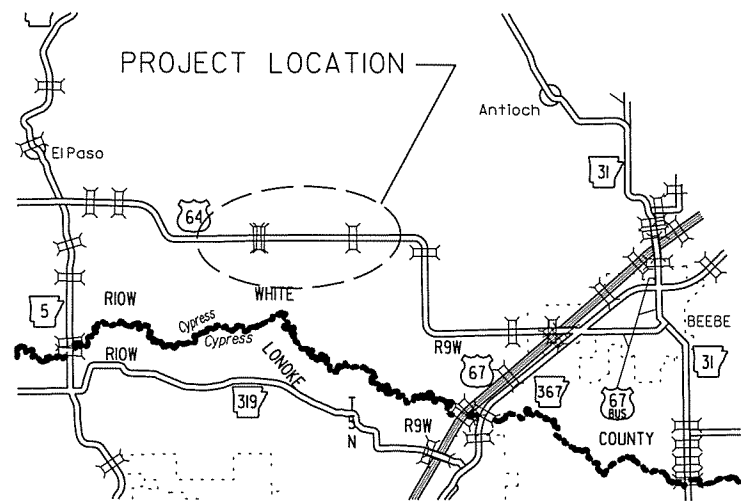


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0501							1	151
TURNER RD. - CO. RD. 5 (WIDENING)S								



VICINITY MAP

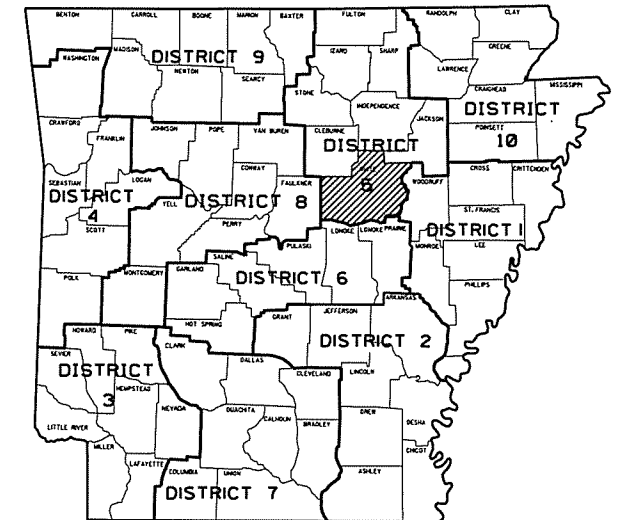
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

**TURNER RD. - CO. RD. 5
(WIDENING) (S)**

WHITE COUNTY
ROUTE 64 SECTION 10

JOB CA0501

FED. AID PROJ. 9991



ARKANSAS HIGHWAY DIST. 5

DESIGN TRAFFIC DATA

DESIGN YEAR-----2035
2015 ADT-----7,300
2035 ADT-----10,000
2035 DHV-----1,100
DIRECTIONAL DISTRIBUTION-----0.60
TRUCKS-----17%
DESIGN SPEED-----60 MPH

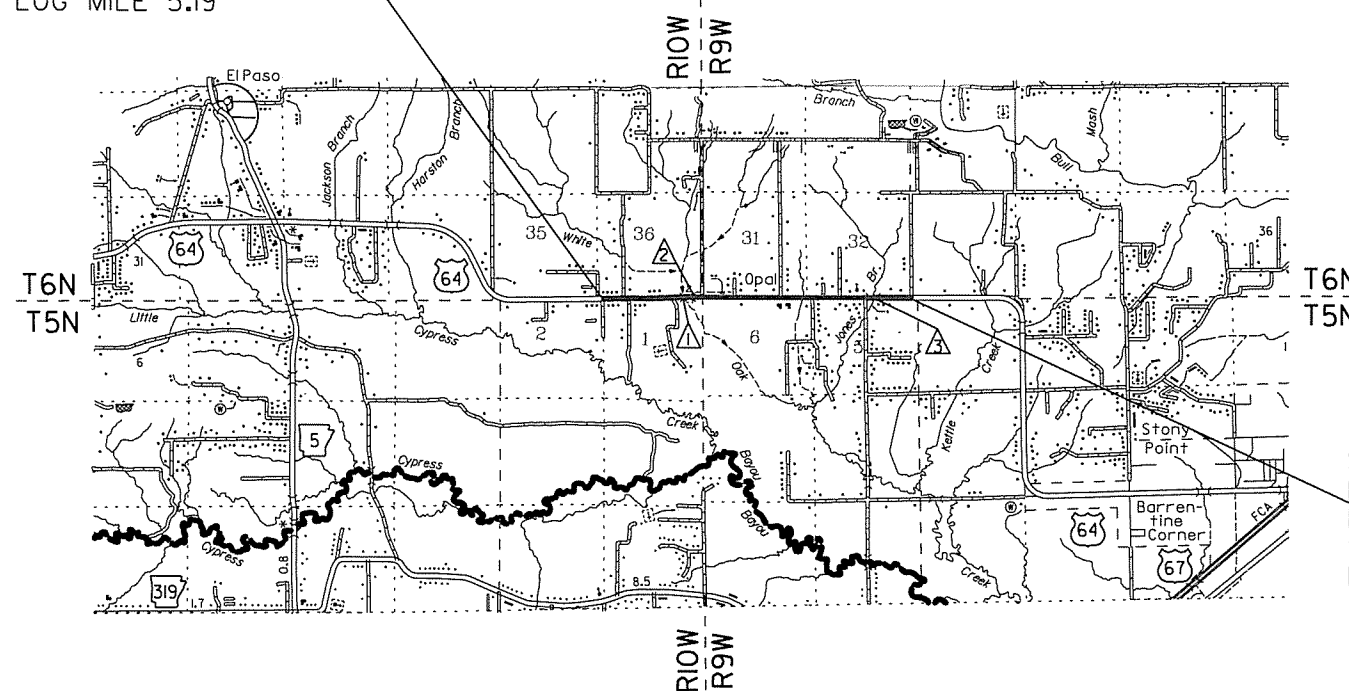
STA. 1228+25.00
BEGIN JOB CA0501
END JOB 012155
LOG MILE 5.19

SCALE: 1" = 10,000'

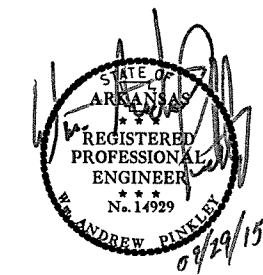


STRUCTURES OVER 20'-0" SPAN

- ▲ STA. 1270+20 IN PLACE
TRIPLE 10'x6'x99' R.C. BOX CULVERT
& 10'x5'x99' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
RETAIN & EXTEND 19' LT. & 7' RT.
Q50 = 3225 CFS, D.A. = 3563 ACRES
SPAN = 43.60'
- ▲ STA. 1273+38 IN PLACE
DBL. 10'x5'x99' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
RETAIN & EXTEND 19' LT. & 7' RT.
Q50 = 3225 CFS, D.A. = 3563 ACRES
SPAN = 20.27'
- ▲ STA. 1365+88 IN PLACE
TRIPLE 7'x5'x99' R.C. BOX CULVERT
& 5'x5'x99' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
RETAIN & EXTEND 26' RT.
CONSTRUCT 7'x5'x123' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q50 = 1478 CFS D.A. = 1144 ACRES
SPAN = 40.05'



STA. 1385+86.03
END JOB CA0501
BEGIN JOB 050263
STA. 170+50.00
LOG MILE 8.23



	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°05'52"	N 35°05'51"	N 35°05'49"
LONGITUDE	W 92°02'03"	W 92°00'26"	W 91°58'50"

	GROSS LENGTH OF PROJECT	15,761.03	FEET	OR	2.985	MILES
NET	" " ROADWAY	15,657.11	" "	" "	2.965	MILES
NET	" " BRIDGES	103.92	" "	" "	0.020	MILES
NET	" " PROJECT	15,761.03	" "	" "	2.985	MILES

P.E. JOB CA0501
NON-PART.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-18-15				6	ARK.			
				JOB NO.	CA0501	2	151	

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2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES		
3 - 7	TYPICAL SECTIONS OF IMPROVEMENT		
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47 - 52	PERMANENT PAVEMENT MARKING DETAILS		
53 - 61	QUANTITIES		
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70 - 81	PLAN AND PROFILE SHEETS		
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85	PRECAST CONCRETE BOX CULVERTS	PBC-1	1-28-15
86	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	2-27-14
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88	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	PCP-1	2-27-14
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90	PAVEMENT MARKING DETAILS	PM-1	9-12-13
91	REINFORCED CONCRETE BOX CULVERT DETAILS	RCB-1	7-26-12
92	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	RCB-2	11-20-03
93	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	RCB-3	10-12-95
94	STANDARD HIGHWAY SIGNS & SUPPORTS ASSEMBLIES	SHS-1	9-12-13
95	U-CHANNEL POST ASSEMBLIES	SHS-2	2-27-14
96	DETAILS OF SPECIAL ITEMS	SI-1	9-12-13
97	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	9-02-15
98	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	9-02-15
99	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	9-02-15
100	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-4	2-27-14
101	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-5	10-15-09
102	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11
103	TEMPORARY EROSION CONTROL DEVICES	TEC-2	6-02-94
104	TEMPORARY EROSION CONTROL DEVICES	TEC-3	11-03-94
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111 - 151	CROSS SECTIONS		

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

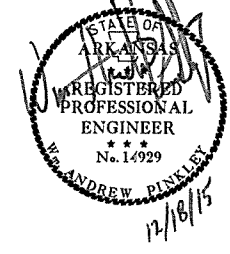
GOVERNING SPECIFICATIONS

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 CA0501
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
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 CA0501	BIDDING REQUIREMENTS AND CONDITIONS
JOB CA0501	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB CA0501	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB CA0501	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB CA0501	COORDINATION OF WORK
JOB CA0501	CULVERT CLEAN OUT
JOB CA0501	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB CA0501	EMPLOYMENT REPORTING
JOB CA0501	GOALS FOR ARKANSAS OWNED MINORITY BUSINESS ENTERPRISE
JOB CA0501	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB CA0501	MANDATORY ELECTRONIC CONTRACT
JOB CA0501	NESTING SITES OF MIGRATORY BIRDS
JOB CA0501	PARTNERING REQUIREMENTS
JOB CA0501	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB CA0501	PLASTIC PIPE
JOB CA0501	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB CA0501	PROSECUTION AND PROGRESS - CONNECTING ARKANSAS PROGRAM
JOB CA0501	SITE USE (A + C METHOD)
JOB CA0501	SHORING FOR CULVERTS
JOB CA0501	SOIL STABILIZATION
JOB CA0501	STORM WATER POLLUTION PREVENTION PLAN
JOB CA0501	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB CA0501	UTILITY ADJUSTMENTS
JOB CA0501	VALUE ENGINEERING
JOB CA0501	WARM MIX ASPHALT

GENERAL NOTES

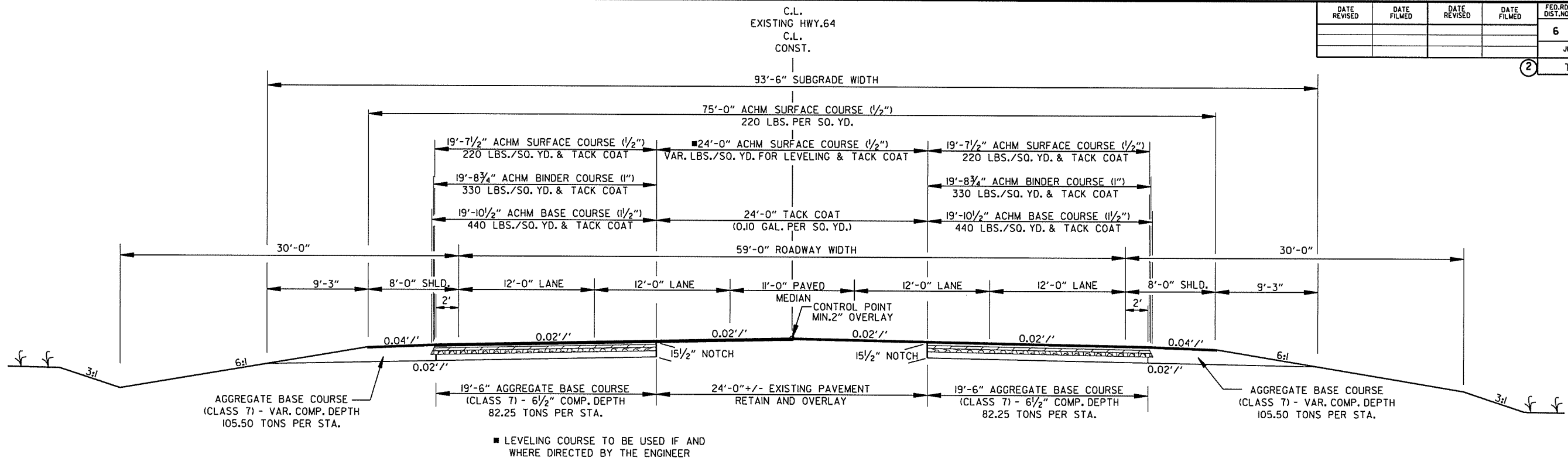
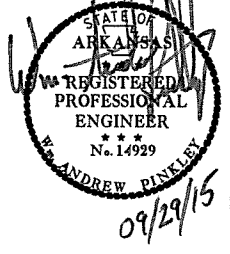
- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY 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 26 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.



2 INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

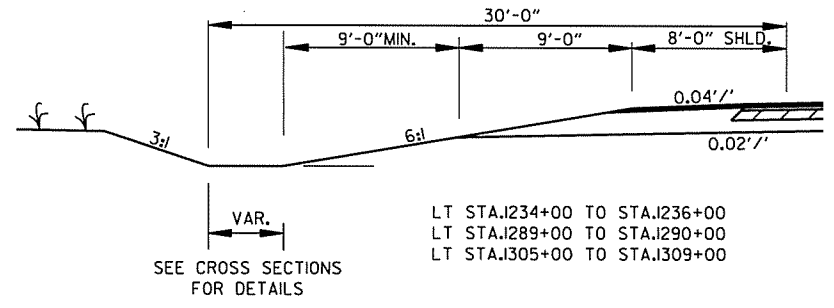
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				6	ARK.		3	151

2 TYPICAL SECTIONS OF IMPROVEMENT



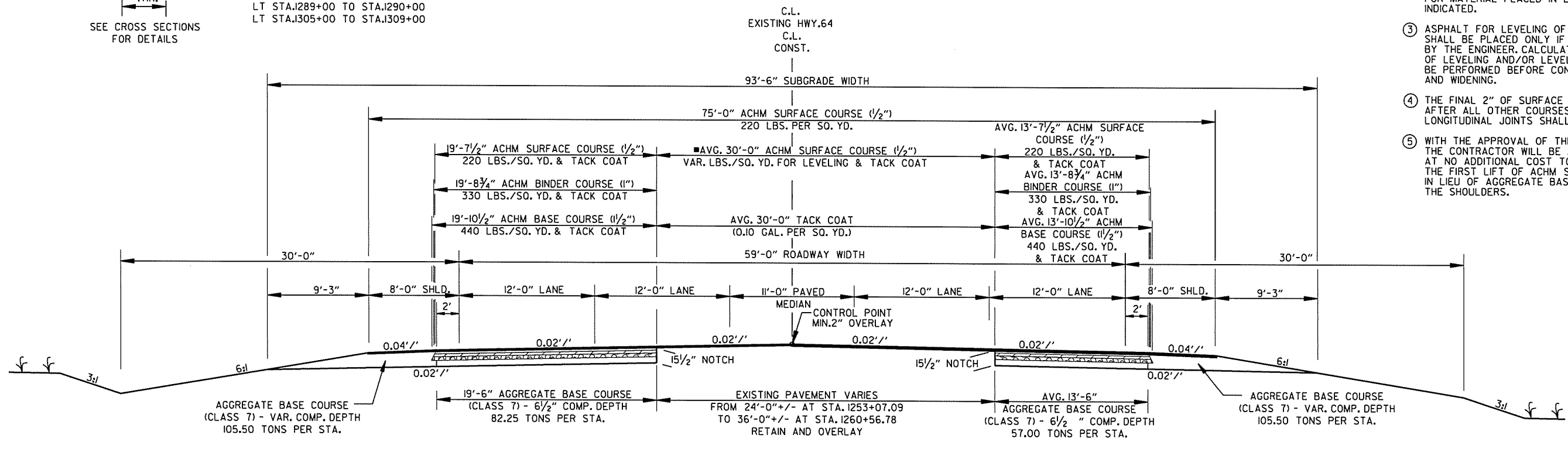
HWY. 64 - NOTCH & WIDEN

STA. I228+25.00 TO STA. I253+07.09
 STA. I384+62.90 TO STA. I385+86.03



LT STA. I234+00 TO STA. I236+00
 LT STA. I289+00 TO STA. I290+00
 LT STA. I305+00 TO STA. I309+00

SEE CROSS SECTIONS FOR DETAILS



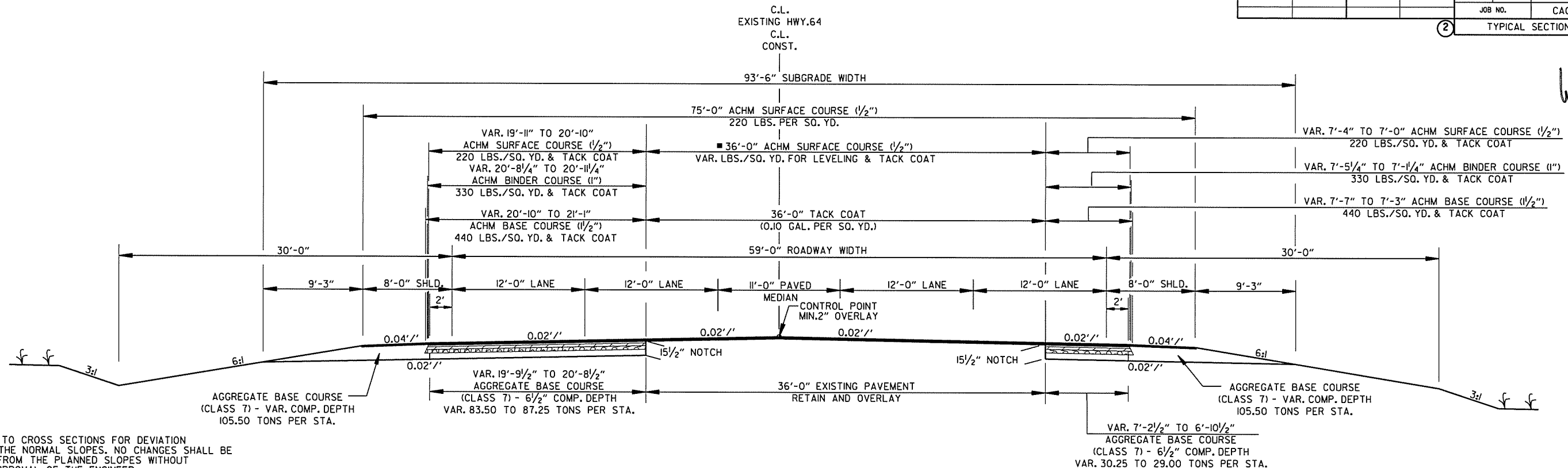
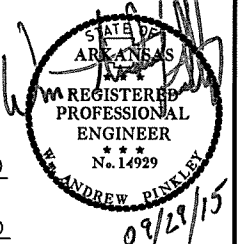
HWY. 64 - NOTCH & WIDEN

STA. I253+07.09 TO STA. I260+56.78

- 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.
 - 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.			
						CA0501	4	151

② TYPICAL SECTIONS OF IMPROVEMENT

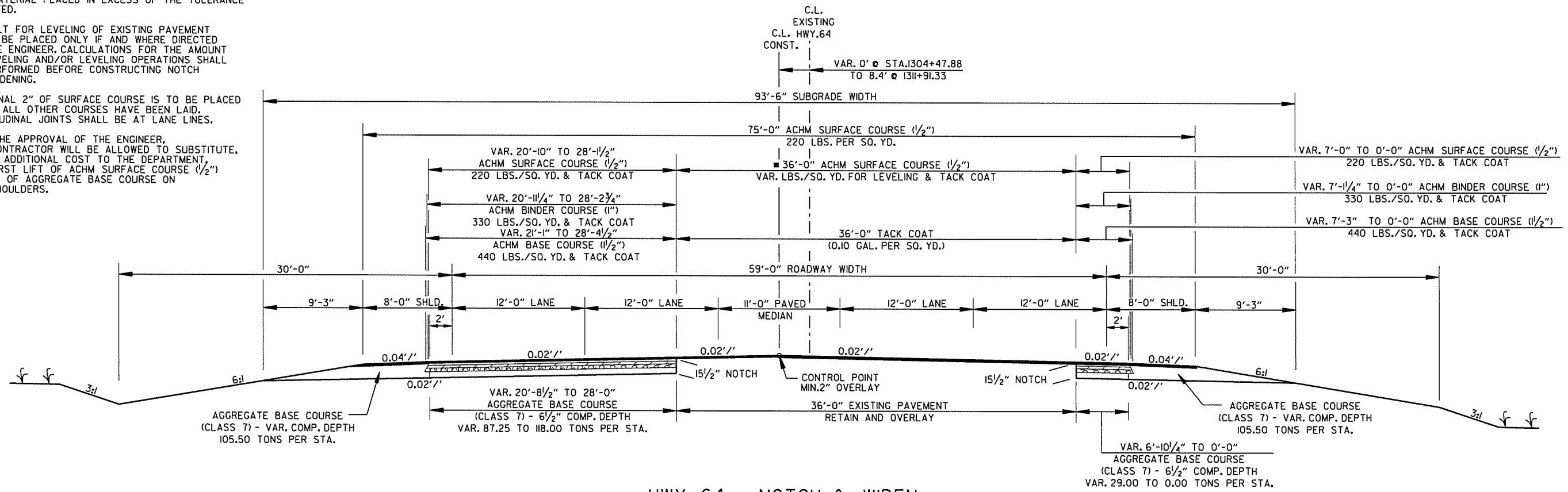


HWY. 64 - NOTCH & WIDEN

STA. 1260+56.78 TO STA. 1304+47.88

- NOTES:
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■ LEVELING COURSE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



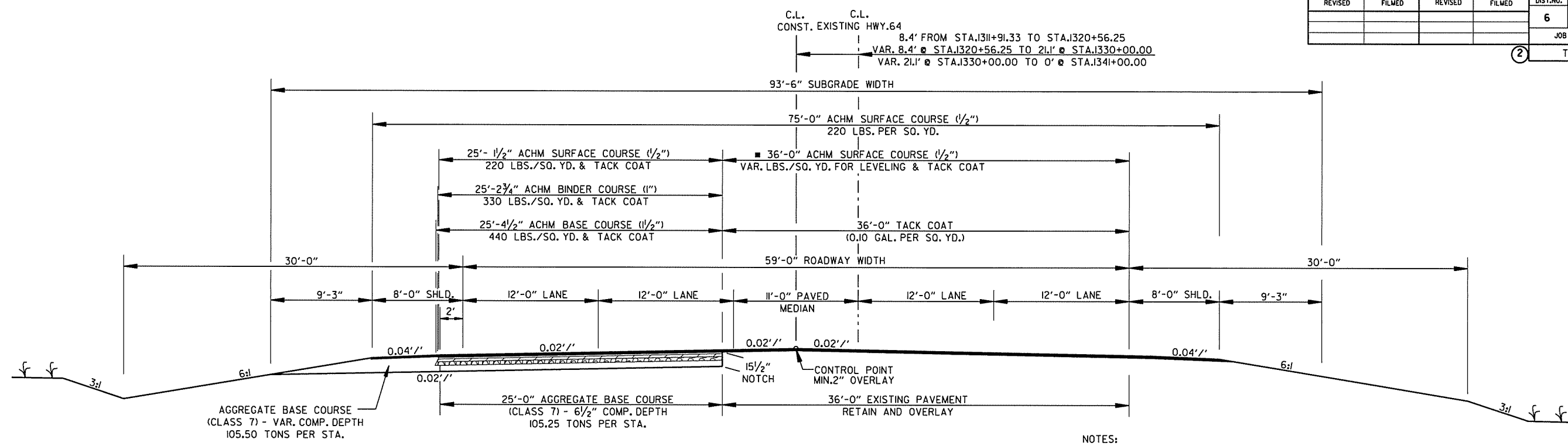
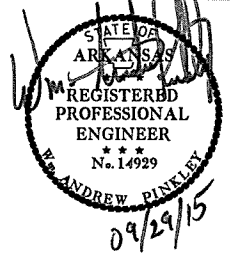
HWY. 64 - NOTCH & WIDEN

STA. 1304+47.88 TO STA. 1311+91.33

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO. CA0501		SHEET NO. 5		TOTAL SHEETS 151

② TYPICAL SECTIONS OF IMPROVEMENT



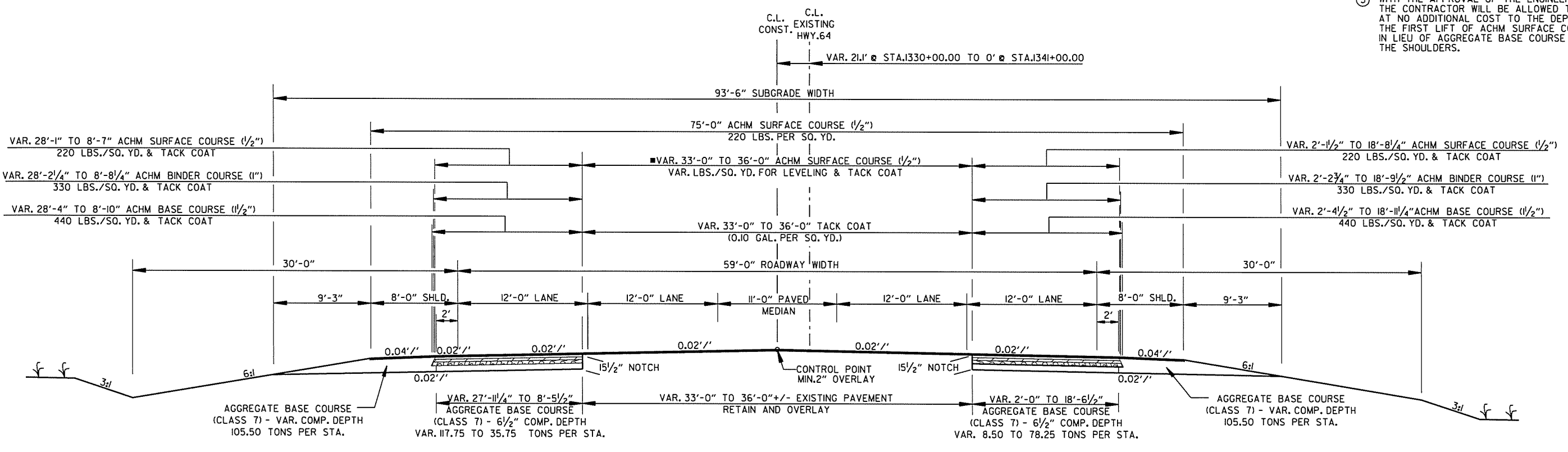
HWY. 64 - NOTCH & WIDEN

STA. 1311+91.33 TO STA. 1333+50.00

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

NOTES:

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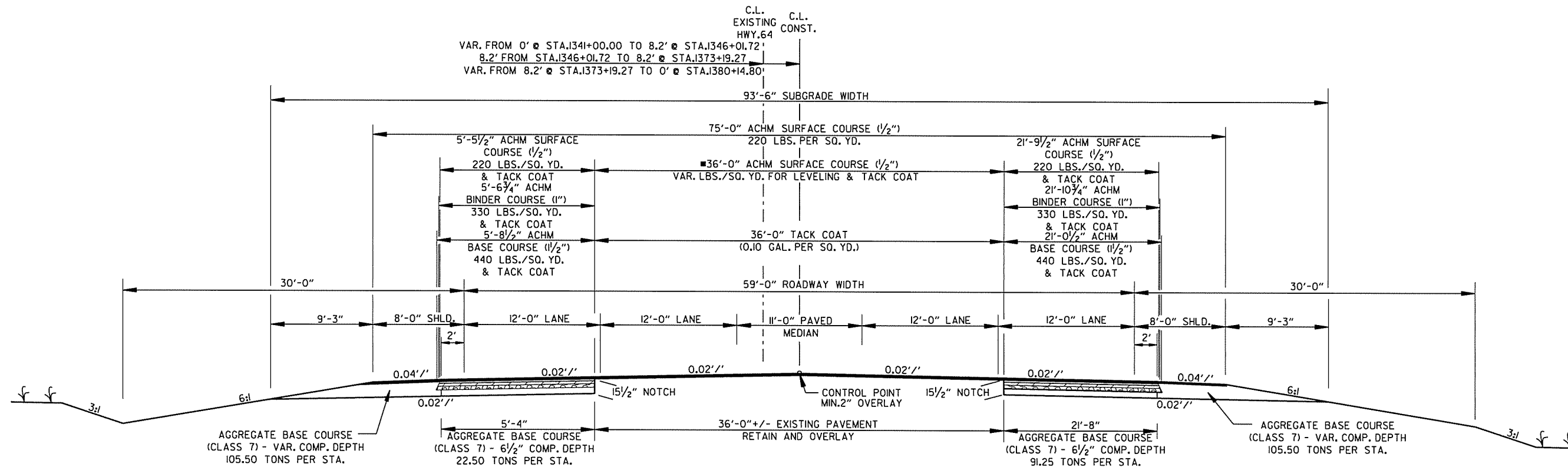
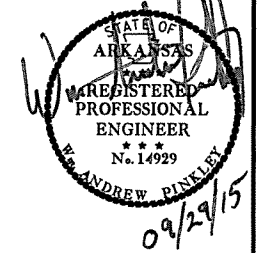
HWY. 64 - NOTCH & WIDEN

STA. 1333+50.00 TO STA. 1341+00.00

TYPICAL SECTIONS OF IMPROVEMENT

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				JOB NO.	CA0501		6	151

② TYPICAL SECTIONS OF IMPROVEMENT



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

HWY. 64 - NOTCH & WIDEN

STA. 1341+00.00 TO STA. 1378+03.27

EXISTING PAVEMENT WITHIN PROPOSED ROADWAY VARIES:
 FROM 36' AT STA. 1343+70 TO 33.8' AT STA. 1345+80
 FROM 33.8' AT STA. 1373+25 TO 36' AT STA. 1375+75

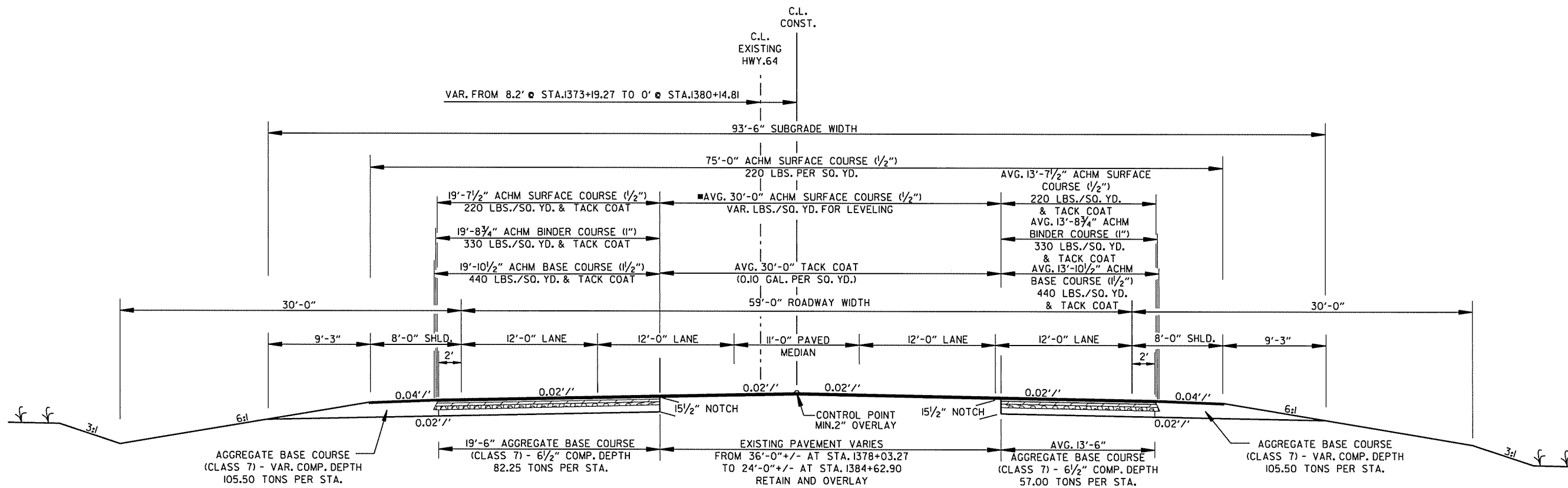
NOTES:

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TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
						CA0501	7	151

② TYPICAL SECTIONS OF IMPROVEMENT



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

HWY. 64 - NOTCH & WIDEN

STA. 1378+03.27 TO STA. 1384+62.90

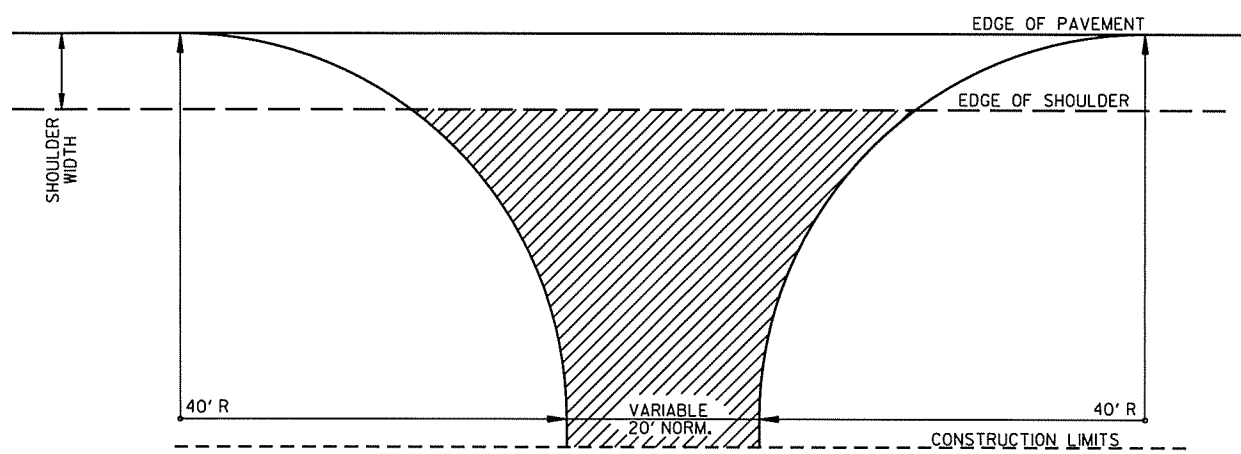
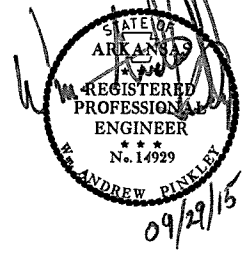
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- ② THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- ③ 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.
- ④ THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
- ⑤ 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.

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501	8	151	

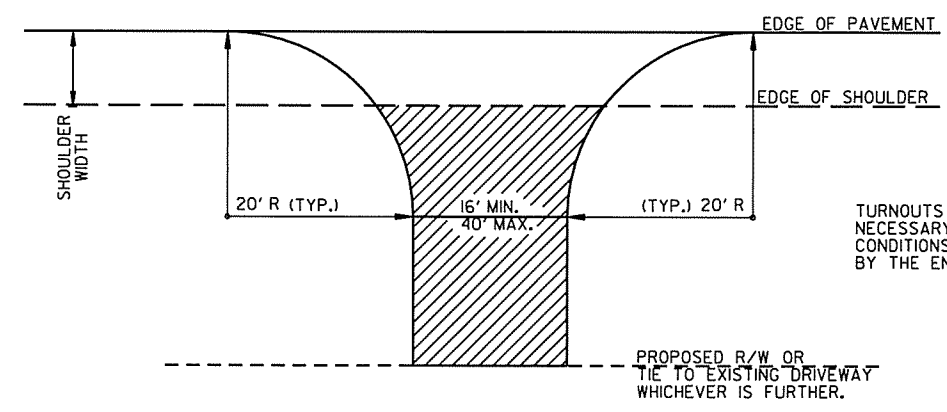
2 SPECIAL DETAILS



DETAIL FOR COUNTY ROAD TURNOUT
N.T.S.

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

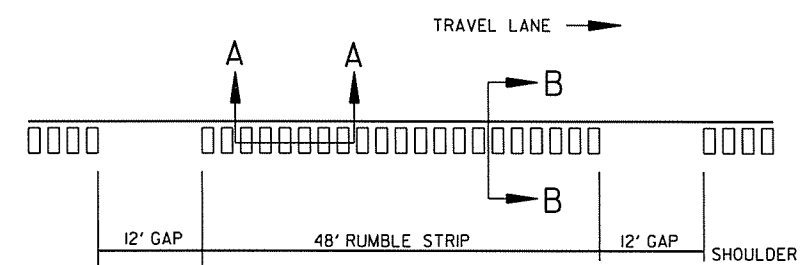
NOTE: REFER TO PLAN SHEETS FOR WIDTH OF COUNTY ROADS.



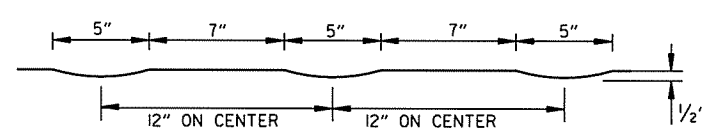
DETAIL FOR DRIVEWAY TURNOUTS
N.T.S.

TURNOUTS SHALL BE MODIFIED AS NECESSARY TO MEET LOCAL CONDITIONS AS DIRECTED BY THE ENGINEER.

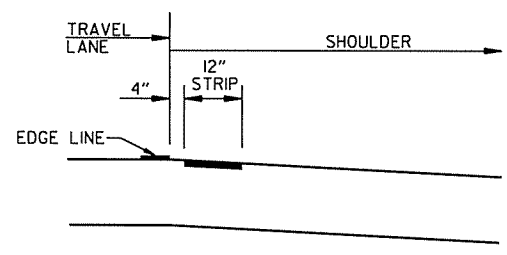
A.C.H.M. SURFACE COURSE (1/2") (220 LBS./SQ. YD.) & AGGREGATE BASE COURSE (CLASS 7) (7" COMPACTED DEPTH) IF ASPHALT DRIVEWAY EXISTS OR 6" CONCRETE - IF CONCRETE DRIVEWAY EXISTS.



PLAN VIEW



SECTION A-A

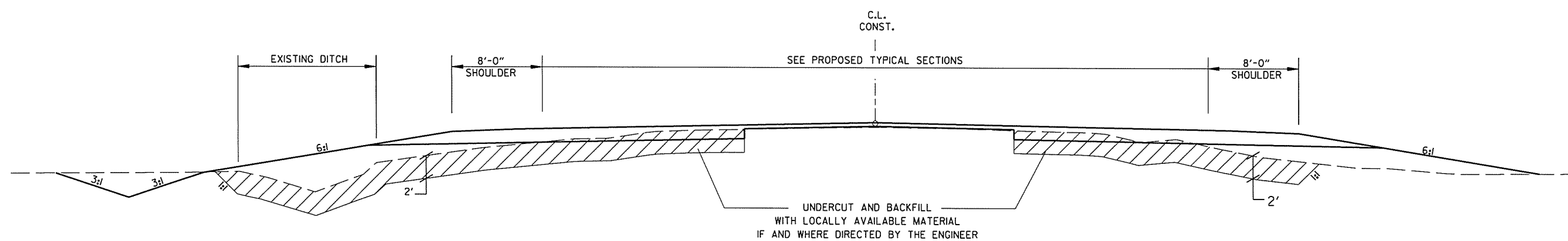


SECTION B-B

GENERAL 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.

DETAILS OF RUMBLE STRIPS (TYPE 2)
N.T.S.



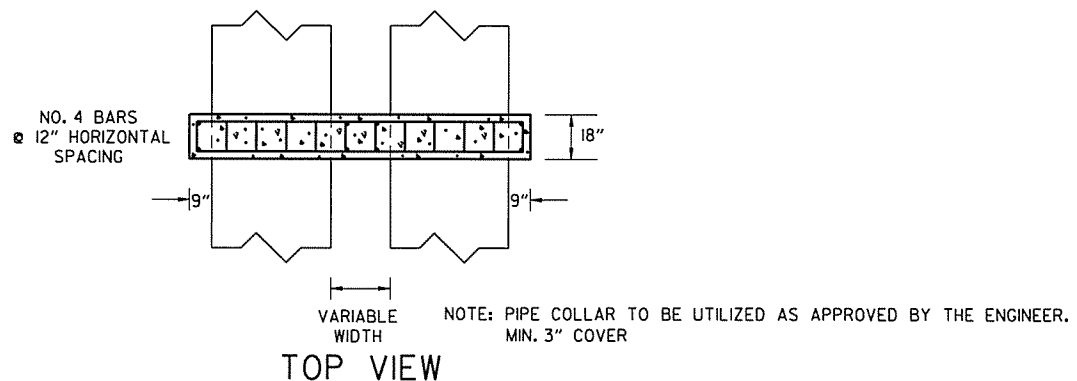
UNDERCUT AND BACKFILL WITH LOCALLY AVAILABLE MATERIAL IF AND WHERE DIRECTED BY THE ENGINEER

DETAIL OF UNDERCUT
N.T.S.

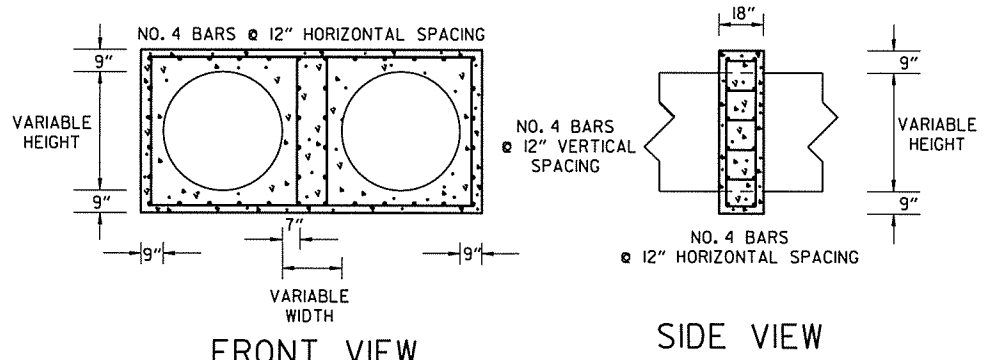
- NOTE:
- REFER TO CROSS SECTIONS FOR UNDERCUT LIMITS.
 - UNDERCUT TO BE APPLIED AT LOCATIONS WITH NO MORE THAN 3 FEET OF FILL WITH THE EXCEPTION OF THE EXISTING DITCHES.

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.	CA0501		9	151
SPECIAL DETAILS								

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 14929
 W. ANDREW PINKLEY
 09/29/15



TOP VIEW

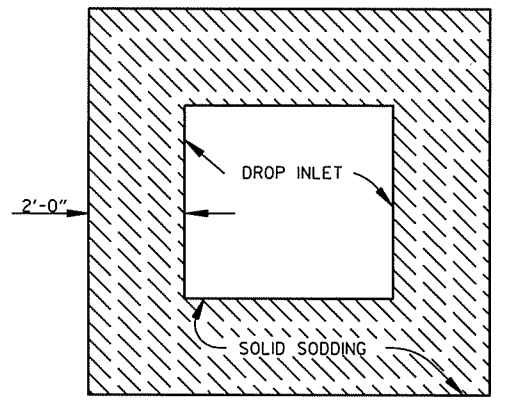


FRONT VIEW

SIDE VIEW

**DOUBLE PIPE EXTENSION
 REINFORCED CONCRETE COLLAR DETAIL**

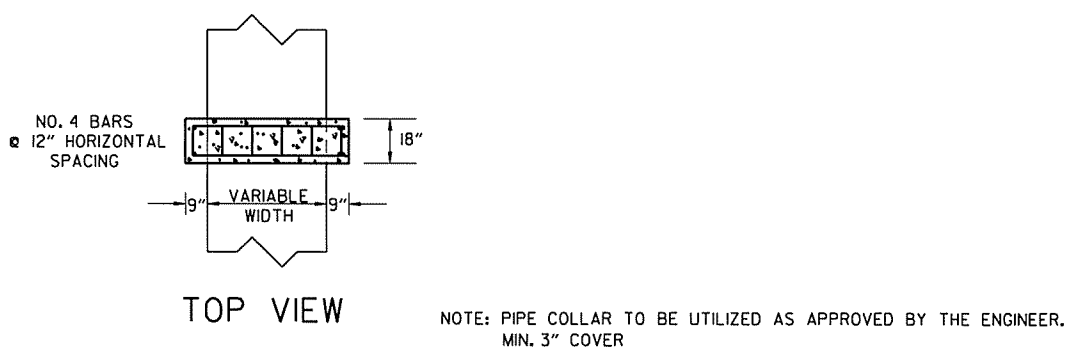
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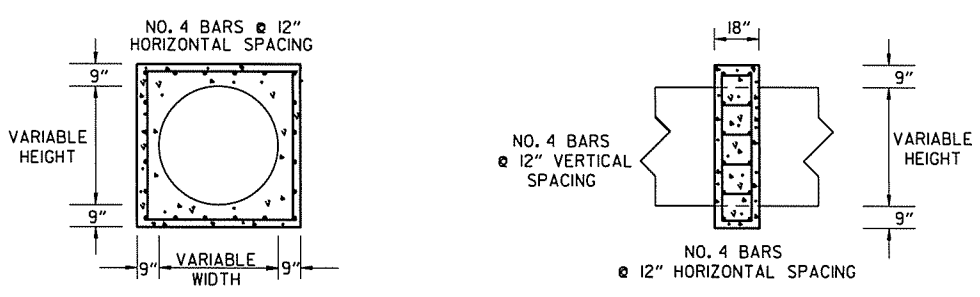
PLAN

**DETAIL OF SOLID SODDING
 AROUND DROP INLET**

N.T.S.



TOP VIEW

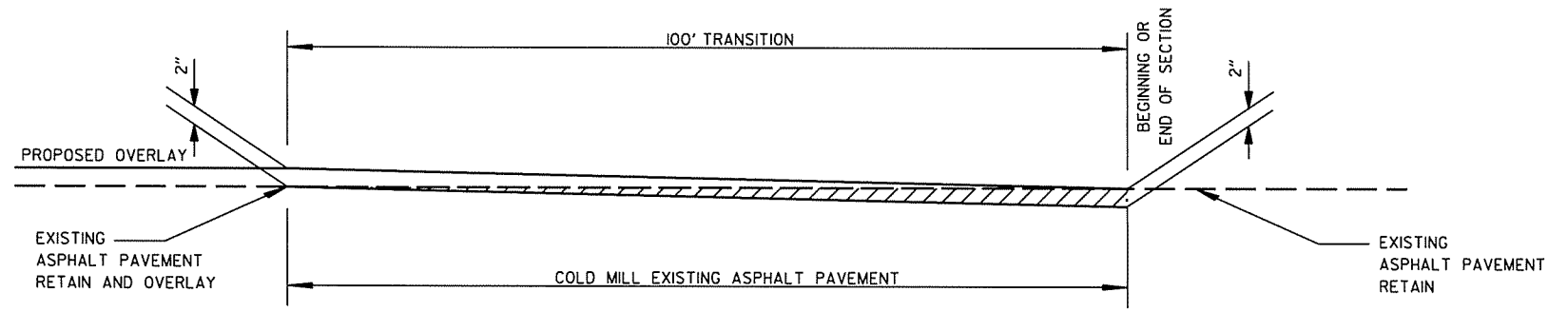


FRONT VIEW

SIDE VIEW

**SINGLE PIPE EXTENSION
 REINFORCED CONCRETE COLLAR DETAIL**

N.T.S.



DETAIL FOR TRANSITION

N.T.S.

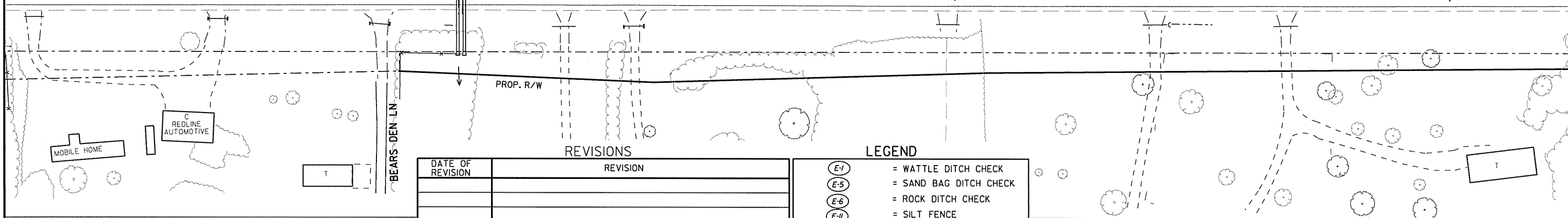
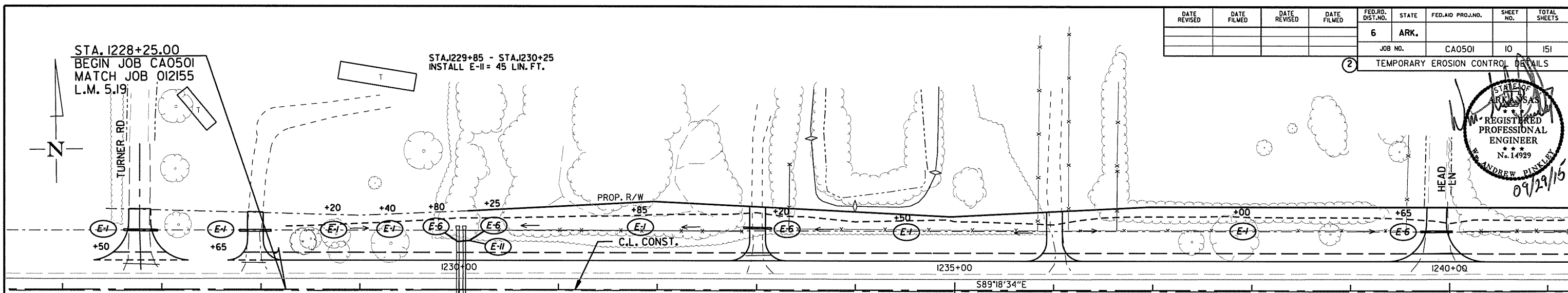
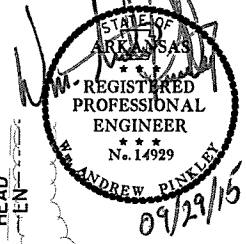
SPECIAL DETAILS

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	CA0501	10	151
				JOB NO. CA0501				
				TEMPORARY EROSION CONTROL DETAILS				

STA. 1228+25.00
 BEGIN JOB CA0501
 MATCH JOB 012155
 L.M. 5.19

STA. 1229+85 - STA. 1230+25
 INSTALL E-II = 45 LIN. FT.

2 TEMPORARY EROSION CONTROL DETAILS



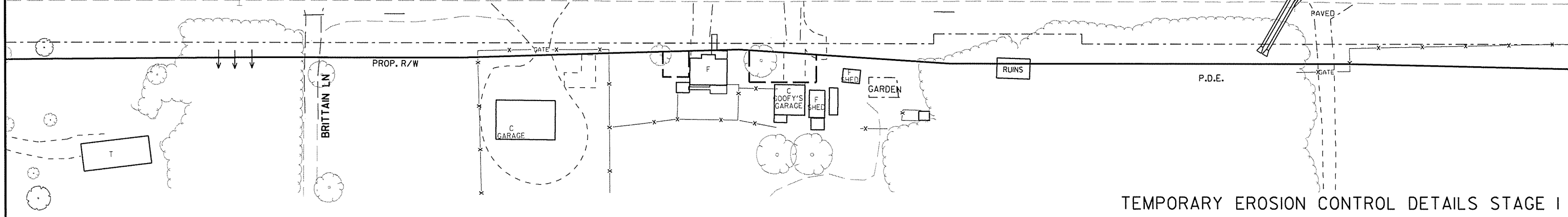
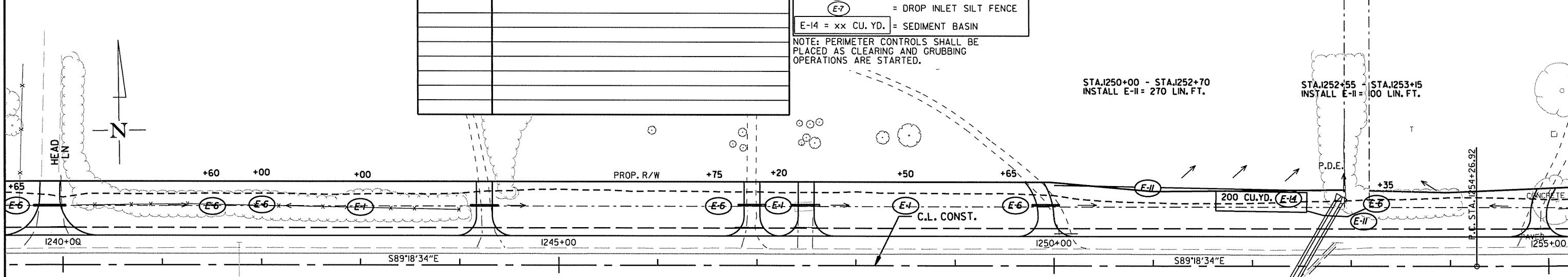
REVISIONS

DATE OF REVISION	REVISION

- LEGEND**
- (E-I) = WATTLE DITCH CHECK
 - (E-5) = SAND BAG DITCH CHECK
 - (E-6) = ROCK DITCH CHECK
 - (E-II) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE
 - E-14 = xx CU. YD. = SEDIMENT BASIN
- NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

STA. 1250+00 - STA. 1252+70
 INSTALL E-II = 270 LIN. FT.

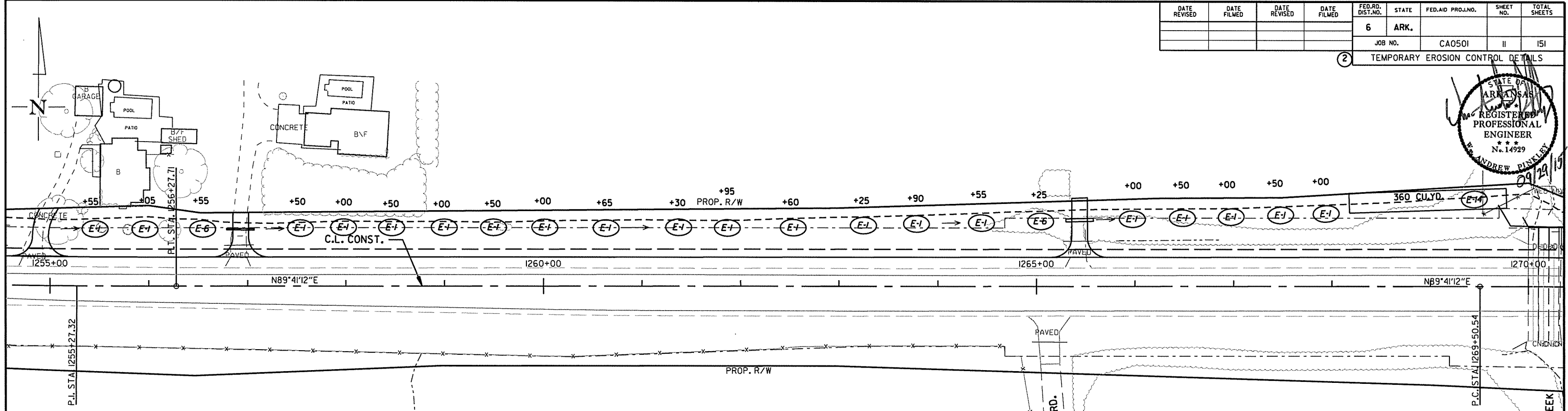
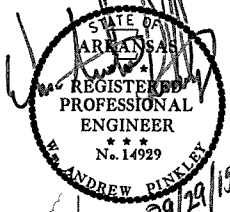
STA. 1252+55 - STA. 1253+15
 INSTALL E-II = 100 LIN. FT.



TEMPORARY EROSION CONTROL DETAILS STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		II	151

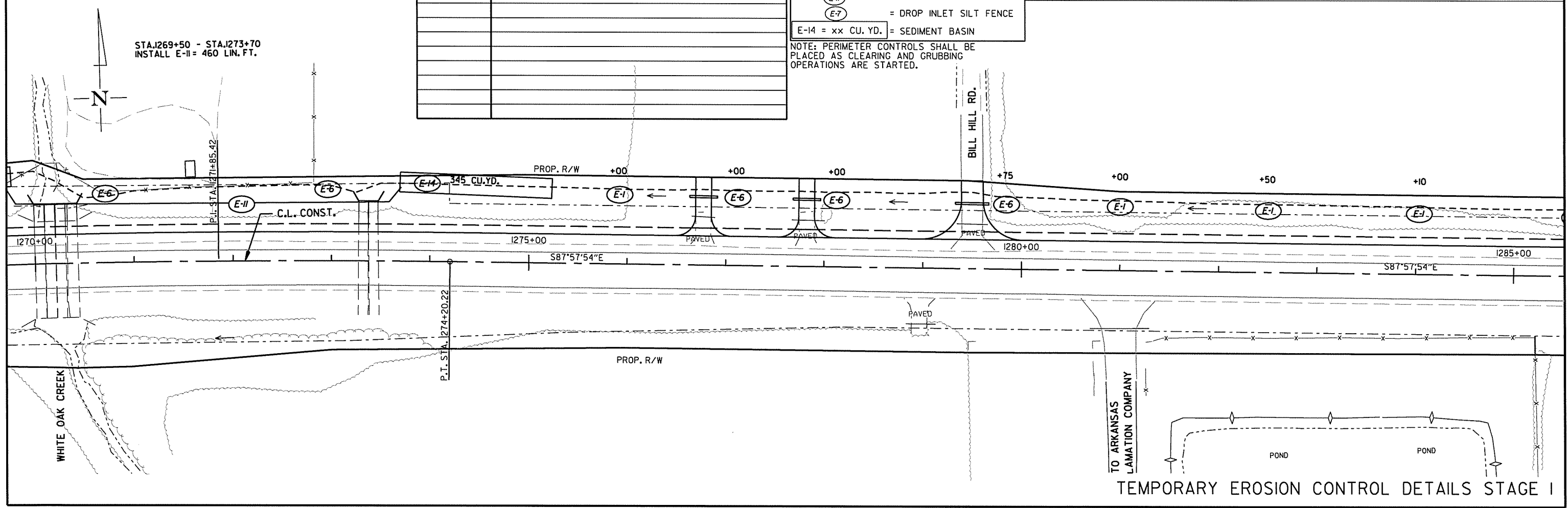
2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS	
DATE OF REVISION	REVISION

LEGEND	
(E-1)	= WATTLE DITCH CHECK
(E-5)	= SAND BAG DITCH CHECK
(E-6)	= ROCK DITCH CHECK
(E-11)	= SILT FENCE
(E-7)	= DROP INLET SILT FENCE
E-14 = xx CU. YD.	= SEDIMENT BASIN

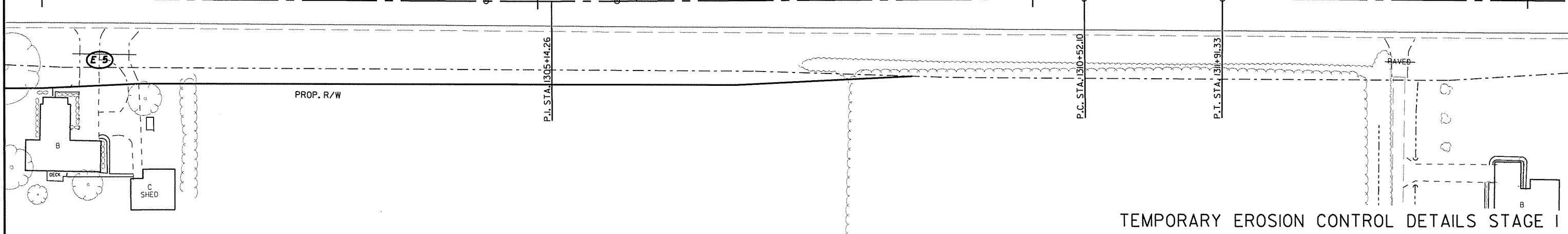
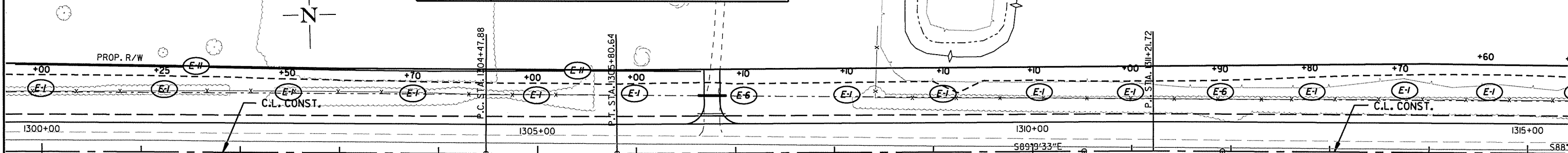
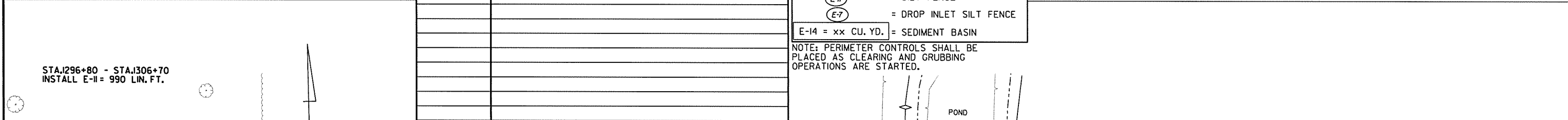
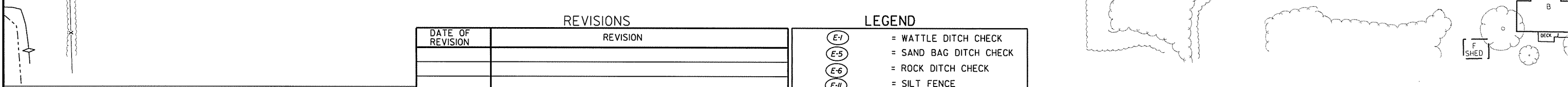
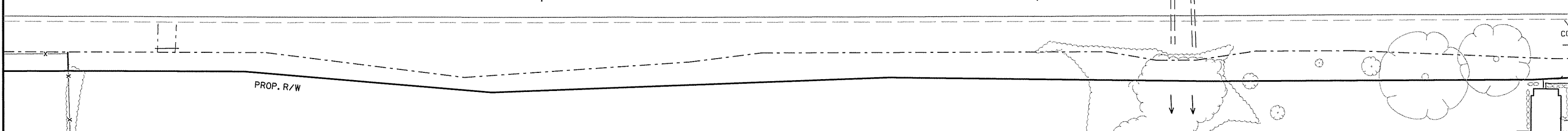
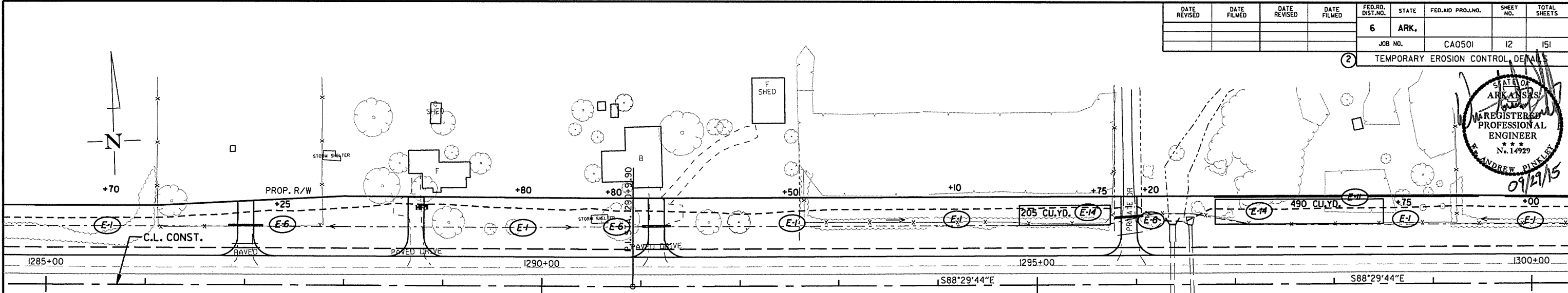
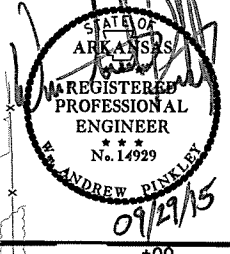
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



TEMPORARY EROSION CONTROL DETAILS STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	CA0501	12	151

2 TEMPORARY EROSION CONTROL DETAILS



REVISIONS	
DATE OF REVISION	REVISION

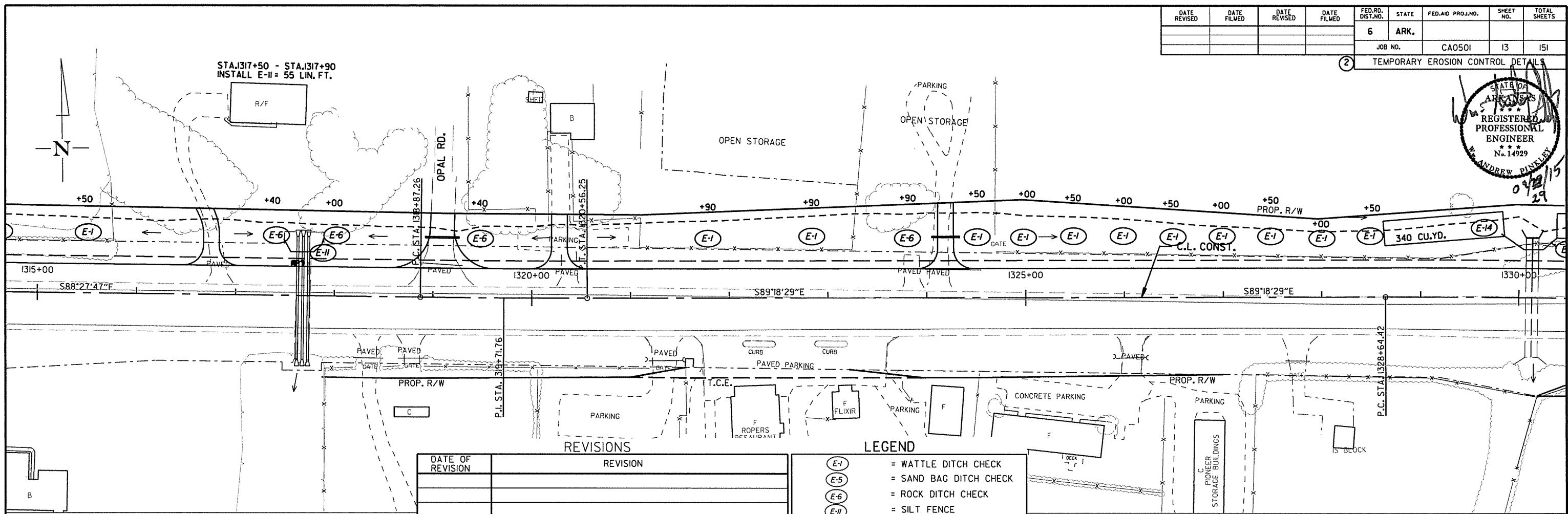
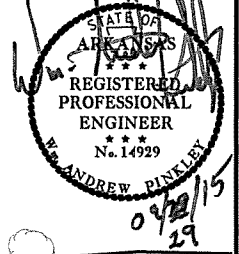
LEGEND	
(E-1)	= WATTLE DITCH CHECK
(E-5)	= SAND BAG DITCH CHECK
(E-6)	= ROCK DITCH CHECK
(E-11)	= SILT FENCE
(E-7)	= DROP INLET SILT FENCE
E-14 = xx CU. YD.	= SEDIMENT BASIN

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

STA. 1296+80 - STA. 1306+70
INSTALL E-11 = 990 LIN. FT.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		13	151

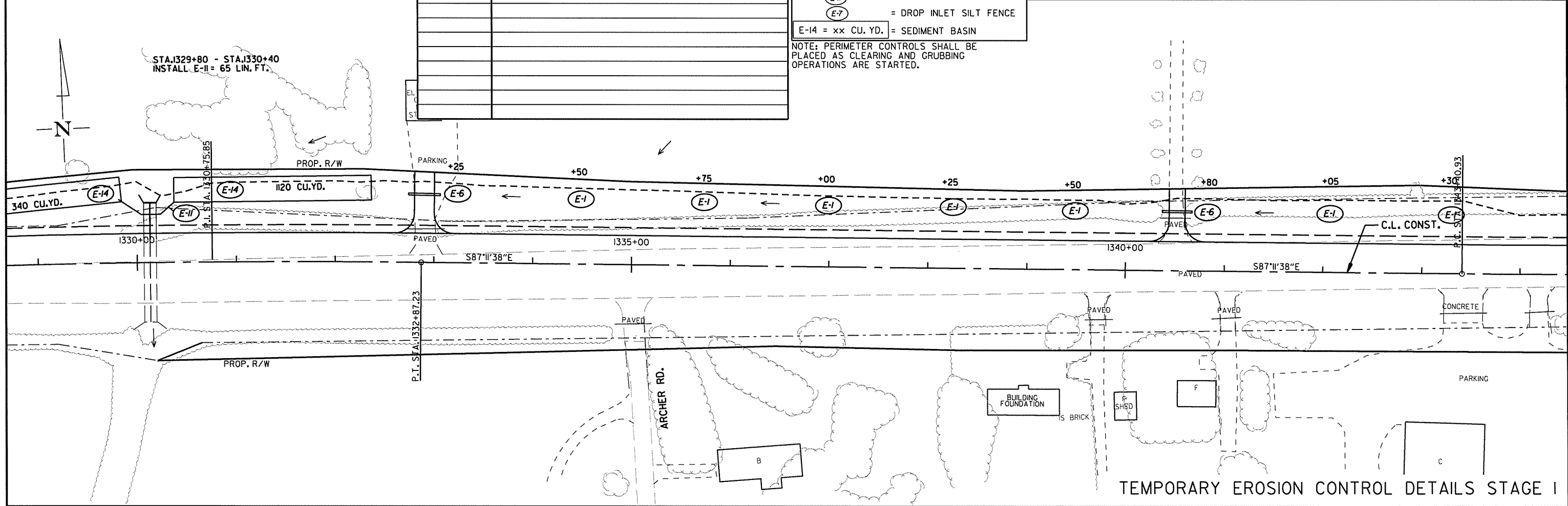
2 TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

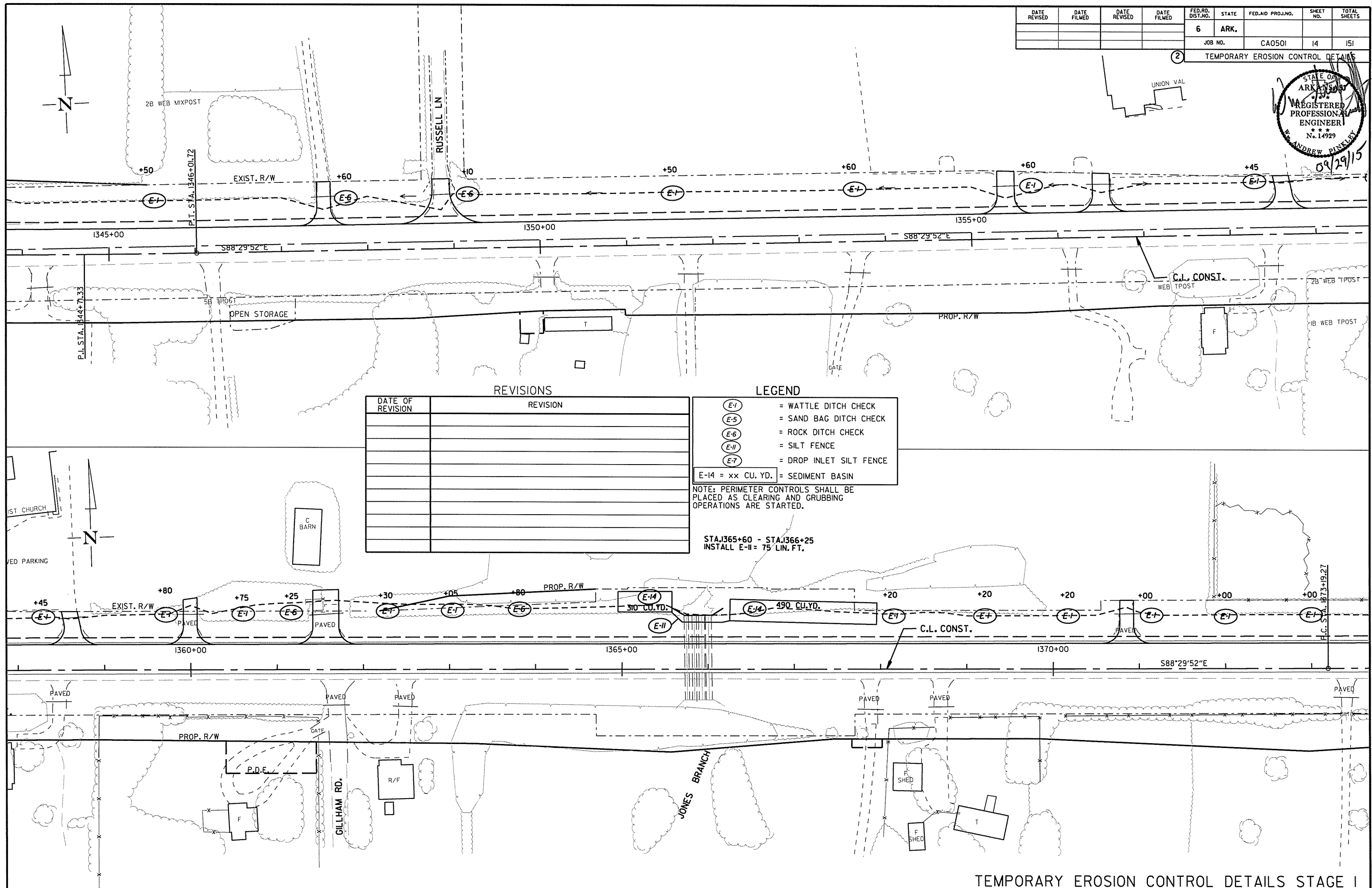
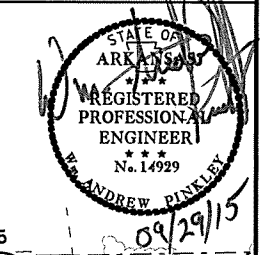
- LEGEND**
- (E-1) = WATTLE DITCH CHECK
 - (E-5) = SAND BAG DITCH CHECK
 - (E-6) = ROCK DITCH CHECK
 - (E-11) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE
 - E-14 = xx CU. YD. = SEDIMENT BASIN

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



TEMPORARY EROSION CONTROL DETAILS STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	CA0501	14	151
				JOB NO. CA0501 14 151				
				TEMPORARY EROSION CONTROL DETAILS				



DATE OF REVISION	REVISION

- LEGEND**
- (E-1) = WATTLE DITCH CHECK
 - (E-5) = SAND BAG DITCH CHECK
 - (E-6) = ROCK DITCH CHECK
 - (E-11) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE
 - E-14 = xx CU. YD. = SEDIMENT BASIN

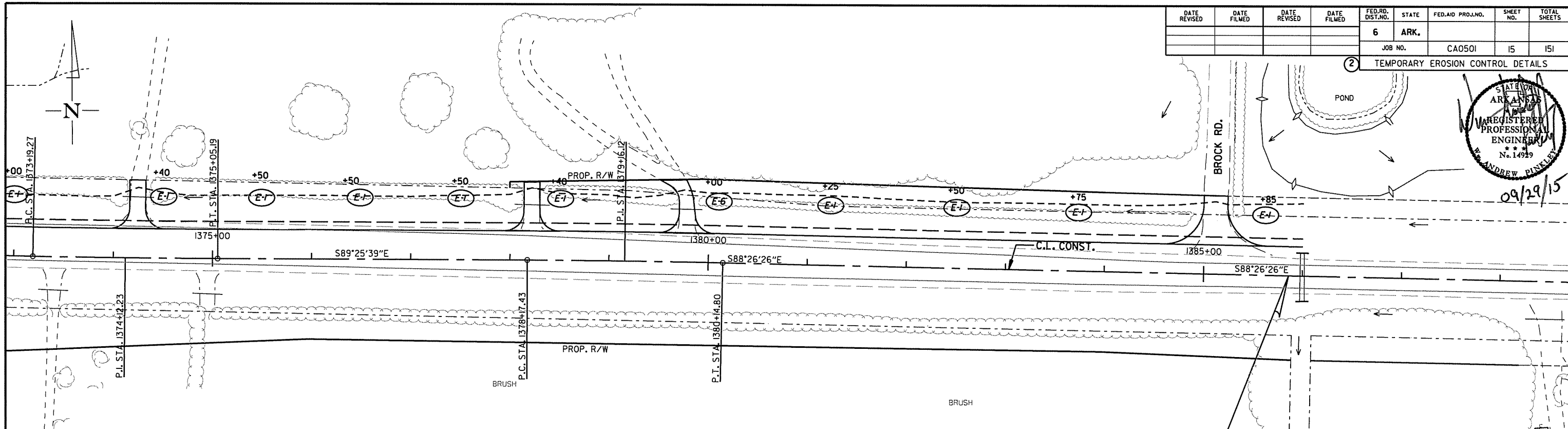
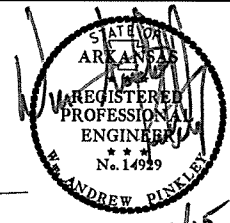
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

STA. 1365+60 - STA. 1366+25
INSTALL E-11 = 75 LIN. FT.

9/28/2015

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				6	ARK.			
JOB NO. CA0501							15	151

TEMPORARY EROSION CONTROL DETAILS



STA. 1385+86.03
 END JOB CA0501
 MATCH JOB 050263
 L.M.8.23

REVISIONS

DATE OF REVISION	REVISION

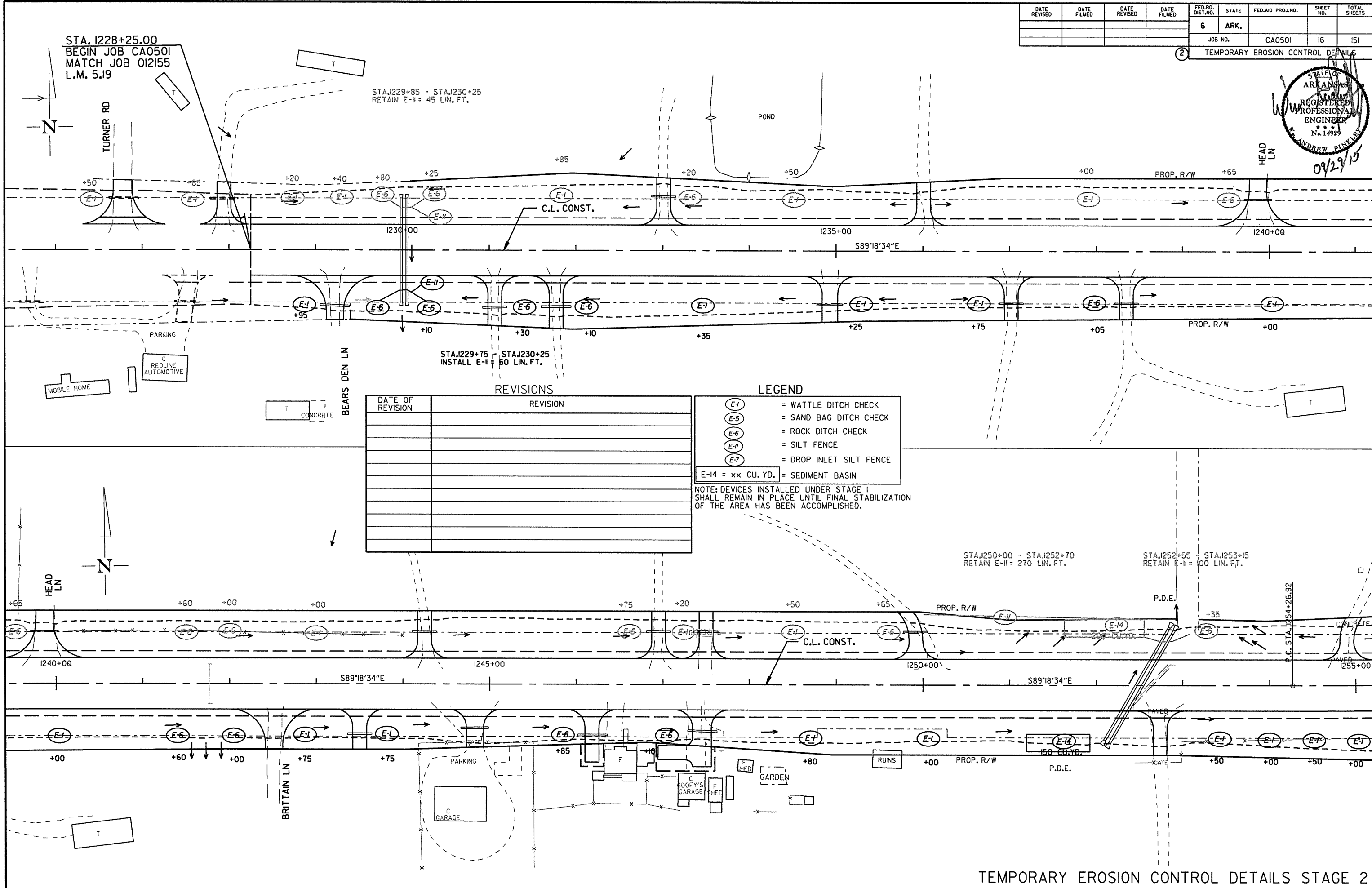
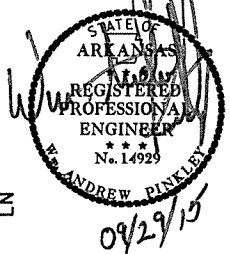
LEGEND

- (E-1) = WATTLE DITCH CHECK
- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE
- E-14 = xx CU. YD. = SEDIMENT BASIN

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

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. CA0501	16	151

TEMPORARY EROSION CONTROL DETAILS



REVISIONS

DATE OF REVISION	REVISION

LEGEND

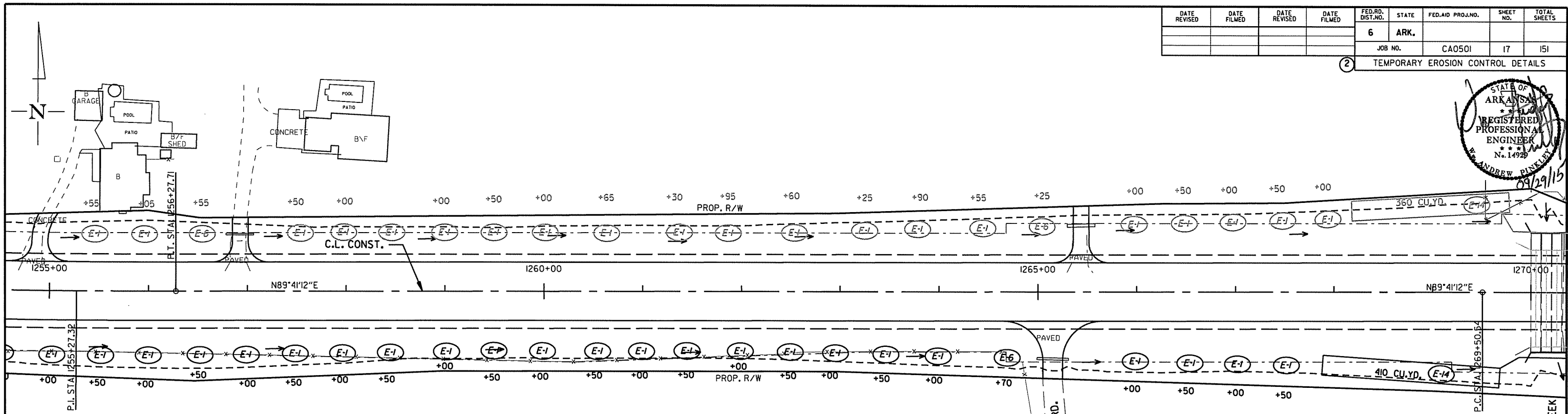
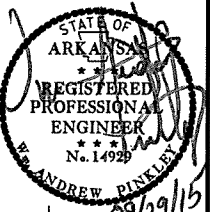
- (E-1) = WATTLE DITCH CHECK
- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE
- (E-14) = xx CU. YD. = SEDIMENT BASIN

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

9/28/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		17	151

TEMPORARY EROSION CONTROL DETAILS



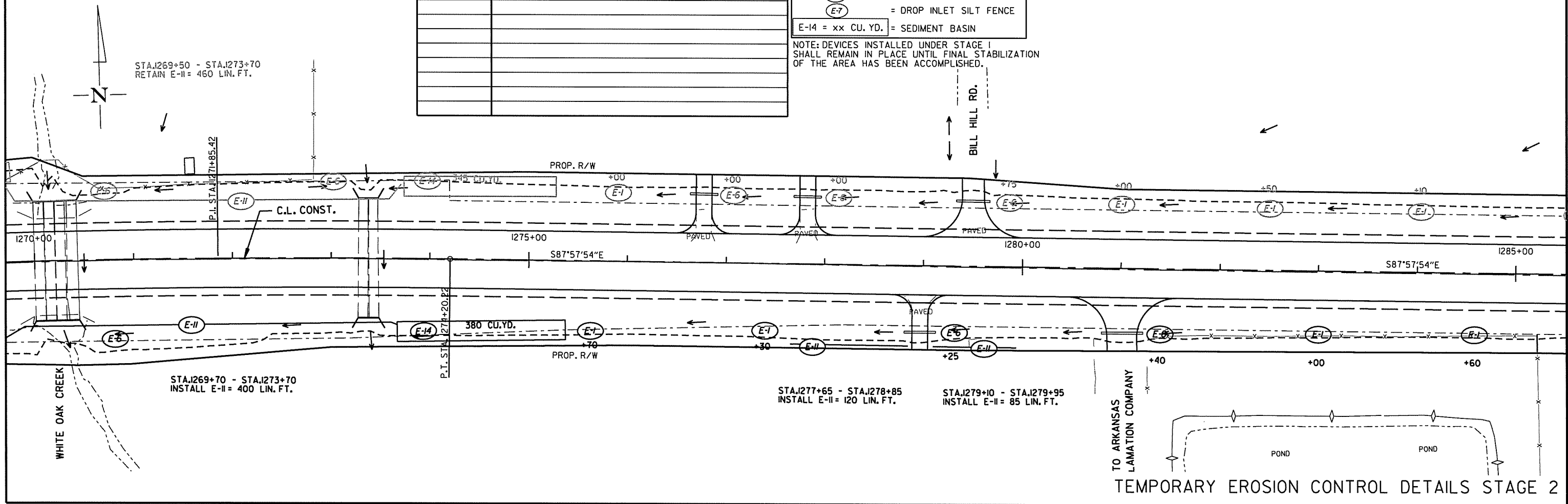
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- E-1 = WATTLE DITCH CHECK
- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-II = SILT FENCE
- E-7 = DROP INLET SILT FENCE
- E-14 = xx CU. YD. = SEDIMENT BASIN

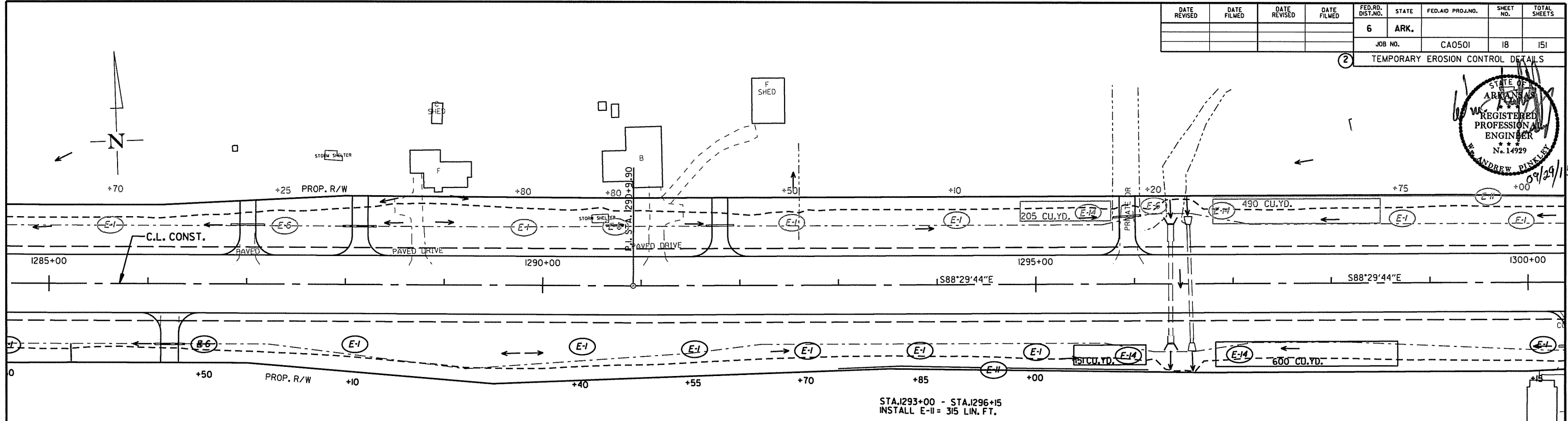
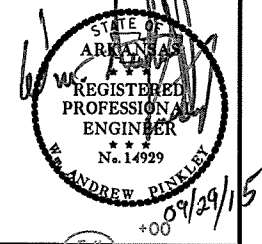
NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



TEMPORARY EROSION CONTROL DETAILS STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		18	151
				JOB NO.	CA0501			

TEMPORARY EROSION CONTROL DETAILS



STA. 1293+00 - STA. 1296+15
INSTALL E-11 = 315 LIN. FT.

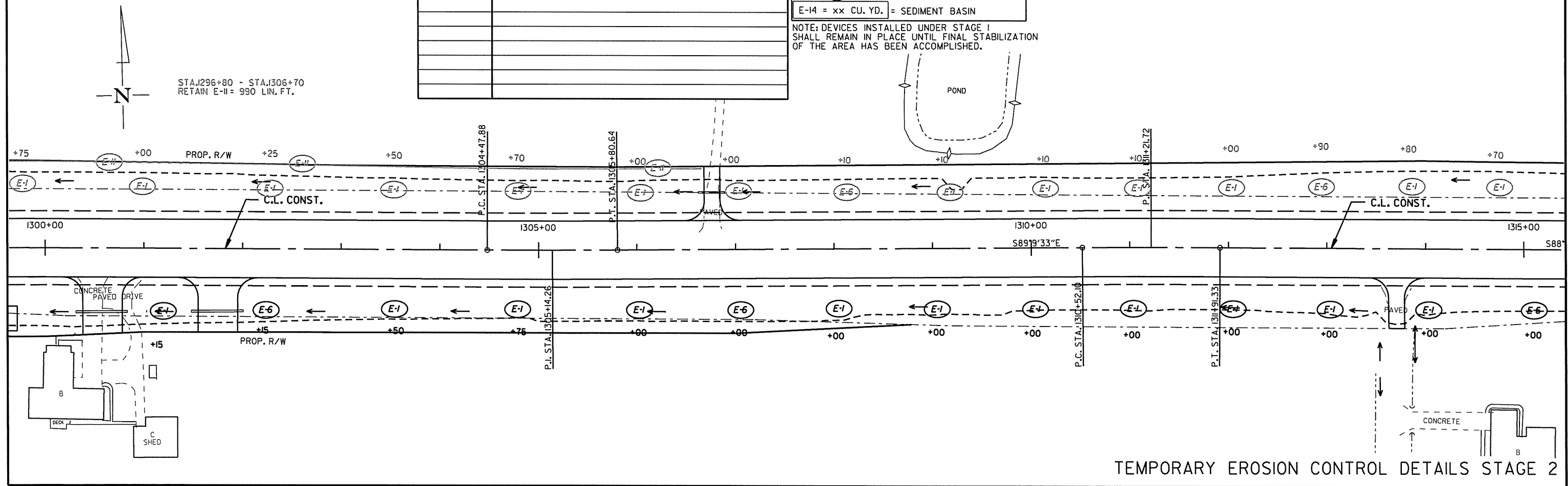
REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-1) = WATTLE DITCH CHECK
- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE
- E-14 = xx CU. YD. = SEDIMENT BASIN

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

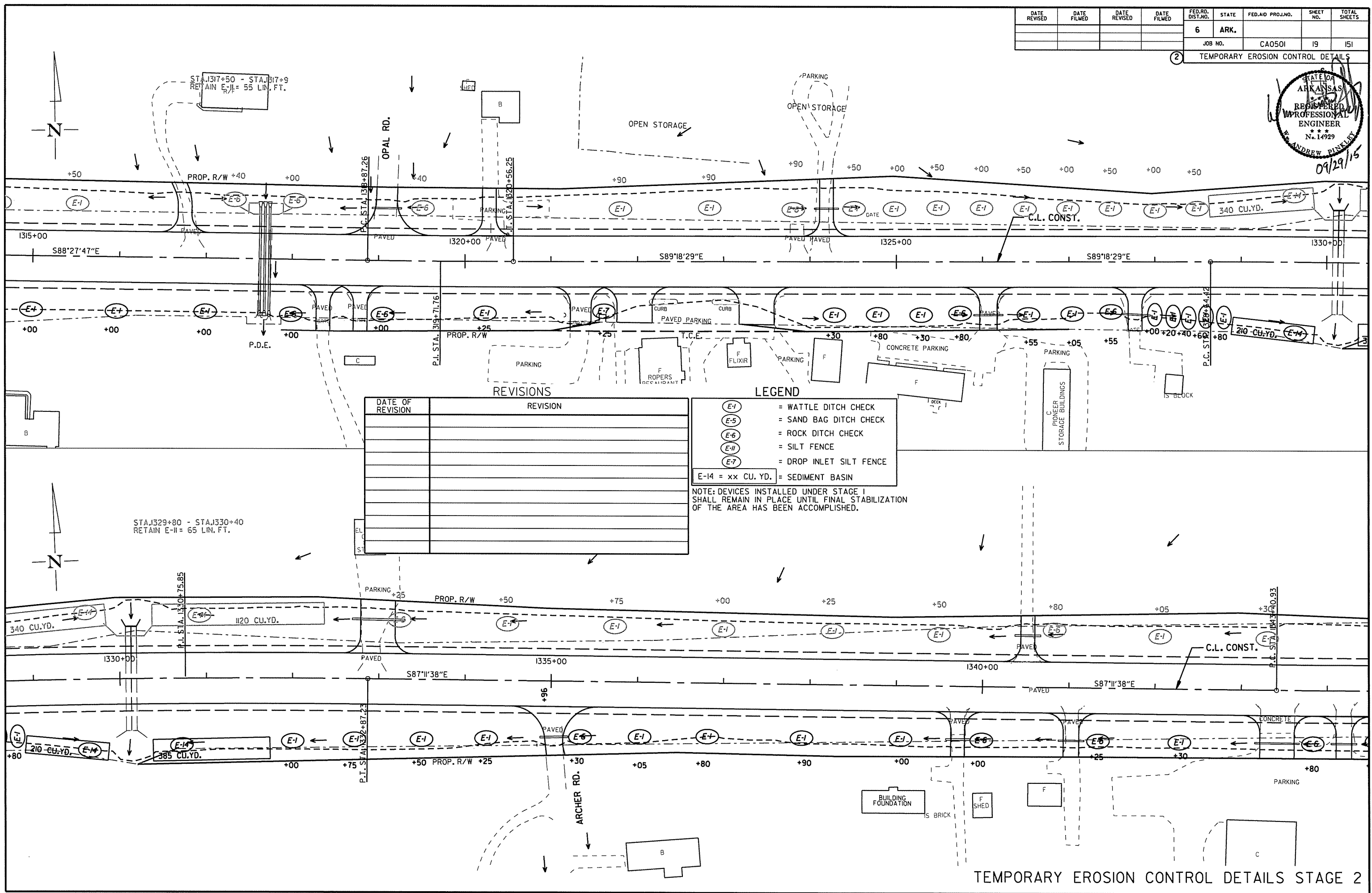
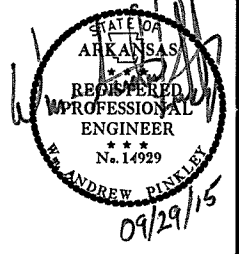


TEMPORARY EROSION CONTROL DETAILS STAGE 2

9/28/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		19	151

JOB NO. CA0501 19 151
 ② TEMPORARY EROSION CONTROL DETAILS



DATE OF REVISION	REVISION

LEGEND

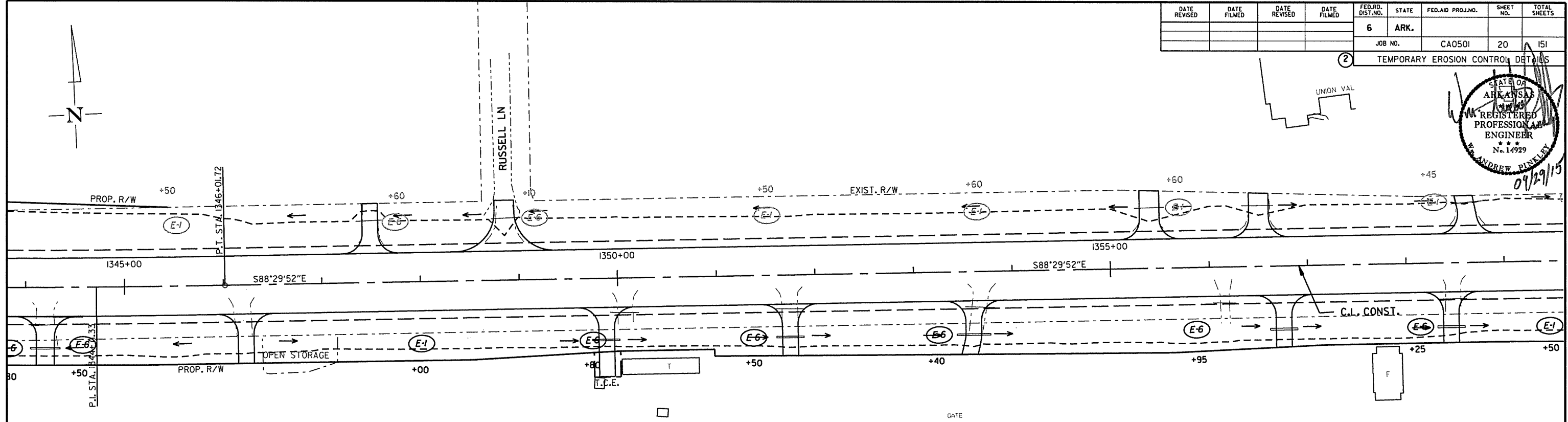
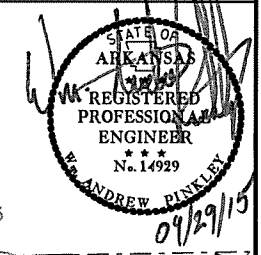
- (E-1) = WATTLE DITCH CHECK
- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-11) = SILT FENCE
- (E-7) = DROP INLET SILT FENCE
- E-14 = xx CU. YD. = SEDIMENT BASIN

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

TEMPORARY EROSION CONTROL DETAILS STAGE 2

9/28/2015

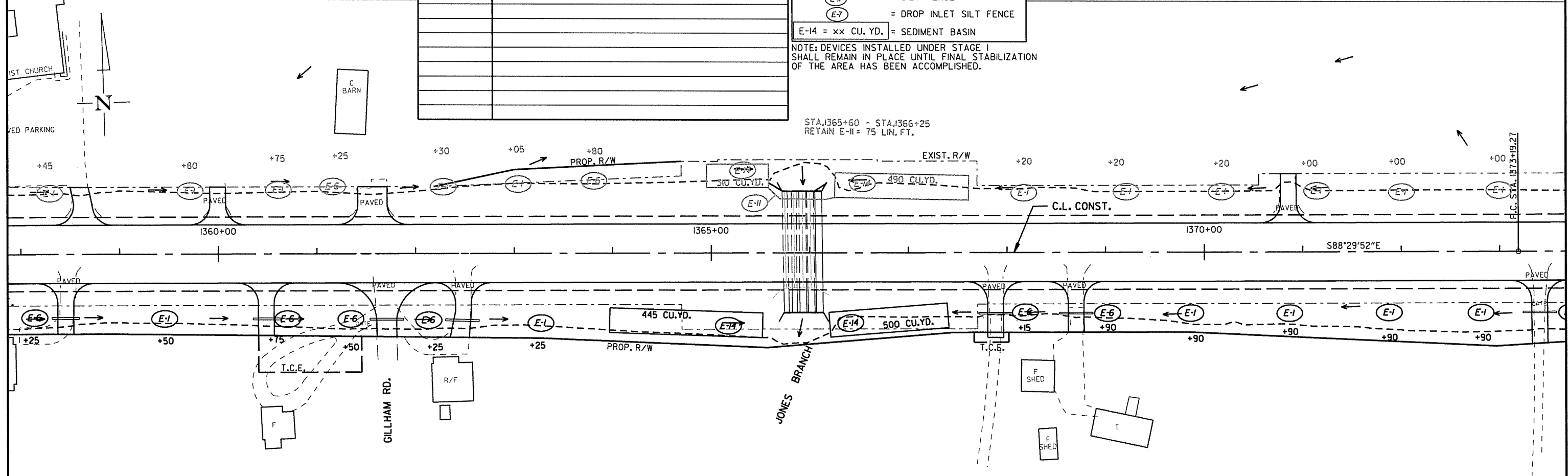
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				6	ARK.	CA0501	20	151
				JOB NO. CA0501 20 151				
				TEMPORARY EROSION CONTROL DETAILS				



REVISIONS

DATE OF REVISION	REVISION

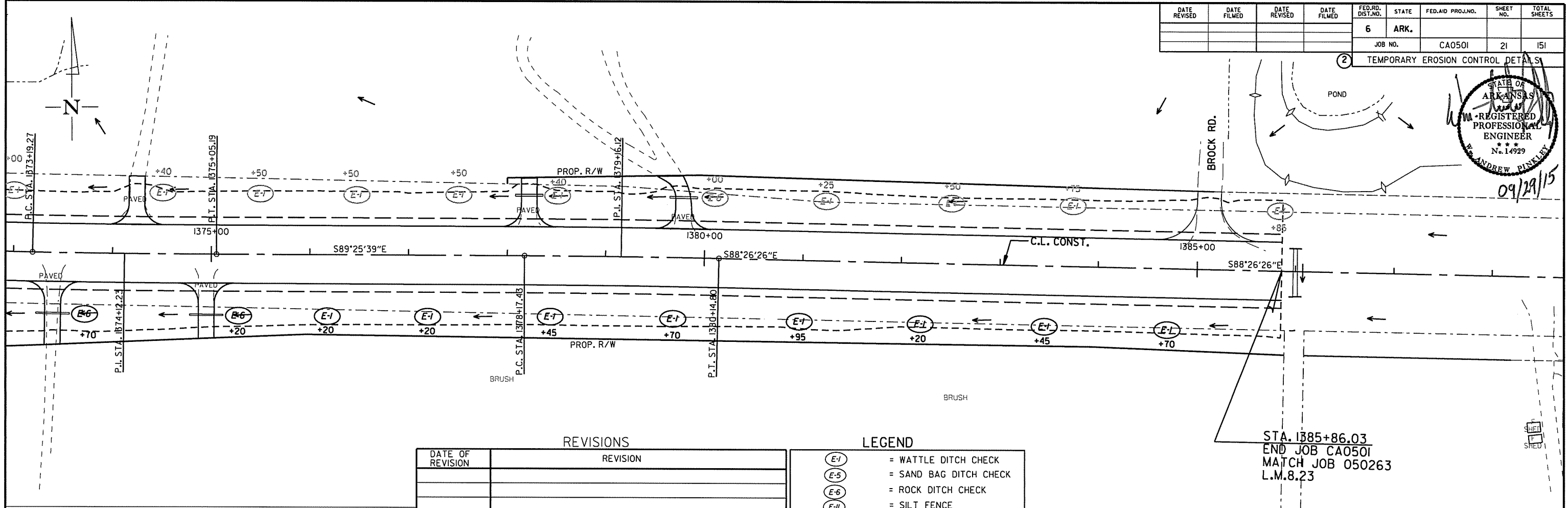
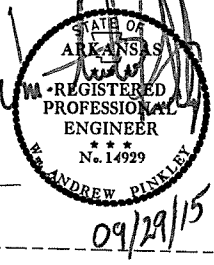
- LEGEND**
- (E-1) = WATTLE DITCH CHECK
 - (E-5) = SAND BAG DITCH CHECK
 - (E-6) = ROCK DITCH CHECK
 - (E-11) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE
 - E-14 = xx CU. YD. = SEDIMENT BASIN
- NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.



9/28/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		21	151
				JOB NO.		CA0501		

TEMPORARY EROSION CONTROL DETAILS



STA. 1385+86.03
 END JOB CA0501
 MATCH JOB 050263
 L.M.8.23

REVISIONS

DATE OF REVISION	REVISION

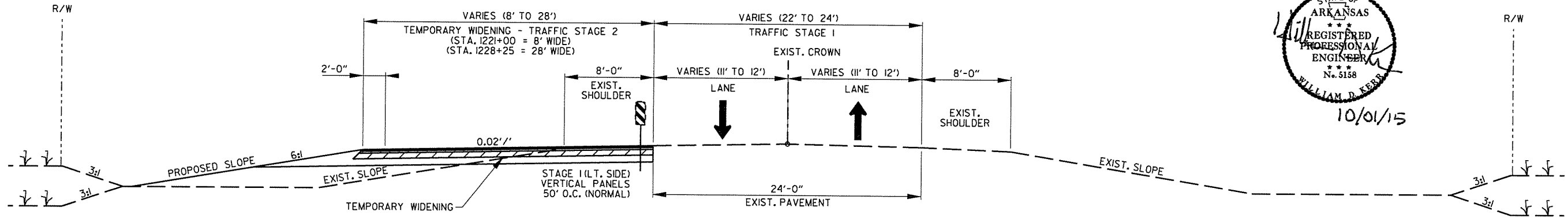
LEGEND

- (E-1) = WATTLE DITCH CHECK
 - (E-5) = SAND BAG DITCH CHECK
 - (E-6) = ROCK DITCH CHECK
 - (E-11) = SILT FENCE
 - (E-7) = DROP INLET SILT FENCE
 - E-14 = xx CU. YD. = SEDIMENT BASIN
- NOTE: DEVICES INSTALLED UNDER STAGE I SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.

NOTE:

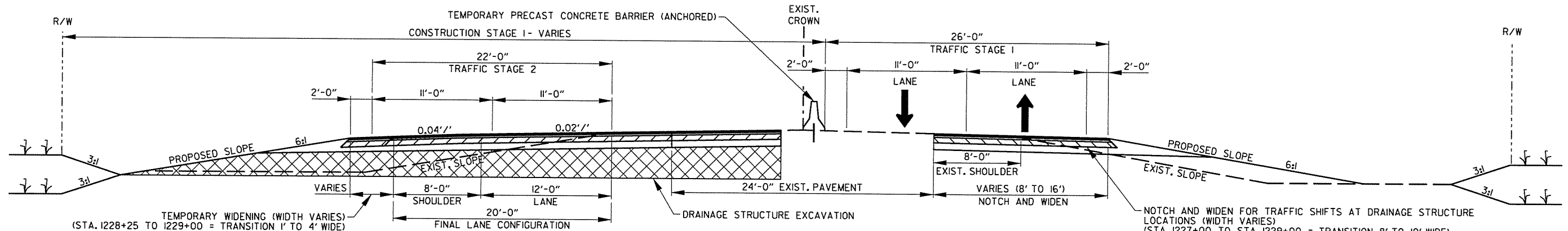
THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS QUANTITY IS THE MAXIMUM ALLOWED FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A VERTICAL DIFFERENTIAL OF 4" OR LESS, AND THEN NOTCH ANOTHER MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 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.	CA0501		22	151
				② MAINTENANCE OF TRAFFIC				



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

TEMPORARY WIDENING
STA. 1221+00 TO STA. 1228+25

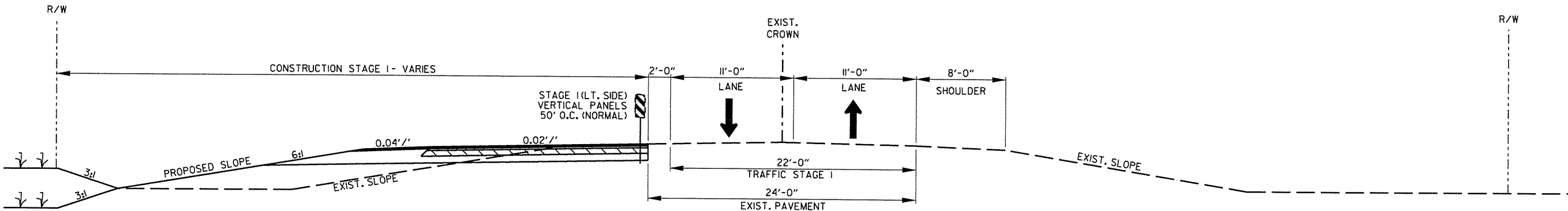


MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

TEMPORARY SHOULDER WIDENING / DRAINAGE STRUCTURE EXCAVATION
 STA. 1228+25 TO STA. 1234+00 (LT. SIDE)
 STA. 1227+00 TO STA. 1233+00 (RT. SIDE)
 STA. 1248+00 TO STA. 1257+00 (LT. SIDE)
 STA. 1249+00 TO STA. 1256+00 (RT. SIDE)
 STA. 1363+00 TO STA. 1369+00 (LT. SIDE)
 STA. 1361+50 TO STA. 1370+50 (RT. SIDE)

TEMPORARY WIDENING (WIDTH VARIES)
 (STA. 1228+25 TO 1229+00 = TRANSITION 1' TO 4' WIDE)
 (STA. 1229+00 TO STA. 1231+00 = 4' WIDE)
 (STA. 1231+00 TO STA. 1234+00 = TRANSITION 4' TO 0' WIDE)
 (STA. 1248+00 TO 1251+00 = TRANSITION 0' TO 4' WIDE)
 (STA. 1251+00 TO STA. 1254+00 = 4' WIDE)
 (STA. 1254+00 TO STA. 1257+00 = TRANSITION 4' TO 0' WIDE)
 (STA. 1363+00 TO 1365+00 = TRANSITION 0 TO 1' WIDE)
 (STA. 1365+00 TO STA. 1367+00 = 1' WIDE)
 (STA. 1367+00 TO STA. 1369+00 = TRANSITION 1' TO 0' WIDE)
 (TEMPORARY WIDENING TO BE REMOVED IN STAGE 3)

NOTCH AND WIDEN FOR TRAFFIC SHIFTS AT DRAINAGE STRUCTURE
 LOCATIONS (WIDTH VARIES)
 (STA. 1227+00 TO STA. 1229+00 = TRANSITION 8' TO 10' WIDE)
 (STA. 1229+00 TO STA. 1231+00 = 10' WIDE)
 (STA. 1231+00 TO STA. 1233+00 = TRANSITION 10' TO 8' WIDE)
 (STA. 1249+00 TO STA. 1251+00 = TRANSITION 8' TO 10' WIDE)
 (STA. 1251+00 TO STA. 1254+00 = 10' WIDE)
 (STA. 1254+00 TO STA. 1256+00 = TRANSITION 10' TO 8' WIDE)
 (STA. 1361+50 TO STA. 1365+00 = TRANSITION 8' TO 16' WIDE)
 (STA. 1365+00 TO STA. 1367+00 = 16' WIDE)
 (STA. 1367+00 TO STA. 1370+50 = TRANSITION 16' TO 8' WIDE)



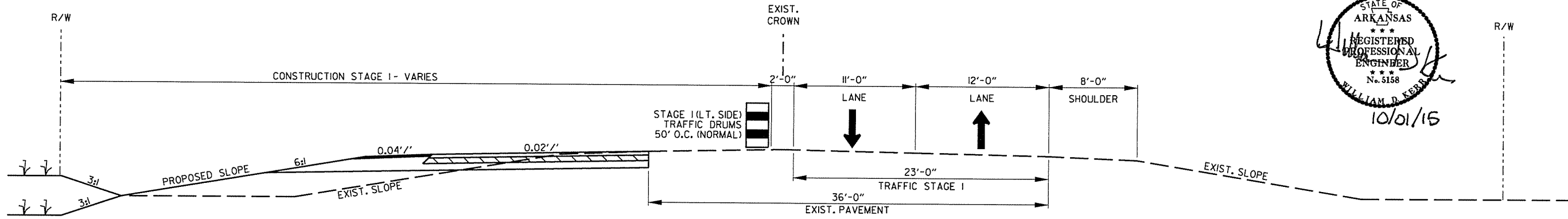
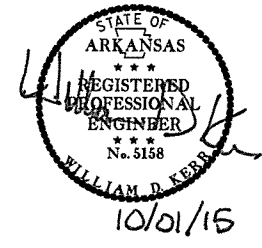
MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

STA. 1233+00 TO STA. 1249+00
 STA. 1385+00 TO STA. 1385+86.63

MAINTENANCE OF TRAFFIC
STAGE I

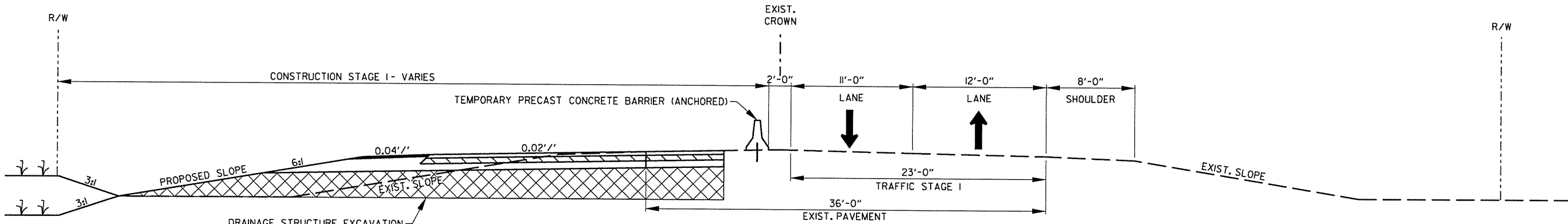
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				6	ARK.			
				JOB NO.	CA0501	23	151	

② MAINTENANCE OF TRAFFIC



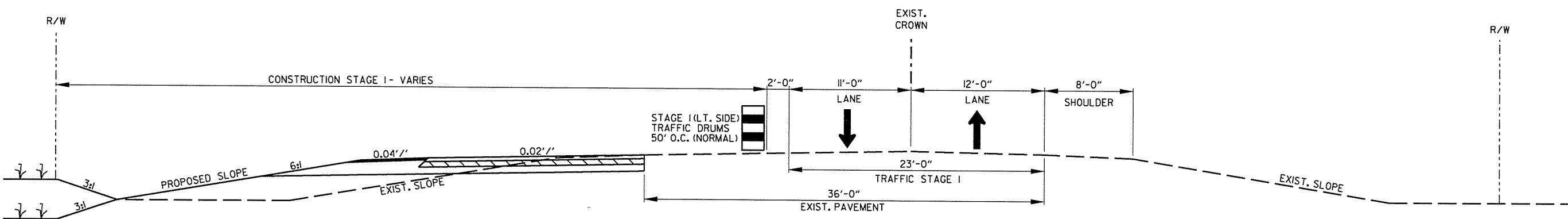
MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

EXIST. 2-LANE TO 3-LANE TRANSITION STA. 1253+22 TO 1260+44
EXIST. 3-LANE STA. 1260+44 TO STA. 1320+70
EXIST. 3-LANE TO 2-LANE TRANSITION STA. 1320+70 TO 1328+00



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

DRAINAGE STRUCTURE EXCAVATION
STA. 1317+68.00



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE I - TYPICAL SECTION

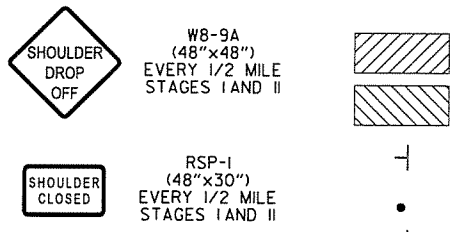
EXIST. 2-LANE TO 3-LANE TRANSITION STA. 1328+00 TO 1335+00
EXIST. 3-LANE STA. 1335+00 TO STA. 1378+00
(SEE SHEET 22 TYPICAL SECTION FOR DRAINAGE STRUCTURE EXCAVATION SECTION FROM STA. 361+50 TO STA. 1370+50)
EXIST. 3-LANE TO 2-LANE TRANSITION STA. 1378+00 TO 1385+00

MAINTENANCE OF TRAFFIC
STAGE I

STAGE I

STATION 1221+00.00 TO 1385+86.63

VERTICAL PANELS:	269	EACH
TRAFFIC DRUMS LENGTH OF PROJECT:	23	EACH
TRAFFIC DRUMS DRIVES:	292	EACH
CONSTRUCTION PAVEMENT MARKINGS:		
4" WHITE	18,403	LIN. FT.
4" YELLOW	31,774	LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS:	18,087	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS:	11,150	LIN. FT.
TEMPORARY PRECAST CONCRETE BARRIER:	1,845	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER:	8	EACH
TEMPORARY WIDENING:	5,314	SQ. YD.



LEGEND

STAGE I CONSTRUCTION AREA

TEMPORARY WIDENING

VERTICAL PANEL

TRAFFIC DRUM

TYPE III BARRICADE

CONCRETE BARRIER

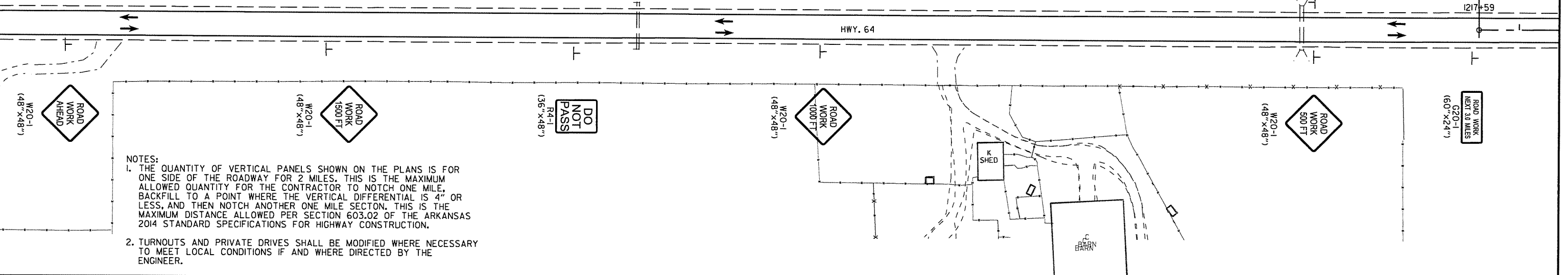
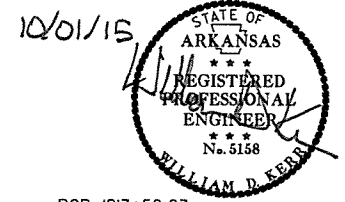
SEQUENCE OF CONSTRUCTION:

STAGE I:
 MAINTAIN TRAFFIC ON EXISTING ROADWAY. INSTALL TEMPORARY WIDENING FOR STAGE I AND STAGE 2 LANE SHIFTS. PLACE LEVELING COURSE ON LEFT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON LEFT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT SIDE OF EXISTING ROADWAY.

STAGE 2:
 SHIFT TRAFFIC TO STAGE I WIDENING. PLACE LEVELING COURSE ON RIGHT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON RIGHT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE RIGHT SIDE OF EXISTING ROADWAY.

SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE. REMOVE TEMPORARY WIDENING IN AREAS NOTED ON PLANS. PLACE FINAL ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS.

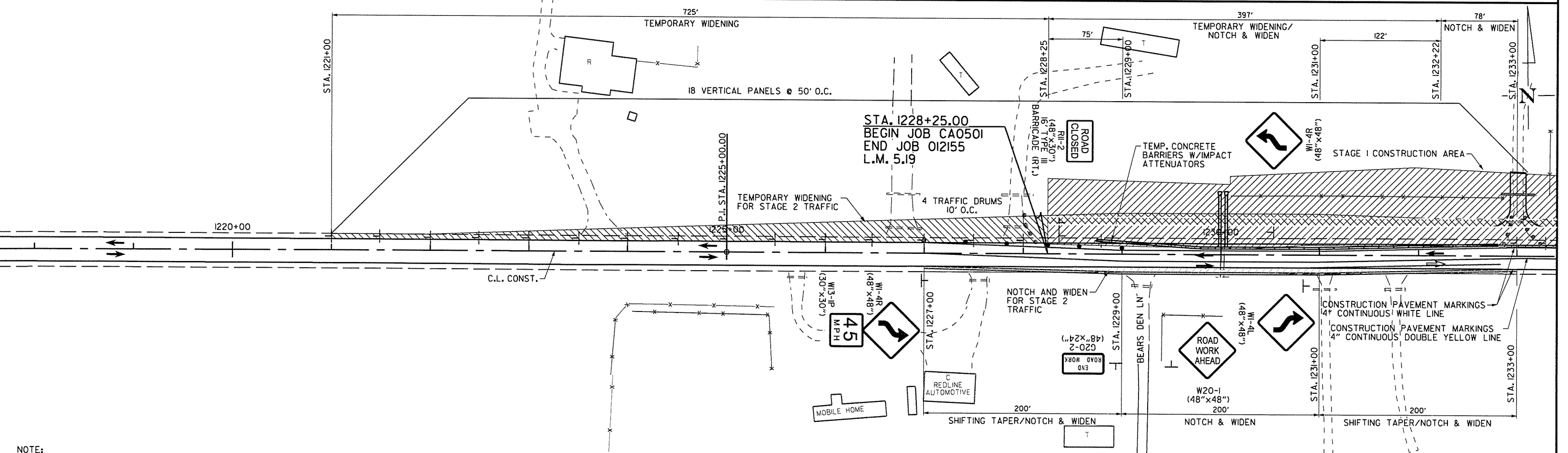
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		24	151
				JOB NO.	CA0501			
				MAINTENANCE OF TRAFFIC				



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.

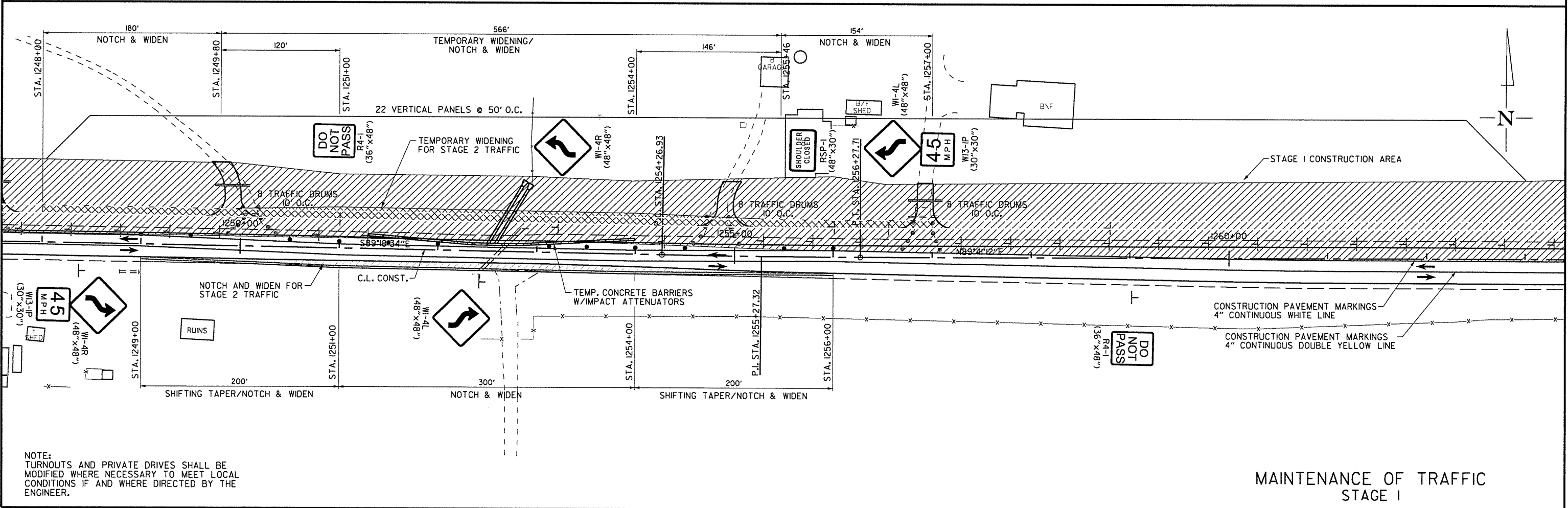
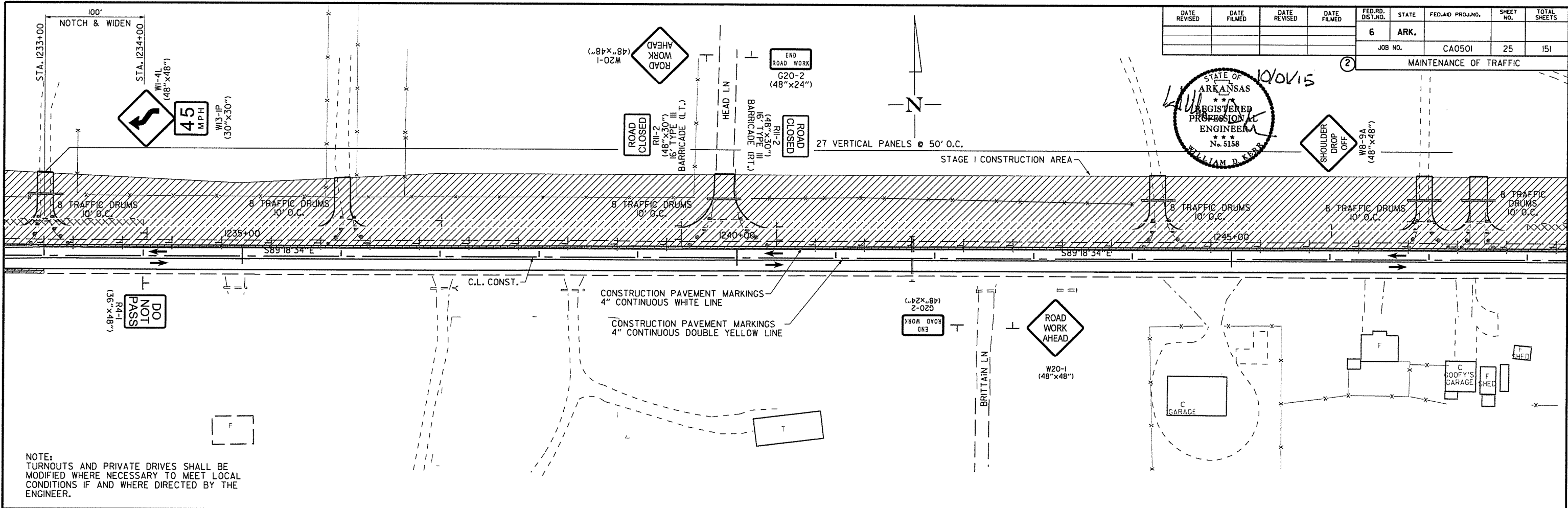
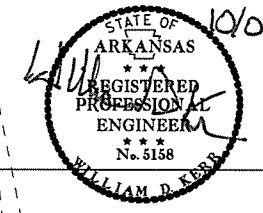
2. TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.



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

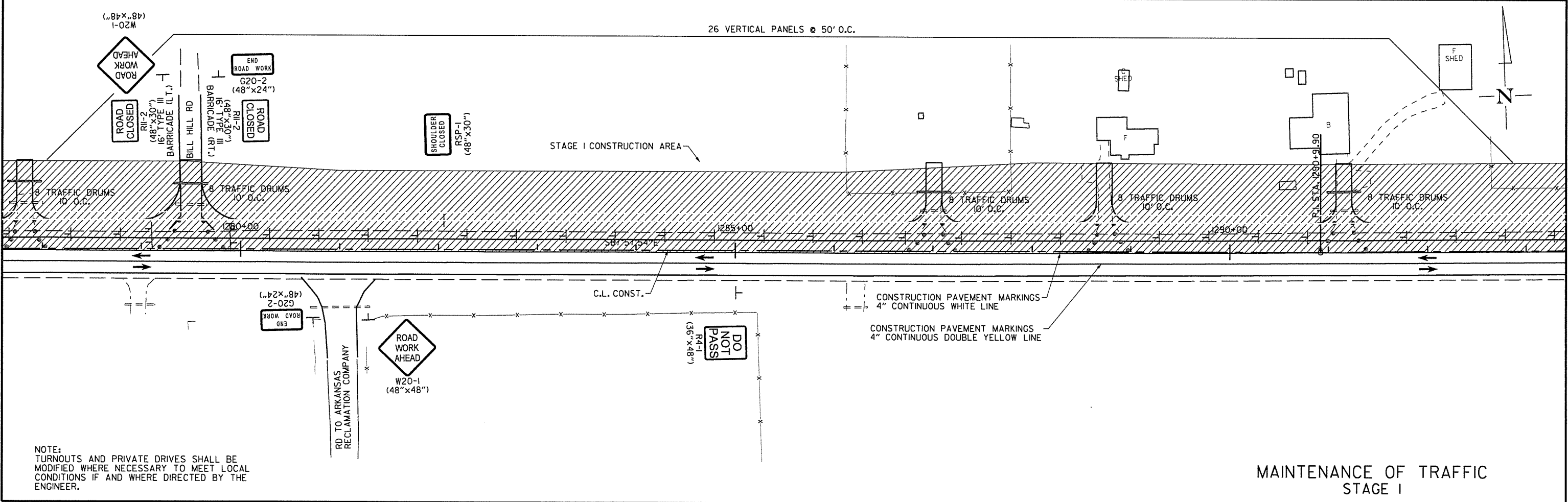
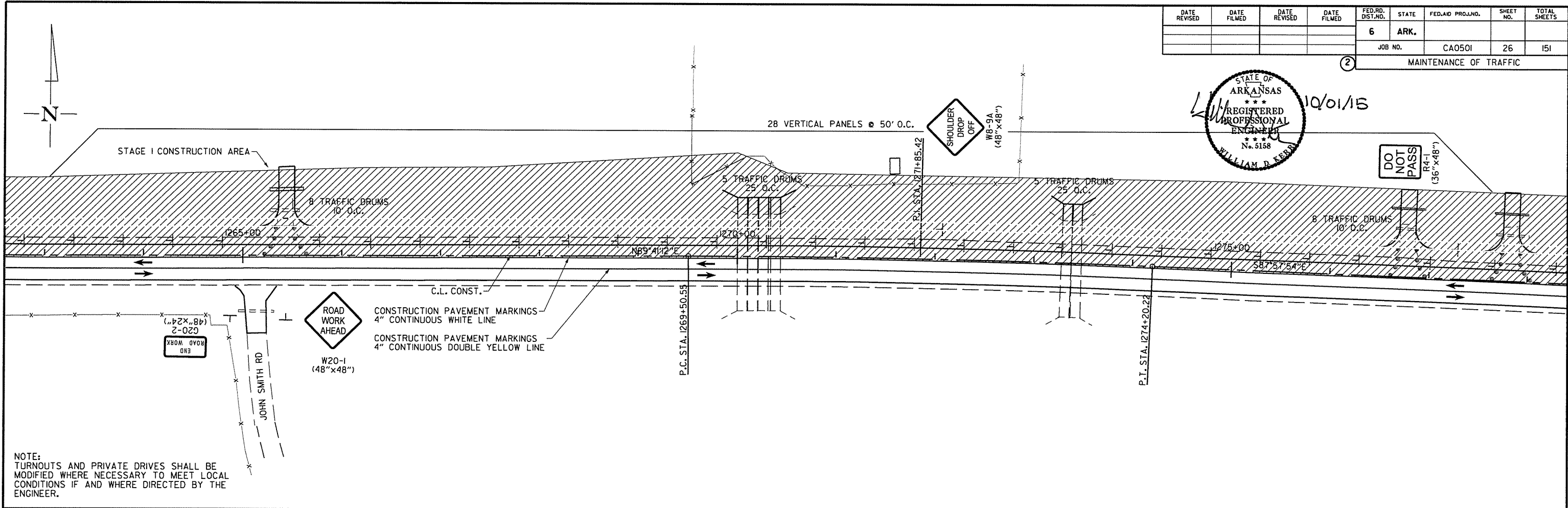
MAINTENANCE OF TRAFFIC
 STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		25	151
				JOB NO. CA0501		25		151
MAINTENANCE OF TRAFFIC								



MAINTENANCE OF TRAFFIC
STAGE I

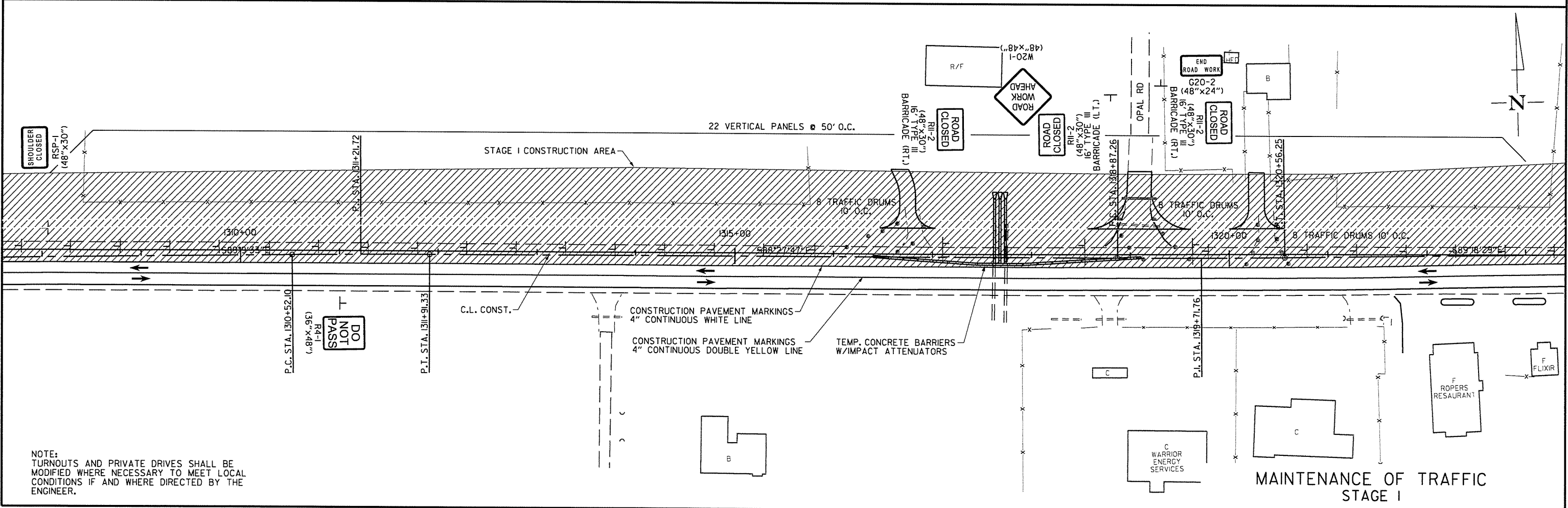
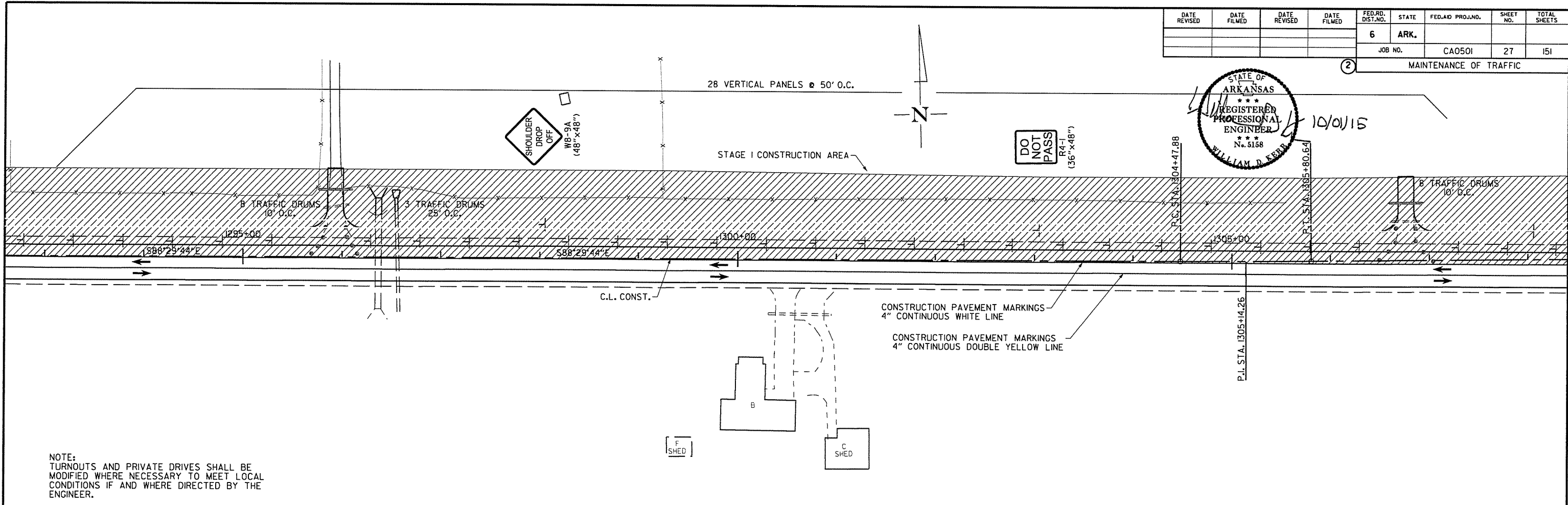
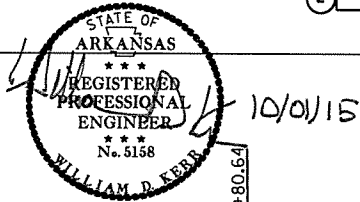
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				6	ARK.			
JOB NO. CA0501							26	151
MAINTENANCE OF TRAFFIC								



MAINTENANCE OF TRAFFIC
STAGE I

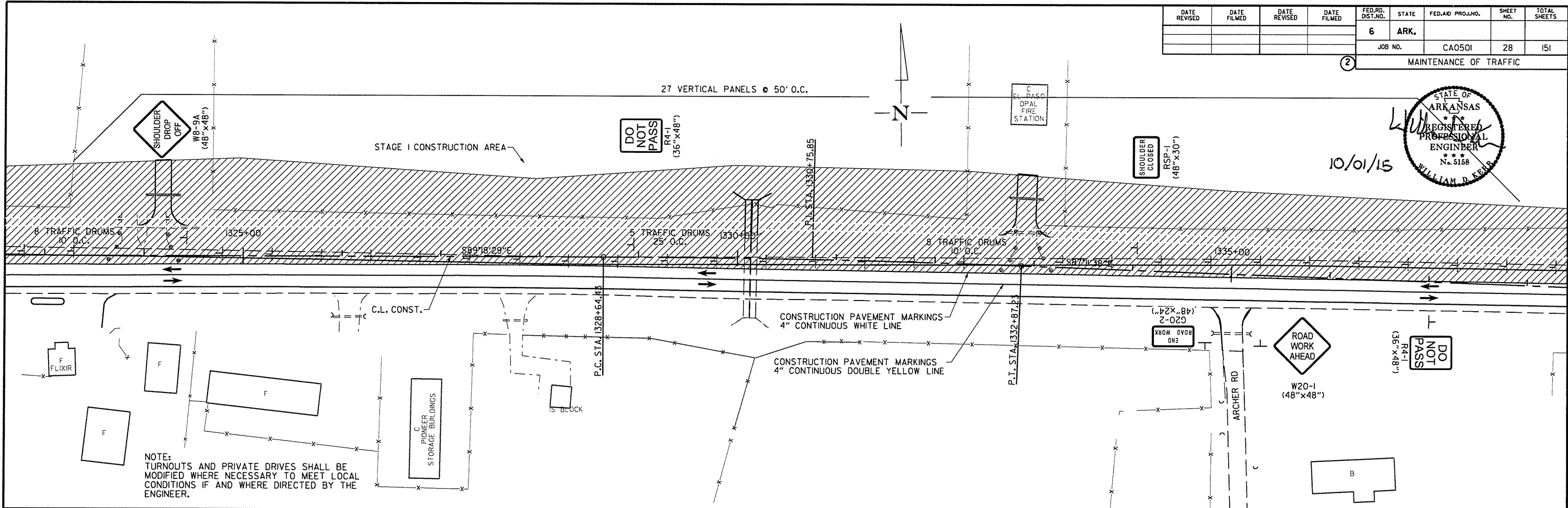
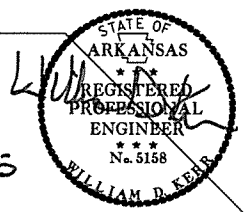
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				6	ARK.			
				JOB NO.	CA0501		27	151

② MAINTENANCE OF TRAFFIC

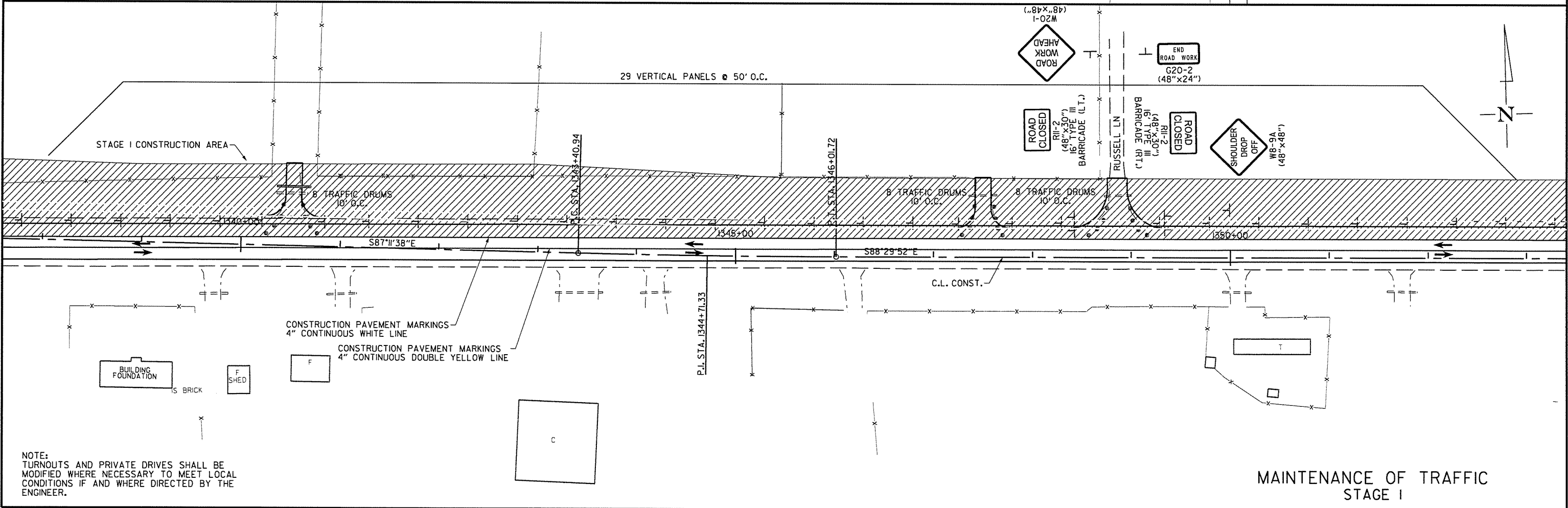


MAINTENANCE OF TRAFFIC STAGE I

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. CA0501							28	151
② MAINTENANCE OF TRAFFIC								



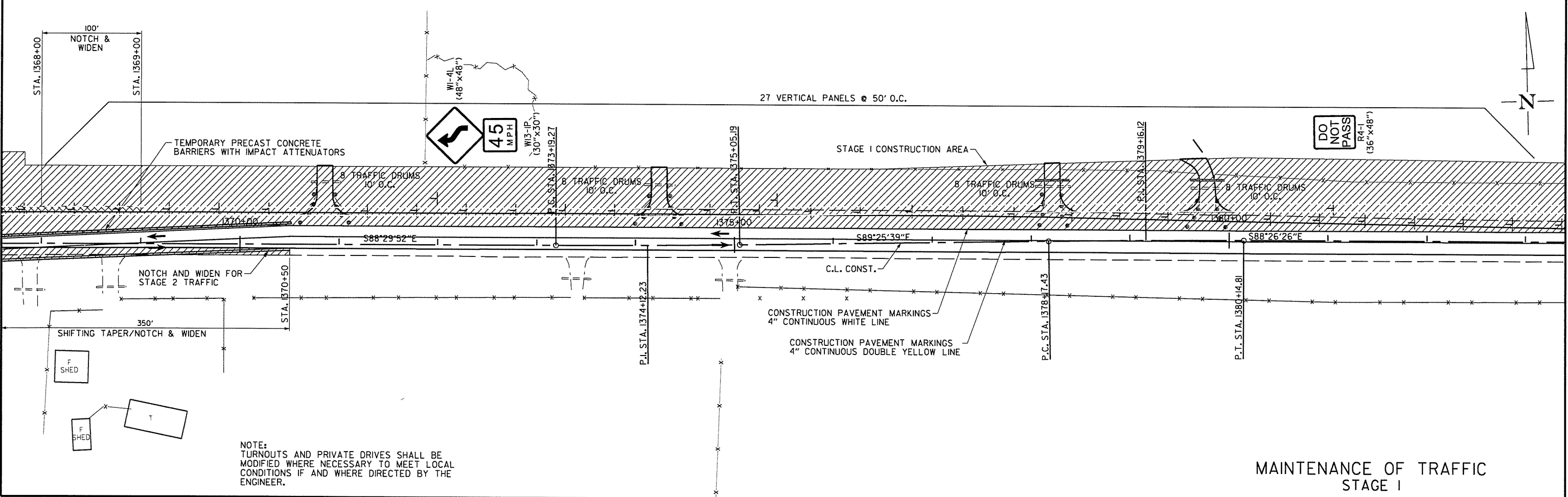
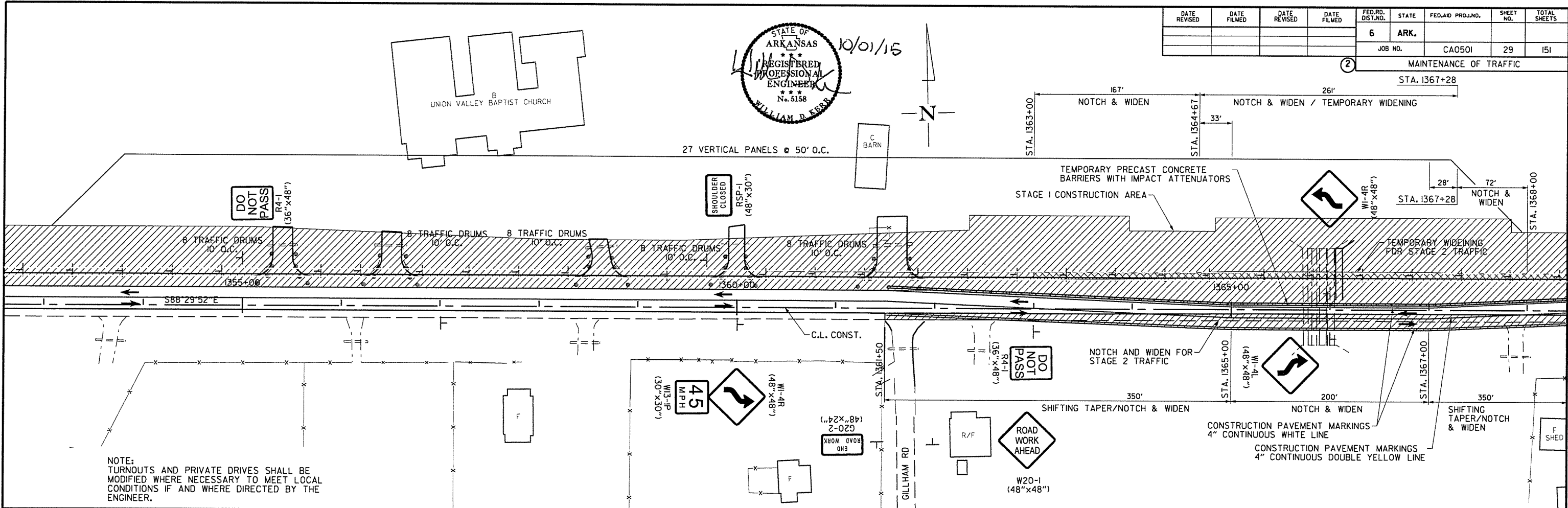
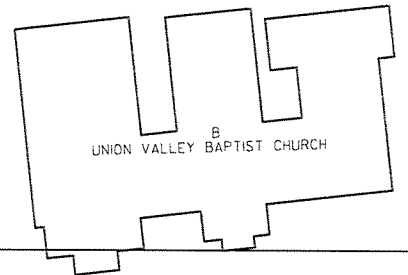
NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.



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 I

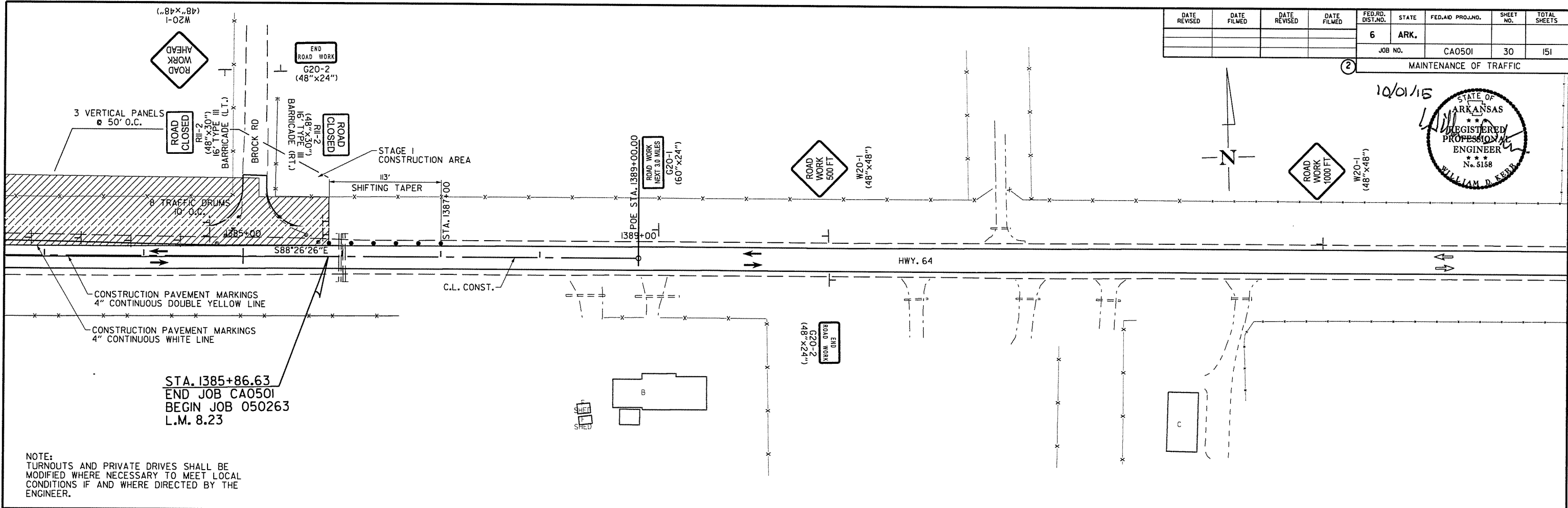
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				6	ARK.		29	151
				JOB NO. CA0501		29		151
MAINTENANCE OF TRAFFIC								



MAINTENANCE OF TRAFFIC
STAGE I

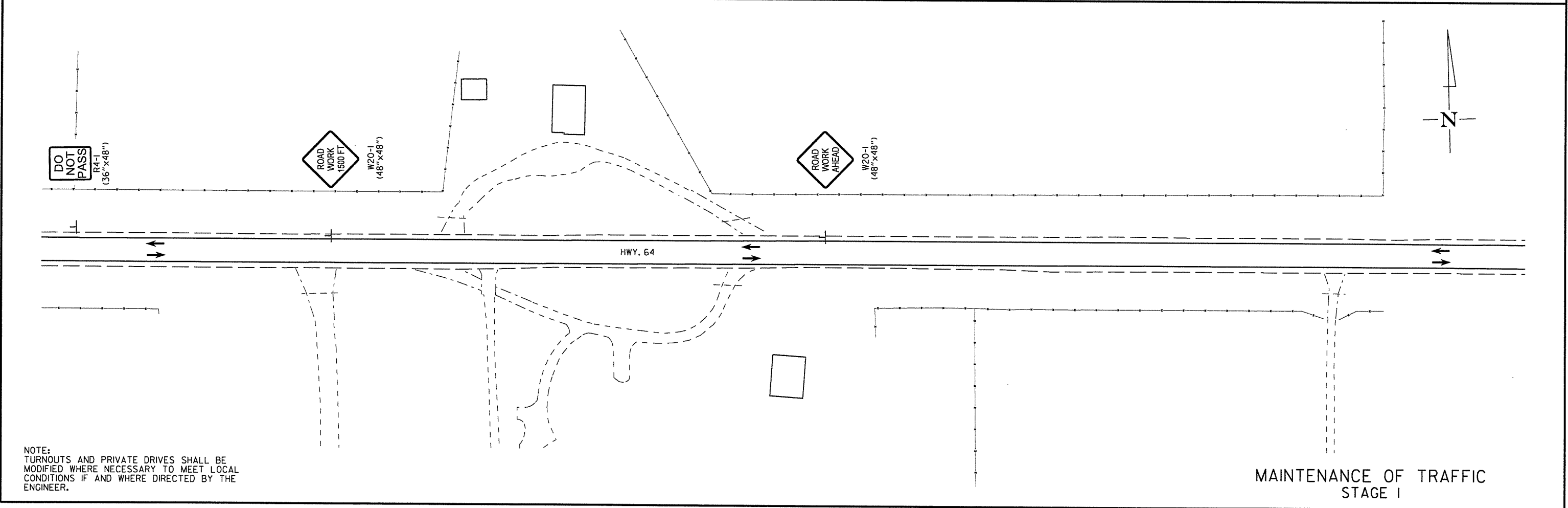
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				6	ARK.		30	151
				JOB NO.	CA0501			
				MAINTENANCE OF TRAFFIC				

10/01/15
 STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 5158
 WILLIAM D. KERR



STA. 1385+86.63
 END JOB CA0501
 BEGIN JOB 050263
 L.M. 8.23

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

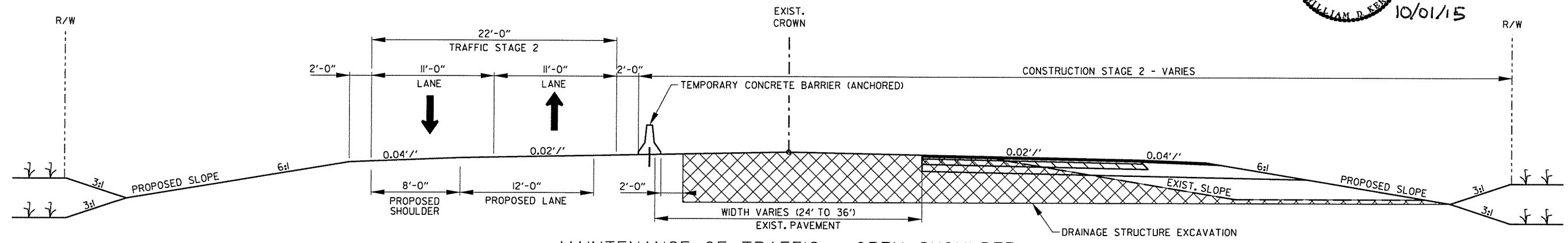


NOTE:
 TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

MAINTENANCE OF TRAFFIC
 STAGE I

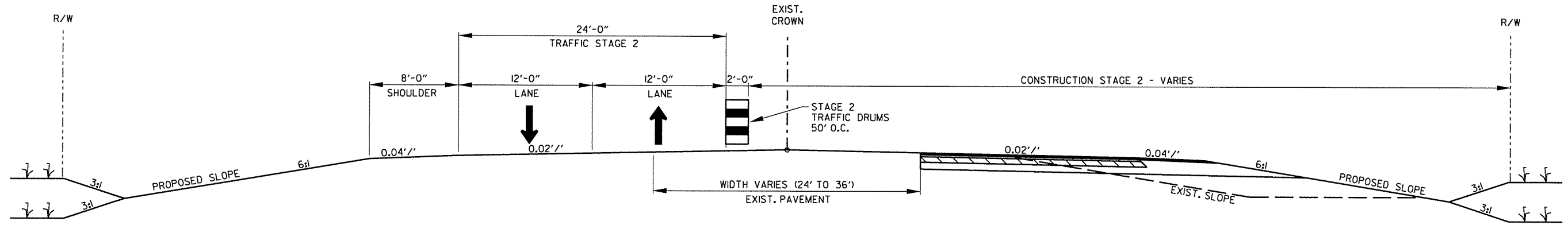
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0501							31	151

② MAINTENANCE OF TRAFFIC



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION

DRAINAGE STRUCTURE EXCAVATION
STA. 1228+25 TO STA. 1234+00
STA. 1248+00 TO STA. 1257+00
STA. 1363+00 TO STA. 1369+00



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
STAGE 2 - TYPICAL SECTION

STA. 1234+00 TO STA. 1385+86.63

MAINTENANCE OF TRAFFIC
STAGE 2

STAGE 2

STATION 1221+00.00 TO 1385+86.63

VERTICAL PANELS:	0	EACH
TRAFFIC DRUMS LENGTH OF PROJECT:	255	EACH
TRAFFIC DRUMS DRIVES:	425	EACH
CONSTRUCTION PAVEMENT MARKINGS:		
4" WHITE	32,975	LIN. FT.
4" YELLOW	32,975	LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS:	6,800	LIN. FT.
TEMPORARY PRECAST CONCRETE BARRIER:	2325	LIN. FT.
RELOCATING TEMPORARY PRECAST CONCRETE BARRIER:	1845	LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER:	8	EACH
TEMPORARY WIDENING REMOVAL:	0	SQ. YD.

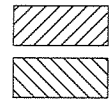


W8-9A
(48"x48")
EVERY 1/2 MILE
STAGES I AND II

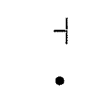


RSP-1
(48"x30")
EVERY 1/2 MILE
STAGES I AND II

LEGEND



STAGE 2 CONSTRUCTION AREA



TEMPORARY WIDENING



VERTICAL PANEL

TRAFFIC DRUM

TYPE III BARRICADE

CONCRETE BARRIER

SEQUENCE OF CONSTRUCTION:

STAGE 1:

MAINTAIN TRAFFIC ON EXISTING ROADWAY. INSTALL TEMPORARY WIDENING FOR STAGE 1 AND STAGE 2 LANE SHIFTS. PLACE LEVELING COURSE ON LEFT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON LEFT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT SIDE OF EXISTING ROADWAY.

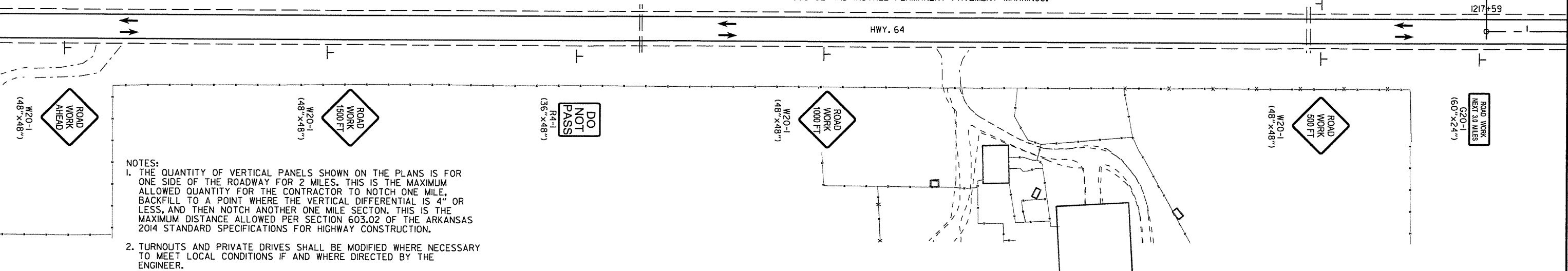
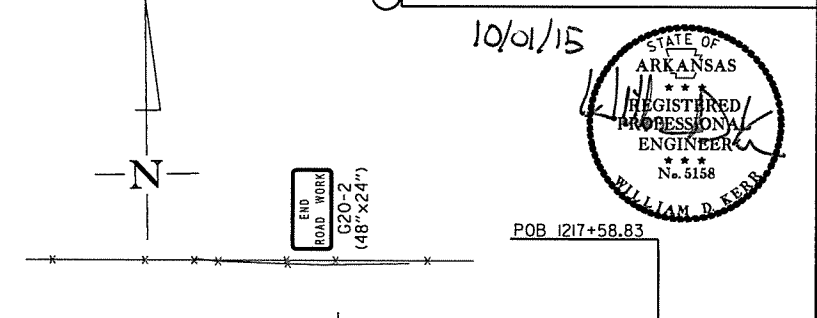
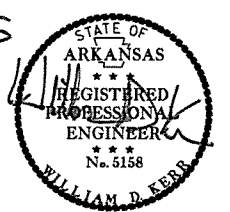
STAGE 2:

SHIFT TRAFFIC TO STAGE 1 WIDENING. PLACE LEVELING COURSE ON RIGHT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON RIGHT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE RIGHT SIDE OF EXISTING ROADWAY.

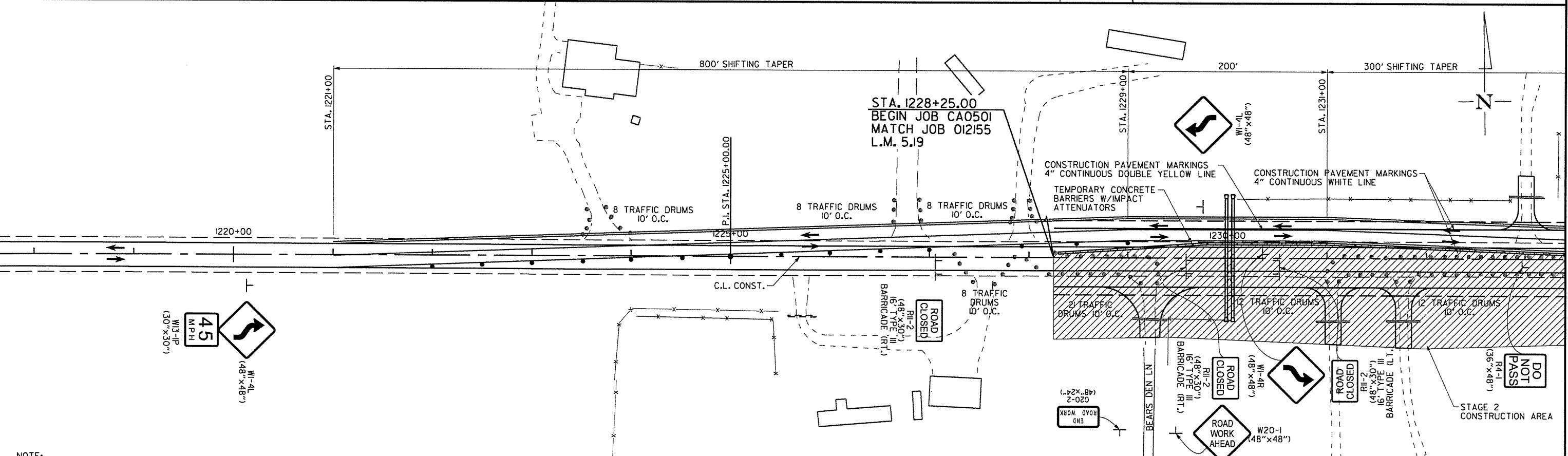
SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE. REMOVE TEMPORARY WIDENING IN AREAS NOTED ON PLANS. PLACE FINAL ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS.

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. CA0501	32	151
							MAINTENANCE OF TRAFFIC		

10/01/15



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.

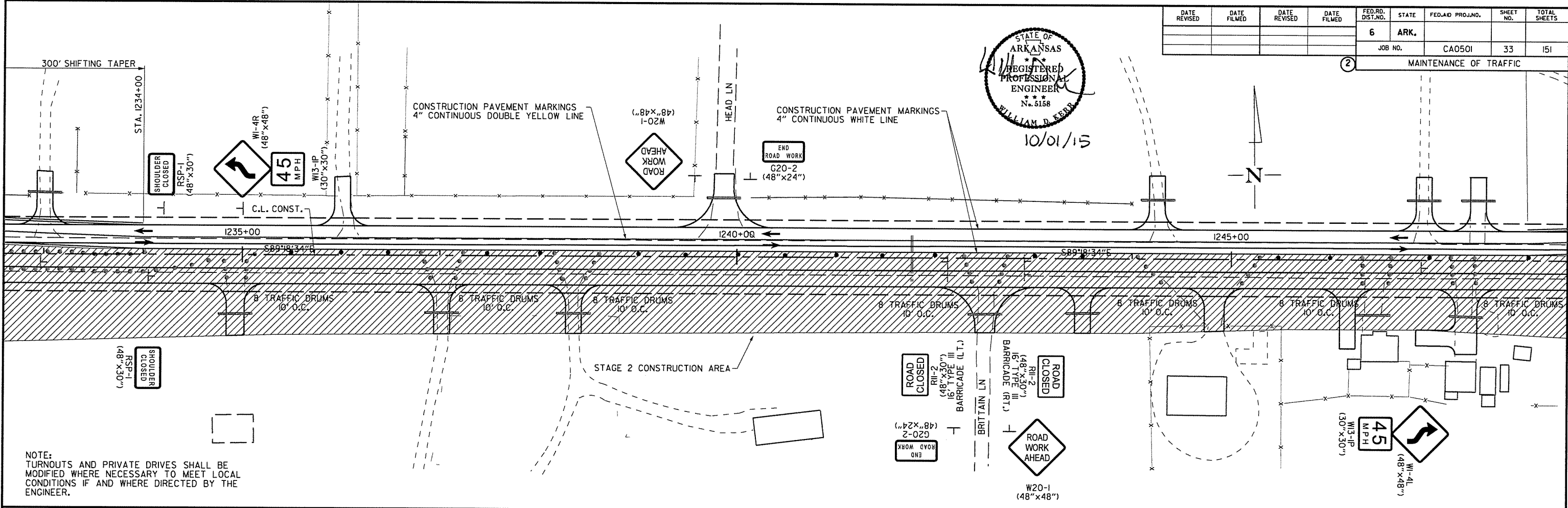


NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

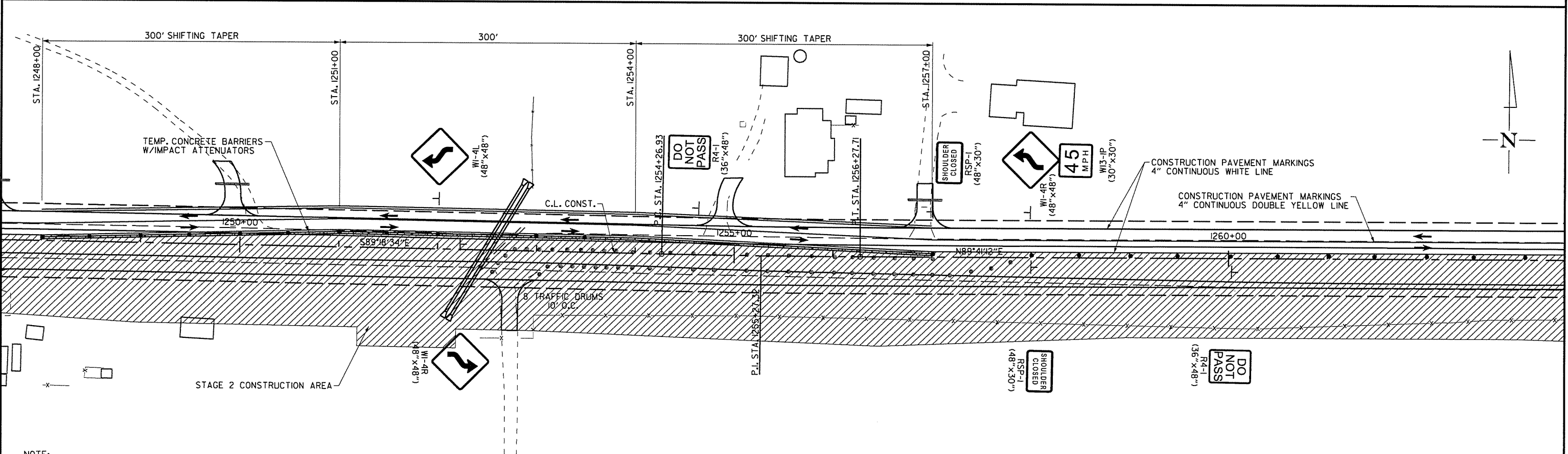
MAINTENANCE OF TRAFFIC
STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		33	151
				JOB NO. CA0501		33		151
				② MAINTENANCE OF TRAFFIC				

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 WILLIAM D. BERN
 No. 5158
 10/01/15



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

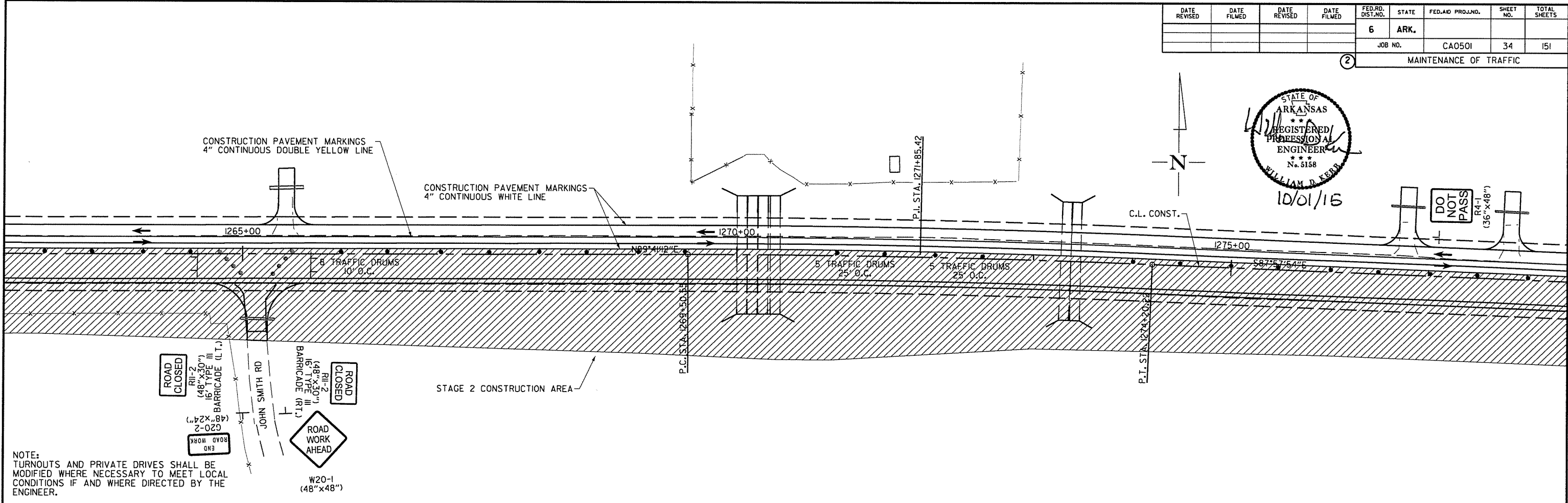
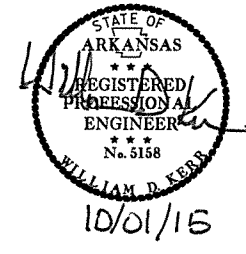


NOTE:
 TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

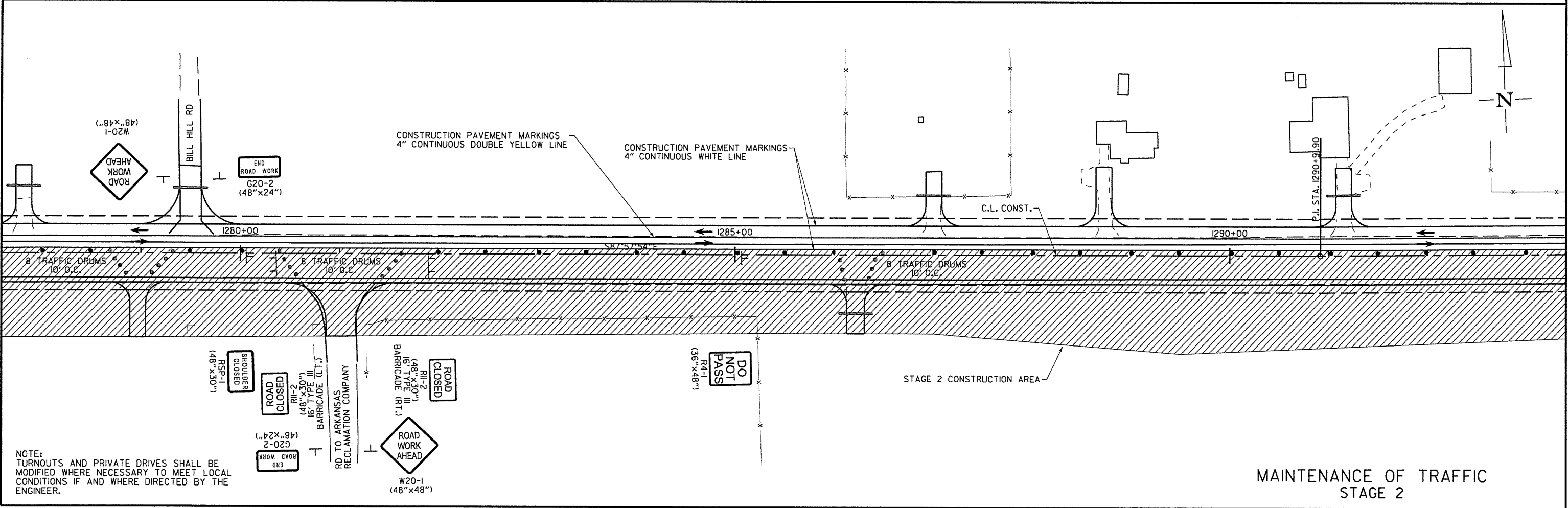
MAINTENANCE OF TRAFFIC
 STAGE 2

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.	CA0501	34	151	

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.



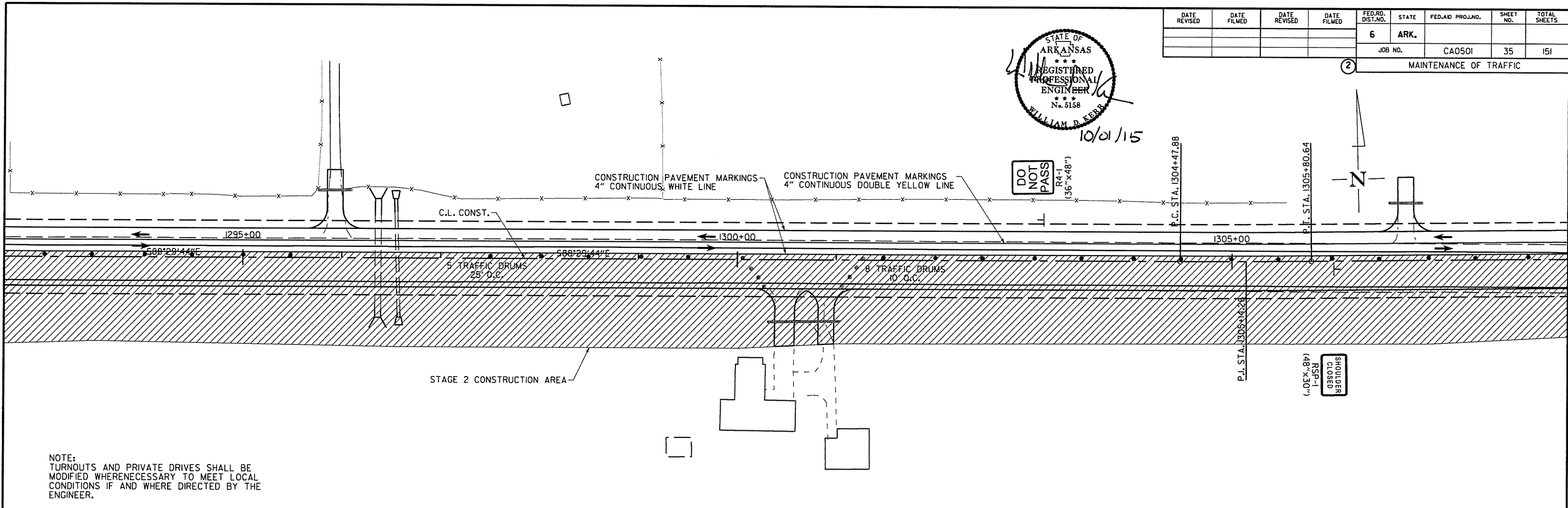
NOTE:
TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS IF AND WHERE DIRECTED BY THE ENGINEER.

MAINTENANCE OF TRAFFIC
STAGE 2

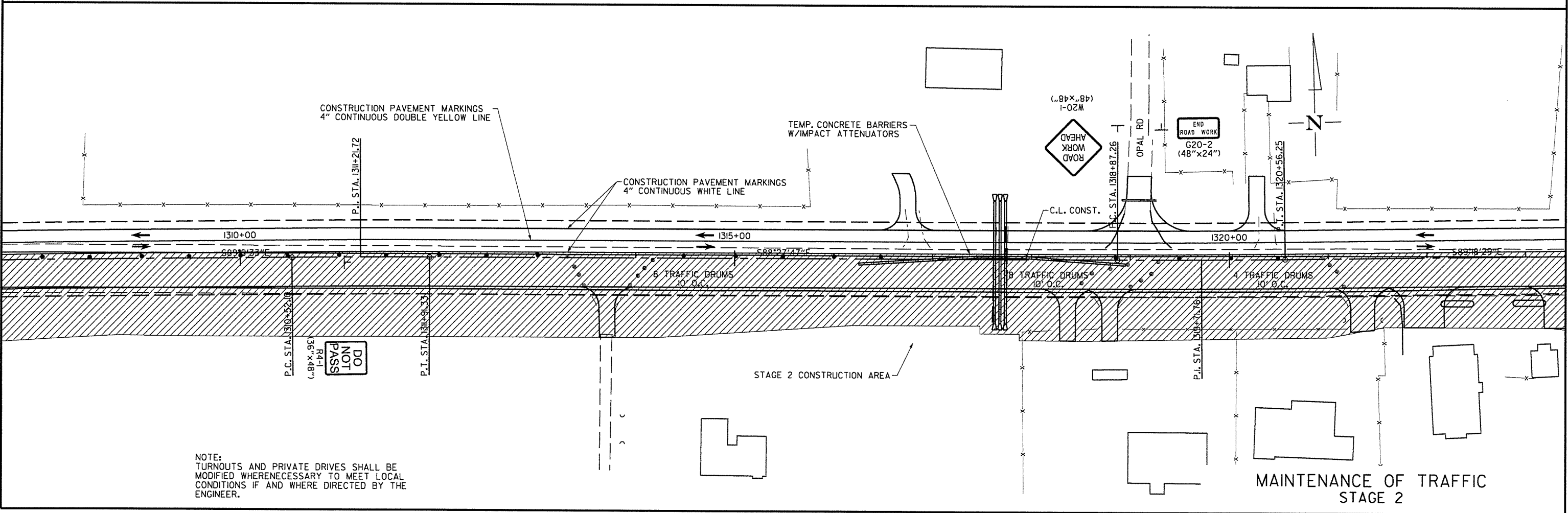
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501	35	151	



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.



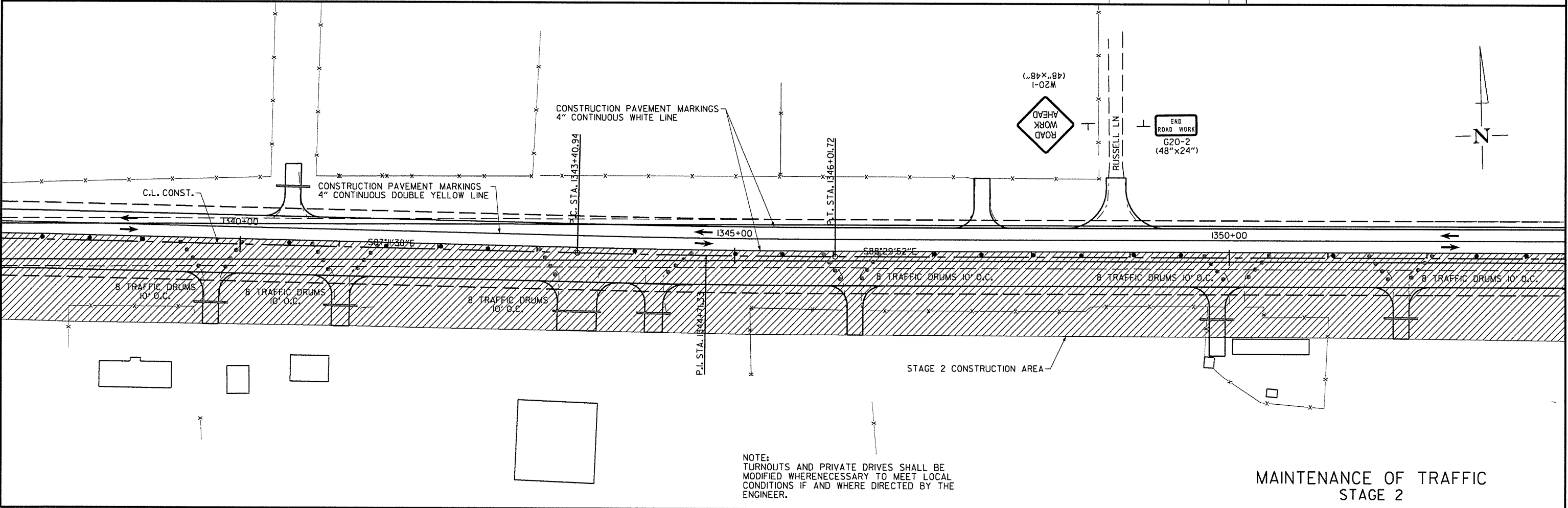
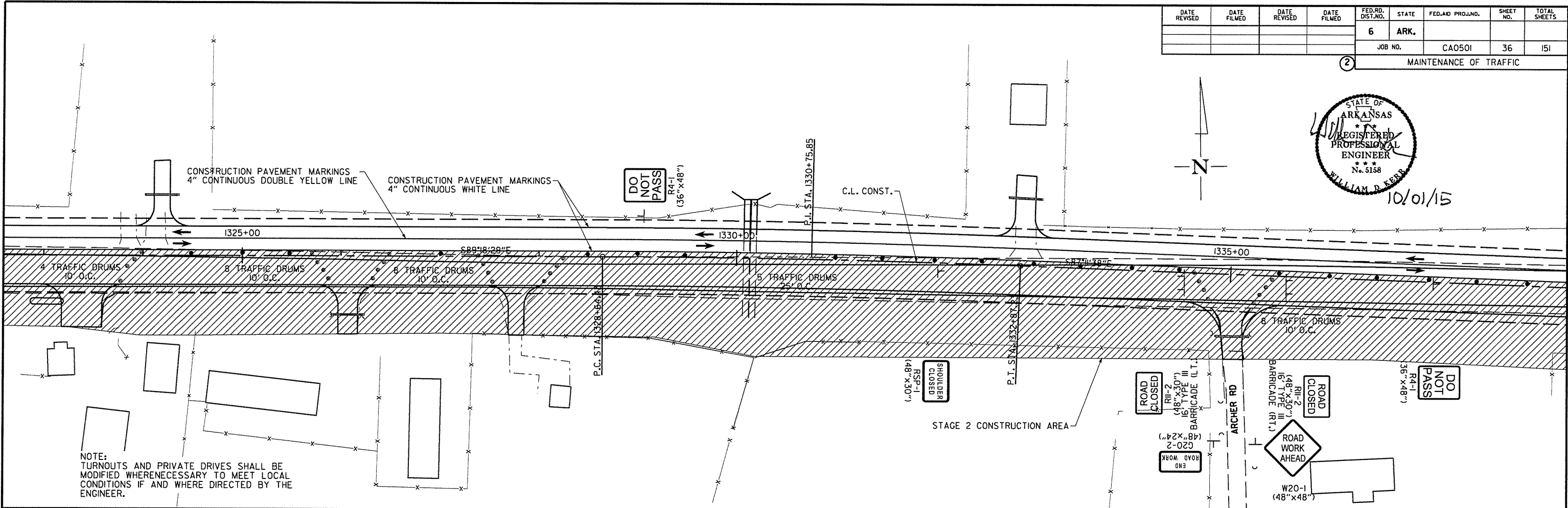
NOTE:
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MAINTENANCE OF TRAFFIC
STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		36	151
JOB NO. CA0501								
② MAINTENANCE OF TRAFFIC								



10/01/15

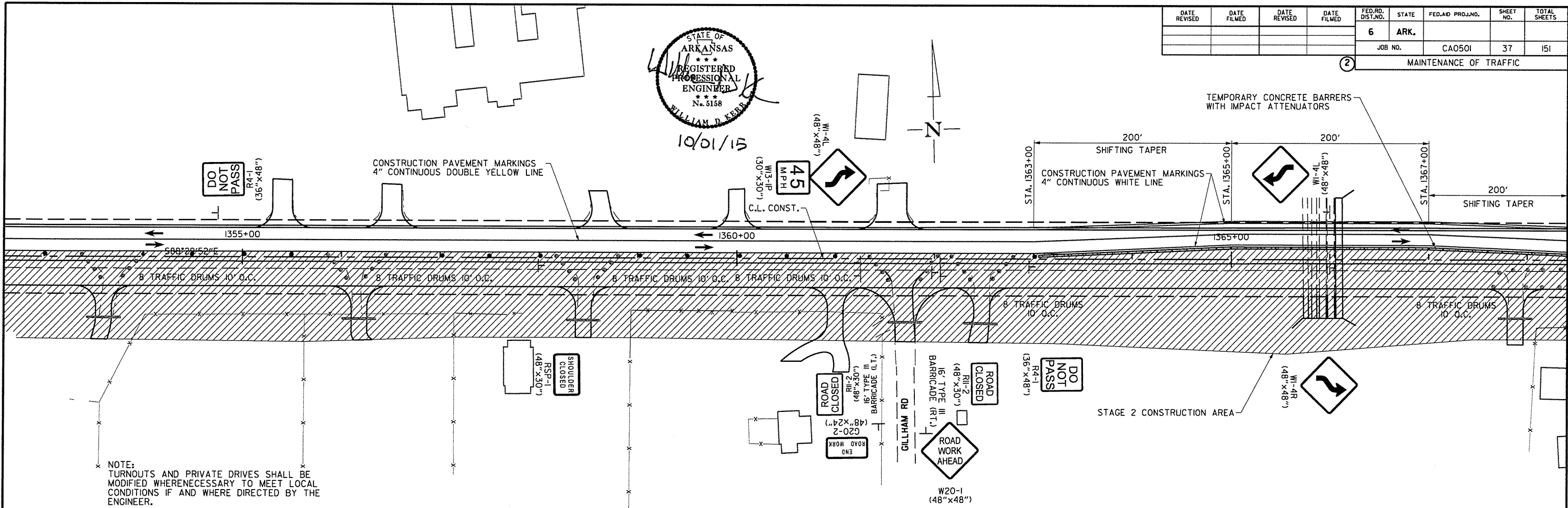


9/14/2014

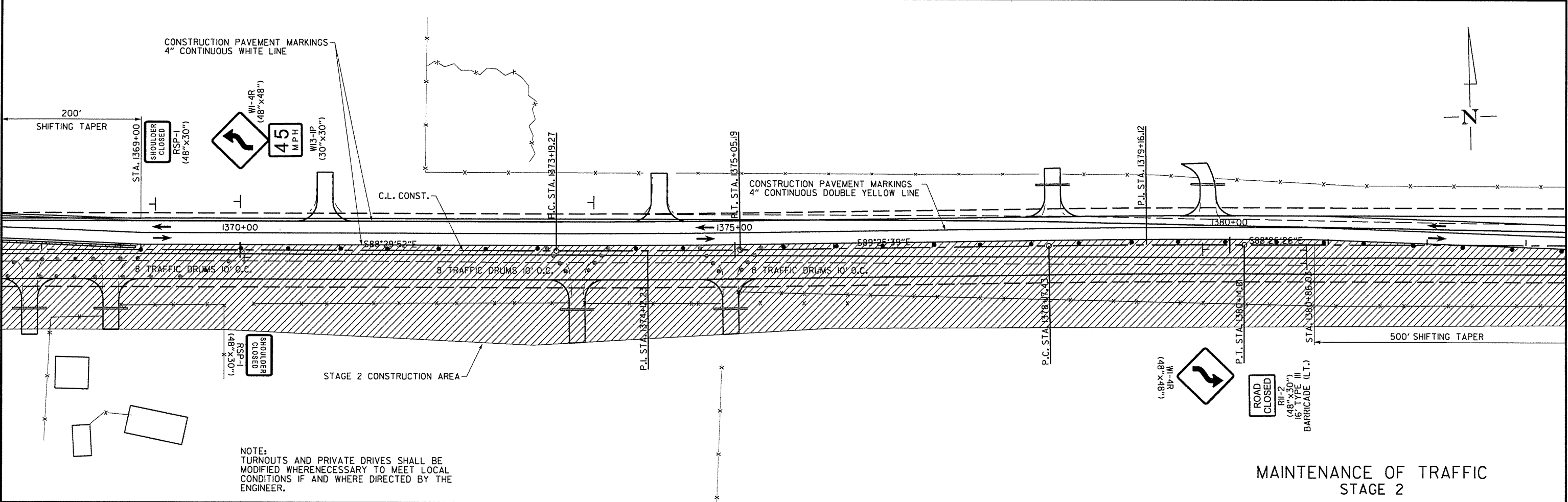
MAINTENANCE OF TRAFFIC
STAGE 2

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.	CA0501		37	151
				② MAINTENANCE OF TRAFFIC				

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 WILLIAM D. KERRY
 No. 5158
 10/01/15



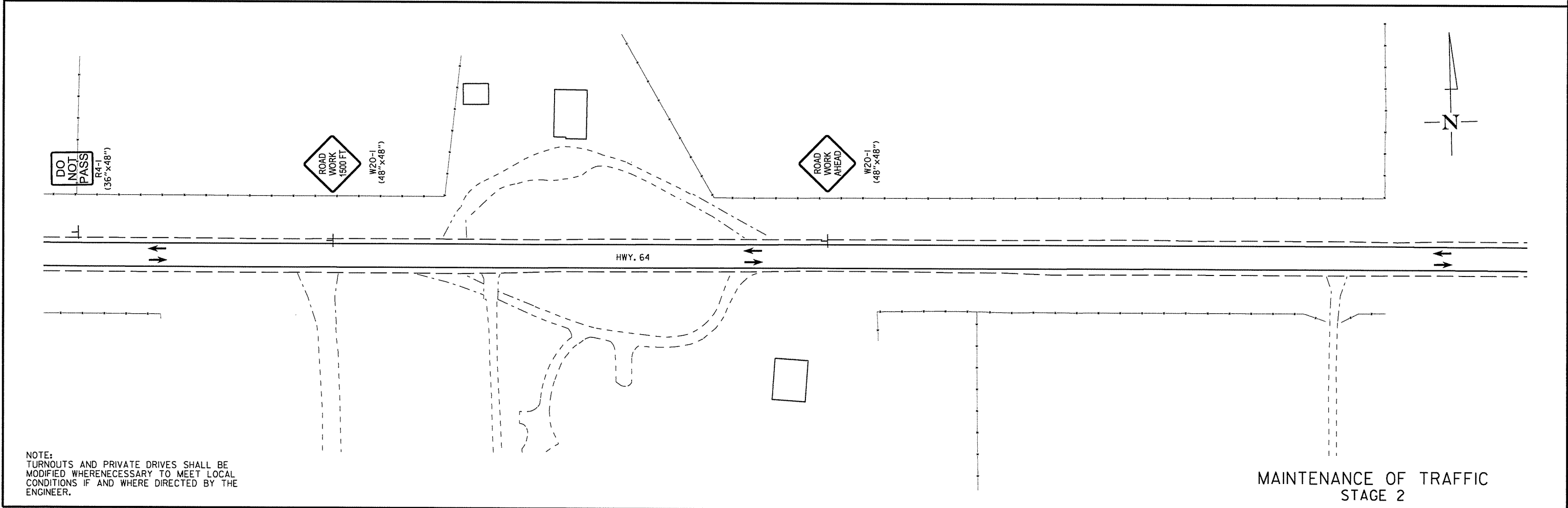
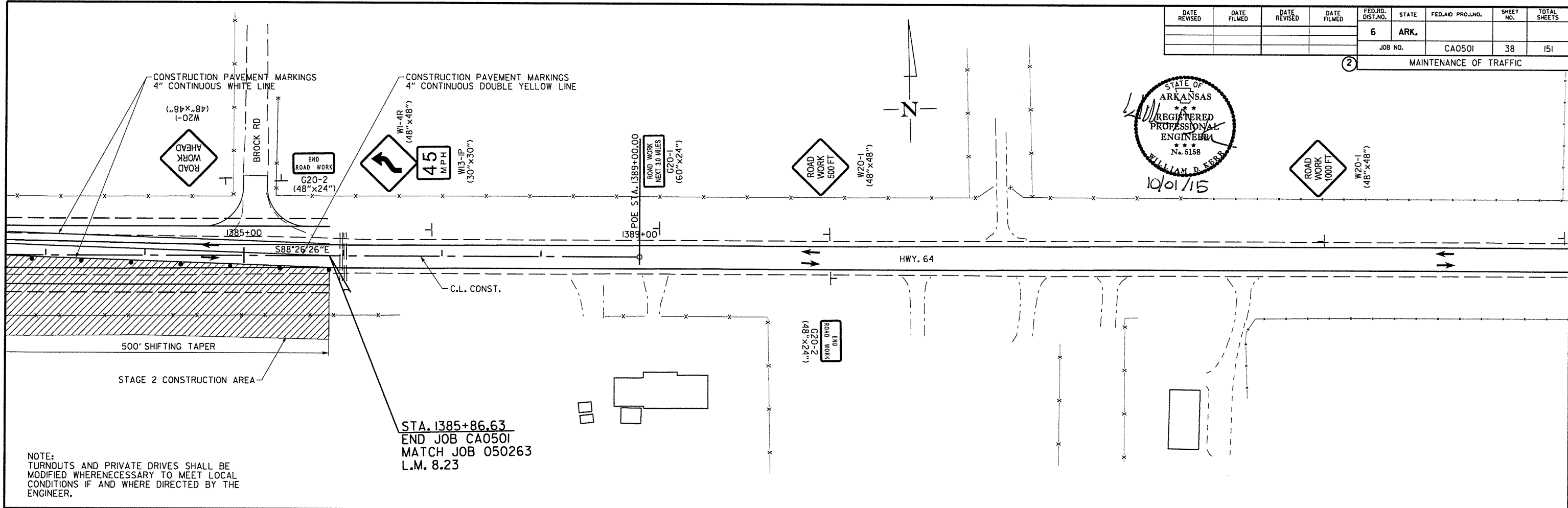
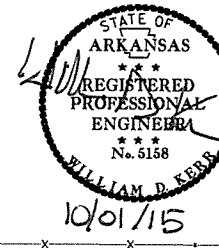
NOTE:
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MAINTENANCE OF TRAFFIC
 STAGE 2

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.	CA0501	38	151	
② MAINTENANCE OF TRAFFIC								

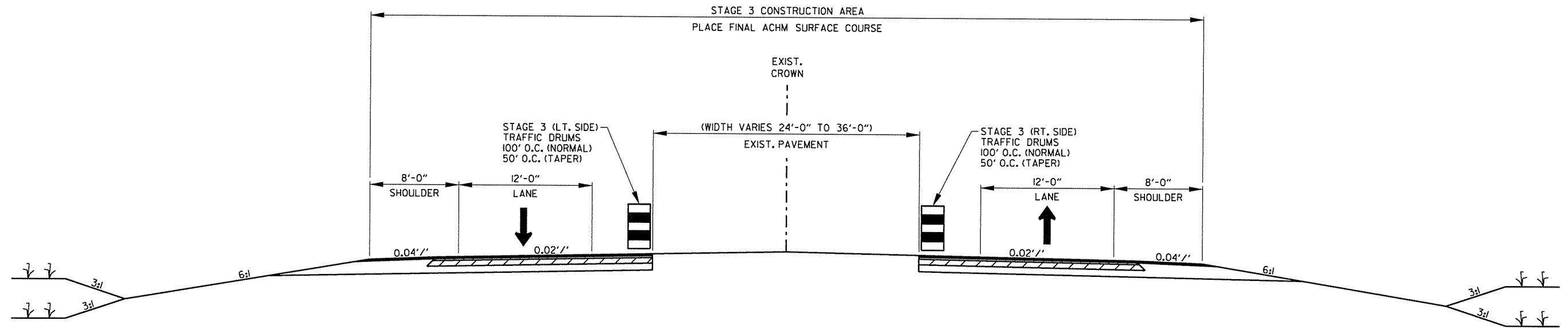
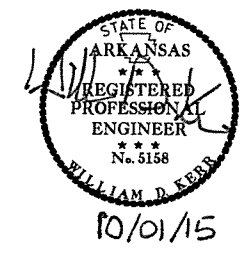


MAINTENANCE OF TRAFFIC
STAGE 2

NOTE:

OVERLAY OF EXISTING ROADWAY WILL BE PERFORMED UNDER TRAFFIC. INTERMITTENT LANE SHIFTS AND LANE CLOSURES WILL BE REQUIRED BASED ON CONTRACTOR PROGRESS AND DAILY WORK AREAS. ALL LANE SHIFTS SHALL COMPLY WITH THE GUIDELINES STATED IN THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD 2009 EDITION).

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.	CA0501		39	151
				② MAINTENANCE OF TRAFFIC				



MAINTENANCE OF TRAFFIC - OPEN SHOULDER
 STAGE 3 - TYPICAL SECTION
 OVERLAY EXISTING ROADWAY
 B.O.P. TO E.O.P.

STAGE 3

STATION 1228+25.00 TO 1385+86.63

TRAFFIC DRUMS LENGTH OF PROJECT: 336 EACH
 TRAFFIC DRUMS DRIVES: 0 EACH

CONSTRUCTION PAVEMENT MARKINGS:
 4" WHITE 31,523 LIN. FT.
 4" YELLOW 31,523 LIN. FT.

TEMPORARY PRECAST CONCRETE BARRIER: 0 LIN. FT.
 TEMPORARY IMPACT ATTENUATION BARRIER: 0 EACH
 TEMPORARY WIDENING REMOVAL: 1,576 SO. YD.



WB-9A
 (48"x48")
 EVERY 1/2 MILE
 STAGES I AND II



RSP-1
 (48"x30")
 EVERY 1/2 MILE
 STAGES I AND II

LEGEND

- TEMPORARY WIDENING REMOVAL
- VERTICAL PANEL
- TRAFFIC DRUM
- TYPE III BARRICADE
- CONCRETE BARRIER

SEQUENCE OF CONSTRUCTION:

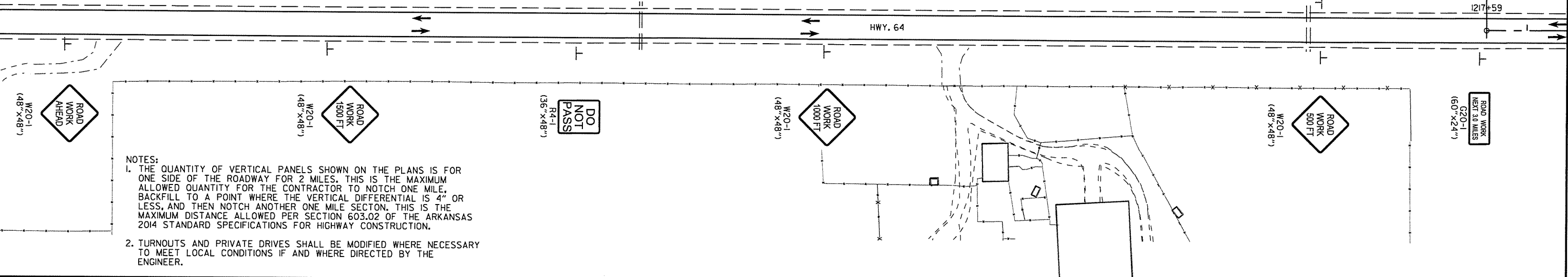
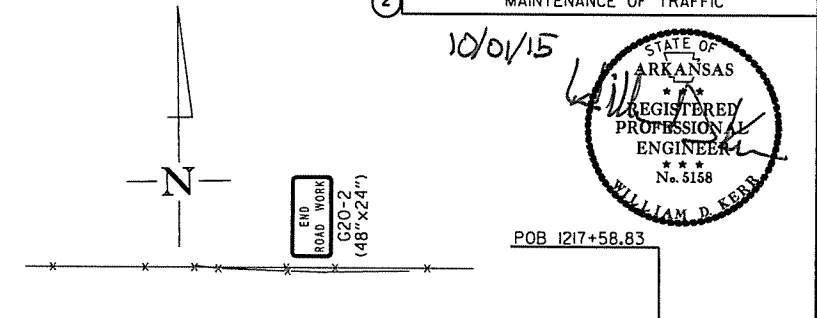
STAGE 1:
 MAINTAIN TRAFFIC ON EXISTING ROADWAY. INSTALL TEMPORARY WIDENING FOR STAGE 1 AND STAGE 2 LANE SHIFTS. PLACE LEVELING COURSE ON LEFT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON LEFT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON LEFT SIDE OF EXISTING ROADWAY.

STAGE 2:
 SHIFT TRAFFIC TO STAGE 1 WIDENING. PLACE LEVELING COURSE ON RIGHT SIDE OF EXISTING CROWN UP TO FINAL 2" LIFT OF SURFACE COURSE. NOTCH AND WIDEN ON RIGHT SIDE. DRIVEWAYS, SIDE DRAINS, AND CROSS DRAINS SHALL BE CONSTRUCTED ON THE RIGHT SIDE OF EXISTING ROADWAY.

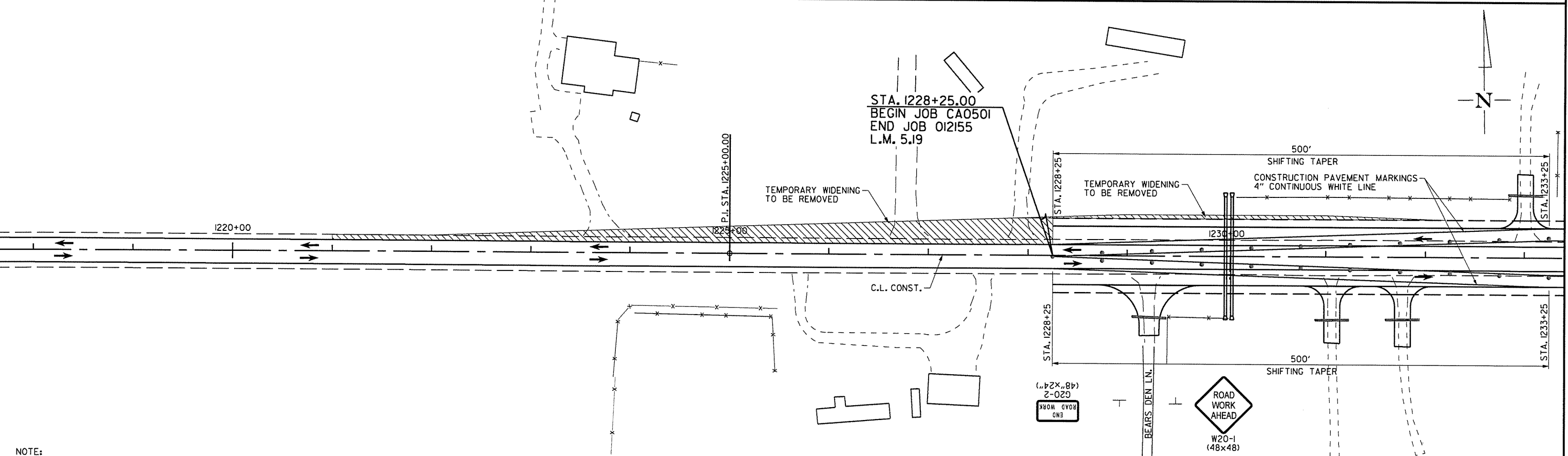
STAGE 3:
 SHIFT TRAFFIC TO CONSTRUCTION CENTERLINE. REMOVE TEMPORARY WIDENING IN AREAS NOTED ON PLANS. PLACE FINAL ACHM SURFACE COURSE AND INSTALL PERMANENT PAVEMENT MARKINGS.

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.	CA0501		40	151
				MAINTENANCE OF TRAFFIC				

10/01/15



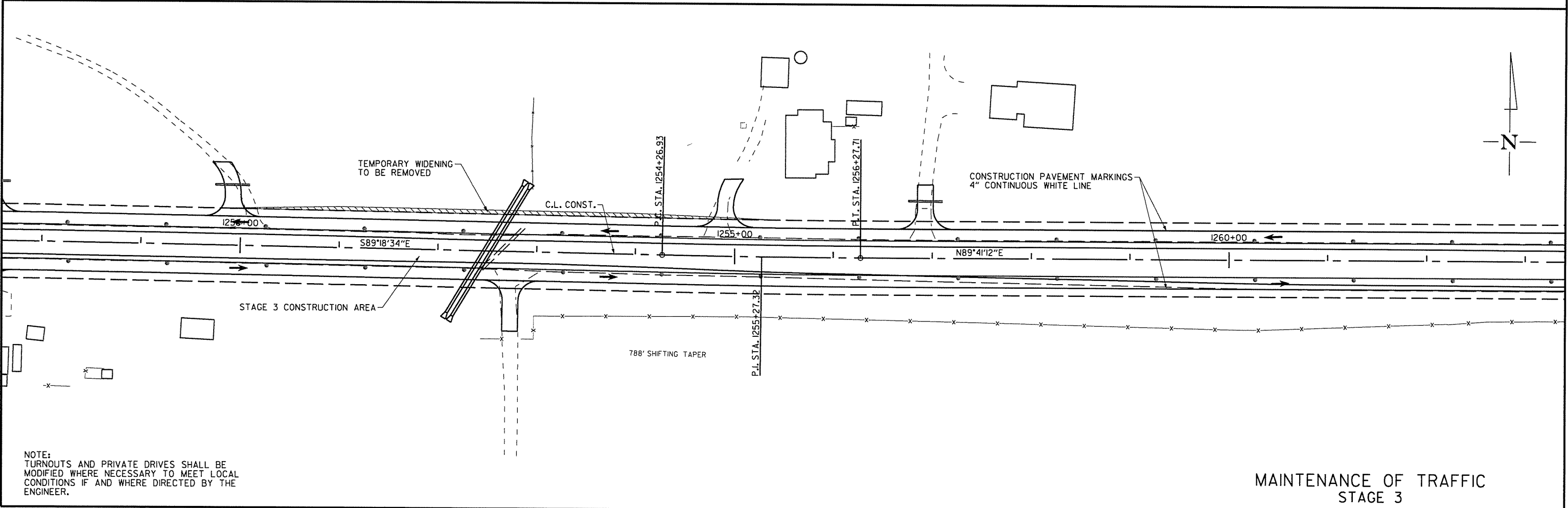
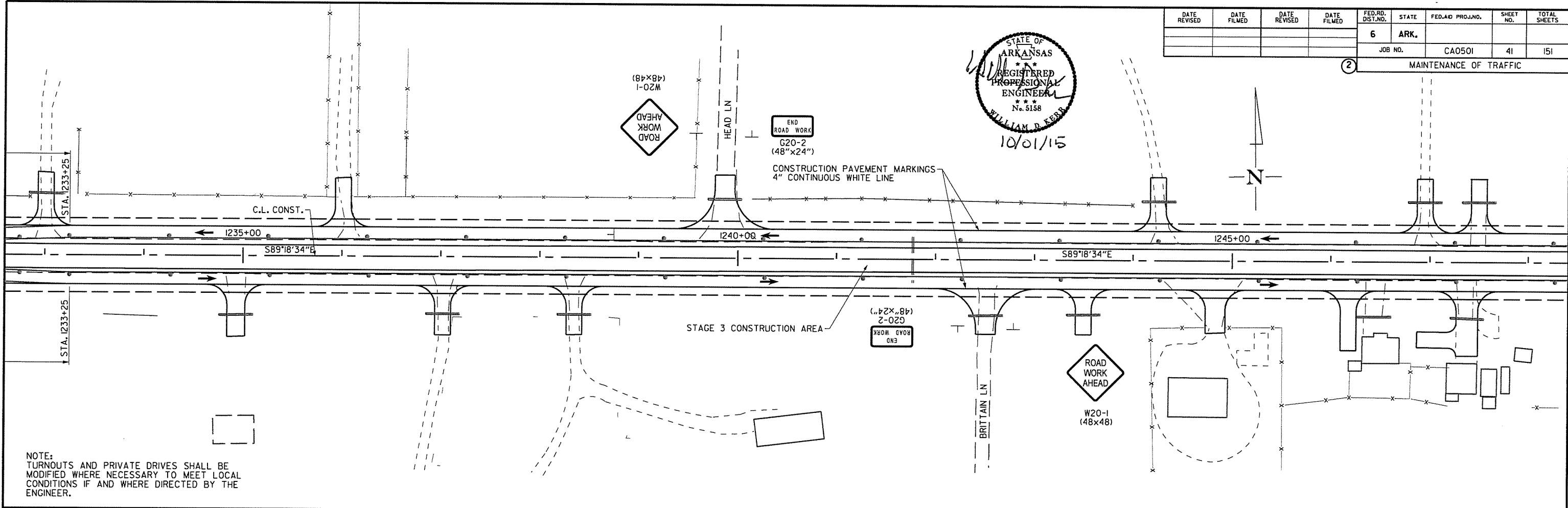
NOTES:
 1. THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 2 MILES. THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE MILE SECTION. THIS IS THE 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.



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 3

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.	CA0501	41	151	
				② MAINTENANCE OF TRAFFIC				

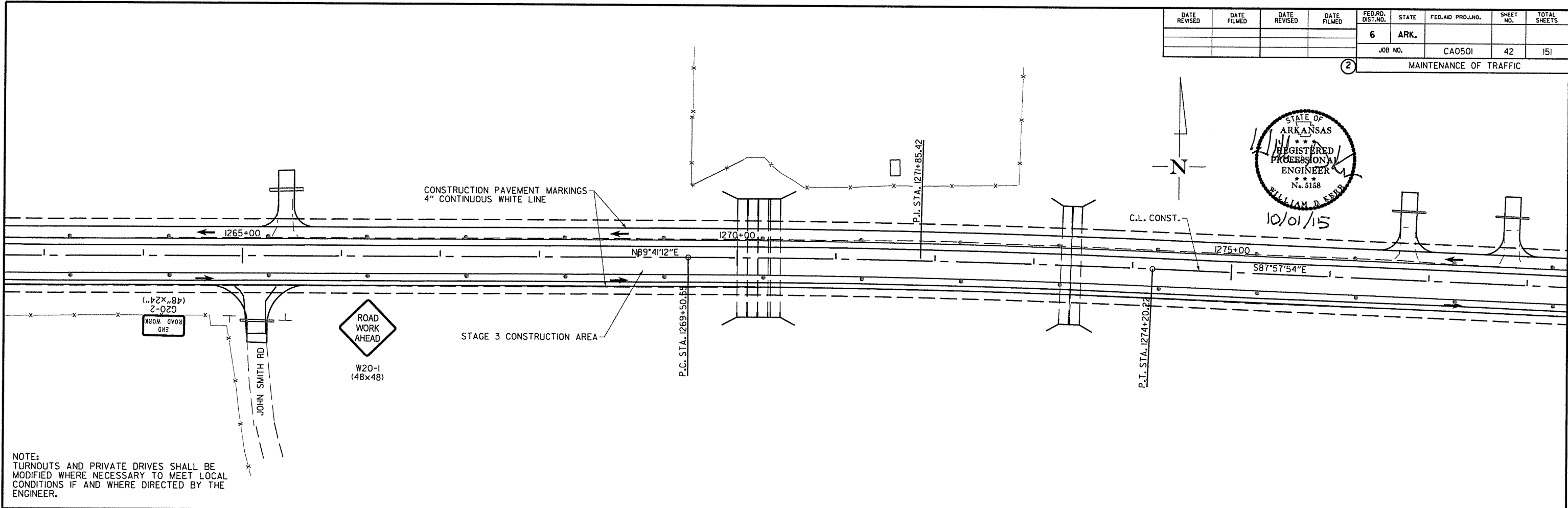


9/14/2015

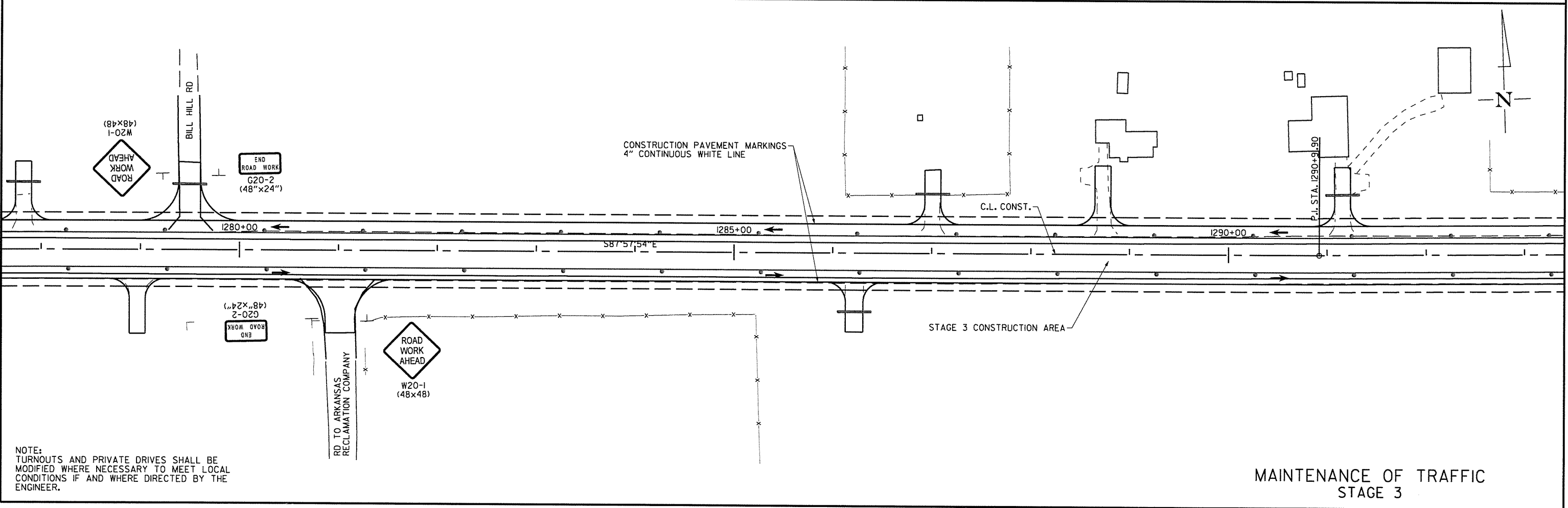
MAINTENANCE OF TRAFFIC
STAGE 3

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.	CA0501	42	151	

② MAINTENANCE OF TRAFFIC



NOTE:
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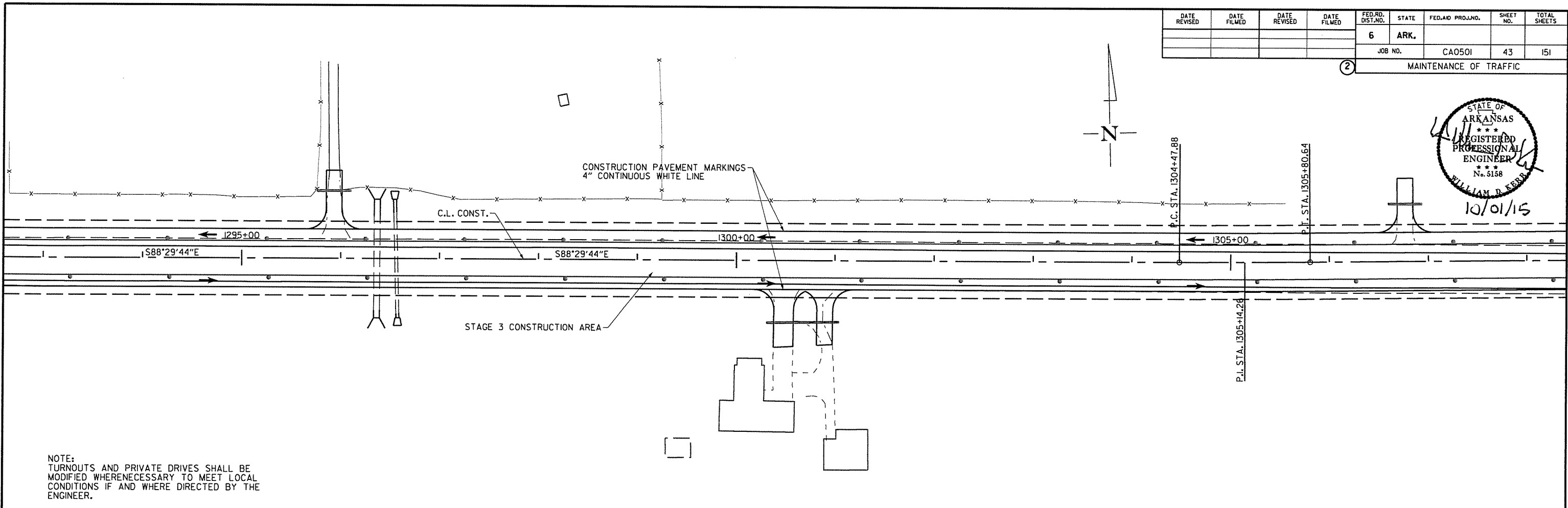
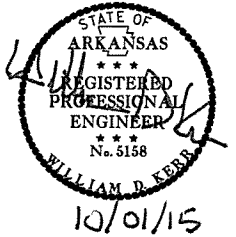


NOTE:
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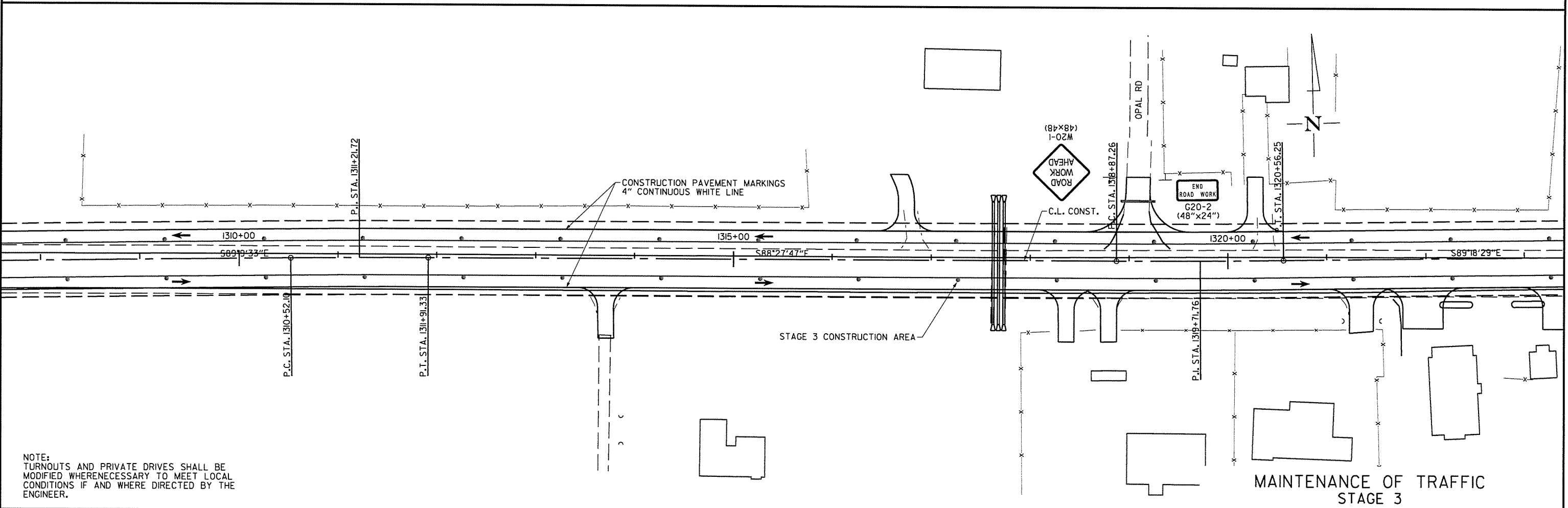
MAINTENANCE OF TRAFFIC
STAGE 3

9/14/2015

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.	CA0501		43	151
				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.

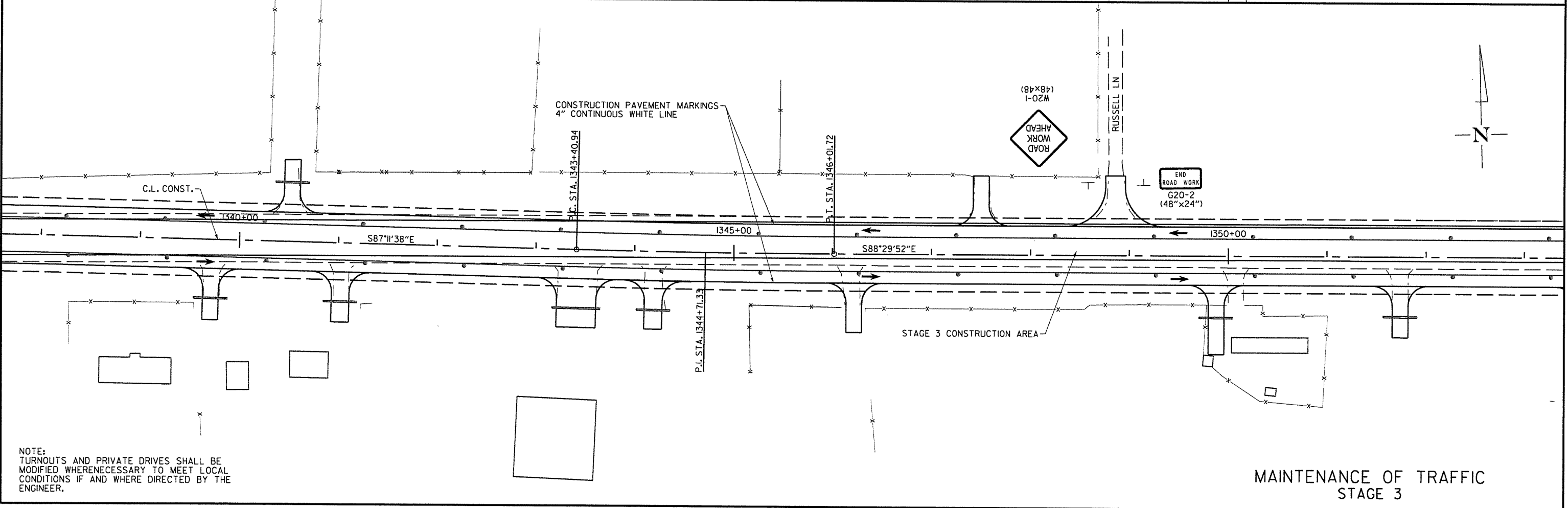
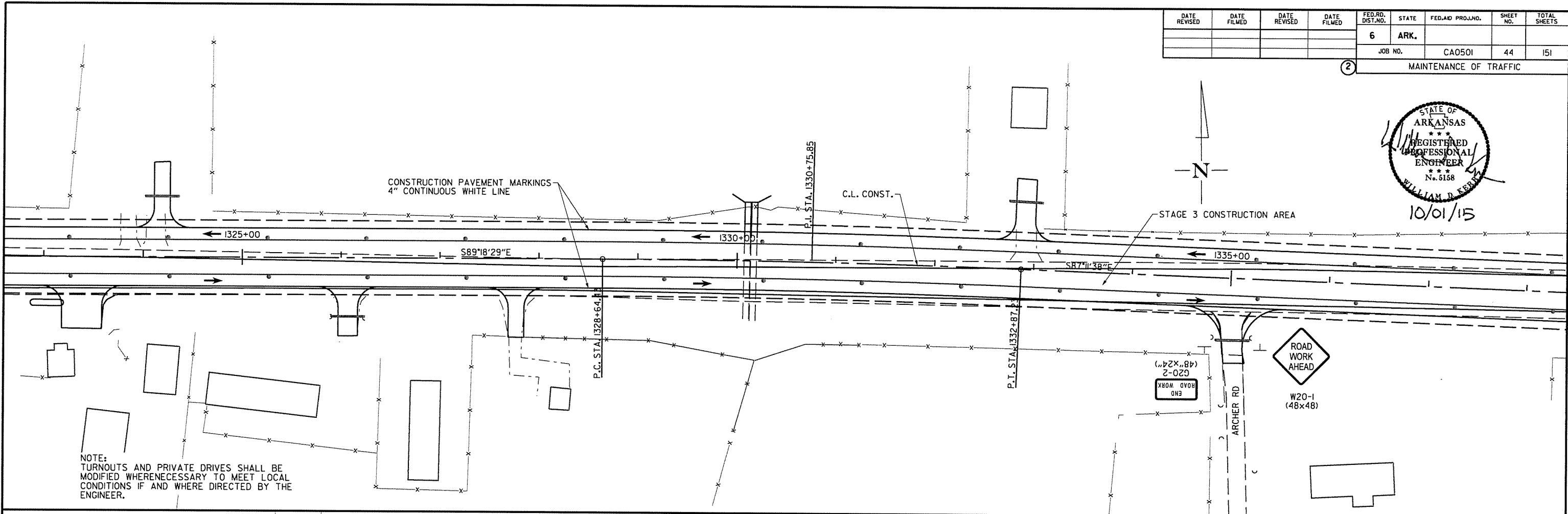
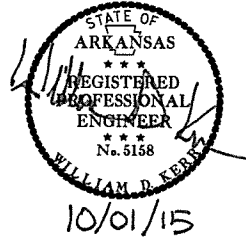


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 CONDITIONS IF AND WHERE DIRECTED BY THE
 ENGINEER.

MAINTENANCE OF TRAFFIC
 STAGE 3

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.	CA0501		44	151

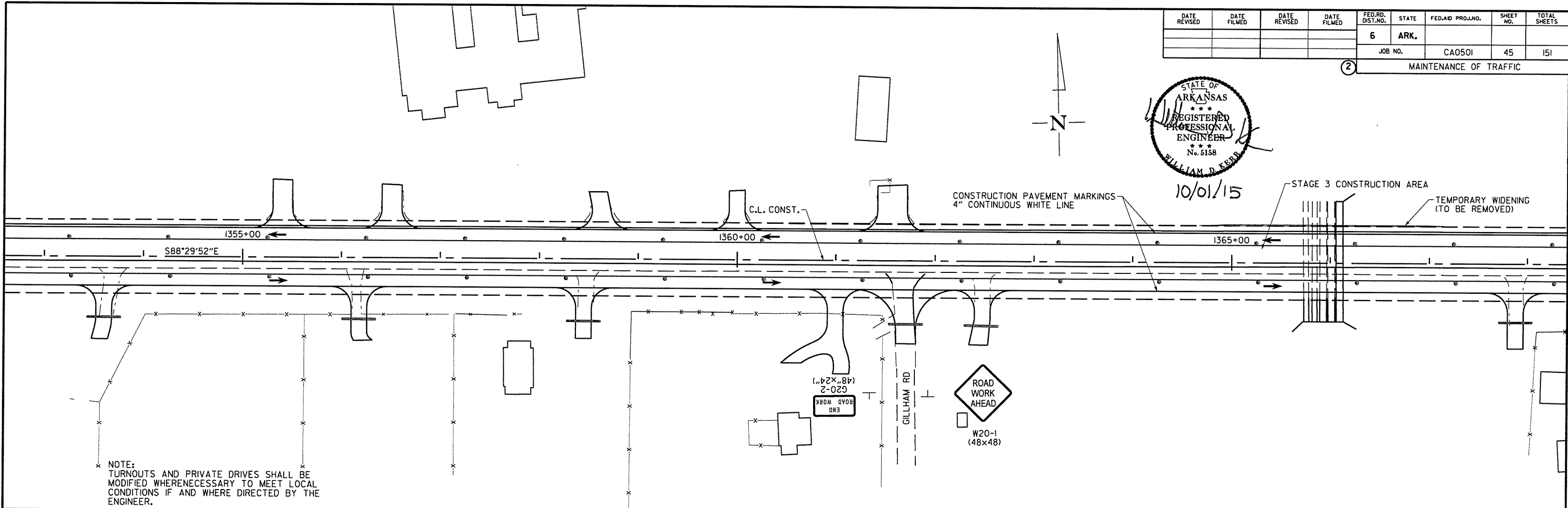
2 MAINTENANCE OF TRAFFIC



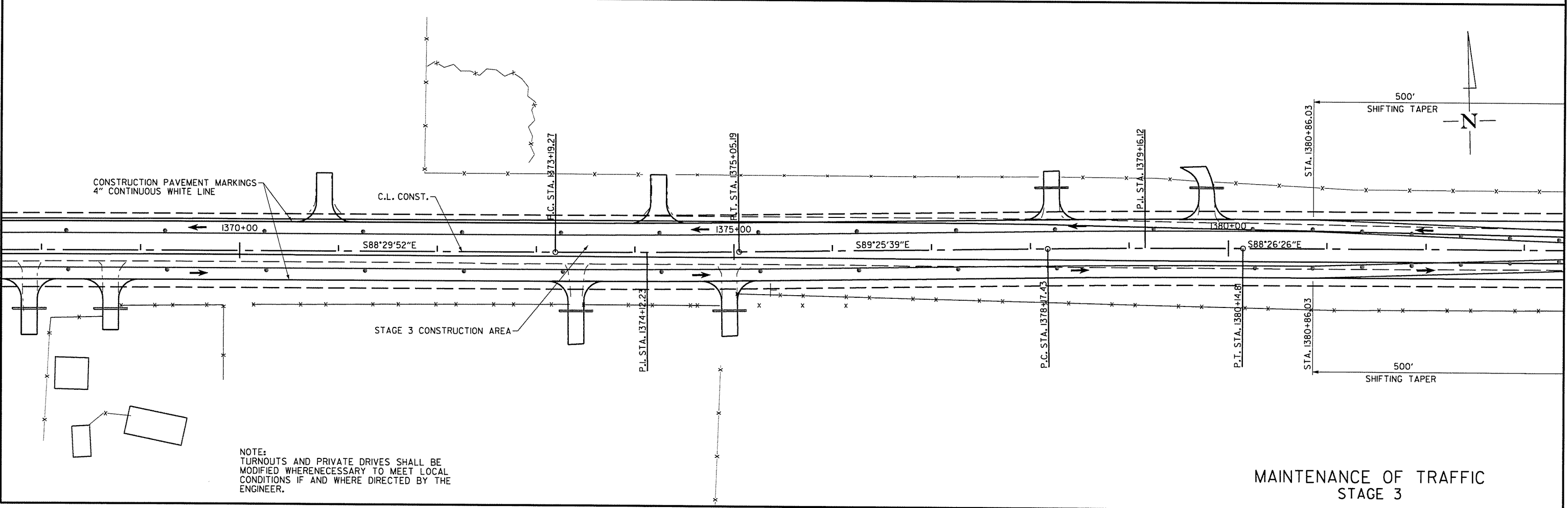
9/14/2015

MAINTENANCE OF TRAFFIC
STAGE 3

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.	CA0501		45	151
				2 MAINTENANCE OF TRAFFIC				



NOTE:
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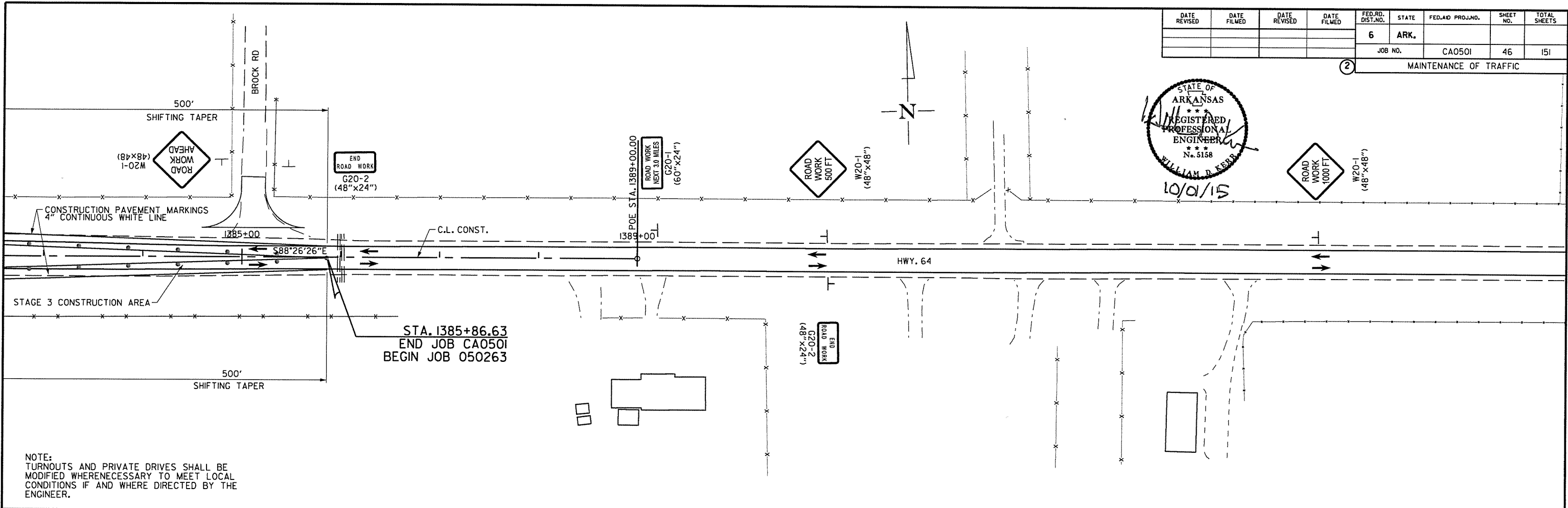
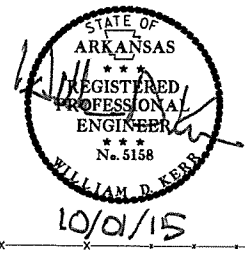


NOTE:
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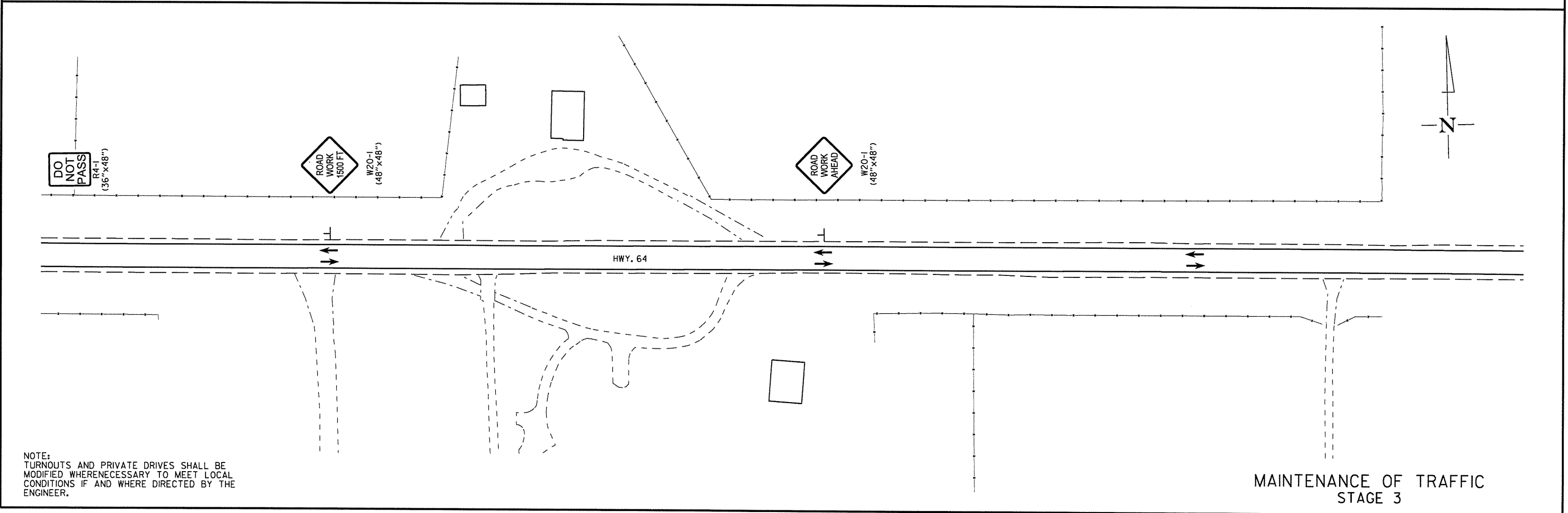
MAINTENANCE OF TRAFFIC
STAGE 3

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.	CA0501	46	151	

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.

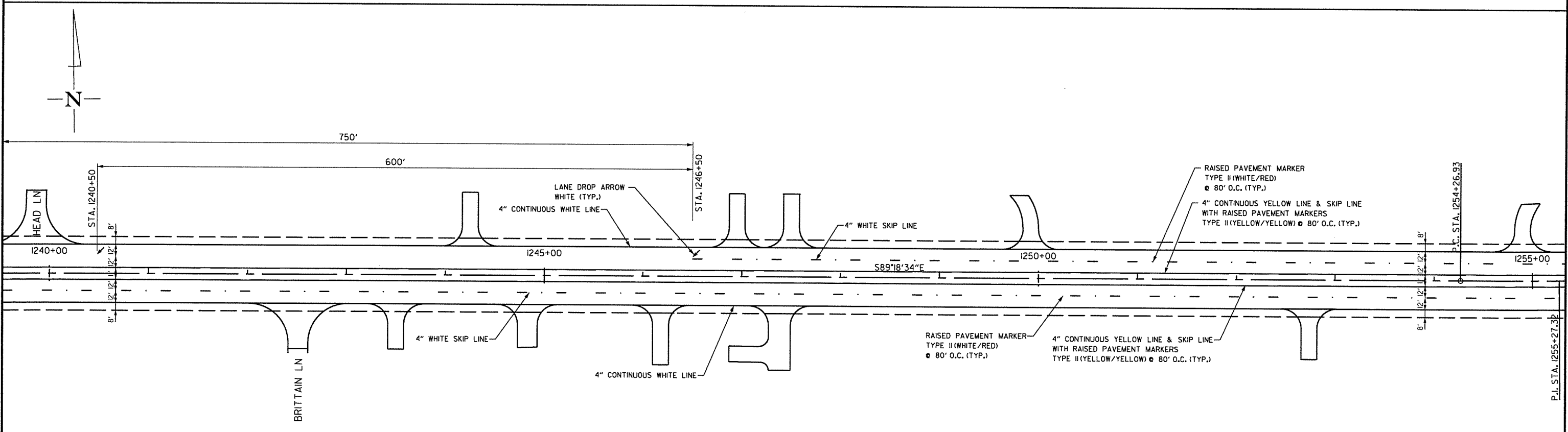
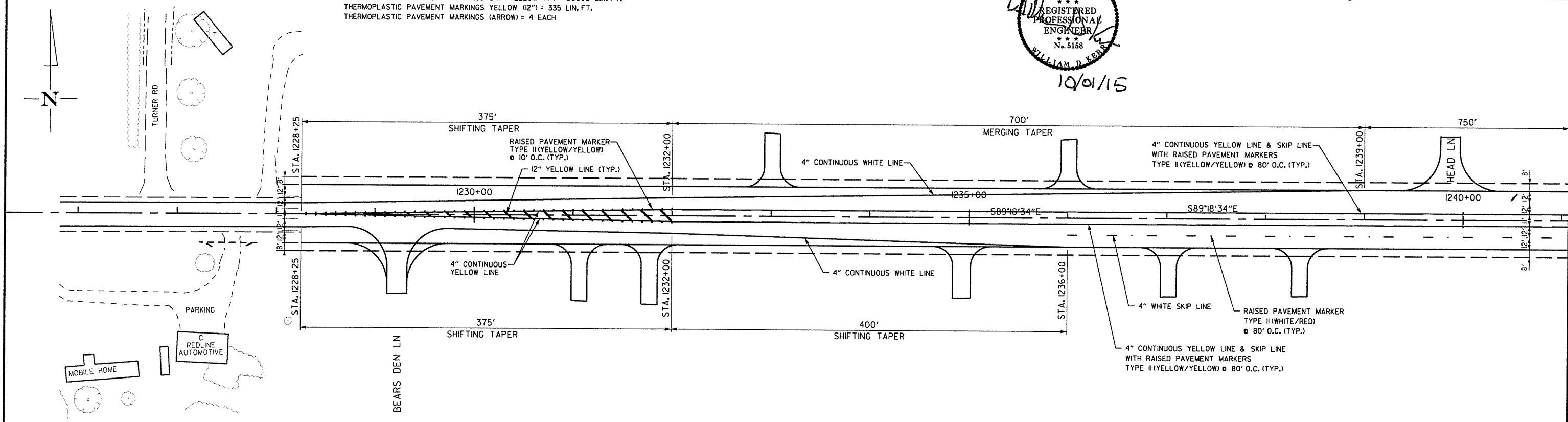


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MAINTENANCE OF TRAFFIC
STAGE 3

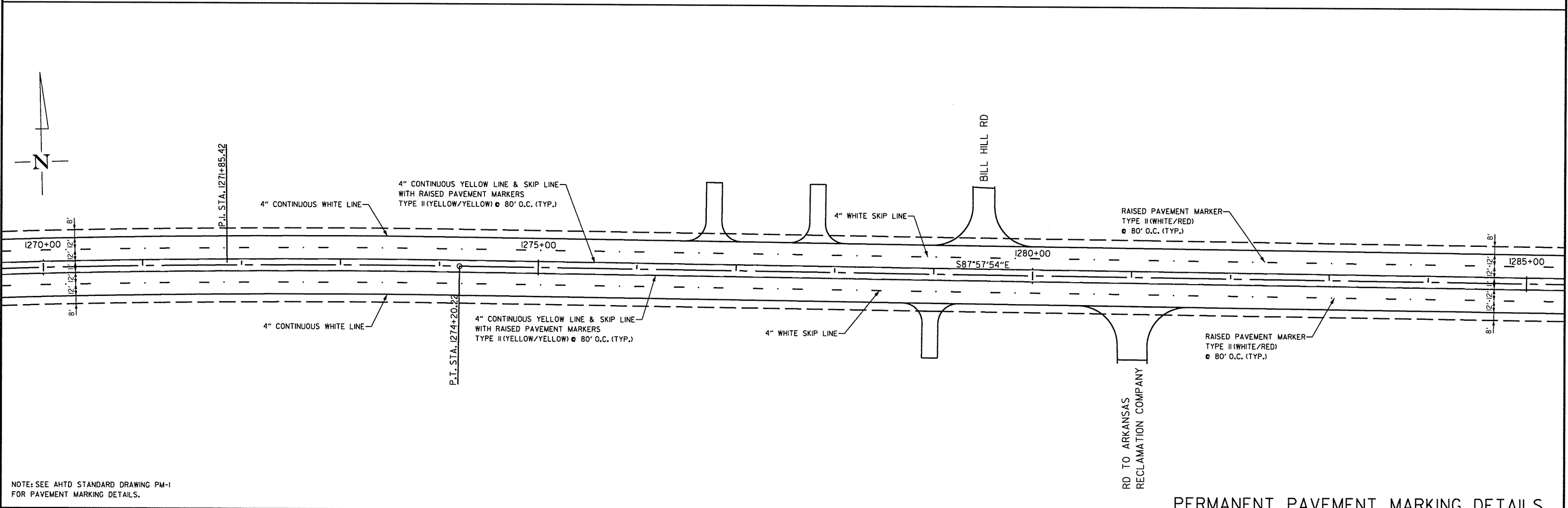
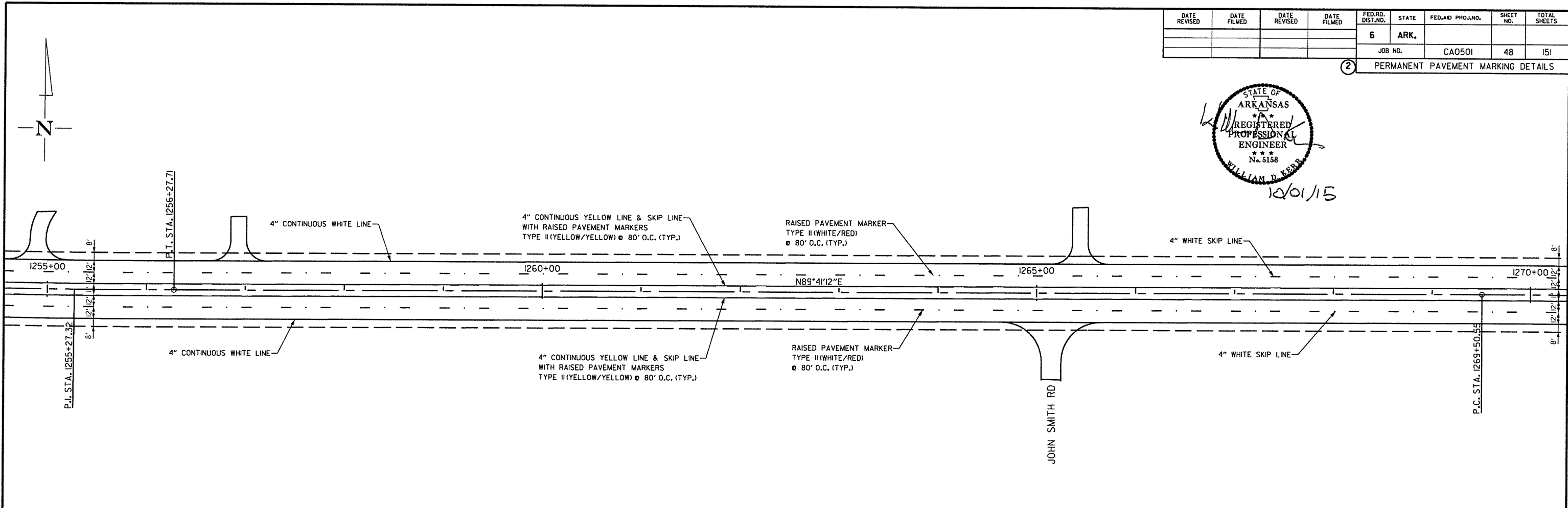
PERMANENT PAVEMENT MARKING QUANTITIES:
 RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 329 EACH
 RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW) = 529 EACH
 THERMOPLASTIC PAVEMENT MARKINGS WHITE (4") = 32189 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKINGS SKIP WHITE (4") = 26300 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4") = 31523 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKINGS SKIP YELLOW (4") = 30000 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKINGS YELLOW (12") = 335 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKINGS (ARROW) = 4 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		47	151
				JOB NO.	CA0501			
				PERMANENT PAVEMENT MARKING DETAILS				



9/14/2015
 NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501	48	151	
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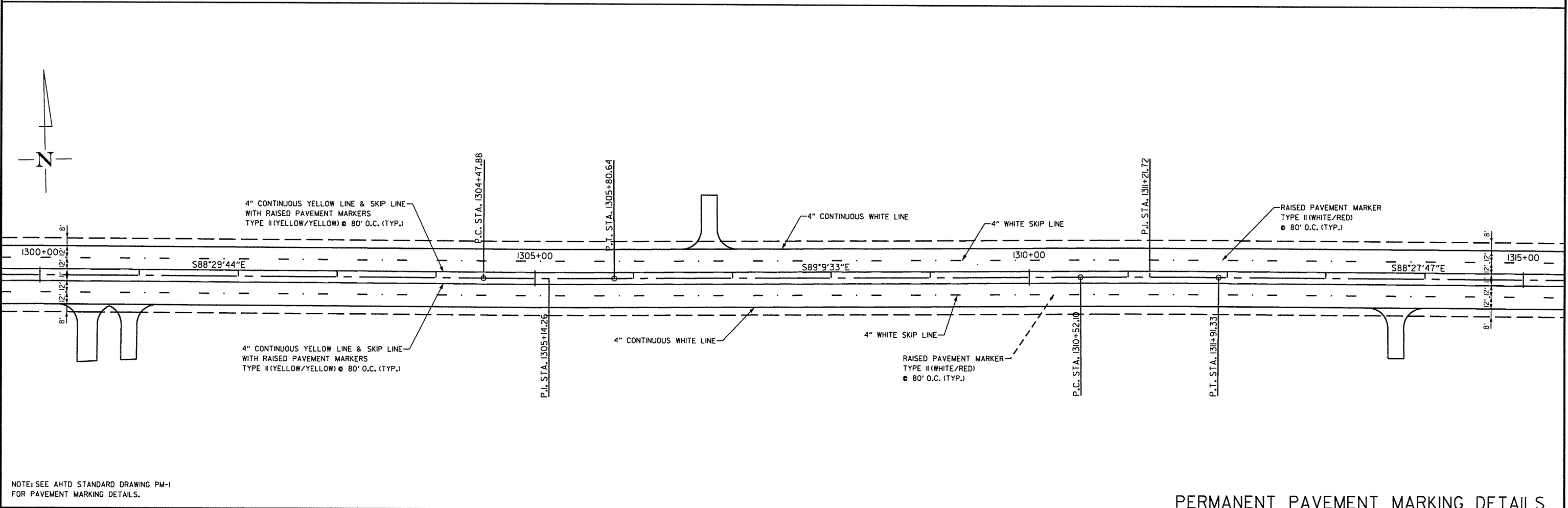
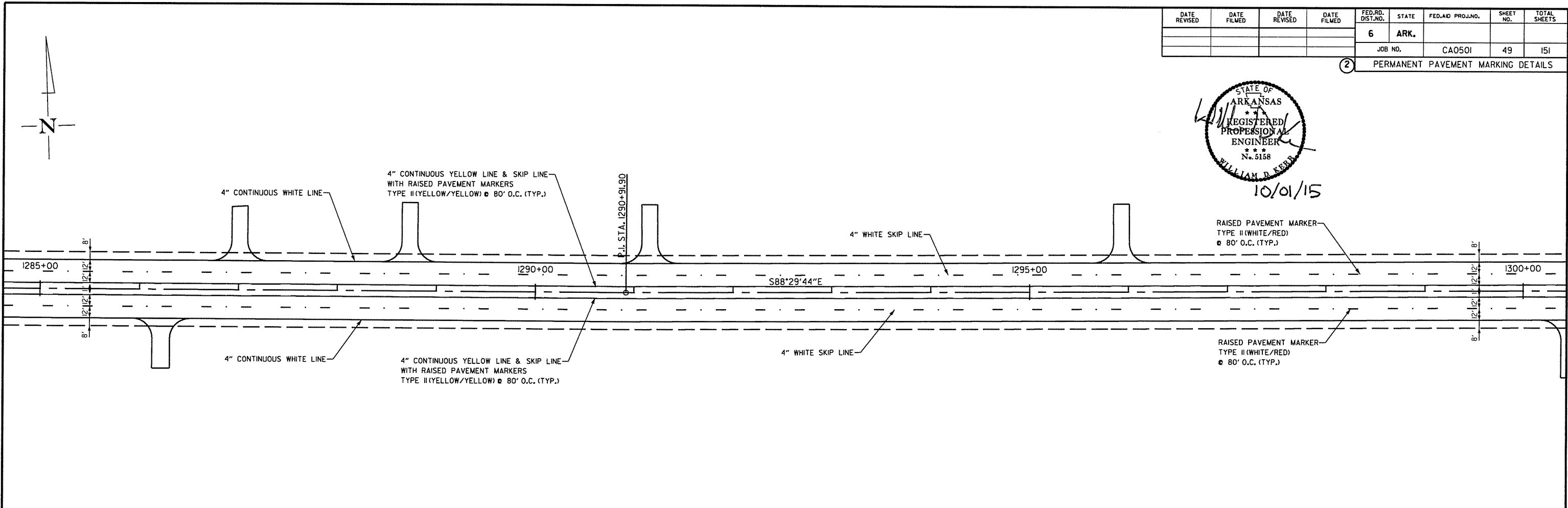
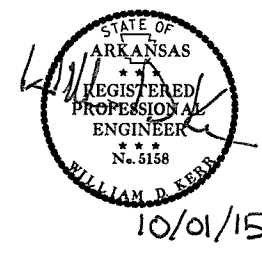


9/14/2015
 NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0501							49	151

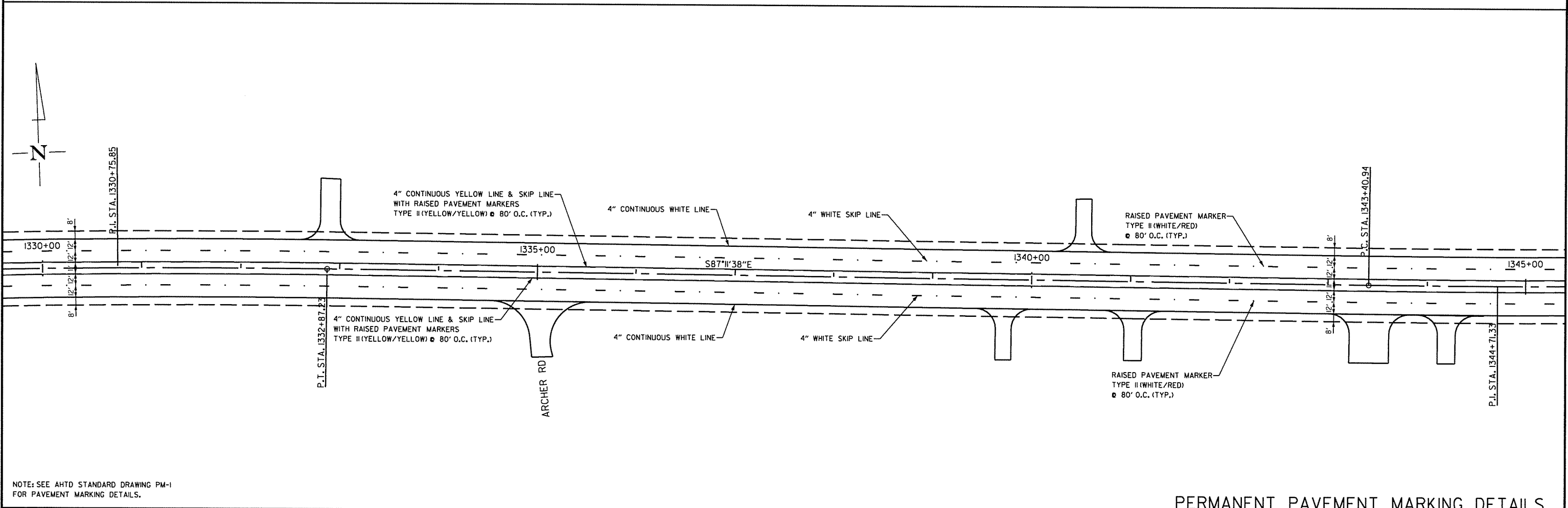
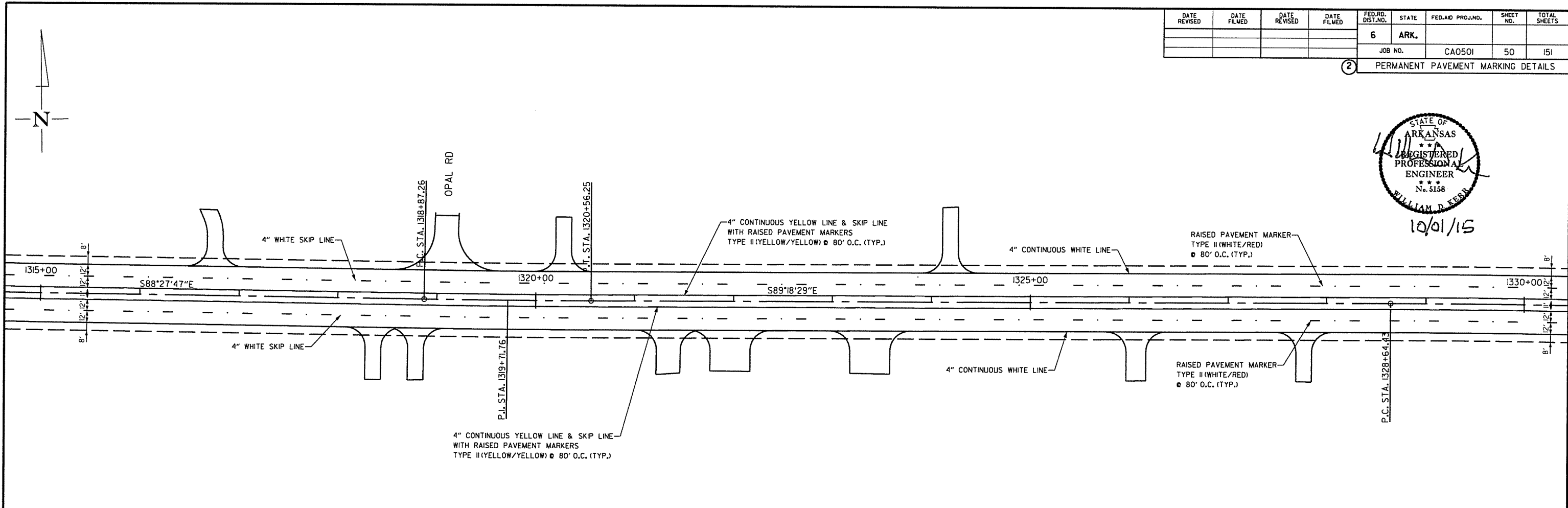
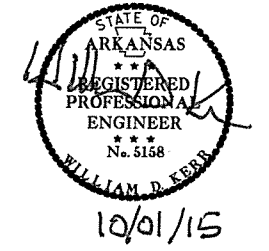
② PERMANENT PAVEMENT MARKING DETAILS



9/14/2015
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0501							50	151
② PERMANENT PAVEMENT MARKING DETAILS								



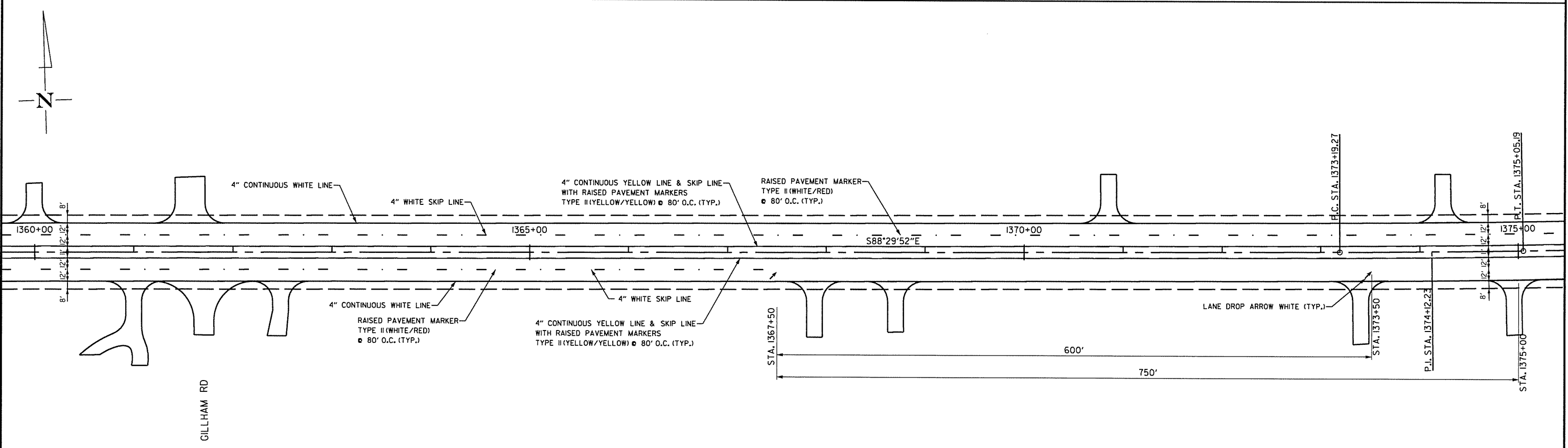
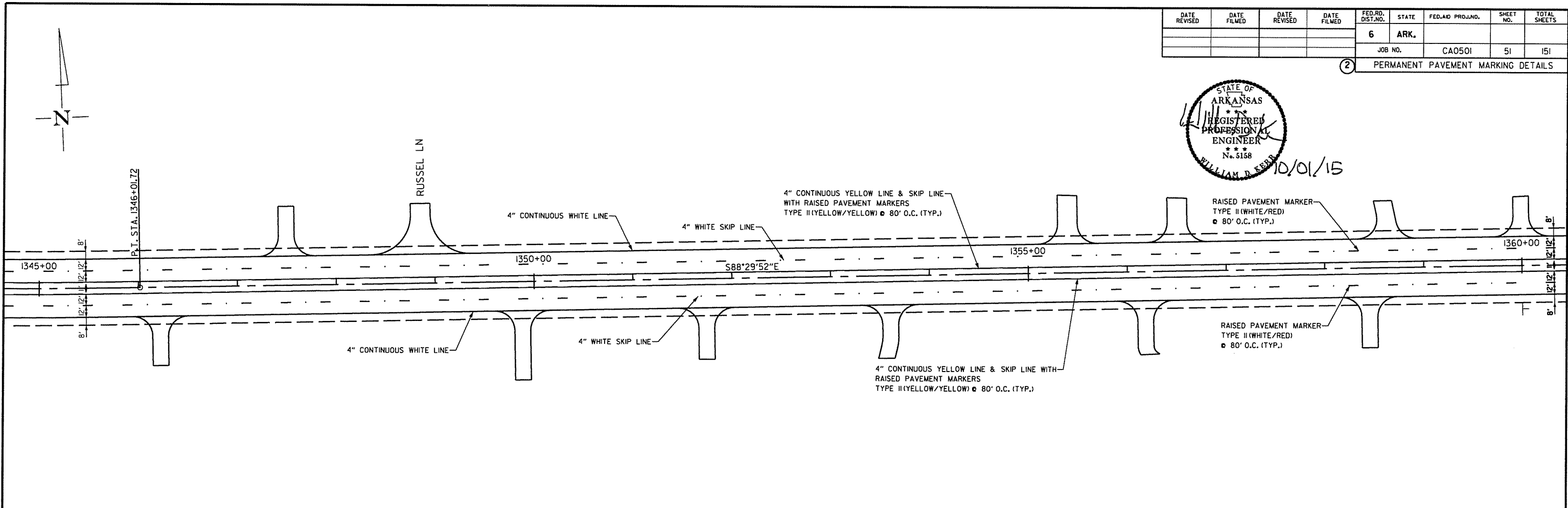
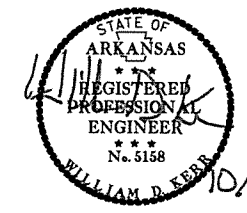
NOTE: SEE AHTD STANDARD DRAWING PM-1 FOR PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKING DETAILS

9/14/2015

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.	CA0501	51	151	

2 PERMANENT PAVEMENT MARKING DETAILS



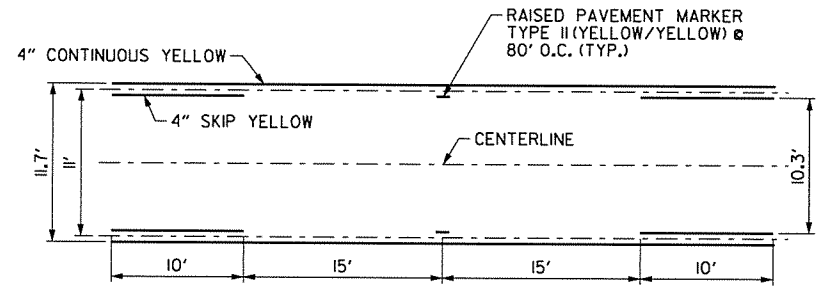
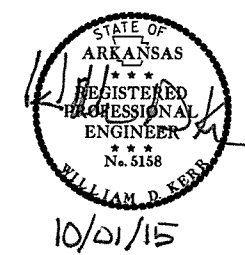
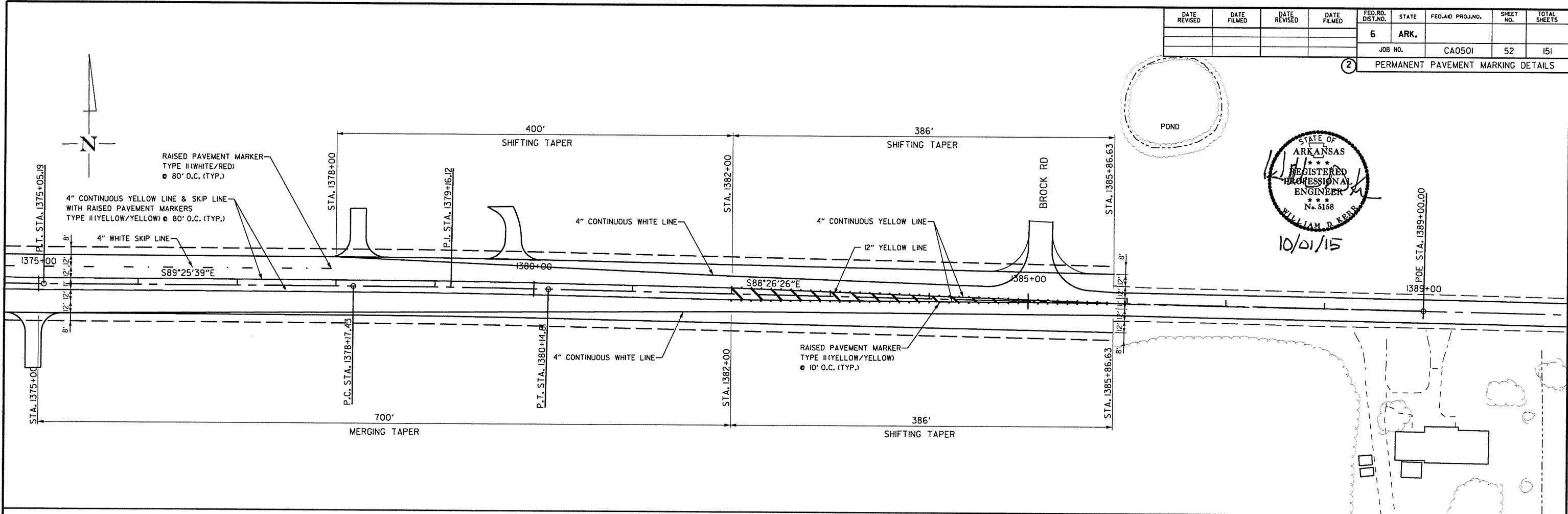
9/14/2015

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

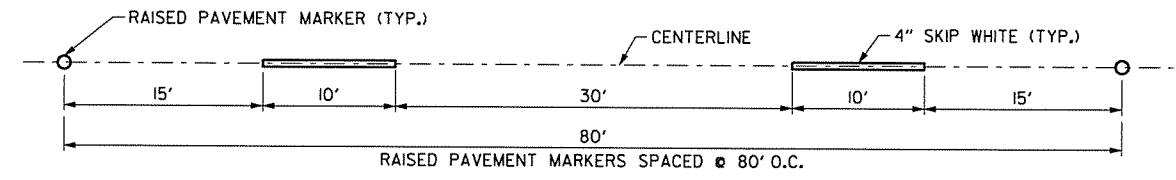
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501	52	151	

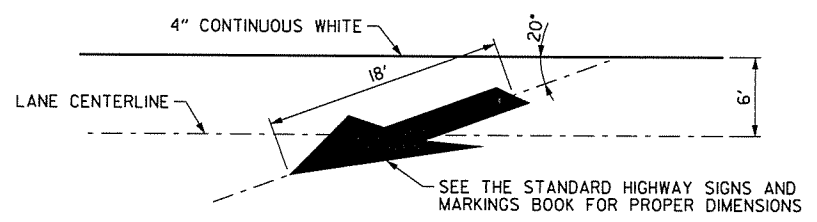
2 PERMANENT PAVEMENT MARKING DETAILS



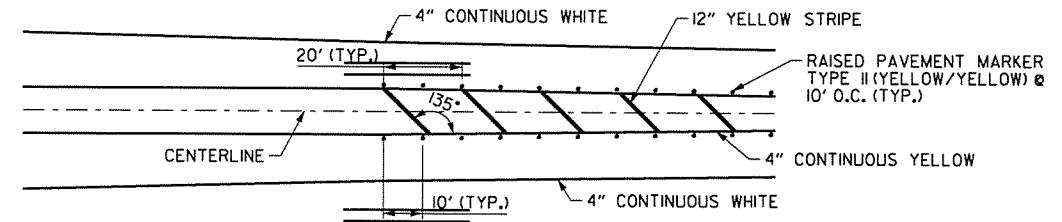
DETAIL FOR CENTER TURN LANE STRIPING
NOT TO SCALE



DETAIL FOR SKIP WHITE STRIPING
NOT TO SCALE



DETAIL FOR LANE DROP ARROW
NOT TO SCALE



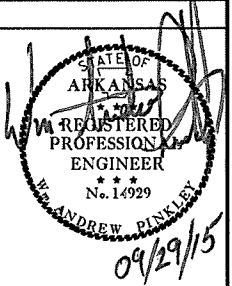
DETAIL FOR DIAGONAL STRIPING
NOT TO SCALE

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

9/14/2015

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.	CA050I		53	151

2 QUANTITIES



ADVANCE WARNING SIGNS AND DEVICES

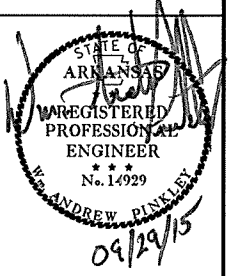
SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN. BARR. (REPAIR)			
								NO.	SQ. FT.			EACH	RIGHT					LEFT	LIN. FT.	EACH
G20-1	ROAD WORK NEXT 3.0 MILES	60"x24"	2	2	2		2	2	20.0											
G20-2	END ROAD WORK	48"x24"	13	13	13		13	13	104.0											
R2-1	SPEED LIMIT (55 MPH)	36"x48"				2	2	2	24.0											
R4-1	DO NOT PASS	36"x48"	14	13			14	14	168.0											
R11-2	ROAD CLOSED	48"x30"	12	15			15	15	150.0											
RSP-1	SHOULDER CLOSED	48"x30"	5	10			10	10	100.0											
W1-4AL	REVERSE CURVE LT.	48"x48"	6	6			6	6	96.0											
W1-4AR	REVERSE CURVE RT.	48"x48"	6	8			8	8	128.0											
W8-9A	SHOULDER DROP OFF	36"x36"	5				5	5	45.0											
W9-01R	RIGHT LANE ENDS	48"x48"				2	2	2	32.0											
W13-1P	SPEED LIMIT (ADVISORY PLAQUE 45 MPH)	30"x30"	6	6			6	6	37.5											
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2		2	2	32.0											
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2		2	2	32.0											
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2		2	2	32.0											
W20-1	ROAD WORK AHEAD	48"x48"	13	13	13		13	13	208.0											
	VERTICAL PANELS		269				269			269										
	TRAFFIC DRUMS		315	680	336		680				680									
	TYPE III BARRICADE-RT. (16')		7	7			7					112								
	TYPE III BARRICADE-LT. (16')		5	7			7						112							
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1845	2325			4170						4170							
	RELOCATING PRECAST CONCRETE BARRIER			1845			1845							1845						
	TEMPORARY IMPACT ATTENUATION BARRIER		8	8			16								16					
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4	4			8										8			
TOTALS:									1208.5	269	680	112	112	4170	1845	16	8			

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

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR BOTH SIDES 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.

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.	CA050I		54	151

② QUANTITIES



CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING			
							TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	4"		12" YELLOW	ARROWS
									WHITE	YELLOW		
LIN. FT. - EACH			LIN. FT.			EACH		LIN. FT.		EACH		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	18087			18087								
CONSTRUCTION PAVEMENT MARKINGS	50177	65950	63046		179173							
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	11150	6800				17950						
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			329				329					
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)			904					904				
THERMOPLASTIC PAVEMENT MARKING WHITE (4")			31523						31523			
THERMOPLASTIC PAVEMENT MARKING YELLOW (4")			31523							31523		
THERMOPLASTIC PAVEMENT MARKING YELLOW (12")			335								335	
THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (4")			26300						26300			
THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) YELLOW (4")			30000							30000		
THERMOPLASTIC PAVEMENT MARKING ARROWS			4									4
TOTALS:				18087	179173	17950	329	904	57823	61523	335	4

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

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.	CA0501	55	151	

2 QUANTITIES

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
1270+20	HEADWALL LT. & RT. OF MAIN LANES	2
1330+14	HEADWALL LT. OF MAIN LANES	1
1365+88	HEADWALL RT. OF MAIN LANES	1
TOTAL:		4

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

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	STATION
1228+25	1385+87	HWY. 64 LT. & RT.	158	158
TOTALS:			158	158

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
1227+25.00	1228+25.00	MAIN LANES	34	377.78
1385+87.00	1386+87.00	MAIN LANES	36	400.00
TOTAL:				777.78

NOTE: AVERAGE MILLING DEPTH 1".

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.	CU. YD.	TON
ENTIRE	PROJECT	STAGE 1	27833	16275	
ENTIRE	PROJECT	STAGE 2	19061	14369	
1221+00	1228+25	TEMPORARY WIDENING FOR TRAFFIC CONTROL	720	80	
ENTIRE	PROJECT	UNDERCUT FOR UNSUITABLE EXISTING MATERIAL	64972	64972	
ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			500
TOTALS:			112586	95696	500

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

REMOVAL AND DISPOSAL OF FENCE AND GATES

STATION	STATION	LOCATION	FENCE	GATES		
			LIN. FT.	EACH		
1230+10	1235+84	LEFT	621	1		
1236+15	1239+57	LEFT	415			
1240+14	1244+01	LEFT	387			
1269+54	1272+82	LEFT	403			
1286+12	1287+78	LEFT	228	1		
1292+65	1295+76	LEFT	361			
1296+05	1305+56	LEFT	981			
1308+43	1315+76	LEFT	802			
1320+04	1320+16	LEFT	20			
1320+42	1323+29	LEFT	370			
1324+69	1332+29	LEFT	863			
1333+09	1340+30	LEFT	786			
1340+75	1345+46	LEFT	499			
1376+48	1384+89	LEFT	864	2		
1385+32	1385+82	LEFT	70			
TOTALS:					13904	12

REMOVAL AND DISPOSAL OF CULVERTS

STATION	DESCRIPTION	PIPE CULVERTS	
		EACH	
1226+78	LT. SIDE DRAIN	1	
1227+93	LT. SIDE DRAIN	1	
1233+01	LT. SIDE DRAIN	1	
1239+86	LT. SIDE DRAIN	1	
1246+95	LT. SIDE DRAIN	1	
1247+50	LT. SIDE DRAIN	1	
1249+92	LT. SIDE DRAIN	1	
1256+93	LT. SIDE DRAIN	1	
1265+44	LT. SIDE DRAIN	1	
1276+77	LT. SIDE DRAIN	1	
1277+82	LT. SIDE DRAIN	1	
1279+51	LT. SIDE DRAIN	1	
1287+01	LT. SIDE DRAIN	1	
1291+16	LT. SIDE DRAIN	1	
1295+93	LT. SIDE DRAIN	1	
1306+77	LT. SIDE DRAIN	1	
1319+07	LT. SIDE DRAIN	1	
1324+19	LT. SIDE DRAIN	1	
1332+90	LT. SIDE DRAIN	1	
1340+52	LT. SIDE DRAIN	1	
1378+22	LT. SIDE DRAIN	1	
1379+78	LT. SIDE DRAIN	1	
TOTALS:			58

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



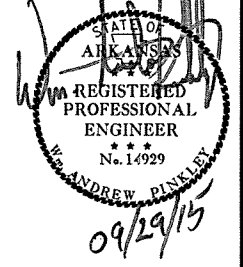
09/29/15

REMOVAL AND DISPOSAL OF ITEMS

STATION	LOCATION	CURB		CONCRETE ISLANDS		CONCRETE DRIVEWAYS		SIGNS	STORM CELLAR	CONCRETE FOUNDATION	
		LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.				
1229+33.00	RT. OF HWY. 64							1			
1229+94.00	RT. OF HWY. 64							1			
1230+10.00	LT. OF HWY. 64							1			
1235+97.00	LT. OF HWY. 64							1			
1239+69.00	LT. OF HWY. 64							1			
1241+77.00	HWY. 64							1			
1242+92.00	RT. OF HWY. 64							1			
1243+24.00	RT. OF HWY. 64							1			
1244+97.00	LT. OF HWY. 64							1			
1249+60.00	RT. OF HWY. 64							1			
1252+74.00	RT. OF HWY. 64							1			75
1254+90.00	LT. OF HWY. 64							1			
1255+00.00	LT. OF HWY. 64					42					
1256+93.00	LT. OF HWY. 64							1			
1261+06.00	RT. OF HWY. 64							1			
1265+30.00	RT. OF HWY. 64							1			
1265+44.00	LT. OF HWY. 64							1			
1269+97.00	RT. OF HWY. 64							1			
1270+20.00	HWY. 64										
1273+37.00	HWY. 64										
1276+77.00	LT. OF HWY. 64										
1277+82.00	LT. OF HWY. 64										
1278+97.00	RT. OF HWY. 64							1			
1279+25.00	LT. OF HWY. 64							1			
1279+34.00	LT. OF HWY. 64										
1287+01.00	LT. OF HWY. 64										
1288+73.00	LT. OF HWY. 64										
1290+60.00	LT. OF HWY. 64								1		
1291+16.00	LT. OF HWY. 64										
1295+80.00	LT. OF HWY. 64							1			
1295+93.00	LT. OF HWY. 64										
1296+36.00	HWY. 64										
1296+56.00	HWY. 64										
1300+28.00	RT. OF HWY. 64							1			
1300+48.00	RT. OF HWY. 64					118		1			
1300+65.00	RT. OF HWY. 64										
1300+90.00	RT. OF HWY. 64							1			
1302+21.00	RT. OF HWY. 64							1			
1306+77.00	LT. OF HWY. 64										
1307+25.00	RT. OF HWY. 64							2			
1312+30.00	RT. OF HWY. 64							2			
1313+70.00	RT. OF HWY. 64										
1317+68.00	LT. OF HWY. 64							2			
1318+85.00	LT. OF HWY. 64							1			
1319+56.00	RT. OF HWY. 64										
1320+40.00	LT. OF HWY. 64										
1321+35.00	RT. OF HWY. 64							1			
1322+30.00	RT. OF HWY. 64			21							
1322+50.00	RT. OF HWY. 64										
1322+00.00	RT. OF HWY. 64			22							
1324+19.00	LT. OF HWY. 64										
1324+77.00	RT. OF HWY. 64							1			
1325+45.00	RT. OF HWY. 64							1			
1325+82.00	RT. OF HWY. 64							1			
1327+09.00	RT. OF HWY. 64							1			
1327+78.00	RT. OF HWY. 64							1			
1328+15.00	RT. OF HWY. 64							1			
1328+16.00	LT. OF HWY. 64							1			
1329+17.00	LT. OF HWY. 64							1			
1330+14.00	HWY. 64										
1330+20.00	LT. OF HWY. 64							1			
1331+20.00	LT. OF HWY. 64							1			
1332+21.00	LT. OF HWY. 64										
1332+90.00	LT. OF HWY. 64										
1333+21.00	LT. OF HWY. 64							1			
1334+89.00	RT. OF HWY. 64							1			
1335+18.00	RT. OF HWY. 64							1			
1339+57.00	LT. OF HWY. 64							1			
1339+71.00	RT. OF HWY. 64										
1340+52.00	LT. OF HWY. 64										
1341+03.00	RT. OF HWY. 64										
1342+90.00	LT. OF HWY. 64							2			
1343+42.00	RT. OF HWY. 64					162					
1344+19.00	RT. OF HWY. 64										
1346+22.00	RT. OF HWY. 64										
1347+50.00	LT. OF HWY. 64							2			
1348+72.00	LT. OF HWY. 64							1			
1350+07.00	RT. OF HWY. 64										
1351+74.00	RT. OF HWY. 64										
1353+64.00	RT. OF HWY. 64										
1353+99.00	LT. OF HWY. 64							2			
1354+61.00	RT. OF HWY. 64							1			
1355+23.00	LT. OF HWY. 64							1			
1355+54.00	LT. OF HWY. 64							1			
1355+56.00	RT. OF HWY. 64							1			
1356+14.00	RT. OF HWY. 64					55					
1356+38.00	LT. OF HWY. 64							1			
1356+64.00	LT. OF HWY. 64							1			
1356+80.00	LT. OF HWY. 64							1			
1356+96.00	LT. OF HWY. 64							1			
1357+15.00	LT. OF HWY. 64							1			
1357+24.00	LT. OF HWY. 64							1			
1358+47.00	RT. OF HWY. 64							1			
1358+48.00	LT. OF HWY. 64							1			
1361+83.00	RT. OF HWY. 64							1			
1362+48.00	RT. OF HWY. 64										
1365+72.00	LT. & RT. OF HWY. 64							2			
1365+88.00	HWY. 64										
1366+05.00	LT. & RT. OF HWY. 64							2			
1367+88.00	RT. OF HWY. 64										
1368+70.00	RT. OF HWY. 64										
1371+09.00	RT. OF HWY. 64							1			
1373+40.00	RT. OF HWY. 64					61					
1374+24.00	LT. OF HWY. 64										
1374+95.00	RT. OF HWY. 64										
1377+17.00	LT. OF HWY. 64							2			
1379+22.00	LT. OF HWY. 64										
1379+78.00	LT. OF HWY. 64							2			
1384+90.00	LT. OF HWY. 64							1			
1385+29.00	LT. OF HWY. 64							1			
1385+93.00	RT. OF HWY. 64							1			
TOTALS:		148	43	438	69	1	75				

QUANTITIES

DATE REVISION	DATE FILMED	DATE REVISION	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA050I		56	151



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		57	151
				JOB NO.	CA0501			

2 QUANTITIES

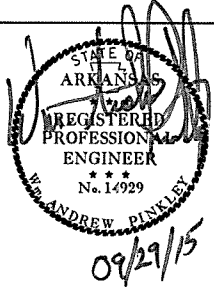
SOIL LOG

BORING ID	STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
		DEG	MIN	SEC	DEG	MIN	SEC						
B-1	1227+00, 25 L	35	5	52.46 N	92	2	1.28 W	Boring B-1	.5 to 2	34	16	A-6 (16)	RD/BR
B-2	1234+00, 40 L	35	5	52.45 N	92	1	53.18 W	Boring B-2	.5 to 2	40	20	A-6 (22)	RD/BR
B-3	1242+00, 25 L	35	5	52.21 N	92	1	43.63 W	Boring B-3	.5 to 2	32	12	A-6 (12)	RD/BR
B-4	1250+00, 25 L	35	5	52.11 N	92	1	34.01 W	Boring B-4	.5 to 2	35	16	A-6 (16)	BROWN
B-5	1258+00, 25 L	35	5	52.10 N	92	1	24.30 W	Boring B-5	.5 to 2	26	9	A-4 (8)	GRAY
B-6	1266+00, 25 R	35	5	51.41 N	92	1	14.56 W	Boring B-6	.5 to 2	42	20	A-7-6 (22)	GRAY
B-7	1274+00, 25 L	35	5	52.13 N	92	1	5.03 W	Boring B-7	.5 to 2	28	14	A-6 (13)	BROWN
B-8	1282+00, 25 R	35	5	51.10 N	92	0	55.34 W	Boring B-8	.5 to 2	28	14	A-6 (13)	GRAY
B-9	1290+00, 25 L	35	5	51.58 N	92	0	45.81 W	Boring B-9	.5 to 2	37	18	A-6 (19)	GRAY
B-10	1298+00, 25 R	35	5	50.63 N	92	0	36.25 W	Boring B-10	2 to 3.5	30	10	A-4 (10)	GRAY
B-11	1306+00, 25 L	35	5	50.20 N	92	0	26.58 W	Boring B-11	.5 to 2	38	20	A-6 (21)	GRAY
B-12	1313+75, 30 R	35	5	50.20 N	92	0	16.84 W	Boring B-12	.5 to 2	44	23	A-7-6 (25)	GRAY
B-13	1321+00, 30 L	35	5	50.73 N	92	0	7.31 W	Boring B-13	.5 to 2	45	19	A-7-6 (28)	GRAY
B-14	1330+00, 30 R	35	5	49.87 N	91	59	57.74 W	Boring B-14	.5 to 2	31	18	A-6 (13)	BROWN
B-15	1338+00, 25 L	35	5	50.40 N	91	59	48.02 W	Boring B-15	.5 to 2	36	20	A-6 (17)	GRAY
B-16	1346+00, 25 R	35	5	49.48 N	91	59	38.43 W	Boring B-16	.5 to 2	35	17	A-6 (18)	GRY/BR
B-17	1354+00, 50 L	35	5	49.99 N	91	59	28.77 W	Boring B-17	.5 to 2	32	17	A-6 (15)	BROWN
B-18	1362+00, 40 R	35	5	49.08 N	91	59	19.10 W	Boring B-18	.5 to 2	32	19	A-6 (13)	BROWN
B-19	1370+00, 40 L	35	5	49.58 N	91	59	9.46 W	Boring B-19	.5 to 2	28	20	A-4 (7)	BROWN
B-20	1378+00, 30 R	35	5	48.64 N	91	58	59.91 W	Boring B-20	.5 to 2	30	18	A-6 (11)	DK BR
B-21	1386+00, 40 L	35	5	49.07 N	91	58	50.23 W	Boring B-21	.5 to 2	31	16	A-6 (14)	GRAY
CB-1	1270+25, 40 L	35	5	52.21 N	92	1	9.39 W	Boring CB-1	.5 to 2	27	15	A-6 (10)	BROWN
CB-2	1273+25, 45 R	35	5	51.31 N	92	1	6.00 W	Boring CB-2	.5 to 2	32	20	A-6 (12)	GRAY
CB-3	1296+50, 40 L	35	5	51.44 N	92	0	38.02 W	Boring CB-3	.5 to 2	29	15	A-6 (13)	RD/BR
CB-4	1317+75, 40 L	35	5	50.83 N	92	0	12.36 W	Boring CB-4	.5 to 2	37	19	A-6 (19)	RD/BR
CB-5	1330+25, 40 L	35	5	50.55 N	91	59	57.28 W	Boring CB-5	2 to 3.5	31	17	A-6 (13)	BROWN
CB-6	1366+00, 40 L	35	5	49.68 N	91	59	14.47 W	Boring CB-6	.5 to 2	29	18	A-6 (10)	BROWN
CB-7	1386+00, 25 R	35	5	48.45 N	91	58	50.29 W	Boring CB-7	.5 to 2	30	15	A-6 (14)	RD/BR

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

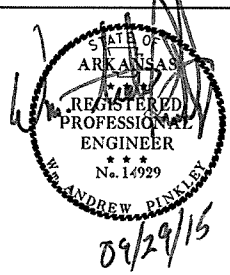
RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	RUMBLE STRIPS IN ASPHALT SHOULDERS
			LIN. FT.
1228+25	1228+72	RT. OF HWY. 64	47
1229+72	1230+79	RT. OF HWY. 64	107
1231+35	1231+50	RT. OF HWY. 64	15
1232+05	1234+64	RT. OF HWY. 64	259
1235+22	1236+74	RT. OF HWY. 64	152
1237+30	1238+07	RT. OF HWY. 64	77
1238+63	1242+01	RT. OF HWY. 64	338
1243+01	1243+22	RT. OF HWY. 64	21
1243+78	1244+53	RT. OF HWY. 64	75
1245+13	1245+90	RT. OF HWY. 64	77
1246+46	1247+07	RT. OF HWY. 64	61
1247+69	1252+46	RT. OF HWY. 64	477
1253+02	1264+65	RT. OF HWY. 64	1163
1265+65	1278+69	RT. OF HWY. 64	1304
1279+25	1280+47	RT. OF HWY. 64	122
1281+57	1285+93	RT. OF HWY. 64	436
1286+51	1300+18	RT. OF HWY. 64	1367
1301+18	1313+43	RT. OF HWY. 64	1225
1313+99	1318+09	RT. OF HWY. 64	410
1319+08	1321+02	RT. OF HWY. 64	194
1322+36	1322+98	RT. OF HWY. 64	62
1323+78	1325+77	RT. OF HWY. 64	199
1326+37	1327+49	RT. OF HWY. 64	112
1328+05	1334+53	RT. OF HWY. 64	648
1335+54	1339+44	RT. OF HWY. 64	390
1340+00	1340+74	RT. OF HWY. 64	74
1341+32	1343+01	RT. OF HWY. 64	169
1343+81	1343+91	RT. OF HWY. 64	10
1344+49	1345+94	RT. OF HWY. 64	145
1346+50	1349+60	RT. OF HWY. 64	310
1350+16	1351+46	RT. OF HWY. 64	130
1352+02	1353+33	RT. OF HWY. 64	131
1353+89	1355+90	RT. OF HWY. 64	201
1356+46	1358+17	RT. OF HWY. 64	171
1358+73	1360+72	RT. OF HWY. 64	199
1362+76	1367+60	RT. OF HWY. 64	484
1368+16	1368+42	RT. OF HWY. 64	26
1368+98	1373+12	RT. OF HWY. 64	414
1373+68	1374+67	RT. OF HWY. 64	99
1375+23	1385+87	RT. OF HWY. 64	1064
1228+25	1232+73	LT. OF HWY. 64	448
1233+29	1235+73	LT. OF HWY. 64	244
1236+29	1239+37	LT. OF HWY. 64	308
1240+37	1243+97	LT. OF HWY. 64	360
1244+53	1246+67	LT. OF HWY. 64	214
1247+79	1249+64	LT. OF HWY. 64	185
1250+20	1254+62	LT. OF HWY. 64	442
1255+18	1256+65	LT. OF HWY. 64	147
1257+21	1265+16	LT. OF HWY. 64	795
1265+72	1276+50	LT. OF HWY. 64	1078
1277+05	1277+54	LT. OF HWY. 64	49
1278+10	1278+99	LT. OF HWY. 64	89
1280+01	1286+73	LT. OF HWY. 64	672
1287+29	1288+45	LT. OF HWY. 64	116
1289+01	1290+87	LT. OF HWY. 64	186
1291+44	1295+65	LT. OF HWY. 64	421
1296+21	1306+49	LT. OF HWY. 64	1028
1307+05	1316+47	LT. OF HWY. 64	942
1317+03	1318+57	LT. OF HWY. 64	154
1319+61	1320+00	LT. OF HWY. 64	39
1320+56	1323+91	LT. OF HWY. 64	335
1324+47	1332+60	LT. OF HWY. 64	813
1333+20	1340+24	LT. OF HWY. 64	704
1340+80	1347+22	LT. OF HWY. 64	642
1347+78	1348+36	LT. OF HWY. 64	58
1349+36	1355+10	LT. OF HWY. 64	574
1355+70	1356+21	LT. OF HWY. 64	51
1356+81	1358+33	LT. OF HWY. 64	152
1358+93	1359+72	LT. OF HWY. 64	79
1360+28	1361+22	LT. OF HWY. 64	94
1361+92	1370+58	LT. OF HWY. 64	866
1371+14	1373+99	LT. OF HWY. 64	285
1374+49	1377+94	LT. OF HWY. 64	345
1378+50	1379+50	LT. OF HWY. 64	100
1380+06	1384+59	LT. OF HWY. 64	453
1385+63	1385+87	LT. OF HWY. 64	24
TOTAL:			26457



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.	CA050I		58	151

② QUANTITIES



EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL										
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	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	SQ.YD.	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		CLEARING AND GRUBBING																	
ENTIRE PROJECT		STAGE 1	16.63	33.26	16.63	1696.3	16.63				855		96		2060	3860	3860	3936	
ENTIRE PROJECT		STAGE 2	16.23	32.46	16.23	1655.5	16.23				855		111	20	980	3231	3231	3268	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.						1.3		100	33.00	33.00	673.2	207							
TOTALS:			32.86	65.72	32.86	3353.1	32.86	100	33.00	33.00	673.2	1710	207	207	20	3040	7091	7091	7204

BASIS OF ESTIMATE:
 LIME 2 TONS / ACRE OF SEEDING
 WATER 102.0 M.G. / ACRE OF SEEDING
 WATER 20.4 M.G. / ACRE OF TEMPORARY SEEDING
 WATER 12.6 GAL. / SQ. YD. OF SOLID SODDING
 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.

FENCING

STATION	STATION	LOCATION	WIRE FENCE		*4' CHAIN LINK FENCE	*4' GATES	*16' GATES	*20' GATES
			(TYPE C)	(TYPE D)				
			LIN. FT.					
1230+10	1235+84	LT. OF HWY. 64		574			1	
1236+15	1239+57	LT. OF HWY. 64		342				
1269+54	1272+82	LT. OF HWY. 64	328					
1286+12	1287+78	LT. OF HWY. 64		166			1	
1292+65	1295+76	LT. OF HWY. 64		311				
1296+05	1305+56	LT. OF HWY. 64		951				
1308+43	1315+76	LT. OF HWY. 64		733				
1320+04	1320+16	LT. OF HWY. 64		12				
1361+33	1361+54	LT. OF HWY. 64		21				
1378+00	1384+89	LT. OF HWY. 64		689			2	
1385+32	1385+82	LT. OF HWY. 64		50				
1229+40	1230+02	RT. OF HWY. 64	62					
1244+18	1245+51	RT. OF HWY. 64		133				1
1252+99	1264+87	RT. OF HWY. 64	1188					
1280+74	1280+84	RT. OF HWY. 64		10				
1281+25	1285+23	RT. OF HWY. 64		398				
1317+90	1321+56	RT. OF HWY. 64		366			2	1
1327+34	1327+99	RT. OF HWY. 64		65			1	
1330+16	1334+81	RT. OF HWY. 64		465				
1338+29	1339+56	RT. OF HWY. 64		127				
1345+17	1346+13	RT. OF HWY. 64		96				
1346+32	1348+51	RT. OF HWY. 64		219				
1348+51	1351+00	RT. OF HWY. 64			249	1	**2	
1353+89	1356+11	RT. OF HWY. 64		222				
1356+21	1357+83	RT. OF HWY. 64		162				
1358+93	1361+47	RT. OF HWY. 64		254				1
1368+09	1368+62	RT. OF HWY. 64		53				
1368+79	1369+84	RT. OF HWY. 64		105				
1370+13	1371+60	RT. OF HWY. 64		147				
1374+90	1385+82	RT. OF HWY. 64		1092			1	
TOTALS:			1578	7763	249	1	10	3

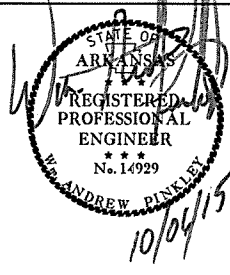
* DENOTES ALTERNATE BID ITEMS.
 ** DOUBLE SWING GATE.

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS	
		(SINGLE)	(DOUBLE)
	EACH		
ENTIRE PROJECT	44	38	3
TOTALS:	44	38	3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		59	151
				JOB NO.	CA0501			

2 QUANTITIES



STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT			FLARED END SECTIONS FOR R.C. PIPE CULVERTS			R.C. BOX CULVERT			UNCL. EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.		
		(CLASS III)		(CLASS IV)	24"	30"	36"	DIMENSIONS							CLASS S CONCRETE-ROADWAY (GRADE 60)	REINF. STEEL-ROADWAY (GRADE 60)
		36"	24"	30"				LENGTH	SPAN	HEIGHT						
1230+01	INSTALL 2-30" R.C. PIPE CULVERTS			240										PCC-1, FES-1, FES-2		
1252+50	INSTALL 2-30" R.C. PIPE CULVERTS			300										PCC-1, FES-1, FES-2		
1296+56	EXTEND 1 - 36" R.C. PIPE CULVERT 17' LT.	17														
1296+56	EXTEND 1 - 36" R.C. PIPE CULVERT 8' RT.	8												PCC-1, FES-1, FES-2		
1317+68	INSTALL 3-24" R.C. PIPE CULVERTS		360		6									PCC-1, FES-1, FES-2		
1296+37	EXTEND 1 - 6'X4' R.C. BOX CULVERT 19' LT.						19	6	4	9.18	1310	4	5	0.06	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1296+37	EXTEND 1 - 6'X4' R.C. BOX CULVERT 9' RT.						9	6	4	4.35	621	2	5	0.06	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1330+14	EXTEND 2 - 6'X5' R.C. BOX CULVERTS 38' LT.						39	6	5	36.70	6208	16	8	0.10	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
SUBTOTALS:		25	360	540	6	8	2			50.23	8139	22	18	0.22		
STRUCTURES OVER 20' - 0" SPAN																
1270+20	EXTEND 3 - 10'X6' R.C. BOX CULVERTS 19' LT.						19	10	6	48.98	8622	11	9	0.11	R300X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1270+20	EXTEND 1 - 10'X5' R.C. BOX CULVERTS 19' LT.						19	10	5	18.18	2482	4	5	0.06	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1270+20	EXTEND 3 - 10'X6' R.C. BOX CULVERTS 7' RT.						7	10	6	18.05	3177	1	9	0.11	R300X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1270+20	EXTEND 1 - 10'X5' R.C. BOX CULVERTS 7' RT.						7	10	5	6.70	914	1	5	0.06	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1273+38	EXTEND 2 - 10'X5' R.C. BOX CULVERTS 19' LT.						19	10	5	31.81	5313	8	10	0.13	R200X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1273+38	EXTEND 2 - 10'X5' R.C. BOX CULVERTS 7' RT.						7	10	5	11.72	1958	3	10	0.13	R200X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1365+88	EXTEND 1 - 5'X5' R.C. BOX CULVERTS 26' RT.						26	7	5	40.72	7488	16	4	0.05	R300X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1365+88	EXTEND 3 - 7'X5' R.C. BOX CULVERTS 26' RT.						26	5	5	11.80	1583	5	19	0.24	R100X-0, WX003-1, RCB-1, RCB-2, RCB-3	
1365+88	INSTALL 1 - 7'X5' R.C. BOX CULVERT						137	7	5	74.42	10332	27	8	0.10	R100X-0, WX003-1, RCB-1, RCB-2	
SUBTOTALS:		25	360	540	6	8	2			262.38	41869	76	79	0.99		
TOTALS:		25	360	540	6	8	2			312.61	50008	98	97	1.21		

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.

CULVERT CLEAN OUT

STATION	LOCATION	EACH
1270+20	HWY. 64 - R.C. BOX	4
1273+38	HWY. 64 - R.C. BOX	2
1296+37	HWY. 64 - R.C. BOX	1
1296+56	HWY. 64 - CROSS DRAIN	1
1330+14	HWY. 64 - R.C. BOX	2
1365+88	HWY. 64 - R.C. BOX	4
1347+50	HWY. 64 - LT. SIDE DRAIN	1
1348+86	HWY. 64 - LT. SIDE DRAIN	1
1355+40	HWY. 64 - LT. SIDE DRAIN	1
1356+51	HWY. 64 - LT. SIDE DRAIN	1
1358+60	HWY. 64 - LT. SIDE DRAIN	1
1360+00	HWY. 64 - LT. SIDE DRAIN	1
1361+56	HWY. 64 - LT. SIDE DRAIN	1
1370+85	HWY. 64 - LT. SIDE DRAIN	1
1374+24	HWY. 64 - LT. SIDE DRAIN	1
1313+70	HWY. 64 - RT. SIDE DRAIN	1
1318+37	HWY. 64 - RT. SIDE DRAIN	1
1318+79	HWY. 64 - RT. SIDE DRAIN	1
1321+35	HWY. 64 - RT. SIDE DRAIN	1
TOTAL:		27

FLOWABLE SELECT MATERIAL

LOCATION	CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	10
TOTAL:	10

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

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU. YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	160
TOTAL:	160

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

DUMPED RIPRAP AND FILTER BLANKET

STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
		CU. YD.	SQ. YD.
1230+01	OUTLET OF PIPE CULVERT	10	20
1252+50	OUTLET OF PIPE CULVERT	10	20
1296+37	OUTLET OF BOX CULVERT	20	40
1317+68	OUTLET OF PIPE CULVERT	10	20
1330+14	OUTLET OF BOX CULVERT	20	40
SUBTOTALS:		70	140
STRUCTURES OVER 20' SPAN			
1270+20	OUTLET OF BOX CULVERT	65	130
1273+38	OUTLET OF BOX CULVERT	30	60
1365+88	OUTLET OF BOX CULVERT	50	100
SUBTOTALS:		145	290
TOTALS:		215	430

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

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
1230+01	HWY. 64	15.67	24.2	21
1252+50	HWY. 64	15.67	35	30
1252+62	HWY. 64	10.83	27	16
1317+68	HWY. 64	19.50	37	40
1365+88	HWY. 64	18.50	24	24
TOTAL:				131

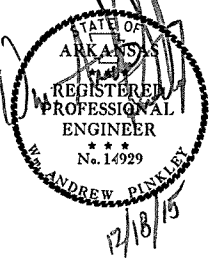
AVG. DEPTH = 9"

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-18-15				6	ARK.			
				JOB NO.		CA0501	62	151

SUMMARY OF QUANTITIES			
ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	158	STATION
201	GRUBBING	158	STATION
202	REMOVAL AND DISPOSAL OF CURB	148	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE	13904	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	12	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	438	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	43	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE FOUNDATION	75	SQ. YD.
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	58	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	69	EACH
202	REMOVAL AND DISPOSAL OF STORM CELLAR	1	EACH
206	FLOWABLE SELECT MATERIAL	10	CU. YD.
210	UNCLASSIFIED EXCAVATION	112586	CU. YD.
210	COMPACTED EMBANKMENT	95696	CU. YD.
SP & 210	SOIL STABILIZATION	500	TON
303	AGGREGATE BASE COURSE (CLASS 7)	54388	TON
SS & 401	TACK COAT	14908	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	11538	TON
SP & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")	443	TON
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	8579	TON
SP, SS & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	385	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	24223	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	46	TON
SP, SS & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	1256	TON
412	COLD MILLING ASPHALT PAVEMENT	778	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	75	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY	520.00	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1209	SQ. FT.
SS & 604	BARRICADES	224	LIN. FT.
SS & 604	TRAFFIC DRUMS	680	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	4170	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	1845	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	179173	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	17950	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	18087	LIN. FT.
SS & 604	VERTICAL PANELS	269	EACH
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	360	LIN. FT.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	540	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	25	LIN. FT.
SP, SS & 606	18" SIDE DRAIN	926	LIN. FT.
SP, SS & 606	24" SIDE DRAIN	984	LIN. FT.
SP, SS & 606	36" SIDE DRAIN	34	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN	114	LIN. FT.
SS & 606	28" X 20" SIDE DRAIN	86	LIN. FT.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	8	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	SELECTED PIPE BEDDING	160	CU. YD.
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	131	TON
619	WIRE FENCE (TYPE C)	1578	LIN. FT.
619	WIRE FENCE (TYPE D)	7763	LIN. FT.
* 619	4' STEEL CHAIN LINK FENCE (ALTERNATE NO. 1)	249	LIN. FT.
* 619	4' ALUMINUM CHAIN LINK FENCE (ALTERNATE NO. 2)	249	LIN. FT.
* 619	4' STEEL GATE (ALTERNATE NO. 1)	1	EACH
* 619	4' ALUMINUM GATES (ALTERNATE NO. 2)	1	EACH
* 619	16' STEEL GATES (ALTERNATE NO. 1)	10	EACH
* 619	16' ALUMINUM GATES (ALTERNATE NO. 2)	10	EACH
* 619	20' STEEL GATES (ALTERNATE NO. 1)	3	EACH
* 619	20' ALUMINUM GATES (ALTERNATE NO. 2)	3	EACH
620	LIME	66	TON
620	SEEDING	32.86	ACRE
SS & 620	MULCH COVER	65.86	ACRE
620	WATER	4027.5	M. GAL.
621	TEMPORARY SEEDING	33.00	ACRE
621	SILT FENCE	3040	LIN. FT.
621	SAND BAG DITCH CHECKS	207	BAG
621	DROP INLET SILT FENCE	20	LIN. FT.
621	SEDIMENT BASIN	7091	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	7091	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	7204	CU. YD.
621	ROCK DITCH CHECKS	207	CU. YD.
621	WATTLE (20")	1710	LIN. FT.
623	SECOND SEEDING APPLICATION	32.86	ACRE
624	SOLID SODDING	197	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	44	EACH
637	MAILBOX SUPPORTS (SINGLE)	38	EACH
637	MAILBOX SUPPORTS (DOUBLE)	3	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	26457	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	57823	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	61523	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (12")	335	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	1233	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER	16	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	8	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	22	CU. YD.
802	CLASS S CONCRETE-ROADWAY	50.23	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	8139	POUND
816	FILTER BLANKET	140	SQ. YD.
816	DUMPED RIPRAP	70	CU. YD.
SP	CULVERT CLEAN OUT	27	EACH
STRUCTURES OVER 20" SPAN			
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	76	CU. YD.
802	CLASS S CONCRETE-ROADWAY	262.38	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	41869	POUND
816	FILTER BLANKET	290	SQ. YD.
816	DUMPED RIPRAP	145	CU. YD.

* DENOTES ALTERNATE BID ITEMS.

2 SUMMARY OF QUANTITIES AND REVISIONS

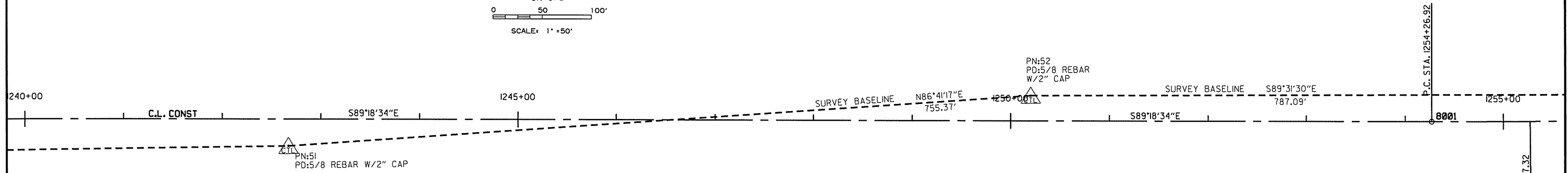
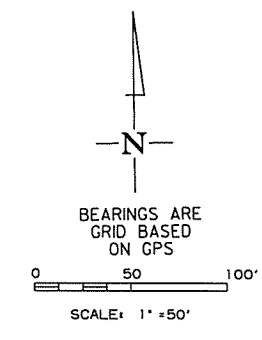
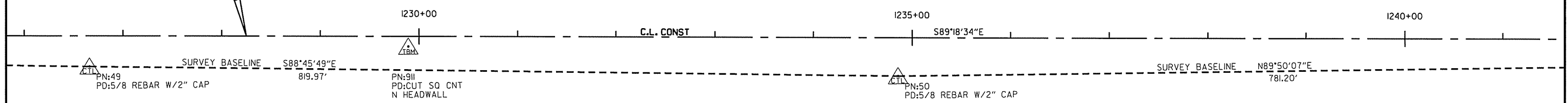
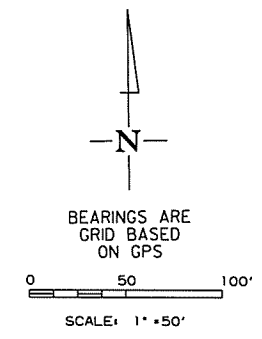
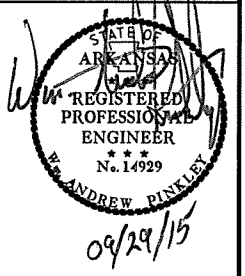


REVISIONS		
DATE	REVISION	SHEET NUMBER
12/18/2015	ADDED PRICE ADJUSTMENT FOR ASPHALT BINDER SP	2, 62

STA. 1228+25.00
 BEGIN JOB CA0501
 MATCH JOB 012155
 L.M. 5.19

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.	CA0501	64	151	

2 SURVEY CONTROL DETAILS



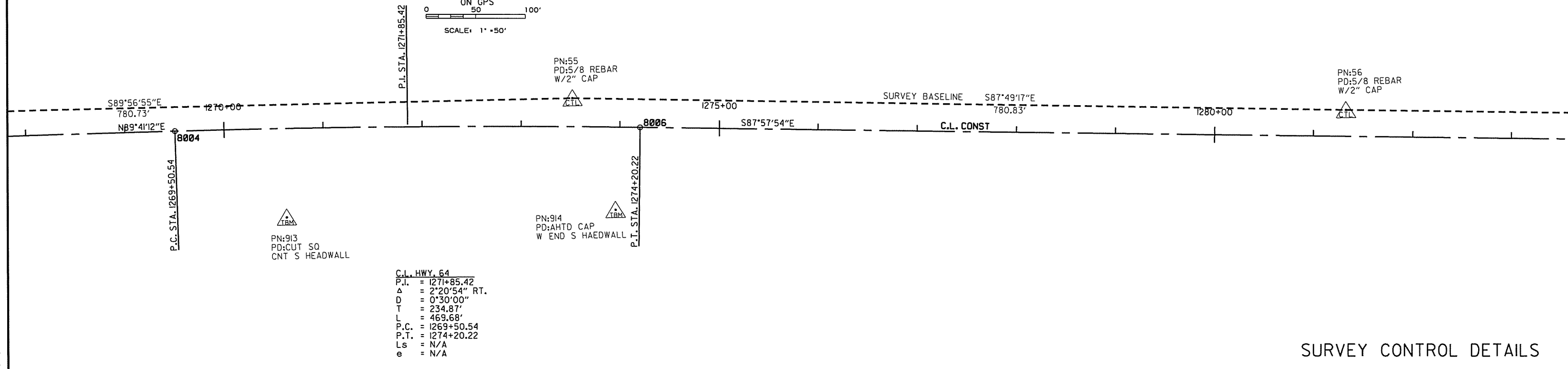
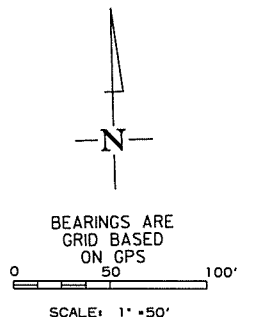
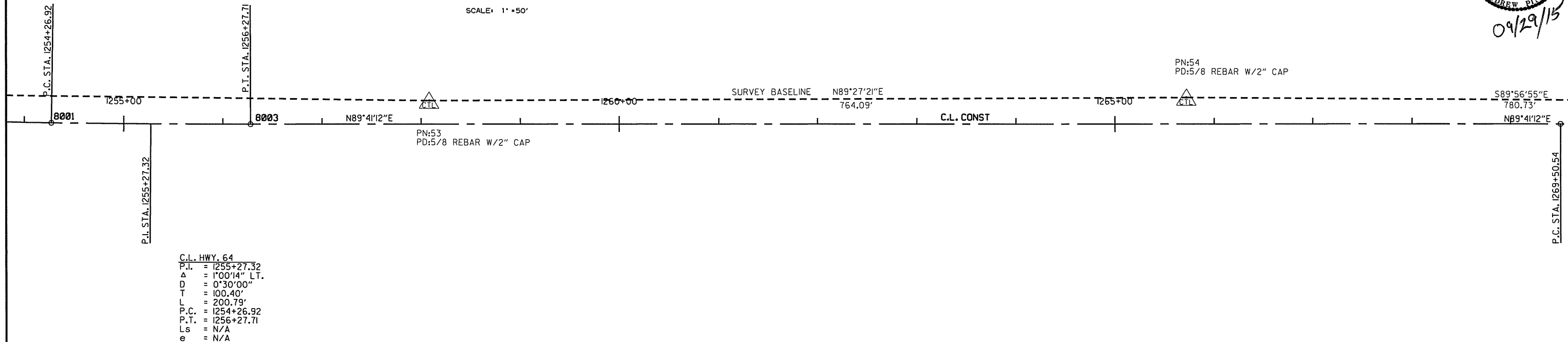
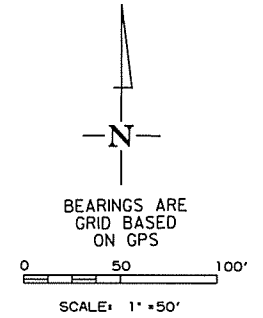
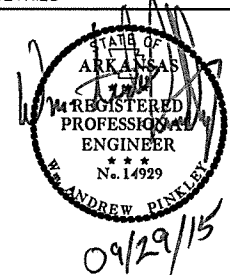
C.L. HWY. 64
 P.I. = 1255+27.32
 Δ = 1°00'14" LT.
 D = 0°30'00"
 T = 100.40'
 L = 200.79'
 P.C. = 1254+26.93
 P.T. = 1256+27.71
 Ls = N/A
 e = N/A

P.I. STA. 1255+27.32

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. CA0501	65	151

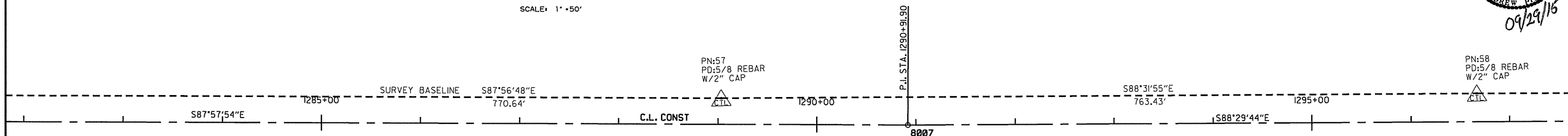
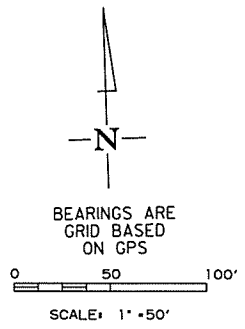
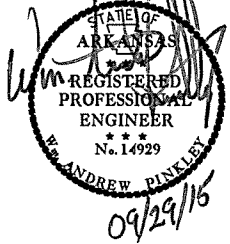
2 SURVEY CONTROL DETAILS



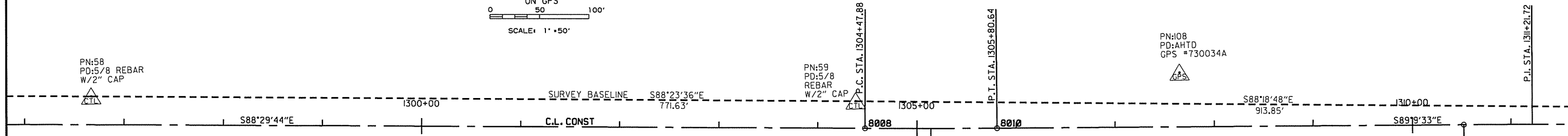
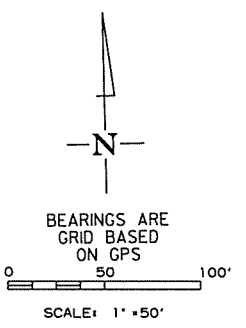
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501		66	151

2 SURVEY CONTROL DETAILS



C.L. HWY. 64
P.I. = 1290+91.90
Δ = 0°31'49" LT.

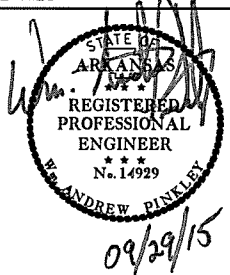


C.L. HWY. 64
P.I. = 1305+14.26
Δ = 0°39'49" LT.
D = 0°30'00"
T = 66.38'
L = 132.76'
P.C. = 1304+47.88
P.T. = 1305+80.64
Ls = N/A
e = N/A

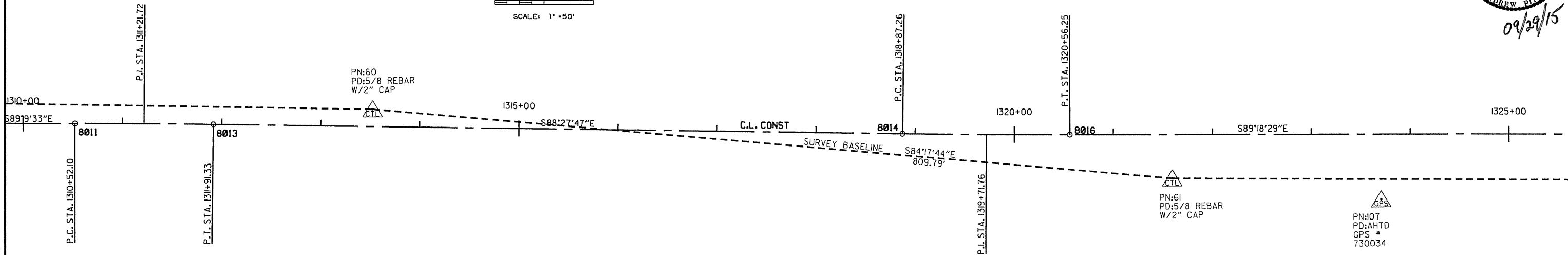
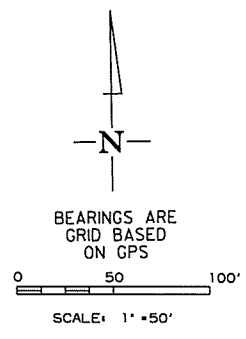
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CA0501	67	151

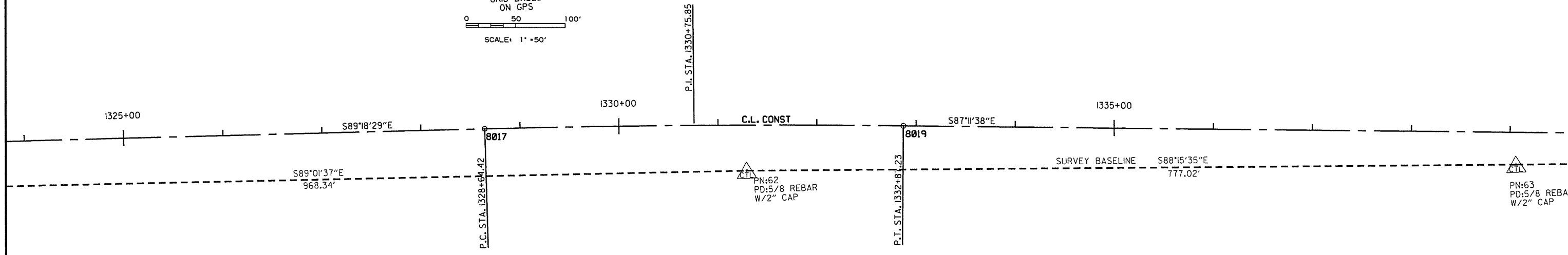
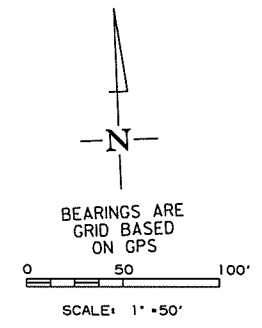
2 SURVEY CONTROL DETAILS



C.L. HWY. 64
P.I. = 1319+71.76
Δ = 0°50'42" LT.
D = 0°30'00"
T = 84.49'
L = 168.98'
P.C. = 1318+87.26
P.T. = 1320+56.25
Ls = N/A
e = N/A



C.L. HWY. 64
P.I. = 1311+21.72
Δ = 0°41'46" RT.
D = 0°30'00"
T = 69.62'
L = 139.23'
P.C. = 1310+52.10
P.T. = 1311+91.33
Ls = N/A
e = N/A

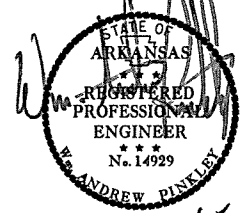


C.L. HWY. 64
P.I. = 1330+75.85
Δ = 2°06'51" RT.
D = 0°30'00"
T = 211.43'
L = 422.81'
P.C. = 1328+64.42
P.T. = 1332+87.23
Ls = N/A
e = N/A

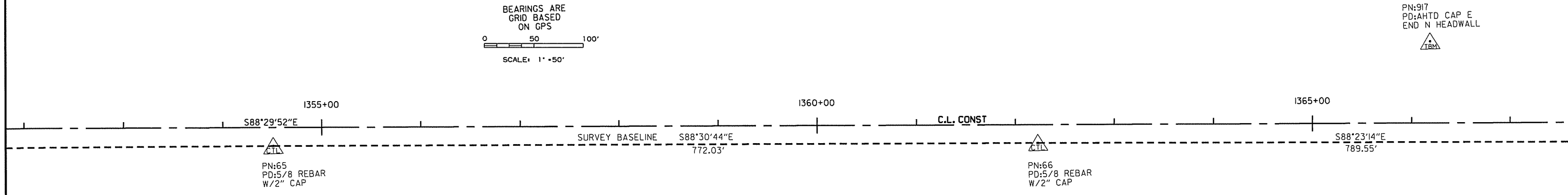
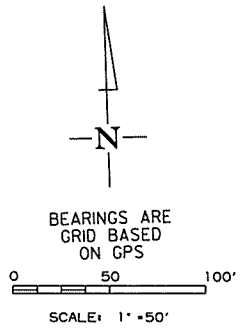
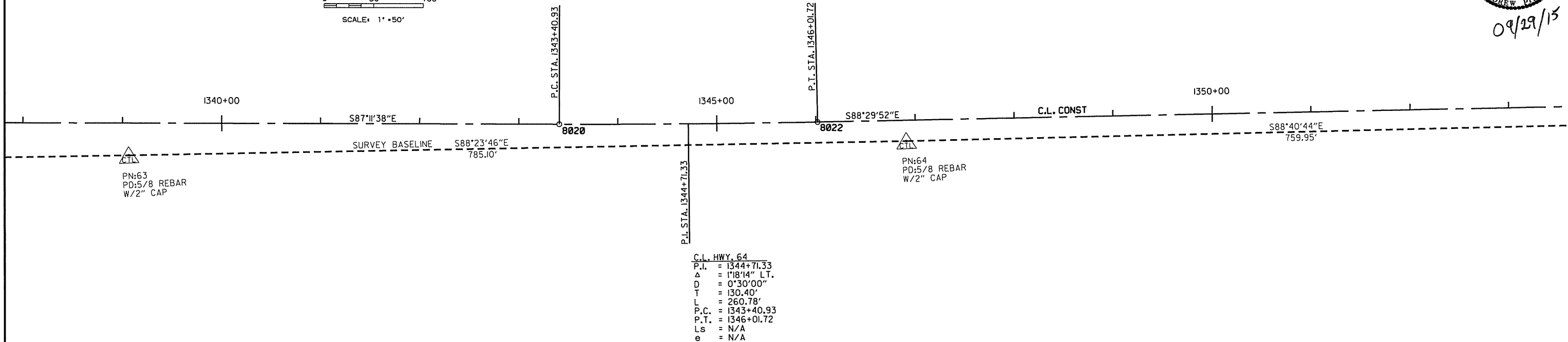
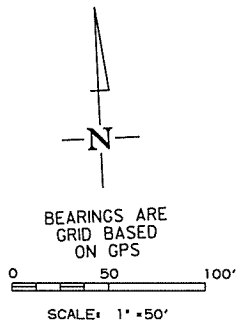
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						CA0501	68	151

2 SURVEY CONTROL DETAILS

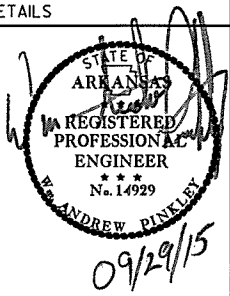


09/29/15

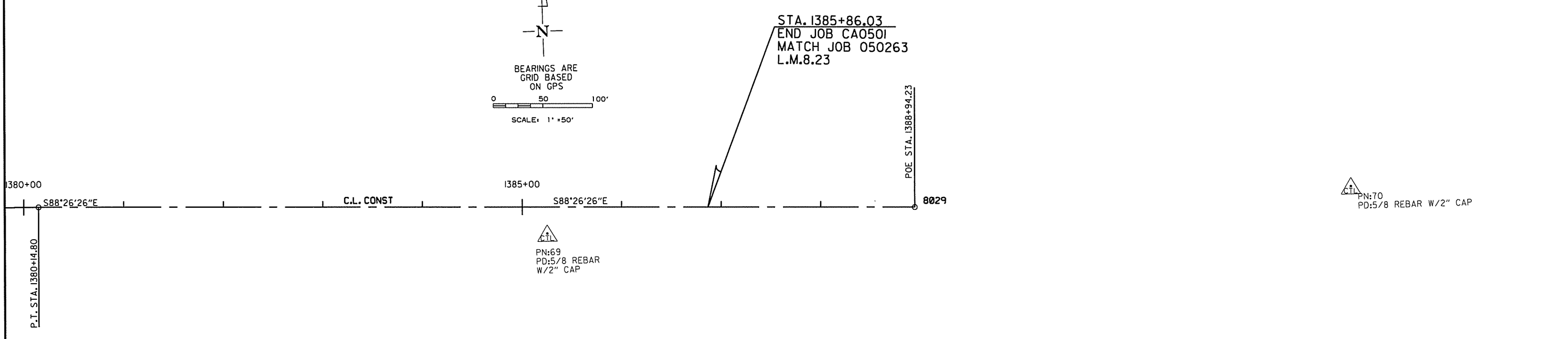
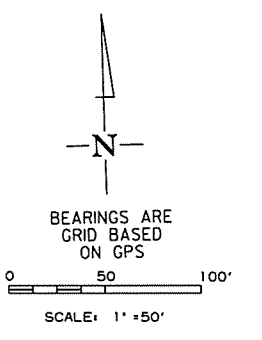
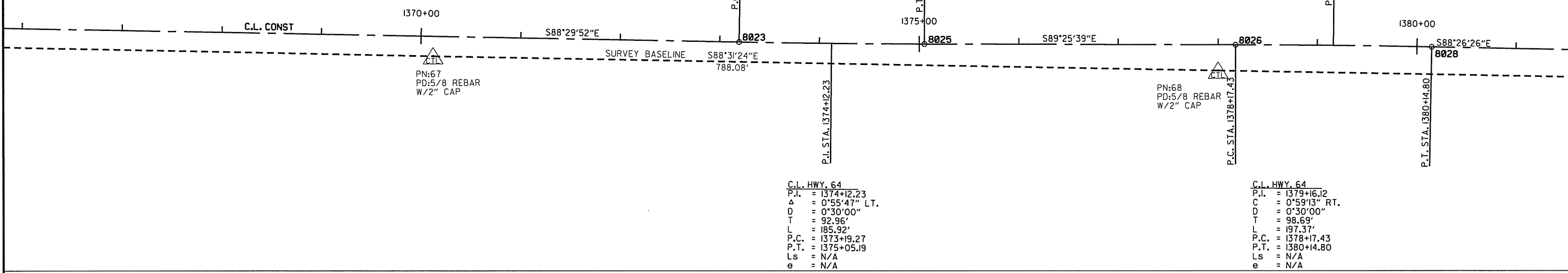
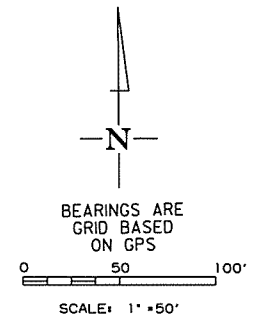


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501		69	151

2 SURVEY CONTROL DETAILS



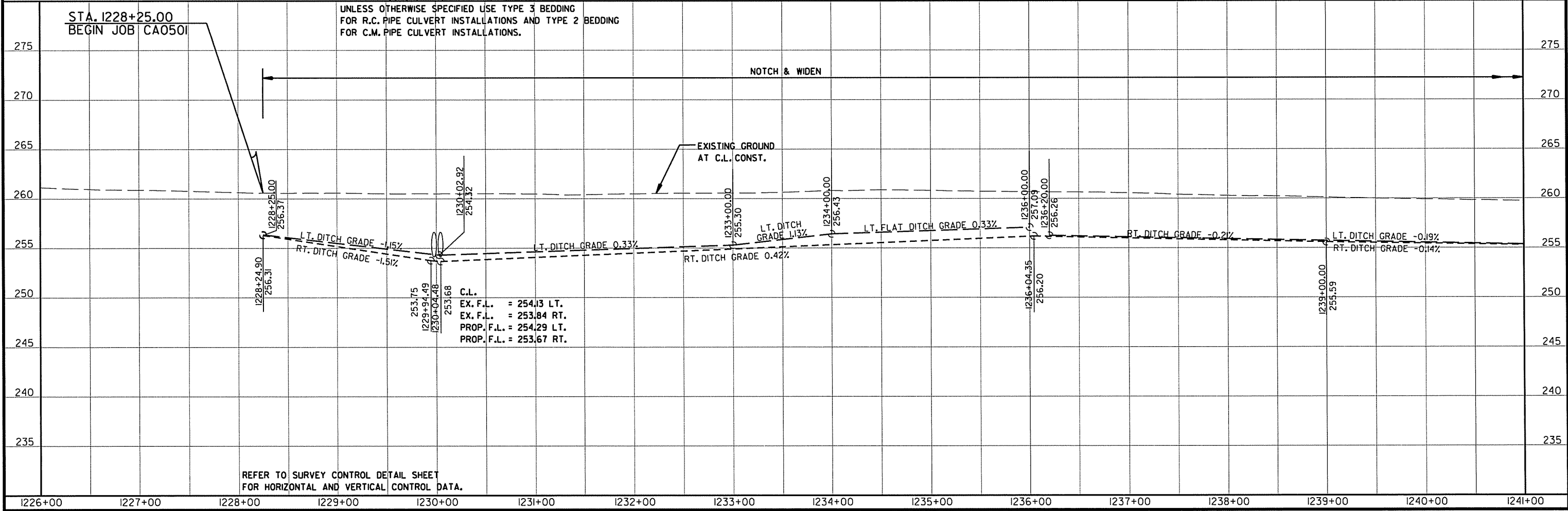
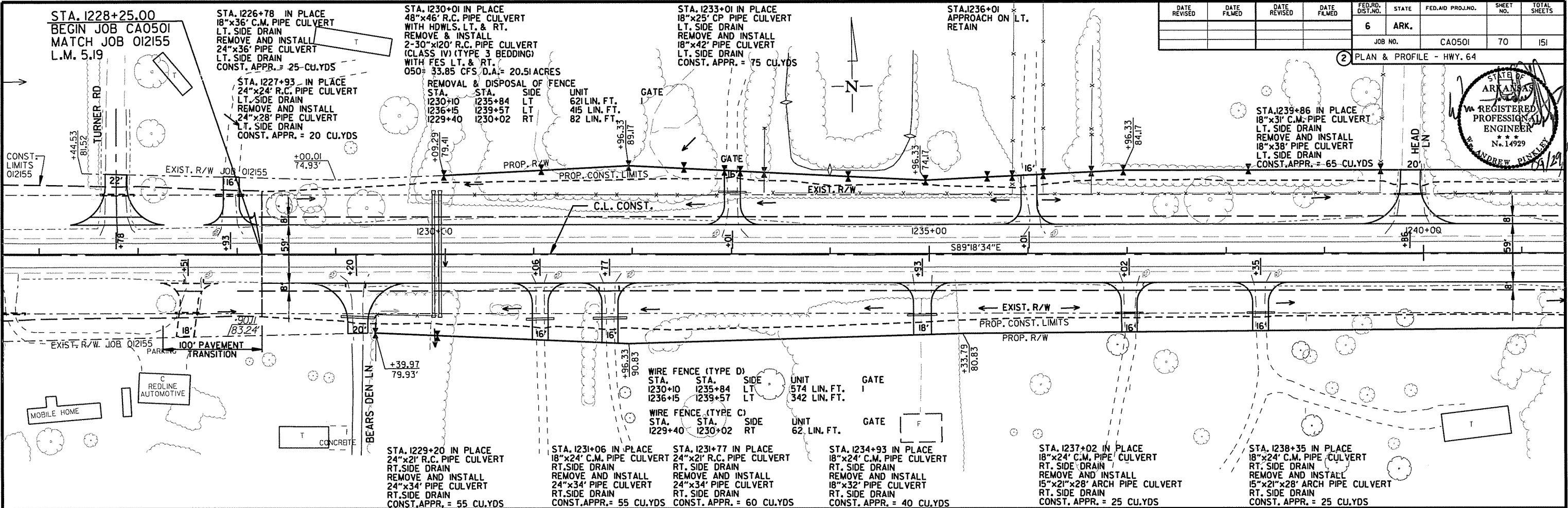
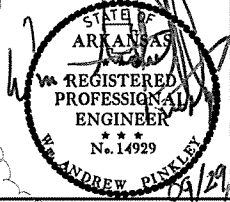
PN:917
PD:AHTD CAP E
END N HEADWALL



9/28/2015

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

2 PLAN & PROFILE - HWY. 64



9/28/2015

STA. 1241+77 IN PLACE
18"x47' R.C. PIPE CULVERT
PLUG AND ABANDON
REMOVAL & DISPOSAL OF FENCE
STA. STA. SIDE UNIT GATE
1240+14 1244+01 LT 387 LIN. FT.
1244+18 1245+51 RT 146 LIN. FT.
1252+99 1264+87 RT 1230 LIN. FT.

STA. 1244+25 INSTALL
18"x40' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS
GATE

STA. 1246+95 IN PLACE
18"x29' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x38' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 70 CU.YDS

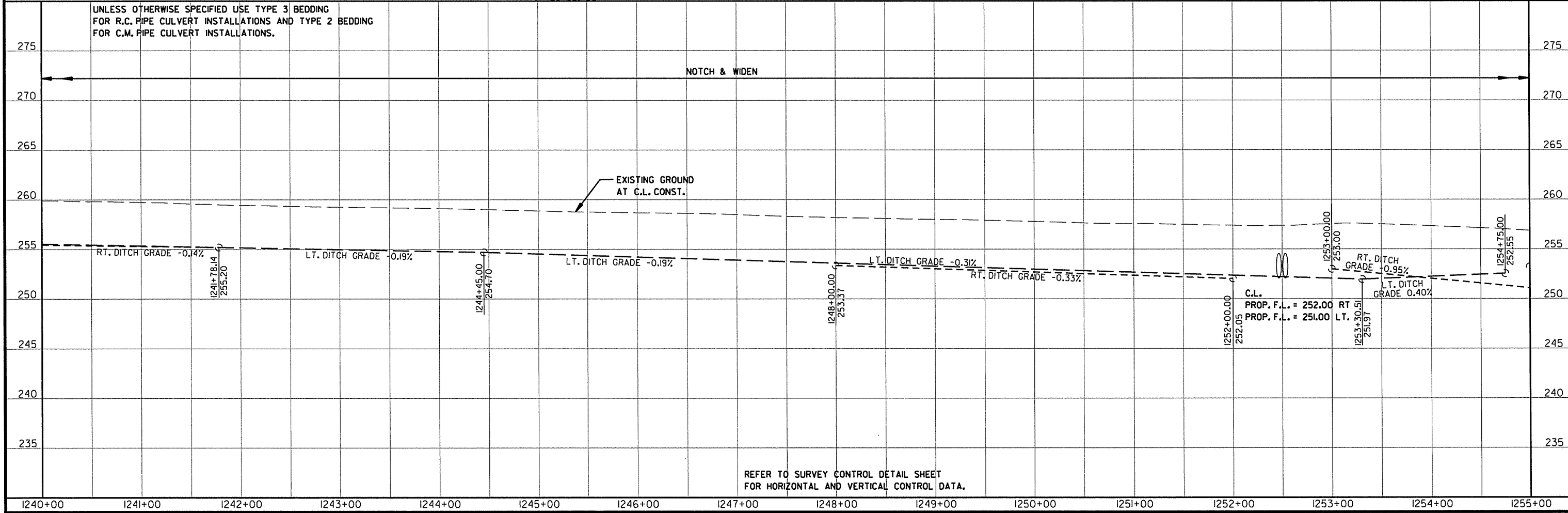
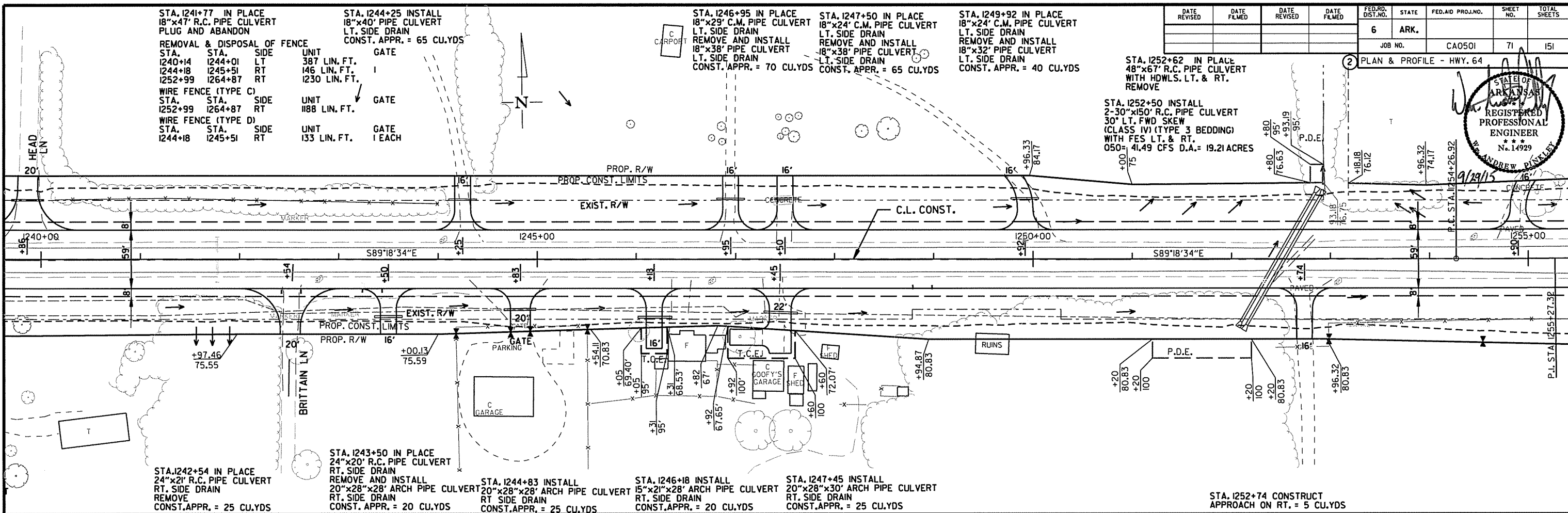
STA. 1247+50 IN PLACE
18"x24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x38' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS

STA. 1249+92 IN PLACE
18"x24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 40 CU.YDS

STA. 1252+62 IN PLACE
48"x67' R.C. PIPE CULVERT
WITH HOWLS. LT. & RT.
REMOVE
STA. 1252+50 INSTALL
2-30"x150' R.C. PIPE CULVERT
30' LT. FWD SKEW
(CLASS IV) (TYPE 3 BEDDING)
WITH FES LT. & RT.
050= 41.49 CFS D.A.= 19.21 ACRES

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		71	151

PLAN & PROFILE - HWY. 64



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

9/28/2015

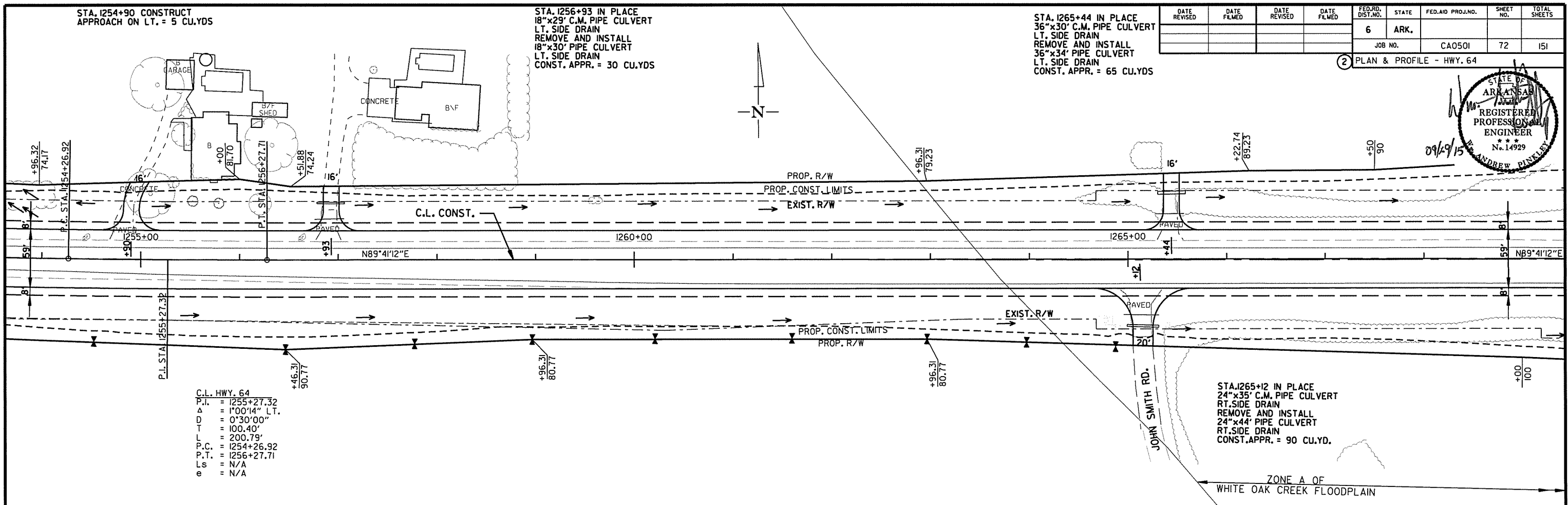
STA. 1254+90 CONSTRUCT
APPROACH ON LT. = 5 CU.YDS

STA. 1256+93 IN PLACE
18"x29' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x30' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 30 CU.YDS

STA. 1265+44 IN PLACE
36"x30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
36"x34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		72	151

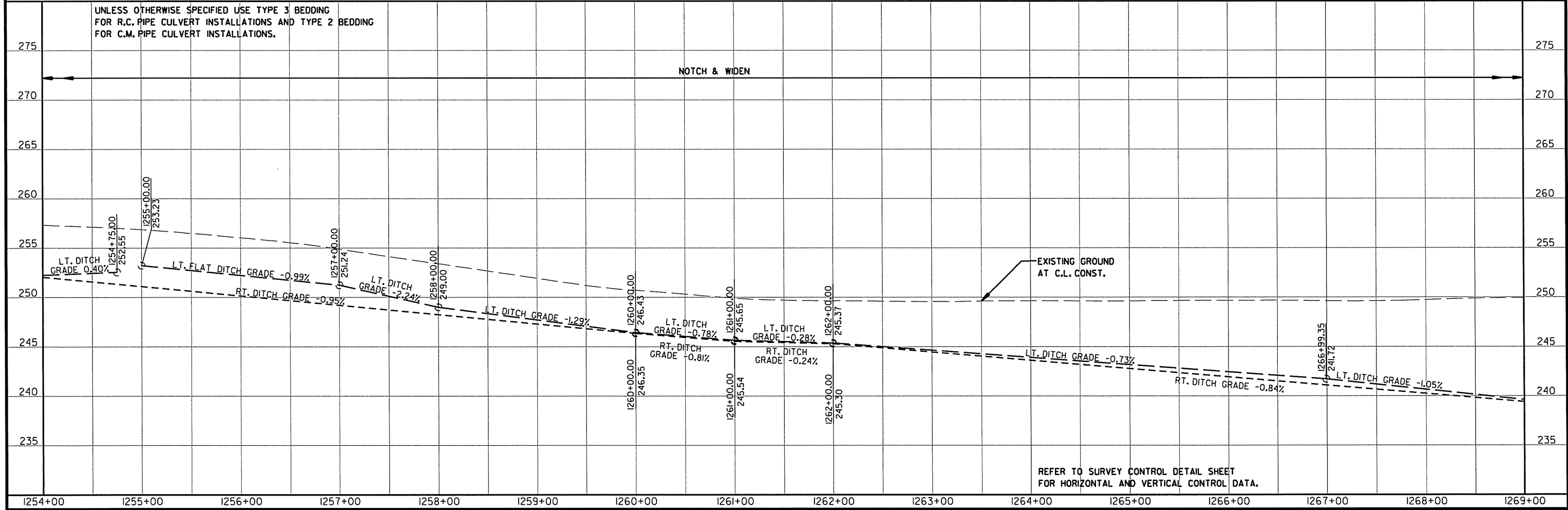
2 PLAN & PROFILE - HWY. 64



C.L. HWY. 64
P.I. = 1255+27.32
Δ = 1°00'14" LT.
D = 0°30'00"
T = 100.40'
L = 200.79'
P.C. = 1254+26.92
P.T. = 1256+27.71
Ls = N/A
e = N/A

STA. 1265+12 IN PLACE
24"x35' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"x44' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 90 CU.YD.

ZONE A OF
WHITE OAK CREEK FLOODPLAIN



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

9/28/2015

STA. 1270+20 IN PLACE
TRIPLE 10'x6'x99' R.C. BOX CULVERT
& 10'x5'x99' R.C. BOX CULVERT
WITH 3/4 WINGS LT. & RT.
RETAIN & EXTEND 19' LT. AND 7' RT.
050= 3225 CFS D.A.= 3563 ACRES

REMOVAL & DISPOSAL OF FENCE
STA. STA. SIDE UNIT
1269+54 1272+82 LT 403 LIN. FT.
WIRE FENCE (TYPE C)
STA. STA. SIDE UNIT GATE
1269+54 1272+82 LT 328 LIN. FT.

STA. 1273+38 IN PLACE
OBL. 10'x5'x99' R.C. BOX CULVERT
WITH 3/4 WINGS LT. & RT.
RETAIN & EXTEND 19' LT. AND 7' RT.
050= 3225 CFS D.A.= 3563 ACRES

STA. 1276+77 IN PLACE
24"x24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x36' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS

STA. 1277+82 IN PLACE
24"x33' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 55 CU.YDS

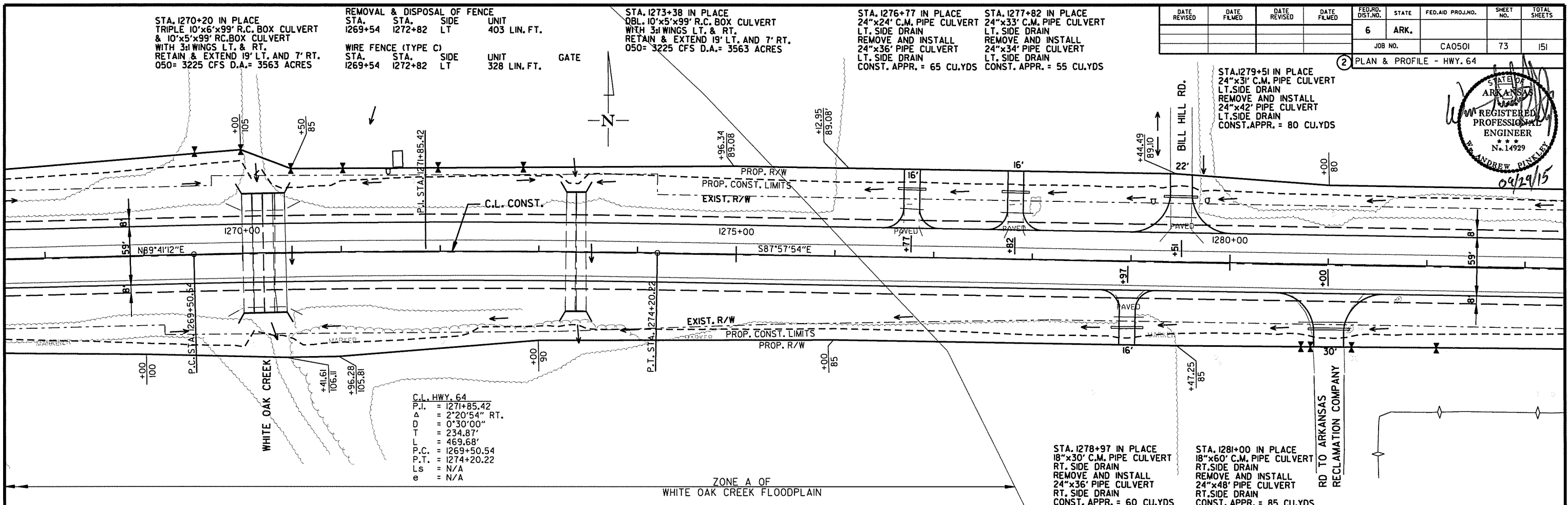
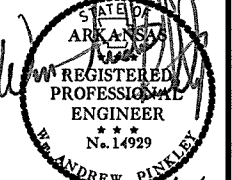
STA. 1279+51 IN PLACE
24"x31' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x42' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 80 CU.YDS

STA. 1278+97 IN PLACE
18"x30' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"x36' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 60 CU.YDS

STA. 1281+00 IN PLACE
18"x60' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24"x48' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 85 CU.YDS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		73	151

PLAN & PROFILE - HWY. 64



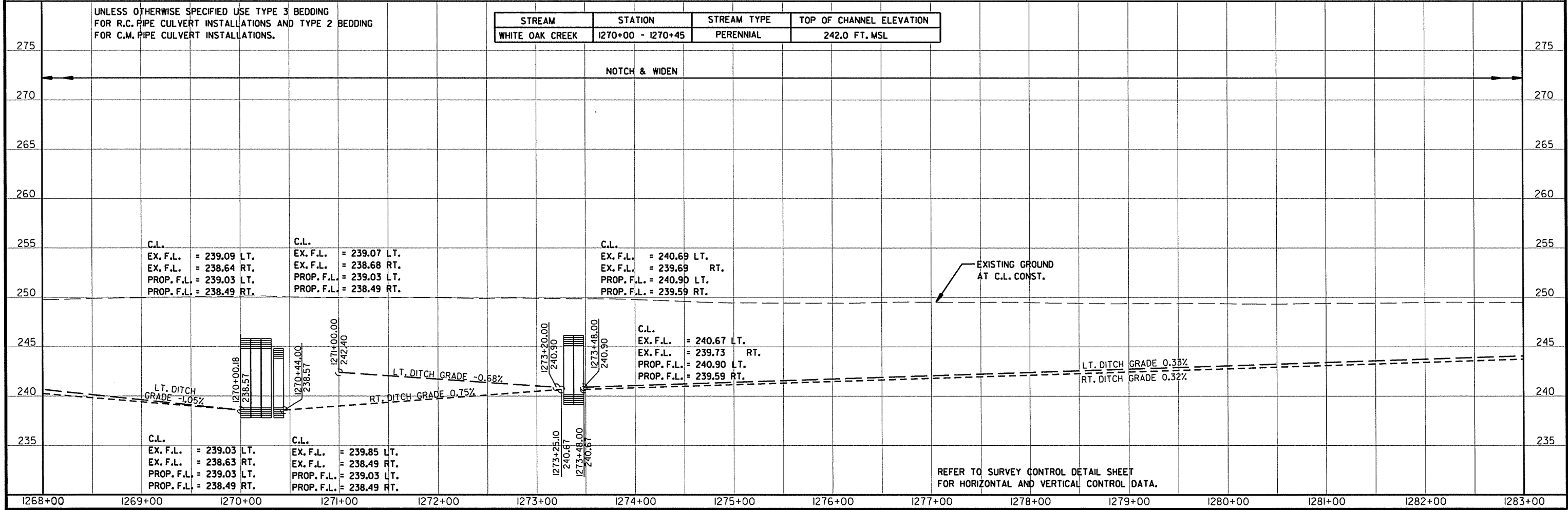
C.L. HWY. 64
P.I. = 1271+85.42
Δ = 2°20'54" RT.
D = 0°30'00" RT.
T = 234.87'
L = 469.68'
P.C. = 1269+50.54
P.T. = 1274+20.22
Ls = N/A
e = N/A

ZONE A OF
WHITE OAK CREEK FLOODPLAIN

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

STREAM	STATION	STREAM TYPE	TOP OF CHANNEL ELEVATION
WHITE OAK CREEK	1270+00 - 1270+45	PERENNIAL	242.0 FT. MSL

NOTCH & WIDEN



EXISTING GROUND AT C.L. CONST.

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

9/28/2015

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	SIDE	UNIT
1280+74	1280+82	RT	26 LIN. FT.
1281+25	1285+23	RT	440 LIN. FT.
1286+12	1287+78	LT	228 LIN. FT.
1292+65	1295+76	LT	361 LIN. FT.

WIRE FENCE (TYPE D)

STA.	STA.	SIDE	UNIT
1280+74	1280+84	RT	10 LIN. FT.
1281+25	1285+23	RT	398 LIN. FT.
1286+12	1287+78	LT	166 LIN. FT.
1292+65	1295+76	LT	311 LIN. FT.

STA. 1287+01 IN PLACE
18"x26" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x38" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 60 CU.YDS

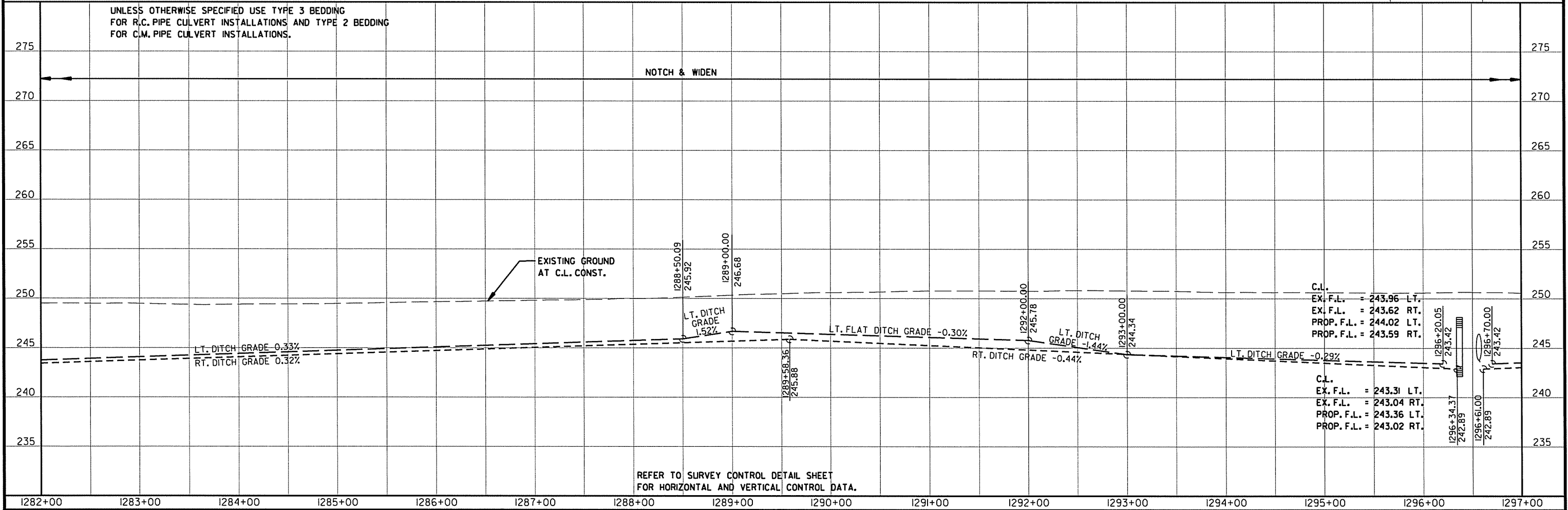
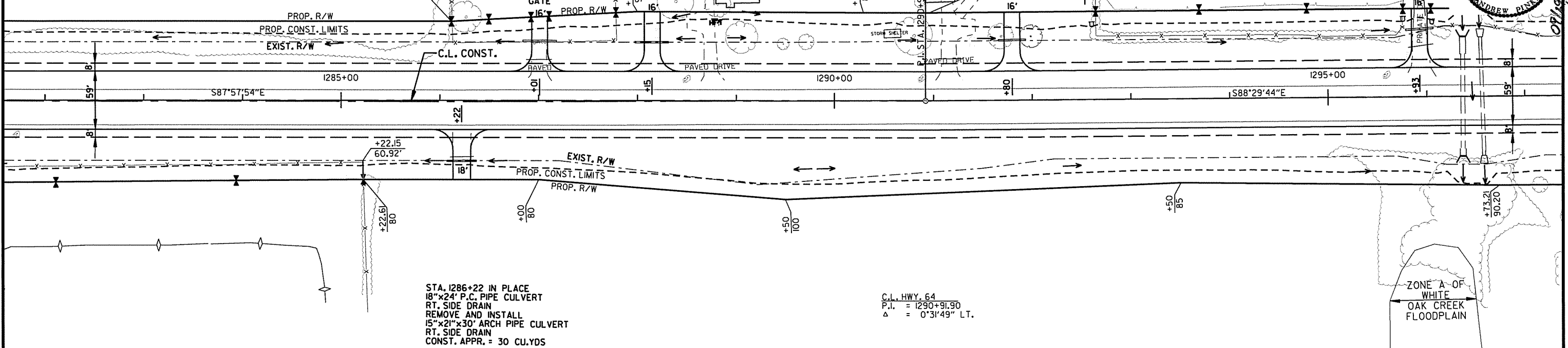
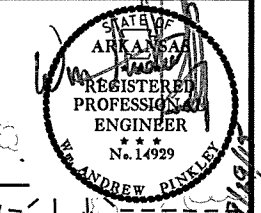
STA. 1291+16 IN PLACE
18"x40" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 100 CU.YDS

STA. 1291+80 INSTALL
18"x36" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS

STA. 1295+93 IN PLACE
18"x25" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x38" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 65 CU.YDS

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. CA0501							74	151

PLAN & PROFILE - HWY. 64



9/28/2015

STA. 1296+37 IN PLACE
6"x4"x96" R.C. BOX CULVERT
WITH 3/4" WINGS LT. & RT.
RETAIN & EXTEND 19' LT. AND 9' RT.
050= 155.42 CFS D.A.= 129.65 ACRES

STA. 1296+56 IN PLACE
36"x102" R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE HDWLS. LT. & RT.
AND EXTEND R.C. PIPE
17' LT. & 8' RT.
(CLASS III) (TYPE 3 BEDDING)
WITH FES. LT. & RT.
050= 155.42 CFS D.A.= 129.65 ACRES
36" R.C. PIPE = 25 LIN. FT.
36" FES = 2 EA.

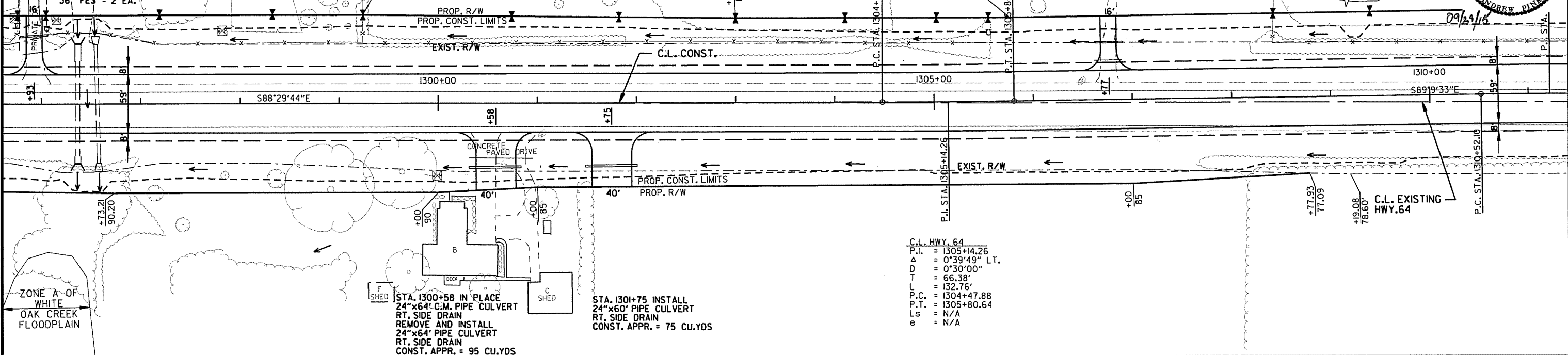
REMOVAL & DISPOSAL OF FENCE
STA. 1296+05 STA. 1305+56 LT UNIT 981 LIN. FT.

WIRE FENCE (TYPE D)
STA. 1296+05 STA. 1305+56 LT UNIT 951 LIN. FT.

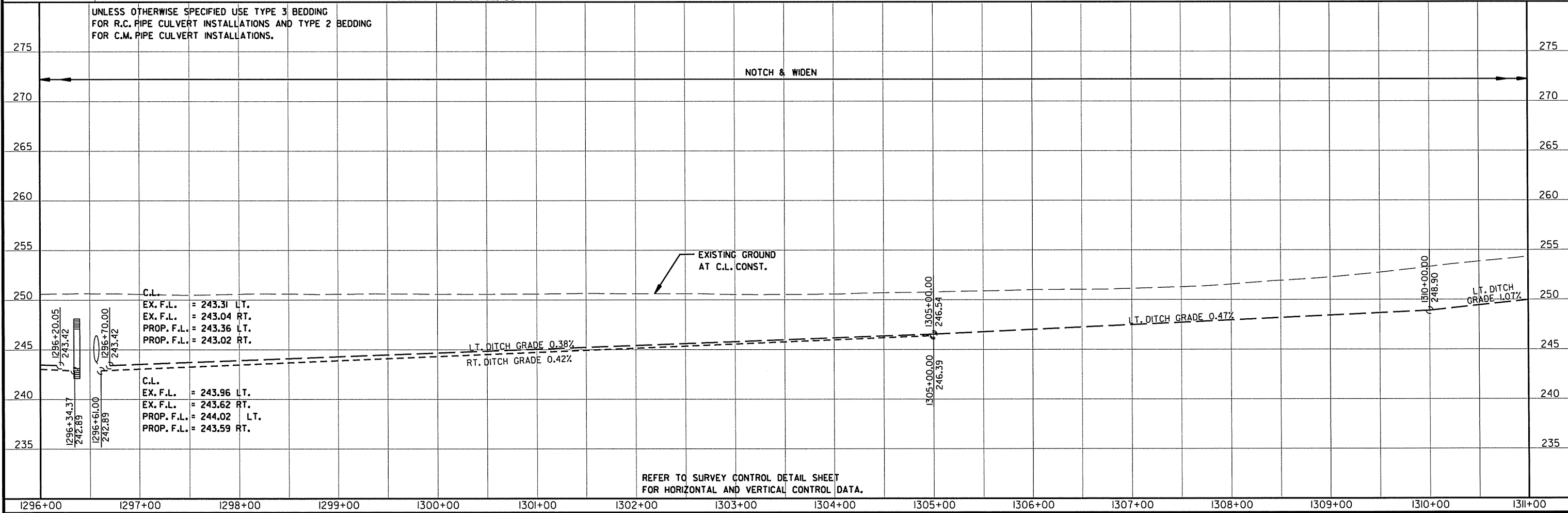
STA. 1306+77 IN PLACE
18"x28" C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
18"x34" PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 55' CU.YDS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		75	151

2 PLAN & PROFILE - HWY. 64



C.L. HWY. 64
P.I. = 1305+14.26
Δ = 0°39'49" LT.
D = 0°30'00"
T = 66.38'
L = 132.76'
P.C. = 1304+47.88
P.T. = 1305+80.64
Ls = N/A
e = N/A



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

9/28/2015

REMOVAL & DISPOSAL OF FENCE				
STA.	STA.	SIDE	UNIT	GATE
1308+43	1315+76	LT	802 LIN. FT.	
1320+04	1320+16	LT	20 LIN. FT.	
1320+42	1323+29	LT	370 LIN. FT.	
1317+90	1321+56	RT	400 LIN. FT.	3

WIRE FENCE (TYPE D)				
STA.	STA.	SIDE	UNIT	GATE
1308+43	1315+76	LT	733 LIN. FT.	
1320+04	1320+16	LT	12 LIN. FT.	
1317+90	1321+56	RT	366 LIN. FT.	3

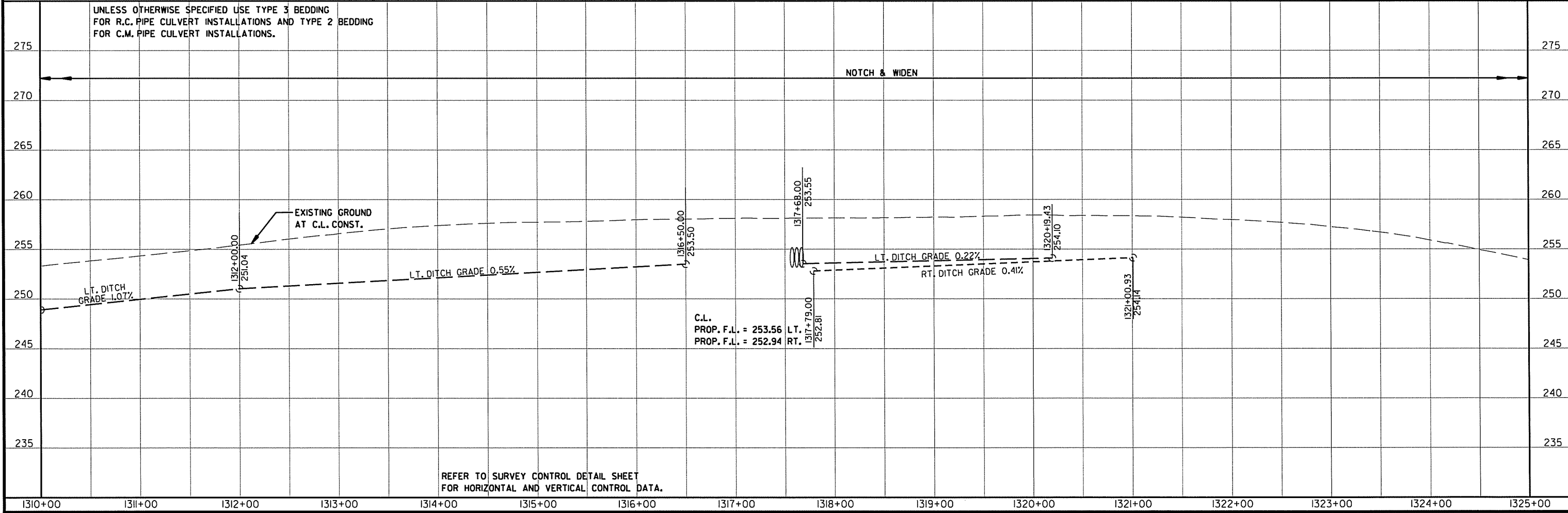
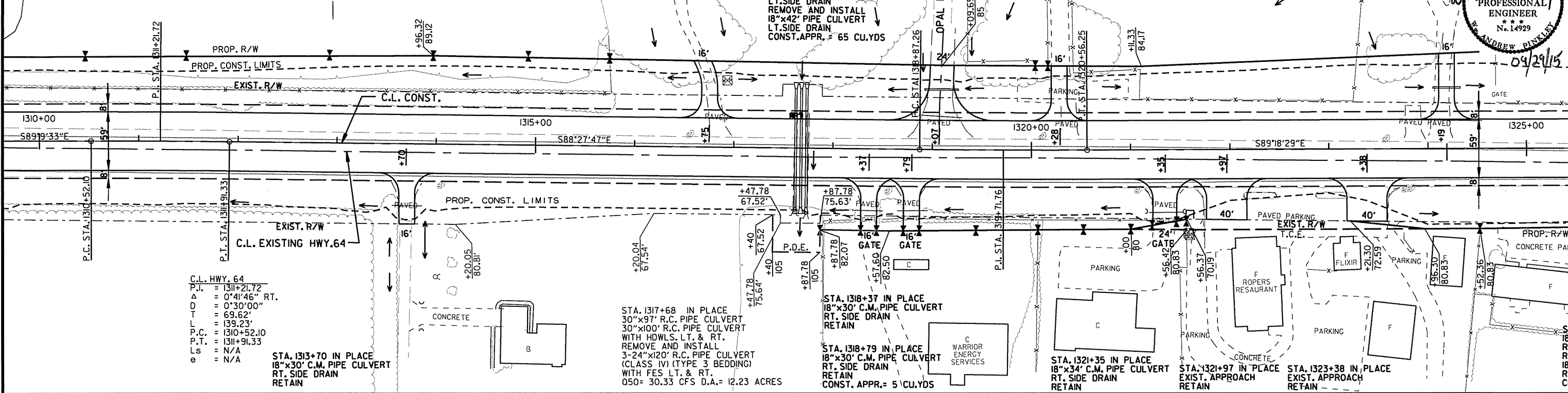
STA. 1316+75 CONSTRUCT
APPROACH ON LT. = 0 CU.YDS

C.L. HWY. 64
P.I. = 1319+71.76
Δ = 0°50'42" LT.
D = 0°30'00"
T = 84.49'
L = 168.98'
P.C. = 1318+87.26
P.T. = 1320+56.25
Ls = N/A
e = N/A

STA. 1320+28 CONSTRUCT
APPROACH ON LT. = 10 CU.YDS

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		76	151

PLAN & PROFILE - HWY. 64

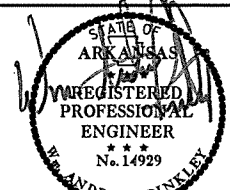


REFER TO SURVEY CONTROL DETAIL SHEET
FOR HORIZONTAL AND VERTICAL CONTROL DATA.

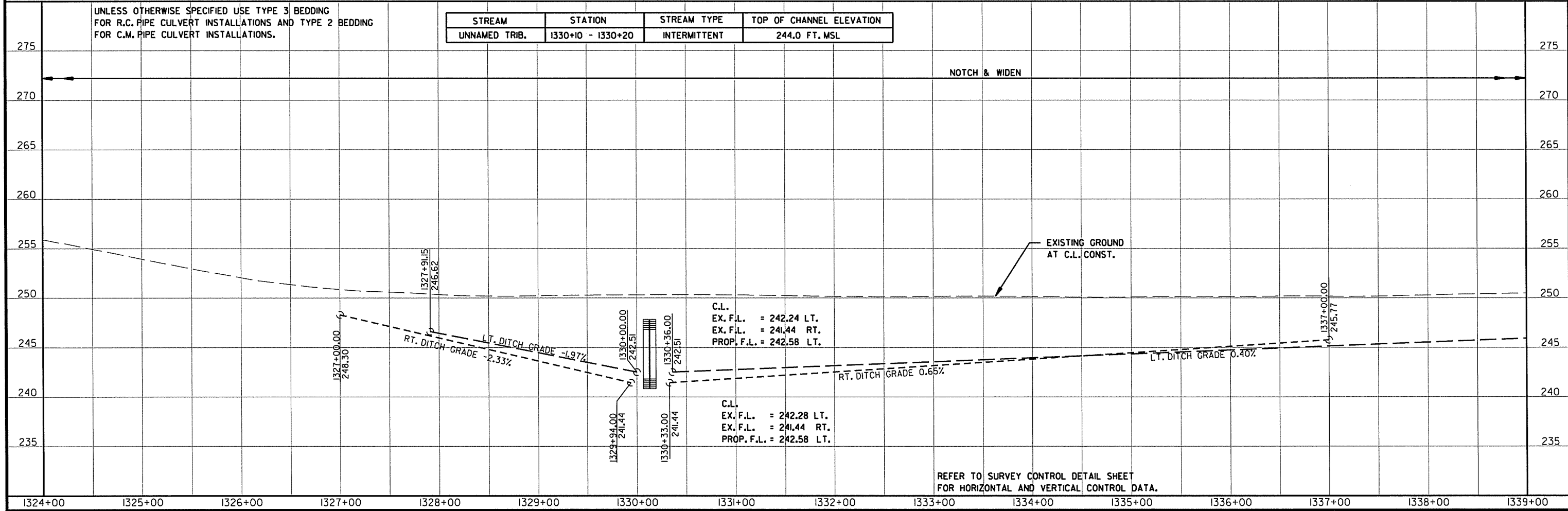
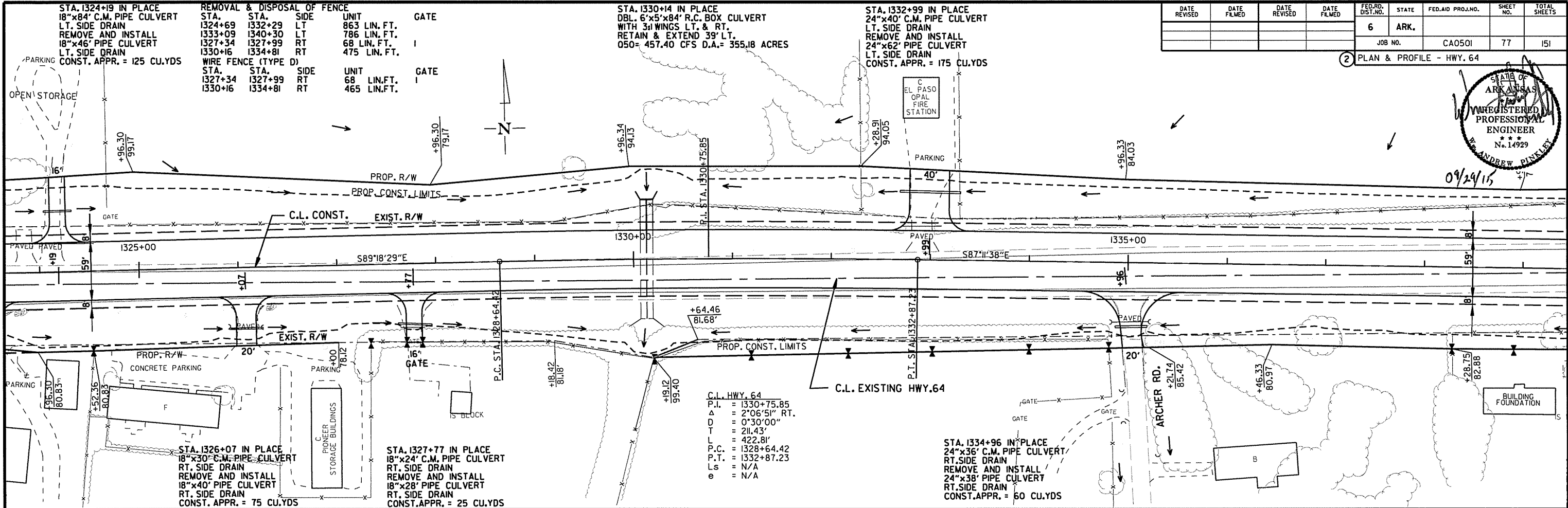
9/28/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		77	151

2 PLAN & PROFILE - HWY. 64



09/24/15

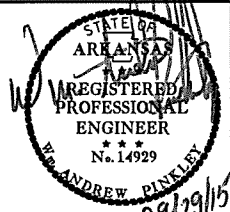


9/28/2015

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

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.	CA0501		78	151

2 PLAN & PROFILE - HWY. 64



STA. 1340+52 IN PLACE
24"x30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x36' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 60 CU.YDS

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	SIDE	UNIT	UNIT
1338+29	1339+56	RT	149	LIN. FT.
1340+75	1345+46	LT	499	LIN. FT.
1345+17	1346+13	RT	125	LIN. FT.
1346+32	1349+99	RT	400	LIN. FT.
1350+16	1351+00	RT	116	LIN. FT.
1353+89	1356+11	RT	270	LIN. FT.

STA. 1347+50 IN PLACE
18"x28' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

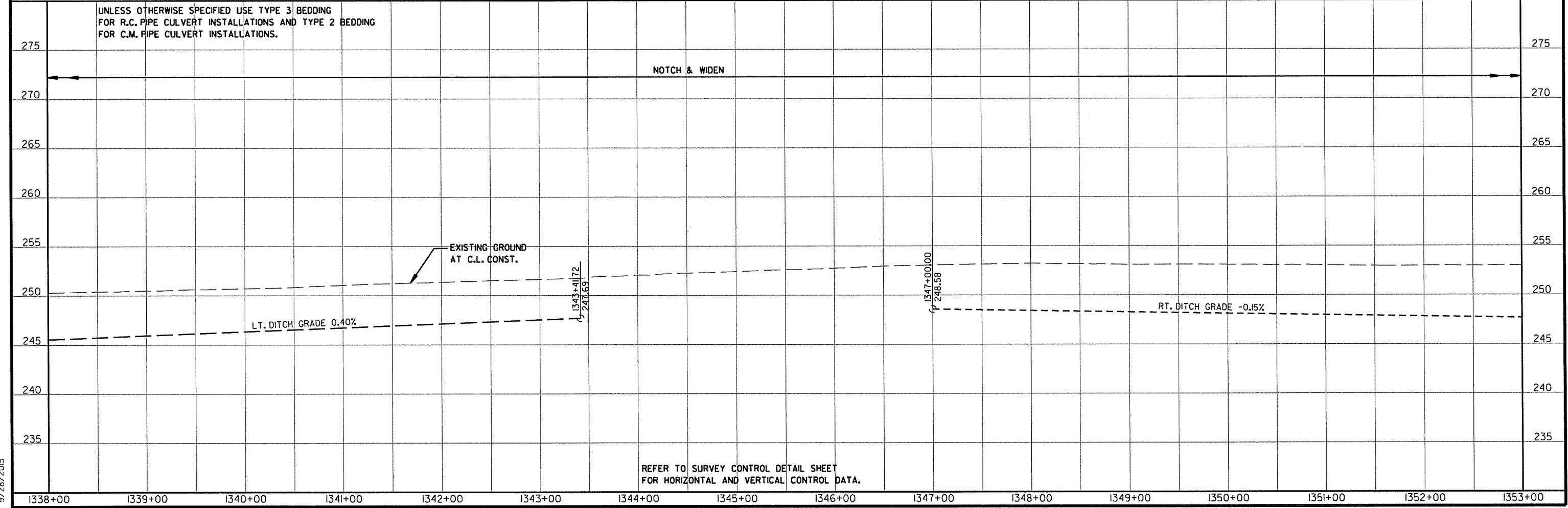
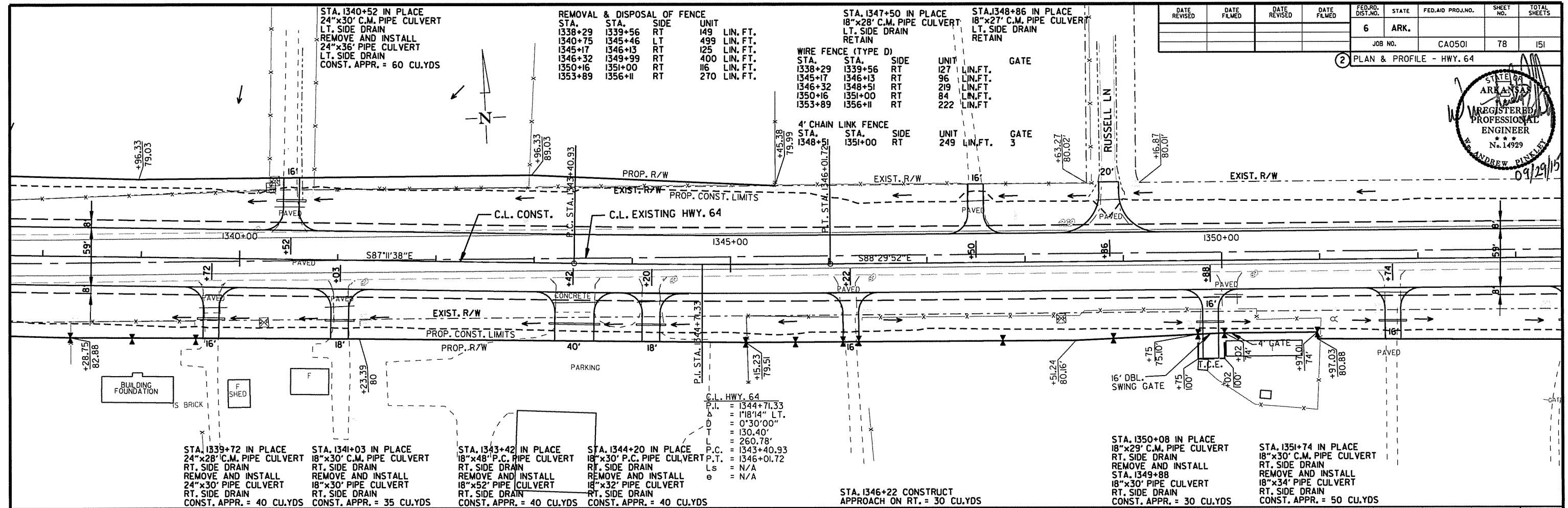
STA.	STA.	SIDE	UNIT	UNIT
1338+29	1339+56	RT	127	LIN. FT.
1345+17	1346+13	RT	96	LIN. FT.
1346+32	1348+51	RT	219	LIN. FT.
1350+16	1351+00	RT	84	LIN. FT.
1353+89	1356+11	RT	222	LIN. FT.

STA. 1348+86 IN PLACE
18"x27' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA.	STA.	SIDE	UNIT	UNIT
1338+29	1339+56	RT	127	LIN. FT.
1345+17	1346+13	RT	96	LIN. FT.
1346+32	1348+51	RT	219	LIN. FT.
1350+16	1351+00	RT	84	LIN. FT.
1353+89	1356+11	RT	222	LIN. FT.

4' CHAIN LINK FENCE

STA.	STA.	SIDE	UNIT	UNIT
1348+51	1351+00	RT	249	LIN. FT.



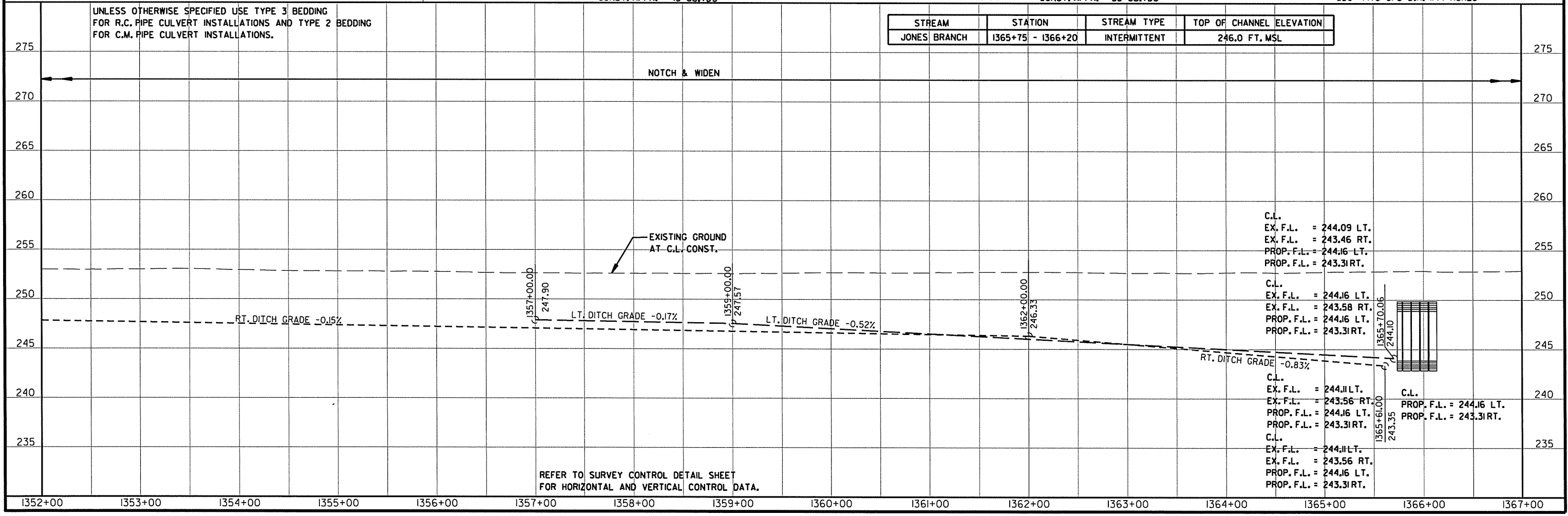
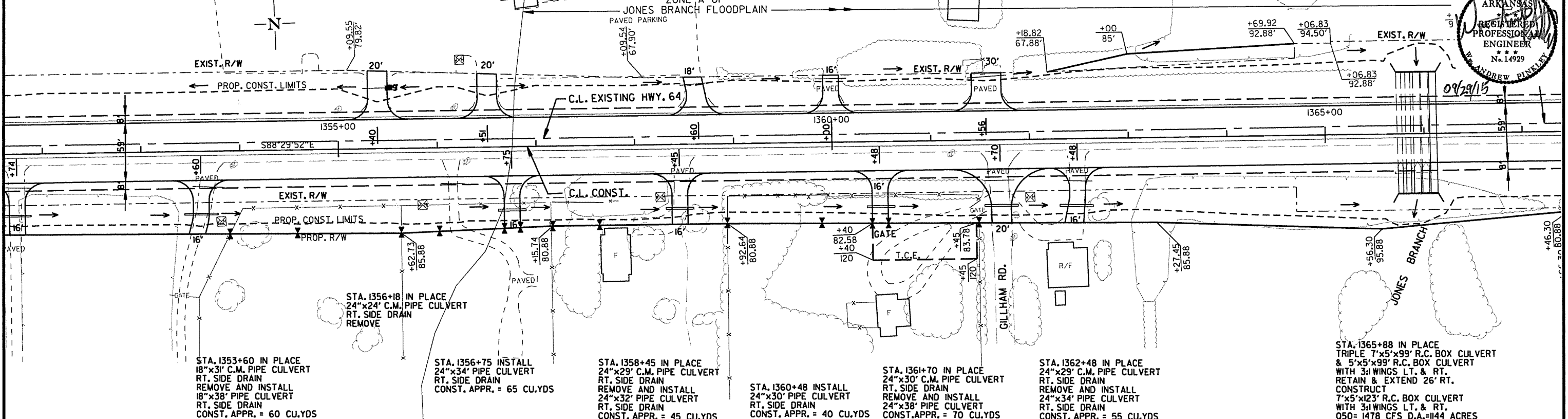
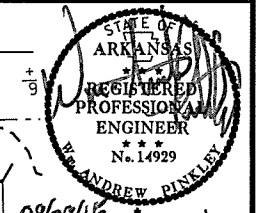
REFER TO SURVEY CONTROL DETAIL SHEET FOR HORIZONTAL AND VERTICAL CONTROL DATA.

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REMOVAL & DISPOSAL OF FENCE			
STA.	STA.	SIDE	UNIT
1356+21	1357+83	RT	187 LIN. FT.
1358+93	1361+47	RT	346 LIN. FT.
WIRE FENCE (TYPE D)			
STA.	STA.	SIDE	UNIT
1356+21	1357+83	RT	162 LIN. FT.
1358+93	1361+47	RT	254 LIN. FT.

GATE			
STA.	STA.	SIDE	UNIT
1355+40	IN PLACE	24"x30' C.M. PIPE CULVERT	LT. SIDE DRAIN RETAIN
1356+51	IN PLACE	24"x32' C.M. PIPE CULVERT	LT. SIDE DRAIN RETAIN
1358+60	IN PLACE	24"x31' C.M. PIPE CULVERT	LT. SIDE DRAIN RETAIN
1360+00	IN PLACE	24"x31' C.M. PIPE CULVERT	LT. SIDE DRAIN RETAIN
1361+56	IN PLACE	36"x39' C.M. PIPE CULVERT	LT. SIDE DRAIN RETAIN

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.	CA0501	79	151
JOB NO. CA0501							PLAN & PROFILE - HWY. 64	



9/28/2015

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

REMOVAL & DISPOSAL OF FENCE				
STA.	STA.	SIDE	UNIT	GATE
1368+09	1368+62	RT	64 LIN. FT.	
1368+79	1369+84	RT	130 LIN. FT.	
WIRE FENCE (TYPE D)				
STA.	STA.	SIDE	UNIT	16' GATE
1368+09	1368+62	RT	53 LIN. FT.	
1368+79	1369+84	RT	105 LIN. FT.	

STA. 1370+85 IN PLACE
24"x30' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN

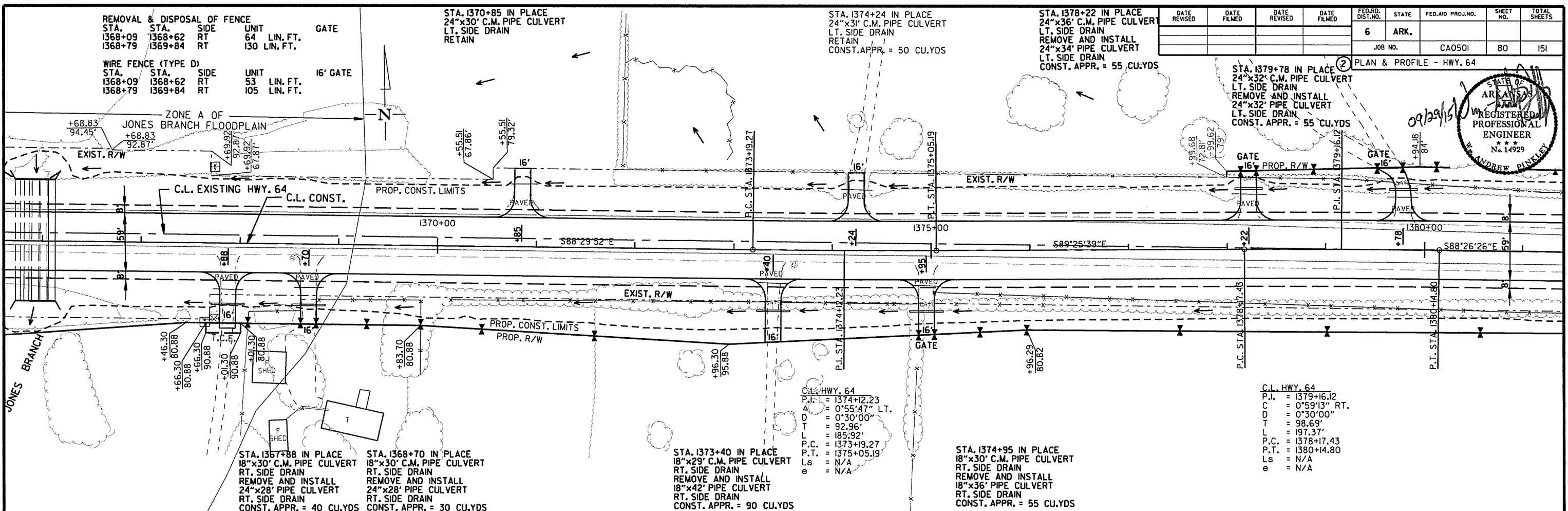
STA. 1374+24 IN PLACE
24"x31' C.M. PIPE CULVERT
LT. SIDE DRAIN
RETAIN
CONST. APPR. = 50 CU.YDS

STA. 1378+22 IN PLACE
24"x36' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x34' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 55 CU.YDS

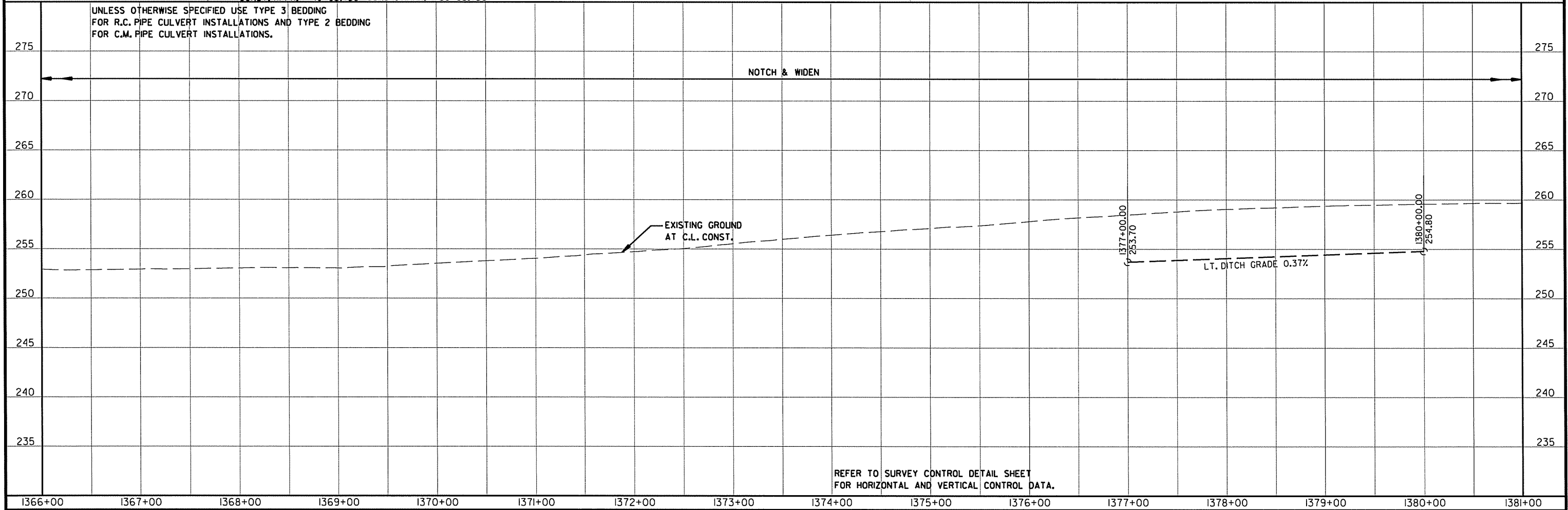
STA. 1379+78 IN PLACE
24"x32' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24"x32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 55 CU.YDS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		80	151

PLAN & PROFILE - HWY. 64



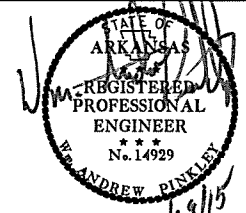
UNLESS OTHERWISE SPECIFIED USE TYPE 3 BEDDING FOR R.C. PIPE CULVERT INSTALLATIONS AND TYPE 2 BEDDING FOR C.M. PIPE CULVERT INSTALLATIONS.



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

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.	CA0501		81	151

2 PLAN & PROFILE - HWY. 64

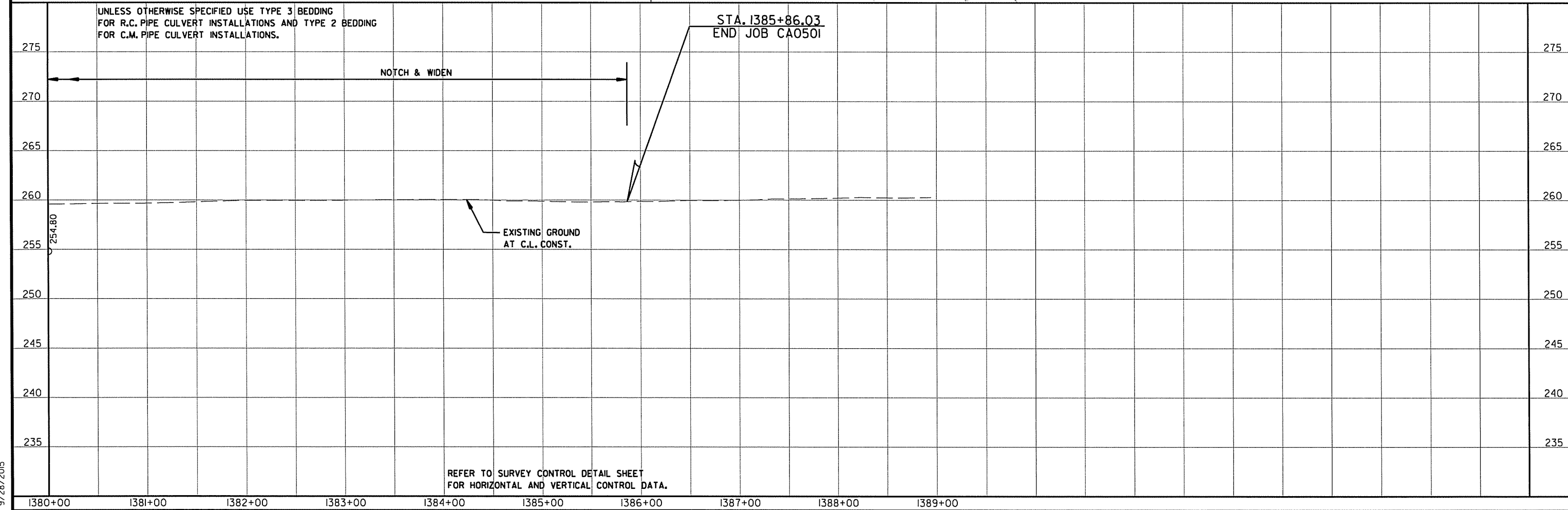
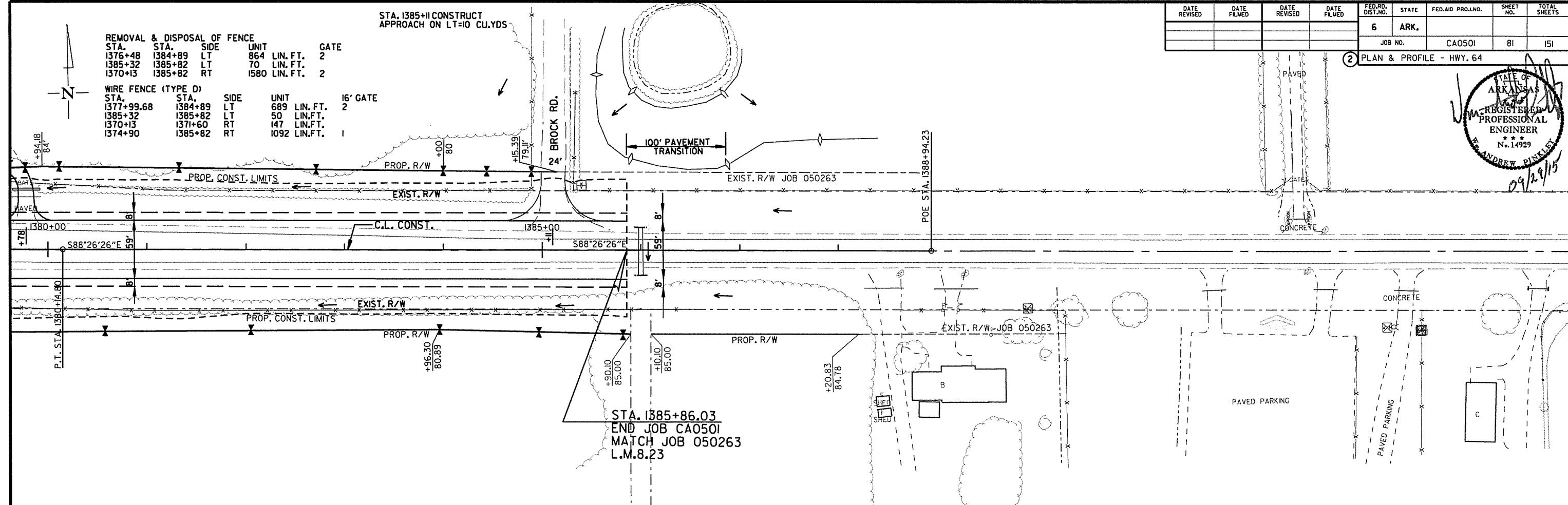


REMOVAL & DISPOSAL OF FENCE

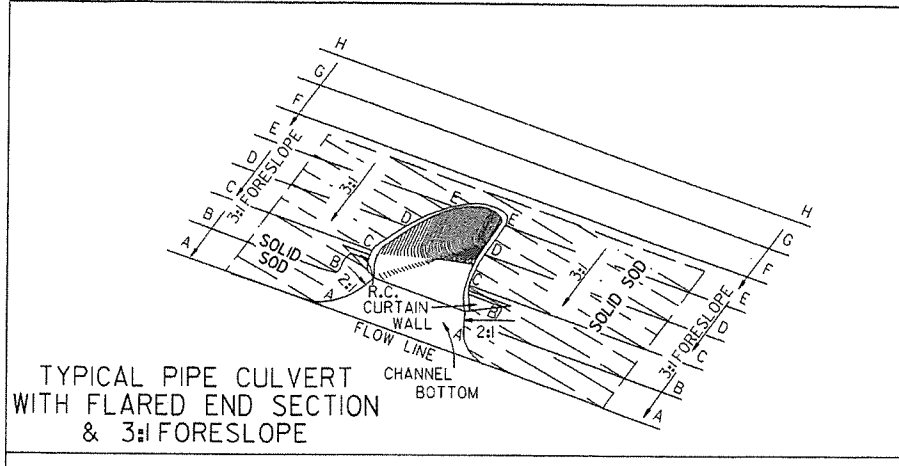
STA.	STA.	SIDE	UNIT	GATE
1376+48	1384+89	LT	864 LIN. FT.	2
1385+32	1385+82	LT	70 LIN. FT.	
1370+13	1385+82	RT	1580 LIN. FT.	2

WIRE FENCE (TYPE D)

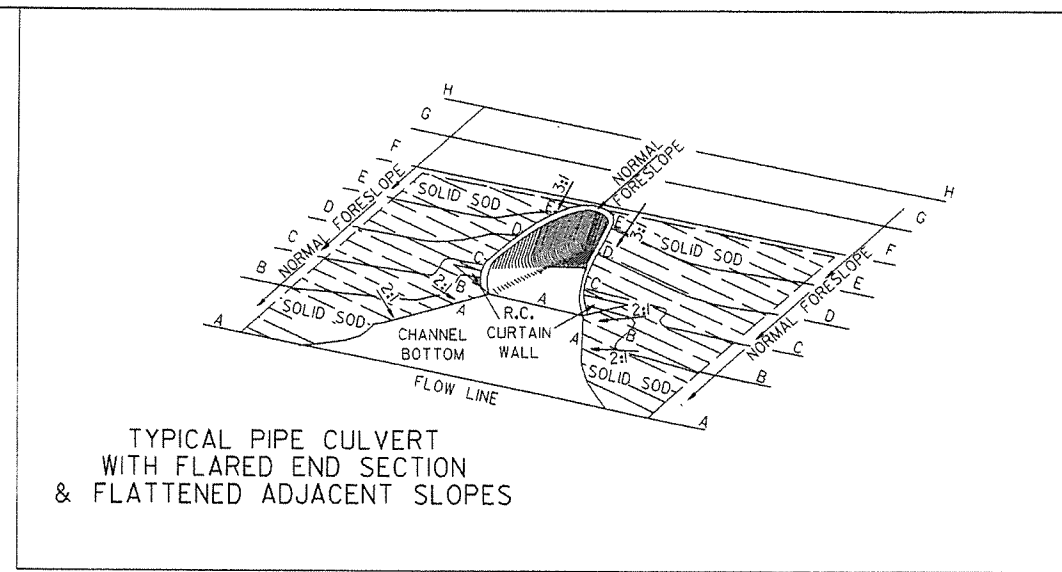
STA.	STA.	SIDE	UNIT	16' GATE
1377+99.68	1384+89	LT	689 LIN. FT.	2
1385+32	1385+82	LT	50 LIN. FT.	
1370+13	1371+60	RT	147 LIN. FT.	
1374+90	1385+82	RT	1092 LIN. FT.	1



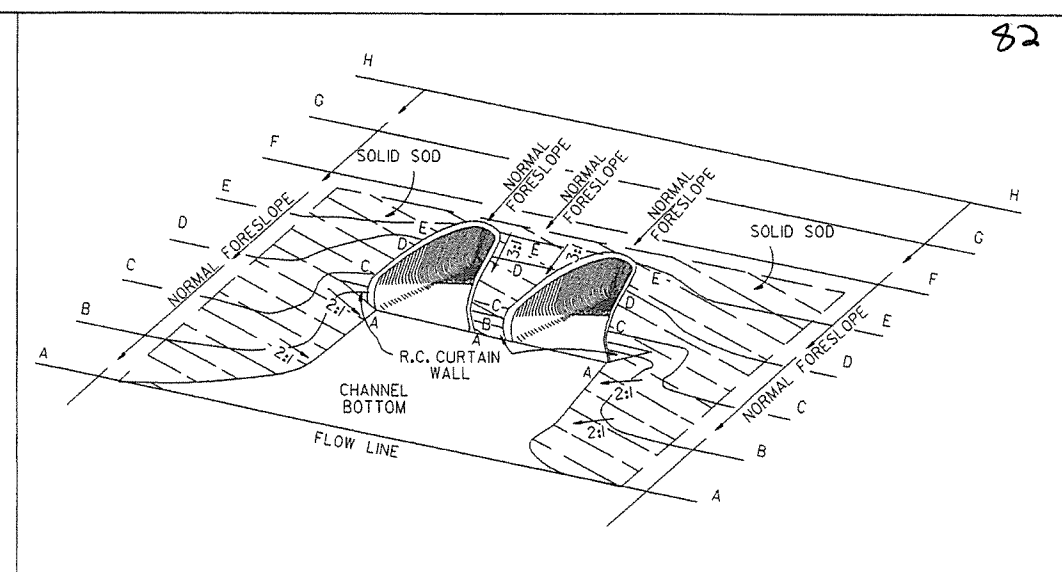
9/28/2015



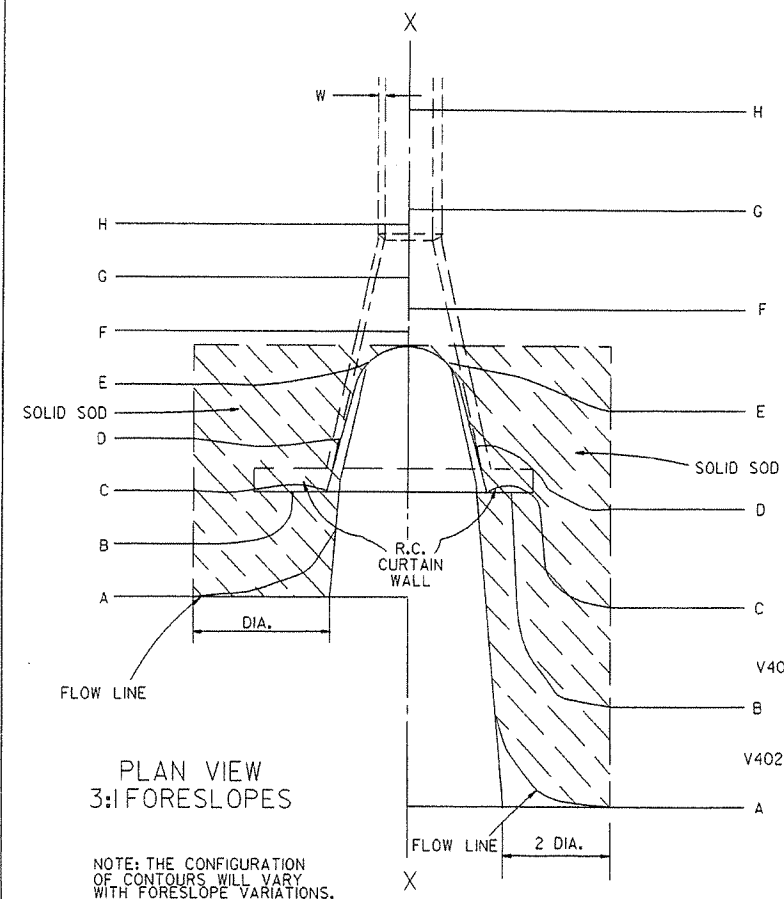
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



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

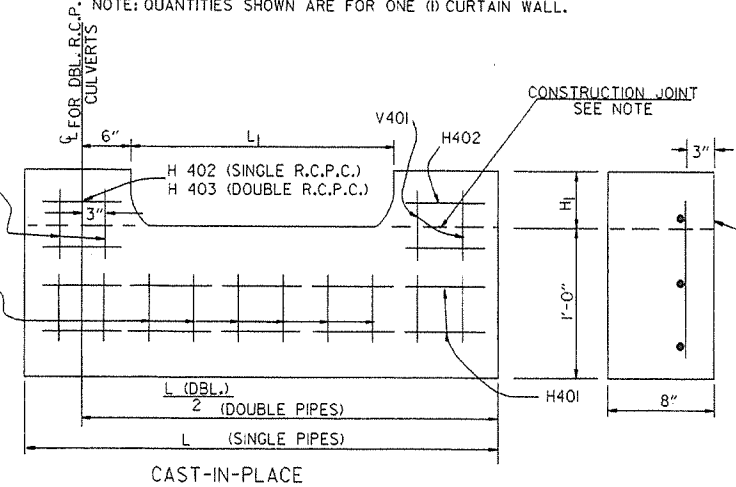
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

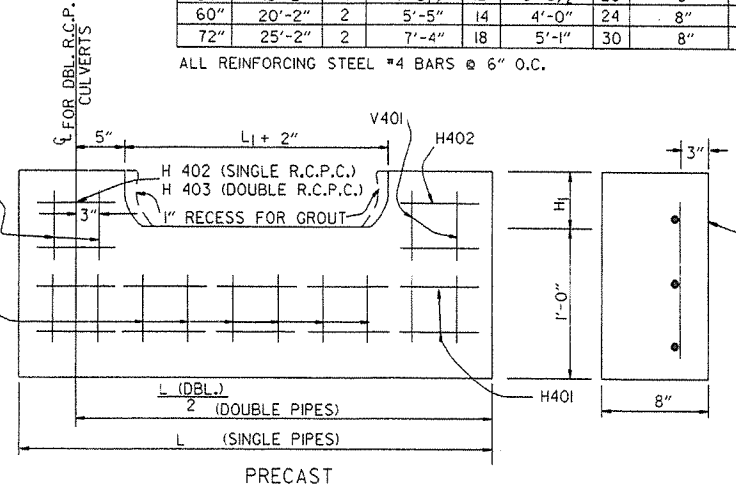
PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	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 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	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'-8"	2	4'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	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

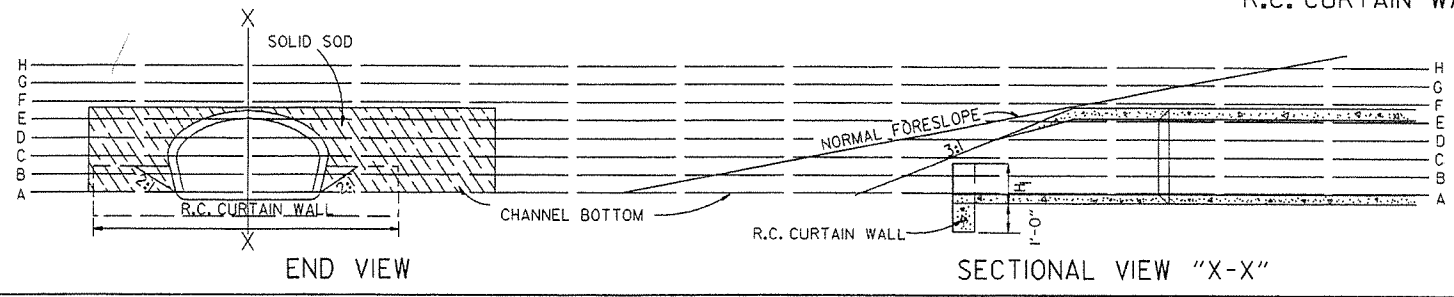
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

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	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
1. 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.
 2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
 3. 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.
 4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

10-18-96	ADDED NOTE TO SOLID SODDING		ARKANSAS STATE HIGHWAY COMMISSION
10-12-95	CORRECTED SPELLING	10-18-96	
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

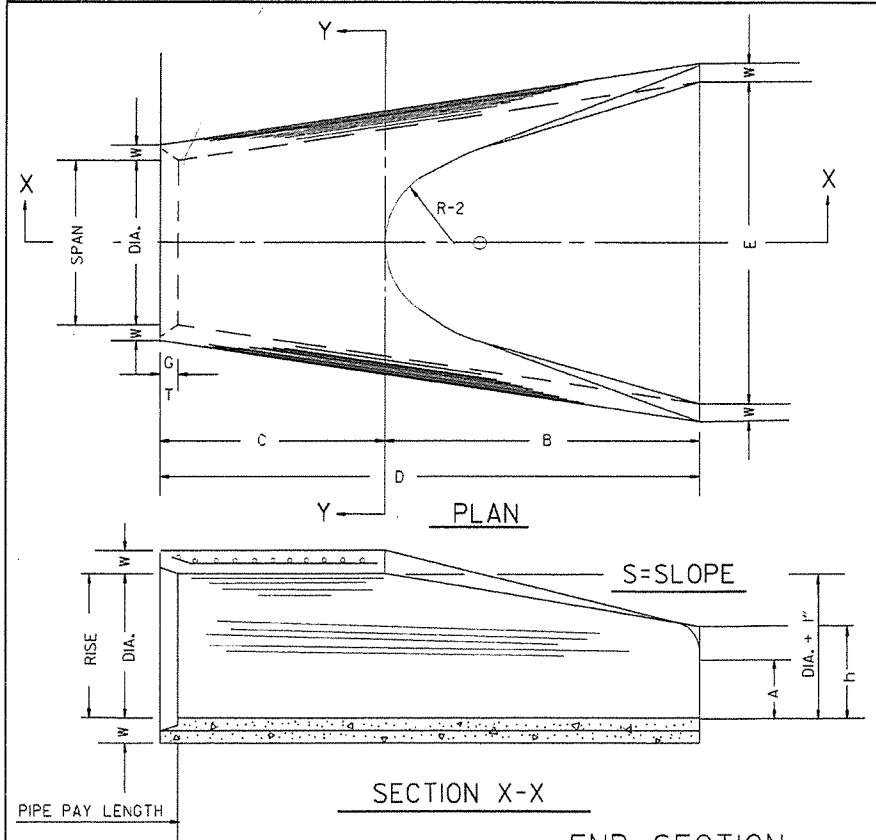
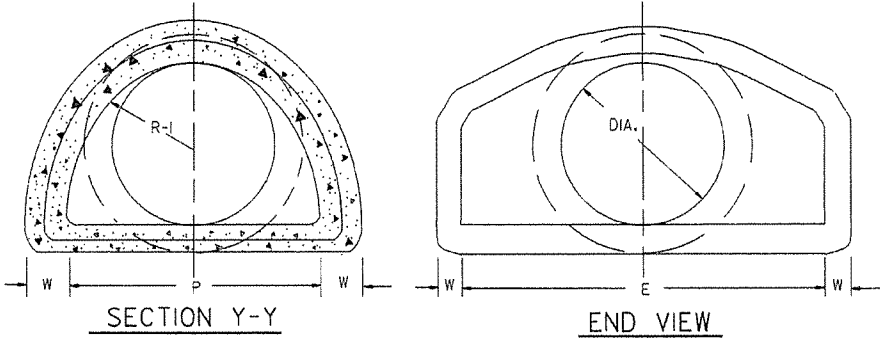


TABLE OF DIMENSIONS

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 1/8"	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 3/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	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 5/8"	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 3/8"	24"	5"	13250	4'-6"



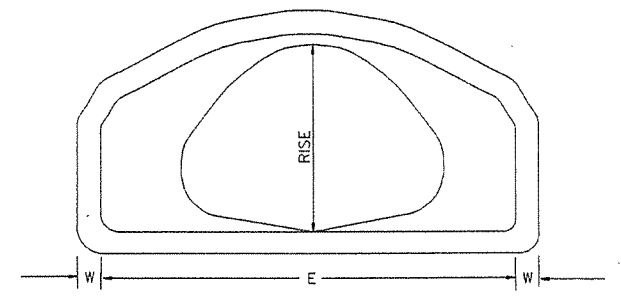
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

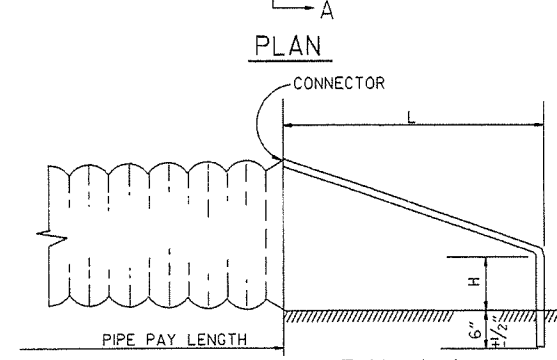
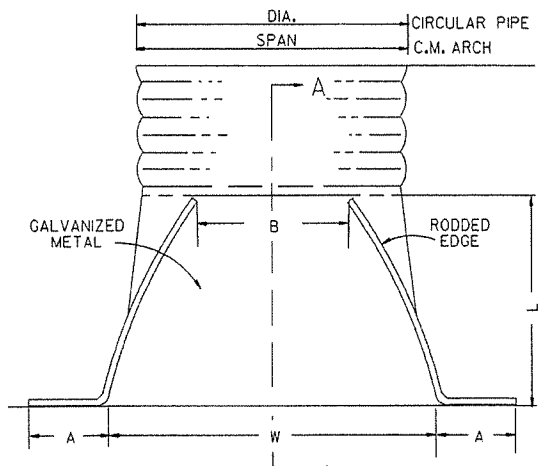
ARCH PIPE

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										
INCHES														
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	3"	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 5/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 3/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 3/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	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 1/4"	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 1/16"	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 1/2:1

• 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

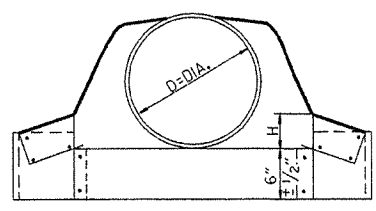


NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

CIRCULAR PIPE

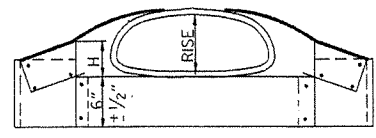
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S
INCHES							
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	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



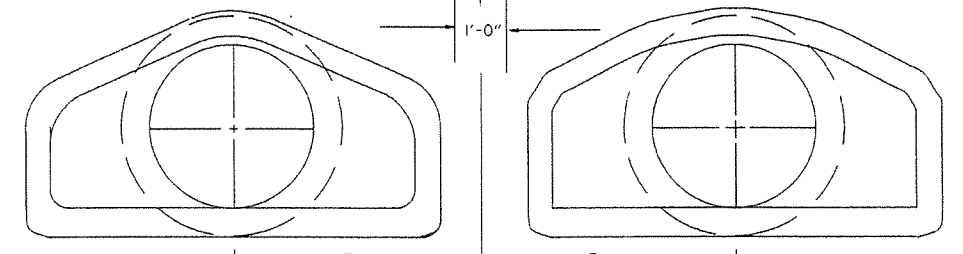
CIRCULAR PIPE

C.M. ARCH PIPE

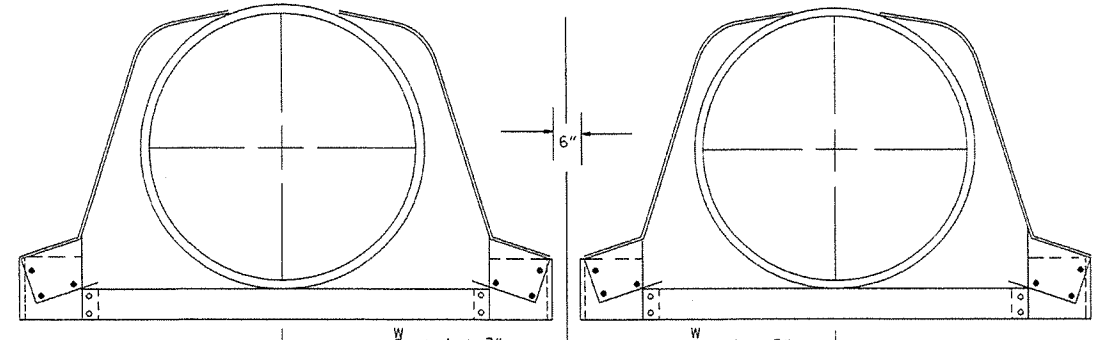
EQUIV. DIA.	SPAN	RISE	A 1" ±	B. MAX.	H 1" ±	L 1 1/2" ±	W 2" ±	S	GAUGE
INCHES									
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	16	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	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



C.M. ARCH PIPE

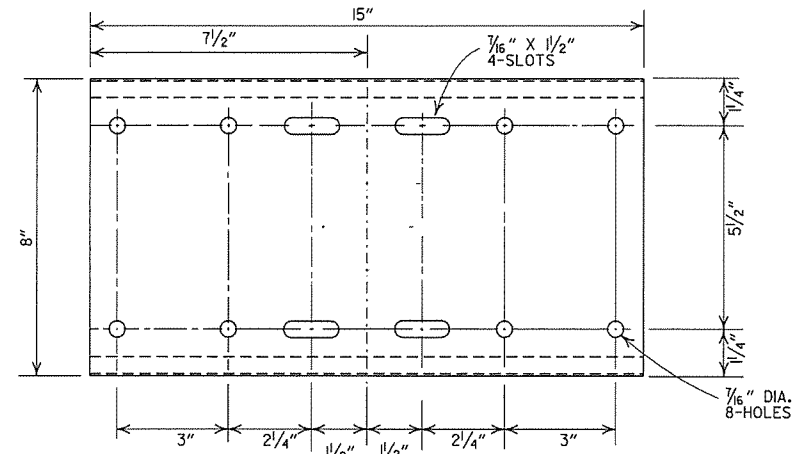


MULTIPLE R.C. PIPE CULVERTS

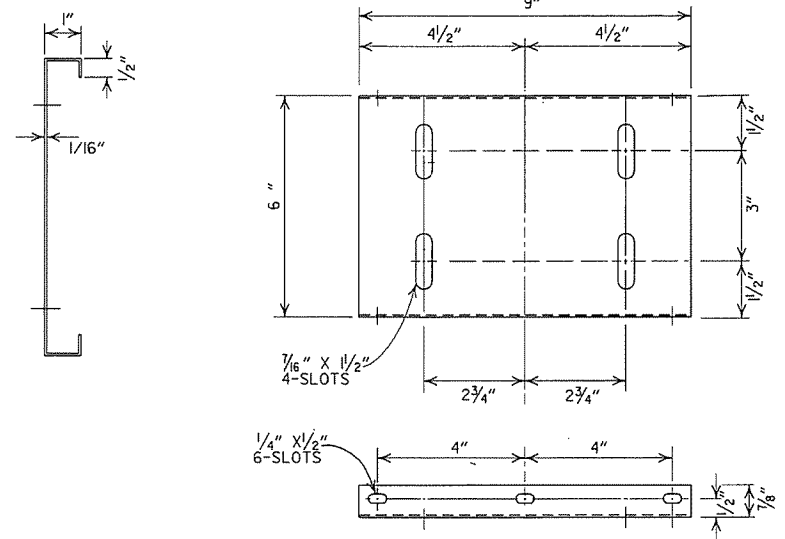


MULTIPLE C.M. PIPE CULVERTS

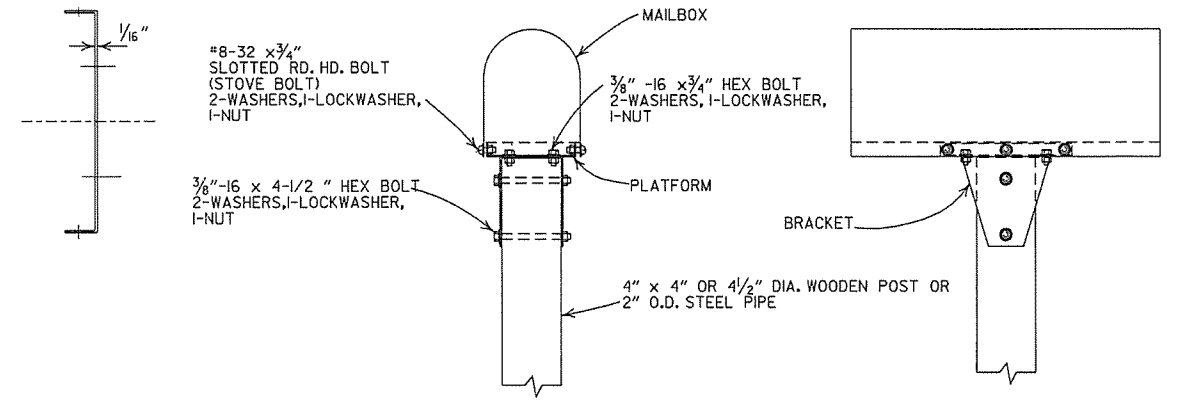
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	FLARED END SECTION
12-5-74	REMOVED NOTE 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.	



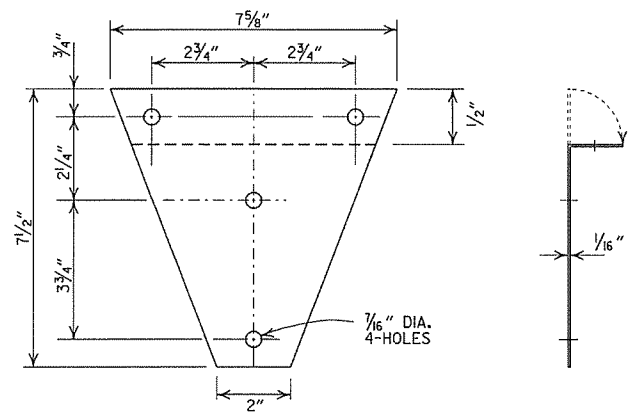
SHELF



PLATFORM

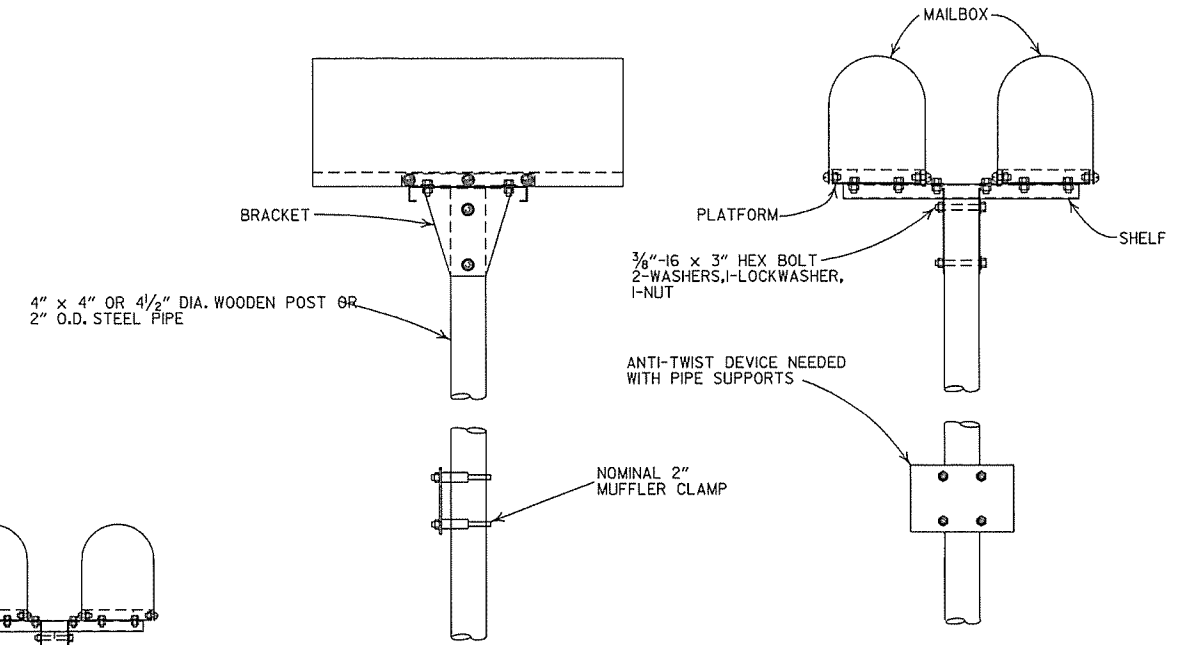


SINGLE INSTALLATION

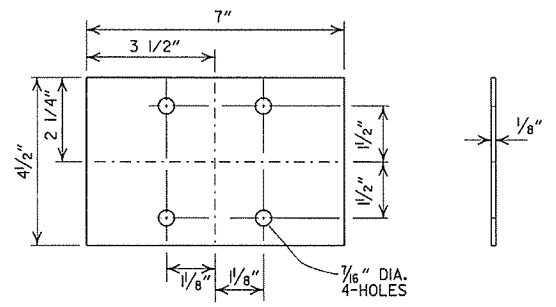


BRACKET

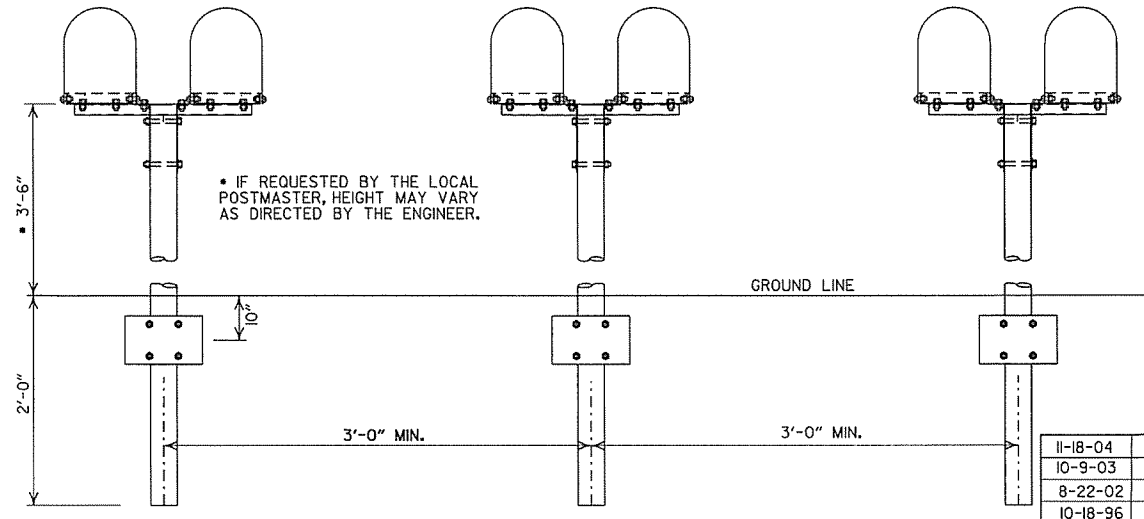
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 7/8" 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.



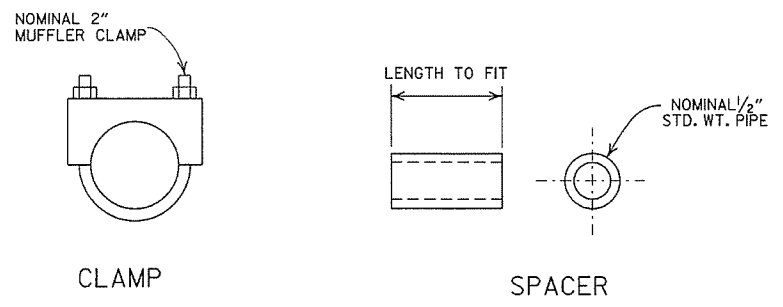
DOUBLE INSTALLATION



ANTI-TWIST PLATE



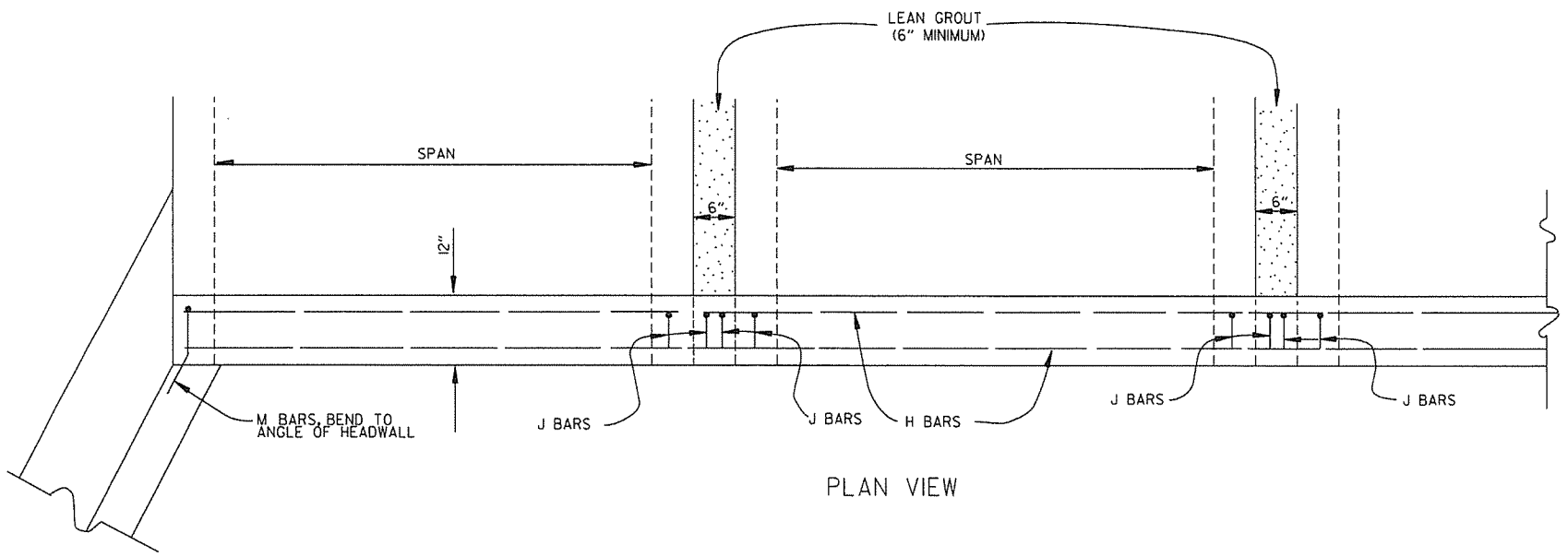
SPACING FOR MULTIPLE POST INSTALLATION



DATE	FIL'ED	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
		FIL'ED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS
STANDARD DRAWING MB-1



BAR LIST

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

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

GENERAL NOTES

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

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

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

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

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

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

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

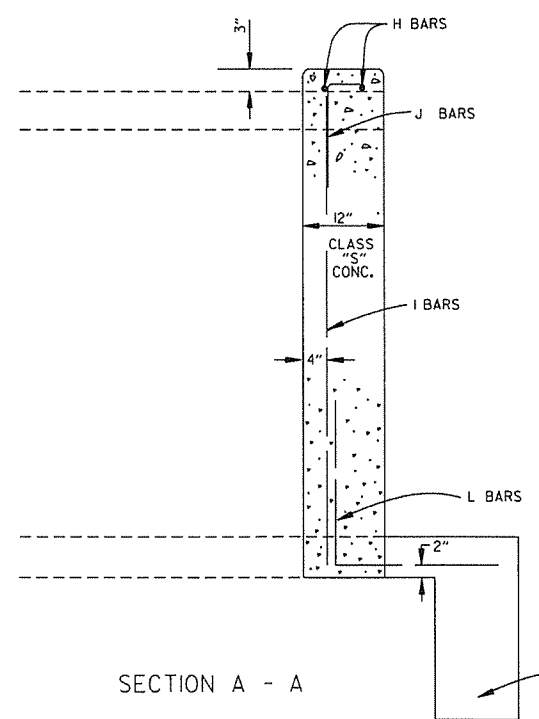
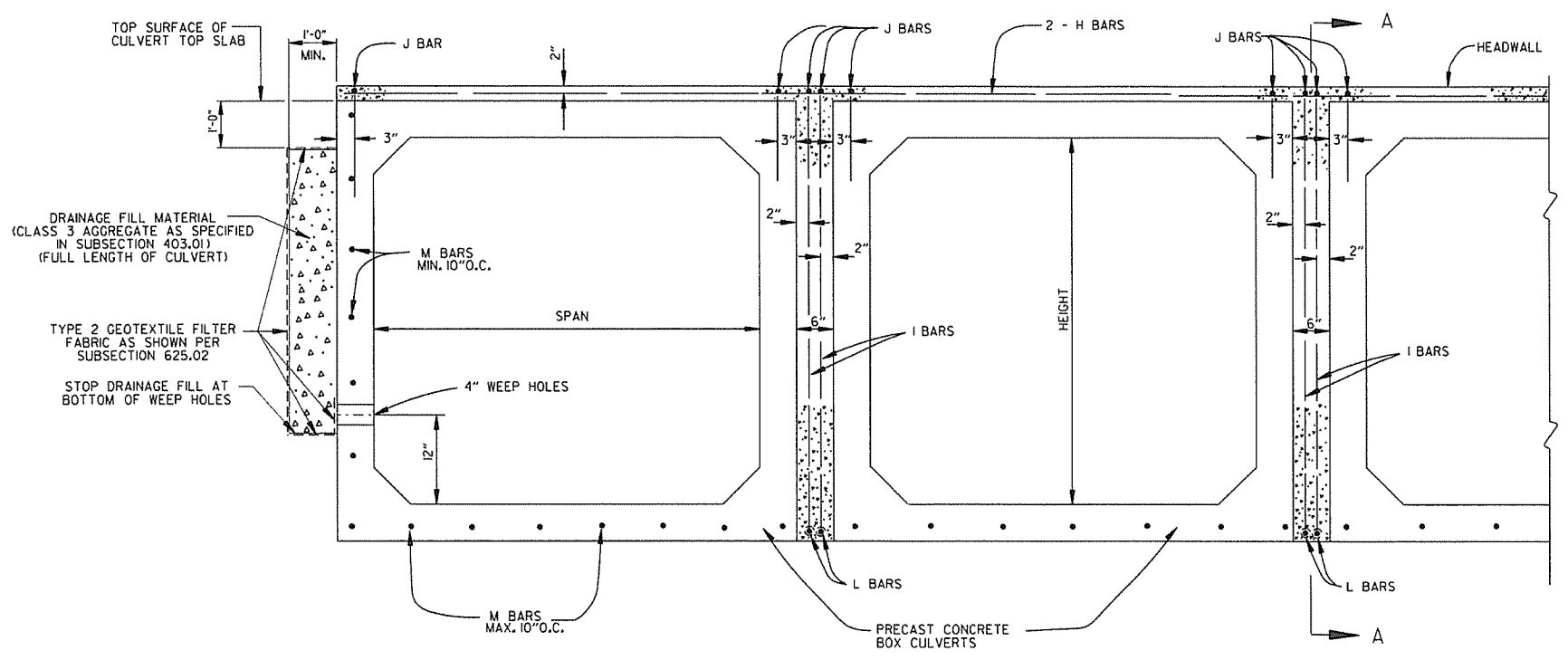
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

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

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

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

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



END VIEW

SECTION A - A

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

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA. 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 7/8	27
42	51 1/8	51	31 7/8	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 5/8	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)(1).

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

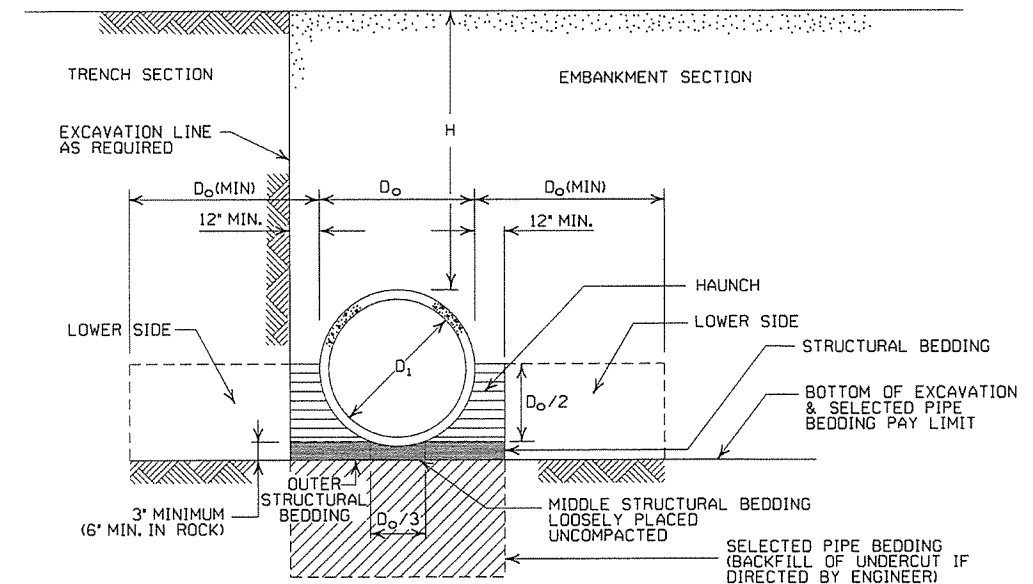
- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1



CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	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 1/2 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	73
42	2		43	67	70	
48	2		37	58	61	64
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 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.

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	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 1/2 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

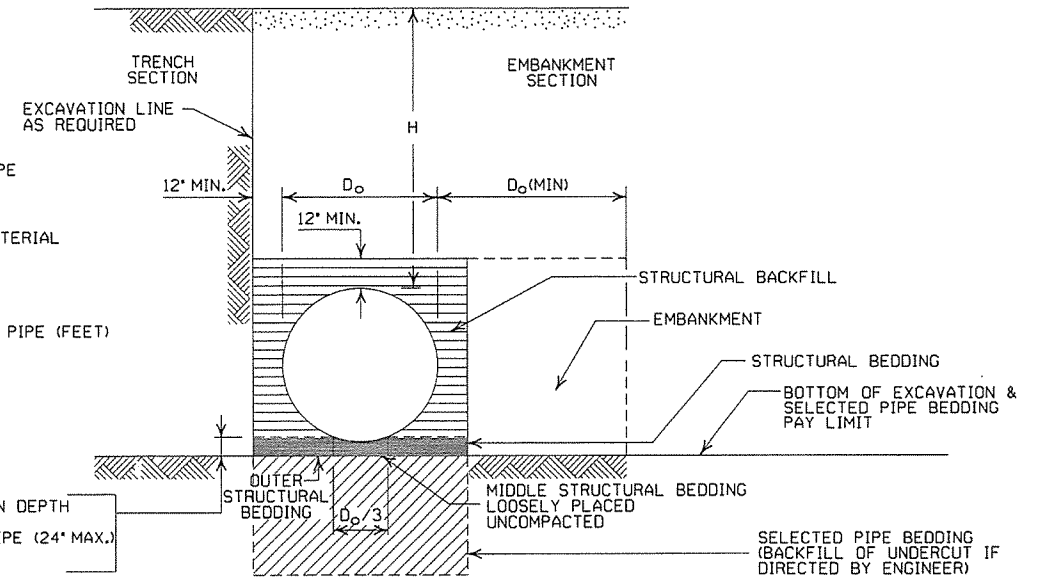
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINIMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED	MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	MIN. THICKNESS REQUIRED	MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		
			INCHES	INSTALLATION	INSTALLATION	INCHES	INSTALLATION	INSTALLATION		
				TYPE 1	TYPE 1		TYPE 1	TYPE 1		
2 1/2 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	0.164	3	15		
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
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	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 1/2 INCH BY 1/2 INCH CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" X 1" OR 5" X 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- [Hatched Pattern] = STRUCTURAL BACKFILL MATERIAL
- [Horizontal Line Pattern] = UNDISTURBED SOIL
- [Dotted Pattern] = 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 1/2" 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."

ARKANSAS STATE HIGHWAY COMMISSION		
METAL PIPE CULVERT FILL HEIGHTS & BEDDING		
STANDARD DRAWING PCM-1		
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	
DATE	REVISION	DATE FILMED

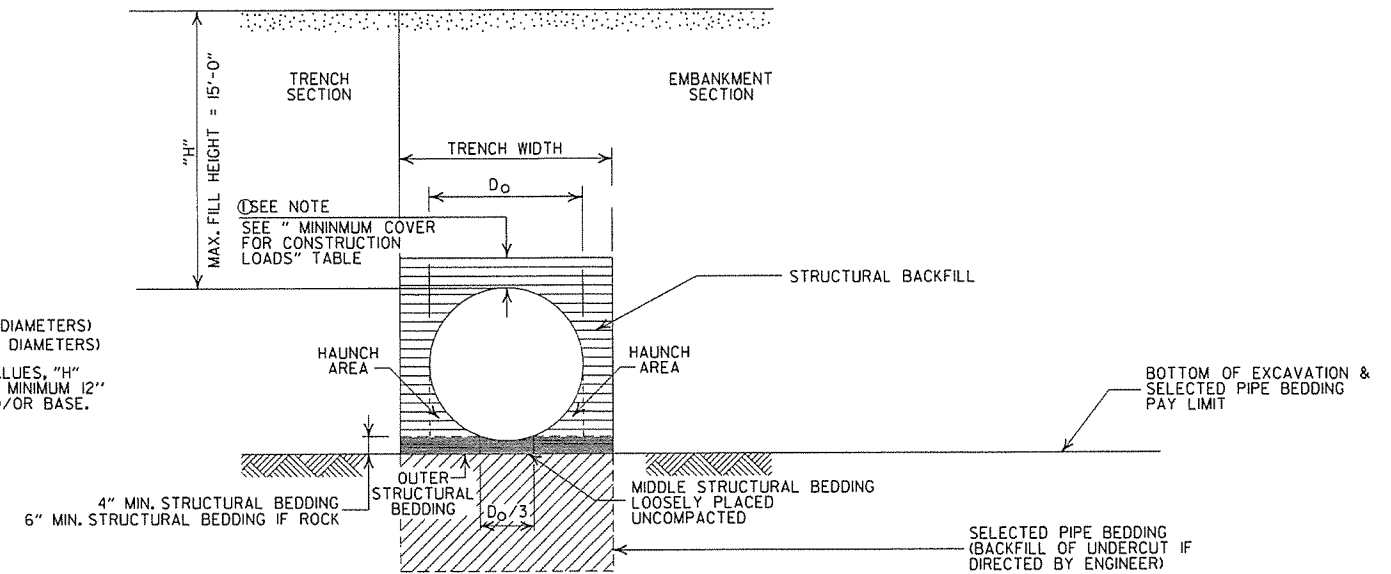
INSTALLATION TYPE	•• MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- 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 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.

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.

- LEGEND -

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

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

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

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

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

• AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
SM3 WILL NOT BE ALLOWED.

•• STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 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.

MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

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

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

MINIMUM 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"

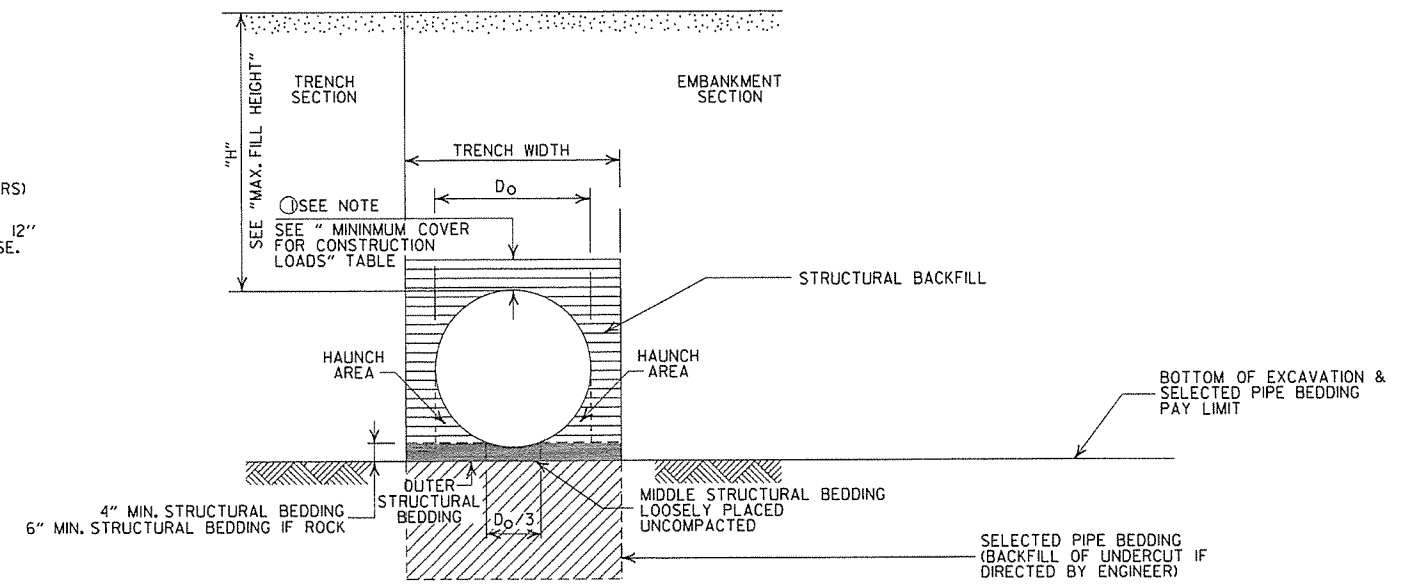
MULTIPLE INSTALLATION OF
PVC PIPES

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

MINIMUM COVER FOR
CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

- LEGEND -

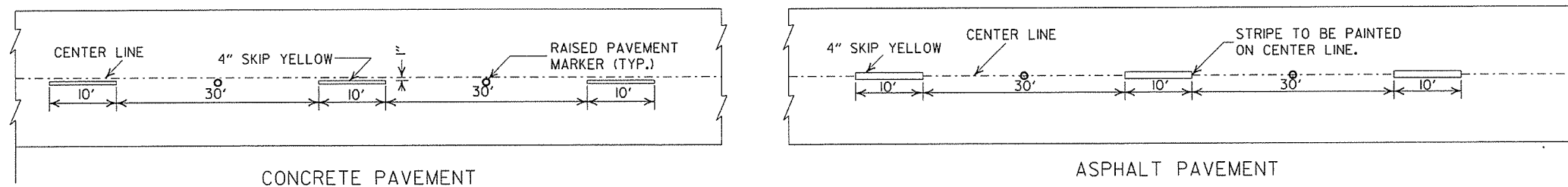
H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

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

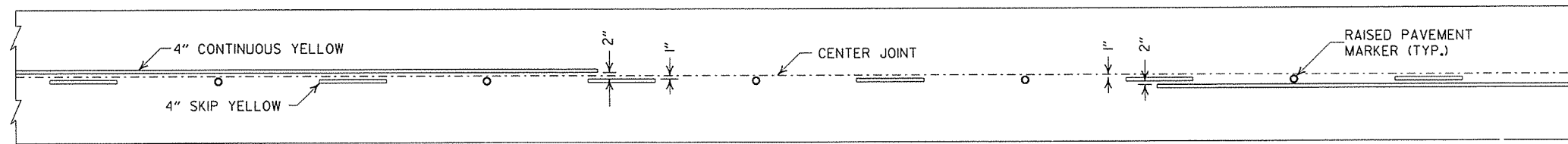
GENERAL NOTES

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 AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

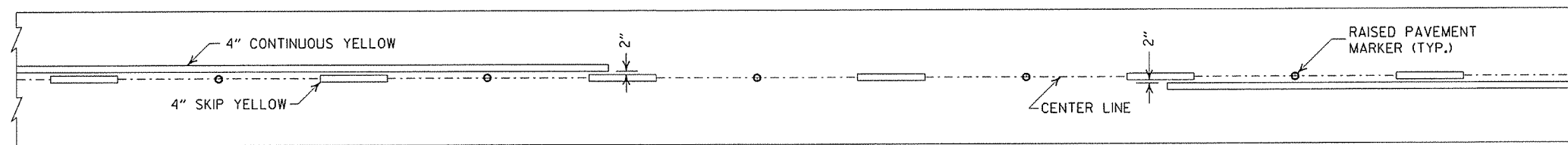
ARKANSAS STATE HIGHWAY COMMISSION		
PLASTIC PIPE CULVERT (PVC F949)		
STANDARD DRAWING PCP-2		
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED



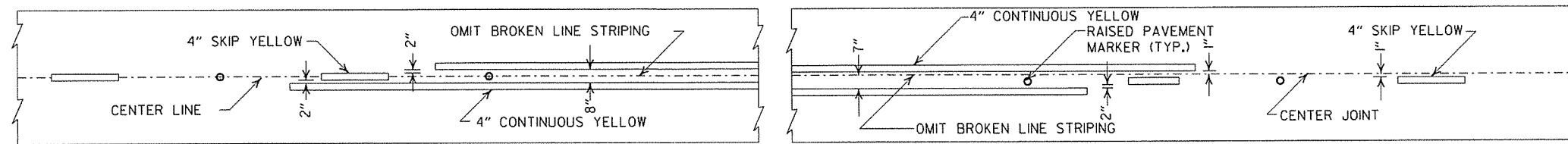
BROKEN LINE STRIPING



SOLID LINE STRIPING ON CONCRETE PAVEMENT



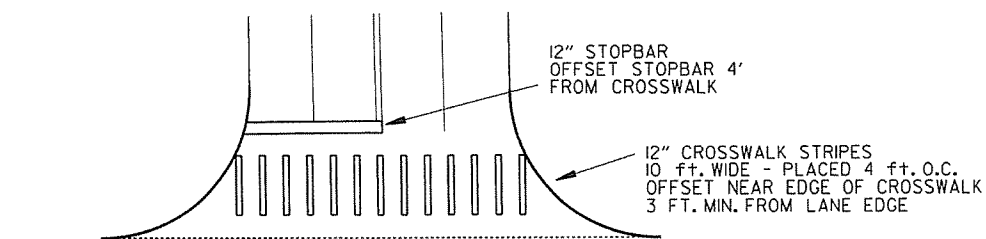
SOLID LINE STRIPING ON ASPHALT PAVEMENT



ASPHALT PAVEMENT

CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

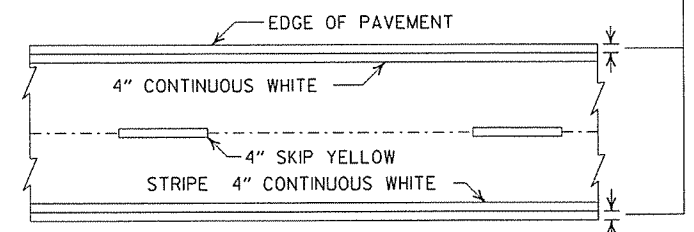


CROSSWALK AND STOPBAR DETAILS

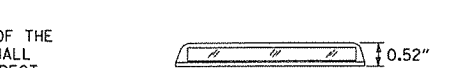
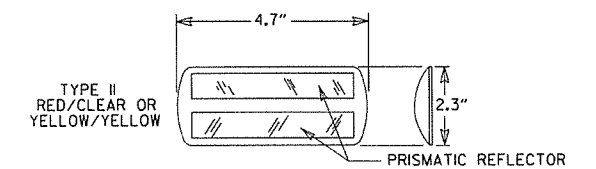
NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

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



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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.

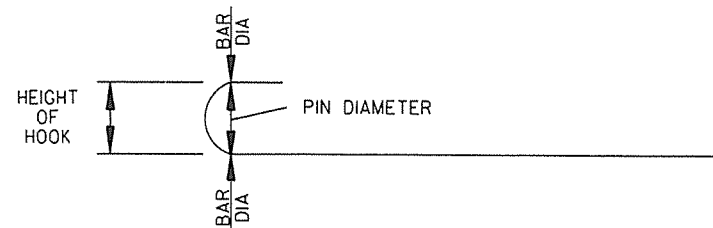
DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

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

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

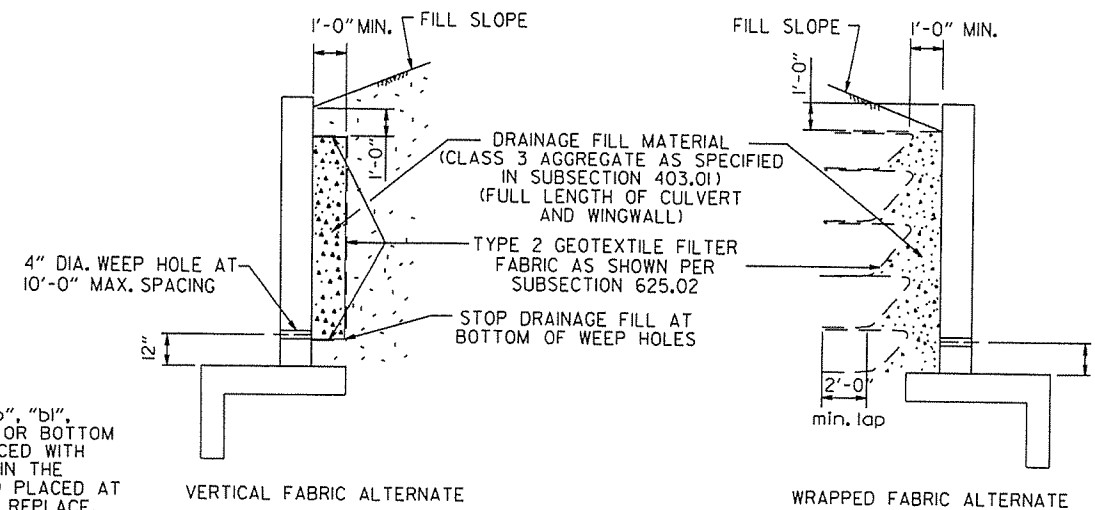
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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.

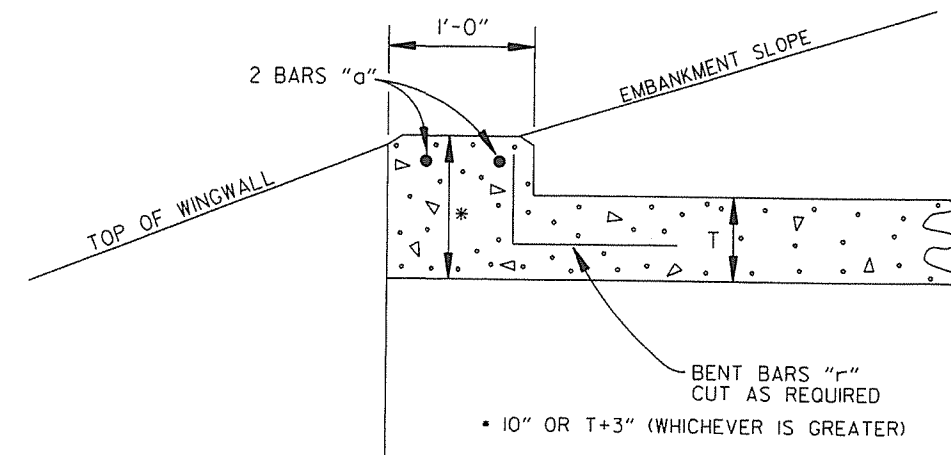
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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 CRSI MANUAL 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.

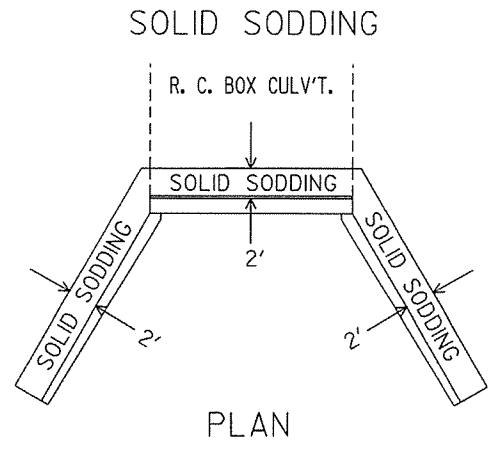
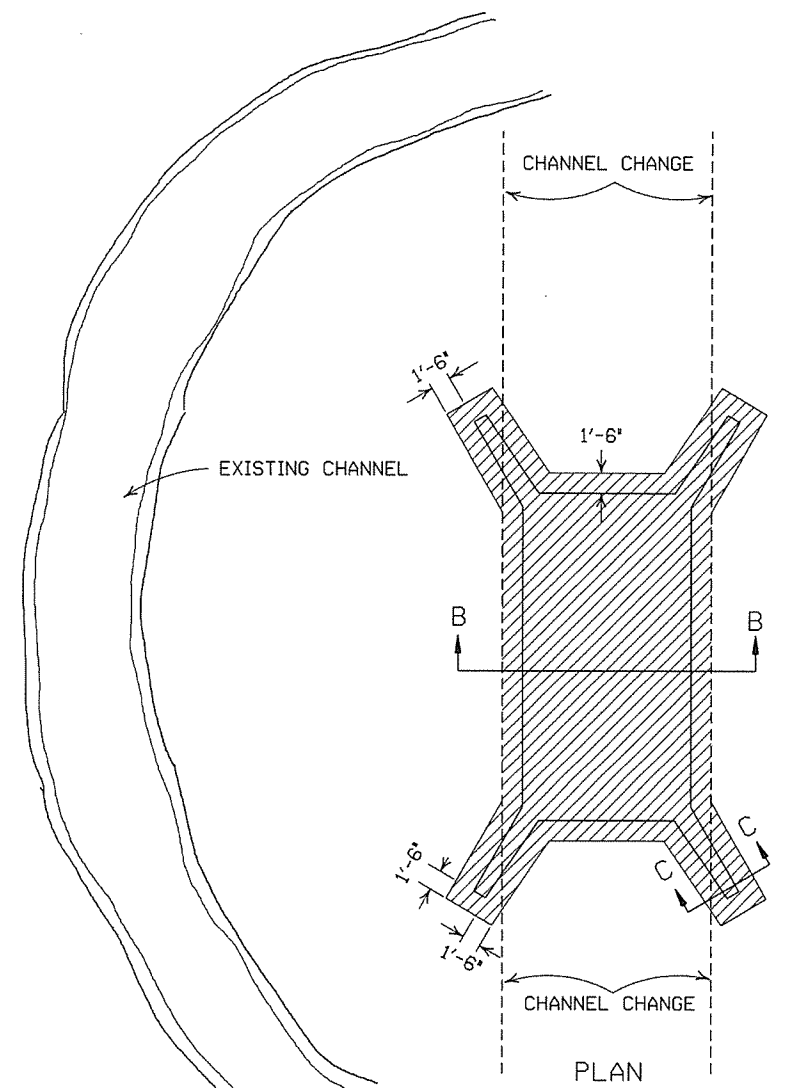
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

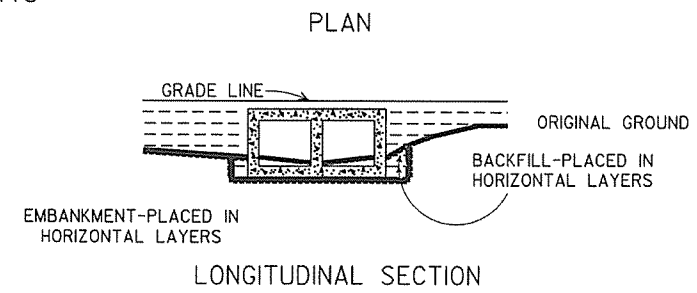
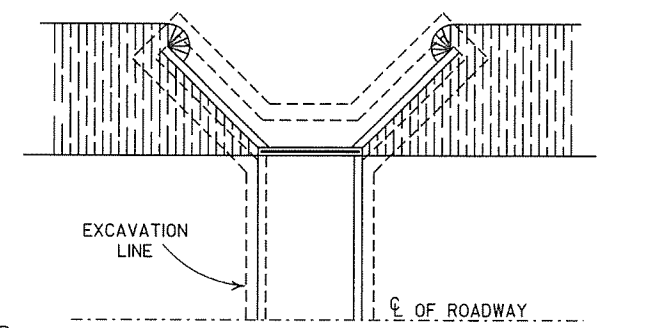
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1

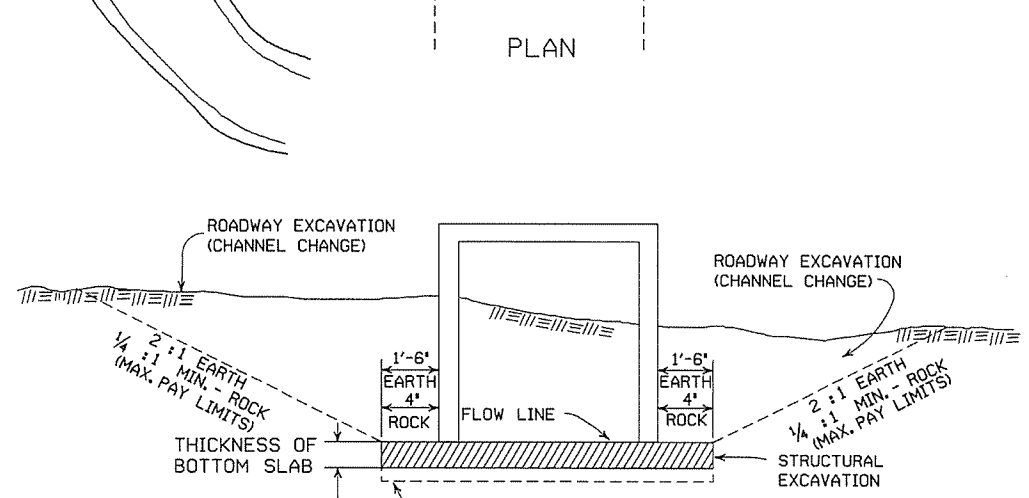
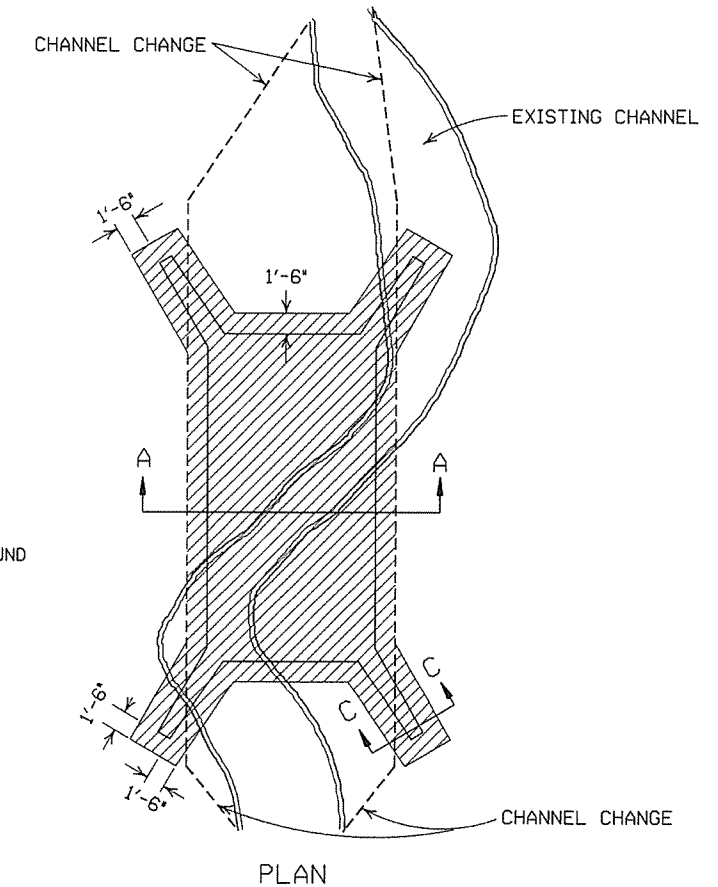


PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

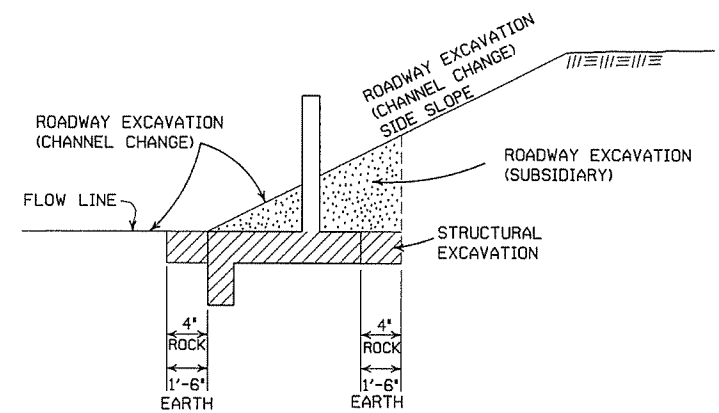


LONGITUDINAL SECTION
BACKFILL DETAILS FOR BOX CULVERT

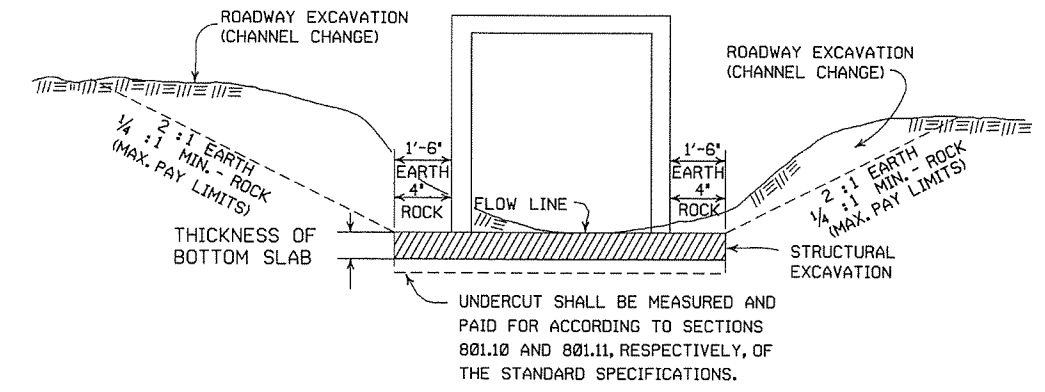


SECTION B-B
DETAILS FOR NEW CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.



SECTION C-C



SECTION A-A
DETAILS THROUGH EXISTING CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

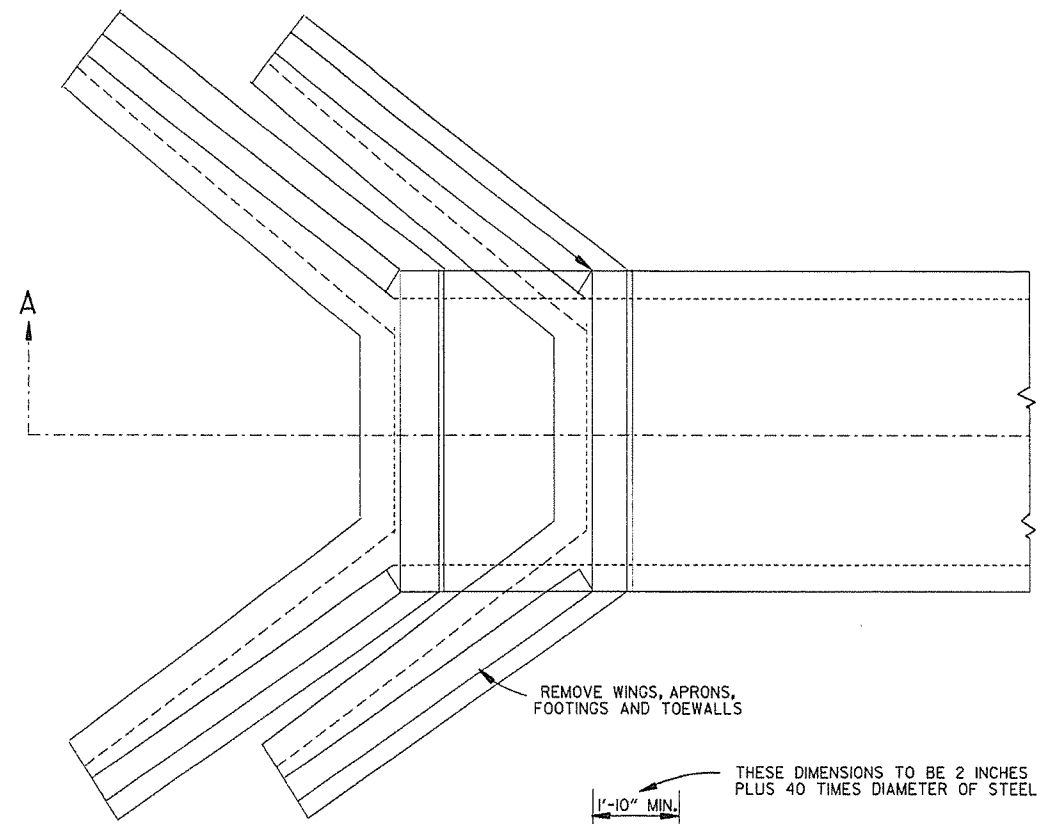
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

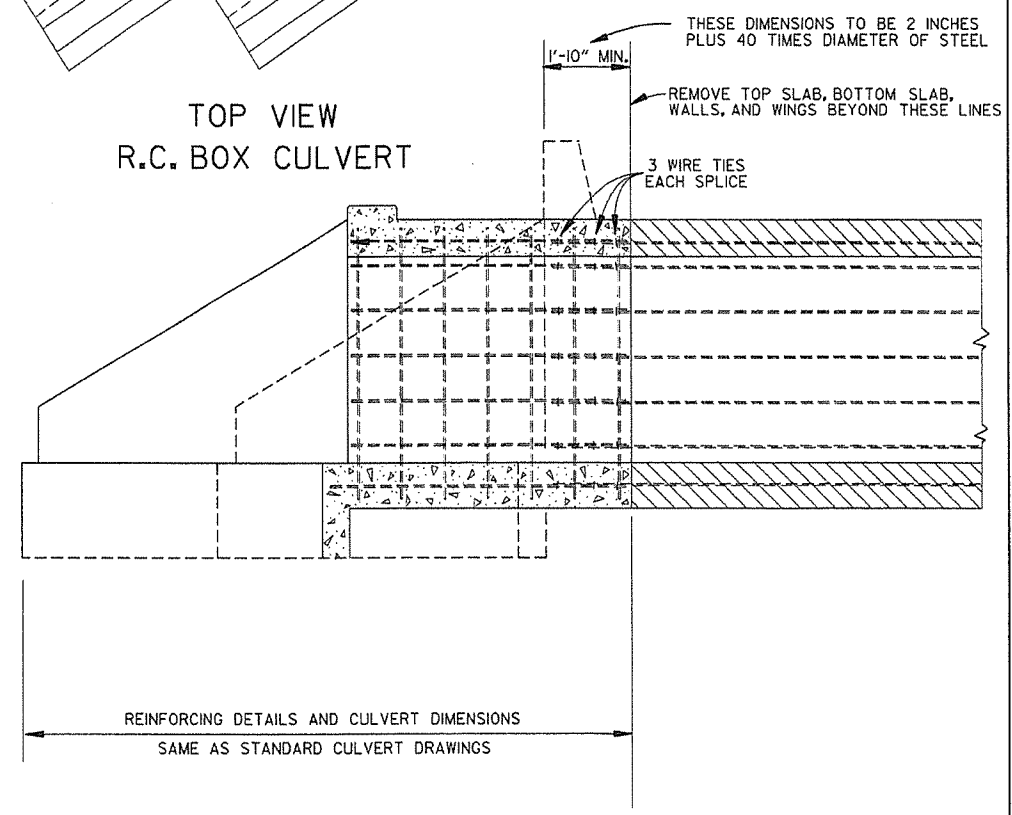
ARKANSAS STATE HIGHWAY COMMISSION

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

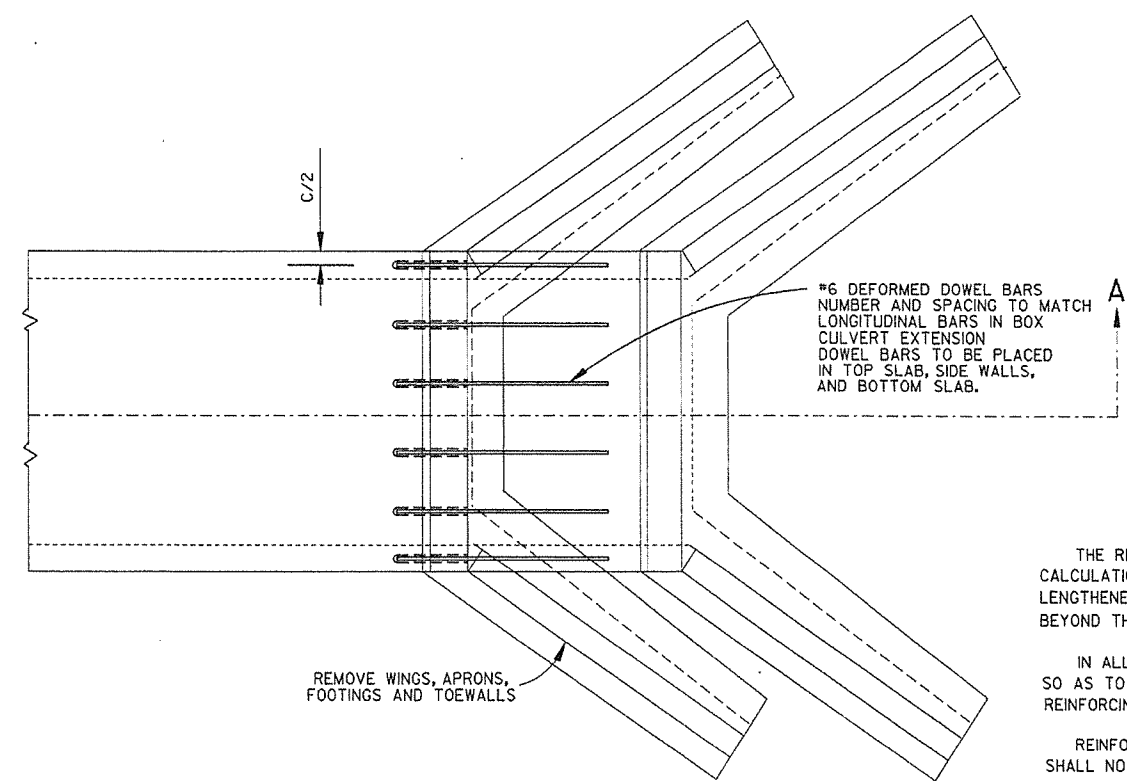
STANDARD DRAWING RCB-2



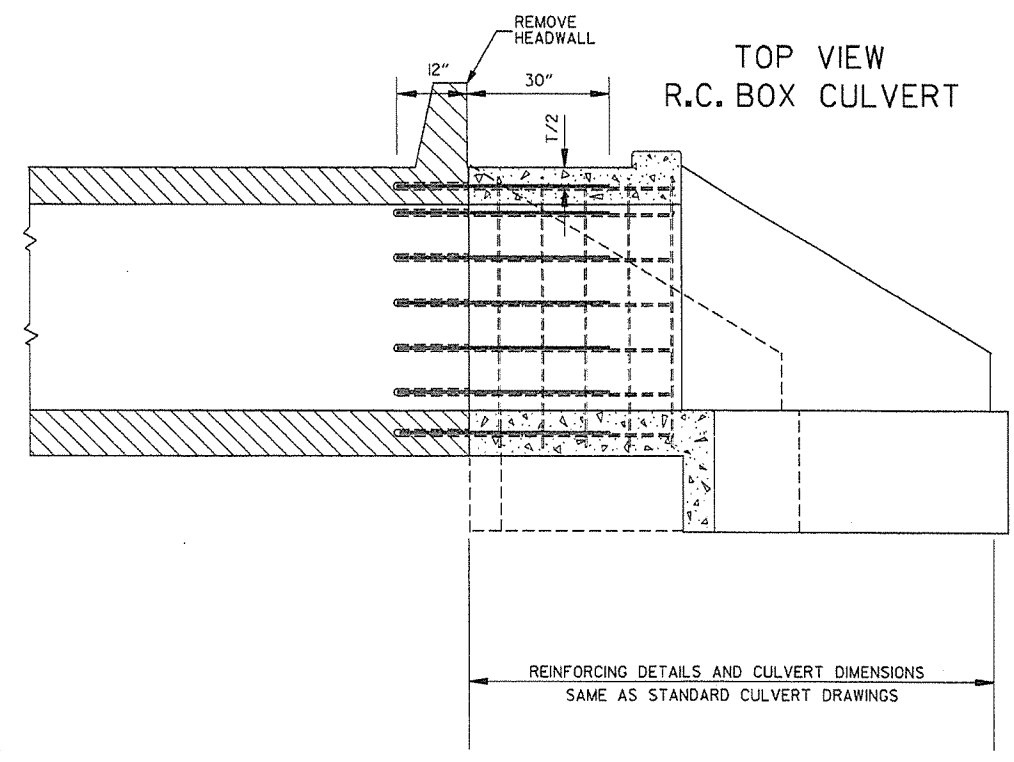
TOP VIEW
R.C. BOX CULVERT



SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT

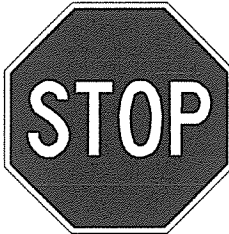
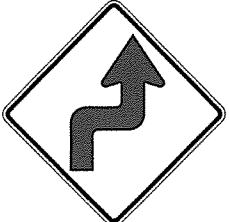
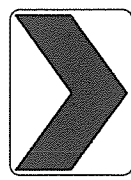
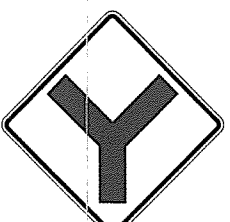


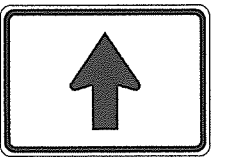
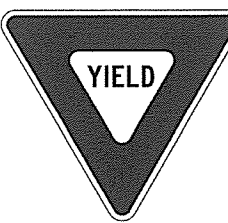
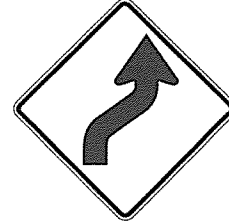
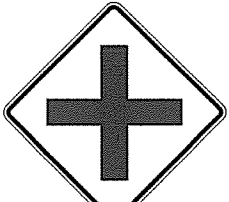

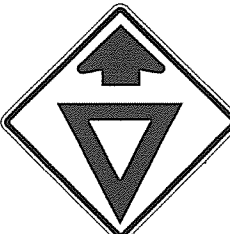

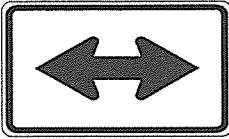
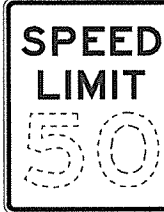
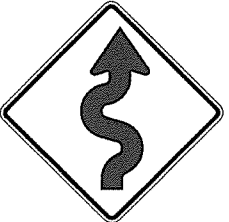
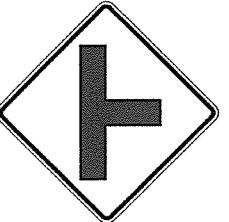




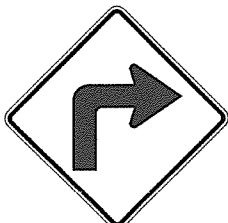
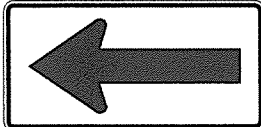
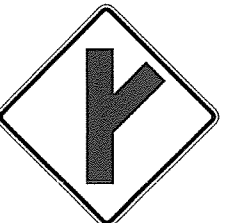

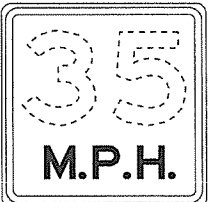
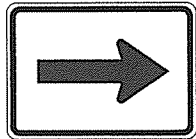
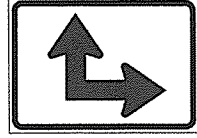
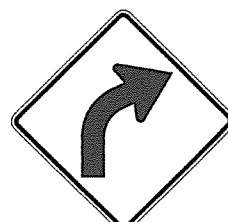
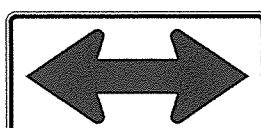
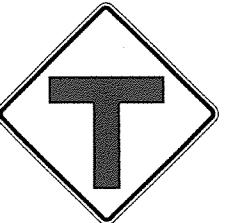
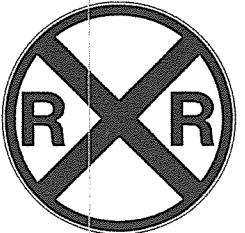
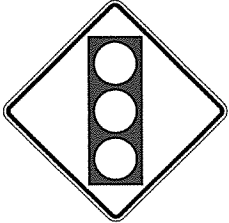



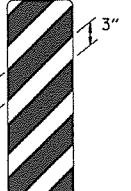


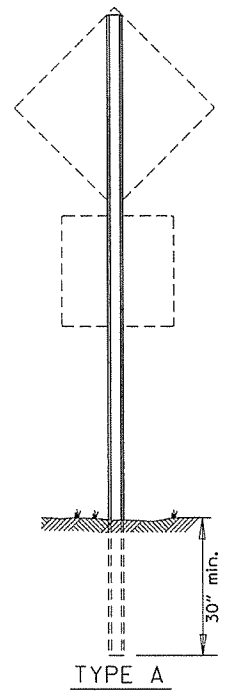
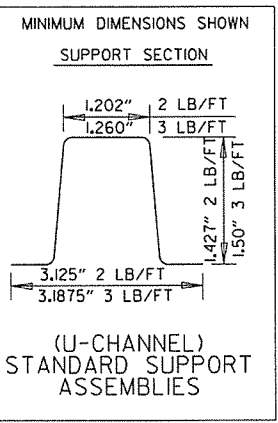
SECTION A-A
METHOD 2

- GENERAL NOTES
- 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.

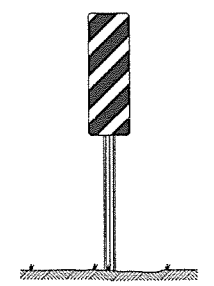
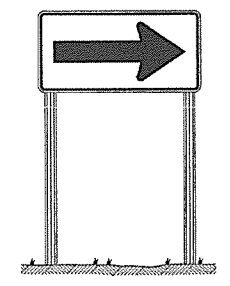
NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.
SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

			ARKANSAS STATE HIGHWAY COMMISSION
			METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
			STANDARD DRAWING RCB-3
10-12-95	CHANGED DRAWING * FROM 144-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

 RI-1 30"x30"	 W1-3 30"x30" (LT. OR RT.)	 W1-8 18"x24"	 W2-5 30"x30"	 W3-1 36"x36"	 W5-1 36"x36"	 M6-3 21"x15"
 RI-2 36"x36"x36"	 W1-4 30"x30" (LT. OR RT.)	 W2-1 30"x30"	 SI-1 36"x36"	 W3-2 36"x36"	 LASSEN 16 COUNTY County Route Marker MI-6 24"x24"	 M6-4 21"x15"
 R2-1 24"x30"	 W1-5 30"x30" (LT. OR RT.)	 W2-2 30"x30"	 NARROW BRIDGE W5-2 36"x36"	 PAVEMENT ENDS W8-3 36"x36"	 NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND. RI-3P 18"x6"	 M6-5 21"x15"
 W1-1 30"x30" (LT. OR RT.)	 W1-6 48"x24"	 W2-3 30"x30" (LT. OR RT.)	 ONE LANE BRIDGE W5-3 36"x36"	 35 M.P.H. W13-1P 18"x18"	 M6-1 21"x15"	 M6-6 21"x15"
 W1-2 30"x30" (LT. OR RT.)	 W1-7 48"x24"	 W2-4 30"x30"	 R X R W10-1 36" DIAMETER	 W3-3 36"x36"	 M6-2 21"x15"	 SCHOOL S4-3P 24"x8"
					 WHEN CHILDREN ARE PRESENT S4-2P 24"x10"	 OM-3 12"x36" (LT. OR RT.)



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.



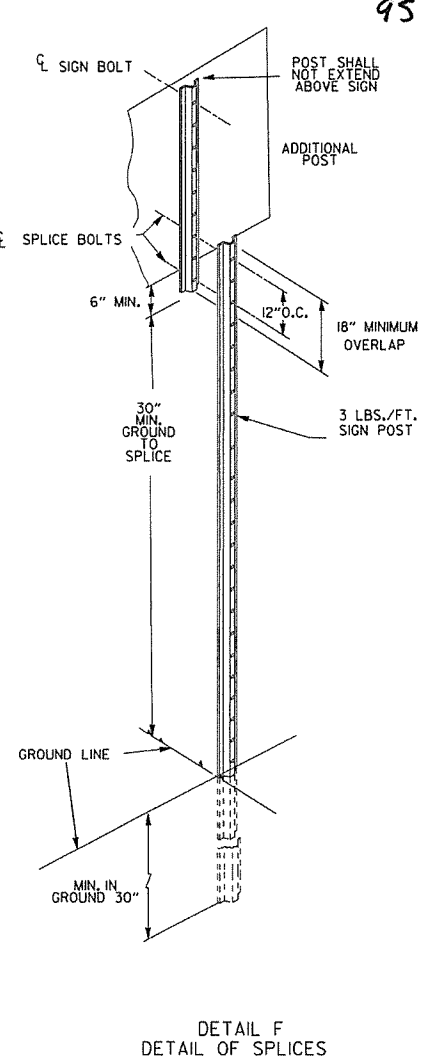
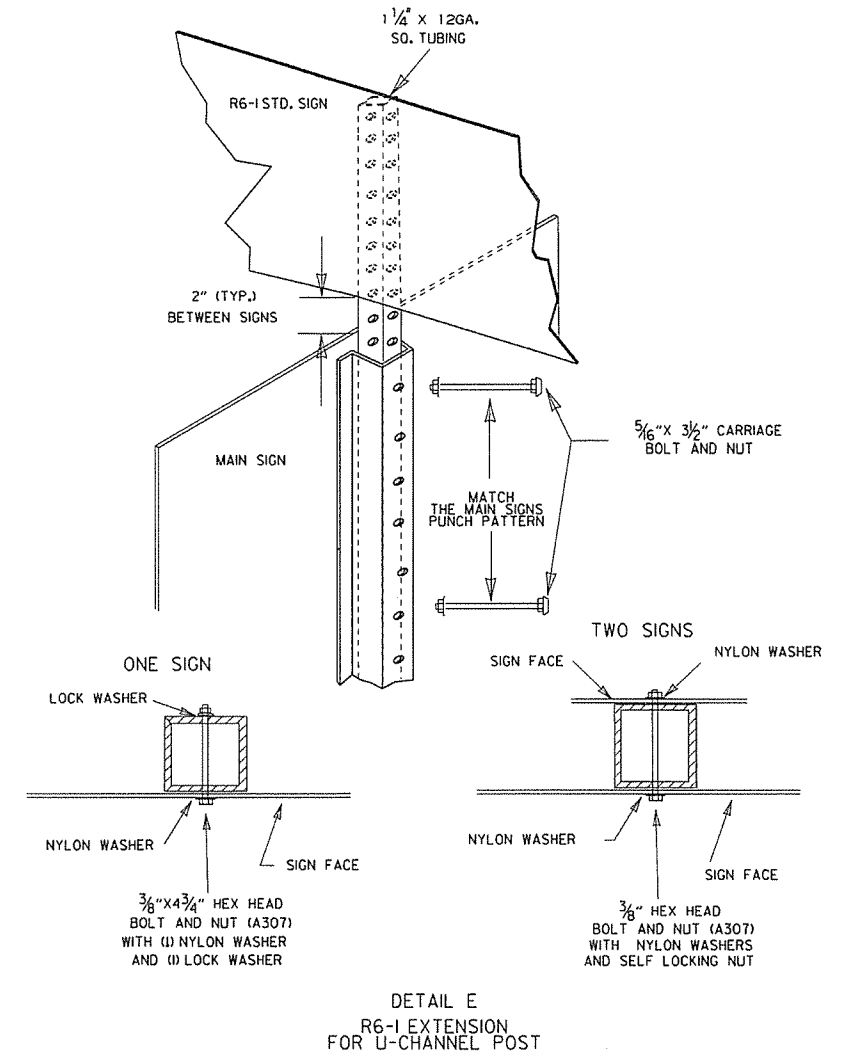
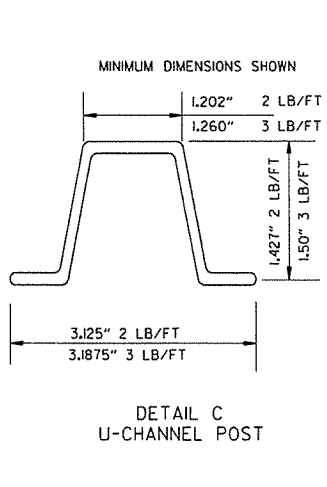
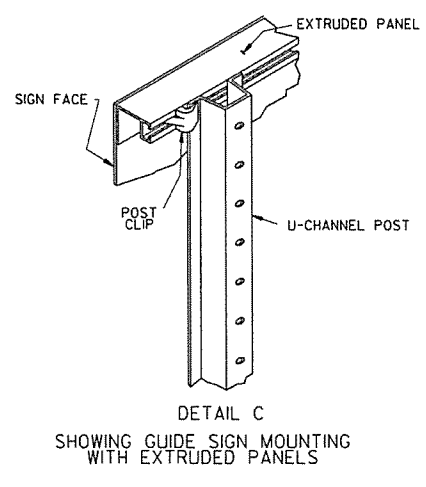
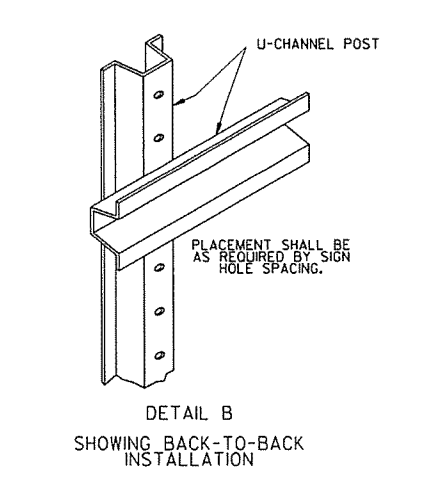
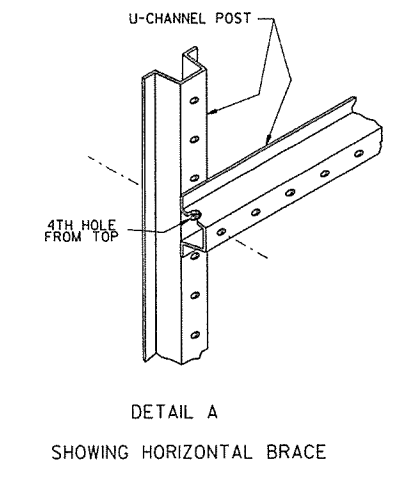
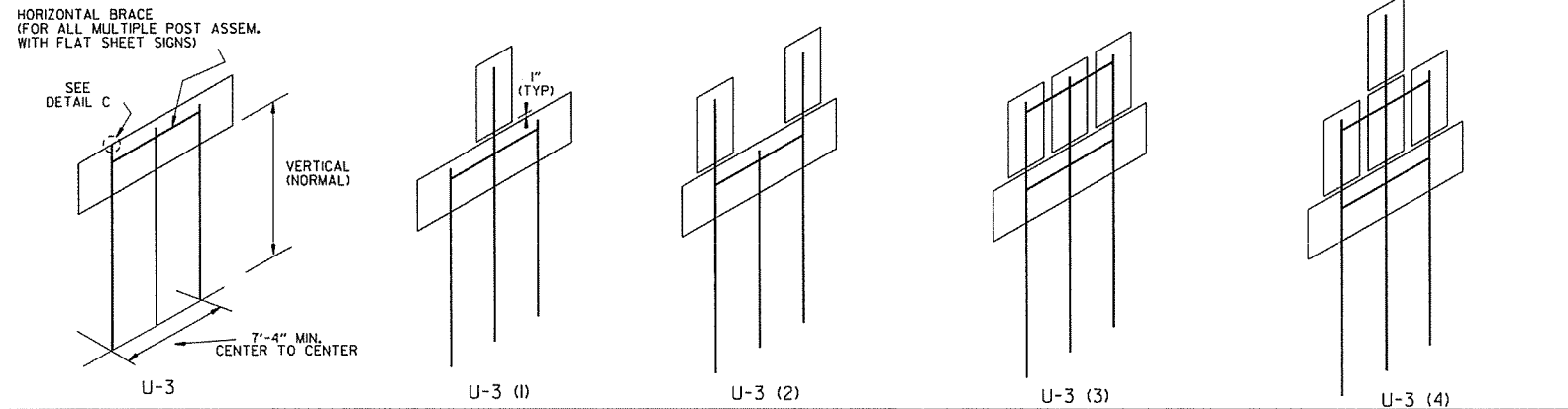
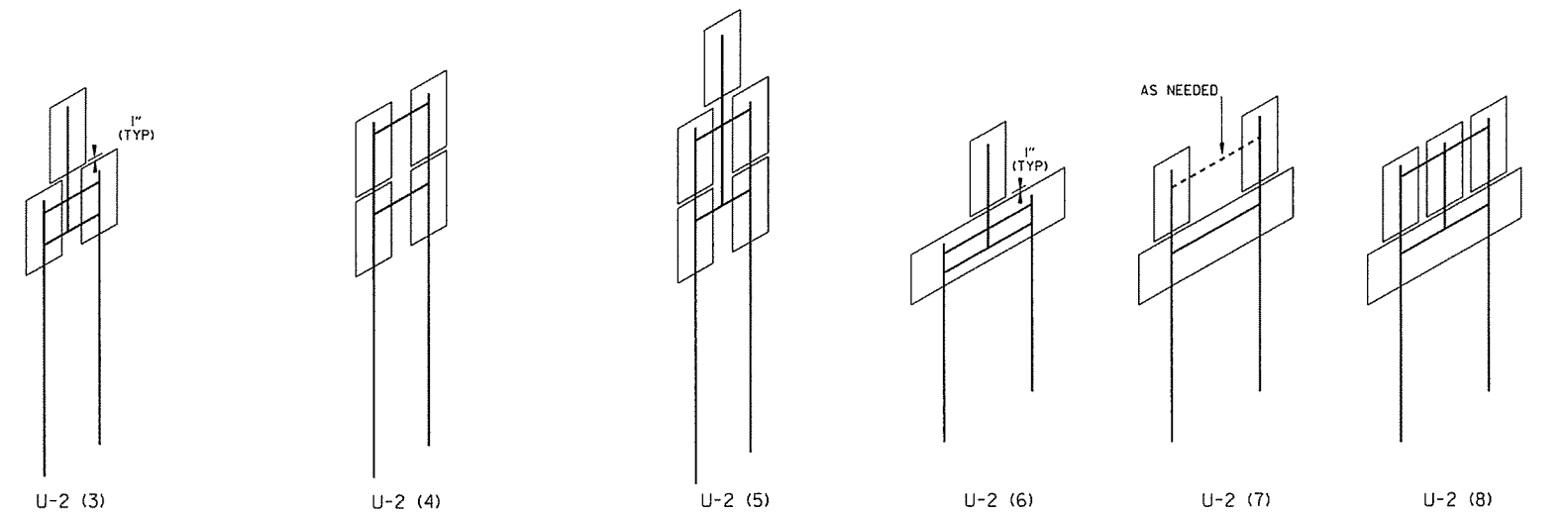
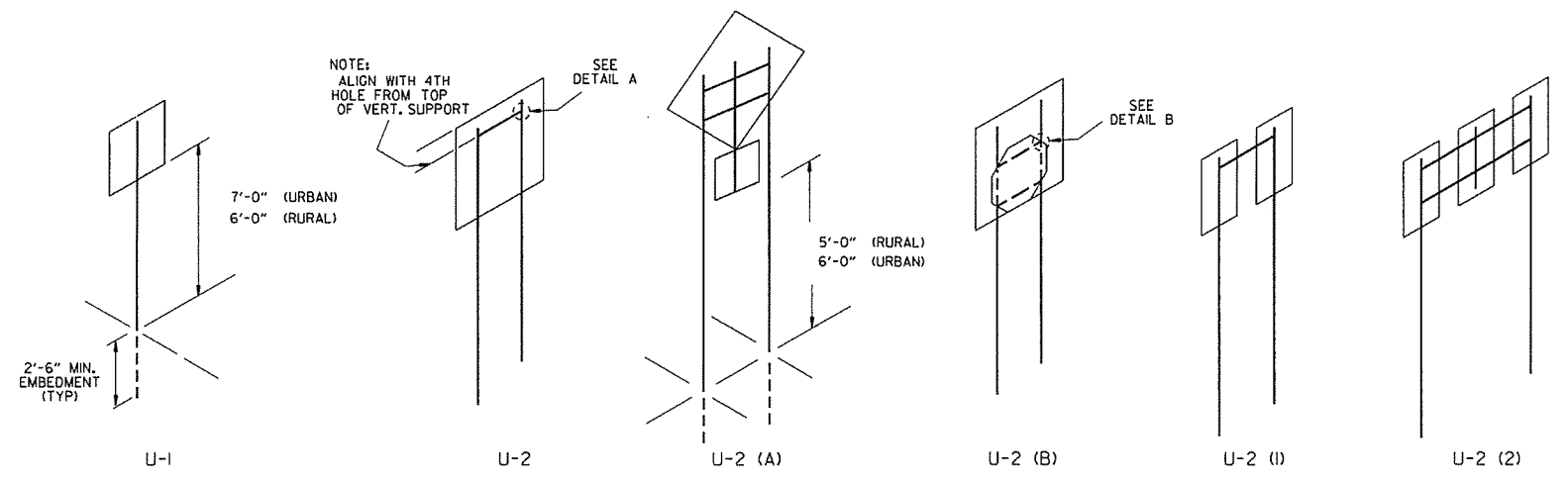
MINIMUM WEIGHT
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

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 W1-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	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:

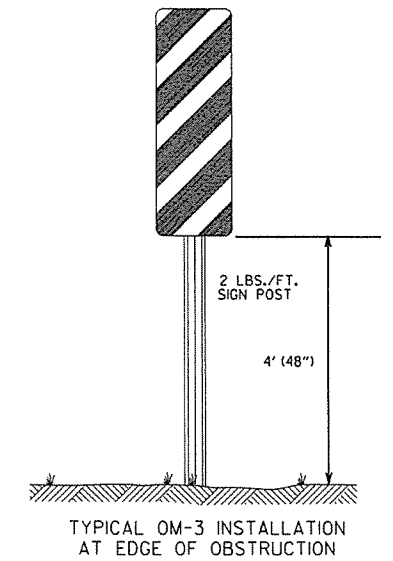
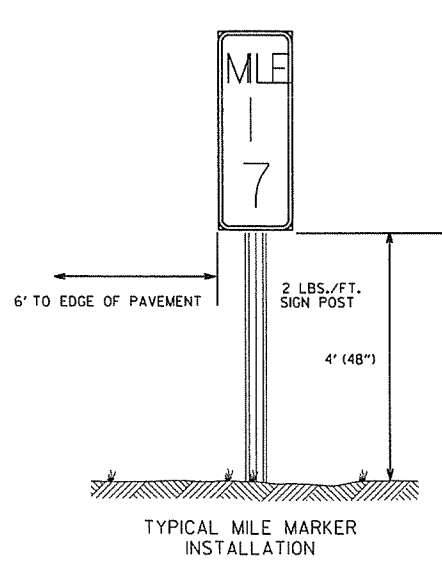
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).

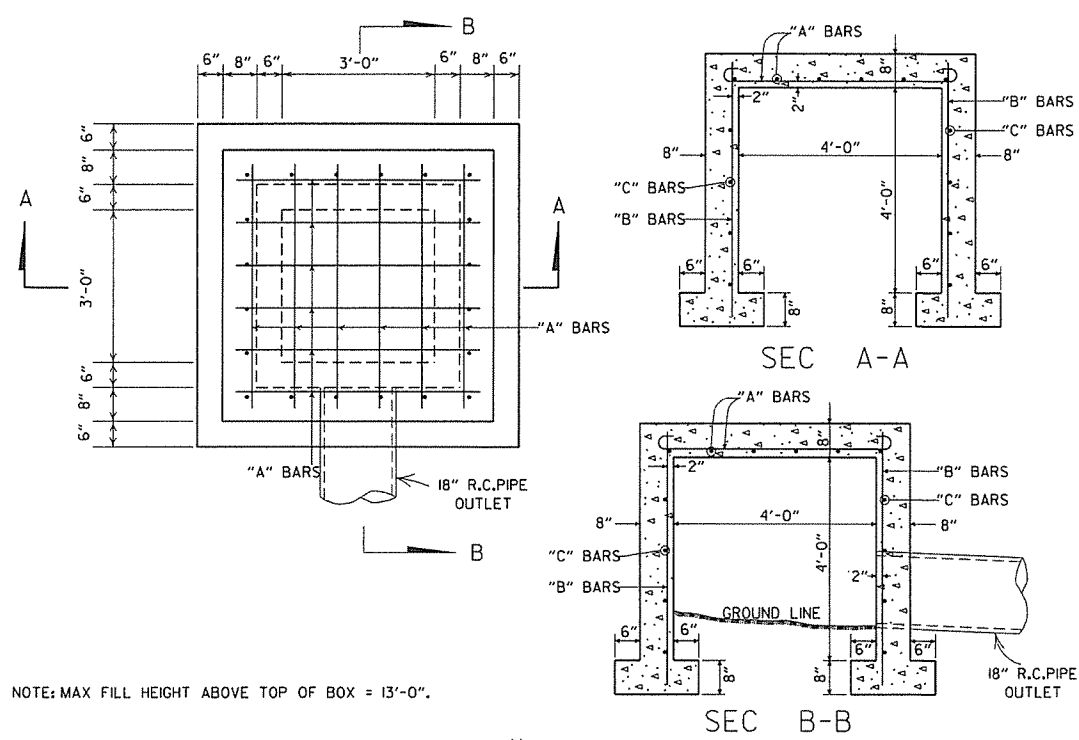
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



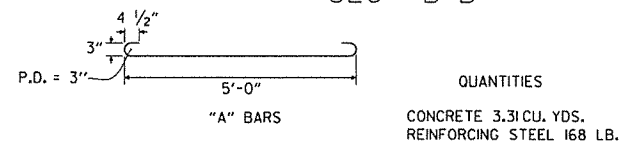
ARKANSAS STATE HIGHWAY COMMISSION		
U-CHANNEL POST ASSEMBLIES		
STANDARD DRAWING SHS-2		
DATE	REVISION	FILED
9-12-13	REVISED U-2(3), U-2(6), U-3(I), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL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



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

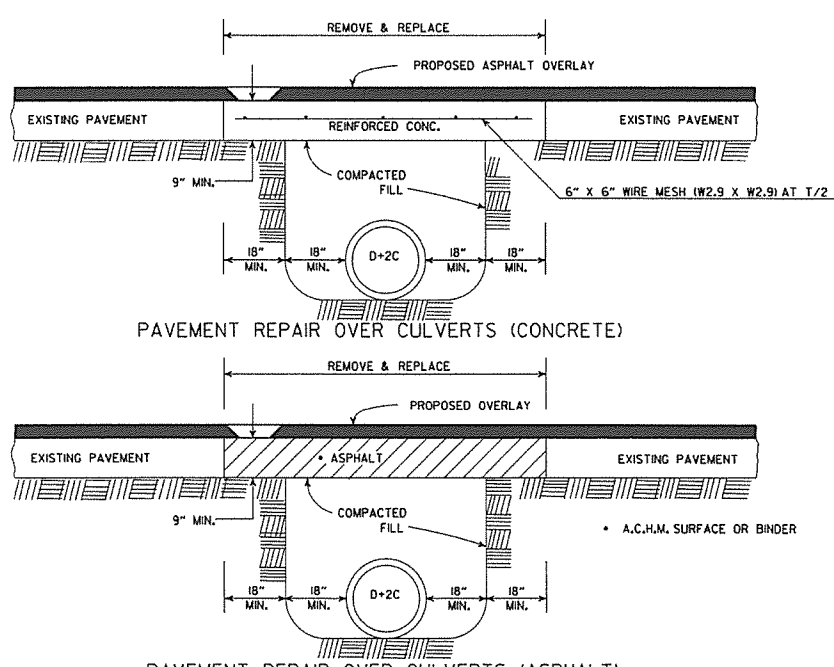
STEEL SCHEDULE

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

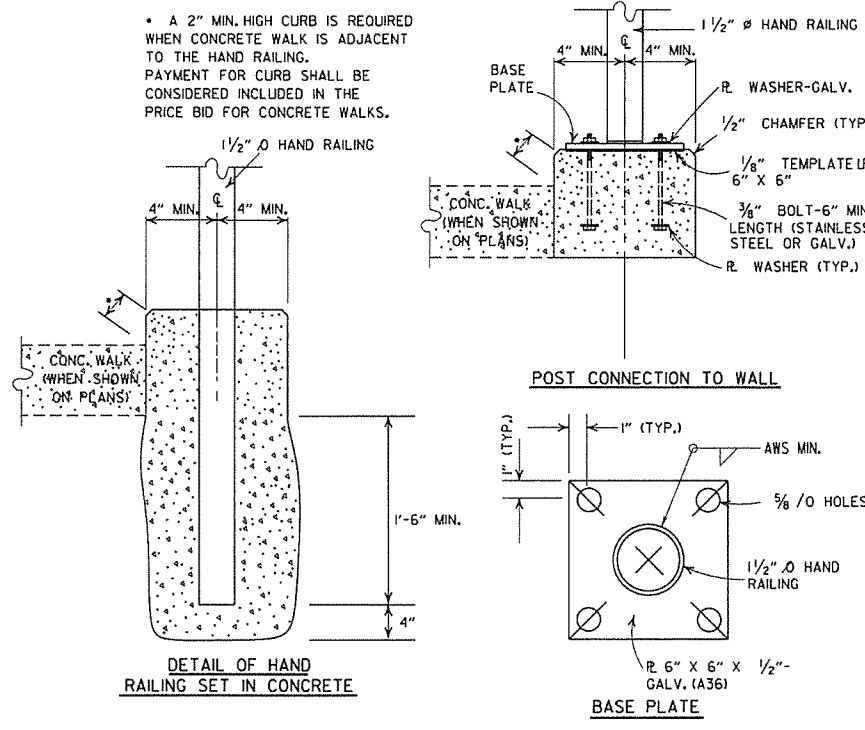


GENERAL NOTE:
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

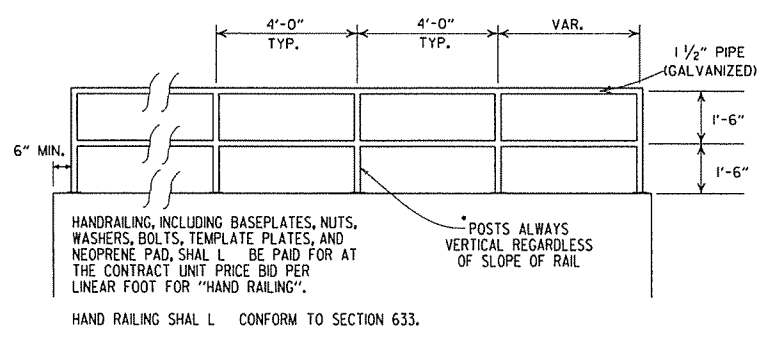
REINFORCED CONCRETE SPRING BOX



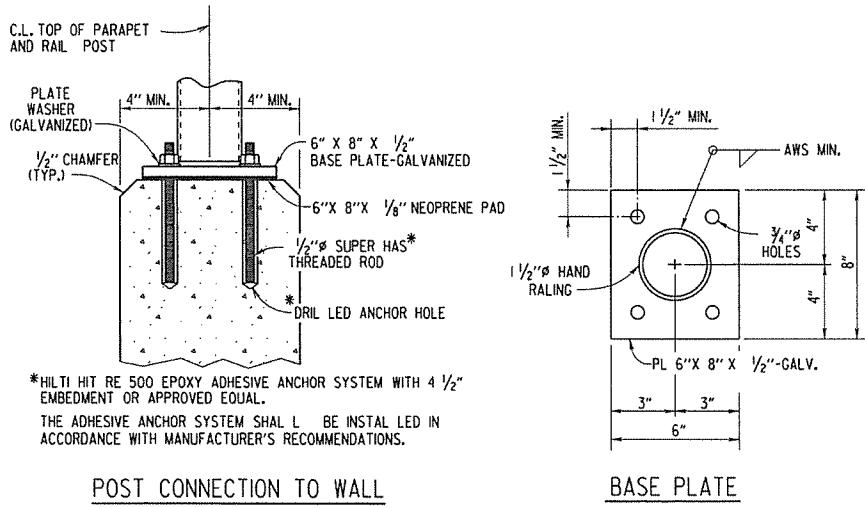
DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS



POST CONNECTION DETAILS



HAND RAILING SHALL CONFORM TO SECTION 633.

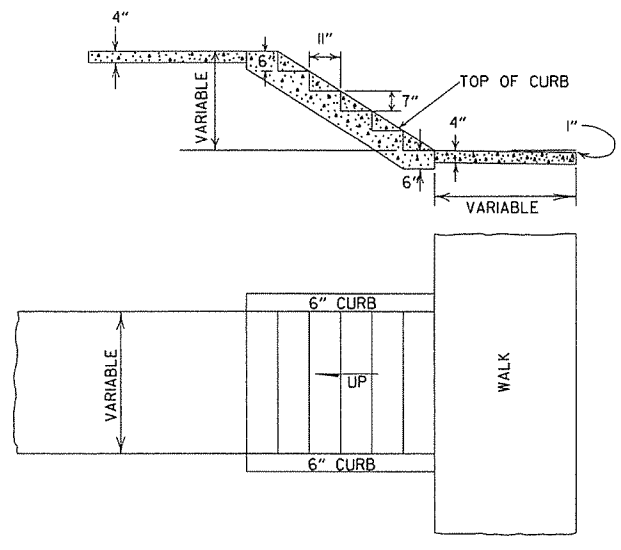


POST CONNECTION TO WALL

BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS




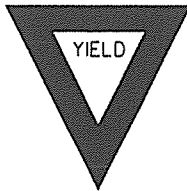







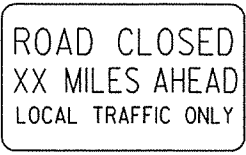
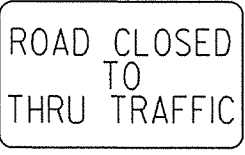

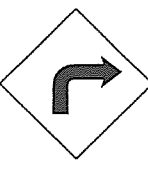

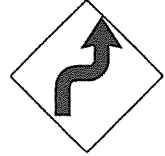

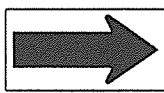
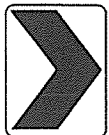
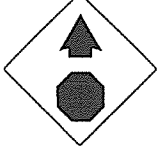
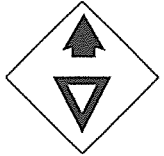
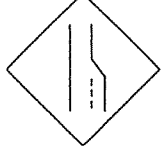

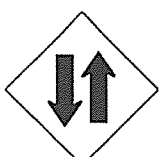

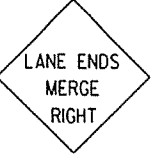





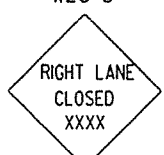
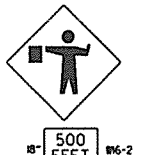

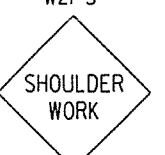
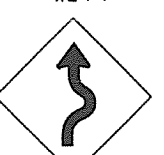
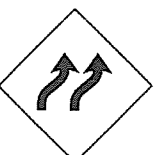


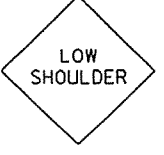
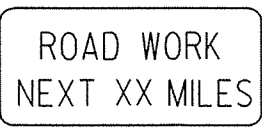
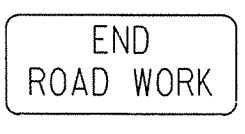
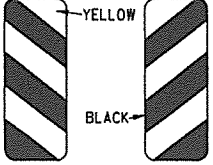
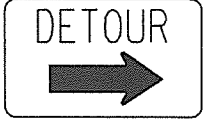
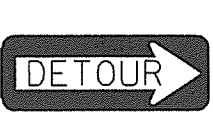
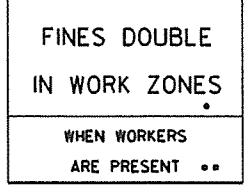
DETAILS OF CONCRETE STEPS & WALKS

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	649-7-15-88
11-1-84	ADDED HDWL. MODS. DEL. PIPE UNDERDRAINS	
1-4-83	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
3-2-81	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
4-20-79	SPELLING OF "UNDERDRAIN"	721-3-2-81
2-2-76	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
4-10-75	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
5-22-74	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
10-2-72	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
	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>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>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>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60"</p> <p>• USE 6" C LETTERS •• USE 4" D LETTERS</p>

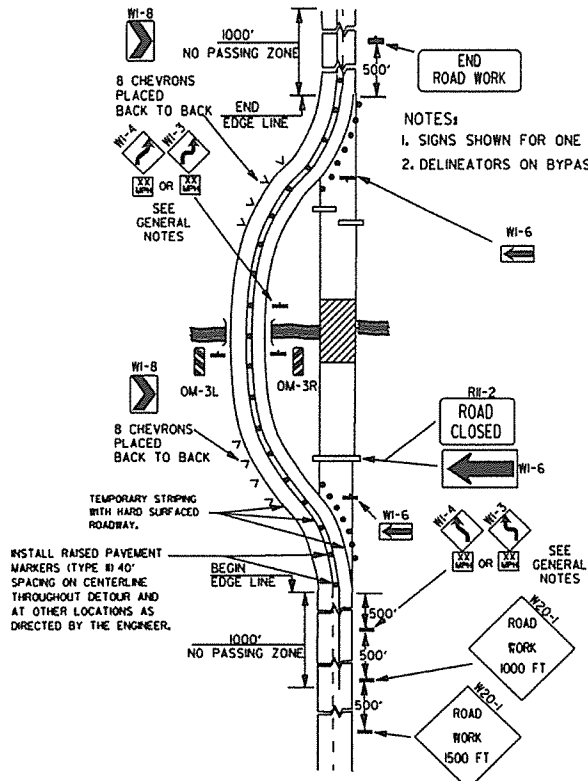
ADVANCE DISTANCES (XXXX)

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

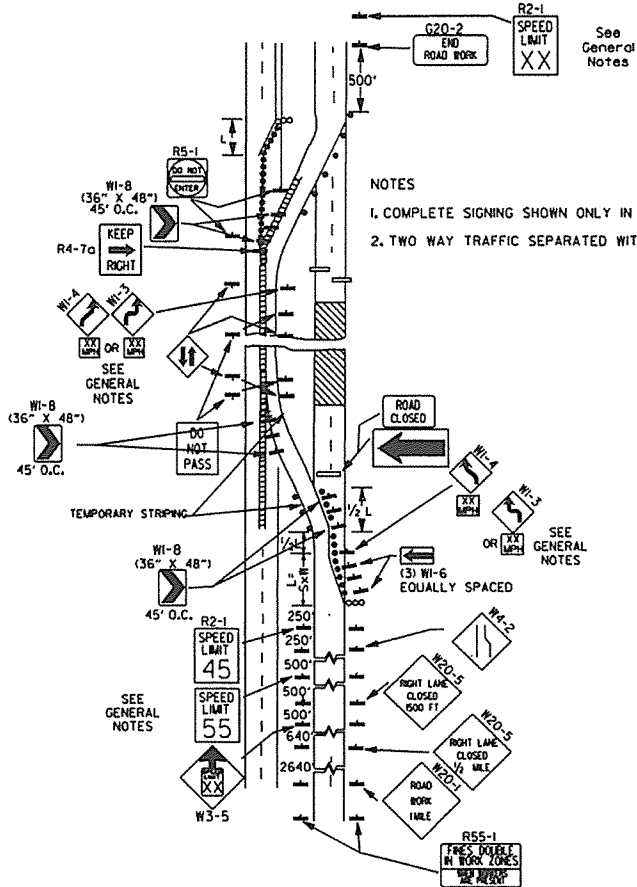
GENERAL NOTES:

- 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.
 - SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
 - SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
 - POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
 - ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
 - FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
 - MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
 - R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

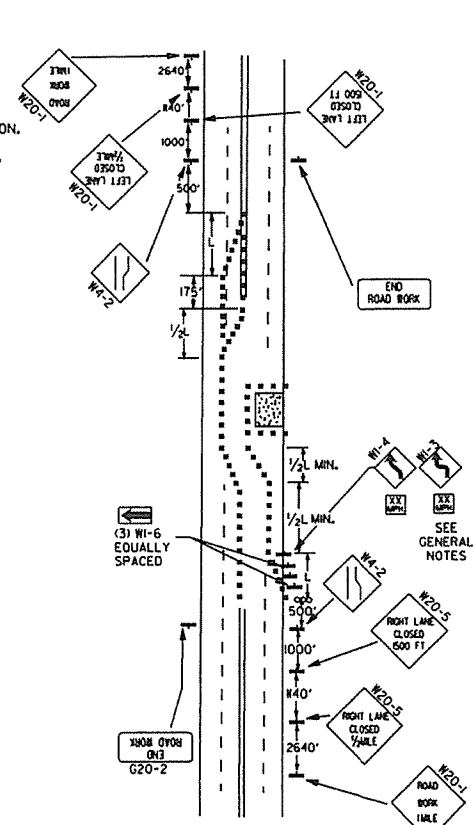
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-16-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
8-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	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, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED



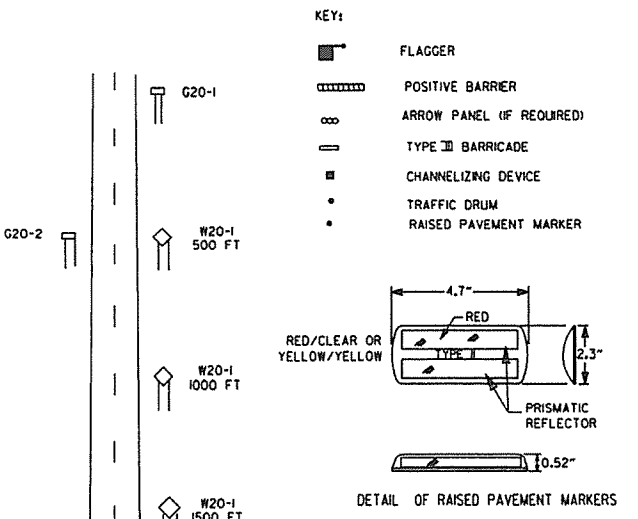
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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



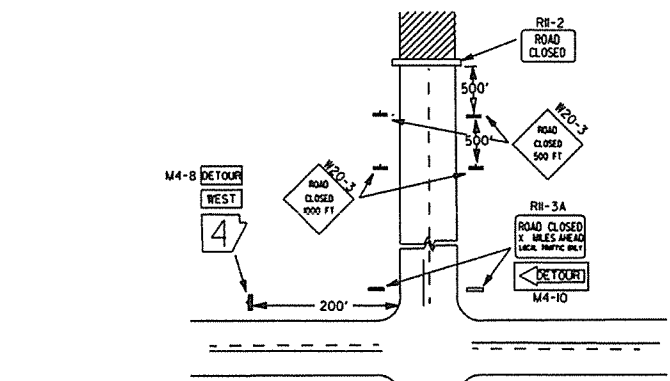
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



TYPICAL ADVANCE WARNING SIGN PLACEMENT

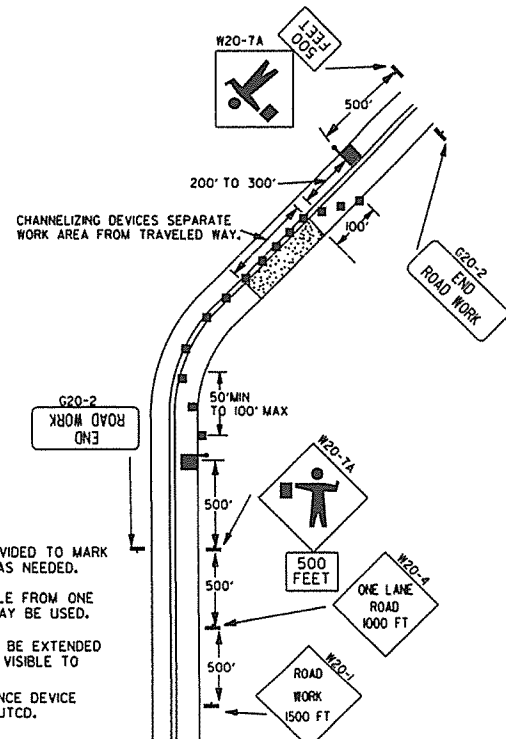
TAPER FORMULAE:
 $L = SXW$ FOR SPEEDS OF 45MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
 W = WIDTH OF OFFSET.

- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 - WHEN THE EXISTING SPEED LIMIT IS 55MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45MPH) SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 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(55MPH) 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.
 - 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.
 - 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.



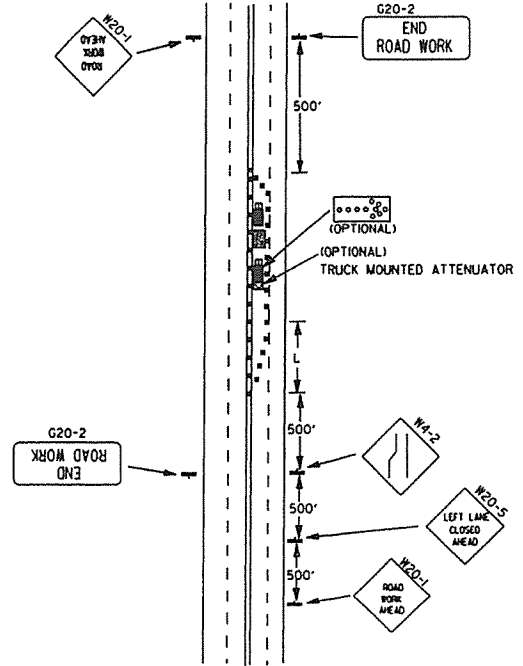
- NOTES:
- REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
 - STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



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

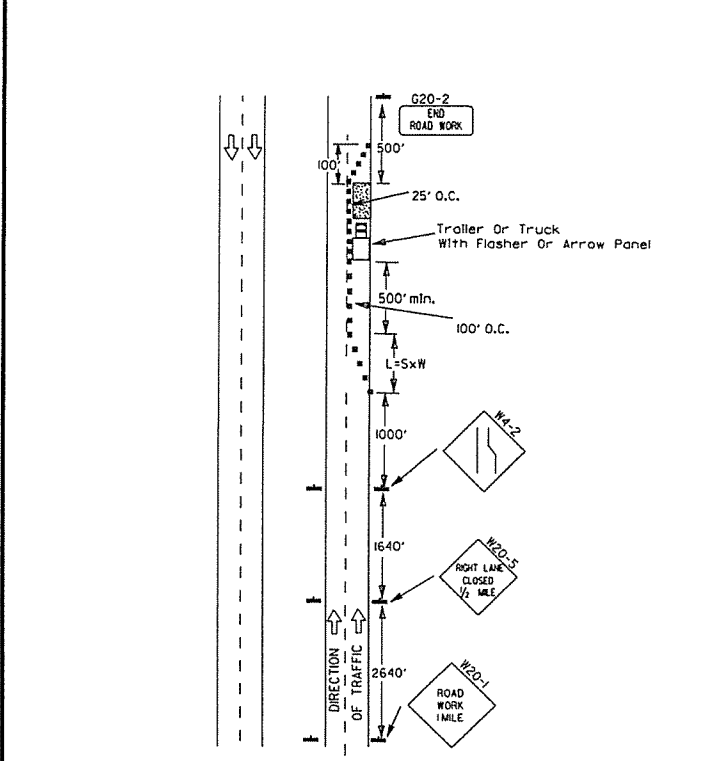
(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



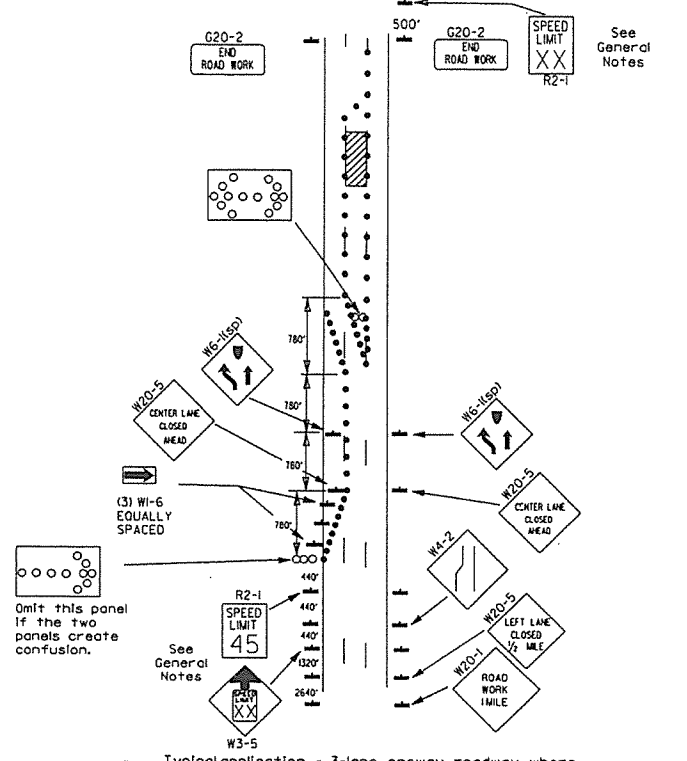
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
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 (G) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

Channelizing devices



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



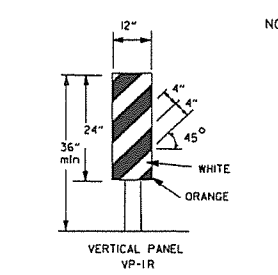
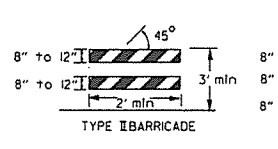
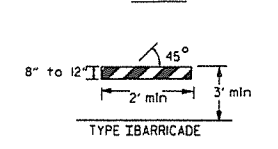
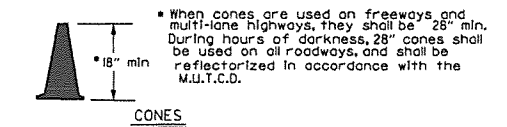
(B) Typical application - 3-lane one-way roadway where center lane is closed.

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

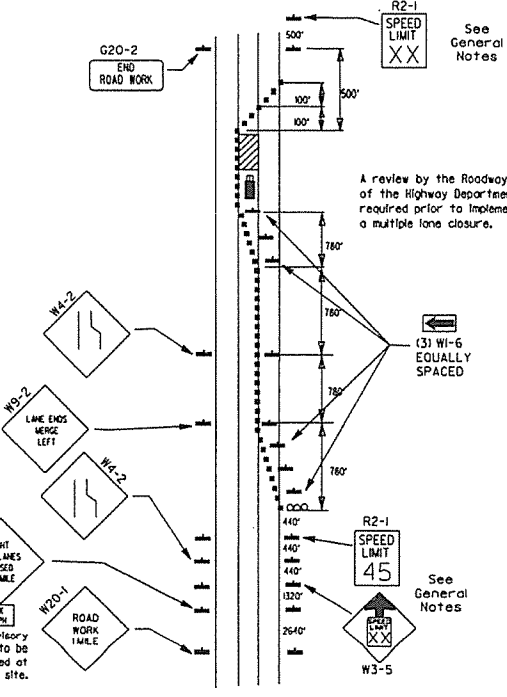
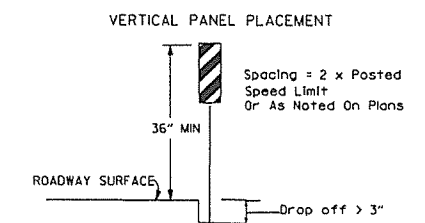
GENERAL NOTES:

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

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



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

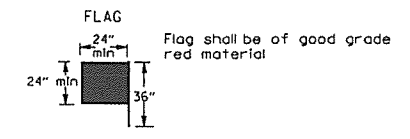


(D) Typical application - closing multiple lanes of a multi-lane highway.

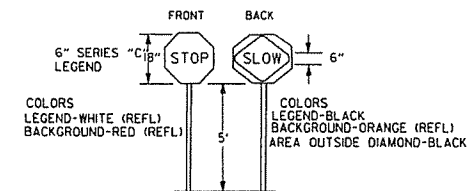
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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

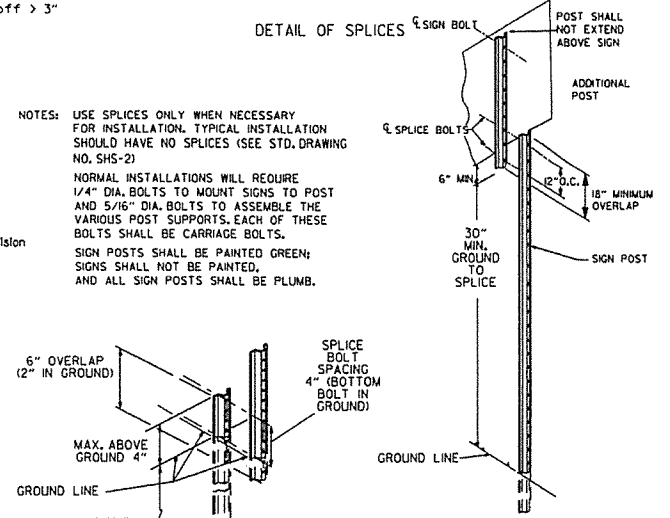
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE



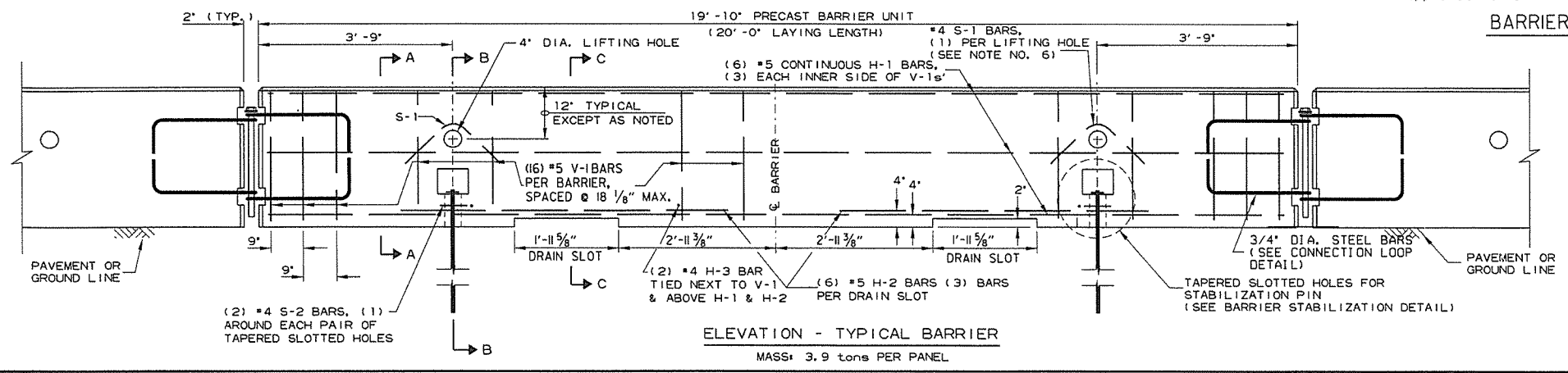
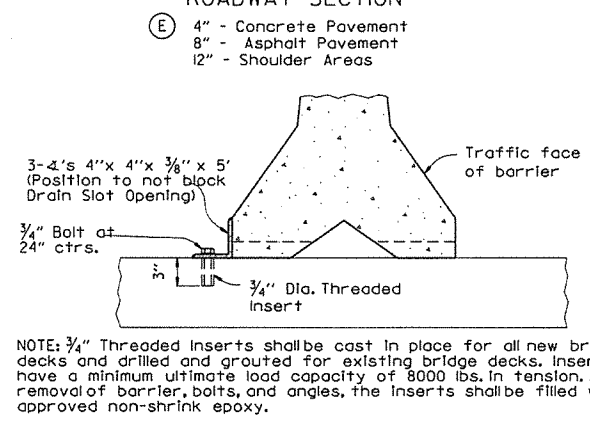
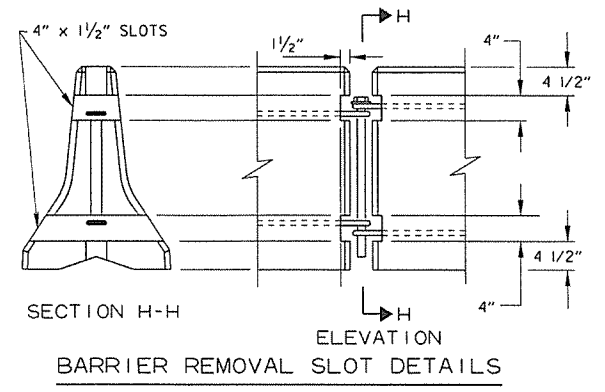
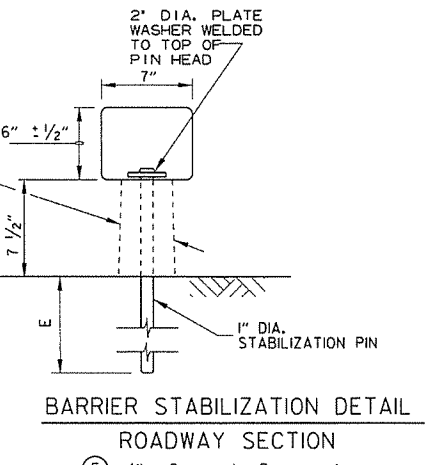
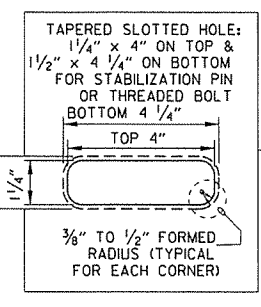
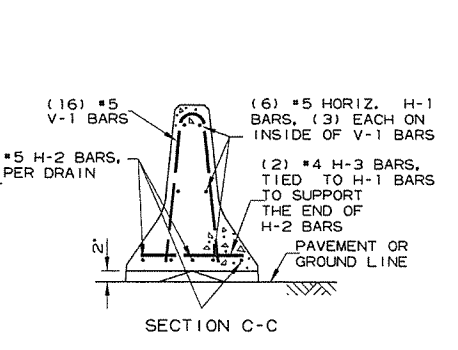
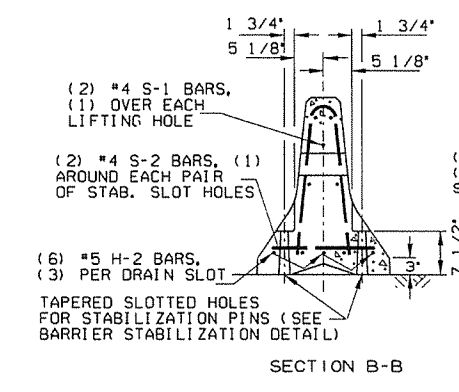
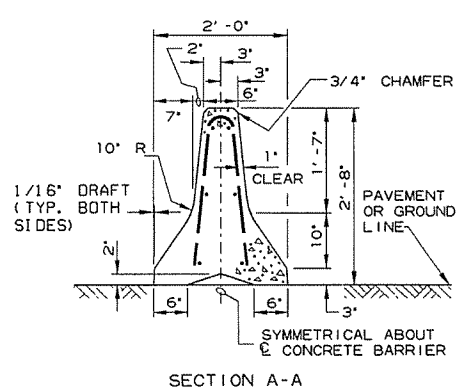
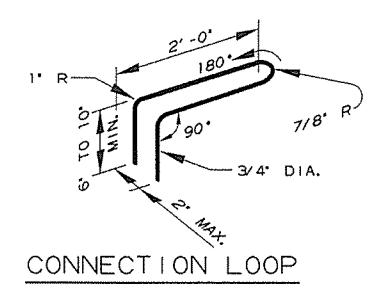
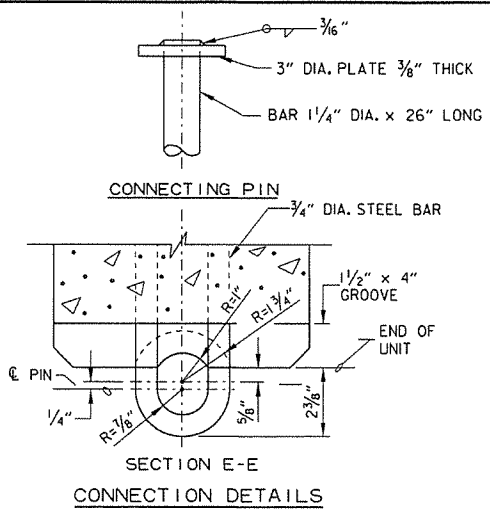
DETAIL OF SPLICES



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

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

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)	



- 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 Ln. 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.

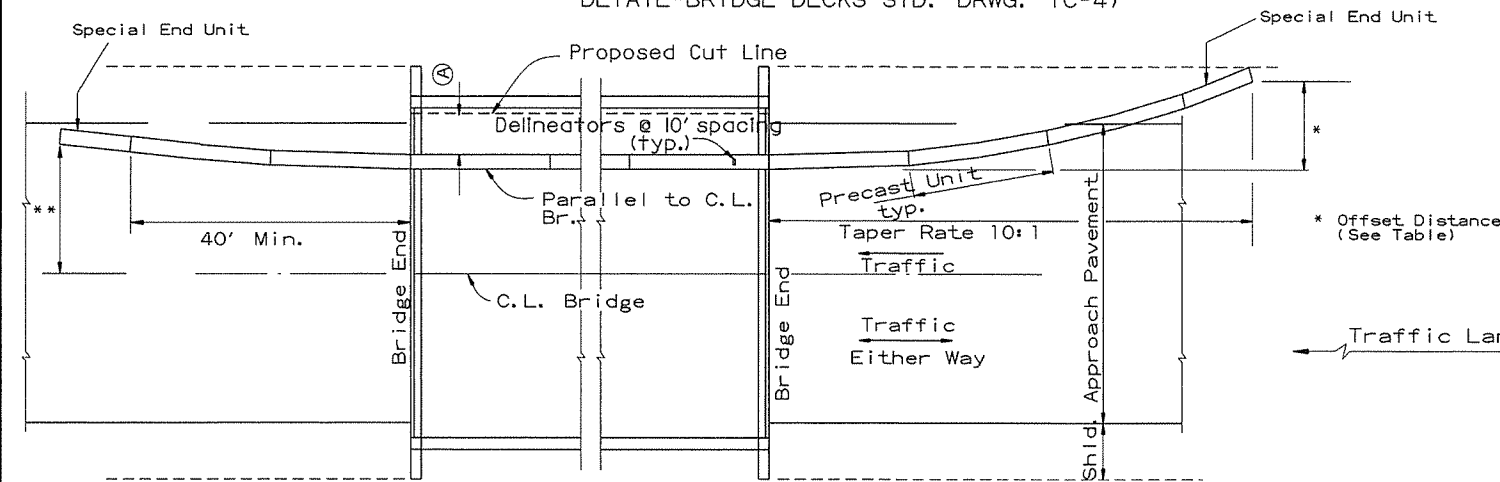
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02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

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

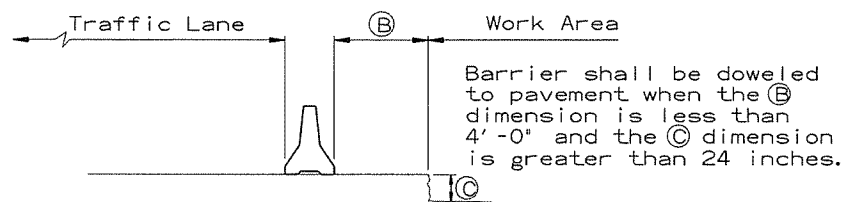
STANDARD DRAWING TC-4

(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

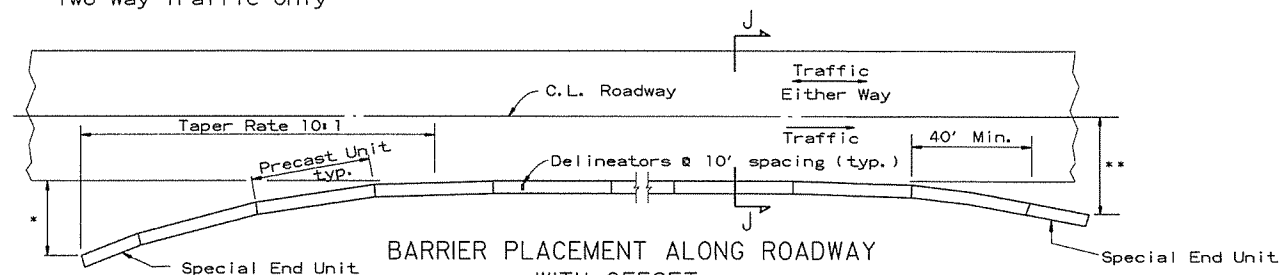
No Scale



SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

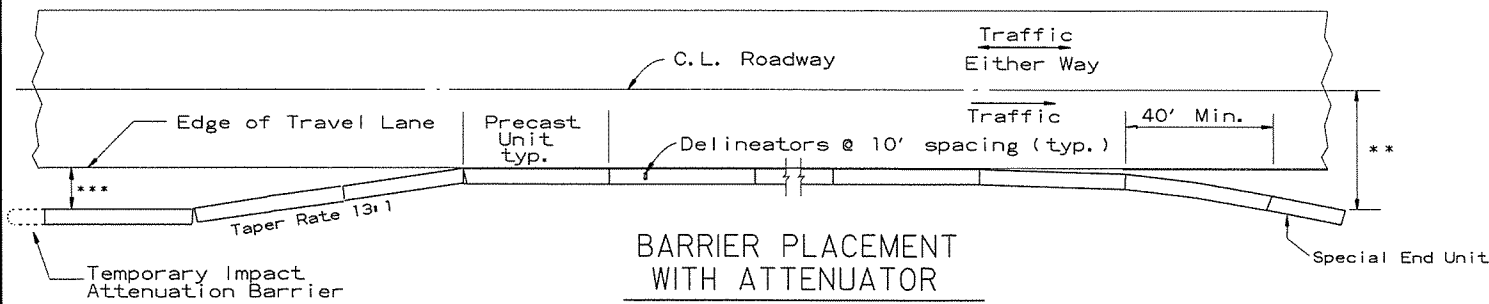
** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

Offset Distance Table

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

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

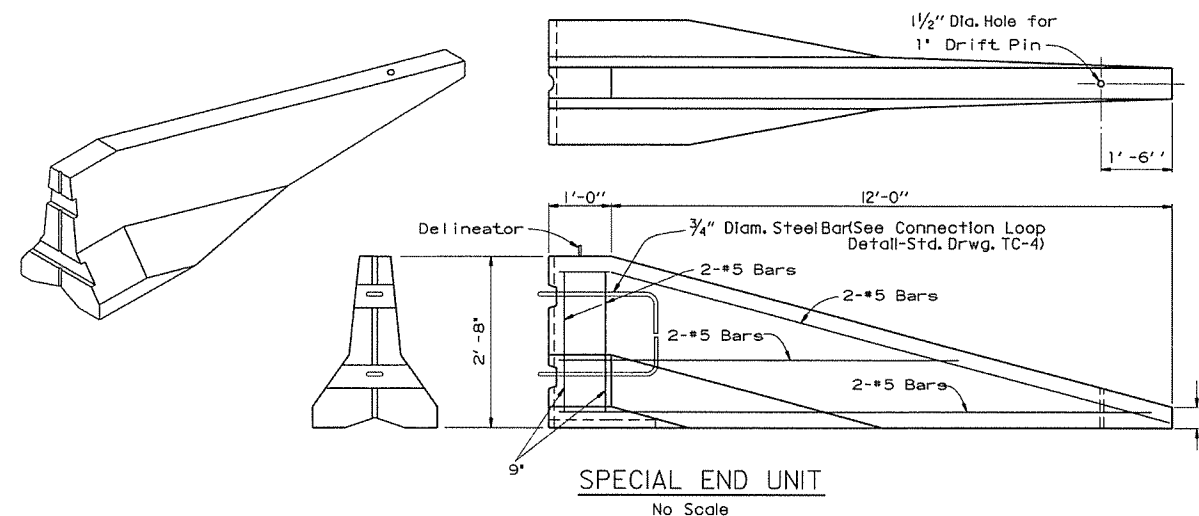


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

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



SPECIAL END UNIT

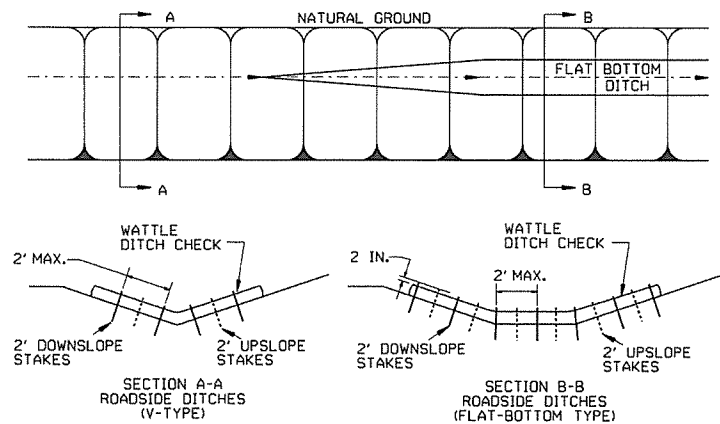
No Scale

General Notes

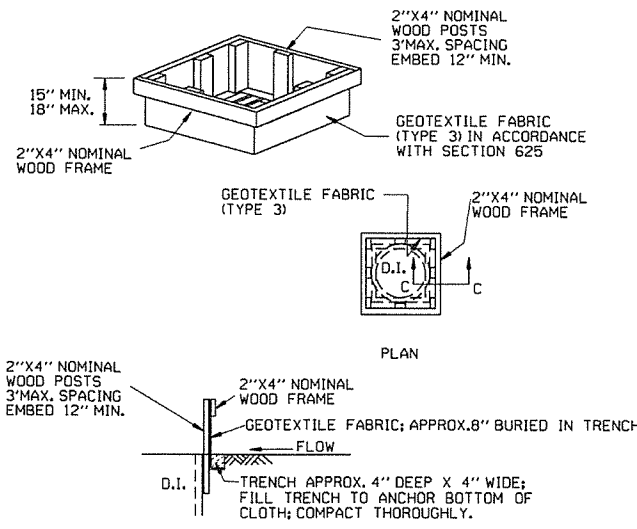
When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

			ARKANSAS STATE HIGHWAY COMMISSION
			STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER
10-15-09	ADDED REFERENCE TO MASH		STANDARD DRAWING TC-5
5-25-06	REVISED BARRIER PLACEMENT		
8-22-02	ISSUED NEW DRAWING		
DATE	REVISION	FILMED	

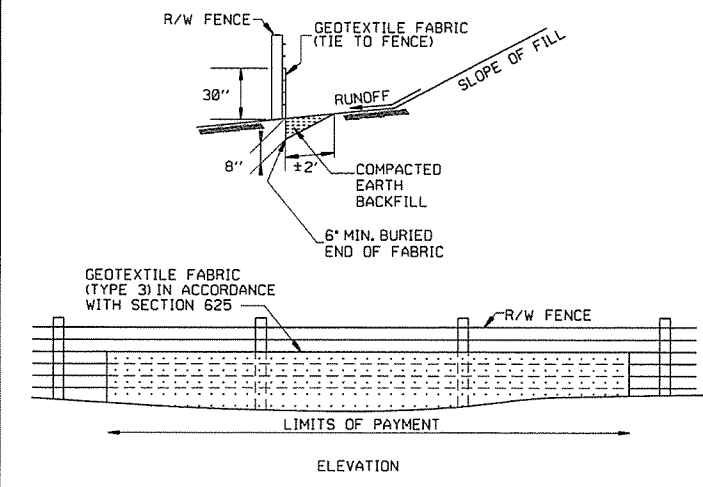
GENERAL NOTES
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



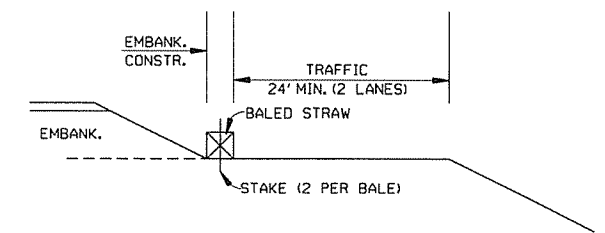
DROP INLET SILT FENCE (E-7)



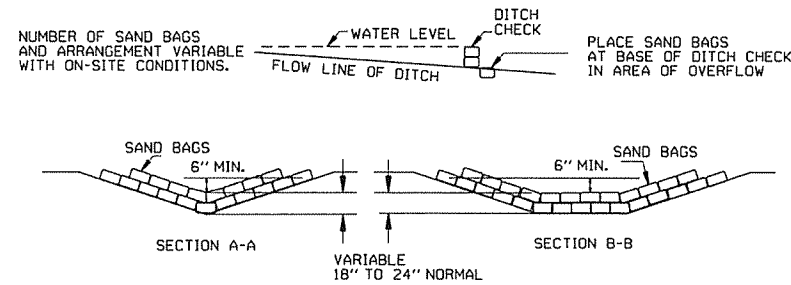
SILT FENCE ON R/W FENCE (E-4)

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

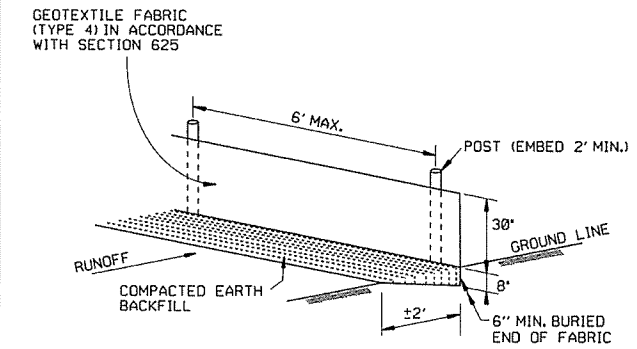
GENERAL NOTES
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL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



BALED STRAW FILTER BARRIER (E-2)

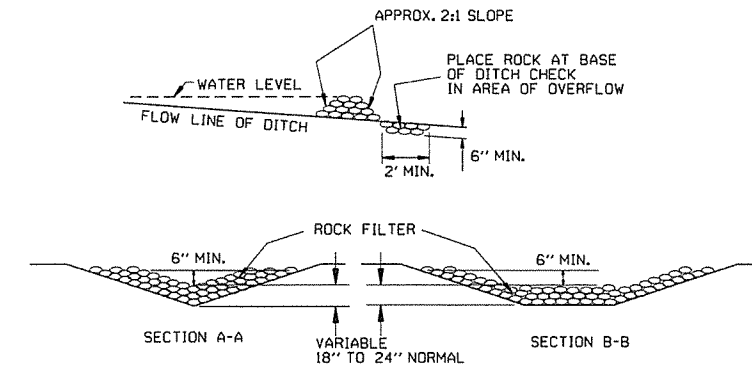


SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

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

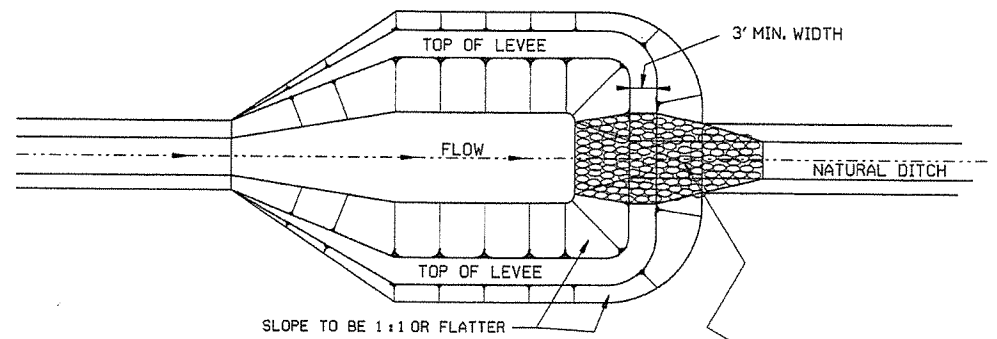


ROCK DITCH CHECK (E-6)

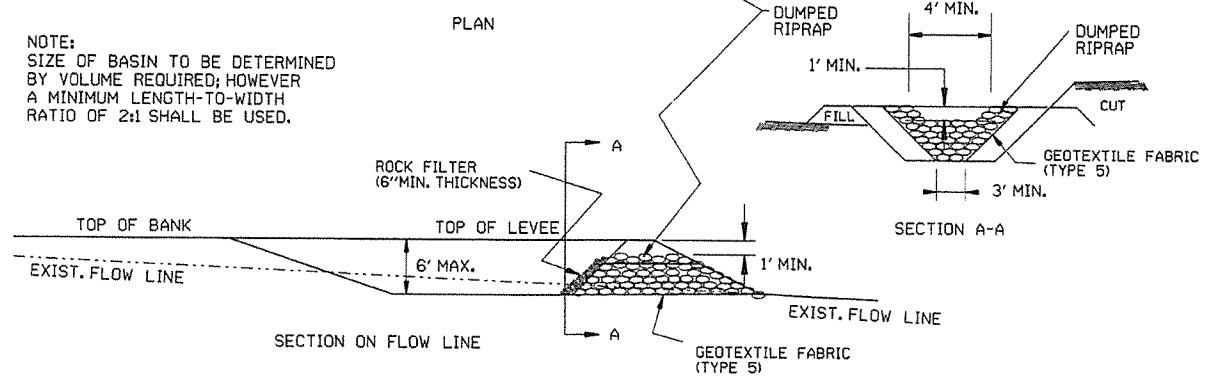
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	
7-15-94	REV. E-4 & E-11 MIN. 13\"/>		
6-2-94	REVISED E-1, 4, 7 & 11; DELETED 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

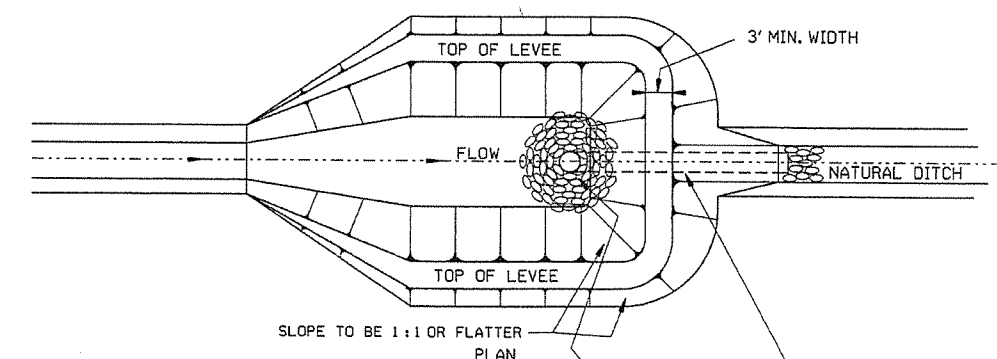
STANDARD DRAWING TEC-1



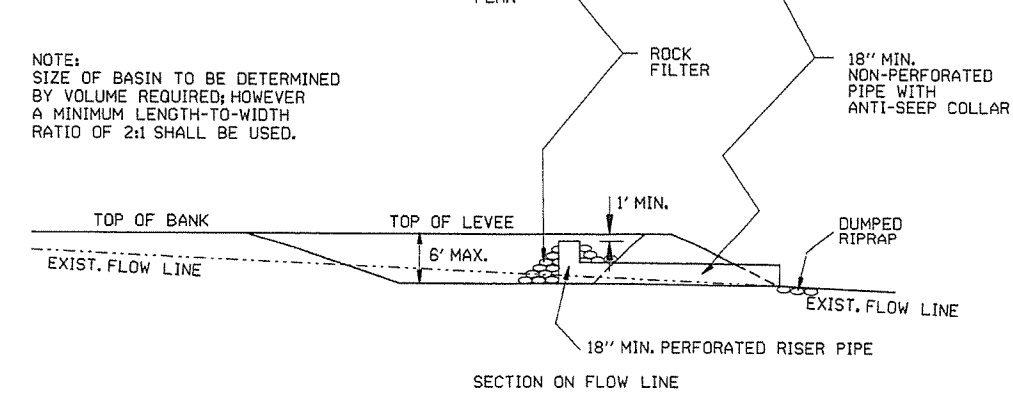
NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.



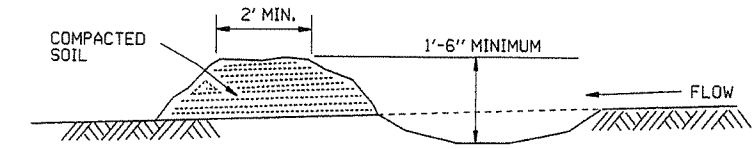
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



NOTE:
SIZE OF BASIN TO BE DETERMINED
BY VOLUME REQUIRED; HOWEVER
A MINIMUM LENGTH-TO-WIDTH
RATIO OF 2:1 SHALL BE USED.

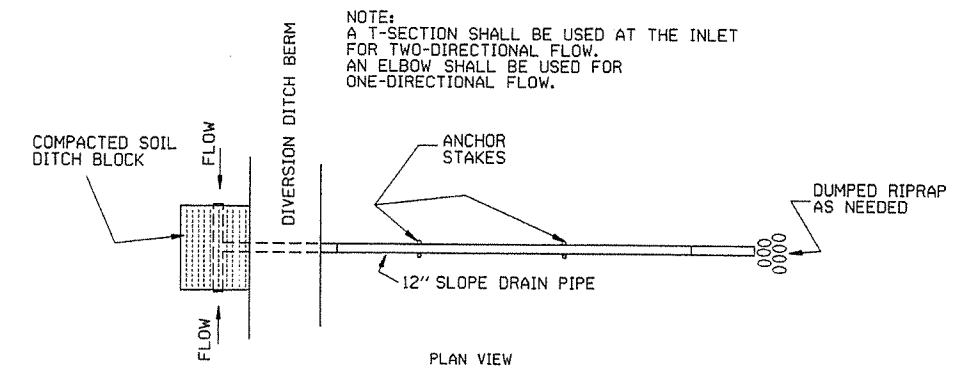


SEDIMENT BASIN WITH PIPE OUTLET (E-10)

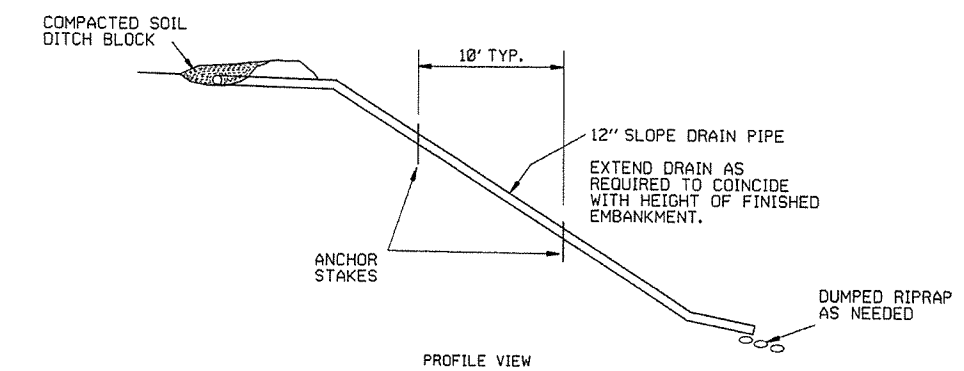


DIVERSION DITCH (E-8)

NOTE:
A T-SECTION SHALL BE USED AT THE INLET
FOR TWO-DIRECTIONAL FLOW.
AN ELBOW SHALL BE USED FOR
ONE-DIRECTIONAL FLOW.

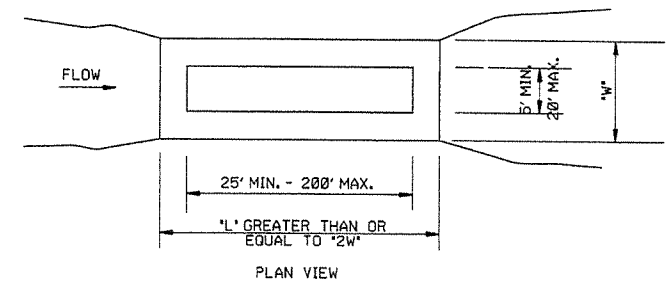


PLAN VIEW

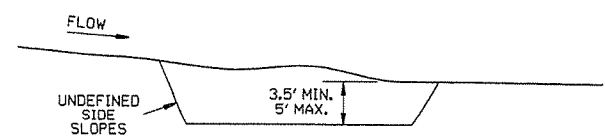


PROFILE VIEW

SLOPE DRAIN (E-12)



PLAN VIEW



PROFILE

SEDIMENT BASIN (E-14)

6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

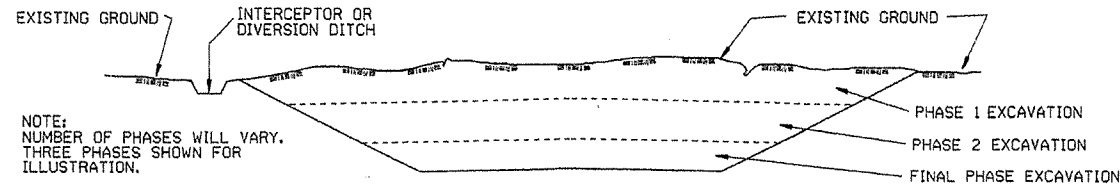
ARKANSAS STATE HIGHWAY COMMISSION
 TEMPORARY EROSION
 CONTROL DEVICES
 STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



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

GENERAL NOTE

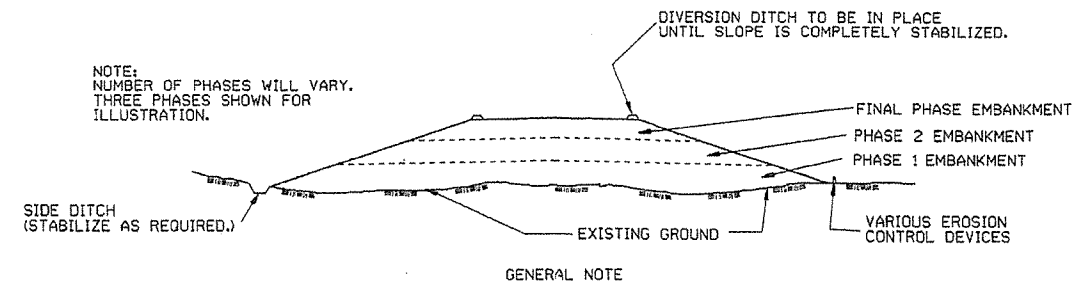
ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

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

104



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

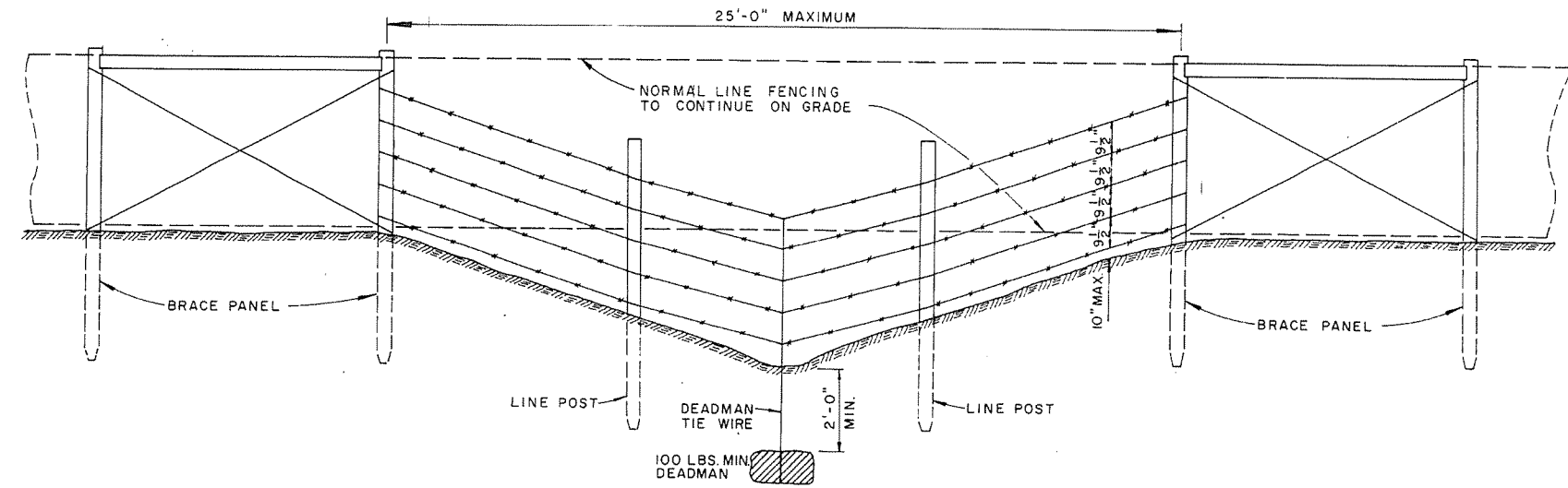
GENERAL NOTE

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.

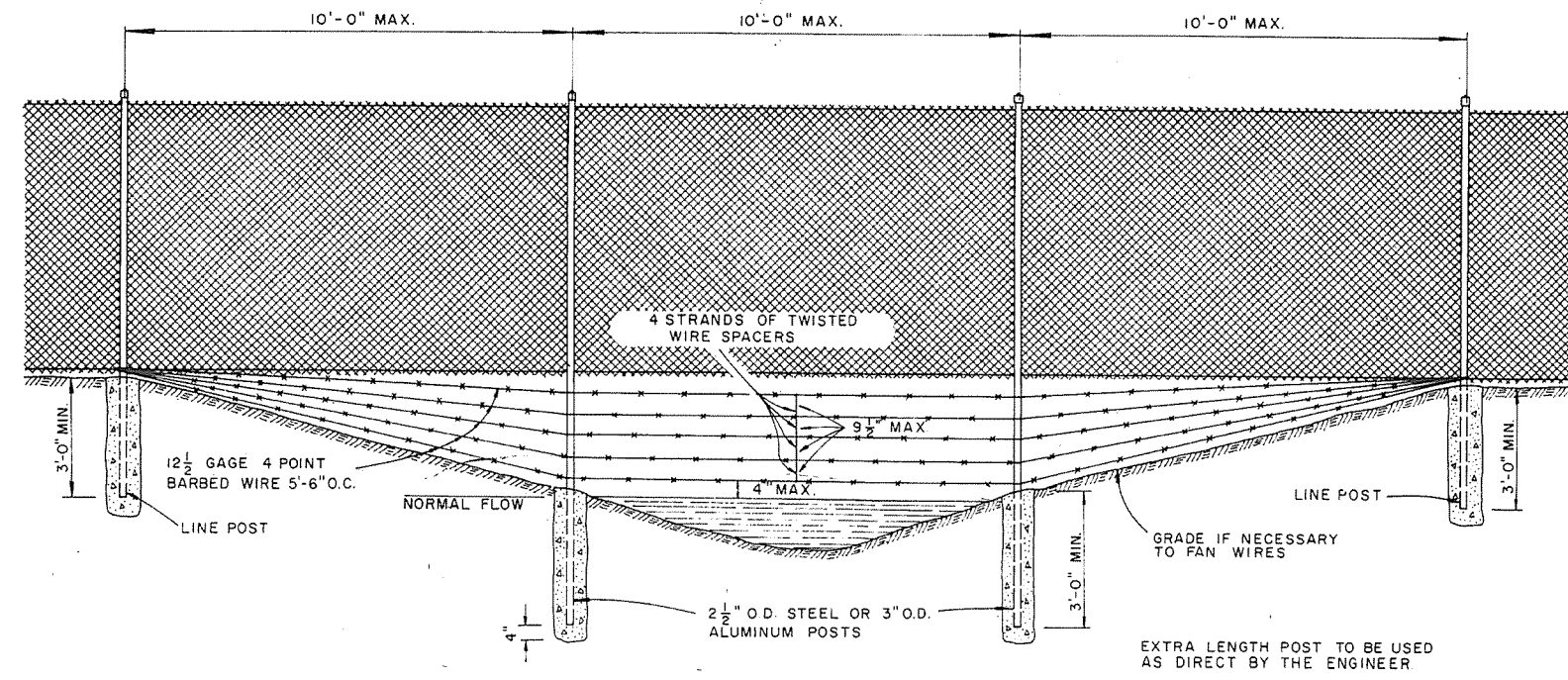
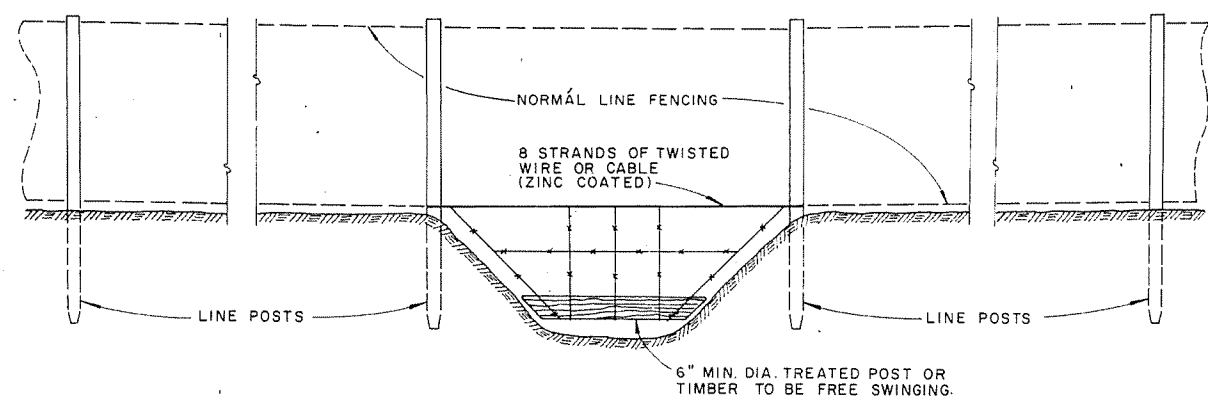
CONSTRUCTION SEQUENCE

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.

			ARKANSAS STATE HIGHWAY COMMISSION
			TEMPORARY EROSION CONTROL DEVICES
			STANDARD DRAWING TEC-3
11-03-94	CORRECTED SPELLING		
6-2-94	Drawn & Issued		6-2-94
DATE	REVISION		FILMED

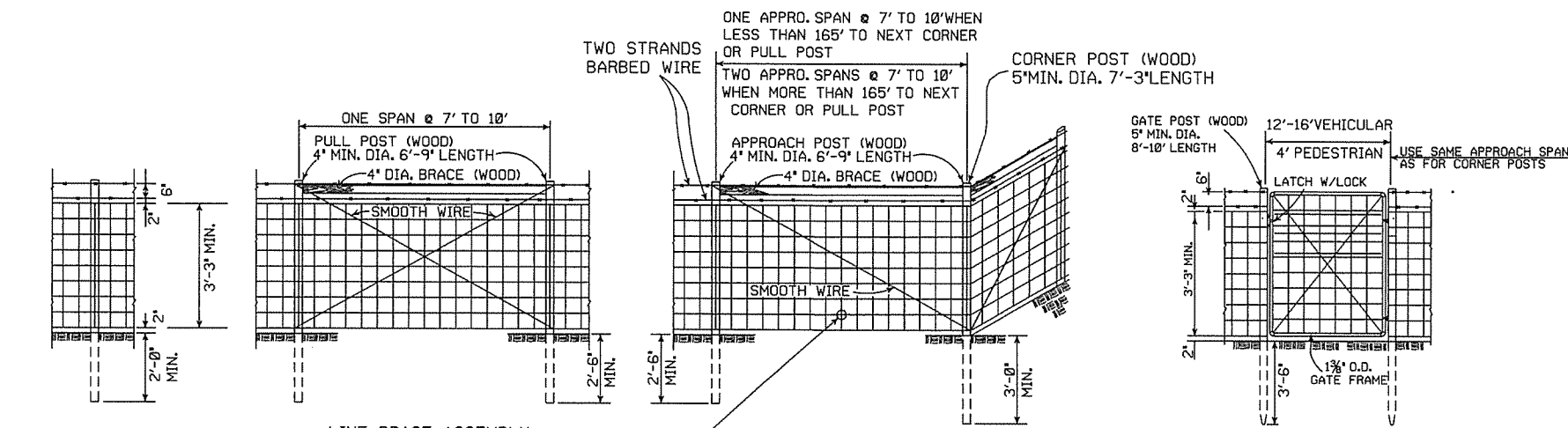


GENERAL NOTES:
 THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.
 WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.
 IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.
 PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.



ARKANSAS STATE HIGHWAY COMMISSION		
WIRE FENCE WATER GAPS		
STANDARD DRAWING		
4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED & REDRAWN	529-10-2-72
DATE	REVISION	DATE FILMD.

WF-2

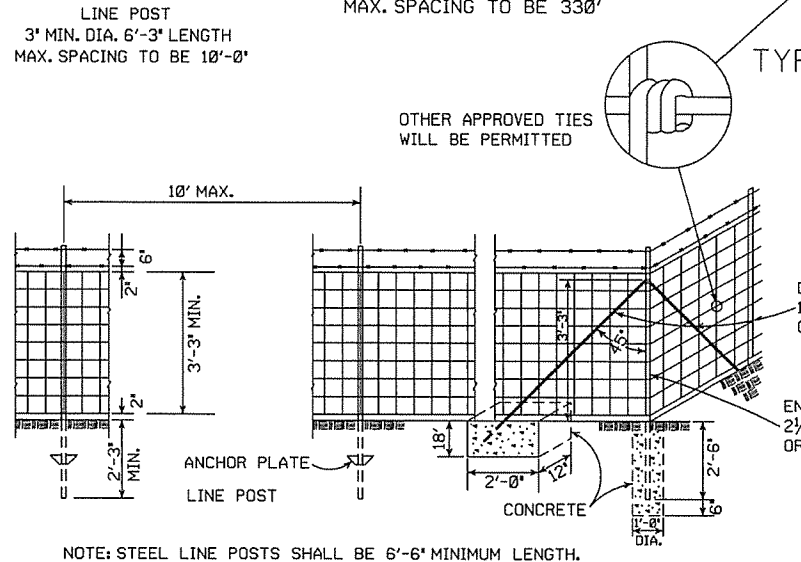


GENERAL NOTES:
 STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.
 AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1' TO +2'. TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

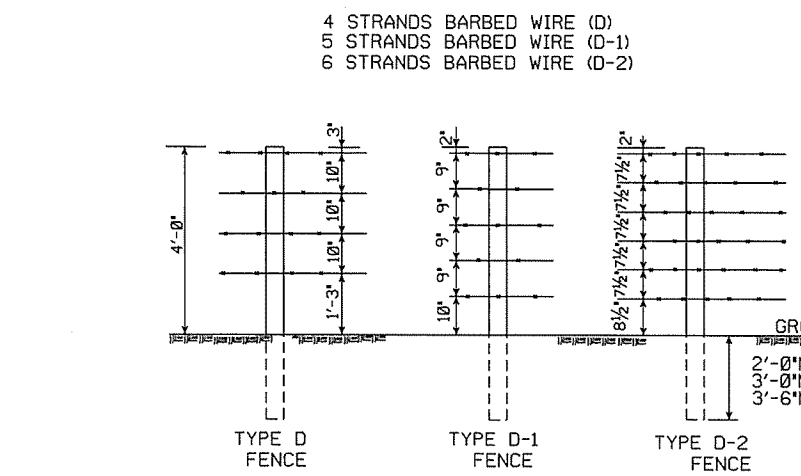
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

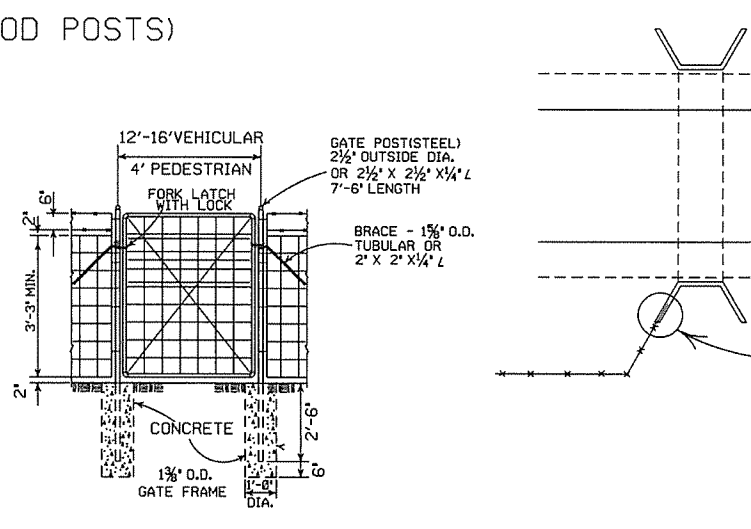
AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.



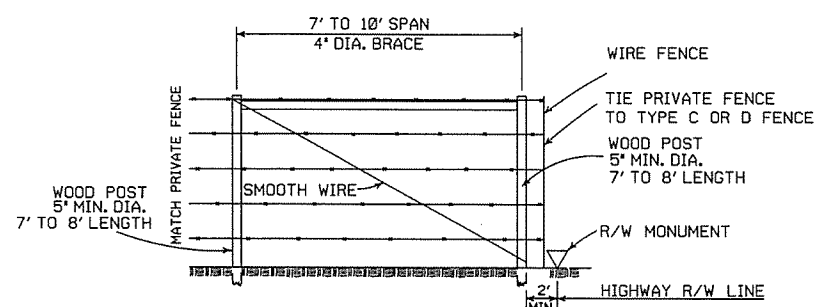
TYPE C FENCE (STEEL POSTS)



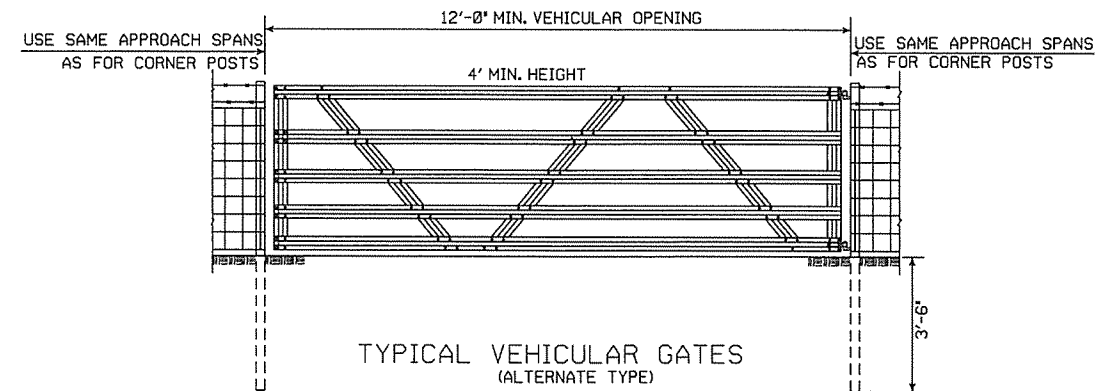
NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION
 WHERE EXISTING FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN IN TYPE C FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.



OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER. THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

8-22-82	REVISED GENERAL NOTES	
10-10-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

**WIRE FENCE
 TYPE C AND D**

STANDARD DRAWING WF-4

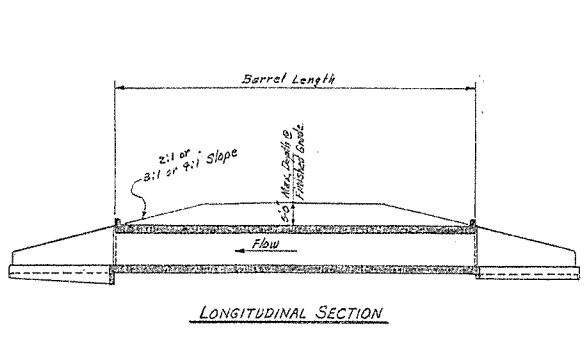
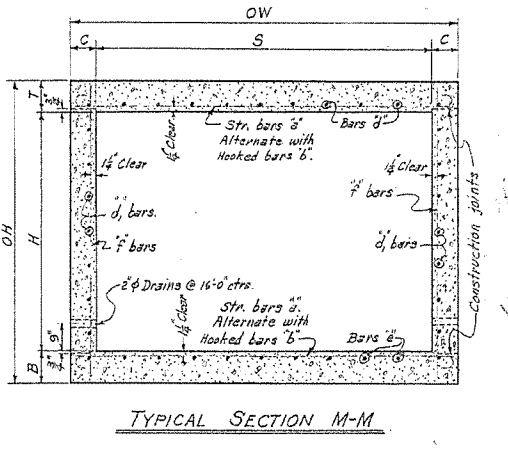
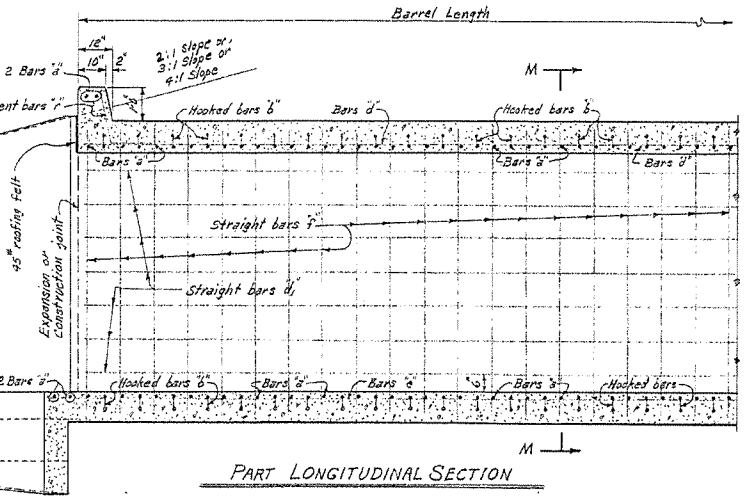
FED. ROAD NO.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.			108	
JOB NO.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	a bars				b bars				c bars				d bars				e bars				f bars					
			STRAIGHT				BENT - See Diagram below.				STRAIGHT				STRAIGHT				STRAIGHT				STRAIGHT					
			SIZE	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	NUMBER REQ'D	3:1	4:1	LENGTH	X	SIZE	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	NUMBER REQ'D	3:1	4:1	LENGTH	SIZE	NUMBER REQ'D	3:1	4:1	LENGTH
0'-0" TO 5'-0" MAXIMUM	1 @ 10'	3'	120	120	4'-3"	110	110	5'-10"	4'-8"	6	6	12	4	120	120	2'-11"	120	120	3'-11"	120	120	4'-10"	120	120	5'-11"	120	120	6'-10"
			120	120	4'-3"	110	110	5'-10"	4'-8"	6	6	12	4	120	120	2'-11"	120	120	3'-11"	120	120	4'-10"	120	120	5'-11"	120	120	6'-10"
			120	120	4'-3"	110	110	5'-10"	4'-8"	6	6	12	4	120	120	2'-11"	120	120	3'-11"	120	120	4'-10"	120	120	5'-11"	120	120	6'-10"
			120	120	4'-3"	110	110	5'-10"	4'-8"	6	6	12	4	120	120	2'-11"	120	120	3'-11"	120	120	4'-10"	120	120	5'-11"	120	120	6'-10"
	1 @ 10'	4'	120	120	5'-9"	110	110	6'-10"	5'-8"	7	7	12	6	120	120	4'-5"	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"
			120	120	5'-9"	110	110	6'-10"	5'-8"	7	7	12	6	120	120	4'-5"	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"
			120	120	5'-9"	110	110	6'-10"	5'-8"	7	7	12	6	120	120	4'-5"	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"
			120	120	5'-9"	110	110	6'-10"	5'-8"	7	7	12	6	120	120	4'-5"	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"
	1 @ 10'	5'	120	120	6'-9"	110	110	7'-10"	6'-8"	8	8	12	7	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"	120	120	9'-5"
			120	120	6'-9"	110	110	7'-10"	6'-8"	8	8	12	7	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"	120	120	9'-5"
			120	120	6'-9"	110	110	7'-10"	6'-8"	8	8	12	7	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"	120	120	9'-5"
			120	120	6'-9"	110	110	7'-10"	6'-8"	8	8	12	7	120	120	5'-5"	120	120	6'-5"	120	120	7'-5"	120	120	8'-5"	120	120	9'-5"

DIMENSIONS										QUANTITIES						
MAX. DESIGN DEPTH OF COVER	D	S	H	BARREL DIMENSIONS				UNIT QUANTITIES								
				HA	OW	T	C	B	OH	CUYD.	LB.	LB.	LB.			
5'-0"	1 @ 10'	4'	2'	8	5'-0"	6'	3'-1 1/2"	0.282	41.99	17.95	66.33					
			3	12	5'-0"	6'	4'-1 1/4"	0.319	44.16	19.62	66.33					
			4	16	5'-0"	6'	5'-1 1/2"	0.354	46.83	21.29	66.33					
			5	20	5'-0"	6'	6'-1 1/2"	0.394	49.50	22.94	66.33					
	1 @ 10'	5'	3'	15	6'-0"	7'	7'-1 1/4"	0.474	52.96	24.63	67.75					
			4	20	6'-0"	7'	8'-1 1/4"	0.528	55.55	26.19	101.27					
			5	25	6'-0"	7'	9'-1 1/4"	0.584	60.30	28.86	101.27					
			6	30	6'-0"	7'	10'-1 1/4"	0.642	64.99	31.72	101.27					
	1 @ 10'	6'	4'	20	7'-0"	8'	11'-1 1/4"	0.718	67.63	33.87	104.27					
			5	25	7'-0"	8'	12'-1 1/4"	0.794	72.94	36.76	118.94					
			6	30	7'-0"	8'	13'-1 1/4"	0.872	78.98	39.74	118.94					
			7	35	7'-0"	8'	14'-1 1/4"	0.952	84.90	42.81	118.94					

Note: For details of wings and bar laps, see Drawing Nos. W-X002-1 or W-X003-1 or W-X004-1 or W-X004-2.



GENERAL NOTES:-
 CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
 All exposed corners to have 3/8" chamfers.
 REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
 BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD
 H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 25,000 Lb. Axles @ 9'-0" ctrs.
 UNIT STRESSES:-
 Class S Concrete (n=10) 1200 psi
 Reinforcing Steel 20,000 psi

Note: This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing No. W-X002-1 or W-X002-2.

CLASS S CONCRETE

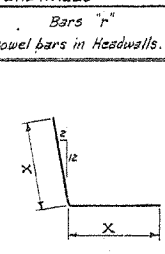
ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4, 5, 6, 7, 8, 9, 10, 11, 12 SPANS 3:1 OR 4:1 SLOPES
 SINGLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-100X-0

Designed By: W.C.H. 1-28-63. Checked By: T.M.S. 5-8-63.
 Drawn By: W.C.H. 2-8-63. Checked By: T.M.S. 5-24-63.
 Quantities By: W.C.H. 2-12-63.

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS	BENDING DIAGRAM
#6	3"	5"	1'-2"	
#7	3 1/2"	5 3/4"	1'-4"	

NOTE:- Dimensions are to centers of bars.

SPAN	SIZE	SPACING	NUMBER REQ'D	LENGTH	X
4'	#4	11"	12	2'-6"	1'-3"
5'	#4	11"	14	2'-7"	1'-3 1/2"
6'	#4	11"	16	2'-8"	1'-4"
7'	#4	11"	18	2'-9"	1'-4 1/2"
8'	#4	11 1/2"	20	2'-11"	1'-5 1/2"
9'	#4	11 1/2"	22	3'-0"	1'-6"
10'	#4	11 1/2"	24	3'-1"	1'-6 1/2"
11'	#4	12"	26	3'-2"	1'-7"
12'	#4	12"	28	3'-3"	1'-7 1/2"



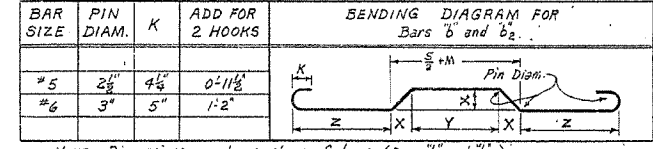
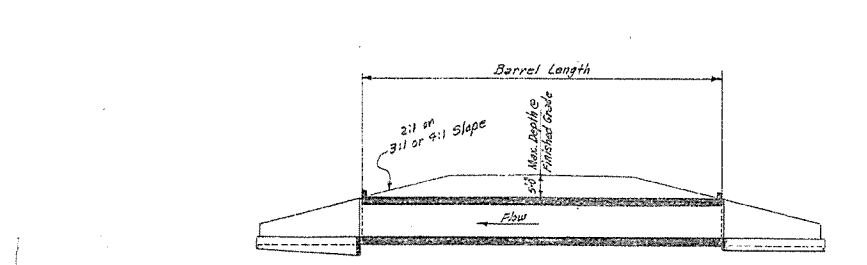
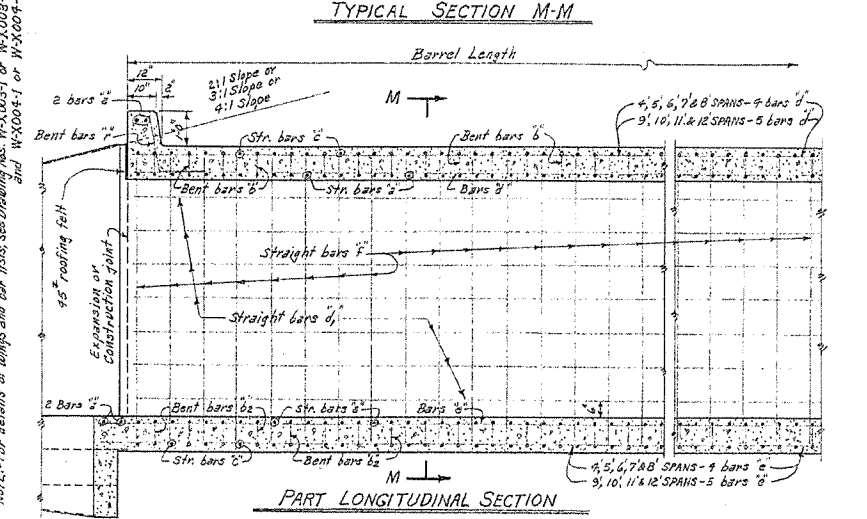
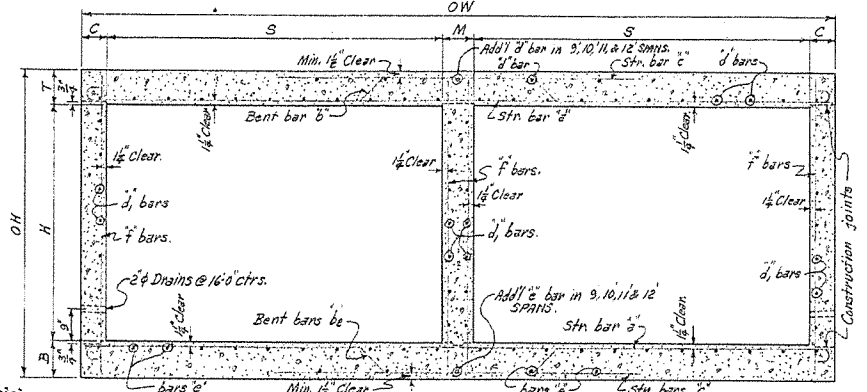
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			109	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH																				
			a bars			b bars			b2 bars			c bars			d bars			e bars			f bars		
			SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D	SIZE	SPACING	NUMBER REQ'D
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	

DIMENSIONS QUANTITIES

MAX. DESIGN DEPTH OF COVER	BARREL DIMENSIONS						UNIT QUANTITIES							
	D	S	H	A	OW	T	C	M	B	OH	CLASS S CONC. PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL
12	12	12	12	12	12	12	12	12	12	12	12	12	12	12



DOWEL BARS FOR TWO HEADWALLS

SPANS @	SIZE	SPACING	No. REQ'D	LENGTH	X
4'	#4	12"	20	2'-5"	1'-2 1/2"
5'	#4	12"	24	2'-6"	1'-3"
6'	#4	12"	28	2'-7"	1'-3 1/2"
7'	#4	12"	32	2'-8"	1'-4"
8'	#4	12"	36	2'-9"	1'-4 1/2"
9'	#4	12"	40	2'-10"	1'-5"
10'	#4	12"	46	2'-11"	1'-5 1/2"
11'	#4	12"	50	3'-0"	1'-6"
12'	#4	12"	54	3'-1"	1'-6 1/2"

GENERAL NOTES:-
 CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
 All exposed corners to have 3/4 chamfers.
 REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
 BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 20'-0". Lap longitudinal bars 50 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls, division walls and slabs shall be only where shown on plans.
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD
 H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 24,000 Lb. Axles @ 4'-0" ctrs.

UNIT STRESSES:-
 Class S Concrete (n=10) 1200 3/4
 Reinforcing Steel 20,000 3/4

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4, 5, 6, 7, 8, 9, 10, 11 & 12 SPANS 3:1 OR 4:1 SLOPES
 DOUBLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-200X-0.

Checked by: JMS - 5-14-63
 Checked by: JMS - 5-29-63
 Checked by: JMS - 5-29-63
 Designed by: W.C.H. 1-17-63
 Drawn by: W.C.H. 2-15-63
 Quantities by: W.C.H. 2-19-63.

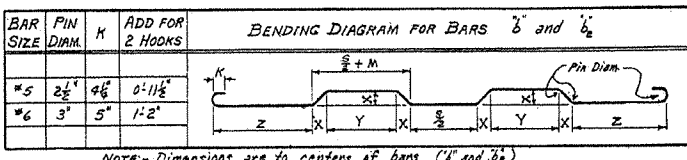
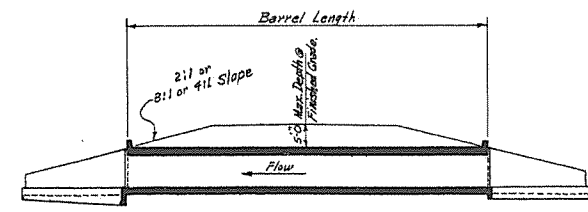
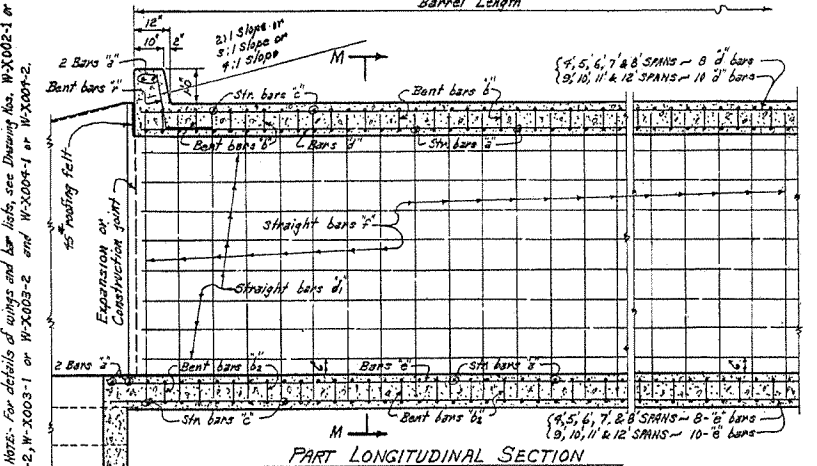
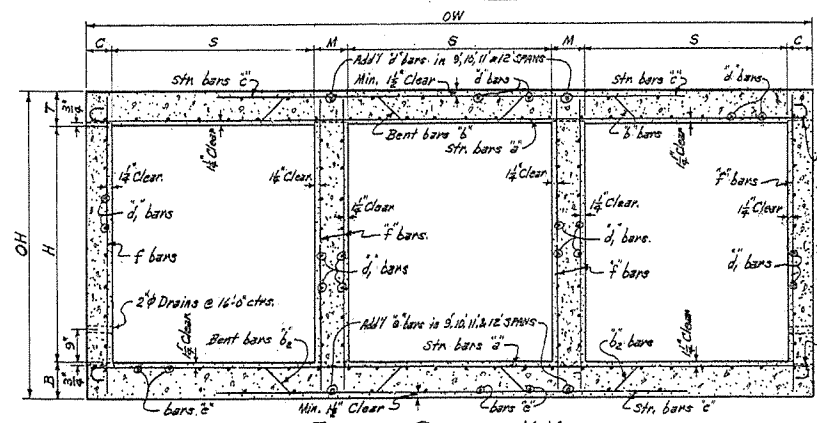
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			110	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	5 bars		6 bars			6 1/2 bars			7 bars			7 1/2 bars			8 bars																				
			STRAIGHT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT	BENT																		
D	S	H	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z
3	12	12	12	12	14	14	14	14	14	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

DIMENSIONS QUANTITIES

MAX. DESIGN DEPTH OF COVER	CLEAR SPANS	CLEAR HEIGHT	BARREL DIMENSIONS						UNIT QUANTITIES				
			SPR. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF DIVISION WALLS	THICKNESS OF BOTTOM SLAB	CLASS S CONC. PER LIN. FT. OF BARREL	PER LAP	REINFORCING STEEL		
D	S	H	A	OW	T	C	M	B	OH	CU.YD.	LB.	LB.	LB.
3	12	12	24	14'-4"	6"	8"	6"	6"	3'-0"	0.726	137.76	66.63	195.33



DOWEL BARS FOR TWO HEADWALLS

SPANS @	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	5/8"	12"	30	2'-5"	1'-2 1/2"
5'	5/8"	12"	36	2'-6"	1'-3"
6'	5/8"	12"	42	2'-7"	1'-3 1/2"
7'	5/8"	12"	48	2'-8"	1'-4"
8'	5/8"	12"	54	2'-9"	1'-4 1/2"
9'	5/8"	12"	60	2'-10"	1'-5"
10'	5/8"	12"	66	2'-11"	1'-5 1/2"
11'	5/8"	12"	72	3'-0"	1'-6"
12'	5/8"	12"	78	3'-1"	1'-6 1/2"

GENERAL NOTES:-
 CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
 All exposed corners to have 1/4 chamfers.
 REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
 BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 35'-0" length of barrel over 35'-0". Lap longitudinal bars 30 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing No. W-X002-1 or W-X002-2.

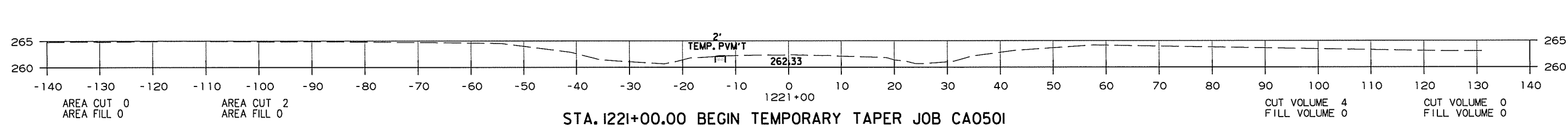
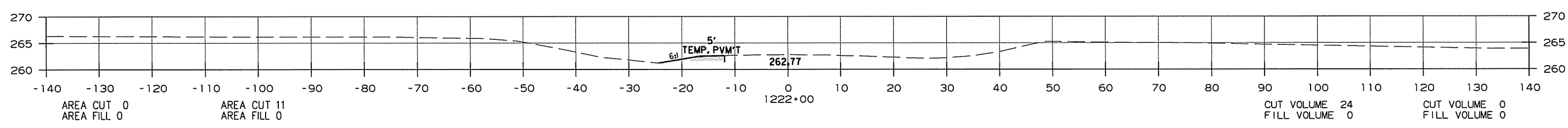
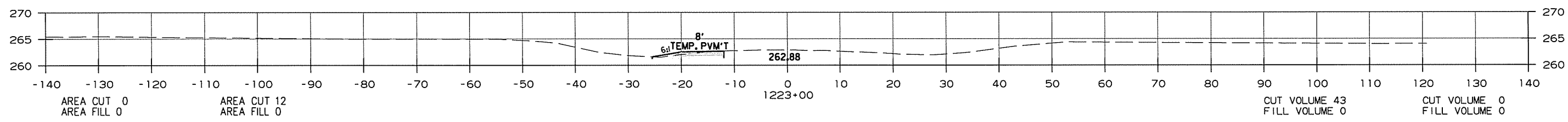
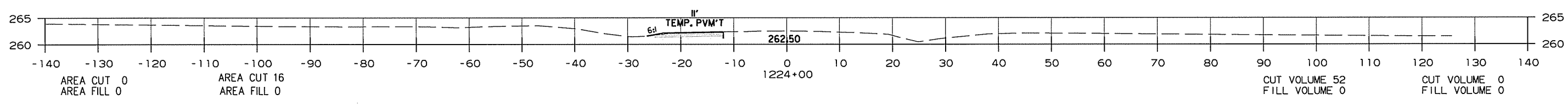
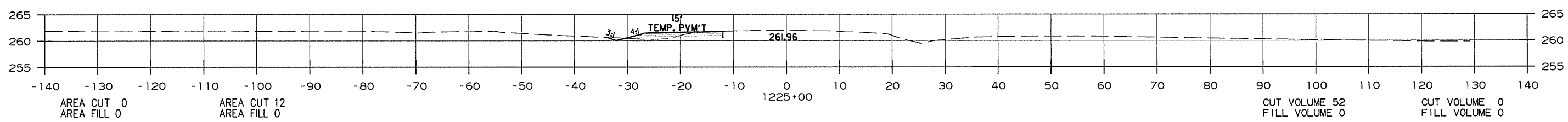
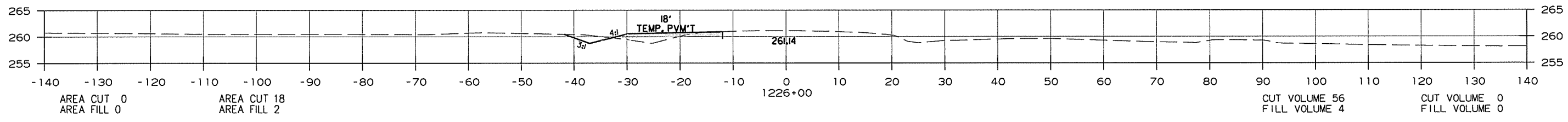
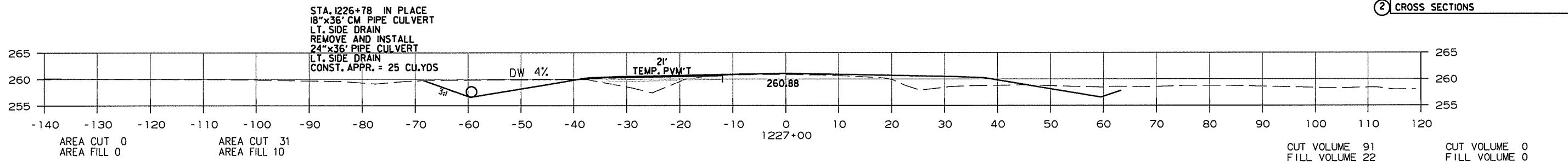
DESIGN LIVE LOAD
 H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 24,000 Lb. Axles at 4'-0" cts.
 UNIT STRESSES:-
 Class S Concrete (n=10) 1200 psi
 Reinforcing Steel 24000 psi

CLASS S CONCRETE
 ARKANSAS STATE HIGHWAY COMMISSION
 DETAILS OF STANDARD BARREL SECTIONS
 FOR
 REINFORCED CONCRETE BOX CULVERTS
 4, 5, 6, 7, 8, 9, 10, 11, 12 SPANS 3:1 OR 4:1 SLOPES
 TRIPLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-300X-O

Checked By: FBMS 5-17-63
 Checked By: FBMS 5-24-63
 Checked By: FBMS 5-24-63
 Designed By: W.C.H. 1-22-63
 Drawn By: W.C.H. 2-20-63
 Quantities By: W.C.H. 3-9-63

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.	CA0501		III	151

2 CROSS SECTIONS



STA. 1221+00.00 BEGIN TEMPORARY TAPER JOB CA0501

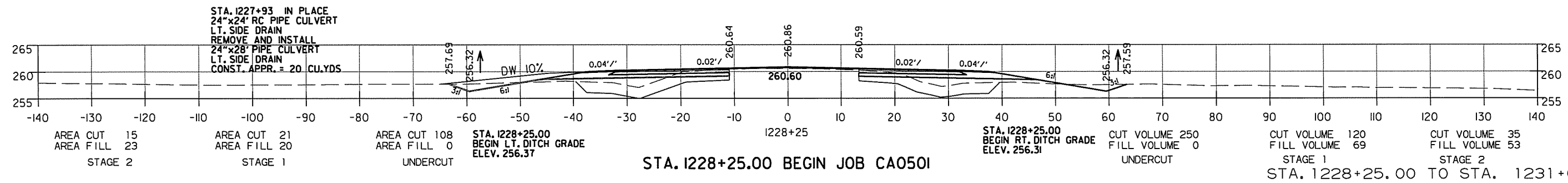
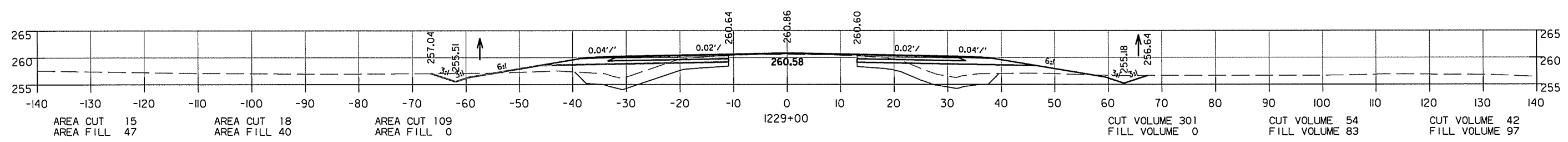
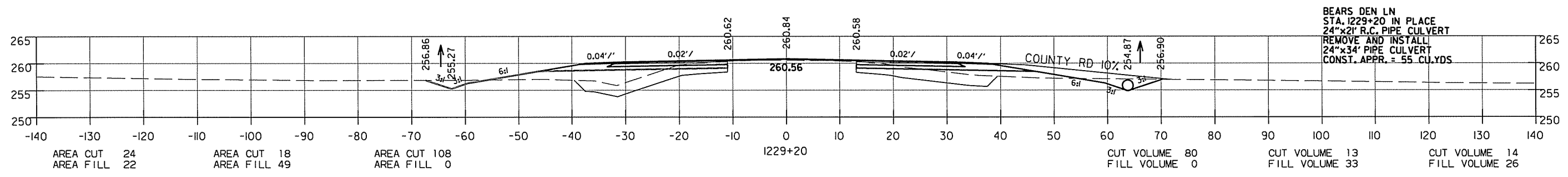
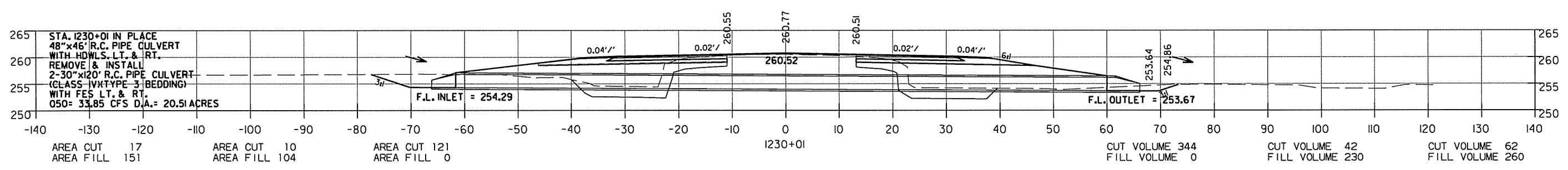
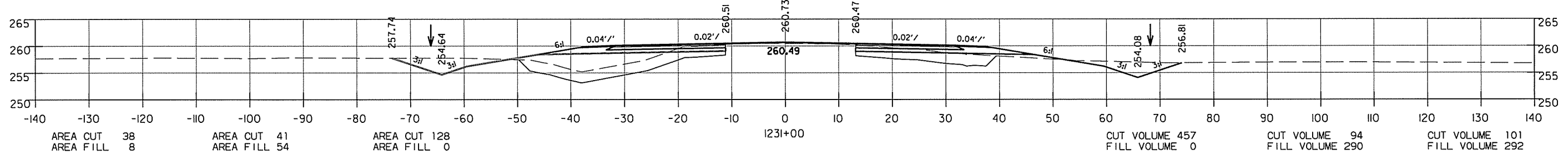
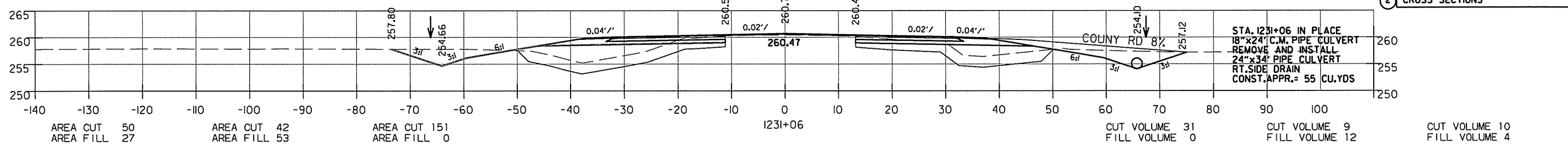
STAGE 1
STA. 1221+00.00 TO STA. 1227+00.00

STAGE 2

10/13/2015

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.	CA0501		112	151

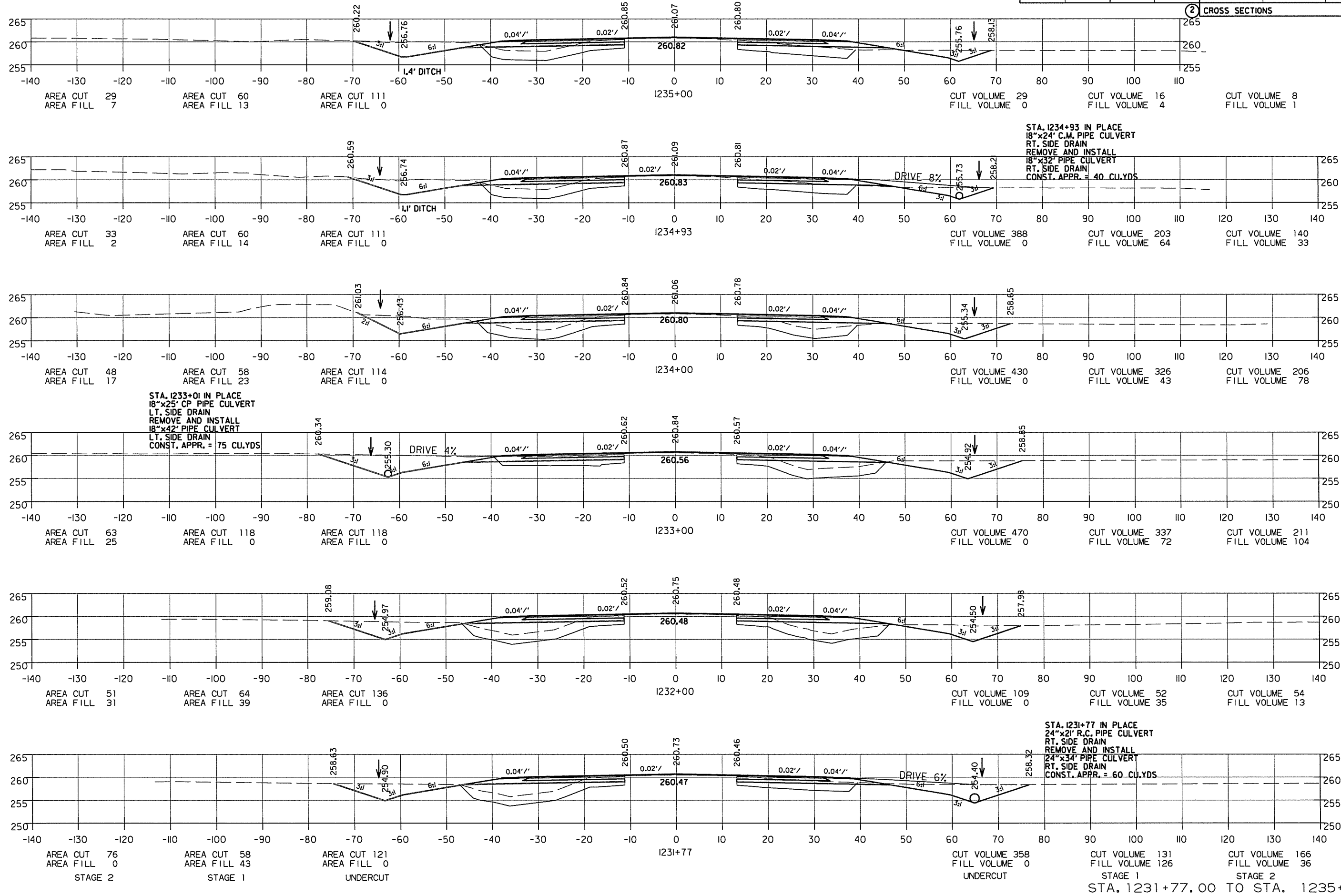
② CROSS SECTIONS



10/13/2015

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. CA0501	113	151

② CROSS SECTIONS



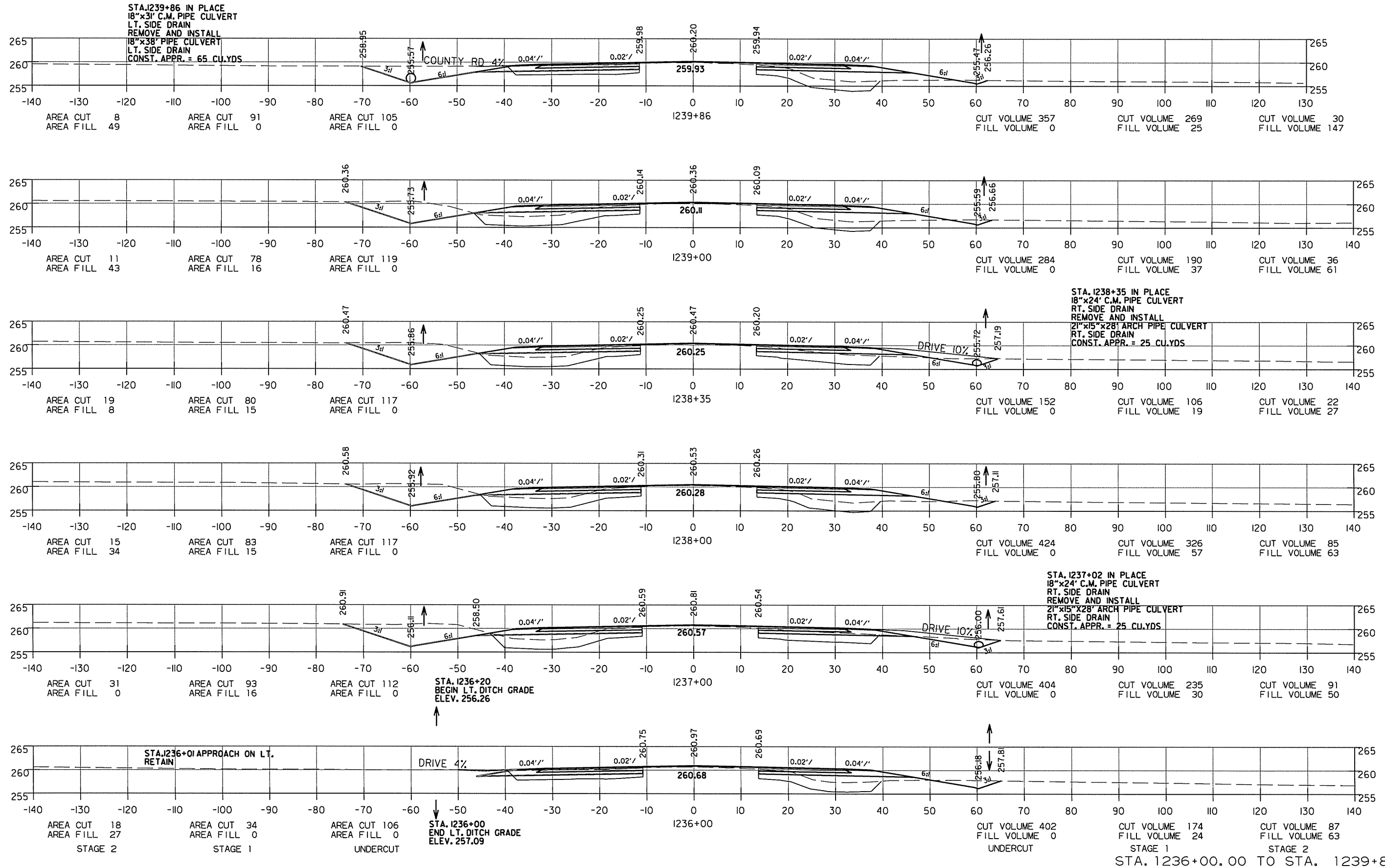
STA. 1234+93 IN PLACE
 18"x24" C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x32" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 40 CU.YDS

STA. 1233+01 IN PLACE
 18"x25" CP PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x42" PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. = 75 CU.YDS

STA. 1231+77 IN PLACE
 24"x21" R.C. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 24"x34" PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 60 CU.YDS

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. CA0501	114	151

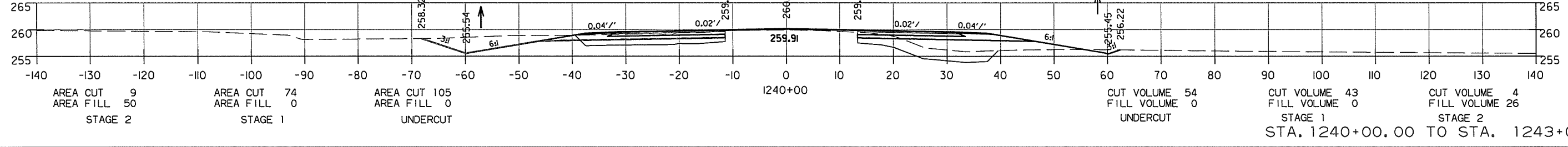
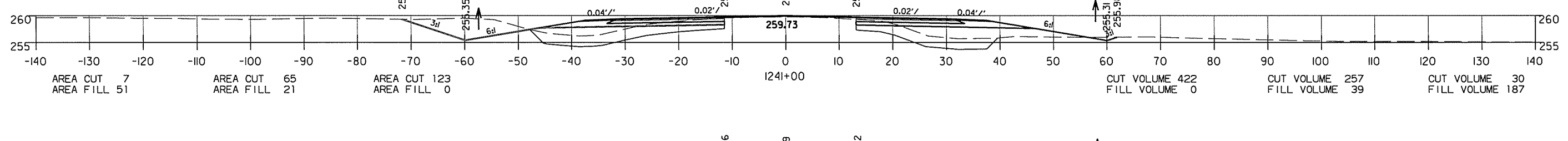
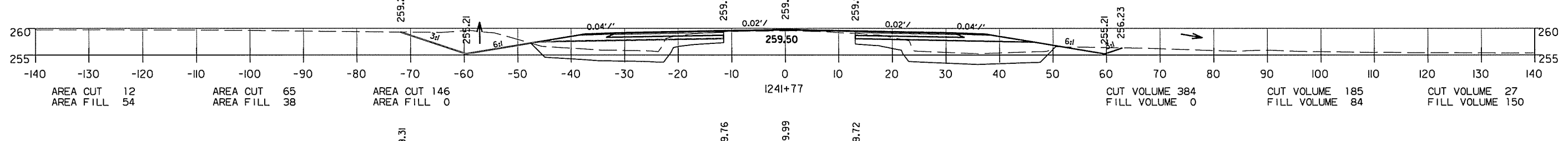
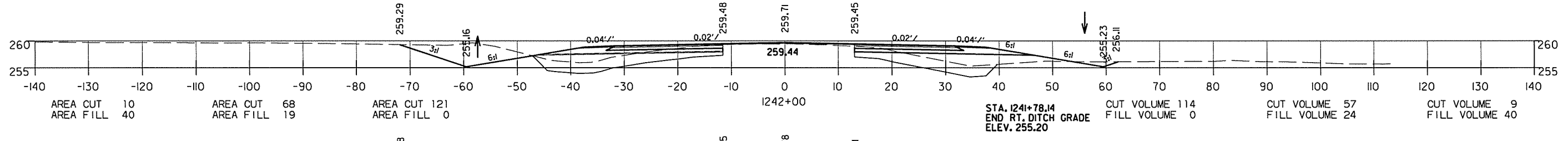
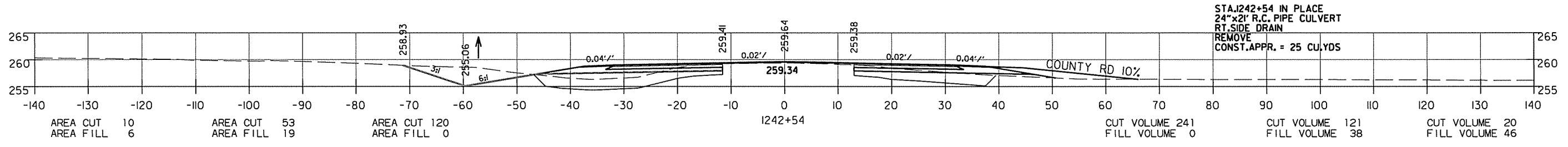
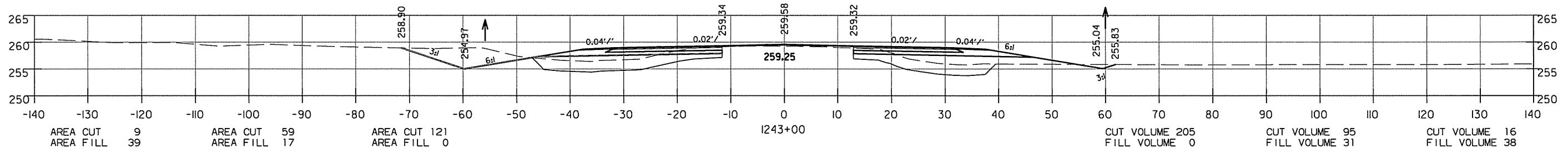
2 CROSS SECTIONS



10/13/2015

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. CA0501	115	151

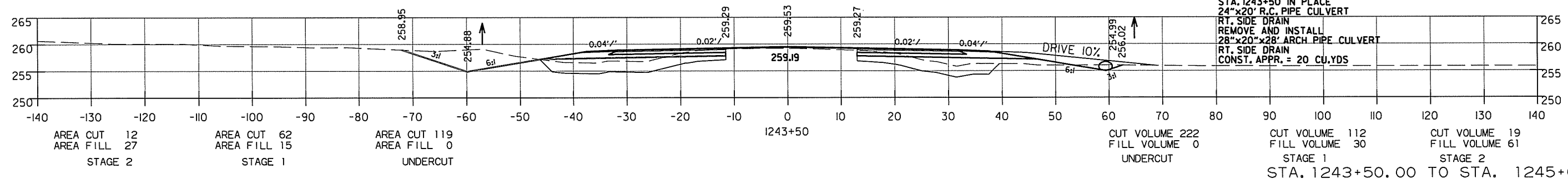
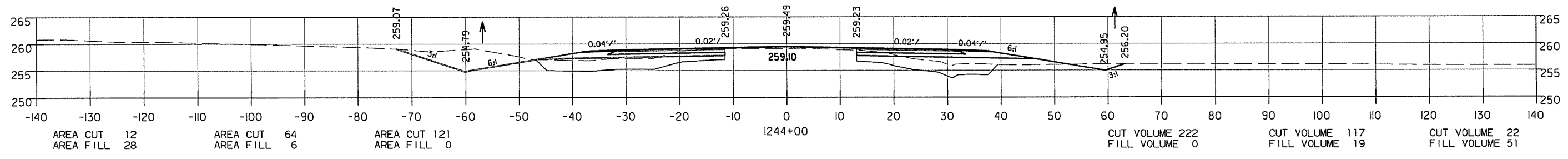
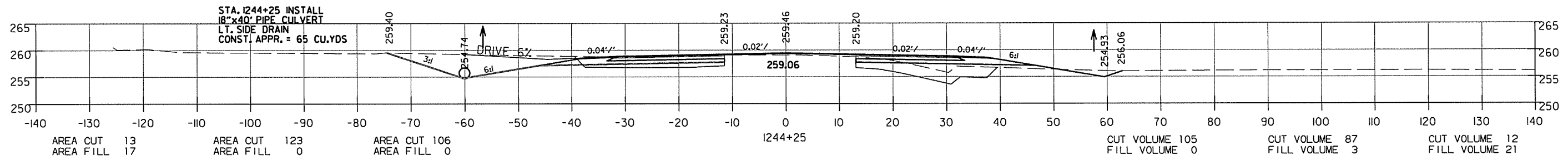
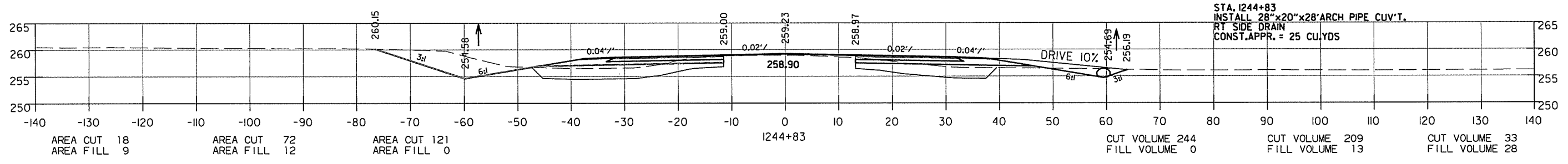
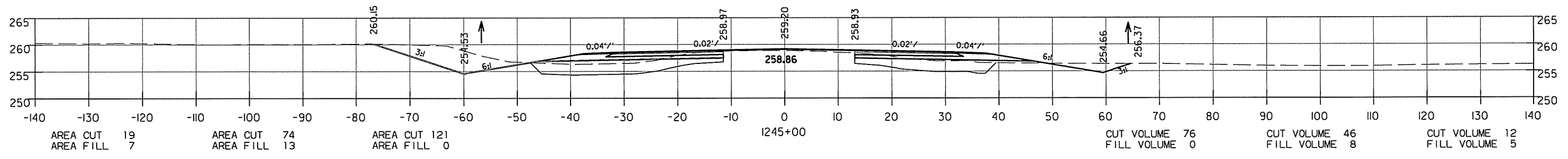
2 CROSS SECTIONS



10/13/2015

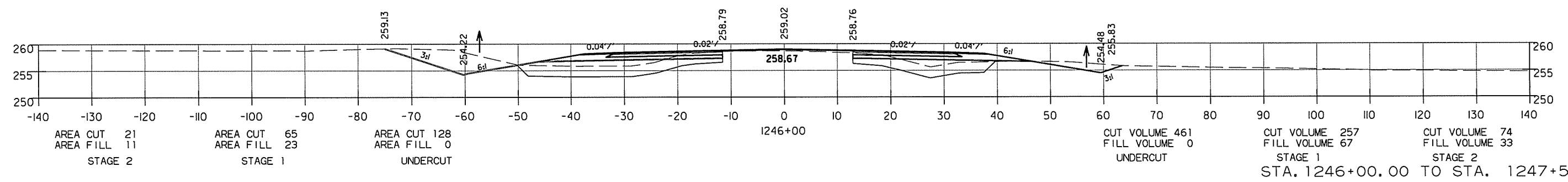
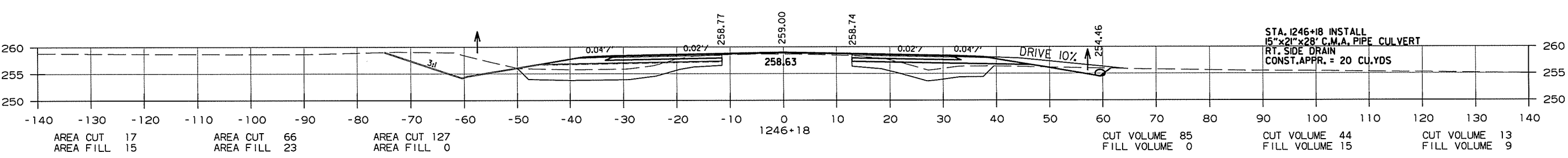
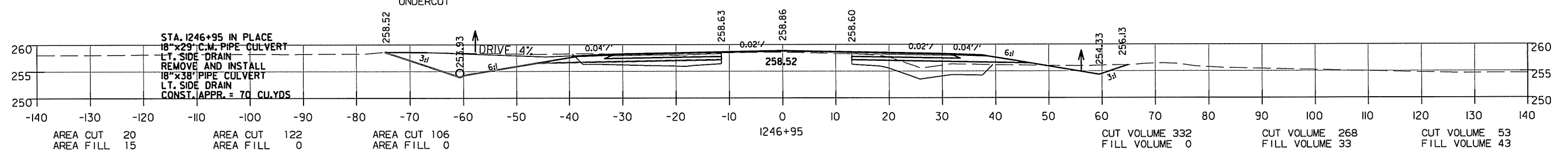
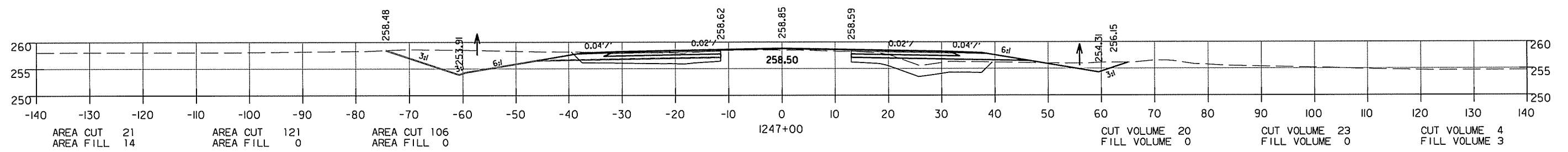
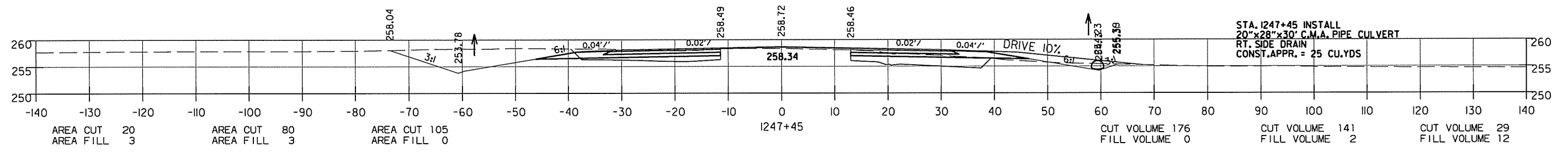
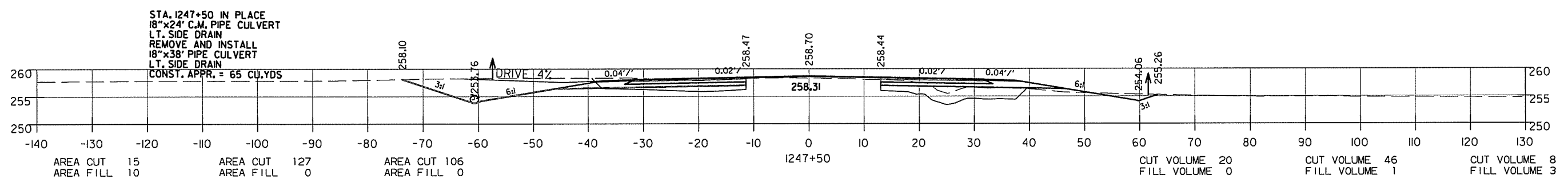
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501		116	151

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.	CA0501		117	151

2 CROSS SECTIONS

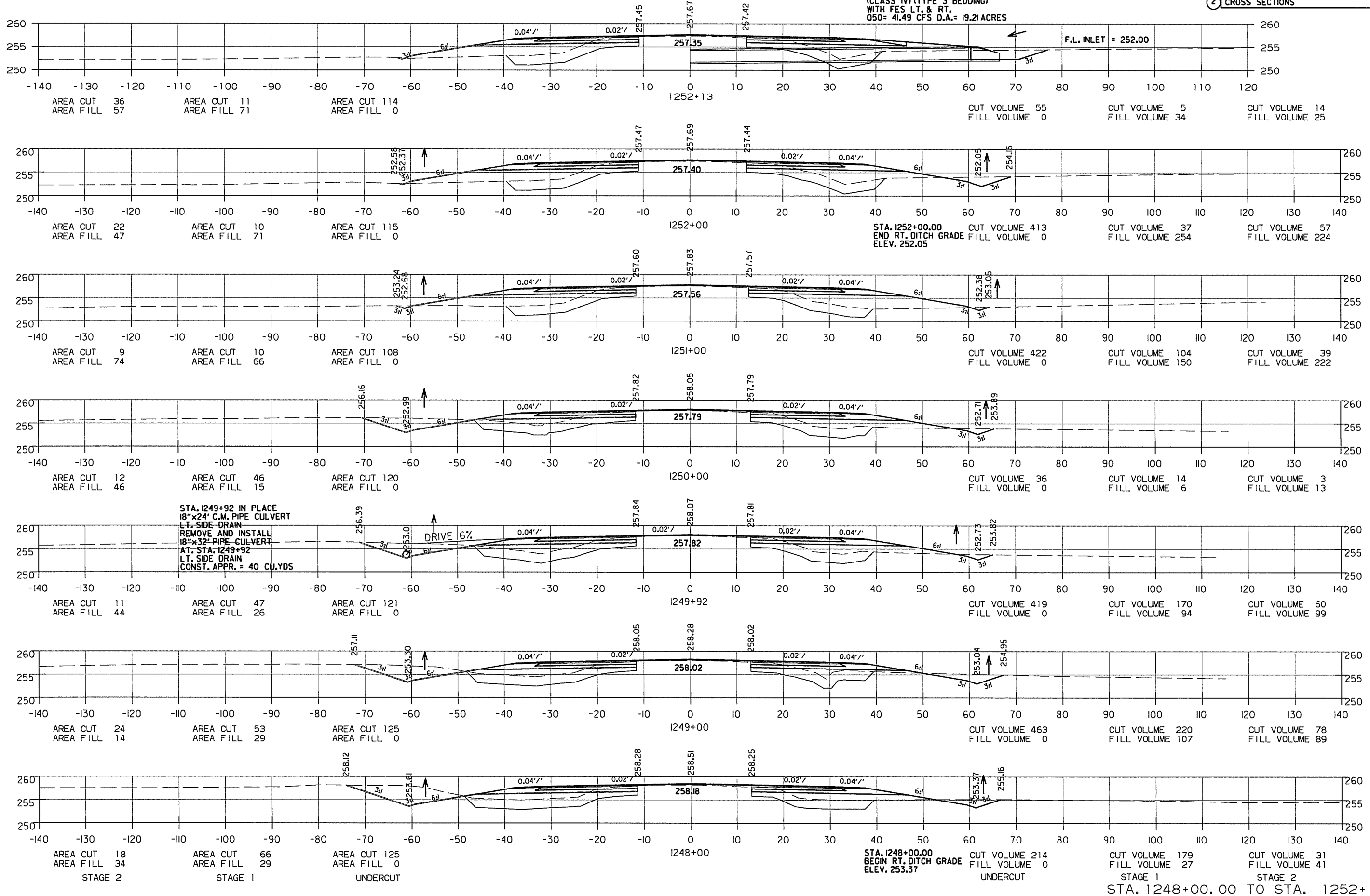


10/13/2015

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. CA0501	118	151

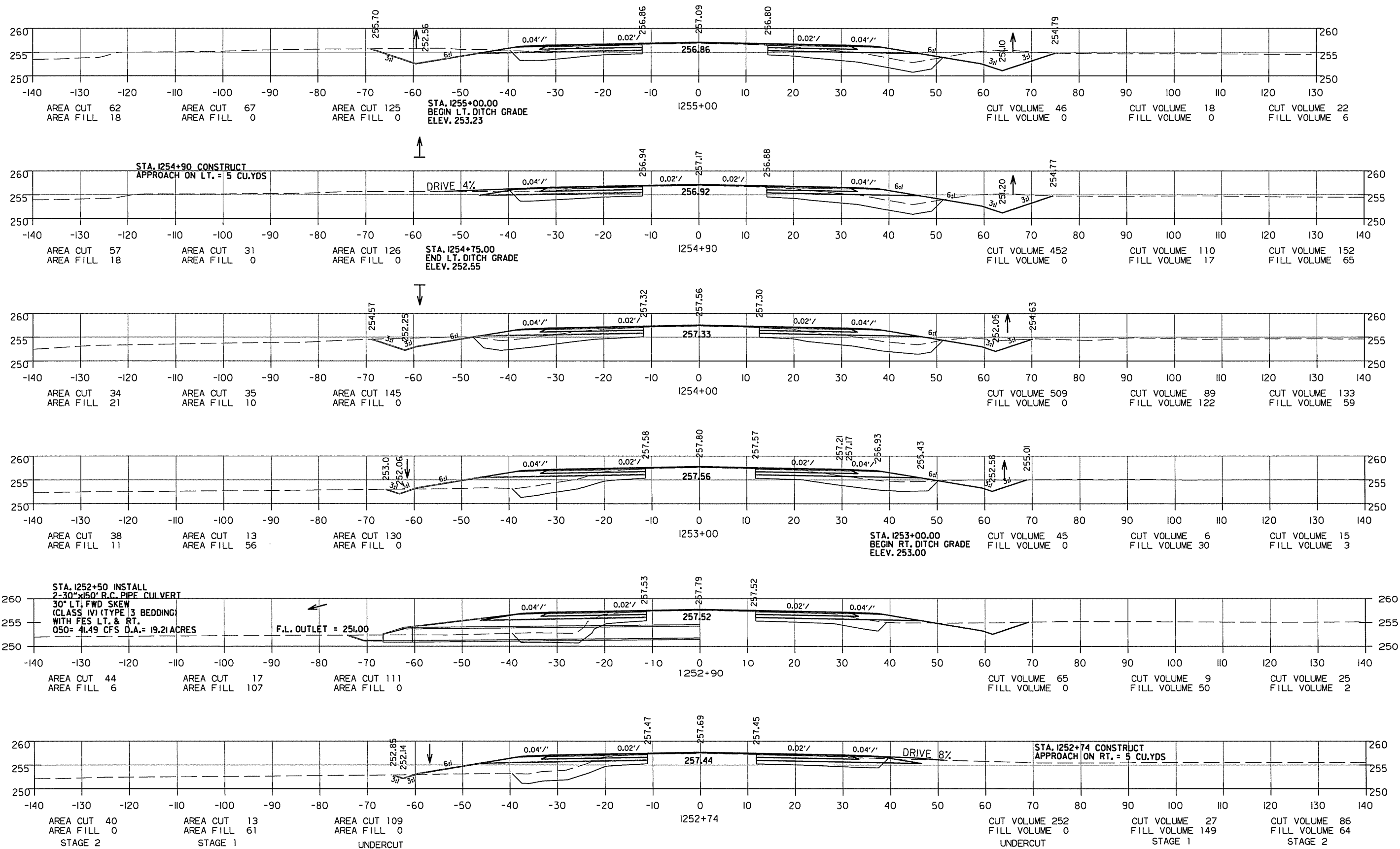
STA. 1252+50 INSTALL
 2-30"x150' R.C. PIPE CULVERT
 30° LT. FWD SKEW
 (CLASS IV) (TYPE 3 BEDDING)
 WITH FES LT. & RT.
 Q50= 41.49 CFS D.A.= 19.21 ACRES

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. CA0501	119	151

2 CROSS SECTIONS

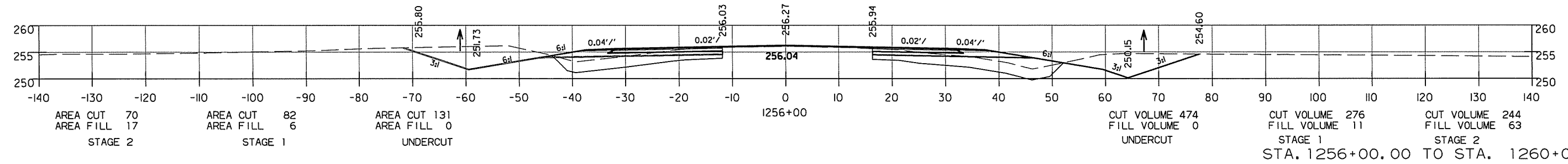
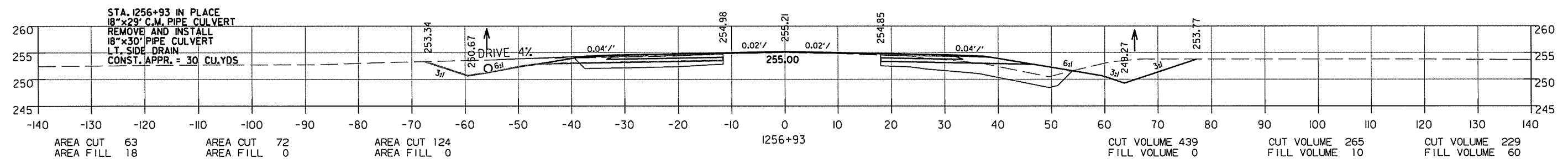
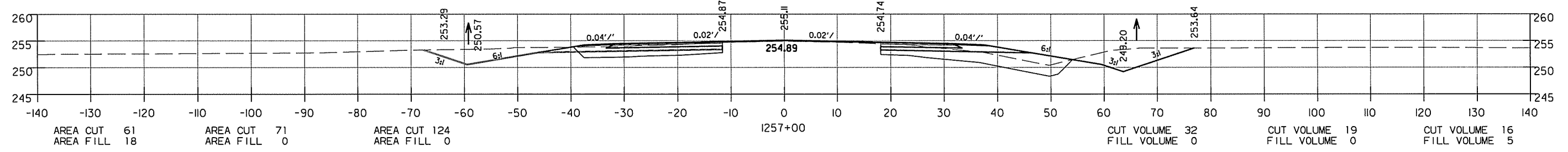
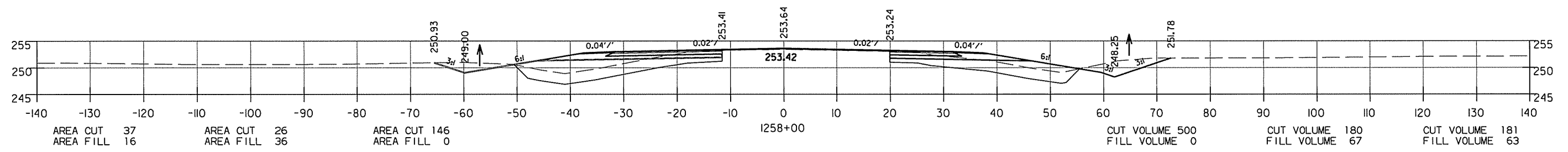
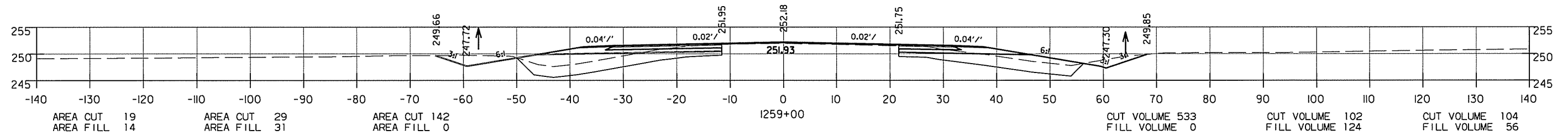
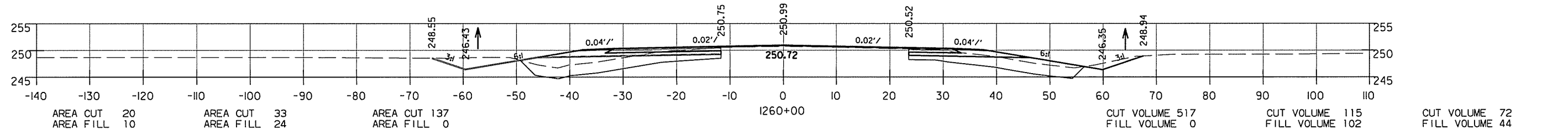


10/13/2015

STA. 1252+74.00 TO STA. 1255+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. CA0501	120	151

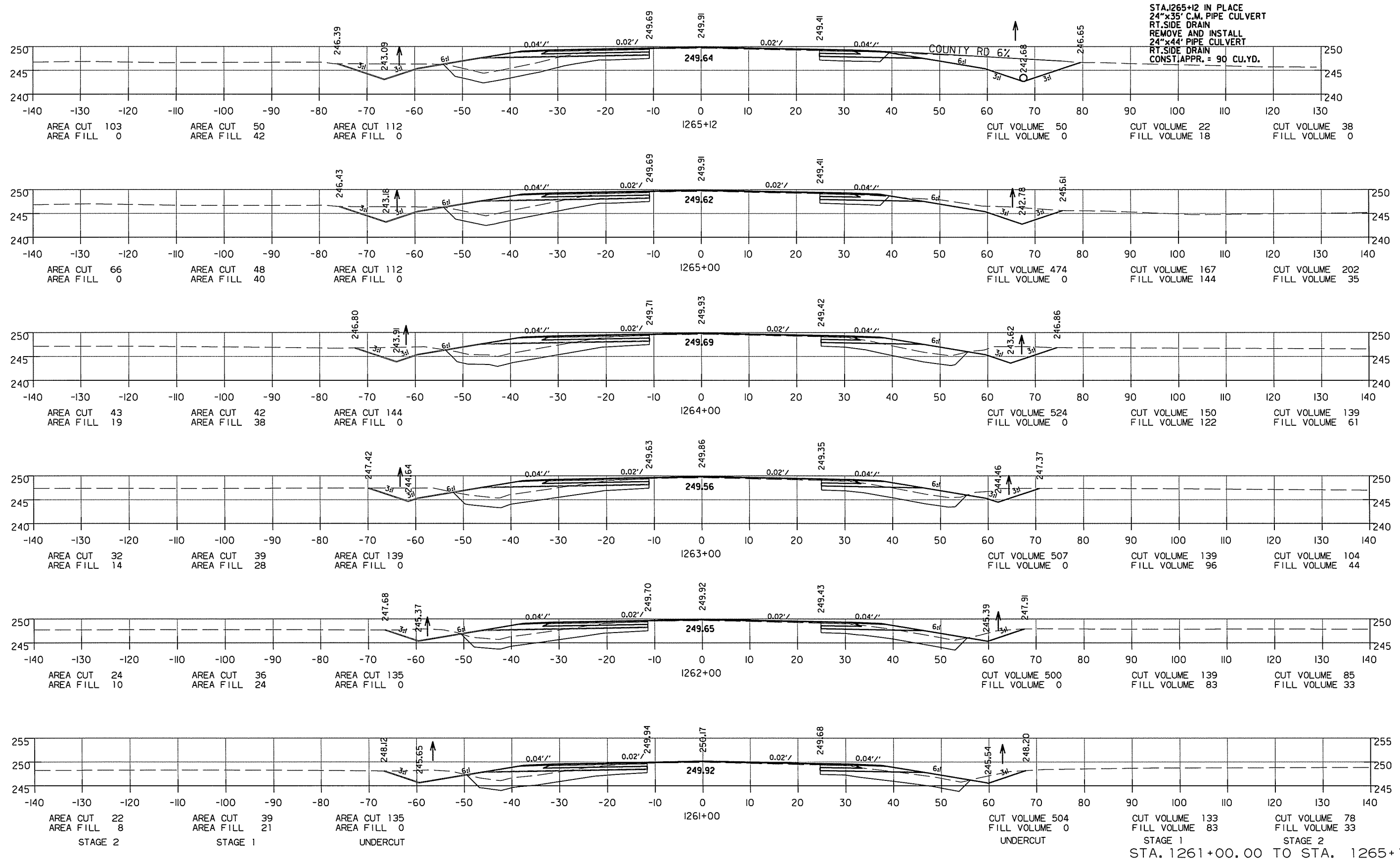
2 CROSS SECTIONS



STA. 1256+00.00 TO STA. 1260+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. CA0501	121	151

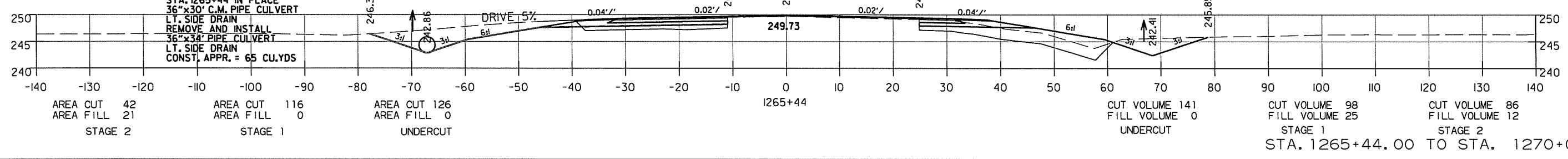
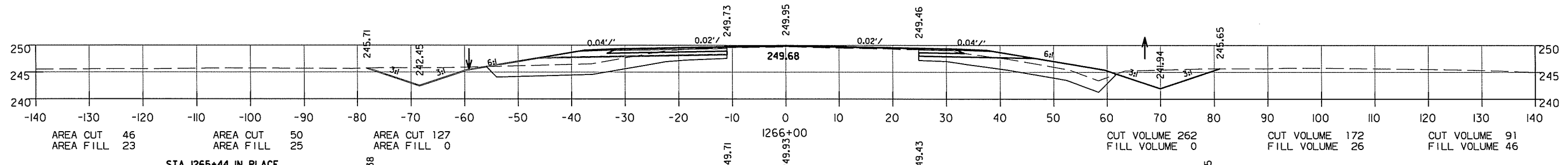
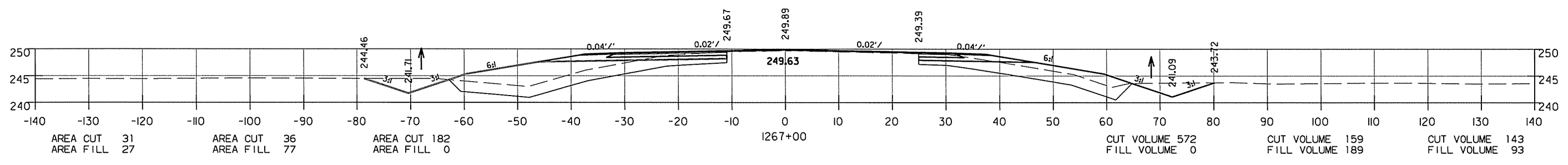
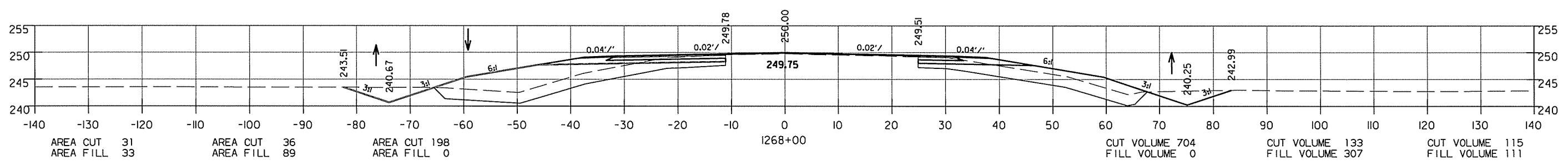
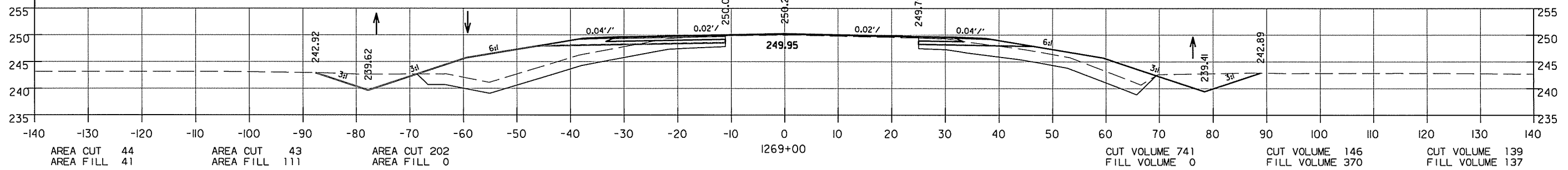
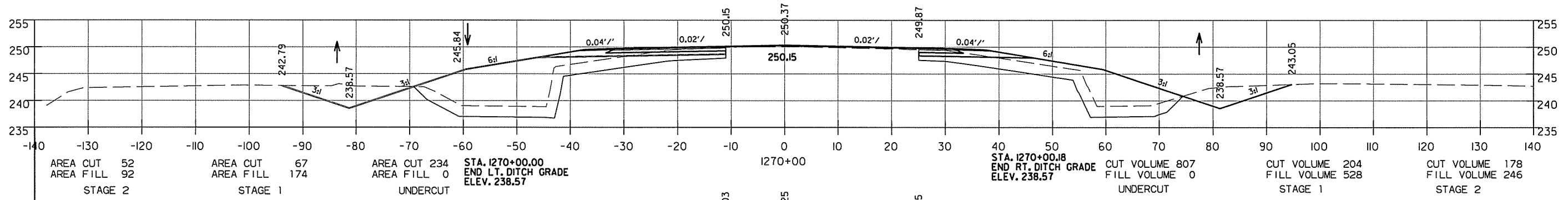
② CROSS SECTIONS



10/13/2015

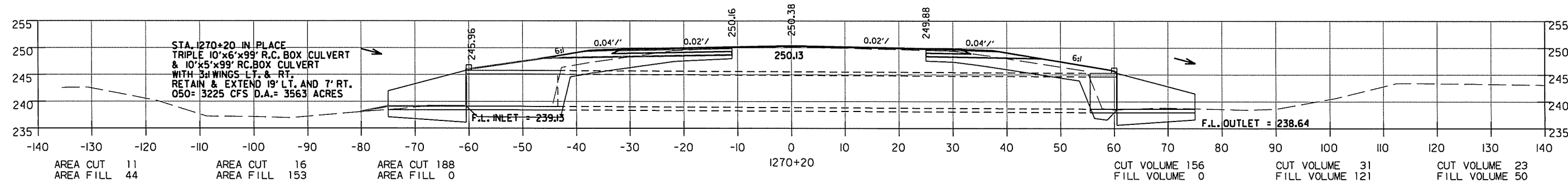
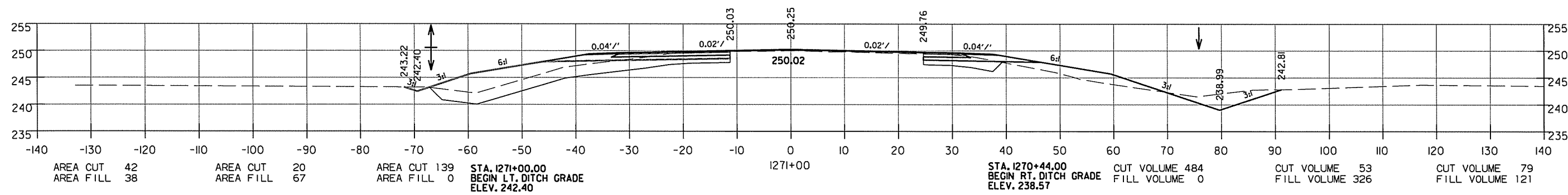
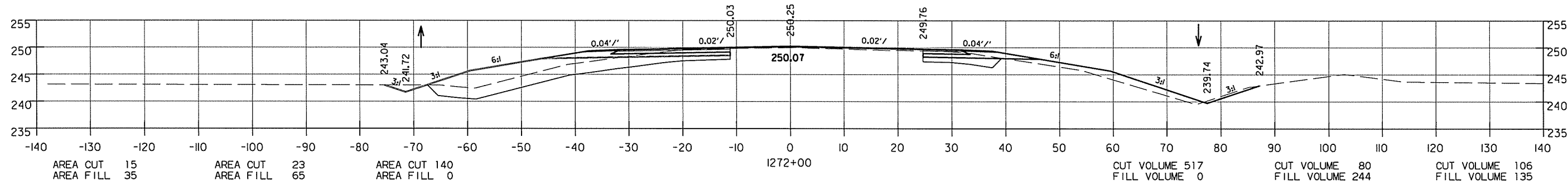
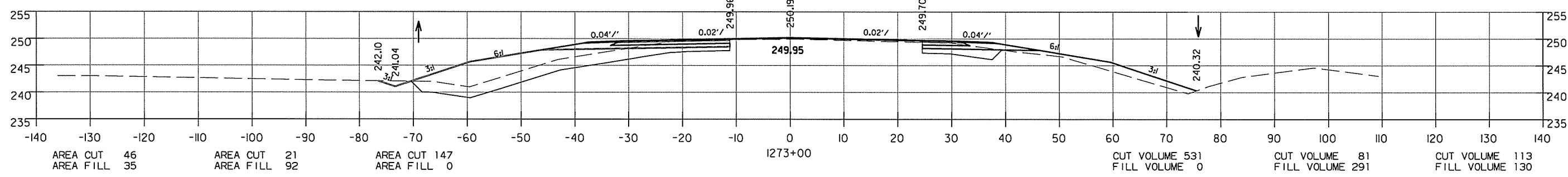
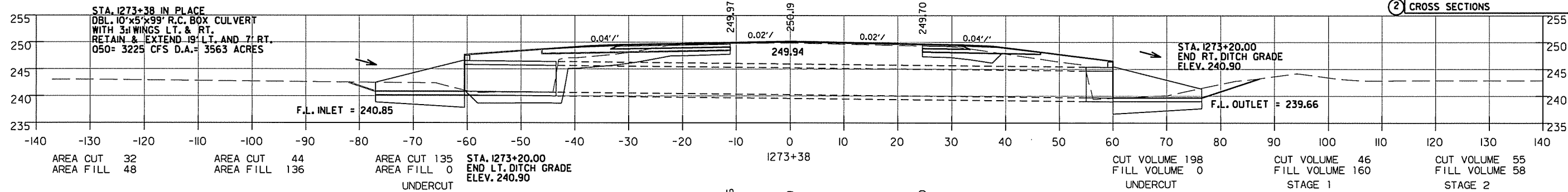
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0501	122	151

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. CA0501							123	151

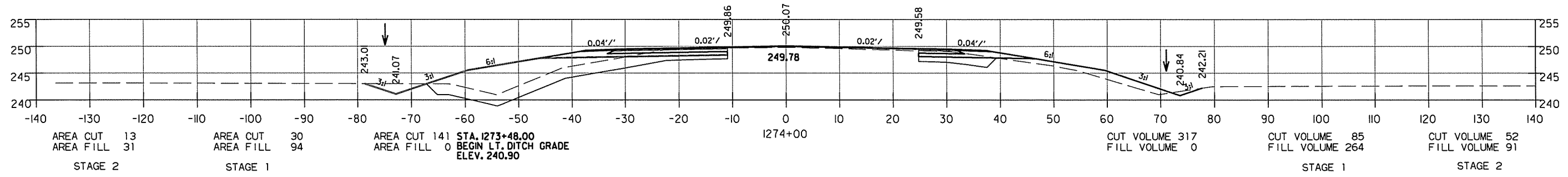
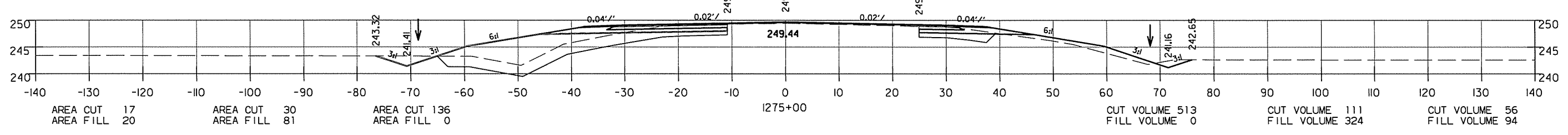
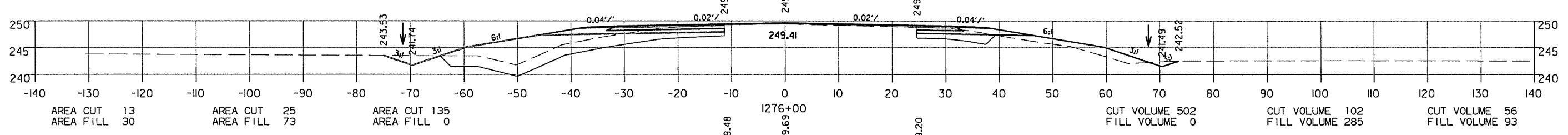
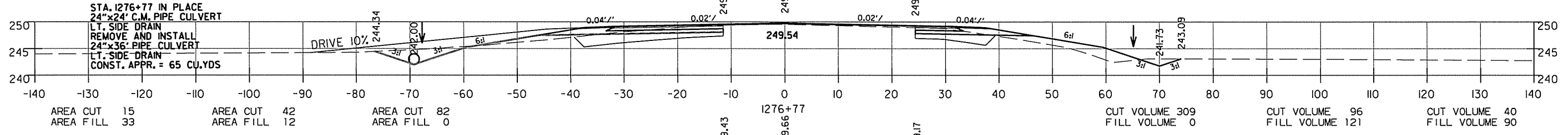
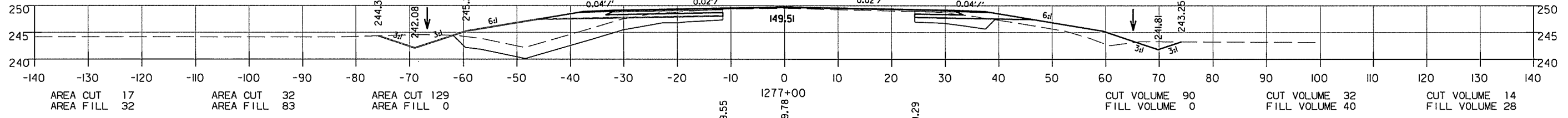
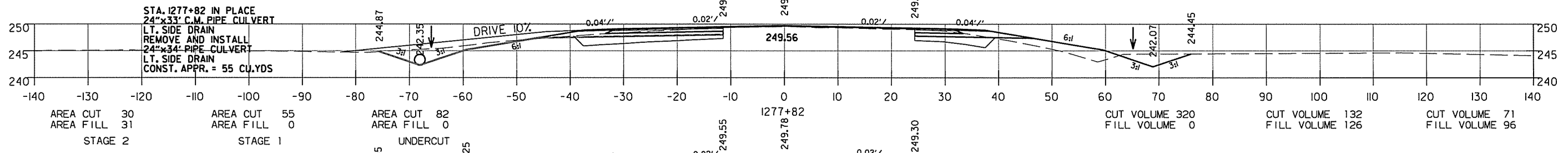
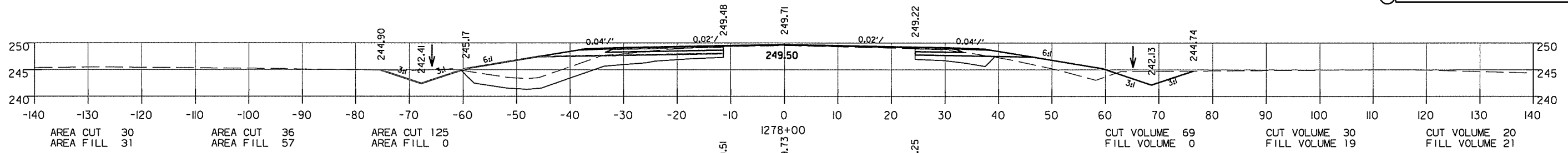
2 CROSS SECTIONS



STA. 1270+20.00 TO STA. 1273+38.00

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. CA0501	124	151

2 CROSS SECTIONS

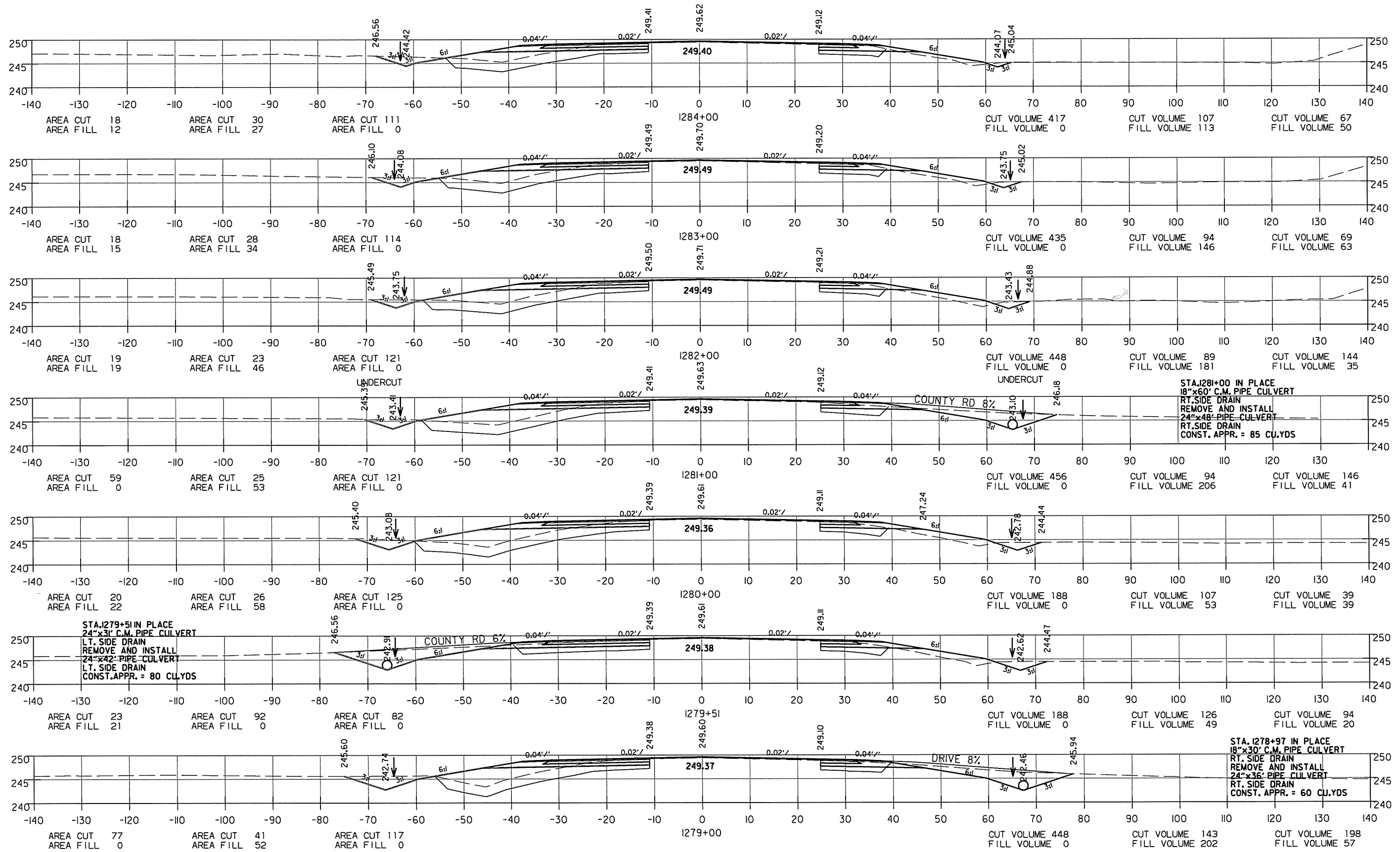


STA. 1274+00.00 TO STA. 1278+00.00

10/13/2015

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. CA0501	125	151

2 CROSS SECTIONS

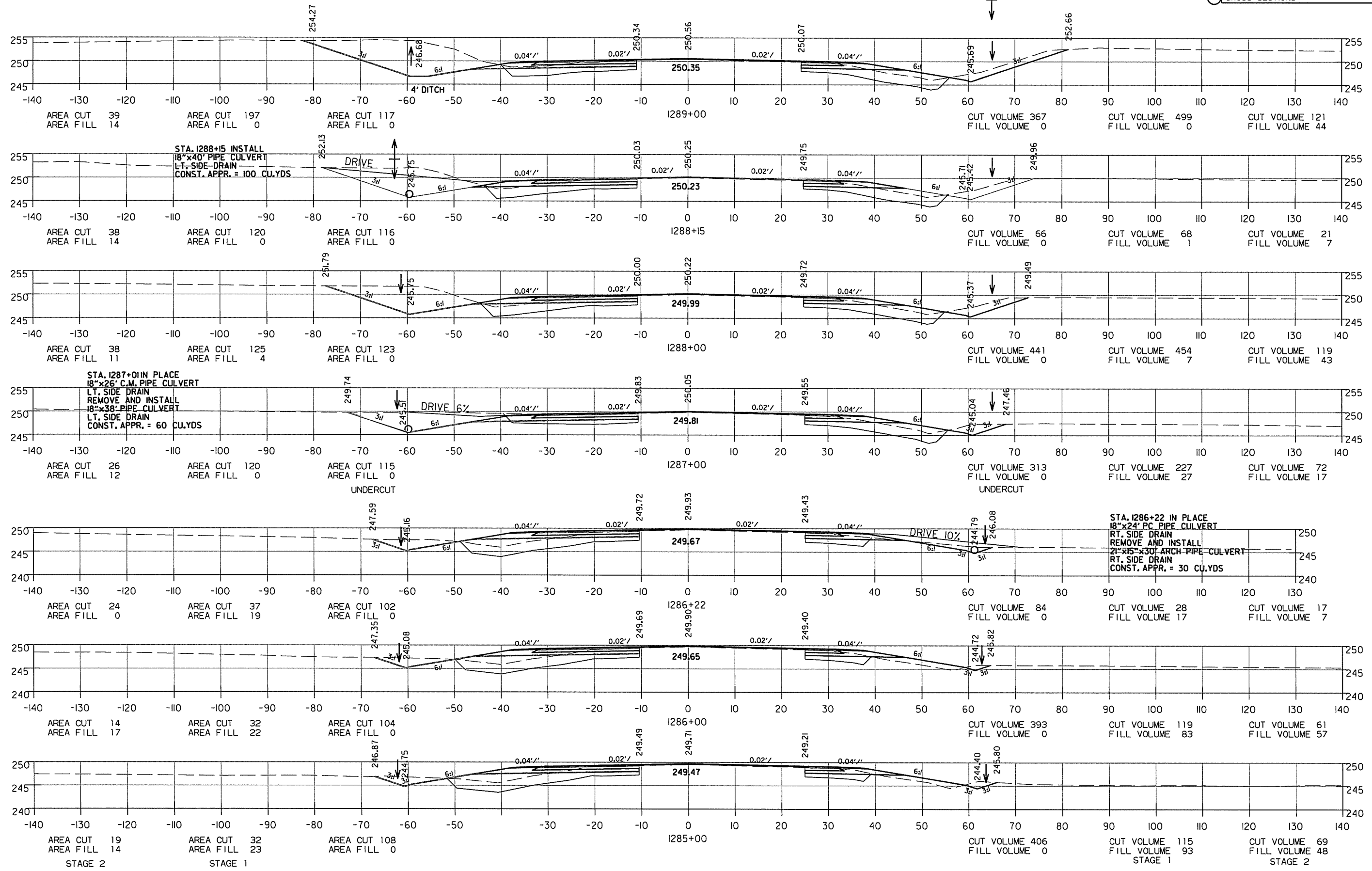


STA. 1279+00.00 TO STA. 1284+00.00

10/13/2015

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. CA0501							126	151

2 CROSS SECTIONS

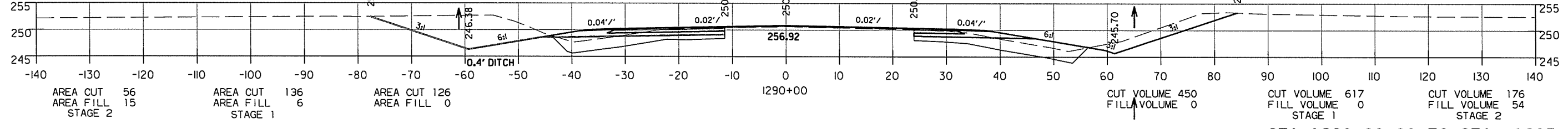
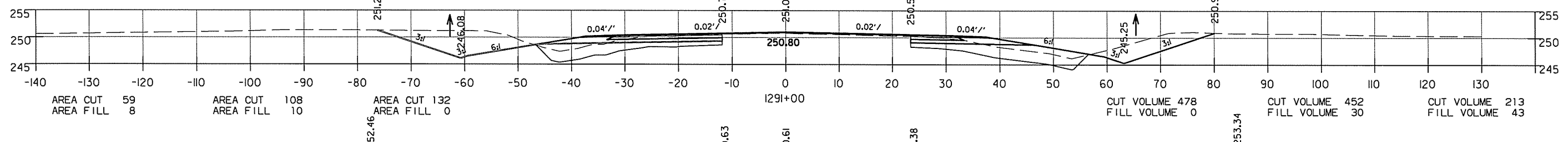
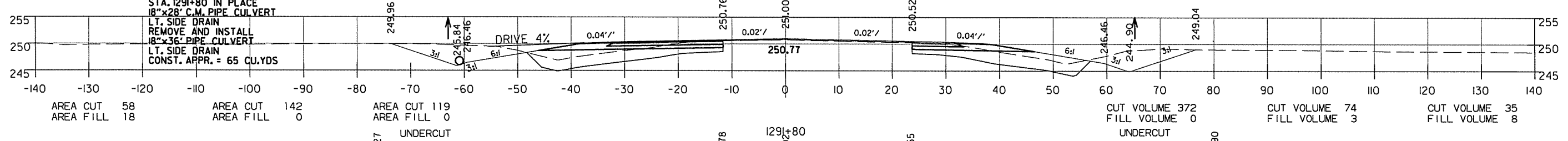
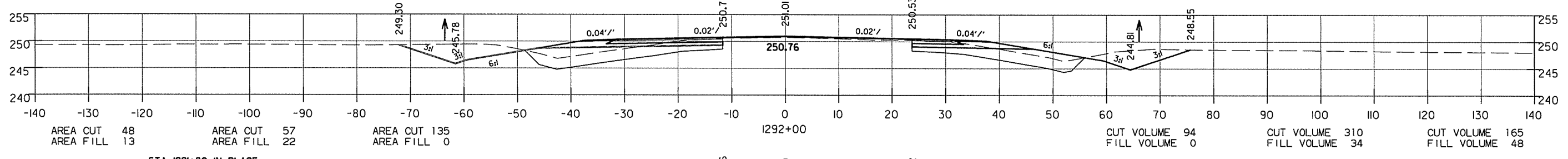
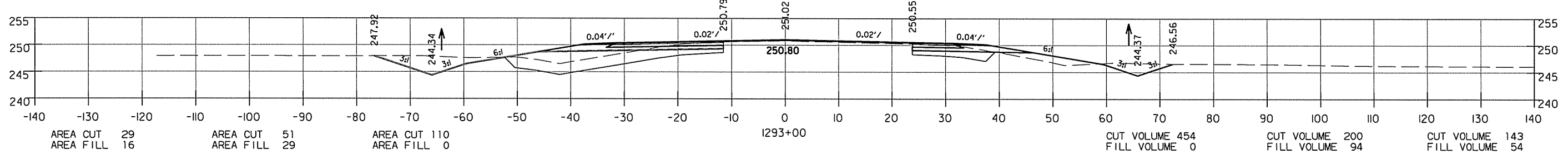
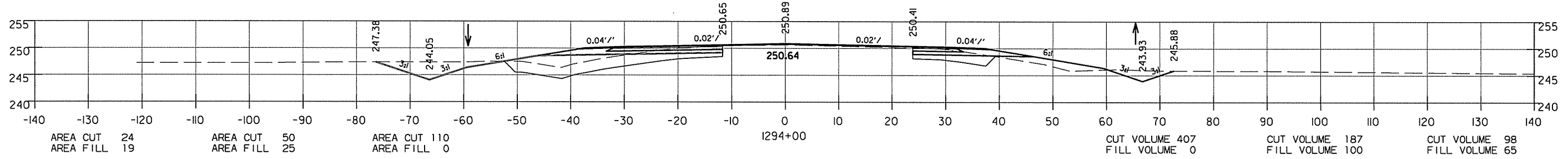
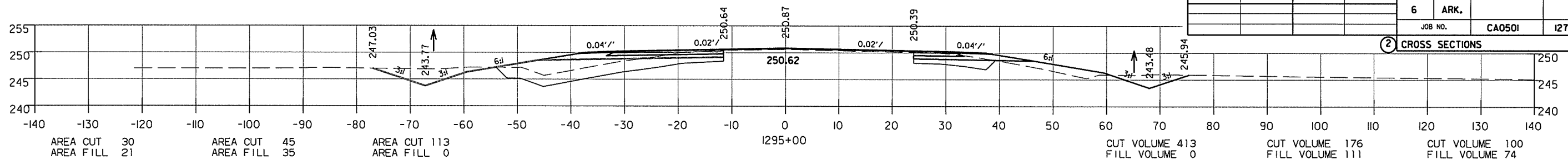


STA. 1285+00.00 TO STA. 1289+00.00

10/13/2015

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. CA0501							127	151

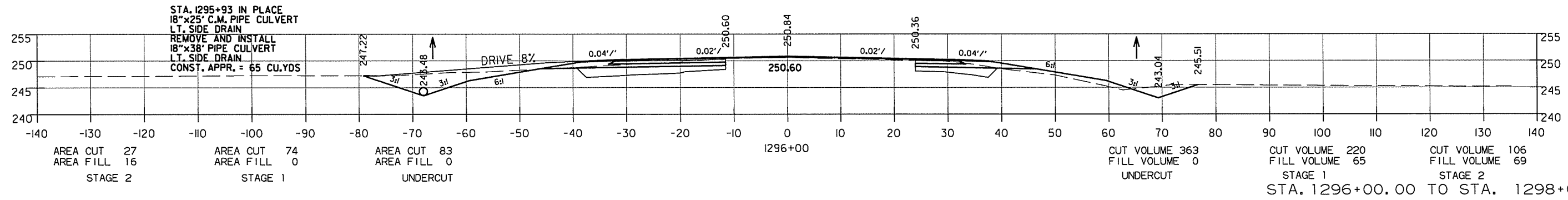
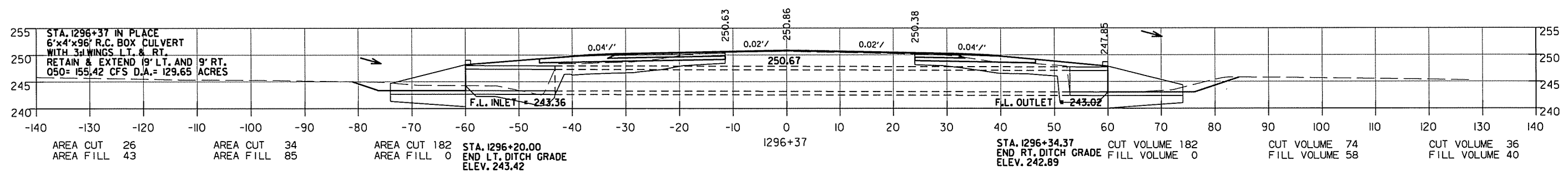
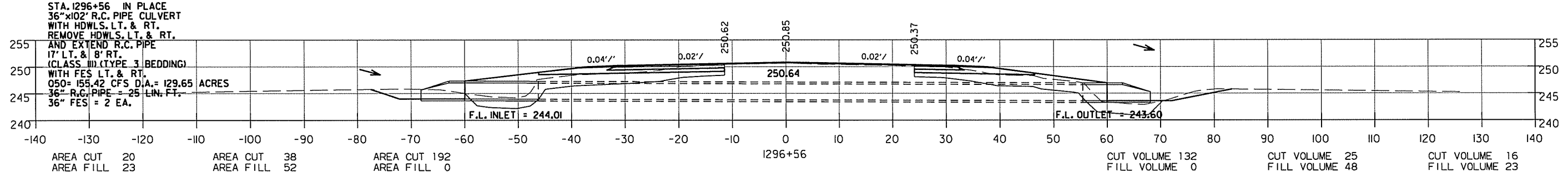
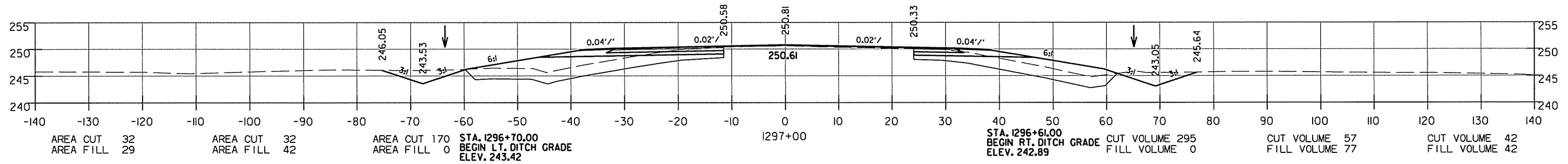
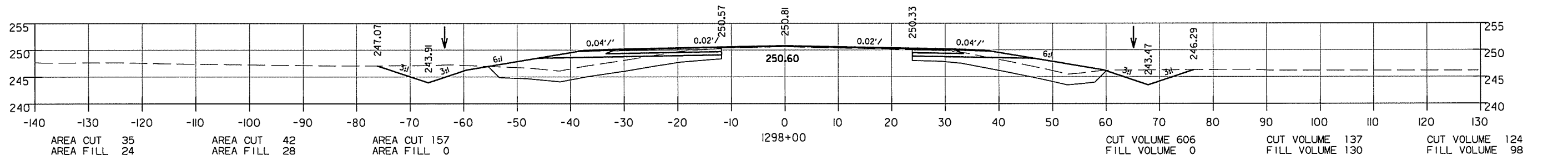
2 CROSS SECTIONS



STA. 1290+00.00 TO STA. 1295+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. CA0501	128	151

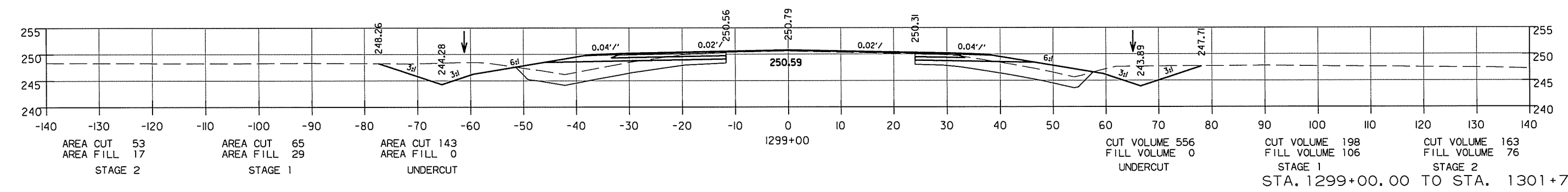
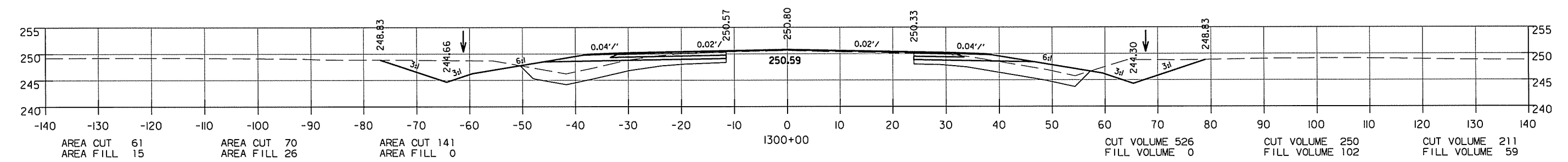
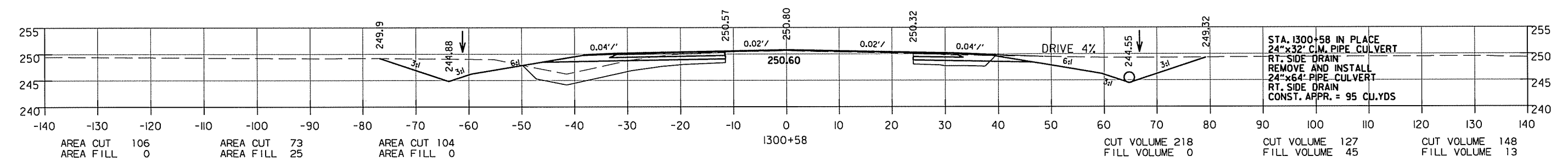
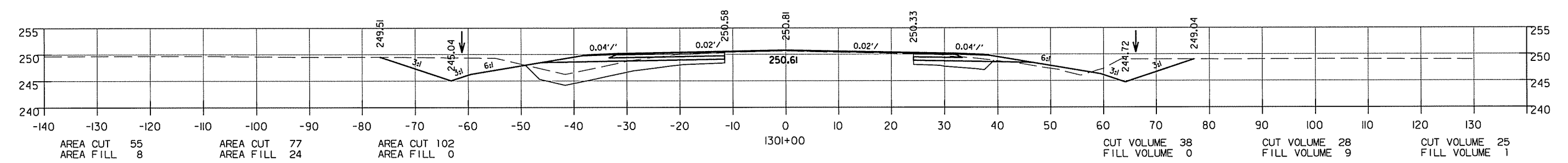
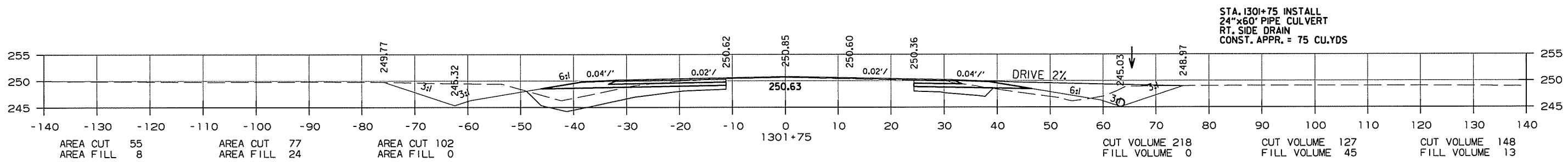
2 CROSS SECTIONS



10/13/2015

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.	CA0501		129	151

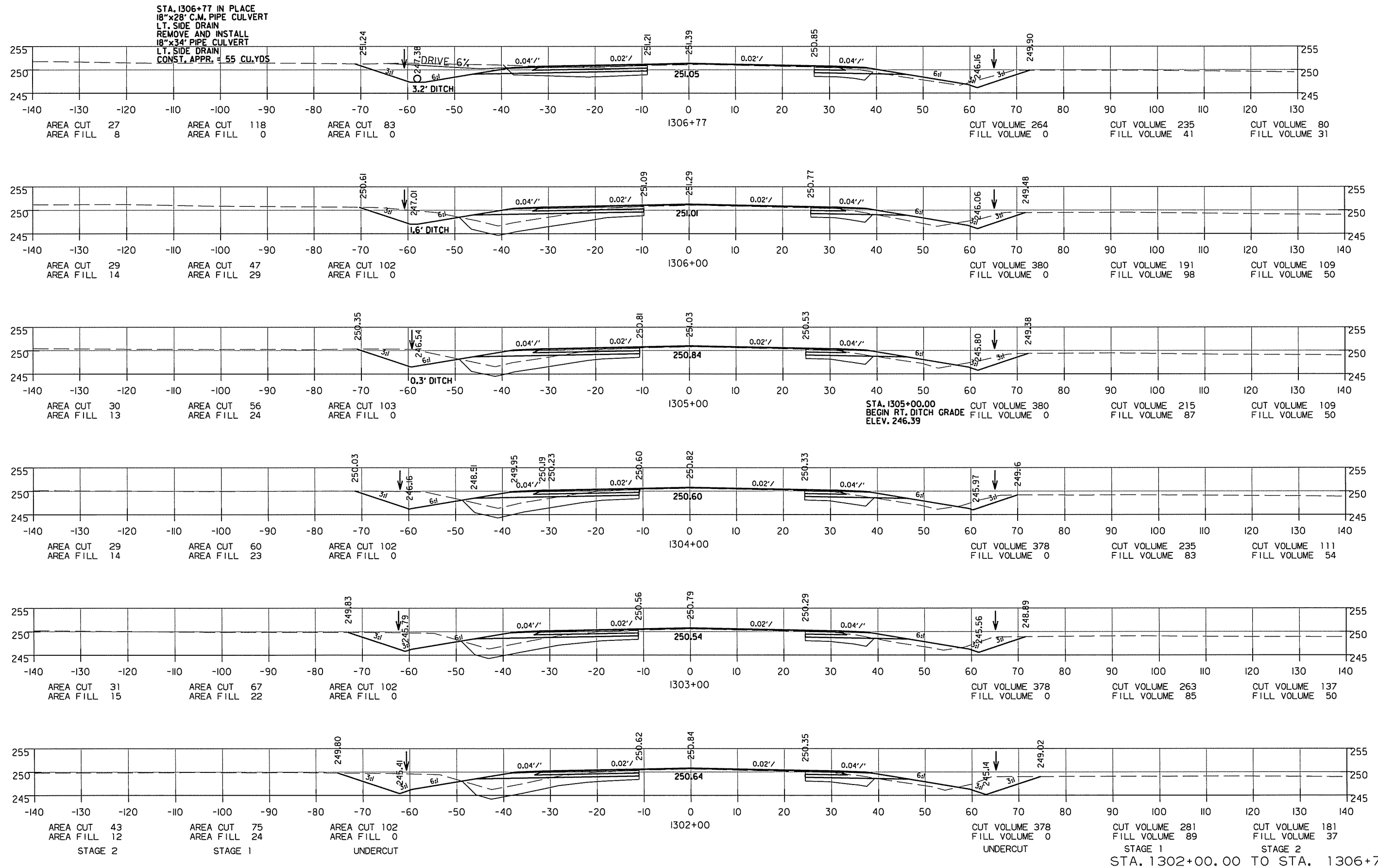
2 CROSS SECTIONS



10/13/2015

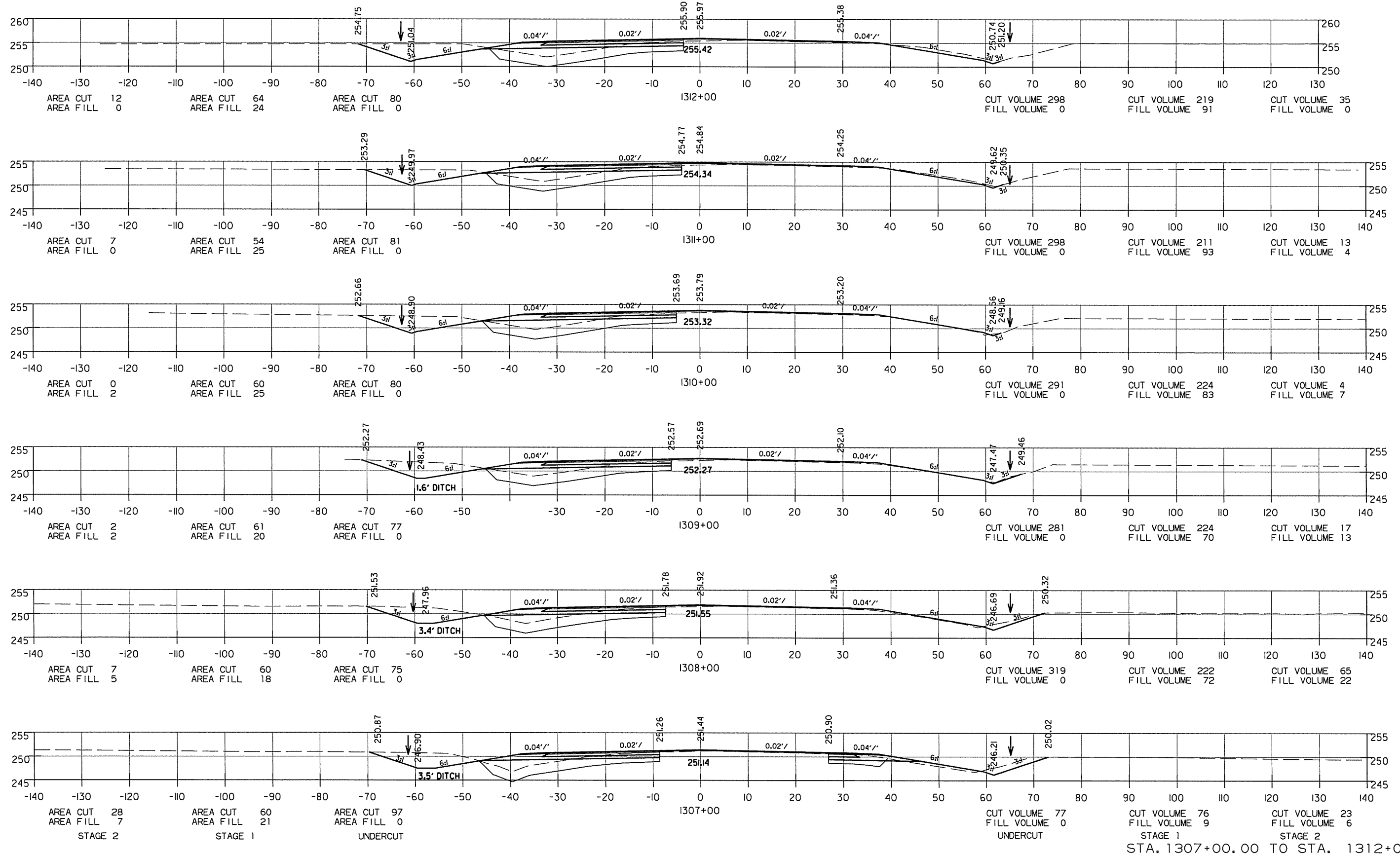
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0501	130	151

2 CROSS SECTIONS



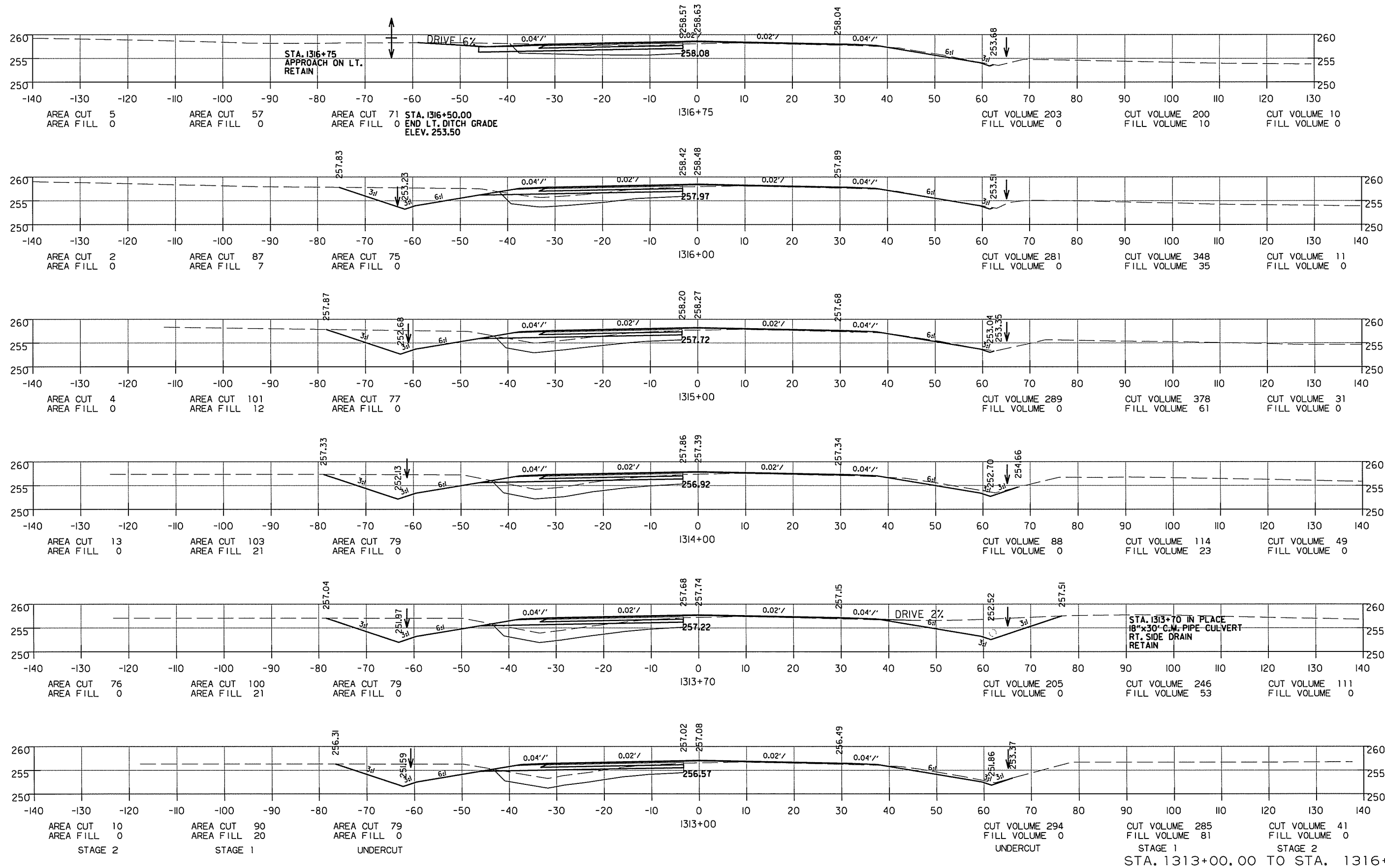
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0501	131	151

2 CROSS SECTIONS



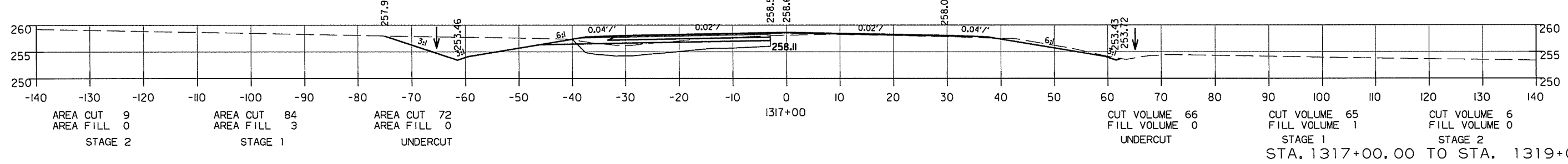
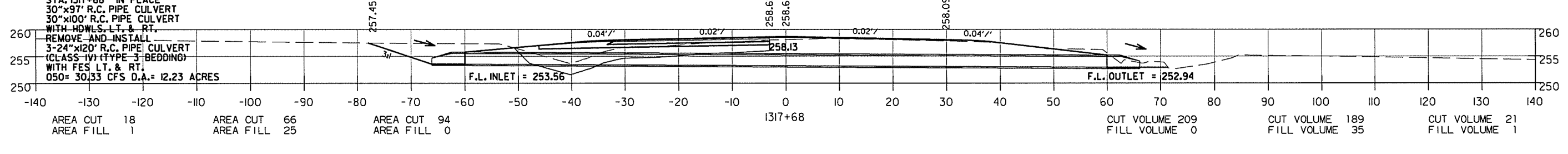
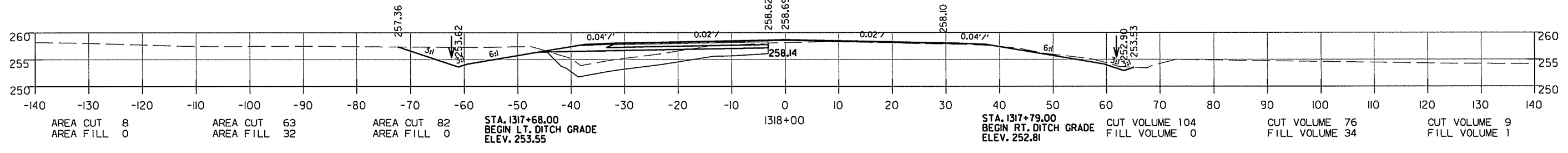
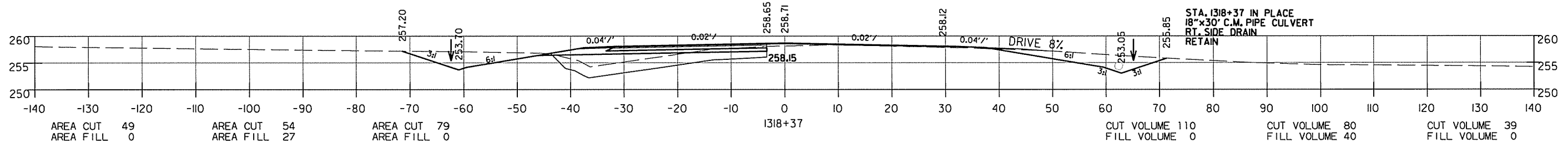
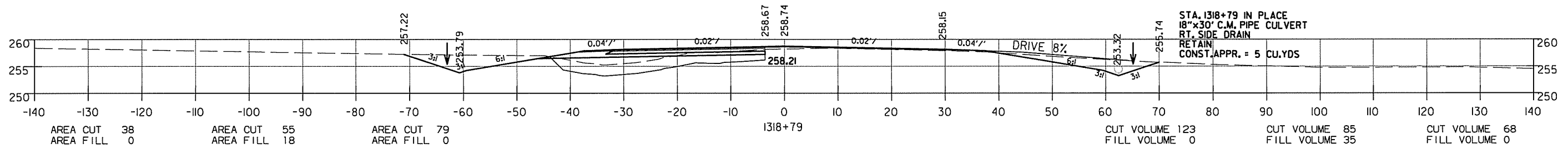
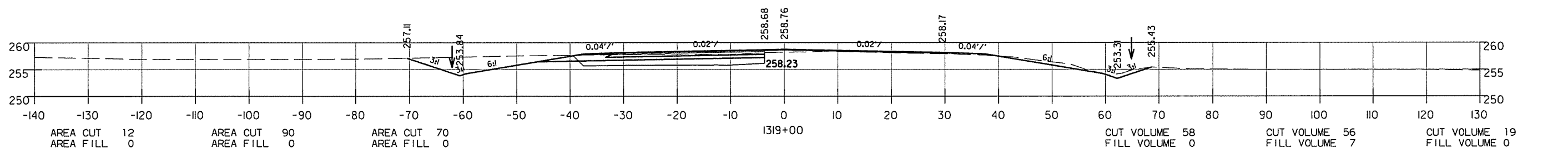
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0501	132	151

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.	CA0501		133	151

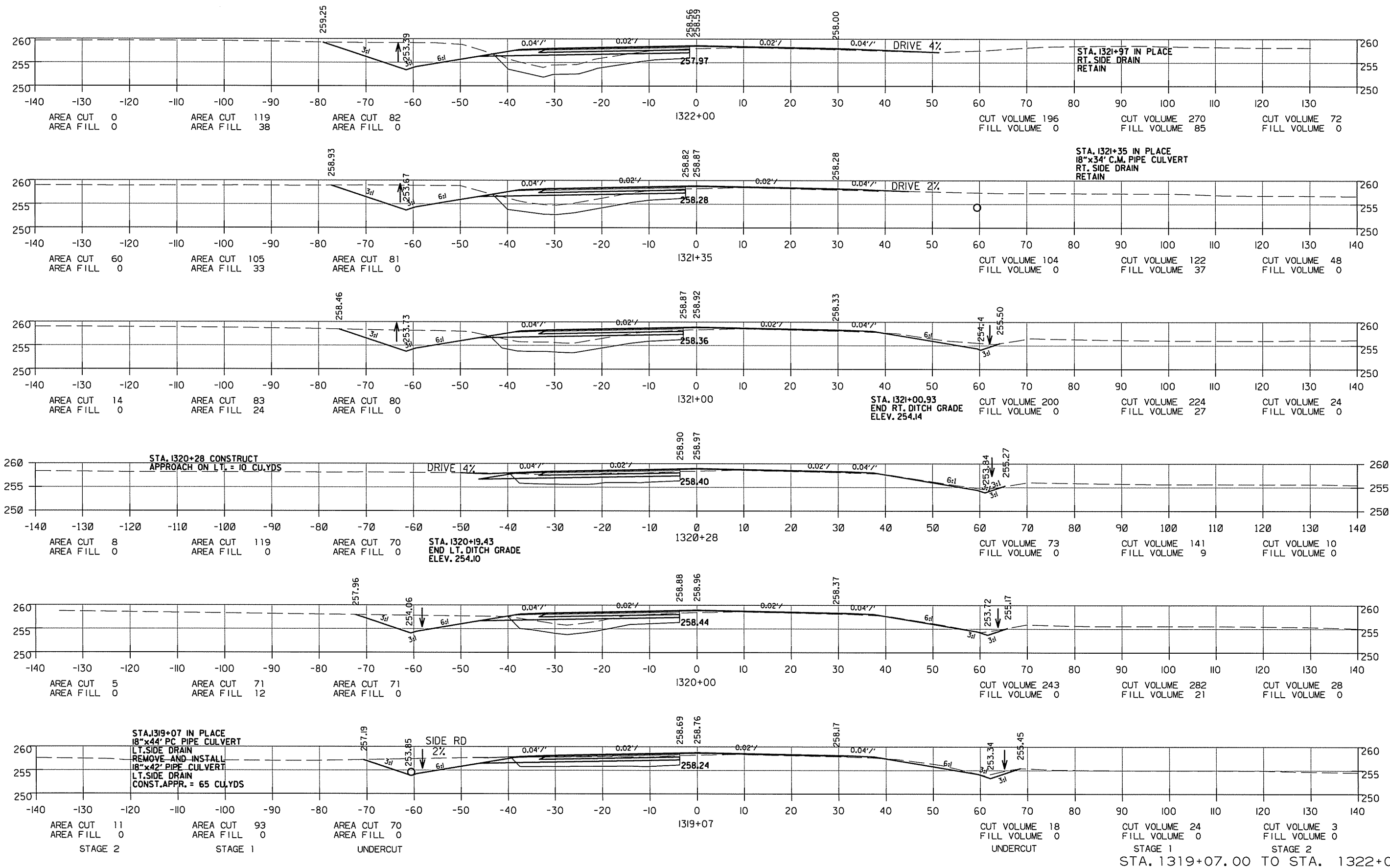
2 CROSS SECTIONS



10/13/2015

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.	CA050I		134	151

2 CROSS SECTIONS



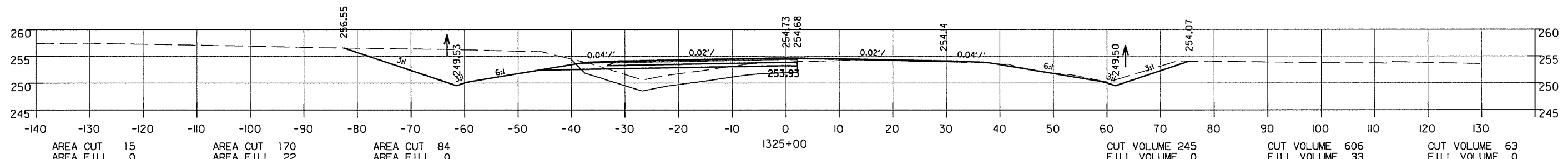
10/13/2015

STAGE 2 STAGE 1 UNDERCUT UNDERCUT STAGE 1 STAGE 2

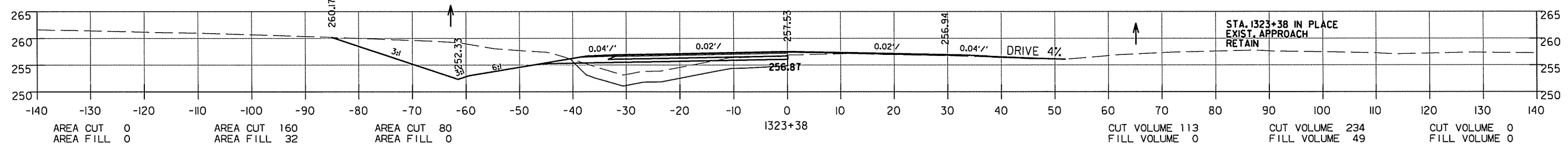
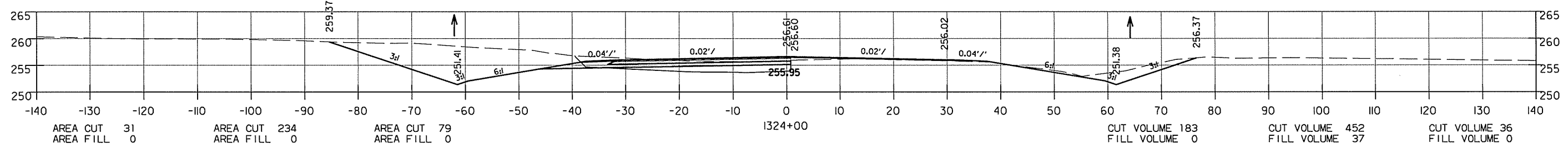
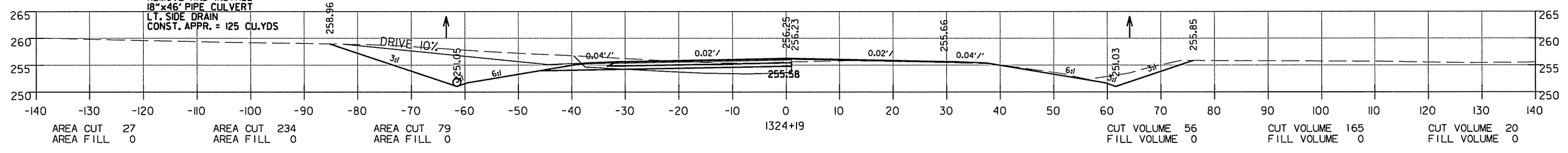
STA. 1319+07.00 TO STA. 1322+00.00

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. CA0501	135	151

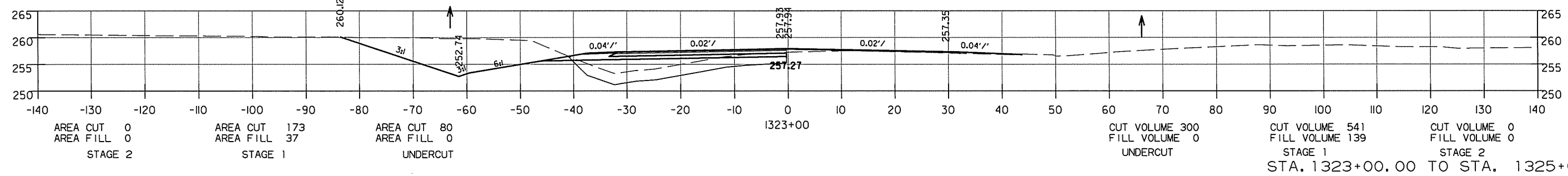
2 CROSS SECTIONS



STA. 1324+19 IN PLACE
 18" x 84' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 REMOVE AND INSTALL
 18" x 46' PIPE CULVERT
 LT. SIDE DRAIN
 CONST. APPR. = 125 CU.YDS



STA. 1323+38 IN PLACE
 EXIST. APPROACH
 RETAIN

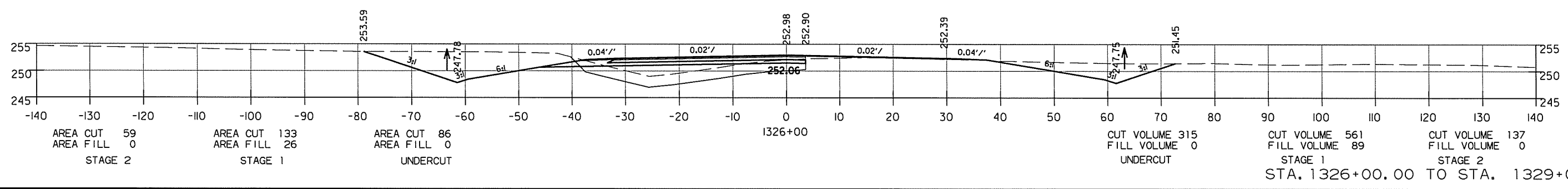
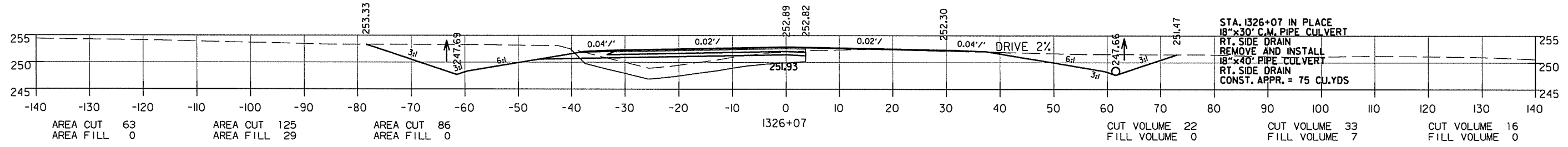
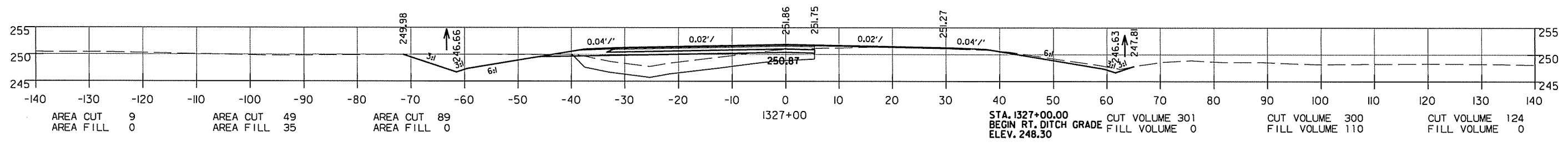
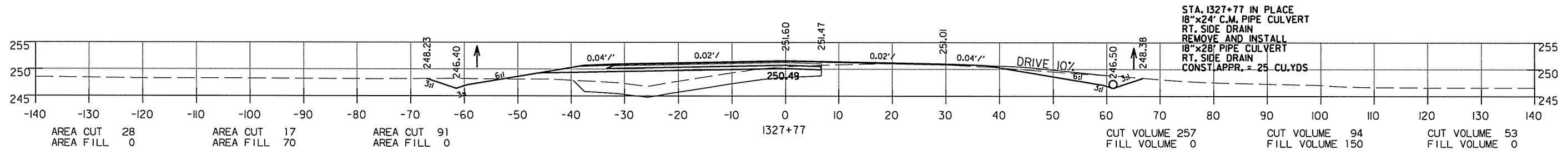
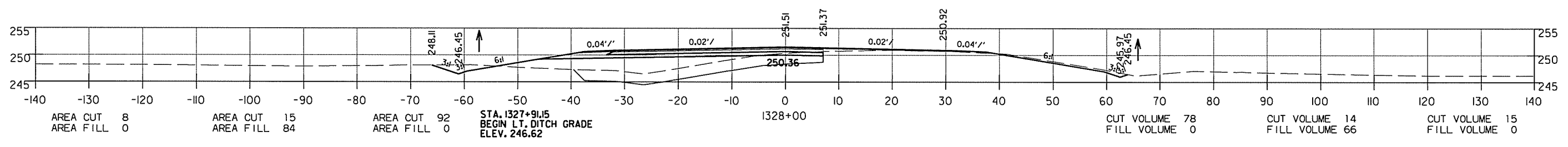
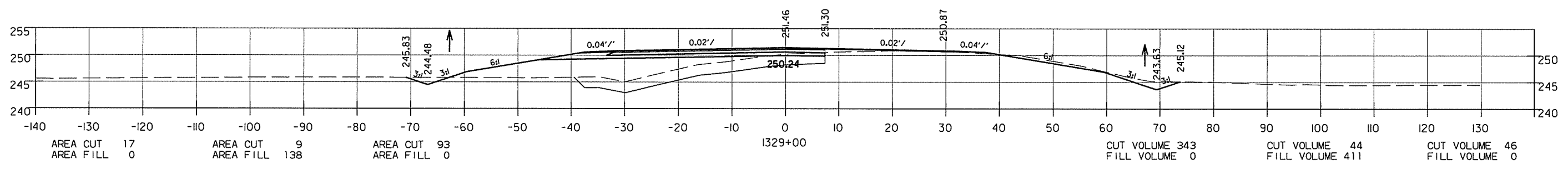


STAGE 2 STAGE 1 UNDERCUT UNDERCUT STAGE 1 STAGE 2

STA. 1323+00.00 TO STA. 1325+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. CA0501	136	151

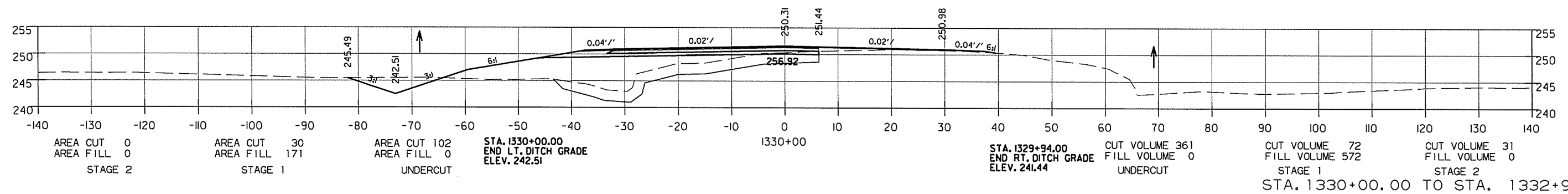
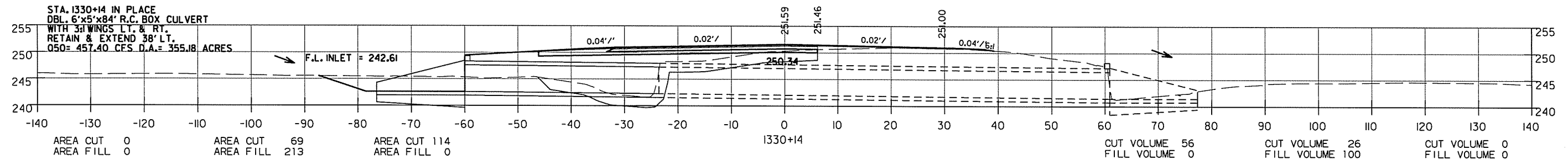
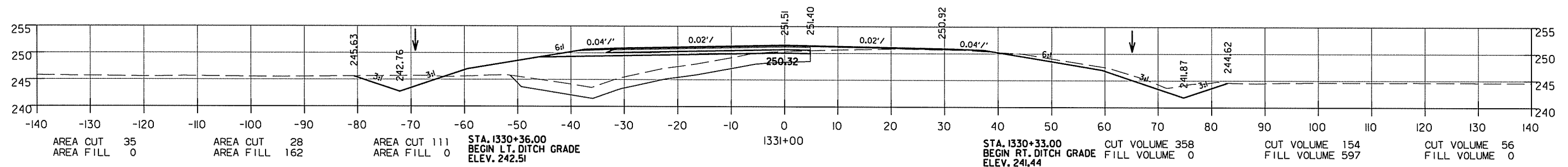
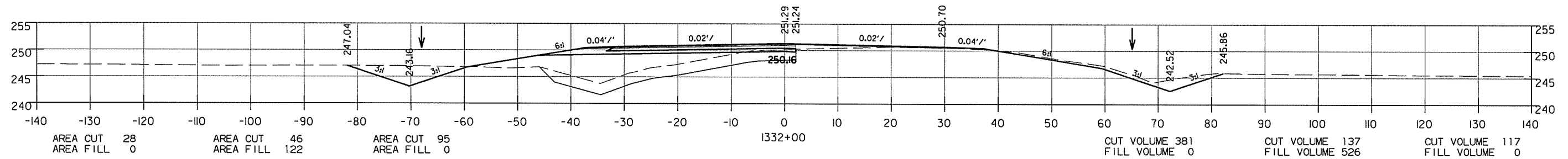
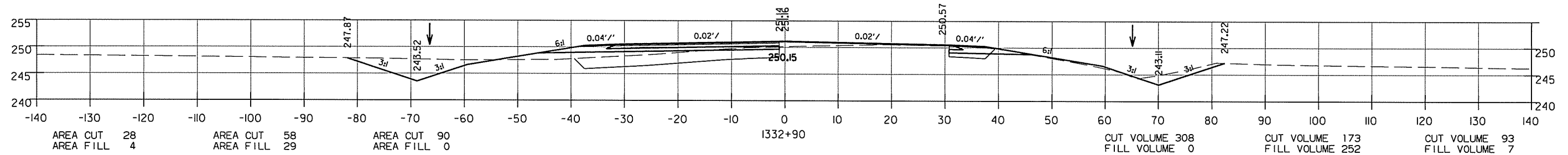
2 CROSS SECTIONS



10/13/2015

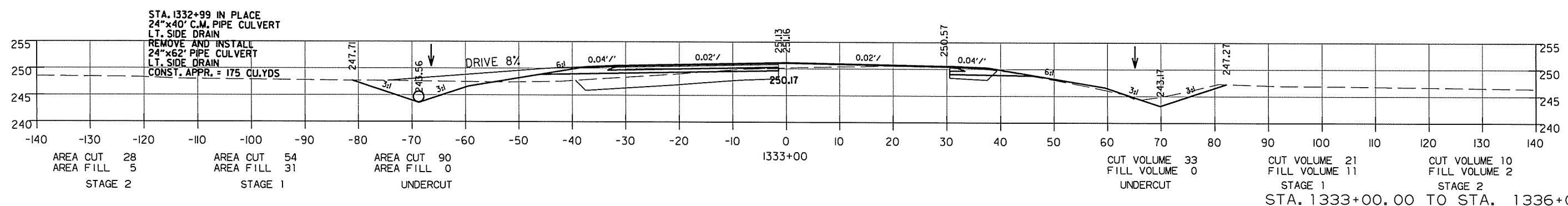
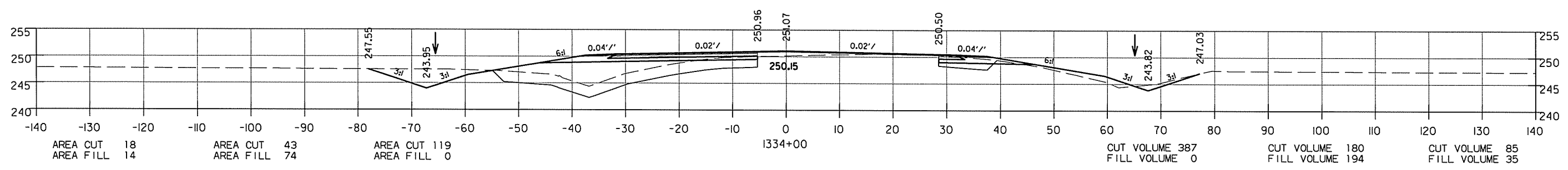
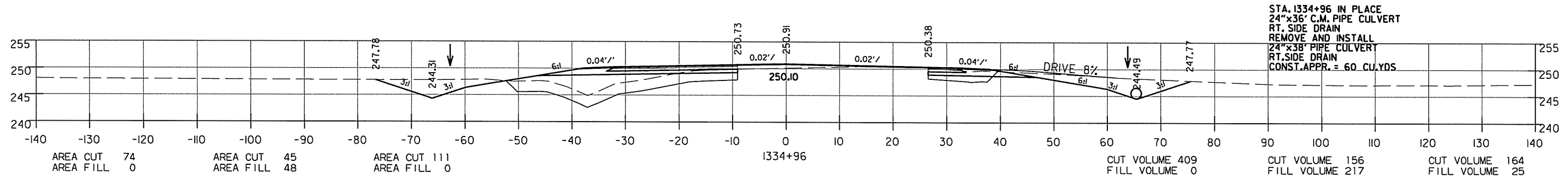
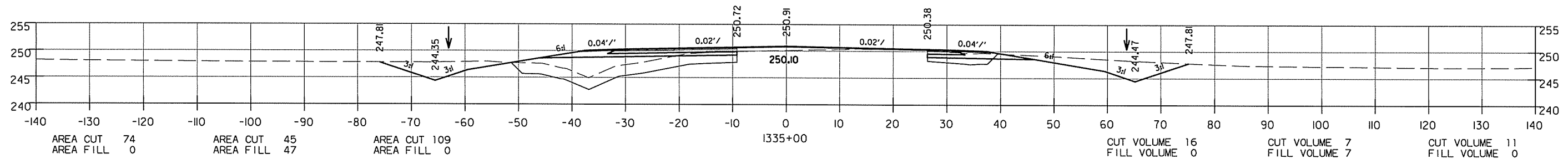
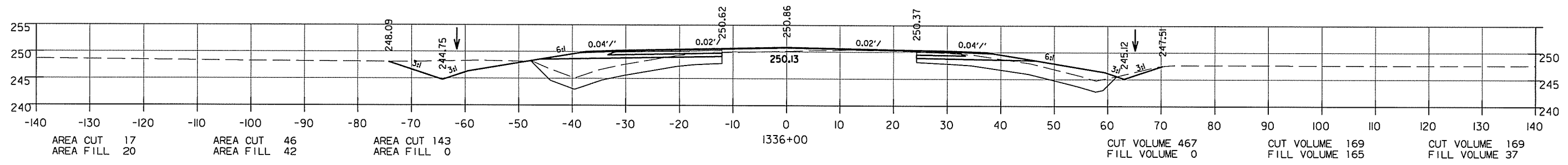
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0501	137	151

2 CROSS SECTIONS



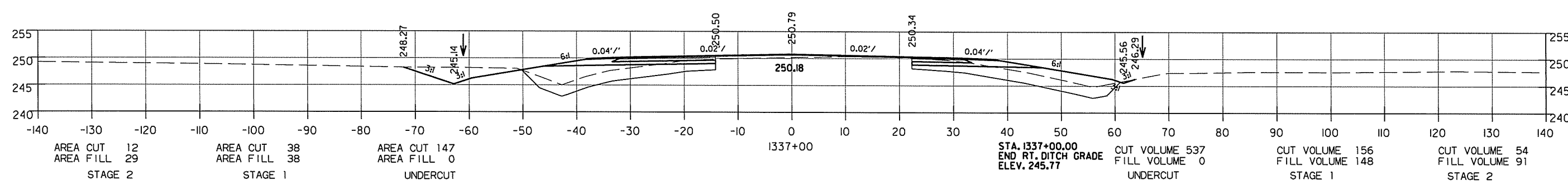
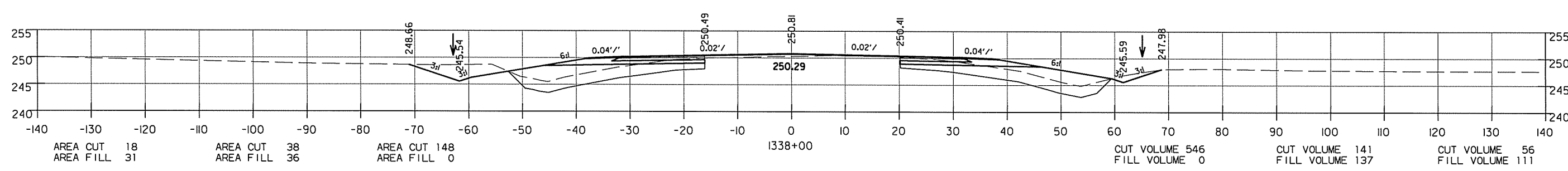
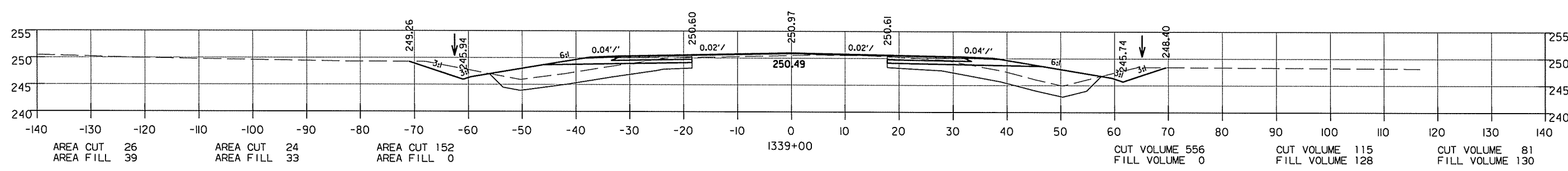
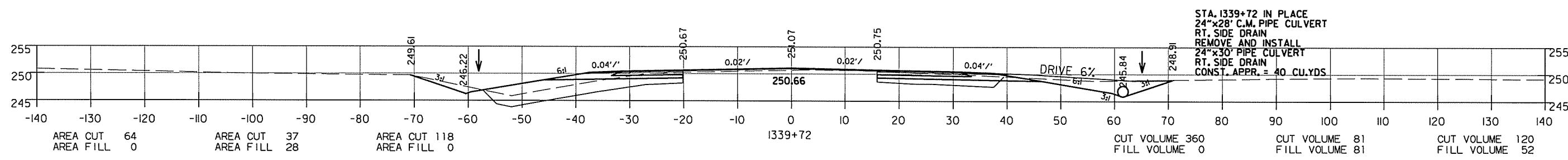
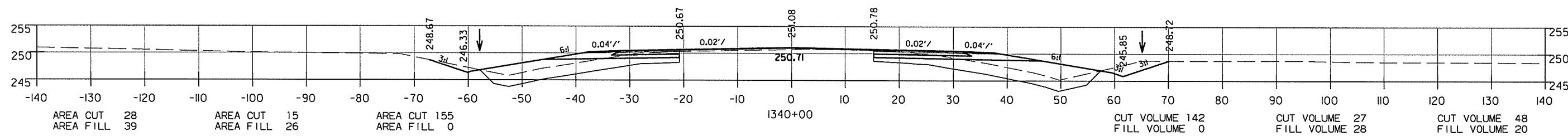
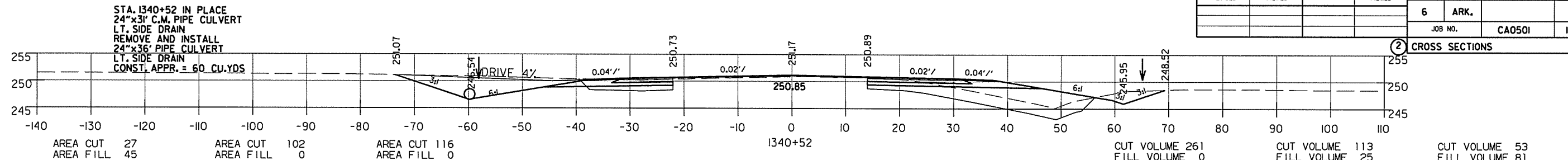
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0501	138	151

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.						CA0501	139	151

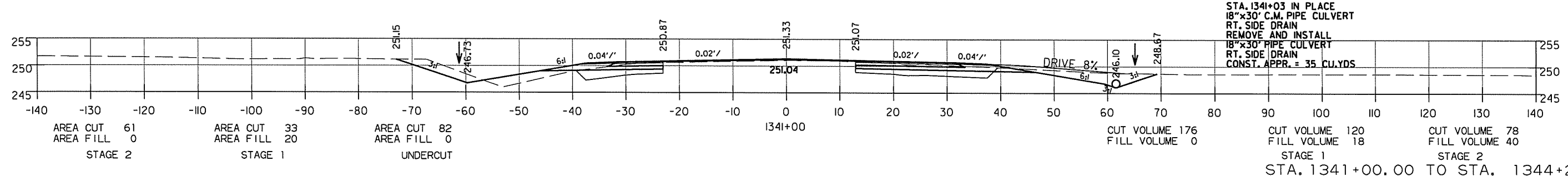
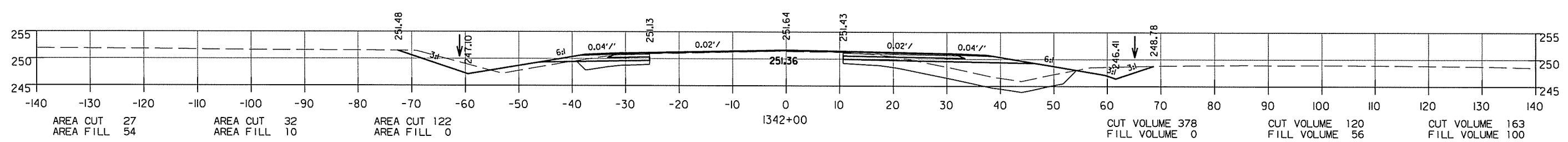
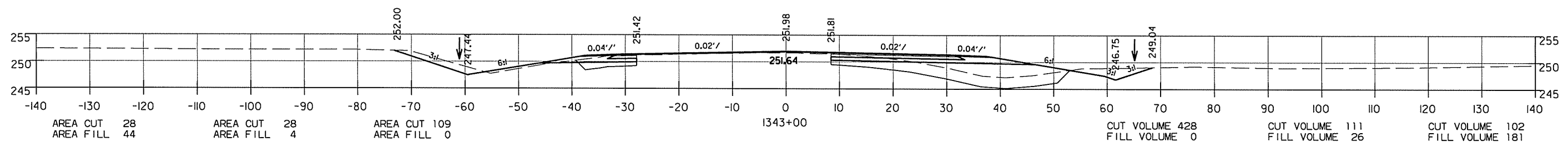
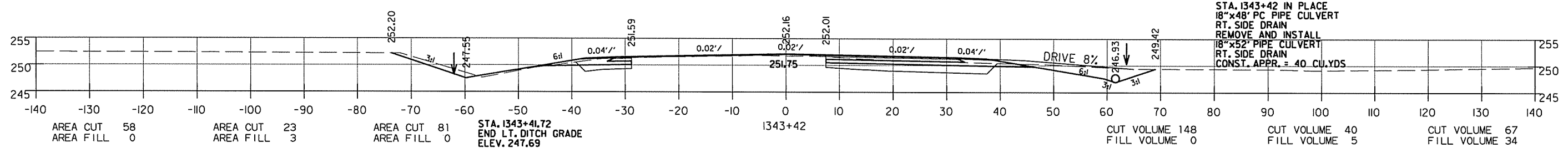
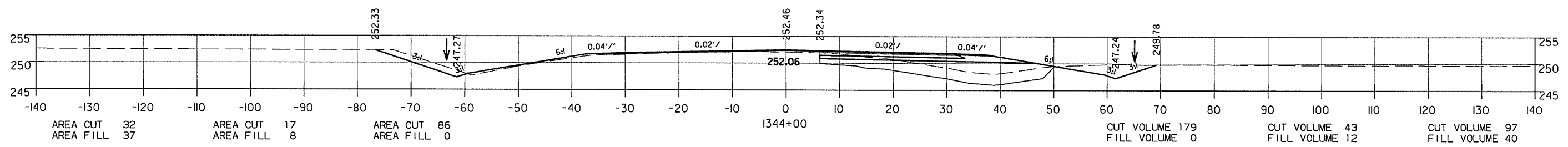
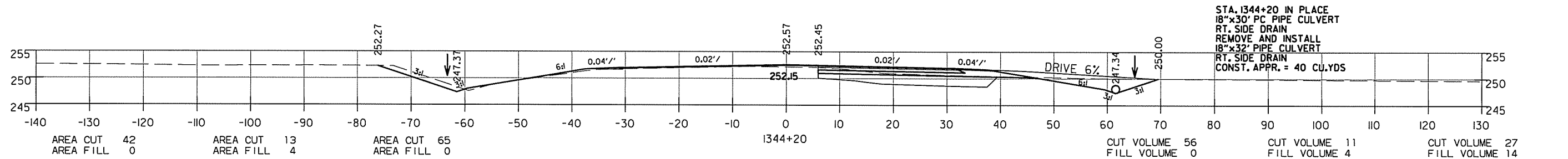
2 CROSS SECTIONS



10/13/2015

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.	CA0501		140	151

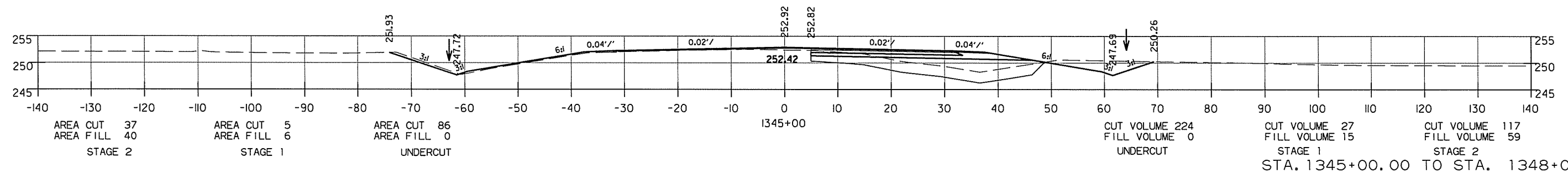
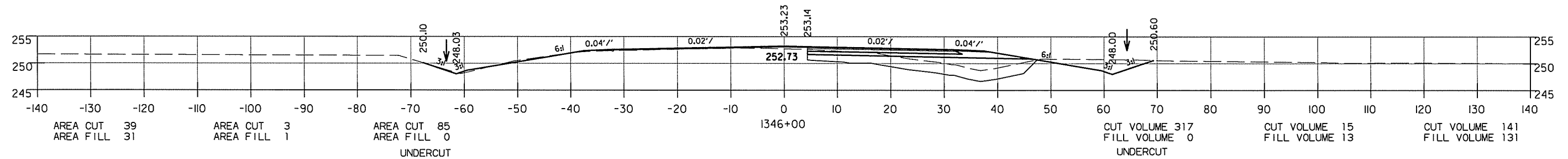
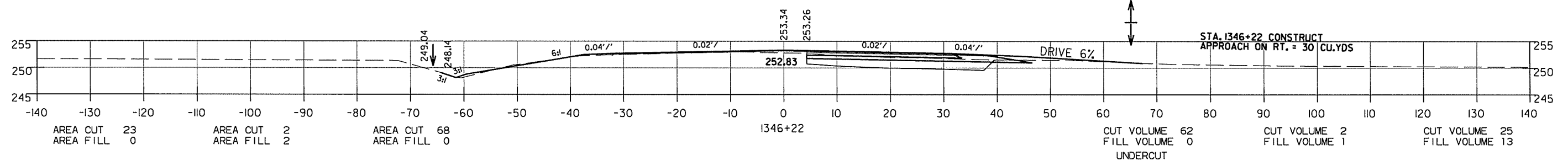
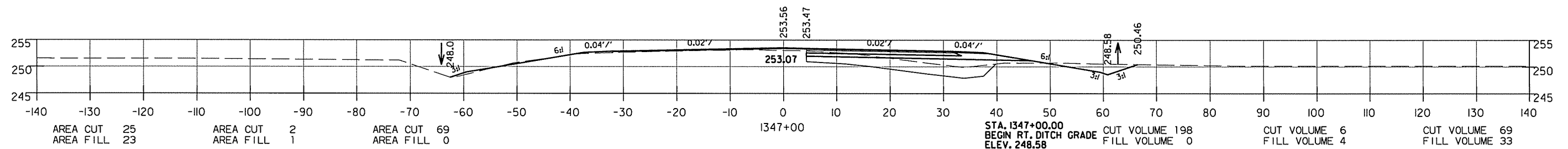
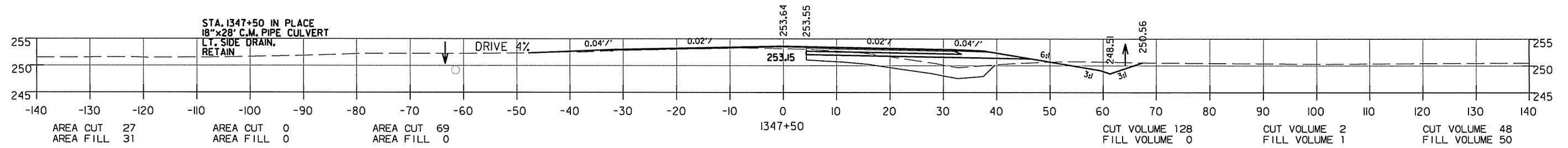
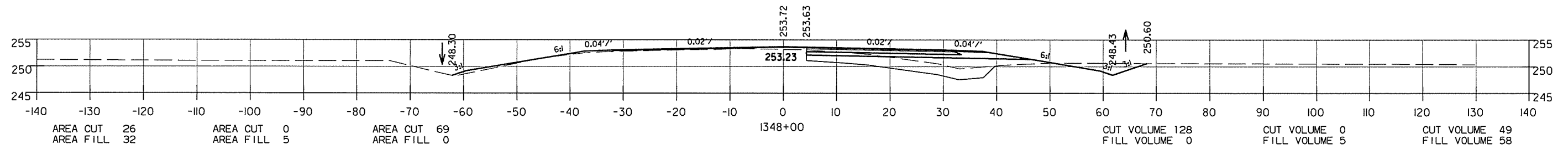
2 CROSS SECTIONS



10/13/2015

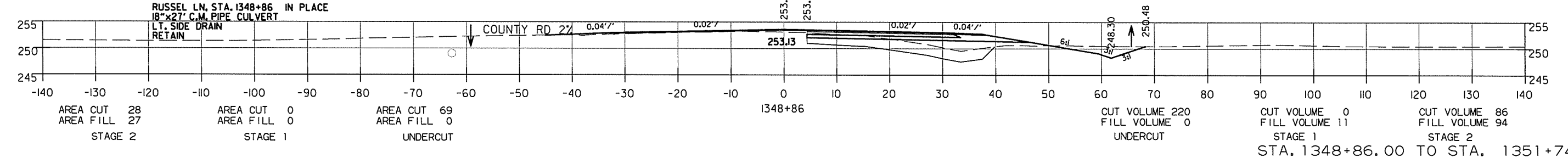
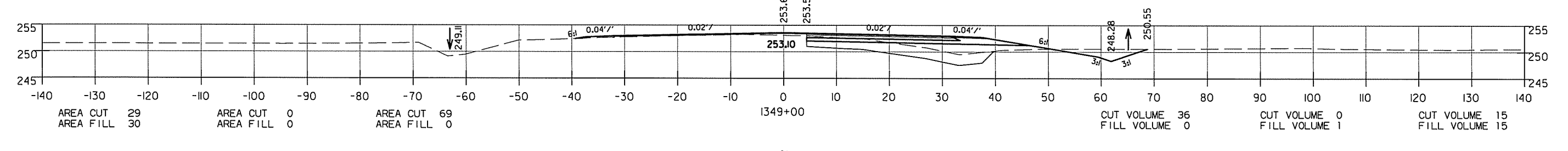
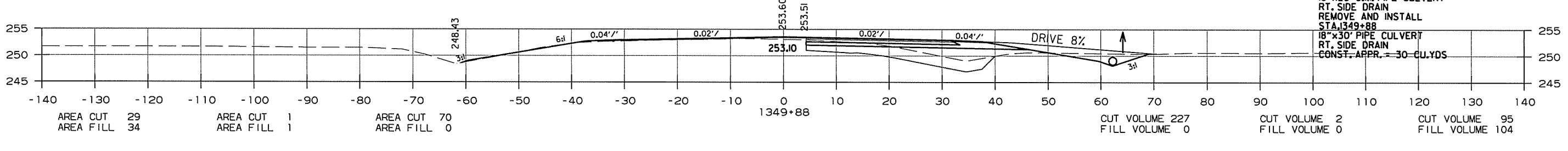
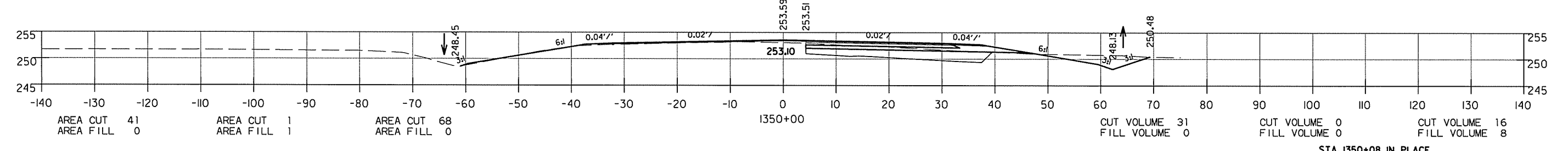
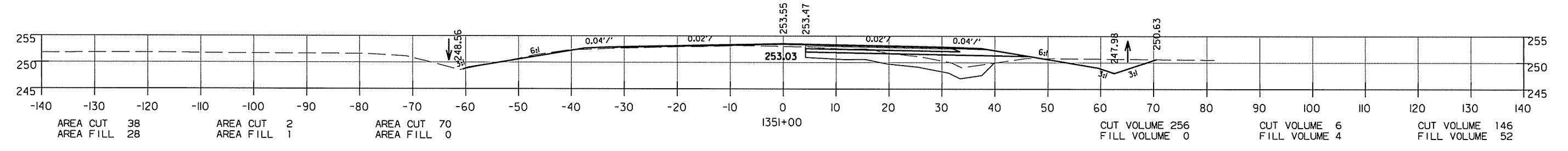
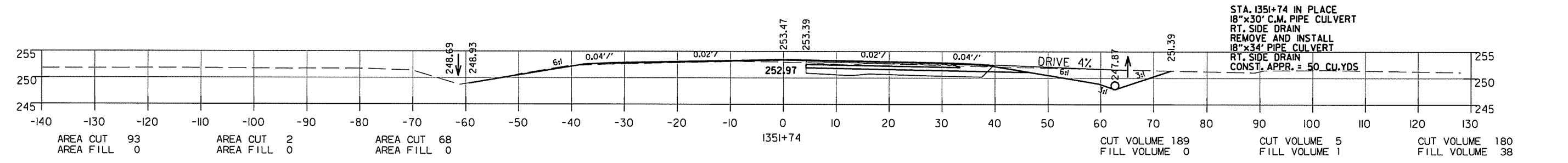
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. CA0501	141	151

2 CROSS SECTIONS



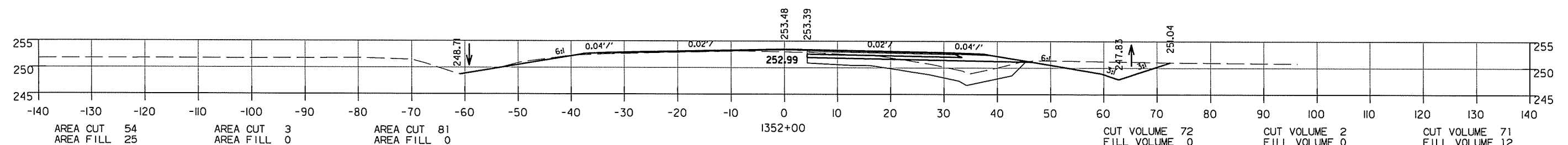
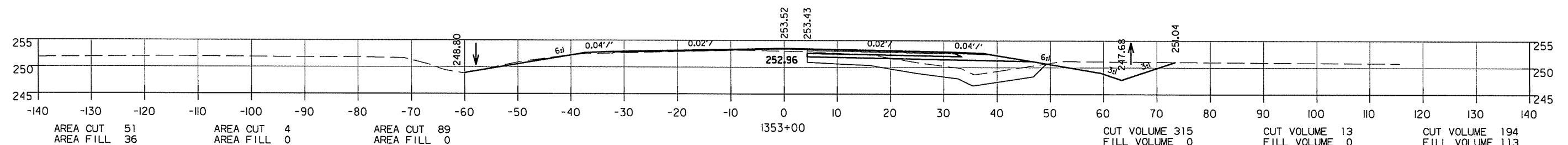
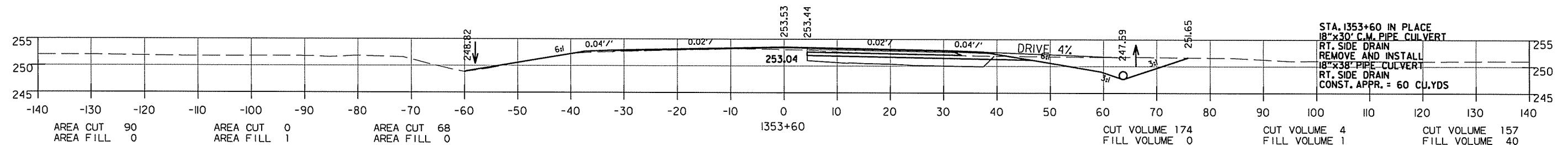
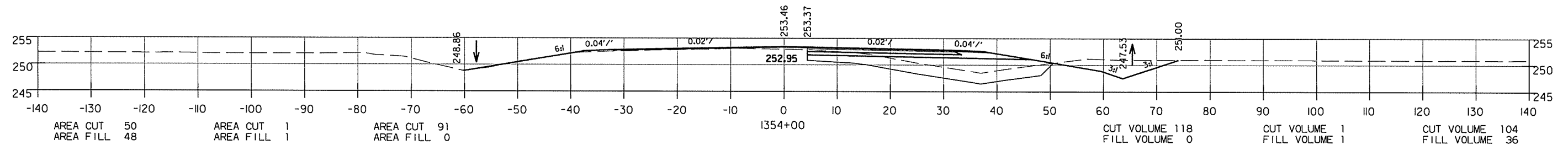
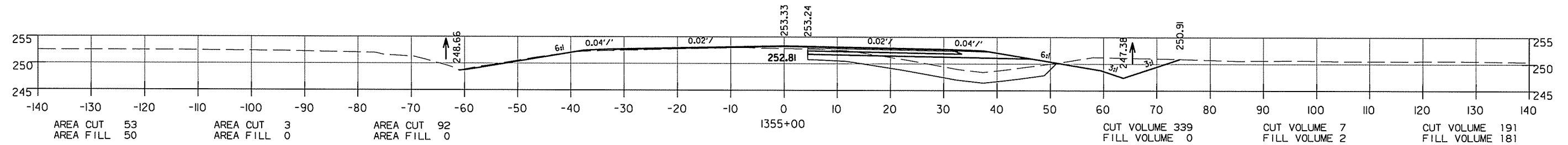
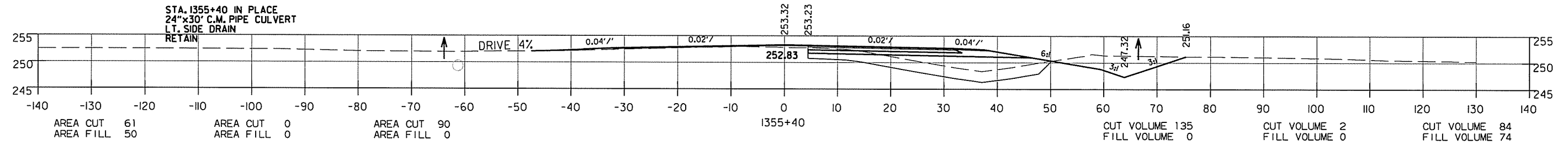
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501		142	151

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.	CA0501		143	151

2 CROSS SECTIONS

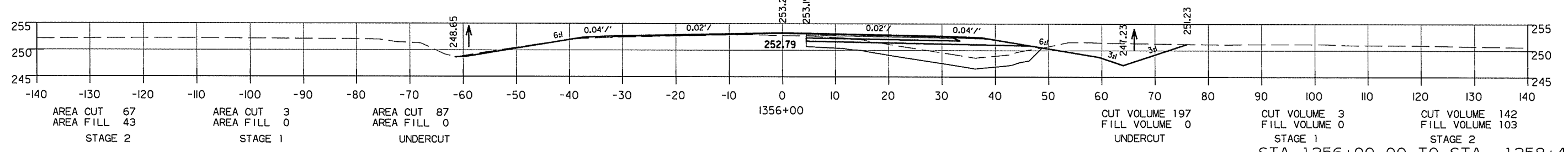
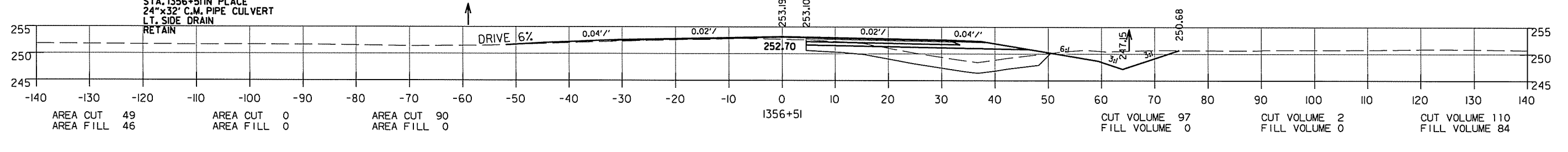
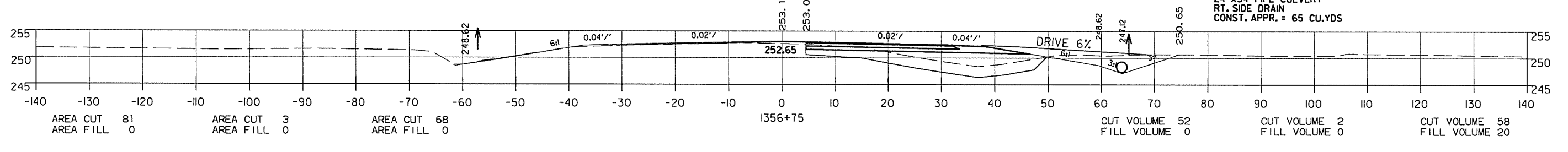
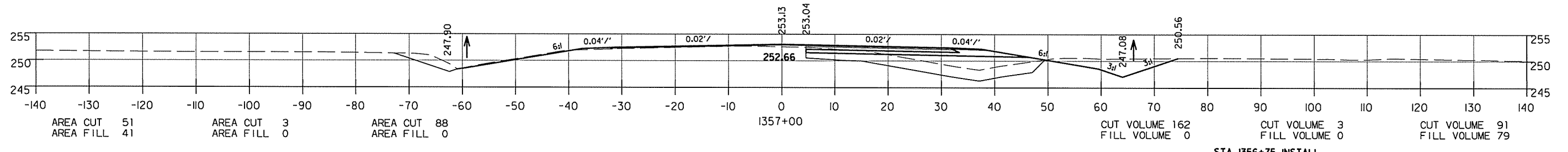
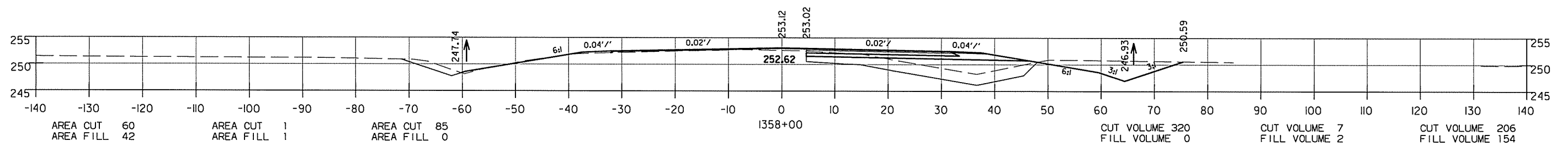
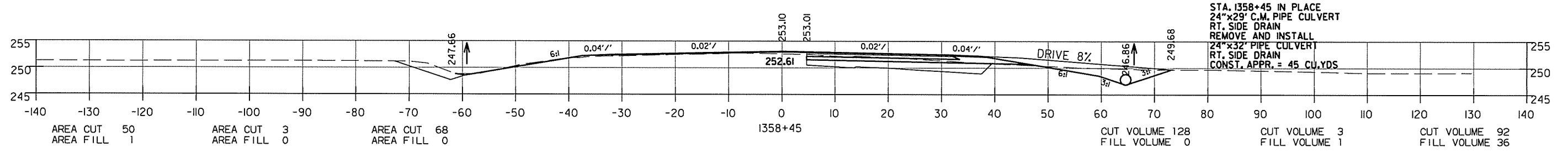


STAGE 2 STAGE 1 UNDERCUT

STA. 1352+00.00 TO STA. 1355+40.00

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.	CA0501		144	151

2 CROSS SECTIONS

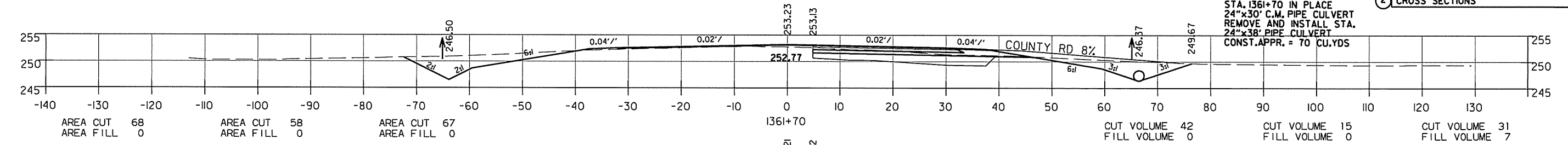


STA. 1356+00.00 TO STA. 1358+45.00

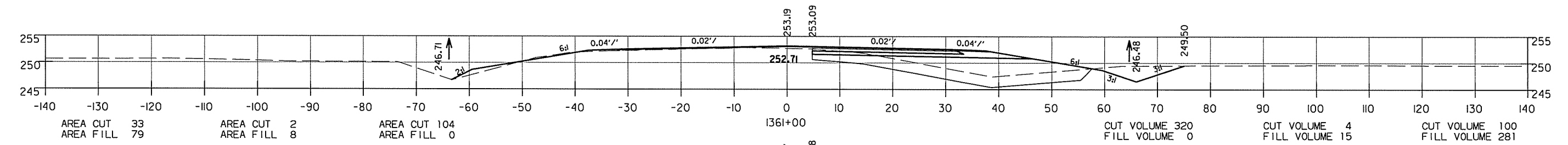
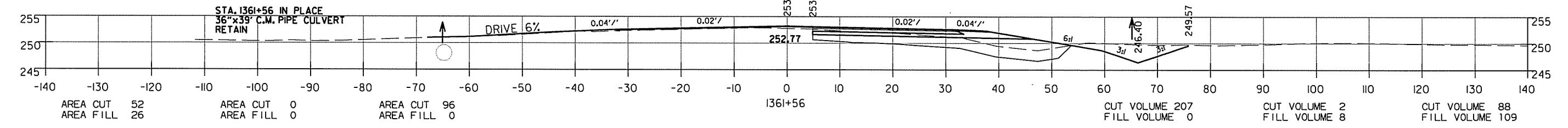
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.						CA0501	145	151

2 CROSS SECTIONS

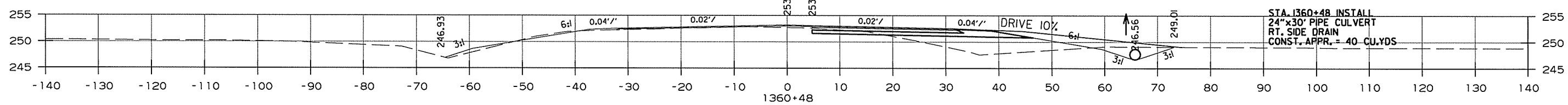
STA. 1361+70 IN PLACE
24"x30" C.M. PIPE CULVERT
REMOVE AND INSTALL STA.
24"x38" PIPE CULVERT
CONST. APPR. = 70 CU.YDS



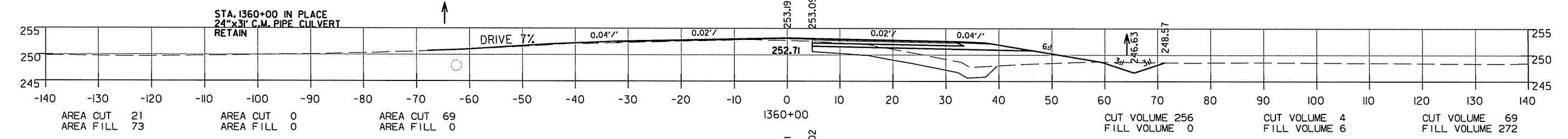
STA. 1361+56 IN PLACE
36"x39" C.M. PIPE CULVERT
RETAIN



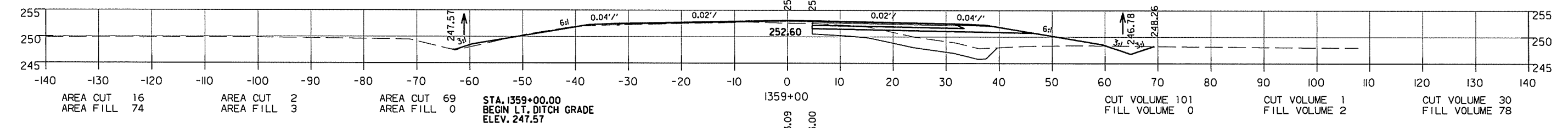
STA. 1360+48 INSTALL
24"x30" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 40 CU.YDS



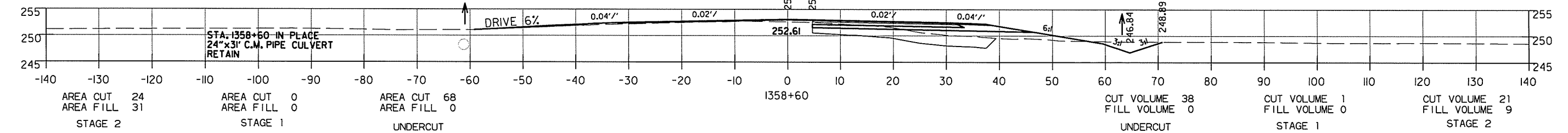
STA. 1360+00 IN PLACE
24"x31" C.M. PIPE CULVERT
RETAIN



STA. 1359+00.00
BEGIN LT. DITCH GRADE
ELEV. 247.57



STA. 1358+60 IN PLACE
24"x31" C.M. PIPE CULVERT
RETAIN

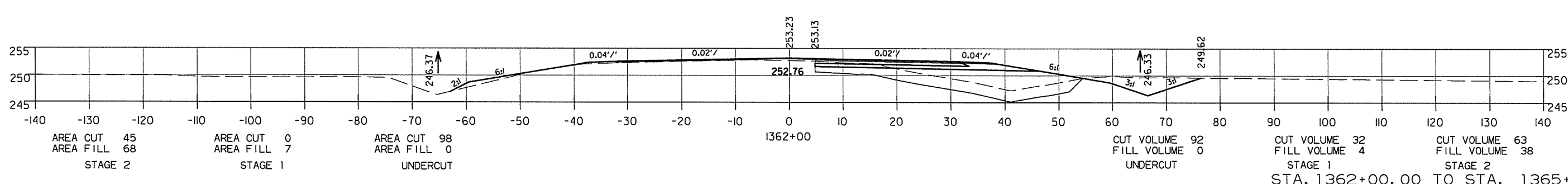
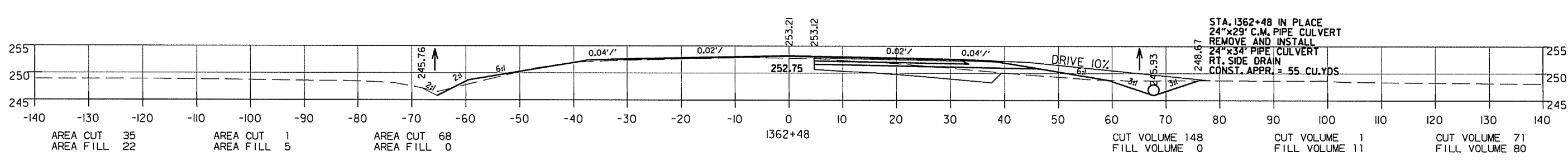
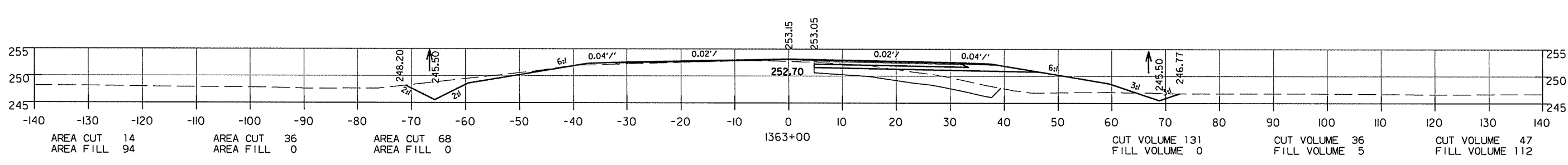
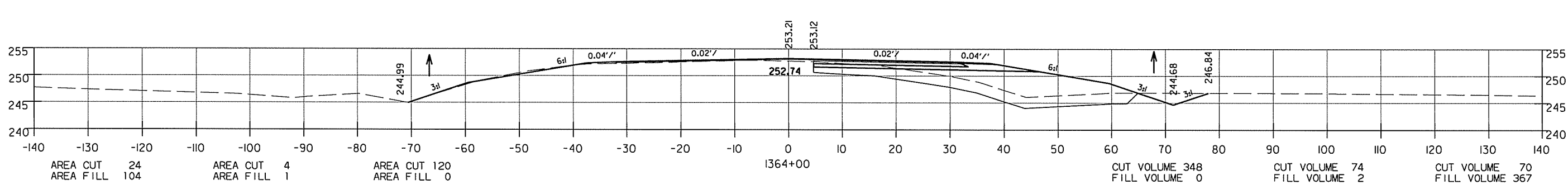
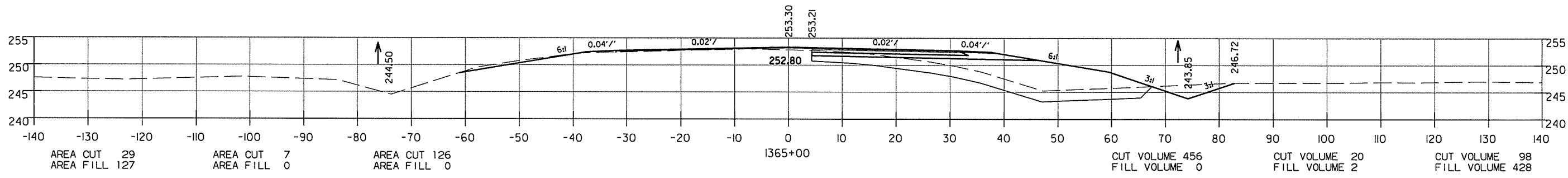
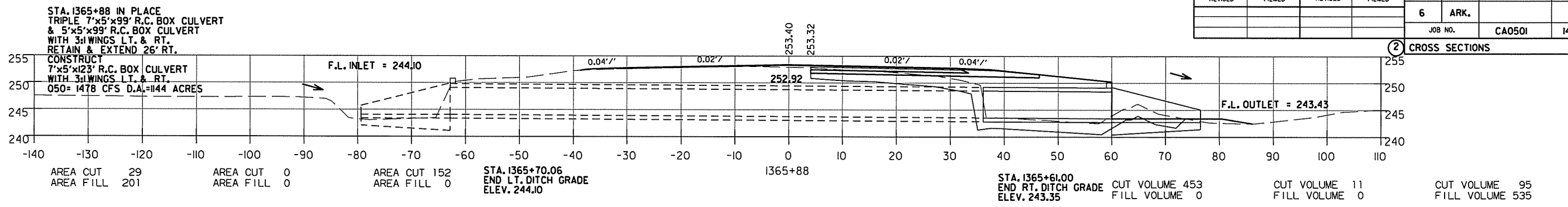


STAGE 2 STAGE 1 UNDERCUT UNDERCUT STAGE 1 STAGE 2

STA. 1358+60.00 TO STA. 1361+70.00

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.	CA0501		146	151

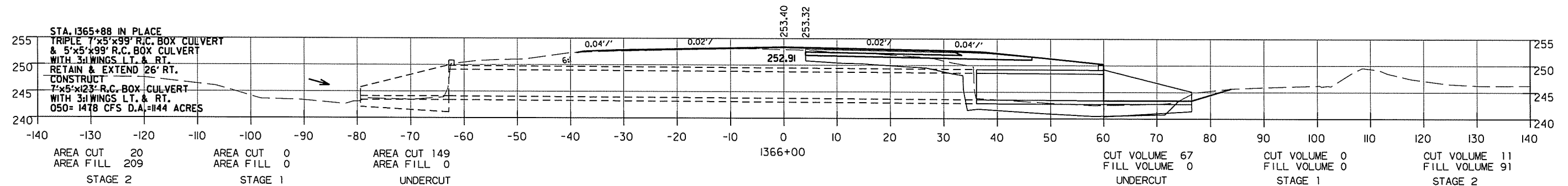
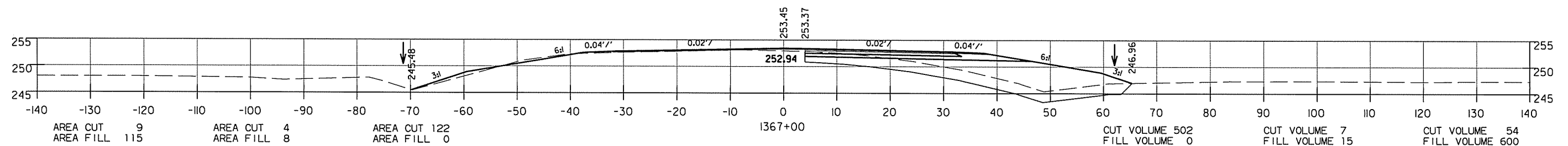
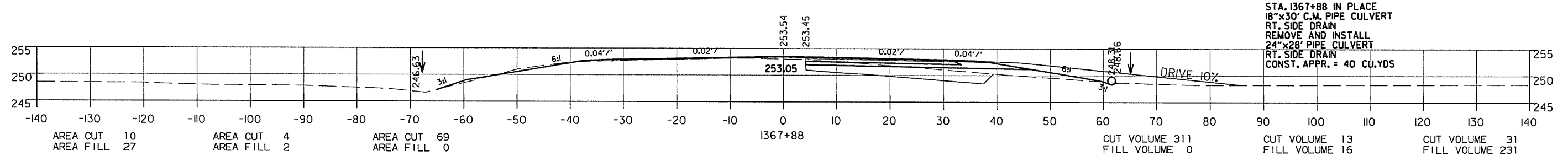
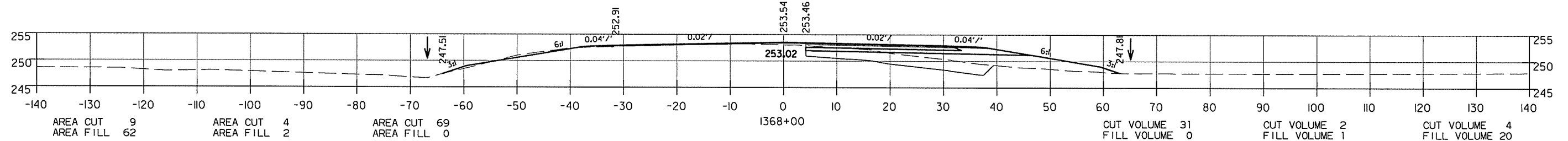
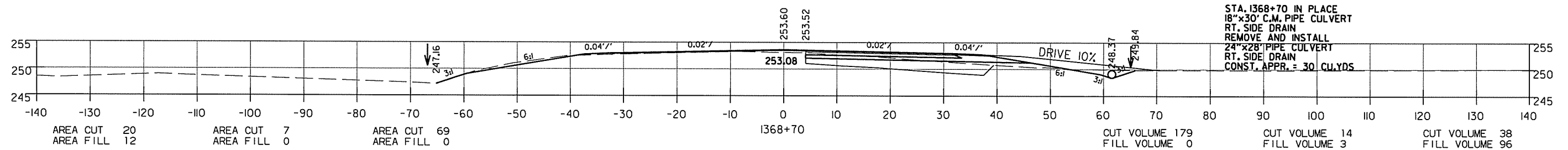
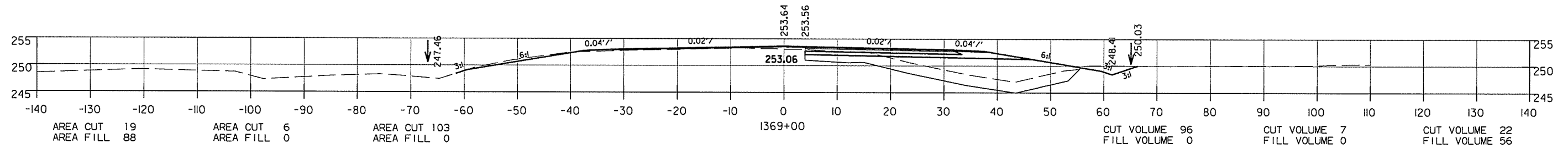
2 CROSS SECTIONS



STA. 1362+00.00 TO STA. 1365+88.00

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.	CA0501		147	151

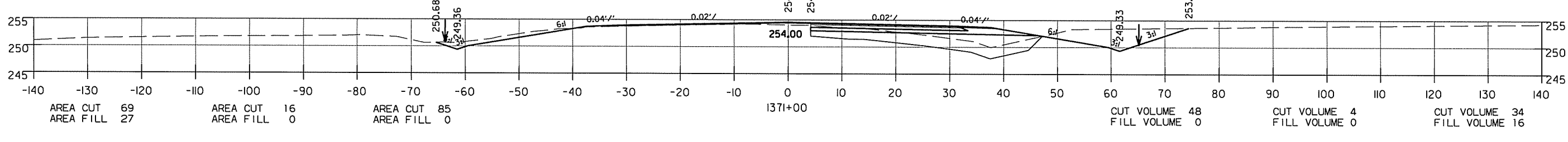
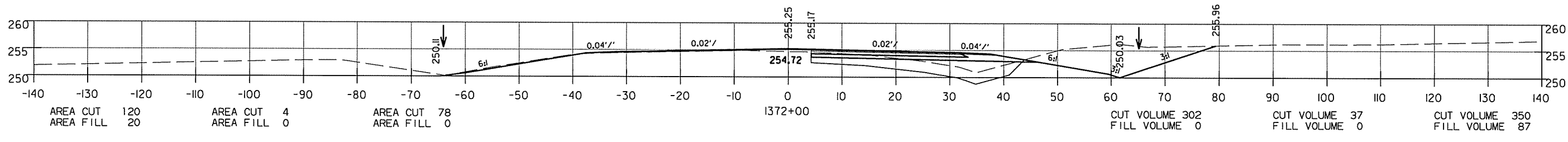
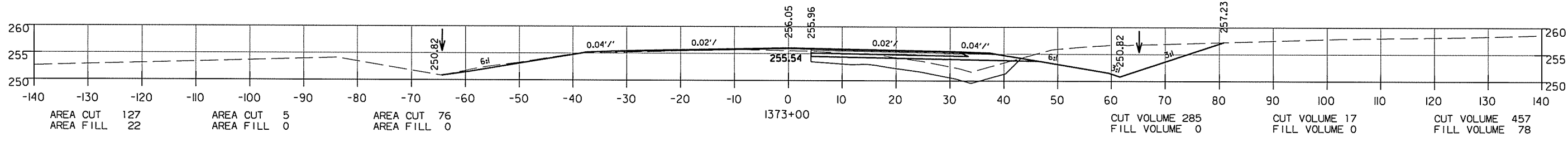
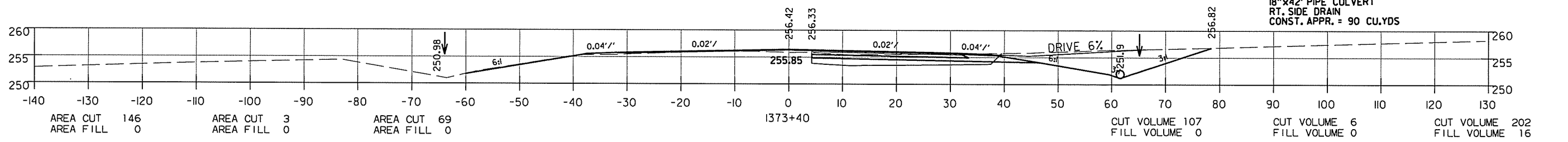
2 CROSS SECTIONS



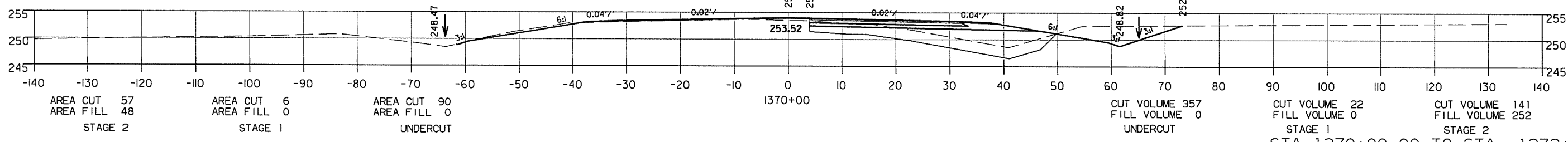
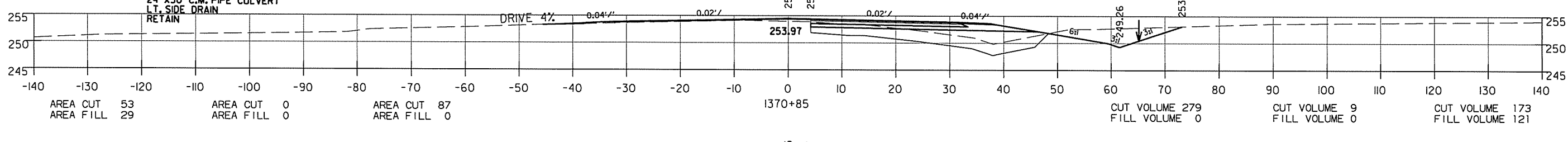
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	CA0501		148	151

2 CROSS SECTIONS

STA. 1373+40 IN PLACE
 18"x29' C.M. PIPE CULVERT
 RT. SIDE DRAIN
 REMOVE AND INSTALL
 18"x42' PIPE CULVERT
 RT. SIDE DRAIN
 CONST. APPR. = 90 CU.YDS



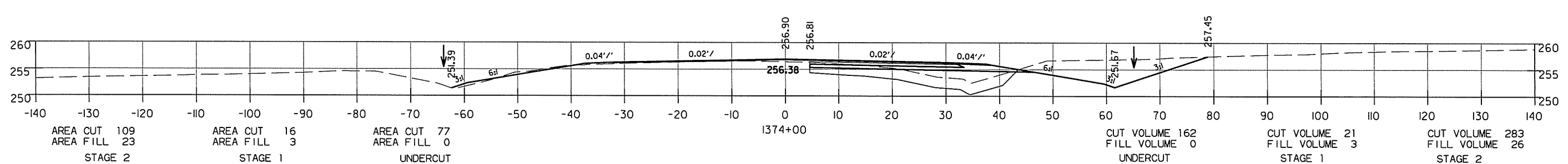
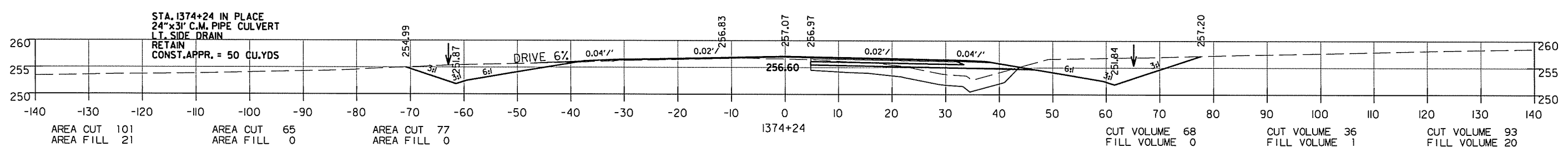
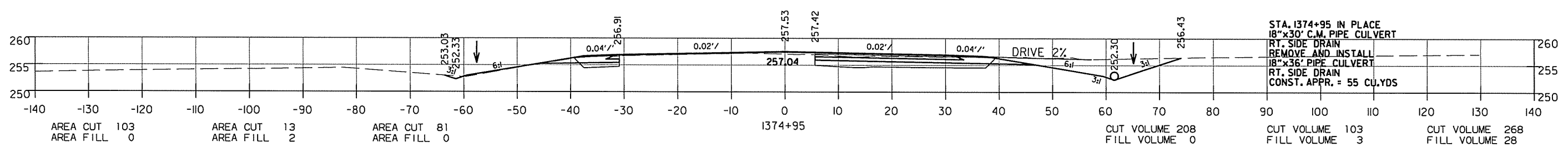
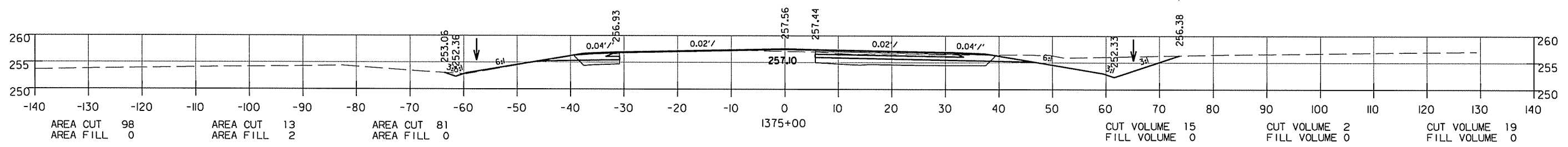
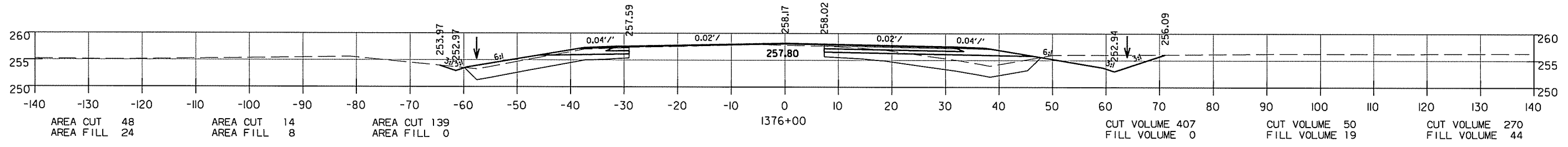
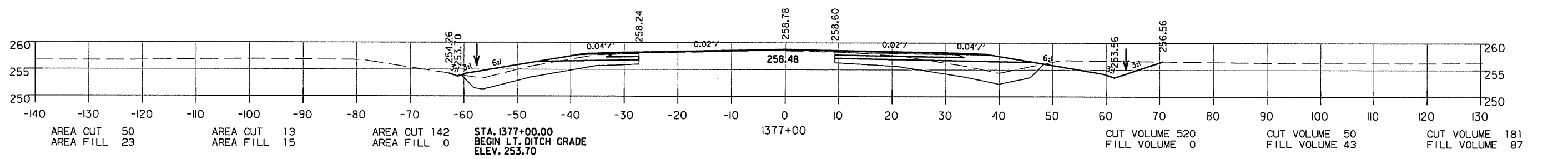
STA. 1370+85 IN PLACE
 24"x30' C.M. PIPE CULVERT
 LT. SIDE DRAIN
 RETAIN



STA. 1370+00.00 TO STA. 1373+40.00

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.	CA0501		149	151

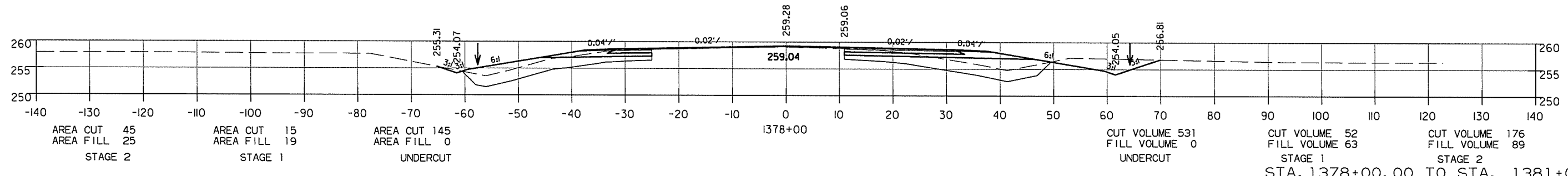
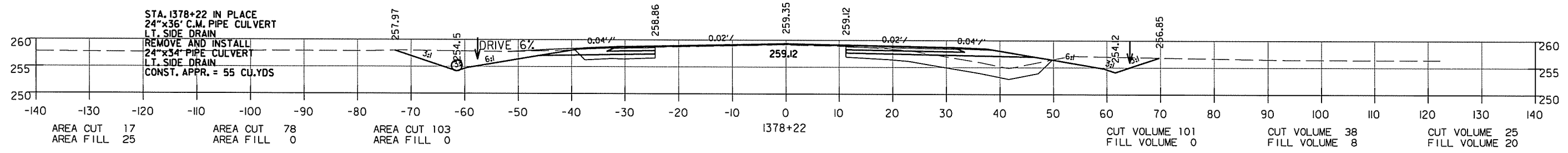
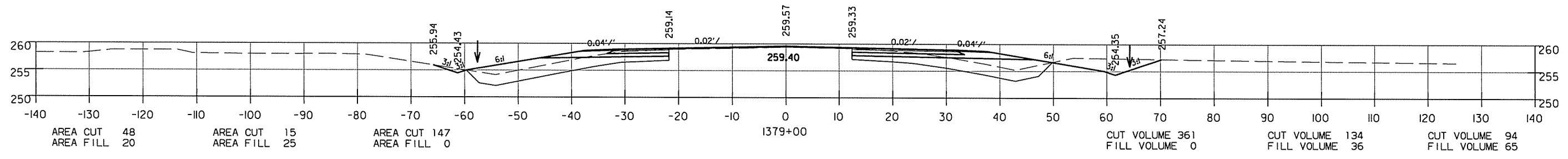
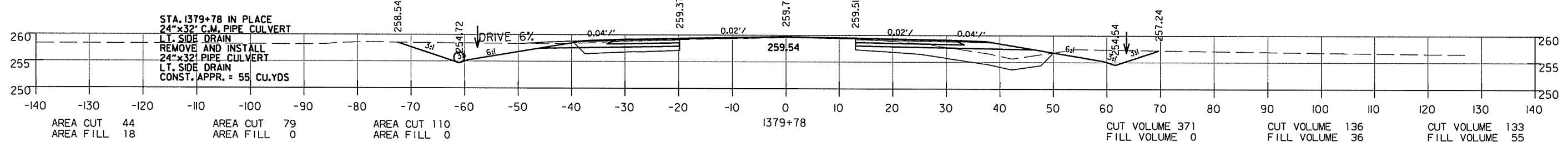
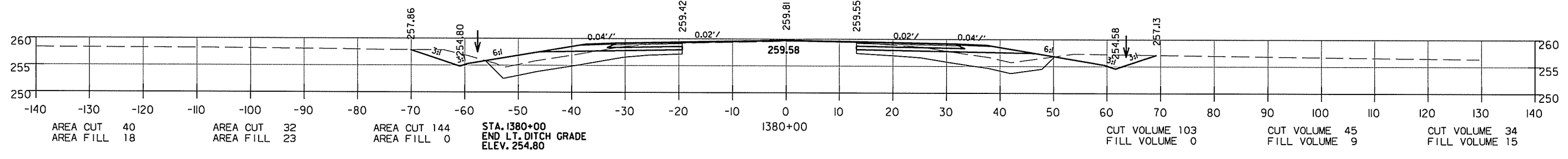
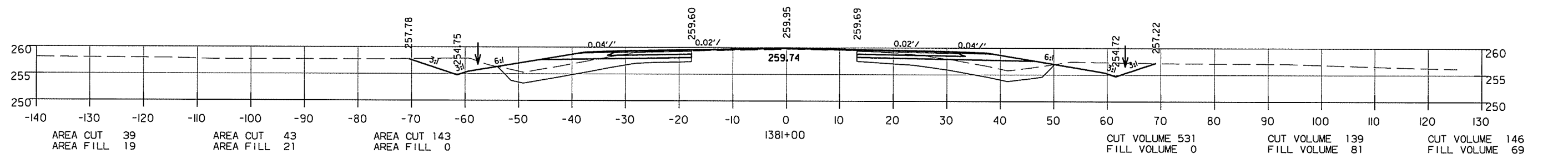
2 CROSS SECTIONS



STA. 1374+00.00 TO STA. 1377+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.	CA0501	150	151	

2 CROSS SECTIONS



STA. 1378+00.00 TO STA. 1381+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.	CA0501		151	151

2 CROSS SECTIONS

