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.		061561	1	72
				(2)	HWY. 5 - PERRY CO. LINE (SAFETY IMPVTS.) (SEL. SECS.) (S)			

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

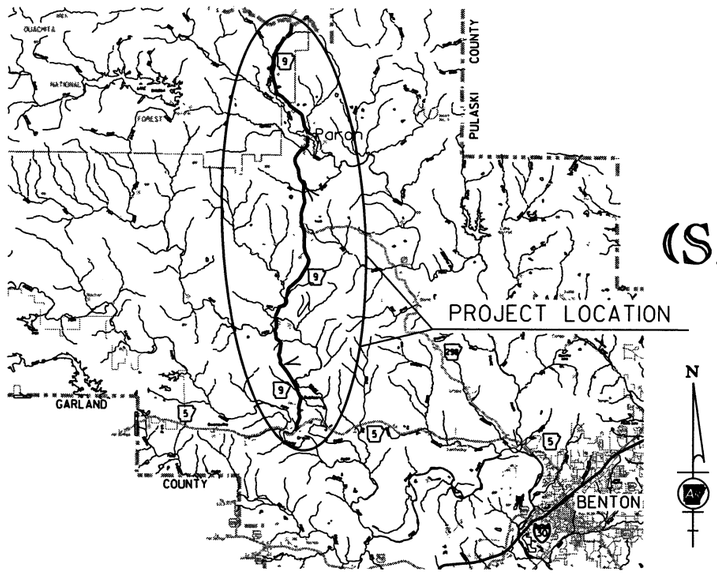
HWY. 5 - PERRY CO. LINE (SAFETY IMPVTS.) (SEL. SECS.) (S)

SALINE COUNTY

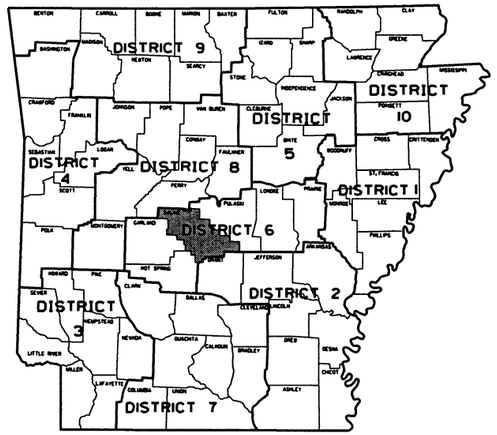
ROUTE 9 SECTION 5

FED. AID PROJECT HSIP-0062(46)

JOB 061561

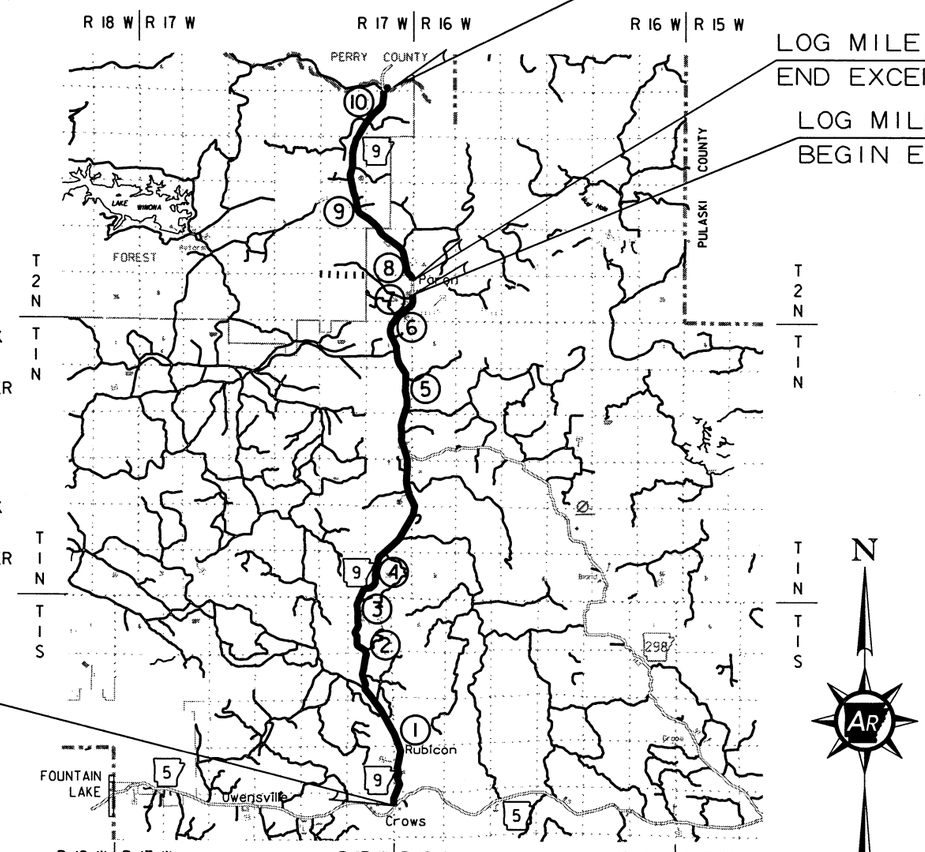


VICINITY MAP



ARK. HWY. DIST. NO. 6

NOT TO SCALE



STRUCTURES OVER 20'-0" SPAN
(FOR INFORMATION ONLY)

(4) LOG MILE 5.68 IN PLACE
DBL. 10' X 6' X 43' R.C. BOX CULVERT
23.26' SPAN WIDTH
WITH 3:1 WINGS LT & RT
RETAIN

(5) LOG MILE 10.05 IN PLACE
TRP. 10' X 6' X 38' R.C. BOX CULVERT
23.26' SPAN WIDTH
WITH 3:1 WINGS LT & RT
RETAIN

(9) LOG MILE 14.76 IN PLACE
DBL. 15' X 5' X 40' R.C. BOX CULVERT
23.26' SPAN WIDTH
WITH 3:1 WINGS LT & RT
RETAIN

(10) LOG MILE 16.90 IN PLACE
TRP. 9' X 5' X 44' R.C. BOX CULVERT
23.26' SPAN WIDTH
WITH 3:1 WINGS LT & RT
RETAIN

EXCEPTIONS TO JOB 061561 (BRIDGE DATA)
(FOR INFORMATION ONLY)

(1) BR. END LOG MILE 1.46
BRIDGE NO. M0255
24'-0" CLEAR ROADWAY
57'-0" TOTAL LENGTH
REINFORCED CONCRETE
CHANNEL BEAMS
BR. END LOG MILE 1.47

(2) BR. END LOG MILE 3.66
BRIDGE NO. M0256
24'-0" CLEAR ROADWAY
38'-0" TOTAL LENGTH
REINFORCED CONCRETE
CHANNEL BEAMS
BR. END LOG MILE 3.67

(3) BR. END LOG MILE 4.66
BRIDGE NO. 03635
24'-0" CLEAR ROADWAY
312'-0" TOTAL LENGTH
REINFORCED CONCRETE DECK
ON STEEL MULTI-BEAMS
BR. END LOG MILE 4.72

(6) BR. END LOG MILE 11.96
BRIDGE NO. 03098
24'-0" CLEAR ROADWAY
168'-0" TOTAL LENGTH
REINFORCED CONCRETE
SLAB SPANS
BR. END LOG MILE 11.99

(7) BR. END LOG MILE 12.44
BRIDGE NO. 06644
24'-0" CLEAR ROADWAY
152'-0" TOTAL LENGTH
REINFORCED CONCRETE DECK
ON STEEL MULTI-BEAMS
BR. END LOG MILE 12.47
(LENGTH INCLUDED IN LARGER
EXCEPTION SHOWN ON MAP)

(8) BR. END LOG MILE 12.56
BRIDGE NO. 06645
24'-0" CLEAR ROADWAY
252'-0" TOTAL LENGTH
REINFORCED CONCRETE DECK
ON STEEL MULTI-BEAMS
BR. END LOG MILE 12.61
(LENGTH INCLUDED IN LARGER
EXCEPTION SHOWN ON MAP)

DESIGN TRAFFIC DATA

DESIGN YEAR	2038
2018 ADT	1200
2038 ADT	1600
2038 DHV	176
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	6%
DESIGN SPEED	55 MPH

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7656
M. E. BANKS

5-17-18

DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE 34° 36' 52" N	LATITUDE 34° 43' 40" N	LATITUDE 34° 50' 21" N
LONGITUDE 92° 46' 09" W	LONGITUDE 92° 45' 46" W	LONGITUDE 92° 46' 02" W

GROSS LENGTH OF PROJECT				92241.60	FEET OR	17.470	MILES
NET	-	-	ROADWAY	88920.48	-	16.841	-
NET	-	-	BRIDGES	0.00	-	0.000	-
NET	-	-	PROJECT	88920.48	-	16.841	-

10/25/2017

R061561.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
7-9-18				6	ARK.			
7-16-18				JOB NO.		061561	2	72

(2) INDEX OF SHEETS, STD. DRWGS., GOV. SPECS., & GEN. NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-16-18

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS, STANDARD DRAWINGS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES
3	TYPICAL SECTIONS OF IMPROVEMENT
4 - 7	SPECIAL DETAILS
8 - 37	TEMPORARY EROSION CONTROL DETAILS
38	MAINTENANCE OF TRAFFIC
39	PERMANENT PAVEMENT MARKING DETAILS
40 - 41	QUANTITIES
42	SUMMARY OF QUANTITIES AND REVISIONS
43 - 72	PLAN SHEETS

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
GR-8	GUARD RAIL DETAILS	11-16-17
GR-8A	GUARD RAIL DETAILS	11-16-17
GR-9	GUARD RAIL DETAILS	04-17-08
GR-9A	GUARD RAIL DETAILS	04-17-08
GR-10	GUARD RAIL DETAILS	11-16-17
GR-11	GUARD RAIL DETAILS	11-16-17
GR-12	GUARD RAIL DETAILS	11-16-17
MB-1	MAILBOX DETAILS	11-18-04
PM-1	PAVEMENT MARKING DETAILS	06-01-17
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	10-18-96
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-13-17
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	09-02-15
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-2	TEMPORARY EROSION CONTROL DEVICES	06-02-94
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94

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 061561
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
605-1	CONCRETE DITCH PAVING
617-1	GUARDRAIL TERMINAL (TYPE 2)
620-1	MULCH COVER
JOB 061561	BIDDING REQUIREMENTS AND CONDITIONS
JOB 061561	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 061561	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 061561	CARGO PREFERENCE ACT REQUIREMENTS
JOB 061561	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 061561	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 061561	LIQUID ANTI-STRIPPING ADDITIVE
JOB 061561	MANDATORY ELECTRONIC CONTRACT
JOB 061561	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 061561	OFF-SITE RESTRAINING CONDITIONS FOR NORTHERN LONG-EARED BATS
JOB 061561	PARTNERING REQUIREMENTS
JOB 061561	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB 061561	PROTECTION OF WATER QUALITY AND WETLANDS
JOB 061561	RUMBLE STRIPS
JOB 061561	STORM WATER POLLUTION PREVENTION PLAN
JOB 061561	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 061561	UTILITY ADJUSTMENTS
JOB 061561	VALUE ENGINEERING
JOB 061561	WARM MIX ASPHALT
JOB 061561	WATER POLLUTION CONTROL

GENERAL NOTES

1. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
2. 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.
3. 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.
4. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
5. 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.
6. 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.
7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
8. 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.

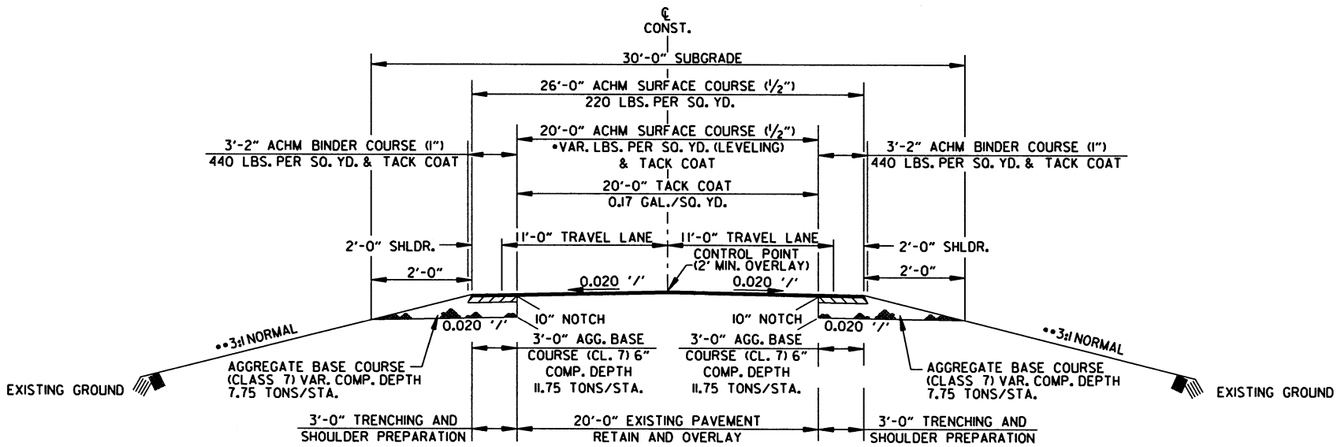
4/30/2018

R061561.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	3	72

(2) TYPICAL SECTION OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TANGENT SECTION NOTCH & WIDEN

SEC. 9 LM 0.00 - 1.46
SEC. 9 LM 1.47 - 3.66
SEC. 9 LM 3.67 - 4.66
SEC. 9 LM 4.72 - 11.96
SEC. 9 LM 11.99 - 12.27
SEC. 9 LM 12.79 - 17.47

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

••3:1 OR FLATTER WHEN POSSIBLE. MAY STEEPEN TO 2:1 WHEN NECESSARY FOR RIGHT OF WAY OR UTILITY REQUIREMENTS.

NOTES:
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. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY. BUT PAYMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS PAY ITEMS.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

11/8/2017

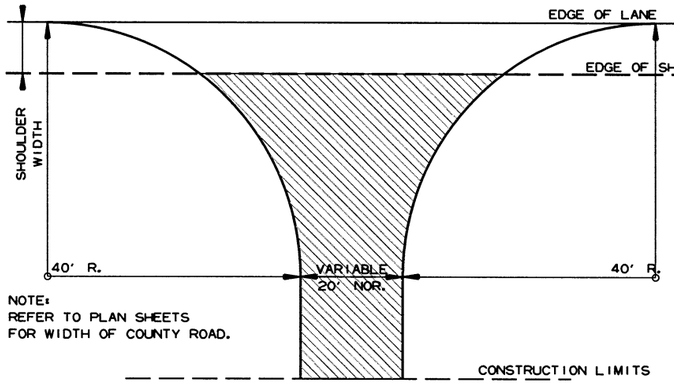
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TYPICAL SECTION OF IMPROVEMENT

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				6	ARK.			
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(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

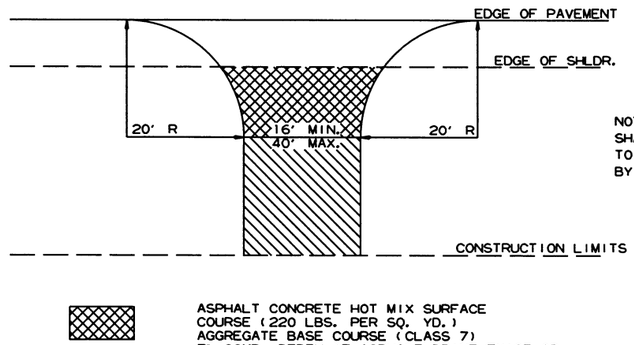


NOTE:
REFER TO PLAN SHEETS FOR WIDTH OF COUNTY ROAD.

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

ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.) AND AGGREGATE BASE COURSE (CLASS 7) 7" COMP. DEPTH

DETAIL FOR COUNTY ROAD TURNOUTS
OPEN SHOULDER SECTION



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

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

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

DETAIL FOR DRIVEWAY TURNOUTS
(COLLECTORS)

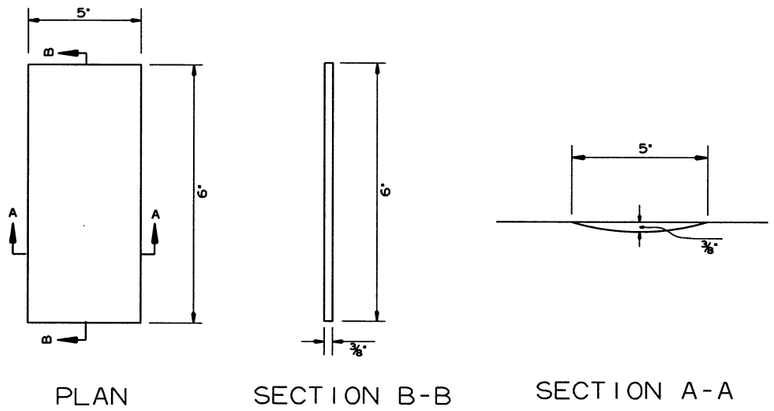
4/30/2018

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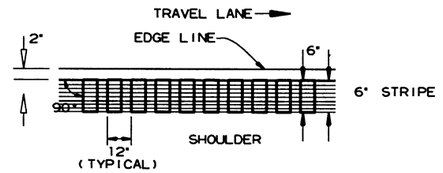
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

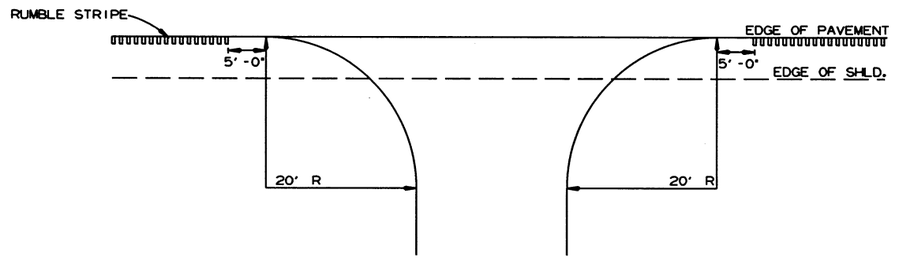


PLAN SECTION B-B SECTION A-A

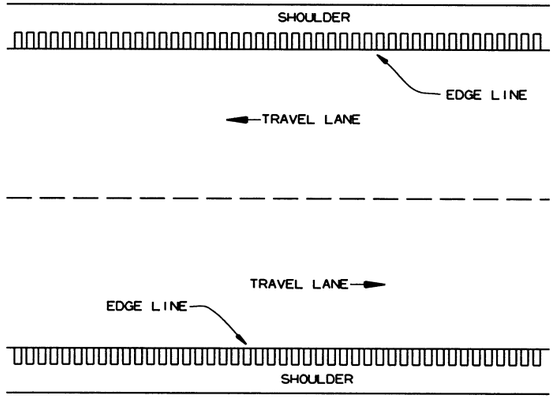
DETAILS OF RUMBLE STRIPE



LOCATION PLAN OF RUMBLE STRIPE
LEFT OR RIGHT SHOULDER



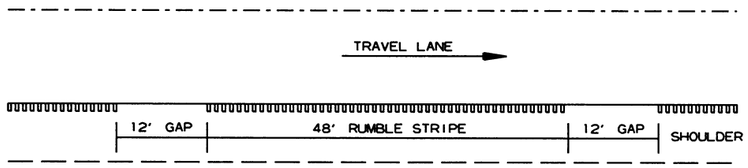
DETAIL FOR RUMBLE STRIPE GAP
AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

1. RUMBLE STRIPES SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPES SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. RUMBLE STRIPES SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPES HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPES HAVE NOT BEEN CONSTRUCTED.
4. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 6" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

DETAIL FOR GAP PATTERN RUMBLE STRIPE

4/30/2018

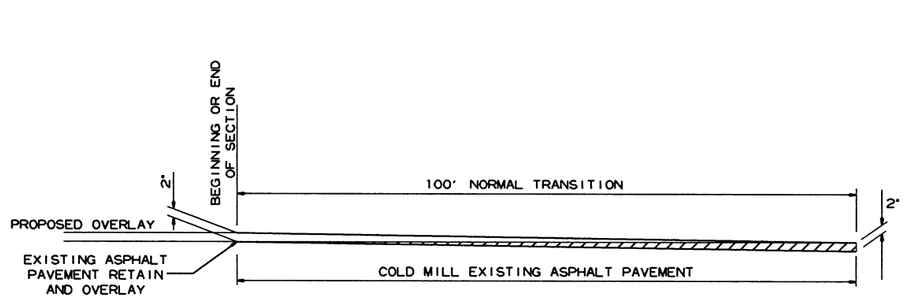
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SPECIAL DETAILS

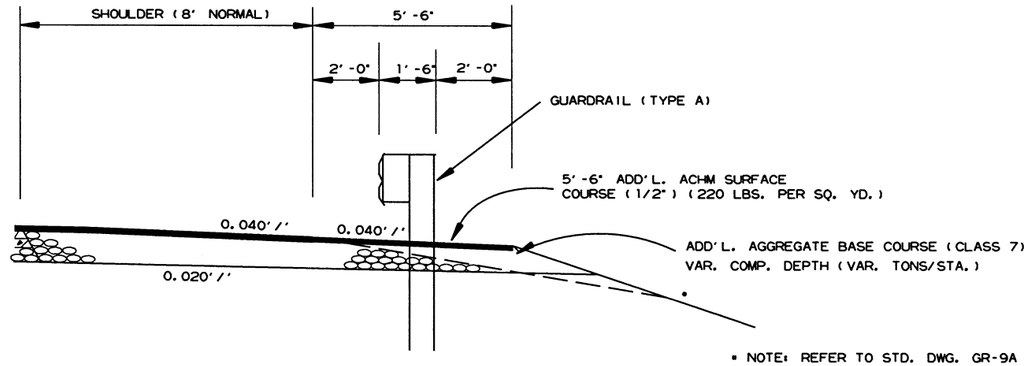
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(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



DETAIL FOR TRANSITIONS



* NOTE: REFER TO STD. DWG. GR-9A FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

WIDENING FOR GUARDRAIL

4/30/2018

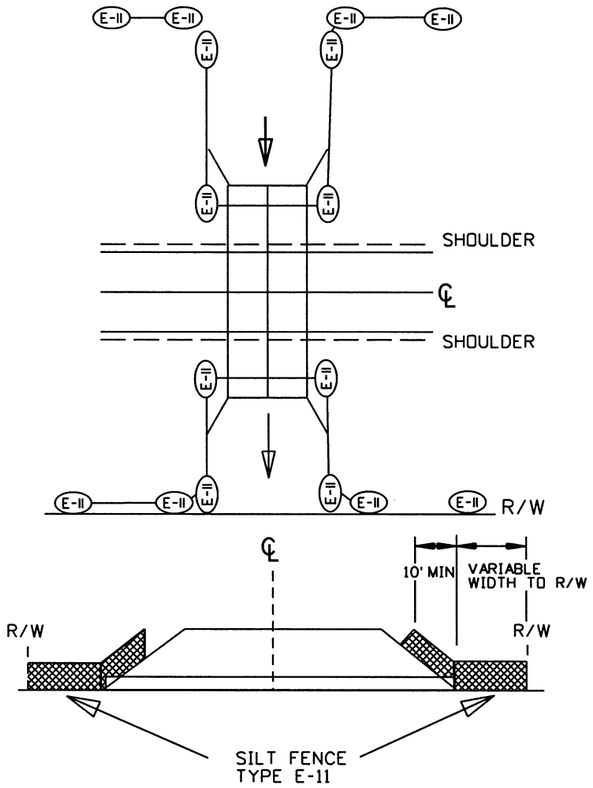
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SPECIAL DETAILS

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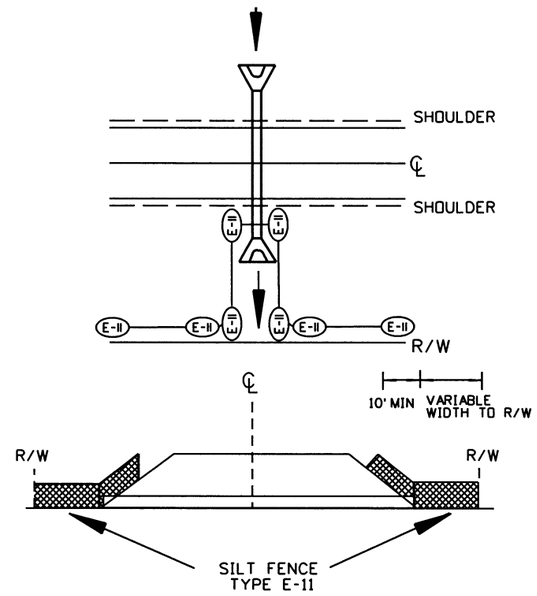
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



DETAIL OF SILT FENCE

AT R.C. BOX



DETAIL OF SILT FENCE

AT CROSS DRAINS

4/30/2018

R061561.DGN

FOR INFORMATION ONLY

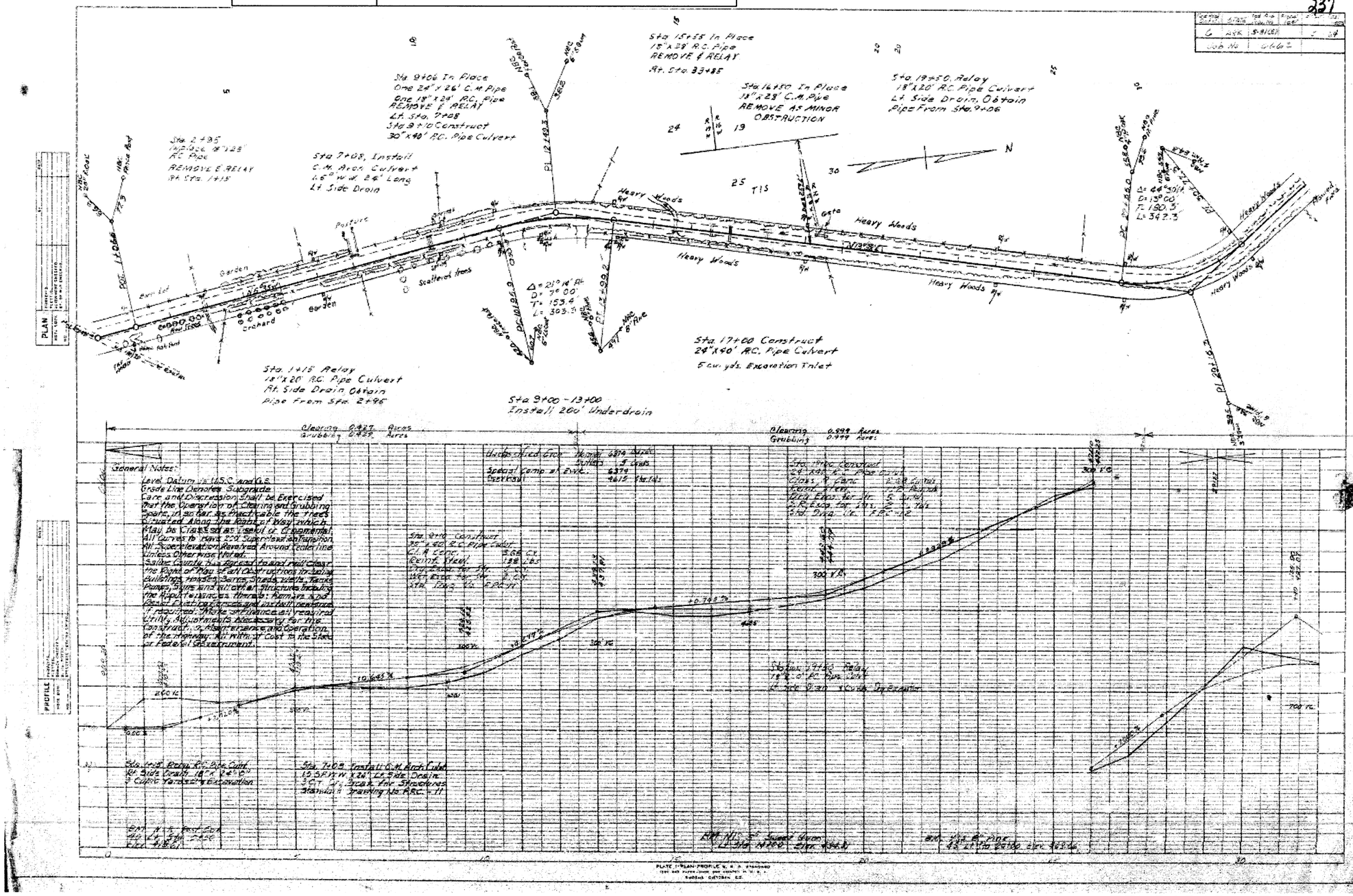
REVISIONS

DATE OF REVISION	REVISION

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

FOR INFORMATION ONLY

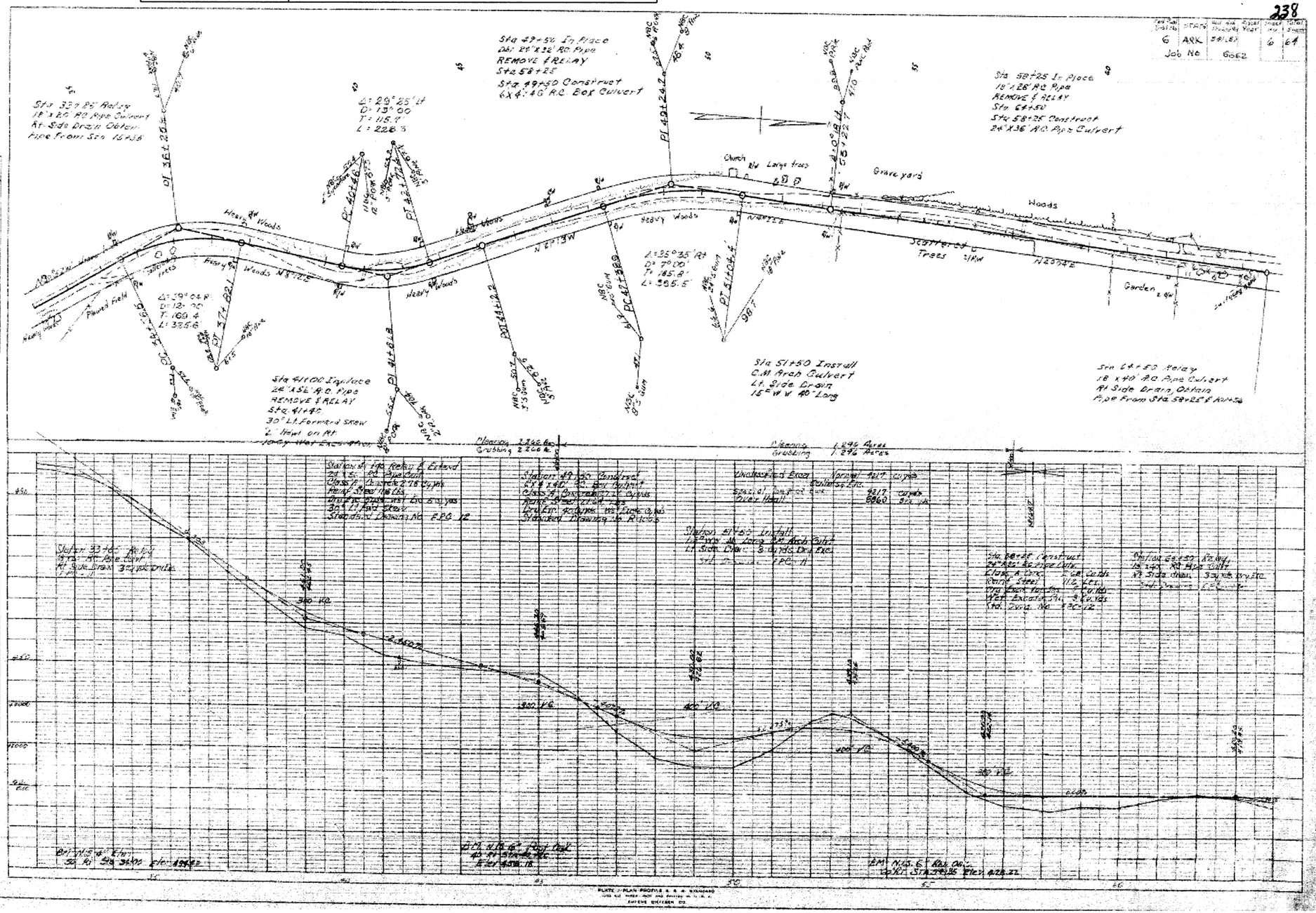
REVISIONS

DATE OF REVISION	REVISION

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.		061561	9	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

R061561.DGN 4/30/2018

FOR INFORMATION ONLY

REVISIONS

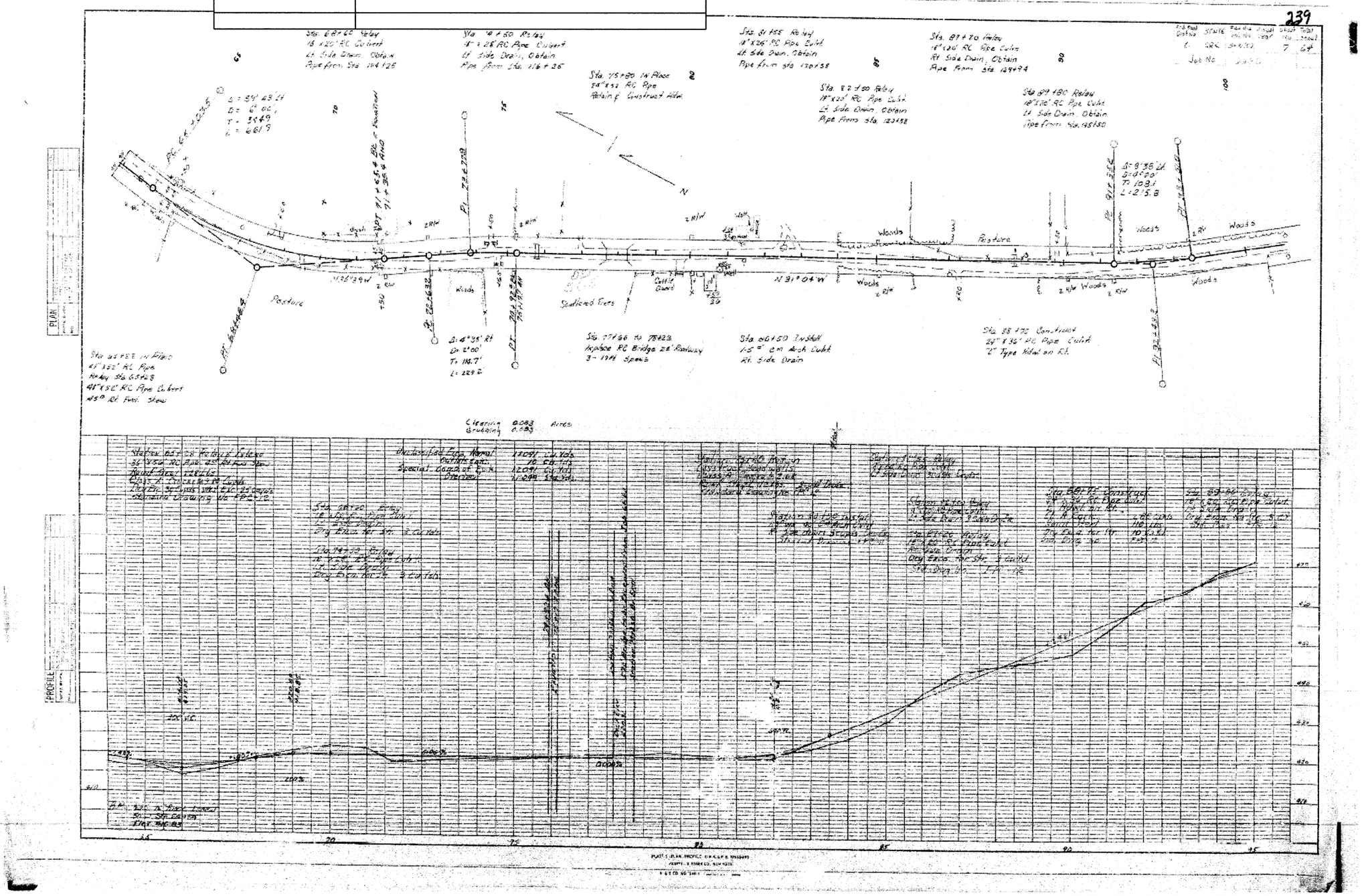
DATE OF REVISION	REVISION

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.		061561	10	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11425
TRINITY D. SMITH
5-15-18

239



4/30/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

FOR INFORMATION ONLY

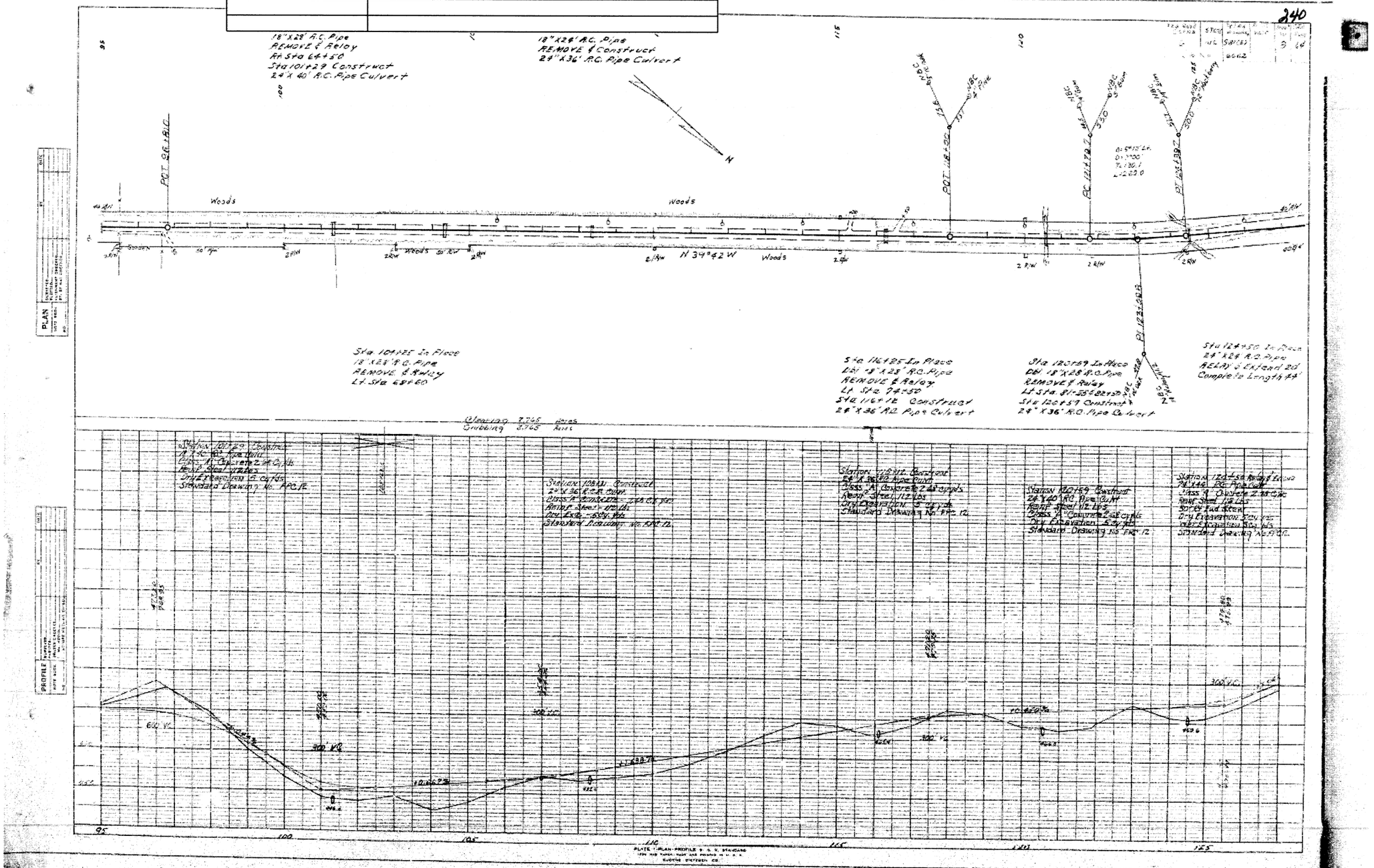
REVISIONS

DATE OF REVISION	REVISION

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.	061561		11	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

FOR INFORMATION ONLY

REVISIONS

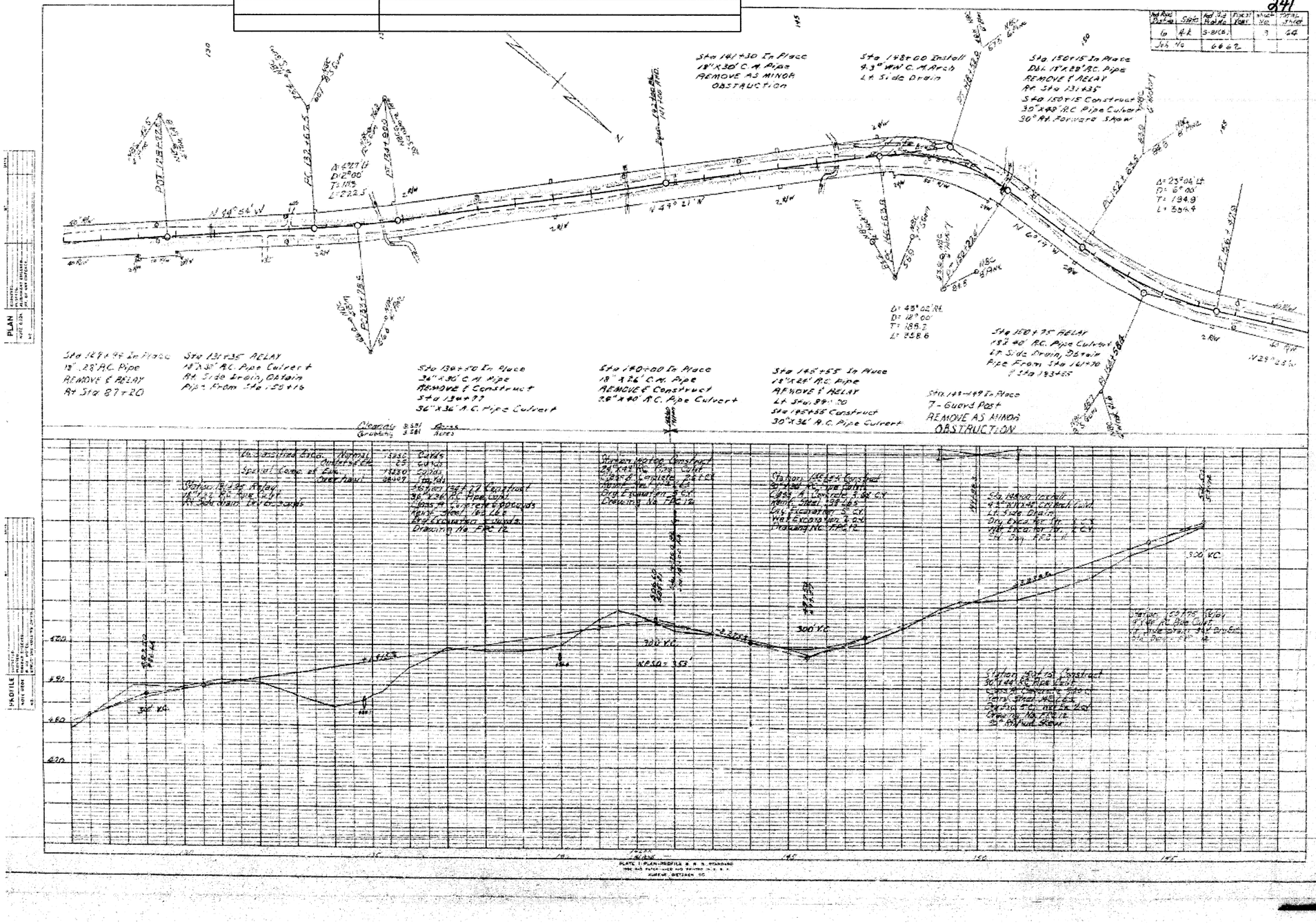
DATE OF REVISION	REVISION

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.		061561	12	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

241


Sta 161+30 In Place
18"X30" C.M. Pipe
REMOVE AS MINOR OBSTRUCTION
Sta 148+00 Install
4.3" WW C.M. Arch
Lt. Side Drain
Sta 150+15 In Place
Dbl. 17"x28" R.C. Pipe
REMOVE & RELAY
Frm Sta 131+35
Sta 150+15 Construct
30"x48" R.C. Pipe Culvert
30° Rt. Forward Skew
Sta 169+99 In Place
18"x28" R.C. Pipe
REMOVE & RELAY
At Sta 87+20
Sta 131+35 RELAY
18"x30" R.C. Pipe Culvert
Rt. Side Drain, Obtain
Pipe From Sta 150+15
Sta 130+50 In Place
36"x36" C.M. Pipe
REMOVE & Construct
Sta 130+77
36"x36" R.C. Pipe Culvert
Sta 160+00 In Place
18"x26" C.M. Pipe
REMOVE & RELAY
28"x40" R.C. Pipe Culvert
Sta 165+55 In Place
18"x26" R.C. Pipe
REMOVE & RELAY
Lt. Sta. 89+20
Sta 165+55 Construct
30"x36" R.C. Pipe Culvert
Sta 169+49 In Place
7-Guard Post
REMOVE AS MINOR OBSTRUCTION
Sta 160+95 RELAY
18"x 40" R.C. Pipe Culvert
LT. Side Drain, Obtain
Pipe From Sta 161+70
& Sta 193+65
Δ= 43°02' Rt.
D= 18°00'
T= 186.2
L= 358.6
Δ= 23°04' Lt.
D= 6°00'
T= 194.9
L= 384.4
PLAN
PROFILE
Clearing & Grubbing 5.5 Ac.
Borrow 3.5 Ac.
Unclassified Excav. Normal 1250 CuYds
Special Cond. of Exc. Over haul 11320 CuYds
Structure Excav. 2667 CuYds
Sta 131+35 Relay
18"x30" R.C. Pipe Culvert
Rt. Side Drain, Obtain Pipe from
Sta 150+15
Sta 130+77 Construct
36"x36" R.C. Pipe Culvert
Class A Concrete 9.5 CY
Reinf. Steel 1.0 LB
Cofferdams & Sheeting
Drawing No. FPE-12
Structure Excav. Construct
24"x48" R.C. Pipe Culvert
Class A Concrete 21.6 CY
Reinf. Steel 2.9 LB
Drg. Excavation 2 CY
Drawing No. FPE-12
Structure Excav. Construct
30"x36" R.C. Pipe Culvert
Class A Concrete 9.58 CY
Reinf. Steel 1.29 LB
Dry Excavation 2 CY
Drawing No. FPE-12
Sta 148+00 Install
4.3" WW C.M. Arch Culvert
Lt. Side Drain
Dry Excav. for Hdwl. 2 CY
Structure Excav. 2 CY
Drawing No. FPE-12
Structure Excav. Construct
30"x44" R.C. Pipe Culvert
Class A Concrete 5.80 CY
Reinf. Steel 46 LB
Dry Excav. for Hdwl. 2 CY
Structure Excav. 2 CY
Drawing No. FPE-12
30° Rt. Fwd. Skew
Sta 169+99 In Place
18"x28" R.C. Pipe
REMOVE & RELAY
At Sta 87+20
Sta 160+95 In Place
18"x40" R.C. Pipe Culvert
Lt. Side Drain, Obtain
Pipe From Sta 161+70
& Sta 193+65
Sta 150+15 Construct
30"x48" R.C. Pipe Culvert
30° Rt. Forward Skew
Sta 165+55 Construct
30"x36" R.C. Pipe Culvert
Sta 160+95 In Place
18"x40" R.C. Pipe Culvert
Lt. Side Drain, Obtain
Pipe From Sta 161+70
& Sta 193+65
Sta 131+35 In Place
18"x30" R.C. Pipe Culvert
Rt. Side Drain, Obtain
Pipe From Sta 150+15
Sta 130+77 In Place
36"x36" R.C. Pipe Culvert
Sta 160+00 In Place
18"x26" C.M. Pipe
REMOVE & Construct
28"x40" R.C. Pipe Culvert
Sta 169+99 In Place
18"x28" R.C. Pipe
REMOVE & RELAY
At Sta 87+20
Sta 131+35 RELAY
18"x30" R.C. Pipe Culvert
Rt. Side Drain, Obtain
Pipe From Sta 150+15
Sta 160+95 RELAY
18"x40" R.C. Pipe Culvert
LT. Side Drain, Obtain
Pipe From Sta 161+70
& Sta 193+65
Sta 165+55 In Place
18"x26" R.C. Pipe
REMOVE & RELAY
Lt. Sta. 89+20
Sta 165+55 Construct
30"x36" R.C. Pipe Culvert
Sta 169+49 In Place
7-Guard Post
REMOVE AS MINOR OBSTRUCTION
Sta 148+00 Install
4.3" WW C.M. Arch Culvert
Lt. Side Drain
Dry Excav. for Hdwl. 2 CY
Structure Excav. 2 CY
Drawing No. FPE-12
30° Rt. Fwd. Skew
Sta 150+15 Construct
30"x48" R.C. Pipe Culvert
Class A Concrete 9.58 CY
Reinf. Steel 46 LB
Dry Excav. for Hdwl. 2 CY
Structure Excav. 2 CY
Drawing No. FPE-12
30° Rt. Fwd. Skew
Sta 130+77 Construct
36"x36" R.C. Pipe Culvert
Class A Concrete 9.5 CY
Reinf. Steel 1.0 LB
Cofferdams & Sheeting
Drawing No. FPE-12
Sta 160+95 In Place
18"x40" R.C. Pipe Culvert
LT. Side Drain, Obtain
Pipe From Sta 161+70
& Sta 193+65

FOR INFORMATION ONLY

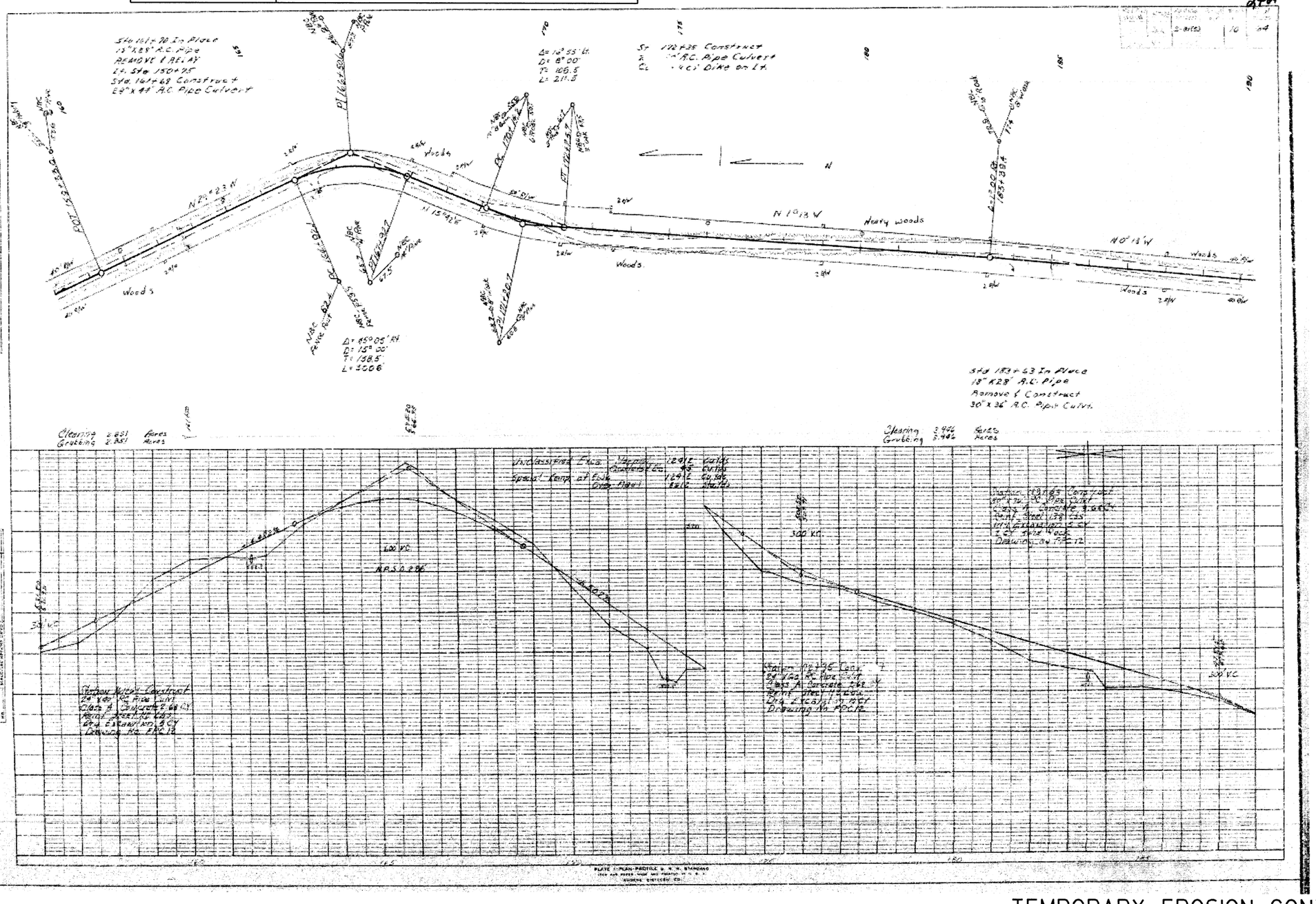
REVISIONS

DATE OF REVISION	REVISION

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.		061561	13	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

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FOR INFORMATION ONLY

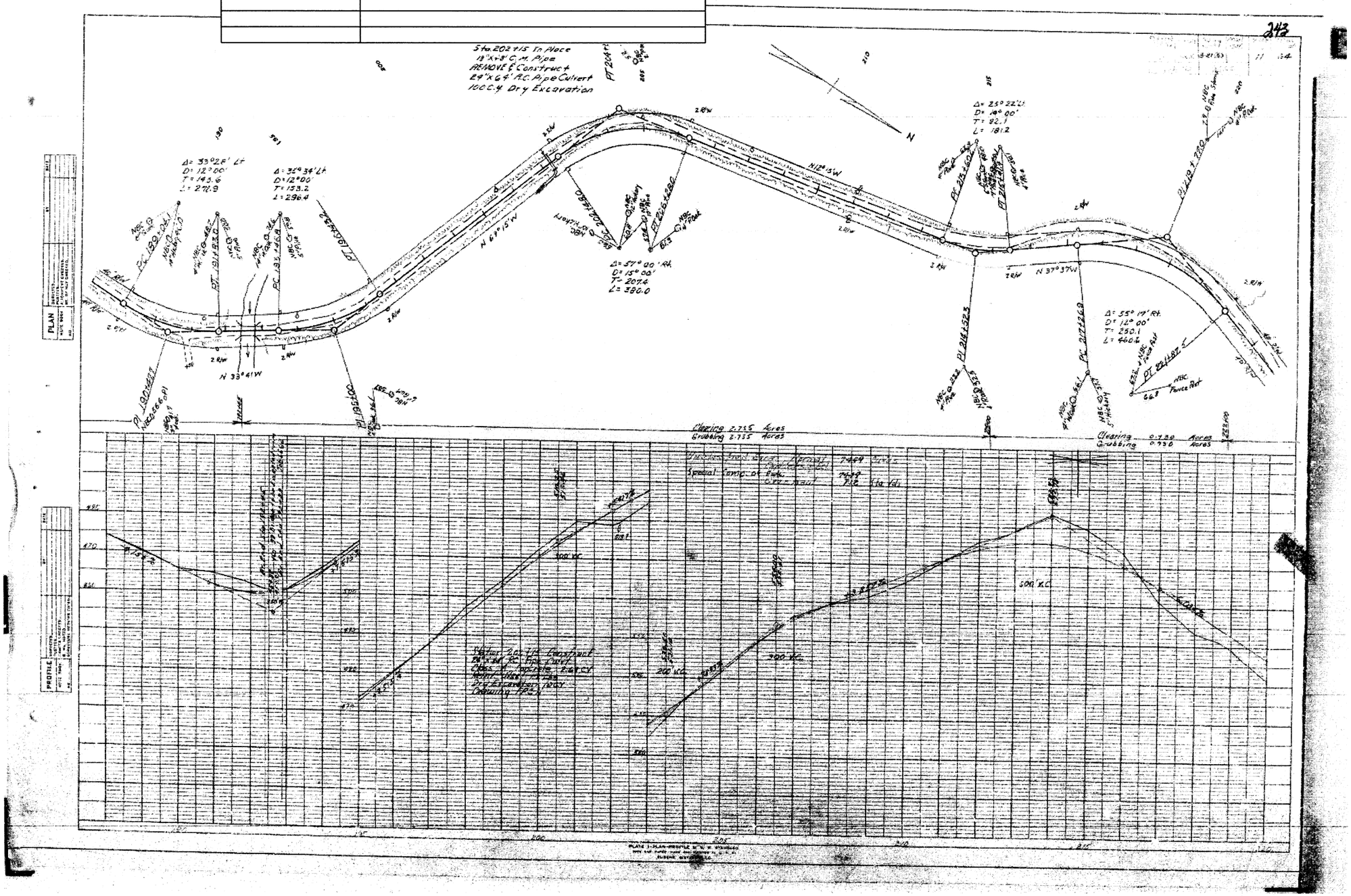
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	14	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

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TEMPORARY EROSION CONTROL DETAILS

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REVISIONS

DATE OF REVISION	REVISION

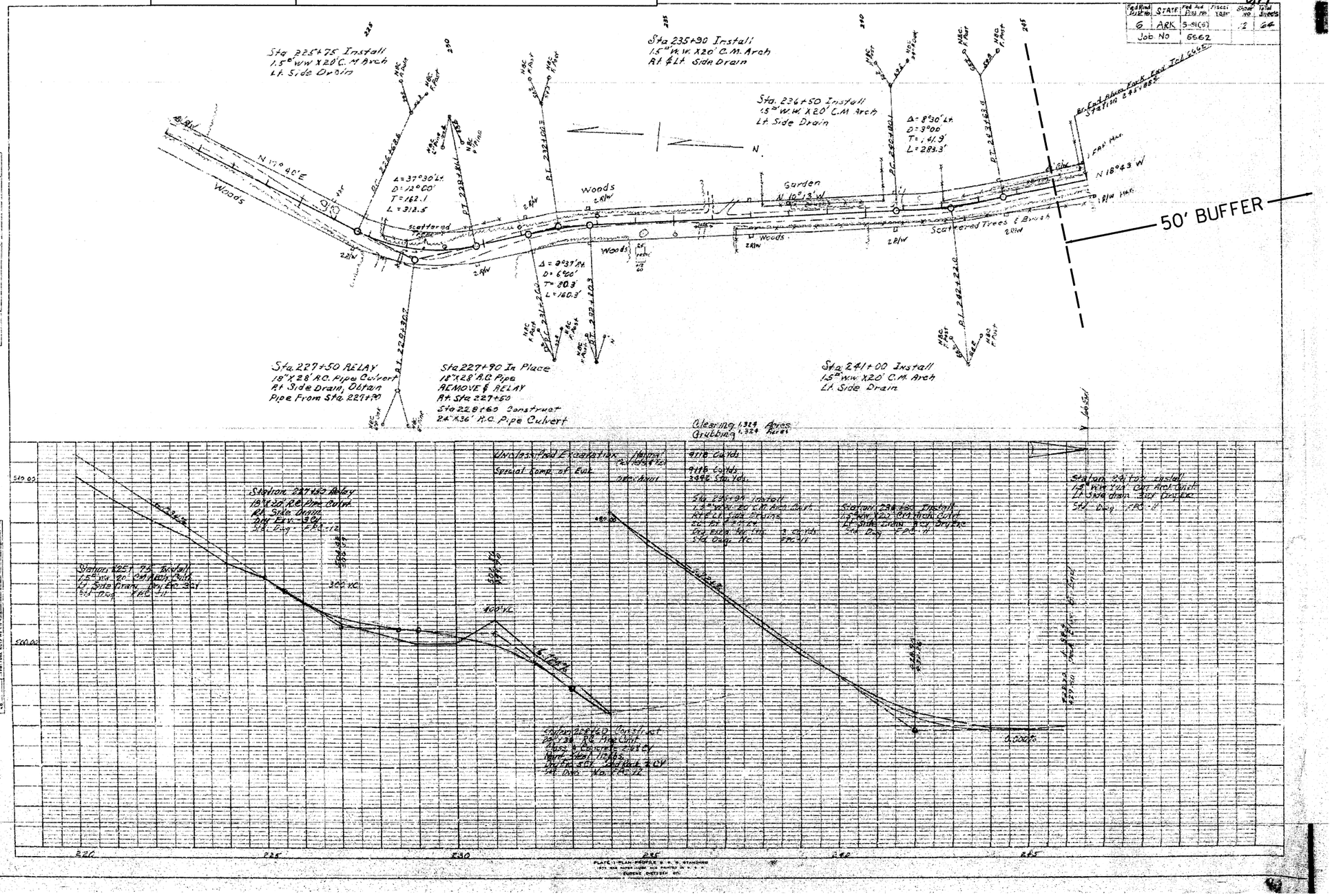
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				6	ARK.			
				JOB NO.		061561	15	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

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Fed.Rd. Dist.No.	STATE	Fed.Aid Proj.No.	Sheet No.	Total Sheets
6	ARK.	S-91(68)	12	64
Job No.	6662			



5/14/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

FOR INFORMATION ONLY

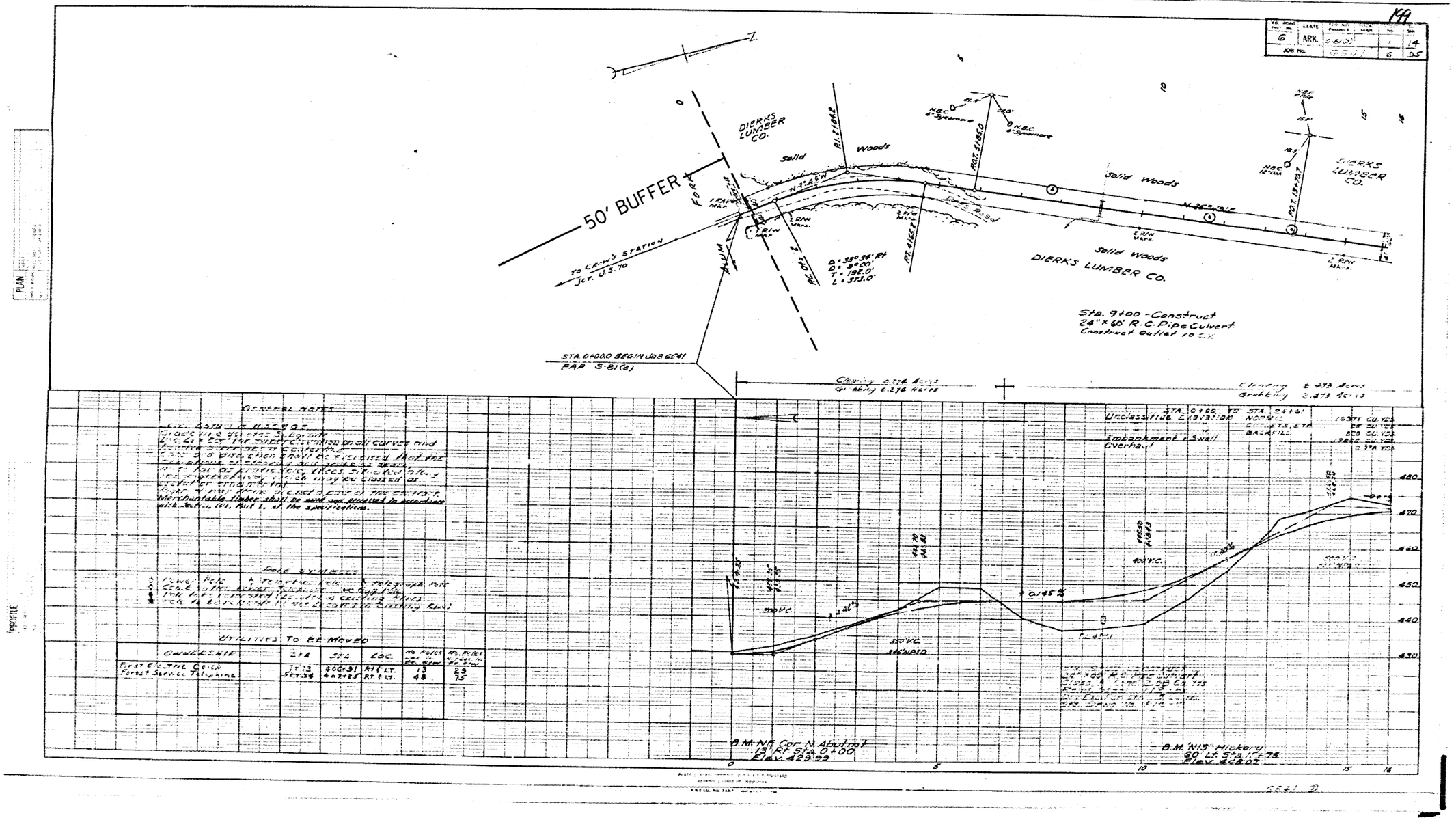
REVISIONS

DATE OF REVISION	REVISION

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.		061561	16	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



CONFLICTS	STA	STA	LOC.	NO. POLES per mile Sta.	NO. POLES Approx. to be Moved
Ark. Electric Co-op Forest Service Telephone	11+73 Set 34	6001-31 4n7+25	Rt & Lt. Rt & Lt.	13 48	23 73

5/14/2018

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TEMPORARY EROSION CONTROL DETAILS

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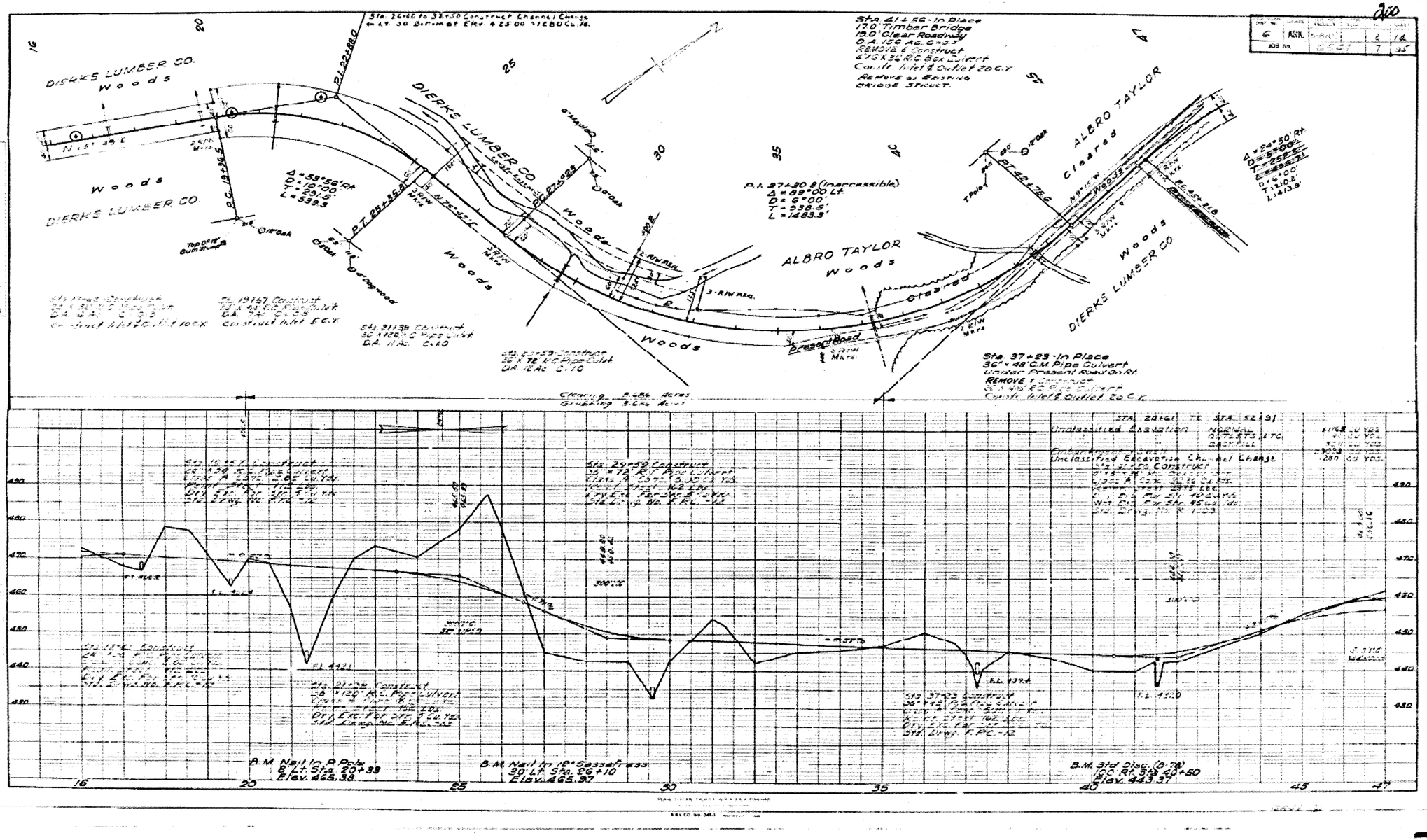
REVISIONS

DATE OF REVISION	REVISION

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				JOB NO.		061561	17	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

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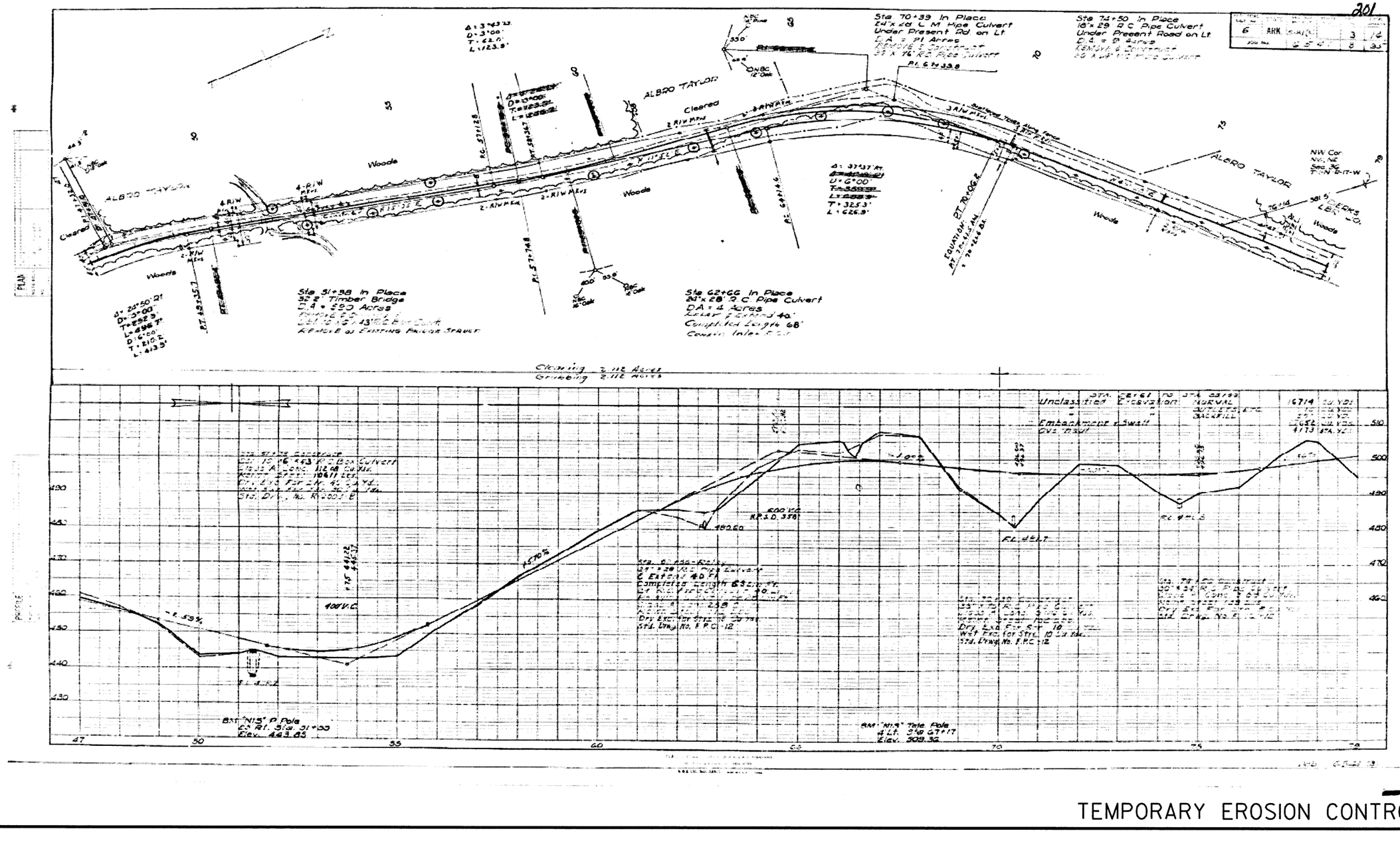
REVISIONS

DATE OF REVISION	REVISION

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				JOB NO.		061561	18	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

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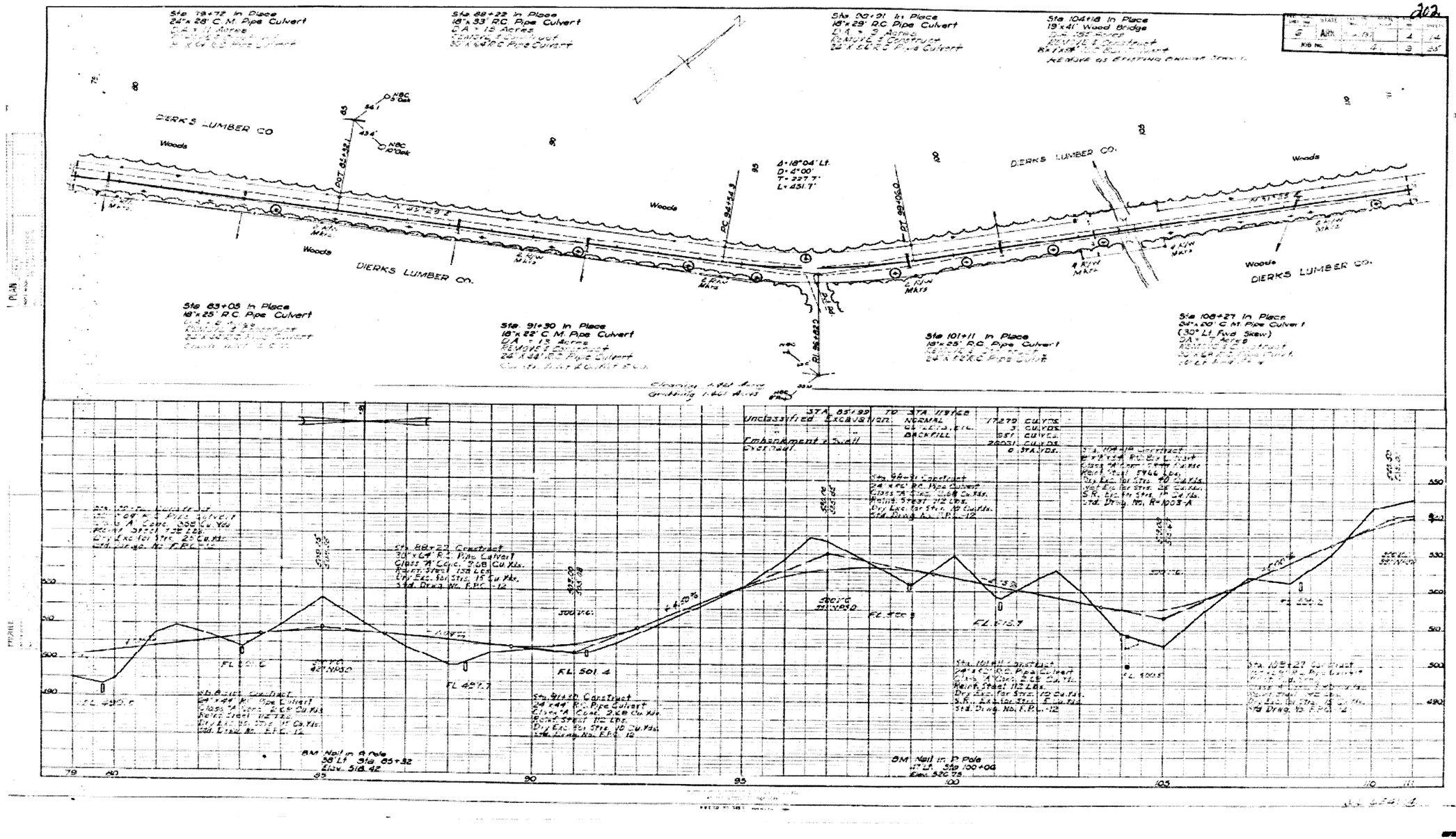
REVISIONS

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				JOB NO.		061561	19	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

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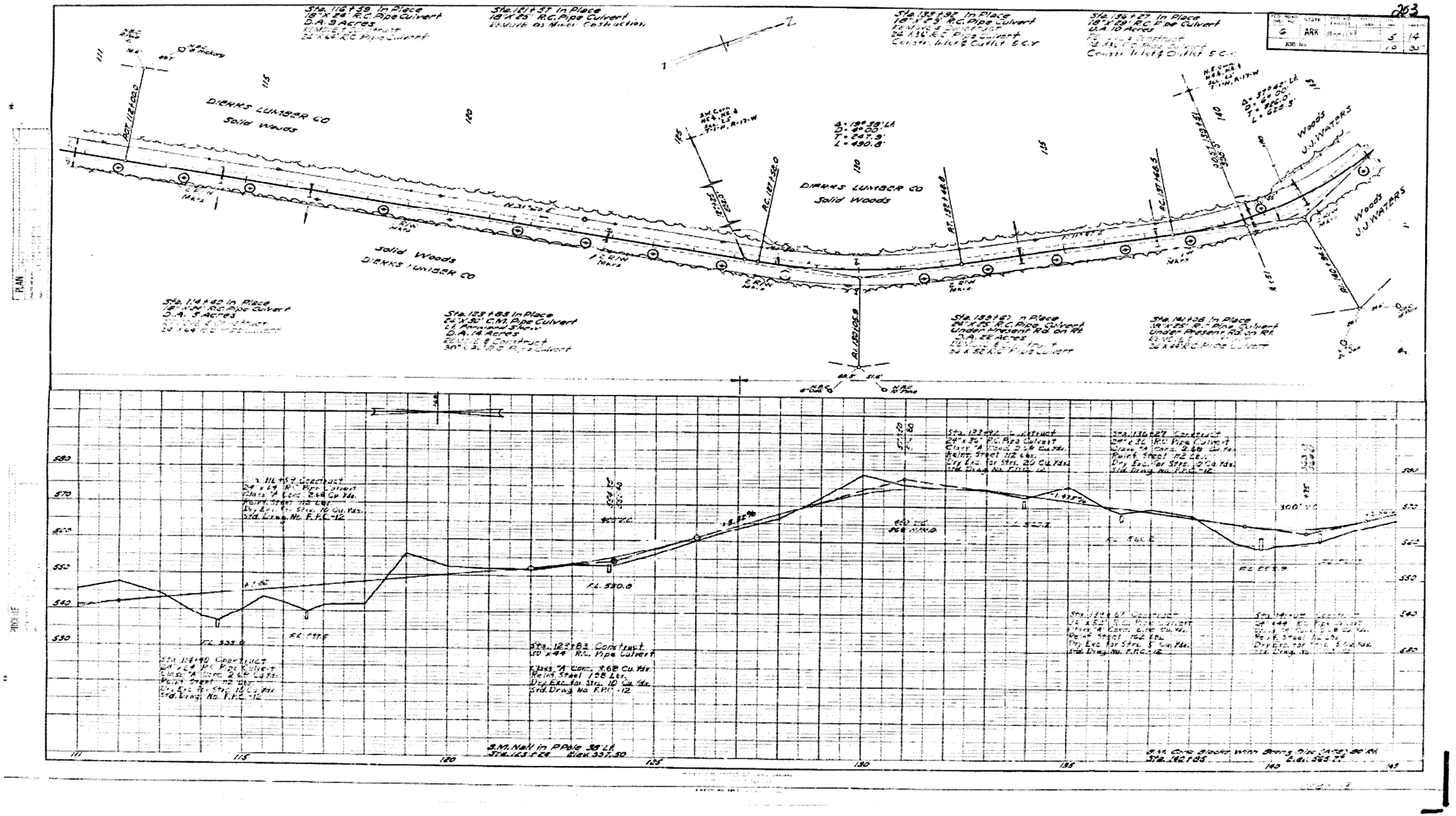
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DATE OF REVISION	REVISION

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				JOB NO.		061561	20	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

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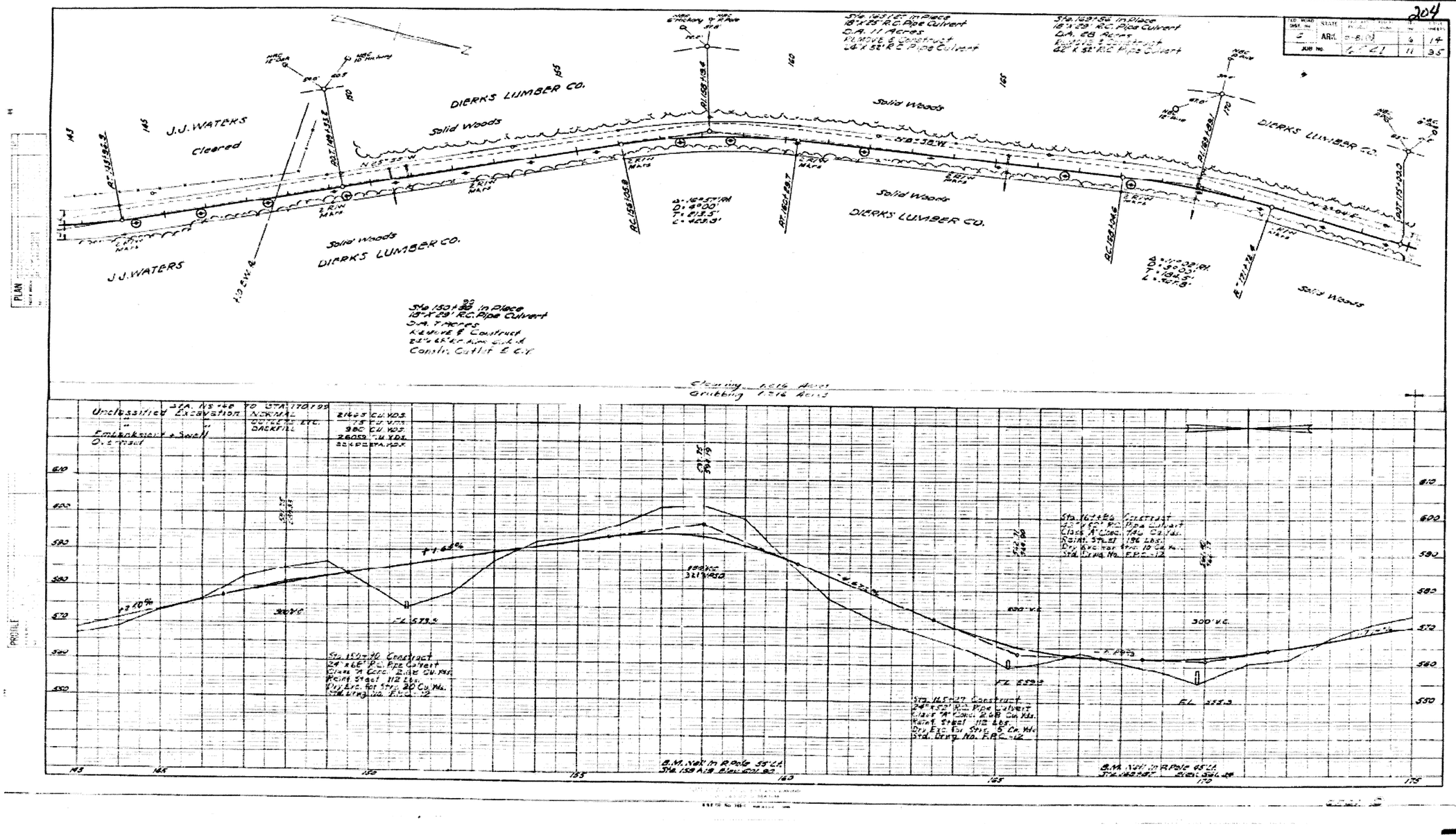
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DATE OF REVISION	REVISION

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				JOB NO.		061561	21	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

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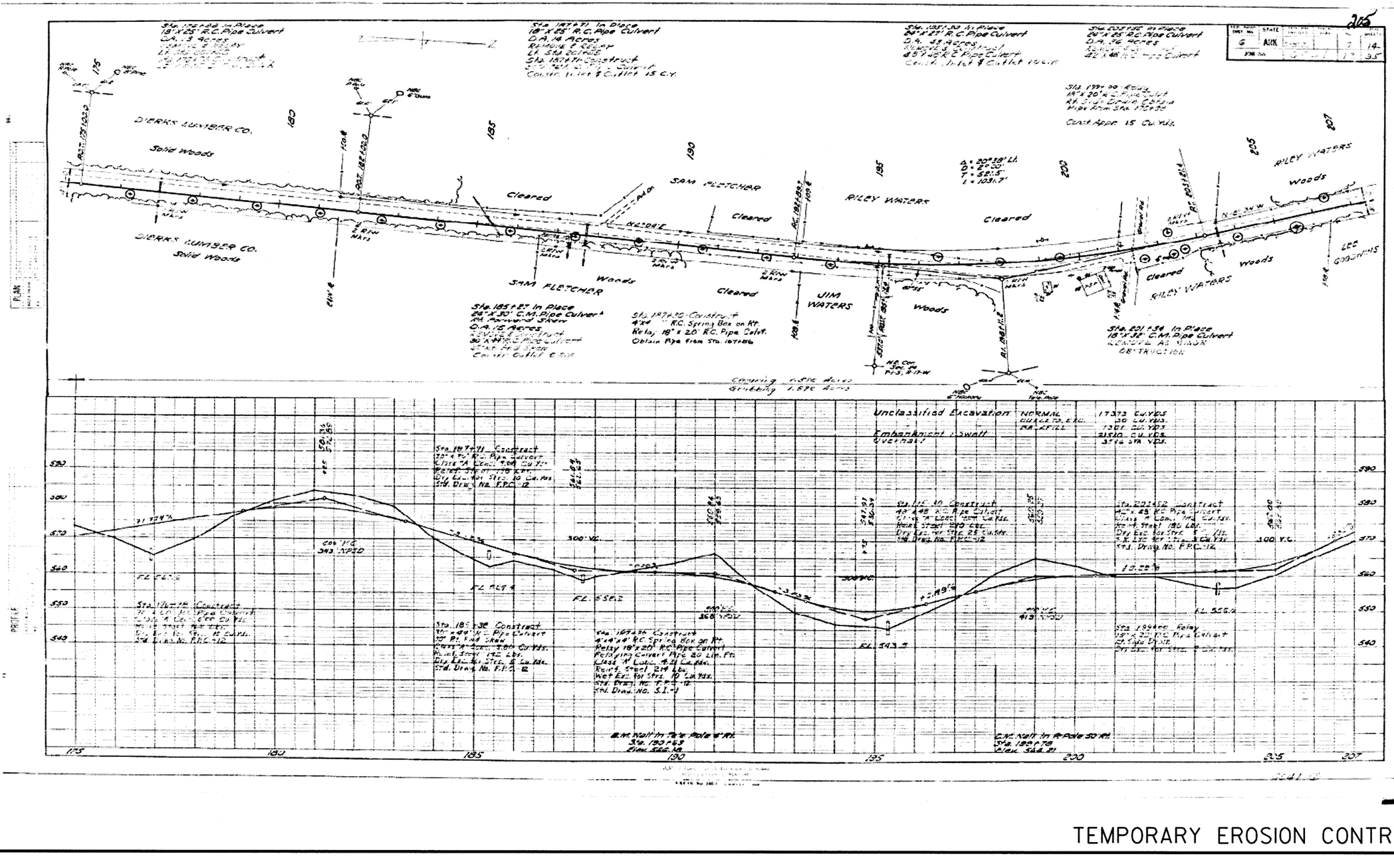
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DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061561	22	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

FOR INFORMATION ONLY

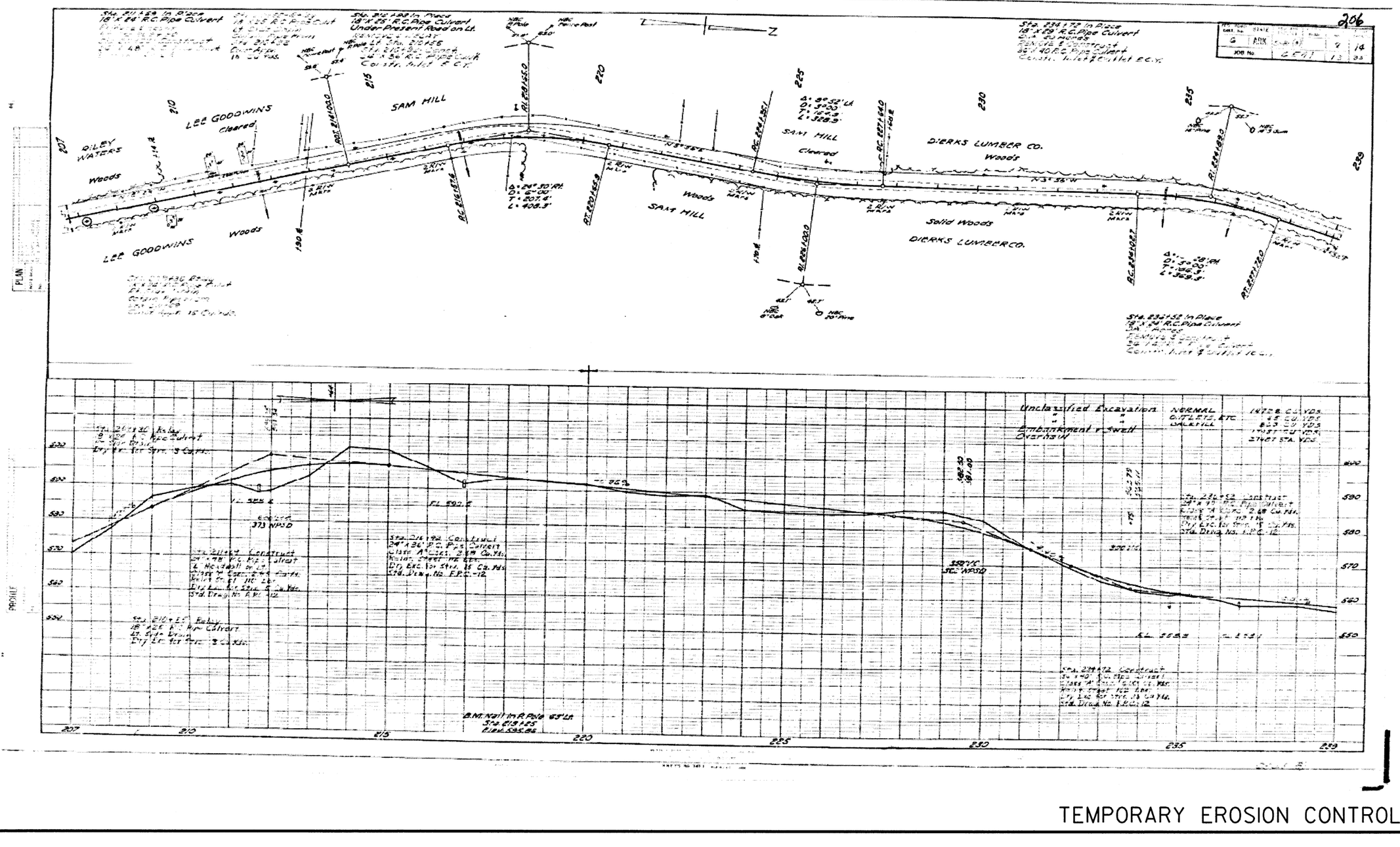
REVISIONS

DATE OF REVISION	REVISION

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.		061561	23	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



R061561.DGN 4/30/2018

TEMPORARY EROSION CONTROL DETAILS

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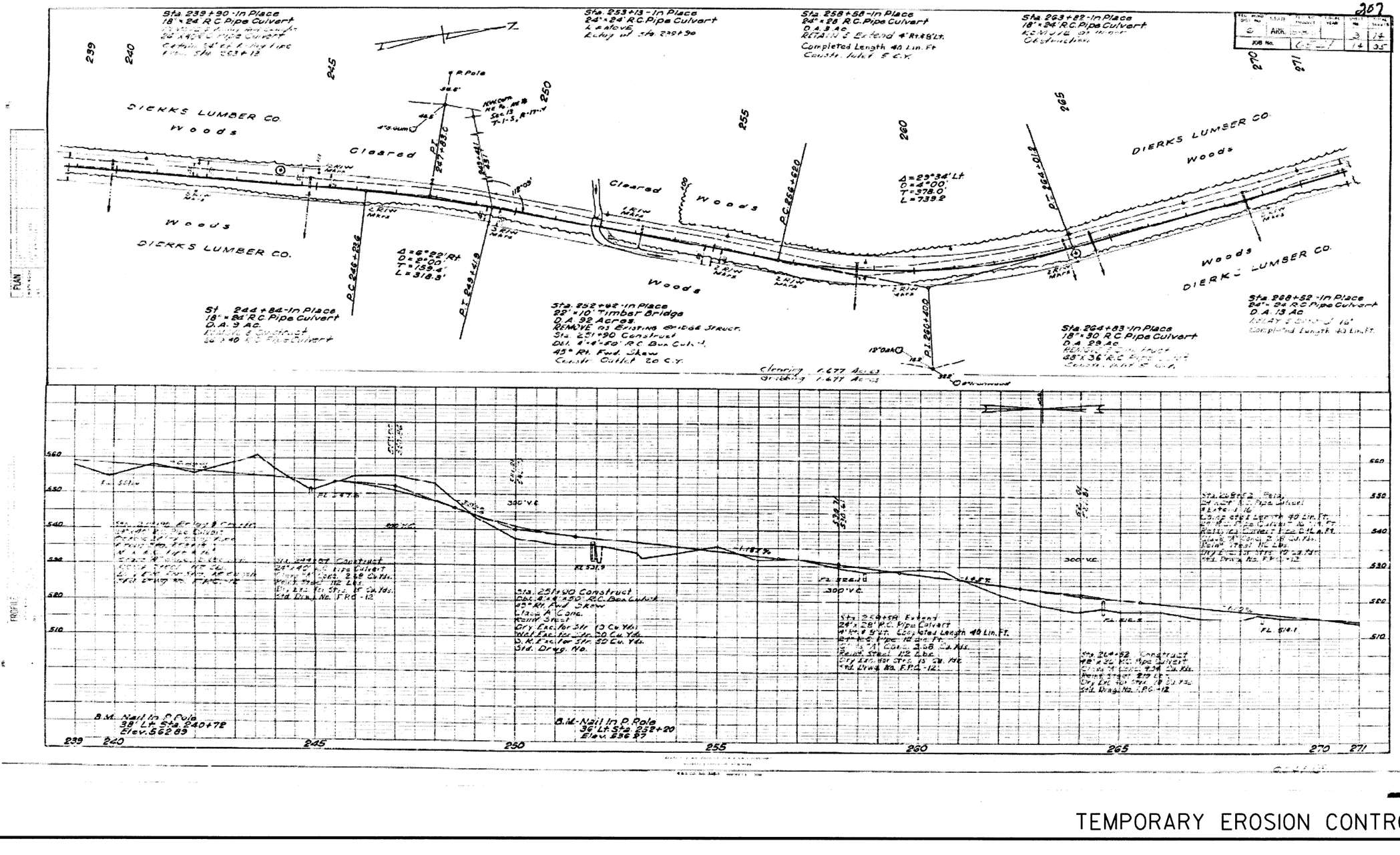
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DATE OF REVISION	REVISION

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.		061561	24	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

TEMPORARY EROSION CONTROL DETAILS

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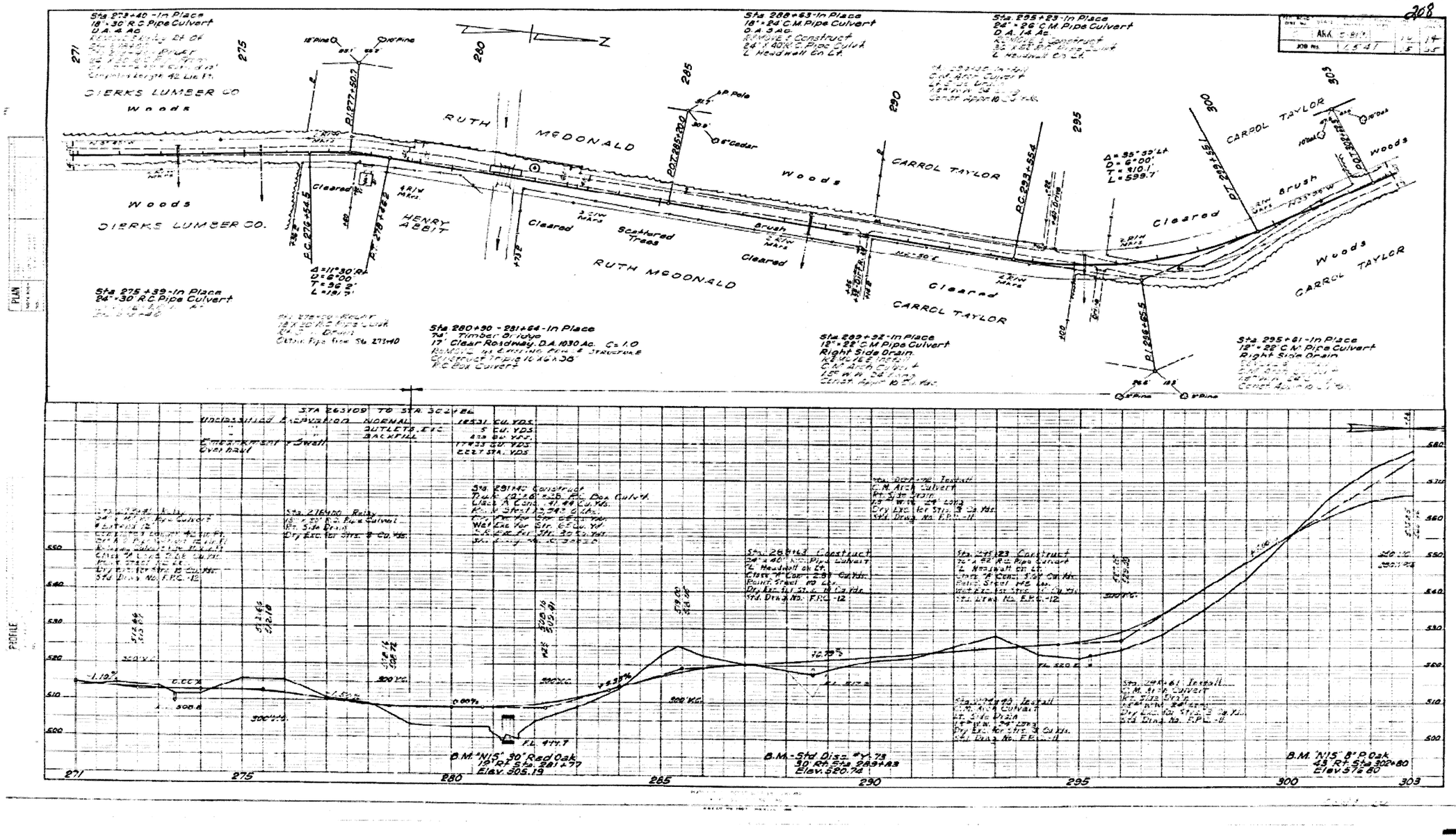
REVISIONS

DATE OF REVISION	REVISION

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.		061561	25	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

R061561.DGN 4/30/2018

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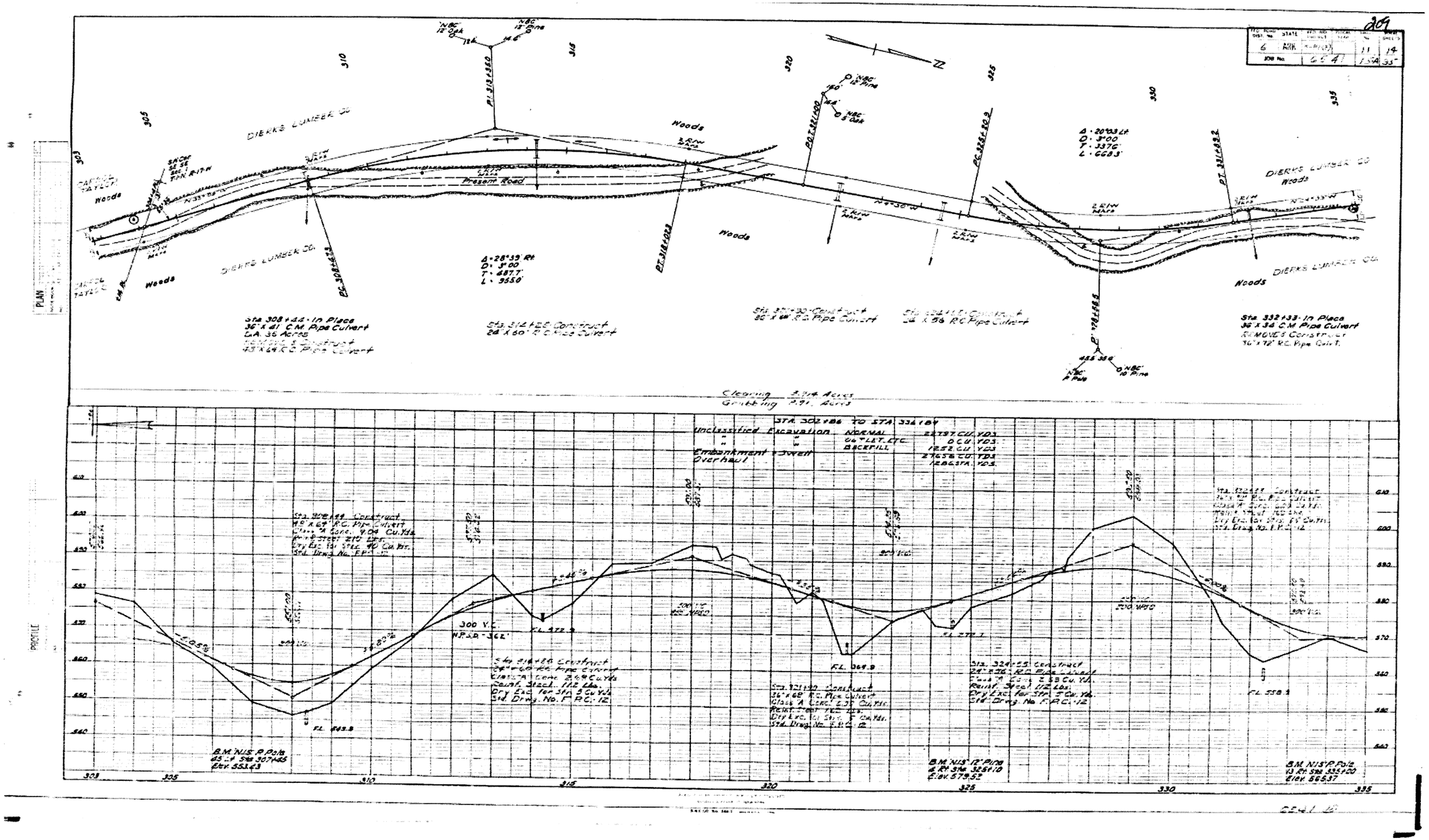
REVISIONS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	28	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

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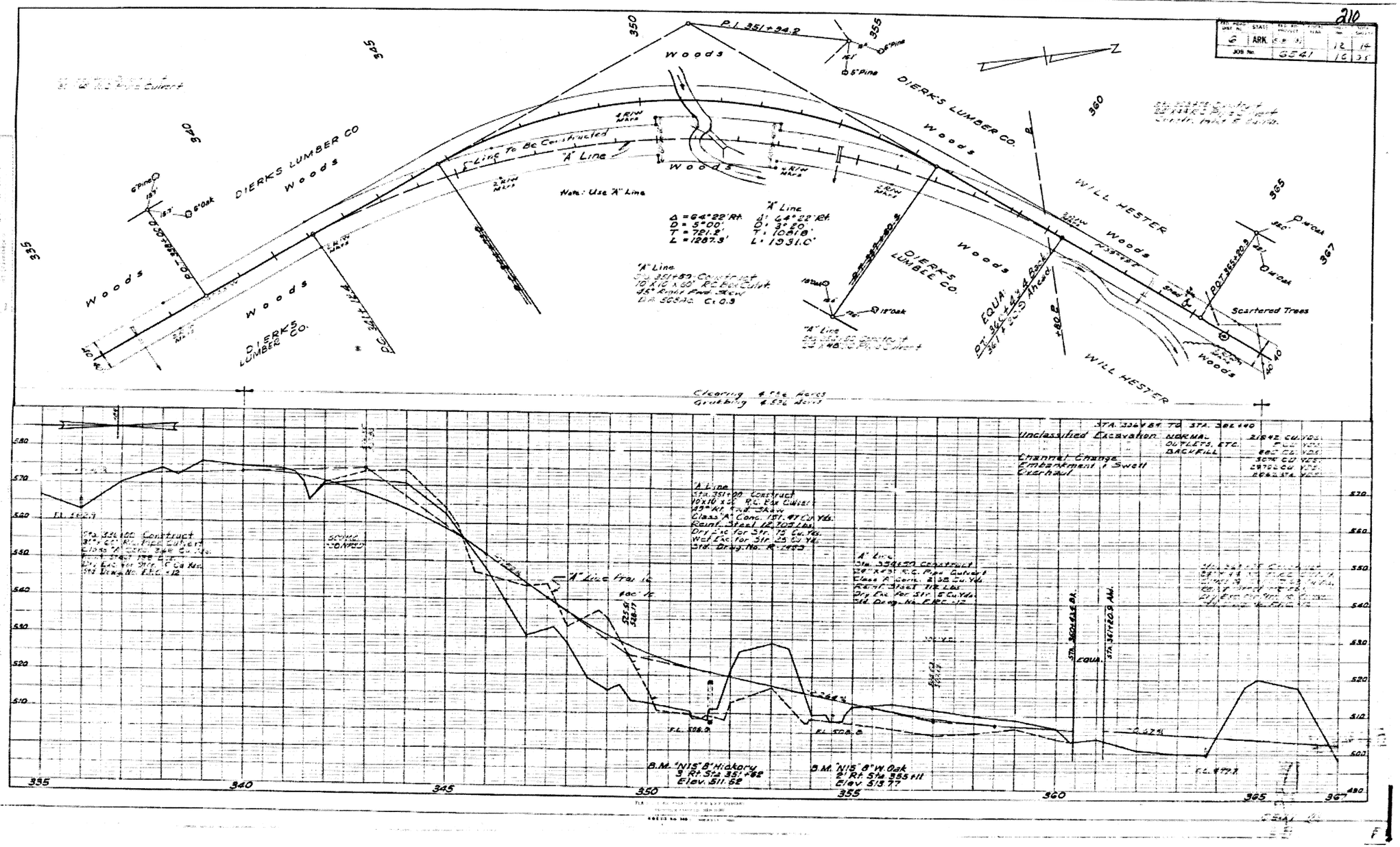
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DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061561	27	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

R061561.DGN

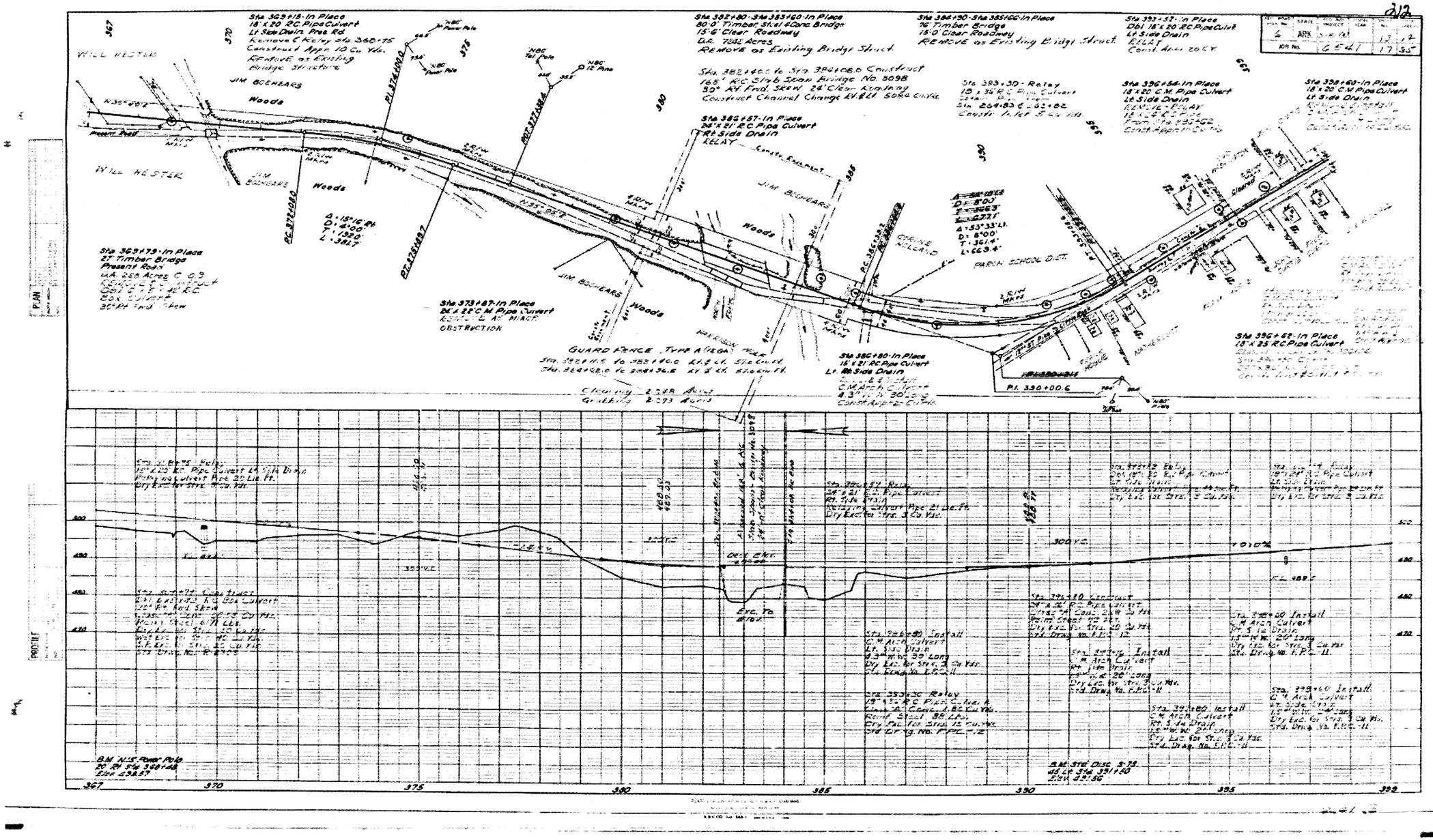
FOR INFORMATION ONLY

REVISIONS

DATE OF REVISION	REVISION

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.		061561	28	72
				(2) TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

4/30/2018

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FOR INFORMATION ONLY

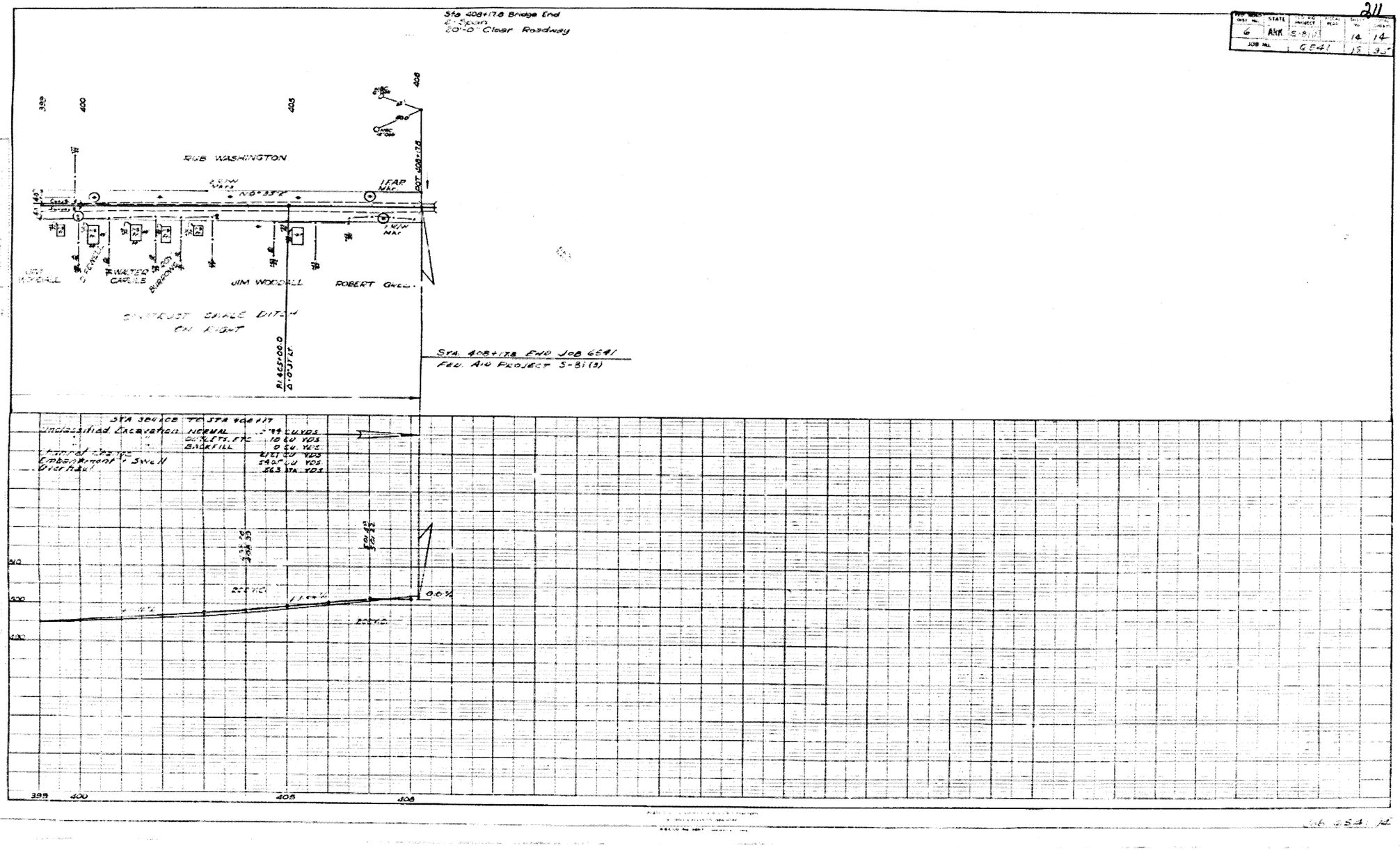
REVISIONS

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				6	ARK.			
				JOB NO.		061561	29	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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TEMPORARY EROSION CONTROL DETAILS

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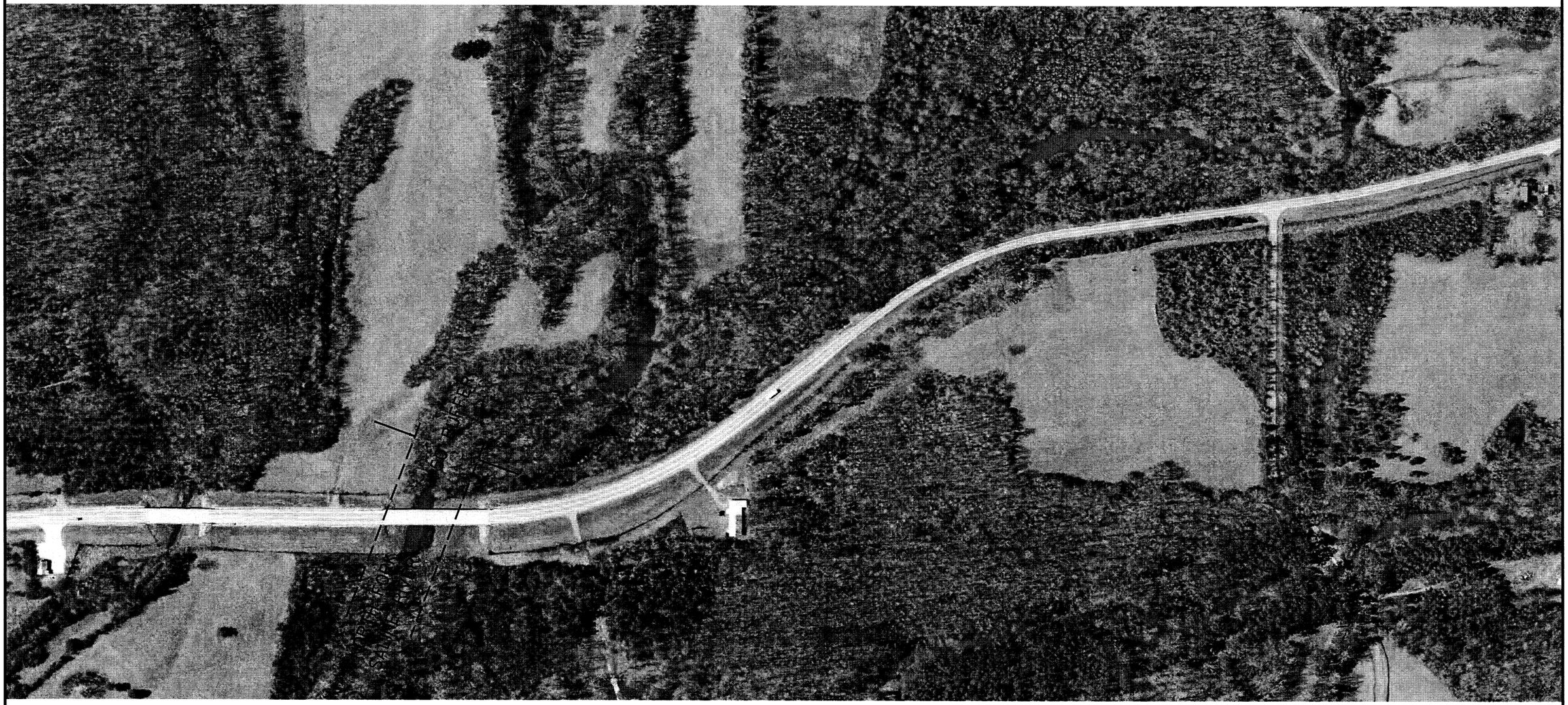
REVISIONS

DATE OF REVISION	REVISION

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.		061561	30	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



5/14/2018

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TEMPORARY EROSION CONTROL DETAILS

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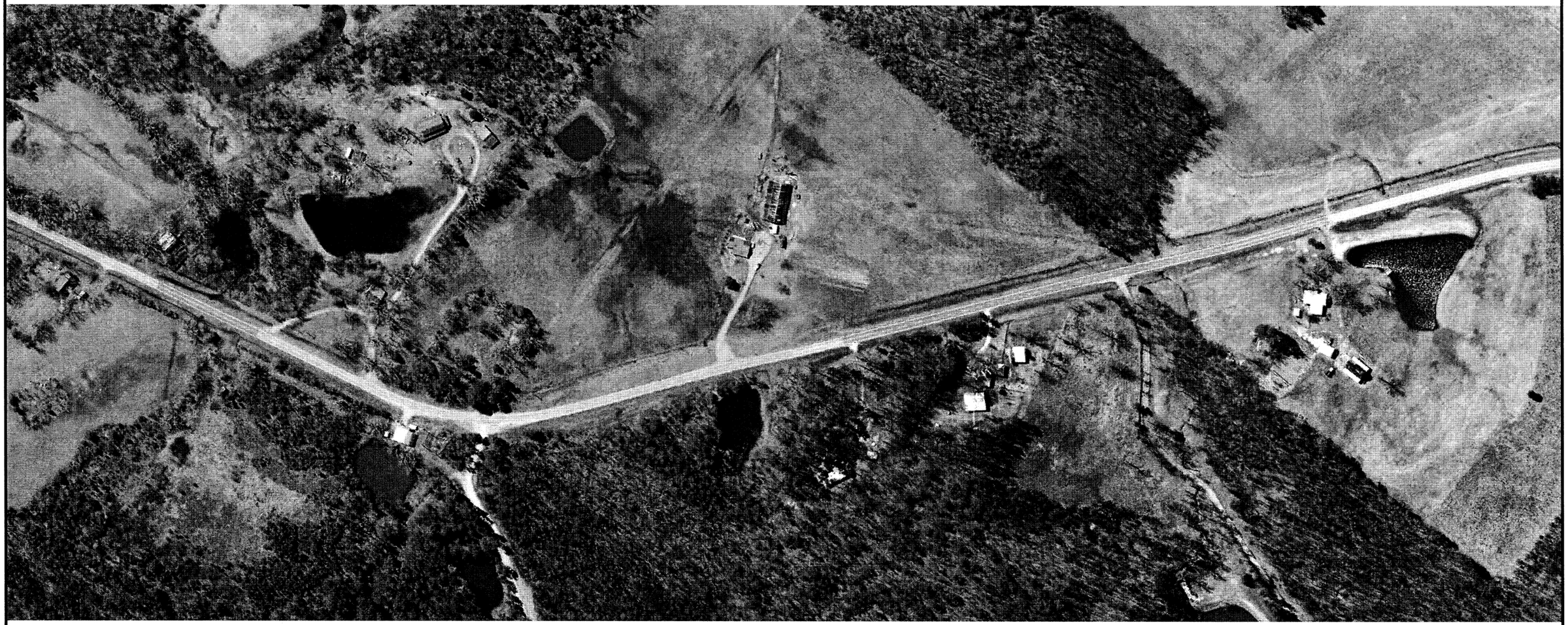
REVISIONS

DATE OF REVISION	REVISION

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.		061561	31	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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TEMPORARY EROSION CONTROL DETAILS

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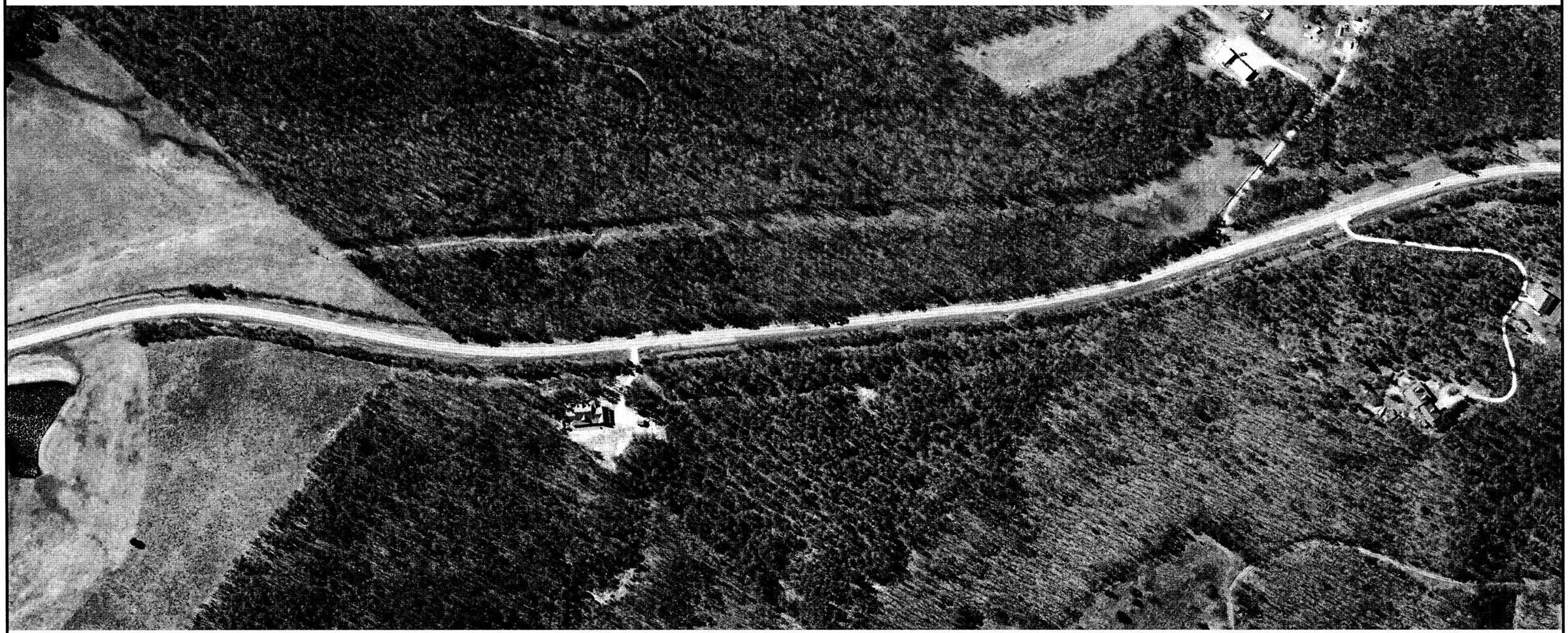
REVISIONS

DATE OF REVISION	REVISION

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.		061561	32	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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TEMPORARY EROSION CONTROL DETAILS

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REVISIONS

DATE OF REVISION	REVISION

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.		061561	33	72

(2) TEMPORARY EROSION CONTROL DETAILS

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

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TEMPORARY EROSION CONTROL DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	34	72
				(2) TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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TEMPORARY EROSION CONTROL DETAILS

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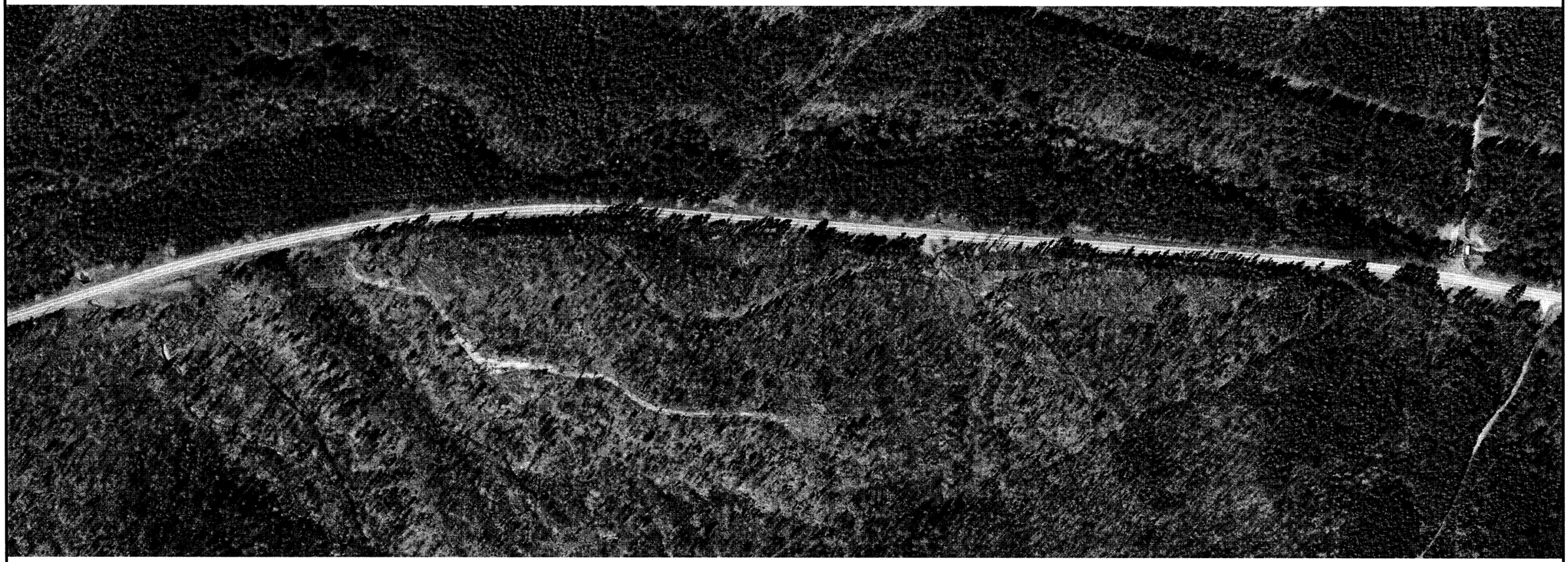
REVISIONS

DATE OF REVISION	REVISION

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.		061561	35	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11425
TRINITY D. SMITH
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TEMPORARY EROSION CONTROL DETAILS

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REVISIONS

DATE OF REVISION	REVISION

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.		061561	36	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



TEMPORARY EROSION CONTROL DETAILS

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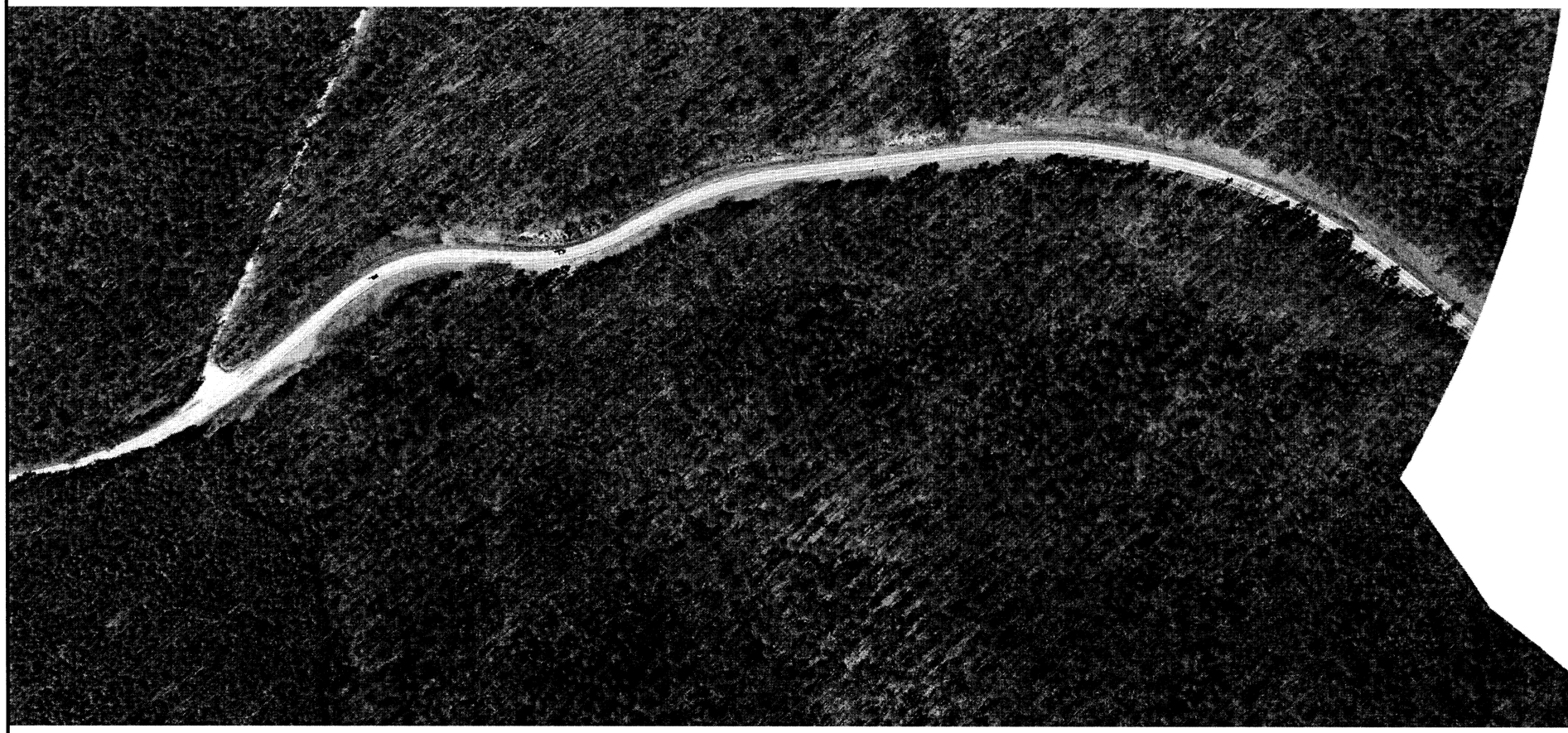
REVISIONS

DATE OF REVISION	REVISION

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.		061561	37	72

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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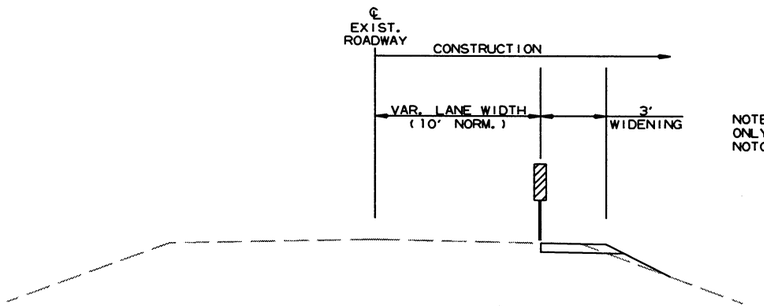
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	38	72

(2) MAINTENANCE OF TRAFFIC

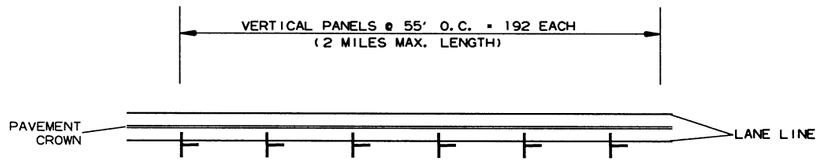
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

SEQUENCE OF CONSTRUCTION
1. NOTCH & WIDEN SHOULDERS
2. OVERLAY



NOTE:
ONLY ONE SIDE OF THE ROADWAY SHALL BE NOTCHED AT A TIME.

DETAIL FOR
SHOULDER WIDENING
SHOWN IN THE DIRECTION OF TRAFFIC



DETAIL OF VERTICAL PANEL PLACEMENT

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

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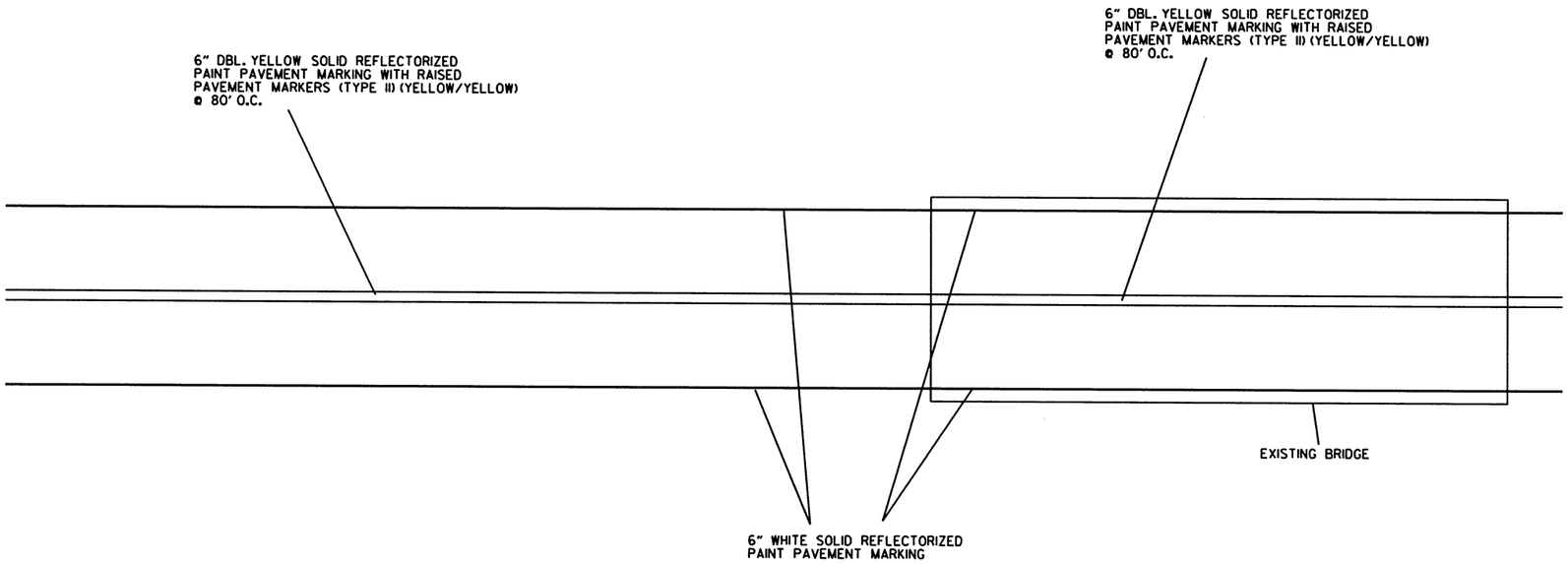
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MAINTENANCE OF TRAFFIC

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.		061561	39	72

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



NOTE:
THE REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6") QUANTITY IS ESTIMATED AND IS BASED ON THE PLACEMENT OF A DOUBLE YELLOW CENTERLINE FOR THE ENTIRE PROJECT. THE CONTRACTOR SHALL NOT PLACE ANY PERMANENT PAVEMENT MARKINGS UNTIL THE PASSING/NO PASSING ZONES HAVE BEEN ESTABLISHED BY THE MAINTENANCE DIVISION.

CONSTRUCTION PAVEMENT MARKINGS = 355684 LIN. FT.

REFLECTORIZED PAINT PAVEMENT MARKING
6" WHITE SOLID EDGE LINES = 184483 LIN. FT.
6" DBL. YELLOW SOLID CENTERLINE = 177842 LIN. FT.

RAISED PAVEMENT MARKINGS (TYPE II) (80' O.C.) = 1153 EACH

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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.		061561	40	72

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL								
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			122.48	244.96	122.48	12493.0	122.48	60.00	60.00	1224.0	7810	1065	22250	500	500	2034
TOTALS:			122.48	244.96	122.48	12493.0	122.48	60.00	60.00	1224.0	7810	1065	22250	500	500	2034

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	ENTIRE PROJECT	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	*TRAFFIC DRUMS
			LIN. FT. - EACH		NO.	SQ. FT.	EACH	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	64.0		
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	64.0		
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	64.0		
W20-1	ROAD WORK AHEAD	48"x48"	27	27	27	432.0		
G20-2	END ROAD WORK	48"x24"	27	27	27	216.0		
G20-1	ROAD WORK NEXT xx MILES	60"x24"	2	2	2	20.0		
OM-3L	OBJECT MARKER	12"x36"	12	12	12	36.0		
OM-3R	OBJECT MARKER	12"x36"	12	12	12	36.0		
R4-1	DO NOT PASS	24"x30"	14	14	14	70.0		
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	4	4	4	36.0		
W8-11	UNEVEN LANES	48"x48"	8	8	8	128.0		
	VERTICAL PANELS		192	192			192	
*	TRAFFIC DRUMS		50	50				50
TOTALS:						1166.0	192	50

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

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

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	ENTIRE PROJECT	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)	REFLECTORIZED PAINT PAVEMENT MARKING 6" WHITE	REFLECTORIZED PAINT PAVEMENT MARKING 6" YELLOW
	LIN. FT. - EACH	LIN. FT.	EACH	LIN. FT.	LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS	355684	355684			
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)	1153		1153		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	184483			184483	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	177842				177842
TOTALS:		355684	1153	184483	177842

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

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	250
DIRECTED BY THE ENGINEER	
TOTAL:	250

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

CONCRETE DITCH PAVING

LOCATION	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
	SQ. YD.	SQ. YD.	M. GAL.
* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	100.00	80.00	1.01
TOTALS:	100.00	80.00	1.01

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

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE	25000	13000
		DIRECTED BY THE ENGINEER		
TOTALS:			25000	13000

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

COLD MILLING ASPHALT PAVEMENT

LOG MILE	LOCATION	LENGTH	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
		FEET		SQ. YD.
0.00	MAIN LANES	100.00	20.00	222.22
17.47	MAIN LANES	100.00	20.00	222.22
TOTAL:				444.44

NOTE: AVERAGE MILLING DEPTH 1".

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				6	ARK.			
				JOB NO.		061561	41	72

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

BASE AND SURFACING

LOG MILE	LOG MILE	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22
			FEET			FEET				FEET			TON	FEET			TON
MAIN LANES																	
0.00	1.46	HWY. 9 MAIN LANES	7708.80	39.00	3006.43	26.33	22552.52	0.05	1127.63	6.33	5421.86	440.00	1192.81	26.00	22269.87	220.00	2449.69
1.47	3.66	HWY. 9 MAIN LANES	11563.20	39.00	4509.65	26.33	33828.78	0.05	1691.44	6.33	8132.78	440.00	1789.21	26.00	33404.80	220.00	3674.53
3.67	4.66	HWY. 9 MAIN LANES	5227.20	39.00	2038.61	26.33	15292.46	0.05	764.62	6.33	3676.46	440.00	808.82	26.00	15100.80	220.00	1661.09
4.72	11.96	HWY. 9 MAIN LANES	38227.20	39.00	14908.61	26.33	111835.80	0.05	5591.79	6.33	26886.46	440.00	5915.02	26.00	110434.13	220.00	12147.75
11.99	12.27	HWY. 9 MAIN LANES	1478.40	39.00	576.58	26.33	4325.14	0.05	216.26	6.33	1039.81	440.00	228.76	26.00	4270.93	220.00	469.80
12.79	17.47	HWY. 9 MAIN LANES	24710.40	39.00	9637.06	26.33	72291.65	0.05	3614.58	6.33	17379.65	440.00	3823.52	26.00	71385.60	220.00	7852.42
ADDITIONAL FOR LEVELING																	
0.00	1.46	HWY. 9 MAIN LANES	7708.80			20.00	17130.67	0.17	2912.21					20.00	17130.67	VAR.	1884.37
1.47	3.66	HWY. 9 MAIN LANES	11563.20			20.00	25696.00	0.17	4368.32					20.00	25696.00	VAR.	2826.56
3.67	4.66	HWY. 9 MAIN LANES	5227.20			20.00	11616.00	0.17	1974.72					20.00	11616.00	VAR.	1277.76
4.72	11.96	HWY. 9 MAIN LANES	38227.20			20.00	84949.33	0.17	14441.39					20.00	84949.33	VAR.	9344.43
11.99	12.27	HWY. 9 MAIN LANES	1478.40			20.00	3285.33	0.17	558.51					20.00	3285.33	VAR.	361.39
12.79	17.47	HWY. 9 MAIN LANES	24710.40			20.00	54912.00	0.17	9335.04					20.00	54912.00	VAR.	6040.32
ADDITIONAL FOR GUARDRAL																	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.		VAR.	1177.50									VAR.	497.44	220.00	54.72
TOTALS:					35854.44		457715.68		46596.51		62537.02		13758.14		454952.90		50044.83

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....95.1% MIN. AGGR.....4.9% ASPHALT BINDER
ACHM BINDER COURSE (1").....96.0% MIN. AGGR.....4.0% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.
* QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

RUMBLE STRIPES IN ASPHALT SHOULDERS

LOG MILE	LOG MILE	LOCATION	* RUMBLE STRIPES IN ASPHALT SHOULDERS
			LIN.FT.
0.00	1.46	HWY. 9 MAIN LANES	15418
1.47	3.66	HWY. 9 MAIN LANES	23126
3.67	4.66	HWY. 9 MAIN LANES	10454
4.72	11.96	HWY. 9 MAIN LANES	76454
11.99	12.27	HWY. 9 MAIN LANES	2957
12.79	17.47	HWY. 9 MAIN LANES	49421
TOTAL:			177830

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

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
* ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	25	25
TOTALS:	25	25

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

EROSION CONTROL MATTING

LOCATION	LENGTH	CLASS 3
	LIN. FT.	SQ. YD.
* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	1000.00	888.89
TOTAL:		888.89

NOTE: AVERAGE WIDTH = 8'-0"

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

GUARDRAIL

LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
	LIN. FT.	EACH	
* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	2200	16	16
TOTALS:	2200	16	16

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

CLEARING AND GRUBBING

LOCATION	CLEARING	GRUBBING
	STATION	
* ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	40	40
TOTALS:	40	40

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

TRENCHING AND SHOULDER PREPARATION

LOCATION	TRENCHING AND SHOULDER PREPARATION
	STATION
* ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	889
TOTAL:	889

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

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QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
7-9-18				6	ARK.			
7-16-18				JOB NO.		061561	42	72

(2) SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
7-16-18

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	40	STATION
201	GRUBBING	40	STATION
210	UNCLASSIFIED EXCAVATION	25000	CU. YD.
210	COMPACTED EMBANKMENT	13000	CU. YD.
215	TRENCHING AND SHOULDER PREPARATION	889	STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	35854	TON
SS & 401	TACK COAT	46597	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	13208	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	550	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	47593	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	2452	TON
412	COLD MILLING ASPHALT PAVEMENT	444	SQ. YD.
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	250	TON
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	1166	SQ. FT.
SS & 604	TRAFFIC DRUMS	50	EACH
604	CONSTRUCTION PAVEMENT MARKINGS	355684	LIN. FT.
SS & 604	VERTICAL PANELS	192	EACH
SS & 605	CONCRETE DITCH PAVING (TYPE B)	100	SQ. YD.
617	GUARDRAIL (TYPE A)	2200	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	16	EACH
617	THRIE BEAM GUARDRAIL TERMINAL	16	EACH
620	LIME	245	TON
620	SEEDING	122.48	ACRE
SS & 620	MULCH COVER	182.48	ACRE
620	WATER	13718.0	M. GAL.
621	TEMPORARY SEEDING	60.00	ACRE
621	SILT FENCE	22250	LIN. FT.
621	SAND BAG DITCH CHECKS	7810	BAG
621	SEDIMENT BASIN	500	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	500	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	2034	CU. YD.
621	ROCK DITCH CHECKS	1065	CU. YD.
623	SECOND SEEDING APPLICATION	122.48	ACRE
624	SOLID SODDING	80	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	889	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	25	EACH
637	MAILBOX SUPPORTS (SINGLE)	25	EACH
SP & 642	RUMBLE STRIPES IN ASPHALT SHOULDERS	177830	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")	184483	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")	177842	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	1153	EACH

REVISIONS

DATE	REVISION	SHEET NUMBER
7/9/2018	ADDED SUPPLEMENTAL SPECIFICATION TO "GUARDRAIL TERMINAL (TYPE 2)"	2 & 42
7/16/2018	ADDED LIQUID ANTI-STRIPPING ADDITITVE SPECIAL PROVISION	2 & 42

4/30/2018

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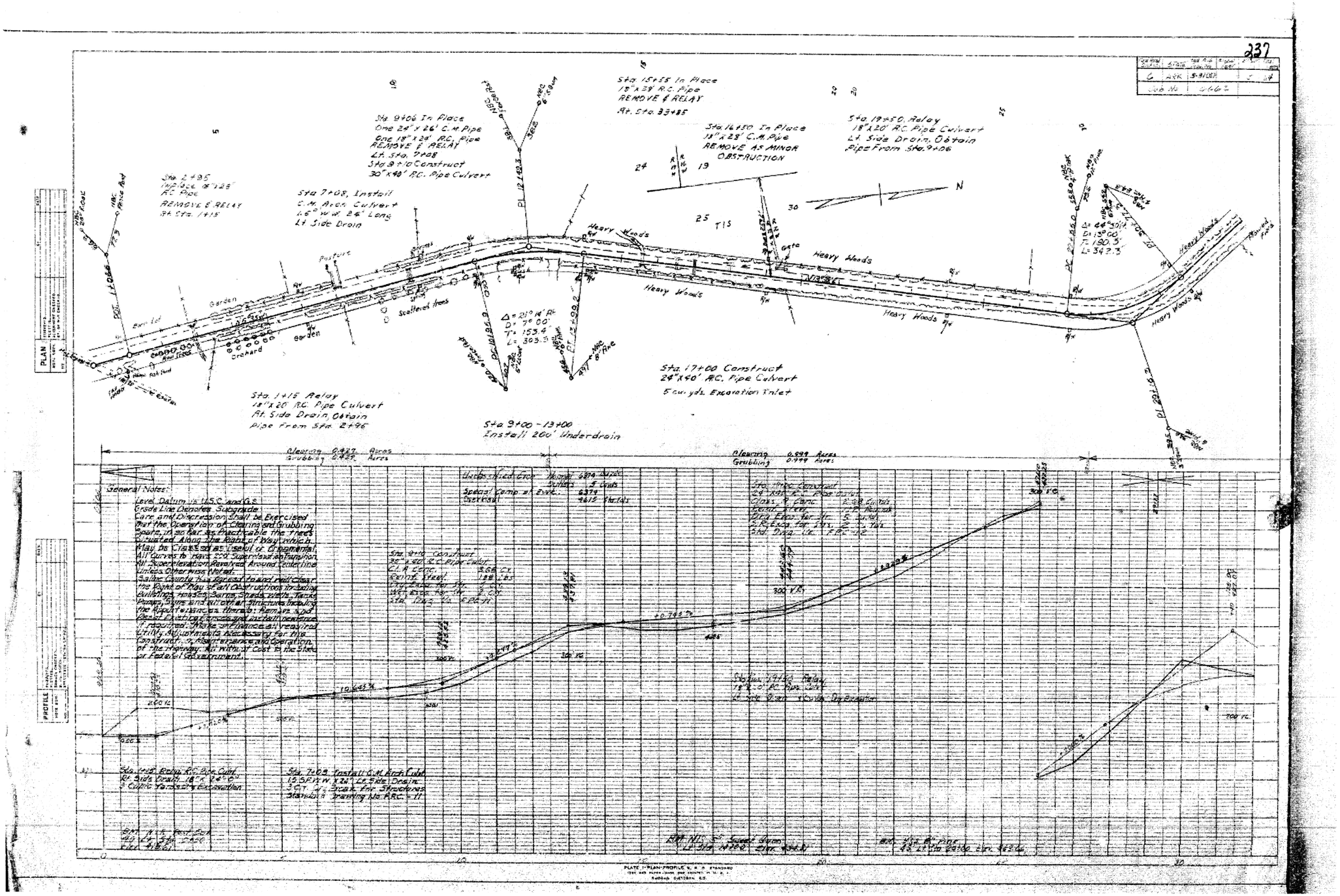
SUMMARY OF QUANTITIES AND REVISIONS

FOR INFORMATION ONLY

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.		061561	43	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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PLAN SHEETS

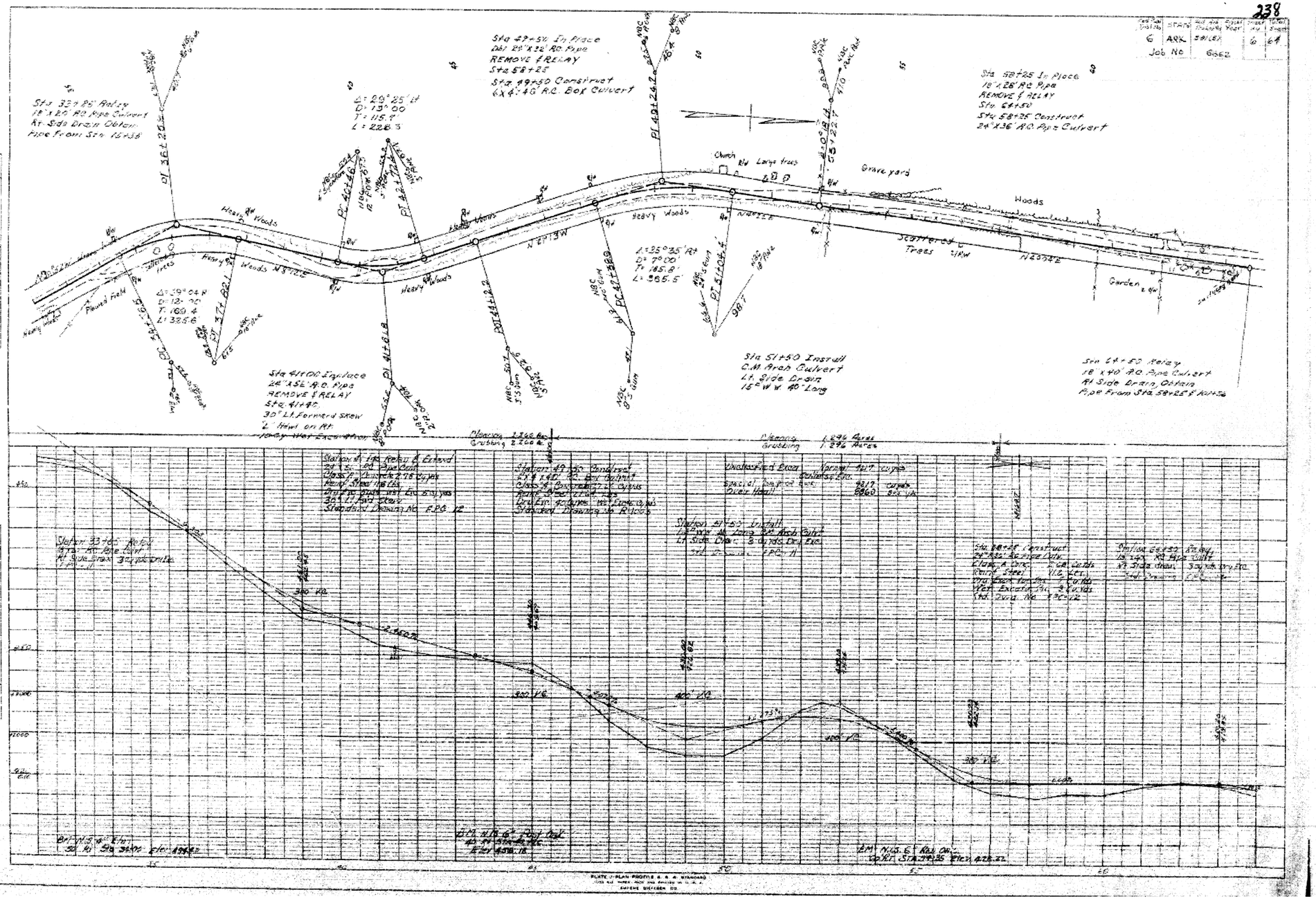
FOR INFORMATION ONLY

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				6	ARK.			
				JOB NO.		061561	44	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

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PLAN SHEETS

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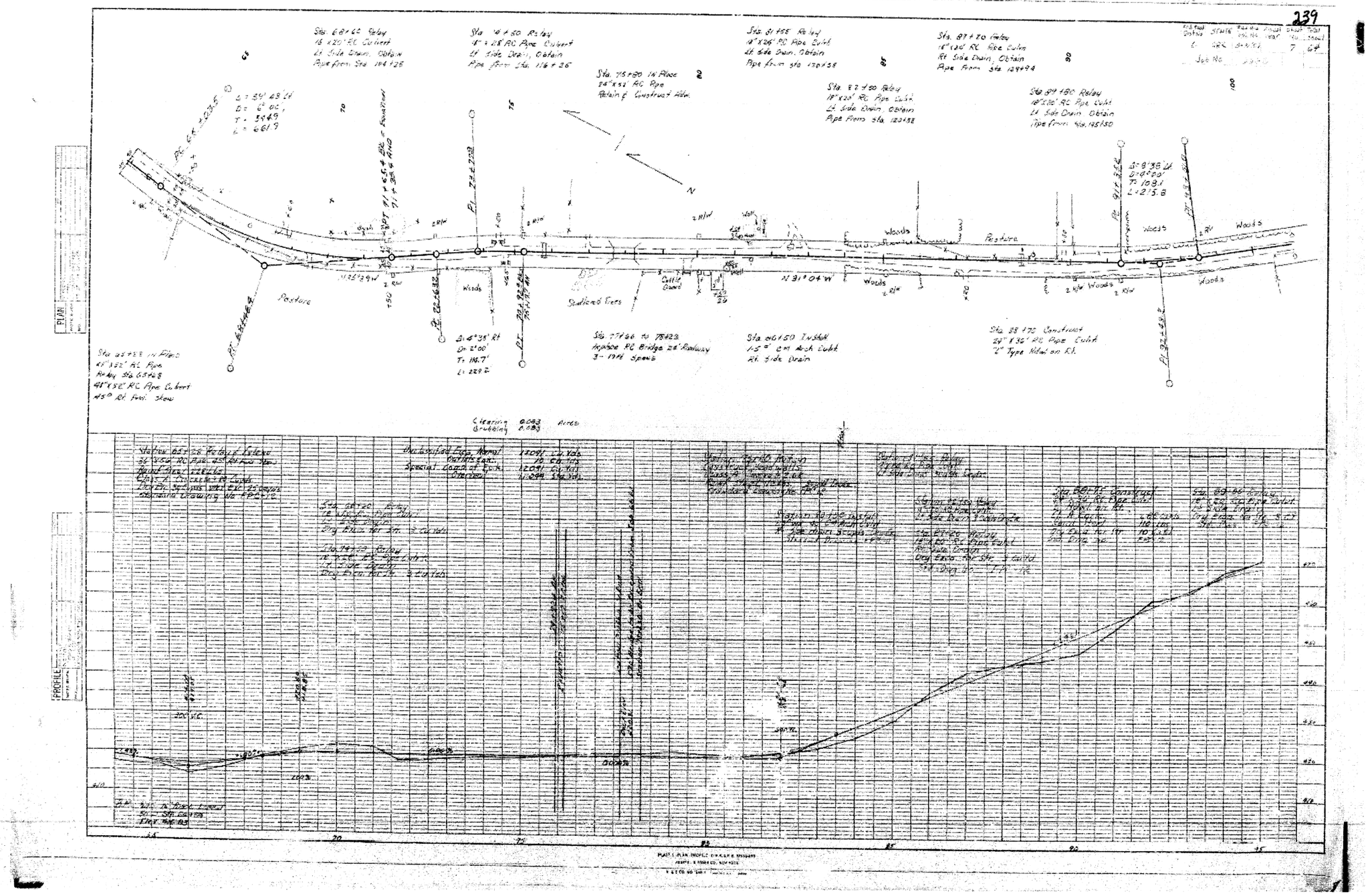
FOR INFORMATION ONLY

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				6	ARK.			
				JOB NO.		061561	45	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

239



PLAN SHEETS

4/30/2018

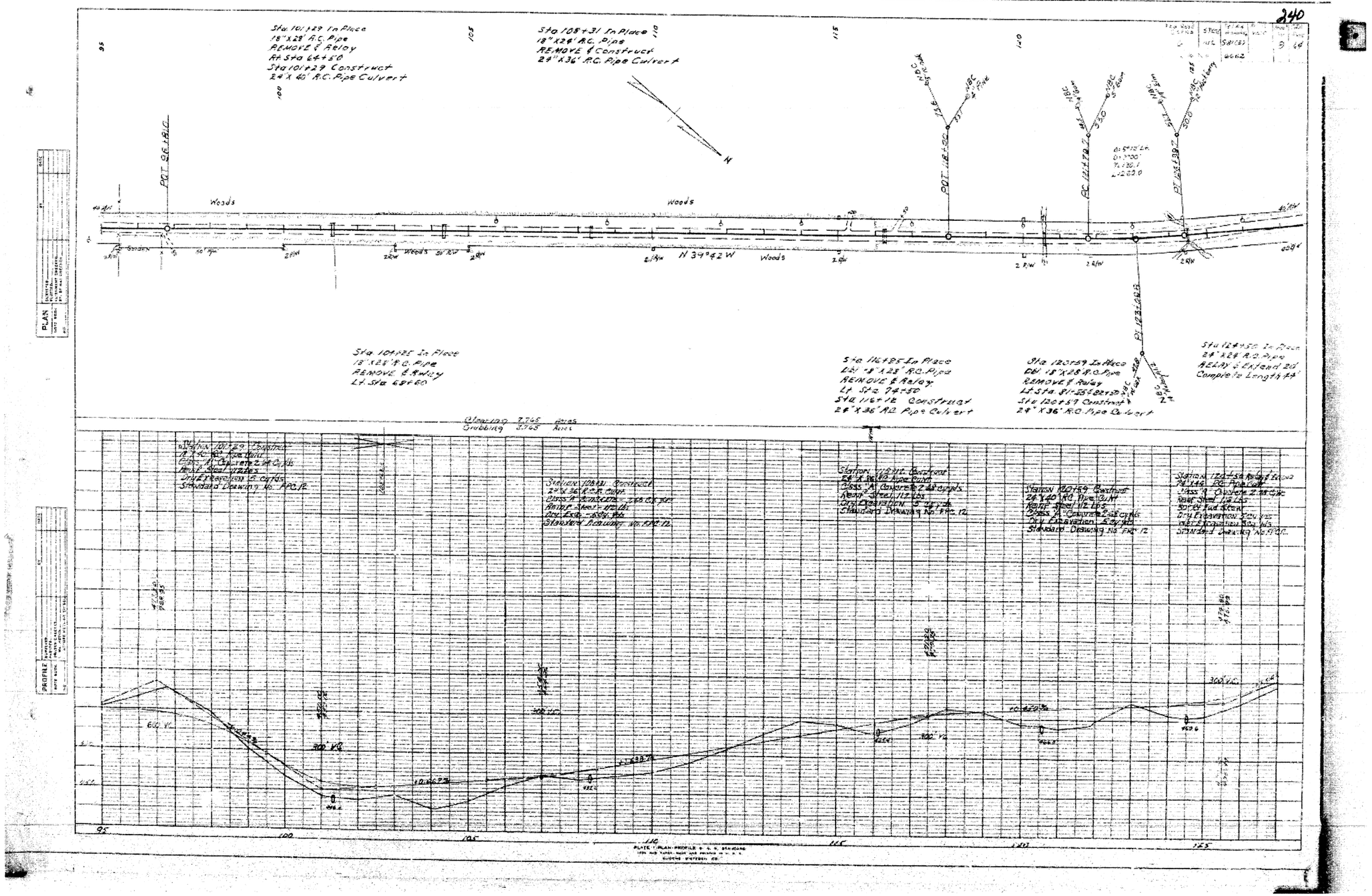
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				6	ARK.			
				JOB NO.		061561	46	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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PLAN SHEETS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	47	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

241

Sta 161+30 In Place
18"X30' C.M. Pipe
REMOVE AS MINOR OBSTRUCTION

Sta 148+00 Install
9.3" WW C.M. Arch
Lt. Side Drain

Sta 150+15 In Place
Dbl. 14'x28' R.C. Pipe
REMOVE & RELAY
Rt. Sta 131+35
Sta 150+15 Construct
30"x90' R.C. Pipe Culvert
30° Rt. Forward Slope

Sta 147+49 In Place
7 - Guy's Post
REMOVE AS MINOR OBSTRUCTION

Sta 167+94 In Place
18"x28' R.C. Pipe
REMOVE & RELAY
Rt. Sta 87+20

Sta 131+35 RELAY
18"x30' R.C. Pipe Culvert
Rt. Side Drain, Obtain
Pipe From Sta 120+16

Sta 134+50 In Place
36"x36' C.M. Pipe
REMOVE & Construct
Sta 134+97
36"x36' R.C. Pipe Culvert

Sta 140+00 In Place
18"x26' C.M. Pipe
REMOVE & Construct
28"x40' R.C. Pipe Culvert

Sta 145+55 In Place
18"x28' R.C. Pipe
REMOVE & RELAY
Lt. Sta. 89+20
Sta 145+55 Construct
30"x36' R.C. Pipe Culvert

Sta 160+75 RELAY
18"x40' R.C. Pipe Culvert
Lt. Side Drain, Obtain
Pipe From Sta 161+76
& Sta 193+65

Δ: 43°02' Rt.
D: 18°00'
T: 186.3
L: 358.6

Δ: 23°08' Lt.
D: 6°00'
T: 194.9
L: 384.4

Clearing 5.5 Ac.
Grubbing 3.5 Ac.
Acres

Unclassified Excav. Normal haul 3350 Cu.Yds.
Special Case of Exc. Over haul 1320 Cu.Yds.

Station 131+35 Relay
18"x32' RC Pipe Culvert
Rt. Side Drain, Obtain Backs

Station 134+97 Construct
36"x36' RC Pipe Culvert
Class A Concrete 6.0 Cu.Yds.
Reinf. Steel 1,160 Lbs.
Dry Excavation 6.0 Cu.Yds.
Drawing No. FPE-12

Station 140+00 Construct
28"x40' RC Pipe Culvert
Class A Concrete 5.2 Cu.Yds.
Reinf. Steel 1,160 Lbs.
Dry Excavation 5.2 Cu.Yds.
Drawing No. FPE-12

Station 145+55 Construct
30"x36' RC Pipe Culvert
Class A Concrete 5.8 Cu.Yds.
Reinf. Steel 1,255 Lbs.
Dry Excavation 5.8 Cu.Yds.
Wet Excavation 5.8 Cu.Yds.
Drawing No. FPE-12

Station 160+75 Relay
18"x40' RC Pipe Culvert
Lt. Side Drain, 36' Drain
Dry Excav. for Pr. 7.2 Cu.Yds.
Wet Excavation 7.2 Cu.Yds.
Class A Conc. for Pr. 7.2 Cu.Yds.
Reinf. Steel for Pr. 1,440 Lbs.
24" Rt. Forward Skew

Station 161+76 Construct
9.3" WW x 42" CM Arch Culvert
Lt. Side Drain
Dry Excav. for Pr. 7.2 Cu.Yds.
Wet Excavation 7.2 Cu.Yds.
Class A Conc. for Pr. 7.2 Cu.Yds.
Reinf. Steel for Pr. 1,440 Lbs.
24" Rt. Forward Skew

Station 193+65 Construct
36"x36' RC Pipe Culvert
Class A Concrete 5.8 Cu.Yds.
Reinf. Steel 1,255 Lbs.
Dry Excavation 5.8 Cu.Yds.
Drawing No. FPE-12
24" Rt. Forward Skew

320' VC

300' VC

320' VC

K=50 = 3.53'

PLAN
PROFILE

PLATE 1: PLAN-PROFILE U. S. STANDARD

4/30/2018

R061561.DGN

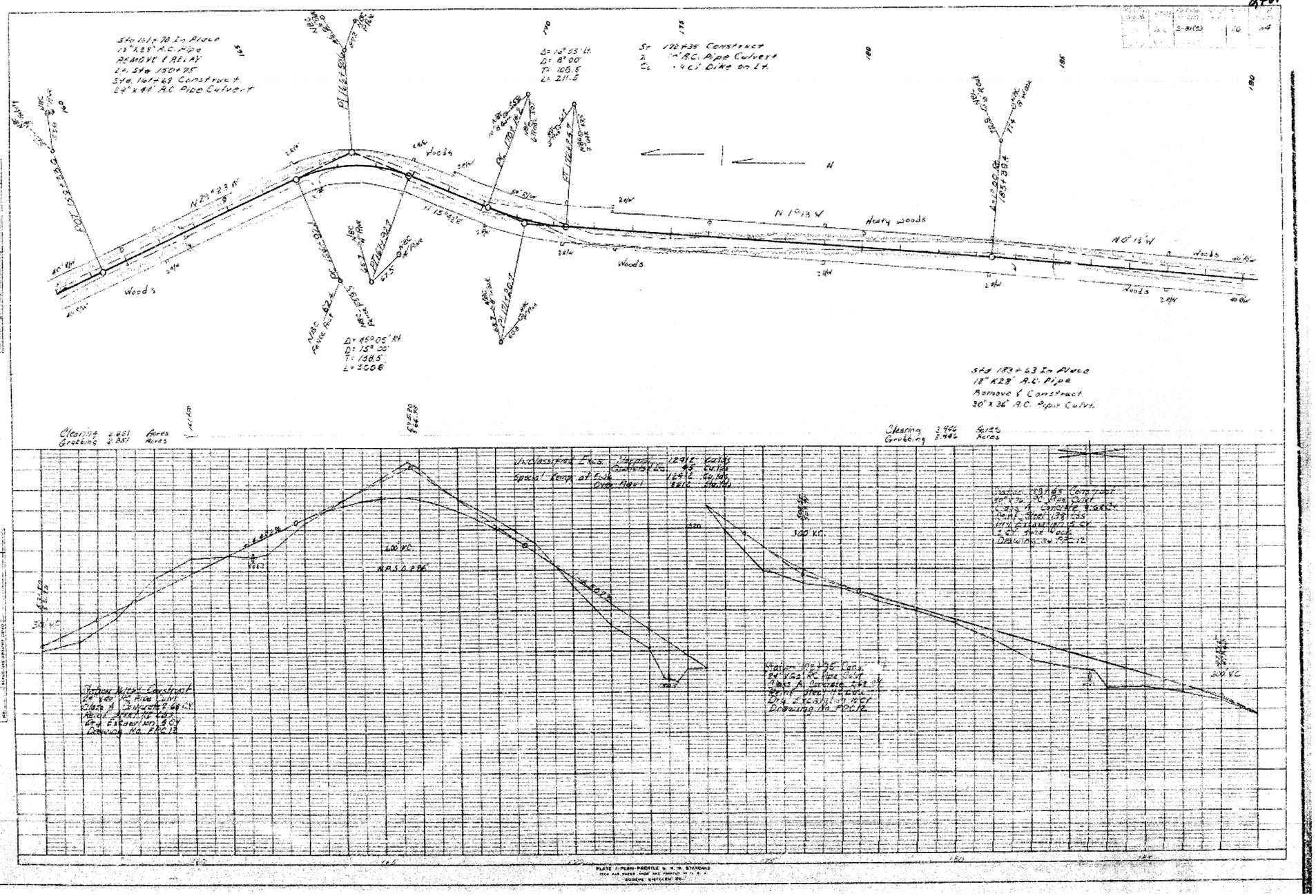
PLAN SHEETS

FOR INFORMATION ONLY

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.		061561	48	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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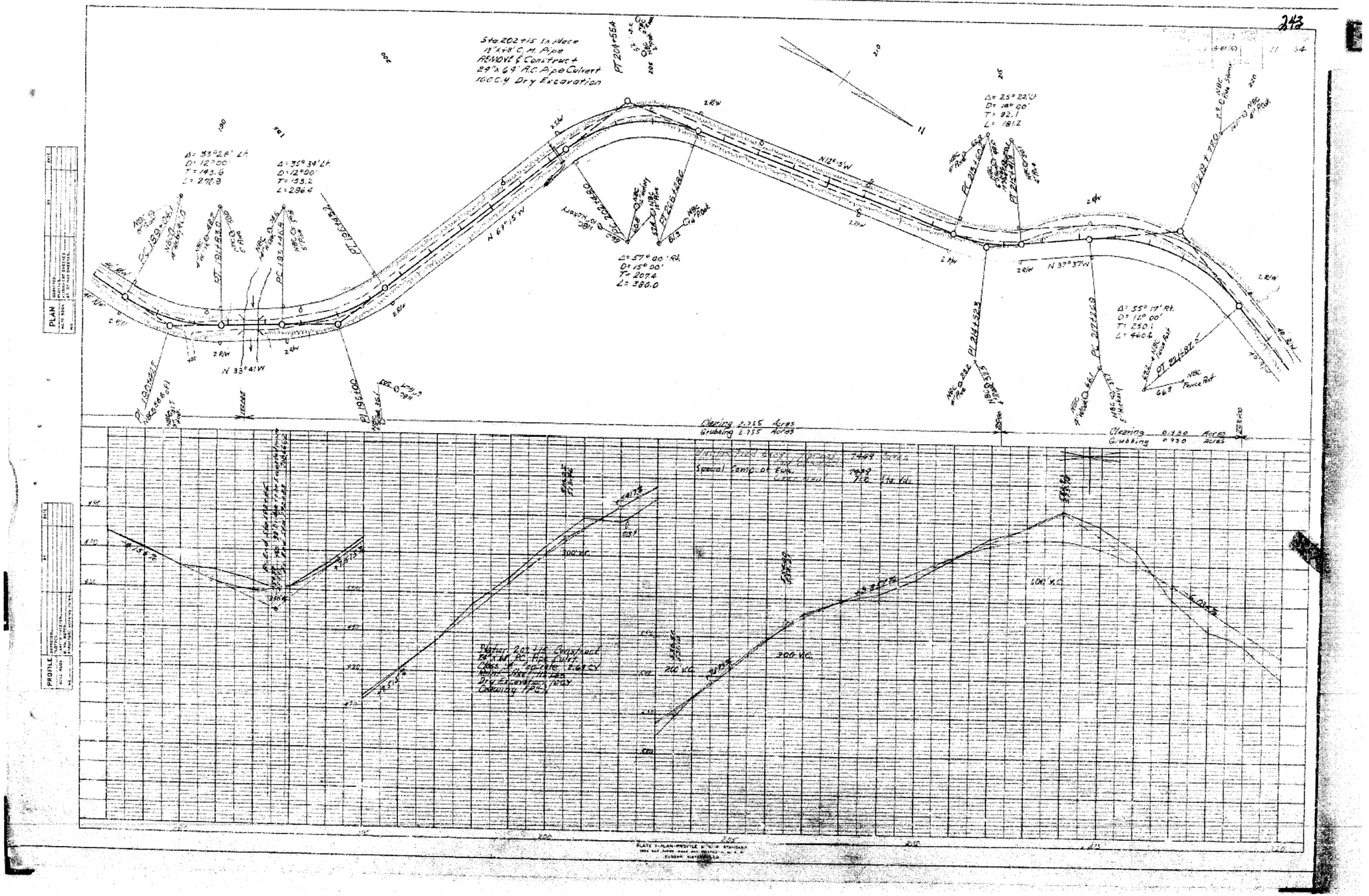
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				6	ARK.			
				JOB NO.		061561	49	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

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FOR INFORMATION ONLY

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				6	ARK.			
				JOB NO.		061561	50	72
				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

244

Fed Road Dist No	STATE	Fed Aid Proj No	Sheet No	Total Sheets
6	ARK.	S-91(6)	2	24
Job No		6662		

Sta 225+75 Install
1.5^m W.W. X 20' C.M. Arch
Lt. Side Drain

Sta 235+90 Install
1.5^m W.W. X 20' C.M. Arch
At & Lt. Side Drain

Sta. 236+50 Install
1.5^m W.W. X 20' C.M. Arch
Lt. Side Drain

Sta 227+50 RELAY
18"X 28" R.C. Pipe Culvert
At Side Drain, Obtain
Pipe From Sta. 227+90

Sta 227+90 In Place
18"X 28" R.C. Pipe
REMOVE & RELAY
At Sta 227+50
Sta 228+60 Construct
24"X 36" R.C. Pipe Culvert

Sta. 241+00 Install
1.5^m W.W. X 20' C.M. Arch
Lt. Side Drain

50' BUFFER

Clearing 1.329 Acres
Grubbing 1.329 Acres

Unclass. Pool Excavation (Roads) 9118 Cu Yds
Special Comp. of Emb. 9118 Cu Yds
3446 Cu Yds

Station 227+50 Relay
18"X 28" R.C. Pipe Culvert
Rt. Side Drain
Inv. Elev. = 304
Sta. Dwg. = FPC-12

Station 228+60 Construct
24"X 36" R.C. Pipe Culvert
Lt. Side Drain & Relay
Sta. Dwg. FPC-11

Station 241+00 Install
18"X 28" R.C. Pipe Culvert
Lt. Side Drain
Sta. Dwg. FPC-11

PLAN
PROFILE

4/30/2018

R061561.DGN

PLAN SHEETS

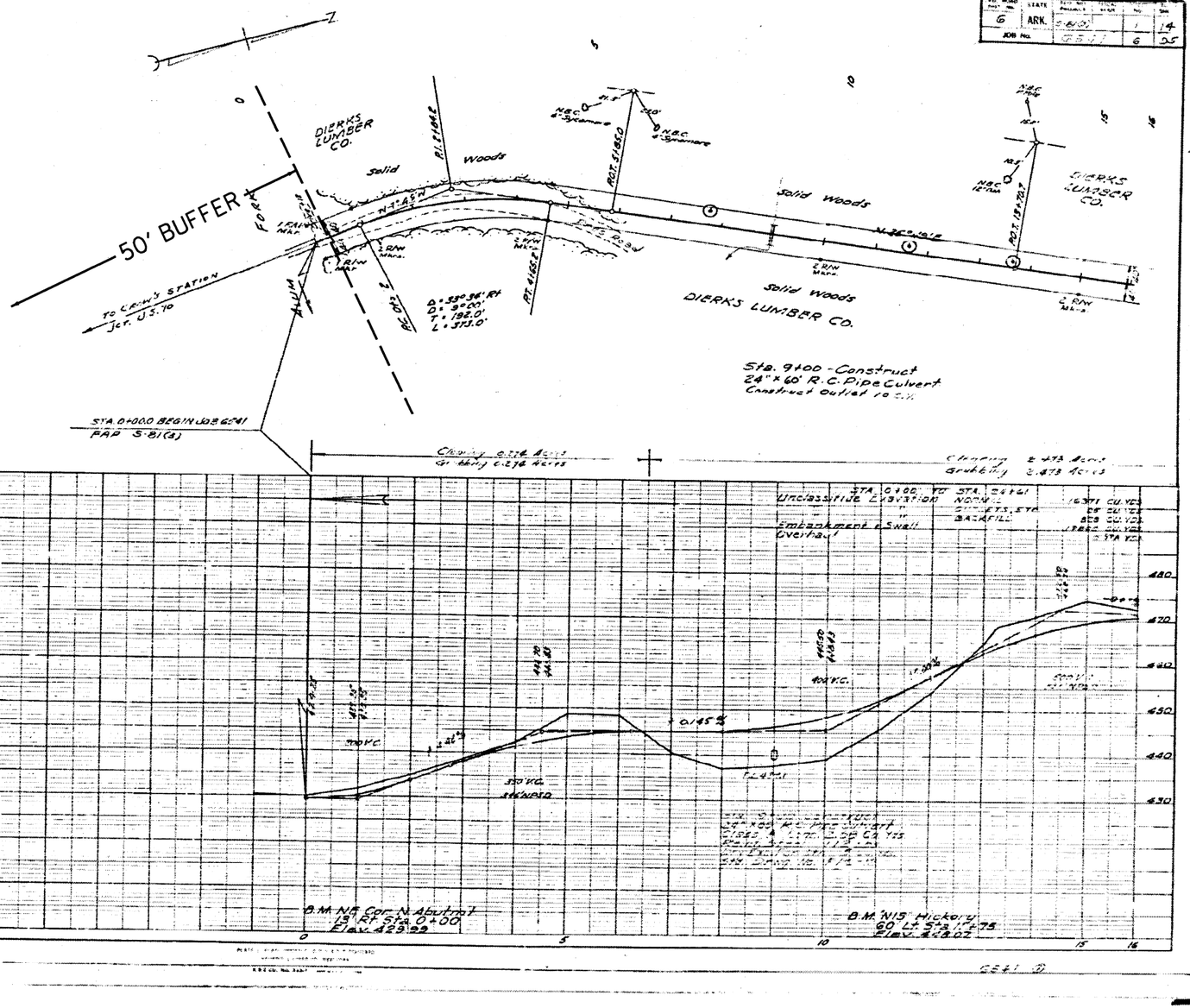
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				6	ARK.			
				JOB NO.		061561	51	72
				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

KA

FED. ROAD DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	061561	14	
JOB No.			6	35



GENERAL NOTES

C.W. ADD TO ALL C & G

CLEAR & GRUB ALL AREAS WITHIN RIGHT OF WAY LINES AND EASEMENTS AS SHOWN ON PLANS AND AS DIRECTED BY THE ENGINEER. ALL TREES, STUMPS, BRUSH, LOGS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL TREES 6" DIA. AND LARGER SHALL BE CUT FLUSH WITH THE GROUND OR AS DIRECTED BY THE ENGINEER. ALL STUMPS SHALL BE GRUBBED AND REMOVED TO A DEPTH OF 12" BELOW THE GROUND OR AS DIRECTED BY THE ENGINEER. ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN A MANNER SATISFACTORY TO THE ENGINEER AND IN ACCORDANCE WITH SECTION 201 OF THE STANDARD SPECIFICATIONS.

ALL TREES, STUMPS, BRUSH, LOGS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ALL TREES 6" DIA. AND LARGER SHALL BE CUT FLUSH WITH THE GROUND OR AS DIRECTED BY THE ENGINEER. ALL STUMPS SHALL BE GRUBBED AND REMOVED TO A DEPTH OF 12" BELOW THE GROUND OR AS DIRECTED BY THE ENGINEER. ALL MATERIAL REMOVED SHALL BE DISPOSED OF IN A MANNER SATISFACTORY TO THE ENGINEER AND IN ACCORDANCE WITH SECTION 201 OF THE STANDARD SPECIFICATIONS.

Merchantable timber shall be sawn and removed in accordance with Section 101, Part 1, of the specifications.

FENCE REMOVED

1. FENCE FOR A TEMPORARY ATTY. & Telegraph Pole
2. FENCE Pole Across Temporary Gate & Guy Wire
3. FENCE Pole Fence Post (Gate) in Existing Fence
4. FENCE TO BE REMOVED AT THE DIRECTION OF THE ENGINEER

UTILITIES TO BE MOVED

CONCERN	STA	STA	LOC.	No. POLES per SPAN	No. WIRES per SPAN
Electric Co-op	17+73	6+00.91	RT & LT.	13	29
Forest Service Telephone	Sec. 34	4+37.25	Rt & Lt.	48	75

PLAN

PROFILE

4/30/2018

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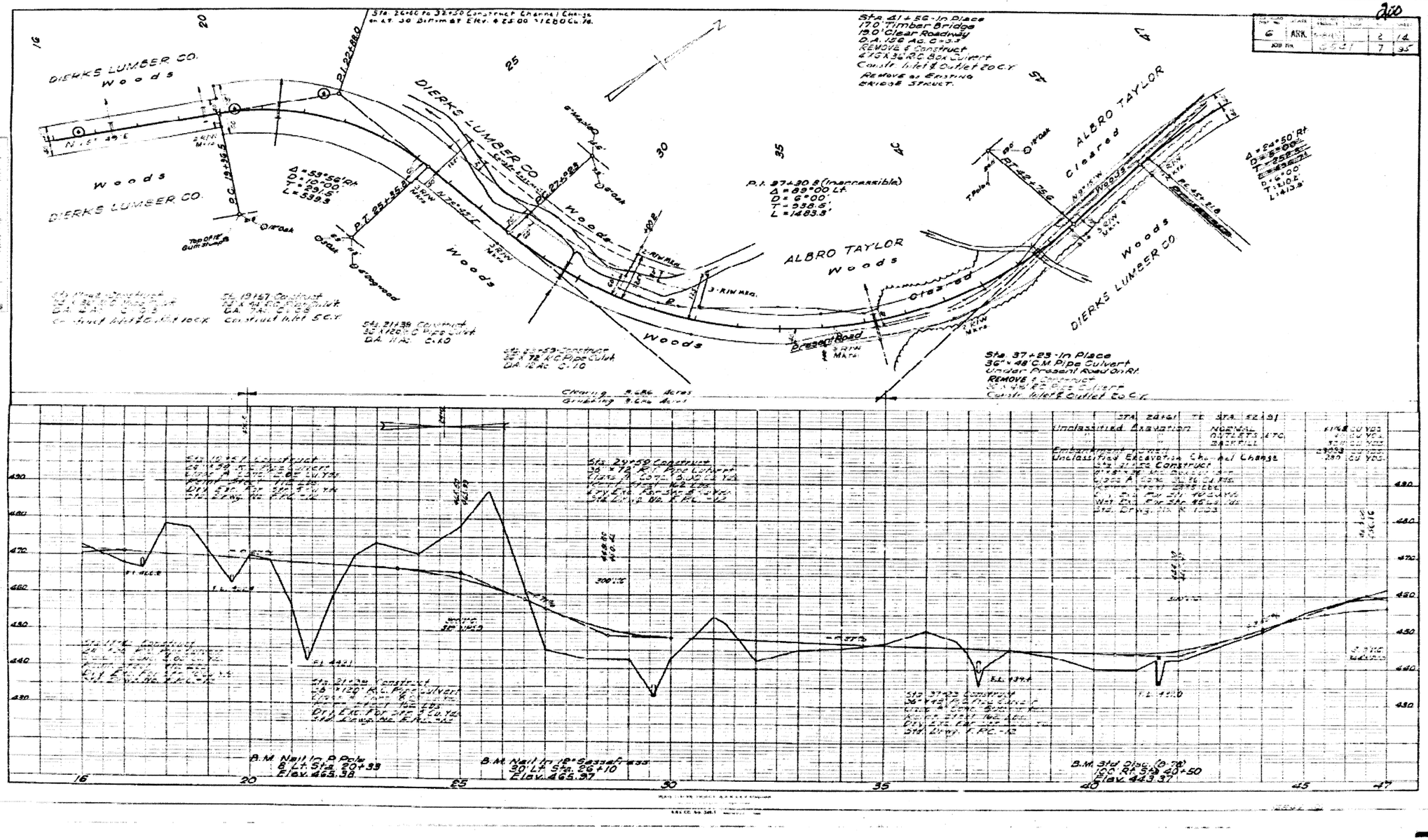
PLAN SHEETS

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				6	ARK.			
				JOB NO.		061561	52	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

4/30/2018

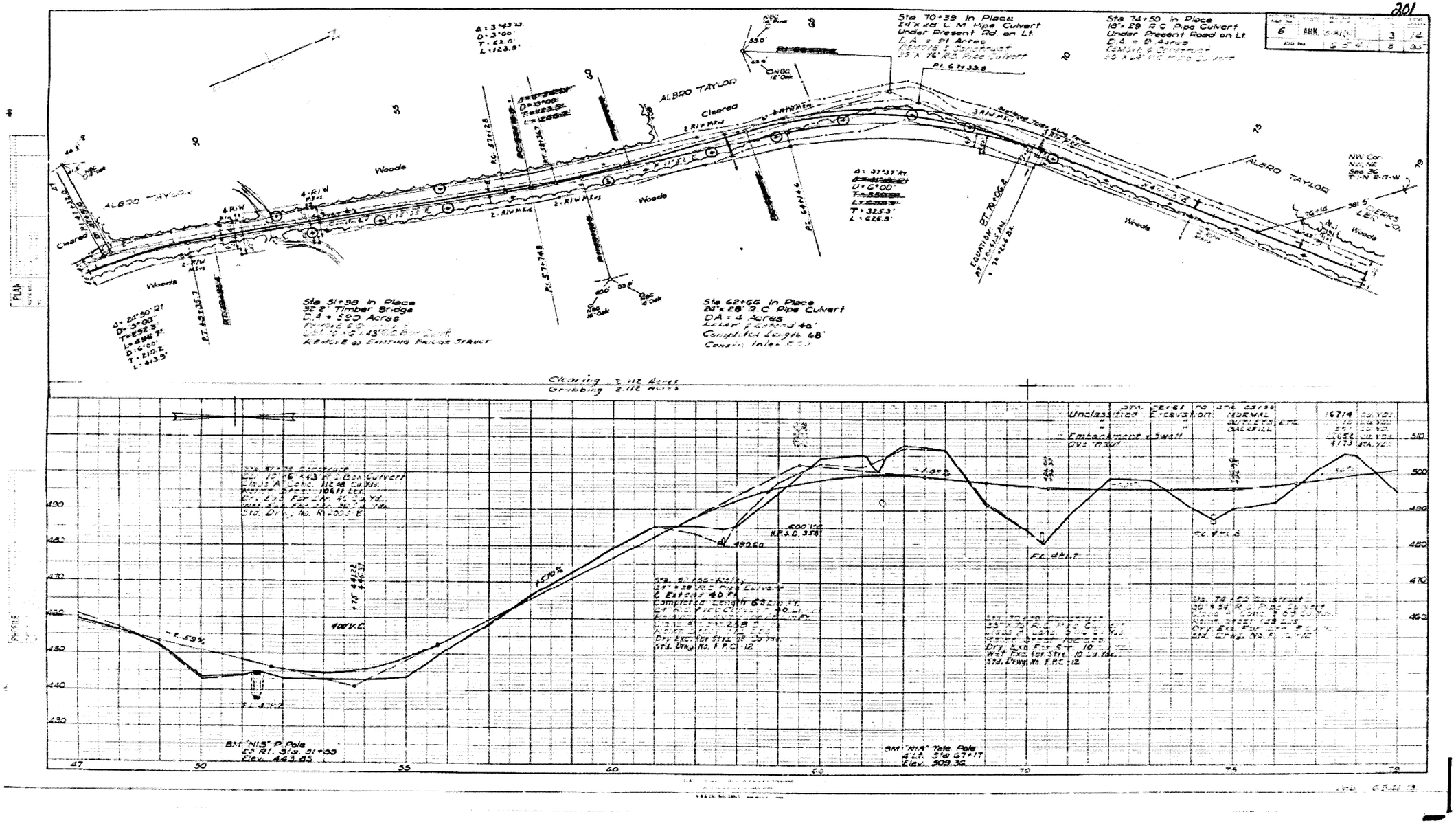
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				6	ARK.			
				JOB NO.		061561	53	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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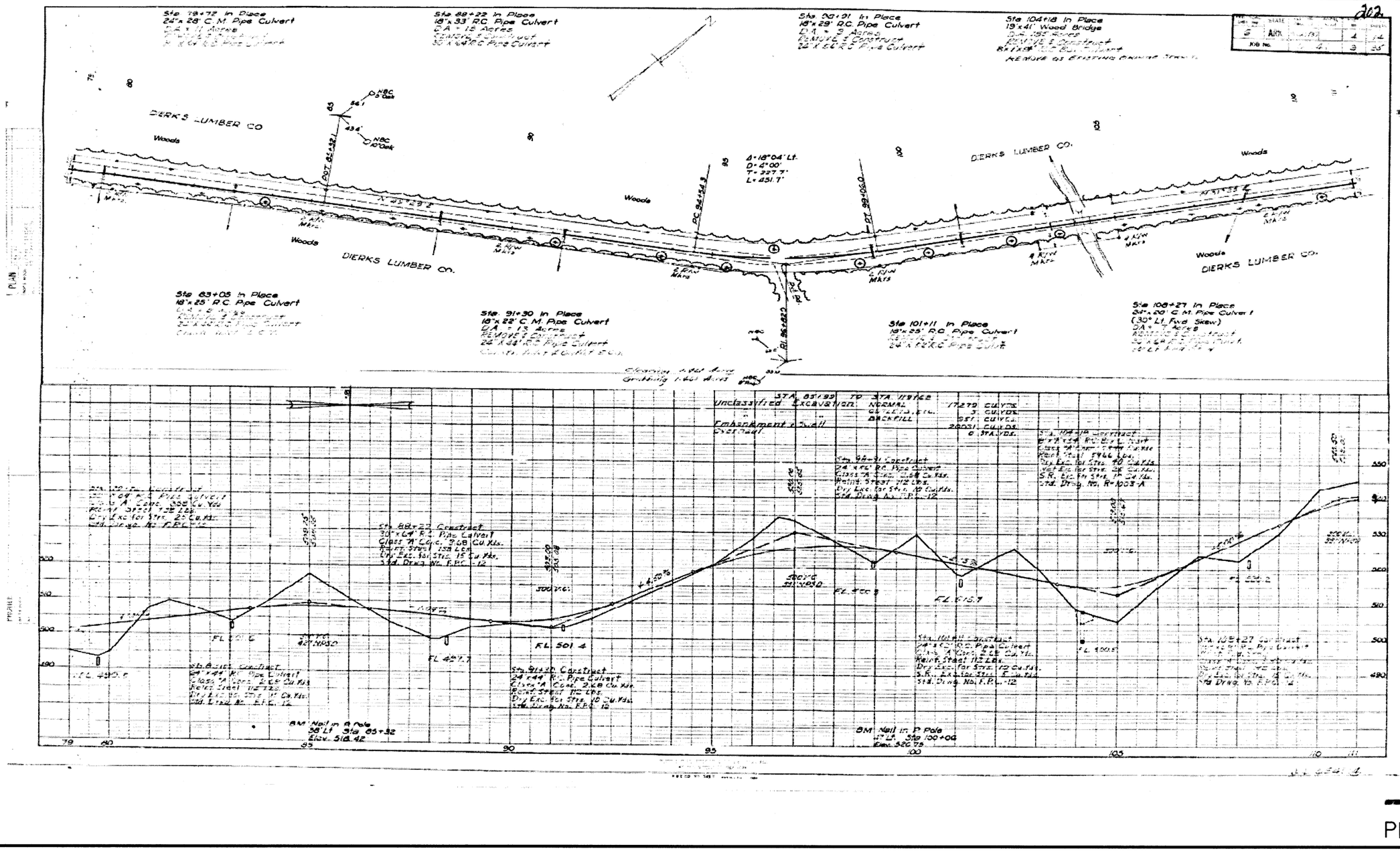
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				6	ARK.			
				JOB NO.		061561	54	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

4/30/2018

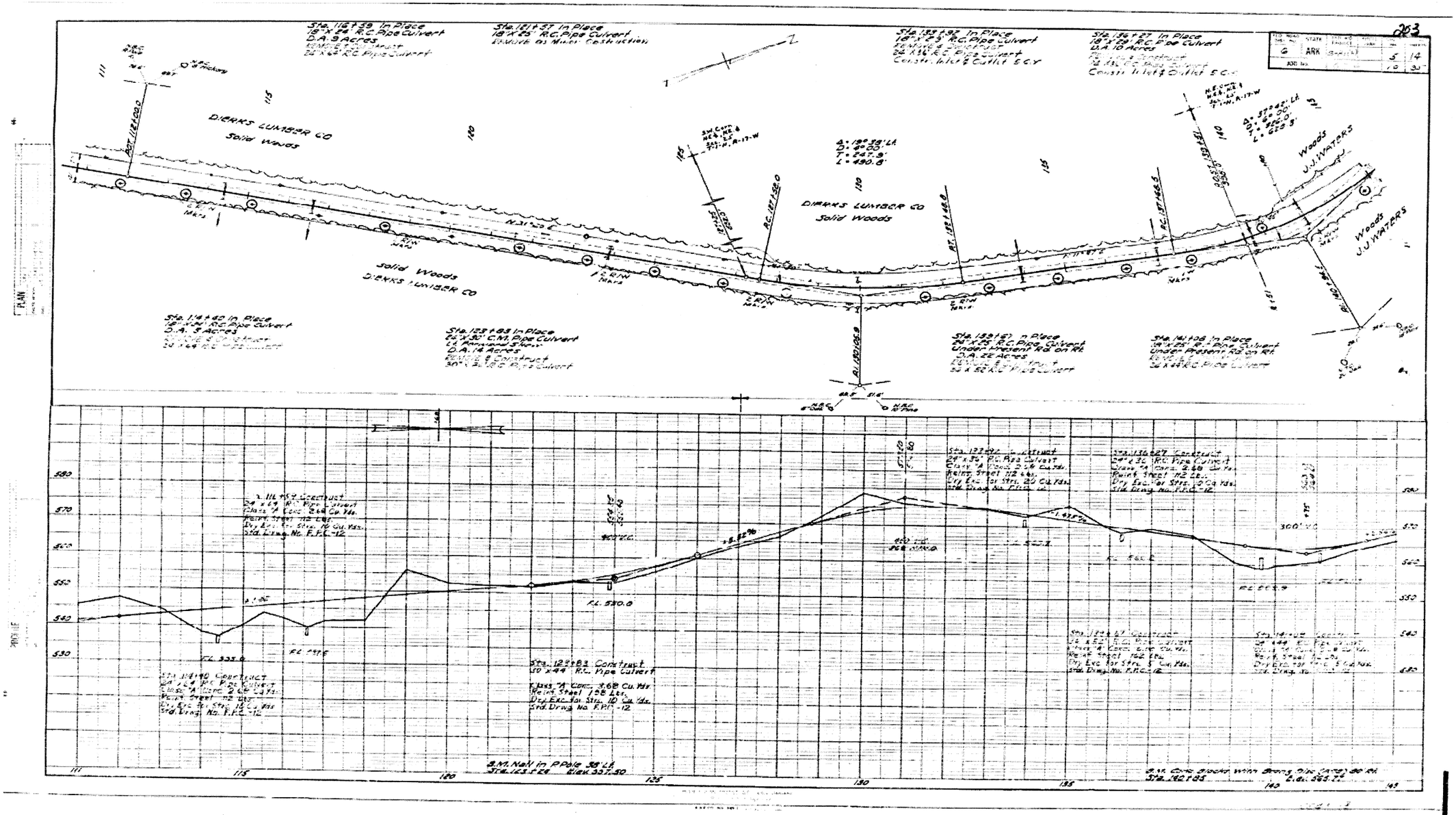
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				6	ARK.			
				JOB NO.		061561	55	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



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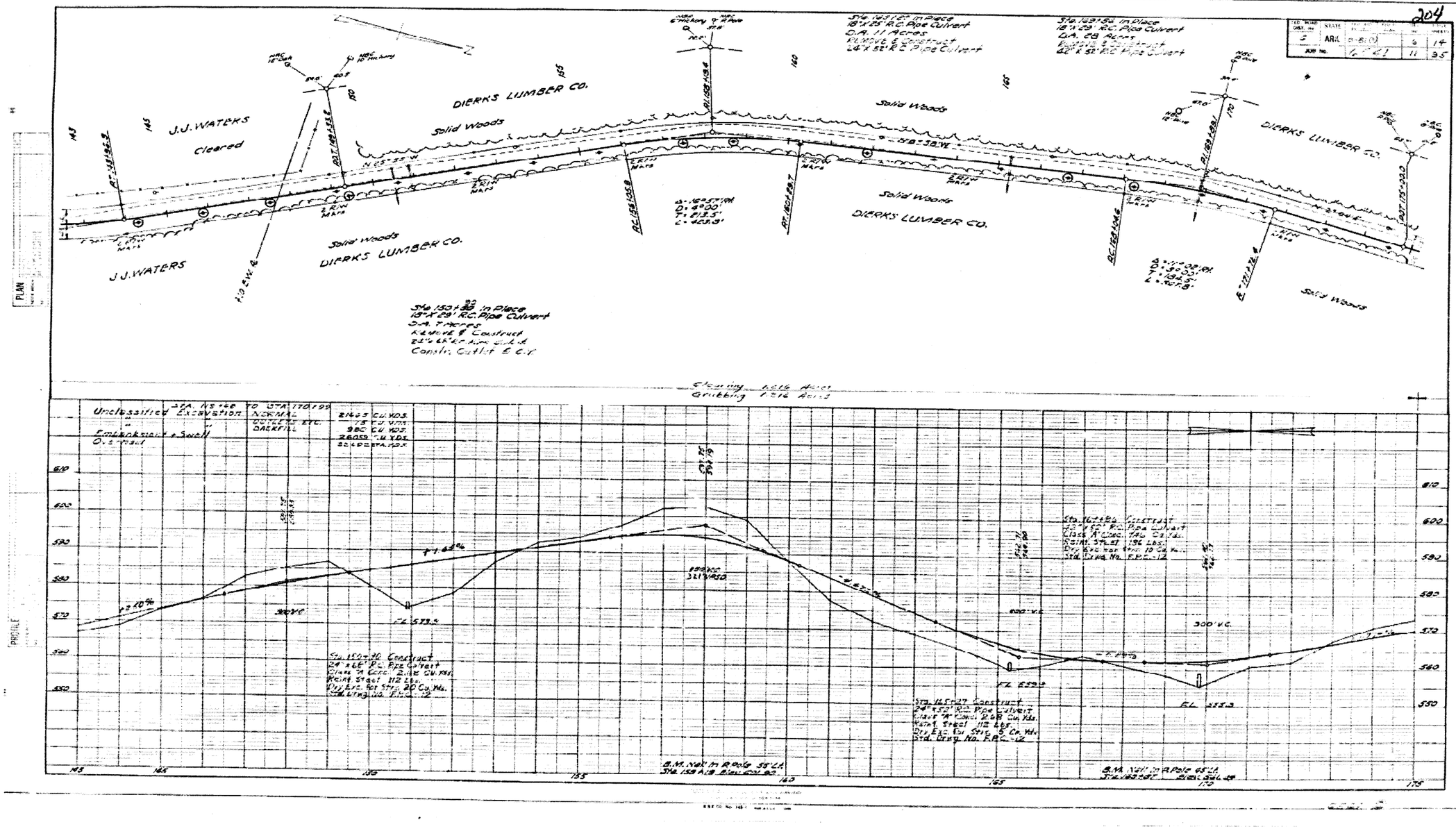
PLAN SHEETS

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				6	ARK.			
				JOB NO.		061561	56	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

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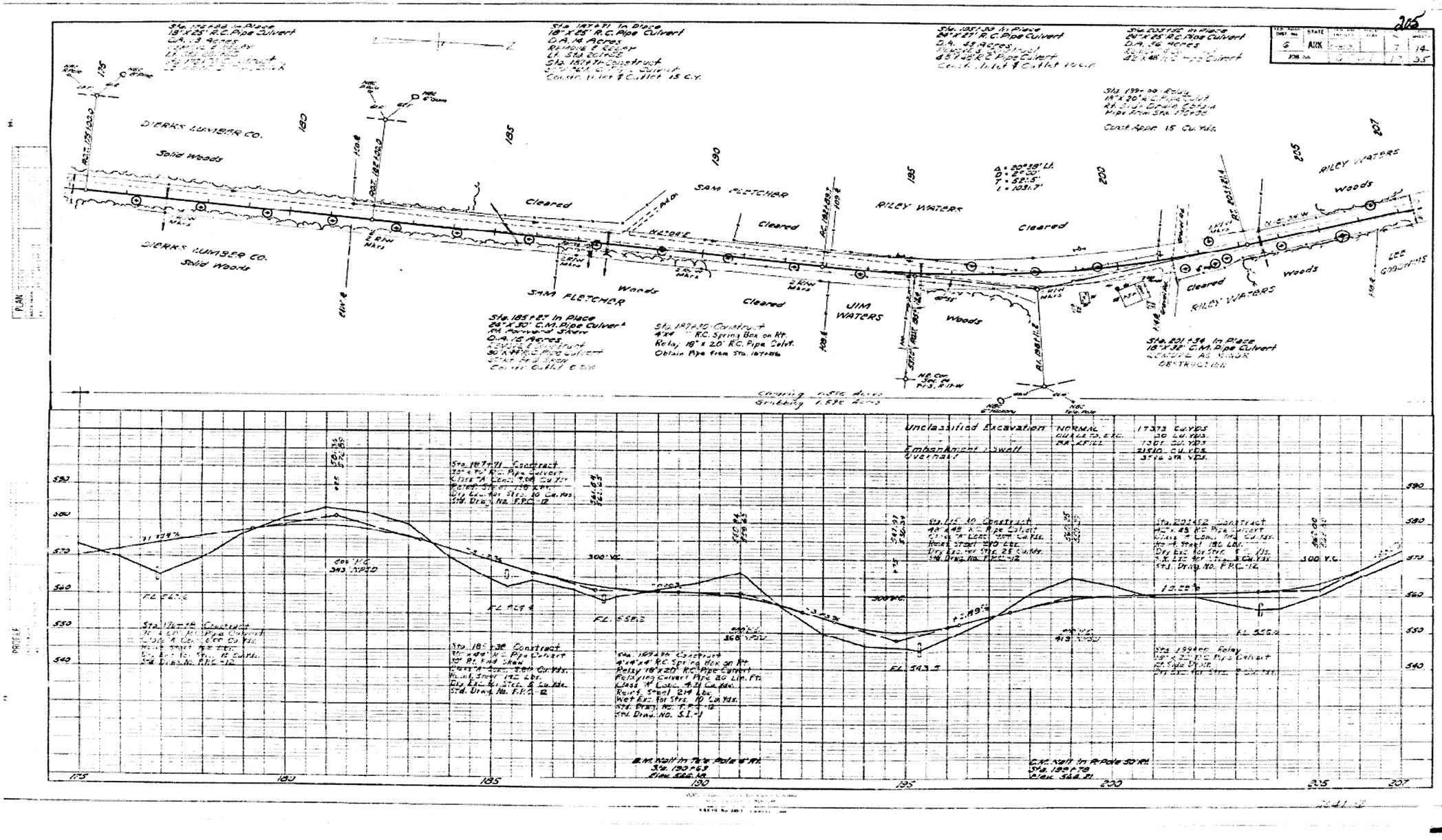
PLAN SHEETS

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				6	ARK.			
				JOB NO.		061561	57	72

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
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PLAN SHEETS

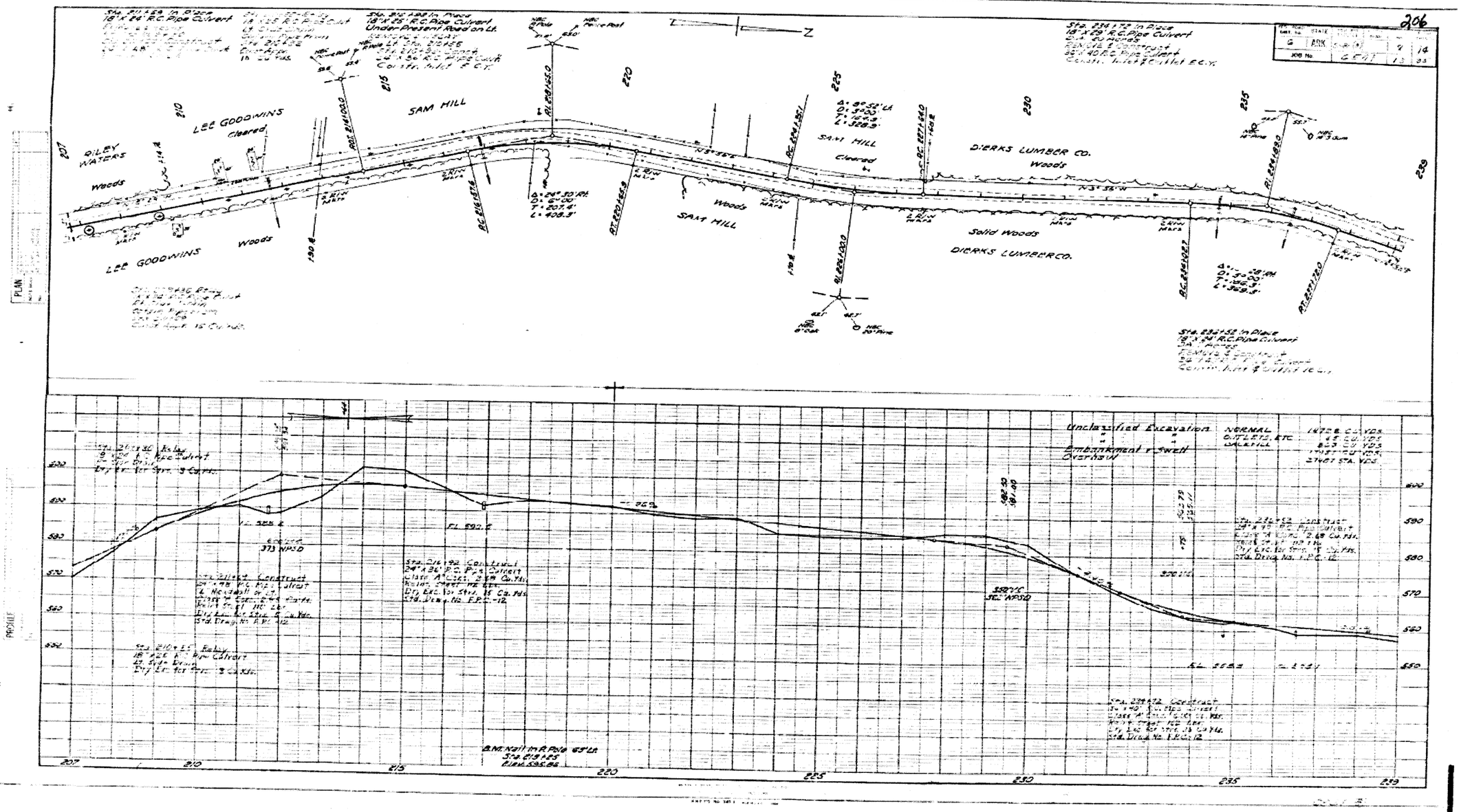
FOR INFORMATION ONLY

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.		061561	58	72

(2) PLAN SHEETS

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

5-15-18



4/30/2018

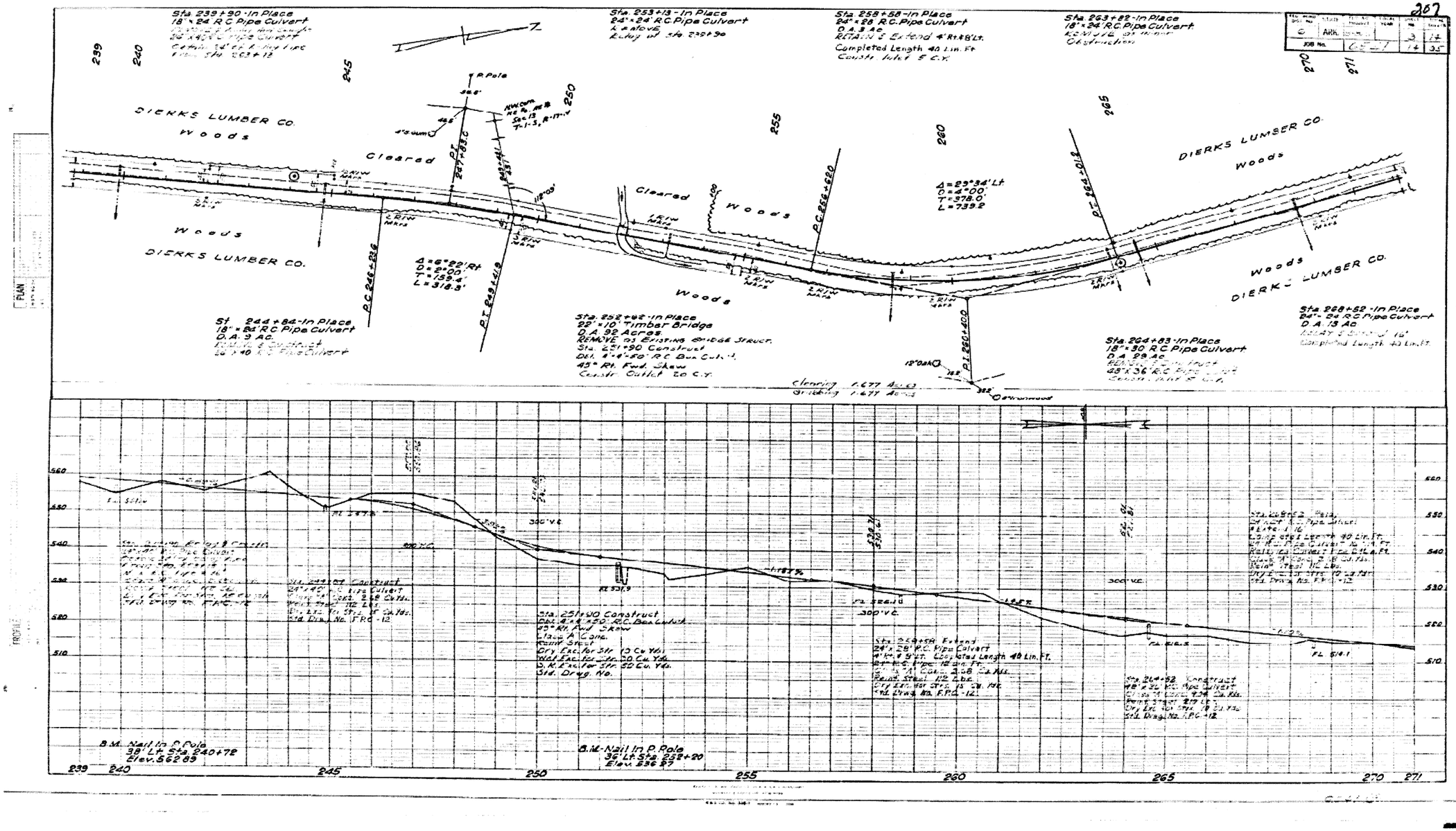
R061561.DGN

PLAN SHEETS

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				6	ARK.			
				JOB NO.		061561	59	72
				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

4/30/2018

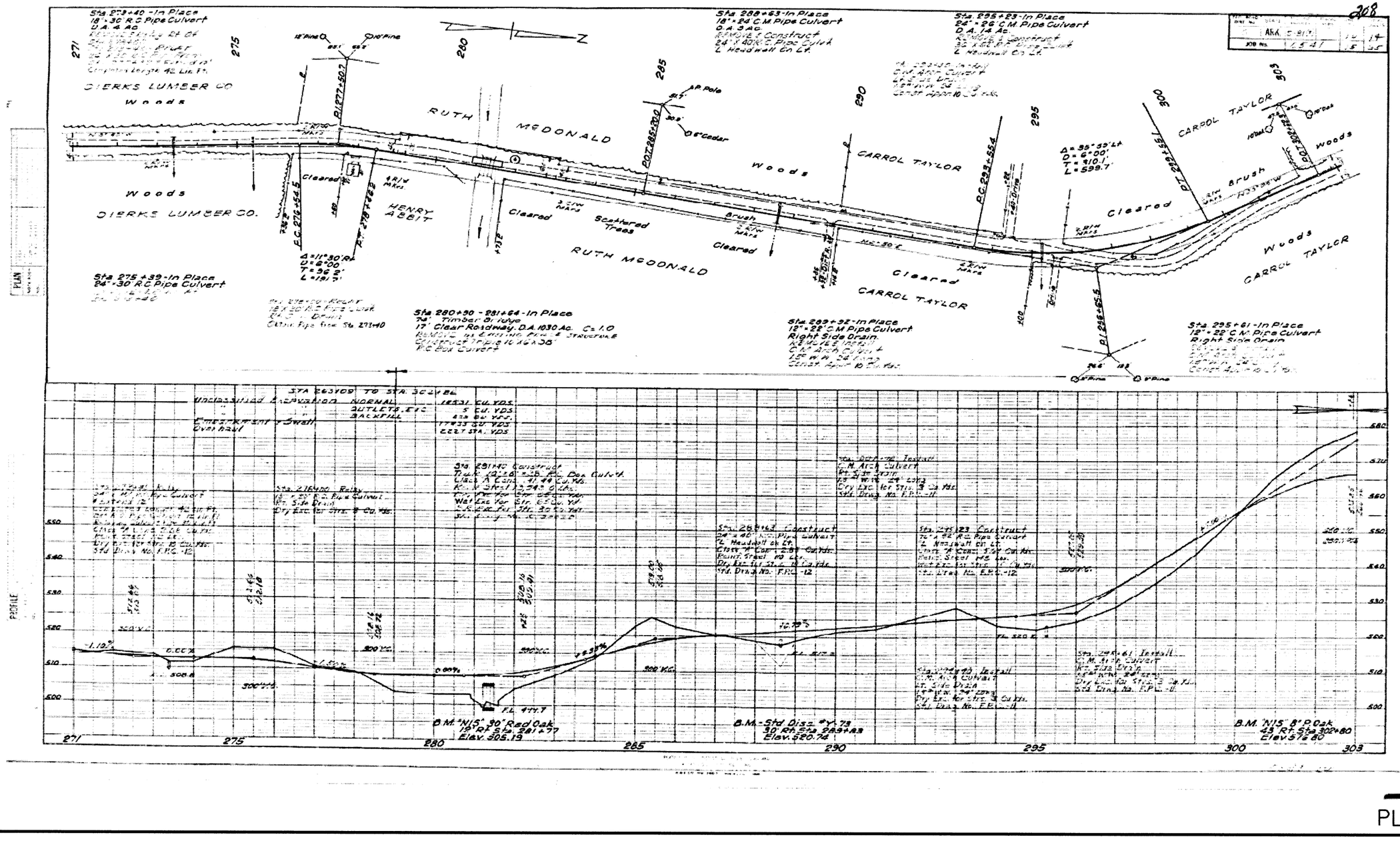
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FOR INFORMATION ONLY

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				6	ARK.			
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(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18

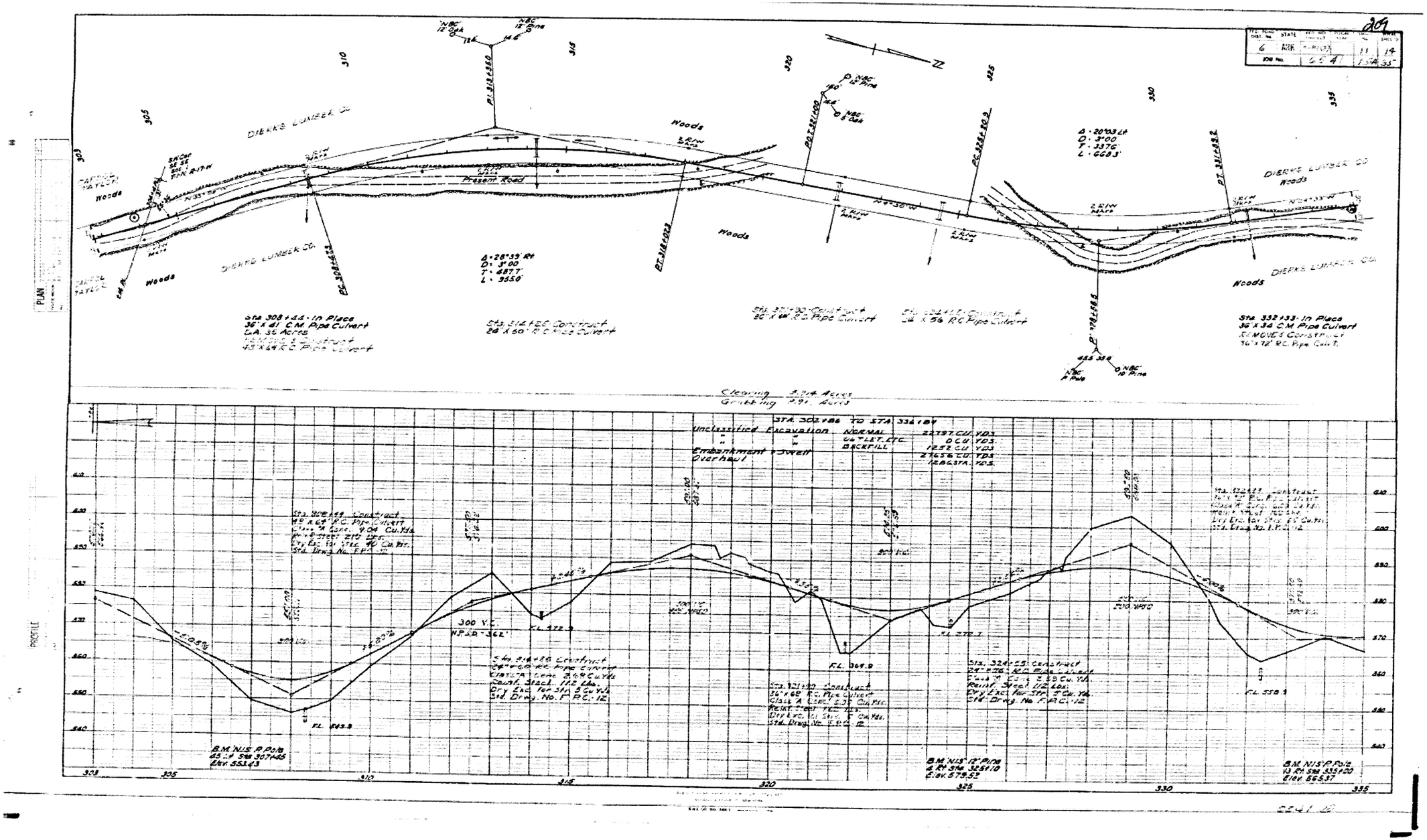


FOR INFORMATION ONLY

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(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

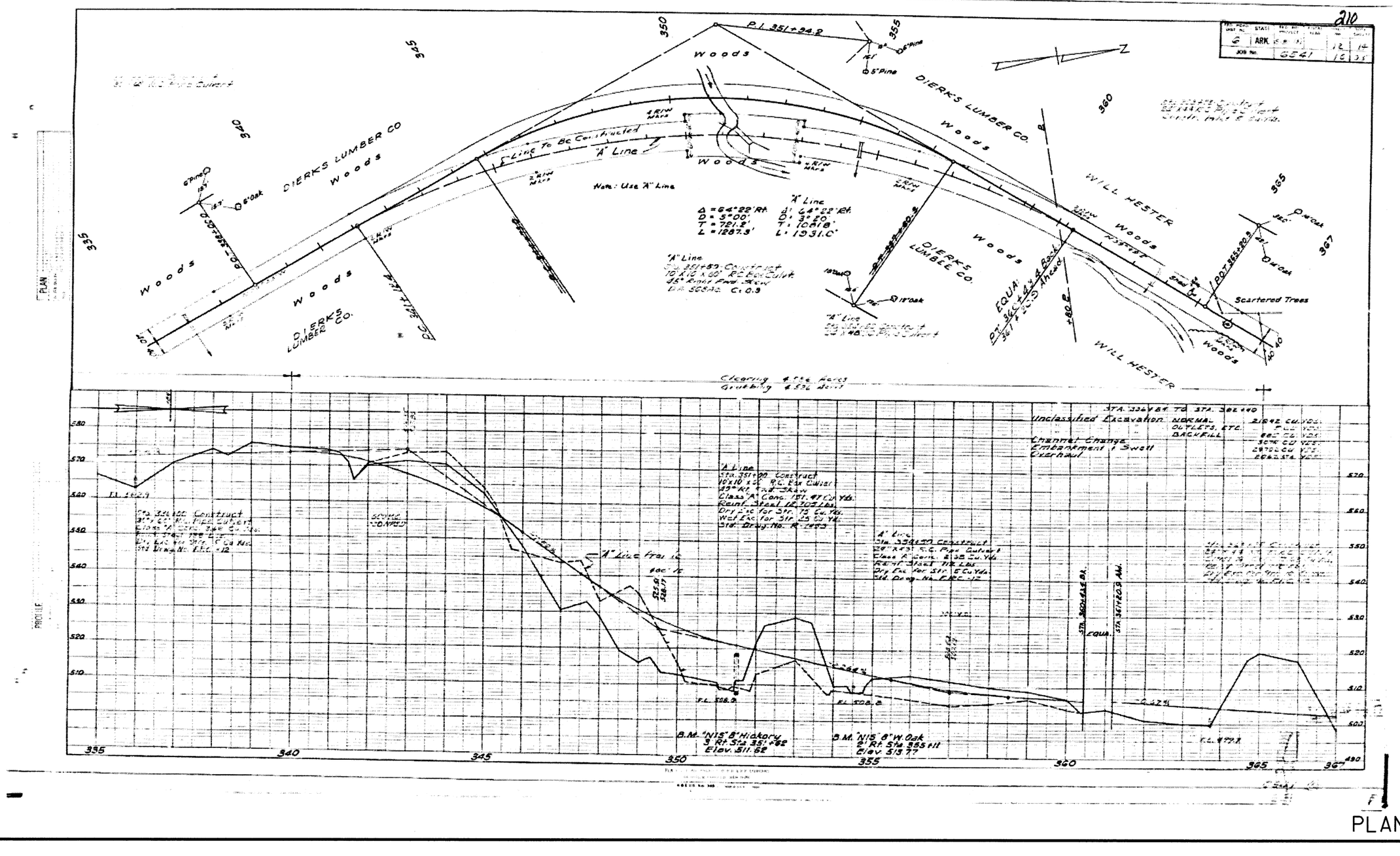
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R061561.DGN

FOR INFORMATION ONLY

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

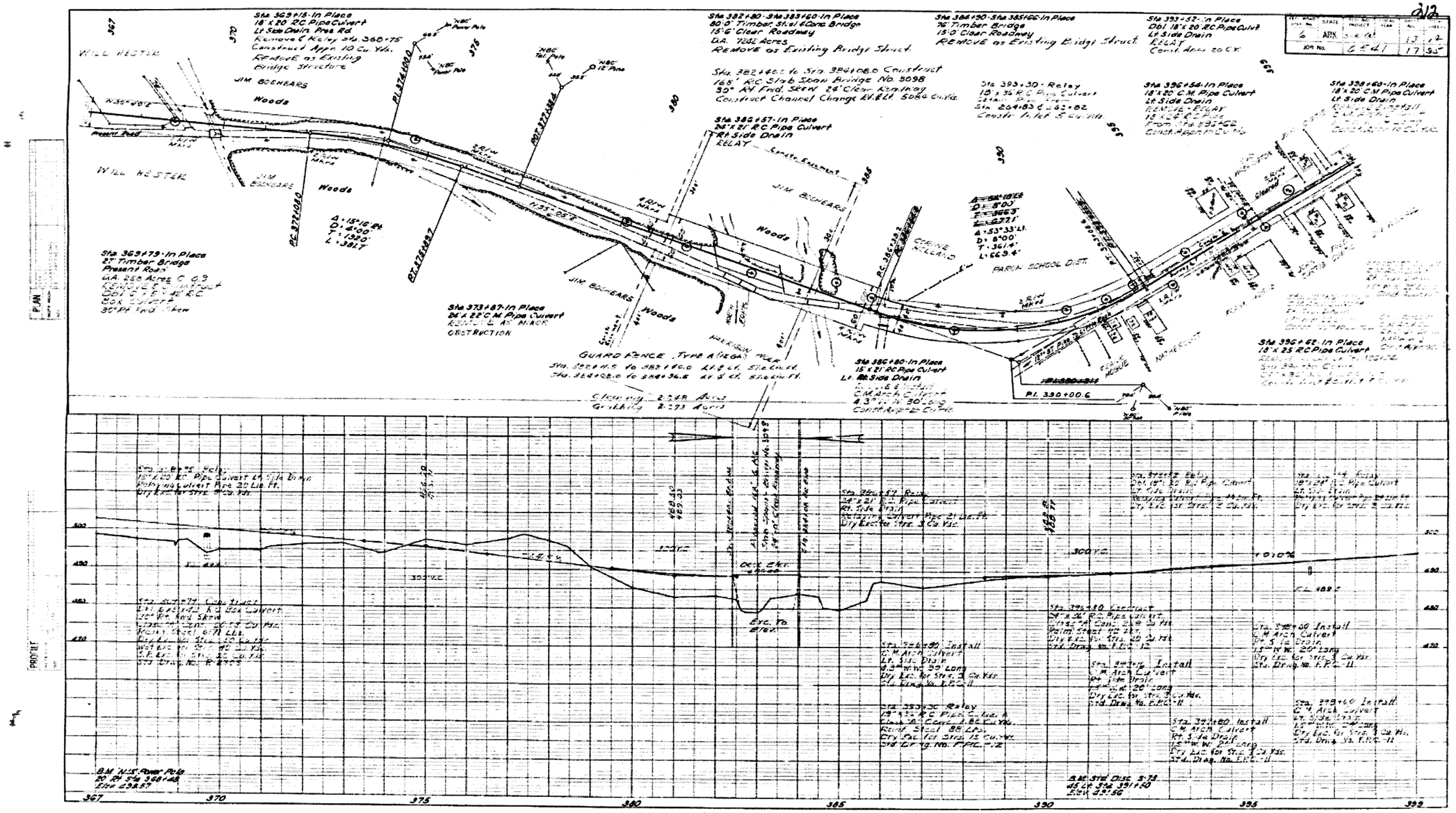
PLAN SHEETS

FOR INFORMATION ONLY

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

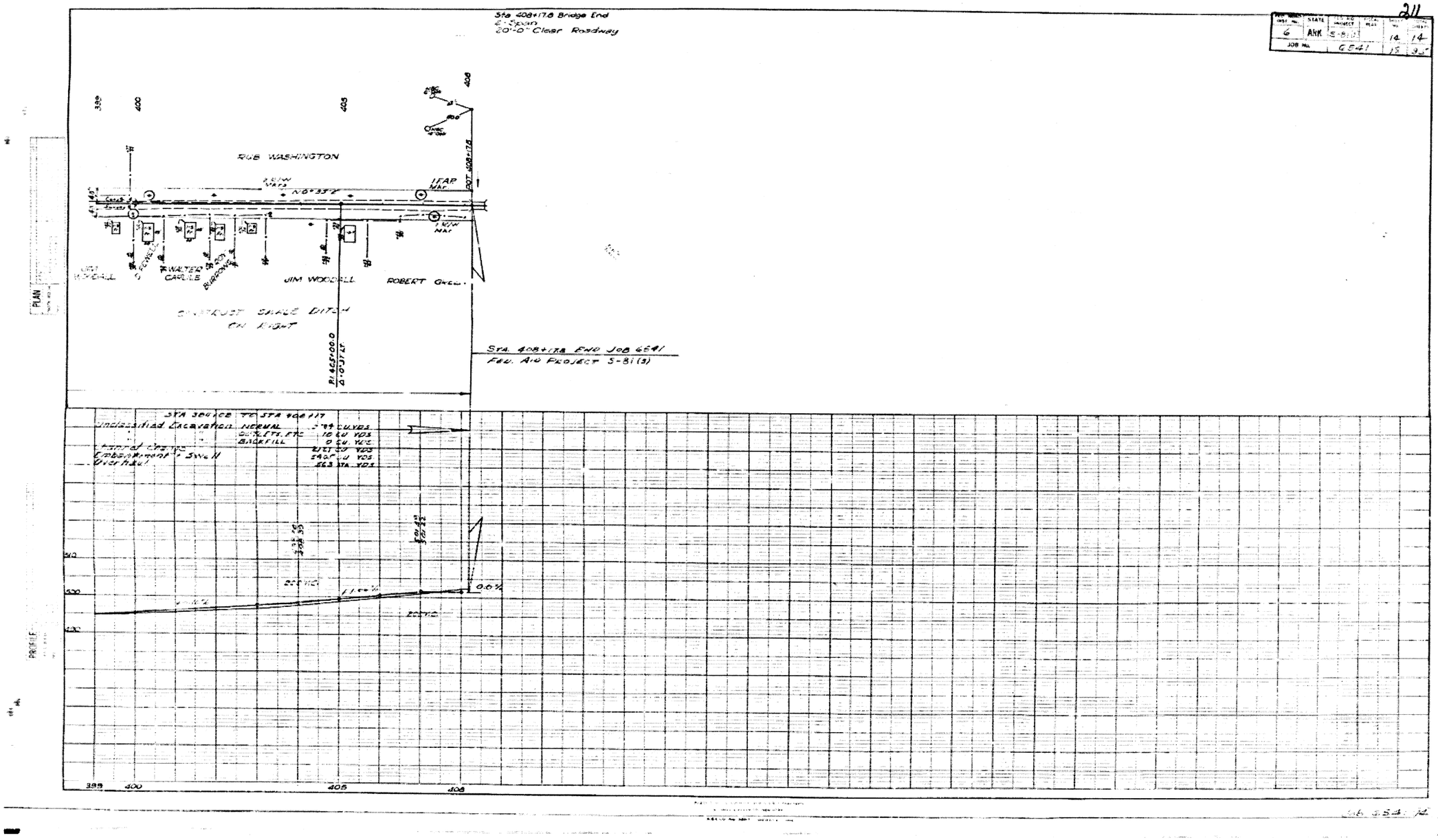
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PLAN SHEETS

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				(2)	PLAN SHEETS			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

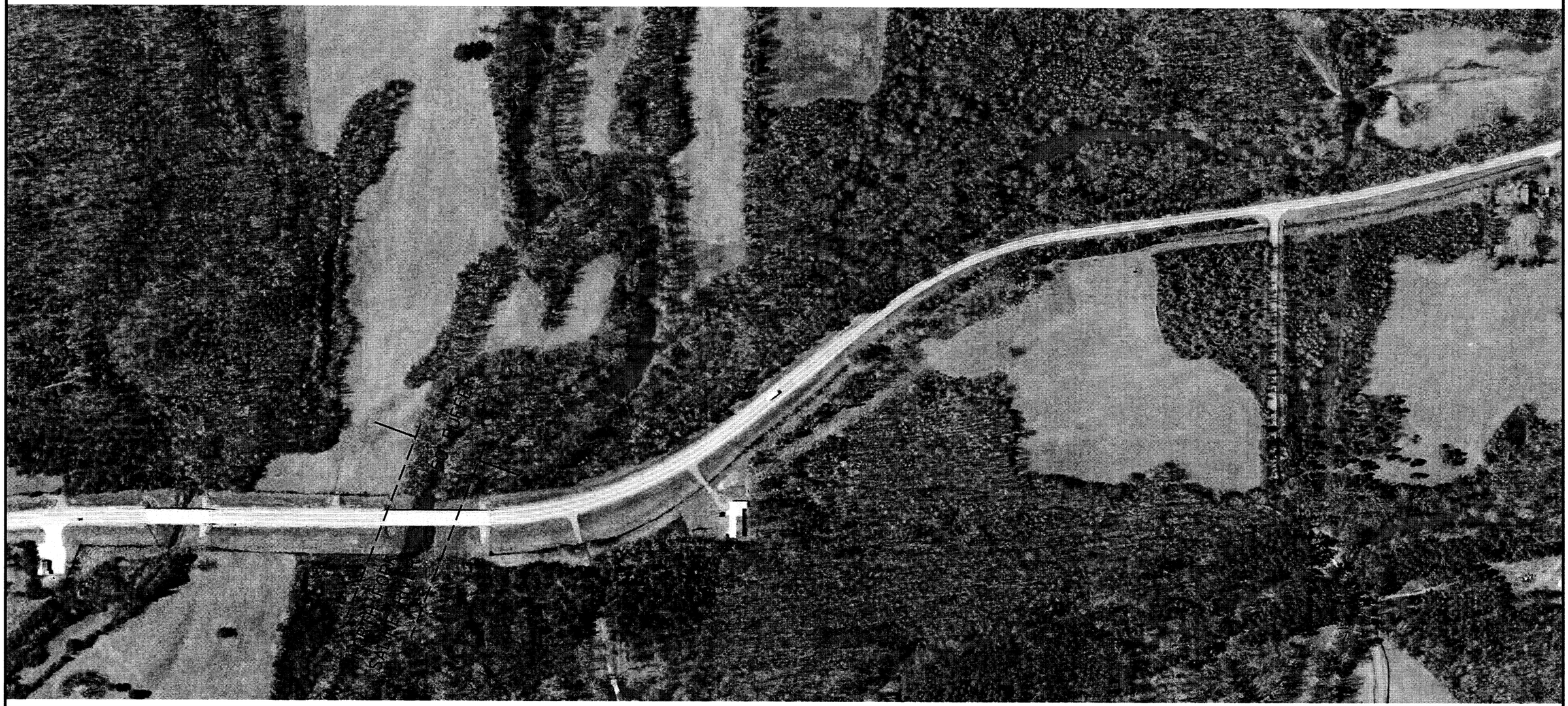
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PLAN SHEETS

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				6	ARK.			
				JOB NO.		061561	65	72
				(2) PLAN SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



4/30/2018

R061561.DGN

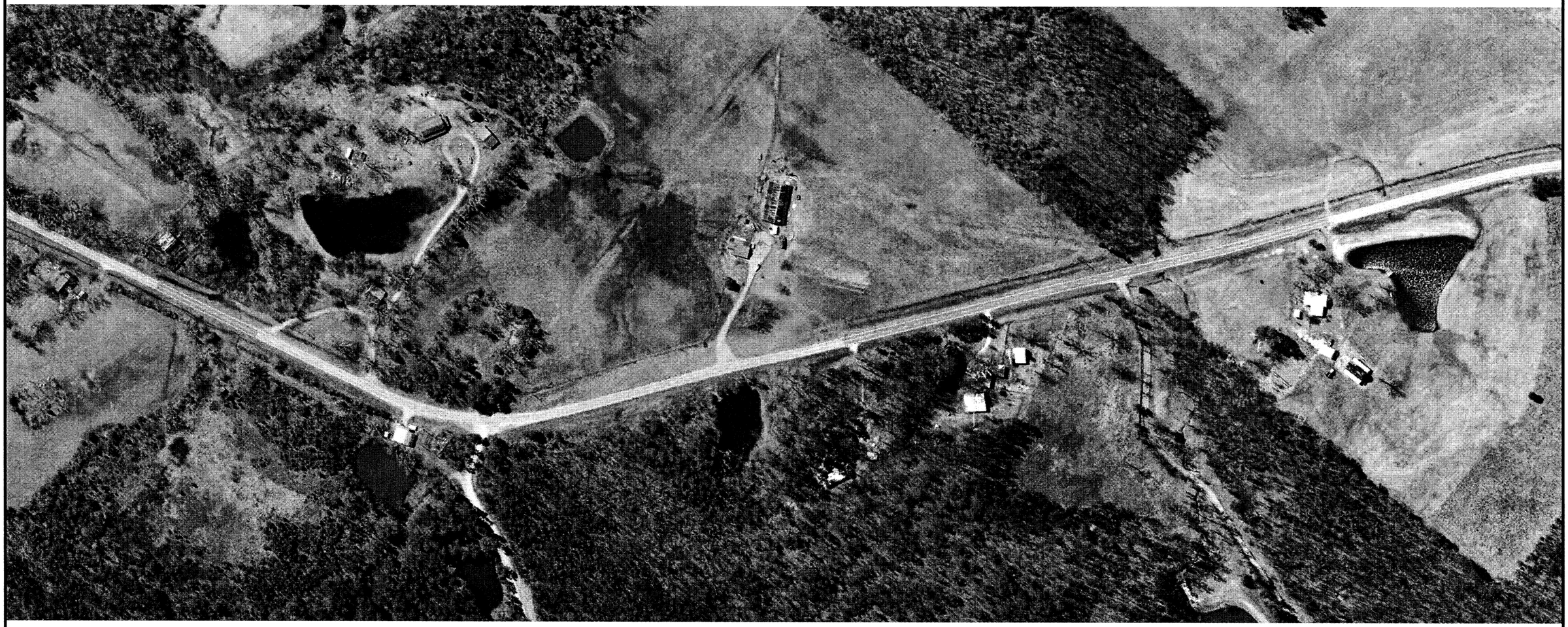
PLAN SHEETS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				(2) PLAN SHEETS				

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

5-15-18



PLAN SHEETS

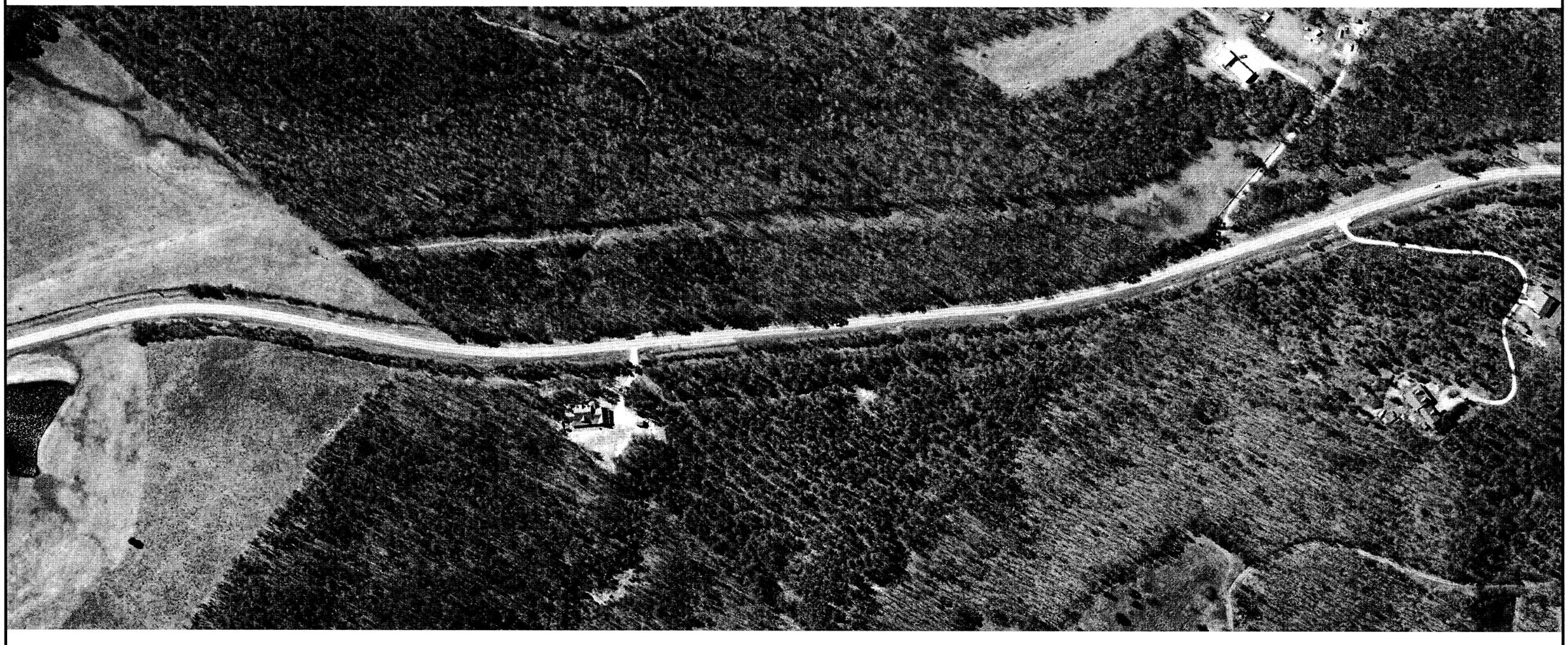
R061561.DGN 4/30/2018

FOR INFORMATION ONLY

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(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



R061561.DGN 4/30/2018

PLAN SHEETS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	68	72
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

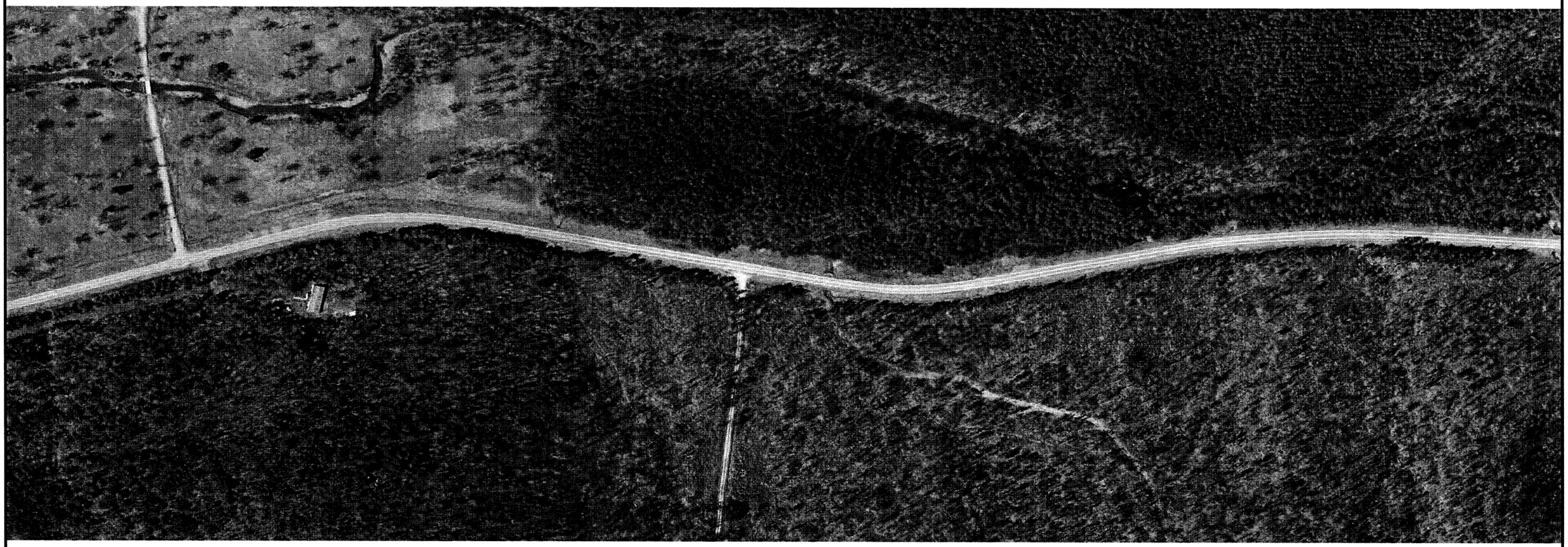
R061561.DGN 4/30/2018

FOR INFORMATION ONLY

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				6	ARK.			
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(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



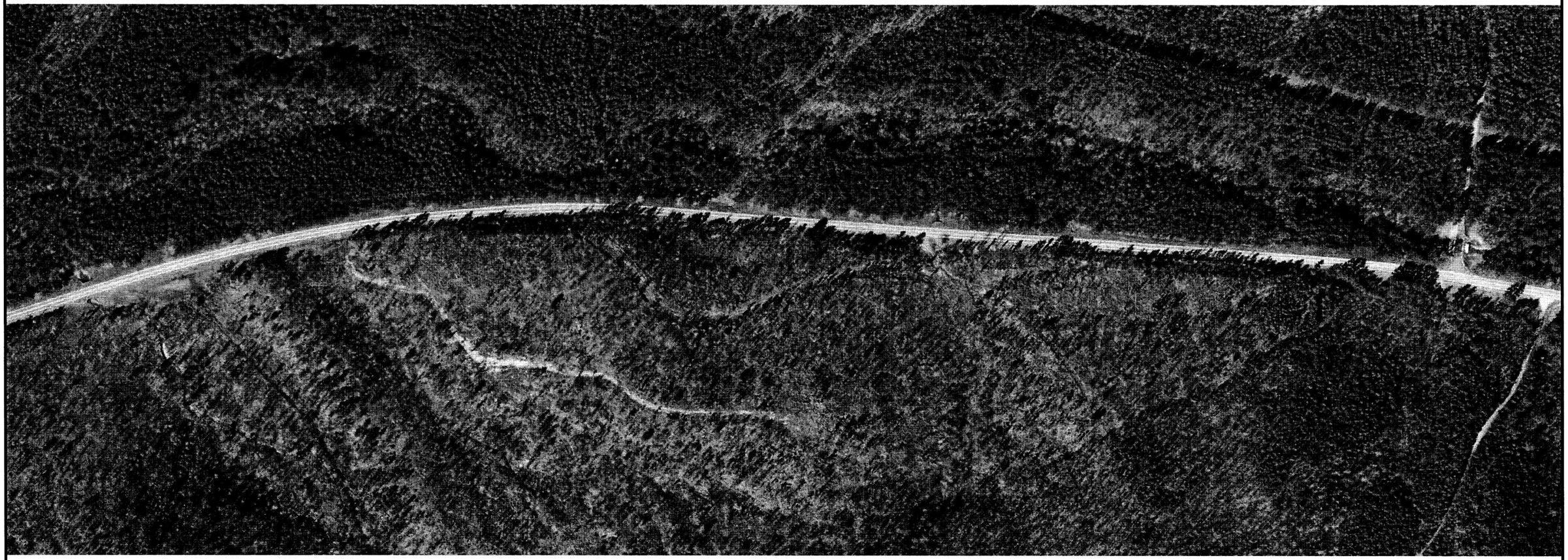
R061561.DGN 4/30/2018

PLAN SHEETS

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

R061561.DGN 4/30/2018

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061561	71	72
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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



PLAN SHEETS

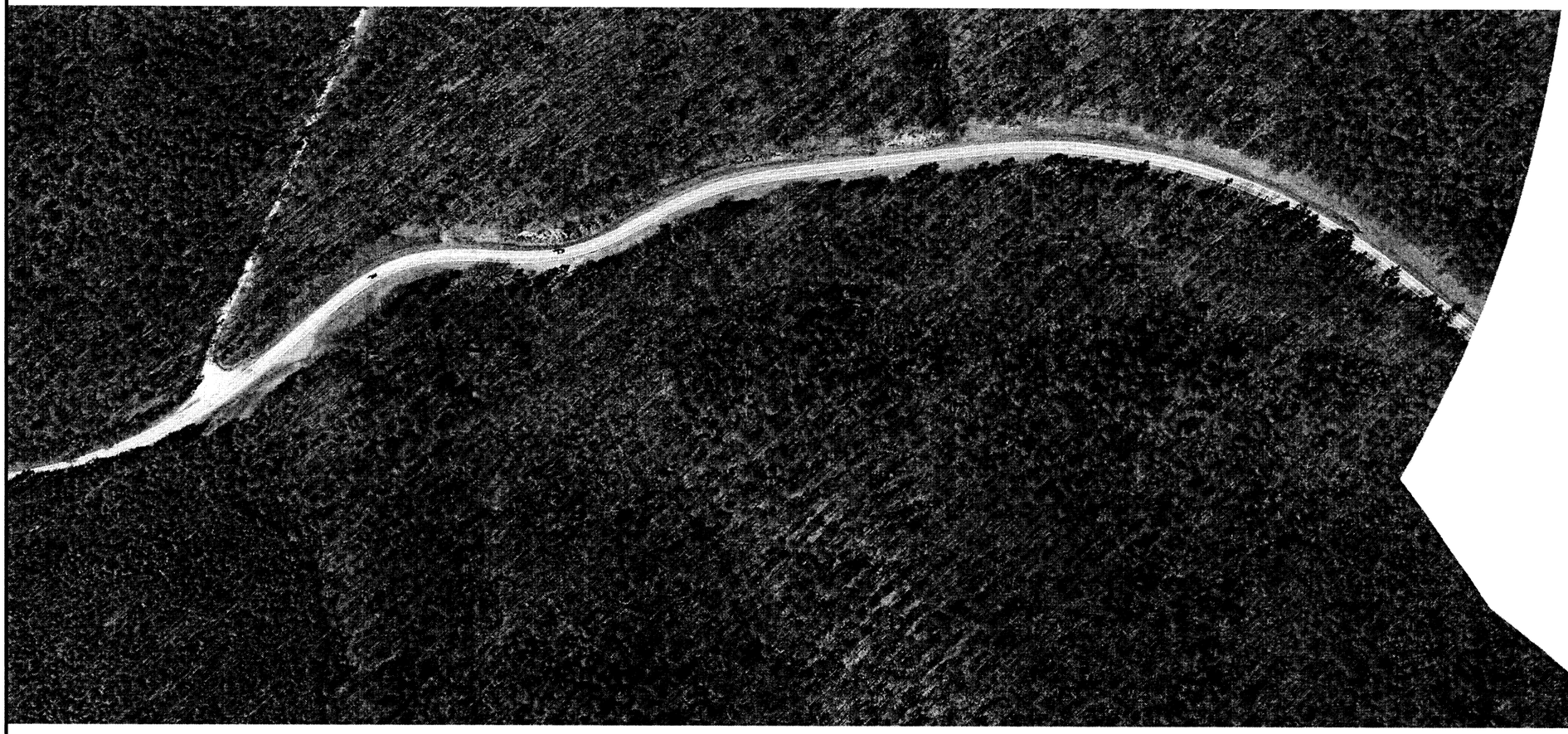
R061561.DGN 4/30/2018

FOR INFORMATION ONLY

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

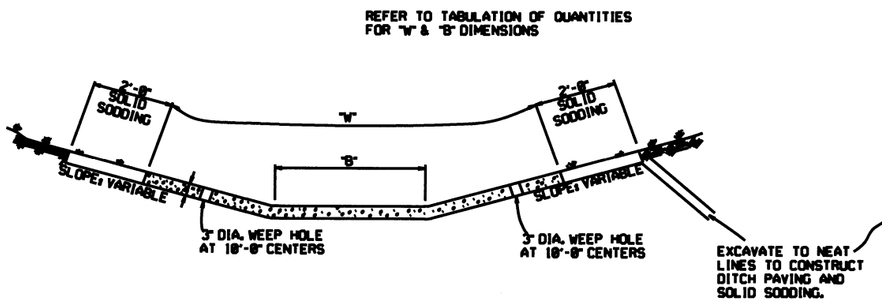
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
5-15-18



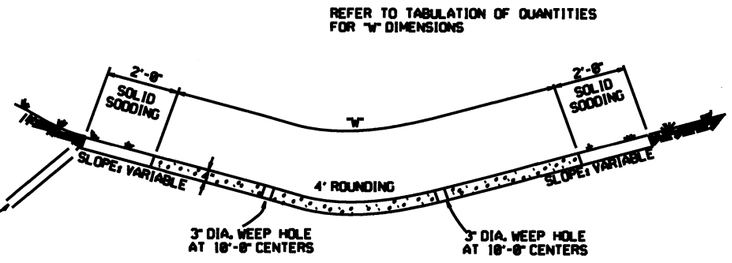
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PLAN SHEETS

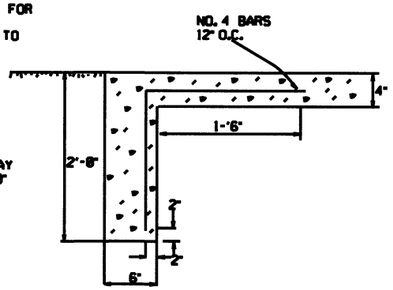


TYPE A



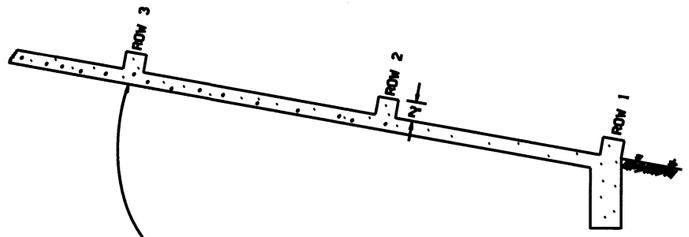
TYPE B

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



TOE WALL DEPTH MAY BE ALTERED TO 1'-8" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



ENERGY DISSIPATORS
(NO SCALE)

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

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

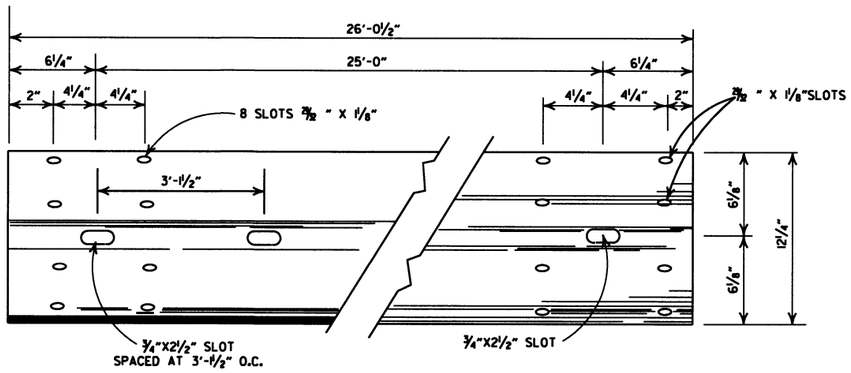
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

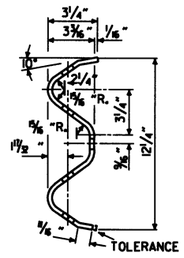
DATE	REVISION	DATE FILM'D
12-8-16	CORRECTED ENERGY DISSIPATOR DRAWING AND NOTE	
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
10-30-89	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	851-7-15-88
4-1-87	REVISED ENERGY DISSIPATOR	571-4-1-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	542-1-9-87
11-1-86	ADDED NOTE TO ENERGY DISS.	495-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	408-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPES A & B	
10-2-72	REVISED AND REDRAWN	408-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

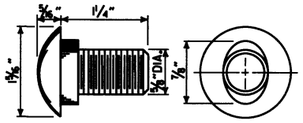
STANDARD DRAWING CDP-1



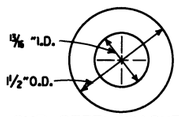


DETAILS OF W-BEAM GUARD RAIL

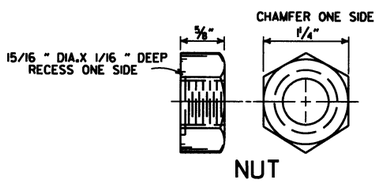
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



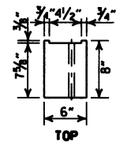
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

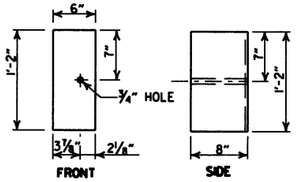


NUT

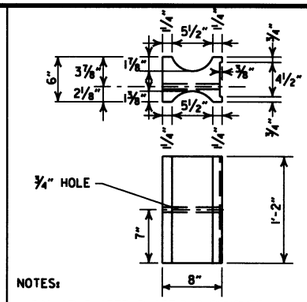


WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

TOP



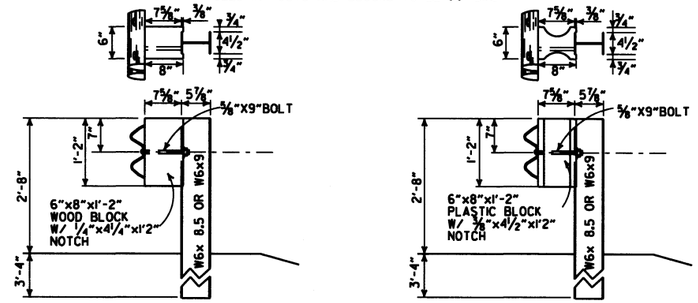
WOOD BLOCKOUT (W-BEAM)



NOTES:

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

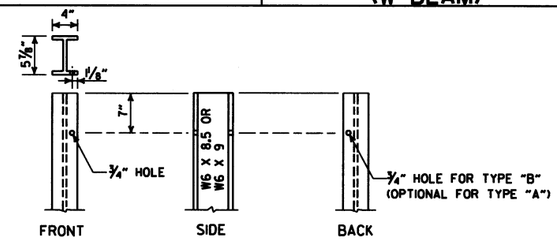
PLASTIC BLOCKOUT (W-BEAM)



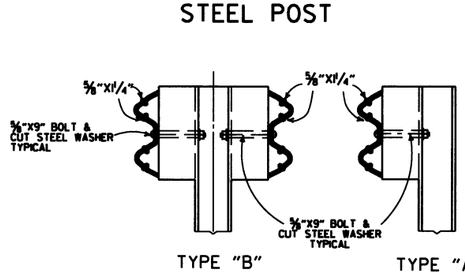
WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¼" BEYOND IT.

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

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

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

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

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

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

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

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

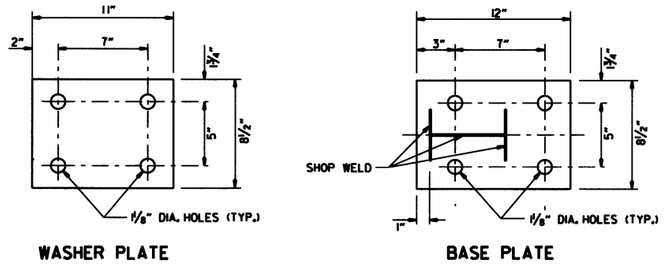
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

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

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

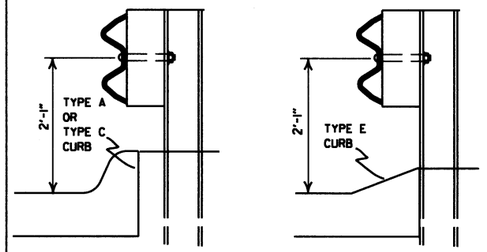
STANDARD DRAWING GR-8



WASHER PLATE

BASE PLATE

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



FOR DESIGN SPEEDS OF 50 MPH OR LESS

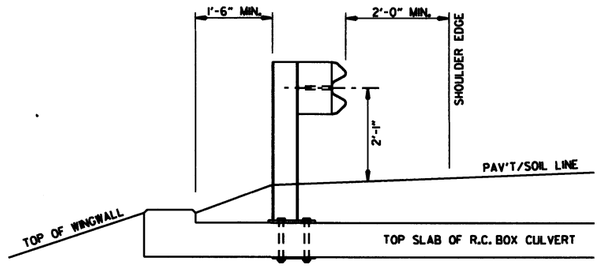
ALIGN FACE OF GUARD RAIL WITH FACE OF CURB.

FOR DESIGN SPEEDS OF 55 MPH OR MORE

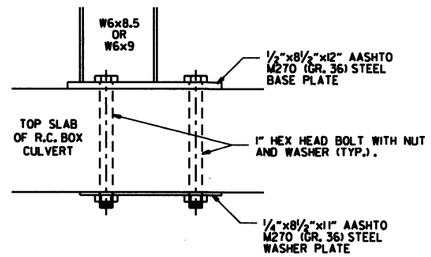
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

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

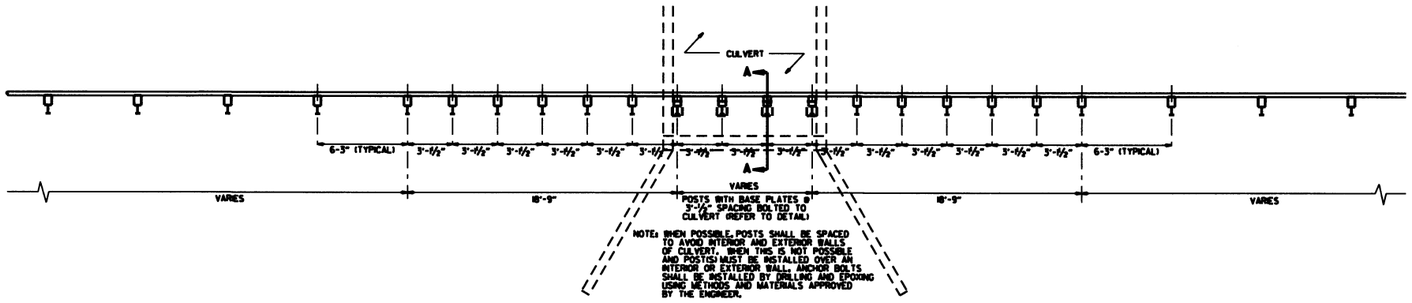
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A



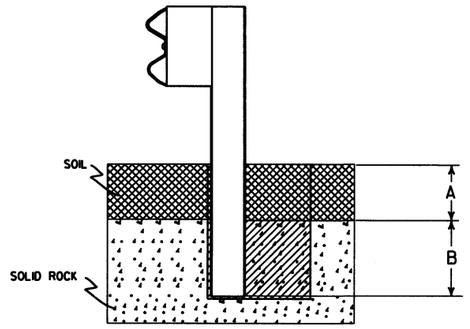
DETAIL OF CONNECTION



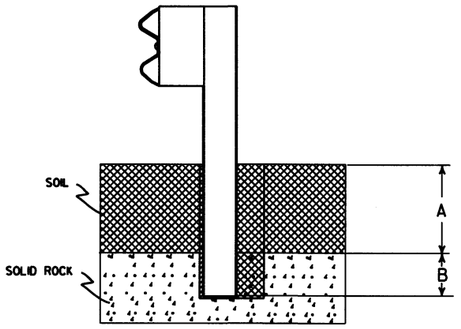
PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

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

Case 1

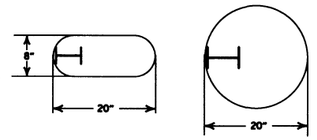


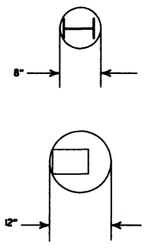
Case 2



Plan View Steel Posts

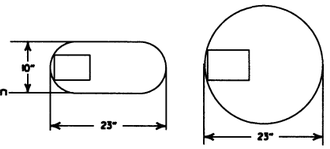
Either hole configuration acceptable





Plan View Wood Posts

Either hole configuration acceptable



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

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

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

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

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

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

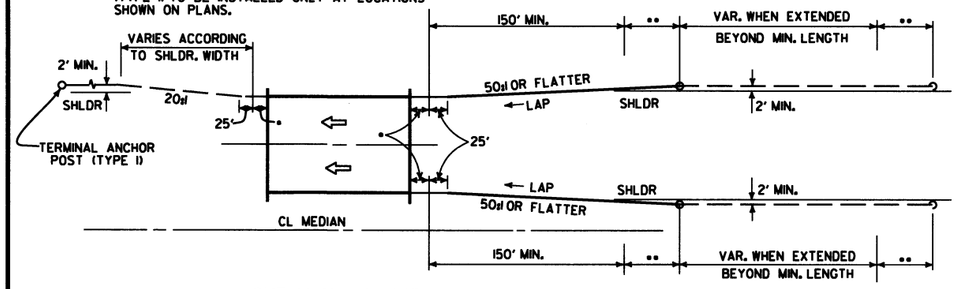
DATE	REVISION	FILMED
11-16-17	REVISED GUARD RAIL HEIGHT	
07-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
04-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS.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

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

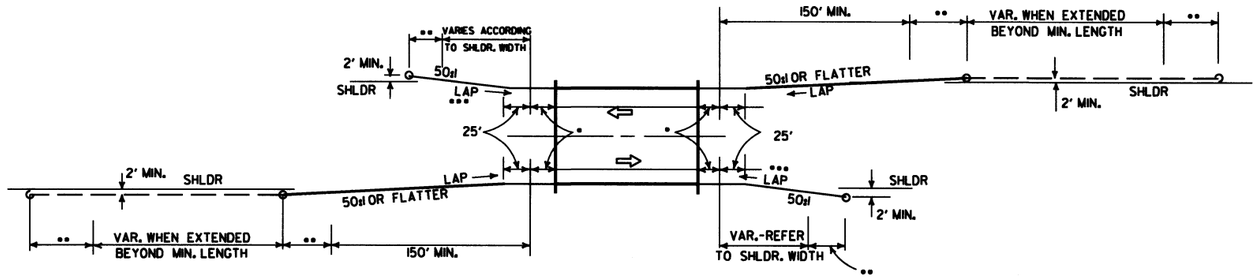
STANDARD DRAWING GR-8A

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



ONE-WAY TRAFFIC

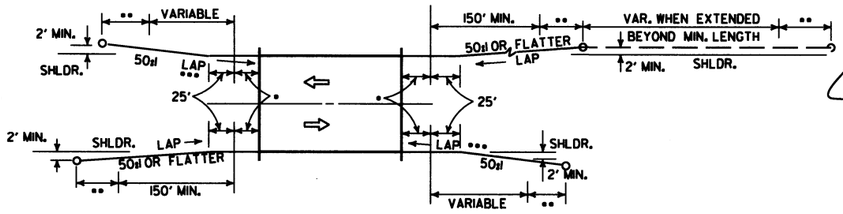
••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

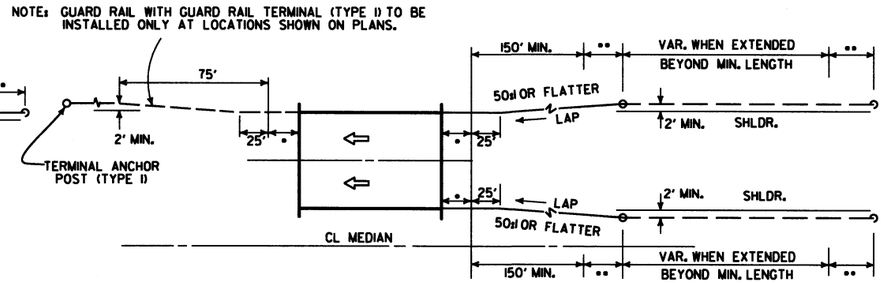
METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

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



TWO-WAY TRAFFIC

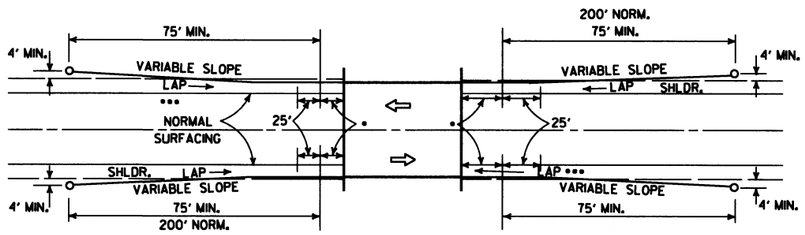
NOTE: GUARD RAIL WITH GUARD RAIL TERMINAL (TYPE I) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

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

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



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

LEGEND

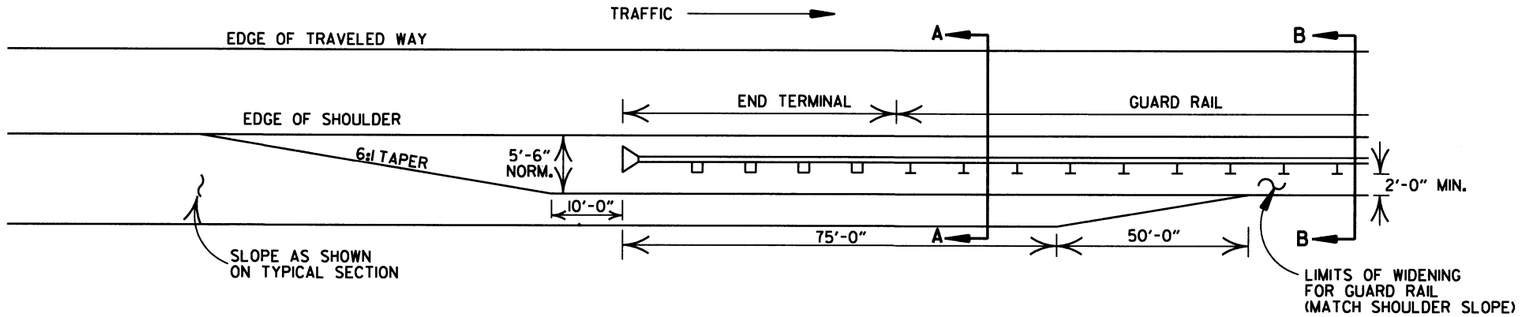
- • THRIE BEAM GUARD RAIL TERMINAL
- •• GUARD RAIL TERMINAL (TYPE 2)

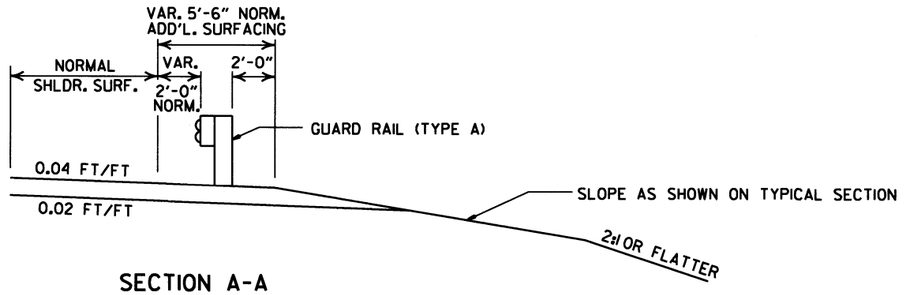
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87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

ARKANSAS STATE HIGHWAY COMMISSION

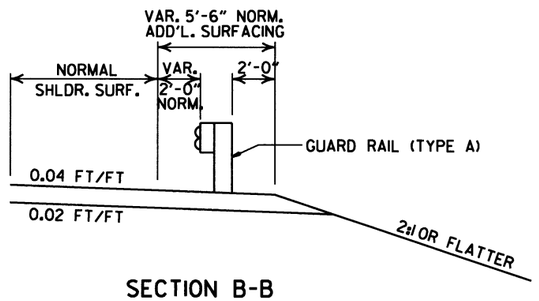
GUARD RAIL DETAILS

STANDARD DRAWING GR-9



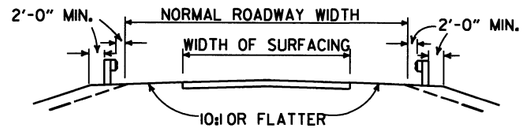


SECTION A-A

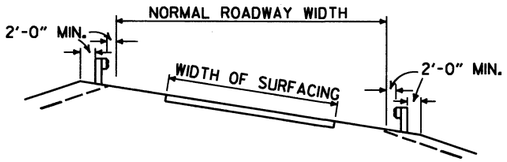


SECTION B-B

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



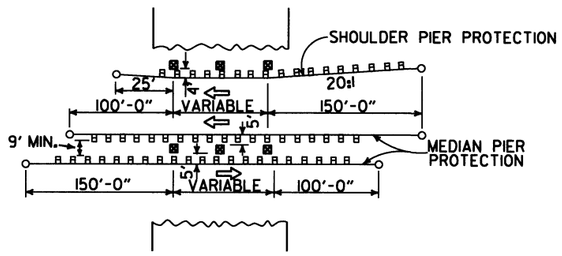
SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

DETAILS OF WIDENING FOR GUARD RAIL



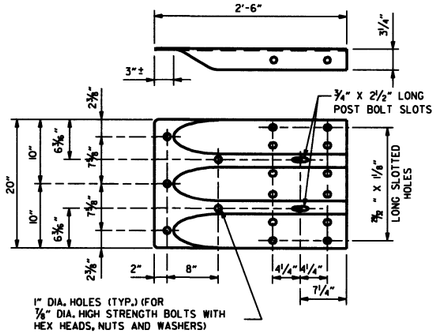
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

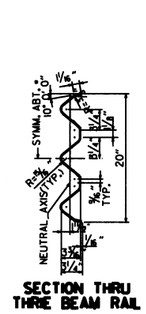
ARKANSAS STATE HIGHWAY COMMISSION

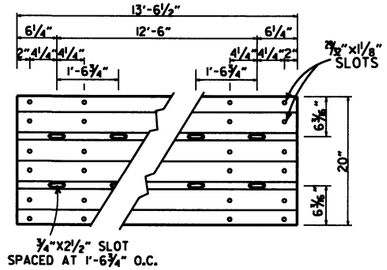
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A

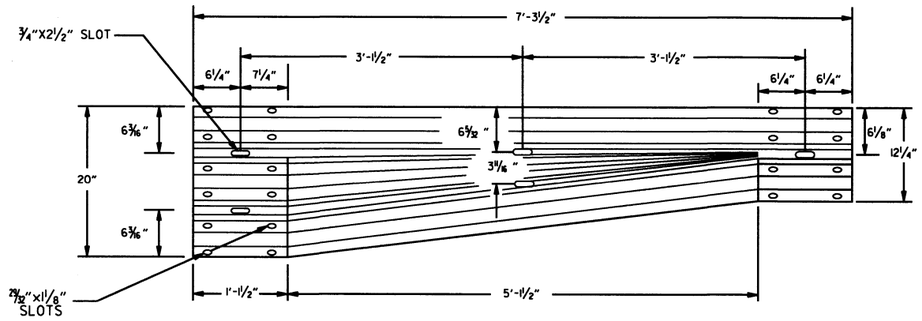


SPECIAL END SHOE

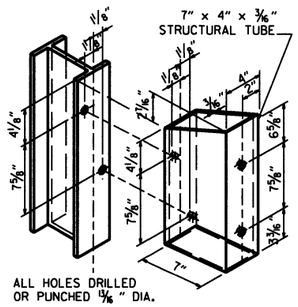




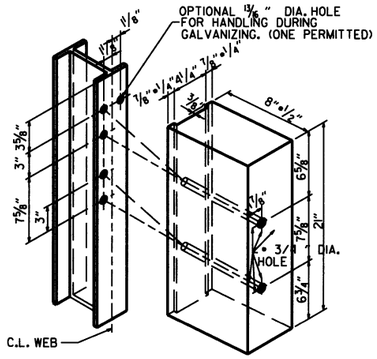
THRIE BEAM RAIL



TRANSITION SECTION



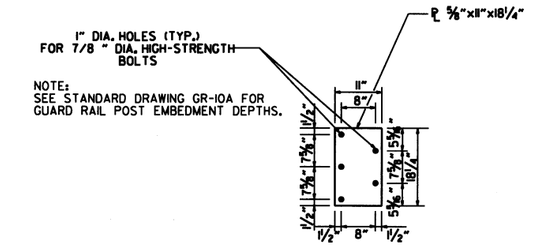
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

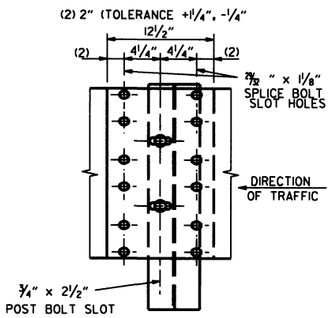
HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

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



CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



THRIE BEAM RAIL SPLICE AT POST

GENERAL NOTES:

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

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

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

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-13.

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

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

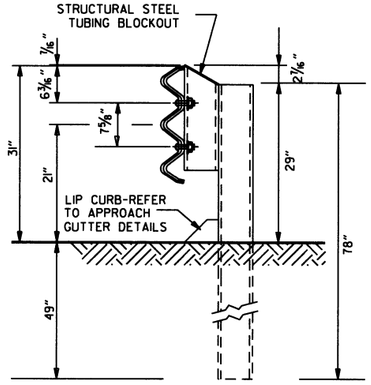
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 # (1400 #) OR NO. 1 1350 # SOUTHERN PINE.

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

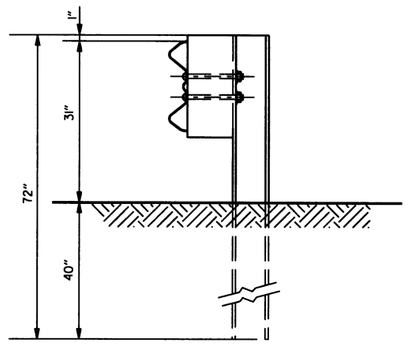
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

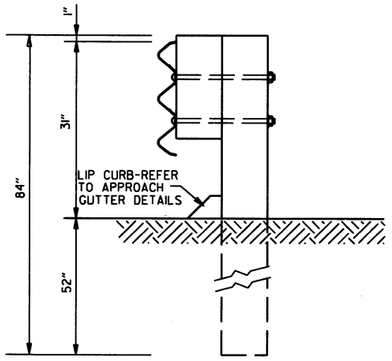
STANDARD DRAWING GR-10



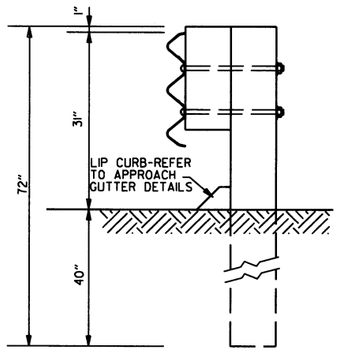
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



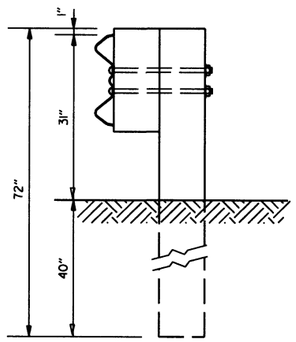
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



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



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



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

GENERAL NOTES:

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

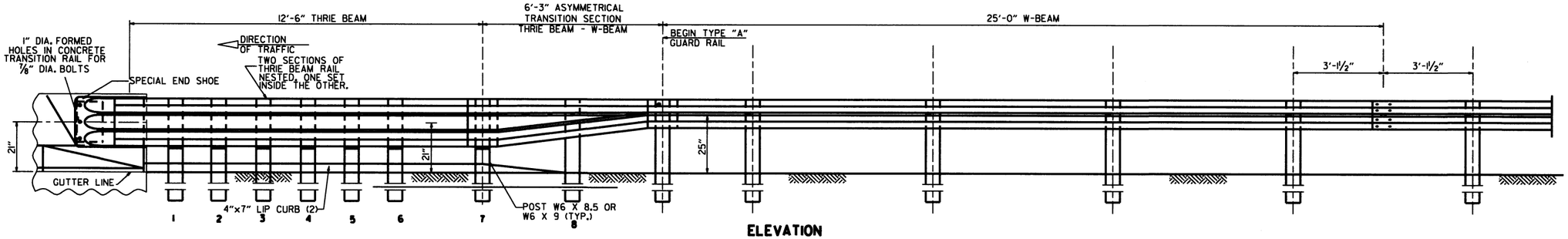
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

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

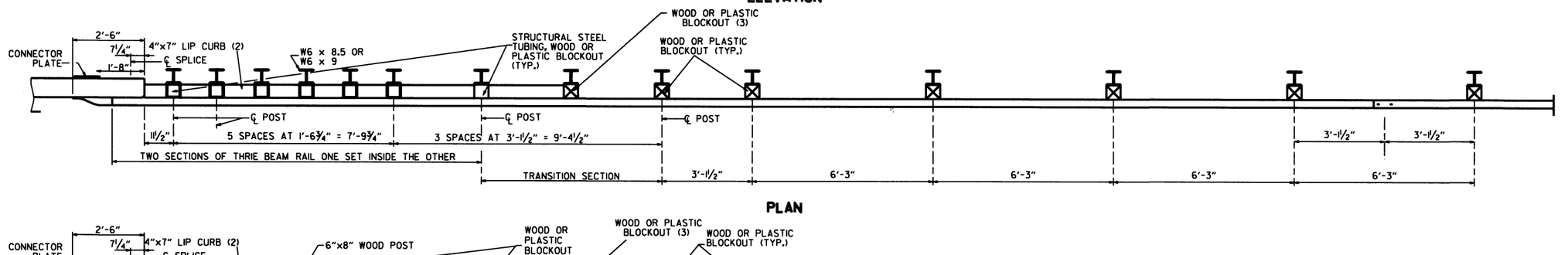
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

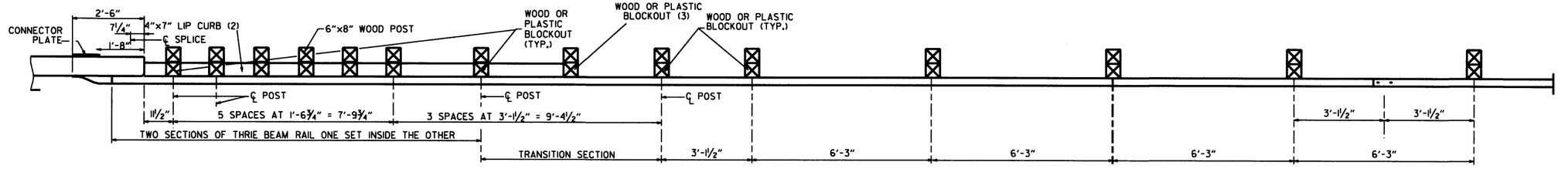
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

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

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

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

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

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

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-13.

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

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

POSTS SHALL BE PLACED AT THE MID-SPAN OF THE W-BEAM.

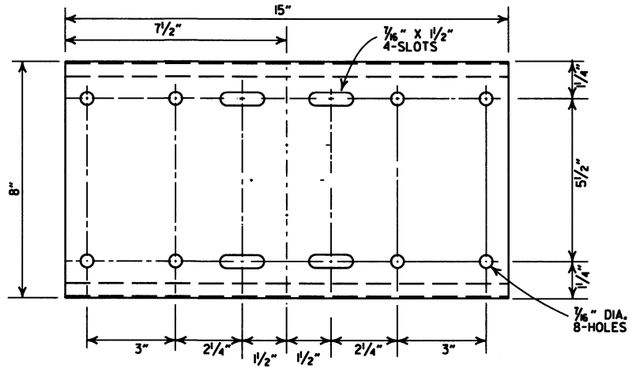
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

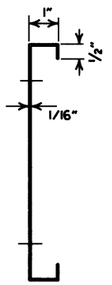
ARKANSAS STATE HIGHWAY COMMISSION

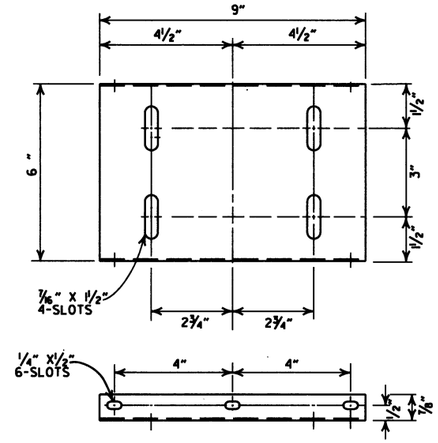
GUARD RAIL DETAILS

STANDARD DRAWING GR-12

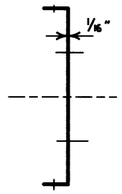


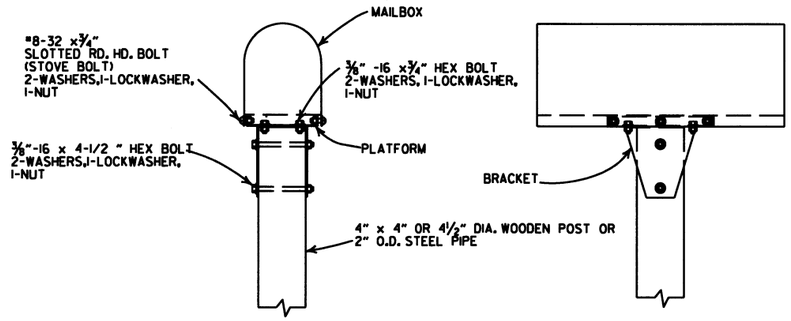
SHELF



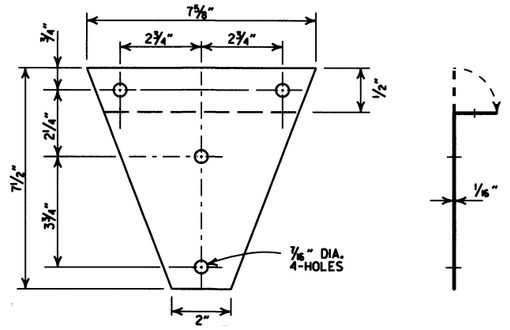


PLATFORM





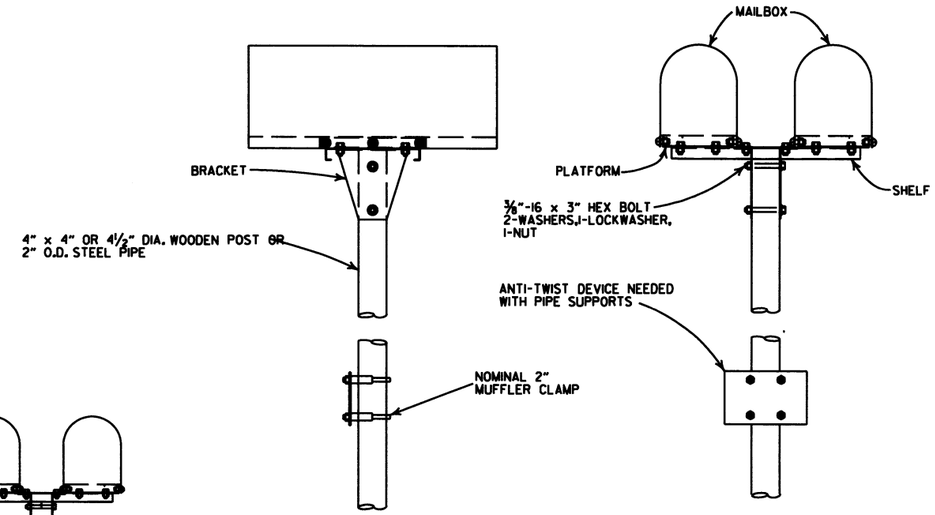
SINGLE INSTALLATION



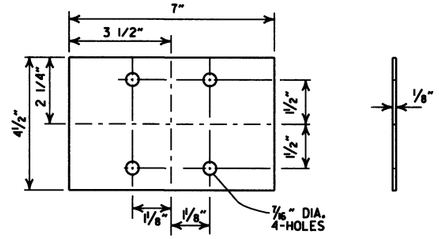
BRACKET

GENERAL NOTES

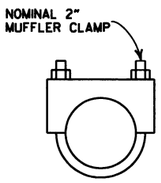
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X¾" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



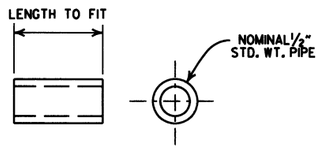
DOUBLE INSTALLATION



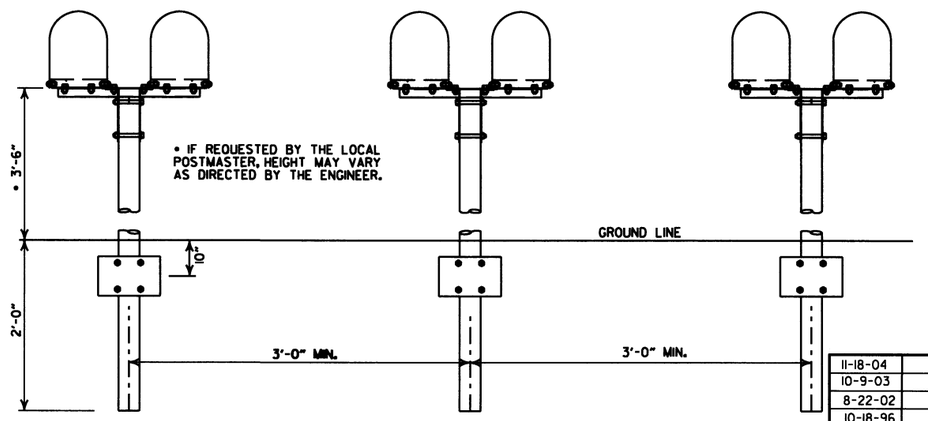
ANTI-TWIST PLATE



CLAMP



SPACER



SPACING FOR MULTIPLE POST INSTALLATION

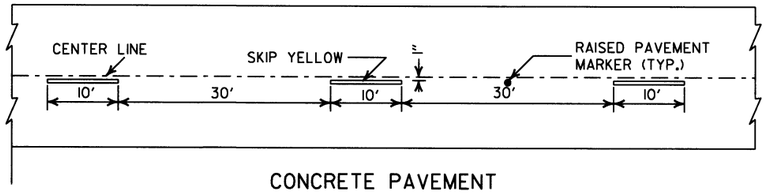
DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	20-7-15-88	ISSUED

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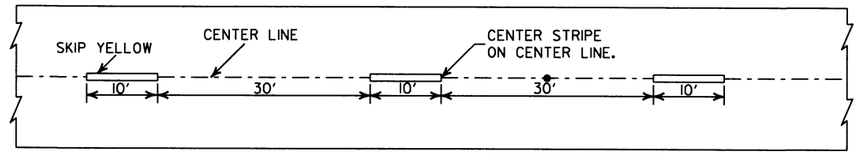
MAILBOX DETAILS

STANDARD DRAWING MB-1

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

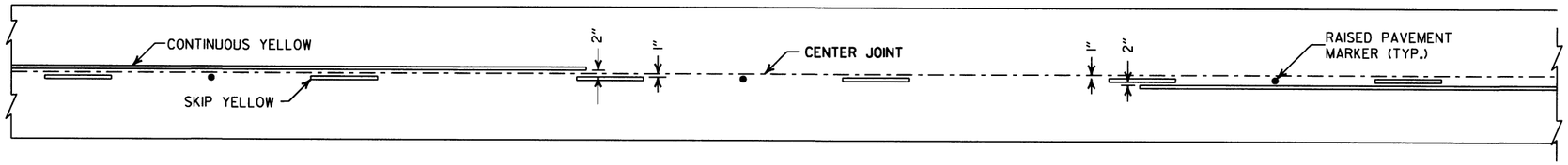


CONCRETE PAVEMENT

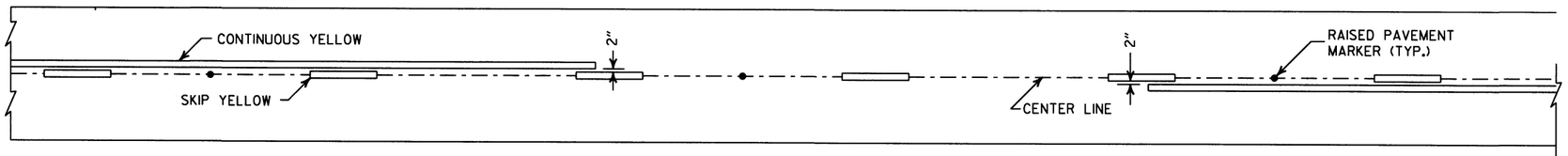


ASPHALT PAVEMENT

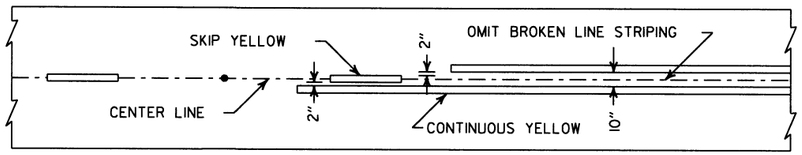
BROKEN LINE STRIPING



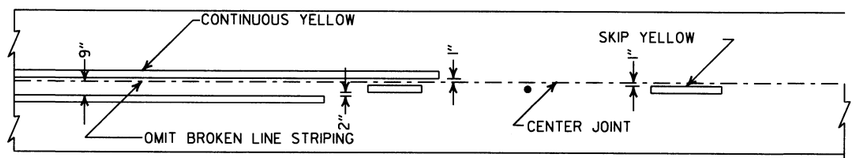
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

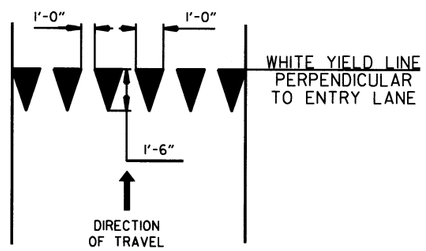


ASPHALT PAVEMENT

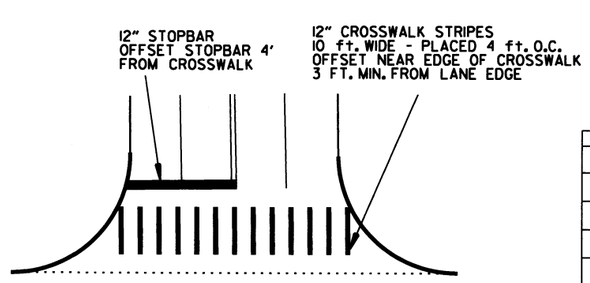


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

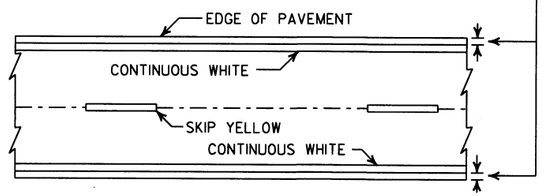


YIELD LINE DETAIL



CROSSWALK AND STOPBAR DETAILS

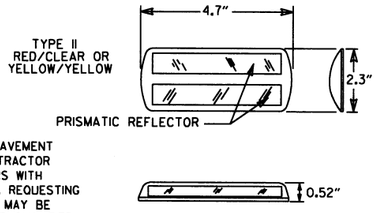
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING

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

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.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

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PAVEMENT MARKING DETAILS

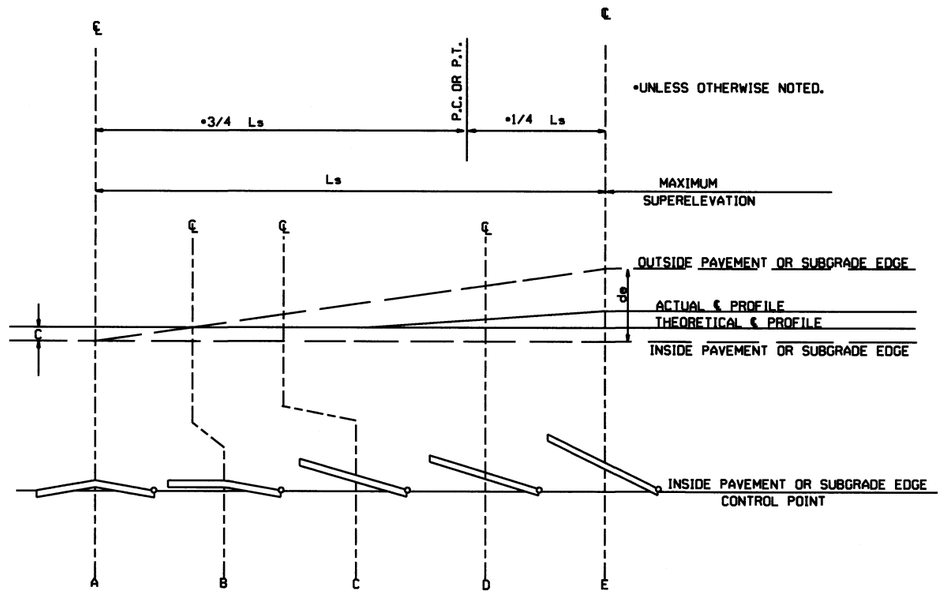
STANDARD DRAWING PM-1

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15'	N.C.*			N.C.*			N.C.*			N.C.*			N.C.*			N.C.*		
0° 30'	N.C.*			N.C.*			N.C.*			N.C.*			N.C.*			N.C.*		
0° 45'	N.C.*			N.C.*			R.C.*			0.022			0.023			0.028		
1° 00'	N.C.*			N.C.*			0.021			0.026			0.030			0.037	275	300
1° 15'	N.C.*			R.C.*			0.026			0.031			0.037			0.046		
1° 30'	N.C.*			0.021			0.031	200		0.032			0.043	250		0.054		
1° 45'	R.C.*			0.025			0.036			0.037	225		0.049		300	0.062		
2° 00'	R.C.*			0.028	175		0.040			0.043		300	0.055			0.070		
2° 15'	R.C.*			0.031			0.045		250	0.048			0.061			0.078	300	350
2° 30'	0.021			0.034			0.049			0.053			0.067			0.085	315	
2° 45'	0.023			0.037			0.053			0.058			0.072			0.091	335	
3° 00'	0.025			0.040		200	0.057			0.063			0.077	260		0.096	350	
3° 15'	0.027	150		0.043			0.061			0.067	230		0.082	275		0.098	360	400
3° 30'	0.029			0.046			0.065	205		0.072	245		0.086	285		0.100	360	
3° 45'	0.031			0.049			0.069	215		0.076	255		0.090	295				
4° 00'	0.033			0.051			0.072	225		0.080	265		0.093	305	350			
4° 30'	0.037			0.056			0.078	240		0.083	270		0.096	315				
5° 00'	0.040			0.061			0.083	250		0.087	280		0.098	320				
5° 30'	0.043			0.066	185		0.088	260		0.091	295							
6° 00'	0.046			0.070	190		0.092	270		0.094	300							
6° 30'	0.050			0.074	200		0.095	280	300	0.096	305							
7° 00'	0.053			0.078	210		0.098	285		0.100	315							
7° 30'	0.056			0.081	215		0.099	290										
8° 00'	0.058			0.084	220	250	0.100	290										
8° 30'	0.061			0.087	225													
9° 00'	0.063			0.089	230													
10° 00'	0.068	160		0.094	235													
11° 00'	0.072	170		0.097	250													
12° 00'	0.076	175		0.099	250													
13° 00'	0.080	180		0.100	250													
14° 00'	0.083	190																
15° 00'	0.086	195																
16° 00'	0.089	200																
17° 00'	0.091	200																
18° 00'	0.093	205																
19° 00'	0.095	210																
20° 00'	0.097	215	250															
21° 00'	0.098	215																
22° 00'	0.099	215																
23° 00'	0.099	215																
24° 00'	0.100	220																
	D MAX = 24° 45'			D MAX = 13° 15'			D MAX = 8° 15'			D MAX = 6° 30'			D MAX = 5° 15'			D MAX = 3° 30'		

ABBREVIATIONS

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



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

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

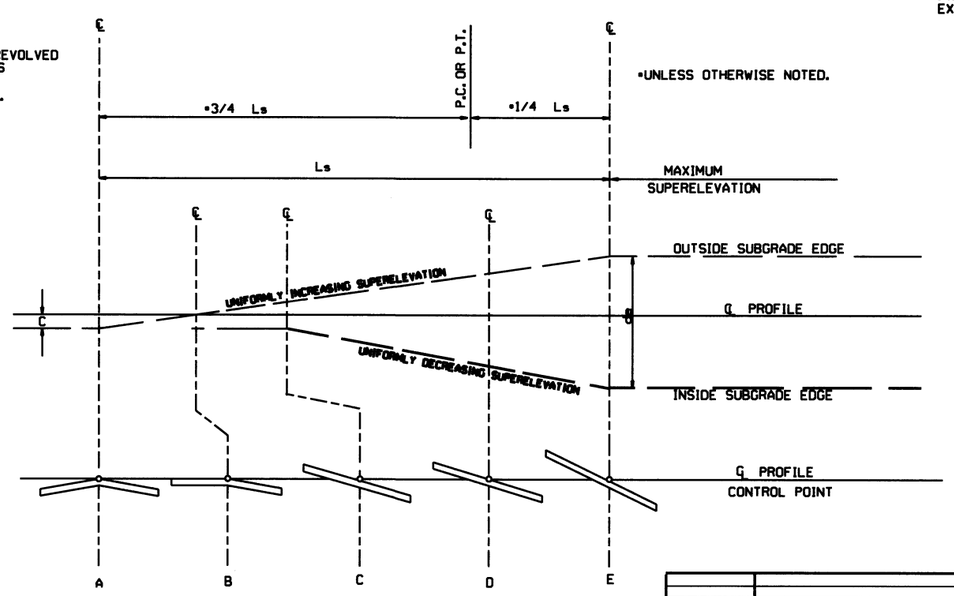
GENERAL NOTES

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

3 LANE UNDIVIDED - - - - - +20%
4 LANE UNDIVIDED - - - - - +50%
5 LANE UNDIVIDED - - - - - +80%
6 LANE UNDIVIDED - - - - - +100%

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

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

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

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

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TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

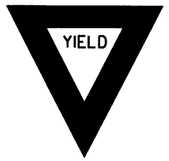
STANDARD DRAWING SE-2

R1-1



STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



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

W3-5



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

W3-5a



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

R4-1



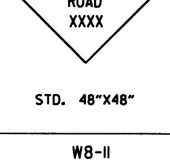
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



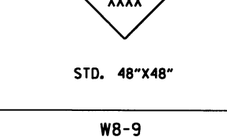
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



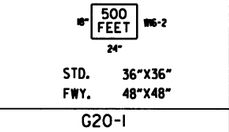
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



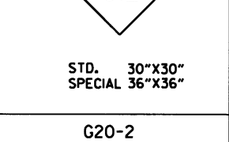
48"X30"

RII-3A



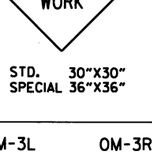
60"X30"

RII-4



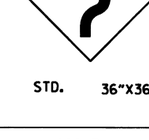
60"X30"

W21-5a



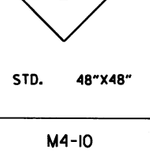
STD. 36"X36"
FWY. 48"X48"

WI-1



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

WI-2



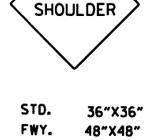
STD. 36"X36"
FWY. 48"X48"

WI-3



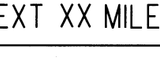
STD. 48"X48"

WI-4



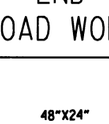
STD. 48"X48"

WI-6



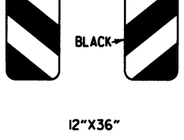
STD. 48"X24"
SPECIAL 60"X30"

WI-8



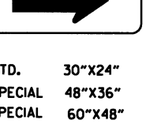
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

EXPWY. 36"X36"
FWY. 48"X48"

W9-2

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

WI3-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

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

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

R56-1

STD. 18"X18"

W8-11

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

W8-9

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

G20-1

60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

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

M4-10

48"X18"

R55-1

36"X60"

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

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.

3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.

• 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.

• 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.

6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12-FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.

7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.

8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.

9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.

10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

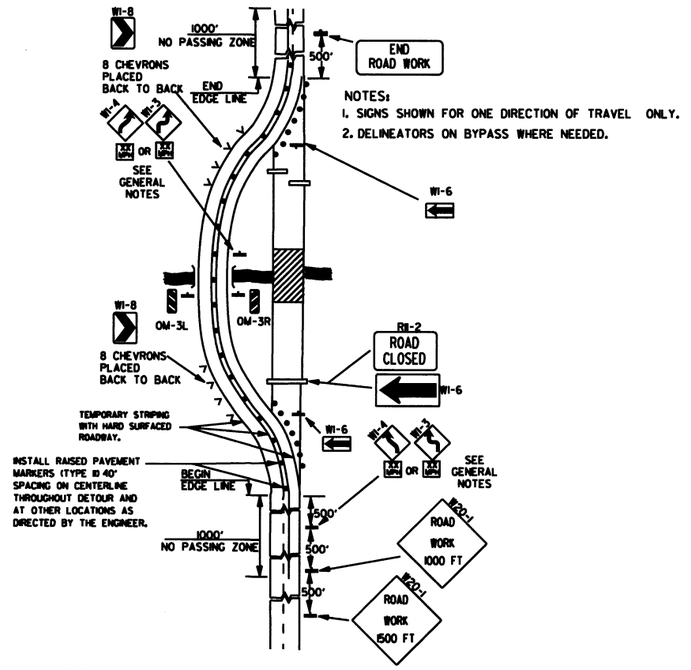
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

ARKANSAS STATE HIGHWAY COMMISSION

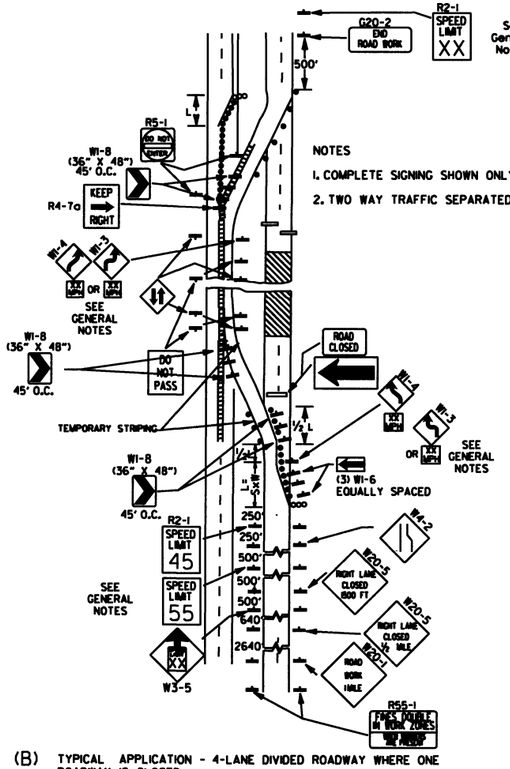
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



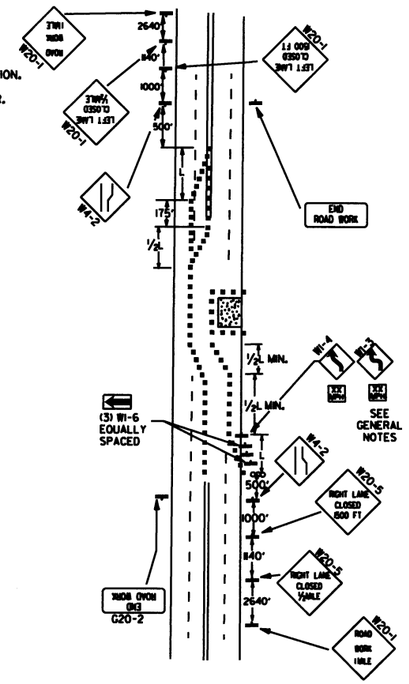
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

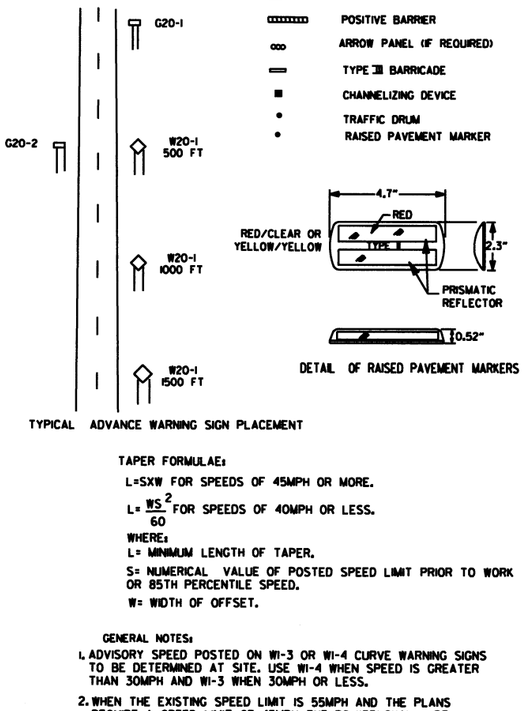


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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



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



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

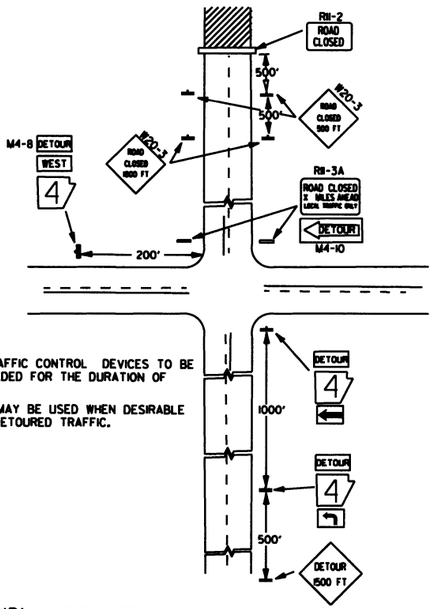
L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

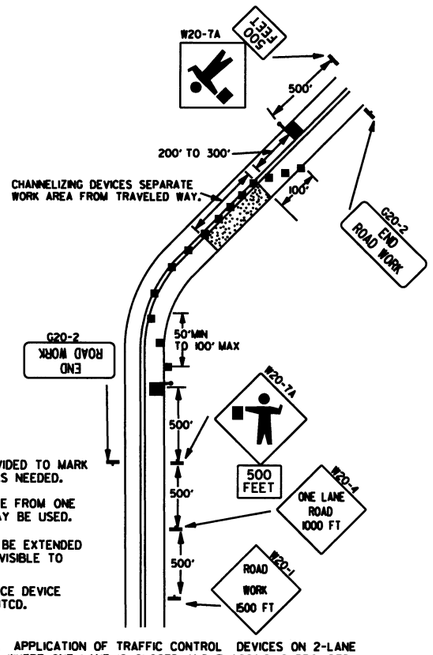
GENERAL NOTES:

1. ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



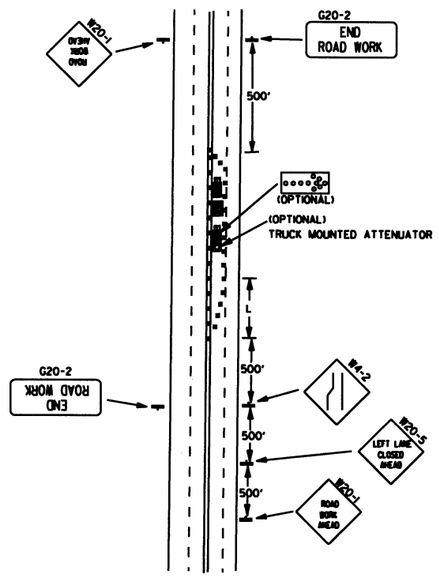
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



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

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



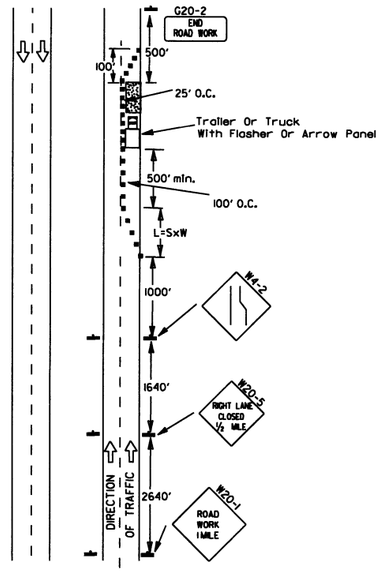
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

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

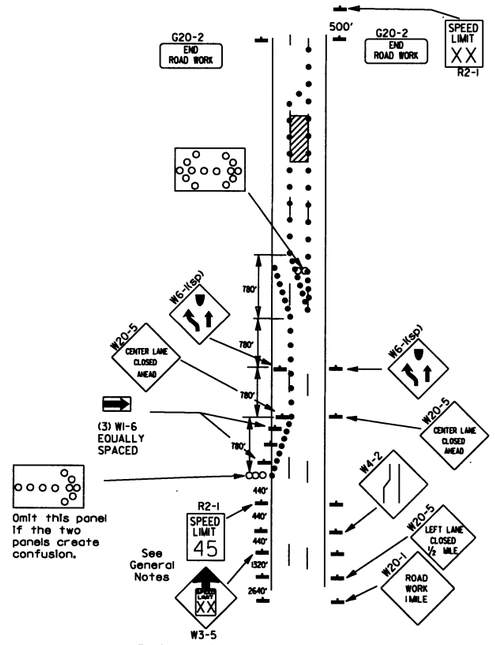
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

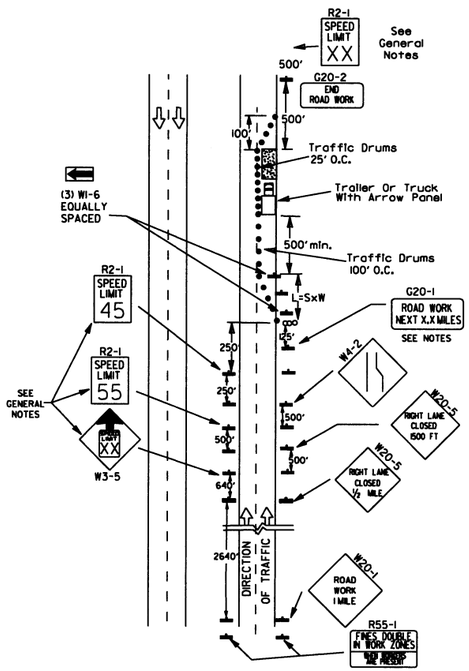
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (if Required)

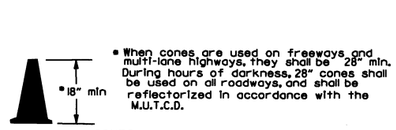
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 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(45) shall be omitted. Additional R2-1 55mph 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 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.

Channelizing devices



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

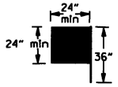
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

• When shown on the plans concrete barrier will be used.

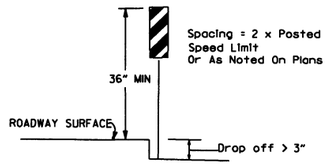
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

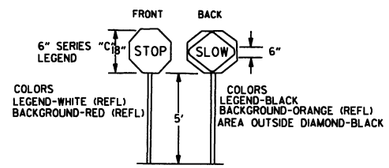


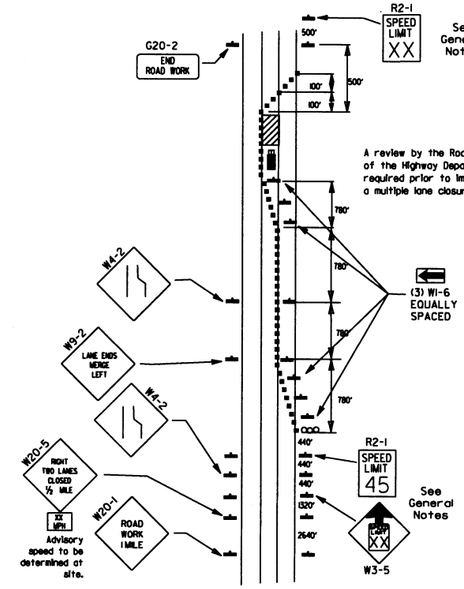
Flag shall be of good grade red material

VERTICAL PANEL PLACEMENT



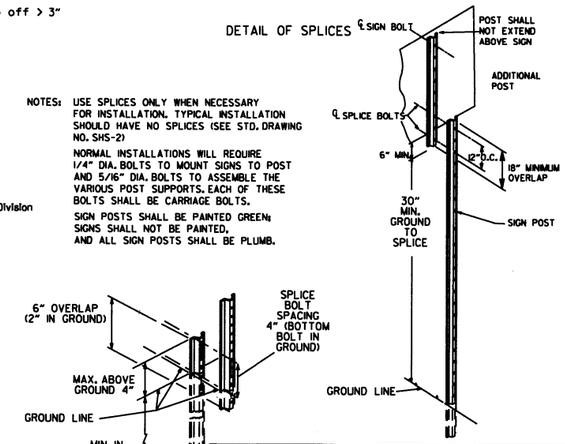
STOP SLOW PADDLE





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

DETAIL OF SPLICES



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

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

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

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	

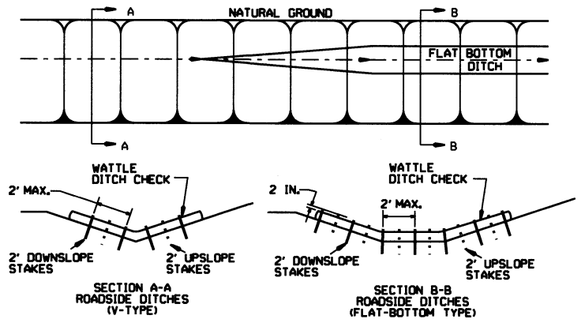
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

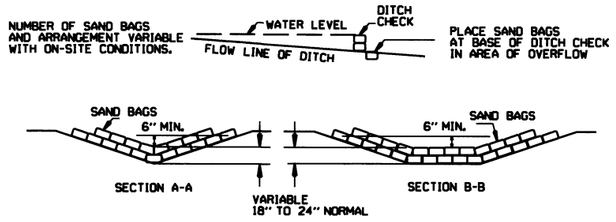
STANDARD DRAWING TC-3

GENERAL NOTES

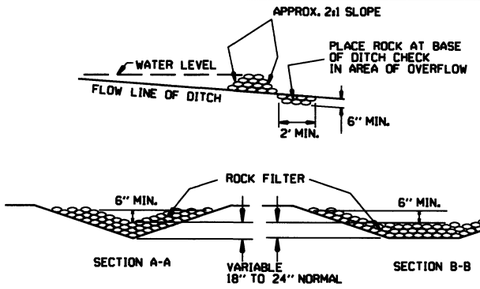
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

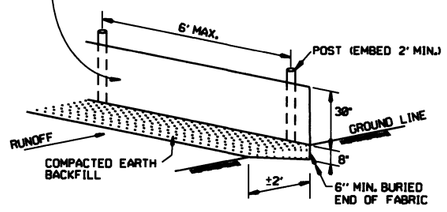


ROCK DITCH CHECK (E-6)

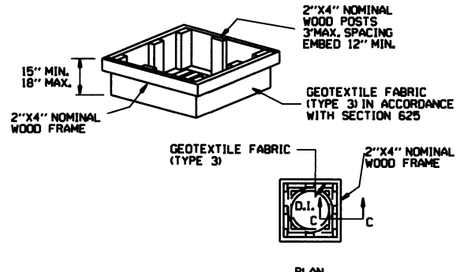
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

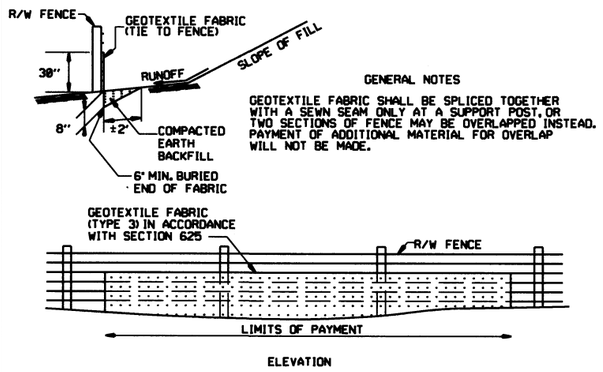
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



GENERAL NOTES

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

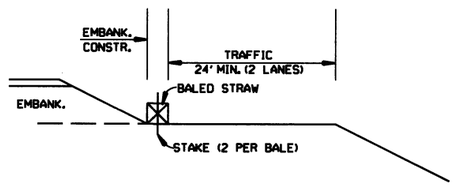
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

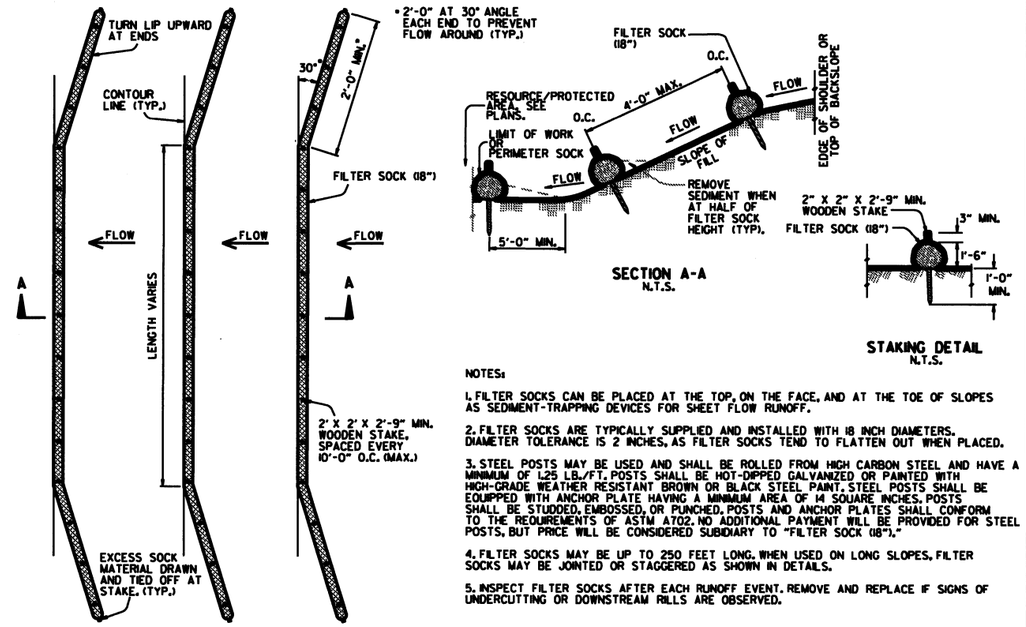
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

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



BALED STRAW FILTER BARRIER (E-2)



NOTES:

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

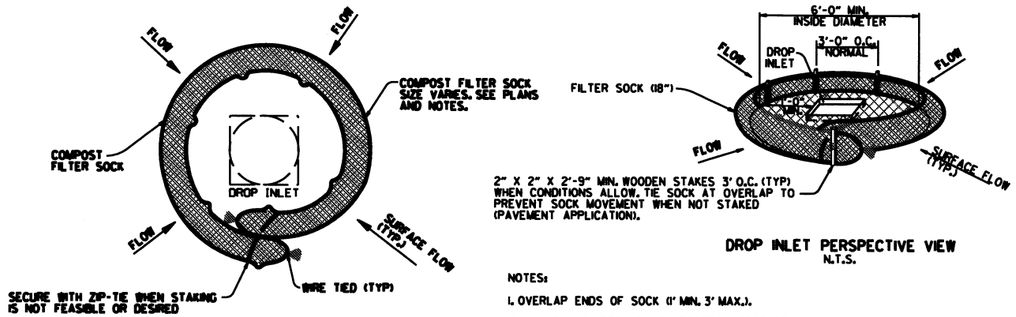
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBSIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

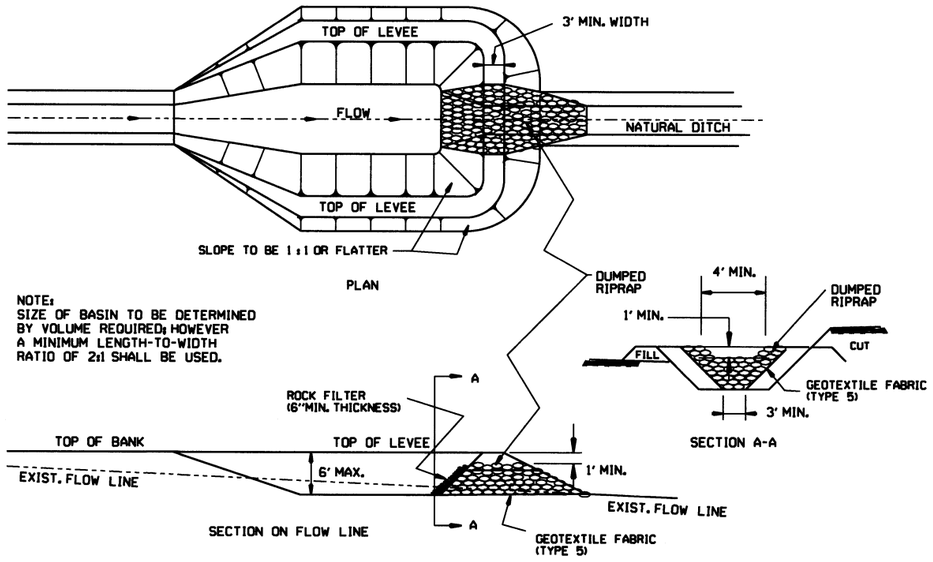
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 15" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

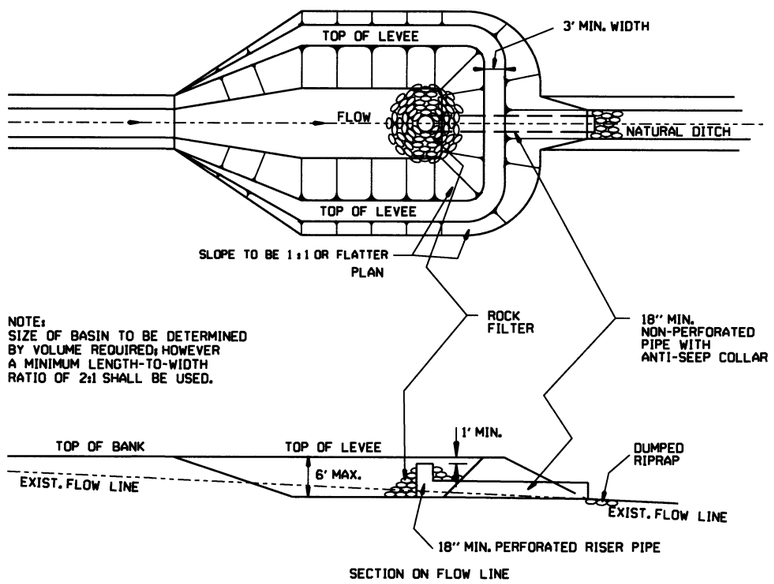
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

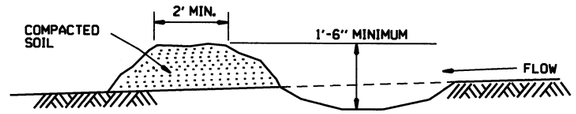
STANDARD DRAWING TEC-1



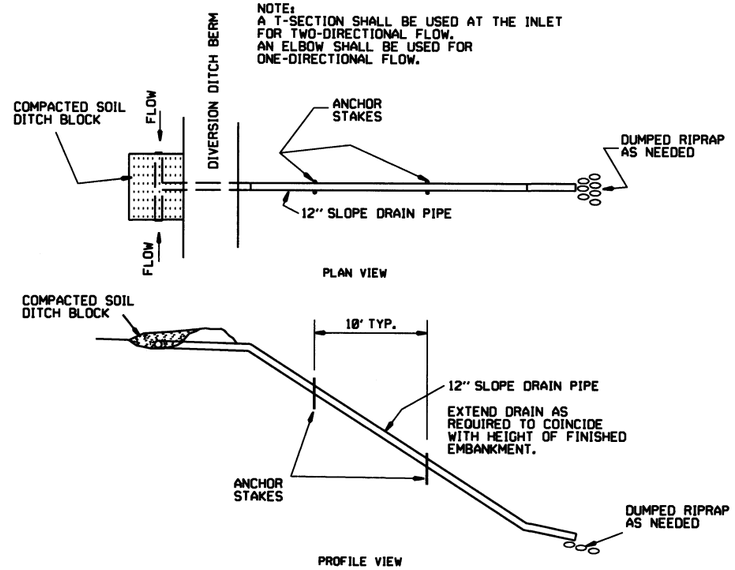
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



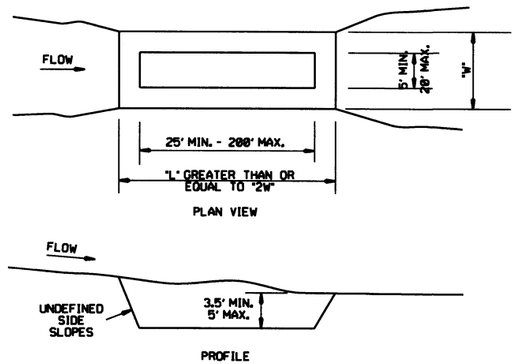
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

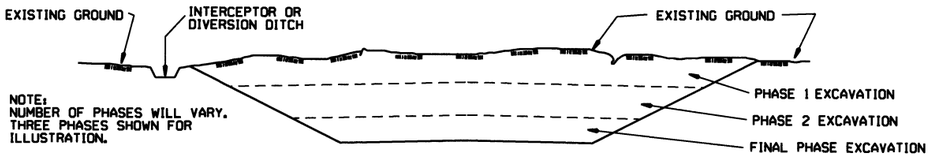
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



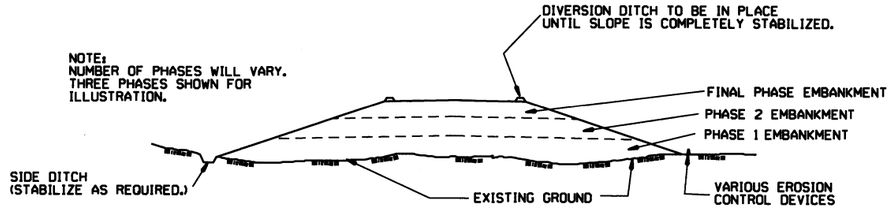
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3