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.		FA0314	1	72

④ HWY. 341 SOUTHEAST - STONE CO. LINE (PHASE 2) (S)

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR PROPOSED COUNTY ROAD

HWY. 341 SOUTHEAST - STONE CO. LINE (PHASE 2) (S)

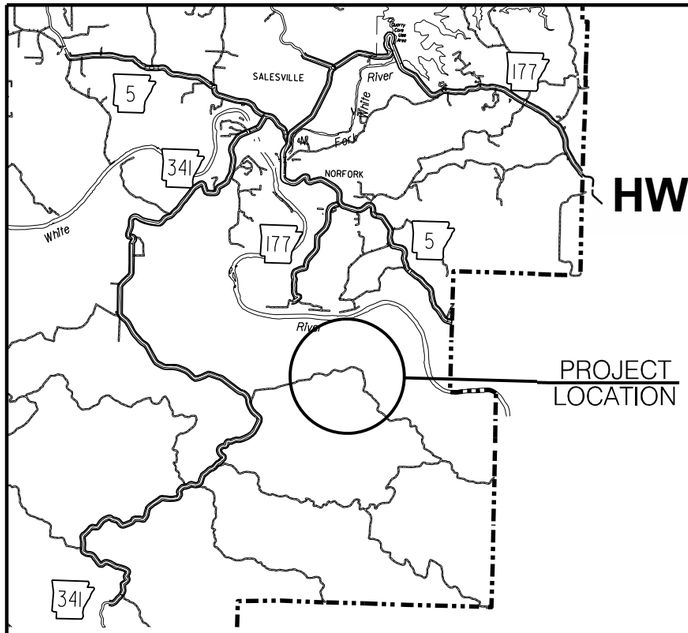
CO. RD. 73

BAXTER COUNTY

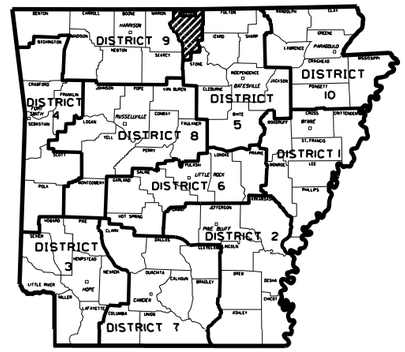
JOB FA0314

FED. AID PROJECT STPF-0003(63)

NOT TO SCALE

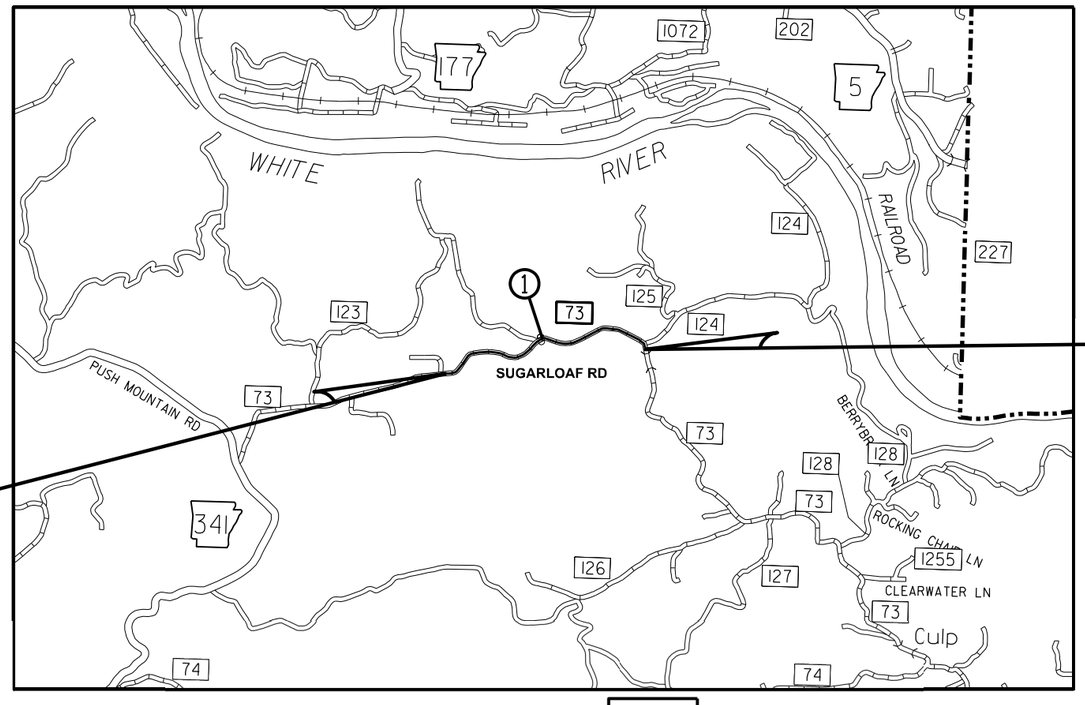


VICINITY MAP



ARKANSAS HIGHWAY DISTRICT 9

R12W



T 17 N

T 17 N

R12W

STRUCTURES OVER 20'-0" SPAN

① STA. 225+32 CONSTRUCT
DOUBLE 9' X 6' X 82'
THREE-SIDED CAST-IN-PLACE CULVERT
45° RT. FWD. SKEW
SPAN = 28' - 3 3/4"
Q25=860 CFS D.A. = 1.14 SQ. MI.

STA. 186+00.00
BEGIN JOB FA0314

STA. 266+50.00
END JOB FA0314

DESIGN TRAFFIC DATA

DESIGN YEAR	2046
2026 ADT	75
2046 ADT	85
2046 DHV	13
DIRECTIONAL DISTRIBUTON	0.60
TRUCKS	2%
DESIGN SPEED	30 MPH

APPROVED

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 12547
JESSIE XU JONES

Digitally signed by Jones, Jessie
Date: 2026.09.14 14:54:15-05'00'

CHIEF ENGINEER

P.E. JOB FA0312

PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N 36° 08' 15"	N 36° 08' 27"	N 36° 08' 23"
LONG.	W 92° 16' 34"	W 92° 15' 52"	W 92° 15' 9"

GROSS	LENGTH	OF	PROJECT	8050.00	FEET	OR	1.525	MILES
NET	"	"	ROADWAY	8021.69	"	"	1.519	"
NET	"	"	BRIDGE	28.31	"	"	0.005	"
NET	"	"	PROJECT	8050.00	"	"	1.525	"

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				6	ARK.			
				JOB NO.		FA0314	2	72

(4) INDEX OF SHEETS AND STANDARD DRAWINGS

Digitally signed by Freeling, Bryan E.
Date: 2026.09.21 14:39:02-05'00'

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG. NO.
1	TITLE SHEET		
2	INDEX OF SHEETS AND STANDARD DRAWINGS		
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES		
4 - 6	TYPICAL SECTIONS OF IMPROVEMENT		
7 - 9	SPECIAL DETAILS		
10 - 16	TEMPORARY EROSION CONTROL DETAILS		
17 - 19	QUANTITIES		
20	SUMMARY OF QUANTITIES AND REVISONS		
21 - 26	SURVEY CONTROL DETAILS		
27 - 33	PLAN AND PROFILE SHEETS		
34	LAYOUT OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 1 OF 2	04954	68845
35	LAYOUT OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 2 OF 2	04954	68846
36	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 1 OF 6	04954	68847
37	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 2 OF 6	04954	68848
38	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 3 OF 6	04954	68849
39	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 4 OF 6	04954	68850
40	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 5 OF 6	04954	68851
41	DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT, SHEET 6 OF 6	04954	68852
42 - 72	CROSS SECTIONS		

ROADWAY STANDARD DRAWINGS

DRWG. NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PM-1	PAVEMENT MARKING DETAILS	04-09-26
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
SHS-1	STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES	09-12-13
SHS-2	U-CHANNEL POST ASSEMBLIES	07-25-19
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-1A	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-09-26
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-6	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	04-09-26
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
WF-4	WIRE FENCE TYPE C AND D	08-22-02

INDEX OF SHEETS AND STANDARD DRAWINGS

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10-26-2026				6	ARK.			
				JOB NO.		FA0314	3	72

4 GOVERNING SPECIFICATIONS & GENERAL NOTES

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
100-4	DEPARTMENT NAME CHANGE
102-2	ISSUANCE OF PROPOSALS
102-3	PREQUALIFICATION OF BIDDERS
103-2	CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4	MAINTENANCE DURING CONSTRUCTION
107-2	RESTRAINING CONDITIONS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
210-1	UNCLASSIFIED EXCAVATION
303-1	AGGREGATE BASE COURSE
306-1	QUALITY CONTROL AND ACCEPTANCE
400-1	TACK COATS
400-4	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5	PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6	LIQUID ANTI-STRIP ADDITIVE
404-3	DESIGN OF ASPHALT MIXTURES
409-2	ASPHALT LABORATORY FACILITY
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2	DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4	EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1	RECYCLED ASPHALT PAVEMENT
501-3	PORTLAND CEMENT CONCRETE PAVEMENT
600-2	INCIDENTAL CONSTRUCTION
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
605-1	CONCRETE DITCH PAVING
606-1	PIPE CULVERTS FOR SIDE DRAINS
619-1	FENCES
621-1	FILTER SOCKS
723-1	GENERAL REQUIREMENTS FOR SIGNS
729-1	CHANNEL POST SIGN SUPPORT
800-1	STRUCTURES
802-3	CONCRETE FOR STRUCTURES
802-5	CONCRETE FOR STRUCTURES
804-2	REINFORCING STEEL FOR STRUCTURES
JOB FA0314	ARCHEOLOGICAL MONITORING
JOB FA0314	BIDDING REQUIREMENTS AND CONDITIONS
JOB FA0314	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB FA0314	BUY AMERICA - CONSTRUCTION MATERIALS
JOB FA0314	CARGO PREFERENCE ACT REQUIREMENTS
JOB FA0314	CAVE DISCOVERY
JOB FA0314	COORDINATION OF WORK
JOB FA0314	DELAY IN RIGHT OF WAY OCCUPANCY
JOB FA0314	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
JOB FA0314	DESIGN OF ASPHALT MIXTURES - AGGREGATES
JOB FA0314	DOCUMENTATION OF PAYMENTS MADE - PROMPT PAYMENT (SIGNET)
JOB FA0314	FOREST SERVICE REQUIREMENTS
JOB FA0314	LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB FA0314	MANDATORY ELECTRONIC CONTRACT
JOB FA0314	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB FA0314	NESTING SITES OF MIGRATORY BIRDS
JOB FA0314	OFF-SITE RESTRAINING CONDITIONS FOR INDIANA AND NORTHERN LONG-EARED BATS
JOB FA0314	PARTNERING REQUIREMENTS
JOB FA0314	PLASTIC PIPE
JOB FA0314	PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB FA0314	PRICE ADJUSTMENT FOR FUEL
JOB FA0314	PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB FA0314	RECYCLED ASPHALT SHINGLES
JOB FA0314	RESTRAINING CONDITIONS
JOB FA0314	SHORING FOR CULVERTS
JOB FA0314	SPECIAL SEEDING REQUIREMENTS
JOB FA0314	STORM WATER POLLUTION PREVENTION PLAN
JOB FA0314	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB FA0314	UTILITY ADJUSTMENTS
JOB FA0314	VALUE ENGINEERING
JOB FA0314	VENDOR REGISTRATION REQUIREMENT
JOB FA0314	WARM MIX ASPHALT
JOB FA0314	WATER POLLUTION CONTROL
JOB FA0314	WELLHEAD PROTECTION

GENERAL NOTES

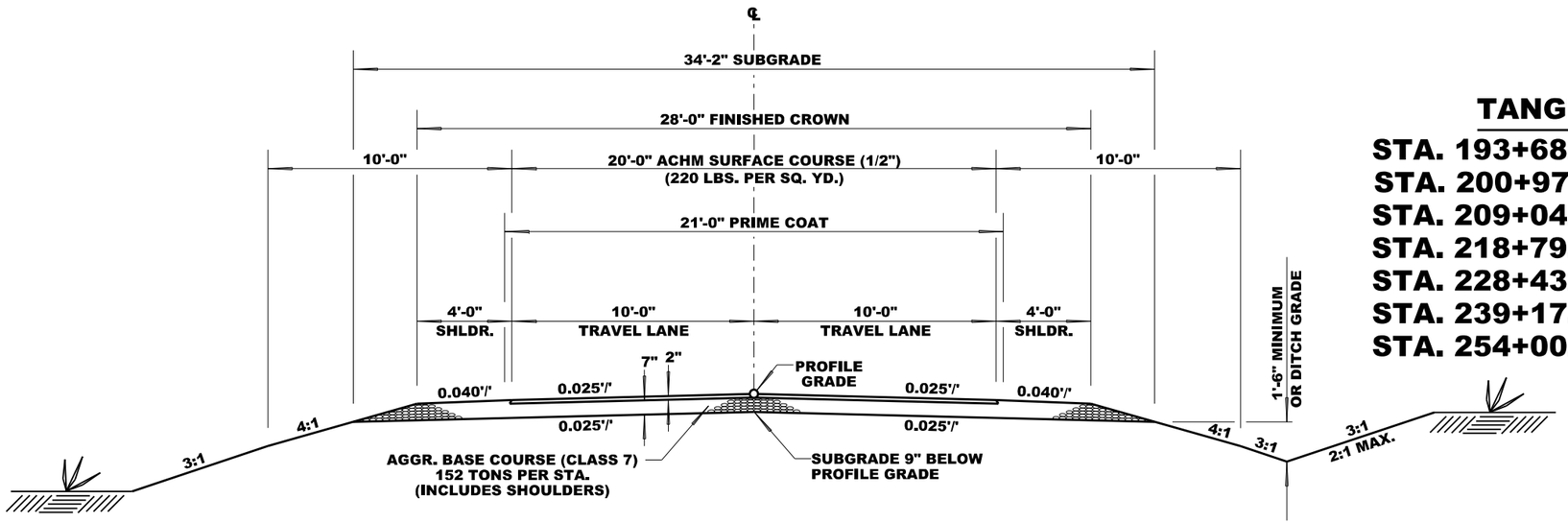
1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN IN PLANS
2. UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE MOVED BY THE OWNERS.
3. THE CONTRACTOR SHALL MAINTAIN MAILBOXES WITHIN THE PROJECT LIMITS SUCH THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. THE CONTRACTOR SHALL REMOVE AND RESTORE TO THE PROPER HEIGHT THE EXISTING MAILBOX POSTS AND MAILBOXES AS DIRECTED BY THE ENGINEER. ITEMS DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT NO COST TO THE DEPARTMENT. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICES BID FOR OTHER ITEMS OF THE CONTRACT.
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 ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. THE CONTRACTOR SHALL PROVIDE 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. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR PERMIT REQUIREMENTS.
8. PAVEMENT TO BE REMOVED SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. PAVEMENT SHALL BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT RETAINED. ANY DAMAGE TO RETAINED PAVEMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. TEMPORARY EASEMENTS ARE PROVIDED FOR CONTRACTOR ACCESS. AREAS OUTSIDE THE CONSTRUCTION LIMITS SHALL NOT BE CLEARED OR GRUBBED UNLESS DIRECTED BY THE ENGINEER.
10. SUPERELEVATION SHALL BE COMPUTED IN ACCORDANCE WITH STANDARD DRAWING SE-2 USING 30 M.P.H. DESIGN VALUES AND REVOLVE ABOUT THE INNER EDGE OF TRAVEL LANE UNLESS OTHERWISE SHOWN.
11. THE ROAD SHALL BE MAINTAINED AND REMAIN OPEN TO TRAFFIC THROUGHOUT THE PROJECT.
12. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
13. INSTALLATION OF PERMANENT TRAFFIC SAFETY SIGNS NOT SHOWN IN THE PLANS IS THE RESPONSIBILITY OF BAXTER COUNTY.
14. EDGE LINES SHALL NOT BE PLACED UNTIL AFTER ALL MATERIAL HAS BEEN PLACED OR PULLED UP AGAINST THE EDGE OF PAVEMENT.
15. THE CONTRACTOR SHALL COORDINATE WITH NORTH ARKANSAS ELECTRIC AND BAXTER COUNTY FOR THE RELOCATION OF UTILITY POLES.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
10/26/26
BRYAN FREELING

GOVERNING SPECIFICATIONS AND GENERAL NOTES

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				6	ARK.			
				JOB NO.		FA0314	4	72

4 TYPICAL SECTIONS OF IMPROVEMENT



TANGENT SECTION

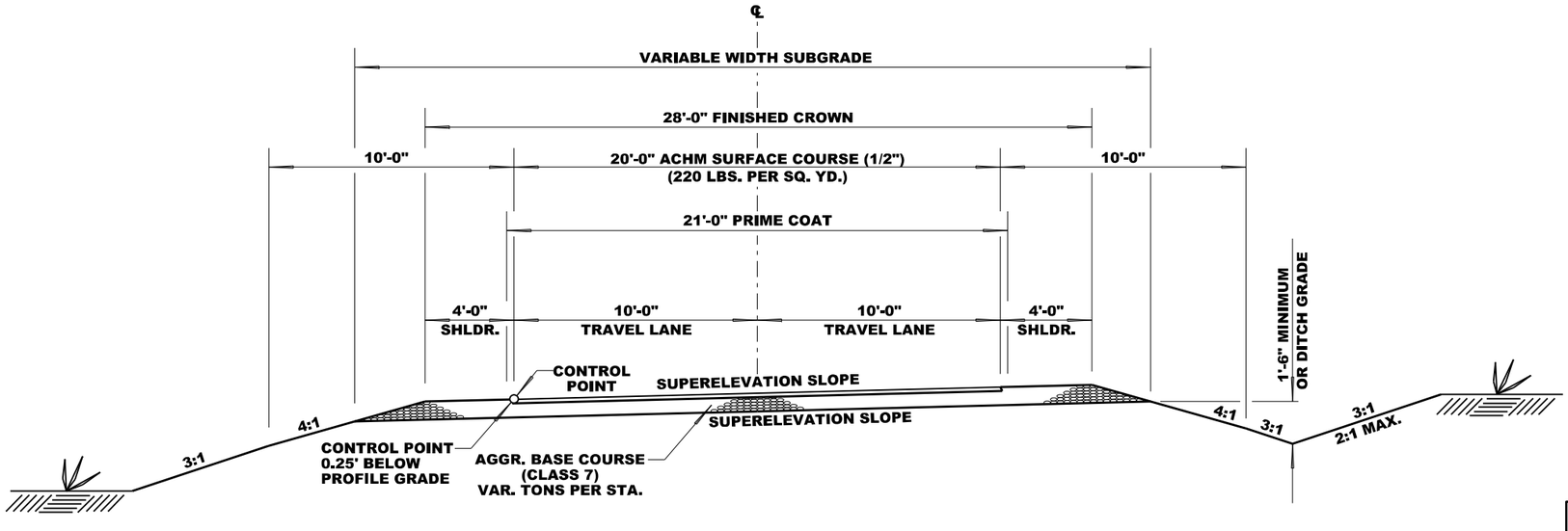
TANGENT SECTION

STA. 193+68.79 - STA. 193+86.57
STA. 200+97.38 - STA. 203+01.21
STA. 209+04.86 - STA. 210+01.90
STA. 218+79.43 - STA. 220+98.94
STA. 228+43.23 - STA. 228+43.25
STA. 239+17.06 - STA. 245+02.05
STA. 254+00.02 - STA. 259+59.68

STATE OF ARKANSAS
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NOTE: 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.

REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGE SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.



SUPERELEVATION SECTION

SUPERELEVATION SECTION

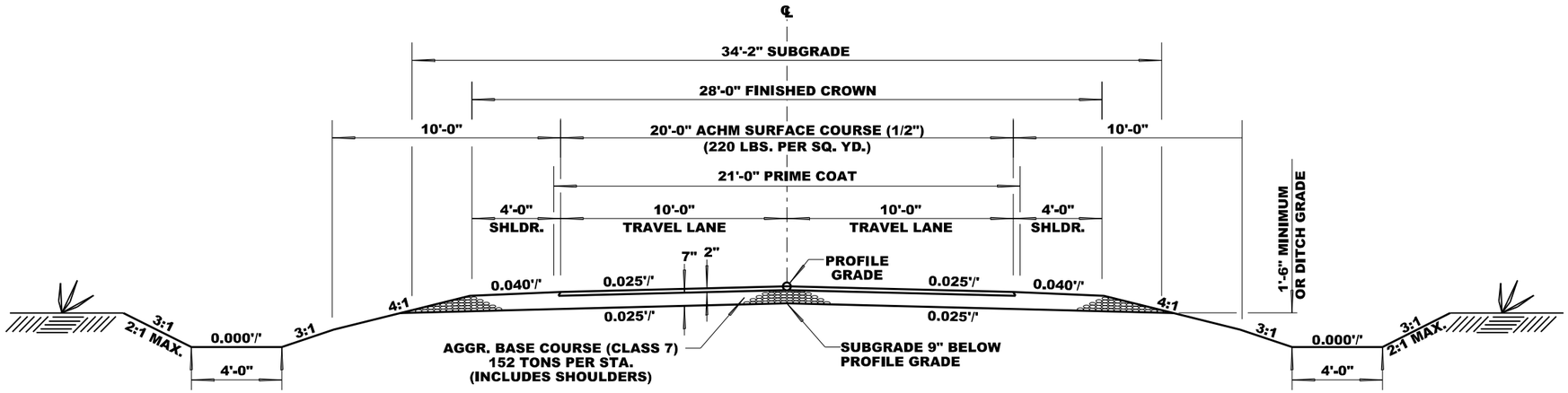
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STA. 193+86.57 - STA. 200+97.38
STA. 203+01.21 - STA. 209+04.86
STA. 210+01.90 - STA. 218+79.43
STA. 220+98.94 - STA. 228+43.23
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STA. 245+02.05 - STA. 254+00.02
STA. 259+59.68 - STA. 266+50.00

TYPICAL SECTIONS OF IMPROVEMENT

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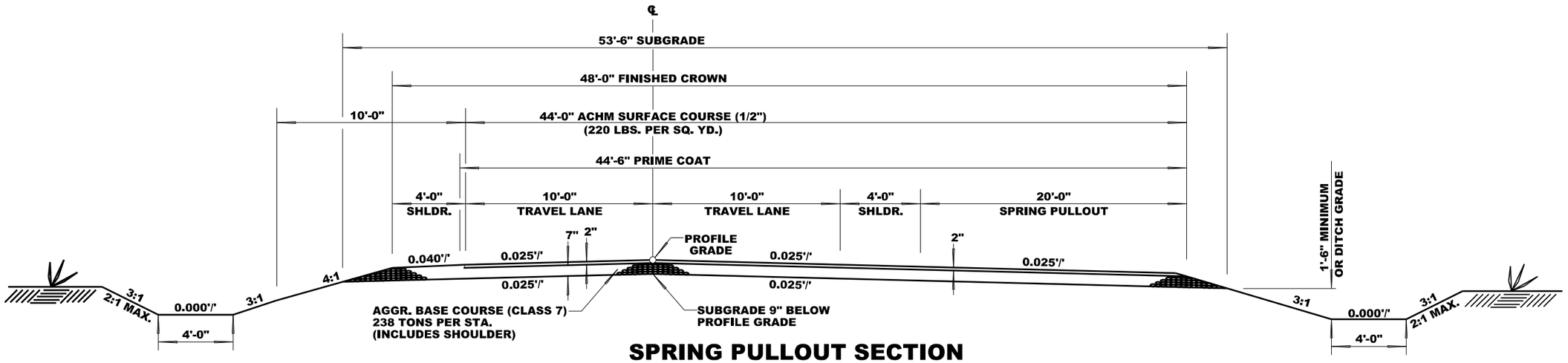
(4) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
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SPRING PULLOUT SECTION

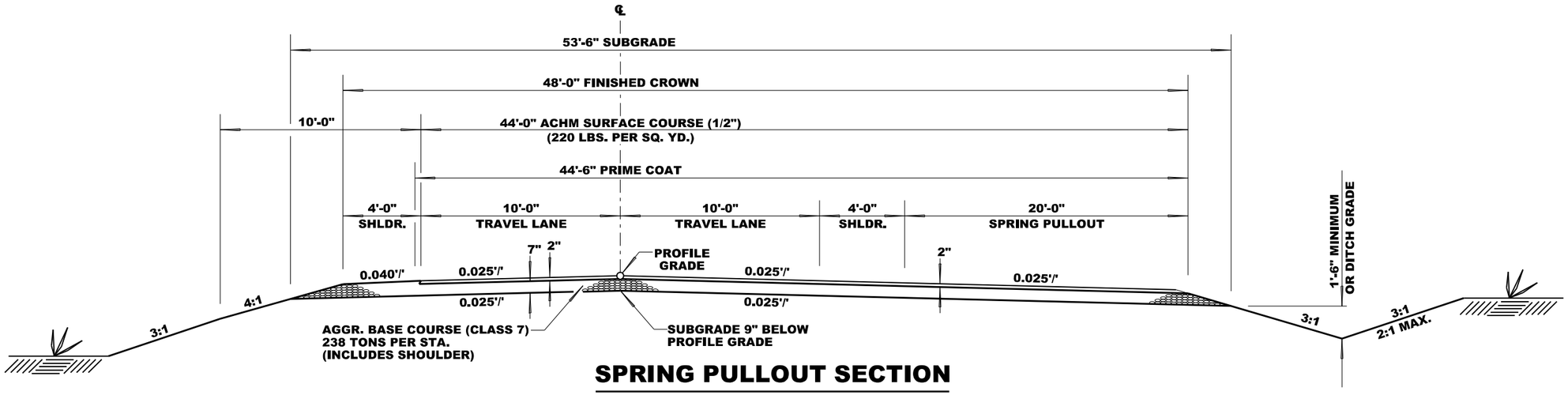
STA. 216+00 - STA. 217+00.00 TRANSITION
STA. 217+00 - STA. 220+00.00
STA. 220+00 - STA. 221+00.00 TRANSITION

TYPICAL SECTIONS OF IMPROVEMENT

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4 TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING



SPRING PULLOUT SECTION

STA. 216+00 - STA. 217+00.00 TRANSITION
STA. 217+00 - STA. 220+00.00
STA. 220+00 - STA. 221+00.00 TRANSITION

NOTE: 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.

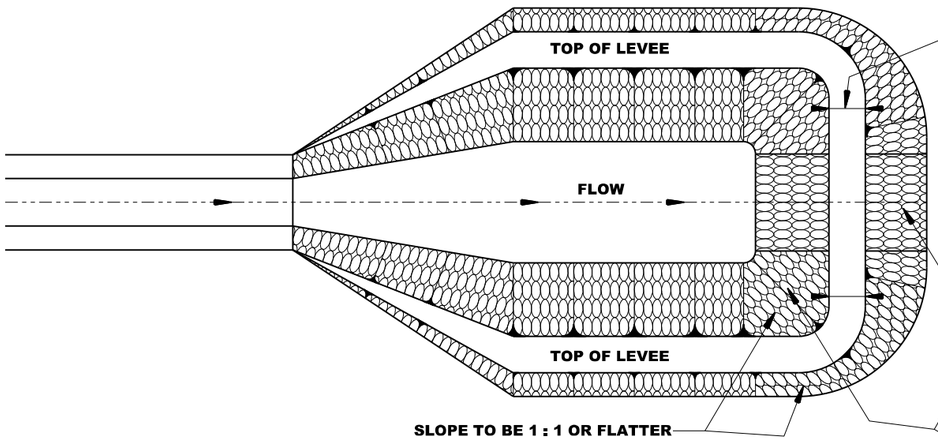
REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGE SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

TYPICAL SECTIONS OF IMPROVEMENT

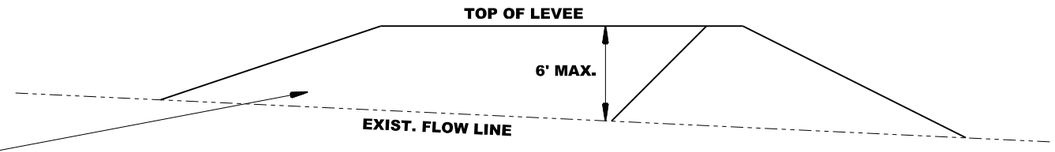
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4 SPECIAL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING



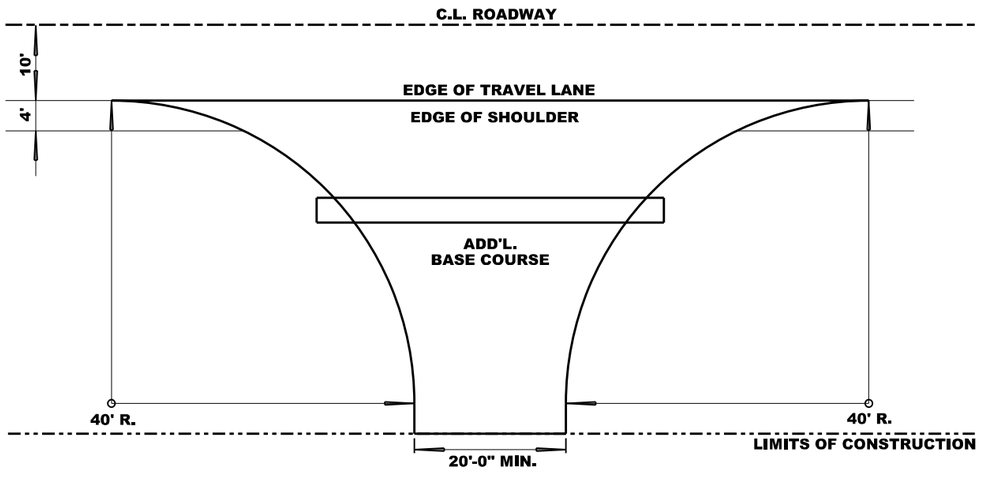
NOTE:
SIZE OF BASIN TO BE DETERMINED BY VOLUME REQUIRED; HOWEVER A MINIMUM LENGTH-TO-WIDTH RATIO OF 2:1 SHALL BE USED.



SPECIAL SEDIMENT BASIN

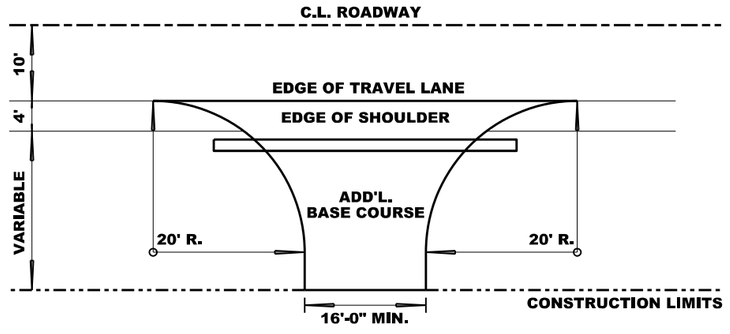
STA. 223+50 LT. & RT.

NOTE: SPECIAL SEDIMENT BASIN INCLUDED IN QUANTITIES FOR ROCK DITCH CHECKS (E-6).



DETAIL OF COUNTY ROAD TURNOUT

ADD'L. BASE COURSE AND SURFACING SEE QUANTITY BOX



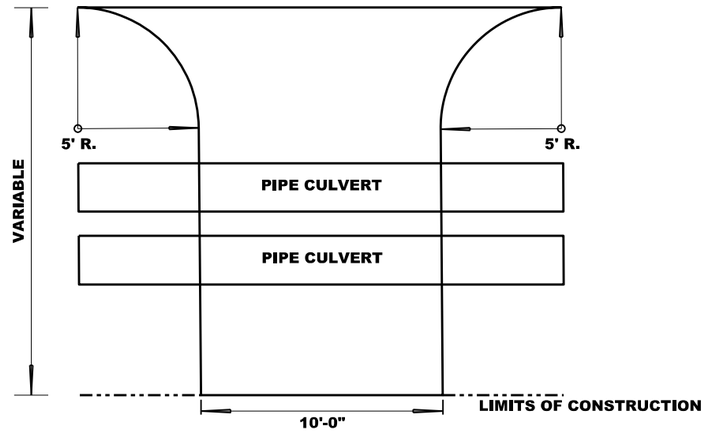
DETAIL OF PRIVATE ENTRANCES

ADD'L. BASE COURSE AND SURFACING SEE QUANTITY BOX

SPECIAL DETAILS

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4 SPECIAL DETAILS

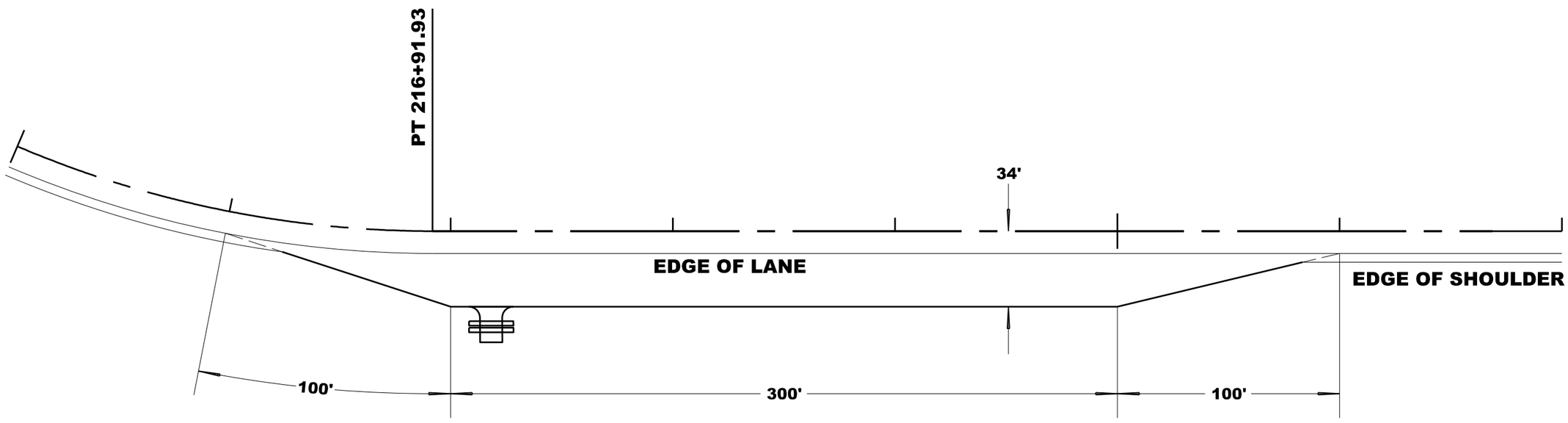


DETAIL OF SPRING ACCESS WALK

ADDITIONAL BASE COURSE
AND SURFACING
SEE QUANTITY BOX

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

215 216 217 218 219 220 221 217



DETAIL OF SPRING PULLOUT

ADD'L. BASE COURSE
AND SURFACING
SEE QUANTITY BOX

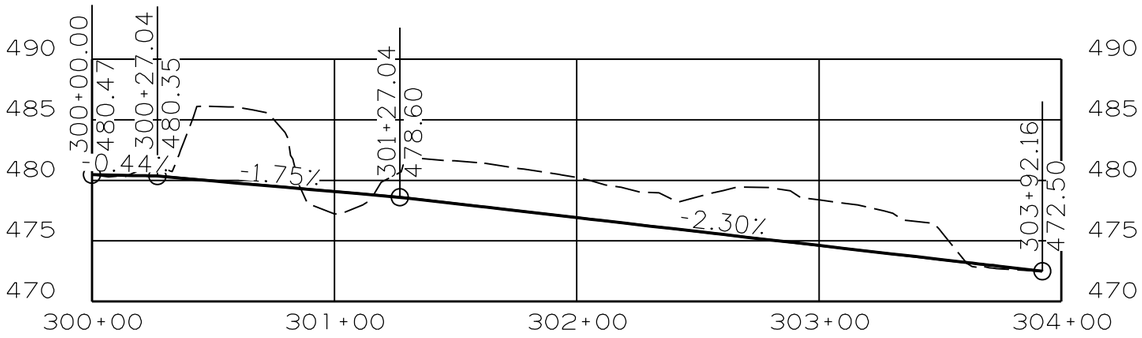
SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	9	72

4 SPECIAL DETAILS

STA. 225+41 IN PLACE
8' X 4' X 44' R.C. BOX CULVERT
30° RT. FORWARD SKEW
REMOVE AND CONSTRUCT @
STA. 225+32 CONSTRUCT
DBL. 9' X 6' X 82'
THREE-SIDED CAST-IN-PLACE CULVERT
ON 45° RT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
TOTAL SPAN = 28'-3¾"
Q25= 860 CFS D.A. = 1.14 SQ. MI.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING



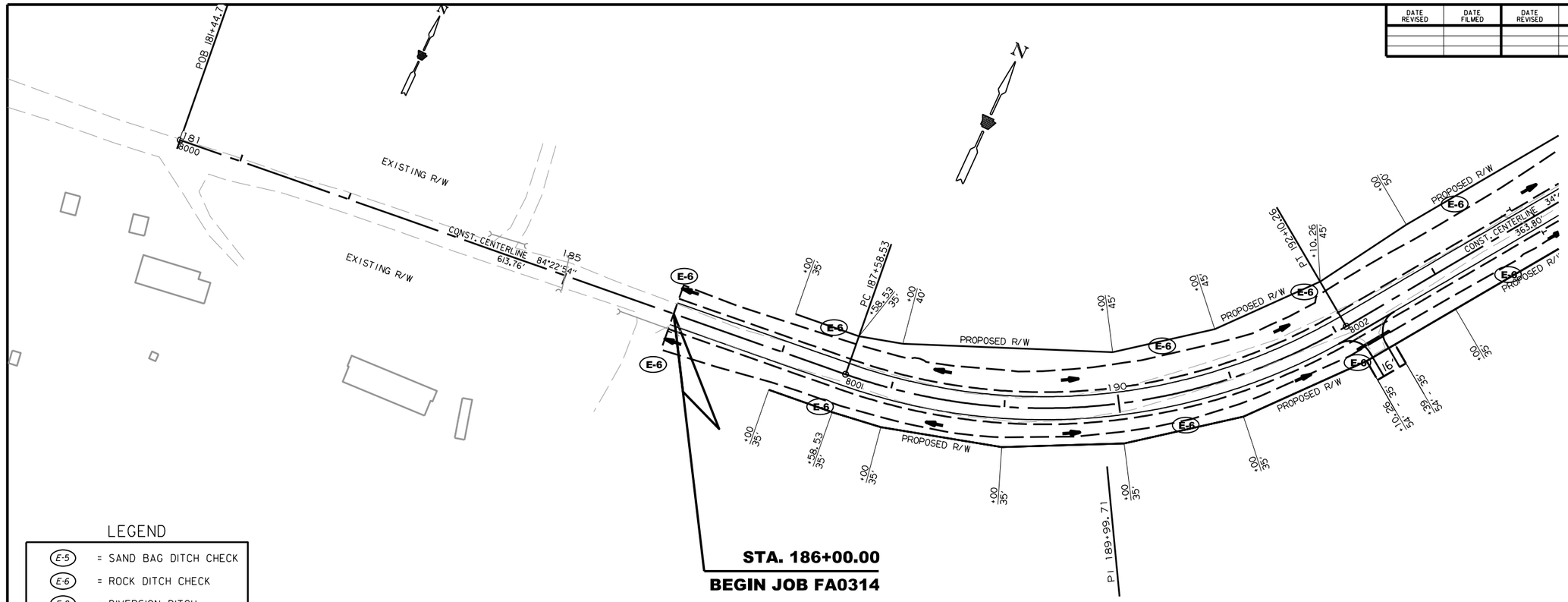
CHANNEL PROFILE

CHANNEL TYPICAL SECTION

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	10	72

4 TEMPORARY EROSION CONTROL DETAILS



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

50 0 50 100
SCALE IN FEET

LEGEND

- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-8 = DIVERSION DITCH
- E-11 = SILT FENCE
- E-12 = SLOPE DRAIN
- E-14 = SEDIMENT BASIN

TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)				SEDIMENT REMOVAL AND DISPOSAL	
STA. 186+00	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 187+50	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 190+50	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 192+00	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 193+50	LT. & RT.	= 6	CU. YD.	3	CU. YD.

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

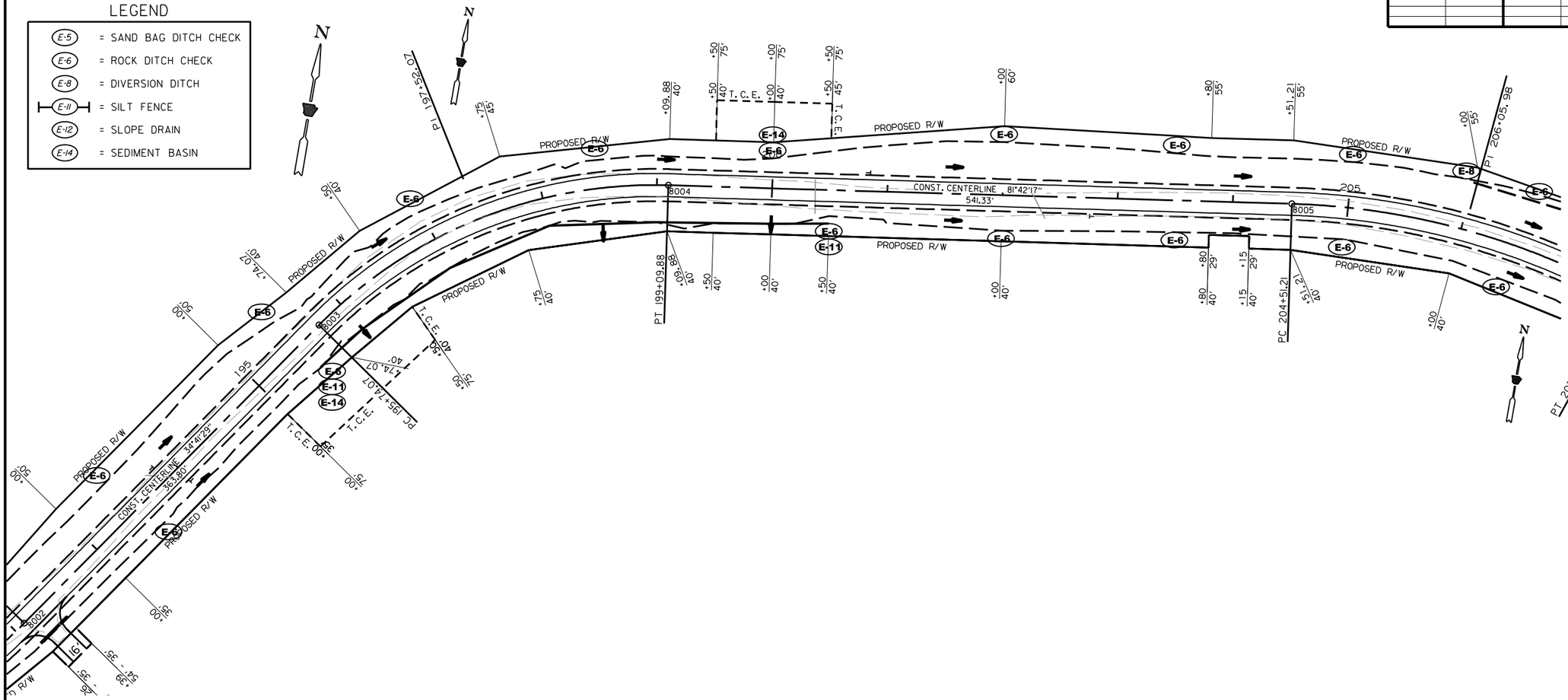
TEMPORARY EROSION CONTROL DETAILS

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.		FA0314	11	72

4 TEMPORARY EROSION CONTROL DETAILS

LEGEND

- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-8 = DIVERSION DITCH
- E-11 = SILT FENCE
- E-12 = SLOPE DRAIN
- E-14 = SEDIMENT BASIN



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)

				SEDIMENT REMOVAL AND DISPOSAL
STA. 195+50	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 197+00	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 198+50	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 200+00	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 200+50	RT.	= 3	CU. YD.	1.5 CU. YD.
STA. 202+00	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 203+50	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 205+00	LT. & RT.	= 6	CU. YD.	3 CU. YD.

SILT FENCE (E-11)

		SEDIMENT REMOVAL AND DISPOSAL
STA. 195+50 - STA. 200+50 RT.	= 479 LIN. FT.	53 CU. YD.

SEDIMENT BASIN (E-14)

			SEDIMENT REMOVAL AND DISPOSAL
STA. 195+50	RT.	= 66 CU. YD.	66 CU. YD.
STA. 200+00	LT.	= 117 CU. YD.	117 CU. YD.
OBLIT. OF SED. BASIN		= 183 CU. YD.	

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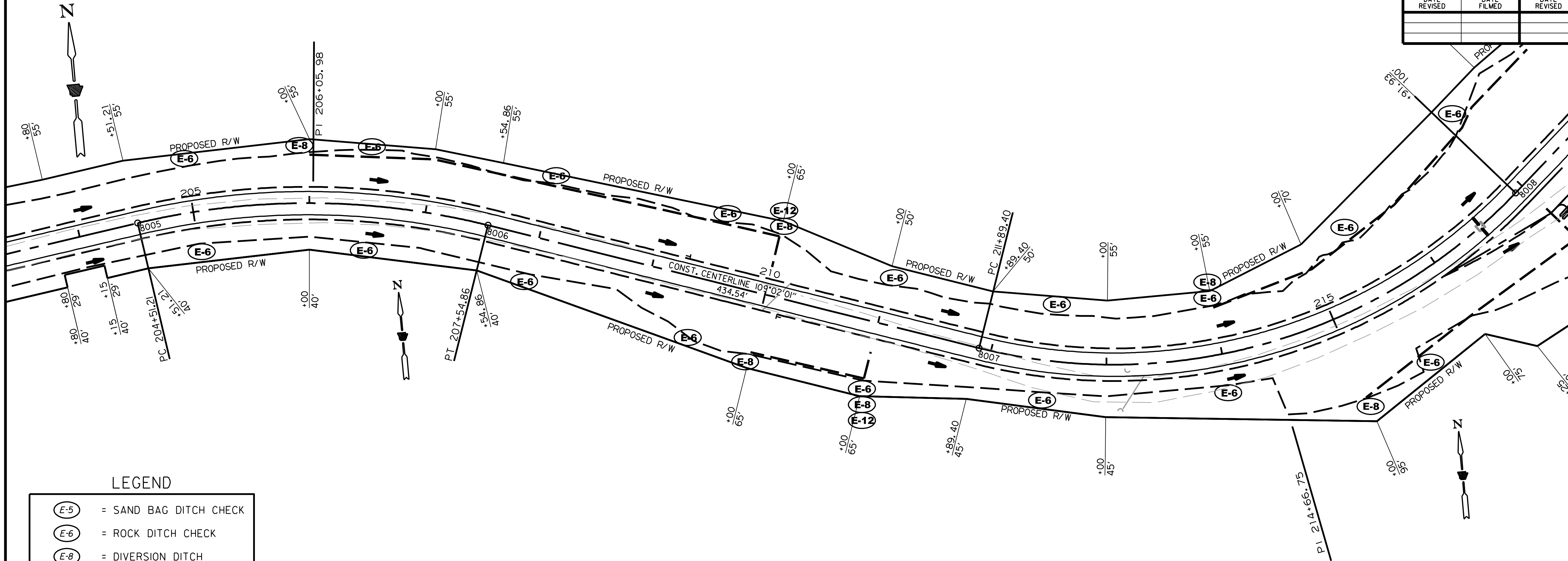
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

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.		FA0314	12	72

(4) TEMPORARY EROSION CONTROL DETAILS





LEGEND

E-5	= SAND BAG DITCH CHECK
E-6	= ROCK DITCH CHECK
E-8	= DIVERSION DITCH
E-11	= SILT FENCE
E-12	= SLOPE DRAIN
E-14	= SEDIMENT BASIN

50 0 50 100
SCALE IN FEET

TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)

			SEDIMENT REMOVAL AND DISPOSAL
STA. 206+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 208+00	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 209+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 211+00	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 212+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 214+00	LT. & RT.	= 6 CU. YD.	3 CU. YD.

DIVERSION DITCH (E-8)

STA. 206+00 - STA. 210+00 LT. = 412 LIN. FT.
STA. 210+00 - STA. 211+00 RT. = 100 LIN. FT.
STA. 214+00 - STA. 219+00 LT. = 470 LIN. FT.

PIPE FOR SLOPE DRAINS (E-12)

STA. 210+00 LT. = 35 LIN. FT.
STA. 211+00 RT. = 33 LIN. FT.

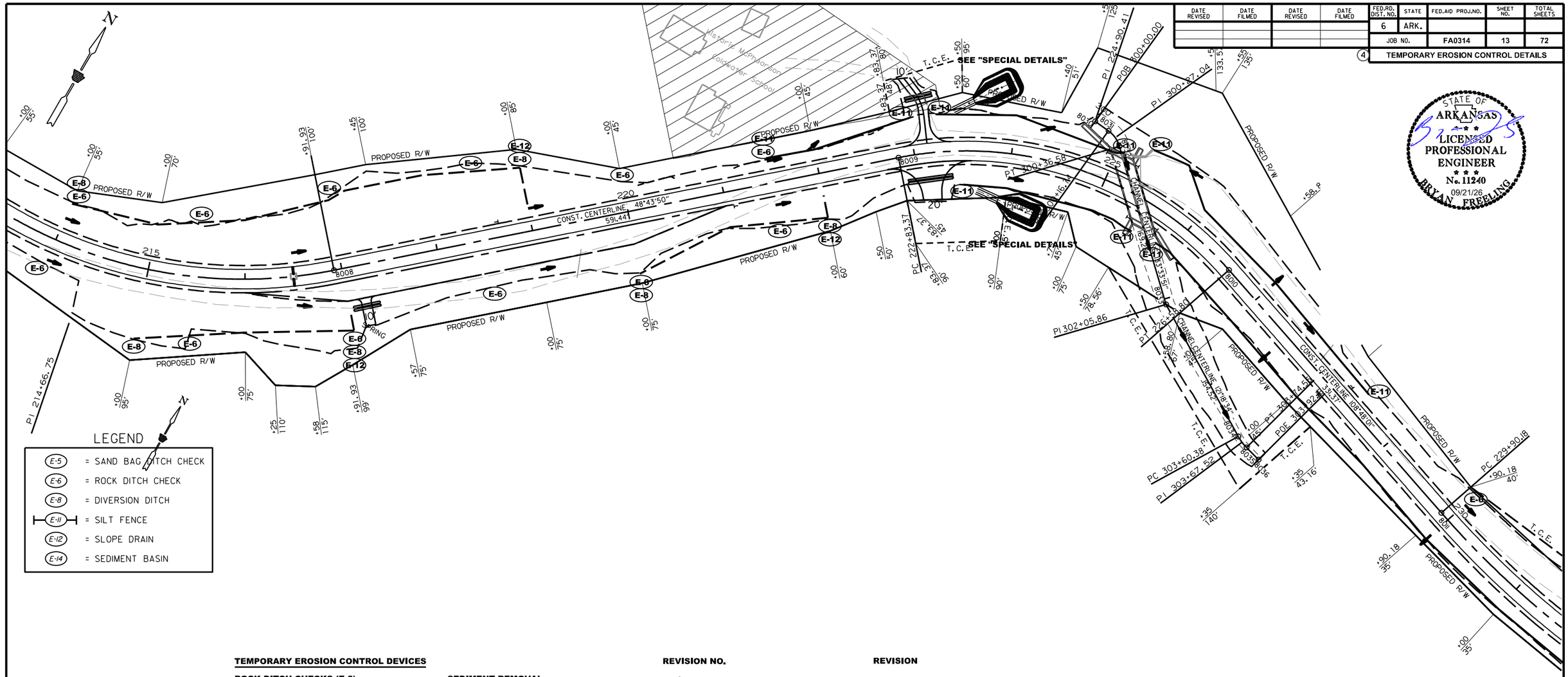
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

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.		FA0314	13	72

4 TEMPORARY EROSION CONTROL DETAILS



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)

			SEDIMENT REMOVAL AND DISPOSAL
STA. 215+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 217+00	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 218+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 220+00	LT. & RT.	= 6 CU. YD.	3 CU. YD.
STA. 221+50	LT. & RT.	= 6 CU. YD.	3 CU. YD.

SILT FENCE (E-11)

		SEDIMENT REMOVAL AND DISPOSAL
STA. 221+50 - STA. 223+00 LT.	= 153 LIN. FT.	17 CU. YD.
STA. 223+25 - STA. 225+08 LT.	= 203 LIN. FT.	23 CU. YD.
STA. 223+50 - STA. 225+51 RT.	= 181 LIN. FT.	20 CU. YD.
STA. 225+29 - STA. 228+50 LT.	= 343 LIN. FT.	38 CU. YD.
STA. 225+80 - STA. 235+00 RT.	= 929 LIN. FT.	103 CU. YD.

DIVERSION DITCH (E-8)

STA. 215+00 - STA. 217+00 RT.	= 227 LIN. FT.
STA. 220+00 - STA. 222+00 RT.	= 205 LIN. FT.

PIPE FOR SLOPE DRAINS (E-12)

STA. 217+00	RT.	= 27 LIN. FT.
STA. 219+00	LT.	= 51 LIN. FT.
STA. 222+00	RT.	= 31 LIN. FT.

ROCK SEDIMENT BASIN

			SEDIMENT REMOVAL AND DISPOSAL
*STA. 223+50	LT. & RT.	= 90 CU. YD.	90 CU. YD.

*PAID FOR AS ROCK DITCH CHECKS

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

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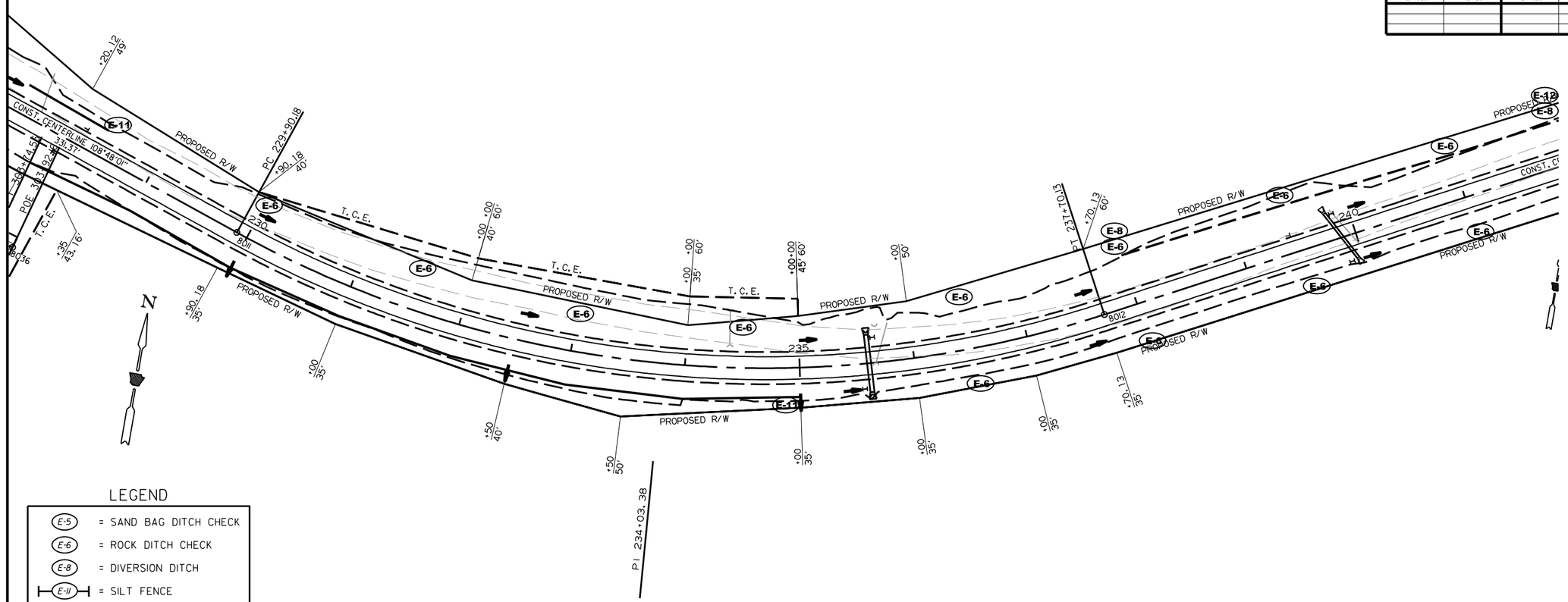
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SCALE IN FEET

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.		FA0314	14	72

4 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-8 = DIVERSION DITCH
- E-11 = SILT FENCE
- E-12 = SLOPE DRAIN
- E-14 = SEDIMENT BASIN

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

50 0 50 100
SCALE IN FEET

TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)

				SEDIMENT REMOVAL AND DISPOSAL	
STA. 230+00	LT.	= 3	CU. YD.	1.5	CU. YD.
STA. 231+50	LT.	= 3	CU. YD.	1.5	CU. YD.
STA. 233+00	LT.	= 3	CU. YD.	1.5	CU. YD.
STA. 234+50	LT.	= 3	CU. YD.	1.5	CU. YD.
STA. 236+50	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 238+00	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 239+50	LT. & RT.	= 6	CU. YD.	3	CU. YD.
STA. 241+00	LT. & RT.	= 6	CU. YD.	3	CU. YD.

DIVERSION DITCH (E-8)

STA. 238+00 - STA. 242+00 LT. = 400 LIN. FT.

PIPE FOR SLOPE DRAINS (E-12)

STA. 242+00 LT. = 24 LIN. FT.

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

TEMPORARY EROSION CONTROL DETAILS

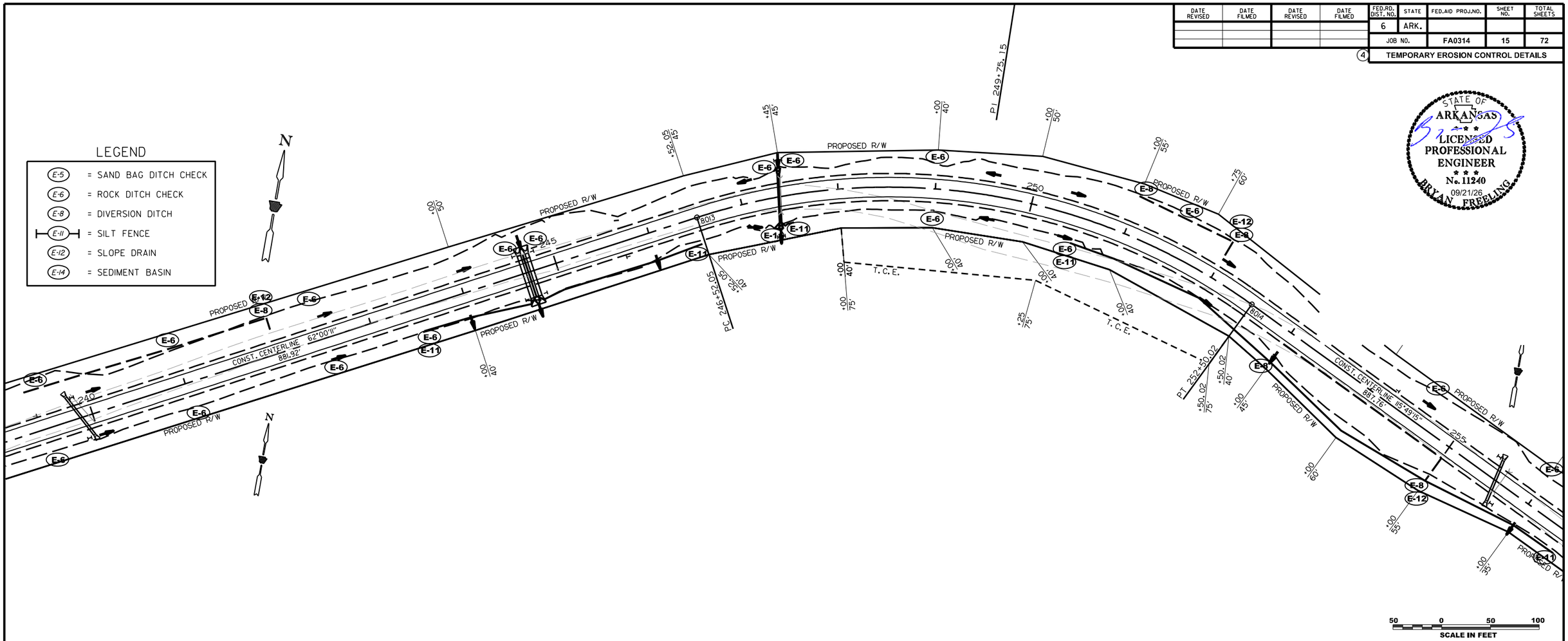
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				6	ARK.			
				JOB NO.		FA0314	15	72

(4) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

LEGEND

- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-8) = DIVERSION DITCH
- (E-11) = SILT FENCE
- (E-12) = SLOPE DRAIN
- (E-14) = SEDIMENT BASIN



TEMPORARY EROSION CONTROL DEVICES

ROCK DITCH CHECKS (E-6)

				SEDIMENT REMOVAL AND DISPOSAL
STA. 242+50	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 243+50	RT.	= 3	CU. YD.	1.5 CU. YD.
STA. 244+65	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 244+75	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 247+38	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 247+48	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 249+00	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 250+50	RT.	= 3	CU. YD.	1.5 CU. YD.
STA. 251+50	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 253+00	LT.	= 3	CU. YD.	1.5 CU. YD.

SILT FENCE (E-11)

		SEDIMENT REMOVAL AND DISPOSAL
STA. 243+50 - STA. 246+50 RT.	= 305 LIN. FT.	34 CU. YD.
STA. 247+28 - STA. 247+50 RT.	= 25 LIN. FT.	3 CU. YD.
STA. 250+50 - STA. 256+50 RT.	= 595 LIN. FT.	66 CU. YD.

DIVERSION DITCH (E-8)

STA. 251+00 - STA. 252+00 LT. = 107 LIN. FT.
STA. 253+00 - STA. 255+00 RT. = 200 LIN. FT.

PIPE FOR SLOPE DRAINS (E-12)

STA. 252+00	LT.	= 30	LIN. FT.
STA. 255+00	RT.	= 31	LIN. FT.

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

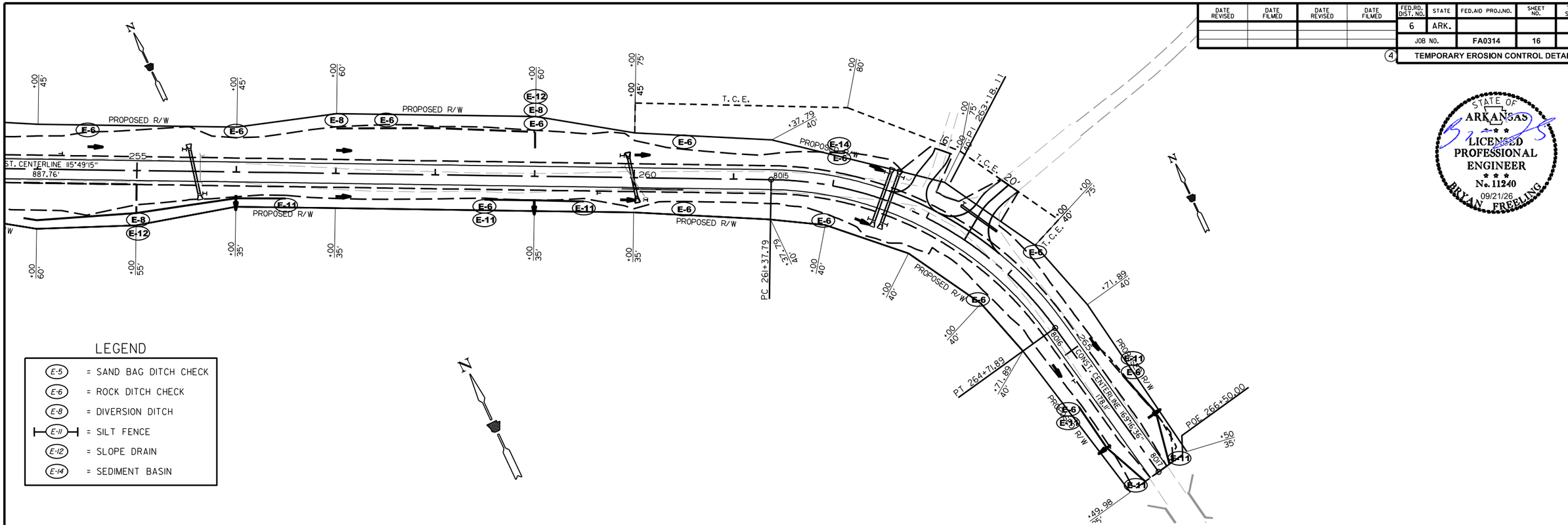
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TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		FA0314	16	72

4 TEMPORARY EROSION CONTROL DETAILS



LEGEND

- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-8 = DIVERSION DITCH
- E-11 = SILT FENCE
- E-12 = SLOPE DRAIN
- E-14 = SEDIMENT BASIN

50 0 50 100
SCALE IN FEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

TEMPORARY EROSION CONTROL DEVICES

				SEDIMENT REMOVAL AND DISPOSAL
ROCK DITCH CHECKS (E-6)				
STA. 254+50	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 256+00	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 257+50	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 258+50	RT.	= 3	CU. YD.	1.5 CU. YD.
STA. 259+00	LT.	= 3	CU. YD.	1.5 CU. YD.
STA. 260+50	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 262+00	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 264+00	LT. & RT.	= 6	CU. YD.	3 CU. YD.
STA. 265+50	LT. & RT.	= 6	CU. YD.	3 CU. YD.

				SEDIMENT REMOVAL AND DISPOSAL
SILT FENCE (E-11)				
STA. 258+50 - STA. 259+50	RT.	= 100	LIN. FT.	11 CU. YD.
STA. 265+50 - STA. 266+50	LT.	= 104	LIN. FT.	11 CU. YD.
STA. 265+50 - STA. 266+50	RT.	= 101	LIN. FT.	11 CU. YD.

DIVERSION DITCH (E-8)

STA. 257+00 - STA. 259+00 LT. = 200 LIN. FT.

PIPE FOR SLOPE DRAINS (E-12)

STA. 259+00 LT. = 30 LIN. FT.

				SEDIMENT REMOVAL AND DISPOSAL
SEDIMENT BASIN (E-14)				
STA. 262+00	LT.	= 128	CU. YD.	128 CU. YD.
OBLIT. OF SED. BASIN		= 128	CU. YD.	

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

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TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		FA0314	17	72

④ QUANTITIES

TRAFFIC CONTROL DEVICES

DESCRIPTION	W20-1 1500 FT. NO.	W20-1 1500 FT. SQ. FT.	W20-1 1000 FT. NO.	W20-1 1000 FT. SQ. FT.	W20-1 500 FT. NO.	W20-1 500 FT. SQ. FT.	W20-1 AHEAD NO.	W20-1 AHEAD SQ. FT.	G20-1 (ROAD WORK NEXT X.X MILES) NO.	G20-1 (ROAD WORK NEXT X.X MILES) SQ. FT.	G20-2 (END ROAD WORK) NO.	G20-2 (END ROAD WORK) SQ. FT.	R2-6aP (FINES DOUBLE) NO.	R2-6aP (FINES DOUBLE) SQ. FT.	R2-11 (END HIGHER FINES ZONE) NO.	R2-11 (END HIGHER FINES ZONE) SQ. FT.	WZ-4 (NO HAND-HELD PHONE USE BY DRIVER) NO.	WZ-4 (NO HAND-HELD PHONE USE BY DRIVER) SQ. FT.	*TRAFFIC DRUMS EACH	STANDARD DRAWING NUMBER
STA. 171+00	1	16.00											1	12.00						TC-1, TC-2, TC-3,TC-6
STA. 176+00			1	16.00													1	13.50		TC-1, TC-1A, TC-2, TC-3,TC-6
STA. 181+00											1	8.00			1	12.00				TC-1, TC-2, TC-3,TC-6
STA. 184+75					1	16.00			1	10.00										TC-1, TC-2, TC-3,TC-6
STA. 263+44							1	16.00												TC-1, TC-2, TC-3,TC-6
STA. 267+75									1	10.00										TC-1, TC-2, TC-3,TC-6
STA. 271+50					1	16.00					1	8.00			1	12.00				TC-1, TC-2, TC-3,TC-6
STA. 276+50			1	16.00													1	13.50		TC-1, TC-1A, TC-2, TC-3,TC-6
STA. 281+50	1	16.00											1	12.00						TC-1, TC-2, TC-3,TC-6
ENTIRE JOB																				TC-1, TC-2, TC-3,TC-6
ENTIRE PROJECT																			75*	TC-1, TC-2, TC-3
SUBTOTALS:	2	32.00	2	32.00	2	32.00	1	16.00	2	20.00	2	16.00	2	24.00	2	24.00	2	27.00	75*	
TOTALS:																		223.00	75*	

LOCATION OF THE TRAFFIC CONTROL DEVICES TO BE AS DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

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

BASE AND SURFACING

STARTING STATION	ENDING STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		PRIME COAT				ACHM SURFACE COURSE (1/2")			
			FEET	TONS/STATION	TONS	WIDTH	SQ. YDS.	GAL./SQ.YD.	GALLONS	WIDTH	SQ. YDS.	LBS./SQ. YD.	TONS
186+00.	216+00.	MAIN LANES	3000	152.00	4560.0	21.00	7000.00	0.40	2800 00	20.00	6666.7	220.00	733.3
186+00.	266+50.	ADDITIONAL FOR SUPER	8050	VAR.	272.1								
216+00.	217+00.	SPRING PULLOUT TRANSITION	100	195.00	195.0	33.00	366.70	0.40	146.70	32.00	355.6	220.00	39.1
217+00.	220+00.	SPRING PULLOUT	300	238.00	714.0	44.50	1483.30	0.40	593.30	44.00	1466.7	220.00	161.3
220+00.	221+00.	SPRING PULLOUT TRANSITION	100	195.00	195.0	33.00	366.70	0.40	146.70	32.00	355.6	220.00	39.1
221+00.	266+00.	MAIN LANES	4500	152.00	6840.0	21.00	10500.00	0.40	4200 00	20.00	10000.0	220.00	1100.0
266+00.	266+50.	ENDING TRANSITION	50	VAR.	72.0	21.00	116.70	0.40	46.70	20.00	111.1	220.00	12.2
192+25.		PRIVATE DRIVE ON RT.			25.8	VAR.	63.20	0.40	25.30	VAR.	63.2	220.00	7.0
217+18.		SPRING ACCESS WALK ON RT.			7.7	11.00	26.50	0.40	10.60	10.00	19.0	220.00	2.1
223+14.		PRIVATE DRIVE ON LT.			62.6	VAR.	153.30	0.40	61.30	VAR.	153.3	220.00	16.9
223+14.		COUNTY ROAD TURNOUT ON RT.			48.6	VAR.	119.10	0.40	47.60	VAR.	119.1	220.00	13.1
262+81.		PRIVATE DRIVE ON LT.			56.6	VAR.	121.40	0.40	48.60	VAR.	121.4	220.00	13.4
263+44.		COUNTY ROAD TURNOUT ON LT.			84.5	VAR.	172.70	0.40	69.10	VAR.	172.7	220.00	19.0
MAINTENANCE OF TRAFFIC*		ENTIRE PROJECT			1000.0								
TOTALS:					14133.9				8195 90				2156.50
USE:					14134				8196				2157

BASIS OF ESTIMATE:

AGGREGATE BASE COURSE (CLASS 7)	135 TONS / STA.(MAIN LANES)
AGGREGATE BASE COURSE (CLASS 7)	195 TONS / STA.(SPRING PULLOUT TRANSITION)
AGGREGATE BASE COURSE (CLASS 7)	237 TONS / STA.(SPRING PULLOUT)
AGGREGATE BASE COURSE (CLASS 7)	144 TONS / STA.(ENDING TRANSITION)
PRIME COAT	0.40 GAL. / SQ. YD.
ACHM SURFACE COURSE (1/2")	220 LBS. PER SQ. YD.

VOLUME CONTROL:

ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	5.8%
MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	94.2%

NOTE: RATES MAY BE MODIFIED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

*QUANTITY ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

PAVEMENT MARKING

STATION FROM	STATION TO	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4") CONTINUOUS	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4") CONTINUOUS
		LINEAR FEET	LINEAR FEET
186+00	266+50	16100	16100
TOTALS:		16100	16100

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

4" PIPE UNDERDRAIN

LOCATION	4" PIPE UNDERDRAIN	UNDERDRAIN OUTLET PROTECTORS
	LIN. FT.	EACH
ENTIRE PROJECT	200	4
TOTALS:	200	4

NOTE: ESTIMATED QUANTITY. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

FENCING

STATION	STATION	SIDE	WIRE FENCE (TYPE D)	20' GATE ALTERNATES	
				STEEL	ALUMINUM
			LIN. FT.	EACH	EACH
255+03	259+12	RT.	411		
263+01	265+10	RT.	190		
263+69	266+50	LT.	302		
265+20		RT.		1	1
265+30	266+50	RT.	128		
*AS DIRECTED			200		
TOTALS:			1231	1	1

*NOTE: TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

CLEARING AND GRUBBING

STATION	STATION	CLEARING	GRUBBING
		STATION	STATION
186+00	266+50	81	81
TOTALS:		81	81

EARTHWORK

STATION	STATION	DESCRIPTION	UNCLASSIFIED EXCAVATION NORMAL	UNCLASSIFIED EXCAVATION ADD'L	UNCLASSIFIED EXCAVATION TOTAL	COMPACTED EMBANKMENT NORMAL	COMPACTED EMBANKMENT ADD'L	COMPACTED EMBANKMENT TOTAL
			CUBIC YARDS					
186+00	266+50	MAIN LANES	27977		27977	18701		18701
192+25		ENTRANCE ON RT.					40	40
212+59	214+16	OBLITERATION OF EXISTING ROAD		30	30			
217+18		SPRING ACCESS ON RT.					45	45
217+87	219+55	OBLITERATION OF EXISTING ROAD		40	40			
223+14		ENTRANCE ON LT.					140	140
223+14		ENTRANCE ON RT.					75	75
225+66	235+29	OBLITERATION OF EXISTING ROAD		787	787			
262+81		ENTRANCE ON LT.					20	20
263+44		TURNOUT ON LT.					25	25
300+00	303+92	CHANNEL CHANGE		1217	1217		226	226
TOTALS:			27977	2074	30051	18701	571	19272

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

NOTE: CHANNEL CHANGE EXCAVATION, IF DEEMED SUITABLE BY THE ENGINEER, TO BE USED AS ROADWAY EMBANKMENT. EXCAVATION DEEMED UNSUITABLE SHALL BE DISPOSED OF AS APPROVED BY THE ENGINEER.

REINFORCED CONCRETE SPRING BOX

STATION	CLASS S CONCRETE. ROADWAY	REINFORCING STEEL- ROADWAY (GRADE 60)	18" R.C.P.
	CU. YD.	POUND	LIN. FT.
216+50	3.31	168	16
TOTALS:	3.31	168	16

EXACT LOCATION TO BE DETERMINED IN THE FIELD BY THE ENGINEER. PAYMENT FOR EXCAVATION WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	18	72

④ QUANTITIES

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

STATION	SIDE	STANDARD SIGN NUMBER												SUPPORT ASSEMBLIES		STANDARD DRAWING NUMBER
		R1-1 (STOP)		W1-2R		W1-2L		W8-3		OM-3L		OM-3R		TYPE A	TYPE C	
		NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.	NO.	SQ. FT.	EACH		
186+00	RT.					1	6.25							1		SHS 1&2
193+85	LT.			1	6.25									1		SHS 1&2
193+99	RT.			1	6.25									1		SHS 1&2
200+85	LT.					1	6.25							1		SHS 1&2
202+76	RT.			1	6.25									1		SHS 1&2
209+30	LT.					1	6.25							1		SHS 1&2
210+14	RT.					1	6.25							1		SHS 1&2
218+67	LT.			1	6.25									1		SHS 1&2
221+08	RT.			1	6.25									1		SHS 1&2
224+91	LT.									1	3.00				1	SHS 1&2
225+21	LT.											1	3.00		1	SHS 1&2
225+43	RT.											1	3.00		1	SHS 1&2
225+77	RT.									1	3.00				1	SHS 1&2
228+15	RT.					1	6.25							1		SHS 1&2
228+34	LT.					1	6.25							1		SHS 1&2
235+61	LT.			1	6.25					1	3.00*	1	3.00*	1	1	SHS 1&2
235+61	RT.			1	6.25					1	3.00*	1	3.00*	1	1	SHS 1&2
239+45	LT.			1	6.25									1		SHS 1&2
239+79	LT.			1	6.25					1	3.00*	1	3.00*	1	1	SHS 1&2
239+96	RT.			1	6.25					1	3.00*	1	3.00*	1	1	SHS 1&2
244+62	LT.									1	3.00	1	3.00		2	SHS 1&2
244+78	RT.									1	3.00	1	3.00		2	SHS 1&2
245+72	RT.			1	6.25									1		SHS 1&2
247+36	LT.									1	3.00*	1	3.00*		1	SHS 1&2
247+42	RT.									1	3.00*	1	3.00*		1	SHS 1&2
254+25	LT.					1	6.25							1		SHS 1&2
255+53	LT.									1	3.00*	1	3.00*		1	SHS 1&2
255+63	RT.									1	3.00*	1	3.00*		1	SHS 1&2
259+63	RT.			1	6.25									1		SHS 1&2
259+94	LT.									1	3.00*	1	3.00*		1	SHS 1&2
260+03	RT.									1	3.00*	1	3.00*		1	SHS 1&2
262+47	LT.									1	3.00	1	3.00		2	SHS 1&2
262+63	RT.									1	3.00	1	3.00		2	SHS 1&2
263+25	LT.	1	6.25											1		SHS 1&2
265+25	RT.							1	9.00					1		SHS 1&2
266+47	LT.					1	6.25							1		SHS 1&2
SUBTOTALS:		1	6.25	12	75.00	8	50.00	1	9.00	16	48.00	16	48.00	22	36	
TOTALS:													236.25	22	36	

NOTE: ALL STANDARD SIGN BLANKS TO BE 0.08" THICK. REFER TO STANDARD DRAWING SHS - 2 FOR CHANNEL POST SPLICING DETAILS.

*TWO OM-3'S PLACED BACK TO BACK ON EACH SIDE OF A SINGLE TYPE C SUPPORT ASSEMBLY.

TEMPORARY EROSION CONTROL

STATION	STATION	LOCATION	SPECIAL TEMPORARY SEEDING	SPECIAL SECOND SEEDING APPLICATION	WATER	FILTER SOCK (18") (E-3)	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DIVERSION DITCH (E-8)	SILT FENCE (E-11)	PIPE FOR SLOPE DRAINS (E-12)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	SEDIMENT REMOVAL AND DISPOSAL
			ACRES	ACRES	M. GALS	LIN. FT.	BAGS	CU.YDS.	LIN. FT.	LIN. FT.	LIN. FT.	CU. YD.	CU. YD.	CU. YDS
186+00	266+50	MAIN LANES	13.70*	13.70*	559.0*			333	2321*	3518*	292	311	311	913*
ENTIRE PROJECT AS DIRECTED						200*	110*			270*				15*
TOTALS:			13.70*	13.70*	559.0*	200*	110*	333*	2321*	3788*	292*	311*	311*	928*

BASIS OF ESTIMATE:
WATER..... 20.4 M.G. / ACRE OF SEEDING, TEMPORARY SEEDING

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.

*NOTE: QUANTITIES ARE ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

PERMANENT EROSION CONTROL

LOCATION	LIME	SPECIAL SEEDING	SPECIAL MULCH COVER	WATER
	TONS	ACRES	ACRES	M. GALS.
ENTIRE JOB	27	13.7	13.7	1397.4
TOTALS:	27	13.7	13.7	1397.4

BASIS OF ESTIMATE:
LIME..... 2 TONS / ACRE OF SEEDING
WATER..... 102.0 M.G. / ACRE OF SEEDING, PERMANENT SEEDING

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION / DESCRIPTION	REMOVAL AND DISPOSAL OF FENCE	REMOVAL AND DISPOSAL OF GATES	REMOVAL AND DISPOSAL OF PIPE CULVERTS	REMOVAL AND DISPOSAL OF BOX CULVERTS
			LIN. FT.	EACH	EACH	EACH
193+87		1.8' X 1.2' X 35' CULVERT			1	
200+38		1.8' X 1.2' X 30' CULVERT			1	
202+31		1.8' X 1.2' X 28' CULVERT			1	
210+10		15" X 35' CULVERT			1	
213+22		18" X 34' CULVERT			1	
219+40		2.2' X 1.5' X 29' CULVERT			1	
225+41		8' X 4' X 44' R. C. BOX CULVERT				1
227+88		15" X 12" X 36' CULVERT			1	
234+38		15" X 27' CULVERT			1	
235+73		36" X 35' CULVERT			1	
239+92		22" X 15" X 45' CULVERT			1	
244+70		18" X 37' CULVERT			1	
247+41		24" X 36' CULVERT			1	
254+83	259+12	FENCE ON RT.	471			
255+64		18" X 28' CULVERT			1	
260+01		36' CULVERT			1	
262+77		28' CULVERT			1	
263+01	265+10	FENCE ON RT.	213			
263+69	266+50	FENCE ON LT.	292			
265+20		20' GATE ON RT.		1		
265+30	266+50	FENCE ON RT.	255			
TOTALS:			1231	1	15	1

REMOVAL AND RELOCATION OF SIGN

STATION	SIDE	DESCRIPTION	REMOVAL AND RELOCATION OF SIGN
			EACH
221+70	LT.	HISTORIC MCPHEARSON COLDWATER SCHOOL SIGN	1
263+65	LT.	GAME & FISH PUBLIC ACCESS SIGN	1
TOTAL:			2

FILTER BLANKET AND DUMPED RIPRAP

STATION	STATION	SIDE	FILTER BLANKET	DUMPED RIPRAP
			SQ. YDS.	CU. YDS.
186+00	221+25	LT.	2350.0	1175.0
186+00	192+09	RT.	406.0	203.0
192+39	195+25	RT.	190.7	95.4
200+75	217+04	RT.	1086.0	543.0
217+32	222+91	RT.	372.7	186.4
223+37	225+48	RT.	140.7	70.4
224+75	225+93	LT.	78.7	39.4
226+25	226+75	RT.	33.3	16.7
237+80	244+59	LT.	452.7	226.4
244+88	246+98	LT.	140.0	70.0
254+26	263+35	LT.	606.0	303.0
256+50	258+50	RT.	133.3	66.7
259+50	265+50	RT.	400.0	200.0
TOTALS:			6390.1	3195.4
USE:			6390	3195

NOTE: TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	19	72
				(4)		QUANTITIES		

STRUCTURES OVER 20'-0" SPAN

STATION	DESCRIPTION	R.C. BOX CULVERTS			CLASS "S" CONCRETE - BRIDGE	REINFORCING STEEL - ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	BRIDGE NAME PLATE (TYPE C)	CONCRETE DITCH PAVING (TYPE B)	FILTER BLANKET	DUMPED RIPRAP	STANDARD DRAWING NUMBERS
		SPAN	HEIGHT	LENGTH								
		LIN. FT.			CU. YDS.	POUNDS	CU. YDS.	EACH	SQ. YD.	SQ. YDS.	CU. YD.	
225+32	THREE-SIDED CAST-IN-PLACE CULVERT DBL. 9' X 6' X 82' ON 45° RT. FWD. SKEW	9	6	82	328.31	47140	210	1	79.0	26	13	RCB-1 & RCB-2
TOTALS:					328.31	47140	210	1	79.0	26	13	

STATE OF ARKANSAS
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STRUCTURES

STATION	DESCRIPTION	SIDE DRAINS			PIPE CULVERT ALT.					ARCH PIPE CULVERTS ALT.				FLARED END SECTION ALT.				FLARED END SECTIONS FOR ARCH PIPE CULVERT ALT.				SELECTED PIPE BEDDING*	FILTER BLANKET	DUMPED RIPRAP	STANDARD DRAWING NUMBERS
					30"			42"		29" X 18"	28" X 20"	44" X 27"	42" X 29"	30"		42"		29" X 18"	28" X 20"	44" X 27"	42" X 29"				
		24"	21" X 15"	28" X 20"	R.C.P. (CLASS IV)	R.C.P. (CLASS V)	C.M.P.	R.C.P. (CLASS V)	C.M.P.	R.C.P. (CLASS IV)	C.M.P.	R.C.P. (CLASS IV)	C.M.P.	R.C.P.	C.M.P.	R.C.P.	C.M.P.	R.C.P.	C.M.P.	R.C.P.	C.M.P.				
		LINEAR FT.								LINEAR FT.				EACH				EACH				CU. YDS.	CU. YDS.	SQ. YDS.	
192+25	SIDE DRAIN ON RT.		30																						PCM-1, PCC-1
217+18	DBL. SIDE DRAIN ON RT.	56																							PCM-1, PCC-1
223+14	DBL. SIDE DRAIN ON LT.			56																					PCM-1, PCC-1
223+14	DBL. SIDE DRAIN ON RT.			92																					PCM-1, PCC-1
235+60	CROSS DRAIN											100	112							2	2	6	34	17	PCM-1, PCC-1, FES-1, FES-2
239+89	CROSS DRAIN									46	52							2	2			4	16	8	PCM-1, PCC-1, FES-1, FES-3
244+70	DBL. CROSS DRAIN							96	108							4	4					8	92	46	PCM-1, PCC-1, FES-1, FES-4
247+39	CROSS DRAIN				50		56							2	2							4	26	13	PCM-1, PCC-1, FES-1, FES-5
255+58	CROSS DRAIN									44	50							2	2			4	16	8	PCM-1, PCC-1, FES-1, FES-6
259+99	CROSS DRAIN									40	46							2	2			4	16	8	PCM-1, PCC-1, FES-1, FES-7
262+62	DBL. CROSS DRAIN					96	108							4	4							8	52	26	PCM-1, PCC-1, FES-1, FES-8
263+44	SIDE DRAIN ON LT.			44																					PCM-1, PCC-1
TOTALS:		56	30	192	50	96	164	96	108	130	148	100	112	6	6	4	4	6	6	2	2	38	252	126	

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.
*QUANTITIES ARE ESTIMATED. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-26-2026				6	ARK.			
				JOB NO.		FA0314	20	72

(4) SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES

ITEM NO.	ITEM		QUANTITY	UNIT
201	CLEARING		81	STATION
201	GRUBBING		81	STATION
202	REMOVAL AND DISPOSAL OF FENCE		1231	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES		1	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		15	EACH
202	REMOVAL AND DISPOSAL OF BOX CULVERTS		1	EACH
202	REMOVAL AND RELOCATION OF SIGN		2	EACH
SP, SS, & 210	UNCLASSIFIED EXCAVATION		30051	CU. YD.
SP & 210	COMPACTED EMBANKMENT		19272	CU. YD.
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)		14134	TON
SS & 401	PRIME COAT		8196	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		2032	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		125	TON
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SS & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
SS & 604	SIGNS		223	SQ. FT.
SS & 604	TRAFFIC DRUMS		75	EACH
SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)		79	SQ. YD.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		16	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	(ALTERNATE NO. 1)	50	LIN. FT.
* SS & 606	30" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 2)	56	LIN. FT.
* SS & 606	30" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 3)	56	LIN. FT.
* SS & 606	30" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)	(ALTERNATE NO. 4)	56	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	(ALTERNATE NO. 1)	96	LIN. FT.
* SS & 606	30" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 2)	108	LIN. FT.
* SS & 606	30" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 3)	108	LIN. FT.
* SS & 606	30" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (16 GAUGE)	(ALTERNATE NO. 4)	108	LIN. FT.
* SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	(ALTERNATE NO. 1)	96	LIN. FT.
* SS & 606	42" ASPHALT COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)	(ALTERNATE NO. 2)	108	LIN. FT.
* SS & 606	42" ALUMINUM COATED CORRUGATED STEEL PIPE CULVERTS (14 GAUGE)	(ALTERNATE NO. 3)	108	LIN. FT.
* SS & 606	42" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE CULVERT (14 GAUGE)	(ALTERNATE NO. 4)	108	LIN. FT.
* SS & 606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	(ALTERNATE NO. 1)	130	LIN. FT.
* SS & 606	28" X 20" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 2)	148	LIN. FT.
* SS & 606	28" X 20" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (16 GAUGE)	(ALTERNATE NO. 3)	148	LIN. FT.
* SS & 606	28" X 20" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE CULVERT (16	(ALTERNATE NO. 4)	148	LIN. FT.
* SS & 606	44" X 27" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	(ALTERNATE NO. 1)	100	LIN. FT.
* SS & 606	42" X 29" ALUMINUM COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)	(ALTERNATE NO. 2)	112	LIN. FT.
* SS & 606	42" X 29" ASPHALT COATED CORRUGATED STEEL ARCH PIPE CULVERTS (14 GAUGE)	(ALTERNATE NO. 3)	112	LIN. FT.
* SS & 606	42" X 29" POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE CULVERT (14	(ALTERNATE NO. 4)	112	LIN. FT.
* SS & 606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	(ALTERNATE NO. 1)	6	EACH
* SS & 606	30" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	(ALTERNATE NO. 2)	6	EACH
* SS & 606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	(ALTERNATE NO. 1)	4	EACH
* SS & 606	42" FLARED END SECTIONS FOR CORRUGATED STEEL PIPE CULVERTS	(ALTERNATE NO. 2)	4	EACH
* SS & 606	29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	(ALTERNATE NO. 1)	6	EACH
* SS & 606	28" X 20" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERT	(ALTERNATE NO. 2)	6	EACH
* SS & 606	44" X 27" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	(ALTERNATE NO. 1)	2	EACH
* SS & 606	42" X 29" FLARED END SECTIONS FOR CORRUGATED STEEL ARCH PIPE CULVERTS	(ALTERNATE NO. 2)	2	EACH
SP, SS, & 606	24" SIDE DRAIN		56	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN		30	LIN. FT.
SS & 606	28" X 20" SIDE DRAIN		192	LIN. FT.
SS & 606	SELECTED PIPE BEDDING		38	CU. YD.
SS & 611	4" PIPE UNDERDRAINS		200	LIN. FT.
SS & 611	UNDERDRAIN OUTLET PROTECTORS		4	EACH
SS & 619	WIRE FENCE (TYPE D)		1231	LIN. FT.
* SS & 619	20' STEEL GATES	(ALTERNATE NO. 1)	1	EACH
* SS & 619	20' ALUMINUM GATES	(ALTERNATE NO. 2)	1	EACH
620	LIME		27	TON
SP & 620	SPECIAL SEEDING		13.70	ACRE
SP, SS, & 620	SPECIAL MULCH COVER		13.70	ACRE
620	WATER		1956.4	M. GAL.
621	SILT FENCE		3788	LIN. FT.
621	SAND BAG DITCH CHECKS		110	BAG
621	DIVERSION DITCH		2321	LIN. FT.
621	SEDIMENT BASIN		311	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		311	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		928.0	CU. YD.
621	PIPE FOR SLOPE DRAINS		292	LIN. FT.
621	ROCK DITCH CHECKS		333	CU. YD.
SS & 621	FILTER SOCK (18")		200	LIN. FT.
SP & 621	SPECIAL TEMPORARY SEEDING		13.70	ACRE
SP & 623	SPECIAL SECOND SEEDING APPLICATION		13.70	ACRE
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")		16100	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (4")		16100	LIN. FT.
SS & 726	STANDARD SIGN		236.25	SQ. FT.
SS & 729	CHANNEL POST SIGN SUPPORT (TYPE A)		22	EACH
SS & 729	CHANNEL POST SIGN SUPPORT (TYPE C)		36	EACH
SP, SS, & 802	CLASS S CONCRETE-ROADWAY		3.31	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)		168	POUND
SS & 816	FILTER BLANKET		6668	SQ. YD.
SS & 816	DUMPED RIPRAP		3334	CU. YD.

* DENOTES ALTERNATE BID ITEMS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
10/26/26
BRYAN FREELING

STRUCTURES OVER 20'-0" SPAN

ITEM NO.	ITEM	QUANTITY	UNIT
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	210	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-BRIDGE	328.31	CU. YD.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	47140	POUND
812	BRIDGE NAME PLATE (TYPE C)	1	EACH

* DENOTES ALTERNATE BID ITEMS

REVISIONS

DATE	REVISION	SHEET NUMBER
10/26/2026	ADDED SPECIAL PROVISION DELAY IN RIGHT OF WAY OCCUPANCY	3 & 20

SUMMARY OF QUANTITIES AND REVISIONS

JOB SURVEYED BY CLS INC. - 9-2011, JOB PROCESSED AND BUILT BY LLC/EDR 9-26-2011.
SURVEY CONTROL COORDINATES

Project Name: sfa0312
Date: 9/27/2011
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	652114.2569	2249499.9041	698.46	CTL	*5/8" REBAR W/ 2" CAP
2	652738.9357	2241758.8390	733.15	CTL	*5/8" REBAR W/ 2" CAP
3	653650.2039	2236029.9723	787.45	CTL	*5/8" REBAR W/ 2" CAP
4	654868.0569	2234048.5077	789.15	CTL	*5/8" REBAR W/ 2" CAP
5	654656.2593	2240406.5067	804.88	CTL	*5/8" REBAR W/ 2" CAP
6	655565.4620	2243706.2576	809.01	CTL	*5/8" REBAR W/ 2" CAP
7	655523.0138	2248869.1862	966.06	CTL	*5/8" REBAR W/ 2" CAP
8	655663.5274	2253387.1857	795.06	CTL	*5/8" REBAR W/ 2" CAP
9	655680.3611	2256034.6662	801.91	CTL	*5/8" REBAR W/ 2" CAP
10	655707.4313	2260659.9765	804.34	CTL	*5/8" REBAR W/ 2" CAP
11	656030.1250	2263359.7665	810.32	CTL	*5/8" REBAR W/ 2" CAP
12	656368.5729	2268808.1407	778.77	CTL	*5/8" REBAR W/ 2" CAP
13	656491.7868	2273394.6863	779.67	CTL	*5/8" REBAR W/ 2" CAP
14	656758.0618	2276961.1751	776.24	CTL	*5/8" REBAR W/ 2" CAP
15	656819.3686	2300412.3846	752.53	CTL	*5/8" REBAR W/ 2" CAP
16	656900.8667	2312650.0088	745.80	CTL	*5/8" REBAR W/ 2" CAP
17	657521.8145	2312235.9081	689.04	CTL	*5/8" REBAR W/ 2" CAP
18	657268.8145	2312235.9081	689.04	CTL	*5/8" REBAR W/ 2" CAP
19	657661.0874	2312744.5749	608.36	CTL	*5/8" REBAR W/ 2" CAP
20	657490.3665	2313273.5158	554.00	CTL	*5/8" REBAR W/ 2" CAP
21	657522.7746	2313674.9168	524.50	CTL	*5/8" REBAR W/ 2" CAP
22	658042.6656	2341163.1508	484.51	CTL	*5/8" REBAR W/ 2" CAP
23	658048.9911	2344478.6934	481.46	CTL	*5/8" REBAR W/ 2" CAP
24	657878.3768	2348627.5734	474.14	CTL	*5/8" REBAR W/ 2" CAP
25	657918.9439	2353397.7877	465.95	CTL	*5/8" REBAR W/ 2" CAP
26	658446.3096	2363851.5369	455.97	CTL	*5/8" REBAR W/ 2" CAP
27	658397.5743	2365954.1747	456.79	CTL	*5/8" REBAR W/ 2" CAP
28	658172.3838	2372356.8835	446.26	CTL	*5/8" REBAR W/ 2" CAP
29	657866.0979	2378088.4358	416.06	CTL	*5/8" REBAR W/ 2" CAP
30	657522.7746	2378088.4358	417.57	CTL	*5/8" REBAR W/ 2" CAP
31	656775.7466	2380982.2045	423.77	CTL	*5/8" REBAR W/ 2" CAP
32	656387.0315	2381170.3467	449.60	CTL	*5/8" REBAR W/ 2" CAP
33	655961.5223	2381028.0336	437.91	CTL	*5/8" REBAR W/ 2" CAP
34	655661.4709	2380281.4347	635.33	CTL	*5/8" REBAR W/ 2" CAP
35	654934.9556	2380904.2779	662.32	CTL	*5/8" REBAR W/ 2" CAP
36	654341.7134	2380124.6724	624.70	CTL	*5/8" REBAR W/ 2" CAP
37	653940.8393	2379781.2988	748.80	CTL	*5/8" REBAR W/ 2" CAP
38	653101.2435	2379682.6231	726.92	CTL	*5/8" REBAR W/ 2" CAP
39	652287.3370	2380059.0779	738.66	CTL	*5/8" REBAR W/ 2" CAP
40	652308.7001	2401769.0177	802.36	CTL	*5/8" REBAR W/ 2" CAP
41	651720.0849	2412101.5618	788.45	CTL	*5/8" REBAR W/ 2" CAP
42	651689.8895	2417134.2638	750.90	CTL	*5/8" REBAR W/ 2" CAP
43	651871.3196	2422236.5284	756.20	CTL	*5/8" REBAR W/ 2" CAP
44	651836.8166	2425616.4890	748.42	CTL	*5/8" REBAR W/ 2" CAP
45	652178.7287	2432284.3605	714.00	CTL	*5/8" REBAR W/ 2" CAP
46	652018.9624	2433284.3605	714.00	CTL	*5/8" REBAR W/ 2" CAP
47	651968.9274	2434853.7810	720.96	CTL	*5/8" REBAR W/ 2" CAP
48	651685.8713	2434853.7810	720.96	CTL	*5/8" REBAR W/ 2" CAP
49	651055.8140	2434860.8299	722.33	CTL	*5/8" REBAR W/ 2" CAP
50	650935.5210	2434860.8624	711.93	CTL	*5/8" REBAR W/ 2" CAP
51	651055.5160	2442466.9605	699.66	CTL	*5/8" REBAR W/ 2" CAP
52	650898.4176	2446411.4846	702.84	CTL	*5/8" REBAR W/ 2" CAP
53	649989.9875	2451013.9376	653.38	CTL	*5/8" REBAR W/ 2" CAP
54	649350.9875	2451302.3605	655.38	CTL	*5/8" REBAR W/ 2" CAP
55	648939.4887	2451324.4812	653.12	CTL	*5/8" REBAR W/ 2" CAP
56	648825.8508	2450604.1041	517.75	CTL	*5/8" REBAR W/ 2" CAP
57	647875.8508	2450607.7489	444.55	CTL	*5/8" REBAR W/ 2" CAP
58	647775.0888	2446366.3412	442.58	CTL	*5/8" REBAR W/ 2" CAP
59	647627.5597	2446610.2814	435.13	CTL	*5/8" REBAR W/ 2" CAP
60	647318.6559	2446774.2295	432.54	CTL	*5/8" REBAR W/ 2" CAP
61	647198.2795	2447100.3338	428.88	CTL	*5/8" REBAR W/ 2" CAP
62	646974.8256	2447669.0961	415.92	CTL	*5/8" REBAR W/ 2" CAP
63	646661.2445	2447870.9422	428.77	CTL	*5/8" REBAR W/ 2" CAP
64	646660.5530	2448314.5807	460.91	CTL	*5/8" REBAR W/ 2" CAP
65	646521.4570	2448518.0607	478.11	CTL	*5/8" REBAR W/ 2" CAP
66	646273.8117	2448758.0143	496.67	CTL	*5/8" REBAR W/ 2" CAP
67	646647.8685	2449047.8527	520.36	CTL	*5/8" REBAR W/ 2" CAP
68	645994.8005	2449112.0927	520.30	CTL	*5/8" REBAR W/ 2" CAP
69	645618.3583	2449057.2842	502.54	CTL	*5/8" REBAR W/ 2" CAP
70	645495.0387	2449293.5734	479.59	CTL	*5/8" REBAR W/ 2" CAP
71	645350.2454	2449774.2295	432.54	CTL	*5/8" REBAR W/ 2" CAP
72	645137.3000	2449800.9470	428.32	CTL	*5/8" REBAR W/ 2" CAP
73	644616.1065	2449757.0187	479.53	CTL	*5/8" REBAR W/ 2" CAP
74	644516.9143	2449896.2369	496.14	CTL	*5/8" REBAR W/ 2" CAP
75	644405.1431	2450344.2308	540.81	CTL	*5/8" REBAR W/ 2" CAP
76	644391.6161	2450691.9544	550.33	CTL	*5/8" REBAR W/ 2" CAP
77	644065.8346	2451209.1247	533.83	CTL	*5/8" REBAR W/ 2" CAP
78	644035.5711	2451613.3354	543.03	CTL	*5/8" REBAR W/ 2" CAP
79	644062.5111	2451811.3317	540.87	CTL	*5/8" REBAR W/ 2" CAP
80	643888.9857	2452041.9841	512.16	CTL	*5/8" REBAR W/ 2" CAP
81	643806.4727	2452591.9826	526.27	CTL	*5/8" REBAR W/ 2" CAP
82	643923.5006	2453962.1977	502.55	CTL	*5/8" REBAR W/ 2" CAP
83	643586.6243	2453758.1738	494.30	CTL	*5/8" REBAR W/ 2" CAP
84	643587.6564	2453911.9409	446.38	CTL	*5/8" REBAR W/ 2" CAP
85	644109.9167	2453940.1917	431.17	CTL	*5/8" REBAR W/ 2" CAP
86	644392.9448	2454194.0002	446.50	CTL	*5/8" REBAR W/ 2" CAP
87	644547.9455	2454401.8018	438.89	CTL	*5/8" REBAR W/ 2" CAP
88	644575.6447	2454760.2858	433.73	CTL	*5/8" REBAR W/ 2" CAP
89	644621.7361	2454968.7900	417.91	CTL	*5/8" REBAR W/ 2" CAP
90	644657.0476	2455158.3673	407.51	CTL	*5/8" REBAR W/ 2" CAP
91	643997.9415	2455226.6763	369.93	CTL	*5/8" REBAR W/ 2" CAP
92	643906.7249	2455630.6704	361.43	CTL	*5/8" REBAR W/ 2" CAP
93	643857.4366	2456604.9935	415.86	CTL	*5/8" REBAR W/ 2" CAP
94	643857.4366	2456624.9538	461.91	CTL	*5/8" REBAR W/ 2" CAP
95	644235.9961	2456708.1290	491.61	CTL	*5/8" REBAR W/ 2" CAP
96	644195.4267	2456824.9538	499.90	CTL	*5/8" REBAR W/ 2" CAP
97	644028.9411	2457107.9288	514.90	CTL	*DRILL HOLE IN BEDROCK
98	657513.0408	2377865.0444	413.72	TBM	*SOUTH END OF WEST HEADWALL
100	657059.2438	2244107.9717	703.35	GPS	*AHTD GPS 030009
101	657112.5366	2249396.4198	684.28	GPS	*AHTD GPS 030009A
102	656127.3482	2257963.3687	802.15	GPS	*AHTD GPS 030010
103	658405.3351	2239050.6601	748.24	GPS	*AHTD GPS 030011
104	657666.9299	2378774.7248	408.03	GPS	*AHTD GPS 030011A
105	652693.5290	2410328.0384	764.13	GPS	*AHTD GPS 030012
106	650439.9334	2447702.2941	698.59	GPS	*AHTD GPS 030013
107	649178.7245	2452327.4225	530.26	GPS	*AHTD GPS 030014
108	647895.2887	2453357.9695	520.82	GPS	*AHTD GPS 030015
109	644137.6587	2456962.8306	510.46	GPS	*AHTD GPS 690009
110	643356.7486	2457107.9288	514.90	GPS	*AHTD GPS 690009A
900	-.99999.0000	-.99999.0000	754.79	BM	*USGS BM 1 FJD
901	-.99999.0000	-.99999.0000	983.67	BM	*USGS BM 2 FJD
902	658044.2884	1234306.0330	408.02	TBM	*SOUTHEAST CULVERT HEADWALL
903	-.99999.0000	-.99999.0000	413.27	TBM	*SOUTH END OF WEST HEADWALL
904	647441.2467	2446698.6526	427.97	TBM	*CHISELED SQUARE
905	646106.8289	2446374.6599	427.46	TBM	*CHISELED SQUARE
906	646702.6884	2447761.1397	419.04	TBM	*CHISELED SQUARE
907	643904.4155	2455521.6652	358.59	TBM	*AHTD CAP SET IN SE END

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.999804515 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF
GRID COORDINATES ARE STORED UNDER FILE NAME sFA0312gi.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL

BASIS OF BEARING:
BEARINGS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 030009, 030009A, 030010, 030011A, 030013, 030014, 030015, 690009
CONVERGENCE ANGLE: 0-08-31 LEFT AT LT: 36-07-33.2 LG:092-14-38.4
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

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.		FA0314	21	72

(4) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

CONSTRUCTION CENTERLINE COORDINATES FOR COUNTY ROAD 73

POINT NAME	NORTHING	EASTING	DESCRIPTION	STATION
8000	656803.5065	1230431.4933	POB	181+44.77
8001	656863.5932	1231042.3075	PC	187+58.53
	656887.2040	1231282.3237	PI	189+99.71
8002	657085.5049	1231419.5898	PT	192+10.26
8003	657384.6345	1231626.6508	PC	195+74.07
	657530.9962	1231727.9641	PI	197+52.07
8004	657556.6779	1231904.1076	PT	199+09.88
8005	657634.7779	1232439.7742	PC	204+51.21
	657657.1076	1232592.9275	PI	206+05.98
8006	657606.6328	1232739.2382	PT	207+54.86
8007	657464.9193	1233150.0214	PC	211+89.40
	657374.4691	1233412.2085	PI	214+66.75
8008	657557.4097	1233620.6696	PT	216+91.93
8009	657947.5248	1234065.2064	PC	222+83.37
	658084.0876	1234220.8200	PI	224+90.41
8010	658017.3654	1234416.8127	PT	226+58.80
8011	657910.5737	1234730.5074	PC	229+90.18
	657777.4102	1235121.6676	PI	234+03.38
8012	657971.3781	1235486.5172	PT	237+70.13
8013	658385.3723	1236265.2317	PC	246+52.05
	658537.0420	1236550.5194	PI	249+75.15
8014	658396.3138	1236841.3601	PT	252+50.02
8015	658009.6413	1237640.4900	PC	261+37.79
	657931.0997	1237802.8106	PI	263+18.11
8016	657753.9246	1237836.3626	PT	264+71.89
8017	657578.9212	1237869.5033	POE	266+50.00

CONSTRUCTION CENTERLINE COORDINATES FOR CHANNEL

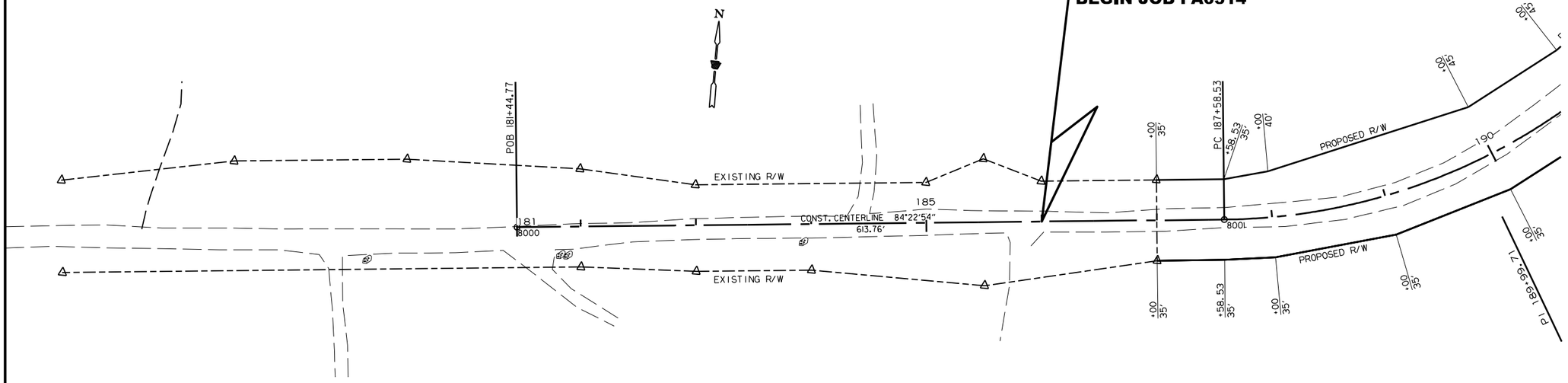
POINT NAME	NORTHING	EASTING	DESCRIPTION	STATION
8030	658080.8575	1234221.5471	POB	300+00.00
8031	658079.2058	1234238.2032	PC	300+16.74
	658078.1893	1234248.4538	PI	300+27.04
8032	658071.0903	1234255.9179	PT	300+36.58
8033	657954.4284	1234378.5783	PI	302+05.86
8034	657874.1312	1234510.5947	PC	303+60.38
	657870.4235	1234516.6905	PI	303+67.52
8035	657868.5688	1234523.5801	PT	303+74.55
8036	657863.9932	1234540.5766	POE	303+92.16

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	22	72

4 SURVEY CONTROL DETAILS

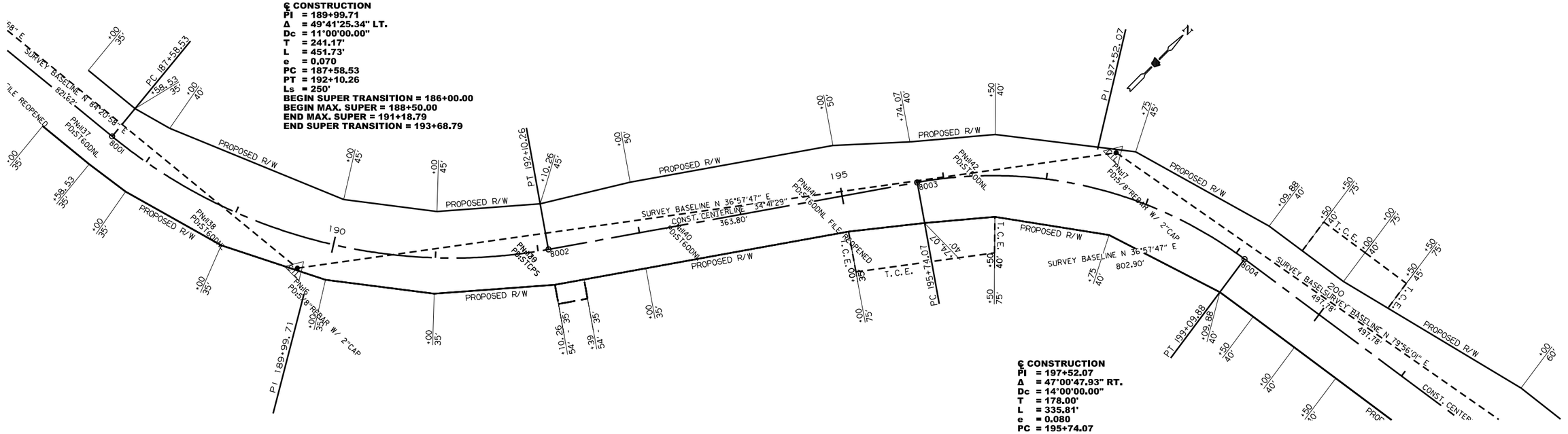
STA. 186+00.00
BEGIN JOB FA0314



STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING

50 0 50 100
SCALE IN FEET

℄ CONSTRUCTION
PI = 189+99.71
Δ = 49°41'25.34" LT.
Dc = 11°00'00.00"
T = 241.17'
L = 451.73'
e = 0.070
PC = 187+58.53
PT = 192+10.26
Ls = 250'
BEGIN SUPER TRANSITION = 186+00.00
BEGIN MAX. SUPER = 188+50.00
END MAX. SUPER = 191+18.79
END SUPER TRANSITION = 193+68.79



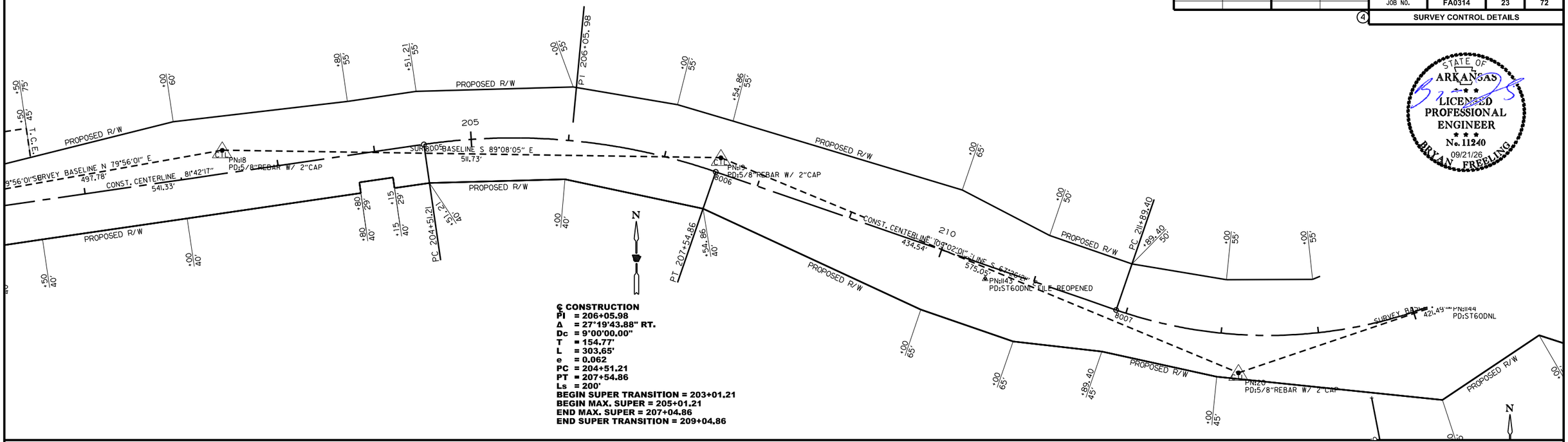
℄ CONSTRUCTION
PI = 197+52.07
Δ = 47°00'47.93" RT.
Dc = 14°00'00.00"
T = 178.00'
L = 335.81'
e = 0.080
PC = 195+74.07
PT = 199+09.88
Ls = 250'
BEGIN SUPER TRANSITION = 193+86.57
BEGIN MAX. SUPER = 196+36.57
END MAX. SUPER = 198+47.38
END SUPER TRANSITION = 200+97.38

SURVEY CONTROL DETAILS

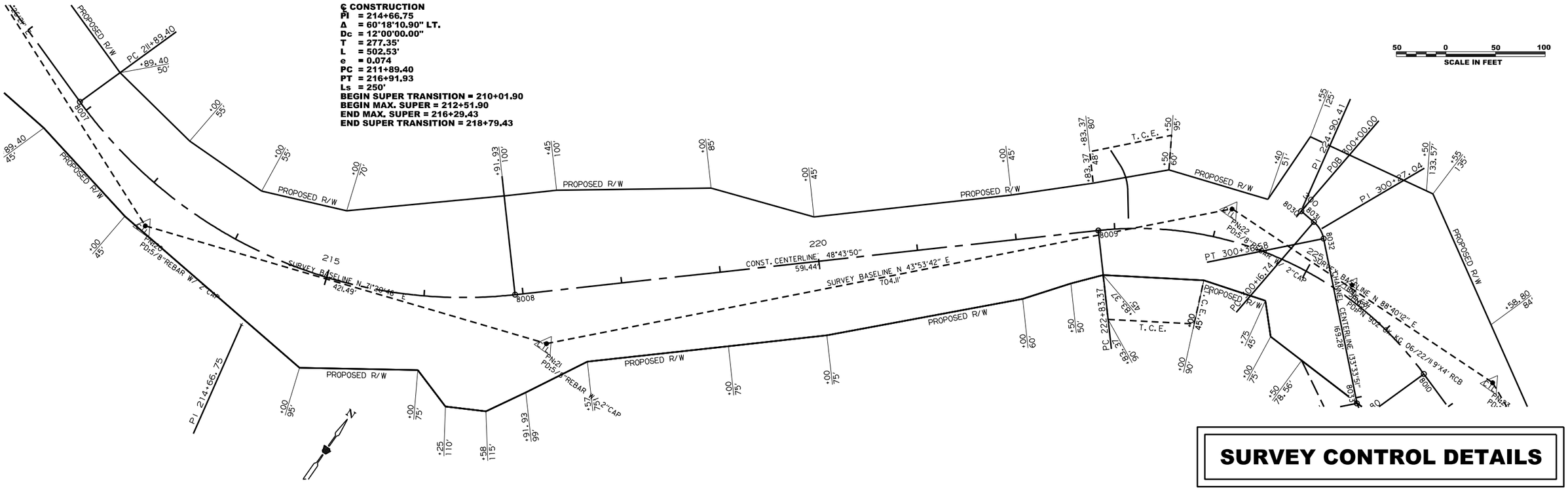
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	23	72

4 SURVEY CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING



℄ CONSTRUCTION
PI = 206+05.98
Δ = 27°19'43.88" RT.
Dc = 9°00'00.00"
T = 154.77'
L = 303.65'
e = 0.062
PC = 204+51.21
PT = 207+54.86
Ls = 200'
BEGIN SUPER TRANSITION = 203+01.21
BEGIN MAX. SUPER = 205+01.21
END MAX. SUPER = 207+04.86
END SUPER TRANSITION = 209+04.86



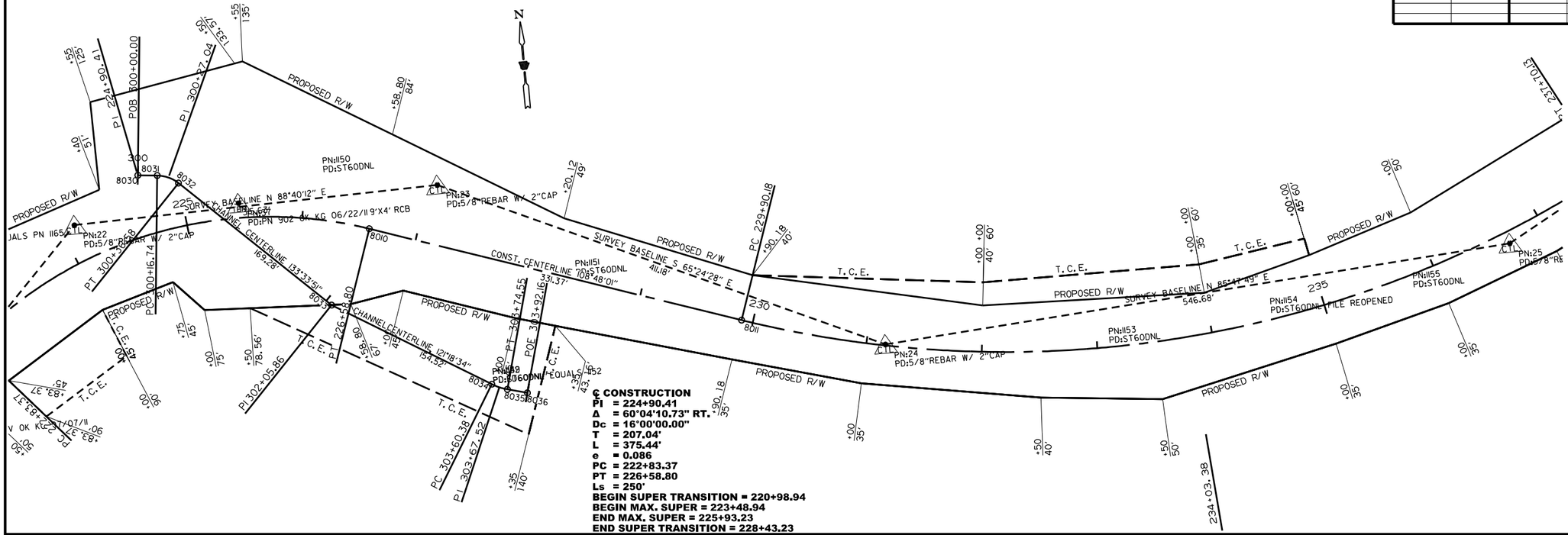
℄ CONSTRUCTION
PI = 214+66.75
Δ = 60°18'10.90" LT.
Dc = 12°00'00.00"
T = 277.35'
L = 502.53'
e = 0.074
PC = 211+89.40
PT = 216+91.93
Ls = 250'
BEGIN SUPER TRANSITION = 210+01.90
BEGIN MAX. SUPER = 212+51.90
END MAX. SUPER = 216+29.43
END SUPER TRANSITION = 218+79.43

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	24	72

4 SURVEY CONTROL DETAILS

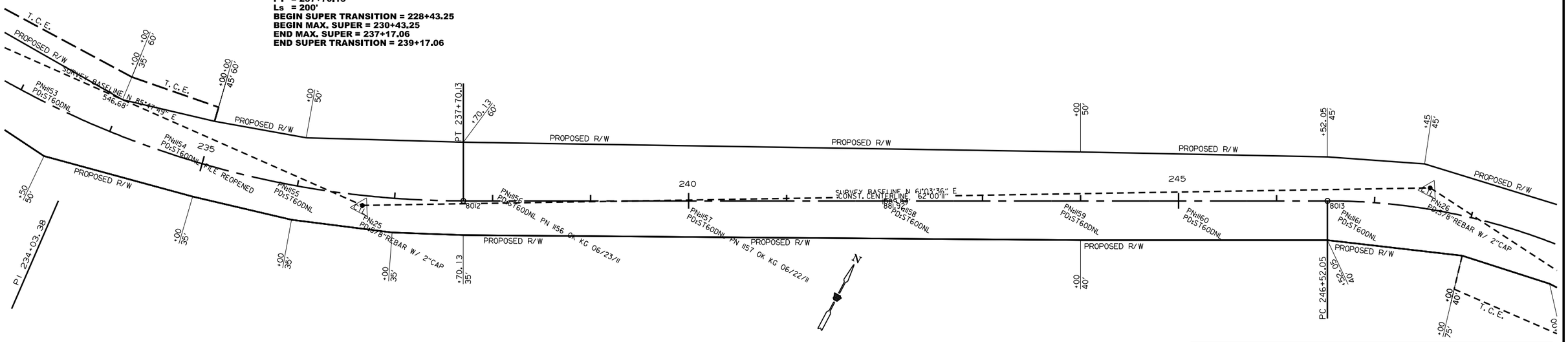
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11240
09/21/26
BRYAN FREELING



℄ CONSTRUCTION
PI = 224+90.41
Δ = 60°04'10.73" RT.
Dc = 16°00'00.00"
T = 207.04'
L = 375.44'
e = 0.086
PC = 222+83.37
PT = 226+58.80
Ls = 250'
BEGIN SUPER TRANSITION = 220+98.94
BEGIN MAX. SUPER = 223+48.94
END MAX. SUPER = 225+93.23
END SUPER TRANSITION = 228+43.23

50 0 50 100
SCALE IN FEET

℄ CONSTRUCTION
PI = 234+03.38
Δ = 46°47'49.29" LT.
Dc = 6°00'00.00"
T = 413.21'
L = 779.95'
e = 0.046
PC = 229+90.18
PT = 237+70.13
Ls = 200'
BEGIN SUPER TRANSITION = 228+43.25
BEGIN MAX. SUPER = 230+43.25
END MAX. SUPER = 237+17.06
END SUPER TRANSITION = 239+17.06

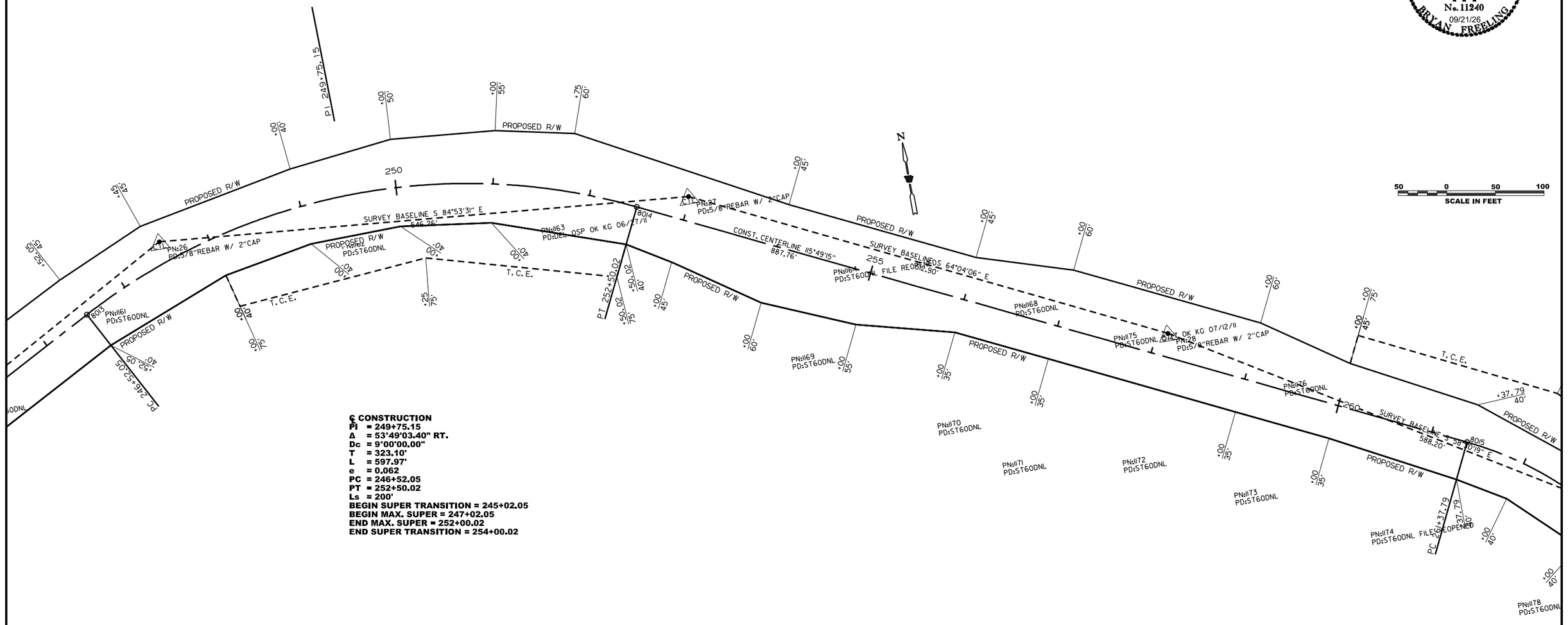


SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	25	72

4 SURVEY CONTROL DETAILS

STATE OF ARKANSAS
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No. 11240
09/21/26
BRYAN FREELING



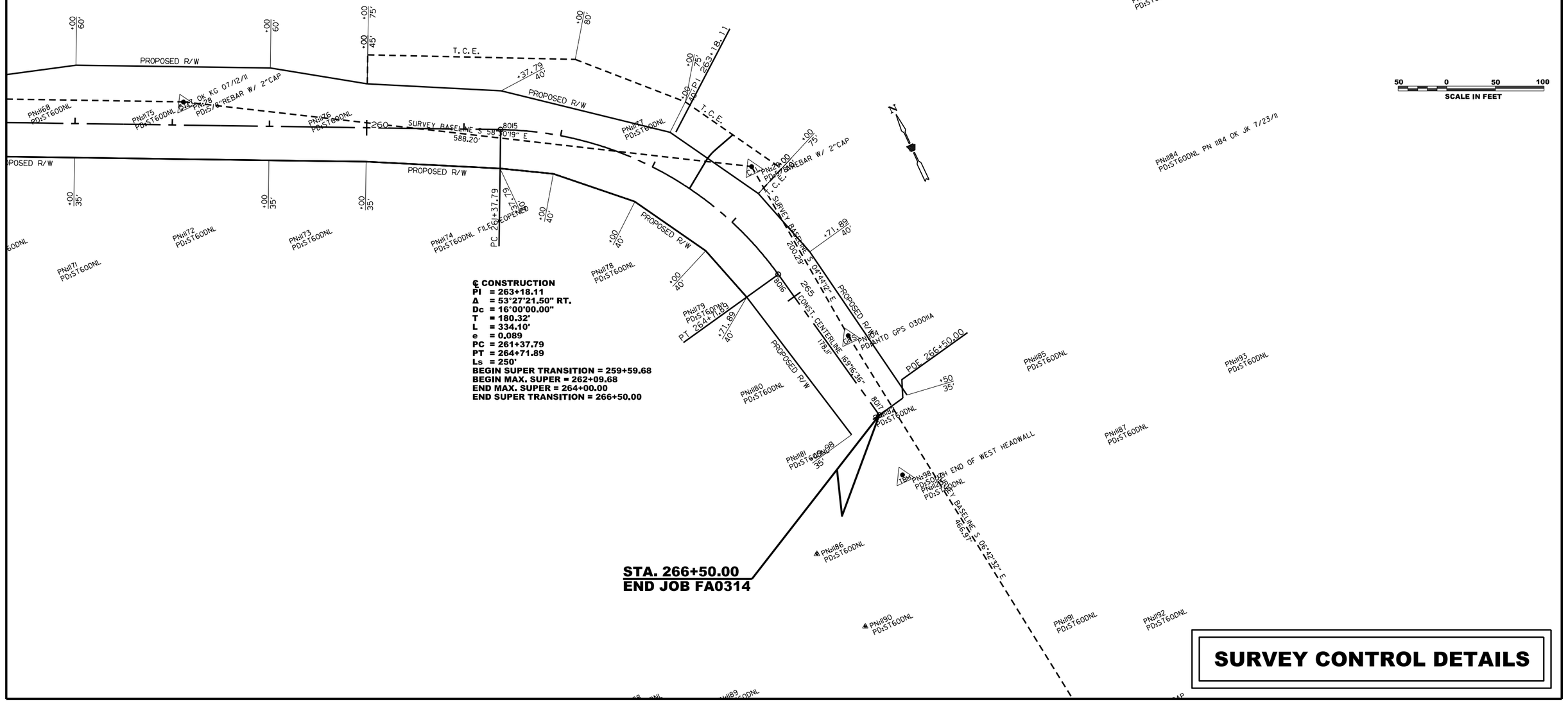
℄ CONSTRUCTION
PI = 249+75.15
Δ = 53°49'03.40" RT.
Dc = 9°00'00.00"
T = 323.10'
L = 597.97'
e = 0.062
PC = 246+52.05
PT = 252+50.02
Ls = 200'
BEGIN SUPER TRANSITION = 245+02.05
BEGIN MAX. SUPER = 247+02.05
END MAX. SUPER = 252+00.02
END SUPER TRANSITION = 254+00.02

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	26	72

4 SURVEY CONTROL DETAILS

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LICENSED PROFESSIONAL ENGINEER
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09/21/26
BRYAN FREELING



SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	27	72

4 PLAN AND PROFILE SHEETS

EARTHWORK

UNCLASSIFIED EXCAVATION (MAIN LANES)	31871	CU. YD.
UNCLASSIFIED EXCAVATION (OBLIT. OF RDWY.)	857	CU. YD.
UNCLASSIFIED EXCAVATION (CHANNEL)	1217	CU. YD.
COMPACTED EMBANKMENT (MAIN LANES)	15636	CU. YD.
COMPACTED EMBANKMENT (ADDITIONAL)	345	CU. YD.
COMPACTED EMBANKMENT (CHANNEL)	226	CU. YD.

CLEARING AND GRUBBING
STA. 187+00 - STA. 266+50 = 80 STATIONS

℄ CONSTRUCTION
PI = 189+99.71
Δ = 49°41'25.34" LT.
Dc = 11°00'00.00"
T = 241.17'
L = 451.73'
e = 0.070
PC = 187+58.53
PT = 192+10.26
Ls = 250'
BEGIN SUPER TRANSITION = 186+00.00
BEGIN MAX. SUPER = 188+50.00
END MAX. SUPER = 191+18.79
END SUPER TRANSITION = 193+68.79

STA. 193+87
1.8' X 1.2' X 35' CULVERT
CROSS DRAIN
REMOVE

STA. 193+85
W1-2R
ON LT.

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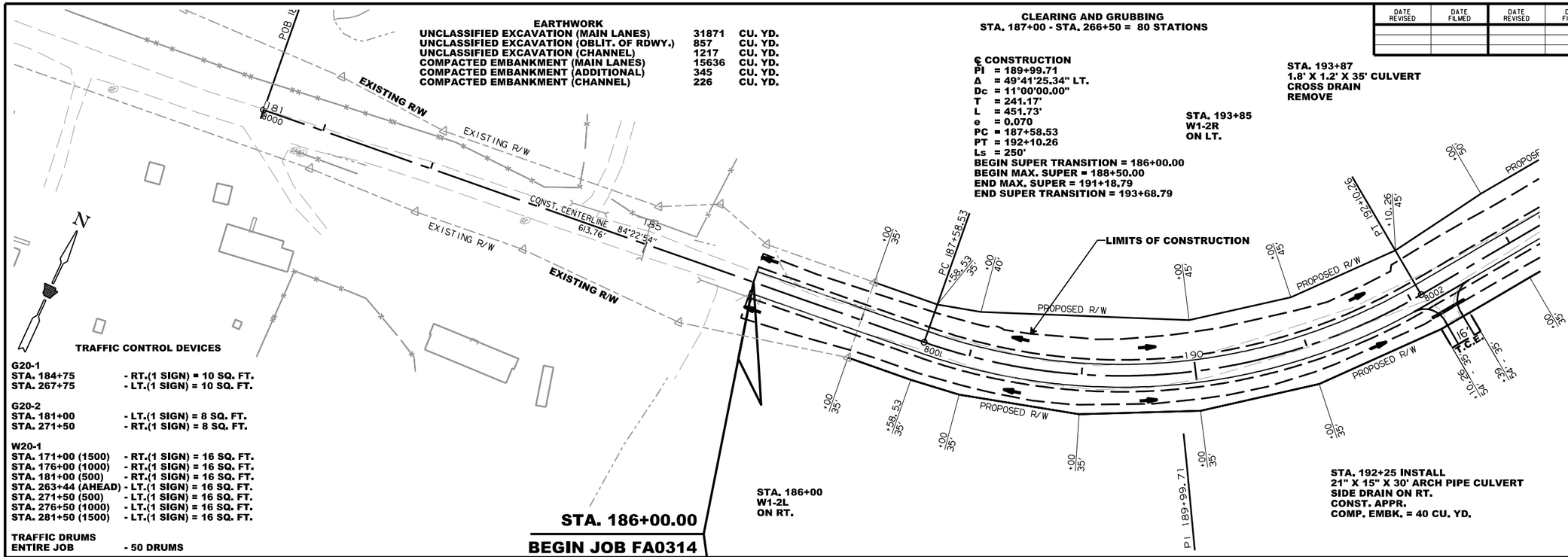
TRAFFIC CONTROL DEVICES

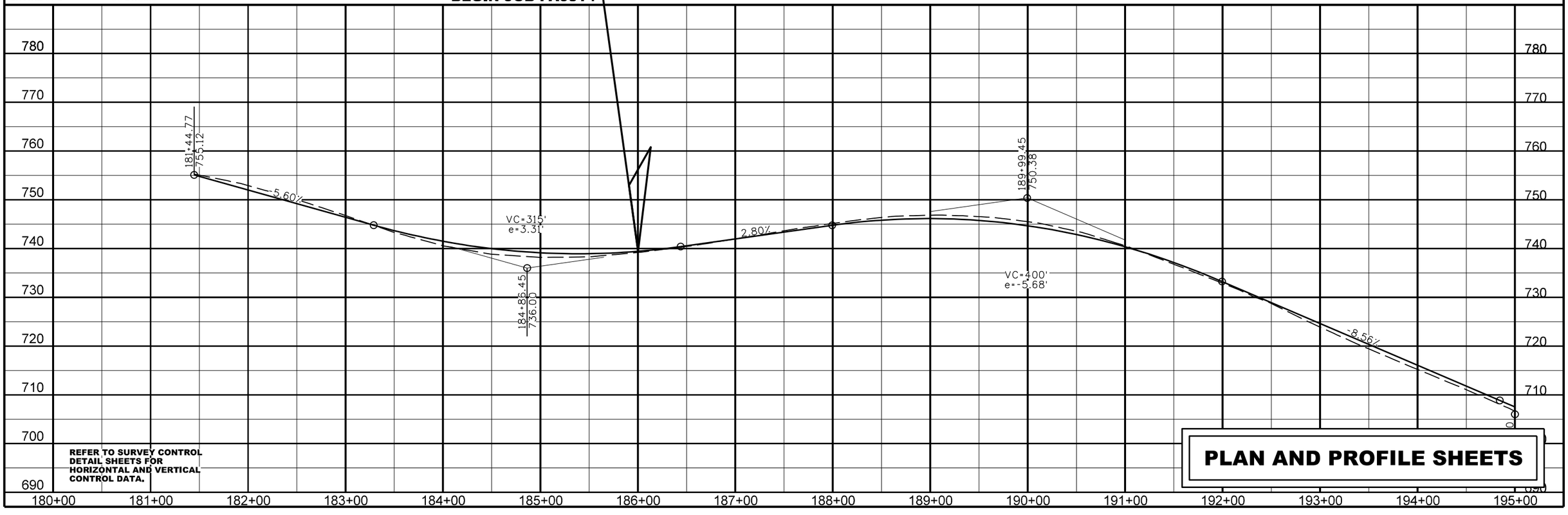
G20-1
STA. 184+75 - RT.(1 SIGN) = 10 SQ. FT.
STA. 267+75 - LT.(1 SIGN) = 10 SQ. FT.

G20-2
STA. 181+00 - LT.(1 SIGN) = 8 SQ. FT.
STA. 271+50 - RT.(1 SIGN) = 8 SQ. FT.

W20-1
STA. 171+00 (1500) - RT.(1 SIGN) = 16 SQ. FT.
STA. 176+00 (1000) - RT.(1 SIGN) = 16 SQ. FT.
STA. 181+00 (500) - RT.(1 SIGN) = 16 SQ. FT.
STA. 263+44 (AHEAD) - LT.(1 SIGN) = 16 SQ. FT.
STA. 271+50 (500) - LT.(1 SIGN) = 16 SQ. FT.
STA. 276+50 (1000) - LT.(1 SIGN) = 16 SQ. FT.
STA. 281+50 (1500) - LT.(1 SIGN) = 16 SQ. FT.

TRAFFIC DRUMS
ENTIRE JOB - 50 DRUMS



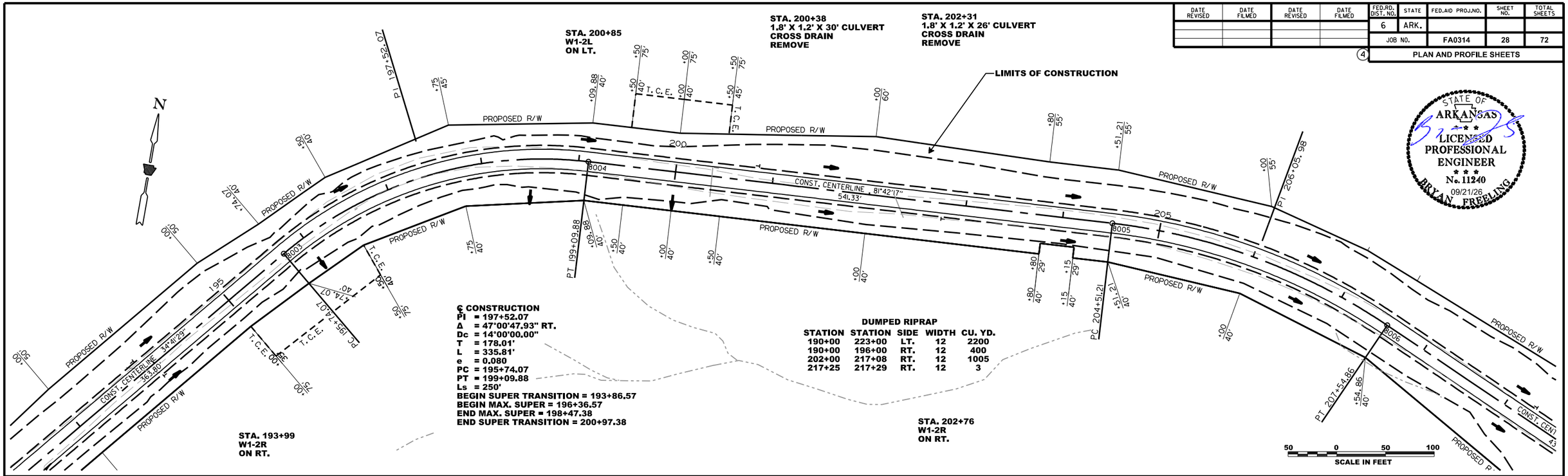


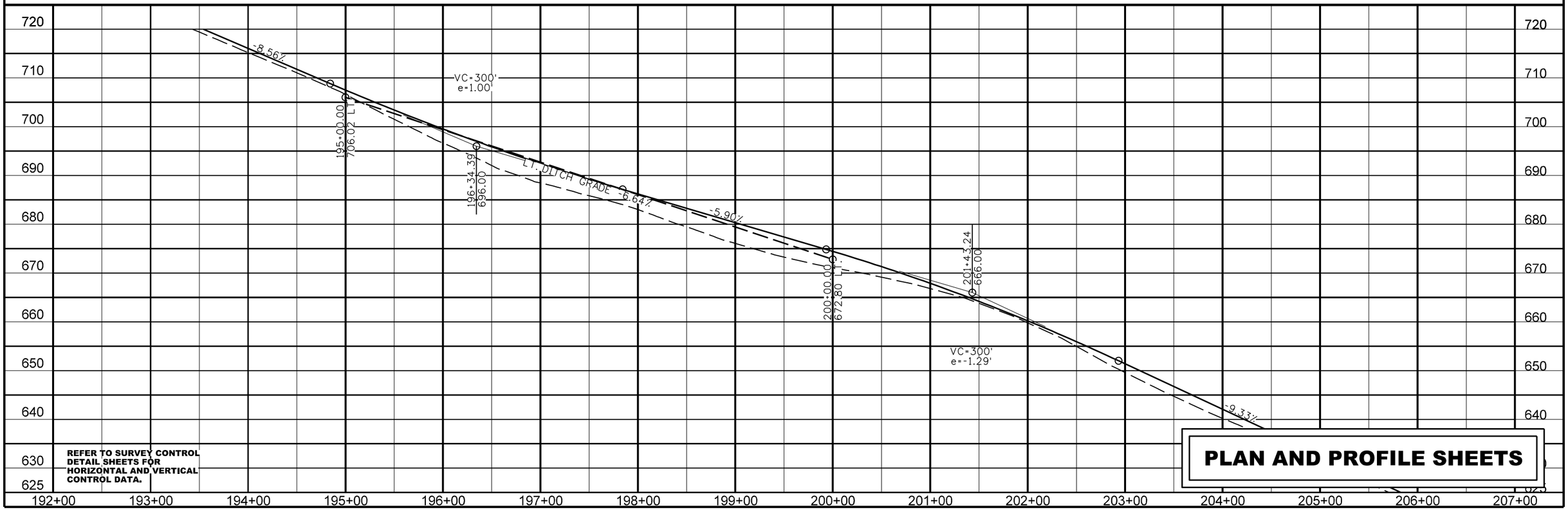
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

PLAN AND PROFILE SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	28	72

4 PLAN AND PROFILE SHEETS





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

PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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09/21/26
BRYAN FREELING

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.		FA0314	29	72

4 PLAN AND PROFILE SHEETS

PROPOSED R/W

PI 206+05.98

205

8005

8006

CONST. CENTERLINE 109°02'01"
434.54'

210

8007

PC 204+51.21

PT 207+54.86

PROPOSED R/W

Ç CONSTRUCTION
PI = 206+05.98
Δ = 27°19'43.88" RT.
Dc = 9°00'00.00"
T = 154.77'
L = 303.65'
e = 0.062
PC = 204+51.21
PT = 207+54.86
Ls= 200'
BEGIN SUPER TRANSITION = 203+01.21
BEGIN MAX. SUPER = 205+01.21
END MAX. SUPER = 207+04.86
END SUPER TRANSITION = 209+04.86

STA. 209+30
W1-2L
ON LT.

LIMITS OF CONSTRUCTION

STA. 210+10
15" X 35' CULVERT
CROSS DRAIN
REMOVE

Ç CONSTRUCTION
PI = 214+66.75
Δ = 60°18'10.90" LT.
Dc = 12°00'00.00"
T = 277.35'
L = 502.53'
e = 0.074
PC = 211+89.40
PT = 216+91.93
Ls = 250'
BEGIN SUPER TRANSITION = 210+01.90
BEGIN MAX. SUPER = 212+51.90
END MAX. SUPER = 216+29.43
END SUPER TRANSITION = 218+79.43

PC 211+89.40

215

8008

SPRING

PROPOSED P

PROPOSED R/W

STA. 210+14
W1-2L
ON RT.

DUMPED RIPRAP

STATION	STATION	SIDE	WIDTH	CU. YD.
190+00	223+00	LT.	12	2200
190+00	196+00	RT.	12	400
202+00	217+08	RT.	12	1005
217+25	217+29	RT.	12	3

STA. 213+22
18" X 34' CULVERT
CROSS DRAIN
REMOVE

PI 214+66.75

STA. 216+00 - STA. 221+00
CONSTRUCT
SPRING PULLOUT
ON RT.

STA. 217+18 INSTALL
DOUBLE 24" X 28' PIPE CULVERT
SIDE DRAIN ON RT.
CONST. APPR.
COMP. EMBK. = 45 CU. YD.

OBLITERATION OF EXISTING ROADWAY
STA. 212+59 TO STA. 214+16 ON RT. = 30 CU. YD.

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50 0 50 100
SCALE IN FEET

635 630 620 610 600 590 580 570 560 550 540

-9.33%

VC=300'
e=0.11'

211+08.01
576.00

212+00.00
566.79 R.

RT. DITCH GRADE

-9.04%

-8.91%

VC=300'
e=1.53'

205+00 206+00 207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00

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

PLAN AND PROFILE SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	30	72
				4	PLAN AND PROFILE SHEETS			

STA. 216+50
CONSTRUCT
REINFORCED CONCRETE
SPRING BOX

STA. 218+67
W1-2R
ON LT.

STA. 219+40
2.2' X 1.5' X 29' CULVERT
CROSS DRAIN
REMOVE

STA. 223+14 - INSTALL
DBL. 28" X 20" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR.
COMP. EMBK. = 140 CU. YD.

LIMITS OF CONSTRUCTION

REMOVAL AND RELOCATION OF SIGN
STA. 221+70 ON LT. = 1 EACH

STA. 221+08
W1-2R
ON RT.

STA. 225+77
OM-3L
ON RT.

STA. 225+43
OM-3R
ON RT.

STA. 224+91
OM-3L
ON LT.

STA. 225+21
OM-3R
ON LT.

STA. 228+34
W1-2L
ON LT.

STA. 228+15
W1-2L
ON RT.

CHANNEL BOTTOM WIDTH

LIMITS OF CHANNEL CHANGE

STA. 216+00 - STA. 221+00
CONSTRUCT
SPRING PULLOUT
ON RT.

NOTE: CAUTION SHOULD BE USED AROUND THE SPRING LOCATED AT STA. 217+18 ON RT. TO MINIMIZE DISTURBANCE TO THE SPRING.

OBLITERATION OF EXISTING ROADWAY
STA. 217+87 TO STA. 219+55 ON RT. = 40 CU. YD.

℄ CONSTRUCTION
PI = 224+90.41
Δ = 60°04'10.73" RT.
D = 16°00'00.00"
T = 207.04'
L = 375.44'
e = 0.086
PC = 222+83.37
PT = 226+58.80
Ls = 250'
BEGIN SUPER TRANSITION = 220+98.94
BEGIN MAX. SUPER = 223+48.94
END MAX. SUPER = 225+93.23
END SUPER TRANSITION = 228+43.23

STA. 225+41 IN PLACE
8' X 4' X 44' R.C. BOX CULVERT
30° RT. FORWARD SKEW
REMOVE

STA. 225+32 CONSTRUCT
DBL. 9' X 6' X 82'
THREE-SIDED CAST-IN-PLACE CULVERT
ON 45° RT. FWD. SKEW
WITH 3:1 WINGS LT. AND RT.
TOTAL SPAN = 28'-3 3/4"
Q25= 860 CFS D.A. = 1.14 SQ. MI.

STA. 223+14 INSTALL
DBL. 28" X 20" X 46' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR.
COMP. EMBK. = 75 CU. YD.

STA. 227+88
15" X 12" x 36' CULVERT
CROSS DRAIN
REMOVE

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SCALE IN FEET 50 0 50 100

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

INLET = 480.00 FT.
OUTLET = 478.60 FT.

PLAN AND PROFILE SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	31	72

4 PLAN AND PROFILE SHEETS

℄ CONSTRUCTION
PI = 234+03.38
Δ = 46°47'49.29" LT.
D = 6°00'00.00"
T = 413.21'
L = 779.95'
e = 0.046
PC = 229+90.18
PT = 237+70.13
Ls = 200'
BEGIN SUPER TRANSITION = 228+43.25
BEGIN MAX. SUPER = 230+43.25
END MAX. SUPER = 237+17.06
END SUPER TRANSITION = 239+17.06

STA. 235+60
OM-3L & OM-3R
ON LT.

STA. 234+38
15" X 27' CULVERT
CROSS DRAIN
REMOVE

STA. 235+73
36" X 35' CULVERT
CROSS DRAIN
REMOVE

STA. 239+79
OM-3L & OM-3R
ON LT.

STA. 239+45
W1-2R
ON LT.

STA. 239+92
22" X 15" X 45' CULVERT
CROSS DRAIN
REMOVE

LIMITS OF CONSTRUCTION

LIMITS OF CONSTRUCTION

STA. 239+96
OM-3L & OM-3R
ON RT.

STA. 235+60
OM-3L & OM-3R
ON RT.

PROPOSED R/W
T.C.E.
CONST. CENTERLINE 62°00'11" 881.92'
PC 229+90.18
PI 234+03.38
PT 237+70.13

STA. 235+60 CONSTRUCT
44" X 27" ARCH PIPE CULVERT
CROSS DRAIN
D.A. = 32.8 AC, Q25 = 43.8 CFS
44" X 27" RCP(CL. IV)(TYPE 3 BEDDING) = 50 LIN. FT.
42" X 29" CMP OR PLASTIC(TYPE 2 BEDDING) = 56 LIN. FT.
FES ON LT. AND RT. = 2 EACH

STA. 239+89 CONSTRUCT
29" X 18" ARCH PIPE CULVERT
CROSS DRAIN
20° RT. FWD. SKEW
D.A. = 3.54 AC, Q25 = 18.4 CFS
29" X 18" RCP(CL. IV)(TYPE 3 BEDDING) = 44 LIN. FT.
28" X 20" CMP OR PLASTIC(TYPE 2 BEDDING) = 50 LIN. FT.
FES ON LT. AND RT. = 2 EACH

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50 0 50 100
SCALE IN FEET

VC=300'
e=0.24'
LT. DITCH GRADE -2.07%
-1.46%
LT. DITCH GRADE -2.06%
LT. DITCH GRADE 2.50%
LT. DITCH GRADE -2.12%
VC=700'
e=-1.35'
LT. DITCH GRADE 3.54%
LT. DITCH GRADE -3.03%
-3.00%
LT. DITCH GRADE -3.13%
VC=275'
e=2.14'
LT. DITCH GRADE 4.39%
LT. DITCH GRADE 0.00%

231+42.73 475.40 LT.
231+57.24 472.01 LT.
235+60.00 463.70 LT.
236+27.75 465.39 LT.
237+80.00 462.7 LT.
239+24.13 463.98
239+77.00 456.20 LT.
240+20.00 457.72 LT.
244+59.00 444.00 LT.
244+79.40 447.34
244+88.00 444.00 LT.

FL. INLET = 463.70 FT.
FL. OUTLET = 463.02 FT.

INLET = 456.20 FT.
OUTLET = 455.66 FT.

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

PLAN AND PROFILE SHEETS

500 490 480 470 460 450 440 430 420 410 405

230+00 231+00 232+00 233+00 234+00 235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	32	72
				4	PLAN AND PROFILE SHEETS			

STA. 244+70 CONSTRUCT
DBL. 42" PIPE CULVERT
CROSS DRAIN
D.A. = 35.1 AC, Q25 = 70.5 CFS
42" RCP(CL. V)(TYPE 3 BEDDING) = 80 LIN. FT.
42" CMP OR PLASTIC(TYPE 2 BEDDING) = 92 LIN. FT.
42" FES ON LT. AND RT. = 4 EACH

STA. 247+39 CONSTRUCT
30" PIPE CULVERT
CROSS DRAIN
10° LT. FWD. SKEW
D.A. = 23.8 AC, Q25 = 23.3 CFS
30" RCP(CL. IV)(TYPE 3 BEDDING) = 50 LIN. FT.
30" CMP OR PLASTIC(TYPE 2 BEDDING) = 56 LIN. FT.
30" FES ON LT. AND RT. = 2 EACH

STA. 247+42
OM-3L & OM-3R
ON LT.

STA. 247+41
24" X 36' CULVERT
CROSS DRAIN
REMOVE

STA. 244+70
OM-3L & OM-3R
ON LT.

STA. 244+70
18" X 37' CULVERT
CROSS DRAIN
REMOVE

STA. 244+70
OM-3L & OM-3R
ON LT.

PI 249+75.15

LIMITS OF CONSTRUCTION

STA. 254+25
W1-2L
ON LT.

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BRYAN FREELING

PROPOSED R/W

CONST. CENTERLINE 62°00'11" 881.92'

CONST. CENTERLINE 115°49'15" 887.76'

STA. 244+70
OM-3L & OM-3R
ON RT.

STA. 245+72
W1-2R
ON RT.

STA. 247+36
OM-3L & OM-3R
ON RT.

STA. 244+70
OM-3L & OM-3R
ON RT.

LIMITS OF CONSTRUCTION

℄ CONSTRUCTION
PI = 249+75.15
Δ = 53°49'03.40" RT.
D = 9°00'00.00"
T = 323.10'
L = 597.97'
e = 0.062
PC = 246+52.05
PT = 252+50.02
Ls = 200'
BEGIN SUPER TRANSITION = 245+02.05
BEGIN MAX. SUPER = 247+02.05
END MAX. SUPER = 252+00.02
END SUPER TRANSITION = 254+00.02

T.C.E.

SCALE IN FEET 50 0 50 100

240+20.00
457.72 LT.

LT. DITCH GRADE 3.54%

-3.00%

LT. DITCH GRADE -3.13%

VC=275'
e=2.14'

244+79.42
447.34

244+59.00
444.00 LT.

244+88.00
444.00 LT.

FL. INLET = 444.00 FT.
FL. OUTLET = 442.75 FT.

LT. DITCH GRADE 0.00%

LT. DITCH GRADE 4.39%

3.22%

246+97.66
453.20 LT.

FL. INLET = 451.65 FT.
FL. OUTLET = 448.60 FT.

249+87.20
463.70

VC=300'
e=-2.17'

-2.57%

LT. DITCH GRADE -4.00%

254+26.19
449.74 LT.

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

505 500 490 480 470 460 450 440 430 420 410

240+00 241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00 251+00 252+00 253+00 254+00 255+00

PLAN AND PROFILE SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST. NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		FA0314	33	72

4 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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BRYAN FREELING

STA. 255+64
18" X 28' CULVERT
CROSS DRAIN
REMOVE

STA. 255+53
OM-3L & OM-3R
ON LT.

STA. 260+01
36' CULVERT
CROSS DRAIN
REMOVE

STA. 259+94
OM-3L & OM-3R
ON LT.

STA. 262+55
OM-3L & OM-3R
ON LT.

STA. 262+77
28' CULVERT
CROSS DRAIN
REMOVE

STA. 263+25
R1-1
ON LT.
(CO. RD. 124)

STA. 262+55 CONSTRUCT
DBL. 30" PIPE CULVERT
CROSS DRAIN
D.A. = 62.0 AC, Q25 = 69.4 CFS
30" RCP(CL. V)(TYPE 3 BEDDING) = 88 LIN. FT.
30" CMP OR PLASTIC(TYPE 2 BEDDING) = 96 LIN. FT.
30" FES ON LT. AND RT. = 4 EACH

STA. 262+81 CONST. APPR. ON LT.
COMP. EMBK. = 20 CU. YD.

STA. 263+44 INSTALL
28" X 20" X 44' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR.
COMP. EMBK. = 25 CU. YD.

REMOVAL AND RELOCATION OF SIGN
STA. 263+65 ON LT. = 1 EACH

SPECIAL FLOOD HAZARD LIMITS

50' TRANSITION

STA. 266+47
W1-2L
ON LT.

LIMITS OF CONSTRUCTION

STA. 255+58 CONSTRUCT
29" X 18" ARCH PIPE CULVERT
CROSS DRAIN
15° RT. FWD. SKEW
D.A. = 6.41 AC, Q25 = 11.3 CFS
29" X 18" RCP(CL. IV)(TYPE 3 BEDDING) = 44 LIN. FT.
28" X 20" CMP OR PLASTIC(TYPE 2 BEDDING) = 50 LIN. FT.
FES ON LT. AND RT. = 2 EACH

STA. 255+63
OM-3L & OM-3R
ON RT.

STA. 259+99 CONSTRUCT
29" X 18" ARCH PIPE CULVERT
CROSS DRAIN
15° RT. FWD. SKEW
D.A. = 6.34 AC, Q25 = 9.2 CFS
29" X 18" RCP(CL. IV)(TYPE 3 BEDDING) = 50 LIN. FT.
28" X 20" CMP OR PLASTIC(TYPE 2 BEDDING) = 56 LIN. FT.
FES ON LT. AND RT. = 2 EACH

STA. 260+03
OM-3L & OM-3R
ON RT.

STA. 262+55
OM-3L & OM-3R
ON RT.

℄ CONSTRUCTION
PI = 263+18.11
Δ = 53°27'21.50" RT.
D = 16°00'00.00"
T = 180.32'
L = 334.10'
e = 0.086
PC = 261+37.79
PT = 264+71.89
Ls = 250'
BEGIN SUPER TRANSITION = 259+59.68
BEGIN MAX. SUPER = 262+09.68
END MAX. SUPER = 264+00.00
END SUPER TRANSITION = 266+50.00

STA. 265+20
REMOVAL AND DISPOSAL
OF GATE ON RT. = 1 EACH

STA. 265+20 INSTALL
20' GATE ON RT. = 1 EACH

STA. 265+25
W8-3
ON RT.

STA. 259+63
W1-2R
ON RT.

REMOVAL AND DISPOSAL OF FENCE
STA. 254+83 - STA. 259+12 RT. = 471'
STA. 263+01 - STA. 265+10 RT. = 213'
STA. 263+69 - STA. 266+50 LT. = 292'
STA. 265+30 - STA. 266+50 RT. = 255'

WIRE FENCE (TYPE D)
STA. 255+03 - STA. 259+12 RT. = 411'
STA. 263+01 - STA. 265+10 RT. = 190'
STA. 263+69 - STA. 266+50 LT. = 302'
STA. 265+30 - STA. 266+50 RT. = 128'

SCALE IN FEET: 50 0 50 100

STA. 266+50.00
END JOB FA0314

FL. INLET = 444.69 FT.
FL. OUTLET = 443.66 FT.

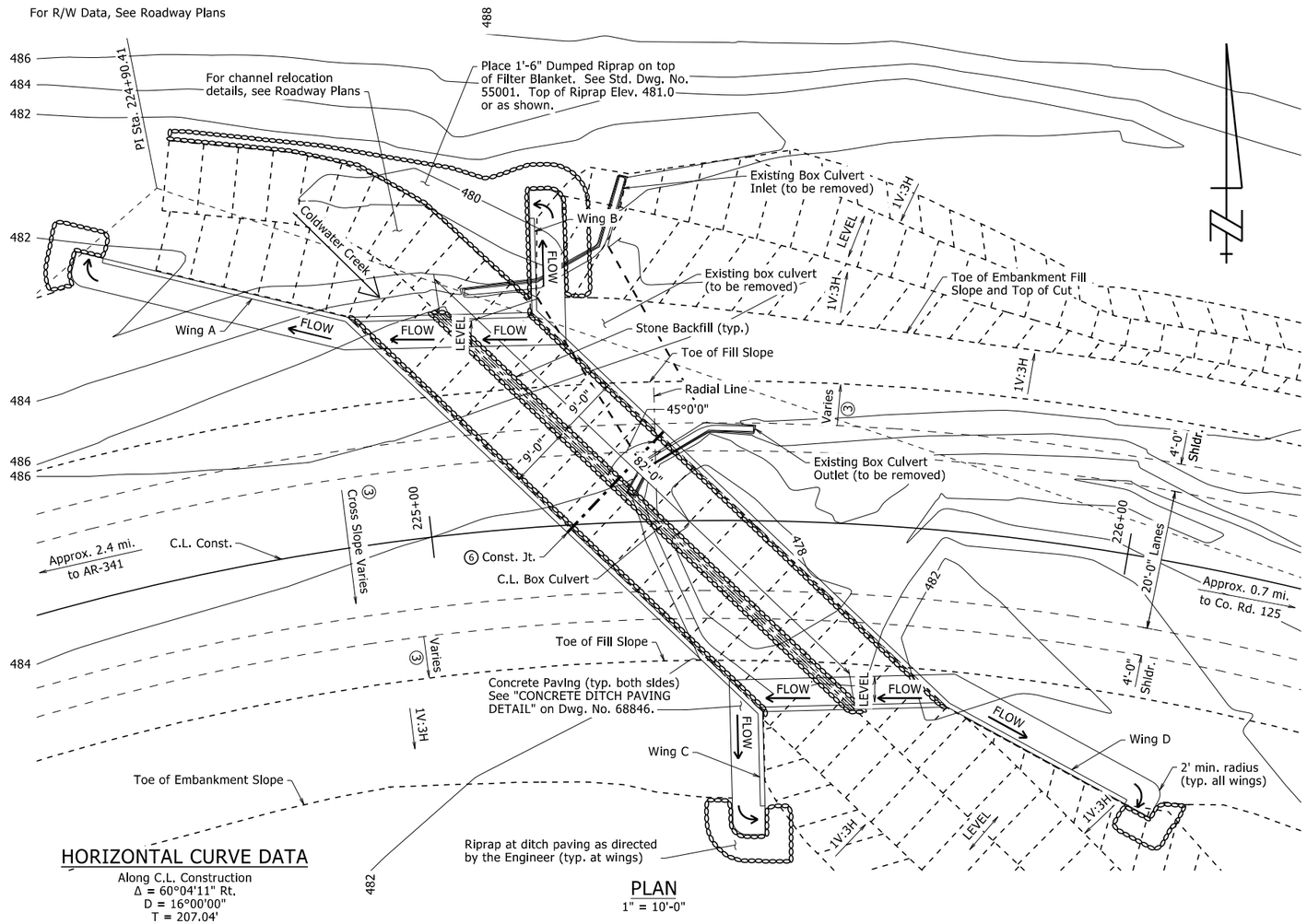
FL. INLET = 426.33 FT.
FL. OUTLET = 426.17 FT.

FL. INLET = 416.00 FT.
FL. OUTLET = 414.90 FT.

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

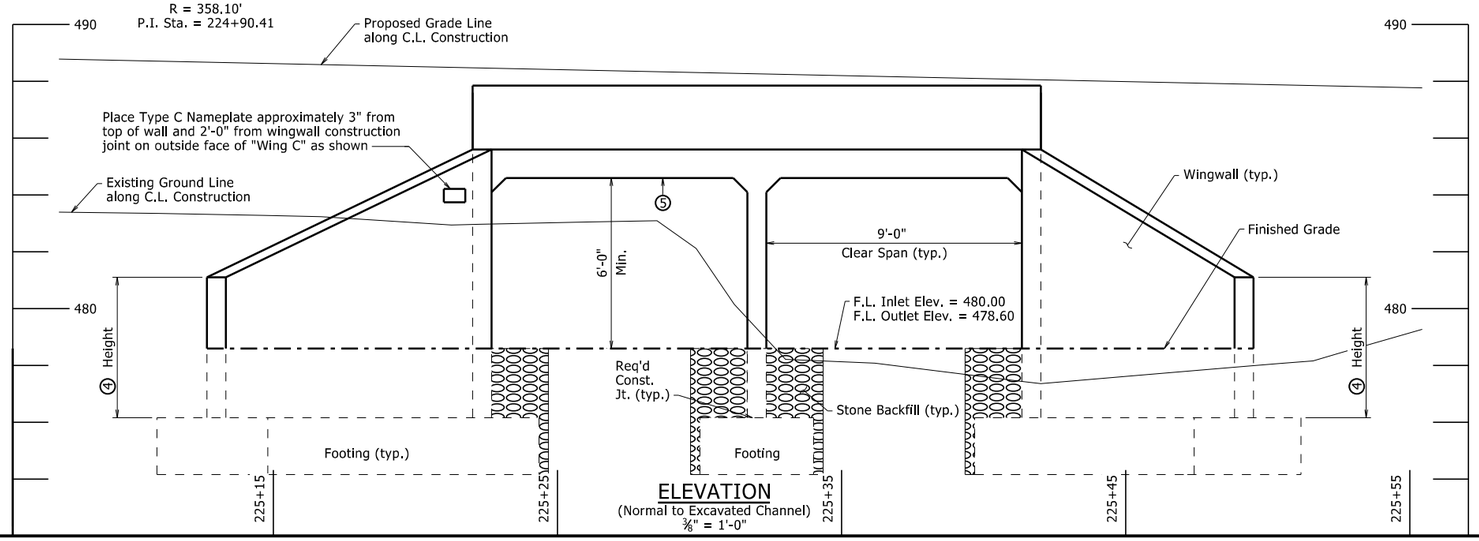
PLAN AND PROFILE SHEETS

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	34	72
		04954 - LAYOUT - 68845				



HORIZONTAL CURVE DATA

Along C.L. Construction
Δ = 60°04'11" Rt.
D = 16°00'00"
T = 207.04'
L = 375.44'
R = 358.10'
P.I. Sta. = 224+90.41



GENERAL NOTES:

BENCHMARK: Vertical Control data are shown on the Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Ninth Edition (2020).

LIVE LOADING: HL-93

All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have ¾" chamfers.

Reinforcing Steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

Membrane Waterproofing shall conform to the requirements of Section 815. Membrane Waterproofing shall be Type C and as directed by the Engineer applied to all construction joints in the top slab and the sidewalls of R.C. culvert and to the construction joint between wingwalls and R.C. culvert walls. Membrane Waterproofing will not be paid for directly, but shall be considered subsidiary to the item "Class S Concrete".

Weep Holes in culvert walls and in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above finished ground. There shall be a minimum of two (2) weep holes in each wingwall.

The barrel components of the culvert may be constructed using continuous pours. The Contractor may use multiple pours with transverse construction joints spaced a minimum of 50 feet apart unless superseded by site constraints as approved by the Engineer. Construction joints between footings and walls shall be made only where shown in the Plans. Joints shall be keyed and shall be normal to the centerline of barrel except as noted. Reinforcing shall be continuous through joints unless noted otherwise. All longitudinal construction joints shall be submitted to the Engineer for approval.

FOOTINGS: Footings shall be keyed a minimum of 1'-0" into competent rock as determined in the field. The top of the footings shall be set 2' below the channel bottom as determined by the lowest channel elevation with the footprint of the footing. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings keyed into rock shall be poured directly against excavated surfaces of rock. Excavations shall be backfilled and compacted to the channel flow line using stone backfill meeting the requirements of Section 207, except the gradation should ensure that the rock size (D_{50}) is equal to or greater than 9". The maximum piece size shall not be greater than 18". The stone may be dumped into the excavation limits without regard to depth of layer. This work and materials are considered subsidiary to various bid items.

REMOVAL AND SALVAGE: The Contractor shall remove existing culvert in accordance with Section 205. All material from existing structure shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Notes

SCHEDULE OF BRIDGE QUANTITIES

	ITEM 605	ITEM 801	ITEM SS & 802	ITEM SS & 804	ITEM 812	ITEM SS & 816	ITEM SS & 816
	CONCRETE DITCH PAVING (TYPE B)	EXCAVATION FOR STRUCTURES - BRIDGE	CLASS S CONCRETE - BRIDGE	REINFORCING STEEL - BRIDGE (GRADE 60)	② BRIDGE NAME PLATE (TYPE C)	FILTER BLANKET	DUMPED RIPRAP
UNIT	SQ. YD.	CU. YD.	CU. YD.	LB.	EACH	SQ. YD.	CU. YD.
	79	① 210	① 328.31	① 47,140	1	26	13

① Estimated quantities shown. Actual quantities will be determined in the field.

② Name Plate Title = COLDWATER CREEK

③ See "TYPICAL SECTION A-A" on Dwg. No. 68847 for additional information.

④ Heights based on bottom of wingwall elevation measured from 2'-0" below channel bottom. See "TABLE OF VARIABLES" on Dwg. No. 68851 for additional information. Wingwall dimensions shall be field verified by the Contractor prior to fabrication of cast-in-place wingwalls.

⑤ Total minimum culvert area shall be 108 square feet.
Min. Culvert Low Chord at Inlet = 486.00
Min. Culvert Low Chord at Outlet = 484.60

⑥ Stage 1 to be constructed after partial removal of existing culvert. For more information on the staged construction joint, see Roadway Notes and "STAGED CONSTRUCTION JOINT DETAIL" on Drawing No. 68846

SHEET 1 OF 2
LAYOUT OF THREE-SIDED CAST-IN-PLACE CULVERT
CO. RD. 73 OVER COLDWATER CREEK
HWY. 341 SOUTHEAST - STONE CO.
LINE (PHASE 2) (S)
BAXTER COUNTY

CO. RD. 73

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/22/25
CHARLES R. ELLIS

Ellis, Rick Digitally signed by Ellis, Rick DN: CN=Ellis, Rick, OU=Employees, OU=ARDOT, DC=com, DC=com Date: 2025.09.22 12:15:31 -05'00'

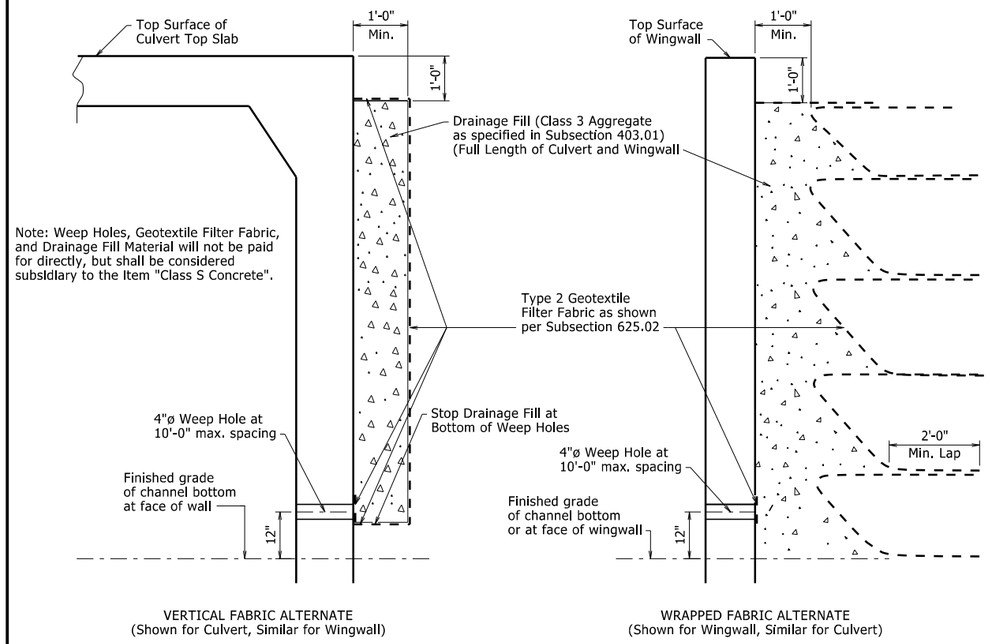
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CHECKED BY: DPT DATE: 7/5/2023
DESIGNED BY: BAB DATE: 5/2023
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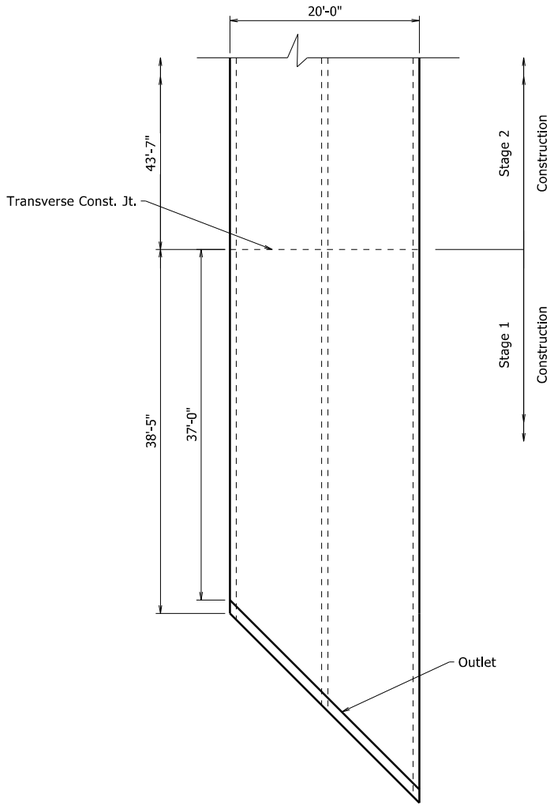
BRIDGE NO. 04954 DRAWING NO. 68845

PRINT DATE: 9/22/2025

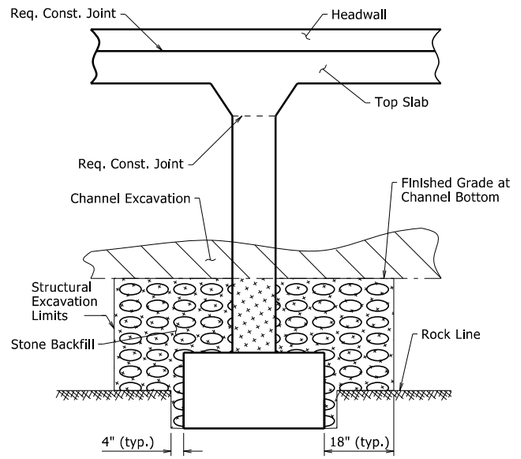
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	35	72
		04954 - LAYOUT - 68846				



WINGWALL & CULVERT DRAINAGE DETAIL



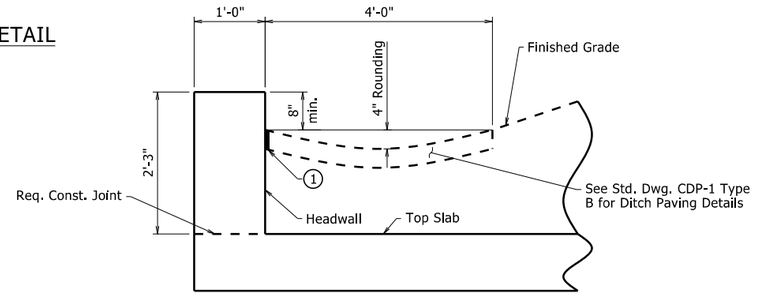
STAGED CONSTRUCTION JOINT DETAIL



LIMITS OF PAY FOR EXCAVATION

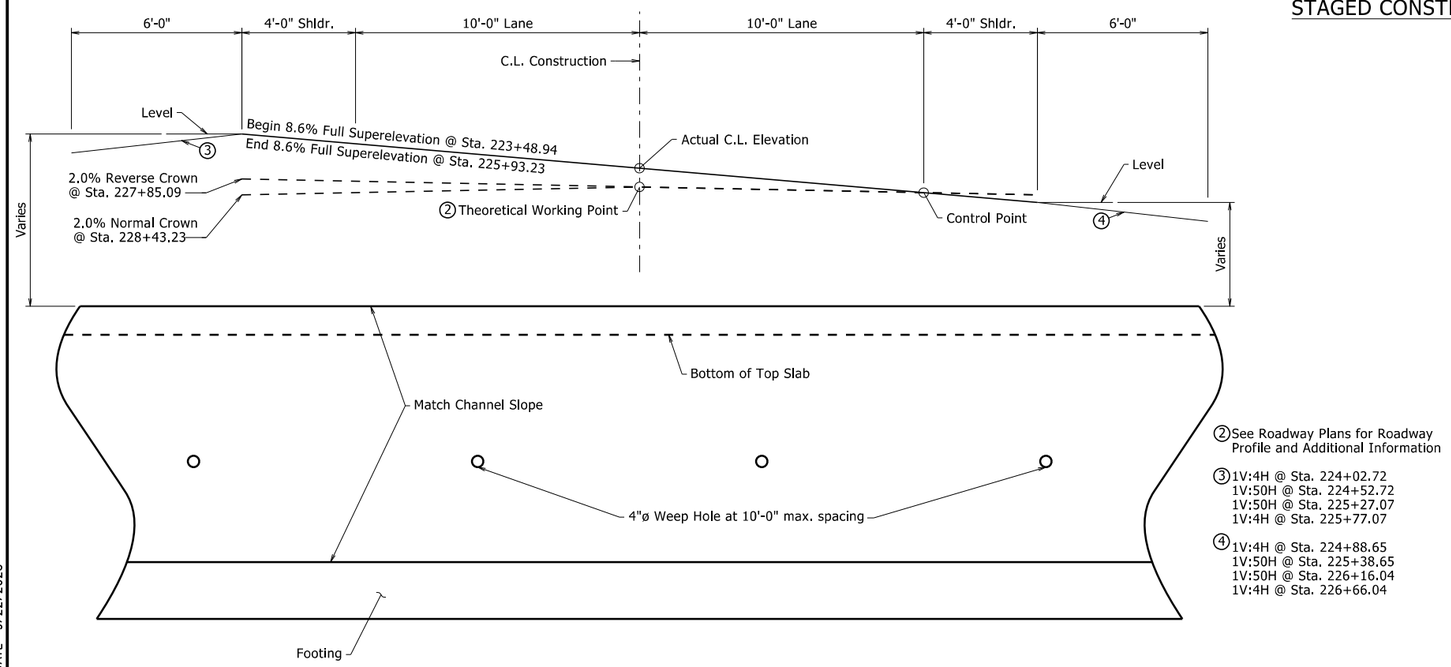
UNIT SHOWN
WINGWALLS SIMILAR

(1) ½" Preformed Joint Filler (AASHTO M153, Type 1) per Subsection 501.02(h)(1). Seal with ½" x 1" Type 3 or 4 Joint Sealer per Subsection 501.02(h)(2).



CONCRETE DITCH PAVING DETAIL

For the Headwall reinforcement, see Dwg. No. 68847



TYPICAL SECTION

Looking Ahead

(2) See Roadway Plans for Roadway Profile and Additional Information

(3) 1V:4H @ Sta. 224+02.72
1V:50H @ Sta. 224+52.72
1V:50H @ Sta. 225+27.07
1V:4H @ Sta. 225+77.07

(4) 1V:4H @ Sta. 224+88.65
1V:50H @ Sta. 225+38.65
1V:50H @ Sta. 226+16.04
1V:4H @ Sta. 226+66.04

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/22/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
LAYOUT OF THREE-SIDED CAST-IN-PLACE CULVERT
CO. RD. 73 OVER COLDWATER CREEK
HWY. 341 SOUTHEAST - STONE CO.
LINE (PHASE 2) (S)
BAXTER COUNTY

CO. RD. 73

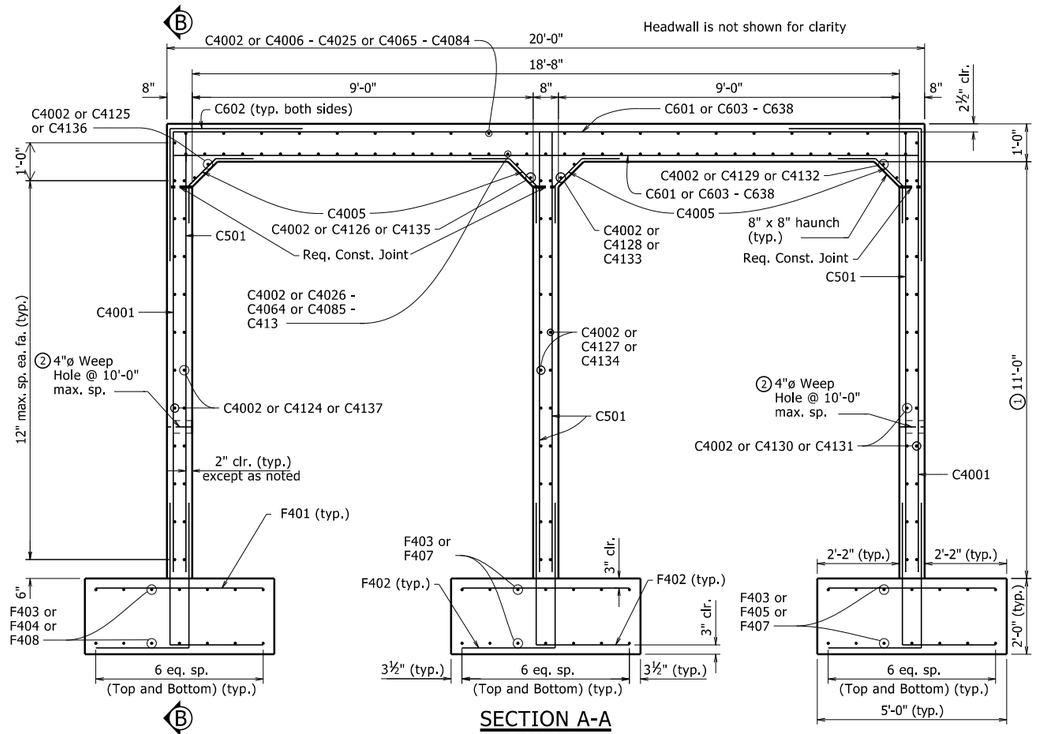
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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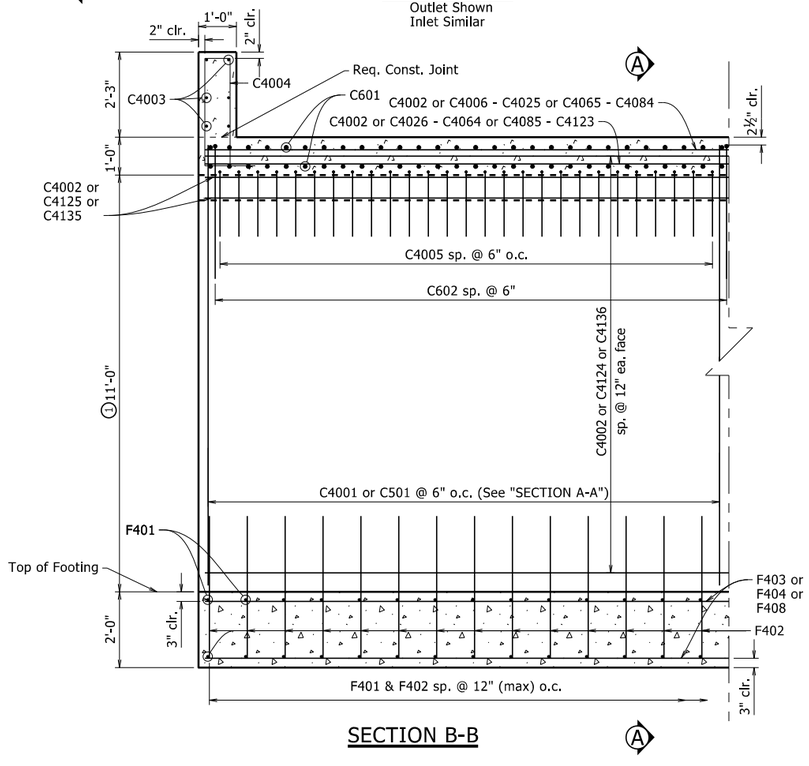
BRIDGE NO. 04954 DRAWING NO. 68846

PRINT DATE: 9/22/2025



SECTION A-A

Outlet Shown
Inlet Similar

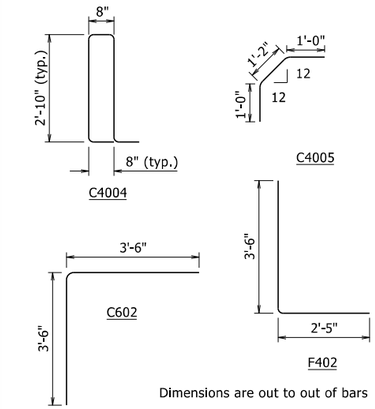


SECTION B-B

CULVERT BAR LIST

	MARK	NO. REQ'D	LENGTH	P.D.
3	C4001	322	11'-8"	Str.
3	C4002	135	35'-0"	Str.
	C4003	12	26'-11" to 27'-6"	Str.
	C4004	54	7'-3"	3"
	C4005	636	3'-2"	3"
	C4006 to C4025	1 ea.	6'-3" to 25'-10"	Str.
	C4026 to C4064	1 ea.	6'-3" to 25'-10"	Str.
	C4065 to C4084	1 ea.	23'-7" to 43'-1"	Str.
	C4085 to C4123	1 ea.	23'-7" to 43'-1"	Str.
	C4124	23	6'-6"	Str.
	C4125	2	7'-3"	Str.
	C4126	2	15'-7"	Str.
	C4127	22	16'-2"	Str.
	C4128	2	16'-11"	Str.
	C4129	2	25'-3"	Str.
	C4130	23	24'-7"	Str.
	C4131	23	23'-9"	Str.
	C4132	2	24'-6"	Str.
	C4133	2	32'-10"	Str.
	C4134	22	33'-5"	Str.
	C4135	2	34'-2"	Str.
	C4136	2	42'-6"	Str.
	C4137	23	41'-10"	Str.
	C501	653	11'-8"	Str.
3	C601	248	19-8"	Str.
	C602	316	6'-11"	4½"
	C603 - C638	4 ea.	2'-4" to 19'-4"	Str.
	F401	244	4'-6"	Str.
	F402	488	5'-10"	3"
	F403	56	33'-5"	Str.
	F404	14	43'-2"	Str.
	F405	14	25'-4"	Str.
	F406	14	27'-7"	Str.
	F407	14	17'-10"	Str.
	F408	14	9'-9"	Str.

BENDING DIAGRAM



Dimensions are out to out of bars

1. Height is estimated from field survey to where rock is assumed. Actual heights to be determined in the field.
2. For more information on the weep holes, see "WINGWALL & CULVERT DRAINAGE DETAIL" on Dwg. No. 68846
3. Bar Lengths and number of bars may need to be adjusted based on site conditions.

STATE OF ARKANSAS
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No. 9235
9/22/25
CHARLES R. ELLIS

BRIDGE ENGINEER

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	36	72
		04954 - Three-Sided Culvert - 68847				

SHEET 1 OF 6
DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT

ROUTE SEC.

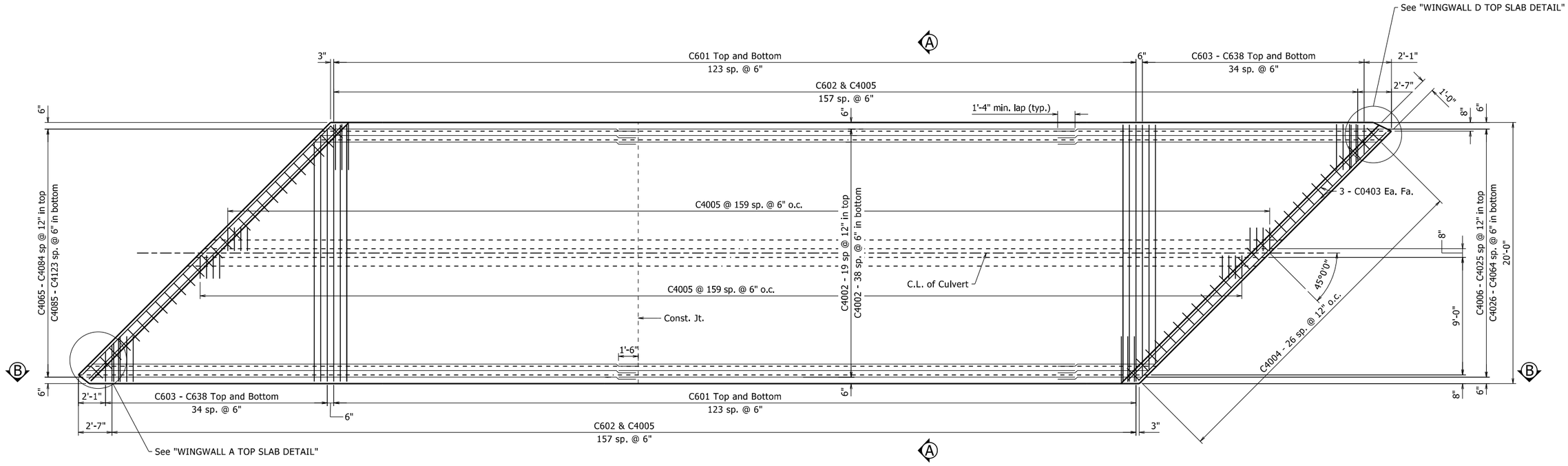
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: DPT DATE: 02/10/2025
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BRIDGE NO. 04954 DRAWING NO. 68847

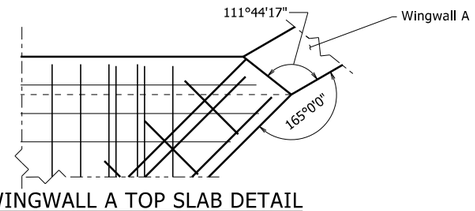
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		6	ARK.	FA0314	37	72
		04954 - Three-Sided Culvert - 68848				



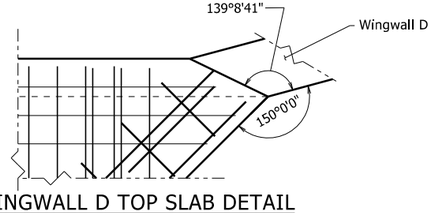
TOP SLAB REINFORCEMENT

For "SECTION A-A" and "SECTION B-B", see Dwg. No. 68847.



WINGWALL A TOP SLAB DETAIL

¾" = 1'-0"



WINGWALL D TOP SLAB DETAIL

¾" = 1'-0"

WINGWALL A TOP SLAB DETAIL depicts the variation of the top slab at the inlet
WINGWALL D TOP SLAB DETAIL depicts the variation of the top slab at the outlet

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BRIDGE ENGINEER

SHEET 2 OF 6
DETAILS OF THREE-SIDED
CAST-IN-PLACE CULVERT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

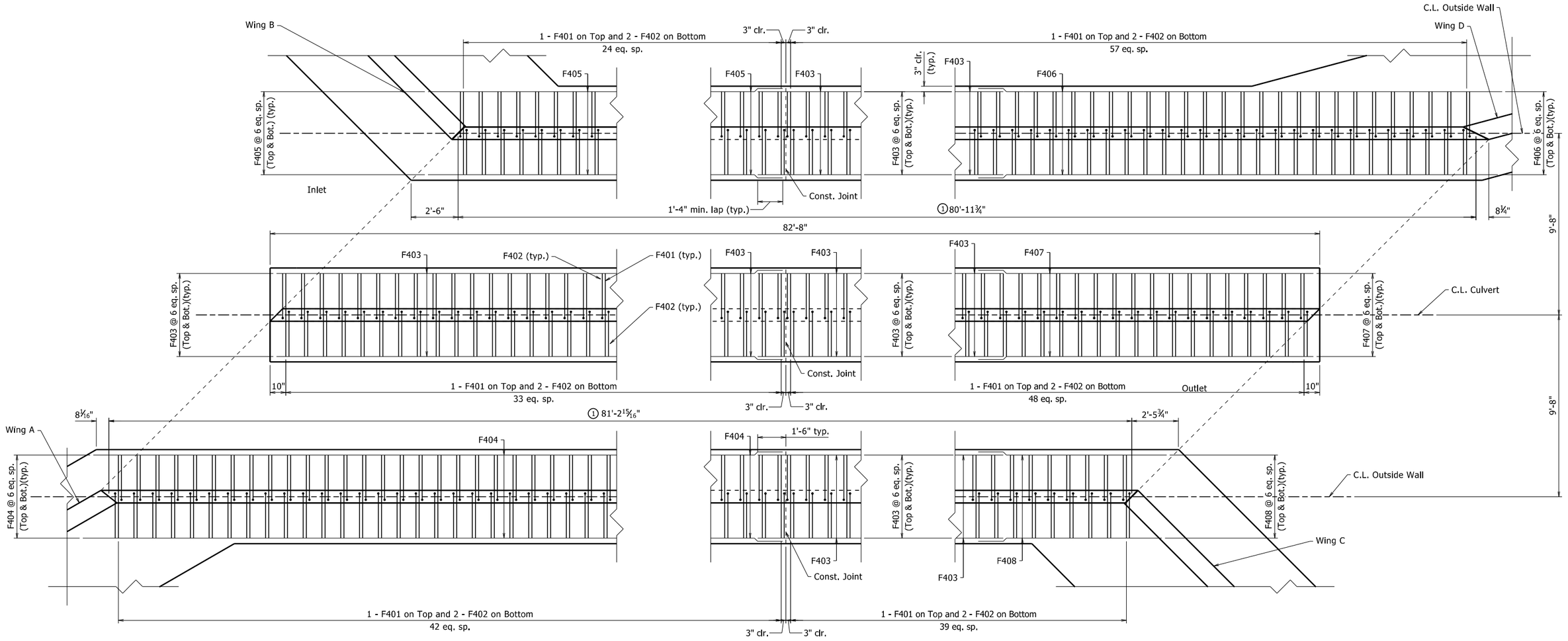
LITTLE ROCK, ARK.

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BRIDGE NO. 04954 DRAWING NO. 68848

PRINT DATE: 9/22/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	38	72
		04954 - Three-Sided Culvert - 68849				



FOOTING PLAN VIEW

General Notes:

F401 and F402 are tied together, but bar separation is shown for clarity.

See Dwg. No. 68847, "SECTION A-A", and "SECTION B-B" for more information.

① Measured along centerline of wall

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BRIDGE ENGINEER

SHEET 3 OF 6
DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT

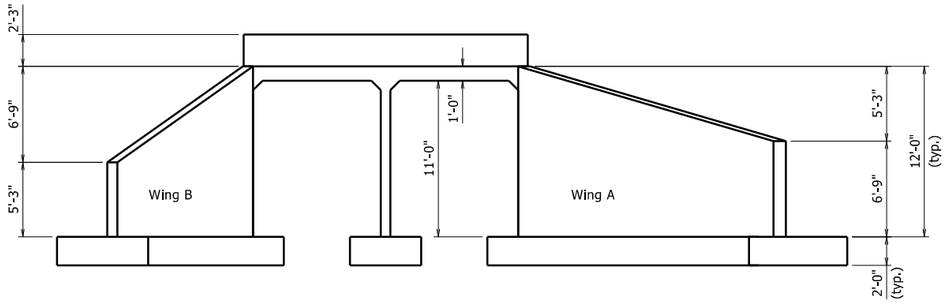
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ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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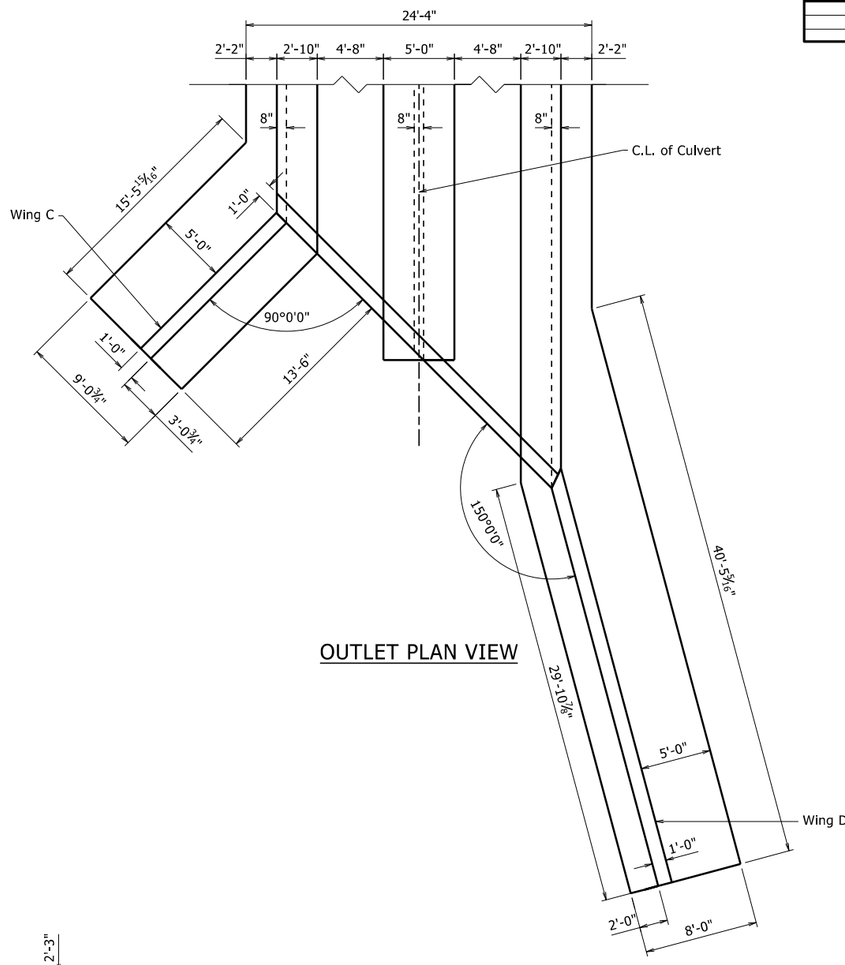
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PRINT DATE: 9/22/2025

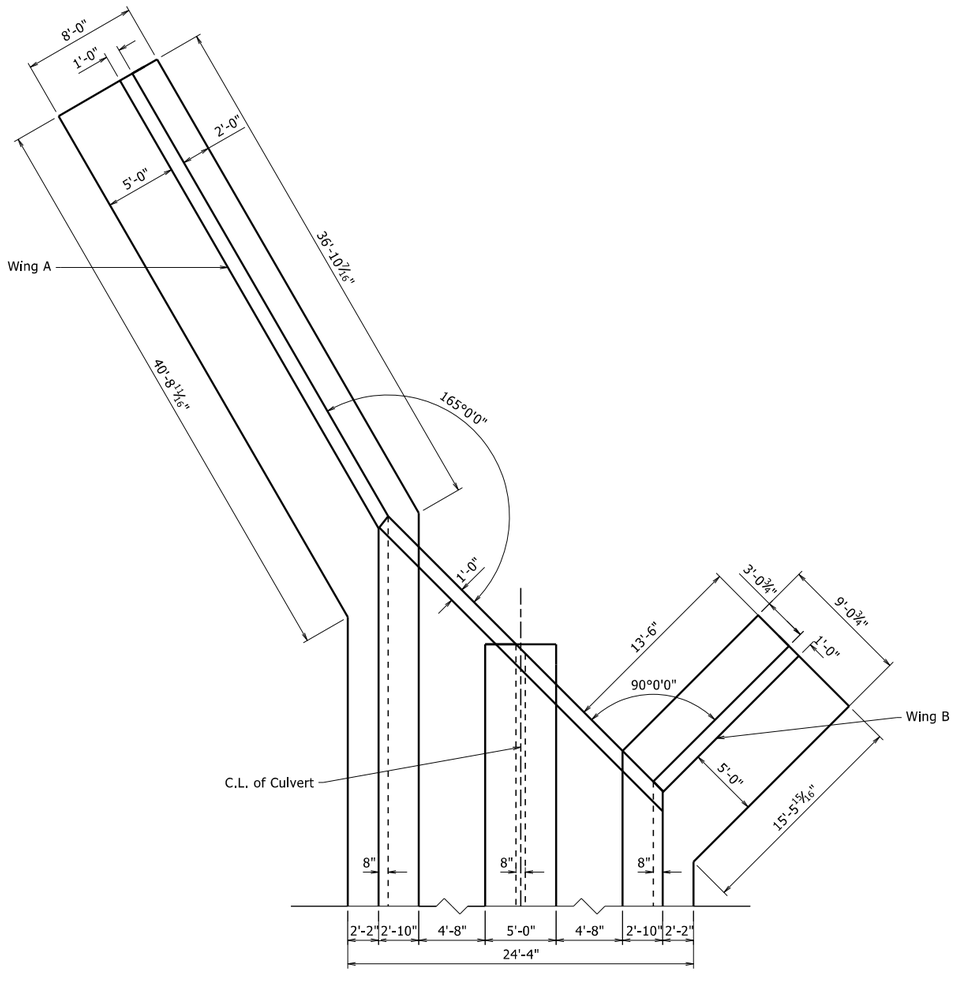
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		6	ARK.	FA0314	39	72
		04954 - Three-Sided Culvert - 68850				



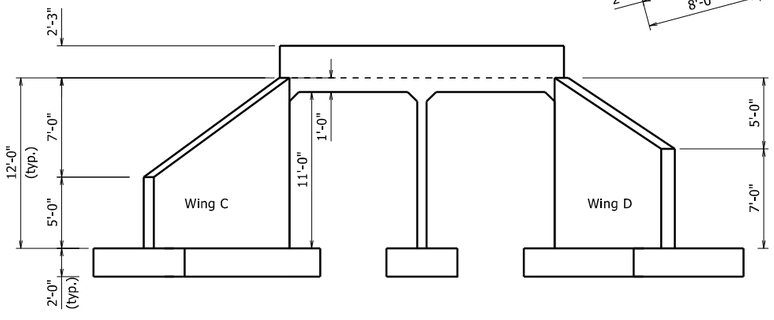
INLET ELEVATION



OUTLET PLAN VIEW



INLET PLAN VIEW



OUTLET ELEVATION

Height is estimated from field survey to where rock is assumed.
Actual heights to be determined in the field.

STATE OF ARKANSAS
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SHEET 4 OF 6
DETAILS OF THREE-SIDED
CAST-IN-PLACE CULVERT

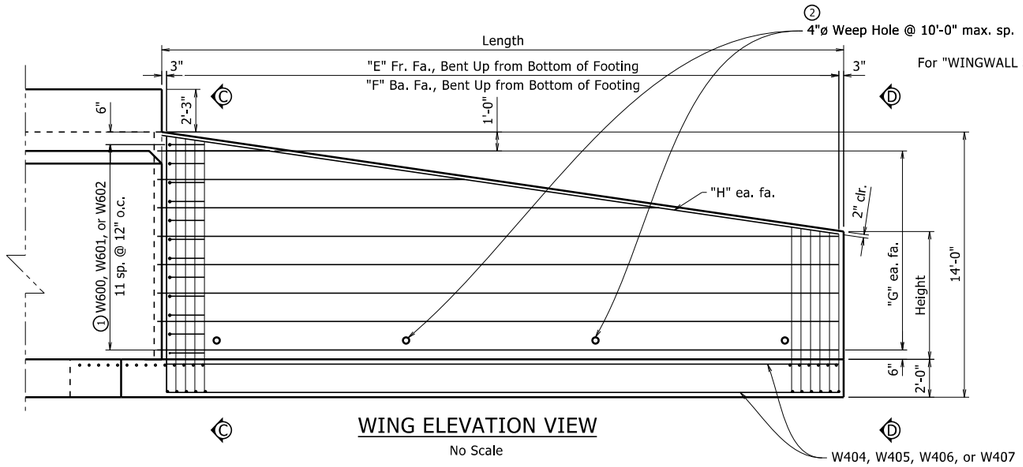
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ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: DPT DATE: 09/2024

BRIDGE NO. 04954 DRAWING NO. 68850

PRINT DATE: 9/22/2025

DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	40	72
		04954 - Three-Sided Culvert - 68851				

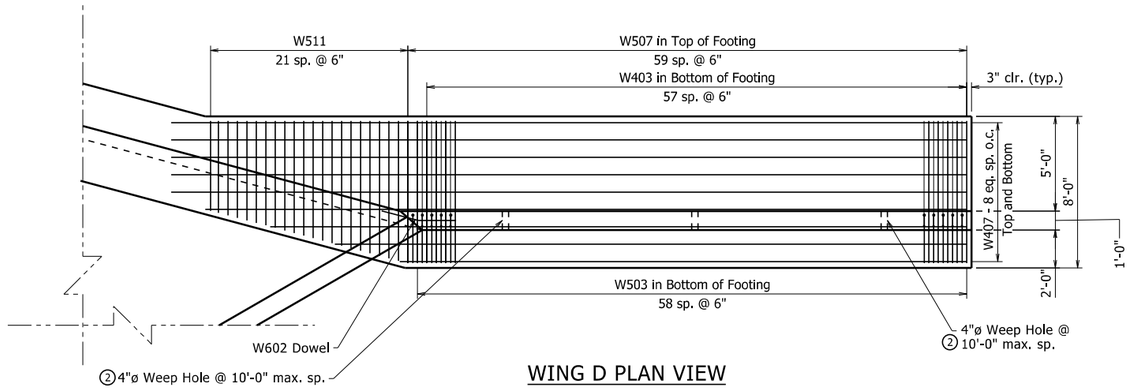


WING ELEVATION VIEW

No Scale

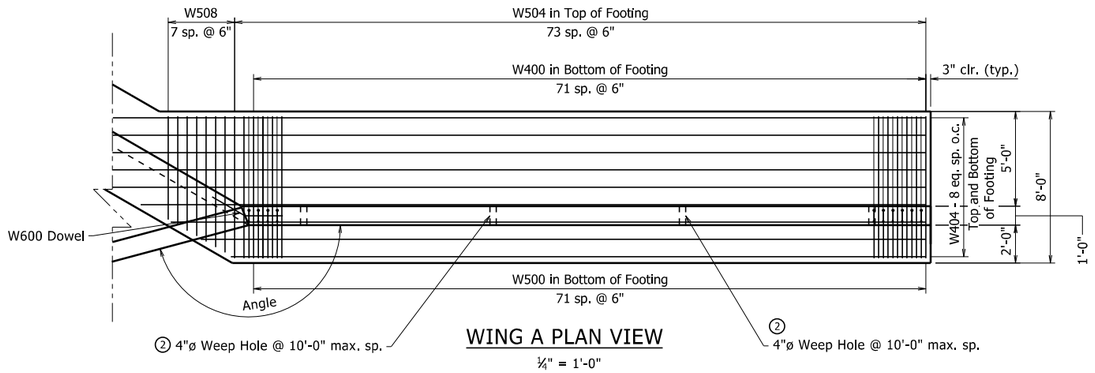
Height is estimated from field survey to where rock is assumed.
Actual heights to be determined in the field.

For "WINGWALL SECTION C-C" and "WINGWALL VIEW D-D", see Dwg. No. 68852.



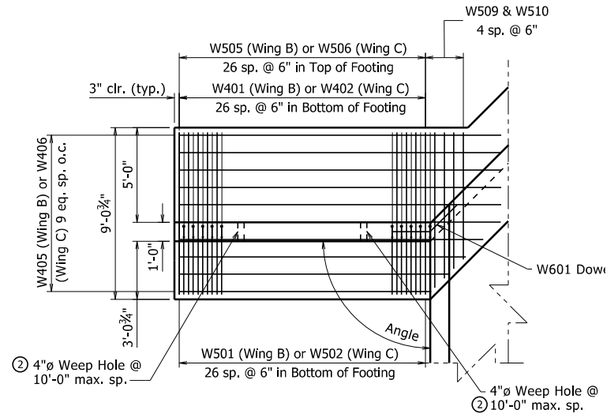
WING D PLAN VIEW

¼" = 1'-0"



WING A PLAN VIEW

¼" = 1'-0"



WING B & C PLAN VIEW

¼" = 1'-0"

① See Dwg. No. 68852 for "CONSTRUCTION JOINTS" Detail.

② See Dwg. No. 68846 for "WINGWALL & CULVERT DRAINAGE DETAIL".

TABLE OF VARIABLES

		Length	Height	Angle	"E"	"F"	"G"	"H"
Wings	A	36'-0"	6'-9"	165°	W400 71 sp. @ 6"	W500 71 sp. @ 6"	W408 7 sp. @ 18"	W412
	B	13'-6"	5'-3"	90°	W401 26 sp. @ 6"	W501 26 sp. @ 6"	W409 7 sp. @ 18"	W413
	C	13'-6"	5'-0"	90°	W402 26 sp. @ 6"	W502 26 sp. @ 6"	W410 7 sp. @ 18"	W414
	D	29'-0"	7'-0"	150°	W403 57 sp. @ 6"	W503 58 sp. @ 6"	W411 7 sp. @ 18"	W415

Height is estimated from field survey to where rock is assumed.
Actual heights to be determined in the field.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
9/22/25
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 6
DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 11/18/2024 FILENAME: bfa0314_c2.dgn
CHECKED BY: DPT DATE: 02/10/2025 SCALE: As Noted
DESIGNED BY: DPT DATE: 09/2024

BRIDGE NO. 04954 DRAWING NO. 68851

PRINT DATE: 9/22/2025

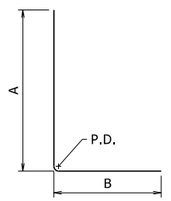
DATE REVISED	DATE REVISED	FED. RD. DIST. NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	FA0314	41	72
		04954 - Three-Sided Culvert - 68852				

WINGWALL BAR LIST

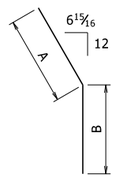
① Bar Lengths and number of bars may need to be adjusted based on site conditions.

	MARK	NO. REQ'D	A	B	LENGTH	P.D.
①	W400	72	8'-5" to 13'-7"	5'-7"	14'-1" to 19'-3"	3"
①	W401	27	7'-0" to 13'-7"	5'-7"	12'-8" to 19'-2"	3"
①	W402	27	6'-9" to 13'-7"	5'-7"	12'-5" to 19'-2"	3"
①	W403	58	8-5" to 13'-7"	5'-7"	14'-1" to 19'-3"	3"
	W404	18	-	-	36'-7" to 42'-3"	Str.
	W405	20	-	-	13'-2" to 17'-0"	Str.
	W406	20	-	-	13'-2" to 17'-0"	Str.
	W407	18	-	-	29'-8" to 42'-0"	Str.
①	W408	16	-	-	5'-10" to 36'-0"	Str.
①	W409	16	-	-	1'-6" to 13'-2"	Str.
①	W410	16	-	-	1'-6" to 13'-2"	Str.
①	W411	16	-	-	5'-5" to 29'-5"	Str.
	W412	2	-	-	36'-2"	Str.
	W413	2	-	-	14'-9"	Str.
	W414	2	-	-	14'-10"	Str.
	W415	2	-	-	29'-3"	Str.
①	W500	72	8'-5" to 13'-7"	2'-7"	13'-11" to 19'-1"	3¾"
①	W501	27	7'-0" to 13'-7"	3'-8"	12'-6" to 19'-1"	3¾"
①	W502	27	6'-9" to 13'-7"	3'-8"	12'-3" to 19'-1"	3¾"
①	W503	59	8'-5" to 13'-7"	2'-7"	13'-11" to 19'-1"	3¾"
	W504	74	-	-	7'-6"	Str.
	W505	27	-	-	8'-7"	Str.
	W506	27	-	-	8'-7"	Str.
	W507	60	-	-	7'-6"	Str.
	W508	7	-	-	5'-6" to 7'-3"	Str.
	W509	4	-	-	6'-10" to 8'-4"	Str.
	W510	4	-	-	6'-10" to 8'-4"	Str.
	W511	21	-	-	4'-10" to 7'-5"	Str.
①	W600	12	2'-0"	2'-0"	4'-0"	4½"
①	W601	24	2'-0"	2'-0"	4'-0"	4½"
①	W602	12	2'-0"	2'-0"	4'-0"	4½"

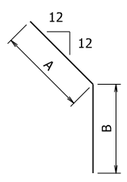
Dimensions are out to out of bars.



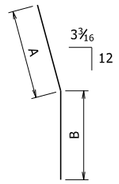
W400 - W403 & W500 - W503



W600



W601

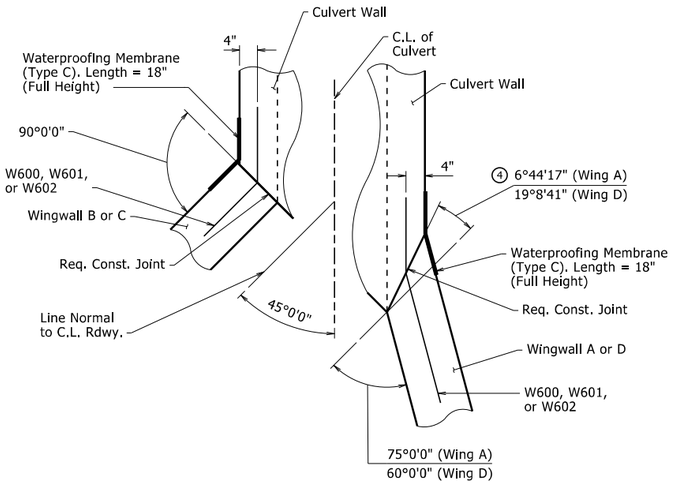


W602

② See Dwg. No. 68846 for "CONCRETE DITCH PAVING DETAIL"

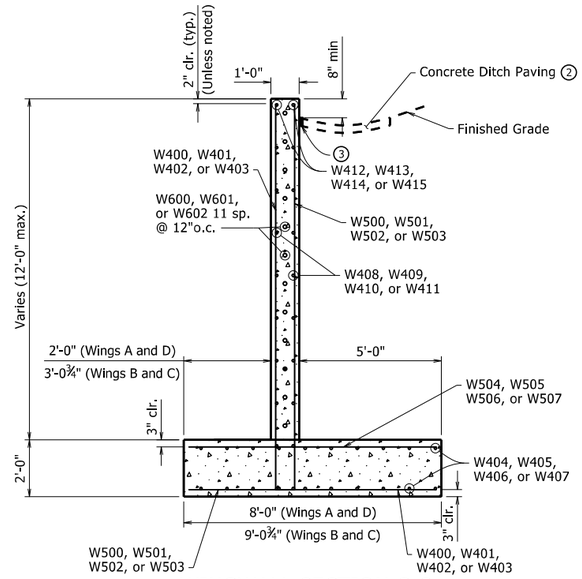
③ ½" Performed Joint Filler (AASHTO M153, Type 1) per Subsection 501.02(h)(1). Seal with ½" x 1" Type 3 or 4 Joint Sealer per Subsection 501.02(h)(2).

④ See Dwg. No. 68848 for "WINGWALL A TOP SLAB DETAIL" and "WINGWALL D TOP SLAB DETAIL" for more information.

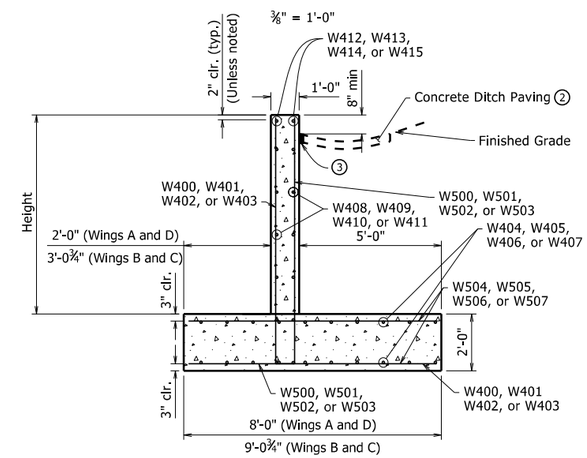


CONSTRUCTION JOINTS

¾" = 1'-0"



WINGWALL SECTION C-C



WINGWALL VIEW D-D

For "Height" see "TABLE OF VARIABLES" on Dwg. No. 68851.

⅜" = 1'-0"

Height is estimated from field survey to where rock is assumed. Actual heights to be determined in the field.

STATE OF ARKANSAS
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9/22/25
CHARLES R. ELLIS

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SHEET 6 OF 6
DETAILS OF THREE-SIDED CAST-IN-PLACE CULVERT

ROUTE SEC.

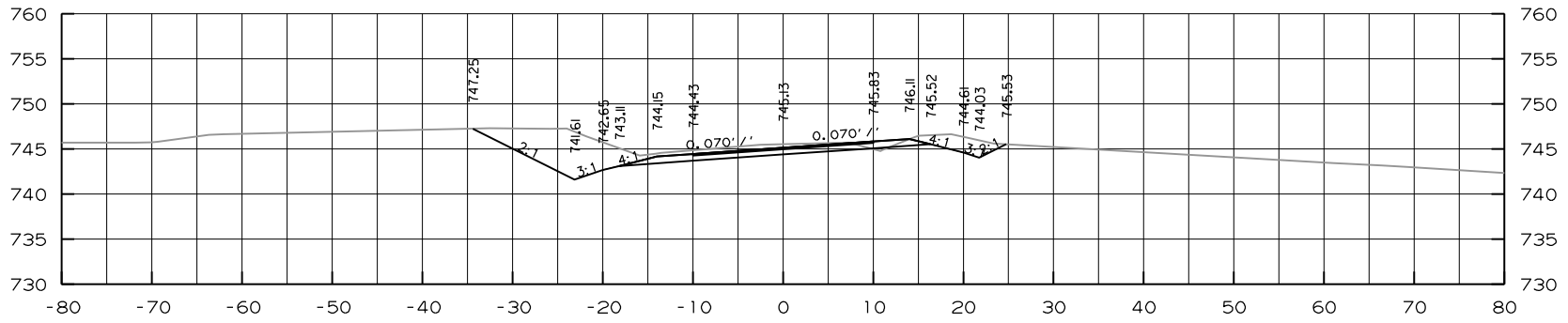
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CPK DATE: 11/21/2024
CHECKED BY: DPT DATE: 02/10/2025
DESIGNED BY: DPT DATE: 09/2024
FILENAME: bfa0314_c2.dgn
SCALE: As Noted

BRIDGE NO. 04954 DRAWING NO. 68852

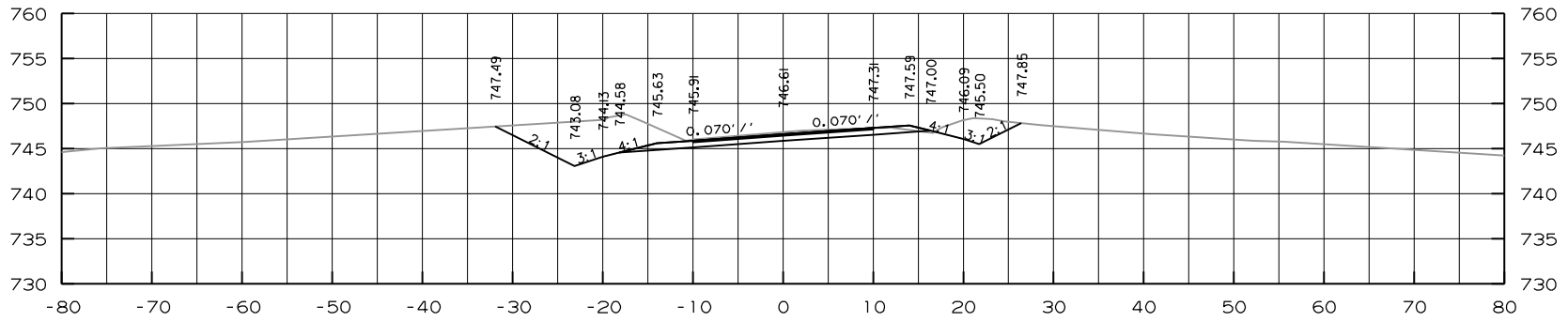
PRINT DATE: 9/22/2025



AREA CUT 93.79
AREA FILL 0.37

190+00.00

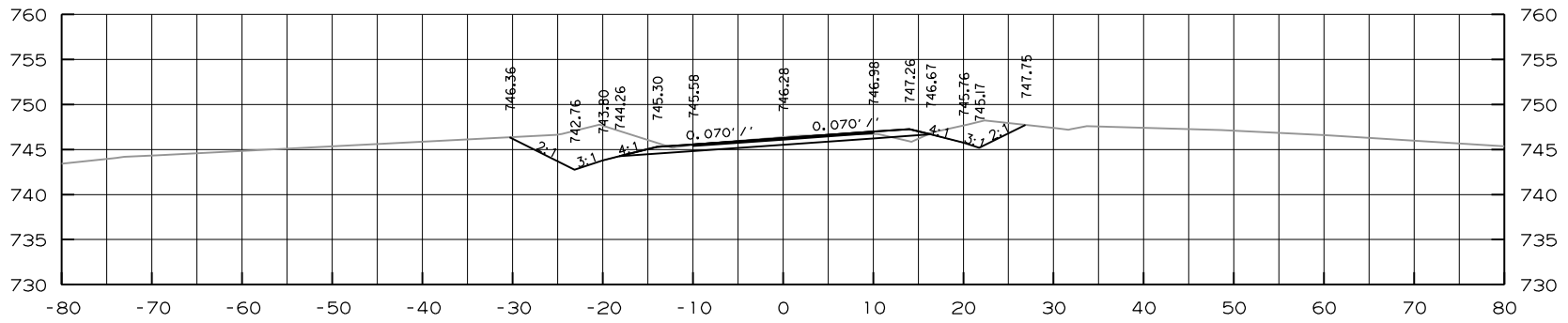
CUT VOLUME 357
FILL VOLUME 1



AREA CUT 99.23
AREA FILL 0.19

189+00.00

CUT VOLUME 163
FILL VOLUME 1

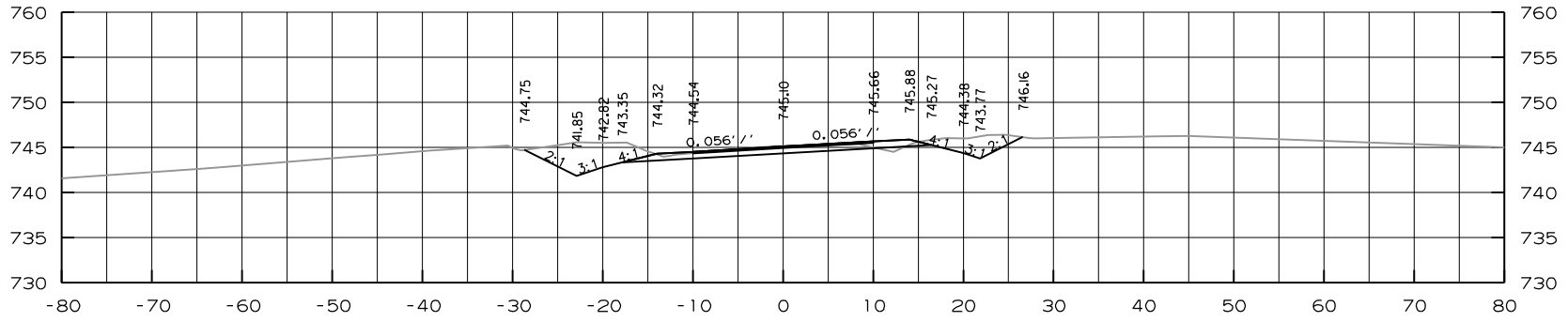


AREA CUT 76.91
AREA FILL 1.31

188+50.00

CUT VOLUME 129
FILL VOLUME 2

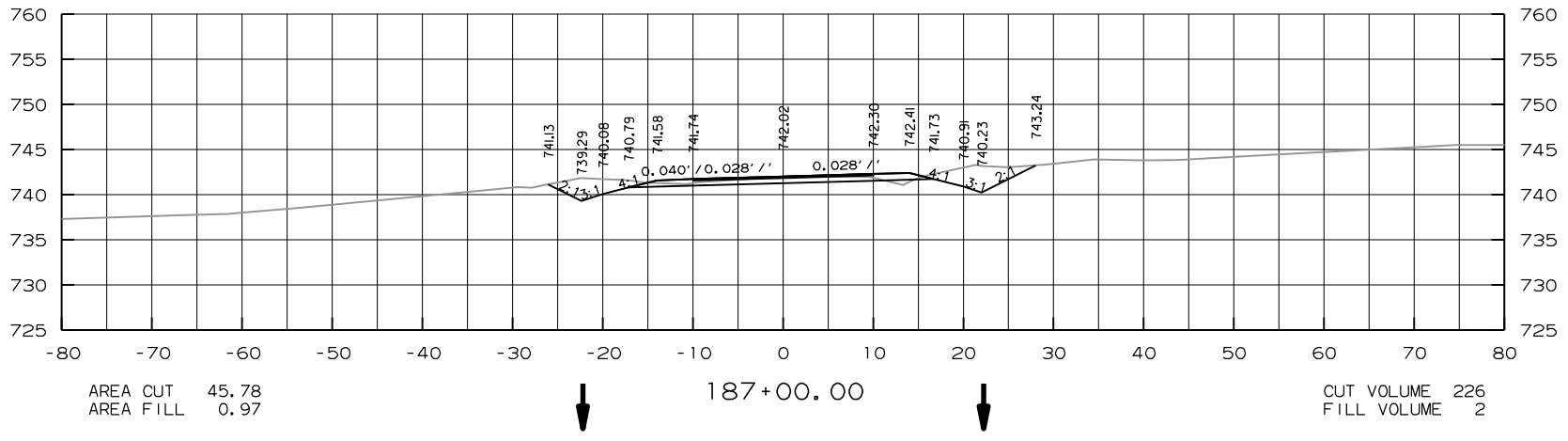
BEGIN FULL SUPERELEVATION



AREA CUT 62.29
AREA FILL 0.81

188+00.00

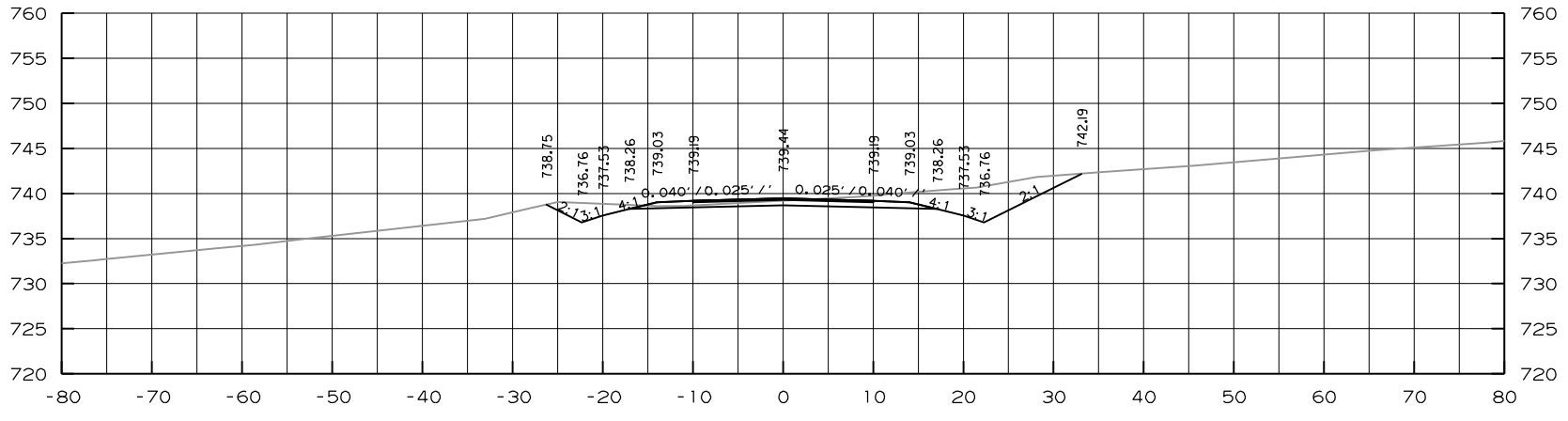
CUT VOLUME 200
FILL VOLUME 3



AREA CUT 45.78
AREA FILL 0.97

187+00.00

CUT VOLUME 226
FILL VOLUME 2



AREA CUT 76.51
AREA FILL 0.00

186+00.00

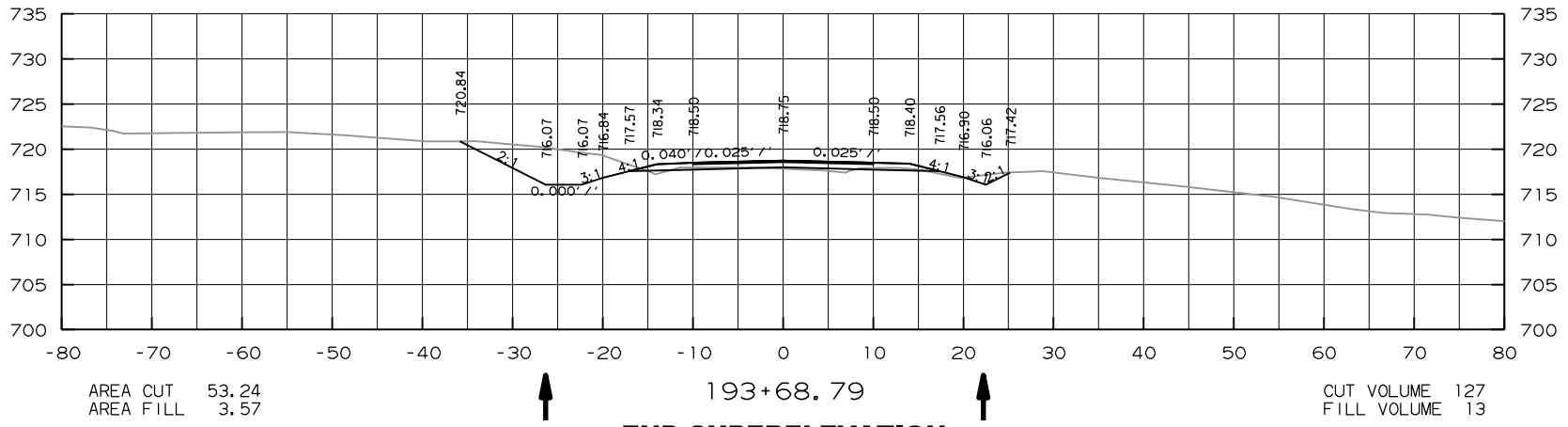
CUT VOLUME 0
FILL VOLUME 0

BEGIN SUPERELEVATION

BEGIN JOB FA0314

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.		FA0314	42	72

4 CROSS SECTIONS STA. 186+00.00 TO 190+00.00

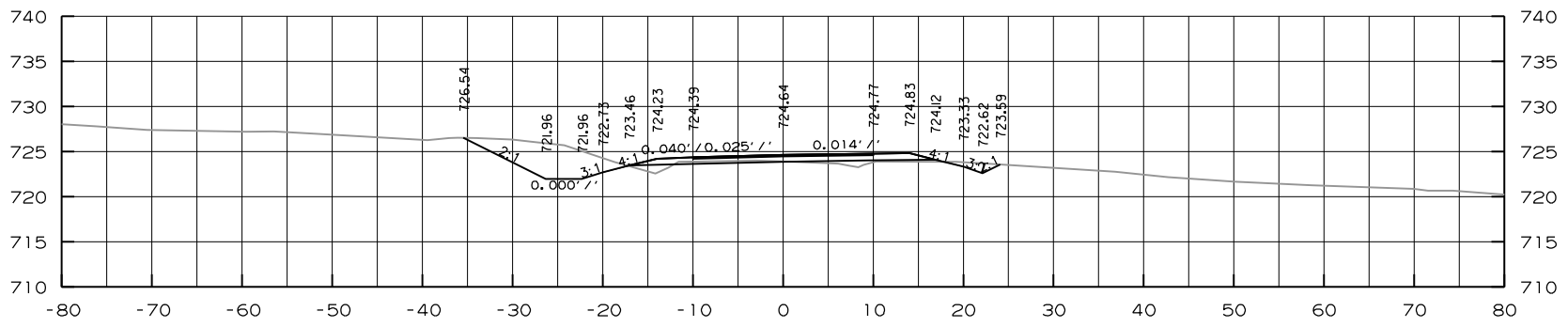


AREA CUT 53.24
AREA FILL 3.57

193+68.79

CUT VOLUME 127
FILL VOLUME 13

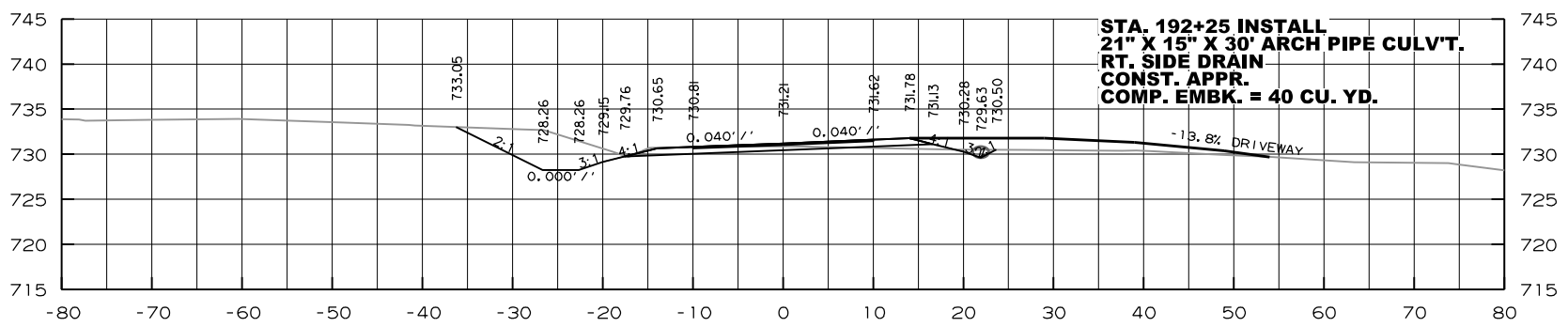
END SUPERELEVATION



AREA CUT 46.67
AREA FILL 6.56

193+00.00

CUT VOLUME 148
FILL VOLUME 14

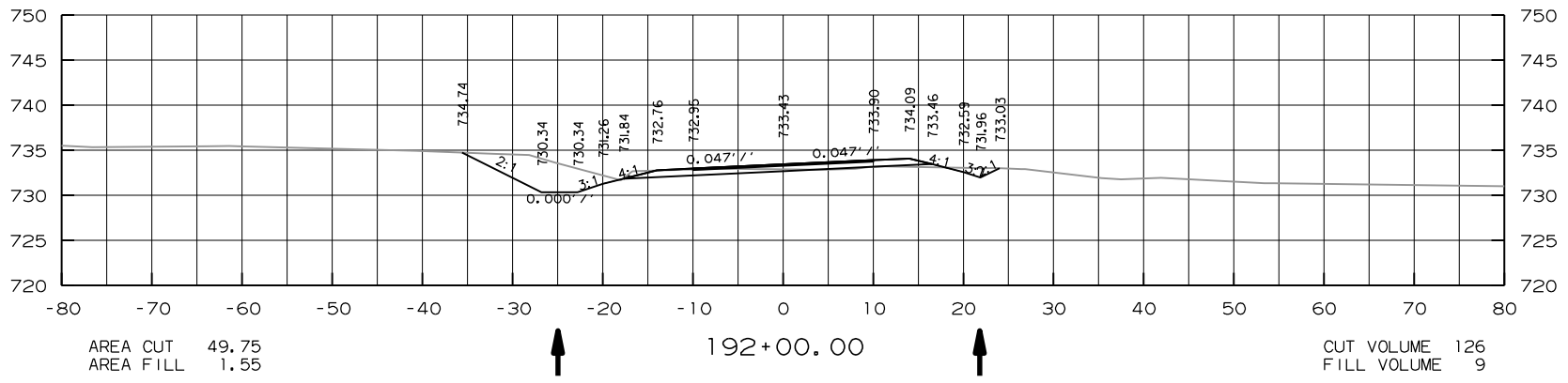


STA. 192+25 INSTALL
21" X 15" X 30' ARCH PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR.
COMP. EMBK. = 40 CU. YD.

AREA CUT 59.63
AREA FILL 3.26

192+25.00

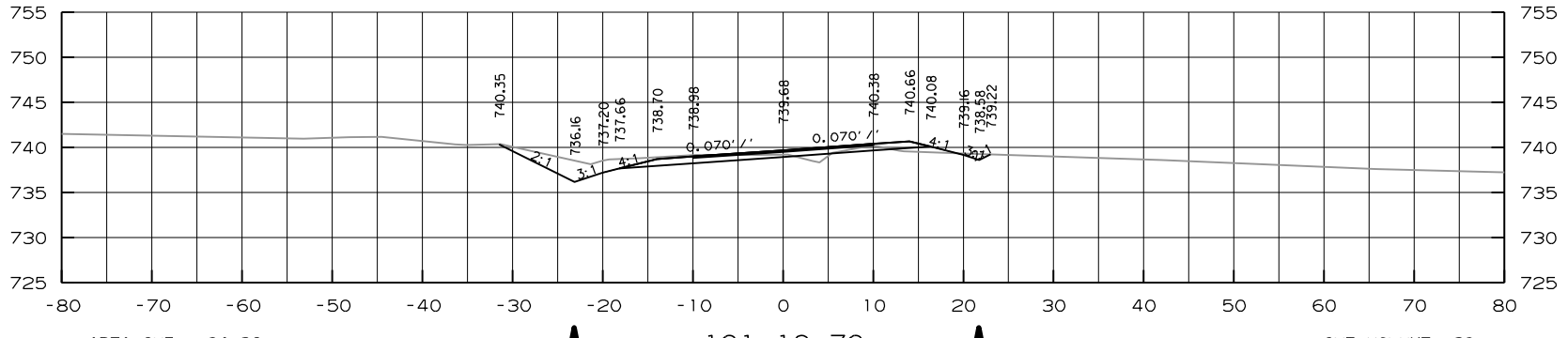
CUT VOLUME 51
FILL VOLUME 2



AREA CUT 49.75
AREA FILL 1.55

192+00.00

CUT VOLUME 126
FILL VOLUME 9

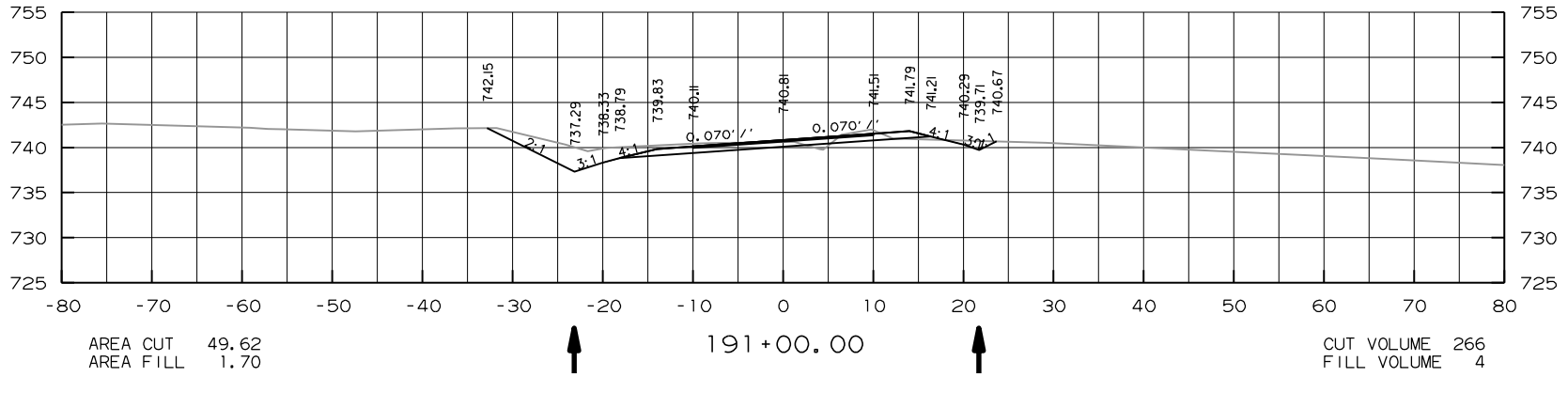


AREA CUT 34.26
AREA FILL 4.41

191+18.79

CUT VOLUME 29
FILL VOLUME 2

END FULL SUPERELEVATION



AREA CUT 49.62
AREA FILL 1.70

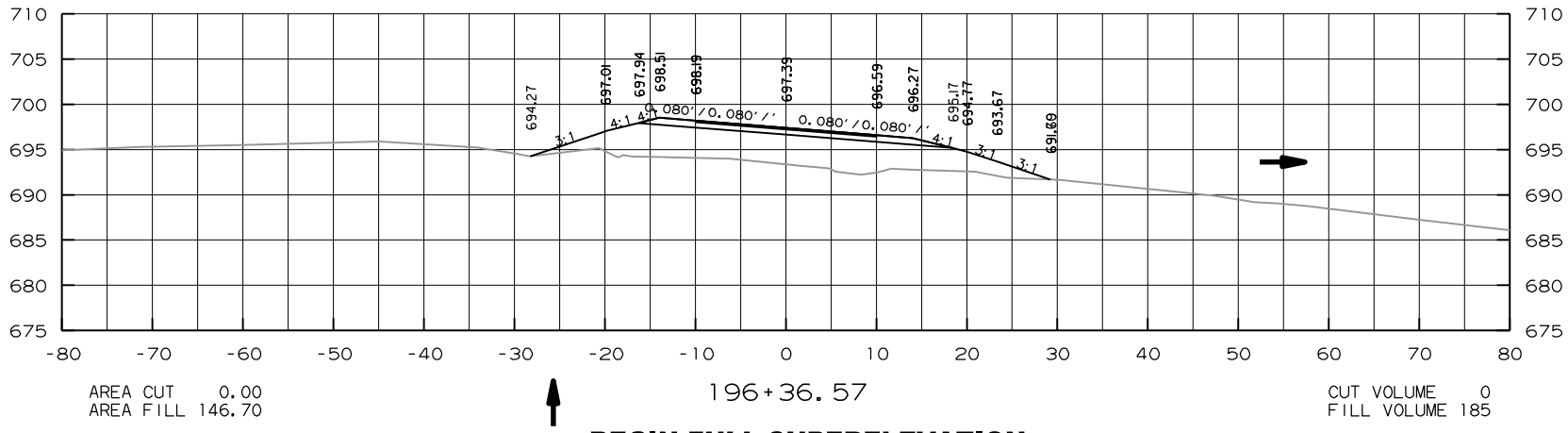
191+00.00

CUT VOLUME 266
FILL VOLUME 4

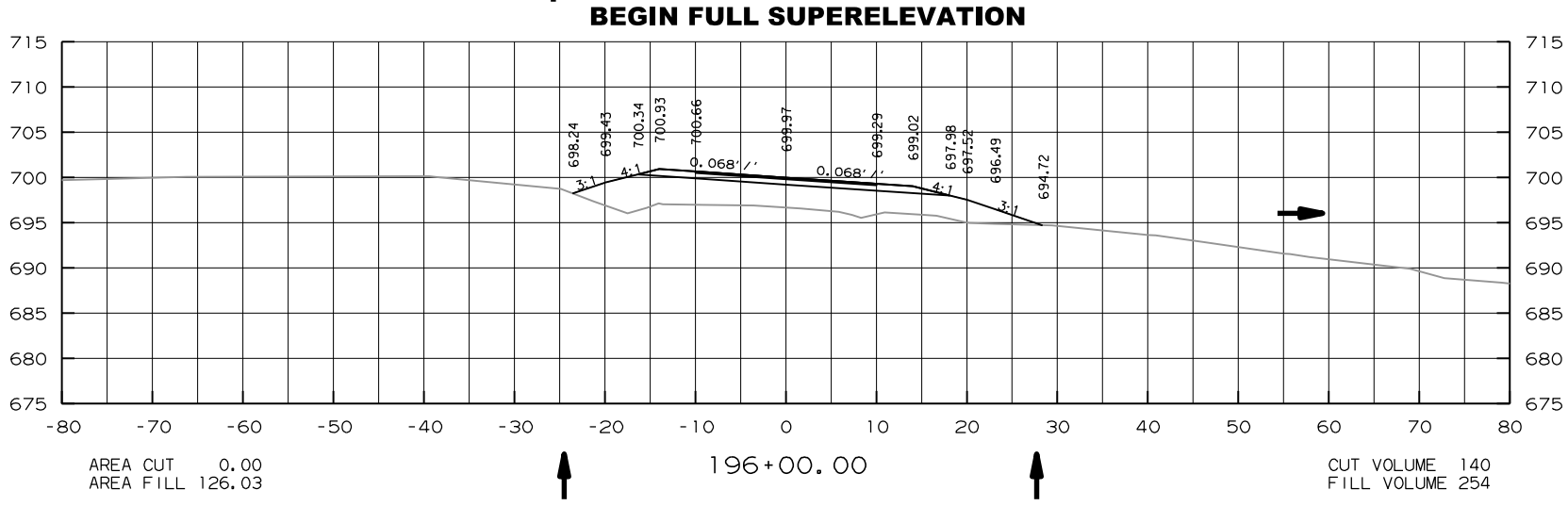
4 CROSS SECTIONS STA. 191+00.00 TO 193+68.79

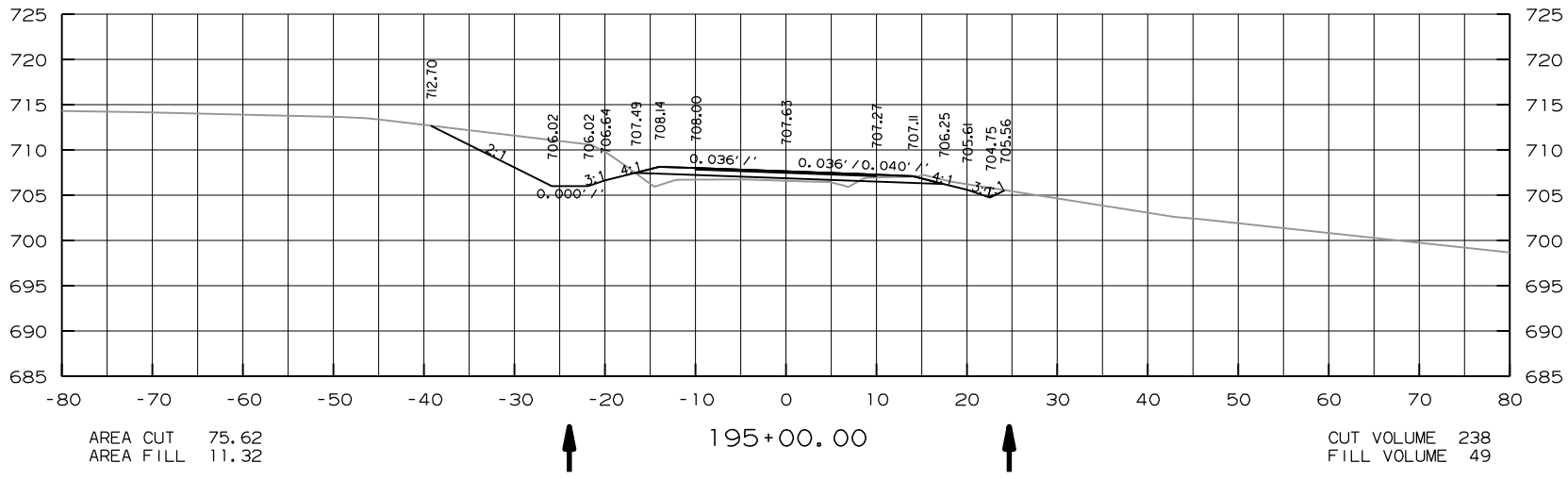
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

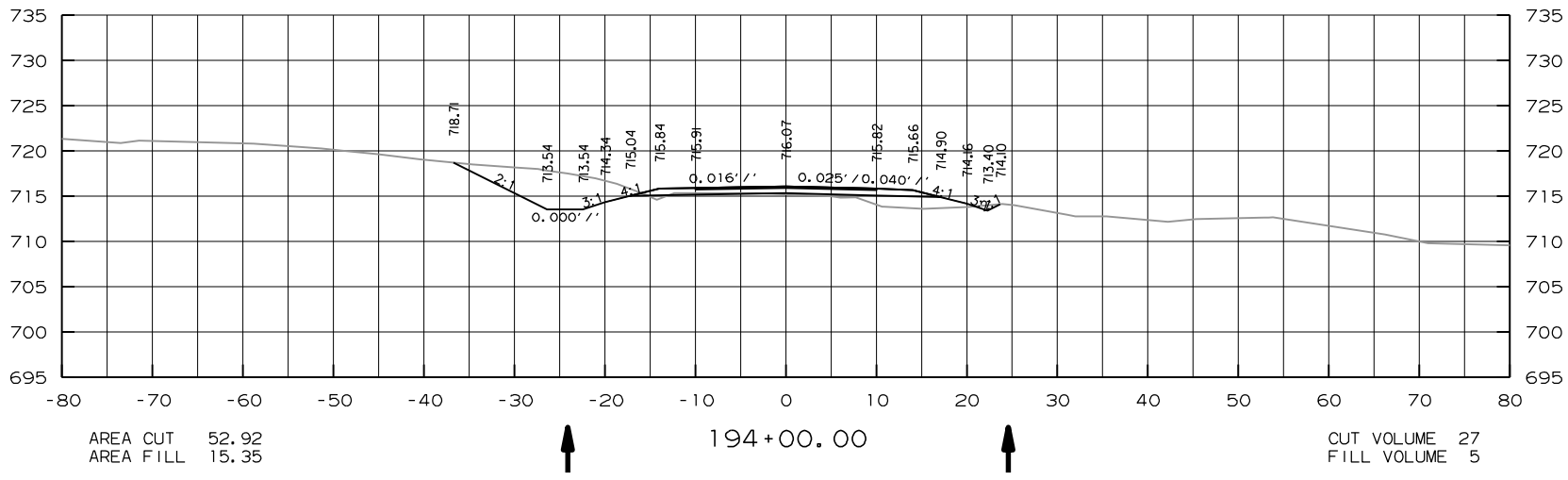
JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		43	72

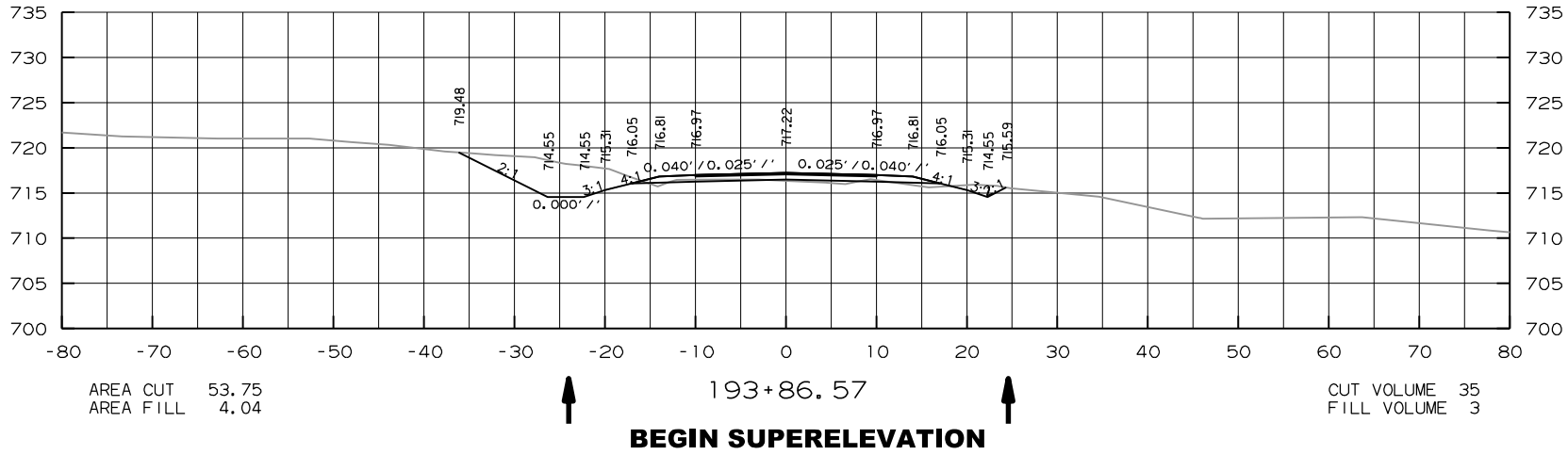


BEGIN FULL SUPERELEVATION





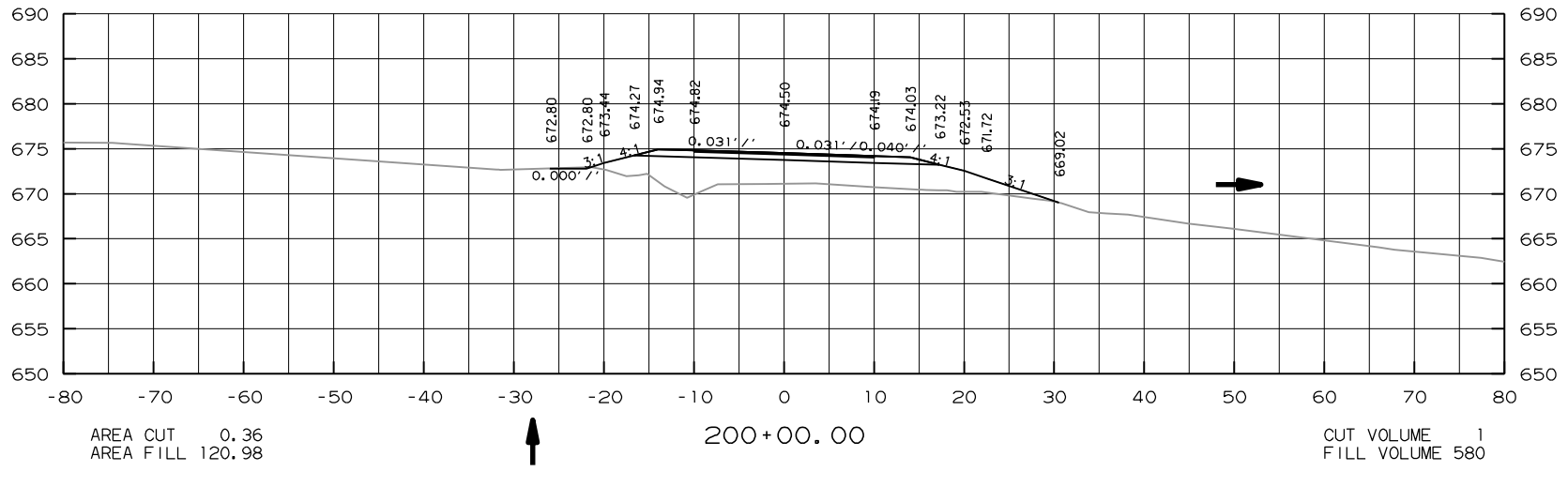


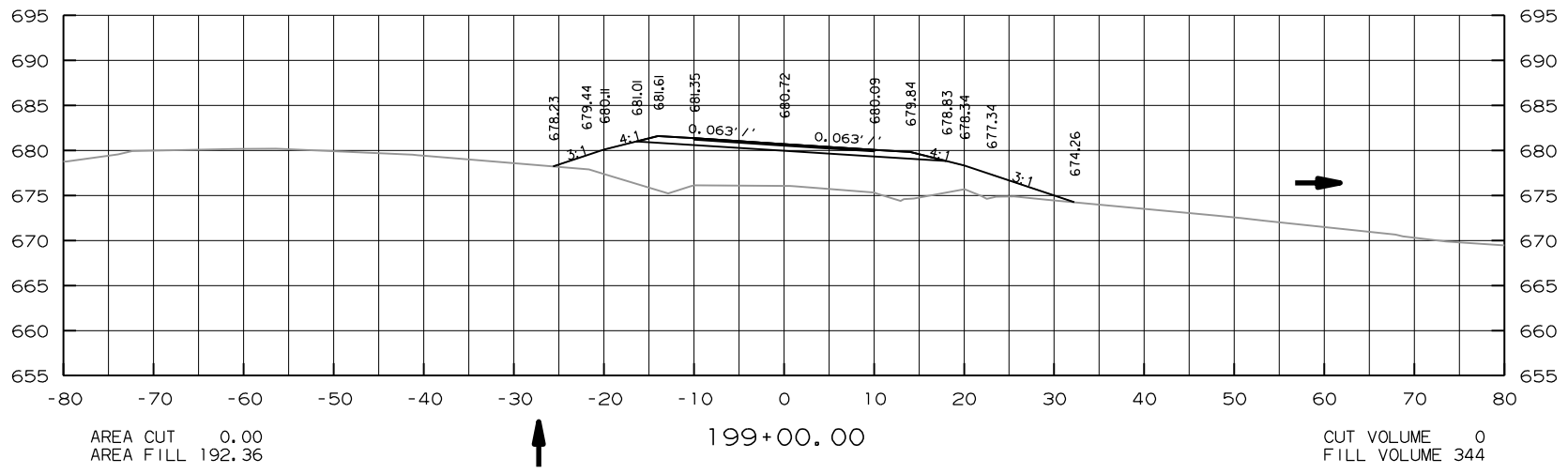


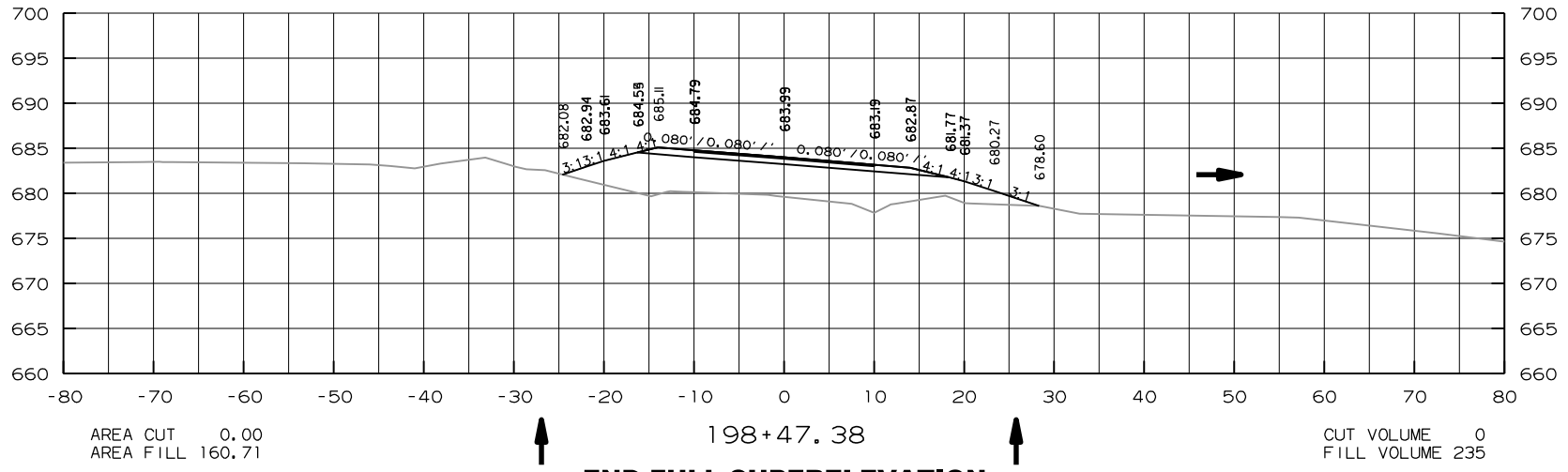
BEGIN SUPERELEVATION

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.				
				FA0314			44	72

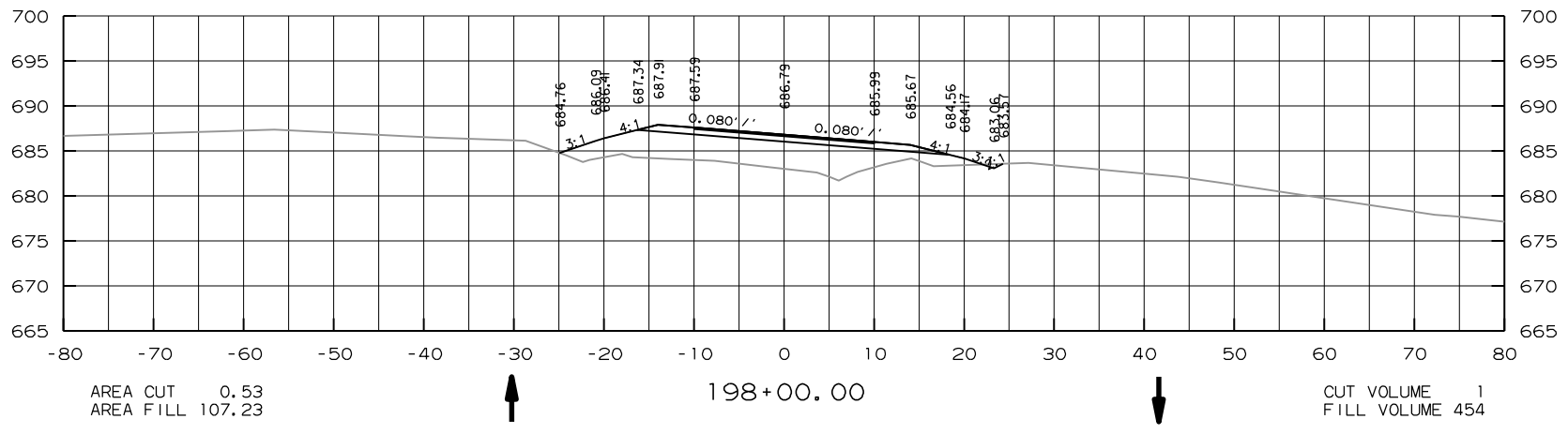
4 CROSS SECTIONS STA. 193+86.57 TO 196+36.57

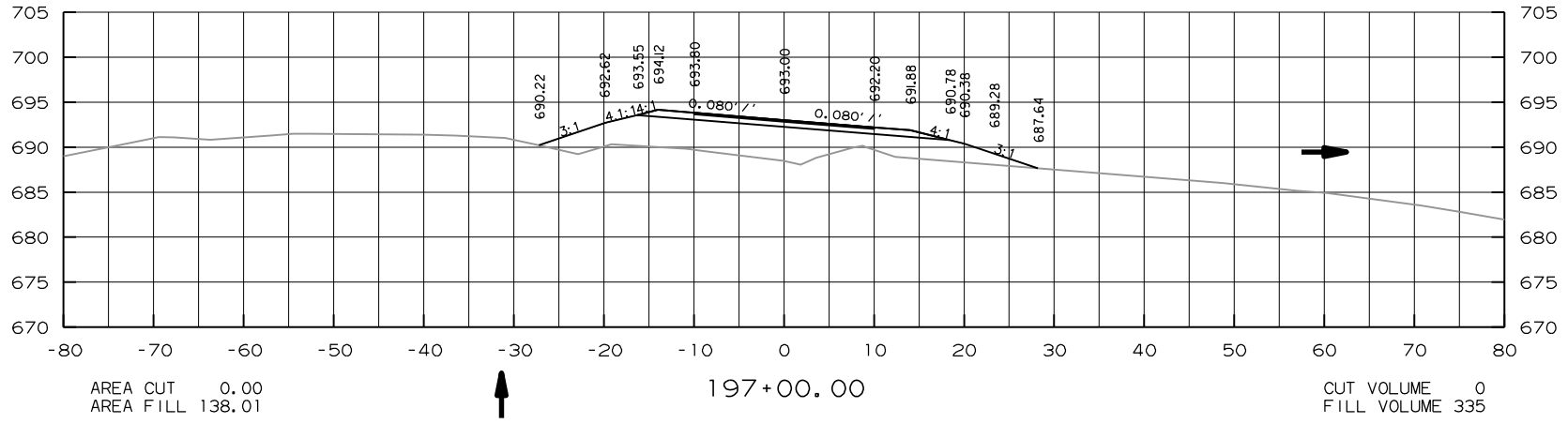






END FULL SUPERELEVATION



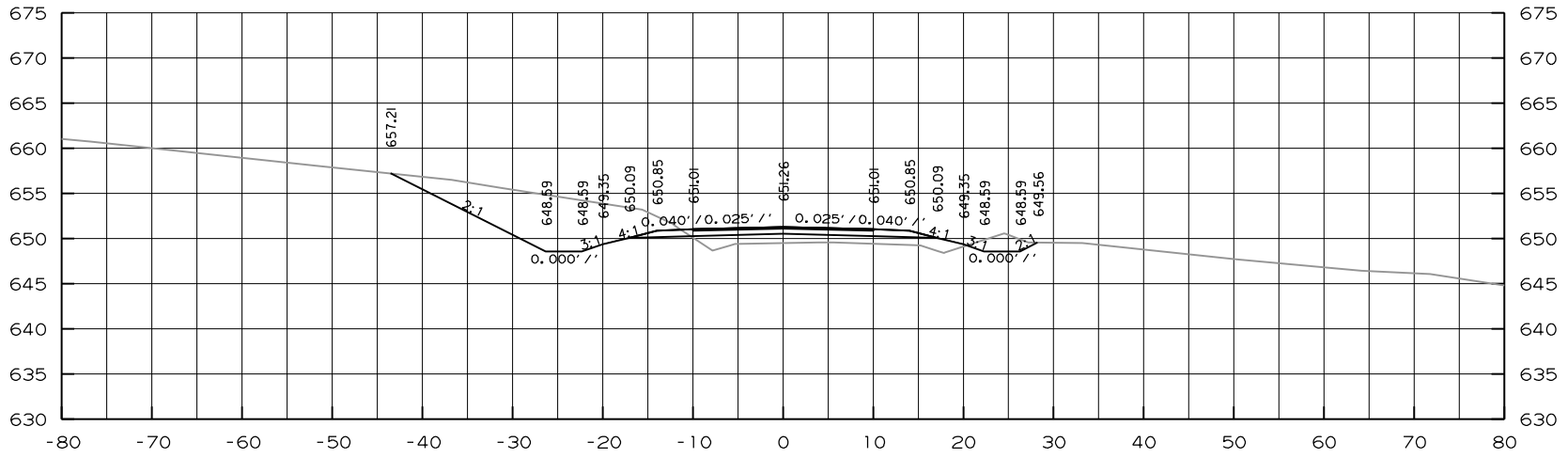


CROSS SECTIONS STA. 197+00.00 TO 200+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	72

JOB NO. FA0314

4

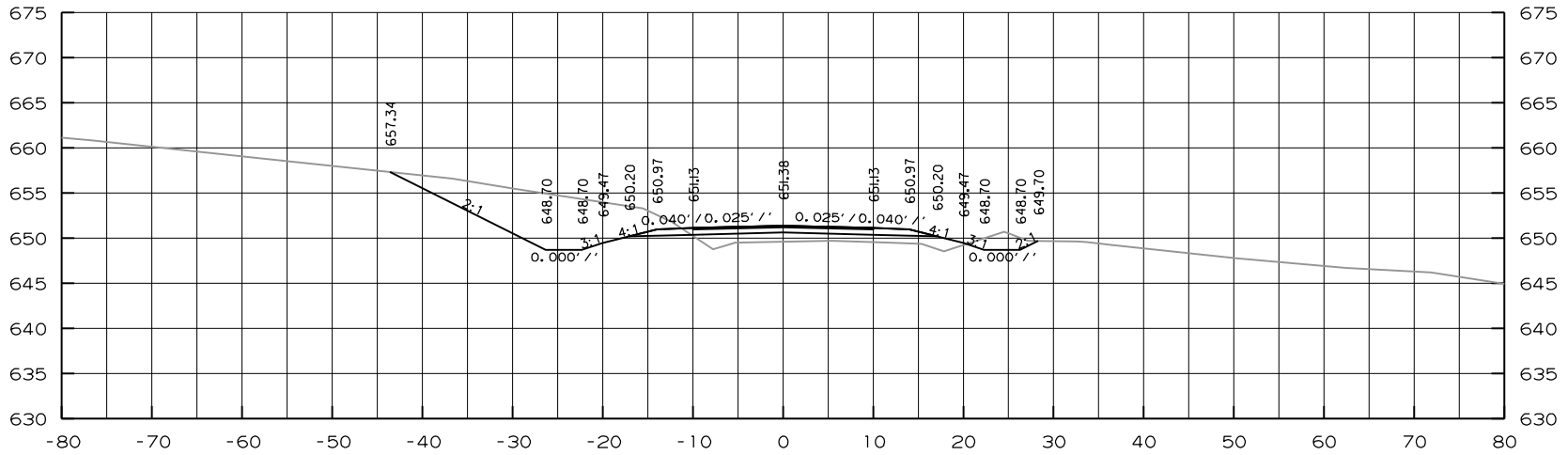


AREA CUT 125.18
AREA FILL 28.95

203+01.21

CUT VOLUME 6
FILL VOLUME 1

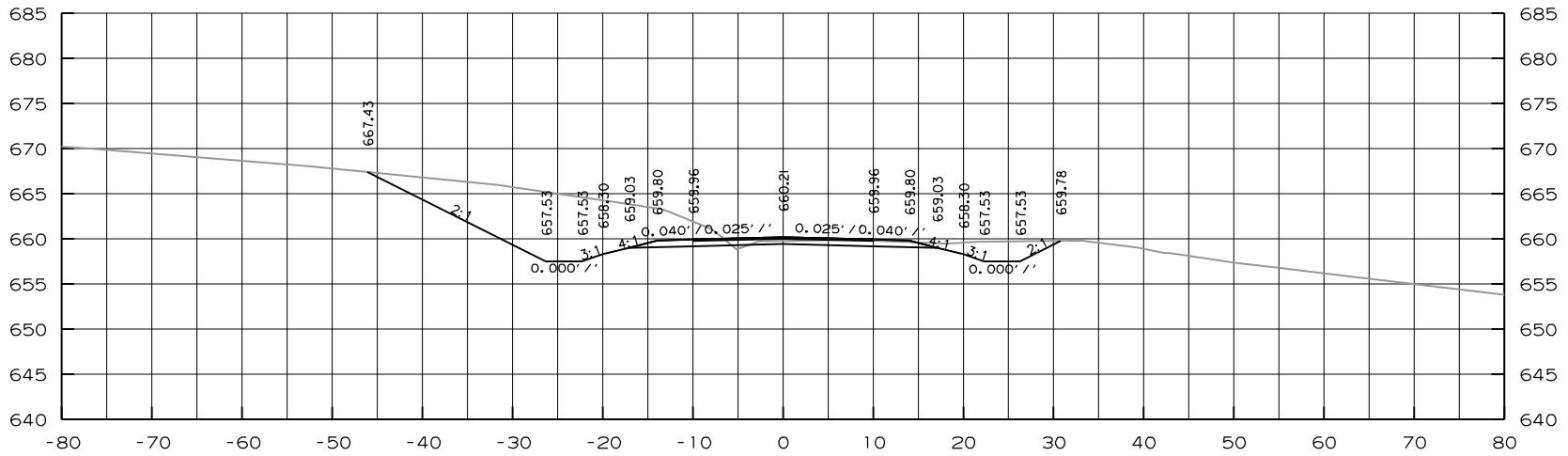
BEGIN SUPERELEVATION



AREA CUT 125.65
AREA FILL 28.57

203+00.00

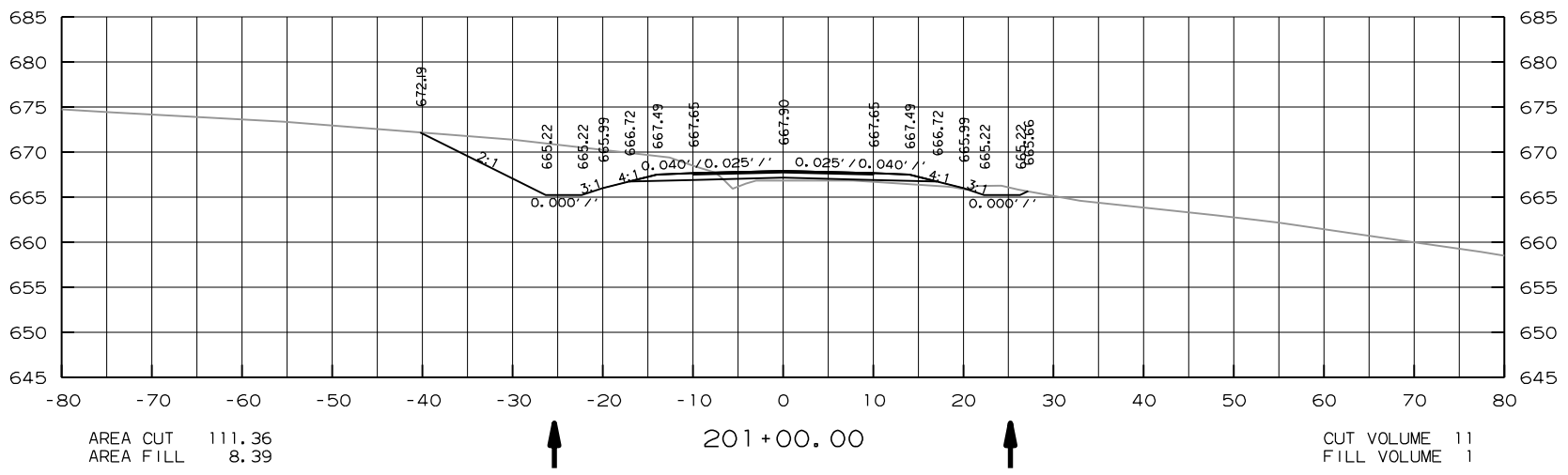
CUT VOLUME 609
FILL VOLUME 54



AREA CUT 203.40
AREA FILL 0.51

202+00.00

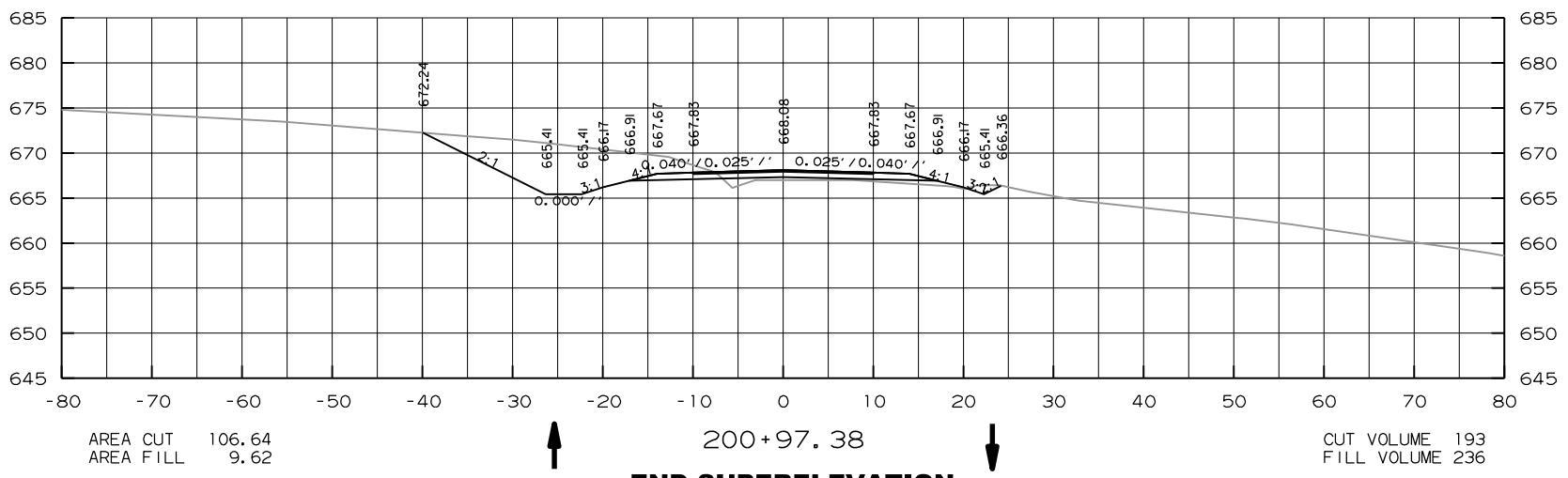
CUT VOLUME 583
FILL VOLUME 16



AREA CUT 111.36
AREA FILL 8.39

201+00.00

CUT VOLUME 11
FILL VOLUME 1



AREA CUT 106.64
AREA FILL 9.62

200+97.38

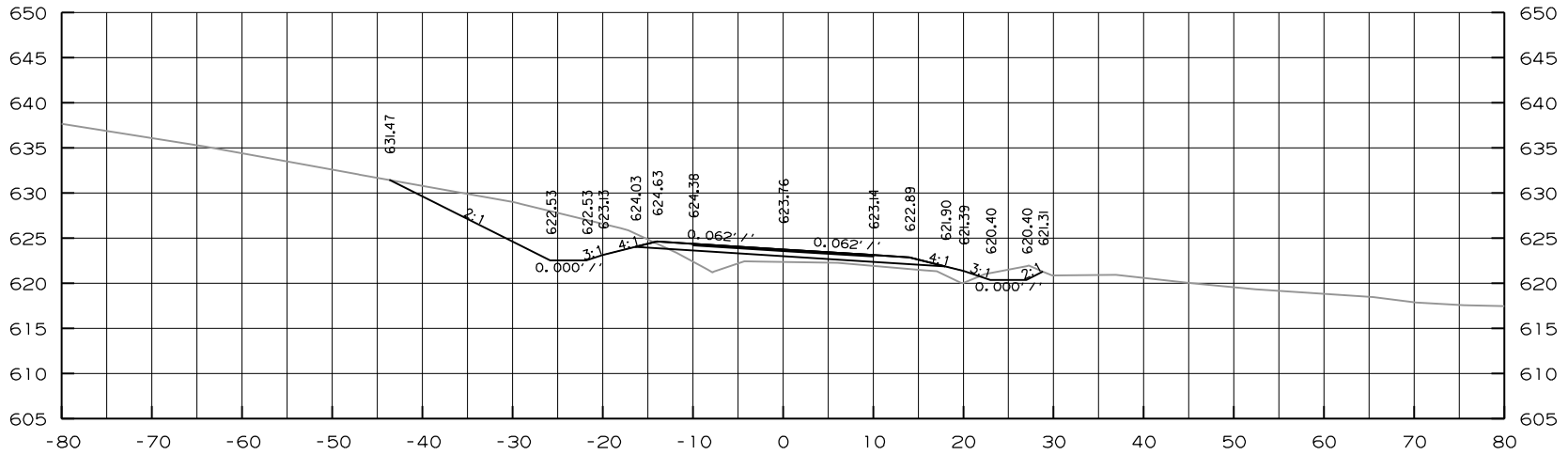
CUT VOLUME 193
FILL VOLUME 236

END SUPERELEVATION

4 CROSS SECTIONS STA. 200+97.38 TO 203+01.21

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		46	72

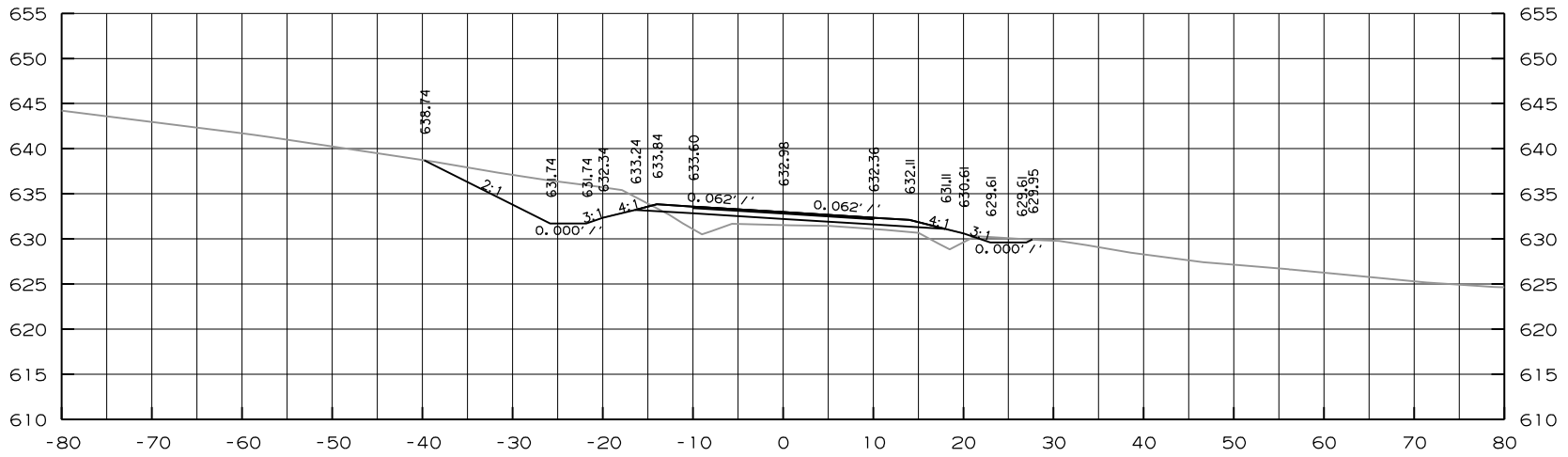
DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED



AREA CUT 96.51
AREA FILL 26.66

206+00.00

CUT VOLUME 308
FILL VOLUME 104

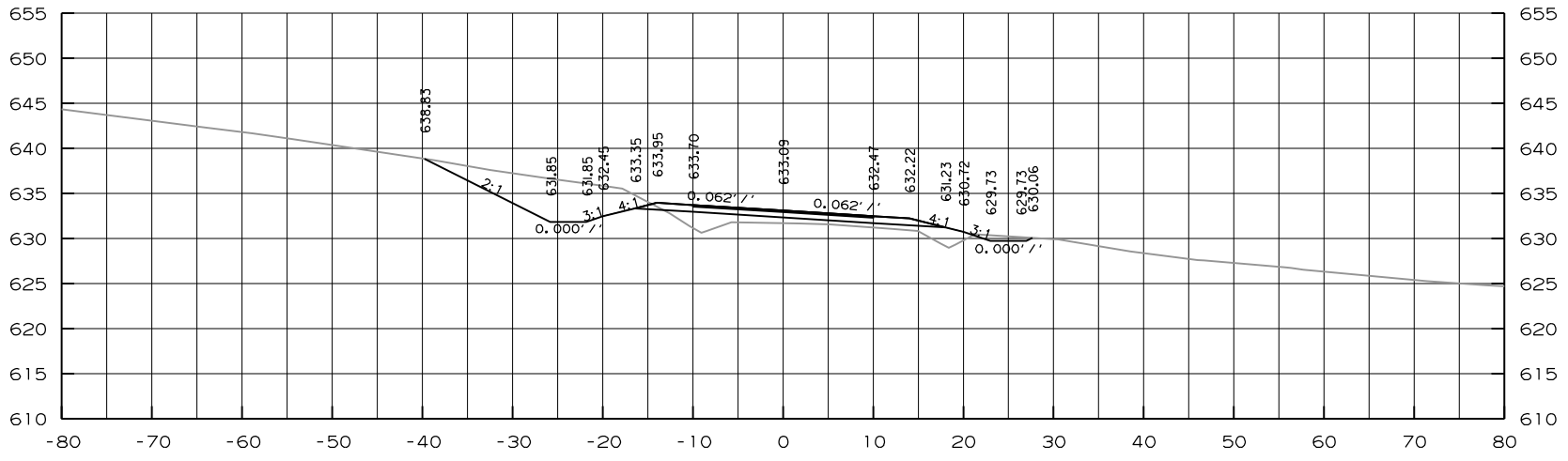


AREA CUT 71.74
AREA FILL 30.34

205+01.21

CUT VOLUME 3
FILL VOLUME 1

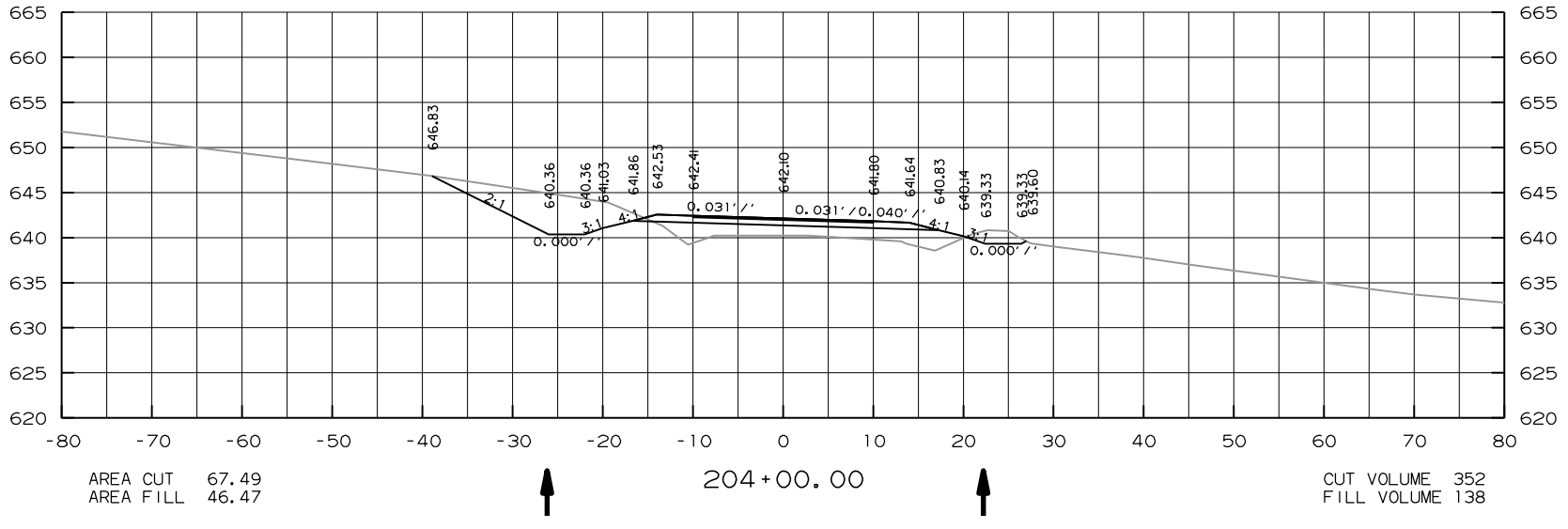
BEGIN FULL SUPERELEVATION



AREA CUT 71.98
AREA FILL 30.19

205+00.00

CUT VOLUME 258
FILL VOLUME 142



AREA CUT 67.49
AREA FILL 46.47

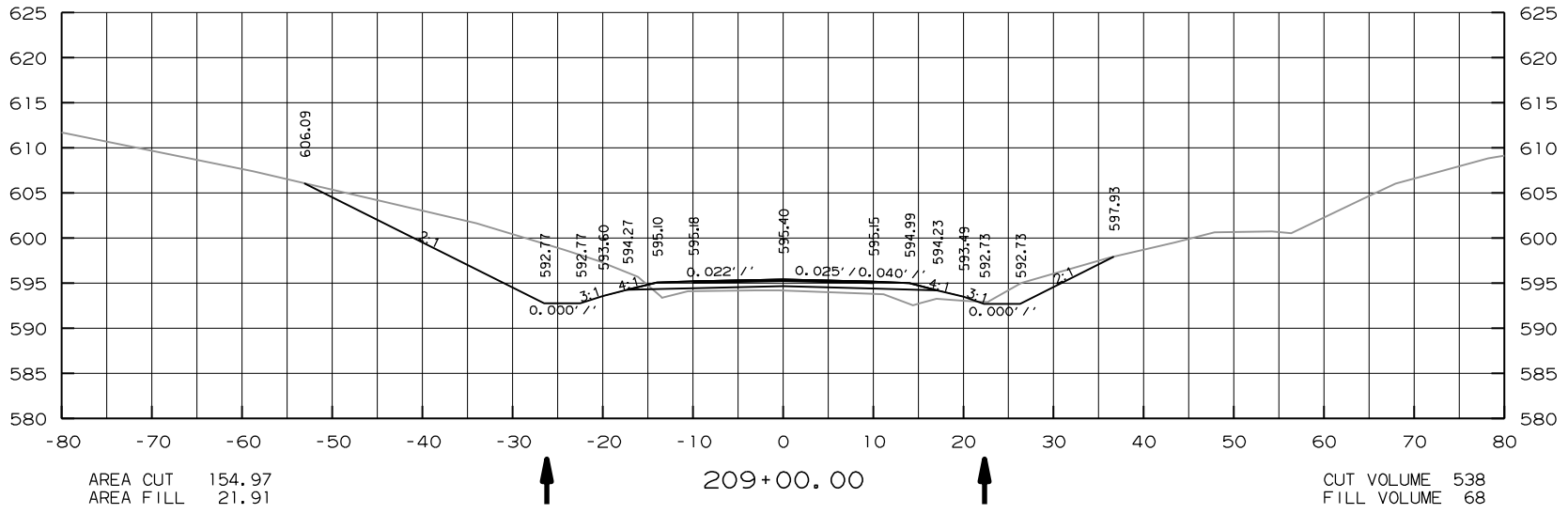
204+00.00

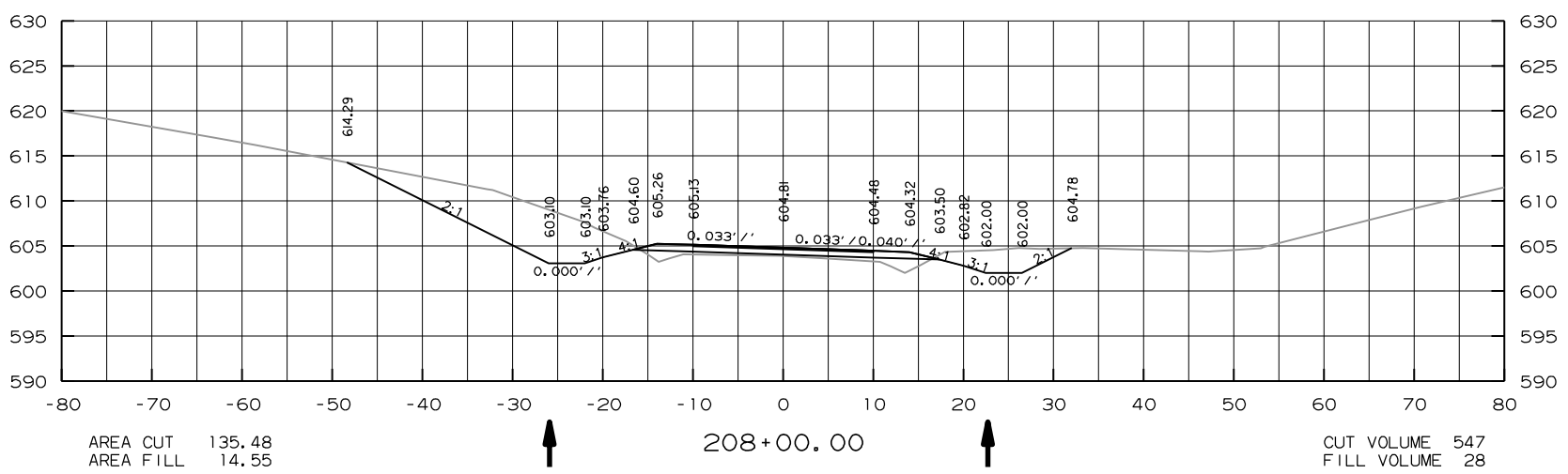
CUT VOLUME 352
FILL VOLUME 138

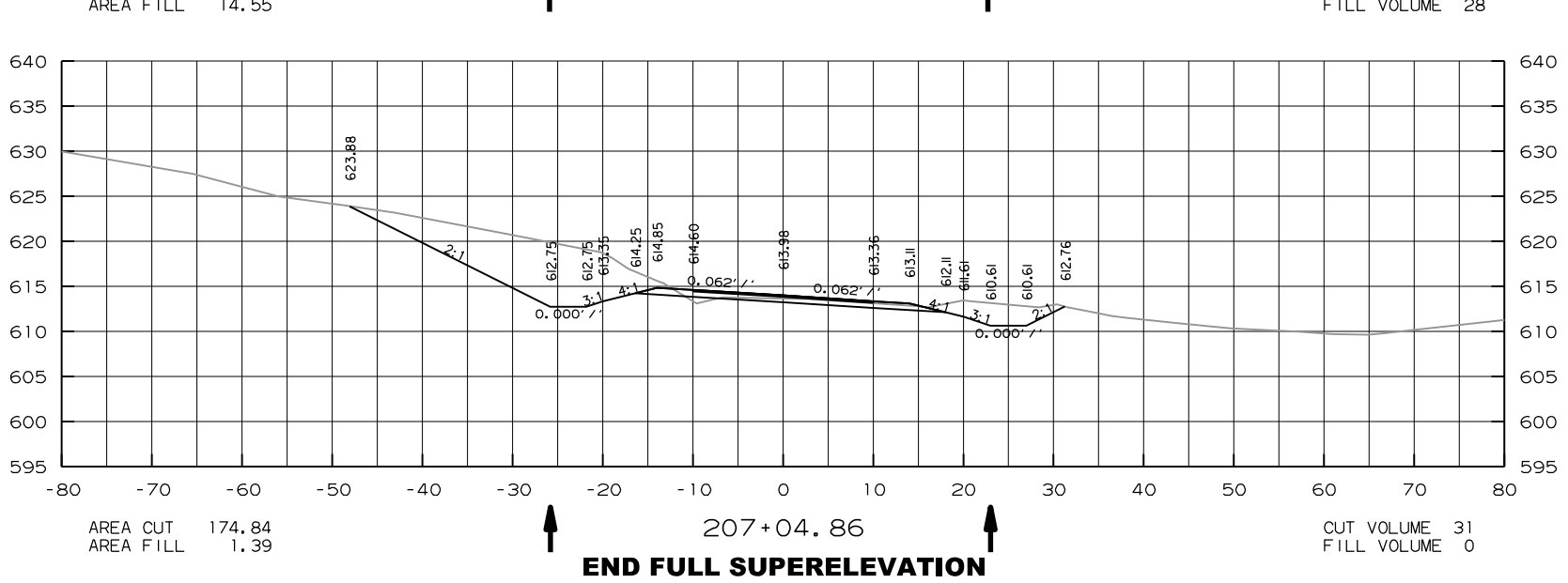
DATE REVISED
DATE FILMED
DATE REVISED
DATE FILMED

4 CROSS SECTIONS STA. 204+00.00 TO 206+00.00

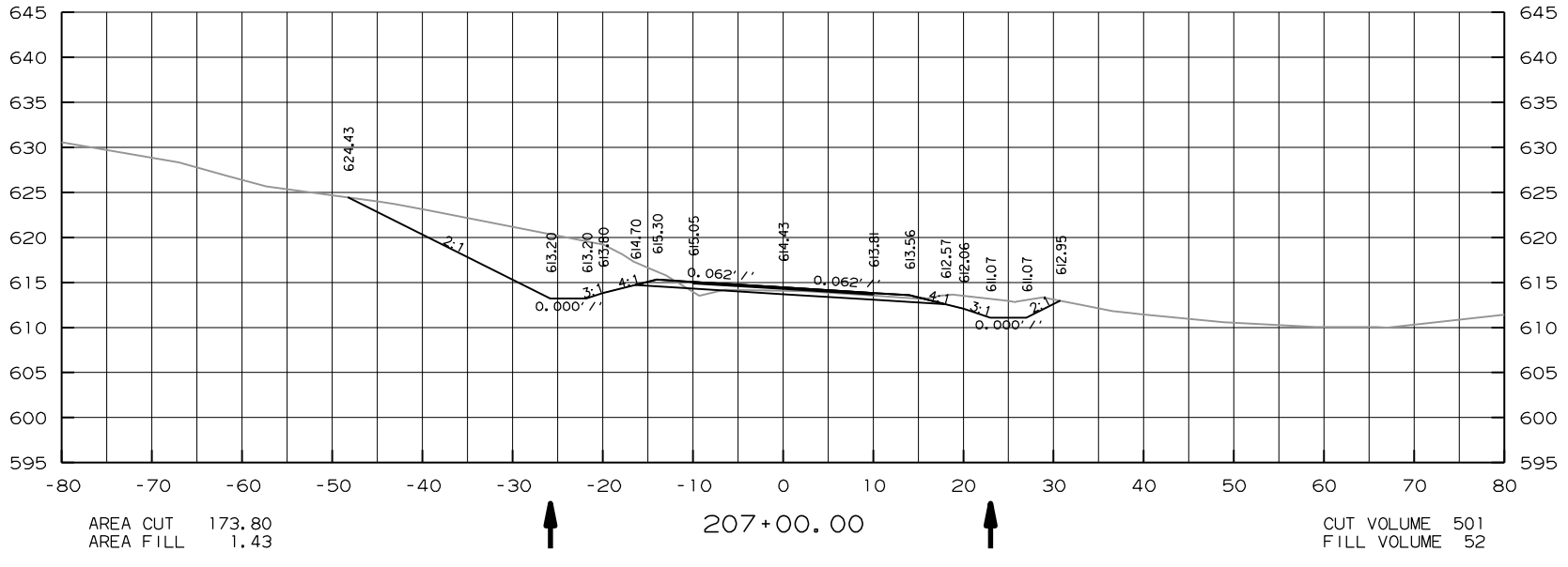
JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		47	72





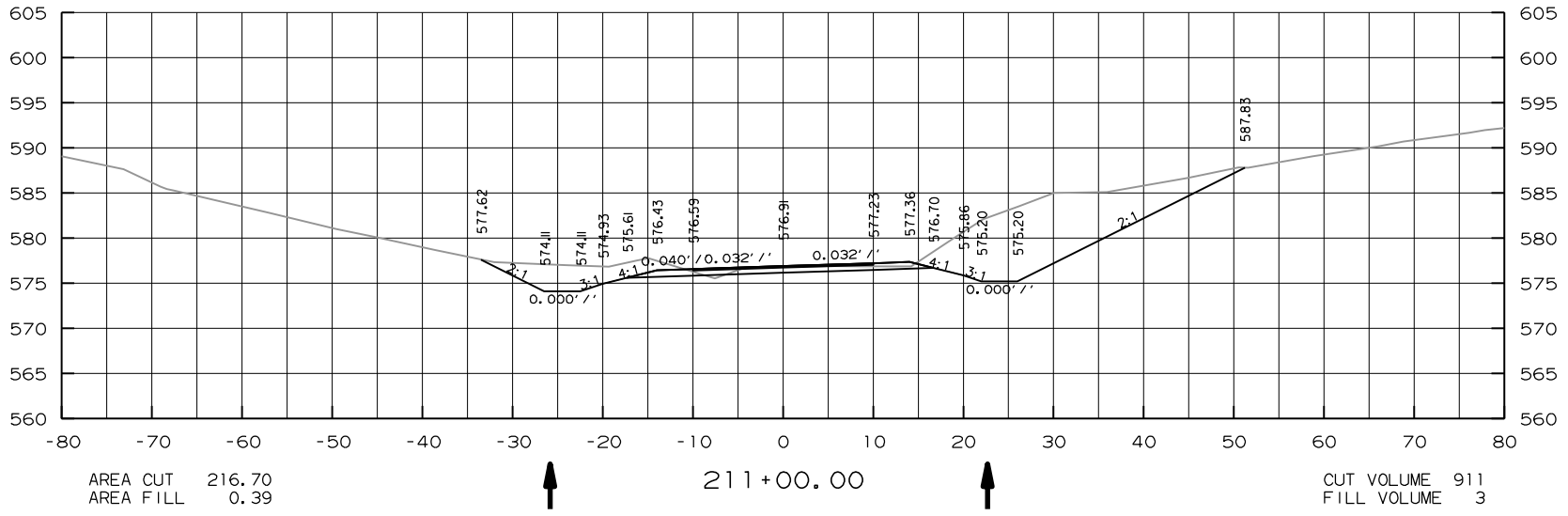


END FULL SUPERELEVATION



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.			48	72
				FA0314				

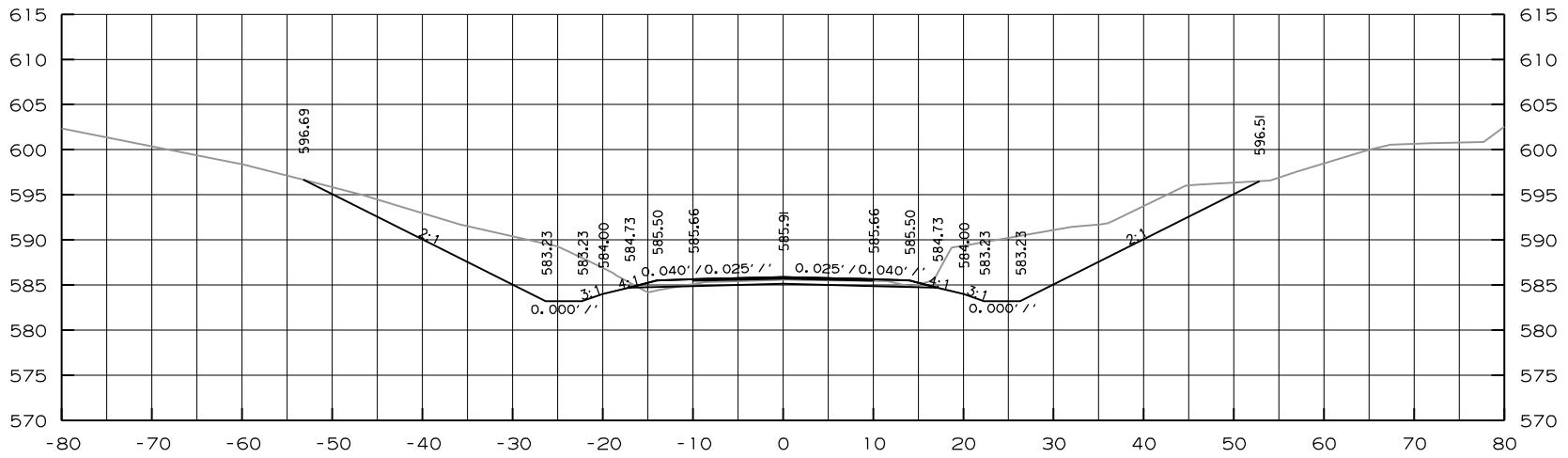
4 CROSS SECTIONS STA. 207+00.00 TO 209+00.00



AREA CUT 216.70
AREA FILL 0.39

211+00.00

CUT VOLUME 911
FILL VOLUME 3

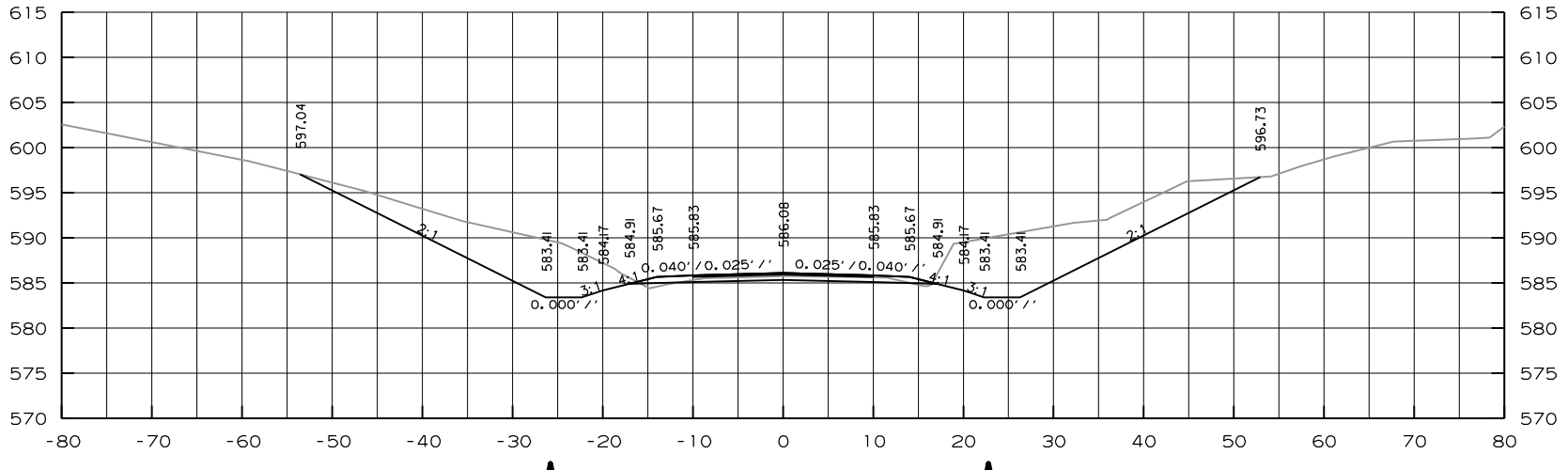


AREA CUT 284.56
AREA FILL 1.26

210+01.90

CUT VOLUME 20
FILL VOLUME 0

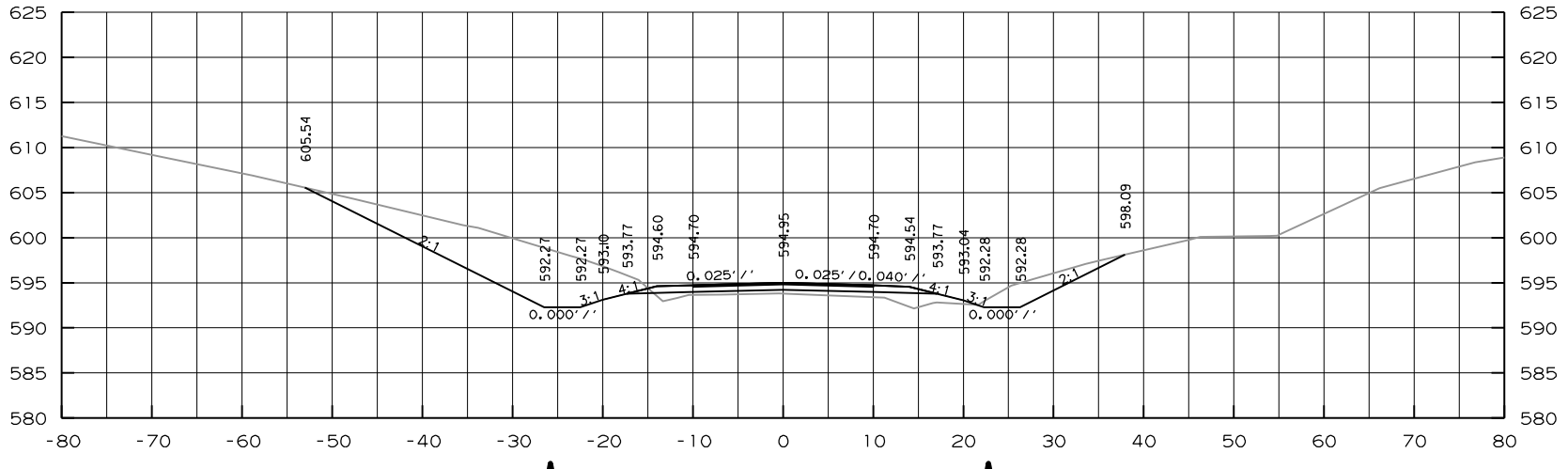
BEGIN SUPERELEVATION



AREA CUT 285.37
AREA FILL 1.68

210+00.00

CUT VOLUME 789
FILL VOLUME 40



AREA CUT 162.55
AREA FILL 21.14

209+04.86

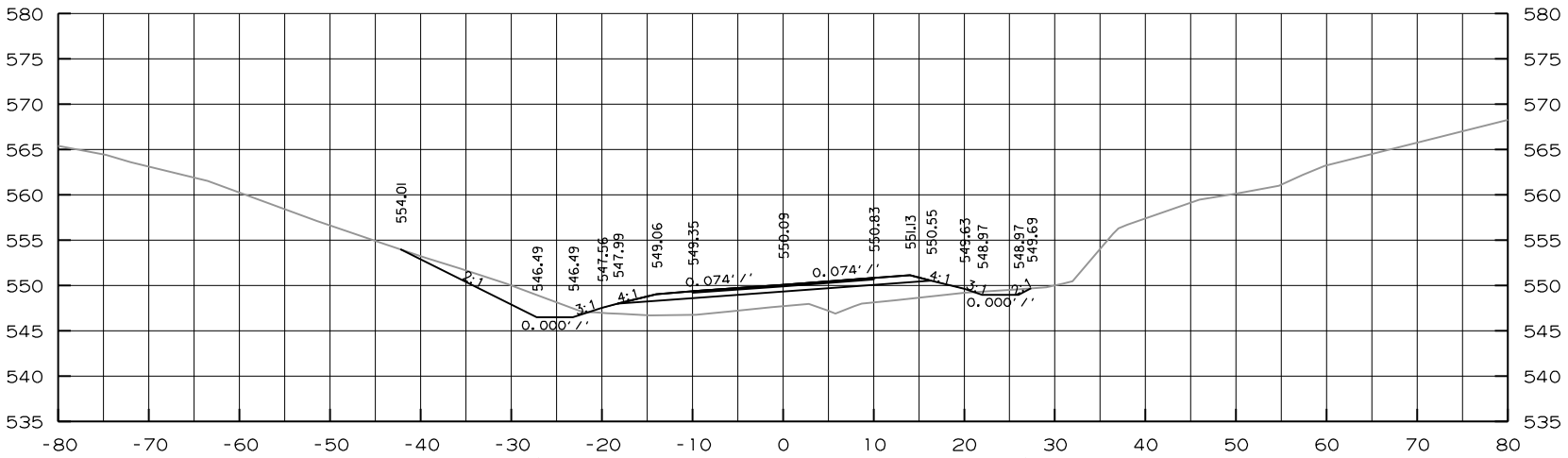
CUT VOLUME 29
FILL VOLUME 4

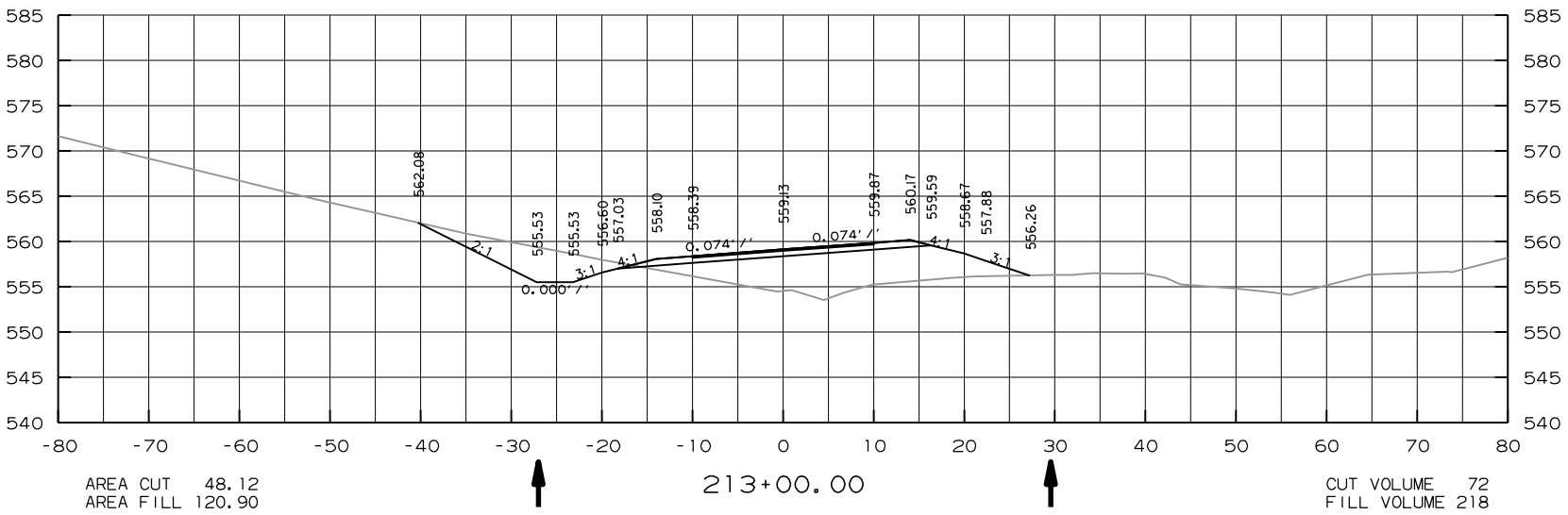
END SUPERELEVATION

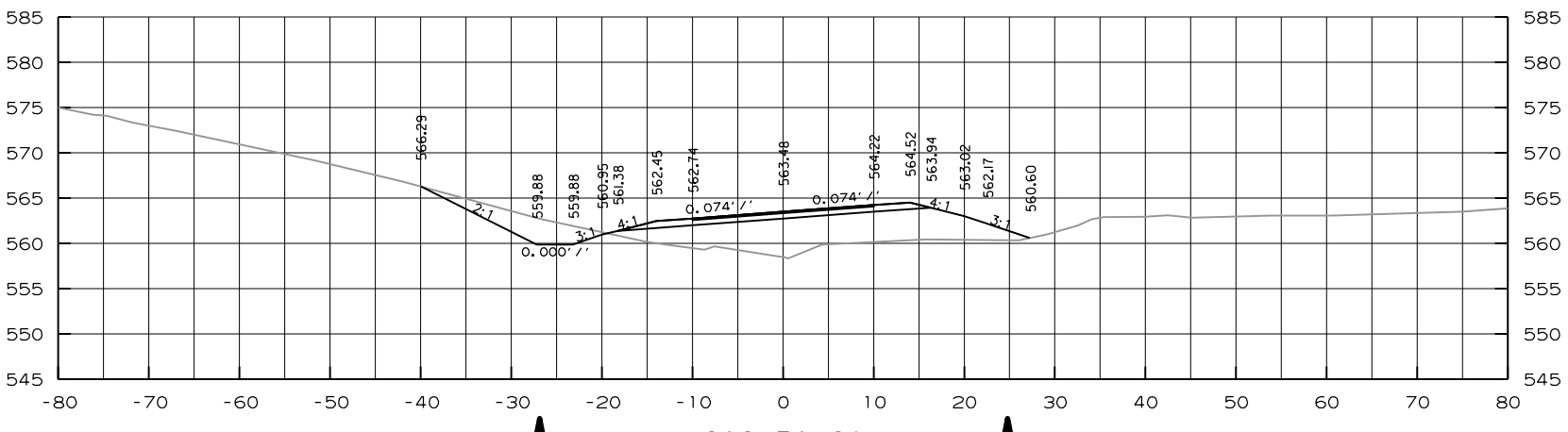
4 CROSS SECTIONS STA. 209+04.86 TO 211+00.00

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		49	72

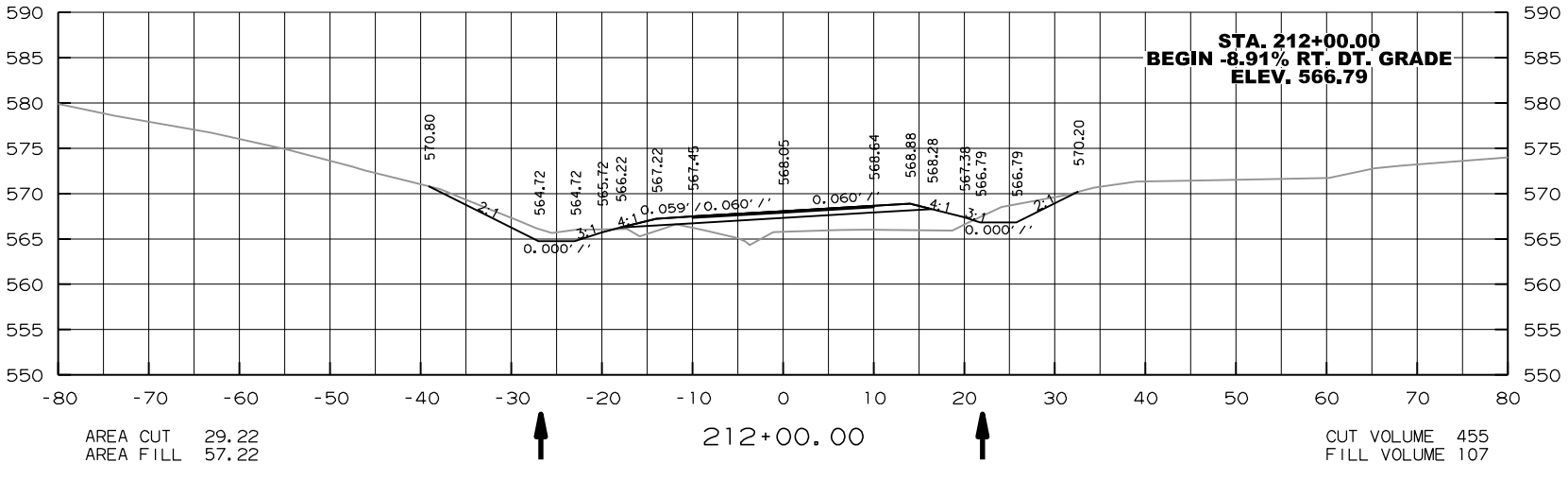
DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED







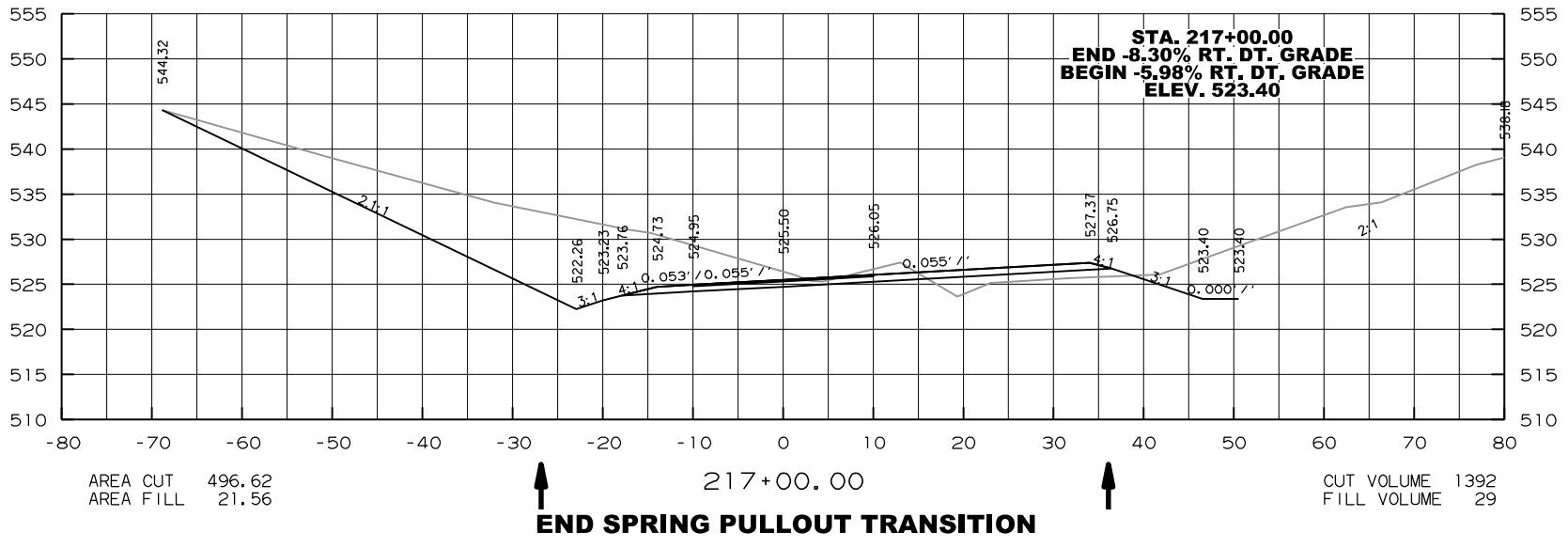
BEGIN FULL SUPERELEVATION



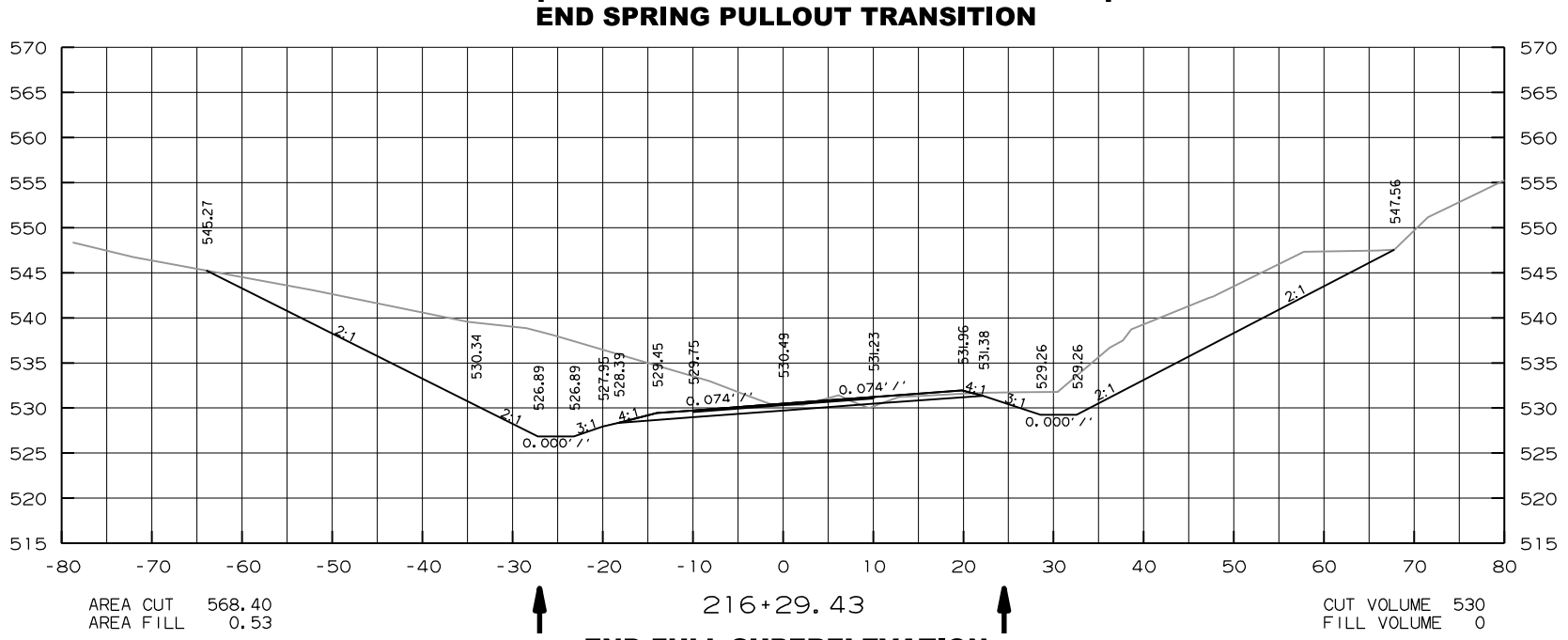
DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED

4 CROSS SECTIONS STA. 212+00.00 TO 214+00.00

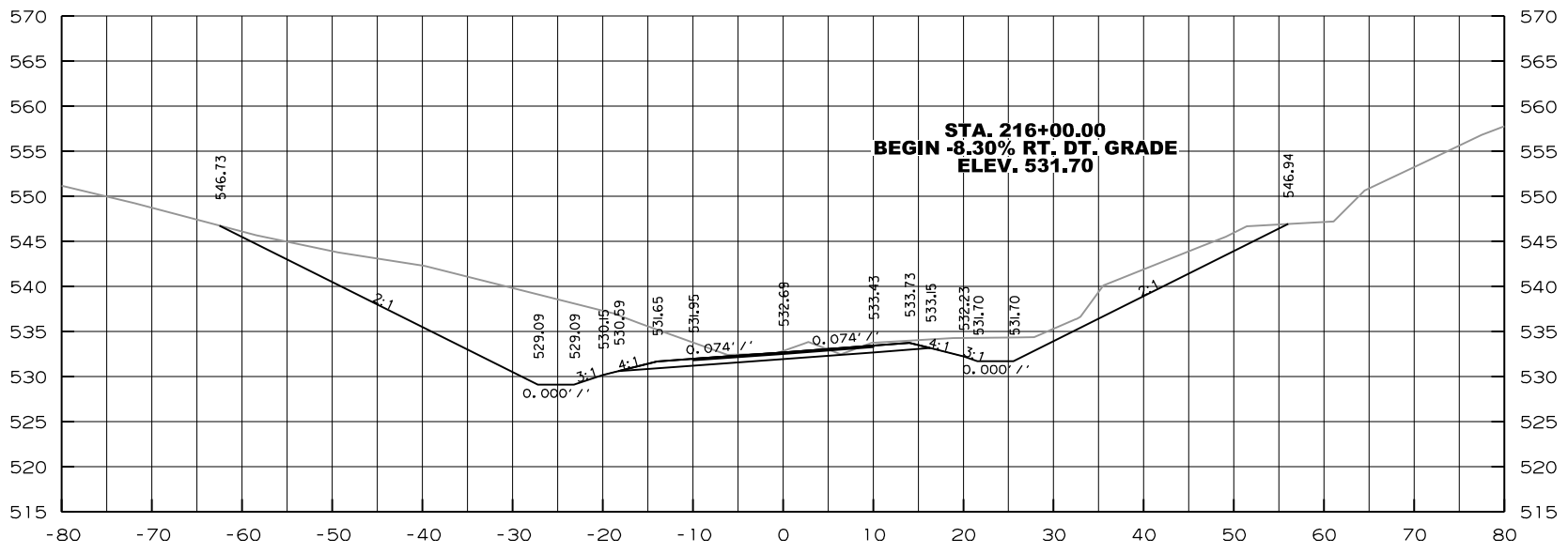
JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		50	72



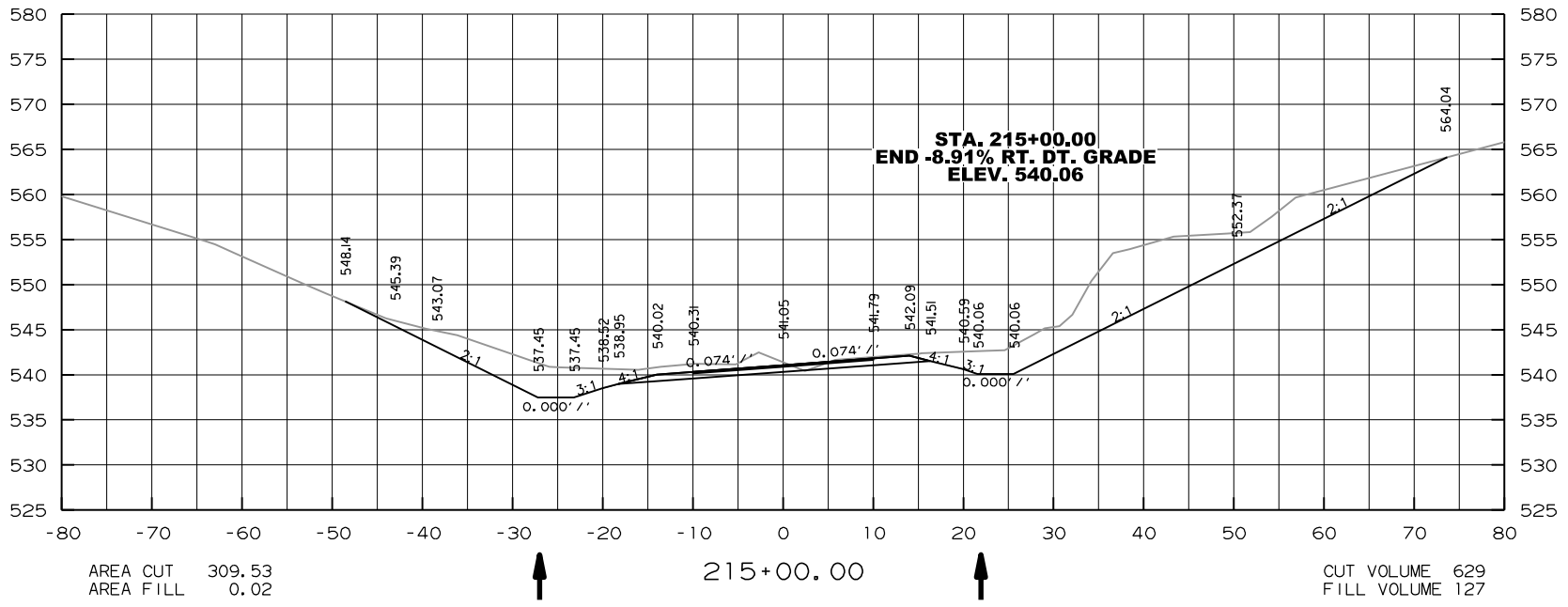
END SPRING PULLOUT TRANSITION



END FULL SUPERELEVATION



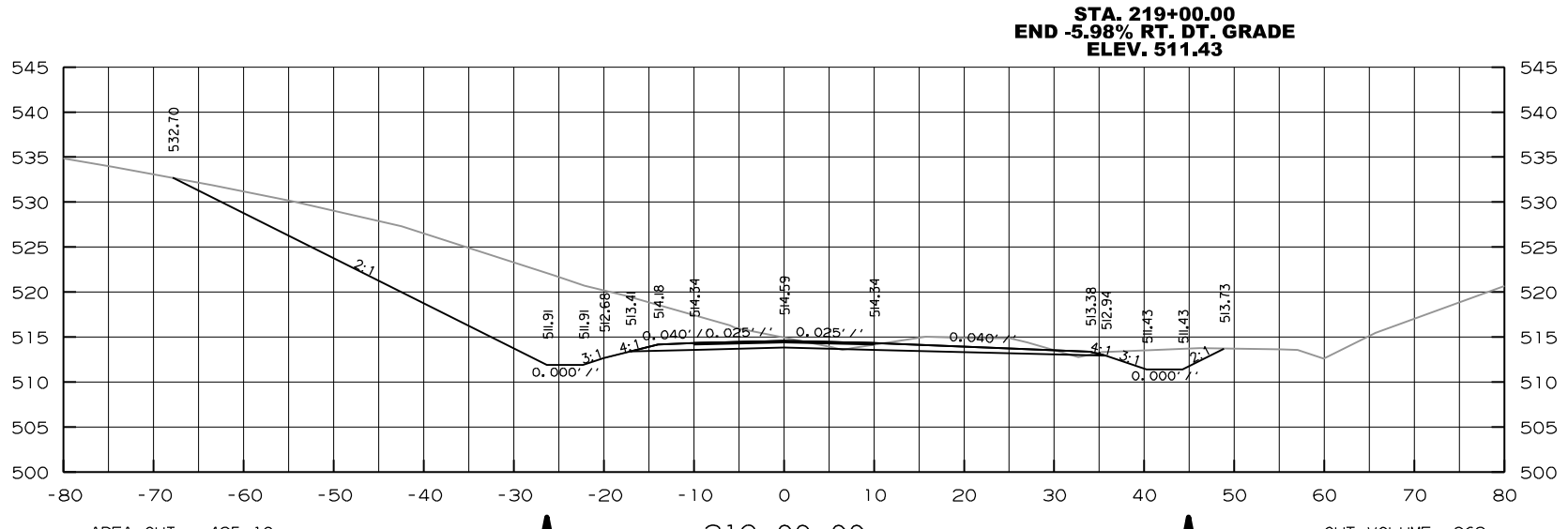
BEGIN SPRING PULLOUT TRANSITION

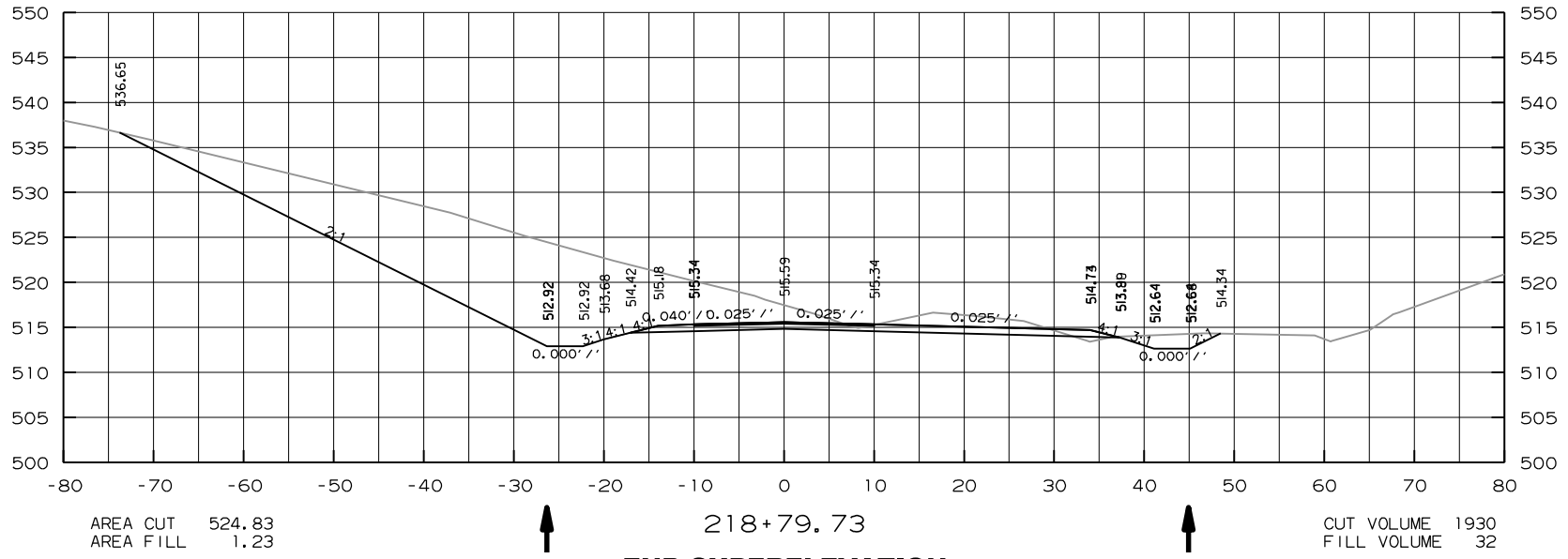


4 CROSS SECTIONS STA. 215+00.00 TO 217+00.00

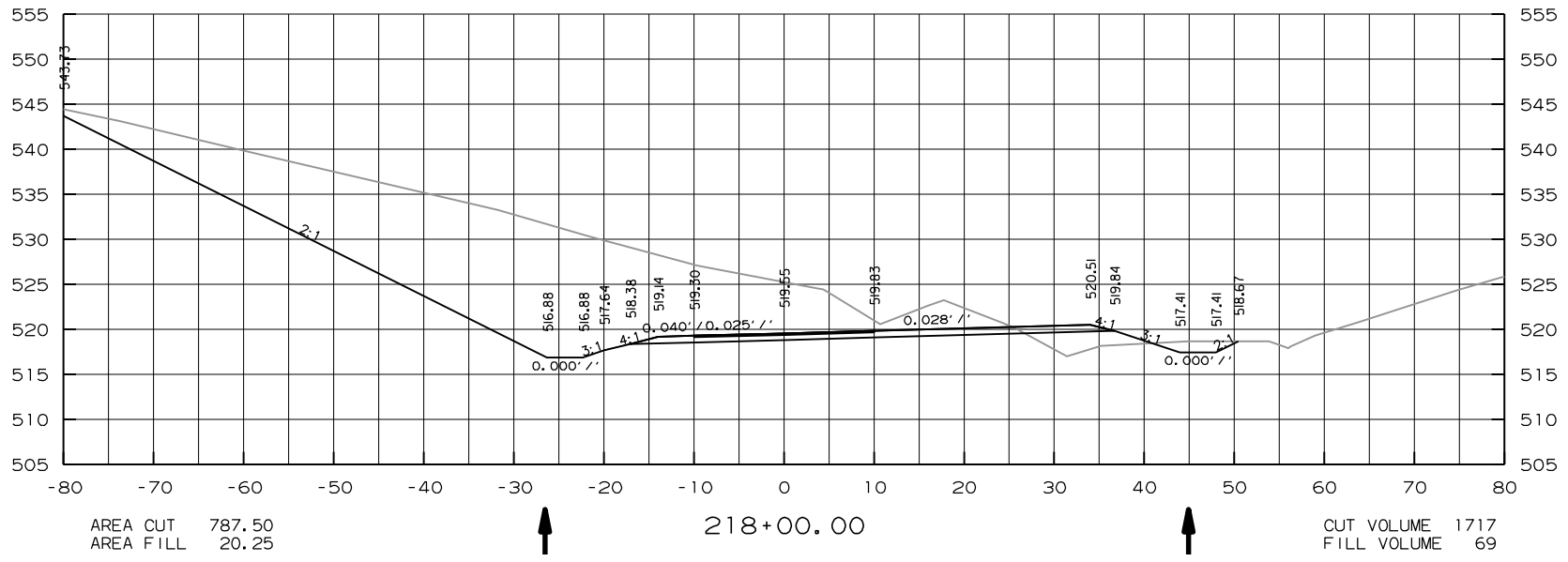
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		51	72

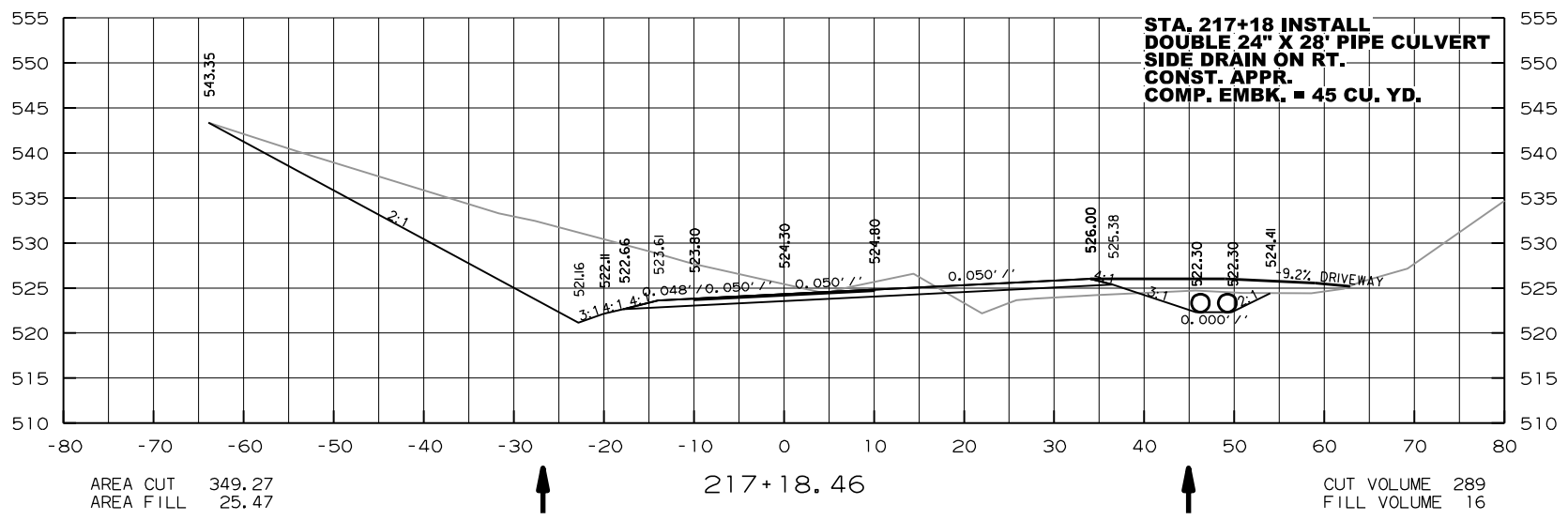
JOB NO. FA0314





END SUPERELEVATION

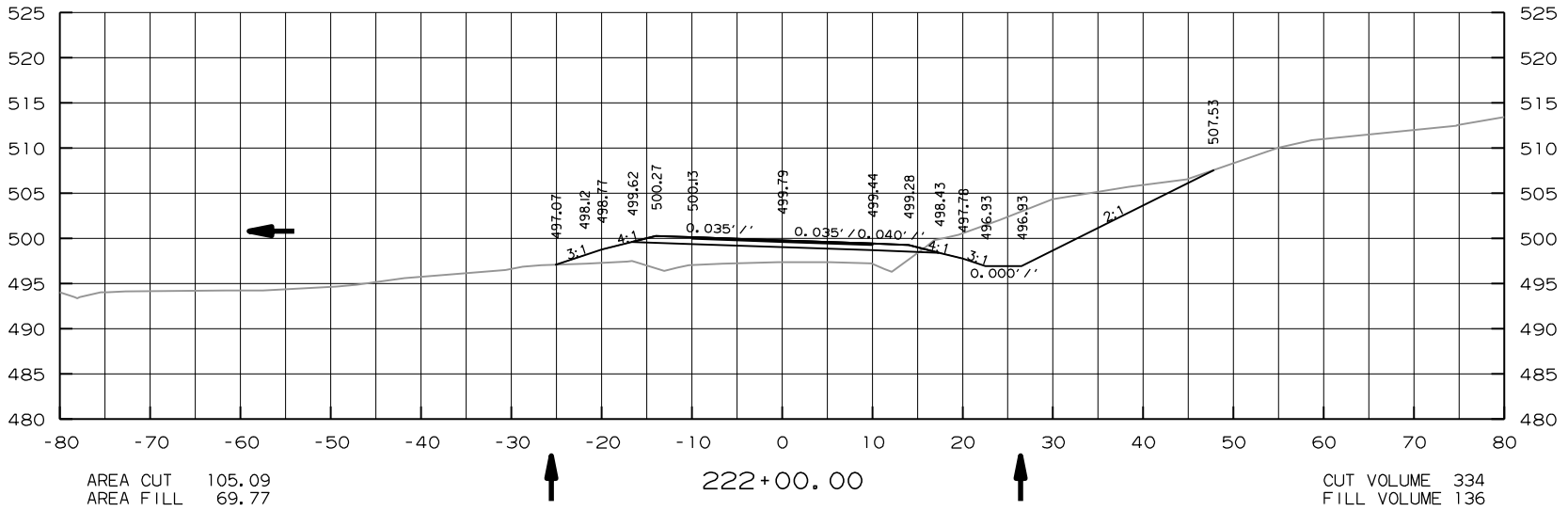




4 CROSS SECTIONS STA. 217+18.46 TO 219+00.00

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		52	72

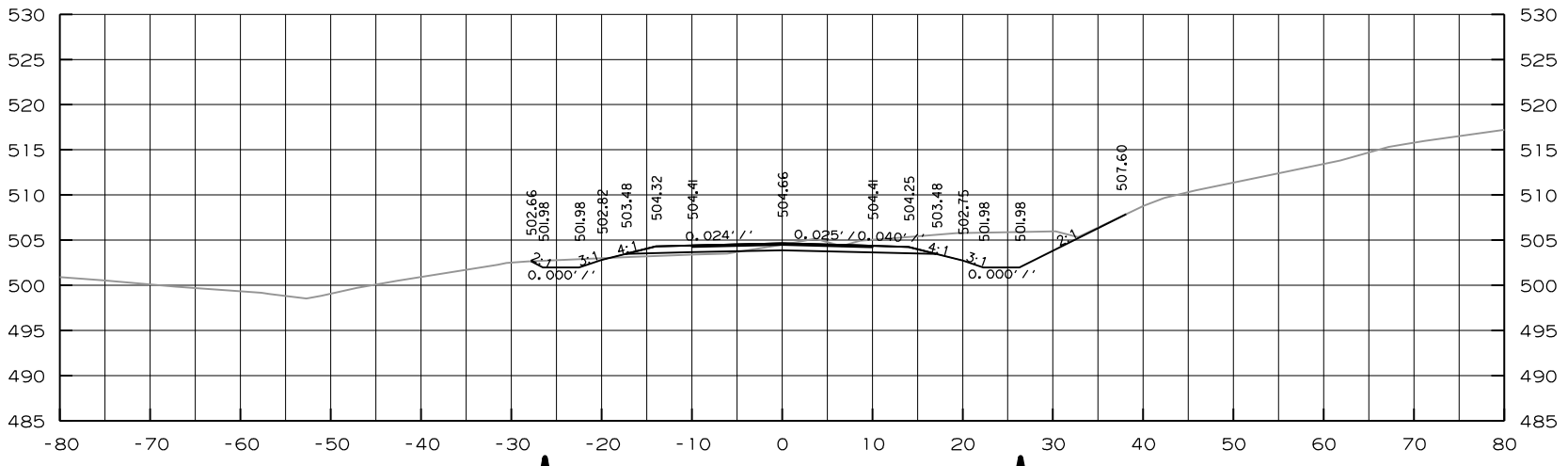
DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED



AREA CUT 105.09
AREA FILL 69.77

222+00.00

CUT VOLUME 334
FILL VOLUME 136

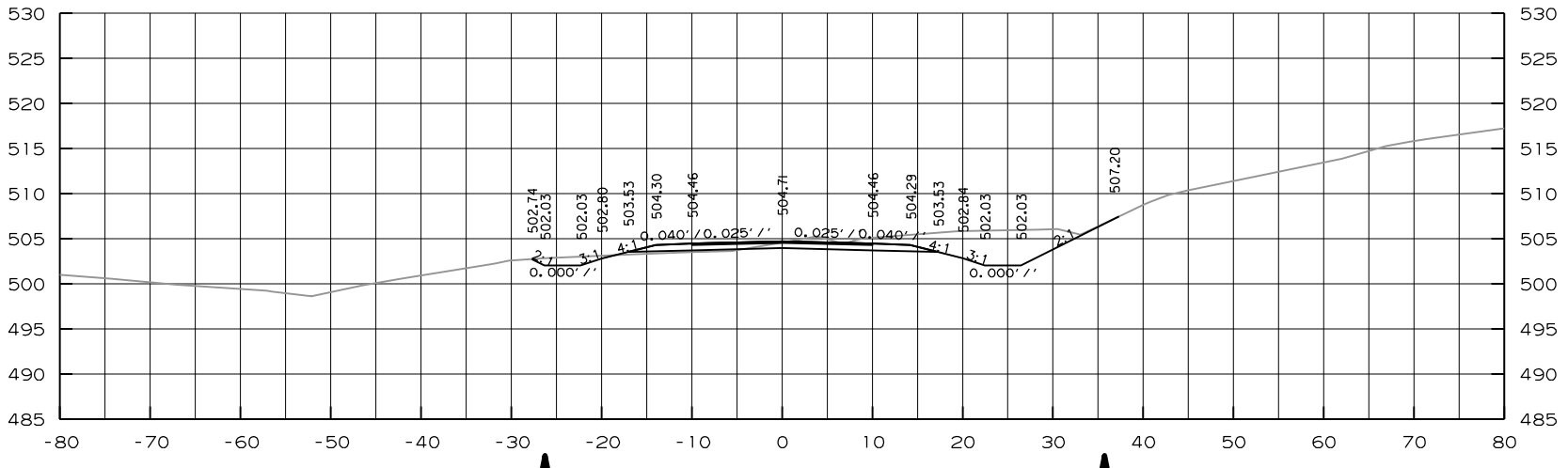


AREA CUT 75.00
AREA FILL 3.82

221+00.00

CUT VOLUME 3
FILL VOLUME 0

END SPRING PULLOUT TRANSITION

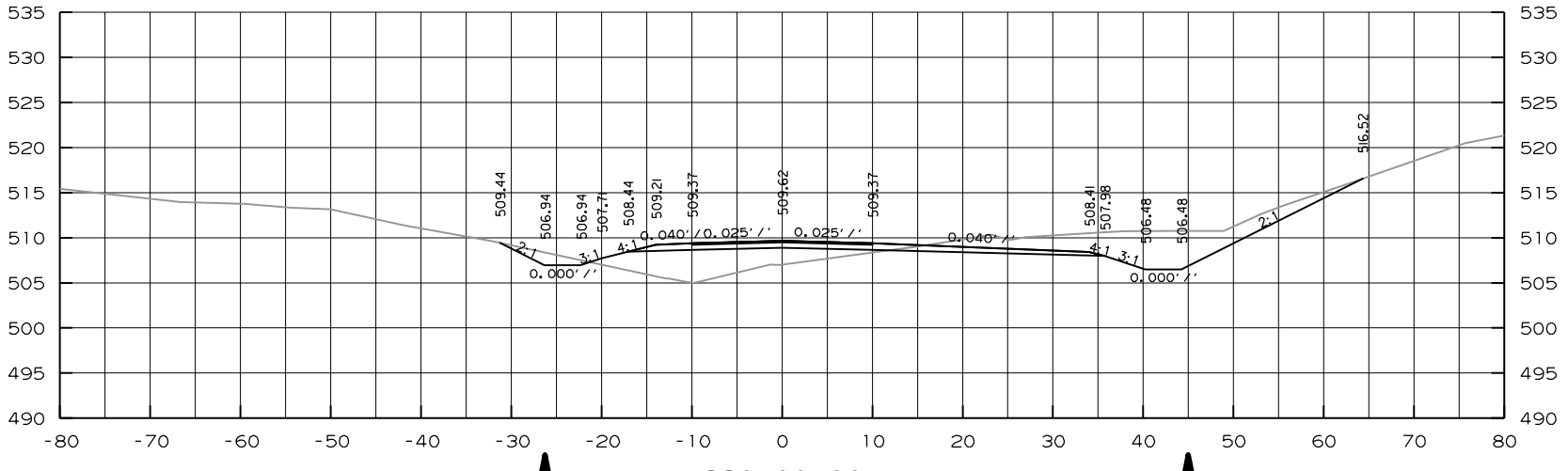


AREA CUT 76.49
AREA FILL 2.89

220+98.94

CUT VOLUME 341
FILL VOLUME 119

BEGIN SUPERELEVATION



AREA CUT 109.63
AREA FILL 62.17

220+00.00

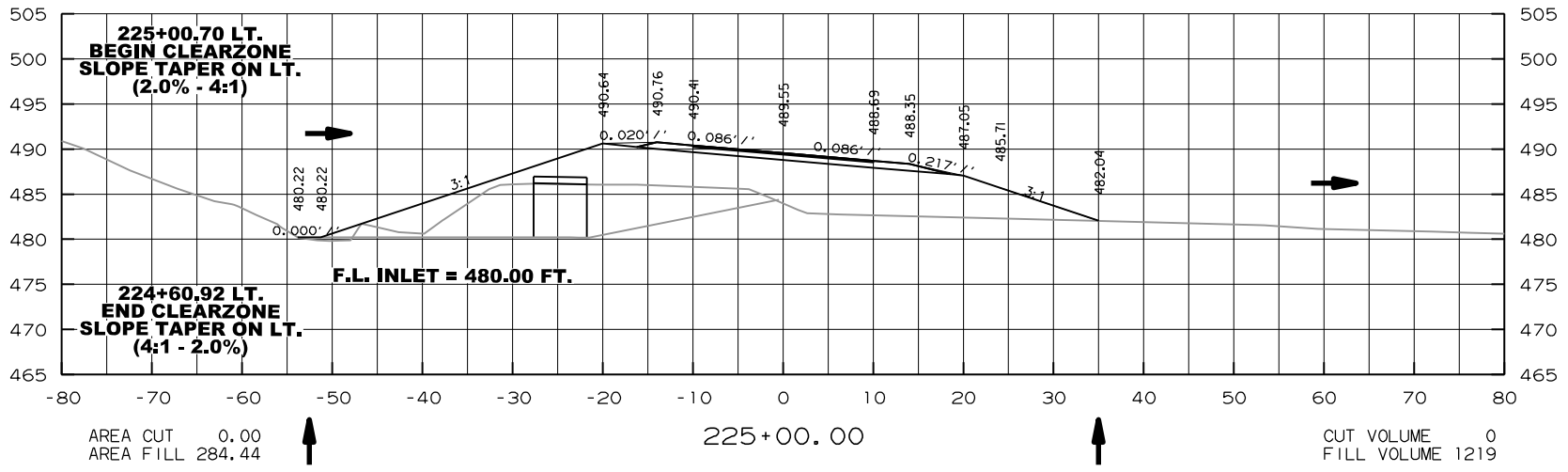
CUT VOLUME 990
FILL VOLUME 116

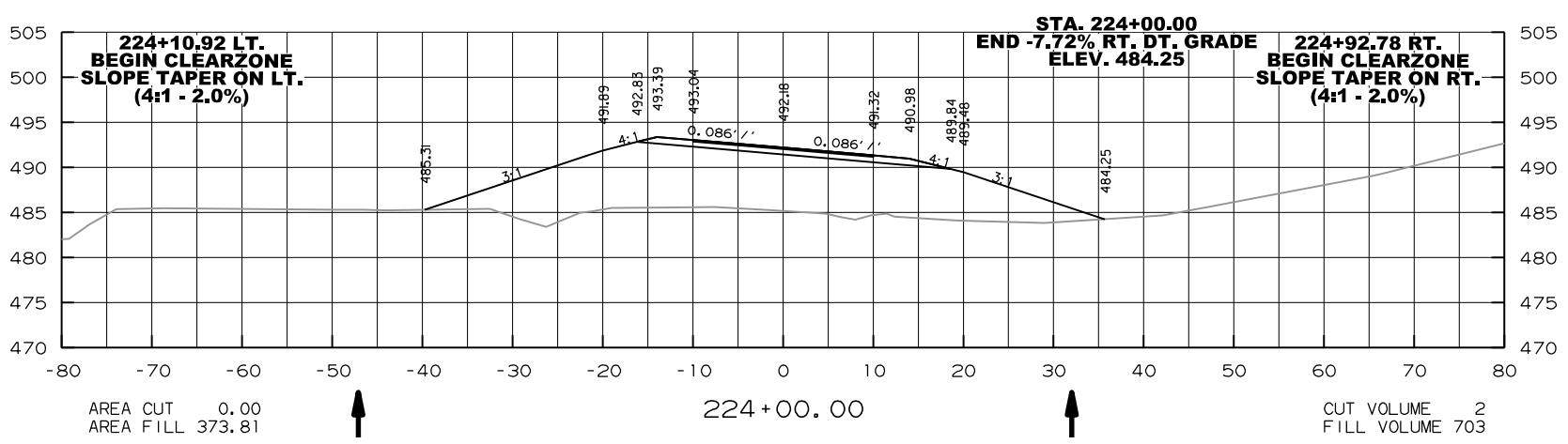
BEGIN SPRING PULLOUT TRANSITION

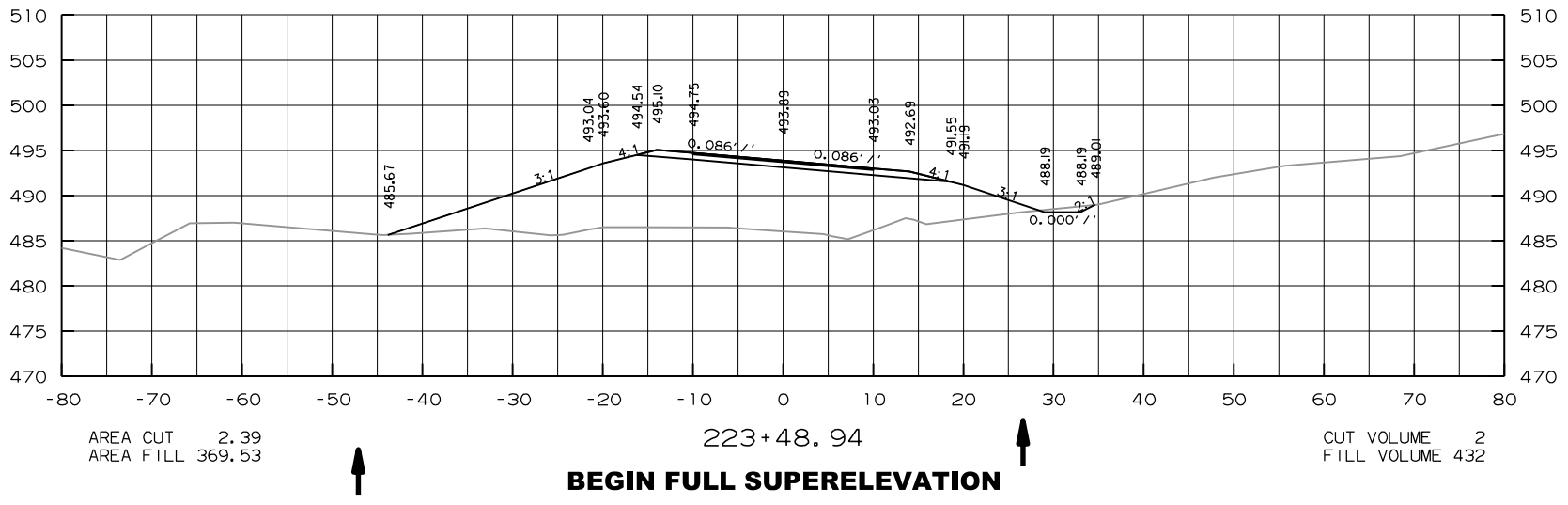
4 CROSS SECTIONS STA. 220+00.00 TO 222+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		53	72

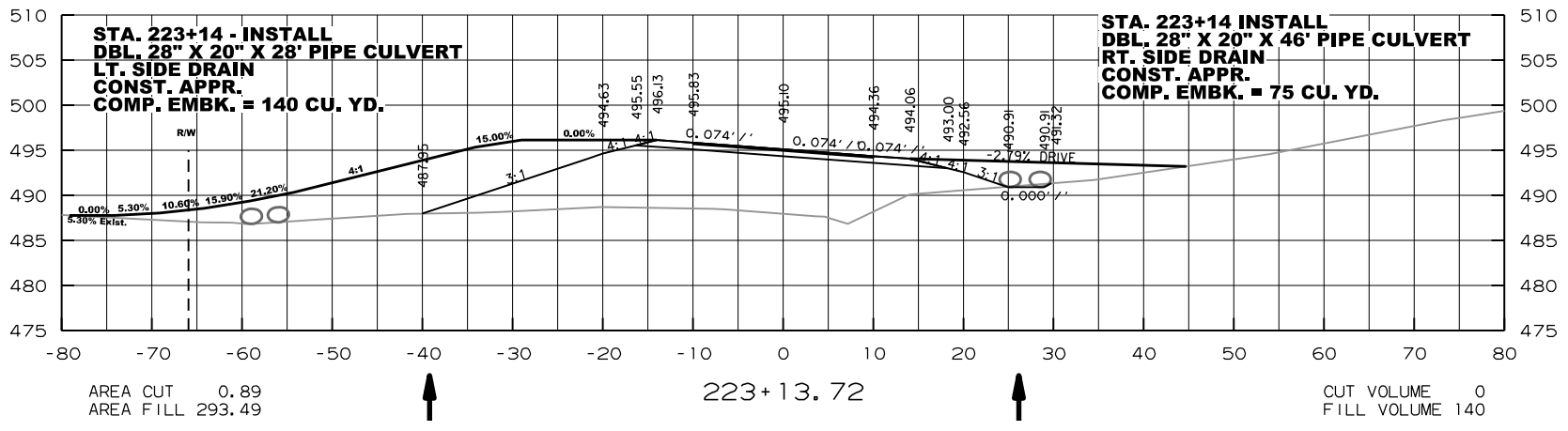
JOB NO. FA0314

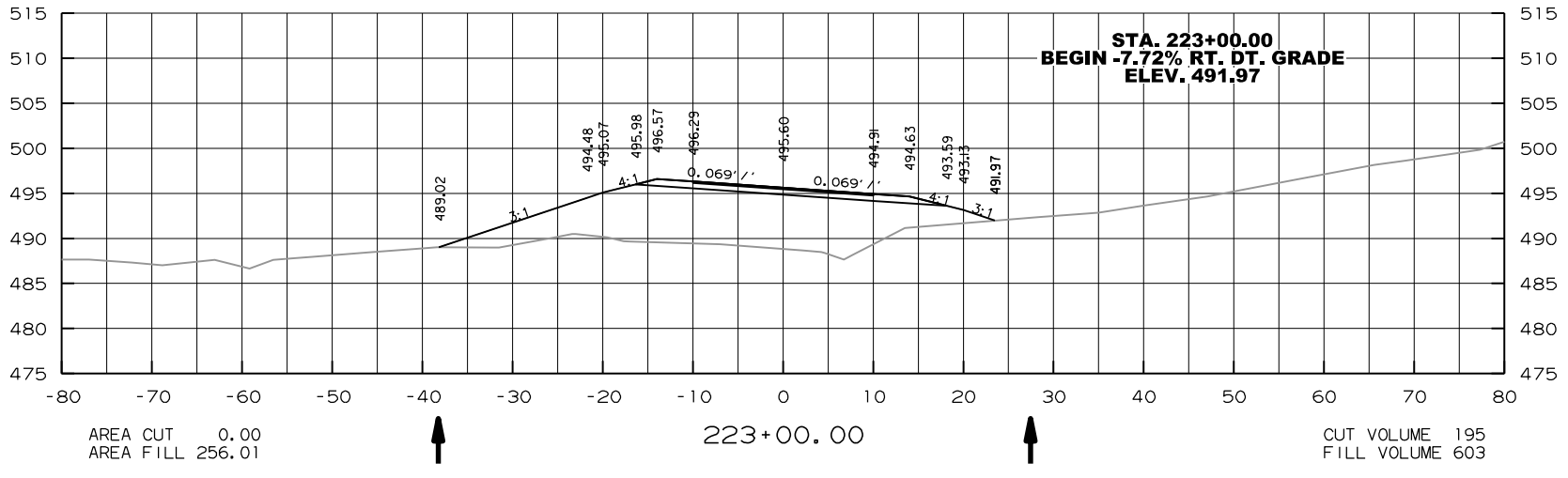






BEGIN FULL SUPERELEVATION





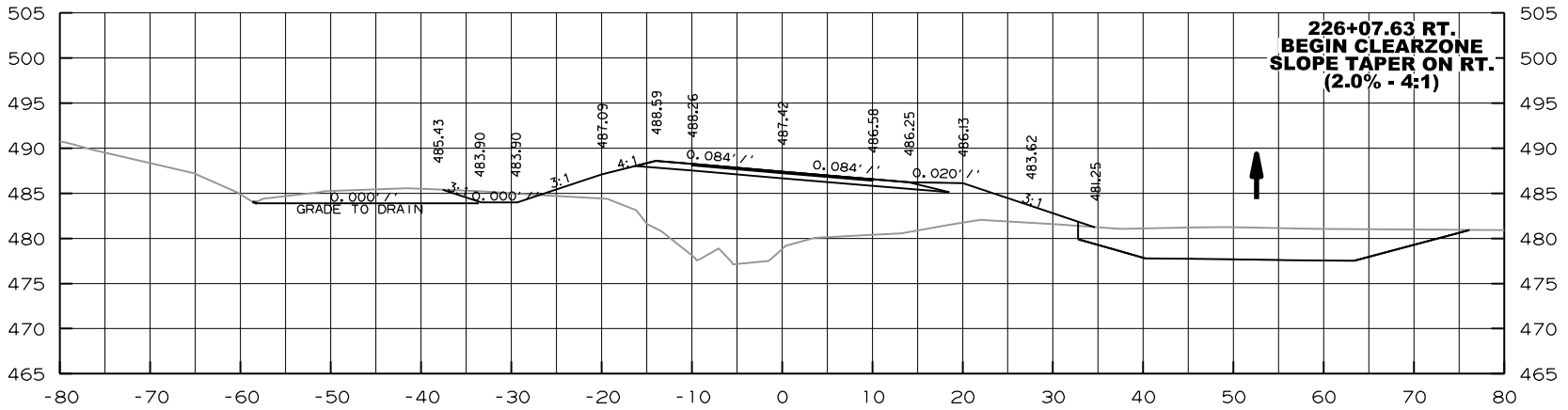
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		54	72

JOB NO. FA0314

4 CROSS SECTIONS STA. 223+00.00 TO 225+00.00

STA. 226+30.00
END 0.00% RT. DT. GRADE
ELEV. 476.60

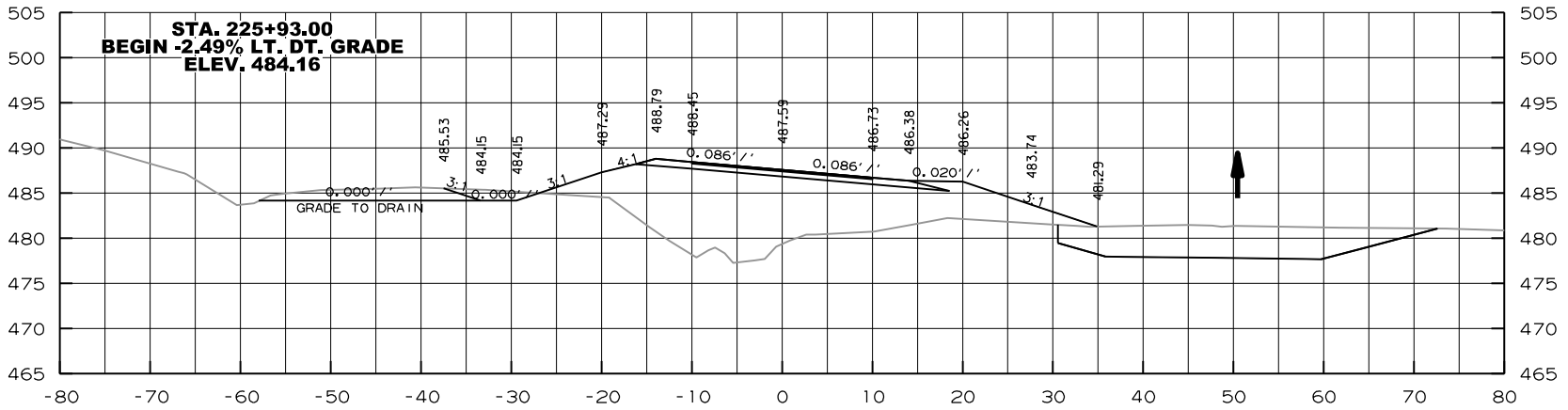
226+57.63 RT.
END CLEARZONE
SLOPE TAPER ON RT.
(2.0% - 4:1)



AREA CUT 38.35
AREA FILL 301.42

226+00.00

CUT VOLUME 9
FILL VOLUME 75

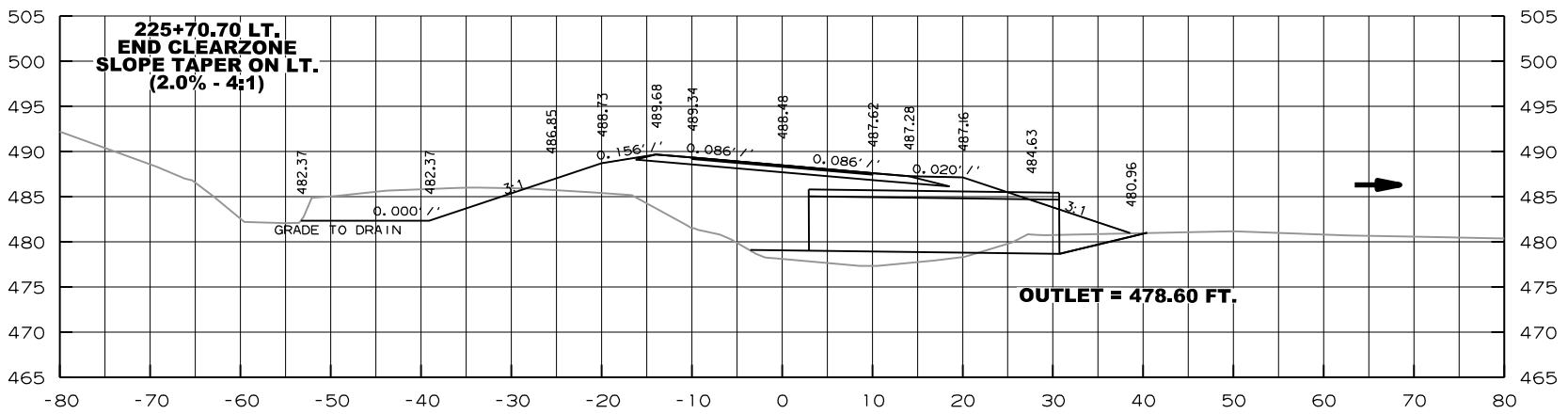


AREA CUT 34.75
AREA FILL 300.27

225+93.23

CUT VOLUME 75
FILL VOLUME 553

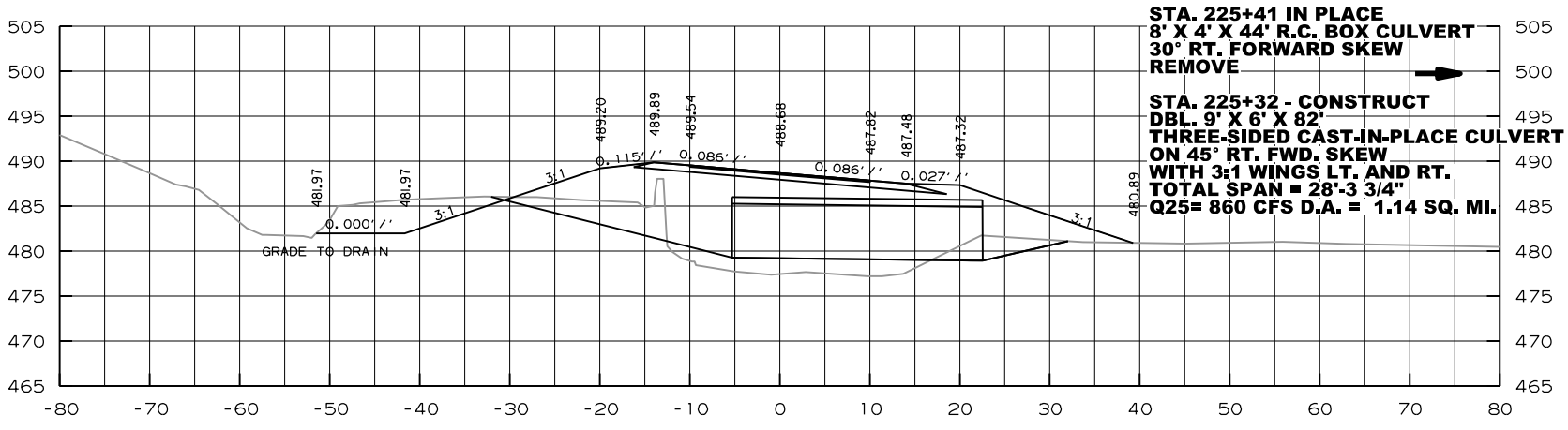
END FULL SUPERELEVATION



AREA CUT 60.50
AREA FILL 403.93

225+50.82

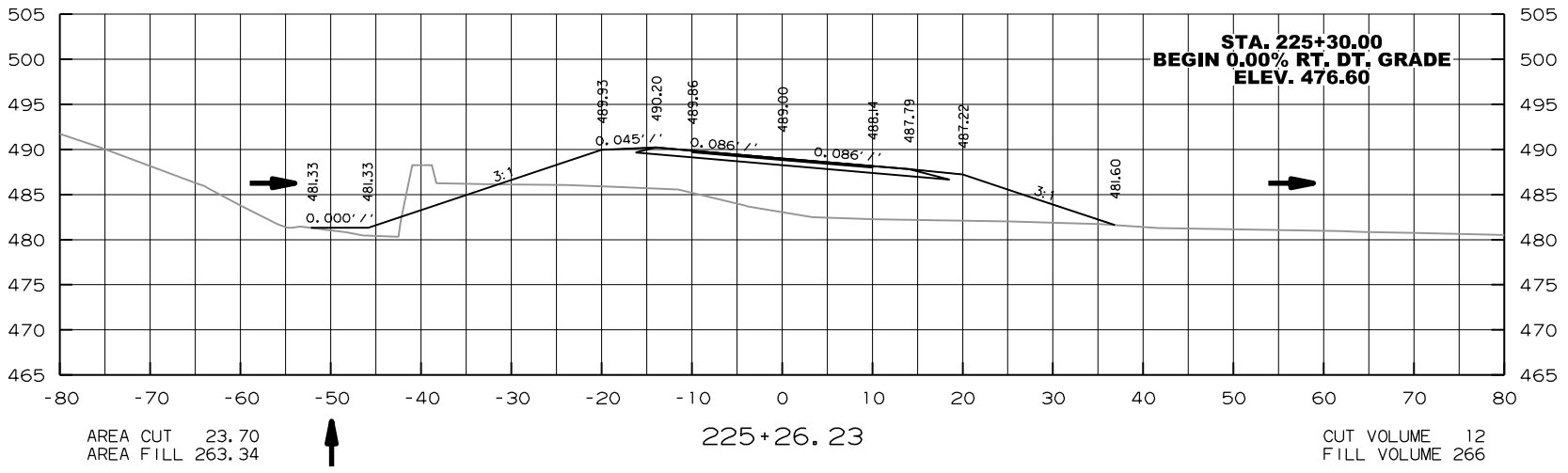
CUT VOLUME 20
FILL VOLUME 145



AREA CUT 51.74
AREA FILL 416.30

225+41.30

CUT VOLUME 21
FILL VOLUME 190



AREA CUT 23.70
AREA FILL 263.34

225+26.23

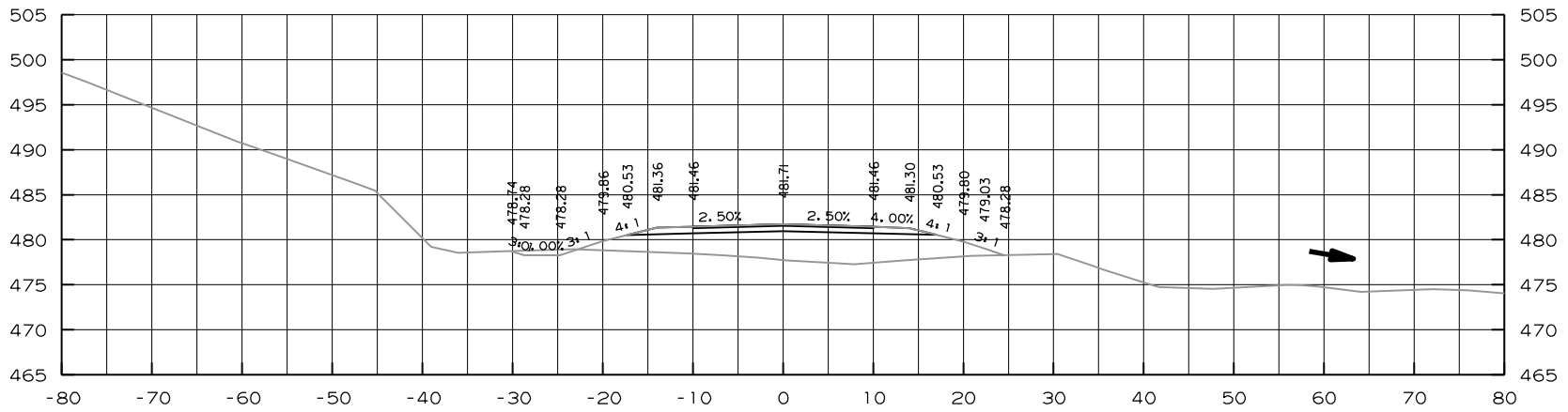
CUT VOLUME 12
FILL VOLUME 266

CROSS SECTIONS STA. 225+26.23 TO 226+00.00

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		55	72

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

4

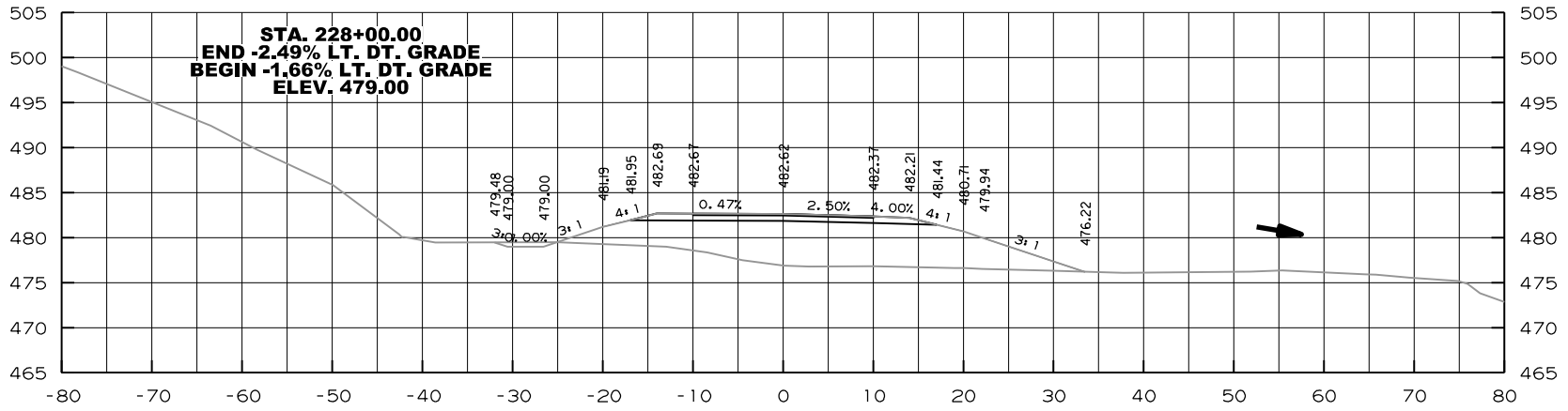


AREA CUT 3.27
AREA FILL 111.02

228+43.23

END SUPERELEVATION

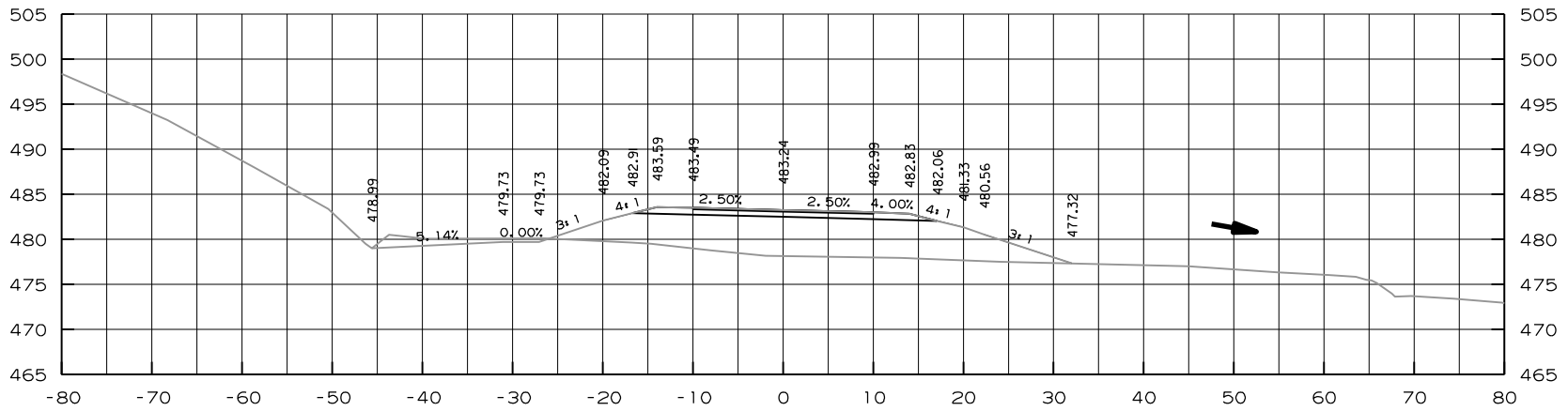
CUT VOLUME 5
FILL VOLUME 248



AREA CUT 2.66
AREA FILL 198.43

228+00.00

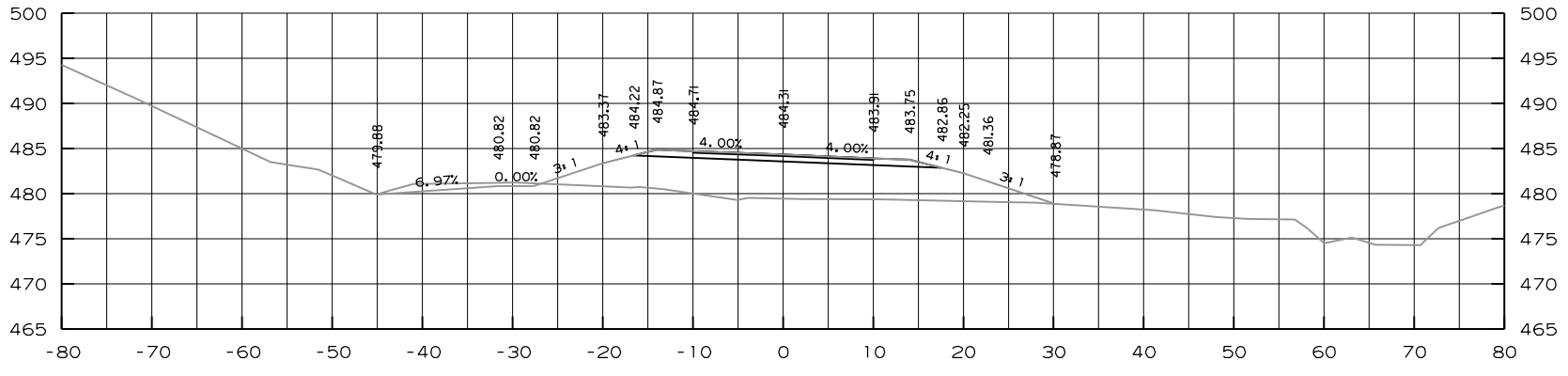
CUT VOLUME 8
FILL VOLUME 210



AREA CUT 12.47
AREA FILL 187.57

227+70.56

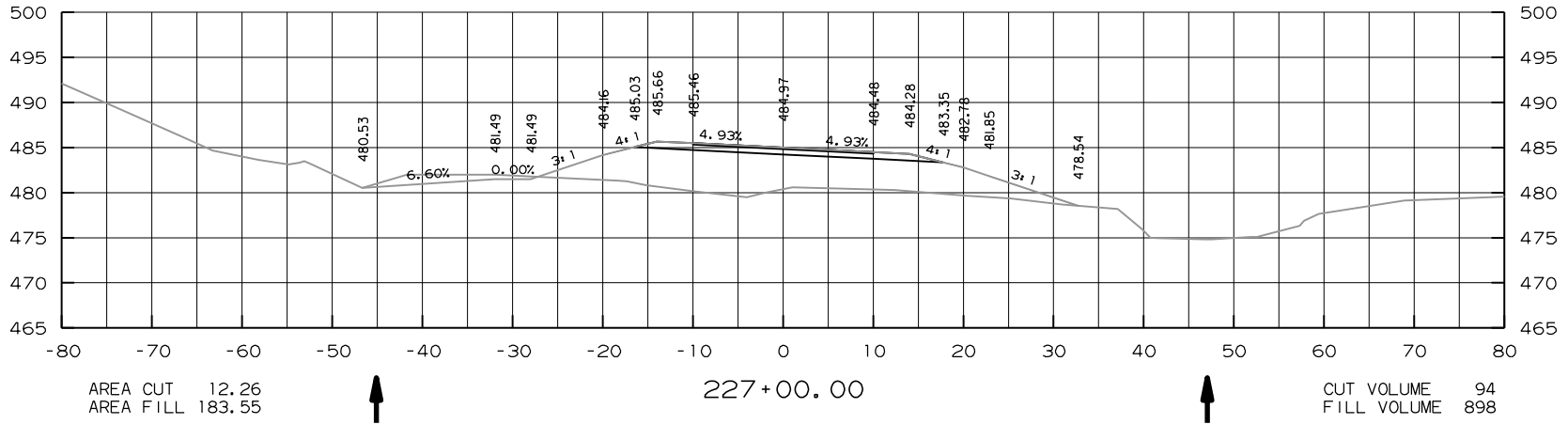
CUT VOLUME 18
FILL VOLUME 294



AREA CUT 9.45
AREA FILL 176.50

227+26.95

CUT VOLUME 11
FILL VOLUME 180



AREA CUT 12.26
AREA FILL 183.55

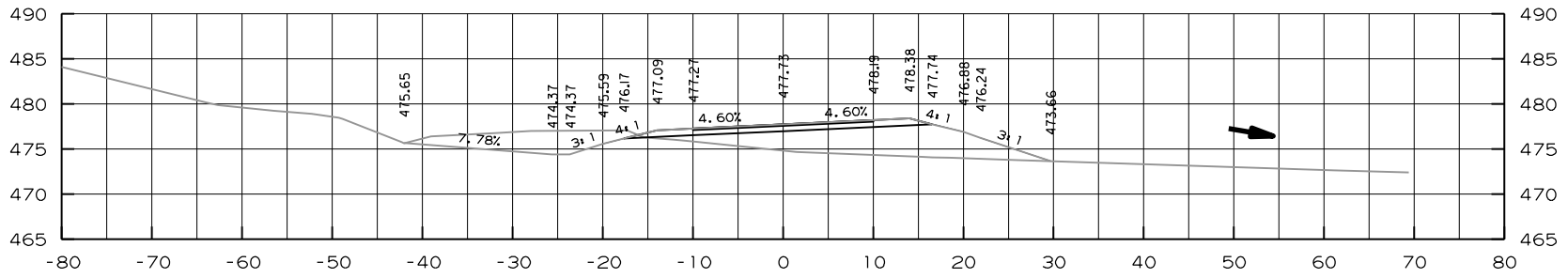
227+00.00

CUT VOLUME 94
FILL VOLUME 898

4 CROSS SECTIONS STA. 227+00.00 TO 228+43.23

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		56	72

JOB NO. FA0314

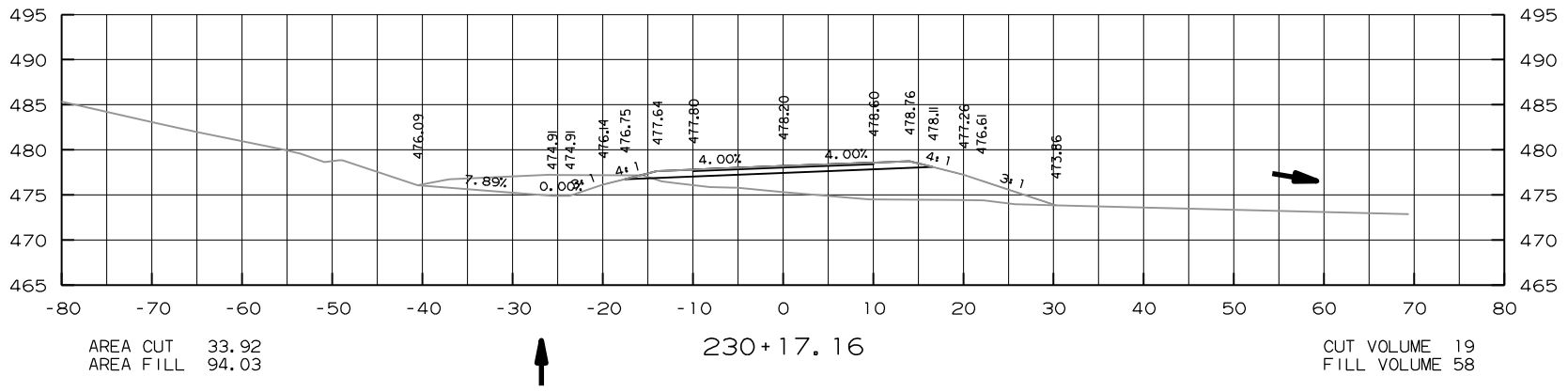


AREA CUT 42.88
AREA FILL 90.09

230+43.25

CUT VOLUME 37
FILL VOLUME 89

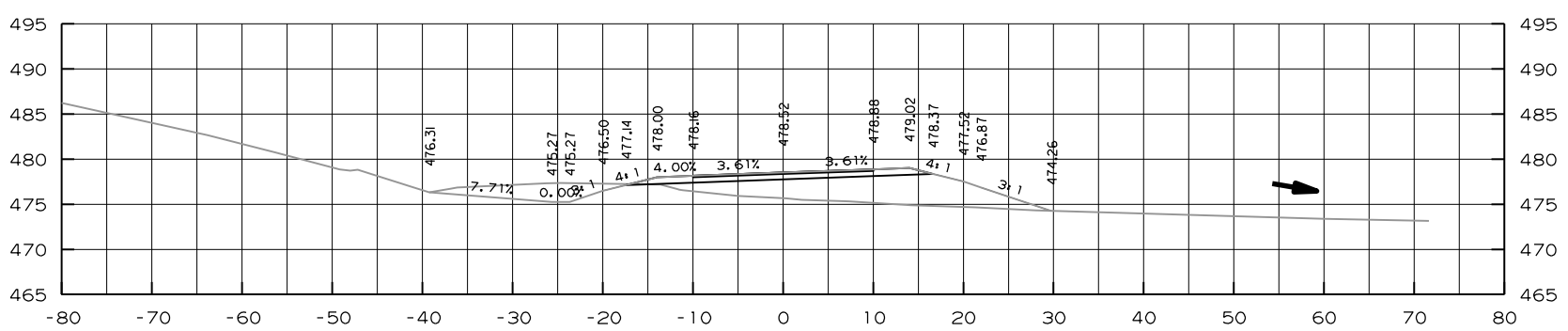
BEGIN FULL SUPERELEVATION



AREA CUT 33.92
AREA FILL 94.03

230+17.16

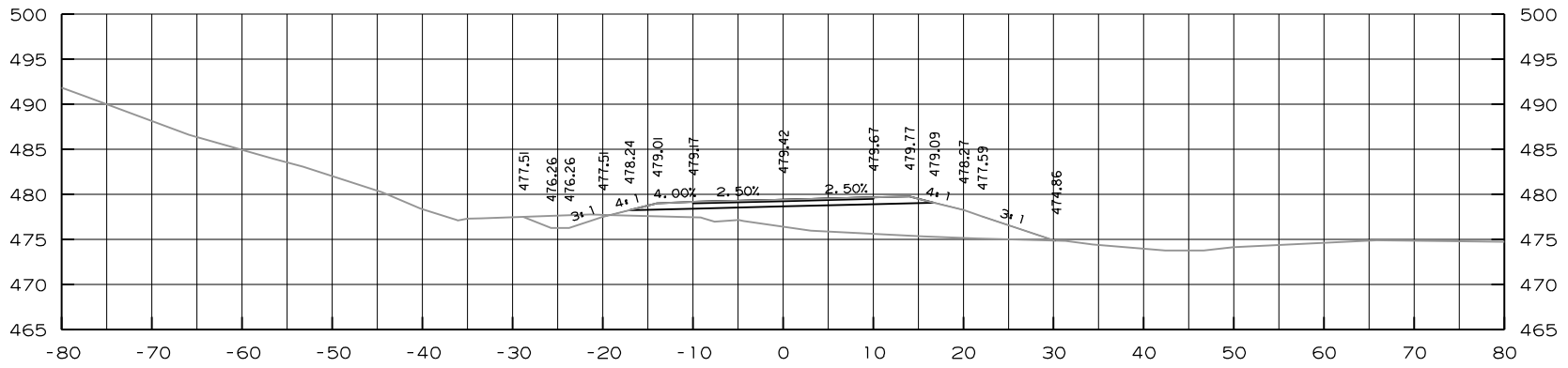
CUT VOLUME 19
FILL VOLUME 58



AREA CUT 27.06
AREA FILL 89.75

230+00.00

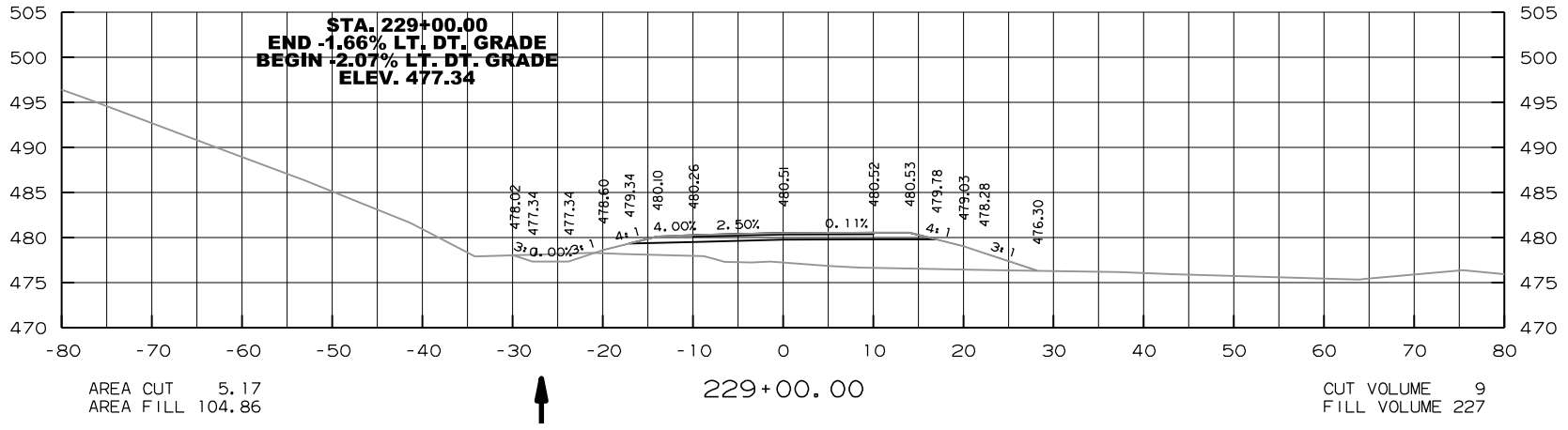
CUT VOLUME 31
FILL VOLUME 170



AREA CUT 8.25
AREA FILL 101.37

229+51.95

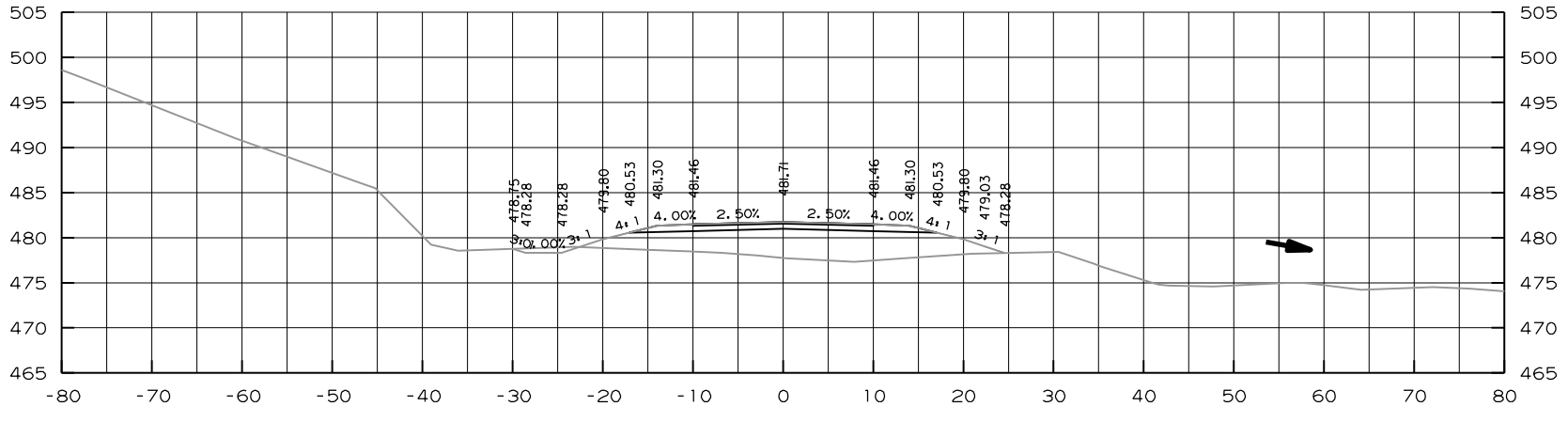
CUT VOLUME 13
FILL VOLUME 198



AREA CUT 5.17
AREA FILL 104.86

229+00.00

CUT VOLUME 9
FILL VOLUME 227



AREA CUT 3.31
AREA FILL 110.69

228+43.25

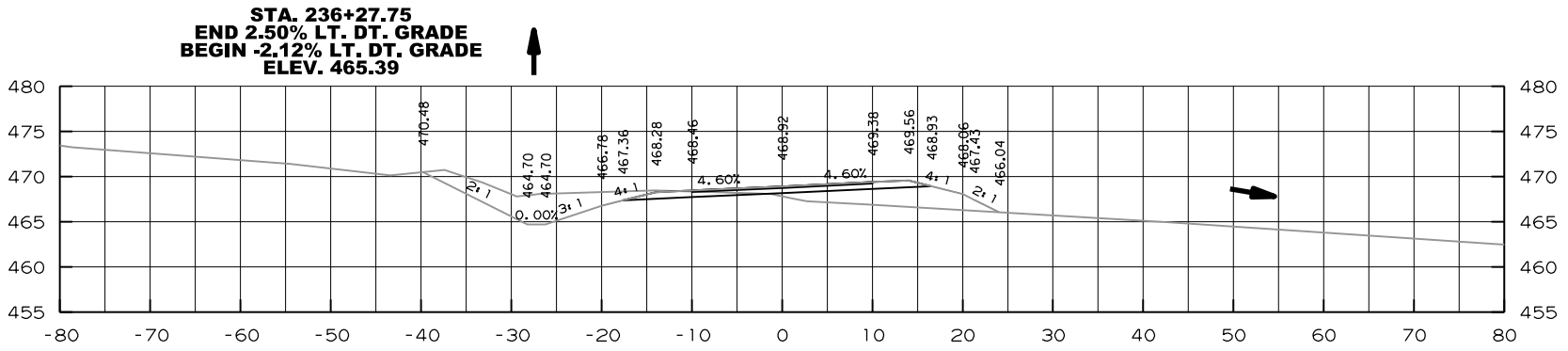
CUT VOLUME 0
FILL VOLUME 0

BEGIN SUPERELEVATION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		57	72

JOB NO. FA0314

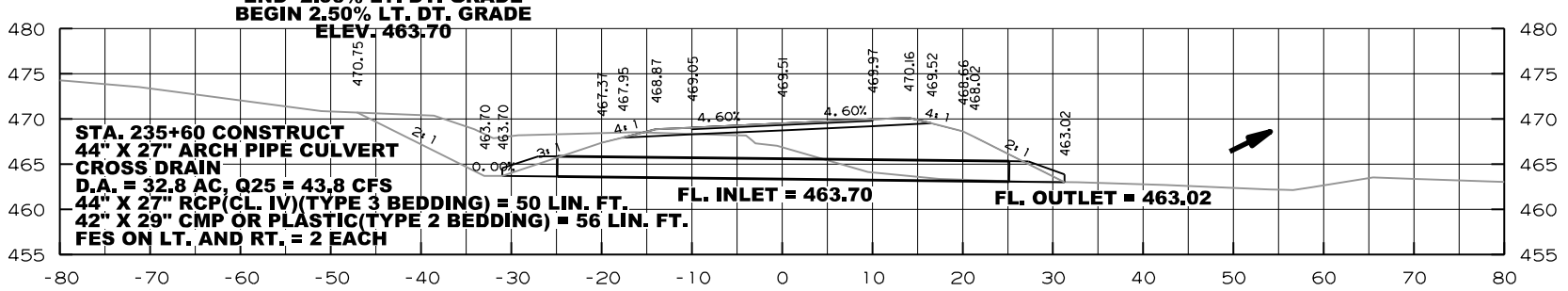
4 CROSS SECTIONS STA. 228+43.25 TO 230+43.25



AREA CUT 55.59
AREA FILL 36.98

236+00.00

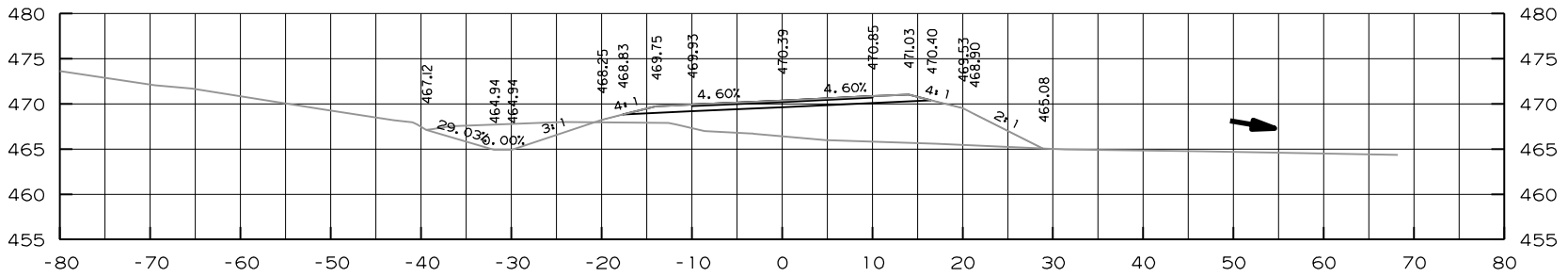
CUT VOLUME 104
FILL VOLUME 123



AREA CUT 84.55
AREA FILL 128.78

235+60.00

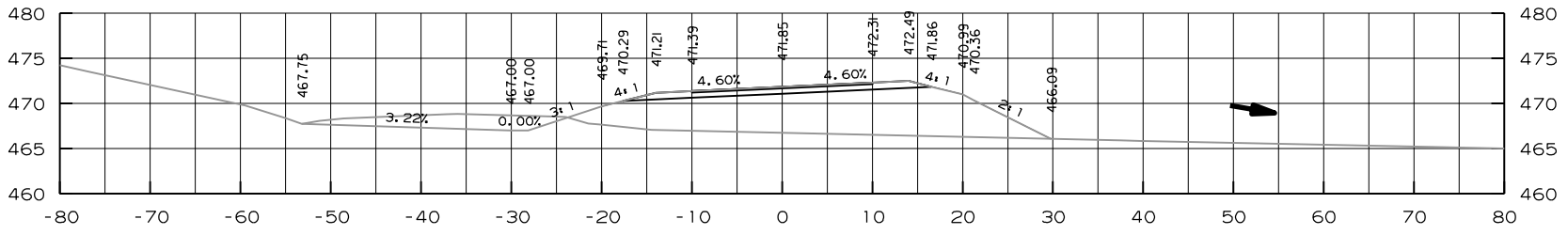
CUT VOLUME 128
FILL VOLUME 296



AREA CUT 30.27
AREA FILL 137.40

235+00.00

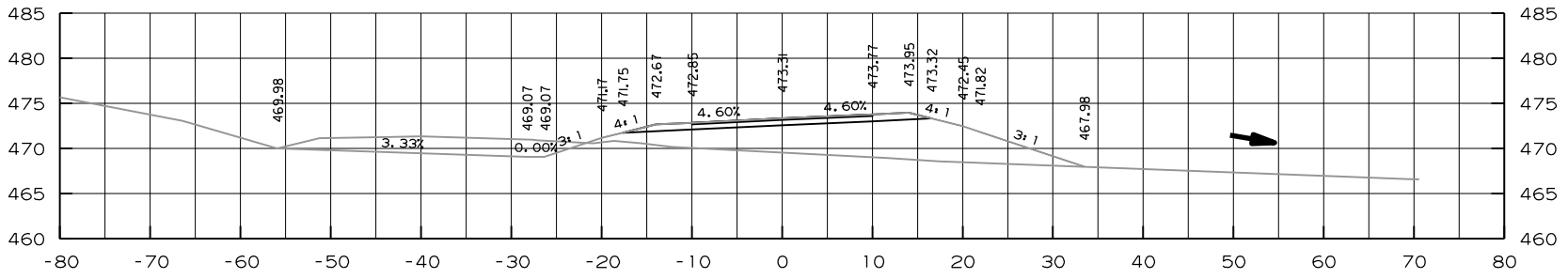
CUT VOLUME 119
FILL VOLUME 620



AREA CUT 34.23
AREA FILL 197.34

234+00.00

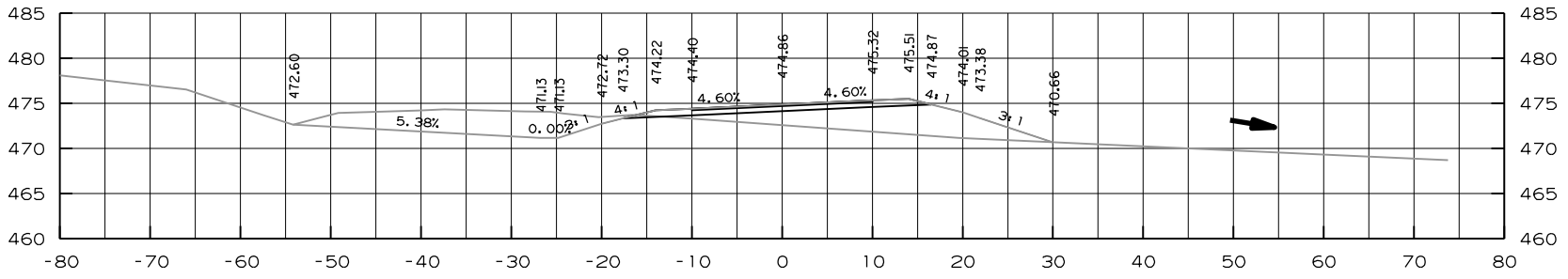
CUT VOLUME 158
FILL VOLUME 632



AREA CUT 50.96
AREA FILL 144.19

233+00.00

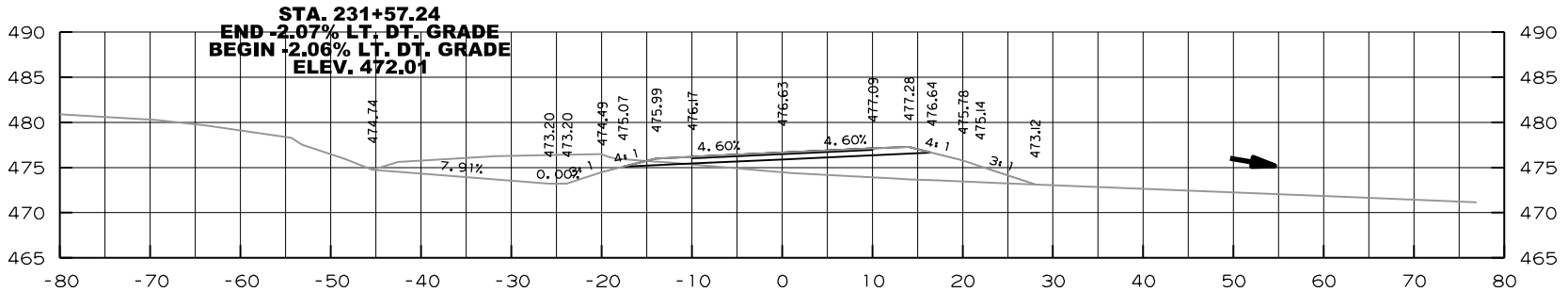
CUT VOLUME 232
FILL VOLUME 411



AREA CUT 74.33
AREA FILL 77.50

232+00.00

CUT VOLUME 250
FILL VOLUME 262



AREA CUT 60.69
AREA FILL 63.75

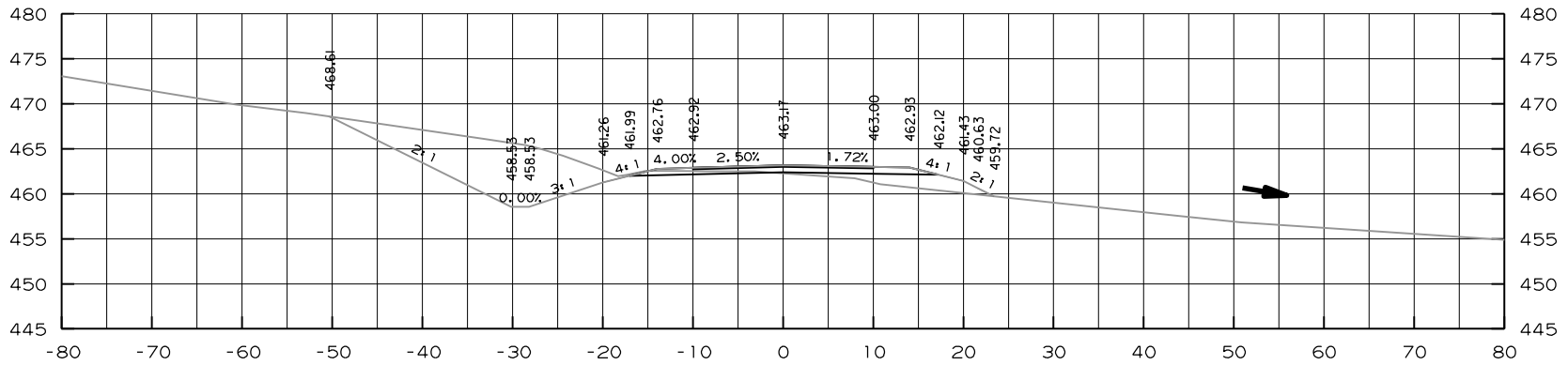
231+00.00

CUT VOLUME 109
FILL VOLUME 162

4 CROSS SECTIONS STA. 231+00.00 TO 236+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		58	72

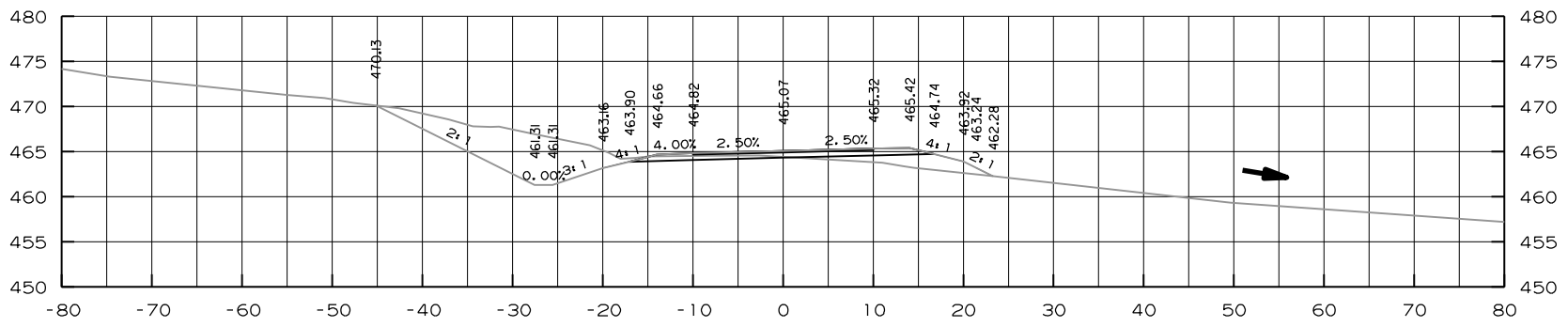
JOB NO. FA0314



AREA CUT 126.26
AREA FILL 21.46

239+00.00

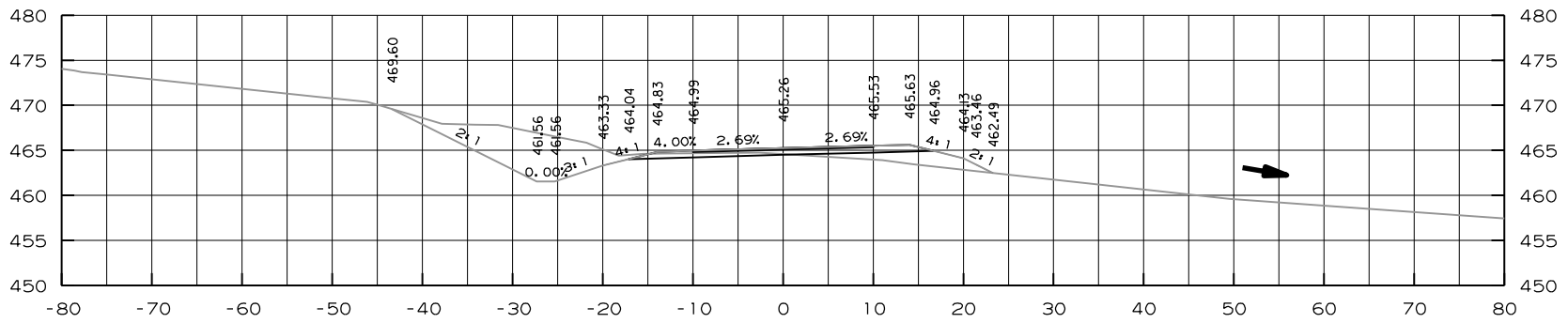
CUT VOLUME 368
FILL VOLUME 68



AREA CUT 90.71
AREA FILL 18.61

238+08.36

CUT VOLUME 26
FILL VOLUME 6

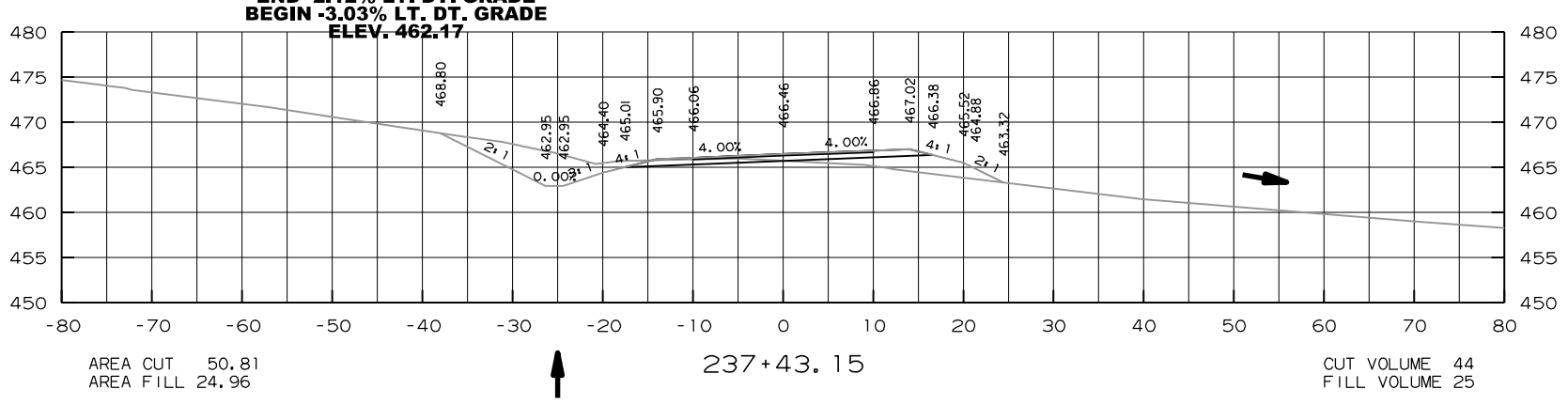


AREA CUT 78.73
AREA FILL 19.03

238+00.00

CUT VOLUME 136
FILL VOLUME 46

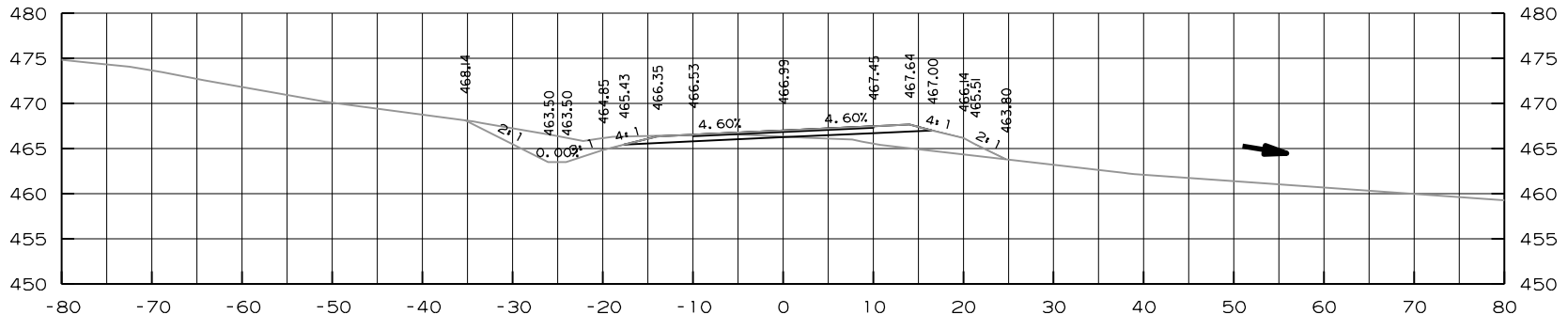
STA. 237+80.00
END -2.12% LT. DT. GRADE
BEGIN -3.03% LT. DT. GRADE
ELEV. 462.17



AREA CUT 50.81
AREA FILL 24.96

237+43.15

CUT VOLUME 44
FILL VOLUME 25

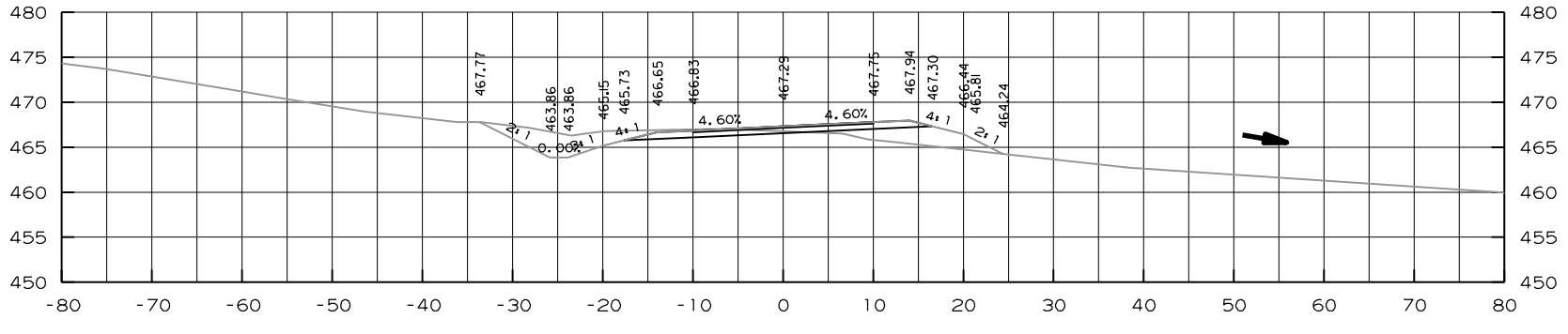


AREA CUT 40.73
AREA FILL 26.70

237+17.06

CUT VOLUME 26
FILL VOLUME 16

END FULL SUPERELEVATION



AREA CUT 41.61
AREA FILL 25.16

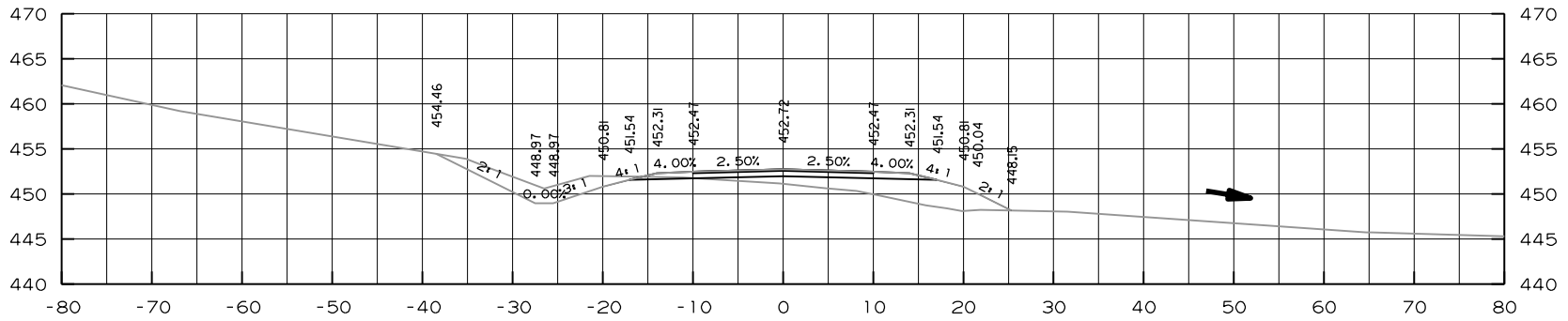
237+00.00

CUT VOLUME 180
FILL VOLUME 115

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		59	72

JOB NO. FA0314

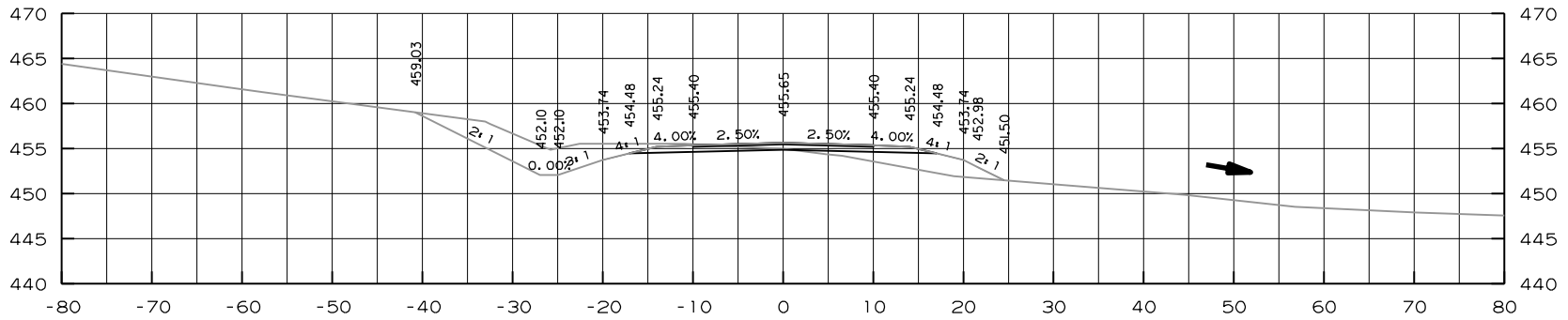
4 CROSS SECTIONS STA.237+00.00 TO 239+00.00



AREA CUT 30.61
AREA FILL 48.51

243+00.00

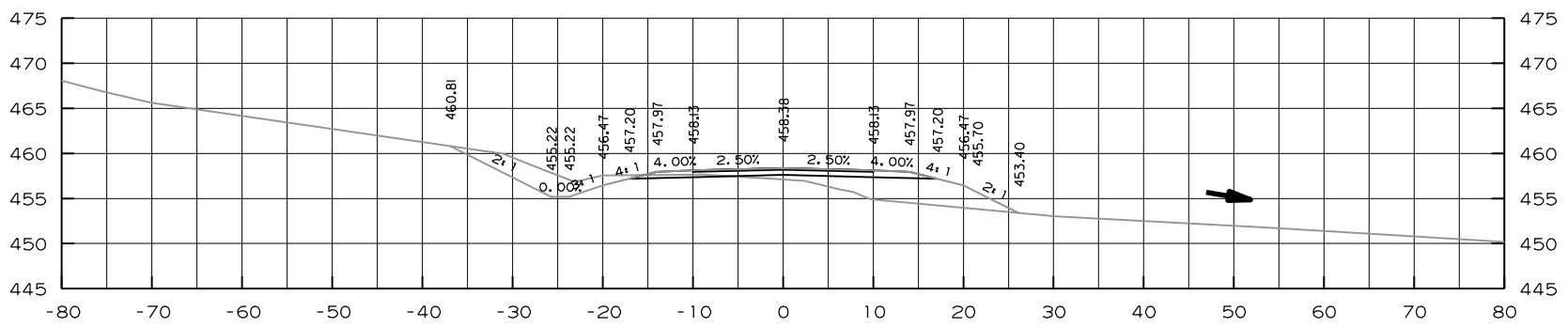
CUT VOLUME 175
FILL VOLUME 138



AREA CUT 64.02
AREA FILL 26.11

242+00.00

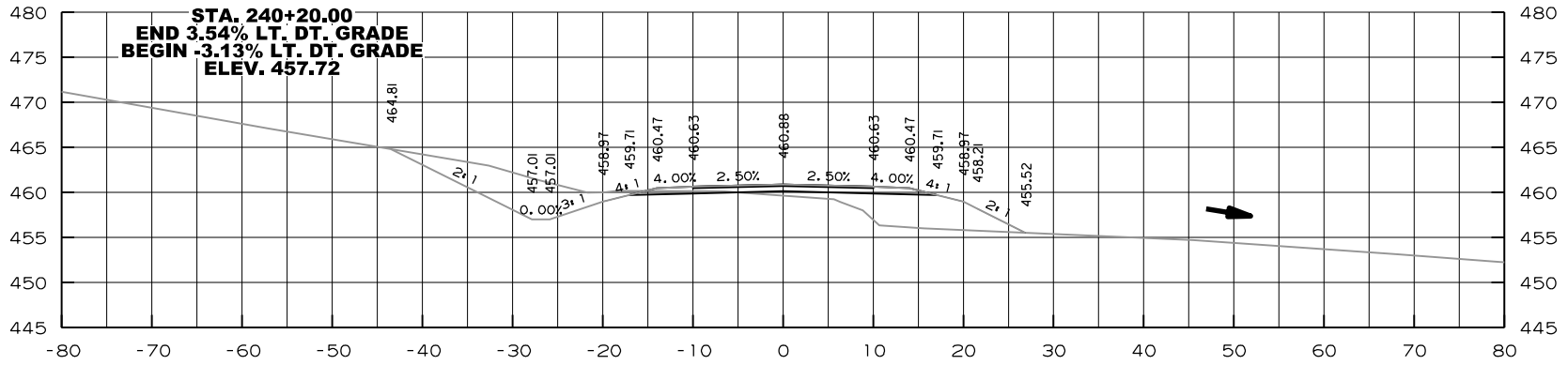
CUT VOLUME 180
FILL VOLUME 139



AREA CUT 33.33
AREA FILL 48.74

241+00.00

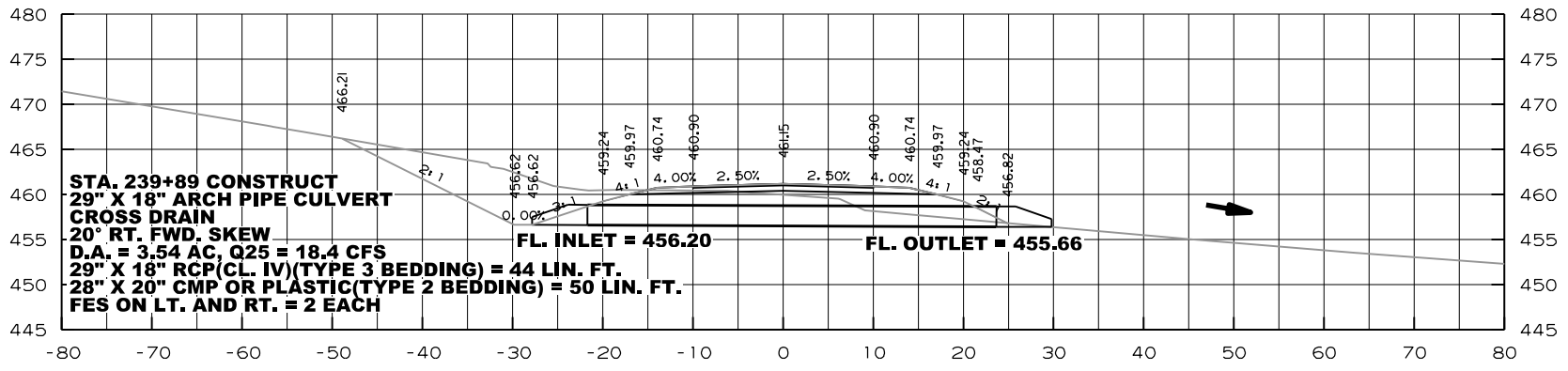
CUT VOLUME 186
FILL VOLUME 198



AREA CUT 67.23
AREA FILL 58.26

240+00.00

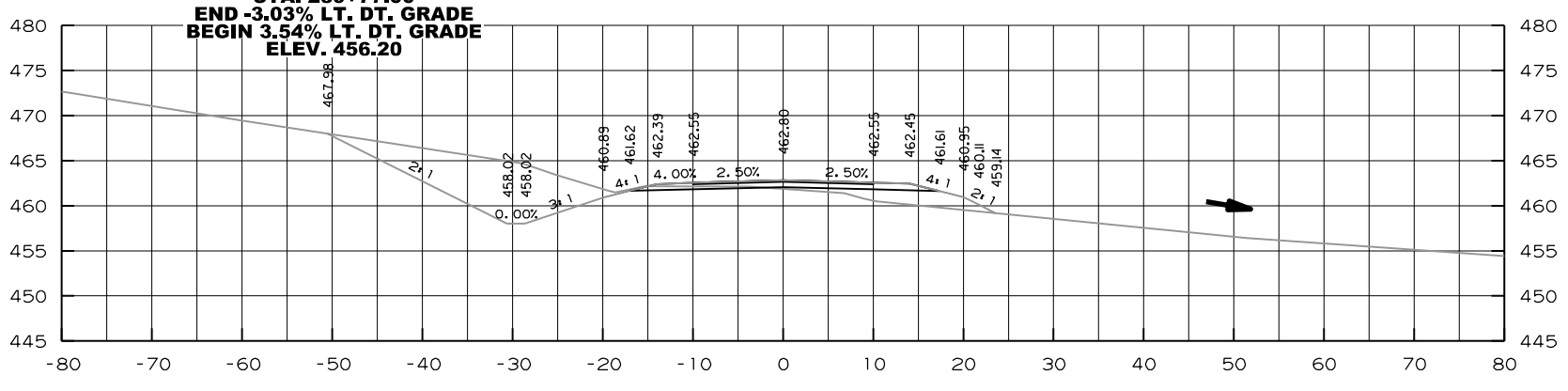
CUT VOLUME 34
FILL VOLUME 20



AREA CUT 99.34
AREA FILL 37.48

239+89.00

CUT VOLUME 293
FILL VOLUME 82



AREA CUT 120.33
AREA FILL 23.96

239+17.06

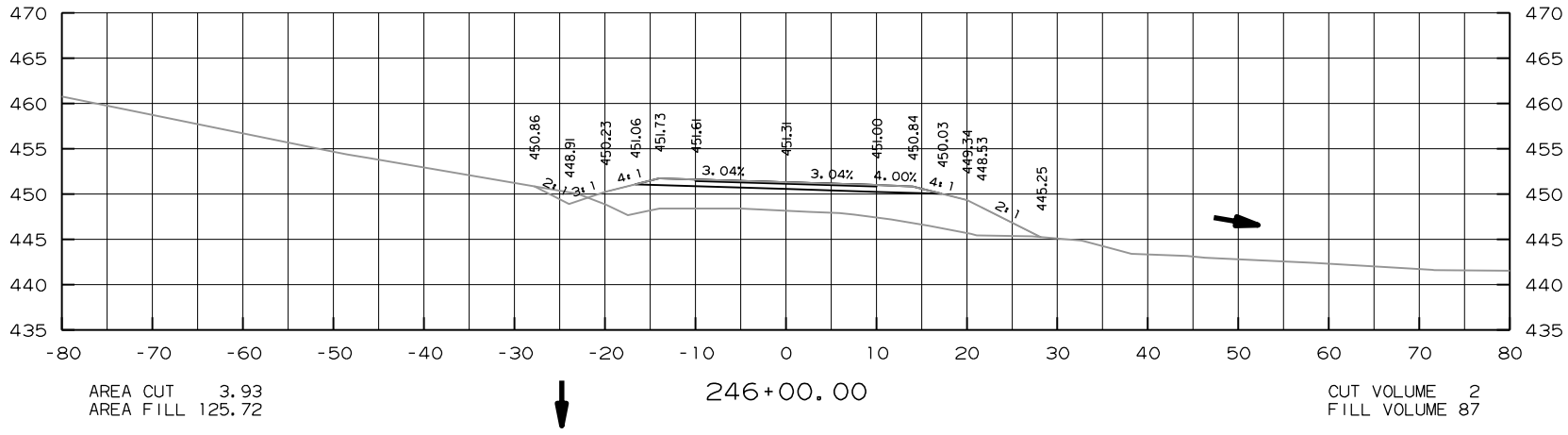
CUT VOLUME 78
FILL VOLUME 14

END SUPERELEVATION

DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED

4 CROSS SECTIONS STA. 239+17.06 TO 243+00.00

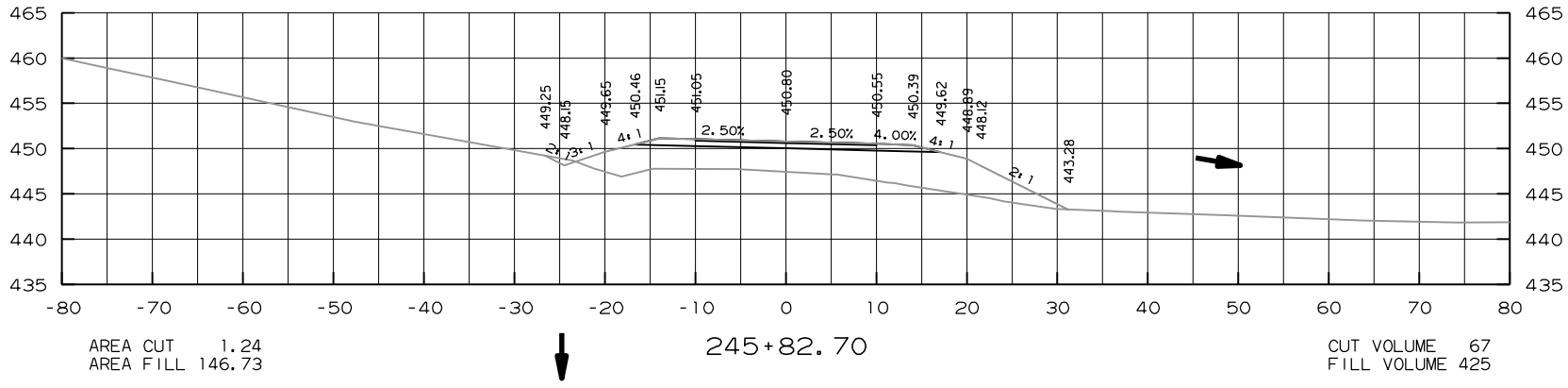
JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		60	72



AREA CUT 3.93
AREA FILL 125.72

246+00.00

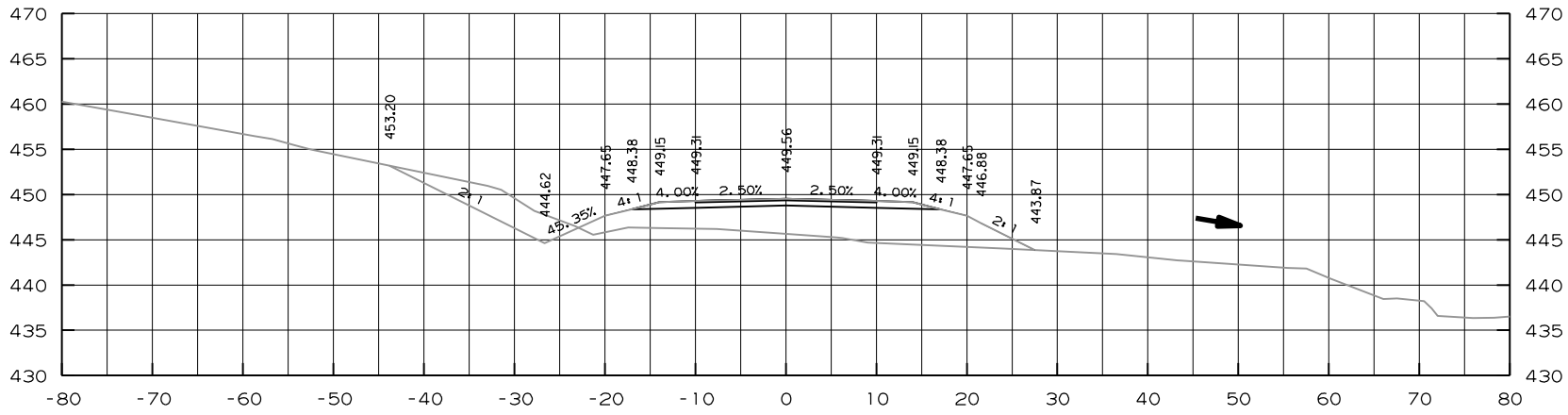
CUT VOLUME 2
FILL VOLUME 87



AREA CUT 1.24
AREA FILL 146.73

245+82.70

CUT VOLUME 67
FILL VOLUME 425

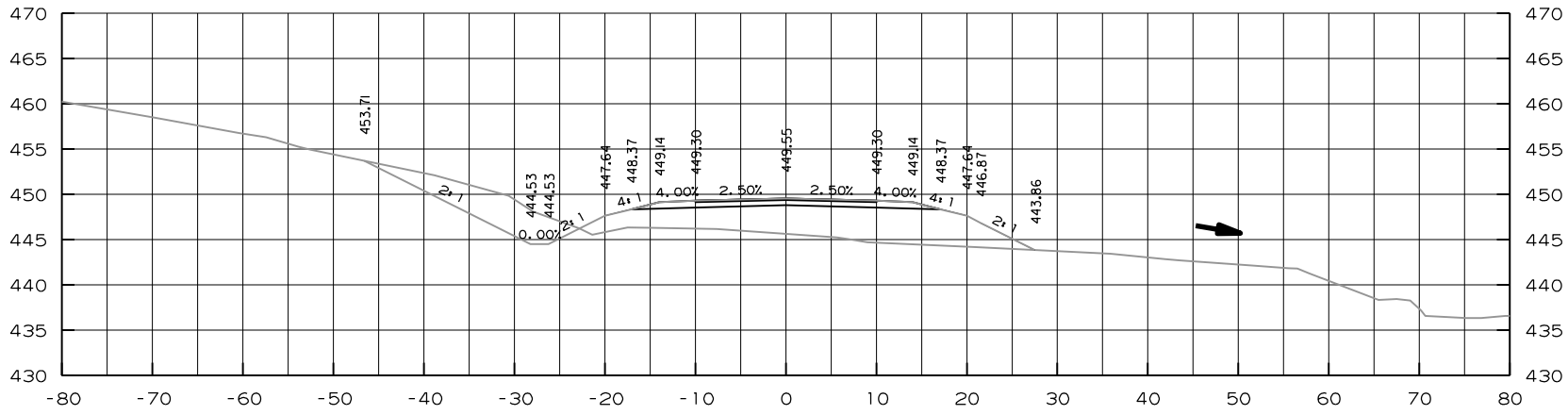


AREA CUT 43.93
AREA FILL 137.90

245+02.05

BEGIN SUPERELEVATION

CUT VOLUME 4
FILL VOLUME 10

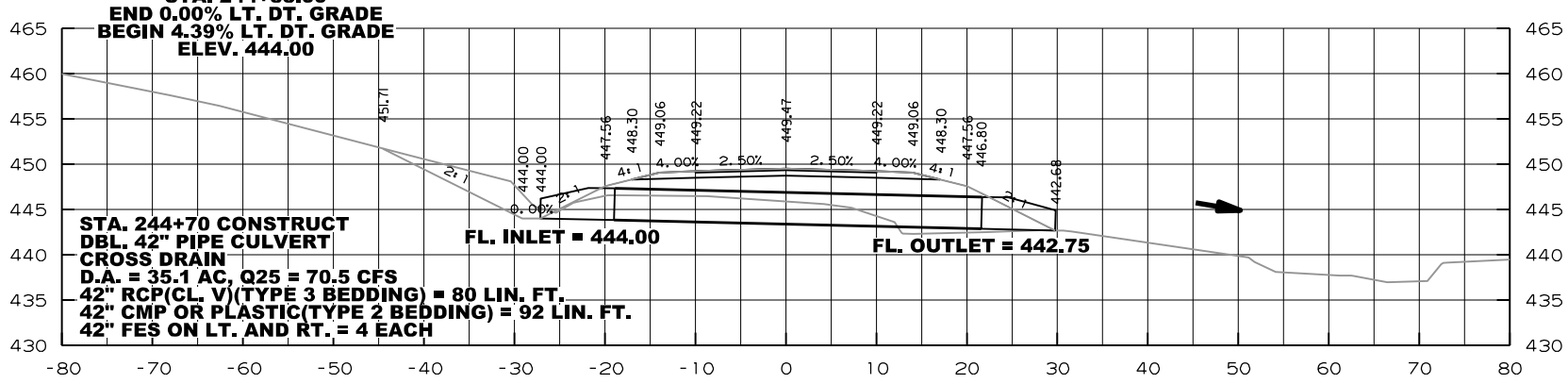


AREA CUT 56.19
AREA FILL 137.26

245+00.00

CUT VOLUME 49
FILL VOLUME 163

STA. 244+88.00
END 0.00% LT. DT. GRADE
BEGIN 4.39% LT. DT. GRADE
ELEV. 444.00



STA. 244+70 CONSTRUCT
DBL. 42" PIPE CULVERT
CROSS DRAIN
D.A. = 35.1 AC, Q25 = 70.5 CFS
42" RCP(CL. V)(TYPE 3 BEDDING) = 80 LIN. FT.
42" CMP OR PLASTIC(TYPE 2 BEDDING) = 92 LIN. FT.
42" FES ON LT. AND RT. = 4 EACH

FL. INLET = 444.00

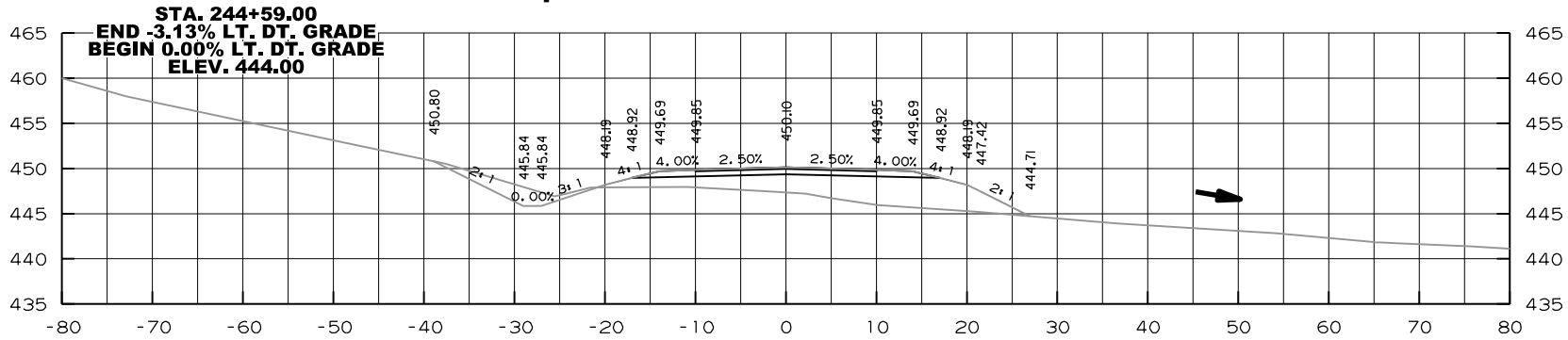
FL. OUTLET = 442.75

AREA CUT 32.55
AREA FILL 156.48

244+70.00

CUT VOLUME 65
FILL VOLUME 325

STA. 244+59.00
END -3.13% LT. DT. GRADE
BEGIN 0.00% LT. DT. GRADE
ELEV. 444.00



AREA CUT 17.65
AREA FILL 94.06

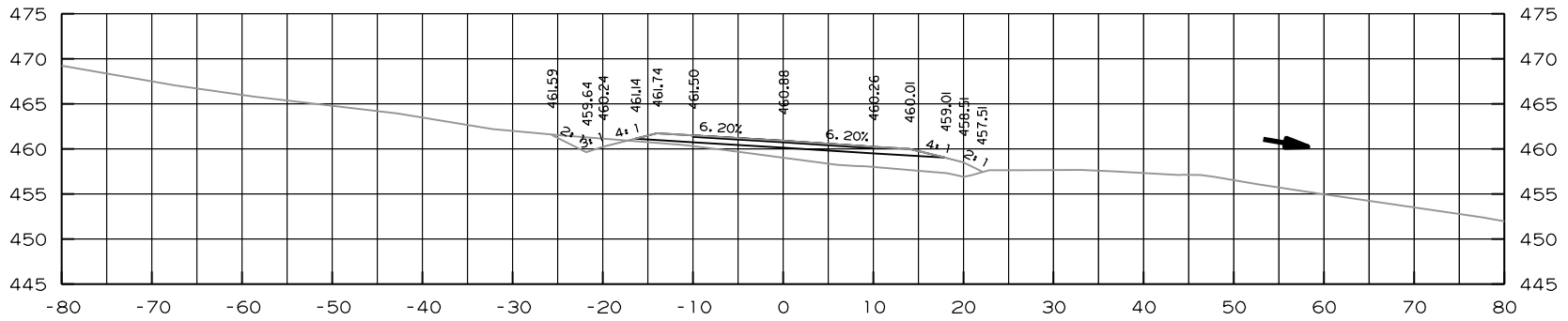
244+00.00

CUT VOLUME 89
FILL VOLUME 264

4 CROSS SECTIONS STA. 244+00.00 TO 246+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		61	72

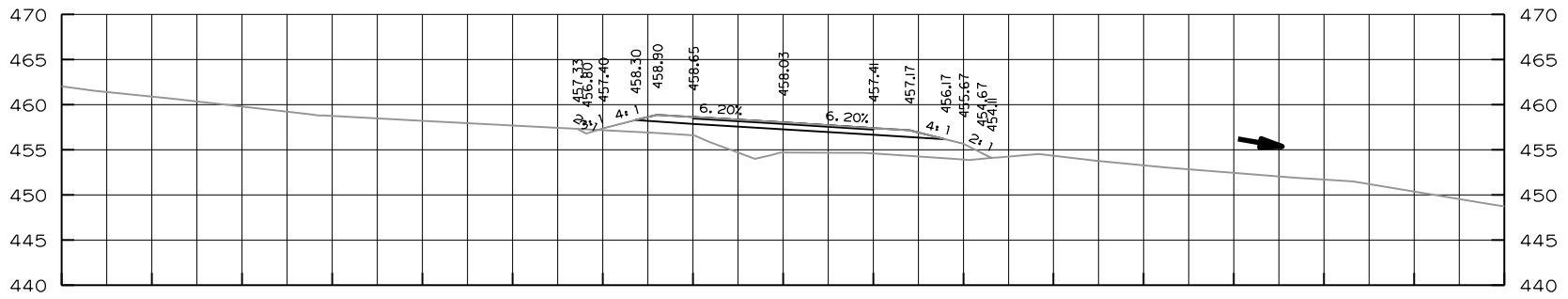
JOB NO. FA0314



AREA CUT 6.64
AREA FILL 41.94

249+00.00

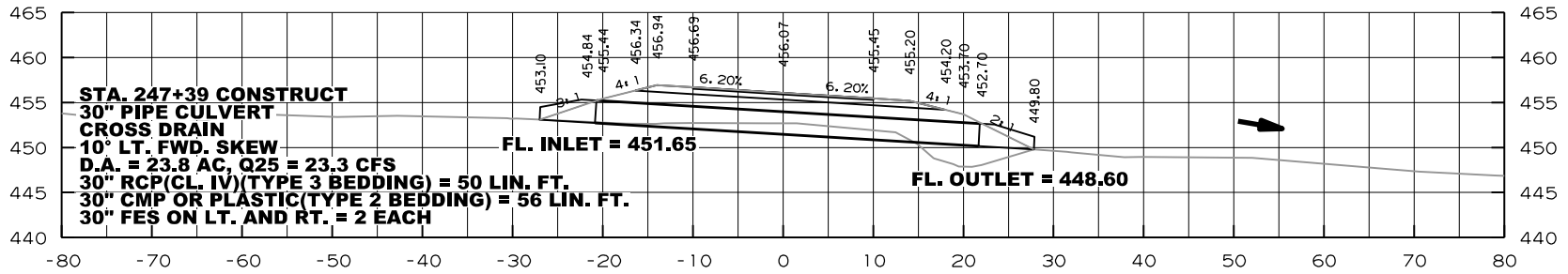
CUT VOLUME 13
FILL VOLUME 232



AREA CUT 0.54
AREA FILL 83.20

248+00.00

CUT VOLUME 1
FILL VOLUME 281



STA. 247+39 CONSTRUCT
30" PIPE CULVERT
CROSS DRAIN
10° LT. FWD. SKEW
D.A. = 23.8 AC, Q25 = 23.3 CFS
30" RCP(CL. IV)(TYPE 3 BEDDING) = 50 LIN. FT.
30" CMP OR PLASTIC(TYPE 2 BEDDING) = 56 LIN. FT.
30" FES ON LT. AND RT. = 2 EACH

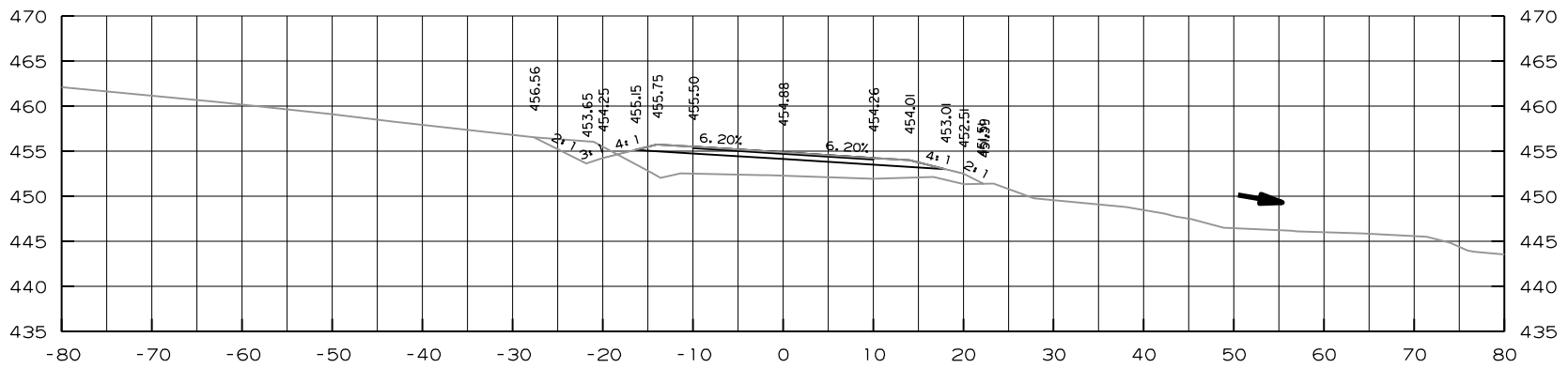
FL. INLET = 451.65

FL. OUTLET = 448.60

AREA CUT 0.00
AREA FILL 165.23

247+39.00

CUT VOLUME 8
FILL VOLUME 159

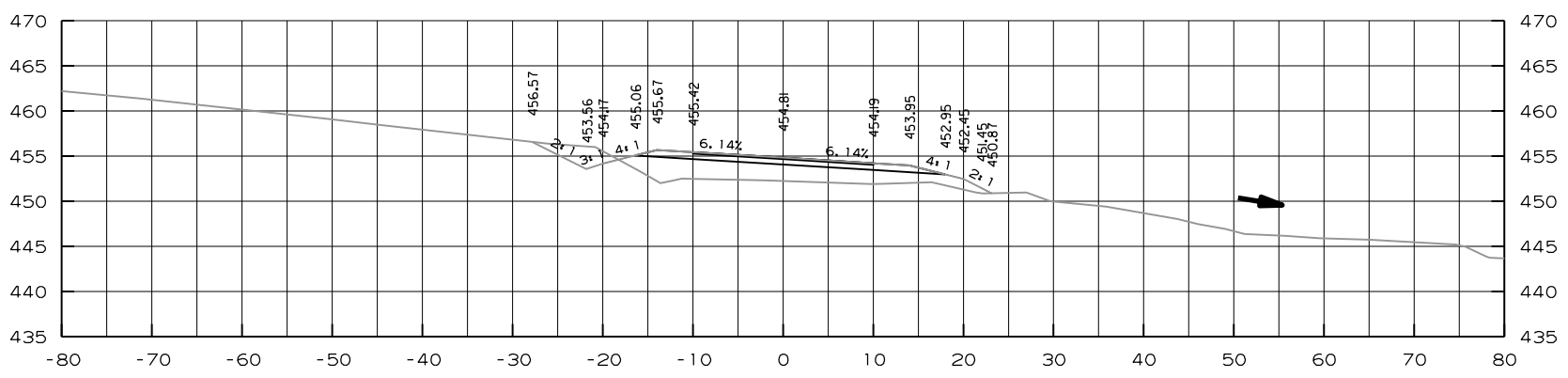


AREA CUT 11.73
AREA FILL 67.56

247+02.05

CUT VOLUME 1
FILL VOLUME 5

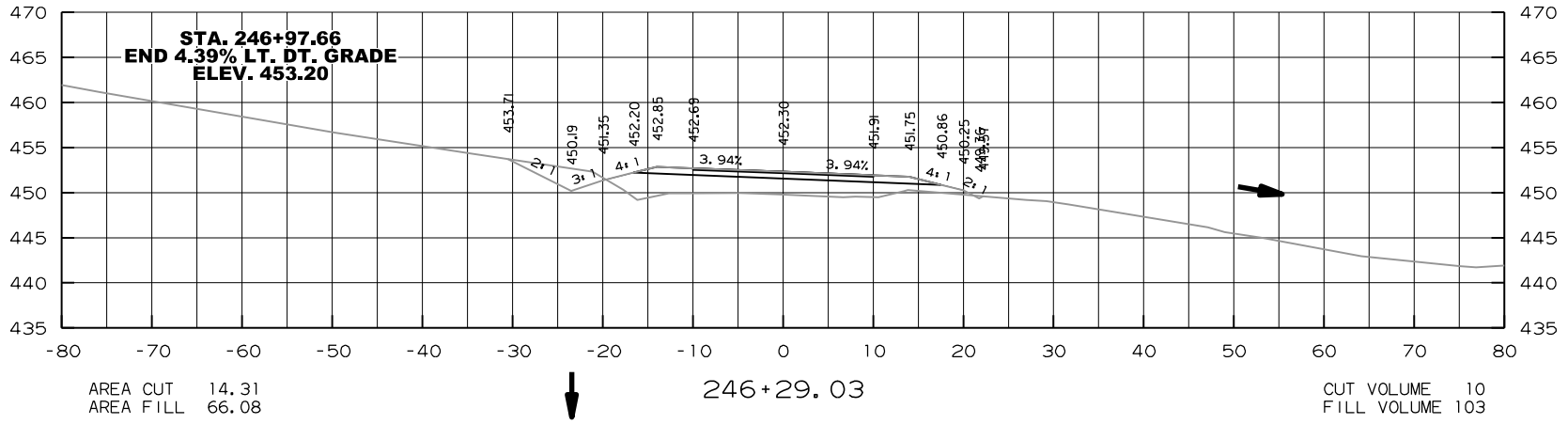
BEGIN FULL SUPERELEVATION



AREA CUT 12.15
AREA FILL 67.47

247+00.00

CUT VOLUME 35
FILL VOLUME 176



STA. 246+97.66
END 4.39% LT. DT. GRADE
ELEV. 453.20

AREA CUT 14.31
AREA FILL 66.08

246+29.03

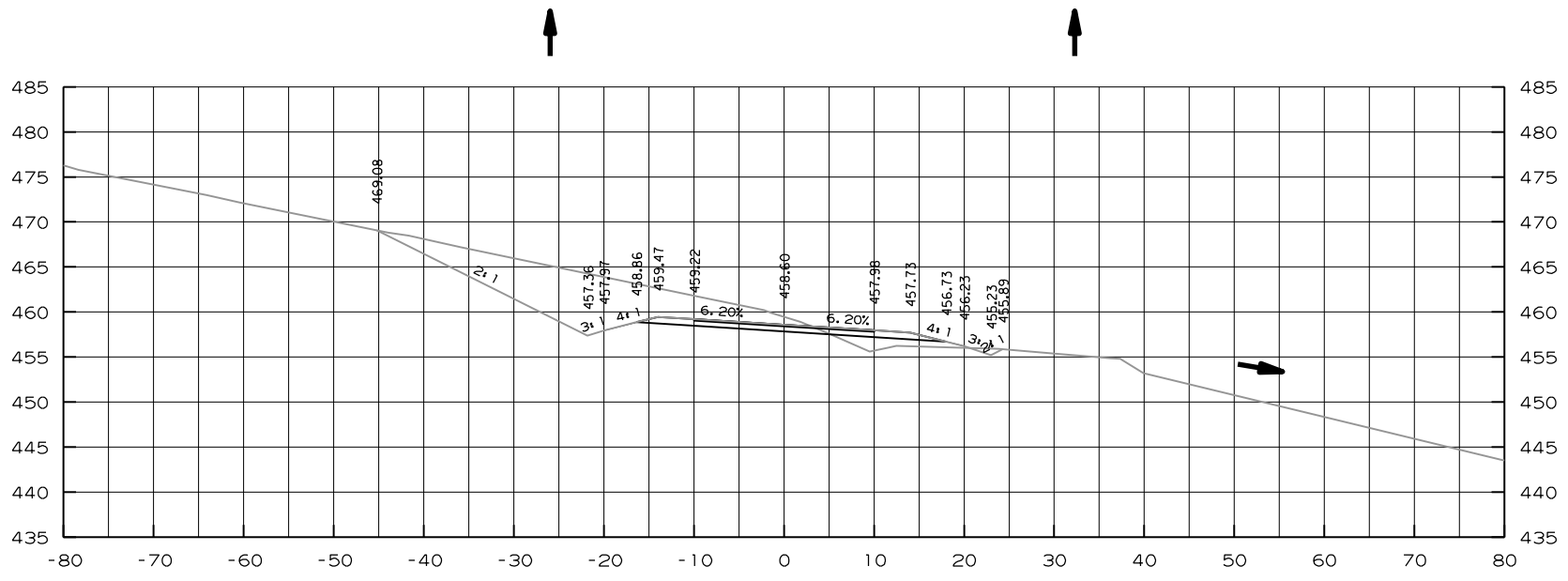
CUT VOLUME 10
FILL VOLUME 103

CROSS SECTIONS STA. 246+29.03 TO 249+00.00

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		62	72

DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED

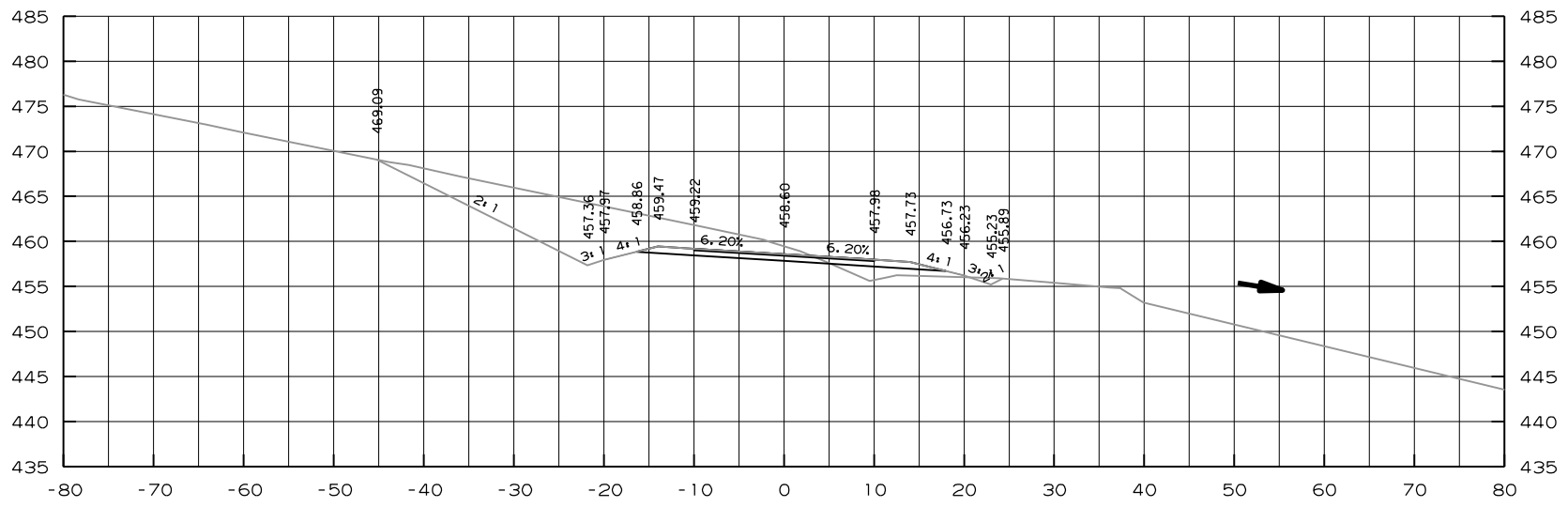
4



AREA CUT 167.80
AREA FILL 12.08

252+00.02

CUT VOLUME 0
FILL VOLUME 0

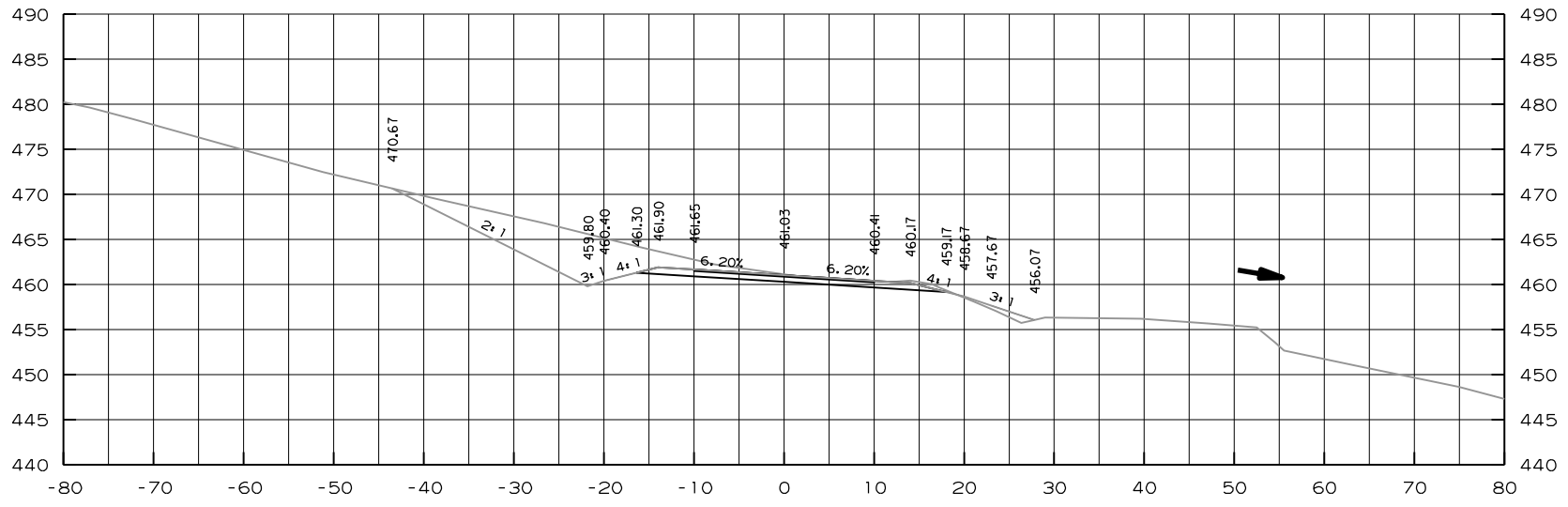


AREA CUT 167.82
AREA FILL 12.08

252+00.00

CUT VOLUME 549
FILL VOLUME 29

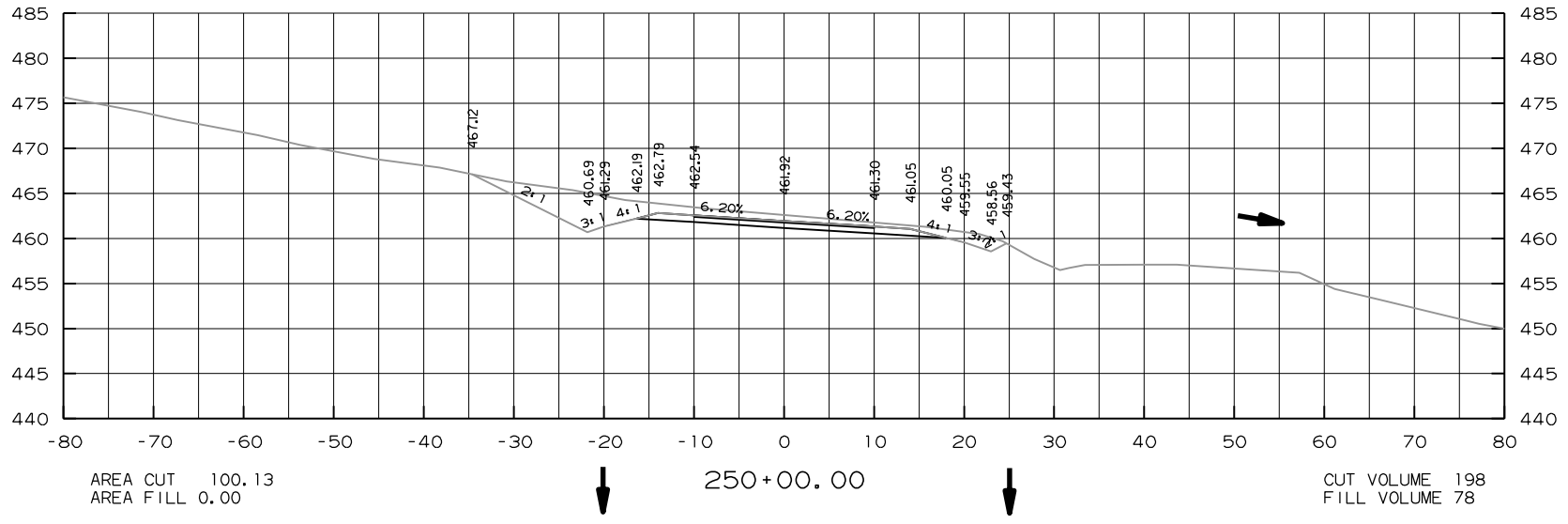
END FULL SUPERELEVATION



AREA CUT 128.42
AREA FILL 3.34

251+00.00

CUT VOLUME 423
FILL VOLUME 6



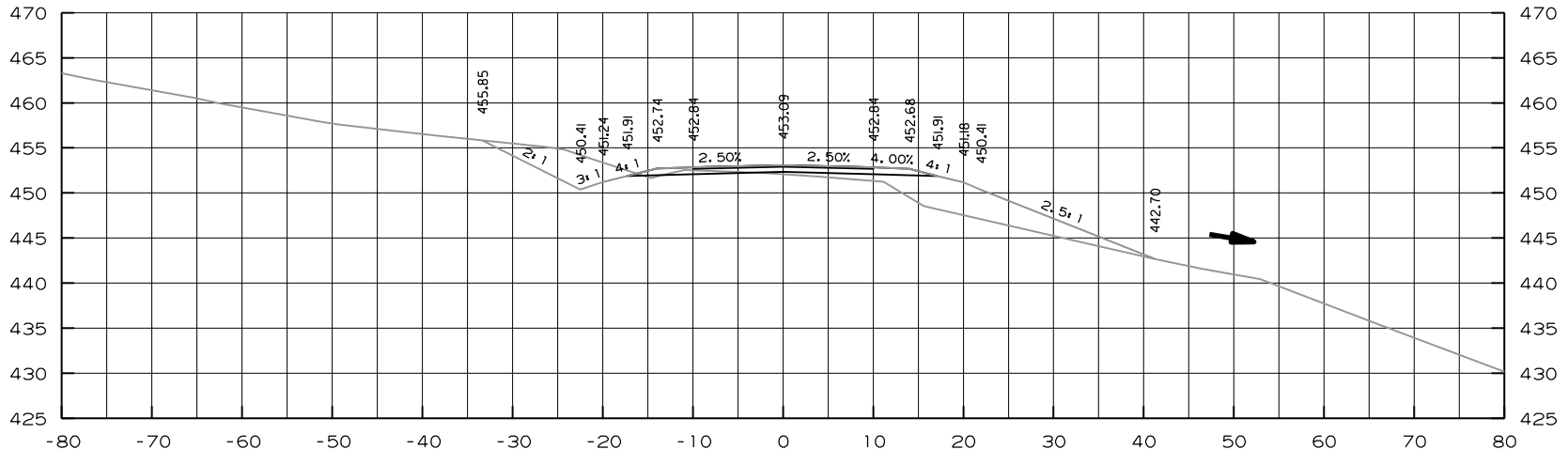
AREA CUT 100.13
AREA FILL 0.00

250+00.00

CUT VOLUME 198
FILL VOLUME 78

4 CROSS SECTIONS STA. 250+00.00 TO 252+00.02

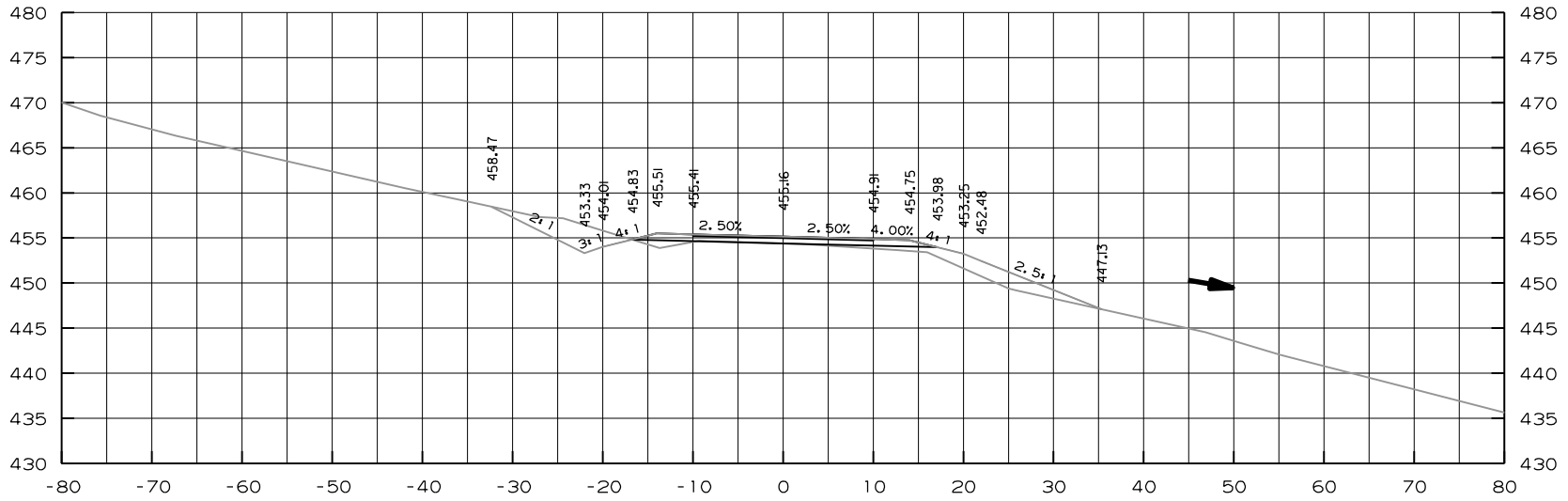
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO.				FA0314			63	72



AREA CUT 36.95
AREA FILL 70.45

254+00.00
END SUPERELEVATION

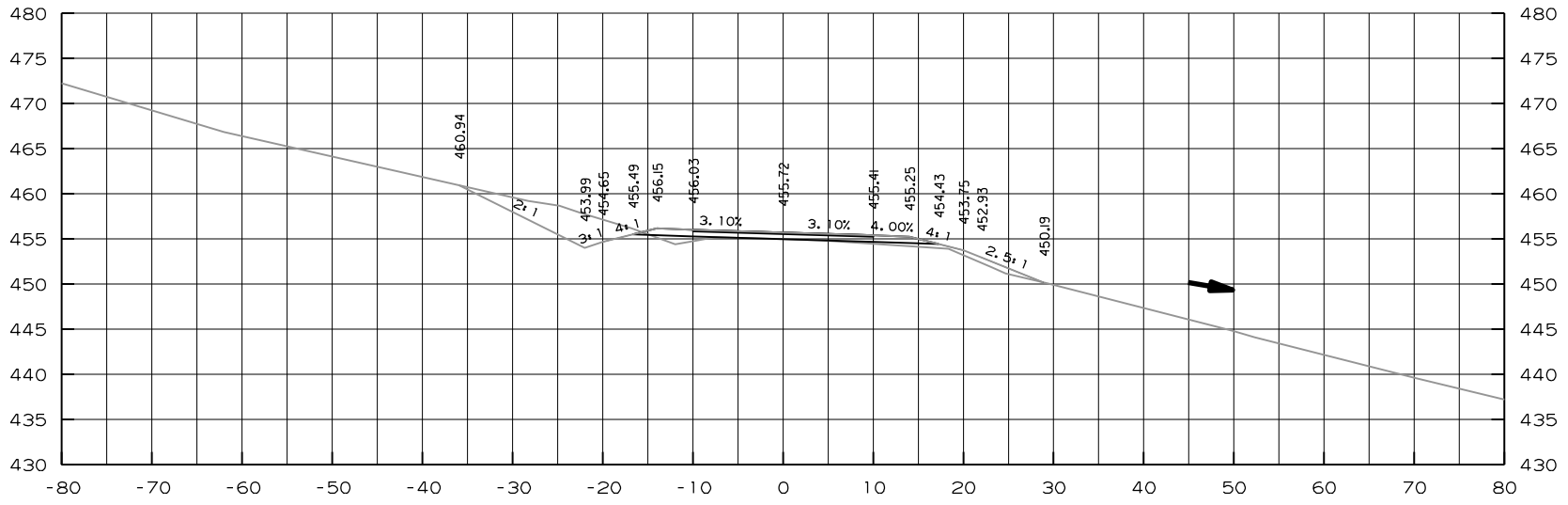
CUT VOLUME 92
FILL VOLUME 151



AREA CUT 24.62
AREA FILL 29.90

253+19.38

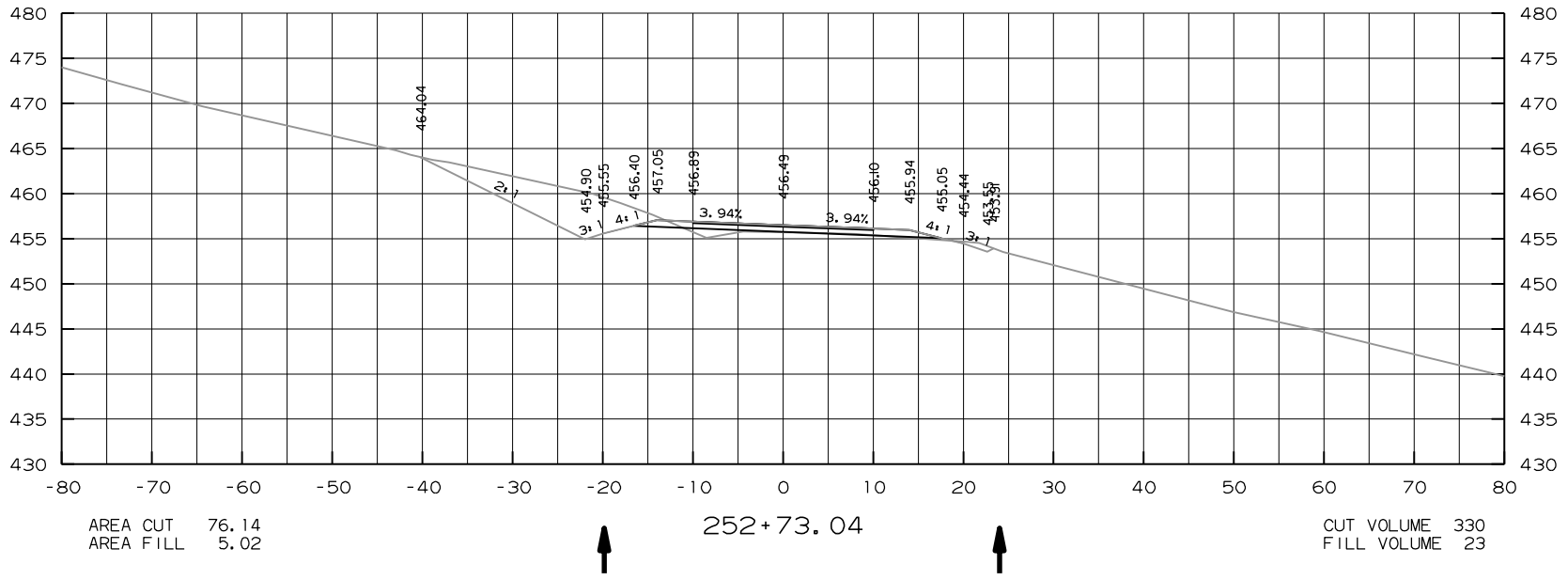
CUT VOLUME 23
FILL VOLUME 15



AREA CUT 39.33
AREA FILL 12.08

253+00.00

CUT VOLUME 58
FILL VOLUME 9



AREA CUT 76.14
AREA FILL 5.02

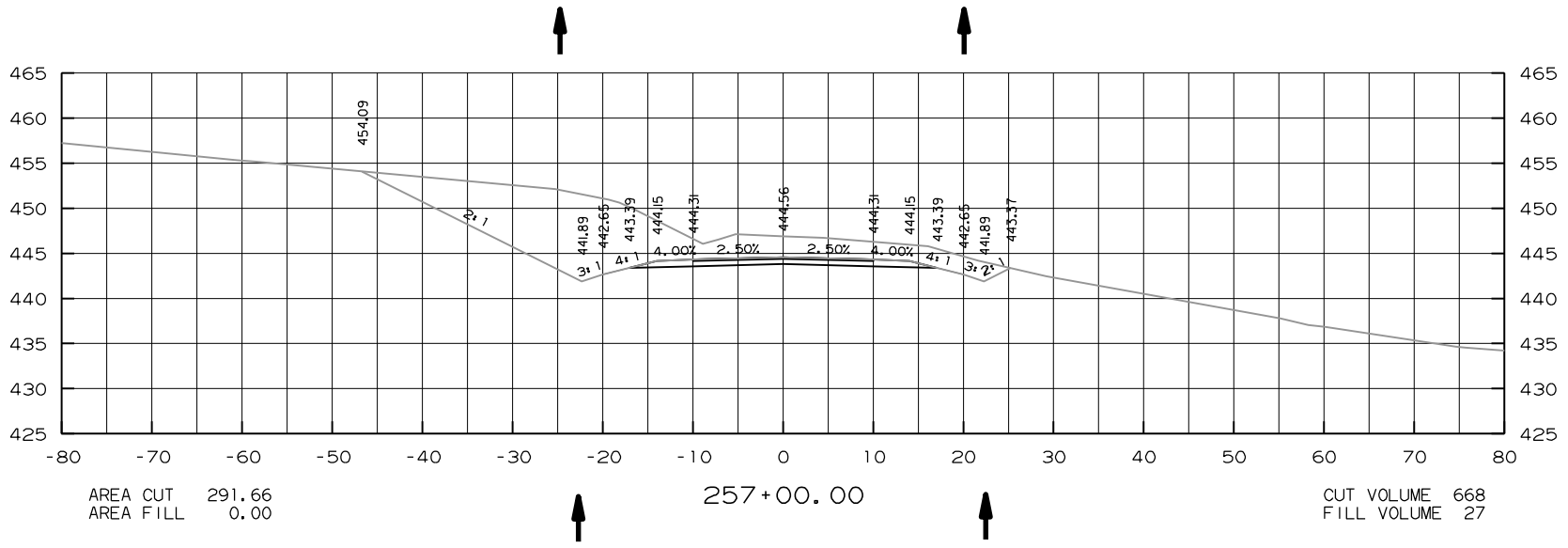
252+73.04

CUT VOLUME 330
FILL VOLUME 23

4 CROSS SECTIONS STA. 252+73.04 TO 254+00.00

JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		64	72

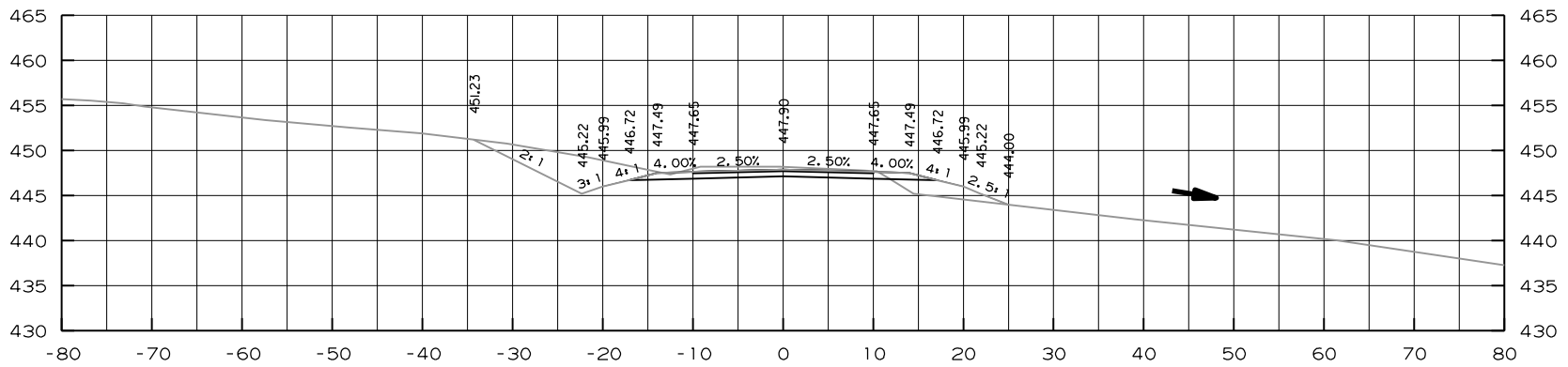
DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED



AREA CUT 291.66
AREA FILL 0.00

257+00.00

CUT VOLUME 668
FILL VOLUME 27

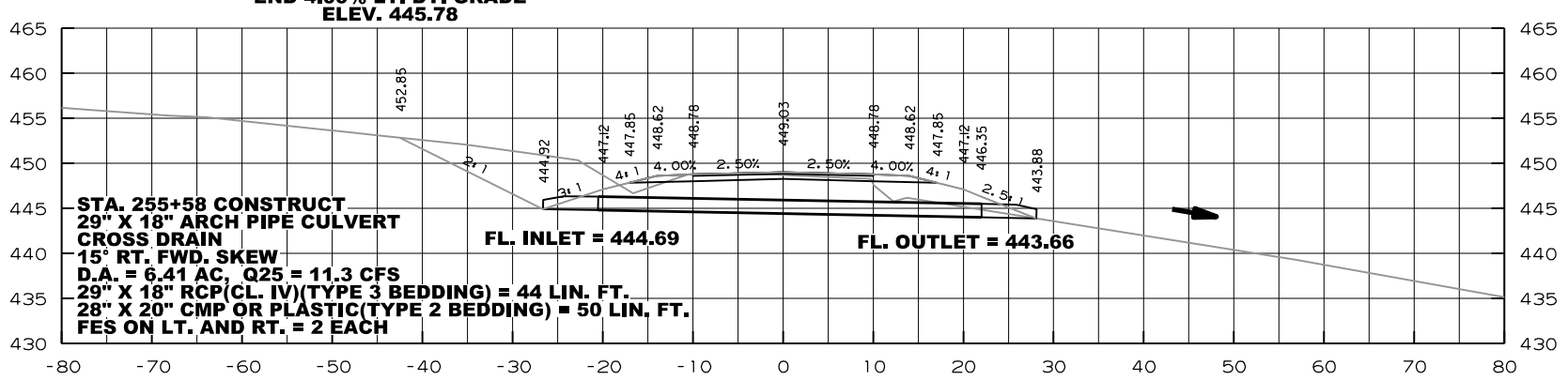


AREA CUT 69.16
AREA FILL 14.59

256+00.00

CUT VOLUME 123
FILL VOLUME 34

STA. 255+79.61
END 4.00% LT. DT. GRADE
ELEV. 445.78



STA. 255+58 CONSTRUCT
29" X 18" ARCH PIPE CULVERT
CROSS DRAIN
15° RT. FWD. SKEW
D.A. = 6.41 AC, Q25 = 11.3 CFS
29" X 18" RCP(CL. IV)(TYPE 3 BEDDING) = 44 LIN. FT.
28" X 20" CMP OR PLASTIC(TYPE 2 BEDDING) = 50 LIN. FT.
FES ON LT. AND RT. = 2 EACH

FL. INLET = 444.69

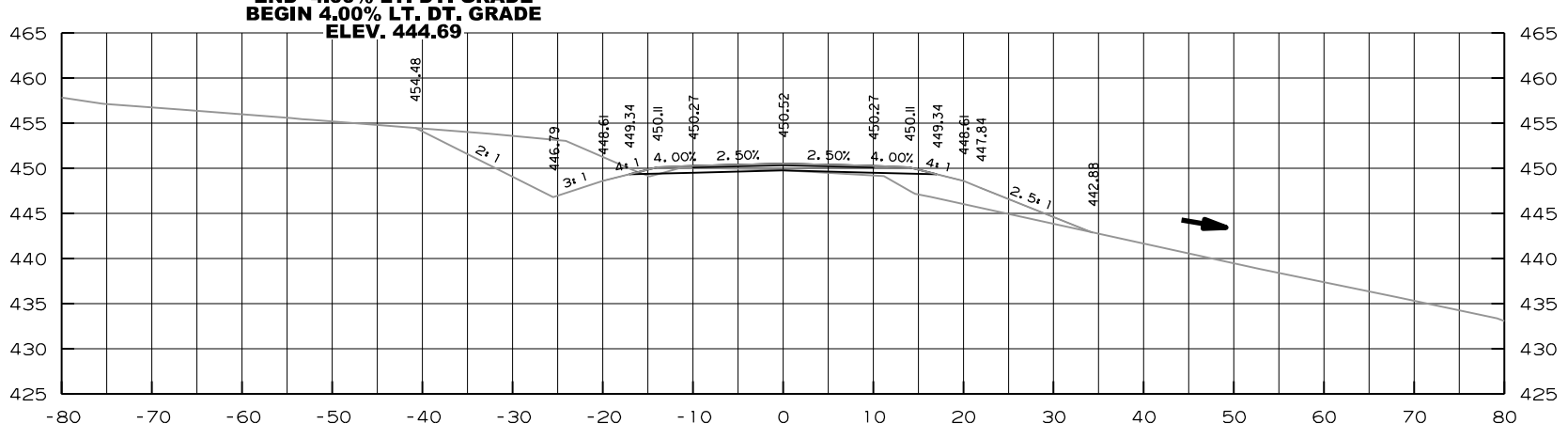
FL. OUTLET = 443.66

AREA CUT 88.46
AREA FILL 29.77

255+58.00

CUT VOLUME 186
FILL VOLUME 74

STA. 255+52.34
END -4.00% LT. DT. GRADE
BEGIN 4.00% LT. DT. GRADE
ELEV. 444.69

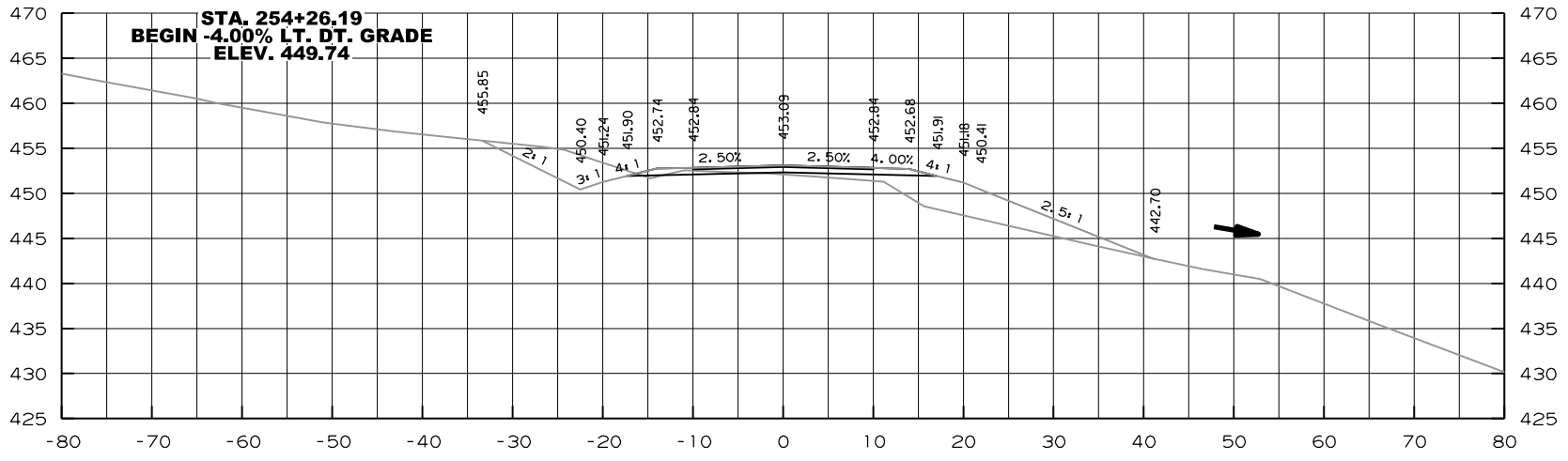


AREA CUT 85.00
AREA FILL 39.11

255+00.00

CUT VOLUME 226
FILL VOLUME 203

STA. 254+26.19
BEGIN -4.00% LT. DT. GRADE
ELEV. 449.74



AREA CUT 36.96
AREA FILL 70.45

254+00.02

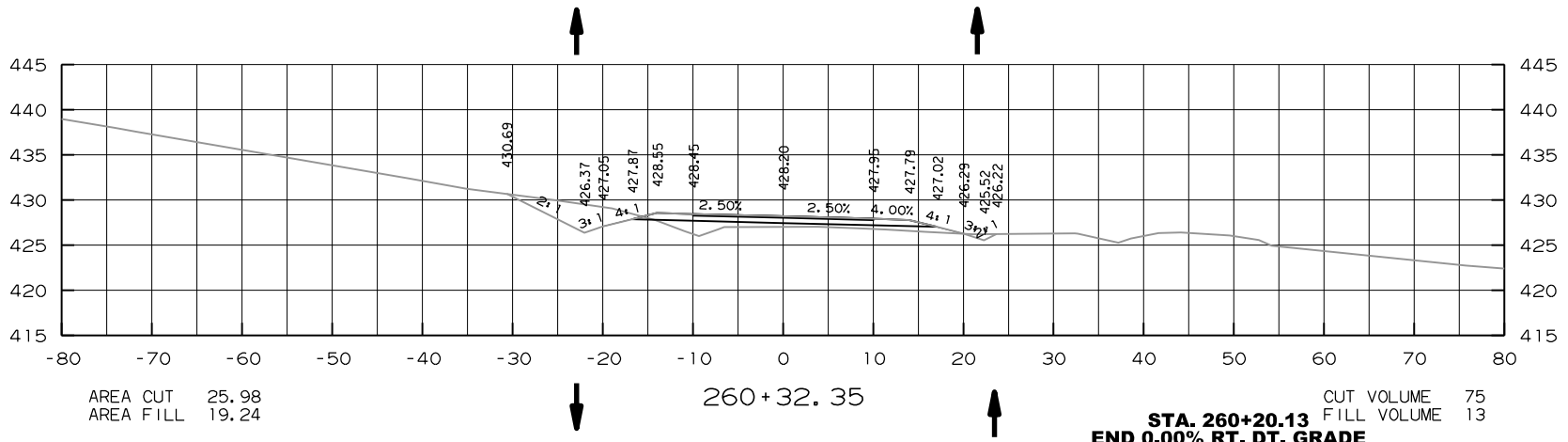
CUT VOLUME 0
FILL VOLUME 0

CROSS SECTIONS STA. 254+00.02 TO 257+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		65	72

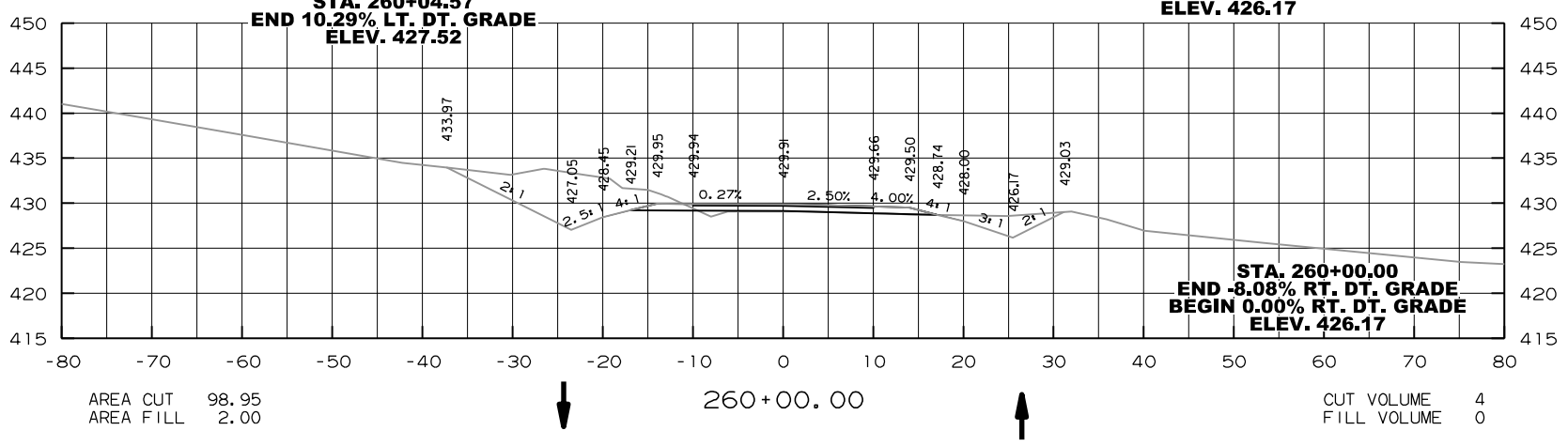
JOB NO. FA0314

4

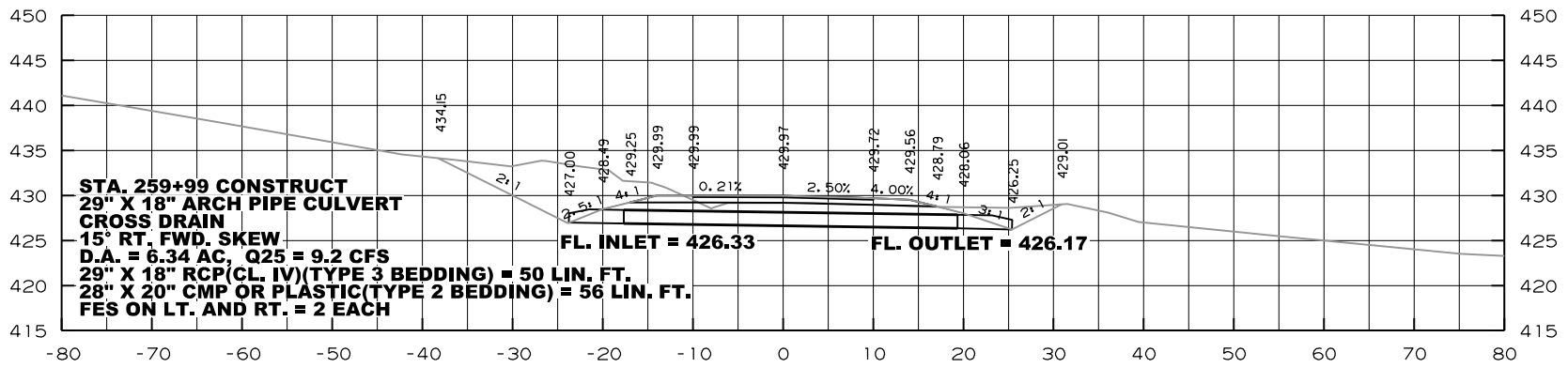


STA. 260+20.13
END 0.00% RT. DT. GRADE
ELEV. 426.17

STA. 260+04.57
END 10.29% LT. DT. GRADE
ELEV. 427.52



STA. 260+00.00
END -8.08% RT. DT. GRADE
BEGIN 0.00% RT. DT. GRADE
ELEV. 426.17

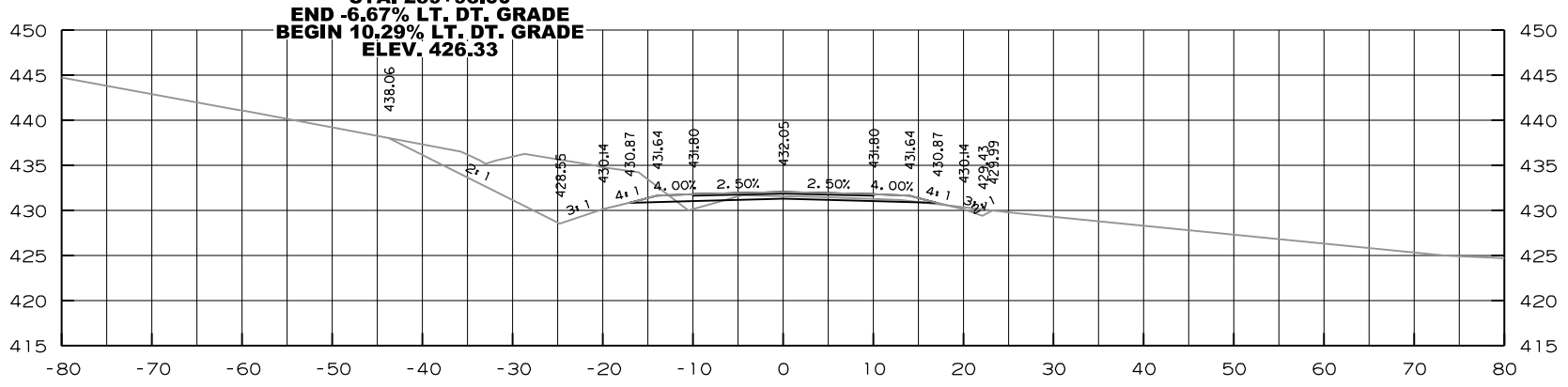


STA. 259+99 CONSTRUCT
29" X 18" ARCH PIPE CULVERT
CROSS DRAIN
15° RT. FWD. SKEW
D.A. = 6.34 AC, Q25 = 9.2 CFS
29" X 18" RCP(CL. IV)(TYPE 3 BEDDING) = 50 LIN. FT.
28" X 20" CMP OR PLASTIC(TYPE 2 BEDDING) = 56 LIN. FT.
FES ON LT. AND RT. = 2 EACH

FL. INLET = 426.33

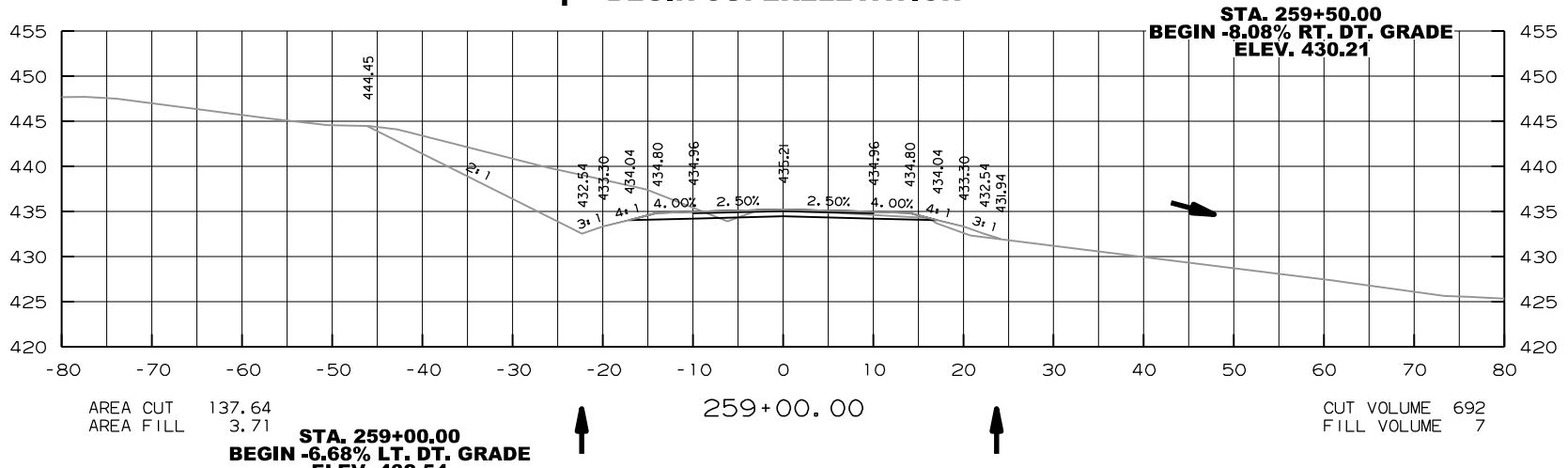
FL. OUTLET = 426.17

STA. 259+93.00
END -6.67% LT. DT. GRADE
BEGIN 10.29% LT. DT. GRADE
ELEV. 426.33

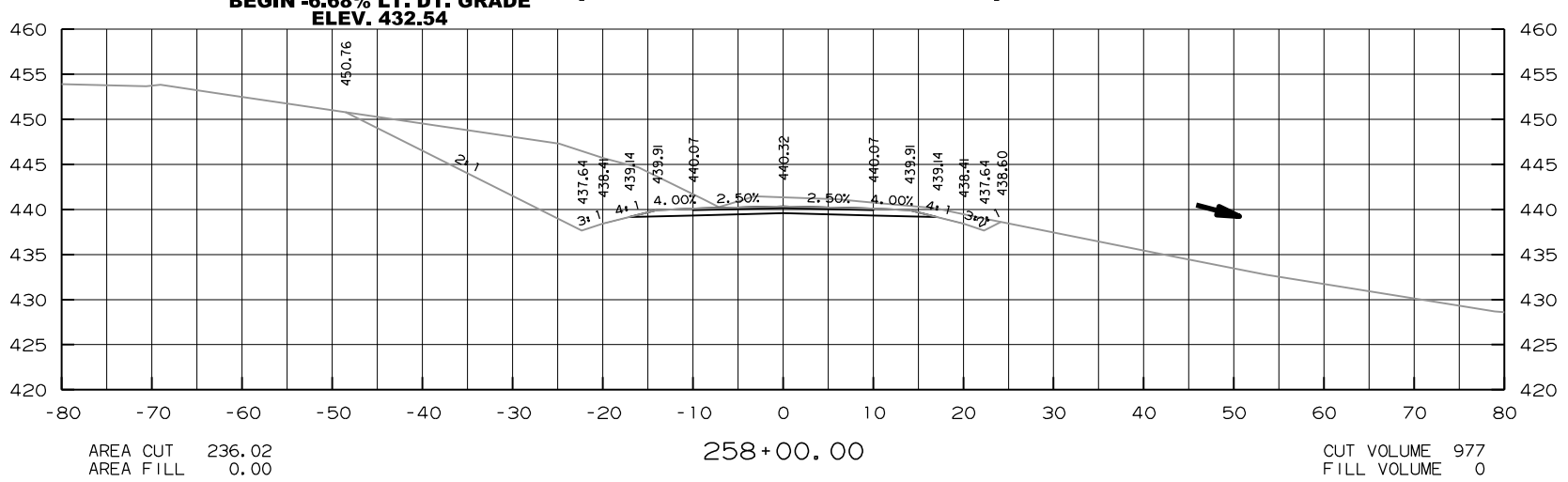


BEGIN SUPERELEVATION

STA. 259+50.00
BEGIN -8.08% RT. DT. GRADE
ELEV. 430.21



STA. 259+00.00
BEGIN -6.68% LT. DT. GRADE
ELEV. 432.54

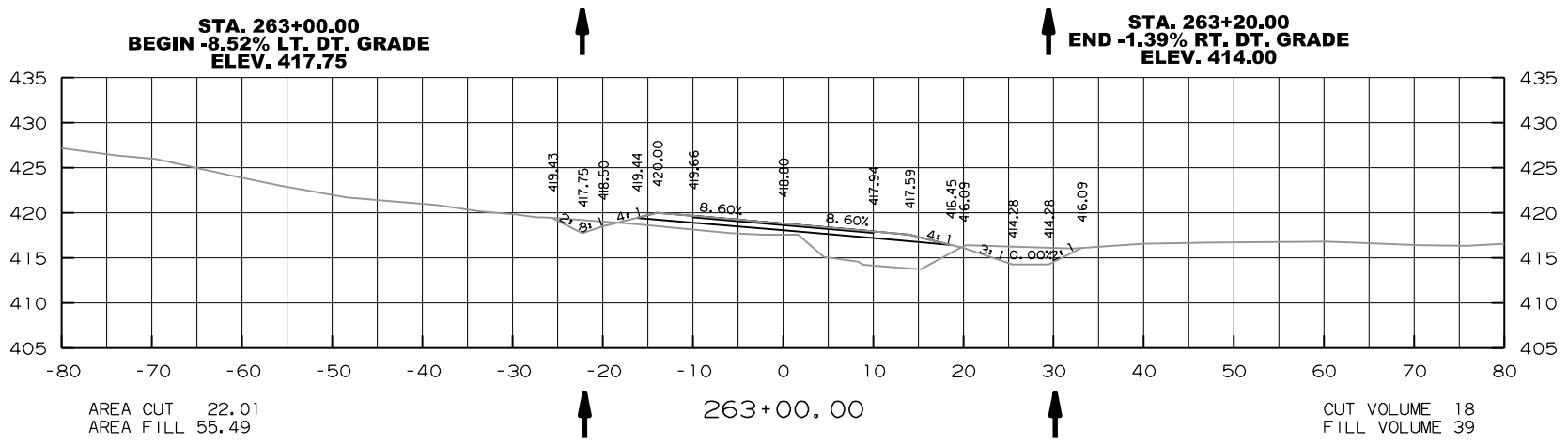


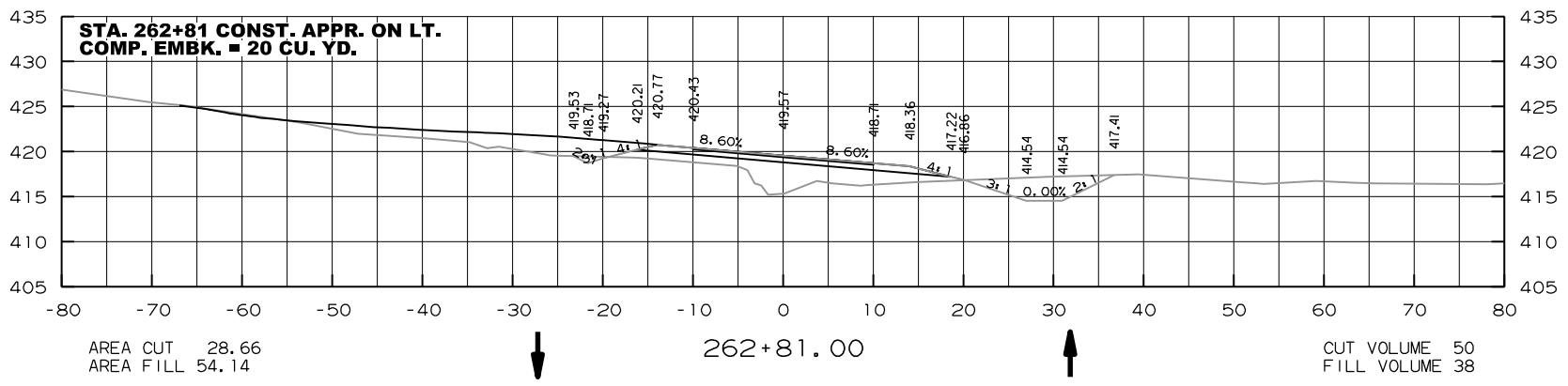
CROSS SECTIONS STA. 258+00.00 TO 260+32.35

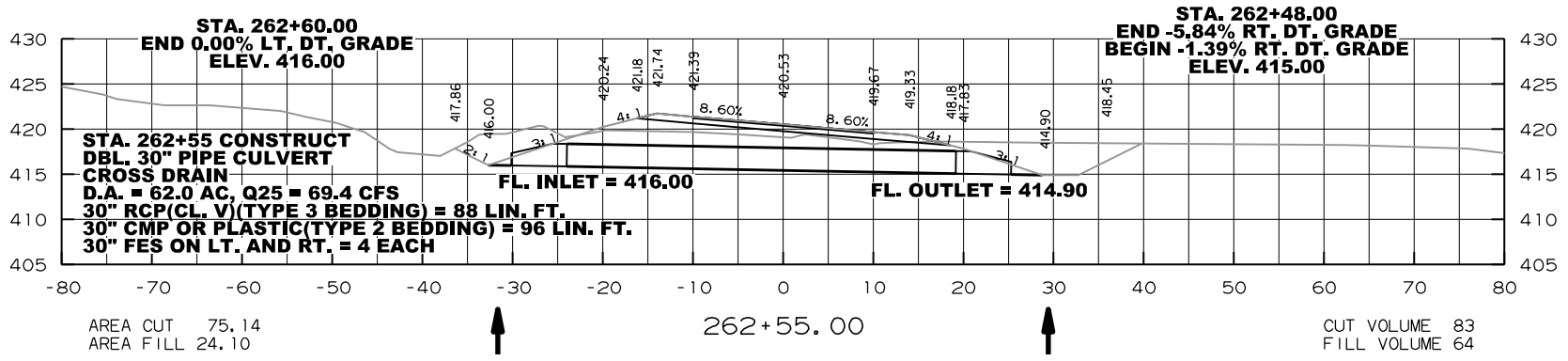
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		66	72

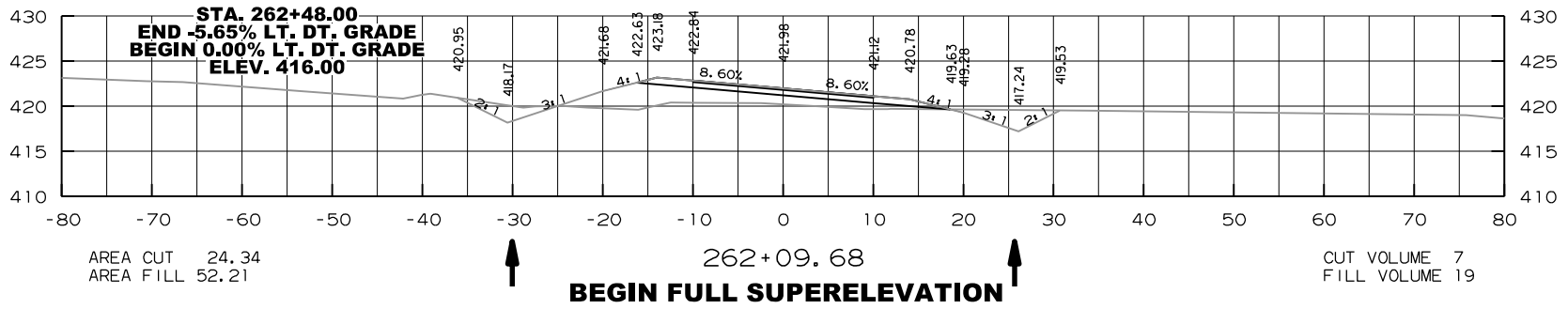
JOB NO. FA0314

4

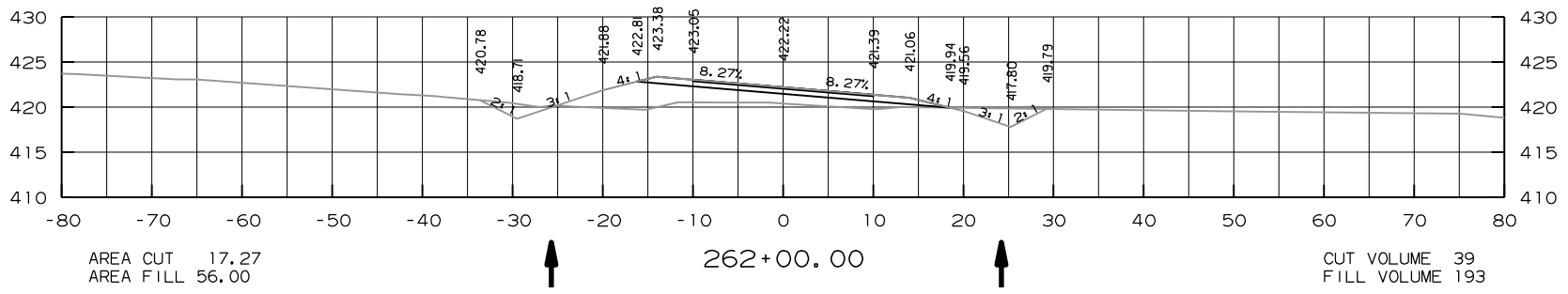


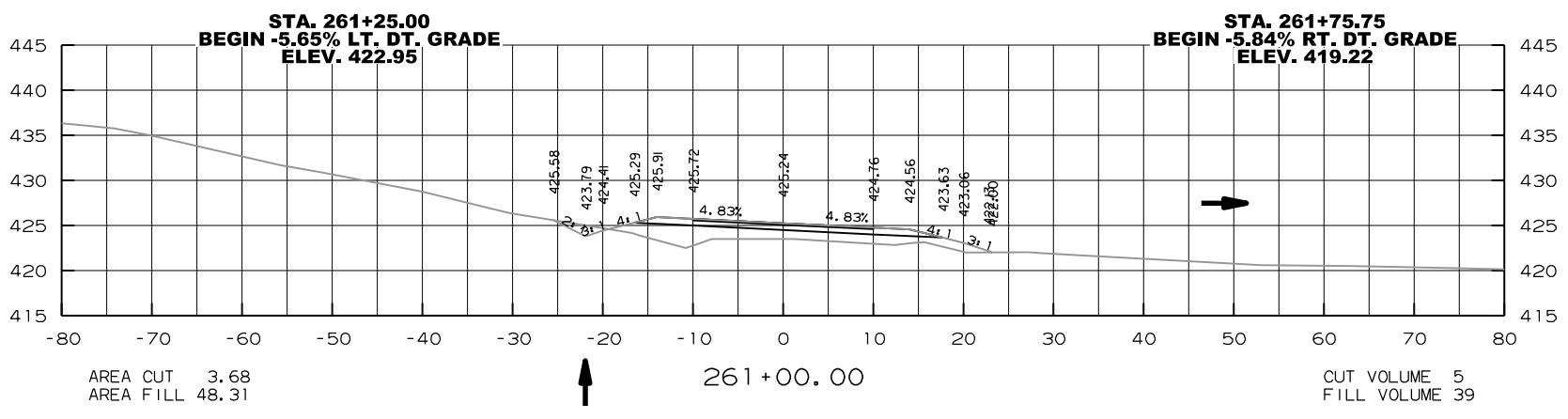


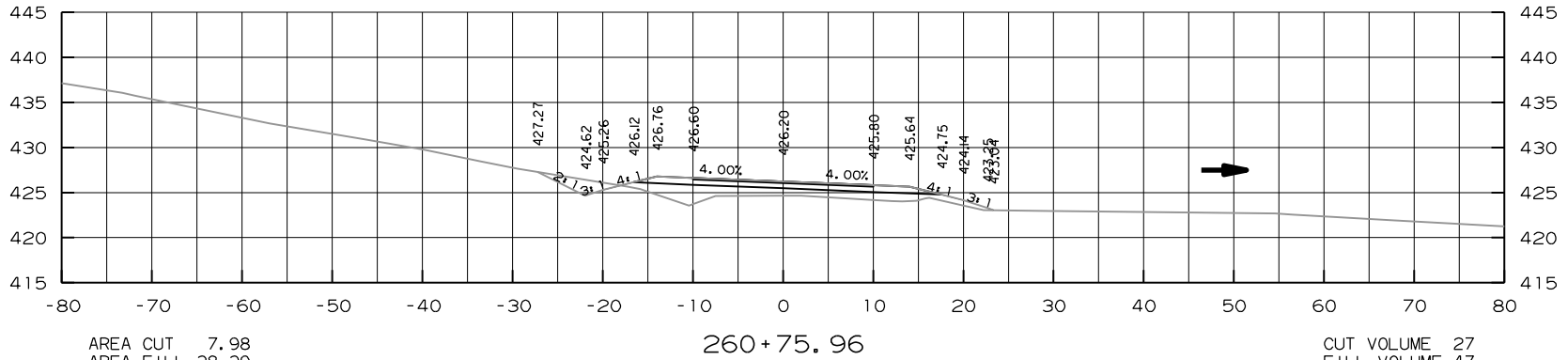




BEGIN FULL SUPERELEVATION





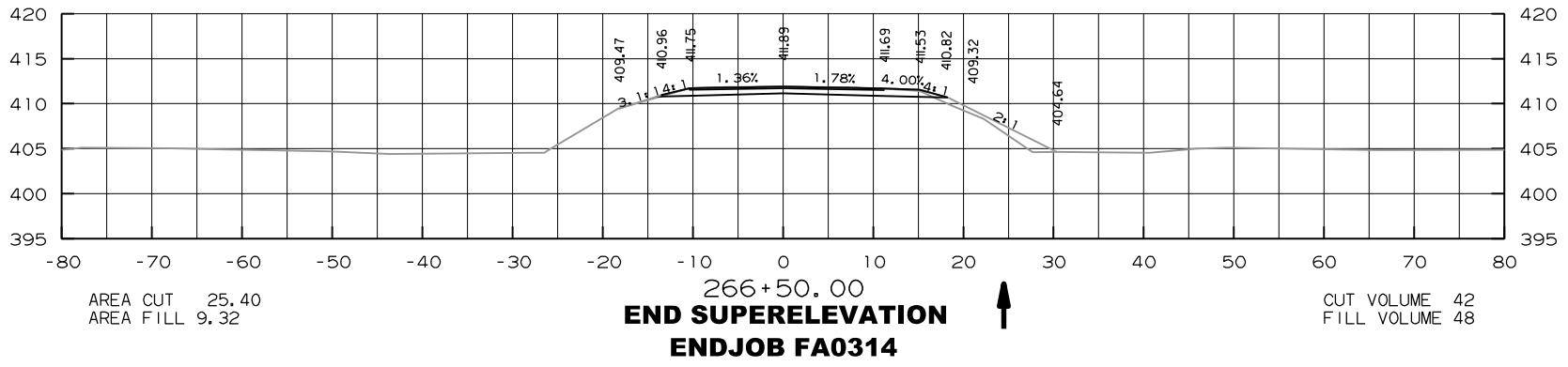


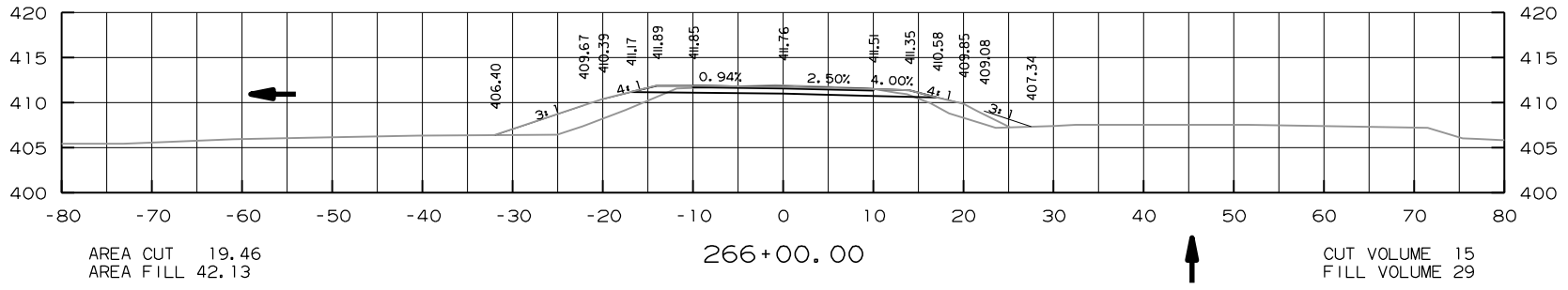
CROSS SECTIONS STA. 260+75.96 TO 263+00.00

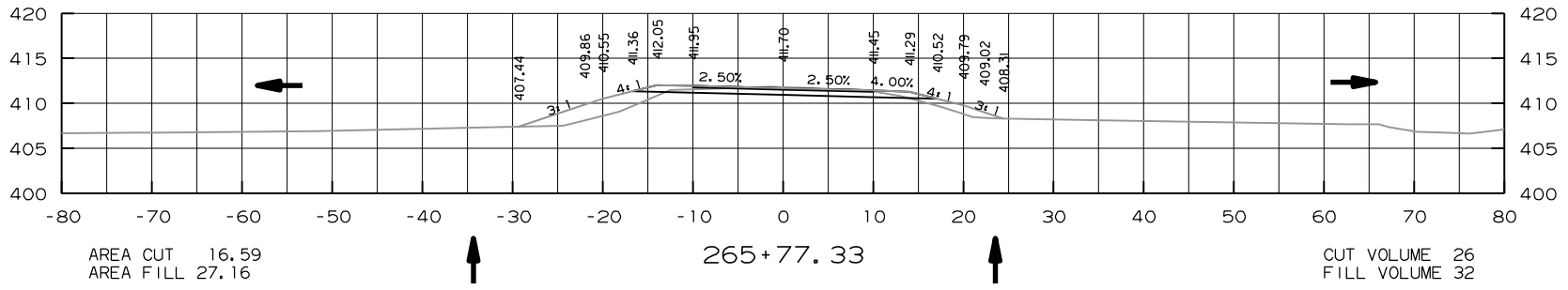
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		67	72

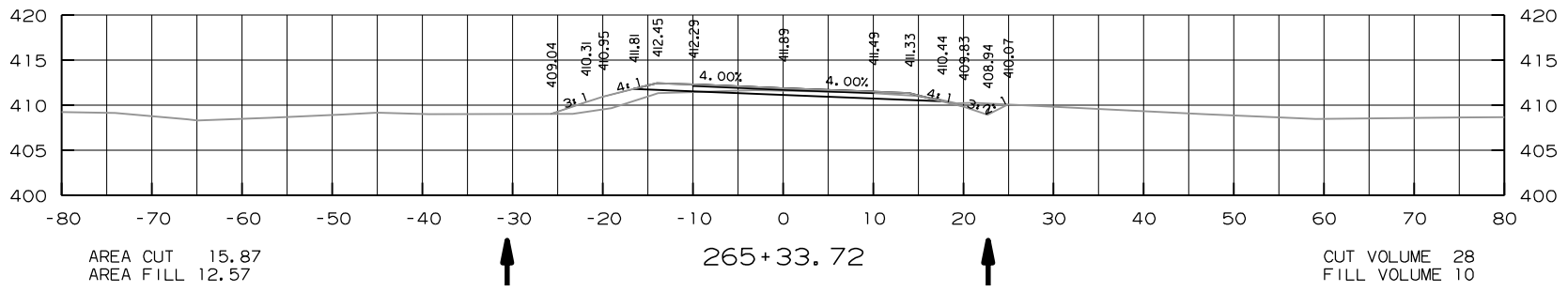
JOB NO. FA0314

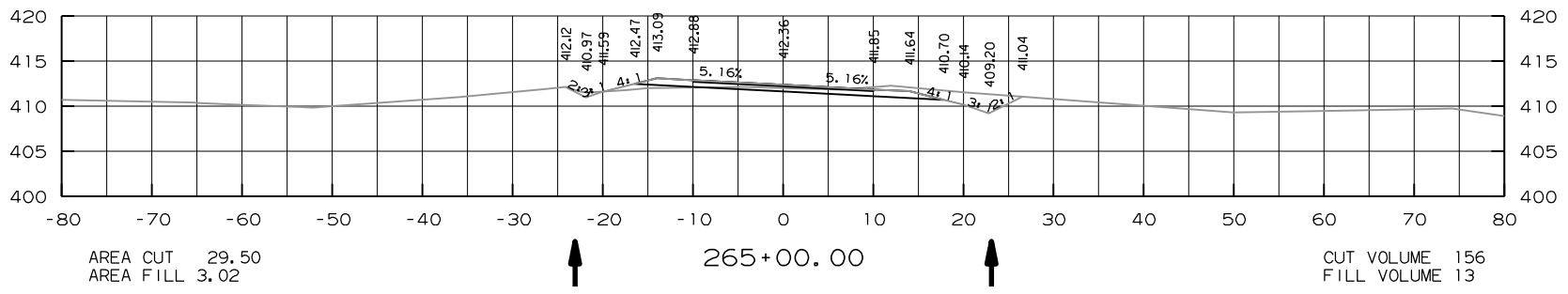
4



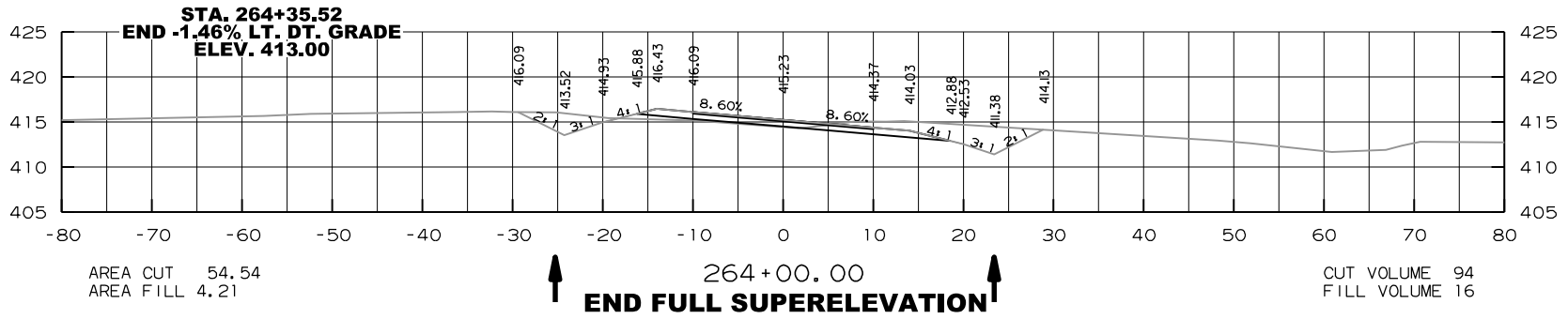






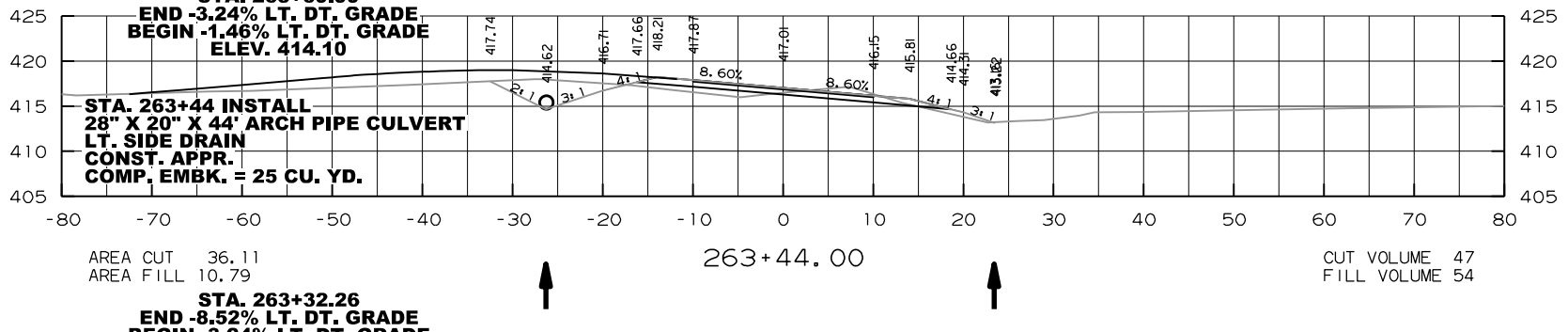


STA. 264+35.52
END -1.46% LT. DT. GRADE
ELEV. 413.00



END FULL SUPERELEVATION

STA. 263+60.00
END -3.24% LT. DT. GRADE
BEGIN -1.46% LT. DT. GRADE
ELEV. 414.10



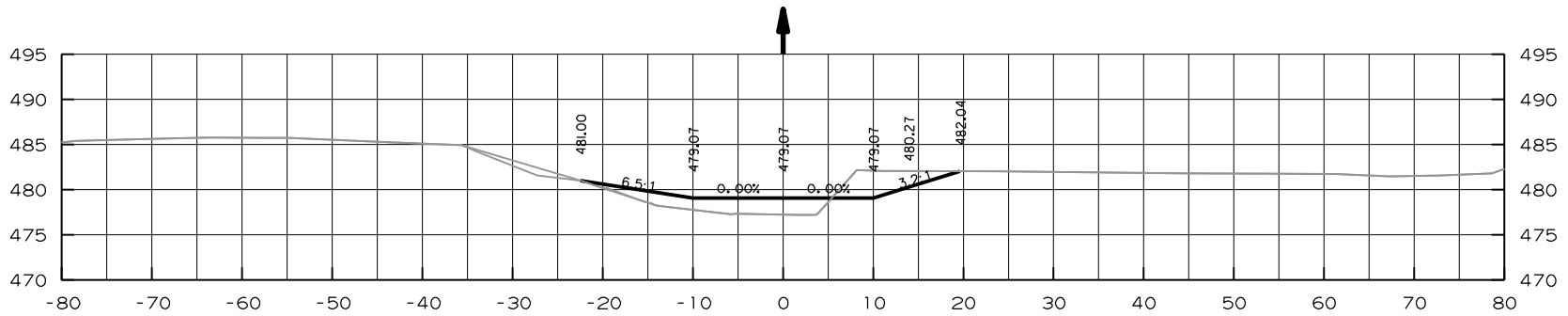
STA. 263+44 INSTALL
28" X 20" X 44' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR.
COMP. EMBK. = 25 CU. YD.

STA. 263+32.26
END -8.52% LT. DT. GRADE
BEGIN -3.24% LT. DT. GRADE
ELEV. 415.00

4 CROSS SECTIONS STA. 263+44.00 TO 266+50.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		68	72

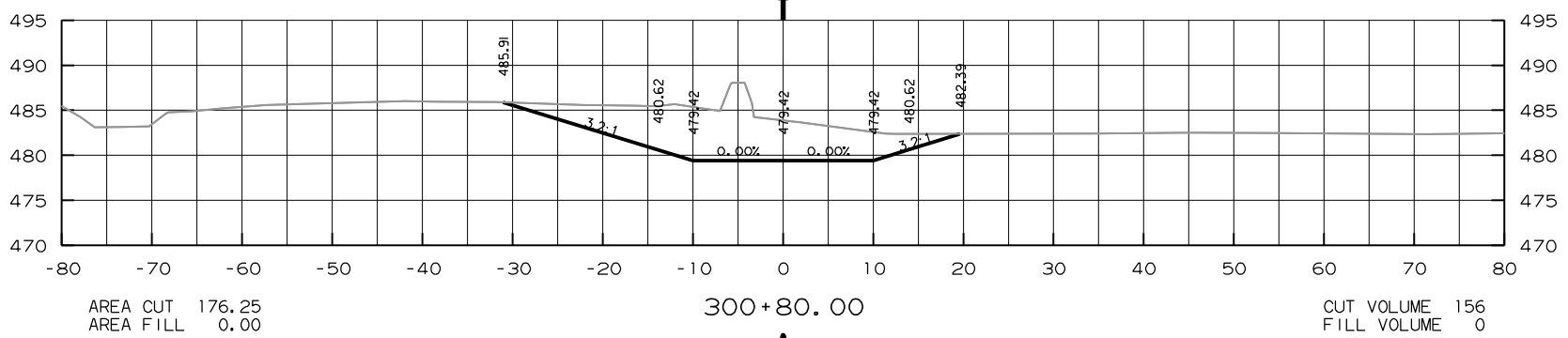
JOB NO. FA0314



AREA CUT 29.98
AREA FILL 36.85

301+00.00

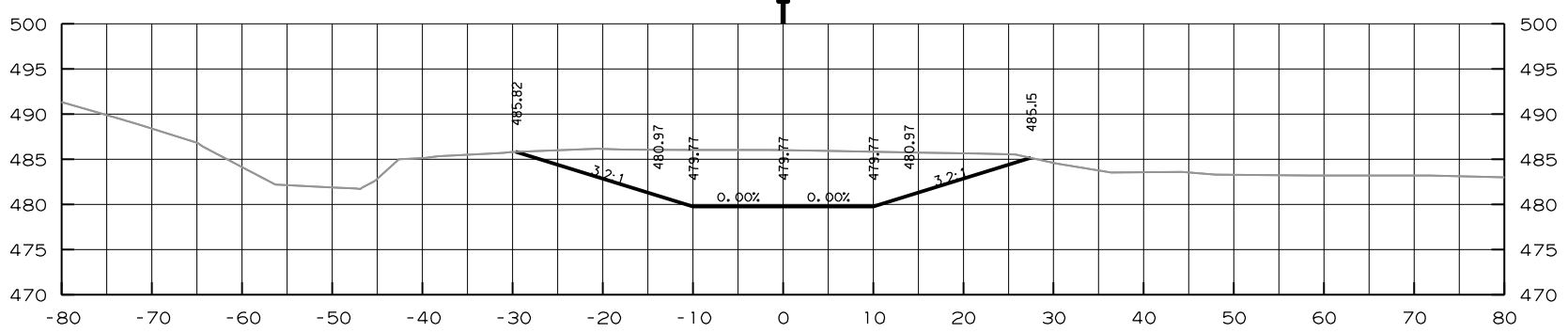
CUT VOLUME 76
FILL VOLUME 14



AREA CUT 176.25
AREA FILL 0.00

300+80.00

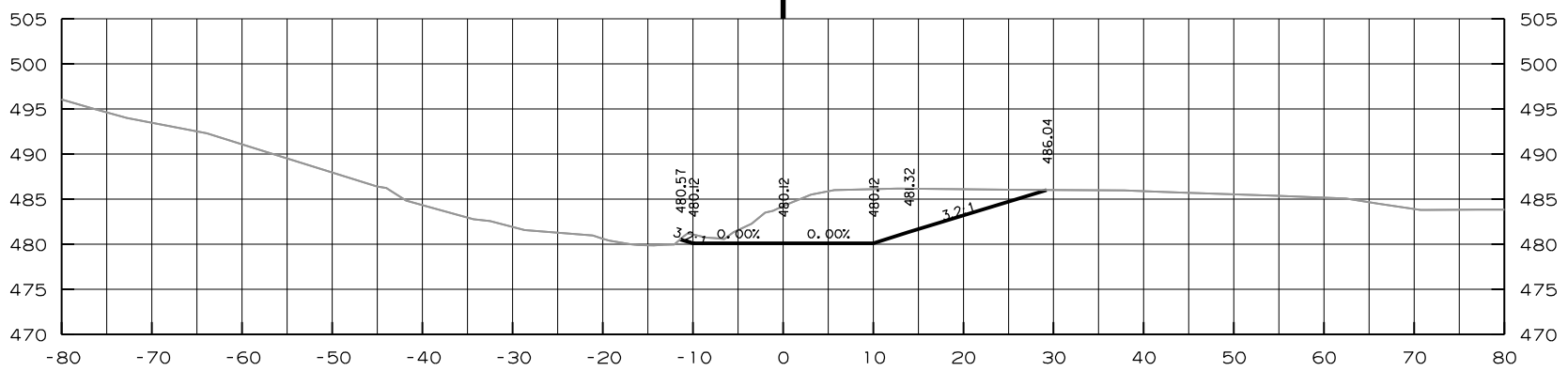
CUT VOLUME 156
FILL VOLUME 0



AREA CUT 244.08
AREA FILL 0.00

300+60.00

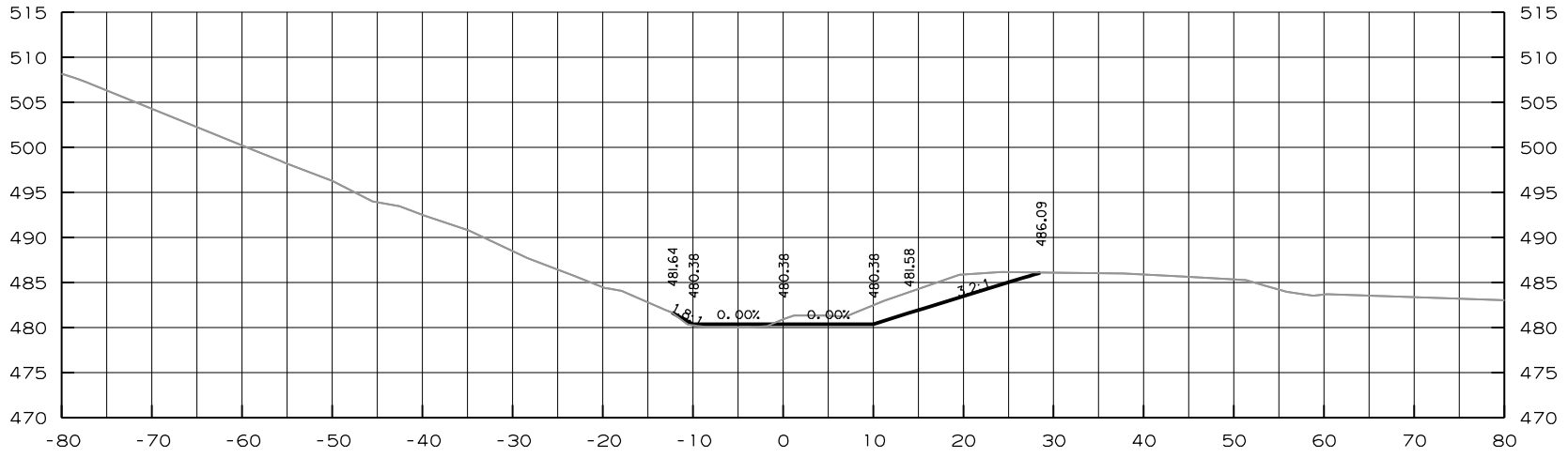
CUT VOLUME 139
FILL VOLUME 0



AREA CUT 132.27
AREA FILL 0.00

300+40.00

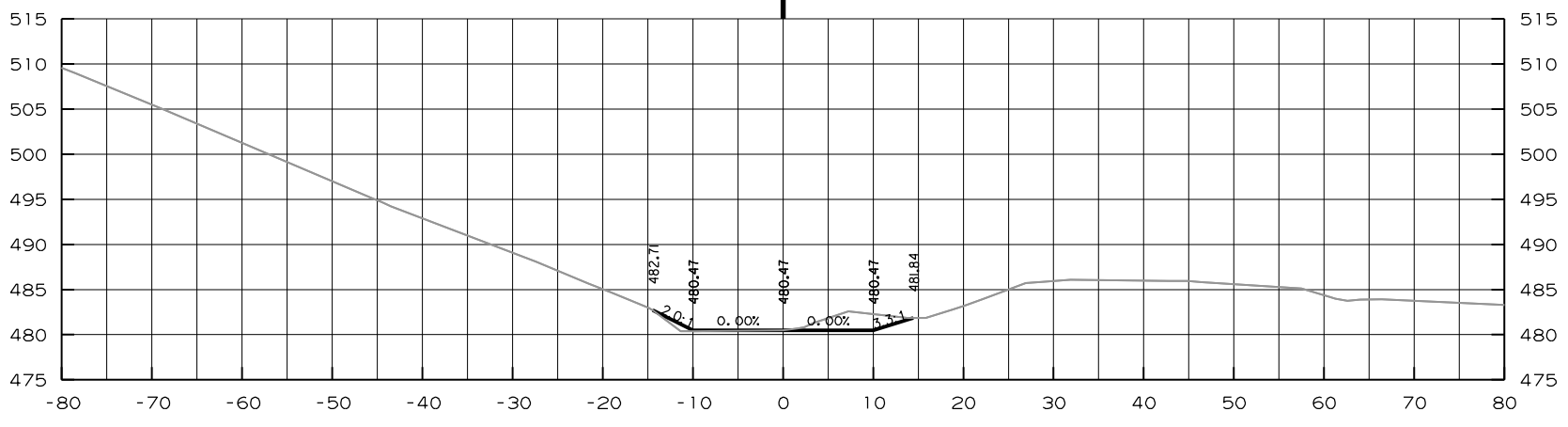
CUT VOLUME 66
FILL VOLUME 1



AREA CUT 45.53
AREA FILL 3.19

300+20.00

CUT VOLUME 23
FILL VOLUME 2



AREA CUT 15.75
AREA FILL 2.32

300+00.00

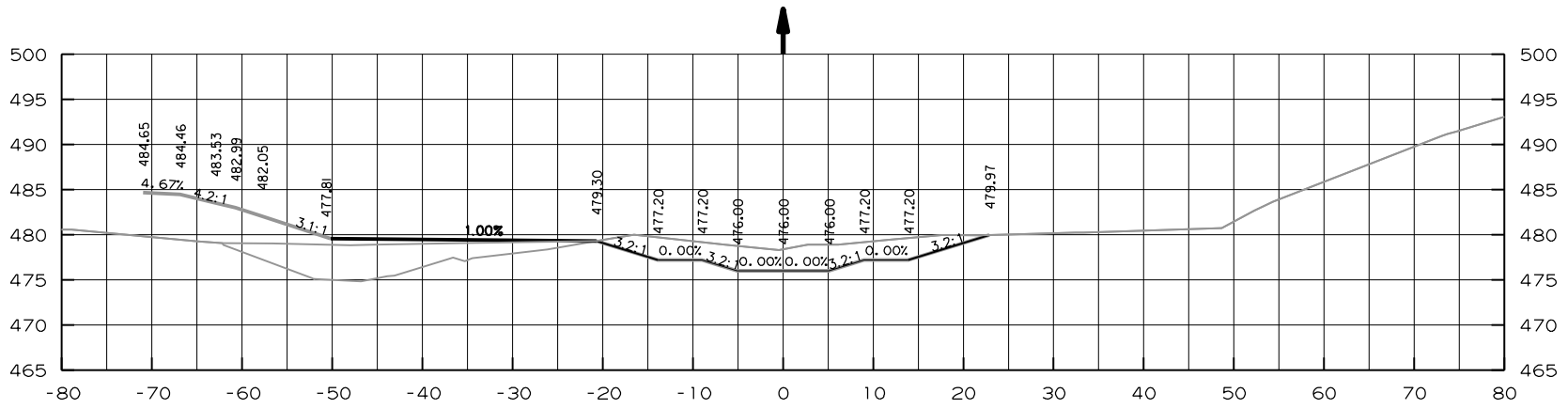
CUT VOLUME 0
FILL VOLUME 0

CROSS SECTIONS STA. 300+00.00 TO 301+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		69	72

JOB NO. FA0314

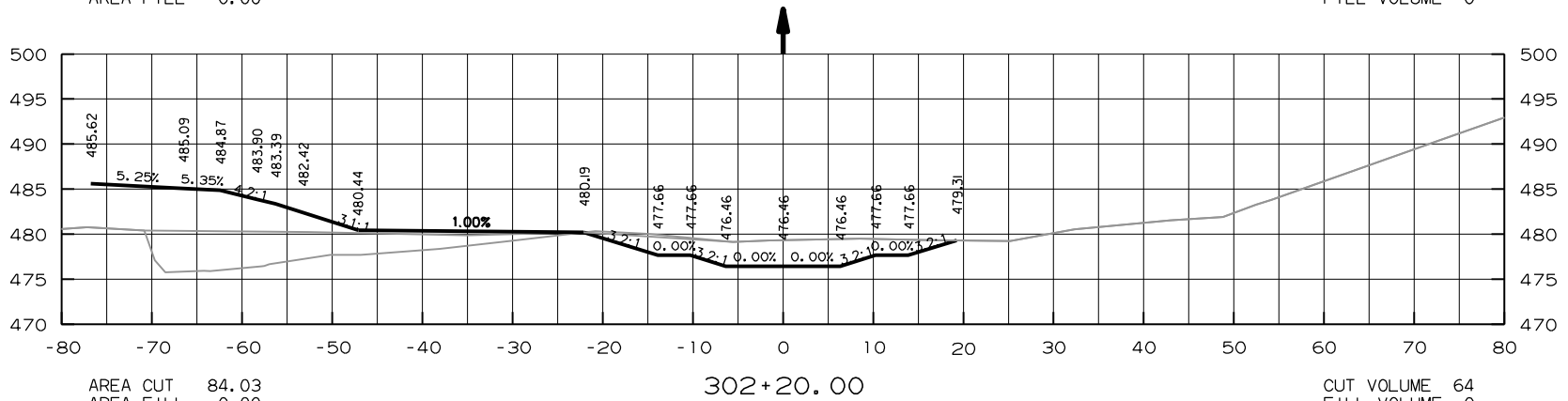
4



AREA CUT 89.21
AREA FILL 0.00

302+40.00

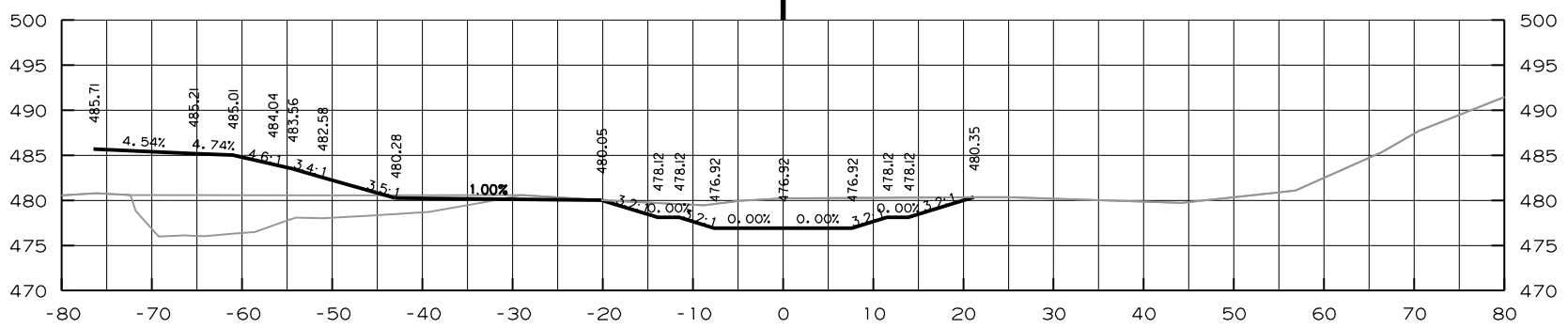
CUT VOLUME 64
FILL VOLUME 0



AREA CUT 84.03
AREA FILL 0.00

302+20.00

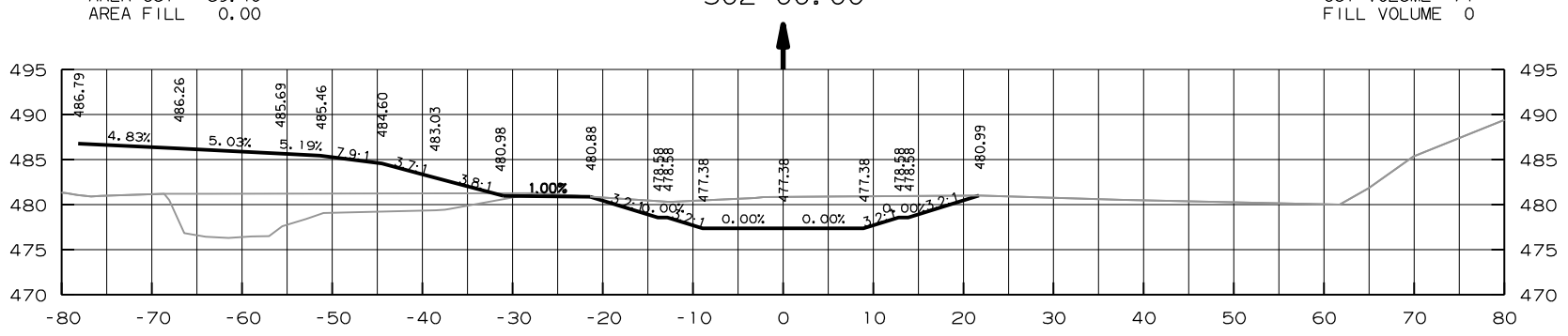
CUT VOLUME 64
FILL VOLUME 0



AREA CUT 89.40
AREA FILL 0.00

302+00.00

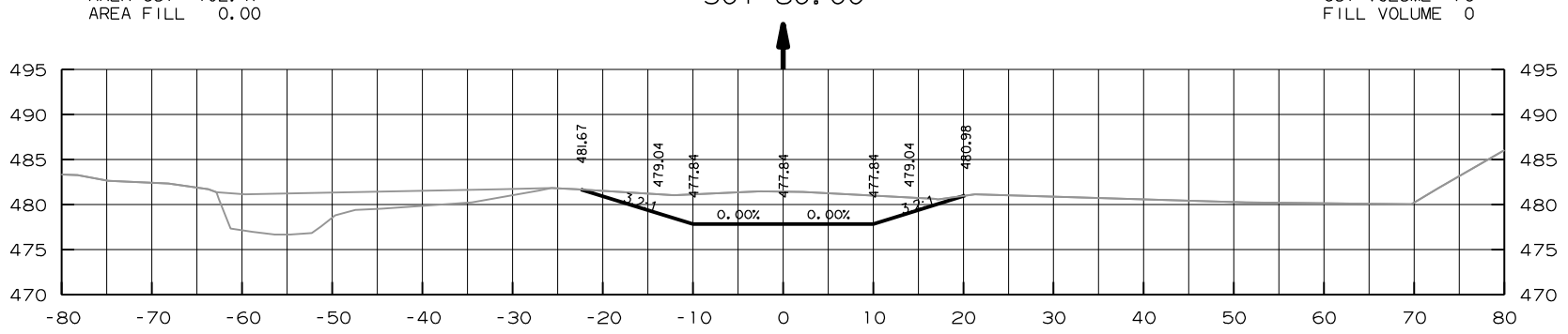
CUT VOLUME 71
FILL VOLUME 0



AREA CUT 102.47
AREA FILL 0.00

301+80.00

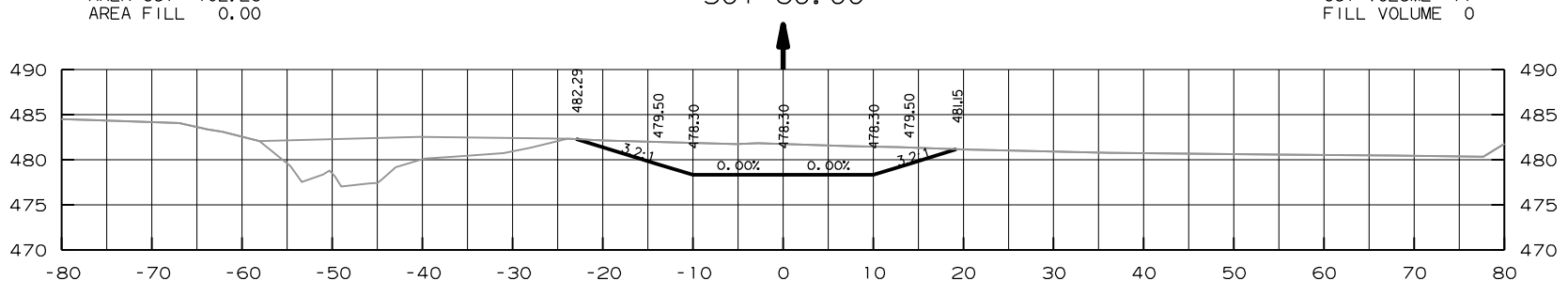
CUT VOLUME 76
FILL VOLUME 0



AREA CUT 102.26
AREA FILL 0.00

301+60.00

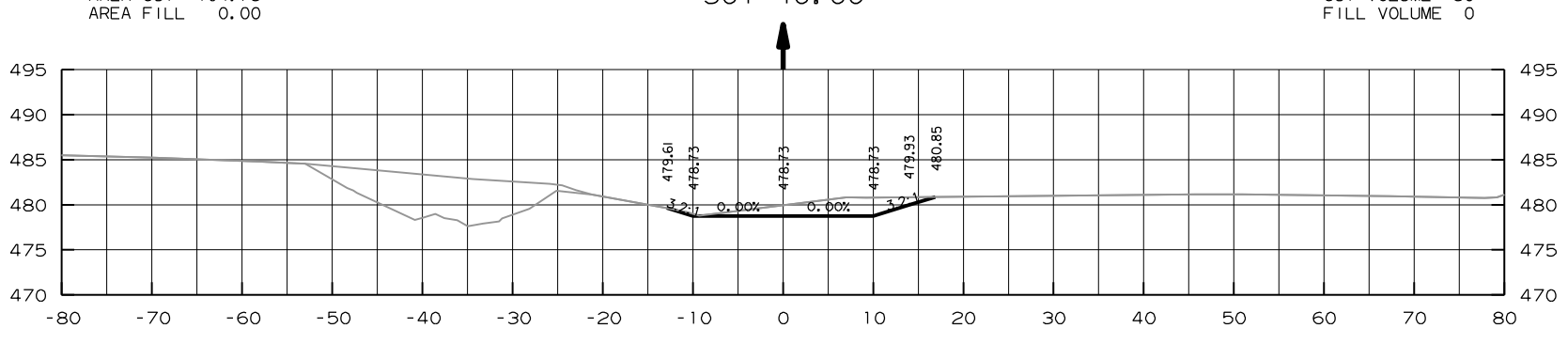
CUT VOLUME 77
FILL VOLUME 0



AREA CUT 104.73
AREA FILL 0.00

301+40.00

CUT VOLUME 50
FILL VOLUME 0



AREA CUT 30.76
AREA FILL 0.00

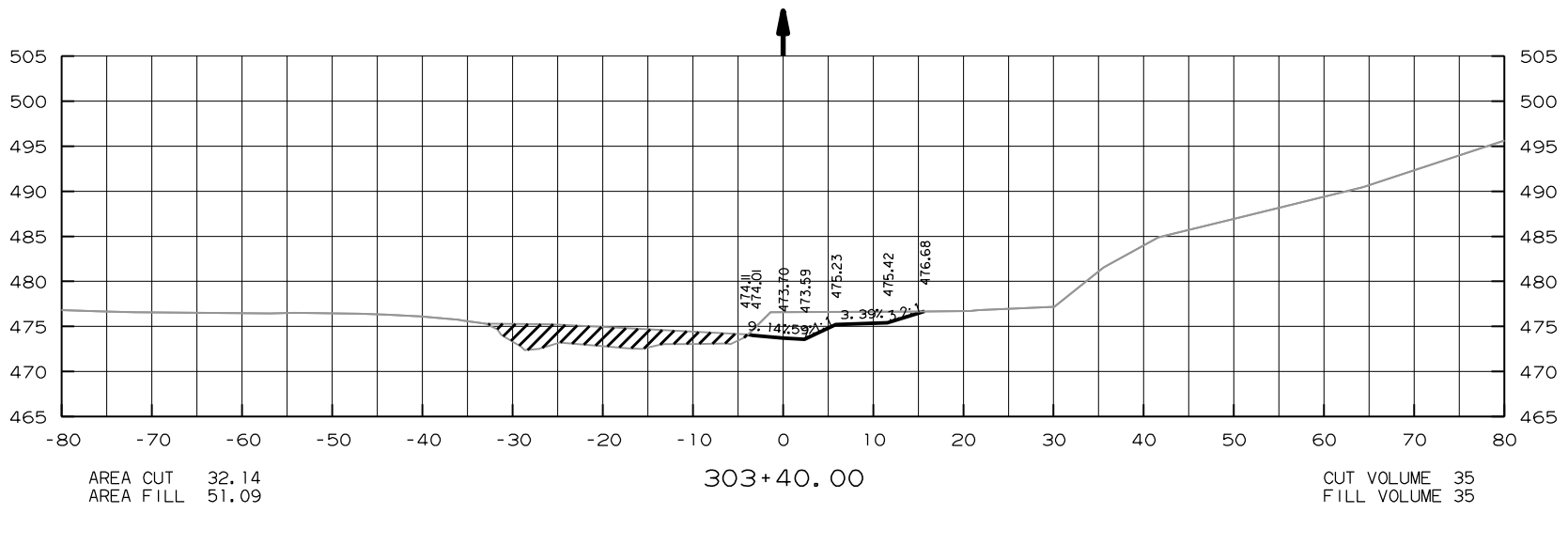
301+20.00

CUT VOLUME 22
FILL VOLUME 14

4 CROSS SECTIONS STA. 301+20.00 TO 302+40.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		70	72

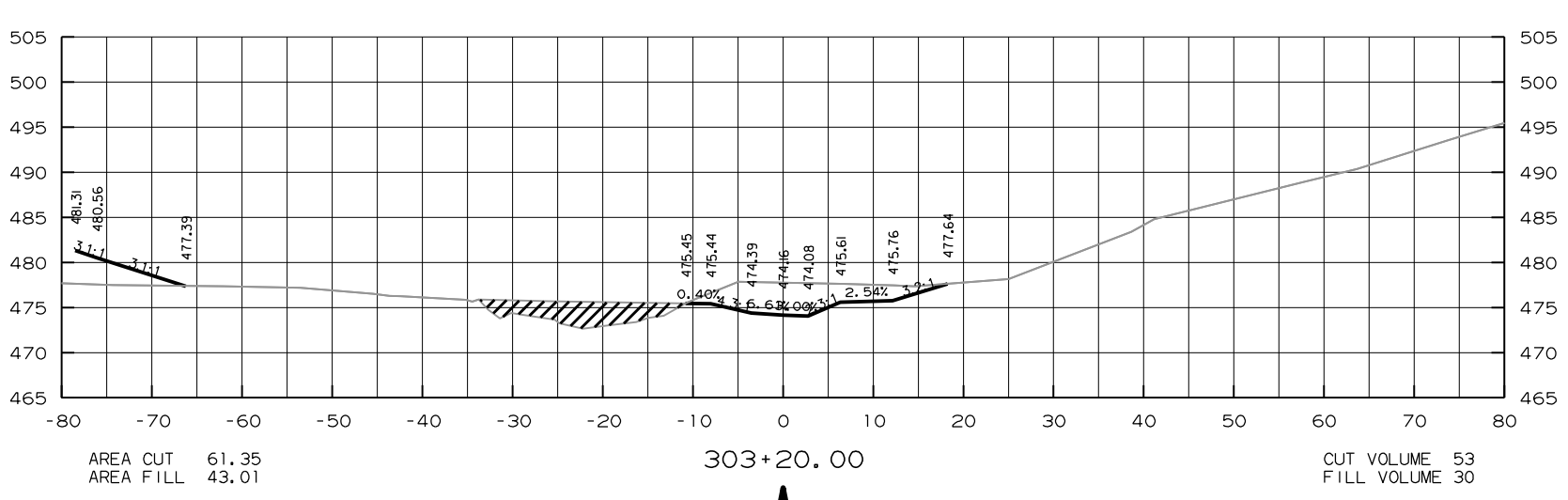
JOB NO. FA0314



AREA CUT 32.14
AREA FILL 51.09

303+40.00

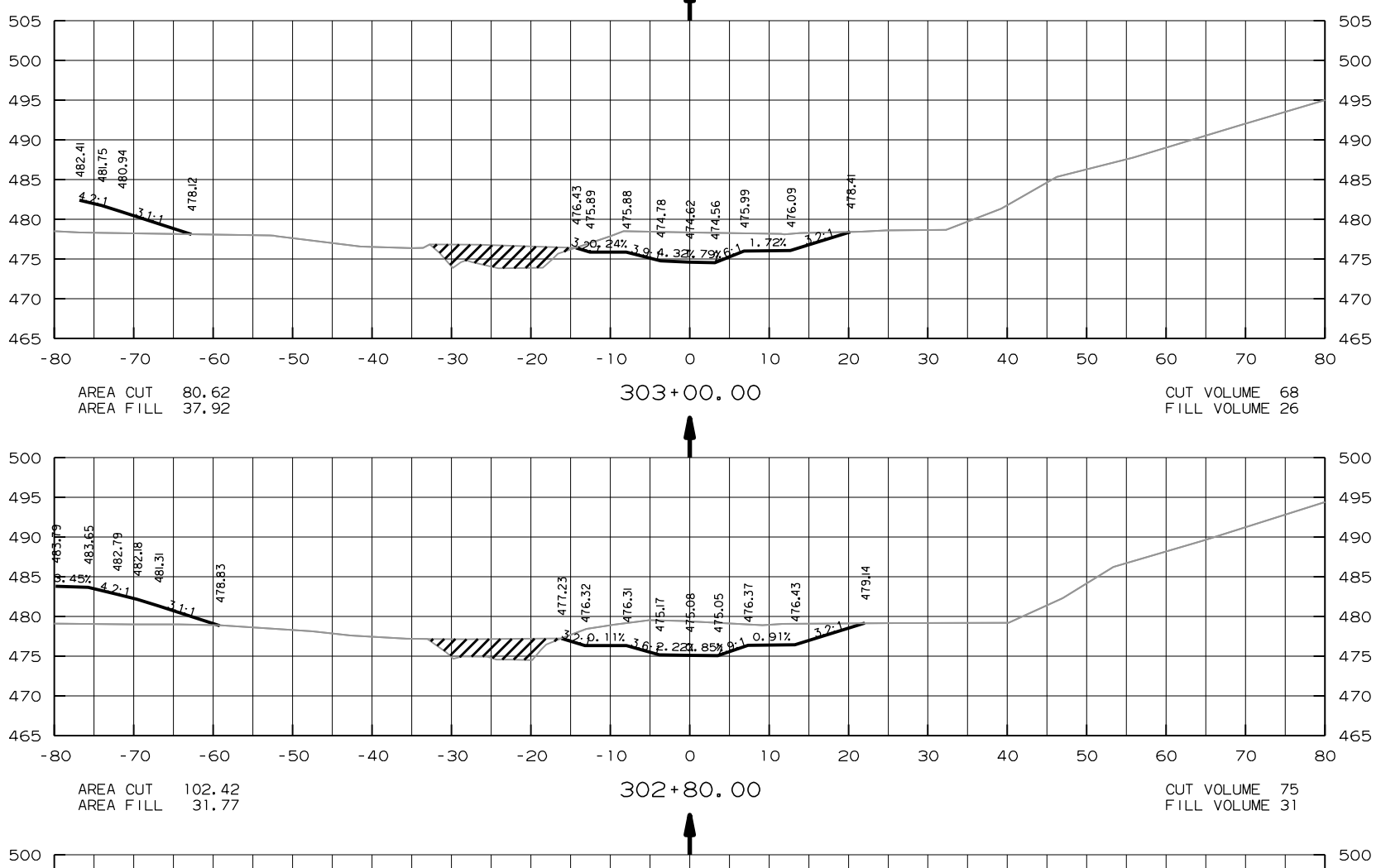
CUT VOLUME 35
FILL VOLUME 35



AREA CUT 61.35
AREA FILL 43.01

303+20.00

CUT VOLUME 53
FILL VOLUME 30



AREA CUT 80.62
AREA FILL 37.92

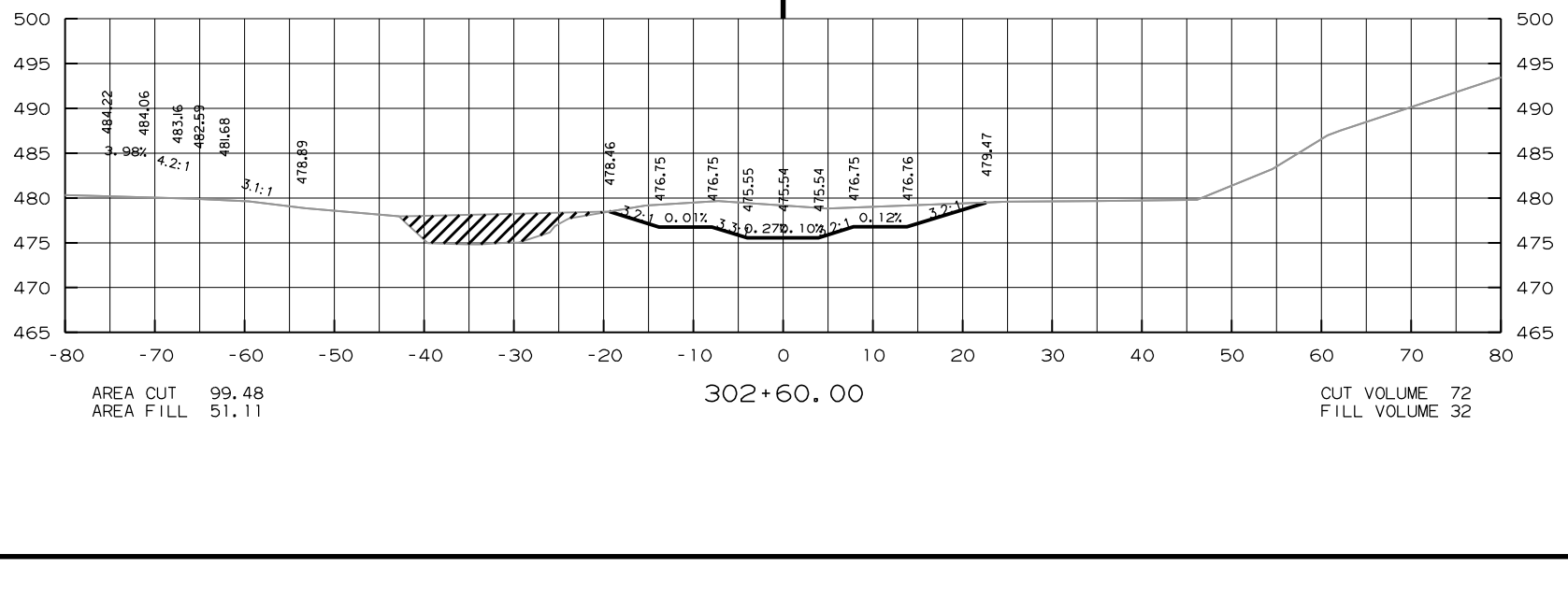
303+00.00

CUT VOLUME 68
FILL VOLUME 26

AREA CUT 102.42
AREA FILL 31.77

302+80.00

CUT VOLUME 75
FILL VOLUME 31



AREA CUT 99.48
AREA FILL 51.11

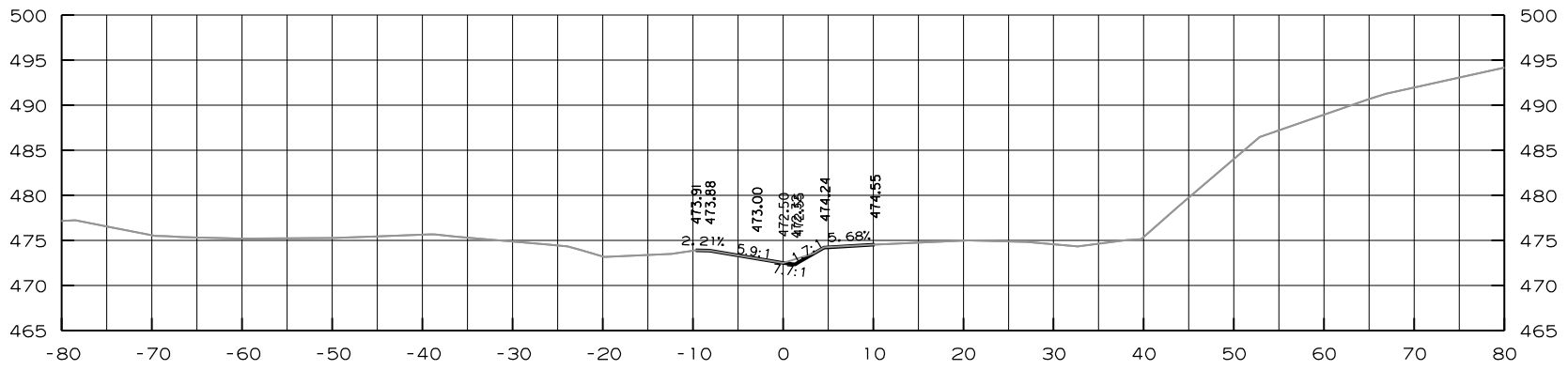
302+60.00

CUT VOLUME 72
FILL VOLUME 32

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		71	72

JOB NO. FA0314

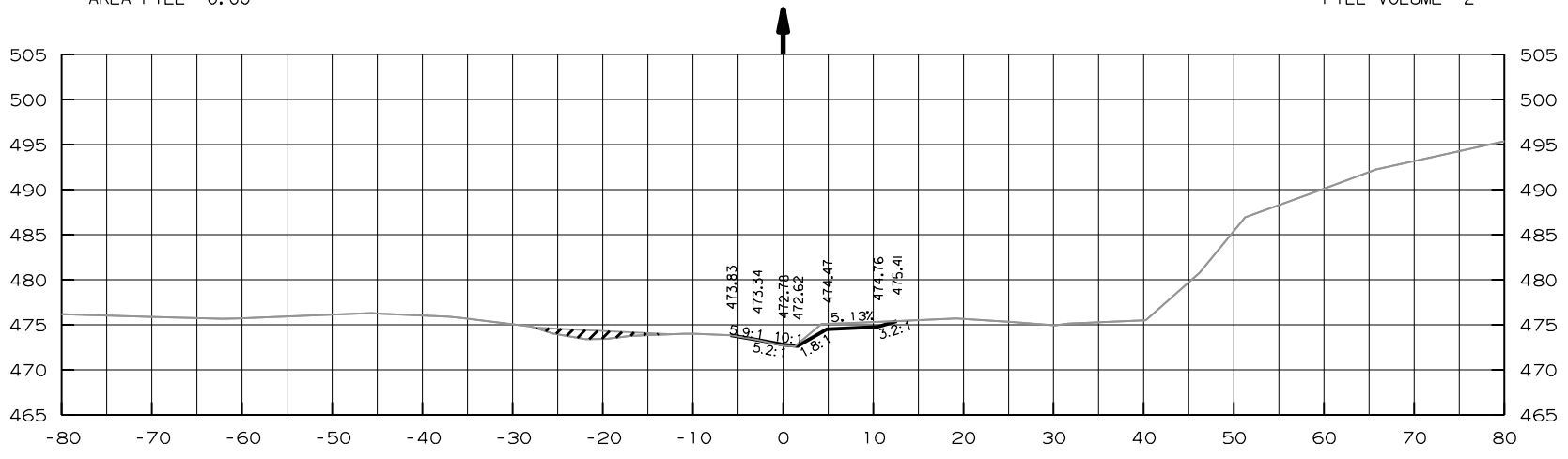
4 CROSS SECTIONS STA. 302+60.00 TO 303+40.00



AREA CUT 0.99
AREA FILL 0.00

303+92.16

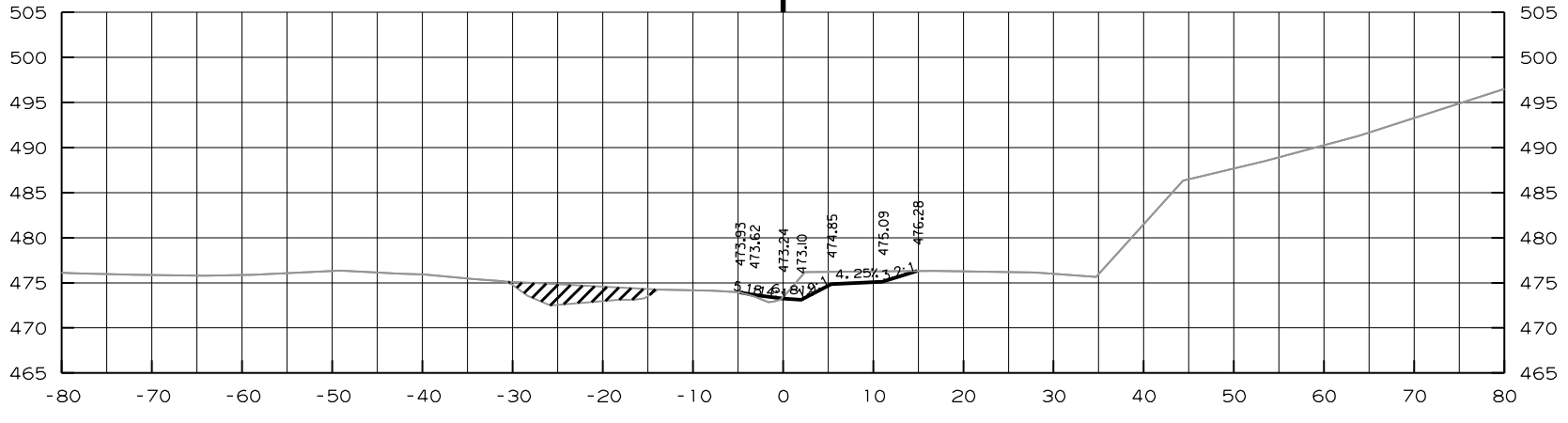
CUT VOLUME 2
FILL VOLUME 2



AREA CUT 6.02
AREA FILL 8.22

303+80.00

CUT VOLUME 9
FILL VOLUME 12



AREA CUT 19.46
AREA FILL 25.10

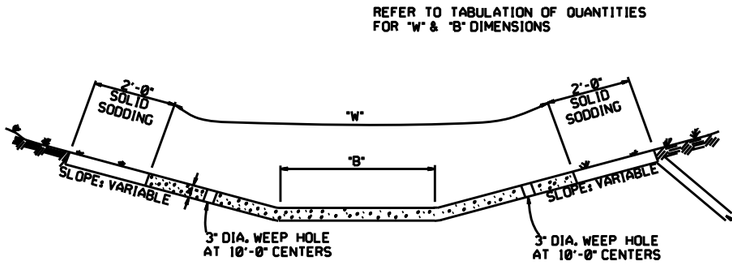
303+60.00

CUT VOLUME 19
FILL VOLUME 28

4 CROSS SECTIONS STA. 303+60.00 TO 303+92.16

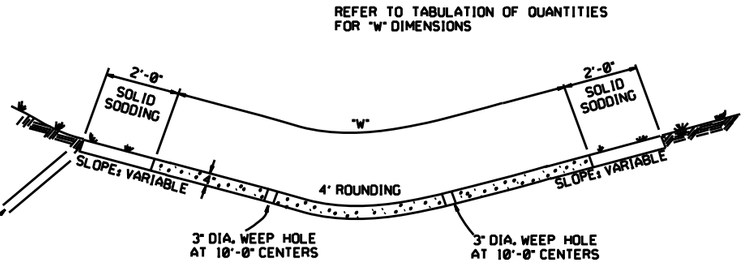
JOB NO.	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
FA0314	6	ARK.		72	72

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED



TYPE A

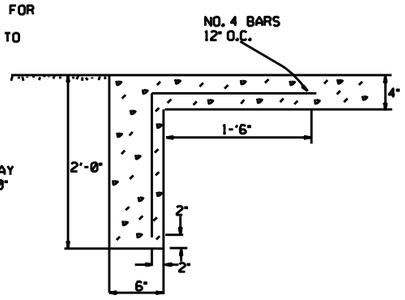
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.



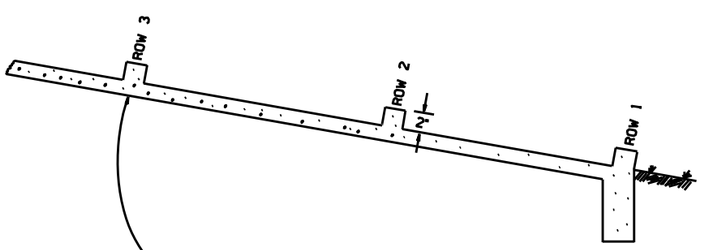
TYPE B

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'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

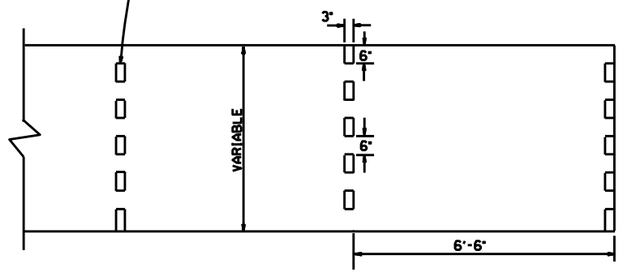


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

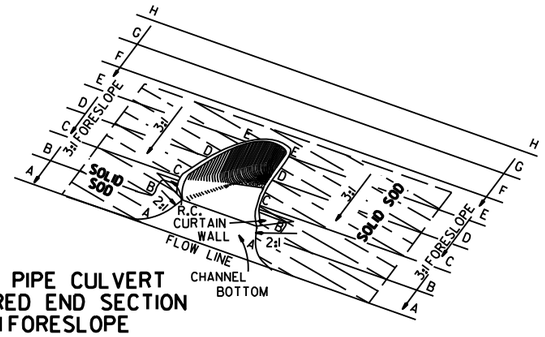
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-1-87	REVISED ENERGY DISSIPATOR	671-4-1-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

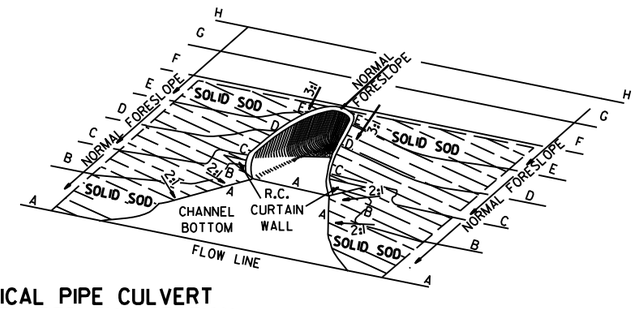
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

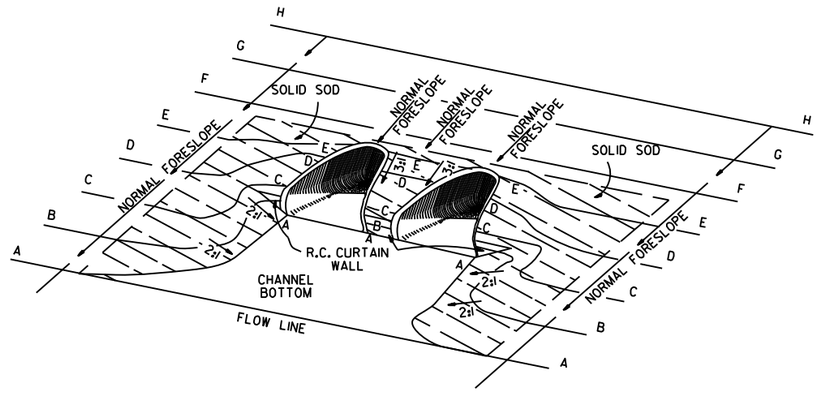
STANDARD DRAWING CDP-1



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



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1½"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9½"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

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

REINFORCING STEEL SCHEDULE

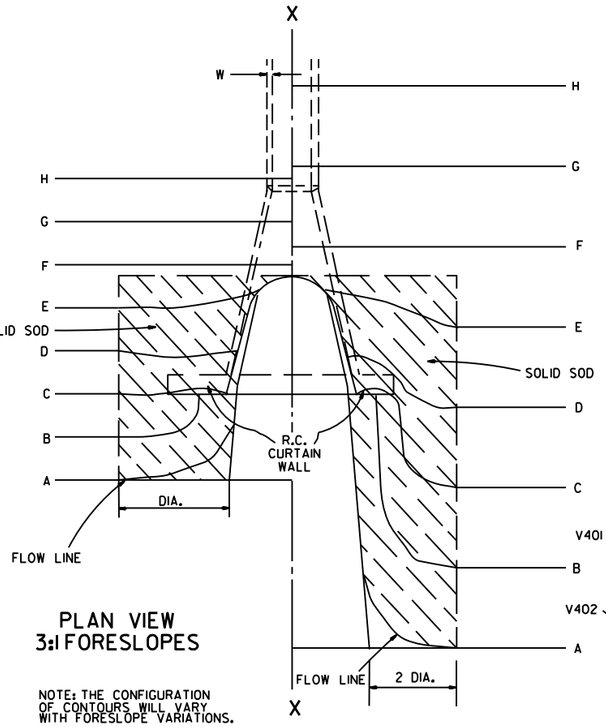
PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

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

SOLID SODDING

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

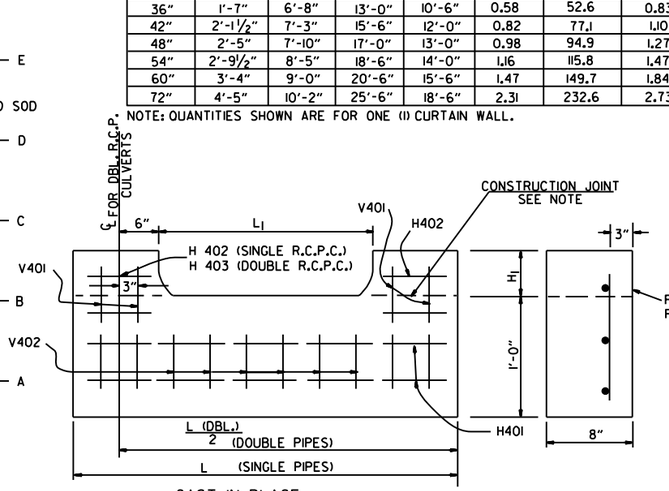
NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.



PLAN VIEW
3:1 FORESLOPES

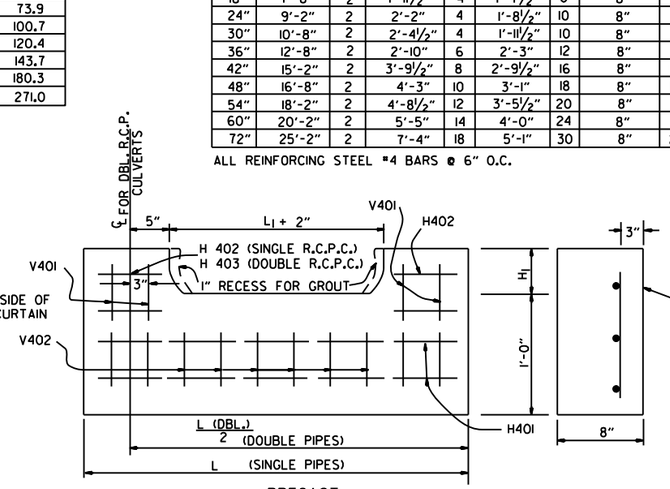
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



CAST-IN-PLACE

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



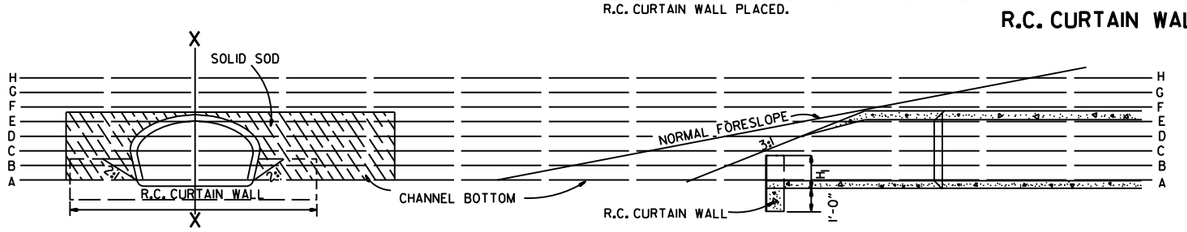
PRECAST

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

R.C. CURTAIN WALL DETAILS

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE: FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	
10-12-95	CORRECTED SPELLING	
11- 3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

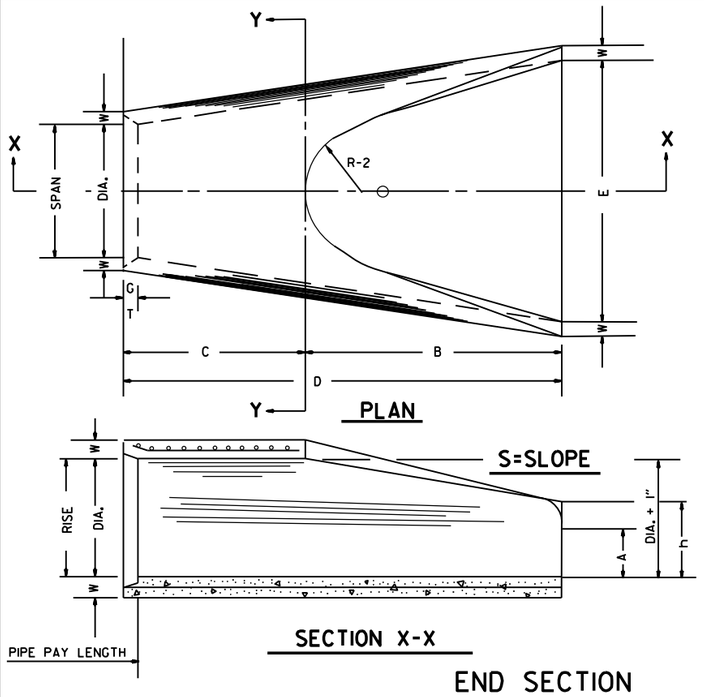
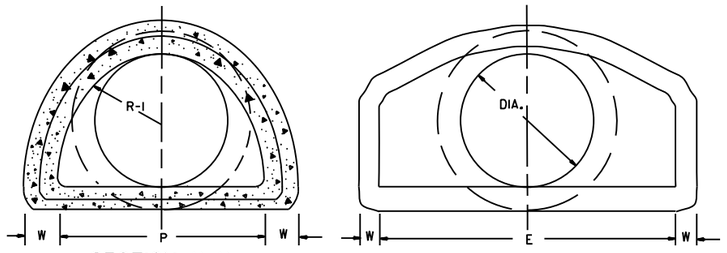


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33⅜"	16⅛"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47⅛"	24⅜"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36⅛"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77⅛"	38⅛"	24"	5"	13250	4'-6"

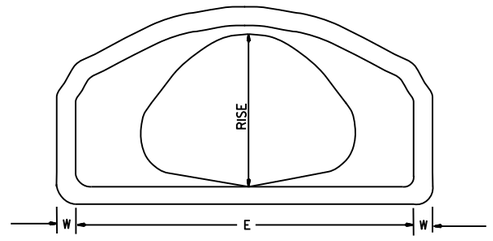


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

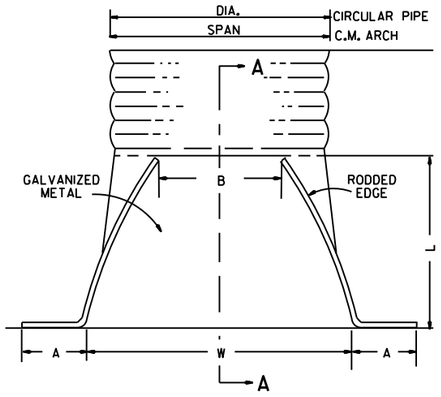
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36¹³⁄₁₆"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47¹³⁄₁₆"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54⅜"	22"	3½"	2½:1
42	51⅛	51	31⅝	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅝"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72¹⁵⁄₁₆"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77¹³⁄₁₆"	24"	5"	2¼:1

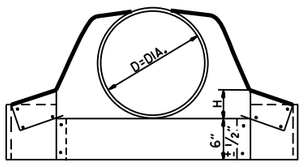
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



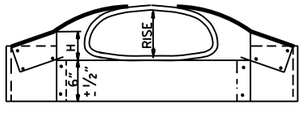
END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS





CIRCULAR PIPE



C.M. ARCH PIPE

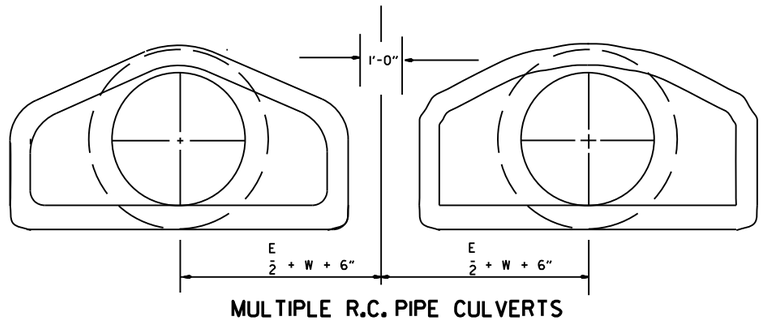
CIRCULAR PIPE

D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	12	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

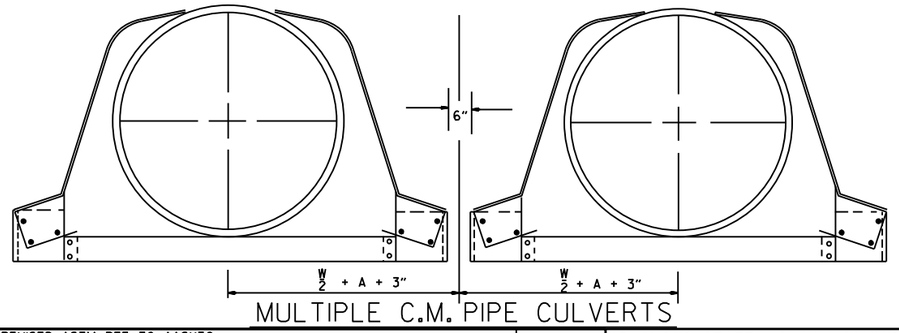
C.M. ARCH PIPE

EQUIV. DIA.	SPAN	RISE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12

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



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73
10-2-72	REVISED AND REDRAWN	760-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-2

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅞	44	26⅝	27
42	51⅛	51	31 5/16	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

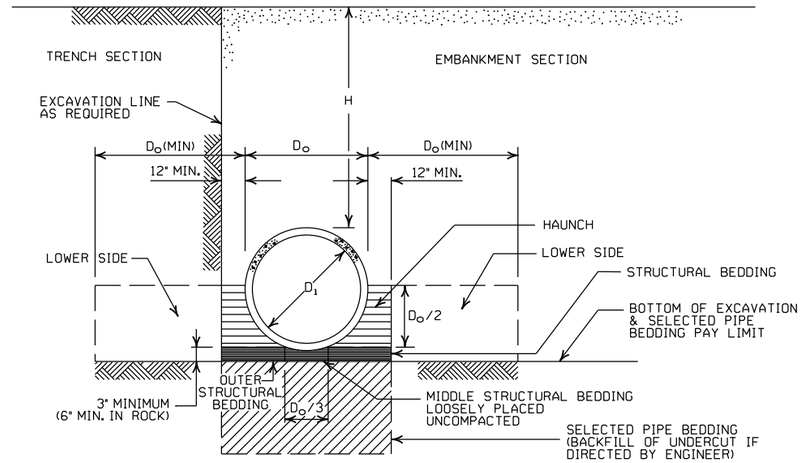
- LEGEND -

D_1 = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS (INCHES)				
		0.064	0.079	0.109	0.138	0.168
2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM						
12	1	84	91			
15	1	67	73			
18	1	56	61			
24	1	42	46	59		
30	2	34	36	47		
36	2		30	39	41	
42	2		43	67	70	73
48	2		37	58	61	64
② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, BOLTED, OR HELICAL LOCK-SEAM						
36	1	48	60	88	111	118
42	1	41	51	72	90	102
48	1	36	45	64	77	85
54	2	32	40	59	71	79
60	2	29	36	53	64	71
66	2	26	33	47	58	64
72	2	24	30	44	53	59
78	2		28	41	49	54
84	2		26	38	45	51
90	2		24	35	43	45
96	2		22	33	40	44
102	2			31	38	42
108	2			30	35	39
114	2			28	34	37
120	2			27	32	35

CORRUGATED ALUMINUM PIPE (ROUND)

PIPE DIAMETER (INCHES)	① MINUMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET)	MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET)				
		METAL THICKNESS IN INCHES				
		0.060	0.075	0.105	0.135	0.164
		2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
12	1	45	45			
18	2	30	30	52		
24	2	22	22	39	41	
30	2		18	31	32	34
36	2.5		15	26	27	28
42	2			43	43	44
48	2			40	41	43
54	2			35	37	38
60	2				33	34
66	2					31
72	2					29

CONSTRUCTION SEQUENCE

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

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

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

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

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

CORRUGATED METAL PIPE ARCHES

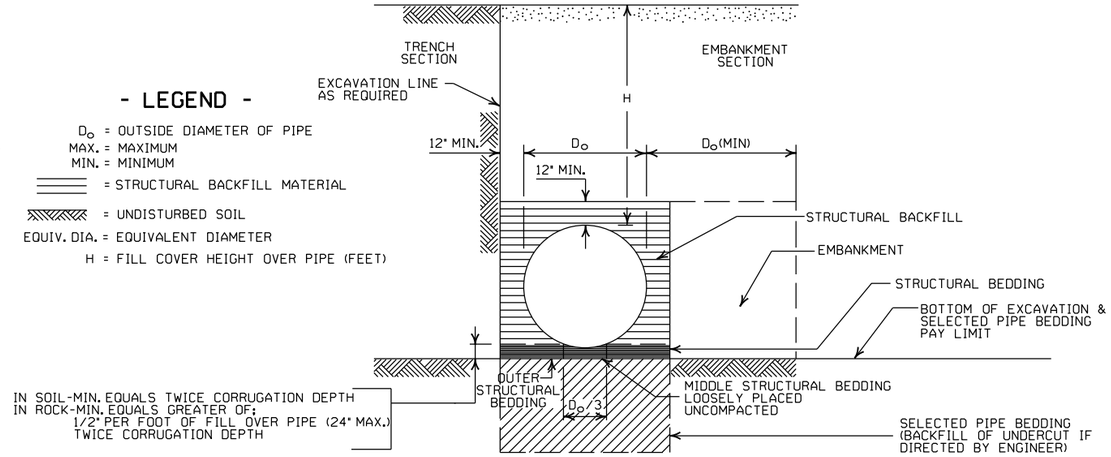
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL					ALUMINUM				
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)		MAX. HEIGHT OF FILL, "H" (FT.)	
				INSTALLATION		INSTALLATION			INSTALLATION		INSTALLATION	
				TYPE 1		TYPE 1			TYPE 1		TYPE 1	
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM					2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM				
15	17x13	3	0.064	2		15		0.060	2		15	
18	21x15	3	0.064	2		15		0.060	2		15	
21	24x18	3	0.064	2.25		15		0.060	2.25		15	
24	28x20	3	0.064	2.5		15		0.075	2.5		15	
30	35x24	3	0.079	3		12		0.075	3		12	
36	42x29	3½	0.079	3		12		0.105	3		12	
42	49x33	4	0.079	3		12		0.105	3		12	
48	57x38	5	0.109	3		13		0.135	3		13	
54	64x43	6	0.109	3		14		0.135	3		14	
60	71x47	7	0.138	3		15		0.164	3		15	
66	77x52	8	0.168	3		15						
72	83x57	9	0.168	3		15						
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM									
				INSTALLATION		INSTALLATION						
				TYPE 2	TYPE 1	TYPE 2	TYPE 1					
36	40x31	5	0.079	3	2	12	15					
42	46x36	6	0.079	3	2	13	15					
48	53x41	7	0.079	3	2	13	15					
54	60x46	8	0.079	3	2	13	15					
60	66x51	9	0.079	3	2	13	15					
66	73x55	12	0.079	3	2	15	15					
72	81x59	14	0.079	3	2	15	15					
78	87x63	14	0.079	3	2	15	15					
84	95x67	16	0.109	3	2	15	15					
90	103x71	16	0.109	3	2	15	15					
96	112x75	18	0.109	3	2	15	15					
102	117x79	18	0.109	3	2	15	15					
108	128x83	18	0.138	3	2	15	15					

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

② WHERE THE STANDARD 2 2/3"x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A PIPE OF THE SAME DIAMETER WITH A 3" x 1" OR 5" x 1" CORRUGATION MAY BE SUBSTITUTED, PROVIDING IT IS GAUGED FOR A FILL HEIGHT CONDITION EQUAL TO OR GREATER THAN THE MAXIMUM FILL HEIGHT CONDITION FOR THE SPECIFIED GAUGE AND CORRUGATION.

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE (ROUND).
3. INSTALALTION TYPE 1 SHALL BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 2⅔" X ½" CORRUGATION.
4. INSTALLATION TYPE 1 OR 2 MAY BE USED FOR CORRUGATED STEEL OR ALUMINUM PIPE ARCHES WITH 3" X 1" OR 5" X 1" CORRUGATION.

GENERAL NOTES

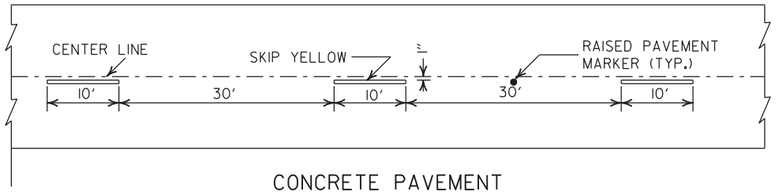
1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD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

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

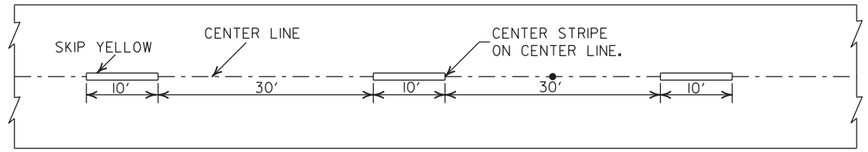
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1



CONCRETE PAVEMENT

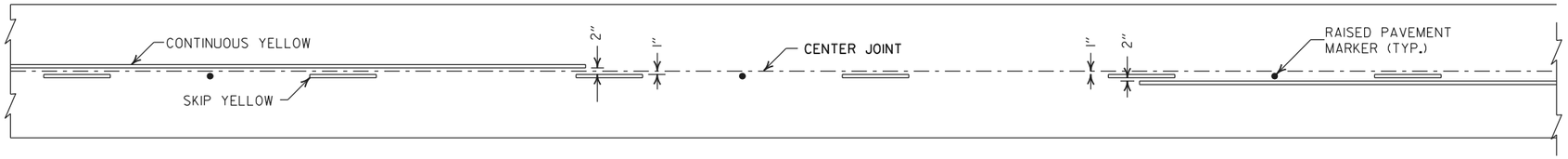


ASPHALT PAVEMENT

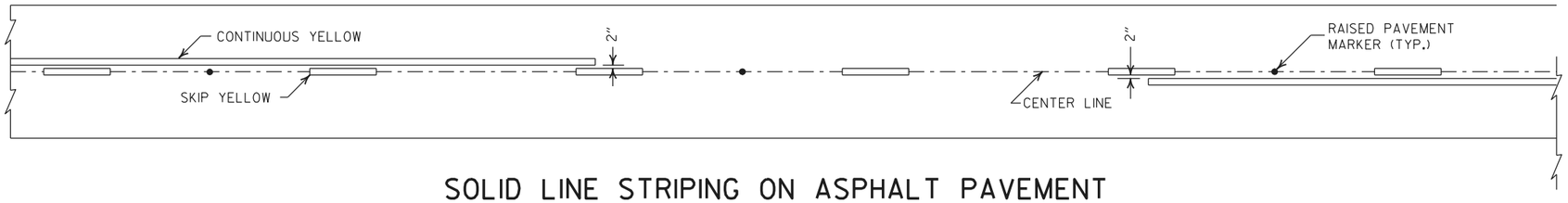
BROKEN LINE STRIPING

NOTES:

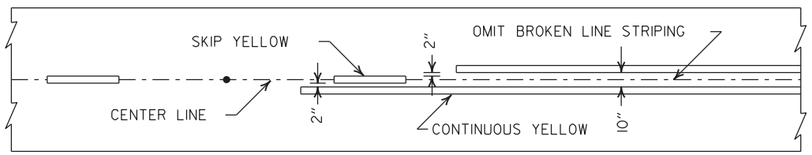
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



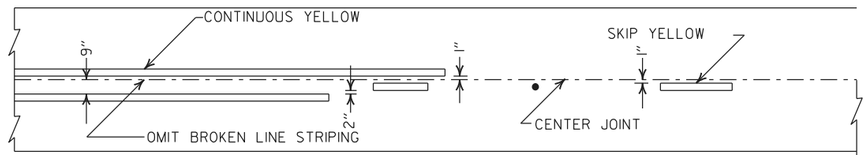
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

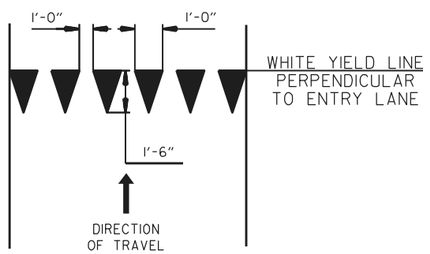


ASPHALT PAVEMENT

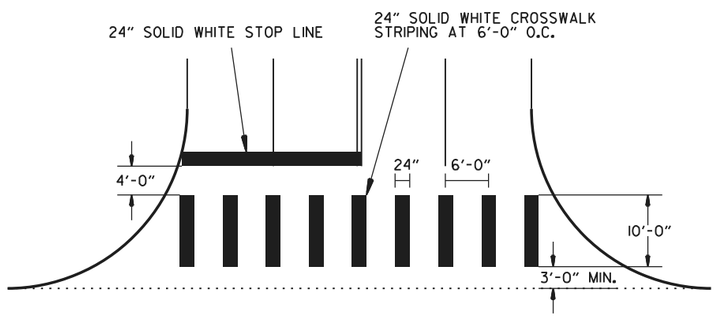


CONCRETE PAVEMENT

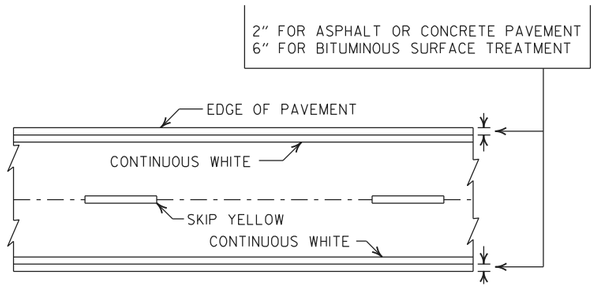
STRIPING AT ADJACENT NO PASSING LANES



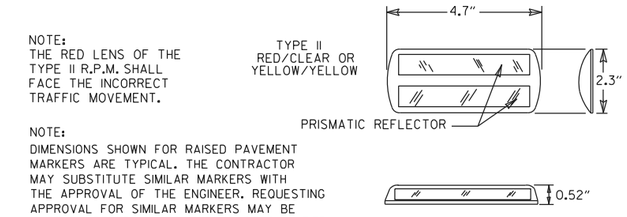
YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS



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 ARDOT QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE REV	DESCRIPTION
04-09-26	REV. CROSSWALK & STOP LINE DETAILS
02-27-20	REV. STOP LINE DETAILS
06-01-17	ADDED YIELD LINE DETAIL
05-12-16	REVISED LINE WIDTHS, SPACING, & NOTES
09-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS

ARKANSAS STATE HIGHWAY COMMISSION

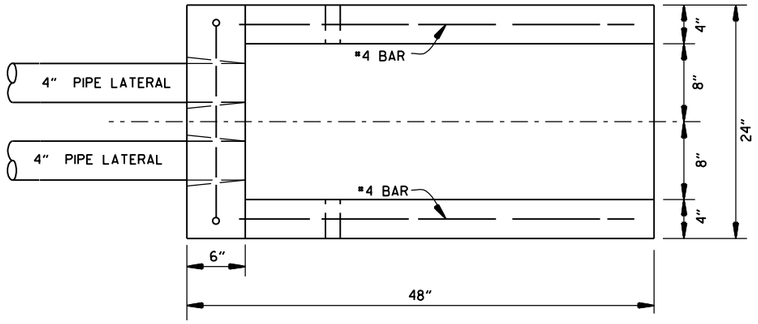
PAVEMENT MARKING DETAILS

DATE EFFECTIVE	STANDARD DRAWING	PM-1
04-09-2026		

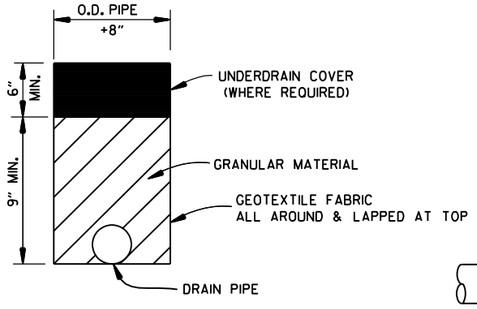
NOTE:

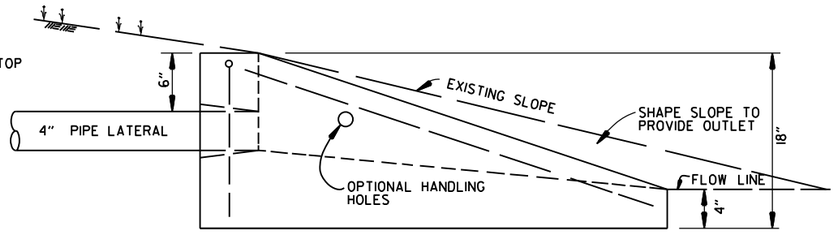
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.

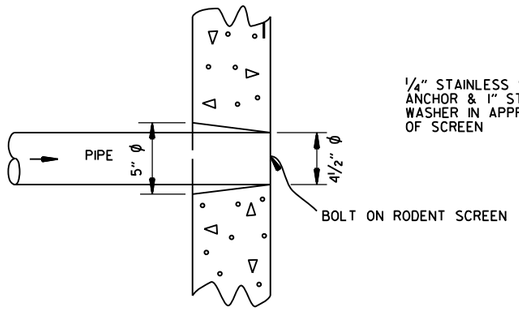


PLAN VIEW

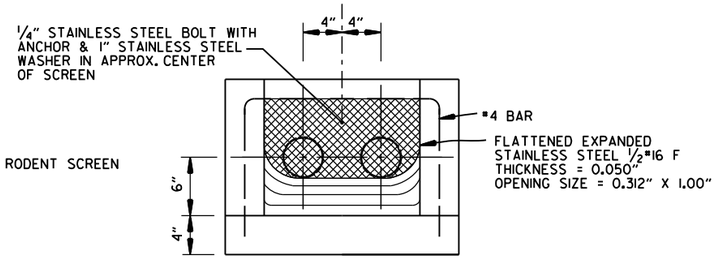




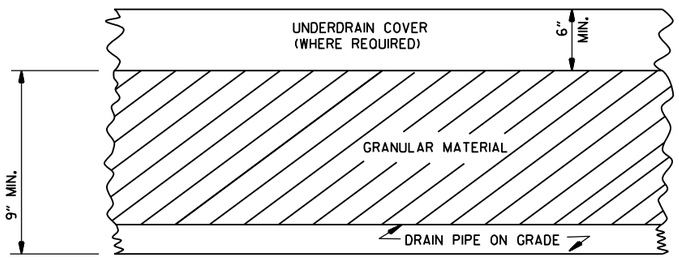
SIDE VIEW



DETAIL OF HOLE FOR 4" PIPE

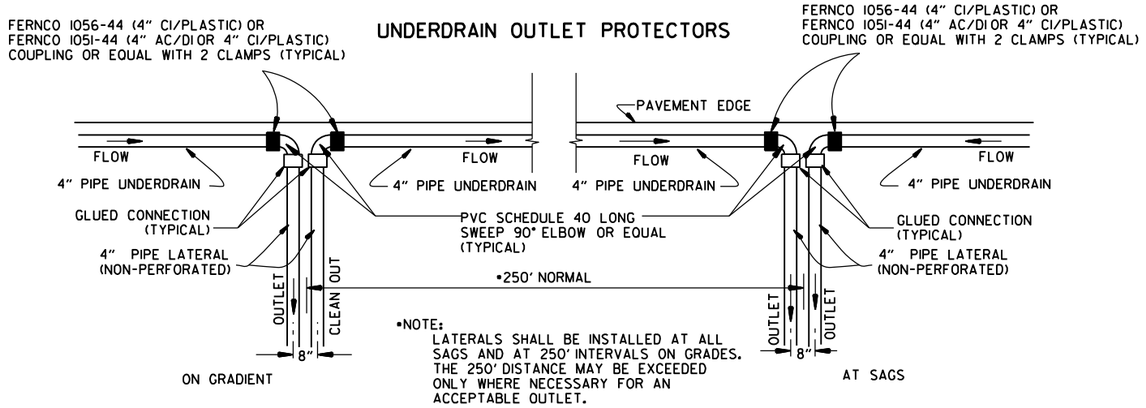


FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE I. PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID PER LIN. FT. FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

2. 4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREON. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 611 OF THE STANDARD SPECIFICATIONS.

3. EXISTING 4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "4" PIPE UNDERDRAINS."

4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

5. PAYMENT FOR THE RODENT SCREEN SHALL BE INCLUDED IN THE PRICE BID PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS."

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: 1. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARD DRAWING PU-1 AND GROUT THE UNUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE.

DATE	REVISION	DATE FILMED
12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE: 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH			35 MPH			40 MPH			45 MPH			50 MPH			55 MPH			60 MPH			65 MPH			70 MPH			75 MPH		
	e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)		e	Ls (FT)	
		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE		MINIMUM	DESIRABLE
0° 15'	NC			NC			NC			NC			NC			NC			NC			NC			NC			NC		
0° 30'	NC			NC			NC			NC			NC			NC			RC	96		RC	96		RC	96		0.022	101	
0° 45'	NC			NC			NC			NC			RC	96		RC	96		0.024	106		0.026	110		0.030	120		0.032	125	
1° 00'	NC			NC			NC			RC	90		0.022	101		0.026	110		0.030	120		0.034	130		0.038	139		0.042	149	300
1° 15'	NC			NC			RC	84		0.022	95		0.028	115		0.032	125		0.038	139		0.042	149		0.046	158	300	0.052	173	
1° 30'	NC			RC	78		0.022	88		0.028	108		0.032	125		0.038	139		0.044	154		0.050	168	300	0.056	182		0.062	197	
1° 45'	RC	72		RC	78		0.026	97		0.030	113		0.036	134		0.044	154		0.050	168		0.056	182		0.064	202		0.070	216	
2° 00'	RC	72		0.024	86		0.028	101		0.034	122		0.042	149		0.048	163		0.056	182	300	0.064	202		0.070	216		0.080	240	
2° 15'	RC	72		0.026	90		0.032	109		0.038	131		0.046	158		0.054	178	300	0.062	197		0.070	216		0.078	235		0.088	259	350
2° 30'	0.022	75		0.028	94		0.034	113		0.042	140		0.050	168		0.058	187		0.068	211		0.076	230		0.086	254	350	0.096	278	
2° 45'	0.024	79		0.030	98		0.038	122		0.046	149	200	0.054	178	250	0.064	202		0.072	221		0.082	245		0.092	269		0.100	288	400
3° 00'	0.026	83		0.034	105		0.040	126		0.050	158		0.058	187		0.068	211		0.078	235		0.088	259		0.098	283	400	D MAX = 2° 45'		
3° 15'	0.028	86		0.036	109		0.044	134		0.052	162		0.062	197		0.072	221		0.082	245		0.092	269		0.100	288				
3° 30'	0.030	90		0.038	113		0.046	139	200	0.056	171		0.066	206		0.076	230		0.086	254		0.096	278	350	D MAX = 3° 30'					
3° 45'	0.032	93		0.040	117		0.050	147		0.058	176		0.070	216		0.080	240		0.090	264		0.098	283							
4° 00'	0.034	97		0.042	121	200	0.052	151		0.062	185		0.072	221		0.084	250		0.094	274	350	0.100	288		D MAX = 4° 15'						
4° 15'	0.036	100		0.044	125		0.054	155		0.064	189		0.076	230		0.086	254		0.096	278										
4° 30'	0.036	100	200	0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283										
4° 45'	0.038	104		0.048	133		0.060	168		0.070	203		0.082	245		0.092	269	350	0.100	288										
5° 00'	0.040	108		0.050	137		0.062	172		0.072	207		0.084	250		0.094	274		D MAX = 5° 15'										
5° 30'	0.044	115		0.054	144		0.066	181		0.078	221	250	0.088	259	300	0.098	283												
6° 00'	0.046	119		0.058	152		0.070	189		0.082	230		0.092	269		0.100	288												
6° 30'	0.050	126		0.062	160		0.074	198		0.086	239		0.096	278		D MAX = 6° 30'													
7° 00'	0.052	130		0.064	164		0.078	206		0.090	248		0.098	283															
7° 30'	0.054	133		0.068	172		0.080	210		0.092	252		0.100	288															
8° 00'	0.058	140		0.070	176		0.084	219		0.094	257		D MAX = 8°25'																
8° 30'	0.060	144		0.072	179		0.086	223	250	0.096	261	300																		
9° 00'	0.062	148		0.076	187		0.088	227		0.098	266																			
9° 30'	0.064	151		0.078	191		0.092	235		0.100	270																			
10° 00'	0.066	155		0.080	195		0.094	240		D MAX = 10° 30'																				
11° 00'	0.070	162		0.084	203		0.096	244																						
12° 00'	0.074	169		0.088	211	250	0.098	248																						
13° 00'	0.076	173		0.090	215		0.100	252	300																					
14° 00'	0.080	180		0.094	222		D MAX = 13° 45'																							
15° 00'	0.082	184		0.096	226																									
16° 00'	0.086	191		0.098	230																									
17° 00'	0.088	194		0.100	234																									
18° 00'	0.090	198	250	D MAX = 19° 30'																										
19° 00'	0.092	202																												
20° 00'	0.094	205																												
21° 00'	0.096	209																												
22° 00'	0.096	209																												
23° 00'	0.098	212																												
24° 00'	0.098	212																												
25° 00'	0.100	216																												
D MAX = 28° 30'																														

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%

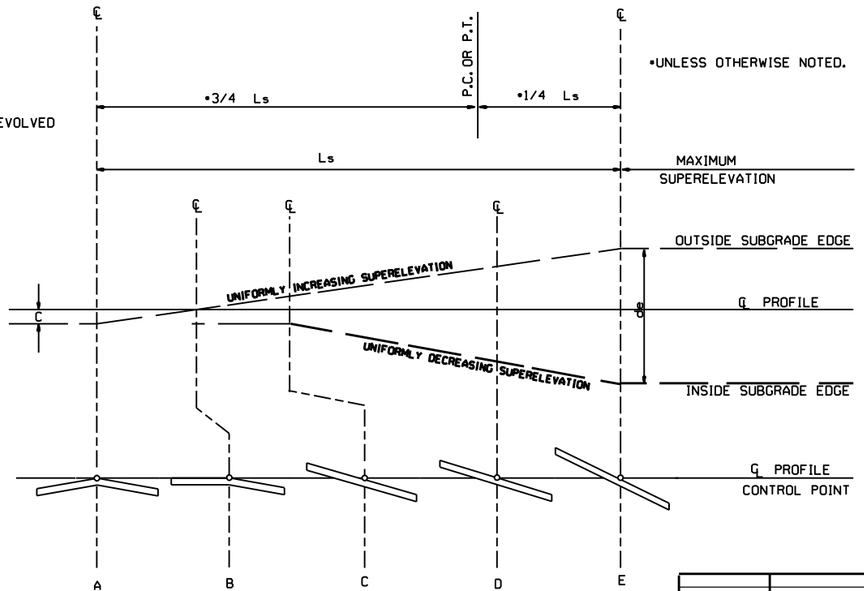
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

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

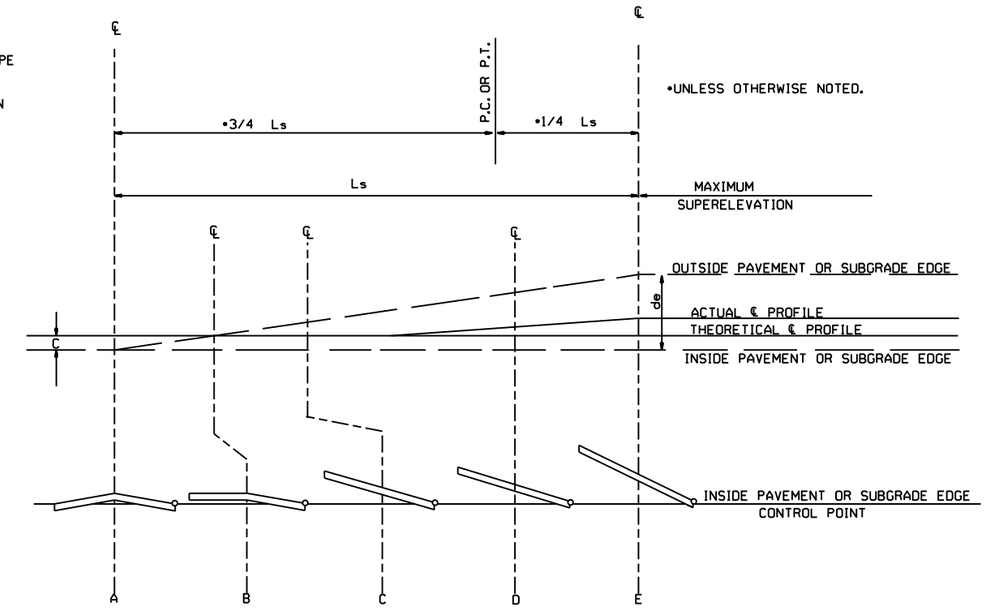
SUPERELEVATION FORMULA $= \frac{Lde}{Ls}$

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 CENTER LINE



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

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

DATE	REVISION	DATE FILMED
11-07-19	REVISED SUPERELEVATION TABLE	
10-18-96	ADDED FORMULA	
01-09-87	ISSUED	534-1-9-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

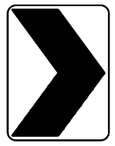
STANDARD DRAWING SE-2



R1-1
30"X30"



W1-3
30"X30"
(LT. OR RT.)



W1-8
18"X24"



W2-5
30"X30"



W3-1
36"X36"



W5-1
36"X36"



M6-3
21"X15"



R1-2
36"X36"X36"



W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"

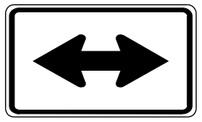


W3-2
36"X36"



County
Route Marker
M1-6
24"X24"

NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



M6-4
21"X15"



R2-1
24"X30"



W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"



W5-2
36"X36"



W8-3
36"X36"



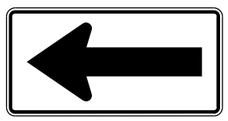
R1-3P
18"X6"



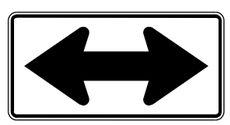
M6-5
21"X15"



W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"



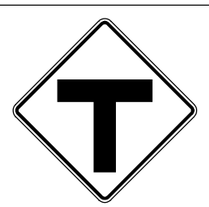
W1-7
48"X24"



W1-2
30"X30"
(LT. or RT.)



W2-3
30"X30"
(LT. or RT.)



W2-4
30"X30"



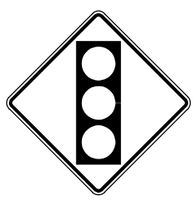
W5-3
36"X36"



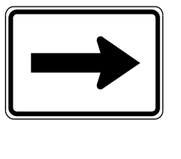
W10-1
36" DIAMETER



W13-1P
18"X18"

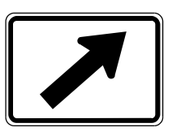


W3-3
36"X36"



M6-1
21"X15"

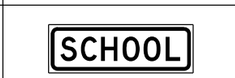
NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



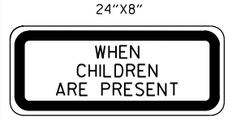
M6-2
21"X15"



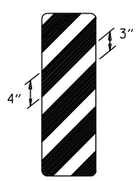
M6-6
21"X15"



S4-3P
24"X8"



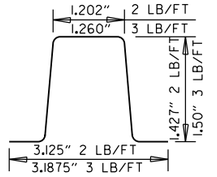
S4-2P
24"X10"



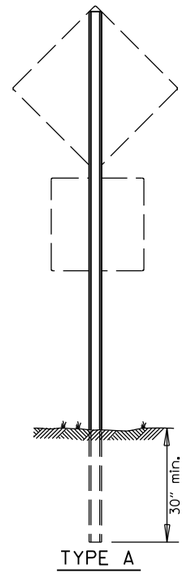
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

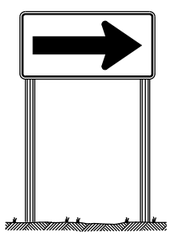


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES



TYPE A

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



TYPE B

TYPE C

MINIMUM WEIGHT

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

STANDARD HIGHWAY SIGNS

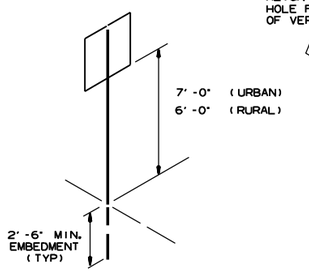
SUPPORT ASSEMBLIES

DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2*-3*; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

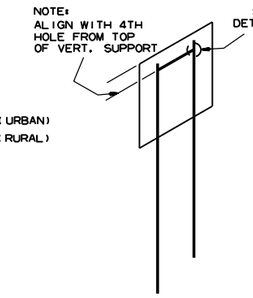
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

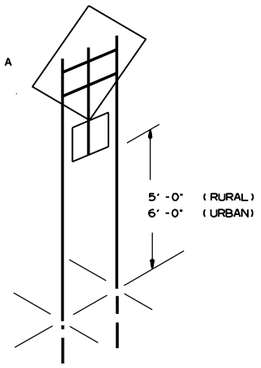
STANDARD DRAWING SHS-1



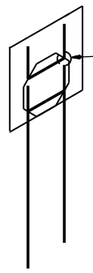
U-1



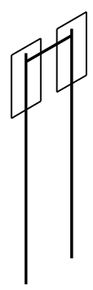
U-2



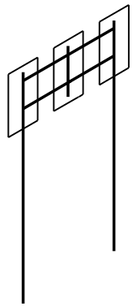
U-2 (A)



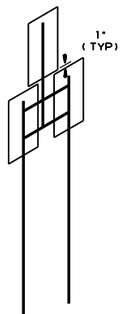
U-2 (B)



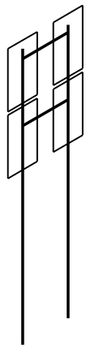
U-2 (1)



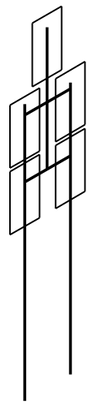
U-2 (2)



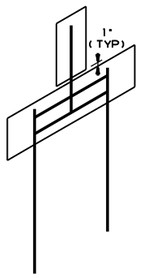
U-2 (3)



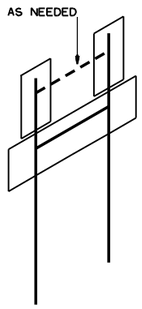
U-2 (4)



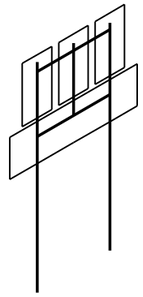
U-2 (5)



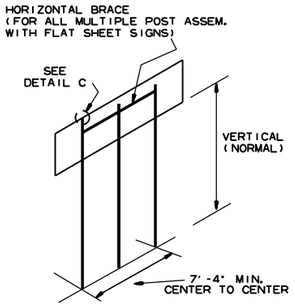
U-2 (6)



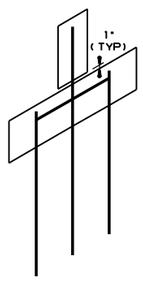
U-2 (7)



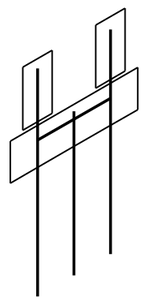
U-2 (8)



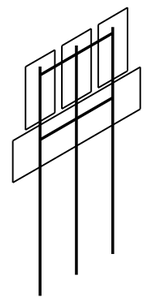
U-3



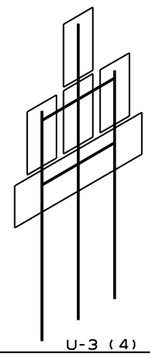
U-3 (1)



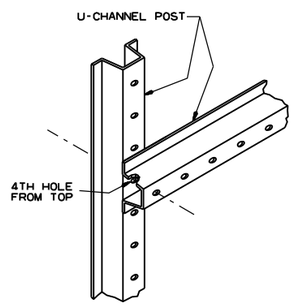
U-3 (2)



U-3 (3)

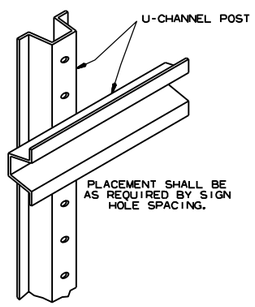


U-3 (4)



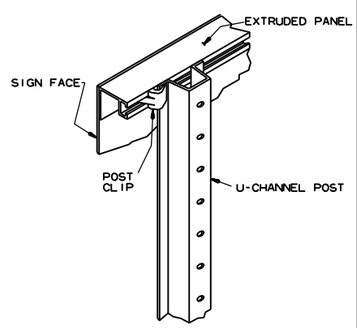
DETAIL A

SHOWING HORIZONTAL BRACE



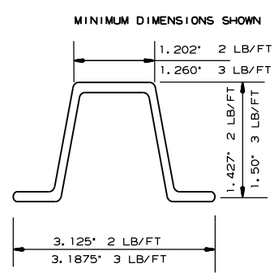
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



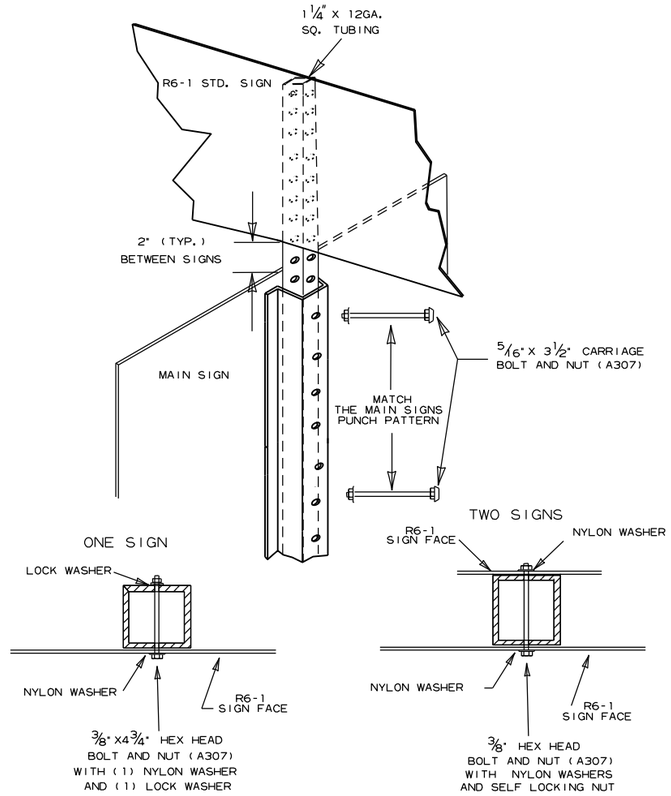
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



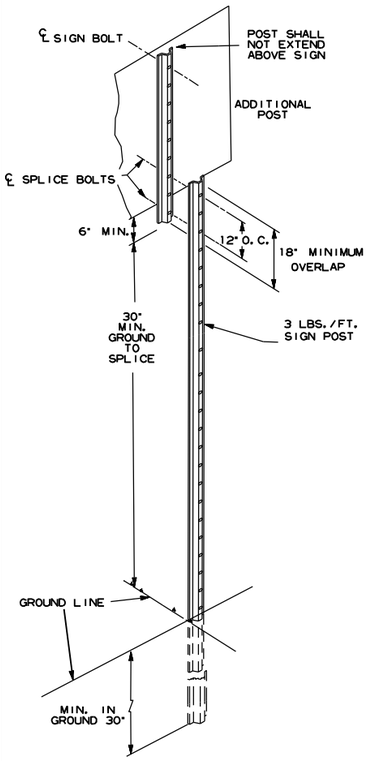
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

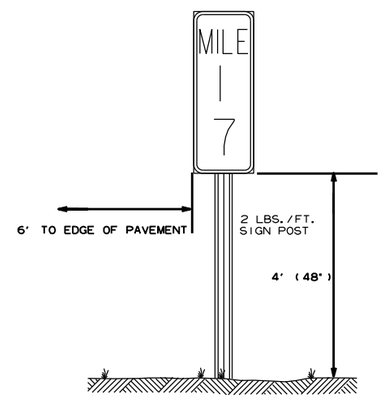
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

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

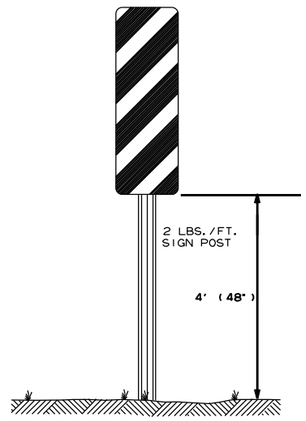
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

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



TYPICAL MILE MARKER INSTALLATION



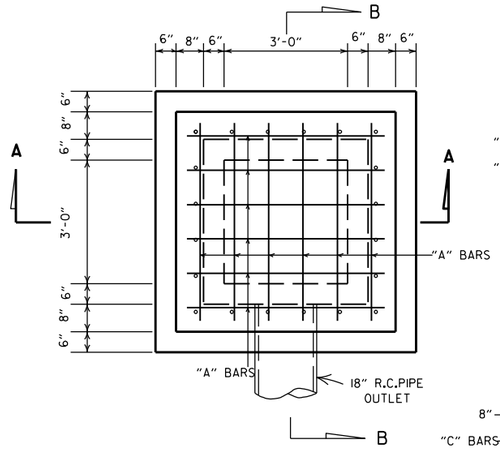
TYPICAL OM-3 INSTALLATION AT EDGE OF OBSTRUCTION

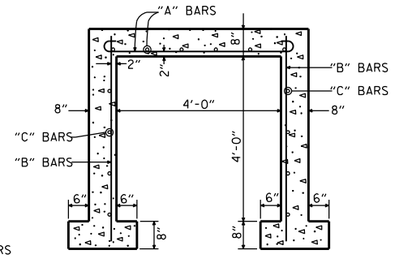
DATE	REVISION	FILMED
7-25-19	REVISED CARRIAGE BOLT WITH MATERIAL REQUIREMENT	
2-27-14	REVISED NOTES.	
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

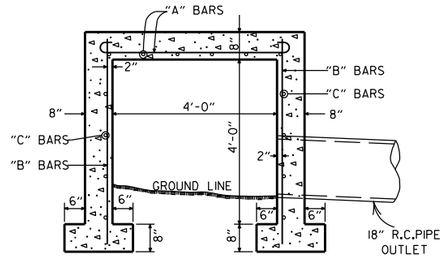
U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2



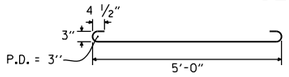


SEC A-A



SEC B-B

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



"A" BARS

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 ½"
"C"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS

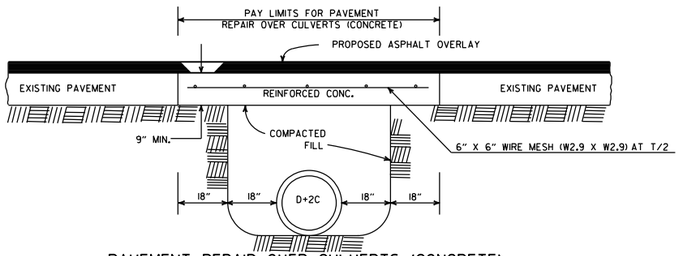
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

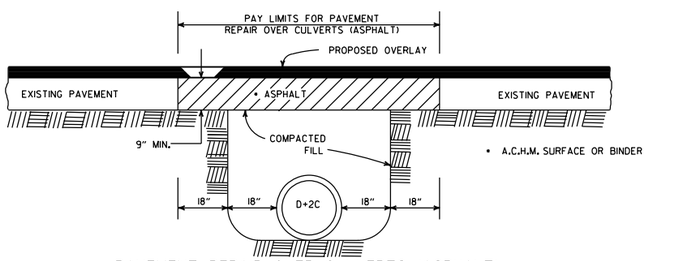
GENERAL NOTE:

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

REINFORCED CONCRETE SPRING BOX



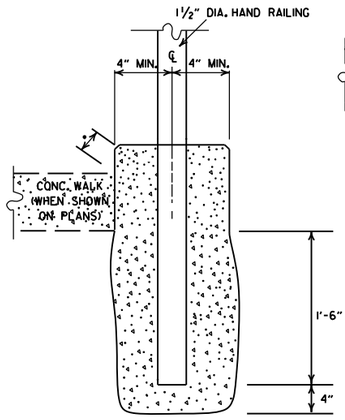
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



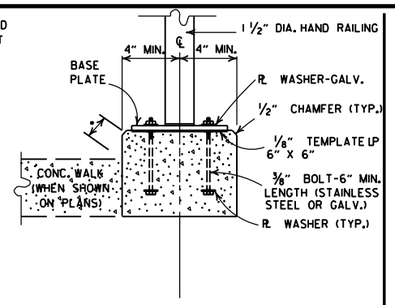
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

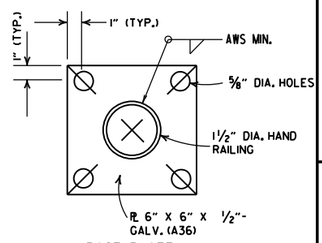
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

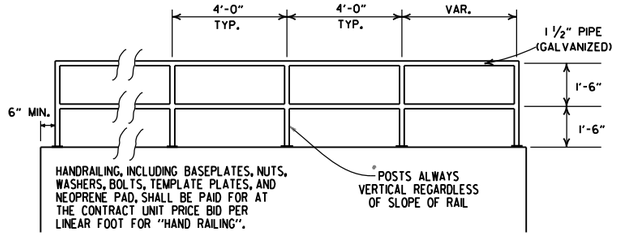


POST CONNECTION TO WALL

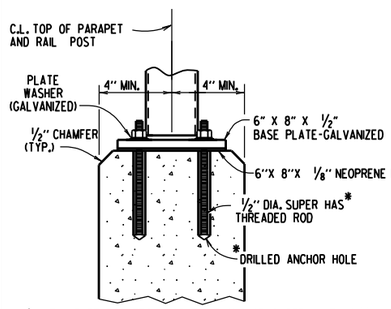


BASE PLATE

POST CONNECTION DETAILS



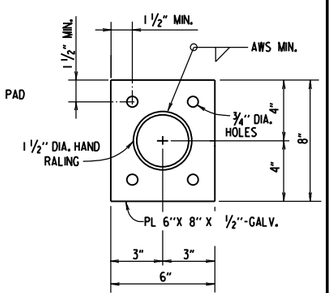
HAND RAILING SHALL CONFORM TO SECTION 633.



*HILTI HIT RE 500 EPOXY ADHESIVE ANCHOR SYSTEM WITH 4 ½" EMBEDMENT OR APPROVED EQUAL.

THE ADHESIVE ANCHOR SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

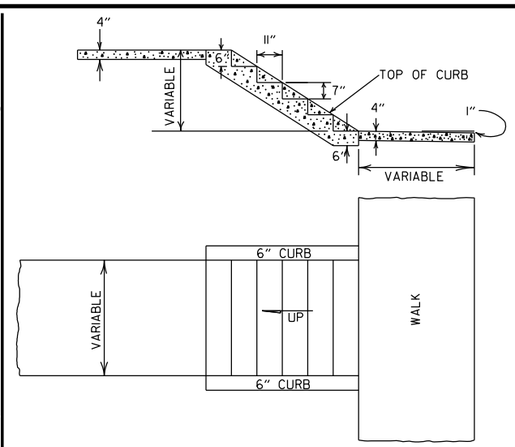
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

1. RISE AND TREAD DIMENSIONS OF STEPS MAY BE VARIED AS DIRECTED BY THE ENGINEER, HOWEVER, TREAD WIDTHS SHALL BE 11" MIN. ALL STEPS IN A FLIGHT SHALL HAVE CONSISTENT TREAD & RISER DIMENSIONS.
2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

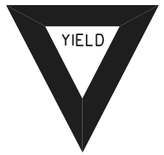
STANDARD DRAWING SI-1

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"

R2-6aP



48"X36"

*USE 6" C LETTERS
**USE 4" D LETTERS

R5-1



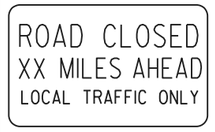
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



48"X30"

RII-3A



60"X30"

RII-4



60"X30"

W21-5a



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

W1-1



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

W1-2



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

R2-11



36"X48"

W1-3



STD. 48"X48"

W1-4



STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



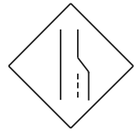
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

R56-1



STD. 18"X18"

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"

W13-1



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"

W1-4b



STD. 48"X48"

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"

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. R2-6aP PLAQUES SHALL BE MOUNTED BELOW AN APPLICABLE ADVANCE WARNING SIGN THAT IS LOCATED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE PLAQUE SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE W3-5 "REDUCED SPEED AHEAD" SIGN. R2-11 SIGNS SHALL BE INSTALLED AT OR NEAR THE DOWNSTREAM END OF THE WORK ZONE. SEE STANDARD DRAWINGS TC-2, TC-3, AND TC-6 FOR TYPICAL PLACEMENT LOCATIONS.

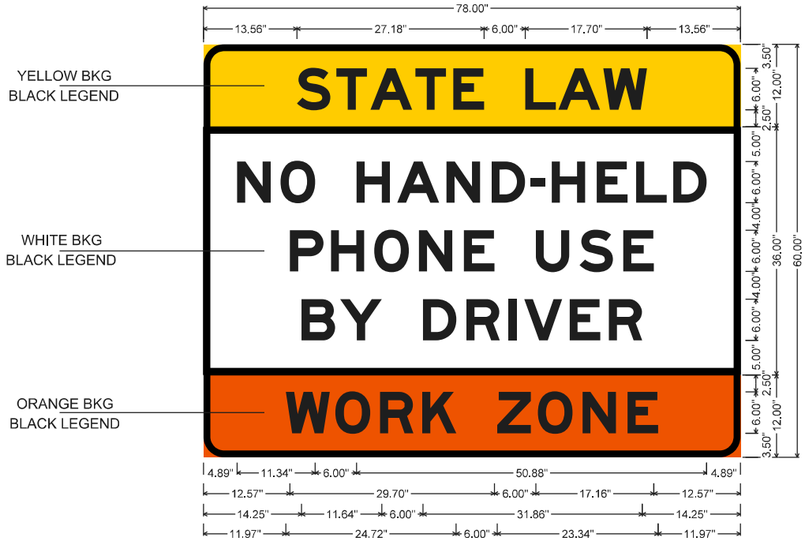
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
12-15-11	REVISED W24-1
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS, REVISED ROAD WORK NEXT XX MILES
04-13-17	DELETED RSP-1 & ADDED W21-5a
11-07-19	REVISED FOR MASH

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

DATE EFFECTIVE	STANDARD DRAWING	TC-1
08-14-2025		

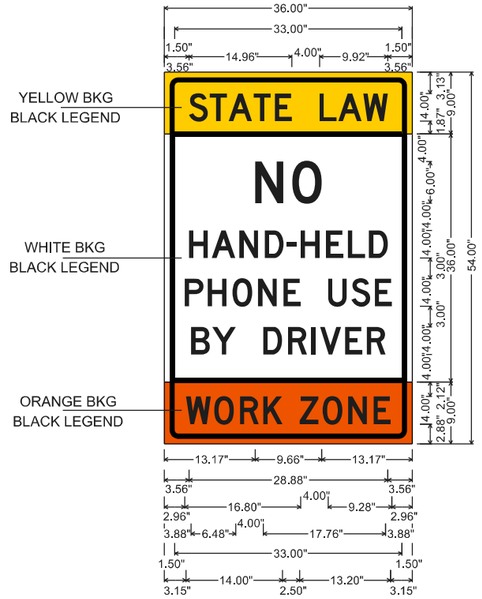


3.0" Radius, 1.0" Border, Black on Yellow;
"STATE LAW", E Mod 2K;

3.0" Radius, 1.0" Border, Black on White;
"NO HAND-HELD", E Mod 2K; "PHONE USE", E Mod 2K; "BY DRIVER", E Mod 2K;

3.0" Radius, 1.0" Border, Black on Orange;
"WORK ZONE", E Mod 2K;

WZ-4 (INTERSTATE) SIGN



2.00" Radius, 0.75" Border, 0.75" Indent, Black on Yellow;
"STATE LAW", D 2K;

3.00" Radius, 0.75" Border, 0.75" Indent, Black on White;
"NO", D 2K; "HAND-HELD", D 2K;
"PHONE USE", D 2K;
"BY DRIVER", D 2K;

2.00" Radius, 0.75" Border, 0.75" Indent, Black on Orange;
"WORK", D 2K; "ZONE", D 2K;

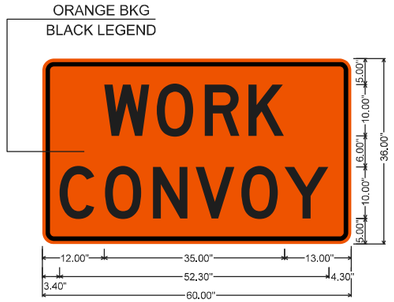
WZ-4 (NON-INTERSTATE) SIGN

NOTE: REFER TO STANDARD DRAWING TC-1 FOR GENERAL NOTES.



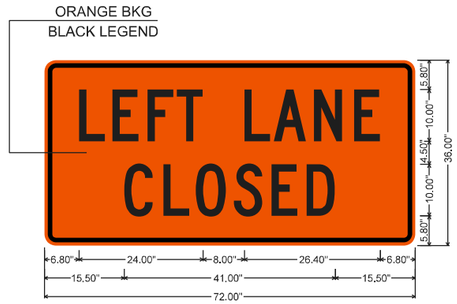
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"X", D; "VEHICLE", D; "CONVOY", D;

WZ-2 SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"WORK", D; "CONVOY", D;

WZ-3 SIGN



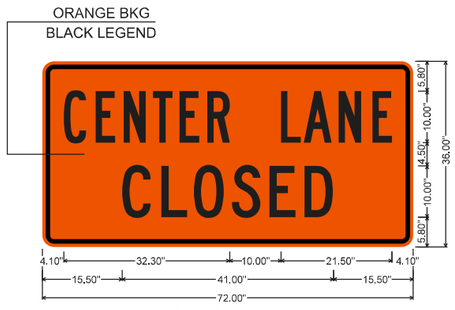
2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"LEFT LANE", C; "CLOSED", C;

WZ-W20-5L SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"RIGHT", C specified length; "LANE", C specified length;
"CLOSED", C specified length;

WZ-W20-5R SIGN



2.3" Radius, 0.9" Border, 0.6" Indent, Black on Orange;
"CENTER LANE", B 2K; "CLOSED", C;

WZ-W20-5C SIGN

MOBILE WORK ZONE SIGNS



3.0" Radius, 1.0" Border, Black on Orange;
"Job XXXXXX" C 2K; "Start Date Xxxx Year" C 2K;
"Est Completion Xxxx Year" C 2K 80% spacing;
"IDRIVE" Arial, Italic; "ARKANSAS.COM" Arial, Italic;

CONSTRUCTION PROJECT INFORMATION SIGN



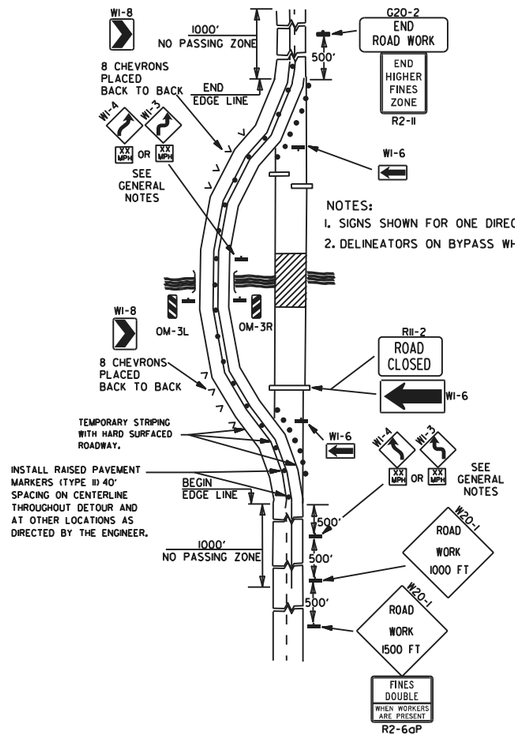
WZ-1 (INTERSTATE) SIGN

DATE REV	DESCRIPTION
04-09-26	ISSUED

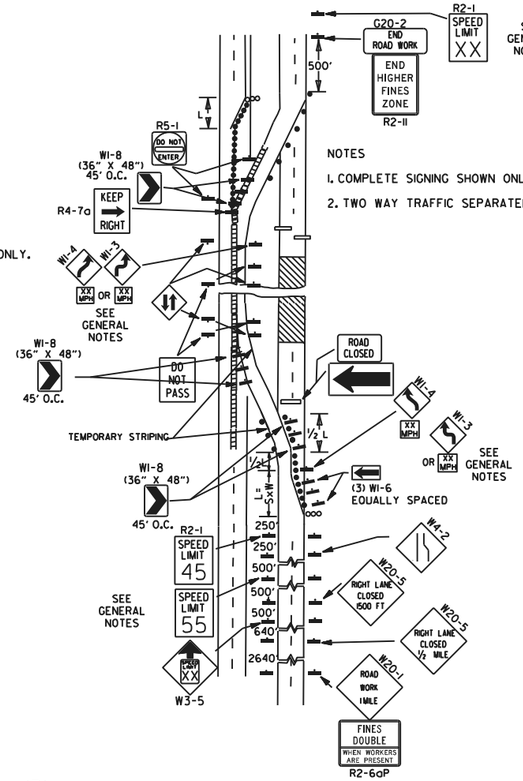
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

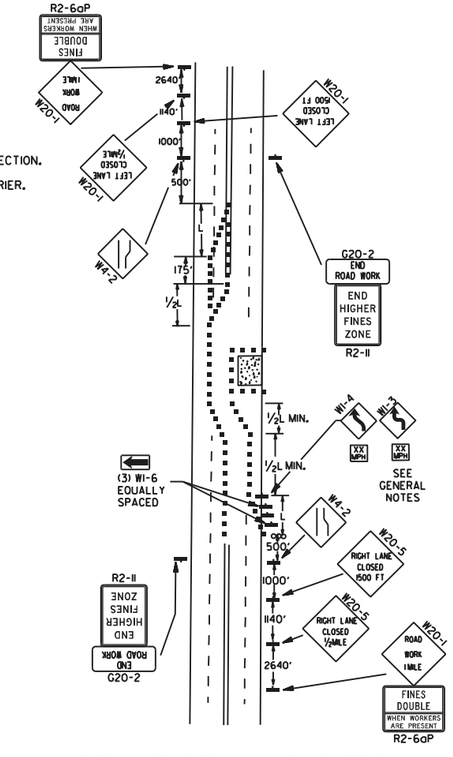
DATE EFFECTIVE	STANDARD DRAWING	TC-1A
04-09-2026		



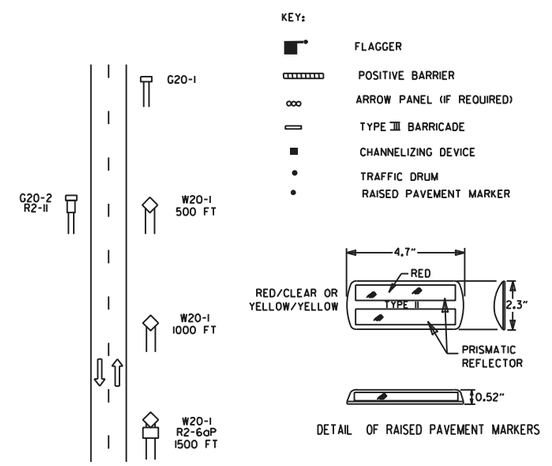
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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



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



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

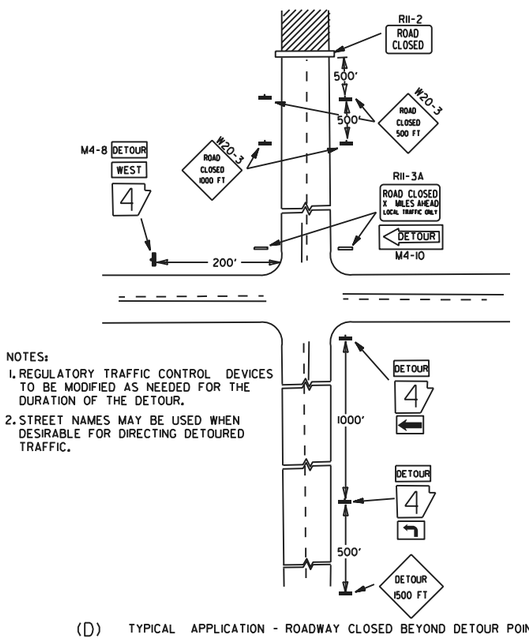
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

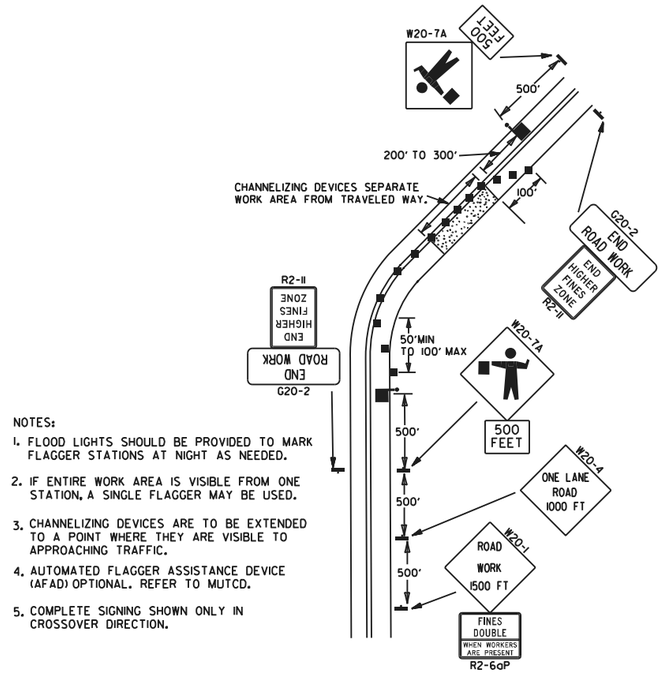
W= WIDTH OF OFFSET.

GENERAL NOTES:

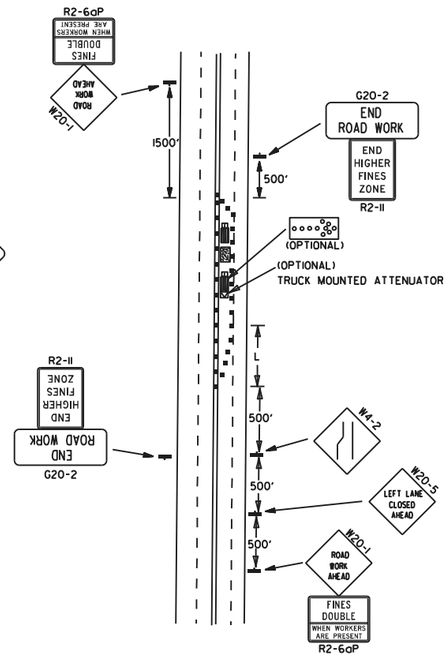
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON WI-3 OR WI-4 CURVE WARNING SIGNS. USE WI-4 WHEN SPEED IS GREATER THAN 30MPH AND WI-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
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 ARDOT QUALIFIED PRODUCTS LIST.
9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



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



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



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

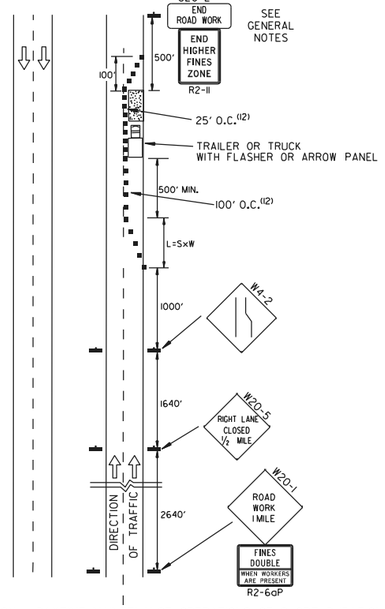
DATE REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-20-21	REVISED NOTE 7
11-07-19	REVISED NOTE 1. ADDED NOTE 9
09-02-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (AT & REPLACED R2-5A WITH W3-5
09-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKINGS

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

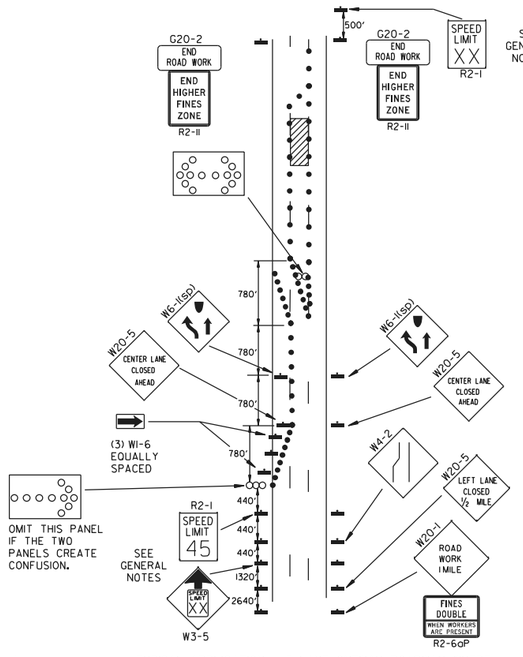
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

DATE EFFECTIVE	STANDARD DRAWING	TC-2
08-14-2025		



(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

KEY:

○○○ ARROW PANEL (IF REQUIRED)

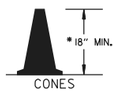
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

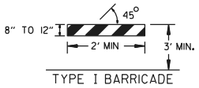
GENERAL NOTES:

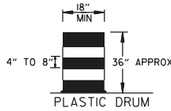
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-I(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-I 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(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-I(45) SHALL BE OMITTED. ADDITIONAL R2-I 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(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 SHOULD BE INSTALLED 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. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
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 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
12. ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR TRAFFIC DRUMS, TUBULAR MARKERS MAY BE USED AT 50' O.C. IN STABILIZATION ZONES AND AT 10' O.C. DIRECTLY ADJACENT TO CONSTRUCTION OPERATIONS AND AT EXIT TAPERS. TUBULAR MARKERS SHALL BE STABILIZED WITH WEIGHTED BASES IN ACCORDANCE WITH THE M.U.T.C.D.

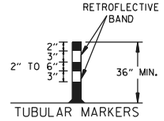
CHANNELIZING DEVICES

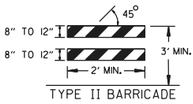


* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



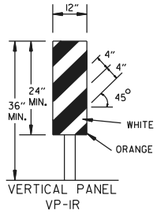


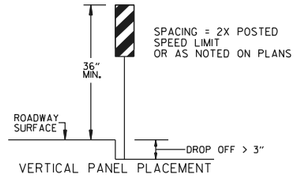




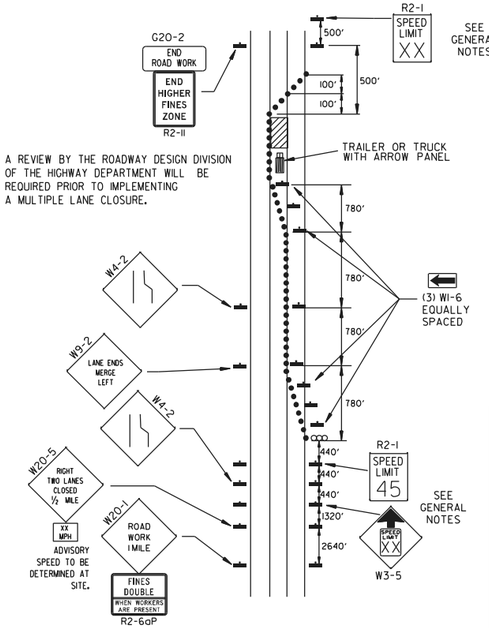


NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



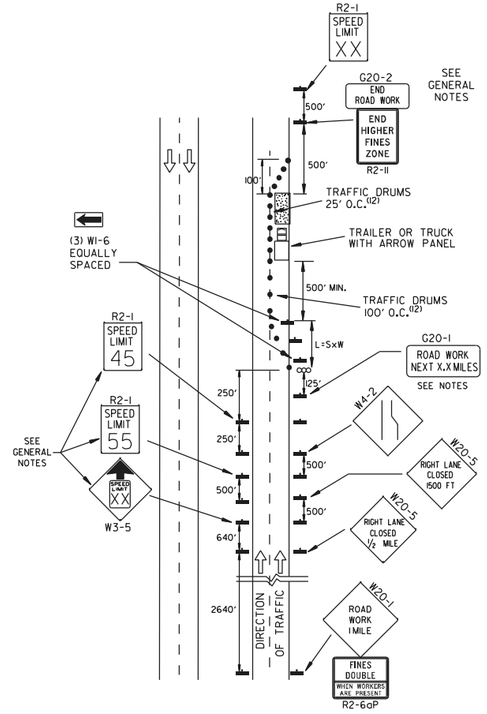


FLAG SHALL BE OF GOOD GRADE RED MATERIAL



A REVIEW BY THE ROADWAY DESIGN DIVISION OF THE HIGHWAY DEPARTMENT WILL BE REQUIRED PRIOR TO IMPLEMENTING A MULTIPLE LANE CLOSURE.

(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

TRAFFIC CONTROL DEVICES

NON-INTERSTATE

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL ≤ 45 MPH	TRAFFIC CONTROL > 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9 AND TRAFFIC DRUMS[1]	W8-9 AND TRAFFIC DRUMS[1]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17 EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17 EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17 EDGE LINE STRIPING, AND TRAFFIC DRUMS[1]	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS[3]
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER[4] & EDGE LINES	PRECAST CONCRETE BARRIER[4] & EDGE LINES

INTERSTATE

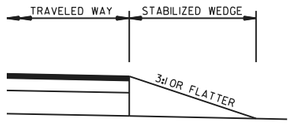
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17 EDGE LINE STRIPING, AND TRAFFIC DRUMS[2]
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

INTERSTATE AND NON-INTERSTATE

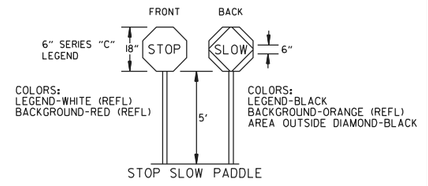
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

GENERAL NOTES:

1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
4. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.
6. TIME LIMITATIONS MUST CONFORM TO SECTION 603 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).



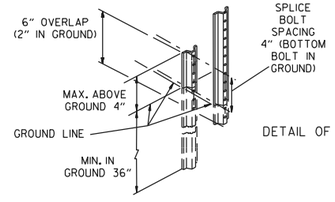
NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

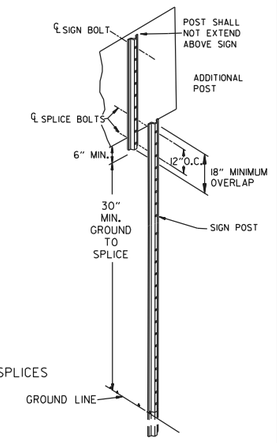


NOTES:
USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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 REV	DESCRIPTION
08-14-25	ADDED R2-6aP AND R2-11
05-22-25	REVISED TRAFFIC CONTROL DEVICES AND NOTES. ADDED NOTE 12.
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES
05-20-21	REVISED NOTE 10
02-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS

ARKANSAS STATE HIGHWAY COMMISSION

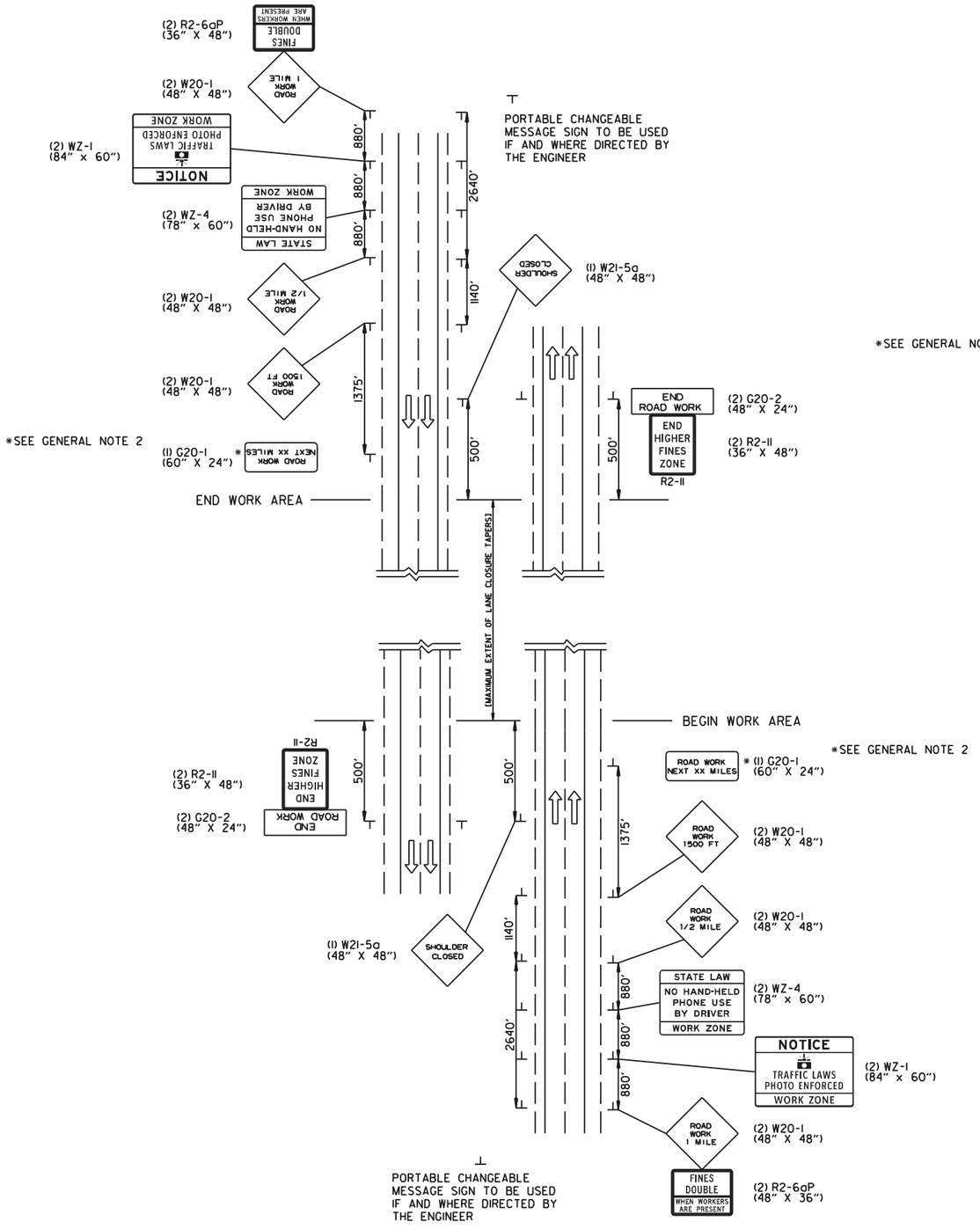
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

DATE EFFECTIVE 08-14-2025

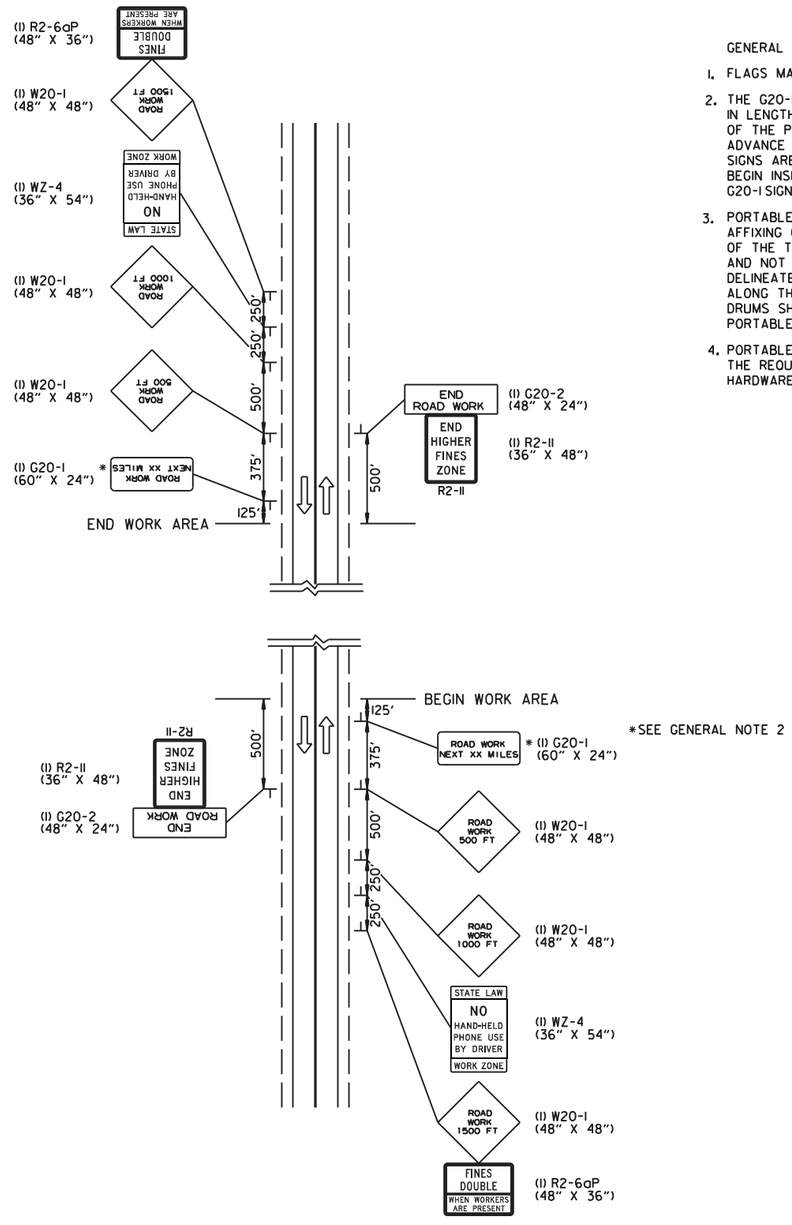
STANDARD DRAWING

TC-3

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



(A) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)



(B) TYPICAL APPLICATION - ADVANCE WARNING SIGNS AT BEGINNING AND END OF JOB (NON-FULLY CONTROLLED ACCESS FACILITIES) (ALL STAGES)

GENERAL NOTES:

1. FLAGS MAY BE MOUNTED TO SIGNS AT NIGHT AS NEEDED.
2. THE G20-1 SIGN SHOULD BE INSTALLED 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 OR 1500 FT) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. 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, THIS DEVICE SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR PORTABLE CHANGEABLE MESSAGE SIGNS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

DATE REV	DESCRIPTION
04-09-26	CORRECTED WZ-4 SIGN DIMENSIONS
01-22-26	ADDED WZ-4 AND REVISED GENERAL NOTE 1
11-06-25	REPLACED "SPEED" WITH "TRAFFIC LAWS" ON WZ-1
08-14-25	ISSUED

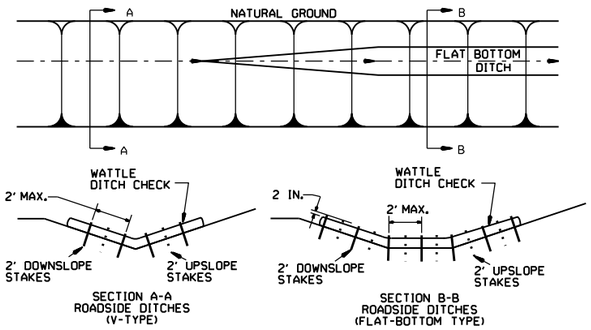
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

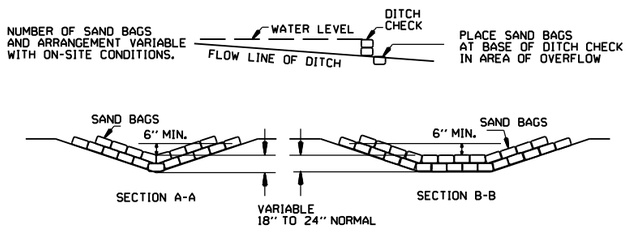
DATE EFFECTIVE	STANDARD DRAWING	TC-6
04-09-2026		

GENERAL NOTES

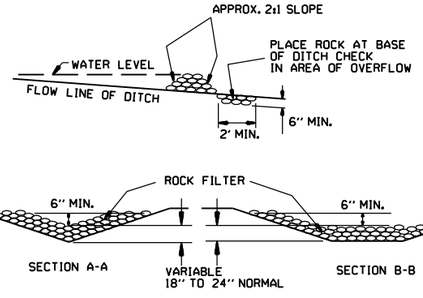
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

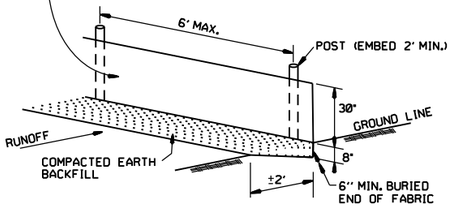


ROCK DITCH CHECK (E-6)

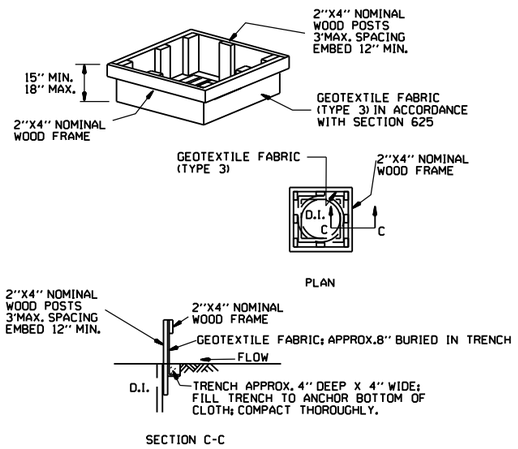
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

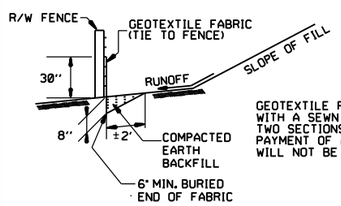
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)

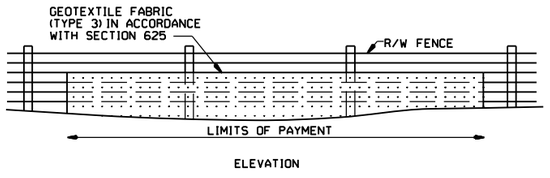


DROP INLET SILT FENCE (E-7)



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.



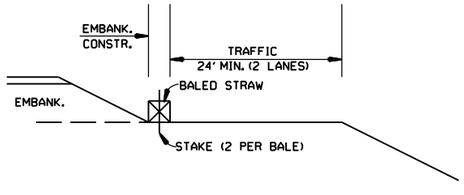
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

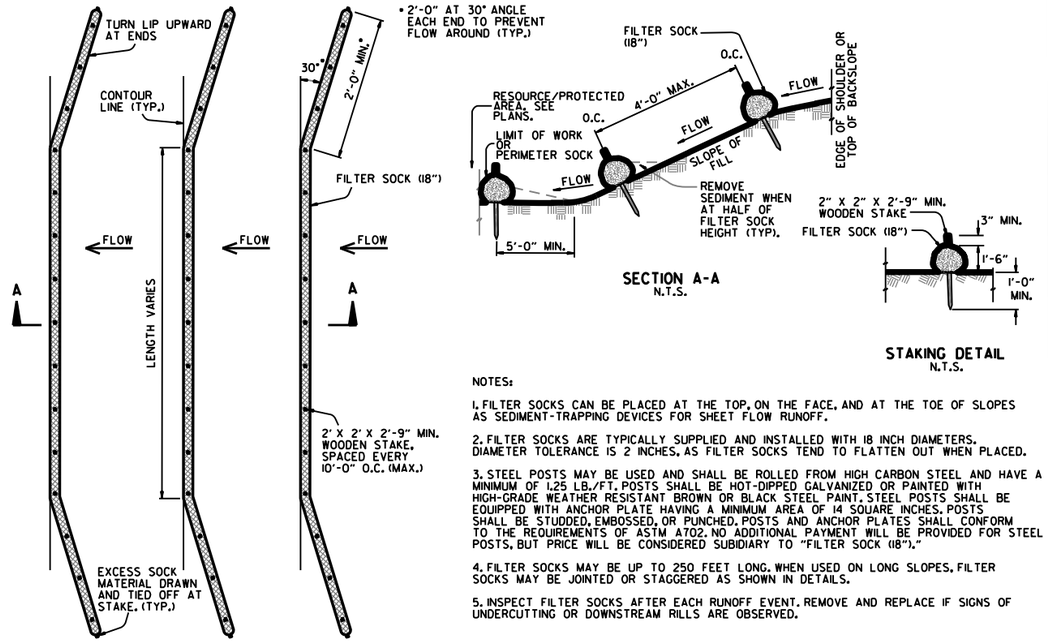
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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.

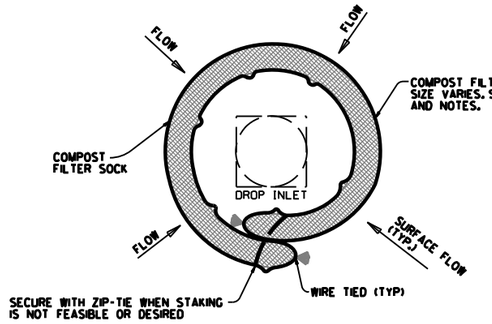
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

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 SUBIDIARY TO "FILTER SOCK (18")."

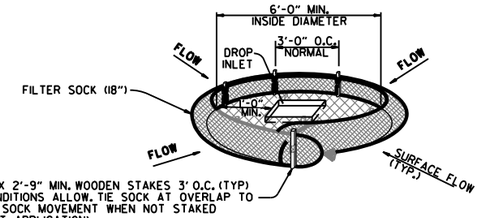
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

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)



DROP INLET PLAN VIEW
N.T.S.



DROP INLET PERSPECTIVE VIEW
N.T.S.

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.

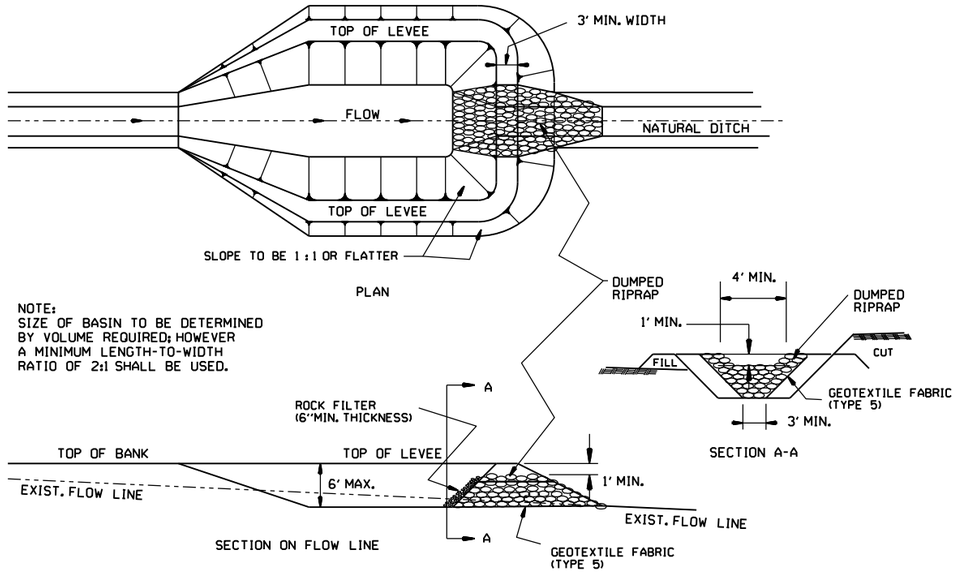
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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. 13" 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

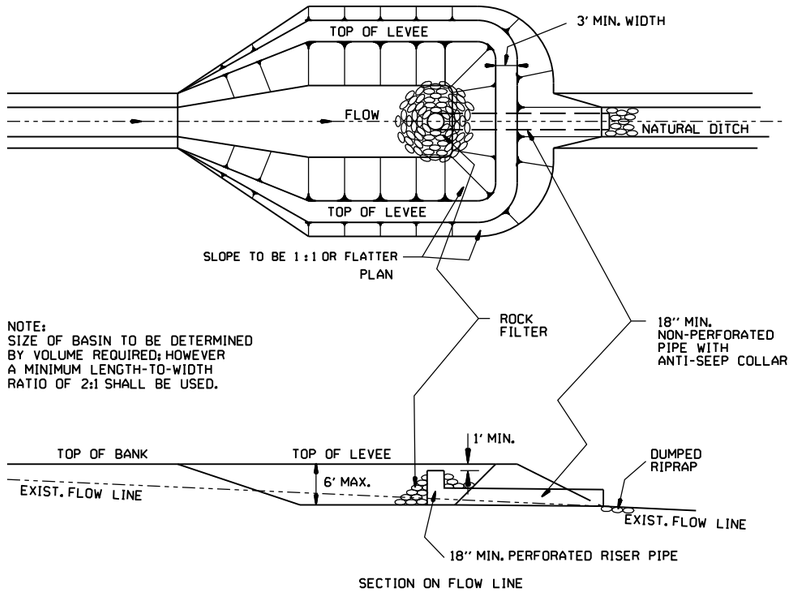
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

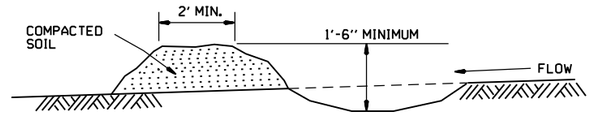
STANDARD DRAWING TEC-1



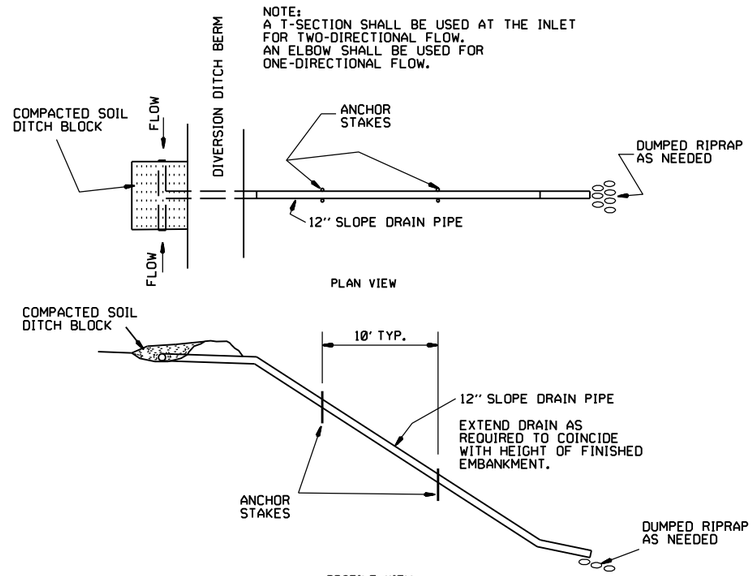
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



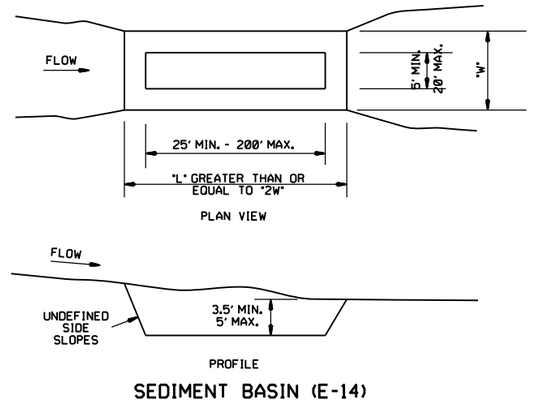
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

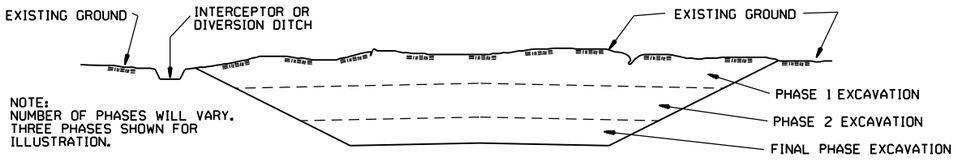
STANDARD DRAWING TEC-2

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



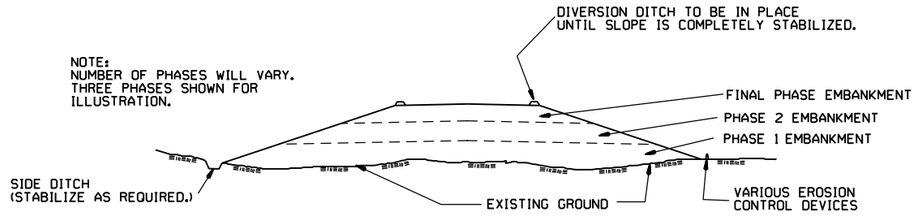
GENERAL NOTE

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

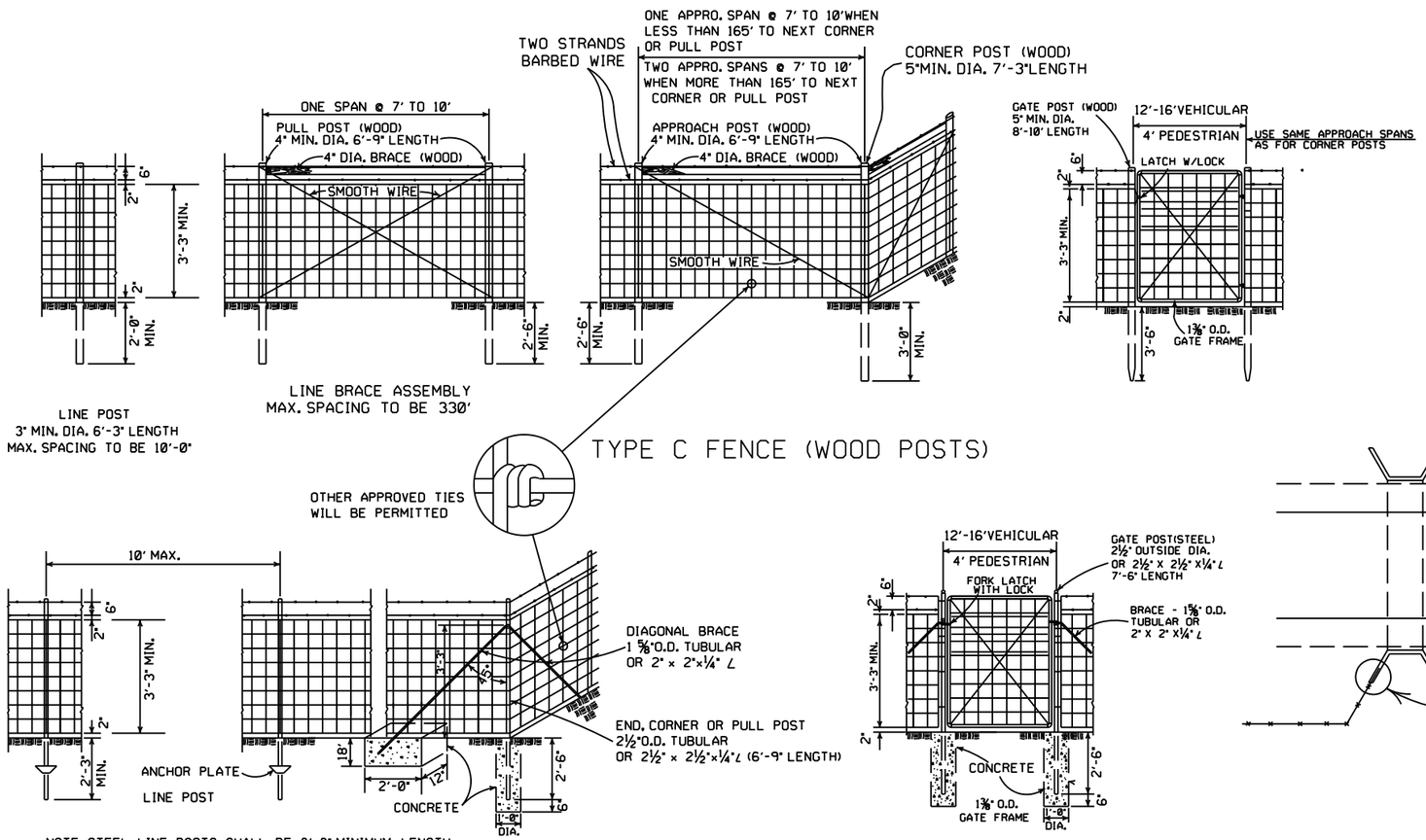
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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



GENERAL NOTES:

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

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

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

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

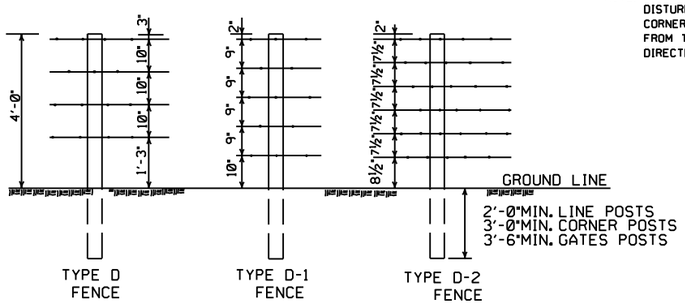
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD" AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF 4 TIMES FOR EACH WIRE LOOP.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

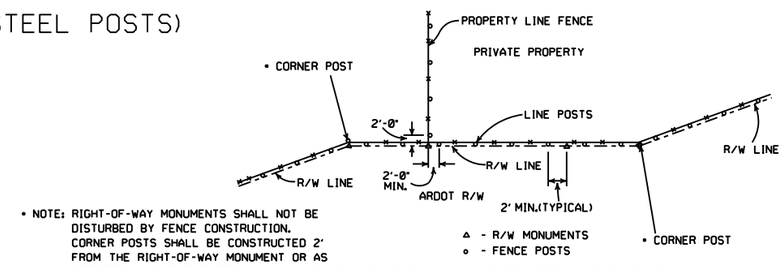
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE C FENCE (STEEL POSTS)

4 STRANDS BARBED WIRE (D)
5 STRANDS BARBED WIRE (D-1)
6 STRANDS BARBED WIRE (D-2)

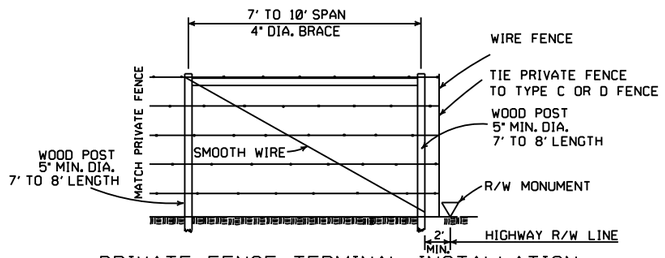


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



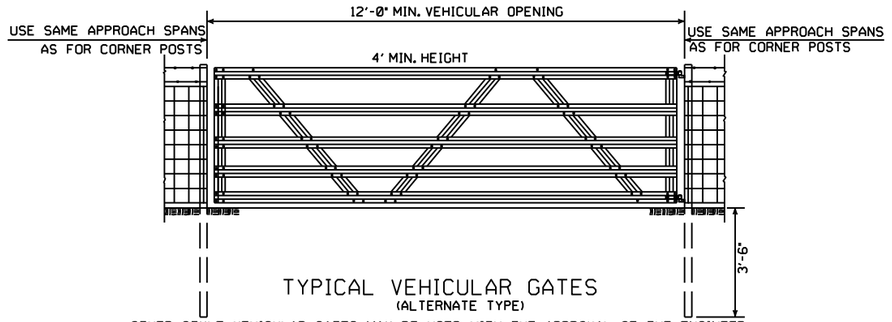
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION

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



TYPICAL VEHICULAR GATES
(ALTERNATE TYPE)

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

DATE	REVISION	FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

STANDARD DRAWING WF-4