DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	1	191
		HWY. 83 SPUR - HWY. 278 CONNECTOR (MONTICELLO) (F)				

ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

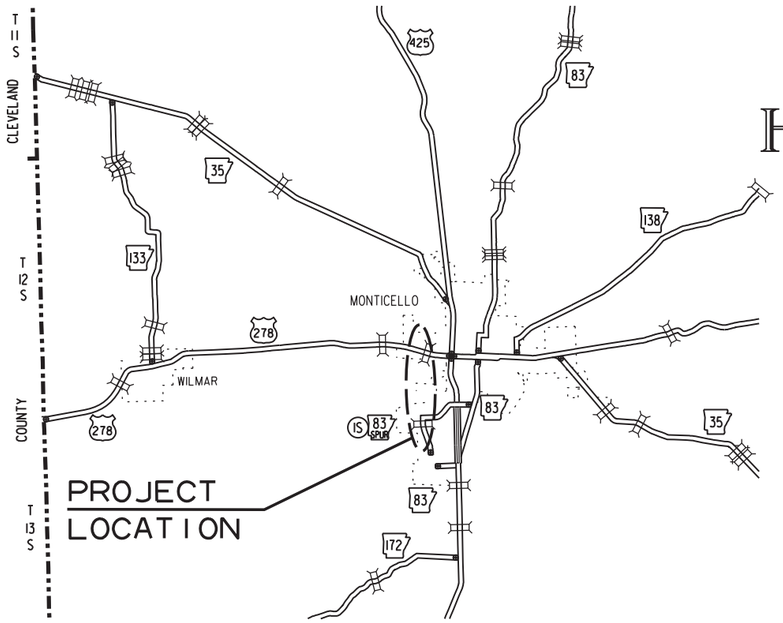
HWY. 83 SPUR - HWY. 278 CONNECTOR (MONTICELLO) (F)

DREW COUNTY

ROUTE 83 SECTION 1

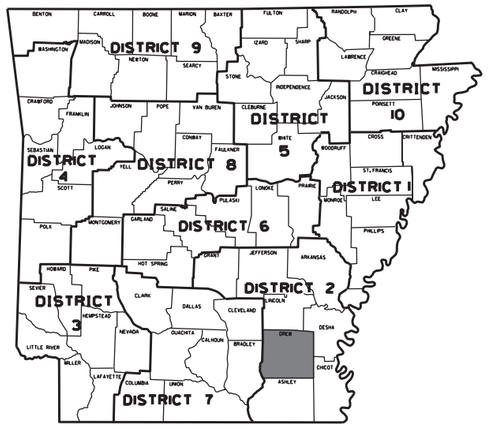
FED. AID PROJ. STPSC-9293(9)

JOB 020475



VICINITY MAP

"NOT TO SCALE"



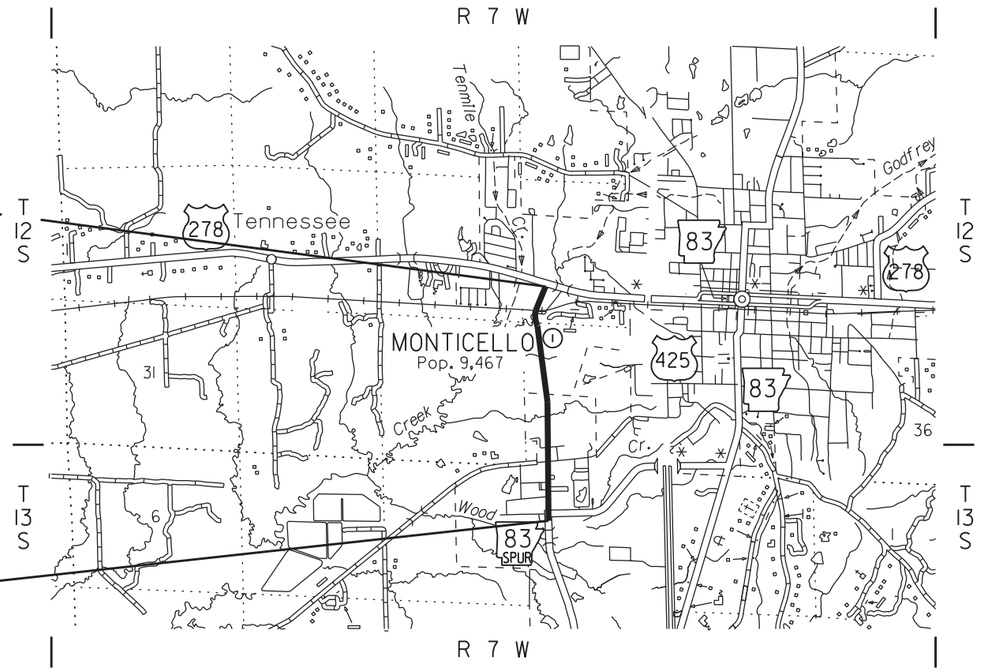
ARK. HWY. DIST. NO. 2

BRIDGE DATA

(1) BR. END STA. 1078+34.91
BRIDGE NO. 07536
40'-0" CLEAR ROADWAY
1097'-2 1/4" TOTAL LENGTH
450'-0" CONTINUOUS W-BEAM UNIT (65'-80'-80'-80'-80'-65')
390'-0" CONTINUOUS PLATE GIRDER (120'-150'-120')
255'-0" CONTINUOUS W-BEAM UNIT (85'-85'-85')
BR. END STA. 1089+32.09

STA. 1094+93.60
END JOB 020475

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44



GROSS LENGTH OF	PROJECT	8889.32	FEET	OR	1.684	MILES
NET	"	"	ROADWAY	7792.14	"	"	1.476	"
NET	"	"	BRIDGES	1097.18	"	"	0.208	"
NET	"	"	PROJECT	8889.32	"	"	1.684	"

	BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE	N 33°36'26"	N 33°37'09"	N 33°37'53"
LONGITUDE	W 91°48'54"	W 91°48'53"	W 91°48'53"

DESIGN TRAFFIC DATA

DESIGN YEAR	2042
2022 ADT	3000
2042 ADT	4600
2042 DHV	506
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	2%
DESIGN SPEED	55 MPH

APPROVED

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 10045
KELVIN REX VINES

Vines, Rex
Jun 29 2022 2:51 PM
DocuSign

DEPUTY DIRECTOR
AND CHIEF ENGINEER

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	2	191
		INDEX OF SHEETS AND STANDARD DRAWINGS				

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 - 8	TYPICAL SECTIONS OF IMPROVEMENT		
9 - 12	SPECIAL DETAILS		
13 - 24	TEMPORARY EROSION CONTROL DETAILS		
25 - 37	MAINTENANCE OF TRAFFIC DETAILS		
38 - 40	PERMANENT PAVEMENT MARKING DETAILS		
41 - 46	QUANTITIES		
47	SCHEDULE OF BRIDGE QUANTITIES	07536	65102
48	SUMMARY OF QUANTITIES AND REVISIONS		
49 - 57	SURVEY CONTROL DETAILS		
58 - 73	PLAN AND PROFILE SHEETS		
74	ILLUMINATION NOTES AND QUANTITIES		
75	ILLUMINATION LAYOUT - NORTH		
76	ILLUMINATION LAYOUT - SOUTH		
77	ILLUMINATION TABLES		
78 - 79	ILLUMINATION DETAILS		
80	SIGNING SUMMARY OF QUANTITIES		
81 - 87	SIGN PLACEMENT SHEETS		
88 - 89	SIGN LAYOUT SHEETS		
90	LAYOUT OF BRIDGE HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR (SHEET 1 OF 3)	07536	65103
91	LAYOUT OF BRIDGE HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR (SHEET 2 OF 3)	07536	65104
92	LAYOUT OF BRIDGE HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR (SHEET 3 OF 3)	07536	65105
93	RAILROAD EXHIBIT A HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR (SHEET 1 OF 2)	07536	65106
94	RAILROAD EXHIBIT A HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR (SHEET 2 OF 2)	07536	65107
95	DETAILS OF END BENTS (SHEET 1 OF 5)	07536	65108
96	DETAILS OF END BENTS (SHEET 2 OF 5)	07536	65109
97	DETAILS OF END BENTS (SHEET 3 OF 5)	07536	65110
98	DETAILS OF END BENTS (SHEET 4 OF 5)	07536	65111
99	DETAILS OF END BENTS (SHEET 5 OF 5)	07536	65112
100	DETAILS OF INTERMEDIATE BENTS 2 THRU 6 (SHEET 1 OF 2)	07536	65113
101	DETAILS OF INTERMEDIATE BENTS 2 THRU 6 (SHEET 2 OF 2)	07536	65114
102	DETAILS OF INTERMEDIATE BENT 7 (SHEET 1 OF 2)	07536	65115
103	DETAILS OF INTERMEDIATE BENT 7 (SHEET 2 OF 2)	07536	65116
104	DETAILS OF INTERMEDIATE BENTS 8 & 9 (SHEET 1 OF 2)	07536	65117
105	DETAILS OF INTERMEDIATE BENTS 8 & 9 (SHEET 2 OF 2)	07536	65118
106	DETAILS OF INTERMEDIATE BENT 10 (SHEET 1 OF 2)	07536	65119
107	DETAILS OF INTERMEDIATE BENT 10 (SHEET 2 OF 2)	07536	65120
108	DETAILS OF INTERMEDIATE BENTS 11 & 12 (SHEET 1 OF 2)	07536	65121
109	DETAILS OF INTERMEDIATE BENTS 11 & 12 (SHEET 2 OF 2)	07536	65122
110	DETAILS OF ELASTOMERIC BEARINGS (SHEET 1 OF 2)	07536	65123
111	DETAILS OF ELASTOMERIC BEARINGS (SHEET 2 OF 2)	07536	65124
112	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 1 OF 7)	07536	65125
113	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 2 OF 7)	07536	65126
114	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 3 OF 7)	07536	65127
115	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 4 OF 7)	07536	65128
116	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 5 OF 7)	07536	65129
117	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 6 OF 7)	07536	65130
118	DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT (SHEET 7 OF 7)	07536	65131
119	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 1 OF 9)	07536	65132
120	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 2 OF 9)	07536	65133
121	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 3 OF 9)	07536	65134
122	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 4 OF 9)	07536	65135
123	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 5 OF 9)	07536	65136
124	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 6 OF 9)	07536	65137
125	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 7 OF 9)	07536	65138
126	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 8 OF 9)	07536	65139
127	DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT (SHEET 9 OF 9)	07536	65140
128	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 1 OF 7)	07536	65141
129	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 2 OF 7)	07536	65142
130	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 3 OF 7)	07536	65143
131	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 4 OF 7)	07536	65144
132	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 5 OF 7)	07536	65145
133	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 6 OF 7)	07536	65146
134	DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT (SHEET 7 OF 7)	07536	65147
135	DETAILS OF FINGER JOINT (SHEET 1 OF 2)	07536	65148
136	DETAILS OF FINGER JOINT (SHEET 2 OF 2)	07536	65149
137	DETAILS OF TYPE SPECIAL APPROACH SLAB	07536	65150
138 - 191	CROSS SECTIONS		

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

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

Smith, Trinity D.
Nov 30 2022 2:16 PM

DocuSigned

BRIDGE STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
55000	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS	02-27-14
55001	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES	02-27-14
55005	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS	03-24-16
55006	STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES	09-02-15
55007	STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES	02-11-16
55009	STANDARD DETAILS FOR NEOPRENE STRIP SEAL JOINTS	02-11-16
55010	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE	05-11-21
55018	STANDARD DETAILS FOR CHAIN LINK FENCE	02-11-16
55021	STANDARD DETAILS FOR CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS	03-24-16
55030F	STANDARD DETAILS FOR TYPE F APPROACH GUTTERS	04-08-21
55070	STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36	09-27-22

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
CDP-1	CONCRETE DITCH PAVING	12-08-16
CG-1	CURBING DETAILS	11-29-07
CPTJ-6A	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)	11-07-19
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-19-22
DR-2	DETAILS OF DRIVEWAYS & STREET TURNOUTS	05-19-22
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
GR-6	GUARDRAIL DETAILS	05-19-22
GR-8	GUARDRAIL DETAILS	11-07-19
GR-9	GUARDRAIL DETAILS	11-07-19
GR-10	GUARDRAIL DETAILS	11-07-19
GR-11	GUARDRAIL DETAILS	11-07-19
GR-12	GUARDRAIL DETAILS	05-14-20
MB-1	MAILBOX DETAILS	11-18-04
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCP-1	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	02-27-14
PCP-2	PLASTIC PIPE CULVERT (PVC F949)	02-27-14
PCP-3	PLASTIC PIPE CULVERT (POLYPROPYLENE)	02-27-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
PU-1	DETAILS OF PIPE UNDERDRAIN	12-08-16
SD-6	HEAVY DUTY PULL BOX	11-16-17
SE-2	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	11-07-19
SHS-1	STANDARD HIGHWAY SIGNS AND SUPPORTS ASSEMBLIES	09-12-13
SHS-2	U-CHANNEL POST ASSEMBLIES	07-25-19
SHS-3	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS	05-19-22
SHS-4	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS	09-12-13
SHS-7	DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS	09-12-13
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
SI-3	CONCRETE WALK (TYPE SPECIAL)	11-05-20
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	05-20-21
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-12-21
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-2	WIRE FENCE WATER GAPS	04-20-79
WF-3	CHAIN LINK FENCE	11-17-10
WF-4	WIRE FENCE TYPE C AND D	08-22-02
WR-1	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	11-10-05

ah40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	3	191
		GOVERNING SPECIFICATIONS AND GENERAL NOTES				

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

Nov 30 2022 2:16 PM

DocuSign

GOVERNING SPECIFICATIONS

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

NUMBER **TITLE**

ERRATA____ ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__ REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__ SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__ SUPPLEMENT - TRAINING PROGRAM - JOB 020475
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
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
307-1_____ CEMENT
308-1_____ CEMENT
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
400-7_____ TRACKLESS TACK
404-3_____ DESIGN OF ASPHALT MIXTURES
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
501-2_____ CEMENT
505-1_____ PORTLAND CEMENT CONCRETE DRIVEWAY
600-2_____ INCIDENTAL CONSTRUCTION
603-1_____ LANE CLOSURE NOTIFICATION
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
617-1_____ GUARDRAIL TERMINAL (TYPE 2)
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
632-1_____ CONCRETE ISLAND
633-1_____ CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1_____ CURBING
723-1_____ GENERAL REQUIREMENTS FOR SIGNS
800-1_____ STRUCTURES
802-3_____ CONCRETE FOR STRUCTURES
802-4_____ CEMENT
804-2_____ REINFORCING STEEL FOR STRUCTURES
807-2_____ STEEL STRUCTURES
808-1_____ INSTALLATION OF ELASTOMERIC BEARINGS
808-2_____ ELASTOMERIC BEARINGS
JOB 020475__ ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)
JOB 020475__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 020475__ BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 020475__ BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 020475__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 020475__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 020475__ CLASS C FLY ASH IN PORTLAND CEMENT CONCRETE PAVEMENT AND CLASS S(AE) CONCRETE
JOB 020475__ COLD MILLING – COUNTY PROPERTY
JOB 020475__ COMPACTED EMBANKMENT
JOB 020475__ CONCRETE PULL BOX
JOB 020475__ CONCRETE WALKS (TYPE SPECIAL)
JOB 020475__ CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 020475 CONSTRUCTION PROJECT INFORMATION SIGN
JOB 020475__ CULVERT CLEAN OUT
JOB 020475__ DELAY IN RIGHT OF WAY OCCUPANCY
JOB 020475__ DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 020475__ DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 020475__ ELECTRICAL CONDUCTORS FOR LUMINARIES (ROUNDABOUT LIGHTING)
JOB 020475__ ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 020475__ ESTABLISHING CONTRACT TIME – CALENDAR DAY CONTRACT
JOB 020475__ FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 020475__ GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 020475__ INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (G&W)
JOB 020475__ INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (UPRR)
JOB 020475__ LED ROADWAY ILLUMINATION POLE
JOB 020475__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 020475__ MANDATORY ELECTRONIC CONTRACT
JOB 020475__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 020475__ NESTING SITES OF MIGRATORY BIRDS
JOB 020475__ OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB 020475__ PARTNERING REQUIREMENTS
JOB 020475__ PCC PAVEMENT SURFACE SMOOTHNESS (IRI)
JOB 020475__ PLASTIC PIPE
JOB 020475__ PRE-BID ON SITE INVESTIGATION OF SOIL CONDITIONS
JOB 020475__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 020475__ PRICE ADJUSTMENT FOR FUEL
JOB 020475__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 020475__ PROSECUTION AND PROGRESS WITH BID SCHEDULE
JOB 020475__ REACTIVE AGGREGATE TESTING
JOB 020475__ SERVICE POINT ASSEMBLY (ROUNDABOUT LIGHTING)
JOB 020475__ SHORING FOR CULVERTS
JOB 020475__ SOIL STABILIZATION
JOB 020475__ SPECIAL SAFETY REQUIREMENTS FOR BRIDGES
JOB 020475__ STORM WATER POLLUTION PREVENTION PLAN
JOB 020475__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 020475__ TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS)
JOB 020475__ UTILITY ADJUSTMENTS
JOB 020475__ VALUE ENGINEERING
JOB 020475__ WARM MIX ASPHALT
JOB 020475__ WELLHEAD PROTECTION

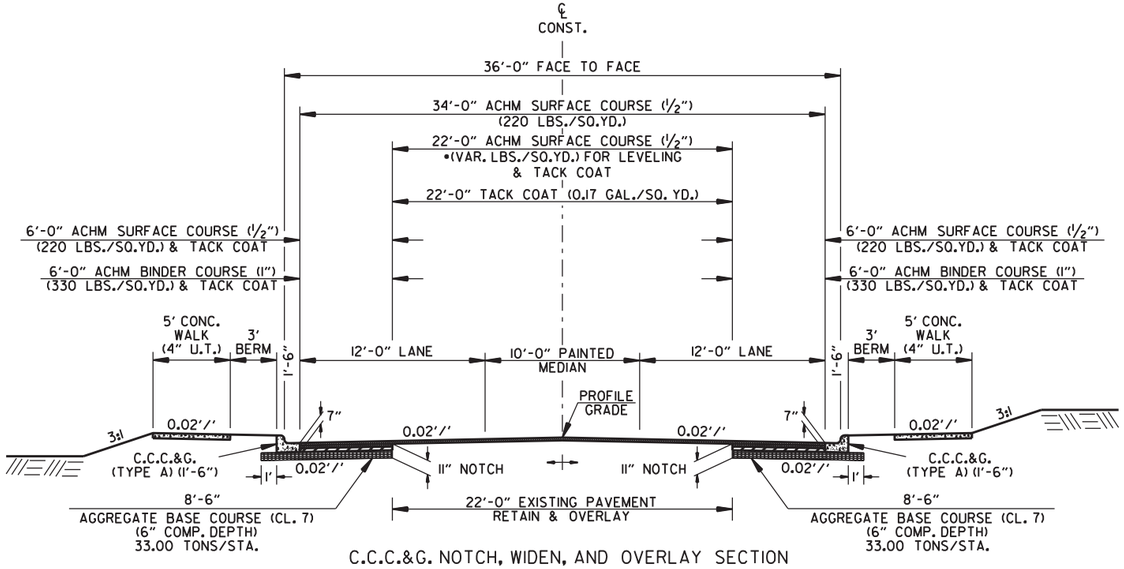
GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. 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.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. 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.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
11. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.

EW41606 8/29/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	4	191
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:19 PM
DocuSign

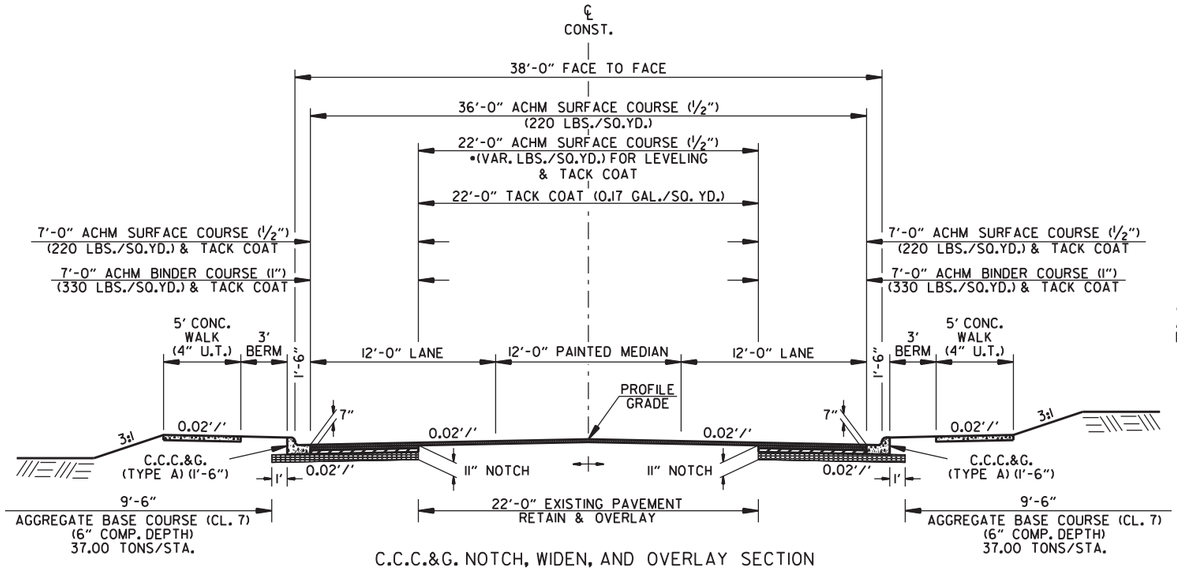


C.C.C.&G. NOTCH, WIDEN, AND OVERLAY SECTION

HWY. 83
STA. 1001+45.07 TO STA. 1003+60.07
STA. 1009+98.98 TO STA. 1012+03.98

JORDAN DR.
STA. 105+37.59 TO STA. 107+52.60

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



C.C.C.&G. NOTCH, WIDEN, AND OVERLAY SECTION

HWY. 83
STA. 1025+35.40 TO STA. 1027+60.40

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

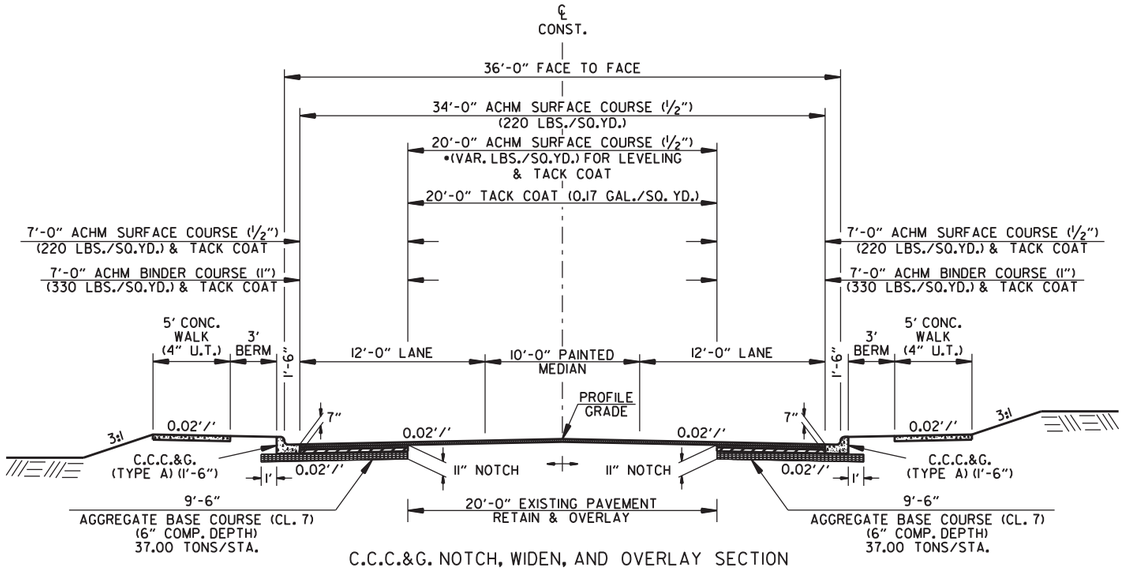
dn40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	5	191
		TYPICAL SECTIONS OF IMPROVEMENT				

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

Jun 29 2022 1:19 PM

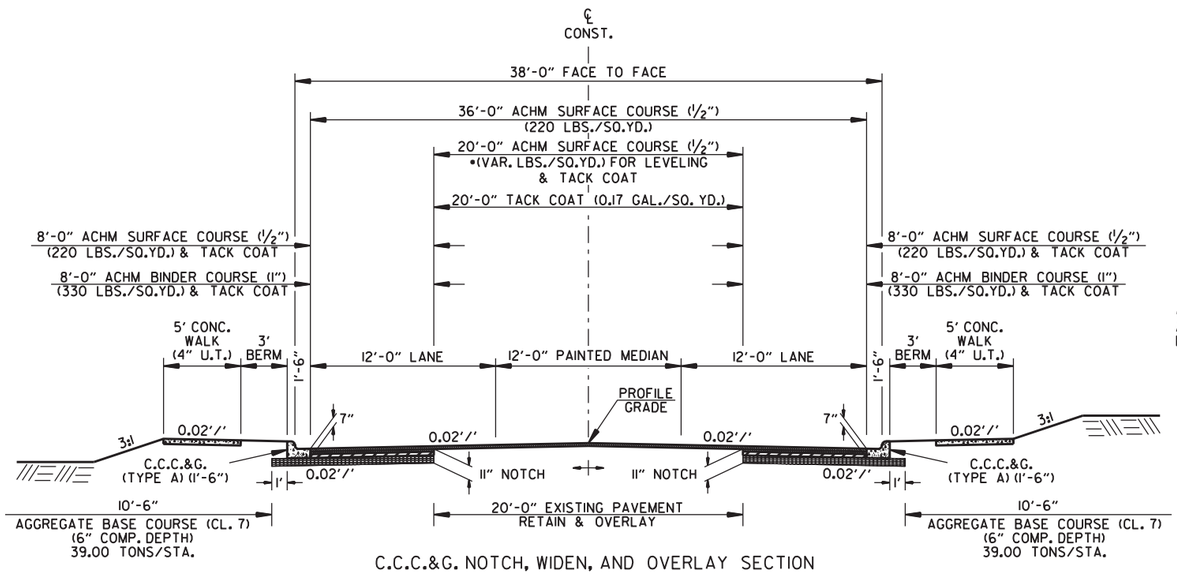
DocuSign



C.C.C.&G. NOTCH, WIDEN, AND OVERLAY SECTION

JORDAN DR.
STA. 101+47.39 TO STA. 103+62.39

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



C.C.C.&G. NOTCH, WIDEN, AND OVERLAY SECTION

HWY. 83
STA. 1029+16.31 TO STA. 1031+41.31

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

oh40219 6/21/2022
R020475.DGN

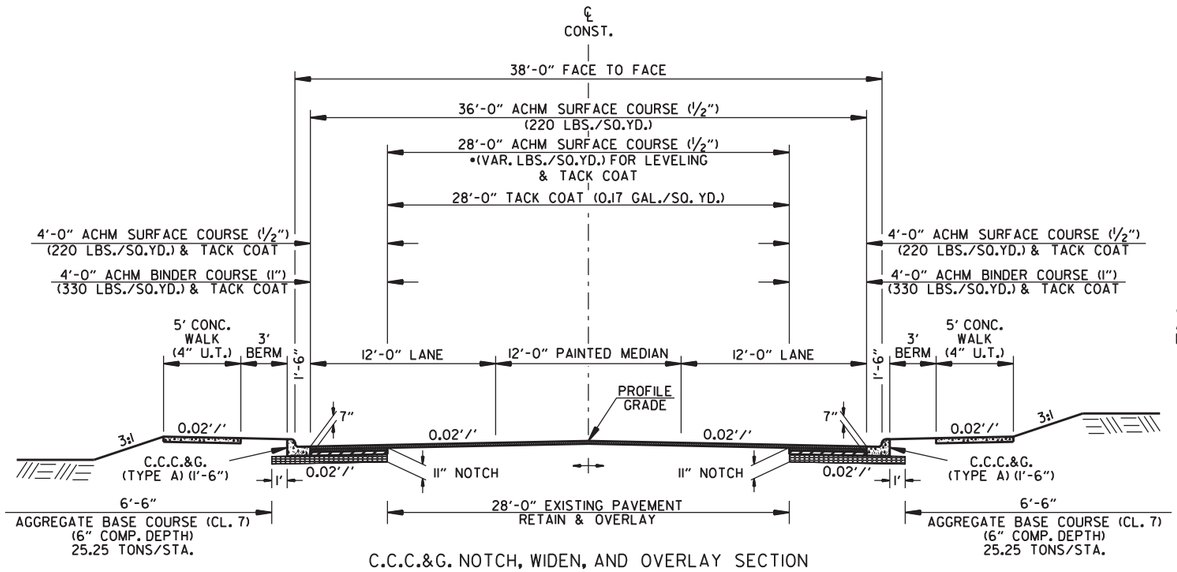
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	6	191
		TYPICAL SECTIONS OF IMPROVEMENT				

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

Jun 29 2022 1:19 PM

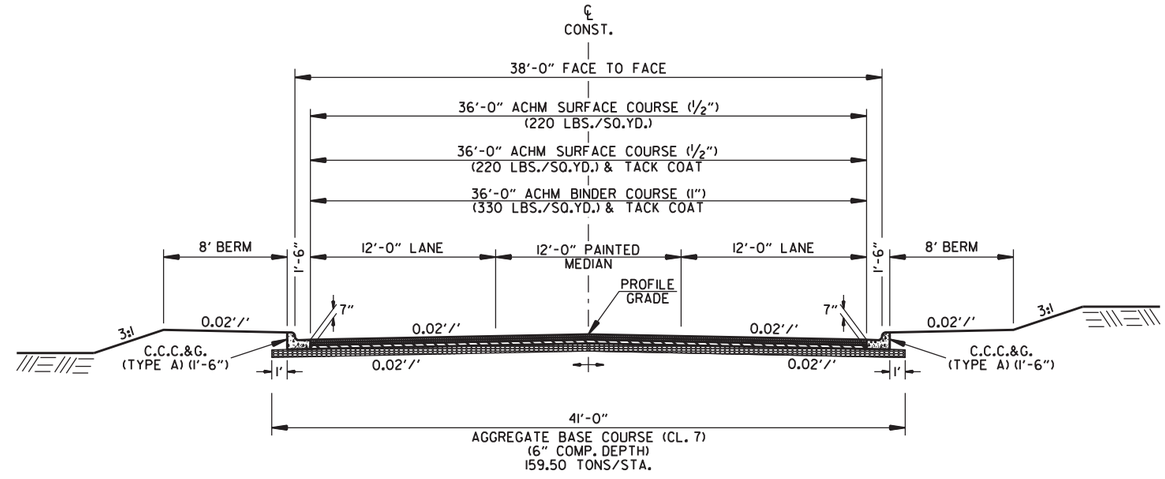
DocuSign



C.C.C.&G. NOTCH, WIDEN, AND OVERLAY SECTION

OLD WARREN RD.
STA. 301+33.21 TO STA. 303+28.21
STA. 304+71.78 TO STA. 306+96.79

•TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER



HWY. 83 - C.C.C.&G. FULL DEPTH SECTION

STA. 1092+00.00 to STA. 1094+93.60

NOTES:

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

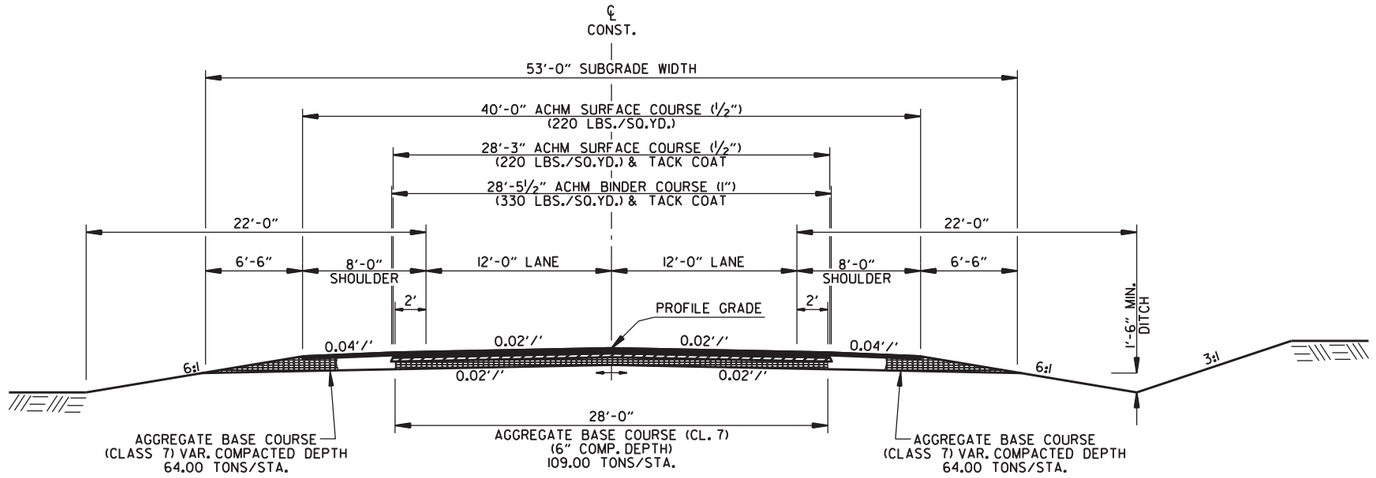
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

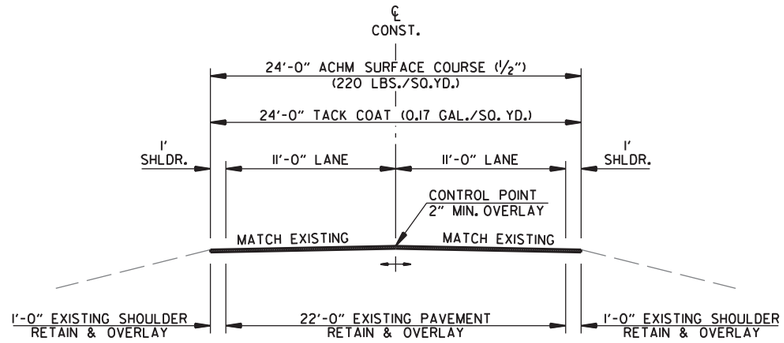
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	7	191
		TYPICAL SECTIONS OF IMPROVEMENT				



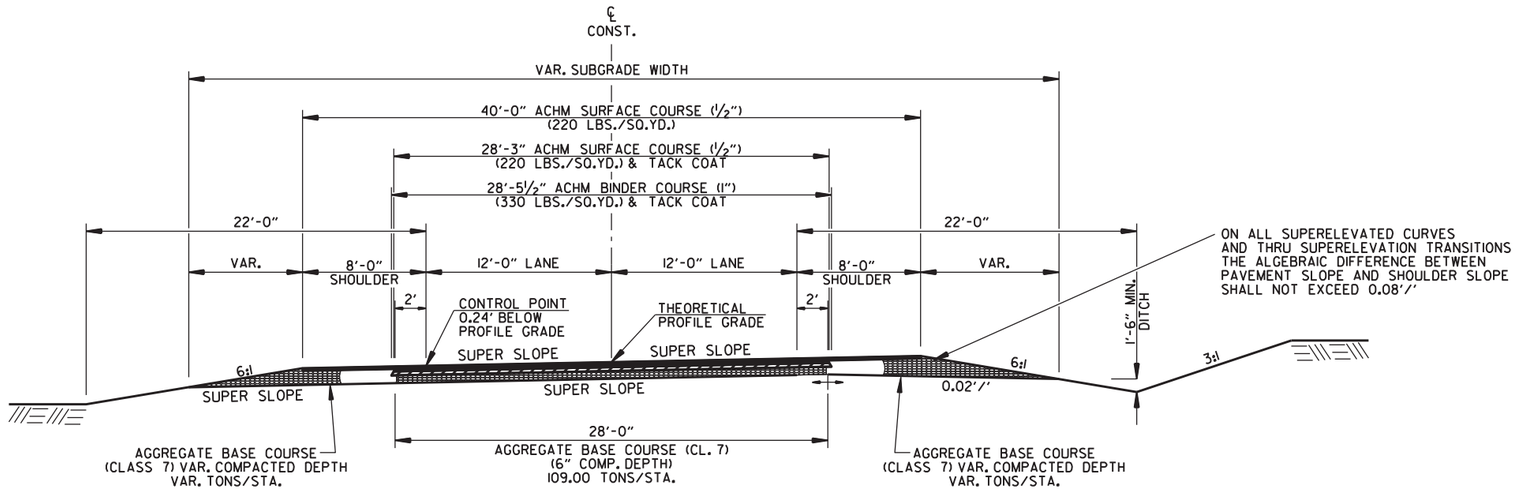
HWY. 83 - FULL DEPTH SECTION

STA. 1031+41.31 TO STA. 1032+88.49
STA. 1040+70.53 TO STA. 1040+79.76
STA. 1048+34.45 TO STA. 1050+20.31
STA. 1063+73.74 TO STA. 1067+32.83
STA. 1089+32.09 TO STA. 1092+00.00



HWY. 83 - OVERLAY SECTION

STA. 1012+03.98 TO STA. 1025+35.40



HWY. 83 - FULL DEPTH SECTION (SUPERELEVATION)

STA. 1032+88.49 TO STA. 1040+70.53
STA. 1040+79.76 TO STA. 1048+34.45
STA. 1050+20.31 TO STA. 1063+73.74
STA. 1067+32.83 TO STA. 1078+34.91

NOTES:

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

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (½") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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

Jun 29 2022 1:20 PM

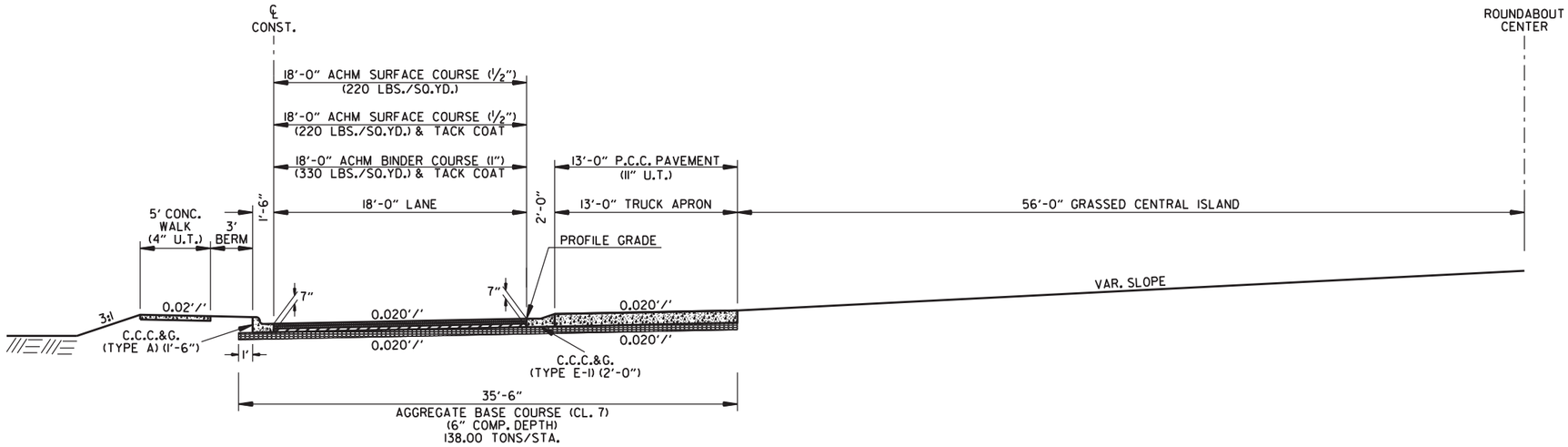
DocuSign

oh40219 6/21/2022
R020475.DGN

TYPICAL SECTIONS OF IMPROVEMENT

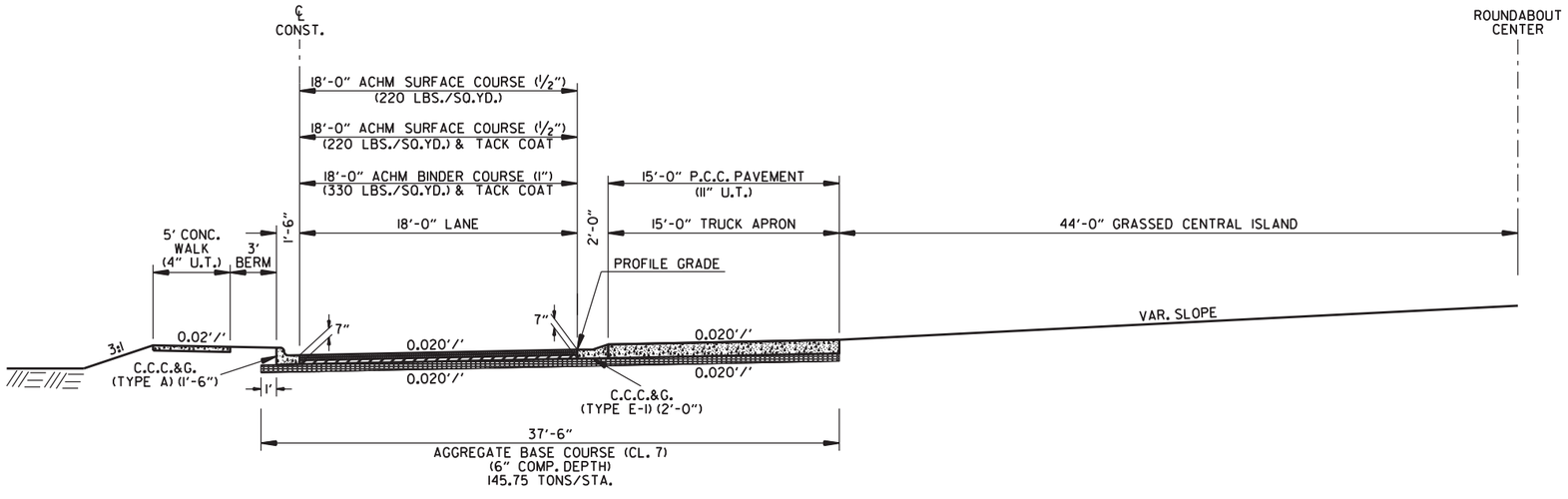
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	8	191
		TYPICAL SECTIONS OF IMPROVEMENT				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:20 PM
DocuSign



ROUNDABOUT 1- FULL DEPTH SECTION

STA. 200+00.00 TO STA. 204+46.11



ROUNDABOUT 2 - FULL DEPTH SECTION

STA. 400+16.70 TO STA. 400+93.97
STA. 401+22.63 TO STA. 401+80.50
STA. 402+05.80 TO STA. 402+84.85
STA. 403+14.65 TO STA. 403+62.87

NOTES:

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.

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

PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD(S) USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

oh40219 6/21/2022
R020475.DGN

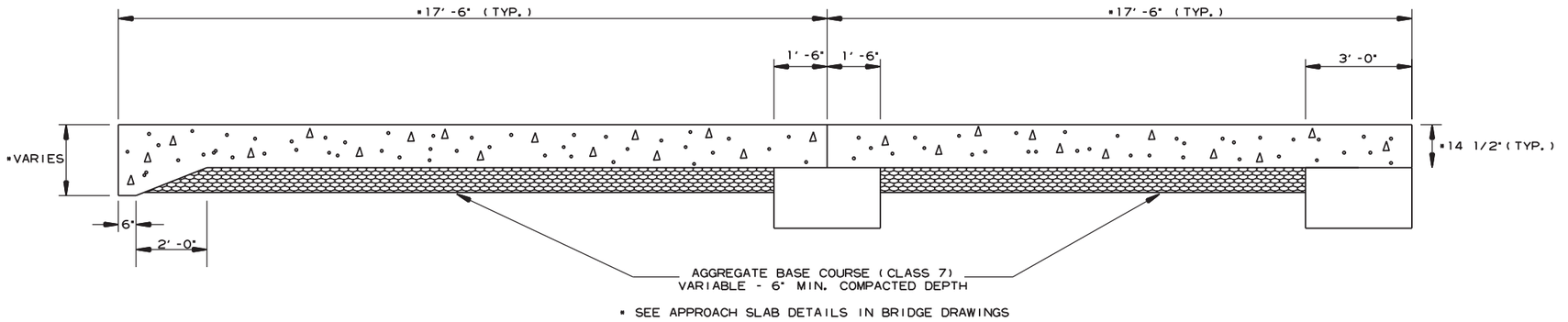
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	9	191
		SPECIAL DETAILS				

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

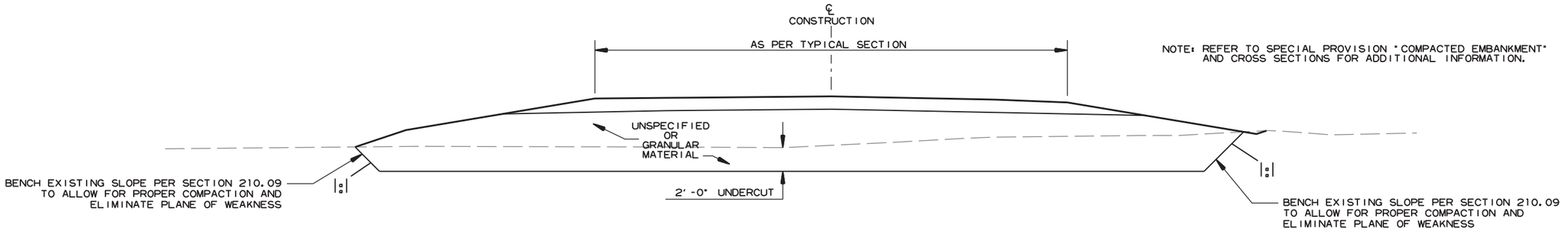
Jun 29 2022 1:20 PM

DocuSign



* SEE APPROACH SLAB DETAILS IN BRIDGE DRAWINGS

SECTION OF APPROACH SLAB
(FOR ASPHALT PAVEMENT)



UNDERCUT DETAIL

STA. 1000+45.07 TO STA. 1003+60.07 - HWY. 83
STA. 1009+98.98 TO STA. 1012+03.98 - HWY. 83
STA. 1024+35.40 TO STA. 1027+60.40 - HWY. 83
STA. 1029+16.31 TO STA. 1033+64.00 - HWY. 83
STA. 1048+00.00 TO STA. 1053+00.00 - HWY. 83
STA. 1093+40.00 TO STA. 1094+58.97 - HWY. 83
STA. 100+47.39 TO STA. 108+52.60 - JORDAN DR.
STA. 300+33.21 TO STA. 307+96.79 - OLD WARREN RD.

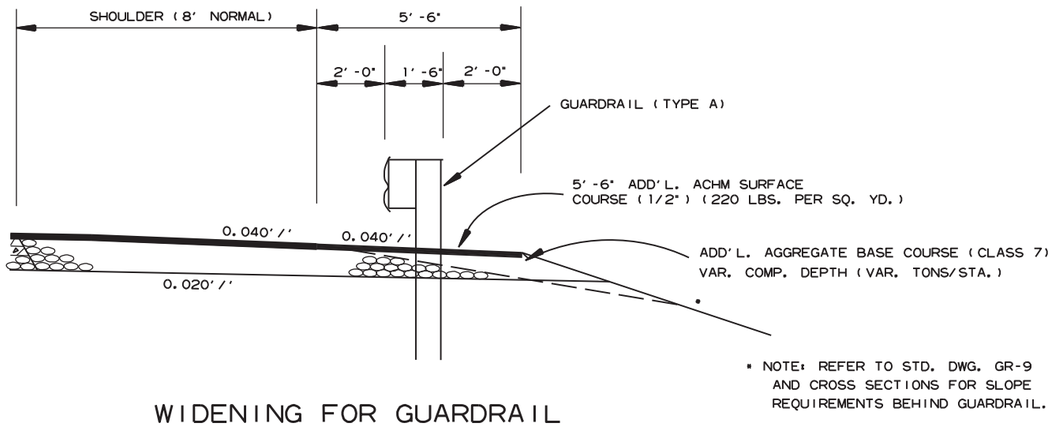
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	10	191
		SPECIAL DETAILS				

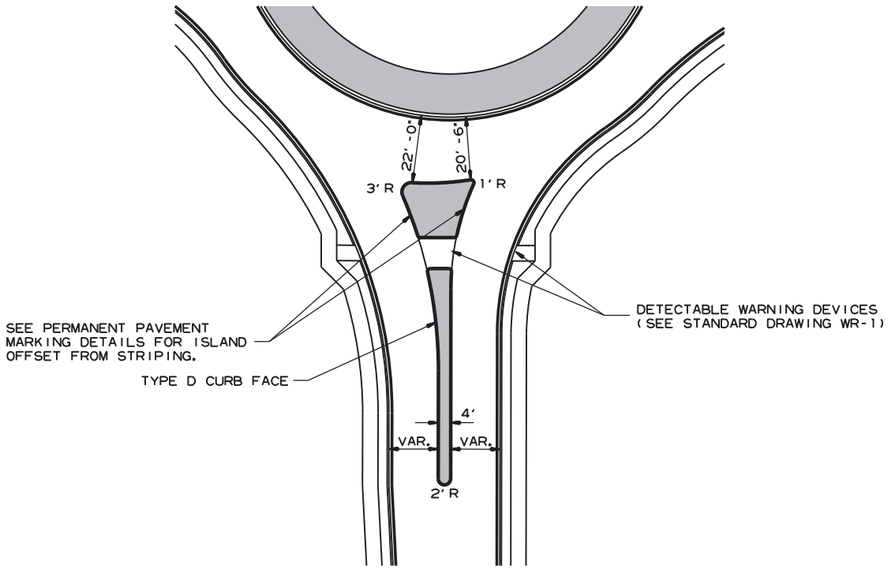
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Jun 29 2022 1:20 PM

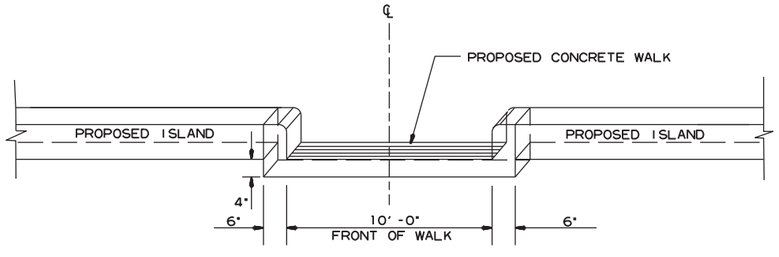
DocuSign



WIDENING FOR GUARDRAIL



ROUNDABOUT APPROACH DETAIL



FACE SHALL MEET REQUIREMENTS OF TYPE D CURB

NOTE: CONCRETE WALK-THROUGH ISLAND SHALL BE POURED MONOLITHICALLY. ALL MATERIALS REQUIRED TO CONSTRUCT CONCRETE WALK-THROUGH ISLAND SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE ISLAND.

CONCRETE WALK-THROUGH ISLAND

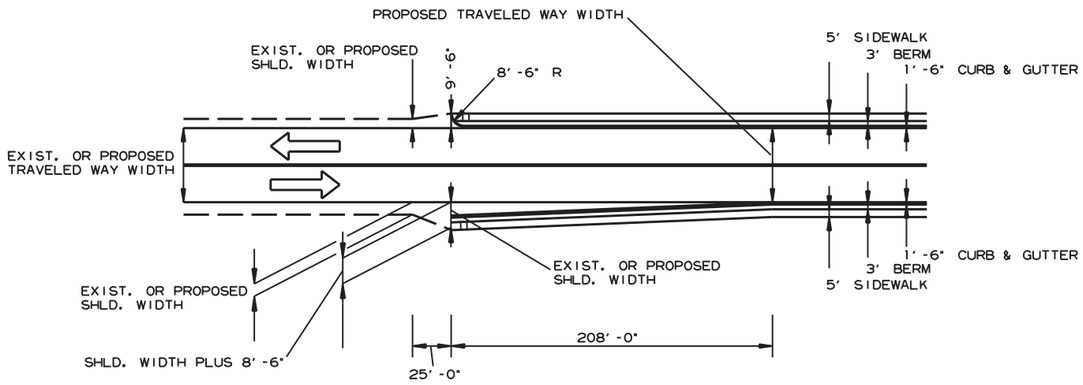
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	11	191
		SPECIAL DETAILS				

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

Jun 29 2022 1:20 PM

DocuSign

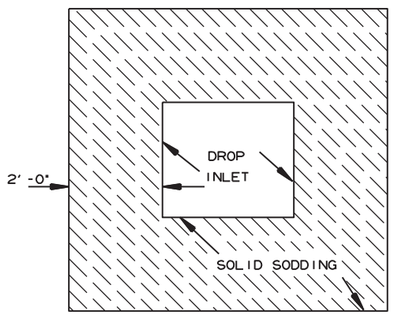


TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

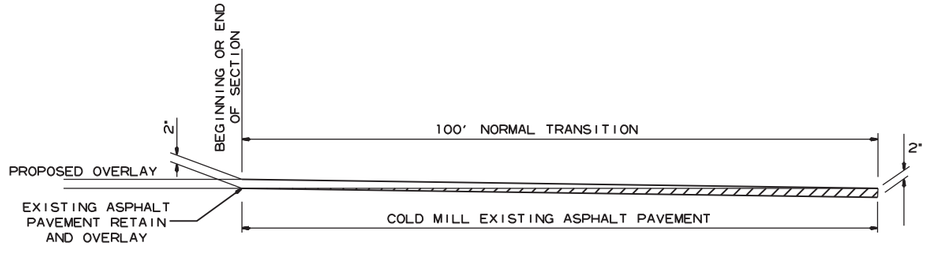


6.0" Radius, 1.3" Border, Black on Orange;
"Job XXXXXX" C 2K; "Start Date Mo Year" C 2K;
"Est Completion Mo Year" C 2K; "IDRIVE ARKANSAS.COM" Arial;

CONSTRUCTION PROJECT INFORMATION SIGN



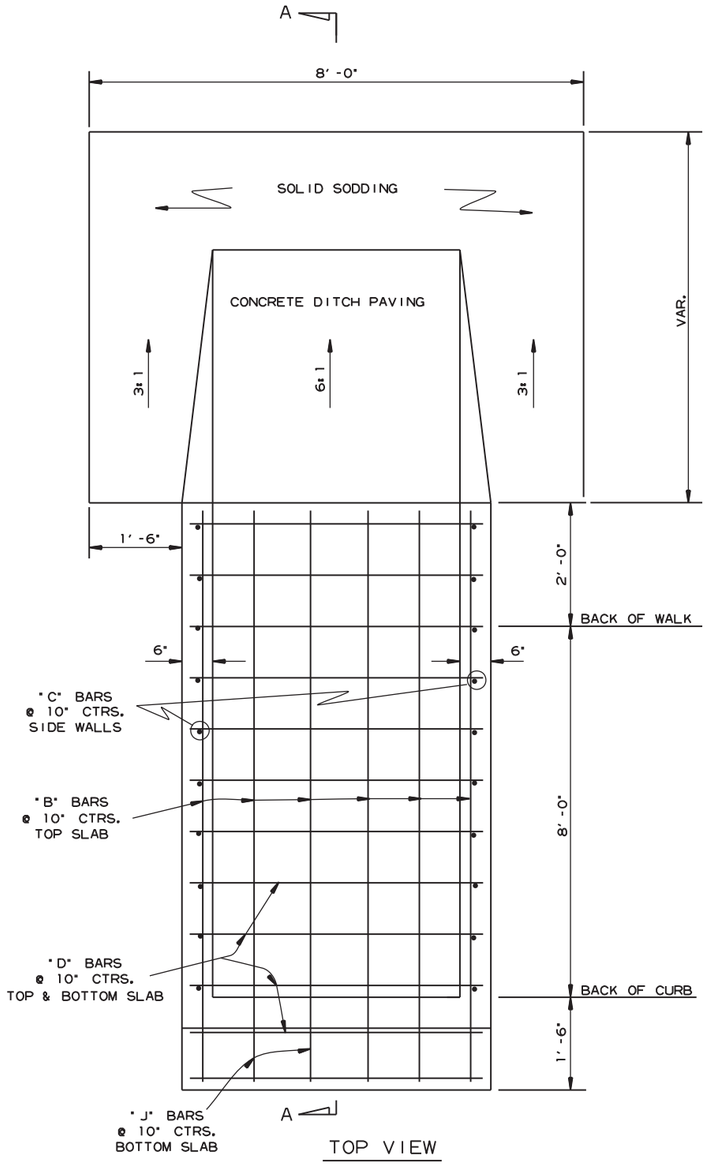
DETAIL FOR SOLID SODDING AROUND DROP INLETS



DETAIL FOR TRANSITIONS

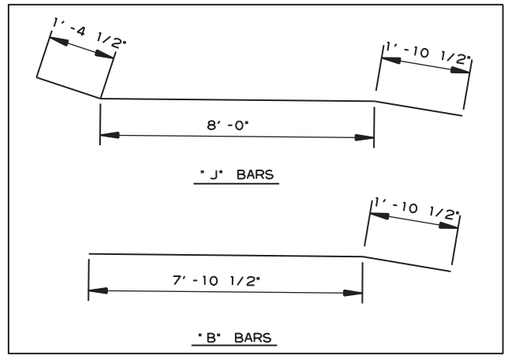
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	12	191
		SPECIAL DETAILS				



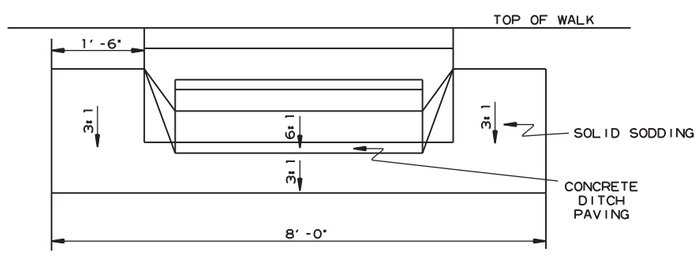
TOP VIEW

BAR DIAGRAM

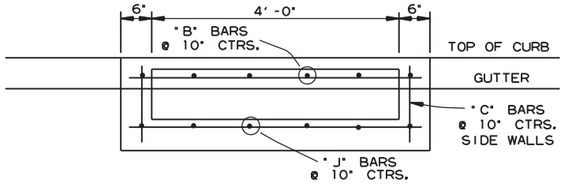


CLASS A CONC.	REINF. STEEL-RDWY. GRADE 60
CU. YDS.	POUND
2.53	207

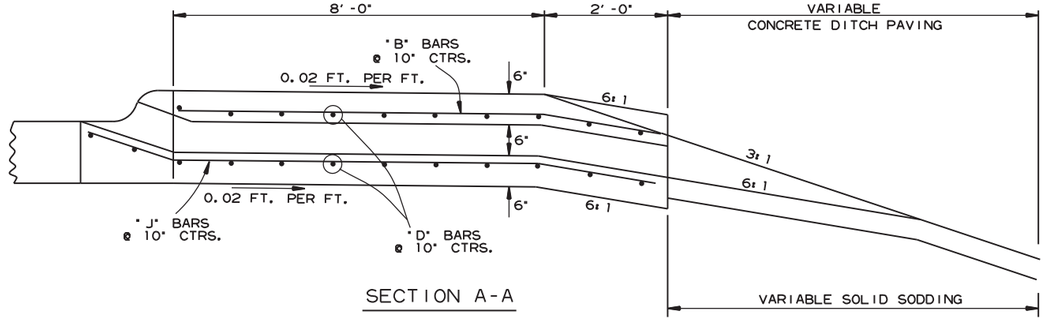
QUANTITIES FOR INFORMATION ONLY
DROP INLET (TYPE SPECIAL)



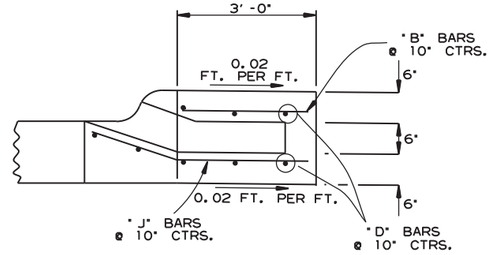
BACK VIEW



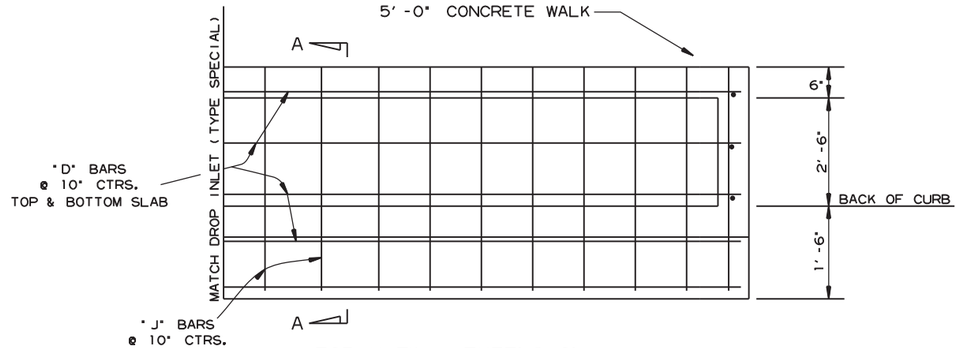
FRONT VIEW



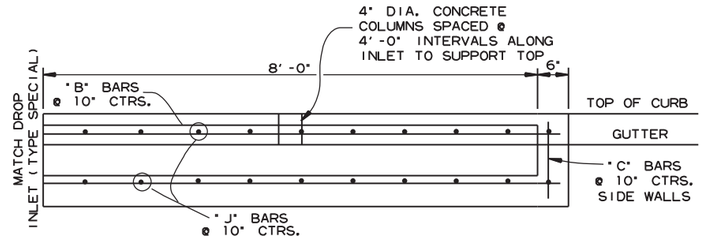
SECTION A-A



SECTION A-A - EXTENSION



TOP VIEW - EXTENSION



FRONT VIEW - EXTENSION

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINF. BARS SHALL BE #4 AND HAVE 1-1/2" COVER.
3. DROP INLETS AND EXTENSIONS ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
4. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
5. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
6. CONCRETE DITCH PAVING & SOLID SODDING SHALL BE PAID FOR SEPARATELY.
7. CONSTRUCT EXTENSIONS UPSTREAM OF DROP INLET UNLESS OTHERWISE SPECIFIED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:21 PM
DocuSign

DROP INLET (TYPE SPECIAL)

SPECIAL DETAILS

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	13	191
		TEMPORARY EROSION CONTROL DETAILS				

LEGEND

E-5	= SAND BAG DITCH CHECKS
E-13	= FILTER SOCK

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING AND GRUBBING

SAND BAG DITCH CHECKS (E-5)
(37 LOCATIONS = 814 BAGS)

SILT FENCE (E-11)
(22 LOCATIONS = 7762 LIN. FT.)

FILTER SOCK (E-13)
(1 LOCATION = 23 LIN. FT.)

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

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

Jun 29 2022 1:21 PM

DocuSign

P.O.B. 100+00.00
P.O.B. 1000+00.00
P.O.E. 104+50.00
P.O.B. 1009+09.04
P.O.B. 104+50.00
P.O.E. 1004+50.00
P.C.C. 202+23.05
P.C.C. 200+00.00
P.C.C. 204+46.11
P.O.E. 109+88.09

N 0°25'15" E
N 0°19'46" E
S 89°53'18" E
S 89°37'26" E

EXIST. ROW

REVISIONS

DATE OF REVISION	REVISION

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	14	191
		TEMPORARY EROSION CONTROL DETAILS				

LEGEND

E-5	= SAND BAG DITCH CHECKS
E-11	= SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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

Jun 29 2022 1:21 PM

DocuSign

REVISIONS

DATE OF REVISION	REVISION

oh40219 6/21/2022
R020475.DGN

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	15	191

TEMPORARY EROSION CONTROL DETAILS

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:21 PM

N

1035 · 1040 · 1045 · 1050 · 1055 · 1060

P.C. 1035+13.49 · P.T. 1038+45.53 · P.C. 1043+04.76 · P.T. 1044+57.25 · P.T. 1046+08.45 · P.C. 1052+45.31 · P.T. 1057+00.81 · P.T. 1061+48.74

25' BUFFER

N 0°48' 13" E
N 2°31' 00" W
N 3°34' 37" E

PROPOSED ROW

E-II ·276 LIN.FT. · E-II ·121 LIN.FT. · E-II ·114 LIN.FT. · E-II ·548 LIN.FT. · E-II ·122 LIN.FT. · E-II ·60 LIN.FT. · E-II ·133 LIN.FT. · E-II ·85 LIN.FT. · E-II ·427 LIN.FT. · E-II ·114 LIN.FT. · E-II ·169 LIN.FT. · E-II ·294 LIN.FT. · E-II ·1059 LIN.FT. · E-II ·77 LIN.FT.

E-5 ·80 · ·65 · ·65 · ·43 · ·00 · ·00 · ·20 · ·75 · ·94 · ·15 · ·55 · ·25

·73.49 46.90 · ·00.00 55.00 · ·50.00 65.00 · ·95.00 45.00 · ·00.00 65.00 · ·86.72 60.00 · ·81.76 73.69 · ·00.00 59.00 · ·95.24 68.35 · ·70.00 95.00 · ·95.00 90.00 · ·00.00 95.00 · ·99.41 70.00 · ·50.00 70.00 · ·50.00 50.00 · ·16.13 50.00 · ·21.64 50.70 · ·12.25 50.00 · ·90.00 70.00 · ·00.00 55.00 · ·00.00 70.00 · ·00.00 80.00

LEGEND

E-5 = SAND BAG DITCH CHECKS

E-II = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

on40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	16	191
		TEMPORARY EROSION CONTROL DETAILS				

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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

Jun 29 2022 1:21 PM

DocuSign

P.T. 1061+48.74
+60.00 80.00
E-11 +1059 LIN.FT.
1065
+00.00 55.00
PROPOSED ROW
+96.43 71.87
+00.00 90.00
E-5 +15
1070
E-11 +1395 LIN.FT.
PROPOSED ROW
+00.00 80.00
1075
+00.00 115.00
N 14°29' 30" W
E-5 +30
E-11
PROPOSED ROW
+00.00 85.00
E-11 +266 LIN.FT.
+00.00 60.00
25' BUFFER
+45.01 72.43
25' BUFFER
+75.00 75.00
+00.00 60.00
P.C. 1069+57.83
PROPOSED ROW
+00.00 70.00
+00.00 100.00

LEGEND

E-5 = SAND BAG DITCH CHECKS
E-11 = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

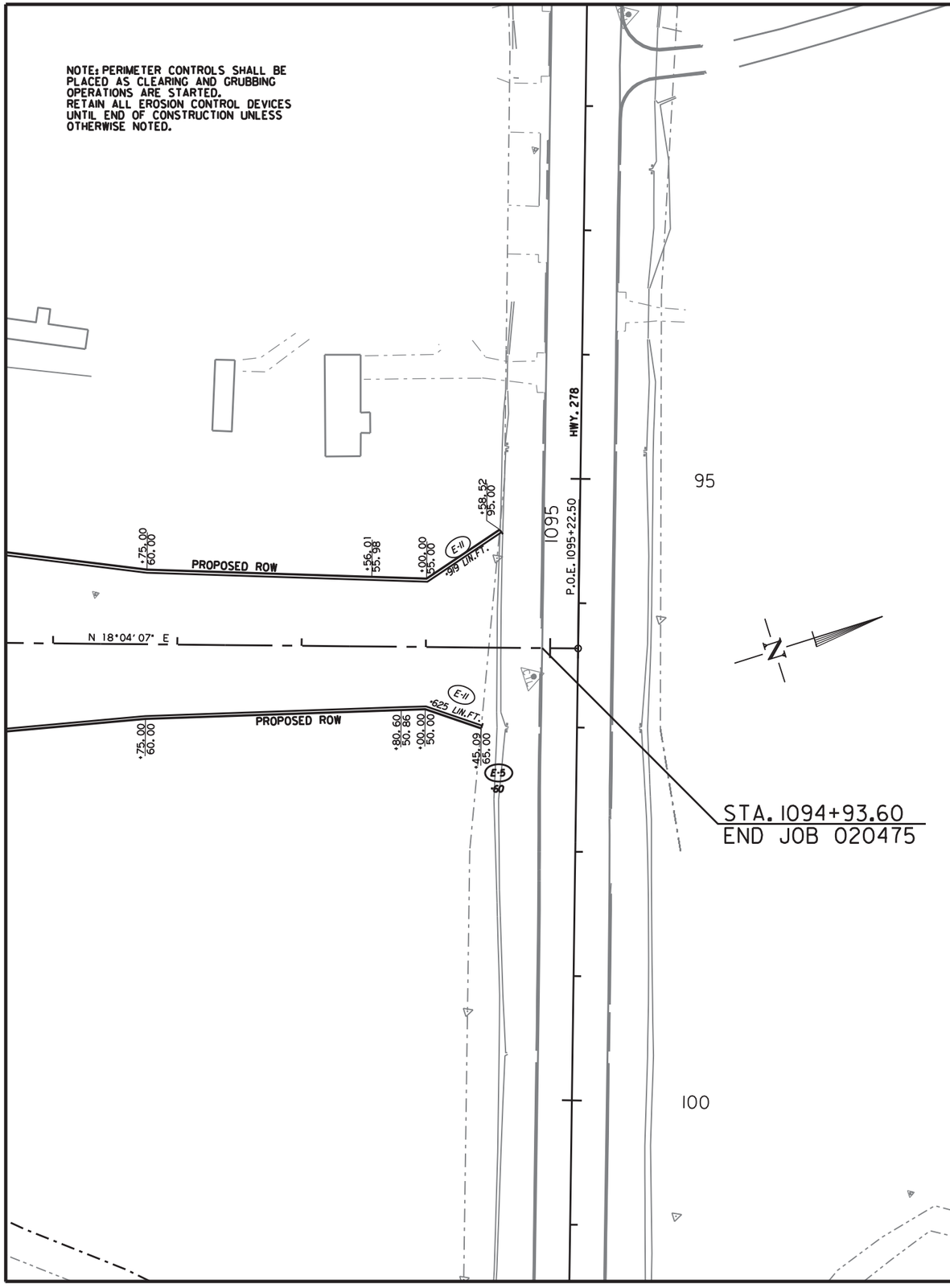
+55.00 195.00 P.I. 1077+94.47
PROPOSED ROW
E-11 +1395 LIN.FT.
+15.79 190.38
+40.00 195.00
25' BUFFER
1080
E-5 +70
25' BUFFER
+50.00 60.00
PROPOSED ROW
E-11 +152 LIN.FT.
+27.19 58.85
E-11 +41 LIN.FT.
1085
+24.40 56.89
PROPOSED ROW
+25.00 60.00
E-11 +919 LIN.FT.
+25.00 100.00
1090
E-5 +55
E-5 +50
E-11 +285 LIN.FT.
+50.00 60.00
PROPOSED ROW
25' BUFFER
+53.13 61.94
25' BUFFER
+53.50 62.96
P.T. 1085+85.84
N 18°
+25.00 60.00
PROPOSED ROW
E-11 +625 LIN.FT.
+25.00 95.00
PROPOSED ROW
+00.00 150.00
+21.42 166.86
+50.00 160.00
+60.00 200.00

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

oh40219 6/21/2022
RO20475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	17	191
		TEMPORARY EROSION CONTROL DETAILS				

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED. RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.



LEGEND

E-5	= SAND BAG DITCH CHECKS
E-II	= SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

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

Jun 29 2022 1:22 PM

DocuSign

qh40219 6/21/2022
R020475.DGN

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	18	191

TEMPORARY EROSION CONTROL DETAILS

LEGEND

E-5	= SAND BAG DITCH CHECKS
E-13	= FILTER SOCK

STAGE I

SAND BAG DITCH CHECKS (E-5)
(41 LOCATIONS = 902 BAGS)

FILTER SOCK (E-13)
(17 LOCATIONS = 391 LIN. FT.)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
Trinity D. Smith
No. 11425
TRINITY D. SMITH

Jun 29 2022 1:22 PM

DocuSign

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

P.O.B. 1000+00.00

1000

N 0°25'15" E

P.C.C. 202+23.05

P.O.B. 104+50.00
P.O.E. 1004+50.00

P.O.E. 104+50.00
P.O.B. 1009+09.04

N 0°19'46" E

P.C.C. 200+00.00
P.T. 201+46.11

P.O.B. 100+00.00

100

S 89°55'58" E

EXIST. ROW

1010

22'

EXIST. ROW

1015

EXIST. ROW

105

EXIST. ROW

EXIST. ROW

S 89°37'26" E

EXIST. ROW

P.O.E. 109+88.09

REVISIONS

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

qh40219 6/21/2022
R020475.DGN

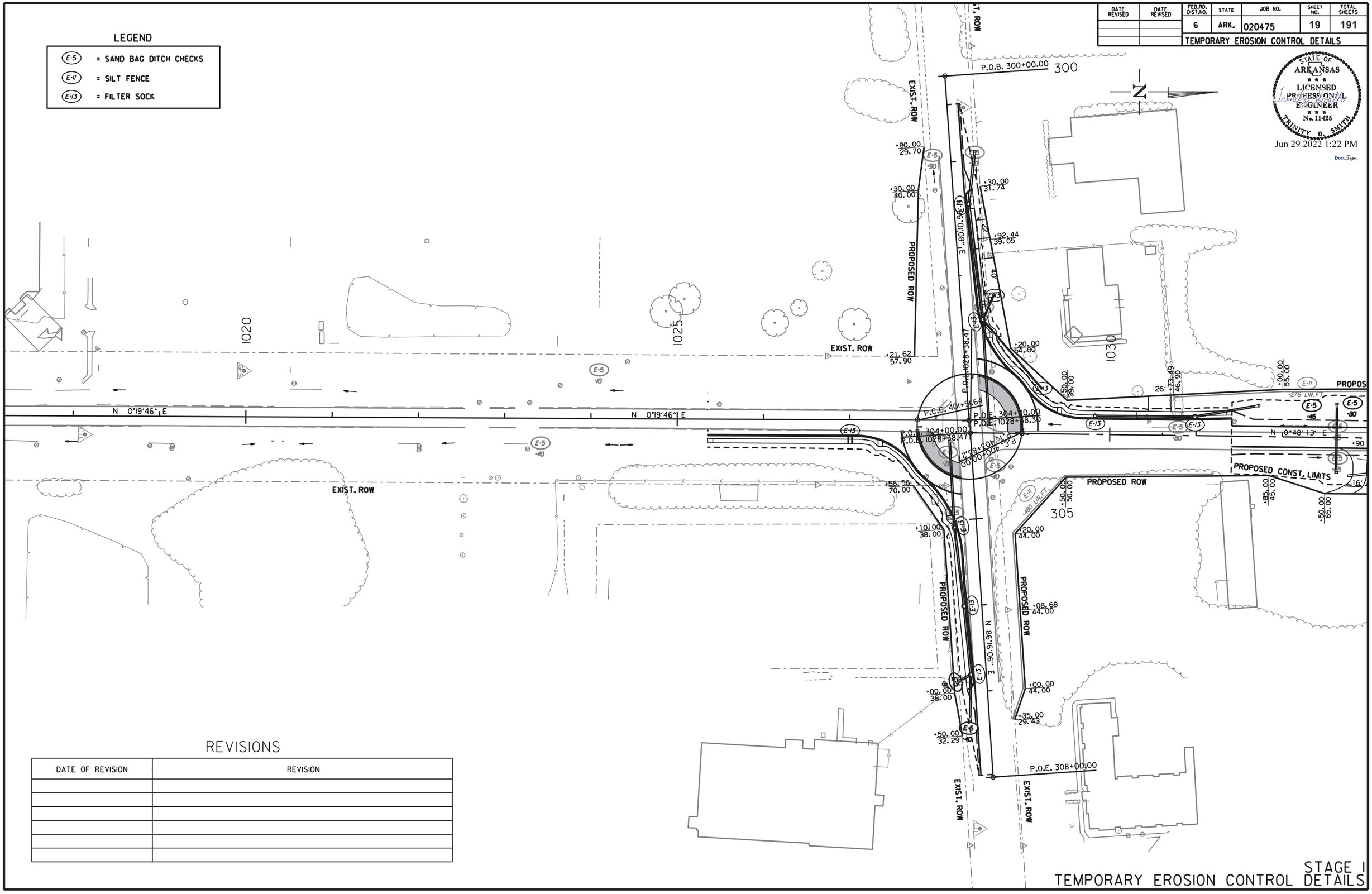
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	19	191

TEMPORARY EROSION CONTROL DETAILS

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:22 PM
DocuSign



REVISIONS

DATE OF REVISION	REVISION

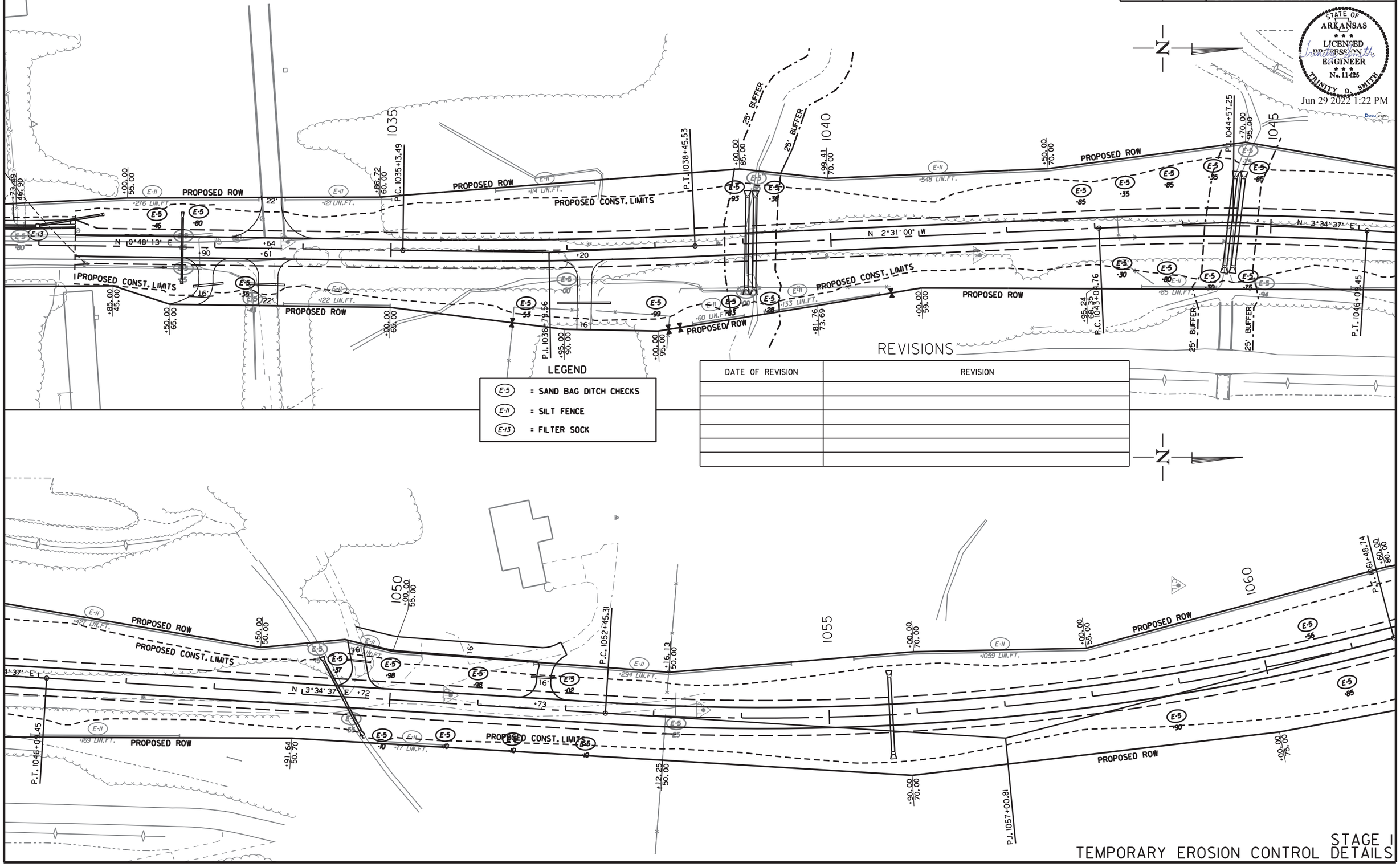
STAGE I
TEMPORARY EROSION CONTROL DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	20	191

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:22 PM
DocuSign



REVISIONS

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	21	191
		TEMPORARY EROSION CONTROL DETAILS				

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

Jun 29 2022 1:22 PM

DocuSign

P.T. 1061+48.74
+60.00 80.00
E-11 •1059 LIN.FT.
PROPOSED CONST. LIMITS
E-5 •9
E-5 •10
1065
+00.00 55.00
PROPOSED ROW
+96.43 71.87
+00.00 90.00
E-5 •11
1070
E-11 •1395 LIN.FT.
PROPOSED ROW
+00.00 80.00
1075
+00.00 115.00
PROPOSE
N 14°29' 30" W
E-5 •85
E-5 •18
E-5 •42
E-5 •10
E-11 •266 LIN.FT.
PROPOSED ROW
+00.00 85.00
+00.00 60.00
25' BUFFER
+45.01 72.43
25' BUFFER
+75.00 75.00
PROPOSED CONST. LIMITS
+00.00 60.00
P.C. 1069+57.83
PROPOSED ROW
+00.00 70.00
PROPOSED CONST. LIMITS
+00.00 100.00

LEGEND

- E-5 = SAND BAG DITCH CHECKS
- E-11 = SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

+55.00 155.00 P.I. 1077+94.47
PROPOSED ROW
E-11 •1395 LIN.FT.
PROPOSED CONST. LIMITS
+15.79 190.38
+40.00 195.00
25' BUFFER
TENMILE TRIBUTARY
1080
E-5 •50
25' BUFFER
TENMILE TRIBUTARY
+50.00 60.00
PROPOSED ROW
E-11 •152 LIN.FT.
+27.19 58.85
E-11 •41 LIN.FT.
1085
+24.40 56.89
PROPOSED ROW
+25.00 60.00
E-11 •919 LIN.FT.
+25.00 160.00
1090
E-5 •50
E-11 •285 LIN.FT.
+50.00 60.00
PROPOSED ROW
+21.42 166.86
+50.00 160.00
25' BUFFER
+53.13 61.94
25' BUFFER
UNION PACIFIC RAILROAD
+53.50 62.96
P.I. 1085+85.84
N 18°
+25.00 60.00
PROPOSED ROW
+25.00 95.00
E-11 •625 LIN.FT.
PROPOSED CONST. LIMITS
PROPOSED ROW
+00.00 150.00
+60.00 200.00

STAGE I
TEMPORARY EROSION CONTROL DETAILS

ah40219 6/21/2022
R020475.DGN

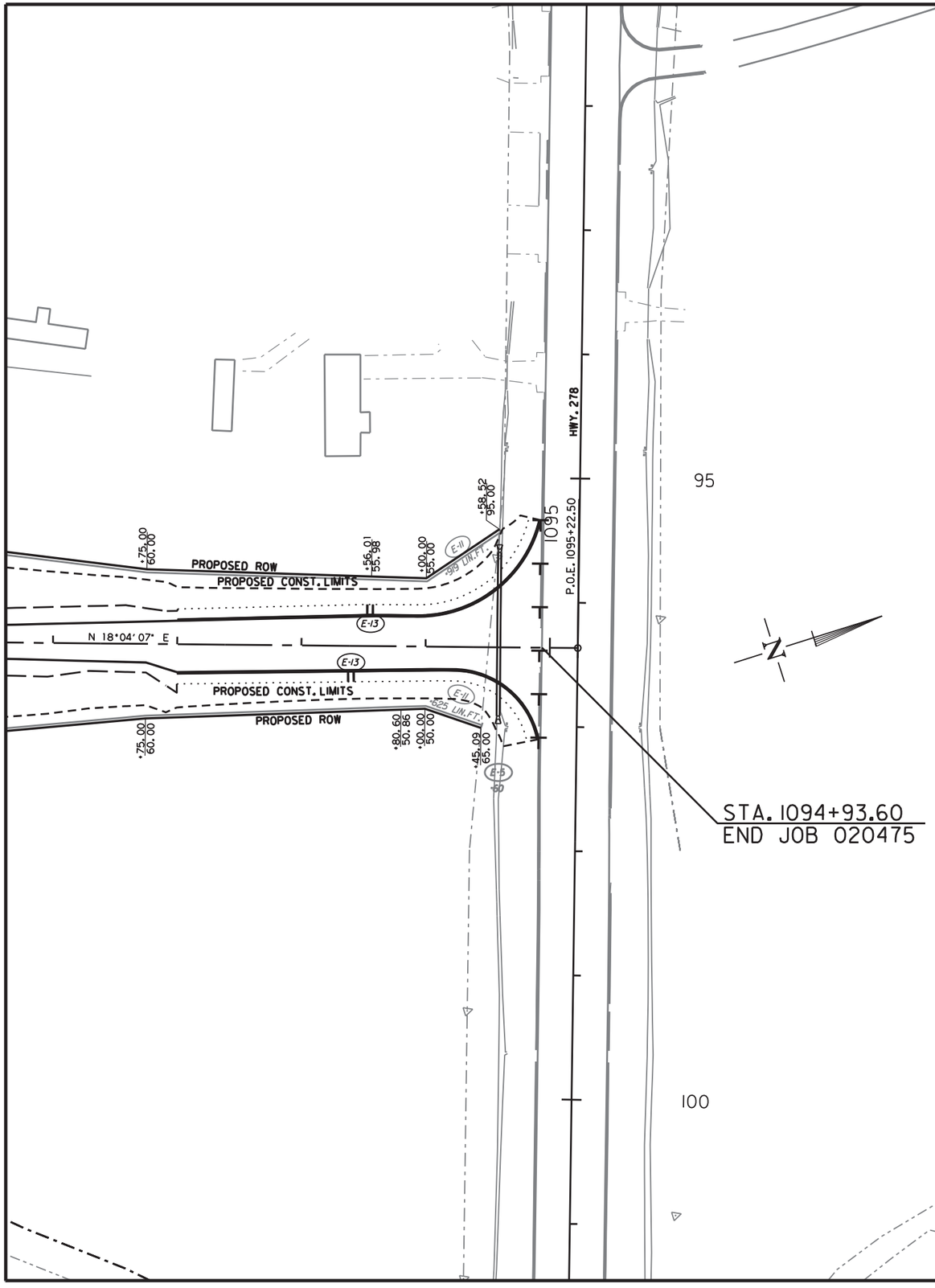
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	22	191

TEMPORARY EROSION CONTROL DETAILS

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

Jun 29 2022 1:23 PM

DocuSign



LEGEND

E-5	= SAND BAG DITCH CHECKS
E-11	= SILT FENCE
E-13	= FILTER SOCK

REVISIONS

DATE OF REVISION	REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS

dh402l9 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	23	191

TEMPORARY EROSION CONTROL DETAILS

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

Jun 29 2022 1:23 PM

DocuSign

LEGEND

E-5 = SAND BAG DITCH CHECKS

E-13 = FILTER SOCK

STAGE 2

SAND BAG DITCH CHECKS (E-5)
(2 LOCATIONS = 44 BAGS)

FILTER SOCK (E-13)
(11 LOCATIONS = 253 LIN. FT.)

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

P.O.B. 100+00.00

P.O.B. 1000+00.00

P.C.C. 202+23.05

P.O.E. 104+50.00
P.O.B. 1009+09.04

P.O.B. 104+50.00
P.O.E. 1004+50.00

P.O.E. 109+88.09

N 0°25'15" E

N 0°19'46" E

S 89°37'26" E

EXIST. ROW

22'

100

1000

101

105

REVISIONS

DATE OF REVISION	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	24	191

TEMPORARY EROSION CONTROL DETAILS

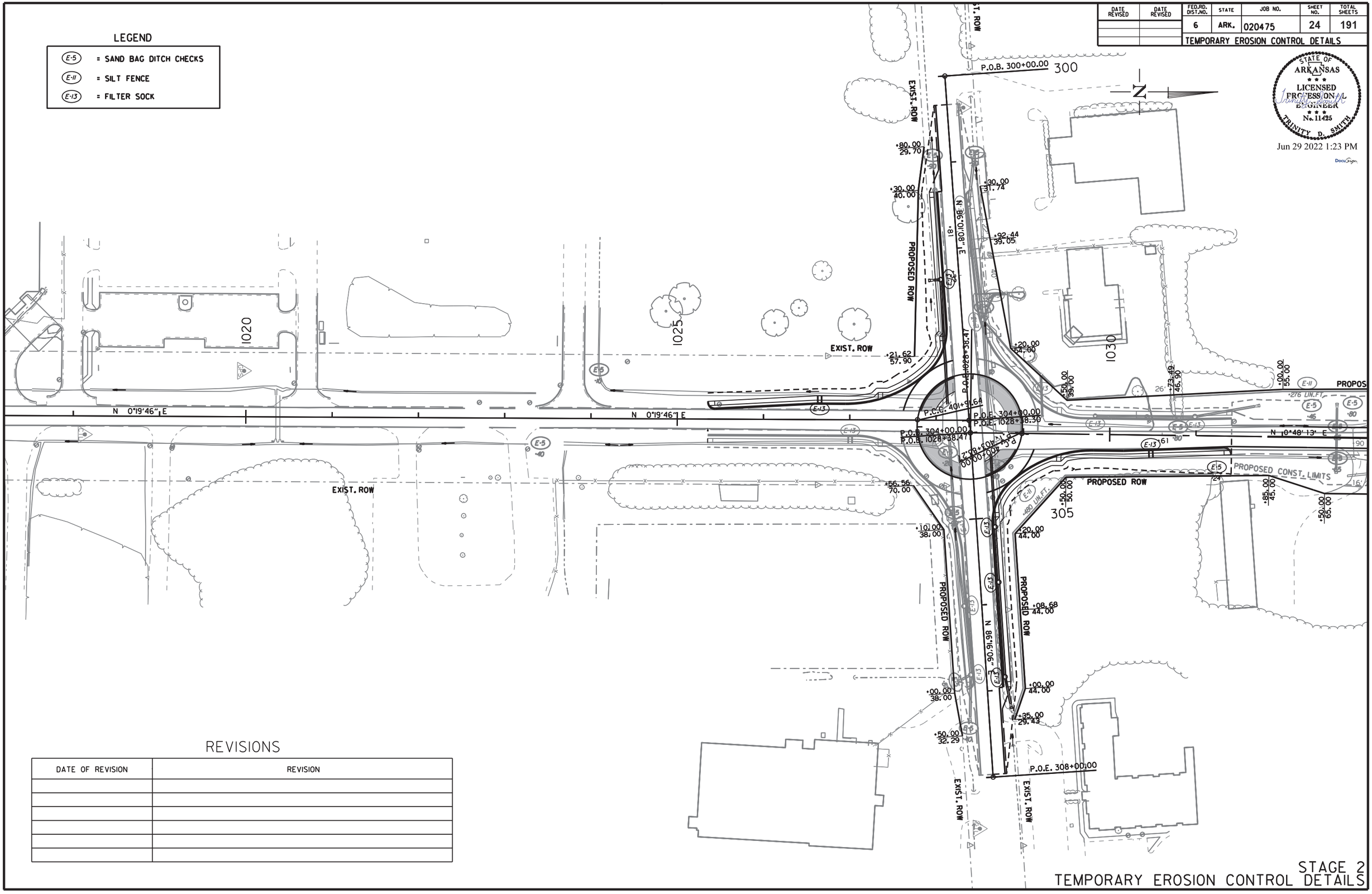
LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-11) = SILT FENCE
- (E-13) = FILTER SOCK

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

Jun 29 2022 1:23 PM

DocuSign



REVISIONS

DATE OF REVISION	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

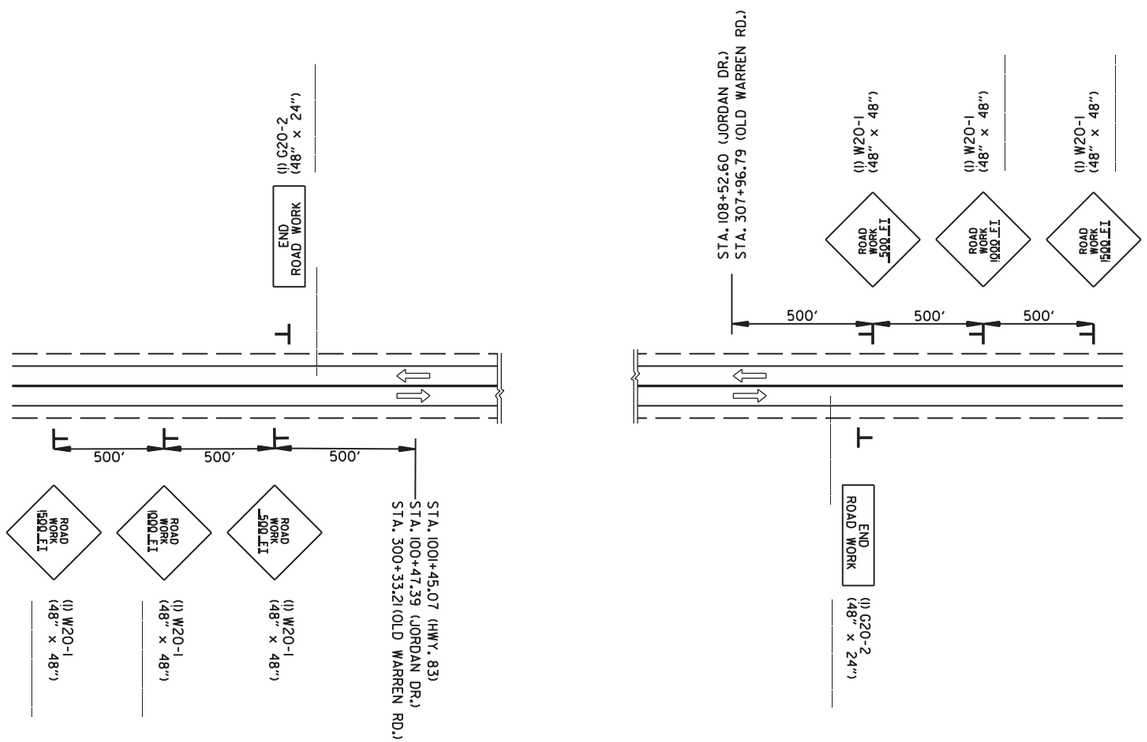
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	25	191
		MAINTENANCE OF TRAFFIC DETAILS				

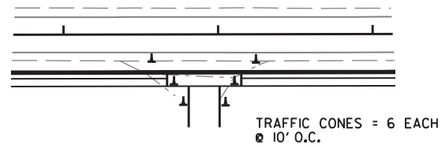
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH

Sep 28 2022 7:09 AM

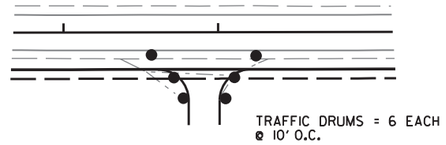
DocuSign



ADVANCE WARNING (ALL STAGES)



DRIVEWAY/TRAFFIC CONE DETAIL



DRIVEWAY/TRAFFIC DRUM DETAIL

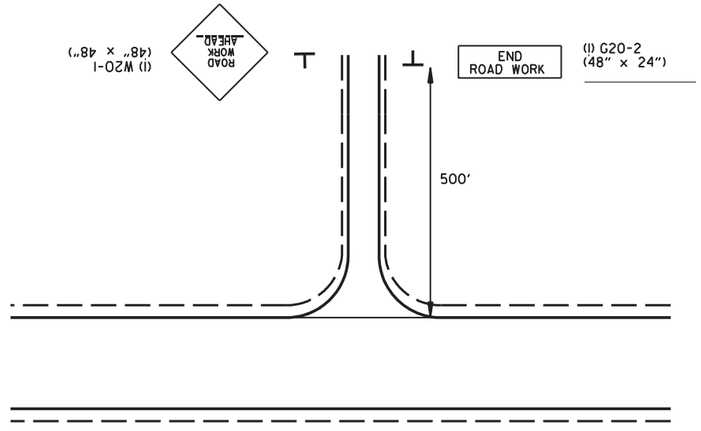
BUMP	(10) W8-1 (30" X 30")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
RIGHT SHOULDER CLOSED	(8) W21-5a (36" x 36")	ALL STAGES TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

INSTALL THE PERMANENT ROUNDABOUT SIGNING AND COVER SIGNS DURING STAGE 1 CONSTRUCTION. ANY PERMANENT SIGNING THAT CANNOT BE INSTALLED INITIALLY SHALL BE PLACED ON TEMPORARY SUPPORTS AND COVERED IN THE PROPOSED LOCATION UNTIL PERMANENT INSTALLATION CAN BE COMPLETE.

PRIOR TO THE CONSTRUCTION OF THE CENTRAL ISLAND AND SPLITTER ISLANDS THE SIGNS SHALL BE UNCOVERED PRIOR TO TRAFFIC BEING PLACED IN THE ROUNDABOUT.

THE PERMANENT ROUNDABOUT LIGHTING SHALL BE INSTALLED AND OPERATIONAL PRIOR TO TRAFFIC BEING PLACED IN THE ROUNDABOUT.

IF THE PERMANENT LIGHTING IS NOT INSTALLED OR OPERATIONAL PRIOR TO TRAFFIC BEING PLACED IN THE ROUNDABOUT, THE CONTRACTOR SHALL PROVIDE TEMPORARY LIGHTING UNTIL THE PERMANENT LIGHTING IS OPERATIONAL.



ADVANCE WARNING - SIDE ROADS
(ALL STAGES)

STA. 1015+45, ROBERTS DR.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	26	191
		MAINTENANCE OF TRAFFIC DETAILS				

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

Jun 29 2022 1:23 PM

DocuSign

STA. 101+47.39
BEGIN JORDAN DR.

P.O.B. 100+00.00

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

P.O.B. 1000+00.00

WHITE CONSTRUCTION PAVEMENT MARKING

DBL. YELLOW CONSTRUCTION PAVEMENT MARKING

N 0°25'15" E

P.O.B. 1004+50.00
P.O.E. 1004+32.00

P.C.C. 202+23.09

P.O.E. 1004+50.00
P.O.B. 1009+05.04

N 0°19'46" E

TRAFFIC CONES

22'

ROBERTS DR.

VERTICAL PANELS SPACED 25' O.C.

ROAD CLOSED

(1) R11-2 (48" X 30")

(1) 8' BARR. TYP. III RT.

P.C.C. 204+26.13

S 89°37'26" E

STA. 107+52.60
END JORDAN DR.

P.O.E. 109+88.09

STAGE 1 CONSTRUCTION SEQUENCE

- INSTALL ADVANCED WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN ON THE ADVANCED WARNING DETAIL.
- APPLY LEVELING COURSE TO EXISTING LANES IF AND WHERE DIRECTED BY THE ENGINEER.
- INSTALL CONSTRUCTION PAVEMENT MARKINGS AND STOP SIGNS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS.
- USE VERTICAL PANELS SPACED 25' O.C. TO DELINIATE THE WORK ZONE. USE TRAFFIC CONES AND TRAFFIC DRUMS TO DELINIATE DRIVEWAYS.
- NOTCH AND WIDEN THE NORTHWEST AND SOUTHEAST QUADRANTS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS.
- CONSTRUCT NEW LOCATION HWY. 83 AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS.

STAGE 1 QUANTITIES

SIGNS = 614.5 SQ. FT.
VERTICAL PANELS = 110 EACH
TRAFFIC DRUMS = 36 EACH
TRAFFIC CONES = 30 EACH
CONSTRUCTION PAVEMENT MARKINGS = 10690 LIN. FT.

STOP (4) R1-1 (30" x 30") TO BE USED AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC DETAIL

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	27	191

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:24 PM
DocuSign

STA. 301+33.21
BEGIN OLD WARREN RD.

P.O.B. 300+00.00

300

N

+80.00
29.70

+30.00
40.00

+30.00
31.74

N 8°10'08" E

TRAFFIC CONES

+92.44
39.05

PROPOSED ROW

1020

1025

1030

+21.62
57.90

WHITE
CONSTRUCTION PAVEMENT MARKING

DBL. YELLOW
CONSTRUCTION PAVEMENT MARKING

+20.00
54.00

+50.00
39.00

+23.49
46.90

+00.00
55.00

PROPOS

N 0°19'46" E

N 0°19'46" E

P.C.C. 301+00.00
P.O.B. 302+33.47

P.C.C. 303+08.47

P.O.E. 304+00.00
P.T. 302+38.36

STOP

N 0°48'13" E

VERTICAL PANELS
SPACED 25' O.C.

+56.56
70.00

PROPOSED CONST. LIMITS

PROPOSED ROW

+50.00
50.00

+85.00
45.00

+50.00
65.00

305

ROAD CLOSED
0.42 MILES AHEAD
LOCAL TRAFFIC ONLY

(1) R11-3a
(60" X 30")

(1) 8' BARR.
TYP. III RT.

+10.00
38.00

+20.00
44.00

PROPOSED ROW

PROPOSED ROW

+08.68
44.00

STA. 306+96.79
END OLD WARREN RD.

N 86°16'06" E

+00.00
44.00

+00.00
38.00

+35.00
29.43

+50.00
32.29

WALL

P.O.E. 308+00.00

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	28	191
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:24 PM
DocuSign

N

1035 +73.49 46.90 | +00.00 55.00 | PROPOSED ROW | 22' | +86.72 60.00 | P.C. 1035+13.49 | PROPOSED ROW | PROPOSED CONST. LIMITS | P.T. 1038+45.53 | +00.00 85.00 | 1040 +99.41 70.00 | +50.00 70.00 | PROPOSED ROW | P.I. 1044+57.25 | +70.00 95.00 | 1045

N 0°48' 13" E | +90 | +64 | +61 | +20 | N 2°31' 00" W | N 3°34' 37" E

PROPOSED CONST. LIMITS | 16' | 22' | PROPOSED ROW | +95.00 45.00 | +50.00 65.00 | +00.00 65.00 | P.I. 1036+79.56 | +95.00 90.00 | +00.00 95.00 | PROPOSED ROW | +81.76 73.69 | +00.00 59.00 | PROPOSED ROW | +95.24 68.35 | P.C. 1043+04.76

P.T. 1046+09.45

N

1050 +00.00 55.00 | PROPOSED ROW | +50.00 50.00 | PROPOSED CONST. LIMITS | 16' | 16' | P.C. 1052+45.31 | +16.13 50.00 | 1055 | +00.00 70.00 | +00.00 55.00 | PROPOSED ROW | 1060 | P.T. 1061+48.74 | +50.00 80.00

ROAD CLOSED | (1) R11-2 (48" X 30") | 8' BARR. TYP. III RT. | 8' BARR. TYP. III LT.

N 3°34' 37" E | +72 | +73 | PROPOSED CONST. LIMITS | PROPOSED ROW | P.T. 1046+09.45 | +91.64 50.70 | +12.25 50.00 | +90.00 70.00 | P.I. 1057+00.81 | PROPOSED ROW | +00.00 75.00

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	29	191
		MAINTENANCE OF TRAFFIC DETAILS				

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

Jun 29 2022 1:26 PM

DocuSign

1065
P.T. 1061+48.74
+60.00 80.00
PROPOSED CONST. LIMITS
+00.00 55.00
PROPOSED ROW
+96.43 71.87
+00.00 90.00
1070
PROPOSED ROW
+00.00 80.00
1075
+00.00 115.00
PROPOSE
N 14°29' 30" W
PROPOSED CONST. LIMITS
PROPOSED ROW
+00.00 85.00
PROPOSED ROW
+00.00 60.00
+45.01 72.43
+75.00 75.00
+00.00 60.00
P.C. 1069+57.83
PROPOSED ROW
+00.00 70.00
PROPOSED CONST. LIMITS
+00.00 100.00

1080
+55.00 155.00
P.I. 1077+94.47
PROPOSED ROW
PROPOSED CONST. LIMITS
+15.79 190.38
+40.00 195.00
+50.00 60.00
PROPOSED ROW
1085
+27.19 56.85
+24.40 56.89
PROPOSED ROW
+25.00 60.00
+25.00 160.00
1090
+50.00 60.00
+53.13 67.94
+53.50 62.96
P.I. 1085+85.84
N 18°
+25.00 60.00
PROPOSED ROW
+25.00 95.00
ROPOSED CONST. LIMITS
PROPOSED ROW
+00.00 150.00
+21.42 166.86
+50.00 160.00
+60.00 200.00

x3

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

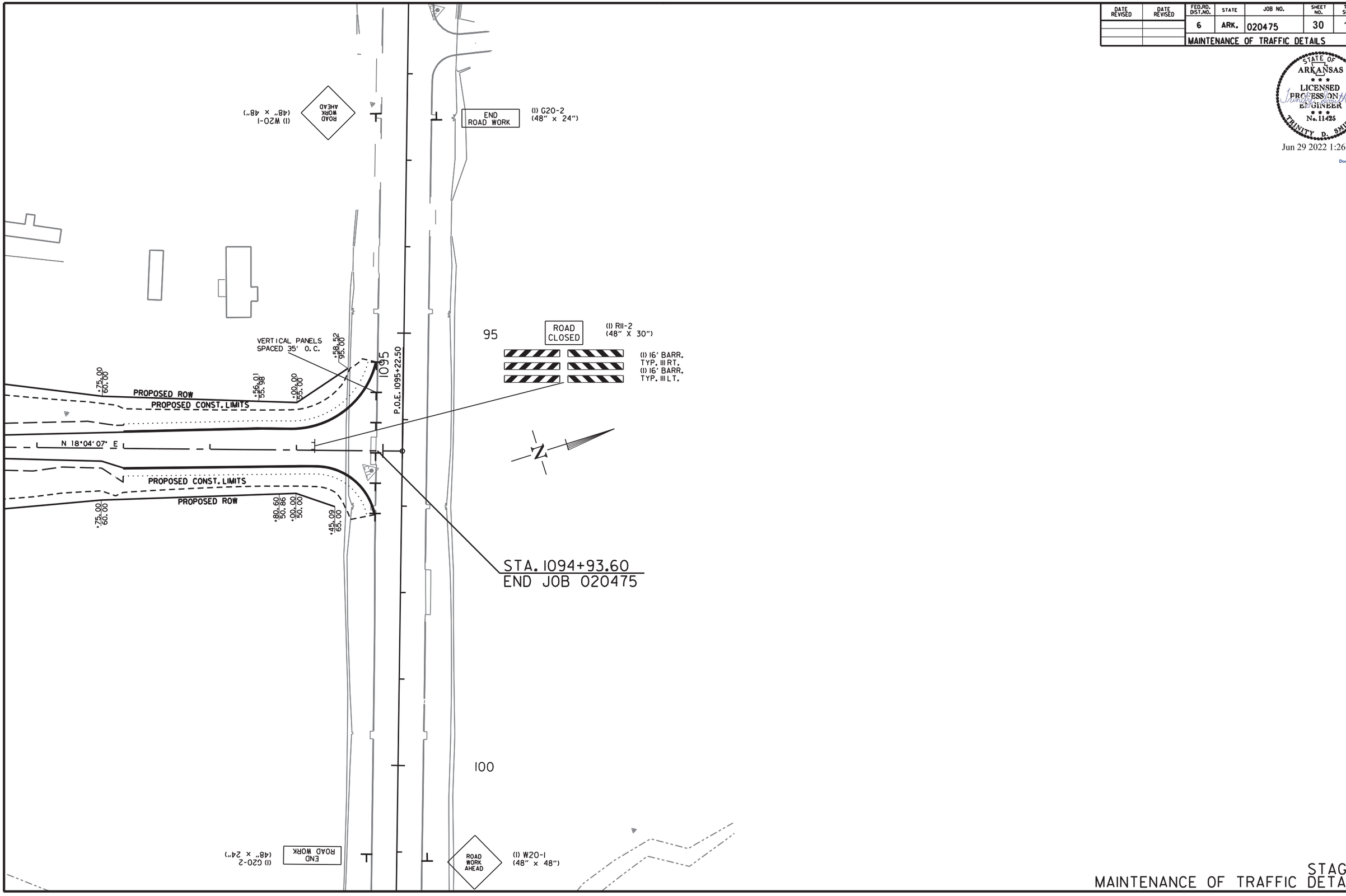
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	30	191
		MAINTENANCE OF TRAFFIC DETAILS				

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

Jun 29 2022 1:26 PM

DocuSign



STAGE I
MAINTENANCE OF TRAFFIC DETAILS

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	31	191

MAINTENANCE OF TRAFFIC DETAILS

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

Jun 29 2022 1:27 PM

DocuSign

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

STA. 101+47.39
BEGIN JORDAN DR.

P.O.B. 100+00.00

P.O.B. 1000+00.00

VERTICAL PANELS SPACED 25' O.C.

N 0°25'15" E

P.C.C. 202+23.05

P.O.B. 104+50.00
P.O.E. 1004+50.00

P.O.E. 104+50.00
P.O.B. 1009+09.04

N 0°19'46" E

S 89°53'18" E

S 89°13'36" E

ROBERTS DR.

22'

EXIST. ROW

EXIST. ROW

ROAD CLOSED

(1) R11-2 (48" X 30")

(1) 8' BARR. TYP. III RT.

STA. 107+52.60
END JORDAN DR.

P.O.E. 109+88.09

STAGE 2 CONSTRUCTION SEQUENCE

-REMOVE ROAD CLOSED SIGNS AND BARRICADES AND OPEN HWY. 83 NEW LOCATION ROADWAY TO TRAFFIC.

-REMOVE AND INSTALL CONSTRUCTION PAVEMENT MARKINGS ALONG HWY. 83 FROM STA. 1030+57 TO STA. 1031+83 AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

-USE VERTICAL PANELS SPACED 25' O.C. TO DELINEATE THE WORK ZONE. USE TRAFFIC CONES TO DELINEATE DRIVEWAYS.

-NOTCH AND WIDEN THE NORTHEAST AND SOUTHWEST QUADRANTS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

STAGE 2 QUANTITIES

SIGNS = 562.5 SQ. FT.
VERTICAL PANELS = 114 EACH
TRAFFIC CONES = 6 EACH
CONSTRUCTION PAVEMENT MARKINGS = 26230 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS (WORDS) = 2 EACH
CONSTRUCTION PAVEMENT MARKINGS (ARROWS) = 4 EACH
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS = 336 LIN. FT.

STOP (4) R1-1 (30" x 30") TO BE USED AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAIL

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	32	191

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:27 PM
DocuSign

STA. 301+33.21
BEGIN OLD WARREN RD.

P.O.B. 300+00.00

300

EXIST. ROW

PROPOSED ROW

N 8°10'08" E

+80.00
29.70

+30.00
40.00

+30.00
31.74

+92.44
39.05

+21.62
57.90

EXIST. ROW

+20.00
54.00

1020

1025

1030

VERTICAL PANELS
SPACED 25' O.C.

WHITE
CONSTRUCTION PAVEMENT MARKING

DBL. YELLOW
CONSTRUCTION PAVEMENT MARKING

+50.00
39.00

+73.49
46.90

+00.00
55.00

PROPOS

N 0°19'46" E

N 0°19'46" E

P.O.E. 301+91.64

P.O.E. 304+00.00
P.O.E. 1028+38.30

P.O.B. 304+00.00
P.O.B. 1028+38.47

STOP

STOP

N 10°48' 13" E

+56.56
70.00

+50.00
50.00

PROPOSED ROW

PROPOSED CONST. LIMITS

+85.00
45.00

+50.00
65.00

305

+10.00
38.00

+20.00
44.00

PROPOSED ROW

PROPOSED ROW

+08.68
44.00

N 86°18'06" E

STA. 306+96.79
END OLD WARREN RD.

+00.00
38.00

+00.00
44.00

+35.00
29.43

+50.00
32.29

WALL

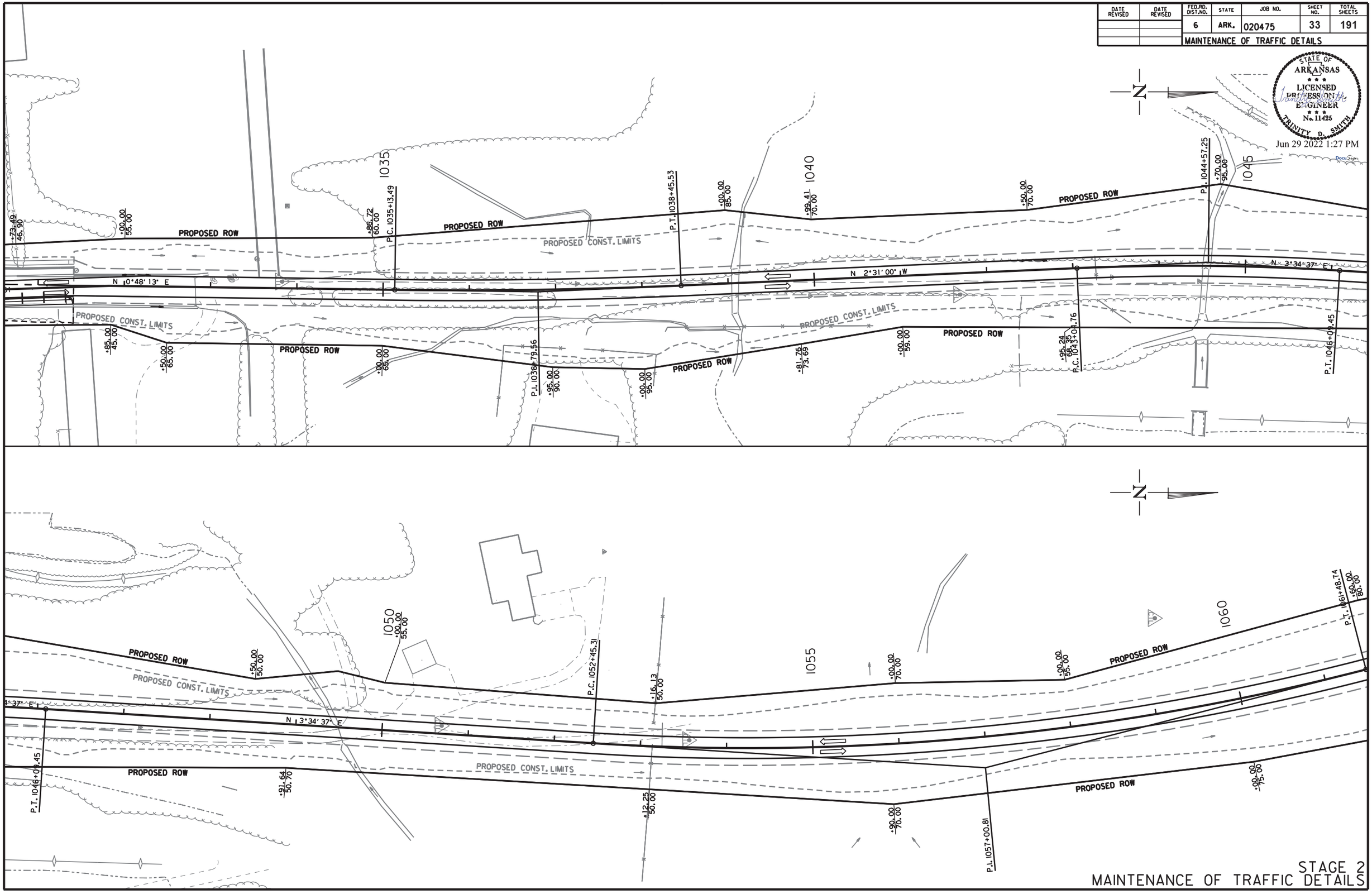
P.O.E. 308+00.00

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	33	191
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:27 PM



STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	34	191
		MAINTENANCE OF TRAFFIC DETAILS				

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

Jun 29 2022 1:27 PM

DocuSign

N 14°29' 30" W

P.T. 1061+48.74

P.C. 1069+57.83

P.I. 1077+94.47

P.I. 1085+85.84

PROPOSED ROW

PROPOSED CONST. LIMITS

1065 1070 1075 1080 1085 1090

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

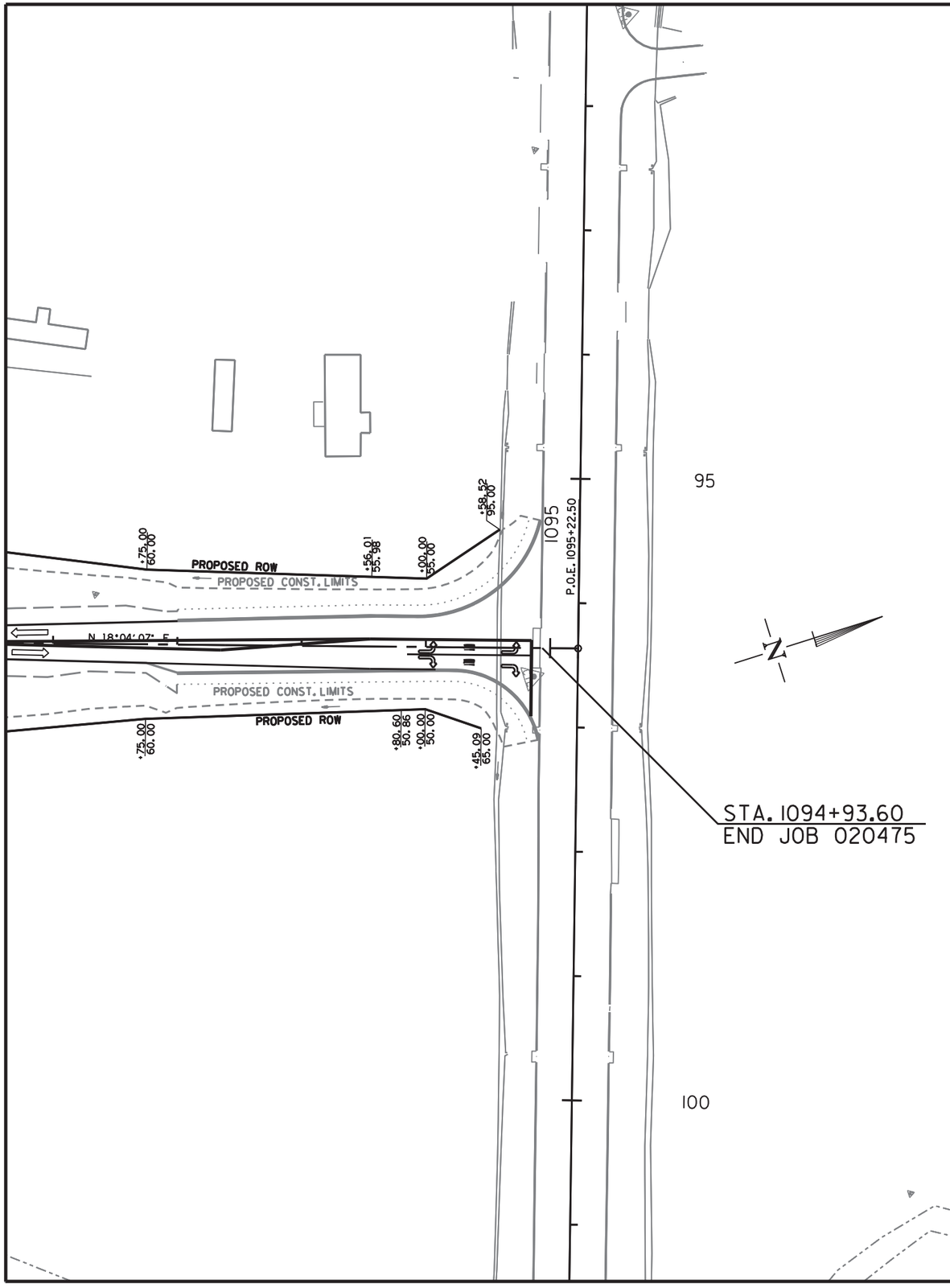
oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	35	191
		MAINTENANCE OF TRAFFIC DETAILS				

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

Jun 29 2022 1:27 PM

DocuSign



STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	36	191
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:28 PM
DocuSign

STA. 101+47.39
BEGIN JORDAN DR.

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

P.O.B. 100+00.00

P.O.B. 1000+00.00

TRAFFIC CONES
SPACED 25' O.C.

P.C.C. 202+23.05

P.O.E. 104+50.00
P.O.B. 1009+09.04

P.O.B. 104+50.00
P.O.E. 1004+50.00

N. 0°25'15" E.

N. 0°19'46" E.

S. 89°37'26" E. 204+46.11

S. 89°37'26" E. 200+00.00

WHITE
CONSTRUCTION PAVEMENT MARKING

YELLOW
CONSTRUCTION PAVEMENT MARKING

ROBERTS DR.

EXIST. ROW

EXIST. ROW

STA. 107+52.60
END JORDAN DR.

P.O.E. 109+88.09

STAGE 3 CONSTRUCTION SEQUENCE

-REMOVE STAGE 2 VERTICAL PANELS AND CONSTRUCTION PAVEMENT MARKINGS.

-INSTALL TRAFFIC CONES AND CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 3 MAINTENANCE OF TRAFFIC DETAILS.

-CONSTRUCT ISLANDS AND REMAINDER OF APRONS OF ROUNDABOUT 1 AND ROUNDABOUT 2.

-OVERLAY HWY. 83 BETWEEN ROUNDABOUT 1 AND ROUNDABOUT 2 AND APPLY FINAL 2" LIFT OF ACHM SURFACE COURSE.

-INSTALL PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKINGS DETAILS.

STAGE 3 QUANTITIES

SIGNS = 430.5 SQ. FT.
TRAFFIC CONES = 118 EACH
CONSTRUCTION PAVEMENT MARKINGS = 4658 LIN. FT.
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS = 8856 LIN. FT.

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	37	191
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:28 PM
DocuSign

STA. 301+33.21
BEGIN OLD WARREN RD.

P.O.B. 300+00.00

300

EXIST. ROW

PROPOSED ROW

N 86°08'38" E

+80.00
29.70

+30.00
40.00

+30.00
31.74

+92.44
39.05

1020

1025

1030

TRAFFIC CONES
SPACED 25' O.C.

EXIST. ROW

+21.62
57.90

+20.00
54.00

+50.00
39.00

+23.49
46.90

+00.00
55.00

PROPOS

N 0°19'46" E

N 0°19'46" E

P.O.E. 304+00.00
P.O.C. 1028+38.18

P.O.C. 304+00.00
P.O.B. 1028+18.47

N 0°48'13" E

PROPOSED CONST. LIMITS

PROPOSED ROW

+56.56
70.00

+50.00
50.00

+85.00
45.00

+50.00
65.00

305

WHITE
CONSTRUCTION PAVEMENT MARKING

YELLOW
CONSTRUCTION PAVEMENT MARKING

+10.00
38.00

+20.00
44.00

PROPOSED ROW

PROPOSED ROW

N 86°08'38" E

+08.68
44.00

STA. 306+96.79
END OLD WARREN RD.

+00.00
38.00

+00.00
44.00

+35.00
29.43

+50.00
32.29

WALL

P.O.E. 308+00.00

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	38	191
		PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:28 PM
DocuSign

LEGEND

- = 6" WHITE THERMOPLASTIC PAVEMENT MARKING
- = 6" DOTTED WHITE THERMOPLASTIC PAVEMENT MARKING
- = 12" WHITE (STOP LINE) THERMOPLASTIC PAVEMENT MARKING
- = 12" WHITE (CROSSWALK) THERMOPLASTIC PAVEMENT MARKING
- = THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
- = THERMOPLASTIC PAVEMENT MARKING (WORD)
- = THERMOPLASTIC PAVEMENT MARKING (ARROW)

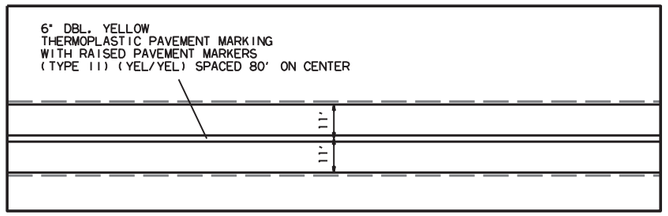
NOTE: USE THE CORRESPONDING PAVEMENT MARKINGS LISTED ABOVE UNLESS OTHERWISE SPECIFIED IN THE PERMANENT PAVEMENT MARKING DETAILS.

PERMANENT PAVEMENT MARKINGS

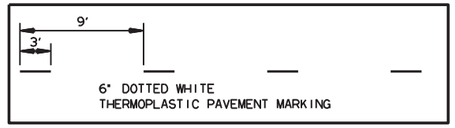
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL) (80' O.C.) = 120 EACH
THERMOPLASTIC PAVEMENT MARKING WHITE (6") = 17040 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (8") = 491 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 801 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (6") = 18971 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (8") = 1233 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (YIELD LINE) = 120 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS) = 2 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROWS) = 4 EACH
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10") = 197 LIN. FT.
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10") = 1469 LIN. FT.

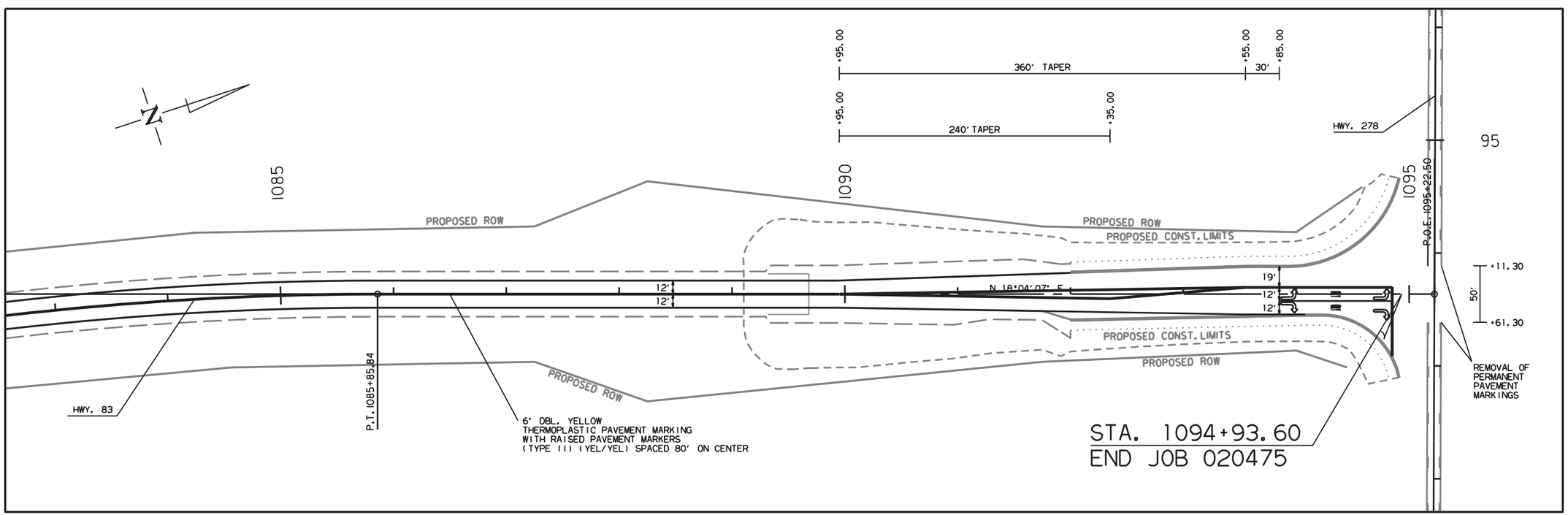
REMOVAL OF PERMANENT PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKING YELLOW (6") = 125 LIN. FT.
RAISED PAVEMENT MARKERS = 2 EACH



HWY. 83 OVERLAY STRIPING DETAIL





HWY. 83 STRIPING DETAIL

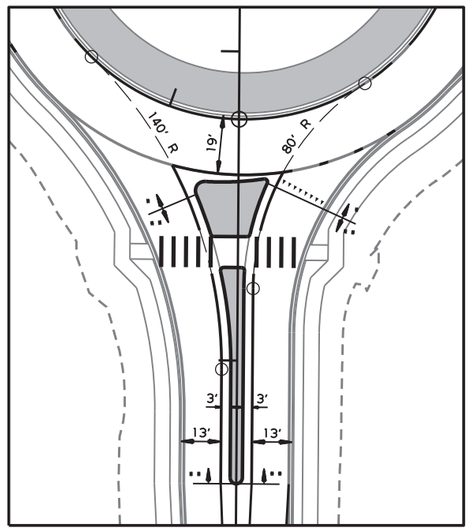
oh40219 6/21/2022
R020475.DGN

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	39	191

PERMANENT PAVEMENT MARKING DETAILS

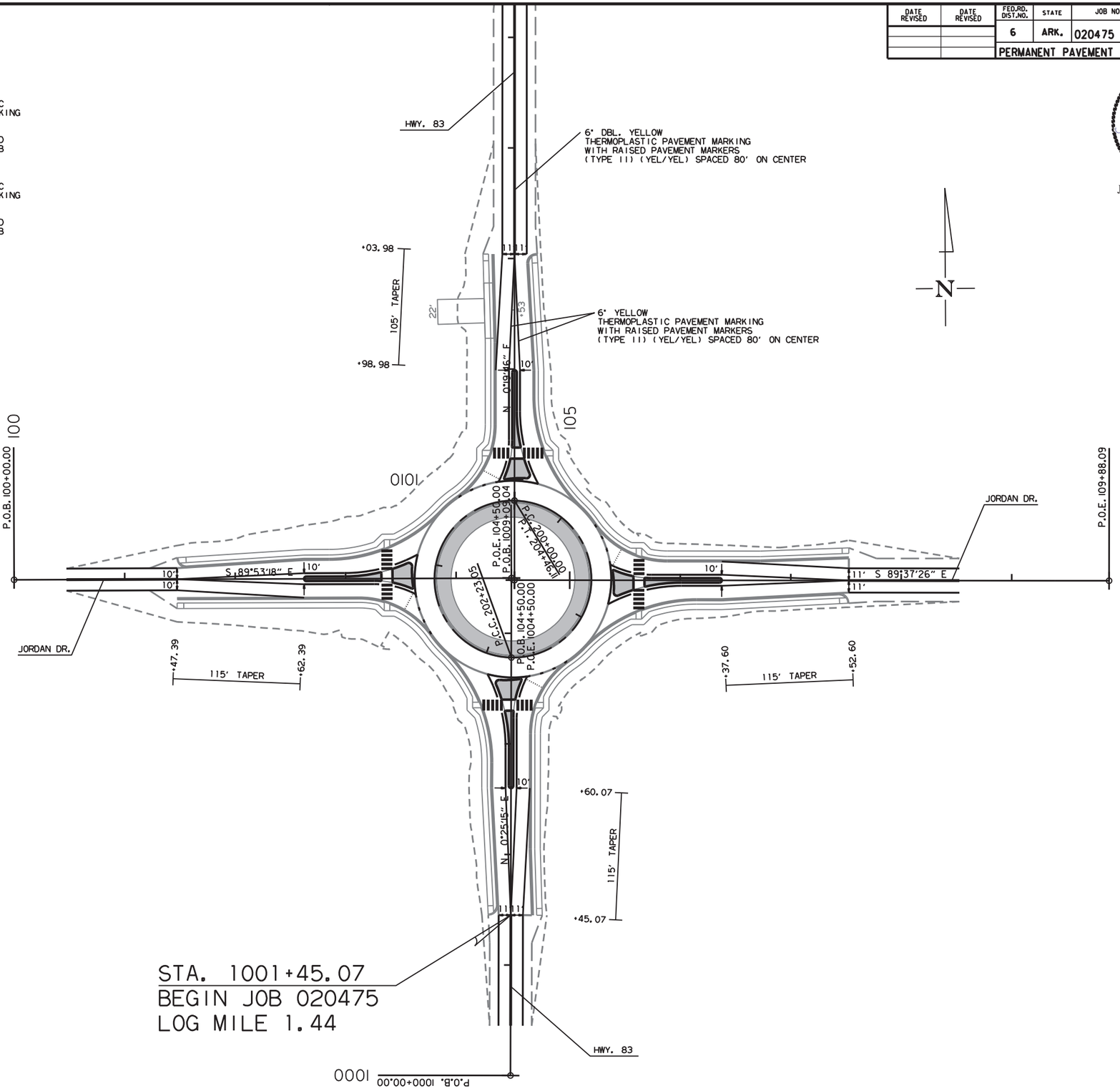
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:29 PM
DocuSign



* 8" WHITE THERMOPLASTIC PAVEMENT MARKING AND 10" WHITE REFLECTORIZED PAINT ON CURB

** 8" YELLOW THERMOPLASTIC PAVEMENT MARKING AND 10" YELLOW REFLECTORIZED PAINT ON CURB

APPROACH STRIPING DETAIL
ROUNDABOUT 1
(ALL APPROACHES)



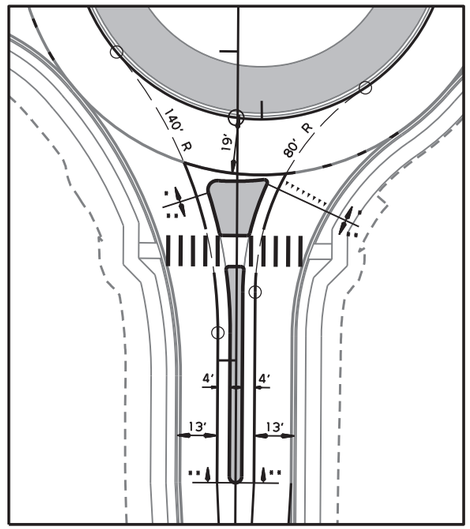
dh40219 6/21/2022
R020475.DGN

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	40	191

PERMANENT PAVEMENT MARKING DETAILS

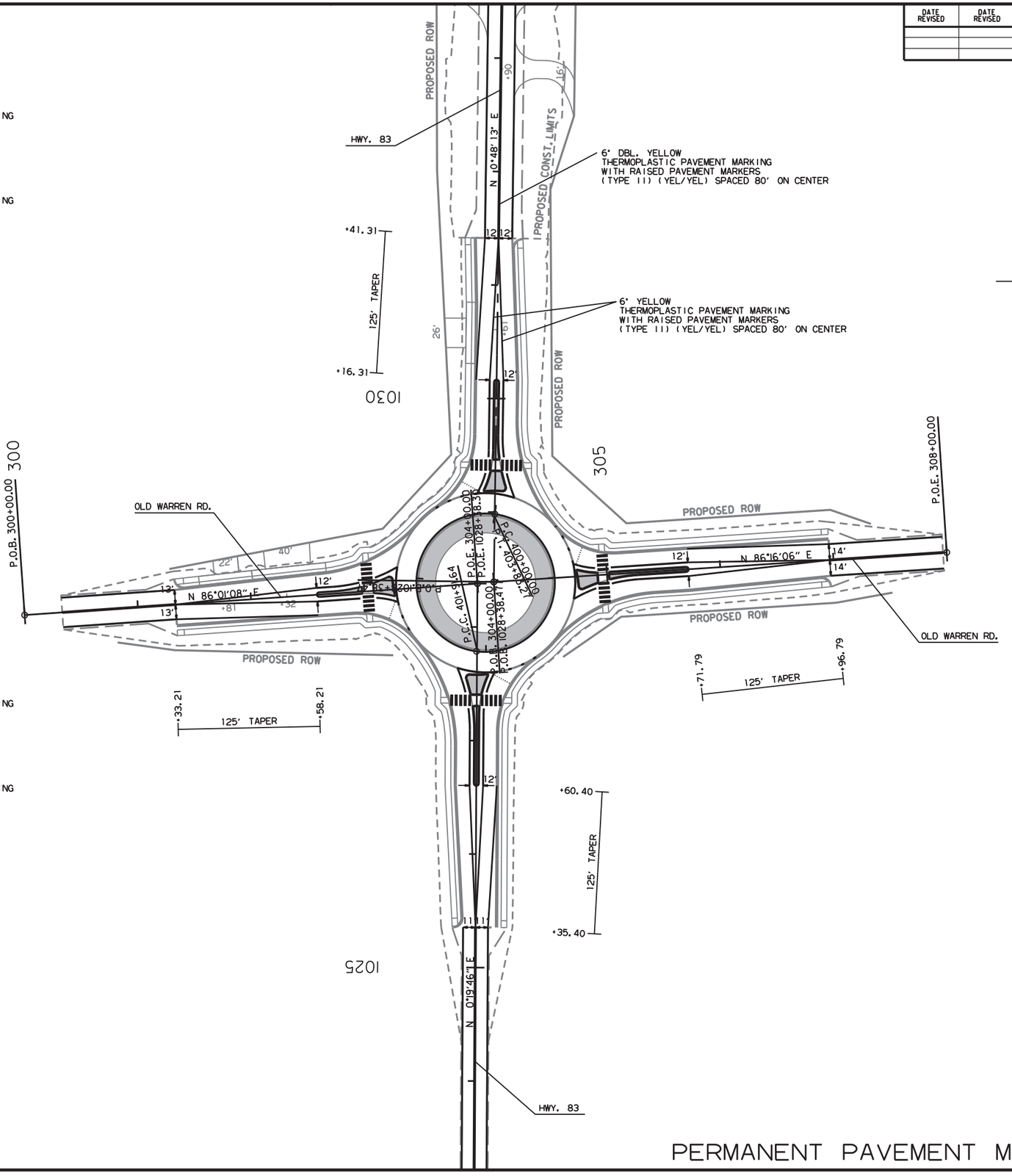
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:29 PM

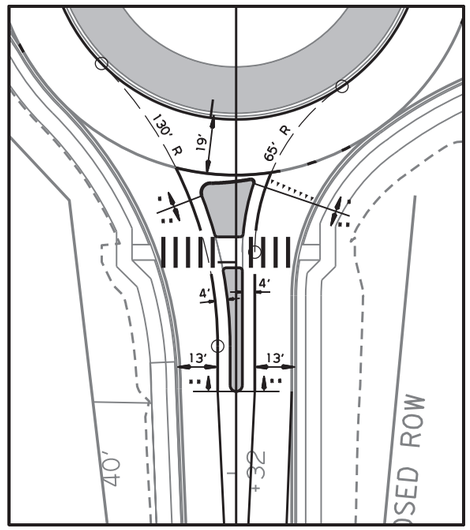


APPROACH STRIPING DETAIL
ROUNDABOUT 2
(SOUTH & NORTH APPROACHES)

* 8" WHITE THERMOPLASTIC PAVEMENT MARKING AND 10" WHITE REFLECTORIZED PAINT ON CURB

** 8" YELLOW THERMOPLASTIC PAVEMENT MARKING AND 10" YELLOW REFLECTORIZED PAINT ON CURB





APPROACH STRIPING DETAIL
ROUNDABOUT 2
(WEST & EAST APPROACHES)

* 8" WHITE THERMOPLASTIC PAVEMENT MARKING AND 10" WHITE REFLECTORIZED PAINT ON CURB

** 8" YELLOW THERMOPLASTIC PAVEMENT MARKING AND 10" YELLOW REFLECTORIZED PAINT ON CURB

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	41	191
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:29 PM
DocuSign

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		CONSTRUCTION PROJECT INFORMATION SIGN UPDATE	VERTICAL PANELS	TRAFFIC DRUMS	TRAFFIC CONES	BARRICADES (TYPE III)	BARRICADES (TYPE III)
			EACH				NO.	SQ. FT.	EACH				RIGHT LIN. FT.	LEFT LIN. FT.
W20-1	ROAD WORK 1500 FT.	48"x48"	5	5	5	5	5	80.0						
W20-1	ROAD WORK 1000 FT.	48"x48"	5	5	5	5	5	80.0						
W20-1	ROAD WORK 500 FT.	48"x48"	5	5	5	5	5	80.0						
W20-1	ROAD WORK AHEAD	48"x48"	2	1	1	2	2	32.0						
G20-2	END ROAD WORK	48"x24"	8	6	6	8	8	64.0						
R1-1	STOP SIGN	30"x30"	8	8		8	8	50.00						
R11-2	ROAD CLOSED	48"x30"	3	1		3	3	30.0						
R11-3a	ROAD CLOSED 0.42 MILES AHEAD	60"x30"	1			1	1	12.50						
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	8	8		8	8	72.0						
W8-1	BUMP	30"x30"	8	10	10	10	10	62.5						
SPECIAL	CONSTRUCTION PROJECT INFORMATION	96"x48"	2	2	2	2	2	64.0						
	CONSTRUCTION PROJECT INFORMATION UPDATE								10					
	VERTICAL PANELS		110	114		114				114				
	TRAFFIC DRUMS		36			36					36			
	TRAFFIC CONES		30	6	118	118						118		
	TYPE III BARRICADE-RT. (8')		3	1		3							24	
	TYPE III BARRICADE-LT. (8')		1			1								8
	TYPE III BARRICADE-RT. (16')		1			1							16	
	TYPE III BARRICADE-LT. (16')		1			1								16
TOTALS:								**627.0**	**10**	**114**	**36**	**118**	**40**	**24**

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	REMOVAL OF RAISED PAVEMENT MARKERS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKING								REFLECTORIZED PAINT PAVEMENT MARKING	
								WORDS	ARROWS		TYPE II (YELLOW/YELLOW)	6" WHITE	6" YELLOW	8" WHITE	8" YELLOW	12" WHITE	YIELD LINE	WORDS	ARROWS	10" WHITE	10" YELLOW
	LIN. FT. - EACH				LIN. FT.	EACH	LIN. FT.	EACH		LIN. FT.	EACH	LIN. FT.						EACH		LIN. FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS				125	125																
REMOVAL OF RAISED PAVEMENT MARKERS				2		2															
CONSTRUCTION PAVEMENT MARKINGS	10690	26230	4658				41578														
CONSTRUCTION PAVEMENT MARKINGS (WORDS)		2						2													
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		4							4												
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		336	8856							9192											
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)				120							120										
THERMOPLASTIC PAVEMENT MARKING WHITE (6")				17040								17040									
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")				18971									18971								
THERMOPLASTIC PAVEMENT MARKING WHITE (8")				491										491							
THERMOPLASTIC PAVEMENT MARKING YELLOW (8")				1233											1233						
THERMOPLASTIC PAVEMENT MARKING WHITE (12")				801												801					
THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)				120													120				
THERMOPLASTIC PAVEMENT MARKING (WORDS)				2														2			
THERMOPLASTIC PAVEMENT MARKING (ARROWS)				4															4		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")				197																197	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")				1469																	1469
TOTALS:					**125**	**2**	**41578**	**2**	**4**	**9192**	**120**	**17040**	**18971**	**491**	**1233**	**801**	**120**	**2**	**4**	**197**	**1469**

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

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

oh40219 6/27/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	42	191
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:29 PM
DocuSign

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
1011+00	33	36	31.22	91	48	54.02	06 RT	0-5	31	14	A-6(10)	BROWN
1011+00	33	36	31.24	91	48	53.89	18 RT	0-5	36	16	A-6(13)	BROWN
1011+00	33	36	31.24	91	48	53.80	27 RT	0-5	34	17	A-6(11)	BROWN
1019+00	33	36	39.29	91	48	54.07	06 LT	0-5	24	7	A-4(3)	BR/GR
1019+00	33	36	39.26	91	48	54.23	18 LT	0-5	27	11	A-6(6)	RD/BR
1027+00	33	36	47.19	91	48	53.85	06 RT	0-5	30	14	A-6(8)	BR/GR
1027+00	33	36	47.19	91	48	53.71	18 RT	0-5	28	11	A-6(5)	BR/GR
1035+00	33	36	55.44	91	48	53.49	CL	0-5	36	17	A-6(15)	BROWN
1043+00	33	37	2.88	91	48	53.46	CL	0-5	40	24	A-6(13)	RD/BR
1051+00	33	37	10.77	91	48	53.33	CL	0-5	33	12	A-6(9)	BROWN
1059+00	33	37	18.68	91	48	53.69	CL	0-5	27	7	A-4(5)	BROWN
1067+00	33	37	26.56	91	48	55.82	CL	0-5	24	3	A-4(0)	BROWN
1075+00	33	37	34.15	91	48	57.68	CL	0-5	33	14	A-6(11)	BROWN
1083+00	33	37	41.80	91	48	57.19	CL	0-5	25	7	A-4(4)	BROWN
1091+00	33	37	49.46	91	48	54.09	CL	0-5	ND	NP	A-4(0)	BROWN
1094+80	33	37	53.05	91	48	52.81	CL	0-5	18	4	A-4(0)	RD/BR
1095+00	33	37	53.33	91	48	52.73	CL	0-5	21	8	A-4(0)	RD/BR

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
1000+45.07	1003+60.07	STAGE 1 - HWY. 83	68	174	
1009+98.98	1012+03.98	STAGE 1 - HWY. 83	147	250	
1024+35.40	1027+60.40	STAGE 1 - HWY. 83	44	235	
1029+16.31	1094+58.97	STAGE 1 - HWY. 83	15372	148844	
100+47.39	103+62.39	STAGE 1 - JORDAN DR.	151	344	
105+37.59	108+52.60	STAGE 1 - JORDAN DR.	31	188	
300+33.21	303+28.21	STAGE 1 - OLD WARREN RD.	38	119	
304+71.78	307+96.79	STAGE 1 - OLD WARREN RD.	28	192	
1000+45.07	1003+60.07	STAGE 2 - HWY. 83	43	227	
1009+98.98	1012+03.98	STAGE 2 - HWY. 83	37	172	
1024+35.40	1027+60.40	STAGE 2 - HWY. 83	16	325	
1029+16.31	1094+58.97	STAGE 2 - HWY. 83	235	232	
100+47.39	103+62.39	STAGE 2 - JORDAN DR.	40	534	
105+37.59	108+52.60	STAGE 2 - JORDAN DR.	41	162	
300+33.21	303+28.21	STAGE 2 - OLD WARREN RD.	42	207	
304+71.78	307+96.79	STAGE 2 - OLD WARREN RD.	23	256	
1000+45.07	1003+60.07	UNDERCUT - HWY. 83	734	734	
1009+98.98	1012+03.98	UNDERCUT - HWY. 83	742	742	
1024+35.40	1027+60.40	UNDERCUT - HWY. 83	725	725	
1029+16.31	1094+58.97	UNDERCUT - HWY. 83	5110	5110	
100+47.39	103+62.39	UNDERCUT - JORDAN DR.	1079	1079	
105+37.59	108+52.60	UNDERCUT - JORDAN DR.	558	558	
300+33.21	303+28.21	UNDERCUT - OLD WARREN RD.	495	495	
304+71.78	307+96.79	UNDERCUT - OLD WARREN RD.	490	490	
ENTIRE	PROJECT	OBLITERATION OF EXISTING PAVEMENT	366		
1080+21	1080+21	CHANNEL CHANGE	260		
* ENTIRE	PROJECT	TO BE USED IF AND WHERE			350
		DIRECTED BY THE ENGINEER			
TOTALS:			**26915**	**162394**	**350**

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

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL									
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	FILTER SOCK (12") (E-13)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	CLEARING AND GRUBBING							31.00	31.00	632.4	814		7762	23			324
ENTIRE	PROJECT	STAGE 1							25.00	25.00	510.0	902			391			41
ENTIRE	PROJECT	STAGE 2							2.60	2.60	53.0	44			253			2
ENTIRE	PROJECT	STAGE 3	10.42	20.84	10.42	1101.9	10.42	3097	0.37	0.37	7.5							
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			2.61	5.22	2.61	266.2	2.61		14.74	14.74	300.7	440	300	1941	167	1000	1000	1192
TOTALS:			**13.03**	**26.06**	**13.03**	**1368.1**	**13.03**	**3097**	**73.71**	**73.71**	**1503.6**	**2200**	**300**	**9703**	**834**	**1000**	**1000**	**1559**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

6/27/2022
qh40219
R020475.DGN

QUANTITIES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	43	191
		QUANTITIES				

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
1010+42	1011+40	HWY. 83 LT.	1	1
1028+94	1031+18	HWY. 83 RT.	3	3
1033+92	1053+69	HWY. 83 LT. & RT.	20	20
1055+28	1057+28	HWY. 83 RT.	2	2
1068+61	1069+06	HWY. 83 RT.	1	1
1070+51	1071+13	HWY. 83 LT.	1	1
1073+31	1075+67	HWY. 83 LT. & RT.	3	3
1078+35	1087+02	HWY. 83 LT. & RT.	9	9
TOTALS:			40	40

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
101+47.39	102+50.00	HWY. 83 RT.	102.61	91.21
103+07.49	103+65.49	HWY. 83 LT.	58.00	51.56
1036+00.00	1038+95.00	HWY. 83 RT.	295.00	262.22
1039+15.00	1040+00.00	HWY. 83 LT.	85.00	75.56
1039+15.00	1040+00.00	HWY. 83 RT.	85.00	75.56
1057+00.00	1058+00.00	HWY. 83 LT.	100.00	88.89
TOTAL:				645.00

NOTE: AVERAGE WIDTH = 8'-0"

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE D)	* 6' CHAIN LINK FENCE	* 10'-0" GATES
			LIN. FT.		EACH
1036+37	1038+12	HWY. 83 RT.		177	1
1038+25	1040+66	HWY. 83 RT.	244		
TOTALS:			244	177	1

* DENOTES ALTERNATE BID ITEM.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
TRINITY D. SMITH
No. 11425
Jun 29 2022 1:29 PM
DocuSign

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	RETAINING WALLS	CONCRETE DRIVEWAYS	SIGN FOUNDATIONS	CONCRETE DITCH PAVING	SIGNS	SATELLITE DISH
			LIN. FT.	LIN. FT.	SQ. YD.	EACH	SQ. YD.	EACH	EACH
1003+80	1003+80	HWY. 83 LT.						1	
1003+71	1003+85	HWY. 83 RT.		47				1	
102+84	103+14	JORDAN DR. RT.					21		
1009+73	1009+88	HWY. 83 RT.		47				1	
1011+55	1011+55	HWY. 83 LT.			118				
1028+65	1029+21	HWY. 83 LT. & RT.				6	8	3	
301+68	302+55	OLD WARREN RD. LT.	32		181			1	
1030+41	1030+79	HWY. 83 LT.	43		113			1	
1031+10	1031+10	HWY. 83 RT.							3
1031+46	1031+46	HWY. 83 LT.				2		1	
1033+28	1034+03	HWY. 83 LT.	90		110			1	
1050+17	1050+75	HWY. 83 LT.			101				
1094+93	1094+93	HWY. 83 LT. & RT.	144		21				
TOTALS:			309	94	644	8	29	10	3

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
1002+90.00	1002+90.00	HWY. 83 LT.	7.85	6.32	5.51	3.49	0.04
1002+90.00	1002+90.00	HWY. 83 RT.	5.52	6.32	3.88	2.45	0.03
1010+31.00	1010+31.00	HWY. 83 LT.	18.72	6.32	13.15	8.32	0.10
1010+48.00	1010+48.00	HWY. 83 RT.	7.65	6.32	5.37	3.40	0.04
1026+65.00	1026+65.00	HWY. 83 LT.	6.34	6.32	4.45	2.82	0.04
1027+00.00	1027+00.00	HWY. 83 RT.	4.32	6.32	3.03	1.92	0.02
1030+48.00	1030+48.00	HWY. 83 RT.	7.01	6.32	4.92	3.12	0.04
1043+00.00	1044+43.17	HWY. 83 RT.	143.17	6.32	100.54	63.63	0.80
1043+00.00	1044+39.33	HWY. 83 LT.	139.33	6.32	97.84	61.92	0.78
1044+58.83	1045+50.00	HWY. 83 RT.	91.17	6.32	64.02	40.52	0.51
1044+70.00	1044+99.33	HWY. 83 LT.	29.33	6.32	20.60	13.04	0.16
1049+20.00	1049+47.77	HWY. 83 LT.	27.77	6.32	19.50	12.34	0.16
1049+75.77	1050+00.00	HWY. 83 LT.	24.23	6.32	17.01	10.77	0.14
1049+72.00	1050+00.00	HWY. 83 RT.	28.00	6.32	19.66	12.44	0.16
1093+40.00	1093+40.00	HWY. 83 RT.	12.14	6.32	8.52	5.40	0.07
1093+55.00	1093+55.00	HWY. 83 LT.	10.84	6.32	7.61	4.82	0.06
TOTALS:					395.61	250.40	3.15

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

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
103+39	50" X 30' C.M. CROSS DRAIN	1	
1002+80	24" X 38' R.C. RT. CROSS DRAIN	1	
1010+00	24" X 54' R.C. RT. CROSS DRAIN	1	
1011+53	24" X 38' C.M. LT. SIDE DRAIN	1	
1030+61	16" X 27' C.M. LT. SIDE DRAIN	1	
301+81	24" X 38' C.M. LT. SIDE DRAIN	1	
302+32	24" X 38' C.M. LT. SIDE DRAIN	1	
307+15	16" X 20' C.M. RT. SIDE DRAIN	1	
1028+08	24" X 50" R.C. CROSS DRAIN	1	
1028+65	18" X 50' C.M. CROSS DRAIN	1	
1032+82	22" X 14' R.C. CROSS DRAIN	1	
1032+90	24" X 30' C.M. RT. SIDE DRAIN	1	
1037+20	24" X 31' C.M. RT. SIDE DRAIN	1	
1039+09	36" X 50' C.M. CROSS DRAIN	2	
1044+58	36" X 50' C.M. CROSS DRAIN	2	
1049+46	24" X 20' C.M. CROSS DRAIN	1	
1053+25	22" X 16" X 26' C.M. ARCH CROSS DRAIN	1	
1094+90	DROP INLET AND 18" X 20" OUTLET PIPE RT.	1	1
TOTALS:		20	1

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

CULVERT CLEAN OUT

STATION	LOCATION	EACH
1020+37	HWY. 83 SPUR - CROSS DRAIN	2
TOTAL:		2

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
302+09	302+09	OLD WARREN RD. LT.	5	
1028+60	1028+60	HWY. 83 LT.	20	
1030+75	1030+75	HWY. 83 LT.	30	
1036+37	1038+14	HWY. 83 RT.	211	2
1038+25	1040+66	HWY. 83 RT.	244	
1043+25	1043+66	HWY. 83 LT. & RT.	99	2
1053+12	1053+16	HWY. 83 LT. & RT.	100	
1073+25	1073+44	HWY. 83 RT.	87	
TOTALS:			796	4

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
1000+45.07	1001+45.07	HWY. 83 MAIN LANES	38.00	422.22
100+47.39	101+47.39	JORDAN DR. MAIN LANES	20.00	222.22
107+52.60	108+52.60	JORDAN DR. MAIN LANES	39.00	433.33
300+33.21	301+33.21	OLD WARREN RD. MAIN LANES	30.00	333.33
306+96.79	307+96.79	OLD WARREN RD. MAIN LANES	32.00	355.56
TOTAL:				1766.66

NOTE: AVERAGE MILLING DEPTH 1".

STOCKPILE LOCATION: HWY. 278, SECTION 14, LOG MILE 6.42

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
1089+32	HWY. 83 BRIDGE END	1
TOTAL:		1

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

CONCRETE WALKS (TYPE SPECIAL)

STATION	STATION	LOCATION	CONCRETE WALKS (TYPE SPECIAL)	HAND RAILING	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			SQ. YD.	LIN. FT.	SQ. FT.	SQ. YD.
400+19	400+85	ROUNDABOUT 2	67	119	238	26
402+25	402+84	ROUNDABOUT 2	61	109	218	24
TOTALS:			128	228	456	50

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)	MAILBOX SUPPORTS (DOUBLE)
		EACH	
ENTIRE PROJECT	6	2	2
TOTALS:	6	2	2

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ.YD.
200+00	204+46	ROUNDABOUT 1 & APPROACHES	1888	1049
400+00	403+83	ROUNDABOUT 2 & APPROACHES	1531	851
TOTAL:				1900

QUANTITIES

oh40219 6/27/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	44	191
		QUANTITIES				

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS			STANDARD DRAWINGS
										18"	24"	21"X15"	
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.			
1011+53	LT.	HWY. 83	22	1011+28	1011+78	149.55					44		DR-1, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
301+81	LT.	OLD WARREN RD.	22	30'+56	302+06	77.44							DR-1
302+32	LT.	OLD WARREN RD.	40	30'+98	302+66	140.44							DR-1
1030+61	LT.	HWY. 83	26	1030+34	1030+88	101.44							DR-1
1032+90	RT.	HWY. 83	16				73.62	8.10	30.06		34		DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
1033+61	RT.	HWY. 83	22				113.40	12.47	46.31		40		DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
1033+64	LT.	HWY. 83	22			14.45							DR-2
1037+20	RT.	HWY. 83	16				129.62	14.26	52.93		60		DR-2, PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
1049+72	LT.	HWY. 83	16				81.21	8.93	33.16	28			DR-2 PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
1051+00	LT.	HWY. 83 - CONNECTOR DRIVEWAY	16						220.27				DR-2
1051+73	LT.	HWY. 83	16				62.05	6.83	25.34			28	DR-2 PCC-1, PCM-1, PCP-1, PCP-2, PCP-3
* ENTIRE PROJECT TEMPORARY DRIVES									100.00				
TOTALS:						**483.32**	**459.90**	**50.59**	**508.07**	**28**	**178**	**28**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

** FOR INFORMATION ONLY

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.

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
1076+77.76	1078+21.51	LT. SIDE	75	1	1
1076+02.76	1078+21.51	RT. SIDE	150	1	1
1089+45.49	1091+64.24	LT. SIDE	150	1	1
1089+45.49	1090+89.24	RT. SIDE	75	1	1
TOTALS:			**450**	**4**	**4**

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")	TYPE E-1 (2' 0")
			LIN. FT.	LIN. FT.
1001+45	1012+04	ROUNDABOUT 1 & APPROACHES	2016	440
1025+35	1031+41	ROUNDABOUT 2 & APPROACHES	2006	377
1092+00	1094+91	HWY. 83 LT.	328	
1092+00	1094+91	HWY. 83 RT.	318	
TOTALS:			**4668**	**817**

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE F)	APPROACH SLABS	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	CU.YD.	POUND	TON
1077+99.91	1078+34.91	HWY. 83		71.80	8655	38.50
1077+99.91	1078+34.91	HWY. 83 LT.	4.20		210	
1077+99.91	1078+34.91	HWY. 83 RT.	4.20		210	
1089+32.09	1089+67.09	HWY. 83		71.80	8655	38.50
1089+32.09	1089+67.09	HWY. 83 LT.	4.20		210	
1089+32.09	1089+67.09	HWY. 83 RT.	4.20		210	
TOTALS:			**16.80**	**143.60**	**18150**	**77.00**

NOTE: USE T =13" FOR 8' SHOULDER.

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3
		SQ.YD.
1001+48	HWY. 83 RT.	3.4
1001+51	HWY. 83 LT.	3.9
1003+35	HWY. 83 RT.	3.8
1003+35	HWY. 83 LT.	3.9
1010+24	HWY. 83 RT.	3.9
1010+24	HWY. 83 LT.	3.8
1011+99	HWY. 83 RT.	3.7
1012+01	HWY. 83 LT.	3.4
1025+38	HWY. 83 RT.	3.3
1025+41	HWY. 83 LT.	3.7
1027+35	HWY. 83 RT.	3.9
1027+35	HWY. 83 LT.	3.8
1029+41	HWY. 83 RT.	3.8
1029+41	HWY. 83 LT.	3.9
1031+35	HWY. 83 RT.	3.9
1031+38	HWY. 83 LT.	3.4
101+50	JORDAN DR. RT.	3.3
101+53	JORDAN DR. LT.	3.8
103+37	JORDAN DR. RT.	3.8
103+37	JORDAN DR. LT.	3.9
105+63	JORDAN DR. RT.	3.9
105+63	JORDAN DR. LT.	3.8
107+47	JORDAN DR. RT.	3.9
107+50	JORDAN DR. LT.	3.4
301+36	OLD WARREN RD. RT.	3.3
301+39	OLD WARREN RD. LT.	3.9
303+03	OLD WARREN RD. RT.	3.7
303+03	OLD WARREN RD. LT.	3.8
304+97	OLD WARREN RD. RT.	3.8
304+97	OLD WARREN RD. LT.	3.6
306+91	OLD WARREN RD. RT.	3.9
306+94	OLD WARREN RD. LT.	3.3
TOTAL:		**118.6**

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

Smith, Trinity D.
Jun 30 2022 11:28 AM
DocuSign

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	250
ENGINEER	
TOTAL:	**250**

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

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND
			SQ.YD.
1003+09	HWY. 83 - APPROACH ISLAND	D	82
103+11	JORDAN DR. - APPROACH ISLAND	D	83
105+89	JORDAN DR. - APPROACH ISLAND	D	83
1010+50	HWY. 83 - APPROACH ISLAND	D	82
1027+09	HWY. 83 - APPROACH ISLAND	D	69
302+92	OLD WARREN RD. - APPROACH ISLAND	D	54
305+23	OLD WARREN RD. - APPROACH ISLAND	D	67
1029+68	HWY. 83 - APPROACH ISLAND	D	69
TOTAL:			**589**

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
* ENTIRE PROJECT TO BE USED IF AND			4000	16
WHERE DIRECTED BY THE ENGINEER				
TOTALS:			**4000**	**16**

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

UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR 4" PIPE UNDERDRAIN.

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
1028+14	HWY. 83	25.00	20	40
1028+60	HWY. 83	25.00	20	40
1032+63	HWY. 83	7.92	20	13
103+01	JORDAN DR.	9.67	20	15
103+39	JORDAN DR.	11.42	20	18
TOTAL:				**126**

AVG. DEPTH = 13"

oh40219 6/27/2022
R020475.DGN

QUANTITIES

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	45	191
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:30 PM
DocuSign

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	20
DIRECTED BY THE ENGINEER	
TOTAL:	**20**

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	20	40
DIRECTED BY THE ENGINEER		
TOTALS:	**20**	**40**

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

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

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	36"	42"	48"	22"X14"	(CLASS IV) 18"	36"	54"	29"X18"	(CLASS V) 18"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	22"X14"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	42"	48"	54"	29"X18"	DROP INLETS TYPE MO	TYPE SPECIAL	EXT. 4'	YARD DRAINS	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.														EACH											SQ.YD.	M.GAL.	
1002+90	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
1002+90	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
1010+31	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
1010+48	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
1026+65	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
1027+00	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
1029+20	CONST. YARD DRAIN ON LT. AND PIPE OUTLET												102													1			FPC-9
1029+83	CONST. DROP INLET ON LT. AND PIPE OUTLET													112									1						FPC-9E, FPC-9M, PCC-1,FCM-1
1030+48	CONST. DROP INLET ON RT. W/EXT.																							1	1				SPECIAL DETAIL
1030+99	CONST. DROP INLET ON LT. AND PIPE OUTLET W/FES	68														1							1				5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
1032+63	CONST. 18" X 70' PIPE CULVERT W/FES LT. & RT.							70								2											10	0.13	FES-1, FES-2, PCC-1
1039+09	CONST. DBL. 48" X 102' PIPE CULVERT W/FES LT. & RT.					204														4							62	0.78	FES-1, FES-2, PCC-1
1044+58	CONST. DBL. 54" X 100' PIPE CULVERT W/FES LT. & RT.									200											4						74	0.93	FES-1, FES-2, PCC-1
1049+46	CONST. 29" X 18" X 88' ARCH PIPE CULVERT W/FES LT. & RT.										88											2					16	0.20	FES-1, FES-2, PCC-1
1055+70	CONST. 42" X 84' PIPE CULVERT W/FES LT. & RT.				84														2								46	0.58	FES-1, FES-2, PCC-1
1067+39	CONST. 36" X 174' PIPE CULVERT W/FES LT. & RT.			174													2										34	0.43	FES-1, FES-2, PCC-1
1093+40	CONST. DROP INLET ON RT. W/EXT.																							1	1				SPEICAL DETAIL
1093+55	CONST. DROP INLET ON LT. W/EXT.																							1	1				SPECIAL DETAIL
1094+59	CONST. 24" X 132' PIPE CULVERT W/FES LT. & RT.		132														2										16	0.20	FES-1, FES-2, PCC-1
102+35	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
102+39	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
103+01	CONST. 36" X 66' PIPE CULVERT W/FES LT. & RT.								66								2										34	0.43	FES-1, FES-2, PCC-1
103+45	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
103+45	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
105+50	CONST. DROP INLET ON LT.																							1					SPECIAL DETAIL
105+90	CONST. DROP INLET ON RT.																							1					SPECIAL DETAIL
301+50	CONST. DROP INLET ON LT. AND PIPE OUTLET W/FES						54															1	1				5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
302+35	CONST. DROP INLET ON RT. AND PIPE OUTLET W/FES	6												6		1							1				5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1
302+57	CONST. YARD DRAIN ON LT. AND PIPE OUTLET												28													1			FPC-9
302+85	CONST. DROP INLET ON LT. W/EXT. AND PIPE OUTLET														132								1		1				FPC-9E, FPC-9M, PCC-1,FCM-1
305+08	CONST. DROP INLET ON RT. AND PIPE OUTLET											284											1						FPC-9E, FPC-9M, PCC-1
305+11	CONST. DROP INLET ON LT. AND PIPE OUTLET											238											1						FPC-9E, FPC-9M, PCC-1,FCM-1
305+75	CONST. DROP INLET ON LT. AND PIPE OUTLET													60									1						FPC-9E, FPC-9M, PCC-1,FCM-1
306+00	CONST. DROP INLET ON RT. AND PIPE OUTLET													88									1						FPC-9E, FPC-9M, PCC-1,FCM-1
306+80	CONST. DROP INLET ON RT. AND PIPE INLETS W/FES AND PIPE OUTLET	58												76		2							1				10	0.13	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1,PCM-1
306+85	CONST. DROP INLET ON LT. AND PIPE INTLET W/FES AND PIPE OUTLET	30												106		1							1				5	0.06	FES-1, FES-2, FPC-9E, FPC-9M, PCC-1,PCM-1
* ENTIRE PROJECT TO BE USED AS DIRECTED BY THE ENGINEER													600												6			FPC-9
TOTALS:		**162**	**132**	**174**	**84**	**204**	**54**	**70**	**66**	**200**	**88**	**522**	**730**	**448**	**132**	**7**	**2**	**4**	**2**	**4**	**4**	**3**	**11**	**15**	**4**	**8**	**322**	**4.05**	

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

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

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

on40219 6/27/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	46	191
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:30 PM
DocuSign

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT						ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								PORTLAND CEMENT CONCRETE PAVEMENT	
						(0.05 GAL. PER SQ. YD.)			(0.17 GAL. PER SQ. YD.)																
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLON	TOTAL WID.	SQ.YD.	GALLON	TOTAL GALLONS	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	TOTAL PG 64-22	AVG. WID.	11" U.T.
			FEET			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	TON	FEET	SQ. YD.
MAIN LANES																											
1000+45.07	1001+45.07	HWY. 83 - TRANSITION	100.00						38.00	422.22	71.78	71.78									38.00	422.22	220.00	46.44	46.44		
1001+45.07	1003+60.07	HWY. 83 - NOTCH, WIDEN, AND OVERLAY	215.00	VAR.	177.52	VAR.	741.10	37.06				37.06	VAR.	370.55	330.00	61.14	VAR.	370.55	220.00	40.76	VAR.	827.55	220.00	91.03	131.79		
1009+98.98	1012+03.98	HWY. 83 - NOTCH, WIDEN, AND OVERLAY	205.00	VAR.	173.08	VAR.	727.06	36.35				36.35	VAR.	363.53	330.00	59.98	VAR.	363.53	220.00	39.99	VAR.	795.33	220.00	87.49	127.48		
1012+03.98	1015+00.71	HWY. 83 - OVERLAY	296.73						VAR.	1194.45	203.06	203.06									VAR.	1194.45	220.00	131.39	131.39		
1015+00.71	1025+35.40	HWY. 83 - OVERLAY	1034.69						24.00	2759.17	469.06	469.06									24.00	2759.17	220.00	303.51	303.51		
1025+35.40	1027+60.40	HWY. 83 - NOTCH, WIDEN, AND OVERLAY	225.00	VAR.	183.23	VAR.	764.80	38.24				38.24	VAR.	382.40	330.00	63.10	VAR.	382.40	220.00	42.06	VAR.	887.84	220.00	97.66	139.72		
1028+98.22	1031+41.31	HWY. 83 - NOTCH, WIDEN, AND OVERLAY	243.09	VAR.	207.99	VAR.	949.28	47.46				47.46	VAR.	474.64	330.00	78.32	VAR.	474.64	220.00	52.21	VAR.	901.46	220.00	99.16	151.37		
1031+41.31	1077+99.91	HWY. 83 - FULL DEPTH	4658.6	237.00	11040.88	56.71	29354.36	1467.72				1467.72	28.46	14731.53	330.00	2430.70	28.25	14622.83	220.00	1608.51	40.00	20704.89	220.00	2277.54	3886.05		
1089+67.09	1092+00.00	HWY. 83 - FULL DEPTH	232.91	VAR.	596.17	VAR.	1709.32	85.47				85.47	VAR.	857.77	330.00	141.53	28.25	851.55	220.00	93.67	VAR.	1332.50	220.00	146.58	240.25		
1092+00.00	1094+93.60	HWY. 83 - FULL DEPTH	293.60	VAR.	607.18	VAR.	3469.58						VAR.	1734.79	330.00	286.24	VAR.	1734.79	220.00	190.83	VAR.	1734.79	220.00	190.83	381.66		
100+47.39	101+47.39	JORDAN DR. - TRANSITION	100.00						20.00	222.22	37.78	37.78									20.00	222.22	220.00	24.44	24.44		
101+47.39	103+62.40	JORDAN DR. - NOTCH, WIDEN, AND OVERLAY	215.01	VAR.	195.23	VAR.	842.36	42.12				42.12	VAR.	421.18	330.00	69.49	VAR.	421.18	220.00	46.33	VAR.	814.57	220.00	89.60	135.93		
105+37.57	107+52.60	JORDAN DR. - NOTCH, WIDEN, AND OVERLAY	215.03	VAR.	177.91	VAR.	750.34	37.52				37.52	VAR.	375.17	330.00	61.90	VAR.	375.17	220.00	41.27	VAR.	834.29	220.00	91.77	133.04		
107+52.60	108+52.60	JORDAN DR. - TRANSITION	100.00						39.00	433.33	73.67	73.67									39.00	433.33	220.00	47.67	47.67		
300+33.21	301+33.21	OLD WARREN RD. - TRANSITION	100.00						30.00	333.33	56.67	56.67									30.00	333.33	220.00	36.67	36.67		
301+33.21	303+28.22	OLD WARREN RD. - NOTCH, WIDEN, AND OVERLAY	195.01	VAR.	134.00	VAR.	518.40	25.92				25.92	VAR.	259.20	330.00	42.77	VAR.	259.20	220.00	28.51	VAR.	788.10	220.00	86.69	115.20		
304+71.78	306+96.79	OLD WARREN RD. - NOTCH, WIDEN, AND OVERLAY	225.01	VAR.	141.16	VAR.	526.32	26.32				26.32	VAR.	263.16	330.00	43.42	VAR.	263.16	220.00	28.95	VAR.	901.72	220.00	99.19	128.14		
306+96.79	307+96.79	OLD WARREN RD. - TRANSITION	100.00						32.00	355.56	60.45	60.45									32.00	355.56	220.00	39.11	39.11		
200+00.00	204+46.11	ROUNDABOUT 1 - FULL DEPTH	446.11	138.00	615.63	36.00	1784.44	89.22				89.22	18.00	892.22	330.00	147.22	18.00	892.22	220.00	98.14	18.00	892.22	220.00	98.14	196.28	13.00	644.38
400+00.00	403+83.27	ROUNDABOUT 2 - FULL DEPTH	383.27	145.75	558.62	36.00	1533.08	76.65				76.65	18.00	766.54	330.00	126.48	18.00	766.54	220.00	84.32	18.00	766.54	220.00	84.32	168.64	15.00	638.78
ADDITIONAL FOR LEVELING																											
1001+45.07	1003+60.07	HWY. 83 - LEVELING	215.00						22.00	525.56	89.35	89.35					22.00	525.56	VAR.	11.98					11.98		
1009+98.98	1012+03.98	HWY. 83 - LEVELING	205.00						22.00	501.11	85.19	85.19					22.00	501.11	VAR.	27.50					27.50		
1025+35.40	1027+60.40	HWY. 83 - LEVELING	225.00						22.00	550.00	93.50	93.50					22.00	550.00	VAR.	100.60					100.60		
1028+98.22	1032+00.00	HWY. 83 - LEVELING	301.78						20.00	670.62	114.01	114.01					20.00	670.62	VAR.	87.83					87.83		
101+47.39	103+62.40	JORDAN DR. - LEVELING	215.01						20.00	477.80	81.23	81.23					20.00	477.80	VAR.	85.97					85.97		
105+37.57	107+52.60	JORDAN DR. - LEVELING	215.03						22.00	525.63	89.36	89.36					22.00	525.63	VAR.	72.11					72.11		
301+33.21	303+28.22	OLD WARREN RD. - LEVELING	195.01						28.00	606.70	103.14	103.14					28.00	606.70	VAR.	31.13					31.13		
304+71.78	306+96.79	OLD WARREN RD. - LEVELING	225.01						28.00	700.03	119.01	119.01					28.00	700.03	VAR.	126.68					126.68		
ADDITIONAL FOR SUPERELEVATION																											
1032+88.49	1035+88.49	HWY. 83 - SUPERELEVATION TRANSITION	300.00	19.00	57.00																						
1035+88.49	1037+70.53	HWY. 83 - MAXIMUM SUPERELEVATION	182.04	38.00	69.18																						
1037+70.53	1040+70.53	HWY. 83 - SUPERELEVATION TRANSITION	300.00	19.00	57.00																						
1040+79.76	1043+79.76	HWY. 83 - SUPERELEVATION TRANSITION	300.00	32.00	96.00																						
1043+79.76	1045+34.45	HWY. 83 - MAXIMUM SUPERELEVATION	154.69	64.00	99.00																						
1045+34.45	1048+34.45	HWY. 83 - SUPERELEVATION TRANSITION	300.00	32.00	96.00																						
1050+20.31	1053+20.31	HWY. 83 - SUPERELEVATION TRANSITION	300.00	32.00	96.00																						
1053+20.31	1060+73.74	HWY. 83 - MAXIMUM SUPERELEVATION	753.43	64.00	482.20																						
1060+73.74	1063+73.74	HWY. 83 - SUPERELEVATION TRANSITION	300.00	32.00	96.00																						
1067+32.83	1070+32.83	HWY. 83 - SUPERELEVATION TRANSITION	300.00	32.00	96.00																						
1070+32.83	1078+34.91	HWY. 83 - MAXIMUM SUPERELEVATION	802.08	64.00	513.33																						
ADDITIONAL FOR GUARDRAIL WIDENING																											
1075+75.66	1076+08.66	HWY. 83 - WIDENING TAPER RT.	33.00	13.25	4.37																2.75	10.08	220.00	1.11	1.11		
1076+08.66	1078+34.91	HWY. 83 - WIDENING RT.	226.25	26.50	59.96																5.50	138.26	220.00	15.21	15.21		
1076+38.16	1076+71.16	HWY. 83 - WIDENING TAPER LT.	33.00	13.25	4.37																2.75	10.08	220.00	1.11	1.11		
1076+71.16	1078+34.91	HWY. 83 - WIDENING LT.	163.75	26.50	43.39																5.50	100.07	220.00	11.01	11.01		
1089+32.09	1090+95.84	HWY. 83 - WIDENING RT.	163.75	26.50	43.39																5.50	100.07	220.00	11.01	11.01		
1090+95.84	1091+28.84	HWY. 83 - WIDENING TAPER RT.	33.00	13.25	4.37																2.75	10.08	220.00	1.11	1.11		
1089+32.09	1091+58.34	HWY. 83 - WIDENING LT.	226.25	26.50	59.96																5.50	138.26	220.00	15.21	15.21		
1091+58.34	1091+91.34	HWY. 83 - WIDENING TAPER LT.	33.00	13.25	4.37																2.75	10.08	220.00	1.11	1.11		
TOTALS:					**16790.49**		**43670.44**	**2010.05**		**10277.73**	**1747.26**	**3757.31**		**21892.68**		**3612.29**		**26335.21**		**2939.35**		**38419.06**		**4226.11**	**7165.46**		**1283.16**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.8% MIN. AGGR.....4.2% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		47	191
JOB NO.		020475		

① 07536 - QUANTITIES - 65102

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 020475

BRIDGE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	SS & 619	801	SP, SS, & 802	SP, SS, & 802	803	SS & 804	SS & 804	SS & 805	SP, SS, & 807	SP, SS, & 807	SP, SS, & 807	SP, SS, & 807	SS & 807	SS & 808	809	812	816	816
			ITEM	7' STEEL CHAIN LINK FENCE	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	CLASS S CONCRETE - BRIDGE	CLASS S(AE) CONCRETE - BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL - BRIDGE (GRADE 60)	EPOXY COATED REINFORCING STEEL (GRADE 60)	① STEEL SHELL PILING (18" DIA.)	② STRUCTURAL STEEL IN W-BEAM SPANS (A709, GR. 50)	STRUCTURAL STEEL IN W-BEAM SPANS (A709, GR. 50W)	② STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50W)	② PAINTING STRUCTURAL STEEL	ELASTOMERIC BEARINGS	ARMORED JOINT WITH NEOPRENE STRIP SEAL	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP
			UNIT	LIN. FT.	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LB.	LIN. FT.	LB.	LB.	LB.	LB.	TON	CU. IN.	LIN. FT.	EACH	SQ. YD.	CU. YD.
07536	HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR																				
		BENT 1				46.58		11.5	4,917	694	890		850				2,677.5			1,800	935
		BENT 2			161	143.69			22,777		1,680						2,940.0				
		BENT 3			134	143.68			22,777		1,800						1,905.4				
		BENT 4			149	143.68			22,777		1,680						1,905.4				
		BENT 5			142	143.69			22,777		1,680						1,905.4				
		BENT 6			169	143.68			22,777		1,560						2,940.0				
		BENT 7			159	157.71			24,724		1,680						5,088.1				
		BENT 8			258	150.65			28,259		2,400						2,492.2				
		BENT 9			156	135.80			25,858		2,520						2,492.2				
		BENT 10			168	139.20			21,354		1,680						4,068.1				
		BENT 11			146	117.85			18,277		1,800						2,102.5				
		BENT 12			146	111.52			17,387		1,800						2,102.5				
		BENT 13				46.07		11.5	4,899	694	645		850				1,657.5			325	179
		450'-0" CONT. W-BEAM UNIT					567.40	2,368.1		153,986		561,610	11,430			275.0		42	1		
		390'-0" CONT. PLATE GIRDER UNIT		200			494.40	2,052.4		135,171				578,940	19,490	286.9					
		255'-0" CONT. W-BEAM UNIT					323.30	1,341.9		86,935		317,680	11,370			156.5		42			
TOTALS FOR BRIDGE NO. 07536				200	1,788	1,623.80	1,385.10	5,785.4	259,560	377,480	21,815	879,290	24,500	578,940	19,490	718.4	34,276.8	84	1	2,125	1,114

① Piles shall conform to details shown on Std. Dwg. No. 55021.

② The color of paint shall be Green equal or close to Federal Std. 595B, Color Chip No. 14109 and as approved by the Engineer.

THOMAS GERARD
DESIGN SECTION SUPERVISOR

STATE OF ARKANSAS
CHARLES R. ELLIS
Date: 2022.06.30 11:57:47 AM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
HWY. 83 SPUR - HWY. 278
CONNECTOR (MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. I

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BAB DATE: 2/18/2022 FILENAME: b020475_q1.dgn
CHECKED BY: JJ DATE: 3/2/2022 SCALE: No Scale
DESIGNED BY: - DATE: -

BRIDGE NO. 07536 DRAWING NO. 65102

PRINT DATE: 6/30/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	48	191
		SUMMARY OF QUANTITIES AND REVISIONS				

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

Sep 28 2022 7:09 AM

DocuSign

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		40	STATION
201	GRUBBING		40	STATION
202	REMOVAL AND DISPOSAL OF CURB		309	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE		796	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES		4	EACH
202	REMOVAL AND DISPOSAL OF RETAINING WALLS		94	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS		644	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS		8	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS		1	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		20	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING		29	SQ. YD.
202	REMOVAL AND DISPOSAL OF SATELLITE DISH		3	EACH
202	REMOVAL AND DISPOSAL OF SIGNS		10	EACH
SP, SS, & 210	UNCLASSIFIED EXCAVATION		26915	CU. YD.
SP & 210	COMPACTED EMBANKMENT		162394	CU. YD.
SP & 210	SOIL STABILIZATION		350	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)		17376	TON
SS & 401	TACK COAT		3797	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		3461	TON
SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")		152	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		6841	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		375	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT		1767	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		20	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		20	TON
SP, SS, & 501	PORTLAND CEMENT CONCRETE PAVEMENT (11" UNIFORM THICKNESS)		1283.16	SQ. YD.
SP, SS, & 504	APPROACH SLABS		143.60	CU. YD.
SP, SS, & 504	APPROACH GUTTERS		16.80	CU. YD.
SP, SS, & 505	PORTLAND CEMENT CONCRETE DRIVEWAY		483.32	SQ. YD.
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		627	SQ. FT.
SP, SS, & 604	CONSTRUCTION PROJECT INFORMATION SIGN UPDATE		10	EACH
SS & 604	BARRICADES		64	LIN. FT.
SS & 604	TRAFFIC DRUMS		36	EACH
SS & 604	TRAFFIC CONE		118	EACH
604	CONSTRUCTION PAVEMENT MARKINGS		41578	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)		2	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		4	EACH
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS		9192	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		125	LIN. FT.
604	REMOVAL OF RAISED PAVEMENT MARKERS		2	EACH
SS & 604	VERTICAL PANELS		114	EACH
SP, SS, & 605	CONCRETE DITCH PAVING (TYPE B)		396	SQ. YD.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		162	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	448	LIN. FT.
* SS & 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	448	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		70	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)		522	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		132	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		174	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		66	LIN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		84	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		204	LIN. FT.
SS & 606	54" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		200	LIN. FT.
SS & 606	22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)		54	LIN. FT.
* SS & 606	22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	132	LIN. FT.
* SS & 606	21" X 15" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE	(ALTERNATE NO. 2)	132	LIN. FT.
SS & 606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)		88	LIN. FT.
SP	CULVERT CLEAN OUT		2	EACH
SS & 606	12" SIDE DRAIN		730	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN		28	LIN. FT.
SP, SS, & 606	24" SIDE DRAIN		178	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN		28	LIN. FT.
SS & 606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		7	EACH
SS & 606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
SS & 606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		4	EACH
SS & 606	42" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
SS & 606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		4	EACH
SS & 606	54" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		4	EACH
SS & 606	29" X 18" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS		3	EACH
SS & 606	SELECTED PIPE BEDDING		250	CU. YD.
SS & 609	DROP INLETS (TYPE MO)		11	EACH
SS & 609	DROP INLETS (TYPE SPECIAL)		15	EACH
SS & 609	DROP INLET EXTENSIONS (4')		4	EACH
SS & 609	YARD DRAINS		8	EACH
SS & 611	UNDERDRAIN OUTLET PROTECTORS		16	EACH
SS & 611	4" PIPE UNDERDRAINS		4000	LIN. FT.
SS & 615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)		126	TON
SS & 617	GUARDRAIL (TYPE A)		450	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)		4	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL		4	EACH
SS & 619	WIRE FENCE (TYPE D)		244	LIN. FT.
* SS & 619	6' STEEL CHAIN LINK FENCE	(ALTERNATE NO. 1)	177	LIN. FT.
* SS & 619	6' ALUMINUM CHAIN LINK FENCE	(ALTERNATE NO. 2)	177	LIN. FT.
* SS & 619	10' STEEL GATES	(ALTERNATE NO. 1)	1	EACH
* SS & 619	10' ALUMINUM GATES	(ALTERNATE NO. 2)	1	EACH

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
620	LIME	26	TON
620	SEEDING	13.03	ACRE
SS & 620	MULCH COVER	86.74	ACRE
620	WATER	2878.9	M. GAL.
621	TEMPORARY SEEDING	73.71	ACRE
621	SILT FENCE	9703	LIN. FT.
621	SAND BAG DITCH CHECKS	2200	BAG
621	SEDIMENT REMOVAL AND DISPOSAL	1559	CU. YD.
621	SEDIMENT BASIN	1000	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	1000	CU. YD.
621	ROCK DITCH CHECKS	300	CU. YD.
SS & 621	FILTER SOCK (12")	834	LIN. FT.
623	SECOND SEEDING APPLICATION	13.03	ACRE
624	SOLID SODDING	3669	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	645	SQ. YD.
SP, SS, & 632	CONCRETE ISLAND	589	SQ. YD.
SP, SS, & 633	CONCRETE WALKS	1900	SQ. YD.
SP, SS, & 633	CONCRETE WALKS (TYPE SPECIAL)	128	SQ. YD.
SS & 633	HAND RAILING	228	LIN. FT.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	4668	LIN. FT.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE E-1) (2' 0")	817	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
637	MAILBOXES	6	EACH
637	MAILBOX SUPPORTS (SINGLE)	2	EACH
637	MAILBOX SUPPORTS (DOUBLE)	2	EACH
SP, SS, & 641	WHEELCHAIR RAMPS (TYPE 3)	119	SQ. YD.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G., E.G.C.)	2852	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1400	LIN. FT.
710	NON-METALLIC CONDUIT (2")	2517	LIN. FT.
SP, SS, & 711	CONCRETE PULL BOX (TYPE 2 HD)	33	EACH
SP, SS, & 711	CONCRETE PULL BOX (TYPE 3 HD)	2	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	2	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	197	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	1469	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	17040	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	491	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	801	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	18971	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	1233	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	120	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	2	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	4	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	120	EACH
SS & 726	STANDARD SIGN	714	SQ. FT.
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	44	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	9	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	12	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-6)	1	EACH
SP	ARCHITECTURAL FINISH	456	SQ. FT.
SP	TEXTURED COATING FINISH	50	SQ. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	18150	POUND
SP	LED ROADWAY ILLUMINATION POLE (25,000 LUMENS, COBRA HEAD, SHOE BASE, 40')	20	EACH
	STRUCTURES OVER 20' SPAN		
SS & 619	7' STEEL CHAIN LINK FENCE	200	LIN. FT.
636	BRIDGE CONSTRUCTION CONTROL	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	1788	CU. YD.
SP, SS, & 802	CLASS S CONCRETE-BRIDGE	1624	CU. YD.
SP, SS, & 802	CLASS S(AE) CONCRETE-BRIDGE	1385	CU. YD.
803	CLASS 2 PROTECTIVE SURFACE TREATMENT	5785	SQ. YD.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	259560	POUND
SS & 804	EPOXY COATED REINFORCING STEEL (GRADE 60)	377480	POUND
SS & 805	STEEL SHELL PILING (18" DIAMETER)	21815	LIN. FT.
SP, SS, & 807	STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50W)	24500	POUND
SP, SS, & 807	STRUCTURAL STEEL IN BEAM SPANS (A709, GR. 50)	879290	POUND
SP, SS, & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50)	578940	POUND
SP, SS, & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (A709, GR. 50W)	19490	POUND
SS & 807	PAINTING STRUCTURAL STEEL	718	TON
SS & 808	ELASTOMERIC BEARINGS	34277	CU. IN.
SS & 809	ARMORED JOINT WITH NEOPRENE STRIP SEAL	84	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1	EACH
SS & 816	FILTER BLANKET	2125	SQ. YD.
SS & 816	DUMPED RIPRAP	1114	CU. YD.

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER

qh40219 6/27/2022
R020475.DGN

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	49	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:31 PM

DocuSign

SURVEY CONTROL COORDINATES

Project Name: s020475
Date: 12/12/2018
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, 220007 - 220007A & 220035 - 220035A
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	1653602.5809	1368786.9759	215.15	CTL	ARDOT STD. MON. STAMPED PN:1
2	1654074.9482	1368755.3744	215.30	CTL	ARDOT STD. MON. STAMPED PN:2
3	1655046.7019	1368761.8964	226.72	CTL	ARDOT STD. MON. STAMPED PN:3
4	1655046.6000	1369537.5330	224.73	CTL	ARDOT STD. MON. STAMPED PN:4
5	1655067.4101	1368119.9795	223.43	CTL	ARDOT STD. MON. STAMPED PN:5
6	1655983.2270	1368767.5394	229.43	CTL	ARDOT STD. MON. STAMPED PN:6
7	1656973.5977	1368772.5499	231.98	CTL	ARDOT STD. MON. STAMPED PN:7
8	1657020.2315	1369225.2712	237.13	CTL	ARDOT STD. MON. STAMPED PN:8
9	1657001.7629	1368389.6114	228.90	CTL	ARDOT STD. MON. STAMPED PN:9
10	1657554.0850	1368766.3926	228.35	CTL	ARDOT STD. MON. STAMPED PN:10
11	1658340.0322	1368781.3583	219.38	CTL	ARDOT STD. MON. STAMPED PN:11
12	1659238.8858	1368772.9404	230.69	CTL	ARDOT STD. MON. STAMPED PN:12
13	1659525.8208	1368789.6717	233.82	CTL	ARDOT STD. MON. STAMPED PN:13
14	1660065.4441	1368648.2846	235.25	CTL	ARDOT STD. MON. STAMPED PN:14
15	1660373.9651	1368722.6200	241.66	CTL	ARDOT STD. MON. STAMPED PN:15
16	1661078.5796	1368504.6439	222.86	CTL	ARDOT STD. MON. STAMPED PN:16
17	1661521.1760	1368651.8677	223.29	CTL	ARDOT STD. MON. STAMPED PN:17
18	1661894.1496	1368464.8722	213.49	CTL	ARDOT STD. MON. STAMPED PN:18
19	1662145.7790	1368501.9982	208.42	CTL	ARDOT STD. MON. STAMPED PN:19
20	1662411.2308	1368417.4617	208.81	CTL	ARDOT STD. MON. STAMPED PN:20
21	1662811.1214	1368579.6388	210.18	CTL	ARDOT STD. MON. STAMPED PN:21
22	1663548.4807	1368856.6960	217.81	CTL	ARDOT STD. MON. STAMPED PN:22
23	1663781.5236	1368371.6849	218.34	CTL	ARDOT STD. MON. STAMPED PN:23
24	1663334.4510	1369501.7696	218.53	CTL	ARDOT STD. MON. STAMPED PN:24
25	1663253.4632	1370022.9043	223.65	CTL	ARDOT STD. MON. STAMPED PN:25
26	1663851.6519	1367946.8921	218.53	CTL	ARDOT STD. MON. STAMPED PN:26
100	1662240.8535	1372521.0835	260.81	GPS	ARDOT GPS #220007
101	1660683.4750	1372406.8474	274.12	GPS	ARDOT GPS #220007A
102	1654344.8058	1368753.8168	218.85	GPS	ARDOT GPS #220035
103	1656167.8952	1368694.0167	229.84	GPS	ARDOT GPS #220035A
900	1663337.8728	1369462.9594	216.67	TBM	STD.AHTD ALUM BM CAP IN S HW
995	1663608.2091	1372610.7965	250.79	BM	NGS/ARDOT 2ND ORDER BM X 319
996	1662379.0430	1372611.4796	259.93	BM	NGS/ARDOT 2ND ORDER BM A 351
997	1658528.8198	1373143.2531	272.28	BM	NGS/ARDOT 2ND ORDER BM B 351
998	1655168.1854	1370688.5431	224.14	BM	NGS/ARDOT 2ND ORDER BM C 351
999	1653153.3753	1368916.0288	215.46	BM	NGS/ARDOT 2ND ORDER BM D 351

*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 0.9999388978 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 S020475GI.CTL
HORIZONTAL DATUM: NAD 83 (2011)
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:
ARKANSAS STATE PLANE GRID BEARINGS - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 220007 - 220007A & 220035 - 220035A
CONVERGENCE ANGLE: 0-06-13.0443 RIGHT AT PN:11 LT:N 33-37-01.6134 LG:W091-48-53.4812
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

HWY. 83

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	1000+00.00	1654630.7339	1368734.8655
8001	POE	1004+50.00	1655080.7218	1368738.1697
8002	POB	1009+09.04	1655078.8136	1368740.9442
8003	POE	1028+38.30	1657008.0405	1368752.0402
8004	POB	1028+38.47	1657009.5105	1368766.3969
8005	PC	1035+13.49	1657684.4630	1368775.8644
8007	PT	1038+45.53	1658016.4218	1368770.9012
8008	PC	1043+04.76	1658475.2030	1368750.7357
8010	PT	1046+09.45	1658779.7393	1368753.5536
8011	PC	1052+45.31	1659414.3543	1368793.2252
8013	PT	1061+48.74	1660309.9735	1368707.6606
8014	PC	1069+57.83	1661093.3171	1368505.1959
8016	PT	1085+85.84	1662698.7259	1368555.3237
8017	POE	1095+22.50	1663589.2023	1368845.8350

ROUNDABOUT 1

POINT NO.	TYPE	STATION	NORTHING	EASTING
8018	PC	200+00.00	1655150.7448	1368741.3579
8020	PCC	202+23.05	1655008.7905	1368737.7560
8018	PT	200+00.00	1655150.7448	1368741.3579

ROUNDABOUT 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8021	PC	400+00.00	1657069.2465	1368767.2348
8023	PCC	401+91.64	1656948.3046	1368751.2022
8021	PT	400+00.00	1657069.2465	1368767.2348

JORDAN DR.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8024	POB	100+00.00	1655081.5994	1368288.1706
8001	POE	104+50.00	1655080.7218	1368738.1697
8002	POB	104+50.00	1655078.8136	1368740.9442
8025	POE	109+88.09	1655075.2812	1369279.0273

OLD WARREN RD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8026	POB	300+00.00	1656980.2700	1368353.0053
8003	POE	304+00.00	1657008.0405	1368752.0402
8004	POB	304+00.00	1657009.5105	1368766.3969
8027	POE	308+00.00	1657035.5437	1369165.5488

HWY. 278

POINT NO.	TYPE	STATION	NORTHING	EASTING
8028	POB	89+10.02	1663817.3586	1368156.2216
8029	POE	104+77.40	1663325.0949	1369644.2934

qh40219 6/21/2022
RD020475.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	50	191
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:32 PM
DocuSign

SURVEY BASELINE N 41°15'21" W
961.20'

P.O.B. 100+00.00

100

8024

SURVEY BASELINE S 88°09'06" E
642.29'

STA. 101+47.39
BEGIN JORDAN DR.

S 89°53'18" E
450.00'

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

1000

1010

1015

STA. 201+12.24 ROUNDABOUT 1=
STA. 103+80.40 JORDAN DR.
Δ = 89°13'56"

ROUNDABOUT 1

PI = N.A.
Δ = 360°00'00"RT.
R = 71'
T = N.A.
L = 446.11'
PC = 200+00.00
PT = 204+46.11

P.O.B. 1000+00.00

P.C.C. 202+23.05

P.O.E. 104+50.00
P.O.E. 1004+50.00

P.C. 200+00.00
P.T. 204+46.11

8000

N 0°25'15" E
450.00'

8001

8002

8020

8108

105

N 0°19'46" E
1929.26'

SURVEY BASELINE N 21°42'33" W
198.27'

STA. 202+22.94 ROUNDABOUT 1=
STA. 1003+78.07 HWY. 83
Δ = 88°52'29"

PN:3
PDI&RDOT STD. MON. STAMPED PN:3

P.O.B. 104+50.00
P.O.B. 1009+09.04

STA. 200+00.00 ROUNDABOUT 1=
STA. 204+46.11 ROUNDABOUT 1=
STA. 1009+80.97 HWY. 83
Δ = 88°52'34"

PN:6
PDI&RDOT STD. MON. STAMPED PN:6

STA. 203+34.97 ROUNDABOUT 1=
STA. 105+19.60 JORDAN DR.
Δ = 89°14'15"

HWY. 83

JORDAN DR.

S 89°37'26" E
538.09'

STA. 107+52.60
END JORDAN DR.

SURVEY BASELINE S 89°59'33" E
775.64'

SURVEY BASELINE

SURVEY BASELINE N 39°25'24" W
1212.50'

8025

P.O.E. 109+88.09

109

SURVEY CONTROL DETAILS

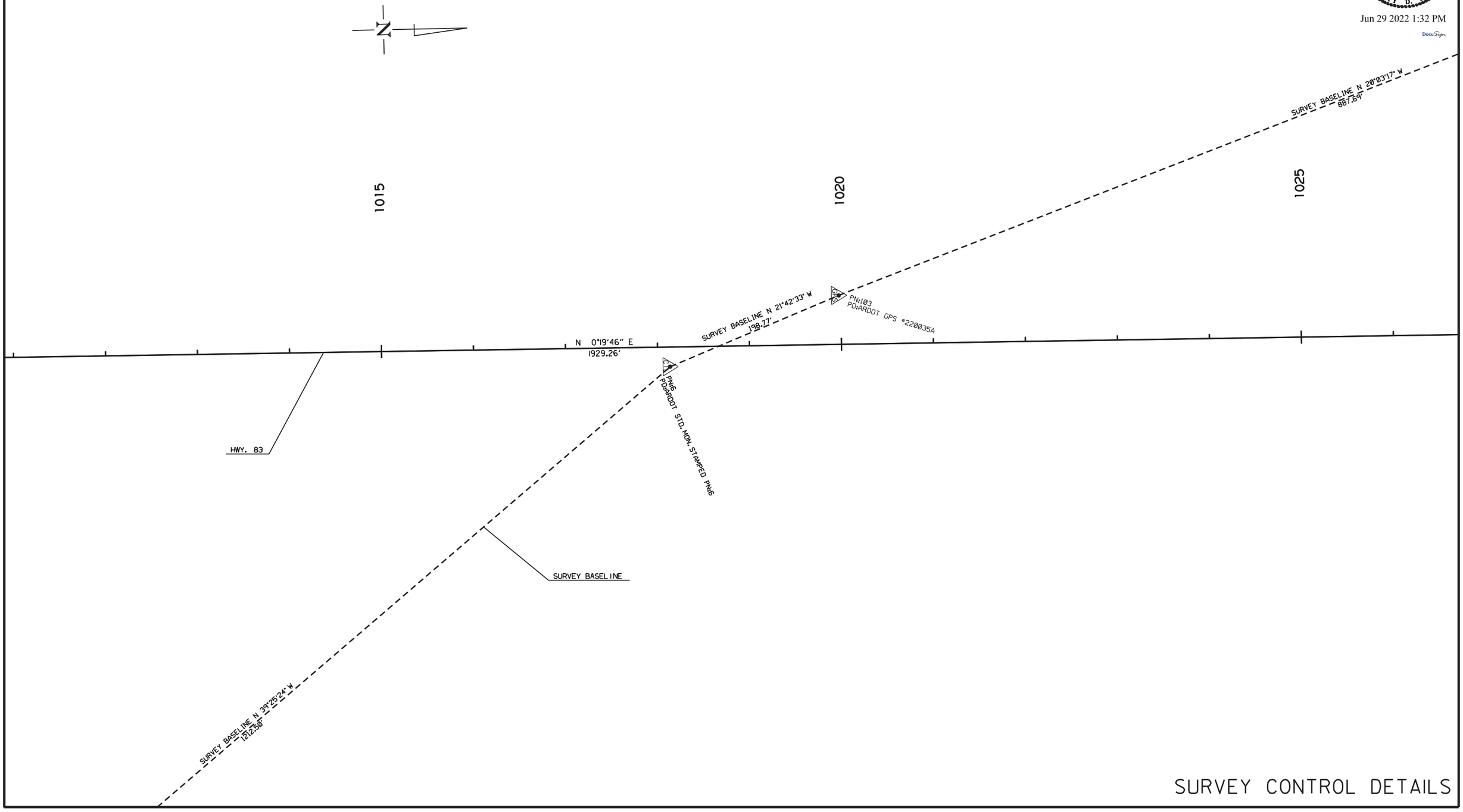
dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	51	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:32 PM

DocuSign



SURVEY CONTROL DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	52	191
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:32 PM
DocuSign

STA. 301+33.21
BEGIN OLD WARREN RD.

P.O.B. 300+00.00

300

PN9
PD:ARDOT STD. MON. STAMPED PN9

SURVEY BASELINE N 20°03'17" W
887.64'

STA. 401+08.33 ROUNDAOBUT 2=
STA. 303+46.21 OLD WARREN RD.
Δ = 90°13'15" RT.

1025

1030

1035

1040

SURVEY BASELINE N 86°01'08" E
400.00'
383.97'

ROUNDABOUT 2

PI = N.A.
Δ = 360°00'00"RT.
R = 61'
T = N.A.
L = 383.27'
PC = 400+00.00
PT = 403+83.27

P.C.C. 401+91.94

STA. 401+92.14 ROUNDAOBUT 2=
STA. 1027+78.50 HWY. 83
Δ = 83°14'46"RT.

P.O.E. 304+00.00
P.O.E. 1028+38.30

P.C. 400+00.00
P.T. 403+83.27

N 0°19'46" E
1929.26'

8023

8003

8004

8022

P.O.B. 304+00.00
P.O.B. 1028+38.47

N 0°48'13" E
675.02'

STA. 400+00.00 ROUNDABOUT 2=
STA. 403+83.27 ROUNDABOUT 2=
STA. 1028+98.22 HWY. 83
Δ = 83°15'08"RT.

305

PN7
PD:ARDOT STD. MON. STAMPED PN7

HWY. 83

STA. 402+99.73 ROUNDAOBUT 2=
STA. 304+53.79 OLD WARREN RD.
Δ = 90°15'00"RT.

SURVEY BASELINE N 84°02'08" E
455.12'

SURVEY BASELINE N 86°16'09" E
400.00'

OLD WARREN RD.

SURVEY BASELINE N 48°40'52" W
703.57'

SURVEY BASELINE

PN10
PD:ARDOT STD. MON. STAMPED PN10

P.C. 1035+13.49

8005 N 0°48'13" E
166.07'

PI = 1036+79.56
Δ = 3°19'13"RT.
D = 1°00'00"
T = 166.07'
L = 332.04'
PC = 1035+13.49
PT = 1038+45.53
e = 0.026'/'
Ls = 300'

P.T. 1038+45.53

N 2°31'00" W
166.07'

8007

N 2°31'00" W
459.22'

SURVEY BASELINE N 01°05'27" E
786.09'

P.I. 1036+79.56

STA. 306+96.79
END OLD WARREN RD.

P.O.E. 308+00.00

308

8027

PN8
PD:ARDOT STD. MON. STAMPED PN8

SURVEY CONTROL DETAILS

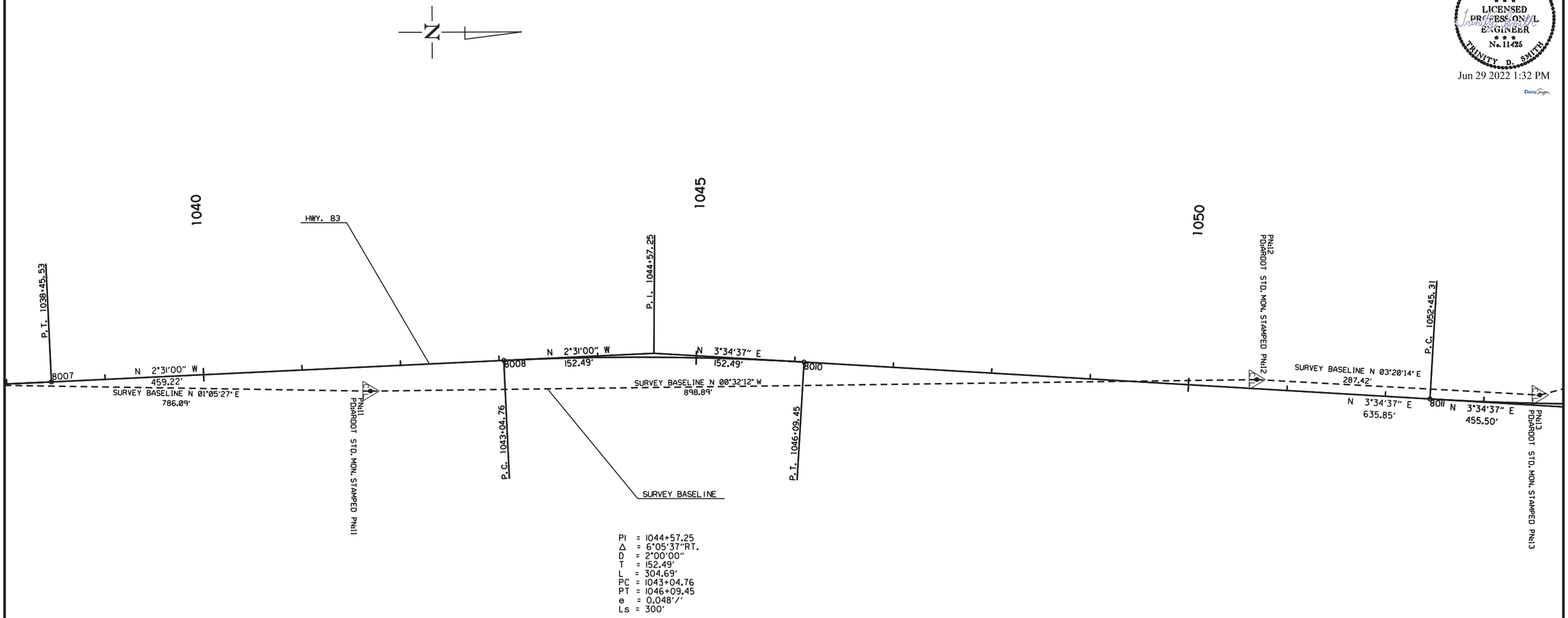
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	53	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:32 PM

DocuSign



PI = 1044+57.25
Δ = 6°05'37"RT.
D = 2°00'00"
T = 152.49'
L = 304.69'
PC = 1043+04.76
PT = 1046+09.45
e = 0.048'/'
Ls = 300'

oh40219 6/21/2022
R020475.DGN

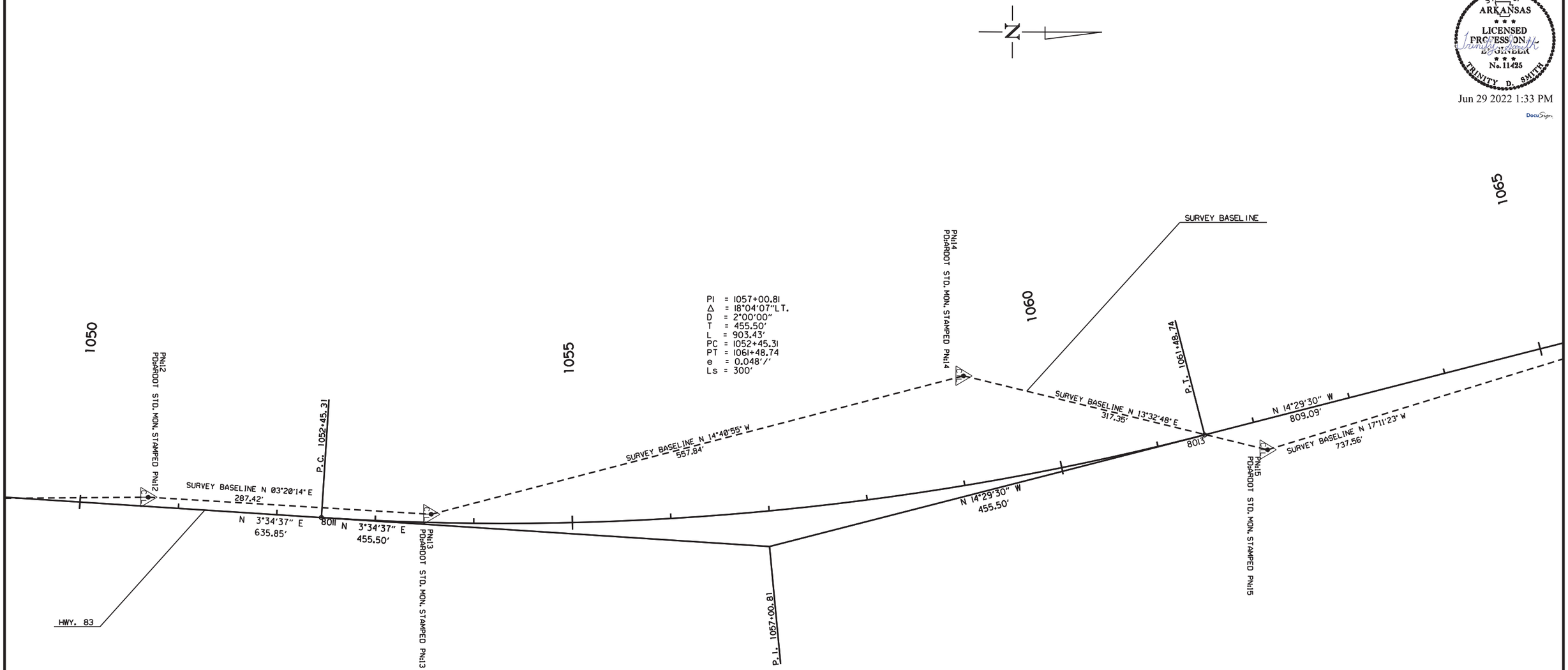
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	54	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:33 PM

DocuSign

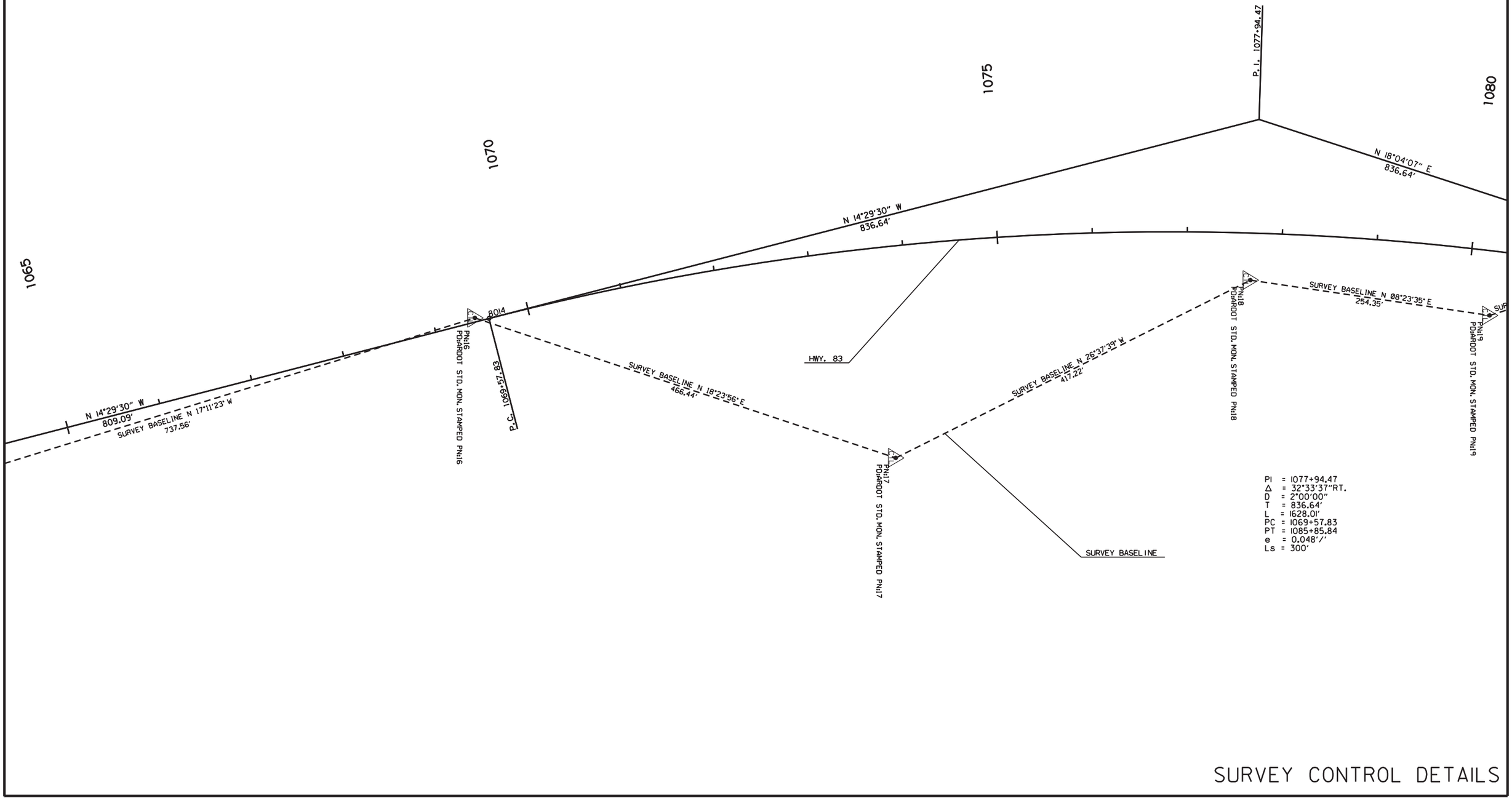


oh40219 6/21/2022
R020475.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	55	191
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:33 PM
DocuSign



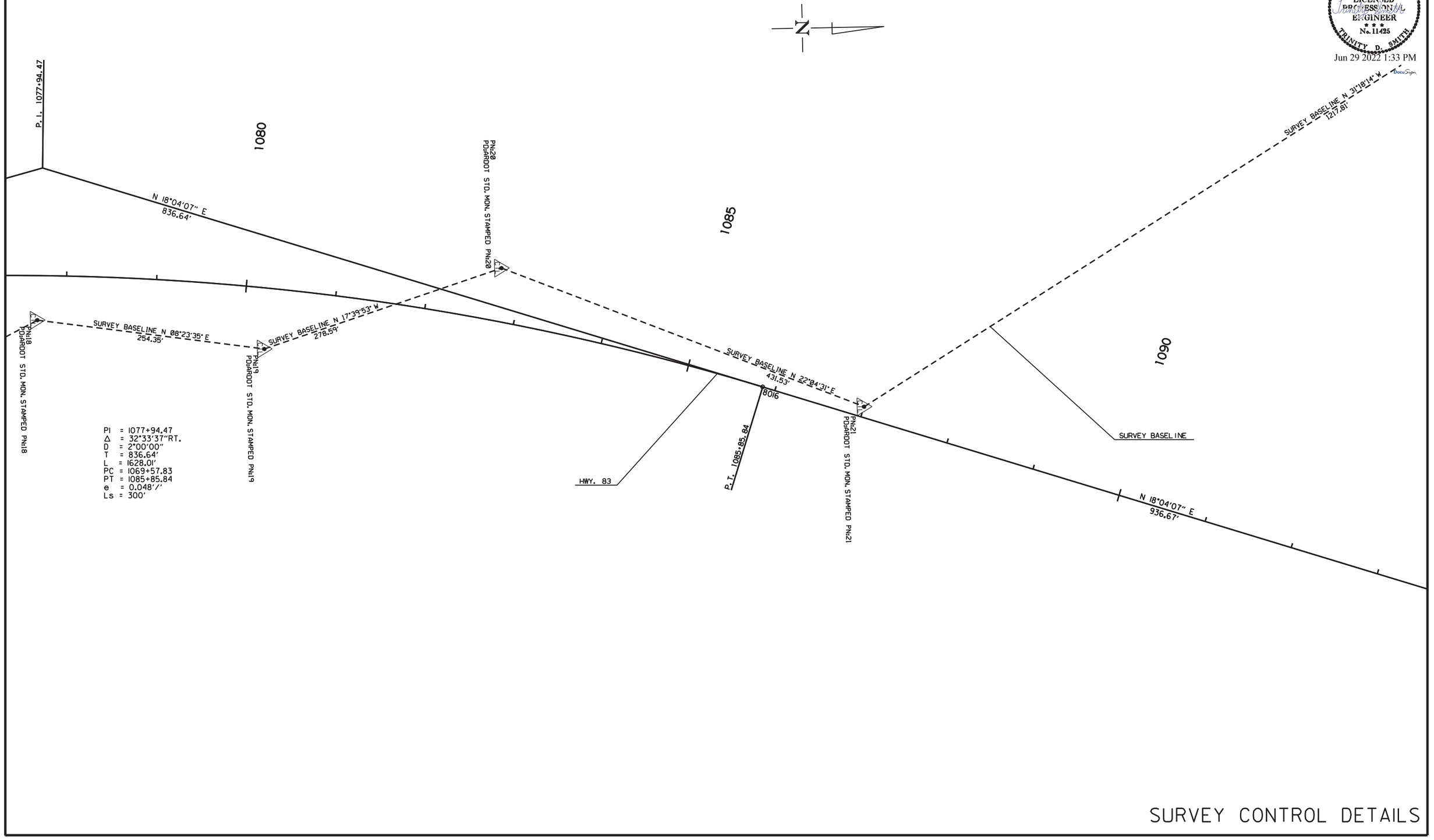
SURVEY CONTROL DETAILS

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	56	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:33 PM



SURVEY CONTROL DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	57	191
		SURVEY CONTROL DETAILS				

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

Jun 29 2022 1:33 PM

DocuSign

SURVEY BASELINE N 31°18'14" W
1217.81'

1090

SURVEY BASELINE

8016

SURVEY BASELINE N 22°04'31" E
431.53'

PN21
PDARDOT STD. MON. STAMPED PN21

N 18°04'07" E
936.67'

HWY. 83

P.O.T. 1085+85.84

1095

95

SURVEY BASELINE S 64°28'07" E
538.09'

P.O.C. 1095+22.50

8017

PN22
PDARDOT STD. MON. STAMPED PN22

S 71°41'44" E
1567.38'

STA. 1094+93.60
END JOB 020475

C.L. HWY. 83 STA. 1095+22.50 =
C.L. HWY. 278 STA. 96+36.40
Δ = 89°45'50"

100

SURVEY BASELINE S 71°28'41" E
679.65'

HWY. 278

SURVEY CONTROL DETAILS

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	58	191
		PLAN AND PROFILE SHEETS				

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

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

Jun 29 2022 1:34 PM

DocuSign

STA. 1001+45.07
BEGIN JOB 020475
LOG MILE 1.44

STA. 1002+90 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1001+51 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.9 SQ. YDS.

STA. 202+22.94 ROUNDABOUT 1 =
STA. 1003+78.07 HWY. 83
Δ = 88°52'29"

STA. 1001+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.9 SQ. YDS.

P.O.B. 1000+00.00

1000

115' TAPER

+45.07

+60.07

R = 140'

N 0°25'15" E

20'

12'

18'

8'

11'

11'

8'

P.O.B. 104+50.00
P.O.E. 1004+50.00

P.C.C. 202+23.05

P.O.E. 104+50.00
P.O.B. 1009+09.04

P.T. 204+46.11

200+00.00

1010

R = 80'

100' TRANSITION

+45.07

+45.07

R = 80'

R = 140'

105

STA. 1010+24 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.8 SQ. YDS.

S 89°53'18" E

EXIST. ROW

STA. 200+00.00 ROUNDABOUT 1 =
STA. 204+46.11 ROUNDABOUT 1 =
STA. 1009+80.97 HWY. 83
Δ = 88°52'34"

STA. 1010+31 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1012+01 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 1011+53 IN PLACE
24" X 38' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24" X 44' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 75 CU. YDS.

ROBERTS DR.

105' TAPER

EXIST. ROW

+98.98

+03.98

22'

1015

EXIST. ROW

N 0°19'46" E

18'

18'

+53

24'

24'

6'

11'

11'

6'

1'

11'

11'

EXIST. ROW

EXIST. ROW

STA. 1002+80 IN PLACE
24" X 38' R.C. PIPE CULVERT
REMOVE

STA. 1001+48 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.4 SQ. YDS.

STA. 1002+90 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1003+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.8 SQ. YDS.

STA. 1011+99 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.7 SQ. YDS.

STA. 105+92 IN PLACE
24" X 54' R.C. PIPE CULVERT
REMOVE

STA. 1010+24 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

STA. 1010+48 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

S 89°37'26" E

EXIST. ROW

P.O.E. 109+88.09

DENOTES OBLITERATION
OF EXISTING PAVEMENT

HWY. 83

oh40219 6/21/2022
R020475.DGN

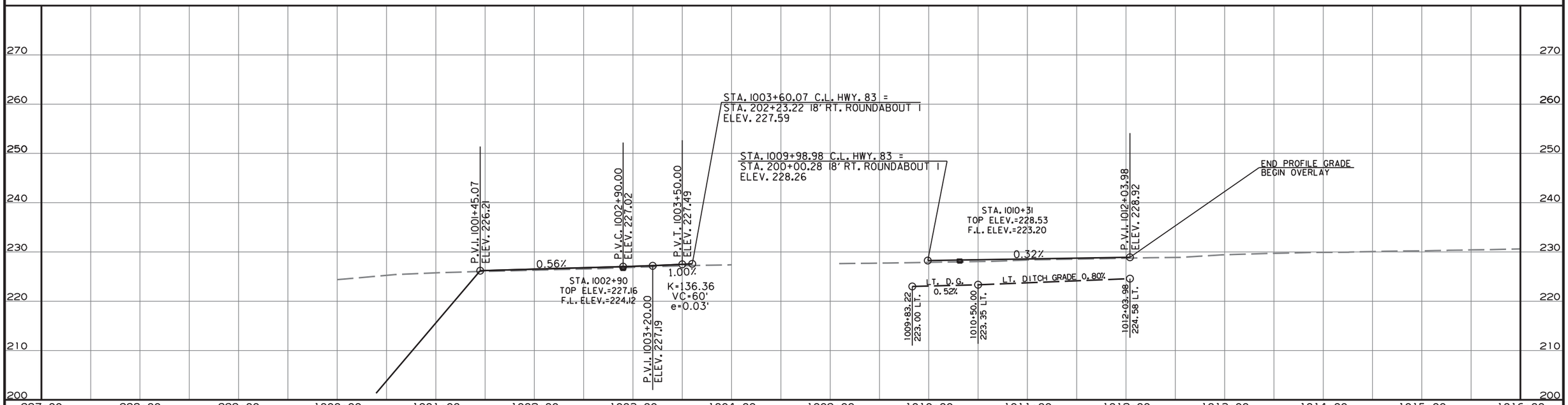
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	59	191
		PLAN AND PROFILE SHEETS				

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

Jun 29 2022 1:34 PM

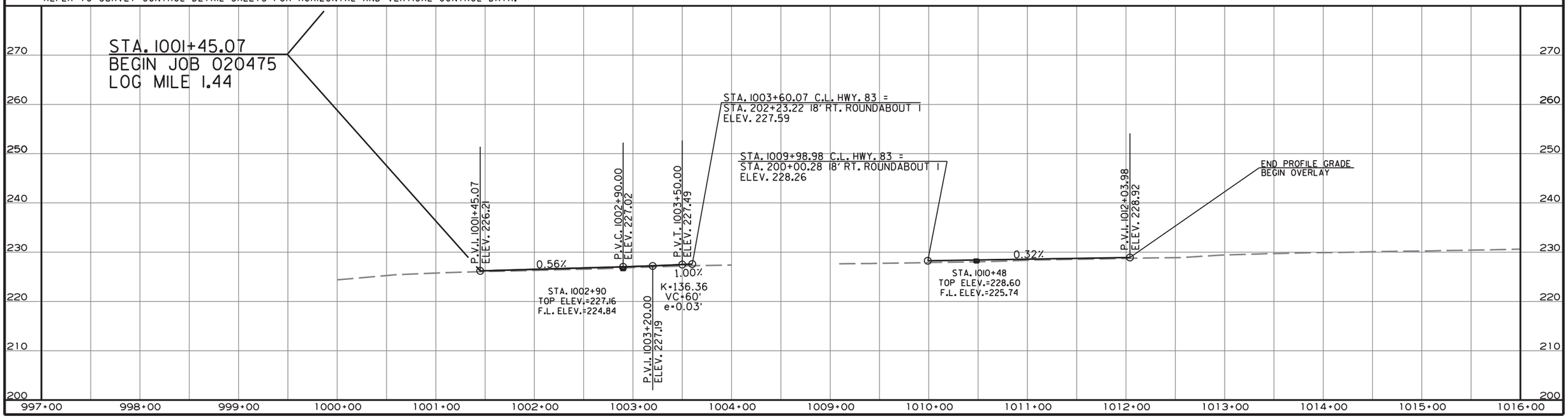
DocuSign

LEFT SIDE OF HWY. 83



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

RIGHT SIDE OF HWY. 83



6/21/2022
dh40219
R020475.DGN

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	60	191

PLAN AND PROFILE SHEETS

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

Jun 29 2022 1:34 PM

DocuSign

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

HWY. 83

280
270
260
250
240
230
220
210
200
190

1016+00 1017+00 1018+00 1019+00 1020+00 1021+00 1022+00 1023+00 1024+00 1025+00 1026+00 1027+00 1028+00 1029+00 1030+00 1031+00

ah40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	61	191
		PLAN AND PROFILE SHEETS				

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:34 PM
DocuSign

STA. 1029+20 - CONSTRUCT
YARD DRAIN ON LT.
& 12" X 102' PIPE OUTLET
CONNECT TO D.I. @ STA. 302+83
H = 2' 1"
YARD DRAIN = 1'-6" DIA.
12" SIDE DRAIN = 102 LIN. FT.

STA. 1031+38 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

STA. 1027+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.8 SQ. YDS.

STA. 1029+83 - CONSTRUCT
D.I. ON LT.
& 18" X 112' PIPE OUTLET
CONNECT TO D.I. @ STA. 1030+99
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 112 LIN. FT.
18" SLPCCS = 112 LIN. FT.

STA. 1025+41 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.7 SQ. YDS.

STA. 1026+65 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1029+41 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.9 SQ. YDS.

STA. 400+00.00 ROUANDABOUT 2 =
STA. 403+83.27 ROUANDABOUT 2 =
STA. 1028+98.22 HWY. 83
Δ = 83°15'08" RT.

STA. 1030+61 IN PLACE
16" X 27' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 1030+99 - CONSTRUCT
D.I. ON LT.
& 18" X 68' PIPE OUTLET W/ F.E.S.
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 68 LIN. FT.
18" F.E.S. = 1EACH

PI = 1036+79.56
Δ = 3°19'13"RT.
D = 1°00'00"
T = 166.07'
L = 332.04'
PC = 1035+13.49
PT = 1038+45.53
e = 0.026'/'
Ls = 300'

STA. 401+92.14 ROUNDABOUT 2 =
STA. 1027+78.50 HWY. 83
Δ = 83°14'46" RT.

STA. 1027+00 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1028+08 IN PLACE
24" X 51' R.C. PIPE CULVERT
REMOVE

STA. 1025+38 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

STA. 1027+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

STA. 1028+65 IN PLACE
18" X 47' R.C. PIPE CULVERT
REMOVE

STA. 1030+48 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
WITH 4' EXTENSION
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1029+41 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.8 SQ. YDS.

STA. 1031+35 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

P.O.B. 300+00.00
P.O.E. 304+00.00
P.O.E. 1028+18.30
P.O.E. 401+91.64
P.O.E. 304+00.00
P.O.E. 1028+18.47
P.O.E. 308+00.00

N 86°01'08" E
N 0°19'46" E
N 0°48'13" E
N 86°16'06" E

R = 140'
R = 80'
R = 140'
R = 80'

125' TAPER
125' TAPER

EXIST. ROW
PROPOSED ROW
PROPOSED CONST. LIMITS
6' CHAIN LINK 3 BARB CNGOOD

1025
1030
1035
305

HWY. 83

oh40219 6/21/2022
R020475.DGN

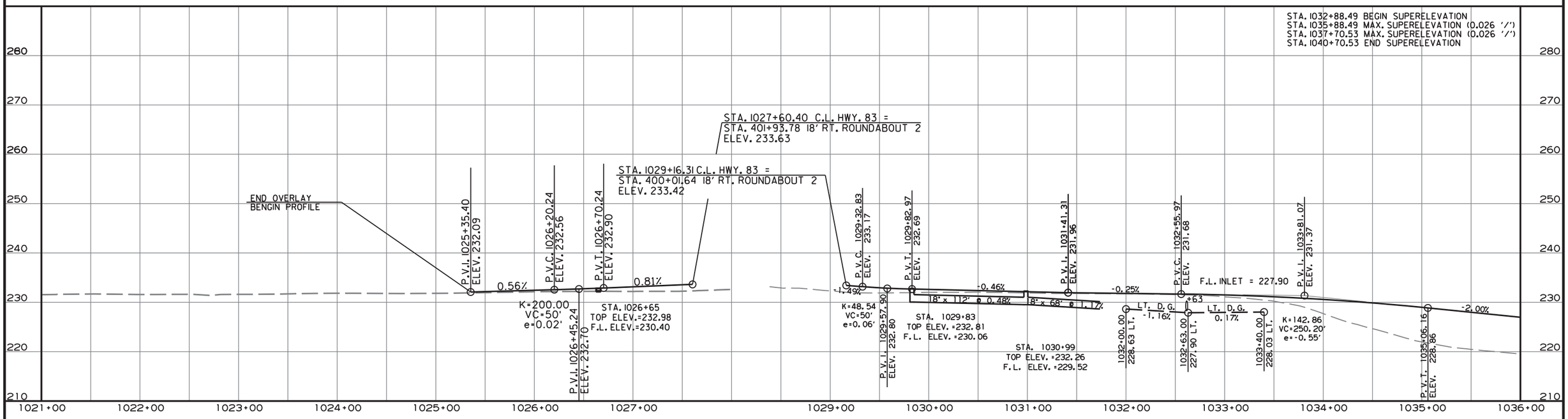
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	62	191
		PLAN AND PROFILE SHEETS				

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

Jun 29 2022 1:34 PM

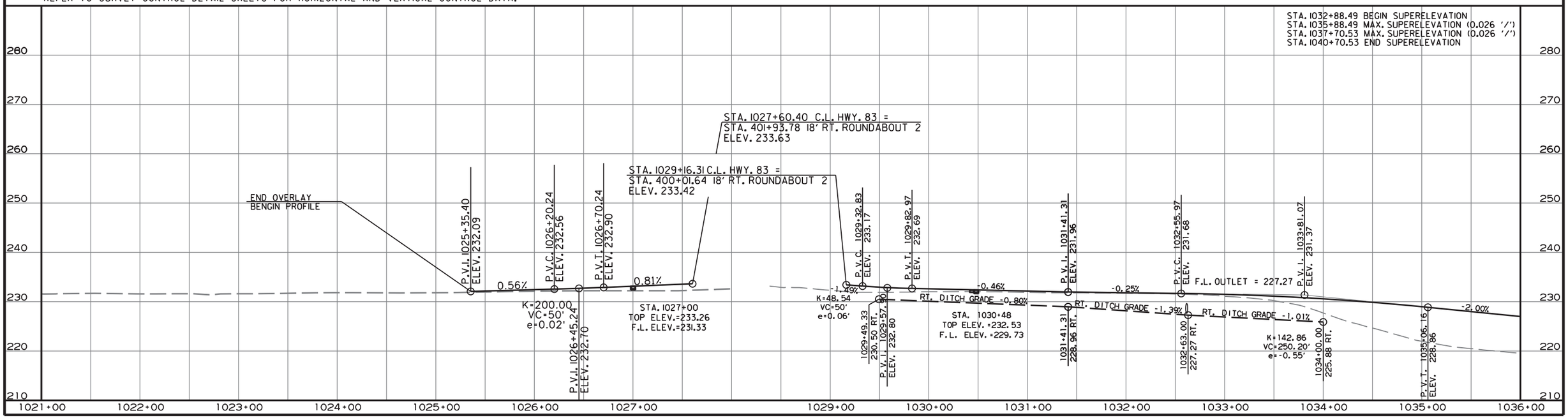
DocuSign

LEFT SIDE OF HWY. 83



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

RIGHT SIDE OF HWY. 83



DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	63	191
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:35 PM

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STA. 1032+63 CONSTRUCT
18" X 70' PIPE CULVERT
WITH FES LT. & RT.
050 = 1.0 CFS D.A. = 2.9 ACRES
18" R.C. PIPE (CLASS IV) = 70 LIN. FT.
18" F.E.S. = 2 EACH

STA. 1032+82 IN PLACE
22" X 14" X 30' C.M. PIPE CULVERT
REMOVE

STA. 1033+64
CONSTRUCT TURNOUT = 25 CU. YDS.

STA. 1032+90 IN PLACE
24" X 30' C.P. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24" X 34' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 50 CU. YDS.

STA. 1033+61 INSTALL
24" X 40' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 70 CU. YDS.

PI = 1036+79.56
Δ = 3°19'13"RT.
D = 1°00'00"
T = 166.07'
L = 332.04'
PC = 1035+13.49
PT = 1038+45.53
e = 0.026'/'
Ls = 300'

STA. 1039+09 IN PLACE
DBL. 36" X 50' C.M. PIPE CULVERT
REMOVE AND CONSTRUCT
DBL. 48" X 102' PIPE CULVERT
ON A 3° LT. FWD. SKEW
WITH FES LT. & RT.
050 = 204 CFS D.A. = 71 ACRES
48" R.C. PIPE (CLASS III) = 204 LIN. FT.
48" F.E.S. = 4 EACH

STA. 1037+20 IN PLACE
24" X 31' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
24" X 60' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 345 CU. YDS.

STA. 1043+00.00 TO STA. 1044+39.33 ON LT.
CONC. DITCH PAVING (TYPE B) = 97.84 SQ. YD.

STA. 1044+70.00 TO STA. 1044+99.33 ON LT.
CONC. DITCH PAVING (TYPE B) = 20.60 SQ. YD.

STA. 1044+58 IN PLACE
DBL. 36" X 50' C.M. PIPE CULVERT
REMOVE AND CONSTRUCT
DBL. 54" X 100' PIPE CULVERT
ON A 6° LT. FWD. SKEW
WITH FES LT. & RT.
050 = 197 CFS D.A. = 173 ACRES
54" R.C. PIPE (CLASS IV) = 200 LIN. FT.
54" F.E.S. = 4 EACH

STA. 1043+00.00 TO STA. 1044+43.17 ON RT.
CONC. DITCH PAVING (TYPE B) = 100.54 SQ. YD.

STA. 1044+58.83 TO STA. 1045+50.00 ON RT.
CONC. DITCH PAVING (TYPE B) = 64.02 SQ. YD.

PI = 1044+57.25
Δ = 6°05'37"RT.
D = 2°00'00"
T = 152.49'
L = 304.69'
PC = 1043+04.76
PT = 1046+09.45
e = 0.048'/'
Ls = 300'

FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.	GATES
1036+37	1038+12	RT.	6' C.L.	177	1
1038+25	1040+66	RT.	D	244	

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

HWY. 83

STA. 1032+88.49 BEGIN SUPERELEVATION
STA. 1035+88.49 MAX. SUPERELEVATION (0.026 '/')
STA. 1037+70.53 MAX. SUPERELEVATION (0.026 '/')
STA. 1040+70.53 END SUPERELEVATION

FLOODPLAIN
STA. 1037+90 TO STA. 1040+30

STA. 1040+79.76 BEGIN SUPERELEVATION
STA. 1043+79.76 MAX. SUPERELEVATION (0.048 '/')
STA. 1045+34.45 MAX. SUPERELEVATION (0.048 '/')
STA. 1048+34.45 END SUPERELEVATION

FLOODPLAIN
STA. 1044+30 TO STA. 1046+20

F.L. INLET LT. = 227.90'
F.L. OUTLET RT. = 227.27'

F.L. OUTLET LT. = 209.53'
F.L. INLET RT. = 210.20'

F.L. OUTLET LT. = 209.71'
F.L. INLET RT. = 210.80'

050 DESIGN HIGH WATER 215.94

050 DESIGN HIGH WATER 215.66

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	64	191
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:35 PM

DENOTES OBLITERATION OF EXISTING PAVEMENT

STA. 1049+46 IN PLACE
24" X 20' C.M. PIPE CULVERT
REMOVE AND CONSTRUCT
29" X 18" X 88' ARCH PIPE CULVERT
ON 30° RT. FWD. SKEW
WITH FES LT. & RT.
050 = 2.2 CFS D.A. = 5.3 ACRES
29" X 18" R.C. ARCH PIPE (CLASS IV) = 88 LIN. FT.
29" X 18" F.E.S. = 2 EACH

STA. 1049+72 INSTALL
18" X 28' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 25 CU. YDS.

STA. 1049+20.00 TO STA. 1049+47.77 ON LT.
CONC. DITCH PAVING (TYPE B) = 19.50 SQ. YD.

STA. 1049+75.77 TO STA. 1050+00.00 ON LT.
CONC. DITCH PAVING (TYPE B) = 17.01 SQ. YD.

STA. 1051+73 INSTALL
21" X 15" X 28' ARCH PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YDS.

STA. 1051+00
CONSTRUCT APPROACH ON LT. = 105 CU. YDS. UNCL. EXC.

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STA. 1055+70 CONSTRUCT
42" X 84' PIPE CULVERT
WITH FES LT. & RT.
050 = 8.5 CFS D.A. = 16.0 ACRES
42" R.C. PIPE (CLASS III) = 84 LIN. FT.
42" F.E.S. = 2 EACH

PI = 1057+00.81
Δ = 18°04'07"LT.
D = 2°00'00"
T = 455.50'
L = 903.43'
PC = 1052+45.31
PT = 1061+48.74
e = 0.048'/'
Ls = 300'

PROPOSED ROW
PROPOSED CONST. LIMITS
T.C.E.
P.C. 1052+45.31
P.T. 1046+09.45
P.I. 1057+00.81
N 14°29' 30" W
N 3°34' 37" E 72.73
1050
1055
1060

PI = 1044+57.25
Δ = 6°05'37"RT.
D = 2°00'00"
T = 152.49'
L = 304.69'
PC = 1043+04.76
PT = 1046+09.45
e = 0.048'/'
Ls = 300'

STA. 1049+72.00 TO STA. 1050+00.00 ON RT.
CONC. DITCH PAVING (TYPE B) = 19.66 SQ. YD.

STA. 1053+25 IN PLACE
22" X 16" X 26' C.M. PIPE CULVERT
REMOVE

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

HWY. 83

FLOODPLAIN
STA. 1044+30 TO STA. 1046+20

STA. 1040+79.76 BEGIN SUPERELEVATION
STA. 1043+79.76 MAX. SUPERELEVATION (0.048 '/')
STA. 1045+34.45 MAX. SUPERELEVATION (0.048 '/')
STA. 1048+34.45 END SUPERELEVATION

STA. 1050+20.31 BEGIN SUPERELEVATION
STA. 1053+20.31 MAX. SUPERELEVATION (0.048 '/')
STA. 1060+73.74 MAX. SUPERELEVATION (0.048 '/')
STA. 1063+73.74 END SUPERELEVATION

K=200.00
VC=400'
e=1.00'
P.V.T. 1047+77.37
ELEV. 226.00
F.L. OUTLET LT. = 224.62'
F.L. INLET RT. = 226.00'
+46
2.00%
LT. D.G. 3.31%
1049+20.00 LT.
224.62 LT.
1049+72.00
226.00 RT.
RT. D.G. 4.54%
1050+00.00
227.27 LT.
1050+00.00
227.27 RT.
P.V.C. 1051+52.37
ELEV. 233.50
P.V.I. 1055+27.37
ELEV. 241.00
K=250.00
VC=750'
e=-2.81'
+70
F.L. OUTLET LT. = 228.54'
F.L. INLET RT. = 230.99'
1057+00.00
231.88 LT.
LT. D.G. 2.12%
1058+00.00
234.00 LT.
P.V.T. 1059+02.37
ELEV. 237.25
-1.00%
LT. DITCH GRADE -0.78%

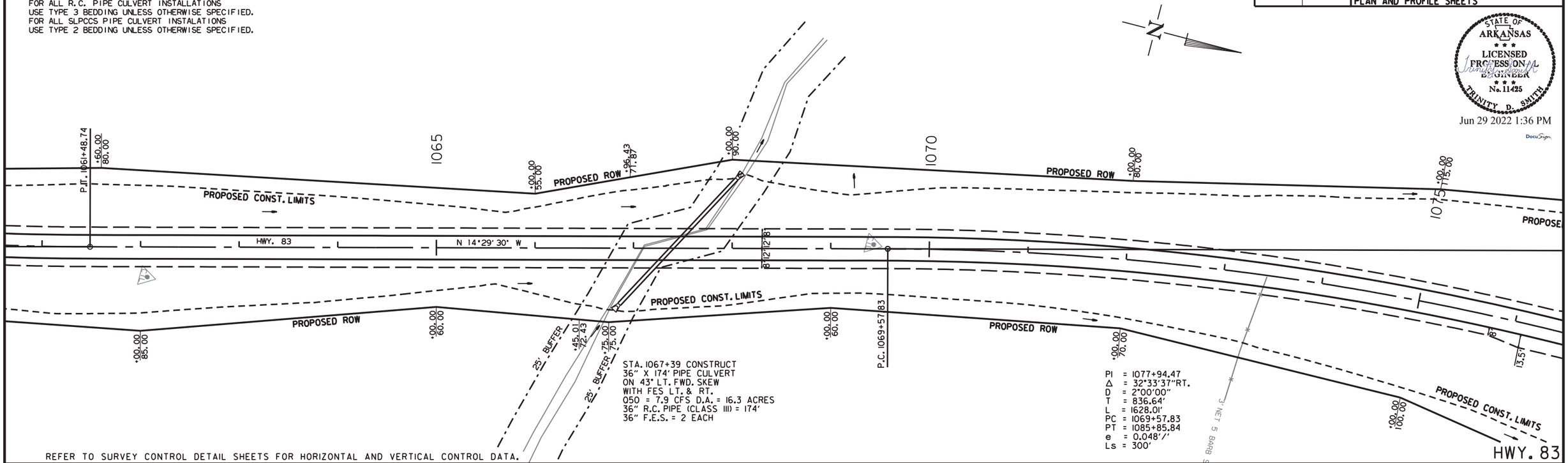
270 260 250 240 230 220 210 200 190 180
1046+00 1047+00 1048+00 1049+00 1050+00 1051+00 1052+00 1053+00 1054+00 1055+00 1056+00 1057+00 1058+00 1059+00 1060+00 1061+00

ah40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	65	191
		PLAN AND PROFILE SHEETS				

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

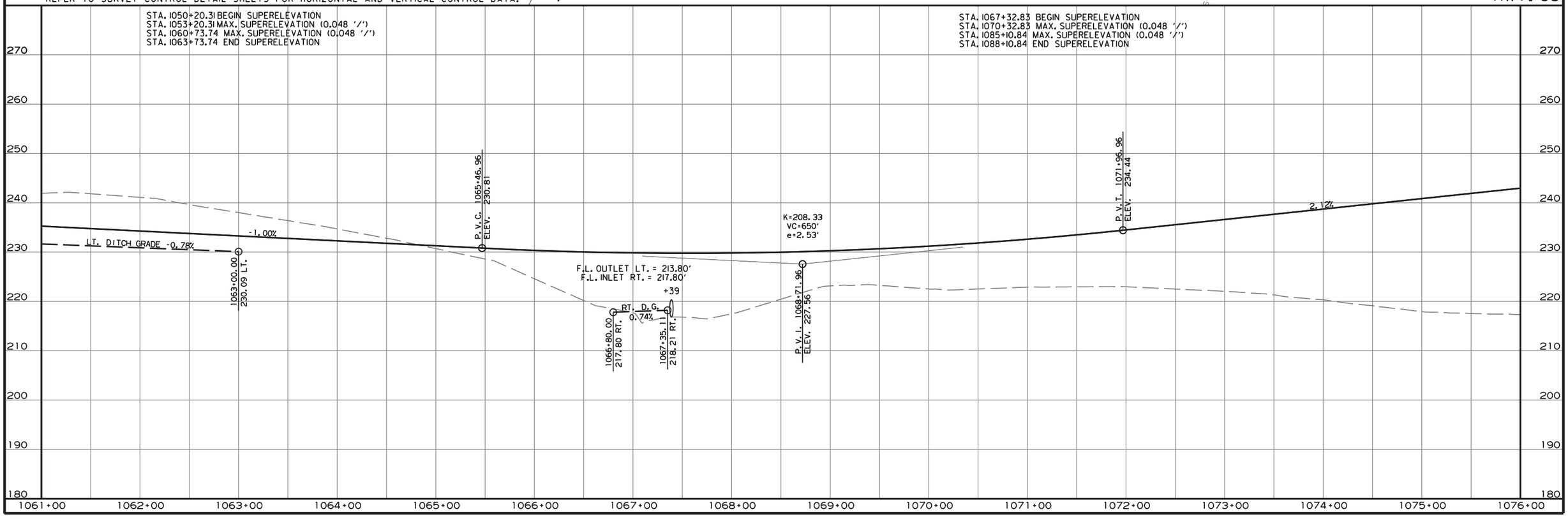
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:36 PM
DocuSign



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

STA. 1050+20.31 BEGIN SUPERELEVATION
STA. 1053+20.31 MAX. SUPERELEVATION (0.048 '/')
STA. 1060+73.74 MAX. SUPERELEVATION (0.048 '/')
STA. 1063+73.74 END SUPERELEVATION

STA. 1067+32.83 BEGIN SUPERELEVATION
STA. 1070+32.83 MAX. SUPERELEVATION (0.048 '/')
STA. 1085+10.84 MAX. SUPERELEVATION (0.048 '/')
STA. 1088+10.84 END SUPERELEVATION



oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	66	191
		PLAN AND PROFILE SHEETS				

ALL R.C. PIPE CULVERTS SHALL BE CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:36 PM

STA. 1080+35.72
OFFSET = 38.87
ELEV. = 205.12

P.I. 1077+94.47

PROPOSED ROW

PROPOSED CONST. LIMITS

N 14°29'30" W

25' BUFFER

TENMILE TRIBUTARY

N 18°04'07" E

4' BARB WOOD POST CNTR

1080

1085

1090

PROPOSED ROW

360' TAPER

HWY. 83

N 18°

4' FLAT BOTTOM CHANNEL
W/ 3:1 CUT SLOPES

PROPOSED CONST. LIMITS

PROPOSED ROW

PI = 1077+94.47
Δ = 32°33'37"RT.
D = 2°00'00"
T = 836.64'
L = 1628.01'
PC = 1069+57.83
PT = 1085+85.84
e = 0.048'/'
Ls = 300'

STA. 1078+68.68
OFFSET = 182.32
ELEV. = 207.18

STA. 1080+21
CHANNEL CHANGE = 260 CU. YD. UNCL. EXC.

25' BUFFER

TENMILE TRIBUTARY

UNION PACIFIC RAILROAD

P.I. 1085+85.84

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

HWY. 83

STA. 1067+32.83 BEGIN SUPERELEVATION
STA. 1070+32.83 MAX. SUPERELEVATION (0.048 '/')
STA. 1085+10.84 MAX. SUPERELEVATION (0.048 '/')
STA. 1088+10.84 END SUPERELEVATION

FLOODPLAIN
STA. 1077+60 TO STA. 1095+21

BRIDGE END
STA. 1078+34.91
ELEV. 248.27

P.V.C. 1078+80.00
ELEV. 248.89

P.V.I. 1083+05.00
ELEV. 257.89

2.12%

K=119.38
VC=850'
e=-7.56'

Q50 DESIGN
HIGH WATER
212.90

BRDIGE END
STA. 1089+32.09
ELEV. 226.62

-5.00%

P.V.T. 1087+30.00
ELEV. 236.64

P.V.C. 1088+91.56
ELEV. 228.56

K=91.06
VC=550'
e=4.15'

270 260 250 240 230 220 210 200 190 180

1076+00 1077+00 1078+00 1079+00 1080+00 1081+00 1082+00 1083+00 1084+00 1085+00 1086+00 1087+00 1088+00 1089+00 1090+00 1091+00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	67	191
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:36 PM
DocuSign

STA. 1093+55 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
WITH 4' EXTENSION LT. & RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

HWY. 278

95

1095

P.O.E. 1095+22.50

R = 100'

+55

360' TAPER

+75.00 60.00
+56.01 55.98
+00.00 55.00
+58.52 95.00

PROPOSED ROW
PROPOSED CONST. LIMITS

13.5'
B7
25'
19'

N 18°04'07" E

STA. 1095+22.50 HWY. 83 =
STA. 95+36.40 HWY. 278

STA. 1094+59 CONSTRUCT
24" X 132' PIPE CULVERT
WITH FES LT. & RT.
050 = 2.6 CFS D.A. = 6.0 ACRES
24" R.C. PIPE (CLASS III) = 132 LIN. FT.
24" F.E.S. = 2 EACH

STA. 1094+90 IN PLACE
DROP INLET ON RT.
18" X 20' PIPE OUTLET
REMOVE

PROPOSED CONST. LIMITS
PROPOSED ROW

+75.00 60.00
+80.60 50.86
+00.00 50.00
+45.09 65.00

R = 70'

208' TAPER

+00.00
+08.00

STA. 1093+40 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
WITH 4' EXTENSION LT. & RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

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

HWY. 83

FLOODPLAIN
STA. 1077+60 TO STA. 1095+21

STA. 1094+93.60
END JOB 020475

K=91.06
VC=550'
e=4.15'

STA. 1093+55 LT.
TOP ELEV.=217.18
F.L. ELEV.=213.18

P.V.T. 1094+41.56
ELEV. 217.67

P.V.I. 1094+91.60
ELEV. 218.19

1.04%

+59

-5.00%

P.V.I. 1091+66.56
ELEV. 214.81

STA. 1093+40 RT.
TOP ELEV.=217.27
F.L. ELEV.=212.85

F.L. INLET LT. = 212.58'
F.L. OUTLET RT. = 211.69'

270 260 250 240 230 220 210 200 190 180

1091+00 1092+00 1093+00 1094+00 1095+00 1096+00 1097+00 1098+00 1099+00 1100+00 1101+00 1102+00 1103+00 1104+00 1105+00 1106+00

ah40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	68	191
		PLAN AND PROFILE SHEETS				

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:37 PM
DocuSign

STA. 101+47.39
BEGIN JORDAN DR.

STA. 107+52.60
END JORDAN DR.

STA. 102+39 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 103+45 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 103+37 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.9 SQ. YDS.

STA. 101+53 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.8 SQ. YDS.

STA. 105+63 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.8 SQ. YDS.

STA. 105+50 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 201+12.24 ROUNDABOUT ℄
STA. 103+80.40 JORDAN DR.
Δ = 89°13'56"

STA. 203+34.97 ROUNDABOUT ℄
STA. 105+19.60 JORDAN DR.
Δ = 89°14'15"

STA. 107+50 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.4 SQ. YDS.

115' TAPER
115' TAPER
EXIST. ROW
EXIST. ROW
EXIST. ROW
22'
N 0°19'46" E
105
101
100
1000
+47.39
+62.39
+37.60
+52.60
R = 140'
R = 80'
R = 140'
R = 80'
P.O.B. 100+00.00
P.O.E. 104+50.00
P.O.B. 1009+04.04
P.C.C. 200+00.00
P.C.C. 202+23.05
P.C.C. 204+46.11
P.O.B. 104+50.00
P.O.E. 1004+50.00
P.O.E. 109+88.09
S 89°53'18" E
S 89°37'26" E
18'
18'
18'
18'
8'11"
8'11"
2'
2'
100' TRANSITION
100' TRANSITION
+47.39
+47.39
+52.60
+52.60

STA. 103+39 IN PLACE
30" X 50" X 90' C.M. PIPE CULVERT
REMOVE

STA. 102+35 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 103+45 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 103+37 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.8 SQ. YDS.

STA. 103+01 CONSTRUCT
36" X 66' PIPE CULVERT
ON A 8° LT. FWD. SKEW
WITH FES LT. & RT.
Q50 = 5.08 CFS D.A. = 0.56 ACRES
36" R.C. PIPE (CLASS IV) = 66 LIN. FT.
36" F.E.S. = 2 EACH

STA. 101+50 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

N 0°25'15" E

STA. 105+63 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

STA. 107+47 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

STA. 105+90 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

P.O.B. 1000+00.00

DENOTES OBLITERATION
OF EXISTING PAVEMENT

JORDAN DR.

dh40219 6/21/2022
R020475.DGN

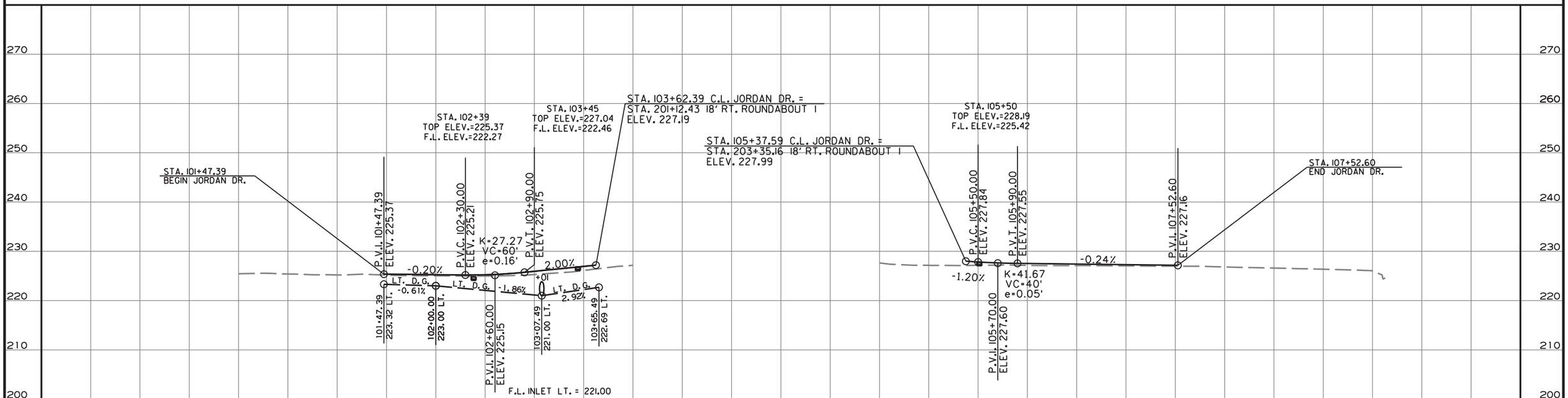
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	69	191
		PLAN AND PROFILE SHEETS				

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

Jun 29 2022 1:37 PM

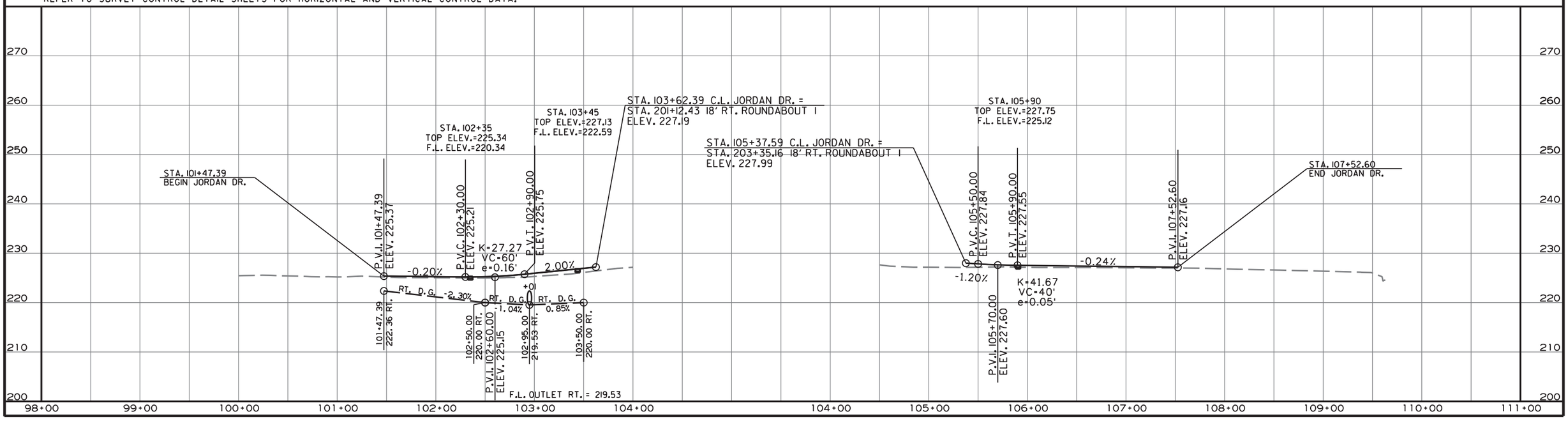
DocuSign

LEFT SIDE OF JORDAN DR.



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

RIGHT SIDE OF JORDAN DR.



6/21/2022
ah40219
R020475.DGN

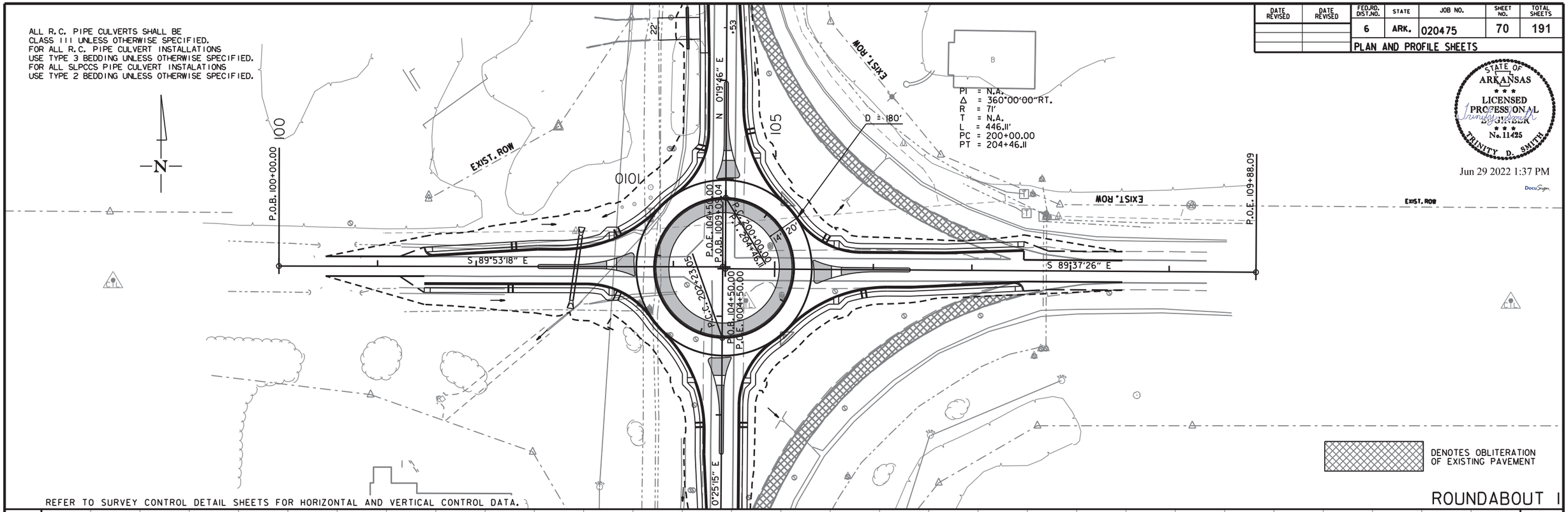
ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	70	191
		PLAN AND PROFILE SHEETS				

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

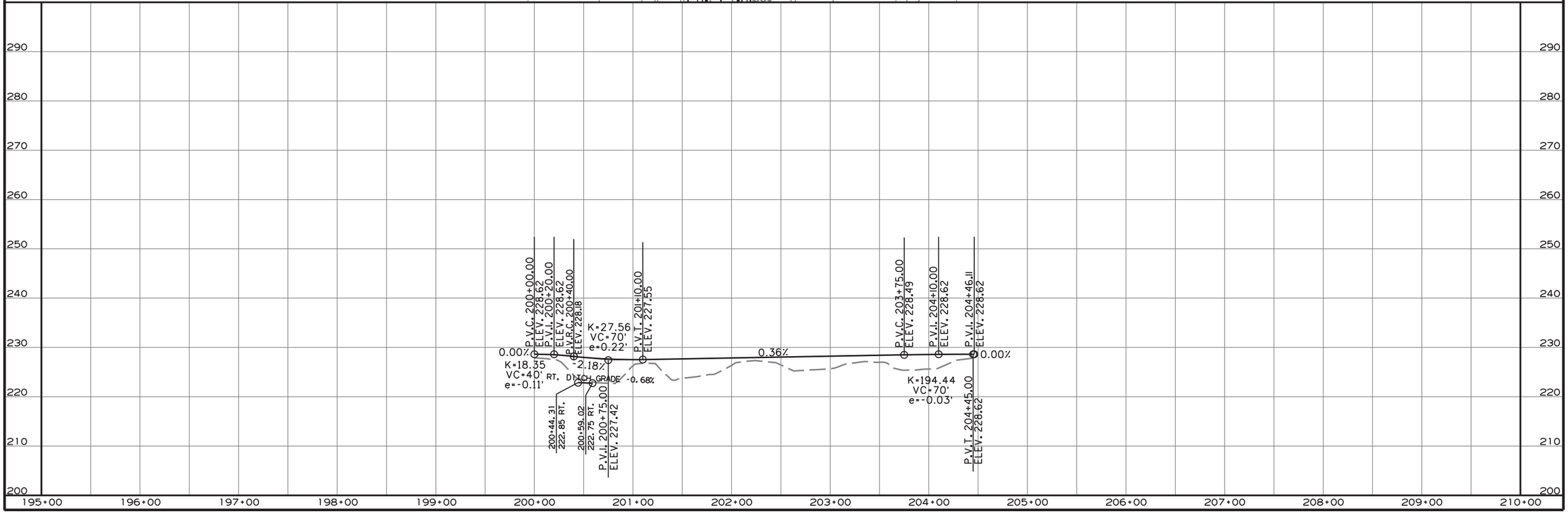
Jun 29 2022 1:37 PM

DocuSign



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

ROUNDABOUT I



ah40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	71	191
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:37 PM
DocuSign

STA. 301+50 - CONSTRUCT
D.I. ON LT.
& 22" X 14" X 54' ARCH PIPE OUTLET
H = 2' 8"
TY MO = 4' I.D.
TY C = 4' X 3'
22" X 14" R.C. ARCH PIPE = 54 LIN. FT.
22" X 14" ARCH F.E.S. = 1EACH

STA. 302+85 - CONSTRUCT
D.I. ON LT. W/ 4' EXTENSION
& 22" X 14" X 132' ARCH PIPE OUTLET
CONNECT TO D.I. @ STA. 301+50
H = 3' 9"
TY MO = 4' I.D.
TY C = 4' X 4'
22" X 14" R.C. ARCH PIPE = 132 LIN. FT.
22" X 14" SLPCCS ARCH PIPE = 132 LIN. FT.

STA. 301+81 IN PLACE
24" X 30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE
CONSTRUCT APPROACH = 5 CU. YDS.

STA. 302+32 IN PLACE
24" X 48' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE
CONSTRUCT APPROACH = 5 CU. YDS.

STA. 302+57 - CONSTRUCT
YARD DRAIN ON LT.
& 12" X 28' PIPE OUTLET
CONNECT TO D.I. @ STA. 302+85
H = 2' 1"
YARD DRAIN = 1'-6" DIA.
12" SIDE DRAIN = 28 LIN. FT.

STA. 301+39 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.9 SQ. YDS.

STA. 303+03 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.8 SQ. YDS.

STA. 305+11 - CONSTRUCT
D.I. ON LT.
& 18" X 238' PIPE OUTLET
CONNECT TO D.I. @ STA. 302+85
H = 5' 2"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE (CLASS V) = 238 LIN. FT.

STA. 305+75 - CONSTRUCT
D.I. ON LT.
& 18" X 60' PIPE OUTLET
CONNECT TO D.I. @ STA. 305+11
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 60 LIN. FT.
18" SLPCCS PIPE = 60 LIN. FT.

STA. 306+94 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.3 SQ. YDS.

STA. 304+97 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON LT.
= 3.6 SQ. YDS.

STA. 306+85 - CONSTRUCT
D.I. ON LT.
& 18" X 30' PIPE INLET W/ F.E.S.
& 18" X 106' PIPE OUTLET
CONNECT TO D.I. @ STA. 305+75
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 136 LIN. FT.
18" SLPCCS PIPE = 106 LIN. FT.
18 F.E.S. = 1EACH

STA. 402+99.73 ROUNDABOUT 2 =
STA. 304+53.79 OLD WARREN RD.
Δ = 90°15'00" RT.

STA. 306+96.79
END OLD WARREN RD.

STA. 301+33.21
BEGIN OLD WARREN RD.

STA. 401+08.33 ROUNDABOUT 2 =
STA. 303+46.21 OLD WARREN RD.
Δ = 90°13'14" RT.

125' TAPER

125' TAPER

100' TRANSITION

100' TRANSITION

R = 65'

R = 130'

R = 65'

R = 130'

PROPOSED ROW

PROPOSED CONST. LIMITS

EXIST. ROW

P.O.B. 300+00.00

P.O.E. 308+00.00

N 86°01'08" E

N 86°16'06" E

N 0°48'13" E

N 0°19'46" E

STA. 307+14 IN PLACE
18" X 40' R.C. PIPE CULVERT
REMOVE

STA. 304+97 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.8 SQ. YDS.

STA. 303+03 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.7 SQ. YDS.

STA. 306+91 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.9 SQ. YDS.

STA. 301+36 CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON RT.
= 3.3 SQ. YDS.

STA. 302+35 - CONSTRUCT
D.I. ON RT.
& 18" X 6' PIPE OUTLET W/ F.E.S.
H = 2' 3"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 6 LIN. FT.
18" F.E.S. = 1EACH

STA. 305+08 - CONSTRUCT
D.I. ON RT.
& 18" X 284' PIPE OUTLET
CONNECT TO D.I. @ STA. 302+35
H = 4' 10"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE (CLASS V) = 284 LIN. FT.

STA. 306+00 - CONSTRUCT
D.I. ON RT.
& 18" X 88' PIPE OUTLET
CONNECT TO D.I. @ STA. 305+08.00
H = 2' 10"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 88 LIN. FT.
18" SLPCCS PIPE = 88 LIN. FT.

STA. 306+80 - CONSTRUCT
D.I. ON RT.
& 18" X 48' PIPE INLET W/ F.E.S.
& 18" X 10' PIPE INLET W/ F.E.S.
& 18" X 76' PIPE OUTLET
CONNECT TO D.I. @ STA. 306+00
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 134 LIN. FT.
18" SLPCCS PIPE = 76 LIN. FT.
18" F.E.S. = 2 EACH

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

OLD WARREN RD.

dh40219 6/21/2022
R020475.DGN

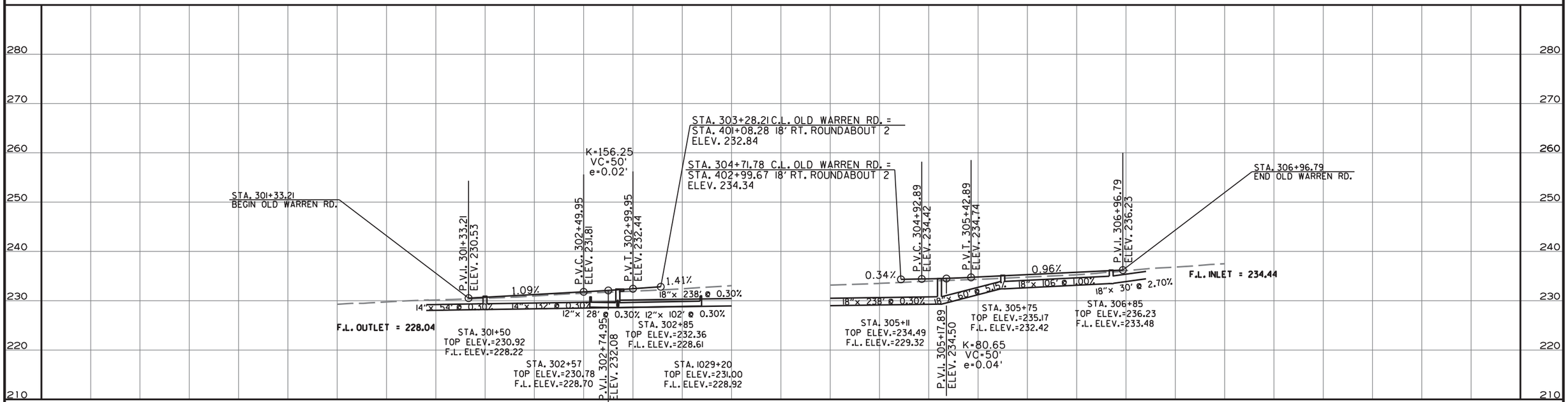
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	72	191
		PLAN AND PROFILE SHEETS				

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

Jun 29 2022 1:38 PM

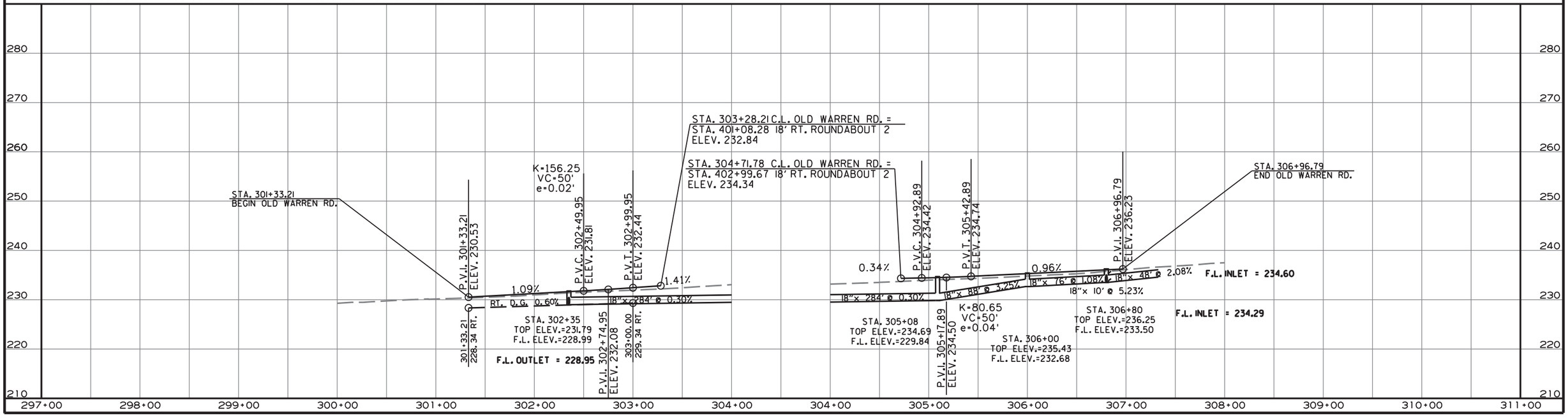
DocuSign

LEFT SIDE OF OLD WARREN RD.



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

RIGHT SIDE OF OLD WARREN RD.

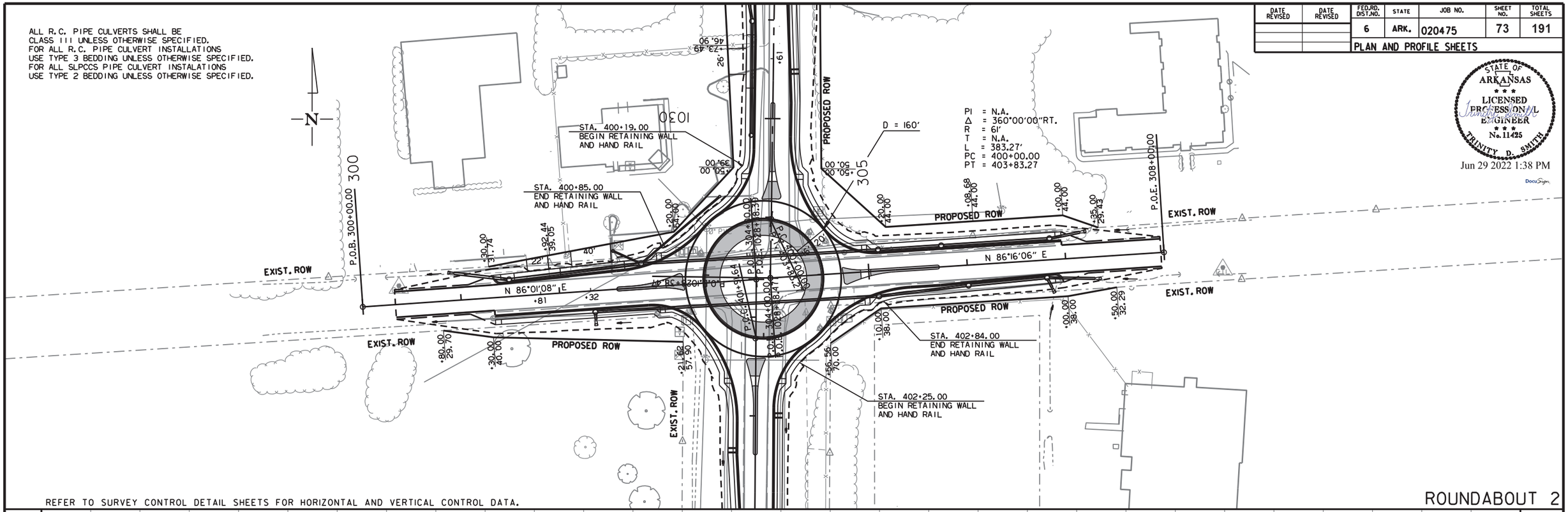


6/21/2022
oh40219
R020475.DGN

ALL R.C. PIPE CULVERTS SHALL BE
CLASS III UNLESS OTHERWISE SPECIFIED.
FOR ALL R.C. PIPE CULVERT INSTALLATIONS
USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
FOR ALL SLPCCS PIPE CULVERT INSTALATIONS
USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

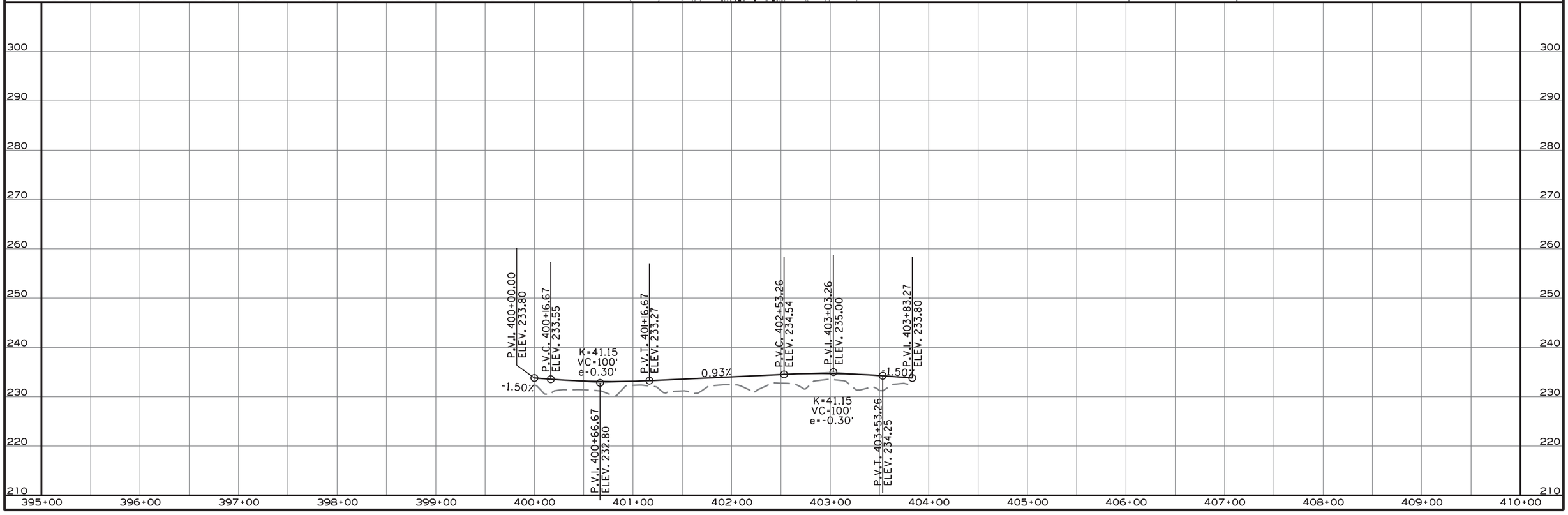
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	73	191
		PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
Jun 29 2022 1:38 PM
DocuSign



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

ROUNDABOUT 2



oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	74	191
		ILLUMINATION NOTES AND QUANTITIES				

GENERAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NFPA 70, CURRENT EDITION), LIFE SAFETY CODE (NFPA 101, CURRENT EDITION), UNDERGROUND FACILITIES DAMAGE PREVENTION ACT (§14-271-101 ET SEQ.). AND LOCAL ELECTRICAL CODE. IN ADDITION, ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE PROJECT ENGINEER, TO ENSURE ARKANSAS STATE CODES (§17-28-101 ET SEQ. AND §20-31-101 ET SEQ.) ARE MET. THE DOCUMENTATION SHALL INCLUDE:
   (1) ELECTRICIANS' LICENSE INFORMATION AND EXPIRATION DATE.
   (2) THE RATIO OF LICENSED-ELECTRICIAN-TO-APPRENTICE-ELECTRICIANS.
   (3) PRINTED SEARCH RESULT OF LICENSED ELECTRICIANS FROM ARKANSAS DEPARTMENT OF LABOR ELECTRICAIN LICENSEE DIRECTORY (https://www.ark.org/labor/electrician/search.php)
   ALL LICENSES SHALL BE VALID AND CURRENT.

3. THE CONTRACTOR SHALL NOT ENGAGE IN EXCAVATION OR DEMOLITION ACTIVITIES WITHOUT HAVING FIRST NOTIFIED THE ARKANSAS ONE CALL CENTER IN ACCORDANCE WITH UNDERGROUND FACILITIES DAMAGE PREVENTION ACT. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE CALL SYSTEM. THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES AS WELL AS THE ONE CALL CENTER.

4. UNDERGROUND UTILITIES EXIST WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. SOME UTILITIES MAY HAVE BEEN RELOCATED SINCE THE TIME OF DESIGN AND THE CONTRACTOR'S NOTICE TO PROCEED. THE CONTRACTOR SHALL CONTACT THE UTILITY COMPANIES INVOLVED AND VERIFY THE LOCATIONS OF UNDERGROUND UTILITIES. THE CONTRACTOR SHALL MAINTAIN THE UTILITY LOCATION MARKINGS UNTIL IT IS NO LONGER NECESSARY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS OF REPAIR OR REPLACEMENT OF EXISITNG UTILITIES DAMAGED DURING CONSTRUCTION.

6. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAYBE THE PROPERTY OF THE UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.

7. CONDUIT INSTALL UNDER ROADWAY SURFACES SHALL BE INSTALLED BY A PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" AS PER NEC.

8. NON-DESTRUCTIVE MEG TEST AND CURRENT LEAKAGE TEST SHALL BE PERFORMED ON NEW CONDUCTORS, IN THE PRESENCE OF THE FIELD INSPECTOR. THE TEST VOLTAGE SHALL BE LIMITED TO 600 VOLTS. ANY CONDUCTOR NOT MEETING THE MINIMUM ACCEPTABLE VALUE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE USING NEW CONDUCTOR. THE RESULTS SHALL BE DOCUMENTED AND PROVIDED TO THE JOB ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES CAUSED BY THE MEG TEST WHILE DEVICES OR ACCESSORIES ARE STILL CONNECTED AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE SPECIAL PROVISION ELECTRICAL CONDUCTORS-IN-CONDUIT.

9. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.

10. EACH ROADWAY ILLUMINATION POLE SHALL BE BONDED TO EQUIPMENT GROUNDING CONDUCTOR PER NEC. SEE ARTICLES 250 AND 410.

11. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED.

12. ALL LUMINAIRE ASSEMBLIES SHALL HAVE A BUG RATING OF U0.

13. BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL PROVIDE 2 SETS OF LEDGER SIZE (11" X 17") AS-BUILT PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.

14. PULL CABLE SHALL BE MINIMUM 1/4" PULL NYLON OR POLYESTER ROPE, OR 1200 LBS PULL TAPE WHEN PULLING CONDUCTORS. STEEL CABLE OR FISH TAPE SHALL NOT BE USED. CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY THE NEC FOR CONDUCTORS USED.

15. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED ON THE PLANS. ALL CONDUIT SHALL BE 2" INCH DIAMETER UNLESS SPECIFIED ON PLANS.

16. SLACK CABLES IN PULL BOXES SHALL BE 3 FEET.

LIGHTING NOTES:

1. FOR LUMINAIRE ORIENTATION AND X-Y COORDINATES OF POLES, SEE LUMINAIRE SCHEDULE.

2. INSTALL PULL BOX (TYPE 2) ON SIDEWALK WITHIN 5' OF POLE FOUNDATION. UNLESS SHOWN OTHERWISE ON THE PLANS.

3. CONDUIT BURIED UNDER ROADWAY AND SIDEWALK SHALL HAVE MINIMUM 24" DEPTH. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DROP INLETS.

4. CONDUIT INSTALLED UNDER ROADWAY SECTIONS SHALL BE INSTALLED BY PUSHING OR DIRECTIONAL BORING. CONDUIT SHALL BE UL LISTED AND MARKED FOR DIRECTIONAL BORING USE.

5. THERE ARE FIBER OPTICS, SANITARY SEWER, AND GAS UTILITY.

6. INSTALL CONDUIT BELL END FITTINGS ON NON-METALLIC CONDUIT ENDS. THE COST OF FITTINGS SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM, "NON-METALLIC CONDUIT (2"). USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.

7. THE DEGREE OF TILT ON LUMINAIRES SHALL BE ZERO.

8. ALL SPLICES SHALL BE WATERTIGHT AND UL-LISTED FOR CONTINUOUS USE IN SUBMERSIBLE INSTALLATIONS.

9. USE MINIMUM 1/4" PULL ROPE OR 1200 LBS. PULL TAPE WHEN PULLING CONDUCTORS.

10. E.G.C. SHALL BE EXOTHERMICALLY BONDED TO GROUND ROD.

11. CONDUCT A MINIMUM 14-DAY BURN TEST FOR THE COMPLETE LIGHTING SYSTEM. REPLACE BURNED OUT AND NOTICEABLY DIM LUMINAIRES; MALFUNCTIONING EQUIPMENT SHALL BE CORRECTED, AND RETEST THE SYSTEM. OTHERWISE REMOVE AND REPLACE WITH NEW EQUIPMENT.

12. SEE STANDARD DRAWING SD-6 FOR PULL BOX CONSTRUCTION.

13. ALL METAL POLES SHALL BE GROUNDED TO E.G.C. PER NEC (2020) ARTICLE 410 PART IV AND PART V.

14. 2C/10 A.W.G., E.G.C. INDICATES TWO CURRENT CARRYING CONDUCTORS AND ONE E.G.C.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7827
JOSEPH A. BARTINI
8:21 AM
DocuSigned

SUMMARY OF ILLUMINATION QUANTITIES

ITEM NUMBER	ITEM	NORTH ROUNDABOUT	SOUTH ROUNDABOUT	TOTAL	UNIT
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.,E.G.C.)	1066	1786	2852	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	560	840	1400	LIN. FT.
710	NON-METALLIC CONDUIT (2")	923	1594	2517	LIN. FT.
SS, SP, & 711	CONCRETE PULL BOX (TYPE 2 HD)	14	19	33	EACH
SS, SP, & 711	CONCRETE PULL BOX (TYPE 3 HD)	1	1	2	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	2	EACH
SP	LED ROADWAY ILLUMINATION POLE (25,000 LUMENS, COBRA HEAD, SHOE BASE, 40')	8	12	20	EACH

LOCATION: HIGHWAY 83
CITY: MONTICELLO
COUNTY: DREW
DISTRICT: 2 SCALE: N/A DRAWN BY: JDH

M020475.DGN 4/15/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	75	191
		ILLUMINATION LAYOUT - NORTH				

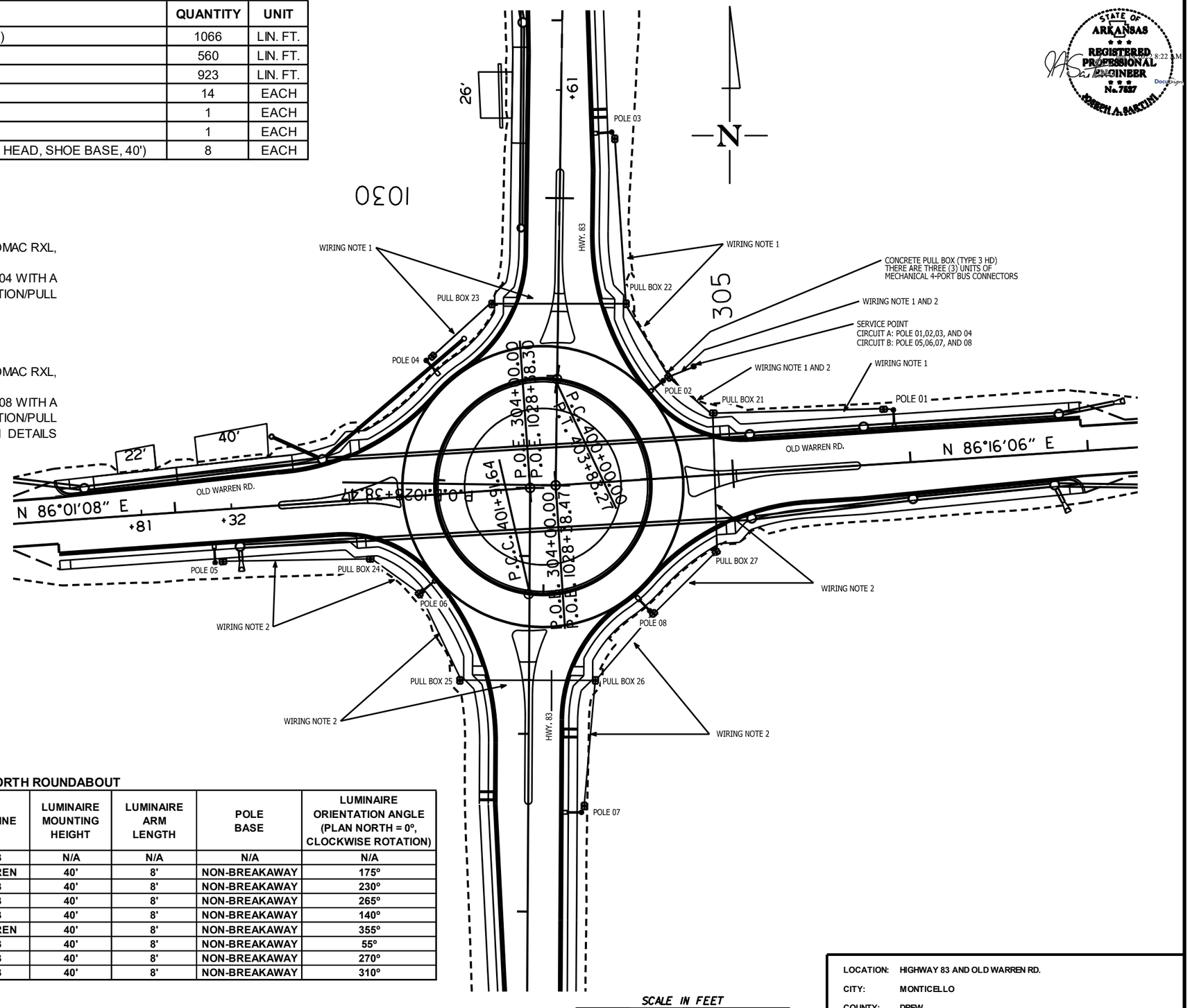
NORTH ROUNDABOUT - ILLUMINATION QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.,E.G.C.)	1066	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	560	LIN. FT.
710	NON-METALLIC CONDUIT (2")	923	LIN. FT.
SS, SP, & 711	CONCRETE PULL BOX (TYPE 2 HD)	14	EACH
SS, SP, & 711	CONCRETE PULL BOX (TYPE 3 HD)	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	LED ROADWAY ILLUMINATION POLE (25,000 LUMENS, COBRA HEAD, SHOE BASE, 40')	8	EACH

NORTH ROUNDABOUT WIRING NOTES:

1. CIRCUIT A:
   1-2/10A.W.G.,E.G.C. IN SCH.40 NON-METALLIC CONDUIT (2")
   BRANCH AT PULL BOXES 02 AND 22 USING MULTI-PORT BUS CONNECTORS (HOMAC RXL, UTILCO SAFTYSUB, OR APPROVED EQUAL).
   SPLICED AT EACH PULL BOX ASSOCIATE WITH LIGHTING POLES 01, 02, 03, AND 04 WITH A BREAKAWAY DISCONNECT LOCATED IN POLE BASE. REFER TO POLE FOUNDATION/PULL BOX WIRING DETAIL IN ILLUMINATION DETAILS SHEET.

2. CIRCUIT B:
   1-2/10A.W.G.,E.G.C. IN SCH.40 NON-METALLIC CONDUIT (2")
   BRANCH AT PULL BOXES 02 AND 22 USING MULTI-PORT BUS CONNECTORS (HOMAC RXL, UTILCO SAFTYSUB, OR APPROVED EQUAL).
   SPLICED AT EACH PULL BOX ASSOCIATE WITH LIGHTING POLES 05, 06, 07, AND 08 WITH A BREAKAWAY DISCONNECT LOCATED IN POLE BASE. REFER TO POLE FOUNDATION/PULL BOX WIRING DETAIL AND LUMINAIRE WIRING SCHEMATICS IN ILLUMINATION DETAILS SHEETS.



LUMINAIRE SCHEDULE - NORTH ROUNDABOUT

POLE NO.	EASTING	NORTHING	STATION	OFFSET	CENTER LINE	LUMINAIRE MOUNTING HEIGHT	LUMINAIRE ARM LENGTH	POLE BASE	LUMINAIRE ORIENTATION ANGLE (PLAN NORTH = 0º, CLOCKWISE ROTATION)
SERVICE POINT	1368844.04	1657076.44	1029+06.84	67.70' RT.	HWY. 83	N/A	N/A	N/A	N/A
POLE 01	1368956.36	1657051.93	305+92.32	29.96' LT.	OLD WARREN	40'	8'	NON-BREAKAWAY	175º
POLE 02	1368826.93	1657068.33	1028+98.14	59.70' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	230º
POLE 03	1368797.93	1657208.14	1030+37.53	28.75' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	265º
POLE 04	1368693.60	1657079.74	1029+07.68	73.78' LT.	HWY. 83	40'	8'	NON-BREAKAWAY	140º
POLE 05	1368574.92	1656965.97	302+20.39	29.67' RT.	OLD WARREN	40'	8'	NON-BREAKAWAY	355º
POLE 06	1368691.60	1656950.06	1027+79.97	60.11' LT.	HWY. 83	40'	8'	NON-BREAKAWAY	55º
POLE 07	1368780.93	1656825.55	1026+55.98	29.94' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	270º
POLE 08	1368819.32	1656938.91	1027+69.56	67.67' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	310º

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7837
JOSEPH A. SANTINI
8:22 AM

LOCATION: HIGHWAY 83 AND OLD WARREN RD.
CITY: MONTICELLO
COUNTY: DREW
DISTRICT: 2 SCALE: 1" = 60' DRAWN BY: JDH

M020475.DGN 4/15/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	76	191
		ILLUMINATION LAYOUT - SOUTH				

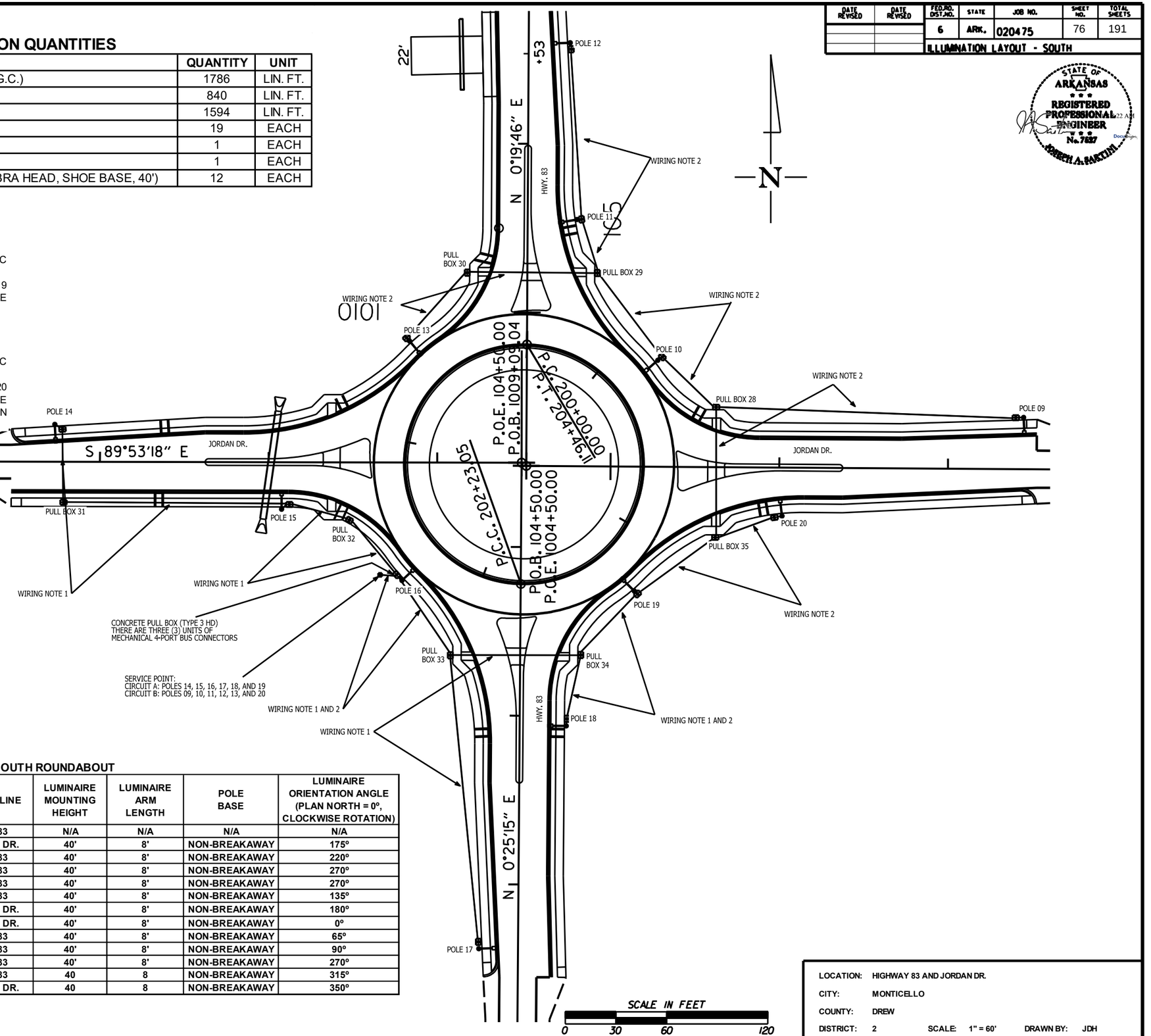
SOUTH ROUNDABOUT - ILLUMINATION QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.,E.G.C.)	1786	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	840	LIN. FT.
710	NON-METALLIC CONDUIT (2")	1594	LIN. FT.
SS, SP, & 711	CONCRETE PULL BOX (TYPE 2 HD)	19	EACH
SS, SP, & 711	CONCRETE PULL BOX (TYPE 3 HD)	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	LED ROADWAY ILLUMINATION POLE (25,000 LUMENS, COBRA HEAD, SHOE BASE, 40')	12	EACH

SOUTH ROUNDABOUT WIRING NOTES:

1. CIRCUIT A:
   1-2/10A.W.G.,E.G.C. IN SCH.40 NON-METALLIC CONDUIT (2")
   BRANCH AT PULL BOXES 15, 33 AND 34 USING MULTI-PORT BUS CONNECTORS (HOMAC RXL, UTILCO SAFTYSUB, OR APPROVED EQUAL).
   SPLICED AT EACH PULL BOX ASSOCIATE WITH LIGHTING POLES 14, 15, 16, 17, 18, AND 19 WITH A BREAKAWAY DISCONNECT LOCATED IN POLE BASE. REFER TO POLE FOUNDATION/PULL BOX WIRING DETAIL IN ILLUMINATION DETAILS SHEET.

2. CIRCUIT B:
   1-2/10A.W.G.,E.G.C. IN SCH.40 NON-METALLIC CONDUIT (2")
   BRANCH AT PULL BOXES 28, 29 AND 35 USING MULTI-PORT BUS CONNECTORS (HOMAC RXL, UTILCO SAFTYSUB, OR APPROVED EQUAL).
   SPLICED AT EACH PULL BOX ASSOCIATE WITH LIGHTING POLES 09, 10, 11, 12, 13, AND 20 WITH A BREAKAWAY DISCONNECT LOCATED IN POLE BASE. REFER TO POLE FOUNDATION/PULL BOX WIRING DETAIL AND LUMINAIRE WIRING SCHEMATICS IN ILLUMINATION DETAILS SHEETS.



LUMINAIRE SCHEDULE - SOUTH ROUNDABOUT

POLE NO.	EASTING	NORTHING	STATION	OFFSET	CENTER LINE	LUMINAIRE MOUNTING HEIGHT	LUMINAIRE ARM LENGTH	POLE BASE	LUMINAIRE ORIENTATION ANGLE (PLAN NORTH = 0°, CLOCKWISE ROTATION)
SERVICE POINT	1368654.26	1655014.18	1003+82.84	83.42' LT.	HWY. 83	N/A	N/A	N/A	N/A
POLE 09	1369035.82	1655107.51	107+44.68	30.63' LT.	JORDAN DR.	40'	8'	NON-BREAKAWAY	175°
POLE 10	1368818.90	1655141.40	1009+72.08	77.59' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	220°
POLE 11	1368771.01	1655224.82	1010+55.22	29.23' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	270°
POLE 12	1368766.99	1655329.60	1011+59.98	24.60' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	270°
POLE 13	1368671.86	1655152.70	1009+82.53	69.51' LT.	HWY. 83	40'	8'	NON-BREAKAWAY	135°
POLE 14	1368461.40	1655103.41	101+73.19	22.15' LT.	JORDAN DR.	40'	8'	NON-BREAKAWAY	180°
POLE 15	1368595.87	1655053.15	103+07.75	27.85' RT.	JORDAN DR.	40'	8'	NON-BREAKAWAY	0°
POLE 16	1368667.22	1655010.90	1003+79.66	70.43' LT.	HWY. 83	40'	8'	NON-BREAKAWAY	65°
POLE 17	1368712.78	1654792.61	1001+61.71	23.27 LT.	HWY. 83	40'	8'	NON-BREAKAWAY	90°
POLE 18	1368764.61	1654924.68	1002+94.15	27.59' RT.	HWY. 83	40'	8'	NON-BREAKAWAY	270°
POLE 19	1368804.93	1655004.68	1003+74.45	67.32' RT.	HWY. 83	40	8	NON-BREAKAWAY	315°
POLE 20	1368892.56	1655049.05	106+01.81	28.77' RT.	JORDAN DR.	40	8	NON-BREAKAWAY	350°

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7627
JOSEPH A. MARTIN

LOCATION: HIGHWAY 83 AND JORDAN DR.
CITY: MONTICELLO
COUNTY: DREW
DISTRICT: 2 SCALE: 1" = 60' DRAWN BY: JDH

M020475.DGN 4/15/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	77	191
		ILLUMINATION TABLES				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7627
JOSEPH A. MARTIN

ILLUMINATION STATISTICS

DESCRIPTION	AVG. (FC)	MAX. (FC)	MIN. (FC)	AVG/MIN
ROUNDABOUT	2.3	3.2	1.2	2.7:1
APPROACH	1.3	1.6	1	1.3:1
CROSSWALK	1.3	1.4	1.1	1.2:1

NOTE:
1. CALCULATIONS WERE BASED ON 0.85 LIGHT LOSS FACTOR.
2. HORIZONTAL ILLUMINATION VALUES ARE SHOWN.

ILLUMINATION DESIGN CRITERIA

DESCRIPTION	AVG. (FC)	AVG/MIN
ROUNDABOUT	1.7	3:1
APPROACH	1.0	4:1
CROSSWALK	1.0	4:1

NOTE:
1. DESIGN BASIS WERE AASHTO ROADWAY LIGHTING DESIGN GUIDE, 7TH ED. AND IES RP-8-18.
2. ATBL_D_XXXXX_R3.IES DESIGN FIXTURE OR APPROVED EQUAL SHALL BE USED.

CONDUIT FILL

CONDUIT SIZE	CONDUCTORS	CONDCUIT FILL	MAX FILL
2"	2C/10 A.W.G., E.G.C.	7.97%	40%

NORTH ROUNDABOUT, ELECTRICAL SERVICE DATA

CIRCUIT ID	LOCATION	SERVICE VOLTAGE	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS	MAIN CIRCUIT BREAKER	BRANCH CIRCUIT BREAKER	BRANCH CIRCUIT (AMPS)	KVA LOAD
A	SEE NORTH ROUNDABOUT ILLUMINATION LAYOUT	120/240V, SINGLE PHASE	2" NMC	2C/10 A.W.G. & E.G.C.	2P/100A	2P/20A	4.20	1.01
B				2C/10 A.W.G. & E.G.C.		2P/20A	4.20	1.01

SOUTH ROUNDABOUT, ELECTRICAL SERVICE DATA

CIRCUIT ID	LOCATION	SERVICE VOLTAGE	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS	MAIN CIRCUIT BREAKER	BRANCH CIRCUIT BREAKER	BRANCH CIRCUIT (AMPS)	KVA LOAD
A	SEE SOUTH ROUNDABOUT ILLUMINATION LAYOUT	120/240V, SINGLE PHASE	2" NMC	2C/10 A.W.G. & E.G.C.	2P/100A	2P/20A	6.30	1.51
B				2C/10 A.W.G. & E.G.C.		2P/20A	6.30	1.51

NORTH ROUNDABOUT, VOLTAGE DROP, CIRCUIT A

SEGMENT		VOLTAGE	PHASE	SETS	CONDUCTOR	CURRENT	SEG AMP	Z/1000ft	LENGTH	VD	%VD
SRV. PT.	POLE 02	240.00	1ϕ	1	#10	1.05	4.20	1.046339	16	0.14	0.06
POLE 02	POLE 01	239.86	1ϕ	1	#10	1.05	1.05	1.046339	130	0.29	0.12
POLE 02	PULL BOX 22	239.86	1ϕ	1	#10	2.10	2.10	1.046339	50	0.22	0.09
PULLBOX 22	POLE 03	239.64	1ϕ	1	#10	1.05	1.05	1.046339	96	0.21	0.09
PULLBOX 22	POLE 04	239.64	1ϕ	1	#10	1.05	1.05	1.046339	124	0.27	0.11
										TOTAL	0.47

NORTH ROUNDABOUT, VOLTAGE DROP, CIRCUIT B

SEGMENT		VOLTAGE	PHASE	SETS	CONDUCTOR	CURRENT	SEG AMP	Z/1000ft	LENGTH	VD	%VD
SRV. PT.	POLE 08	240.00	1ϕ	1	#10	1.05	4.20	1.046339	175	1.54	0.64
POLE 08	PULL BOX 26	238.46	1ϕ	1	#10	1.05	3.15	1.046339	52	0.34	0.14
PULL BOX 26	POLE 07	238.12	1ϕ	1	#10	1.05	1.05	1.046339	73	0.16	0.07
PULL BOX 26	POLE 06	238.12	1ϕ	1	#10	1.05	2.10	1.046339	134	0.59	0.25
POLE 06	POLE 05	237.53	1ϕ	1	#10	1.05	1.05	1.046339	119	0.26	0.11
										TOTAL	1.21

SOUTH ROUNDABOUT, VOLTAGE DROP, CIRCUIT A

SEGMENT		VOLTAGE	PHASE	SETS	CONDUCTOR	CURRENT	SEG AMP	Z/1000ft	LENGTH	VD	%VD
SRV. PT.	POLE 16	240.00	1ϕ	1	#10	1.05	6.30	1.046339	11	0.15	0.06
POLE 16	POLE 15	239.85	1ϕ	1	#10	1.05	2.10	1.046339	83	0.36	0.15
POLE15	POLE 14	239.49	1ϕ	1	#10	1.05	2.10	1.046339	181	0.80	0.33
POLE 16	PULL BOX 33	239.85	1ϕ	1	#10	1.05	3.15	1.046339	60	0.40	0.16
PULL BOX 33	POLE 17	239.46	1ϕ	1	#10	1.05	1.05	1.046339	173	0.38	0.16
PULL BOX 33	PULL BOX 34	239.46	1ϕ	1	#10	2.10	2.10	1.046339	81	0.36	0.15
PULL BOX 34	POLE 18	239.10	1ϕ	1	#10	1.05	1.05	1.046339	41	0.09	0.04
PULL BOX 34	POLE 19	239.10	1ϕ	1	#10	1.05	1.05	1.046339	53	0.12	0.05
										TOTAL	1.10

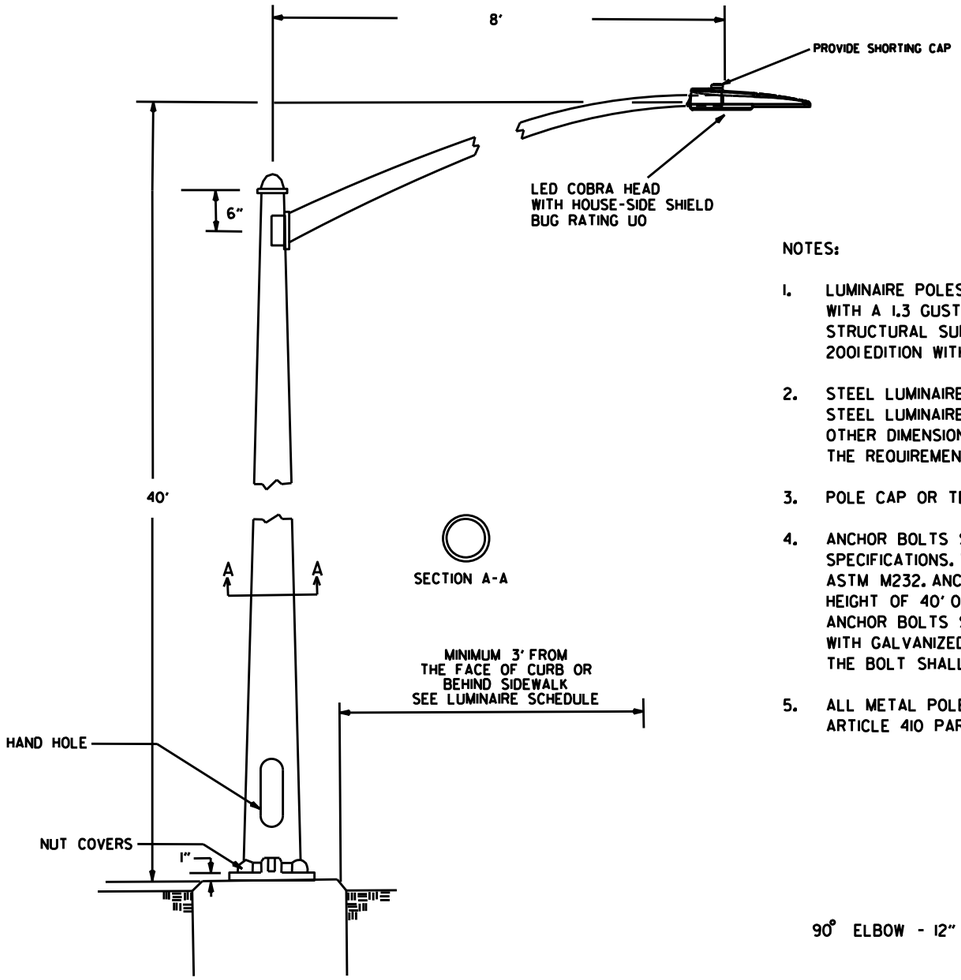
SOUTH ROUNDABOUT, VOLTAGE DROP, CIRCUIT B

SEGMENT		VOLTAGE	PHASE	SETS	CONDUCTOR	CURRENT	SEG AMP	Z/1000ft	LENGTH	VD	%VD
SRV. PT.	PULL BOX 35	240.00	1ϕ	1	#10	1.05	6.30	1.046339	252	3.32	1.38
PULL BOX 35	POLE 20	236.68	1ϕ	1	#10	1.05	1.05	1.046339	40	0.09	0.04
PULLBOX 35	PULL BOX 28	236.68	1ϕ	1	#10	5.25	5.25	1.046339	81	0.89	0.38
PULL BOX 28	POLE 09	235.79	1ϕ	1	#10	1.05	1.05	1.046339	181	0.40	0.17
PULL BOX 28	POLE 10	235.79	1ϕ	1	#10	1.05	4.20	1.046339	46	0.40	0.17
POLE 10	PULL BOX 29	235.38	1ϕ	1	#10	3.15	3.15	1.046339	66	0.44	0.18
PULL BOX 29	POLE 11	234.95	1ϕ	1	#10	1.05	2.10	1.046339	36	0.16	0.07
POLE 11	POLE 12	234.79	1ϕ	1	#10	1.05	1.05	1.046339	104	0.23	0.10
PULL BOX 29	POLE 13	234.95	1ϕ	1	#10	1.05	1.05	1.046339	134	0.29	0.13
										TOTAL	2.61

M020475.DGN 4/15/2022

LOCATION:	HIGHWAY 83
CITY:	MONTICELLO
COUNTY:	DREW
DISTRICT:	2
SCALE:	N/A
DRAWN BY:	JDH

DATE REVISED	DATE REVISED	FED.RD. DST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	78	191
		ILLUMINATION DETAILS				



COBRA HEAD LUMINAIRE WITH SHOE BASE

NOTES:

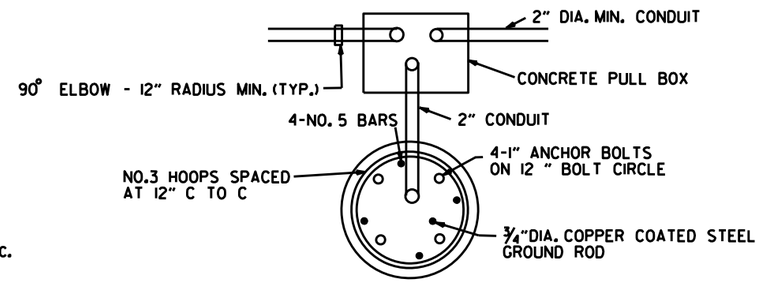
1. LUMINAIRE POLES SHALL MEET THE REQUIREMENTS OF 90 MPH WIND ZONE WITH A 1.3 GUST FACTOR ON THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS LUMINAIRES AND TRAFFIC SIGNALS, 2001 EDITION WITH 2003 AND 2006 INTERIMS.

2. STEEL LUMINAIRE POLES SHALL BE A MINIMUM OF 11 GAUGE.
STEEL LUMINAIRE POLES SHALL BE HOT-DIPPED GALVANIZED.
OTHER DIMENSIONS PER MANUFACTURER'S RECOMMENDATION AS NECESSARY TO MEET THE REQUIREMENTS OF THE SP - LED ROADWAY ILLUMINATION POLE.

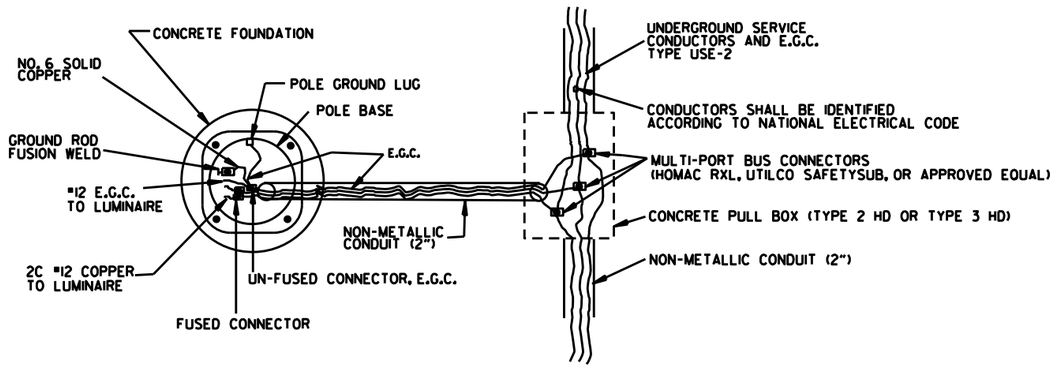
3. POLE CAP OR TENON CAP SHALL BE PROVIDED.

4. ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF SECTION 714 OF THE STANDARD SPECIFICATIONS. THE TOP 8" OF ALL ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM M232. ANCHOR BOLTS IN FOUNDATIONS SHALL BE 1.25" X 30" FOR MOUNTING HEIGHT OF 40' OR GREATER, 1" X 30" FOR MOUNTING HEIGHT LESS THAN 40'. ANCHOR BOLTS SHALL HAVE TOP END THREADED NOT LESS THAN 5" AND FURNISHED WITH GALVANIZED HEX NUTS, LOCK WASHERS, AND TEMPLATE. THE LOWER END OF THE BOLT SHALL BE THREADED AND FURNISHED WITH HEX NUT AND TEMPLATE.

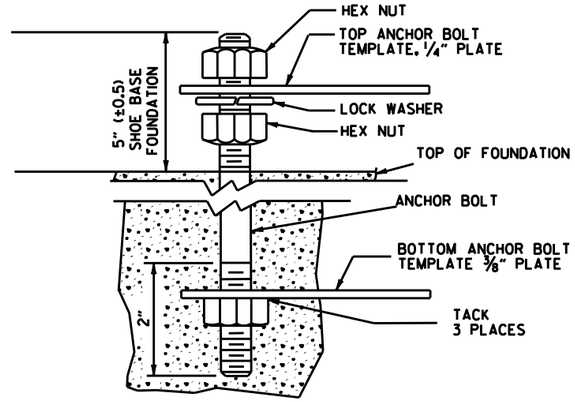
5. ALL METAL POLES SHALL BE BONDED TO E.G.C. PER NATIONAL ELECTRICAL CODE. ARTICLE 410 PART IV AND V.



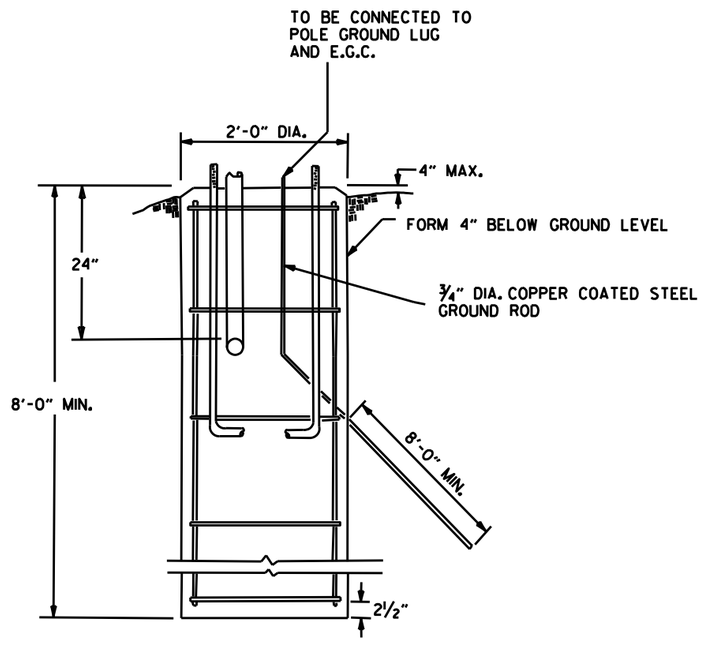
PLAN



POLE FOUNDATION/PULL BOX
WIRING DETAIL



ANCHOR BOLT DETAIL



ROADWAY LUMINAIRE
POLE FOUNDATION

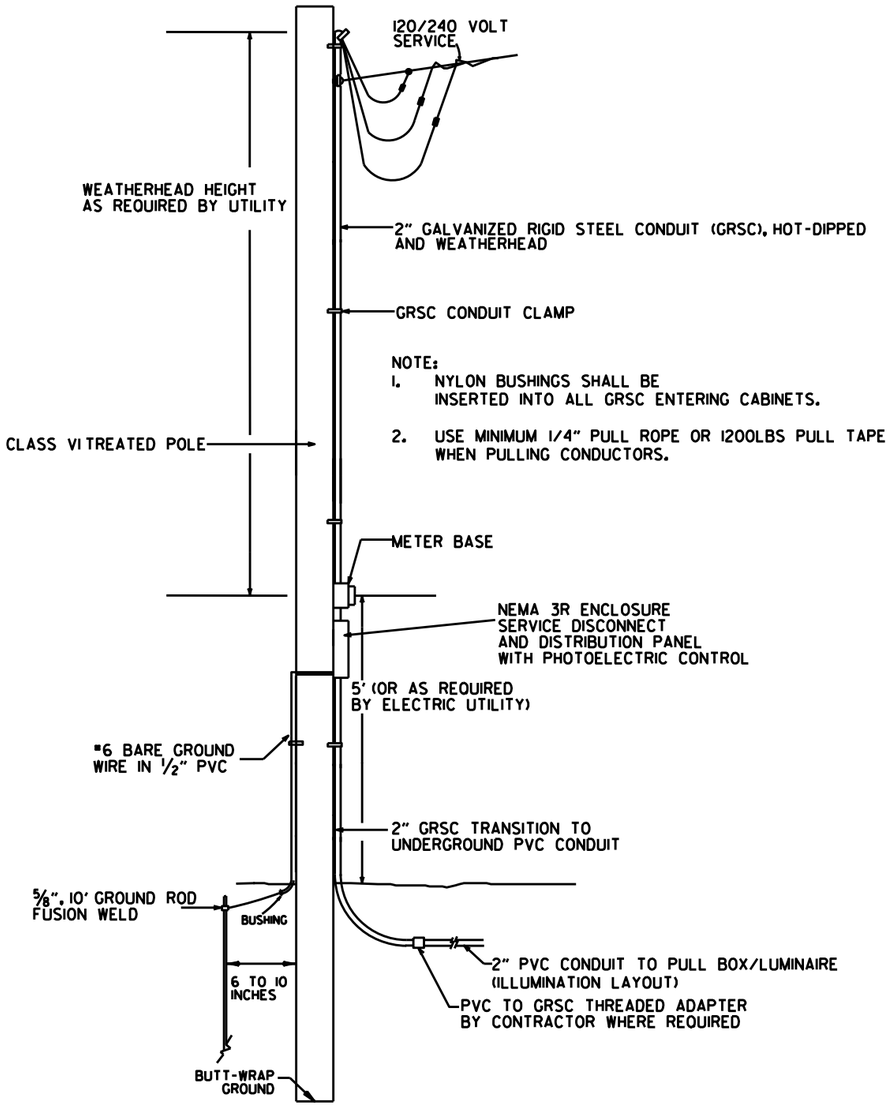
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7637
JOSEPH A. SARTINI
8:24 AM
DocuSign

LOCATION:	HIGHWAY 83			
CITY:	MONTICELLO			
COUNTY:	DREW			
DISTRICT:	2	SCALE: N/A	DRAWN BY:	JDH

M020475.DGN 4/15/2022

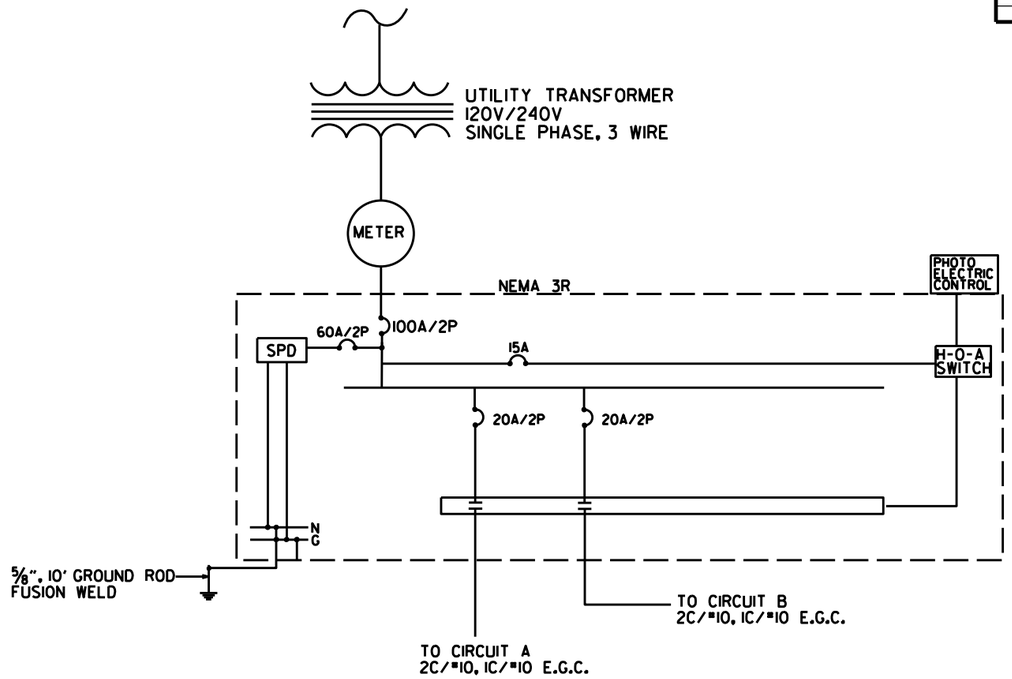
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	79	191
		ILLUMINATION DETAILS				



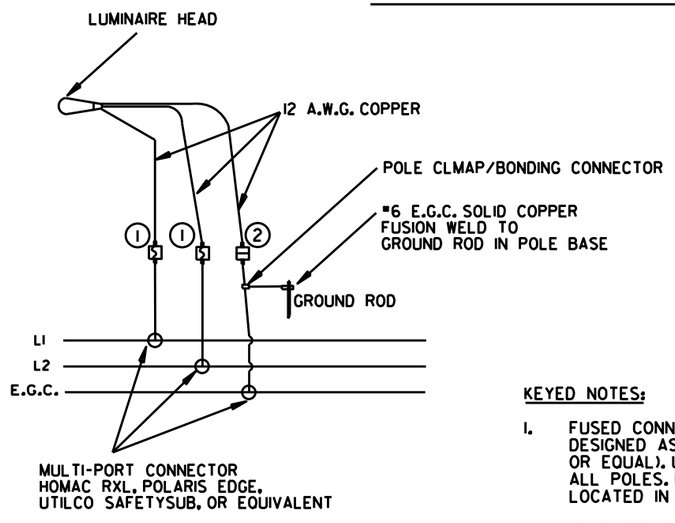


LUMINAIRE SERVICE POINT ASSEMBLY

120V/240 VAC LUMINAIRE SERVICE POINT ASSEMBLY FOR ROADWAY LIGHTING



ONE-LINE DIAGRAM FOR PEDESTAL SERVICE POINT



TYPICAL WIRING FOR LUMINAIRES
THREE-WIRE CIRCUIT-CENTER GROUNDED
LUMINIARES SERVED AT 240 VAC.

(120/240 VOLT SERVICE)

LUMINAIRE WIRING SCHEMATICS

KEYED NOTES:

1. FUSED CONNECTOR - SHALL BE WATERTIGHT, UL-LISTED, AND DESIGNED AS BREAKAWAY (HOMAC FLOOD-SEAL, EATON BUSSMANN OR EQUAL). USE A FUSED CONNECTOR FOR THE LINE WIRE ON ALL POLES. USE MANUFACTURER'S RECOMMENDED FUSE SIZE LOCATED IN POLE BASE.
2. UN-FUSED CONNECTOR - SHALL BE WATERTIGHT AND SHALL BE DESIGNED AS BREAKAWAY (HOMAC FLOOD-SEAL, EATON BUSSMANN, OR EQUAL) LOCATED IN POLE BASE.

LOCATION:	HIGHWAY 83			
CITY:	MONTICELLO			
COUNTY:	DREW			
DISTRICT:	2	SCALE: N/A	DRAWN BY:	JDH

M020475.DGN 4/15/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	80	191
		SIGNING SUMMARY OF QUANTITIES				

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
SS & 726	STANDARD SIGN	714	SQ. FT.
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	44	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	9	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	12	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-6)	1	EACH

STANDARD SIGNS

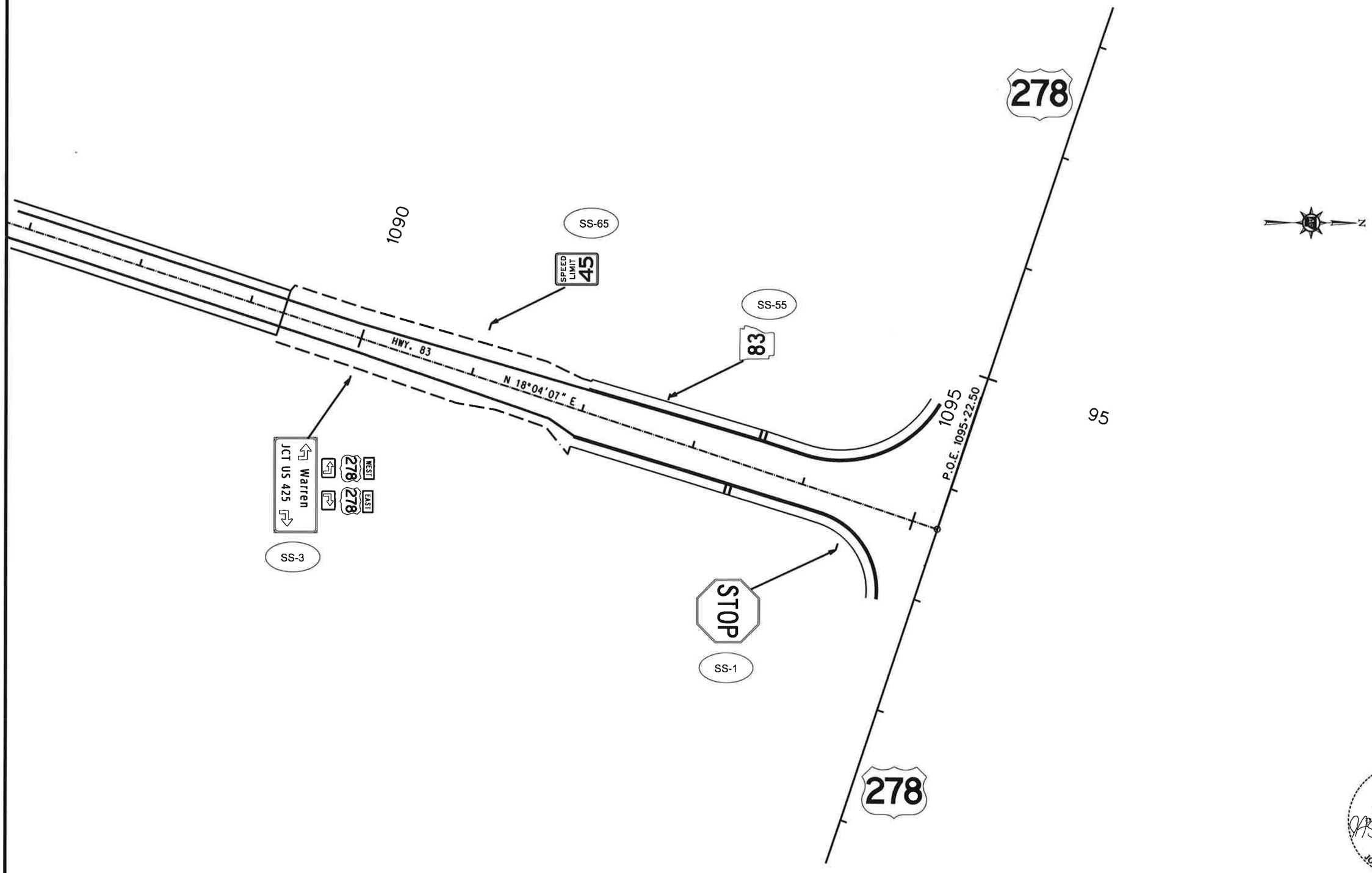
SIGN NO./	STANDARD SIGNS FLAT SHEET OMNI-DIRECTIONAL SIGN SUPPORTS				
	TYPE				STANDARD
	G1	G2	G2-1	G2-6	SIGN
	EA.	EA.	EA.	EA.	SQ. FT.
SS-1		1			16.00
SS-2	1				5.00
SS-6	1				5.00
SS-4	1				9.00
SS-5	1				7.19
SS-8	1				9.00
SS-17	1				9.00
SS-23	1				9.00
SS-29	1				9.00
SS-32	1				9.00
SS-38	1				9.00
SS-44	1				9.00
SS-50	1				9.00
SS-3				1	32.13
SS-7	1				8.50
SS-18	1				8.50
SS-28	1				8.50
SS-30	1				8.50
SS-31	1				8.50
SS-37	1				8.50
SS-43	1				8.50
SS-49	1				8.50
SS-11		1			8.00
SS-14		1			8.00
SS-20		1			8.00
SS-25		1			8.00
SS-35		1			8.00
SS-41		1			8.00
SS-47		1			8.00
SS-53		1			8.00
SS-10			1		12.00
SS-15			1		12.00
SS-21			1		12.00
SS-26			1		12.00
SS-34			1		12.00
SS-40			1		12.00
SS-46			1		12.00
SS-52			1		12.00
SS-9	1				10.00
SS-12	1				10.00
SS-13	1				10.00
SS-16	1				10.00
SS-19	1				10.00
SS-22	1				10.00
SS-24	1				10.00
SS-27	1				10.00
SS-33	1				10.00
SS-36	1				10.00
SS-39	1				10.00
SS-42	1				10.00
SS-45	1				10.00
SS-48	1				10.00
SS-51	1				10.00
SS-54	1				10.00
SS-55	1				4.00
SS-56	1				4.00
SS-57	1				4.00
SS-58			1		40.50
SS-59			1		40.50
SS-60			1		30.00
SS-61			1		30.00
SS-62	1				4.00
SS-63	1				4.00
SS-64	1				5.00
SS-65	1				5.00
SS-66	1				9.00
TOTALS:	44	9	12	1	714.32

NOTE: SEE SIGN PLACEMENT SHEETS FOR SIGN LOCATIONS.
SEE SIGN LAYOUT SHEETS FOR SIGN DIMENSIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
DocuSigned 8:37 AM

SIGNING SUMMARY OF QUANTITIES

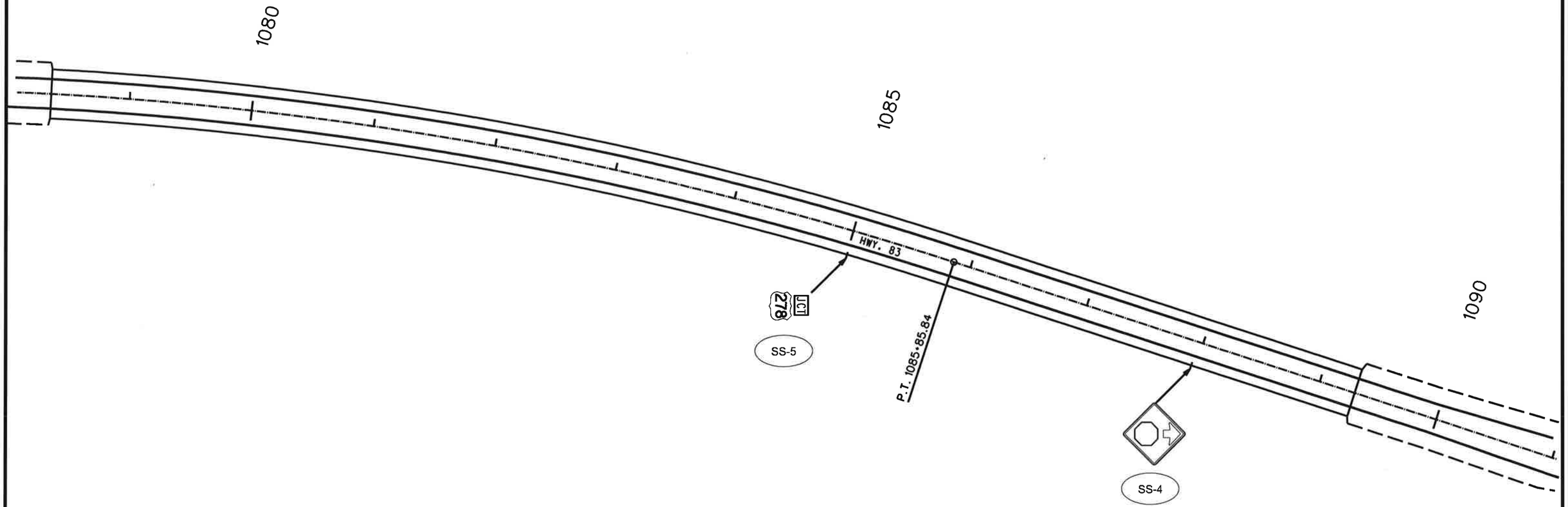
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	81	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

SIGN PLACEMENT SHEET

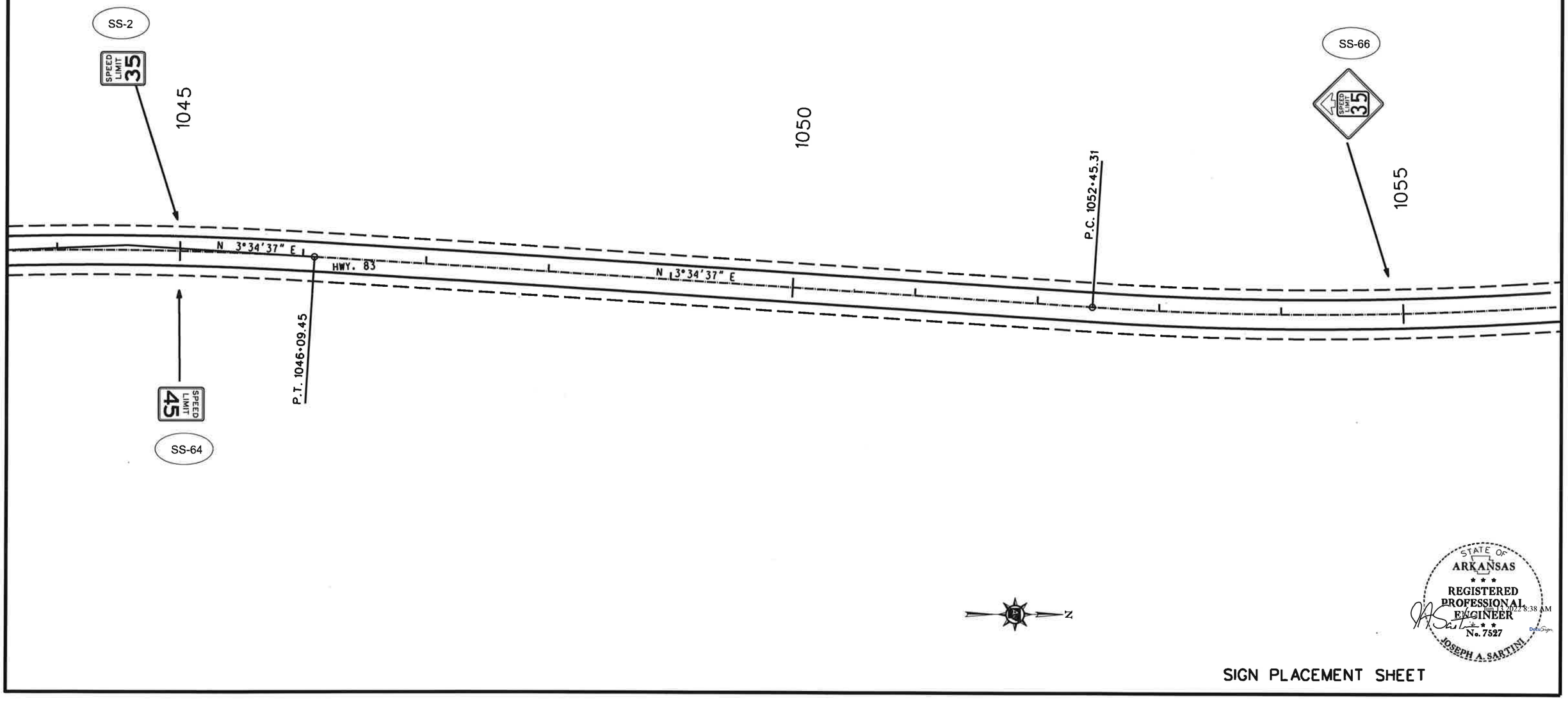
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	82	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

SIGN PLACEMENT SHEET

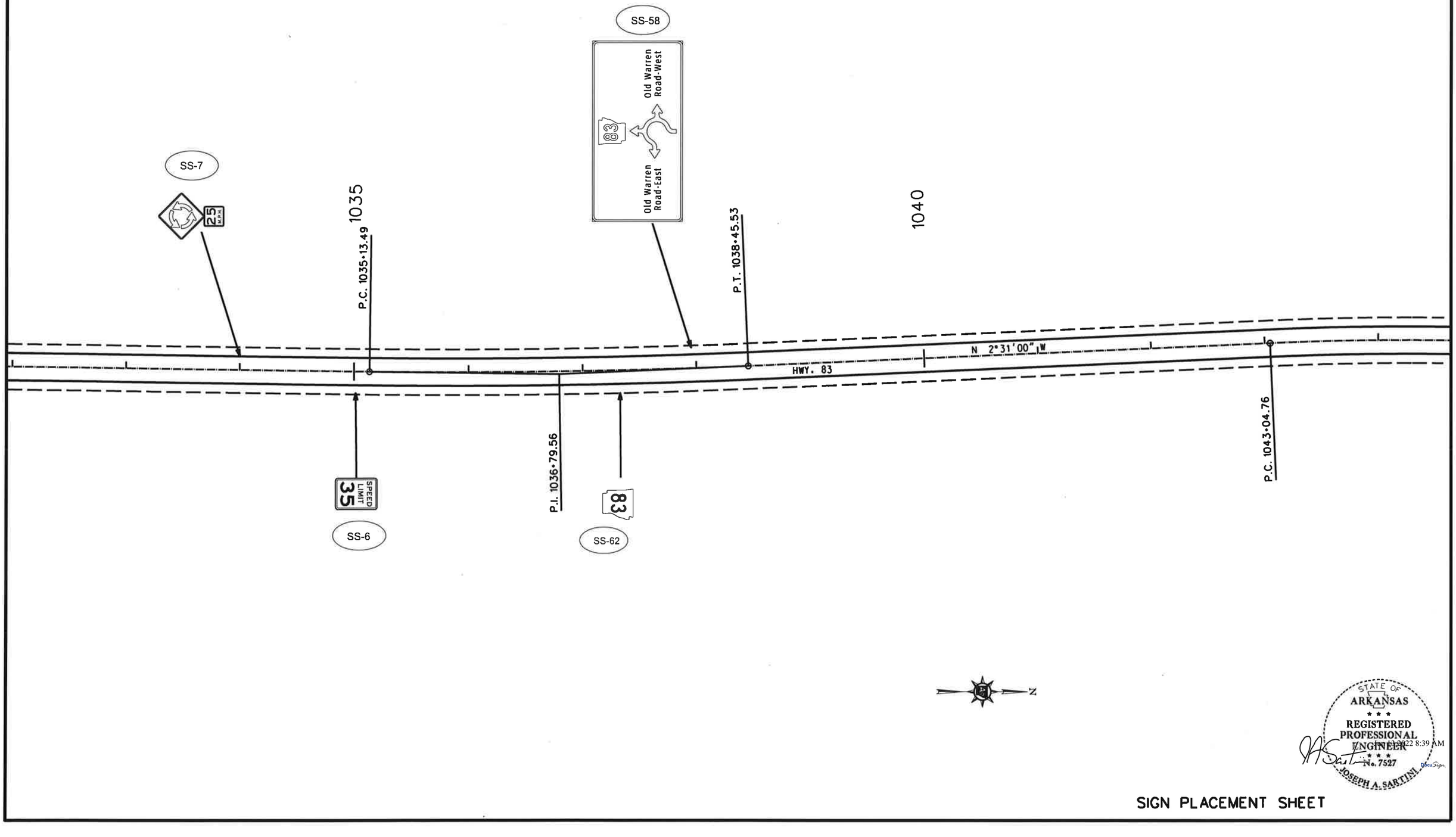
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	83	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
Jan 12 2022 8:38 AM

SIGN PLACEMENT SHEET

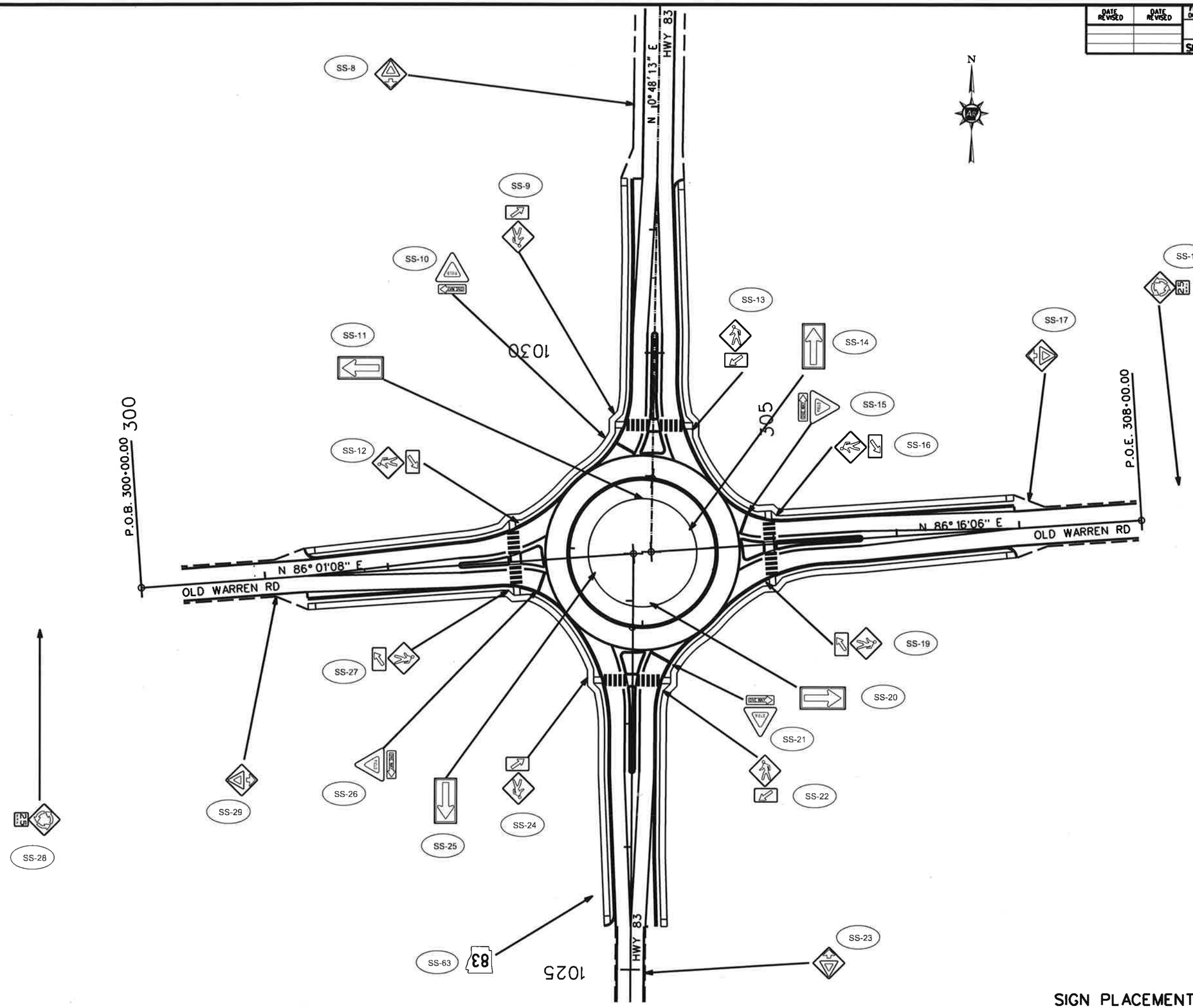
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	84	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
10/13/2022 8:39 AM

SIGN PLACEMENT SHEET

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	85	191
		SIGN PLACEMENT SHEETS				

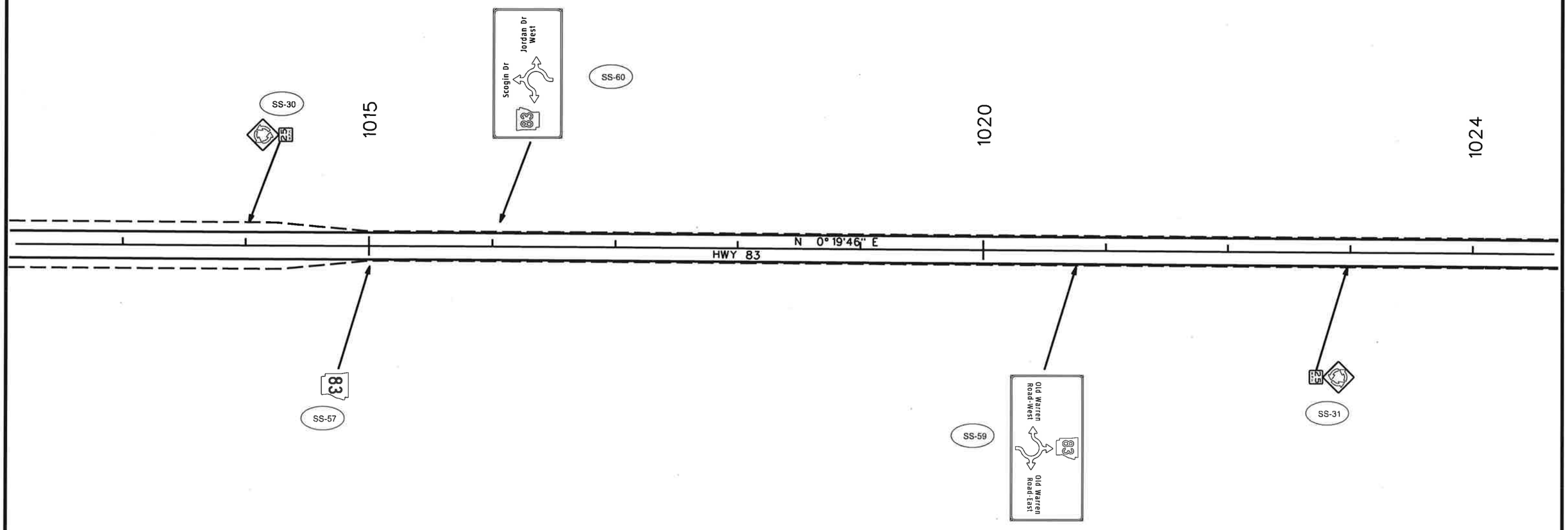


STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

June 13 2022 8:39 AM

SIGN PLACEMENT SHEET

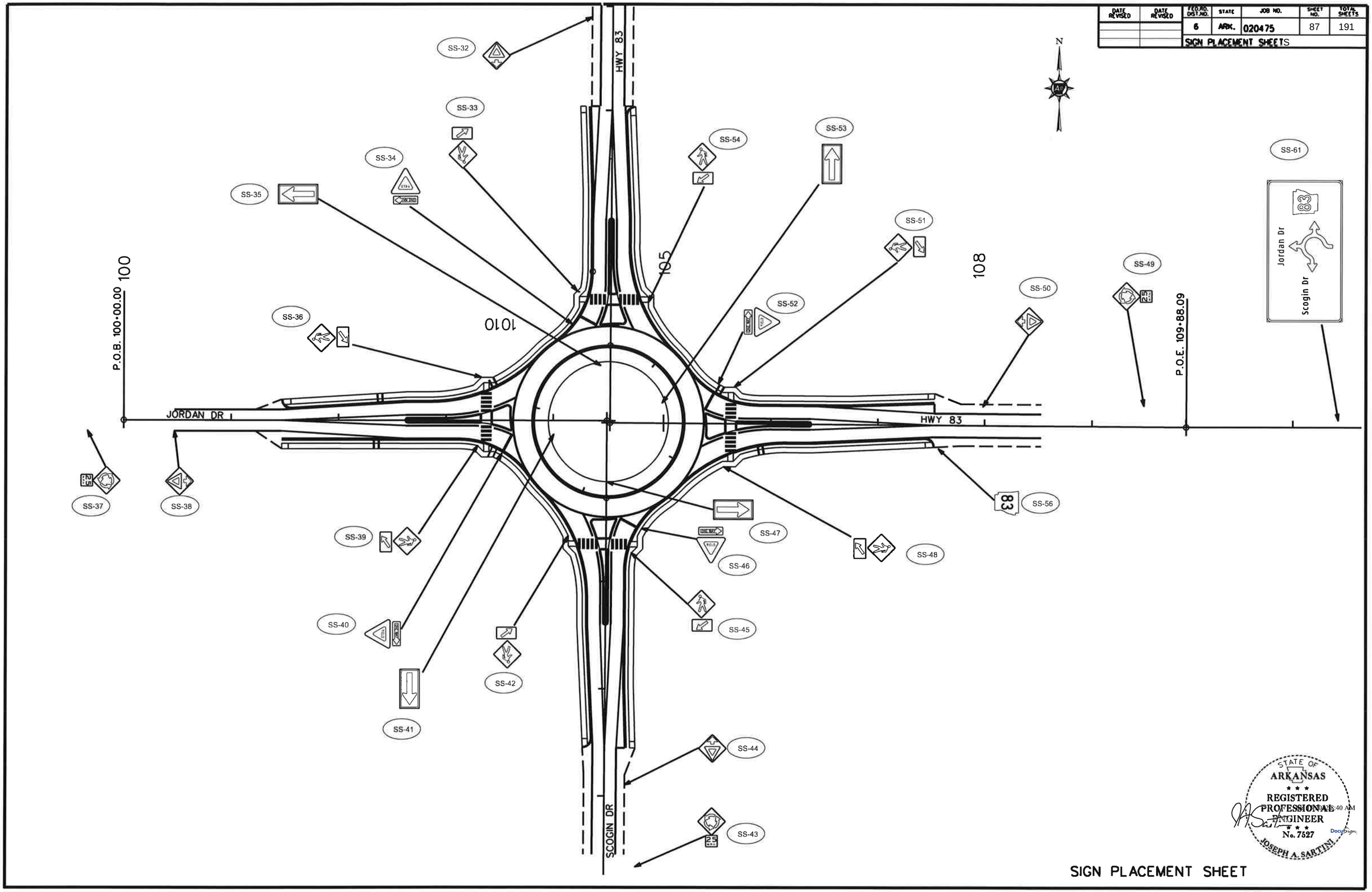
DATE REVISED	DATE REVISED	F(C)RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	86	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTIN

SIGN PLACEMENT SHEET

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	87	191
		SIGN PLACEMENT SHEETS				



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
DocuSigned by: 10/3/2025 10:40 AM CDT

SIGN PLACEMENT SHEET

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	88	191
		SIGN LAYOUT SHEETS				

48X48 R1-1



SS-1

24X30 R2-1



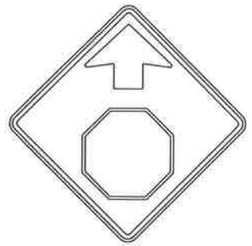
SS-2
SS-6

24X30 R2-1



SS-64
SS-65

36X36 W3-1A



SS-4



21X15 M2-1

24X30 M1-4

SS-5

36X36 W3-2A



SS-8 SS-17
SS-23 SS-29
SS-32 SS-38
SS-44 SS-50

24X12 M3-4



24X30 M1-4



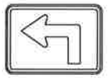


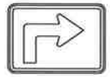
24X12 M3-2



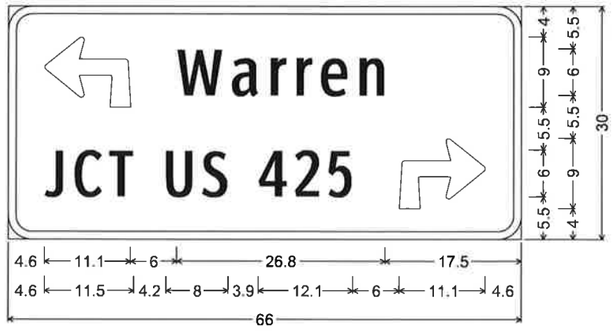
24X30 M1-4

21X15 M5-1L





21X15 M5-1R



3.0" Radius, 1.0" Border, White on, Green;
90 Deg Advance Turn Arrow 16.0" X 13.0" White;
"Warren", ClearviewHwy-2-W; "JCT US 425", ClearviewHwy-2-W;
90 Deg Advance Turn Arrow 16.0" X 13.0" White;

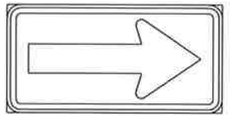
SS-3

30X30 W2-6



18X18 W13-1

SS-7 SS-18
SS-28 SS-30
SS-31 SS-37
SS-43 SS-49



24X48 W1-6

SS-11 SS-14
SS-20 SS-25
SS-35 SS-41
SS-47 SS-53



36X12 R6-1R

36 R1-2

SS-10 SS-15
SS-21 SS-26
SS-34 SS-40
SS-46 SS-52

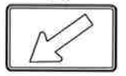


24X24 M1-6

SS-55
SS-56
SS-57
SS-62
SS-63

30X30 W11-2





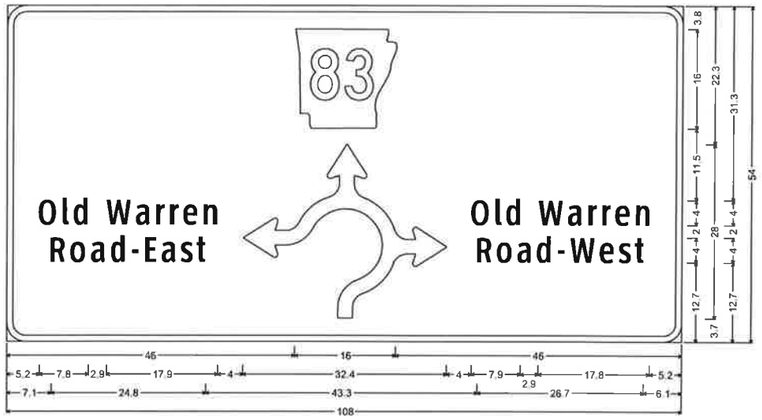
18X30 W16-7PL

SS-9 SS-12
SS-13 SS-16
SS-19 SS-22
SS-24 SS-27
SS-33 SS-36
SS-39 SS-42
SS-45 SS-48
SS-51 SS-54

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
Jan 18, 2022 8:40 AM
DocuSign

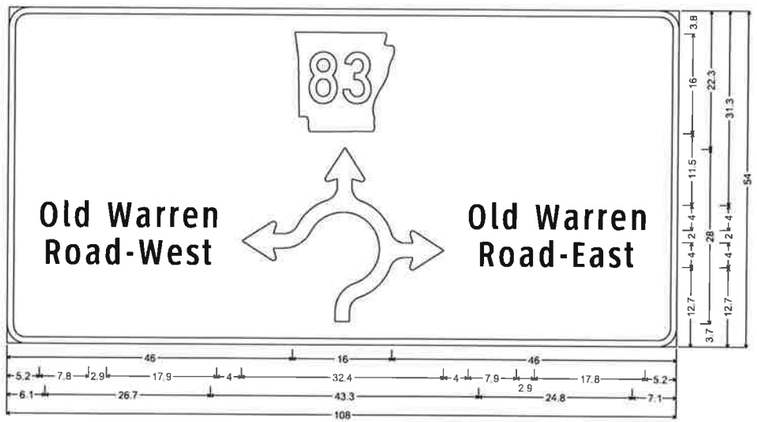
SIGN LAYOUT SHEET

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	89	191
		SIGN LAYOUT SHEETS				



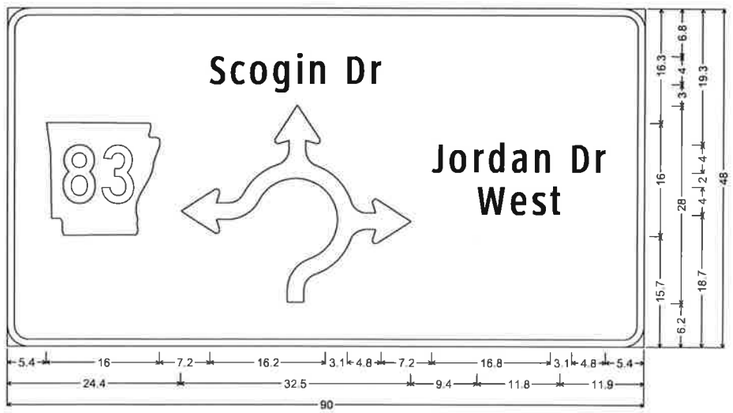
3.0" Radius, 1.0" Border, White on, Green;
"Old Warren", ClearviewHwy-2-W; "Road-East", ClearviewHwy-2-W; "Old Warren", ClearviewHwy-2-W;
"Road-West", ClearviewHwy-2-W;

SS-58



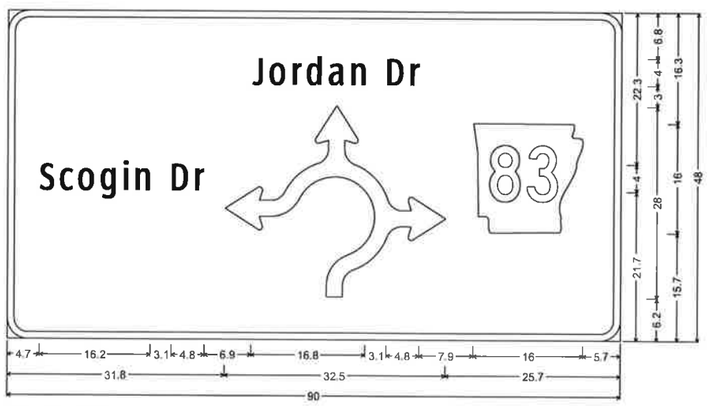
3.0" Radius, 1.0" Border, White on, Green;
"Old Warren", ClearviewHwy-2-W; "Road-West", ClearviewHwy-2-W; "Old Warren", ClearviewHwy-2-W;
"Road-East", ClearviewHwy-2-W;

SS-59



3.0" Radius, 1.0" Border, White on, Green;
"Scogin Dr", ClearviewHwy-2-W; "Jordan Dr", ClearviewHwy-2-W; "West", ClearviewHwy-2-W;

SS-60



3.0" Radius, 1.0" Border, White on, Green;
"Scogin Dr", ClearviewHwy-2-W; "Jordan Dr", ClearviewHwy-2-W;

SS-61

36X36 W3-5



SS-66

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

AM 11 2022 8:40 AM
DocuSign

SIGN LAYOUT SHEET

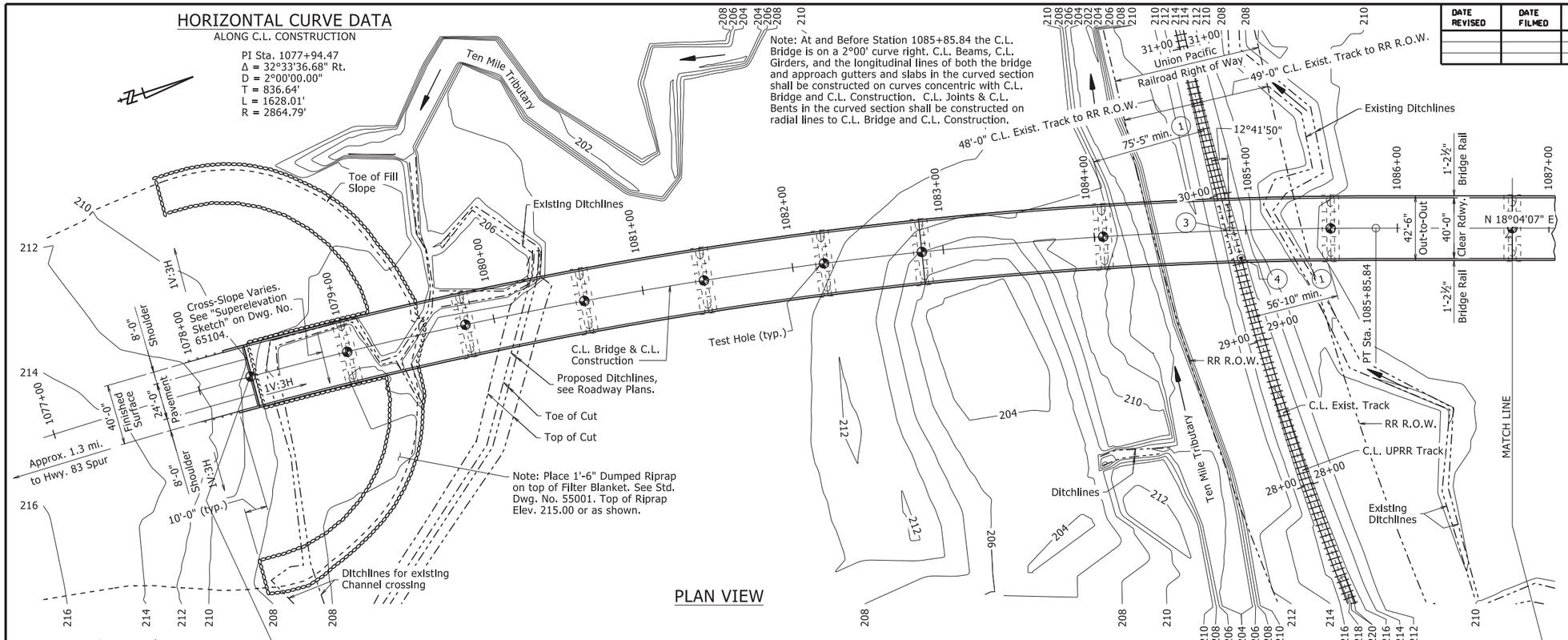
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	90	191
				07536 -		LAYOUT - 65103		

HORIZONTAL CURVE DATA

ALONG C.L. CONSTRUCTION

PI Sta. 1077+94.47
Δ = 32°33'36.68" Rt.
D = 2°00'00.00"
T = 836.64'
L = 1628.01'
R = 2864.79'

Note: At and Before Station 1085+85.84 the C.L. Bridge is on a 2°00' curve right. C.L. Beams, C.L. Girders, and the longitudinal lines of both the bridge and approach gutters and slabs in the curved section shall be constructed on curves concentric with C.L. Bridge and C.L. Construction. C.L. Joints & C.L. Bents in the curved section shall be constructed on radial lines to C.L. Bridge and C.L. Construction.



PLAN VIEW

Notes:
For R/W Data and Temporary Construction Easements, see Roadway Plans.

Use Type F Approach Gutters and Type Special Approach Slabs at both ends of the bridge. For details see Std. Dwg. No. 55030F and Dwg. No. 65150, respectively.

See Dwg. No. 65104 for General Notes

See Dwg. No. 65105 for Soil Boring Information

(1) Minimum horizontal clearance at face of bent.

(2) Chain Link Fence to be placed on both sides of Bridge over railroad right-of-way. See Std. Dwg. No. 55018. For fence locations, see "CHAIN LINK FENCE LOCATIONS OVER RR R.O.W."

(3) Intersection of C.L. Bridge and C.L. Exist. Track at Sta. 1084+89.54.

(4) Point of minimum vertical clearance at Sta. 1084+96.40, 18.5' Right.

(5) Top of Deck at C.L. Bridge to Low Steel.

(6) See Job 020475 "Geotechnical Exploration" Report for details of "Select Fill" for embankment construction at Bent 1 and Bent 13.

Note:
See Dwg. No. 65104 for "VERTICAL ALIGNMENT DATA", and "HYDRAULIC DATA" table.

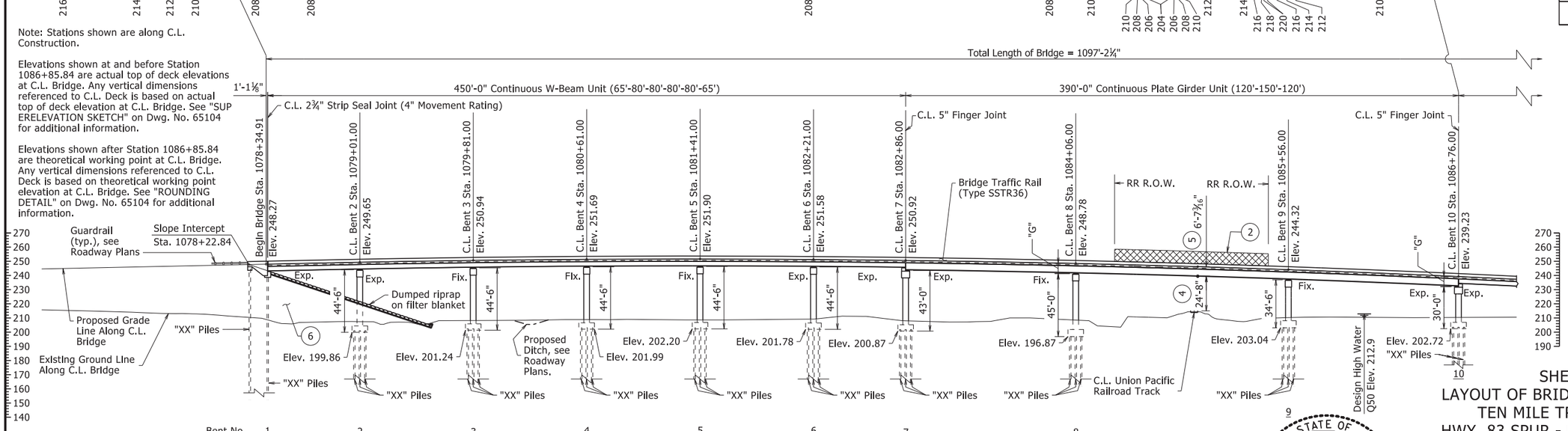
CHAIN LINK FENCE LOCATION OVER RR R.O.W.

Station Location	Right of C.L. Bridge	Left of C.L. Bridge
Start	1084+42.00	1084+34.00
End	1085+42.72	1085+33.30

Note: Stations shown are along C.L. Construction.

Elevations shown at and before Station 1086+85.84 are actual top of deck elevations at C.L. Bridge. Any vertical dimensions referenced to C.L. Deck is based on actual top of deck elevation at C.L. Bridge. See "SUP ERELEVATION SKETCH" on Dwg. No. 65104 for additional information.

Elevations shown after Station 1086+85.84 are theoretical working point at C.L. Bridge. Any vertical dimensions referenced to C.L. Deck is based on theoretical working point elevation at C.L. Bridge. See "ROUNDING DETAIL" on Dwg. No. 65104 for additional information.



ELEVATION VIEW

See Dwg. No. 65105 for Soil Borings.

For plan pile length "XX" (FT), see "PILE BEARING TABLE" on Dwg. No. 65104.

TABLE OF VARIABLES

BENT NO.	Top of Deck at C.L. Bridge & C.L. Bent to Low Seat of Cap
	"G"
2	5'-3 3/16"
3	5'-2 7/16"
4	5'-2 7/16"
5	5'-2 3/8"
6	5'-3 3/16"
7 Back	5'-5 15/16"
7 Ahead	7'-0½"
8	6'-10 15/16"
9	6'-9⅜"
10 Back	6'-6⅛"

STATE OF ARKANSAS
May 2 2022 3:53 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 3
LAYOUT OF BRIDGE HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR
HWY. 83 SPUR - HWY. 278 CONNECTOR
(MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. I

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

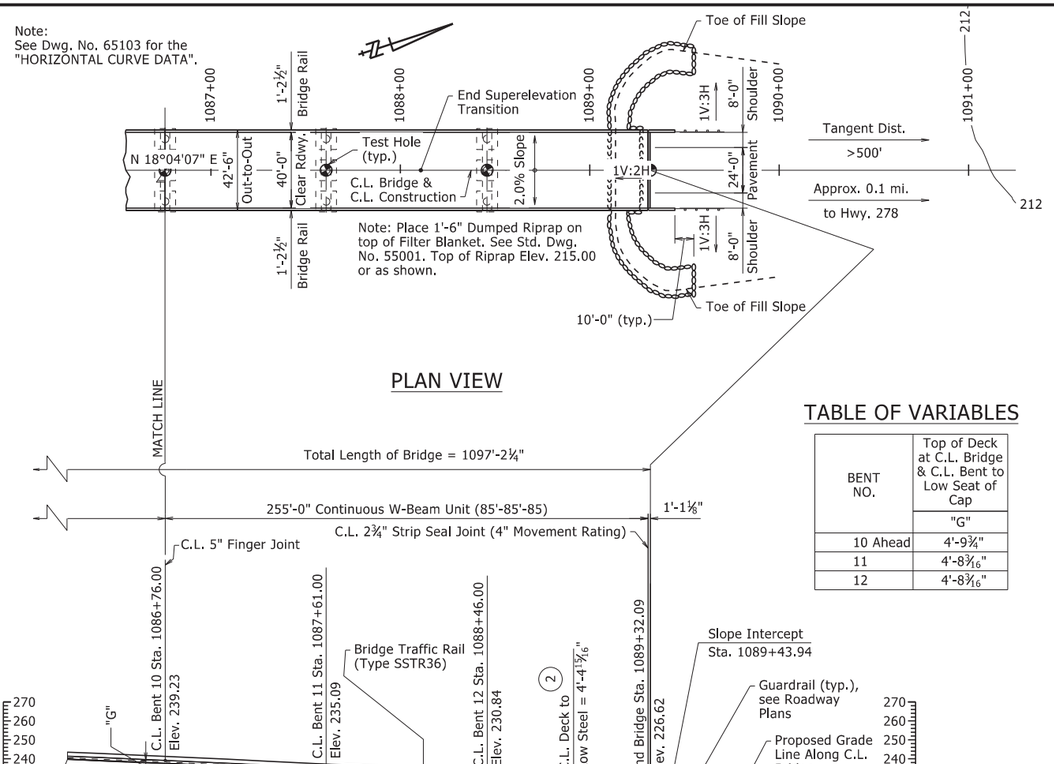
DRAWN BY: JJ DATE: 12/07/2020
CHECKED BY: DPT DATE: 02/23/2022
DESIGNED BY: JJ DATE: 04/21/2020
FILENAME: b020475_l1.dgn
SCALE: 1" = 40'

BRIDGE NO. 07536
DRAWING NO. 65103

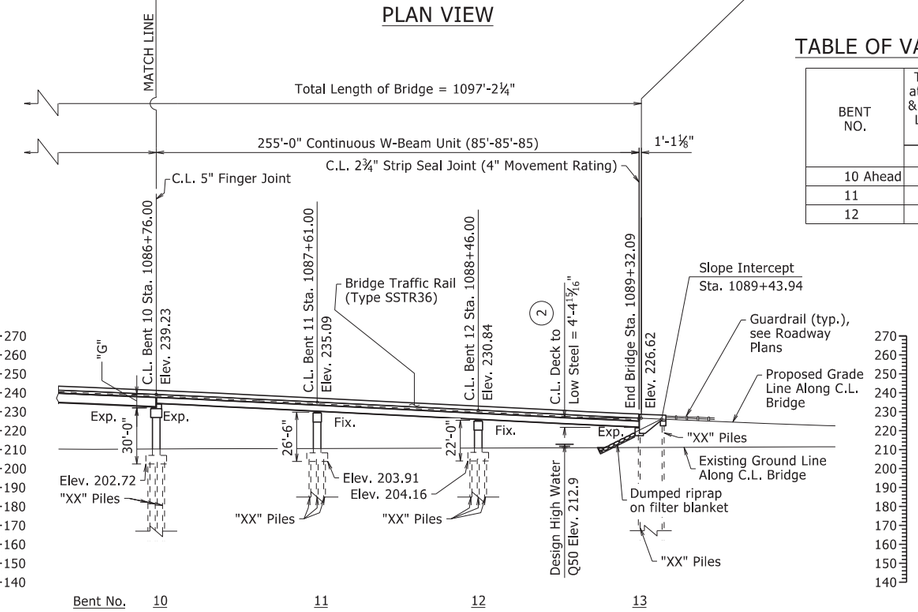
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	91	191
				07536 -		LAYOUT - 65104		

Note:
See Dwg. No. 65103 for the "HORIZONTAL CURVE DATA".



PLAN VIEW



ELEVATION VIEW

TABLE OF VARIABLES

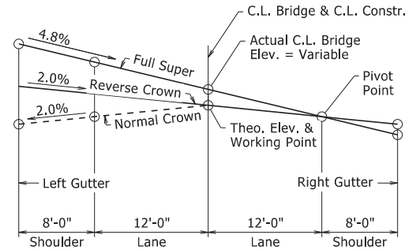
BENT NO.	Top of Deck at C.L. Bridge & C.L. Bent to Low Seat of Cap
	"G"
10 Ahead	4'-9¾"
11	4'-8 3/16"
12	4'-8 3/16"

PILE BEARING TABLE

BENT NO(S).	REQUIRED MINIMUM ULTIMATE BEARING CAPACITY (TONS)	PLAN PILE LENGTH "XX" (FT)
1 - Wing	150.0	120.0
1	210.0	130.0
2	150.0	70.0
3	150.0	75.0
4 & 5	150.0	70.0
6	150.0	65.0
7	165.0	70.0
8	294.0	100.0
9	295.0	105.0
10	165.0	70.0
11 & 12	170.0	75.0
13	210.0	95.0
13 - Wing	150.0	85.0

Note:
See Dwg. No. 65105 for Soil Borings.

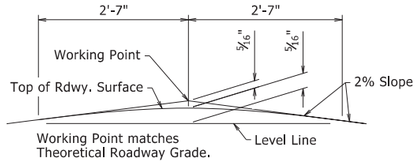
Begin Superelevation Transition Sta. 1067+32.83
Reverse Crown Sta. 1068+57.83
Begin Max Superelevation Sta. 1070+32.83
End Max Superelevation Sta. 1085+10.84
Reverse Crown Sta. 1086+85.84
End Superelevation Transition Sta. 1088+10.84



SUPERELEVATION SKETCH

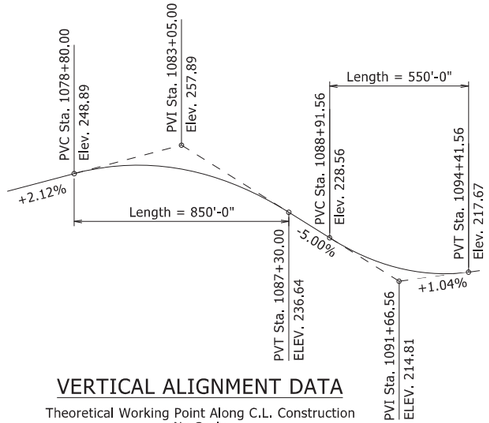
Looking Ahead
No Scale

Values shown are for 2% Peaked Crown. Dimension for Working Point to Top of Roadway Surface Varies from 0" at Sta. 1086+85.84 to 5/16" at Sta. 1088+10.84.



ROUNDING DETAIL

No Scale



VERTICAL ALIGNMENT DATA

Theoretical Working Point Along C.L. Construction
No Scale

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	① NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEVATION WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	4,572	212.9	212.9
Base	100	5,001	213.0	213.0
Extreme	500	5,870	213.3	213.3
Overtopping	>500	-	-	-

① Unconstricted water surface elevation without structure or roadway approaches.

② Proposed Low Bridge Chord Elev. = 222.3 ft. at Sta. 1089+30.80
Drainage Area = 2.7 sq. miles
Historical H.W. Elev. = N/A

General Notes:

BENCH MARK: 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 Specification, Eighth Edition (2017).

LIVE LOADING: HL-93

SEISMIC ZONE: 2 S_{D1} = 0.169 SITE CLASS: D

SEISMIC OPERATIONAL CLASSIFICATION: Other

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (Superstructure)	f'c = 4,000 psi
Class S Concrete (Substructure)	f'c = 3,500 psi
Reinforcing Steel (AASHTO M 31 or M 322, Type A)	fy = 60,000 psi
Structural Steel (ASTM A709, Grade 50)	Fy = 50,000 psi
Structural Steel (ASTM A709, Grade 50W)	Fy = 50,000 psi
Structural Steel (ASTM A709, Grade 36)	Fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL SHELL PILING: Piling in Bents 1 thru 13 shall be 18" diameter concrete filled steel shell piles and shall be driven to meet the requirements shown in the PILE BEARING TABLE. All piling shall be driven with an approved air, steam, or diesel hammer to a minimum ultimate bearing capacity as shown in the PILE BEARING TABLE. Piles in the end bents shall be driven after embankment to bottom of cap is in place. Lengths of piling shown are assumed for estimating quantities only. Actual lengths are to be determined in the field. No additional payment will be made for cut-off or build-up. Test piles are not required but may be driven for the Contractor's information in accordance with Subsection 805.08(g). No piles will be paid for as test piles.

DRIVING SYSTEM: The driving system approval and ultimate bearing capacity determination for piling shall be based on the requirements of Subsection 805.09(b) "Method B - Wave Equation Analysis (WEAP)". It is estimated that the minimum rated hammer energy required to obtain the ultimate bearing capacity for piles at Bents 1, 8, 9, and 13 will be 80,000 foot pounds per blow. The estimated minimum rated hammer energy required to obtain the ultimate bearing capacity for piles at all other bents will be 42,000 foot pounds per blow.

PILE FOOTINGS: The top of the footings at Bents 2 thru 12 shall be set a minimum of 2'-0" below natural ground as determined by the lowest surface elevation within the footprint of the footing, or at the elevations shown on the plans, whichever is lower. Foundations for footings shall be prepared in accordance with Subsection 801.04 and backfilled and compacted according to Subsection 801.08. Foundation piles shall not be driven until after the excavation to bottom of footing is complete.

PAINTING: All Grade 50 structural steel, except galvanized members and surfaces in contact with concrete, shall be painted as specified in Subsection 807.75. The color of paint shall be Green and shall match Federal Standard 595B, Color Chip No. 14109.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish.

PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface and to the roadway face and top of the bridge traffic rails in accordance with Section 803.

DETAIL DRAWINGS:	DRAWING NO(S).
End Bents	65108 - 65112
Intermediate Bents	65113 - 65122
Elastomeric Bearings	65123 - 65124
450' Continuous W-Beam Unit	65125 - 65131
390' Continuous Plate Girder Unit	65132 - 65140
255' Continuous W-Beam Unit	65141 - 65147
Concrete Filled Steel Shell Piling	55021
Bridge Traffic Rail	55070
General Notes for Steel Bridge Structures	55006
Details for Steel Bridge Structures	55007
Neoprene Strip Seal Joints	55009
Finger Joints	65148 - 65149
Chain Link Fence	55018

STATE OF ARKANSAS
Charles R. Ellis Expires: June 27 2022 5:34 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 3
LAYOUT OF BRIDGE HIGHWAY 83 OVER
TEN MILE TRIBUTARY & UPRR
HWY. 83 SPUR - HWY. 278 CONNECTOR
(MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. I
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

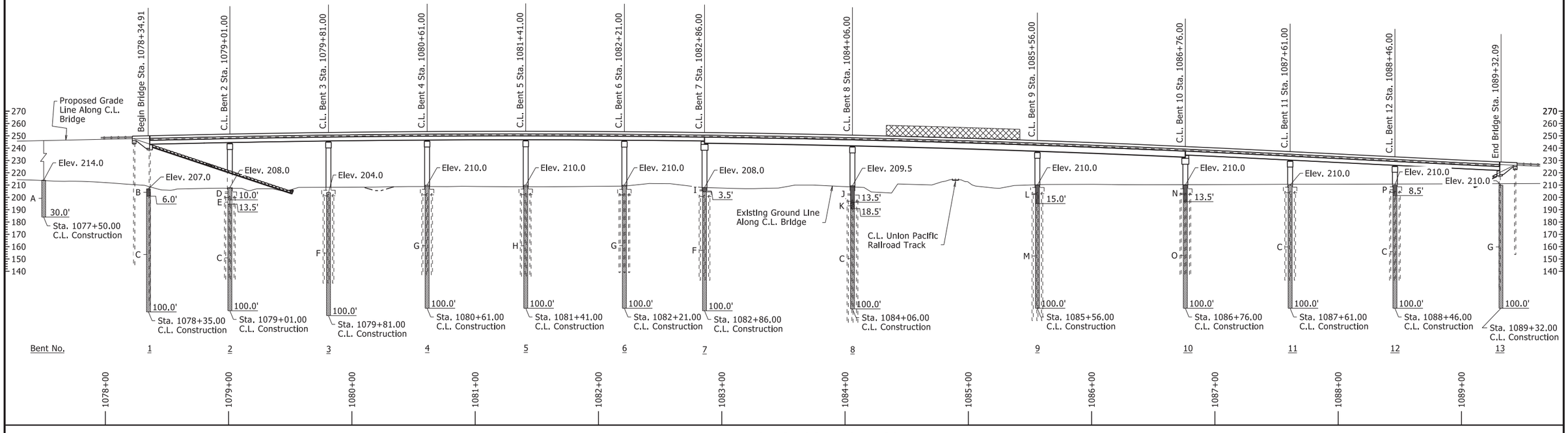
DRAWN BY: JJ DATE: 12/07/2020 FILENAME: b020475_l1.dgn
CHECKED BY: DPT DATE: 02/23/2022 SCALE: 1" = 40'
DESIGNED BY: JJ DATE: 04/21/2020
BRIDGE NO. 07536 DRAWING NO. 65104

PRINT DATE: 6/27/2022

1086+00 1087+00 1088+00 1089+00 1090+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		020475	92	191
07536 -	LAYOUT	- 65105		



ELEVATION OF SOIL BORINGS

BORING LEGEND

A - Medium stiff to stiff, brown and gray fat clay (CH)
B - Stiff to very stiff, brown, sandy lean clay (CL)
C - Medium stiff to very stiff, brown and gray and tan fat clay (CH)
D - Soft to medium stiff, gray fat clay (CH)
E - Medium stiff, gray elastic silt (MH)
F - Very soft to very stiff, brown and gray fat clay (CH)
G - Soft to very stiff, brown and gray fat clay (CH)
H - Soft to hard, brown and gray fat clay (CH)
I - Medium stiff, brown lean clay (CL)
J - Medium stiff to stiff, gray lean clay (CL)
K - Loose, gray clayey gravel, some sand (GC)
L - Stiff to medium stiff, brown and gray lean clay (CL)
M - Very stiff to stiff, gray fat clay (CH)
N - Stiff, brown and gray lean clay (CL)
O - Medium stiff to hard, brown and gray fat clay (CH)
P - Soft to medium stiff, brown and gray lean clay (CL)

N VALUES

Sta. 1077+50.00 C.L. Construction	Sta. 1078+35.00 C.L. Construction	Sta. 1079+01.00 C.L. Construction	Sta. 1079+81.00 C.L. Construction	Sta. 1080+61.00 C.L. Construction	Sta. 1081+41.00 C.L. Construction	Sta. 1082+21.00 C.L. Construction	Sta. 1082+86.00 C.L. Construction	Sta. 1084+06.00 C.L. Construction	Sta. 1085+56.00 C.L. Construction	Sta. 1086+76.00 C.L. Construction	Sta. 1087+61.00 C.L. Construction	Sta. 1088+46.00 C.L. Construction	Sta. 1089+32.00 C.L. Construction
1.0-2.5, N=9	1.0-2.5, N=9	1.0-2.5, N=1	1.0-2.5, N=2	1.0-2.5, N=7	1.0-2.5, N=3	1.0-2.5, N=5	1.0-2.5, N=7	1.0-2.5, N=7	1.0-2.5, N=10	1.0-2.5, N=8	1.0-2.5, N=5	1.0-2.5, N=3	1.0-2.5, N=6
3.5-5.0, N=8	6.0-7.5, N=5	3.5-5.0, N=2	3.5-5.0, N=4	3.5-5.0, N=3	3.5-5.0, N=2	3.5-5.0, N=3	3.5-5.0, N=3	3.5-5.0, N=7	3.5-5.0, N=9	3.5-5.0, N=6	3.5-5.0, N=5	3.5-5.0, N=3	3.5-5.0, N=4
6.0-7.5, N=9	13.5-15.0, N=5	6.0-7.5, N=4	6.0-7.5, N=6	6.0-7.5, N=4	6.0-7.5, N=2	6.0-7.5, N=1	6.0-7.5, N=0	6.0-7.5, N=5	6.0-7.5, N=14	6.0-7.5, N=8	6.0-7.5, N=6	6.0-7.5, N=5	6.0-7.5, N=8
8.5-10, N=10	18.5-20.0, N=8	8.5-10.0, N=5	8.5-10.0, N=5	8.5-10.0, N=7	13.5-15.0, N=10	8.5-10.0, N=5	8.5-10.0, N=0	8.5-10.0, N=10	8.5-10.0, N=8	13.5-15.0, N=16	8.5-10.0, N=5	8.5-10.0, N=6	8.5-10.0, N=7
13.5-15.0, N=8	23.5-25.0, N=8	13.5-15.0, N=7	13.5-15.0, N=7	13.5-15.0, N=10	18.5-20.0, N=7	13.5-15.0, N=6	13.5-15.0, N=4	13.5-15.0, N=7	13.5-15.0, N=6	18.5-20.0, N=7	13.5-15.0, N=8	13.5-15.0, N=7	13.5-15.0, N=7
18.5-20.0, N=9	28.5-30.0, N=11	18.5-20.0, N=7	18.5-20.0, N=8	18.5-20.0, N=8	23.5-25.0, N=9	18.5-20.0, N=7	18.5-20.0, N=7	18.5-20.0, N=8	18.5-20.0, N=9	23.5-25.0, N=11	18.5-20.0, N=7	18.5-20.0, N=6	18.5-20.0, N=6
23.5-25.0, N=9	33.5-35.0, N=11	23.5-25.0, N=8	23.5-25.0, N=9	23.5-25.0, N=9	28.5-30.0, N=11	23.5-25.0, N=11	23.5-25.0, N=13	23.5-25.0, N=9	23.5-25.0, N=11	28.5-30.0, N=44	23.5-25.0, N=10	23.5-25.0, N=9	23.5-25.0, N=12
28.5-30.0, N=11	38.5-40.0, N=13	28.5-30.0, N=10	28.5-30.0, N=12	28.5-30.0, N=12	33.5-35.0, N=11	28.5-30.0, N=13	28.5-30.0, N=14	28.5-30.0, N=11	28.5-30.0, N=12	33.5-35.0, N=12	28.5-30.0, N=12	28.5-30.0, N=10	28.5-30.0, N=14
	43.5-45.0, N=15	33.5-35.0, N=12	33.5-35.0, N=12	33.5-35.0, N=13	38.5-40.0, N=15	33.5-35.0, N=15	33.5-35.0, N=12	33.5-35.0, N=13	33.5-35.0, N=13	38.5-40.0, N=13	33.5-35.0, N=12	33.5-35.0, N=13	33.5-35.0, N=13
	48.5-50.0, N=15	38.5-40.0, N=11	38.5-40.0, N=14	38.5-40.0, N=14	43.5-45.0, N=14	38.5-40.0, N=14	38.5-40.0, N=18	38.5-40.0, N=16	38.5-40.0, N=12	43.5-45.0, N=14	38.5-40.0, N=15	38.5-40.0, N=15	38.5-40.0, N=17
	53.5-55.0, N=16	43.5-45.0, N=12	43.5-45.0, N=18	43.5-45.0, N=14	48.5-50.0, N=16	43.5-45.0, N=16	43.5-45.0, N=14	43.5-45.0, N=16	43.5-45.0, N=21	48.5-50.0, N=18	43.5-45.0, N=16	43.5-45.0, N=12	43.5-45.0, N=21
	58.5-60.0, N=16	48.5-50.0, N=16	48.5-50.0, N=16	48.5-50.0, N=17	53.5-55.0, N=16	48.5-50.0, N=15	48.5-50.0, N=18	48.5-50.0, N=19	48.5-50.0, N=15	53.5-55.0, N=17	48.5-50.0, N=17	48.5-50.0, N=17	48.5-50.0, N=15
	63.5-65.0, N=20	53.5-55.0, N=16	53.5-55.0, N=17	53.5-55.0, N=19	58.5-60.0, N=40	53.5-55.0, N=18	53.5-55.0, N=18	53.5-55.0, N=17	53.5-55.0, N=18	58.5-60.0, N=16	53.5-55.0, N=18	53.5-55.0, N=20	53.5-55.0, N=18
	68.5-70.0, N=20	58.5-60.0, N=15	58.5-60.0, N=19	58.5-60.0, N=16	63.5-65.0, N=18	58.5-60.0, N=19	58.5-60.0, N=20	58.5-60.0, N=19	58.5-60.0, N=16	63.5-65.0, N=17	58.5-60.0, N=17	58.5-60.0, N=21	58.5-60.0, N=17
	73.5-75.0, N=20	63.5-65.0, N=20	63.5-65.0, N=18	63.5-65.0, N=17	68.5-70.0, N=53	63.5-65.0, N=19	63.5-65.0, N=20	68.5-70.0, N=20	63.5-65.0, N=19	68.5-70.0, N=19	63.5-65.0, N=18	63.5-65.0, N=19	63.5-65.0, N=13
	78.5-80.0, N=18	68.5-70.0, N=17	68.5-70.0, N=19	68.5-70.0, N=20	73.5-75.0, N=21	68.5-70.0, N=22	68.5-70.0, N=20	73.5-75.0, N=20	68.5-70.0, N=20	73.5-75.0, N=22	68.5-70.0, N=18	68.5-70.0, N=21	68.5-70.0, N=19
	83.5-85.0, N=23	73.5-75.0, N=28	73.5-75.0, N=21	73.5-75.0, N=23	78.5-80.0, N=26	73.5-75.0, N=21	78.5-80.0, N=22	78.5-80.0, N=22	73.5-75.0, N=23	78.5-80.0, N=23	73.5-75.0, N=20	73.5-75.0, N=19	73.5-75.0, N=27
	88.5-90.0, N=21	78.5-80.0, N=23	78.5-80.0, N=21	78.5-80.0, N=22	83.5-85.0, N=31	78.5-80.0, N=25	83.5-85.0, N=20	83.5-85.0, N=20	78.5-80.0, N=21	83.5-85.0, N=21	78.5-80.0, N=22	78.5-80.0, N=22	78.5-80.0, N=20
	93.5-95.0, N=21	83.5-85.0, N=26	83.5-85.0, N=22	83.5-85.0, N=22	88.5-90.0, N=30	83.5-85.0, N=27	88.5-90.0, N=23	88.5-90.0, N=22	83.5-85.0, N=26	88.5-90.0, N=25	83.5-85.0, N=22	83.5-85.0, N=26	83.5-85.0, N=18
	98.5-100.0, N=20	88.5-90.0, N=21	88.5-90.0, N=25	88.5-90.0, N=24	93.5-95.0, N=30	88.5-90.0, N=27	93.5-95.0, N=23	93.5-95.0, N=24	88.5-90.0, N=23	93.5-95.0, N=24	88.5-90.0, N=24	88.5-90.0, N=24	88.5-90.0, N=24
		93.5-95.0, N=22	93.5-95.0, N=24	93.5-95.0, N=26	98.5-100.0, N=18	93.5-95.0, N=26	93.5-95.0, N=22	98.5-100.0, N=26	93.5-95.0, N=23	98.5-100.0, N=22	93.5-95.0, N=25	93.5-95.0, N=22	93.5-95.0, N=22
		98.5-100.0, N=25	98.5-100.0, N=28	98.5-100.0, N=23		98.5-100.0, N=28	98.5-100.0, N=26		98.5-100.0, N=23		98.5-100.0, N=25	98.5-100.0, N=23	98.5-100.0, N=28

For End Bent 1, a waiting period of 120 days is required after the placement of embankment fill and prior to commencing pile driving operations. The waiting period begins after all fill has been placed for End Bent 1.

For End Bent 13, a waiting period of 60 days is required after the placement of embankment fill and prior to commencing pile driving operations. The waiting period begins after all fill has been placed for End Bent 13.

STATE OF ARKANSAS
May 2 2022 3:53 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 3
LAYOUT OF BRIDGE HIGHWAY 83 OVER
TEN MILE TRIBUTARY & UPRR
HWY. 83 SPUR - HWY. 278 CONNECTOR
(MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. I

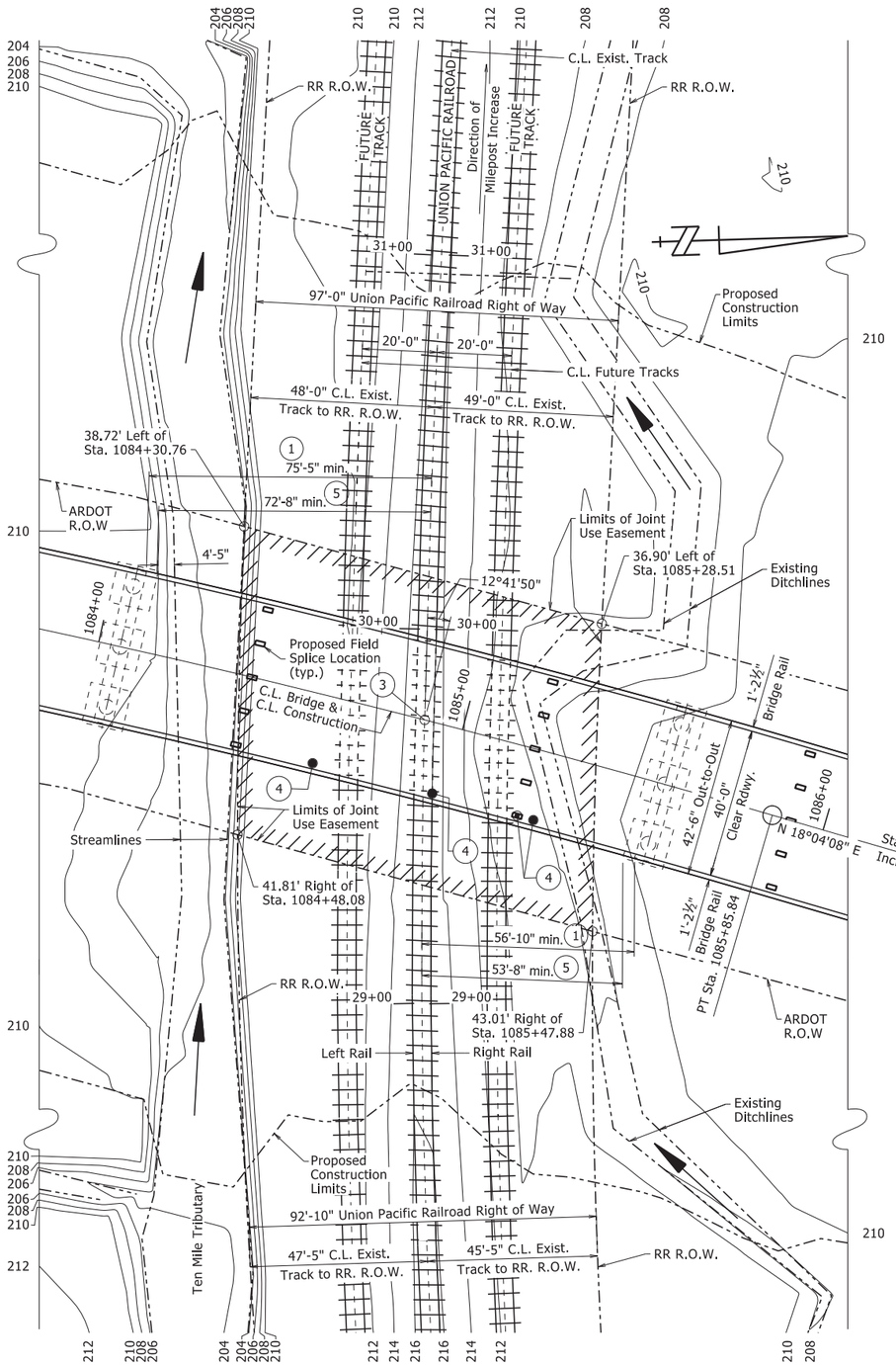
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 01/31/2022 FILENAME: b020475_l1.dgn
CHECKED BY: DPT DATE: 02/23/2022 SCALE: 1" = 40'
DESIGNED BY: JJ DATE: 04/21/2020

BRIDGE NO. 07536 DRAWING NO. 65105

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	93	191
				1	07536 - EXHIBIT A - 65106			



LOCATION PLAN
1"=20'

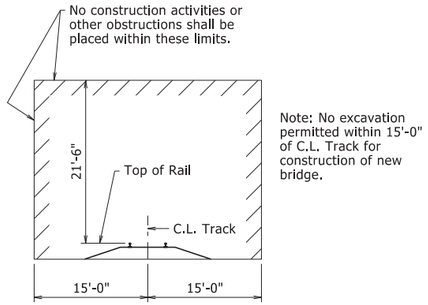
GENERAL NOTES:

1. Site(s) shall be accessed without crossing track(s) except at existing road crossing(s), unless explicit approvals have been obtained from UPRR. The track is owned by UPRR and leased by Genesse & Wyoming - Arkansas Midland Railroad (G&W-AKMD). All references to UPRR in the bridge plans also refer to G&W-AKMD. The Contractor shall coordinate all construction activities with both Railroads.
2. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad(s) prior to construction.
3. Currently there are no known utilities on the Railroad right-of-way other than those shown. At https://www.up.com/aboutup/community/telecom/groups/index.htm open a ticket for UPRR Utility coordination and use SP contact for AKMD ulitility coordination prior to construction.
4. Construction shall comply with requirements noted in Special Provision "Insurance, Construction, and Flagging Requirements on Railroad Property (UPRR)" and in Special Provision "Insurance, Construction, and Flagging Requirements on Railroad Property (G&W-AKMD)", including the use of permanent steel deck pans over the Railroad right-of-way.
5. The proposed grade separation project shall not change the quantity and/or characteristics of the flow in the Railroad ditches and/or drainage structures. Existing drainage patterns will be maintained. Closed parapet railing (no deck drains) are typical on both sides of the bridge deck over the Railroad right-of-way.
6. The Contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad(s) prior to beginning any grading on the project site.
7. Temporary construction clearances, including falsework clearances, shall comply with the details shown in "Minimum Construction Clearance Envelope". All unauthorized equipment, materials, and personnel shall remain outside this envelope.
8. All shoring systems that impact the Railroad's operations and/or supports the Railroad's embankment shall be designed and constructed per the Railroad(s) temporary shoring requirements.
9. Erection over the Railroad right-of-way shall be designed to cause no interruption to all Railroad(s) operations. Falsework will not be allowed in the Railroad Right-of-way without Railroad(s) approval.
10. All personnel must clear the area within 25 feet of track and secure all equipment during the approach and passage of a train. All work within 50 feet of track must cease during the approach and passage of a train.
11. All permanent clearances shall be verified before project closeout.
12. All demolition within the Railroad right-of-way and/or demolition that may impact the Railroad tracks or operations shall comply with the Railroad(s) demolition requirements.

TABLE

Track	Location	Min. Vert. Clear.
Union Pacific Railroad Track (UPRR)	29'-7" Left of C.L. Exist. Track	25'-6"
	At Right Rail of Exist. Track	24'-8"
	At Splice Plate	23'-9"
	29'-7" Right of C.L. Exist. Track	23'-8"

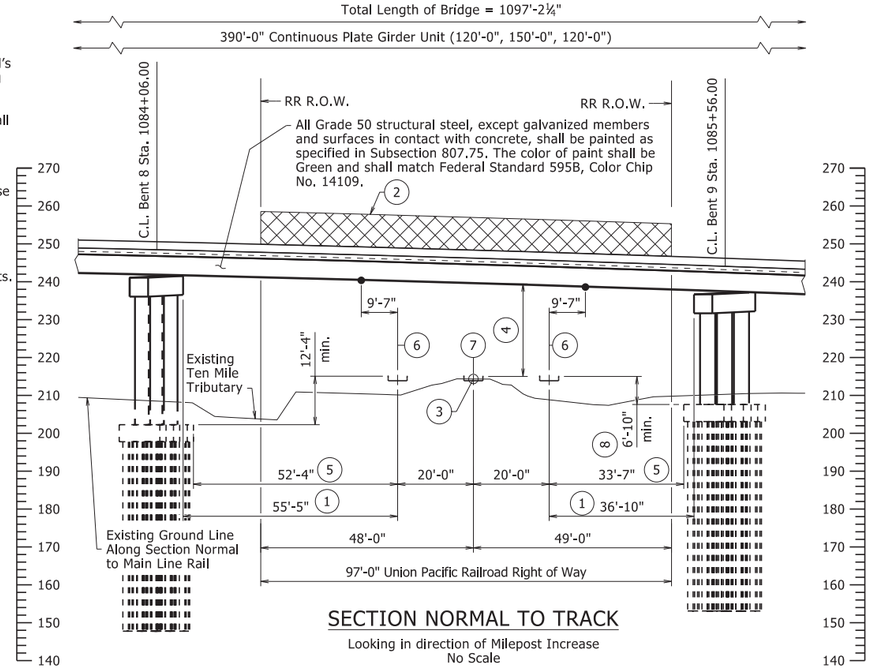
Note: The location of minimum vertical clearance was adjusted for an approximate track degree of curvature of 1.41°. Minimum vertical clearances shown are after all permanent dead loads are applied to the structure and are measured to the lowest steel girder element at the location indicated, including field splice elements. Future track top of rail elevations are assumed equal to adjacent existing track top of rail elevations.



Note: No excavation permitted within 15'-0" of C.L. Track for construction of new bridge.

MINIMUM CONSTRUCTION CLEARANCE ENVELOPE
Normal to Track
No Scale

(1) Minimum horizontal clearance at face of bent.
(2) Chain Link Fence to be placed on both sides of Bridge over railroad right-of-way.
(3) Intersection of C.L. Bridge and C.L. Exist. Track at Sta. 1084+89.54, Approx. Railroad Milepost 447.06.
(4) Points of minimum vertical clearance to top of rail, see "TABLE".
(5) Minimum horizontal clearance at face of footing.
(6) C.L. Future Tracks.
(7) C.L. Exist. Main Line Rail Track
(8) Base of rail to top of footing. All footings are located outside of UPRR ROW.



SECTION NORMAL TO TRACK
Looking in direction of Milepost Increase
No Scale

STATE OF ARKANSAS
Chris Ellis
May 12 2022 12:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

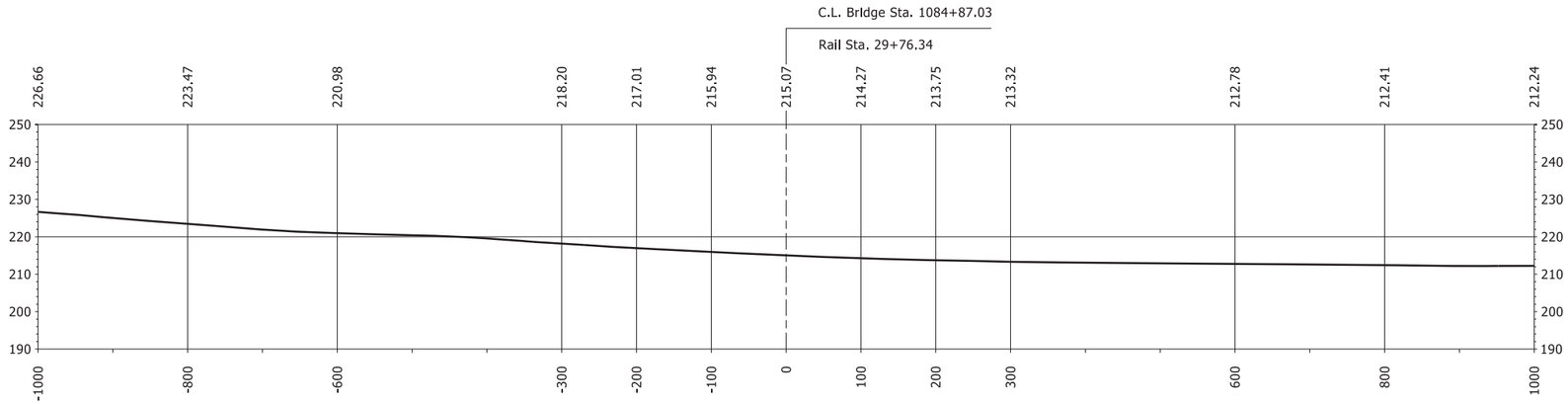
SHEET 1 OF 2
RAILROAD EXHIBIT A
HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR
WARREN BRANCH SUBDIVISION, MILEPOST 447.06
LATITUDE 33.6289°N, LONGITUDE 91.8152°W
HWY. 83 SPUR - HWY. 278 CONNECTOR
(MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. 1
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 12/07/2020
CHECKED BY: DPT DATE: 02/23/2022
DESIGNED BY: JJ DATE: 04/23/2020
FILENAME: b020475_exA.dgn
SCALE: AS NOTED
BRIDGE NO. 07536
DRAWING NO. 65106

PRINT DATE: 5/10/2022

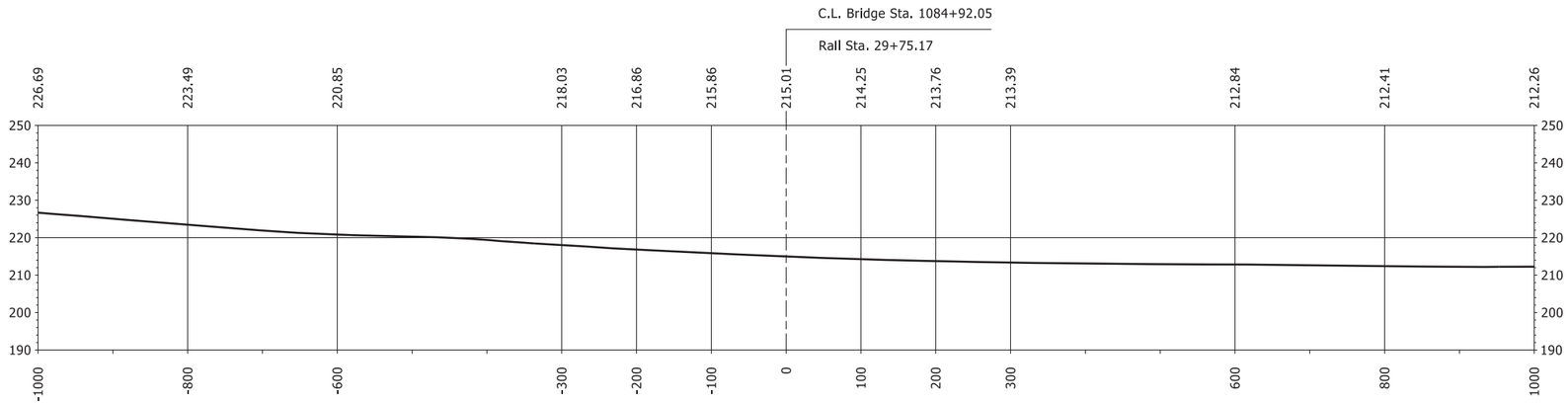
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	94	191
				07536 - EXHIBIT A - 65107				



PROFILE ALONG TOP OF LEFT RAIL

No Scale

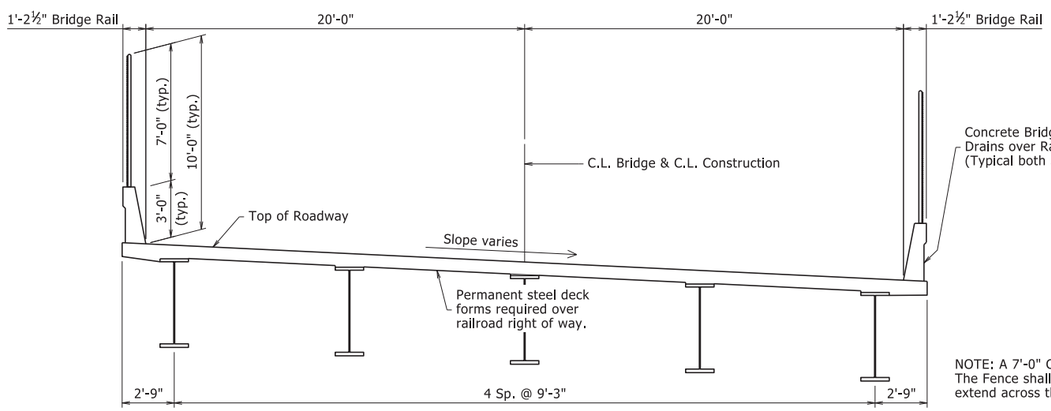
Direction of Milepost Increase



PROFILE ALONG TOP OF RIGHT RAIL

No Scale

Direction of Milepost Increase



TYPICAL SECTION

Looking Ahead (C.L. Construction Stationing)
No Scale

NOTE: A 7'-0" Chain Link Fence is required on both sides of bridge. The Fence shall be mounted on top of the concrete bridge rail and shall extend across the width of the Union Pacific Railroad Right of Way.

STATE OF ARKANSAS
May 2 2022 3:50 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
RAILROAD EXHIBIT A
HIGHWAY 83 OVER TEN MILE TRIBUTARY & UPRR
WARREN BRANCH SUBDIVISION, MILEPOST 447.06
LATITUDE 33.6289°N, LONGITUDE 91.8152°W
HWY. 83 SPUR - HWY. 278 CONNECTOR
(MONTICELLO) (F)
DREW COUNTY

ROUTE 83 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

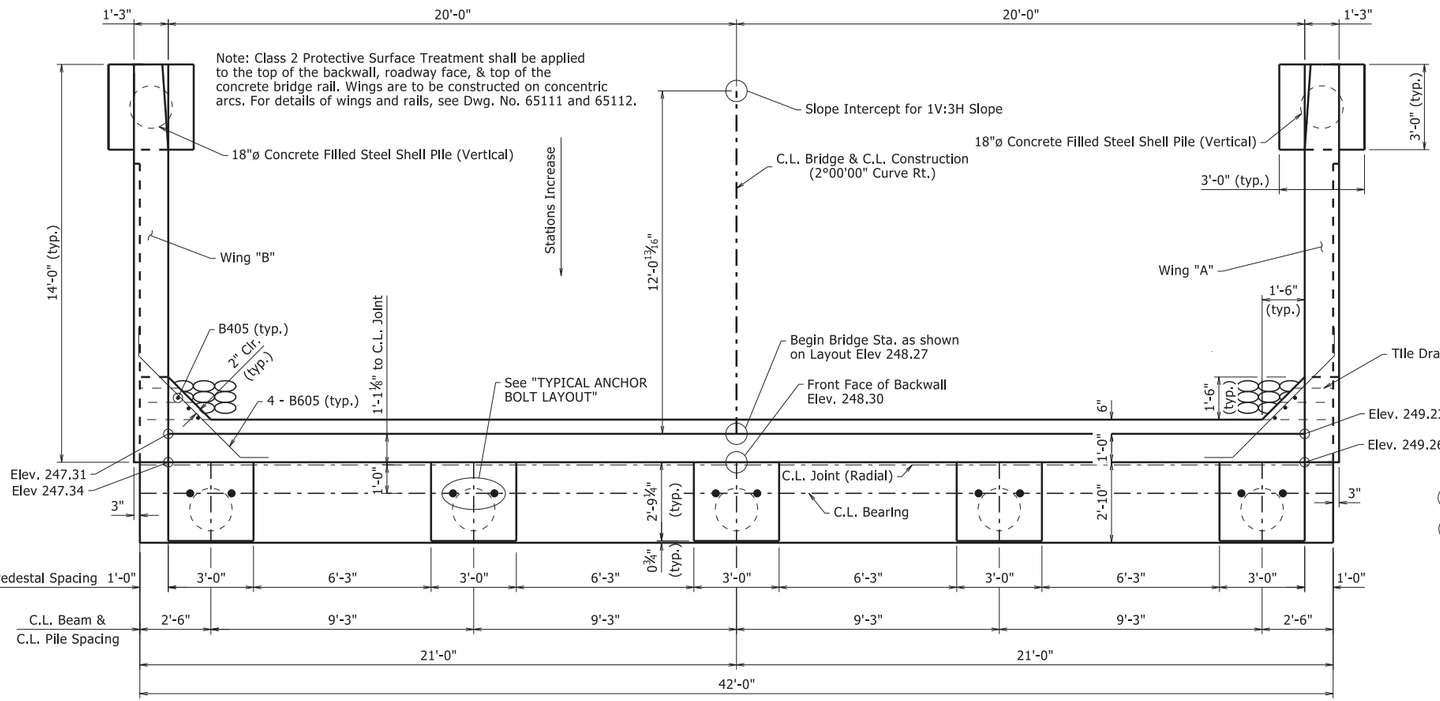
DRAWN BY: JJ DATE: 12/07/2020
CHECKED BY: DPT DATE: 02/23/2022
DESIGNED BY: JJ DATE: 04/23/2020
FILENAME: b020475_exA.dgn
SCALE: AS NOTED

BRIDGE NO. 07536 DRAWING NO. 65107

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	95	191

① 07536 - END BENTS - 65108



PLAN - BENT 1

⅜" = 1'-0"

GENERAL NOTES:

For Joint Details see Dwg. No. 65110.

For "SUBSTRUCTURE NOTES", see Std. Dwg. No. 55006.

Structural steel, unless noted otherwise, in Bent 1 and Bent 13 shall be ASTM A709, Gr. 50W and shall be paid for as "Structural Steel In W-Beam Spans (A709, Grade 50W)".

No portion of the backwall shall be poured before beams are in place. The portion of the backwall above the optional construction joint at the paving bracket shall not be placed until the deck pour has been made. Refer to the "EXPANSION DEVICE INSTALLATION AT END BENTS" note, see Std. Dwg. No. 55009. No heavy construction equipment or backfill shall be allowed directly behind the backwall unit before the concrete for the adjacent span has been completed.

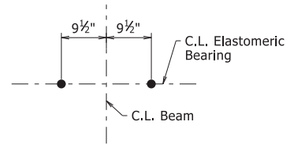
All piling shall be Grade 3 (Fy = 45 ksi). For details of steel piling, see Std. Dwg. No. 55021.

For additional information, see Layout.

For Details of Elastomeric Bearings, see Dwg. Nos. 65123 and 65124.

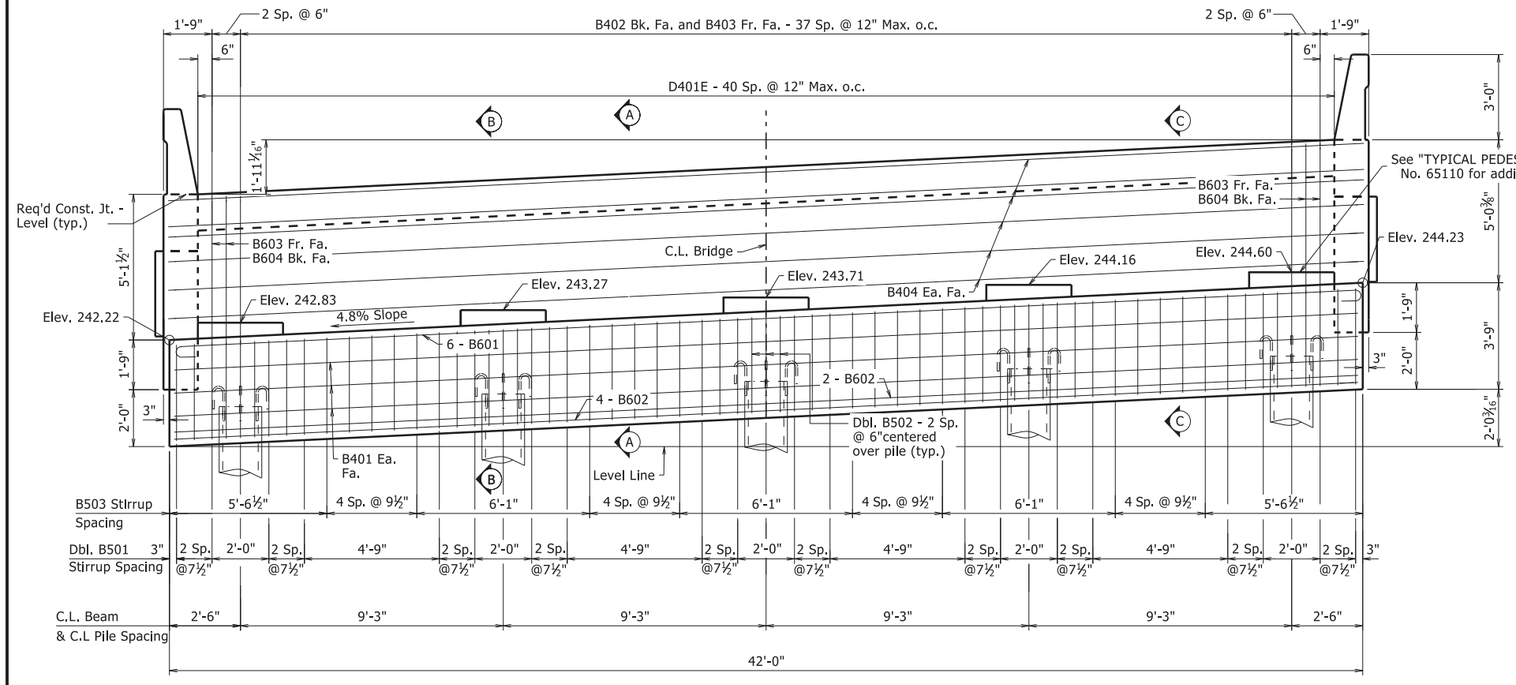
① Pedestals shall be cast level at the elevations shown.

② Place 6"ø tile drains aproximately 6" above fill slope. Spread bars as required. Place 6 cu. ft. of sacked ¾" crushed rock or gravel at each drain. All work and materials to install drains shall be subsidiary to "Class S Concrete".



TYPICAL ANCHOR BOLT LAYOUT

NO SCALE

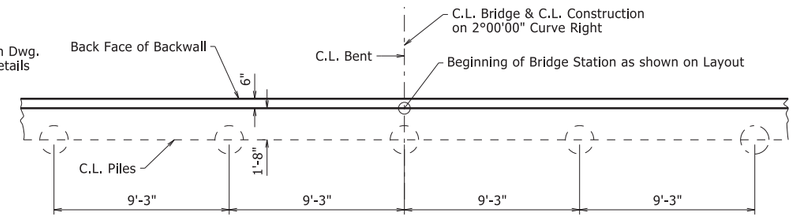


ELEVATION - BENT 1

LOOKING BACK

⅜" = 1'-0"

For "SECTION A-A", "SECTION B-B", and "SECTION C-C", See Dwg. No. 65110.



LAYOUT OF PILES

¼" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:50 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS OF END BENTS

ROUTE SEC.

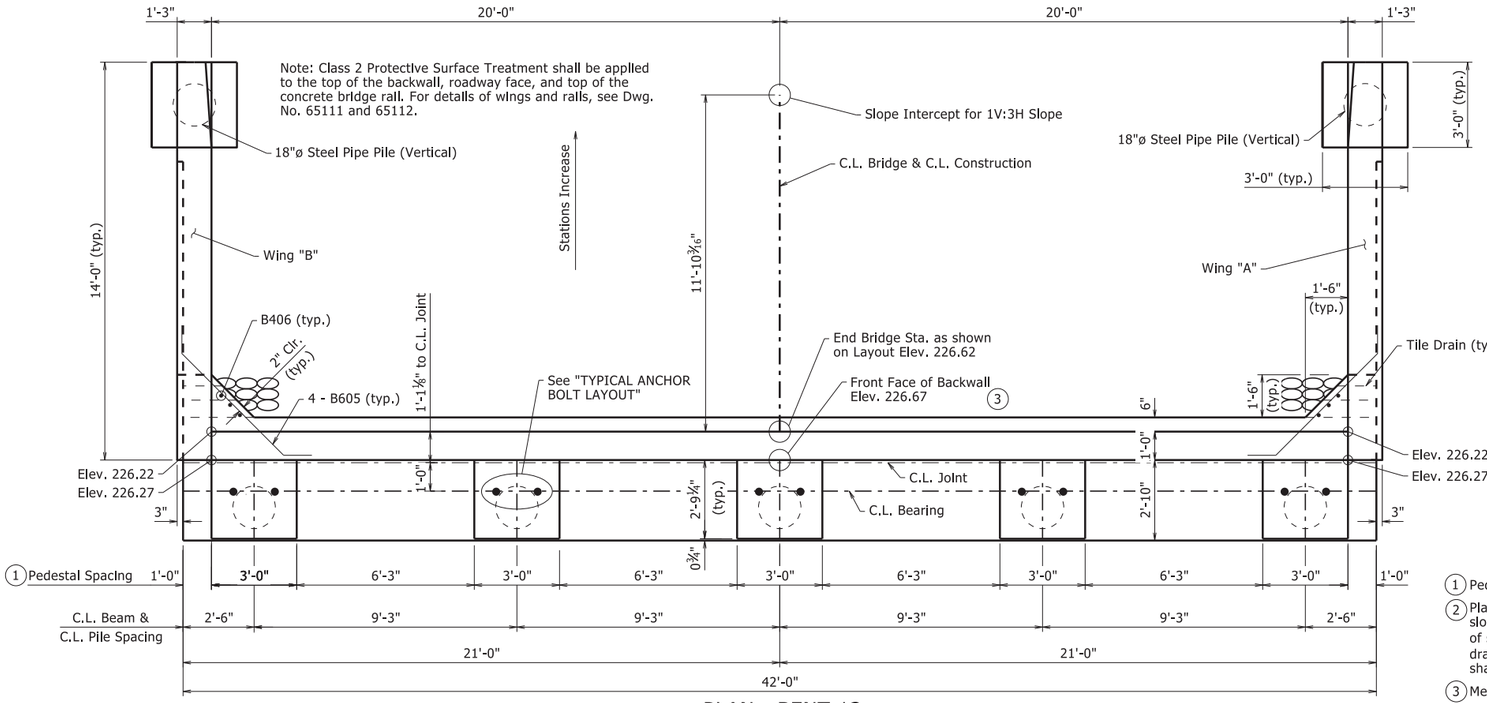
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: RD DATE: 11/10/2021 FILENAME: b020475_b1.dgn
CHECKED BY: BAB DATE: 01/20/2022 SCALE: As Noted
DESIGNED BY: JJ DATE: 10/2021

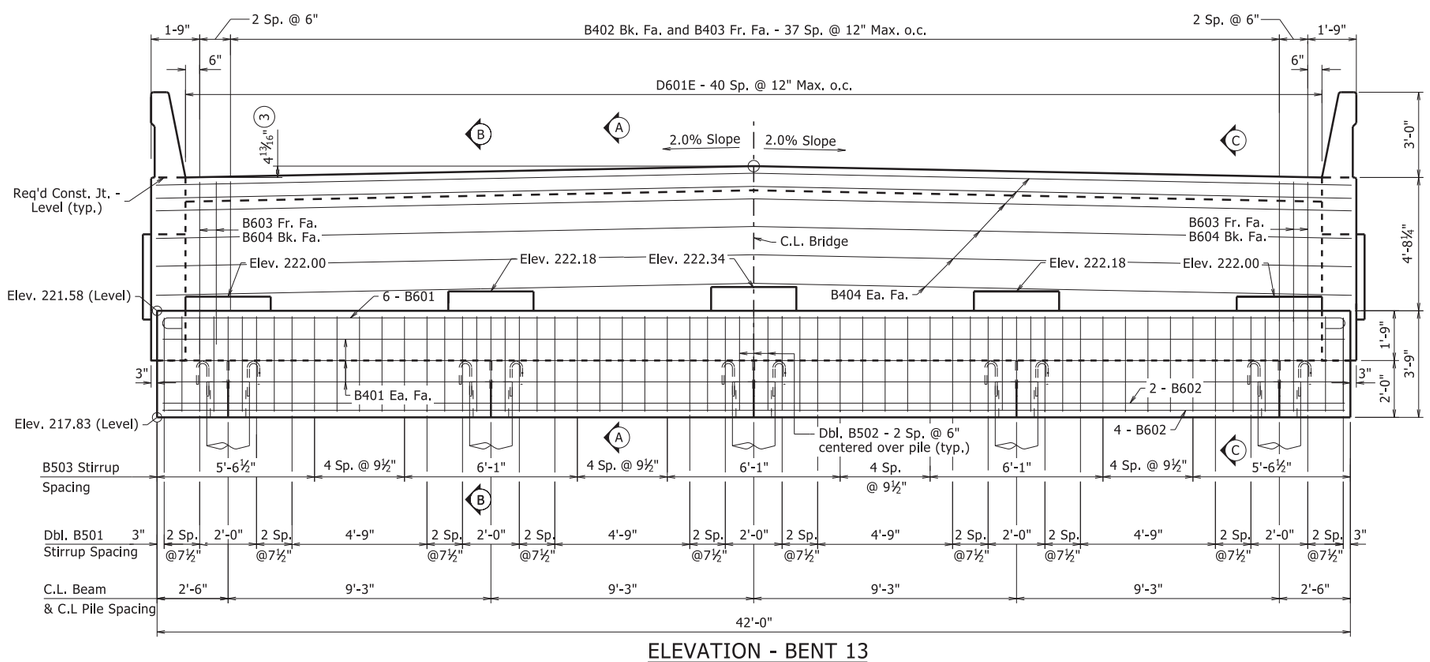
BRIDGE NO. 07536 DRAWING NO. 65108

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	96	191
				①	07536 - END BENTS - 65109			



PLAN - BENT 13

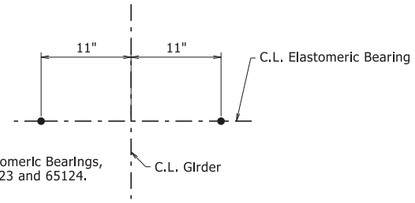
⅜" = 1'-0"



ELEVATION - BENT 13

LOOKING AHEAD

⅜" = 1'-0"



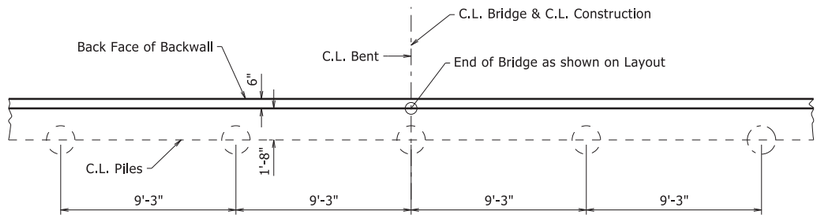
TYPICAL ANCHOR BOLT LAYOUT

NO SCALE

(1) Pedestals shall be cast level at the elevations shown.

(2) Place 6"ø tile drains aproximately 6" above fill slope. Spread bars as required. Place 6 cu. ft. of sacked ¾" crushed rock or gravel at each drain. All work and materials to install drains shall be subsidiary to "Class S Concrete".

(3) Measured at Working Point. See "ROUNDING DETAIL" on Dwg. No. 65104.



LAYOUT OF PILES

¼" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:50 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF END BENTS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

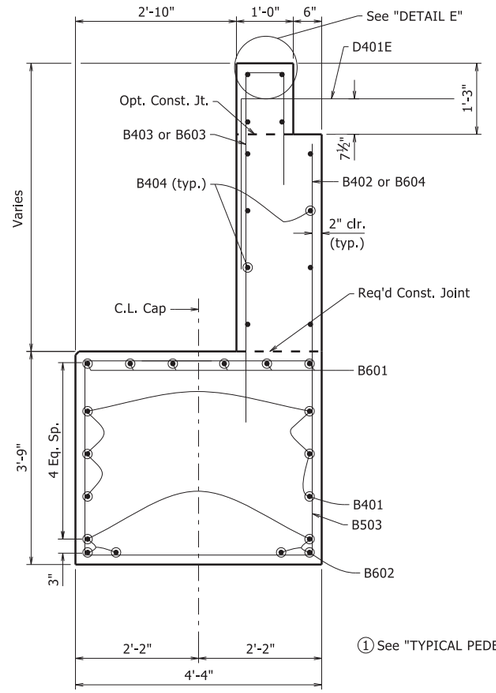
LITTLE ROCK, ARK.

DRAWN BY: RD DATE: 11/10/2021 FILENAME: b020475_b13.dgn
CHECKED BY: BAB DATE: 01/20/2022 SCALE: As Noted
DESIGNED BY: JJ DATE: 10/2021

BRIDGE NO. 07536 DRAWING NO. 65109

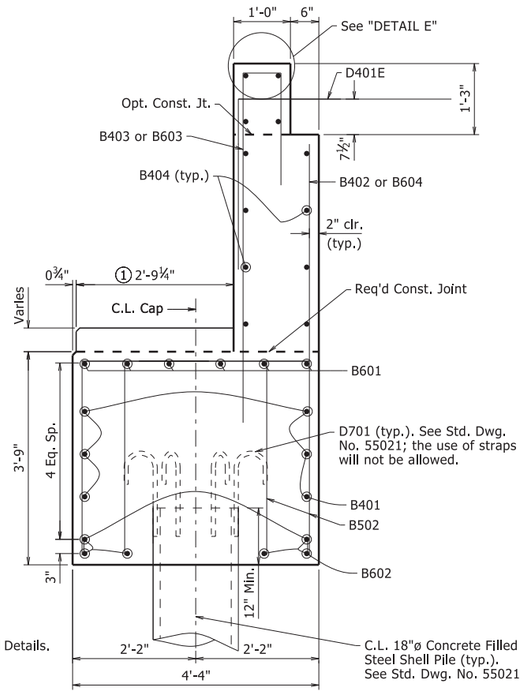
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	97	191
				① 07536 - END BENTS - 65110				

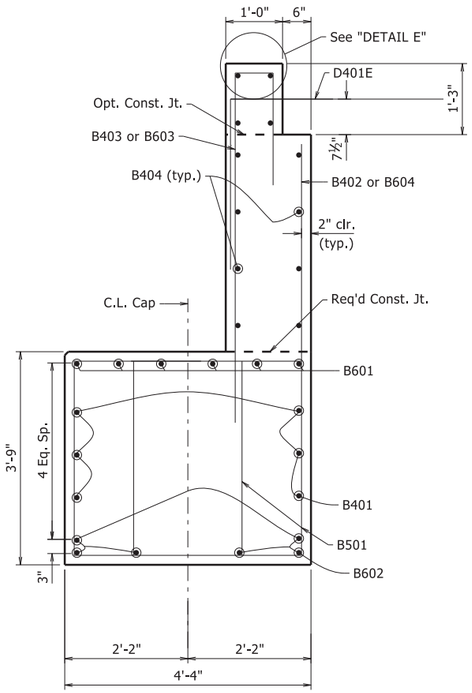


SECTION A-A

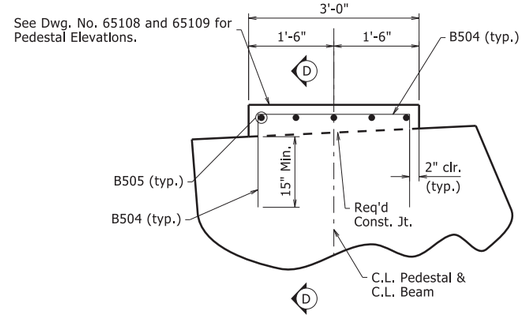
① See "TYPICAL PEDESTAL" for Pedestal Details.



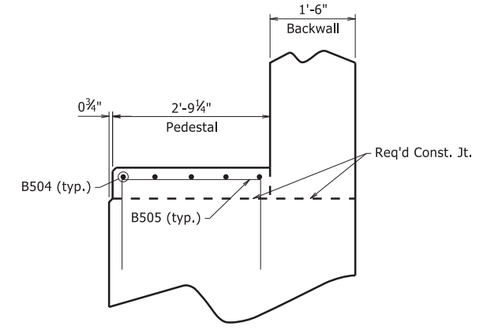
SECTION B-B



SECTION C-C

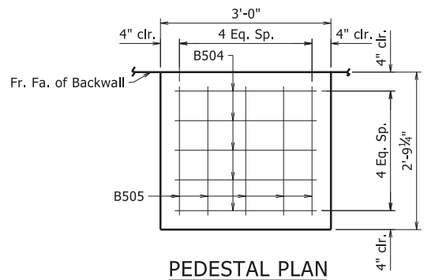


TYPICAL PEDESTAL

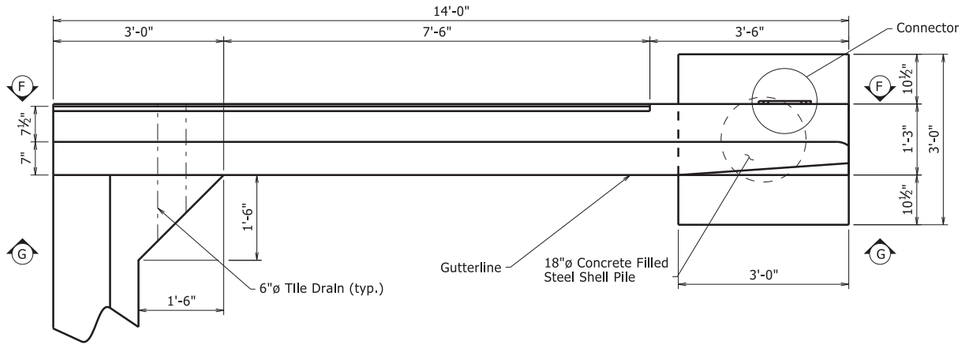


SECTION D-D

Note: Pedestal bars shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

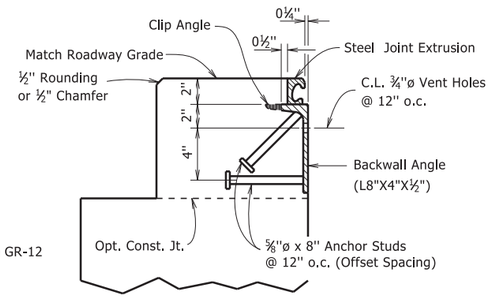


PEDESTAL PLAN



PLAN OF RAIL

WING B SHOWN
WING A SIMILAR



NOTES:
For additional joint details, see Std. Dwg. No. 55009.

Concrete shall be hand packed under the joint armor in the backwall.

Transverse spacing between horizontal anchor studs and vent holes should be 6".

DETAIL E

NO SCALE

For "VIEW F-F" and "VIEW G-G", see Dwg. No. 65111.

STATE OF ARKANSAS
May 2 2022 3:50 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS OF END BENTS

ROUTE SEC.

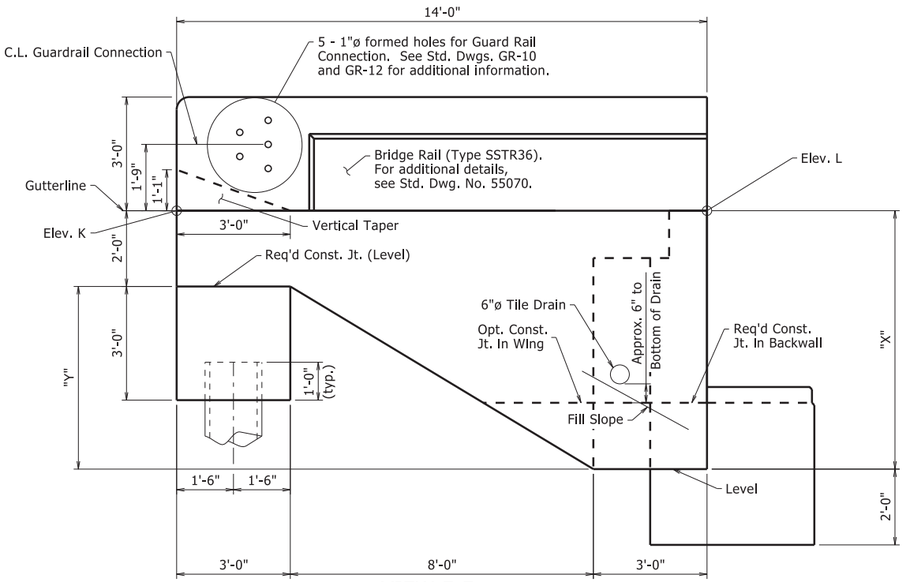
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: RD DATE: 11/10/2021 FILENAME: b020475_b1.dgn
CHECKED BY: BAB DATE: 01/20/2022 SCALE: ¾" = 1'-0"
DESIGNED BY: JJ DATE: 10/2021

BRIDGE NO. 07536 DRAWING NO. 65110

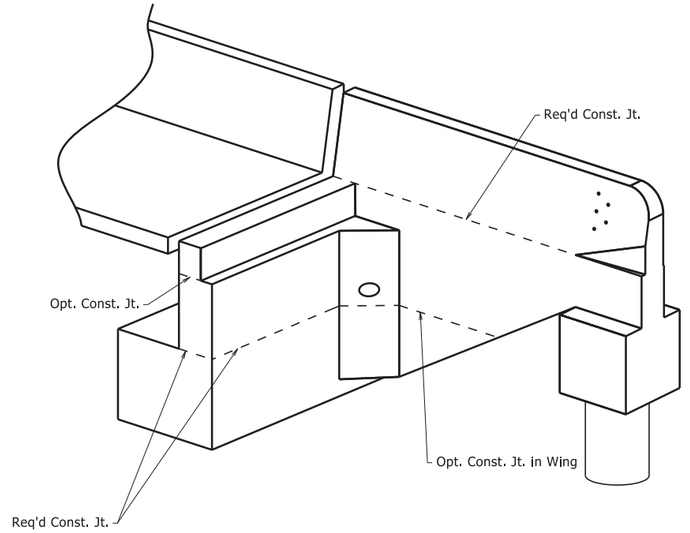
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	98	191
				1	07536 - END BENTS - 65111			



VIEW F-F

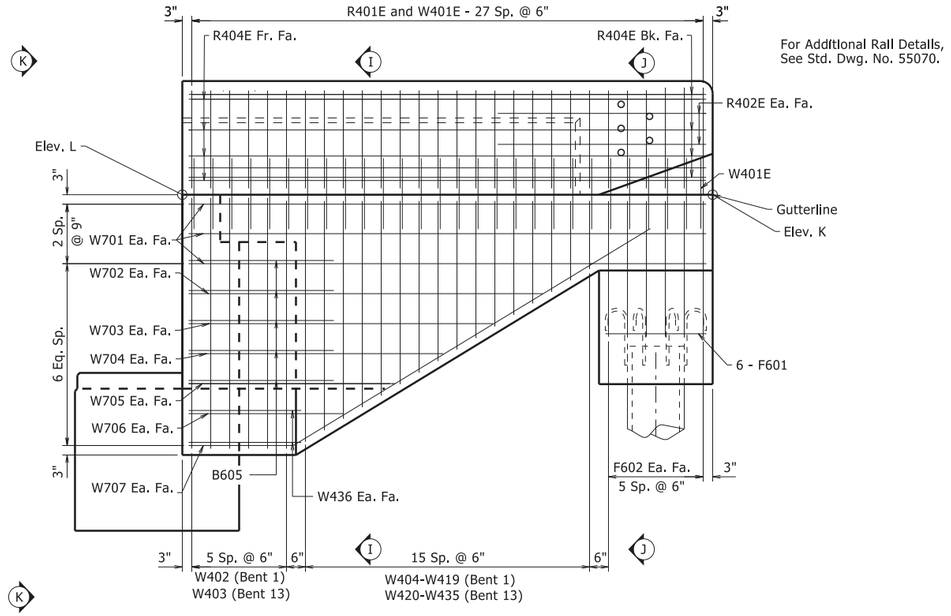
½" = 1'-0"

WING B SHOWN
WING A SIMILAR



THREE DIMENSIONAL VIEW OF RAIL

NO SCALE



For Additional Rail Details, See Std. Dwg. No. 55070.

VIEW G-G

½" = 1'-0"

WING B SHOWN
WING A SIMILAR

For "SECTION I-I", "SECTION J-J", And "VIEW K-K", See Dwg. No. 65112

TABLE OF VARIABLES

		LENGTHS		ELEVATIONS	
BENT	WING	"X"	"Y"	Elev. K	Elev. L
1	A	6'-9⅜"	4'-5¾"	248.96	249.26
1	B	6'-10⁷⁄₁₆"	4'-6¹³⁄₁₆"	247.04	247.34
13	A	6'-5¼"	3'-9¾"	225.64	226.27
13	B	6'-5¼"	3'-9¾"	225.64	226.27

STATE OF ARKANSAS
May 2 2022 3:57 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS OF END BENTS

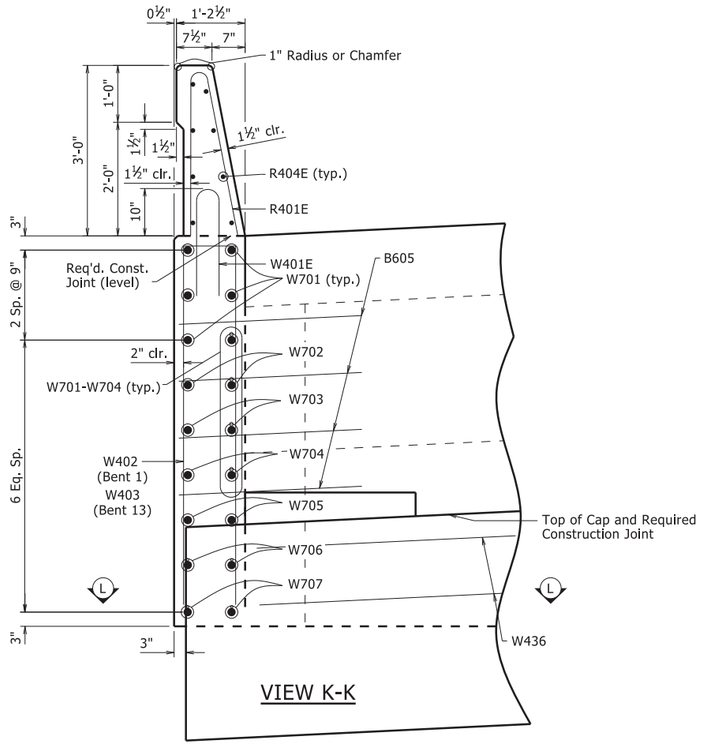
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

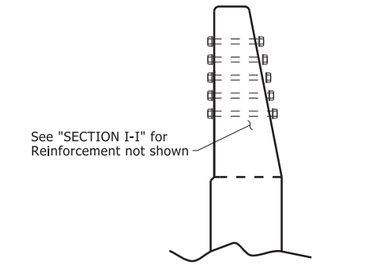
DRAWN BY: RD DATE: 08/25/2021 FILENAME: b020475_b1.dgn
CHECKED BY: BAB DATE: 01/20/2022 SCALE: As Noted
DESIGNED BY: JJ DATE: 08/2021

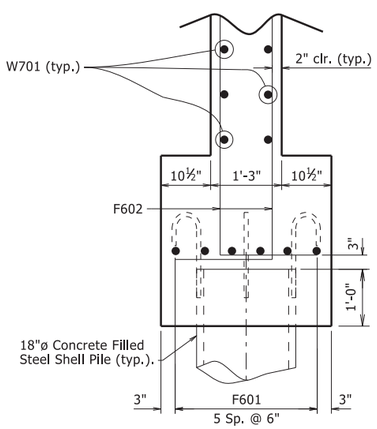
BRIDGE NO. 07536 DRAWING NO. 65111

PRINT DATE: 5/2/2022

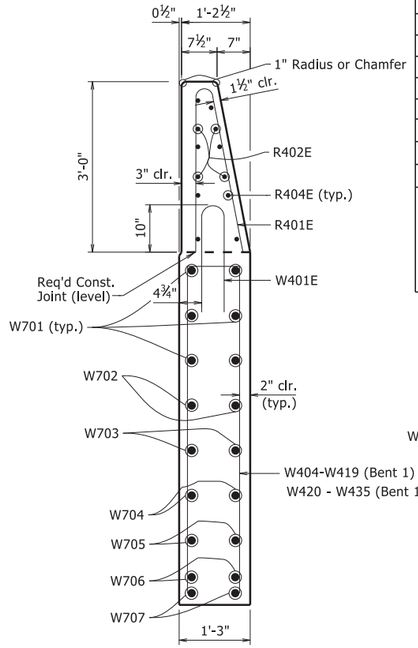
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	99	191
				①		07536 - END BENTS - 65112		



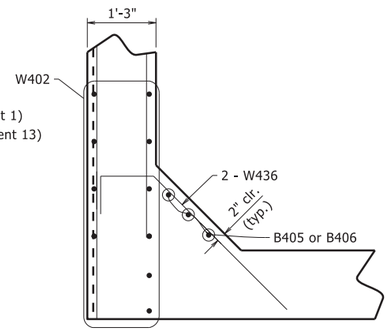




SECTION J-J



SECTION I-I



SECTION L-L

WING B SHOWN
WING A SIMILAR

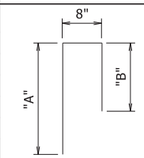
BAR LIST

	BENT 1				BENT 13				
MARK	NO. REQ'D	"A"	"B"	LENGTH	NO. REQ'D	"A"	"B"	LENGTH	P.D.
① R401E	56	-	-	5'-11"	56	-	-	5'-11"	2½"
① R402E	8	-	-	5'-6"	8	-	-	5'-6"	Str.
R404E	16	-	-	13'-8"	16	-	-	13'-8"	Str.
B401	6	-	-	41'-8"	6	-	-	41'-8"	Str.
B402	38	-	-	7'-3"	38	-	-	7'-3"	Str.
B403	38	6'-9"	2'-10"	10'-1"	38	6'-9"	2'-10"	10'-1"	2"
B404	12	-	-	42'-2"	12	-	-	42'-2"	Str.
B405	6	-	-	5'-3"	-	-	-	-	Str.
B406	-	-	-	-	6	-	-	4'-10"	Str.
D401E	41	2'-10"	2'-10"	5'-6"	41	2'-10"	2'-10"	5'-6"	3"
B501	60	3'-5"	3'-0"	13'-4"	60	3'-5"	3'-0"	13'-4"	2½"
B502	30	3'-5"	3'-0"	9'-8"	30	3'-5"	3'-0"	9'-8"	2½"
B503	20	3'-5"	4'-0"	15'-4"	20	3'-5"	4'-0"	15'-4"	2½"
B504	25	1'-10"	2'-8"	6'-2"	25	1'-10"	2'-8"	6'-2"	2½"
B505	25	1'-10"	2'-5"	5'-11"	25	1'-10"	2'-5"	5'-11"	2½"
B601	6	-	-	43'-0"	6	-	-	43'-0"	4½"
B602	6	-	-	41'-8"	6	-	-	41'-8"	Str.
B603	4	7'-7"	3'-8"	11'-7"	4	7'-7"	3'-8"	11'-7"	4½"
B604	4	-	-	7'-4"	4	-	-	7'-4"	Str.
B605	10	-	-	7'-1"	10	-	-	7'-1"	4½"
① W401E	56	-	-	3'-11"	56	-	-	3'-11"	3¾"
W402	12	6'-6"	11"	13'-9"	-	-	-	-	2"
W403	-	-	-	-	12	6'-1"	11"	12'-11"	2"
W404-W419	2 Ea.	1'-10" to 6'-4"	11"	4'-5" to 13'-5"	-	-	-	-	2"
W420-W435	-	-	-	-	2 Ea.	1'-11" to 5'-10"	11"	4'-7" to 12'-5"	3"
W436	4	-	-	5'-3"	4	-	-	5'-3"	3"
W701	12	-	-	13'-8"	12	-	-	13'-8"	Str.
W702-W706	4 Ea.	-	-	4'-2" to 9'-7"	4 Ea.	-	-	4'-2" to 9'-7"	5¼"
W707	4	-	-	13'-10"	4	-	-	13'-10"	5¼"
F601	12	-	-	2'-10"	12	-	-	2'-10"	Str.
F602	12	1'-8½"	3'-10"	5'-5"	12	1'-8½"	3'-10"	5'-5"	4½"

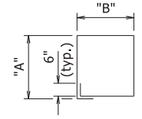
Dimensions are out to out of bars.
Bars with "E" suffix are to be epoxy coated.

① See Std. Dwg. 55070 for additional information.

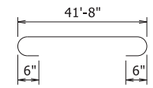
BENDING DIAGRAMS



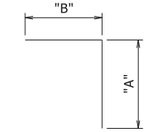
B403
B603



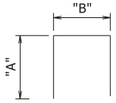
B501
B503



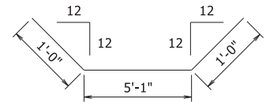
B601



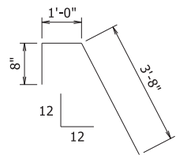
D401E
F602



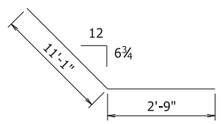
B502
B504
B505
W402
W403
W404-W419
W420-W435



B605



W436



W707

STATE OF ARKANSAS
May 2 2022 3:57 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF END BENTS

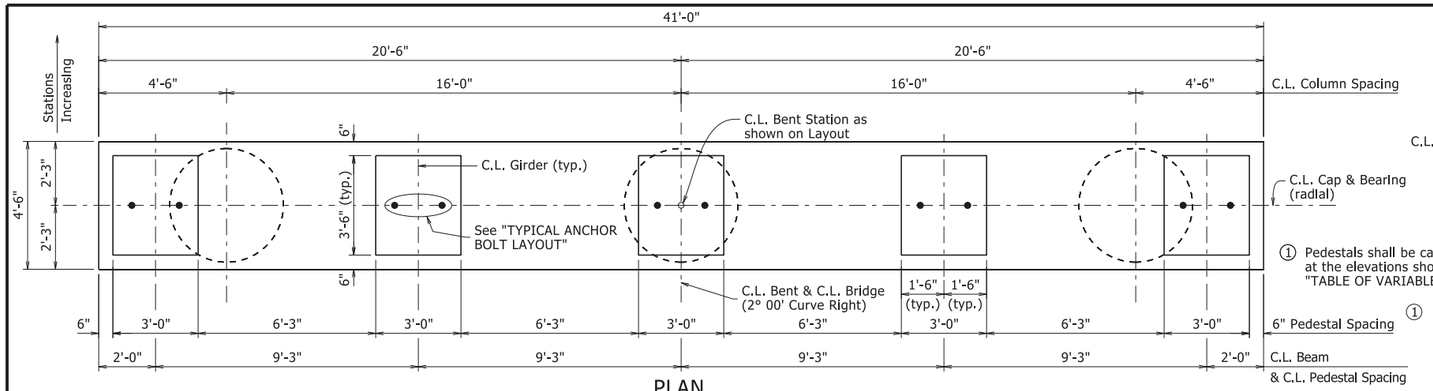
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: RD DATE: 08/25/2021 FILENAME: b020475_b1.dgn
CHECKED BY: BAB DATE: 01/20/2022 SCALE: ¾" = 1'-0"
DESIGNED BY: JJ DATE: 08/2021

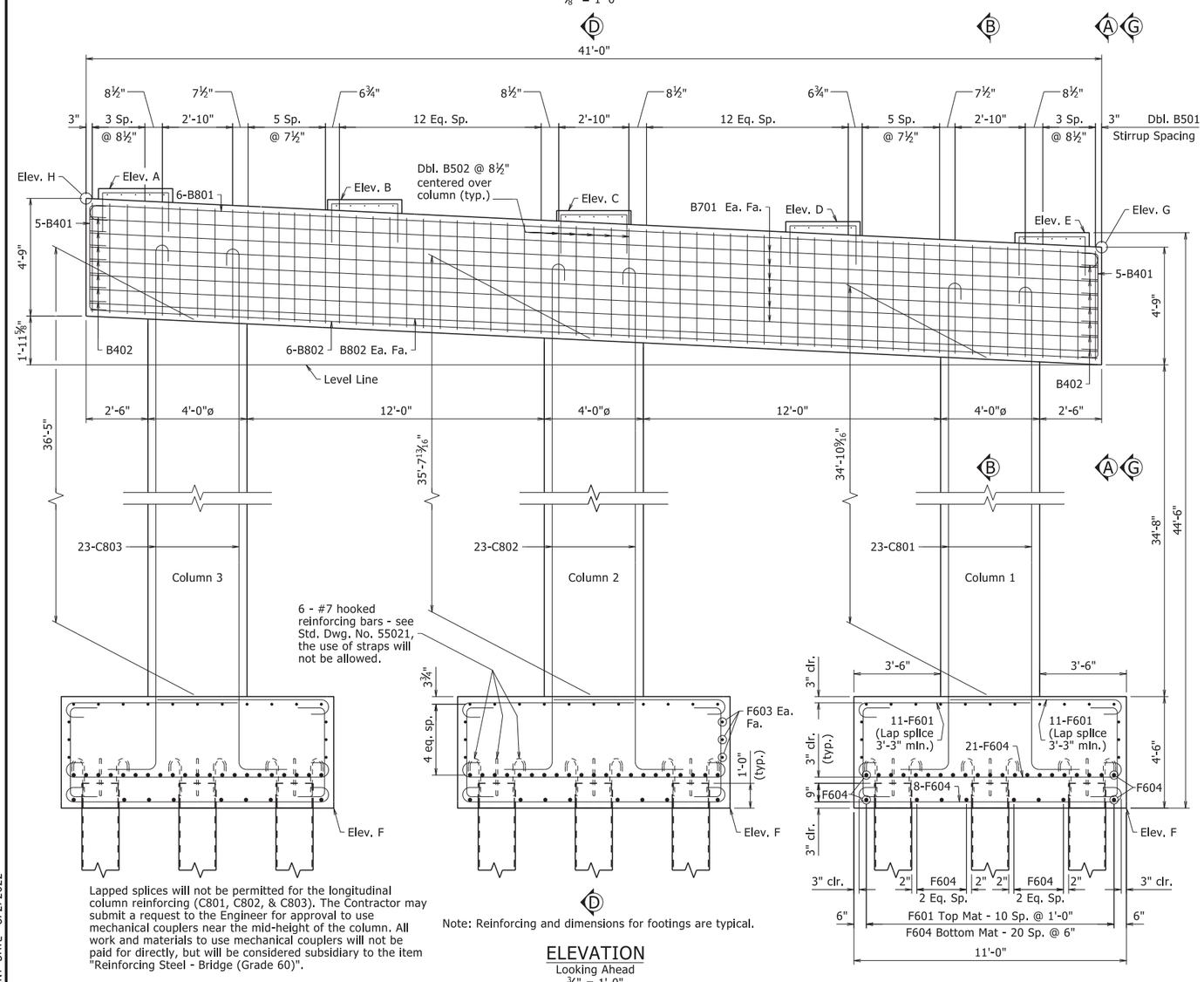
BRIDGE NO. 07536 DRAWING NO. 65112

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	100	191
				①	07536 - INT. BENTS - 65113			



PLAN

⅜" = 1'-0"



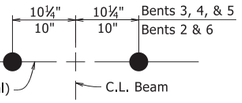
Lapped splices will not be permitted for the longitudinal column reinforcing (C801, C802, & C803). The Contractor may submit a request to the Engineer for approval to use mechanical couplers near the mid-height of the column. All work and materials to use mechanical couplers will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel - Bridge (Grade 60)".

Note: Reinforcing and dimensions for footings are typical.

ELEVATION

Looking Ahead

⅜" = 1'-0"



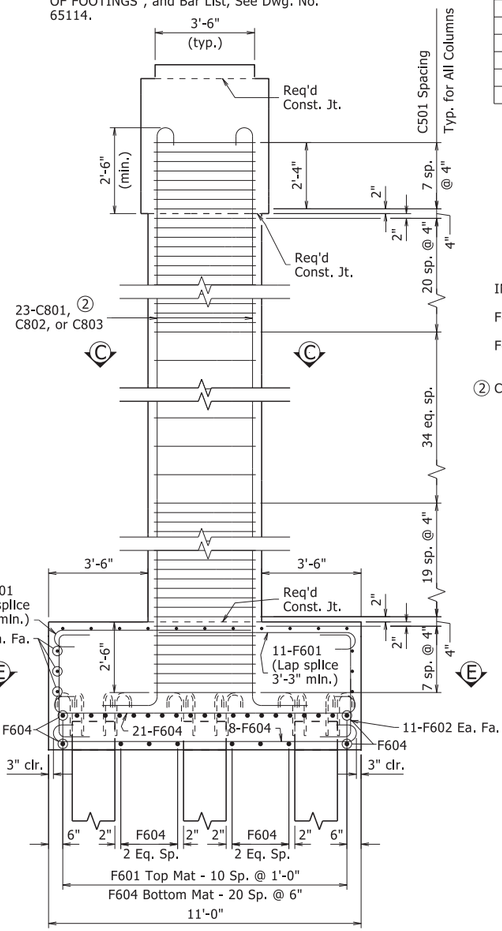
For Details of Elastomeric Bearings and Anchor Bolts, see Dwg. Nos. 65123 & 65124.

TYPICAL ANCHOR BOLT LAYOUT

No Scale

① Pedestals shall be cast level at the elevations shown in "TABLE OF VARIABLES"

For "VIEW A-A", "SECTION B-B", "SECTION C-C", "SECTION E-E", "SECTION F-F", " VIEW G-G", "TYPICAL PEDESTAL", "PEDESTAL PLAN", "PLAN OF FOOTINGS", and Bar List, See Dwg. No. 65114.



SECTION D-D

⅜" = 1'-0"

TABLE OF VARIABLES

Bent No.	2	3	4	5	6
Elev. A	246.14	247.51	248.26	248.48	248.06
Elev. B	245.69	247.07	247.82	248.03	247.61
Elev. C	245.25	246.63	247.37	247.59	247.17
Elev. D	244.80	246.18	246.93	247.14	246.73
Elev. E	244.36	245.74	246.49	246.70	246.28
Elev. F	199.86	201.24	201.99	202.20	201.78
Elev. G	243.78	245.15	245.90	246.11	245.70
Elev. H	245.74	247.12	247.87	248.08	247.67

INTERMEDIATE BENT NOTES

For Standard General Notes, see Std. Dwg. No. 55006.

For additional information see Layout.

② C801, C802, & C803 Bars to rest on bottom mat of reinforcing as shown.

STATE OF ARKANSAS
May 2 2022 3:57 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENTS 2 THRU 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

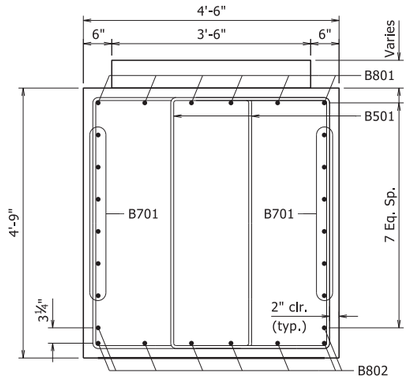
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 5/14/2021
CHECKED BY: TMG DATE: 2/14/2022
DESIGNED BY: JJ DATE: 5/2021
FILENAME: b020475x1_b5.dgn
SCALE: As Noted

BRIDGE NO. 07536 DRAWING NO. 65113

PRINT DATE: 5/2/2022

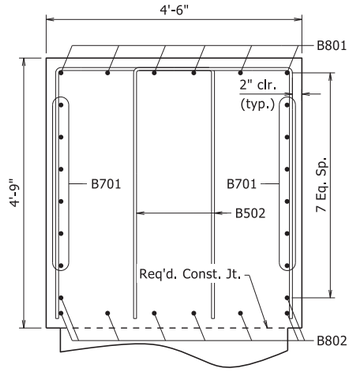
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	101	191
				①		07536 - INT. BENTS - 65114		



NOTE: End of Cap reinforcing not shown for clarity.

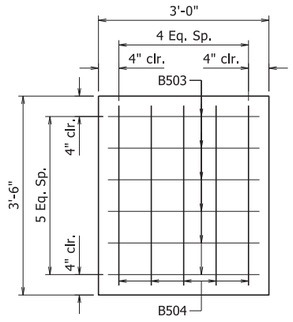
VIEW A-A

¾" = 1'-0"



SECTION B-B

¾" = 1'-0"



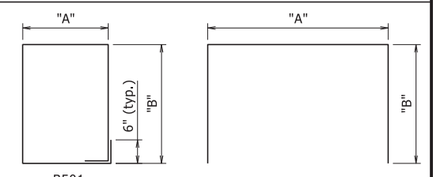
PEDESTAL PLAN

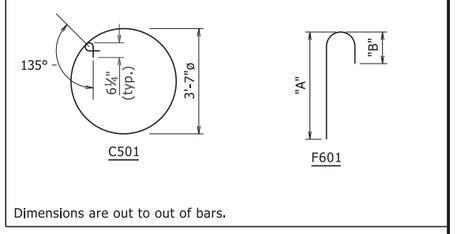
¾" = 1'-0"

BAR LIST - PER BENT

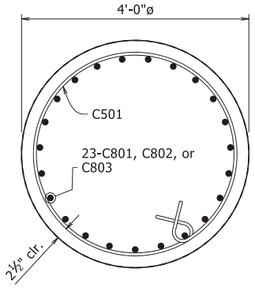
MARK	NO. REQ'D.	LENGTH	"A"	"B"	P. D.
B401	10	5'-6"	4'-3¾"	8"	3"
B402	14	5'-3"	4'-0¾"	8"	3"
B501	92	14'-11"	2'-9½"	4'-5"	2½"
B502	30	11'-5"	2'-9½"	4'-5"	2½"
B503	30	5'-10"	2'-8"	1'-8"	2½"
B504	25	6'-4"	3'-2"	1'-8"	2½"
B701	12	40'-8"			Str.
B801	6	42'-6"	40'-8"	8"	6"
B802	8	40'-8"			Str.
C501	270	12'-8"			3¾"
C801	23	43'-2"	41'-1"		6"
C802	23	43'-11"	41'-10"		6"
C803	23	44'-8"	42'-7"		6"
F601	132	7'-7"	6'-11"	6"	4½"
F602	132	5'-6"	3'-9"	1'-0"	4½"
F603	36	12'-3"	10'-6"	1'-0"	4½"
F604	174	11'-10"	10'-6"	6"	4½"

BENDING DIAGRAMS



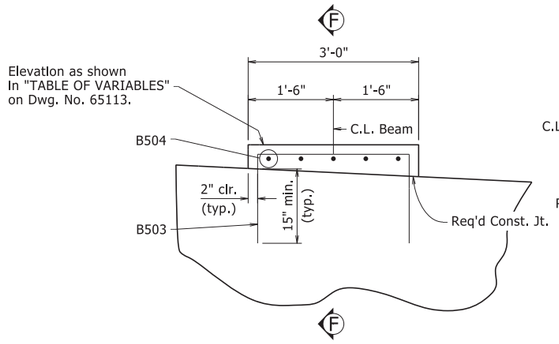


Dimensions are out to out of bars.



SECTION C-C

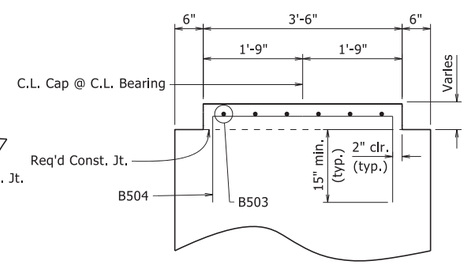
¾" = 1'-0"



TYPICAL PEDESTAL

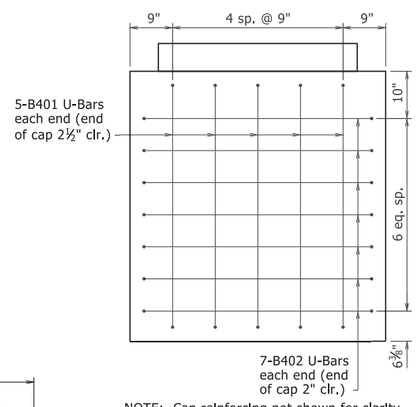
Looking Ahead

¾" = 1'-0"



SECTION F-F

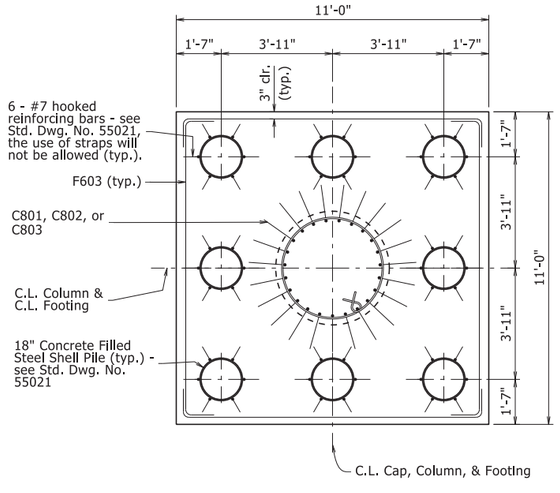
¾" = 1'-0"



NOTE: Cap reinforcing not shown for clarity.

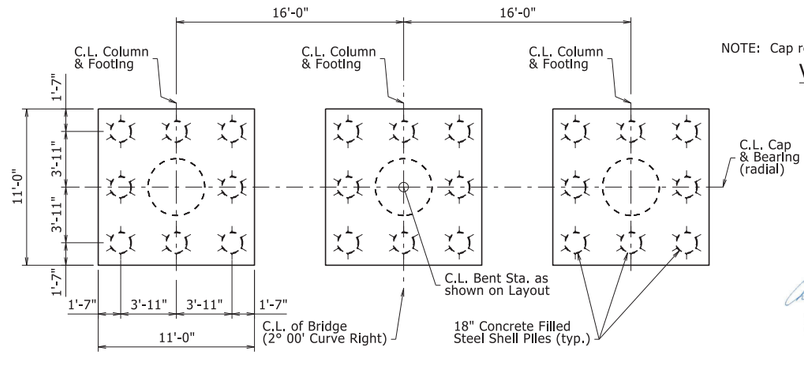
VIEW G-G

¾" = 1'-0"



SECTION E-E

⅜" = 1'-0"



NOTE: Pile and footing dimensions typical.

PLAN OF FOOTINGS

3/16" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:57 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENTS 2 THRU 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

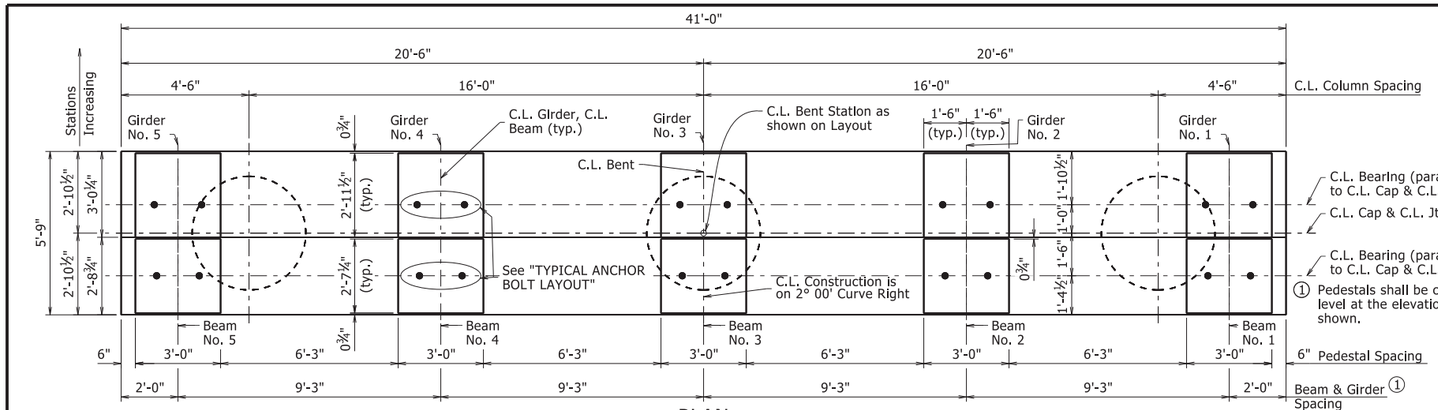
DRAWN BY:	JJ	DATE:	5/14/2021	FILENAME:	b020475x1_b5.dgn
CHECKED BY:	TMG	DATE:	2/14/2022	SCALE:	As Noted
DESIGNED BY:	JJ	DATE:	5/2021		

BRIDGE NO. 07536 DRAWING NO. 65114

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	102	191

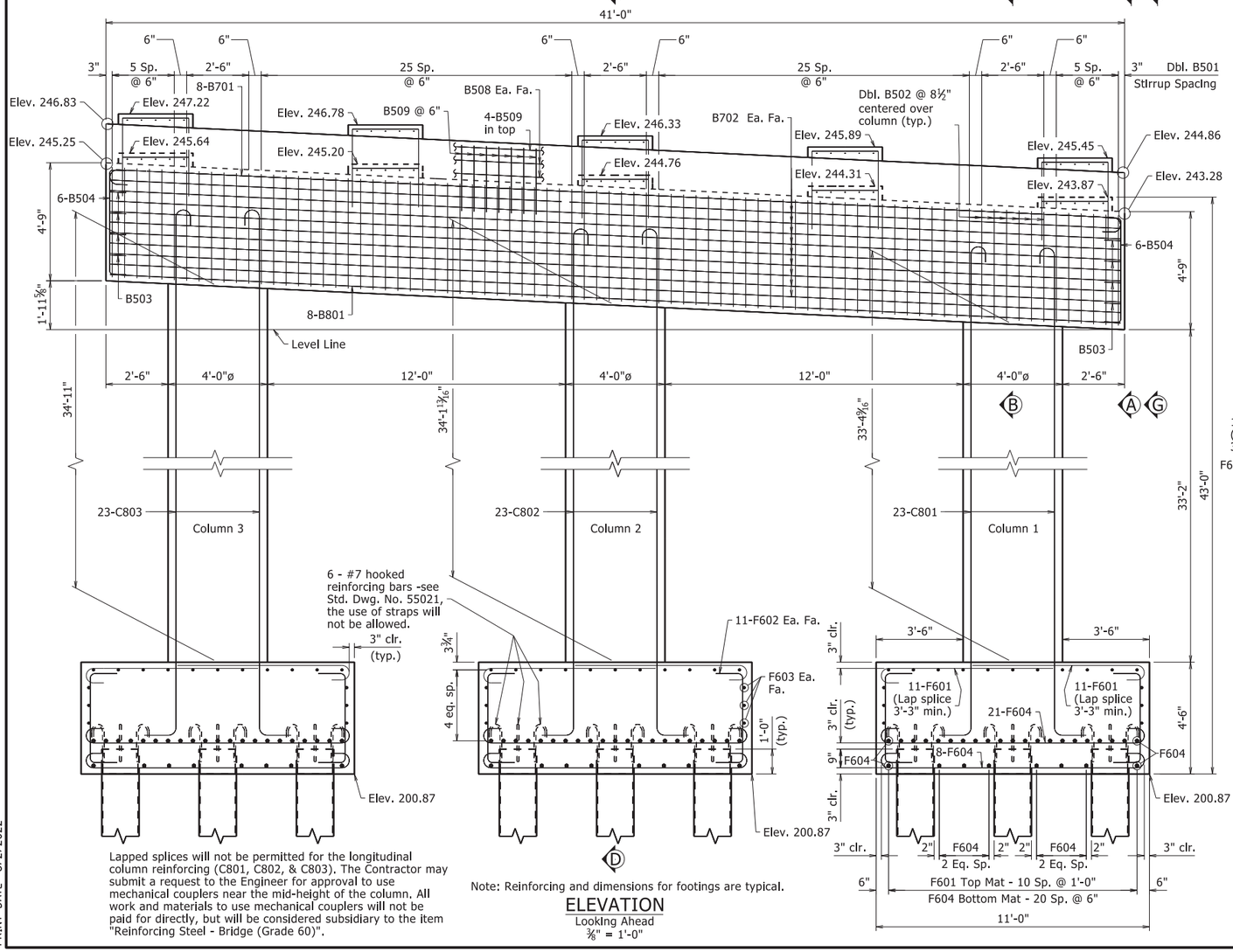
① 07536 - INT. BENT - 65115



① Pedestals shall be cast level at the elevations shown.

PLAN

⅜" = 1'-0"



Lapped splices will not be permitted for the longitudinal column reinforcing (C801, C802, & C803). The Contractor may submit a request to the Engineer for approval to use mechanical couplers near the mid-height of the column. All work and materials to use mechanical couplers will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel - Bridge (Grade 60)".

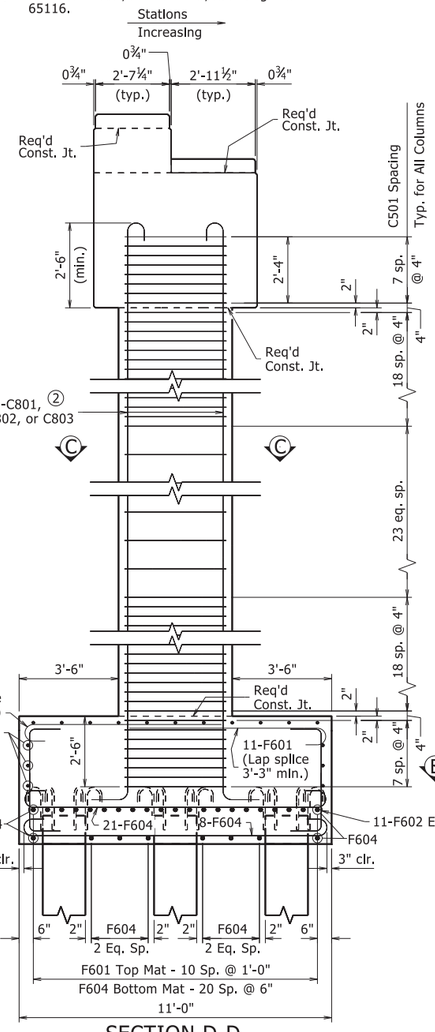
Note: Reinforcing and dimensions for footings are typical.

ELEVATION

Looking Ahead

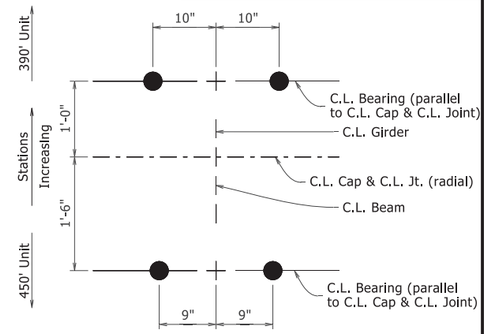
⅜" = 1'-0"

For "VIEW A-A", "SECTION B-B", "SECTION C-C", "SECTION E-E", "SECTION F-F", " VIEW G-G", "TYPICAL PEDESTAL", "PEDESTAL PLAN", "PLAN OF FOOTINGS", and Bar List, See Dwg. No. 65116.



SECTION D-D

⅜" = 1'-0"



For Details of Elastomeric Bearings and Anchor Bolts, see Dwg. Nos. 65123 & 65124.

TYPICAL ANCHOR BOLT LAYOUT

No Scale

INTERMEDIATE BENT NOTES

For Standard General Notes, see Std. Dwg. No. 55006.

For additional information see Layout.

② C801, C802, & C803 Bars to rest on bottom mat of reinforcing as shown.

STATE OF ARKANSAS
May 2 2022 3:57 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENT 7

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

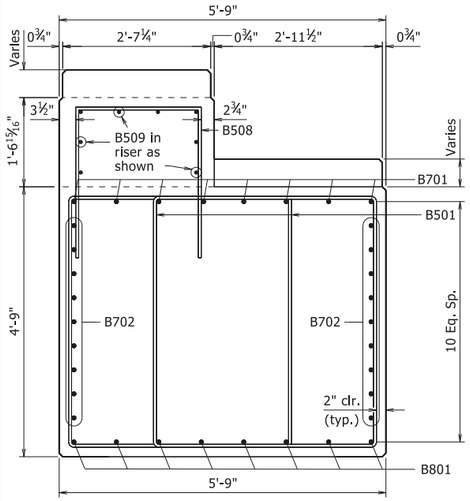
DRAWN BY:	JJ	DATE:	6/2/2021	FILENAME:	b020475x1_b7.dgn
CHECKED BY:	TMG	DATE:	2/15/2022	SCALE:	As Noted
DESIGNED BY:	JJ	DATE:	6/2021		

BRIDGE NO. 07536 DRAWING NO. 65115

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	103	191

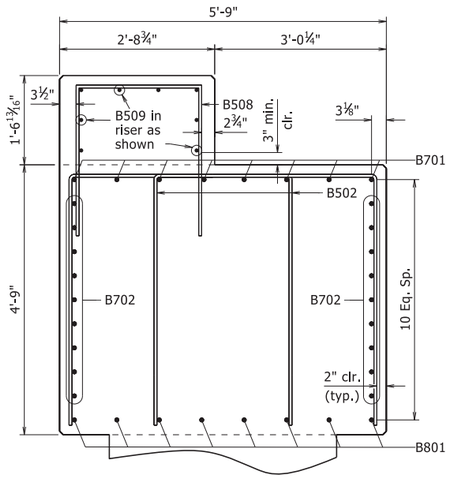
1 07536 - INT. BENTS - 65116



NOTE: End of Cap reinforcing not shown for clarity.

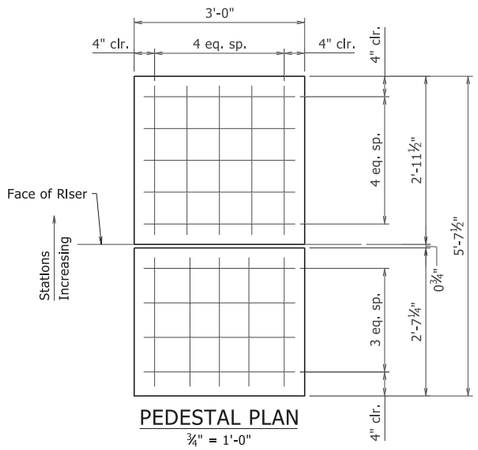
VIEW A-A

¾" = 1'-0"



SECTION B-B

¾" = 1'-0"



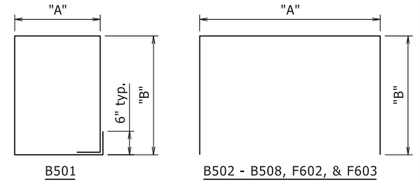
PEDESTAL PLAN

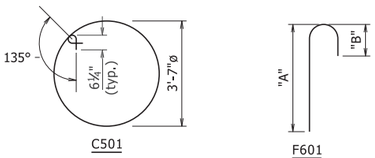
¾" = 1'-0"

BAR LIST

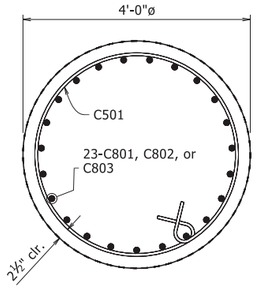
MARK	NO. REQ'D.	LENGTH	"A"	"B"	P. D.
B501	128	17'-6"	4'-1"	4'-5"	2½"
B502	36	12'-9"	4'-1"	4'-5"	2½"
B503	8	6'-2"	5'-3¾"	6"	2½"
B504	12	5'-2"	4'-3¾"	6"	2½"
B505	25	5'-5"	2'-3"	1'-8"	2½"
B506	45	5'-10"	2'-8"	1'-8"	2½"
B507	25	5'-9"	2'-7½"	1'-8"	2½"
B508	82	7'-8"	2'-2½"	2'-10"	2½"
B509	8	40'-8"			Str.
B701	8	42'-4"	40'-8"	7"	5¼"
B702	18	40'-8"			Str.
B801	8	40'-8"			Str.
C501	228	12'-8"			3¾"
C801	23	41'-8"	39'-7"		6"
C802	23	42'-5"	40'-4"		6"
C803	23	43'-2"	41'-1"		6"
F601	132	7'-7"	6'-11"	6"	4½"
F602	132	5'-6"	3'-9"	1'-0"	4½"
F603	36	12'-3"	10'-6"	1'-0"	4½"
F604	174	11'-10"	10'-6"	6"	4½"

BENDING DIAGRAMS



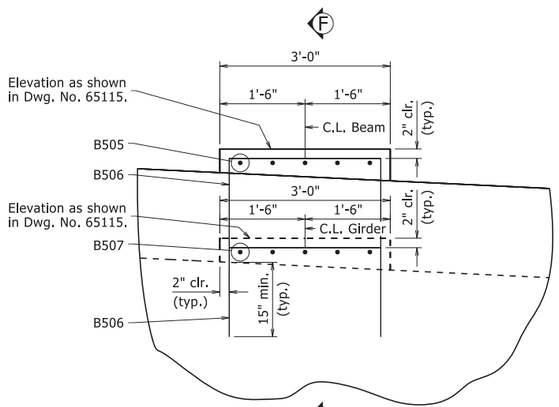


Dimensions are out to out of bars.



SECTION C-C

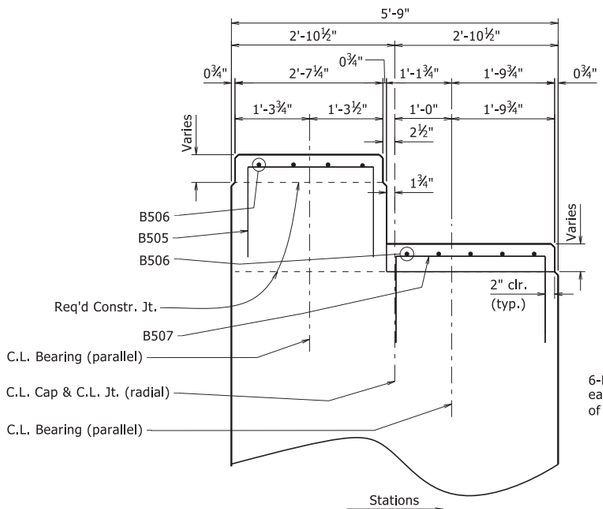
¾" = 1'-0"



TYPICAL PEDESTAL

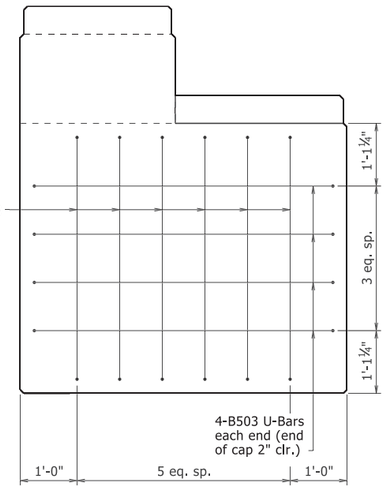
Looking Ahead

¾" = 1'-0"



SECTION F-F

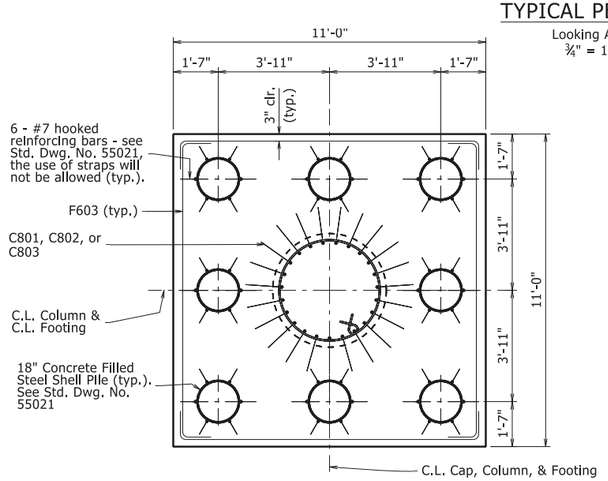
¾" = 1'-0"



NOTE: Cap reinforcing not shown for clarity.

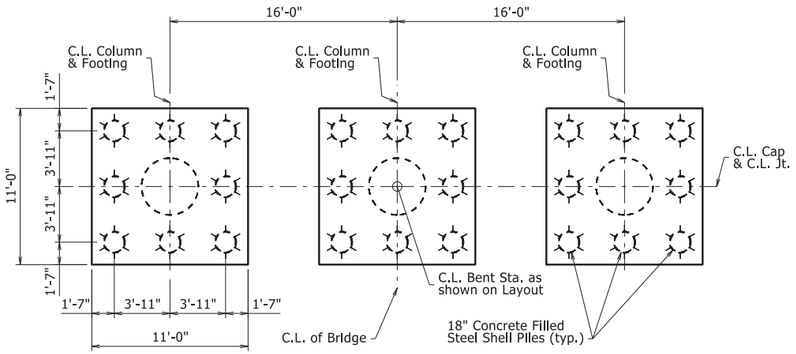
VIEW G-G

¾" = 1'-0"



SECTION E-E

⅜" = 1'-0"



NOTE: Pile and footing dimensions typical.

PLAN OF FOOTINGS

³⁄₁₆" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENT 7

ROUTE SEC.

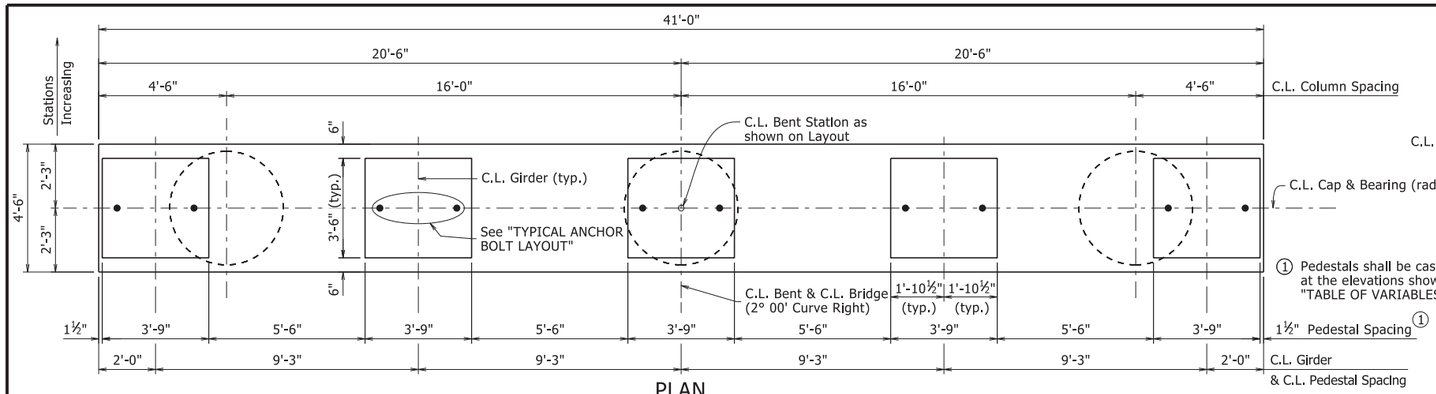
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 6/2/2021
CHECKED BY: TMG DATE: 2/15/2022
DESIGNED BY: JJ DATE: 6/2021
FILENAME: b020475x1_b7.dgn
SCALE: As Noted

BRIDGE NO. 07536 DRAWING NO. 65116

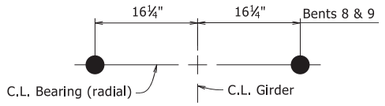
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	104	191
				①	07536 - INT. BENTS - 65117			



PLAN

⅜" = 1'-0"



For Details of Elastomeric Bearings and Anchor Bolts, see Dwg. Nos. 65123 & 65124.

TYPICAL ANCHOR BOLT LAYOUT

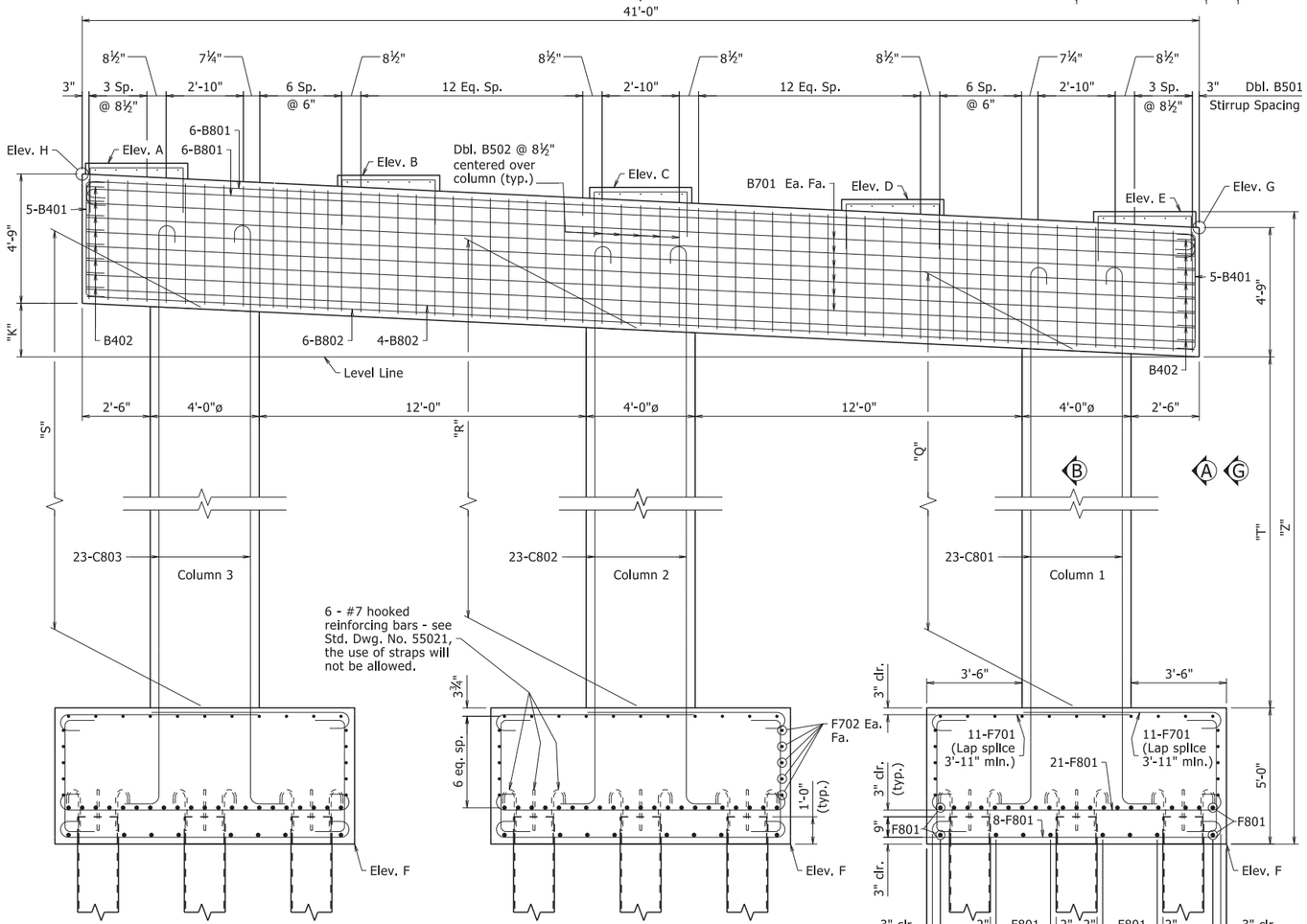
No Scale

① Pedestals shall be cast level at the elevations shown in "TABLE OF VARIABLES"

For "VIEW A-A", "SECTION B-B", "SECTION C-C", "SECTION E-E", "SECTION F-F", "VIEW G-G", "TYPICAL PEDESTAL", "PEDESTAL PLAN", "PLAN OF FOOTINGS", and Bar List, See Dwg. No. 65118.

TABLE OF VARIABLES

Bent No.	8	9
Elev. A	243.64	239.05
Elev. B	243.20	238.67
Elev. C	242.75	238.29
Elev. D	242.31	237.92
Elev. E	241.87	237.54
Elev. F	196.87	203.04
Elev. G	241.27	236.96
Elev. H	243.24	238.64
"Q"	34'-10 7/16"	24'-4 5/16"
"R"	35'-7 3/8"	25'-0 1/8"
"S"	36'-4 7/8"	25'-7 15/16"
"T"	34'-7 13/16"	24'-2 7/8"
"Z"	45'-0"	34'-6"
"K"	1'-11 5/8"	1'-8 1/16"
"N"	26	15
"P"	246	213



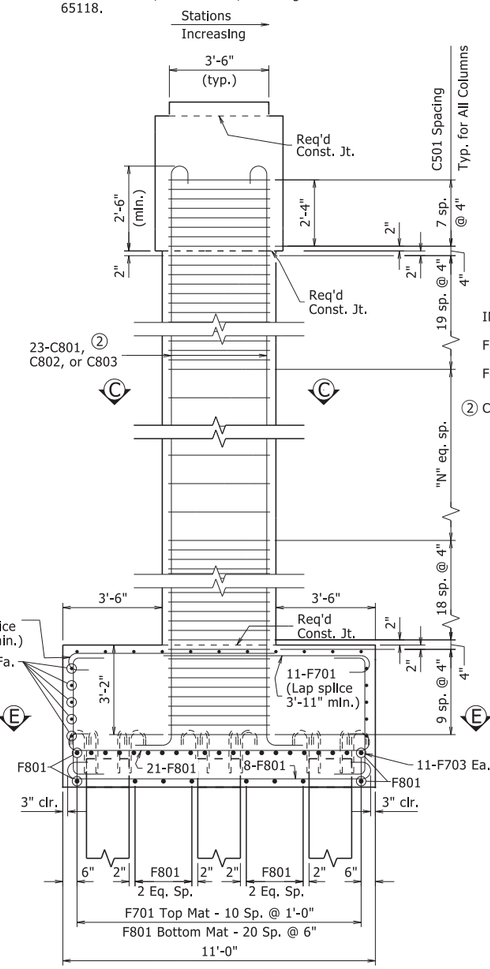
Lapped splices will not be permitted for the longitudinal column reinforcing (C801, C802, & C803). The Contractor may submit a request to the Engineer for approval to use mechanical couplers near the mid-height of the column. All work and materials to use mechanical couplers will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel - Bridge (Grade 60)".

Note: Reinforcing and dimensions for footings are typical.

ELEVATION

Looking Ahead

⅜" = 1'-0"



SECTION D-D

⅜" = 1'-0"

INTERMEDIATE BENT NOTES

For Standard General Notes, see Std. Dwg. No. 55006.

For additional information see Layout.

② C801, C802, & C803 Bars to rest on bottom mat of reinforcing as shown.

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENTS 8 & 9

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

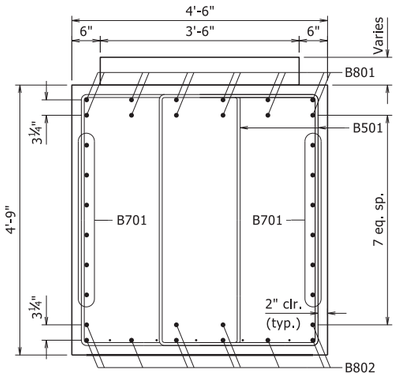
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 5/14/2021
CHECKED BY: TMG DATE: 2/16/2022
DESIGNED BY: JJ DATE: 5/2021
FILENAME: b020475x1_b8.dgn
SCALE: As Noted

BRIDGE NO. 07536 DRAWING NO. 65117

PRINT DATE: 5/2/2022

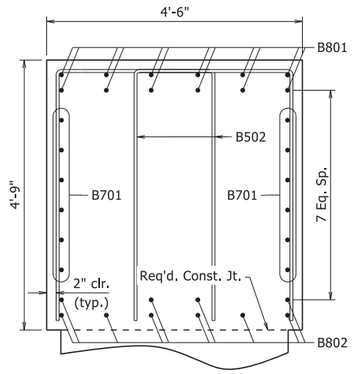
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	105	191
				①		07536 - INT. BENTS - 65118		



NOTE: End of Cap reinforcing not shown for clarity.

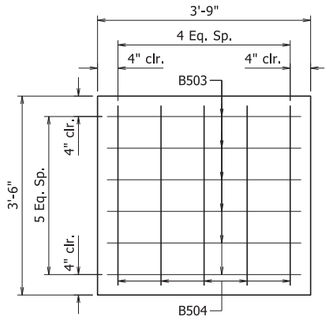
VIEW A-A

¾" = 1'-0"



SECTION B-B

¾" = 1'-0"



PEDESTAL PLAN

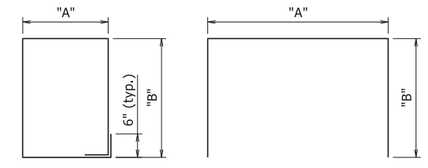
¾" = 1'-0"

BAR LIST - PER BENT

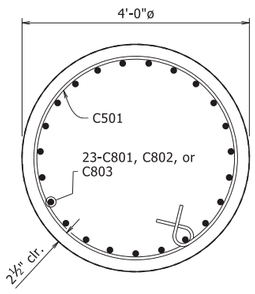
	MARK	NO. REQ'D.	LENGTH	"A"	"B"	P. D.
	B401	10	5'-6"	4'-3¾"	8"	3"
	B402	16	5'-3"	4'-0¾"	8"	3"
	B501	96	14'-11"	2'-9½"	4'-5"	2½"
	B502	30	11'-5"	2'-9½"	4'-5"	2½"
	B503	30	6'-7"	3'-5"	1'-8"	2½"
	B504	25	6'-4"	3'-2"	1'-8"	2½"
	B701	12	40'-8"			Str.
	B801	12	42'-6"	40'-8"	8"	6"
	B802	10	40'-8"			Str.
①	C501	"P"	12'-8"			3¾"
①	C801	23	"Q" + 8'-11"			6"
①	C802	23	"R" + 8'-11"			6"
①	C803	23	"S" + 8'-11"			6"
	F701	132	8'-1"	7'-3"	7"	5¼"
	F702	60	12'-2"	10'-6"	1'-0"	5¼"
	F703	132	6'-2"	4'-2"	1'-2"	5¼"
	F801	174	12'-4"	10'-6"	8"	6"

① See "TABLE OF VARIABLES", Dwg. No. 65117.

BENDING DIAGRAMS

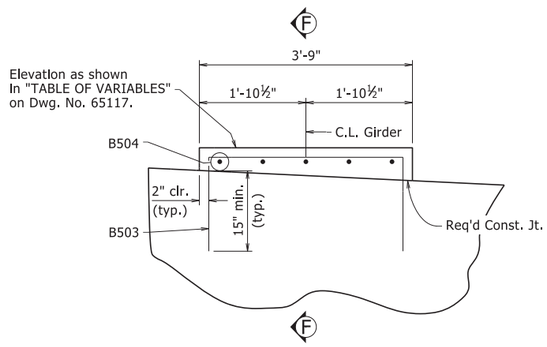


Dimensions are out to out of bars.



SECTION C-C

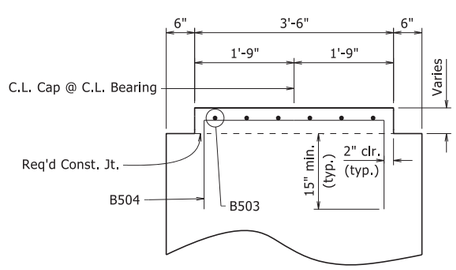
¾" = 1'-0"



TYPICAL PEDESTAL

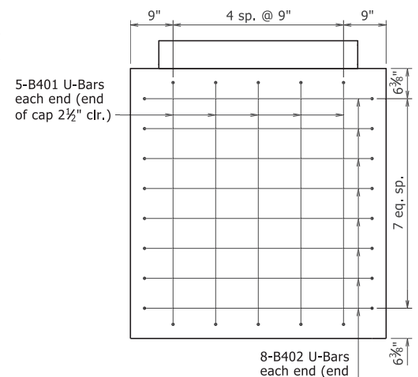
Looking Ahead

¾" = 1'-0"



SECTION F-F

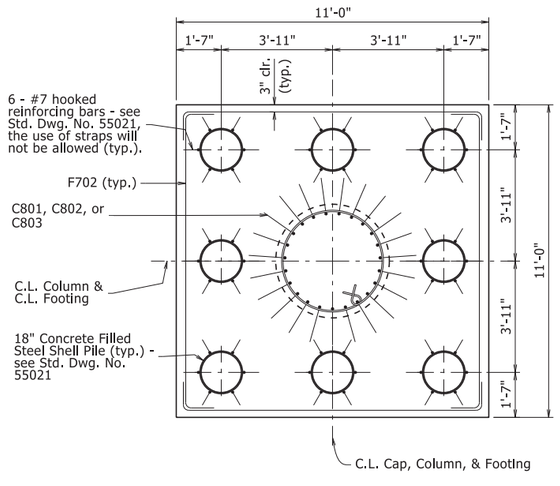
¾" = 1'-0"



NOTE: Cap reinforcing not shown for clarity.

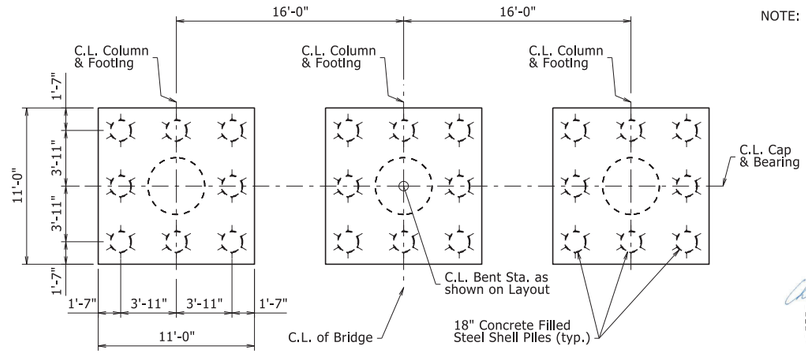
VIEW G-G

¾" = 1'-0"



SECTION E-E

⅜" = 1'-0"



NOTE: Pile and footing dimensions typical.

PLAN OF FOOTINGS

3/16" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENTS 8 & 9

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

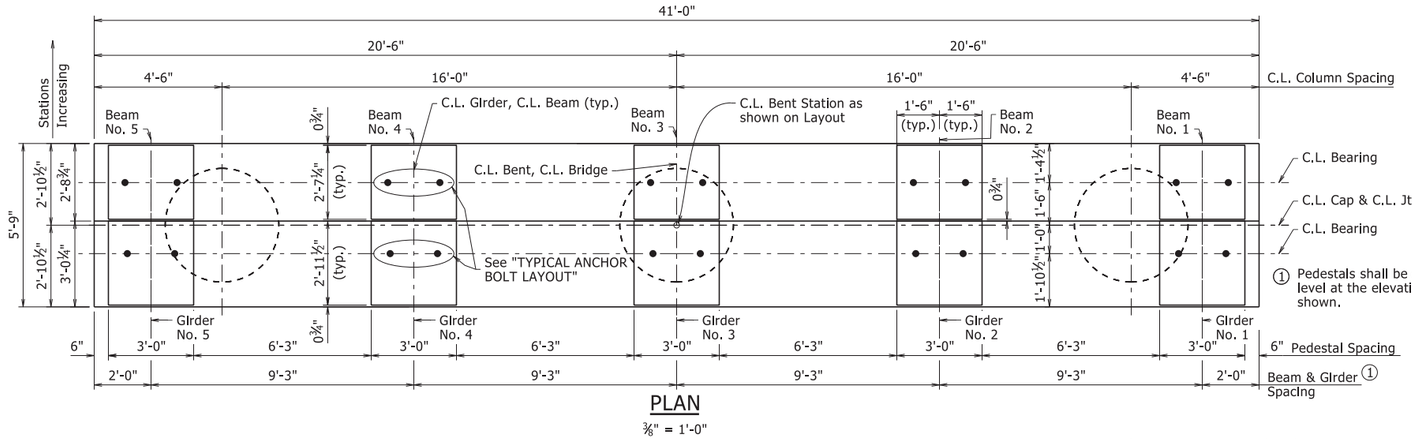
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 7/26/2021 FILENAME: b020475x1_b8.dgn
CHECKED BY: TMG DATE: 2/16/2022 SCALE: As Noted
DESIGNED BY: JJ DATE: 7/2021

BRIDGE NO. 07536 DRAWING NO. 65118

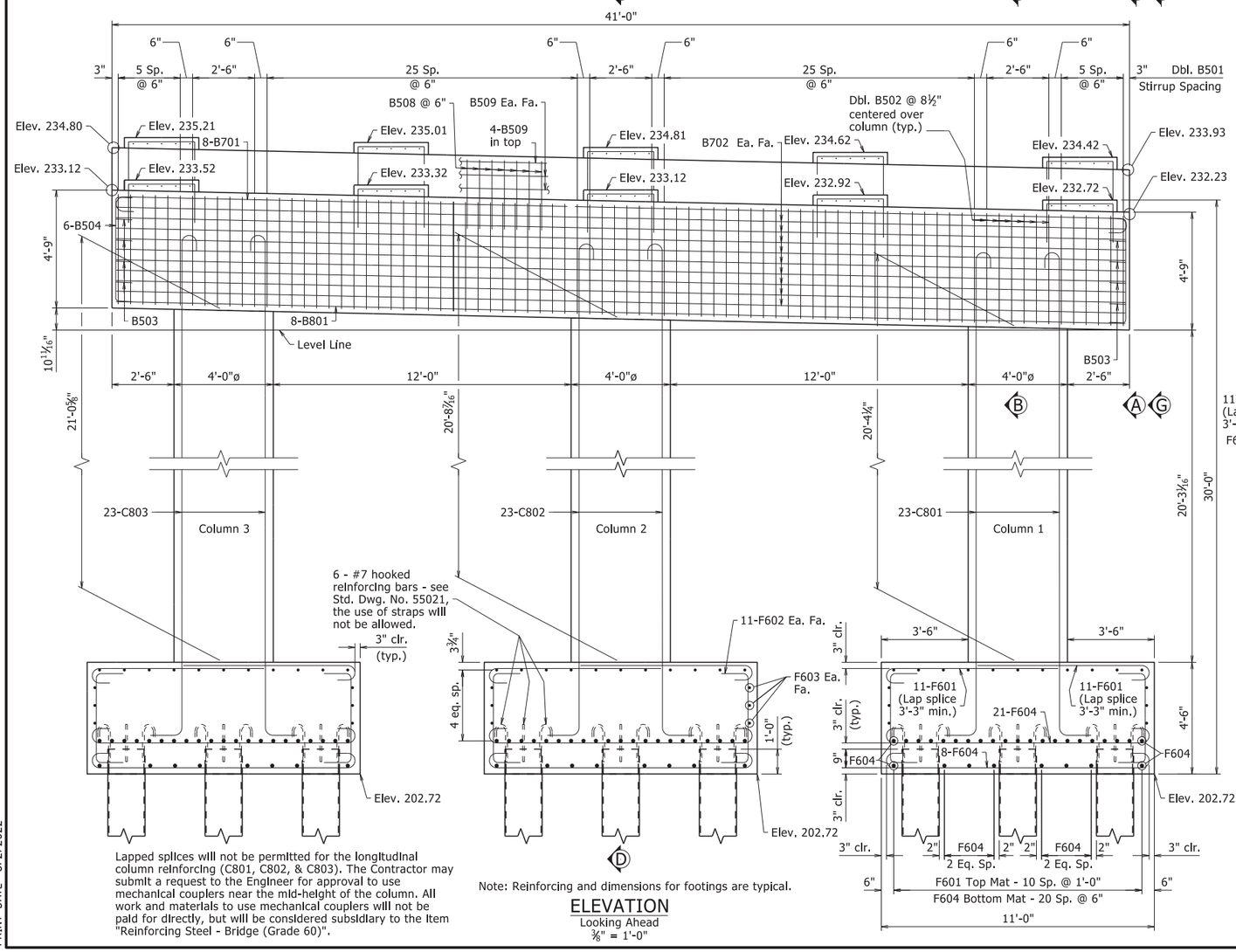
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	106	191
				①	07536 - INT. BENTS - 65119			



PLAN

⅜" = 1'-0"



Lapped splices will not be permitted for the longitudinal column reinforcing (C801, C802, & C803). The Contractor may submit a request to the Engineer for approval to use mechanical couplers near the mid-height of the column. All work and materials to use mechanical couplers will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel - Bridge (Grade 60)".

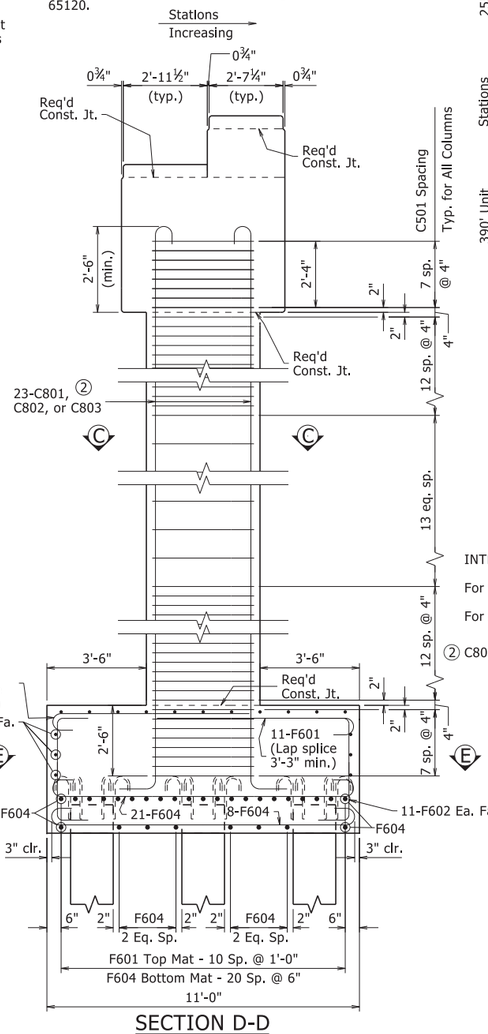
Note: Reinforcing and dimensions for footings are typical.

ELEVATION

Looking Ahead

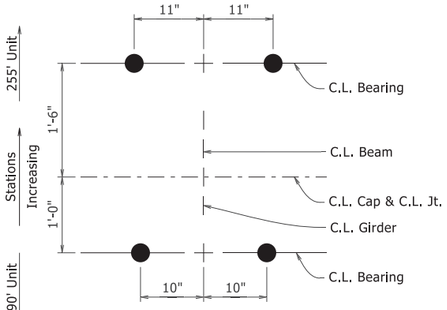
⅜" = 1'-0"

For "VIEW A-A", "SECTION B-B", "SECTION C-C", "SECTION E-E", "SECTION F-F", "VIEW G-G", "TYPICAL PEDESTAL", "PEDESTAL PLAN", "PLAN OF FOOTINGS", and Bar List, See Dwg. No. 65120.



SECTION D-D

⅜" = 1'-0"



For Details of Elastomeric Bearings and Anchor Bolts, see Dwg. Nos. 65123 & 65124.

TYPICAL ANCHOR BOLT LAYOUT

No Scale

INTERMEDIATE BENT NOTES

For Standard General Notes, see Std. Dwg. No. 55006.

For additional information see Layout.

② C801, C802, & C803 Bars to rest on bottom mat of reinforcing as shown.

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENT 10

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	JJ	DATE:	6/2/2021	FILENAME:	b020475x1_b10.dgn
CHECKED BY:	TMG	DATE:	2/17/2022	SCALE:	As Noted
DESIGNED BY:	JJ	DATE:	6/2021		

BRIDGE NO. 07536 DRAWING NO. 65119

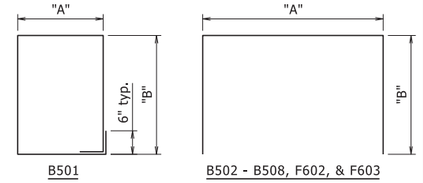
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	107	191
				1	07536 - INT. BENTS - 65120			

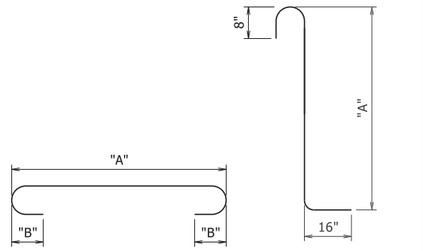
BAR LIST

MARK	NO. REQ'D.	LENGTH	"A"	"B"	P. D.
B501	128	17'-6"	4'-1"	4'-5"	2½"
B502	36	12'-9"	4'-1"	4'-5"	2½"
B503	8	6'-2"	5'-3¾"	6"	2½"
B504	12	5'-3"	4'-3¾"	6"	2½"
B505	25	5'-5"	2'-3"	1'-8"	2½"
B506	45	5'-8"	2'-8"	1'-7"	2½"
B507	25	5'-7"	2'-7½"	1'-7"	2½"
B508	82	7'-8"	2'-2½"	2'-10"	2½"
B509	8	40'-8"			Str.
B701	8	42'-4"	40'-8"	7"	5¼"
B702	18	40'-8"			Str.
B801	8	40'-8"			Str.
C501	162	12'-8"			3¾"
C801	23	28'-7"	26'-6"		6"
C802	23	28'-11"	26'-10"		6"
C803	23	29'-3"	27'-2"		6"
F601	132	7'-7"	6'-11"	6"	4½"
F602	132	5'-6"	3'-9"	1'-0"	4½"
F603	36	12'-3"	10'-6"	1'-0"	4½"
F604	174	11'-10"	10'-6"	6"	4½"

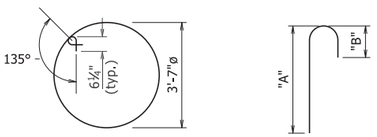
BENDING DIAGRAMS



B501 — B502 - B508, F602, & F603

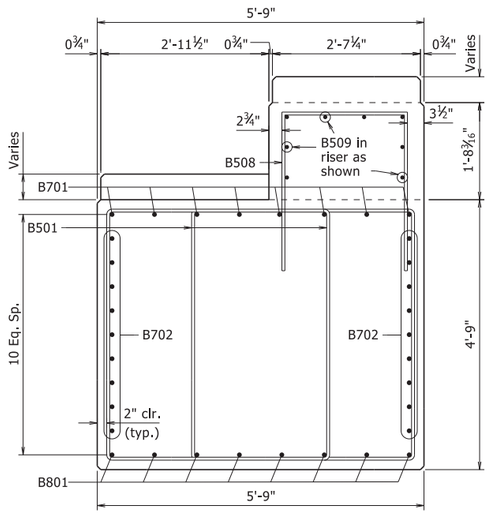


F604 & B701 — C801, C802, & C803



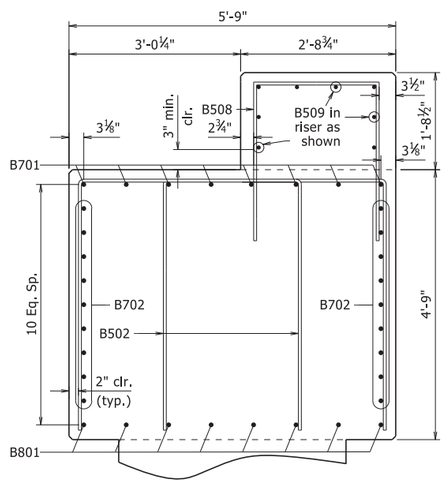
C501 — F601

Dimensions are out to out of bars.

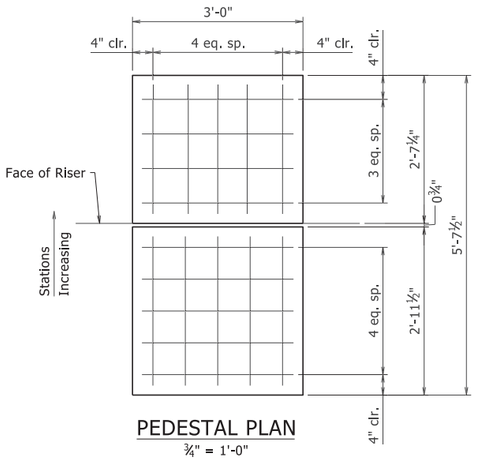


NOTE: End of Cap reinforcing not shown for clarity.

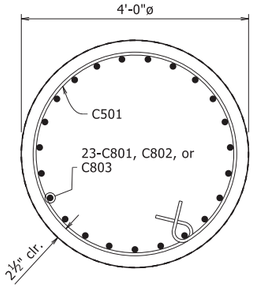
VIEW A-A
¾" = 1'-0"



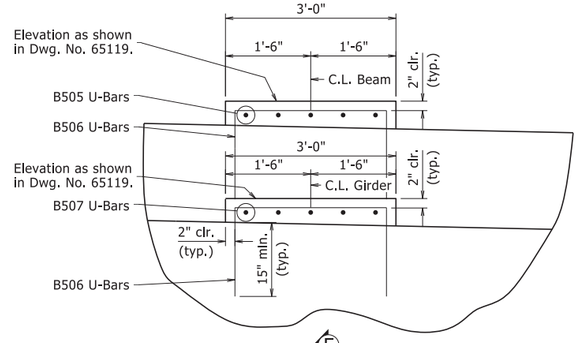
SECTION B-B
¾" = 1'-0"



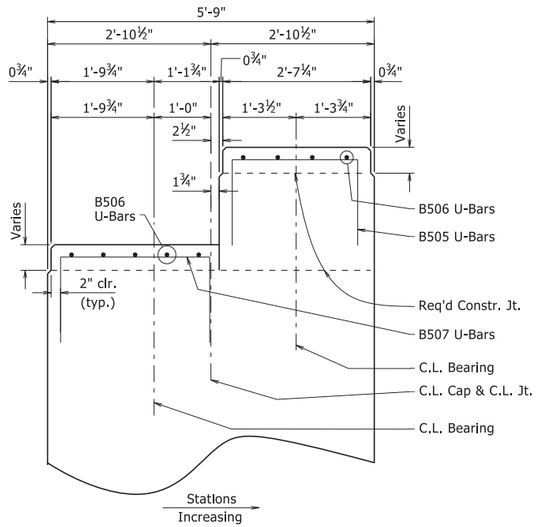
PEDESTAL PLAN
¾" = 1'-0"



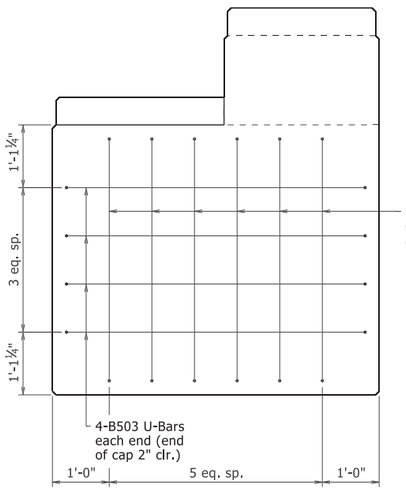
SECTION C-C
¾" = 1'-0"



TYPICAL PEDESTAL
Looking Ahead
¾" = 1'-0"

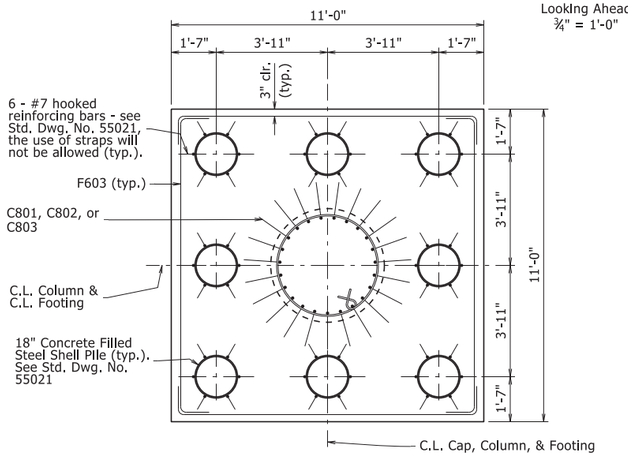


SECTION F-F
¾" = 1'-0"

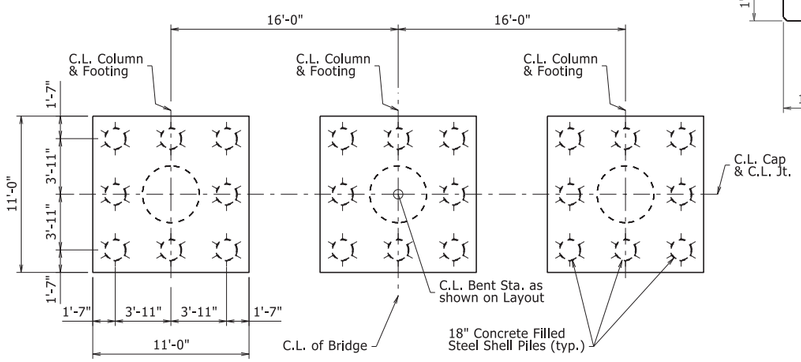


NOTE: Cap reinforcing not shown for clarity.

VIEW G-G
¾" = 1'-0"



SECTION E-E
⅜" = 1'-0"



NOTE: Pile and footing dimensions typical.

PLAN OF FOOTINGS
3⁄16" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENT 10

ROUTE SEC.

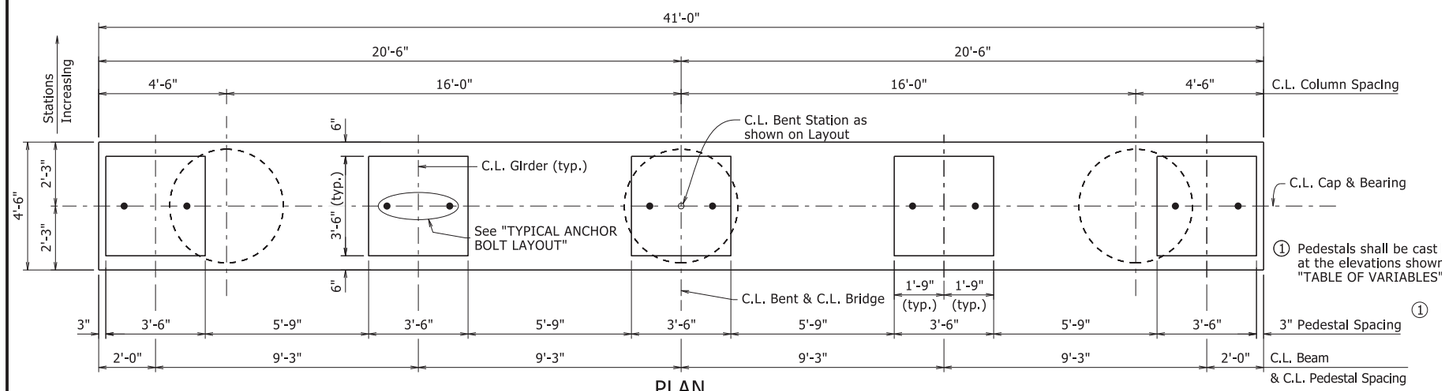
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 6/2/2021
CHECKED BY: TMG DATE: 2/17/2022
DESIGNED BY: JJ DATE: 6/2021
FILENAME: b020475x1_b10.dgn
SCALE: As Noted

BRIDGE NO. 07536 DRAWING NO. 65120

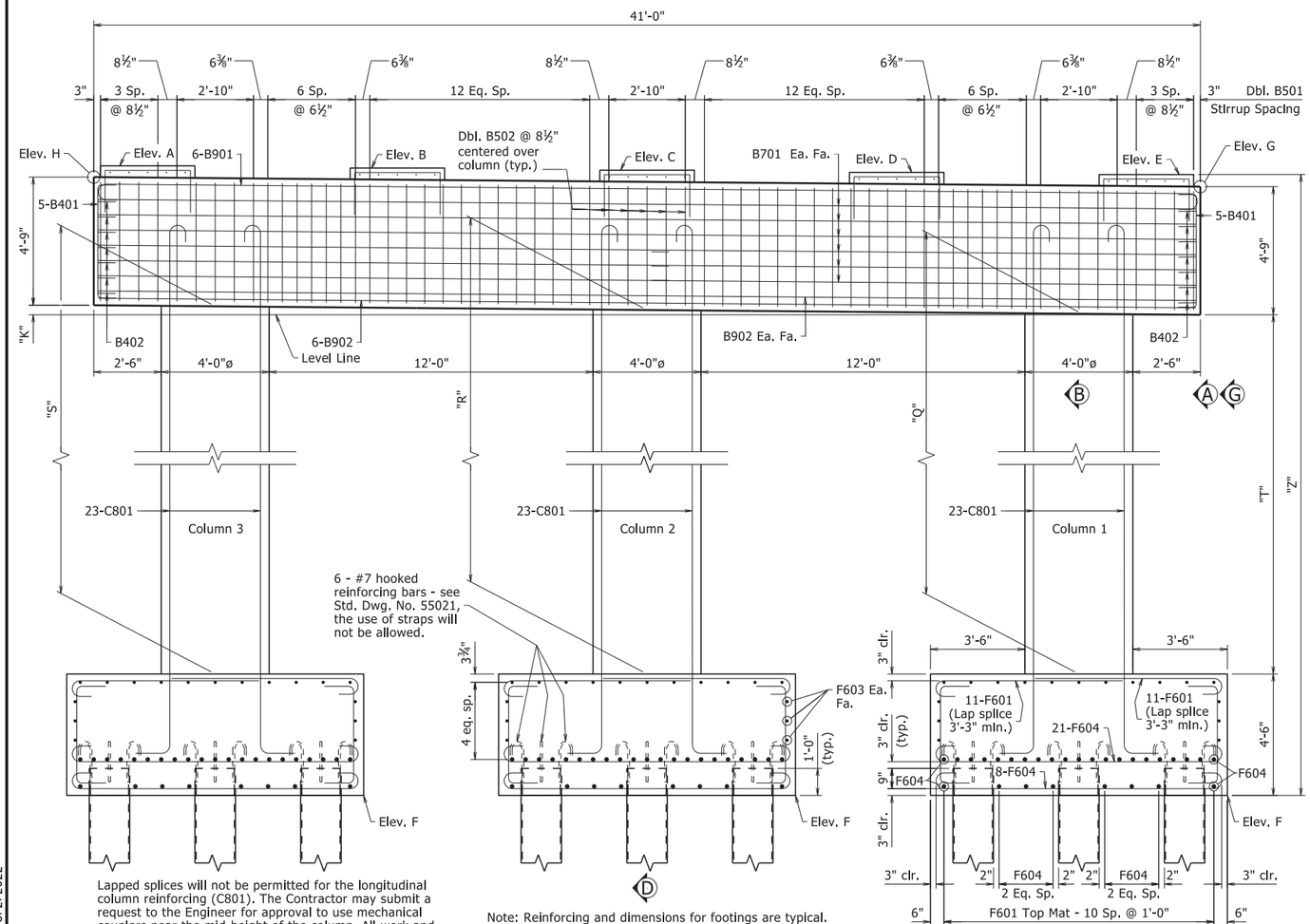
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	108	191
				①	07536 - INT. BENTS - 65121			



PLAN

⅜" = 1'-0"



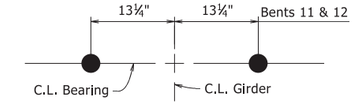
Lapped splices will not be permitted for the longitudinal column reinforcing (C801). The Contractor may submit a request to the Engineer for approval to use mechanical couplers near the mid-height of the column. All work and materials to use mechanical couplers will not be paid for directly, but will be considered subsidiary to the item "Reinforcing Steel - Bridge (Grade 60)".

Note: Reinforcing and dimensions for footings are typical.

ELEVATION

Looking Ahead

⅜" = 1'-0"

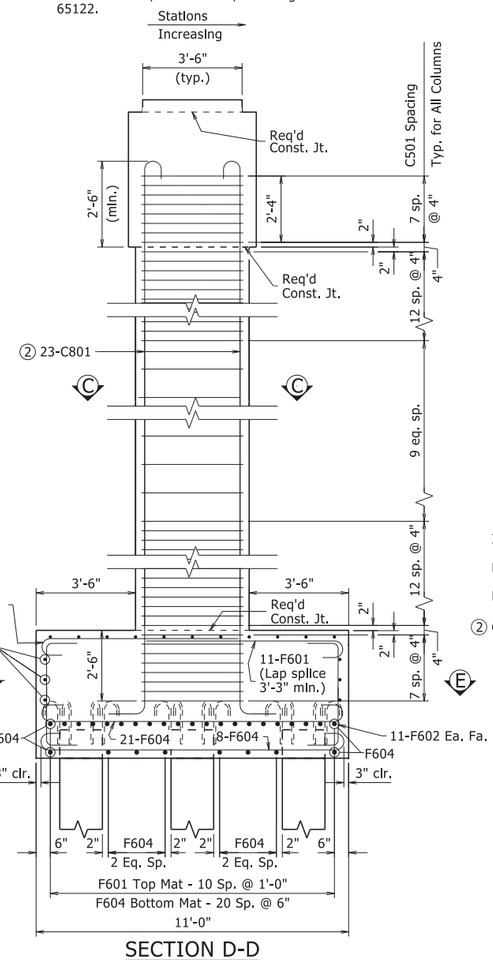


For Details of Elastomeric Bearings and Anchor Bolts, see Dwg. Nos. 65123 & 65124.

TYPICAL ANCHOR BOLT LAYOUT

No Scale

For "VIEW A-A", "SECTION B-B", "SECTION C-C", "SECTION E-E", "SECTION F-F", "VIEW G-G", "TYPICAL PEDESTAL", "PEDESTAL PLAN", "PLAN OF FOOTINGS", and Bar List, See Dwg. No. 65122.



SECTION D-D

⅜" = 1'-0"

TABLE OF VARIABLES

Bent No.	11	12
Elev. A	230.71	226.16
Elev. B	230.75	226.35
Elev. C	230.77	226.51
Elev. D	230.60	226.35
Elev. E	230.41	226.16
Elev. F	203.91	204.16
Elev. G	229.92	225.67
Elev. H	230.28	225.67
"Q"	16'-9 $^{9}/_{16}$"	12'-3 ⅛"
"R"	16'-11 ½"	12'-3 ⅛"
"S"	17'-0 ⅛"	12'-3 ⅛"
"T"	16'-9 ⅛"	12'-3 ⅛"
"Z"	26'-6"	22'-0"
"K"	0'-4 ¼"	0'-0"

INTERMEDIATE BENT NOTES

For Standard General Notes, see Std. Dwg. No. 55006.

For additional information see Layout.

② C801 Bars to rest on bottom mat of reinforcing as shown.

STATE OF ARKANSAS
May 2 2022 3:58 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF INTERMEDIATE BENTS 11 & 12

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

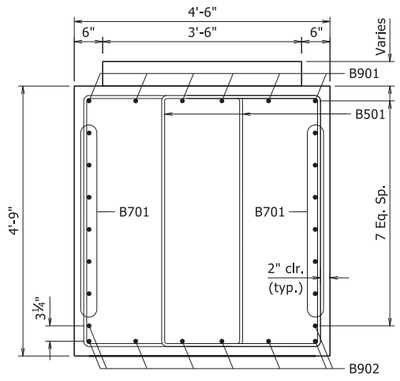
LITTLE ROCK, ARK.

DRAWN BY:	JJ	DATE:	6/2/2021	FILENAME:	b020475x1_b12.dgn
CHECKED BY:	TMG	DATE:	2/17/2022	SCALE:	As Noted
DESIGNED BY:	JJ	DATE:	6/2021		

BRIDGE NO. 07536 DRAWING NO. 65121

PRINT DATE: 5/2/2022

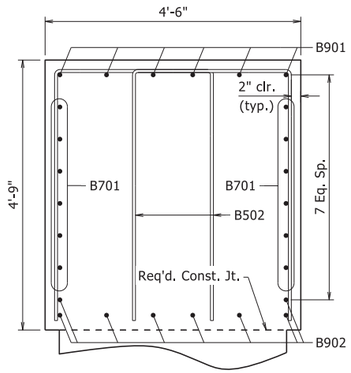
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	109	191
				①		07536 - INT. BENTS - 65122		



NOTE: End of Cap reinforcing not shown for clarity.

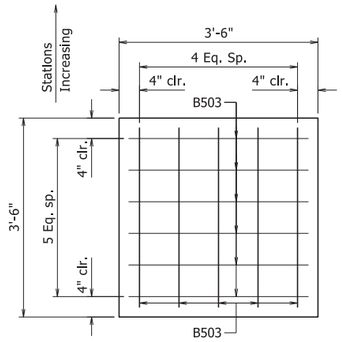
VIEW A-A

¾" = 1'-0"



SECTION B-B

¾" = 1'-0"



PEDESTAL PLAN

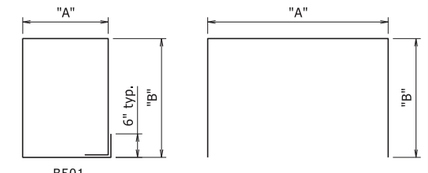
¾" = 1'-0"

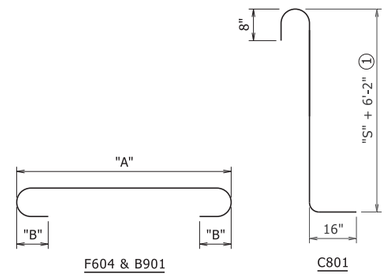
BAR LIST - PER BENT

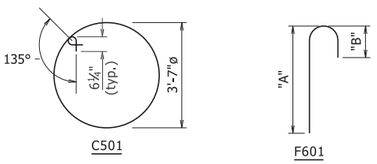
MARK	NO. REQ'D.	LENGTH	"A"	"B"	P. D.
B401	10	5'-6"	4'-3¾"	8"	3"
B402	14	5'-3"	4'-0¾"	8"	3"
B501	96	14'-11"	2'-9½"	4'-5"	2½"
B502	30	11'-5"	2'-9½"	4'-5"	2½"
B503	55	6'-3"	3'-2"	1'-8"	2½"
B701	12	40'-8"			Str.
B901	6	43'-2"	40'-8"	10"	9"
B902	8	40'-8"			Str.
C501	150	12'-8"			3¾"
C801	69	①"S"+8'-3"			6"
F601	132	7'-7"	6'-11"	6"	4½"
F602	132	5'-6"	3'-9"	1'-0"	4½"
F603	36	12'-3"	10'-6"	1'-0"	4½"
F604	174	11'-10"	10'-6"	6"	4½"

① See "TABLE OF VARIABLES", Dwg. No. 65121.

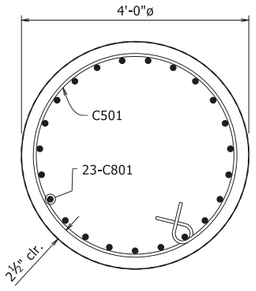
BENDING DIAGRAMS





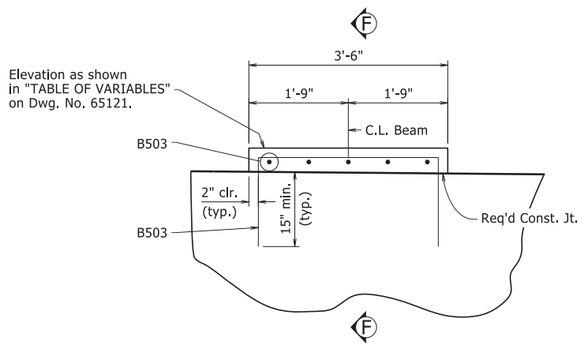


Dimensions are out to out of bars.



SECTION C-C

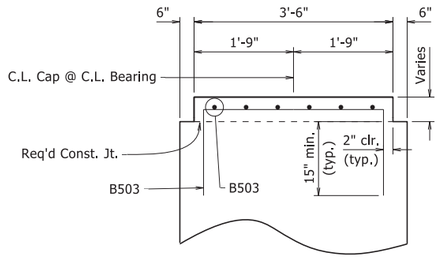
¾" = 1'-0"



TYPICAL PEDESTAL

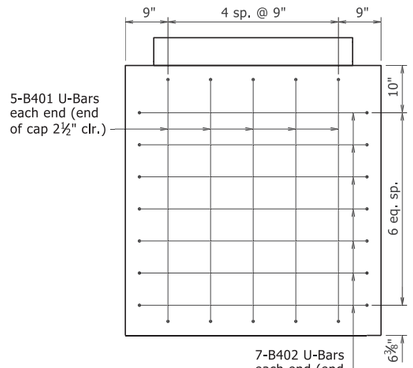
Looking Ahead

¾" = 1'-0"



SECTION F-F

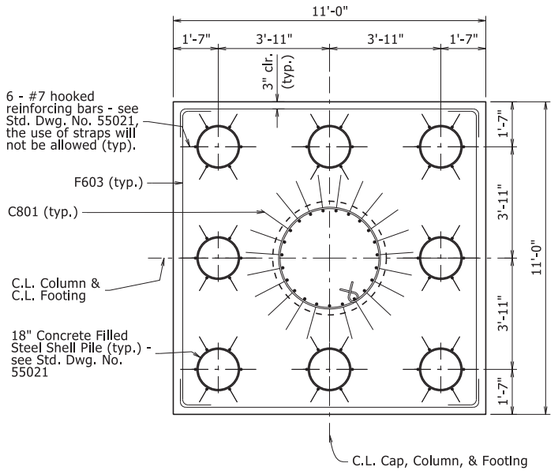
¾" = 1'-0"



NOTE: Cap reinforcing not shown for clarity.

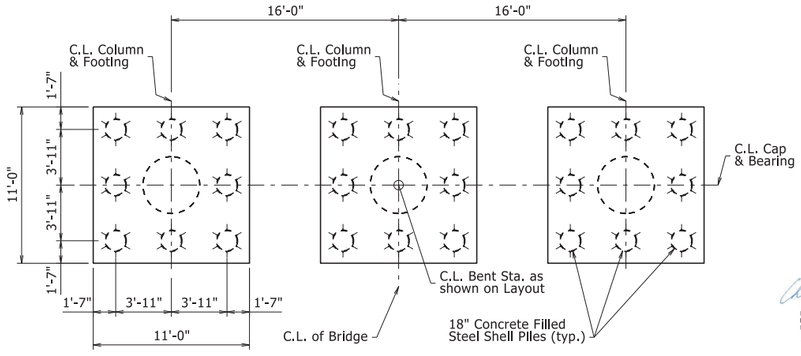
VIEW G-G

¾" = 1'-0"



SECTION E-E

⅜" = 1'-0"



NOTE: Pile and footing dimensions typical.

PLAN OF FOOTINGS

3/16" = 1'-0"

STATE OF ARKANSAS
May 2 2022 3:59 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF INTERMEDIATE BENTS 11 & 12

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

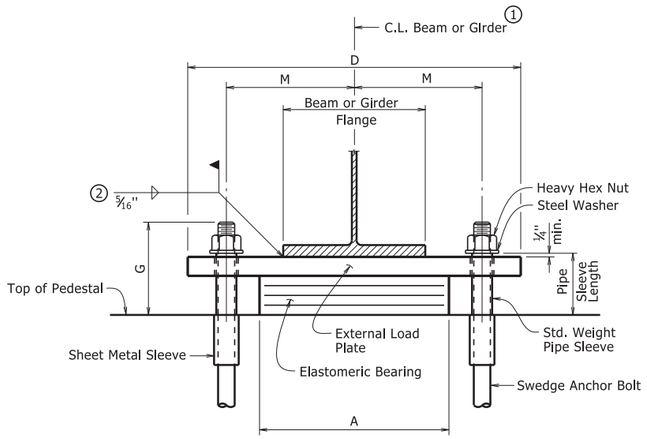
DRAWN BY: JJ DATE: 6/2/2021
CHECKED BY: TMG DATE: 2/17/2022
DESIGNED BY: JJ DATE: 6/2021

FILENAME: b020475x1_b12.dgn
SCALE: As Noted

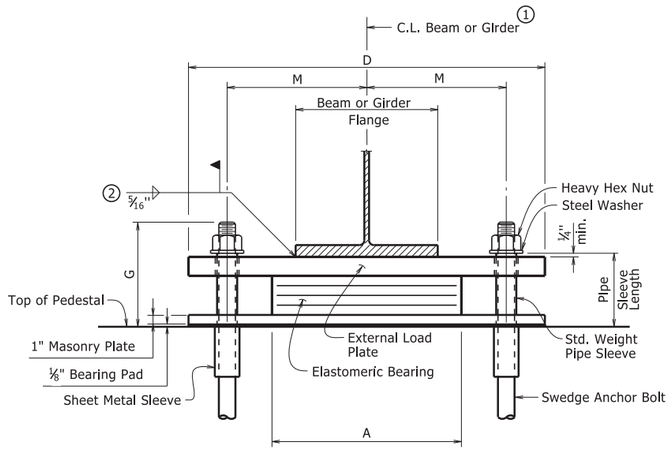
BRIDGE NO. 07536 DRAWING NO. 65122

PRINT DATE: 5/2/2022

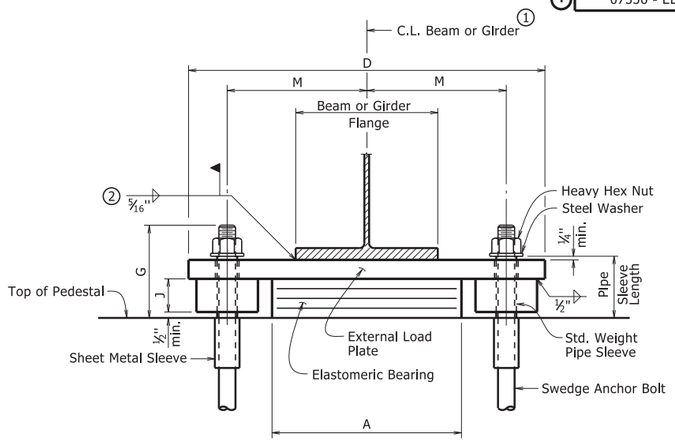
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	110	191
				①	07536 - ELASTO. BEARINGS - 65123			



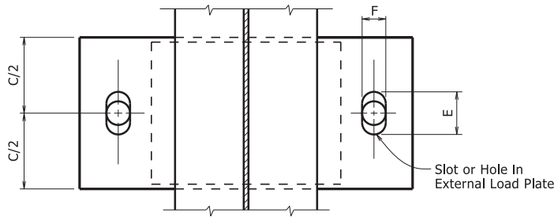
FRONT VIEW
Typical Unless Noted Otherwise



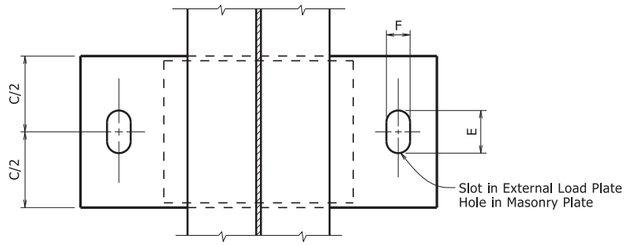
FRONT VIEW - AT BENTS 1 & 7 BACK



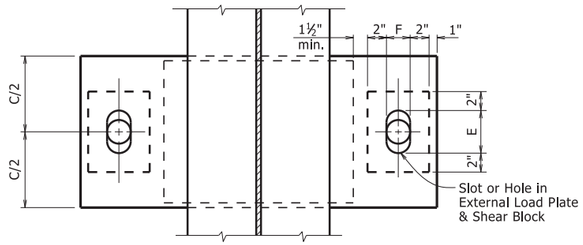
FRONT VIEW - AT BENTS 8,9,11 & 12



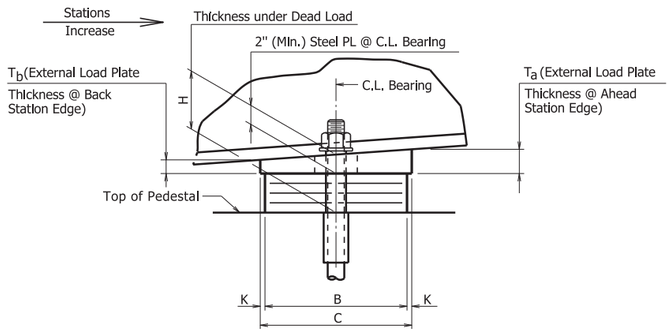
PLAN VIEW
Typical Unless Noted Otherwise



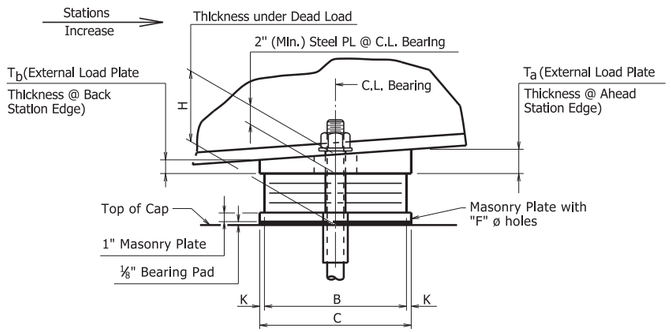
PLAN VIEW - AT BENTS 1 & 7 BACK



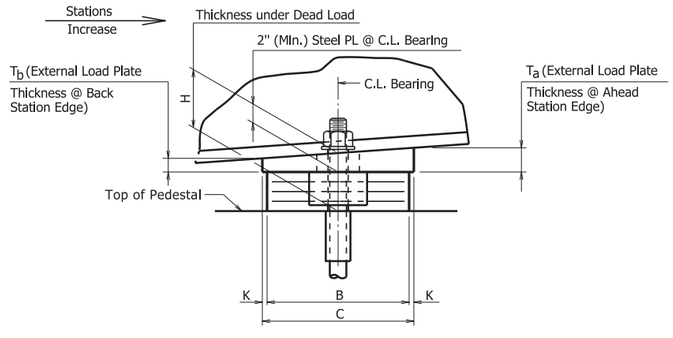
PLAN VIEW - AT BENTS 8,9,11 & 12



SIDE VIEW
Typical Unless Noted Otherwise



SIDE VIEW - AT BENTS 1 & 7 BACK



SIDE VIEW - AT BENTS 8,9,11 & 12

① C.L. Elastomeric Pad shall be aligned with C.L. Beam or Girder.

② Unless otherwise approved by the Engineer, welding of the external load plate at expansion bearings to the beam or girder will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the external load plate are positioned to center on the anchor bolts; and 3) no horizontal deformation of the elastomeric pad is evident. If welding at other temperatures is required, the Engineer will provide adjustment data.

Care shall be taken to ensure that the external load plate is in full and complete contact with the beam or girder flange before welding begins.

The direction of bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in the "Table of Fabricator Variables".

Prior to erection of the beams or girders, the Contractor shall verify the orientation of the bearing with respect to Ta and Tb.

STATE OF ARKANSAS
May 2 2022 3:59 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF
ELASTOMERIC BEARINGS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 08/11/2021 FILENAME: b020475_e1.dgn
CHECKED BY: TMG DATE: 02/22/2022 SCALE: NO SCALE
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65123

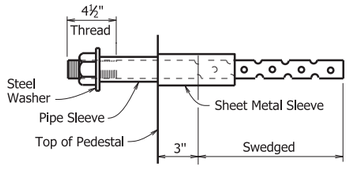
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	111	191
				①	07536 - ELASTO. BEARINGS - 65124			

TABLE OF FABRICATOR VARIABLES

LOCATION		BEARING TYPE	NO. of BEARINGS EACH BENT	③MAXIMUM DESIGN LOAD (KIPS)	ELASTOMERIC PAD							EXTERNAL LOAD PLATE								ANCHOR BOLT					A 1 INCH MASONRY PLATE WITH "F" DIA. HOLES
																				ANCHOR BOLT		PIPE SLEEVE SIZE	SHEET METAL SLEEVE SIZE	STEEL WASHER SIZE (O.D.)	
BENT NO(S).	BEAM OR GIRDER NO.				G	H	A	B	N	t_i	t_e	NO. & THICKNESS OF STEEL LAMINAE	T	C	D	E	F	J	K	M	T_a	T_b	(ø x L)	GRADE	(ø x L)	(ø x L)		
1	All	Exp.	5	107	11¾"	7 5/16"	12"	10½"	6	½"	¼"	7 @ 12 ga.	4¼"	13½"	26"	7¼"	3¾"	NA	1½"	9½"	2.14"	1.86"	2¾"ø x 44"	55	3"ø x 7⅝"	5"ø x 12"	5"	Yes
2	All	Exp.	5	241	9¼"	4 15/16"	14"	14"	4	½"	¼"	5 @ 12 ga.	3"	15"	27"	6⅜"	3¾"	NA	½"	10"	2.15"	1.85"	2¾"ø x 41"	55	3"ø x 5¼"	5"ø x 12"	5"	No
3	All	Fix	5	244	7¾"	3 13/16"	14½"	14½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	15½"	27½"	3¾"	3¾"	NA	½"	10¼"	2.10"	1.90"	2½"ø x 37"	55	3"ø x 4⅛"	4"ø x 12"	4½"	No
4	All	Fix	5	244	7¾"	3 13/16"	14½"	14½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	15½"	27½"	3¾"	3¾"	NA	½"	10¼"	2.05"	1.95"	2½"ø x 37"	55	3"ø x 4⅛"	4"ø x 12"	4½"	No
5	All	Fix	5	244	7¾"	3 13/16"	14½"	14½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	15½"	27¼"	3¼"	3¾"	NA	½"	10¼"	2.00"	2.00"	2½"ø x 37"	55	3"ø x 4⅛"	4"ø x 12"	4½"	No
6	All	Exp.	5	241	9¼"	4 15/16"	14"	14"	4	½"	¼"	5 @ 12 ga.	3"	15"	27"	6⅜"	3¾"	NA	½"	10"	1.95"	2.05"	2¾"ø x 41"	55	3"ø x 5¼"	5"ø x 12"	5"	No
7 Back	All	Exp.	5	107	11"	7 5/16"	12"	10½"	6	½"	¼"	7 @ 12 ga.	4¼"	14½"	24½"	8⅜"	3⅛"	NA	2"	9"	1.91"	2.09"	2¼"ø x 38"	55	2½"ø x 7⅝"	4"ø x 12"	4"	Yes
7 Ahead	All	Exp.	5	147	9¼"	5 5/16"	14"	9½"	5	½"	¼"	6 @ 12 ga.	3⅝"	14½"	26½"	8⅜"	3⅛"	NA	2½"	10"	1.91"	2.09"	2¼"ø x 36"	55	2½"ø x 5⅞"	4"ø x 12"	4"	No
8	All	Fix	5	413	7½"	3¾"	22"	12½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	13½"	41¾"	3½"	3⅛"	1¼"	½"	16¼"	1.85"	2.15"	2¾"ø x 40"	55	3"ø x 4⅛"	5"ø x 12"	5"	No
9	All	Fix	5	413	7½"	3¾"	22"	12½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	13½"	41¾"	3⅛"	3⅛"	1¼"	½"	16¼"	1.76"	2.24"	2¼"ø x 34"	55	2½"ø x 4⅛"	4"ø x 12"	4"	No
10 Back	All	Exp.	5	147	9¼"	5 5/16"	14"	9½"	5	½"	¼"	6 @ 12 ga.	3⅝"	12"	26½"	5¾"	3⅛"	NA	1¼"	10"	1.73"	2.27"	2¼"ø x 36"	55	2½"ø x 5⅞"	4"ø x 12"	4"	No
10 Ahead	All	Exp.	5	135	7¾"	4⅜"	16"	8½"	3	½"	¼"	4 @ 12 ga.	2 7/16"	14½"	28½"	8⅜"	3⅛"	NA	3"	11"	1.67"	2.33"	2"ø x 32"	55	2½"ø x 4¾"	4"ø x 12"	3¾"	No
11	All	Fix	5	286	7¼"	3 13/16"	16"	14½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	15½"	35¾"	3½"	3⅛"	1¼"	½"	13¼"	1.61"	2.39"	2¼"ø x 34"	55	2½"ø x 4⅛"	4"ø x 14"	4"	No
12	All	Fix	5	286	7¼"	3 13/16"	16"	14½"	2	½"	¼"	3 @ 12 ga.	1 13/16"	15½"	35¾"	3⅛"	3⅛"	1¼"	½"	13¼"	1.61"	2.39"	2"ø x 31"	55	2½"ø x 4⅛"	4"ø x 14"	3¾"	No
13	All	Exp.	5	135	7¾"	4⅜"	16"	8½"	3	½"	¼"	4 @ 12 ga.	2 7/16"	11¼"	28½"	5"	3⅛"	NA	1⅜"	11"	1.74"	2.26"	2"ø x 32"	55	2½"ø x 4¾"	4"ø x 14"	3¾"	No

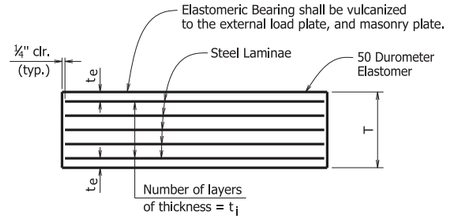
③ Maximum Design Load = Service 1 Limit State



ANCHOR BOLT DETAIL

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of Structural Steel, the dry pack shall be removed and holes for the anchor bolts shall be accurately drilled into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized Sheet Metal Sleeves shall meet the requirements of ASTM 653, CS Type B or approved equivalent, be of minimum 16 gage thickness, and be galvanized according to ASTM B695, Class 50. Sheet Metal Sleeves will not be paid for directly, but will be considered subsidiary to the Item "Structural Steel in Beam Spans (A709, Gr. 50", or "Structural Steel in Plate Girder Spans (A709, Gr. 50)".



t_e = Thickness of elastomer cover on top and bottom of pad

t_i = Thickness of elastomer between steel laminae

N = Number of elastomer layers of thickness t_i

ELASTOMERIC BEARING

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings".

External load plates, shear blocks, and masonry plates shall conform to ASTM A709, Grade 50. Pipe sleeves shall be ASTM A500, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

External load plates, shear blocks, and masonry plates shall be completely fabricated (including bevel, bolt holes and all shop welding) and shall be cleaned before vulcanizing to the elastomeric bearing. The surface in contact with the elastomeric bearing shall be cleaned in accordance with Subsection 808.03. Other surfaces shall be blast cleaned in accordance with Subsection 807.84(b) for painted steel and 807.84(e) for unpainted Grade 50 steel.

Anchor Bolts, Washers and Nuts shall conform to Subsection 807.07. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Pipe Sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (A709, Gr. 50)", or "Structural Steel in Plate Girder Spans (A709, Gr. 50)". External load plates, shear blocks, and masonry plates will not be measured or paid for separately, but will be considered incidental to the unit price bid for "Elastomeric Bearings".

Bearings with masonry plates shall be seated in accordance with Subsection 807.66. This work and materials are considered subsidiary to the item "Elastomeric Bearings" and will not be paid for directly.

STATE OF ARKANSAS
May 2 2022 3:59 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF
ELASTOMERIC BEARINGS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 08/11/2021 FILENAME: b020475_e1.dgn
CHECKED BY: TMG DATE: 02/22/2022 SCALE: NO SCALE
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65124

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	112	191
				①	07536 - SPAN DETAILS - 65125			

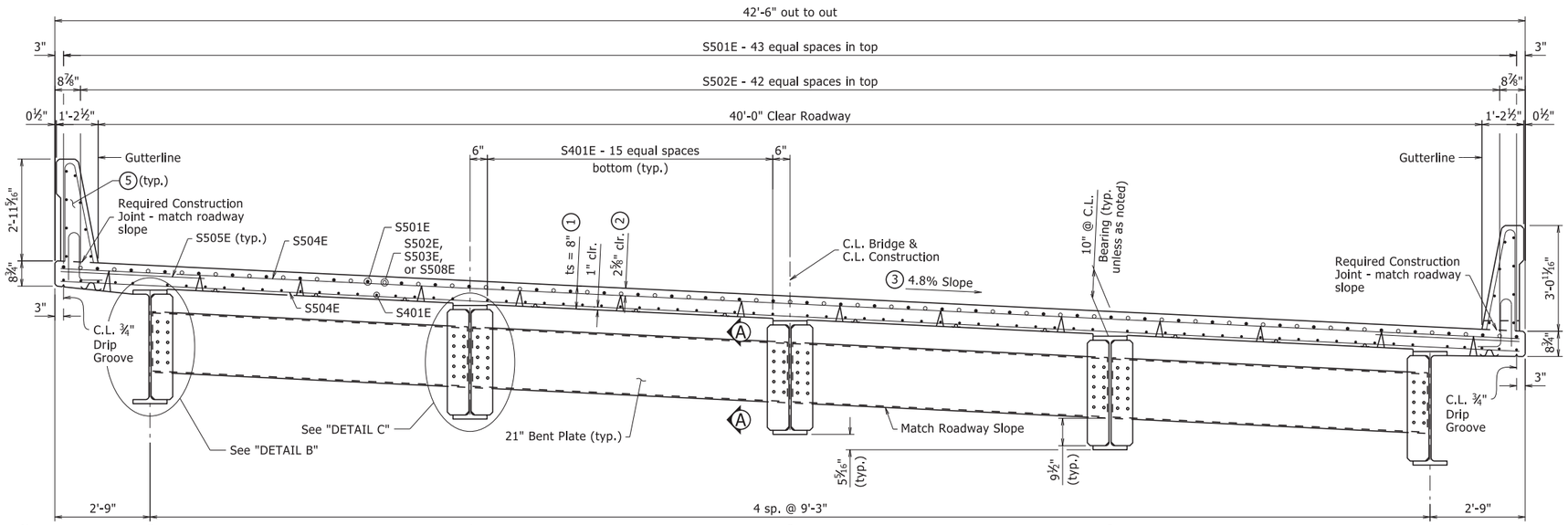
Class 2 Protective Surface Treatment shall be applied to the roadway face & top of the bridge rail, and to the roadway surface.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

Slab Reinforcing

Longitudinal: S501E, S502E, S503E or S508E in top (place as shown)
S401E in bottom (place as shown), see "REINFORCING PLAN & DECK POURING SEQUENCE", Dwg. Nos. 65129 & 65130.

Transverse: S504E @ 6" o.c. in top & bottom
S505E @ 6" in top of overhangs (bundled with #5 bars) both sides

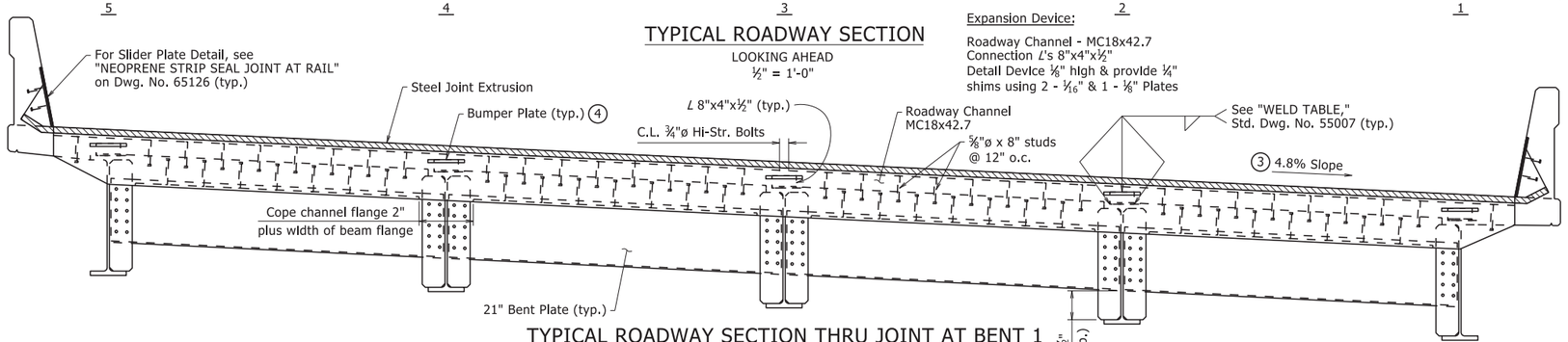


TYPICAL ROADWAY SECTION

LOOKING AHEAD
½" = 1'-0"

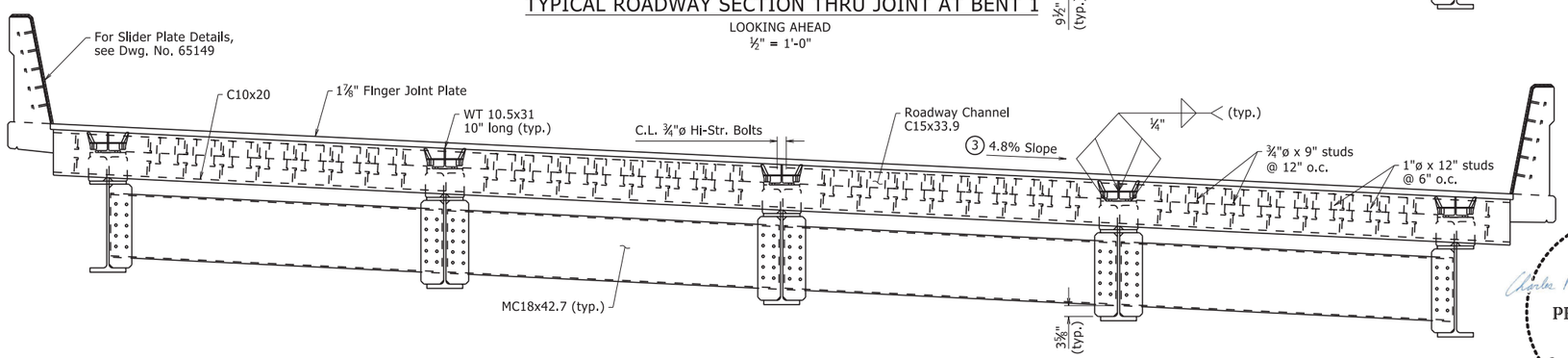
Expansion Device:

Roadway Channel - MC18x42.7
Connection ∠'s 8"x4"x½"
Detail Device ⅛" high & provide ¼" shims using 2 - 1/16" & 1 - ⅛" Plates



TYPICAL ROADWAY SECTION THRU JOINT AT BENT 1

LOOKING AHEAD
½" = 1'-0"



TYPICAL ROADWAY SECTION THRU FINGER JOINT AT BENT 7

LOOKING AHEAD
½" = 1'-0"

NOTES:

Reference "SECTION A-A", "DETAIL B", & "DETAIL C" on Dwg. No. 65126.

Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.

① See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

② Tolerance Minus = ¼":
Plus = to the amount of slab thickness used to meet slab thickness tolerance
See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

③ See "SUPERELEVATION SKETCH" on Dwg. No. 65104 for slope transitions.

④ For size of Bumper Plate, see Std. Dwg. No. 55009.

⑤ Bridge Traffic Rail (Type SSTR36). For additional details, see Std. Dwg. No. 55070.

STATE OF ARKANSAS
May 2 2022 3:59 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

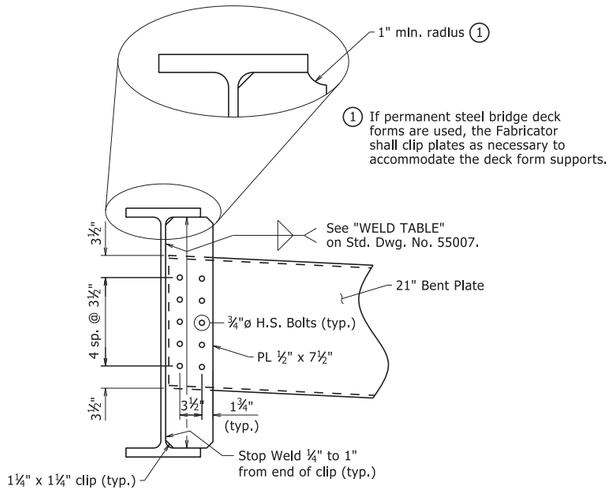
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: AS NOTED

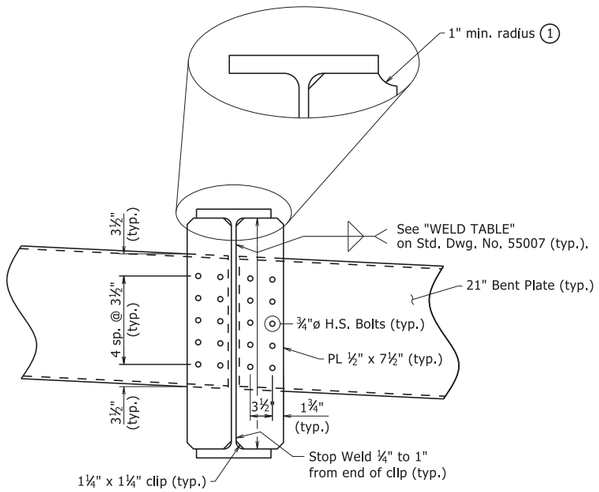
BRIDGE NO. 07536
DRAWING NO. 65125

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	113	191
				①		07536 - SPAN DETAILS - 65126		



DETAIL B



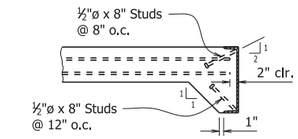
DETAIL C

TABLE OF STRIP SEAL JOINT DATA

Bent Number	Movement Rating (Inch)	"A" Width Perpendicular to Joint at 24 Hour Average Temperature (2) of:			"B" Width Perpendicular to Joint at 24 Hour Average Temperature (2) of:			"C" Width Perpendicular to Joint at 24 hour Average Temperature at 60°F
		40°F	60°F	80°F	40°F	60°F	80°F	
1	4"	2⅝"	2¼"	1⅞"	3⅛"	2¾"	2⅜"	2⅜" +/-

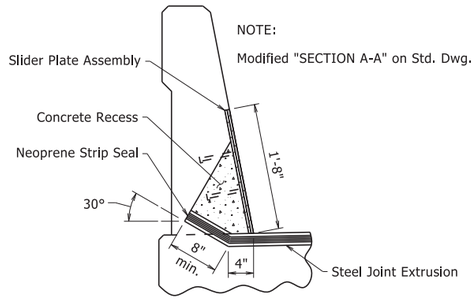
Reference Std. Dwg. No. 55009 for Neoprene Strip Seal Joint Details.

(2) The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

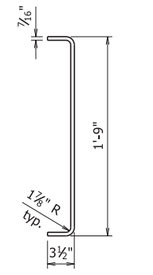


As an alternate to ⅝"ø studs, ½"ø x 8" studs spaced as shown may be used. Use weight of ⅝"ø stud as basis of measurement of structural steel in anchors.

DETAILS OF ALTERNATE ANCHORS AND PLACEMENT OF LONGITUDINAL REINFORCEMENT

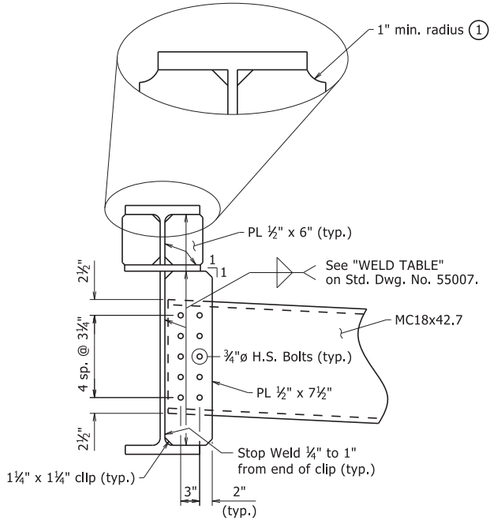


NEOPRENE STRIP SEAL JOINT AT RAIL

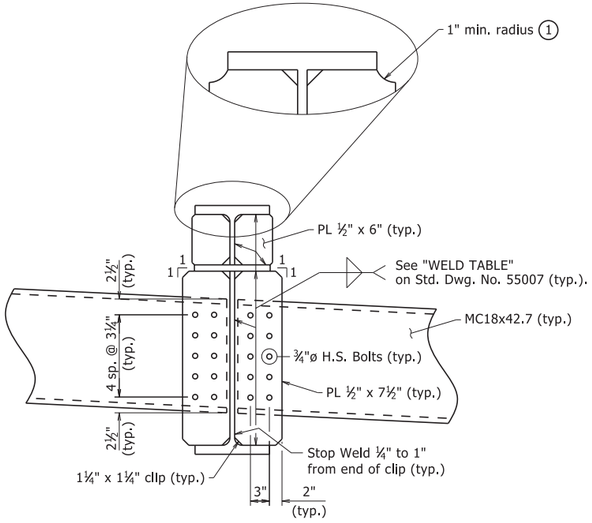


Typical cross-section for all 21" bent plate diaphragms.

SECTION A-A



CONNECTION DETAIL AT FINGER JOINT
(EXTERIOR BEAM)



CONNECTION DETAIL AT FINGER JOINT
(INTERIOR BEAM)

STATE OF ARKANSAS
May 2 2022 3:59 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: NO SCALE
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65126

PRINT DATE: 5/2/2022

NOTES:

All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (A709, Gr. 50)".

Beams are concentric to C.L. Bridge. Diaphragm and field splice lines are radial within the limits of the horizontal curve.

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

See Std. Dwg. No. 55007 for additional details.

(1) Measured along C.L. Bridge

(2) Measured along each C.L. Beam

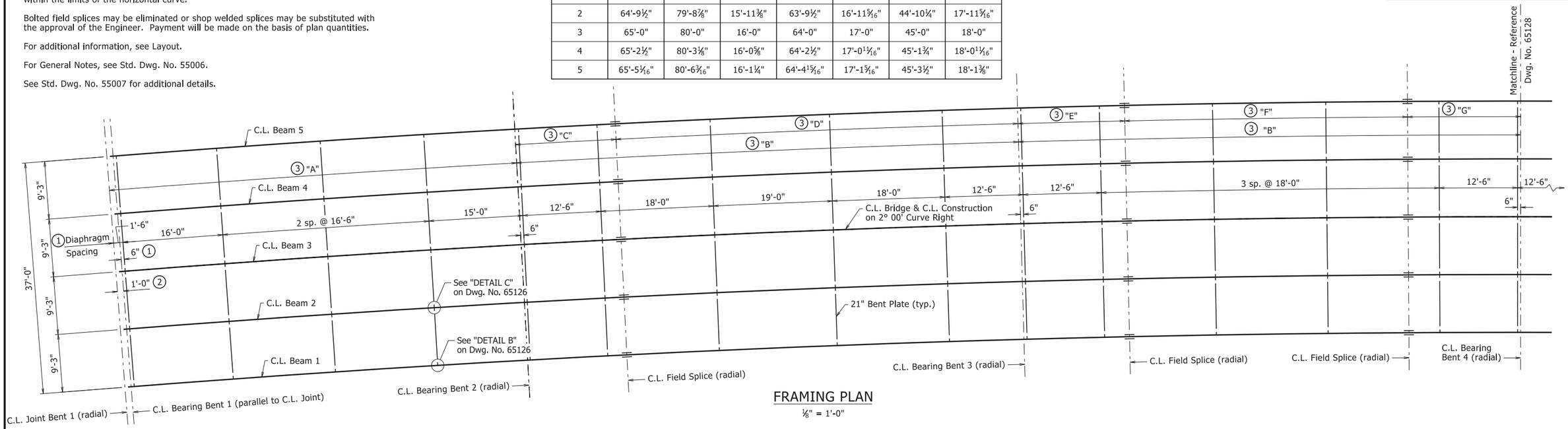
(3) See "TABLE OF VARIABLES".

(2) TABLE OF VARIABLES

Beam No.	"A"	"B"	"C"	"D"	"E"	"F"	"G"
1	64'-6 5/16"	79'-5 3/16"	15'-10 3/4"	63'-7 1/16"	16'-10 1/16"	44'-8 1/2"	17'-10 5/8"
2	64'-9 1/2"	79'-8 7/8"	15'-11 3/8"	63'-9 1/2"	16'-11 5/16"	44'-10 1/4"	17'-11 5/16"
3	65'-0"	80'-0"	16'-0"	64'-0"	17'-0"	45'-0"	18'-0"
4	65'-2 1/2"	80'-3 1/8"	16'-0 5/8"	64'-2 1/2"	17'-0 1/16"	45'-1 3/4"	18'-0 1/16"
5	65'-5 1/16"	80'-6 3/16"	16'-1 1/4"	64'-4 5/16"	17'-1 5/16"	45'-3 1/2"	18'-1 3/8"

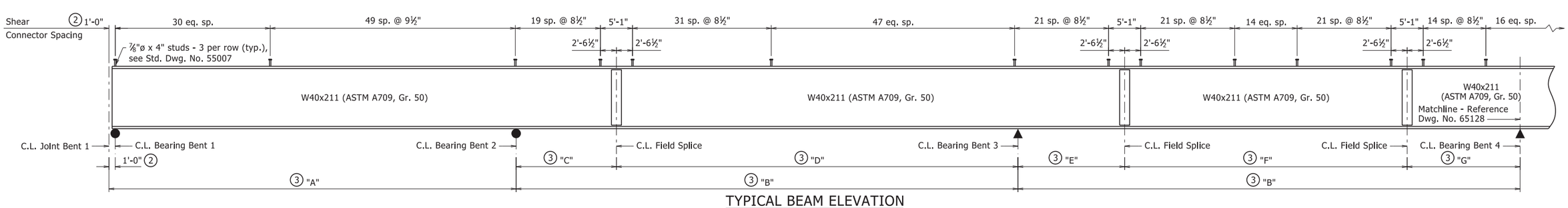
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	114	191

(1) 07536 - SPAN DETAILS - 65127



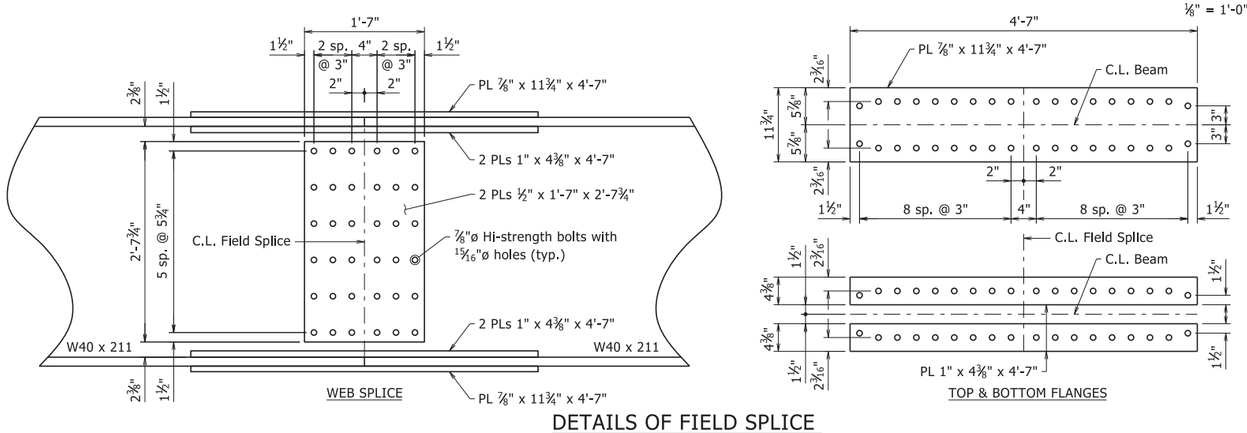
FRAMING PLAN

1/8" = 1'-0"



TYPICAL BEAM ELEVATION

1/8" = 1'-0"



DETAILS OF FIELD SPLICE

1/2" = 1'-0"

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn

CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED

DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65127

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	115	191
				(1)		07536 - SPAN DETAILS - 65128		

NOTES:

All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (A709, Gr. 50)".

Beams are concentric to C.L. Bridge. Diaphragm and field splice lines are radial within the limits of the horizontal curve.

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

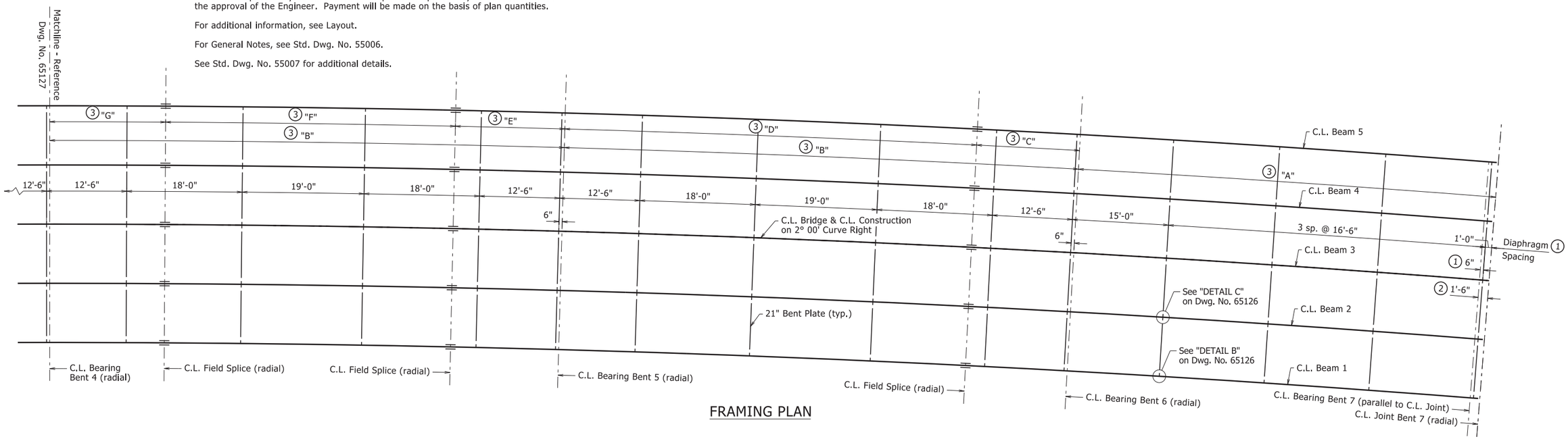
See Std. Dwg. No. 55007 for additional details.

(1) Measured along C.L. Bridge

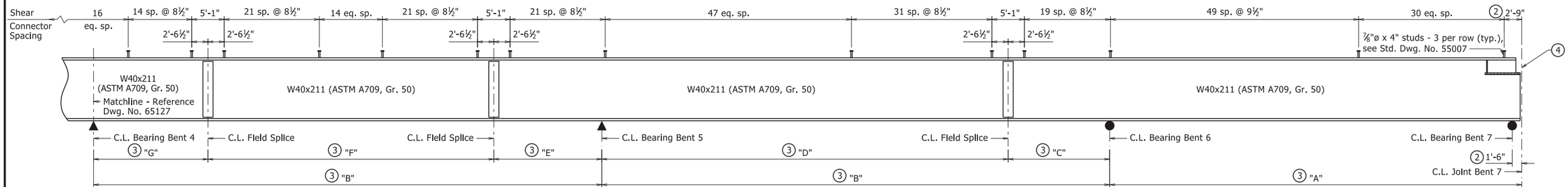
(2) Measured along each C.L. Beam

(3) See "TABLE OF VARIABLES".

(4) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.



FRAMING PLAN



TYPICAL BEAM ELEVATION

(2) TABLE OF VARIABLES

Beam No.	"A"	"B"	"C"	"D"	"E"	"F"	"G"
1	64'-6 15/16"	79'-5 13/16"	15'-10 3/4"	63'-7 1/16"	16'-10 1/16"	44'-8 1/2"	17'-10 5/8"
2	64'-9 1/2"	79'-8 7/8"	15'-11 3/8"	63'-9 1/2"	16'-11 5/16"	44'-10 1/4"	17'-11 5/16"
3	65'-0"	80'-0"	16'-0"	64'-0"	17'-0"	45'-0"	18'-0"
4	65'-2 1/2"	80'-3 1/8"	16'-0 5/8"	64'-2 1/2"	17'-0 1/16"	45'-1 3/4"	18'-0 1/16"
5	65'-5 1/16"	80'-6 3/16"	16'-1 1/4"	64'-4 15/16"	17'-1 5/16"	45'-3 1/2"	18'- 1 3/8"

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: 1/8" = 1'-0"

BRIDGE NO. 07536 DRAWING NO. 65128

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	116	191
				(1)		07536 - SPAN DETAILS - 65129		

NOTES:

Deflections provided are based on the pouring sequence shown. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown. Any deviations, if approved, may require adjustment to the deflections provided. A continuous pour will not be allowed. All Pours 1 must be placed before Pour 2 can be placed. A minimum of 48 hours shall elapse between the end of a pour and the start of the next pour. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and the start of the railing pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer.

After all incremental pours on both units adjacent to finger joint are complete, closure pours on each side of finger joint shall be poured simultaneously. A minimum of 48 hours shall elapse between the last incremental pour and the closure pours.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

Required slab joints and pouring sequence construction joints shall align with bridge rail joints.

(1) Radial Line

(2) Measured along C.L. Bridge

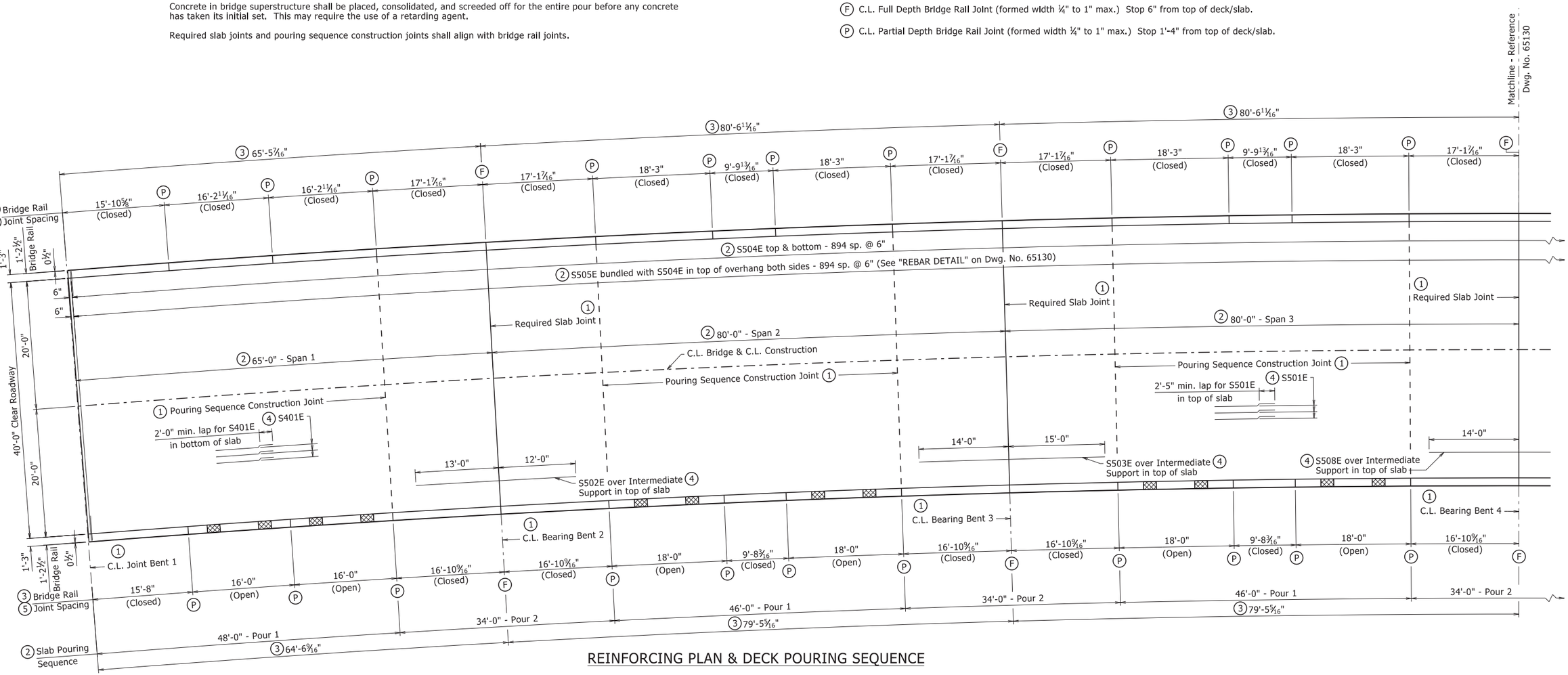
(3) Measured along Gutterline

(4) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65125.

(5) Reference Std. Dwg. No. 55070.

(F) C.L. Full Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 6" from top of deck/slab.

(P) C.L. Partial Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 1'-4" from top of deck/slab.



REINFORCING PLAN & DECK POURING SEQUENCE

NOTE:

C.L. Bridge is in a 2°00' horizontal curve to the right. All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge.

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 5 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

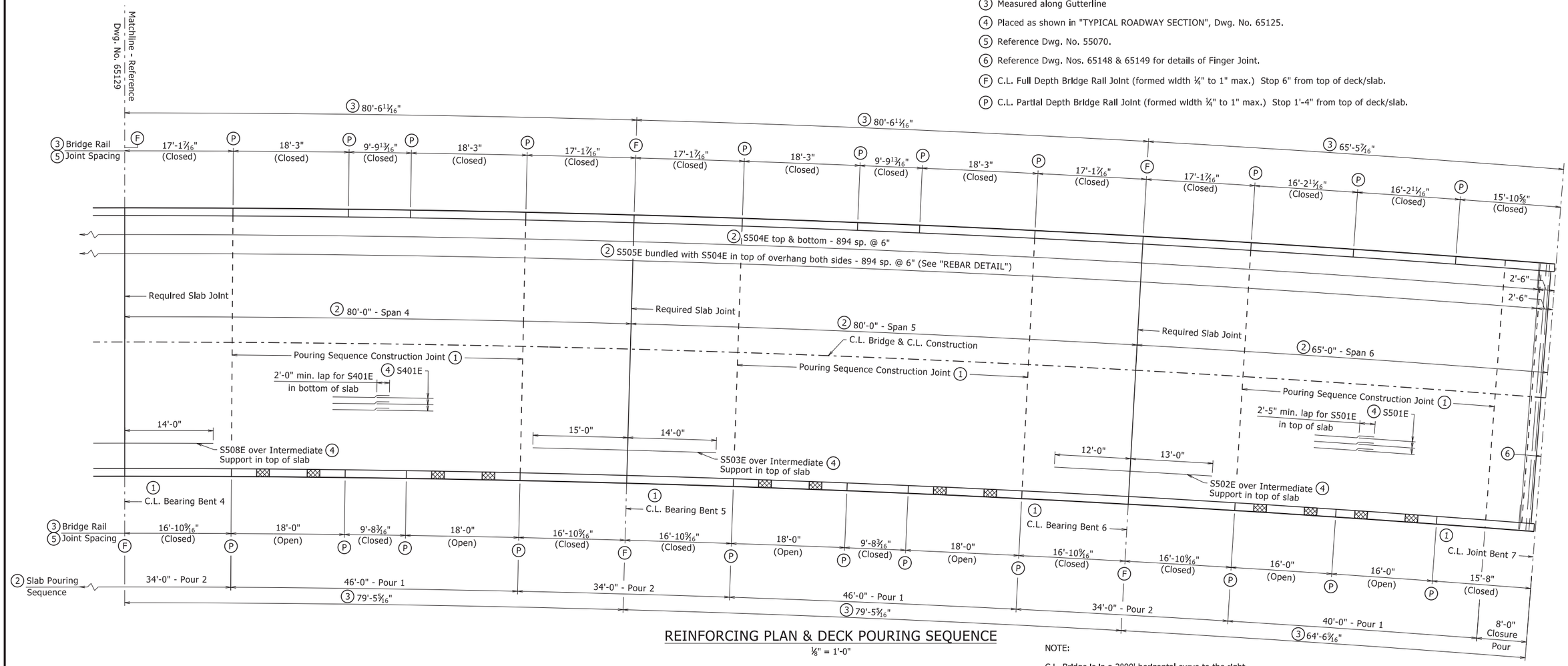
DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: 1/8" = 1'-0"

BRIDGE NO. 07536 DRAWING NO. 65129

PRINT DATE: 5/2/2022

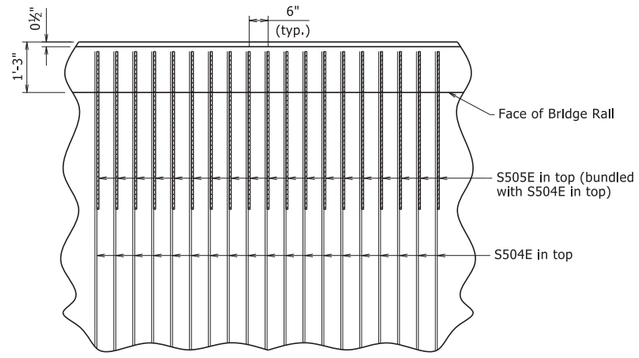
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	117	191
				1	07536 - SPAN DETAILS - 65130			

(1) Radial Line
(2) Measured along C.L. Bridge
(3) Measured along Gutterline
(4) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65125.
(5) Reference Dwg. No. 55070.
(6) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.
(F) C.L. Full Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 6" from top of deck/slab.
(P) C.L. Partial Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 1'-4" from top of deck/slab.



REINFORCING PLAN & DECK POURING SEQUENCE

⅛" = 1'-0"



REBAR DETAIL

NO SCALE

NOTE:

C.L. Bridge is in a 2°00' horizontal curve to the right. All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge.

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65130

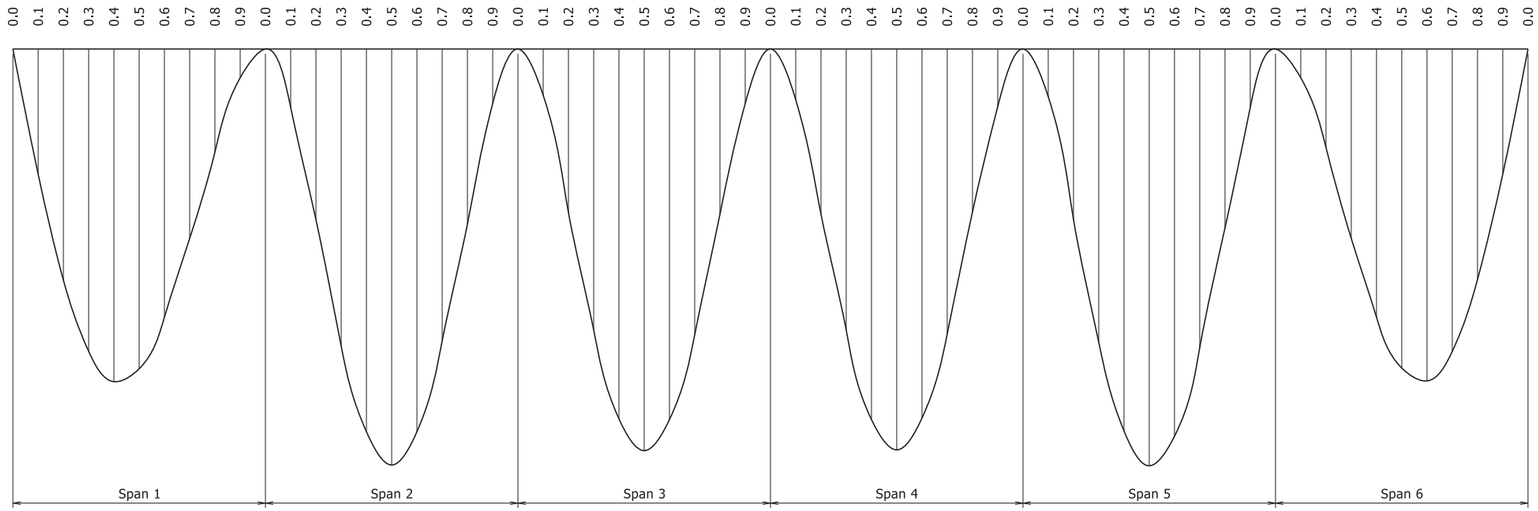
PRINT DATE: 5/2/2022

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel					Structural Steel + Slab					Structural Steel + Slab + Bridge Rail				
		Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.028	0.03	0.031	0.03	0.03	0.14	0.166	0.175	0.17	0.152	0.153	0.176	0.184	0.18	0.166
	0.2	0.051	0.055	0.056	0.056	0.055	0.258	0.306	0.321	0.313	0.279	0.283	0.325	0.339	0.333	0.305
	0.3	0.067	0.072	0.074	0.074	0.072	0.337	0.4	0.421	0.411	0.366	0.369	0.425	0.444	0.437	0.401
	0.4	0.074	0.079	0.081	0.081	0.079	0.371	0.439	0.462	0.451	0.402	0.406	0.466	0.487	0.479	0.44
	0.5	0.071	0.076	0.078	0.078	0.076	0.357	0.423	0.445	0.434	0.387	0.391	0.45	0.469	0.461	0.424
	0.6	0.059	0.064	0.065	0.065	0.064	0.299	0.354	0.372	0.364	0.325	0.328	0.376	0.393	0.387	0.356
	0.7	0.042	0.045	0.046	0.046	0.046	0.211	0.251	0.264	0.257	0.231	0.232	0.267	0.279	0.273	0.253
	0.8	0.023	0.024	0.025	0.025	0.025	0.114	0.135	0.142	0.139	0.125	0.126	0.144	0.15	0.148	0.138
	0.9	0.006	0.007	0.007	0.007	0.007	0.031	0.038	0.039	0.039	0.035	0.035	0.041	0.041	0.042	0.039
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.013	0.014	0.014	0.014	0.013	0.066	0.077	0.08	0.078	0.068	0.073	0.082	0.085	0.083	0.075
	0.2	0.038	0.041	0.042	0.041	0.04	0.194	0.228	0.239	0.232	0.205	0.213	0.242	0.252	0.247	0.225
	0.3	0.065	0.07	0.071	0.071	0.069	0.331	0.39	0.408	0.397	0.352	0.363	0.415	0.431	0.422	0.387
	0.4	0.085	0.09	0.092	0.092	0.089	0.43	0.504	0.529	0.514	0.455	0.472	0.536	0.558	0.547	0.5
	0.5	0.091	0.097	0.099	0.099	0.096	0.463	0.545	0.571	0.555	0.491	0.508	0.579	0.602	0.59	0.539
	0.6	0.084	0.09	0.091	0.091	0.088	0.427	0.502	0.526	0.51	0.451	0.468	0.534	0.555	0.543	0.495
	0.7	0.064	0.068	0.07	0.069	0.067	0.326	0.383	0.402	0.388	0.342	0.358	0.408	0.424	0.413	0.376
	0.8	0.037	0.04	0.04	0.04	0.039	0.19	0.224	0.233	0.225	0.197	0.208	0.238	0.246	0.239	0.217
	0.9	0.013	0.014	0.014	0.013	0.013	0.065	0.077	0.08	0.076	0.066	0.072	0.082	0.085	0.081	0.073
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.011	0.012	0.013	0.013	0.013	0.056	0.067	0.072	0.072	0.067	0.062	0.071	0.076	0.077	0.073
	0.2	0.036	0.038	0.04	0.041	0.041	0.18	0.212	0.225	0.225	0.208	0.198	0.225	0.237	0.239	0.227
	0.3	0.062	0.067	0.069	0.071	0.071	0.314	0.371	0.393	0.392	0.361	0.345	0.395	0.415	0.416	0.394
	0.4	0.082	0.087	0.09	0.092	0.093	0.412	0.485	0.515	0.512	0.473	0.452	0.516	0.543	0.544	0.516
	0.5	0.089	0.095	0.098	0.1	0.102	0.447	0.528	0.56	0.558	0.518	0.49	0.561	0.591	0.593	0.565
	0.6	0.082	0.088	0.091	0.093	0.095	0.413	0.488	0.518	0.517	0.483	0.453	0.519	0.546	0.549	0.527
	0.7	0.063	0.067	0.069	0.072	0.074	0.316	0.373	0.396	0.4	0.377	0.347	0.397	0.418	0.425	0.411
	0.8	0.036	0.039	0.041	0.042	0.045	0.183	0.217	0.231	0.236	0.228	0.201	0.231	0.244	0.25	0.248
	0.9	0.013	0.014	0.014	0.015	0.017	0.064	0.076	0.081	0.085	0.087	0.071	0.081	0.086	0.09	0.094
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.011	0.012	0.013	0.014	0.016	0.058	0.068	0.074	0.079	0.08	0.064	0.073	0.078	0.084	0.087
	0.2	0.036	0.038	0.04	0.042	0.044	0.181	0.213	0.228	0.233	0.222	0.199	0.227	0.24	0.247	0.241
	0.3	0.063	0.067	0.069	0.071	0.073	0.317	0.374	0.397	0.399	0.373	0.348	0.398	0.419	0.424	0.407
	0.4	0.082	0.087	0.09	0.092	0.094	0.414	0.487	0.517	0.516	0.479	0.454	0.518	0.545	0.548	0.523
	0.5	0.089	0.094	0.098	0.1	0.101	0.449	0.528	0.561	0.558	0.515	0.493	0.561	0.592	0.593	0.562
	0.6	0.082	0.087	0.09	0.092	0.093	0.414	0.487	0.516	0.513	0.472	0.454	0.518	0.544	0.545	0.515
	0.7	0.062	0.066	0.069	0.07	0.071	0.315	0.371	0.394	0.392	0.36	0.346	0.395	0.416	0.417	0.393
	0.8	0.036	0.038	0.04	0.041	0.041	0.183	0.215	0.228	0.228	0.209	0.201	0.229	0.24	0.242	0.228
	0.9	0.012	0.013	0.014	0.014	0.014	0.062	0.074	0.079	0.079	0.073	0.069	0.079	0.084	0.084	0.08
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.012	0.013	0.013	0.013	0.012	0.062	0.072	0.074	0.072	0.061	0.068	0.077	0.078	0.077	0.068
	0.2	0.037	0.039	0.04	0.04	0.038	0.188	0.219	0.229	0.223	0.194	0.206	0.233	0.242	0.237	0.214
	0.3	0.065	0.069	0.07	0.07	0.067	0.329	0.384	0.402	0.391	0.343	0.361	0.409	0.424	0.416	0.377
	0.4	0.084	0.09	0.091	0.091	0.088	0.427	0.502	0.525	0.511	0.45	0.469	0.534	0.554	0.544	0.495
	0.5	0.092	0.098	0.1	0.099	0.097	0.466	0.546	0.572	0.556	0.493	0.511	0.581	0.604	0.592	0.541
	0.6	0.085	0.09	0.092	0.092	0.09	0.431	0.506	0.53	0.516	0.457	0.473	0.538	0.559	0.549	0.502
	0.7	0.066	0.07	0.071	0.071	0.069	0.333	0.391	0.409	0.398	0.352	0.366	0.416	0.432	0.424	0.387
	0.8	0.039	0.041	0.042	0.042	0.041	0.197	0.231	0.241	0.236	0.208	0.216	0.246	0.254	0.251	0.229
	0.9	0.014	0.015	0.015	0.015	0.015	0.071	0.084	0.087	0.085	0.075	0.078	0.09	0.092	0.091	0.083
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.006	0.007	0.007	0.007	0.007	0.031	0.039	0.04	0.04	0.035	0.035	0.042	0.042	0.043	0.039
	0.2	0.022	0.024	0.024	0.024	0.024	0.109	0.131	0.136	0.134	0.119	0.12	0.14	0.144	0.143	0.131
	0.3	0.042	0.046	0.047	0.047	0.046	0.211	0.253	0.265	0.26	0.231	0.232	0.269	0.28	0.276	0.253
	0.4	0.059	0.064	0.066	0.066	0.064	0.298	0.356	0.375	0.366	0.325	0.327	0.378	0.396	0.389	0.356
	0.5	0.071	0.076	0.079	0.078	0.076	0.356	0.423	0.447	0.435	0.386	0.39	0.45	0.471	0.462	0.423
	0.6	0.074	0.079	0.082	0.082	0.08	0.371	0.44	0.465	0.453	0.403	0.406	0.467	0.49	0.481	0.441
	0.7	0.067	0.072	0.074	0.074	0.072	0.338	0.401	0.422	0.412	0.366	0.37	0.426	0.445	0.438	0.4
	0.8	0.051	0.055	0.057	0.057	0.055	0.258	0.307	0.324	0.315	0.28	0.283	0.326	0.342	0.335	0.306
	0.9	0.028	0.03	0.031	0.031	0.03	0.14	0.166	0.175	0.171	0.152	0.153	0.176	0.184	0.182	0.166
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	118	191

① 07536 - SPAN DETAILS - 65131



DEAD LOAD DEFLECTION DIAGRAM

NO SCALE

Note:
Camber for Dead Load Deflection +/- ½ Inch tolerance. Deflections shown are along centerline of beam/girder from the plane perpendicular to the web extending from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above plane. Vertical curve corrections not included. Superelevation transition corrections not included.

Dead load deflections shown include an assumed loading of 18 psf to account for stay-in-place metal deck forms. Revisions to the deflection table may be necessary upon review of the Contractor's submitted forming details or any approved changes to the pouring sequence shown in "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65129 & 65130.

Place Type D Bridge Name Plate on front face of span rail approximately 1'-0" from end of rail on right side Beginning of Bridge only. See Std. Dwg. No. 55010.



NAME PLATE DETAIL

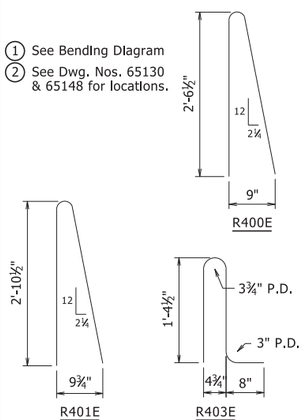
NO SCALE

BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
R400E	96	5'-3"	2½"
R401E	1726	5'-11"	2½"
R402E	176	5'-6"	Str.
R403E	1798	3'-6"	①
R404E	32	9'-4"	Str.
R405E	32	9'-6"	Str.
R406E	16	15'-4"	Str.
R407E	16	15'-7"	Str.
R408E	32	15'-8"	Str.
R409E	32	15'-11"	Str.
R410E	80	16'-7"	Str.
R411E	80	16'-10"	Str.
R412E	64	17'-8"	Str.
R413E	64	17'-11"	Str.
S401E	814	42'-8"	Str.
S501E	352	58'-3"	Str.
S502E	86	25'-0"	Str.
S503E	86	29'-0"	Str.
S504E	1790	42'-2"	Str.
S505E	1790	4'-2"	Str.
② S506E	4	1'-11"	Str.
② S507E	8	7'-11"	Str.
S508E	43	28'-0"	Str.

BENDING DIAGRAMS

① See Bending Diagram
② See Dwg. Nos. 65130 & 65148 for locations.



Dimensions are out to out of bars.
Bars with an "E" suffix are to be epoxy coated.

NOTE:

See "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65129 & 65130 for rail panel lengths.
See "BAR LIST" for rebar quantities.
See "TABLE OF VARIABLES" for rail rebar information.
See Std. Dwg. No. 55070 for details of rail reinforcing, "A" designation, and location of bars with an "R" prefix.

TABLE OF VARIABLES

(for use with Std. Dwg. No. 55070)

Closed Rail Panels			Open Rail Panels						
Panel Length	A	R4XXE	Panel Length	B	C	D	E	F	R4XXE
9'-8 3/16"	19	R404E	16'-0"	5	8	3'-0"	11	6'-0"	R408E
9'-9 13/16"	19	R405E	18'-0"	5	8	3'-0"	15	8'-0"	R412E
15'-8"	31	R406E							
15'-10 5/8"	31	R407E							
15'-10 3/4"	31	R407E							
16'-2 11/16"	32	R409E							
16'-10 9/16"	33	R410E							
17'-1 7/16"	34	R411E							
18'-3"	36	R413E							

PRINT DATE: 5/2/2022

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 7 OF 7
DETAILS OF 450'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: AS NOTED

BRIDGE NO. 07536 DRAWING NO. 65131

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	119	191
				(1)	07536 - SPAN DETAILS - 65132			

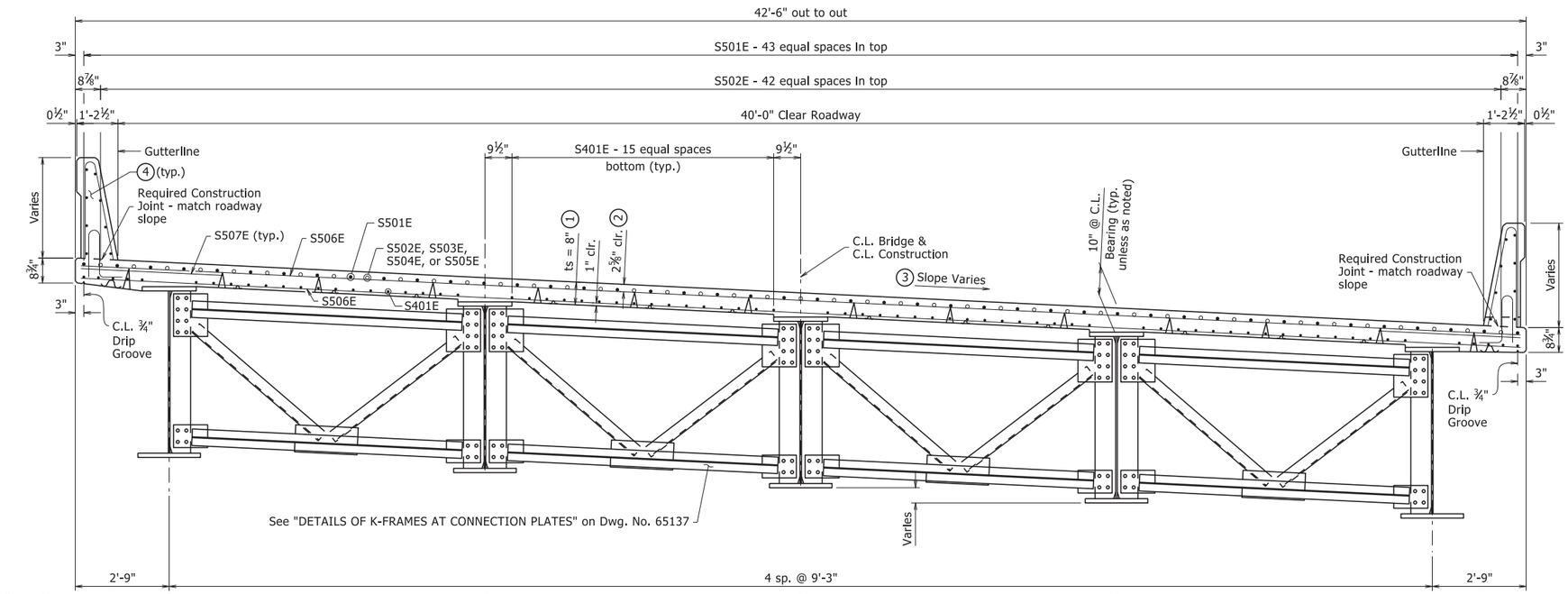
Class 2 Protective Surface Treatment shall be applied to the roadway face & top of the concrete bridge rail, and to the roadway surface.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

Slab Reinforcing

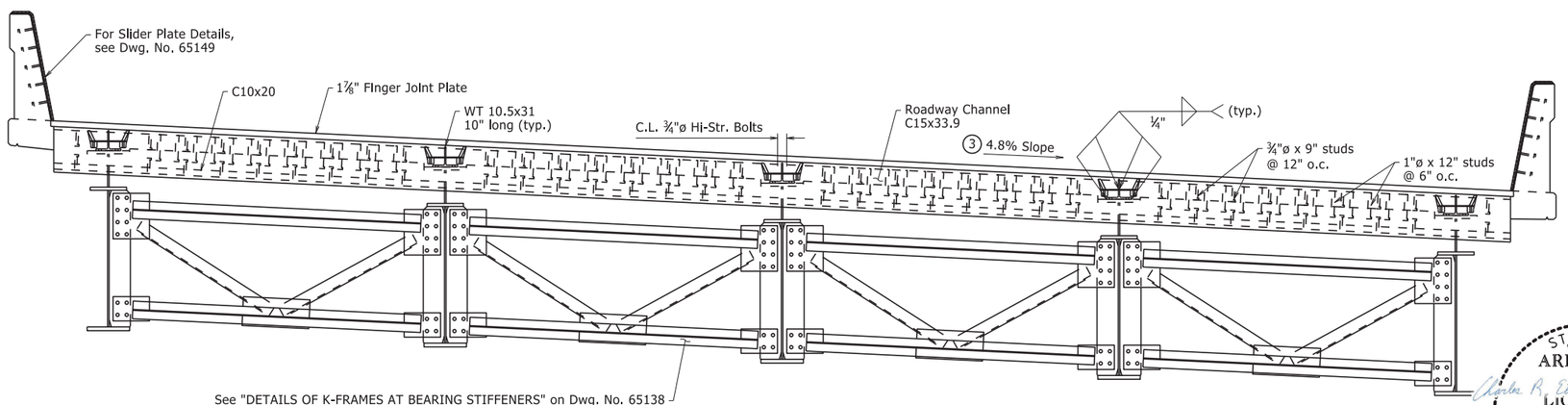
Longitudinal: S501E, S502E, S503E, S504E, & S505E in top (place as shown)
S401E in bottom (place as shown), see "REINFORCING PLAN & DECK POURING SEQUENCE", Dwg. Nos. 65135 & 65136.

Transverse: S506E @ 6" o.c. in top & bottom
S507E @ 6" in top of overhangs (bundled with #5 bars) both sides



TYPICAL ROADWAY SECTION

LOOKING AHEAD
½" = 1'-0"



TYPICAL ROADWAY SECTION THRU FINGER JOINT AT BENT 7

LOOKING AHEAD
½" = 1'-0"

NOTES:

For details of Chain Link Fence, see Std. Dwg. No. 55018. See Layout for fence stationing.

Reference Dwg. Nos. 65106 & 65107 for limits of Chain Link Fence.

Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.

(1) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(2) Tolerance Minus = ¼":
Plus = to the amount of slab thickness used to meet slab thickness tolerance
See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(3) See "SUPERELEVATION SKETCH" on Dwg. No. 65104 for slope transitions.

(4) Bridge Traffic Rail (Type SSTR36). For additional details, see Std. Dwg. No. 55070.

STATE OF ARKANSAS
May 2 2022 4:00 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

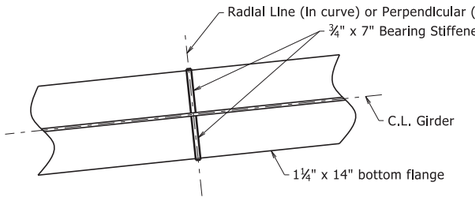
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: AS NOTED

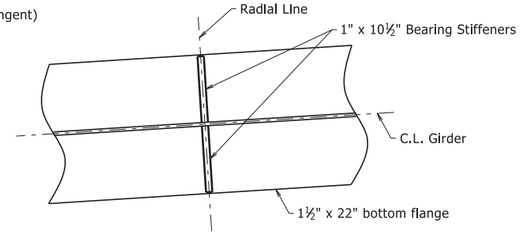
BRIDGE NO. 07536 DRAWING NO. 65132

PRINT DATE: 5/2/2022

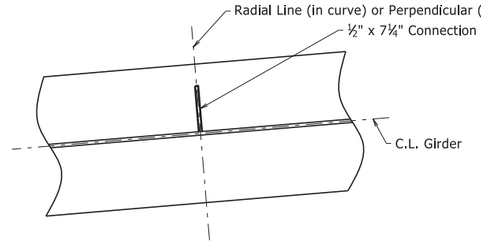
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	120	191
				①	07536 - SPAN DETAILS - 65133			



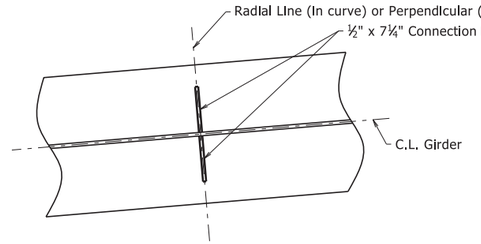
DETAIL D
EXTERIOR & INTERIOR
1"=1'-0"



DETAIL E
EXTERIOR & INTERIOR
1"=1'-0"



DETAIL F
1"=1'-0"



DETAIL G
1"=1'-0"

NOTES:

All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Plate Girders Spans (A709, Gr. 50)".

Girders are concentric to C.L. Bridge. Diaphragm and field splice lines are radial within the limits of the horizontal curve.

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

See Std. Dwg. No. 55007 for additional details.

(1) Measured along C.L. Bridge

(2) Measured along C.L. Girder

(3) See "TABLE OF VARIABLES".

(4) For details see "BEARING STIFFENER DETAILS", on Dwg. No. 65139 & "DETAIL "D".

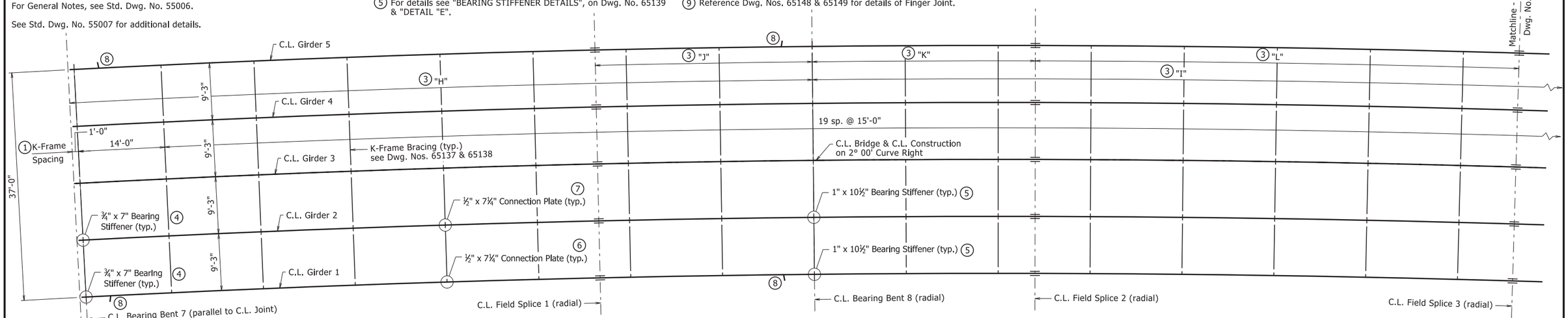
(5) For details see "BEARING STIFFENER DETAILS", on Dwg. No. 65139 & "DETAIL "E".

(6) For details see "K-FRAME CONNECTION DETAILS", on Dwg. No. 65139 & "DETAIL "F".

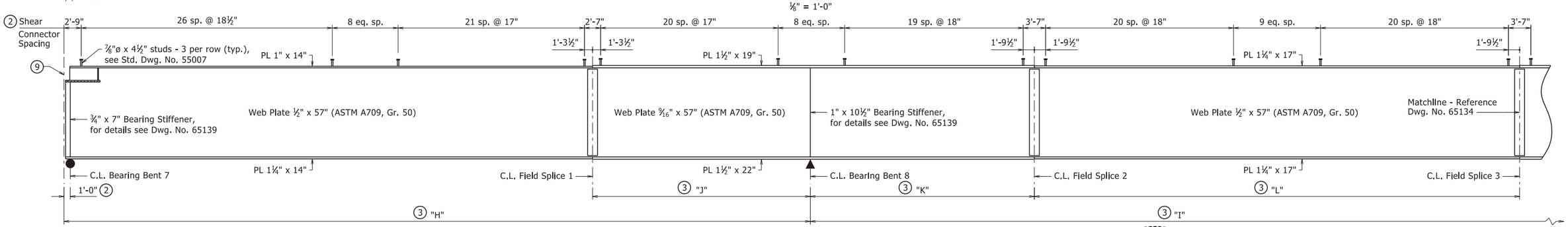
(7) For details see "K-FRAME CONNECTION DETAILS", on Dwg. No. 65139 & "DETAIL "G".

(8) Locate drip plate 5'-0" from C.L. Bearing, see "BOTTOM FLANGE DRIP PLATE" on Std. Dwg. No. 55007. Stop weld 1" from face of web.

(9) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.



FRAMING PLAN
⅛" = 1'-0"



TYPICAL GIRDER ELEVATION
⅛" = 1'-0"

(2) TABLE OF VARIABLES

Girder No.	"H"	"I"	"J"	"K"	"L"
1	119'-2 1/16"	149'-0 3/8"	34'-9 1/4"	35'-9 3/16"	77'-5 15/16"
2	119'-7 3/8"	149'-6 3/16"	34'-10 5/8"	35'-10 5/8"	77'-9"
3	120'-0"	150'-0"	35'-0"	36'-0"	78'-0"
4	120'-4 5/8"	150'-5 13/16"	35'-1 3/8"	36'-1 3/8"	78'-3"
5	120'-9 5/16"	150'-11 5/8"	35'-2 3/4"	36'-2 13/16"	78'-6 1/16"

(2) TABLE FOR TENSION ZONES
Distances are from C.L. Joint at Bent 7

Top Flange Tension Zones	Bottom Flange Tension Zones
61'-5" to 176'-5" & 208'-5" to 327'-5"	C.L. Brg. Bent 7 to 98'-0", 139'-0" to 247'-0", & 288'-11" to C.L. Brg. Bent 10

STATE OF ARKANSAS
May 2 2022 4:01 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: AS NOTED

BRIDGE NO. 07536 DRAWING NO. 65133

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	121	191
				(1)	07536 - SPAN DETAILS - 65134			

NOTES:

All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel In Plate Girder Spans (A709, Gr. 50)".

Girders are concentric to C.L. Bridge left of point of transition. Diaphragm and field splice lines are radial within the limits of the horizontal curve.

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

See Std. Dwg. No. 55007 for additional details.

(1) Measured along C.L. Bridge

(2) Measured along C.L. Girder

(3) See "TABLE OF VARIABLES".

(4) For details see "BEARING STIFFENER DETAILS", on Dwg. No. 65139 & "DETAIL "D".

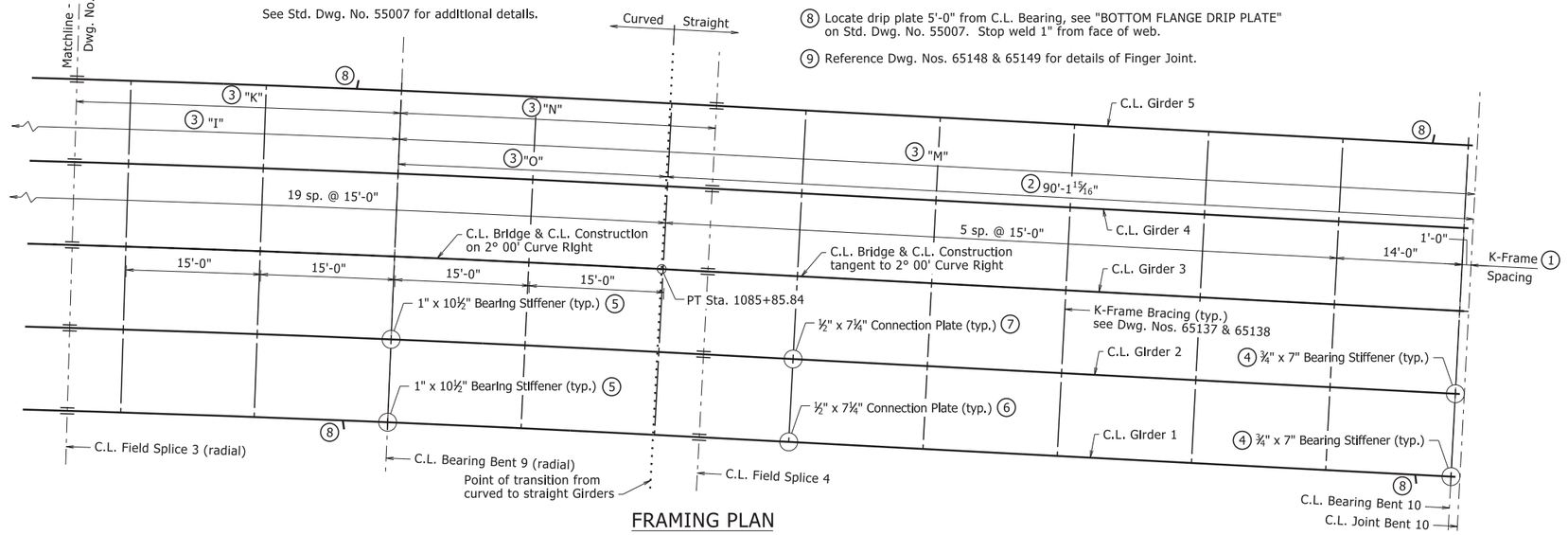
(5) For details see "BEARING STIFFENER DETAILS", on Dwg. No. 65139 & "DETAIL "E".

(6) For details see "K-FRAME CONNECTION DETAILS", on Dwg. No. 65139 & "DETAIL "F".

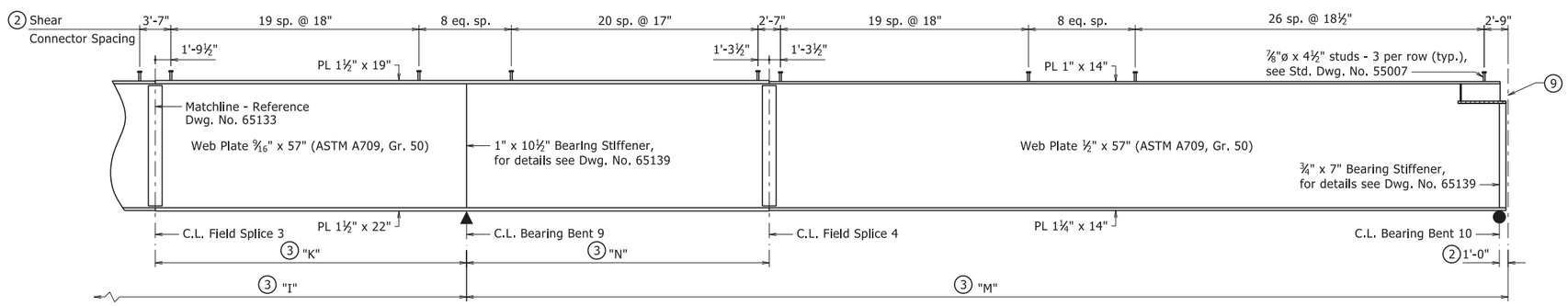
(7) For details see "K-FRAME CONNECTION DETAILS", on Dwg. No. 65139 & "DETAIL "G".

(8) Locate drip plate 5'-0" from C.L. Bearing, see "BOTTOM FLANGE DRIP PLATE" on Std. Dwg. No. 55007. Stop weld 1" from face of web.

(9) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.



FRAMING PLAN



TYPICAL GIRDER ELEVATION

(2) TABLE OF VARIABLES

Girder No.	"I"	"K"	"M"	"N"	"O"
1	149'-0⅜"	35'-9¼"	119'-9 1/16"	34'-9 1/16"	29'-7¾"
2	149'-6 3/16"	35'-10⅝"	119'-10⅞"	34'-10 13/16"	29'-8 15/16"
3	150'-0"	36'-0"	120'-0"	35'-0"	29'-10 1/16"
4	150'-5 13/16"	36'-1⅜"	120'-1 3/16"	35'-1 3/16"	29'-11¼"
5	150'-11⅝"	36'-2¾"	120'-2 5/16"	35'-2 5/16"	30'-0⅜"

STATE OF ARKANSAS
May 2 2022 4:01 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	11/02/2020	FILENAME:	b020475_s1.dgn
CHECKED BY:	JJ	DATE:	01/2022	SCALE:	1/8" = 1'-0"
DESIGNED BY:	JJ	DATE:	10/28/2020		

BRIDGE NO. 07536 DRAWING NO. 65134

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	122	191
				(1)		07536 - SPAN DETAILS - 65135		

NOTES:

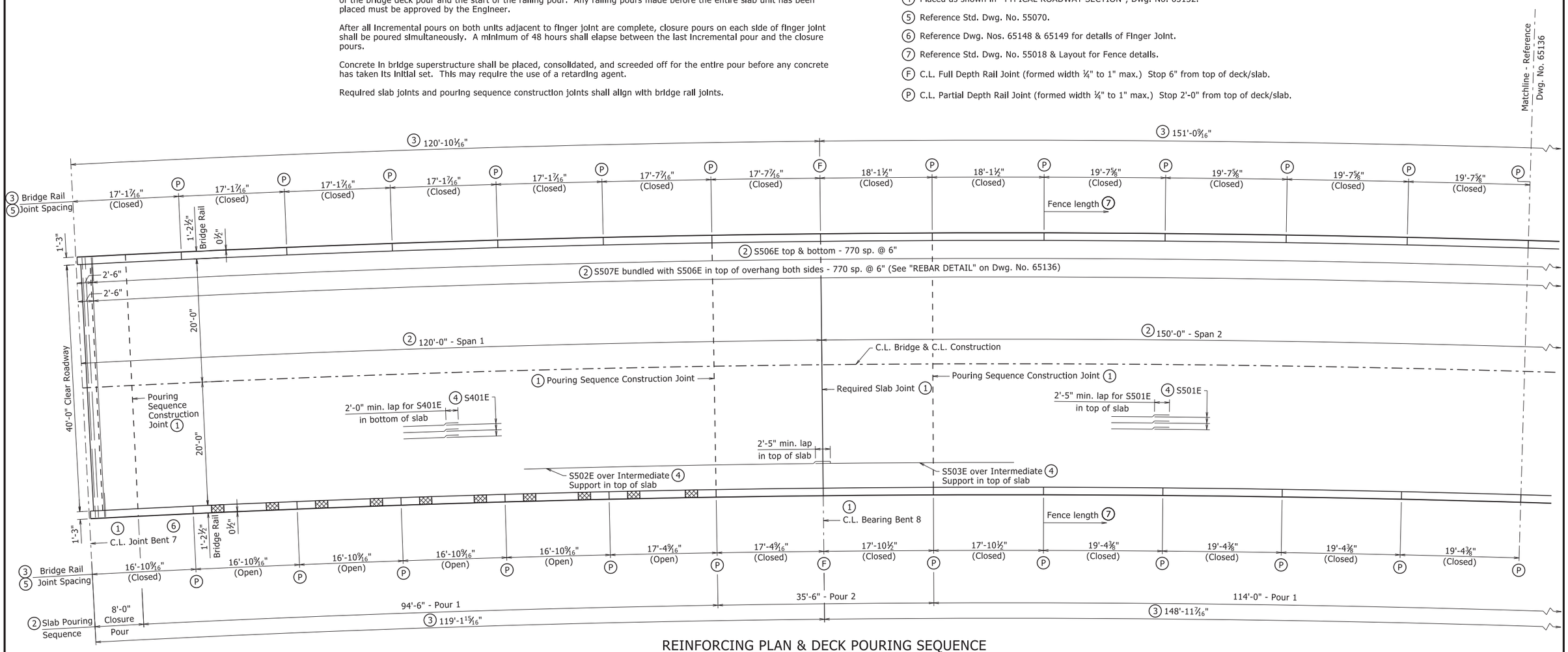
Deflections provided are based on the pouring sequence shown. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown. Any deviations, if approved, may require adjustment to the deflections provided. A continuous pour will not be allowed. All Pours 1 must be placed before Pour 2 can be placed. A minimum of 48 hours shall elapse between the end of a pour and the start of the next pour. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and the start of the railing pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer.

After all incremental pours on both units adjacent to finger joint are complete, closure pours on each side of finger joint shall be poured simultaneously. A minimum of 48 hours shall elapse between the last incremental pour and the closure pours.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

Required slab joints and pouring sequence construction joints shall align with bridge rail joints.

(1) Radial Line
(2) Measured along C.L. Bridge
(3) Measured along Gutterline
(4) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65132.
(5) Reference Std. Dwg. No. 55070.
(6) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.
(7) Reference Std. Dwg. No. 55018 & Layout for Fence details.
(F) C.L. Full Depth Rail Joint (formed width ¼" to 1" max.) Stop 6" from top of deck/slab.
(P) C.L. Partial Depth Rail Joint (formed width ¼" to 1" max.) Stop 2'-0" from top of deck/slab.



REINFORCING PLAN & DECK POURING SEQUENCE

NOTE:

At and before Station 1085+85.84 the C.L. Bridge is in a 2°00' horizontal curve to the right. All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
May 2 2022 4:01 PM
BRIDGE ENGINEER

SHEET 4 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

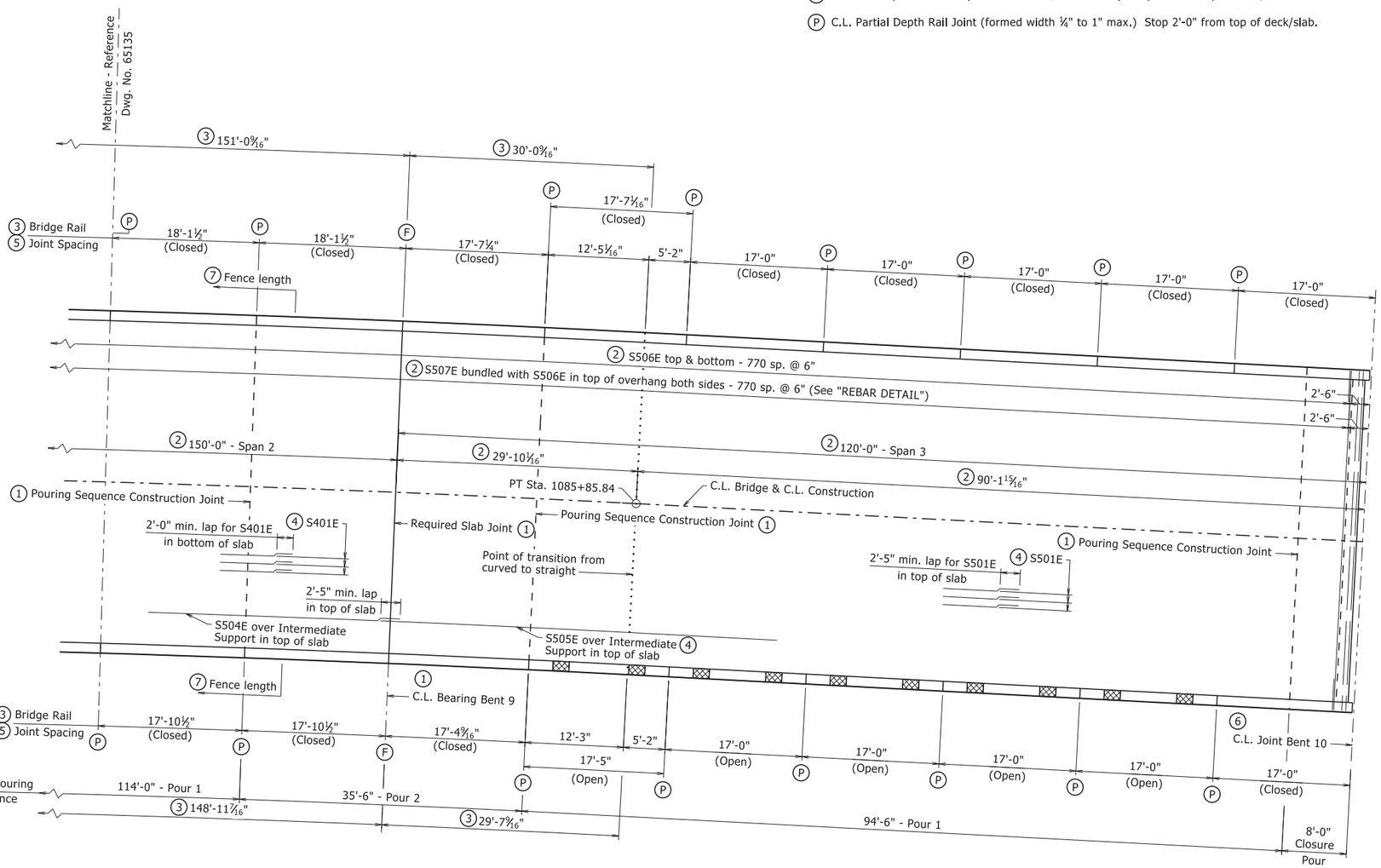
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: 1/8" = 1'-0"
DESIGNED BY: JJ DATE: 10/28/2020
BRIDGE NO. 07536 DRAWING NO. 65135

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	123	191
				(1)		07536 - SPAN DETAILS - 65136		

(1) Radial Line
(2) Measured along C.L. Bridge
(3) Measured along Gutterline
(4) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65132.
(5) Reference Std. Dwg. No. 55070.
(6) Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.
(7) Reference Std. Dwg. No. 55018 & Layout for Fence details.
(F) C.L. Full Depth Rail Joint (formed width ¼" to 1" max.) Stop 6" from top of deck/slab.
(P) C.L. Partial Depth Rail Joint (formed width ¼" to 1" max.) Stop 2'-0" from top of deck/slab.

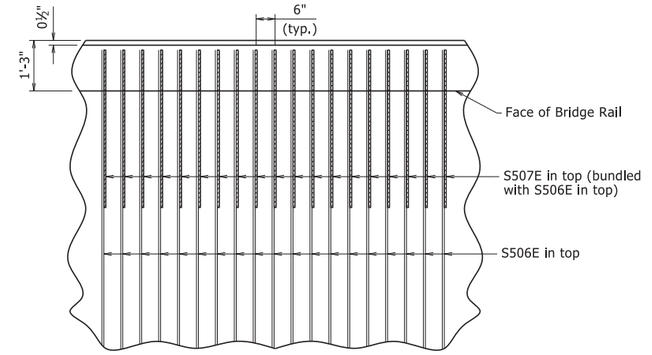


REINFORCING PLAN & DECK POURING SEQUENCE

⅛" = 1'-0"

NOTE:

At and before Station 1085+85.84 the C.L. Bridge is in a 2°00' horizontal curve to the right. All longitudinal lines and longitudinal reinforcing steel shall be placed on curves concentric with C.L. Bridge. All transverse reinforcing steel shall be placed on radial lines and shall be measured along C.L. Bridge.



REBAR DETAIL

NO SCALE

STATE OF ARKANSAS
May 2 2022 4:01 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 5 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

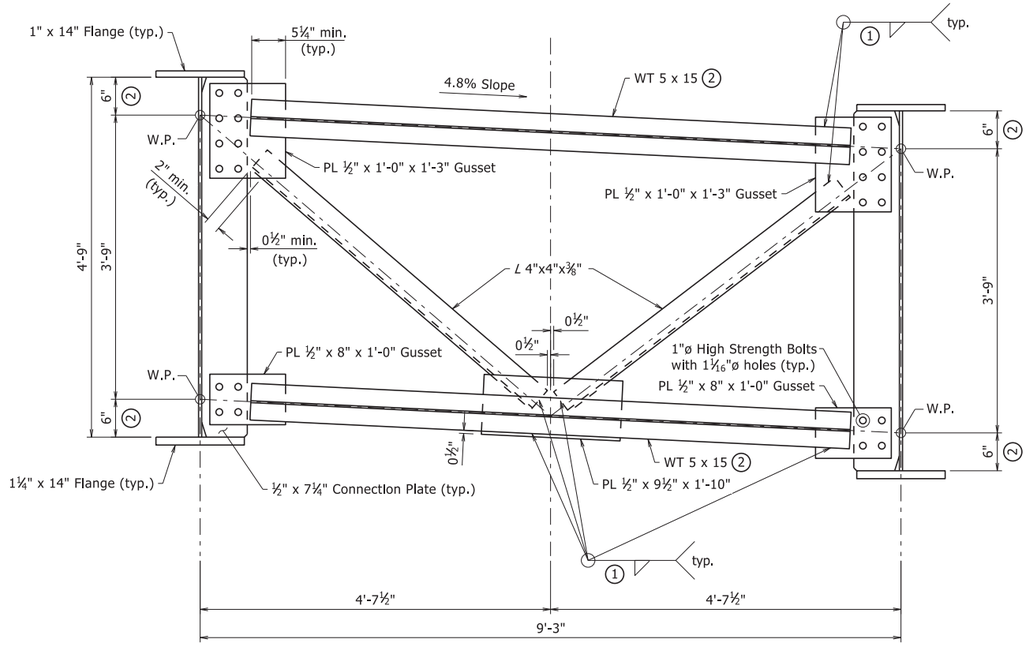
ROUTE SEC.

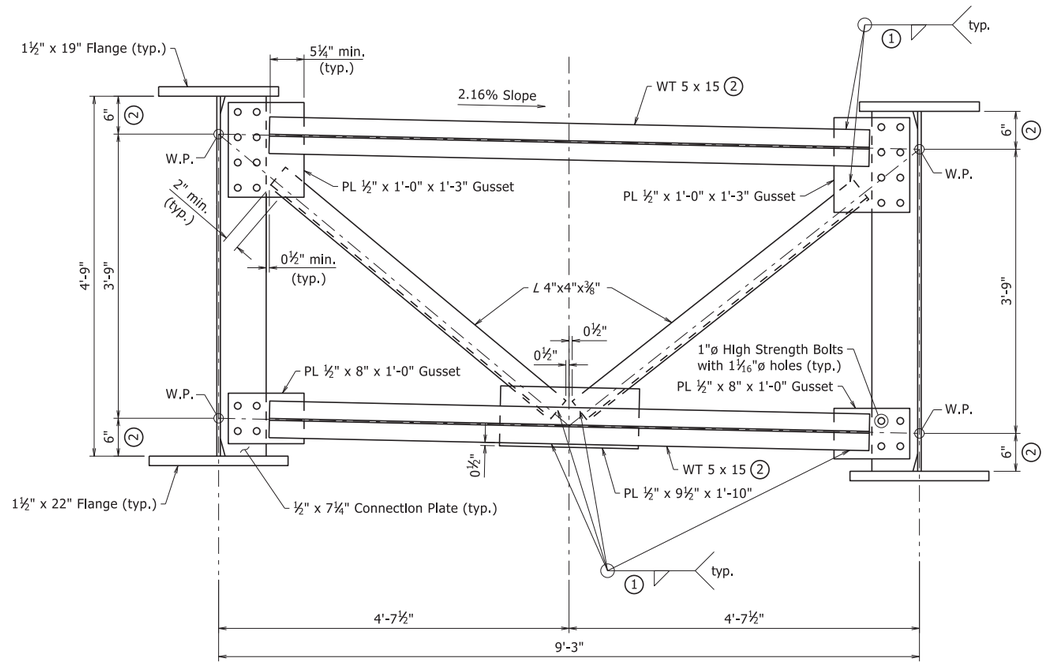
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

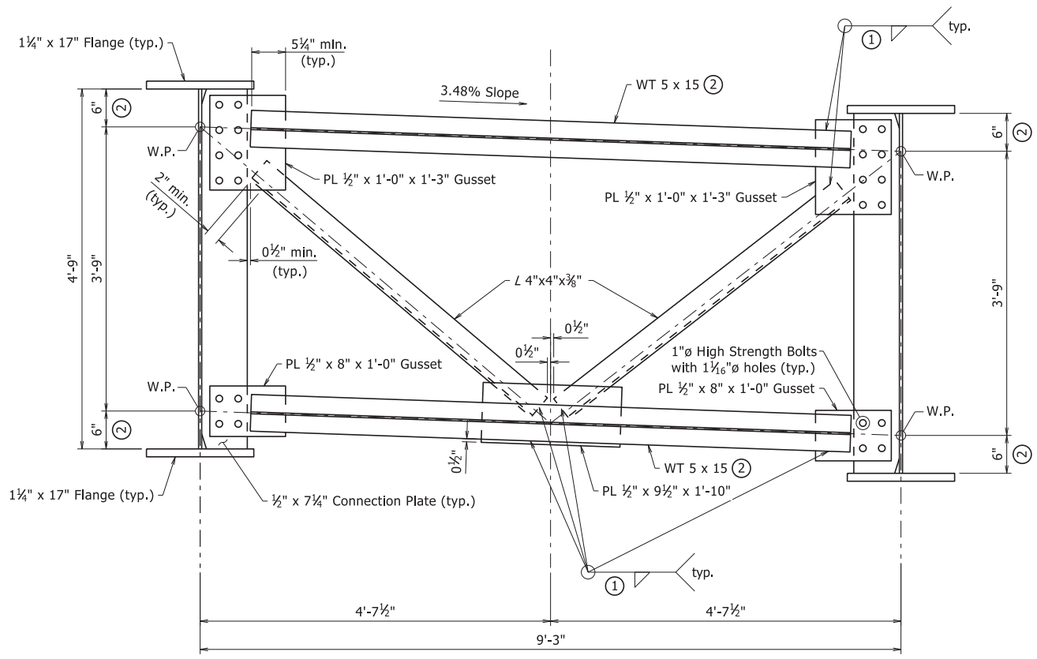
DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020
BRIDGE NO. 07536 DRAWING NO. 65136

PRINT DATE: 5/2/2022

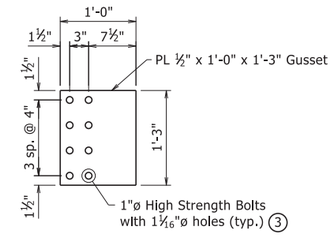
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	124	191
				(1)		07536 - SPAN DETAILS - 65137		

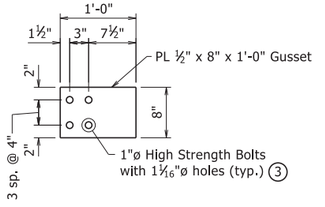






DETAILS OF K-FRAMES AT CONNECTION PLATES





DETAILS OF GUSSET PLATES

NOTES:

(1) See "WELD TABLE", Std. Dwg. No. 55007.

(2) WT 5x15 are to match roadway slope. The C.G. of the bottom chord shall pass through the C.G. of the bottom chord bolt group. Dimensions shown are applicable for a roadway slope of 4.8%.

(3) Oversized holes will not be allowed on K-Frame connections.

W.P. = Working Point

STATE OF ARKANSAS
May 2 2022 4:02 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 6 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

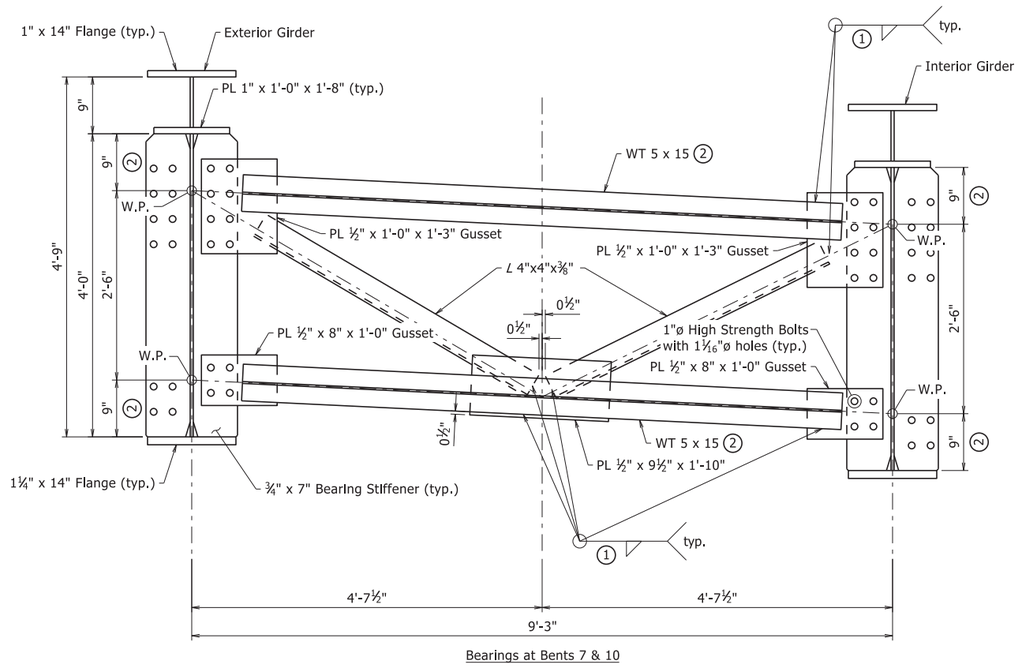
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: 1" = 1'-0"
DESIGNED BY: JJ DATE: 10/28/2020

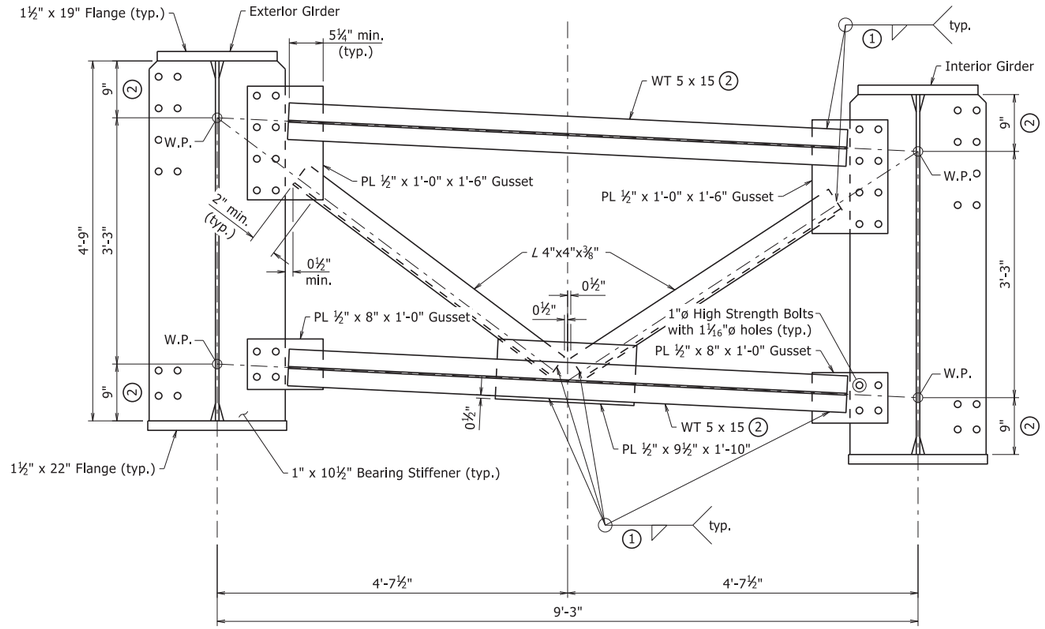
BRIDGE NO. 07536 DRAWING NO. 65137

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	125	191
				(1)	07536 - SPAN DETAILS - 65138			

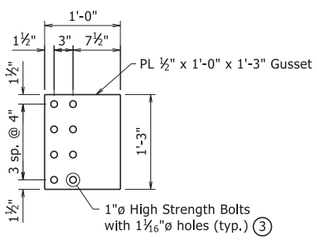


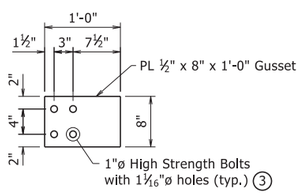
Bearings at Bents 7 & 10



Bearings at Bents 8 & 9

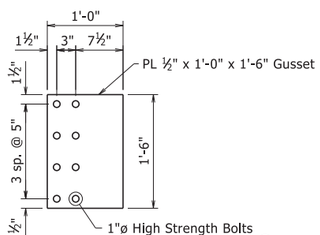
DETAILS OF K-FRAMES AT BEARING STIFFENERS

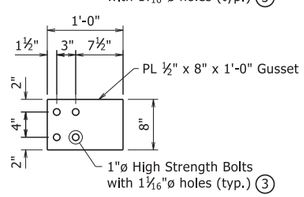




DETAILS OF GUSSET PLATES

Bearings at Bents 7 & 10





DETAILS OF GUSSET PLATES

Bearings at Bents 8 & 9

NOTES:

(1) See "WELD TABLE", Std. Dwg. No. 55007.

(2) WT 5x15 are to match roadway slope. The C.G. of the bottom chord shall pass through the C.G. of the bottom chord bolt group. Dimensions shown are applicable for a roadway slope of 4.8%.

(3) Oversized holes will not be allowed on K-Frame connections.

W.P. = Working Point

STATE OF ARKANSAS
May 2 2022 4:02 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 7 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

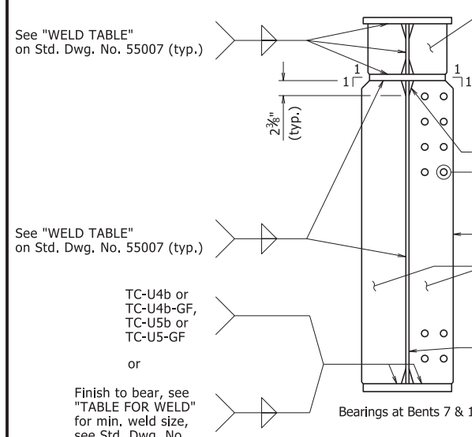
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: 1" = 1'-0"

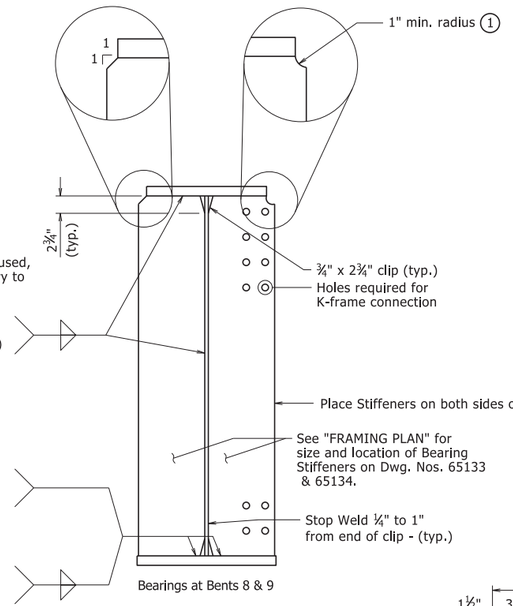
BRIDGE NO. 07536 DRAWING NO. 65138

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	126	191
				(1)		07536 - SPAN DETAILS - 65139		



Bearings at Bents 7 & 10



Bearings at Bents 8 & 9

NOTE:

(1) If permanent steel bridge deck forms are used, the Fabricator shall clip plates as necessary to accommodate the deck form supports.

NOTES:

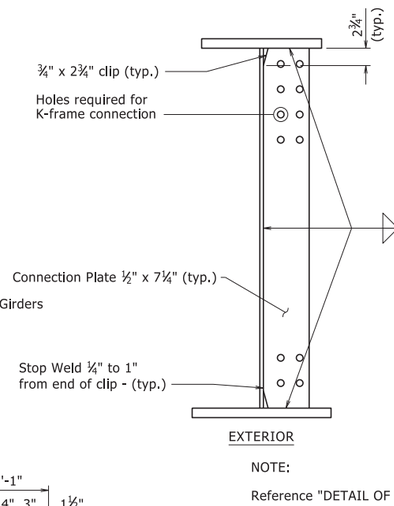
All bearing stiffeners shall be vertical in their final position.

Reference "DETAILS OF K-FRAMES AT BEARING STIFFENERS" on Dwg. No. 65138.

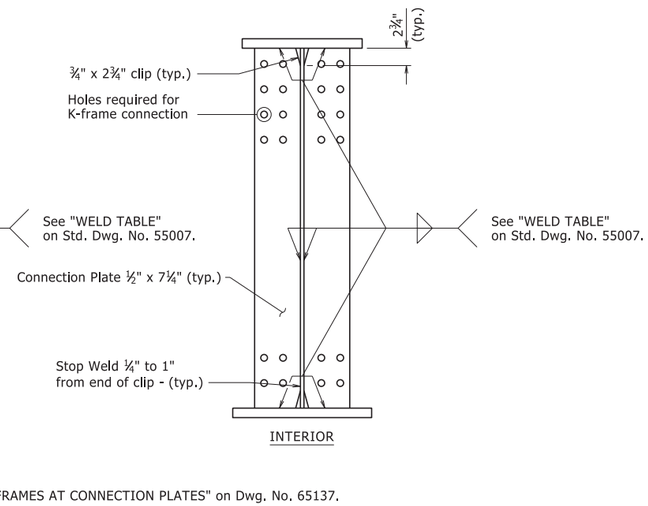
BEARING STIFFENER DETAILS

1" = 1'-0"

(Shown at Exterior Girders)



EXTERIOR



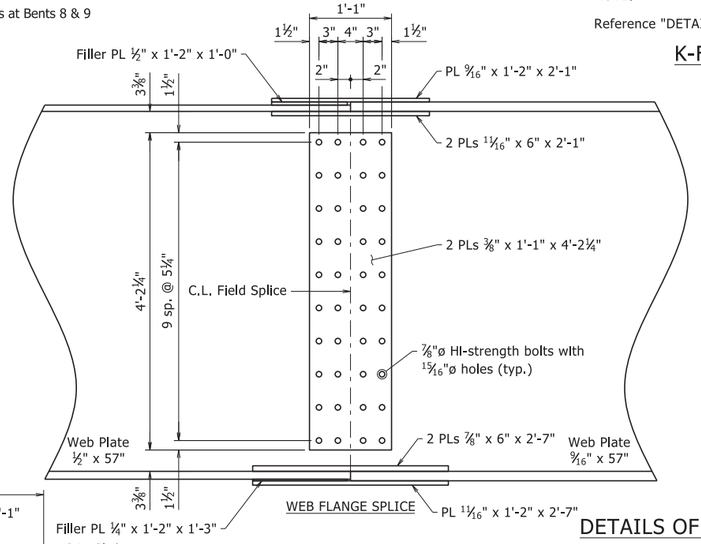
INTERIOR

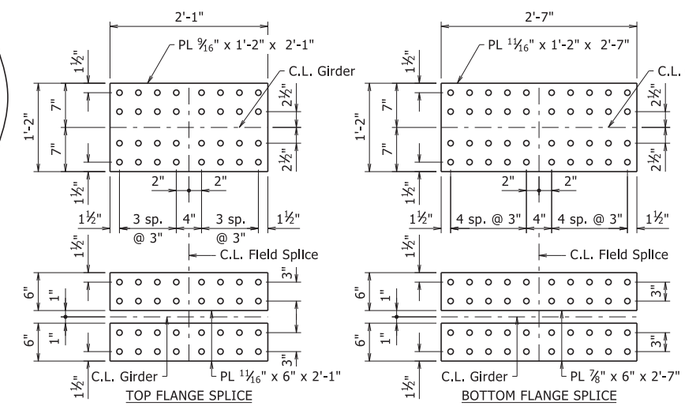
NOTE:

Reference "DETAIL OF K-FRAMES AT CONNECTION PLATES" on Dwg. No. 65137.

K-FRAME CONNECTION DETAILS

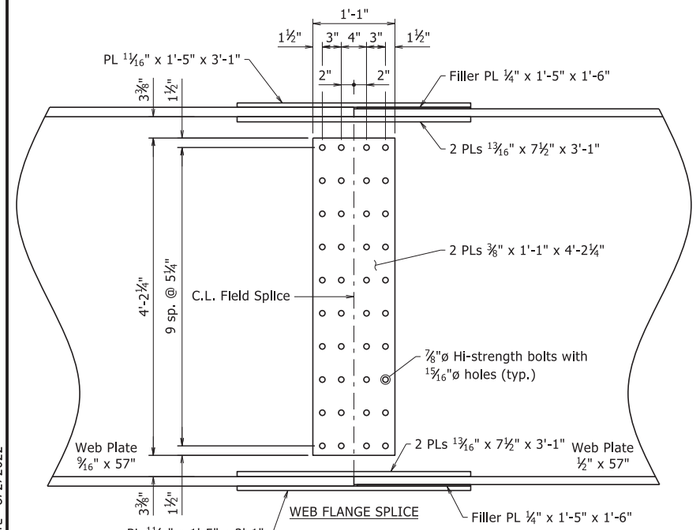
1" = 1'-0"

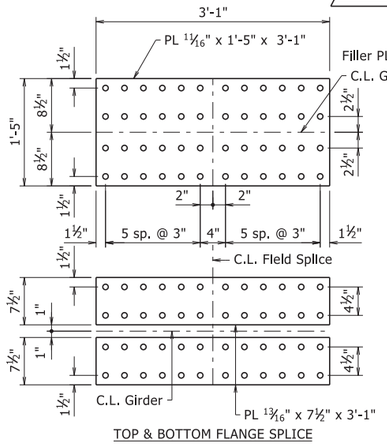




DETAILS OF FIELD SPLICE 1 & 4

1" = 1'-0"

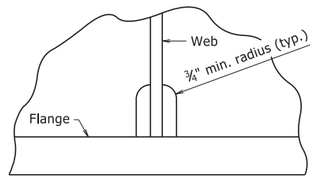




TOP & BOTTOM FLANGE SPLICE

DETAILS OF FIELD SPLICE 2 & 3

1" = 1'-0"



For Bearing Stiffeners and K-Frame Connection Plates. Height and width of clip shall be as noted in the plans.

ALTERNATE CLIP DETAIL

3" = 1'-0"

STATE OF ARKANSAS
May 2 2022 4:02 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 8 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

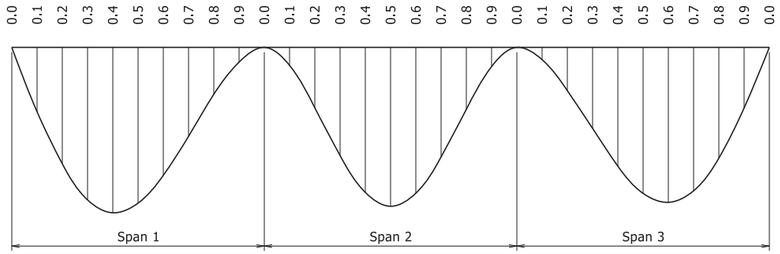
BRIDGE NO. 07536 DRAWING NO. 65139

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	127	191
				①	07536 - SPAN DETAILS - 65140			

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

DEFLECTIONS TABLE																	
Span	Point of Deflection	Structural Steel					Structural Steel + Slab					Structural Steel + Slab + Bridge Rail					
		Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	
1	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	0.128	0.134	0.137	0.139	0.139	0.723	0.776	0.805	0.810	0.798	0.772	0.819	0.846	0.854	0.849	
	0.2	0.230	0.240	0.247	0.249	0.249	1.308	1.401	1.455	1.463	1.442	1.397	1.480	1.531	1.545	1.536	
	0.3	0.299	0.312	0.320	0.323	0.323	1.715	1.834	1.904	1.916	1.889	1.832	1.939	2.005	2.024	2.013	
	0.4	0.320	0.334	0.343	0.345	0.345	1.862	1.991	2.067	2.077	2.047	1.989	2.105	2.177	2.195	2.183	
	0.5	0.296	0.309	0.316	0.318	0.317	1.760	1.881	1.951	1.960	1.928	1.879	1.988	2.054	2.071	2.056	
	0.6	0.237	0.246	0.252	0.253	0.250	1.453	1.552	1.610	1.615	1.584	1.551	1.639	1.694	1.705	1.689	
	0.7	0.157	0.163	0.166	0.166	0.163	1.019	1.088	1.127	1.129	1.103	1.086	1.147	1.184	1.190	1.174	
	0.8	0.074	0.076	0.077	0.076	0.074	0.545	0.580	0.600	0.600	0.584	0.578	0.609	0.627	0.629	0.619	
	0.9	0.016	0.016	0.016	0.015	0.013	0.178	0.189	0.195	0.194	0.186	0.187	0.196	0.201	0.201	0.195	
2	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	0.070	0.074	0.077	0.080	0.081	0.184	0.202	0.213	0.216	0.210	0.209	0.225	0.236	0.241	0.238	
	0.2	0.196	0.206	0.214	0.220	0.224	0.638	0.692	0.726	0.733	0.719	0.708	0.757	0.790	0.802	0.797	
	0.3	0.328	0.345	0.358	0.367	0.374	1.148	1.244	1.302	1.315	1.296	1.265	1.353	1.410	1.431	1.427	
	0.4	0.426	0.448	0.465	0.477	0.487	1.539	1.665	1.743	1.762	1.743	1.691	1.808	1.885	1.914	1.914	
	0.5	0.461	0.486	0.504	0.517	0.528	1.679	1.819	1.906	1.928	1.911	1.843	1.974	2.060	2.093	2.097	
	0.6	0.425	0.448	0.466	0.478	0.488	1.530	1.662	1.745	1.768	1.753	1.681	1.805	1.887	1.920	1.925	
	0.7	0.326	0.344	0.359	0.369	0.377	1.133	1.237	1.304	1.325	1.314	1.249	1.346	1.412	1.442	1.446	
	0.8	0.193	0.205	0.215	0.222	0.228	0.621	0.685	0.728	0.744	0.739	0.690	0.750	0.792	0.814	0.818	
	0.9	0.068	0.073	0.077	0.081	0.084	0.172	0.196	0.214	0.223	0.225	0.196	0.219	0.237	0.248	0.254	
3	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	0.016	0.015	0.013	0.011	0.008	0.184	0.185	0.181	0.171	0.156	0.193	0.192	0.186	0.176	0.162	
	0.2	0.081	0.080	0.077	0.072	0.066	0.585	0.600	0.599	0.577	0.539	0.621	0.630	0.626	0.605	0.571	
	0.3	0.164	0.164	0.161	0.154	0.145	1.061	1.095	1.100	1.067	1.005	1.131	1.155	1.155	1.124	1.069	
	0.4	0.250	0.251	0.248	0.241	0.230	1.528	1.580	1.592	1.552	1.472	1.631	1.669	1.675	1.638	1.568	
	0.5	0.314	0.317	0.315	0.307	0.295	1.859	1.925	1.943	1.898	1.808	1.986	2.035	2.046	2.004	1.927	
	0.6	0.338	0.341	0.340	0.333	0.322	1.960	2.031	2.053	2.010	1.919	2.094	2.148	2.162	2.123	2.045	
	0.7	0.316	0.320	0.319	0.313	0.303	1.807	1.875	1.897	1.859	1.777	1.930	1.983	1.997	1.963	1.893	
	0.8	0.246	0.249	0.249	0.244	0.237	1.393	1.447	1.466	1.436	1.373	1.488	1.529	1.543	1.516	1.462	
	0.9	0.135	0.137	0.137	0.135	0.131	0.761	0.793	0.803	0.788	0.752	0.813	0.837	0.844	0.831	0.800	
	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	



DEAD LOAD DEFLECTION DIAGRAM

NO SCALE

Note:
Camber for Dead Load Deflection +/- ⅛ inch tolerance. Deflections shown are along centerline of beam/girder from the plane perpendicular to the web extending from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above plane. Vertical curve corrections not included. Superelevation transition corrections not included.

Dead load deflections shown include an assumed loading of 18 psf to account for stay-in-place metal deck forms. Revisions to the deflection table may be necessary upon review of the Contractor's submitted forming details or any approved changes to the pouring sequence shown in "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65135 & 65136.

NOTE:

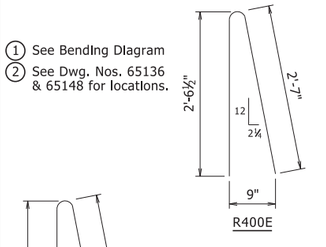
See "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65135 & 65136 for rail panel lengths.
See "BAR LIST" for rebar quantities.
See "TABLE OF VARIABLES" for rail rebar information.
See Std. Dwg. No. 55070 for details of rail reinforcing and "A" designation.

BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
R400E	80	5'-3"	2½"
R401E	1497	5'-11"	2½"
R402E	152	5'-6"	Str.
R403E	1563	3'-6"	①
R404E	40	16'-7"	Str.
R405E	80	16'-8"	Str.
R406E	40	16'-10"	Str.
R407E	32	17'-1"	Str.
R408E	16	17'-3"	Str.
R409E	16	17'-4"	Str.
R410E	32	17'-7"	Str.
R411E	32	17'-10"	Str.
R412E	32	19'-0"	Str.
R413E	32	19'-4"	Str.
S401E	666	44'-11"	Str.
S501E	308	57'-7"	Str.
S502E	43	51'-5"	Str.
S503E	43	33'-5"	Str.
S504E	43	32'-5"	Str.
S505E	43	50'-5"	Str.
S506E	1542	42'-2"	Str.
S507E	1542	4'-2"	Str.
② S508E	8	1'-11"	Str.
② S509E	16	7'-11"	Str.

BENDING DIAGRAMS

① See Bending Diagram
② See Dwg. Nos. 65136 & 65148 for locations.



Dimensions are out to out of bars.
Bars with an "E" suffix are to be epoxy coated.

TABLE OF VARIABLES

(for use with Std. Dwg. No. 55070)

Closed Rail Panels			Open Rail Panels						
Panel Length	A	R4XXE	Panel Length	B	C	D	E	F	R4XXE
16'-10⁹⁄₁₆"	33	R404E	16'-10⁹⁄₁₆"	5	8	3'-0"	13	6'-9⁹⁄₁₆"	R404E
17'-0"	33	R405E	17'-0"	5	8	3'-0"	13	7'-0"	R405E
17'-1⁷⁄₁₆"	34	R406E	17'-4⁹⁄₁₆"	5	8	3'-0"	14	7'-4⁹⁄₁₆"	R407E
17'-4⁹⁄₁₆"	34	R407E	17'-5"	5	8	3'-0"	14	7'-5"	R407E
17'-7¼"	35	R408E	17'-10½"	5	8	3'-0"	15	7'-10½"	R410E
17'-7⁵⁄₁₆"	35	R408E							
17'-7⁷⁄₁₆"	35	R409E							
17'-10½"	35	R410E							
18'-1½"	36	R411E							
19'-4⅜"	38	R412E							
19'-7⅝"	39	R413E							

PRINT DATE: 5/2/2022

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
May 2 2022 4:02 PM
BRIDGE ENGINEER

SHEET 9 OF 9
DETAILS OF 390'-0" CONTINUOUS PLATE GIRDER UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65140

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	128	191

(1) 07536 - SPAN DETAILS - 65141

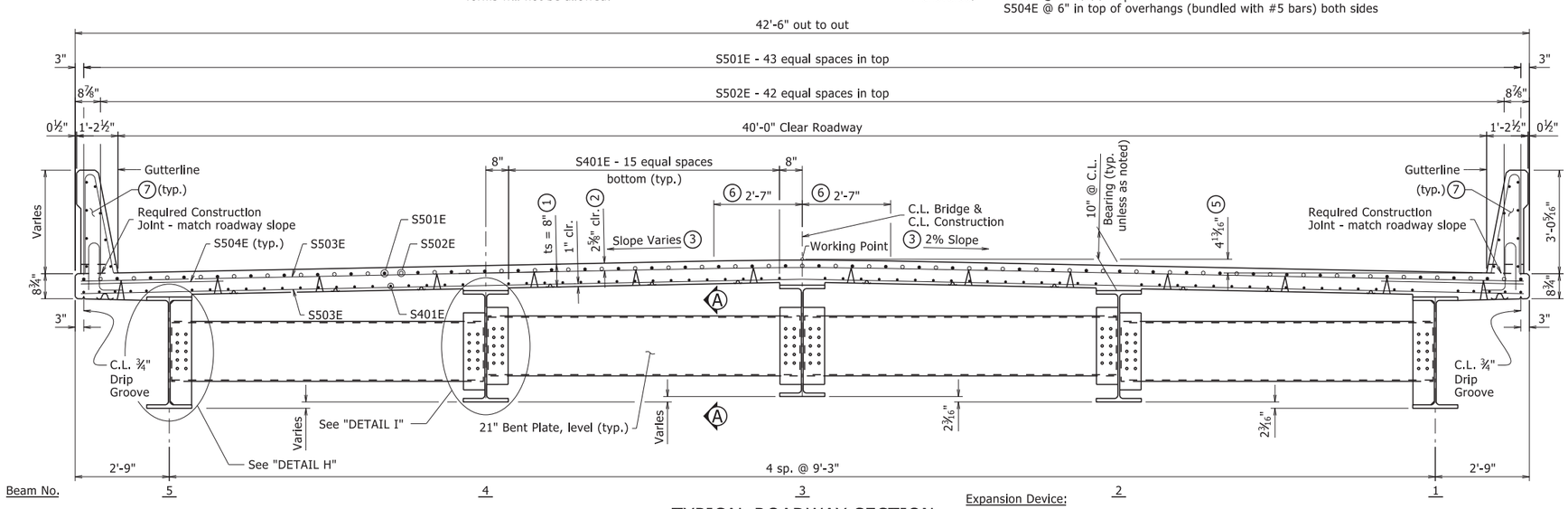
Class 2 Protective Surface Treatment shall be applied to the roadway face & top of the concrete bridge rail, and to the roadway surface.

Bar positions and clearances from the forms shall be maintained by means of stays, ties, hangers, or other approved devices sufficient in size and number to prevent displacement during construction, per Subsection 804.06. Placement of slab bolsters or hi-chairs with full-length lower runners directly on removable deck forms will not be allowed.

Slab Reinforcing

Longitudinal: S501E & S502E in top (place as shown)
S401E in bottom (place as shown), see "REINFORCING PLAN & DECK POURING SEQUENCE", Dwg. Nos. 65145 & 65146.

Transverse: S503E @ 6" o.c. in top & bottom
S504E @ 6" in top of overhangs (bundled with #5 bars) both sides

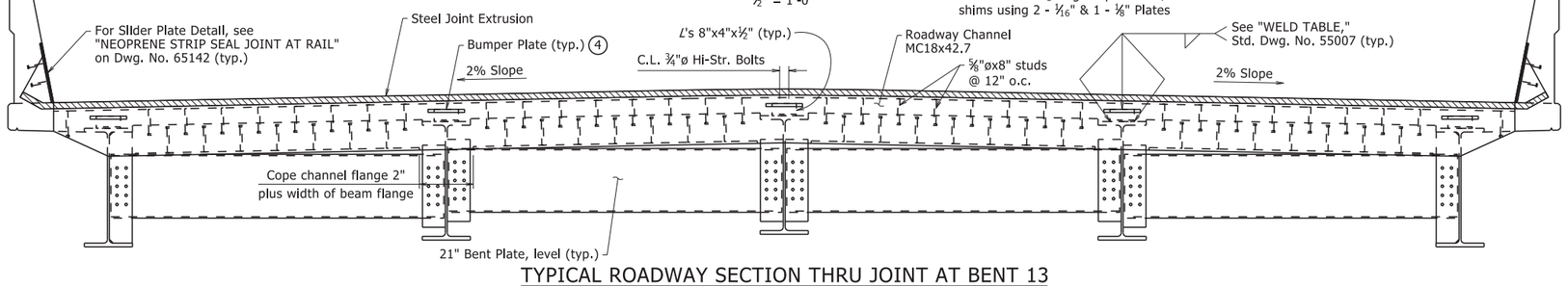


TYPICAL ROADWAY SECTION

LOOKING AHEAD
½" = 1'-0"

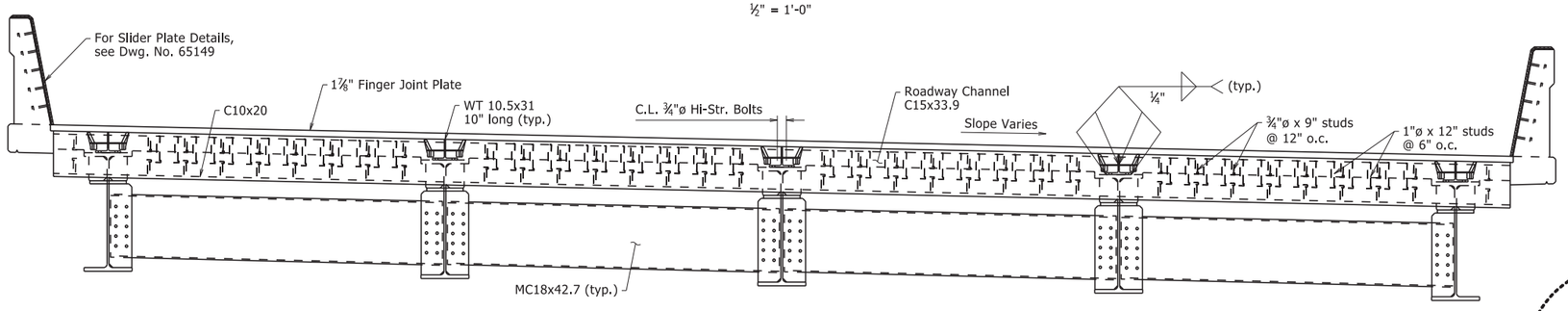
Expansion Device:

Roadway Channel - MC18x42.7
Connection L's 8"x4"x½"
Detail Device ⅛" high & provide ¼" shims using 2 - 1/16" & 1 - ⅛" Plates



TYPICAL ROADWAY SECTION THRU JOINT AT BENT 13

LOOKING AHEAD
½" = 1'-0"



TYPICAL ROADWAY SECTION THRU FINGER JOINT AT BENT 10

LOOKING AHEAD
½" = 1'-0"

NOTES:

Reference Dwg. Nos. 65148 & 65149 for details of Finger Joint.

(1) See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(2) Tolerance Minus = ¼":
Plus = to the amount of slab thickness used to meet slab thickness tolerance
See "ADJUSTMENT FOR SLAB THICKNESS TOLERANCE" on Std. Dwg. No. 55007.

(3) See "SUPERELEVATION SKETCH" on Dwg. No. 65104 for slope transitions.

(4) For size of Bumper Plate, see Std. Dwg. No. 55009.

(5) Working Point to gutterline. Dimension for Working Point to Top of Roadway Surface varies from 0" at Sta. 1086+85.84 to 3/16" at Sta. 1088+10.84.

(6) See "ROUNDING DETAIL", Dwg. No. 65104.

(7) Bridge Traffic Rail (Type SSTR36). For additional details, see Std. Dwg. No. 55070.

STATE OF ARKANSAS
May 2 2022 4:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

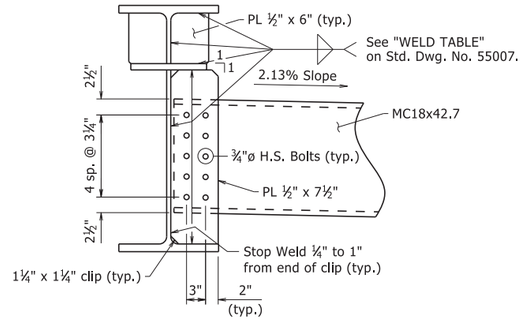
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: AS NOTED

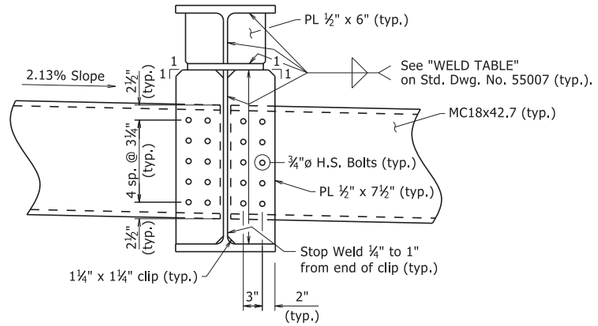
BRIDGE NO. 07536 DRAWING NO. 65141

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	129	191
				(1)	07536 - SPAN DETAILS - 65142			



CONNECTION DETAIL AT FINGER JOINT
(EXTERIOR BEAM)



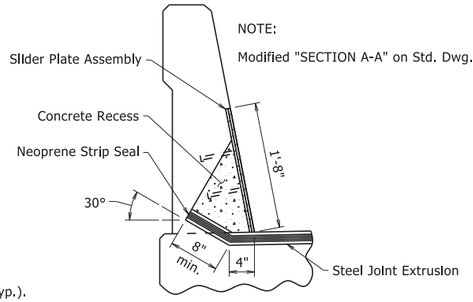
CONNECTION DETAIL AT FINGER JOINT
(INTERIOR BEAM)

TABLE OF STRIP SEAL JOINT DATA

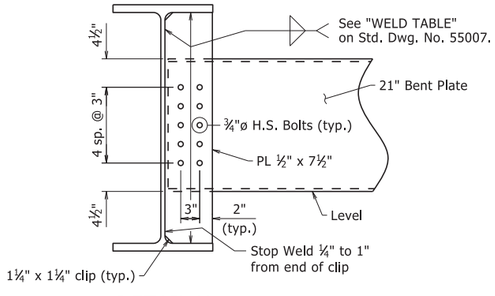
Bent Number	Movement Rating (Inch)	"A" Width Perpendicular to Joint at 24 Hour Average Temperature (1) of:			"B" Width Perpendicular to Joint at 24 Hour Average Temperature (1) of:			"C" Width Perpendicular to Joint at 24 hour Average Temperature at 60°F
		40°F	60°F	80°F	40°F	60°F	80°F	
13	4"	2 7/16"	2¼"	2 1/16"	2 15/16"	2¾"	2 9/16"	2⅜" +/-

Ref. Std. Dwg. No. 55009 for Neoprene Strip Seal Joint Details.

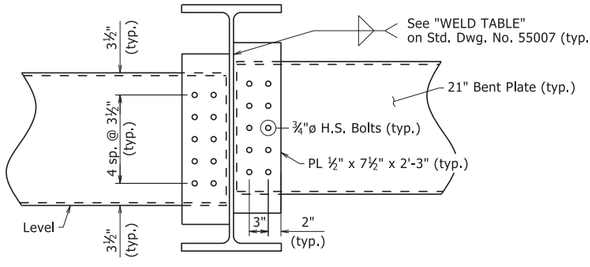
(1) The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.



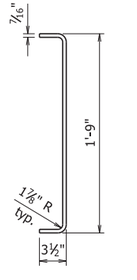
NEOPRENE STRIP SEAL JOINT AT RAIL



DETAIL H



DETAIL I



Typical cross-section for all 21" bent plate diaphragms.

SECTION A-A

STATE OF ARKANSAS
CHARLES R. ELLIS
May 2 2022 4:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
BRIDGE ENGINEER

SHEET 2 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020
CHECKED BY: JJ DATE: 01/2022
DESIGNED BY: JJ DATE: 10/28/2020
FILENAME: b020475_s1.dgn
SCALE: NO SCALE

BRIDGE NO. 07536
DRAWING NO. 65142

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	130	191
				(1)		07536 - SPAN DETAILS - 65143		

NOTES:

All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (A709, Gr. 50)".

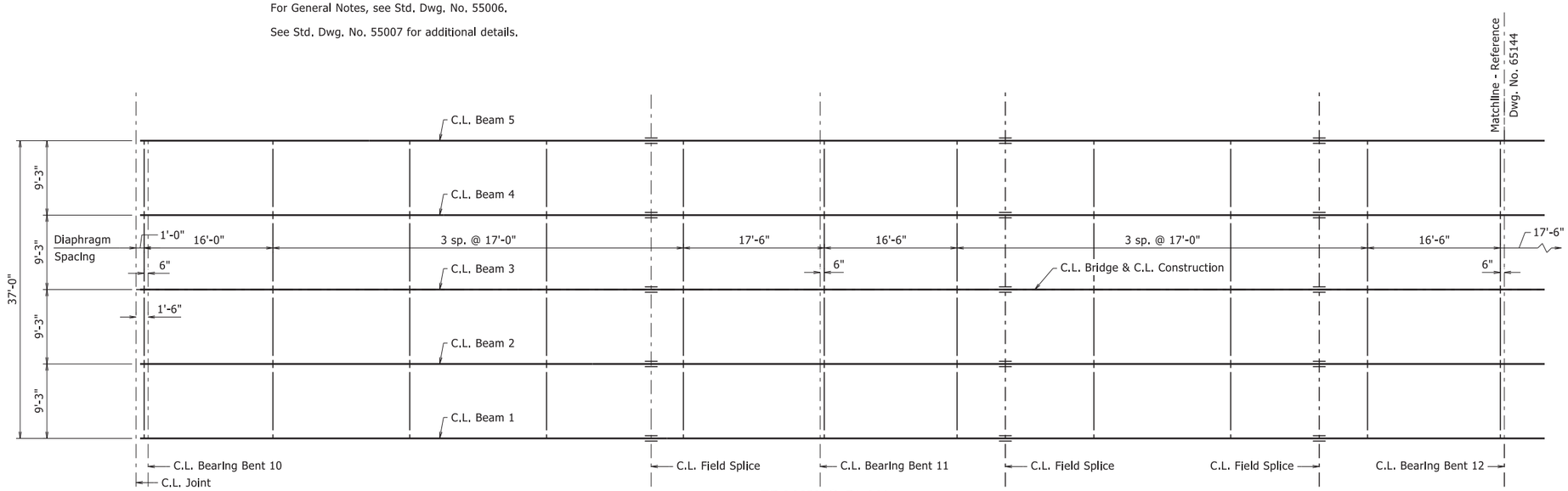
Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

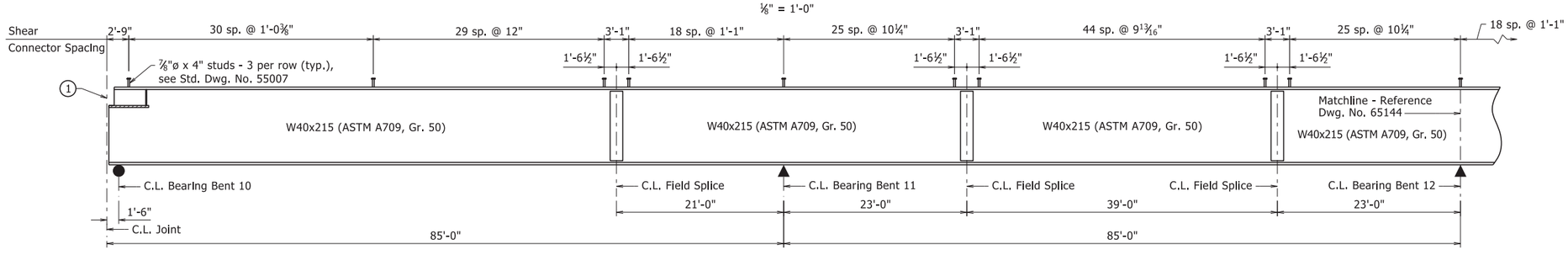
See Std. Dwg. No. 55007 for additional details.

(1) See Dwg. Nos. 65148 & 65149 for Finger Joint Details.



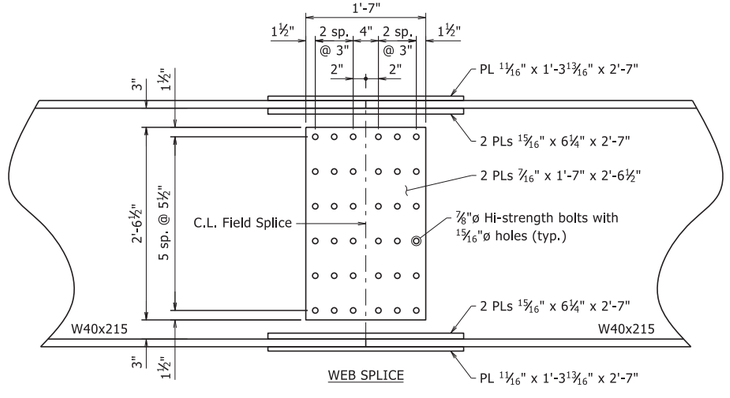
FRAMING PLAN

⅛" = 1'-0"



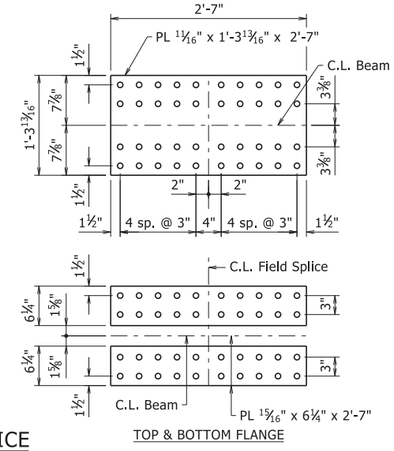
TYPICAL BEAM ELEVATION

⅛" = 1'-0"



DETAILS OF FIELD SPLICE

1" = 1'-0"



TOP & BOTTOM FLANGE

STATE OF ARKANSAS
May 2 2022 4:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	CGP	DATE:	11/02/2020	FILENAME:	b020475_s1.dgn
CHECKED BY:	JJ	DATE:	01/2022	SCALE:	AS NOTED
DESIGNED BY:	JJ	DATE:	10/28/2020		

BRIDGE NO. 07536 DRAWING NO. 65143

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	131	191
				07536 - SPAN DETAILS - 65144				

NOTES:

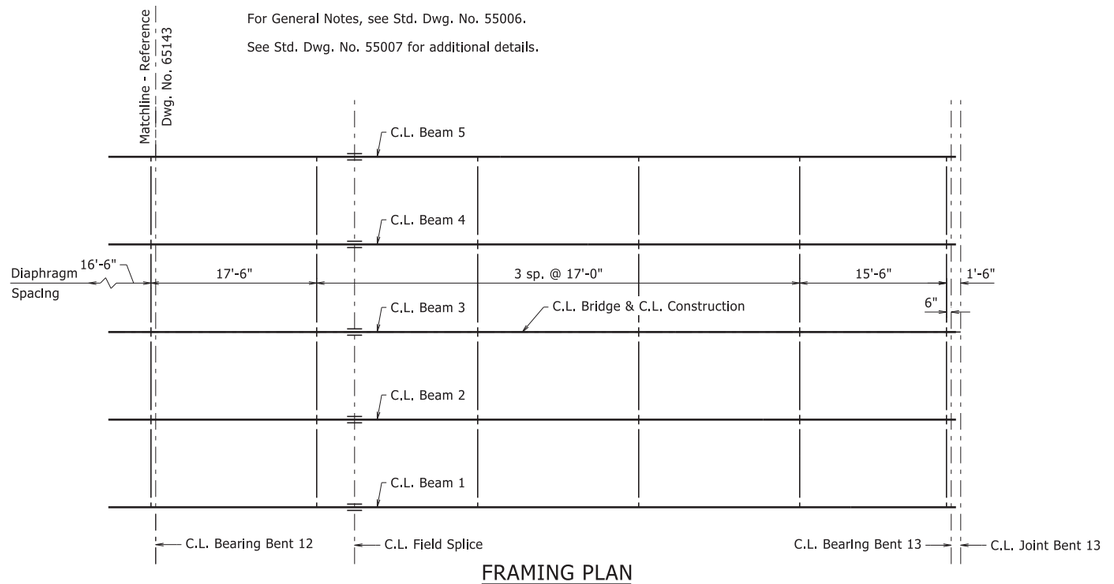
All structural steel shall be ASTM A709, Gr. 50 unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (A709, Gr. 50)".

Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

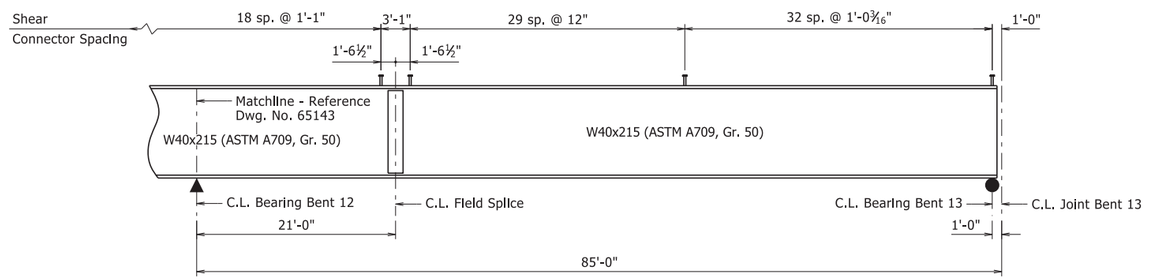
For additional information, see Layout.

For General Notes, see Std. Dwg. No. 55006.

See Std. Dwg. No. 55007 for additional details.



FRAMING PLAN



TYPICAL BEAM ELEVATION

STATE OF ARKANSAS
May 2 2022 4:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: 1/8" = 1'-0"
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65144

PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	132	191
				(1)		07536 - SPAN DETAILS - 65145		

NOTES:

Deflections provided are based on the pouring sequence shown. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown. Any deviations, if approved, may require adjustment to the deflections provided. All Pours 1 must be placed before Pour 2 can be placed and all Pours 2 must be placed before Pour 3 can be placed. A minimum of 48 hours shall elapse between the end of a pour and the start of the next pour. A minimum of 72 hours shall elapse between the end of a pour and the start of an adjacent pour. A minimum of 72 hours shall elapse between the completion of the bridge deck pour and the start of the railing pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer.

After all incremental pours on both units adjacent to finger joint are complete, closure pours on each side of finger joint shall be poured simultaneously. A minimum of 48 hours shall elapse between the last incremental pour and the closure pours.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

Required slab joints and pouring sequence construction joints shall align with bridge rail joints.

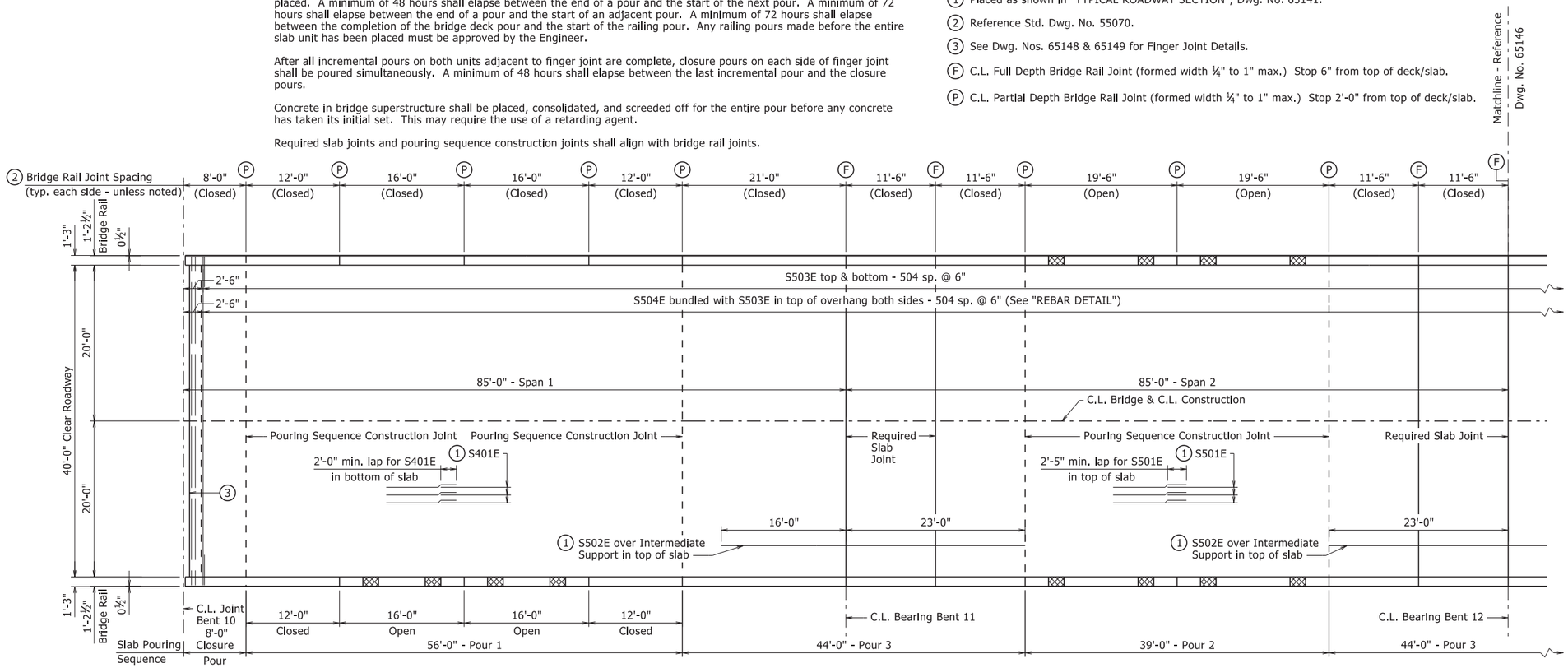
(1) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65141.

(2) Reference Std. Dwg. No. 55070.

(3) See Dwg. Nos. 65148 & 65149 for Finger Joint Details.

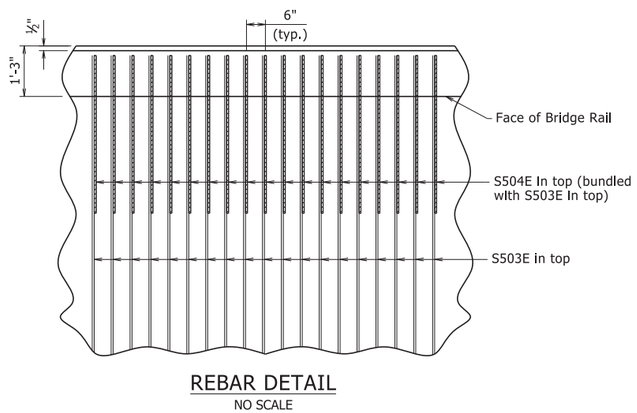
(F) C.L. Full Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 6" from top of deck/slab.

(P) C.L. Partial Depth Bridge Rail Joint (formed width ¼" to 1" max.) Stop 2'-0" from top of deck/slab.



REINFORCING PLAN & DECK POURING SEQUENCE

⅛" = 1'-0"



REBAR DETAIL

NO SCALE

STATE OF ARKANSAS
May 2 2022 4:03 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 5 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65145

PRINT DATE: 5/2/2022

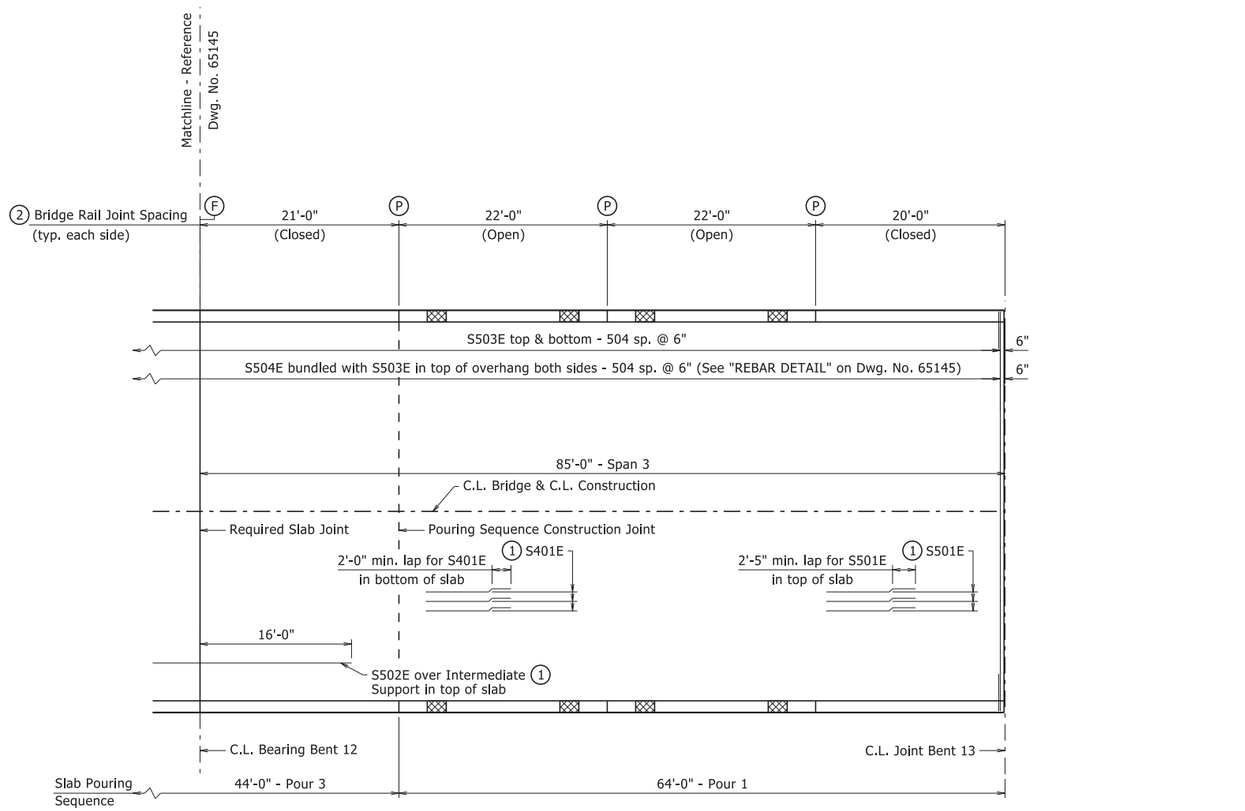
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	133	191
				(1)	07536 - SPAN DETAILS - 65146			

(1) Placed as shown in "TYPICAL ROADWAY SECTION", Dwg. No. 65141.

(2) Reference Std. Dwg. No. 55070.

(F) C.L. Full Depth Bridge Rail Joint (¼" to 1" max.) Stop 4" from top of slab.

(P) C.L. Partial Depth Bridge Rail Joint (¼" to 1" max.) Stop 2'-0" from top of slab.



REINFORCING PLAN & DECK POURING SEQUENCE

⅛" = 1'-0"

STATE OF ARKANSAS
May 2 2022 4:04 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: 1/8" = 1'-0"
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65146

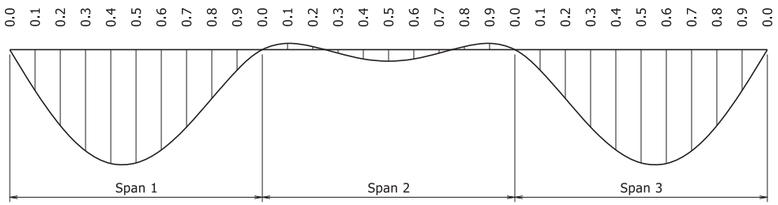
PRINT DATE: 5/2/2022

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	134	191

(1) 07536 - SPAN DETAILS - 65147

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

DEFLECTIONS TABLE																	
Span	Point of Deflection	Structural Steel					Structural Steel + Slab					Structural Steel + Slab + Bridge Rail					
		Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	
1	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	0.100	0.104	0.106	0.104	0.100	0.497	0.560	0.583	0.560	0.497	0.539	0.594	0.615	0.594	0.539	
	0.2	0.186	0.194	0.196	0.194	0.187	0.924	1.041	1.082	1.041	0.925	1.001	1.105	1.141	1.105	1.002	
	0.3	0.248	0.258	0.261	0.258	0.249	1.232	1.385	1.440	1.385	1.233	1.335	1.470	1.518	1.470	1.336	
	0.4	0.279	0.290	0.294	0.290	0.280	1.387	1.558	1.620	1.558	1.388	1.502	1.653	1.708	1.653	1.503	
	0.5	0.278	0.289	0.293	0.289	0.278	1.381	1.550	1.611	1.550	1.381	1.495	1.644	1.698	1.644	1.495	
	0.6	0.246	0.255	0.259	0.256	0.246	1.223	1.370	1.424	1.371	1.223	1.324	1.453	1.501	1.454	1.324	
	0.7	0.190	0.197	0.199	0.197	0.190	0.945	1.056	1.096	1.056	0.945	1.022	1.120	1.155	1.120	1.022	
	0.8	0.120	0.124	0.126	0.124	0.120	0.597	0.665	0.690	0.665	0.597	0.645	0.705	0.727	0.705	0.645	
	0.9	0.050	0.052	0.052	0.052	0.050	0.251	0.278	0.287	0.278	0.251	0.271	0.294	0.302	0.294	0.271	
2	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	-0.016	-0.016	-0.016	-0.016	-0.016	-0.083	-0.083	-0.084	-0.083	-0.083	-0.083	-0.085	-0.086	-0.085	-0.083	
	0.2	-0.008	-0.007	-0.007	-0.007	-0.008	-0.049	-0.032	-0.030	-0.032	-0.049	-0.040	-0.028	-0.027	-0.028	-0.040	
	0.3	0.008	0.011	0.011	0.011	0.008	0.027	0.065	0.073	0.065	0.027	0.046	0.077	0.082	0.077	0.046	
	0.4	0.023	0.026	0.027	0.026	0.023	0.095	0.148	0.162	0.148	0.095	0.123	0.166	0.177	0.166	0.123	
	0.5	0.028	0.032	0.033	0.032	0.028	0.121	0.180	0.195	0.180	0.121	0.152	0.200	0.212	0.200	0.152	
	0.6	0.023	0.026	0.027	0.026	0.023	0.095	0.148	0.162	0.148	0.095	0.123	0.166	0.177	0.166	0.123	
	0.7	0.008	0.011	0.011	0.011	0.008	0.027	0.065	0.073	0.065	0.027	0.046	0.077	0.082	0.077	0.046	
	0.8	-0.008	-0.007	-0.007	-0.007	-0.008	-0.049	-0.032	-0.030	-0.032	-0.049	-0.040	-0.028	-0.027	-0.028	-0.040	
	0.9	-0.016	-0.016	-0.016	-0.016	-0.016	-0.083	-0.083	-0.084	-0.083	-0.083	-0.083	-0.085	-0.086	-0.085	-0.083	
3	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	0.1	0.050	0.052	0.052	0.052	0.050	0.251	0.278	0.287	0.278	0.251	0.271	0.294	0.302	0.294	0.271	
	0.2	0.119	0.124	0.125	0.124	0.120	0.595	0.664	0.688	0.664	0.596	0.643	0.704	0.725	0.704	0.644	
	0.3	0.190	0.197	0.199	0.197	0.190	0.945	1.056	1.096	1.056	0.945	1.022	1.120	1.155	1.120	1.022	
	0.4	0.246	0.255	0.259	0.255	0.246	1.222	1.369	1.423	1.369	1.222	1.323	1.452	1.500	1.452	1.323	
	0.5	0.278	0.289	0.293	0.289	0.278	1.381	1.550	1.611	1.550	1.381	1.495	1.644	1.698	1.644	1.495	
	0.6	0.279	0.290	0.294	0.290	0.280	1.387	1.558	1.620	1.558	1.388	1.502	1.653	1.708	1.653	1.503	
	0.7	0.248	0.258	0.261	0.258	0.249	1.232	1.385	1.440	1.385	1.233	1.335	1.470	1.518	1.470	1.336	
	0.8	0.186	0.194	0.197	0.194	0.187	0.925	1.042	1.084	1.042	0.926	1.002	1.106	1.143	1.106	1.003	
	0.9	0.100	0.104	0.106	0.104	0.100	0.497	0.560	0.583	0.560	0.497	0.539	0.594	0.615	0.594	0.539	
	0.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	



DEAD LOAD DEFLECTION DIAGRAM

NO SCALE

Note:
Camber for Dead Load Deflection +/- ¼ inch tolerance. Deflections shown are along centerline of beam/girder from a chord from C.L. Bearing to C.L. Bearing. Negative sign (-) indicates point above chord. Vertical curve corrections not included. Superelevation transition corrections not included.

Dead load deflections shown include an assumed loading of 18 psf to account for stay-in-place metal deck forms. Revisions to the deflection table may be necessary upon review of the Contractor's submitted forming details or any approved changes to the pouring sequence shown in "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65145 & 65146.

NOTE:

See "REINFORCING PLAN & DECK POURING SEQUENCE" on Dwg. Nos. 65145 & 65146 for rail panel lengths.
See "BAR LIST" for rebar quantities.
See "TABLE OF VARIABLES" for rail rebar information.
See Std. Dwg. No. 55070 for details of rail reinforcing and "A" designation.

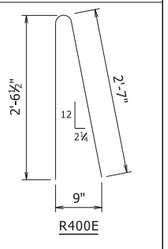
BAR LIST

MARK	NO. REQ'D	LENGTH	P.D.
R400E	64	5'-3"	2½"
R401E	956	5'-11"	2½"
R402E	104	5'-6"	Str.
R403E	1004	3'-6"	(1)
R404E	16	7'-8"	Str.
R405E	64	11'-2"	Str.
R406E	64	13'-8"	Str.
R407E	32	19'-2"	Str.
R408E	16	19'-8"	Str.
R409E	32	20'-8"	Str.
R410E	32	21'-8"	Str.
S401E	444	44'-0"	Str.
S501E	220	52'-9"	Str.
S502E	86	39'-0"	Str.
S503E	1010	42'-2"	Str.
S504E	1010	4'-2"	Str.
(2) S505E	4	1'-11"	Str.
(2) S506E	8	7'-11"	Str.

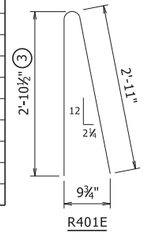
Dimensions are out to out of bars.
Bars with an "E" suffix are to be epoxy coated.

BENDING DIAGRAMS

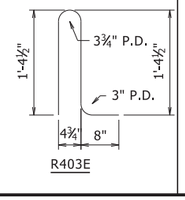
(1) See Bending Diagram
(2) See Dwg. Nos. 65145 & 65148 for locations.
(3) Modify to match roadway slope



R400E



R401E



R403E

TABLE OF VARIABLES

(for use with Std. Dwg. No. 55070)

Closed Rail Panels			Open Rail Panels						
Panel Length	A	R4XXE	Panel Length	B	C	D	E	F	R4XXE
8'-0"	15	R404E	19'-6"	5	8	3'-0"	18	9'-6"	R407E
11'-6"	22	R405E	22'-0"	5	8	3'-0"	23	12'-0"	R410E
14'-0"	27	R406E							
20'-0"	39	R408E							
21'-0"	41	R409E							

PRINT DATE: 5/2/2022

STATE OF ARKANSAS
May 2 2022 4:04 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 7 OF 7
DETAILS OF 255'-0" CONTINUOUS W-BEAM UNIT

ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65147

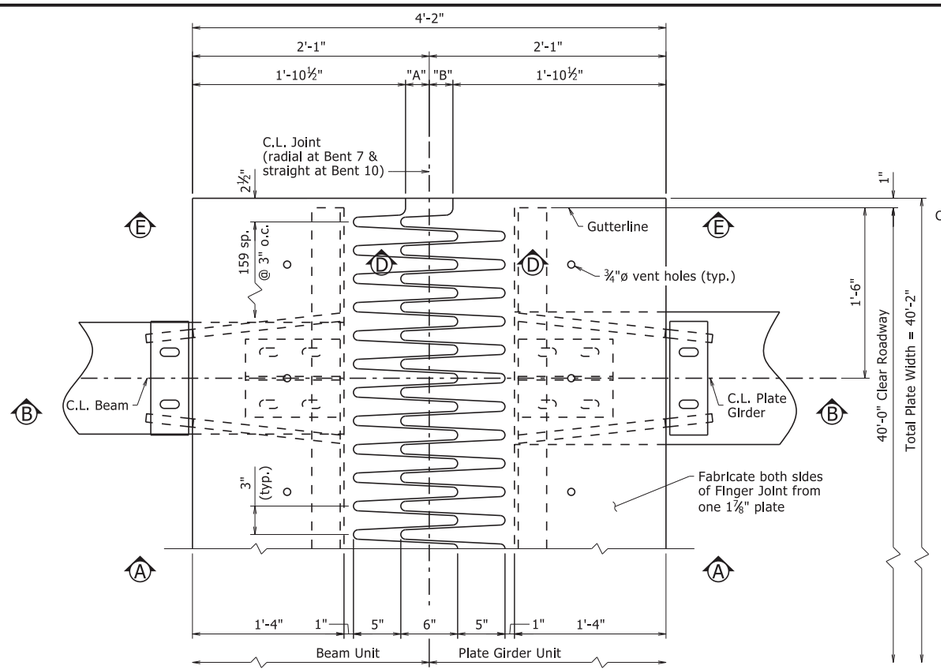
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	135	191
				①	07536 - SPAN DETAILS - 65148			

NOTES:

The finger joints shall be set and adjusted for grade before closure pours are made.

The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

All structural steel shall conform to AASHTO M 270, Gr. 50W and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). The rail slider plates and structural steel completely embedded in concrete shall conform to AASHTO M 270, Gr. 36, 50 or 50W steel. Unless otherwise noted in the plans, all exposed surfaces of the rail slider plates shall be cleaned and painted in accordance with Section 638. Painting shall not be paid for directly and structural steel completely embedded in concrete need not be painted. All structural steel shall be paid for as "Structural Steel in W-Beam Spans (A709, Gr. 50W)" or "Structural Steel in Plate Girder Spans (A709, Gr. 50W)", except as noted, which price shall include painting.



EXPANSION PLATE DETAIL

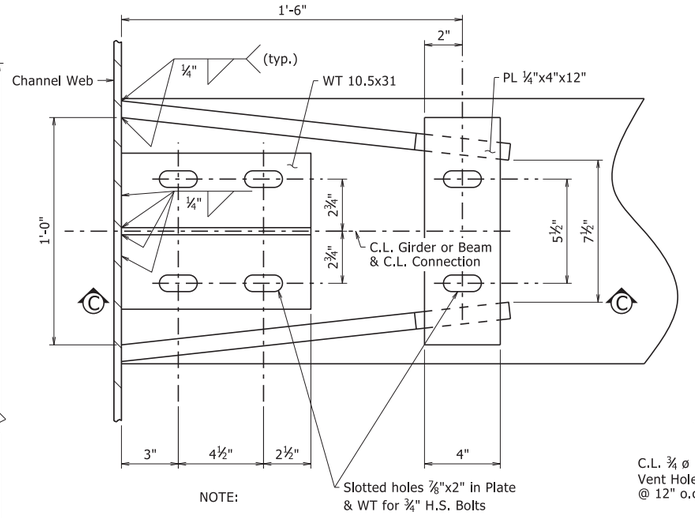
1½" = 1'-0"

TABLE OF VARIABLES

	450'-0" Beam Unit	390'-0" Girder Unit	255'-0" Beam Unit
Temp.	"A"	"B"	"A"
40°F	2⅞"	2 13/16"	2 11/16"
60°F	2½"	2½"	2½"
80°F	2⅛"	2 3/16"	2 5/16"

NOTE:

Bent drip plate and channel shall be located on the expansion device to provide maximum slope for runoff.



NOTE:

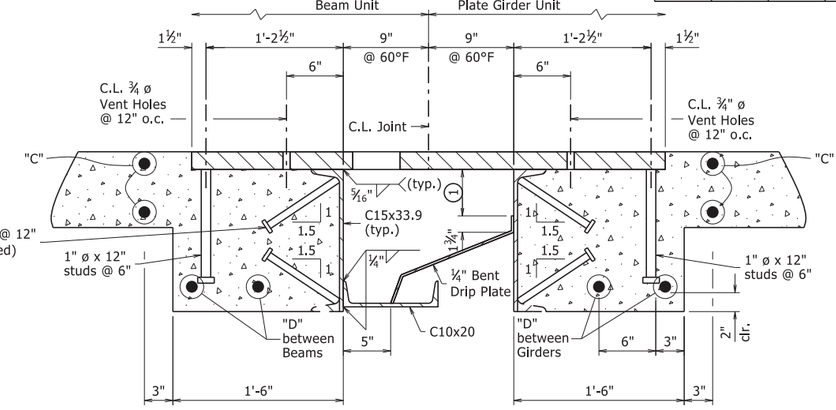
Detail device ⅛" high and provide ¼" shims for WT using 1 - ⅛" PL and 2 - 1/16" PL's.

PLAN OF CONNECTION

3" = 1'-0"

TABLE OF VARIABLES

	450'-0" Beam Unit	390'-0" Girder Unit	255'-0" Beam Unit
"C"	S504E	S504E	S503E
"D"	S506E & S507E	S508E & S509E	S505E & S506E



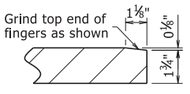
SECTION A-A

1½" = 1'-0"

NOTES:

The studs shown shall be granular flux filled, solid fluxed, or equal, and automatically end welded to the channel in accordance with the recommendations of the manufacturer.

Concrete shall be hand packed under the joint armor.



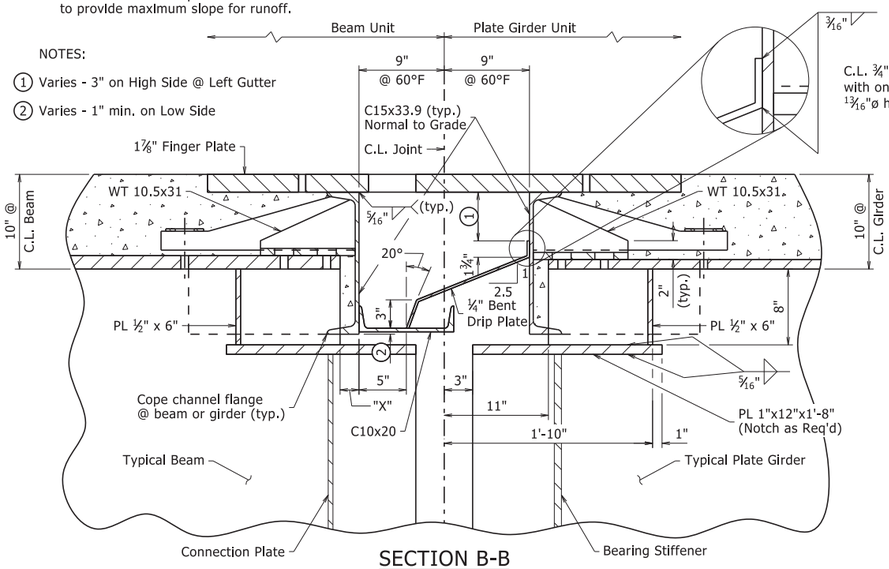
SECTION D-D

3" = 1'-0"

NOTES:

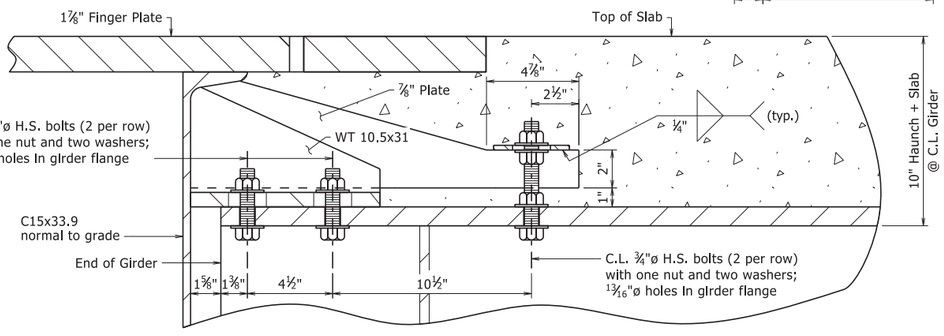
① Varies - 3" on High Side @ Left Gutter

② Varies - 1" min. on Low Side



SECTION B-B

1½" = 1'-0"



SECTION C-C

3" = 1'-0"

STATE OF ARKANSAS
May 2 2022 4:04 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF FINGER JOINT

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

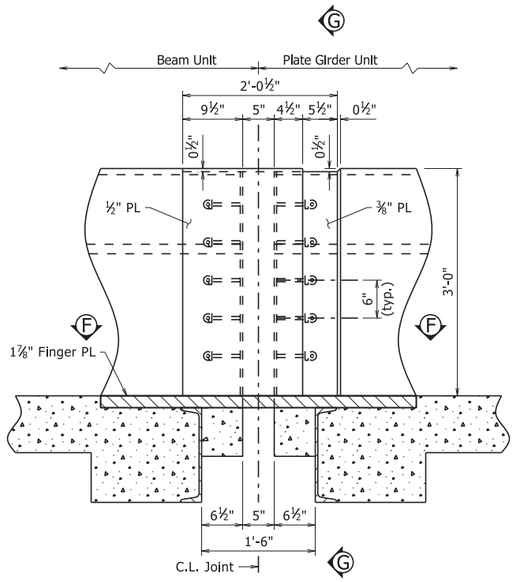
LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: AS NOTED
DESIGNED BY: JJ DATE: 10/28/2020

BRIDGE NO. 07536 DRAWING NO. 65148

PRINT DATE: 5/2/2022

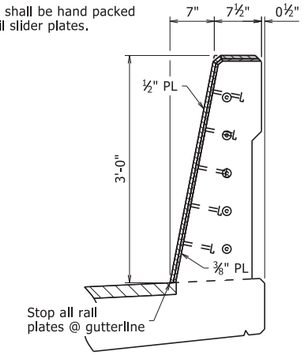
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	136	191
				①	07536 - FINGER JOINTS - 65149			



SECTION E-E

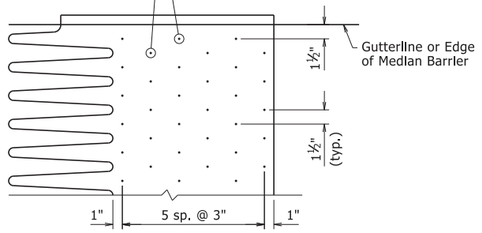
NOTE:

Concrete shall be hand packed under rail slider plates.



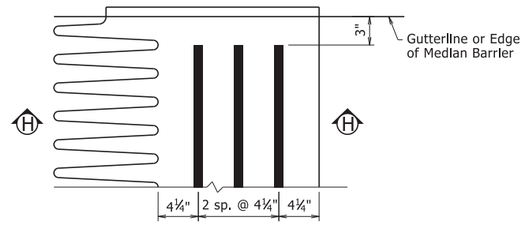
SECTION G-G

Fluxed knock-off no thread type studs shall be used to provide a non-skid surface, Nelson Stud NBL ¼" dia. x 1 MS ¼ KO, or equivalent, placed as shown on exposed roadway surface of all finger plates. Length after knock-off to be ¼".



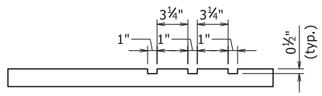
ANTISKID TREATMENT ALTERNATE 1

NO SCALE



ANTISKID TREATMENT ALTERNATE 2

NO SCALE



SECTION H-H

NO SCALE

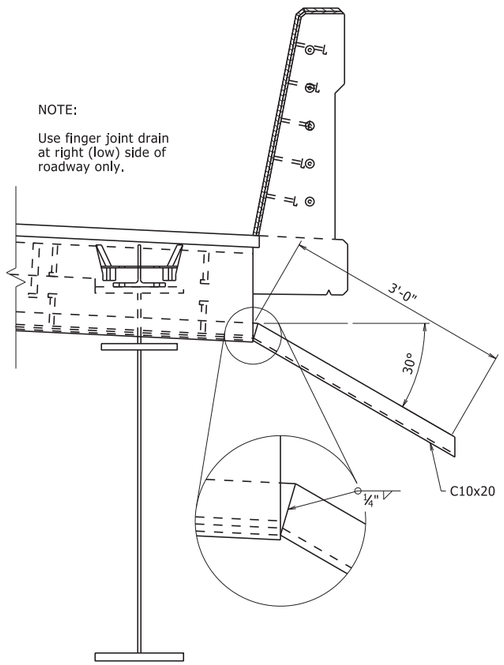
NOTE:

The ½"ø studs shall be granular flux filled, solid fluxed, or equal and automatically end welded to the PL's in accordance with the recommendations of the manufacturer.

SECTION F-F

NOTE:

Use finger joint drain at right (low) side of roadway only.



DRAIN DETAIL

PRINT DATE: 5/2/2022

STATE OF ARKANSAS
May 2 2022 4:04 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF FINGER JOINT

ROUTE SEC.

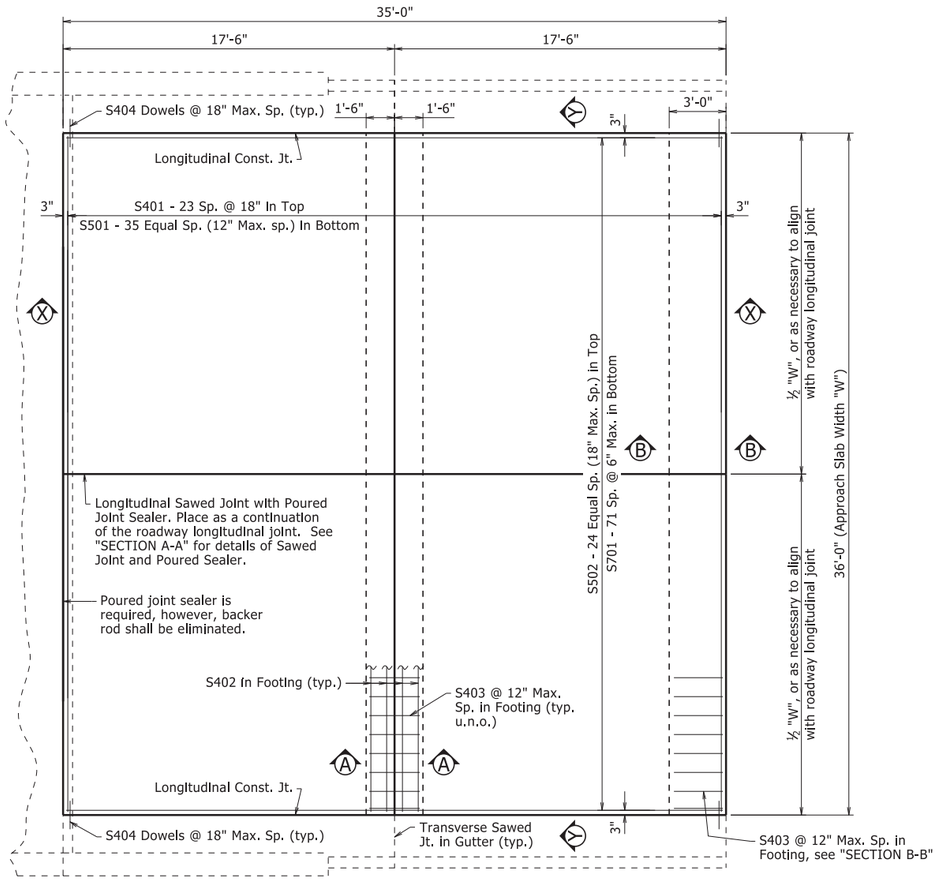
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CGP DATE: 11/02/2020 FILENAME: b020475_s1.dgn
CHECKED BY: JJ DATE: 01/2022 SCALE: 1" = 1'-0"
DESIGNED BY: JJ DATE: 10/28/2020

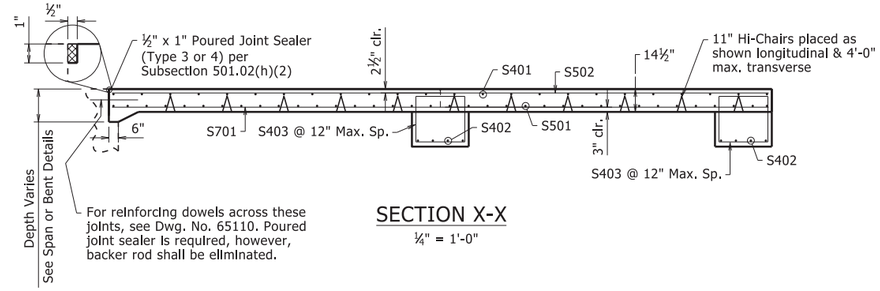
BRIDGE NO. 07536 DRAWING NO. 65149

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		020475	137	191
				①	07536	Approach Slab	- 65150	



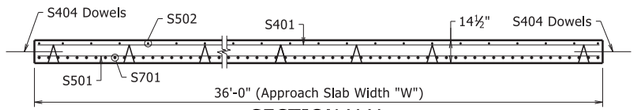
PLAN - APPROACH SLAB

¼" = 1'-0"



SECTION X-X

¼" = 1'-0"



SECTION Y-Y

¼" = 1'-0"

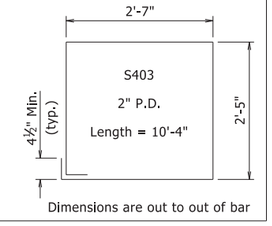
APPROXIMATE QUANTITIES FOR ONE APPROACH SLAB

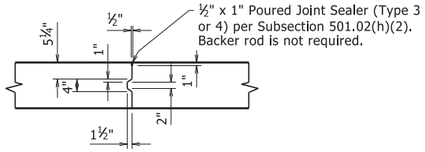
(For Information Only)

Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
8,655	71.80

BAR LIST - PER APPROACH SLAB

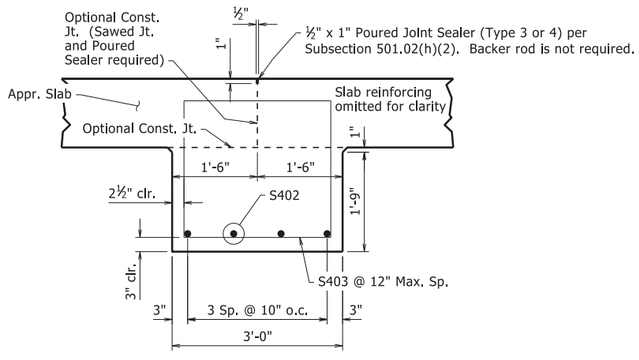
Mark	No. Req'd.	Length	Bending Diagram
S401	24	35' - 8"	
S402	8	35' - 8"	
S403	74	10' - 4"	
S404	48	1'-6"	
S501	36	35' - 8"	
S502	25	34' - 8"	
S701	72	34' - 8"	





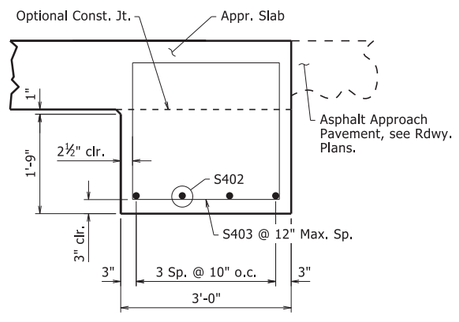
DETAILS OF LONGITUDINAL CONSTRUCTION JOINT

½" = 1'-0"



SECTION A-A

¾" = 1'-0"



SECTION B-B

¾" = 1'-0"

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Slabs will be measured and paid for in accordance with Section 504.

The surface finish for Approach Slabs shall match that used on the bridge deck.

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

STATE OF ARKANSAS
Ellis, Rick
May 2 2022 4:04 PM
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF TYPE SPECIAL APPROACH SLAB

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JJ DATE: 11/10/2021 FILENAME: b020475_as1.dgn

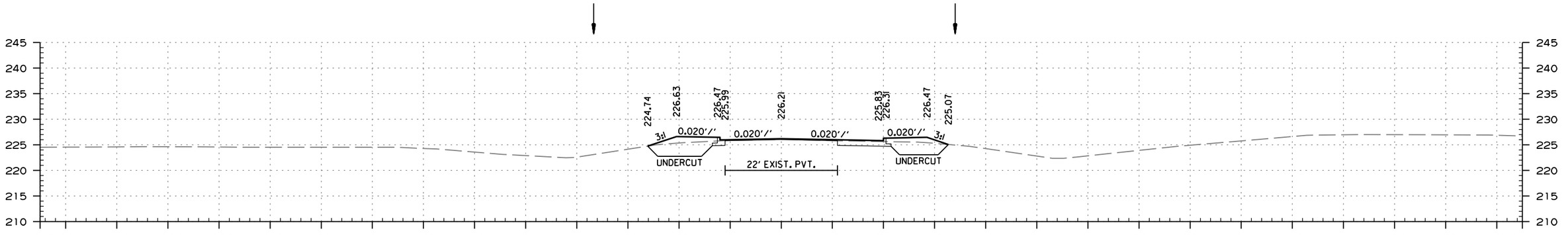
CHECKED BY: TMG DATE: 02/25/2022 SCALE: As Noted

DESIGNED BY: LJB DATE: 02/25/2021

BRIDGE NO. 07536 DRAWING NO. 65150

PRINT DATE: 5/2/2022

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	138	191
		CROSS SECTIONS				



STAGE 1
CUT AREA 9 SQ. FT.
FILL AREA 9 SQ. FT.

STAGE 2
CUT AREA 2 SQ. FT.
FILL AREA 11 SQ. FT.

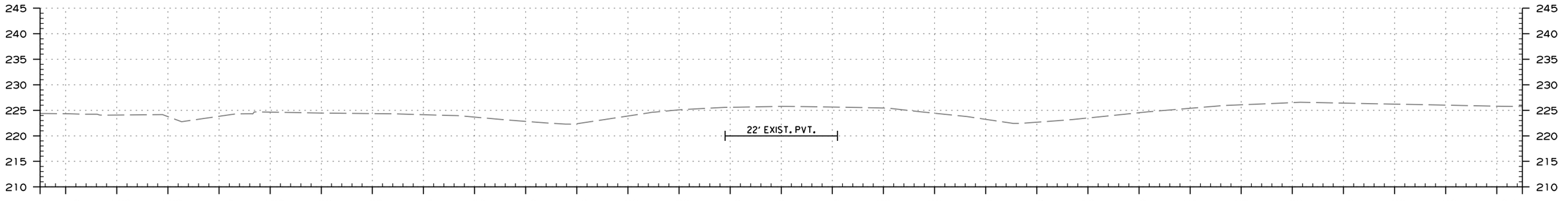
UNDERCUT
CUT AREA 53 SQ. FT.
FILL AREA 53 SQ. FT.

1001+45.07
END 100' TRANSITION
BEGIN JOB 020475

UNDERCUT
CUT VOLUME 44 CU. YD.
FILL VOLUME 44 CU. YD.

STAGE 1
CUT VOLUME 8 CU. YD.
FILL VOLUME 8 CU. YD.

STAGE 2
CUT VOLUME 2 CU. YD.
FILL VOLUME 9 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

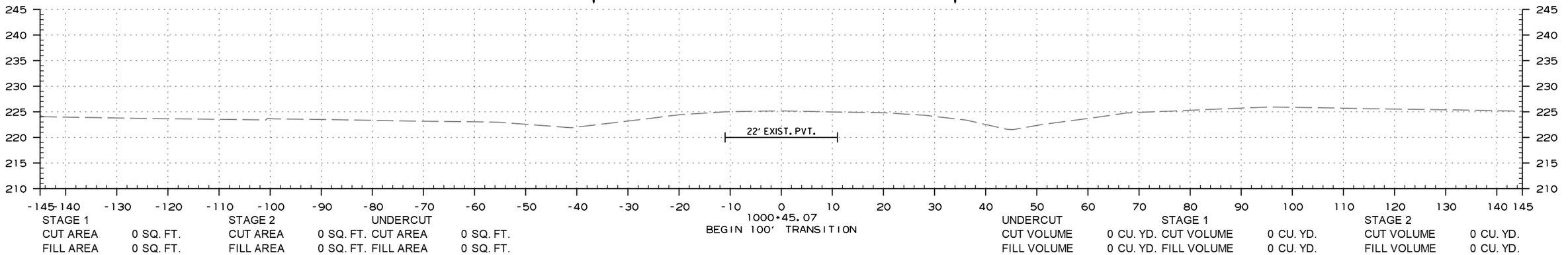
UNDERCUT
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1001+00.00

UNDERCUT
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

UNDERCUT
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1000+45.07
BEGIN 100' TRANSITION

UNDERCUT
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

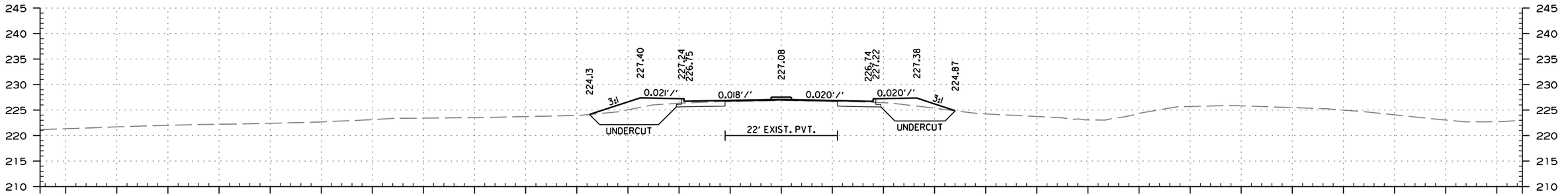
STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83

STA. 1000+45.07 TO STA. 1001+45.07

on40219 6/21/2022
R020475.DGN

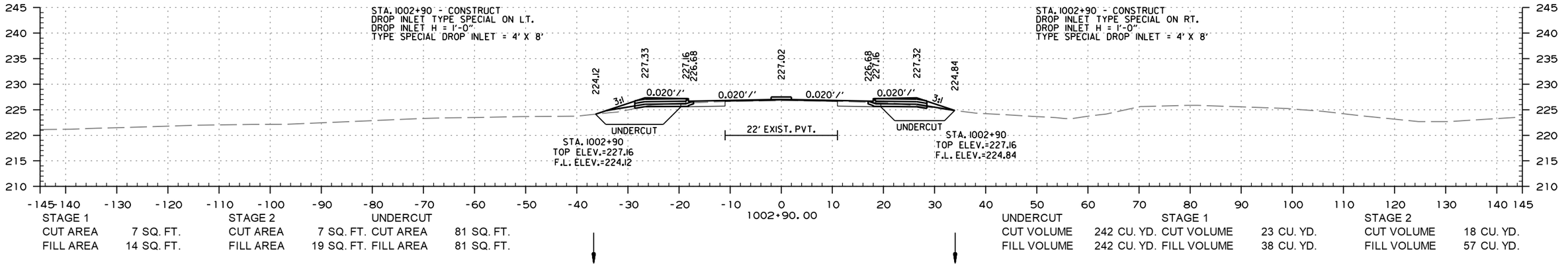
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	139	191
		CROSS SECTIONS				



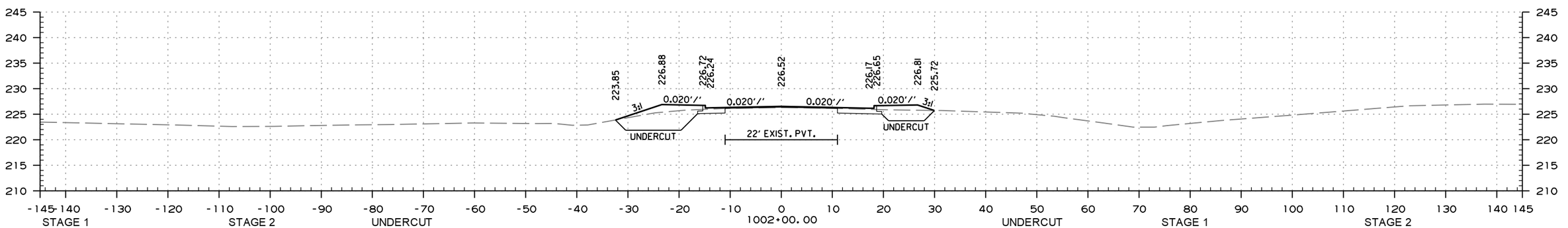
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	8 SQ. FT.	CUT AREA	7 SQ. FT.	CUT AREA	81 SQ. FT.	CUT VOLUME	30 CU. YD.	CUT VOLUME	3 CU. YD.	CUT VOLUME	3 CU. YD.
FILL AREA	15 SQ. FT.	FILL AREA	21 SQ. FT.	FILL AREA	81 SQ. FT.	FILL VOLUME	30 CU. YD.	FILL VOLUME	5 CU. YD.	FILL VOLUME	7 CU. YD.

STA. 1002+90 - CONSTRUCT
DROP INLET TYPE SPECIAL ON LT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'

STA. 1002+90 - CONSTRUCT
DROP INLET TYPE SPECIAL ON RT.
DROP INLET H = 1'-0"
TYPE SPECIAL DROP INLET = 4' X 8'



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	7 SQ. FT.	CUT AREA	7 SQ. FT.	CUT AREA	81 SQ. FT.	CUT VOLUME	242 CU. YD.	CUT VOLUME	23 CU. YD.	CUT VOLUME	18 CU. YD.
FILL AREA	14 SQ. FT.	FILL AREA	19 SQ. FT.	FILL AREA	81 SQ. FT.	FILL VOLUME	242 CU. YD.	FILL VOLUME	38 CU. YD.	FILL VOLUME	57 CU. YD.



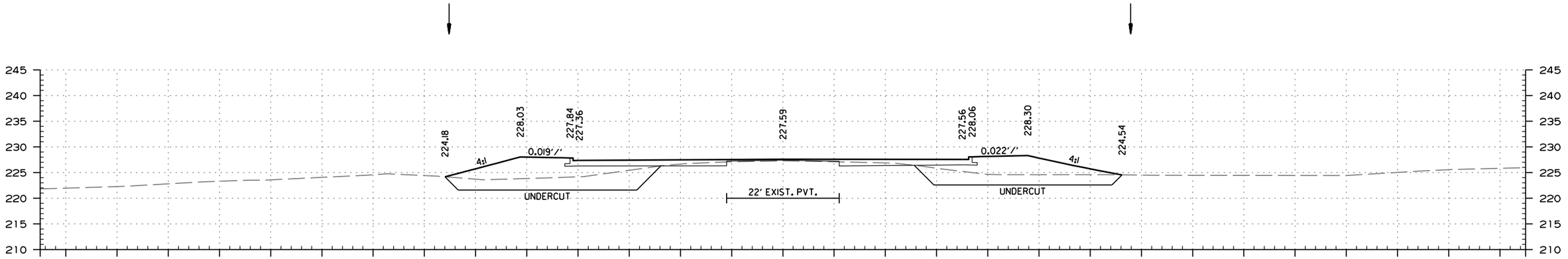
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	7 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	64 SQ. FT.	CUT VOLUME	119 CU. YD.	CUT VOLUME	16 CU. YD.	CUT VOLUME	6 CU. YD.
FILL AREA	9 SQ. FT.	FILL AREA	15 SQ. FT.	FILL AREA	64 SQ. FT.	FILL VOLUME	119 CU. YD.	FILL VOLUME	18 CU. YD.	FILL VOLUME	26 CU. YD.

HWY. 83

STA. 1002+00.00 TO STA. 1003+00.00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	140	191
		CROSS SECTIONS				



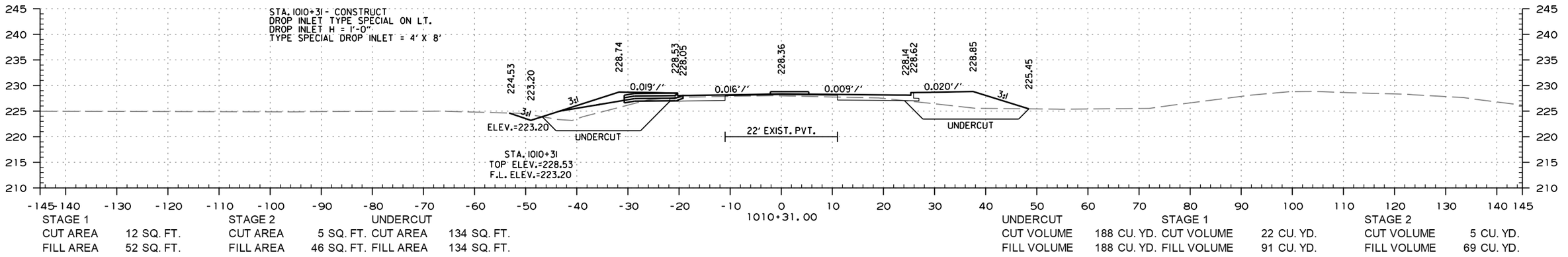
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	8 SQ. FT.	CUT AREA	6 SQ. FT.	CUT AREA	188 SQ. FT.	CUT VOLUME	299 CU. YD.	CUT VOLUME	18 CU. YD.	CUT VOLUME	14 CU. YD.
FILL AREA	79 SQ. FT.	FILL AREA	94 SQ. FT.	FILL AREA	188 SQ. FT.	FILL VOLUME	299 CU. YD.	FILL VOLUME	105 CU. YD.	FILL VOLUME	128 CU. YD.

HWY. 83

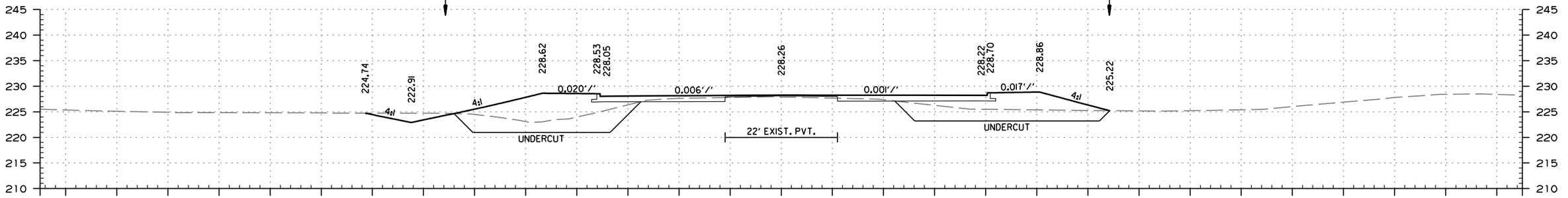
STA. 1003+60.07 TO STA. 1003+60.07

6/21/2022
ah40219
R020475.DGN

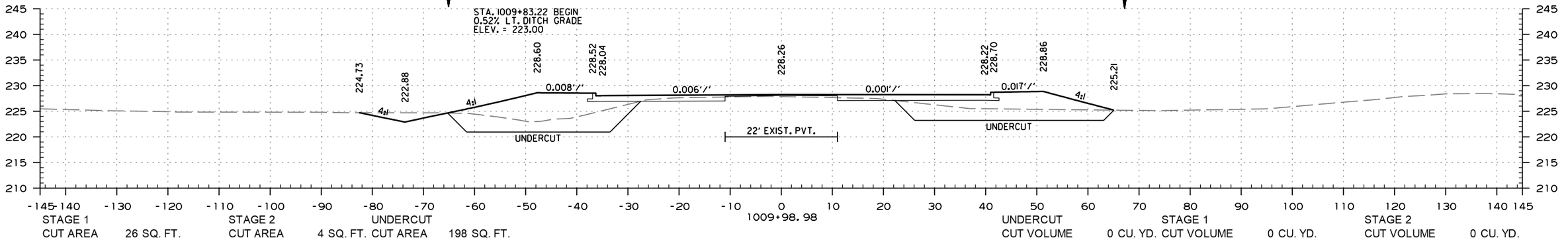
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	141	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	12 SQ. FT.	CUT AREA	5 SQ. FT.	CUT AREA	134 SQ. FT.	CUT VOLUME	188 CU. YD.	CUT VOLUME	22 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	52 SQ. FT.	FILL AREA	46 SQ. FT.	FILL AREA	134 SQ. FT.	FILL VOLUME	188 CU. YD.	FILL VOLUME	91 CU. YD.	FILL VOLUME	69 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	26 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	193 SQ. FT.	CUT VOLUME	7 CU. YD.	CUT VOLUME	1 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	106 SQ. FT.	FILL AREA	74 SQ. FT.	FILL AREA	193 SQ. FT.	FILL VOLUME	7 CU. YD.	FILL VOLUME	4 CU. YD.	FILL VOLUME	3 CU. YD.



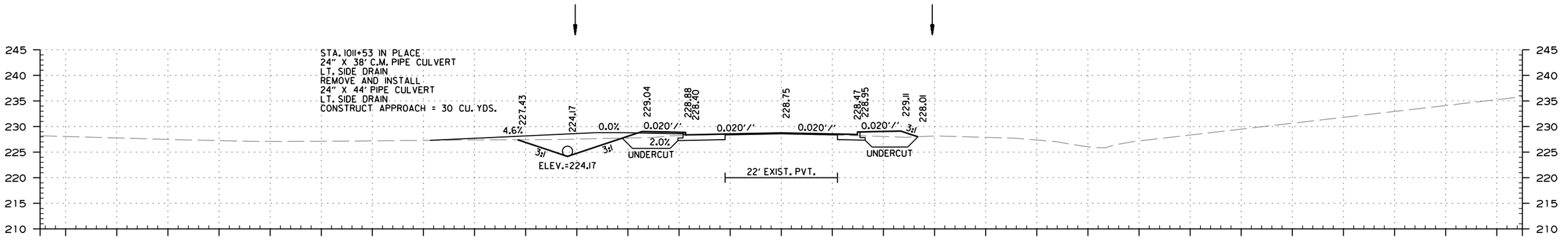
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	26 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	198 SQ. FT.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	110 SQ. FT.	FILL AREA	76 SQ. FT.	FILL AREA	198 SQ. FT.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

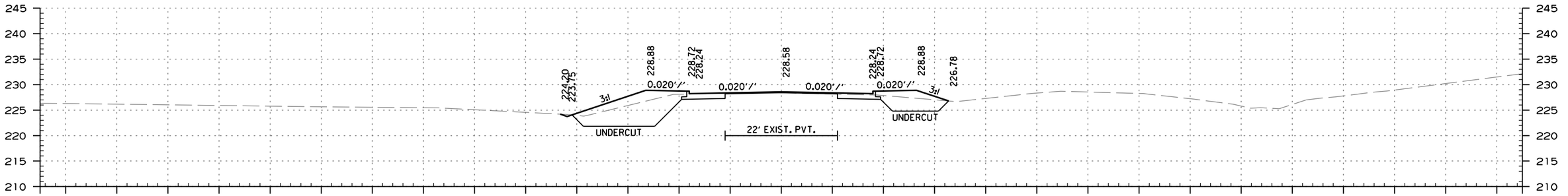
STA. 1009+98.98 TO STA. 1010+31.00

dh40219 6/21/2022
R020475.DGN

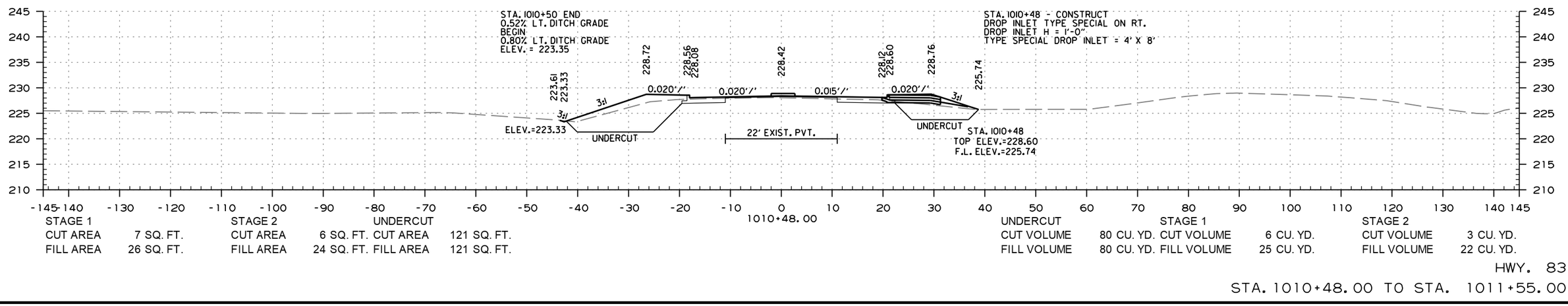
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	142	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	44 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	39 SQ. FT.	CUT VOLUME	137 CU. YD.	CUT VOLUME	52 CU. YD.	CUT VOLUME	11 CU. YD.
FILL AREA	10 SQ. FT.	FILL AREA	10 SQ. FT.	FILL AREA	39 SQ. FT.	FILL VOLUME	137 CU. YD.	FILL VOLUME	39 CU. YD.	FILL VOLUME	24 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	9 SQ. FT.	CUT AREA	7 SQ. FT.	CUT AREA	101 SQ. FT.	CUT VOLUME	214 CU. YD.	CUT VOLUME	15 CU. YD.	CUT VOLUME	13 CU. YD.
FILL AREA	30 SQ. FT.	FILL AREA	14 SQ. FT.	FILL AREA	101 SQ. FT.	FILL VOLUME	214 CU. YD.	FILL VOLUME	54 CU. YD.	FILL VOLUME	37 CU. YD.



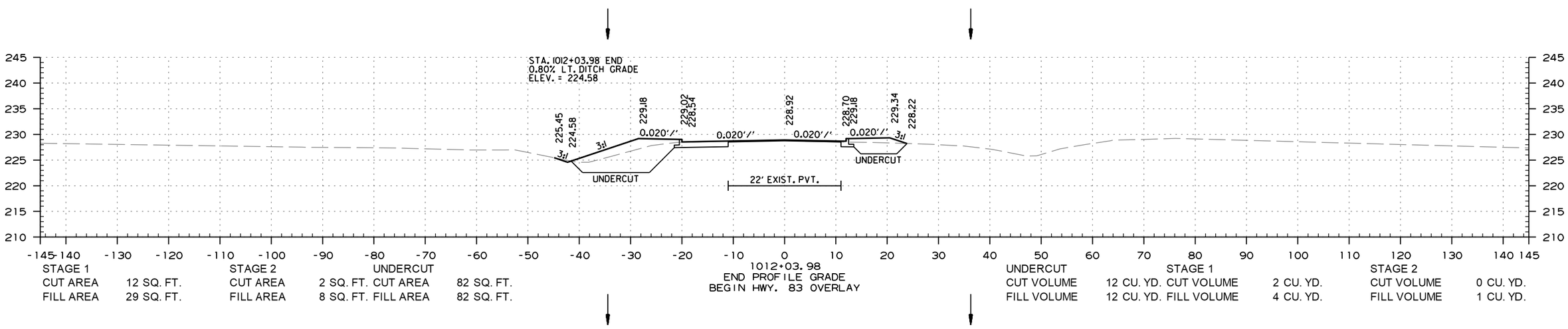
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	7 SQ. FT.	CUT AREA	6 SQ. FT.	CUT AREA	121 SQ. FT.	CUT VOLUME	80 CU. YD.	CUT VOLUME	6 CU. YD.	CUT VOLUME	3 CU. YD.
FILL AREA	26 SQ. FT.	FILL AREA	24 SQ. FT.	FILL AREA	121 SQ. FT.	FILL VOLUME	80 CU. YD.	FILL VOLUME	25 CU. YD.	FILL VOLUME	22 CU. YD.

HWY. 83

STA. 1010+48.00 TO STA. 1011+55.00

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	143	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	12 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	82 SQ. FT.	CUT VOLUME	12 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	29 SQ. FT.	FILL AREA	8 SQ. FT.	FILL AREA	82 SQ. FT.	FILL VOLUME	12 CU. YD.	FILL VOLUME	4 CU. YD.	FILL VOLUME	1 CU. YD.

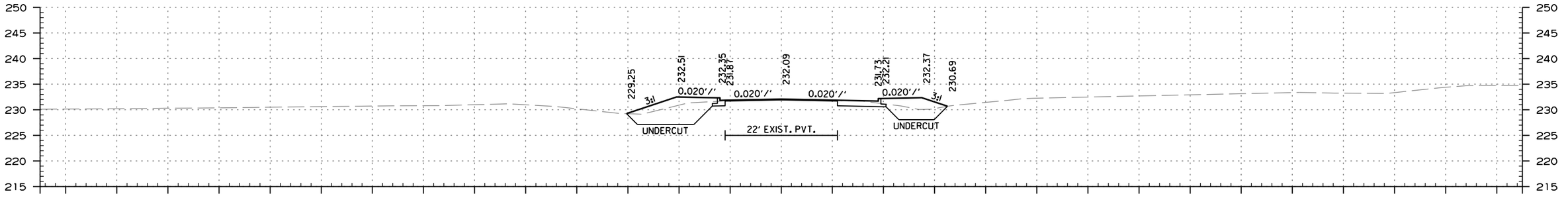
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	12 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	80 SQ. FT.	CUT VOLUME	104 CU. YD.	CUT VOLUME	49 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	28 SQ. FT.	FILL AREA	8 SQ. FT.	FILL AREA	80 SQ. FT.	FILL VOLUME	104 CU. YD.	FILL VOLUME	33 CU. YD.	FILL VOLUME	16 CU. YD.

HWY. 83

STA. 1012+00.00 TO STA. 1012+03.98

dh40219 6/21/2022
R020475.DGN

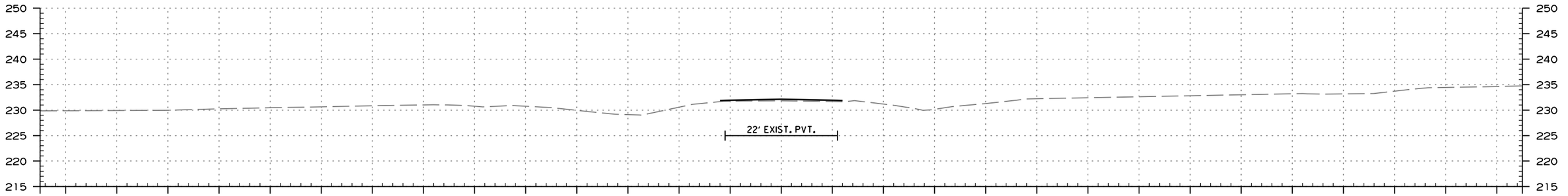
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	144	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	9 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	19 SQ. FT.	FILL AREA	20 SQ. FT.	FILL AREA	0 SQ. FT.

1025+35.40
END HWY. 83 OVERLAY
BEGIN PROFILE GRADE

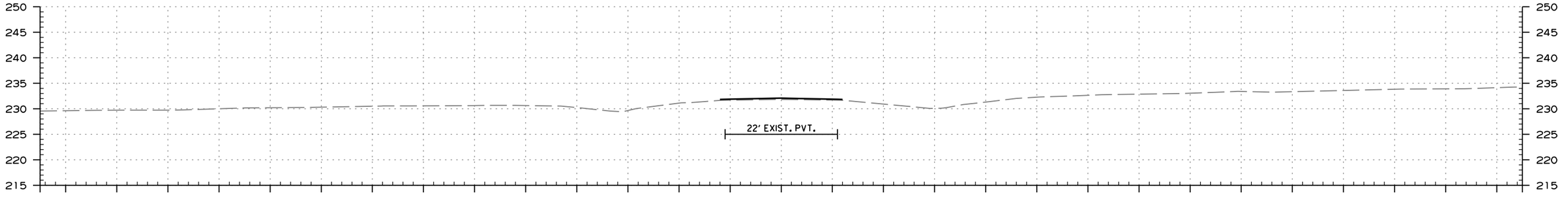
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	45 CU. YD.	CUT VOLUME	6 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	45 CU. YD.	FILL VOLUME	12 CU. YD.	FILL VOLUME	13 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

1025+00.00

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

1024+35.40

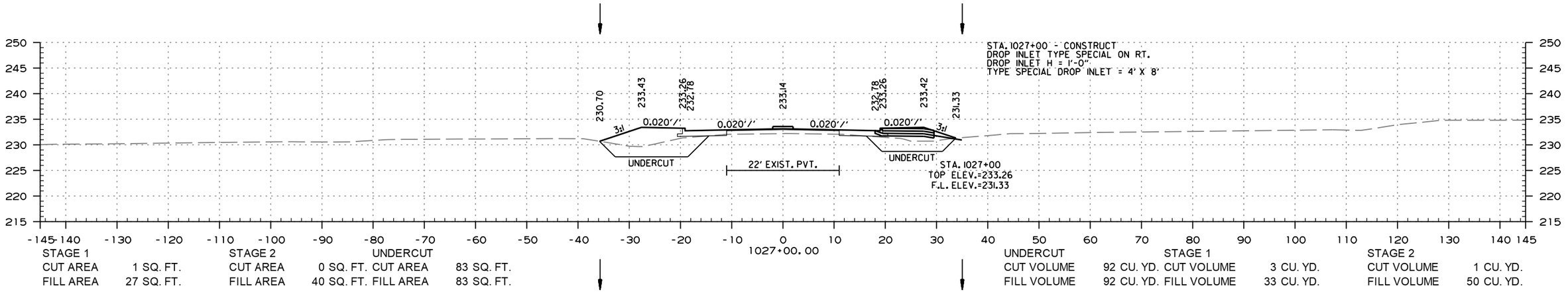
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1024+35.40 TO STA. 1025+35.40

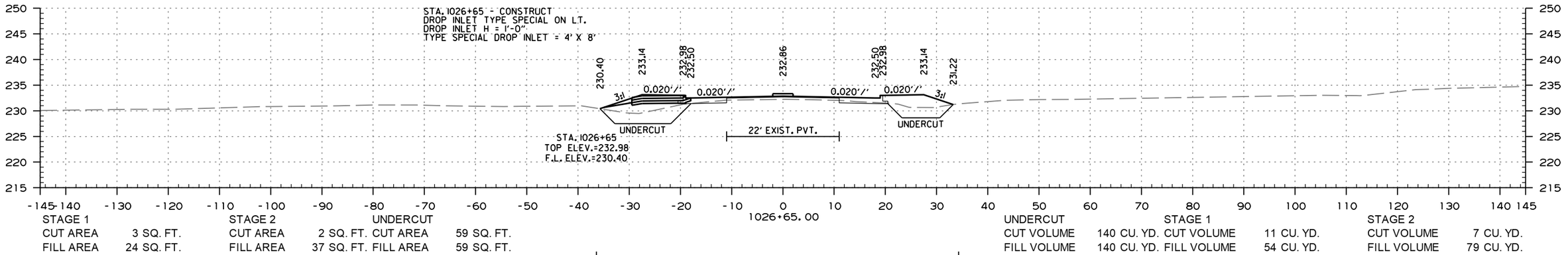
on40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	145	191
		CROSS SECTIONS				



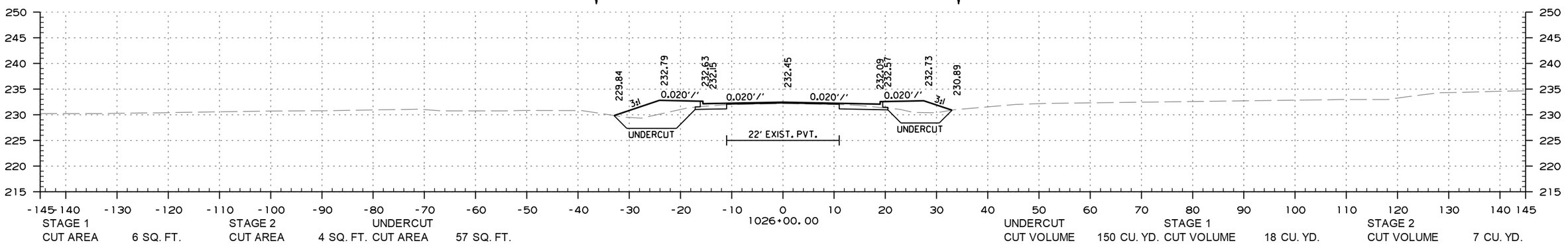
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	1 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	83 SQ. FT.
FILL AREA	27 SQ. FT.	FILL AREA	40 SQ. FT.	FILL AREA	83 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	92 CU. YD.	CUT VOLUME	3 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	92 CU. YD.	FILL VOLUME	33 CU. YD.	FILL VOLUME	50 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	3 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	59 SQ. FT.
FILL AREA	24 SQ. FT.	FILL AREA	37 SQ. FT.	FILL AREA	59 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	140 CU. YD.	CUT VOLUME	11 CU. YD.	CUT VOLUME	7 CU. YD.
FILL VOLUME	140 CU. YD.	FILL VOLUME	54 CU. YD.	FILL VOLUME	79 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	6 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	57 SQ. FT.
FILL AREA	21 SQ. FT.	FILL AREA	29 SQ. FT.	FILL AREA	57 SQ. FT.

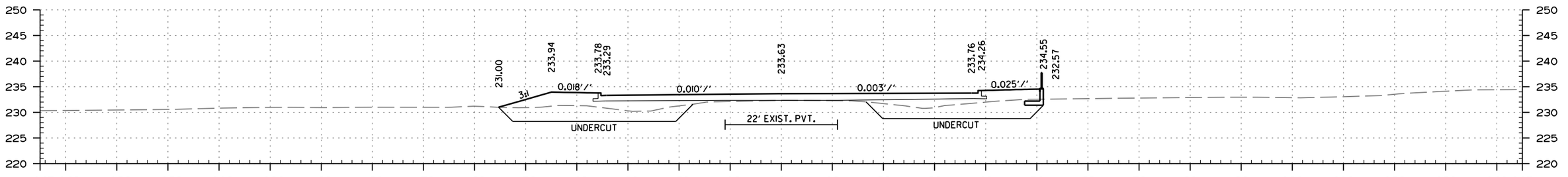
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	150 CU. YD.	CUT VOLUME	18 CU. YD.	CUT VOLUME	7 CU. YD.
FILL VOLUME	150 CU. YD.	FILL VOLUME	48 CU. YD.	FILL VOLUME	59 CU. YD.

HWY. 83

STA. 1026+00.00 TO STA. 1027+00.00

dh402l9 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	146	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	4 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	183 SQ. FT.
FILL AREA	52 SQ. FT.	FILL AREA	71 SQ. FT.	FILL AREA	183 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	298 CU. YD.	CUT VOLUME	6 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	298 CU. YD.	FILL VOLUME	88 CU. YD.	FILL VOLUME	124 CU. YD.

HWY. 83

STA. 1027+60.40 TO STA. 1027+60.40

6/21/2022
ah40219
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	147	191
		CROSS SECTIONS				

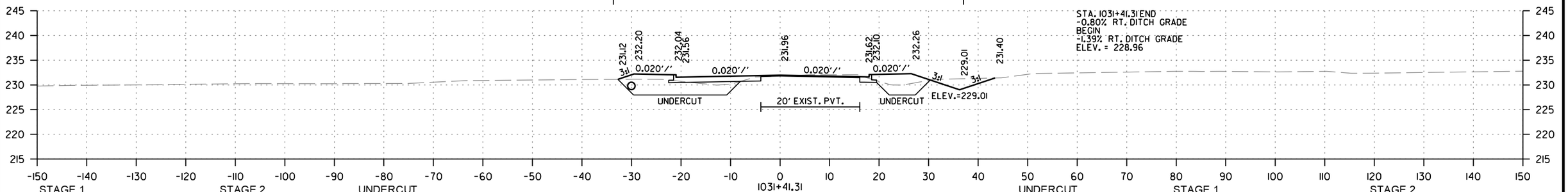
HWY. 83

STA. 1029+16.31 TO STA. 1030+00

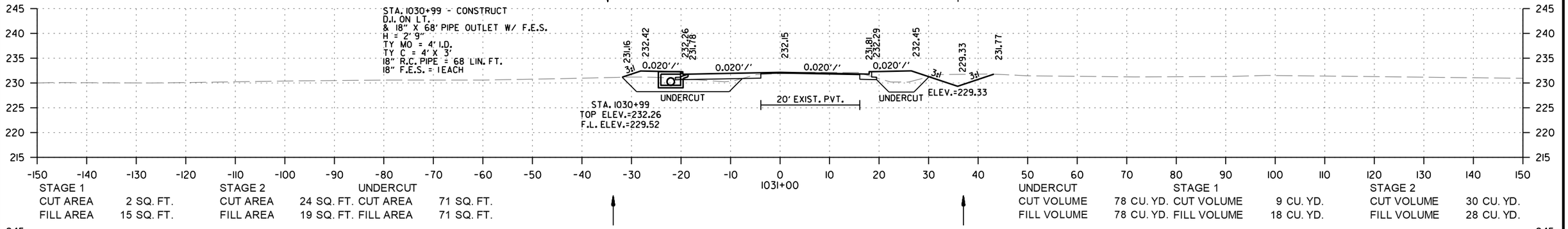
6/21/2022

oh40219 R020475.DGN

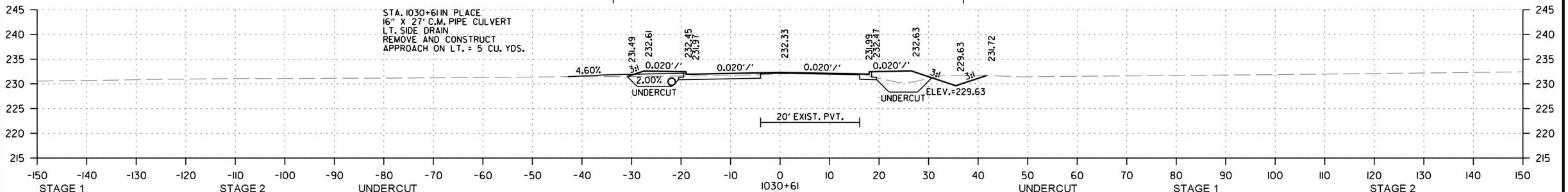
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	148	191
		CROSS SECTIONS				



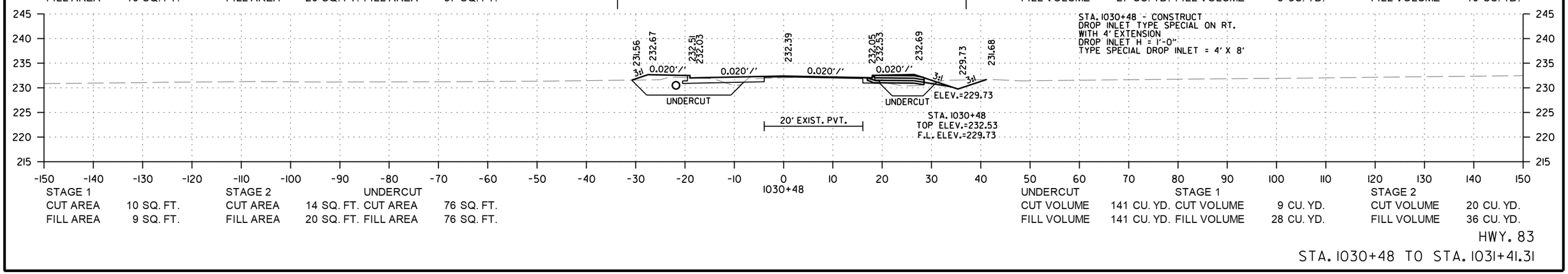
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	3 SQ. FT.	CUT AREA	24 SQ. FT.	CUT AREA	76 SQ. FT.	CUT VOLUME	112 CU. YD.	CUT VOLUME	4 CU. YD.	CUT VOLUME	37 CU. YD.
FILL AREA	14 SQ. FT.	FILL AREA	19 SQ. FT.	FILL AREA	76 SQ. FT.	FILL VOLUME	112 CU. YD.	FILL VOLUME	22 CU. YD.	FILL VOLUME	29 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	2 SQ. FT.	CUT AREA	24 SQ. FT.	CUT AREA	71 SQ. FT.	CUT VOLUME	78 CU. YD.	CUT VOLUME	9 CU. YD.	CUT VOLUME	30 CU. YD.
FILL AREA	15 SQ. FT.	FILL AREA	19 SQ. FT.	FILL AREA	71 SQ. FT.	FILL VOLUME	78 CU. YD.	FILL VOLUME	18 CU. YD.	FILL VOLUME	28 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	11 SQ. FT.	CUT AREA	17 SQ. FT.	CUT AREA	37 SQ. FT.	CUT VOLUME	27 CU. YD.	CUT VOLUME	5 CU. YD.	CUT VOLUME	7 CU. YD.
FILL AREA	10 SQ. FT.	FILL AREA	20 SQ. FT.	FILL AREA	37 SQ. FT.	FILL VOLUME	27 CU. YD.	FILL VOLUME	5 CU. YD.	FILL VOLUME	10 CU. YD.



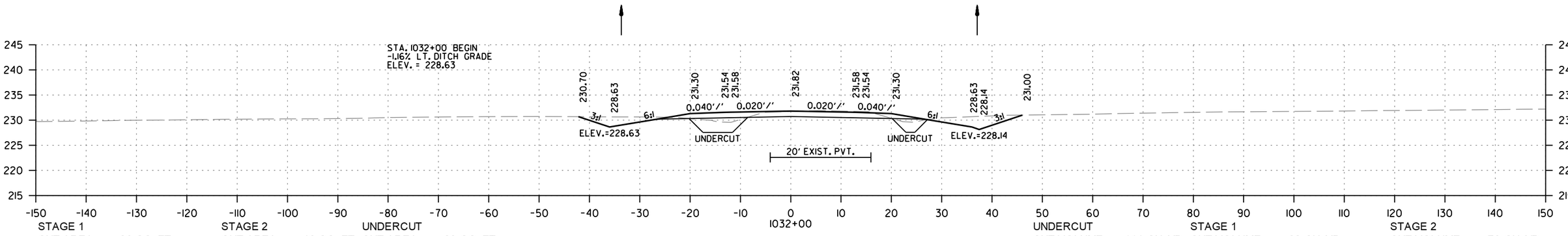
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	10 SQ. FT.	CUT AREA	14 SQ. FT.	CUT AREA	76 SQ. FT.	CUT VOLUME	141 CU. YD.	CUT VOLUME	9 CU. YD.	CUT VOLUME	20 CU. YD.
FILL AREA	9 SQ. FT.	FILL AREA	20 SQ. FT.	FILL AREA	76 SQ. FT.	FILL VOLUME	141 CU. YD.	FILL VOLUME	28 CU. YD.	FILL VOLUME	36 CU. YD.

HWY. 83

STA. 1030+48 TO STA. 1031+41.31

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	149	191
		CROSS SECTIONS				



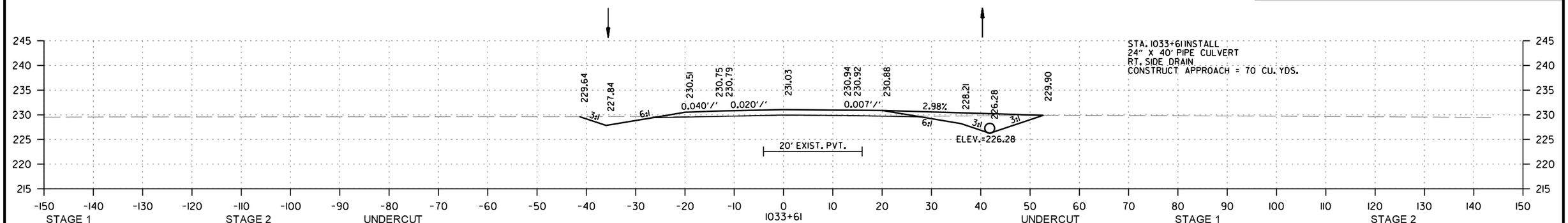
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	26 SQ. FT.	CUT AREA	46 SQ. FT.	CUT AREA	29 SQ. FT.	CUT VOLUME	114 CU. YD.	CUT VOLUME	32 CU. YD.	CUT VOLUME	76 CU. YD.
FILL AREA	6 SQ. FT.	FILL AREA	3 SQ. FT.	FILL AREA	29 SQ. FT.	FILL VOLUME	114 CU. YD.	FILL VOLUME	22 CU. YD.	FILL VOLUME	24 CU. YD.

HWY. 83

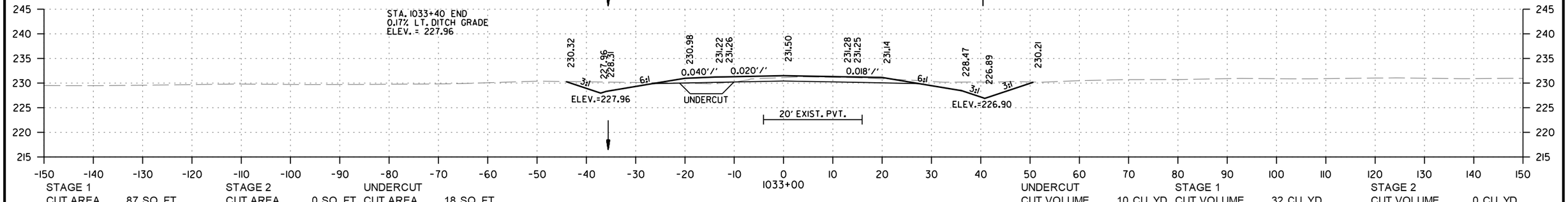
STA. 1032+00 TO STA. 1032+00

dh40219 6/21/2022
R020475.DGN

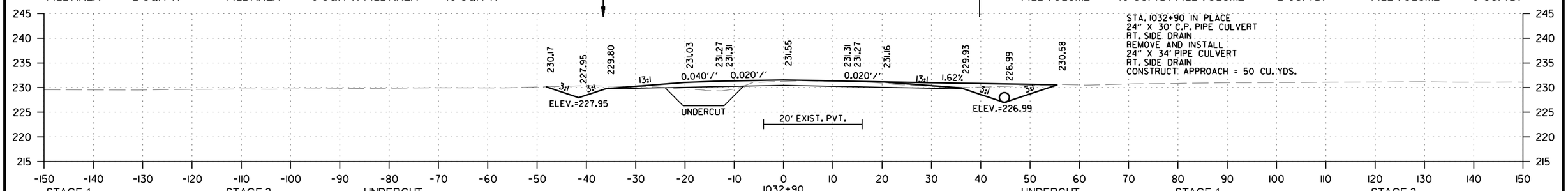
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	150	191
		CROSS SECTIONS				



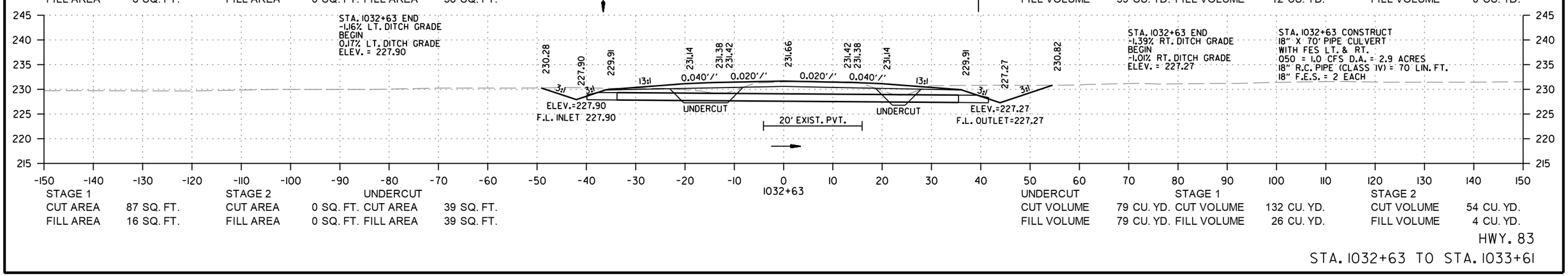
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	58 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	0 CU. YD.	CUT VOLUME	164 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	2 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	0 CU. YD.	FILL VOLUME	5 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	87 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	18 SQ. FT.	CUT VOLUME	10 CU. YD.	CUT VOLUME	32 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	2 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	18 SQ. FT.	FILL VOLUME	10 CU. YD.	FILL VOLUME	2 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	85 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	38 SQ. FT.	CUT VOLUME	39 CU. YD.	CUT VOLUME	86 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	8 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	38 SQ. FT.	FILL VOLUME	39 CU. YD.	FILL VOLUME	12 CU. YD.	FILL VOLUME	0 CU. YD.

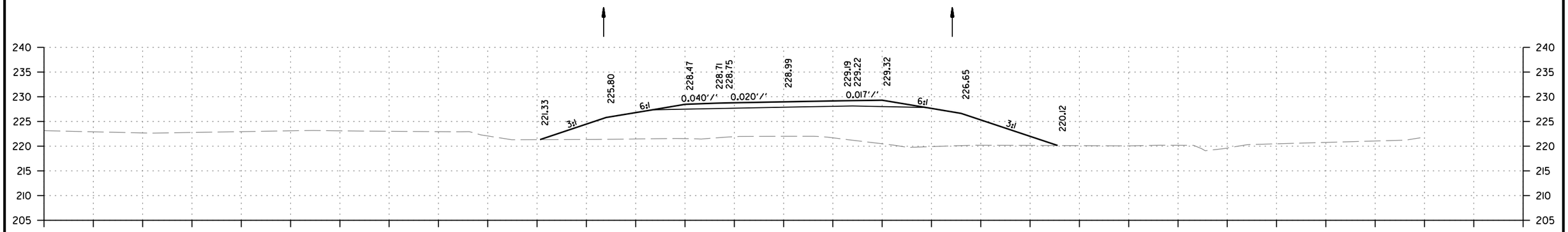


STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	87 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	39 SQ. FT.	CUT VOLUME	79 CU. YD.	CUT VOLUME	132 CU. YD.	CUT VOLUME	54 CU. YD.
FILL AREA	16 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	39 SQ. FT.	FILL VOLUME	79 CU. YD.	FILL VOLUME	26 CU. YD.	FILL VOLUME	4 CU. YD.

HWY. 83

STA. 1032+63 TO STA. 1033+61

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	151	191
		CROSS SECTIONS				

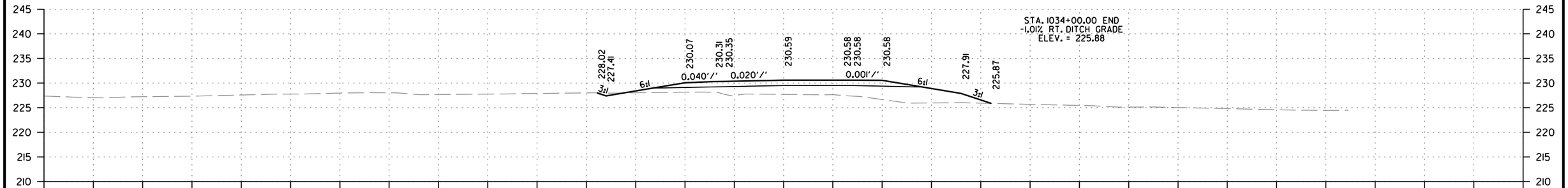


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 550 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 4 CU. YD.
FILL VOLUME 1259 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

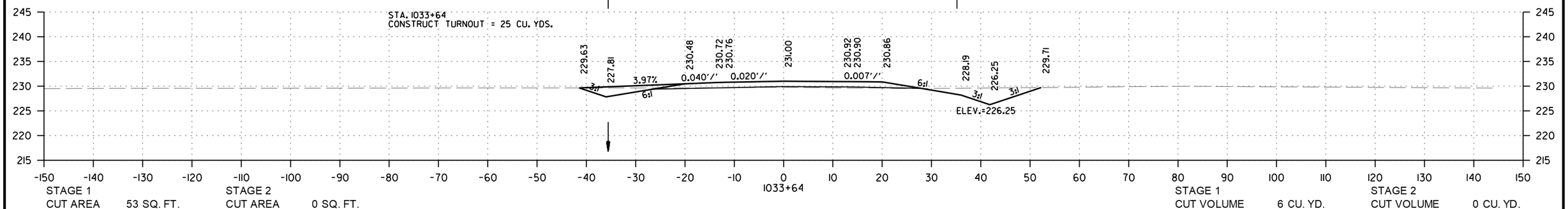


STAGE 1
CUT AREA 2 SQ. FT.
FILL AREA 130 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 37 CU. YD.
FILL VOLUME 90 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 53 SQ. FT.
FILL AREA 5 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 6 CU. YD.
FILL VOLUME 0 CU. YD.

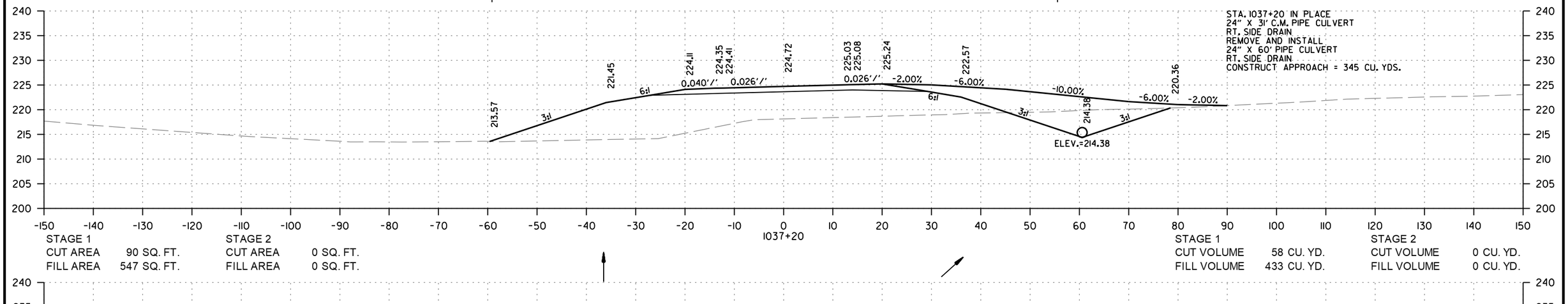
STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83

STA. 1033+64 TO STA. 1035+00

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	152	191
		CROSS SECTIONS				

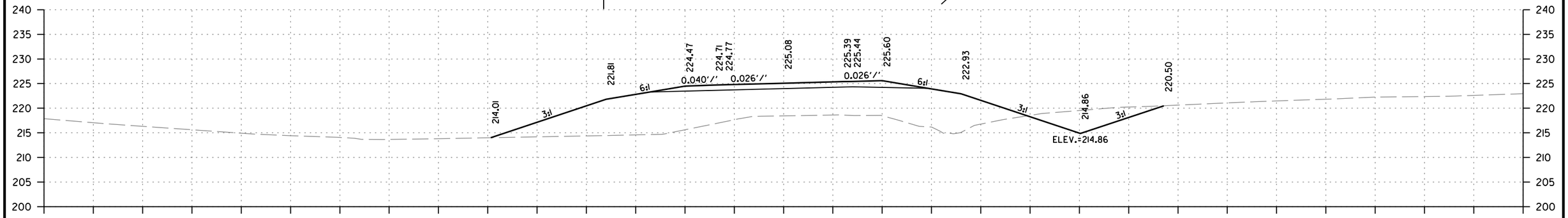


STAGE 1
CUT AREA 90 SQ. FT.
FILL AREA 547 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 58 CU. YD.
FILL VOLUME 433 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

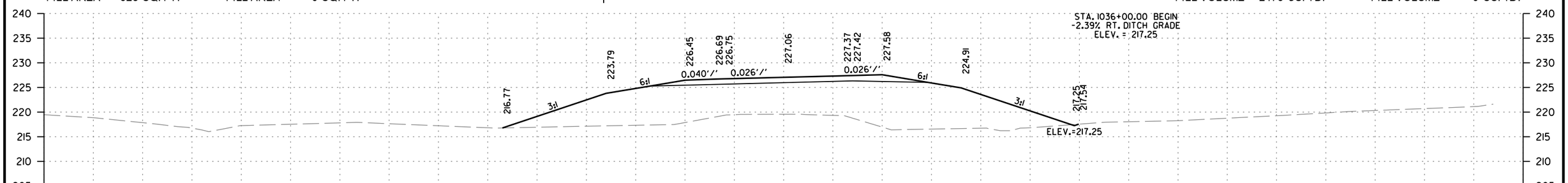


STAGE 1
CUT AREA 67 SQ. FT.
FILL AREA 623 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 124 CU. YD.
FILL VOLUME 2476 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 714 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

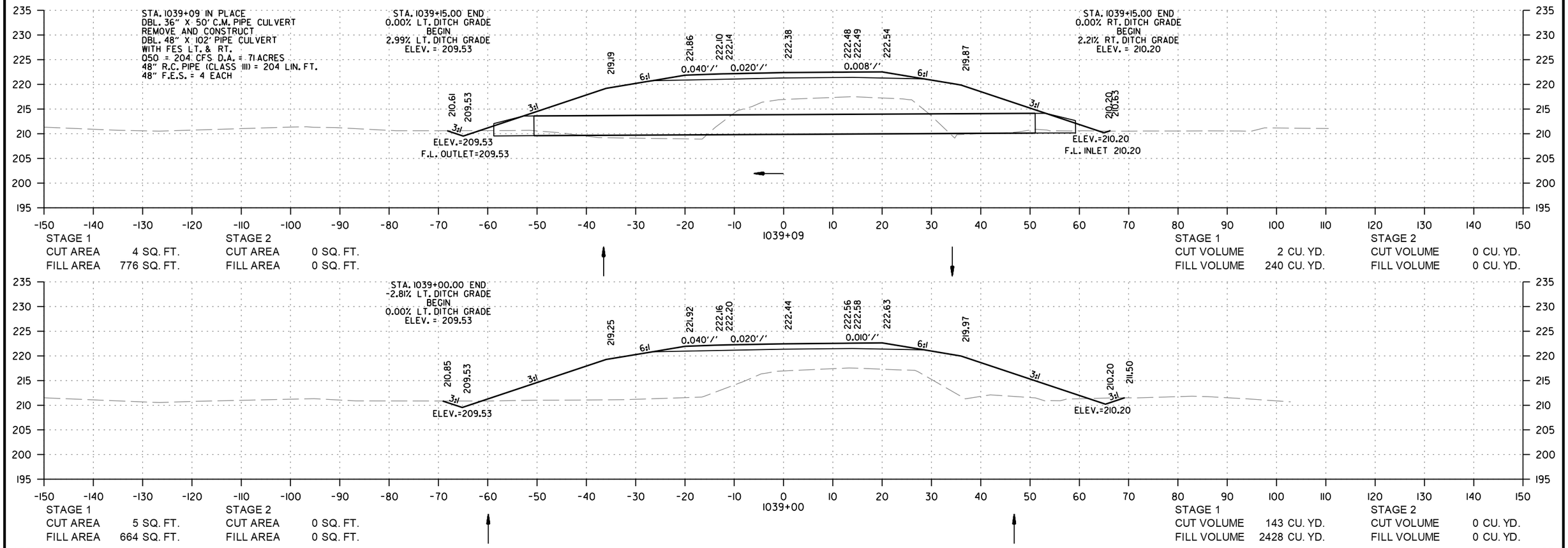
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 2341 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1036+00 TO STA. 1037+20

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	153	191
		CROSS SECTIONS				

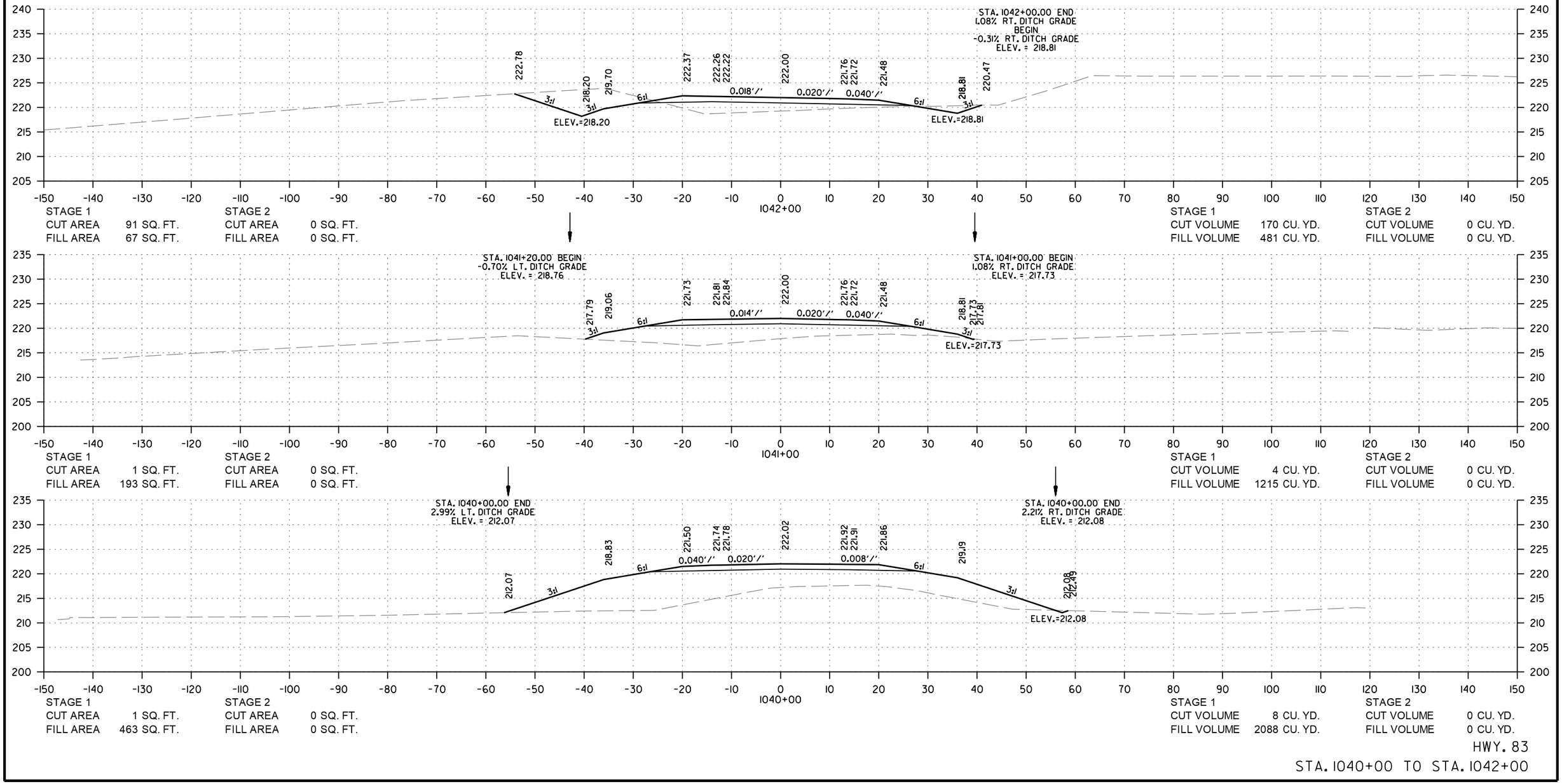


HWY. 83

STA. 1038+00 TO STA. 1039+10

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	154	191
		CROSS SECTIONS				

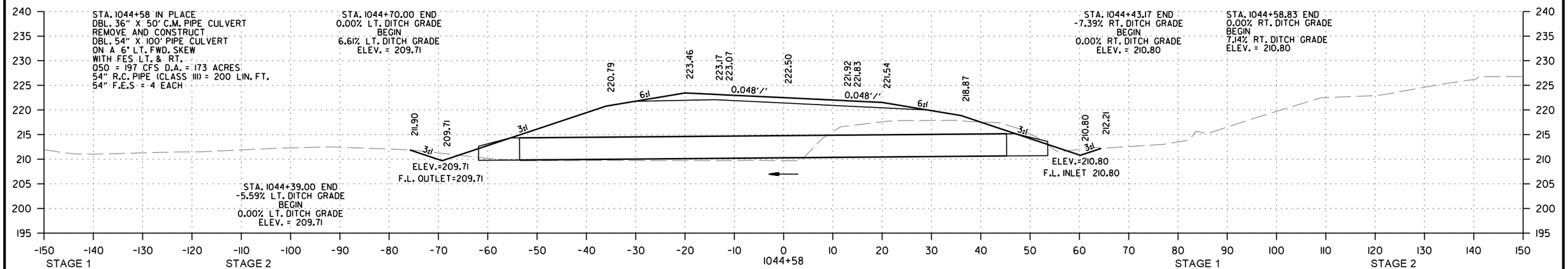


HWY. 83

STA. 1040+00 TO STA. 1042+00

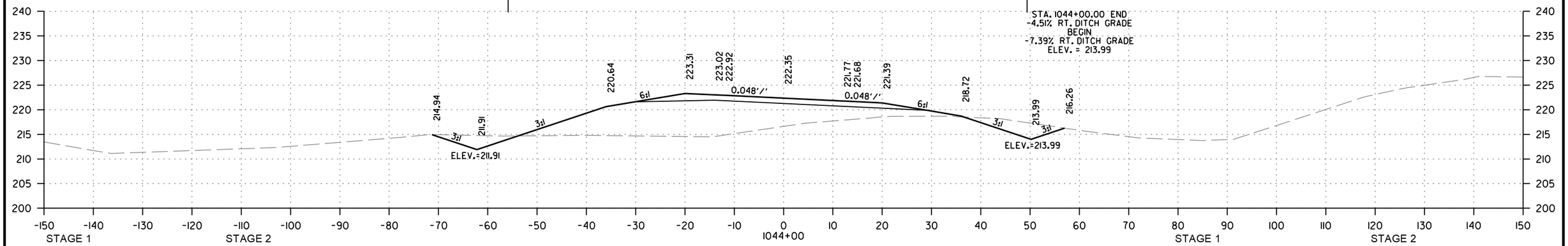
dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	155	191
		CROSS SECTIONS				



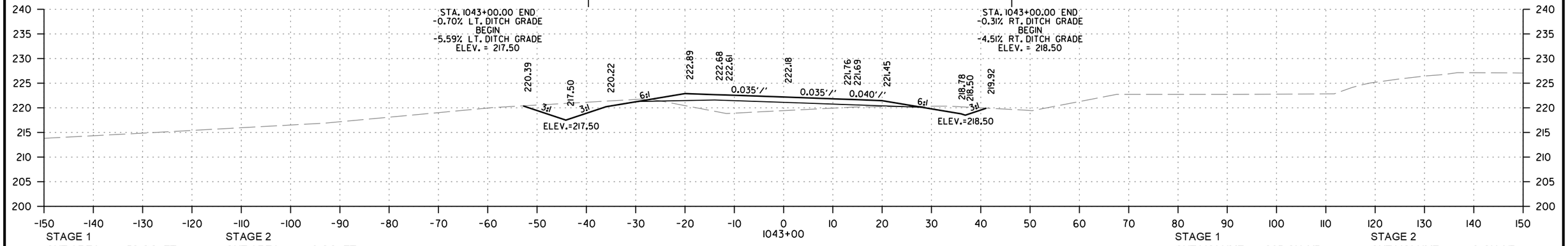
STAGE 1		STAGE 2	
CUT AREA	23 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	776 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	89 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	1231 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2	
CUT AREA	60 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	370 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	207 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	798 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2	
CUT AREA	52 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	61 SQ. FT.	FILL AREA	0 SQ. FT.

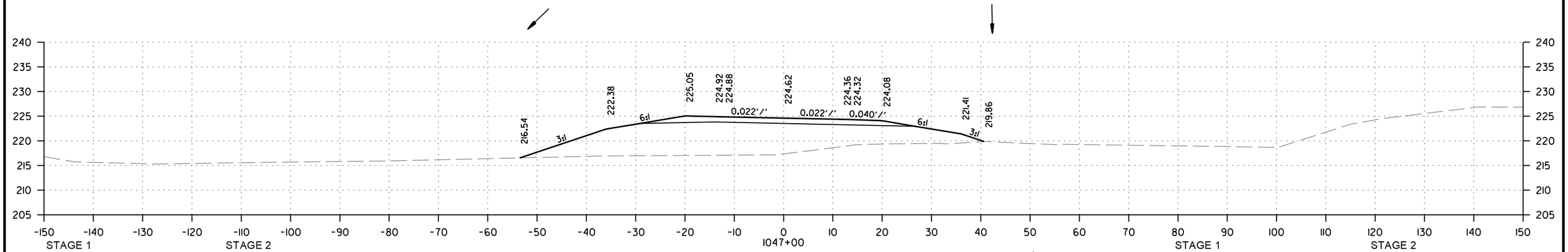
STAGE 1		STAGE 2	
CUT VOLUME	265 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	237 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1043+00 TO STA. 1044+58

on40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	156	191
		CROSS SECTIONS				



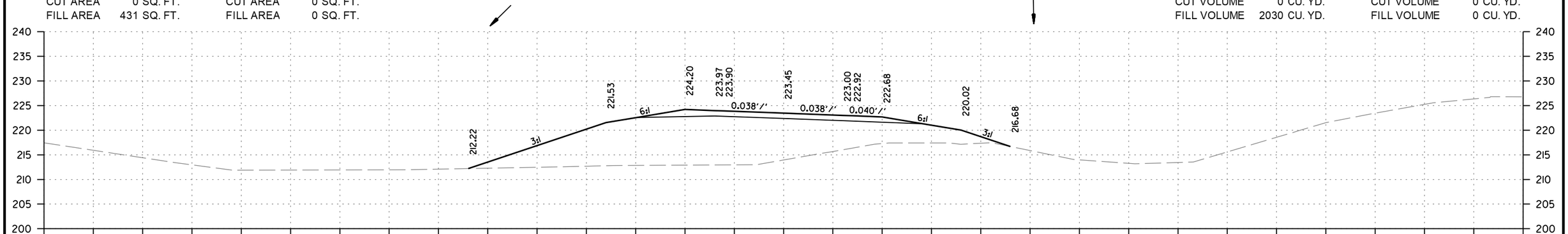
STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 431 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1047+00

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 2030 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 665 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

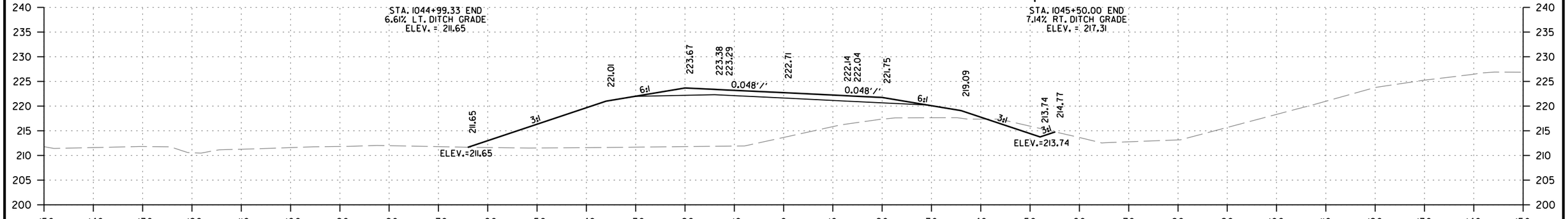
1046+00

STAGE 1
CUT VOLUME 28 CU. YD.
FILL VOLUME 2428 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STA. 1044+99.33 END
6.61% LT. DITCH GRADE
ELEV. = 211.65

STA. 1045+50.00 END
7.14% RT. DITCH GRADE
ELEV. = 217.31



STAGE 1
CUT AREA 15 SQ. FT.
FILL AREA 646 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1045+00

STAGE 1
CUT VOLUME 30 CU. YD.
FILL VOLUME 1106 CU. YD.

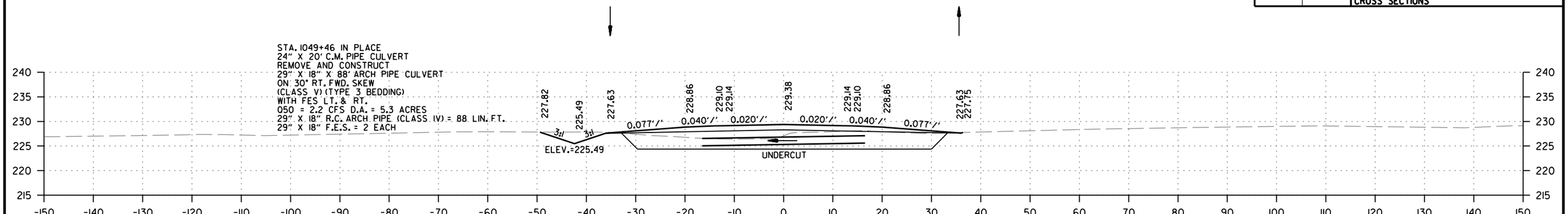
STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1045+00 TO STA. 1047+00

dh40219 6/21/2022
R020475.DGN

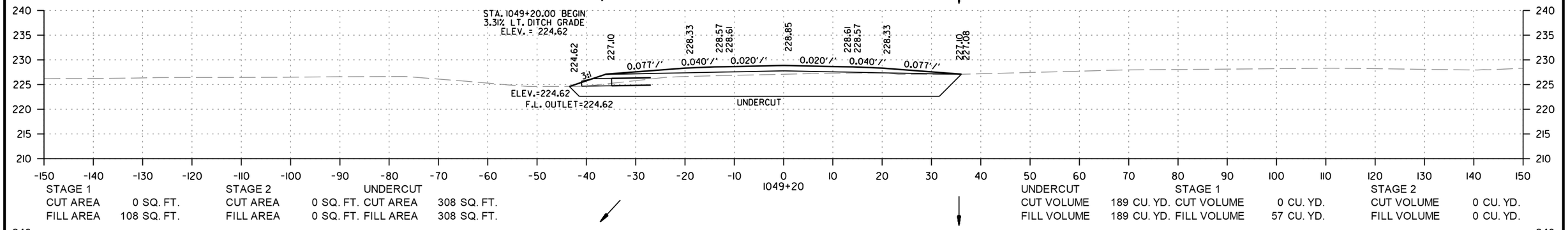
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	157	191
		CROSS SECTIONS				

STA. 1049+46 IN PLACE
24" X 20' C.M. PIPE CULVERT
REMOVE AND CONSTRUCT
29" X 18" X 88' ARCH PIPE CULVERT
ON 30° RT. FWD. SKEW
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
Q50 = 2.2 CFS D.A. = 5.3 ACRES
29" X 18" R.C. ARCH PIPE (CLASS IV) = 88 LIN. FT.
29" X 18" F.E.S. = 2 EACH

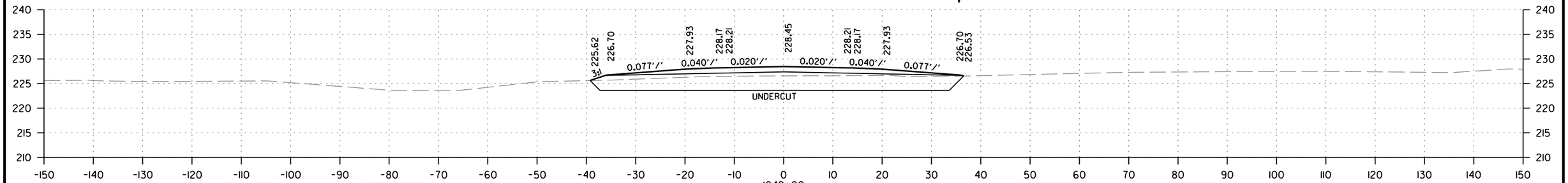


STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	16 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	181 SQ. FT.	CUT VOLUME	235 CU. YD.	CUT VOLUME	8 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	103 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	181 SQ. FT.	FILL VOLUME	235 CU. YD.	FILL VOLUME	102 CU. YD.	FILL VOLUME	0 CU. YD.

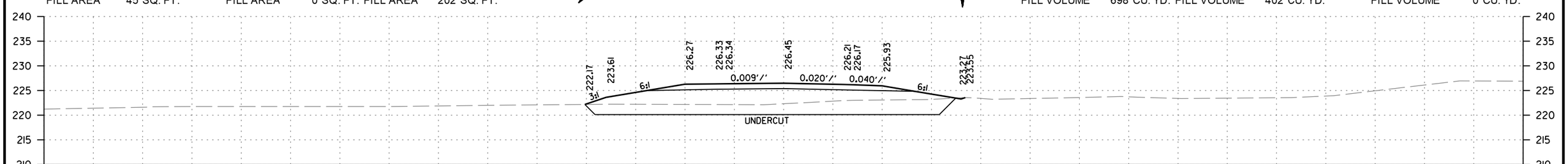
STA. 1049+20.00 BEGIN
3.31% LT. DITCH GRADE
ELEV. = 224.62



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	308 SQ. FT.	CUT VOLUME	189 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	108 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	308 SQ. FT.	FILL VOLUME	189 CU. YD.	FILL VOLUME	57 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	202 SQ. FT.	CUT VOLUME	698 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	45 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	202 SQ. FT.	FILL VOLUME	698 CU. YD.	FILL VOLUME	402 CU. YD.	FILL VOLUME	0 CU. YD.



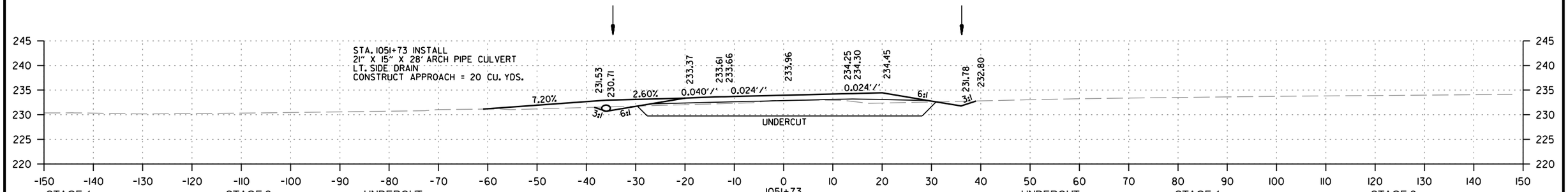
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	1 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	175 SQ. FT.	CUT VOLUME	0 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	172 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	175 SQ. FT.	FILL VOLUME	0 CU. YD.	FILL VOLUME	1117 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1048+00 TO STA. 1049+46

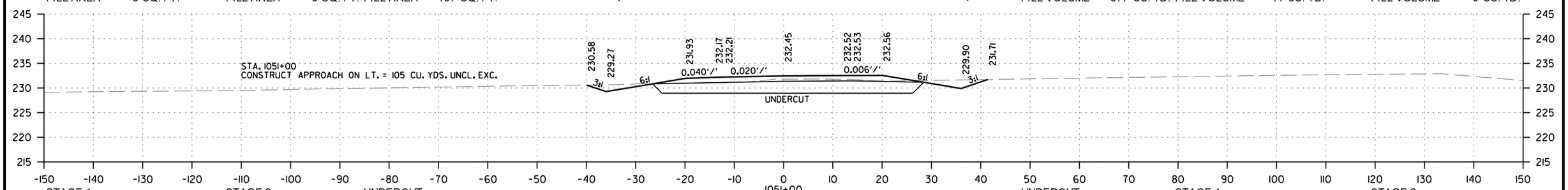
dn40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	158	191
		CROSS SECTIONS				



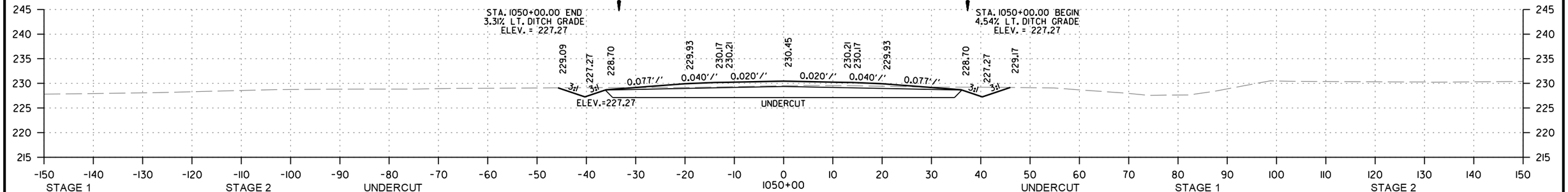
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	19 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	157 SQ. FT.
FILL AREA	8 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	157 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	377 CU. YD.	CUT VOLUME	70 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	377 CU. YD.	FILL VOLUME	11 CU. YD.	FILL VOLUME	0 CU. YD.



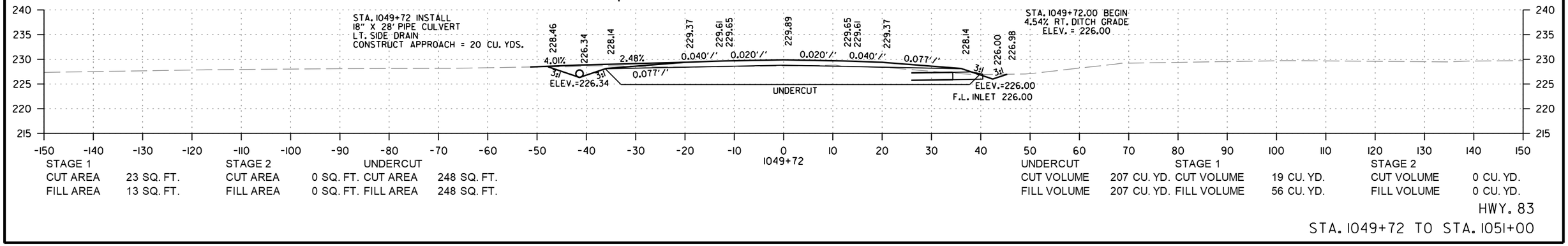
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	33 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	122 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	122 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	474 CU. YD.	CUT VOLUME	144 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	474 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	45 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	134 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	134 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	198 CU. YD.	CUT VOLUME	35 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	198 CU. YD.	FILL VOLUME	7 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	23 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	248 SQ. FT.
FILL AREA	13 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	248 SQ. FT.

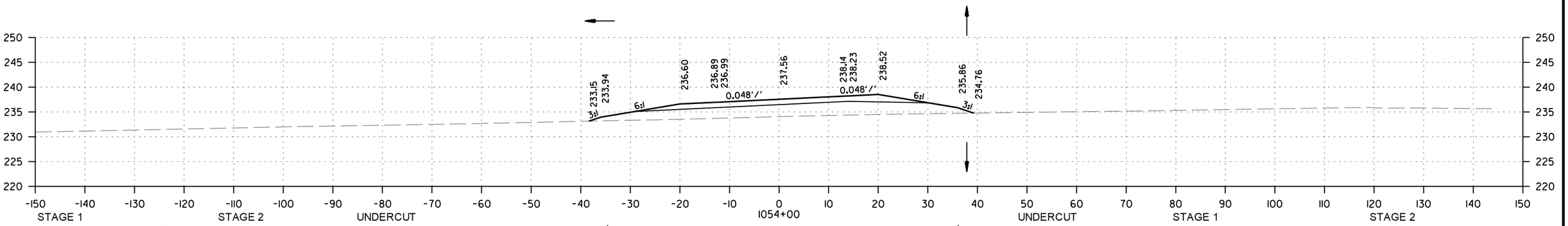
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	207 CU. YD.	CUT VOLUME	19 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	207 CU. YD.	FILL VOLUME	56 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

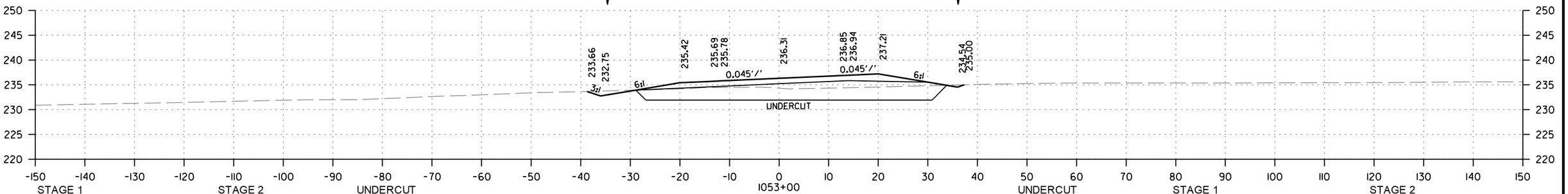
STA. 1049+72 TO STA. 1051+00

dh40219 6/21/2022
R020475.DGN

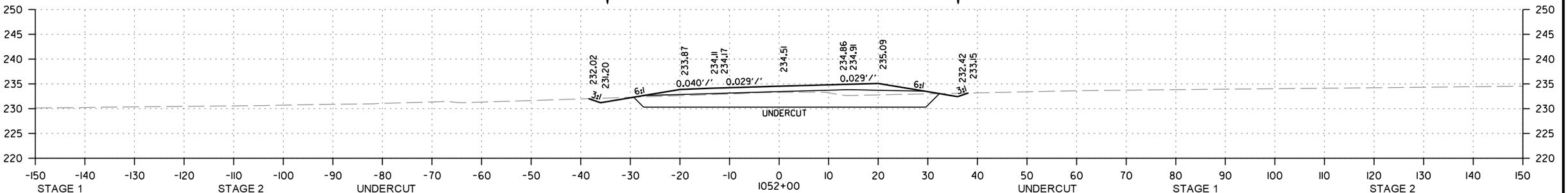
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	159	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	0 CU. YD.	CUT VOLUME	11 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	159 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	0 CU. YD.	FILL VOLUME	376 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	6 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	149 SQ. FT.	CUT VOLUME	561 CU. YD.	CUT VOLUME	22 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	44 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	149 SQ. FT.	FILL VOLUME	561 CU. YD.	FILL VOLUME	130 CU. YD.	FILL VOLUME	0 CU. YD.



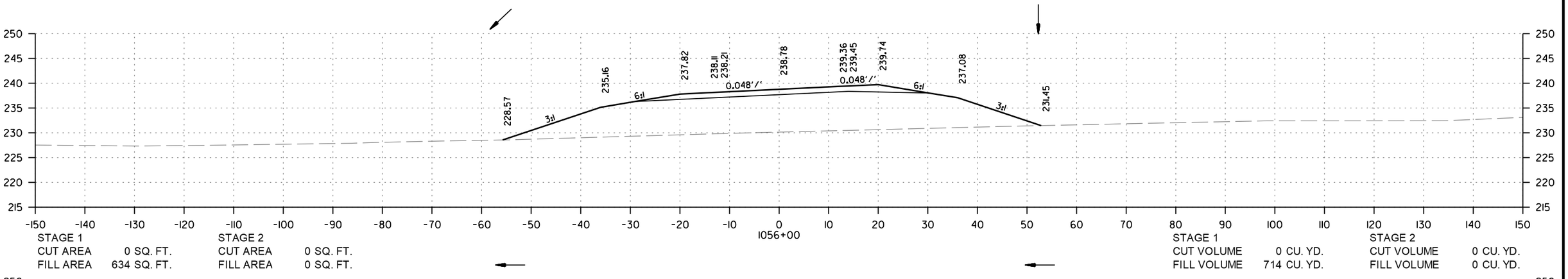
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	6 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	154 SQ. FT.	CUT VOLUME	156 CU. YD.	CUT VOLUME	13 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	26 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	154 SQ. FT.	FILL VOLUME	156 CU. YD.	FILL VOLUME	17 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

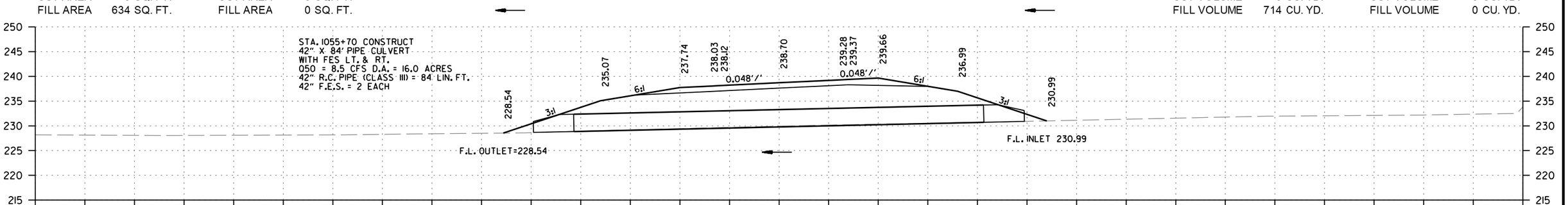
STA. 1052+00 TO STA. 1054+00

ah40219 6/21/2022
R020475.DGN

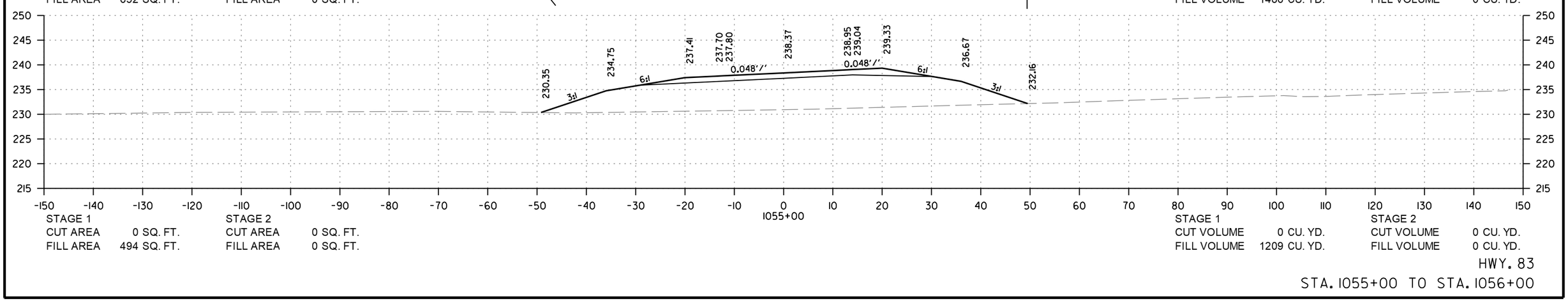
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	160	191
		CROSS SECTIONS				



STAGE 1 CUT AREA 0 SQ. FT. FILL AREA 634 SQ. FT.
STAGE 2 CUT AREA 0 SQ. FT. FILL AREA 0 SQ. FT.
STAGE 1 CUT VOLUME 0 CU. YD. FILL VOLUME 714 CU. YD.
STAGE 2 CUT VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.



STAGE 1 CUT AREA 0 SQ. FT. FILL AREA 652 SQ. FT.
STAGE 2 CUT AREA 0 SQ. FT. FILL AREA 0 SQ. FT.
STAGE 1 CUT VOLUME 0 CU. YD. FILL VOLUME 1486 CU. YD.
STAGE 2 CUT VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.



STAGE 1 CUT AREA 0 SQ. FT. FILL AREA 494 SQ. FT.
STAGE 2 CUT AREA 0 SQ. FT. FILL AREA 0 SQ. FT.
STAGE 1 CUT VOLUME 0 CU. YD. FILL VOLUME 1209 CU. YD.
STAGE 2 CUT VOLUME 0 CU. YD. FILL VOLUME 0 CU. YD.

HWY. 83

STA. 1055+00 TO STA. 1056+00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	161	191
		CROSS SECTIONS				

STAGE 1		STAGE 2	
CUT AREA	210 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT AREA	4 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	64 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	318 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	396 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	119 CU. YD.	FILL VOLUME	0 CU. YD.

STAGE 1		STAGE 2	
CUT VOLUME	7 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	707 CU. YD.	FILL VOLUME	0 CU. YD.

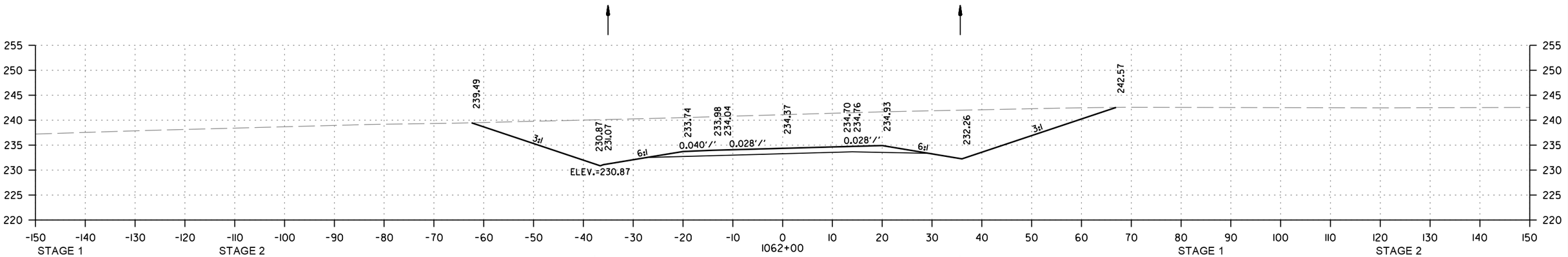
STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	1763 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1057+00 TO STA. 1059+00

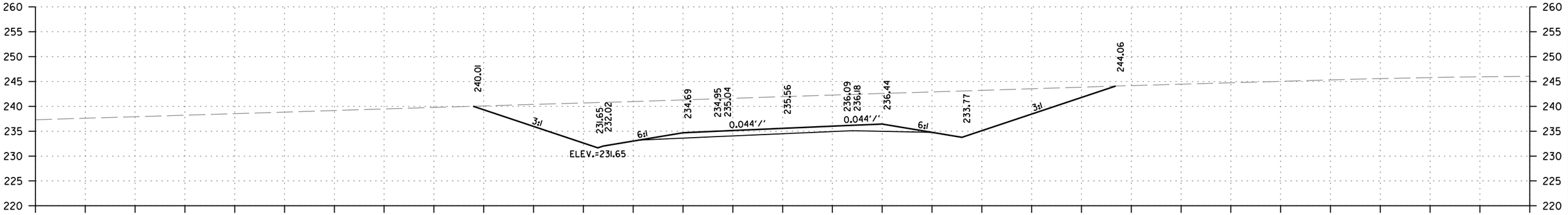
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	162	191
		CROSS SECTIONS				



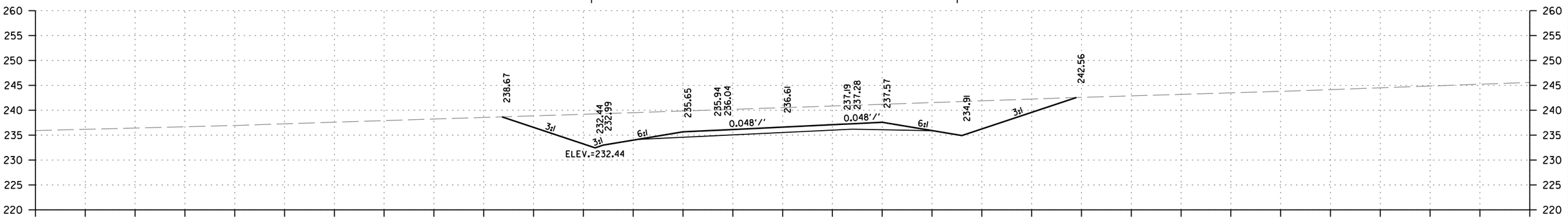
STAGE 1		STAGE 2	
CUT AREA	859 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	3169 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2	
CUT AREA	852 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	2569 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2	
CUT AREA	535 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

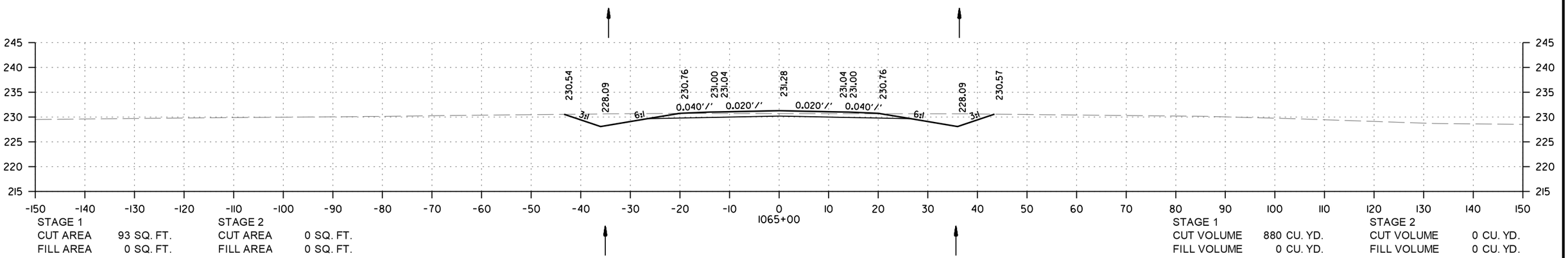
STAGE 1		STAGE 2	
CUT VOLUME	1380 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1060+00 TO STA. 1062+00

oh40219 6/21/2022
R020475.DGN

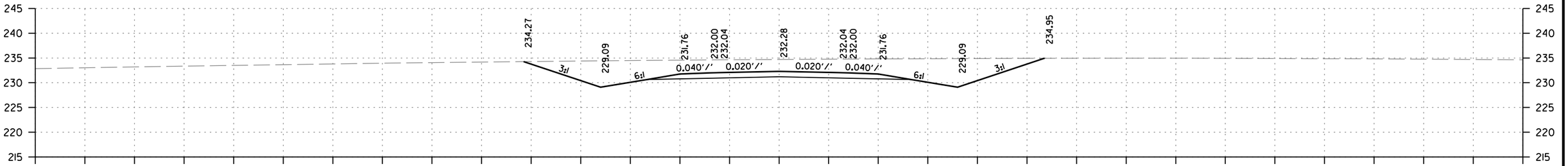
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	163	191
		CROSS SECTIONS				



1065+00

STAGE 1		STAGE 2	
CUT AREA	93 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

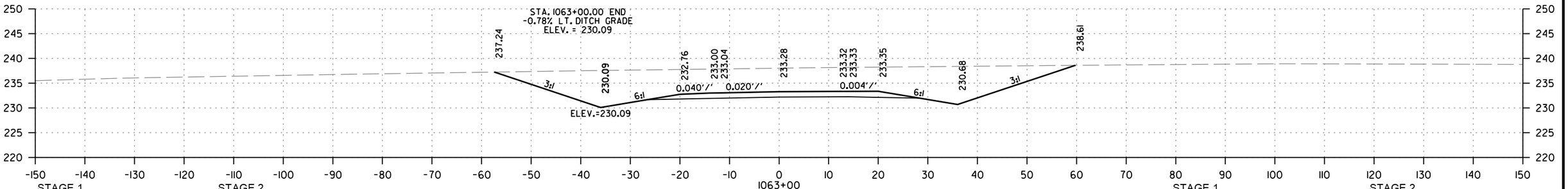
STAGE 1		STAGE 2	
CUT VOLUME	880 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



1064+00

STAGE 1		STAGE 2	
CUT AREA	382 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	1850 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



1063+00

STAGE 1		STAGE 2	
CUT AREA	617 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

STAGE 1		STAGE 2	
CUT VOLUME	2733 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1063+00 TO STA. 1065+00

oh40219 6/21/2022
R020475.DGN

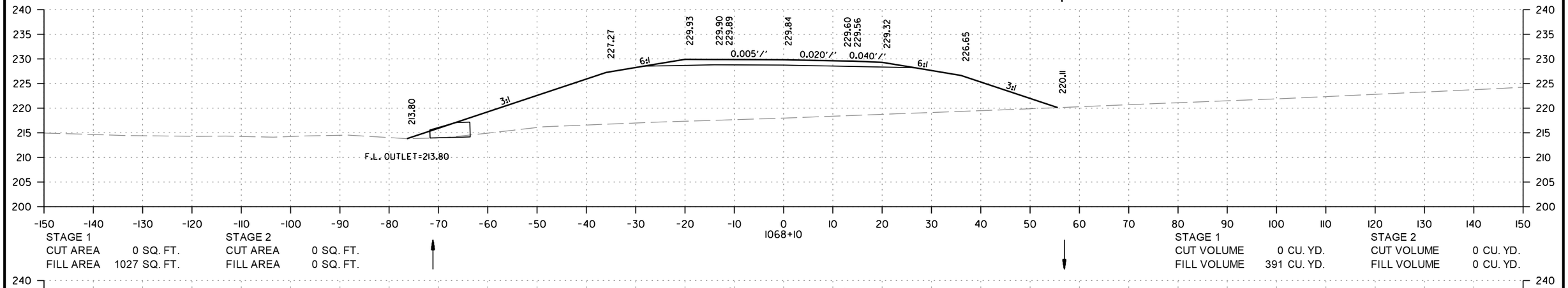
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	164	191
		CROSS SECTIONS				

HWY. 83

STA. 1066+00 TO STA. 1067+00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	165	191
		CROSS SECTIONS				



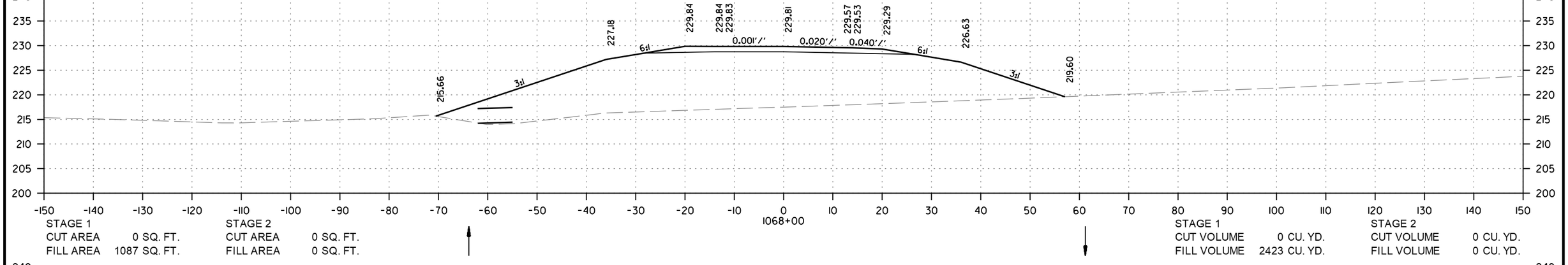
STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1027 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1068+10

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 391 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



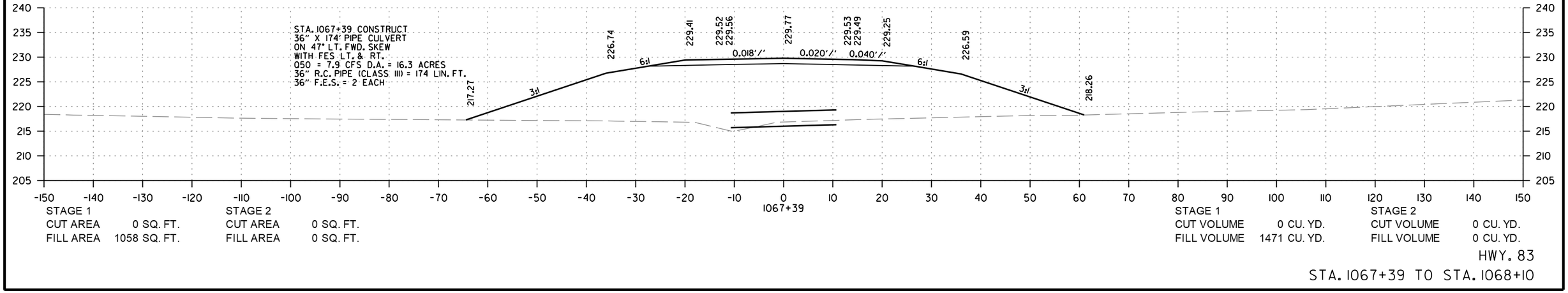
STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1087 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1068+00

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 2423 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1058 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1067+39

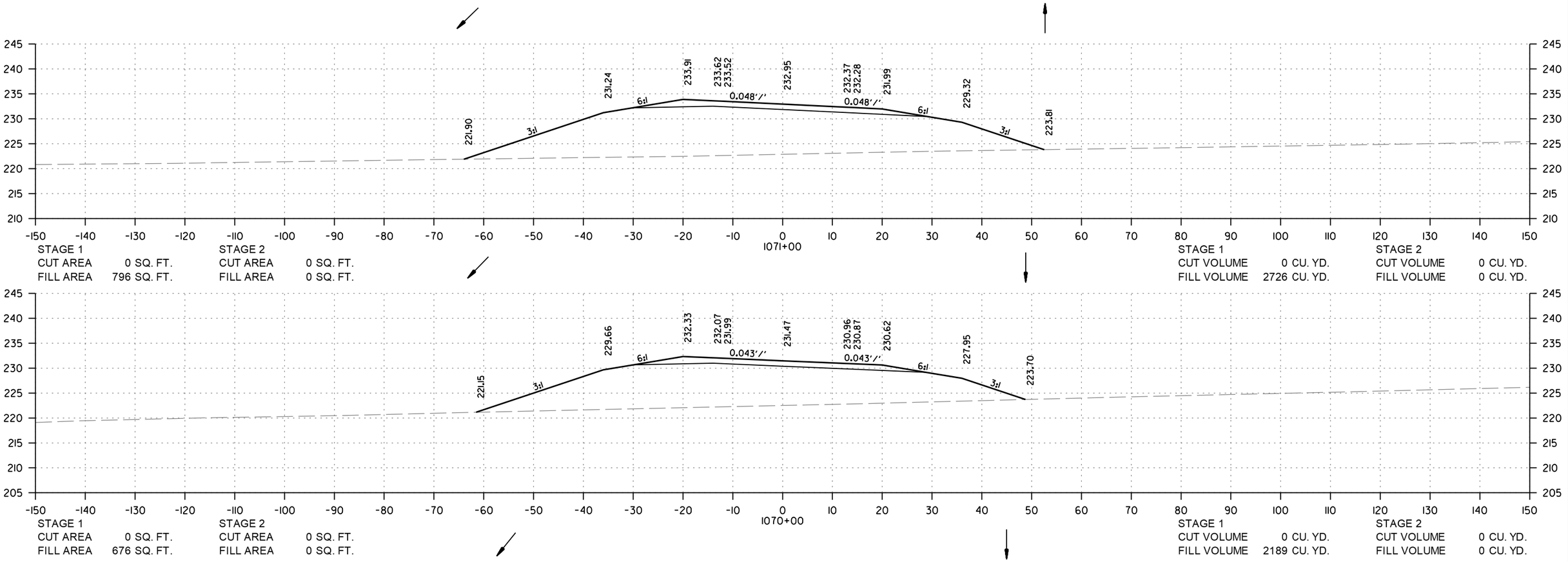
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 1471 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1067+39 TO STA. 1068+10

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	166	191
		CROSS SECTIONS				

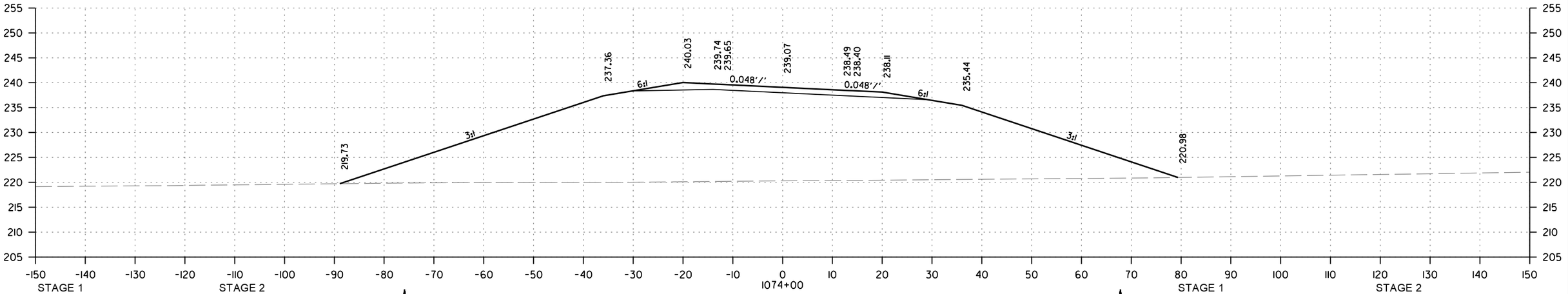


HWY. 83

STA. 1069+00 TO STA. 1071+00

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	167	191
		CROSS SECTIONS				

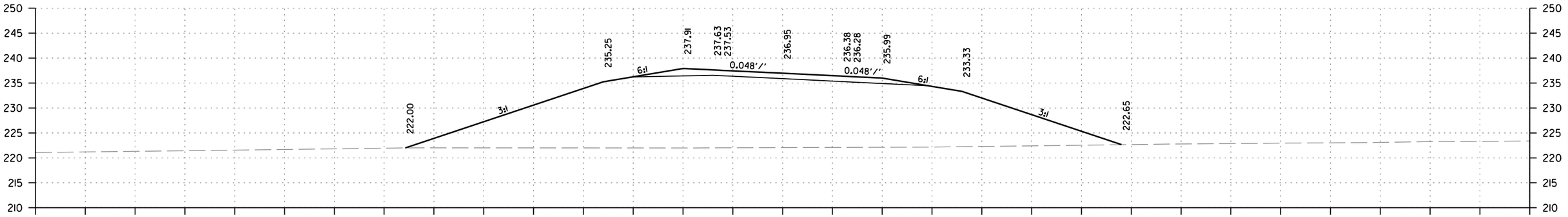


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 2032 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 6380 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

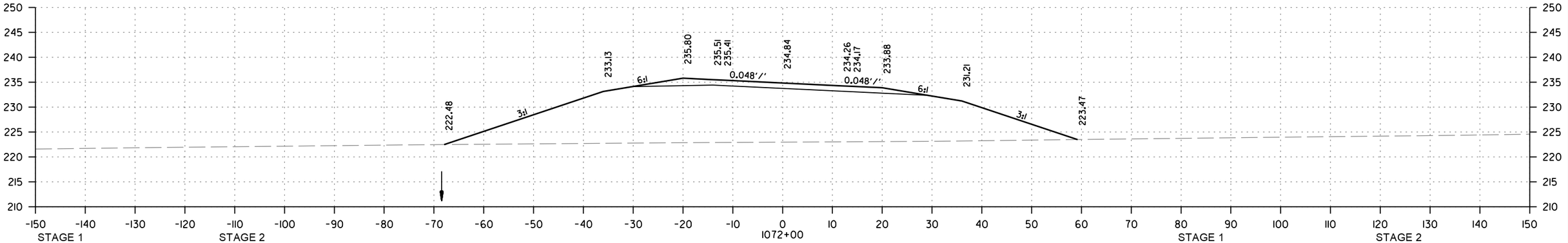


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1413 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 4494 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1014 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

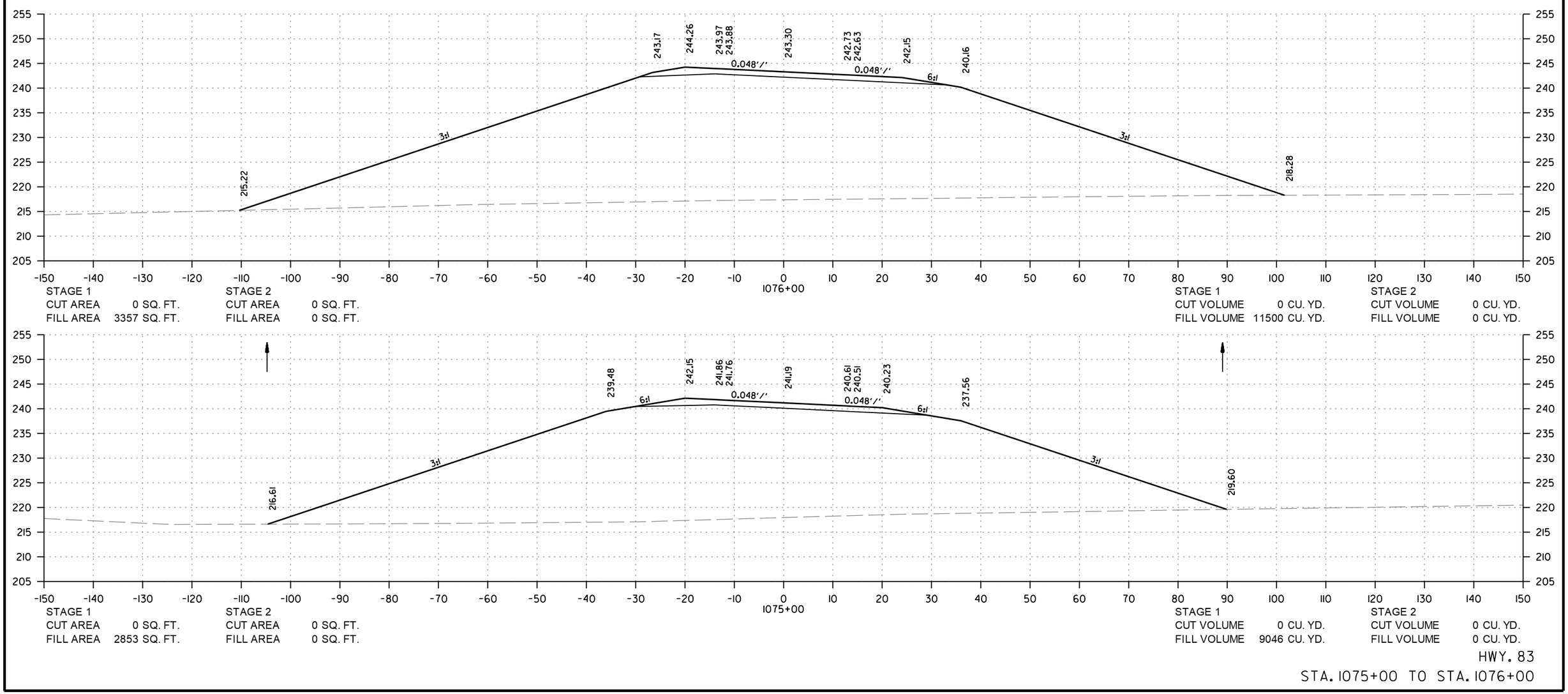
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 3352 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1072+00 TO STA. 1074+00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	168	191
		CROSS SECTIONS				

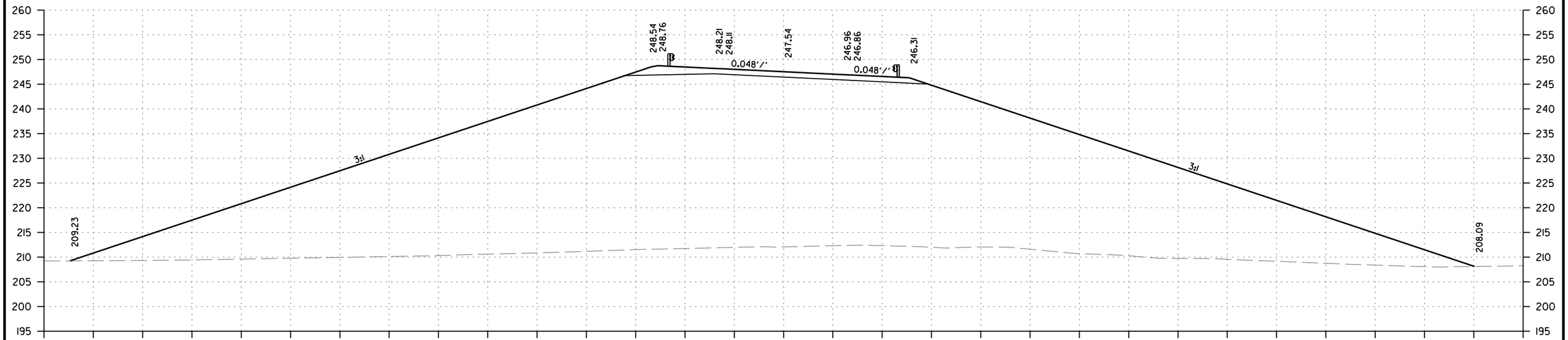


HWY. 83

STA. 1075+00 TO STA. 1076+00

oh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	169	191
		CROSS SECTIONS				

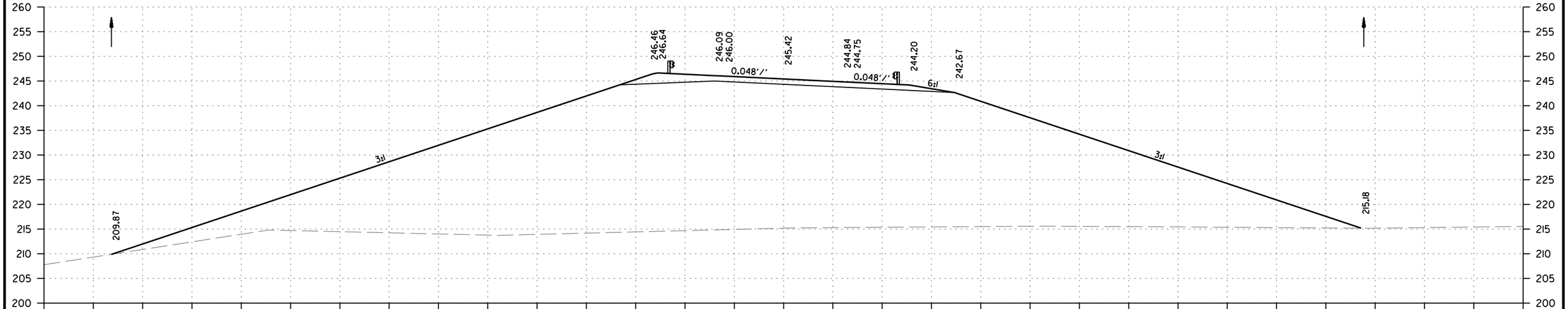


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 5981 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 19352 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 4469 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

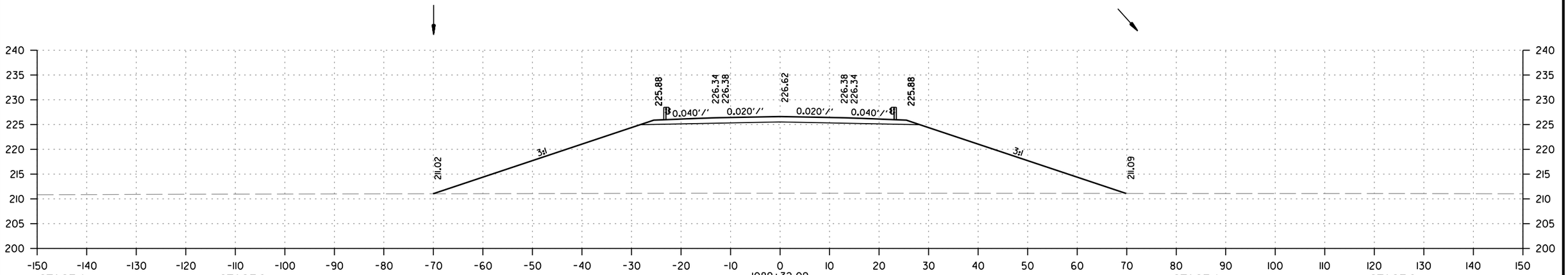
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 14493 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1077+00 TO STA. 1078+00

on40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	170	191
		CROSS SECTIONS				



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1375 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1089+32.09
BRIDGE END

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 471 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1089+13.60
TOE OF SLOPE

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

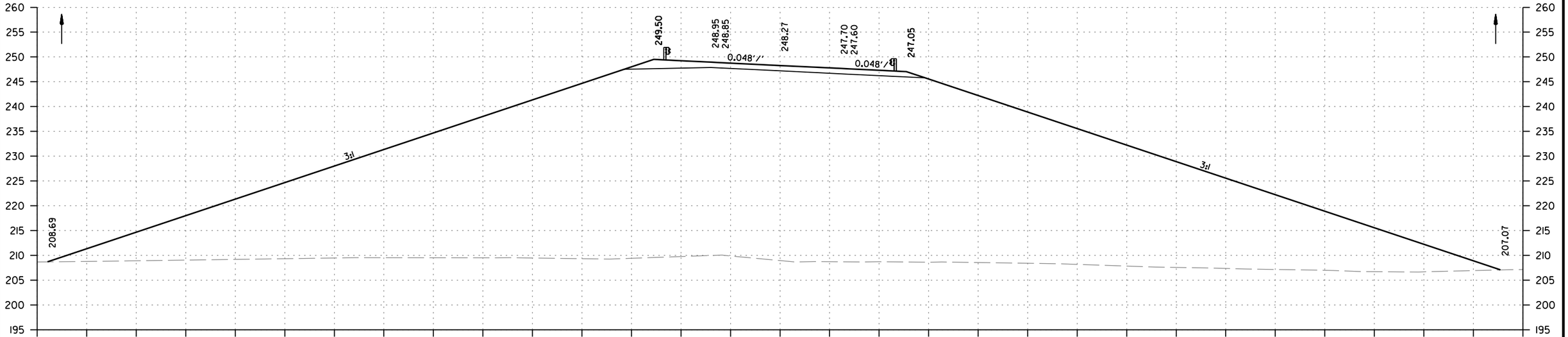
STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1079+48.77
TOE OF SLOPE

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 14106 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 6690 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

1078+34.91
BRIDGE END

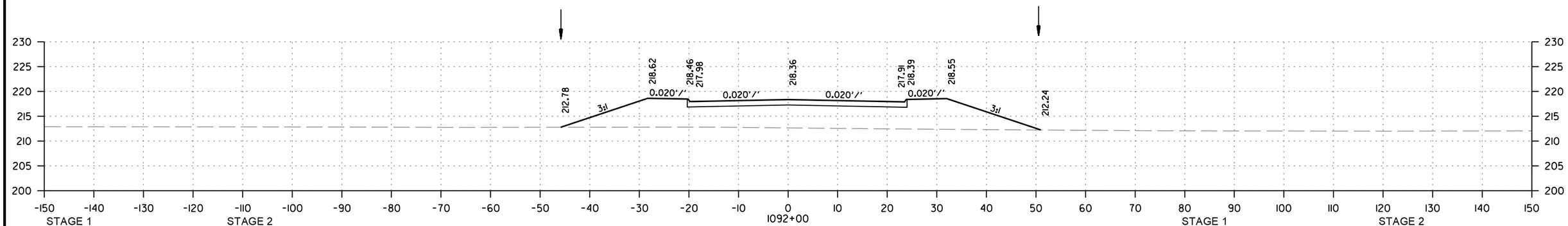
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 8192 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1078+34.91 TO STA. 1089+32.09

dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	171	191
		CROSS SECTIONS				

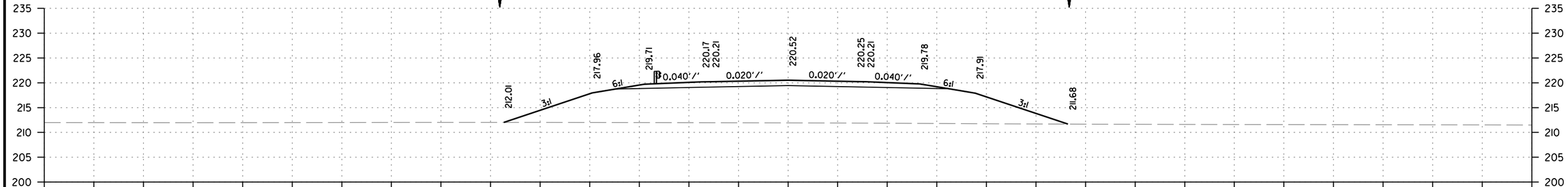


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 400 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 1959 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

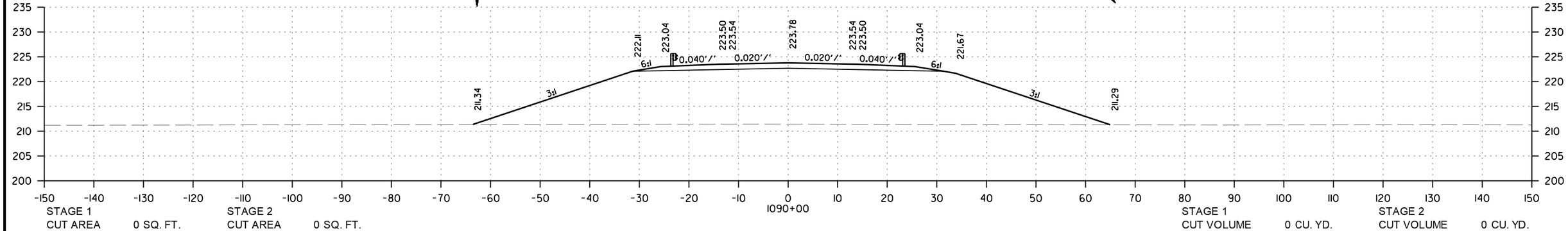


STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 658 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 3159 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.



STAGE 1
CUT AREA 0 SQ. FT.
FILL AREA 1048 SQ. FT.

STAGE 2
CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

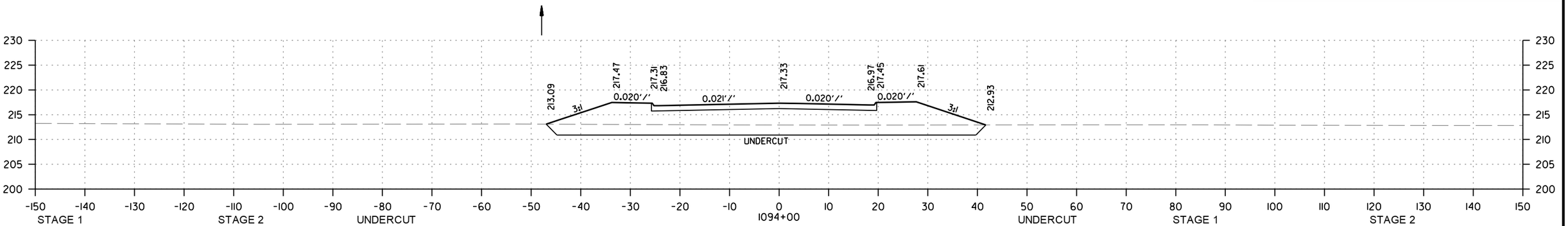
STAGE 1
CUT VOLUME 0 CU. YD.
FILL VOLUME 3047 CU. YD.

STAGE 2
CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

HWY. 83
STA. 1090+00 TO STA. 1092+00

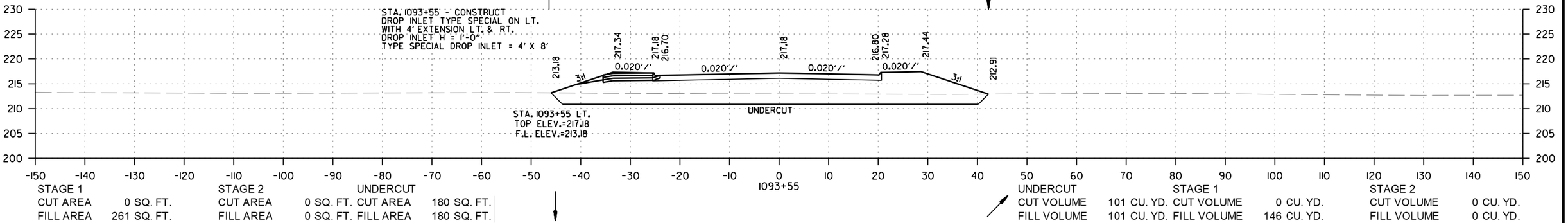
dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	172	191
		CROSS SECTIONS				



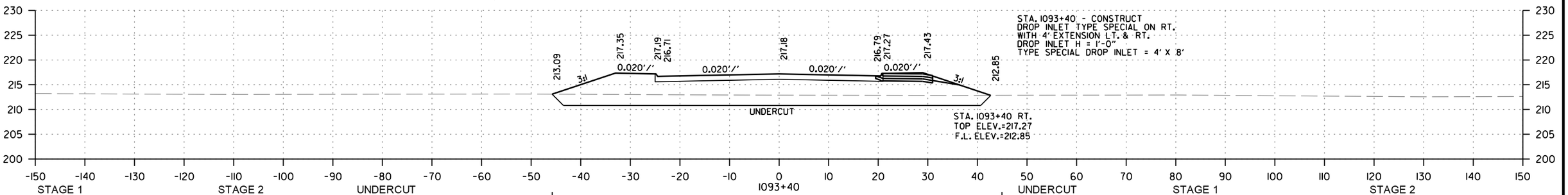
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	177 SQ. FT.
FILL AREA	274 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	177 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	298 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	298 CU. YD.	FILL VOLUME	446 CU. YD.	FILL VOLUME	0 CU. YD.



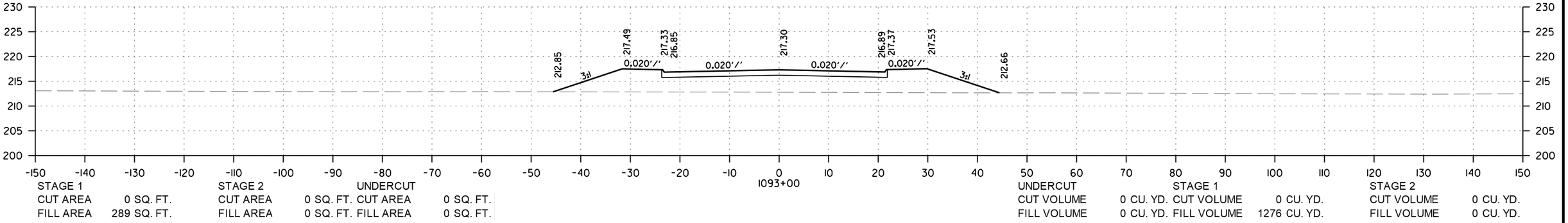
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	180 SQ. FT.
FILL AREA	261 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	180 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	101 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	101 CU. YD.	FILL VOLUME	146 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	182 SQ. FT.
FILL AREA	265 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	182 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	410 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	289 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

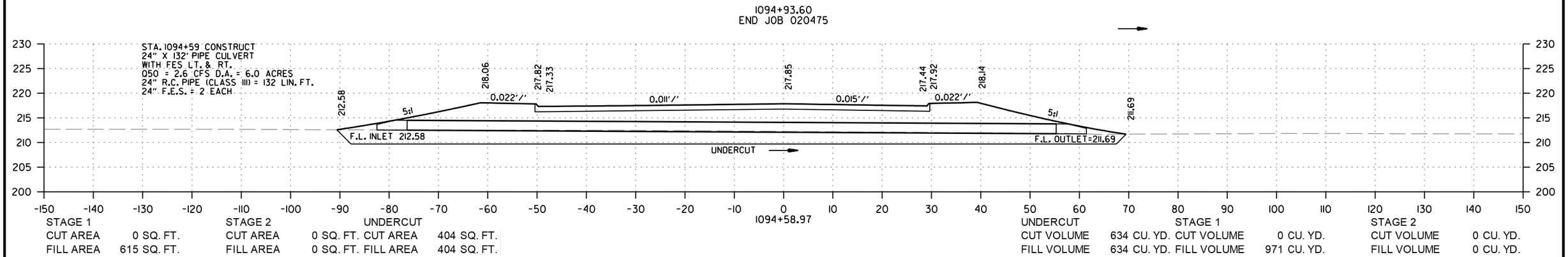
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	1276 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1093+00 TO STA. 1094+00

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	173	191
		CROSS SECTIONS				



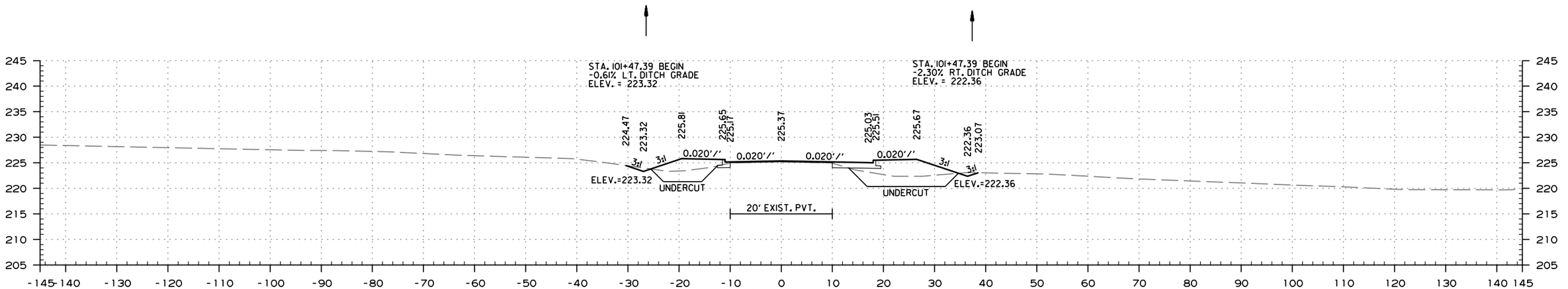
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	404 SQ. FT.	CUT VOLUME	634 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	615 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	404 SQ. FT.	FILL VOLUME	634 CU. YD.	FILL VOLUME	971 CU. YD.	FILL VOLUME	0 CU. YD.

HWY. 83

STA. 1094+58.97 TO STA. 1094+58.97

6/21/2022
dh40219
R020475.DGN

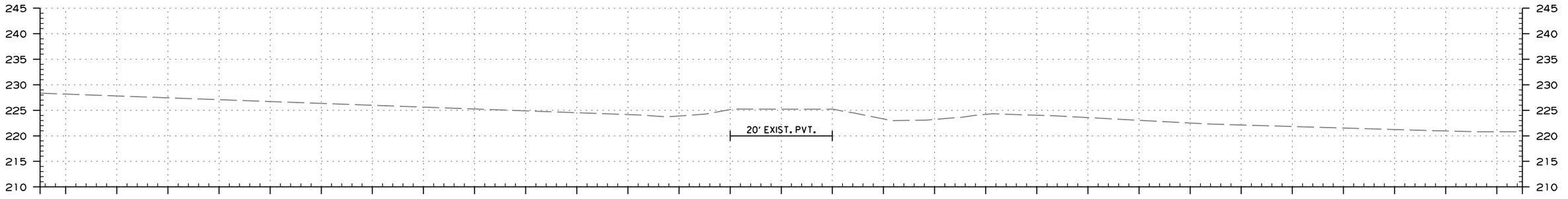
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	174	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	3 SQ. FT.	CUT AREA	3 SQ. FT.	CUT AREA	65 SQ. FT.
FILL AREA	22 SQ. FT.	FILL AREA	41 SQ. FT.	FILL AREA	65 SQ. FT.

101+47.39
END 100' TRANSITION
BEGIN JORDAN DR.

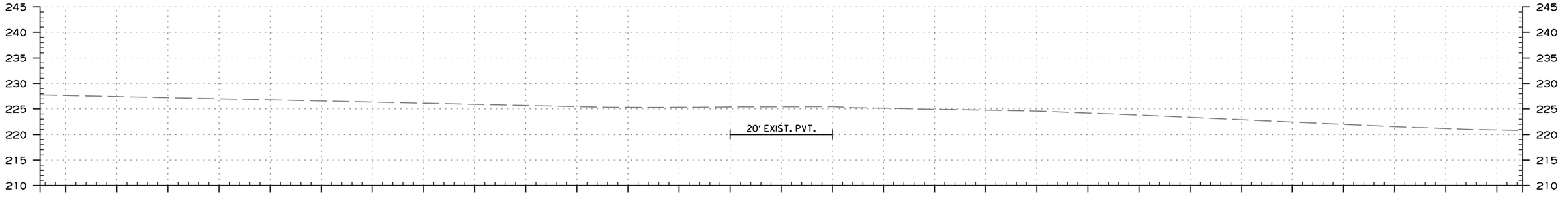
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	57 CU. YD.	CUT VOLUME	3 CU. YD.	CUT VOLUME	3 CU. YD.
FILL VOLUME	57 CU. YD.	FILL VOLUME	19 CU. YD.	FILL VOLUME	36 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

101+00.00

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

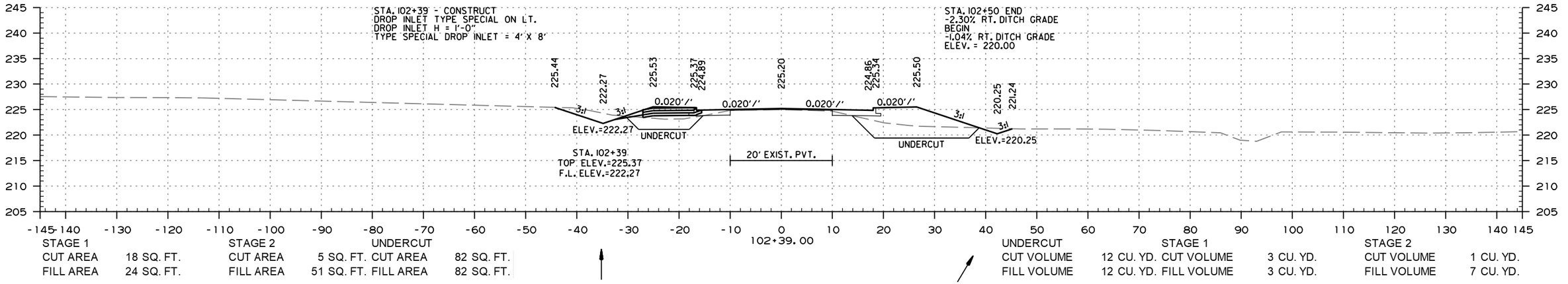
100+47.39
BEGIN 100' TRANSITION

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

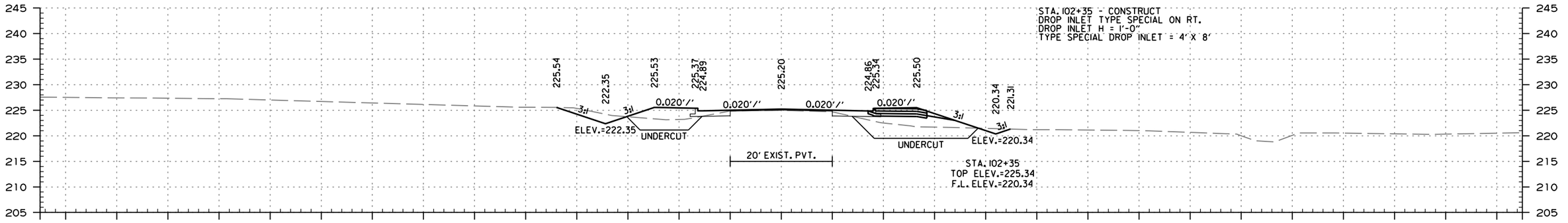
JORDAN DR.
STA. 100+47.39 TO STA. 101+47.39

on40219 6/21/2022
R020475.DGN

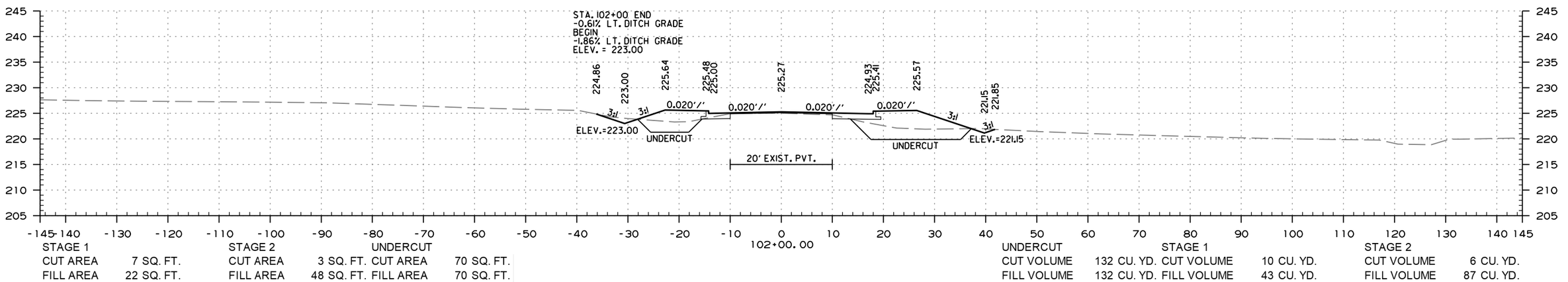
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	175	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	18 SQ. FT.	CUT AREA	5 SQ. FT.	CUT AREA	82 SQ. FT.	CUT VOLUME	12 CU. YD.	CUT VOLUME	3 CU. YD.	CUT VOLUME	1 CU. YD.
FILL AREA	24 SQ. FT.	FILL AREA	51 SQ. FT.	FILL AREA	82 SQ. FT.	FILL VOLUME	12 CU. YD.	FILL VOLUME	3 CU. YD.	FILL VOLUME	7 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	17 SQ. FT.	CUT AREA	5 SQ. FT.	CUT AREA	80 SQ. FT.	CUT VOLUME	97 CU. YD.	CUT VOLUME	16 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	23 SQ. FT.	FILL AREA	50 SQ. FT.	FILL AREA	80 SQ. FT.	FILL VOLUME	97 CU. YD.	FILL VOLUME	29 CU. YD.	FILL VOLUME	64 CU. YD.



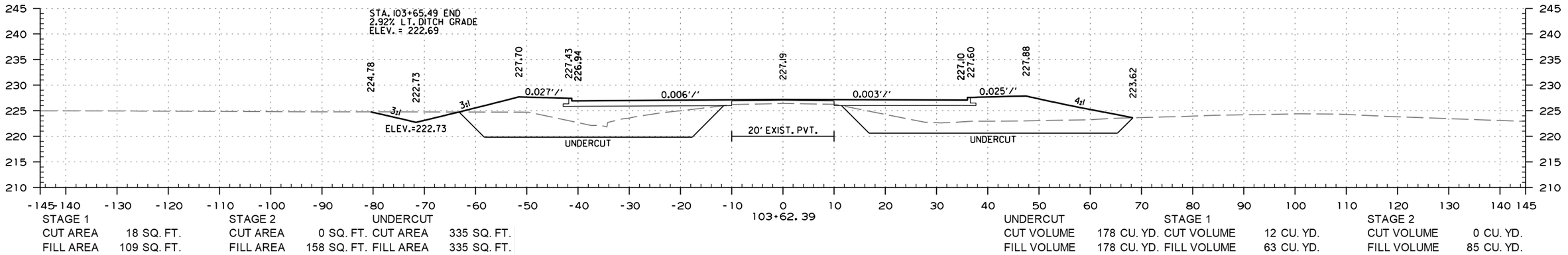
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	7 SQ. FT.	CUT AREA	3 SQ. FT.	CUT AREA	70 SQ. FT.	CUT VOLUME	132 CU. YD.	CUT VOLUME	10 CU. YD.	CUT VOLUME	6 CU. YD.
FILL AREA	22 SQ. FT.	FILL AREA	48 SQ. FT.	FILL AREA	70 SQ. FT.	FILL VOLUME	132 CU. YD.	FILL VOLUME	43 CU. YD.	FILL VOLUME	87 CU. YD.

JORDAN DR.

STA. 102+00.00 TO STA. 102+39.00

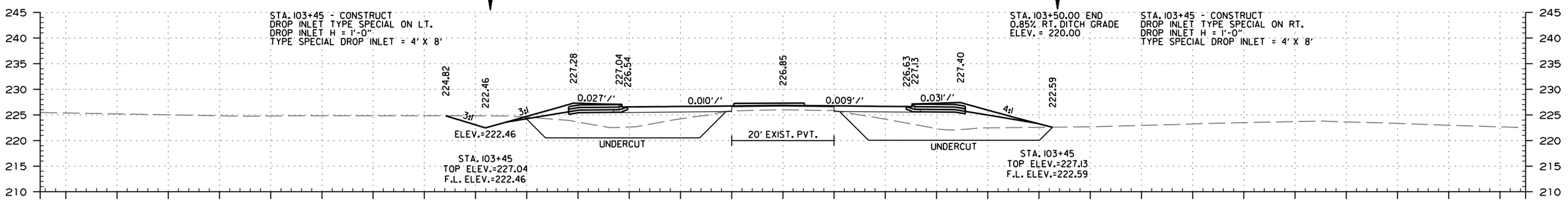
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	176	191
		CROSS SECTIONS				



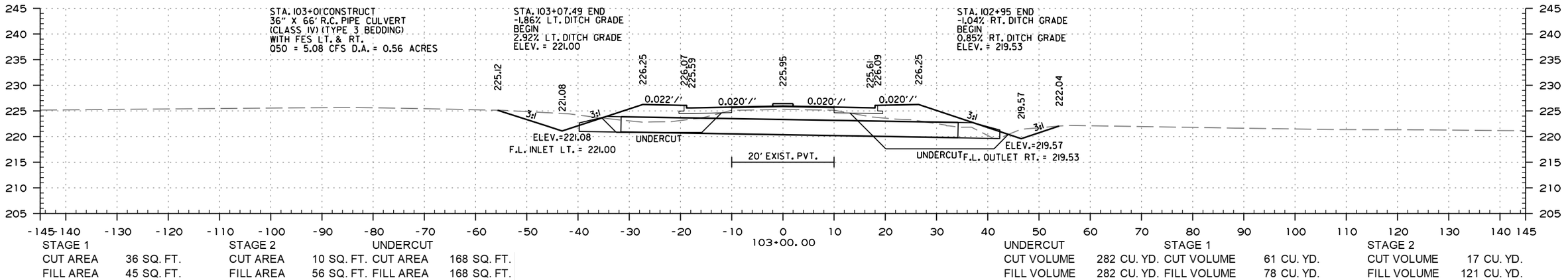
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	18 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	335 SQ. FT.
FILL AREA	109 SQ. FT.	FILL AREA	158 SQ. FT.	FILL AREA	335 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	178 CU. YD.	CUT VOLUME	12 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	178 CU. YD.	FILL VOLUME	63 CU. YD.	FILL VOLUME	85 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	19 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	217 SQ. FT.
FILL AREA	86 SQ. FT.	FILL AREA	105 SQ. FT.	FILL AREA	217 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	321 CU. YD.	CUT VOLUME	46 CU. YD.	CUT VOLUME	8 CU. YD.
FILL VOLUME	321 CU. YD.	FILL VOLUME	109 CU. YD.	FILL VOLUME	134 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	36 SQ. FT.	CUT AREA	10 SQ. FT.	CUT AREA	168 SQ. FT.
FILL AREA	45 SQ. FT.	FILL AREA	56 SQ. FT.	FILL AREA	168 SQ. FT.

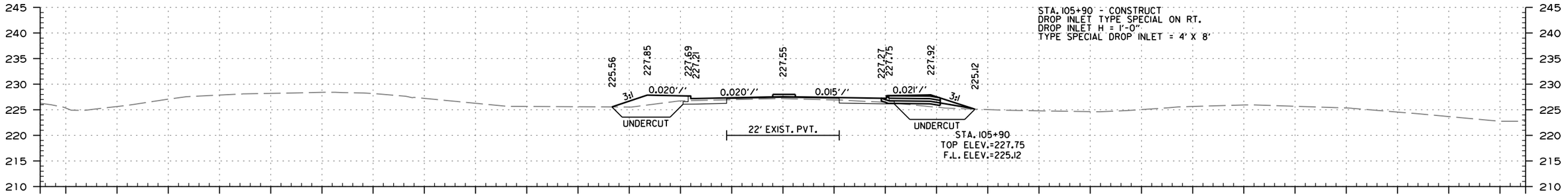
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	282 CU. YD.	CUT VOLUME	61 CU. YD.	CUT VOLUME	17 CU. YD.
FILL VOLUME	282 CU. YD.	FILL VOLUME	78 CU. YD.	FILL VOLUME	121 CU. YD.

JORDAN DR.

STA. 103+00.00 TO STA. 103+62.39

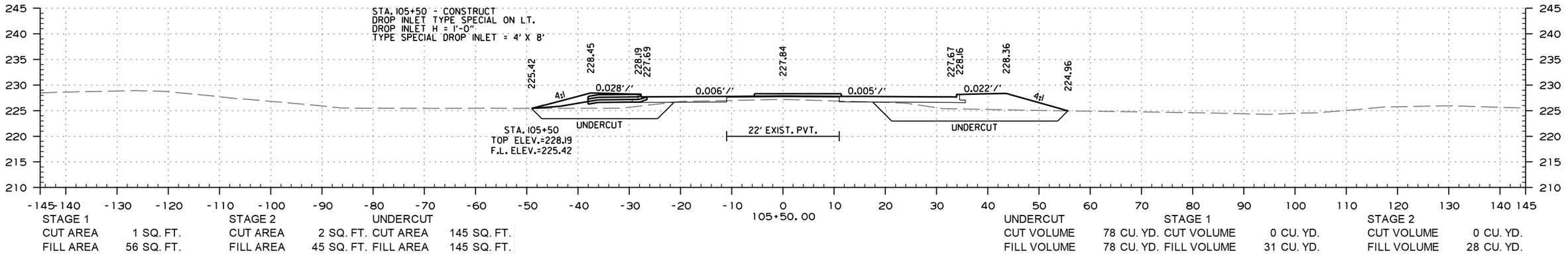
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	177	191
		CROSS SECTIONS				



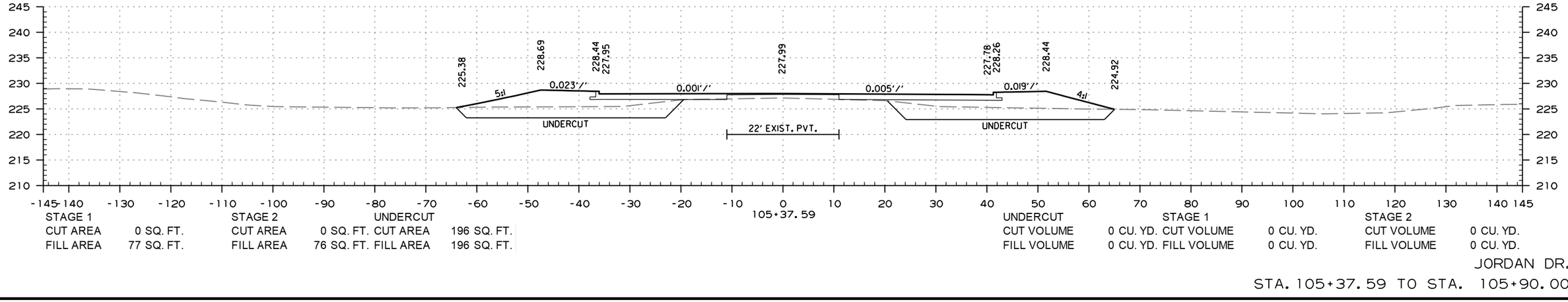
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	5 SQ. FT.	CUT AREA	6 SQ. FT.	CUT AREA	62 SQ. FT.
FILL AREA	25 SQ. FT.	FILL AREA	18 SQ. FT.	FILL AREA	62 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	153 CU. YD.	CUT VOLUME	4 CU. YD.	CUT VOLUME	6 CU. YD.
FILL VOLUME	153 CU. YD.	FILL VOLUME	60 CU. YD.	FILL VOLUME	47 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	1 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	145 SQ. FT.
FILL AREA	56 SQ. FT.	FILL AREA	45 SQ. FT.	FILL AREA	145 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	78 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	78 CU. YD.	FILL VOLUME	31 CU. YD.	FILL VOLUME	28 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	196 SQ. FT.
FILL AREA	77 SQ. FT.	FILL AREA	76 SQ. FT.	FILL AREA	196 SQ. FT.

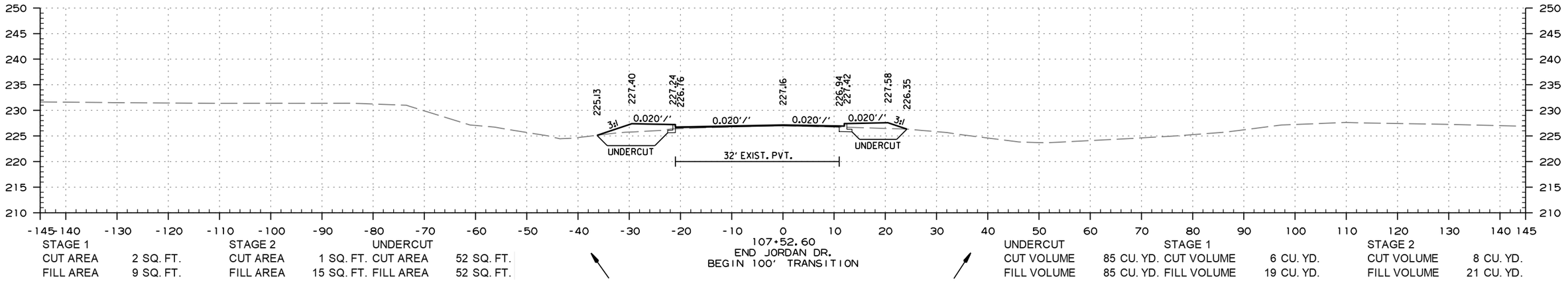
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

JORDAN DR.

STA. 105+37.59 TO STA. 105+90.00

qh40219 6/21/2022
R020475.DGN

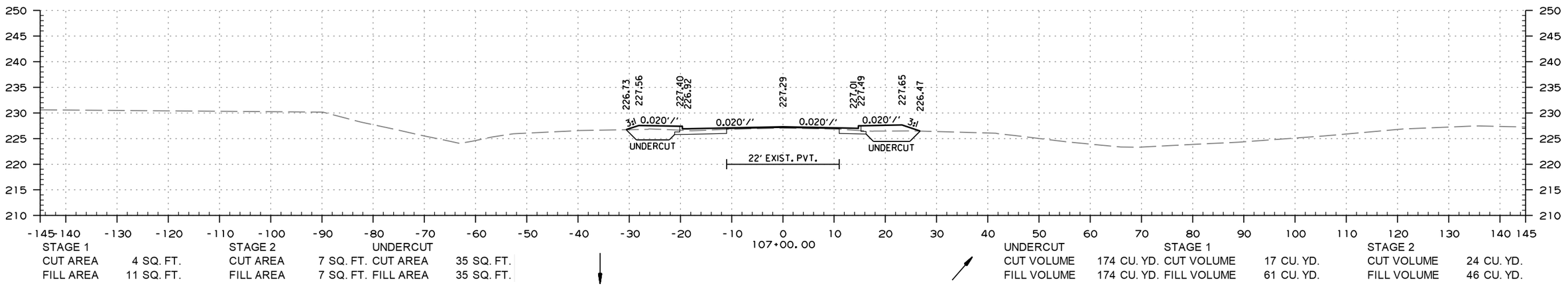
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	178	191
		CROSS SECTIONS				



107+52.60
END JORDAN DR.
BEGIN 100' TRANSITION

STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	1 SQ. FT.	CUT AREA	52 SQ. FT.
FILL AREA	9 SQ. FT.	FILL AREA	15 SQ. FT.	FILL AREA	52 SQ. FT.

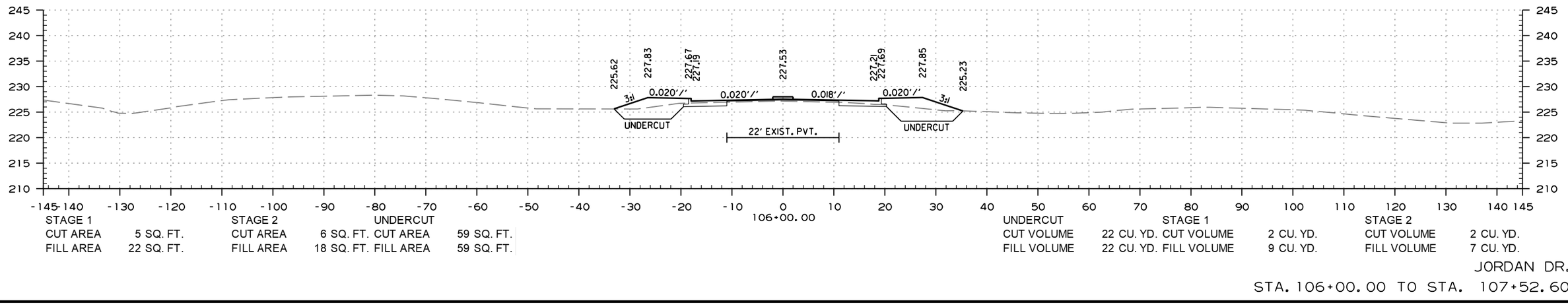
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	85 CU. YD.	CUT VOLUME	6 CU. YD.	CUT VOLUME	8 CU. YD.
FILL VOLUME	85 CU. YD.	FILL VOLUME	19 CU. YD.	FILL VOLUME	21 CU. YD.



107+00.00

STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	4 SQ. FT.	CUT AREA	7 SQ. FT.	CUT AREA	35 SQ. FT.
FILL AREA	11 SQ. FT.	FILL AREA	7 SQ. FT.	FILL AREA	35 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	174 CU. YD.	CUT VOLUME	17 CU. YD.	CUT VOLUME	24 CU. YD.
FILL VOLUME	174 CU. YD.	FILL VOLUME	61 CU. YD.	FILL VOLUME	46 CU. YD.



106+00.00

STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	5 SQ. FT.	CUT AREA	6 SQ. FT.	CUT AREA	59 SQ. FT.
FILL AREA	22 SQ. FT.	FILL AREA	18 SQ. FT.	FILL AREA	59 SQ. FT.

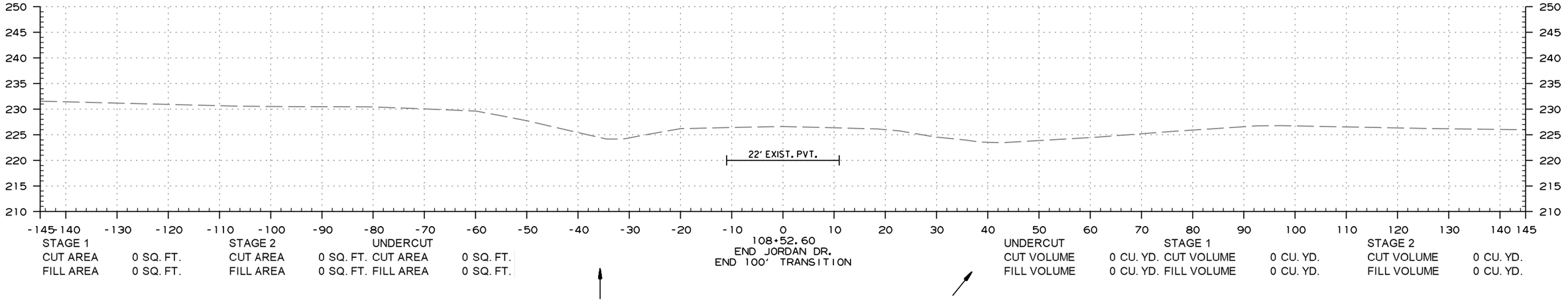
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	22 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	2 CU. YD.
FILL VOLUME	22 CU. YD.	FILL VOLUME	9 CU. YD.	FILL VOLUME	7 CU. YD.

JORDAN DR.

STA. 106+00.00 TO STA. 107+52.60

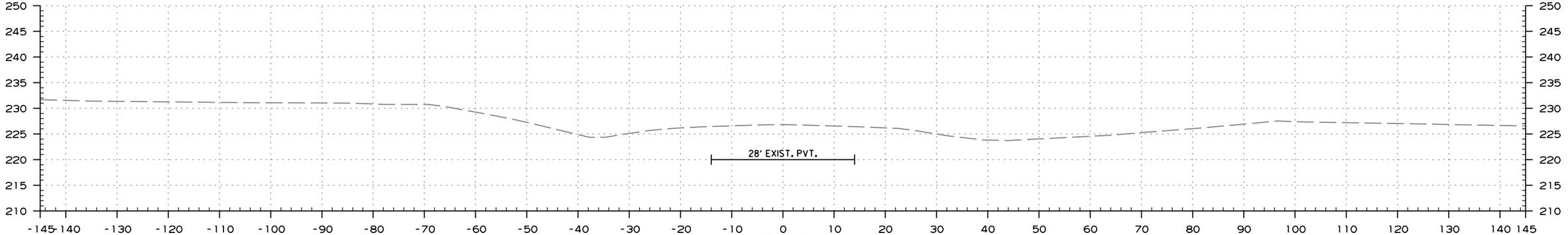
dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	179	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

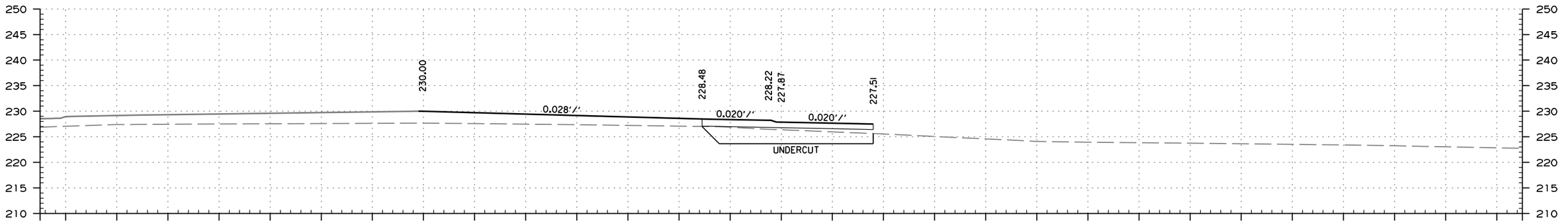
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	46 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	46 CU. YD.	FILL VOLUME	8 CU. YD.	FILL VOLUME	13 CU. YD.

JORDAN DR.

STA. 108+00.00 TO STA. 108+52.60

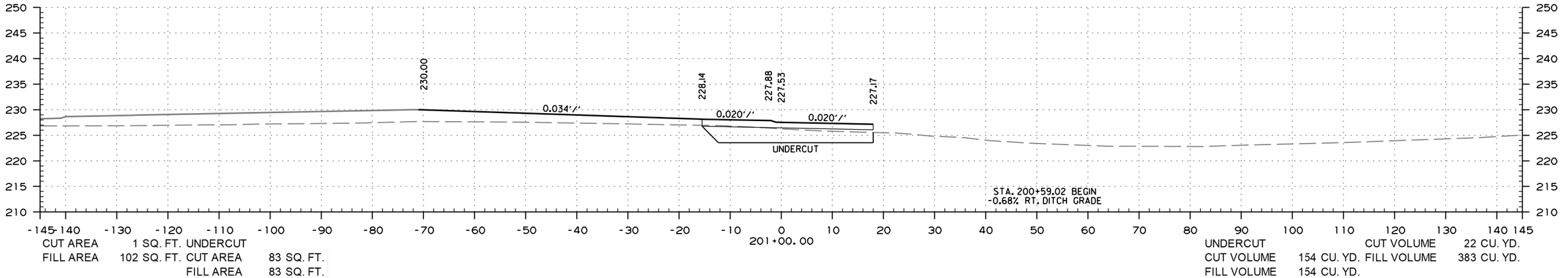
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	180	191
		CROSS SECTIONS				



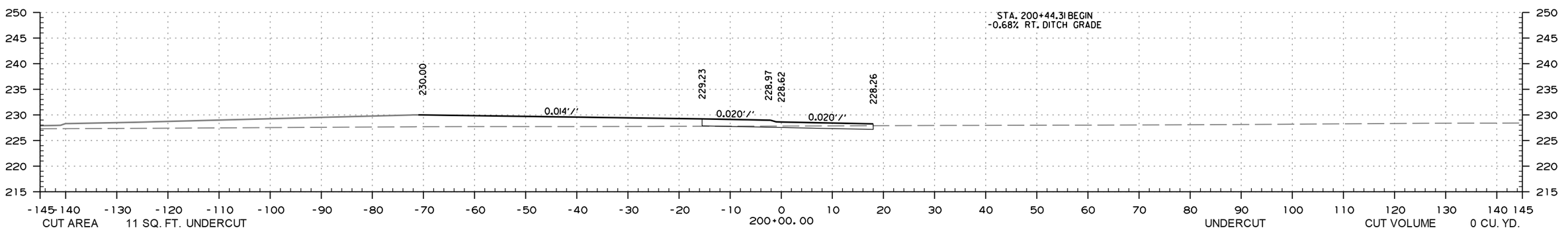
CUT AREA	0 SQ. FT.	UNDERCUT	
FILL AREA	117 SQ. FT.	CUT AREA	84 SQ. FT.
		FILL AREA	84 SQ. FT.

UNDERCUT		CUT VOLUME	2 CU. YD.
CUT VOLUME	309 CU. YD.	FILL VOLUME	406 CU. YD.
FILL VOLUME	309 CU. YD.		



CUT AREA	1 SQ. FT.	UNDERCUT	
FILL AREA	102 SQ. FT.	CUT AREA	83 SQ. FT.
		FILL AREA	83 SQ. FT.

UNDERCUT		CUT VOLUME	22 CU. YD.
CUT VOLUME	154 CU. YD.	FILL VOLUME	383 CU. YD.
FILL VOLUME	154 CU. YD.		



CUT AREA	11 SQ. FT.	UNDERCUT	
FILL AREA	105 SQ. FT.	CUT AREA	0 SQ. FT.
		FILL AREA	0 SQ. FT.

UNDERCUT		CUT VOLUME	0 CU. YD.
CUT VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.		

ROUNDABOUT 1

STA. 200+00.00 TO STA. 202+00.00

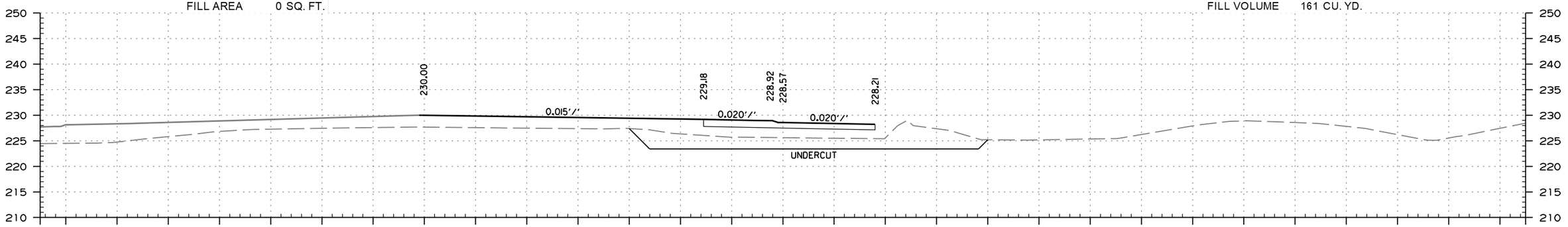
dh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	181	191
		CROSS SECTIONS				

CUT AREA 11 SQ. FT. UNDERCUT
FILL AREA 105 SQ. FT. CUT AREA 0 SQ. FT.
FILL AREA 0 SQ. FT.

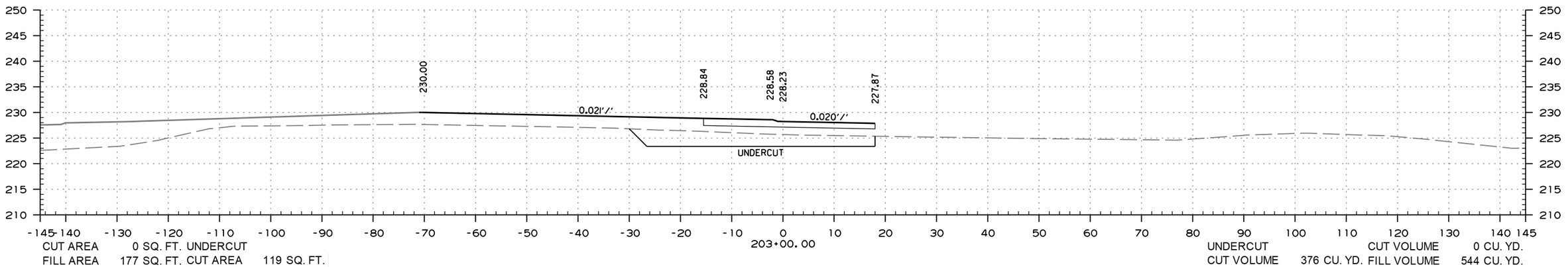
204+46.11

UNDERCUT CUT VOLUME 9 CU. YD.
CUT VOLUME 161 CU. YD. FILL VOLUME 252 CU. YD.
FILL VOLUME 161 CU. YD.



CUT AREA 0 SQ. FT. UNDERCUT
FILL AREA 190 SQ. FT. CUT AREA 188 SQ. FT.
FILL AREA 188 SQ. FT.

UNDERCUT CUT VOLUME 0 CU. YD.
CUT VOLUME 569 CU. YD. FILL VOLUME 680 CU. YD.
FILL VOLUME 569 CU. YD.



CUT AREA 0 SQ. FT. UNDERCUT
FILL AREA 177 SQ. FT. CUT AREA 119 SQ. FT.
FILL AREA 119 SQ. FT.

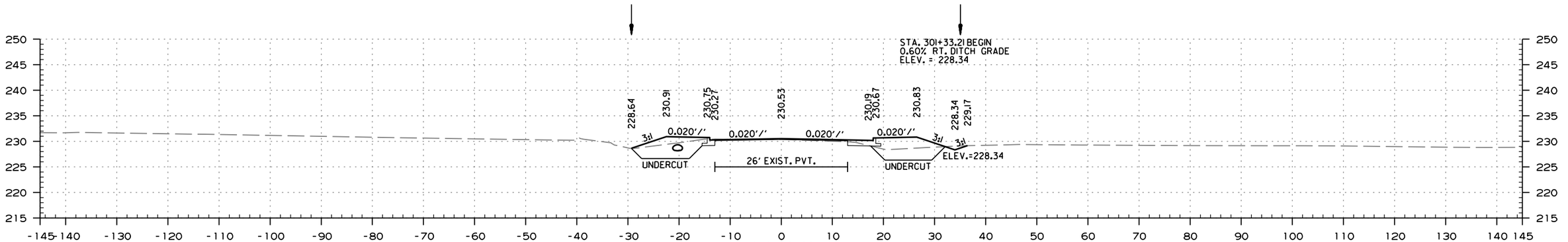
UNDERCUT CUT VOLUME 0 CU. YD.
CUT VOLUME 376 CU. YD. FILL VOLUME 544 CU. YD.
FILL VOLUME 376 CU. YD.

ROUNDABOUT 1

STA. 203+00.00 TO STA. 204+00.00

dh40219 6/21/2022
R020475.DGN

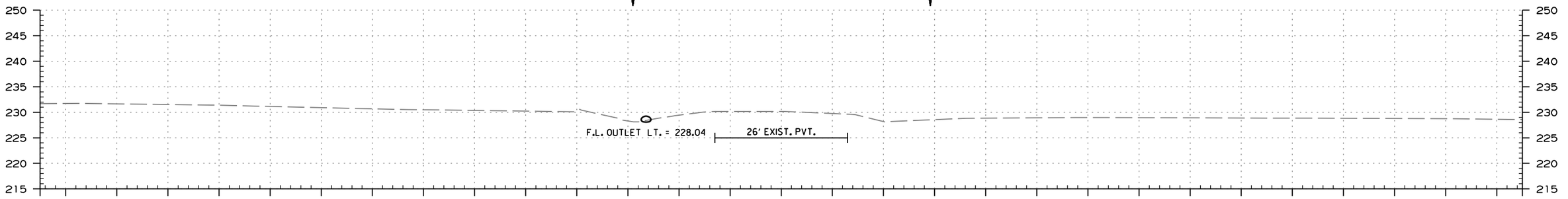
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	182	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	4 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	61 SQ. FT.
FILL AREA	13 SQ. FT.	FILL AREA	23 SQ. FT.	FILL AREA	61 SQ. FT.

301+33.21
END 100' TRANSITION
BEGIN OLD WARREN RD.

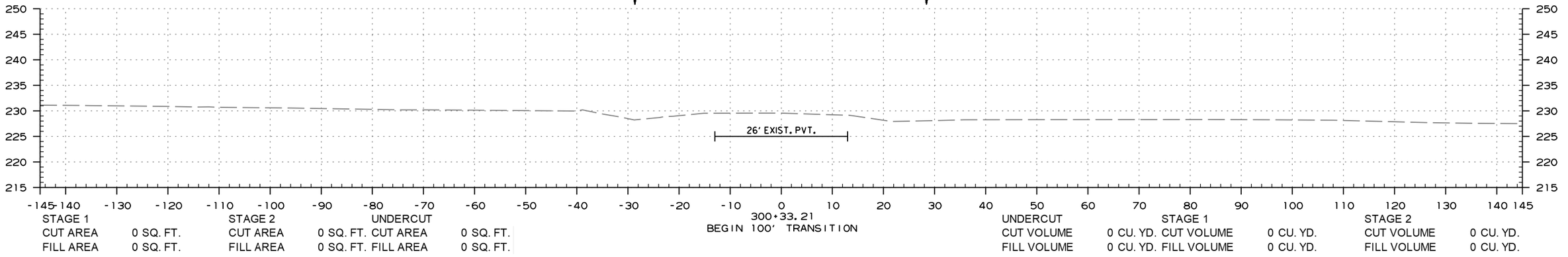
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	38 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	2 CU. YD.
FILL VOLUME	38 CU. YD.	FILL VOLUME	8 CU. YD.	FILL VOLUME	14 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

301+00.00

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.

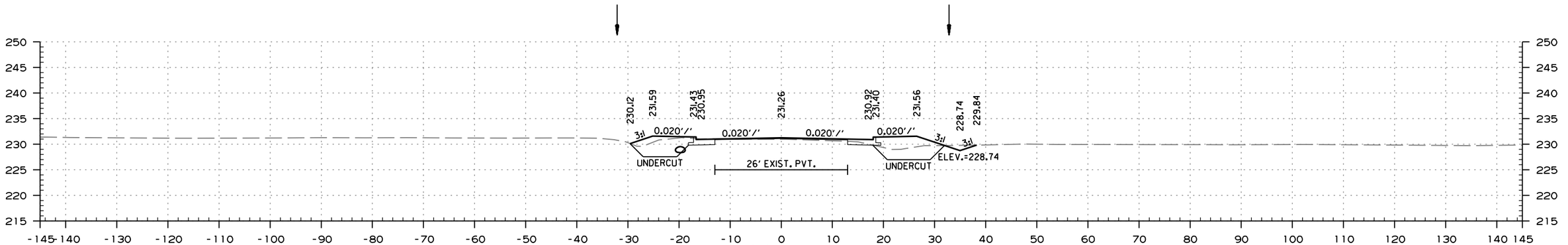
300+33.21
BEGIN 100' TRANSITION

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

OLD WARREN RD.
STA. 300+33.21 TO STA. 301+33.21

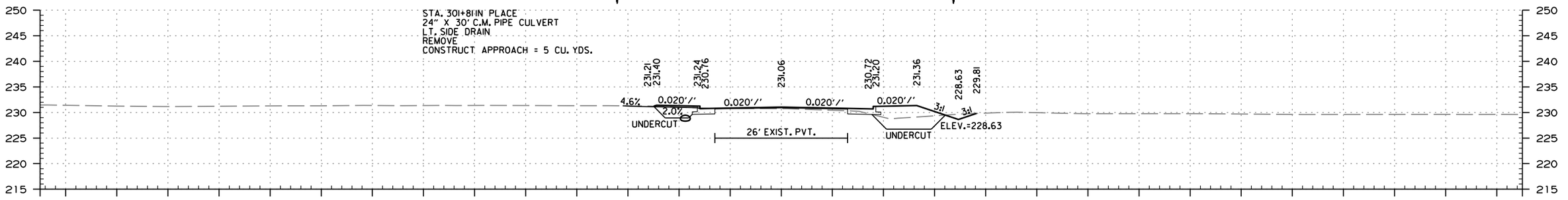
on40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	183	191
		CROSS SECTIONS				



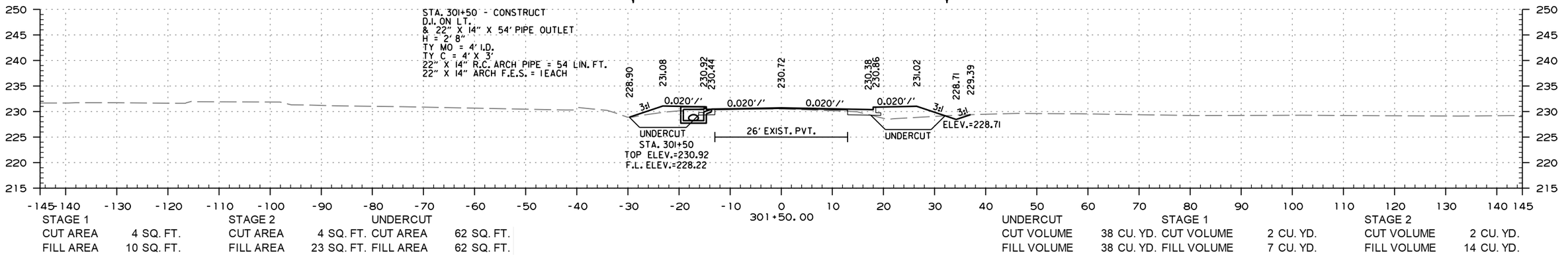
302+00.00

STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	6 SQ. FT.	CUT AREA	5 SQ. FT.	CUT AREA	56 SQ. FT.	CUT VOLUME	34 CU. YD.	CUT VOLUME	4 CU. YD.	CUT VOLUME	4 CU. YD.
FILL AREA	8 SQ. FT.	FILL AREA	23 SQ. FT.	FILL AREA	56 SQ. FT.	FILL VOLUME	34 CU. YD.	FILL VOLUME	4 CU. YD.	FILL VOLUME	17 CU. YD.



301+81.00

STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	5 SQ. FT.	CUT AREA	5 SQ. FT.	CUT AREA	40 SQ. FT.	CUT VOLUME	59 CU. YD.	CUT VOLUME	5 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	2 SQ. FT.	FILL AREA	24 SQ. FT.	FILL AREA	40 SQ. FT.	FILL VOLUME	59 CU. YD.	FILL VOLUME	7 CU. YD.	FILL VOLUME	27 CU. YD.



301+50.00

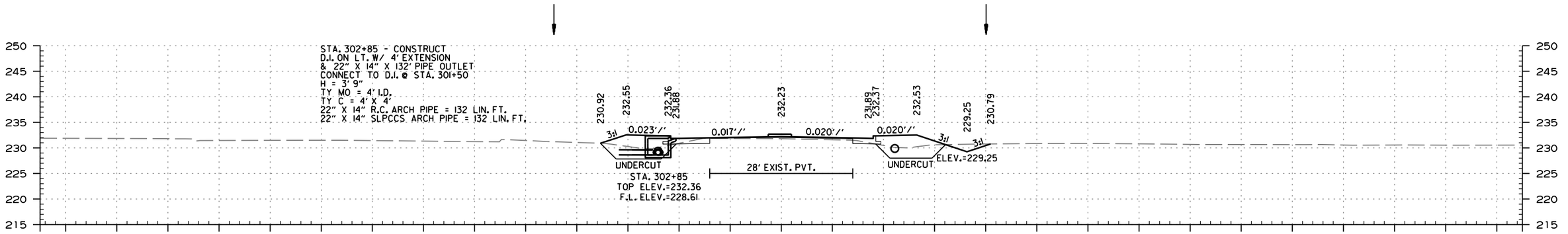
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	4 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	62 SQ. FT.	CUT VOLUME	38 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	2 CU. YD.
FILL AREA	10 SQ. FT.	FILL AREA	23 SQ. FT.	FILL AREA	62 SQ. FT.	FILL VOLUME	38 CU. YD.	FILL VOLUME	7 CU. YD.	FILL VOLUME	14 CU. YD.

OLD WARREN RD.

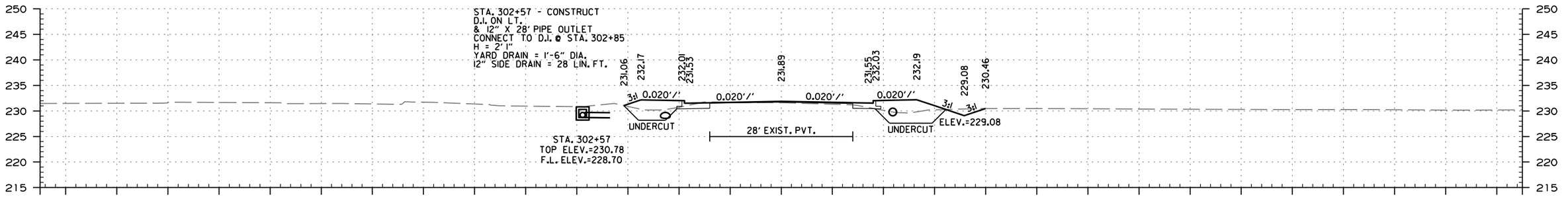
STA. 301+50.00 TO STA. 302+00.00

on40219 6/21/2022
R020475.DGN

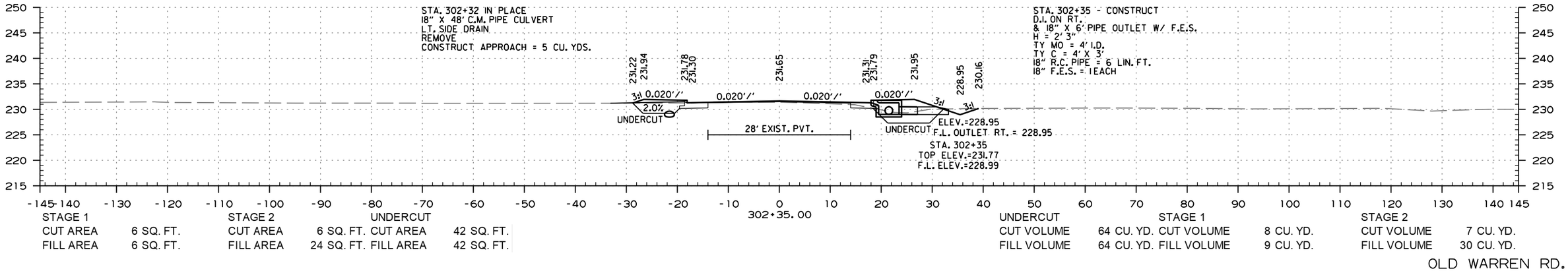
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	184	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	4 SQ. FT.	CUT AREA	8 SQ. FT.	CUT AREA	53 SQ. FT.	CUT VOLUME	49 CU. YD.	CUT VOLUME	5 CU. YD.	CUT VOLUME	8 CU. YD.
FILL AREA	25 SQ. FT.	FILL AREA	23 SQ. FT.	FILL AREA	53 SQ. FT.	FILL VOLUME	49 CU. YD.	FILL VOLUME	22 CU. YD.	FILL VOLUME	24 CU. YD.



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	6 SQ. FT.	CUT AREA	7 SQ. FT.	CUT AREA	41 SQ. FT.	CUT VOLUME	34 CU. YD.	CUT VOLUME	5 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	17 SQ. FT.	FILL AREA	24 SQ. FT.	FILL AREA	41 SQ. FT.	FILL VOLUME	34 CU. YD.	FILL VOLUME	9 CU. YD.	FILL VOLUME	20 CU. YD.



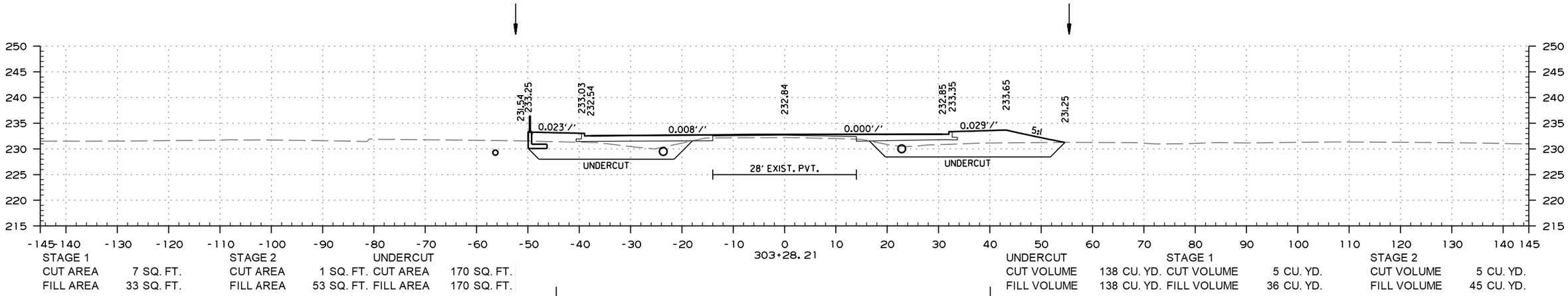
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	6 SQ. FT.	CUT AREA	6 SQ. FT.	CUT AREA	42 SQ. FT.	CUT VOLUME	64 CU. YD.	CUT VOLUME	8 CU. YD.	CUT VOLUME	7 CU. YD.
FILL AREA	6 SQ. FT.	FILL AREA	24 SQ. FT.	FILL AREA	42 SQ. FT.	FILL VOLUME	64 CU. YD.	FILL VOLUME	9 CU. YD.	FILL VOLUME	30 CU. YD.

OLD WARREN RD.

STA. 302+35.00 TO STA. 302+85.00

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	185	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	7 SQ. FT.	CUT AREA	1 SQ. FT.	CUT AREA	170 SQ. FT.	CUT VOLUME	138 CU. YD.	CUT VOLUME	5 CU. YD.	CUT VOLUME	5 CU. YD.
FILL AREA	33 SQ. FT.	FILL AREA	53 SQ. FT.	FILL AREA	170 SQ. FT.	FILL VOLUME	138 CU. YD.	FILL VOLUME	36 CU. YD.	FILL VOLUME	45 CU. YD.

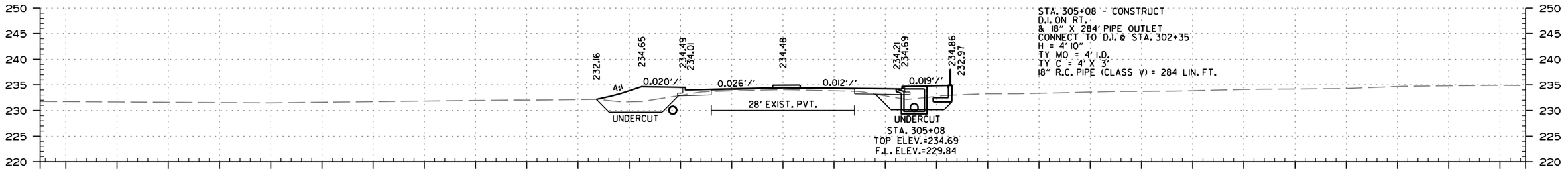
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	3 SQ. FT.	CUT AREA	8 SQ. FT.	CUT AREA	95 SQ. FT.	CUT VOLUME	41 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	4 CU. YD.
FILL AREA	35 SQ. FT.	FILL AREA	33 SQ. FT.	FILL AREA	95 SQ. FT.	FILL VOLUME	41 CU. YD.	FILL VOLUME	17 CU. YD.	FILL VOLUME	16 CU. YD.

OLD WARREN RD.

STA. 303+00.00 TO STA. 303+68.77

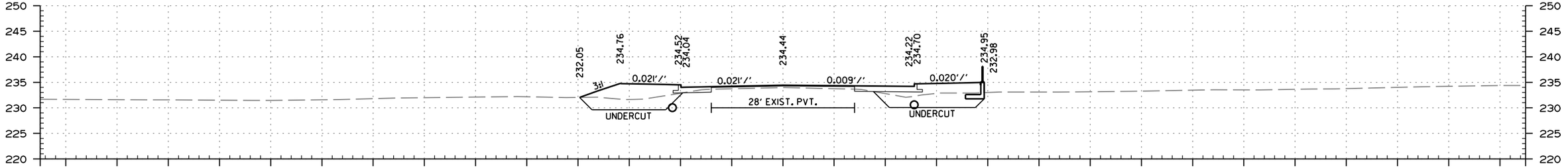
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	186	191
		CROSS SECTIONS				



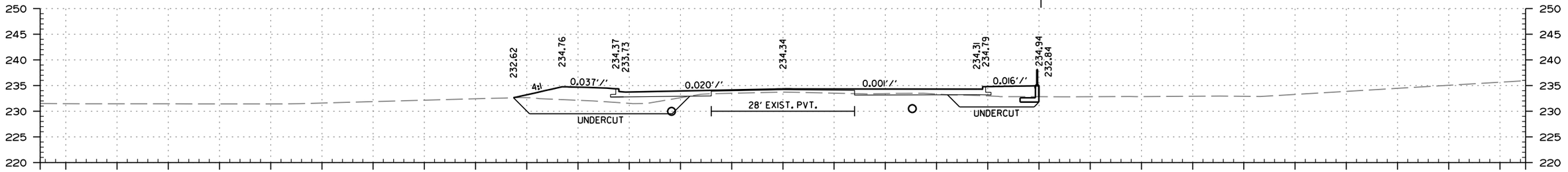
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	6 SQ. FT.	CUT AREA	3 SQ. FT.	CUT AREA	57 SQ. FT.
FILL AREA	23 SQ. FT.	FILL AREA	30 SQ. FT.	FILL AREA	57 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	21 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	21 CU. YD.	FILL VOLUME	8 CU. YD.	FILL VOLUME	11 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	5 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	86 SQ. FT.
FILL AREA	31 SQ. FT.	FILL AREA	41 SQ. FT.	FILL AREA	86 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	103 CU. YD.	CUT VOLUME	7 CU. YD.	CUT VOLUME	2 CU. YD.
FILL VOLUME	103 CU. YD.	FILL VOLUME	27 CU. YD.	FILL VOLUME	48 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	8 SQ. FT.	CUT AREA	1 SQ. FT.	CUT AREA	111 SQ. FT.
FILL AREA	21 SQ. FT.	FILL AREA	51 SQ. FT.	FILL AREA	111 SQ. FT.

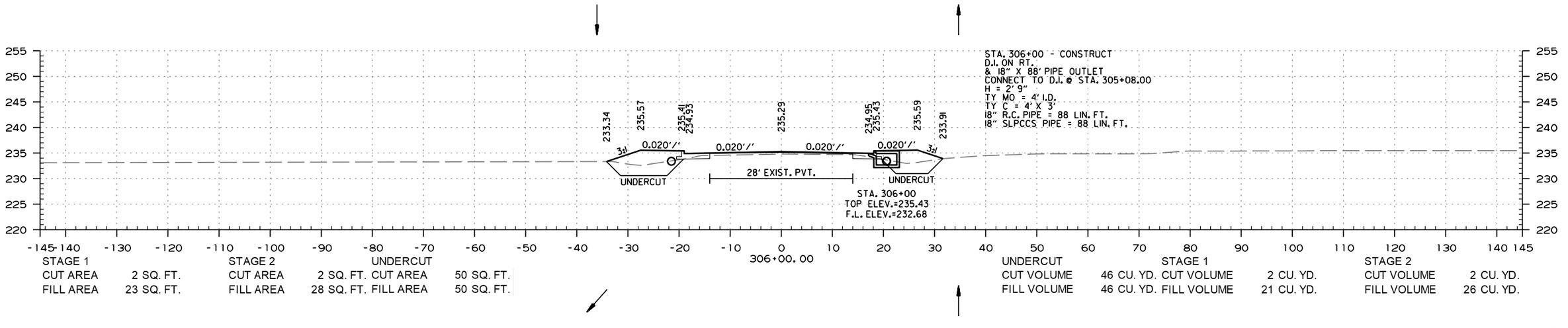
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.

OLD WARREN RD.

STA. 304+71.78 TO STA. 305+08.00

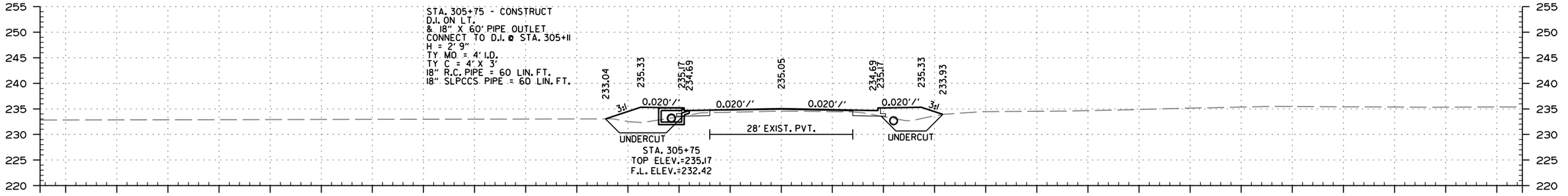
on402l9 6/2l/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	187	191
		CROSS SECTIONS				



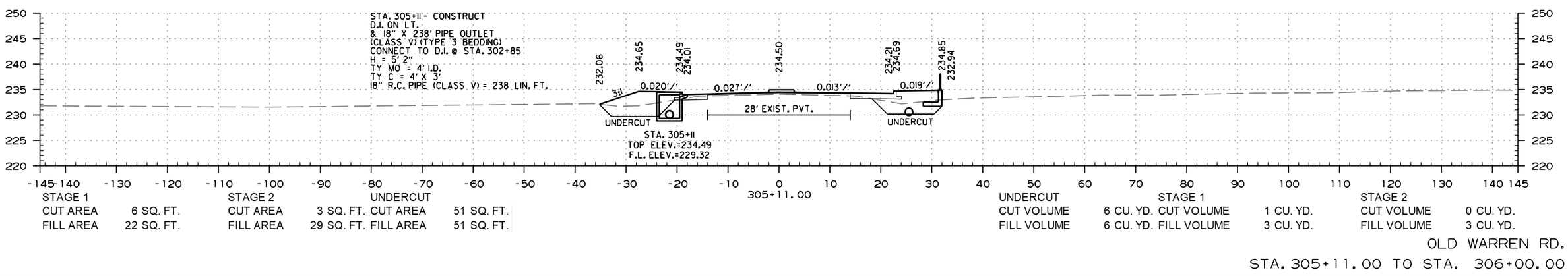
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	50 SQ. FT.
FILL AREA	23 SQ. FT.	FILL AREA	28 SQ. FT.	FILL AREA	50 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	46 CU. YD.	CUT VOLUME	2 CU. YD.	CUT VOLUME	2 CU. YD.
FILL VOLUME	46 CU. YD.	FILL VOLUME	21 CU. YD.	FILL VOLUME	26 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	2 SQ. FT.	CUT AREA	50 SQ. FT.
FILL AREA	22 SQ. FT.	FILL AREA	28 SQ. FT.	FILL AREA	50 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	120 CU. YD.	CUT VOLUME	9 CU. YD.	CUT VOLUME	6 CU. YD.
FILL VOLUME	120 CU. YD.	FILL VOLUME	52 CU. YD.	FILL VOLUME	68 CU. YD.



STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	6 SQ. FT.	CUT AREA	3 SQ. FT.	CUT AREA	51 SQ. FT.
FILL AREA	22 SQ. FT.	FILL AREA	29 SQ. FT.	FILL AREA	51 SQ. FT.

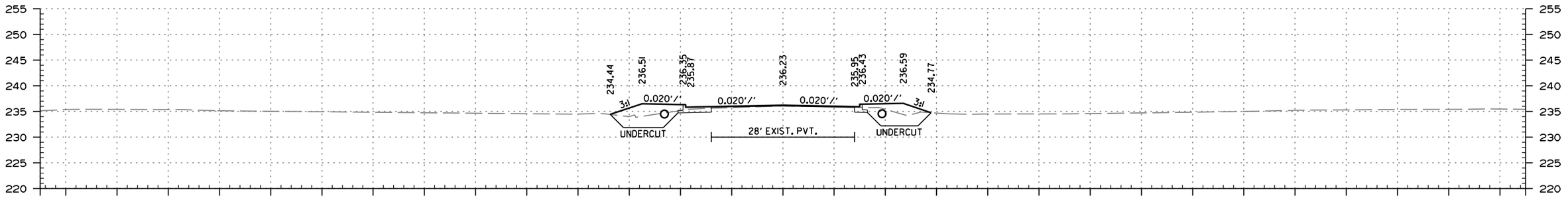
UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	6 CU. YD.	CUT VOLUME	1 CU. YD.	CUT VOLUME	0 CU. YD.
FILL VOLUME	6 CU. YD.	FILL VOLUME	3 CU. YD.	FILL VOLUME	3 CU. YD.

OLD WARREN RD.

STA. 305+11.00 TO STA. 306+00.00

6/21/2022
dh40219
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	188	191
		CROSS SECTIONS				

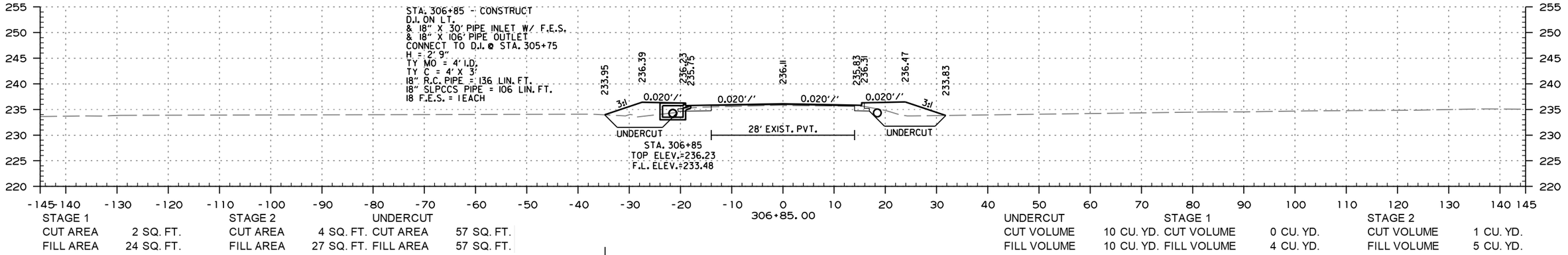


306+96.79
END OLD WARREN RD.
BEGIN 100' TRANSITION

STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	55 SQ. FT.
FILL AREA	15 SQ. FT.	FILL AREA	22 SQ. FT.	FILL AREA	55 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	24 CU. YD.	CUT VOLUME	1 CU. YD.	CUT VOLUME	2 CU. YD.
FILL VOLUME	24 CU. YD.	FILL VOLUME	9 CU. YD.	FILL VOLUME	11 CU. YD.

STA. 306+85 - CONSTRUCT
D.I. ON LT.
& 18" X 30' PIPE INLET W/ F.E.S.
& 18" X 106' PIPE OUTLET
CONNECT TO D.I. @ STA. 305+75
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 136 LIN. FT.
18" SLPCCS PIPE = 106 LIN. FT.
18 F.E.S. = 1EACH



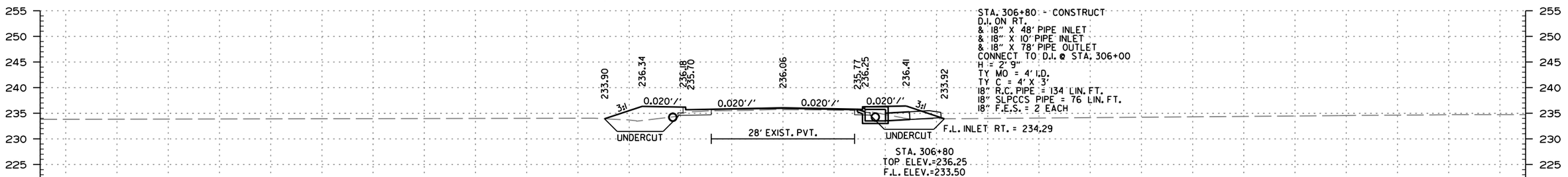
STA. 306+85
TOP ELEV.=236.23
F.L. ELEV.=233.48

306+85.00

STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	57 SQ. FT.
FILL AREA	24 SQ. FT.	FILL AREA	27 SQ. FT.	FILL AREA	57 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	10 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	1 CU. YD.
FILL VOLUME	10 CU. YD.	FILL VOLUME	4 CU. YD.	FILL VOLUME	5 CU. YD.

STA. 306+80 - CONSTRUCT
D.I. ON RT.
& 18" X 48' PIPE INLET
& 18" X 10' PIPE INLET
& 18" X 78' PIPE OUTLET
CONNECT TO D.I. @ STA. 306+00
H = 2' 9"
TY MO = 4' I.D.
TY C = 4' X 3'
18" R.C. PIPE = 134 LIN. FT.
18" SLPCCS PIPE = 76 LIN. FT.
18" F.E.S. = 2 EACH



STA. 306+80
TOP ELEV.=236.25
F.L. ELEV.=233.50

306+80.00

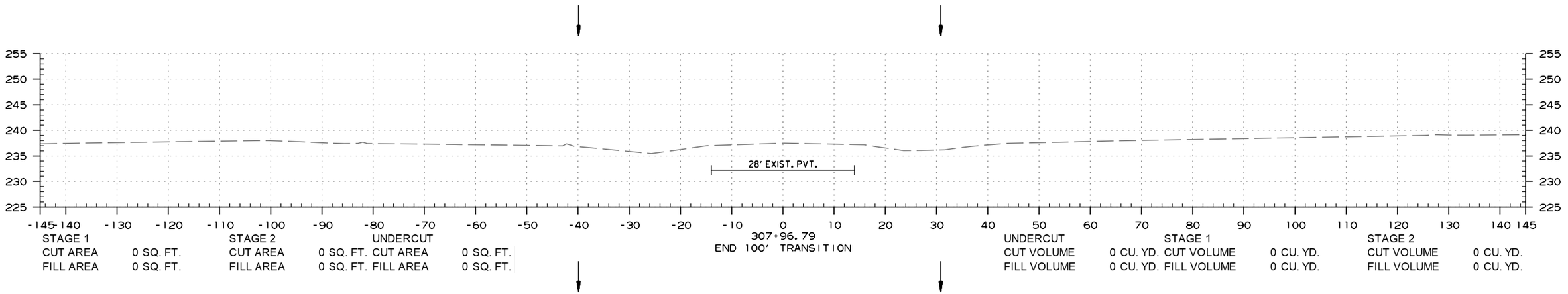
STAGE 1		STAGE 2		UNDERCUT	
CUT AREA	2 SQ. FT.	CUT AREA	4 SQ. FT.	CUT AREA	56 SQ. FT.
FILL AREA	22 SQ. FT.	FILL AREA	28 SQ. FT.	FILL AREA	56 SQ. FT.

UNDERCUT		STAGE 1		STAGE 2	
CUT VOLUME	157 CU. YD.	CUT VOLUME	6 CU. YD.	CUT VOLUME	9 CU. YD.
FILL VOLUME	157 CU. YD.	FILL VOLUME	67 CU. YD.	FILL VOLUME	83 CU. YD.

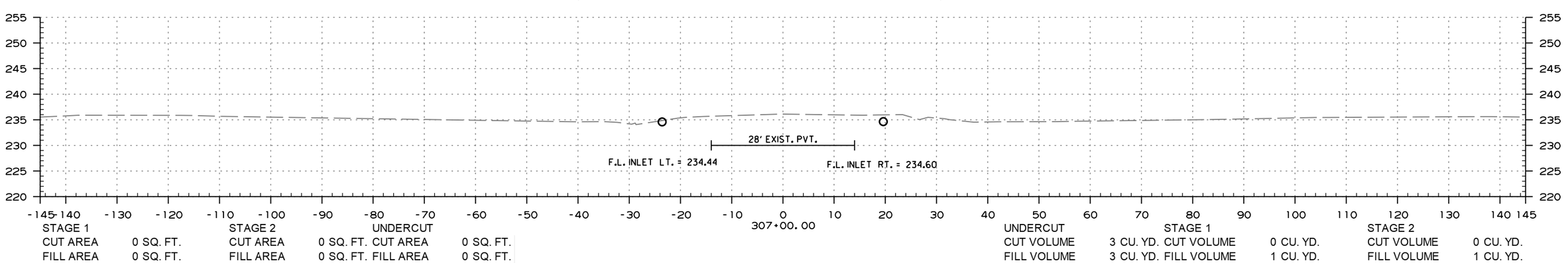
OLD WARREN RD.
STA. 306+80.00 TO STA. 306+96.79

qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	189	191
		CROSS SECTIONS				



STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.	FILL VOLUME	0 CU. YD.



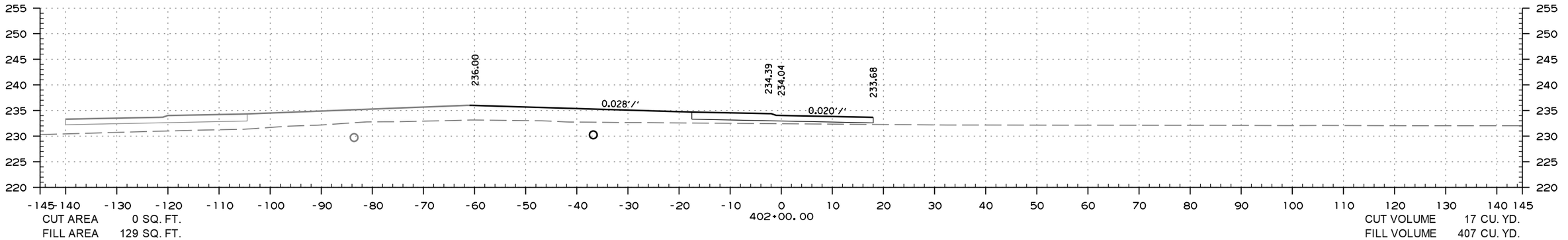
STAGE 1		STAGE 2		UNDERCUT		UNDERCUT		STAGE 1		STAGE 2	
CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT AREA	0 SQ. FT.	CUT VOLUME	3 CU. YD.	CUT VOLUME	0 CU. YD.	CUT VOLUME	0 CU. YD.
FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL AREA	0 SQ. FT.	FILL VOLUME	3 CU. YD.	FILL VOLUME	1 CU. YD.	FILL VOLUME	1 CU. YD.

OLD WARREN RD.

STA. 307+00.00 TO STA. 307+96.79

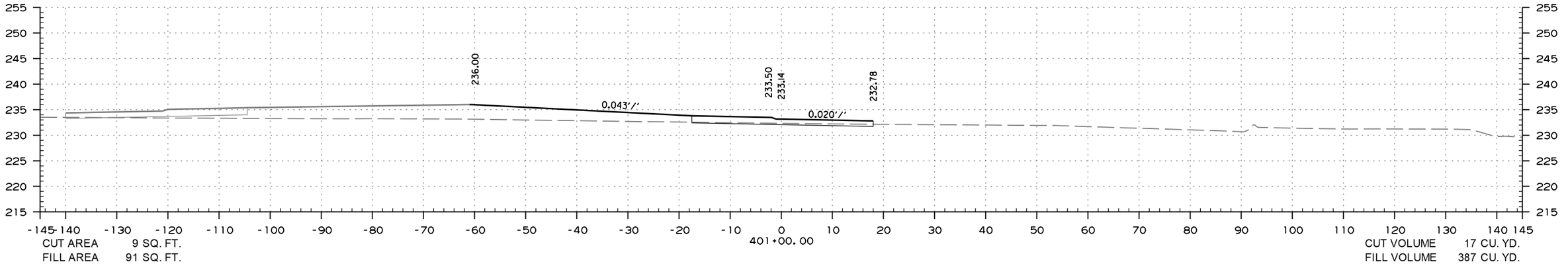
gh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	190	191
		CROSS SECTIONS				



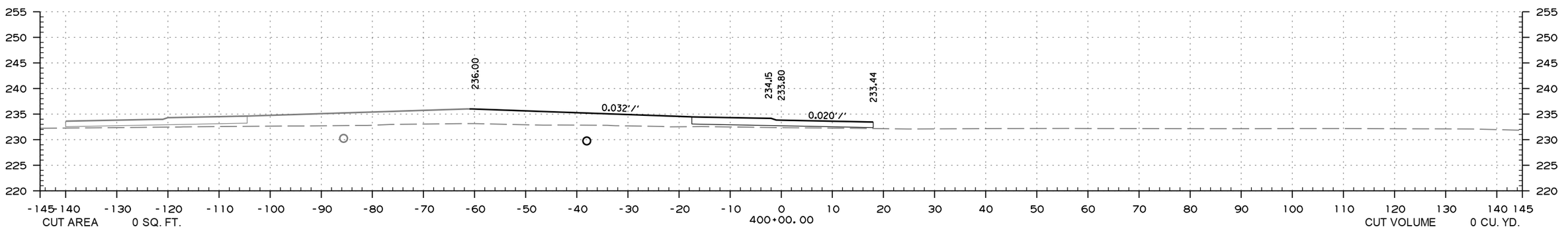
CUT AREA 0 SQ. FT.
FILL AREA 129 SQ. FT.

CUT VOLUME 17 CU. YD.
FILL VOLUME 407 CU. YD.



CUT AREA 9 SQ. FT.
FILL AREA 91 SQ. FT.

CUT VOLUME 17 CU. YD.
FILL VOLUME 387 CU. YD.



CUT AREA 0 SQ. FT.
FILL AREA 118 SQ. FT.

CUT VOLUME 0 CU. YD.
FILL VOLUME 0 CU. YD.

ROUNDABOUT 2

STA. 400+00.00 TO STA. 402+00.00

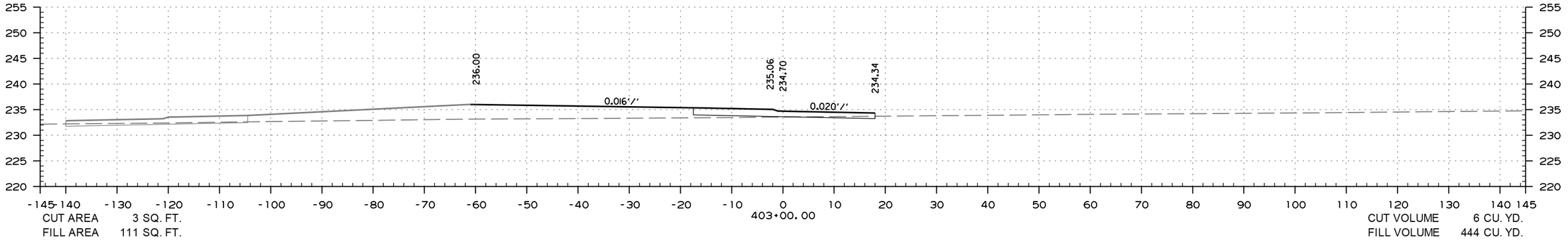
qh40219 6/21/2022
R020475.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	020475	191	191
		CROSS SECTIONS				

CUT AREA 0 SQ. FT.
FILL AREA 118 SQ. FT.

403+83.27

CUT VOLUME 5 CU. YD.
FILL VOLUME 353 CU. YD.



CUT AREA 3 SQ. FT.
FILL AREA 111 SQ. FT.

403+00.00

CUT VOLUME 6 CU. YD.
FILL VOLUME 444 CU. YD.

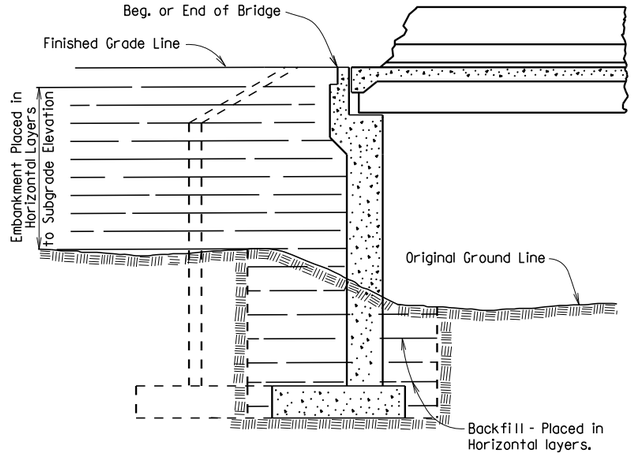
ROUNDABOUT 2

STA. 403+00.00 TO STA. 403+00.00

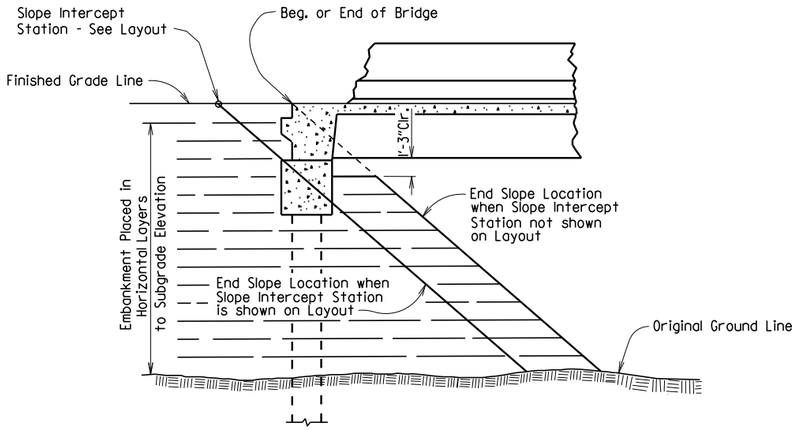
dh40219 6/21/2022
R020475.DGN

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

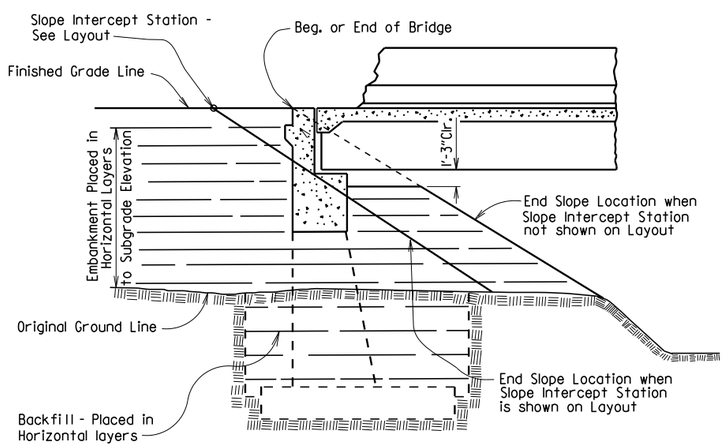
1 EMBANKMENT & BACKFILL 55000



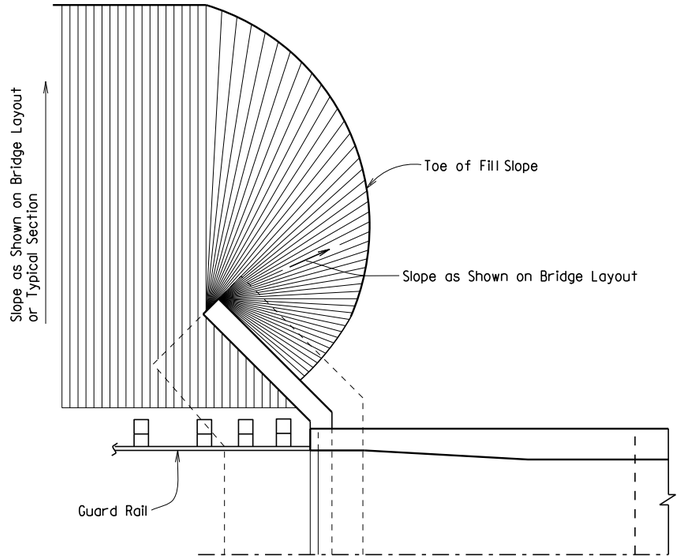
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



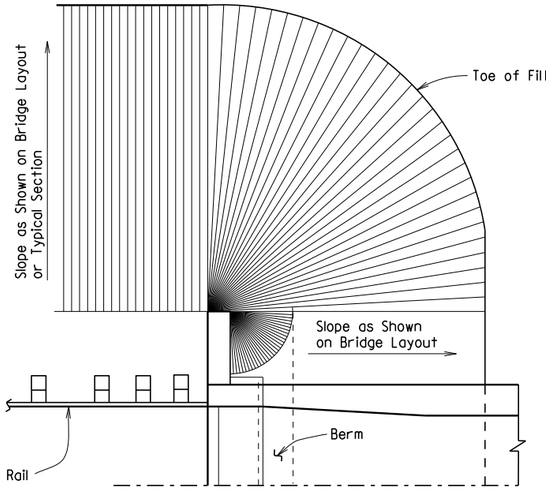
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



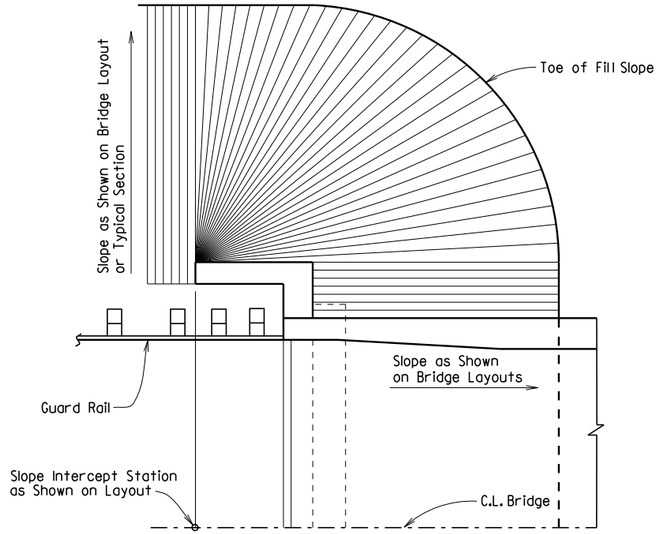
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



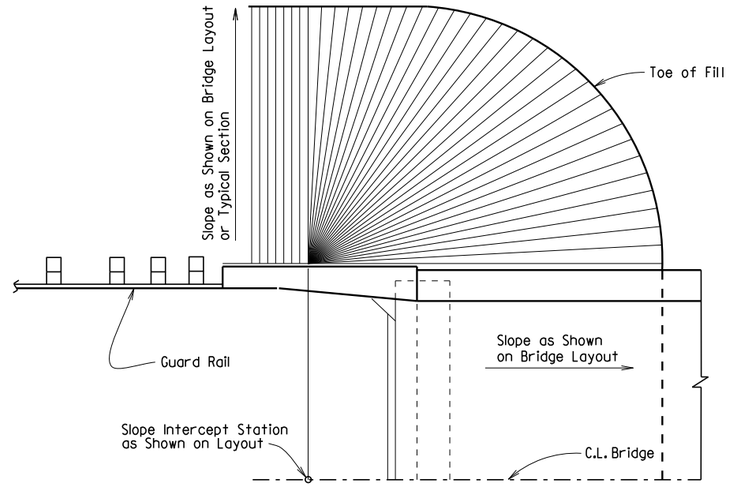
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55000.dgn

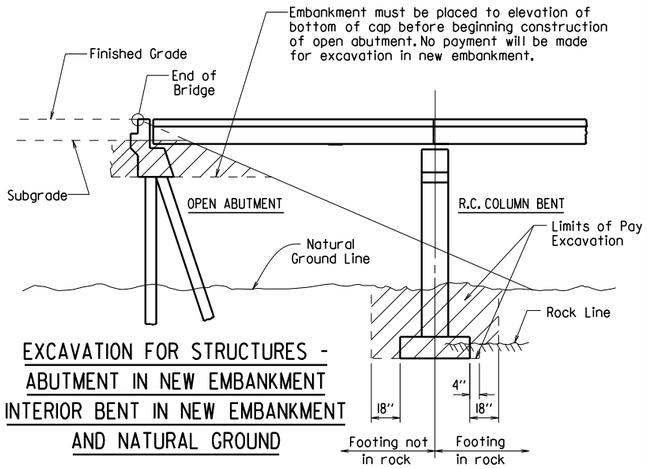
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE: -

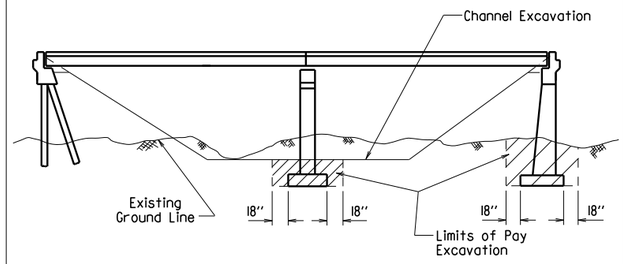
DRAWING NO. 55000

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

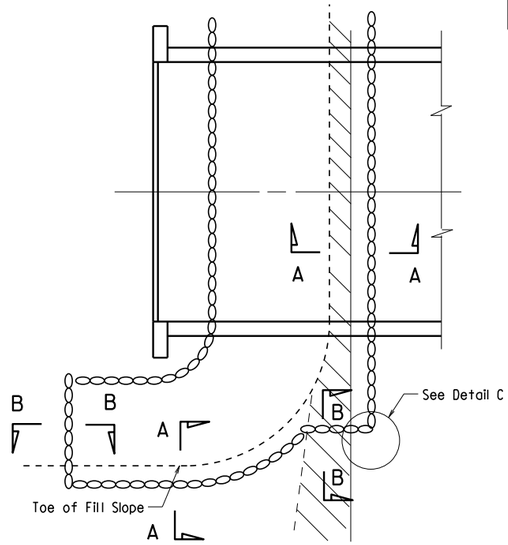
1 RIPRAP & EXCAV. 55001



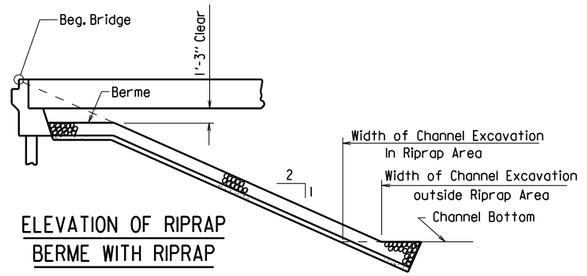
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



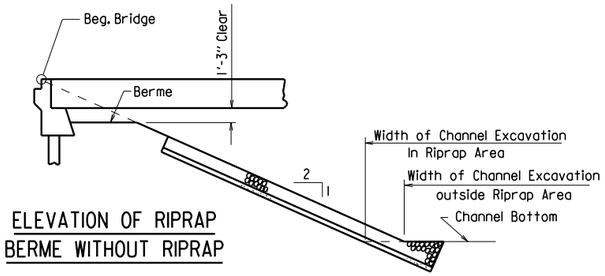
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



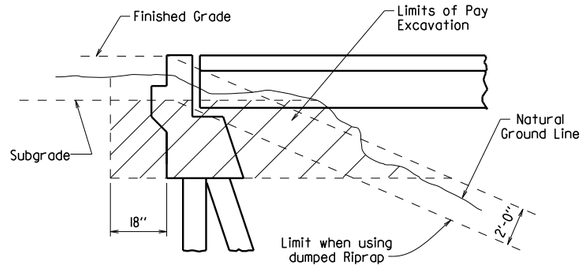
PLAN OF DUMPED RIPRAP



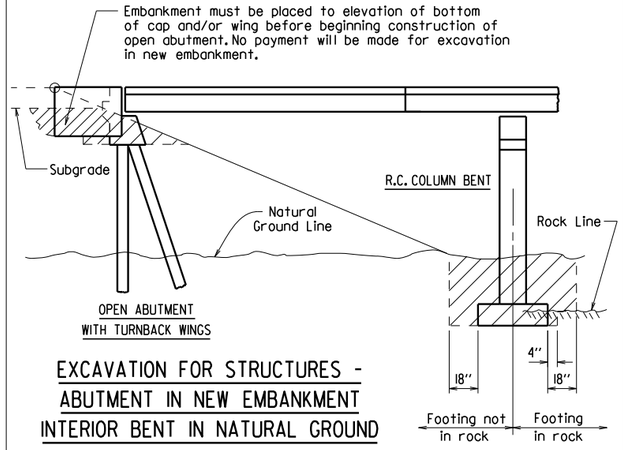
ELEVATION OF RIPRAP BERME WITH RIPRAP



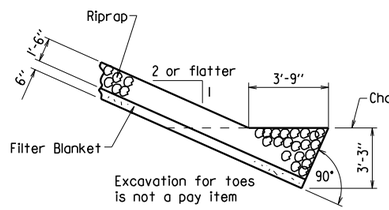
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND

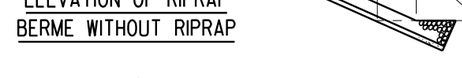


EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND

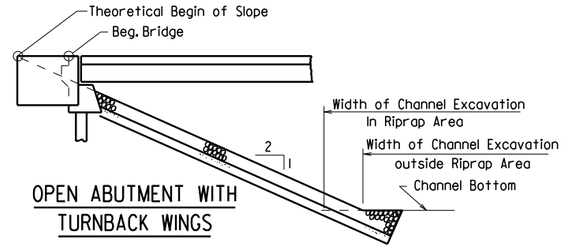


SECTION A-A

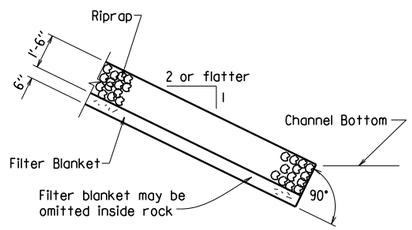
(Toe Excavation in Soil)



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



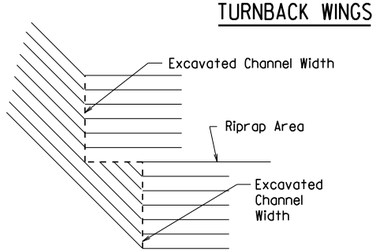
SECTION A-A

(Toe Excavation in Rock)

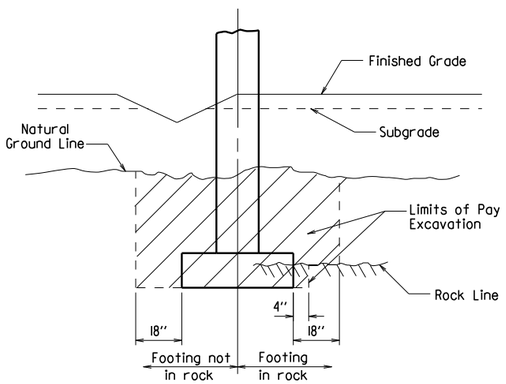
Note : Use this type of toe when rock is encountered which is in a stable condition.

Note : In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

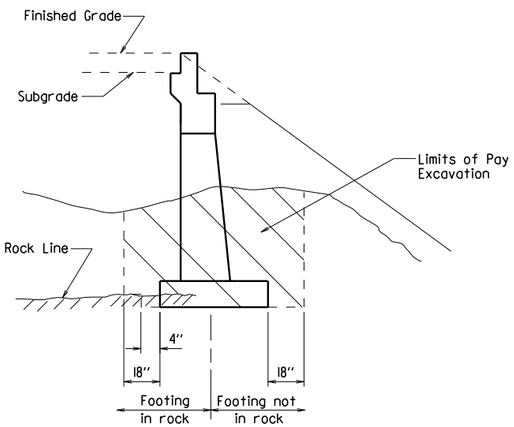
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



DETAIL C



EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

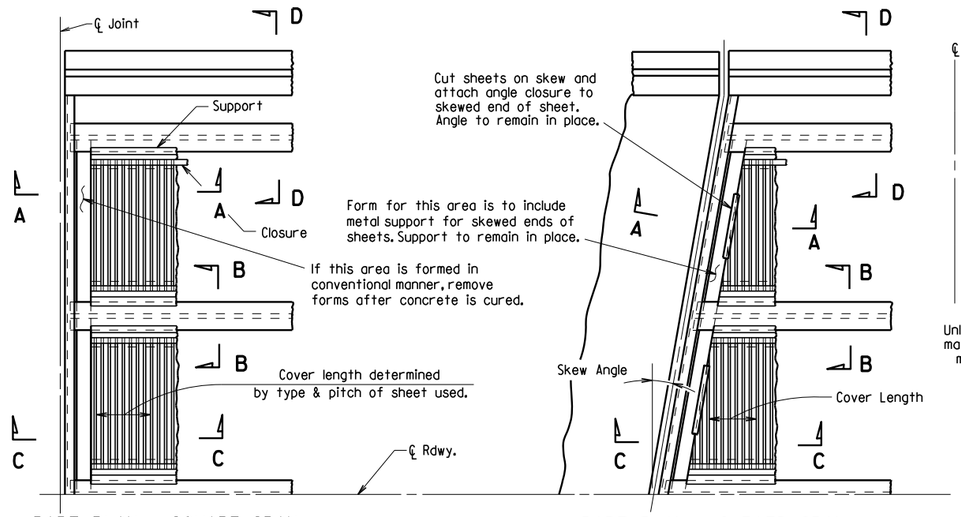
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b5500l.dgn

CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE:

DRAWING NO. 55001

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				
				①	BRIDGE DECK FORMS		55005	

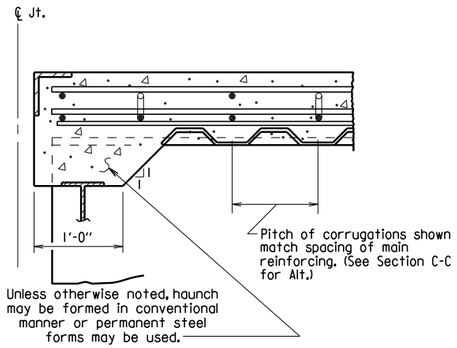


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

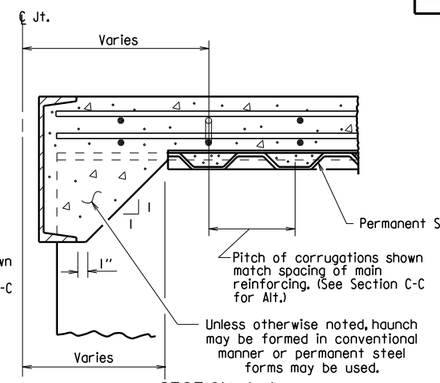
PART PLAN - SKEWED SPAN

3/8" = 1'-0"



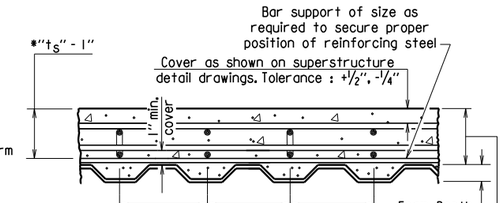
SECTION A-A

N.T.S.
(Angle at end of span)



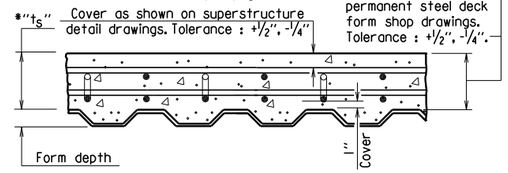
SECTION A-A

N.T.S.
(Channel at end of span)



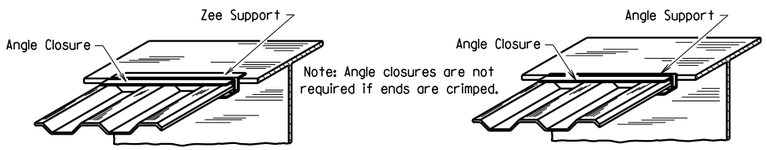
SECTION C-C

1" = 1'-0"



SECTION C-C - ALTERNATE

1" = 1'-0"
(Applicable when corrugations do not match spacing of main reinforcement)



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

*t_s = slab thickness as shown on superstructure detail drawings.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or ∠ supports to the flange must be approved by the Engineer.

Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.

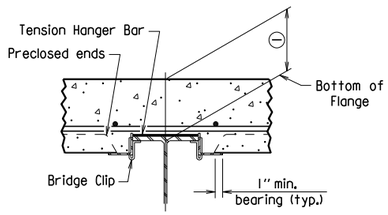
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

③ ⚠ Minimum weld: 1/8" x 1" @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)

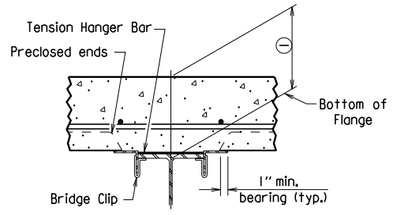
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



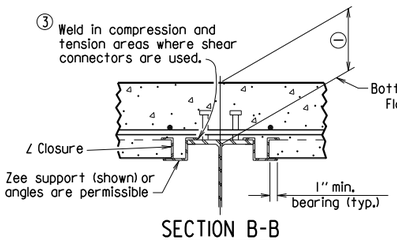
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



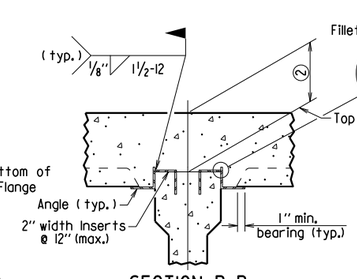
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



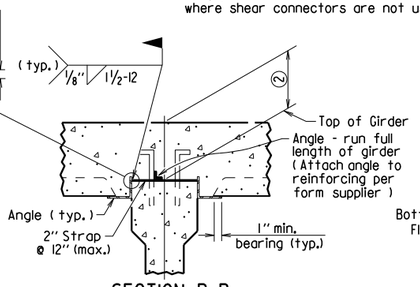
SECTION B-B

1" = 1'-0"
(Showing ∠ Closure)



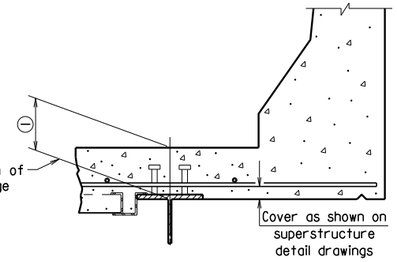
SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by Insert cast in girder)



SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by Strap)



SECTION D-D

1" = 1'-0"
Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t_S + 1 3/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

⚠ Revised weld dimension by KWY, Ck'd. by BEF, 3/24/16.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	KDH	DATE:	2-27-2014	FILENAME:	b55005.dgn
CHECKED BY:	BEF	DATE:	2-27-2014	SCALE:	NONE
DESIGNED BY:	STD.	DATE:	—		

DRAWING NO. 55005

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				①		GENERAL NOTES		55006

GENERAL NOTES

These GENERAL NOTES are applicable unless otherwise shown in the Plan Details, Special Provisions, or Supplemental Specifications.

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 Specifications.

DESIGN SPECIFICATIONS: See Bridge Layout(s).

SUPERSTRUCTURE NOTES:

MATERIALS AND STRENGTHS:

Class S(AE) Concrete	f'c =	4,000 psi
Reinforcing Steel (Gr. 60, AASHTO M 31 or M 322, Type A)	fy =	60,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy =	36,000 psi
Structural Steel (AASHTO M 270, Gr. 50)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy =	50,000 psi
Structural Steel (AASHTO M 270, Gr. HPS70W)	Fy =	70,000 psi

See Plan Details for Grade(s) of Structural Steel required.

CONCRETE:

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi. Concrete shall be poured in the dry and all exposed corners shall be chamfered ¾" unless otherwise noted.

The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Bridge Deck Forms are used.

Use of a longitudinal screed is not permitted on any span of a bridge deck with horizontal curvature.

The concrete deck (roadway surface) shall be given a tine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Sidewalks shall receive a broomed finish as specified for final finishing in Subsection 802.19 for Class 6 Broomed Finish. Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam or girder. When permitted, the use of a longitudinal strike-off will require that a vertical camber adjustment be made in the strike-off to account for the future dead load deflection due to any railings, median barrier, and sidewalks.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A, with mill test reports and shall be epoxy coated. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item "Epoxy Coated Reinforcing Steel (Grade 60)".

STRUCTURAL STEEL (COMMON TO W-BEAMS AND PLATE GIRDERS):

Structural steel shall be AASHTO M 270 with grade and payment as specified in the plans. Grade 50W steel shall not be painted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). Grade 36 and Grade 50 steel shall be painted unless otherwise noted and all exposed surfaces shall be cleaned in accordance with Subsection 807.84. Structural steel completely embedded in concrete may be AASHTO M 270, Gr. 36, Gr. 50 or Gr. 50W unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Unless otherwise noted, field connections shall be bolted with ¾" ø high-strength bolts using 13/16 " ø open holes. Holes for ¾" ø high-strength bolts may be 15/16 " ø if a washer is supplied for use under both the nut and head of the bolt. The use of oversized holes will not be allowed on main members unless otherwise noted. Bolts shall be placed with heads on the outside face of the exterior beam or girder webs and on the bottom of the beam or girder flanges.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the Manufacturer.

When painting is required, all structural steel except galvanized steel and steel completely encased in concrete shall be painted in accordance with Subsection 807.75. The color of paint shall be as specified in the plans.

STRUCTURAL STEEL (W-BEAMS):

All beams and field splice plates, and all diaphragms and connection plates attached to horizontally curved beams are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. ___)".

All beams in continuous units and simple spans with field splices shall be blocked in their true position in the shop in groups as specified in Subsection 807.54(b)(2) with the webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All beams in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

All beam dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Bent plate diaphragms for horizontally curved beams shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight beams may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved beams.

Unless otherwise noted, diaphragms shall be installed as beams are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

STRUCTURAL STEEL (PLATE GIRDERS):

All references to cross-frames shall include "X" or "K" types.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection plates attached to horizontally curved girders are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

All girders in continuous units and simple spans with field splices shall be assembled in the shop as specified in Subsection 807.54(b)(2) and blocked in their true position with webs horizontal. The camber, length of sections, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records. The component parts shall be match marked in this assembly and these marks shall be shown on the erection diagram.

All girders in simple spans without field splices shall be blocked in their true position with webs horizontal. The camber, distance between bearings, and openings of joints shall be measured and this information shall become part of the permanent records.

Web and flange plates for main members and flange splice plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Girder webs may be made by shop splicing with minimum lengths of 25 feet for sections. Flange plates longer than 50 feet may be made by shop splicing with minimum lengths of 25 feet for sections. No additional payment will be made for shop welded splices.

All girder dimensions are based on a temperature of 60 degrees F. A tolerance of ¼" +/- is allowed for camber.

Groove welds in web and flange plates shall be Quality Control (Q.C.) tested by nondestructive testing, as required in Subsection 807.23(b). Fillet welds at flange to web plate connections shall be Q.C. tested by the magnetic particle method. All Q.C. testing shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M 270, Gr. ___)".

Bent plate diaphragms for horizontally curved girders shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses. Bent plate diaphragms for straight girders may be cut and fabricated in accordance with Subsection 807.35 or as required for horizontally curved girders.

Unless otherwise noted, cross-frames and diaphragms shall be installed as girders are erected. All bolts in cross-frames, diaphragms, and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the concrete deck.

SUBSTRUCTURE NOTES:

CONCRETE:

Unless otherwise noted, concrete in caps, columns and footings (except seal footings) shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry. Seal Concrete for footings shall have a minimum 28 day compressive strength f'c = 2,100 psi.

Concrete in drilled shafts shall be Class "S" as modified by Job SP "Drilled Shaft Foundations".

All exposed corners shall be chamfered ¾" unless otherwise noted.

REINFORCING STEEL:

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

STRUCTURAL STEEL:

Structural steel in end bents shall be AASHTO M 270 with grade and payment as specified in the plans.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

FOR ADDITIONAL INFORMATION AND NOTES, SEE LAYOUT(S) AND PLAN DETAILS.

STANDARD GENERAL NOTES
FOR STEEL BRIDGE STRUCTURES

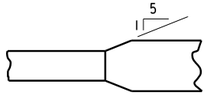
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 9-2-2015 FILENAME: b55006.dgn
CHECKED BY: B.E.F. DATE: 9-2-2015 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55006

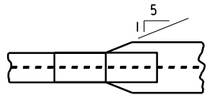
PRINT DATE: 11/7/2019

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				①	STEEL BRIDGE STRUCTURES 55007			

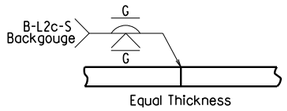


Plan-Unequal Width (Flg.)

FLANGE SPLICE

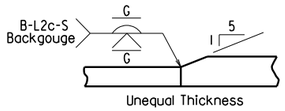


FLANGE SPLICE AT UNEQUAL BOTTOM FLANGE WIDTHS



Equal Thickness

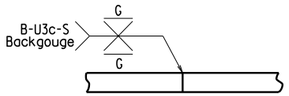
WEB & FLANGE SPLICE



Unequal Thickness

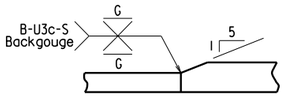
FLANGE SPLICE

(Use when Base Metal Thickness is Equal to or Less than 2")



Equal Thickness

WEB & FLANGE SPLICE

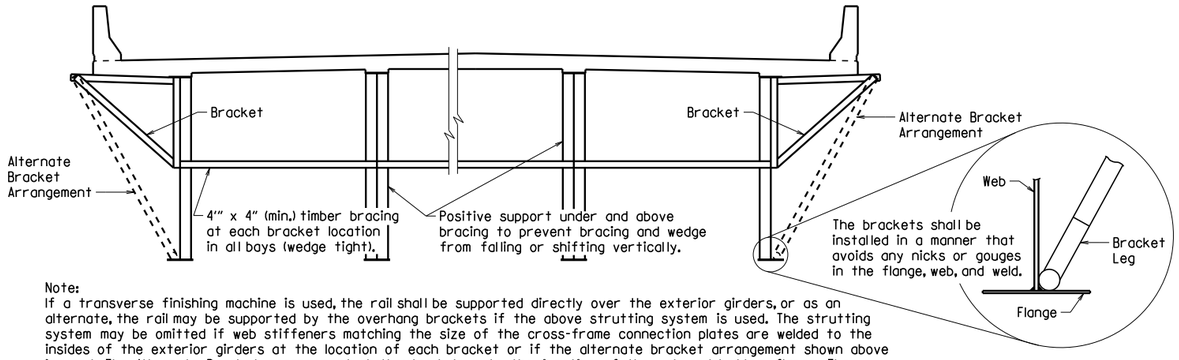


Unequal Thickness

FLANGE SPLICE

(Use when Base Metal Thickness is Greater than 2")

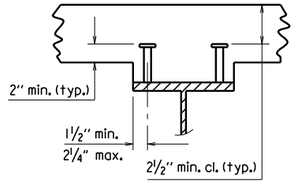
DETAILS OF WELDED SPLICES FOR PLATE GIRDERS



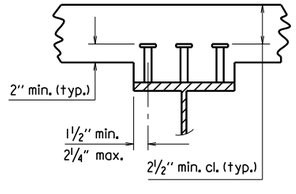
Note:
If a transverse finishing machine is used, the rail shall be supported directly over the exterior girders, or as an alternate, the rail may be supported by the overhang brackets if the above strutting system is used. The strutting system may be omitted if web stiffeners matching the size of the cross-frame connection plates are welded to the insides of the exterior girders at the location of each bracket or if the alternate bracket arrangement shown above is used. The Alternate Bracket arrangement shall extend down to the junction of the web and bottom flange. The stiffener shall conform to the details for cross frame connection plates shown on the plans. No direct payment will be made for brackets, timber bracing, supports, or welded stiffeners. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (___)".

SCREED RAIL SUPPORT FOR PLATE GIRDERS

(USE WHEN WEB DEPTHS ARE 48" OR GREATER)



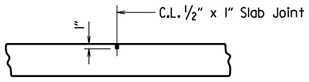
2 STUDS PER ROW



3 STUDS PER ROW

Stud Shear Connectors shall be automatically end welded to the beam or girder flange in accordance with the recommendations of the Manufacturer. See plan details for number and size.

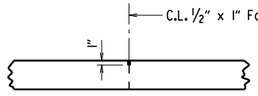
SHEAR CONNECTOR DETAIL



Use Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab Joints shall extend to the outside edge of the deck slab and shall align with open joints at the front face of the parapet. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck from gutterline to gutterline.

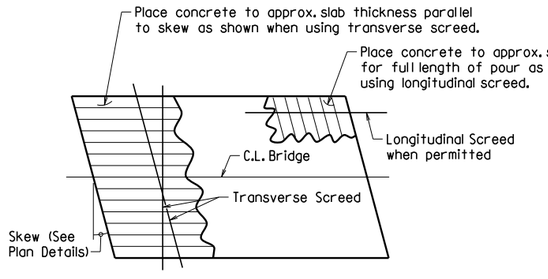
ADDITIONAL NOTES IF SIDEWALKS OR RAISED MEDIANS ARE REQUIRED:
Slab Joints shall be installed before the sidewalk or raised median is poured. After installation of the joint in the sidewalk or raised median and prior to pouring the parapet rail, the joint sealer shall be placed extending across the deck slab from gutterline to gutterline and acrosss the top of the sidwalk or raised median to the edge of the slab. No joint sealer shall be placed on the deck slab under the sidewalk or raised median.

TRANSVERSE SLAB JOINT DETAIL



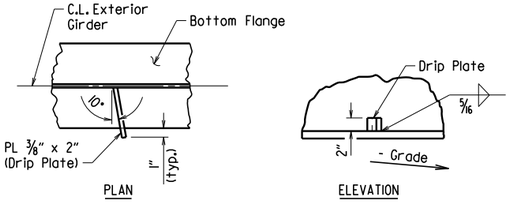
Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod filler will not be required. Joint sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. This joint shall be formed. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL CONSTRUCTION JOINT



Note: At the Contractor's option, the transverse screed may be placed parallel to the skew or perpendicular to C. L. Bridge.

CONCRETE PLACEMENT PROCEDURE FOR BRIDGES WITH SKEW



PLAN

ELEVATION

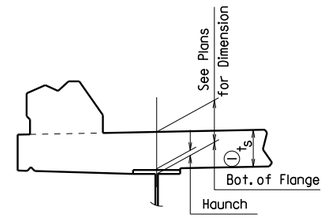
Drip Plate to be welded to the outer side of the bottom flange of the exterior girders.

Locate drip plate 5'-0" from C.L. Bearing on high side of each Bent, unless otherwise noted in the plans.

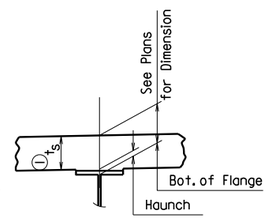
BOTTOM FLANGE DRIP PLATE

(USE WHEN WEB DEPTHS ARE 54" OR GREATER AND UNIT OR SPAN IS NOT IN LEVEL GRADE)

t_s = slab thickness. See "Typical Roadway Section" in the plans.



EXTERIOR BEAM OR GIRDER



INTERIOR BEAM OR GIRDER

① Tolerance when removable deck forming is used is + ½", - ¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

NOTES:
Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance: Minimum occurs when top flange contacts bottom reinforcing steel; Maximum = top flange thickness plus 1¾" unless otherwise noted in the plans. No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

NOTE: Working Point matches Theoretical Roadway Grade.

ROUNDING DETAIL

BRIDGES IN NORMAL CROWN

WELD TABLE

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	⅝"	

NOTE: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR STEEL BRIDGE STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: JYP DATE: 2/11/2016 FILENAME: b55007.dgn

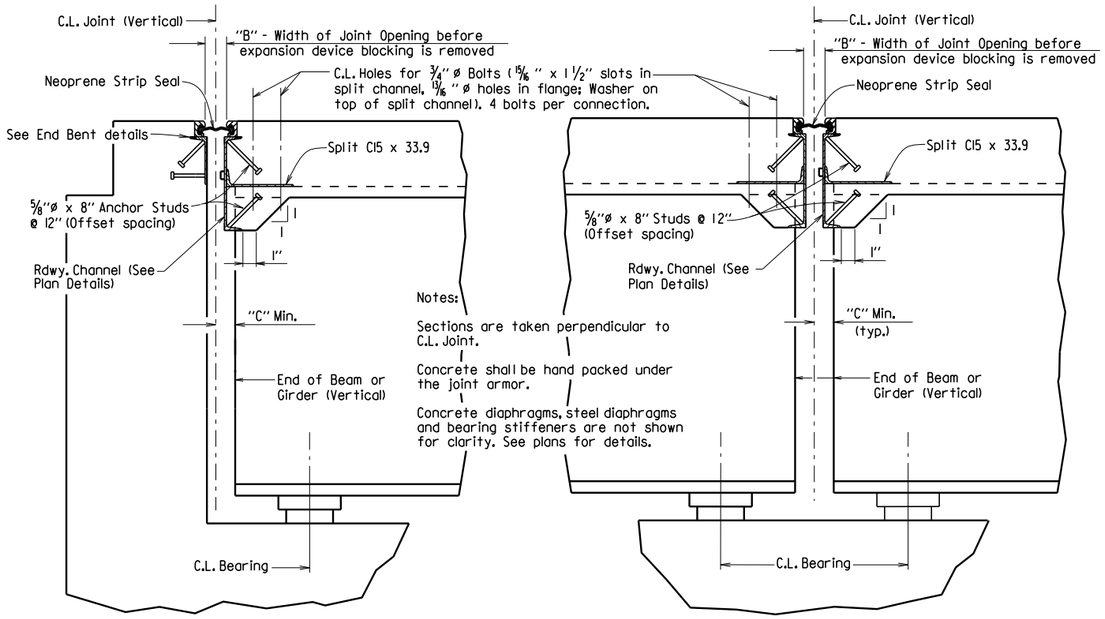
CHECKED BY: AMS DATE: 2/11/2016 SCALE: No Scale

DESIGNED BY: STD. DATE: —

DRAWING NO. 55007

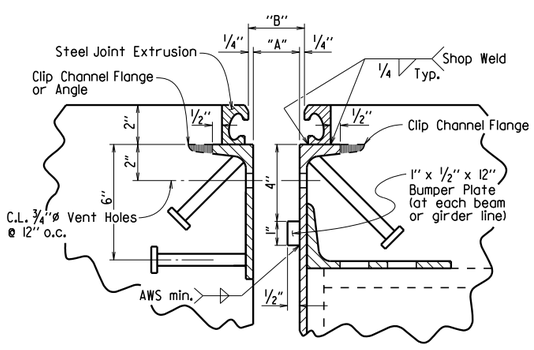
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

1 STRIP SEAL JOINT 55009



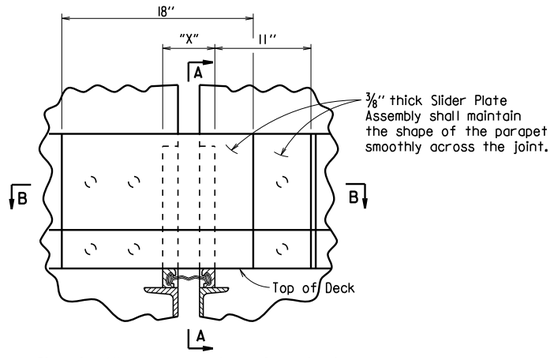
SECTION THRU JOINT AT END BENT

SECTION THRU JOINT AT INTERMEDIATE BENT



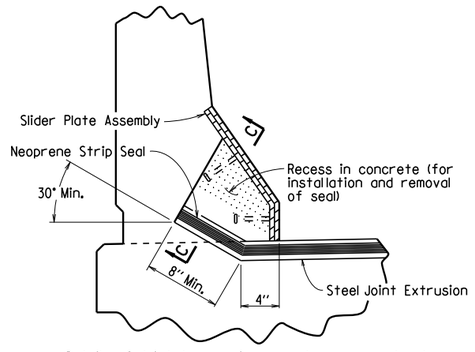
DETAIL OF STRIP SEAL JOINT

Detail shown at End Bent,
Details similar at Intermediate Bent



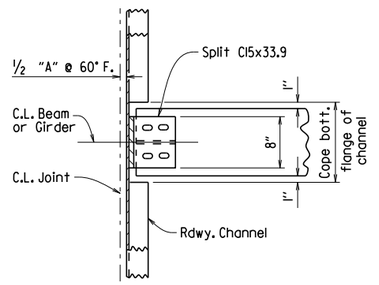
Dimension "X" equals the width of opening in parapet to allow for removal or repair of joint.

DETAIL OF PARAPET SLIDER PLATES



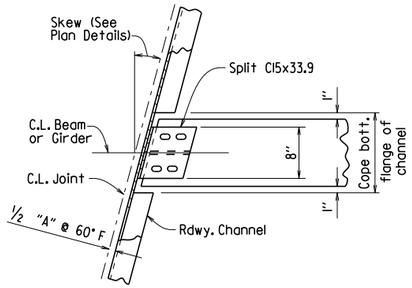
Details of Joint turn-up in parapet are general and show basic design controls only. See plan details for joint installation at sidewalks.

SECTION A-A



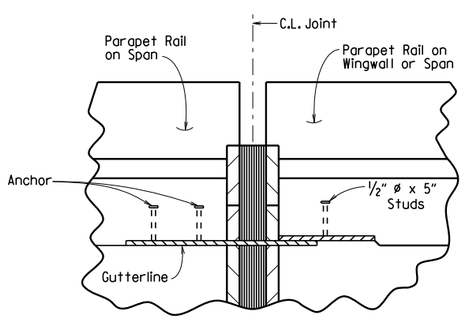
CHANNEL CONNECTION DETAIL

BENTS WITHOUT SKEW



CHANNEL CONNECTION DETAIL

BENTS WITH SKEW

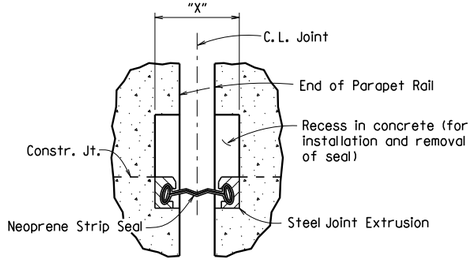


The method of attachment of the slider plate assembly shall allow for removal to provide for future replacement of the neoprene seal. Anchors shall not be paid for directly, but shall be considered subsidiary to the item "Armored Joint with Neoprene Strip Seal".

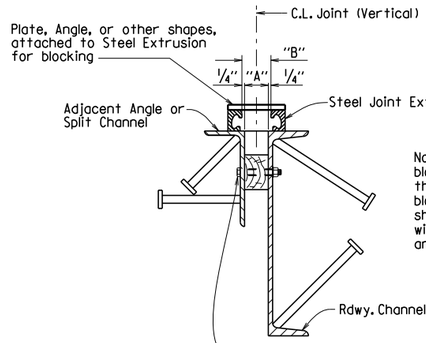
Method of installation and fabrication shall be determined by the Manufacturer.

SECTION B-B

BENTS WITHOUT SKEW SHOWN



SECTION C-C



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator to the dimension "A" shown for 60° F and the blocking details shall be shown on the shop drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

EXPANSION DEVICE INSTALLATION AT END BENTS:

The Contractor may elect to install the expansion device using one of the following two alternatives:

1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams or girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature and grade.

2) The backwall shall be poured to the optional construction joint after beams or girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature and grade.

EXPANSION DEVICE INSTALLATION AT INTERMEDIATE BENTS:

After all beams or girders on each side of the joint are erected the blocked expansion device shall be installed and adjusted for grade. Deck concrete shall be placed for the entire unit or span on one side of the joint before deck concrete on the other side is placed. Connection bolts for the first side to have deck concrete placed shall be completely bolted. Bolts on the other side shall be loosely installed so that thermal and rotational movements will not be restricted during concrete placement on the first side.

Connection bolts on the second side shall remain loose until the concrete pour adjacent to the joint is to be placed. Immediately prior to pouring the span concrete on the second side, the blocking shall be removed, the joint adjusted for temperature and grade, and the connection bolts tightened.

GENERAL NOTES FOR NEOPRENE STRIP SEAL JOINTS:

The steel extrusion and neoprene strip seal material and installation shall be in accordance with Section 809.

The expansion device shall provide for the movement rating(s) shown in the "TABLE OF STRIP SEAL JOINT DATA" in the plan details. The expansion joint shall be capable of sealing the deck surface and parapet area to prevent moisture and other contaminants from descending through the joint.

Details of proposed slider plate assembly shall be submitted to the Engineer for approval prior to the fabrication of any structural steel at the expansion device.

All structural steel shall conform to AASHTO M 270, Grade 50W and all exposed surfaces shall be cleaned in accordance with Subsection 807.84(e). The parapet slider plates and structural steel completely embedded in concrete shall conform to AASHTO M 270, Grade 36, 50 or 50W steel. Unless otherwise noted in the plans, all exposed surfaces of the parapet slider plates shall be cleaned and painted in accordance with Section 638. Painting shall not be paid for directly and structural steel completely embedded in concrete need not be painted. Payment for structural steel shall be as specified in the plans.

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS. SEE "TABLE OF STRIP SEAL JOINT DATA" IN PLAN DETAILS FOR VARIABLES "A", "B", AND "C".

STANDARD DETAILS FOR NEOPRENE STRIP SEAL JOINTS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: L.J.B. DATE: 2/11/2016 FILENAME: b55009.dgn
CHECKED BY: A.M.S. DATE: 2/11/2016 SCALE: No Scale
DESIGNED BY: STD. DATE: —

DRAWING NO. 55009

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
12-1-14		1-15-19		6	ARK.			
1-14-15		3-24-2020		JOB NO.				
1-17-17		5-11-2021						

1 TYPE D NAME PLATE - 55010

The name of the bridge as shown on the plans shall be placed on Lines 1-3 using ⅛" raised letters and numerals ⅜" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	
Line 2	Relief	Railroad	River	Highway 5
Line 3		Overpass	Relief	

21½"

LINE 1
LINE 2
LINE 3

ARKANSAS HIGHWAY COMMISSION
ROBERT S. MOORE, JR. - CHAIR
DALTON A. "ALEC" FARMER, JR. - VICE CHAIR
PHILIP TALDO
KEITH GIBSON
MARIE HOLDER
DIRECTOR - LORIE H. TUDOR
DEPUTY DIRECTOR/CHIEF OPERATING OFFICER - RANDY ORT
DEPUTY DIRECTOR/CHIEF ENGINEER - REX VINES

CONTRACTOR
COMPANY NAME
YEAR

XXXXX

2½" Center of Cast Lug 2½" 2½"

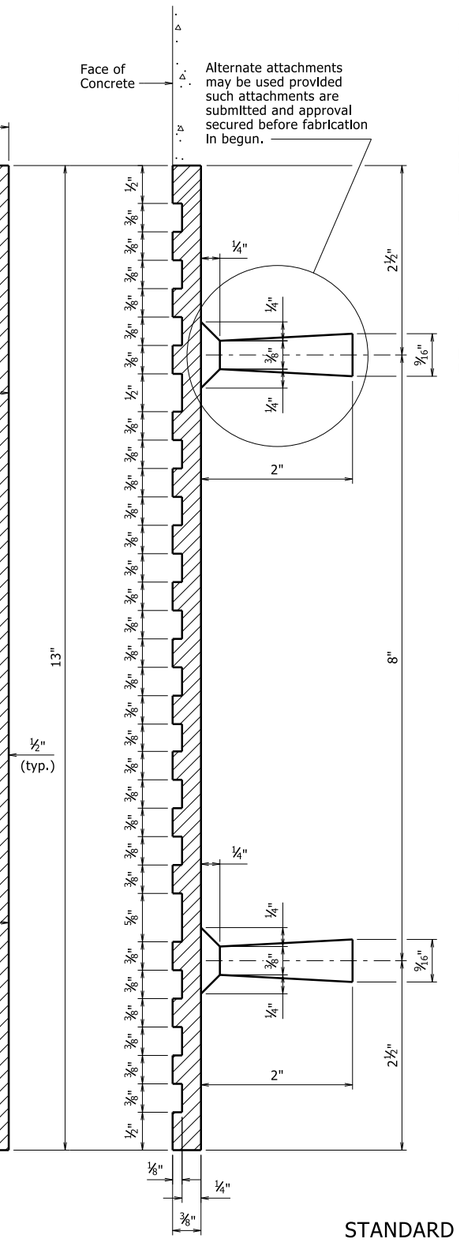
Place the design live loading here using ⅛" raised letters and numerals ¼" high. Examples: HS20 HL-93

Place the Year in which Contract was awarded here using ⅛" raised numerals ⅜" high. Example: 2001

Place the name of the company awarded the construction contract here using ⅛" raised letters and numerals ⅜" high. Example: ABCD CONSTRUCTION, INC.

Place the Bridge number here using ⅛" raised letters and numerals ¼" high. Examples: A1234 05432

TYPICAL BRIDGE NAME PLATE



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be ¼" thick and shall include four tapering cone lugs ⅜" to 9/16" x 2" long. The border and all lettering shall be raised ⅛" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

6 Revised Deputy Director/ Chief Engineer
5-11-2021 CGP Checked By: CRE

5 Revised Director, Deputy Director/Chief Operating Officer, Chair, Vice Chair and added New Commissioner
3-24-2020 CGP Checked By: CRE

4 Revised Chair and Vice Chair Added New Commissioner
1-15-19 CGP Checked By: CRE

3 Added New Commissioner
1-17-17 KDH Checked By: CRE

2 Revised Chair and Vice Chair Added New Commissioner
1-14-15 KDH Checked By: CRE

1 Revised Deputy Director/ Chief Engineer Added Deputy Director/ Chief Operating Officer
12-1-14 KDH Checked By: CRE

STANDARD DETAILS FOR
TYPE D BRIDGE NAME PLATE

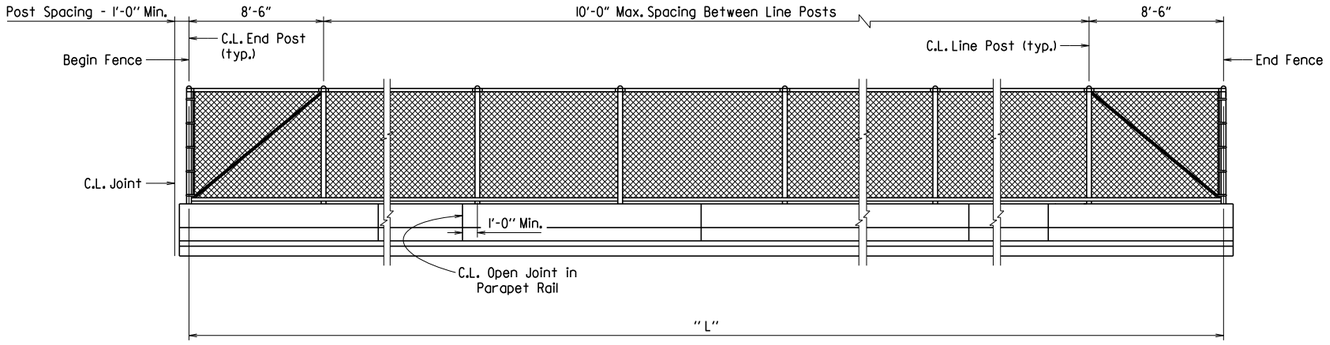
ROUTE SEC.
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE:

DRAWING NO. 55010

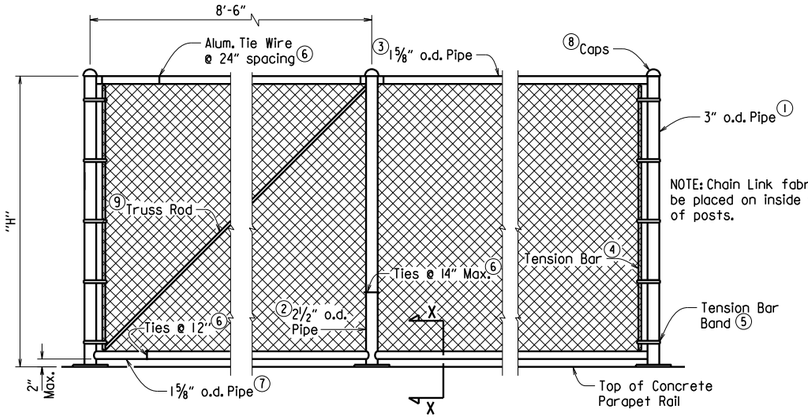
PRINT DATE: 5/11/2021

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				(1)		CHAIN LINK FENCE	55018	



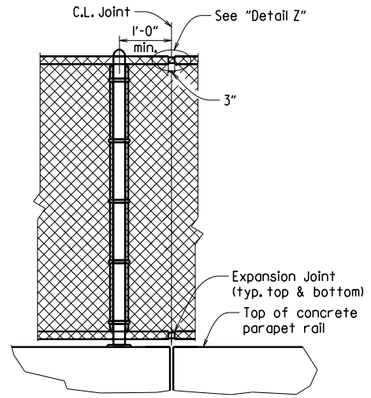
NOTE: The fence location, height "H", total length "L" and parapet panel spacing shall be as specified in plans.

LONGITUDINAL VIEW OF CHAIN LINK FENCE



NOTE: Chain Link fabric to be placed on inside face of posts.

DETAILS OF CHAIN LINK FENCE



DETAIL AT EXPANSION JOINTS

① END POST: 3" O.D.
② LINE POST: 2½" O.D.
③ TOP RAIL: 1⅝" O.D.
④ TENSION BAR: ⅜" x ¾" Bar
⑤ TENSION BAR BAND: ¾"x .074 w/⅝"ø x 1¼" Bolt (1 Band Top and Bottom w/15" Max. spaces)
⑥ TIE WIRE: 9 Ga. Aluminum
⑦ BOTTOM RAIL: 1⅝" O.D.
⑧ CAPS: All Posts shall be Capped and Shall Conform to ASTM F626-84
⑨ TRUSS ROD: Min. of ⅝" Round with Tighteners and Fittings

FABRIC: 9 Ga. 2" Mesh w/Knocklug or Twisting Selvage

GENERAL NOTES FOR CHAIN LINK FENCE:

Fence layout shall conform to the vertical and horizontal bridge alignments. Fence posts shall be set plumb (true vertical position). Parapet rail concrete shall be at least 7 days old before stretching and securing fabric to posts.

Base plates shall not be placed upon areas that are improperly finished, deformed, or irregular.

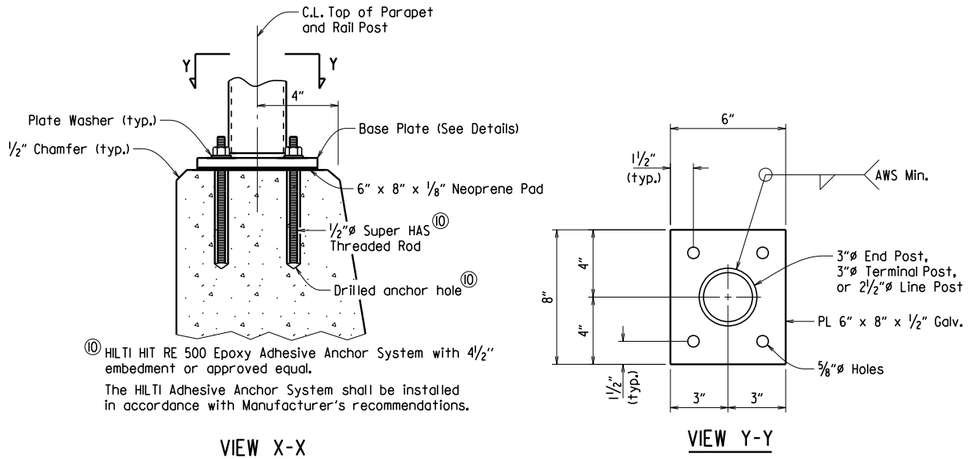
Chain Link Fence attached to Bridge, including neoprene pad and template plates, shall be paid for as "__' Steel Chain Link Fence". For additional details of Chain Link Fence, See Standard Drawing WF-3.

Cast-in-place anchor bolts, nuts, washers, and set screws shall be galvanized high-strength steel or stainless steel. Mixing of galvanized fasteners and stainless steel will not be permitted.

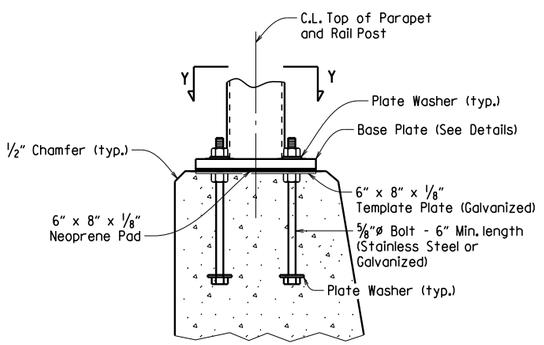
High-Strength Steel:
Cast-in-place anchor bolts shall conform to ASTM A325, Type 1.
Nuts shall conform to ASTM A563, Grade DH or AASHTO M 292, Grade 2H.
Washers shall conform to ASTM F436.
Plate Washers shall conform to AASHTO M 270, Grade 36.
Splice Set Screws shall conform to AASHTO M 270, Grade 36.
Anchor bolts, nuts, washers, plate washers, and set screws shall be galvanized in accordance with AASHTO M 232, Class C or ASTM B695, Class 50.

Stainless Steel:
Cast-in-place anchor bolts shall conform to ASTM A193 or A320-Grade B8 with a minimum yield strength of 80,000 psi.
Nuts shall conform to AASHTO M 292, Grade 8 or ASTM A563.
Washers shall conform to ASTM A240, Type 302.
Plate Washers shall conform to ASTM A240, Type 302.
Splice Set Screws shall conform to ASTM A193 or A320-Grade B8.

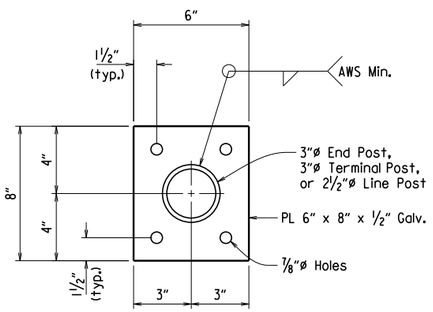
Threads on bolts, screws, and nuts shall conform to American Standard Course Series, Class 2 Fit, ASA Specification B1.1. Plate washers shall have dimensions meeting the requirements of ANSI/ASME B18.22.1, Type A plain washer (Wide Series). Neoprene pads shall conform to the requirements of Subsection 807.15(b).



DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

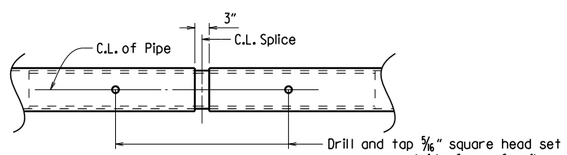


VIEW X-X



VIEW Y-Y

DETAILS OF POST ANCHOR SYSTEM
(CAST-IN-PLACE BOLTS)



DETAIL Z

SECTION AND SUBSECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2014 EDITION).

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR CHAIN LINK FENCE

ARKANSAS STATE HIGHWAY COMMISSION

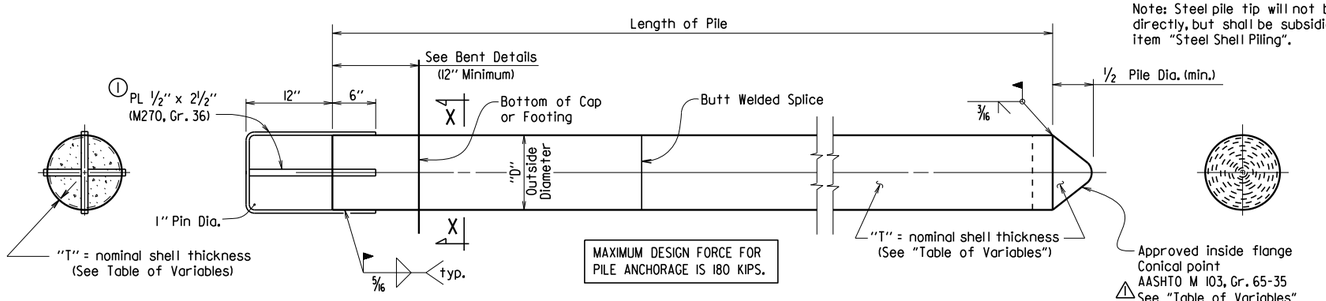
LITTLE ROCK, ARK.

DRAWN BY: E.O.R. DATE: 2-11-2016 FILENAME: b55018.dgn
CHECKED BY: A.M.S. DATE: 2-11-2016 SCALE: No Scale
DESIGNED BY: STD. DATE: ——

DRAWING NO. 55018

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3/24/16				6	ARK.			
				JOB NO.				

(1) STEEL SHELL PILES 55021

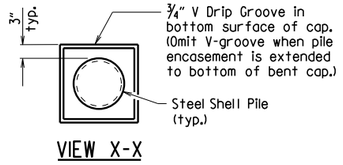


Note: Steel pile tip will not be paid for directly, but shall be subsidiary to the item "Steel Shell Piling".

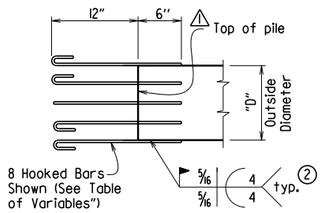
CONCRETE FILLED STEEL SHELL PILE

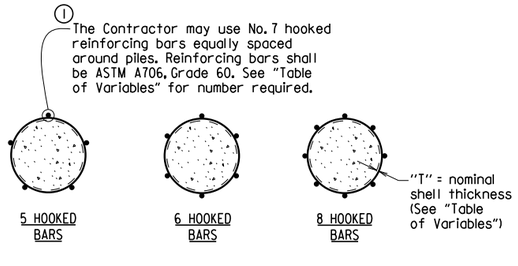
(1) Pile anchorage shall be placed to minimize interference with anchor bolts and reinforcing in cap or footing.

(2) Welding shall comply with ANSI/AWS D1.4 Structural Welding Code-Reinforcing Steel and applicable portions of ANSI/AWS D1.5 Bridge Welding Code.



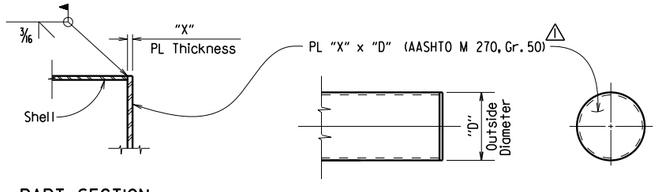
VIEW X-X





ALTERNATE PILE ANCHORAGE DETAIL

Note: Hooked bars shall be oriented to provide the required concrete clearances shown in the plans.

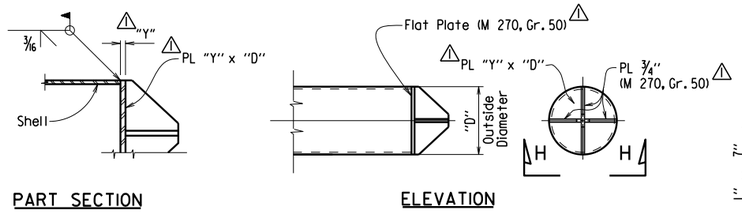


PART SECTION

ELEVATION

ALTERNATE FLAT TIP DETAIL

Note: The alternate flat tip detail shall not be used on steel shell piling to be driven through embankments constructed with internal geosynthetic reinforcement.

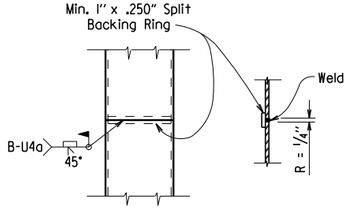


PART SECTION

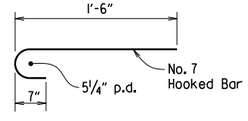
ELEVATION

VIEW H-H

ALTERNATE VANED TIP DETAIL



TYPICAL SPLICE DETAILS



HOOKED BAR DETAIL

TABLE OF VARIABLES

OUTSIDE DIAMETER "D"	NOMINAL SHELL THICKNESS "T"	(1) PLATE THICKNESS "X"	(1) PLATE THICKNESS "Y"	NO. OF HOOKED BARS FOR ALTERNATE PILE ANCHORAGE	(1) MINIMUM CONICAL TIP DESIGN LOAD (KIPS)
14"	0.50"	2¼"	1½"	5	859
16"	0.50"	2¼"	1½"	5	986
18"	0.50"	2½"	1½"	6	1,114
20"	0.50"	2½"	1¾"	6	1,241
24"	0.50"	2¾"	1¾"	8	1,495

(1) Revised and added various details by KWY, Ck'd. by BEF, 3/24/16.

GENERAL NOTES FOR CONCRETE FILLED STEEL SHEEL PILES:

Steel shells shall conform ASTM A252, Grade 3 (Fy = 45,000 psi.)

Concrete used for filling of steel shell shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. and shall be poured in the dry.

Steel shell piling that extends above the ground and is not protected by pile encasement shall be painted in accordance with Subsection 805.02.

See Bridge Layout for size and estimated length of steel shell piles and for driving information.

Concrete, structural steel, reinforcing steel (including welding), and painting shall not be paid for directly, but shall be considered subsidiary to the item "Steel Shell Piling".

GENERAL NOTES FOR PILE ENCASEMENTS:

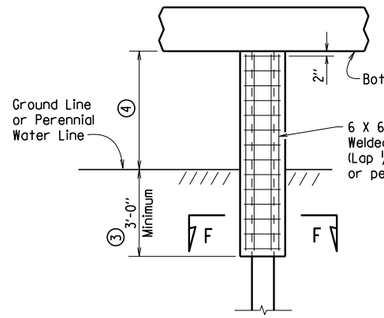
(1) See Bridge Layout for additional notes, any pile encasement restrictions and required location of pile encasements.

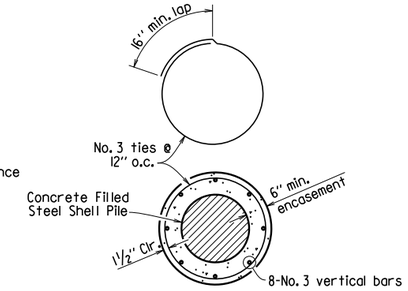
Concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

Welded wire fabric shall conform to AASHTO M 55 or M 221.

Concrete, welded wire fabric or reinforcing steel, and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".





SECTION F-F (REINF. ALTERNATE)

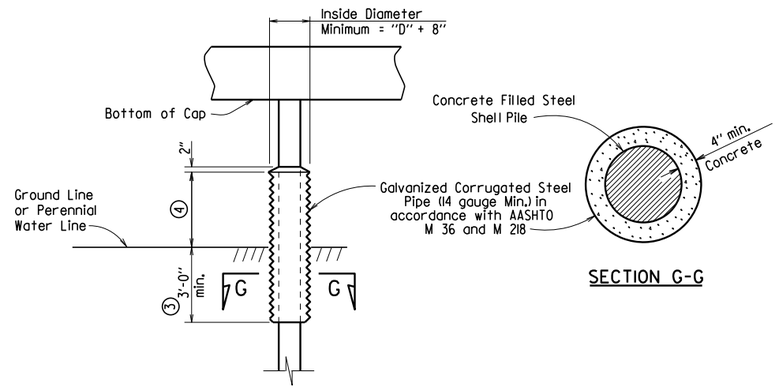
PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

(5) (Shown with Encasement to Bottom of Cap)

(3) Unless otherwise noted on Bridge Layout.

(4) See Bridge Layout for height of pile encasement (3'-0" Minimum).

(5) Pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the detail for partial height encasement.



SECTION G-G

ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL SHELL PILES

(Shown with Partial Height Encasement)

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on March 24, 2016. This copy is not a signed and sealed document.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR CONCRETE FILLED STEEL SHELL PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

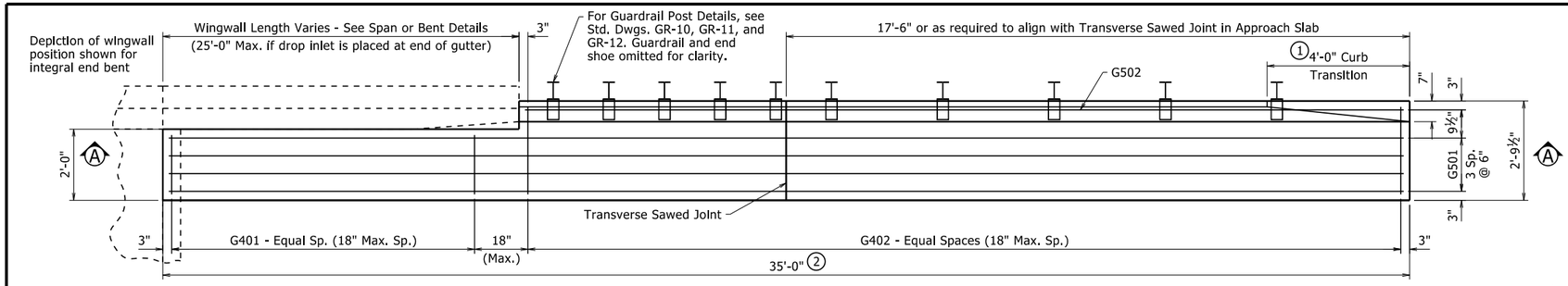
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55021.dgn
CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55021

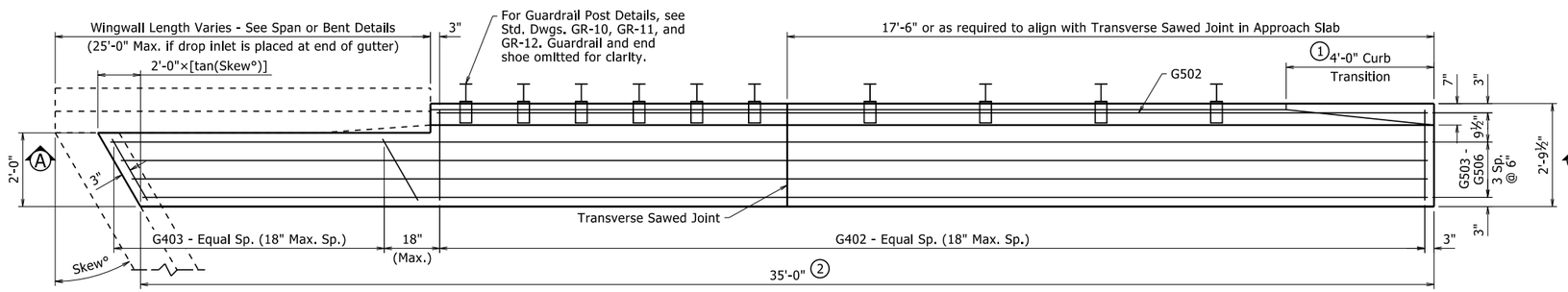
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

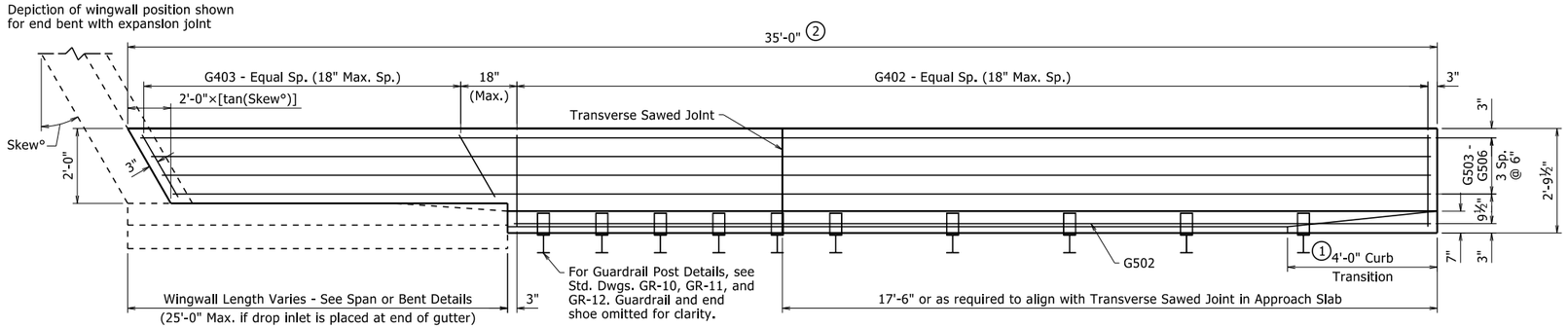
(1) Type F Approach Gutters - 55030F



HALF PLAN OF APPROACH GUTTERS FOR SQUARE END BENT

½" = 1'-0"





PLAN OF SKEWED APPROACH GUTTERS FOR SKEWED END BENT

½" = 1'-0"

QUANTITIES FOR ONE APPROACH GUTTER

(For Information Only)

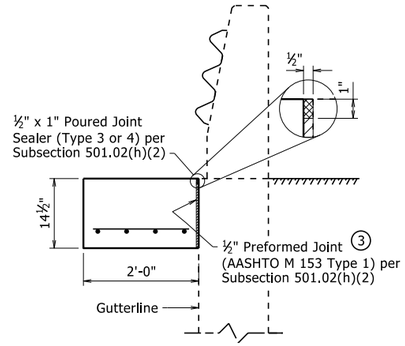
Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
210	4.20

Quantities are based on one gutter for a square, integral end bent and a wingwall length of 10'-0"

BAR LIST FOR ONE APPROACH GUTTER

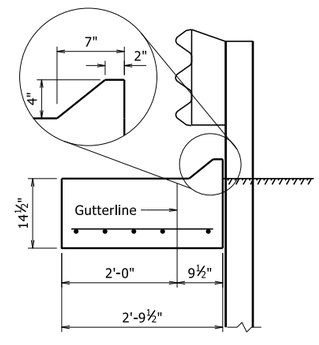
	Mark	No. Req'd.	Length
Square End Bent	G401	(4)	1'-8"
	G402	(4)	2'-5½"
	G501	4	34'-8"
	G502	1	(4)
Skewed End Bent	G402	(4)	2'-5½"
	G403	(4)	(4)
	G502	1	(4)
	G503 - G506	1 ea.	(4)

(4) Varies with Skew and/or Wingwall Length



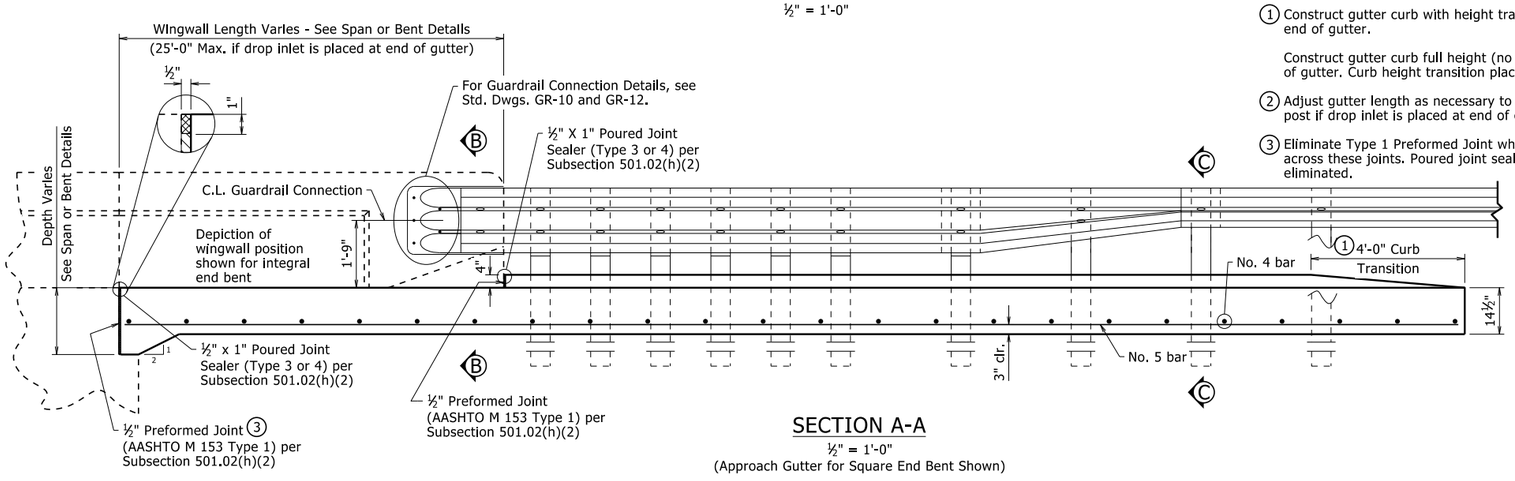
SECTION B-B

¾" = 1'-0"



SECTION C-C

¾" = 1'-0"



SECTION A-A

½" = 1'-0"

(Approach Gutter for Square End Bent Shown)

(1) Construct gutter curb with height transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb full height (no height transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet.

(2) Adjust gutter length as necessary to avoid outlet pipe interference with guardrail post if drop inlet is placed at end of gutter.

(3) Eliminate Type 1 Preformed Joint when bridge details show reinforcing dowels across these joints. Poured joint sealer is required, however, backer rod shall be eliminated.

GENERAL NOTES

All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Gutters will be measured and paid for in accordance with Section 504.

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.

STANDARD DETAILS FOR TYPE F APPROACH GUTTERS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

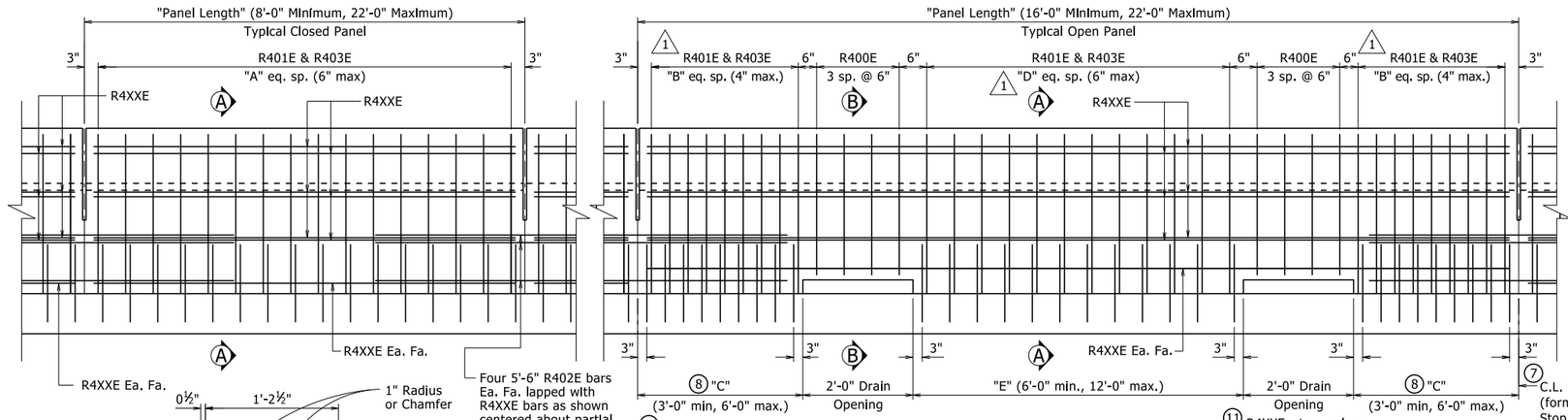
DRAWN BY:	NAC	DATE:	4-8-2021	FILENAME:	b55030f.dgn
CHECKED BY:	LJB	DATE:	4-8-2021	SCALE:	AS NOTED
DESIGNED BY:	STD	DATE:	-		

DRAWING NO. 55030F

PRINT DATE: 4/9/2021

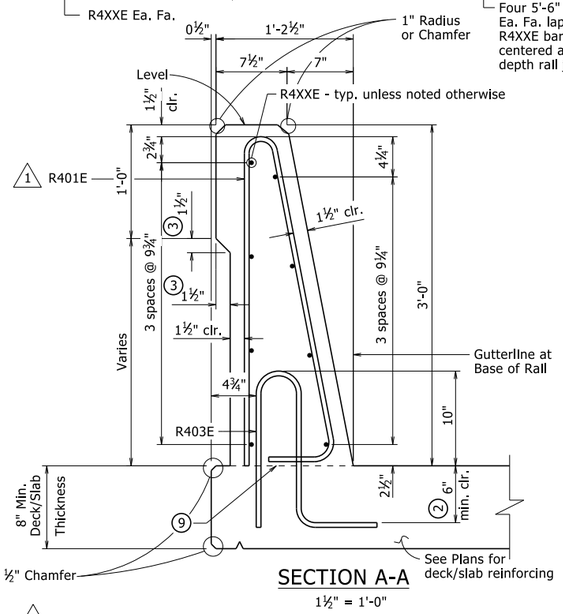
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
09/27/2022				6	ARK.			
				JOB NO.				

TYPE SSTR36 - 55070



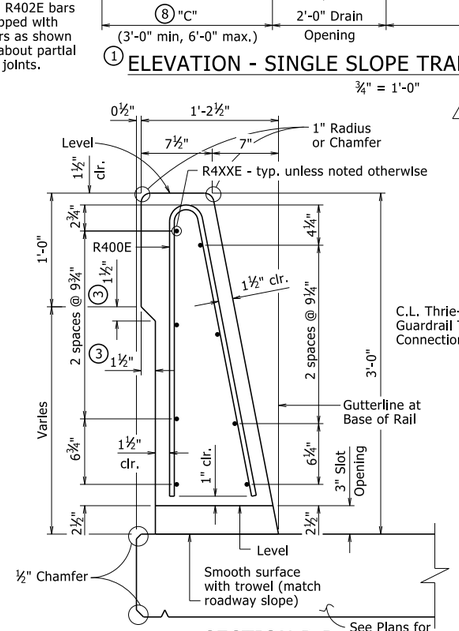
① ELEVATION - SINGLE SLOPE TRAFFIC RAIL

¾" = 1'-0"



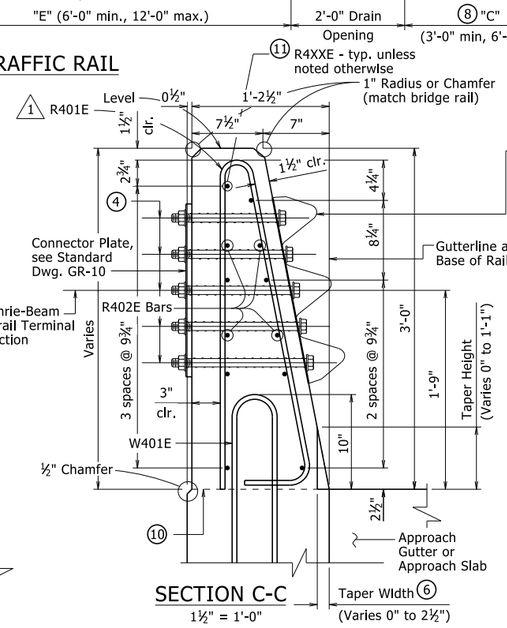
SECTION A-A

1½" = 1'-0"



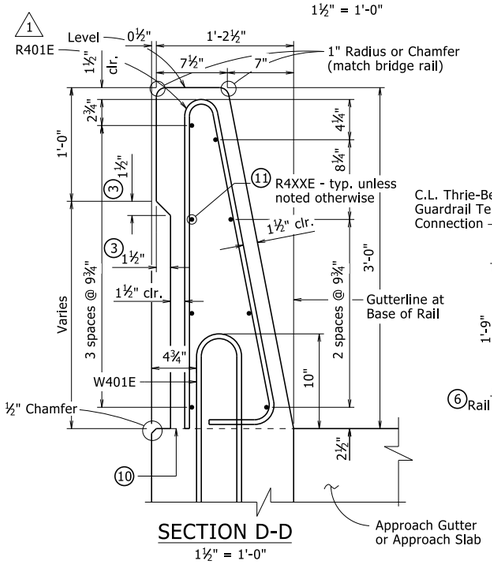
SECTION B-B

1½" = 1'-0"



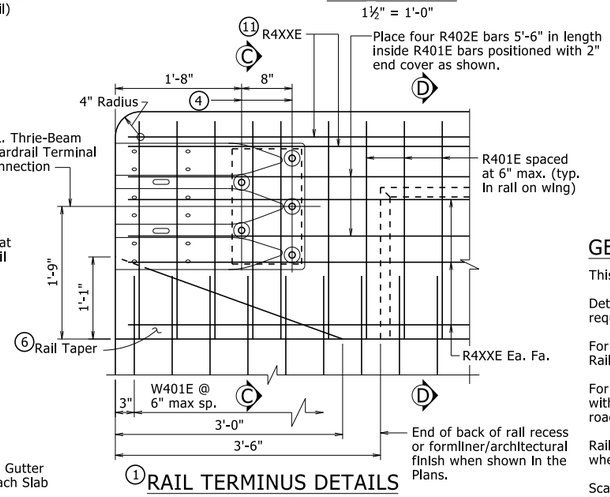
SECTION C-C

1½" = 1'-0"



SECTION D-D

1½" = 1'-0"



① RAIL TERMINUS DETAILS

1" = 1'-0"

⑦ C.L. Full-Depth Rail Joint (formed width ¼" to 1" max). Stop 6" from top of deck/slab or sidewalk. Place at all intermediate bents locations where rail is continuous.

⑦ C.L. Partial-Depth Rail Joint (formed width ¼" to 1" max). Stop 16" from top of deck/slab or sidewalk. Place at all remaining locations other than at intermediate bents.

① All measurements shown are along gutterline at base of rail.

② Minimum embedment into deck/slab.

③ Eliminate recess when formliner with architectural finish is used. See Plans for additional information.

④ C.L. 1" ø formed holes for ⅞" ø bolts. See Standard Drawings GR-10 and GR-12 for additional information.

⑤ Only applicable for bridges with rail cast directly on bridge deck/slab surface. Increase height as necessary for sidewalks, see Plans for additional information.

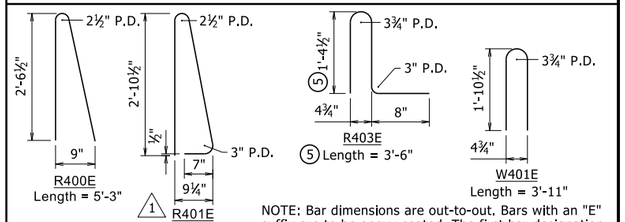
⑥ Field bend front leg of R401E bar as required to maintain minimum 1½" front face clearance within limits of taper.

⑦ When optional slip forming is used: to control cracking, all rail joints must be V-grooved around the perimeter of the rail prior to concrete set and sawing. Depth of V-groove shall be ½". Sawing of the joints shall be done as soon as practical to a width of ¼", and must be controlled so it will follow the V-Groove.

⑧ End posts shall be the same length within a panel.

Bolt Special End Shoe to face of rail as shown. Tapered washers are not required between the head of the bolts and the sloped face of the rail. Tighten the five terminal connection bolts in a well distributed pattern to prevent damage or distortion of the thrie-beam connection. Cut bolts off after installation so as to extend no more than ¾" beyond nut. Paint ends of cut-off bolts with zinc-rich paint. This work and material will not be paid for directly but shall be considered subsidiary to associated contract items.

BENDING DIAGRAM



NOTE: Bar dimensions are out-to-out. Bars with an "E" suffix are to be epoxy coated. The first bar designation number indicates the reinforcing bar size.

⑨ Required Construction Joint. Level where water flows away from rail, match roadway slope where water flows toward rail.

⑩ Top of Abutment Wing & Required Construction Joint (match bridge deck/slab construction joint slope). See Plans for Wing reinforcing.

⑪ These bars will not be included in the "Table of Variables". See Plans for details.

TABLE OF VARIABLES

Closed Rail Panels			Open Rail Panels					
Panel Length	A	R4XXE	Panel Length	B	C	D	E	R4XXE

See Plans for table with values.

GENERAL NOTES

This rail has been successfully evaluated by full-scale crash test to meet MASH TL-4 criteria.

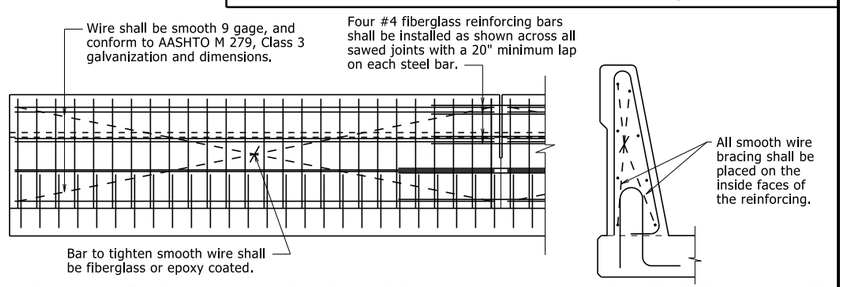
Details shown are general for bridges without sidewalks. See Plans for additional details and requirements specific to bridges with sidewalks.

For Table of Variables, Rail Bar List, locations of Full and Partial Depth Rail Joints, and Wing & Rail Bar Lists, see Plans.

For location of drain openings, see Plans. Drain openings shown are not applicable for bridges with sidewalks. Drain openings will not be allowed over Railroad Right of Way, travelled roadways, and protected waterways.

Rail Terminus details, including Rail Taper, are not applicable for bridges with sidewalks or when bridge railing is continuous with roadway railing.

Scales shown are for 22"x34" drawings. When using 11"x17" drawings, reduce scale by one half.



The extruded rail shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Unless otherwise noted, exposed surfaces may be given a light brush finish or a Class 3, Textured Coating Finish in place of Class 2, Rubbed Finish.

All panels shall be braced as required to prevent racking.

Slip forming will not be allowed on bridges where formliner with architectural treatment is used unless approval from the Engineer is obtained.

DETAILS OF OPTIONAL SLIP FORMING OF BRIDGE TRAFFIC RAIL

No Scale

△1 Modified bending diagram and spacing for R401E bar.

By: CGP, Checked by: CMW 09/27/2022

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 5, 2020. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN DETAILS, SPECIAL PROVISIONS, OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR BRIDGE TRAFFIC RAIL TYPE SSTR36

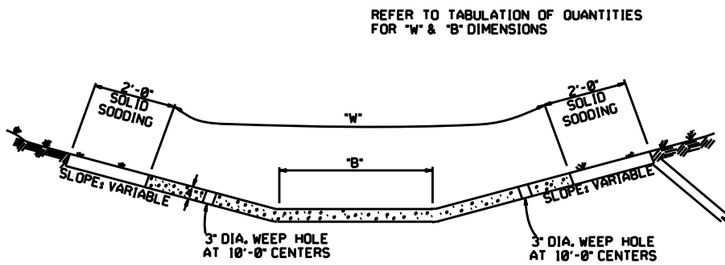
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 11/5/2020
CHECKED BY: LJB DATE: 11/5/2020
DESIGNED BY: STD. DATE: -----
FILENAME: b55070.dgn
SCALE: As Noted

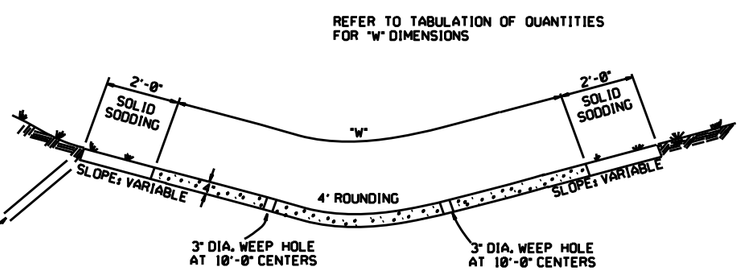
DRAWING NO. 55070

PRINT DATE: 10/6/2022



TYPE A

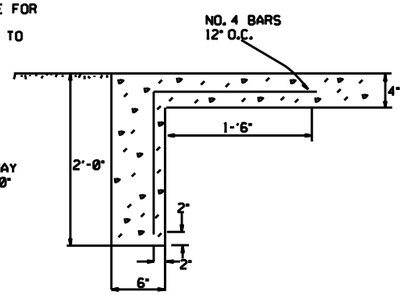
EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.



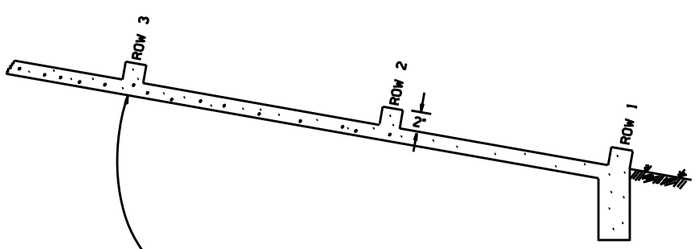
TYPE B

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

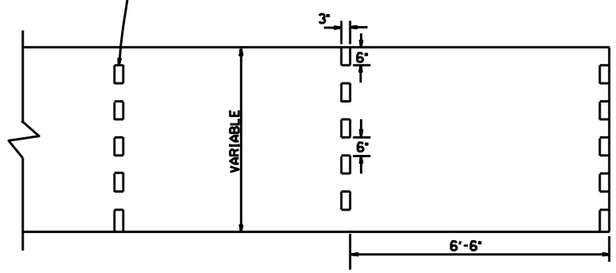


TOE WALL DETAIL FOR CONCRETE DITCH PAVING



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.

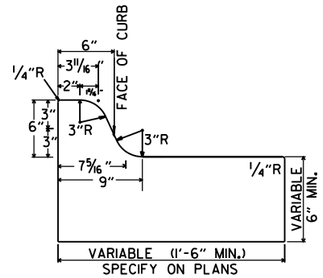
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45° INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

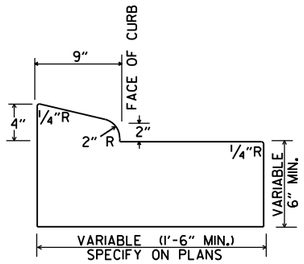
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

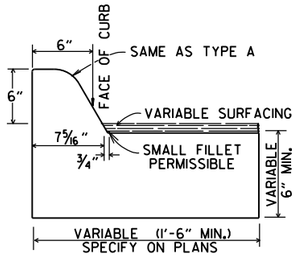
STANDARD DRAWING CDP-1



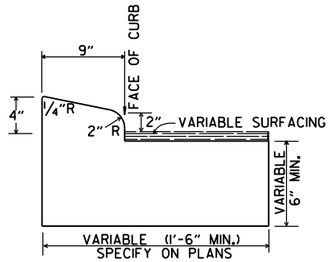
TYPE A



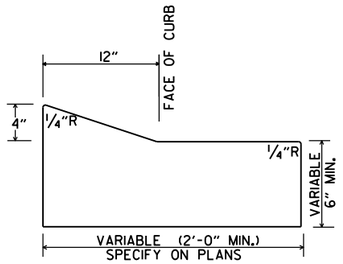
TYPE B-1



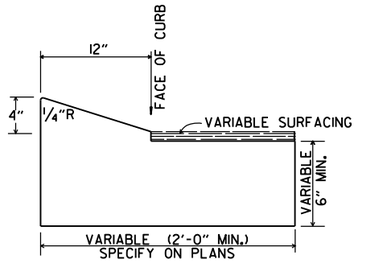
TYPE C



TYPE B-2

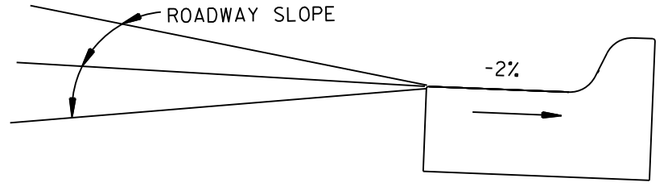


TYPE E-1



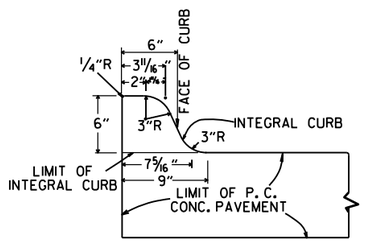
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

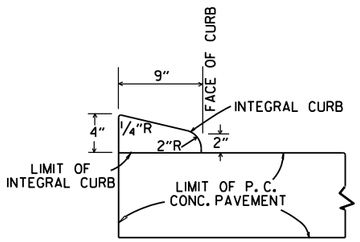


DETAIL OF GUTTER SLOPE

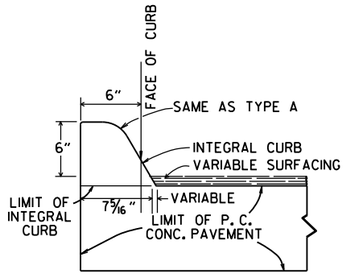
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

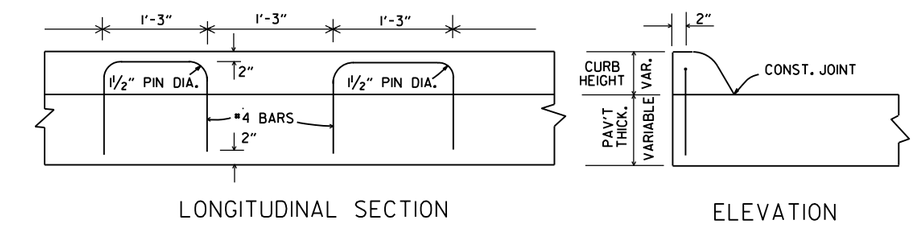


TYPE B



TYPE C

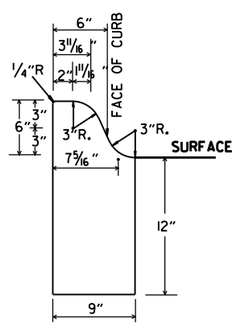
INTEGRAL CURB



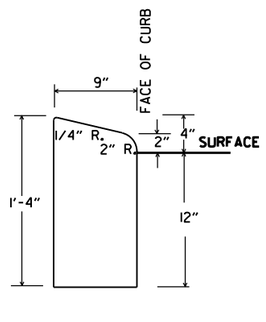
LONGITUDINAL SECTION

ELEVATION

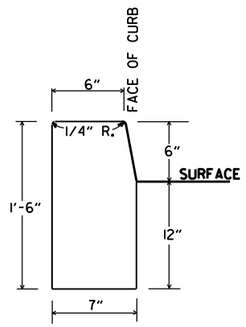
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



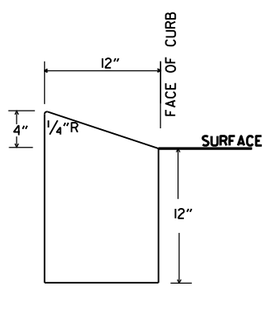
TYPE A



TYPE B

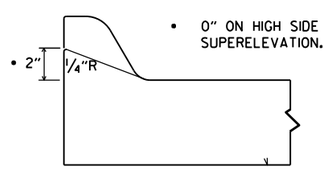


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

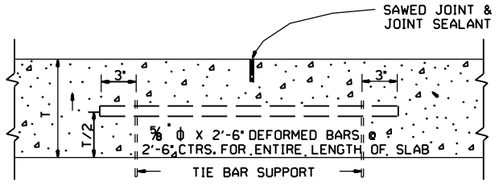
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

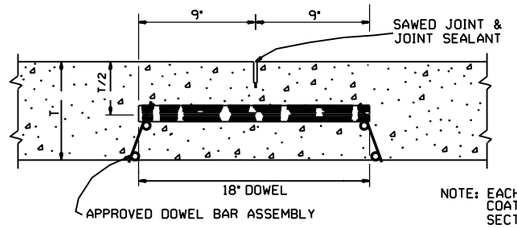
STANDARD DRAWING CG-1



LONGITUDINAL JOINT

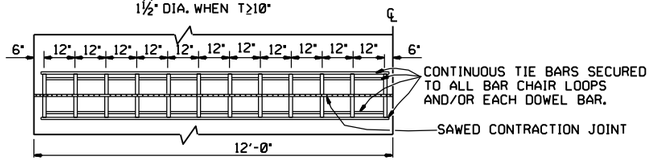
NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.

TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.



NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.

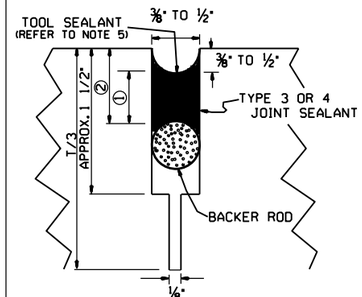
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



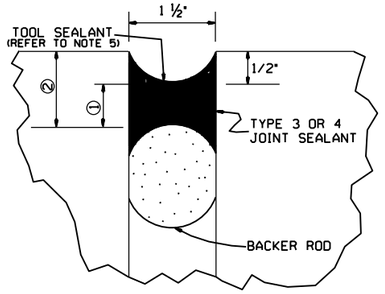
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR. FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



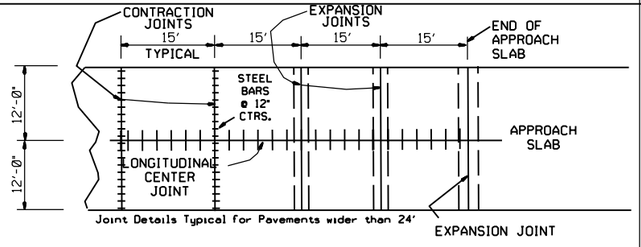
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

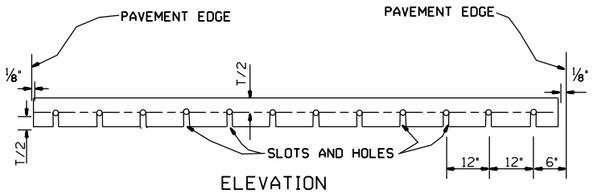
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	5/16	¾	7/16
¾	⅜	⅞	⅜
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
⅜	¾	½	1

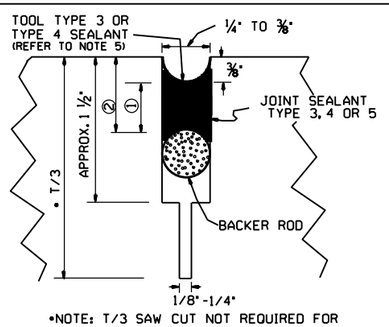


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



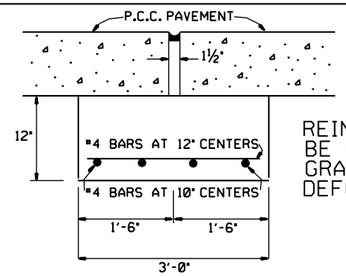
ELEVATION

NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



•NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

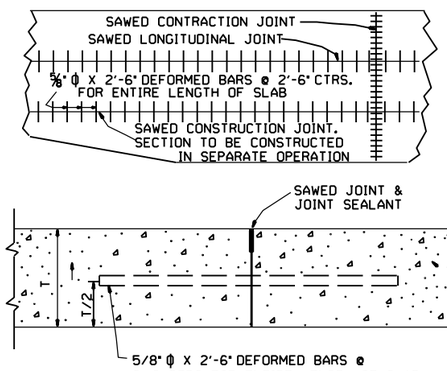


REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

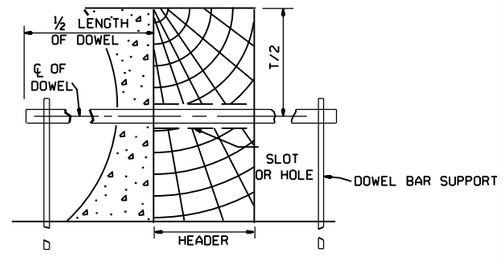
GENERAL NOTES

1. "T" DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S" OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.



NOTE: TIE BARS SHALL BE 15" FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

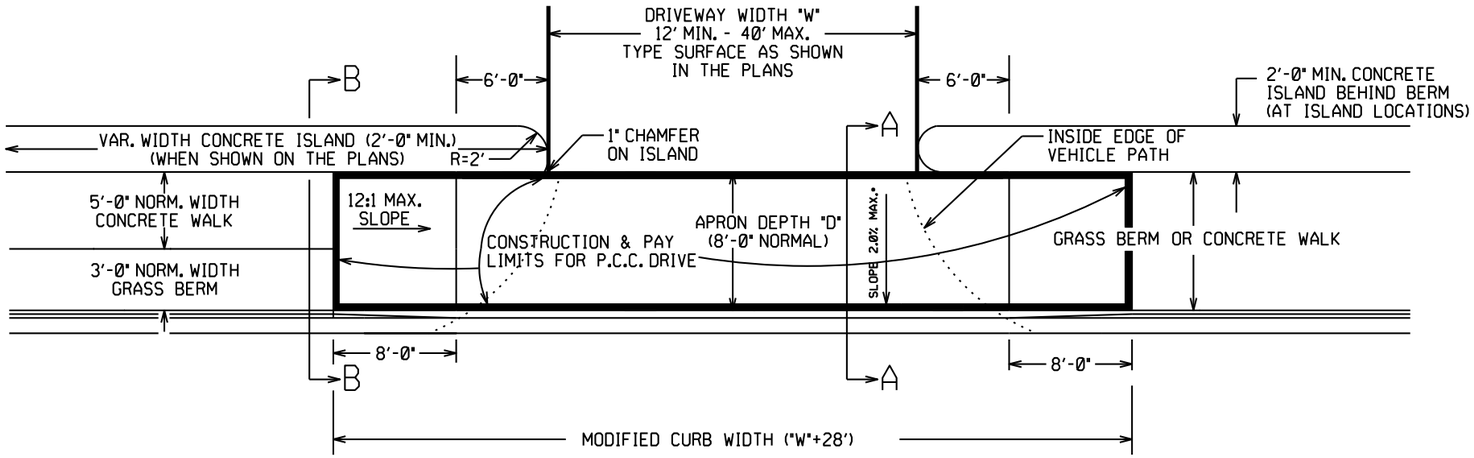
TRANSVERSE CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
11-07-19	REV. EXP. JOINT REF ON APP. SLAB	
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88

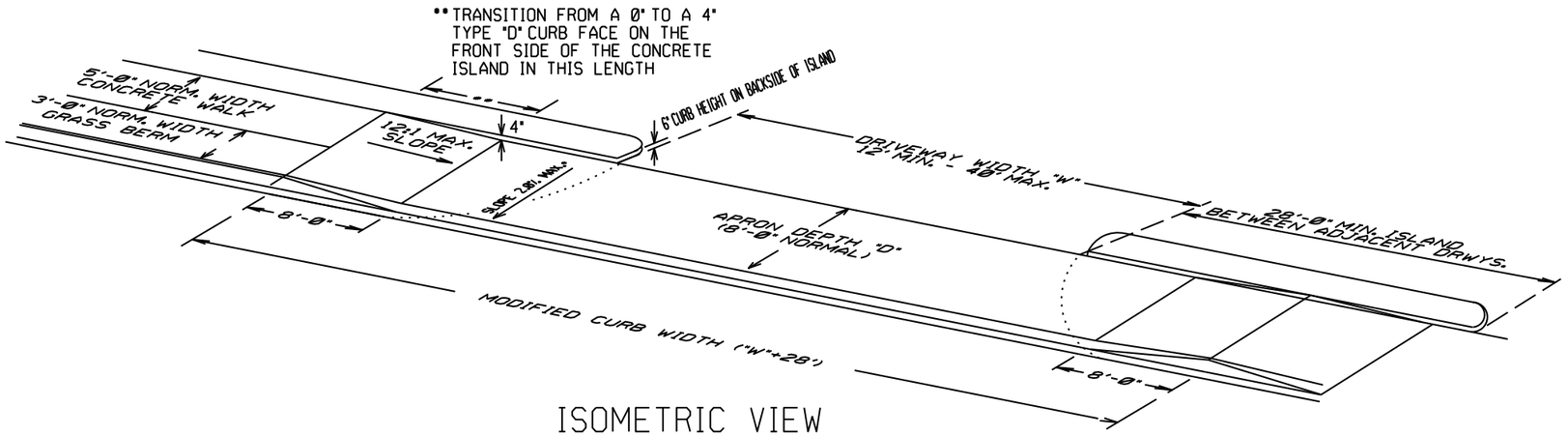
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

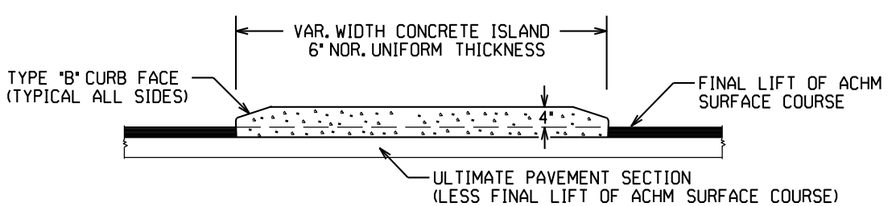
STANDARD DRAWING CPTJ - 6A



PLAN VIEW



ISOMETRIC VIEW

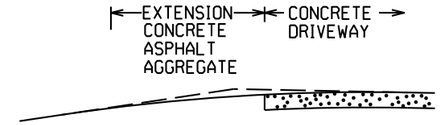


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

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

2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2" WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

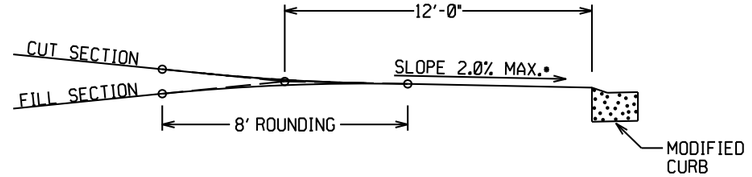
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

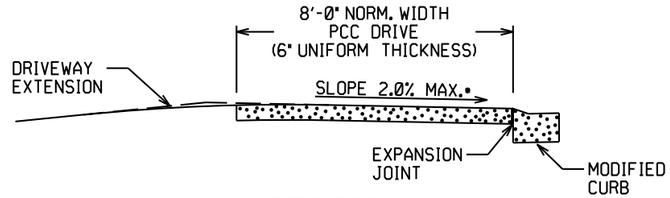
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

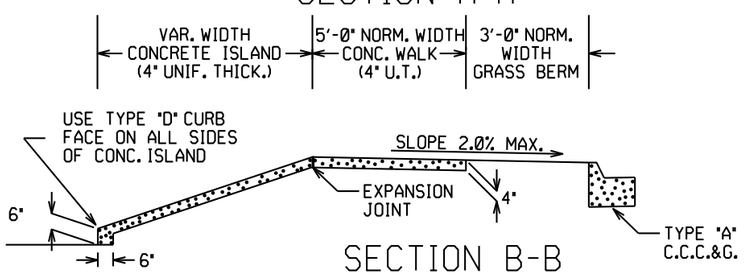


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A



SECTION B-B

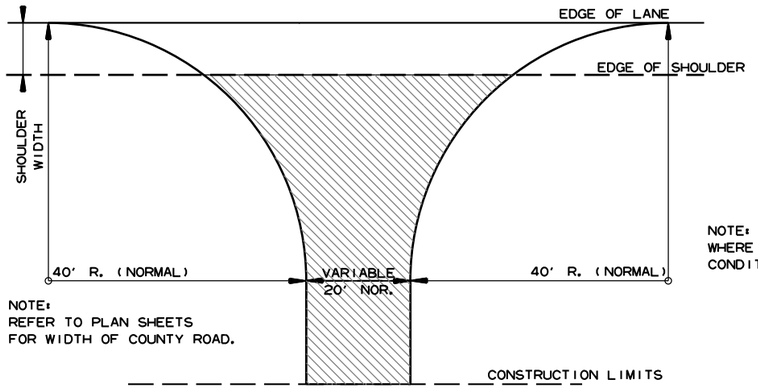
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		REVISED ISLAND NOTES
11-07-19		REVISED WALK DETAILS
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

STANDARD DRAWING DR-1

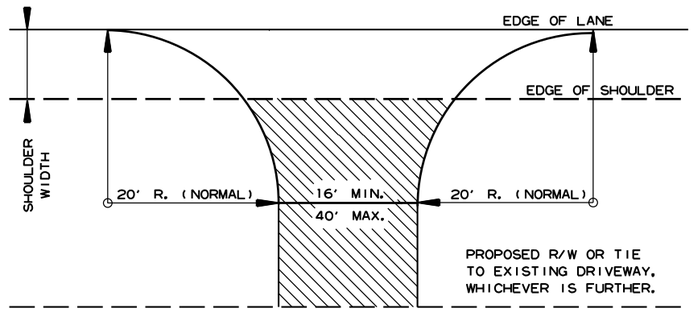


NOTE:
REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.

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

ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH, UNLESS OTHERWISE
SPECIFIED IN PLANS.

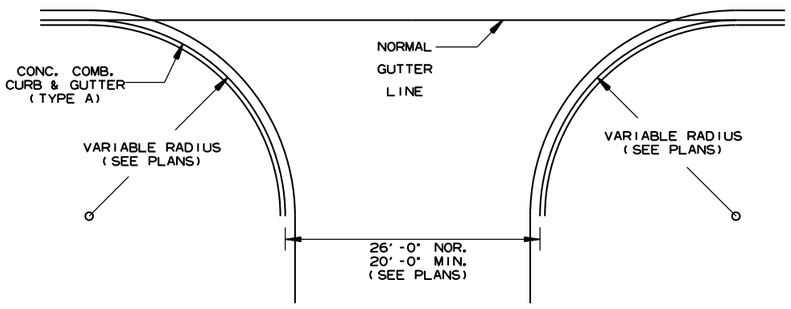
DETAIL FOR COUNTY ROAD TURNOUTS OPEN SHOULDER SECTION



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

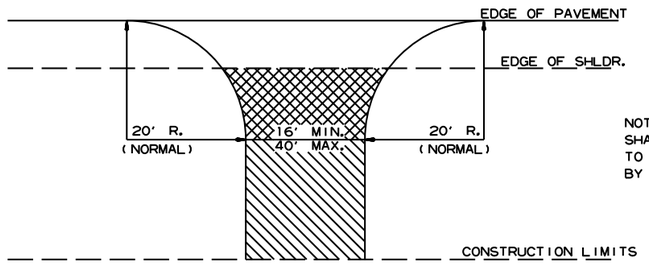
ACHM SURFACE COURSE (1/2")
(220 LBS. PER SQ. YD.) AND
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT OR
GRAVEL DRIVE EXISTING; OR 6"
CONCRETE IF CONCRETE DRIVE
EXISTING.

DETAIL FOR DRIVEWAY TURNOUTS OPEN SHOULDER SECTION (ARTERIALS)



NOTE:
PAVEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LANES.

DETAIL OF TURNOUTS, ASPHALT STREETS, COUNTY ROADS & STATE HIGHWAYS CURB & GUTTER SECTION



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

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

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

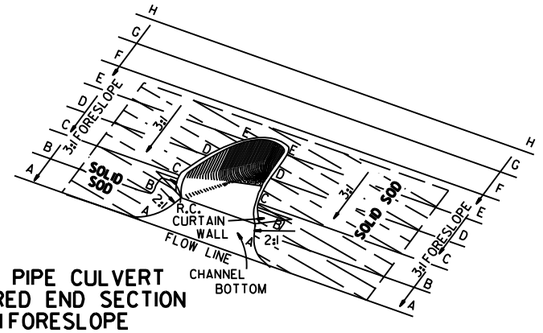
DETAIL FOR DRIVEWAY TURNOUTS (COLLECTORS)

DATE REV	DATE FILMED	DESCRIPTION
5-19-22		ISSUED

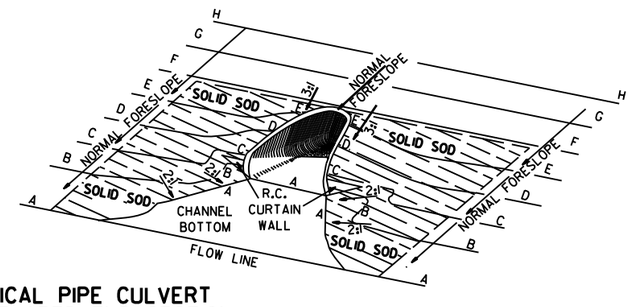
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & STREET TURNOUTS

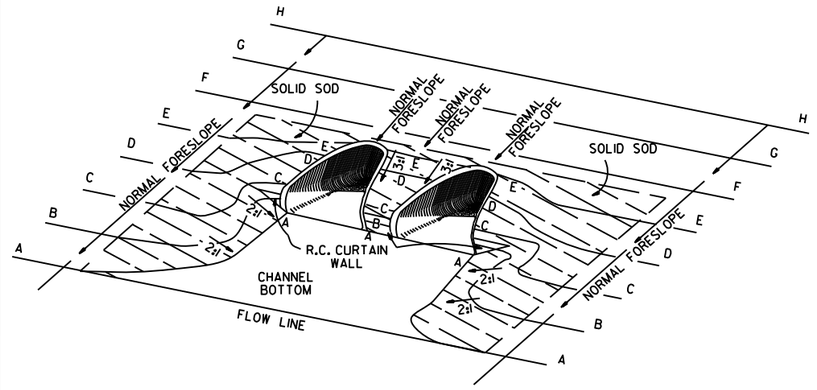
STANDARD DRAWING DR-2



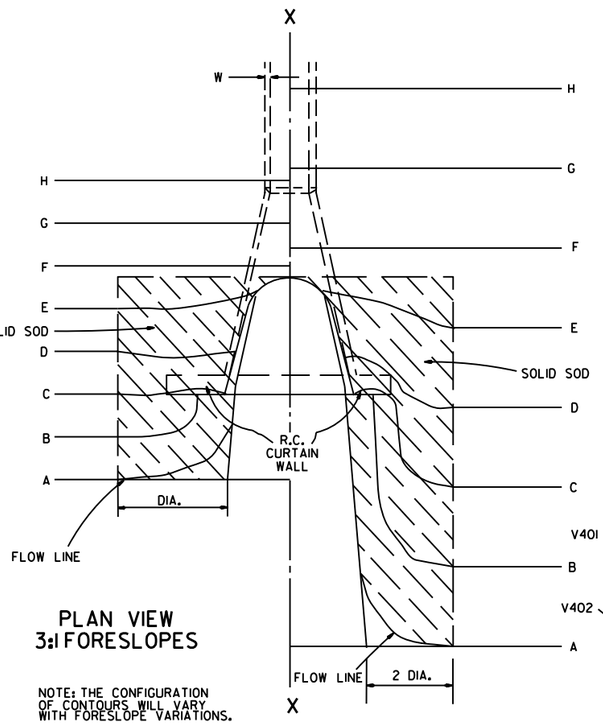
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

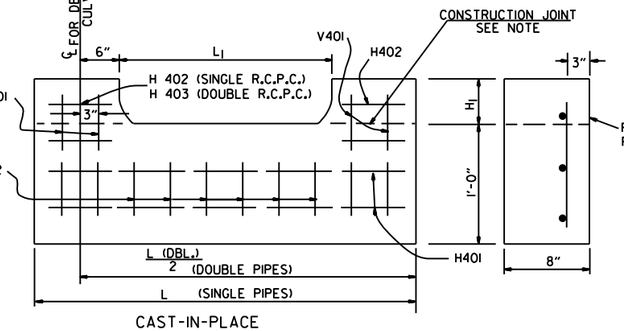
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

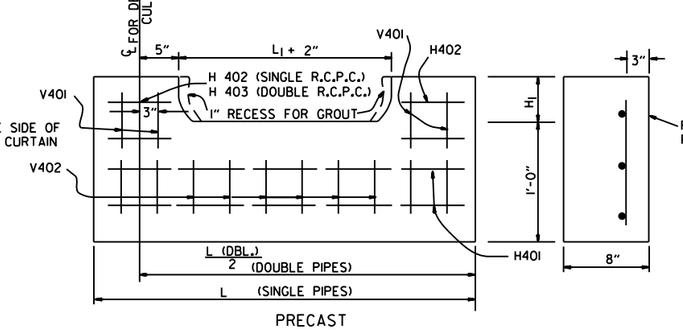
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	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.



CAST-IN-PLACE

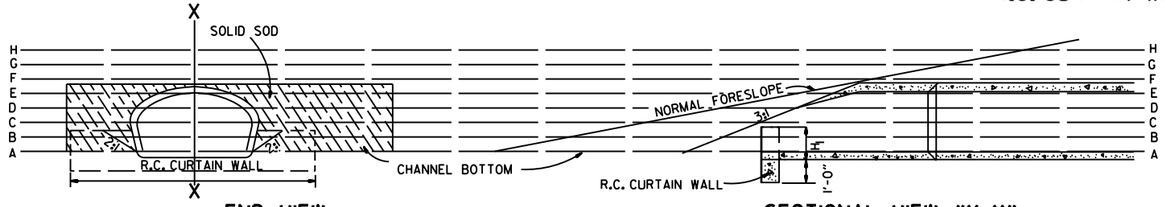
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



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



END VIEW

SECTIONAL VIEW "X-X"

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.

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 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.

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

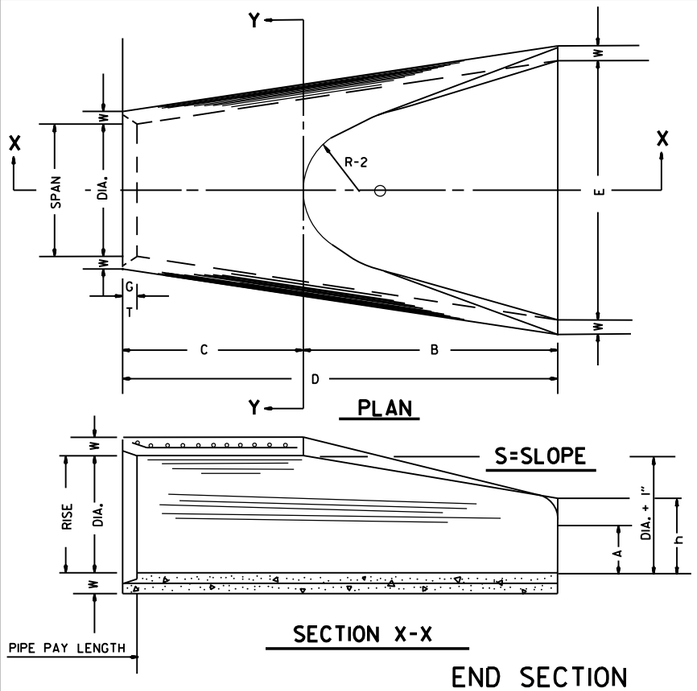
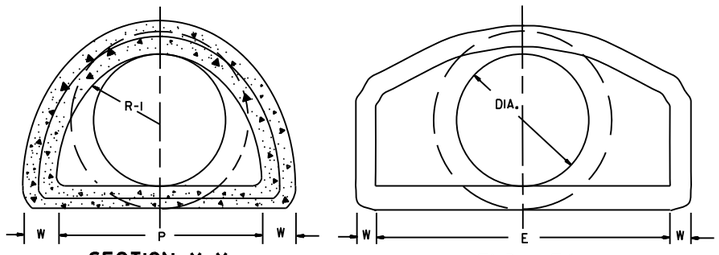


TABLE OF DIMENSIONS

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"	33 3/16"	16 15/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 13/16"	24 5/16"	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"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

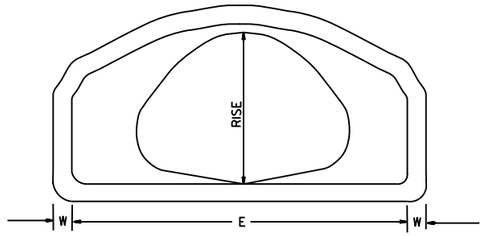


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

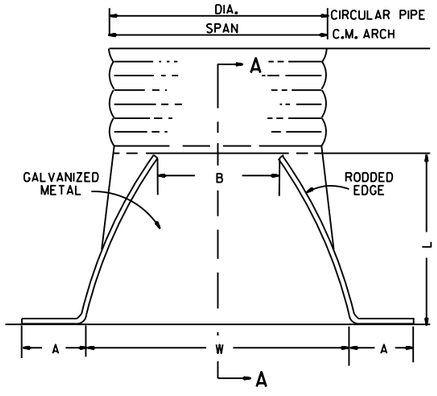
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 11/16"	20"	3"	2½:1
36	43¾	44	26⅜	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	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"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/16"	24"	5"	2¼:1

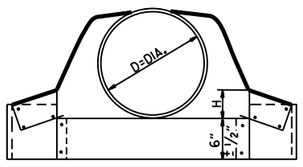
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



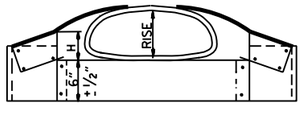
END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS





CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

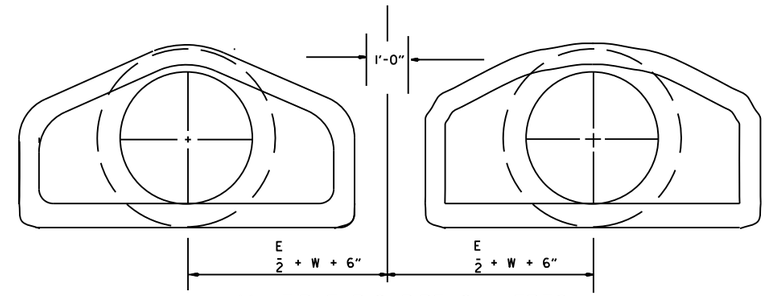
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

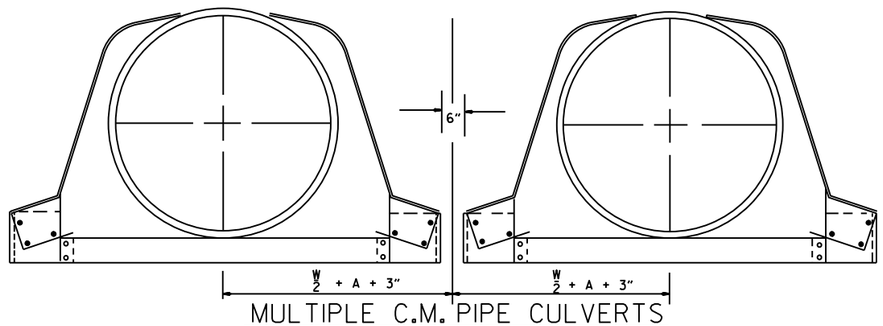
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
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.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



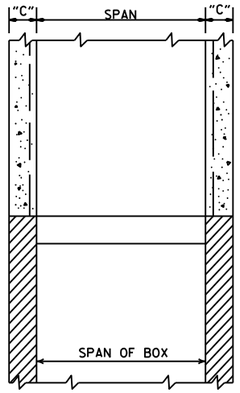
MULTIPLE C.M. PIPE CULVERTS

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

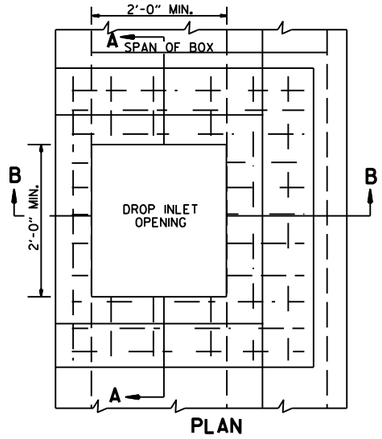
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

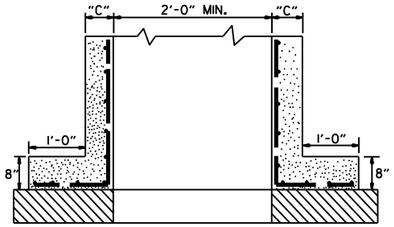
STANDARD DRAWING FES-2



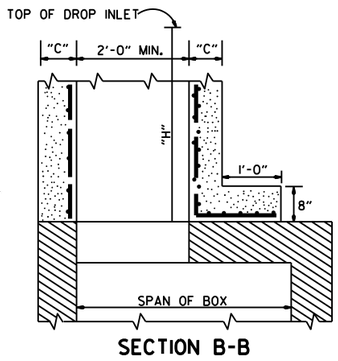
SECTION B-B



PLAN

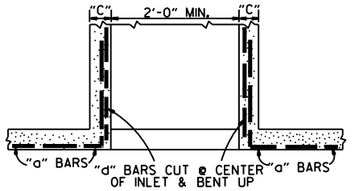


SECTION A-A

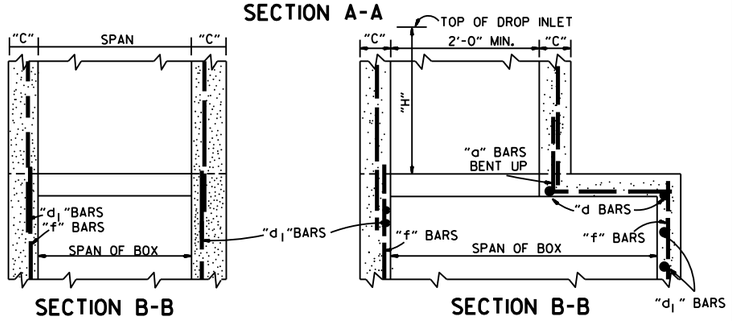


SECTION B-B

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



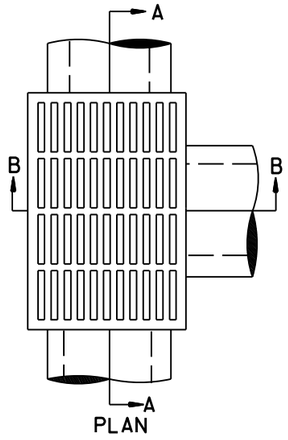
SECTION A-A



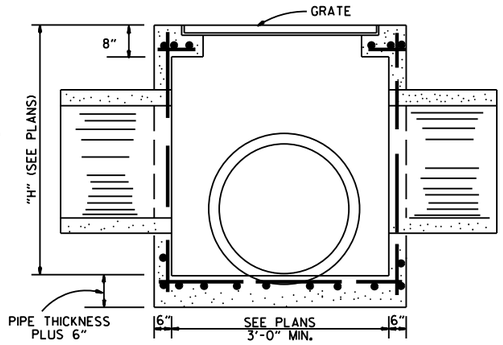
SECTION B-B SECTION B-B

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

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

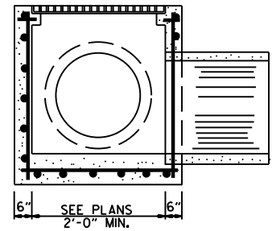


PLAN



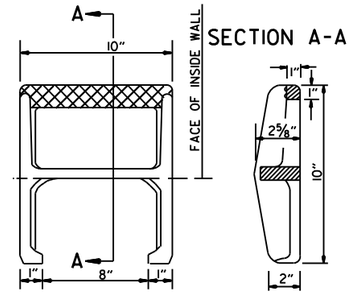
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

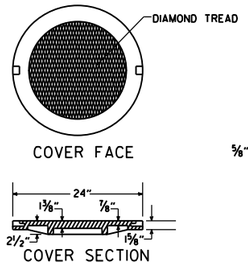


APPROX. WEIGHT = 11 LBS. (CAST IRON)

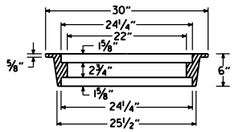
PLAN

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

DETAIL OF STEP FOR DROP INLET



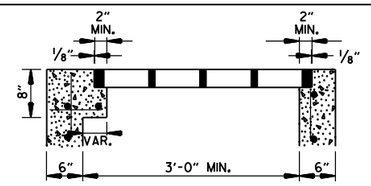
COVER SECTION



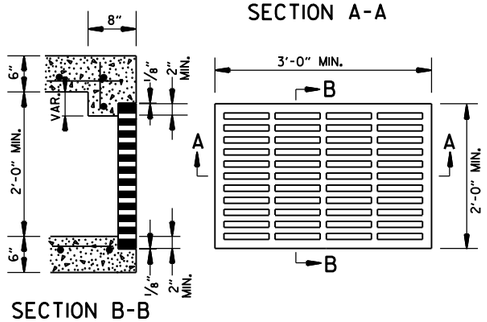
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



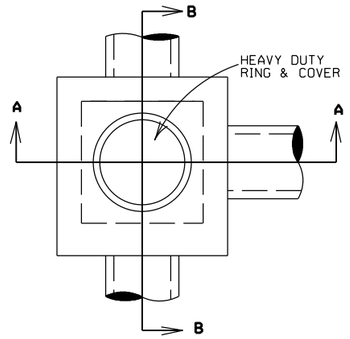
SECTION A-A



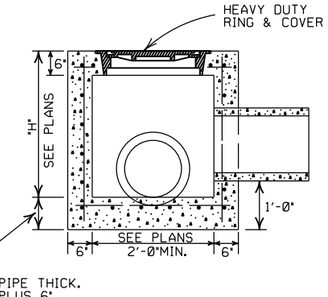
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

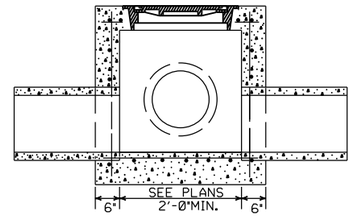


PLAN



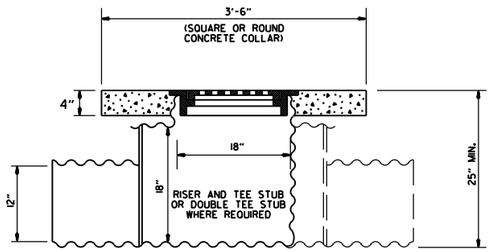
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

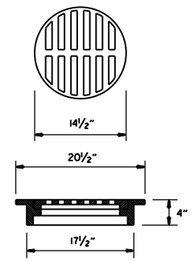


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

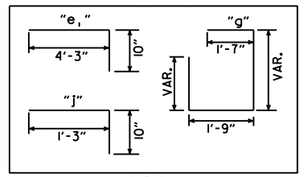
DROP INLET EXTENSION

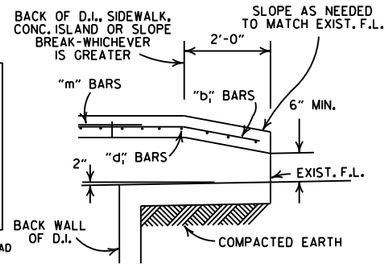
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

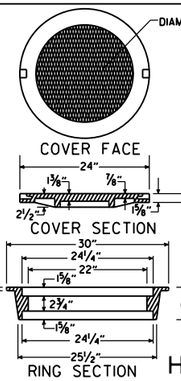
BAR DIAMETER





BACK OPENING

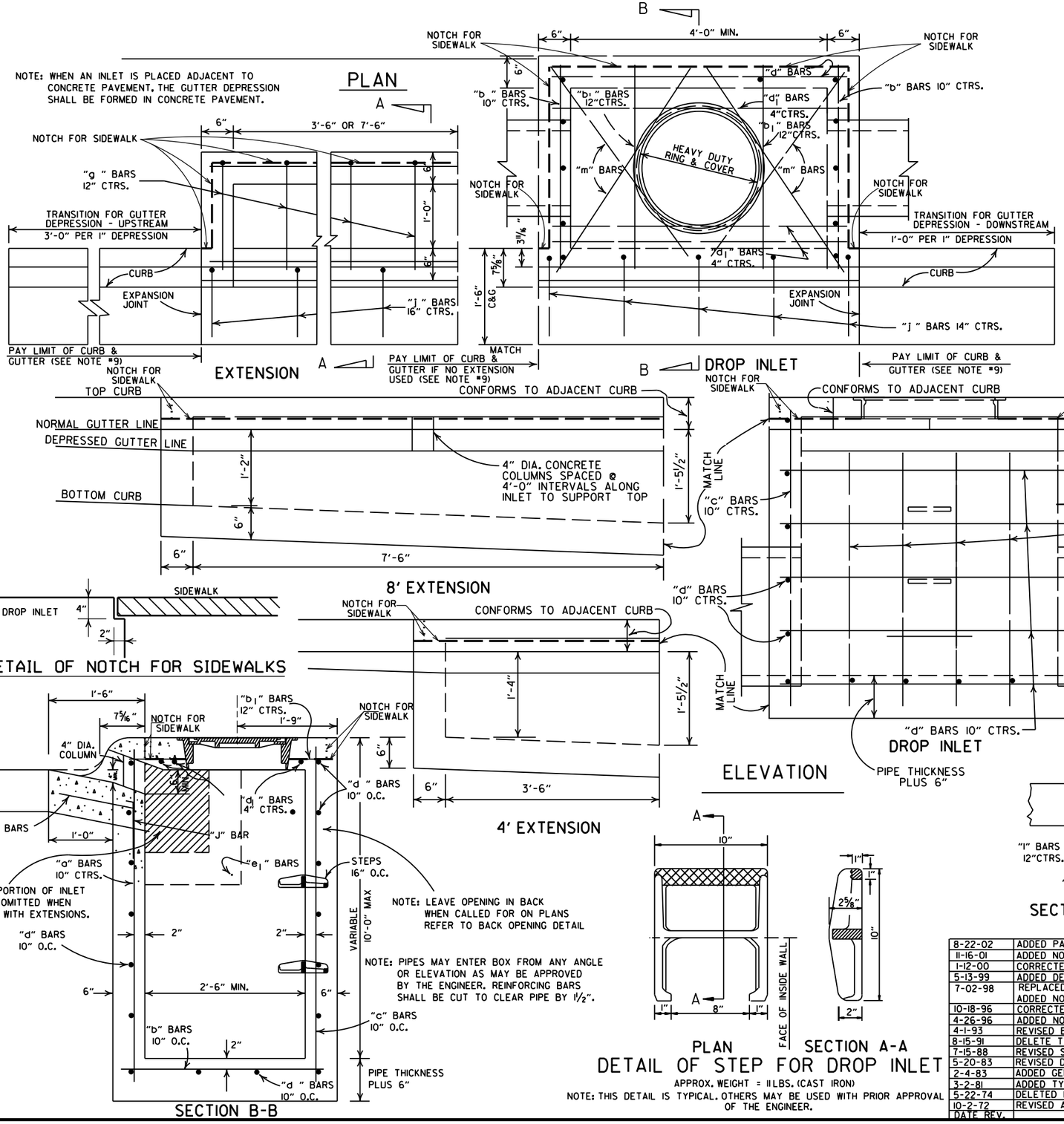
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



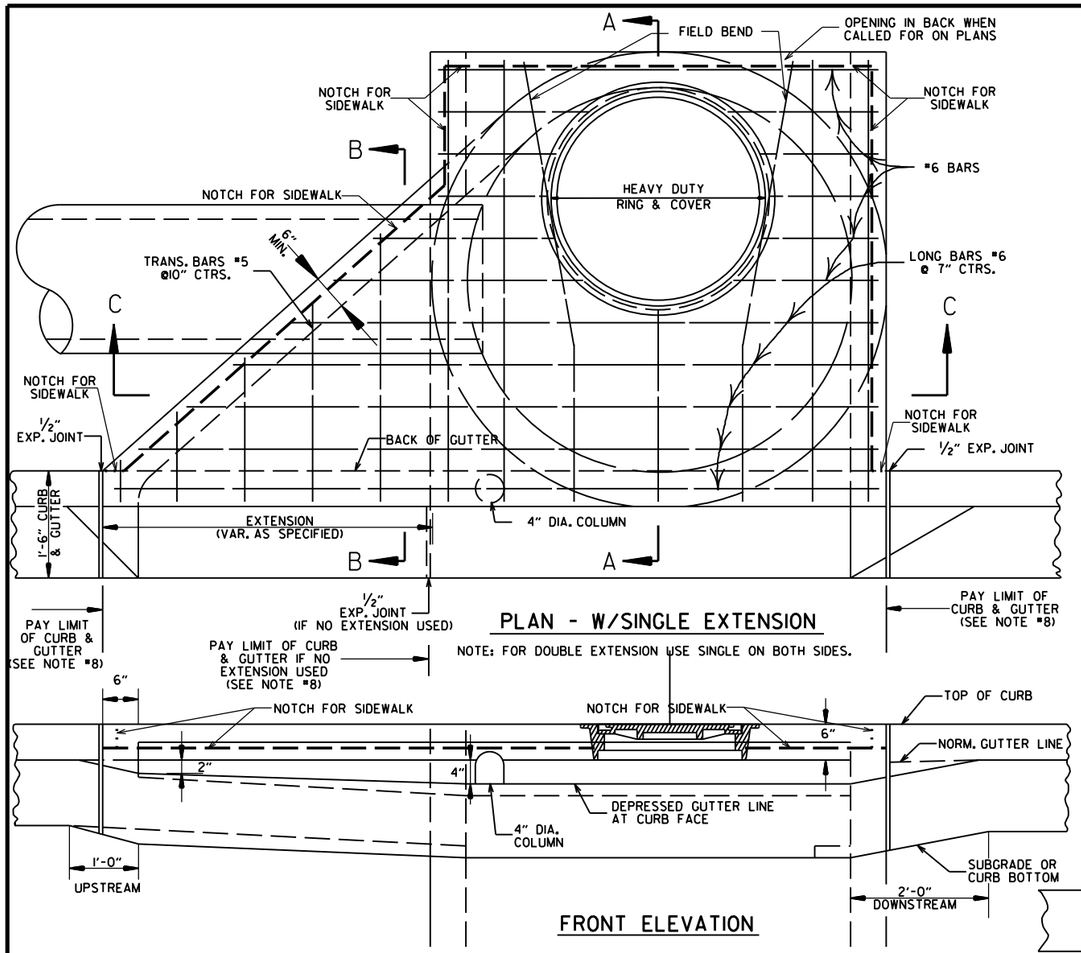
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

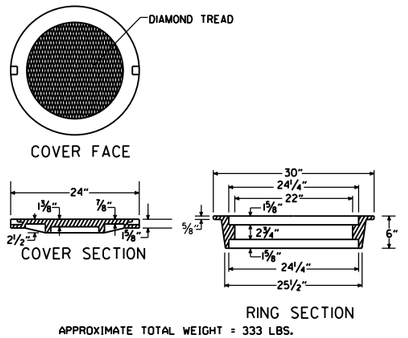
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

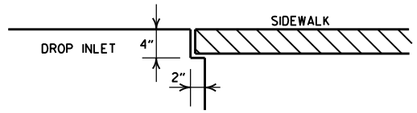




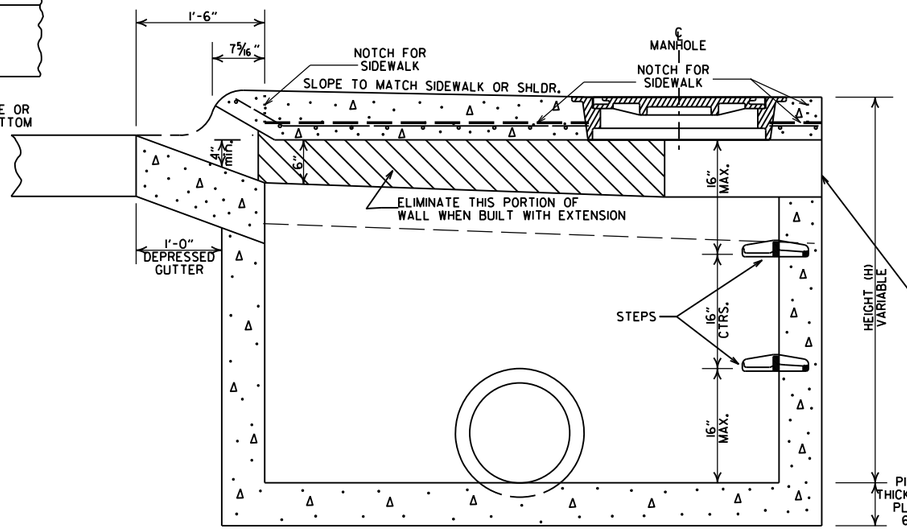
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

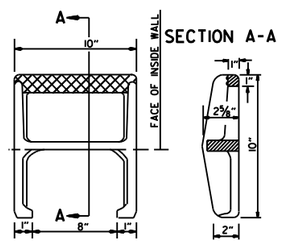
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A



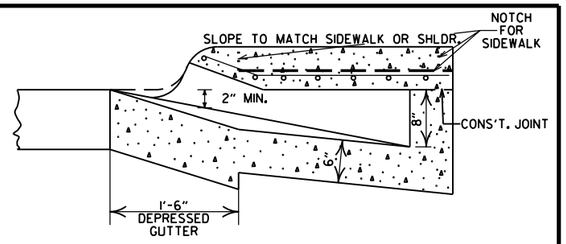
SECTION A-A

APPROX. WEIGHT = 11LBS. (CAST IRON)

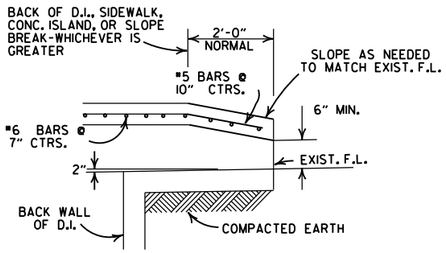
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

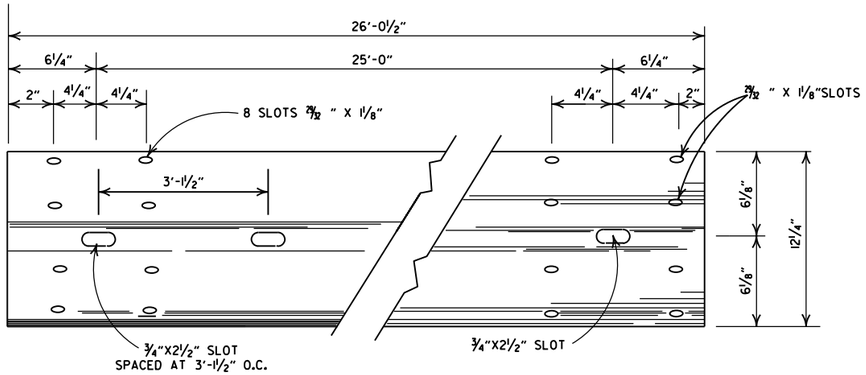
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

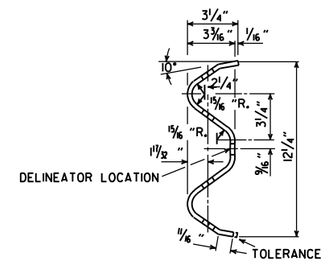
DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11, ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN, BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN. DETAIL & NOTE	4-1-93
8-16-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-23-89	ADDED NOTE & MINIMUM WALL THICKNESS	513-5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	629-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

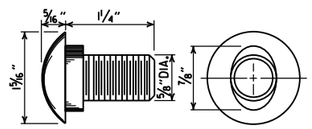
STANDARD DRAWING FPC-9M



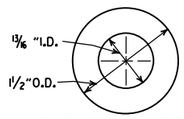


DETAILS OF W-BEAM GUARDRAIL

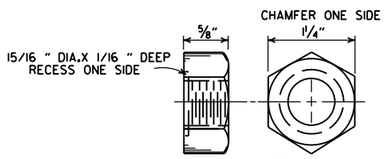
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



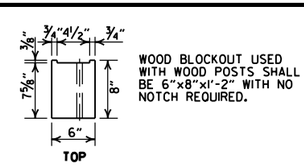
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



CUT STEEL WASHER

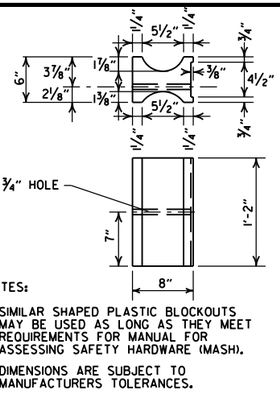


NUT



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

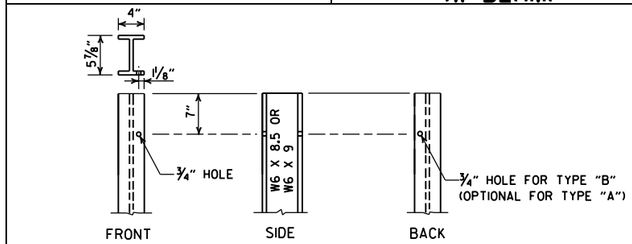
WOOD BLOCKOUT (W-BEAM)



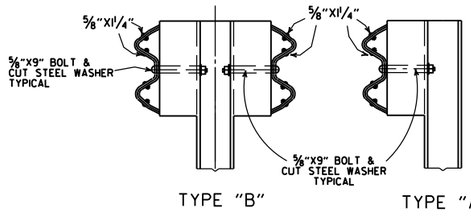
NOTES:

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

PLASTIC BLOCKOUT (W-BEAM)



STEEL POST



DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

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

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

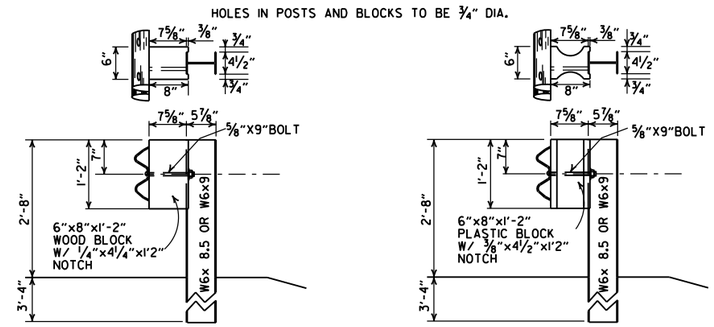
USE W-BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARDRAIL, W-BEAM GUARDRAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

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

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

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

DELINEATORS SHALL BE MOUNTED AT 37.5' SPACING ON THE FRONT FACE OF THE GUARDRAIL. SPACING MAY BE REDUCED IN CURVES, AS DIRECTED BY THE ENGINEER. COLOR SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR DELINEATORS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID PER LIN. FT. FOR GUARDRAIL.



WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

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

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

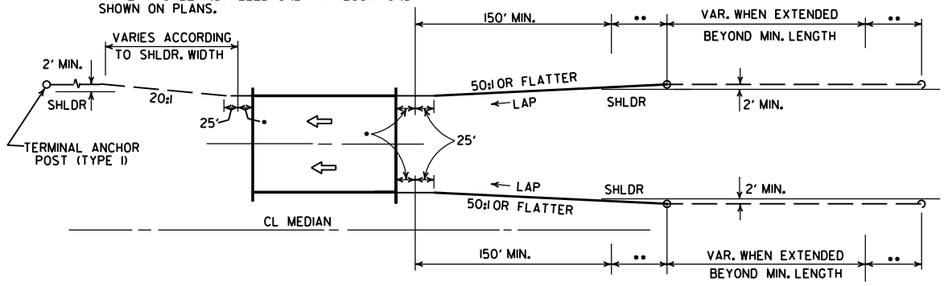
DATE	REVISION	FILMED
05-19-22	REVISED GENERAL NOTES, ADDED DELINEATOR LOCATION.	
11-07-19	RENUMBERED AND RENAMED	
11-16-17	REVISED GENERAL NOTES AND RAISED GUARDRAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARDRAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARDRAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

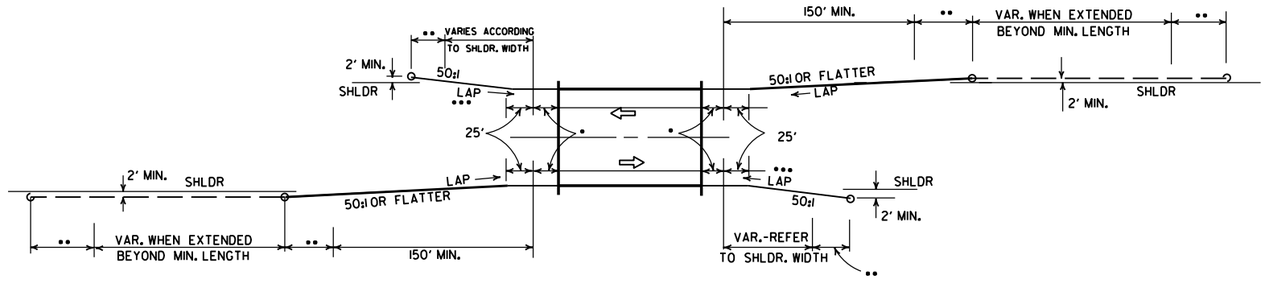
STANDARD DRAWING GR-6

NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

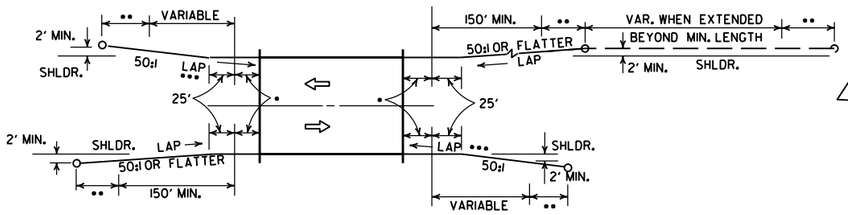
••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

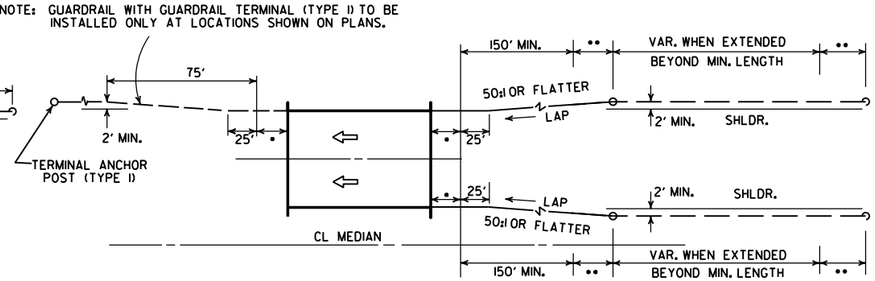
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

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



TWO-WAY TRAFFIC

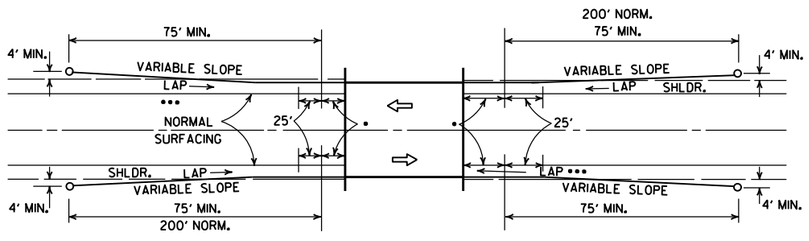
NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

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

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



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

LEGEND

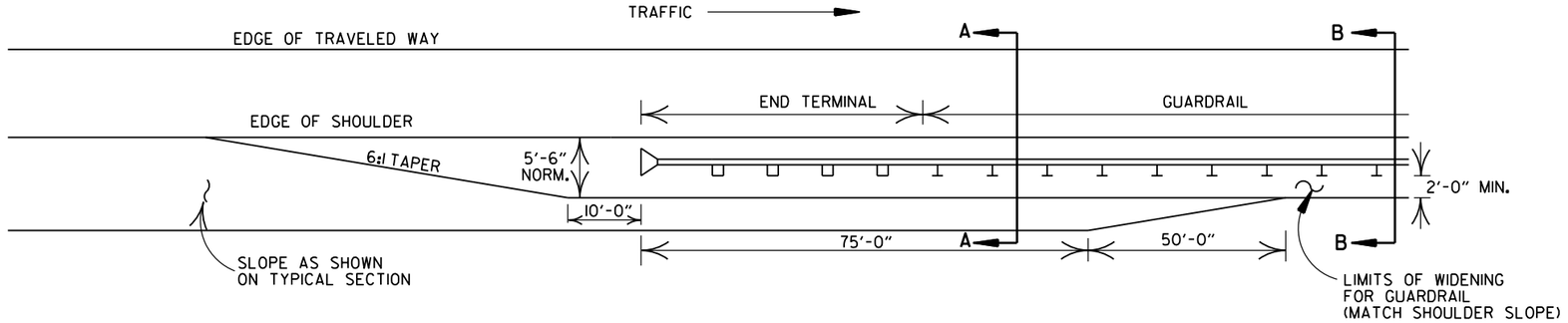
- • THRIE BEAM GUARDRAIL TERMINAL
- •• GUARDRAIL TERMINAL (TYPE 2)

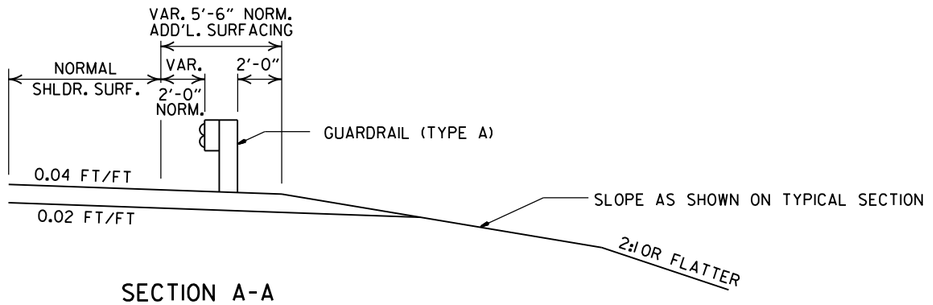
DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARDRAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

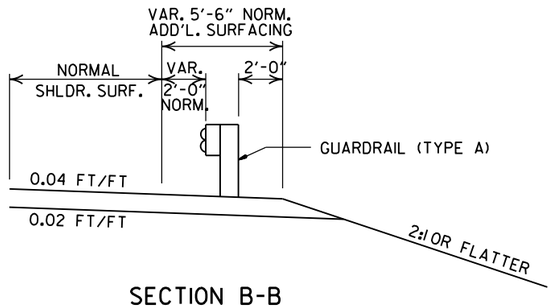
GUARDRAIL DETAILS

STANDARD DRAWING GR-8



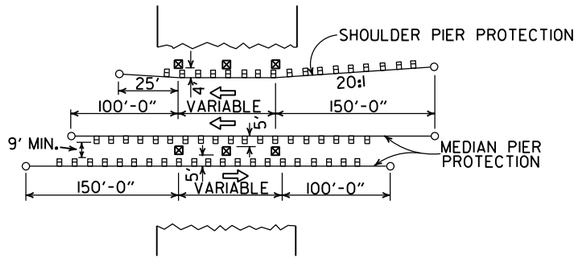


SECTION A-A



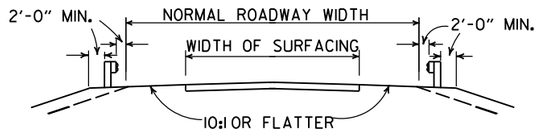
SECTION B-B

DETAILS OF WIDENING FOR GUARDRAIL

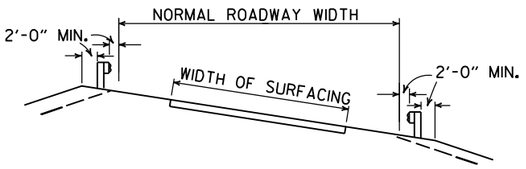


METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

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



SECTION ON TANGENT



SECTION ON CURVE

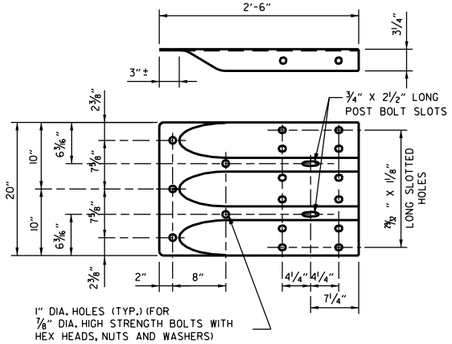
DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

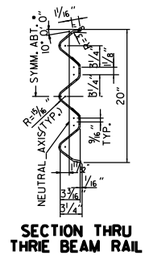
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

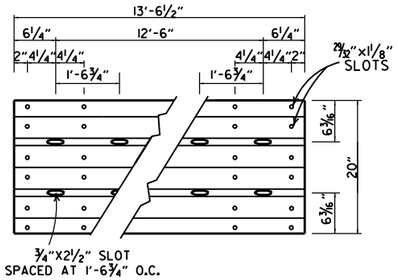
STANDARD DRAWING GR-9



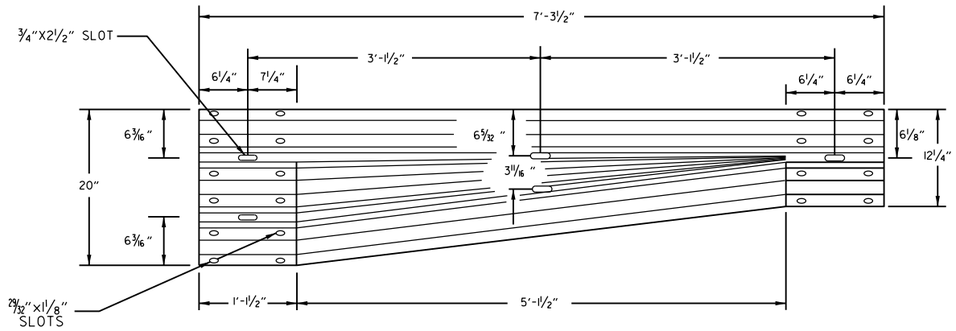
SPECIAL END SHOE



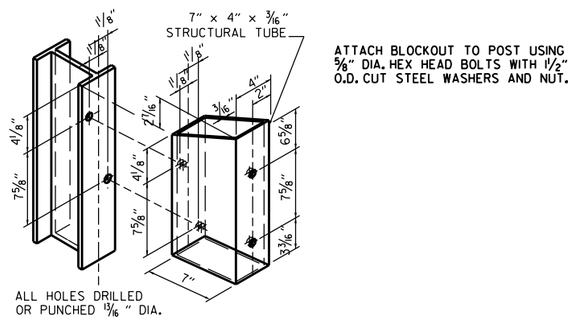
SECTION THRU THRIE BEAM RAIL



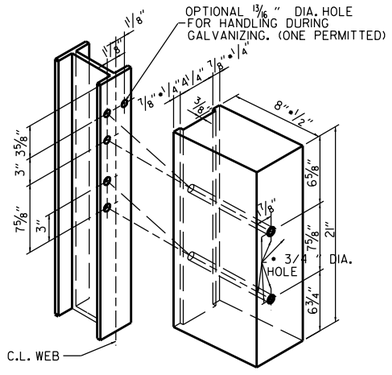
THRIE BEAM RAIL



TRANSITION SECTION



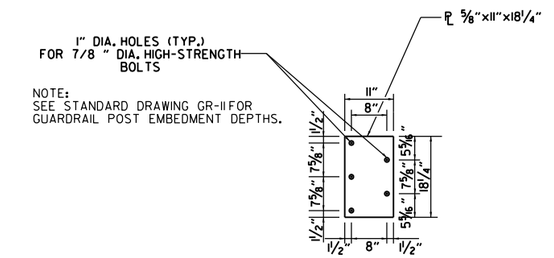
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

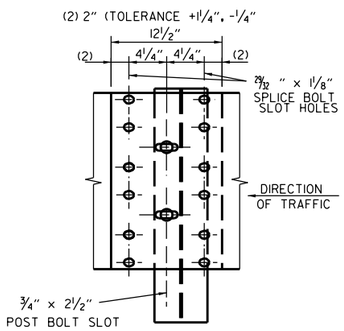
HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

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



CONNECTOR PLATE

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



THRIE BEAM RAIL SPLICE AT POST

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE 1.

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

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

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

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

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

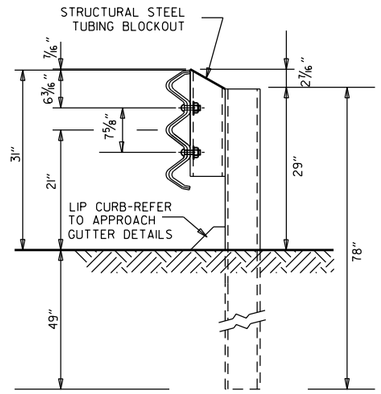
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED AND REVISED REFERENCES	
11-16-17	REVISED TRANSITION SECTION, GUARD RAIL HEIGHT, AND GENERAL NOTES; MOVED THRIE BEAM GUARD RAIL CONNECTIONS AT BRIDGES ENDS TO STD. DRWG. GR-12	
07-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED NOTE (2)	
06-29-00	MOVED DIMENSION LINES	
05-18-00	ADDED NOTE	
03-30-00	DRAWN & ISSUED	

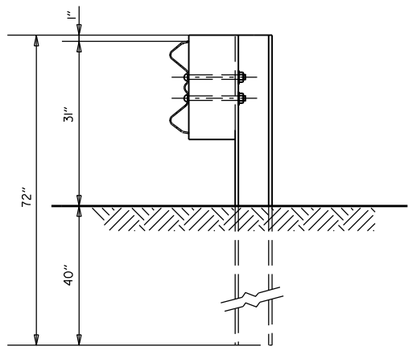
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

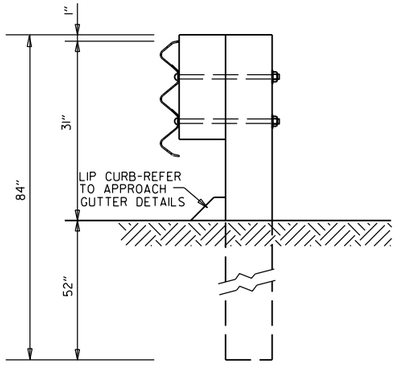
STANDARD DRAWING GR-10



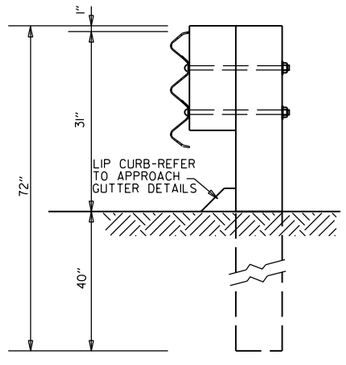
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



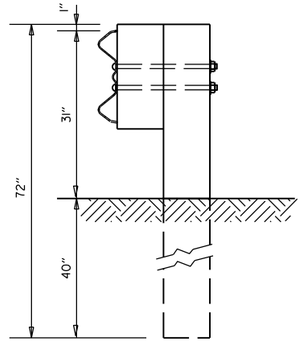
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



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



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



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

GENERAL NOTES:

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

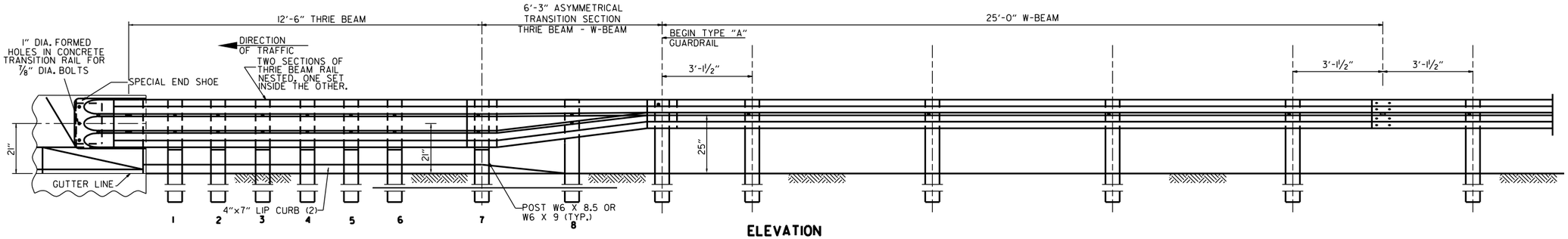
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1STRUCTURAL OR BETTER 9.7f (1400 f) OR NO.1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED	
11-16-17	REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-11	
07-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
08-22-02	REVISED LIP CURB NOTE	
03-30-00	DRAWN & ISSUED	

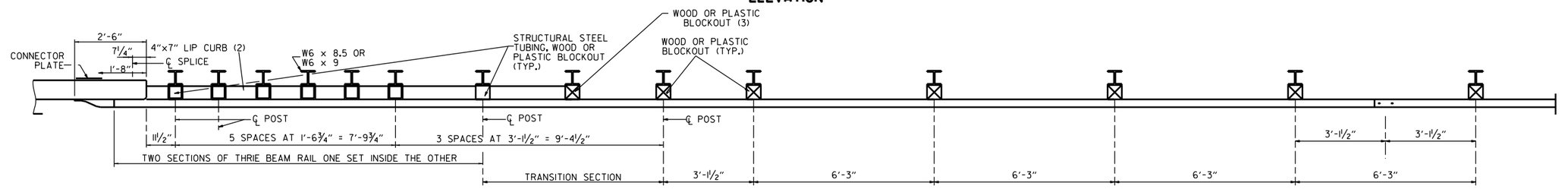
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

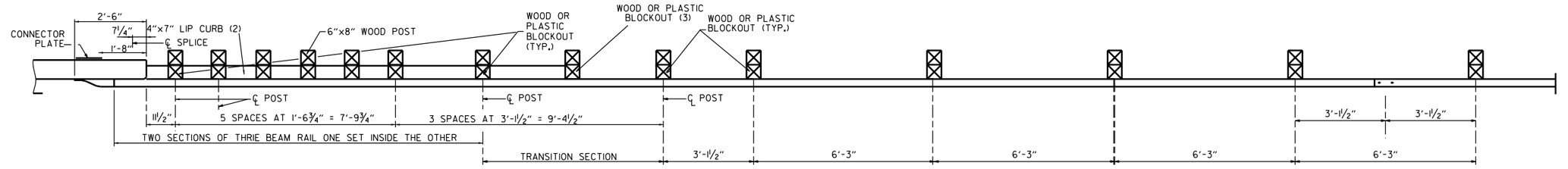
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

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

THRIE BEAM GUARDRAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

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

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

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

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

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

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

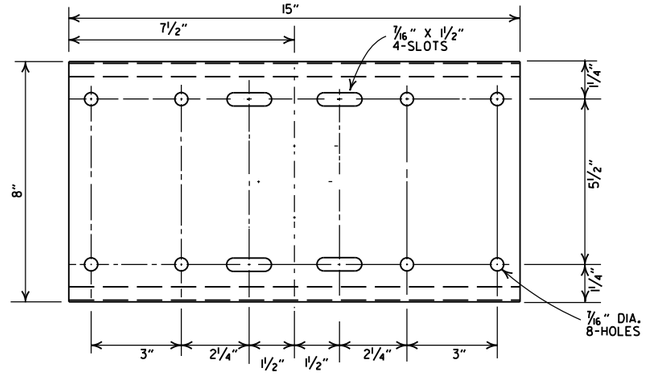
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
05-14-20	REVISED NOTES	
11-07-19	RENAMED & REVISED REFERENCES	
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

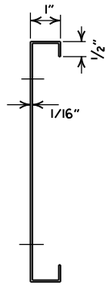
ARKANSAS STATE HIGHWAY COMMISSION

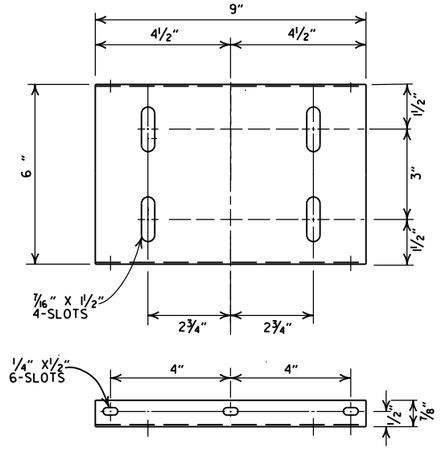
GUARDRAIL DETAILS

STANDARD DRAWING GR-12

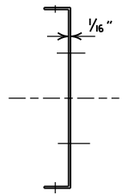


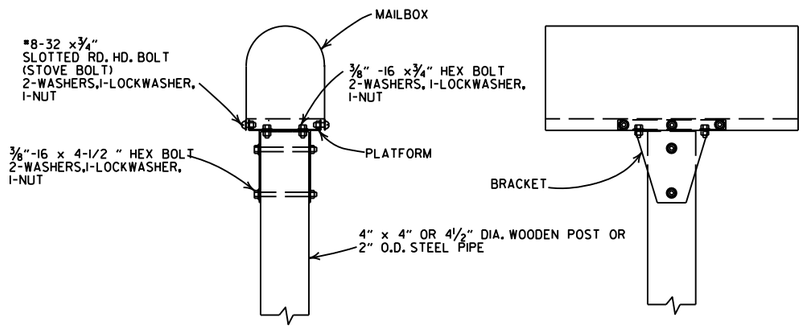
SHELF



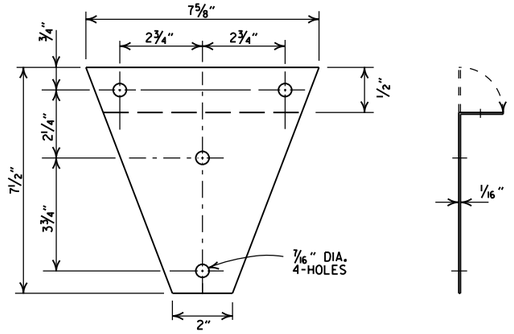


PLATFORM





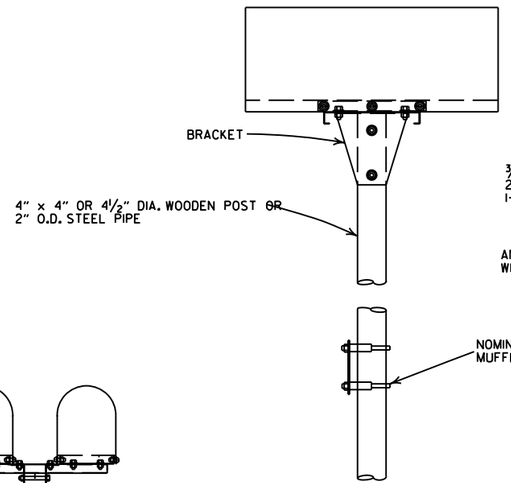
SINGLE INSTALLATION



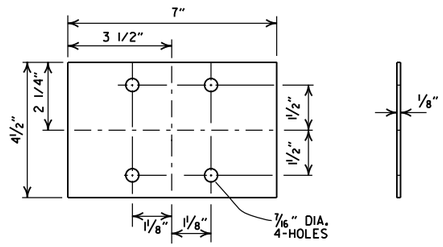
BRACKET

GENERAL NOTES

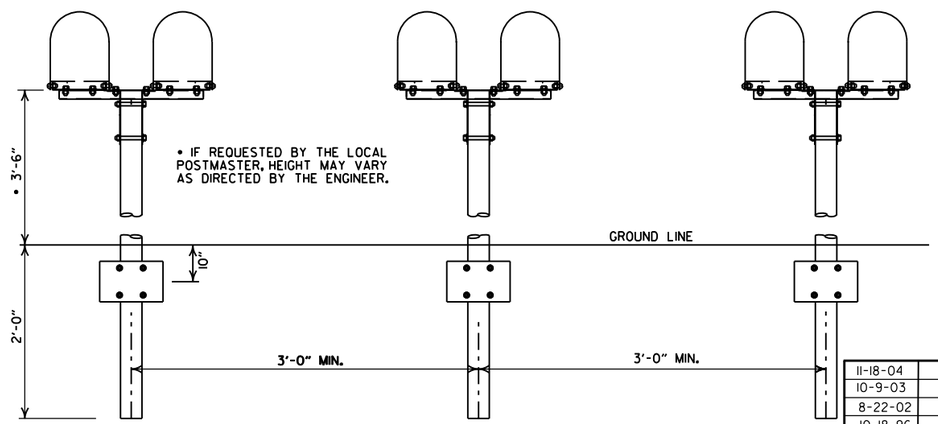
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED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



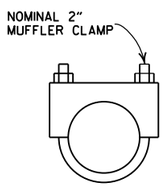
DOUBLE INSTALLATION



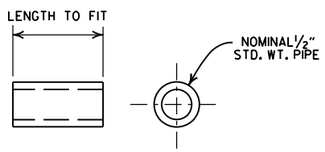
ANTI-TWIST PLATE



SPACING FOR MULTIPLE POST INSTALLATION



CLAMP



SPACER

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

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-1

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	43⅜	44	26⅝	27
42	51⅛	51	31⅜	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.

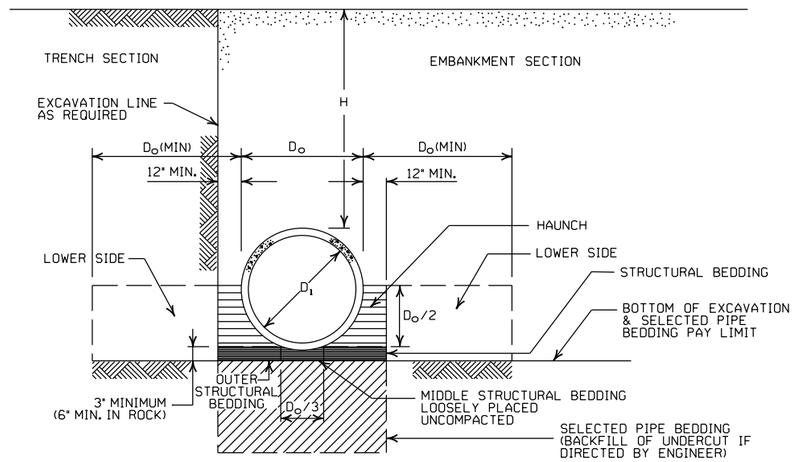
- LEGEND -

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

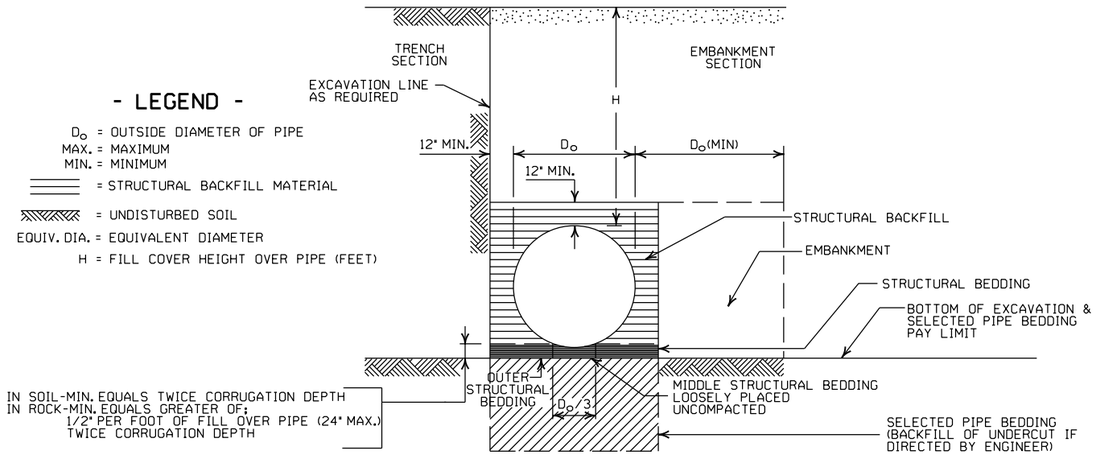
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)	
				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

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

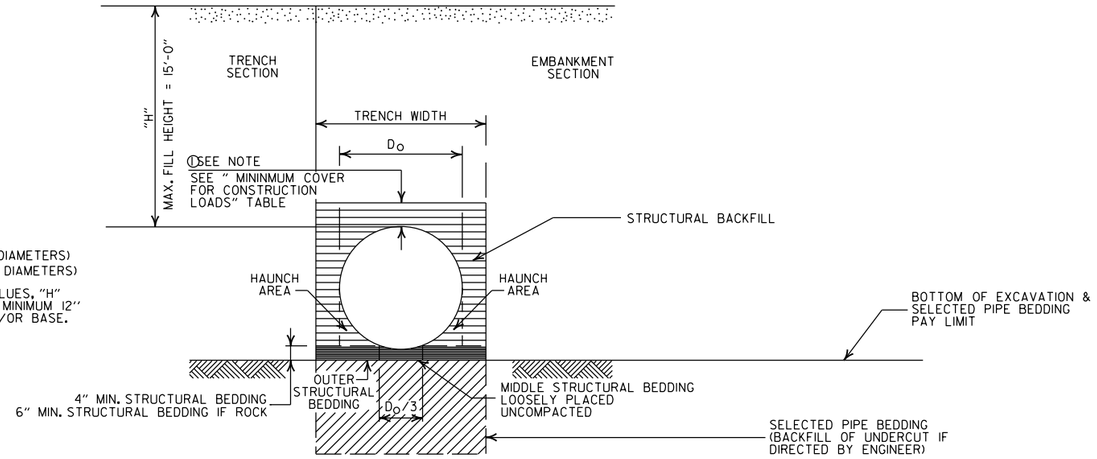
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

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

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

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

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

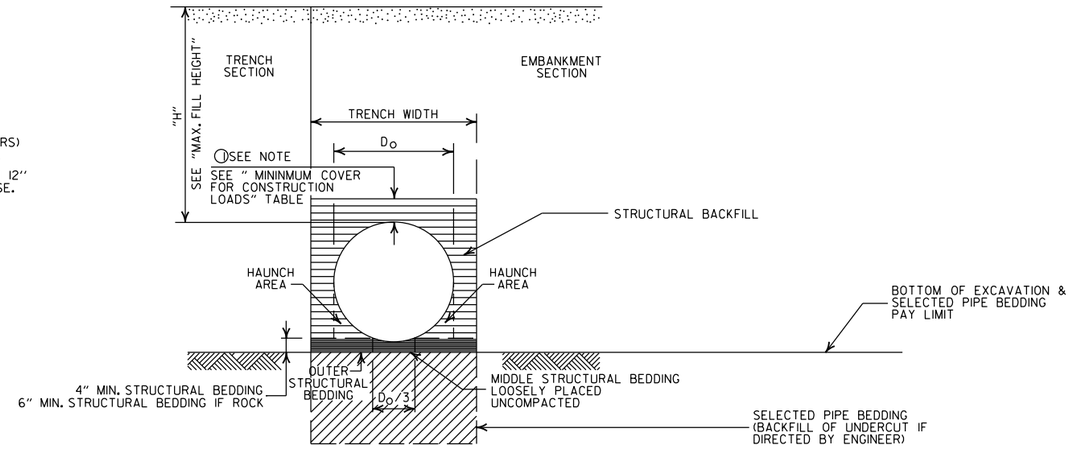
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

MINIMUM COVER FOR CONSTRUCTION LOADS

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

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



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

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

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
2-27-14	REVISED GENERAL NOTE 1.	
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

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

*SM3 WILL NOT BE ALLOWED.

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

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

MULTIPLE INSTALLATION OF POLYPROPYLENE PIPES

PIPE DIAMETER	CLEAR DISTANCE BETWEEN PIPES
18"	1'-6"
24"	2'-0"
30"	2'-6"
36"	3'-0"
42"	3'-6"
48"	4'-0"
60"	5'-0"

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

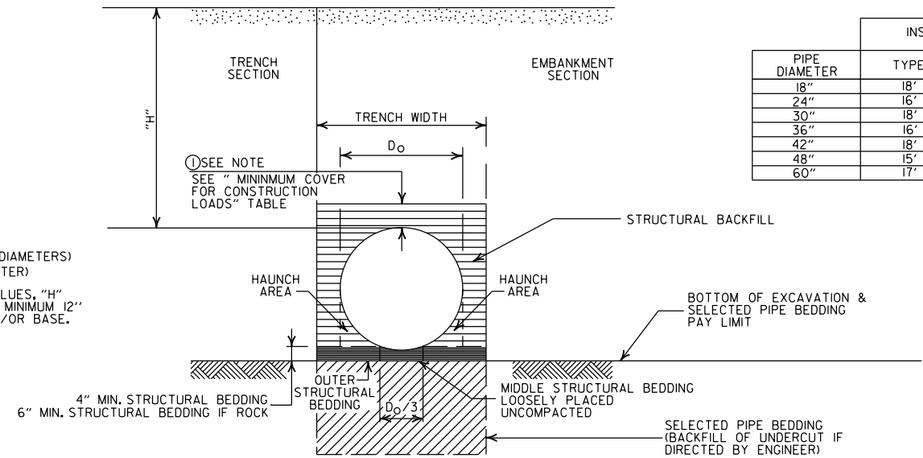
PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"
60"	10'-0"	15'-0"

①NOTE:
12" MIN. (18" - 42" DIAMETERS)
24" MIN. (60" DIAMETER)

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

MAXIMUM HEIGHT OF FILL "H"

PIPE DIAMETER	INSTALLATION TYPE	
	TYPE 1	TYPE 2
18"	18'	14'
24"	16'	12'
30"	18'	14'
36"	16'	12'
42"	18'	13'
48"	15'	11'
60"	17'	12'



MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-150.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

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

EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

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

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M330, TYPE S, INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND 30.4.2 OF THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS 3RD EDITION (2010) WITH 2012 INTERIMS. JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

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

= STRUCTURAL BACKFILL MATERIAL

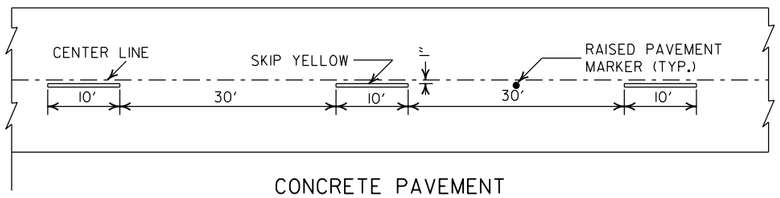
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
02-27-20	REVISED	
11-07-19	ISSUED	

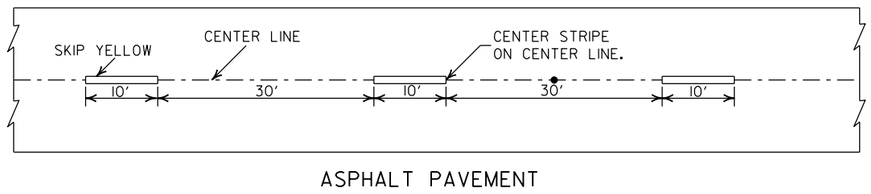
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (POLYPROPYLENE)

STANDARD DRAWING PCP-3

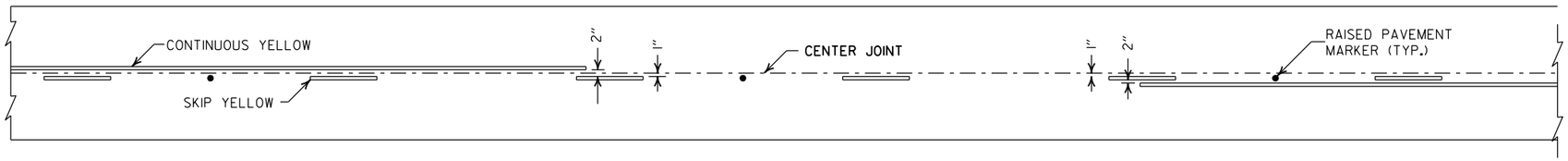


CONCRETE PAVEMENT

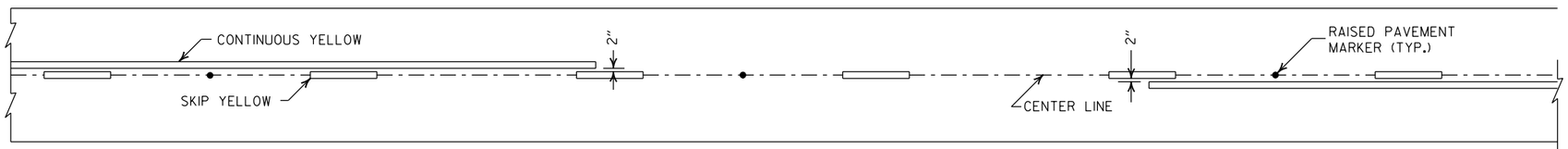


ASPHALT PAVEMENT

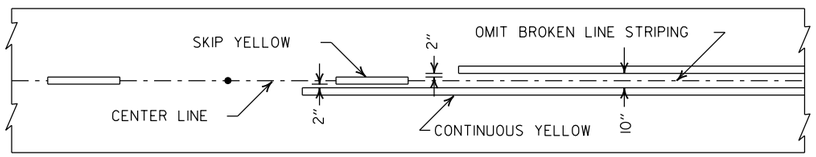
BROKEN LINE STRIPING



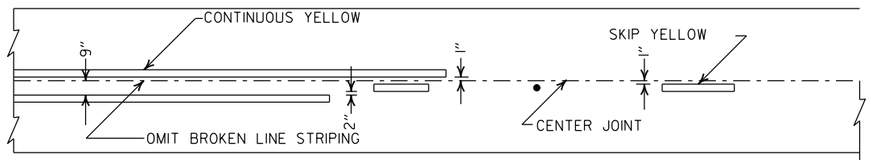
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

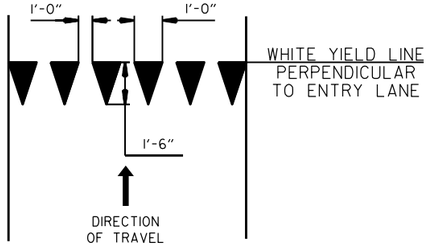


ASPHALT PAVEMENT

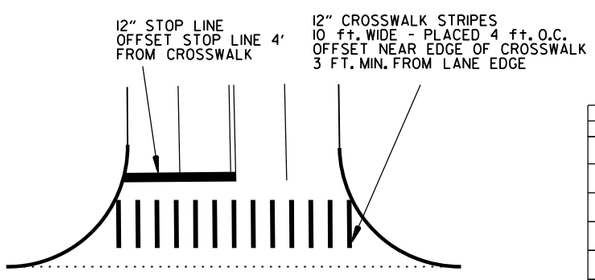


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

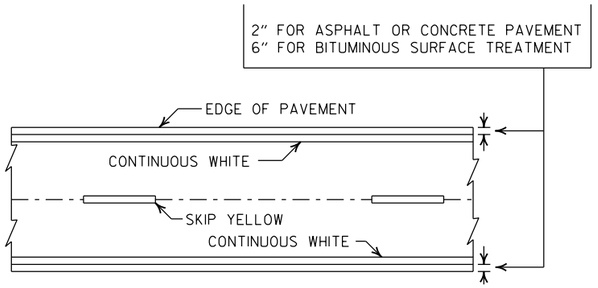


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

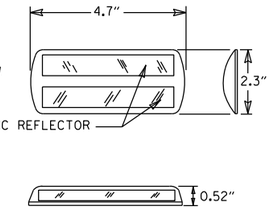
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



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	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

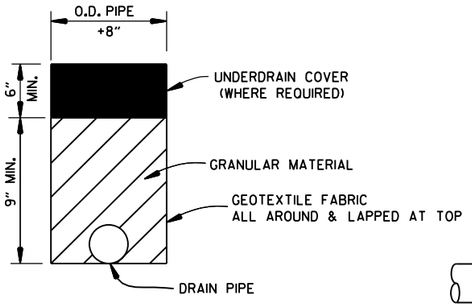
PAVEMENT MARKING DETAILS

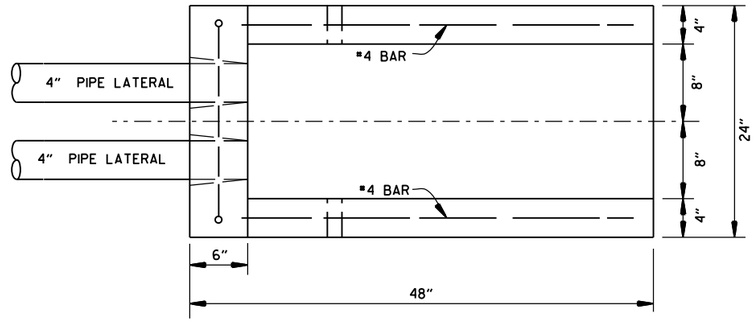
STANDARD DRAWING PM-1

NOTE:

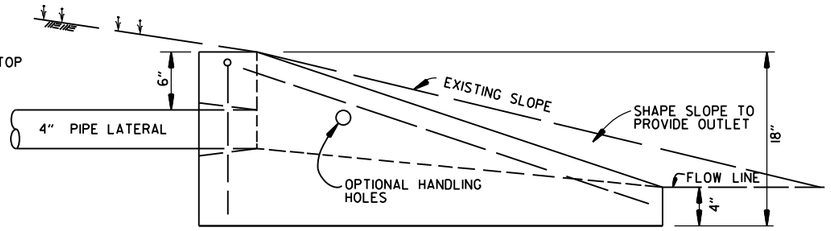
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

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

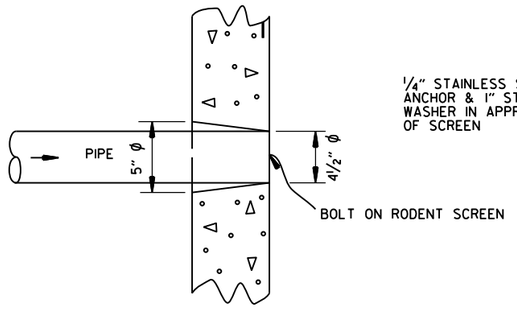




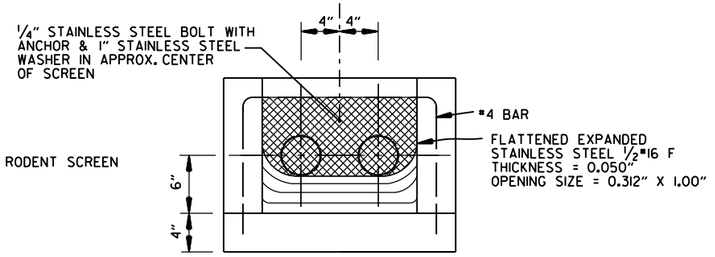
PLAN VIEW



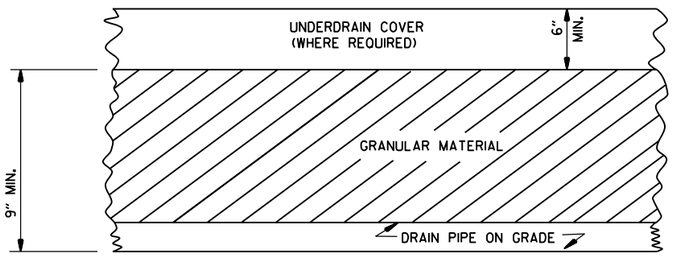
SIDE VIEW



DETAIL OF HOLE
FOR 4" PIPE



FRONT VIEW
(DETAIL OF RODENT SCREEN)



DETAILS OF PIPE UNDERDRAIN

NOTES FOR PIPE UNDERDRAINS

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 625 FOR TYPE 1. 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."

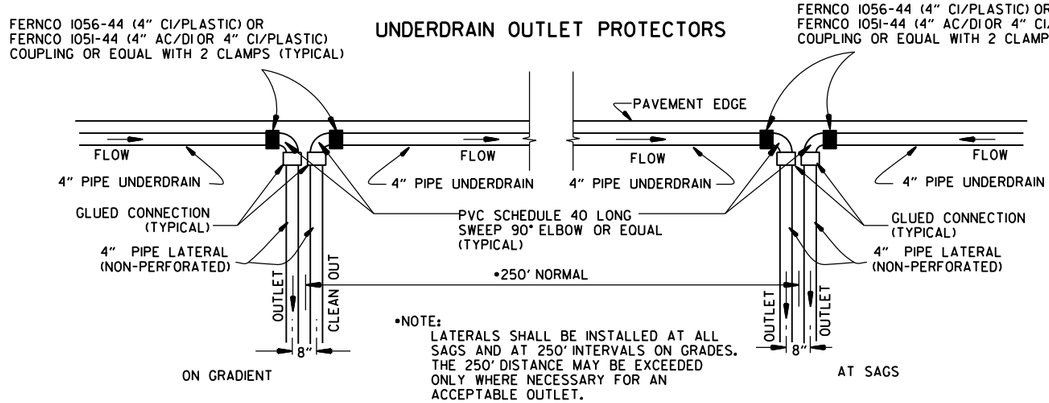
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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.

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.

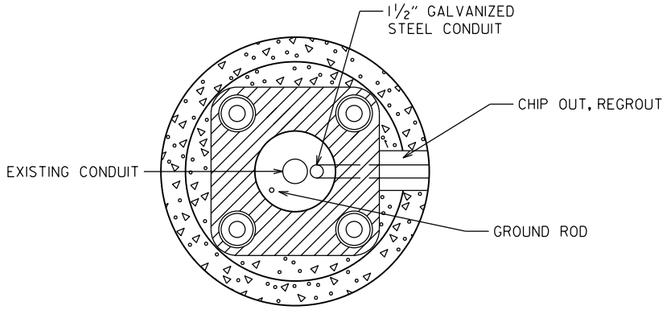
DATE	REVISION	DATE FILMED
12-8-16	ADDED NOTES FOR PIPE UNDERDRAINS, REVISED RODENT SCREEN DETAIL AND NOTES, REMOVED NOTE 1 FOR GRANULAR MATERIAL, ADDED NOTE FOR GEOTEXTILE FABRIC	
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & 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

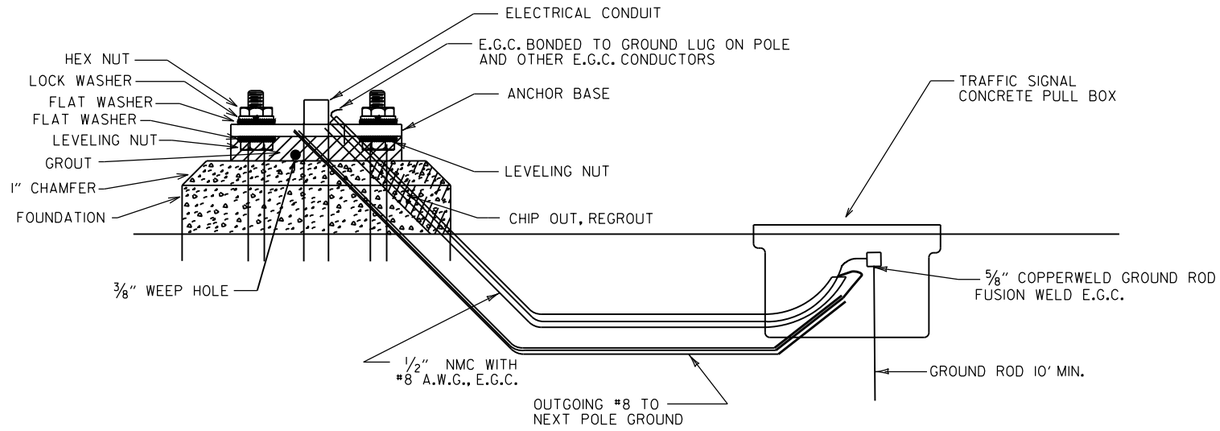
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

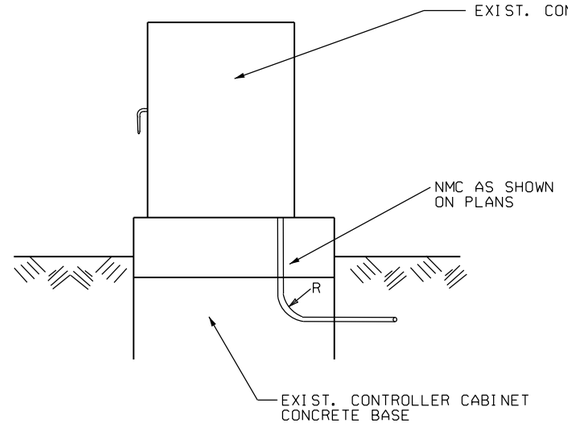
CONDUIT ENTRY TO EXISTING POLE BASE



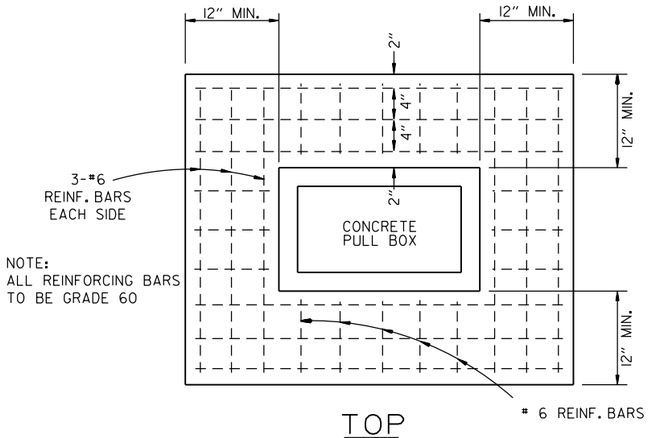
ANCHOR BASE



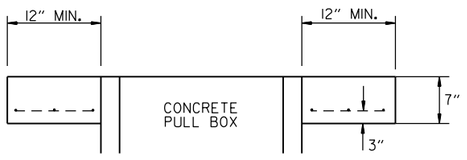
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

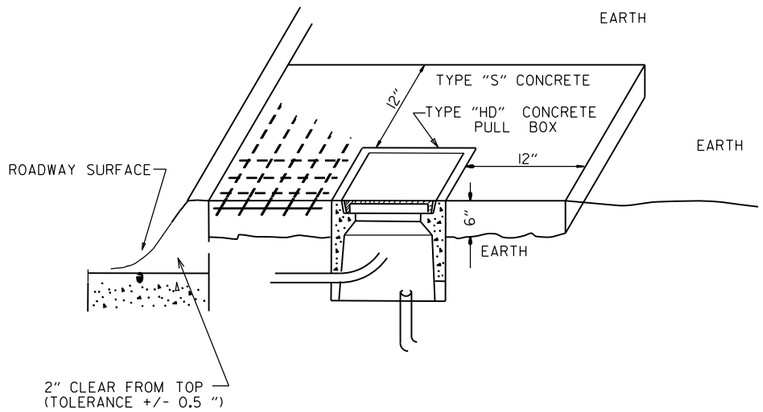


TOP



ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE:
ALL TYPE 1 AND TYPE 2 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 7" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

DATE	REVISION	FILMED
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6

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	300	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		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	300	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		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	350	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		0.096	278	
2° 45'	0.024	79		0.030	98		0.038	122		0.046	149	200	0.054	178		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	250	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							
4° 15'	0.036	100		0.044	125		0.054	155		0.064	189		0.076	230		0.086	254	350	0.096	278		D MAX = 4° 15'								
4° 30'	0.036	100		0.046	129		0.056	160		0.068	198		0.078	235		0.090	264		0.098	283										
4° 45'	0.038	104	200	0.048	133		0.060	168		0.070	203		0.082	245		0.092	269		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		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	300	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	300	D MAX = 8° 25'																
8° 30'	0.060	144		0.072	179		0.086	223	250	0.096	261																		
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	D MAX = 13° 45'																			
14° 00'	0.080	180		0.094	222																								
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'																													

ABBREVIATIONS

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

GENERAL NOTES

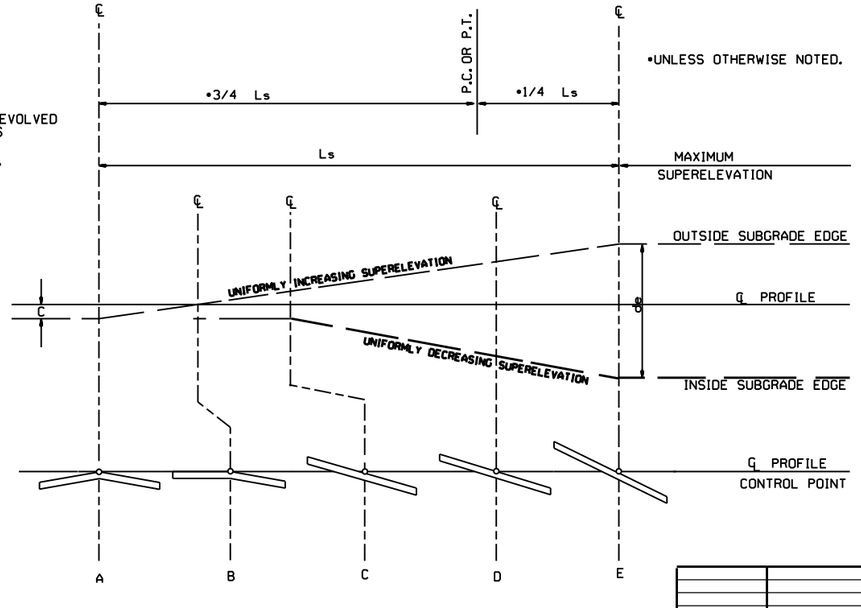
1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED 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%

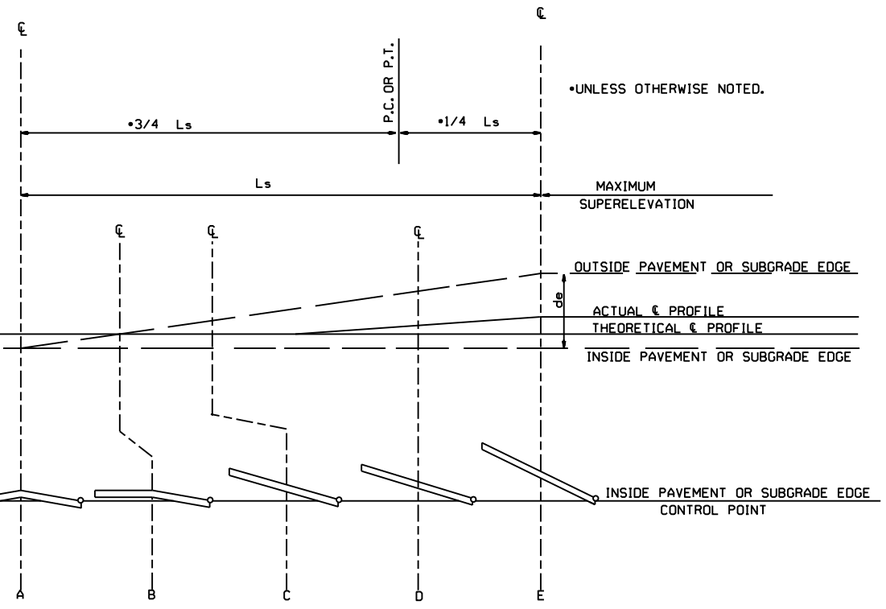
NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

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

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



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 FILLMED
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

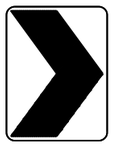
STANDARD DRAWING SE-2



R1-1
30"X30"



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



W1-8
18"X24"



W2-5
30"X30"



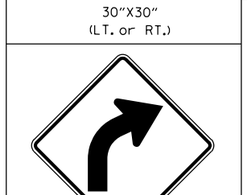
W3-1
36"X36"



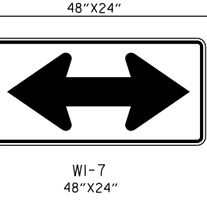
W5-1
36"X36"



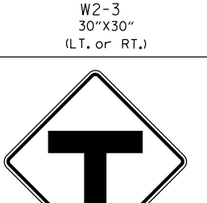
M6-3
21"X15"



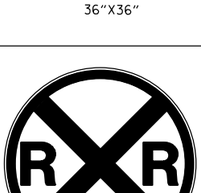
R1-2
36"X36"X36"



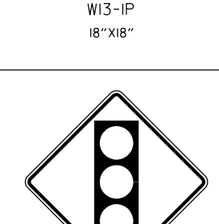
W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"



W3-2
36"X36"

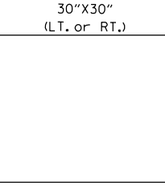


County
Route Marker
M1-6
24"X24"

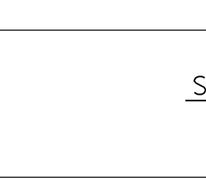
NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



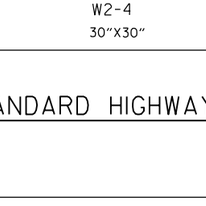
M6-4
21"X15"



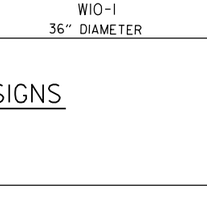
R2-1
24"X30"



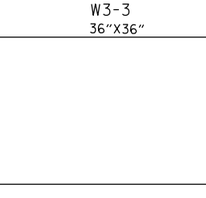
W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"

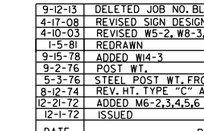


W5-2
36"X36"



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"

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

W5-3
36"X36"

W13-1P
18"X18"

M6-1
21"X15"

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

M6-6
21"X15"

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

W2-4
30"X30"

W10-1
36" DIAMETER

W3-3
36"X36"

M6-2
21"X15"

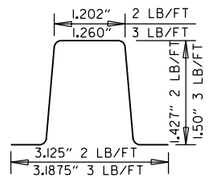
S4-3P
24"X8"

S4-2P
24"X10"

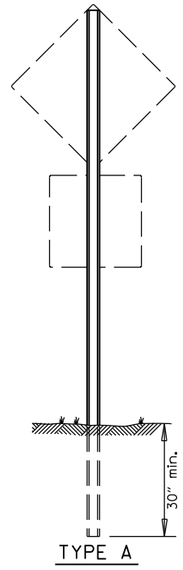
OM-3
12"X36"
(LT. or RT.)

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

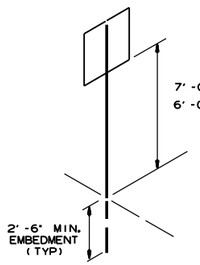
DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED RI-3 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED WI-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED WI4-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2"-3"; ADDED S4-2 & 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

SUPPORT ASSEMBLIES

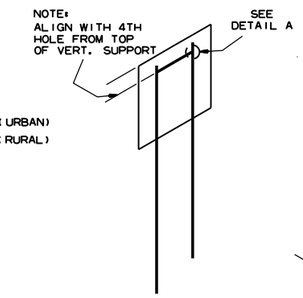
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

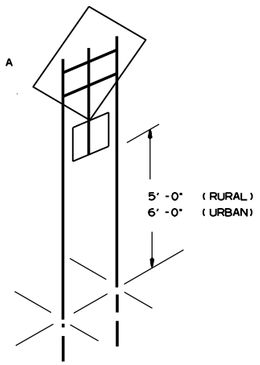
STANDARD DRAWING SHS-1



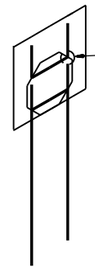
U-1



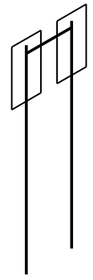
U-2



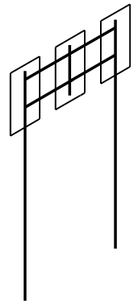
U-2 (A)



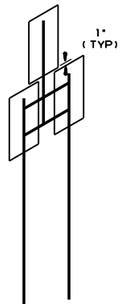
U-2 (B)



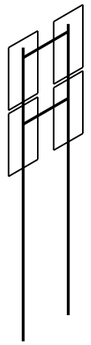
U-2 (1)



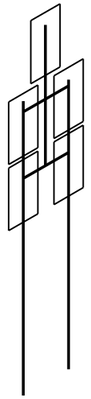
U-2 (2)



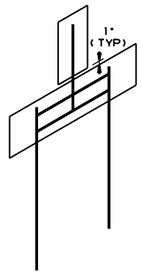
U-2 (3)



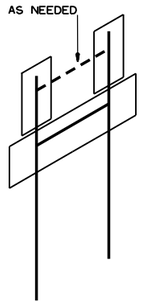
U-2 (4)



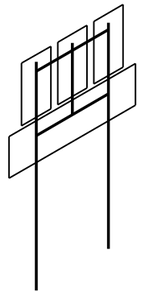
U-2 (5)



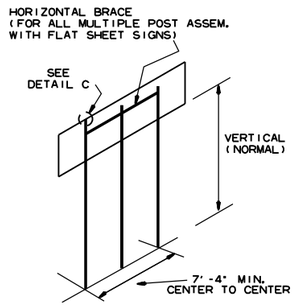
U-2 (6)



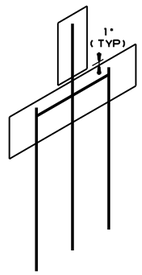
U-2 (7)



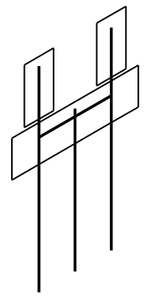
U-2 (8)



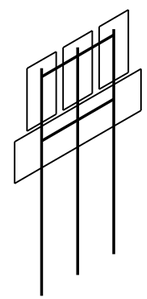
U-3



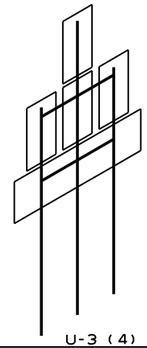
U-3 (1)



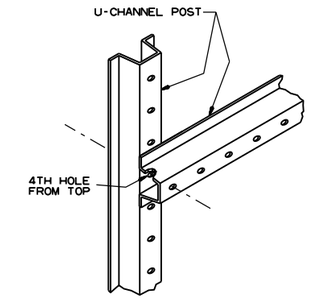
U-3 (2)



U-3 (3)

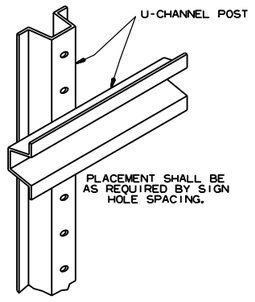


U-3 (4)



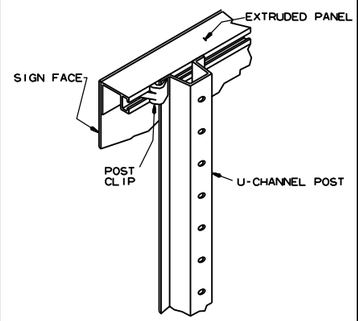
DETAIL A

SHOWING HORIZONTAL BRACE



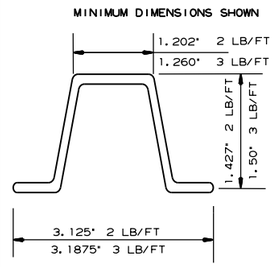
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



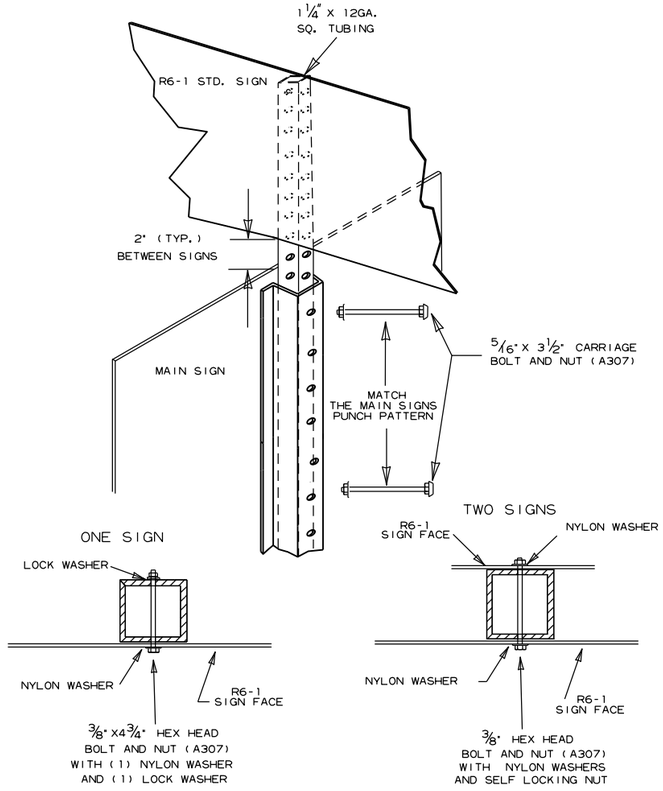
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



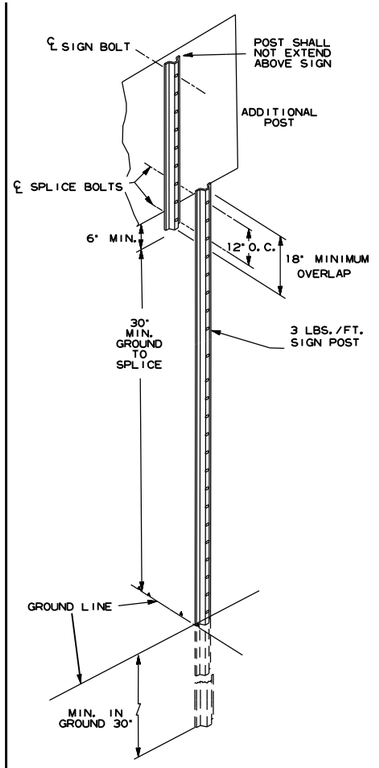
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

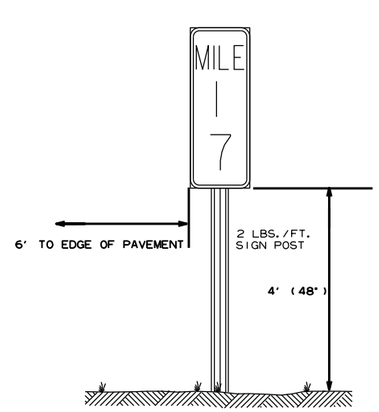
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

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

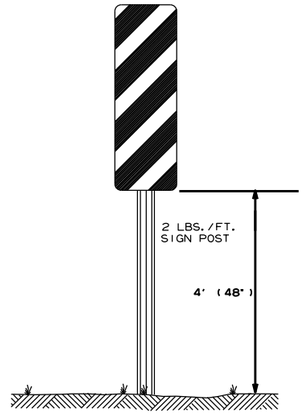
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

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

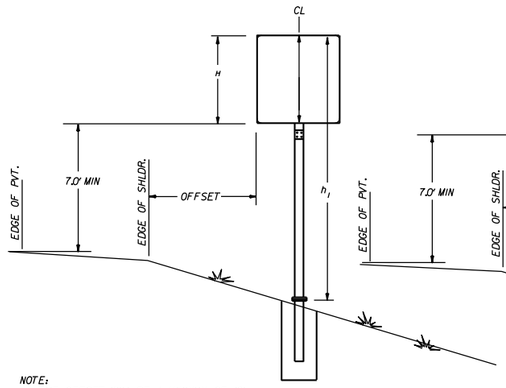
DATE	REVISION	FILMED
7-25-19	REVISED CARRIAGE BOLT WITH MATERIAL REQUIREMENT	
2-27-14	REVISED NOTES.	
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95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

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

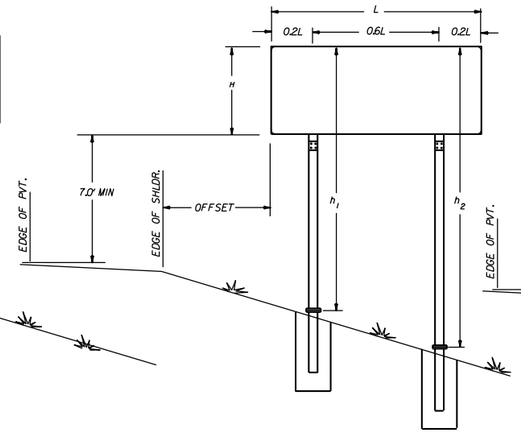
STANDARD DRAWING SHS-2

POST SIZE	BASE CONNECTION DATA											FUSE PLATE DATA									
	BOLT SIZE	BOLT TORQUE (INCH/LBS)	A	B	C	D	E	t_1	t_2	W	R	F	G		J	K	M	d_1	d_2	t_3	BOLT SIZE	WT.OF EACH FUSE PLATE LBS.
W 6X9																						
W 6X12	5/8" x 2 3/4"	450"-680"	5"	2"	1 1/4"	2 3/4"	1 1/8"	3/4"	1/2"	1/4"	11/32"	4 1/4"	2"		4"	2 1/4"	1"	9/16"	3/4"	1/4"	1/2" x 1 1/2"	1.01
W 6X15												5"	2 1/2"		6"	3 1/2"	1 1/2"	11/16"	1 1/4"	3/8"	5/8" x 2 1/4"	2.51
W 8X18												5"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1 11/16"	3/8"	3/4" x 2 1/4"	2.26
W 8X21												5 1/2"	2 1/2"		5 1/4"	2 3/4"	1 1/4"	13/16"	1"	1/2"	3/4" x 2 1/4"	3.35
W 10X22	3/4" x 3 1/2"	750"-1050"	6"	2 1/4"	1 3/8"	3 1/2"	1 1/4"	1"	3/4"	5/16"	11/32"	6"	3"		5 3/4"	2 3/4"	1 3/8"	1 3/16"	1 1/8"	1/2"	3/4" x 2 1/4"	4.03
W 10X26																						
W 12X26												6"	3"		6 1/2"	3 1/2"	1 5/8"	1 3/16"	1 15/16"	1/2"	3/4" x 2 1/4"	4.47

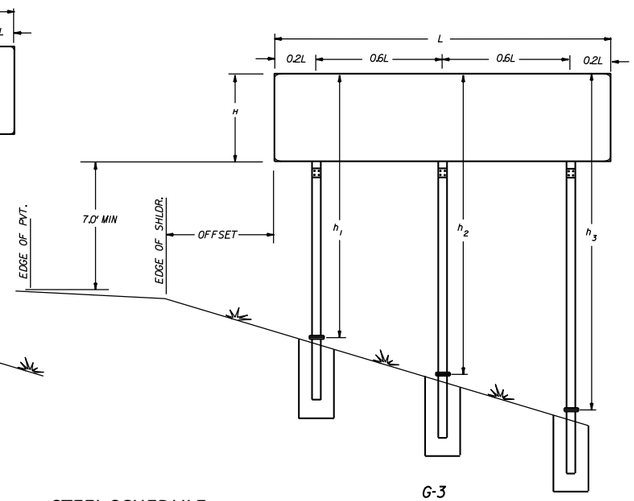


NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

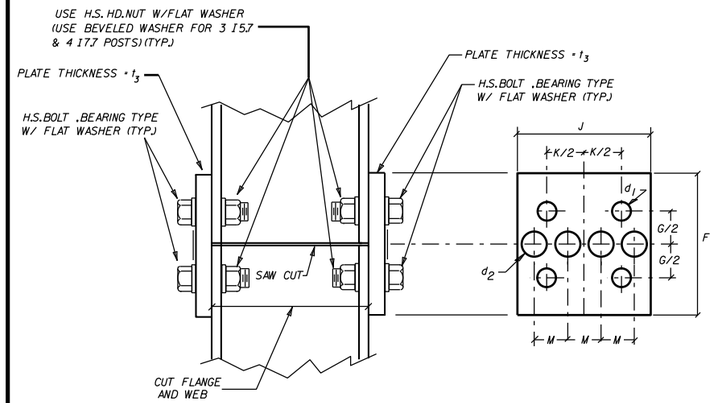
G-1



G-2

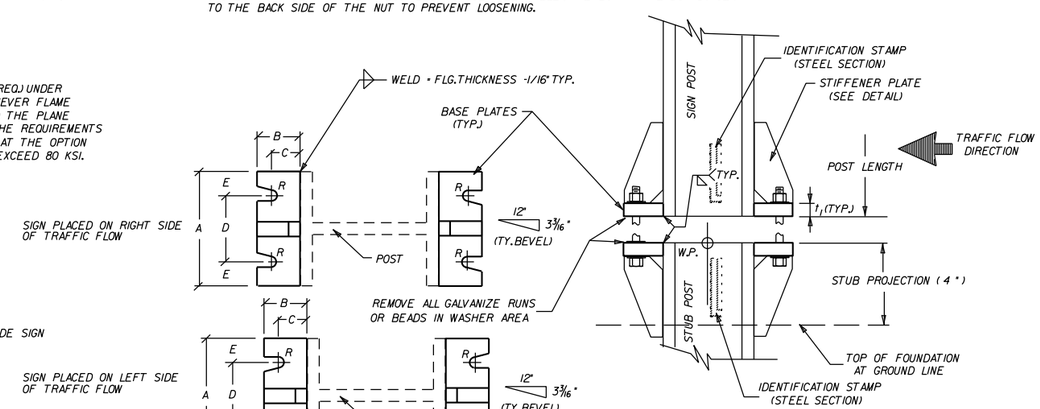


G-3

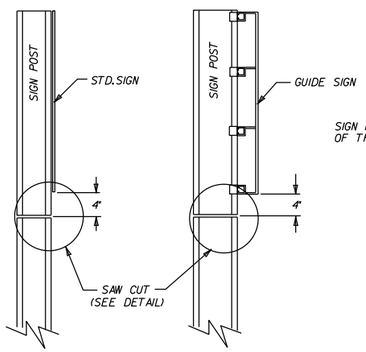


NOTE: USE H.S.HEX HEAD BOLTS,HEX HEAD NUTS AND BEVEL OR FLAT WASHERS (WHERE REQ.) UNDER NUTS. ALL HOLES SHALL BE DRILLED.ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS,HOWEVER FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A36,ASTM-A441,ASTM-572 GRADE 50,OR ASTM-A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S.BOLTS WITH HEX HD.,HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT.SEE TABLE FOR BOLT DIA. AND TORQUE.
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS SPEC.IN THE TABLE AND AS SHOWN IN THE ELEVATION DETAILS. THERE SHALL BE THREE FLAT WASHERS ON EACH BOLT LOCATED AS SHOWN IN THE ELEVATIONS. USE A SHIM TO PLUMB THE SIGN POST. THEN TIGHTEN THE BOLTS USING A 12" TO 15" WRENCH UNTIL THE WASHERS AND SHIMS ARE SEATED AND THE BOLT THREADS ARE CLEAR ,THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE (SEE TABLE). THE BURR THREADS ADJACENT TO THE BACK SIDE OF THE NUT TO PREVENT LOOSENING.



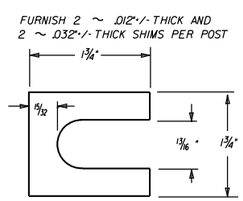
NOTE: BOLT HOLES,USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.



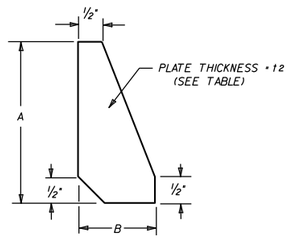
NOTE: POST SHALL BE SAW CUT AFTER GALVANIZING AND THE CUT SURFACE TREATED. AFTER PLATE IS INSTALLED AND ALL BOLTS FULLY TIGHTENED. REPAIR OF CUT SURFACES AFTER GALVANIZING SHALL BE IN ACCORDANCE WITH ASTM A123.

STANDARD SIGNS GUIDE SIGNS

FUSE PLATE DETAILS



SHIM DETAIL



STIFFENER PLATE DETAIL

GENERAL NOTES

TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

BASE PLATES AND STIFFENER PLATES SHALL BE OF THE SAME MATERIAL AS THE PRIMARY SUPPORT POSTS WHICH THEY ARE WELDED.

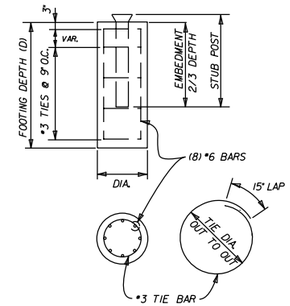
REFER TO THE PLANS FOR FOOTING DIMENSIONS.

EACH STUB POST AND SIGN POST SHALL HAVE A PERMANENT IDENTIFYING STAMP WHICH SPECIFIES THE STEEL SECTION USED. IF THE CONTRACTOR ELECTS TO SHIP THE STUB POST SEPARATE FROM THE SIGN POST A MATCH MARK SYSTEM WILL BE REQUIRED.

STEEL SCHEDULE

FOOTING DIAMETER	#3 TIE BARS		
	DIAMETER	BAR LENGTH	POUNDS
INCHES	INCHES	FEET	
18	12	4.39	1.65
24	18	5.96	2.24
30	24	7.53	2.83
36	30	9.1	3.42

FOOTINIG DEPTH	#6 STRAIGHT BARS		
	BAR LENGTH	NUMBER REQ'D.	POUNDS
FEET	FEET		
2.50	2.00	8	24.03
3.00	2.50	8	30.04
3.50	3.00	8	36.05
4.00	3.50	8	42.06
4.50	4.00	8	48.06
5.00	4.50	8	54.07
5.50	5.00	8	60.08
6.00	5.50	8	66.09
6.50	6.00	8	72.10
7.00	6.50	8	78.10
7.50	7.00	8	84.11
8.00	7.50	8	90.12



FOOTING QUANTITIES

FOOTING DEPTH	NUMBER TIE BARS REQ'D	18" DIAMETER		24" DIAMETER		30" DIAMETER		36" DIAMETER	
		CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL
FEET		CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)
2.50	4	0.16	31						
3.00	4	0.20	37						
3.50	5	0.23	44						
4.00	6	0.26	52	0.47	56				
4.50	6	0.29	58	0.52	62				
5.00	7	0.33	66	0.58	70	0.91	74		
5.50	8			0.64	78	1.00	83		
6.00	8			0.70	84	1.09	89	1.57	93
6.50	9					1.18	98	1.70	103
7.00	10					1.27	106	1.83	112
7.50	10							1.96	118
8.00	11							2.09	128

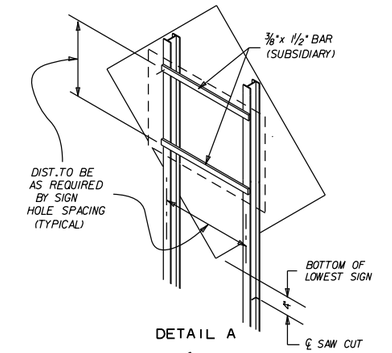
SIGN POST AND STUB POST

DATE	REVISION	FILMED
5-19-22	REVISED FUSE PLATE DETIALS' NOTE.	
9-12-13	ISSUED	

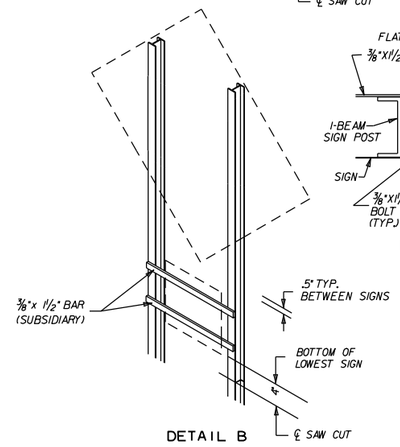
ARKANSAS STATE HIGHWAY COMMISSION

DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS

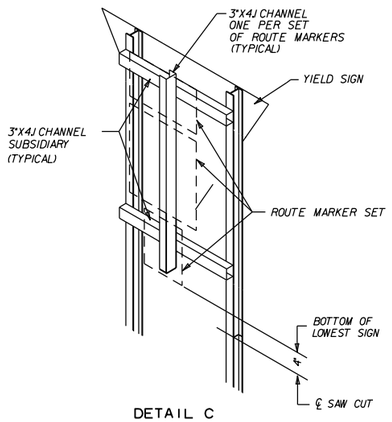
STANDARD DRAWING SHS-3



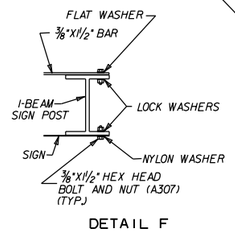
DETAIL A



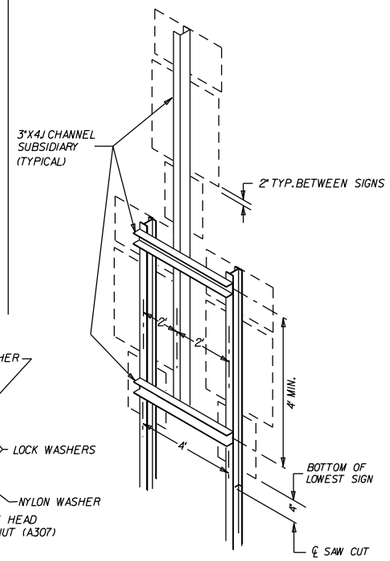
DETAIL B



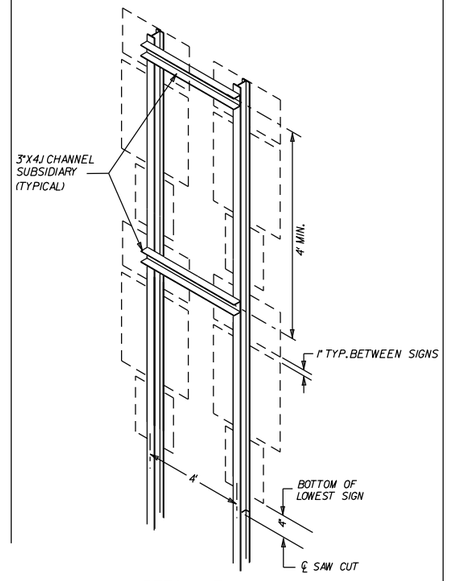
DETAIL C



DETAIL F



DETAIL D



DETAIL E

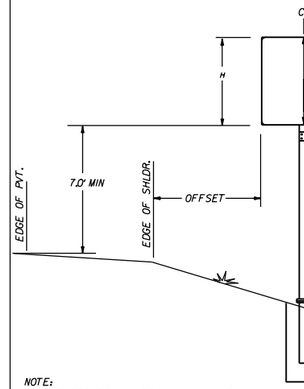
NOTE

ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.

THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.

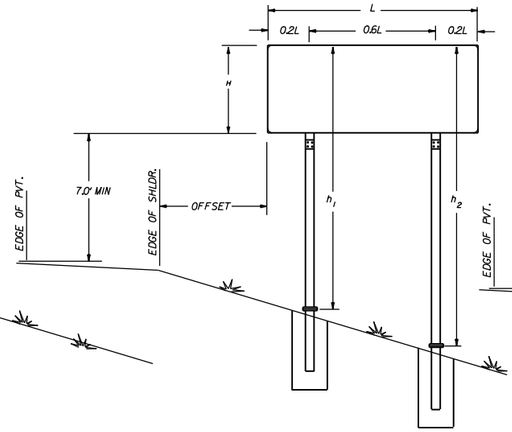
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

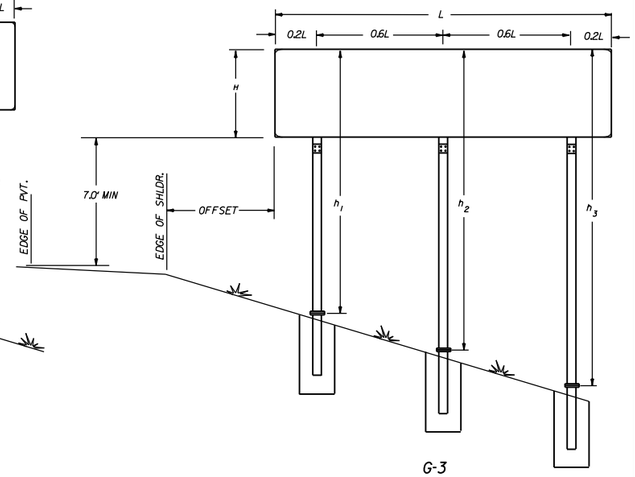


G-1

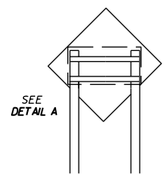
NOTE:
THE OFFSET WILL BE A MINUTE OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER.



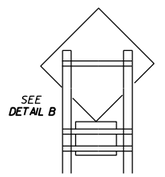
G-2



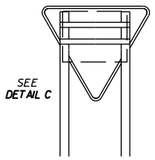
G-3



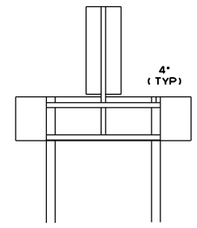
G2-1



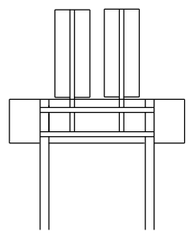
G2-2



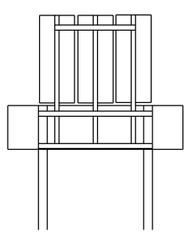
G2-3



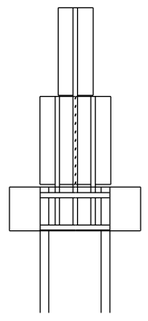
G2-4



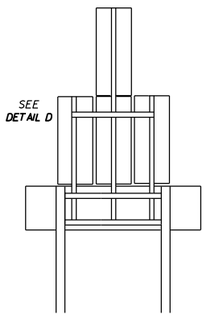
G2-5



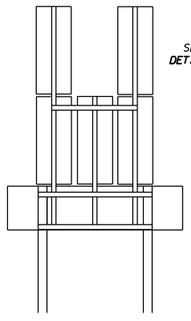
G2-6



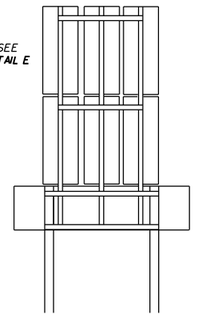
G2-7



G2-8

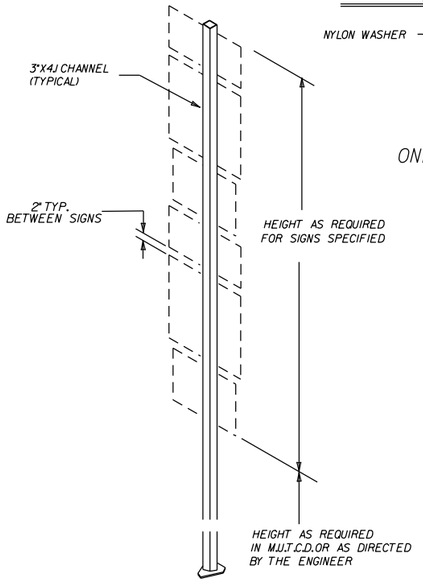


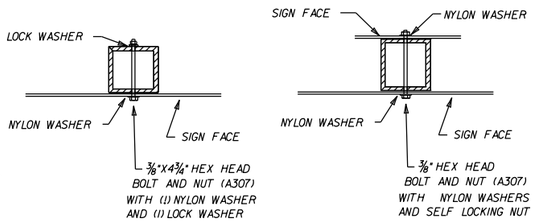
G2-9



G2-10

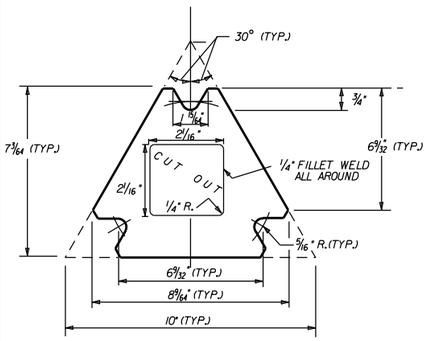
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-4
DATE	REVISION	FILMED	



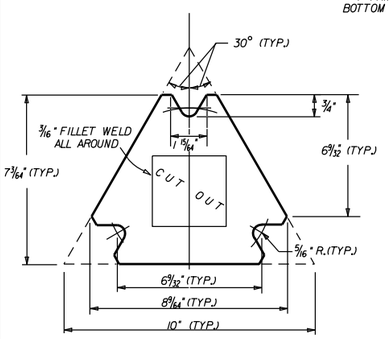


CHANNEL SHALL BE FULL LENGTH OF RECTANGULAR AND SQUARE SIGNS AND SHALL EXTEND 1½" BEYOND BOLT HOLES ON DIAMOND OR IRREGULAR SHAPED SIGNS.

MOUNTING HARDWARE



TOP PLATE



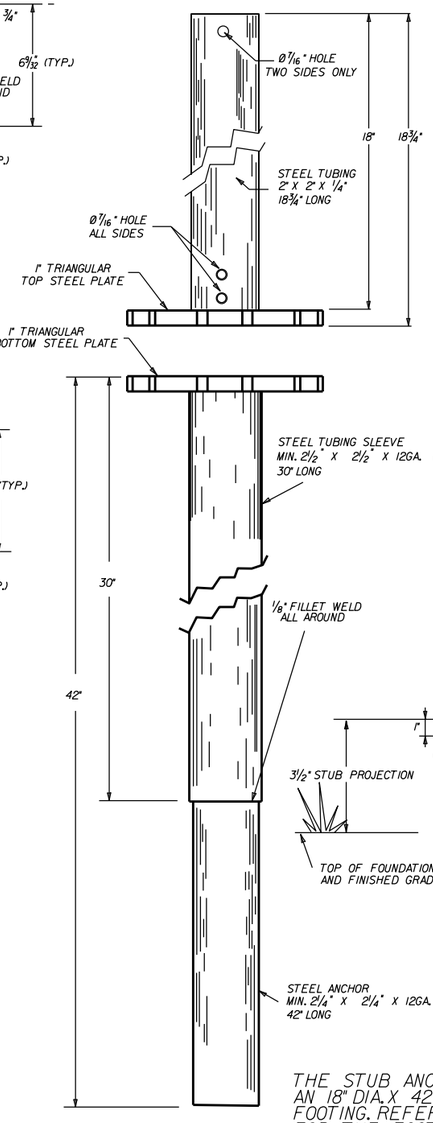
BOTTOM PLATE

GENERAL NOTES:

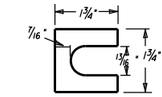
THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE . ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING . FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF 1•500 .

OTHER MASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2¼" X 2¼" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

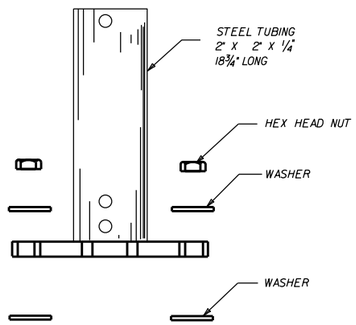


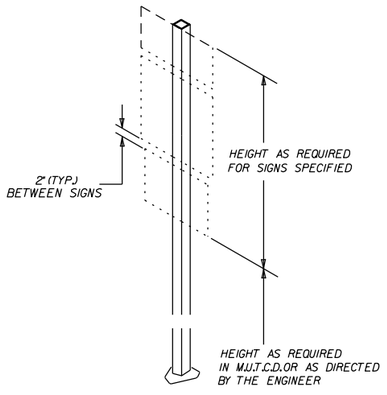
THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD.DRWG.SHS-3 FOR THE FOOTING DETAILS.



FURNISH (2) .012" THICK AND (2) .032" THICK SHIMS PER POST

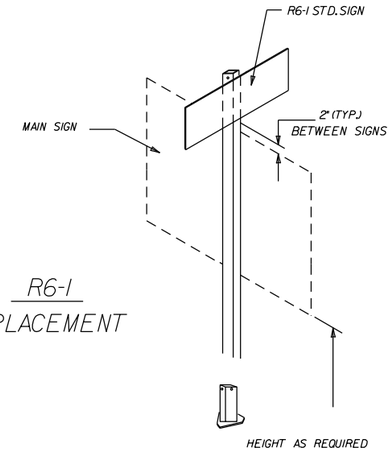
SHIM DETAIL





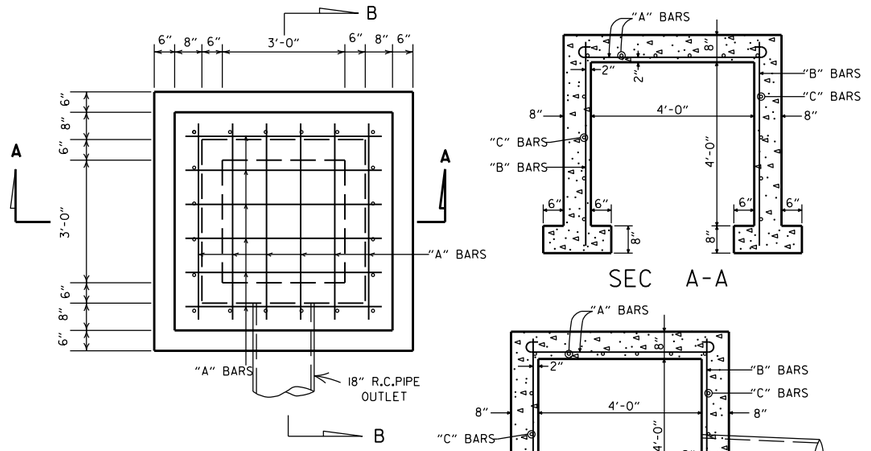
TYPE-I

BASIS OF ESTIMATE
APPROX. 100 lbs STEEL

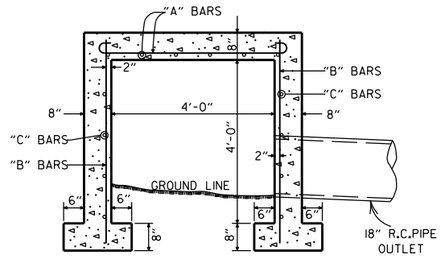


R6-1 PLACEMENT

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS
9-12-13	ISSUED		STANDARD DRAWING SHS-7
DATE	REVISION	FILMED	



SEC A-A



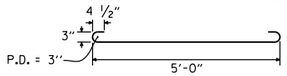
SEC B-B

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

STEEL SCHEDULE

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

ALL STEEL TO BE #4 BARS



"A" BARS

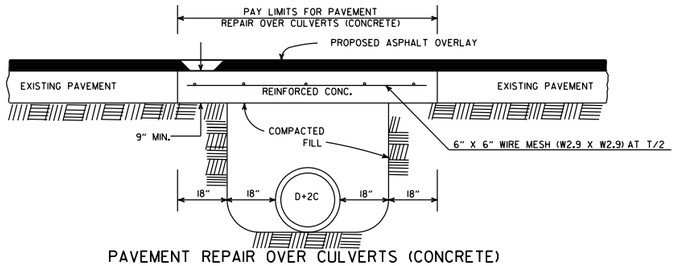
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

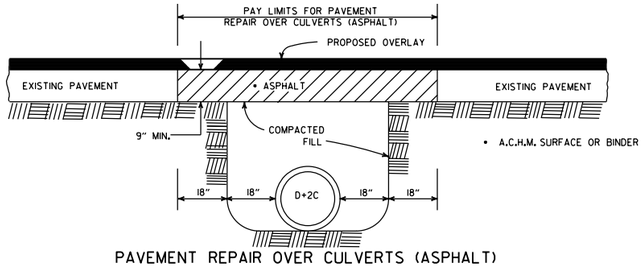
GENERAL NOTE:

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



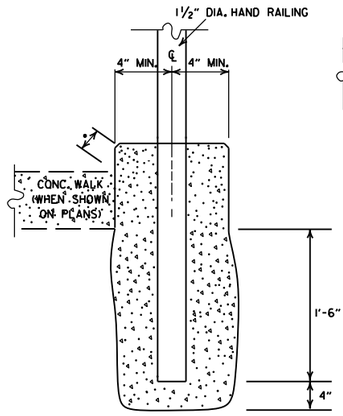
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



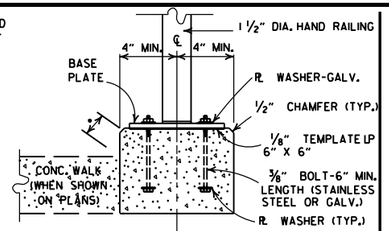
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

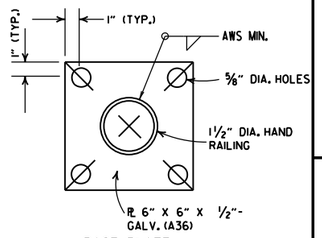
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

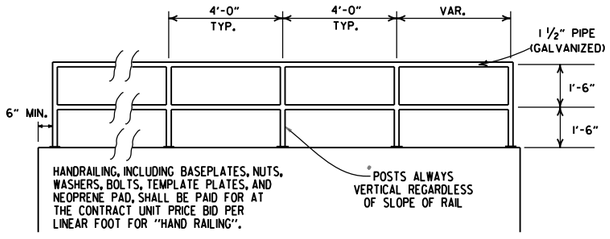


POST CONNECTION TO WALL

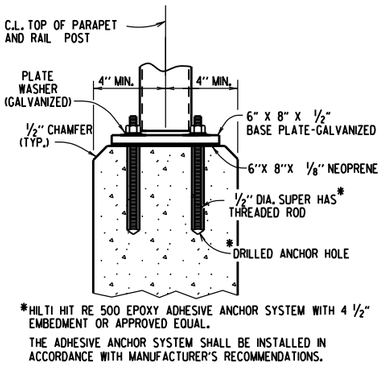


BASE PLATE

POST CONNECTION DETAILS



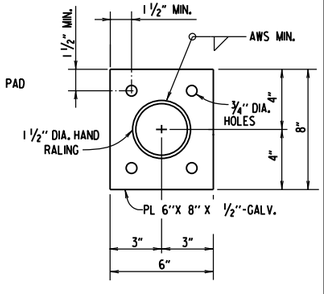
HAND RAILING SHALL CONFORM TO SECTION 633.



*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.

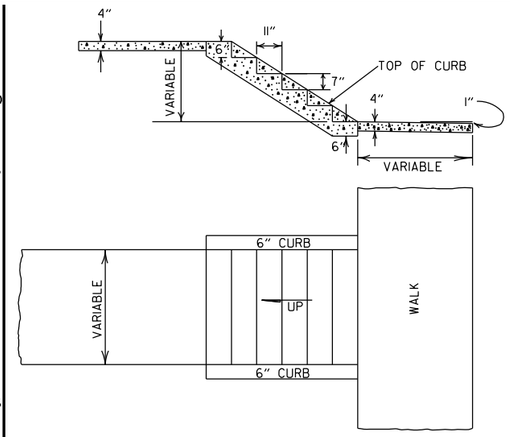
POST CONNECTION TO WALL



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.

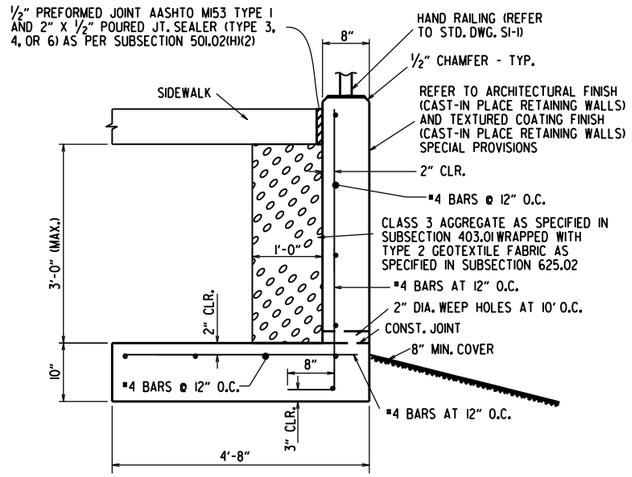
DETAILS OF CONCRETE STEPS & WALKS

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	
4-26-94	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

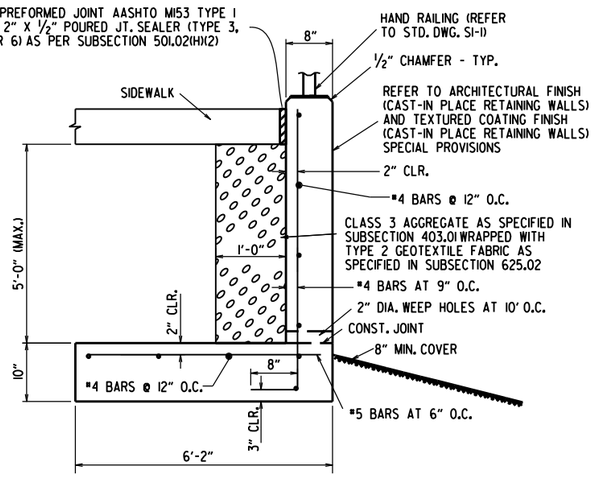
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1



CONCRETE WALK (TYPE SPECIAL) DETAIL MAX HEIGHT 3'-0"

N.T.S.



CONCRETE WALK (TYPE SPECIAL) DETAIL MAX HEIGHT 5'-0"

N.T.S.

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: 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.

DESIGN SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012).

LIVE LOAD: LIVE LOAD SURCHARGE IS NOT INCLUDED IN THE DESIGN OF THESE WALLS. VEHICULAR LIVE LOAD SHALL NOT BE ALLOWED WITHIN A DISTANCE EQUAL TO ONE-HALF THE HEIGHT OF THE WALL.

CONCRETE: CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS TO BE CHAMFERED ½". ALL CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'C = 3,500 PSI. A CLASS 2 SURFACE FINISH SHALL BE USED ON ALL SURFACES OF THE CONCRETE UNLESS OTHERWISE NOTED. REFER TO ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS) AND TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS) SPECIAL PROVISIONS.

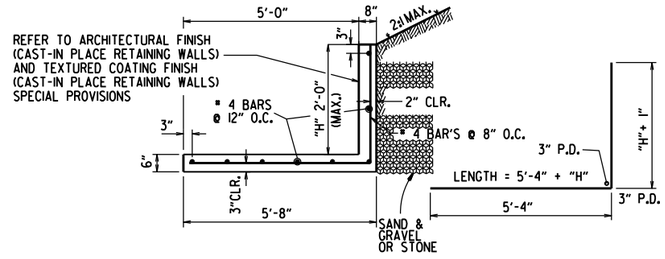
REINFORCING STEEL: ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 OR M53, GRADE 60.

FOUNDATIONS FOR FOOTINGS SHALL BE PREPARED IN ACCORDANCE WITH SUBSECTION 801.04. BACKFILL FOR RETAINING WALLS SHALL BE IN ACCORDANCE WITH SUBSECTION 801.08.

WATERPROOF MEMBRANE (TYPE C), WATERSTOPS, PREFORMED JOINTS, PREFORMED JOINT FILLER, WEEP HOLES, CLASS 3 AGGREGATE, REINF. STEEL, CONCRETE, & GEOTEXTILE FABRIC SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO CONCRETE WALKS (TYPE SPECIAL).

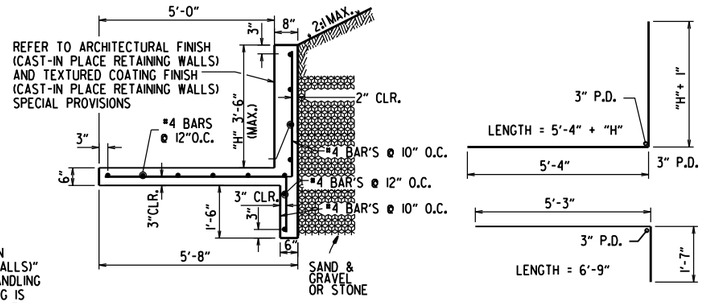
JOINTS IN THE WALL SHALL MATCH TYPE AND SPACING OF THE JOINTS IN THE WALK.

THESE DETAILS ARE NOT INTENDED FOR USE ALONG STREAMS OR DITCHES WITHOUT CONSIDERATION FOR SCOUR.



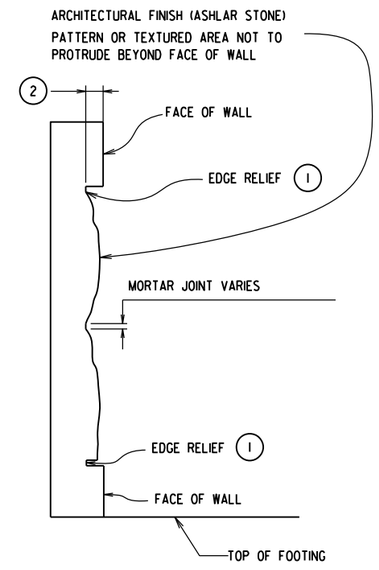
CONCRETE WALK (TYPE SPECIAL) DETAILS MAX HEIGHT 2'-0"

N.T.S.



CONCRETE WALK (TYPE SPECIAL) DETAILS MAX HEIGHT 3'-6"

N.T.S.

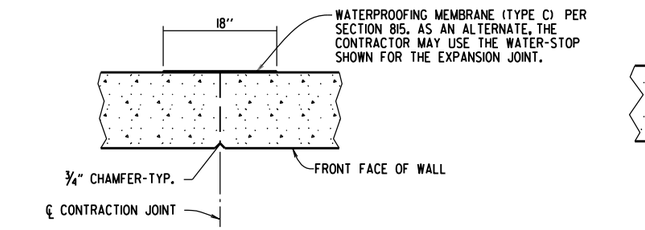


ARCHITECTURAL FINISH DETAILS

N.T.S.

(1) PROVIDE EDGE RELIEF AROUND PERIMETER OF TEXTURE. EDGE RELIEF DIMENSIONS SHALL MATCH MANUFACTURERS EDGE DISTANCE.

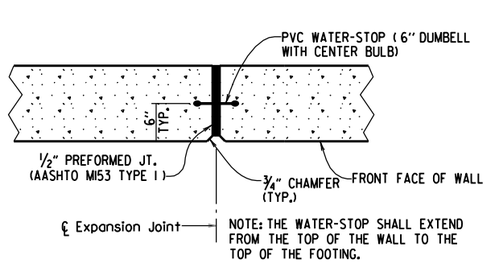
(2) DEPTH OF ASHLAR STONE PATTERN APPROX. 1⅝". SEE SP "ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)".



TYPICAL CONTRACTION JOINT DETAIL

N.T.S.

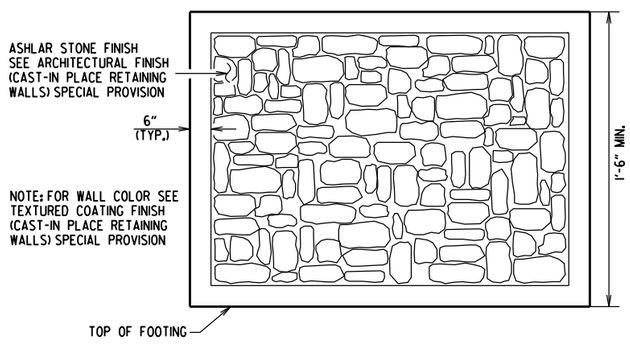
NOTE: 20'-0" MAX. SPACING BETWEEN CONTRACTION JOINTS. HORIZONTAL REINFORCEMENT SHALL BE CONTINUOUS THROUGH CONTRACTION JOINTS.



TYPICAL EXPANSION JOINT DETAIL

N.T.S.

NOTE: 60'-0" MAX. SPACING BETWEEN EXPANSION JOINTS. HORIZONTAL REINFORCING SHALL STOP 2" FROM ℄ EXPANSION JOINT.



ASHLAR STONE FINISH DETAIL

NOTES:

WALL PATTERN SHALL BE APPLIED TO THE EXPOSED SURFACES OF WALL IN ACCORDANCE WITH SP "ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)" AND AS SHOWN IN THE PLANS. CARE SHALL BE TAKEN WITH FORM LINER HANDLING AND INSTALLATION TO ENSURE AESTHETIC QUALITY OF THE WALL TEXTURING IS MAINTAINED. WHERE FORM LINER PANELS REQUIRE MODIFICATION TO CONFORM TO THE LOCATION, DIMENSIONS AND LINES SHOWN IN THE PLANS, THE CONTRACTOR SHALL PROVIDE EDGE RELIEF MATCHING THAT OF THE UNALTERED FORM LINER. PAYMENT FOR WALL TEXTURING SHALL BE IN ACCORDANCE WITH SP "ARCHITECTURAL FINISH (CAST-IN PLACE RETAINING WALLS)".

NO ADJUSTMENTS WILL BE MADE IN CONCRETE VOLUME DUE TO THE USE OF "ARCHITECTURAL FINISH". CLASS "S" CONCRETE SHALL BE MEASURED IN ACCORDANCE WITH SUBSECTION 802.24(A). CARE SHALL BE TAKEN IN PLACING CONCRETE TO AVOID SEGREGATION AND TO ELIMINATE FLOW LINES.

CLASS 3 TEXTURED COATING FINISH SHALL BE APPLIED TO WALL SURFACES AS SPECIFIED IN SP "TEXTURED COATING FINISH (CAST-IN PLACE RETAINING WALLS)" AND IN ACCORDANCE WITH SUBSECTION 802.19(B)(3).

DATE	REVISION	DATE FILMED
11-05-20	REVISED GENERAL NOTES	
5-14-20	DRAWING ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE WALK (TYPE SPECIAL)

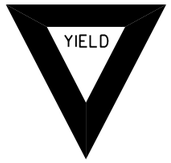
STANDARD DRAWING SI - 3

R1-1



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

R1-2



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

R2-1



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

W3-5



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

W3-5a



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

R4-1



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

R4-2



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

R5-1



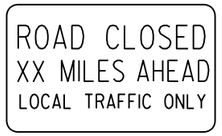
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



48"X30"

R11-3A



60"X30"

R11-4



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"

W1-3



STD. 48"X48"

W1-4



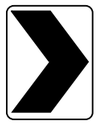
STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



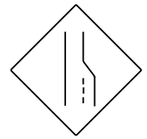
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

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"

R56-1



STD. 18"X18"

W8-11



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

W8-9



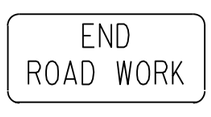
STD. 36"X36"
FWY. 48"X48"

G20-1



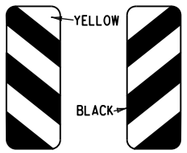
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9



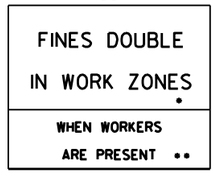
STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10



48"X18"

R55-1



36"X60"

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

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

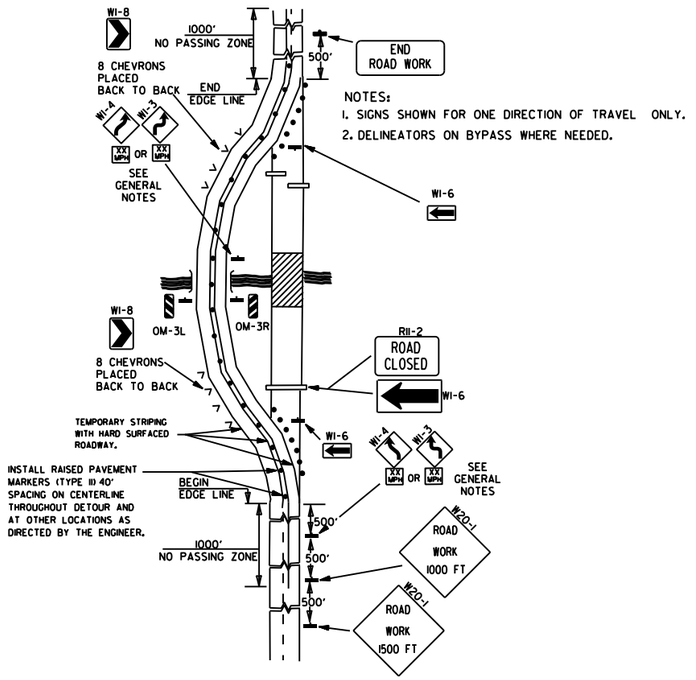
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED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

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

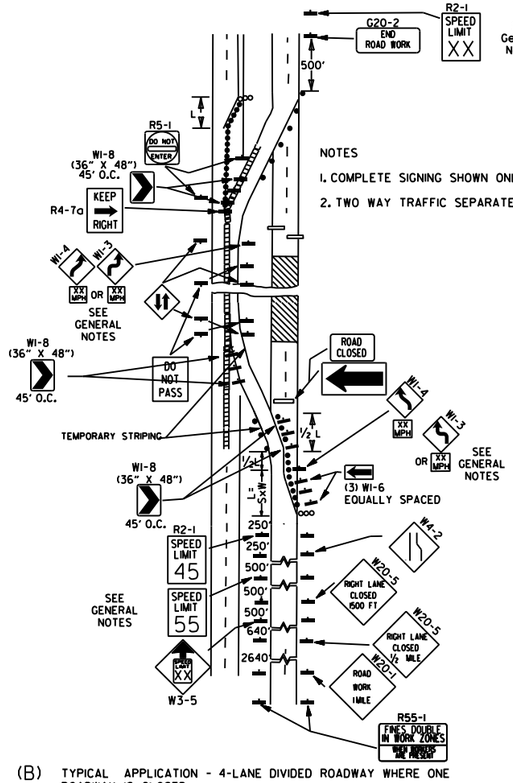
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



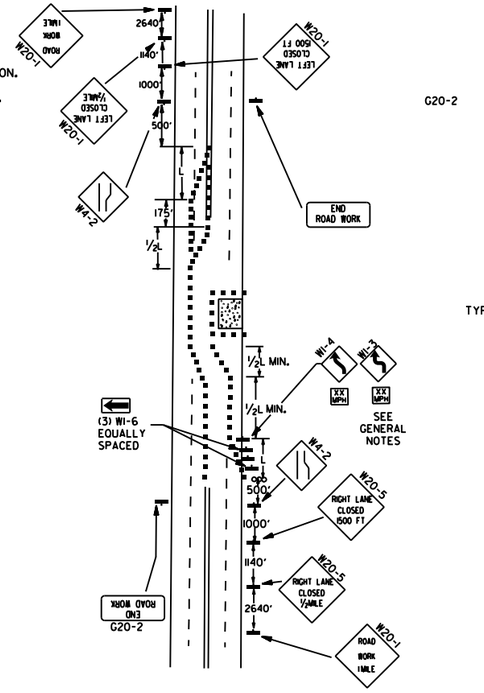
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

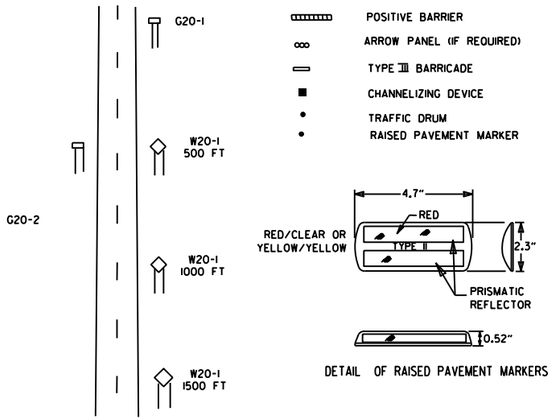


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

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



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



DETAIL OF RAISED PAVEMENT MARKERS

TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

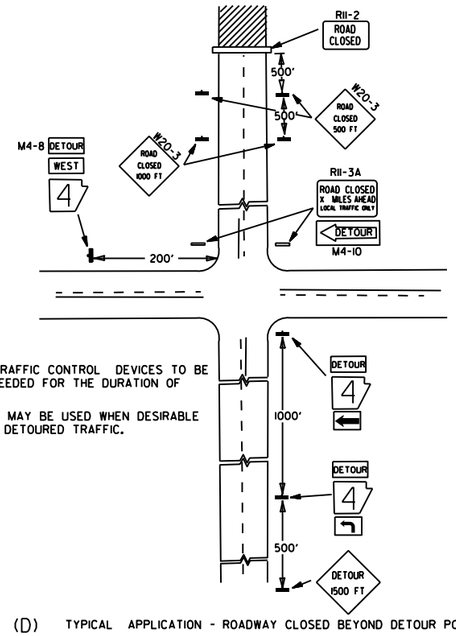
L= MINIMUM LENGTH OF TAPER.

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

W= WIDTH OF OFFSET.

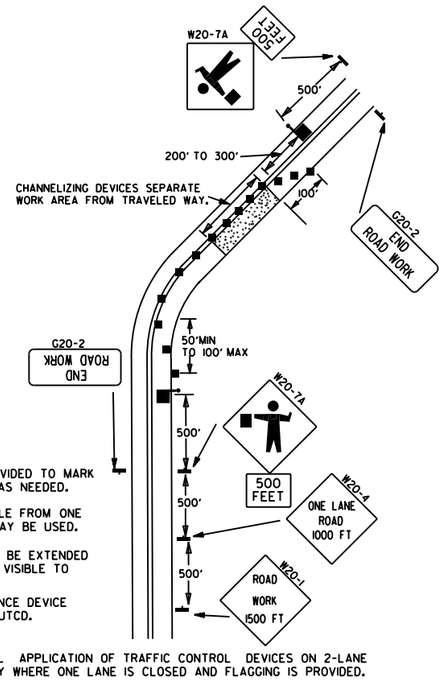
GENERAL NOTES:

1. 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 R2-145MPH 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 R2-155MPH 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).



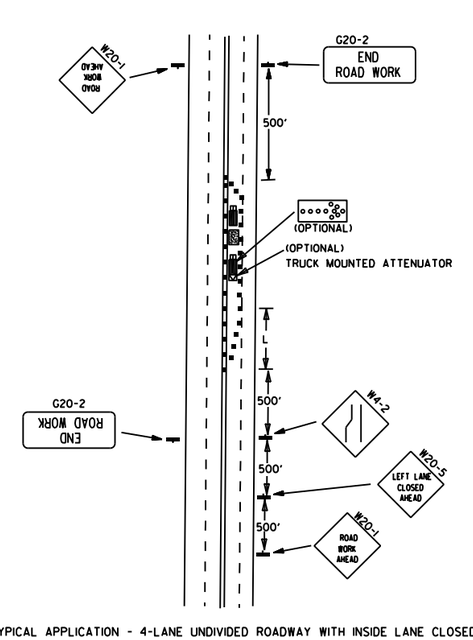
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



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

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



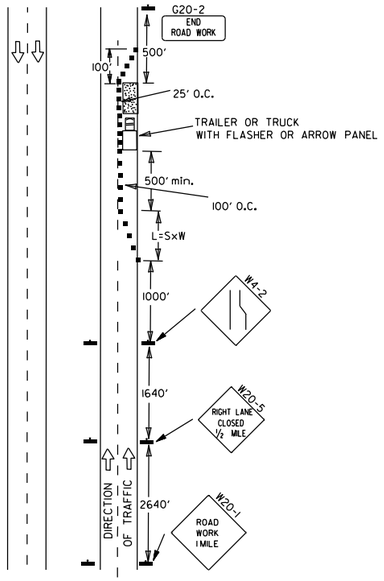
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
05-20-21	REVISED NOTE 7	
11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

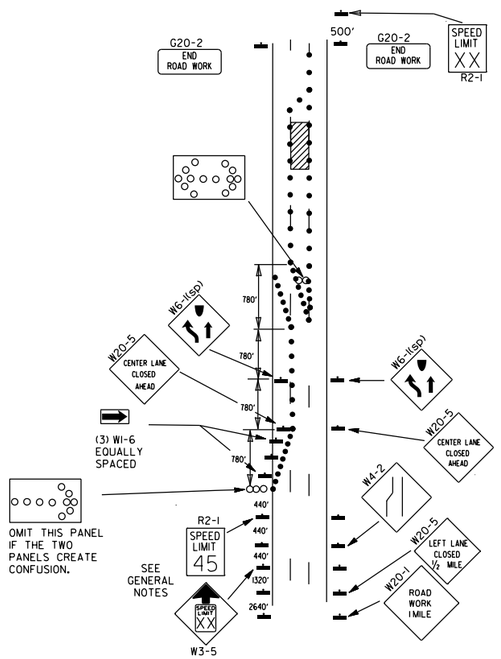
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-2



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



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

KEY:

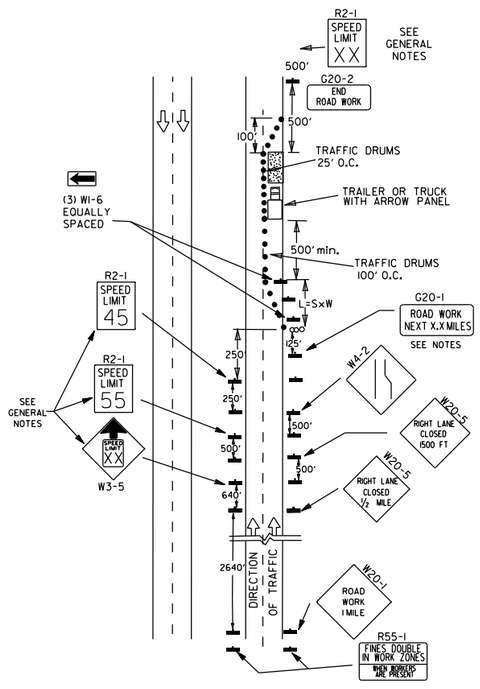
ARROW PANEL (IF REQUIRED)

■ CHANNELIZING DEVICE

● TRAFFIC DRUM

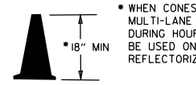
GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE 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. THE G20-1 SIGN WILL BE REQUIRED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF 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).



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

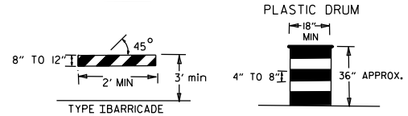
CHANNELIZING DEVICES



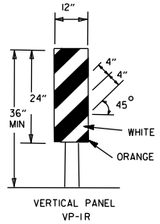
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

CONES

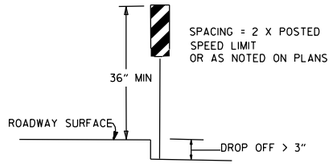
PLASTIC DRUM



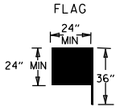
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



VERTICAL PANEL PLACEMENT



FLAG



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

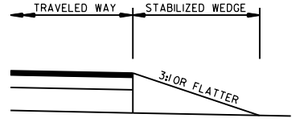
TRAFFIC CONTROL DEVICES			
NON-INTERSTATE			
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL	
		≤ 45 MPH	> 45 MPH
≤ 1"	CENTERLINE	W8-11	W8-11
> 1" ≤ 3"	CENTERLINE	W8-11 AND CENTERLINE LANE STRIPING	W8-11 AND CENTERLINE LANE STRIPING
> 3"	CENTERLINE	STANDARD LANE CLOSURE[6]	STANDARD LANE CLOSURE[6]
≤ 3"	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:

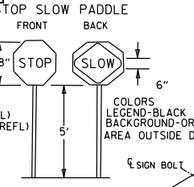
1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL 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).

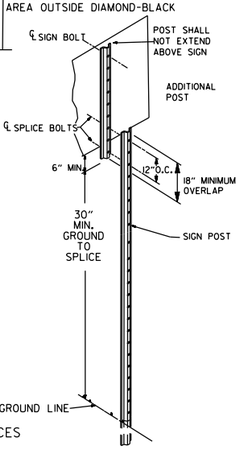


STABILIZED WEDGE

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

STOP SLOW PADDLE

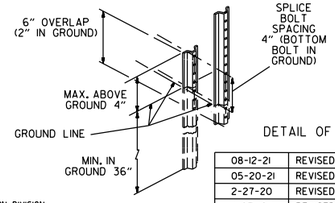




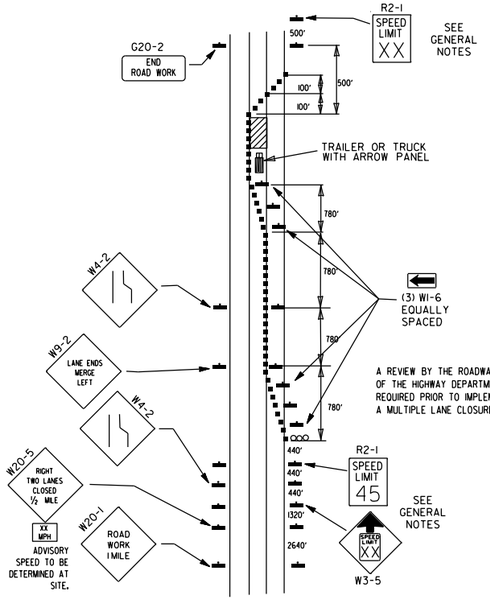
NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

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.



DETAIL OF SPLICES



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.

DATE	REVISION	FILMED
08-12-21	REVISED TRAFFIC CONTROL DEVICES AND NOTES	
05-20-21	REVISED NOTE 10	
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

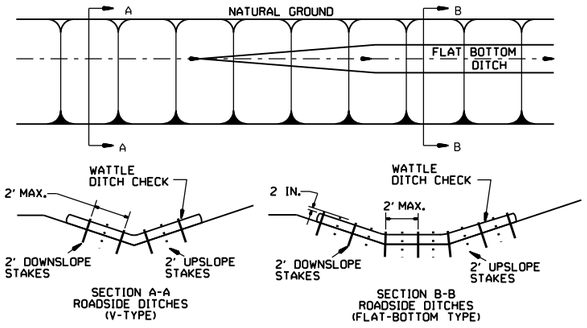
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

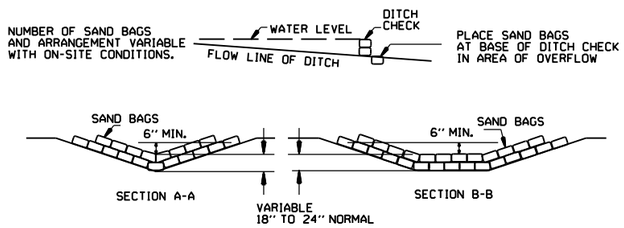
STANDARD DRAWING TC-3

GENERAL NOTES

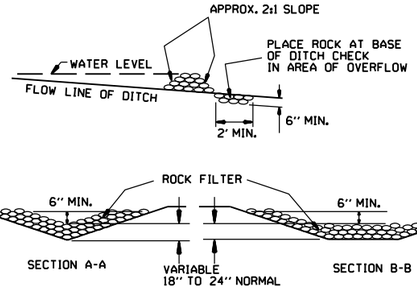
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

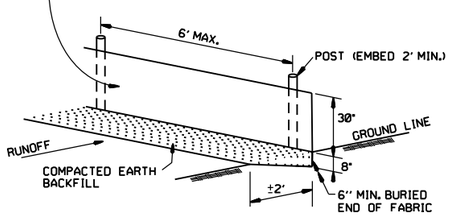


ROCK DITCH CHECK (E-6)

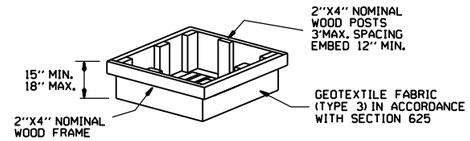
GENERAL NOTES

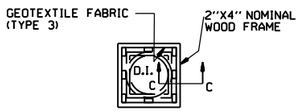
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

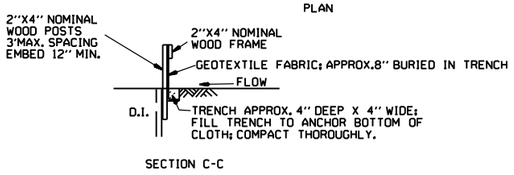
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



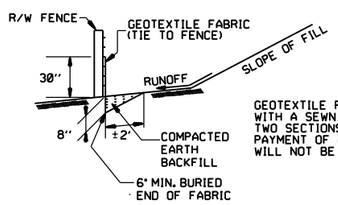
SILT FENCE (E-11)





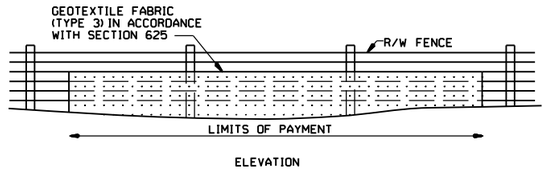


DROP INLET SILT FENCE (E-7)



GENERAL NOTES

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



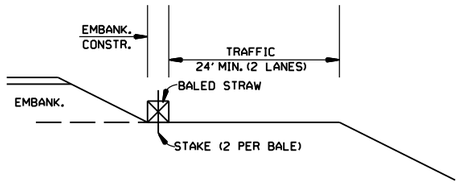
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

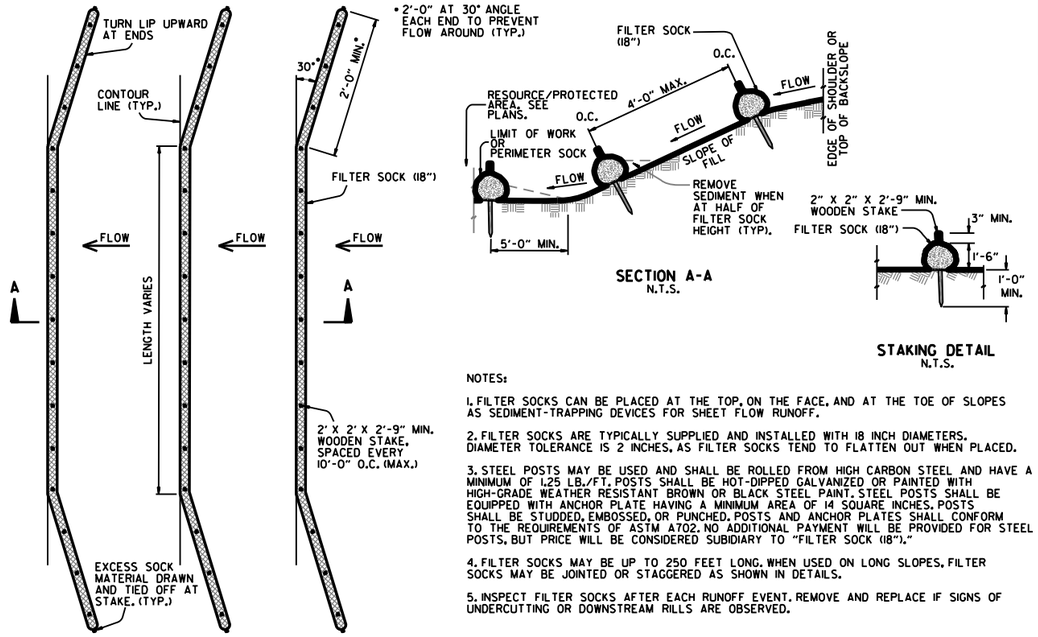
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

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



BALED STRAW FILTER BARRIER (E-2)



NOTES:

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

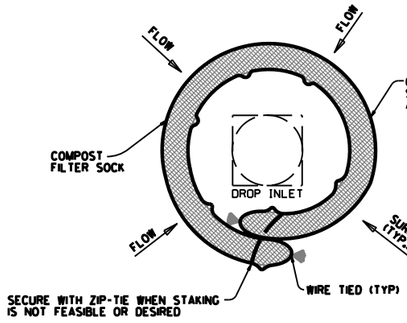
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

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

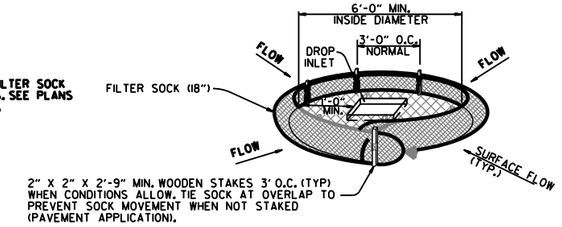
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

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.

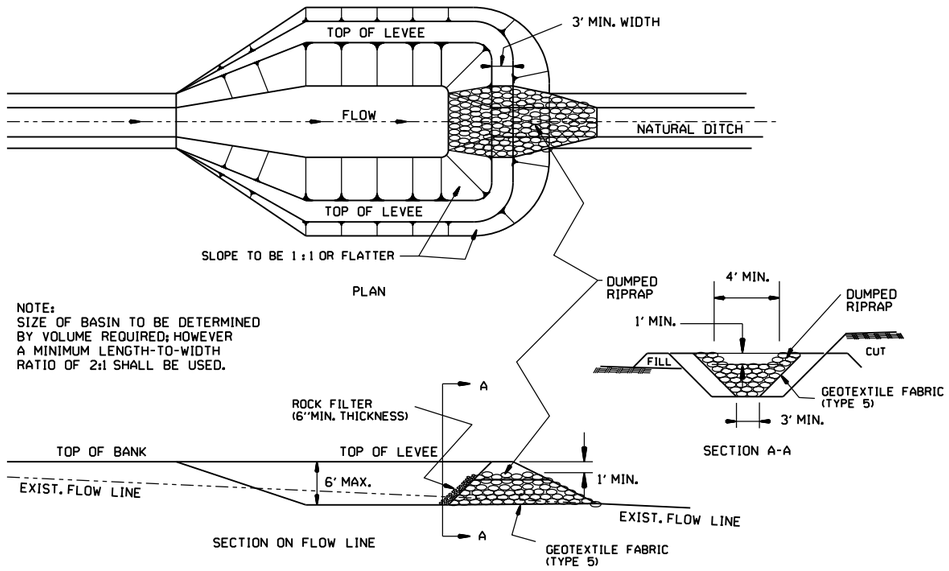
COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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

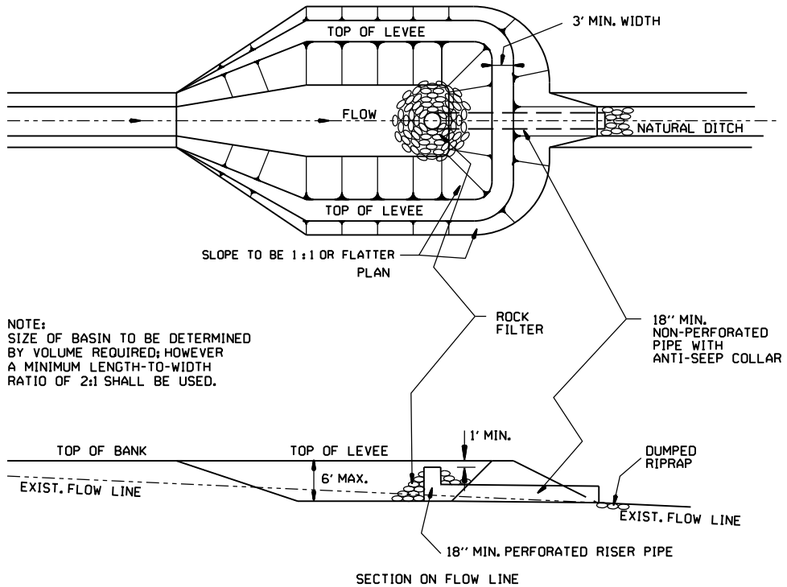
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

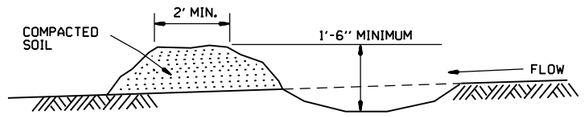
STANDARD DRAWING TEC-1



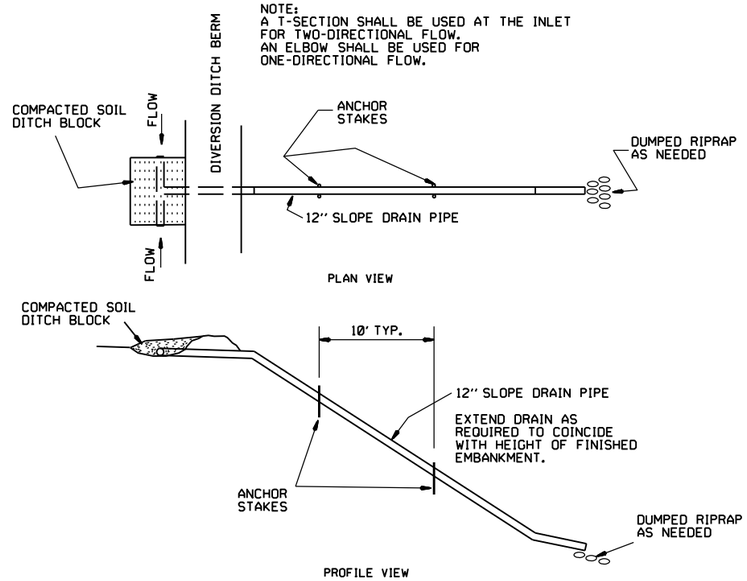
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



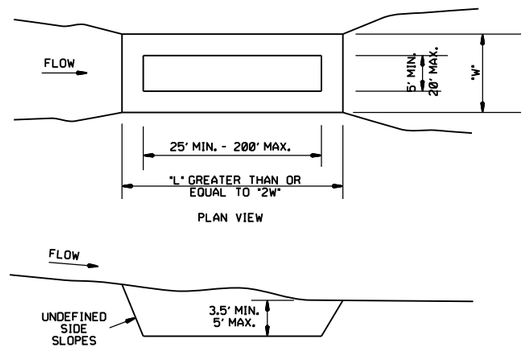
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

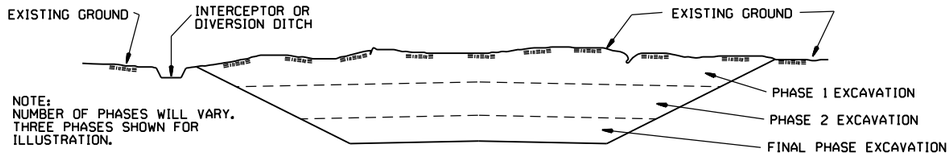
STANDARD DRAWING TEC-2

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



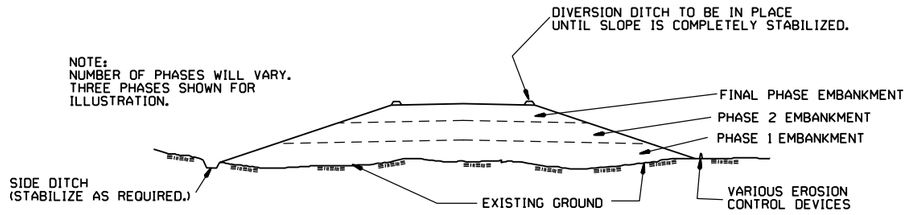
GENERAL NOTE

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

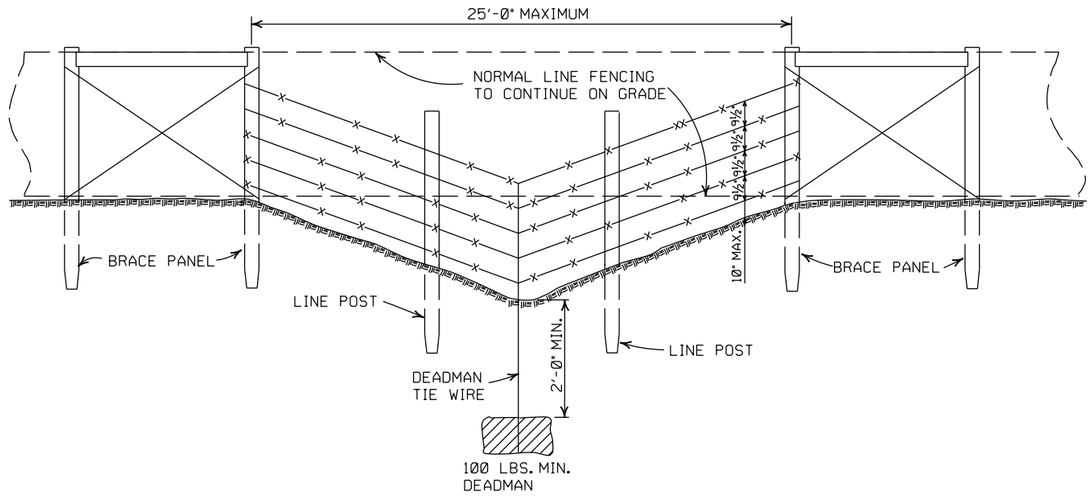
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

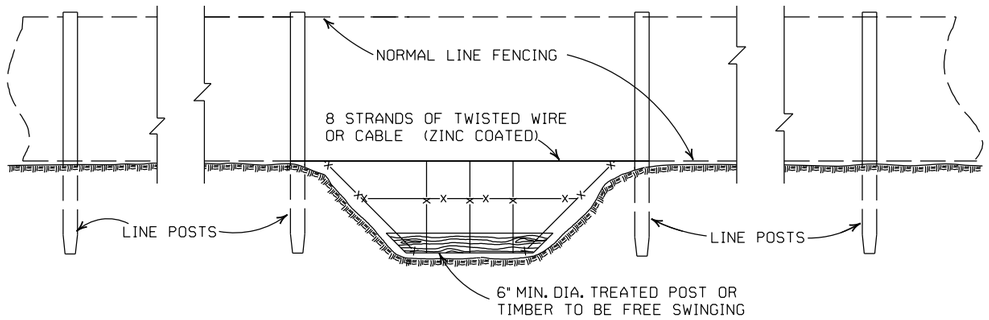
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED

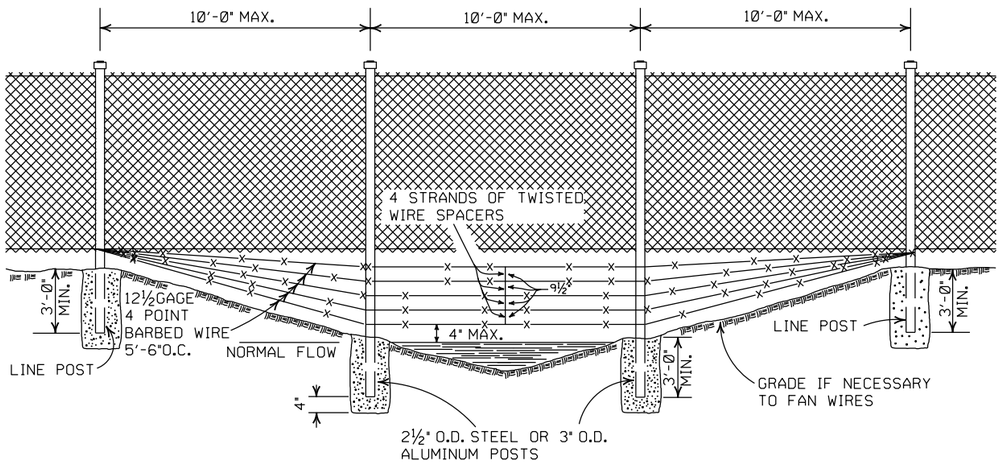
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3







GENERAL NOTES:

THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

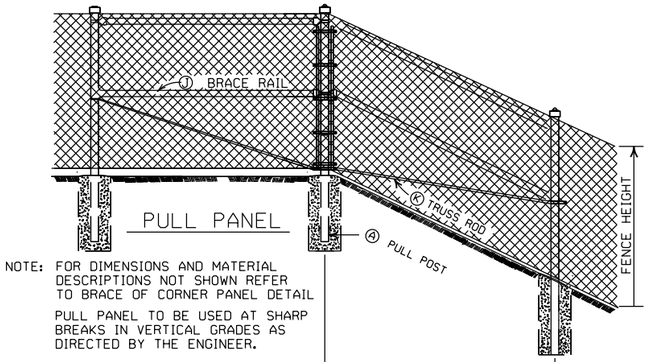
PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

DATE	REVISION	FILMED
4-20-79	REVISED TOP RAIL & TENSION WIRE	696-4-20-79
10-2-72	REVISED AND REDRAWN	529-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

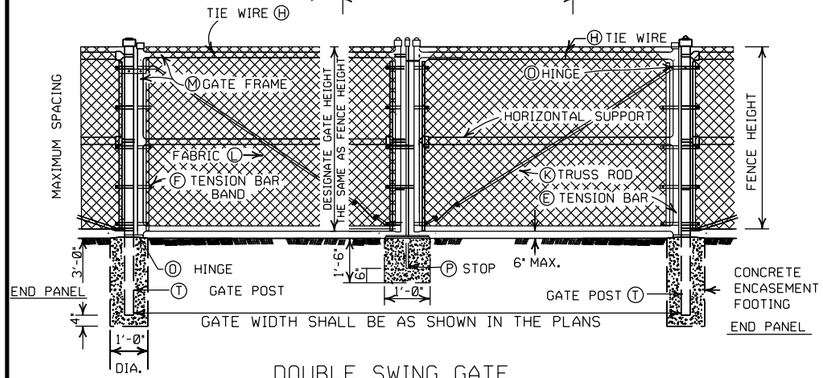
STANDARD DRAWING WF-2



PULL PANEL

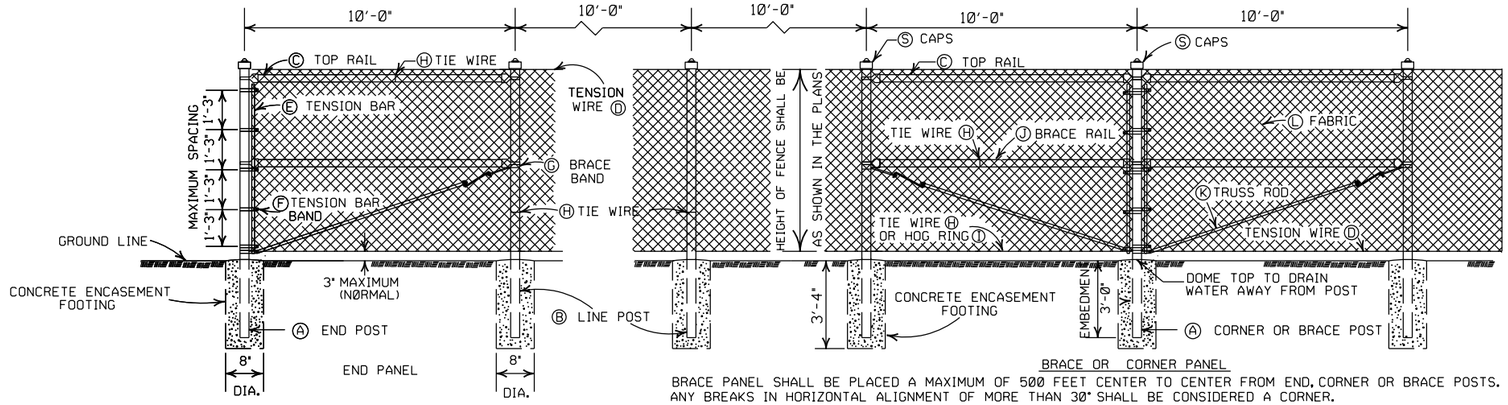
NOTE: FOR DIMENSIONS AND MATERIAL DESCRIPTIONS NOT SHOWN REFER TO BRACE OF CORNER PANEL DETAIL

PULL PANEL TO BE USED AT SHARP BREAKS IN VERTICAL GRADES AS DIRECTED BY THE ENGINEER.



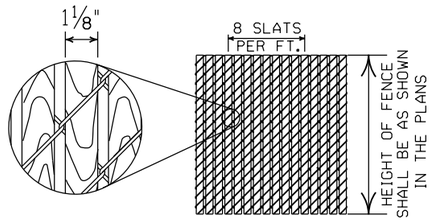
DOUBLE SWING GATE

POST SPACING DETAIL



BRACE OR CORNER PANEL

BRACE PANEL SHALL BE PLACED A MAXIMUM OF 500 FEET CENTER TO CENTER FROM END, CORNER OR BRACE POSTS. ANY BREAKS IN HORIZONTAL ALIGNMENT OF MORE THAN 30° SHALL BE CONSIDERED A CORNER.



1⅛" X ¼" REDWOOD SLATS(LENGTH TO MATCH HEIGHT OF FENCE)

DETAIL OF REDWOOD SLAT INSTALLATION

(WHERE APPLICABLE)

GENERAL NOTES:

(C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.

(D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.

(J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.

(L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

(M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL, MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.

(O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.

(P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.

(S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND "T" POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.

POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.

EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.

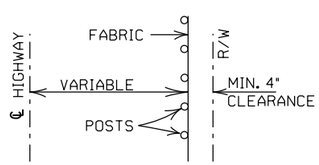
HEIGHT OF FENCE FABRIC	(A) END, PULL, CORNER OR BRACE POST	(B) LINE POSTS SIZE	(B) LINE POSTS TIE SPACING	(C) TOP RAIL SIZE	(C) TOP RAIL TIE SPACING	(C) TOP RAIL MIN. LENGTH	(D) TENSION WIRE SIZE	(D) TENSION WIRE TIE SPACING	(E) TENSION BAR SIZE	(E) TENSION BAR LENGTH	(F) TENSION BAR BAND SIZE	(F) TENSION BAR BAND BOLT SIZE	(F) TENSION BAR BAND SPACING	(G) BRACE BAND SIZE	(G) BRACE BAND BOLT SIZE
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1⅝" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF ⅜" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	MIN. OF ¾" X 0.074	⅝" X 1¼"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	MIN. OF ¾" X 0.105	⅝" X 1¼"
OVER 6' TO 12' INCL.	3 " O.D.	2½" O.D.													

HEIGHT OF FENCE FABRIC	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL SIZE	(J) BRACE RAIL TIE SPACING	(K) TRUSS ROD	(L) FABRIC SIZE	(L) FABRIC MESH	(L) FABRIC SELVAGE	(M) GATE FRAME SIZE	(M) GATE FRAME TIE SPACING	(N) HORIZONTAL SUPPORT SIZE	(N) HORIZONTAL SUPPORT TIE SPACING	(O) HINGE TYPE 180° SWING	(T) GATE POST GATE WIDTH 12' AND LESS	(T) GATE POST GATE WIDTH OVER 12' TO 24' INCL.
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1⅝" O.D.	1 TIE EVERY 2'-0"	MIN. OF ⅝" ROUND WITH TIGHTNERS AND FITTINGS	9 GA.	2"	KNUCK -ING AND/OR TWIST -ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.														4" O.D.	

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUT SIDE DIAMETER OF 2½" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS; AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS. 9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

POSTS AND RAILS

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT. STEEL	LBS. PER LINEAR FT. ALUMINUM	GRADE 2 O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
1⅝	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.120	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.160	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

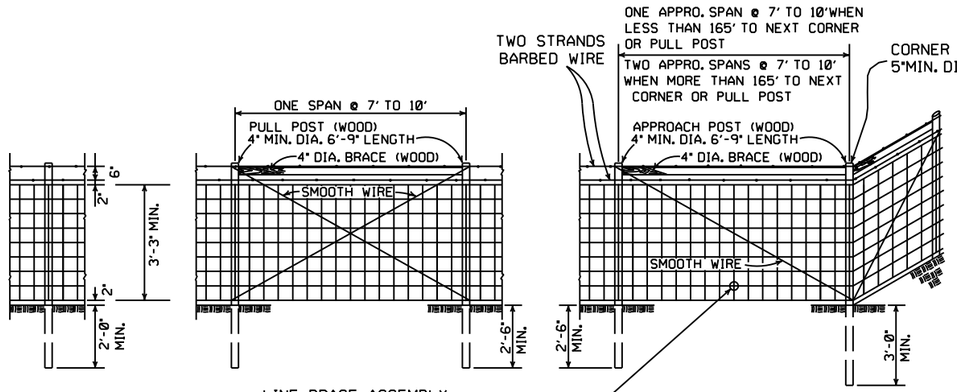
TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES, REMOVED TABLE, & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91 8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

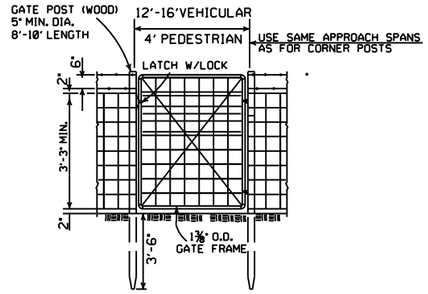
ARKANSAS STATE HIGHWAY COMMISSION

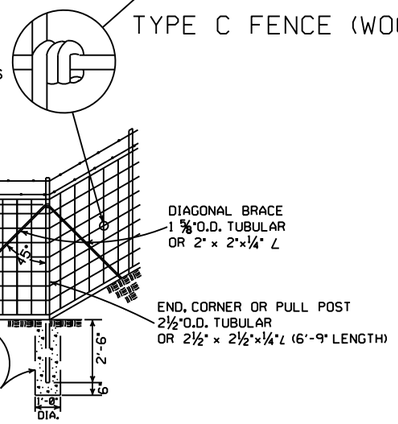
CHAIN LINK FENCE

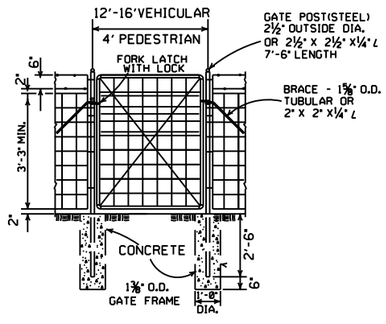
STANDARD DRAWING WF-3



TYPE C FENCE (WOOD POSTS)

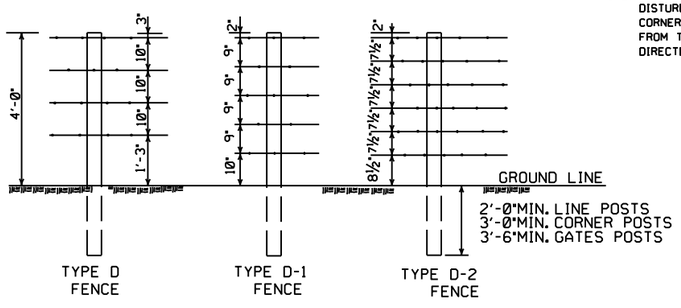




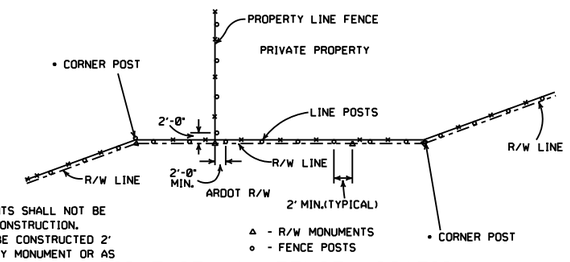


NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.

TYPE C FENCE (STEEL POSTS)

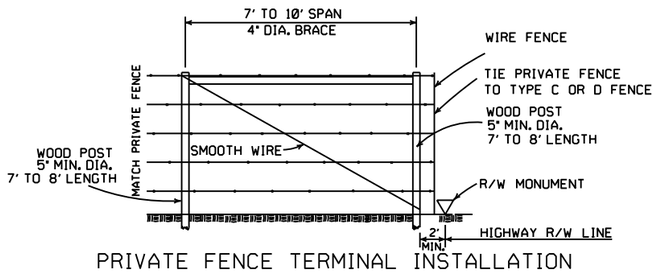


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



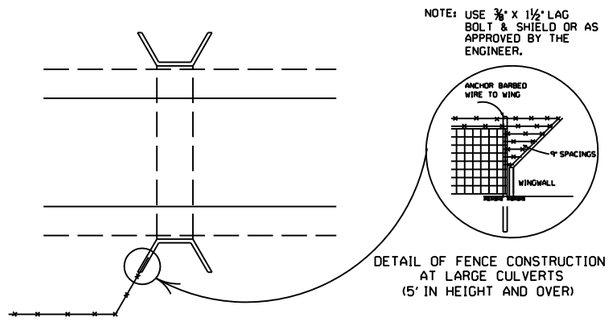
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION

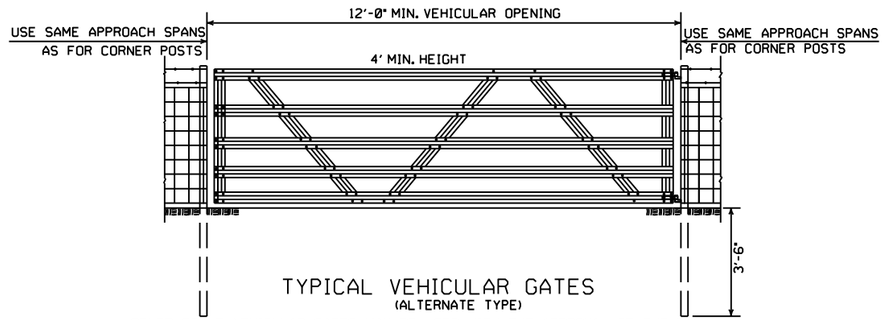


PRIVATE FENCE TERMINAL INSTALLATION

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.



DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)



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.

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.

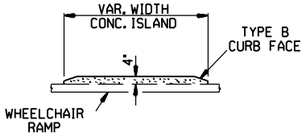
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

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

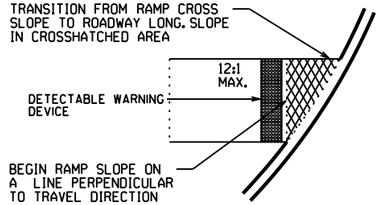
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

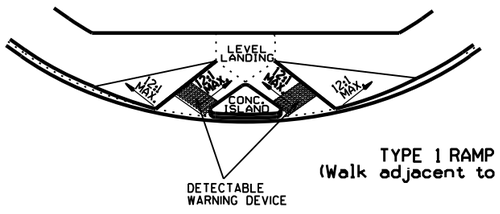
STANDARD DRAWING WF-4



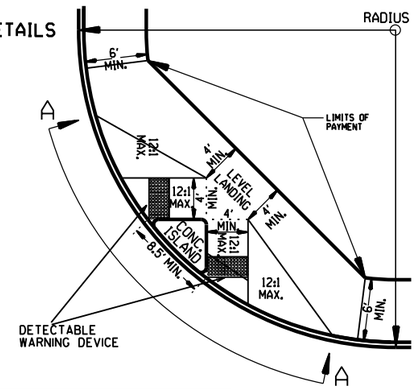
CONCRETE ISLAND DETAIL

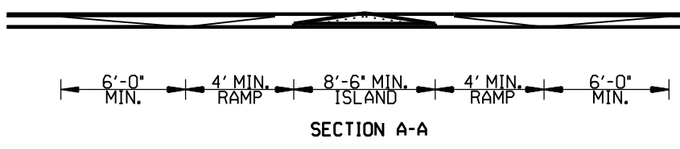


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

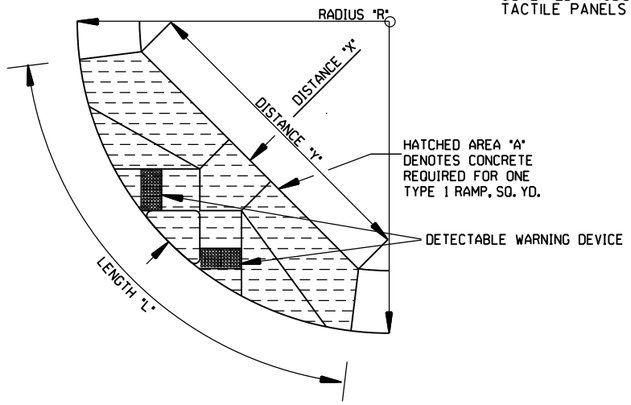




SECTION A-A

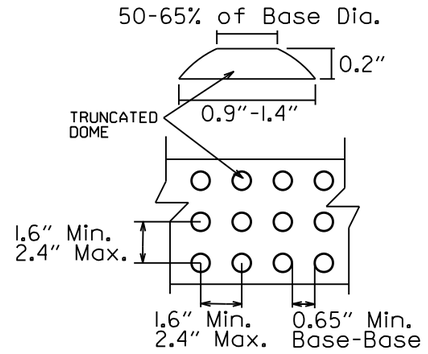
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

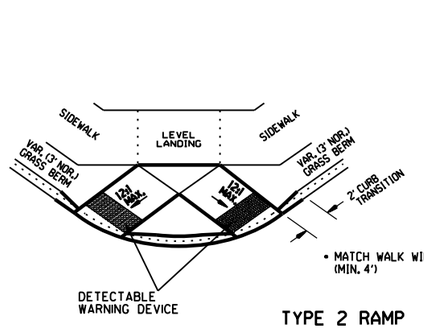
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



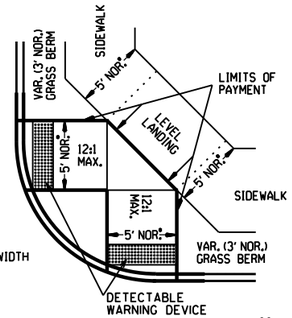
DETECTABLE WARNING DEVICE DETAIL

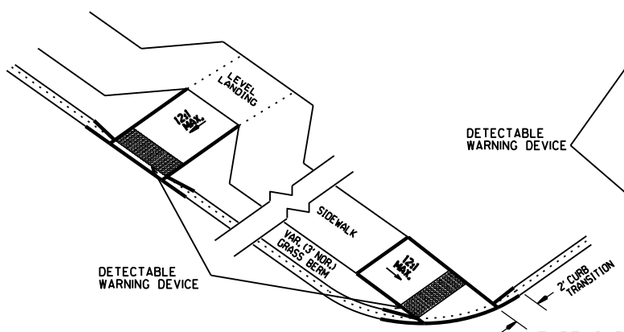
GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

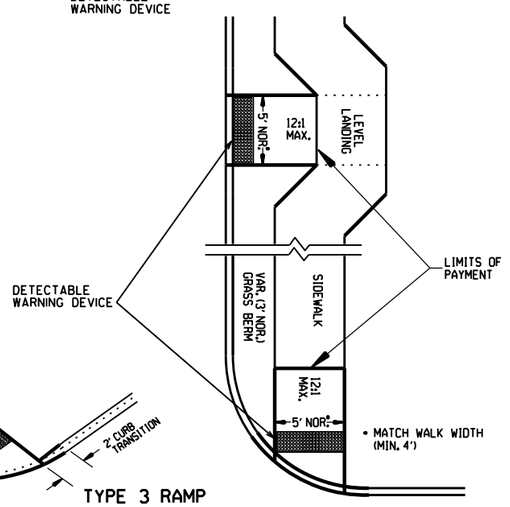


TYPE 2 RAMP

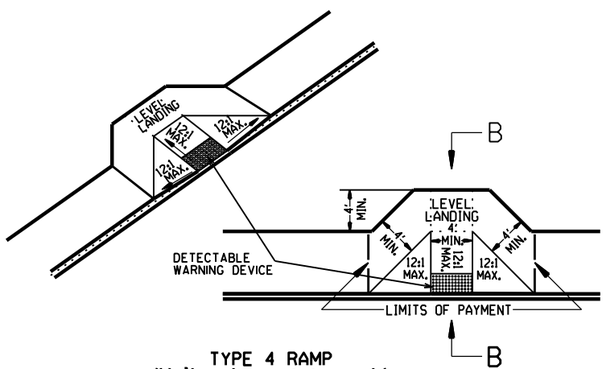




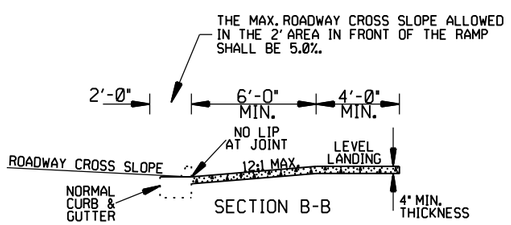
TYPE 3 RAMP



NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.



TYPE 4 RAMP
(Walk adjacent to curb)



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8#TO12#MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.H.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1