"A FULLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CONSTRUCTION PLANS FOR STATE HIGHWAY

BRYANT PKWY.
INTERCHANGE
(BRYANT) (S)

SALINE COUNTY

ROUTE 30 SECTION 22

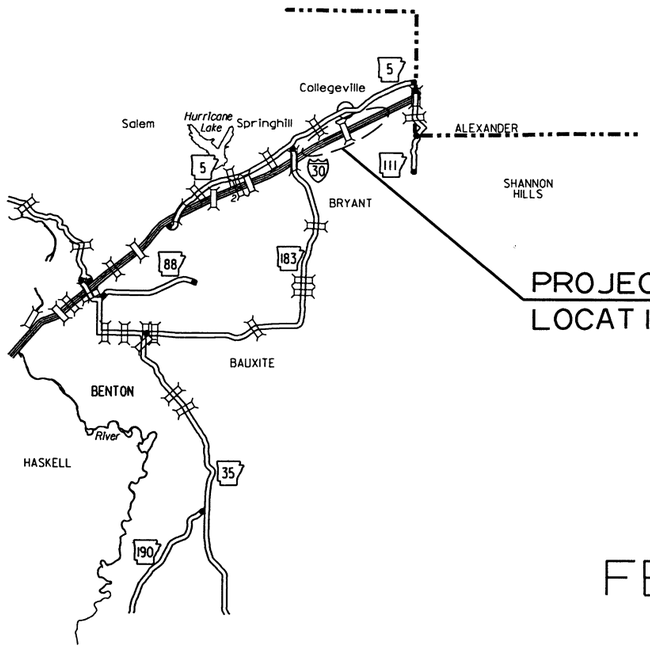
JOB 061474

FED. AID PROJ. NHPP-30-2(269)124

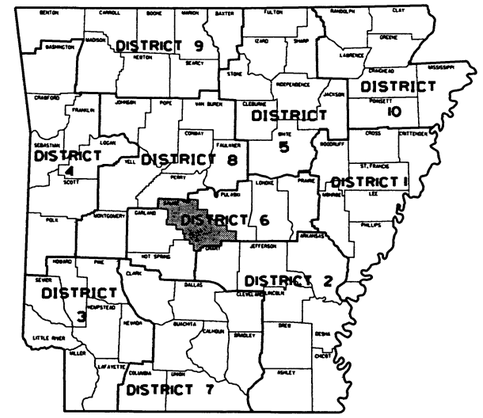
NOT TO SCALE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	1	125

(2) BRYANT PKWY. INTERCHANGE (BRYANT) (S)



VICINITY MAP

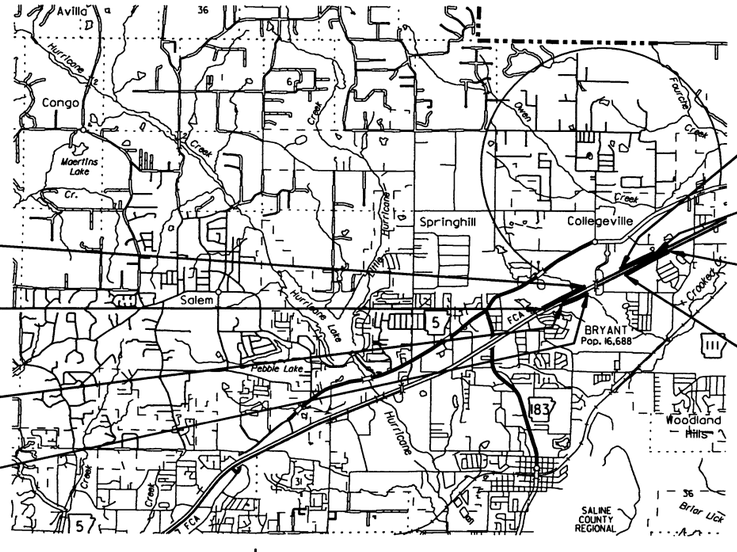


ARK. HWY. DIST. NO. 6

• DESIGN TRAFFIC DATA •	I-30
DESIGN YEAR	2036
2016 ADT	92,000
2036 ADT	120,000
2036 DHV	13,200
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	18%
DESIGN SPEED	70 MPH

R-15-W | R-14-W

T-1-N



T-1-S

R-15-W | R-14-W

STA. 670+83.84
END RAMP 4

STA. 649+27.97
BEGIN RAMP 4
LOG MILE 123.96 (I-30)

STA. 656+95.54
BEGIN RAMP 1

STA. 670+02.56
END RAMP 1

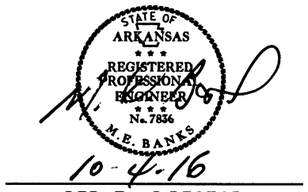
STA. 698+53.05
BEGIN RAMP 3

STA. 716+91.01
END RAMP 3

STA. 723+34.76
END RAMP 2
LOG MILE 125.36 (I-30)

STA. 699+68.72
BEGIN RAMP 2

APPROVED



10-4-16

DEPUTY DIRECTOR
AND CHIEF ENGINEER

BEGINNING OF PROJECT	MID POINT OF PROJECT	END OF PROJECT
LATITUDE = N 34° 37′ 34″	LATITUDE = N 34° 37′ 49″	LATITUDE = N 34° 38′ 04″
LONGITUDE = W 92 28′ 57″	LONGITUDE = W 92° 28′ 17″	LONGITUDE = W 92° 27′ 37″

NO LENGTH INVOLVED

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

2/8/2016

R061474.DGN

INDEX OF SHEETS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	2	125

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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 11425 TRINITY D. SMITH 12-12-16

SHEET NO.	TITLE	STR. NO.	DRWG.NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES			
3	TYPICAL SECTIONS OF IMPROVEMENT			
4 - 5	SPECIAL DETAILS			
6 - 17	TEMPORARY EROSION CONTROL DETAILS			
18 - 29	MAINTENANCE OF TRAFFIC DETAILS			
30 - 33	PERMANENT PAVEMENT MARKING DETAILS			
34 - 37	QUANTITIES			
38	SUMMARY OF QUANTITIES AND REVISIONS			
39 - 42	SURVEY CONTROL DETAILS			
43 - 44	PLAN AND PROFILE SHEETS - RAMP 1			
45 - 46	PLAN AND PROFILE SHEETS - RAMP 2			
47 - 48	PLAN AND PROFILE SHEETS - RAMP 3			
49 - 50	PLAN AND PROFILE SHEETS - RAMP 4			
51	BRYANT PARKWAY OVERPASS LAYOUT			
52	SIGNING SUMMARY OF QUANTITIES			
53 - 54	SIGNING QUANTITIES			
55 - 63	SIGN LAYOUT SHEETS			
64 - 71	SIGN PLACEMENT SHEETS			
72	DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE (SHEET 1 OF 5)	OH-030-60-63, OH-030-62-07, OH-030-62-08, OH-030-62-09	55686	
73	DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE (SHEET 2 OF 5)	OH-030-60-63, OH-030-62-07, OH-030-62-08, OH-030-62-09	55687	
74	DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE (SHEET 3 OF 5)	OH-030-60-63, OH-030-62-07, OH-030-62-08, OH-030-62-09	55688	
75	DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE (SHEET 4 OF 5)	OH-030-60-63, OH-030-62-07, OH-030-62-08, OH-030-62-09	55689	
76	DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE (SHEET 5 OF 5)	OH-030-60-63, OH-030-62-07, OH-030-62-08, OH-030-62-09	55690	
77	CURBING DETAILS		CG-1	11-29-07
78	TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)		CPTJ-6A	5-25-06
79	DETAILS OF DRIVEWAYS & ISLANDS		DR-1	2-27-14
80	DETAILS OF DROP INLETS & JUNCTION BOXES		FPC-9	11-16-01
81	DETAILS OF DROP INLETS		FPC-9D	8-22-02
82	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)		FPC-9S	7-26-12
83	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING		PCC-1	2-27-14
83A	METAL PIPE CULVERT FILL HEIGHTS & BEDDING		PCM-1	2-27-14
83B	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		PCP-1	2-27-14
83C	PLASTIC PIPE CULVERT (PVC F949)		PCP-2	2-27-14
84	PAVEMENT MARKING DETAILS		PM-1	5-12-16
85	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS		PM-2	12-08-16
86	DETAILS OF PIPE UNDERDRAIN		PU-1	12-08-16
87	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	9-02-15
88	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-02-15
89	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	9-02-15
90	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-4	2-27-14
91	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-5	10-15-09
92	TEMPORARY EROSION CONTROL DEVICES		TEC-1	12-15-11
93	TEMPORARY EROSION CONTROL DEVICES		TEC-3	11-03-94
94	DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS		TR-1A	8-22-02
95	WIRE FENCE TYPE A AND B		WF-1	8-22-02
96 - 125	CROSS SECTIONS			

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. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
5. 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.
6. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
7. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
102-2	ISSUANCE OF PROPOSALS
108-1	LIQUIDATED DAMAGES
108-2	WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
303-1	AGGREGATE BASE COURSE
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 061474	BIDDING REQUIREMENTS AND CONDITIONS
JOB 061474	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 061474	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 061474	CARGO PREFERENCE ACT REQUIREMENTS
JOB 061474	CULVERT CLEAN OUT
JOB 061474	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 061474	ENHANCED THERMOPLASTIC PAVEMENT MARKING
JOB 061474	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 061474	MAINTENANCE OF TRAFFIC
JOB 061474	MANDATORY ELECTRONIC CONTRACT
JOB 061474	MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 061474	PARTNERING REQUIREMENTS
JOB 061474	PLASTIC PIPE
JOB 061474	PROSECUTION AND PROGRESS - CALENDAR DAY CONTRACT WITH CPM
JOB 061474	SEQUENCE OF CONSTRUCTION
JOB 061474	SHORING FOR CULVERTS
JOB 061474	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 061474	STEEL SIGN STRUCTURES
JOB 061474	STORM WATER POLLUTION PREVENTION PLAN
JOB 061474	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 061474	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 061474	UTILITY ADJUSTMENTS
JOB 061474	VALUE ENGINEERING
JOB 061474	WARM MIX ASPHALT

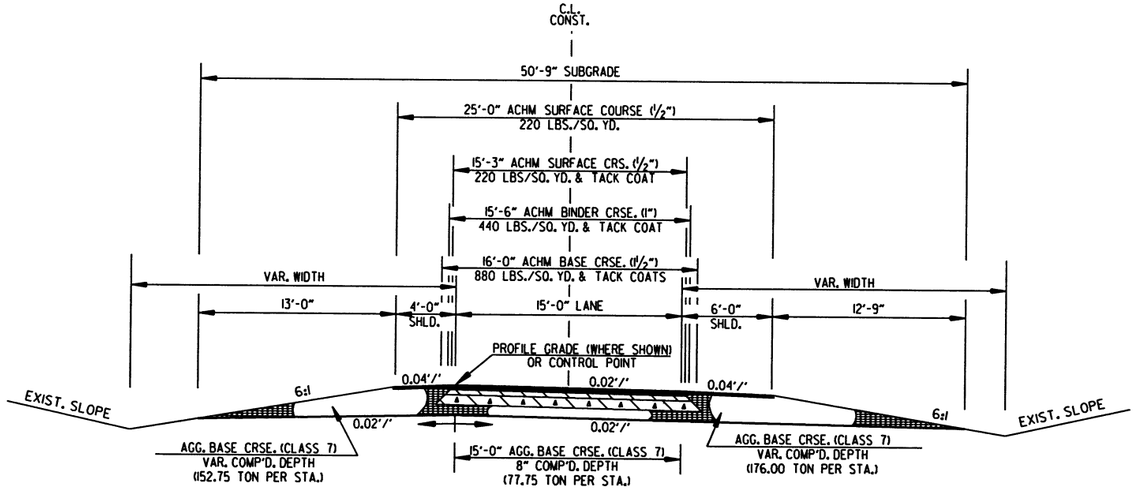
11/8/2011

ZBORDER.CEL

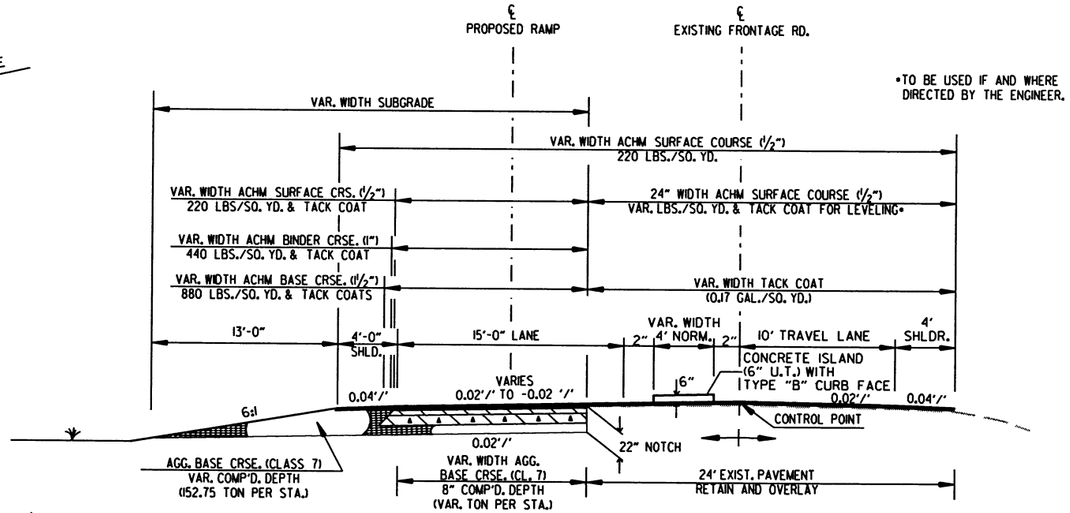
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	3	125

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

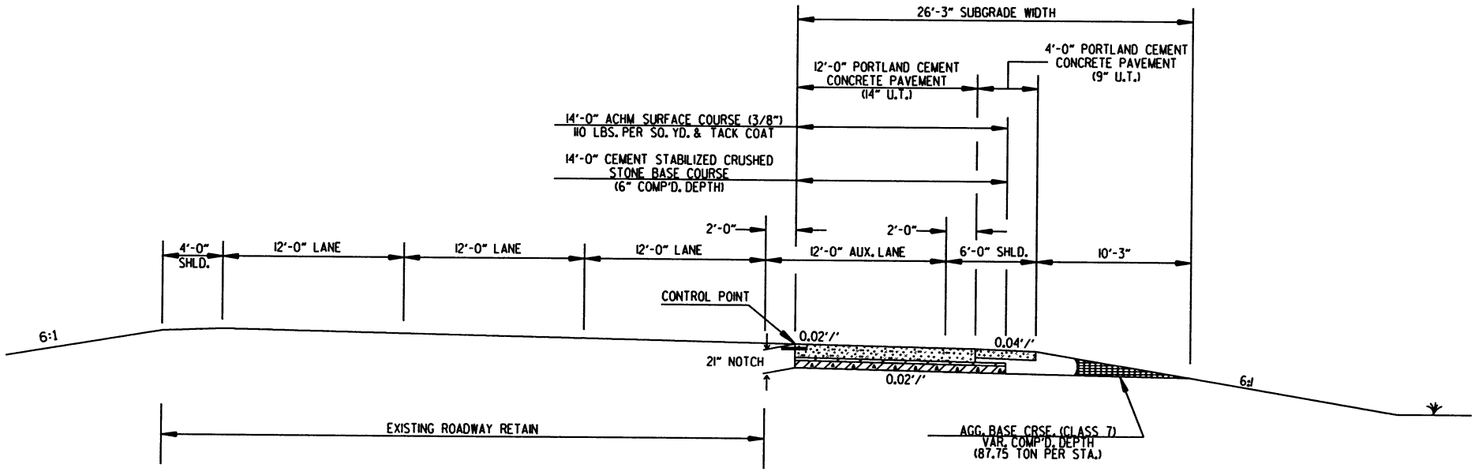


RAMP
(SHOWN IN THE DIRECTION OF TRAFFIC)



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

SLIP RAMP AT FRONTAGE ROAD
(SHOWN IN THE DIRECTION OF TRAFFIC)



I-30 ACCELERATION LANE
(SHOWN IN THE DIRECTION OF TRAFFIC)

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.

PRIOR TO AND DURING PLACEMENT OF PAVEMENT, 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 FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

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.

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

TYPICAL SECTIONS OF IMPROVEMENT

10/3/2016

R061474.DGN

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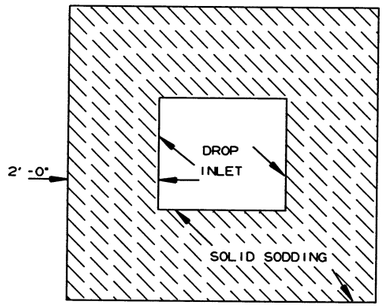
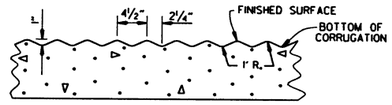
(2) SPECIAL DETAILS

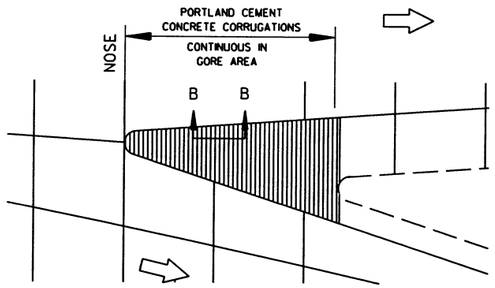
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



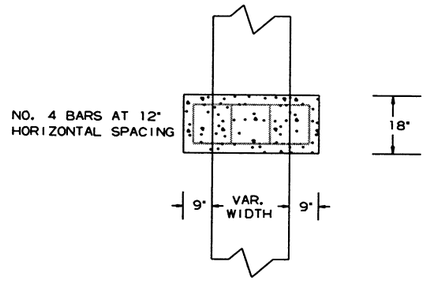
DETAIL FOR SOLID SODDING AROUND DROP INLETS



SECTION B-B

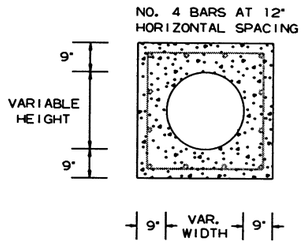


LAYOUT OF SHOULDER CORRUGATIONS IN EXIT GORE AREAS

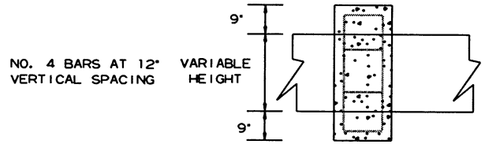


TOP VIEW

MIN 3" COVER

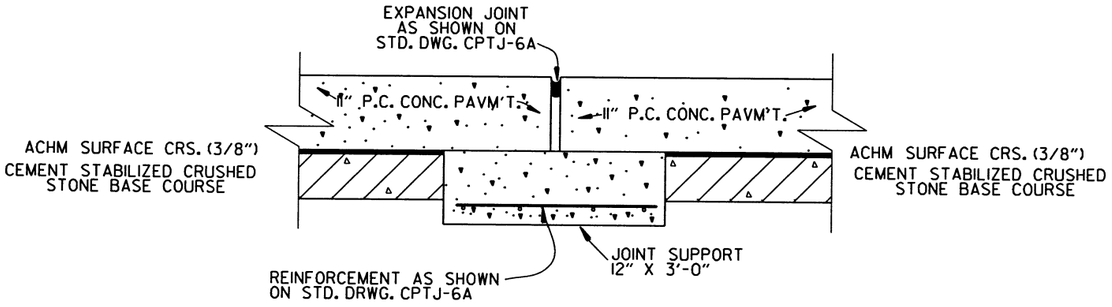


FRONT VIEW

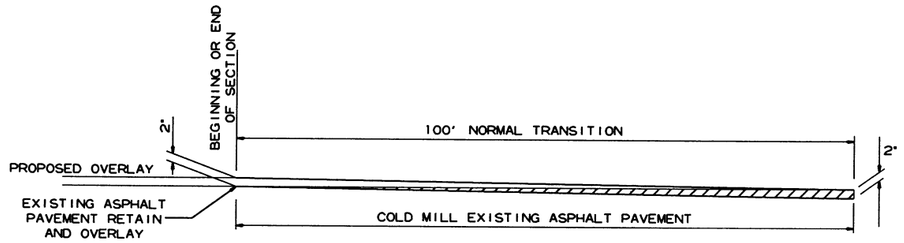


SIDE VIEW

PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL



DETAILS OF JOINT SUPPORT



DETAIL FOR TRANSITIONS

10/3/2016

R061474.DGN

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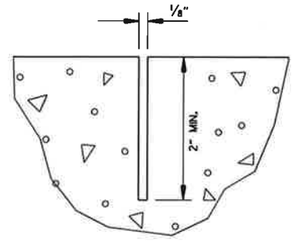
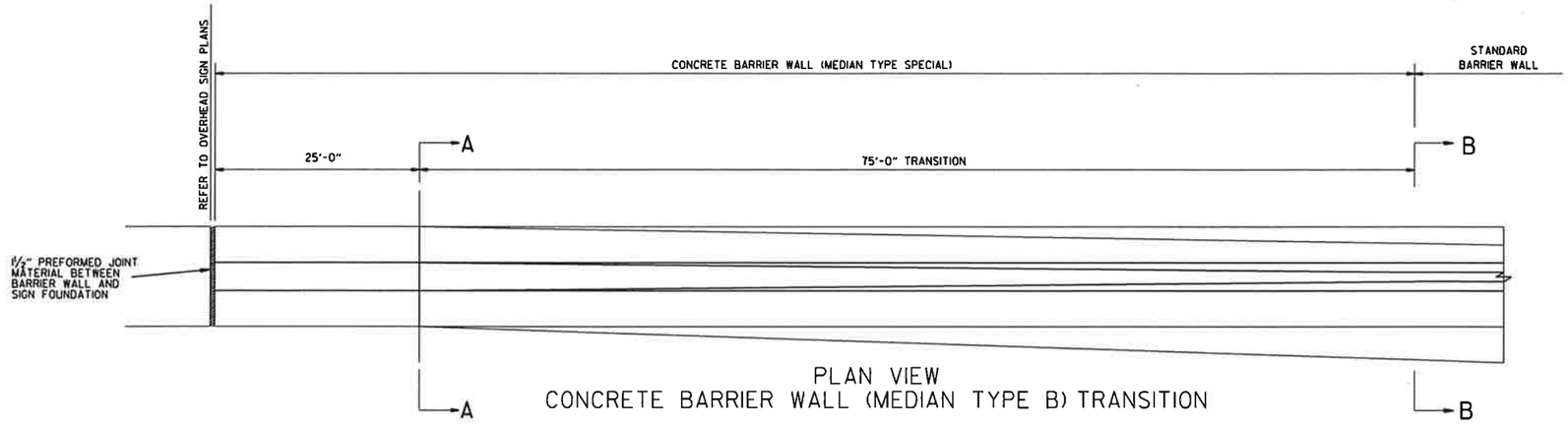
10-10-16				6	ARK.			
1-11-17				JOB NO.		061474	4A	125

(2) SPECIAL DETAILS

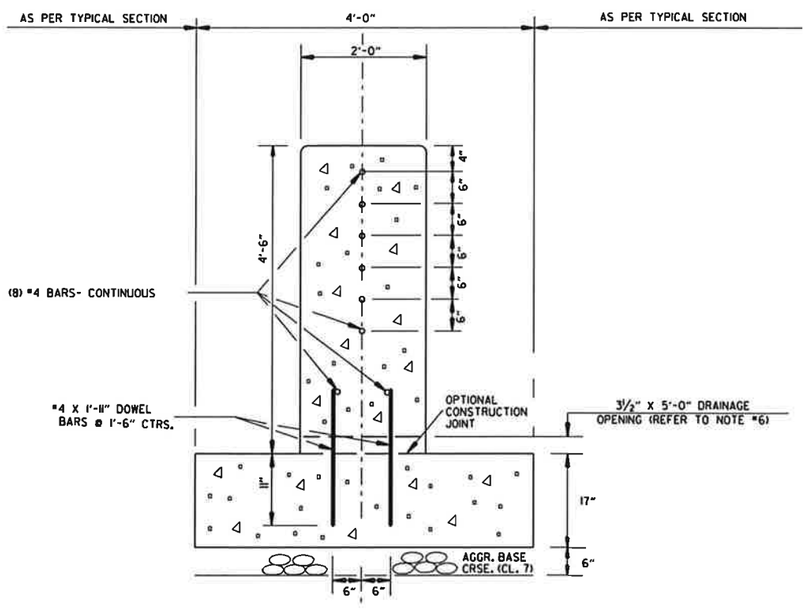


CONTRACTION JOINT DETAIL

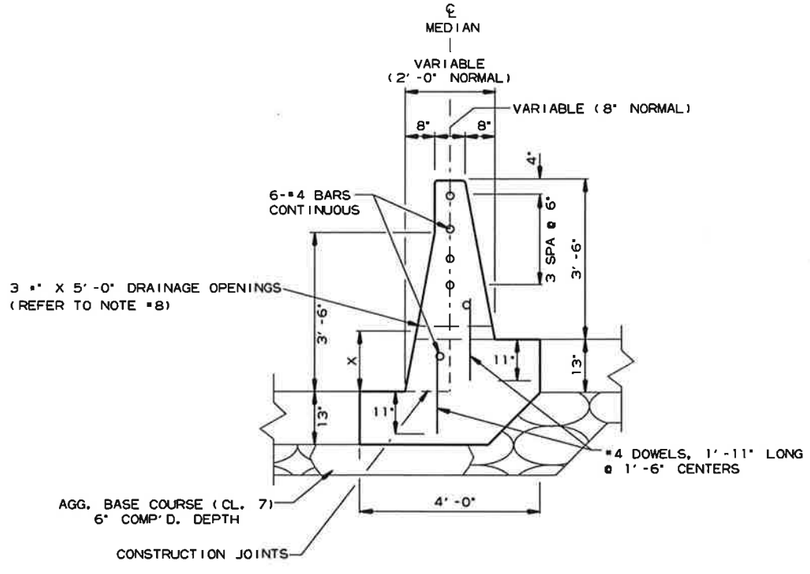
NOTES FOR MEDIAN BARRIER:
1. ALL EXPOSED EDGES SHALL HAVE 3/4" CHAMFERS.
2. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
3. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
4. ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER.
5. DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AS A COMPLETE UNIT.
6. DRAINAGE OPENINGS TO BE CONSTRUCTED ADJACENT TO DROP INLETS. DOWEL BARS SHALL NOT BE PLACED WITHIN 3" OF DRAINAGE OPENINGS.



PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE B) TRANSITION



CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)
(SECTION A-A)



CONCRETE BARRIER WALL (MEDIAN TYPE B)
X = 0'-0" TO 1'-0" MAX
(SECTION B-B)

CONCRETE BARRIER WALL (MEDIAN TYPE B) TRANSITION
FOR OVERHEAD SIGN STRUCTURE

SPECIAL DETAILS

12/13/2016

R061474.DGN

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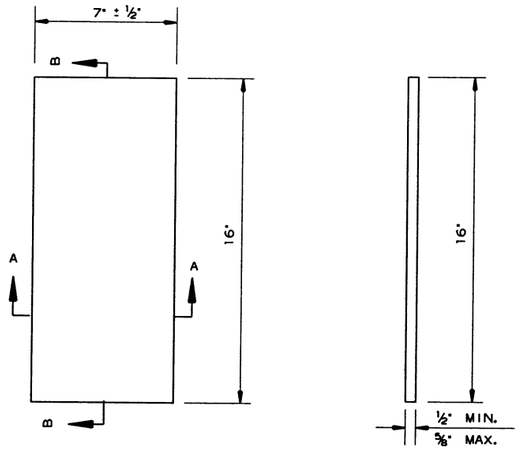
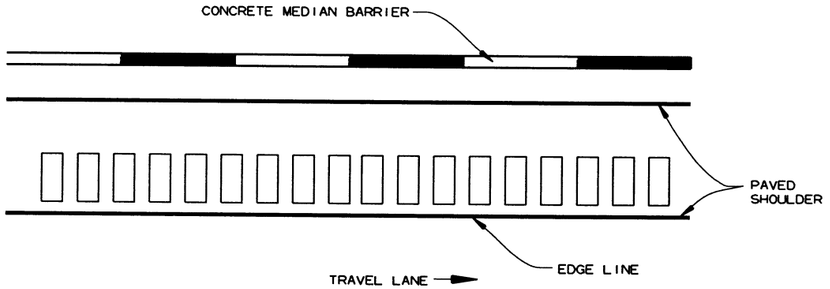
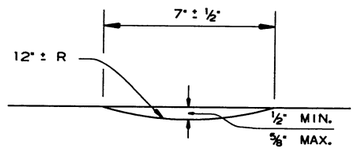
(2) SPECIAL DETAILS



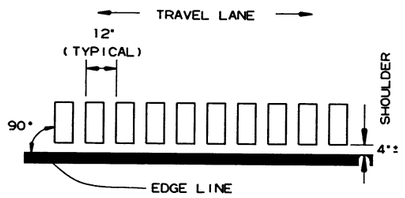
PLAN

SECTION B-B



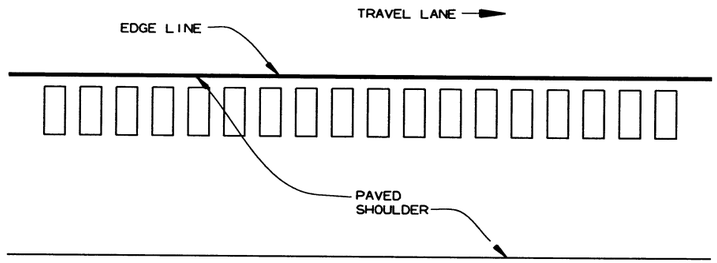


SECTION A-A



LOCATION PLAN OF RUMBLE STRIPS

LEFT SHOULDER



PLAN VIEW

NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.
2. THE ½" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

DETAILS OF RUMBLE STRIPS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

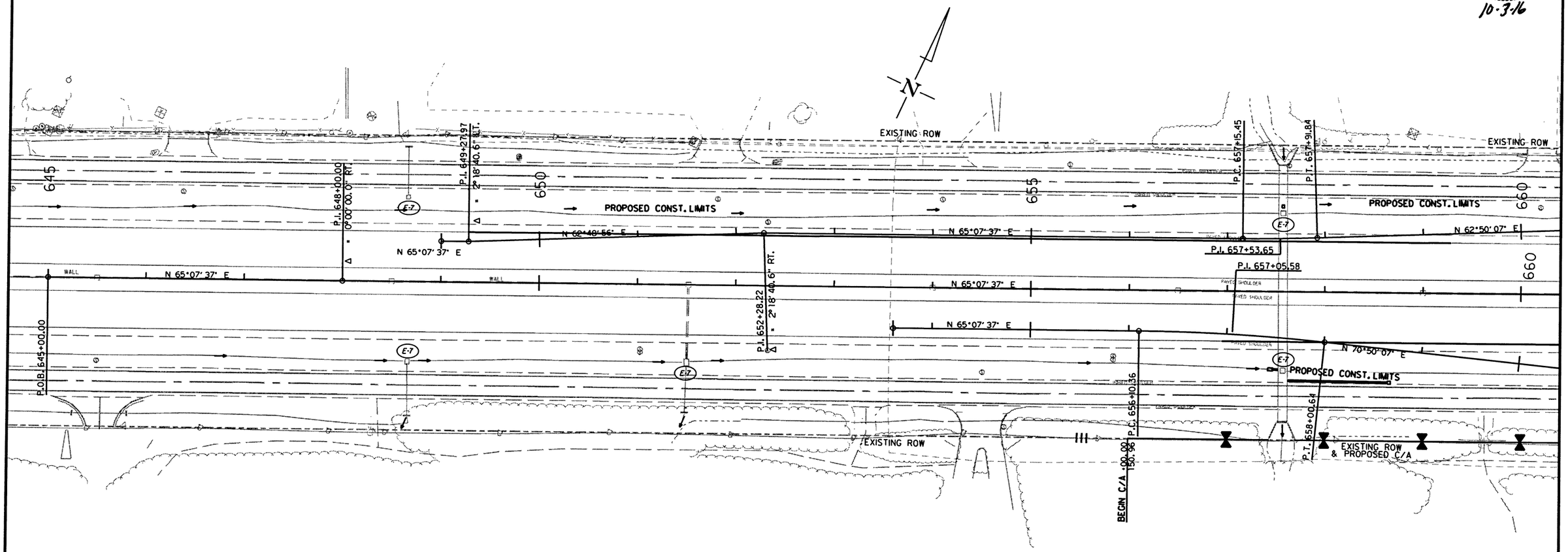
10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	6	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE

10/3/2016

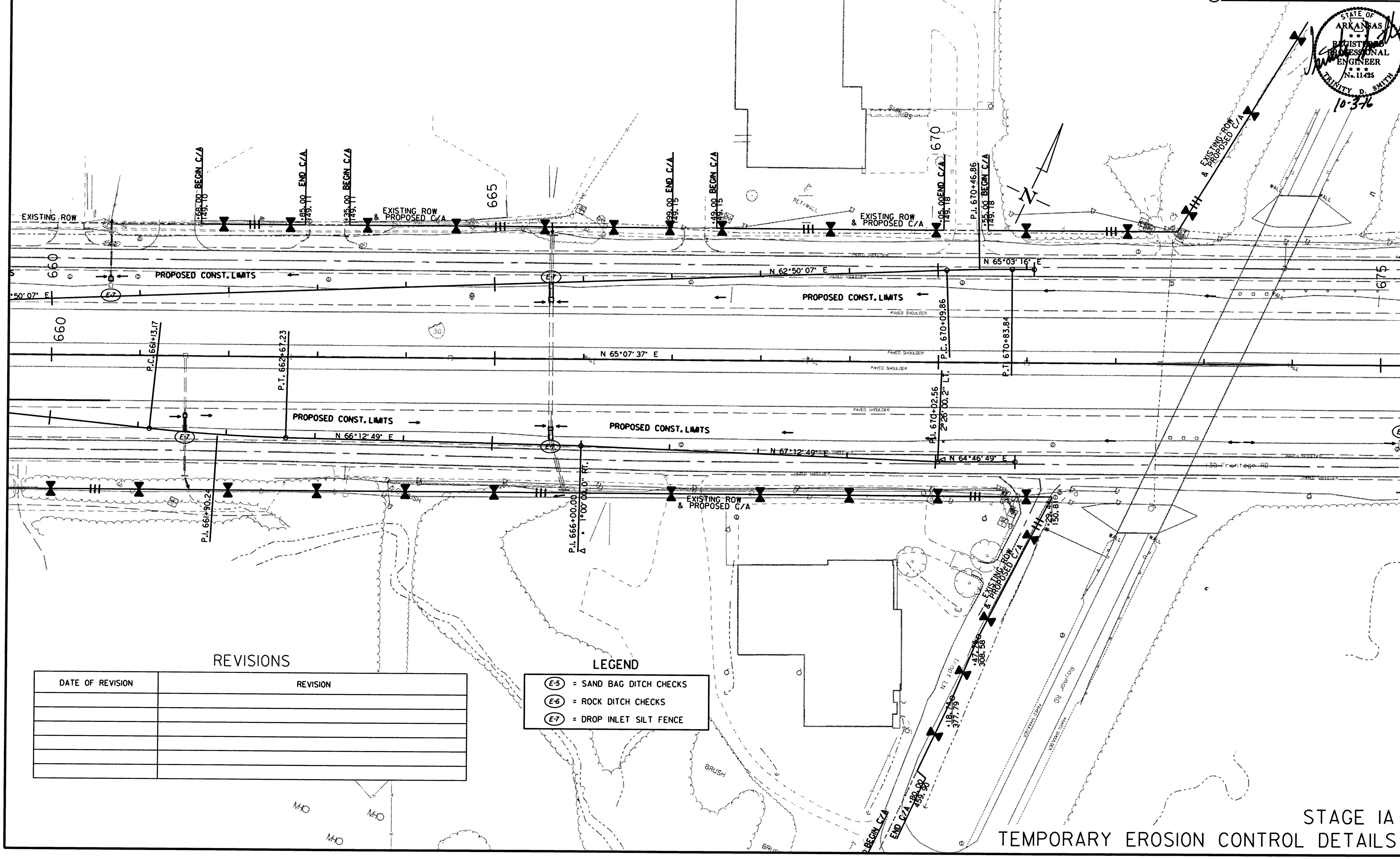
R061474.DGN

STAGE IA
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	7	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
10-3-16



REVISIONS

DATE OF REVISION	REVISION

LEGEND

E-5	= SAND BAG DITCH CHECKS
E-6	= ROCK DITCH CHECKS
E-7	= DROP INLET SILT FENCE

STAGE IA
TEMPORARY EROSION CONTROL DETAILS

10/3/2016
R061474.DGN

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				6	ARK.			
				JOB NO.		061474	8	125

(2) TEMPORARY EROSION CONTROL DETAILS

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

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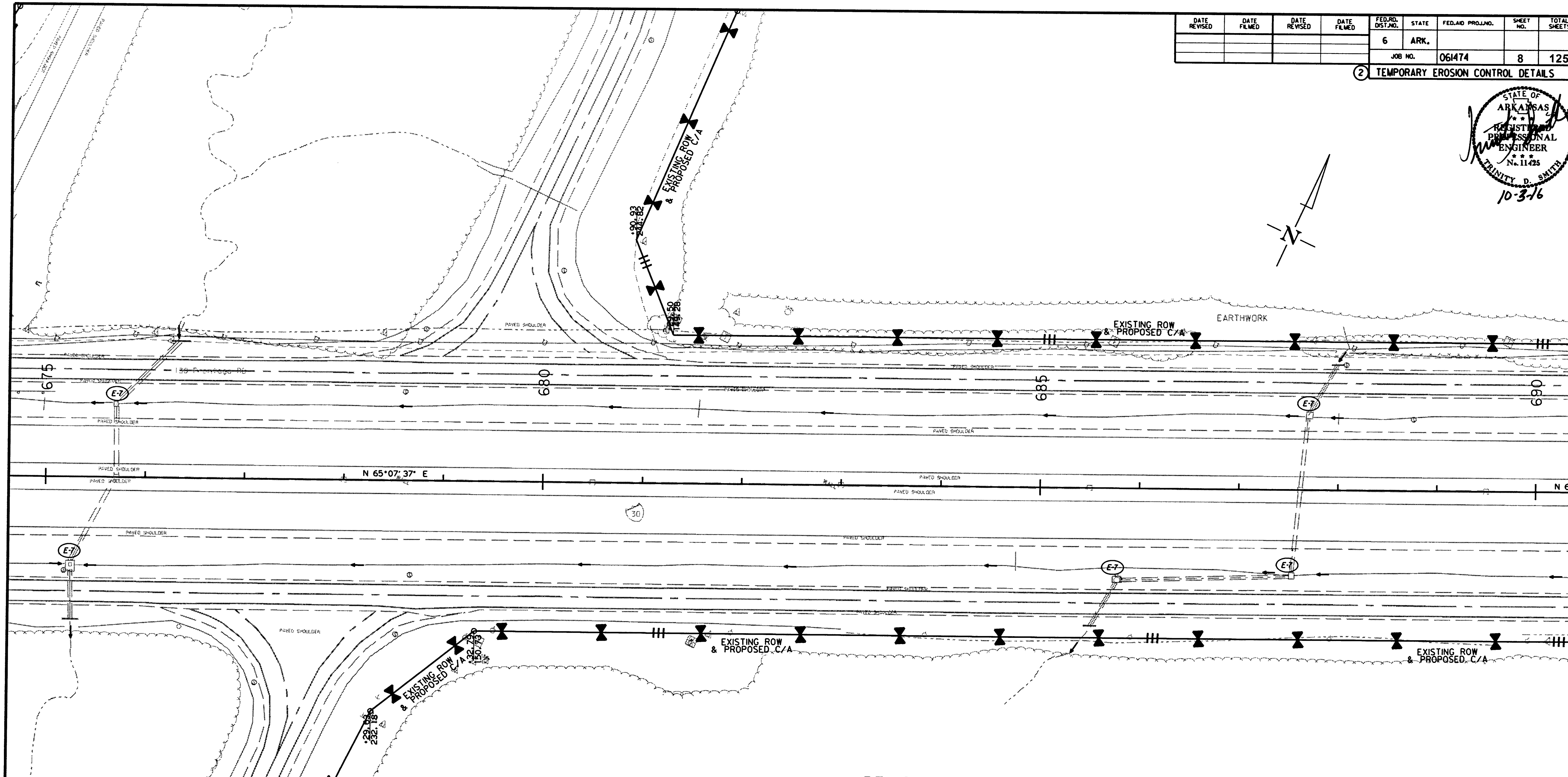
10-3-16



REVISIONS

DATE OF REVISION	REVISION

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STAGE IA

TEMPORARY EROSION CONTROL DETAILS

10/3/2016

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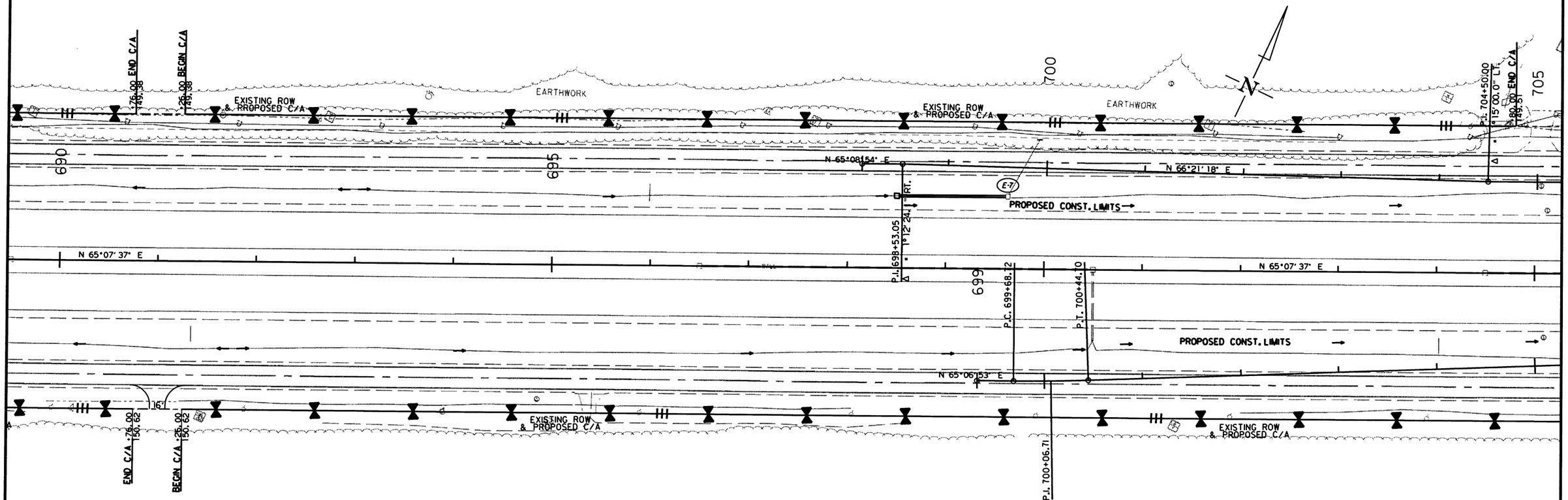
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	9	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11425
TRINITY D. SMITH
12-12-16



REVISIONS

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12/8/2016

R061474.DGN

STAGE IA
TEMPORARY EROSION CONTROL DETAILS

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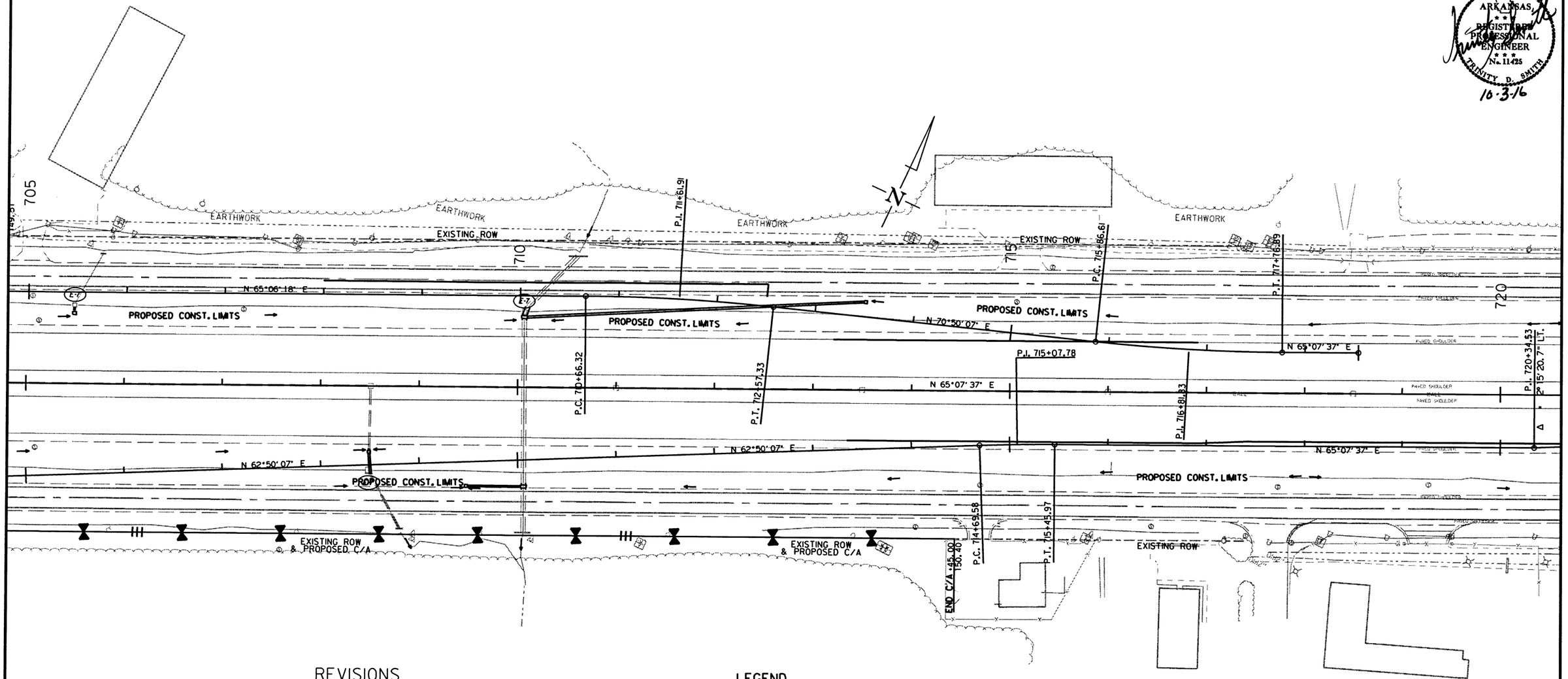
				6	ARK.			
				JOB NO.		061474	10	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



REVISIONS

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10/3/2016

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STAGE IA
TEMPORARY EROSION CONTROL DETAILS

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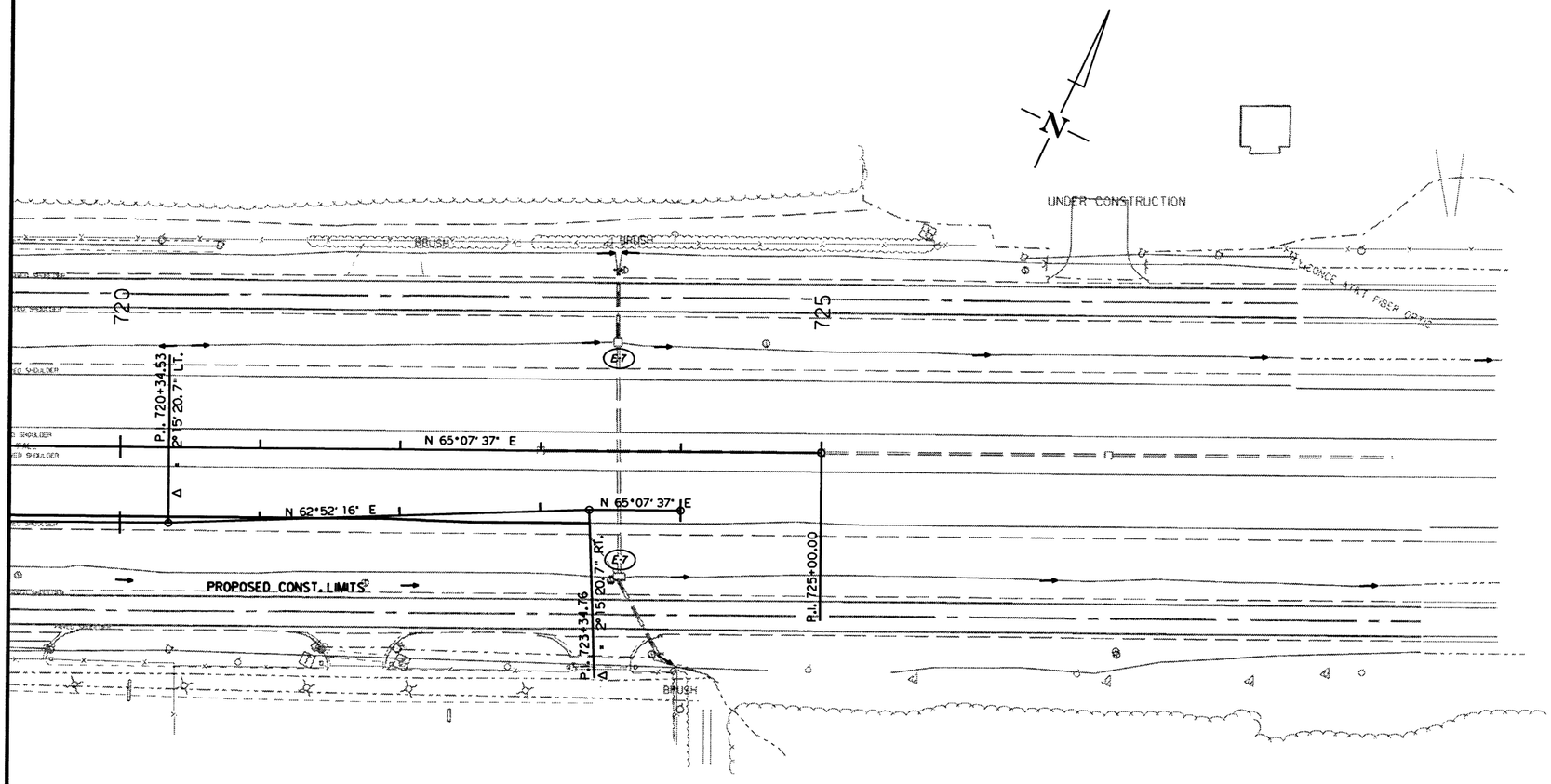
6	ARK.			
JOB NO.		061474	11	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



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10/3/2016

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STAGE IA
TEMPORARY EROSION CONTROL DETAILS

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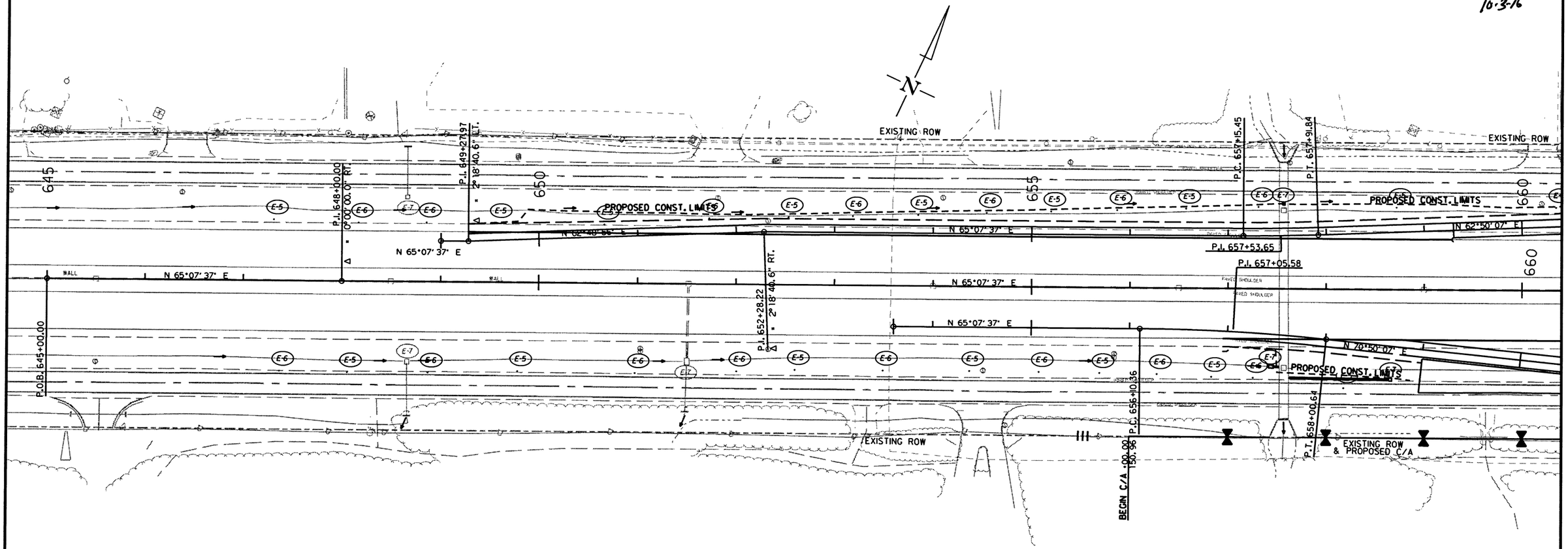
				6	ARK.			
				JOB NO.		061474	12	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



REVISIONS

DATE OF REVISION	REVISION

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10/3/2016

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STAGE IB
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-27-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	13	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-28-16

EXISTING ROW
PROPOSED CONST. LIMITS
EXISTING ROW & PROPOSED C/A
EXISTING ROW & PROPOSED C/A
P.I. 670+46.86
55.00 BEGIN C/A
149.18
49.00 END C/A
149.18
49.00 BEGIN C/A
149.15
88.00 END C/A
149.15
85.00 BEGIN C/A
148.11
85.00 END C/A
149.11
68.00 BEGIN C/A
148.10
N 62°50' 07" E
N 65°03' 16" E
N 65°07' 37" E
N 66°12' 49" E
N 64°46' 49" E
P.C. 661+13.17
P.T. 662+67.23
P.I. 661+90.20
P.C. 670+09.86
P.T. 670+83.84
P.C. 670+02.56
2° L.T.
P.I. 666+00.00
Δ = 1°00' 00.0"
EXISTING ROW & PROPOSED C/A
EXISTING ROW & PROPOSED C/A
29.38
150.81
47.74
308.58
18.49
377.79
BEGIN C/A
END C/A
180.98
285.98
150 Frontage RD
Raymar RD
665
670
675
660
30

REVISIONS

DATE OF REVISION	REVISION

LEGEND

- (E-5) = SAND BAG DITCH CHECKS
- (E-6) = ROCK DITCH CHECKS
- (E-7) = DROP INLET SILT FENCE

DENOTES OBLITERATION OF EXISTING PAVEMENT

10/27/2016

R061474.DGN

STAGE IB
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	14	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

EXISTING ROW & PROPOSED C/A
EARTHWORK
PAVED SHOULDER
36 Frontage RD
N 65°07' 37" E
30
E-5 = SAND BAG DITCH CHECKS
E-6 = ROCK DITCH CHECKS
E-7 = DROP INLET SILT FENCE

REVISIONS

DATE OF REVISION	REVISION

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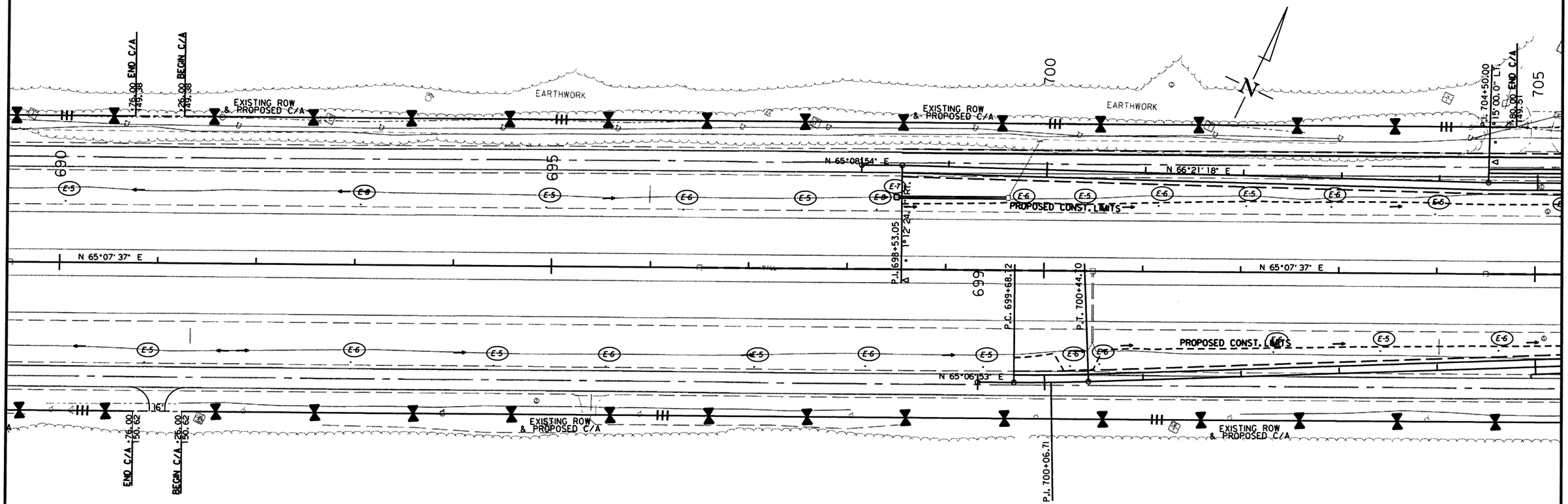
STAGE IB
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	15	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



REVISIONS

DATE OF REVISION	REVISION

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- (E-6) = ROCK DITCH CHECKS
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12/8/2016

R061474.DGN

STAGE IB
TEMPORARY EROSION CONTROL DETAILS

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				6	ARK.			
				JOB NO.		061474	16	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

705 710 715 720

EARTHWORK EARTHWORK EARTHWORK EARTHWORK

EXISTING ROW EXISTING ROW

N 65°06' 18" E

PROPOSED CONST. LIMITS PROPOSED CONST. LIMITS PROPOSED CONST. LIMITS

N 70°50' 07" E

N 65°07' 37" E

N 62°50' 07" E N 62°50' 07" E N 65°07' 37" E

PROPOSED CONST. LIMITS PROPOSED CONST. LIMITS

EXISTING ROW & PROPOSED C/A EXISTING ROW & PROPOSED C/A EXISTING ROW

P.I. 711+61.91
P.C. 710+66.32
P.T. 712+57.33
P.C. 715+86.61
P.T. 717+16.89
P.I. 715+07.78
P.I. 716+81.83
P.I. 720+34.53
Δ = 15° 20' 7" LT.
P.C. 714+69.58
P.T. 715+45.97
END C/A 45.00
150.40

REVISIONS

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- (E-6) = ROCK DITCH CHECKS
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10/3/2016

R061474.DGN

STAGE IB
TEMPORARY EROSION CONTROL DETAILS

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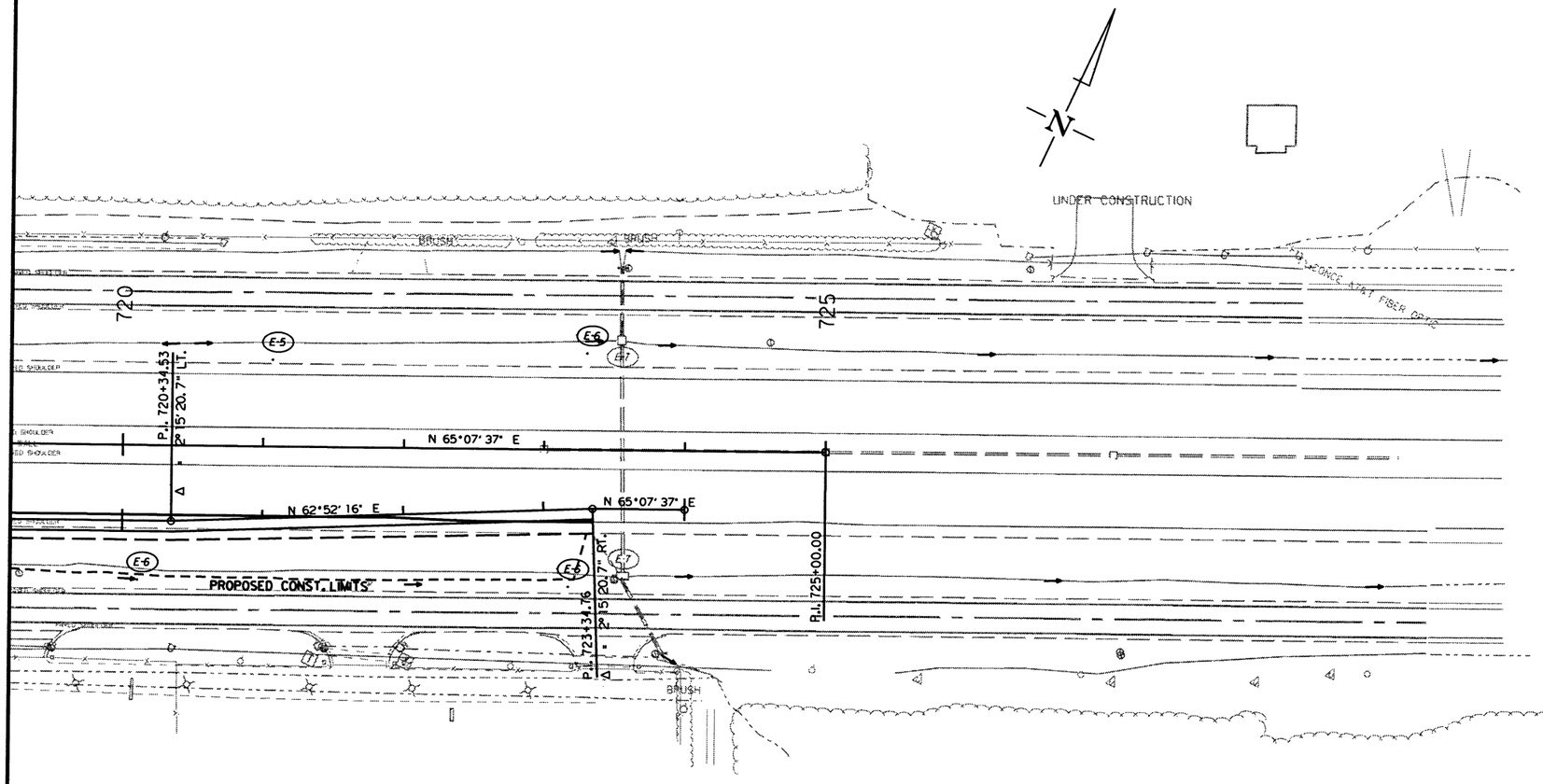
				6	ARK.			
				JOB NO.		061474	17	125

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



REVISIONS

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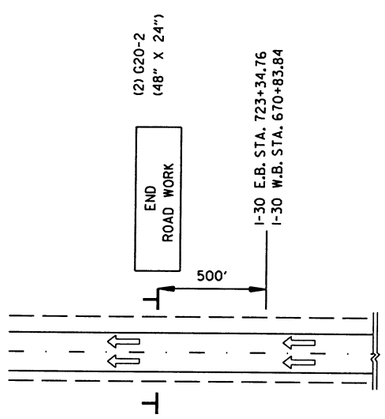
STAGE IB
TEMPORARY EROSION CONTROL DETAILS

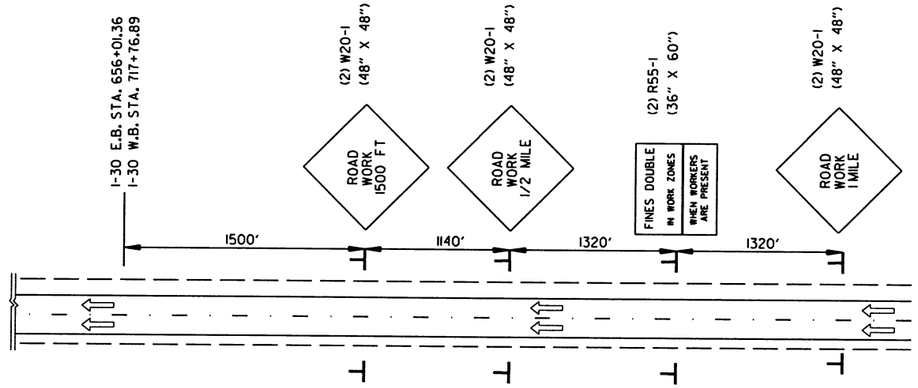
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	18	125

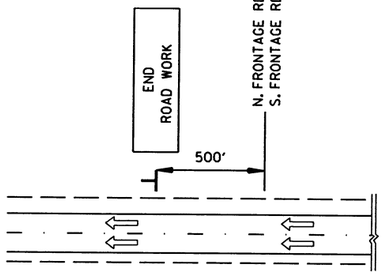
(2) MAINTENANCE OF TRAFFIC DETAILS

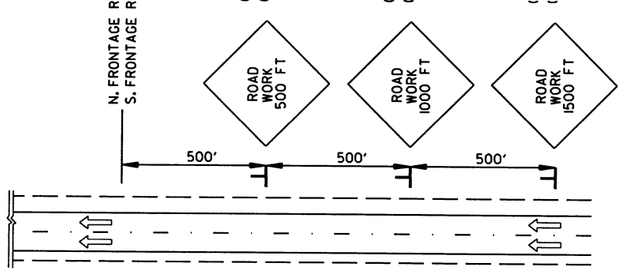
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

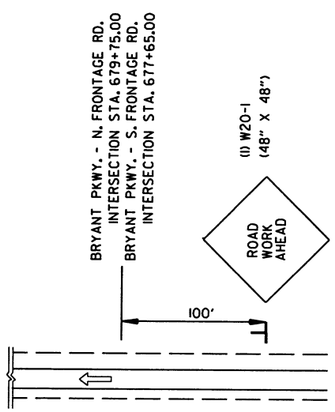
PORTABLE CHANGEABLE MESSAGE SIGN
PLACED AS DIRECTED BY THE ENGINEER











R061474.DGN 10/3/2016

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
				JOB NO.		061474	19	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-28-16

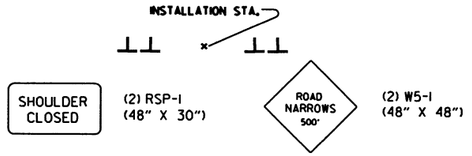
ALL STAGES
TO BE USED IF AND
WHERE DIRECTED BY
THE ENGINEER

(4) W3-5
(48" x 48")

(2) W3-5
(48" x 48")

(2) R2-1
(48" X 60")

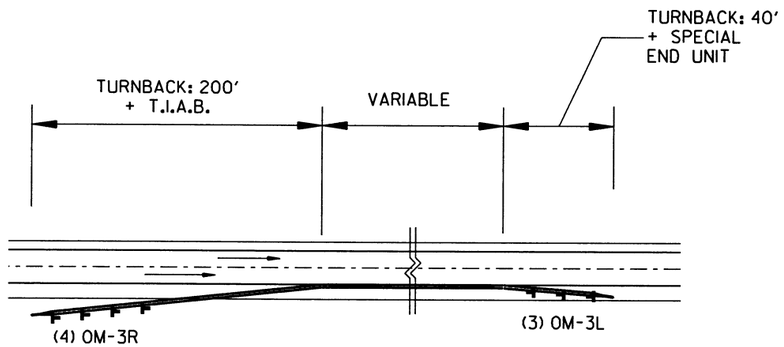
(2) R2-1
(48" X 60")



ADVANCE WARNING SIGNS

STAGE I

I-30 E.B. - STA. 646+35.13
I-30 E.B. - STA. 681+42.59
I-30 W.B. - STA. 699+10.29
I-30 W.B. - STA. 727+50.20



REFER ALSO TO STANDARD DRAWING TC-5
FOR DETAILS OF PLACEMENT OF PCCB TURNBACKS.

NOTE: OM-3L & OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

DETAIL OF OBJECT MARKERS AT PRECAST CONCRETE BARRIER TURNBACKS

SEQUENCE OF CONSTRUCTION

STAGE IA:

INSTALL ADVANCE WARNING SIGNS.

CLOSE OUTSIDE LANE TO INSTALL PRECAST CONCRETE BARRIER AS SHOWN ON MAINTENANCE OF TRAFFIC PLANS.

CLOSE THE OUTSIDE AND MIDDLE LANES TO REMOVE EXISTING PERMANENT PAVEMENT MARKINGS AND INSTALL REMOVABLE CONSTRUCTION PAVEMENT MARKINGS TO SHIFT TRAFFIC AS SHOWN ON MAINTENANCE OF TRAFFIC PLANS.

CLOSE THE INSIDE LANE ON THE FRONTAGE ROAD FOR THE ENTIRE JOB LIMITS USING TRAFFIC DRUMS AS DETAILED.

REMOVE SPECIFIED DROP INLETS. CONSTRUCT PROPOSED DROP INLETS, AND INSTALL PROPOSED R.C. PIPE CULVERTS.

STAGE IB:

CONSTRUCT RAMPS 1-4.

PLACE ALL LAYERS OF ACHM EXCEPT FOR FINAL SURFACE COURSE.

PERFORM COLD MILLING FOR TRANSITIONS.

PLACE FINAL 2" LIFT OF ACHM SURFACE COURSE FOR ALL RAMPS AND TRANSITIONS.

CONSTRUCT CONCRETE ISLANDS.

PLACE FINAL STRIPING FOR THE PROJECT AS SHOWN IN PERMANENT PAVEMENT MARKING DETAILS.

PERFORM PROPOSED OBLITERATION OF EXISTING PAVEMENT FOR TROPF LN.

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ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAILS

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(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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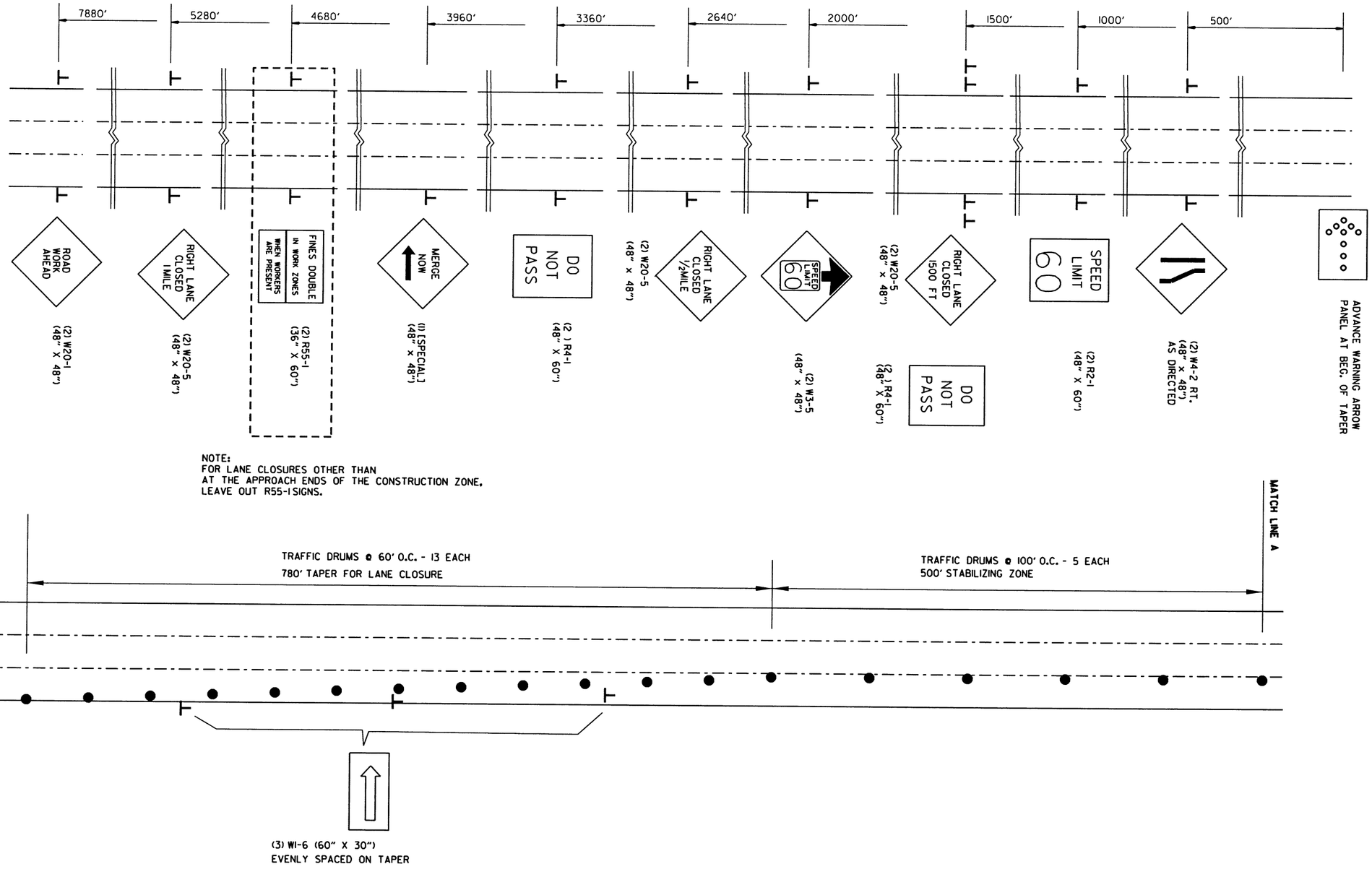
No. 11425
TRINITY D. SMITH
10-3-16



NOTE:
FOR LANE CLOSURES OTHER THAN
AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE,
LEAVE OUT R55-1 SIGNS.

ADVANCE WARNING SIGNS & TYPICAL TRAFFIC DRUM PLACEMENT
FOR OUTSIDE LANE CLOSURE

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LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

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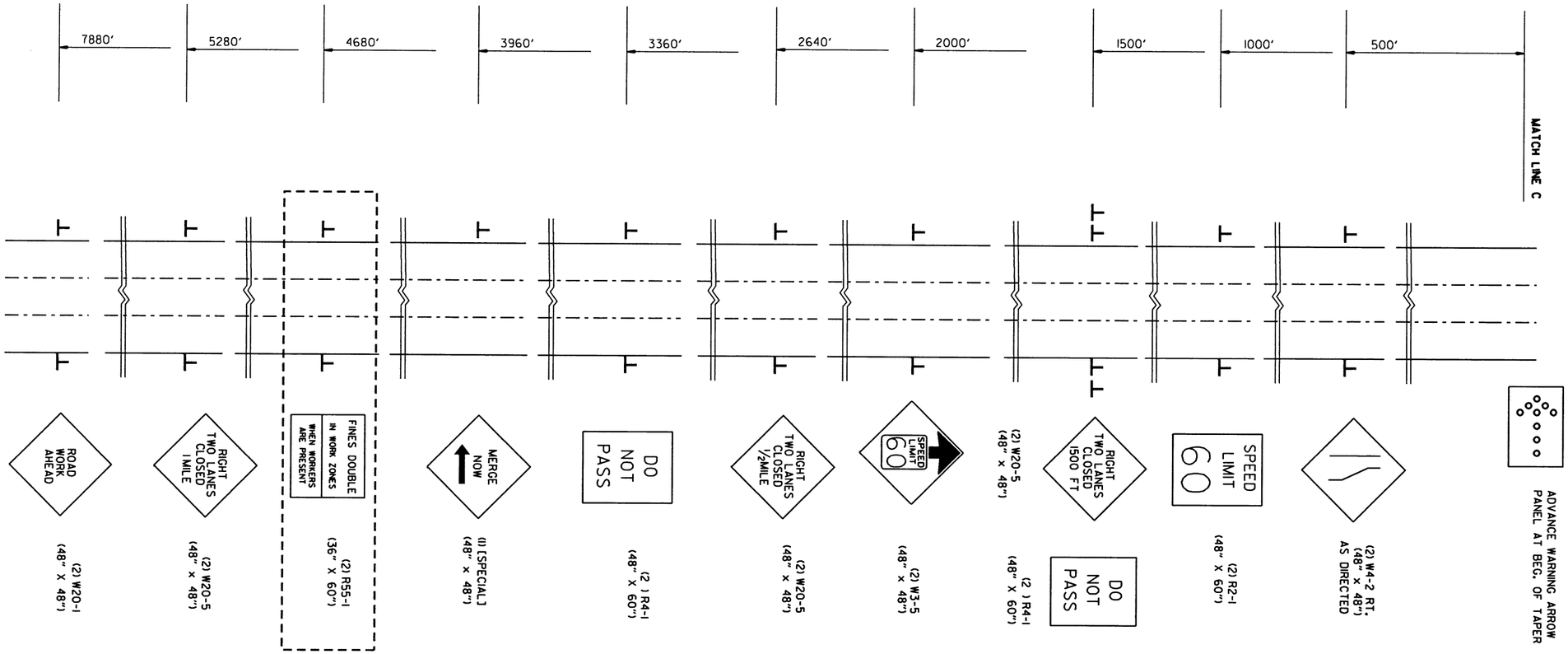
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16



NOTE:
FOR LANE CLOSURES OTHER THAN AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE, LEAVE OUT R55-1 SIGNS.

ADVANCE WARNING SIGNS
FOR OUTSIDE & MIDDLE LANE CLOSURES

10/3/2016

R061474.DGN

LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

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(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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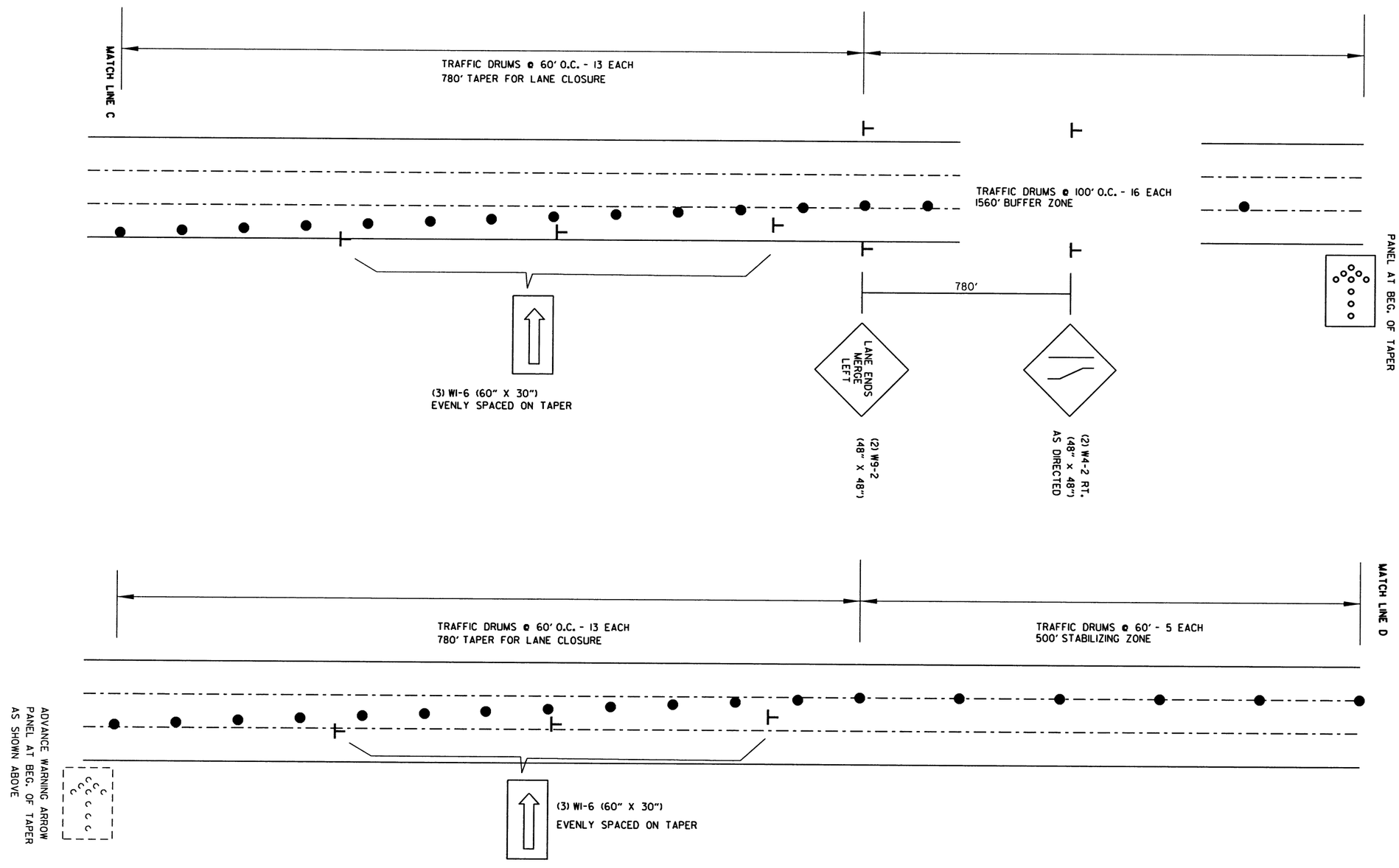
TRINITY D. SMITH
10-3-16



ADVANCE WARNING SIGNS & TYPICAL TRAFFIC DRUM LAYOUT
FOR OUTSIDE & MIDDLE LANE CLOSURES

10/3/2016

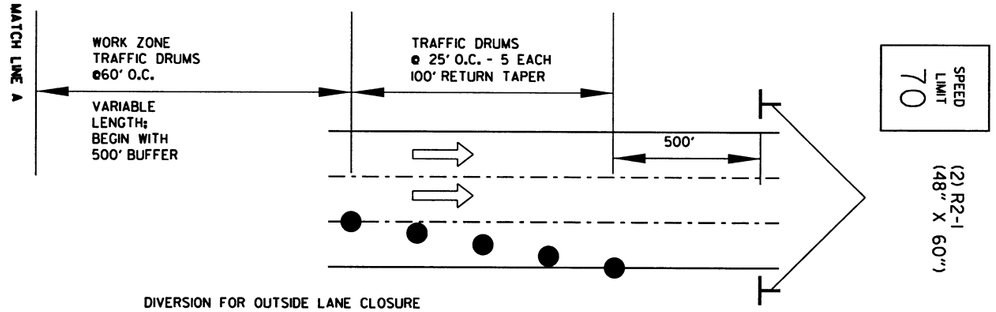
R061474.DGN

LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-10-16				6	ARK.			
				JOB NO.		061474	23	125

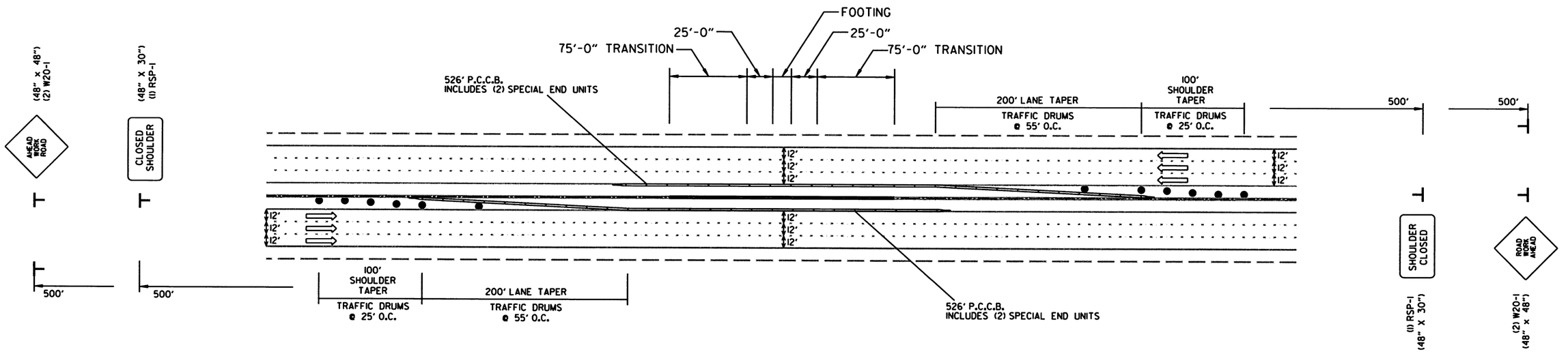
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-10-16



DIVERSION FOR OUTSIDE LANE CLOSURE

TYPICAL TRAFFIC DRUM LAYOUT FOR DIVERSION OF LANE CLOSURES



DETAIL FOR CONSTRUCTION OF OVERHEAD SIGN STRUCTURE MEDIAN FOOTING IN CONCRETE MEDIAN BARRIER WALL

NOTE: REFER TO SPECIAL DETAILS FOR ADDITIONAL INFORMATION

10/10/2016

R061474.DGN

LANE CLOSURE MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	24	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 11425
TRINITY D. SMITH
12-12-16

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 7340 LIN. FT. INCLUDES (1) T.I.A.B. & (1) SPECIAL END UNIT

TRAFFIC DRUMS @ 45' O.C.

EXISTING ROW

PROPOSED CONST. LIMITS

SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

100' SHLDR. TAPER

200' LANE TAPER

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 1920 LIN. FT. INCLUDES (1) T.I.A.B. & (1) SPECIAL END UNIT

TRAFFIC DRUMS @ 45' O.C.

EXISTING ROW & PROPOSED C/A

12/8/2016

R061474.DGN

MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
12-09-16				JOB NO.		061474	25	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-13-16

EXISTING ROW & PROPOSED C/A

TRAFFIC DRUMS @ 45' O.C.

TRAFFIC DRUMS @ 100' O.C.

TRAFFIC DRUMS @ 20' O.C.

PROPOSED CONST. LIMITS

WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

100' LANE TAPER

DENOTES OBLITERATION OF EXISTING PAVEMENT

MAINTENANCE OF TRAFFIC DETAILS

12/8/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	26	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = XXX LIN. FT.
INCLUDES (1) T.I.A.B. & (1) SPECIAL END UNIT

TRAFFIC DRUMS @ 100' O.C.

EXISTING ROW & PROPOSED C/A

EARTHWORK

200' LANE TAPER

100' SHLDR. TAPER

WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

N 65°07' 37" E

TRAFFIC DRUMS @ 100' O.C.

EXISTING ROW & PROPOSED C/A

EXISTING ROW & PROPOSED C/A

EXISTING ROW & PROPOSED C/A

12/8/2016

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MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	27	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

690 695 699 700 705

176.00 END C/A 149.38
126.00 BEGIN C/A 149.38
EXISTING ROW & PROPOSED C/A
EARTHWORK
TRAFFIC DRUMS @ 100' O.C.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 2440 LIN. FT. INCLUDES (1) T.I.A.B. & (1) SPECIAL END UNIT
N 65°08'54" E
100' LANE TAPER
+10.48
N 66°21'18" E
TRAFFIC DRUMS @ 45' O.C.
P.I. 704+50.00
Δ = 15°00.0" LT.
180.00 END C/A 149.51
PROPOSED CONST. LIMITS
12'-12'-12'
12'-11'-11'
P.I. 698+53.05
Δ = 12°30'11" RT.
N 65°07'37" E
WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
P.I. 699+68.12
P.I. 700+44.10
100' SHLDR. TAPER
200' LANE TAPER
+10.02
N 65°06'53" E
P.I. 700+06.71
176.00 END C/A 150.62
126.00 BEGIN C/A 150.62
16'
EXISTING ROW & PROPOSED C/A
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 2980 LIN. FT. INCLUDES (1) T.I.A.B. & (1) SPECIAL END UNIT
TRAFFIC DRUMS @ 100' O.C.
TRAFFIC DRUMS @ 45' O.C.

12/8/2016

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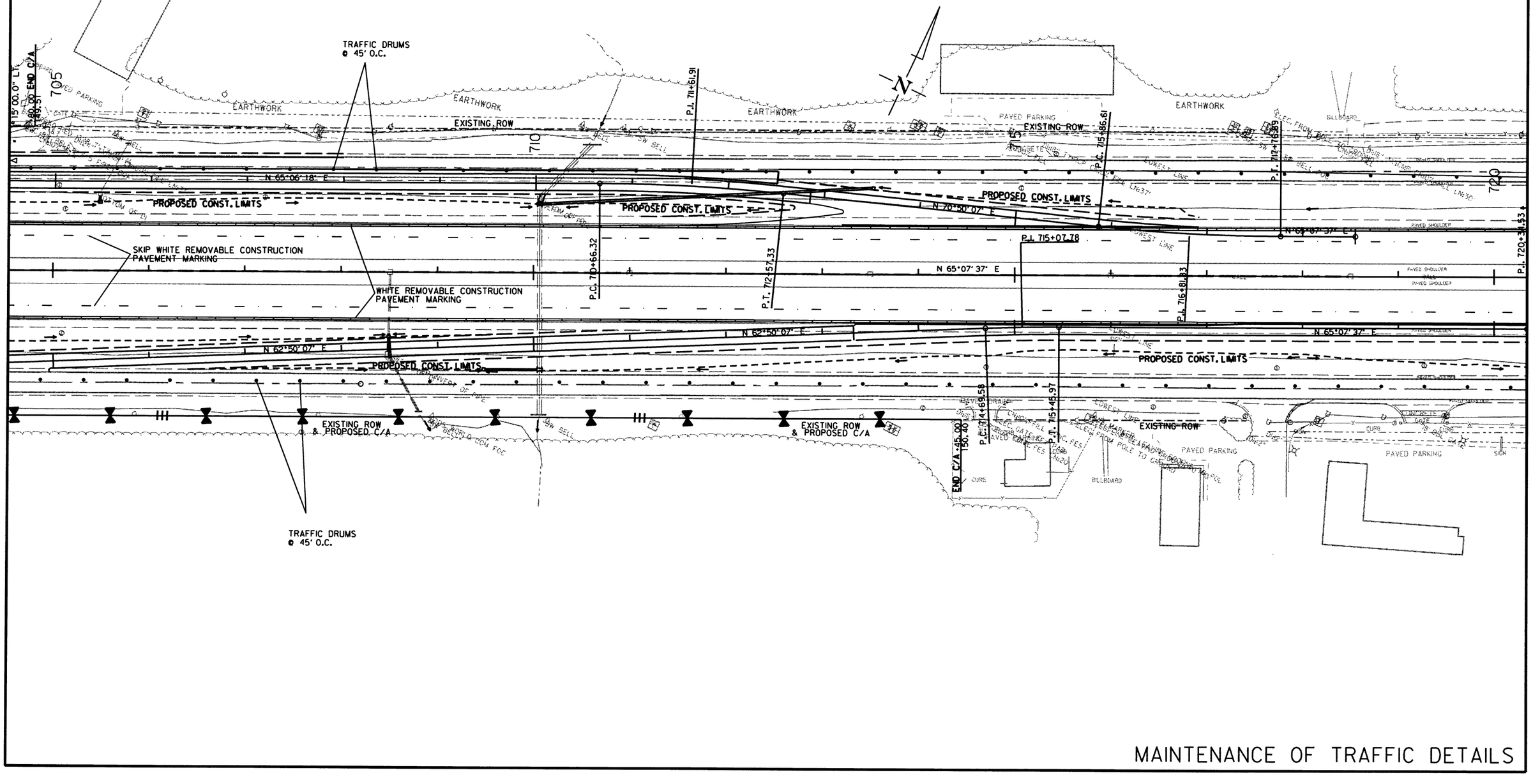
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	28	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



MAINTENANCE OF TRAFFIC DETAILS

12/8/2016

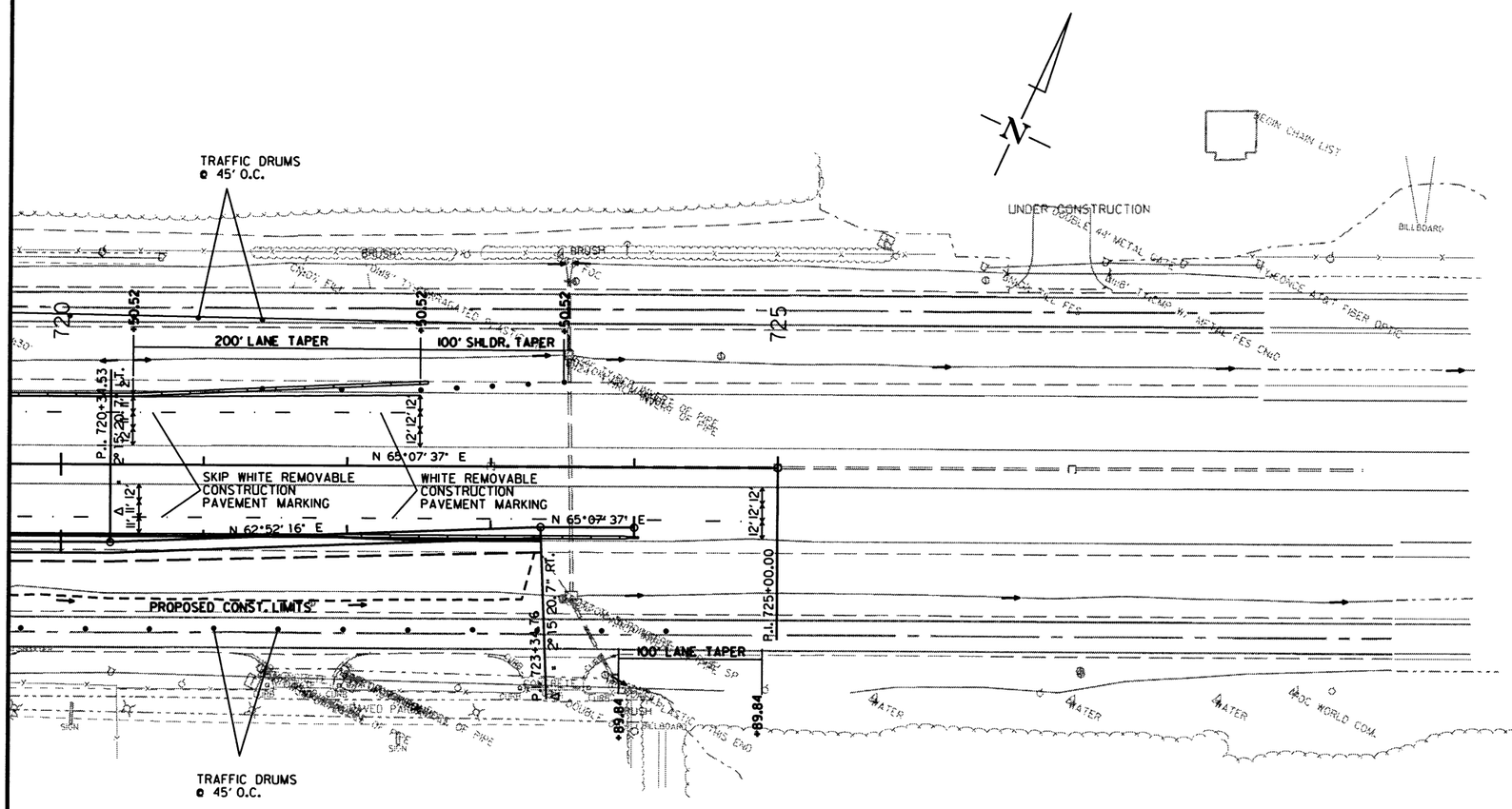
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	29	125

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



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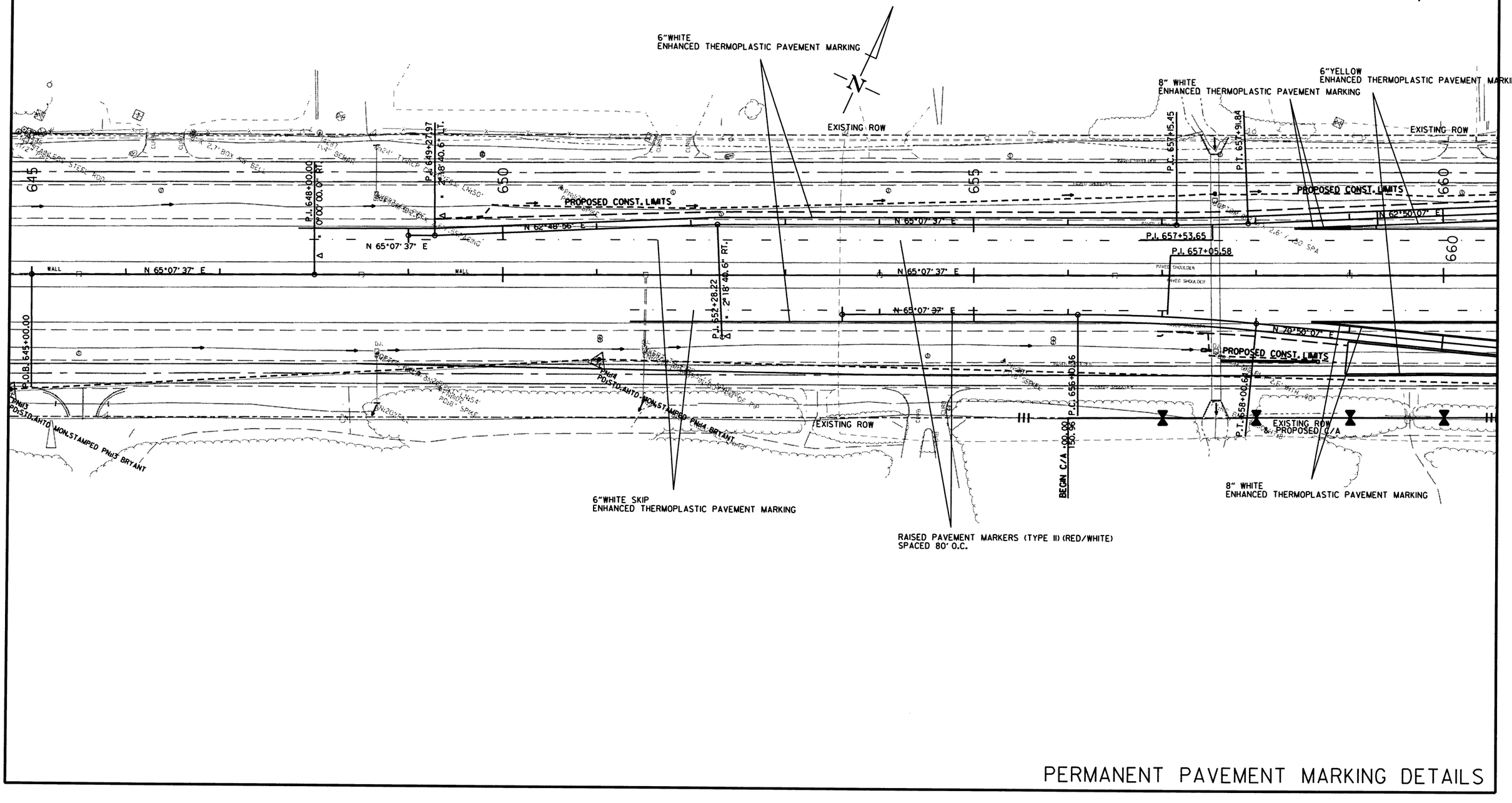
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
	JOB NO.	061474	30	125

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	31	125

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

8" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

6" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

6" YELLOW ENHANCED THERMOPLASTIC PAVEMENT MARKING

6" WHITE ENHANCED THERMOPLASTIC PAVEMENT MARKING

6" WHITE SKIP ENHANCED THERMOPLASTIC PAVEMENT MARKING

6" WHITE SKIP ENHANCED THERMOPLASTIC PAVEMENT MARKING

RAISED PAVEMENT MARKERS TYPE II (RED/WHITE) SPACED 80' O.C.

EXISTING ROW & PROPOSED C/A

PROPOSED CONST. LIMITS

BEGIN C/A 455.88

END C/A 308.58

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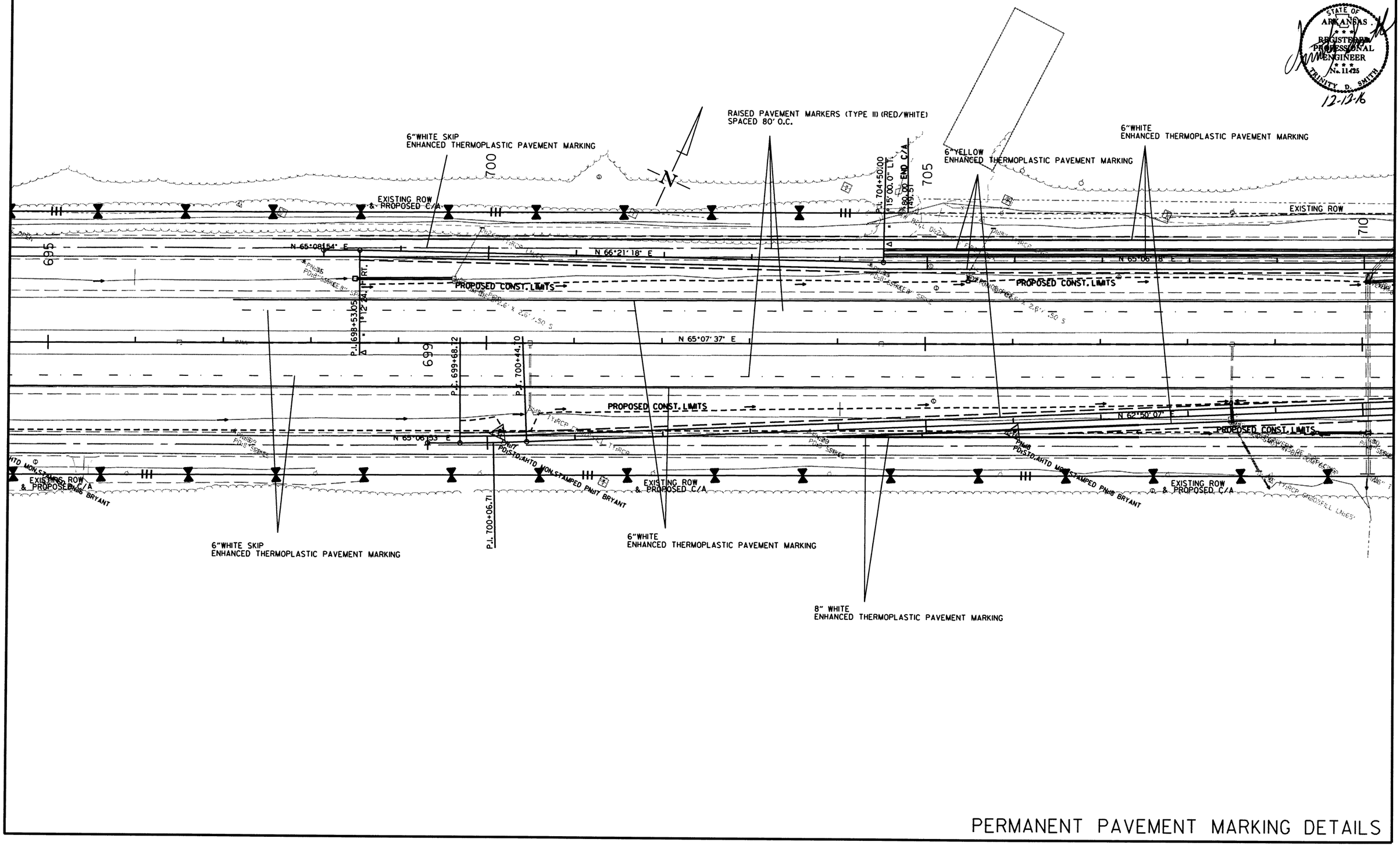
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	32	125

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



12/9/2016

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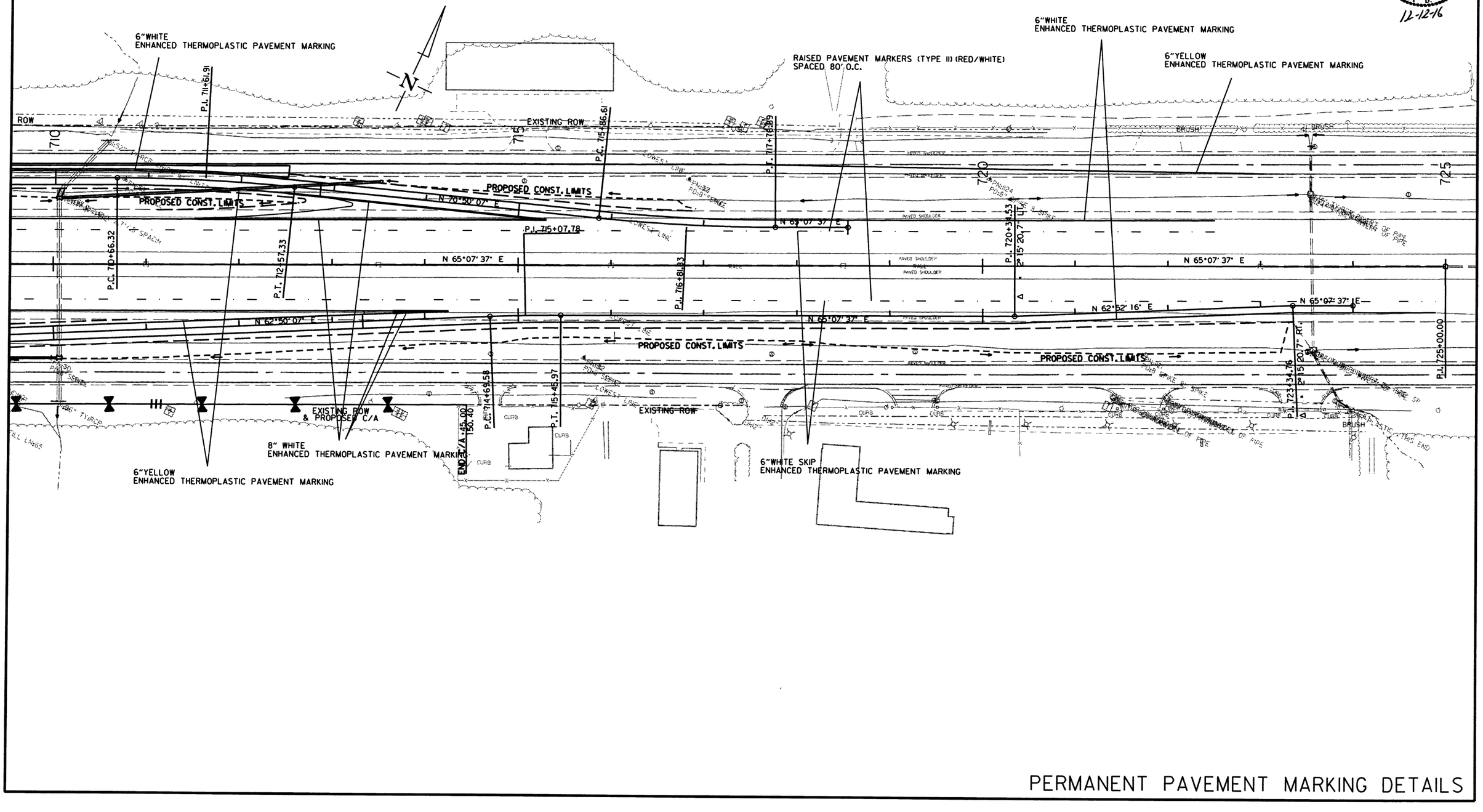
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
12-09-16				6	ARK.			
				JOB NO.		061474	33	125

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16



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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
10-10-16			
12-09-16			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	34	125

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-13-16

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	ENHANCED THERMOPLASTIC PAVEMENT MARKING		
						TYPE II	6"		8"
						(WHITE/RED)	WHITE	YELLOW	WHITE
	LIN. FT. - EACH		LIN. FT.		LIN. FT.	EACH	LIN. FT.		
REMOVAL OF PERMANENT PAVEMENT MARKINGS	14746		14746						
CONSTRUCTION PAVEMENT MARKINGS		29312		29312					
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	13125				13125				
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)		380				380			
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")		14580					14580		
ENHANCED THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (6")		2880					2880		
ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")		8844						8844	
ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")		3008							3008
TOTALS:			**14746**	**29312**	**13125**	**380**	**17460**	**8844**	**3008**

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

NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	ENTIRE PROJECT	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN
			LIN. FT. - EACH		NO.	SQ. FT.	EACH	LIN. FT.		EACH		DAY	WEEK
W20-5	RIGHT LANE CLOSED 1 MILE	48"x48"	4	4	4	64.0							
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"x48"	4	4	4	64.0							
W20-5	RIGHT LANE CLOSED 1500 FT.	48"x48"	4	4	4	64.0							
W20-5	RIGHT TWO LANES CLOSED 1 MILE	48"x48"	4	4	4	64.0							
W20-5	RIGHT TWO LANES CLOSED 1/2 MILE	48"x48"	4	4	4	64.0							
W20-5	RIGHT TWO LANES CLOSED 1500 FT.	48"x48"	4	4	4	64.0							
SPECIAL	MERGE NOW WITH ARROW	48"x48"	2	2	2	32.0							
R4-1	DO NOT PASS	48"x60"	8	8	8	160.0							
W4-2 RT.	RIGHT LANE ENDS GRAPHIC	48"x48"	8	8	8	128.0							
W1-6	LARGE ARROW	60"x30"	12	12	12	150.0							
W9-2	LANE ENDS MERGE LEFT	48"x48"	4	4	4	64.0							
W20-1	ROAD WORK 1 MILE	48"x48"	4	4	4	64.0							
W20-0	ROAD WORK 1/2 MILE	48"x48"	4	4	4	64.0							
W20-1	ROAD WORK 1500 FT.	48"x48"	6	6	6	96.0							
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2	32.0							
W20-1	ROAD WORK 500 FT.	48"x48"	2	2	2	32.0							
W20-1	ROAD WORK AHEAD	48"x48"	8	8	8	128.0							
G20-2	END ROAD WORK	48"x24"	6	6	6	48.0							
W3-5	SPEED LIMIT 60 AHEAD	48"X48"	4	4	4	64.0							
W3-5	SPEED LIMIT 45 AHEAD	48"x48"	4	4	4	64.0							
OM-3L	OBJECT MARKER	12"x36"	12	12	12	36.0							
OM-3R	OBJECT MARKER	12"x36"	16	16	16	48.0							
R55-1	FINES DOUBLE IN WORK ZONES	36"x60"	4	4	4	60.0							
RSP-1	SHOULDER CLOSED	48"x30"	10	10	10	100.0							
W5-1	ROAD NARROWS	48"x48"	8	8	8	128.0							
R2-1	SPEED LMIT 60	48"x60"	4	4	4	80.0							
R2-1	SPEED LIMIT 45	48"x60"	2	2	2	40.0							
R2-1	SPEED LMIT 70	48"x60"	4	4	4	80.0							
	TRAFFIC DRUMS		640	640			640						
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		11152	11152				11152					
	RELOCATING PRECAST CONCRETE BARRIER		3156	3156					3156				
	TEMPORARY IMPACT ATTENUATION BARRIER		4	4						4			
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4	4							4		
	ADVANCE WARNING ARROW PANEL		4	4								776	
	PORTABLE CHANGEABLE MESSAGE SIGN		2	2									54
TOTALS:					**2082.0**		**640**	**11152**	**3156**	**4**	**4**	**776**	**54**

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

NOTE: THE QUANTITY OF TRAFFIC DRUMS PROVIDED IS FOR CLOSURE OF THE INSIDE LANES OF THE FRONTAGE ROAD FOR THE FULL LENGTH OF THE JOB, OUTSIDE LANE CLOSURE FOR THE FULL LENGTH OF THE JOB, AND INSIDE LANE CLOSURE FOR THE FULL LENGTH OF THE JOB. HOWEVER, THE INSTALLATION OF TRAFFIC DRUMS SHALL NEVER EXCEED THE ACTUAL WORK AREA BY MORE THAN 1/4 MILE, UNLESS APPROVED BY THE ENGINEER.

12/12/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
12-09-16				JOB NO.		061474	35	125
				(2) QUANTITIES				

REMOVAL AND DISPOSAL OF DROP INLETS

STATION	DESCRIPTION	DROP INLETS
		EACH
661+53	RAMP 1 TYPE RM DROP INLET IN RT. MEDIAN	1
665+65	RAMP 1 TYPE RM DROP INLET IN RT. MEDIAN	1
708+49	RAMP 2 TYPE RM DROP INLET IN RT. MEDIAN	1
705+46	RAMP 3 TYPE RM DROP INLET IN LT. MEDIAN	1
710+04	RAMP 3 TYPE RM DROP INLET IN LT. MEDIAN	1
657+57	RAMP 4 TYPE TM DROP INLET IN LT. MEDIAN	1
660+68	RAMP 4 TYPE RM DROP INLET IN LT. MEDIAN	1
665+63	RAMP 4 TYPE RM DROP INLET IN LT. MEDIAN	1
TOTAL:		8

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT
			CU. YD.	
656+01.36	670+02.56	RAMP 1	780	622
699+68.72	723+34.76	RAMP 2	1657	1632
698+53.05	717+76.89	RAMP 3	1127	366
649+27.97	670+83.84	RAMP 4	1594	362
671+00		TROPF LN.	62	
ENTIRE	PROJECT	APPROACHES		15
TOTALS:			5220	2997

SEE SECTION 104.03 OF THE STD. SPECS.

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

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
704+95.05	706+50.00	RAMP 2	154.95	137.73
TOTAL:				137.73

NOTE: AVERAGE WIDTH = 8'-0"

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
663+00.00	664+00.00	EASTBOUND FRONTAGE ROAD	28.00	311.11
670+02.56	671+02.56	EASTBOUND FRONTAGE ROAD	28.00	311.11
697+47.61	698+47.61	WESTBOUND FRONTAGE ROAD	28.00	311.11
708+00.00	709+00.00	WESTBOUND FRONTAGE ROAD	28.00	311.11
TOTAL:				1244.44

NOTE: AVERAGE MILLING DEPTH 1".

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.

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	60
ENGINEER	
TOTAL:	60

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE A)
			LIN. FT.
656+00	657+51	RT. OF I-30	144
657+70	669+80	RT. OF I-30	1703
668+97	669+20	RT. OF I-30	54
670+60	675+92	RT. OF I-30	587
676+35	690+76	RT. OF I-30	1706
691+26	714+45	RT. OF I-30	2319
661+68	662+85	LT. OF I-30	117
663+35	666+99	LT. OF I-30	364
667+49	670+05	LT. OF I-30	256
670+55	676+31	LT. OF I-30	961
678+35	690+76	LT. OF I-30	1954
691+26	704+80	LT. OF I-30	1354
TOTALS:			11519

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	25
DIRECTED BY THE ENGINEER	
TOTAL:	25

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

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE (CLASS III)				DROP INLETS TYPE			SOLID SODDING	WATER	STD. DWG. NOS.
		18"	24"	48"	54"	RM	ST	TM			
		LIN. FT.				EACH			SQ.YD.	M.GAL.	
657+47	RAMP 1-CONSTRUCT TYPE RM DI W/ RCP OUTLET	6				1			5	0.06	FPC-9, FPC-9D, PCC-1
658+70	RAMP 1-CONSTRUCT TYPE ST DI W/ RCP OUTLET	104					1		4	0.05	FPC-9, FPC-9S, PCC-1
661+52	RAMP1-CONSTRUCT TYPE ST DI W/ RCP OUTLET LT & RT		18				1		5	0.06	FPC-9, FPC-9S, PCC-1
665+65	RAMP1-CONSTRUCT TYPE RM DI W/ RCP OUTLET LT & RT			14		1			5	0.06	FPC-9, FPC-9D, PCC-1
708+49	RAMP 2-CONSTRUCT TYPE ST DI W/ RCP OUTLET LT & RT	2	22				1		4	0.05	FPC-9, FPC-9S, PCC-1
709+47	RAMP 2-CONSTRUCT TYPE ST DI W/ RCP OUTLET	54					1		4	0.05	FPC-9, FPC-9S, PCC-1
710+05	RAMP 2-CONSTRUCT TYPE ST DI W/ RCP OUTLET LT & RT				4		1		6	0.08	FPC-9, FPC-9S, PCC-1
698+48	RAMP 3-CONSTRUCT TYPE RM DI W/ RCP OUTLET		110			1			6	0.08	FPC-9, FPC-9D, PCC-1
705+46	RAMP 3-CONSTRUCT TYPE RM DI W/ RCP OUTLET	12				1			5	0.06	FPC-9, FPC-9D, PCC-1
710+04	RAMP 3-CONSTRUCT TYPE RM DI W/ RCP OUTLET RT				2	1			6	0.08	FPC-9, FPC-9D, PCC-1
710+19	RAMP 3-EXISTING R.C. PIPE CULV'T RETAIN AND EXTEND				10						FPC-9, FPC-9D, PCC-1
713+50	RAMP 3-CONSTRUCT TYPE ST DI W/ RCP OUTLET		342				1		4	0.05	FPC-9, FPC-9S, PCC-1
657+57	RAMP 4-CONSTRUCT TYPE TM DI							1	4	0.05	FPC-9, FPC-9D, PCC-1
660+68	RAMP 4-CONSTRUCT TYPE RM DI W/ RCP OUTLET RT	2				1			6	0.08	FPC-9, FPC-9D, PCC-1
665+63	RAMP 4-CONSTRUCT TYPE RM DI W/ RCP OUTLET			2		1			6	0.08	FPC-9, FPC-9D, PCC-1
665+63	RAMP 4-EXISTING R.C. PIPE CULV'T RETAIN AND EXTEND			18							FPC-9, FPC-9D, PCC-1
TOTALS:		180	492	34	16	7	6	1	70	0.89	

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.

RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE CONCRETE SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS
			LIN.FT.
649+28	659+28	LT. SIDE OF I-30	1000
713+35	723+35	RT. SIDE OF I-30	1000
TOTAL:			2000

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

12/8/2016

R061474.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-10-16				6	ARK.			
10-27-16				JOB NO.		061474	36	125
12-09-16								

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

CONCRETE ISLAND

STATION	STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
659+00	666+00	RAMP 1	B	842
704+51	712+54	RAMP 3	B	427
TOTAL:				1269

CULVERT CLEAN OUT

STATION	LOCATION	EACH
660+68	RAMP 4	1
661+52	RAMP 1	2
708+49	RAMP 2	1
TOTAL:		4

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL							
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	WATTLE (20") DITCH CHECKS (E-1)	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	LIN. FT.	BAG	CU.YD.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	STAGE 1A												500	19
ENTIRE	PROJECT	STAGE 1B	2.00	4.00	2.00	204.0	2.00	4.49	4.49	91.6		1100	192	350	127
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.50	1.00	0.50	51.0	0.50	1.12	1.12	22.8	500	275	48	213	8
TOTALS:			2.50	5.00	2.50	255.0	2.50	5.61	5.61	114.4	500	1375	240	1063	154

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

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

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

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
660+00	34	37	37.50	92	28	44.20	05LT	0-5	23	8	A-4(0)	BR/GR
660+00	34	37	37.70	92	28	44.20	21LT	0-5	24	8	A-4(0)	GRAY
663+00	34	37	39.90	92	28	43.20	24RT	0-5	24	10	A-4(1)	BROWN
664+00	34	37	39.30	92	28	39.90	24LT	0-5	33	19	A-6(4)	BR/GR
668+00	34	37	42.10	92	28	19.70	05RT	0-5	20	7	A-4(0)	GRAY
705+00	34	37	55.80	92	27	56.70	05LT	0-5	30	16	A-6(4)	BR/GR
710+00	34	37	58.10	92	27	51.30	24LT	0-5	30	17	A-6(5)	BR/GR
710+00	34	37	59.90	92	27	51.80	24RT	0-5	38	25	A-6(9)	BROWN
714+00	34	38	1.70	92	27	47.60	05RT	0-5	28	12	A-6(3)	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

REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER

STATION	STATION	LOCATION	CONCRETE MEDIAN BARRIER LIN. FT.
571+10	573+28	I-30 MEDIAN	218
652+91	655+09	I-30 MEDIAN	218
717+91	720+09	I-30 MEDIAN	218
803+42	805+60	I-30 MEDIAN	218
TOTAL:			872

CONCRETE BARRIER WALL

STATION	STATION	LOCATION	MEDIAN TYPE SP-1 LIN. FT.
571+10	572+10	MEDIAN I-30	100
572+28	573+28	MEDIAN I-30	100
652+91	653+91	MEDIAN I-30	100
654+09	655+09	MEDIAN I-30	100
717+91	718+91	MEDIAN I-30	100
719+09	720+09	MEDIAN I-30	100
803+42	804+42	MEDIAN I-30	100
804+60	805+60	MEDIAN I-30	100
TOTAL:			800

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS 18"	STANDARD DRAWINGS
			FEET	SQ. YD.	TON	TON	LIN. FT.	
691+01	RT.	RT. OF FRONTAGE ROAD	16	73.60	8.10	30.05	28	PCC-1, PCM-1, PCP-1, PCP-2
TOTALS:				73.60	8.10	30.05	28	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....95.1% MIN. AGGR.....4.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				ACHM SURFACE COURSE (3/8") 110 LBS. PER SQ. YD.			TACK COAT 0.05 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE PAVEMENT		PORTLAND CEMENT CONCRETE PAVEMENT	
				AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ. YD.	TON	AVG. WID.	SQ. YD.	GAL.	AVG. WID.	14" U.T.	AVG. WID.	9" U.T.
			FEET	FEET	SQ. YD.	TON	TON	FEET			FEET			FEET	SQ. YD.	FEET	SQ. YD.
TURNOUTS																	
656+95.54	662+76.58	TURNOUT - RAMP 1	581.04	VAR.	1248.19	26.21	410.65	VAR.	1248.19	68.65	VAR.	1248.19	62.41	VAR.	1202.93		
711+10.40	716+91.01	TURNOUT - RAMP 3	580.61	VAR.	1382.93	29.04	454.98	VAR.	1382.93	76.06	VAR.	1382.93	69.15	VAR.	1292.98		
ACCELERATION LANES AND TAPERS																	
649+27.97	659+27.97	ACCELERATION LANE - RAMP 4	1000.00	VAR.	1433.20	30.10	471.52	VAR.	1433.20	78.83	VAR.	1433.20	71.66	VAR.	1211.18	VAR.	511.60
713+34.76	723+34.76	ACCELERATION LANE - RAMP 2	1000.00	VAR.	1424.36	29.91	468.61	VAR.	1424.36	78.34	VAR.	1424.36	71.22	VAR.	1203.26	VAR.	512.32
TOTALS:					5488.68	115.26	1805.76		5488.68	301.88		5488.68	274.44		4910.35		1023.92

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (3/8").....95.1% MIN. AGGR.....4.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR. 6.0% CEMENT
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

12/8/2016
R061474.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	37	125

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")							
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22
			FEET			FEET				FEET			TON	FEET			TON	FEET			TON	FEET			TON	TON
RAMPS																										
661+01.59	661+96.87	RAMP 1 - FULL DEPTH	95.28	VAR.	222.60	62.75	664.31	0.05	33.22	16.00	169.39	880.00	74.53	15.50	164.09	440.00	36.10	15.25	161.45	220.00	17.76	21.00	222.32	220.00	24.46	42.22
661+96.87	670+02.56	RAMP 1 - NOTCH AND WIDEN	805.69	VAR.	1526.70	VAR.	3662.82	0.05	183.14	VAR.	929.47	880.00	408.97	VAR.	907.43	440.00	199.63	VAR.	896.45	220.00	98.61	VAR.	2982.40	220.00	328.06	426.67
699+68.72	704+03.00	RAMP 2 - NOTCH AND WIDEN	434.28	VAR.	810.60	VAR.	1376.64	0.05	68.83	VAR.	351.28	880.00	154.56	VAR.	339.63	440.00	74.72	VAR.	334.45	220.00	36.79	VAR.	521.91	220.00	57.41	94.20
704+03.00	713+34.76	RAMP 2 - FULL DEPTH	931.76	VAR.	2675.40	62.75	6496.44	0.05	324.82	16.00	1656.46	880.00	728.84	15.50	1604.70	440.00	353.03	15.25	1578.82	220.00	173.67	VAR.	2533.60	220.00	278.70	452.37
698+53.21	711+63.49	RAMP 3 - NOTCH AND WIDEN	1310.28	VAR.	2566.20	VAR.	6222.76	0.05	311.14	VAR.	1578.54	880.00	694.56	VAR.	1541.94	440.00	339.23	VAR.	1523.74	220.00	167.61	VAR.	4753.35	220.00	522.87	690.48
711+63.49	712+85.47	RAMP 3 - FULL DEPTH	121.98	VAR.	233.10	62.75	850.47	0.05	42.52	16.00	216.85	880.00	95.41	15.50	210.08	440.00	46.22	15.25	206.69	220.00	22.74	VAR.	300.30	220.00	33.03	55.77
659+27.97	666+59.66	RAMP 4 - FULL DEPTH	731.69	VAR.	1997.10	62.75	5101.51	0.05	255.08	16.00	1300.78	880.00	572.34	15.50	1260.13	440.00	277.23	15.25	1239.81	220.00	136.38	VAR.	1977.55	220.00	217.53	353.91
666+59.66	670+83.85	RAMP 4 - NOTCH AND WIDEN	424.19	VAR.	791.70	VAR.	1350.66	0.05	67.53	VAR.	344.86	880.00	151.74	VAR.	333.18	440.00	73.30	VAR.	327.76	220.00	36.05	VAR.	510.36	220.00	56.14	92.19
ADDITIONAL FOR LEVELING																										
658+94.83	670+02.56	RAMP 1	1107.73			VAR.	16841.54	0.17	2863.06									VAR.	16841.54	VAR.	283.14					283.14
698+53.21	712+54.13	RAMP 3	1400.92			VAR.	23065.15	0.17	3921.08									VAR.	23065.15	VAR.	297.00					297.00
ADDITIONAL FOR ISLAND																										
659+00.00	661+36.25	RAMP 1 - ISLAND SUBGRADE	236.25	VAR.	145.00																					
TURNOUT AND ACCELERATION LANE SHOULDERS																										
649+27.97	659+27.97	ACCELERATION LANE - WESTBOUND	1000.00	87.75	877.50																					
656+10.36	661+01.59	TURNOUT - RAMP 1	491.23	VAR.	235.20																					
712+85.47	717+76.89	TURNOUT - RAMP 3	491.42	VAR.	239.40																					
713+34.76	723+34.76	ACCELERATION LANE - EASTBOUND	1000.00	87.75	877.50																					
ADDITIONAL FOR TRANSITIONS																										
663+00.00	664+00.00	SOUTH FRONTAGE ROAD	100.00																			28.00	311.11	220.00	34.22	34.22
670+02.56	671+02.56	SOUTH FRONTAGE ROAD	100.00																			28.00	311.11	220.00	34.22	34.22
697+47.61	698+47.61	NORTH FRONTAGE ROAD	100.00																			28.00	311.11	220.00	34.22	34.22
708+00.00	709+00.00	NORTH FRONTAGE ROAD	100.00																			28.00	311.11	220.00	34.22	34.22
TOTALS:					**13198.00**		**65632.30**		**8070.42**		**6547.63**		**2880.95**		**6361.18**		**1399.46**		**46175.86**		**1269.75**		**15046.23**		**1655.08**	**2924.83**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....95.1% MIN. AGGR.....4.9% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.9% MIN. AGGR.....4.1% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.2% MIN. AGGR.....3.8% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

10/3/2016

R061474.DGN

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
202	REMOVAL AND DISPOSAL OF DROP INLETS	8	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER	872	LIN. FT.
202	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE	1	EACH
210	UNCLASSIFIED EXCAVATION	5220	CU. YD.
210	COMPACTED EMBANKMENT	2997	CU. YD.
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	13788	TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	1806	TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	115	TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	5489	SQ. YD.
SS & 401	TACK COAT	8345	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	2772	TON
SP & 405	ASPHALT BINDER (PG 76-22) IN ACHM BASE COURSE (1 1/2")	109	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	1342	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	57	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")	287	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8")	15	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	2918	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	1	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	150	TON
412	COLD MILLING ASPHALT PAVEMENT	1244	SQ. YD.
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	25	TON
501	PORTLAND CEMENT CONCRETE PAVEMENT (9" UNIFORM THICKNESS)	1024	SQ. YD.
501	PORTLAND CEMENT CONCRETE PAVEMENT (14" UNIFORM THICKNESS)	4910	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
SS & 604	SIGNS	2082	SQ. FT.
SS & 604	TRAFFIC DRUMS	640	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	11152	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	3156	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	29312	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	13125	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	14746	LIN. FT.
604	ADVANCE WARNING ARROW PANEL	776	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	54	WEEK
SP	CULVERT CLEAN OUT	4	EACH
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	180	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	492	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	34	LIN. FT.
606	54" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	16	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	28	LIN. FT.
606	SELECTED PIPE BEDDING	60	CU. YD.
609	DROP INLETS (TYPE RM)	7	EACH
609	DROP INLETS (TYPE ST)	6	EACH
609	DROP INLETS (TYPE TM)	1	EACH
611	UNDERDRAIN OUTLET PROTECTORS	16	EACH
611	4" PIPE UNDERDRAINS	4000	LIN. FT.
617	GUARDRAIL (TYPE A)	1400	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	8	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	8	EACH
619	WIRE FENCE (TYPE A)	11519	LIN. FT.
620	LIME	5	TON
620	SEEDING	2.50	ACRE
SS & 620	MULCH COVER	8.11	ACRE
620	WATER	370.3	M.GAL.
621	TEMPORARY SEEDING	5.61	ACRE
621	SAND BAG DITCH CHECKS	1375	BAG
621	DROP INLET SILT FENCE	1063	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	154	CU. YD.
621	ROCK DITCH CHECKS	240	CU. YD.
621	WATTLE (20")	500	LIN. FT.
623	SECOND SEEDING APPLICATION	2.50	ACRE
624	SOLID SODDING	70	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	138	SQ. YD.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)	800	LIN. FT.
632	CONCRETE ISLAND	1269	SQ. YD.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS	2000	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")	17460	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")	3008	LIN. FT.
SP	ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	8844	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	380	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-60-63)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-07)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-08)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-09)	1	EACH
725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	1575	SQ. FT.
725	GUIDE SIGN-OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)	936	SQ. FT.
726	STANDARD SIGN	784	SQ. FT.
727	EXIT NUMBER PANEL (TYPE A)	189	SQ. FT.
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	6294	POUND
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	44	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	19	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-4)	4	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER	4	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	4	EACH

REVISIONS

DATE	REVISION	SHEET NUMBER
10/10/2016	ADDED "CONCRETE BARRIER WALL (MEDIAN TYPE B) TRANSITION FOR OVERHEAD SIGN STRUCTURE" SPECIAL DETAIL, ADDED "DETAIL FOR CONSTRUCTION OF OVERHEAD SIGN STRUCTURE MEDIAN FOOTING IN CONCRETE MEDIAN BARRIER WALL" MAINTENANCE OF TRAFFIC DETAIL, ADDED "REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER," RELOCATING PRECAST CONCRETE BARRIER," AND "CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)" QUANTITIES, REVISED "SIGNS" AND "FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER" QUANTITIES	4A, 23, 34, 36, 38
10/27/2016	ADDED OBLITERATION OF EXISTING ROADWAY FOR SECTION OF TROPF LN. WITHIN RIGHT OF WAY, REVISED "UNCLASSIFIED EXCAVATION," "SEEDING," "MULCH COVER," "WATER," AND "TEMPORARY SEEDING" QUANTITIES	13, 19, 25, 35, 36, 38, 44, 50, 51
12/9/2016	REMOVED "HIGH PERFORMANCE PAVEMENT MARKING" SPECIAL PROVISION, REMOVED ALL "INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKINGS" QUANTITIES AND ALL "HIGH PERFORMANCE MARKING TAPE" QUANTITIES, ADDED "ENHANCED THERMOPLASTIC PAVEMENT MARKING" SPECIAL PROVISION, ADDED "ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (6")" QUANTITY, ADDED "ENHANCED THERMOPLASTIC PAVEMENT MARKING WHITE (8")" QUANTITY, ADDED "ENHANCED THERMOPLASTIC PAVEMENT MARKING YELLOW (6")" QUANTITY, REVISED PERMANENT PAVEMENT MARKING DETAILS, REVISED STRIPING IN MAINTENANCE OF TRAFFIC DETAILS, ADDED DRIVEWAY AT STA. 691+01, ADDED "PLASTIC PIPE" SPECIAL PROVISION, ADDED SUPPLEMENTAL SPECIFICATION "606-1 PIPE CULVERTS FOR SIDE DRAINS," UPDATED REVISION DATES FOR STANDARD DRAWINGS "PM-2" AND "PU-1," ADDED STANDARD DRAWINGS "PCM-1," "PCP-1" AND "PCP-2," UPDATED "STORM WATER POLLUTION PREVENTION PLAN" SPECIAL PROVISION, UPDATED "UTILITY ADJUSTMENTS" SPECIAL PROVISION, CHANGED "ADVANCE WARNING ARROW PANEL" FROM 944 DAYS TO 776 DAYS, CHANGED "PORTABLE CHANGEABLE MESSAGE SIGN" FROM 66 WEEKS TO 54 WEEKS	2, 9, 15, 24-36, 38, 51
1/11/2017	REVISED SPECIAL DETAIL FOR CONCRETE BARRIER WALL (MEDIAN TYPE B)	4A, 38

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 11435 TIMOTHY D. SMITH

1-11-17

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE REVISED	DATE REVISED	DATE REVISED	FED.AID DESIG.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-10-16				6	ARK.	061474	38	125
10-27-16		1-11-17						
12-09-16								

(2) SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	39	125

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

SURVEY CONTROL COORDINATES

Project Name: s061474
Date: 3/23/2016
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	2026062.4983	1169437.8060	364.738	CTL	STD. AHTD MON. STAMPED PN: 1 BRYANT
2	2026196.8513	1169842.7713	361.129	CTL	STD. AHTD MON. STAMPED PN: 2 BRYANT
3	2026834.5785	1169956.2816	370.697	CTL	STD. AHTD MON. STAMPED PN: 3 BRYANT
4	2026180.0107	1167939.9503	365.600	CTL	STD. AHTD MON. STAMPED PN: 4 BRYANT
5	2026481.3891	1168627.8463	362.500	CTL	STD. AHTD MON. STAMPED PN: 5 BRYANT
6	2026866.8567	1169486.4058	367.390	CTL	STD. AHTD MON. STAMPED PN: 6 BRYANT
7	2027389.2594	1170470.2730	382.747	CTL	STD. AHTD MON. STAMPED PN: 7 BRYANT
8	2026983.4281	1169401.3376	391.097	CTL	STD. AHTD MON. STAMPED PN: 8 BRYANT
9	2027754.4413	1169353.1808	376.814	CTL	STD. AHTD MON. STAMPED PN: 9 BRYANT
10	2027659.4047	1169906.2537	386.929	CTL	STD. AHTD MON. STAMPED PN: 10 BRYANT
11	2028349.5768	1169720.6717	402.934	CTL	STD. AHTD MON. STAMPED PN: 11 BRYANT
12	2025858.9146	1167242.6619	389.221	CTL	STD. AHTD MON. STAMPED PN: 12 BRYANT
13	2025438.9397	1166848.9670	398.023	CTL	STD. AHTD MON. STAMPED PN: 13 BRYANT
14	2025731.2557	1167401.6680	383.713	CTL	STD. AHTD MON. STAMPED PN: 14 BRYANT
15	2027287.8156	1170781.6168	380.936	CTL	STD. AHTD MON. STAMPED PN: 15 BRYANT
16	2027541.1322	1171329.3945	380.060	CTL	STD. AHTD MON. STAMPED PN: 16 BRYANT
17	2027788.2275	1171863.5237	371.922	CTL	STD. AHTD MON. STAMPED PN: 17 BRYANT
18	2028036.2189	1172395.4068	359.828	CTL	STD. AHTD MON. STAMPED PN: 18 BRYANT
100	2026497.0287	1169342.4604	386.510	GPS	AHTD GPS MON 620020
101	2025637.8122	1166594.7154	406.050	GPS	AHTD GPS MON 620020A
900	2026540.7363	1169392.0512	391.453	TBM	ALUM CAP SE COR BR
901	2027419.5216	1170658.0561	380.419	TBM	CH SQ SW COR CONC DI
902	2026014.9135	1167992.3123	363.894	TBM	CUT SQ. E SIDE OF DI BRYANT
990	2029299.1177	1169365.9853	369.530	BM	NGS BM P338
991	2026943.5166	1169355.0458	395.460	BM	NGS BM Q338

*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 0.9999621733 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 S061474GO.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 620020 - 620020A
CONVERGENCE ANGLE: 0-15-58 LEFT AT LT: 34-37-46N LG: 92-30-23W
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

I-30 CENTERLINE

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	645+00.00	2025559.0745	1166817.2874
8001	PI	648+00.00	2025685.2574	1167089.4599
8002	POE	725+00.00	2028923.9489	1174075.2179

BRYANT PKWY. INTERCHANGE RAMP 1

POINT NO.	TYPE	STATION	NORTHING	EASTING
8003	POB	653+60.34	2025920.9429	1167597.8264
8004	PC	656+10.36	2026026.1016	1167824.6505
8006	PT	658+00.32	2026106.0019	1167996.9931
8007	PC	661+11.31	2026236.8070	1168279.1355
8009	PT	662+65.05	2026301.4709	1168418.6135
8010	PI	665+97.76	2026441.4137	1168720.4658
8011	PI	670+00.06	2026610.6225	1169085.4440
8012	POE	670+87.27	2026647.3041	1169164.5652

BRYANT PKWY. INTERCHANGE RAMP 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8013	POB	699+33.26	2027844.3541	1171746.5651
8014	PC	699+70.13	2027859.8626	1171780.0165
8016	PT	700+46.09	2027891.8128	1171848.9320
8017	PC	714+69.83	2028490.6534	1173140.6128
8019	PT	715+46.20	2028522.7748	1173209.8975
8020	PI	720+34.76	2028728.2663	1173653.1364
8021	PI	723+34.76	2028854.4491	1173925.3090
8022	POE	724+00.00	2028881.8897	1173984.4974

BRYANT PKWY. INTERCHANGE RAMP 3

POINT NO.	TYPE	STATION	NORTHING	EASTING
8023	POB	698+14.29	2027794.3143	1171638.6308
8024	PI	698+55.45	2027811.6296	1171675.9793
8025	PI	704+52.26	2028062.6526	1172217.4283
8026	PC	710+68.59	2028321.8844	1172776.5833
8028	PT	712+59.28	2028402.0920	1172949.5886
8029	PC	715+86.93	2028539.9037	1173246.8441
8031	PT	717+76.89	2028619.8040	1173419.1866
8032	POE	718+54.90	2028652.6172	1173489.9638

BRYANT PKWY. INTERCHANGE RAMP 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8033	POB	649+00.00	2025727.3183	1167180.1841
8034	PI	649+27.97	2025739.0835	1167205.5612
8035	PI	652+27.97	2025865.2663	1167477.7337
8036	PC	657+15.20	2026070.2007	1167919.7709
8038	PT	657+91.57	2026102.3220	1167989.0556
8039	PC	670+08.63	2026614.2263	1169093.2172
8041	PT	670+82.58	2026645.3317	1169160.3108
8042	POE	671+07.41	2026655.7749	1169182.8364

10/3/2016

R061474.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	40	125

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

RAMP 4-A
PI = 657+53.65
Δ = 2°17'30.0" LT.
D = 3°00'00"
T = 38.20'
L = 76.39'
PC = 657+15.45
PT = 657+91.84
NO SUPER

645 650 655 660

P.I. 648+00.00
Δ = 0°00'00.0" RT.

P.I. 649+27.97
Δ = 2°18'40.6" LT.

RAMP 4

I-30 CENTERLINE

8000 N 65°07'37" E 300.00' 8001

8033 N 65°07'37" E 27.97' 8034 N 62°48'56" E 300.24' 8035

N 65°07'37" E 487.23'

P.C. 657+15.45

P.T. 657+91.84

4-A

8036 N 65°07'37" E 38.20' 8038 N 62°50'07" E 38.20'

P.I. 657+05.58

N 65°07'37" E 7700.00'

P.I. 652+28.22
Δ = 2°18'40.6" RT.

8003 N 65°07'37" E 250.02' 8004 N 65°07'37" E 95.22' 8006 N 70°50'07" E 95.22'

1-A

N 70°50'07" E 312.54'

RAMP 1

RAMP 1-A
PI = 657+05.58
Δ = 5°42'30.0" RT.
D = 3°00'00"
T = 95.22'
L = 190.28'
PC = 656+10.36
PT = 658+00.64
NO SUPER

P.C. 656+10.36

P.T. 658+00.64

P.O.B. 645+00.00

SURVEY BASELINE N 62°07'35" E 625.24'

PNi3 PD:STD.AHTD MON.STAMPED PNi3

PNi4 PD:STD.AHTD MON.STAMPED PNi4 BRYANT

665 670 675

RAMP 4-B
PI = 670+46.86
Δ = 2°13'09.2" RT.
D = 3°00'00"
T = 36.99'
L = 73.97'
PC = 670+09.86
PT = 670+83.84
NO SUPER

P.I. 670+46.86

RAMP 4

N 62°50'07" E 1218.03'

N 62°50'07" E 36.99' 8039 4-B N 65°03'16" E 36.99' 8041 8042 N 65°03'16" E 24.83'

P.C. 670+09.86

P.T. 670+83.84

I-30 CENTERLINE

N 65°07'37" E 7700.00'

P.C. 661+13.17

P.T. 662+67.23

P.I. 670+02.56
Δ = 2°26'00.2" LT.

8007 N 70°50'07" E 77.07' 1-B 8009 N 66°12'49" E 77.07' N 66°12'49" E 332.77' 8010 N 67°12'49" E 402.56' N 64°46'49" E 8011 87.21' 8012

SURVEY BASELINE N 66°38'27" E 2782.69'

RAMP 1-B
PI = 661+90.24
Δ = 4°37'17.5" LT.
D = 3°00'00"
T = 77.07'
L = 154.05'
PC = 661+13.17
PT = 662+67.23
NO SUPER

P.I. 661+90.24

P.I. 666+00.00
Δ = 1°00'00.0" RT.

RAMP 1

10/3/2016

R061474.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	41	125

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

675 680 685 690

I-30 CENTERLINE

N 65°07'37" E
7700.00'

SURVEY BASELINE N 61°13'35" E
941.60'

PN13
PD:JOB 061474

PN15
PD:STD.AHTD MON.STAMPED PN15 BRYANT

690 695 700 705

RAMP 3

N 65°08'54" E
41.17'

8023 8024

N 66°21'18" E
596.94'

8025

P.I. 704+50.00
Δ = 1°15'00.0" LT.

P.I. 698+53.05
Δ = 1°12'24.1" RT.

I-30 CENTERLINE

N 65°07'37" E
7700.00'

699

P.C. 699+68.12

P.T. 700+44.10

RAMP 2

SURVEY BASELINE N 65°10'56" E
603.51'

SURVEY BASELINE N 65°10'27" E
588.52'

N 65°06'53" E
36.87'

8013 8014

N 65°06'53" E
38.00'

(2-A)

PN17
PD:STD.AHTD MON.STAMPED PN17 BRYANT

8016

N 62°50'07" E
38.00'

SURVEY BASELINE N 65°00'09" E
586.86'

PN16
PD:STD.AHTD MON.STAMPED PN16 BRYANT

P.I. 700+06.71

RAMP 2-A
PI = 700+06.71
Δ = 2°16'46.1" LT.
D = 3°00'00"
T = 38.00'
L = 75.98'
PC = 699+68.72
PT = 700+44.70
NO SUPER

SURVEY CONTROL DETAILS

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	42	125

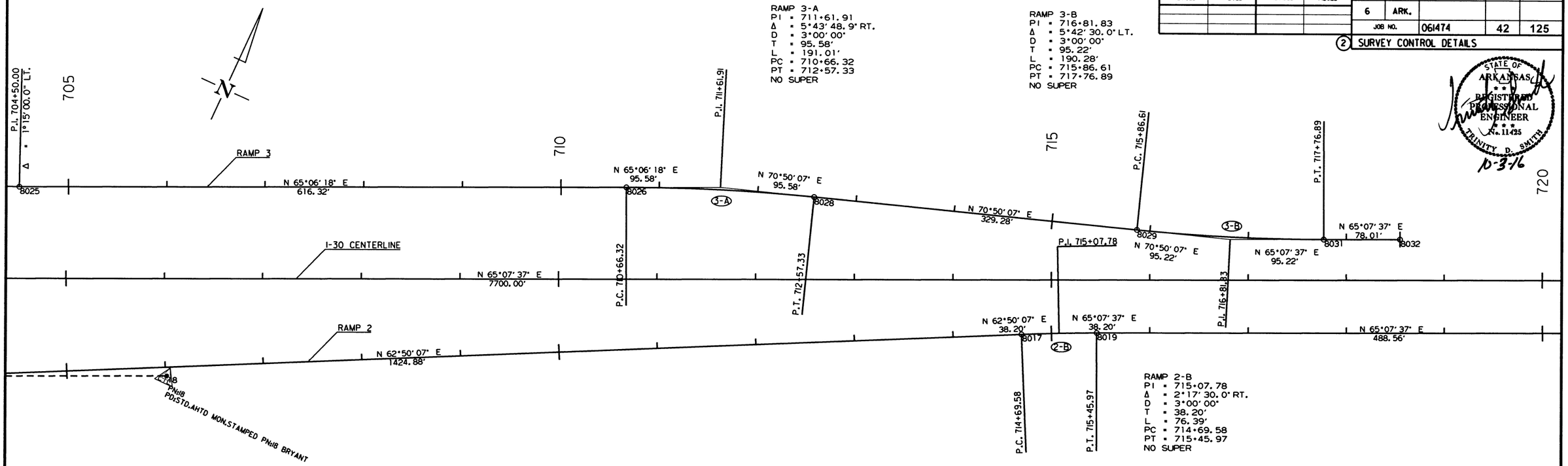
(2) SURVEY CONTROL DETAILS

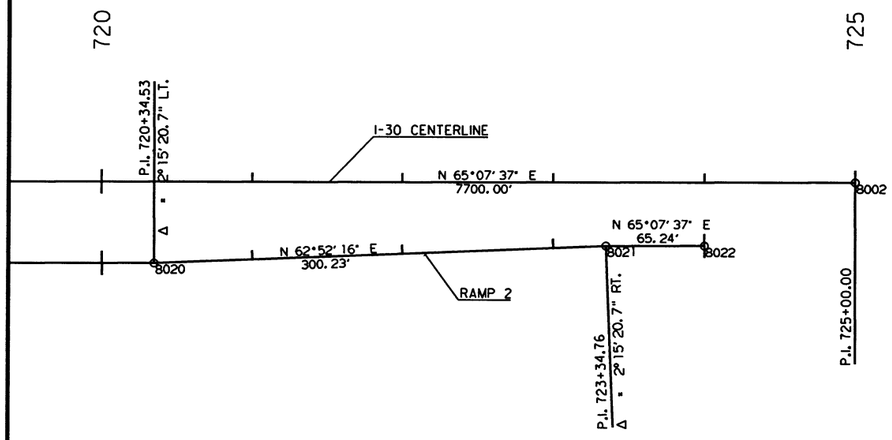
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

RAMP 3-A
PI = 711+61.91
Δ = 5°43'48.9" RT.
D = 3°00'00"
T = 95.58'
L = 191.01'
PC = 710+66.32
PT = 712+57.33
NO SUPER

RAMP 3-B
PI = 716+81.83
Δ = 5°42'30.0" LT.
D = 3°00'00"
T = 95.22'
L = 190.28'
PC = 715+86.61
PT = 717+76.89
NO SUPER

RAMP 2-B
PI = 715+07.78
Δ = 2°17'30.0" RT.
D = 3°00'00"
T = 38.20'
L = 76.39'
PC = 714+69.58
PT = 715+45.97
NO SUPER





10/3/2016

R061474.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	061474		43	125

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

STA. 651+52 - IN PLACE
D.I. TYPE SPI, H = 3.72'
WITH 18" X 73' R.C. PIPE
OUTLET TO JUNCTION BOX (TYPE E)
AT STA. 651+52
RETAIN

STA. 651+52 - IN PLACE
JUNCTION BOX (TYPE E)
4' X 4' X H = 3.08'
WITH 18" X 49' R.C. PIPE OUTLET
RETAIN

STA. 654+00 - IN PLACE
D.I. TYPE SPI, H = 4.55'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 656+50
RETAIN

STA. 656+50 - IN PLACE
D.I. TYPE SPI, H = 3.55'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 659+00
RETAIN

STA. 659+00 - IN PLACE
D.I. TYPE SPI, H = 4.58'
WITH 18" X 252' R.C. PIPE
OUTLET TO D.I. STA. 661+52
RETAIN

STA. 661+52 - IN PLACE
D.I. TYPE SPI, H = 4.40'
RETAIN

STA. 662+68 - IN PLACE
D.I. TYPE SPI, H = 6.52'
WITH 18" X 182' R.C. PIPE
OUTLET TO D.I. STA. 664+50
RETAIN

STA. 664+50 - IN PLACE
D.I. TYPE SPI, H = 9.41'
WITH 18" X 114' R.C. PIPE
OUTLET TO D.I. STA. 665+63
RETAIN

N

EXISTING ROW

PROPOSED CONST. LIMITS

N 62°49'56" E

N 65°07'37" E

P.C. 657+15.45

P.T. 657+91.84

P.I. 657+53.65

P.I. 657+05.58

P.I. 652+28.22
Δ = 2°18'40.6" RT.

P.C. 656+10.36

BEGIN C/A 100.00
150.96

N 62°50'07" E

℄ RAMP 4

P.C. 661+13.17

P.T. 662+67.23

℄ RAMP 1

N 66°12'49" E

N 70°50'02" E

1-A

1-B

CONCRETE ISLAND (TYPE B CURB FACE)

100' TRANSITION

EXISTING ROW & PROPOSED C/A

P.I. 661+90.24

+00.00

+34.32

P.T. 658+00.64

RAMP 1-A
PI = 657+05.58
Δ = 5°42'30.0" RT.
D = 3°00'00"
T = 95.22'
L = 190.28'
PC = 656+10.36
PT = 658+00.64
NO SUPER

RAMP 1-B
PI = 661+90.24
Δ = 4°37'17.5" LT.
D = 3°00'00"
T = 77.07'
L = 154.05'
PC = 661+13.17
PT = 662+67.23
NO SUPER

STA. 657+47 - CONSTRUCT
TYPE RM DROP INLET IN RT. MEDIAN
5' X 3' X H=7.71'
W/18" X 6' R.C. PIPE OUTLET (CL. III)
TO R.C. BOX CULV'T AT STA. 657+62
(USE TYPE 3 BEDDING)

STA. 657+62 - IN PLACE
10' X 8' X 262' R.C. BOX CULV'T
RETAIN

STA. 657+62 - IN PLACE
TYPE TM DROP INLET IN RT. MEDIAN
(4' X 4' X H = 11.27')
RETAIN AND PLUG

STA. 658+70 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
3' X 3' X H=5.46'
W/18" X 104' R.C. PIPE OUTLET (CL. III)
TO R.C. BOX CULV'T AT STA. 657+62
(USE TYPE 3 BEDDING)

STA. 661+52 (C.L. I-30) - IN PLACE
24" X 76' R.C. PIPE CULV'T
CONNECT TO D.I. 18' LT. OF C.L.
USE 2' R.C.P. (CL. III) LT. OF PROPOSED D.I.
FOR COMPLETED INLET = 64 LIN. FT.
24" R.C. PIPE = 2 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 661+52 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
4' X 4' X H=6.62'
W/24" X 16' R.C.P. OUTLET (CL. III) TO
EXISTING 24" X 53' R.C. PIPE CULV'T
AT STA. 661+54
24" R.C. PIPE = 16 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 661+54 - IN PLACE
24" X 53' R.C. PIPE CULV'T
RETAIN

STA. 661+53 - IN PLACE
TYPE RM DROP INLET IN RT. MEDIAN
(4' X 4' X H = 3.97')
REMOVE

RAMP 1

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

STA. 656+95.54
BEGIN RAMP 1

+47
TOP D.I. = 363.93
F.L. D.I. = 356.22
OUTLET F.L. = 356.11

+70
TOP D.I. = 363.60
F.L. D.I. = 358.14
OUTLET F.L. = 356.09

P.V.I. 660+65.59
ELEV. 364.61

P.V.C. 662+00.00
ELEV. 363.20

-1.05%

K=203.44
VC=200'
e=0.25'

0.07%

P.V.T. 664+00.00
ELEV. 362.07

P.V.I. 663+00.00
ELEV. 362.14

+52
TOP D.I. = 362.49
F.L. D.I. = 355.87

400
390
380
370
360
350
340
330

650+00 651+00 652+00 653+00 654+00 655+00 656+00 657+00 658+00 659+00 660+00 661+00 662+00 663+00 664+00 665+00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
				JOB NO.		061474	44	125

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-28-16

STA. 665+63 - IN PLACE
D.I. TYPE SPI, H = 12.19'
RETAIN

STA. 668+50 - IN PLACE
D.I. TYPE SPI, H = 8.90'
WITH 18" X 287' R.C. PIPE
OUTLET TO D.I. STA. 665+63
RETAIN

STA. 671+00 - IN PLACE
D.I. TYPE SPI, H = 6.71'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 668+50
RETAIN

STA. 672+50 - IN PLACE
D.I. TYPE SPI, H = 5.21'
WITH 18" X 150' R.C. PIPE
OUTLET TO D.I. STA. 671+00
RETAIN

STA. 678+00 - IN PLACE
D.I. TYPE SPI, H = 7.91'
WITH 18" X 228' R.C. PIPE
OUTLET TO D.I. STA. 675+71
RETAIN

STA. 678+00 - IN PLACE
D.I. TYPE SPI, H = 7.91'
WITH 18" X 228' R.C. PIPE
OUTLET TO D.I. STA. 675+71
RETAIN

665

669

675

99.00 END C/A
149.15

99.00 BEGIN C/A
149.15

95.00 END C/A
149.18

P.I. 670+46.86
95.00 BEGIN C/A
149.18

EXISTING ROW & PROPOSED C/A

N 65°03' 16" E

N 62°50' 07" E

PROPOSED CONST. LIMITS

℄ RAMP 4

P.C. 670+09.86

P.T. 670+83.84

N 65°07' 37" E

℄ RAMP I

PROPOSED CONST. LIMITS

P.I. 670+02.56
200.00' L.T.
+02.56
100' TRANSITION

N 62°12' 49" E

N 64°46' 49" E

P.I. 666+00.00
Δ = 100.00' Rt.

EXISTING ROW & PROPOSED C/A

STA. 665+65 - CONSTRUCT
TYPE RM DROP INLET IN RT. MEDIAN
5' X 3' X H=8.42'
W/48" X 12' OUTLET (CL. III) TO
EXISTING 48" X 61' R.C. PIPE CULV'T
AT STA. 665+68
24" R.C. PIPE = 12 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 665+65 - IN PLACE
TYPE RM DROP INLET IN RT. MEDIAN
(4' X 4' X H = 7.13')
REMOVE

STA. 665+68 - IN PLACE
48" X 61' R.C. PIPE CULV'T
RETAIN

STA. 665+63 (C.L. I-30) - IN PLACE
48" X 83' R.C. PIPE CULV'T
CONNECT TO D.I. 18' LT. OF C.L.
USE 2' R.C.P. (CL. III) LT. OF PROPOSED D.I.
FOR COMPLETED INLET = 75 LIN. FT.
48" R.C. PIPE = 2 LIN. FT.
(USE TYPE 3 BEDDING)

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

STA. 676+34 (C.L. I-30) - IN PLACE
54" X 89' R.C. PIPE CULV'T
TO D.I. AT 675+71 IN LT. MEDIAN
RETAIN

STA. 675+71 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
W/54" X 69' R.C. PIPE OUTLET
TO D.I. AT STA. 675+71 IN MEDIAN
RETAIN

STA. 675+71 (C.L. I-30) - IN PLACE
TYPE SPI DROP INLET IN MEDIAN, H = 11.27'
W/48" X 93' R.C. PIPE OUTLET
TO D.I. AT STA. 675+25 IN RT. MEDIAN
RETAIN

STA. 675+25 (C.L. I-30) - IN PLACE
TYPE E DROP INLET IN RT. MEDIAN
(6' X 4' X H = 4.83')
W/48" X 51' R.C. PIPE OUTLET
RETAIN

℄ EXISTING ROW & PROPOSED C/A
061474 47.5FT S. ACCESS RD

DENOTES OBLITERATION OF EXISTING PAVEMENT

RAMP I

STA. 670+02.56
END RAMP I

+65
TOP D.I. = 359.93
F.L. D.I. = 351.51

400
390
380
370
360
350
340
330

665+00 666+00 667+00 668+00 669+00 670+00 671+00 672+00 673+00 674+00 675+00 676+00 677+00 678+00 679+00 680+00

10/27/2016

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	45	125

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

STA. 696+50 - IN PLACE
D.I. TYPE SPI, H = 4.55'
WITH 18" X 401' R.C. PIPE
OUTLET TO D.I. STA. 700+50
RETAIN

STA. 700+50 - IN PLACE
D.I. TYPE SPI, H = 4.26'
WITH 18" X 70' R.C. PIPE
RETAIN

STA. 704+50 - IN PLACE
D.I. TYPE SPI, H = 4.50'
WITH 18" X 401' R.C. PIPE
OUTLET TO D.I. STA. 708+51
RETAIN

STA. 708+51 - IN PLACE
D.I. TYPE SPI, H = 6.59'
RETAIN

EARTHWORK

EXISTING ROW & PROPOSED C/A

N 65°08'54" E

N 66°21'18" E

N 65°06'18" E

P.I. 698+53.05
Δ = 1°12'24" RT.

P.I. 704+50.00
Δ = 15°00.0" LT.
D = 80.00' END C/A
L = 209.51'

PROPOSED CONST. LIMITS

℄ RAMP 3

N 65°07'37" E

P.C. 699+68.72

P.T. 700+44.10

℄ RAMP 2

N 65°06'53" E

N 62°50'07" E

P.I. 700+06.71

PNMT FD1ST.AHTD MON.STAMPED PNMT BRYANT

PNMB FD1ST.AHTD MON.STAMPED PNMB BRYANT

EXISTING ROW & PROPOSED C/A PNMB BRYANT

EXISTING ROW & PROPOSED C/A

RAMP 2-A
PI = 700+06.71
Δ = 2°16'46.1" LT.
D = 3°00'00"
T = 38.00'
L = 75.98'
PC = 699+68.72
PT = 700+44.70
NO SUPER

STA. 700+50 (C.L. I-30) - IN PLACE
TYPE SP DROP INLET IN MEDIAN, H = 4.26'
W/18" X 70' R.C. PIPE OUTLET
RETAIN

STA. 708+51 (C.L. I-30) - IN PLACE
18" X 80' R.C. PIPE CULV'T
CONNECT TO D.I. 14' LT. OF C.L.
USE 2' R.C.P. LT. (CL. III) OF PROPOSED D.I.
FOR COMPLETED INLET = 63 LIN. FT.
18" R.C. PIPE = 2 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 708+49 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
3' X 3' X H=7.51'
W/24" X 22' R.C.P. OUTLET (CL. III) TO
EXISTING 24" X 65' R.C. PIPE CULV'T
AT STA. 708+49
24" R.C. PIPE = 22 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 708+49 - IN PLACE
TYPE E DROP INLET IN RT. MEDIAN
(4' X 4' X H = 2.95')
REMOVE

STA. 708+49 - IN PLACE
24" X 65' R.C. PIPE CULV'T
RETAIN

STA. 710+05 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
6' X 3' X H=11.42'

STA. 709+47 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
3' X 3' X H=5.15'
W/18" X 54' R.C. PIPE OUTLET (CL. III)
TO D.I. AT STA. 710+05
(USE TYPE X BEDDING)

STA. 710+07 - IN PLACE
54" X 224' R.C. PIPE CULV'T
CONNECT TO DROP INLETS
STA. 710+05 (RAMP 2) IN RT. MEDIAN AND
STA. 710+04 (RAMP 3) IN LT. MEDIAN
USE 2' R.C.P. LT. AND RT. (CL. III) OF
PROPOSED DROP INLETS
FOR A COMPLETED LENGTH OF:
STA. 710+04 (RAMP 3) OUTLET
AND 710+05 (RAMP 2) INLET = 170 LIN. FT.
STA. 710+05 (RAMP 2) OUTLET = 46 LIN. FT.
54" R.C. PIPE = 6 LIN. FT.
(USE TYPE 3 BEDDING)

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

RAMP 2

STA. 699+68.72
BEGIN RAMP 2

P.V.I. 704+95.05
ELEV. 363.23
P.V.C. 705+03.02
ELEV. 363.03

K-136.83
VC-550'
e-2.76'

-2.48%

P.V.I. 707+78.02
ELEV. 356.21

+49
TOP D.I. = 358.66
F.L. D.I. = 351.15

+47
TOP D.I. = 356.89
F.L. D.I. = 351.74

OUTLET F.L. = 350.58

400 390 380 370 360 350 340 330

695+00 696+00 697+00 698+00 699+00 700+00 701+00 702+00 703+00 704+00 705+00 706+00 707+00 708+00 709+00 710+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	46	125

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

STA. 711+00 - IN PLACE
D.I. TYPE SPI, H = 4.92'
WITH 18" X 249' R.C. PIPE
OUTLET TO D.I. STA. 708+51
RETAIN

STA. 713+50 - IN PLACE
D.I. TYPE SPI, H = 4.73'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 711+00
RETAIN

STA. 716+00 - IN PLACE
D.I. TYPE SPI, H = 5.03'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 713+00
RETAIN

STA. 718+50 - IN PLACE
D.I. TYPE SPI, H = 4.50'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 716+00
RETAIN

STA. 723+54 (C.L. I-30) - IN PLACE
24" X 49' R.C. PIPE CULV'T
TO D.I. AT 723+54 IN LT. MEDIAN
RETAIN

STA. 723+00 - IN PLACE
D.I. TYPE SPI, H = 4.51'
WITH 18" X 200' R.C. PIPE
OUTLET TO D.I. STA. 725+00
RETAIN

STA. 723+54 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
W/24" X 162' R.C. PIPE OUTLET
TO D.I. AT STA. 723+57 IN RT. MEDIAN
RETAIN

STA. 723+57 (C.L. I-30) - IN PLACE
TYPE E DROP INLET IN RT. MEDIAN
(4' X 4' X H = 2.5')
W/24" X 62' R.C. PIPE OUTLET
RETAIN

STA. 710+07 - IN PLACE
54" X 224' R.C. PIPE CULV'T
CONNECT TO DROP INLETS
STA. 710+05 (RAMP 2) IN RT. MEDIAN AND
STA. 710+04 (RAMP 3) IN LT. MEDIAN
USE 2' R.C.P. LT. AND RT. (CL. III) OF PROPOSED DROP INLETS
FOR A COMPLETED LENGTH OF:
STA. 710+04 (RAMP 3) INLET = 2 LIN. FT.
STA. 710+04 (RAMP 3) OUTLET
AND 710+05 (RAMP 2) INLET = 170 LIN. FT.
STA. 710+05 (RAMP 2) OUTLET = 46 LIN. FT.
54" R.C. PIPE = 8 LIN. FT.

STA. 710+05 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
6' X 3' X H=11.42'

RAMP 2-B
PI = 715+07.78
Δ = 2°17' 30.0" RT.
D = 3°00' 00"
T = 38.20'
L = 76.39'
PC = 714+69.58
PT = 715+45.97
NO SUPER

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

RAMP 2

P.V.T. 710+53.02
ELEV. 360.44

P.V.I. 713+34.78
ELEV. 364.78

1.54%

STA. 723+34.76
END RAMP 2
LOG MILE 125.36

+05
TOP D.I. = 357.00
F.L. D.I. = 345.58

10/3/2016

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	47	125

(2) PLAN AND PROFILE SHEETS

STA. 698+48 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H=3'
W/24" X 110' R.C. PIPE OUTLET (CL. III)
TO D.I. AT STA. 699+61
(USE TYPE 3 BEDDING)

STA. 699+77 - IN PLACE
24" X 64' R.C. PIPE CULV'T
RETAIN

STA. 699+61 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(4' X 4' X H = 2.17')
RETAIN

STA. 705+46 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H=3.15'
W/18" X 12' R.C. PIPE OUTLET (CL. III)
TO EXISTING 18" X 60' R.C. PIPE CULV'T
AT STA. 705+53
(USE TYPE X BEDDING)
18" R.C. PIPE = 12 LIN. FT.

STA. 705+46 - IN PLACE
TYPE RM DROP INLET IN RT. MEDIAN
(3' X 3' X H = 2.14')
REMOVE

STA. 705+53 - IN PLACE
18" X 60' R.C. PIPE CULV'T
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

EARTHWORK
EXISTING ROW & PROPOSED C/A
100' TRANSITION
EXISTING ROW
PROPOSED CONST. LIMITS
℄ RAMP 3
℄ RAMP 2
N 65°08'54" E
N 66°21'18" E
N 65°06'18" E
N 65°07'37" E
N 65°06'53" E
N 62°50'07" E
P.I. 698+53.05
1°12'20.1" RT.
+53.05
P.C. 699+68.12
P.T. 700+44.10
P.I. 704+50.00
15°00.0" LT.
80.00 END C/A
Δ 4°
P.I. 700+06.71
695
699
700
705
710
+00.00

STA. 696+50 - IN PLACE
D.I. TYPE SPI, H = 4.55'
WITH 18" X 40' R.C. PIPE
OUTLET TO D.I. STA. 700+50
RETAIN

STA. 700+50 - IN PLACE
D.I. TYPE SPI, H = 4.26'
WITH 18" X 70' R.C. PIPE
RETAIN

STA. 700+50 (C.L. I-30) - IN PLACE
TYPE SP DROP INLET IN MEDIAN. H = 4.26'
W/18" X 70' R.C. PIPE OUTLET
RETAIN

STA. 704+50 - IN PLACE
D.I. TYPE SPI, H = 4.50'
WITH 18" X 40' R.C. PIPE
OUTLET TO D.I. STA. 708+51
RETAIN

STA. 708+51 - IN PLACE
D.I. TYPE SPI, H = 6.59'
RETAIN

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

RAMP 3

STA. 698+53.05
BEGIN RAMP 3

+48
TOP D.I. = 375.67
F.L. D.I. = 372.67
OUTLET F.L. = 372.24

+46
TOP D.I. = 361.59
F.L. D.I. = 358.44

P.V.C. 708+00.00
ELEV. 359.98

K=125.31
VC=350'
e=1.22'

1.03%

P.V.I. 709+75.00
ELEV. 358.17

400
390
380
370
360
350
340
330

695+00 696+00 697+00 698+00 699+00 700+00 701+00 702+00 703+00 704+00 705+00 706+00 707+00 708+00 709+00 710+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	061474		48	125

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

STA. 710+04 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
6' X 3' X H=10.99'

STA. 710+07 - IN PLACE
54" X 224' R.C. PIPE CULV'T
CONNECT TO DROP INLETS AT
STA. 710+05 (RAMP 2) IN RT. MEDIAN AND
STA. 710+04 (RAMP 3) IN LT. MEDIAN
USE 2' R.C.P. LT. AND RT. OF PROPOSED DROP INLETS
FOR A COMPLETED LENGTH OF:
STA. 710+04 (RAMP 3) OUTLET
AND 710+05 (RAMP 2) INLET = 170 LIN. FT.
STA. 710+05 (RAMP 2) OUTLET = 46 LIN. FT.
54" R.C. PIPE = 6 LIN. FT.

STA. 710+19 - IN PLACE
52" X 77' R.C. PIPE CULV'T
RETAIN

STA. 710+04 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(5' X 4' X H = 4.68')
REMOVE

RAMP 3-A
PI = 711+61.91
Δ = 5°43' 48.9" RT.
D = 3°00' 00"
T = 95.58'
L = 191.01'
PC = 710+66.32
PT = 712+57.33
NO SUPER

STA. 713+50 - CONSTRUCT
TYPE ST DROP INLET IN LT. MEDIAN
3' X 3' X H = 6.72'
W/24" X 342' R.C. PIPE OUTLET (CL. III)
TO D.I. AT STA. 710+04
(USE TYPE X BEDDING)

RAMP 3-B
PI = 716+81.83
Δ = 5°42' 30.0" LT.
D = 3°00' 00"
T = 95.22'
L = 190.28'
PC = 715+86.61
PT = 717+76.89
NO SUPER

STA. 723+00 - IN PLACE
D.I. TYPE SPI, H = 4.5'
WITH 18" X 200' R.C. PIPE
OUTLET TO D.I. STA. 725+00
RETAIN

STA. 723+54 (C.L. I-30) - IN PLACE
24" X 49' R.C. PIPE CULV'T
TO D.I. AT 723+54 IN LT. MEDIAN
RETAIN

STA. 723+54 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
W/24" X 162' R.C. PIPE OUTLET
TO D.I. AT STA. 723+57 IN RT. MEDIAN
RETAIN

STA. 723+57 (C.L. I-30) - IN PLACE
TYPE E DROP INLET IN RT. MEDIAN
(4' X 4' X H = 2.5')
W/24" X 62' R.C. PIPE OUTLET
RETAIN

EARTHWORK
EXISTING ROW
PAVED PARKING
PROPOSED CONST. LIMITS
P.I. 711+61.91
P.I. 713+50
P.C. 710+66.32
P.T. 712+57.33
P.I. 715+07.78
P.C. 715+86.61
P.I. 716+81.83
P.T. 717+76.89
℄ RAMP 3
℄ RAMP 2
N 70°50' 07" E
N 65°07' 37" E
N 62°50' 07" E
N 62°52' 16" E
P.I. 720+34.53
P.I. 723+34.76
P.I. 725+00.00
EXISTING ROW & PROPOSED C/A
END C/A 45.00
130.40
P.C. 714+69.58
P.T. 715+45.97
EXISTING ROW
STA. 711+00 - IN PLACE
D.I. TYPE SPI, H = 4.92'
WITH 18" X 249' R.C. PIPE
OUTLET TO D.I. STA. 708+51
RETAIN
STA. 713+50 - IN PLACE
D.I. TYPE SPI, H = 4.73'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 711+00
RETAIN
STA. 716+00 - IN PLACE
D.I. TYPE SPI, H = 5.03'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 713+00
RETAIN
STA. 718+50 - IN PLACE
D.I. TYPE SPI, H = 4.50'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 716+00
RETAIN
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
STA. 716+91.01
END RAMP 3
RAMP 3
K=125.31
VC=350'
e=1.22'
P.V.T. 711+50.00
ELEV. 361.24
P.V.I. 713+21.47
ELEV. 364.25
1.75%
+04
TOP D.I. = 357.65
F.L. D.I. = 346.66
+50
TOP D.I. = 364.22
F.L. D.I. = 357.50
OUTLET F.L. = 350.66
400
390
380
370
360
350
340
330
710+00
711+00
712+00
713+00
714+00
715+00
716+00
717+00
718+00
719+00
720+00
721+00
722+00
723+00
724+00
725+00

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STA. 645+50 - IN PLACE
D.I. TYPE SPI, H = 6.00'
WITH 18" X 300' R.C. PIPE
OUTLET TO D.I. STA. 648+50
RETAIN

STA. 648+50 - IN PLACE
D.I. TYPE SPI, H = 4.91'
WITH 18" X 302' R.C. PIPE
OUTLET TO D.I. STA. 651+51
RETAIN

STA. 651+52 - IN PLACE
D.I. TYPE SPI, H = 3.72'
WITH 18" X 73' R.C. PIPE
OUTLET TO JUNCTION BOX (TYPE E)
AT STA. 651+52
RETAIN

STA. 651+52 - IN PLACE
JUNCTION BOX (TYPE E)
4' X 4' X H = 3.08'
WITH 18" X 49' R.C. PIPE OUTLET
RETAIN

STA. 654+00 - IN PLACE
D.I. TYPE SPI, H = 4.55'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 656+50
RETAIN

STA. 656+50 - IN PLACE
D.I. TYPE SPI, H = 3.55'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 659+00
RETAIN

STA. 659+00 - IN PLACE
D.I. TYPE SPI, H = 4.58'
WITH 18" X 252' R.C. PIPE
OUTLET TO D.I. STA. 661+52
RETAIN

STA. 657+57 - IN PLACE
TYPE TM DROP INLET IN LT. MEDIAN
4' X 4' X H = 10.92'
REMOVE

STA. 657+62 - IN PLACE
10' X 8' X 262' R.C. BOX CULV'T
RETAIN

STA. 657+57 - CONSTRUCT
TYPE TM DROP INLET IN LT. MEDIAN
3' X 2.54' X H=11.59'

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	49	125

(2) PLAN AND PROFILE SHEETS

RAMP 4-A
PI = 657+53.65
Δ = 2°17' 30.0" LT.
D = 3°00' 00"
T = 38.20'
L = 76.39'
PC = 657+15.45
PT = 657+91.84
NO SUPER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-3-16

300' TAPER
700' ACCELERATION LANE
EXISTING ROW
PROPOSED CONST. LIMITS
℄ RAMP 4
℄ RAMP 1
P.I. 649+27.97
2°18' 40.6" LT.
P.I. 648+00.00
0°00' 00.0" RT.
P.I. 652+28.22
2°18' 40.6" RT.
P.I. 657+53.65
P.I. 657+05.58
P.C. 657+15.45
P.T. 657+91.84
P.C. 656+00.36
P.T. 658+00.64
BEGIN C/A 100.00
P.O.B. 645+00.00
N 65°07' 37" E
N 62°48' 56" E
N 62°50' 07" E
N 70°50' 02" E
EXISTING ROW & PROPOSED C/A
DIST. TO ANTD MON. STAMPED PN14 BRYANT
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 649+27.97
BEGIN RAMP 4
LOG MILE 123.96

P.V.C. 659+27.97
ELEV. 366.28
K=127.30
VC=250'
e=0.61'

+57
TOP D.I. = 365.52

RAMP 4

400 390 380 370 360 350 340 330

645+00 646+00 647+00 648+00 649+00 650+00 651+00 652+00 653+00 654+00 655+00 656+00 657+00 658+00 659+00 660+00

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
				JOB NO.	061474		50	125

(2) PLAN AND PROFILE SHEETS

STA. 660+68 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(3' X 3' X H = 2.53')
REMOVE

STA. 660+68 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H=4.17'
W/2' R.C.P. OUTLET TO
EXISTING 18" X 58' R.C. PIPE CULV'T
AT STA. 660+68
18" R.C. PIPE = 2 LIN. FT.

STA. 660+68 - IN PLACE
18" X 58' R.C. PIPE CULV'T
RETAIN

STA. 665+63 (C.L. I-30) - IN PLACE
48" X 78' R.C. PIPE CULV'T
RETAIN

STA. 665+63 - IN PLACE
48" X 57' R.C. PIPE CULV'T
RETAIN AND EXTEND 18' RT.
TO D.I. AT STA. 665+63
FOR A COMPLETED LENGTH OF 72'
48" R.C. PIPE = 18 LIN. FT.

STA. 665+63 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(4' X 3' X H = 7.24')
REMOVE

STA. 665+63 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H=9.67'
W/2' R.C.P. OUTLET TO
EXISTING 48" X 78' R.C. PIPE CULV'T
AT STA. 665+63 (C.L. I-30)
48" R.C. PIPE = 2 LIN. FT.

RAMP 4-B
PI = 670+46.86
Δ = 2°13'09.2" RT.
D = 3°00'00"
T = 36.99'
L = 73.97'
PC = 670+09.86
PT = 670+83.84
NO SUPER

STA. 671+00 - IN PLACE
D.I. TYPE SPI, H = 6.71'
WITH 18" X 250' R.C. PIPE
OUTLET TO D.I. STA. 668+50
RETAIN

STA. 672+50 - IN PLACE
D.I. TYPE SPI, H = 5.21'
WITH 18" X 150' R.C. PIPE
OUTLET TO D.I. STA. 671+00
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-28-16

EXISTING ROW & PROPOSED C/A

PROPOSED CONST. LIMITS

℄ RAMP 4

℄ RAMP 1

N 62°50'07" E

N 65°07'37" E

N 65°12'49" E

N 67°12'49" E

N 64°46'49" E

N 65°03'16" E

P.C. 670+09.86

P.T. 670+83.84

P.I. 670+02.56
2°26'00.2" LT.

P.I. 666+00.00
Δ = 1°00'00.0" RT.

R.C. 661+13.17

P.I. 662+67.23

P.I. 661+90.22

STA. 661+52 - IN PLACE
D.I. TYPE SPI, H = 4.40'
RETAIN

STA. 662+68 - IN PLACE
D.I. TYPE SPI, H = 6.52'
WITH 18" X 182' R.C. PIPE
OUTLET TO D.I. STA. 664+50
RETAIN

STA. 664+50 - IN PLACE
D.I. TYPE SPI, H = 9.41'
WITH 18" X 114' R.C. PIPE
OUTLET TO D.I. STA. 665+63
RETAIN

STA. 665+63 - IN PLACE
D.I. TYPE SPI, H = 12.19'
RETAIN

STA. 668+50 - IN PLACE
D.I. TYPE SPI, H = 8.90'
WITH 18" X 287' R.C. PIPE
OUTLET TO D.I. STA. 665+63
RETAIN

DENOTES OBLITERATION OF EXISTING PAVEMENT

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

RAMP 4

STA. 670+83.84
END RAMP 4

K=127.30
VC=250'
e=0.61'

-1.66%

0.30%

-0.21%

K=483.35
VC=250'
e=-0.16'

P.V.I. 660+52.97
ELEV. 364.21

P.V.T. 661+77.97
ELEV. 364.59

P.V.C. 663+18.61
ELEV. 365.02

P.V.I. 664+43.61
ELEV. 365.40

P.V.T. 665+68.61
ELEV. 365.14

+68
TOP D.I. = 363.12
F.L. D.I. = 358.95

+63
TOP D.I. = 363.74
F.L. D.I. = 354.07

400 390 380 370 360 350 340 330

660+00 661+00 662+00 663+00 664+00 665+00 666+00 667+00 668+00 669+00 670+00 671+00 672+00 673+00 674+00 675+00

10/27/2016

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-27-16				6	ARK.			
12-09-16				JOB NO.		061474	51	125
				(2) BRYANT PARKWAY OVERPASS LAYOUT				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
12-12-16

BEGIN C/A
334.33
END C/A
301.44
670.37
688.98
632.95
689.75
476.72
672.98
167.24
90.92
241.82
128.56
END C/A 85.00
149.11
BEGIN C/A 135.00
149.11
END C/A 89.00
149.15
BEGIN C/A 149.00
149.15
END C/A 165.00
149.18
BEGIN C/A
149.18
END C/A 176.00
149.38
BEGIN C/A 138.00
149.38
665
680
685
690
EARTHWORK
DENOTES OBLITERATION OF EXISTING PAVEMENT
150.81
39.44
308.58
177.79
377.79
18.74
459.90
180.00
587.08
20.00
BEGIN C/A
END C/A 96.75
636.37
BEGIN C/A 59.95
713.38
121.78
720.78
88.23
798.46
56.54
777.14
END C/A 91.60
689.97
BEGIN C/A 35.42
617.71
29.63
232.16
150.82
END C/A 76.00
BEGIN C/A 38.00
150.82

STA. 676+34 (C.L. I-30) - IN PLACE
54" X 89' R.C. PIPE CULV'T
TO D.I. AT 675+71 IN LT. MEDIAN
RETAIN

STA. 675+71 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
W/54" X 69' R.C. PIPE OUTLET
TO D.I. AT STA. 675+71 IN MEDIAN
RETAIN

STA. 675+71 (C.L. I-30) - IN PLACE
TYPE SP DROP INLET IN MEDIAN
W/48" X 93' R.C. PIPE OUTLET
TO D.I. AT STA. 675+25 IN RT. MEDIAN
RETAIN

STA. 675+25 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN RT. MEDIAN
W/48" X 51' R.C. PIPE OUTLET
RETAIN

STA. 687+99 (C.L. I-30) - IN PLACE
42" X 60' R.C. PIPE CULV'T
TO D.I. AT 687+70 IN LT. MEDIAN
RETAIN

STA. 687+70 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
W/42" X 70' R.C. PIPE OUTLET
TO D.I. AT STA. 687+61 IN MEDIAN
RETAIN

STA. 687+61 (C.L. I-30) - IN PLACE
TYPE SP DROP INLET IN MEDIAN
W/42" X 82' R.C. PIPE OUTLET
TO D.I. AT STA. 687+53 IN RT. MEDIAN
RETAIN

STA. 687+53 (C.L. I-30) - IN PLACE
TYPE RM DROP INLET IN RT. MEDIAN
W/42" X 170' R.C. PIPE OUTLET
TO D.I. AT STA. 685+78 IN RT. MEDIAN
RETAIN

STA. 685+78 (C.L. I-30) - IN PLACE
TYPE E DROP INLET IN RT. MEDIAN
W/42" X 52' R.C. PIPE OUTLET
RETAIN

STA. 691+01 INSTALL
18" X 28' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 15 CU. YDS.

BRYANT PARKWAY OVERPASS LAYOUT

12/12/2016
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	52	125

(2) SIGNING SUMMARY OF QUANTITIES

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
202	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE	1	EACH
SS &303	AGGREGATE BASE COURSE (CLASS 7)	560	TON
SP, SS &407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	129	TON
SP, SS &407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	7	TON
617	GUARDRAIL (TYPE A)	1400	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	8	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	8	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-60-63)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-07)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-08)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-62-09)	1	EACH
725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	1575	SQ. FT.
725	GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)	936	SQ. FT.
726	STANDARD SIGNS	784	SQ. FT.
727	EXIT NUMBER PANEL (TYPE A)	189	SQ. FT.
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	44	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	19	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-4)	4	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	6294	POUND

NOTES:

ALL EXISTING GUIDE SIGNS SHALL BE MAINTAINED IN SUCH A MANNER THAT THE SIGNS ARE FULLY VISIBLE, INTACT, AND ERECT FOR THE DURATION OF THE PROJECT, AND SHALL BE REMOVED WHEN THEIR USE IS NO LONGER REQUIRED. REMOVAL AND DISPOSAL OF SIGNS, SUPPORTS AND FOUNDATIONS SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

THE EXISTING SIGNS AND SUPPORTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING FOOTINGS SHALL BE REMOVED AND THE HOLES FILLED WITH A SUITABLE MATERIAL AND COMPACTED.

EXISTING LOGOS WILL BE RELOCATED TO THE NEW LOGO SIGN BY THE CONTRACTOR. THE LOGO INSTALLATION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H1, H2, H3 AND THE STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).

BASIS OF ESTIMATE:
NMAX = 205
MINERAL AGGREGATE 95.1%
ASPHALT BINDER (PG 76 – 22) 4.9%

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
10/3/16
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	53	125

(2) SIGNING QUANTITIES

OVERHEAD SIGNING QUANTITIES

SIGN NO./ LOCATION	STRUCTURE TYPE: INSTALL SIGN STRUCTURE (EACH) ST	OC	OH	BM	REMOVAL & DISPOSAL OF OVERHEAD SIGN STRUCTURE (EACH)	GUIDE SIGN LENGTH LIN. FT.	HEIGHT LIN. FT.	SQ. FT.	EXIT NUMBER PANEL LEGEND	TYPE A	TYPE B	TYPE C	SQ. FT.	GUARDRAIL TYPE A LIN. FT.	TERM. ANCHOR POSTS (TYPE 1) EACH	GUARDRAIL TERM. (TYPE 2) EACH	AGG. BASE CR (CL. 7) TON	ACHM SURF. CR. 220 LBS/SY TON
OH-030-60-63			1		1									350	2	2	140	34
OH-030-LM126.90WB-A						16.50	10.00	165.00	126	23.57								
OH-030-LM126.90WB-B						15.50	6.00	93.00	124	23.57								
OH-030-62-07			1											350	2	2	140	34
OH-030-STA719+00WB-A						15.50	6.50	100.75	124	23.57								
OH-030-STA719+00WB-B						10.00	11.50	115.00	123	23.57								
OH-030-62-08			1											350	2	2	140	34
OH-030-LM122.50EB-A						10.00	12.00	120.00	123	23.57								
OH-030-LM122.50EB-B						15.50	6.00	93.00	124	23.57								
OH-030-62-09			1											350	2	2	140	34
OH-030-62-654+00EB-A						15.50	6.50	100.75	124	23.57								
0H-030-62-654+00EB-B						16.50	9.00	148.50	126	23.57								
TOTALS:			**4**		**1**			**936.00**		**188.56**				**1400**	**8**	**8**	**560**	**136**

MAIN LANES ROADSIDE MOUNTED SIGNING QUANTITIES

SIGN NO./ LOCATION	I-BEAM STRUCTURE TYPE G1	G2	G3	GUIDE SIGN DEMOUNTABLE LEGEND LENGTH LIN. FT.	HEIGHT LIN. FT.	SQ. FT.	I-BEAM BREAKAWAY SIGN SUPPORT: STEEL SECT. A-572 BEAM	LBS	SIGN POST LENGTH H-1 LIN FT	H-2 LIN FT	H-3 LIN FT	STUB POST H-1 LIN FT	H-2 LIN FT	H-3 LIN FT	FOOTINGS DIA. LIN FT	DEPTH LIN FT	EMBED. LIN FT	SIGN POST AND STUB POUND
GM-030-675+00WB		1		12.50	4.00	50.00	W6	9.00	11.00	12.00		2.50	2.50		2.00	3.50	2.00	252.00
LL-030-696+00WB;		1		19.00	14.50	275.50	W8	21.00	20.50	21.50		4.00	4.00		3.00	5.50	5.00	1050.00
LG-030-691+00EB		1		19.00	14.50	275.50	W8	21.00	20.50	21.50		4.00	4.00		3.00	5.50	5.00	1050.00
LG-030-647+00WB		1		19.00	14.50	275.50	W8	21.00	20.50	21.50		4.00	4.00		3.00	5.50	5.00	1050.00
LF-030-681+50WB		1		19.00	14.50	275.50	W8	21.00	20.50	21.50		4.00	4.00		3.00	5.50	5.00	1050.00
LF-030-684+80EB		1		19.00	14.50	275.50	W8	21.00	20.50	21.50		4.00	4.00		3.00	5.50	5.00	1050.00
GM-030-728+00EB		1		14.00	10.50	147.00	W8	18.00	17.50	18.50		3.99	3.99		2.50	5.50	3.66	791.64
TOTALS:		**7**				**1574.50**												**6293.64**

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7527 8-2-16 JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	54	125

(2) SIGNING QUANTITIES

STANDARD SIGNS FLAT SHEET (BOX 1 OF 2)

SIGN NO./ LOCATION	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS TYPE												STANDARD SIGN
	G1	G2	G2-1	G2-2	G2-3	G2-4	G2-5	G2-6	G2-7	G2-8	G2-9	G2-10	
	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	SQ. FT.
SS-SR-629+50EB-A		1											16.00
SS-SR-629+50EB-B		1											16.00
SS-SR-656+00WB-A		1											16.00
SS-SR-656+00WB-B		1											16.00
SS-SR-742+80WB-A		1											16.00
SS-SR-742+80WB-B		1											16.00
SS-SR-638+50EB-A		1											16.00
SS-SR-638+50EB-B		1											16.00
SS-SR-650+00WB-A		1											16.00
SS-SR-650+00WB-B		1											16.00
SS-SR-732+90WB-A		1											16.00
SS-SR-732+90WB-B		1											16.00
SS-030-703+00EB		1											16.00
SS-030-668+00WB		1											16.00
SS-SR-674+00EB	1												16.00
SS-SR-721+90EB	1												16.00
SS-SR-678+80WB	1												9.00
SS-SR-678+50EB	1												9.00
SS-030-60-719+00WB		1											20.00
SS-SR-652+00EB-A	1												9.00
SS-SR-652+00EB-B	1												9.00
SS-SR-661+90WB-A	1												9.00
SS-SR-661+90WB-B	1												9.00
SS-SR-670+00EB-A	1												9.00
SS-SR-670+00EB-B	1												9.00
SS-SR-675+00EB-A	1												9.00
SS-SR-675+00EB-B	1												9.00
SS-SR-682+00WB-A	1												9.00
SS-SR-682+00WB-B	1												9.00
SS-SR-701+00EB-A	1												9.00
SS-SR-701+00EB-B	1												9.00
SS-SR-716+50EB	1												9.00
SS-SR-714+00EB	1												9.00
SS-SR-646+10WB	1												5.00
SUBTOTALS:	**19**	**15**											**425.00**

STANDARD SIGNS FLAT SHEET (BOX 2 OF 2)

SIGN NO./ LOCATION	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS TYPE												STANDARD SIGN
	G1	G2	G2-1	G2-2	G2-3	G2-4	G2-5	G2-6	G2-7	G2-8	G2-9	G2-10	
	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	SQ. FT.
SS-SR-671+50WB-A		1											17.18
SS-SR-671+50WB-B		1											17.18
SS-SR-691+00EB						1							27.18
SS-SR-675+00WB						1							27.18
SS-SR-688+00WB						1							27.18
SS-SR-674+00EB						1							27.18
EX-030-712+40WB		1											37.50
EX-030-661+50EB		1											37.50
SS-SR-651+90WB	1												5.00
SS-SR-654+10WB	1												5.00
SS-SR-660+10WB	1												5.00
SS-SR-661+50WB	1												5.00
SS-SR-663+00WB	1												5.00
SS-SR-667+10WB	1												5.00
SS-SR-667+10EB	1												5.00
SS-SR-671+40EB	1												5.00
SS-SR-672+50WB	1												5.00
SS-SR-670+10WB	1												5.00
SS-SR-678+70WB	1												5.00
SS-SR-678+60EB	1												5.00
SS-SR-715+00WB	1												5.00
SS-SR-714+70EB	1												5.00
SS-SR-717+80EB	1												5.00
SS-SR-719+30EB	1												5.00
SS-SR-705+00WB	1												5.00
SS-SR-721+80EB	1												5.00
SS-SR-723+30EB	1												5.00
SS-SR-725+00WB	1												5.00
SS-SR-680+10WB	1												8.18
SS-SR-699+00EB-A	1												8.18
SS-SR-699+00EB-B	1												8.18
SS-SR-707+50EB	1												8.18
SS-SR-677+10EB	1												8.18
SUBTOTALS:	**25**	**4**											**358.98**
TOTALS:	**50**	**8**				**4**							**783.98**

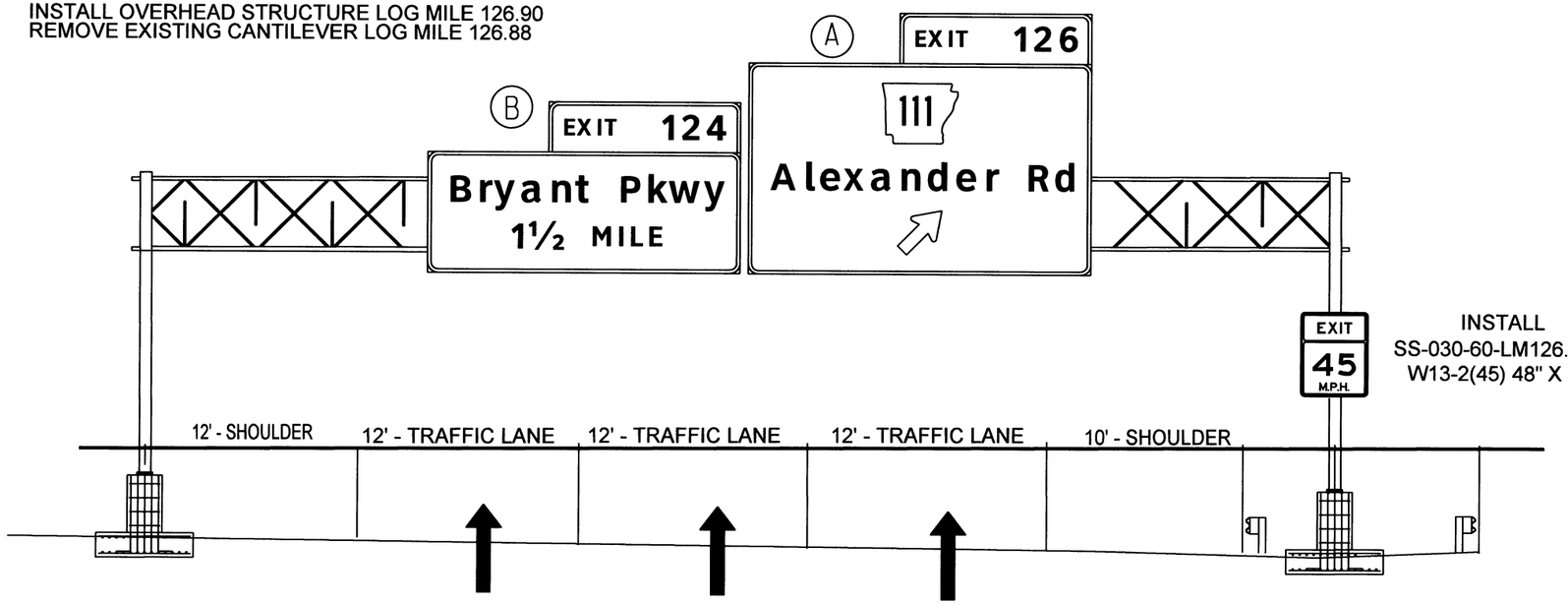
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
10/3/16
JOSEPH A. SARTINI

OH-030-60-LM126.90WB
INSTALL OVERHEAD STRUCTURE LOG MILE 126.90
REMOVE EXISTING CANTILEVER LOG MILE 126.88

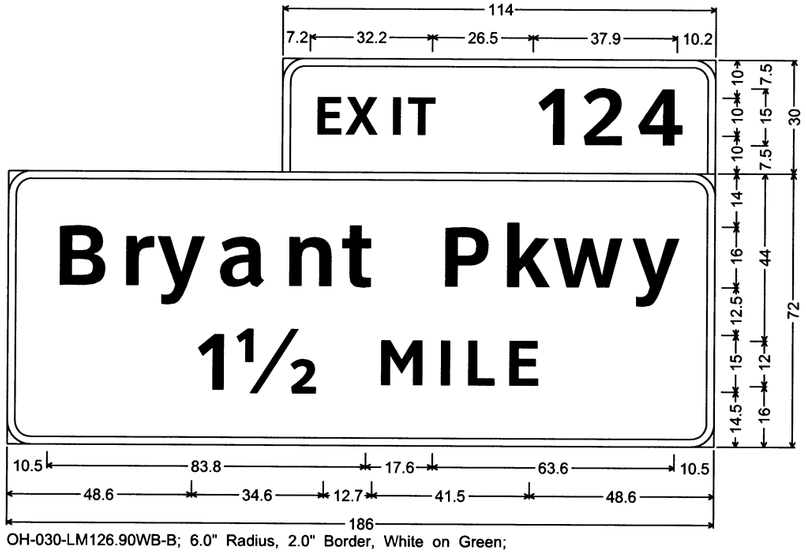
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	55	125

(2) SIGN LAYOUT SHEET

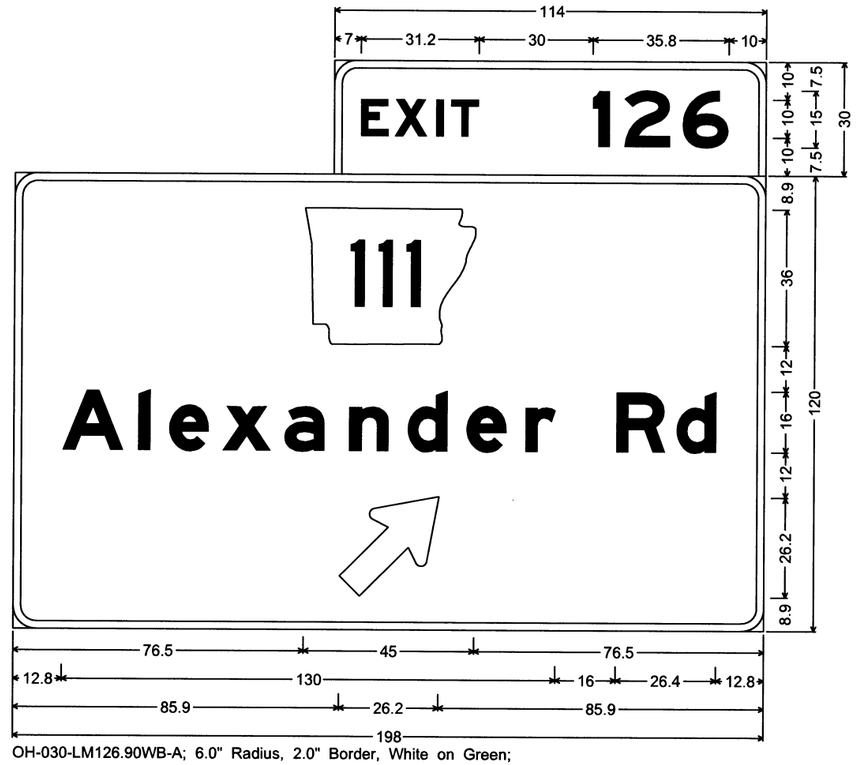
OH-030-60-63



INSTALL
SS-030-60-LM126.90WB
W13-2(45) 48" X 60"



OH-030-LM126.90WB-B; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [124] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Bryant Pkwy] ClearviewHwy-5-W; [1½ MILE] ClearviewHwy-5-W;



OH-030-LM126.90WB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K 107% spacing; [126] E Mod 2K 102% spacing;
6.0" Radius, 2.0" Border, White on Green;
[Alexander Rd] E Mod 2K; Standard Arrow Custom 0.0" X 20.3" 45°;

STATE OF ARKANSAS
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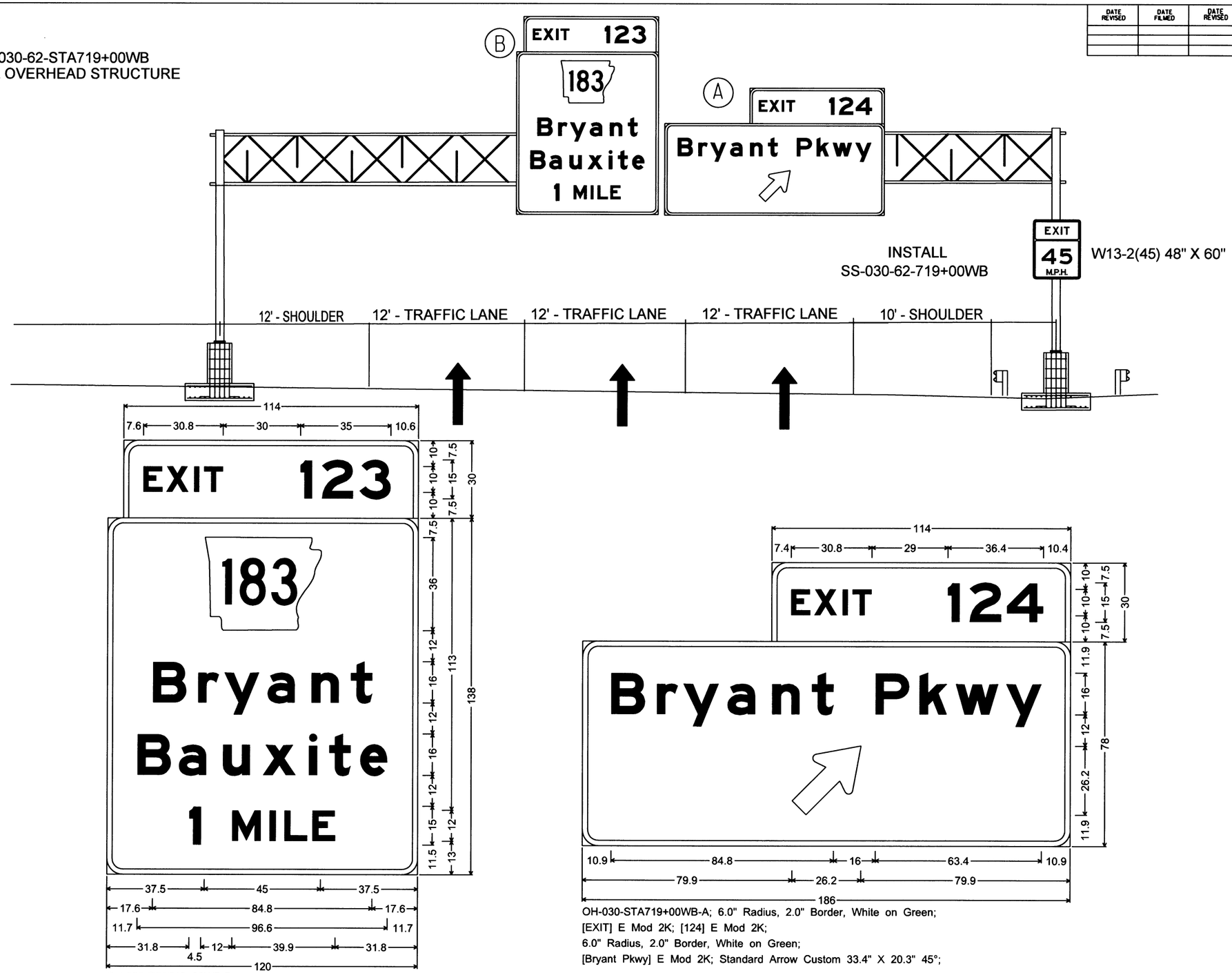
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	56	125

(2) SIGN LAYOUT SHEET

OH-030-62-07

OH-030-62-STA719+00WB
INSTALL OVERHEAD STRUCTURE



OH-030-STA719+00WB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K; [123] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Bryant] E Mod 2K; [Bauxite] E Mod 2K; [1] E Mod 2K;
[MILE] E Mod 2K;

OH-030-STA719+00WB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K; [124] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Bryant Pkwy] E Mod 2K; Standard Arrow Custom 33.4" X 20.3" 45°;

STATE OF ARKANSAS
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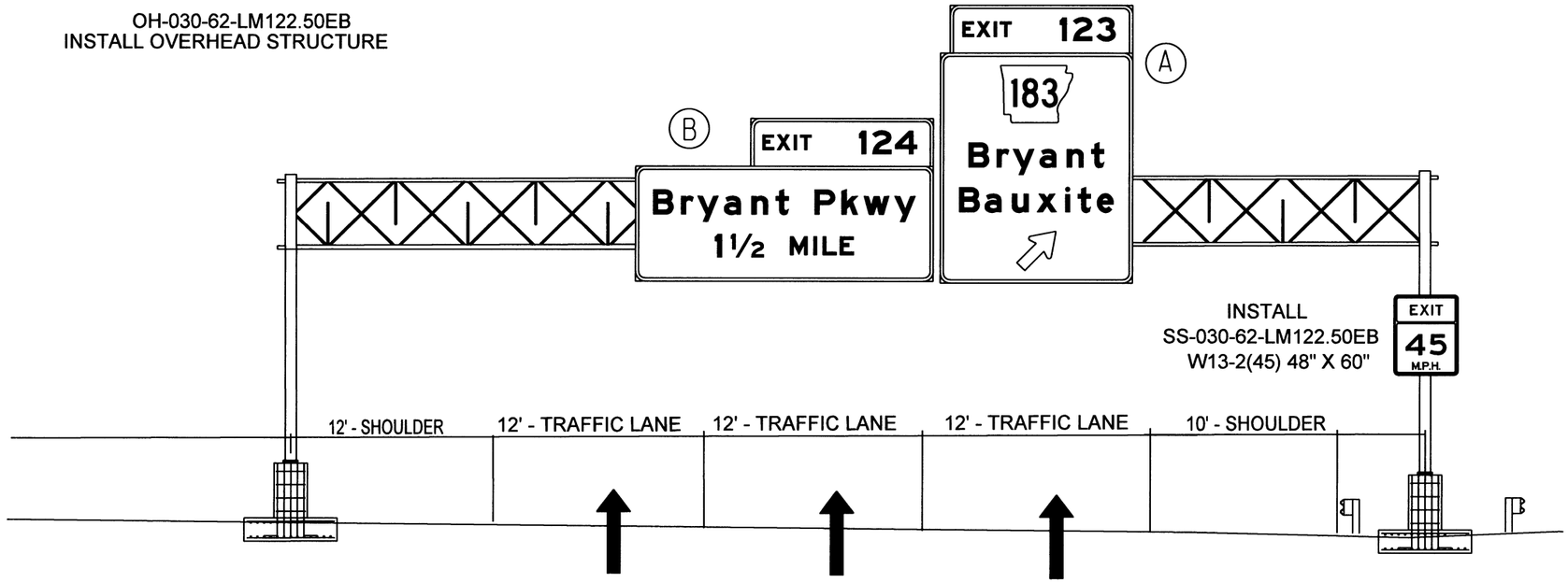
No. 7527
9/24/14
JOSEPH A. SARTINI

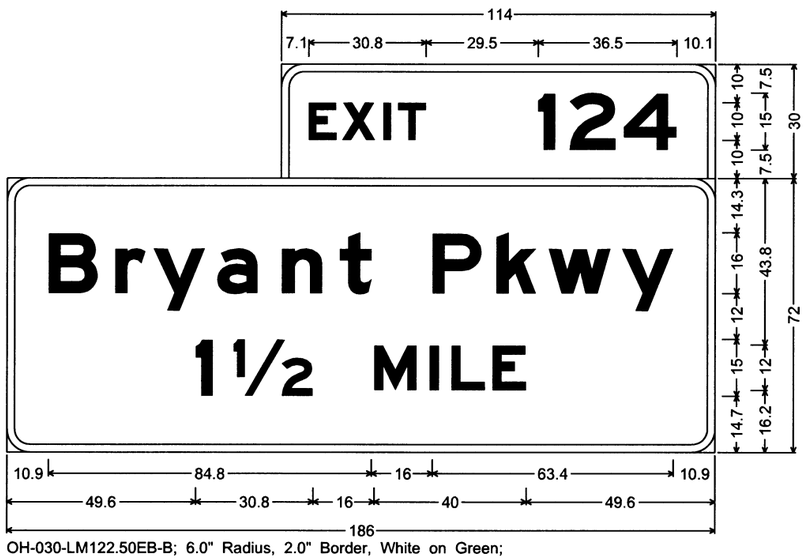
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	57	125

(2) SIGN LAYOUT SHEET

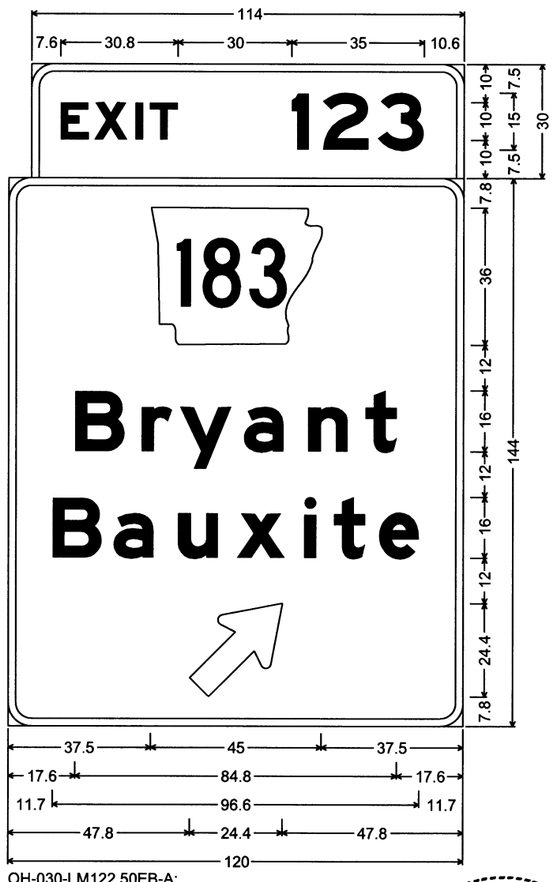
OH-030-62-08

OH-030-62-LM122.50EB
INSTALL OVERHEAD STRUCTURE

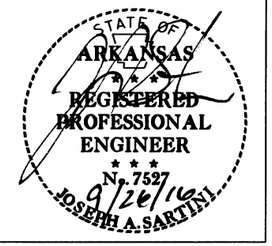




OH-030-LM122.50EB-B; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K; [124] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Bryant Pkwy] E Mod 2K; [1½ MILE] E Mod 2K;



OH-030-LM122.50EB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K; [123] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Bryant] E Mod 2K; [Bauxite] E Mod 2K;
Standard Arrow Custom 31.1" X 18.8" 45°;

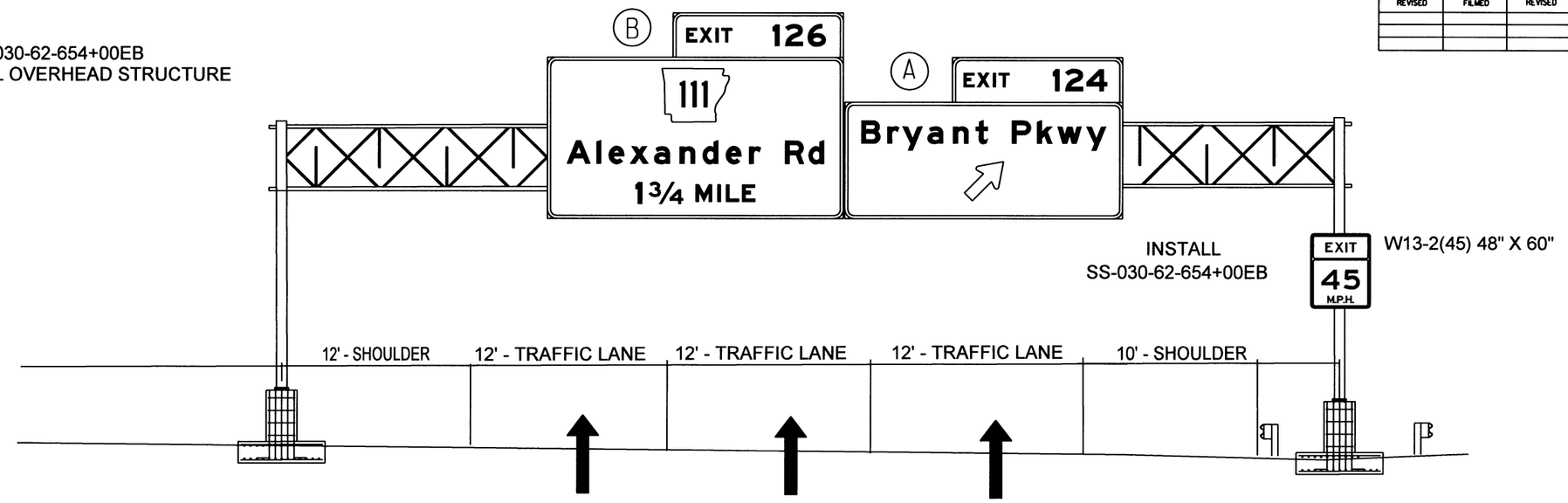


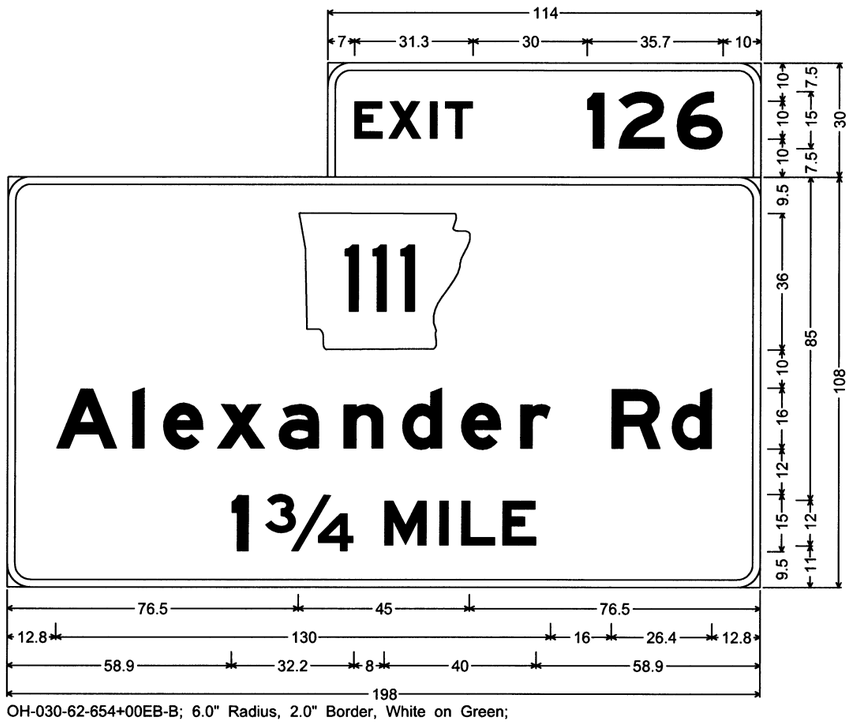
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	58	125

(2) SIGN LAYOUT SHEET

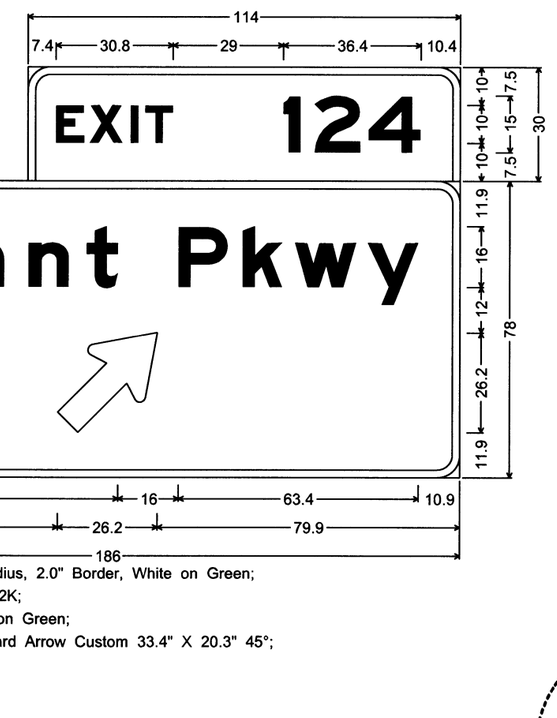
OH-030-62-09

OH-030-62-654+00EB
INSTALL OVERHEAD STRUCTURE

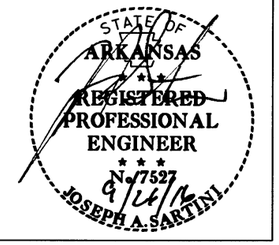




OH-030-62-654+00EB-B; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K 108% spacing; [126] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Alexander Rd] E Mod 2K; [1¾ MILE] E Mod 2K;



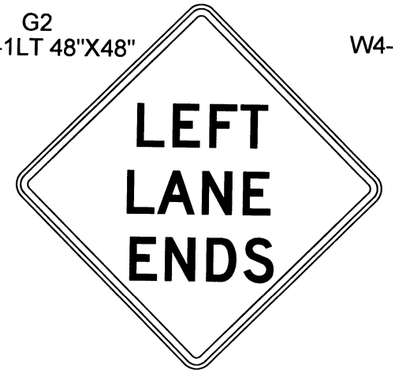
OH-030-62-654+00EB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] E Mod 2K; [124] E Mod 2K;
6.0" Radius, 2.0" Border, White on Green;
[Bryant Pkwy] E Mod 2K; Standard Arrow Custom 33.4" X 20.3" 45°;



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	59	125

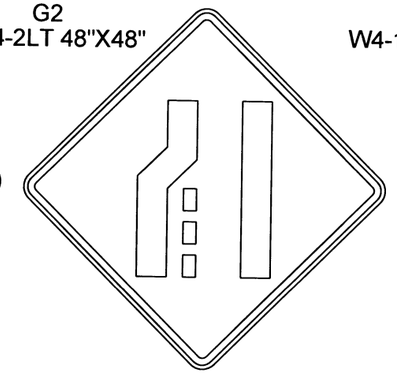
(2) SIGN LAYOUT SHEET

G2
W9-1LT 48"X48"



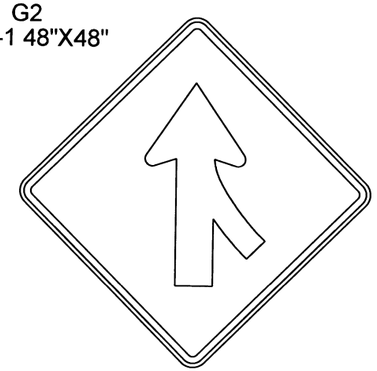
SS-SR-629+50EB-A
SS-SR-629+50EB-B
SS-SR-656+00WB-A
SS-SR-656+00WB-B
SS-SR-742+80WB-A
SS-SR-742+80WB-B

G2
W4-2LT 48"X48"

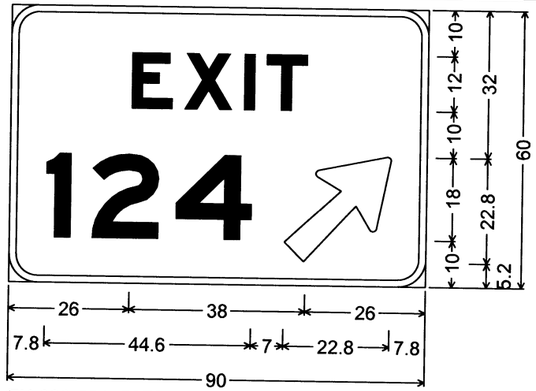


SS-SR-638+50EB-A
SS-SR-638+50EB-B
SS-SR-650+00WB-A
SS-SR-650+00WB-B
SS-SR-732+90WB-A
SS-SR-732+90WB-B

G2
W4-1 48"X48"

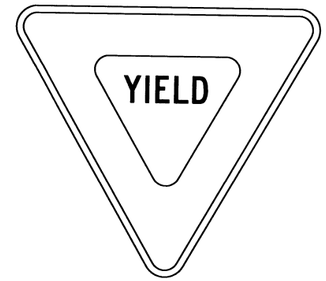


SS-030-703+00EB
SS-030-668+00WB



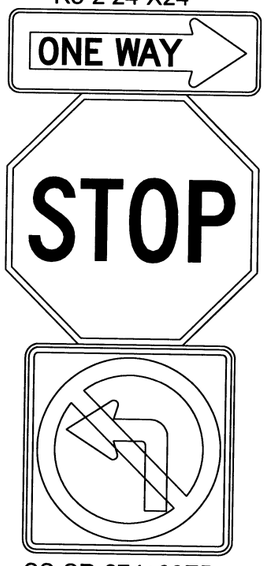
EX-030-661+50EB;
6.0" Radius, 1.5" Border, White on Green;
[EXIT] E Mod; [124] E Mod;
Arrow Custom - 29.0" 45°;

G1
R2-1 36"X36"X36"



SS-SR-678+80WB
SS-SR-678+50EB

G2
R6-1RT 36"X12"
R1-1 36"X36"
R3-2 24"X24"



SS-SR-674+00EB
SS-SR-721+90EB

G1
R5-1 36"X36"

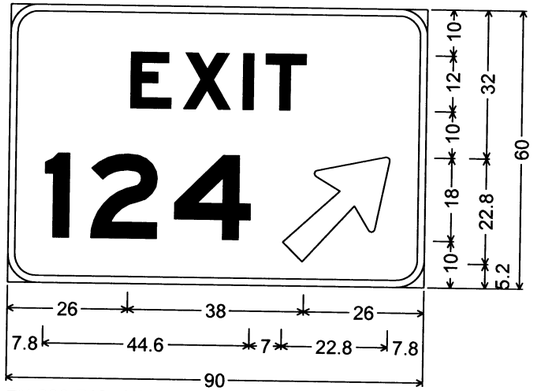
SS-SR-652+00EB-A
SS-SR-652+00EB-B
SS-SR-661+90WB-A
SS-SR-661+90WB-B
SS-SR-670+00EB-A
SS-SR-670+00EB-B
SS-SR-675+00EB-A
SS-SR-675+00EB-B
SS-SR-682+00WB-A
SS-SR-682+00WB-B
SS-SR-701+00EB-A
SS-SR-701+00EB-B
SS-SR-716+50EB
SS-SR-714+00EB

G1
R6-2RT 24"X30"

SS-SR-646+10WB
SS-SR-651+90WB
SS-SR-654+10WB
SS-SR-660+10WB
SS-SR-661+50WB
SS-SR-663+00WB
SS-SR-667+10WB
SS-SR-667+10EB
SS-SR-671+40EB
SS-SR-672+50WB
SS-SR-670+10WB
SS-SR-678+70WB
SS-SR-678+60EB
SS-SR-715+00WB
SS-SR-714+70EB
SS-SR-717+80EB
SS-SR-719+30EB
SS-SR-705+00WB
SS-SR-721+80EB
SS-SR-723+30EB

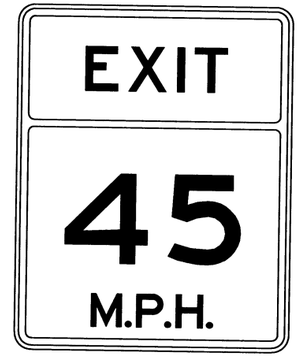
G1
R2-1(55) 24"X30"

SS-SR-725+00WB

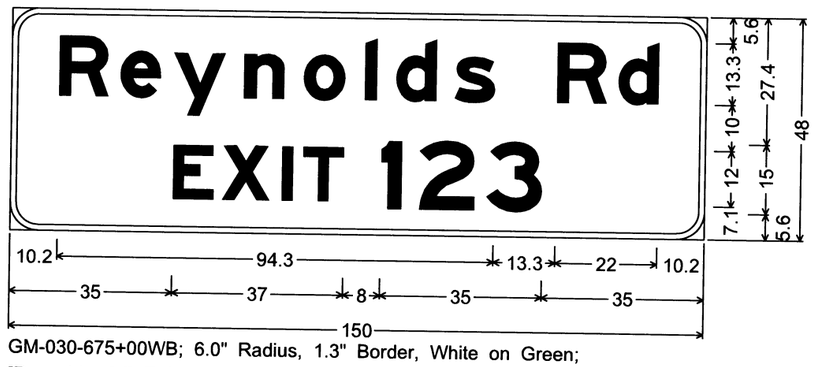


EX-030-712+40WB;
6.0" Radius, 1.5" Border, White on Green;
[EXIT] E Mod; [124] E Mod;
Arrow Custom - 29.0" 45°;

G2
W13-2(45) 48" X 60"



SS-030-60-719+00WB
SS-030-60-LM126.90WB
SS-030-62-LM122.50EB
SS-030-62-654+00EB



GM-030-675+00WB; 6.0" Radius, 1.3" Border, White on Green;
[Reynolds Rd] E Mod 2K; [EXIT 123] E Mod 2K;

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				6	ARK.			
				JOB NO.		061474	60	125

(2) SIGN LAYOUT SHEET

G1
M3-2BL 24"X12"
M1-1(30) 24"X24"
M6-1BL 21"X15"

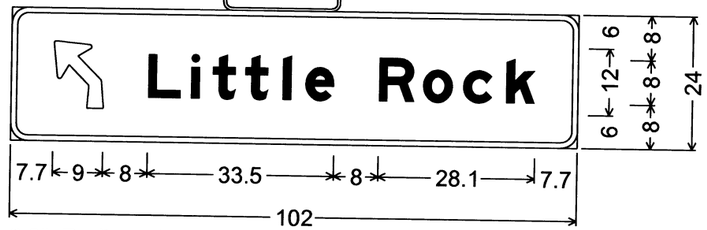
SS-SR-680+10WB

G1
M3-2BL 24"X12"
M1-1(30) 24"X24"
M5-2LT BL 21"X15"

SS-SR-699+00EB-A
SS-SR-699+00EB-B
SS-SR-707+50EB

M3-2BL 24"X12"
M1-1(30) 24"X24"
M5-2LT BL 21"X15"

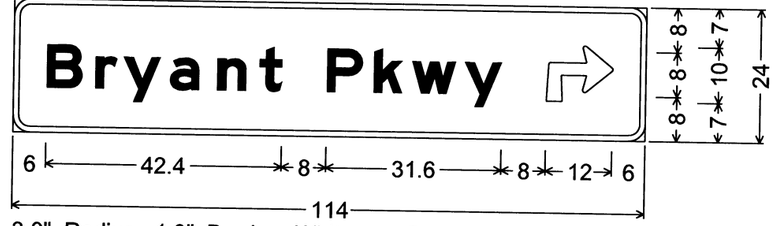
G2-4
SS-SR-691+00EB



3.0" Radius, 1.0" Border, White on Green;
45 Deg Advanced Turn Arrow 9.0" X 12.0";
[Little Rock] E Mod 2K;

M3-2BL 24"X12"
M1-1(30) 24"X24"
M5-1RT BL 21"X15"

G2-4
SS-SR-688+00WB



3.0" Radius, 1.0" Border, White on Green;
[Bryant Pkwy] E Mod 2K;
90 Deg Advanced Turn Arrow 12.0" X 10.0";

G2-1
R5-1 36"X36"
M3-4BL 24"X12"
M1-1(30) 24"X24"
M5-2LT BL 21"X15"

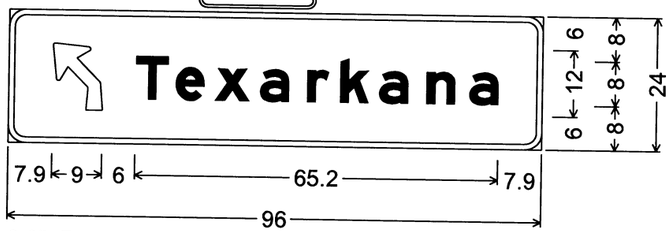
SS-SR-671+50WB-A
SS-SR-671+50WB-B

G1
M3-4BL 24"X12"
M1-1(30) 24"X24"
M6-1BL 21"X15"

SS-SR-677+10EB

M3-4BL 24"X12"
M1-1(30) 24"X24"
M5-2LT BL 21"X15"

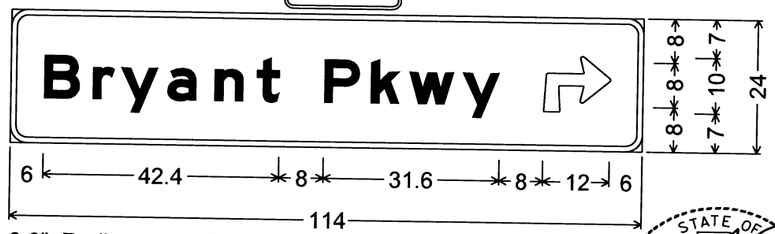
G2-4
SS-SR-675+00WB



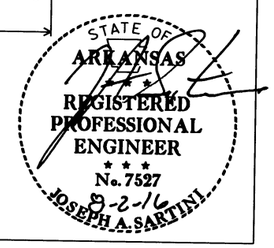
3.0" Radius, 1.0" Border, White on Green;
45 Deg Advanced Turn Arrow 9.0" X 12.0";
[Texarkana] E Mod 2K;

M3-4BL 24"X12"
M1-1(30) 24"X24"
M5-2RT BL 21"X15"

G2-4
SS-SR-674+00EB

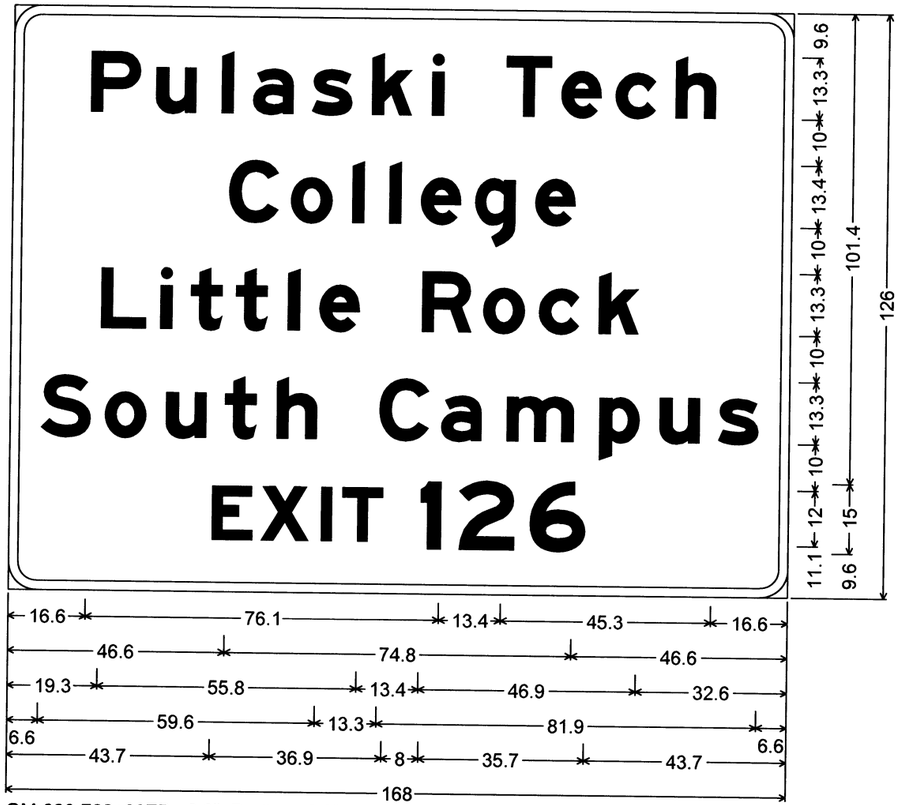


3.0" Radius, 1.0" Border, White on Green;
[Bryant Pkwy] E Mod 2K;
90 Deg Advanced Turn Arrow 12.0" X 10.0";

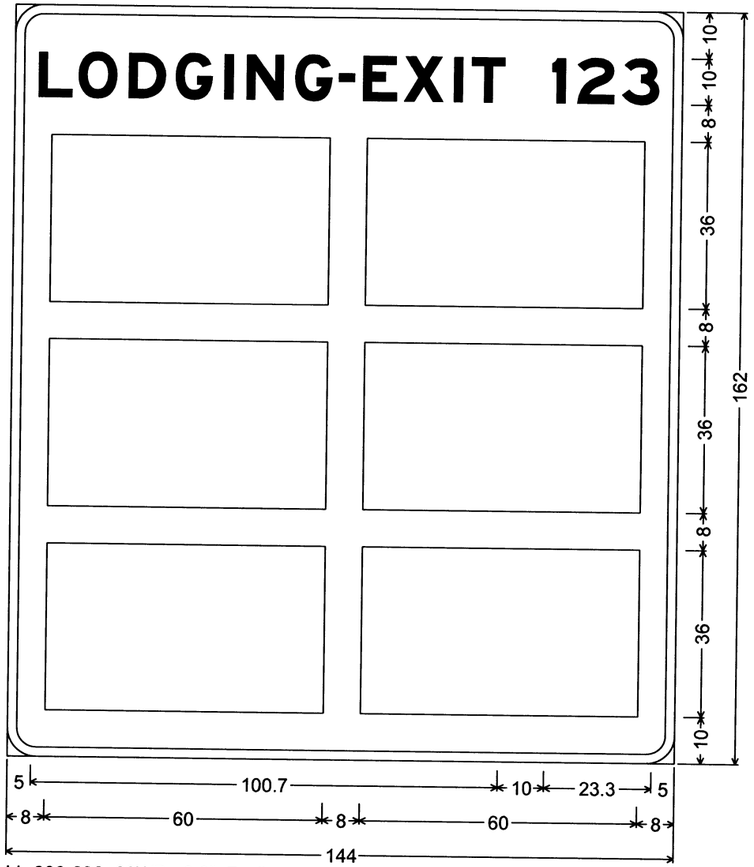


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	61	125

(2) SIGN LAYOUT SHEET



GM-030-728+00EB; 6.0" Radius, 2.0" Border, White on Green;
[Pulaski Tech] E Mod 2K; [College] E Mod 2K; [Little Rock] E Mod 2K;
[South Campus] E Mod 2K; [EXIT 126] E Mod 2K;



LL-030-696+00WB; 6.0" Radius, 2.0" Border, White on Blue;
[LODGING-EXIT 123] E Mod 2K;

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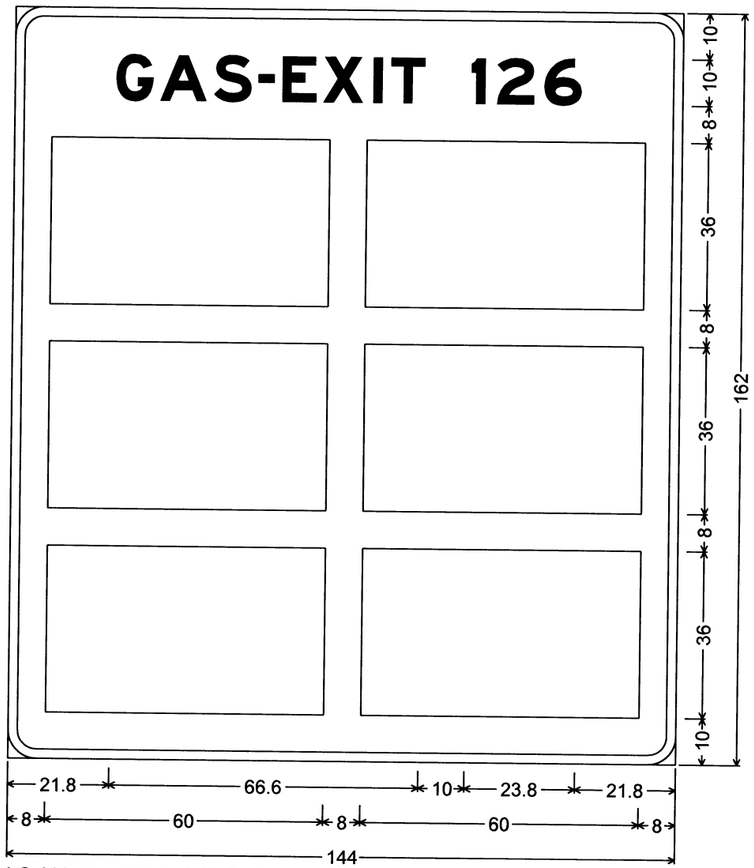
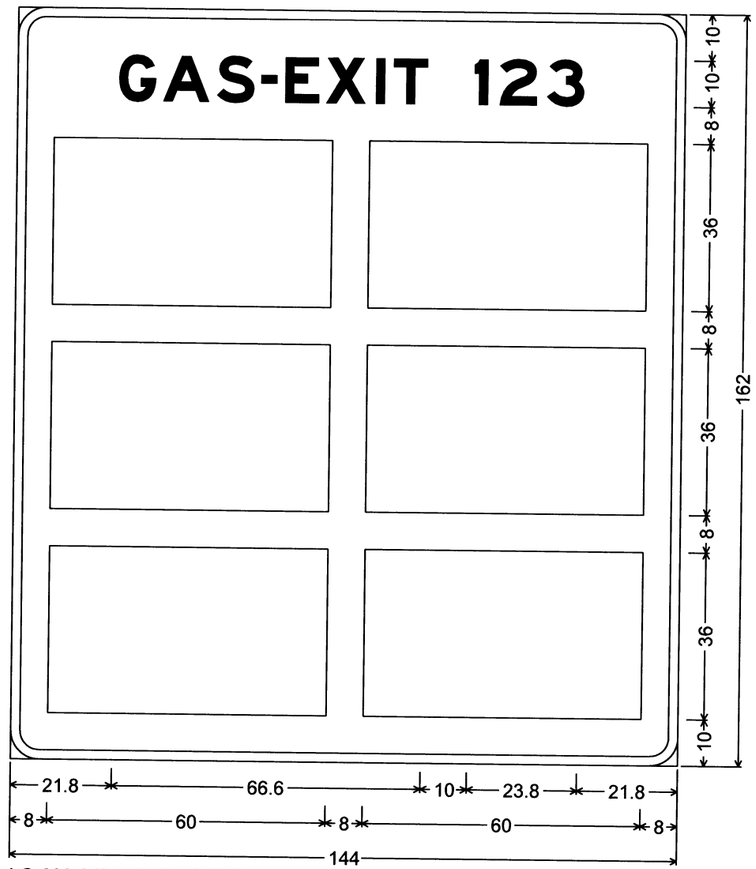
				6	ARK.			
				JOB NO.		061474	62	125

(2) SIGN LAYOUT SHEET



LG-030-691+00EB; 6.0" Radius, 2.0" Border, White on Blue;
[GAS-EXIT 126] E Mod 2K;



LG-030-647+00WB; 6.0" Radius, 2.0" Border, White on Blue;
[GAS-EXIT 126] E Mod 2K;

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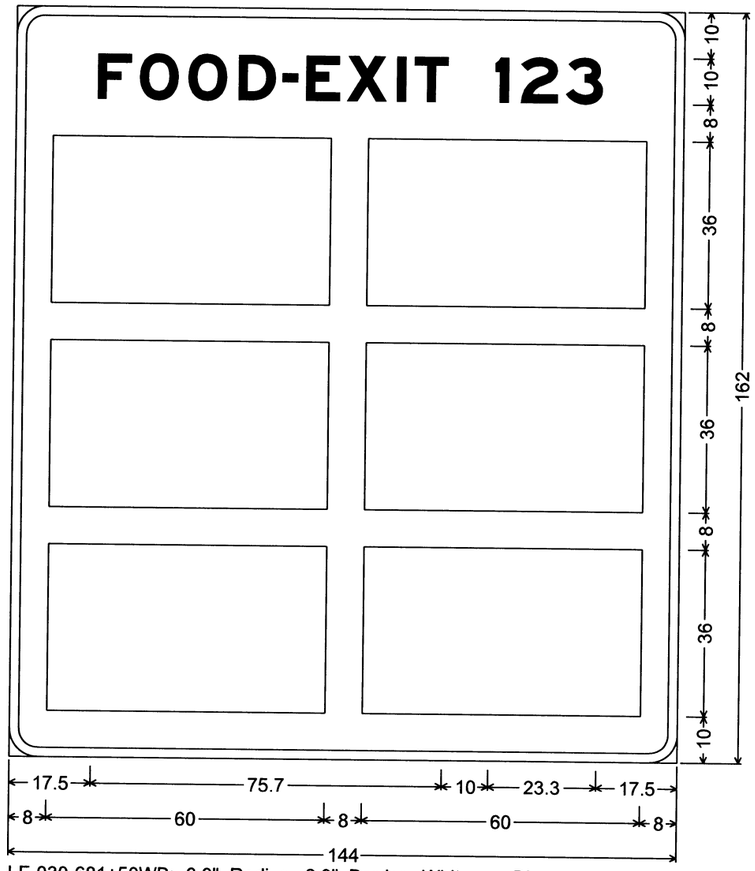
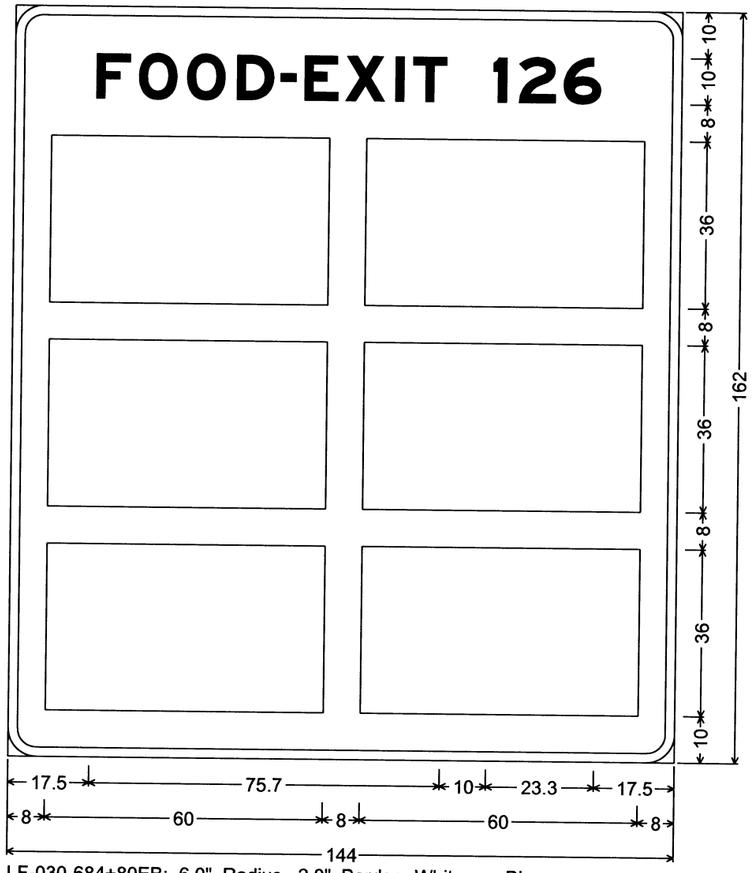
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	63	125

(2) SIGN LAYOUT SHEET



LF-030-681+50WB; 6.0" Radius, 2.0" Border, White on Blue;
[FOOD-EXIT 123] E Mod 2K;



LF-030-684+80EB; 6.0" Radius, 2.0" Border, White on Blue;
[FOOD-EXIT 123] E Mod 2K;

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061474	64	125

(2) SIGN PLACEMENT SHEET

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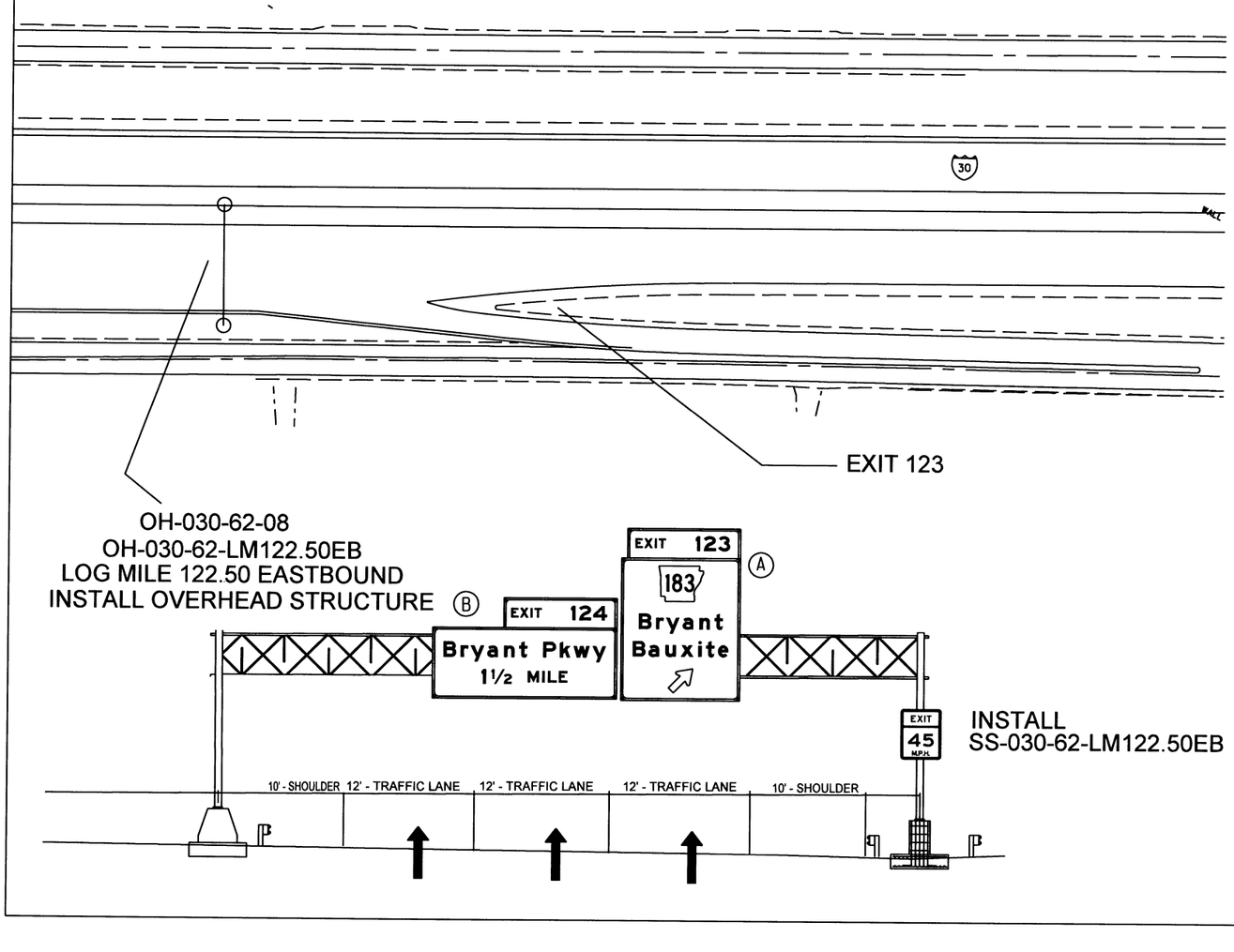
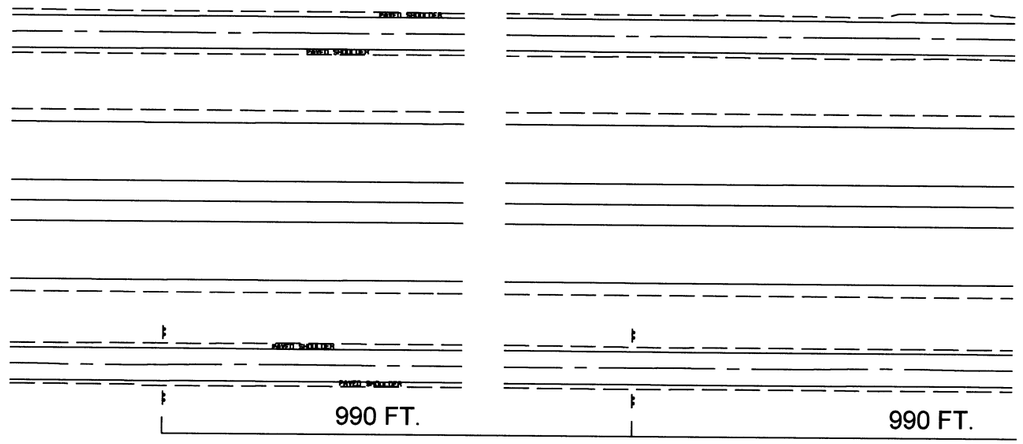
JOSEPH A. SARTINI





LOG MILE 122.50 / STA. 629+00 TO STA. 645+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061474	65	125

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
10/3/14
JOSEPH A. SARTINI

INSTALL
LG-030-647+00WB

GAS-EXIT 123

REPLACE
SS-SR-650+00WB-A/B

REPLACE
SS-SR-656+00WB-A/B

LEFT LANE ENDS

PARKING

PARKING

PARKING

P.I. 649+27.97

650

655

P.T. 657+15.45

P.T. 657+91.84

660

REPLACE
SS-SR-646+10WB

ONE WAY

REPLACE
SS-SR-651+90WB

ONE WAY

REPLACE
SS-SR-654+10WB

ONE WAY

WALL

WALL

PAVED SHOULDER

PAVED SHOULDER

P.I. 657+58.65

PAVED SHOULDER

EARTH SHOULDER

PAVED SHOULDER

P.I. 645+00.00

REMOVE SPEED LIMIT 70

990 FT.

BEGIN TAPER 648+44.83

INSTALL
SS-SR-652+00EB-A/B

DO NOT ENTER

Ⓑ EXIT 126
111
Alexander Rd
1¾ MILE

Ⓐ EXIT 124
Bryant Pkwy

OH-030-62-09
OH-030-62-STA654+00EB
STA. 654+00 EASTBOUND
INSTALL OVERHEAD STRUCTURE

EXIT 45 M.P.H.

INSTALL
SS-030-60-STA654+00EB

10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 10' - SHOULDER

STA. 645+00 TO STA. 660+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	66	125

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
8-2-16
JOSEPH A. SARTINI

INSTALL
SS-SR-661+90WB-A/B
REMOVE EXISTING

REMOVE
EXIT 123 MILE SIGN

REMOVE
LOGO SIGN

INSTALL
SS-SR-671+50WB-A/B
BACK TO BACK

REMOVE
SPEED LIMIT 55

REPLACE
SS-SR-660+10WB

REPLACE
SS-SR-661+50WB

REPLACE
SS-SR-663+00WB

REPLACE
SS-SR-667+10WB

REPLACE
SS-SR-670+10WB

REPLACE
SS-SR-672+50WB

REPLACE
SS-SR-667+10EB

REPLACE
SS-SR-671+40EB

INSTALL
SS-SR-670+00EB-A/B

INSTALL
EX-030-661+50EB

REPLACE
SS-SR-674+00EB

INSTALL
SS-SR-674+00EB

P.C. 661+73.17
P.I. 661+90.24
P.T. 662+57.23
P.I. 666+00.00
P.C. 670+09.86
P.I. 670+46.86
P.I. 670+83.84
P.I. 670+02.56

660 665 670 675

I30 Frontage RD
PAVED PARKING
PARKING
PAVED SHOULDER
WALL
PAINTED TREE VINTAGE MARKET
TROPF LN
ROYMOR RD
Bryant Pkwy

STA. 660+00 TO STA. 675+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	67	125

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
6-2-16
JOSEPH A. SARTINI

INSTALL
SS-SR-675+00WB

REPLACE
GM-030-675+00WB

INSTALL
SS-SR-678+80WB

INSTALL
SS-SR-680+10WB

REPLACE
LF-030-681+50WB

INSTALL
SS-SR-682+00WB-A/B
REMOVE EXISTING

REMOVE EXIT 123
1 MILE SIGN

INSTALL
SS-SR-688+00WB
REMOVE EXISTING

REPLACE
SS-SR-678+70WB

REPLACE
SS-SR-678+60EB

INSTALL
SS-SR-675+00EB-A/B

INSTALL
SS-SR-677+10EB

INSTALL
SS-SR-678+50EB

INSTALL
LF-030-684+80EB
REMOVE EXISTING

STA. 675+00 TO STA. 690+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	68	125
				(2)	SIGN PLACEMENT SHEET			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
8-2-16
JOSEPH A. SARTINI

REPLACE
LL-030-696+00WB

LODGING-EXIT 123

690 695 700 705

SIGN

P.I. 698+53.05

P.C. 699+68.12

P.T. 700+44.10

P.I. 700+06.71

P.I. 704+50.00

WALL

Little Rock
30 EAST ALTERNATE

INSTALL
SS-SR-691+00EB

GAS-EXIT 126

INSTALL
LG-030-691+00EB
REMOVE EXISTING

INSTALL
SS-SR-699+00EB-A/B

DO NOT ENTER

INSTALL
SS-SR-701+00EB-A/B

INSTALL
SS-030-703+00EB

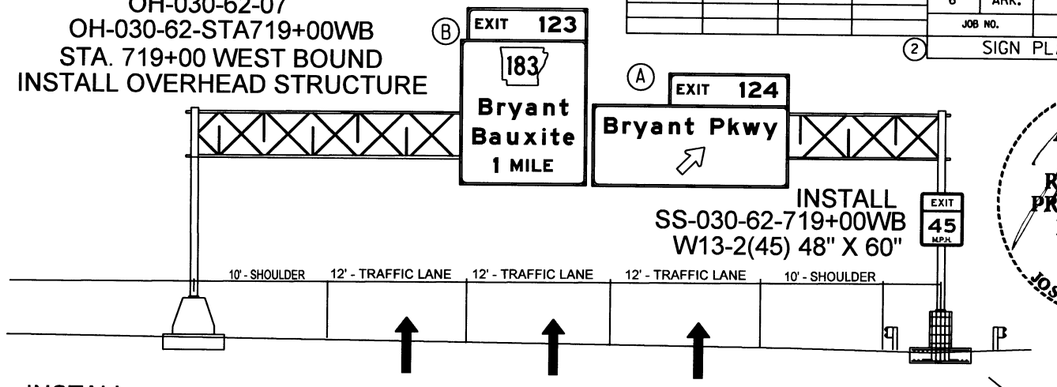
REMOVE EXIT 126 1 MILE SIGN

STA. 690+00 TO STA. 705+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	69	125

(2) SIGN PLACEMENT SHEET

OH-030-62-07
OH-030-62-STA719+00WB
STA. 719+00 WEST BOUND
INSTALL OVERHEAD STRUCTURE



INSTALL
SS-030-62-719+00WB
W13-2(45) 48" X 60"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
10/3/16
JOSEPH A. SARTINI

INSTALL
EX-030-60-712+40WB

EXIT 124

PAVED PARKING

GATE

REPLACE
SS-SR-705+00WB

REPLACE
SS-SR-715+00WB

705 710 715 720

P.I. 711+61.91
P.C. 710+66.32
P.T. 712+57.33
P.C. 715+86.61
P.T. 717+76.89
P.I. 720+34.53
P.I. 715+07.78
P.I. 716+81.83

WALL

PAVED SHOULDER
CONCRETE

REPLACE
SS-SR-714+70EB

REPLACE
SS-SR-717+80EB

REPLACE
SS-SR-719+30EB

P.C. 714+69.58
P.T. 715+45.97

SIGN

INSTALL
SS-SR-707+50EB

REPLACE
SS-SR-714+00EB

REPLACE
SS-SR-716+50EB

MILLBROOK DR.

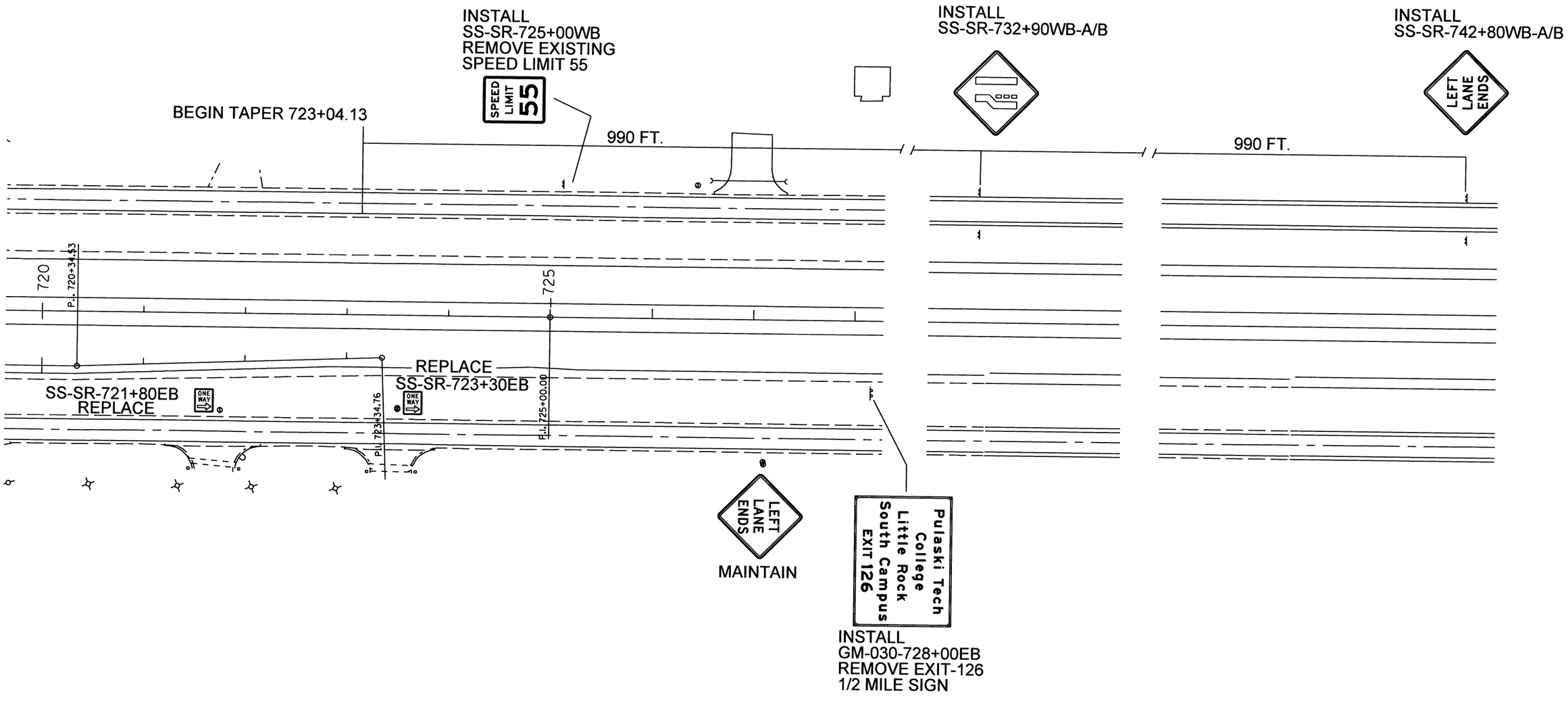
REPLACE
SS-SR-721+90EB

REMOVE PULASKI TECH SIGN

STA. 705+00 TO STA. 720+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	70	125
				(2)	SIGN PLACEMENT SHEET			

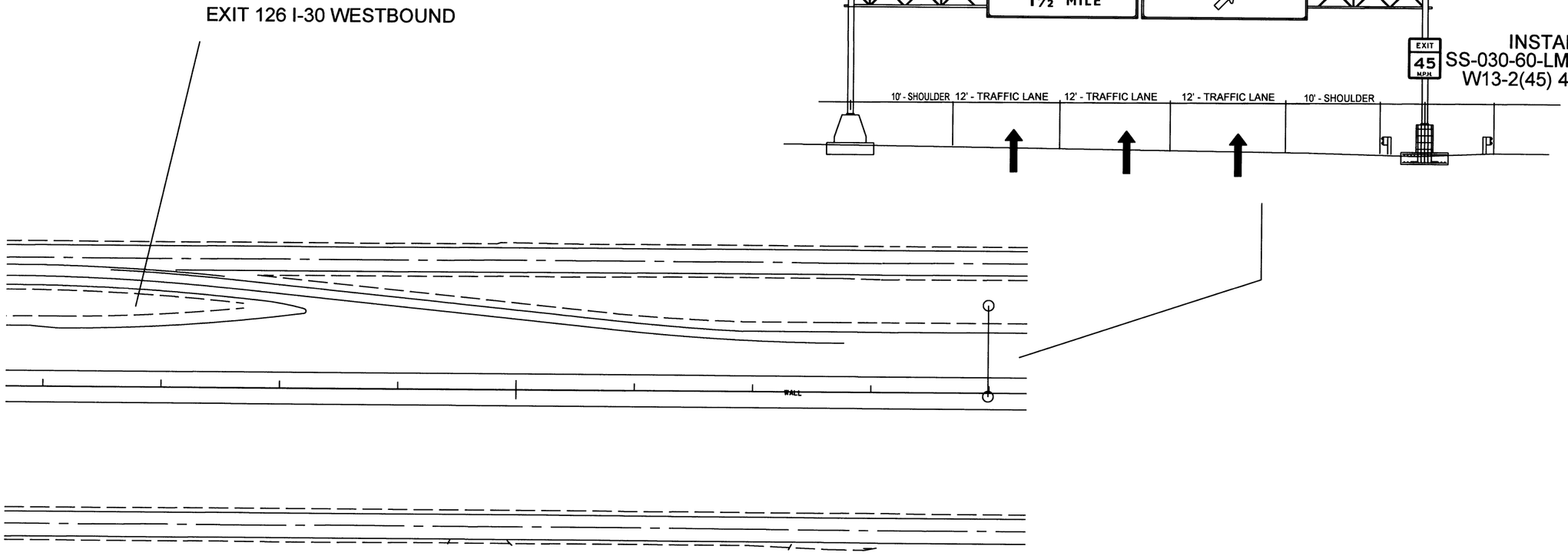
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
8-2-16
JOSEPH A. SARTINI



STA. 720+00 TO STA. 743+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	71	125
				(2)	SIGN PLACEMENT SHEET			

OH-030-60-63
OH-030-60-LM126.90WB
LOG MILE 126.90 WESTBOUND
INSTALL OVERHEAD STRUCTURE
REMOVE EXISTING CANTILEVER LOG MILE 126.88



INSTALL
SS-030-60-LM126.90WB
W13-2(45) 48" X 60"

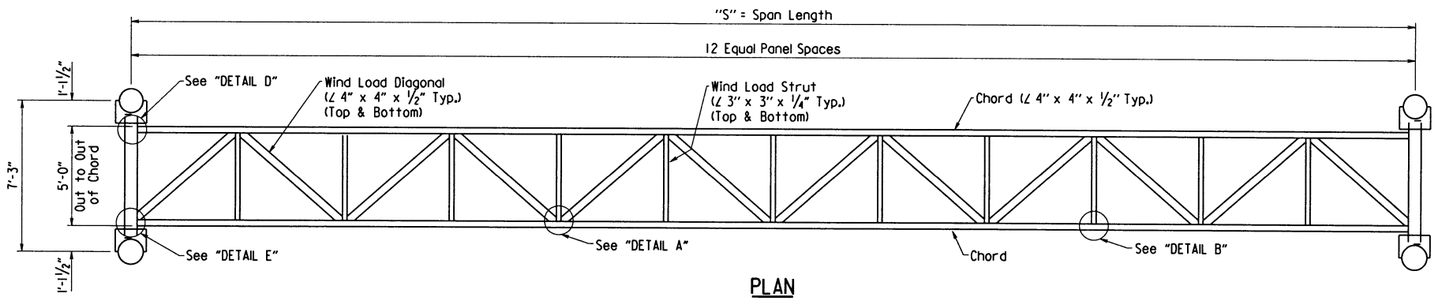
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
10/3/16
JOSEPH A. SARTINI

LOG MILE 126.88

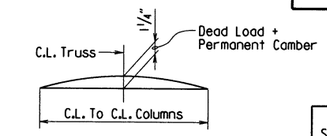
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	72	125
				① SEE TABLE		OVERHEAD SIGN STR.		55686

Notes:
For "View A-A - Foundation A", see Sheet 2 of 5.

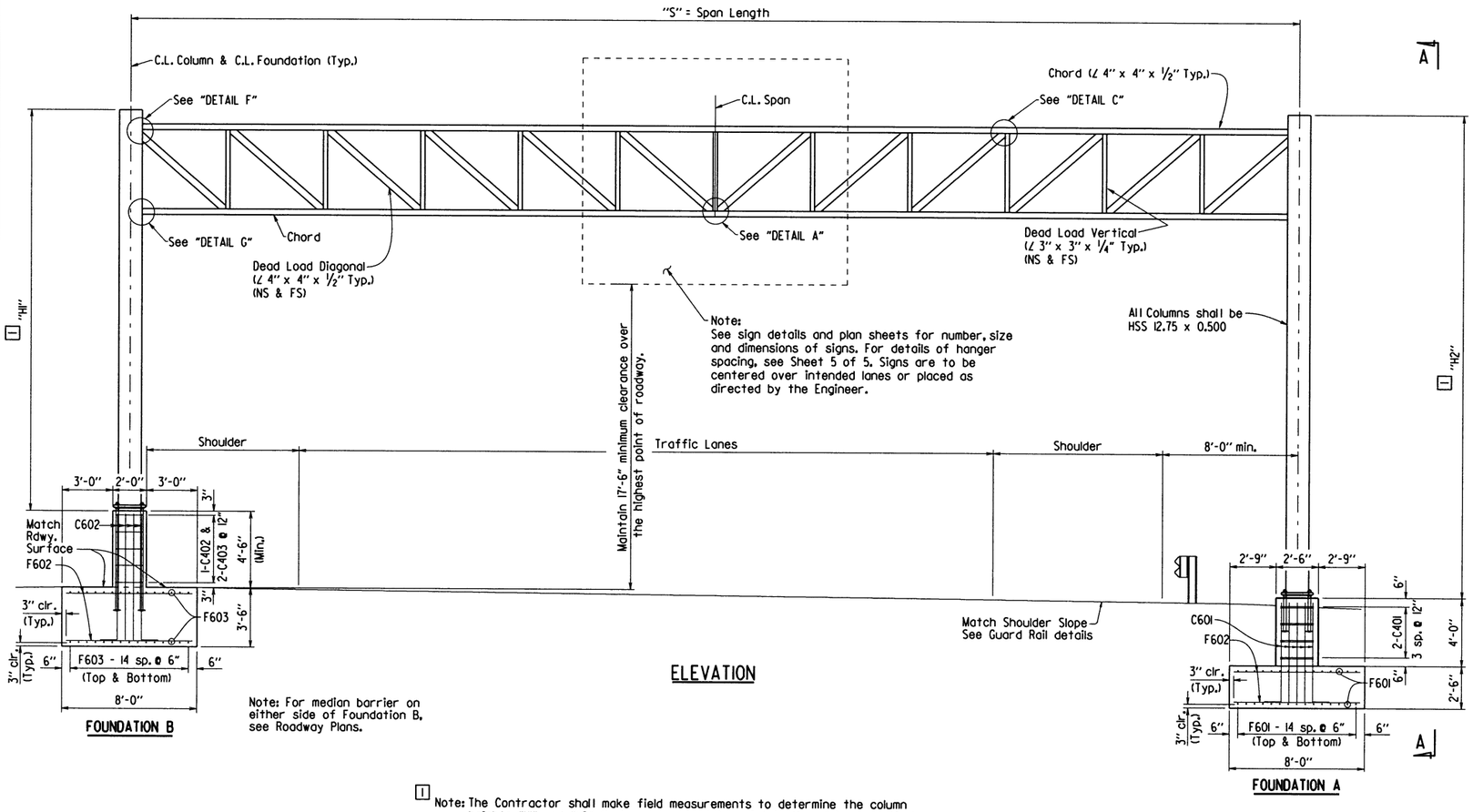
For "DETAIL A" thru "DETAIL G" and "View A-A - Foundation B", see Sheet 3 of 5.



PLAN



TRUSS CAMBER DIAGRAM



ELEVATION

① Note: The Contractor shall make field measurements to determine the column heights "H1" and "H2" that are required to maintain the minimum vertical clearance with the centerline of the sign located at the centerline of the truss. These column heights shall be shown on the shop drawings with a note stating that the Contractor has made the required field measurements. If the structure height ("H1" or "H2") exceeds 30'-0" contact the Engineer. The Contractor shall also verify that the variable span length (55'-0" to 69'-0") is sufficient to meet the minimum clearances and to fit the new structure to the existing and/or proposed conditions.

TABLE OF VARIABLES

SIGN STRUCTURE	SPAN LENGTH "S"	FOUNDATION	
		MEDIAN	OUTSIDE SHOULDER
OH-030-60-63	67'-0"	B	A
OH-030-62-07	67'-0"	B	A
OH-030-62-08	67'-0"	B	A
OH-030-62-09	67'-0"	B	A

TABULAR DATA BY: JYP DATE: 7-22-16
CHECKED BY: ACP DATE: 9-21-16

BAR LIST-FOUNDATION A

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
				Dimensions are out to out of bars.
C401	8	17'-2"	3"	6'-3", 2'-1", 5" (Typ.), 45°, C401
C601	46	6'-9"	4½"	5'-11", 12", C601
F601	30	16'-6"	Str.	
F602	66	7'-6"	Str.	

BAR LIST-FOUNDATION B

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
				Dimensions are out to out of bars.
C402	5	25'-2"	3"	10'-9", 1'-7", 5" (Typ.), 45°, C402
C403	10	18'-2"	3"	7'-3", 1'-7", 5" (Typ.), 45°, C403
C602	76	8'-3"	4½"	7'-5", 12", C602
F602	70	7'-6"	Str.	
F603	30	17'-6"	Str.	

APPROXIMATE QUANTITIES FOR FOUNDATION (FOR INFORMATION ONLY)

STRUCTURE	CLASS S CONCRETE (CU. YDS.)	REINFORCING STEEL (LBS.)	EXCAVATION (CU. YDS.)
FOUNDATION A	16.30	2,045	49
FOUNDATION B	24.67	2,724	30

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-26-16
CHARLES R. ELLIS
BRIDGE ENGINEER

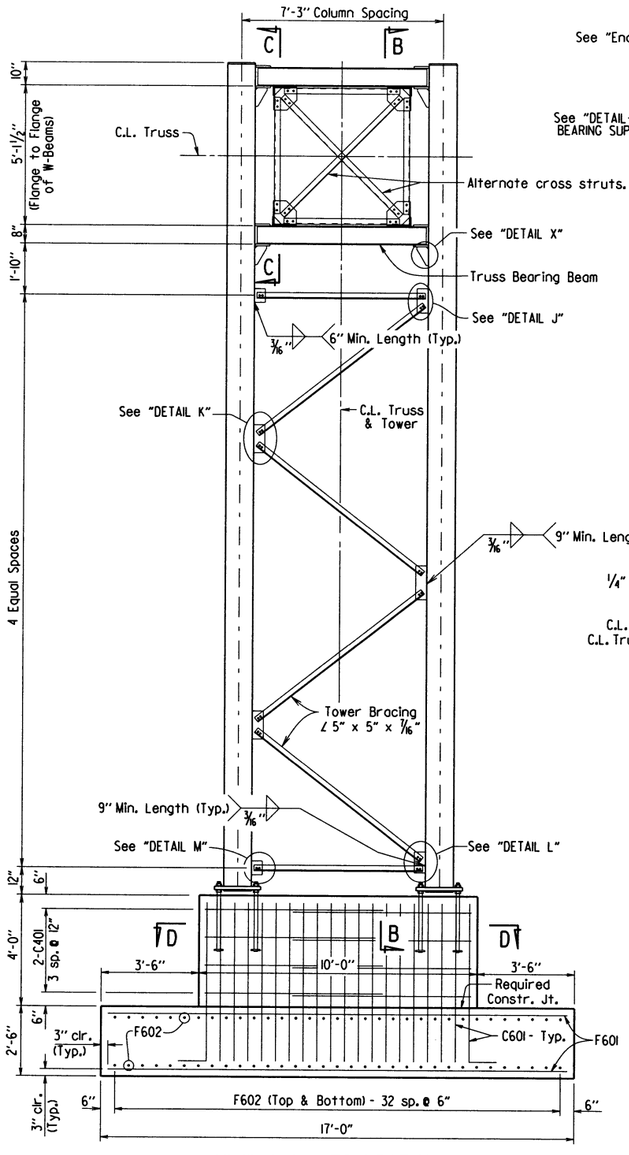
SHEET 1 OF 5
DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURE

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

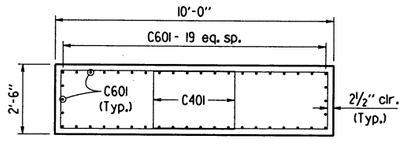
DRAWN BY: A.M.S. DATE: 7/24/15 FILENAME: OH Sign 55-69.dgn
CHECKED BY: ACP DATE: 4/8/16 SCALE: No Scale
DESIGNED BY: TMG DATE: 9/15
STR. NO. SEE TABLE DRAWING NO. 55686

PRINT DATE: 9/21/2016

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.		061474	73	125
				① SEE TABLE		OVERHEAD SIGN STR.		55687

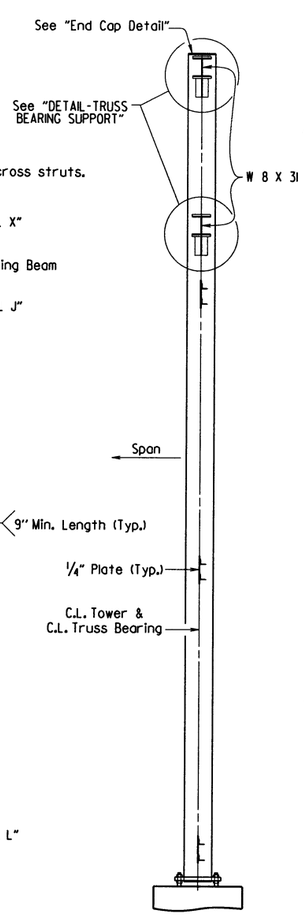


VIEW A-A - FOUNDATION A

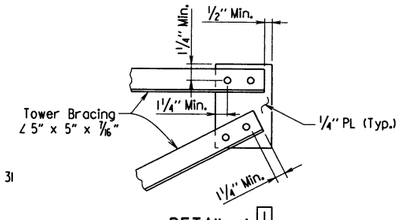


SECTION D-D

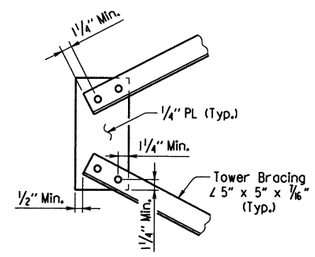
Note: For details of "View A-A - Foundation B", see Sheet 3 of 5.



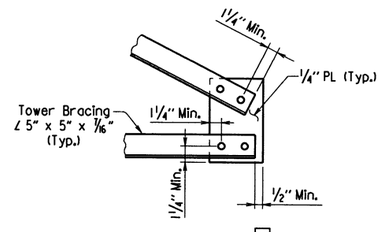
VIEW B-B



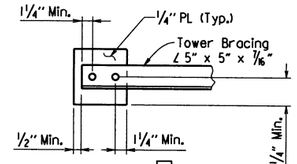
DETAIL J [1]



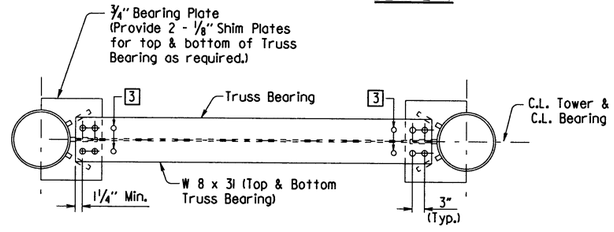
DETAIL K [1]



DETAIL L [1]



DETAIL M [1]

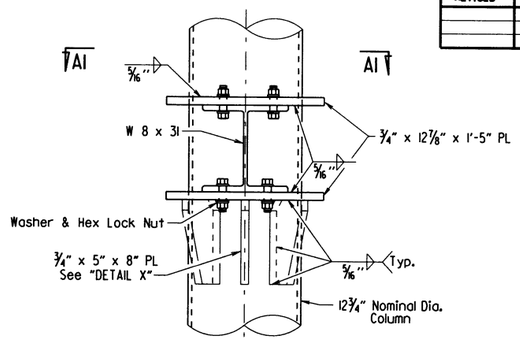


PLAN AT TRUSS BEARING

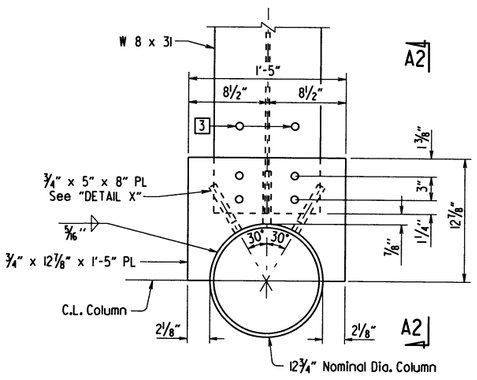
[1] Bolts shall be ¾" ø and open holes shall be 13/16". Minimum center to center bolt spacing shall be 2½". Dimensions shown are typical.

[2] 11/16" x 2" Slotted Hole in Gusset Plate and Chord Angle. Use plate washer on Gusset plate side. 11/16" ø holes in ¾" shim plate and beam flange.

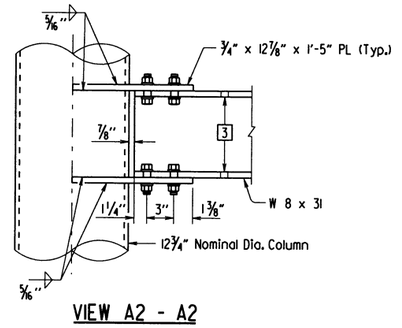
[3] 11/16" ø holes at top and bottom flanges of W 8 x 31.



DETAIL - TRUSS BEARING SUPPORT

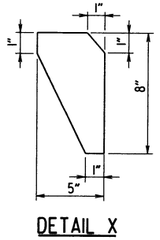


VIEW A1 - A1

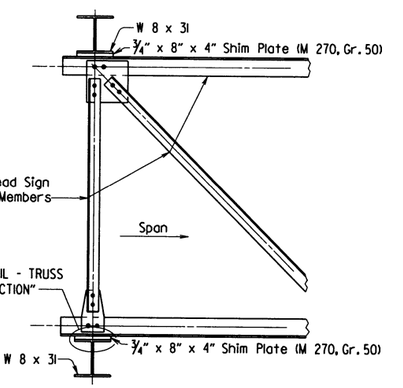


VIEW A2 - A2

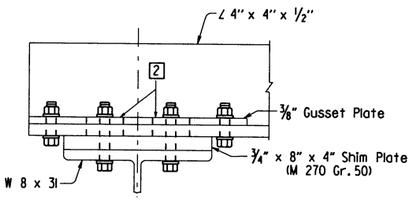
¾" x 5" x 8" Plate not shown for clarity



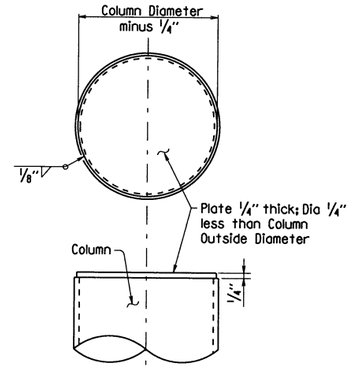
DETAIL X



VIEW C-C



DETAIL - TRUSS CONNECTION



END CAP DETAIL

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-28-16
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF 55' - 69'
STEEL OVERHEAD SIGN STRUCTURE

ROUTE SEC.

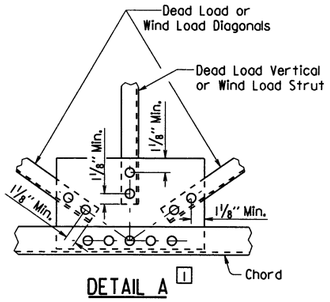
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	A.M.S.	DATE:	7/24/15	FILENAME:	OH Sign 55-69.dgn
CHECKED BY:	ACP	DATE:	4/8/16	SCALE:	No Scale
DESIGNED BY:	TMG	DATE:	9/15		

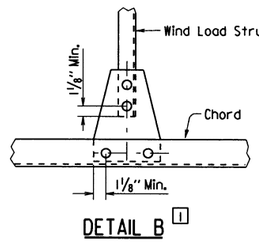
STR. NO. SEE TABLE DRAWING NO. 55687

PRINT DATE: 9/21/2016

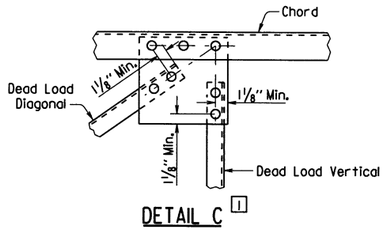
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	74	125
				① SEE TABLE		OVERHEAD SIGN STR.		55688



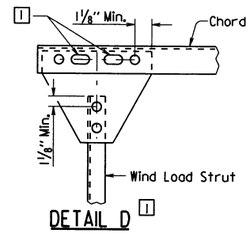
DETAIL A [1]



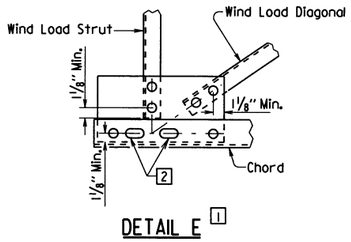
DETAIL B [1]



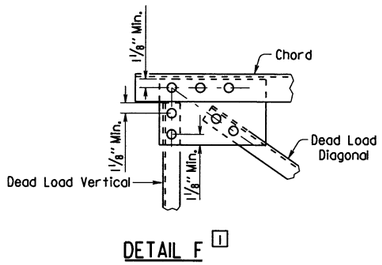
DETAIL C [1]



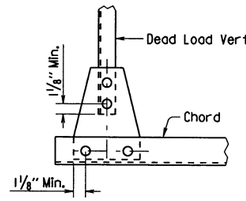
DETAIL D [1]



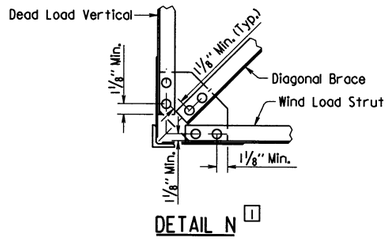
DETAIL E [1]



DETAIL F [1]

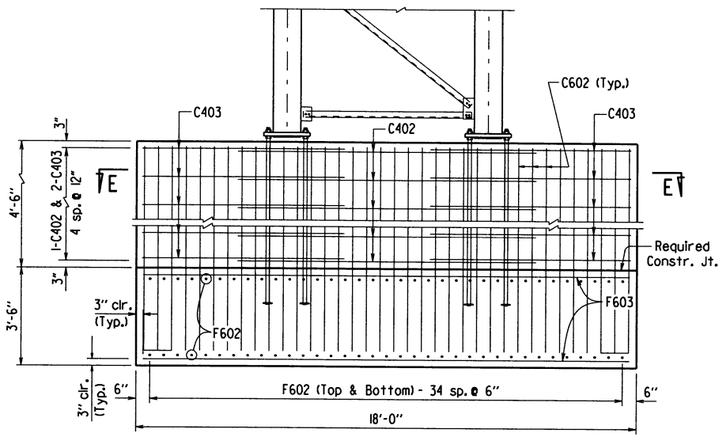


DETAIL G [1]

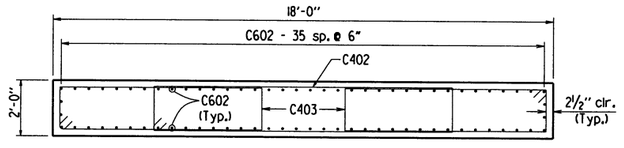


DETAIL N [1]

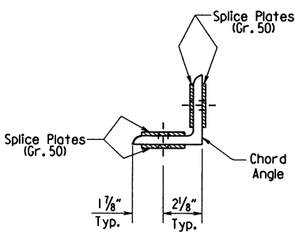
Note:
For details of column not shown, see "View A-A - Foundation A" on Sheet 2 of 5.



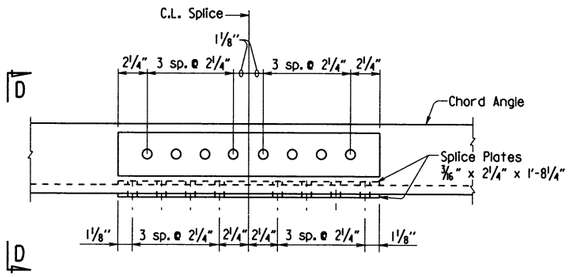
VIEW A-A - FOUNDATION B



SECTION E-E

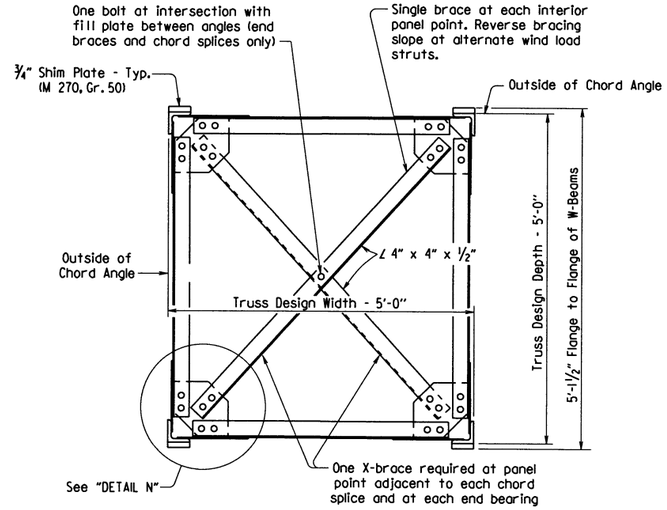


VIEW D-D



Note: Chord angles may be spliced in convenient lengths for galvanizing and sign placement.

CHORD SPLICE



TRUSS SECTION

Note: Unless otherwise noted, thickness of all Gusset Plates shall be ⅜".

[1] Dimensions shown are typical.

[2] 11/16" x 2" Slotted Holes in Gusset Plate and Chord Angle. Use plate washer on Gusset Plate side. 11/16" ø holes in ¾" shim plate and beam flange.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-26-16
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS OF 55' TO 69' STEEL OVERHEAD SIGN STRUCTURES

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

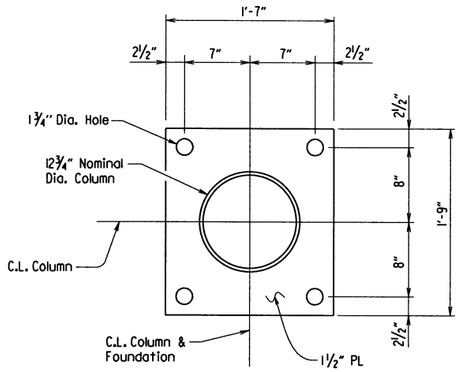
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 7/24/15 FILENAME: OH Sign 55-69.dgn
CHECKED BY: ACP DATE: 4/8/16 SCALE: No Scale
DESIGNED BY: TMG DATE: 9/15

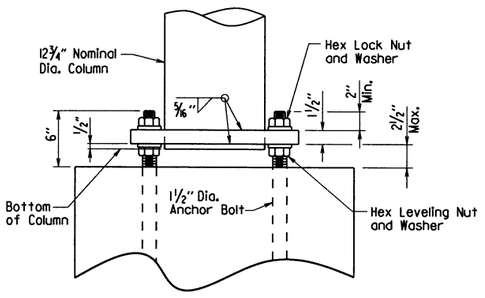
STR. NO. SEE TABLE DRAWING NO. 55688

PRINT DATE: 9/21/2016

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.		061474	95	125
				① SEE TABLE		OVERHEAD SIGN STR.		55689

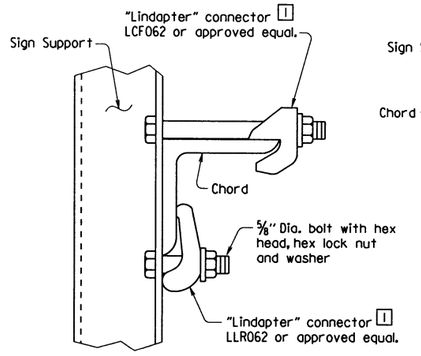


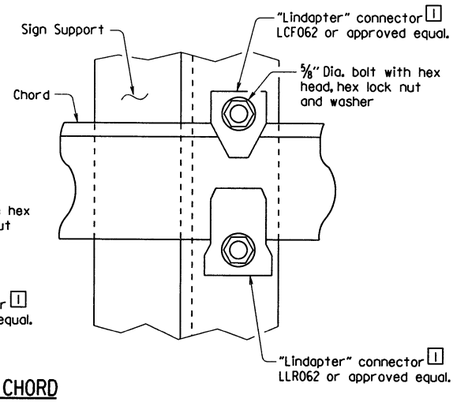
PLAN - COLUMN BASE



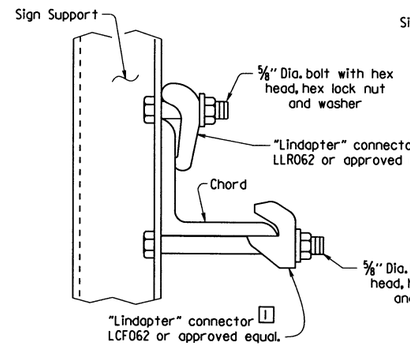
Note: Diameter of hole in base plate to be 1/8" larger than column diameter.

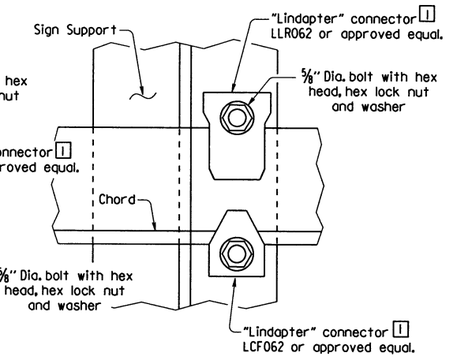
ELEVATION - COLUMN BASE





TOP CHORD



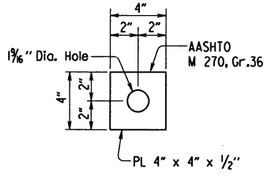


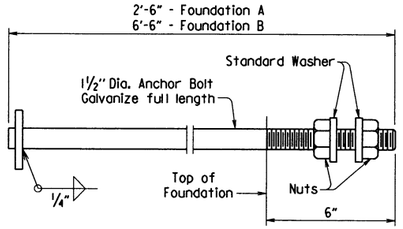
BOTTOM CHORD

[1] All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

Note: Install all support connectors clear of the gusset plates and splice locations.

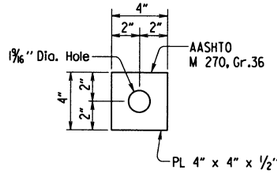
DETAILS OF SIGN SUPPORT CONNECTION TO TRUSS

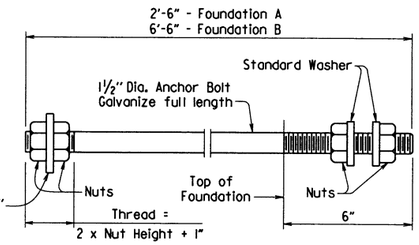




Anchor bolts shall comply with AASHTO M 314, Grade 55 with Supplementary Requirement S1, and galvanized according to Subsection 807.07. Nuts for bolts shall be as specified in Subsection 807.07.

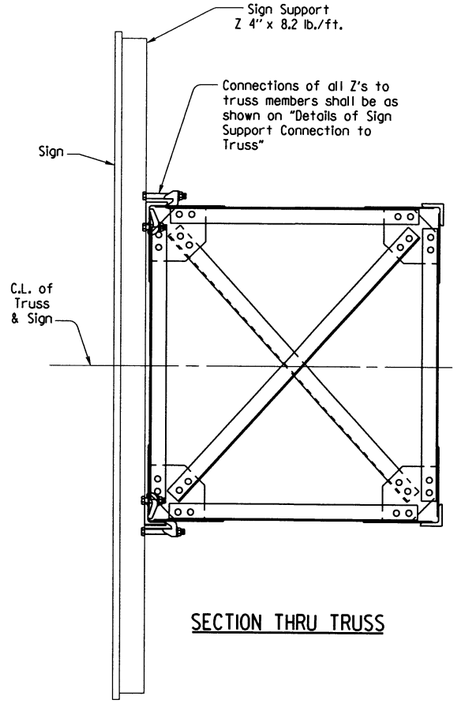
ANCHOR BOLT DETAIL



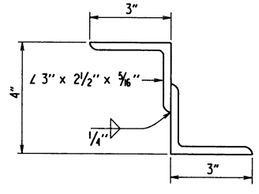


Anchor bolts shall comply with AASHTO M 314, Grade 55 with Supplementary Requirement S1, and galvanized according to Subsection 807.07. Nuts for bolts shall be as specified in Subsection 807.07.

ALTERNATE ANCHOR BOLT DETAIL



SECTION THRU TRUSS



NOTE: Structural Z support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SUPPORT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-26-16
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS OF 55' - 69'
STEEL OVERHEAD SIGN STRUCTURE

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 7/24/15
CHECKED BY: ACP DATE: 4/8/16
DESIGNED BY: TMG DATE: 9/15
FILENAME: OH Sign 55-69.dgn
SCALE: No Scale

STR. NO. SEE TABLE DRAWING NO. 55689

PRINT DATE: 9/21/2016

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.		061474	76	125
				(1) SEE TABLE		OVERHEAD SIGN STR.		55690

GENERAL NOTES:

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 Specifications unless otherwise noted in the plans.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, Sixth Edition, 2013 with current interim revisions.

Basic Wind Speed = 90 mph.
Fatigue Category: I

This structure is approved for a maximum sign area equal to 75% of the span length times a sign height of 15 feet. Use of additional sign area must be approved by the Engineer. If the structure height ("H1" or "H2") exceeds 30'-0" contact the Engineer.

FOUNDATION MATERIALS AND STRENGTHS:
Class S Concrete f'c = 3,500 psi
Reinforcing Steel (Gr. 60, AASHTO M 31 or M 322, Type A) fy = 60,000 psi

Structural steel sign support members shall comply with the following specifications:

Angles:	AASHTO M 270, Grade 36 (Fy = 36,000 psi)
Plate, W-Section:	AASHTO M 270, Grade 50 (Fy = 50,000 psi)
(1) Pipe:	ASTM A139, Gr. C, straight-seam welded (Fy = 42,000 psi), ASTM A500, Gr. B (Fy = 42,000 psi), ASTM A501, Gr. B (Fy = 50,000 psi), ASTM A714, Class 2, Grade II, Type E or S (Fy = 50,000 psi)
Z-Shapes:	AASHTO M 270, Grade 36 (Fy = 36,000 psi)
Shim Plates:	ASTM A1011, SS, Grade 36, Type 2, or Grade 40
Bolts:	ASTM A325, Type 1
Locknuts - Approved Type:	Meeting or exceeding AASHTO M 292
Washers:	ASTM F436
Nuts:	ASTM A563 or AASHTO M 292, Grade DH or Grade 2H

The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and to fit the new structure to the existing conditions.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, 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. Shapes and materials shown in the plans will be the basis of payment and no additional compensation will be made for any adjustments due to substitutions.

All steel shall be galvanized according to Subsection 807.19. Steel completely encased in concrete may not be galvanized. Galvanized coating damaged during transport, handling or erection shall be field repaired in accordance with Subsection 807.88.

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-Notch test specified for Zone 1 minimum service temperature. This work and materials shall be paid for in accordance with Job Special Provision "Steel Sign Structures".

Field splices shall be located in order to avoid sign panel connections. There shall be a maximum of two field splices and they shall be spaced a minimum of 15 feet apart.

Truss field sections shall be shop assembled. Entire truss shall be fully assembled and lifted into place as one unit on to tower supports. All truss member connections shall be bolted connections.

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 temporary or permanent, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to Subsection 807.26 except welding of tubular sections shall conform to AWS D1.1 Structural Welding Code.

No circumferential butt welds will be allowed in any pipe sections.

All fillet welds of critical members shall be tested according to AWS D1.1 Structural Welding Code - Steel using the magnetic particle method. Critical welds shall include: column to base plate and truss bottom support to column.

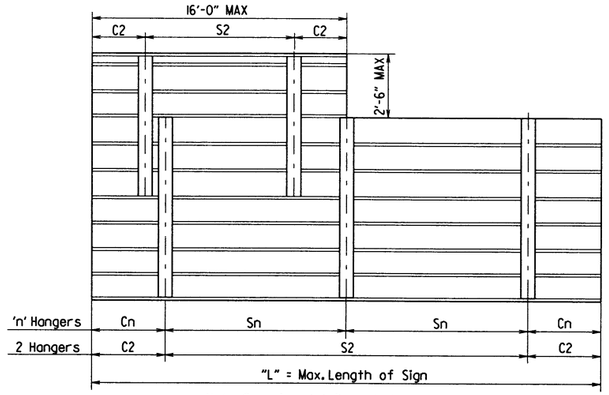
Connections shall be bolted with high-strength bolts. Unless otherwise noted, bolts shall be ⅞" diameter and open holes shall be 15/16". Bolt spacing shall be 2¼" for ⅞" diameter bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of all members.

All truss frame bolts shall comply with ASTM A325 Type 1, galvanized according to Subsection 807.06. Nuts and washers for ASTM A325 Type 1 bolts shall be furnished and galvanized in accordance with Subsection 807.06.

Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Lock nuts to be installed according to manufacturer's recommendations.

Anchor bolts shall comply with AASHTO M 314, Grade 55 including Supplementary Requirement S1, and galvanized according to Subsection 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with Subsection 807.07.

Shoring may be required to protect existing shoulders during excavation. Any shoring required shall not be paid for directly, but shall be considered incidental to the item "Steel Sign Structure". The excavations for the footings shall be backfilled before the structure is attached to the foundations.



Note: See sign details and plan sheets for number, size and dimensions of signs.

HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

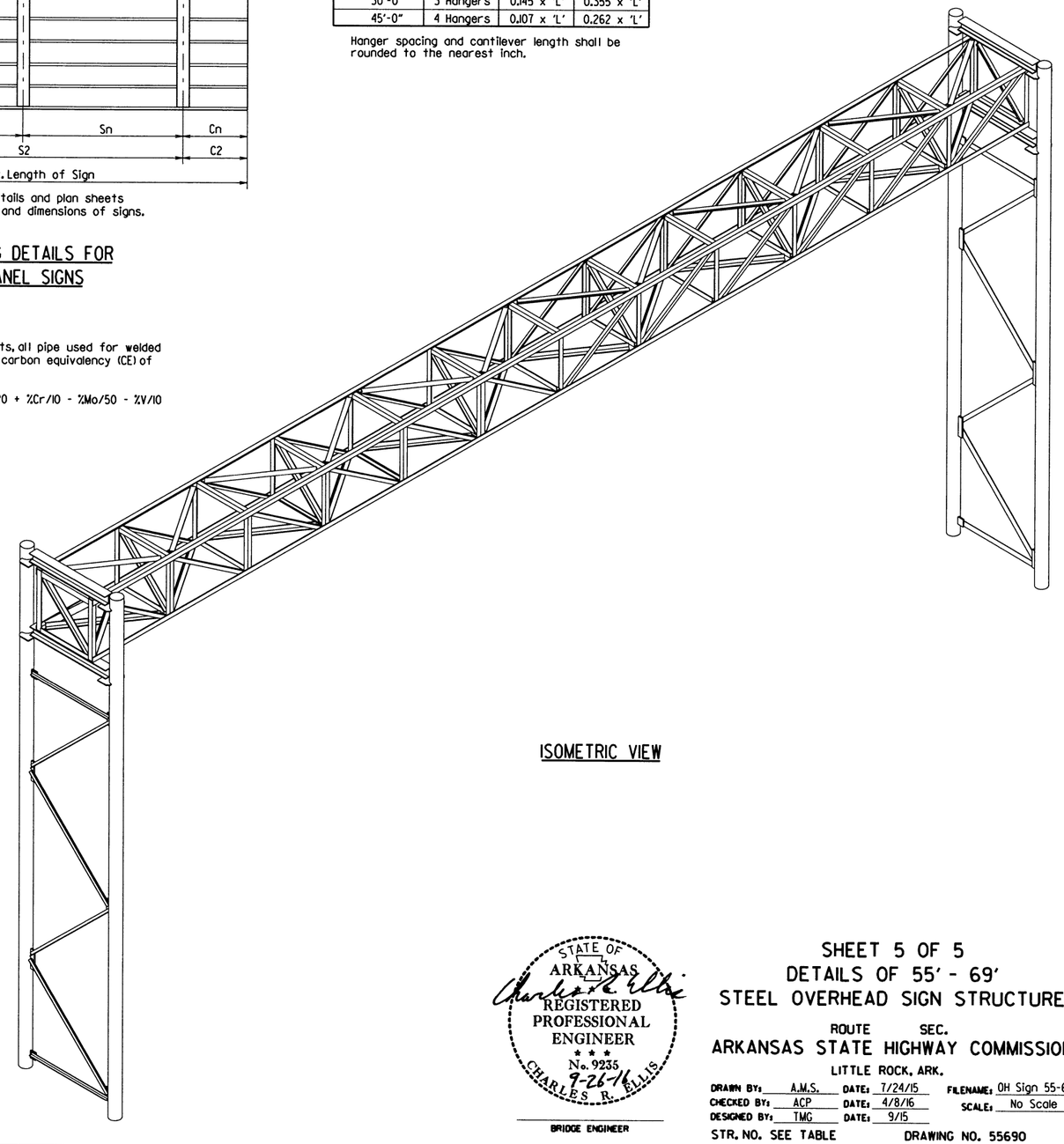
(1) In addition to material requirements, all pipe used for welded applications shall have a maximum carbon equivalency (CE) of 0.4 using the following equation:

CE = %C + %Mn/6 + %Cu/40 + %Ni/20 + %Cr/10 - %Mo/50 - %V/10

HANGER VARIABLES

Max. Length of Sign = "L"	"n" Hangers	Cantilever Length "Cn"	Hanger Spacing 'Sn'
15'-0"	2 Hangers	0.21 x 'L'	0.58 x 'L'
30'-0"	3 Hangers	0.145 x 'L'	0.355 x 'L'
45'-0"	4 Hangers	0.107 x 'L'	0.262 x 'L'

Hanger spacing and cantilever length shall be rounded to the nearest inch.



ISOMETRIC VIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-26-16
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF 55' - 69'
STEEL OVERHEAD SIGN STRUCTURE

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 7/24/15
CHECKED BY: ACP DATE: 4/8/16
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FILENAME: OH Sign 55-69.dgn
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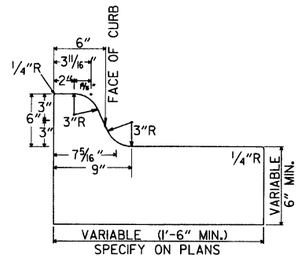
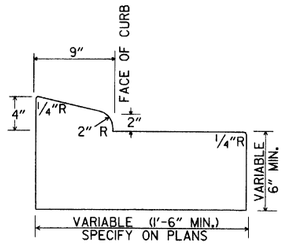
STR. NO. SEE TABLE DRAWING NO. 55690

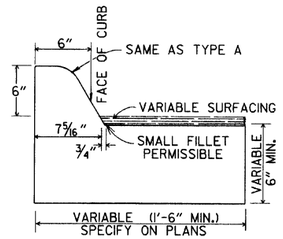
PRINT DATE: 9/21/2016



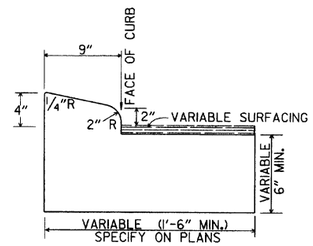
TYPE A



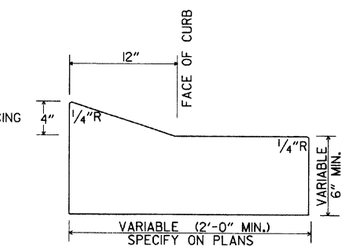
TYPE B-1



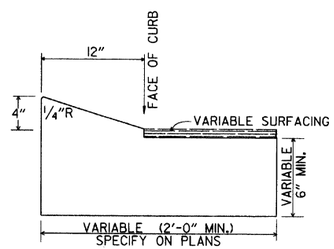
TYPE C



TYPE B-2

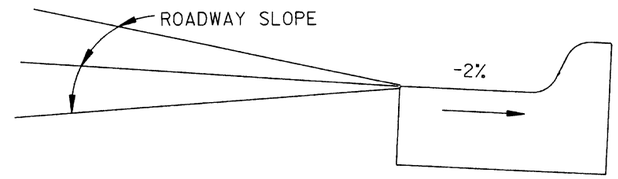


TYPE E-1



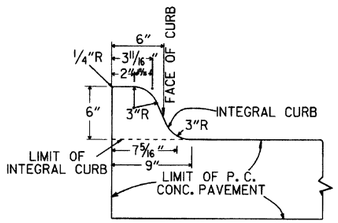
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

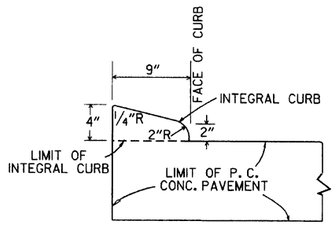


DETAIL OF GUTTER SLOPE

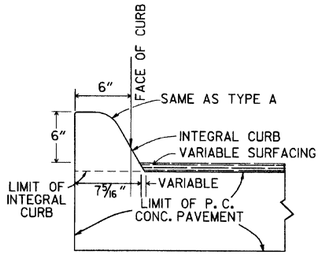
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

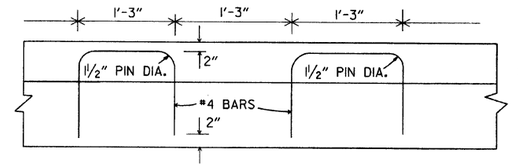


TYPE B

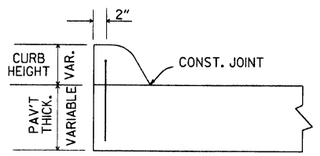


TYPE C

INTEGRAL CURB

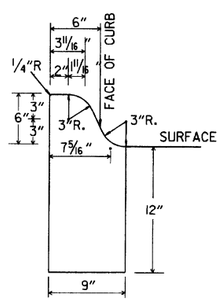


LONGITUDINAL SECTION

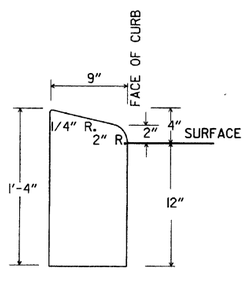


ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



TYPE A



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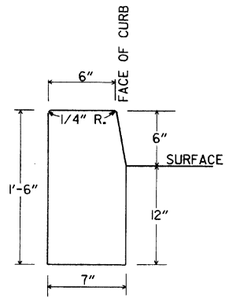
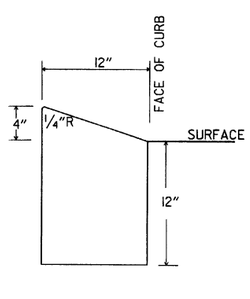
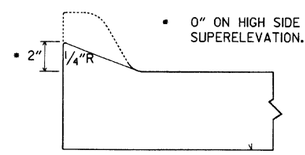


TYPE D



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.

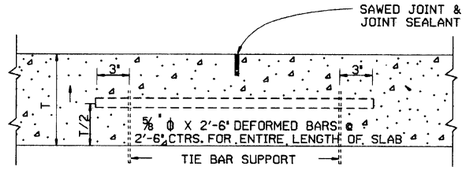
DETAILS OF MODIFIED CURB

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

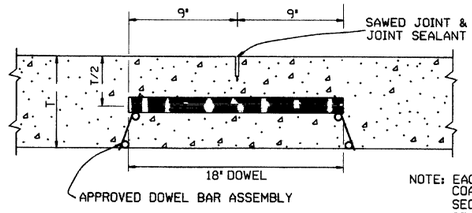
CURBING DETAILS

STANDARD DRAWING CG-1



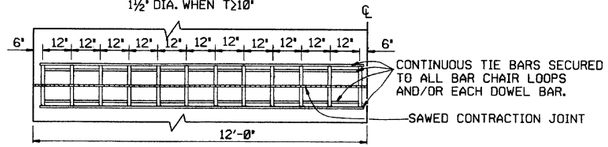
LONGITUDINAL JOINT

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.

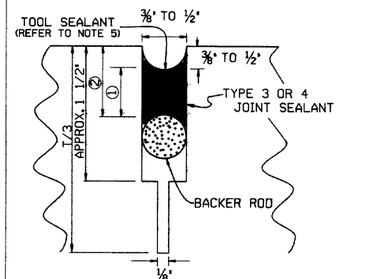
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



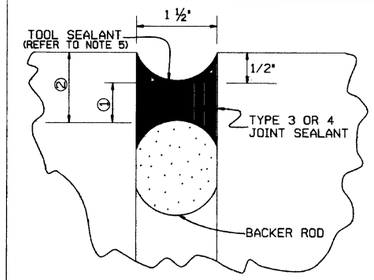
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

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



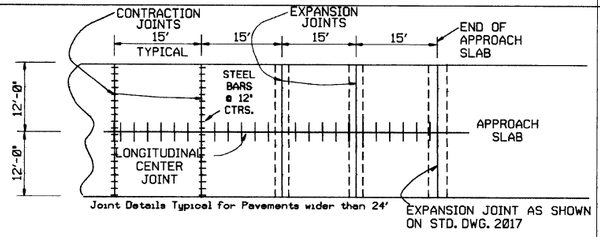
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

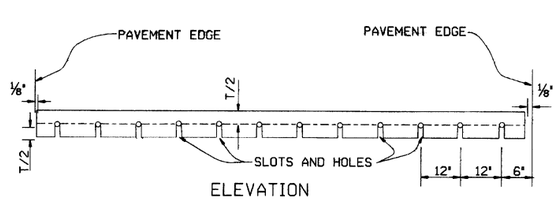
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	⅜	¾	½
¾	⅜	⅞	⅝
⅞	⅜	1	⅝
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	¾	¾
⅜	¾	½	1

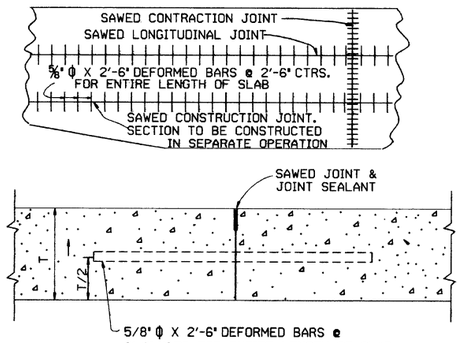


PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



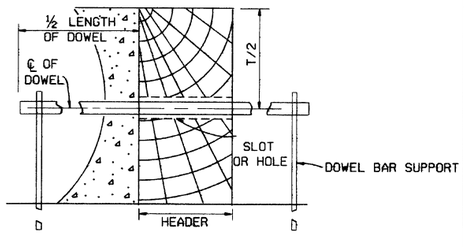
ELEVATION

NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.



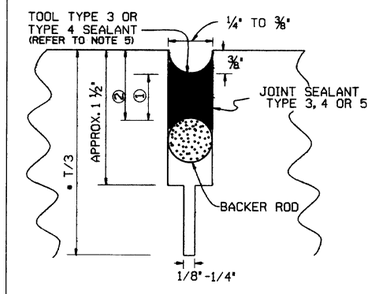
NOTE: TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

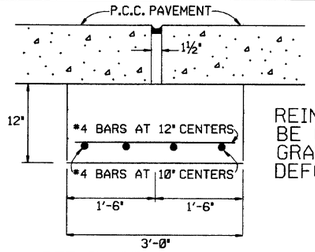
TRANSVERSE CONSTRUCTION JOINT



•NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
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



REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

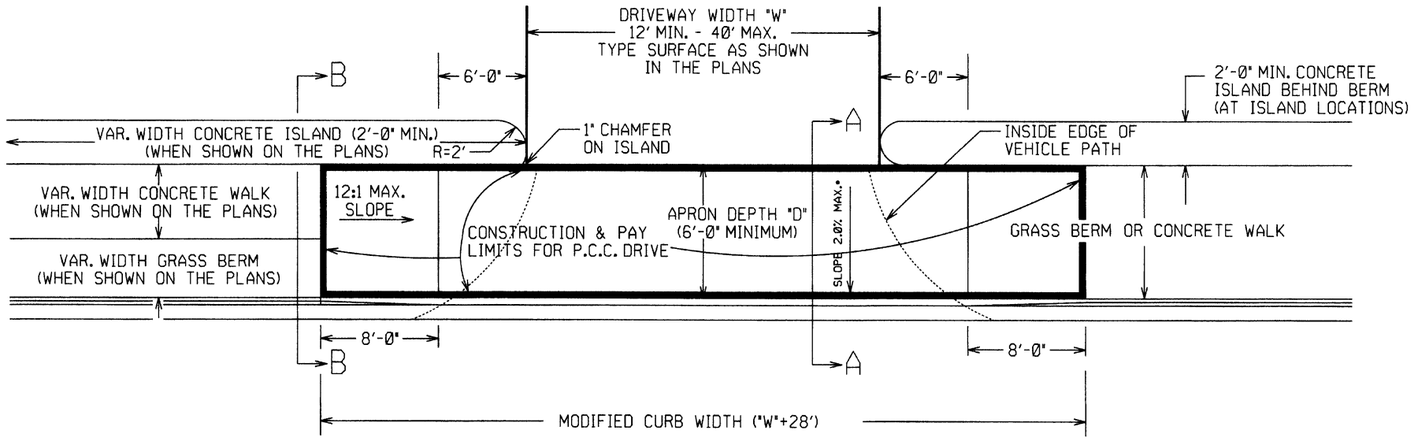
GENERAL NOTES

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.

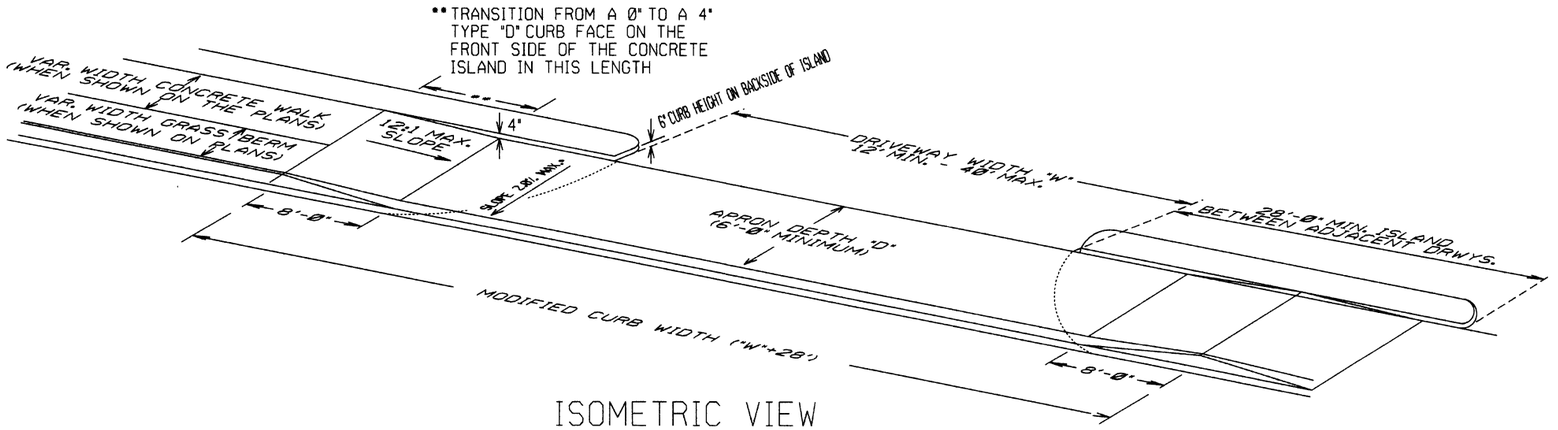
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

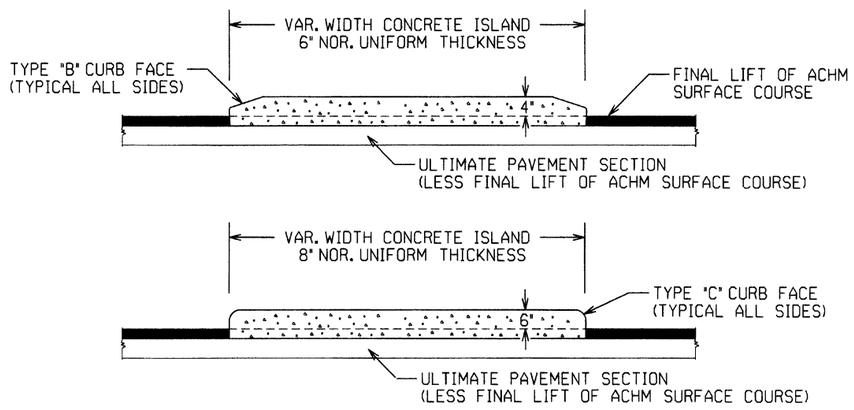
STANDARD DRAWING CPTJ - 6A



PLAN VIEW

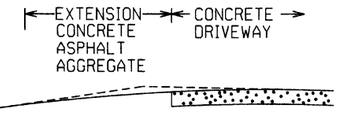


ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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".



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

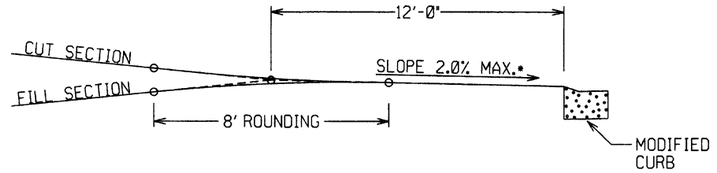
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

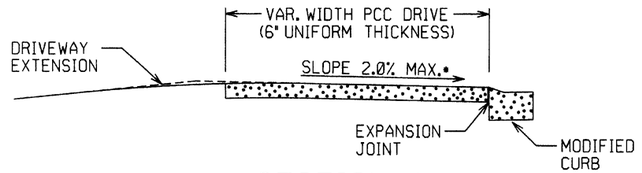
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

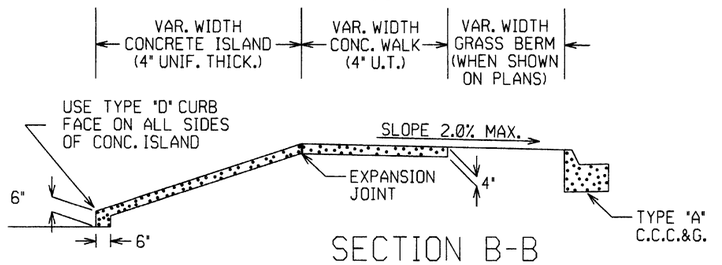


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



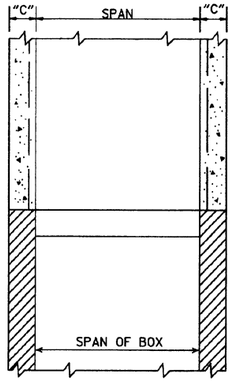
SECTION A-A



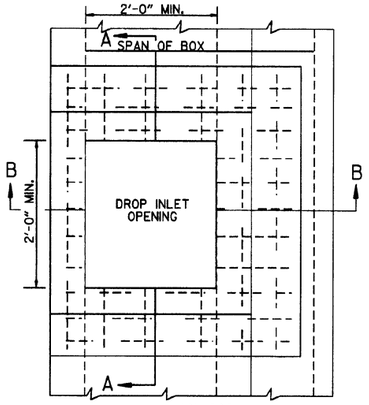
SECTION B-B
CURBED ISLAND BEHIND WALK

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

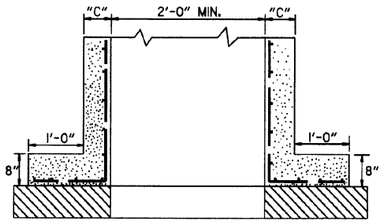
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



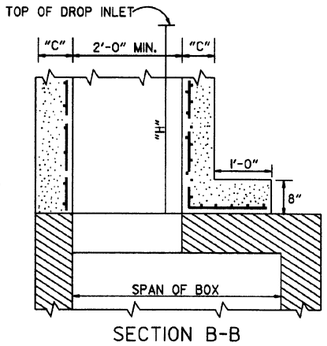
SECTION B-B



PLAN

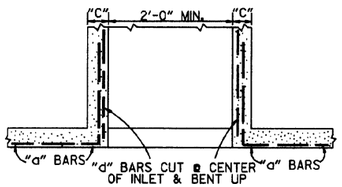


SECTION A-A

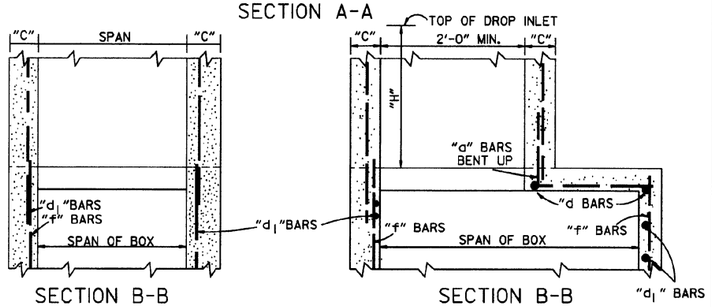


SECTION B-B

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



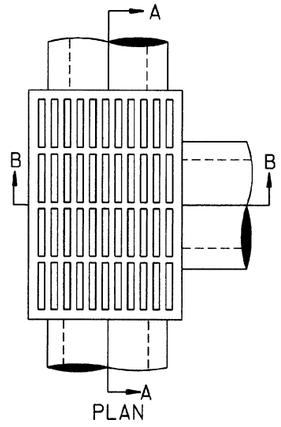
SECTION A-A



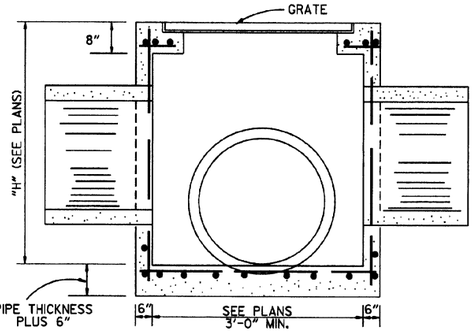
SECTION B-B SECTION B-B

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

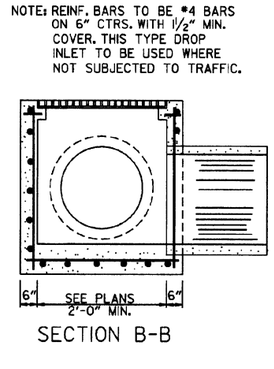
NOTE: "C" DIMENSIONS AND REINFORCING BAR SIZES, SHALL CONFORM TO THOSE SHOWN ON STANDARD DRAWING FOR DROP INLET.



PLAN

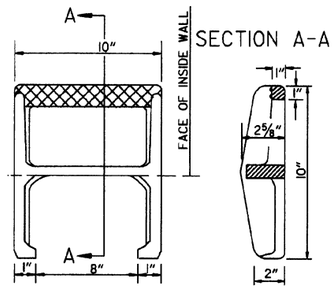


SECTION A-A



SECTION B-B

DROP INLET (TYPE E)

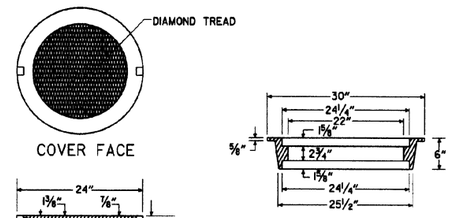


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

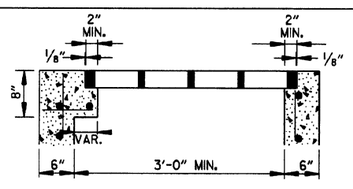
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

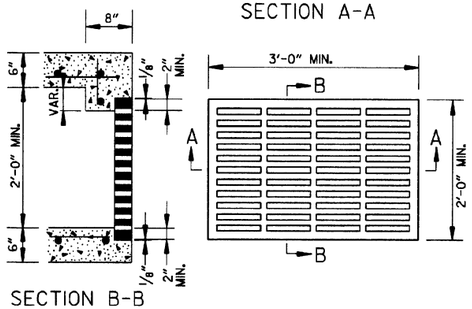


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



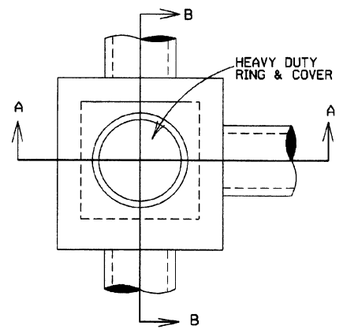
SECTION A-A



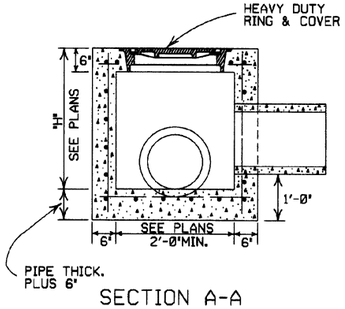
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

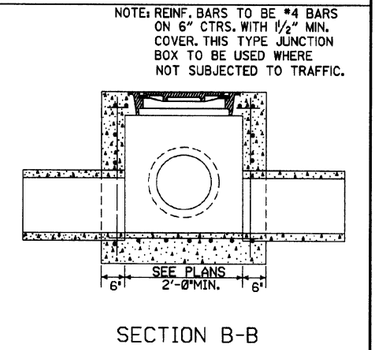
GRATE FOR TYPE E DROP INLET



PLAN

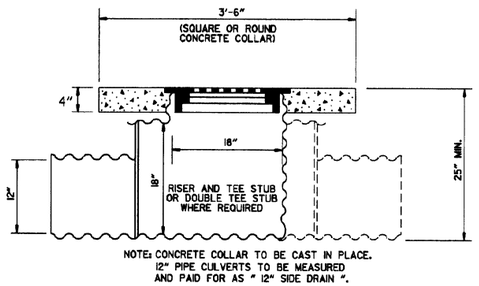


SECTION A-A

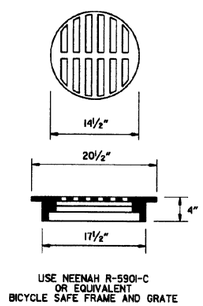


SECTION B-B

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:

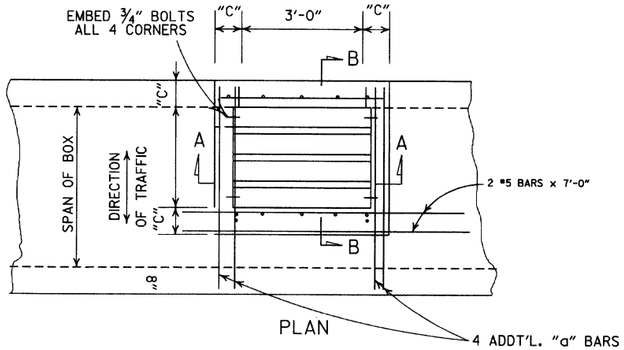
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS 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	

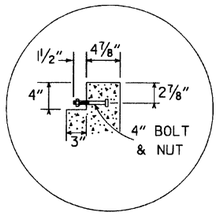
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

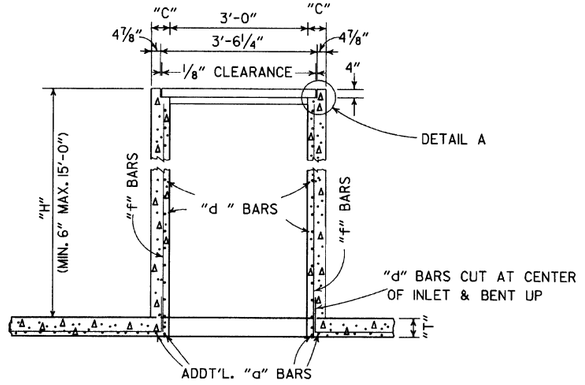
STANDARD DRAWING FPC-9



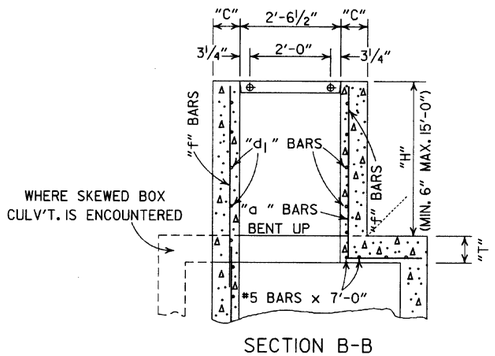
PLAN



DETAIL A



SECTION A-A

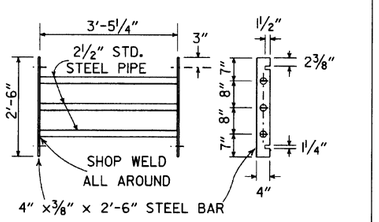


SECTION B-B

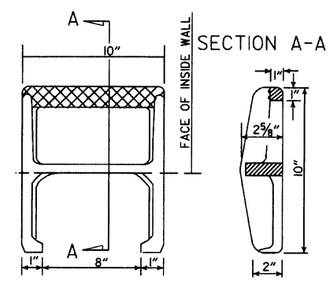
NOTE: ADDT'L.REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

DIMENSIONS & REINF. BARS FOR D.I. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DROP INLET TYPE "TM"
FOR REINFORCED CONC. BOX CULVERTS



GRATE DETAIL



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

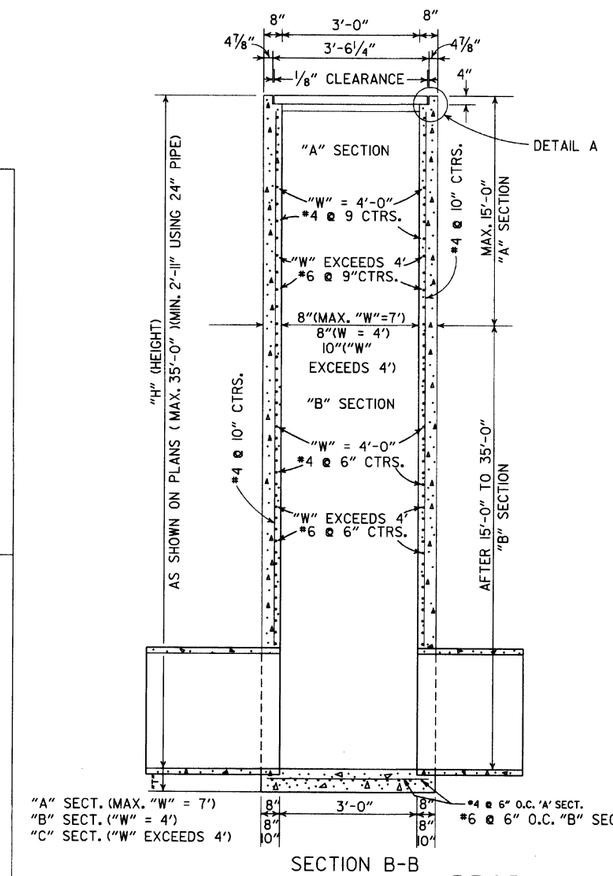
GENERAL NOTES:

1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 1 OR 2, ASTM A307 OR AASHTO M 164.
2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
4. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1½" COVER. LARGER SIZES TO HAVE 2" COVER.
6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

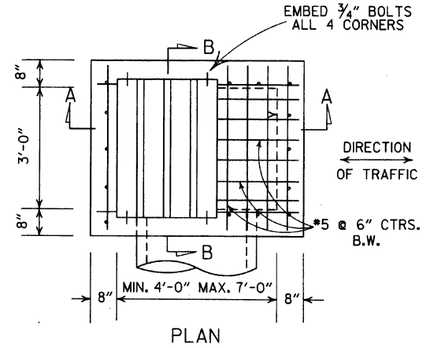
TABLE OF "W" DIMENSIONS

I.D. PIPE	SKEW OF CROSS DRAIN		
	STRAIGHT	30°	45°
	"W"	"W"	"W"
24"	4'-0"	4'-0"	4'-0"
30"	4'-0"	4'-0"	4'-5"
36"	4'-0"	4'-3"	5'-3"
42"	4'-3"	4'-11"	6'-1"
48"	4'-10"	5'-7"	6'-11"

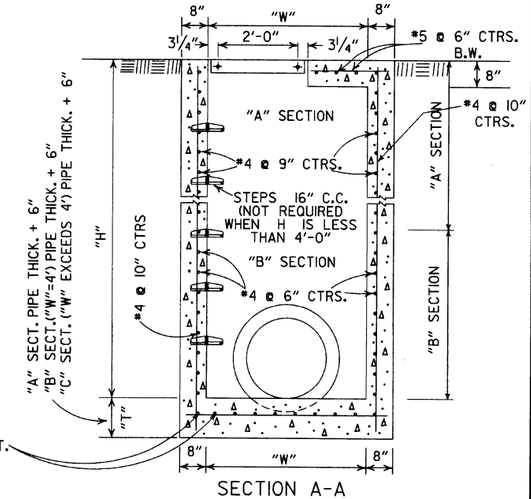
NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



SECTION B-B



PLAN



SECTION A-A

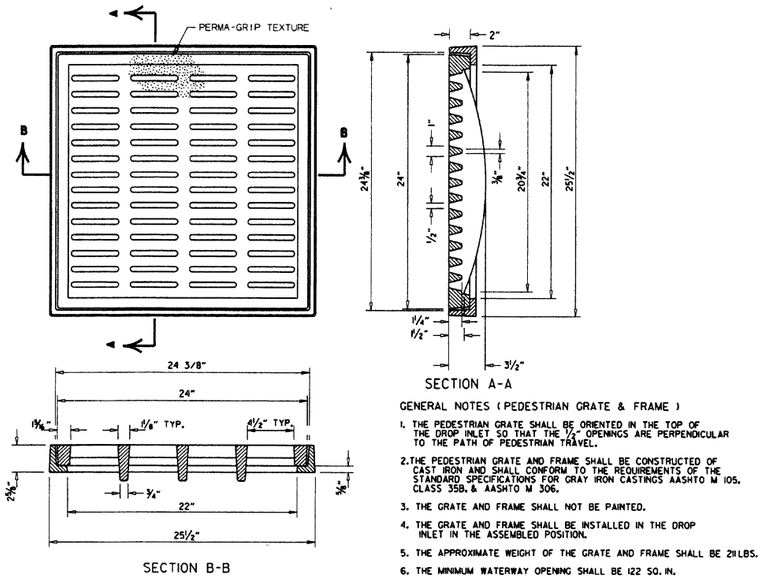
DROP INLET(TYPE RM)

8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL,TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72
REVISED		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

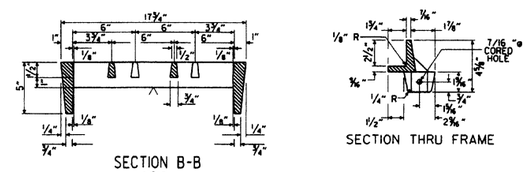
STANDARD DRAWING FPC-9D

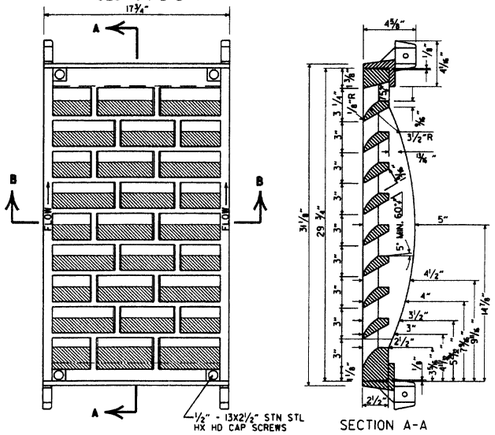


GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN 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, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

DETAILS OF PEDESTRIAN GRATE AND FRAME

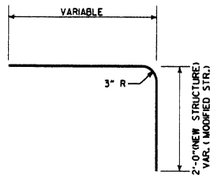




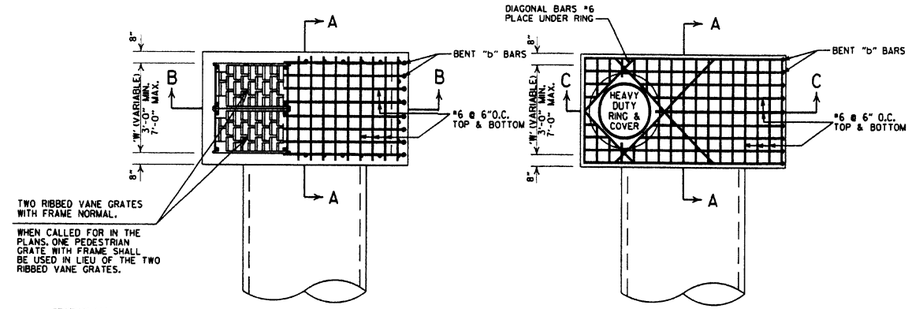
GENERAL NOTES (RIBBED VANE GRATE & FRAME)

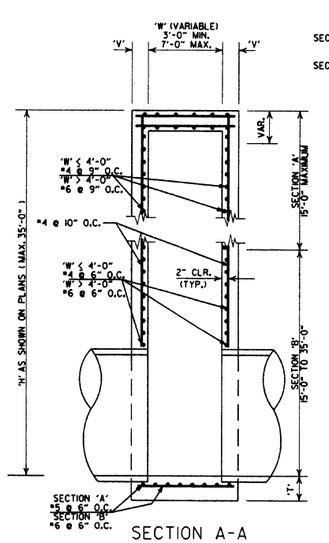
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED POSITION.
4. APPROXIMATE WEIGHT OF GRATE SHALL BE 170 LBS.

DETAILS OF RIBBED VANE GRATE AND FRAME

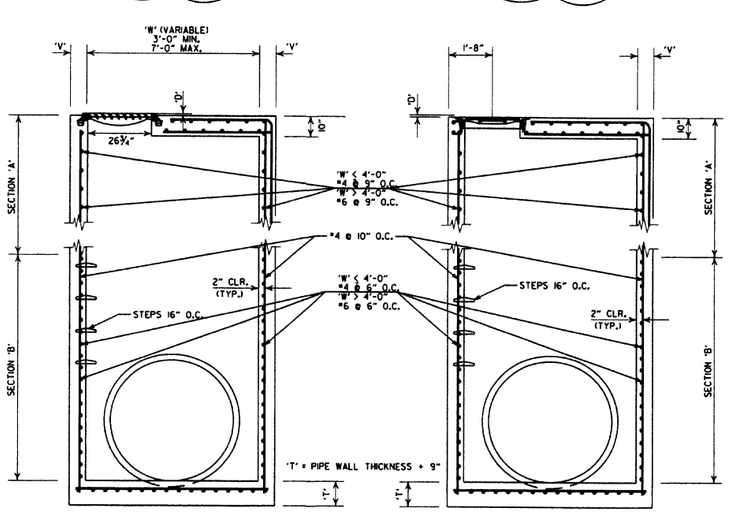


DETAIL OF BENT "b" BAR





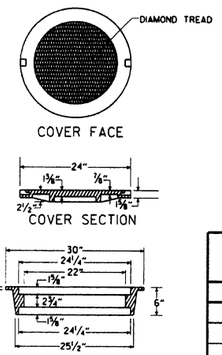
SECTION A-A



SECTION B-B

SECTION C-C

DETAILS OF DROP INLET (TYPE ST)



HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.

GENERAL NOTES (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 M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. 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 REVISED	DATE FILMED	DESCRIPTION
7-26-12		REMOVED NOTE 4, REVISED 'T', REVISED BOTTOM SLAB REBAR FOR SECTION 'A', SHOWED REBAR CLEARANCE IN SECTIONS
11-16-01		ADDED NOTE 4
1-12-00		REVISED HEAVY DUTY RING & COVER
5-13-99		ADDED PEDESTRIAN FRAME & GRATE
7-02-98		REMOVED NOTE 5, REV. DIMENSIONS, ADDED HEAVY DUTY RING & COVER ADDED AASHTO REF. REVISED GRATE
10-18-96		REVISED ASTM REF. TO AASHTO
10-1-92		REVISED & REISSUED
8-15-91	8-15-91	REVISED & REISSUED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

STANDARD DRAWING FPC-9S

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD 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	31⅞	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.

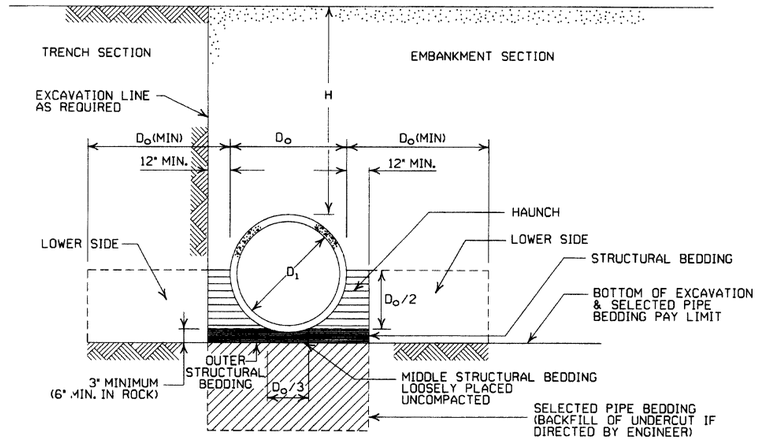
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

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.

GENERAL NOTES

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

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

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					

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

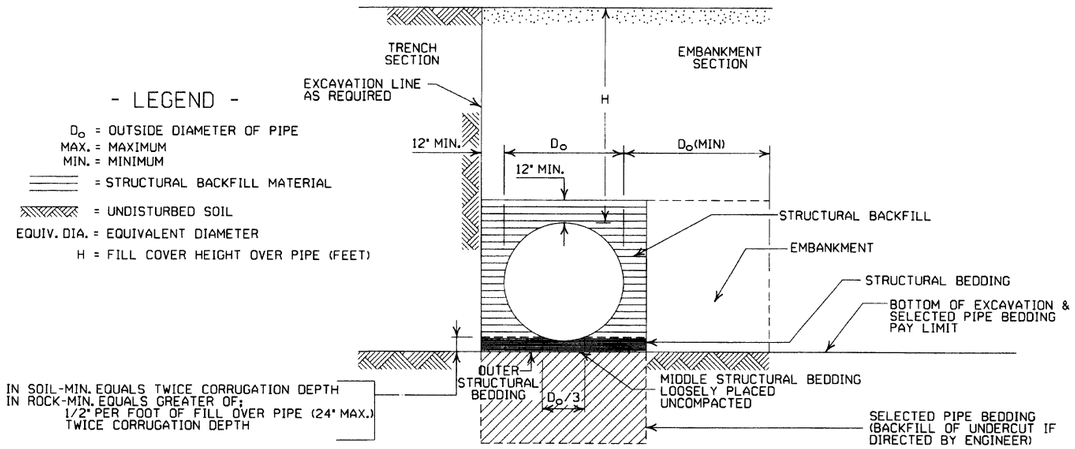
③ SM-3 WILL NOT BE ALLOWED.

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

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

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.

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

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

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

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

SM3 WILL NOT BE ALLOWED.

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

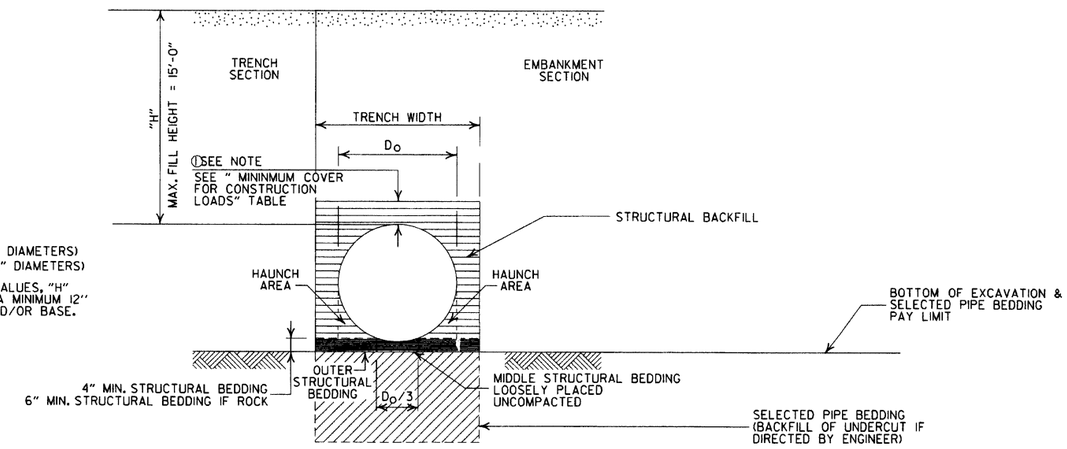
STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET) "H" < 10'-0"	TRENCH WIDTH (FEET) "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.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	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.

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 CONFROM 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.)
Ø = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

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

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

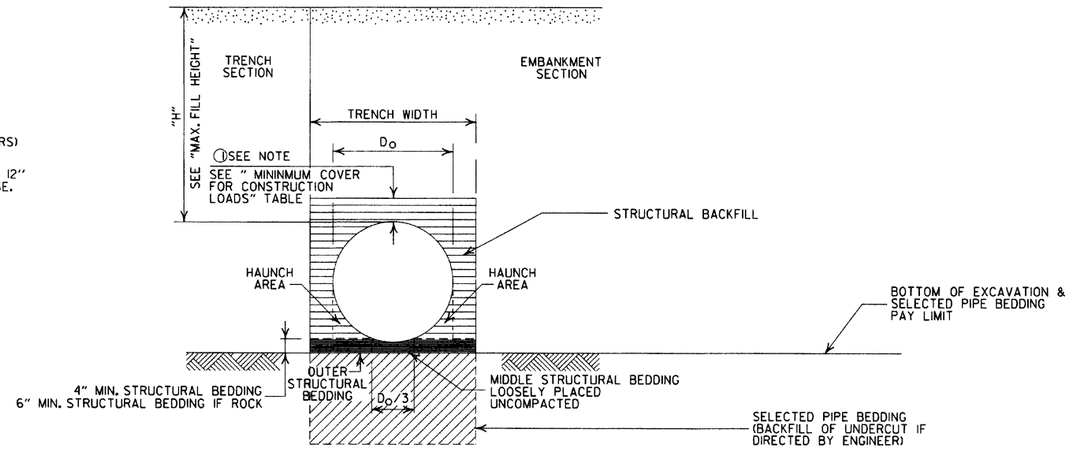
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

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 CONFROM 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. 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

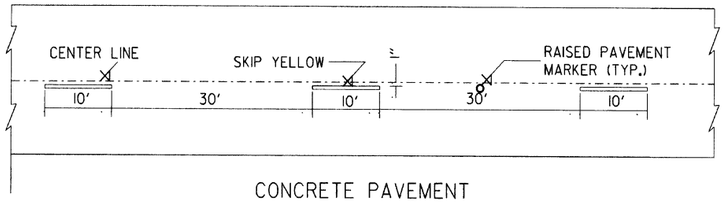
= UNDISTURBED SOIL

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	

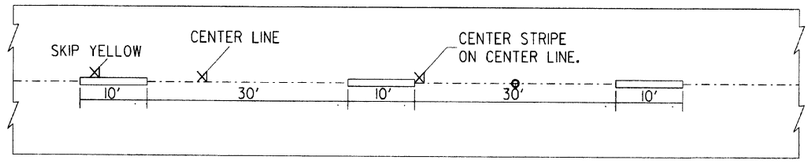
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

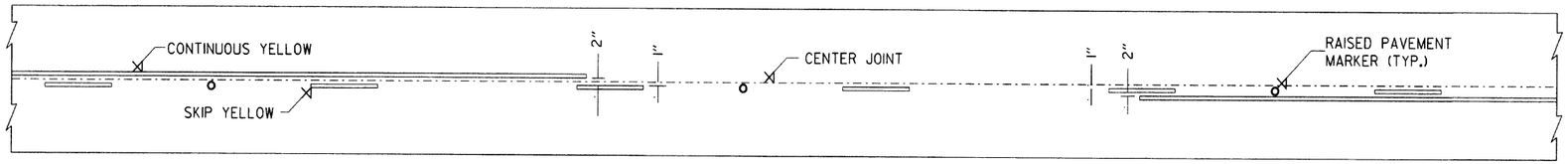


CONCRETE PAVEMENT

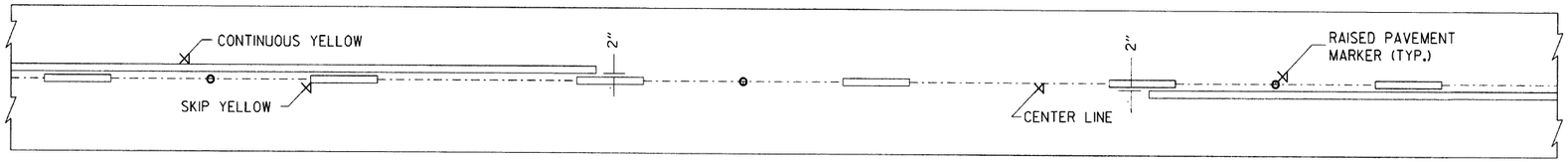


ASPHALT PAVEMENT

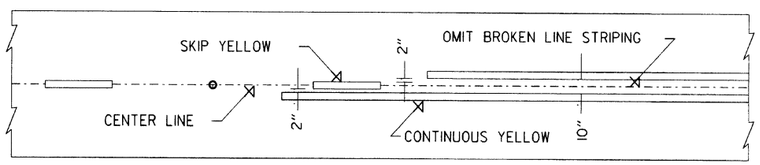
BROKEN LINE STRIPING



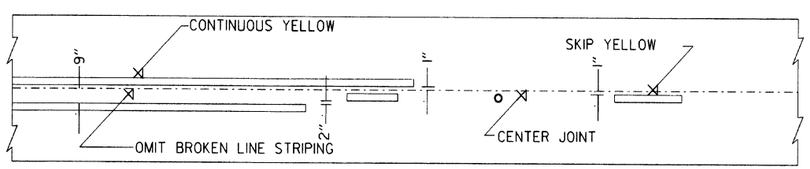
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

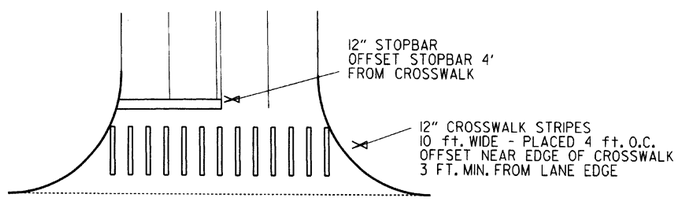


ASPHALT PAVEMENT



CONCRETE PAVEMENT

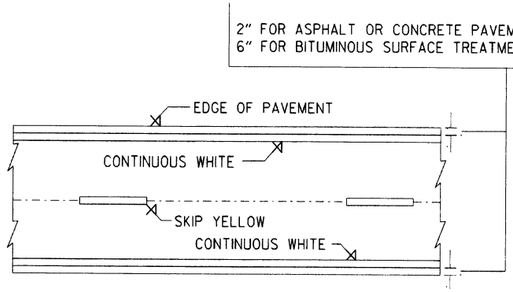
STRIPING AT ADJACENT NO PASSING LANES



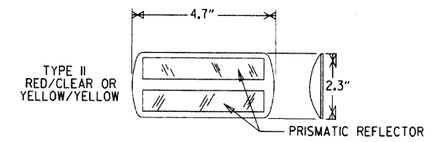
CROSSWALK AND STOPBAR DETAILS

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.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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

DATE	REVISION	FILMED
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

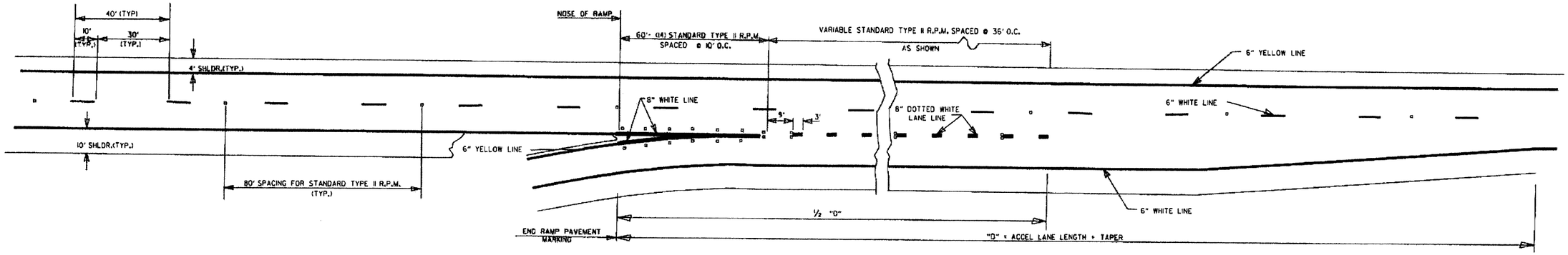
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

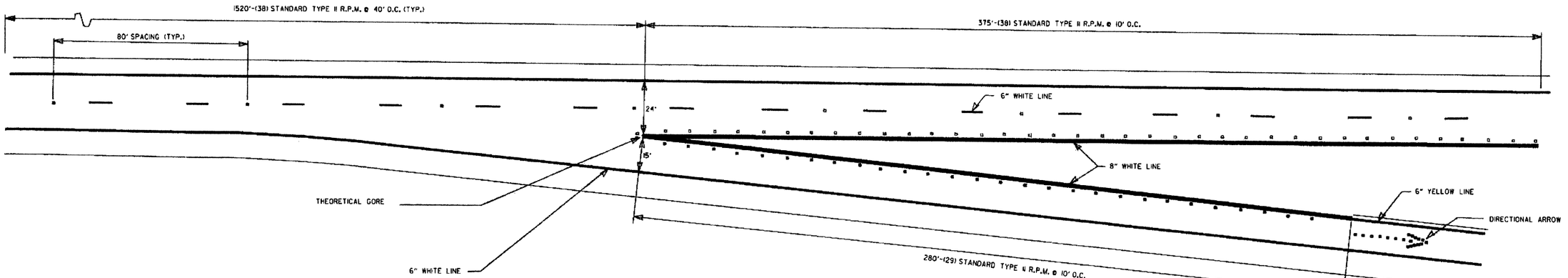
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

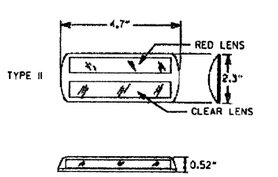
6" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

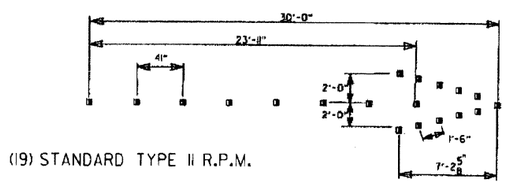


EXIT RAMPS



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

GENERAL NOTES:

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

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

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

DATE	REVISION	FILMED
12-8-16	REVISED RAISED PAV'T MARKERS FOR 80' SPACING; REVISED WIDTH OF STRIPING	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

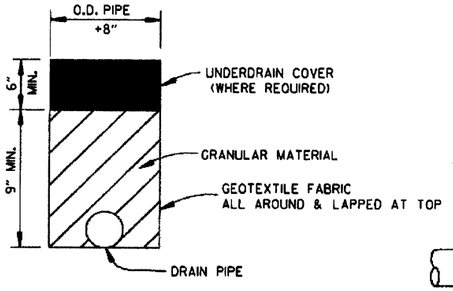
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS

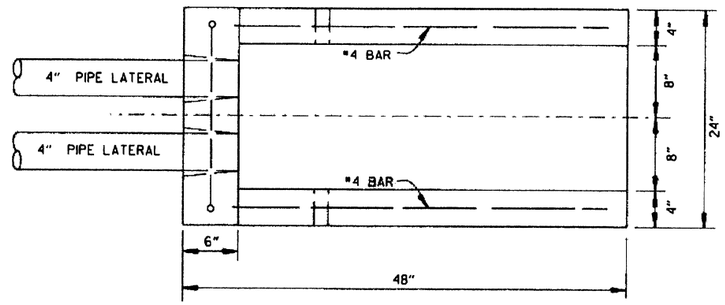
STANDARD DRAWING PM-2

NOTE:

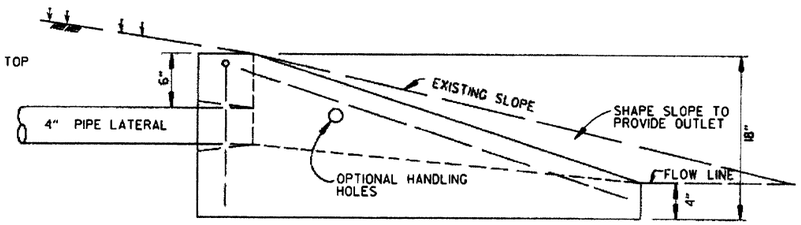
1. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

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

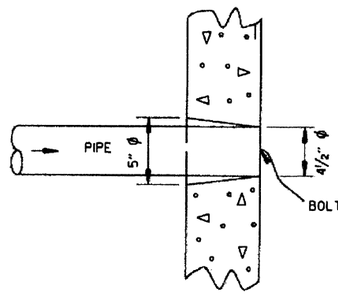




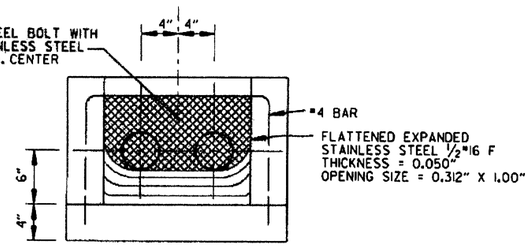
PLAN VIEW



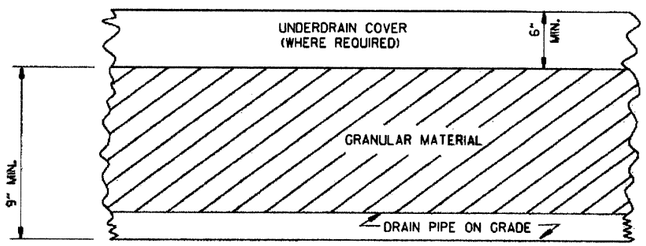
SIDE VIEW



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

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

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

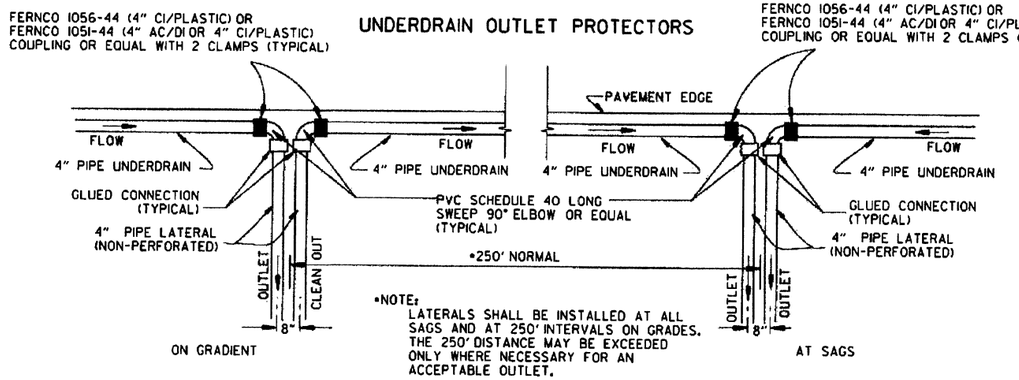
4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH 4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE III WHITE) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

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

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

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

UNDERDRAIN OUTLET PROTECTORS



•NOTE:
LATERALS SHALL BE INSTALLED AT ALL SAGS AND AT 250' INTERVALS ON GRADES. THE 250' DISTANCE MAY BE EXCEEDED ONLY WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

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

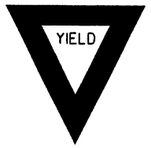
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

R1-1

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

R1-2



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

R2-1

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

W3-5

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

W3-5a

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

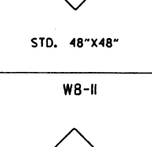
R4-1

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

R4-2

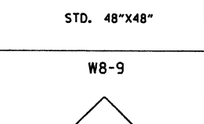
STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



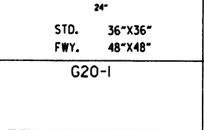
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



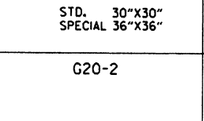
48"X30"

RII-3A



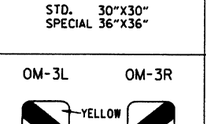
60"X30"

RII-4



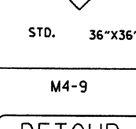
60"X30"

RSP-1



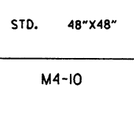
48"X30"

WI-1



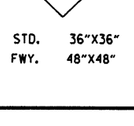
STD. 36"X36"
FWY. 48"X48"

WI-2



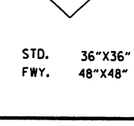
STD. 36"X36"
FWY. 48"X48"

WI-3



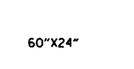
STD. 48"X48"

WI-4



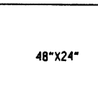
STD. 48"X48"

WI-6



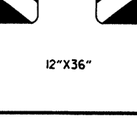
STD. 48"X24"
SPECIAL 60"X30"

WI-8



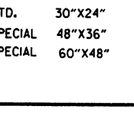
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



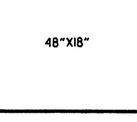
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1

STD. 36"X36"
SPECIAL 48"X48"

W6-3

EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7

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

W9-2

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

WI3-1

STD. 24"X24"

W20-1

STD. 48"X48"

W20-2

STD. 48"X48"

W20-3

STD. 48"X48"

W20-4

STD. 48"X48"

W20-5

STD. 48"X48"

W20-7a

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

W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1

STD. 36"X36"

WI-4b

STD. 48"X48"

R56-1

STD. 18"X18"

W8-11

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

W8-9

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

G20-1

60"X24"

G20-2

48"X24"

OM-3L OM-3R

12"X36"

M4-9

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

M4-10

48"X18"

R55-1

36"X60"

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

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT, HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

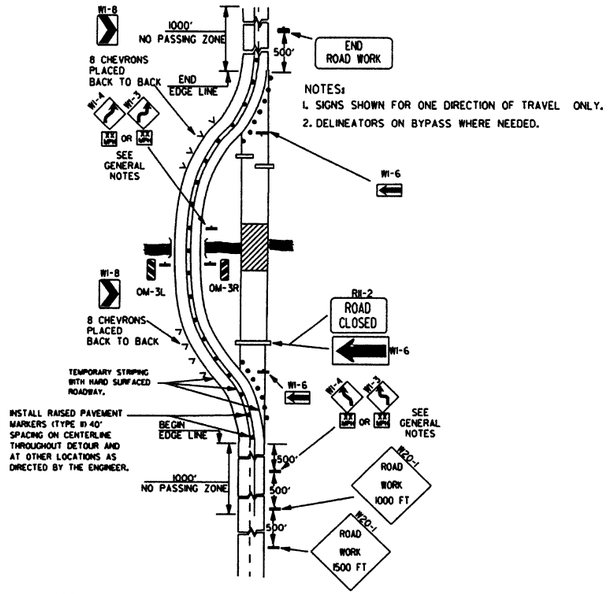
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
8-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
8-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
8-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
8-18-98	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

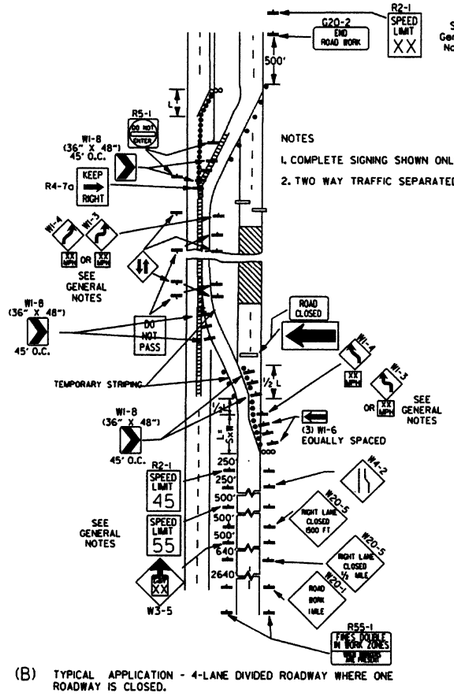
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



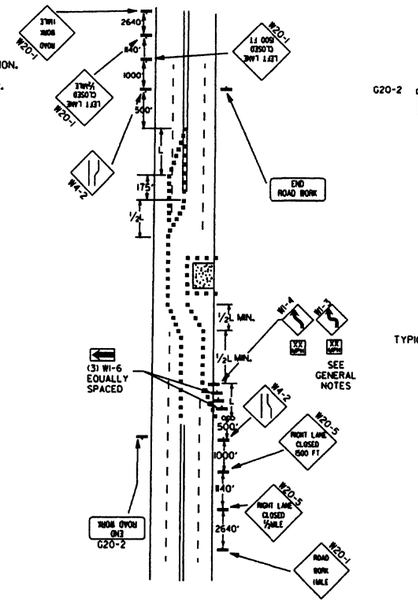
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

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

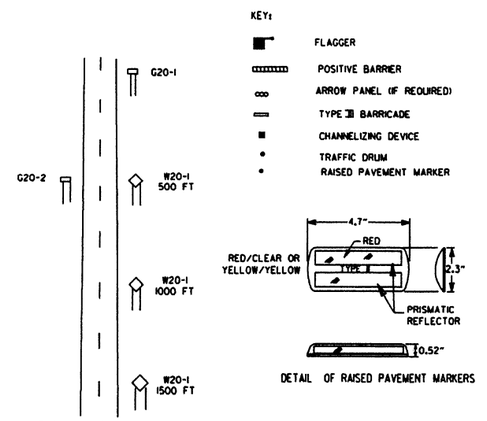


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(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.



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

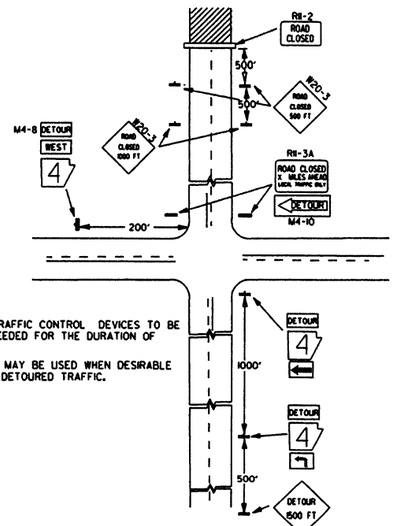
L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

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

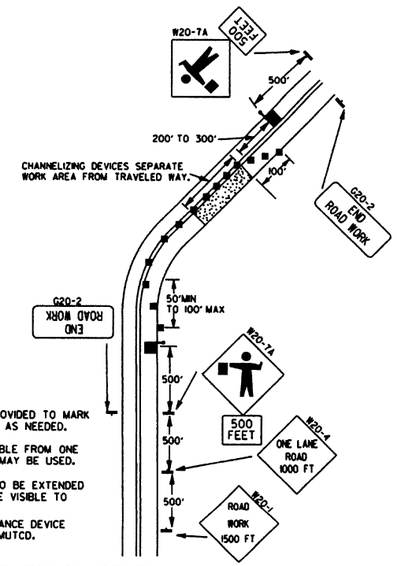
GENERAL NOTES:

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



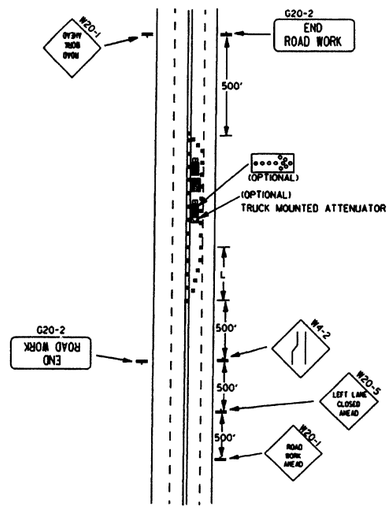
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

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



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

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



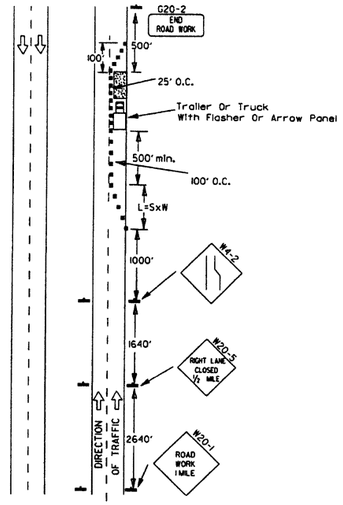
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (G) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

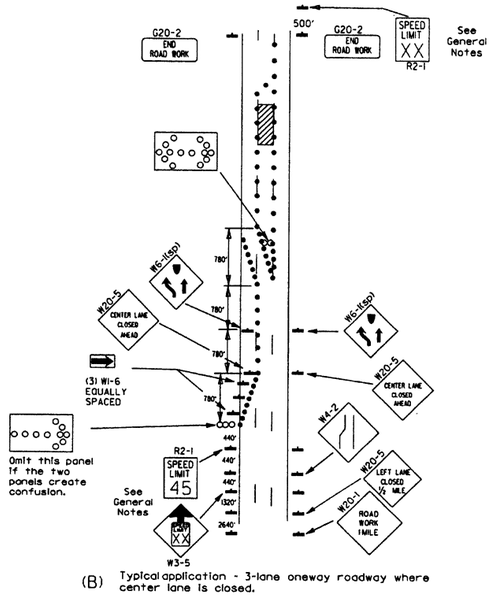
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

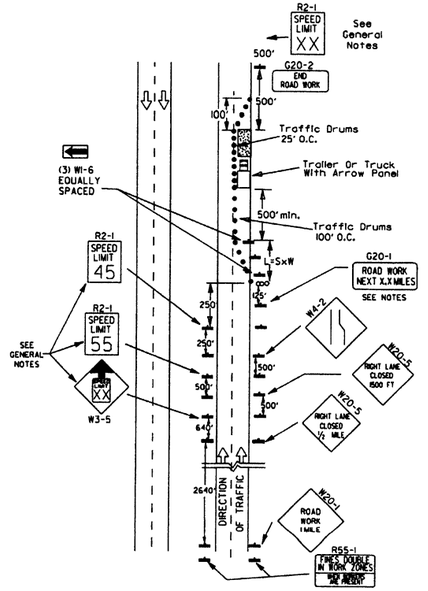
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (If Required)

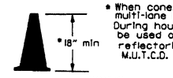
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

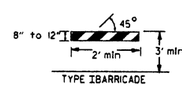
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the W3-5 shall be installed at that location. Additional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

Channelizing devices



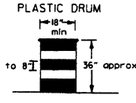
CONES

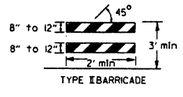
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.



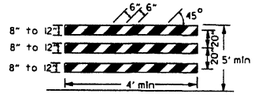
TYPE I BARRICADE

PLASTIC DRUM



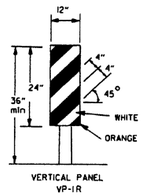


TYPE II BARRICADE



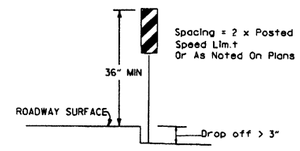
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



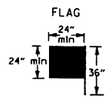
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

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

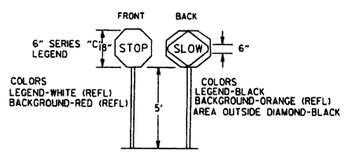
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

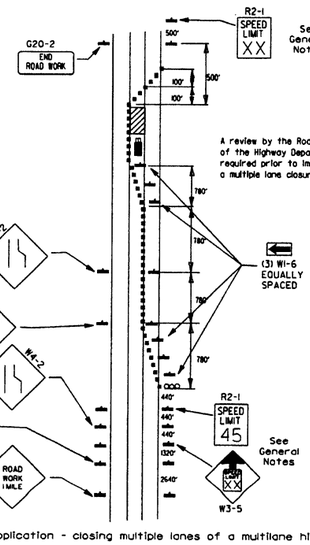
FLAG



Flag shall be of good grade red material

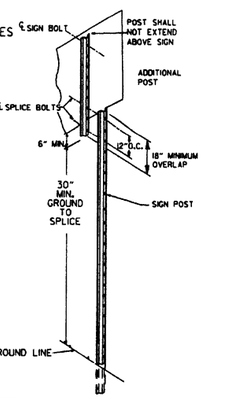
STOP SLOW PADDLE





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

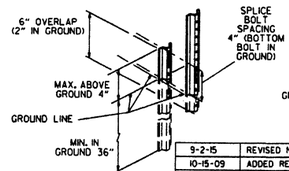
DETAIL OF SPLICES



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

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

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



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

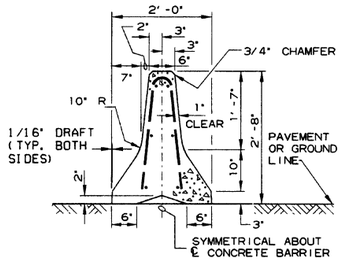
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

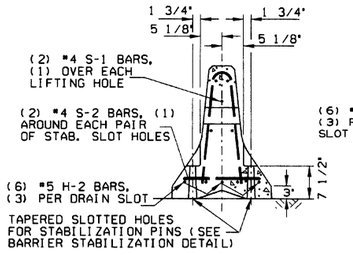
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

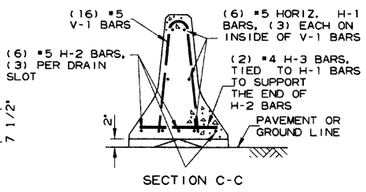
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 1" MIN. CLEAR TO BAR, 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP, 1'-6"
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 9 1/2", 2'-1 3/8", 4 3/8"



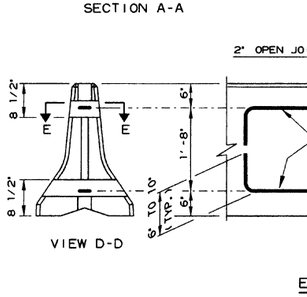
SECTION A-A



SECTION B-B



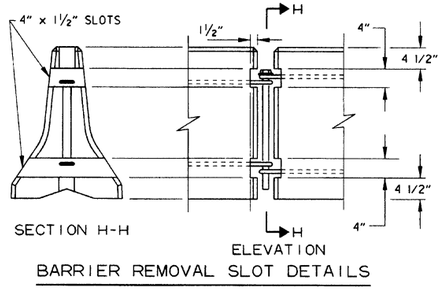
SECTION C-C



VIEW D-D

VIEW D'-D'

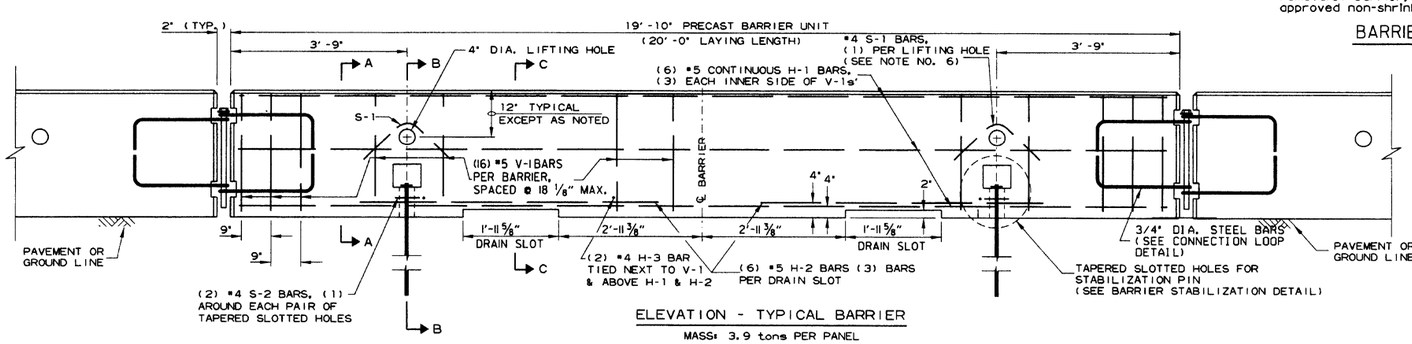
ELEVATION



SECTION H-H

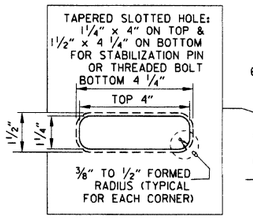
ELEVATION

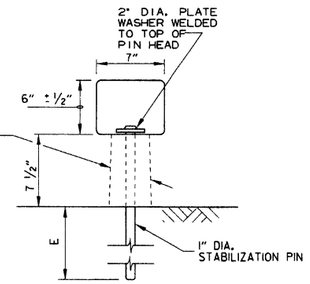
BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

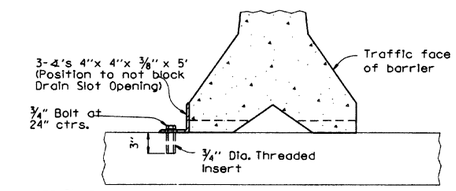




BARRIER STABILIZATION DETAIL

ROADWAY SECTION

(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



NOTE: ¾" Threaded inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS

General Notes

1. The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
2. Materials shall meet the following minimum requirements:
   Concrete: 2500 psi compressive strength at 28 days.
   Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
   Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
   Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

   In applications where barrier wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
   Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
   Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.
3. Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.
4. Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.
5. Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
6. A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

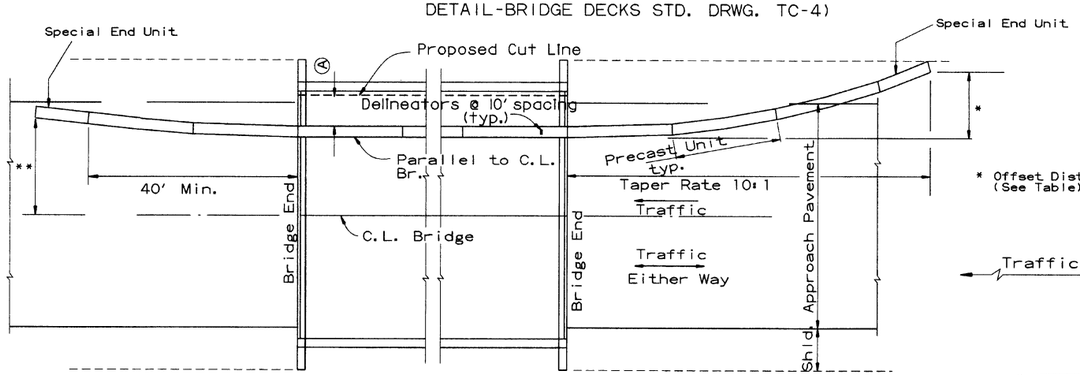
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02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

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

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

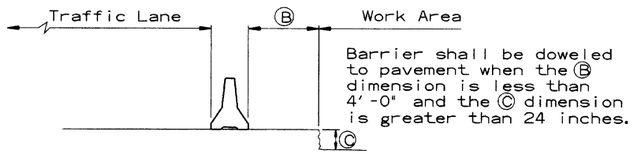


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

* Offset Distance (See Table)

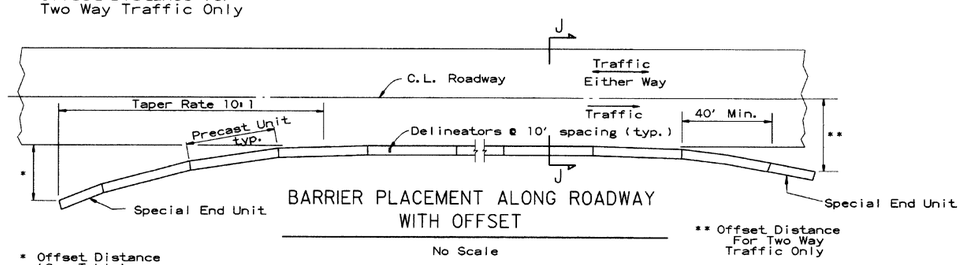
** Offset Distance for Two Way Traffic Only



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

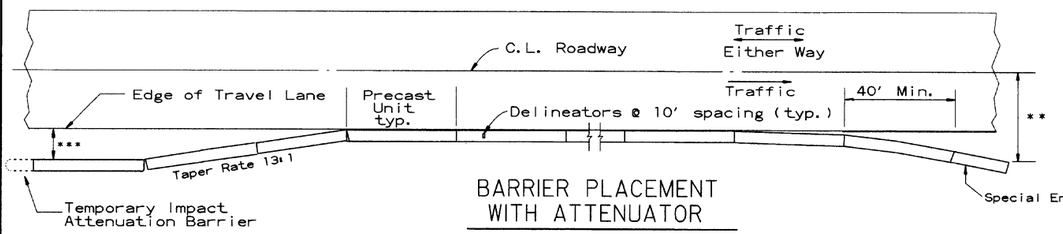
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

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

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

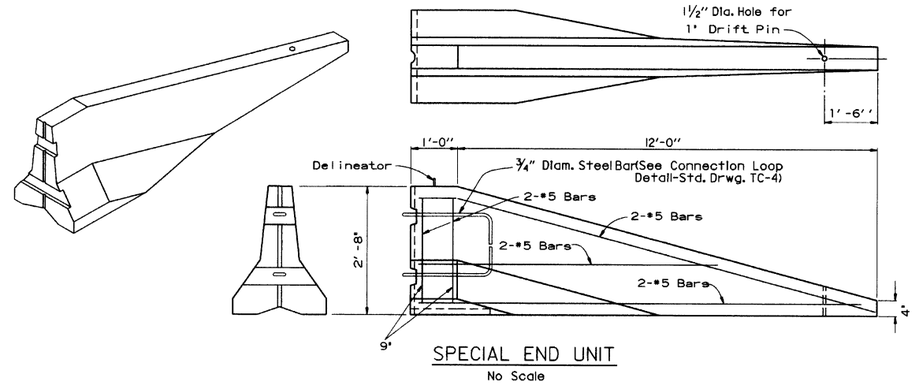


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

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

** Offset Distance For Two Way Traffic Only



SPECIAL END UNIT

No Scale

General Notes

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

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

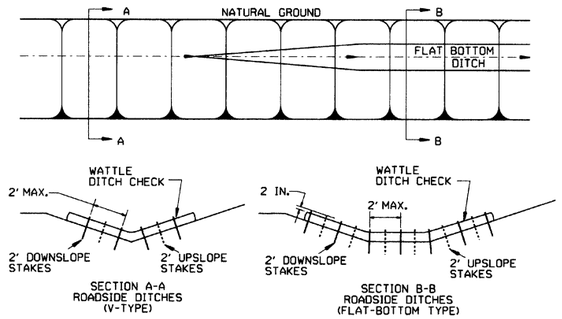
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

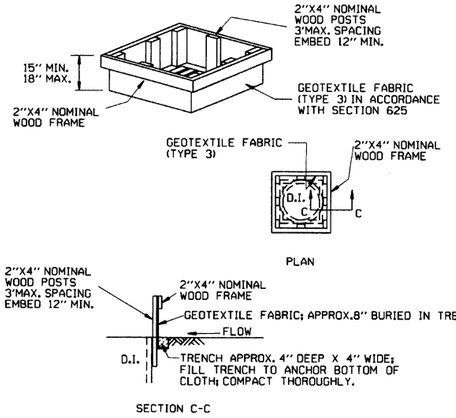
STANDARD DRAWING TC-5

GENERAL NOTES

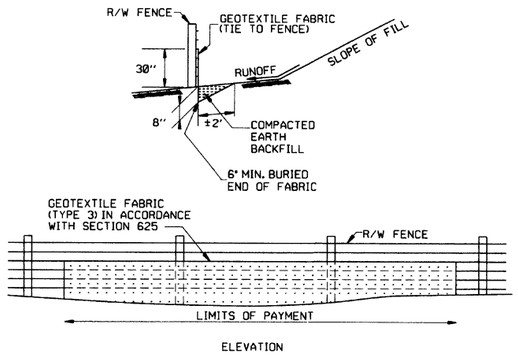
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

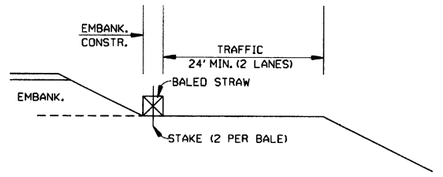
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

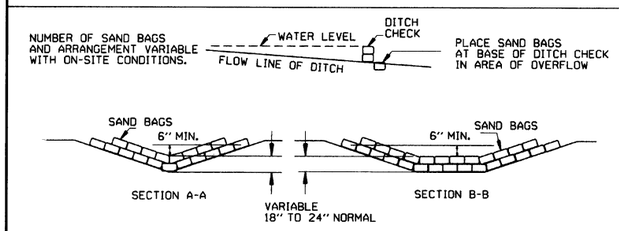
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

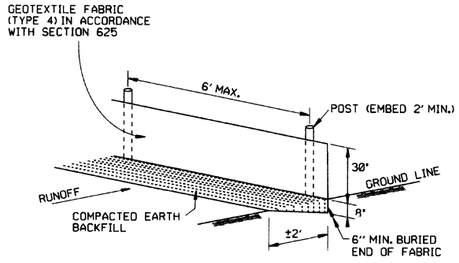
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



BALED STRAW FILTER BARRIER (E-2)



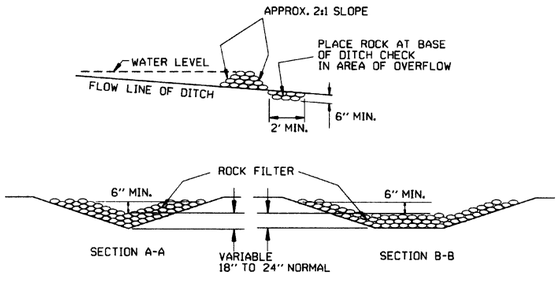
SAND BAG DITCH CHECK (E-5)



SILT FENCE (E-11)

GENERAL NOTES

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



ROCK DITCH CHECK (E-6)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

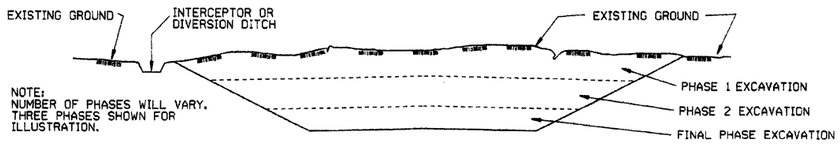
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



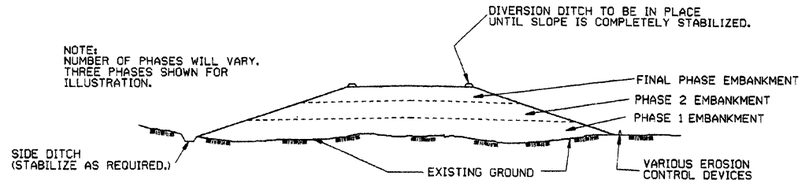
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

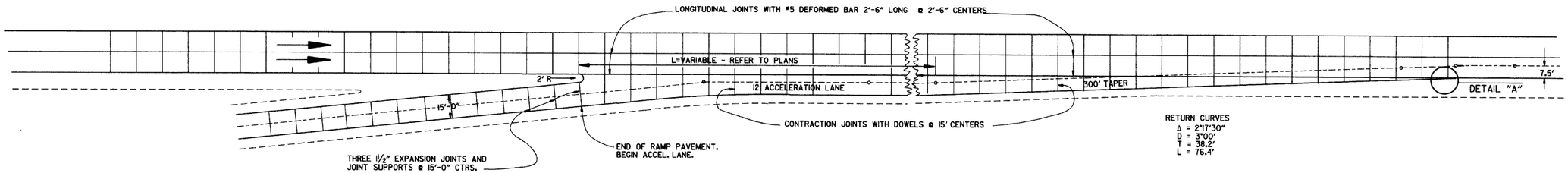
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	6-2-94
6-2-94	Drawn & Issued	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

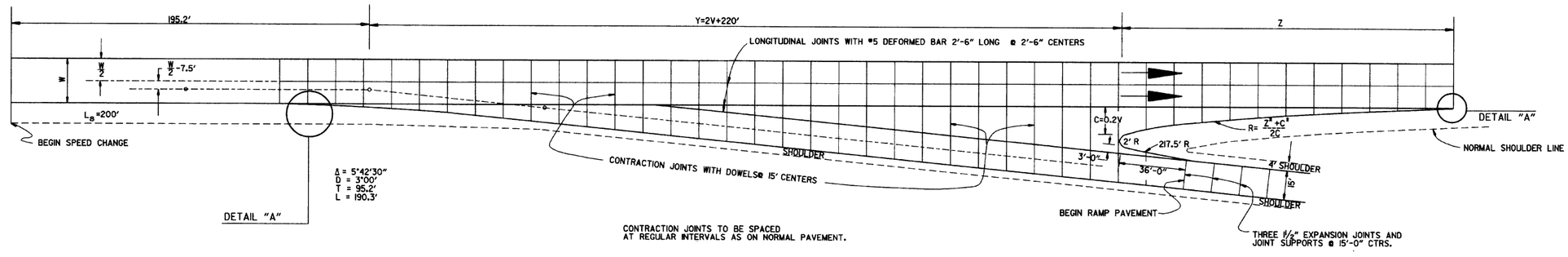
STANDARD DRAWING TEC-3

stdtec3.dgn



ENTRANCE RAMP

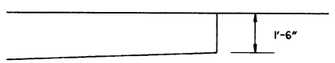
NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.



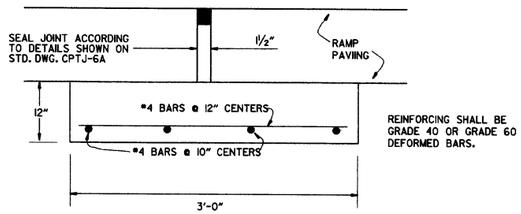
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1162.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL "A"



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

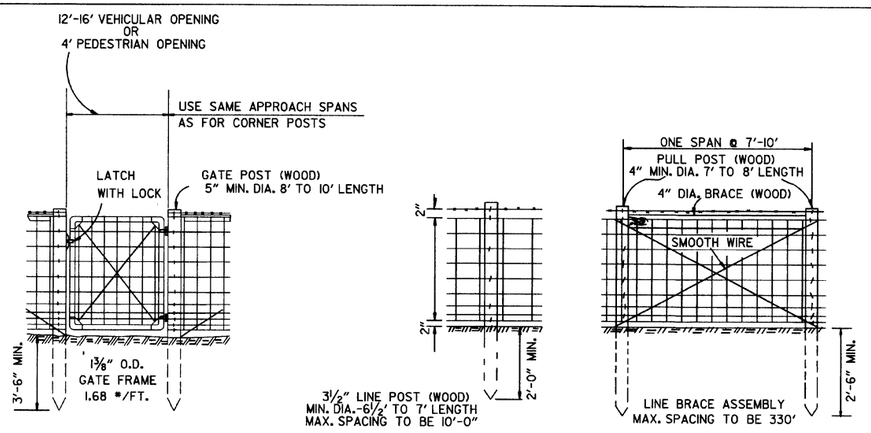
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

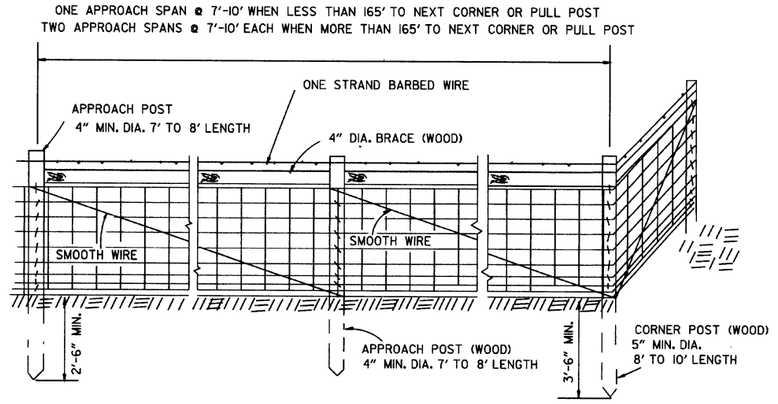
DATE	REVISION	DATE FILM'D
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL A & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORMED TO 1988 SPECIFICATIONS	65C-7-15-88
3-2-81	ISSUED	511-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

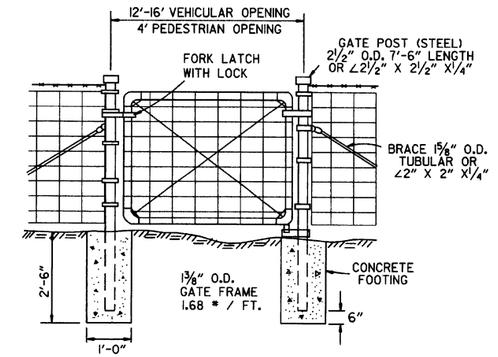
STANDARD DRAWING TR-1A

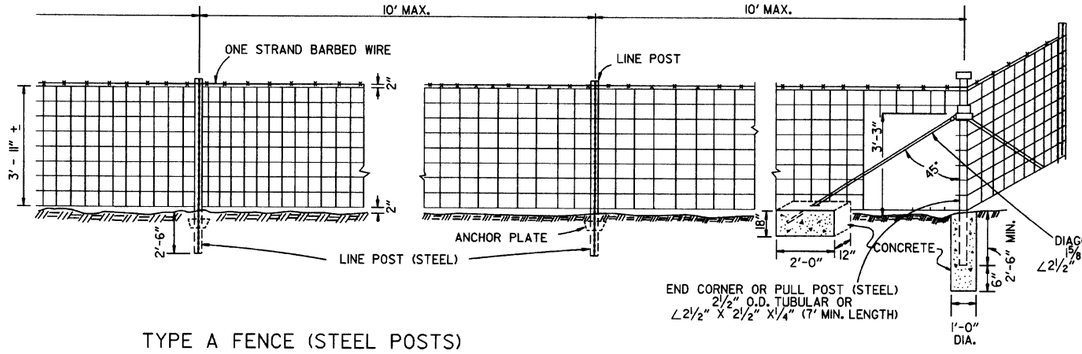




NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE A FENCE (WOOD POSTS)





TYPE A FENCE (STEEL POSTS)

GENERAL NOTES:

STEEL LINE POSTS SHALL BE GALVANIZED, 7 FT. IN LENGTH.

TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK).

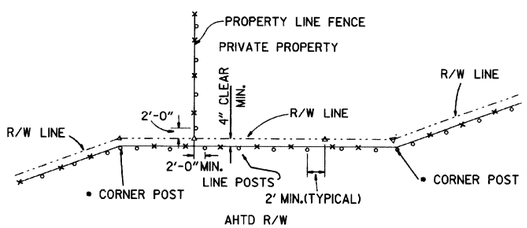
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

GATE HINGES AND LATCHES WITH LOCKS TO BE OF A TYPE APPROVED BY THE ENGINEER. DRIVEWAY GATES, EITHER SINGLE 12' OR 16' OR DOUBLE 6' TO 8' OPENINGS 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 BY MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON THE 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 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 SUFFIEICNT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO THE BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

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.

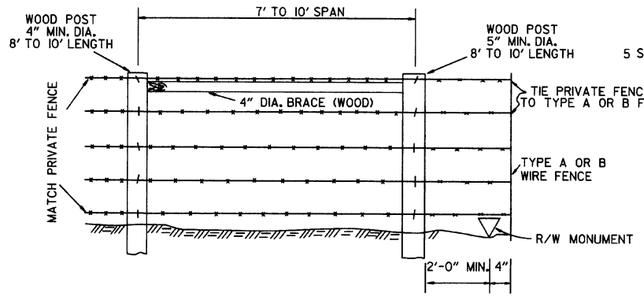
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD": AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF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



•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.

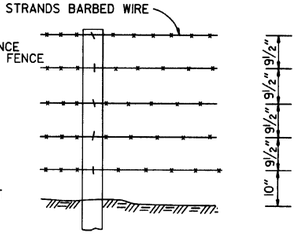
△ - R/W MONUMENTS
○ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



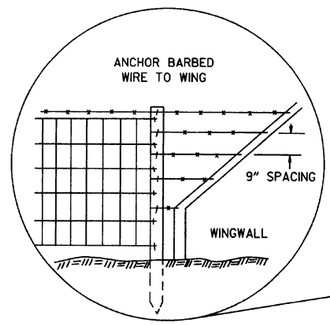
WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

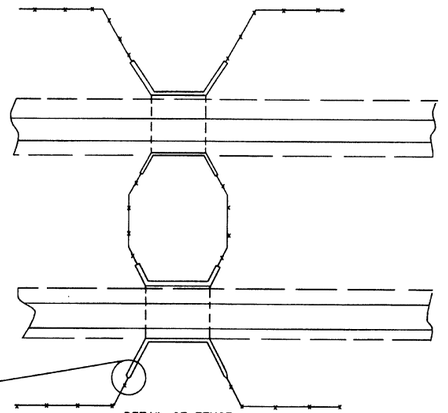
PRIVATE FENCE
TERMINAL INSTALLATION



SPACING AND SIZE OF POSTS FOR TYPE B FENCE SHALL BE THE SAME AS TYPE A FENCE.

TYPE B FENCE





DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
7-15-88	ADDED SPLICE NOTES	
7-15-88	ADDED HEIGHT DIMENSION	
4-3-87	REVISED VARIOUS NOTES	
	AND GENERAL NOTES	
11-1-84	MAX. POST SPACING	
1-4-83	MIN. DIA. LINE POST	
10-2-72	REVISED & REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

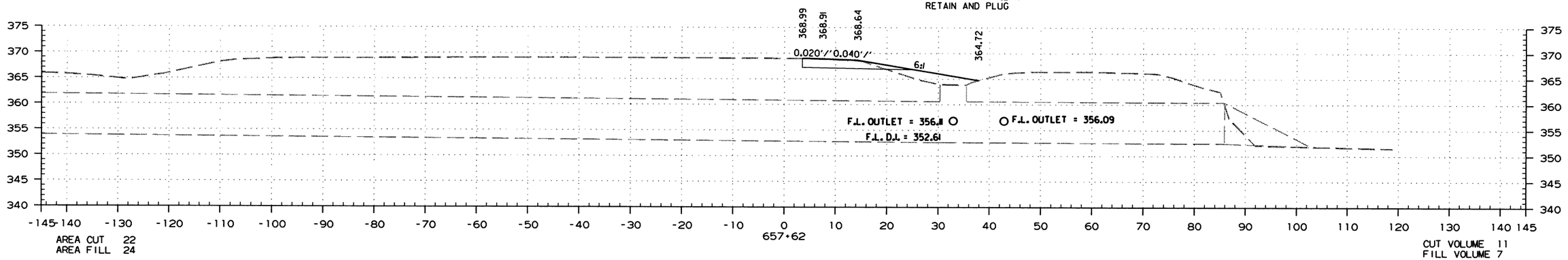
STANDARD DRAWING WF-1

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	96	125

(2) CROSS SECTIONS

STA. 657+62 - IN PLACE
10' X 8' X 262' R.C. BOX CULV'T
RETAIN

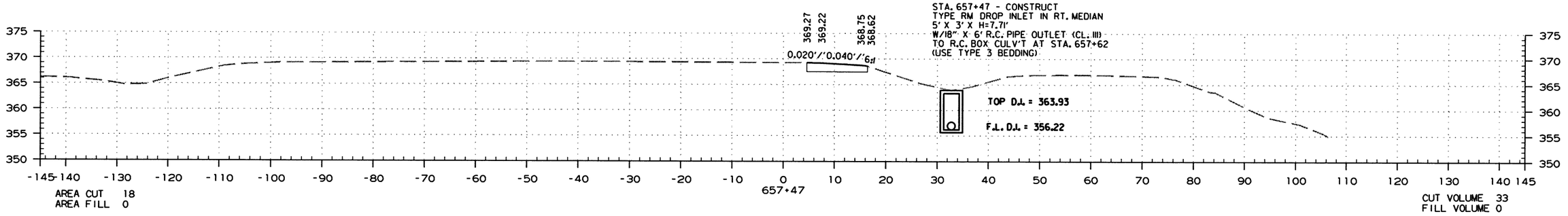
STA. 657+62 - IN PLACE
TYPE TM DROP INLET IN RT. MEDIAN
(4' X 4' X H = 11.27')
RETAIN AND PLUG



AREA CUT 22
AREA FILL 24

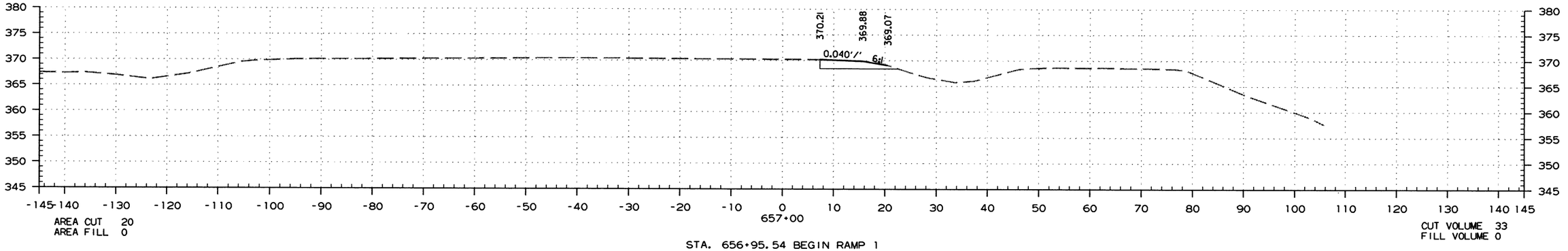
CUT VOLUME 11
FILL VOLUME 7

STA. 657+47 - CONSTRUCT
TYPE RM DROP INLET IN RT. MEDIAN
5' X 3' X H=7.71'
W/18" X 6' R.C. PIPE OUTLET (CL. III)
TO R.C. BOX CULV'T AT STA. 657+62
(USE TYPE 3 BEDDING)



AREA CUT 18
AREA FILL 0

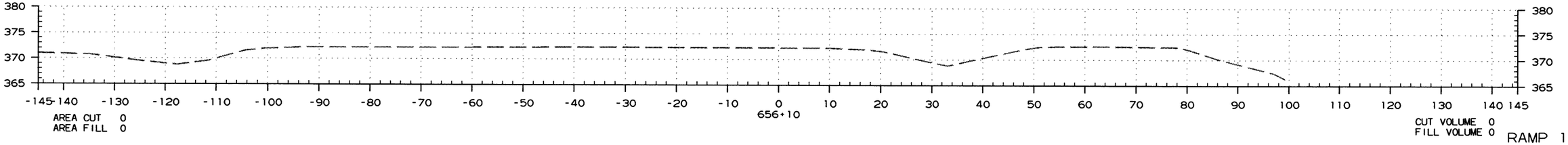
CUT VOLUME 33
FILL VOLUME 0



AREA CUT 20
AREA FILL 0

CUT VOLUME 33
FILL VOLUME 0

STA. 656+95.54 BEGIN RAMP 1



AREA CUT 0
AREA FILL 0

CUT VOLUME 0
FILL VOLUME 0

RAMP 1

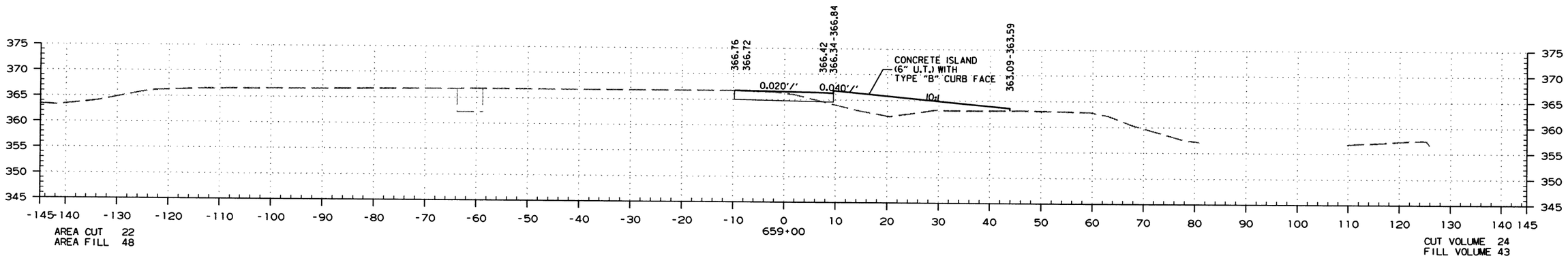
STA. 656+10.36 TO STA. 657+61.81

10/3/2016

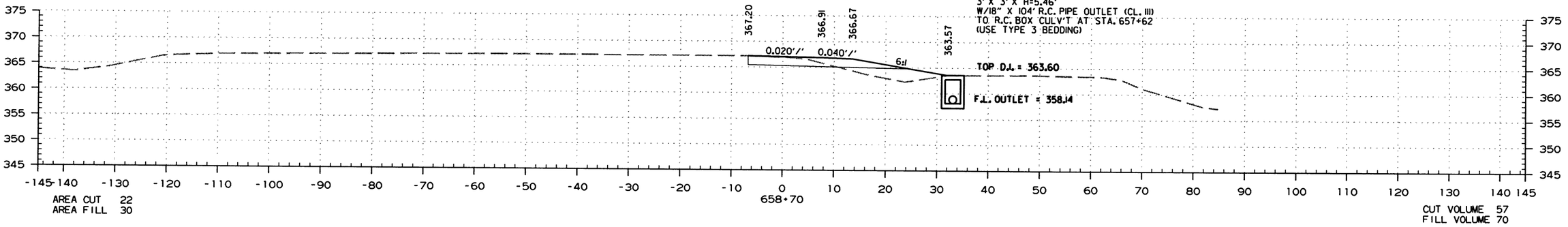
R061474.DGN

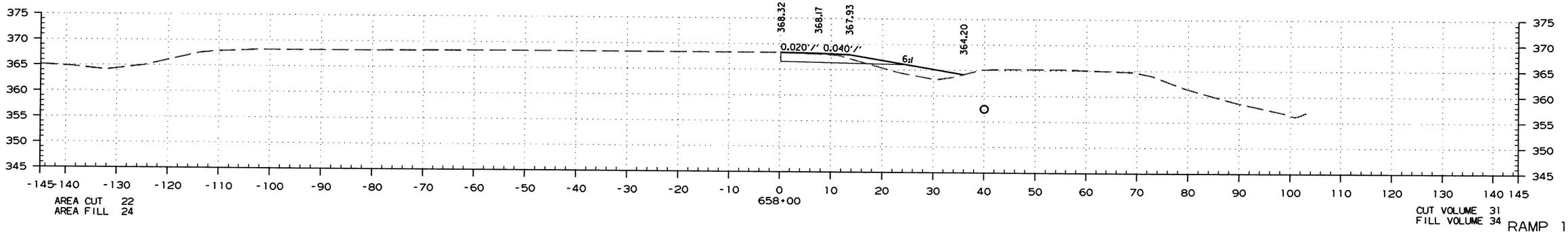
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	97	125

(2) CROSS SECTIONS



STA. 658+70 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
3' X 3' X H=5.46'
W/18" X 104' R.C. PIPE OUTLET (CL. III)
TO R.C. BOX CULV'T AT STA. 657+62
(USE TYPE 3 BEDDING)





RAMP 1

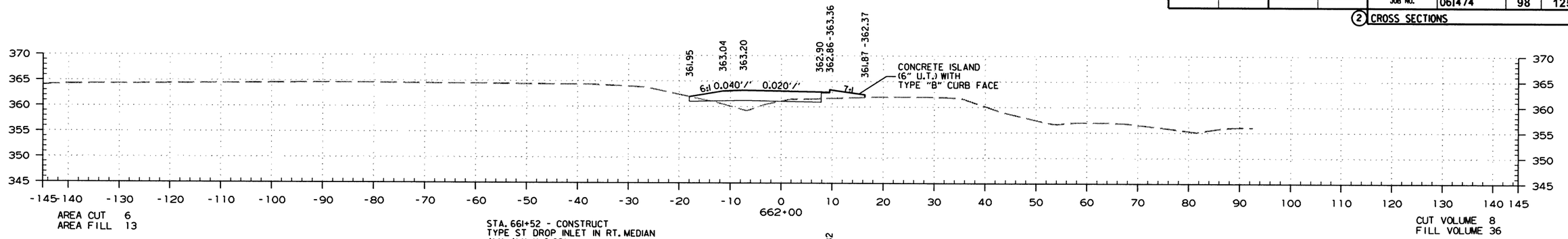
STA. 658+00.00 TO STA. 659+00.00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	98	125

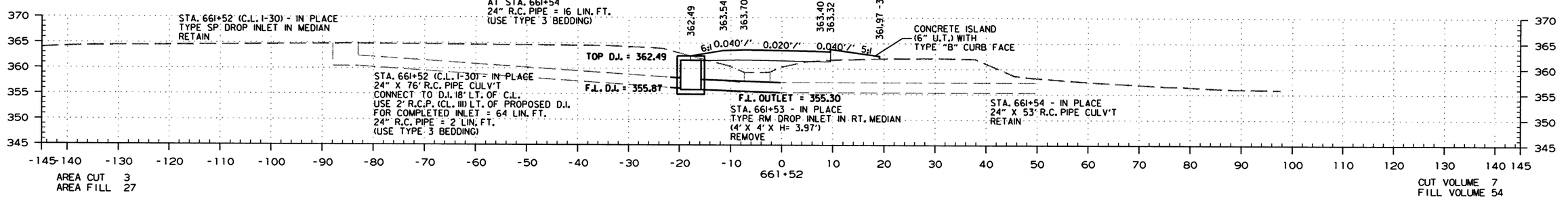
(2) CROSS SECTIONS



AREA CUT 6
AREA FILL 13

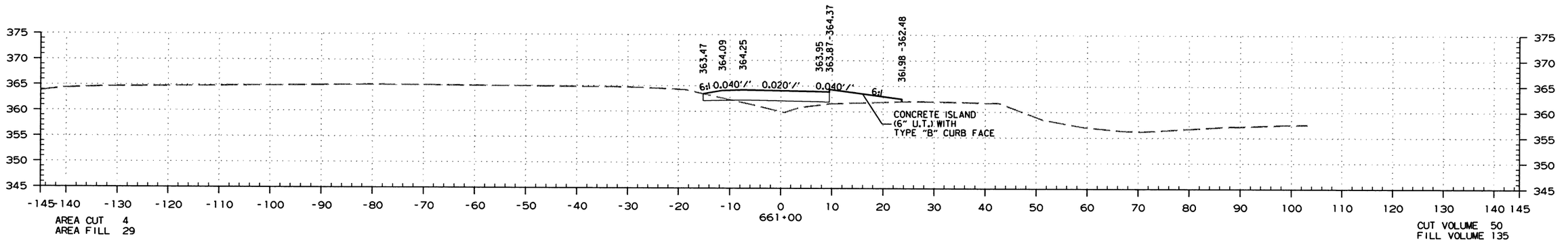
CUT VOLUME 8
FILL VOLUME 36

STA. 661+52 - CONSTRUCT
TYPE ST DROP INLET IN RT. MEDIAN
4' X 4' X H=6.62'
W/24" X 16' R.C.P. OUTLET (CL. III) TO
EXISTING 24" X 53' R.C. PIPE CULV'T
AT STA. 661+54
24" R.C. PIPE = 16 LIN. FT.
(USE TYPE 3 BEDDING)



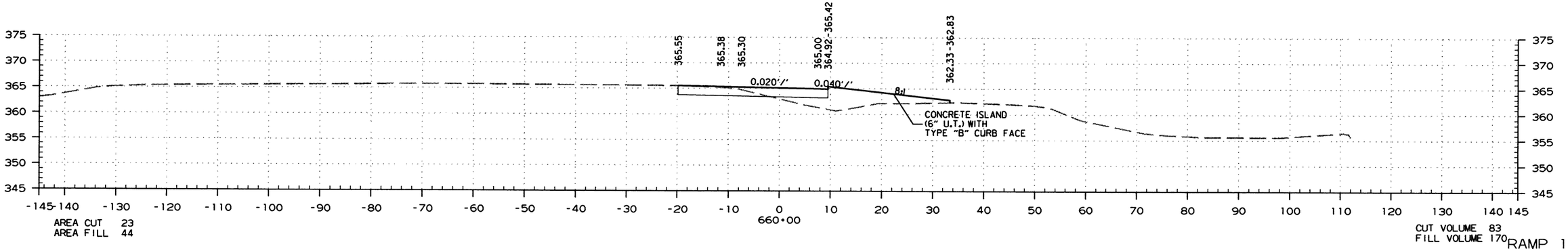
AREA CUT 3
AREA FILL 27

CUT VOLUME 7
FILL VOLUME 54



AREA CUT 4
AREA FILL 29

CUT VOLUME 50
FILL VOLUME 135



AREA CUT 23
AREA FILL 44

CUT VOLUME 83
FILL VOLUME 170

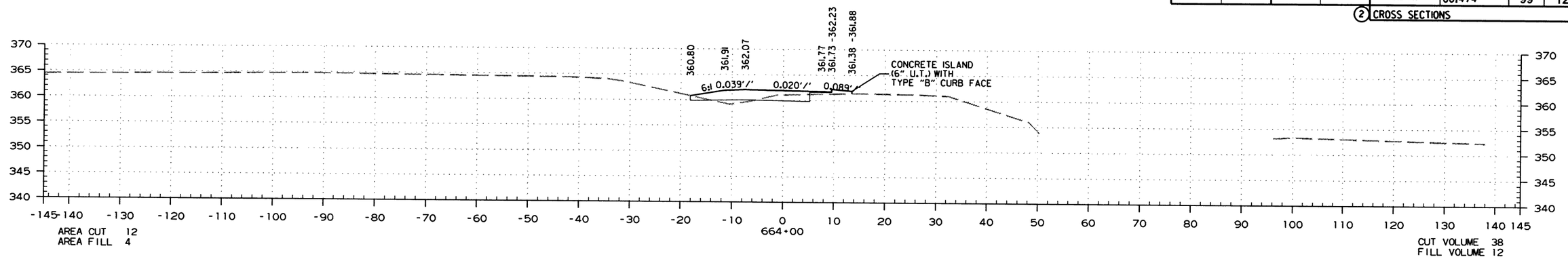
RAMP 1
STA. 660+00.00 TO STA. 662+00.00

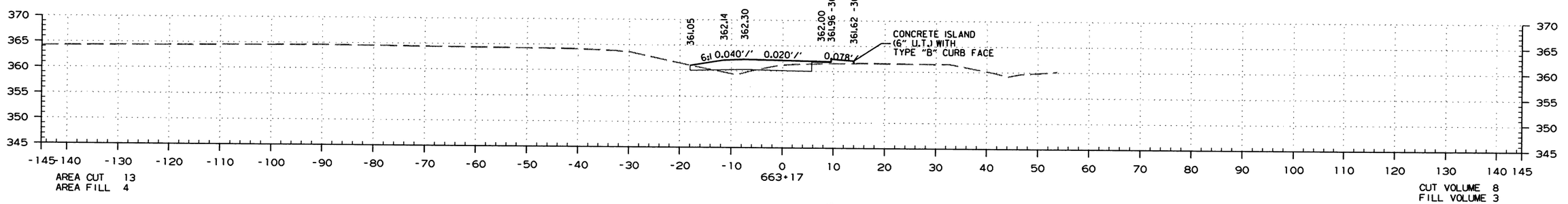
10/3/2016

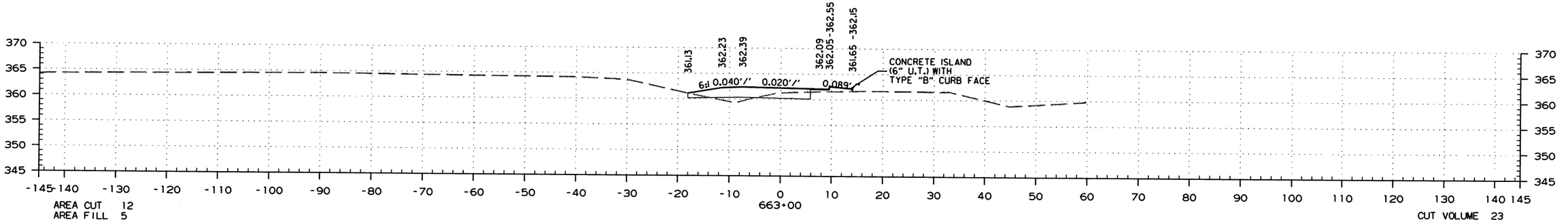
R061474.DGN

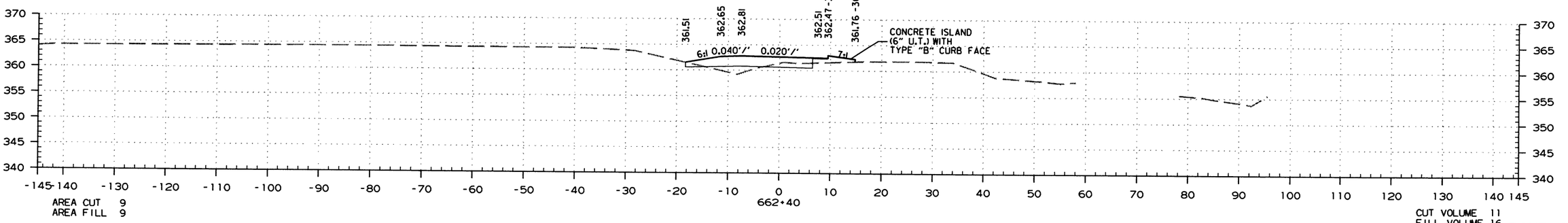
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	99	125

(2) CROSS SECTIONS









RAMP 1

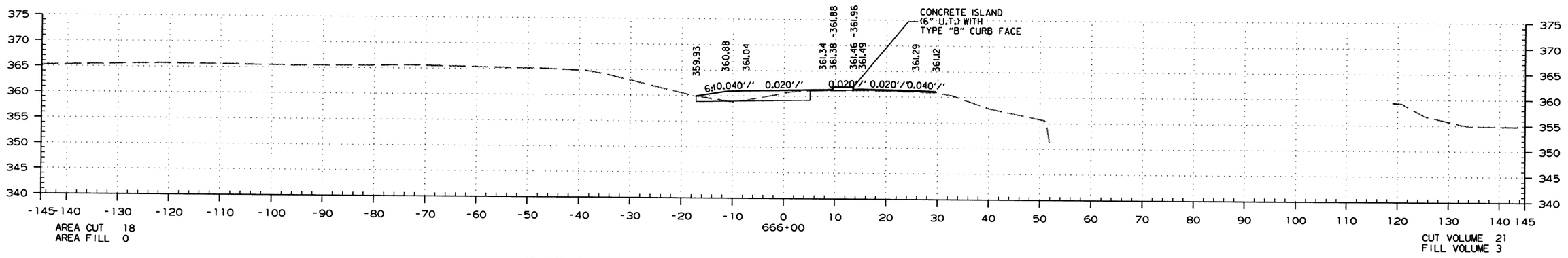
STA. 662+39.89 TO STA. 664+00.00

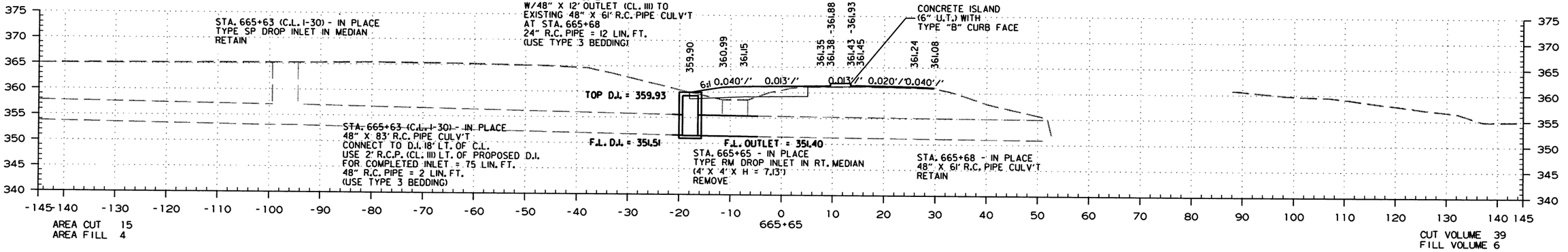
10/3/2016

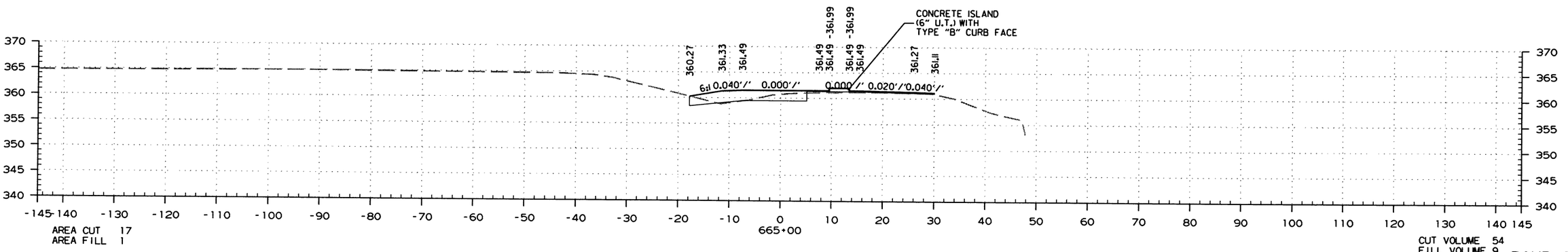
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	100	125

(2) CROSS SECTIONS







10/3/2016

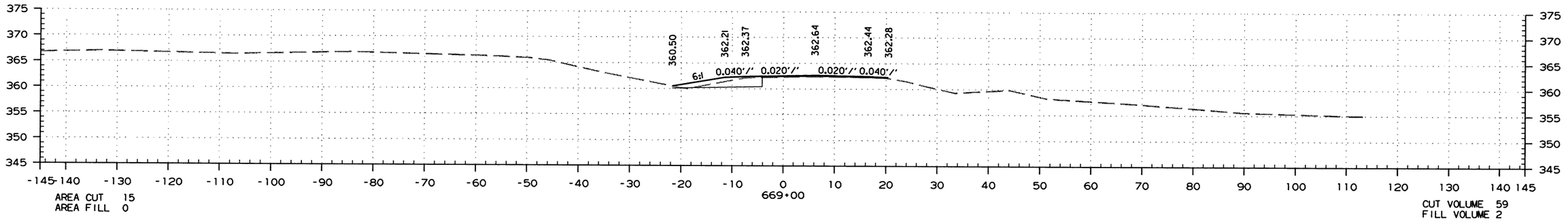
R061474.DGN

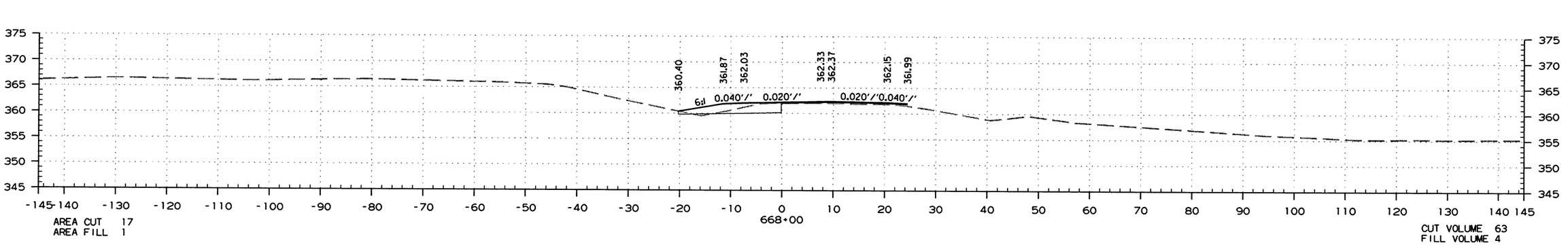
RAMP 1

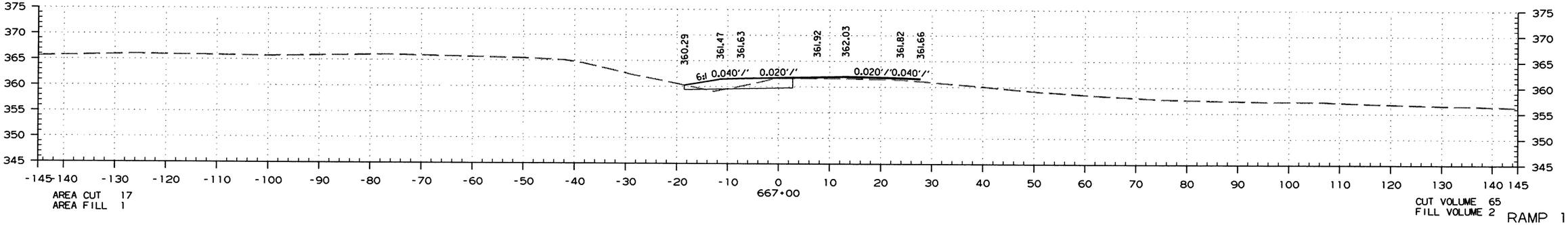
STA. 665+00.00 TO STA. 666+00.00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	101	125

(2) CROSS SECTIONS







RAMP 1

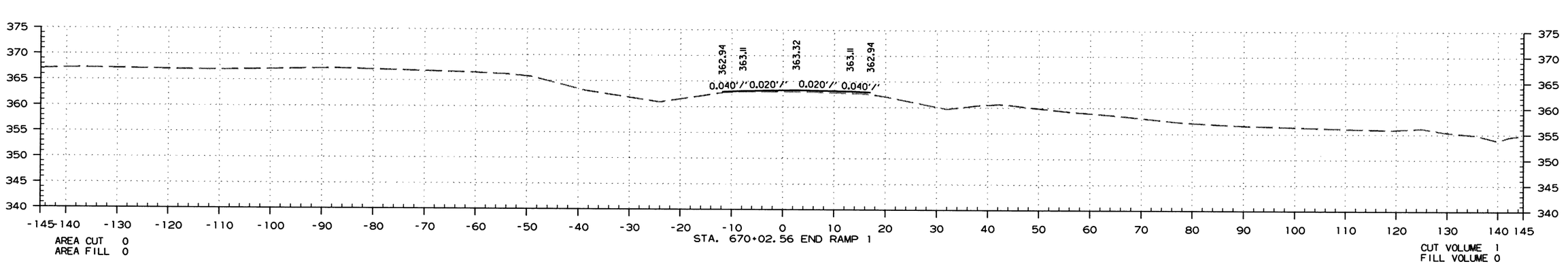
STA. 667+00.00 TO STA. 669+00.00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	102	125

(2) CROSS SECTIONS



RAMP 1

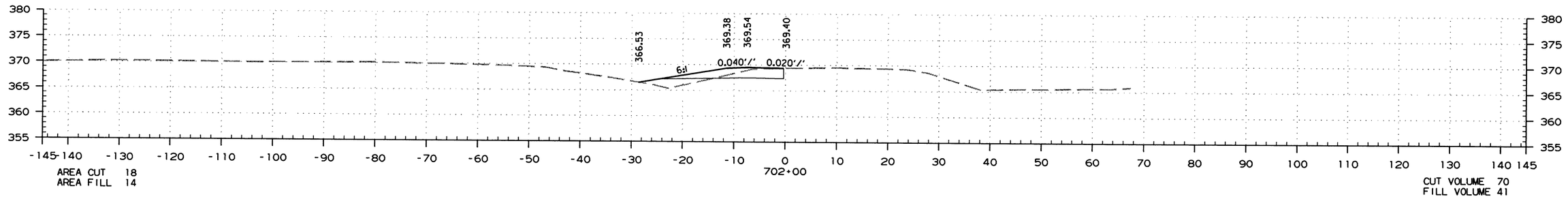
STA. 670+00.00 TO STA. 670+02.56

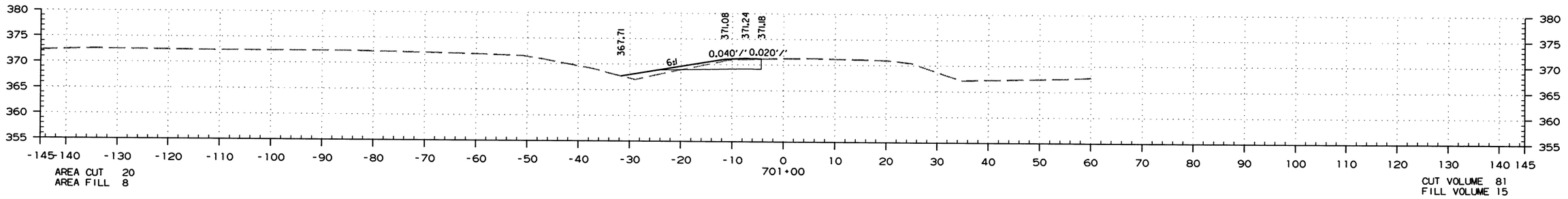
10/3/2016

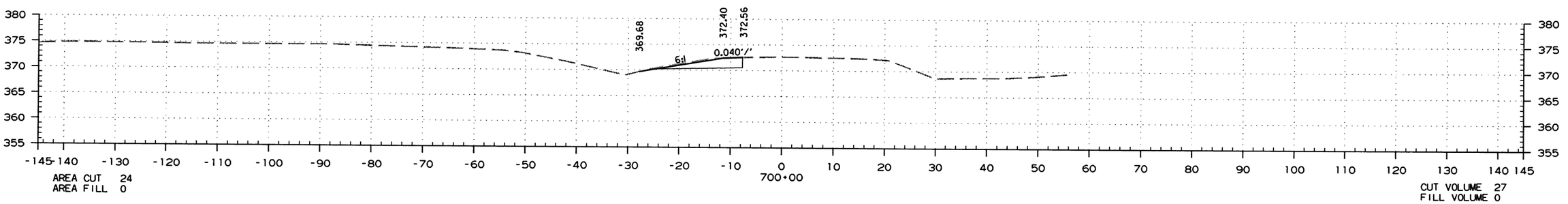
R061474.DGN

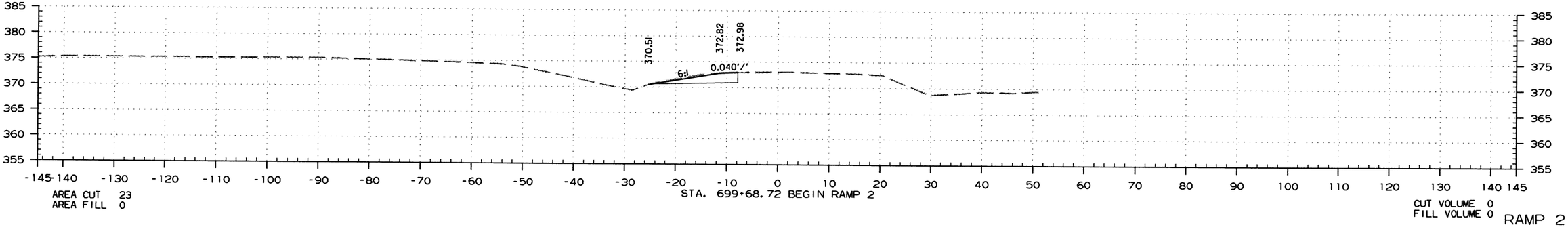
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	103	125

(2) CROSS SECTIONS









RAMP 2

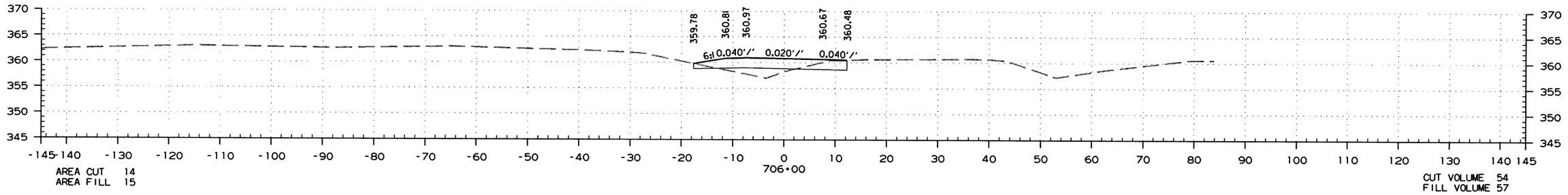
STA. 699+68.72 TO STA. 702+00.00

10/3/2016

R061474.DGN

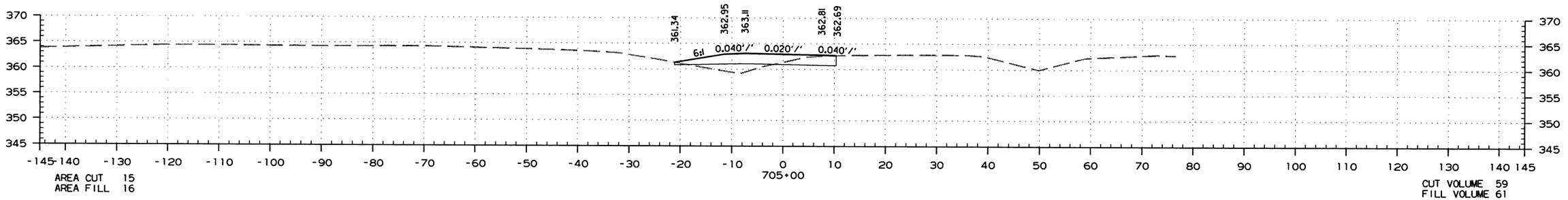
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	104	125

(2) CROSS SECTIONS



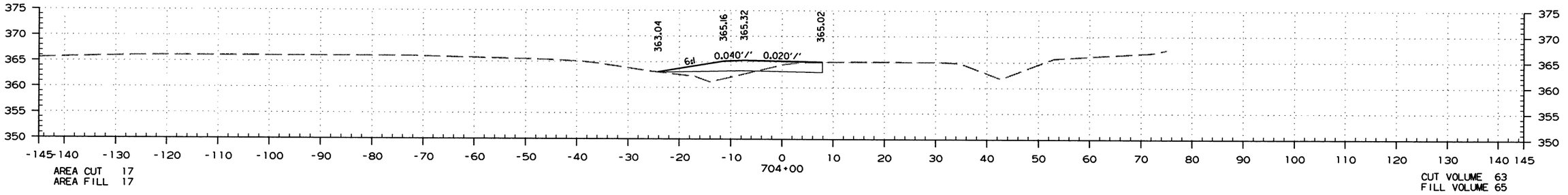
AREA CUT 14
AREA FILL 15

CUT VOLUME 54
FILL VOLUME 57



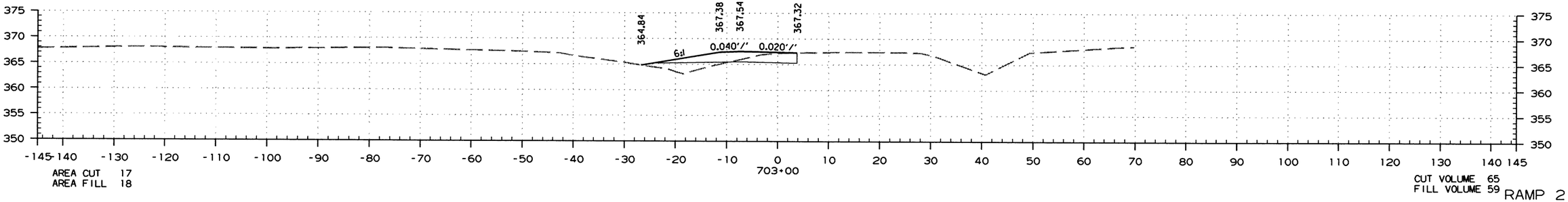
AREA CUT 15
AREA FILL 16

CUT VOLUME 59
FILL VOLUME 61



AREA CUT 17
AREA FILL 17

CUT VOLUME 63
FILL VOLUME 65



AREA CUT 17
AREA FILL 18

CUT VOLUME 65
FILL VOLUME 59

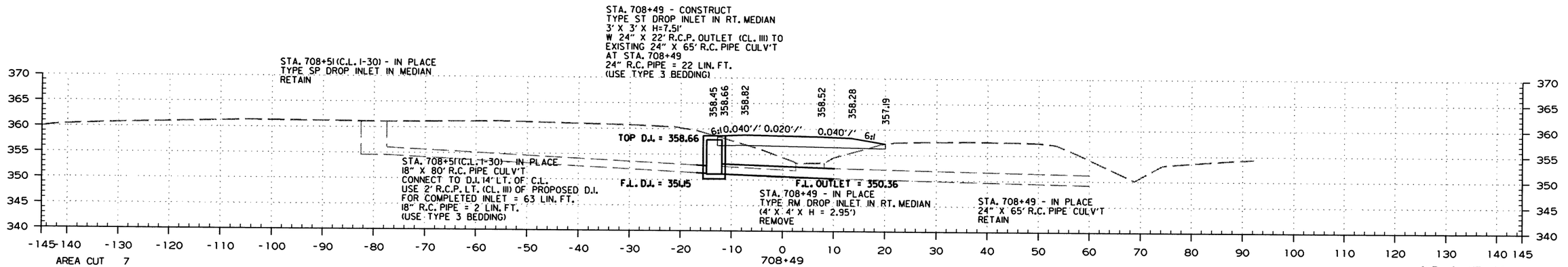
RAMP 2
STA. 703+00.00 TO STA. 706+00.00

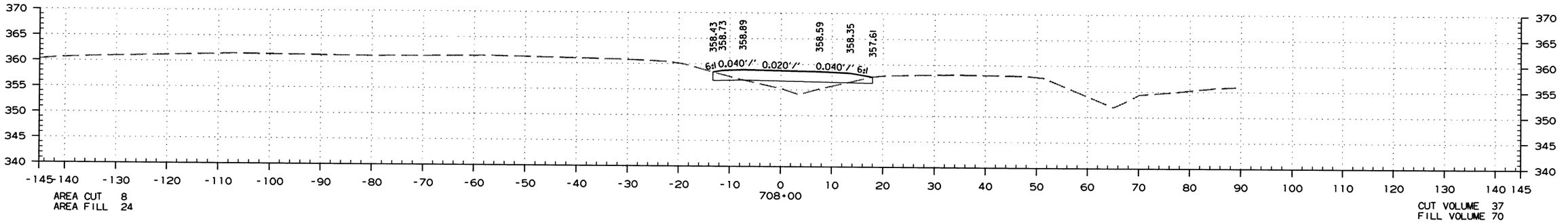
10/3/2016

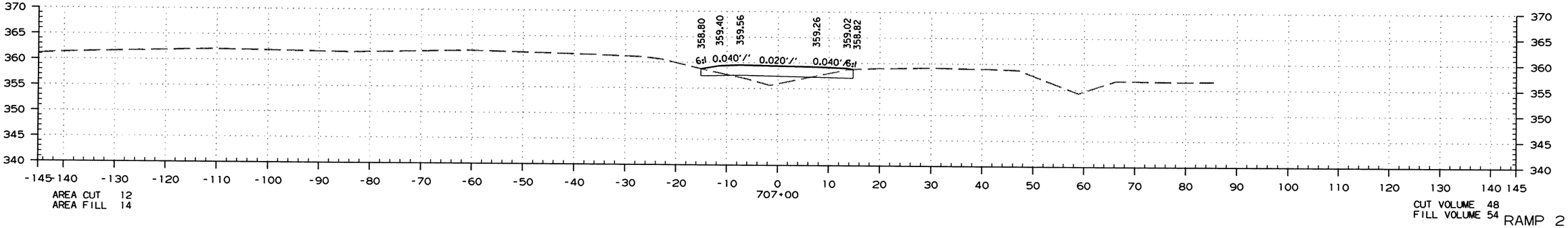
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	105	125

(2) CROSS SECTIONS







RAMP 2

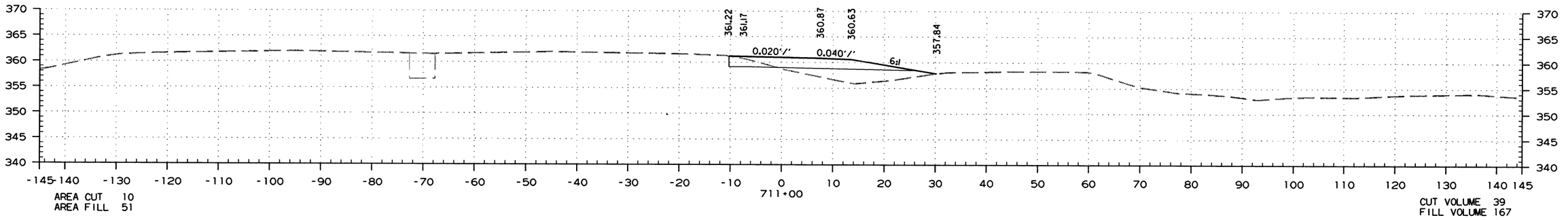
STA. 707+00.00 TO STA. 708+49.44

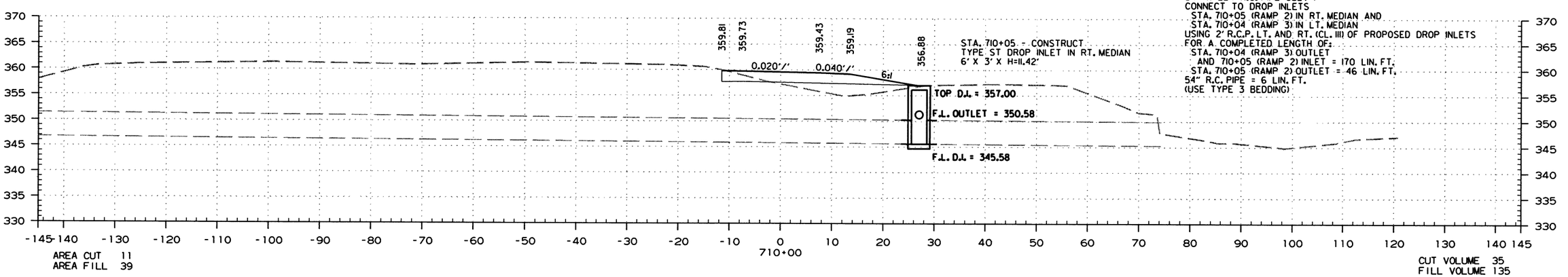
10/3/2016

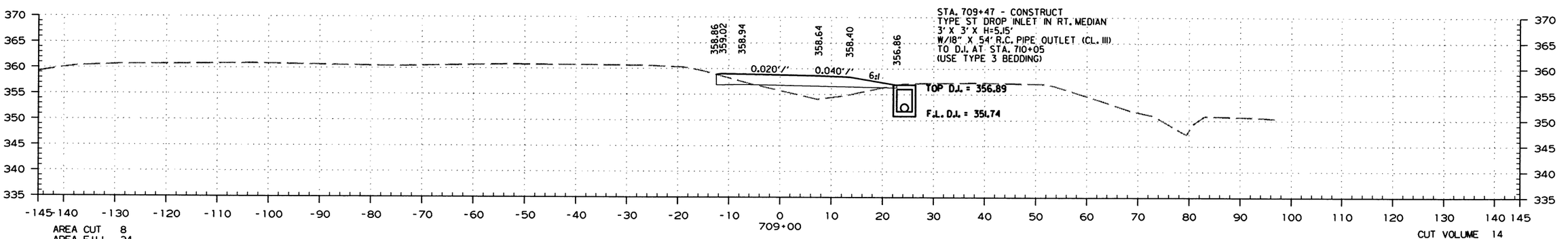
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	106	125

(2) CROSS SECTIONS







RAMP 2

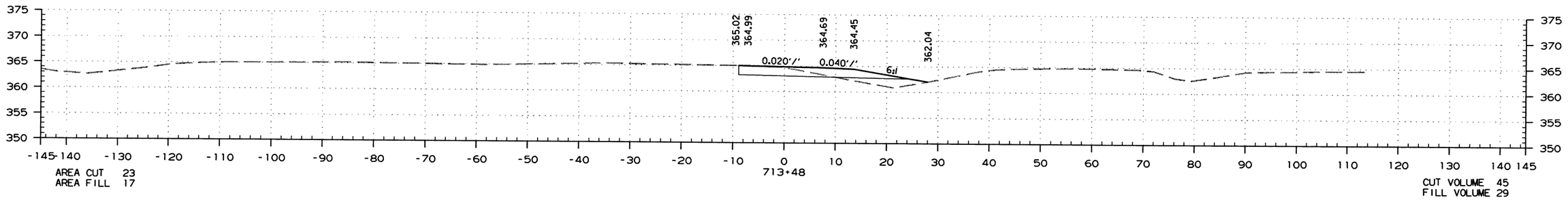
STA. 709+00.00 TO STA. 711+00.00

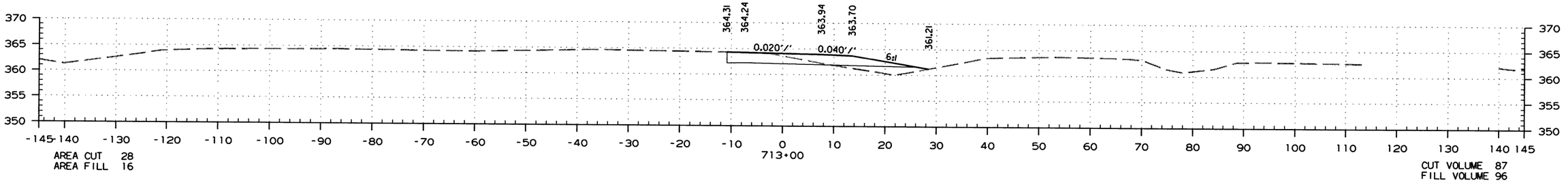
10/3/2016

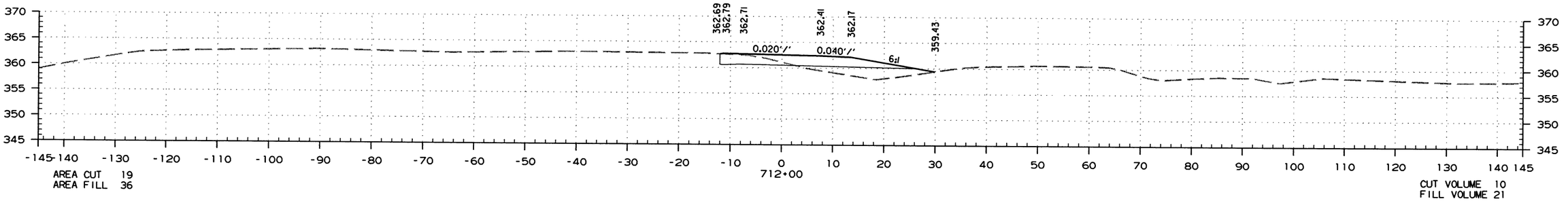
R061474.DGN

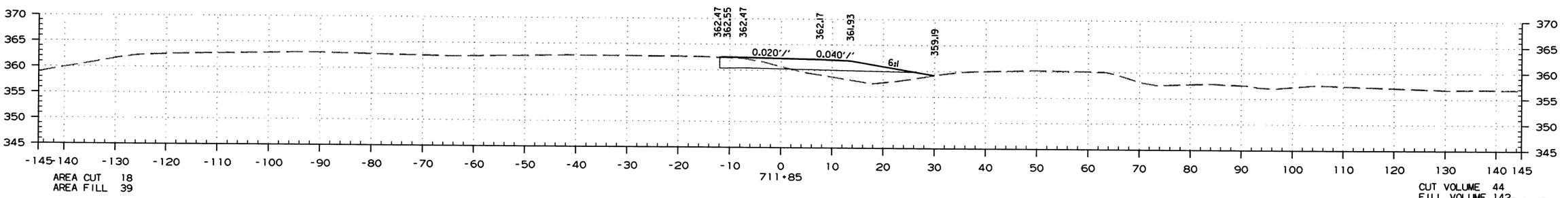
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	107	125

(2) CROSS SECTIONS









RAMP 2

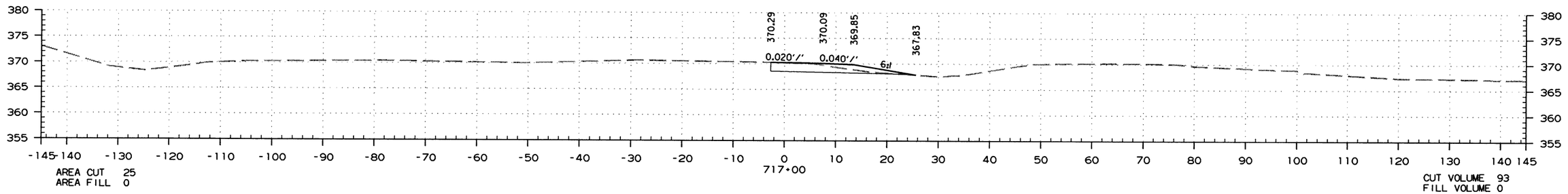
STA. 711+84.75 TO STA. 713+48.00

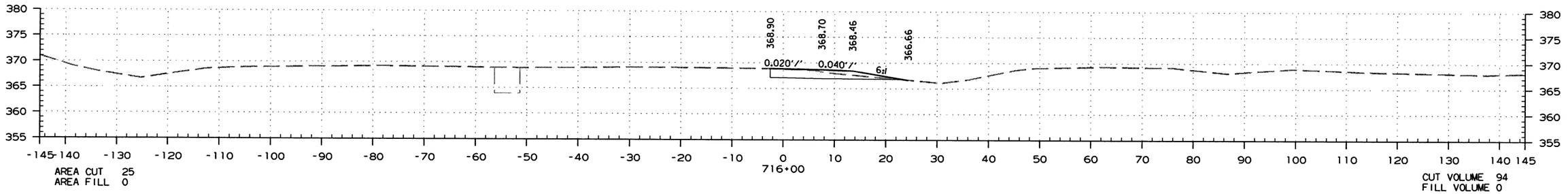
10/3/2016

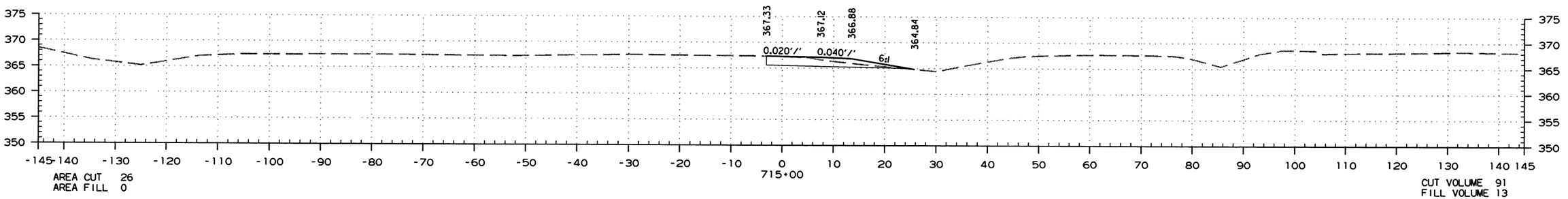
R061474.DGN

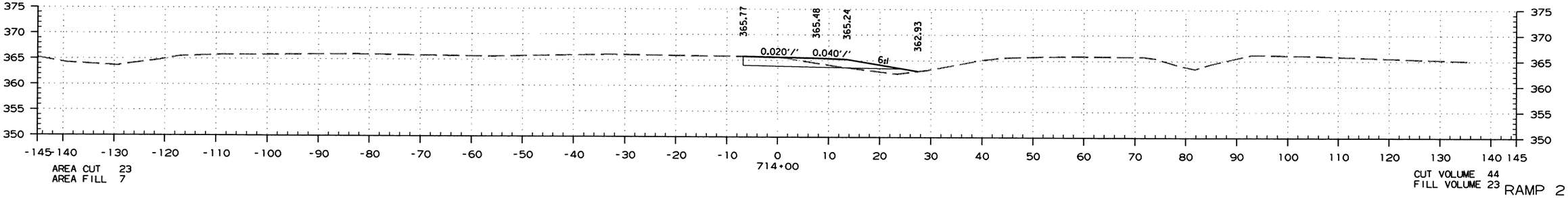
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	108	125

(2) CROSS SECTIONS









RAMP 2

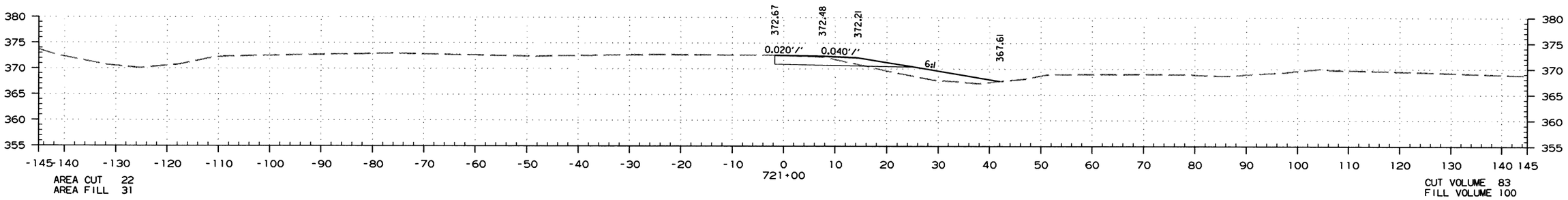
STA. 714+00.00 TO STA. 717+00.00

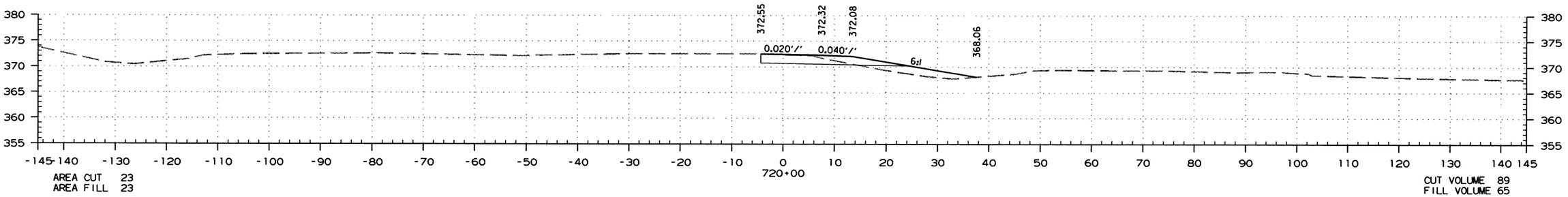
10/3/2016

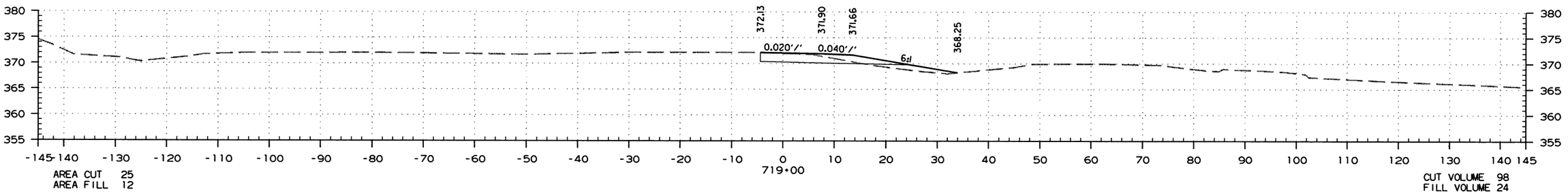
R061474.DGN

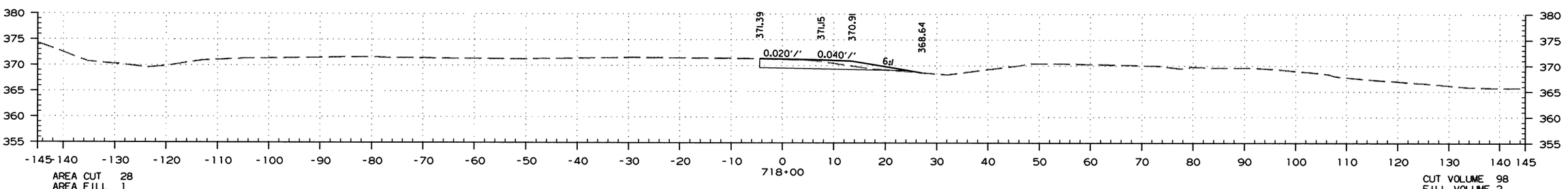
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	109	125

(2) CROSS SECTIONS









RAMP 2

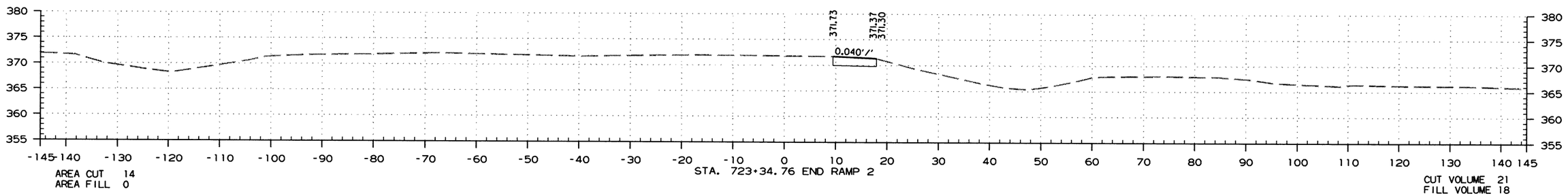
STA. 718+00.00 TO STA. 721+00.00

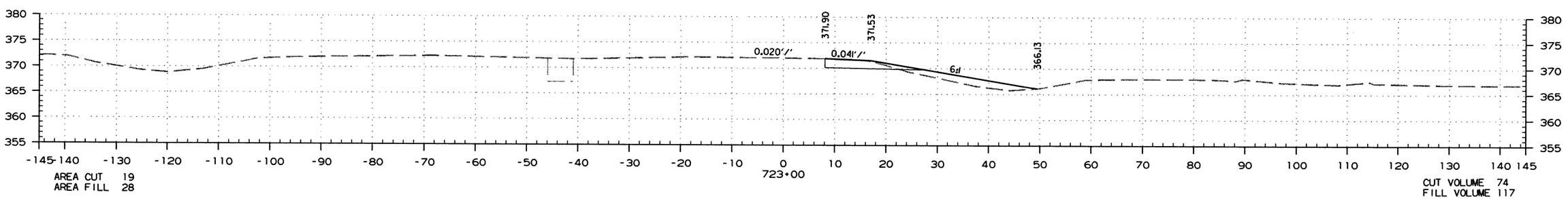
10/3/2016

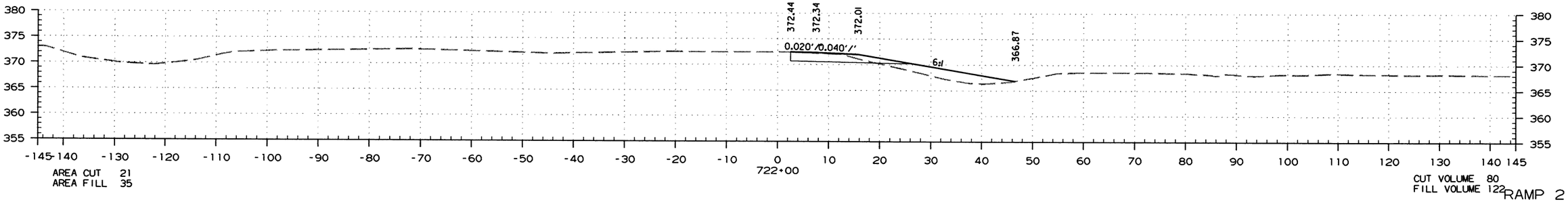
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	110	125

(2) CROSS SECTIONS







RAMP 2

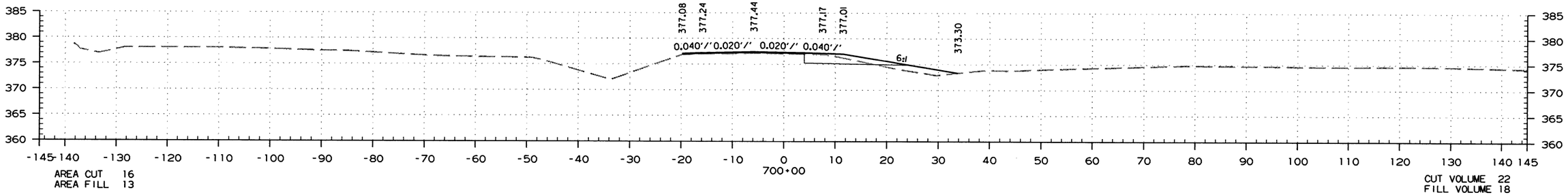
STA. 722+00.00 TO STA. 723+34.76

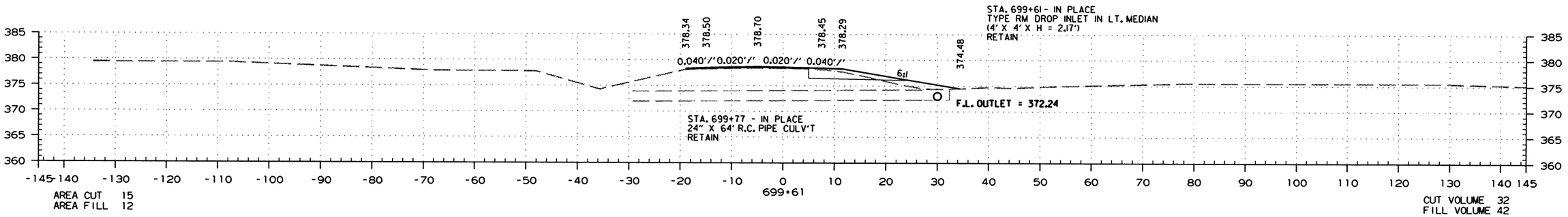
10/3/2016

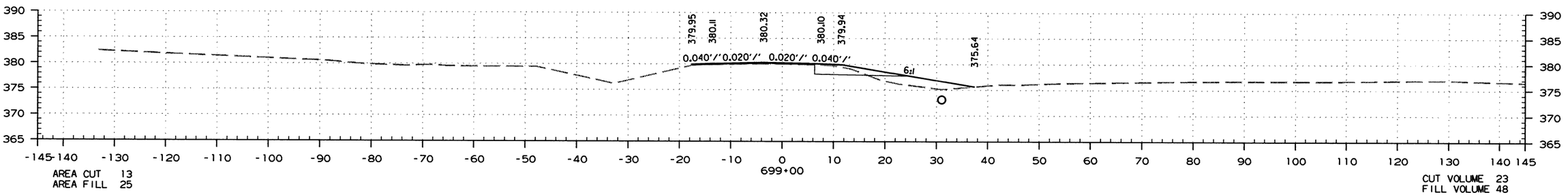
R061474.DGN

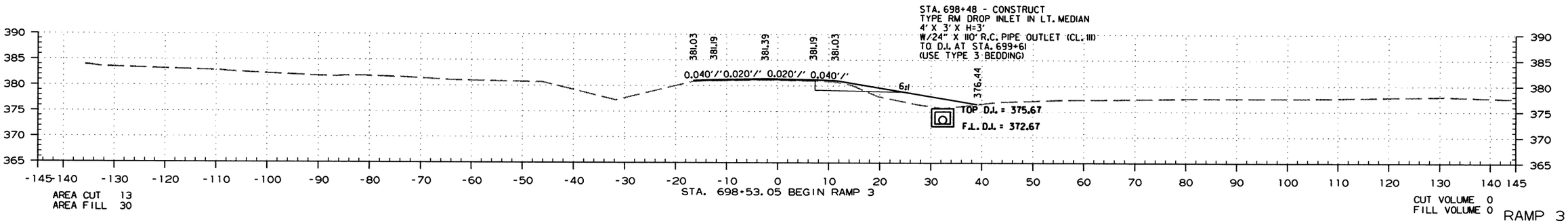
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	111	125

(2) CROSS SECTIONS









RAMP 3

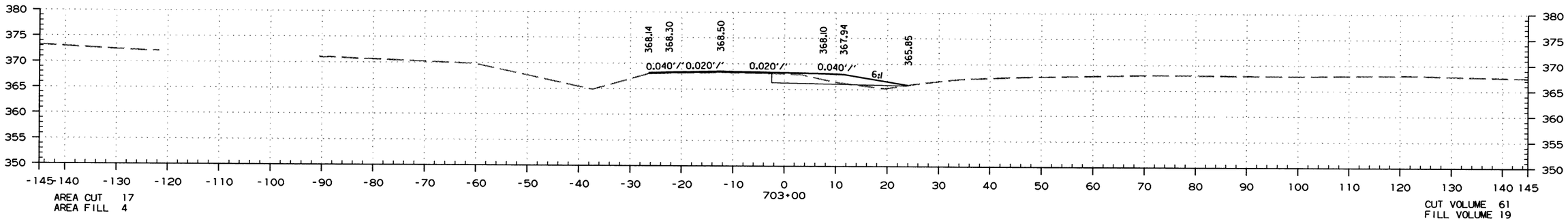
STA. 698+53.05 TO STA. 700+00.00

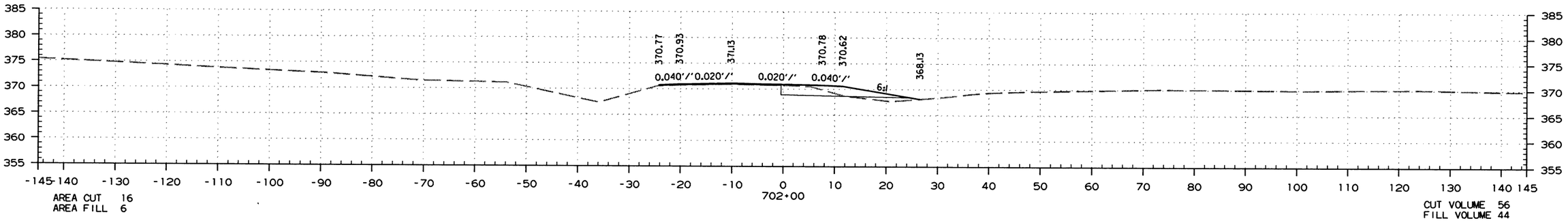
10/3/2016

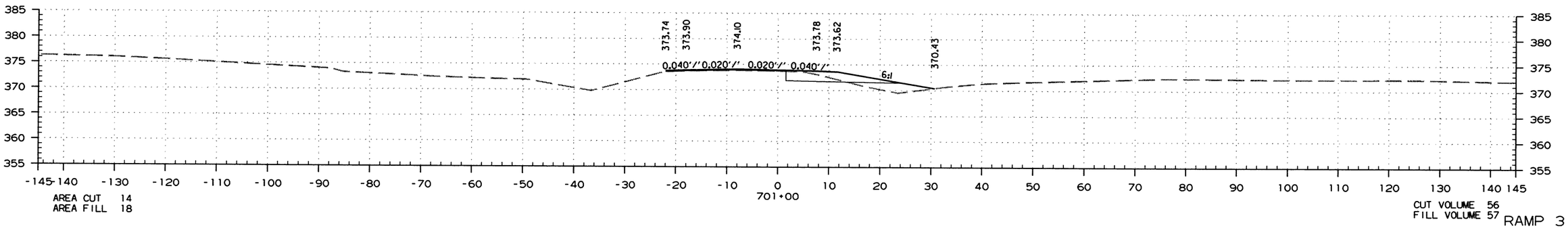
R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	112	125

(2) CROSS SECTIONS







RAMP 3

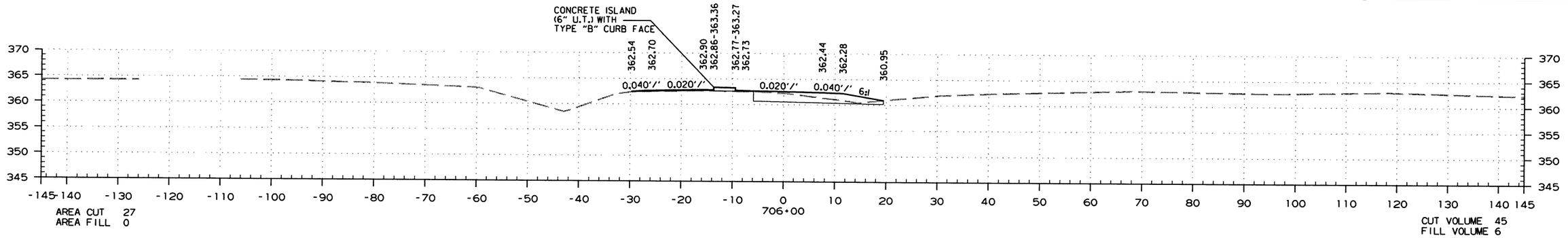
STA. 701+00.00 TO STA. 703+00.00

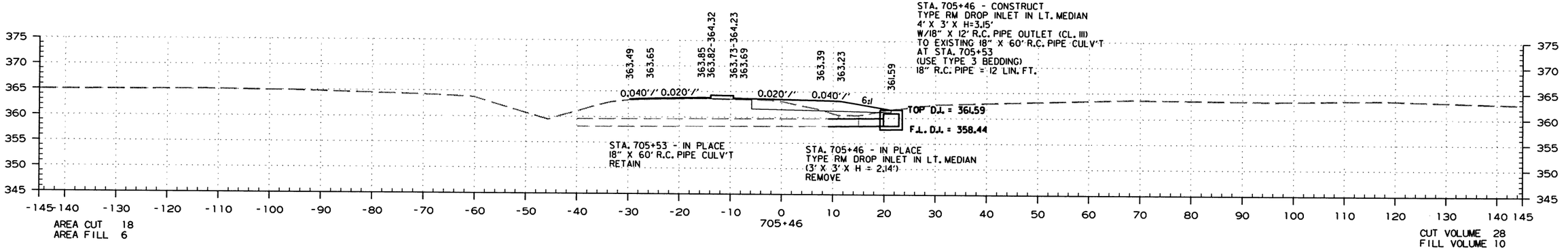
10/3/2016

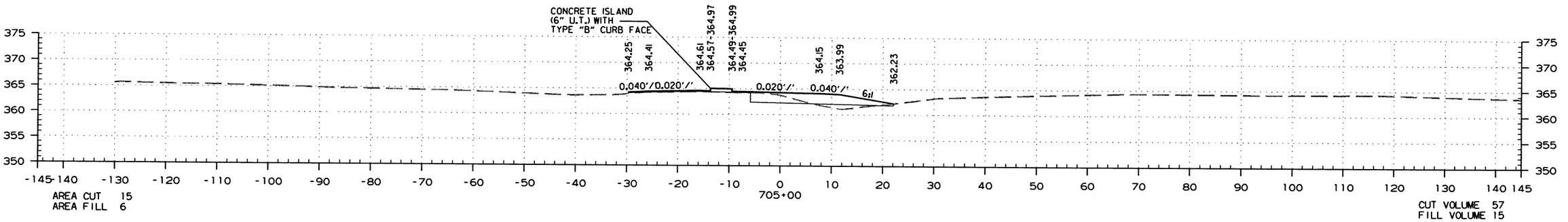
R061474.DGN

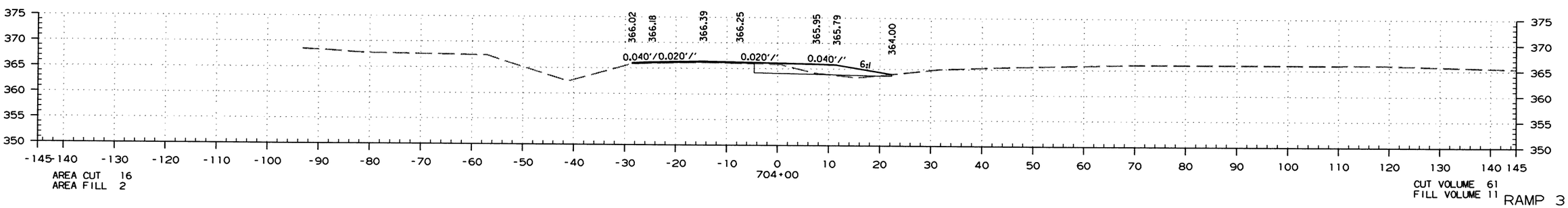
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	113	125

(2) CROSS SECTIONS









RAMP 3

STA. 704+00.00 TO STA. 706+00.00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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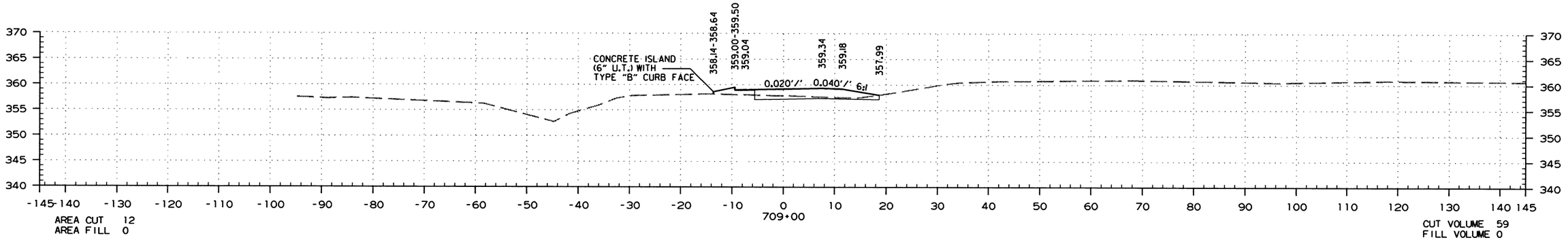
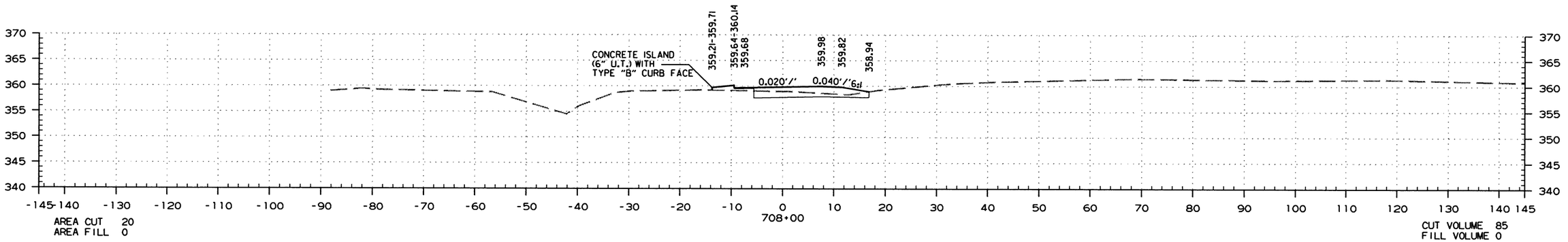
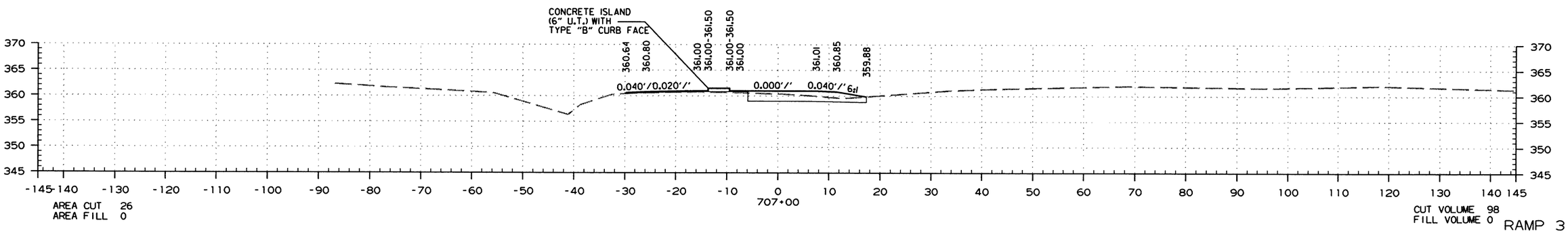
				JOB NO.		061474	114	125

(2) CROSS SECTIONS







RAMP 3

STA. 707+00.00 TO STA. 709+00.00

10/3/2016

R061474.DGN

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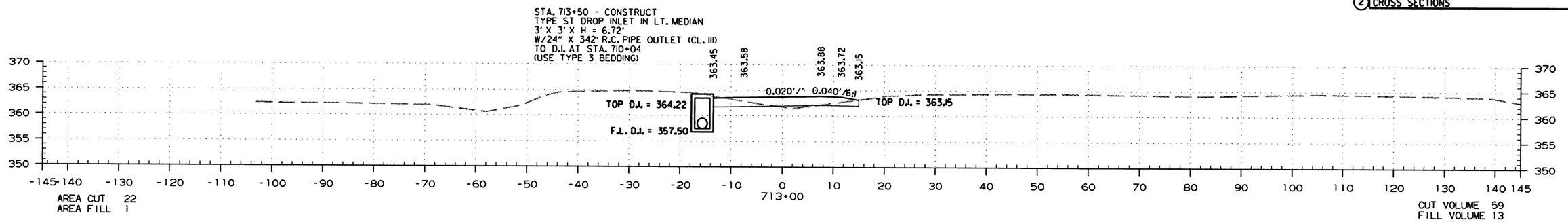
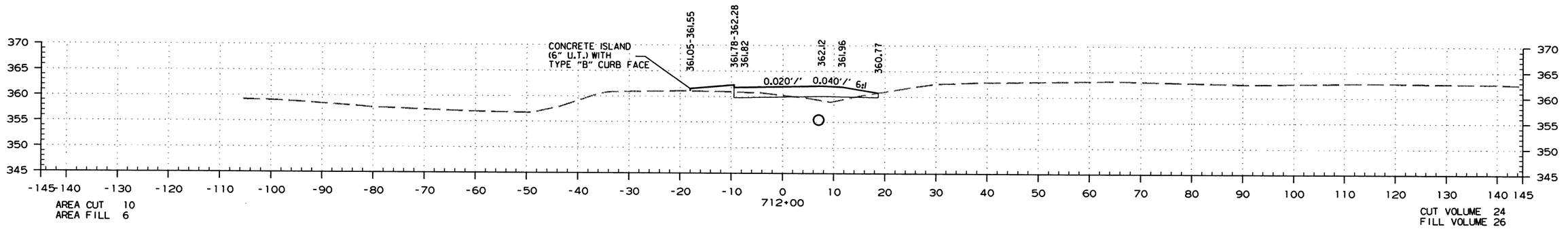
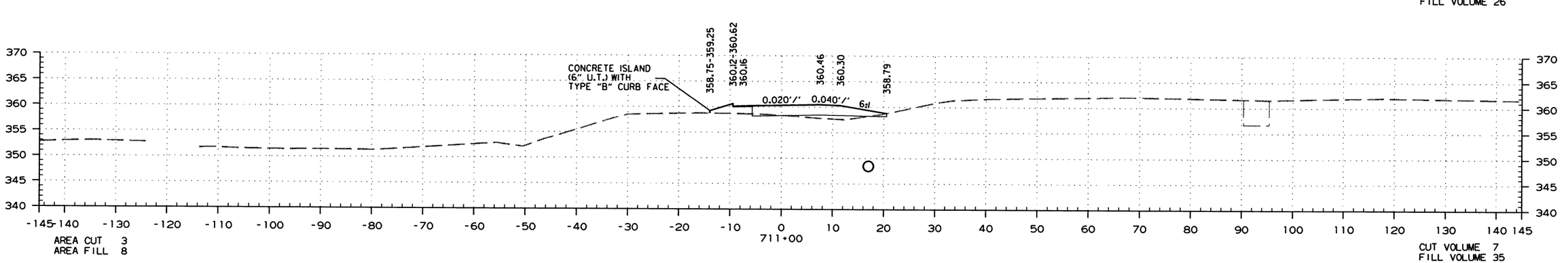
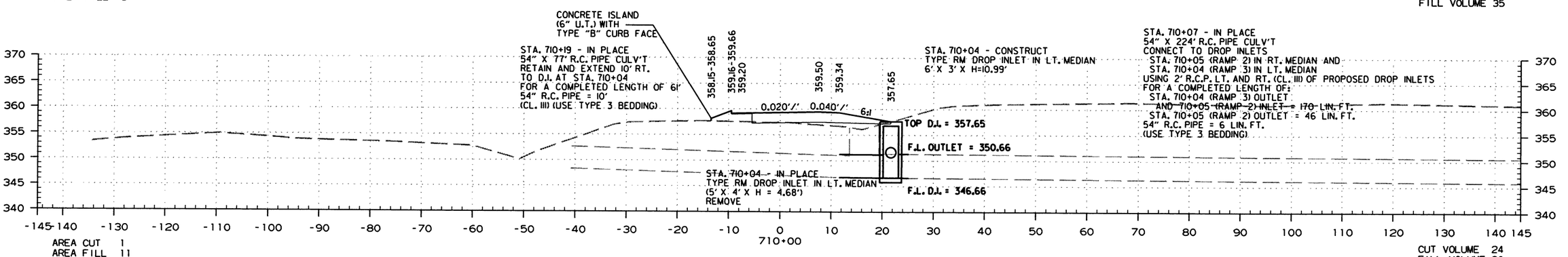
(2) CROSS SECTIONS









RAMP 3

STA. 710+00.00 TO STA. 713+00.00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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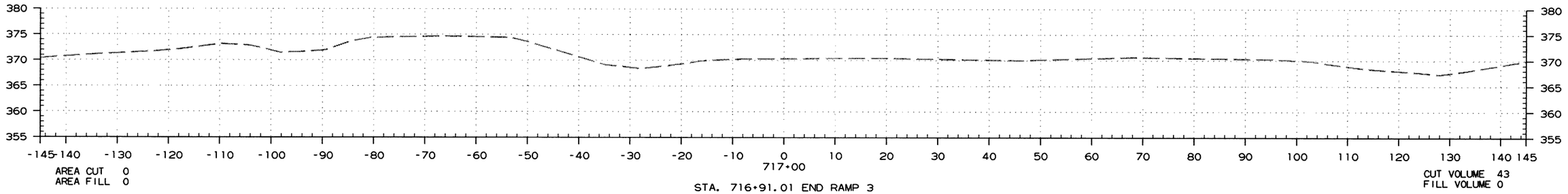
				JOB NO.		061474	116	125

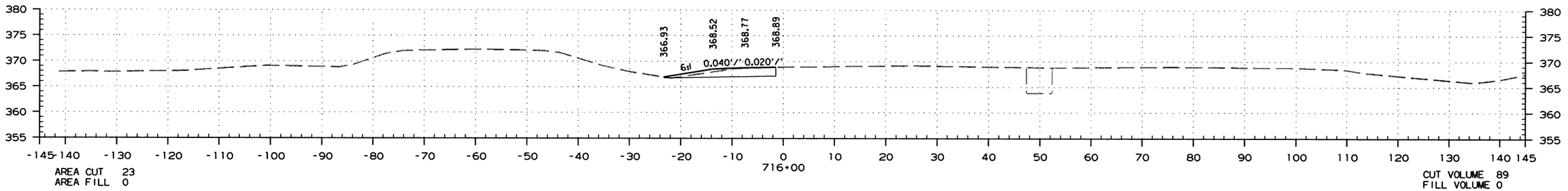
(2) CROSS SECTIONS



AREA CUT 0
AREA FILL 0

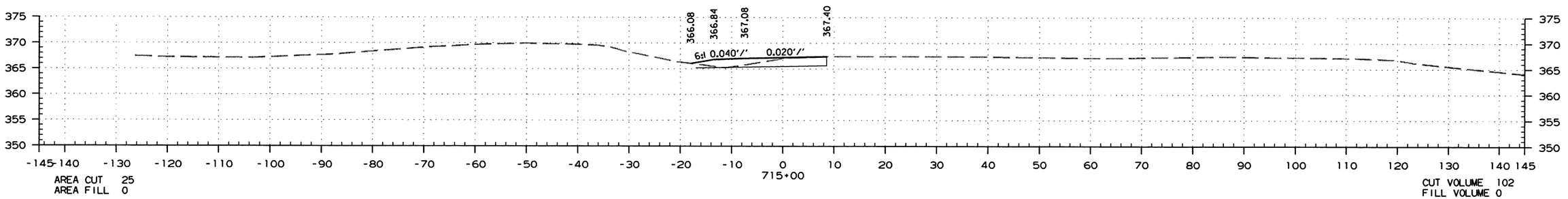
CUT VOLUME 43
FILL VOLUME 0

STA. 716+91.01 END RAMP 3



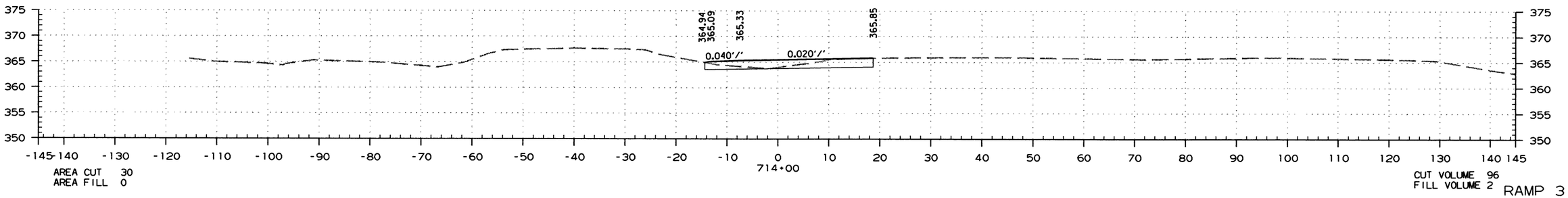
AREA CUT 23
AREA FILL 0

CUT VOLUME 89
FILL VOLUME 0



AREA CUT 25
AREA FILL 0

CUT VOLUME 102
FILL VOLUME 0



AREA CUT 30
AREA FILL 0

CUT VOLUME 96
FILL VOLUME 2

RAMP 3

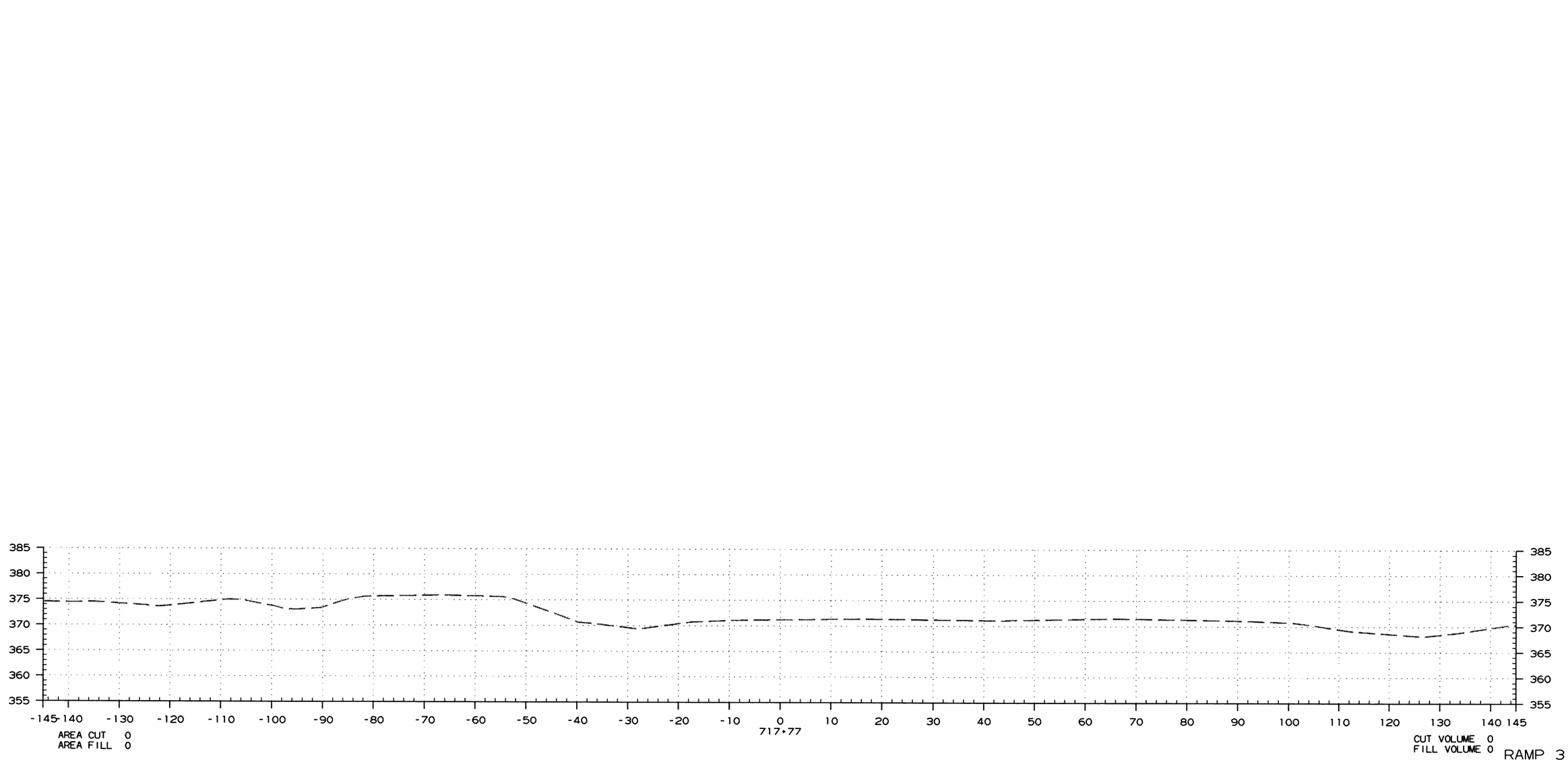
STA. 714+00.00 TO STA. 717+00.00

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	117	125

(2) CROSS SECTIONS



RAMP 3

STA. 717+76.89 TO STA. 717+76.89

10/3/2016

R061474.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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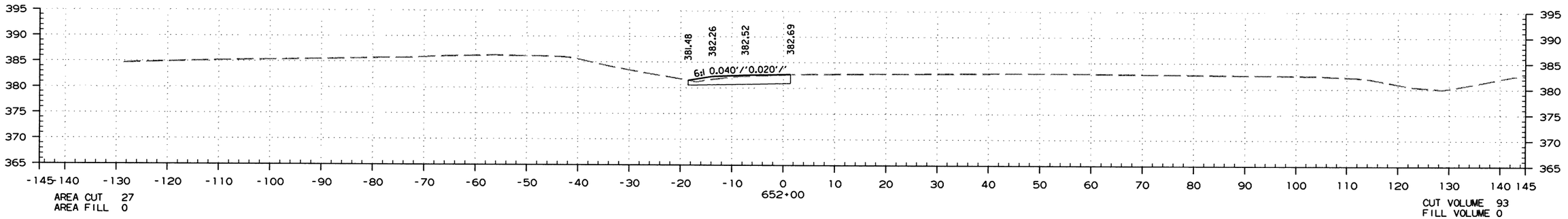
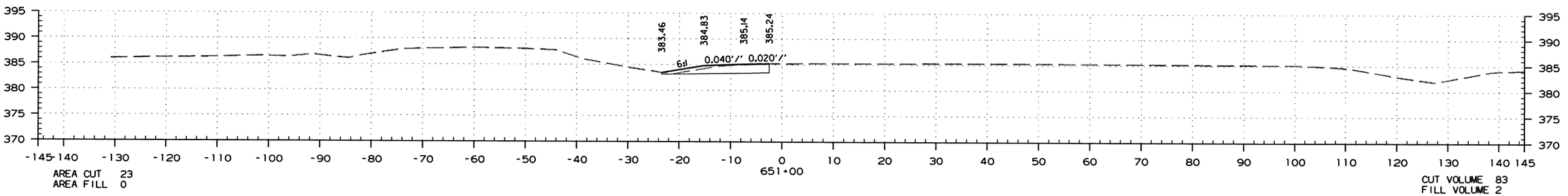
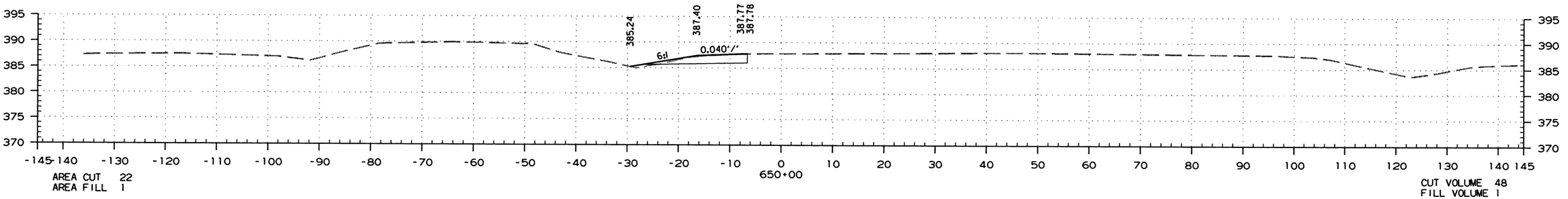
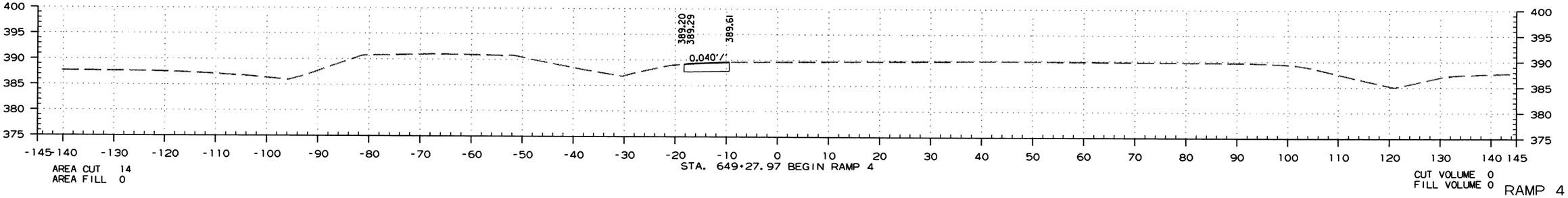
				JOB NO.		061474	118	125

(2) CROSS SECTIONS









RAMP 4

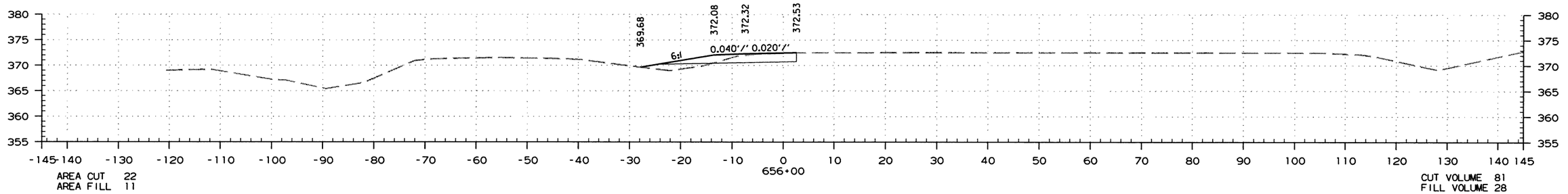
STA. 649+27.97 TO STA. 652+00.00

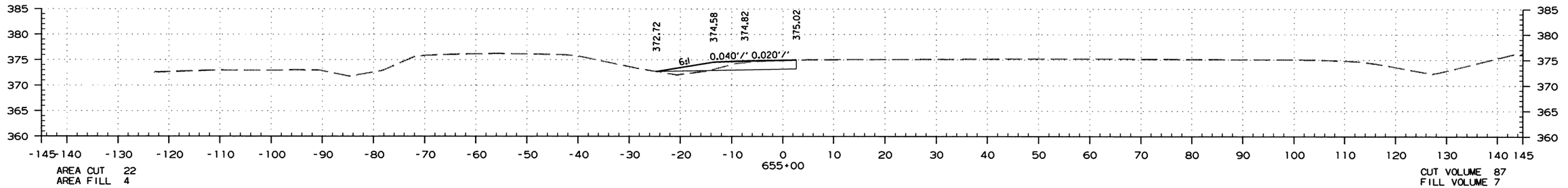
10/3/2016

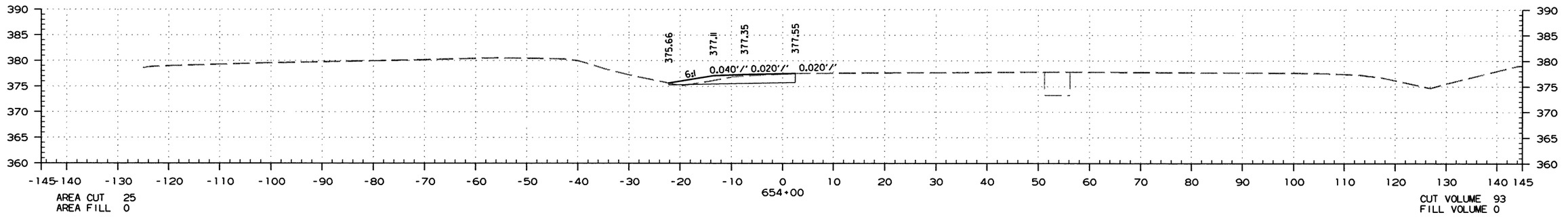
R061474.DGN

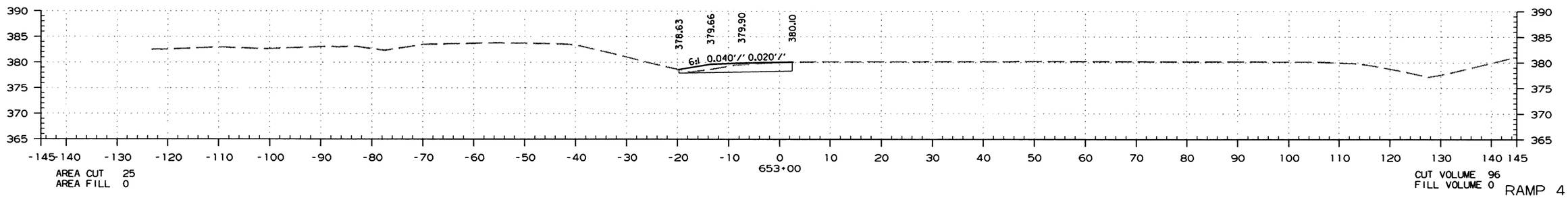
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	119	125

(2) CROSS SECTIONS









RAMP 4

STA. 653+00.00 TO STA. 656+00.00

10/3/2016

R061474.DGN

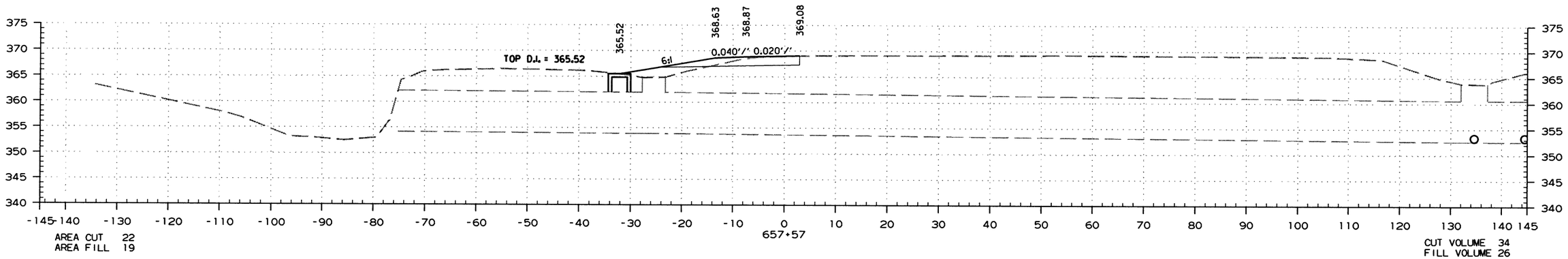
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	120	125

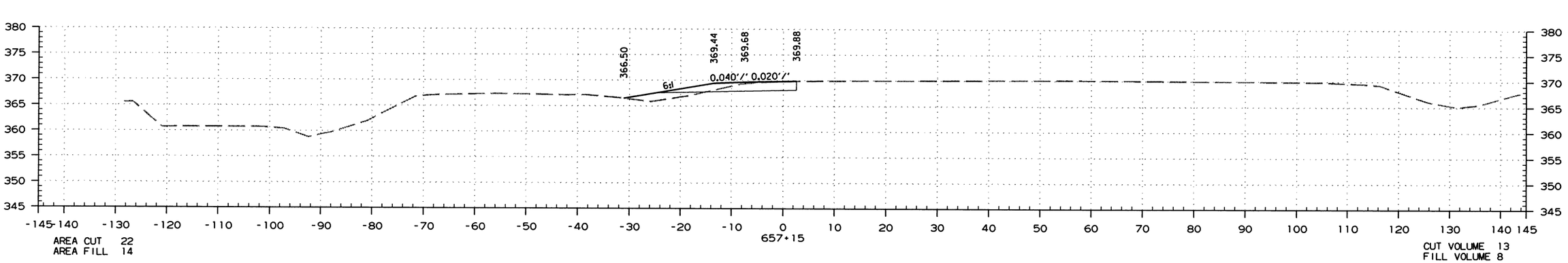
(2) CROSS SECTIONS

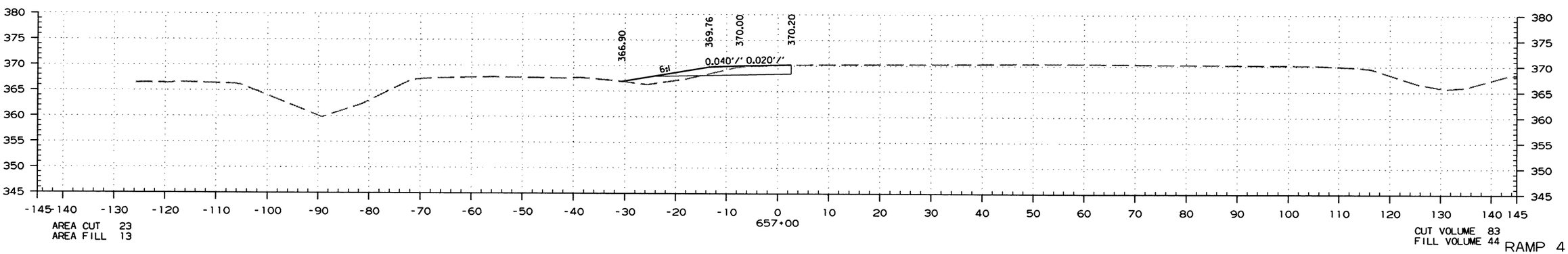
STA. 657+57 - IN PLACE
TYPE TM DROP INLET IN LT. MEDIAN
4' X 4' X H = 10.92'
REMOVE

STA. 657+62 - IN PLACE
10' X 8' X 262' R.C. BOX CULV'T
RETAIN

STA. 657+57 - CONSTRUCT
TYPE TM DROP INLET IN LT. MEDIAN
3' X 2.54' X H=11.59'







RAMP 4
STA. 657+00.00 TO STA. 657+57.07

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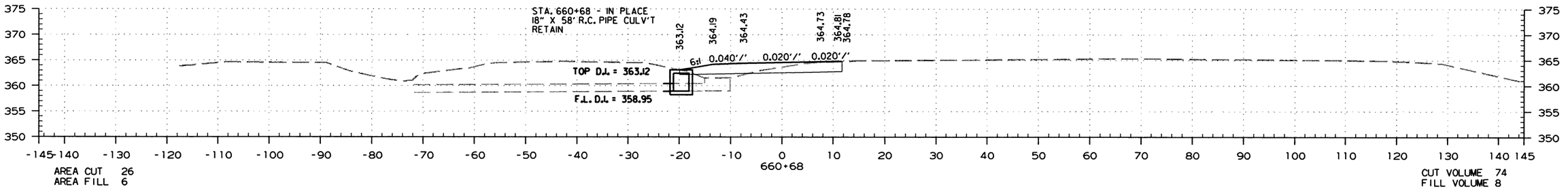
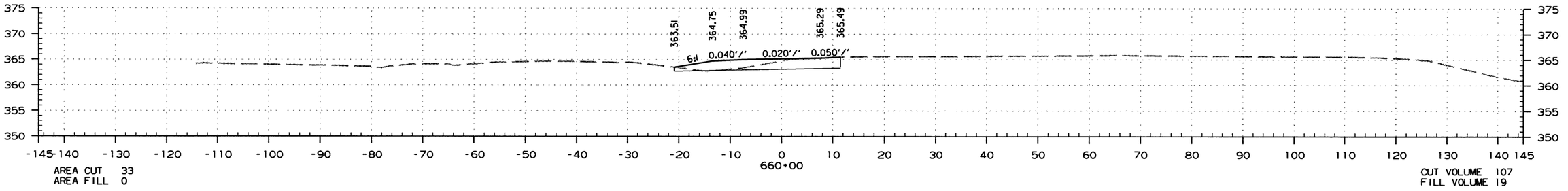
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	121	125

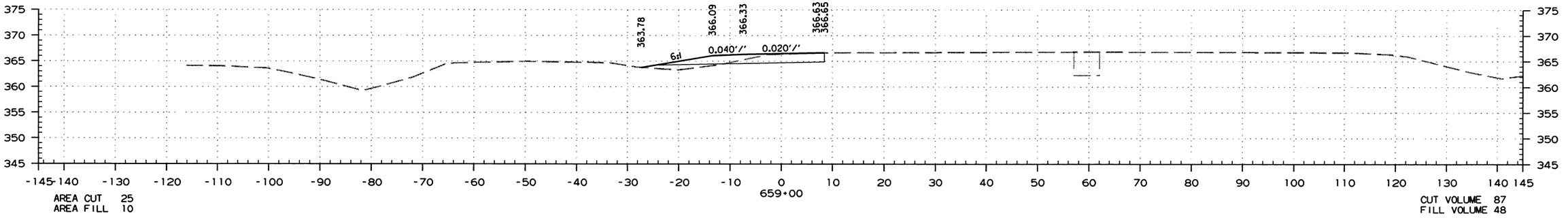
(2) CROSS SECTIONS

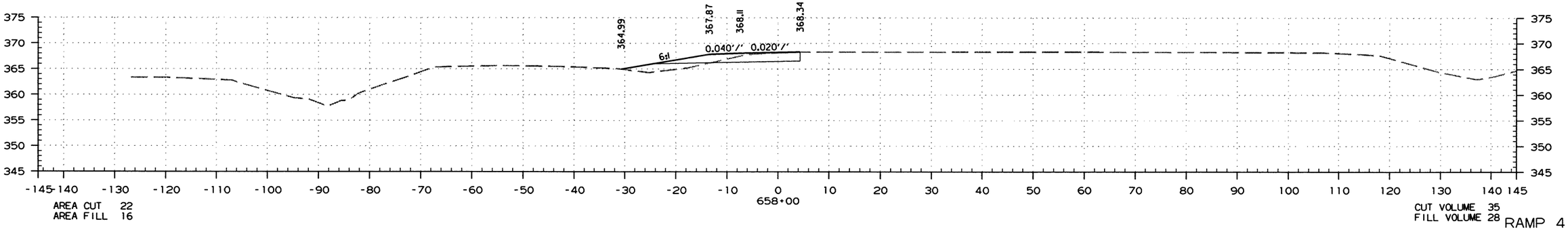
STA. 660+68 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(3' X 3' X H = 2.53')
REMOVE

STA. 660+68 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H=4.17'
W/2' R.C.P. OUTLET (CL. III) TO
EXISTING 18" X 58' R.C. PIPE CULV'T
AT STA. 660+68
18" R.C. PIPE = 2 LIN. FT.
(USE TYPE 3 BEDDING)









RAMP 4
STA. 658+00.00 TO STA. 660+67.68

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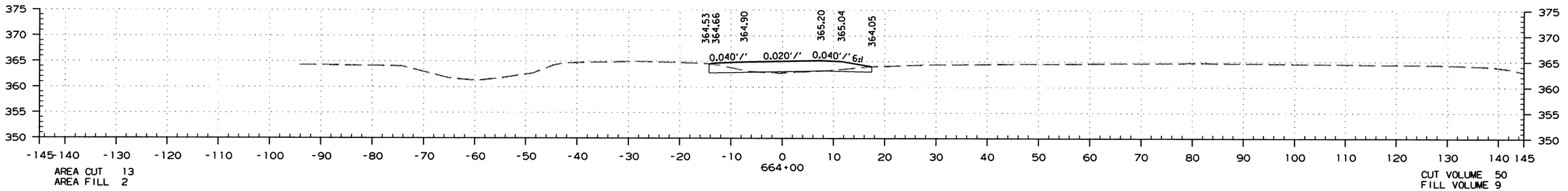
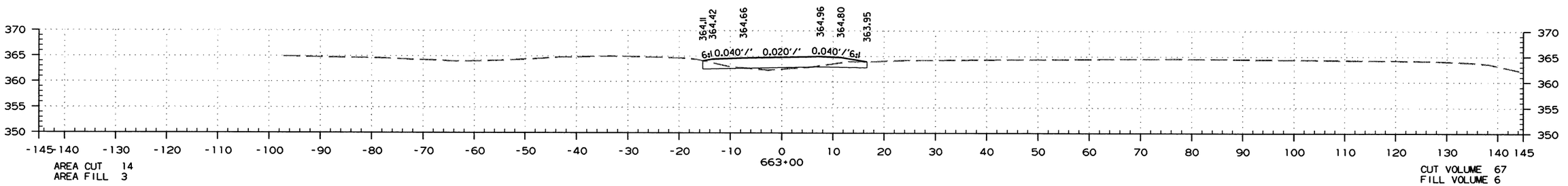
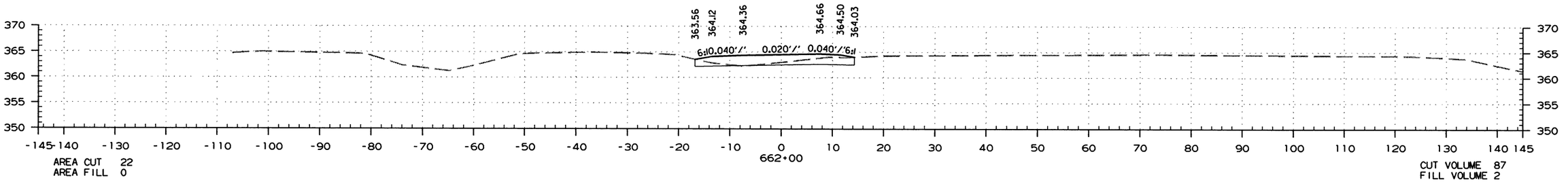
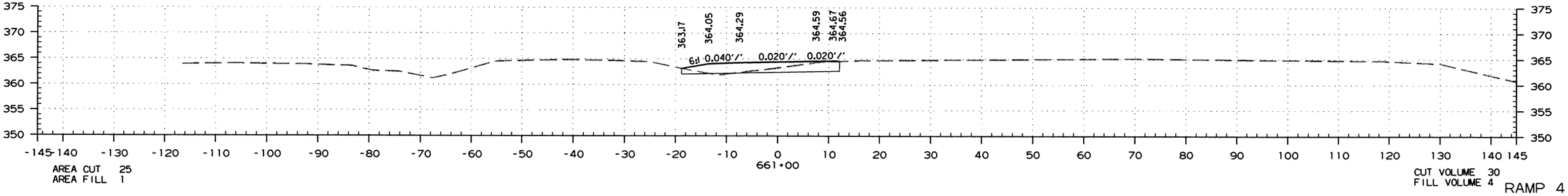
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RO. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	122	125

(2) CROSS SECTIONS









RAMP 4

STA. 661+00.00 TO STA. 664+00.00

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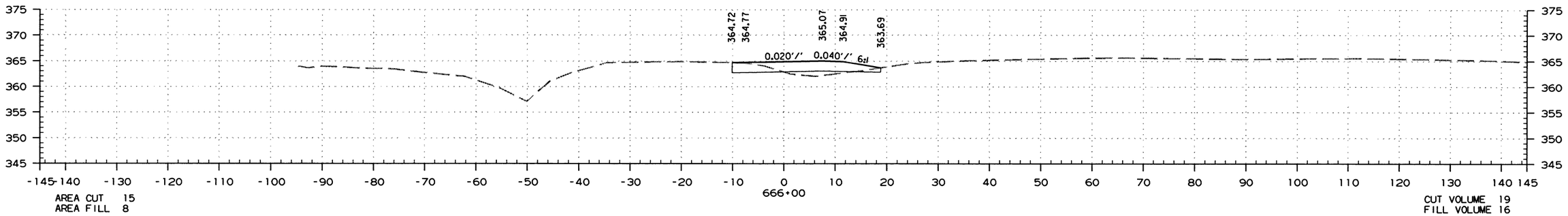
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	123	125

(2) CROSS SECTIONS



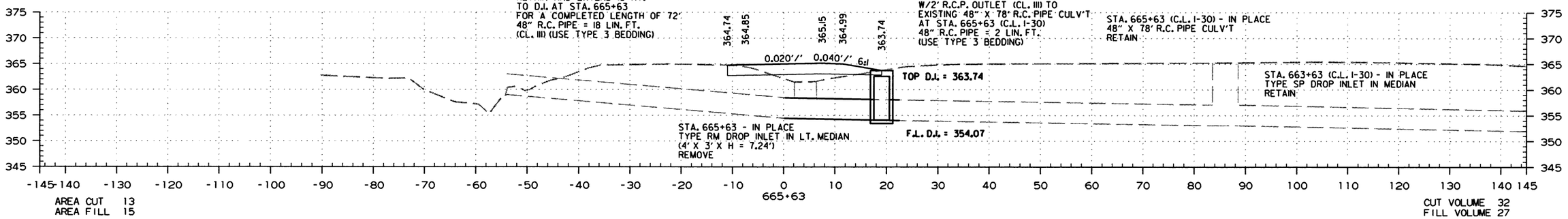
AREA CUT 15
AREA FILL 8

CUT VOLUME 19
FILL VOLUME 16

STA. 665+63 - IN PLACE
48" X 57' R.C. PIPE CULV'T
RETAIN AND EXTEND 18' RT.
TO D.I. AT STA. 665+63
FOR A COMPLETED LENGTH OF 72'
48" R.C. PIPE = 18 LIN. FT.
(CL. III) (USE TYPE 3 BEDDING)

STA. 665+63 - CONSTRUCT
TYPE RM DROP INLET IN LT. MEDIAN
4' X 3' X H = 9.67'
W/2' R.C.P. OUTLET (CL. III) TO
EXISTING 48" X 78' R.C. PIPE CULV'T
AT STA. 665+63 (C.L. I-30)
48" R.C. PIPE = 2 LIN. FT.
(USE TYPE 3 BEDDING)

STA. 665+63 (C.L. I-30) - IN PLACE
48" X 78' R.C. PIPE CULV'T
RETAIN

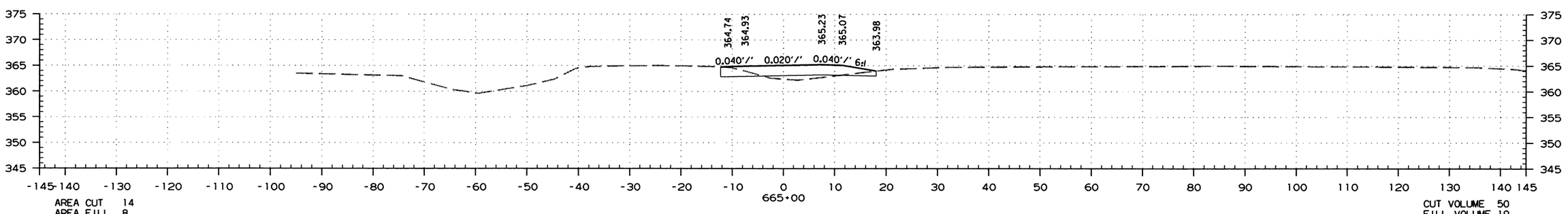


STA. 665+63 - IN PLACE
TYPE RM DROP INLET IN LT. MEDIAN
(4' X 3' X H = 7.24')
REMOVE

STA. 663+63 (C.L. I-30) - IN PLACE
TYPE SP DROP INLET IN MEDIAN
RETAIN

AREA CUT 13
AREA FILL 15

CUT VOLUME 32
FILL VOLUME 27



AREA CUT 14
AREA FILL 8

CUT VOLUME 50
FILL VOLUME 19

RAMP 4

STA. 665+00.00 TO STA. 666+00.00

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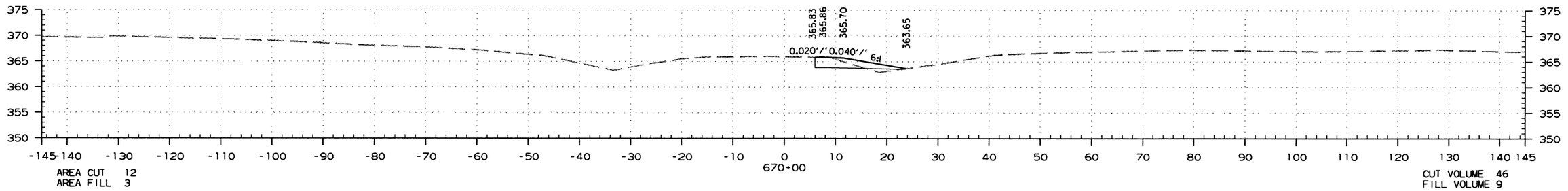
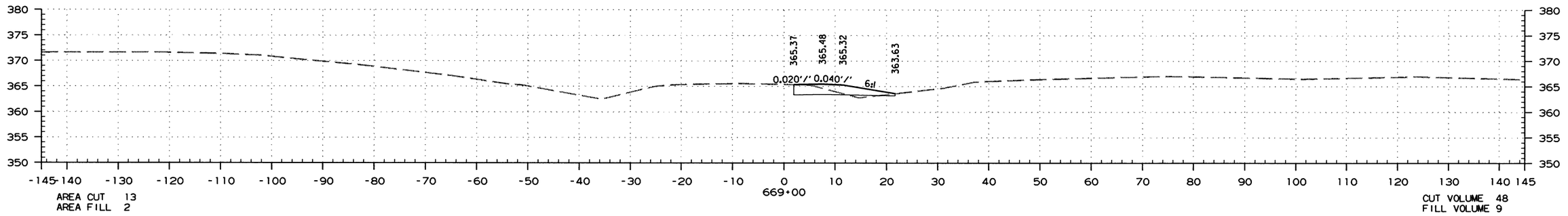
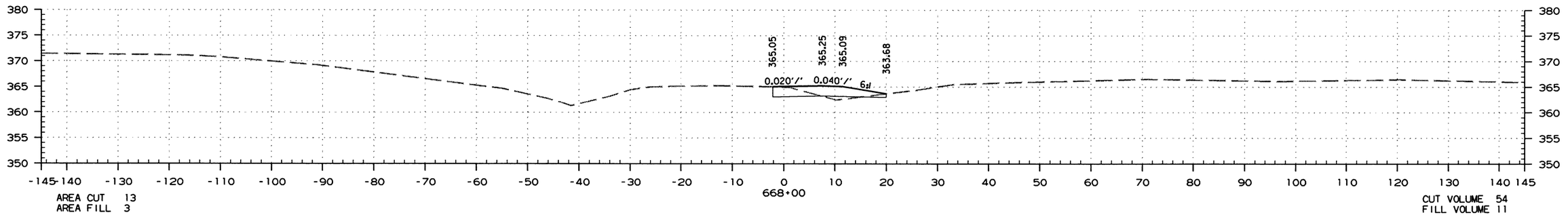
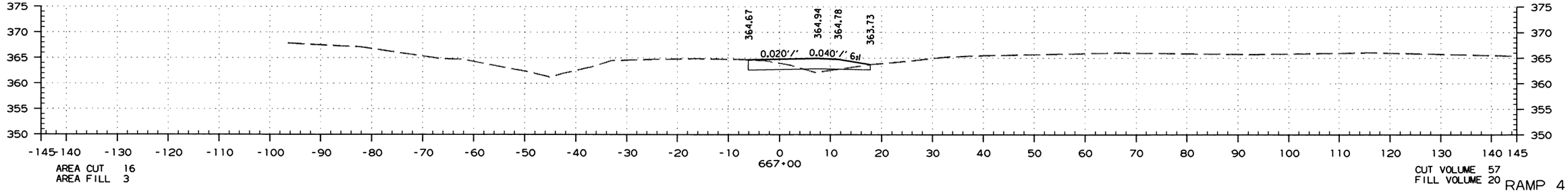
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	124	125

(2) CROSS SECTIONS









RAMP 4

STA. 667+00.00 TO STA. 670+00.00

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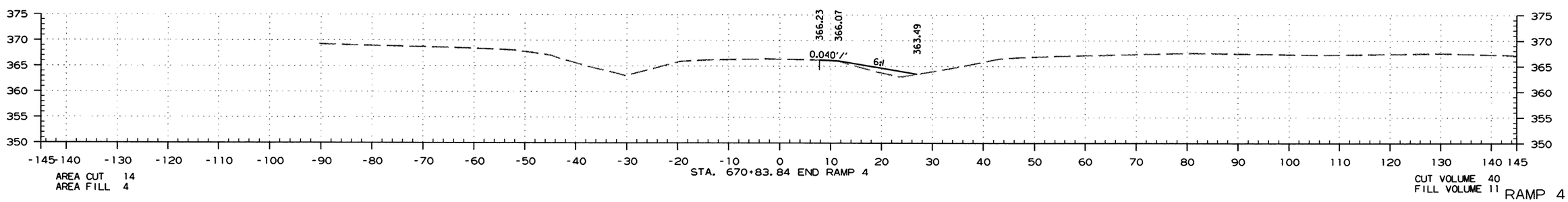
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061474	125	125

(2) CROSS SECTIONS



RAMP 4

STA. 670+83.84 TO STA. 670+83.84

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