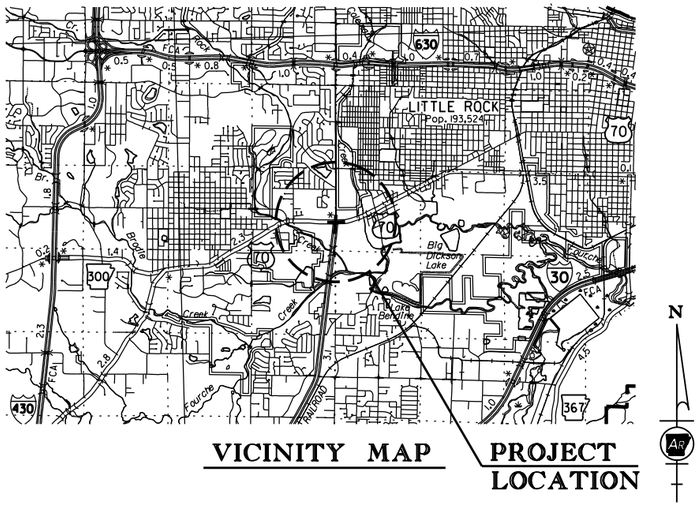
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	1	45
		HWY. 70/UNIVERSITY AVE. INTERS. IMPVTS. (S)				



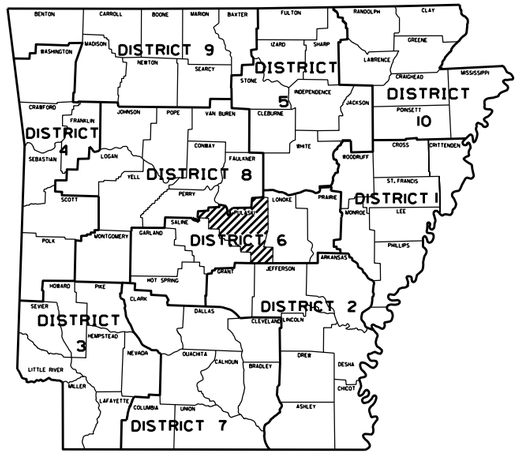
ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 70/UNIVERSITY AVE. INTERS. IMPVTS. (S)

PULASKI COUNTY
ROUTE 70 SECTION 12

JOB 061510

F.A.P. NHPP-STPU-9253(85) & 9030



ARKANSAS HWY. DIST. 6

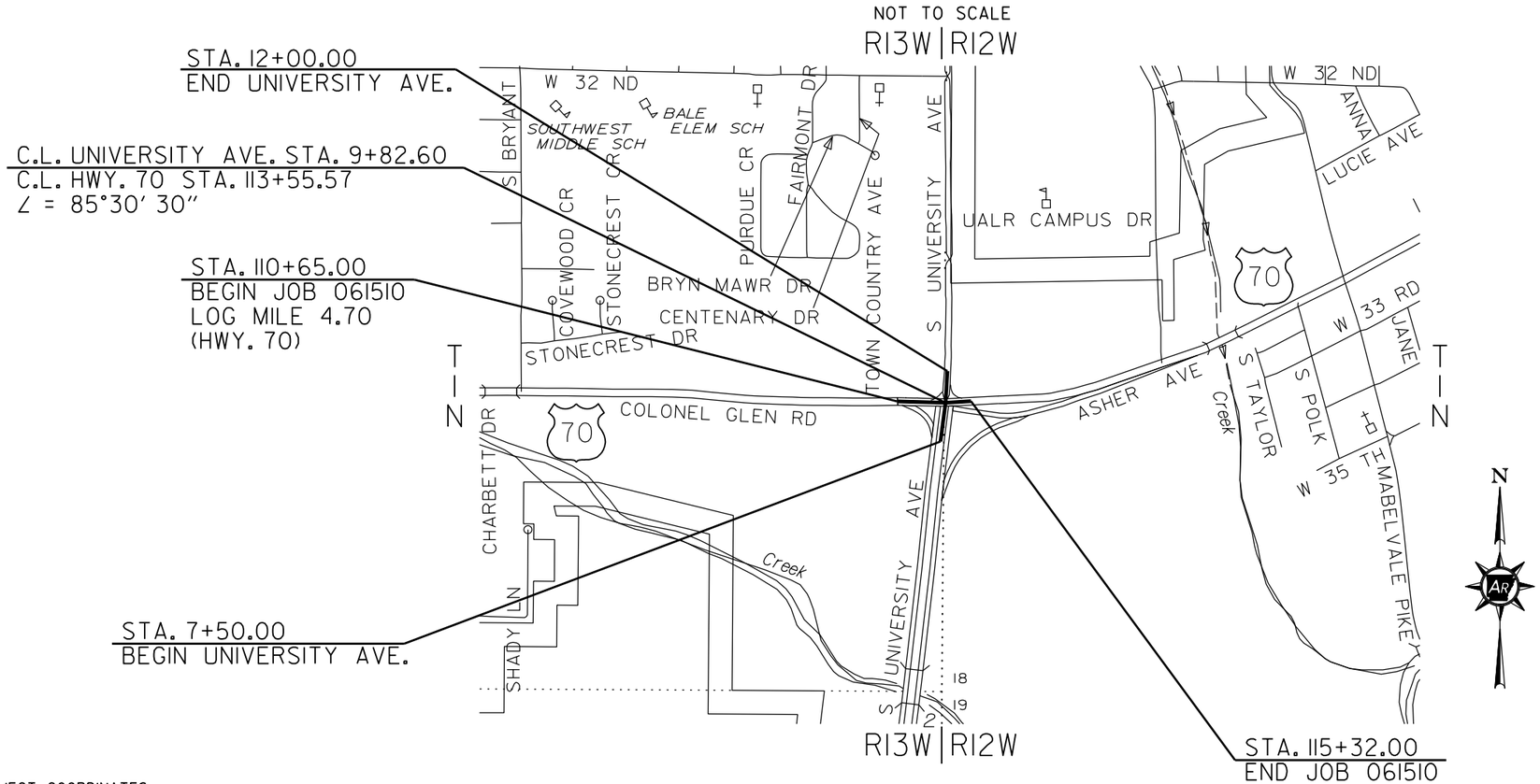
•DESIGN TRAFFIC DATA (HWY. 70)•

DESIGN YEAR	2045
2025 ADT	42,243
2045 ADT	49,456
2045 DHV	5,441
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	3%
DESIGN SPEED	40 MPH

• DESIGN TRAFFIC DATA (UNIVERSITY AVE.)•

DESIGN YEAR	2045
2025 ADT	31,941
2045 ADT	37,089
2045 DHV	4,080
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	3%
DESIGN SPEED (SB)	35 MPH
DESIGN SPEED (NB)	45 MPH

NOT TO SCALE



PROJECT COORDINATES:

	BEGIN	MID-POINT	END
LAT.	N34° 43' 04"	N34° 43' 04"	N34° 43' 04"
LONG.	W92° 20' 36"	W92° 20' 33"	W92° 20' 30"

LENGTH OF PROJECT CALCULATED ALONG C.L.
GROSS LENGTH OF PROJECT 917.00 FEET OR 0.174 MILES
NET LENGTH OF ROADWAY 917.00 FEET OR 0.174 MILES
NET LENGTH OF BRIDGES 0.0 FEET OR 0.000 MILES
NET LENGTH OF PROJECT 917.00 FEET OR 0.174 MILES

APPROVED

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

Date: 2025.08.13 19:11:35-05'00'

CHIEF ENGINEER - PRECONSTRUCTION

JH41264 8/13/2025
R061510.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	2	45
		INDEX OF SHEETS AND STANDARD DRAWINGS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND STANDARD DRAWINGS
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES
4 - 7	SPECIAL DETAILS
8 - 10	TEMPORARY EROSION CONTROL DETAILS
11 - 14	MAINTENANCE OF TRAFFIC DETAILS
15	PERMANENT PAVEMENT MARKING DETAILS
16 - 18	QUANTITIES
19	SUMMARY OF QUANTITIES AND REVISIONS
20 - 22	SURVEY CONTROL DETAILS
23 - 24	PLAN AND PROFILE SHEETS
25	SUMMARY OF TRAFFIC SIGNAL QUANTITIES
26	TRAFFIC SIGNAL NOTES
27	GROUNDING ARRAY DETAIL
28	PEDESTRIAN SIGNAL DETAILS
29 - 32	SIGNALIZATION PLAN SHEETS
33 - 38	ILLUMINATION DETAILS
39 - 45	CROSS SECTIONS

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DRWG.NO.	TITLE	DATE
CG-1	CURBING DETAILS	11-29-07
DR-1	DETAILS OF DRIVEWAYS & ISLANDS	05-22-25
FES-1	FLARED END SECTION	10-18-96
FES-2	FLARED END SECTION	10-18-96
FPC-9	DETAILS OF DROP INLETS & JUNCTION BOXES	11-16-01
FPC-9E	DETAILS OF DROP INLETS (TYPE C)	08-22-02
FPC-9M	DETAILS OF DROP INLET (TYPE MO)	08-22-02
FPC-9S	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	07-26-12
PCC-1	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PCM-1	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	02-27-14
PM-1	PAVEMENT MARKING DETAILS	02-27-20
SD-5	CONTROLLER CABINET UTILITY DRAWER	09-12-13
SD-6	HEAVY DUTY PULL BOX	02-13-24
SD-8	SIGNAL HEAD PLACEMENT	12-08-16
SD-11	STEEL POLE WITH MAST ARM	02-13-24
SI-1	DETAILS OF SPECIAL ITEMS	10-25-18
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TC-6	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	08-14-25
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94
WR-1	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	11-10-05
WR-2	WHEELCHAIR RAMPS ALTERATIONS ONLY	10-09-03

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
09-10-2025		6	ARK.	061510	3	45
		GOVERNING SPECIFICATIONS AND GENERAL NOTES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER

09/10/2025

GOVERNING SPECIFICATIONS

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

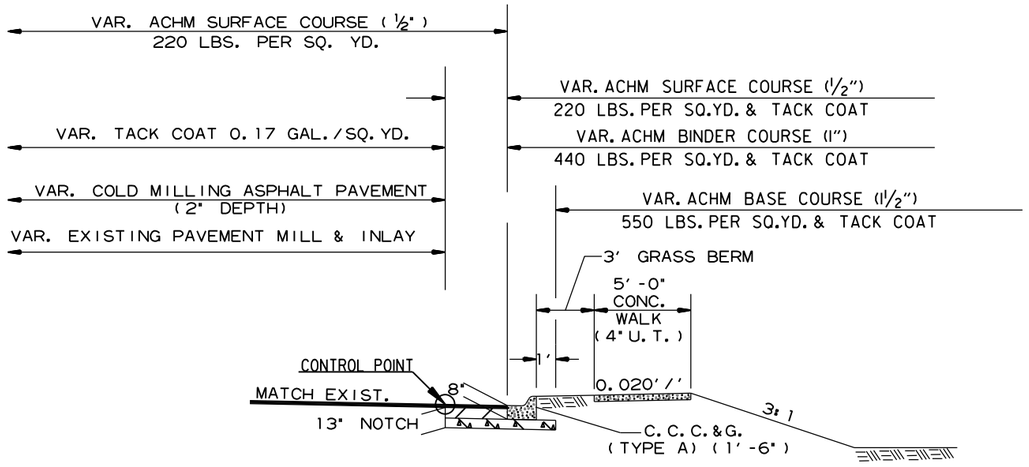
NUMBER **TITLE**

ERRATA____ ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__ REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__ SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__ SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__ SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__ SUPPLEMENT - WAGE RATE DETERMINATION
100-3_____ CONTRACTOR'S LICENSE
100-4_____ DEPARTMENT NAME CHANGE
102-2_____ ISSUANCE OF PROPOSALS
102-3_____ PREQUALIFICATION OF BIDDERS
103-2_____ CONTACT INFORMATION FOR MOTORIST DAMAGE CLAIMS
105-4_____ MAINTENANCE DURING CONSTRUCTION
107-2_____ RESTRAINING CONDITIONS
108-1_____ LIQUIDATED DAMAGES
108-2_____ WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
210-1_____ UNCLASSIFIED EXCAVATION
303-1_____ AGGREGATE BASE COURSE
306-1_____ QUALITY CONTROL AND ACCEPTANCE
400-1_____ TACK COATS
400-4_____ DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5_____ PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6_____ LIQUID ANTI-STRIP ADDITIVE
400-7_____ TRACKLESS TACK
404-3_____ DESIGN OF ASPHALT MIXTURES
409-2_____ ASPHALT LABORATORY FACILITY
410-1_____ CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____ DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
410-4_____ EVALUATION OF ACHM SUBLOT REPLACEMENT MATERIAL
416-1_____ RECYCLED ASPHALT PAVEMENT
501-3_____ PORTLAND CEMENT CONCRETE PAVEMENT
502-1_____ WELDED WIRE REINFORCEMENT
600-2_____ INCIDENTAL CONSTRUCTION
603-1_____ LANE CLOSURE NOTIFICATION
604-1_____ RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____ TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
606-1_____ PIPE CULVERTS FOR SIDE DRAINS
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
632-1_____ CONCRETE ISLAND
633-1_____ CONCRETE WALKS, CONCRETE STEPS, AND HAND RAILING
634-1_____ CURBING
700-2_____ TRAFFIC CONTROL FACILITIES
802-5_____ CONCRETE FOR STRUCTURES
JOB 061510__ ACCESSIBLE PEDESTRIAN SIGNAL (APS)
JOB 061510__ ACTUATED CONTROLLER
JOB 061510__ AIRPORT CLEARANCE REQUIREMENTS
JOB 061510__ ASPHALT MIXTURES WITH PG 76-22 BINDER
JOB 061510__ ASSESSMENT OF WORKING DAYS – MAINTENANCE OF TRAFFIC
JOB 061510__ BIDDING REQUIREMENTS AND CONDITIONS
JOB 061510__ BUY AMERICA - CONSTRUCTION MATERIALS
JOB 061510__ CARGO PREFERENCE ACT REQUIREMENTS
JOB 061510__ COLD MILLING – COUNTY PROPERTY
JOB 061510__ DESIGN AND QUALITY CONTROL ASPHALT MIXTURES
JOB 061510__ DOCUMENTATION OF PAYMENTS MADE TO DISADVANTAGED BUSINESS ENTERPRISES
JOB 061510__ ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 061510__ ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 061510__ ELECTRICAL CONDUCTORS-IN-CONDUIT (TRAFFIC SIGNAL)
JOB 061510__ FLEXIBLE BEGINNING OF WORK – CALENDAR DAY CONTRACT
JOB 061510__ HIGH MAST ILLUMINATION ASSEMBLY
JOB 061510__ LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 061510__ LED TRAFFIC SIGNAL HEAD
JOB 061510__ LIQUIDATED DAMAGES PROCEDURE FOR BID LETTINGS
JOB 061510__ MAINTENANCE OF TRAFFIC
JOB 061510__ MANDATORY ELECTRONIC CONTRACT
JOB 061510__ MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 061510__ PEDESTAL TYPE SERVICE POINT ASSEMBLY
JOB 061510__ PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 061510__ PRICE ADJUSTMENT FOR FUEL
JOB 061510__ PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT
JOB 061510__ REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 061510__ RETROREFLECTIVE BACKPLATES
JOB 061510__ SHORING FOR CULVERTS
JOB 061510__ SOIL STABILIZATION
JOB 061510__ SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 061510__ SYSTEM LOCAL CONTROLLER
JOB 061510__ TRAFFIC SIGNAL CONTROLLER (MODIFICATION)
JOB 061510__ UTILITY ADJUSTMENTS
JOB 061510__ VIDEO DETECTION SYSTEM (ADAPTIVE TRAFFIC CONTROL)
JOB 061510__ WARM MIX ASPHALT
JOB 061510__ WATER POLLUTION CONTROL

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. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE AS APPROVED BY THE RESIDENT ENGINEER.
7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
8. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. 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.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	4	45
		SPECIAL DETAILS				



SOUTHWEST RADIUS DETAIL

HIGHWAY 70 RT.
STA. 110+78 - STA. 112+72

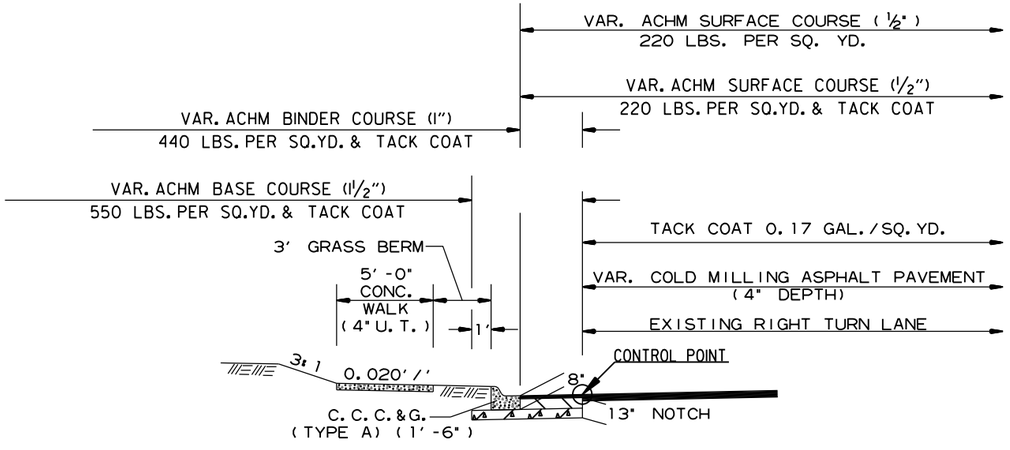
NOTES:

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

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

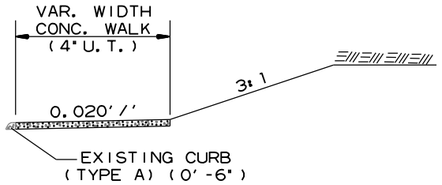
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

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

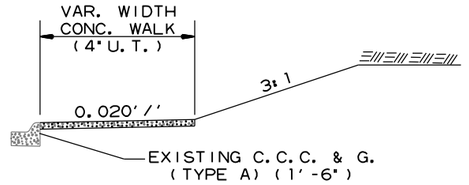


NORTHEAST RADIUS WIDENING DETAILS

HIGHWAY 70 LT.
STA. 114+11 - STA. 115+32



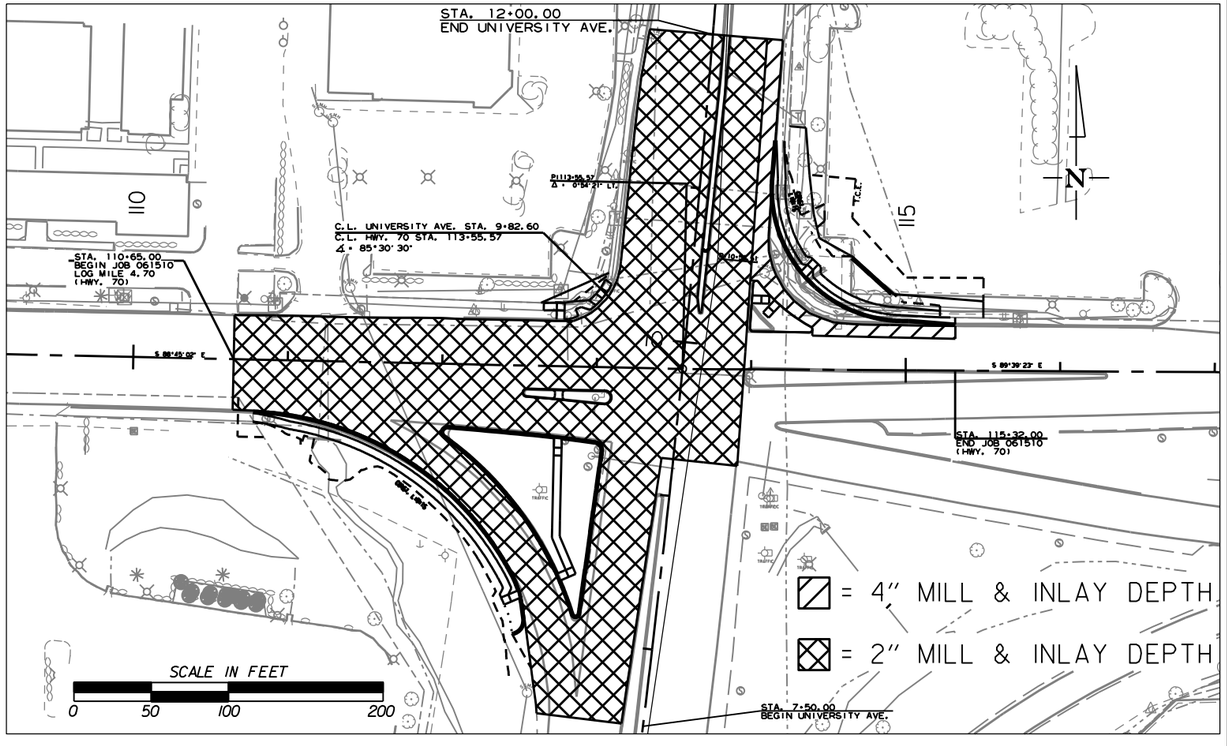
STA. 112+64 - STA. 112+81



STA. 112+81 - STA. 113+09

NORTHWEST RADIUS CONCRETE WALK DETAILS

HIGHWAY 70 LT.
STA. 112+64 - STA. 113+09



MILL & INLAY DETAILS

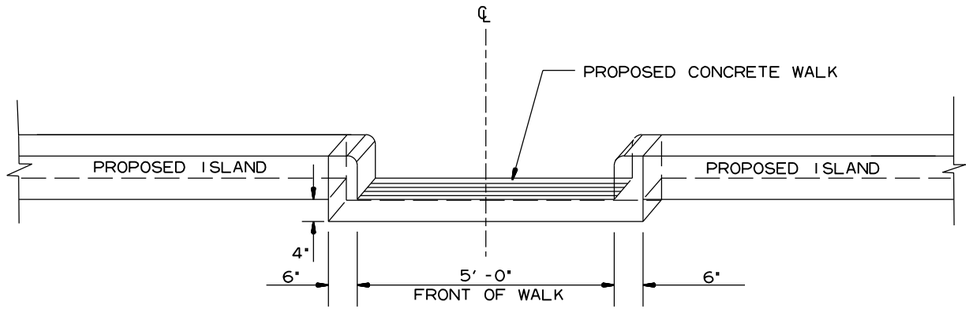
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	5	45
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
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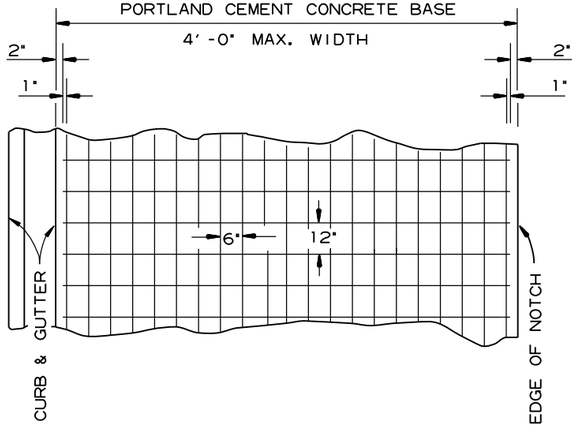
08/13/2025



FACE SHALL MEET REQUIREMENTS
OF TYPE C CURB

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

CONCRETE WALK THROUGH ISLAND

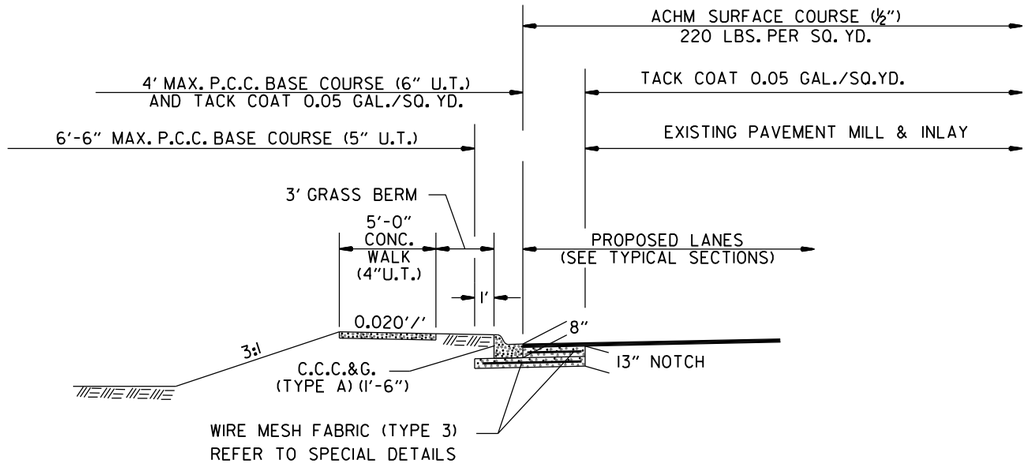


6" X 12" MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ.YD.

NOTES:

1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (5" U.T. and 6" U.T.)

DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)

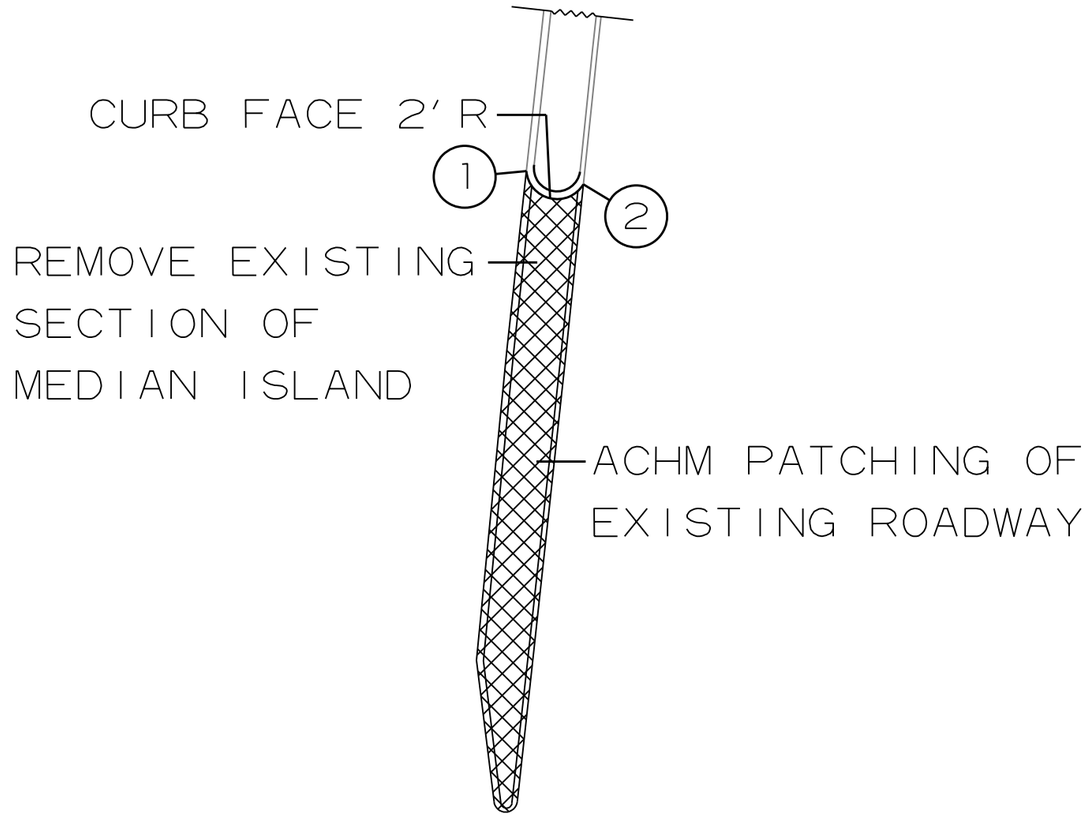


P.C.C. BASE WIDENING DETAIL

P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	6	45
		SPECIAL DETAILS				



MEDIAN ISLAND DETAIL

UNIVERSITY AVENUE

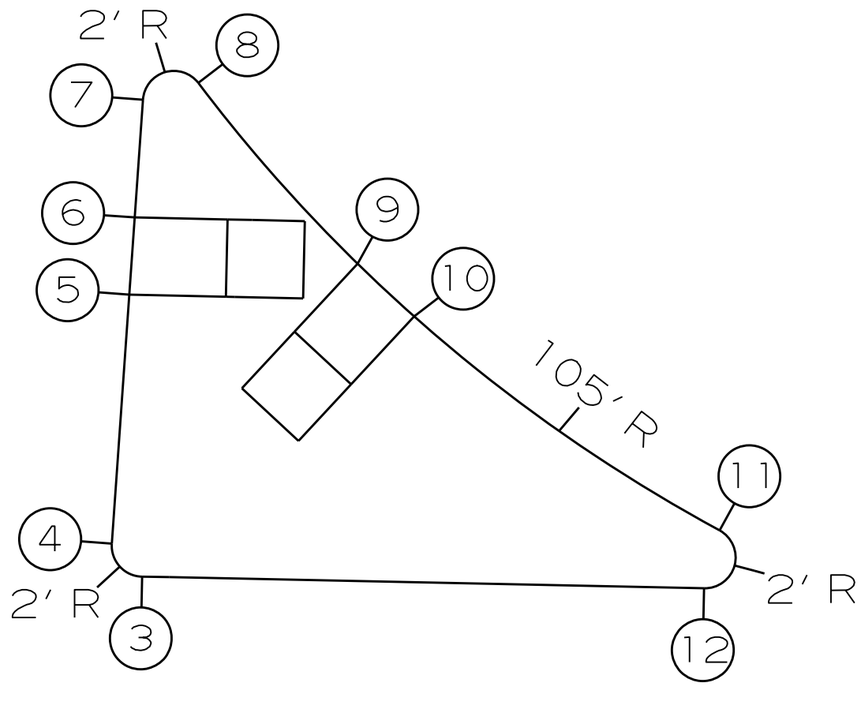
TYPE C CURB FACE

(DETAIL NOT TO SCALE)

UNIVERSITY AVENUE MEDIAN ISLAND POINT TABLE

POINT	ALIGNMENT	STATION	OFFSET
1	UNIVERSITY AVE.	10+61.30	5.36' RT.
2	UNIVERSITY AVE.	10+60.80	9.12' RT.

*STATION & OFFSET ARE FROM FACE OF CURB



NORTHEAST ISLAND DETAIL

HWY. 70/UNIVERSITY AVENUE

TYPE C CURB FACE

(DETAIL NOT TO SCALE)

NORTHEAST ISLAND POINT TABLE

POINT	ALIGNMENT	STATION	OFFSET
3	HWY. 70	114+01.04	24.59' LT.
4	HWY. 70	113+99.08	26.72' LT.
5	HWY. 70	114+00.11	42.84' LT.
6	HWY. 70	114+00.43	47.84' LT.
7	HWY. 70	114+00.92	55.46' LT.
8	HWY. 70	114+04.49	56.56' LT.
9	HWY. 70	114+14.87	44.92' LT.
10	HWY. 70	114+18.55	41.54' LT.
11	HWY. 70	114+38.40	27.81' LT.
12	HWY. 70	114+37.42	24.05' LT.

*STATION & OFFSET ARE FROM FACE OF CURB

STATE OF ARKANSAS
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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	7	45
		SPECIAL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
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08/13/2025

HWY. 70 MEDIAN ISLAND POINT TABLE

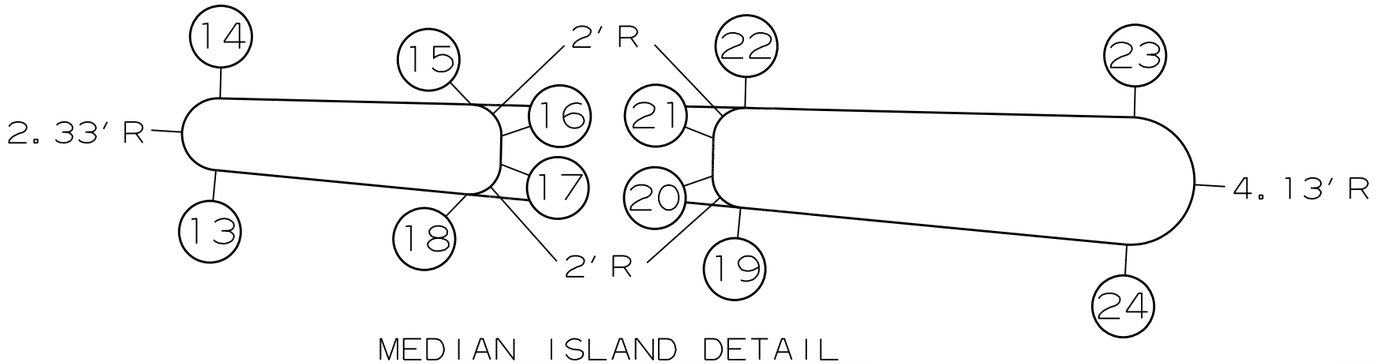
POINT	ALIGNMENT	STATION	OFFSET
13	HWY. 70	112+54.96	19.88' RT.
14	HWY. 70	112+55.14	15.23' RT.
15	HWY. 70	112+71.40	15.27' RT.
16	HWY. 70	112+73.39	17.27' RT.
17	HWY. 70	112+73.39	19.09' RT.
18	HWY. 70	112+71.24	21.08' RT.
19	HWY. 70	112+80.24	21.75' RT.
20	HWY. 70	112+78.39	19.76' RT.
21	HWY. 70	112+78.39	17.29' RT.
22	HWY. 70	112+80.40	15.29' RT.
23	HWY. 70	113+05.61	15.36' RT.
24	HWY. 70	113+05.29	23.60' RT.

*STATION & OFFSET ARE FROM FACE OF CURB

SOUTHWEST ISLAND POINT TABLE

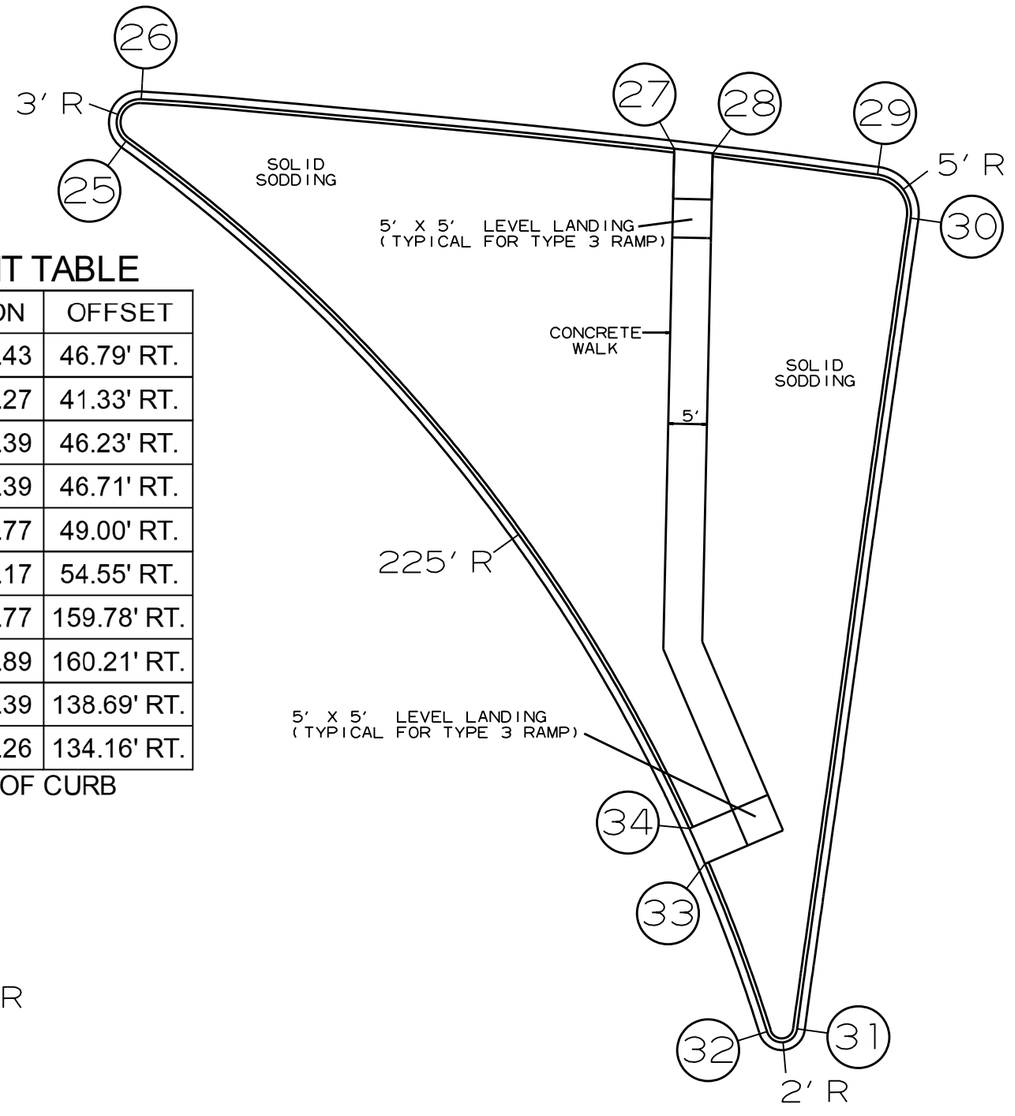
POINT	ALIGNMENT	STATION	OFFSET
25	HWY. 70	112+02.43	46.79' RT.
26	HWY. 70	112+04.27	41.33' RT.
27	HWY. 70	112+73.39	46.23' RT.
28	HWY. 70	112+78.39	46.71' RT.
29	HWY. 70	112+99.77	49.00' RT.
30	HWY. 70	113+04.17	54.55' RT.
31	HWY. 70	112+91.77	159.78' RT.
32	HWY. 70	112+87.89	160.21' RT.
33	HWY. 70	112+79.39	138.69' RT.
34	HWY. 70	112+77.26	134.16' RT.

*STATION & OFFSET ARE FROM FACE OF CURB



MEDIAN ISLAND DETAIL

HWY. 70
TYPE C CURB FACE
(DETAIL NOT TO SCALE)



SOUTHWEST ISLAND DETAIL

HWY. 70/UNIVERSITY AVENUE
CONCRETE COMBINATION CURB AND GUTTER TYPE A
(DETAIL NOT TO SCALE)

SPECIAL DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

REVISIONS

DATE OF REVISION	REVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	8	45

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

PI 113+55.57
Δ = 0°54'21" LT.

PI 110+56.51

S 88°45'02" E

S 89°39'23" E

HWY. 70

UNIVERSITY AVE.

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 115+32.00
END JOB 061510
(HWY. 70)

STA. 7+50.00
BEGIN UNIVERSITY AVE.

+45 54.37'-65'
+15 70'
+15 100'
+90 75'
+75 80'
+90 100'
+64.71 73.58'
+91.95 49.23'
+00 60'
+50 60'
+50 34.18'-45'
+40 53.46'
+63 40.77'
+35 25.15'-50'
+05 24.97'-50'
+68.52 24.55'-50'
+85.44 50'

E-13 CONST. LIMITS

T.C.E.

N 115

E-13 DROP INLET FILTER SOCK ON LT.

HWY. 70:
STA. 114+85 = 23 LIN. FT.
STA. 115+05 = 23 LIN. FT.

E-13 DROP INLET FILTER SOCK ON RT.

UNIVERSITY:
STA. 10+46 = 23 LIN. FT.
STA. 10+49 = 27 LIN. FT.
STA. 10+62 = 32 LIN. FT.
STA. 10+77 = 23 LIN. FT.
STA. 10+92 = 23 LIN. FT.
STA. 11+14 = 23 LIN. FT.

LEGEND

E-13 = DROP INLET FILTER SOCK

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

SCALE IN FEET
0 25 50 100

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

REVISIONS

DATE OF REVISION	REVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	9	45

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

UNIVERSITY AVE.

P.I. 13+55.57
Δ = 0°54'21" LT.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

P.I. 10+56.51

HWY. 70

S 88°45'02" E

S 89°39'23" E

CTL

CONST. LIMITS

T.C.E.

+45 54.37'-65'
+15 70'
+15 100'
+90 75'
+75 80'
+90 100'
+64.71 73.58'
+91.95 49.23'
+00 60'
+50 60'
+50 34.18'-45'
+40 53.46'
+63 40.77'
+35 25.15'-50'
+05 24.97'-50'
+68.52 24.55'-50'
+85.44 50'

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 115+32.00
END JOB 061510
(HWY. 70)

STA. 7+50.00
BEGIN UNIVERSITY AVE.

E-6 ROCK DITCH CHECKS ON RT.

HWY. 70:
STA. 111+27 = 3 CU. YDS.

E-11 SILT FENCE ON RT.

HWY. 70:
STA. 110+97-111+28 = 31 LIN. FT.
STA. 111+34-112+45 = 181 LIN. FT.

E-13 DROP INLET FILTER SOCK ON RT.

HWY. 70:
STA. 111+27 = 56 LIN. FT.

LEGEND

E-6	= ROCK DITCH CHECK
E-11	= SILT FENCE
E-13	= DROP INLET FILTER SOCK

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

SCALE IN FEET
0 25 50 100

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

REVISIONS

DATE OF REVISION	REVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	10	45

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

UNIVERSITY AVENUE

P.I. 13+55.57
Δ = 0°54'21" LT.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

P.I. 10+56.51

S 88°45'02" E

S 89°39'23" E

HWY. 70

CTL

BE

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 115+32.00
END JOB 061510
(HWY. 70)

CONST. LIMITS

T.C.E.

TBM

TRAFFIC

ONLY

E-13 SILT FENCE ON LT.

HWY. 70:
STA. 112+65-113+05 = 45 LIN. FT.

LEGEND

E-11 = SILT FENCE

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

SCALE IN FEET
0 25 50 100

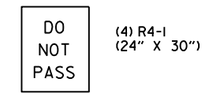
STAGE 3
TEMPORARY EROSION CONTROL DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	11	45
		MAINTENANCE OF TRAFFIC DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025



(4) R4-1
(24" X 30")

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



(4) W8-1
(36" X 36")

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



(2) W21 - 5a
(36" X 36")

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

CONSTRUCTION SEQUENCE

STAGE 1:

1) INSTALL ADVANCE WARNING (W20-1) SIGNS AND END ROAD WORK SIGNS AS SHOWN ON THE ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAILS.
2) INSTALL PB1 AT THE BASE OF THE NEW UTILITY POLE (ALREADY INSTALLED BY OTHERS) THAT IS TO PROVIDE POWER TO THE NEW TRAFFIC SIGNAL SERVICE POINT AND PROVIDE POWER TO THE EXISTING TRAFFIC SIGNAL SERVICE POINT UNTIL THE NEW TRAFFIC SIGNAL IS OPERATIONAL. PB1 LOCATION SHOWN ON THE SIGNALIZATION PLAN SHEETS IS APPROXIMATE. INSTALL PB2 AND RUN CONDUIT FROM THE NEW UTILITY POLE TO PB1, PB2, AND THE EXISTING SERVICE POINT AS SHOWN ON THE SIGNALIZATION PLAN SHEETS. ONCE COMPLETED, CONTACT THE CITY TO MOVE THEIR EQUPMENT AND INSTALL WIRING FROM THE POLE TO THE EXISTING SERVICE POINT SO THAT THE EXISTING POLE IN THE NORTHEAST QUADRANT THAT IS CURRENTLY PROVIDING POWER CAN BE REMOVED. THE CONTRACTOR SHALL COORDINATE WITH THE CITY THROUGHOUT THIS PROCESS.
3) DISCONNECT FIBER OPTIC CABLE FROM EXISTING UTILITY POLE IN NORTHWEST CORNER AND SPOOL AT EXISTING PULL BOX PB8 AS SHOWN ON SIGNALIZATION PLAN SHEETS WHILE A REPRESENTATIVE OF THE CITY OF LITTLE ROCK IS PRESENT. (SEE SIGNALIZATION PLAN SHEETS)
4) DISCONNECT FIBER OPTIC CABLE FROM EXISTING TRAFFIC SIGNAL CONTROLLER AND SPOOL AT EXISTING PULL BOX PB8 AS SHOWN ON SIGNALIZATION PLAN SHEETS WHILE A REPRESENTATIVE OF THE CITY OF LITTLE ROCK IS PRESENT. (SEE SIGNALIZATION PLAN SHEETS)
5) AS SHOWN ON THE STAGE 1 MAINTENANCE OF TRAFFIC DETAILS:
   A) INSTALL VERTICAL PANELS.
   B) REMOVE SOUTHWEST ISLAND CONCRETE CURB AND CONSTRUCT NEW CONCRETE CURB AND GUTTER, WHEELCHAIR RAMPS, AND CONCRETE WALK.
   C) CONSTRUCT NORTHEAST RADIUS OF INTERSECTION AND INSTALL DRAINAGE STRUCTURES, WHEELCHAIR RAMPS, AND CONCRETE WALK.
6) PRIOR TO SHIFTING TRAFFIC IN THE NORTHEAST RADIUS FOR STAGE 2 CONSTRUCTION, MILL REMAINING EXISTING PAVEMENT FOR PROPOSED RIGHT TURN LANE 4" FROM STA. 113+99.08 - STA. 115+32.00 AND INSTALL INTERMEDIATE SURFACE AS SHOWN ON SPECIAL DETAILS SHEET.

STAGE 2:

1) AS SHOWN ON THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS:
   A) INSTALL VERTICAL PANELS AND CONSTRUCTION PAVEMENT MARKINGS.
   B) REMOVE NORTHEAST ISLAND AND CONSTRUCT NEW ISLAND AND WHEELCHAIR RAMPS.
   C) CONSTRUCT SOUTHWEST RADIUS OF INTERSECTION AND INSTALL DRAINAGE STRUCTURES, WHEELCHAIR RAMPS, AND CONCRETE WALK.
2) PERMANENT TRAFFIC SIGNAL MUST BE INSTALLED AND OPERATIONAL AS SHOWN ON STAGE 3 TRAFFIC SIGNAL OPERATIONS SHEET PRIOR TO THE BEGINNING OF STAGE 3.

STAGE 3:

1) AS SHOWN ON THE STAGE 3 MAINTENANCE OF TRAFFIC DETAILS:
   A) INSTALL VERTICAL PANELS.
   B) REMOVE WEST LEG MEDIAN ISLAND AND CONSTRUCT NEW MEDIAN CONCRETE CUT THROUGH ISLAND.
   C) REMOVE NORTH LEG MEDIAN ISLAND AND CONSTRUCT NEW MEDIAN ISLAND RADIUS. INSTALL YELLOW MEDIAN CONSTRUCTION PAVEMENT MARKINGS.
   D) CONSTRUCT NORTHWEST RADIUS OF INTERSECTION AND INSTALL CONCRETE WALKS AND WHEELCHAIR RAMPS.
2) MILL AND INLAY, THEN INSTALL CONSTRUCTION PAVEMENT MARKINGS AS SHOWN:
   A) HIGHWAY 70 FROM STA. 110+65.00 TO STA. 113+05.16
   B) HIGHWAY 70 EASTBOUND CHANNELIZED RIGHT TURN LANE FROM STA. 110+78.00 TO STA. 112+92.00
   C) UNIVERSITY AVENUE SOUTHBOUND THROUGH LANES FROM STA. 7+50.00 TO STA. 9+23.91
   D) THE INTERSECTION FROM STA. 9+23.91 TO STA. 10+13.25 AND UNIVERSITY AVENUE FROM STA. 10+13.25 TO STA. 12+00.00
3) APPLY FINAL 2" LIFT OF ACHM AND PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

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CONSTRUCTION SEQUENCE
MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	12	45

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

SIDEWALK CLOSED
(1) R9-9
(24" X 12")

SIDEWALK CLOSED
(1) R9-9
(24" X 12")

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

P.I. 113+55.57
Δ = 0°54'21" LT.

P.I. 110+56.51

EXIST. ROW
PROP. ROW
CONST. LIMIT
T.C.E.

S 88°45'02" E

S 89°39'23" E

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 115+32.00
END JOB 061510
(HWY. 70)

STA. 7+50.00
BEGIN UNIVERSITY AVE.

VERTICAL PANELS @ 20' O.C. ON RT. = 19 EACH
HWY. 70
STA. 112+03-113+07

VERTICAL PANELS @ 20' O.C. ON RT. = 5 EACH
UNIVERSITY AVE.
STA. 10+56-11+35

VERTICAL PANELS @ 20' O.C. ON LT. = 8 EACH
HWY. 70
STA. 114+23-115+55

SCALE IN FEET
0 25 50 100

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	13	45

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

P.I. 113+55.57
Δ = 0°54'21" LT.

P.I. 110+56.51

S 88°45'02" E

S 89°39'23" E

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 115+32.00
END JOB 061510
(HWY. 70)

WHITE SOLID CONST. PVMT. MARKING

BEGIN YELLOW SOLID CONST. PVMT. MARKING FOR ISLAND

END YELLOW SOLID CONST. PVMT. MARKING FOR ISLAND

WHITE SOLID CONST. PVMT. MARKING

STA. 7+50.00
BEGIN UNIVERSITY AVE.

CONSTRUCTION PAVEMENT MARKINGS: 653 LIN. FT.

VERTICAL PANELS @ 20' O.C. ON RT. = 15 EACH
HWY. 70
STA. 110+78-112+60

VERTICAL PANELS @ 10' O.C. ON LT. = 15 EACH
HWY. 70
STA. 113+99-114+46

SCALE IN FEET
0 25 50 100

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	14	45

MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

WHITE SOLID CONST. PVMT. MARKING

WHITE SKIP CONST. PVMT. MARKING

WIDE WHITE SOLID CONST. PVMT. MARKING

WHITE SOLID CONST. PVMT. MARKING (STOP LINE)

P.I. 13+55.57
Δ = 0°54'21" LT.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

WHITE DOTTED CONST. PVMT. MARKING
(2' STRIPE WITH 6' SPACE)

P.I. 10+56.51

S 88°45'02" E

S 89°39'23" E

STA. 115+32.00
END JOB 061510
(HWY. 70)

DBL. YELLOW CONST. PVMT. MARKING

WHITE SKIP CONST. PVMT. MARKING

CONST. PVMT. MARKING (ARROWS)

WHITE SOLID CONST. PVMT. MARKING

CONST. PVMT. MARKING (WORDS)

BEGIN YELLOW SOLID CONST. PVMT. MARKING FOR ISLAND

WHITE SOLID CONST. PVMT. MARKING (STOP LINE)

END YELLOW SOLID CONST. PVMT. MARKING FOR ISLAND

WHITE SOLID CONST. PVMT. MARKING

WHITE SKIP CONST. PVMT. MARKING

CONSTRUCTION PAVEMENT MARKINGS: 2366 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS (WORDS): 4 EACH
CONSTRUCTION PAVEMENT MARKINGS (ARROWS): 7 EACH

VERTICAL PANELS @ 20' O.C. ON RT. = 6 EACH
HWY. 70
STA. 112+51-113+11

VERTICAL PANELS @ 20' O.C. ON LT. = 5 EACH
HWY. 70
STA. 112+64-113+17

VERTICAL PANELS @ 10' O.C. ON RT. = 9 EACH
UNIVERSITY AVE.
STA. 10+20-10+60

STA. 7+50.00
BEGIN UNIVERSITY AVE.

SCALE IN FEET
0 25 50 100

STAGE 3
MAINTENANCE OF TRAFFIC DETAILS

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

NOTE: DIMENSIONS OF PERMANENT PAVEMENT MARKINGS ARE APPROXIMATE.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	15	45

PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

STA. 12+00.00
END UNIVERSITY AVE.

6" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED) SPACED 80' O.C.

6" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING

6" WHITE SKIP THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED) SPACED 80' O.C.

12" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED) SPACED 80' O.C.

12" YELLOW REFLECTORIZED PAINT ON CURB

12" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING (STOP LINE)

12" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING (CROSSWALK LINE)

P1113+55.57
Δ = 0°54'21" LT.

C.L. UNIVERSITY AVE. STA. 9+82.60
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

6" WHITE DOTTED EXTENSION LANE LINE THERMOPLASTIC PAVEMENT MARKING (2' STRIPE WITH 6' SPACE)

THERMOPLASTIC PAVEMENT MARKING (ARROWS)

6" DBL. YELLOW THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (YELLOW/YELLOW) SPACED 80' O.C.

6" WHITE SKIP THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED) SPACED 80' O.C.

6" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING FOR ISLAND

BEGIN 6" YELLOW SOLID THERMOPLASTIC PAVEMENT MARKING AND 12" YELLOW REFLECTORIZED PAINT ON CURB

THERMOPLASTIC PAVEMENT MARKING (WORDS)

END 6" YELLOW SOLID THERMOPLASTIC PAVEMENT MARKING AND 12" YELLOW REFLECTORIZED PAINT ON CURB

6" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING

12" WHITE REFLECTORIZED PAINT ON CURB

6" WHITE SOLID THERMOPLASTIC PAVEMENT MARKING

6" WHITE SKIP THERMOPLASTIC PAVEMENT MARKING W/ RAISED PAVEMENT MARKERS (TYPE II) (WHITE/RED) SPACED 80' O.C.

STA. 115+32.00
END JOB 061510
(HWY. 70)

STA. 7+50.00
BEGIN UNIVERSITY AVE.

S 88°45'02" E

S 89°39'23" E

N

SCALE IN FEET
0 25 50 100

PERMANENT PAVEMENT MARKING QUANTITIES:

THERMOPLASTIC PAVEMENT MARKING WHITE (6")	=	1856 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	=	545 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING WHITE (12")	=	643 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING (WORDS)	=	5 EACH
THERMOPLASTIC PAVEMENT MARKING (ARROWS)	=	9 EACH
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (12")	=	342 LIN. FT.
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (12")	=	150 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	=	24 EACH
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	=	4 EACH

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
08-18-2025		6	ARK.	061510	16	45
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/21/2025

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS
			LIN. FT. - EACH					NO.	SQ. FT.	EACH
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4		4	4	64.0	
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4		4	4	64.0	
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4		4	4	64.0	
G20-2	END ROAD WORK	48"x24"	4	4	4		4	4	32.0	
R4-1	DO NOT PASS	24"x30"	4	4	4		4	4	20.0	
R9-9	SIDEWALK CLOSED	24"x12"	2				2	2	4.0	
W21-5a	RIGHT SHOULDER CLOSED	36"x36"	2	2	2		2	2	18.0	
W8-1	BUMP	30"x30"	4	4	4		4	4	25.0	
R2-6aP	DOUBLE FINES WHEN WORKERS ARE PRESENT	48"x36"	4	4	4		4	4	48.0	
R2-11	END HIGHER FINES ZONE	36"x48"	4	4	4		4	4	48.0	
	VERTICAL PANELS		32	30	20		32			32
TOTALS:									**387.0**	**32**

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKING					REFLECTORIZED PAINT PAVEMENT MARKING	
								TYPE II	TYPE II	6"		12"	WORDS	ARROWS	12"	
						WORDS	ARROWS	(WHITE/RED)	(YELLOW/YELLOW)	WHITE	YELLOW	WHITE			WHITE	YELLOW
	LIN. FT. - EACH				LIN. FT.	EACH		EACH		LIN. FT.			EACH		LIN. FT.	
CONSTRUCTION PAVEMENT MARKINGS		653	2366		3019											
CONSTRUCTION PAVEMENT MARKINGS (WORDS)			4			4										
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)			7				7									
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)				24				24								
RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)				4					4							
THERMOPLASTIC PAVEMENT MARKING WHITE (6")				1856						1856						
THERMOPLASTIC PAVEMENT MARKING YELLOW (6")				545							545					
THERMOPLASTIC PAVEMENT MARKING WHITE (12")				643								643				
THERMOPLASTIC PAVEMENT MARKING (WORDS)				5									5			
THERMOPLASTIC PAVEMENT MARKING (ARROWS)				9										9		
REFLECTORIZED PAINT PAVEMENT MARKING WHITE (12")				342											342	
REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (12")				150												150
TOTALS:					**3019**	**4**	**7**	**24**	**4**	**1856**	**545**	**643**	**5**	**9**	**342**	**150**

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

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL						TEMPORARY EROSION CONTROL						
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	ROCK DITCH CHECKS (E-6)	SILT FENCE (E-11)	DROP INLET FILTER SOCK (12") (E-13)	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ.YD.	ACRE	ACRE	M.GAL.	CU.YD.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE	PROJECT	HIGHWAY 70/UNIVERSITY AVENUE INTERSECTION	0.15	0.30	0.15	20.0	0.15	373	0.33	0.33	6.7	3	257	253	11
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			0.04	0.08	0.04	5.3	0.04	93	0.08	0.08	1.6	3	64	63	2
TOTALS:			**0.19**	**0.38**	**0.19**	**25.3**	**0.19**	**466**	**0.41**	**0.41**	**8.3**	**6**	**321**	**316**	**13**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING
ROCK DITCH CHECKS.....3 CU.YD./LOCATION
FILTER SOCKS.....23 LIN. FT./ 4' DIA. INLET
27 LIN. FT. / 5' DIA. INLET
30 LIN. FT. / 6' DIA. INLET

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.

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
08-18-2025		6	ARK.	061510	17	45
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/21/2025

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	CONCRETE ISLANDS	WALKS
			LIN. FT.	LIN. FT.	SQ. YD.	SQ. YD.
110+78	111+35	HWY. 70 ON RT.		58		
112+05	113+06	HWY. 70 ON RT.	370			
112+53	113+10	HWY. 70 ON RT.			36	
112+62	112+71	HWY. 70 ON LT.		9		
112+64	112+69	HWY. 70 ON LT.				3
112+81	112+93	HWY. 70 ON LT.				9
113+98	114+14	HWY. 70 ON LT.			15	
114+58	115+31	HWY. 70 ON LT.		73		
114+58	115+22	HWY. 70 ON LT.				36
114+65	114+92	HWY. 70 ON LT. - PARKING LOT		16		
10+18	10+22	UNIVERSITY AVE. ON LT.		5		
10+19	10+62	UNIVERSITY AVE. ON RT.			16	
10+21	10+35	UNIVERSITY AVE. ON LT.				11
10+23	11+35	UNIVERSITY AVE. ON RT.	141			
10+26	11+35	UNIVERSITY AVE. ON RT.				77
10+41	10+65	UNIVERSITY AVE. ON RT. - PARKING LOT		24		
TOTALS:			511	185	67	136

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
110+78	112+56	HWY. 70 ON RT.	224
112+00	113+05	HWY. 70 ON RT. - ISLAND	358
114+35	115+32	HWY. 70 ON LT.	105
114+64	114+97	HWY. 70 ON LT. - PARKING LOT	28
10+52	11+35	UNIVERSITY AVE. ON RT.	90
TOTAL:			805

CONCRETE ISLAND

STATION	STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND
				SQ.YD.
112+52	113+09	HWY. 70 ON RT.	C	40
113+99	114+39	HWY. 70 ON LT.	C	70
10+59	10+62	UNIVERSITY AVE. ON RT.	C	1
TOTAL:				111

EARTHWORK

	STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
				CU. YD.		TON
	ENTIRE	PROJECT	HIGHWAY 70	117	210	
	ENTIRE	PROJECT	UNIVERSITY AVENUE	184	19	
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE			10
			DIRECTED BY THE ENGINEER			
	TOTALS:			301	229	10

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

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
UNIVERSITY AVENUE - STA. 10+19.29 TO STA. 10+61.76 - NORTH LEG MEDIAN ISLAND REMOVAL	12
ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	10
TOTAL:	22

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

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	JUNCTION BOXES	DROP INLETS
		EACH	EACH	EACH
111+25	HWY. 70 ON RT.	2		
114+56	HWY. 70 ON LT.	1	1	
114+73	HWY. 70 ON LT. - PARKING LOT	1		1
10+49	UNIVERSITY AVE. ON RT.		1	
10+54	UNIVERSITY AVE. ON RT.	1		1
10+92	UNIVERSITY AVE. ON RT. - PARKING LOT	1		1
TOTALS:		6	2	3

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

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3	TYPE 6
		SQ.YD.	
112+47	HWY. 70 ON RT.	3.5	
112+76	HWY. 70 ON LT.	3.3	
112+76	HWY. 70 ON RT.	3.5	
112+81	HWY. 70 ON RT.	3.3	
10+26	UNIVERSITY AVE. ON LT.		9.6
10+28	UNIVERSITY AVE. ON RT.	3.3	
10+32	UNIVERSITY AVE. ON RT.	3.4	
10+53	UNIVERSITY AVE. ON RT.	3.5	
TOTALS:		23.8	9.6

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
10+48	UNIVERSITY AVE. ON RT.	8.50	4	3
TOTAL:				3

AVG. DEPTH = 13"

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ.YD.
110+78	112+48	HWY. 70 ON RT.	221	123
112+64	112+99	HWY. 70 ON LT.	35	23
114+39	115+22	HWY. 70 ON LT.	90	50
8+40	9+24	UNIVERSITY AVE. ON LT. - IN ISLAND	84	47
10+54	11+35	UNIVERSITY AVE. ON RT.	90	50
TOTALS:				293

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	20
ENGINEER	
TOTAL:	20

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	10	20
DIRECTED BY THE ENGINEER		
TOTALS:	10	20

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

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

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
08-18-2025		6	ARK.	061510	18	45
		QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/21/2025

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE (CLASS III) 48"	REINFORCED CONCRETE PIPE (CLASS IV) 29"X18"	SIDE DRAIN 12"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 48"	DROP INLETS TYPE C	DROP INLETS TYPE MO	DROP INLETS EXT. 4'	DROP INLETS EXT. 8'	JUNCT. BOXES (TYPE ST)	YARD DRAINS	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.				EACH	EACH						SQ.YD.	M.GAL.	
111+26.68	HWY. 70 - CONSTRUCT DROP INLET ON RT.	40				2	1						31	0.39	FPC-9E, FPC-9M, PCC-1, FES-1, FES-2
114+84.60	HWY. 70 - CONSTRUCT DROP INLET ON LT.				40			1	2						FPC-9E, FPC-9M, PCC-1, PCM-1
115+05.41	HWY. 70 - CONSTRUCT DROP INLET ON LT.				24			1							FPC-9E, FPC-9M, PCC-1, PCM-1
10+46.35	UNIVERSITY AVE. - CONSTRUCT DROP INLET ON RT.				16			1							FPC-9E, FPC-9M, PCC-1, PCM-1
10+49.31	UNIVERSITY AVE. - CONSTRUCT JUNCTION BOX ON RT.										1				FPC-9S
10+61.68	UNIVERSITY AVE. - CONSTRUCT DROP INLET ON RT.		20				1			1					FPC-9E, FPC-9M, PCC-1
10+77.36	UNIVERSITY AVE. - CONSTRUCT DROP INLET ON RT.				10			1		1					FPC-9E, FPC-9M, PCC-1, PCM-1
10+91.69	UNIVERSITY AVE. - CONSTRUCT DROP INLET ON RT.				24			1	2						FPC-9E, FPC-9M, PCC-1, PCM-1
11+13.60	UNIVERSITY AVE. - CONSTRUCT DROP INLET ON RT.				34			1		1					FPC-9E, FPC-9M, PCC-1, PCM-1
*ENTIRE PROJECT TO BE USED IF AND WHERE BY THE ENGINEER				50								1			FPC-9, PCC-1, PCM-1
TOTALS:		**40**	**20**	**50**	**148**	**2**	**2**	**6**	**4**	**3**	**1**	**1**	**31**	**0.39**	

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

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

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

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

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7) TON / STATION	AGGREGATE BASE COURSE (CLASS 7) TON	TACK COAT (0.05 GAL. PER SQ. YD.) AVG. WID.	TACK COAT (0.05 GAL. PER SQ. YD.) SQ.YD.	TACK COAT (0.05 GAL. PER SQ. YD.) GALLON	TACK COAT (0.17 GAL. PER SQ. YD.) AVG. WID.	TACK COAT (0.17 GAL. PER SQ. YD.) SQ.YD.	TACK COAT (0.17 GAL. PER SQ. YD.) GALLON	TACK COAT TOTAL GALLONS	PORTLAND CEMENT CONCRETE BASE 5" UNIFORM THICKNESS AVG. WID.	PORTLAND CEMENT CONCRETE BASE 5" UNIFORM THICKNESS SQ. YD.	ACHM BASE COURSE (1 1/2") AVG. WID.	ACHM BASE COURSE (1 1/2") SQ.YD.	ACHM BASE COURSE (1 1/2") POUND / SQ.YD.	ACHM BASE COURSE (1 1/2") PG 70-22	ACHM BINDER COURSE (1") AVG. WID.	ACHM BINDER COURSE (1") SQ.YD.	ACHM BINDER COURSE (1") POUND / SQ.YD.	ACHM BINDER COURSE (1") PG 70-22	ACHM SURFACE COURSE (1/2") AVG. WID.	ACHM SURFACE COURSE (1/2") SQ.YD.	ACHM SURFACE COURSE (1/2") POUND / SQ.YD.	ACHM SURFACE COURSE (1/2") PG 76-22	ACHM SURFACE COURSE (1/2") AVG. WID.	ACHM SURFACE COURSE (1/2") SQ.YD.	ACHM SURFACE COURSE (1/2") POUND / SQ.YD.	TOTAL PG 76-22	TOTAL PG 76-22
			FEET	TON / STATION	TON	FEET			FEET				FEET		FEET			TON	FEET			TON	FEET			TON	FEET			TON	TON
MAIN LANES																															
110+78.00	112+72.00	HWY. 70 ON RT. - SOUTHWEST RADIUS - NOTCH & WIDEN, C.C.C. & G.	251.00										2.50	69.72																	
112+63.92	112+69.98	HWY. 70 ON RT. - SOUTHWEST RADIUS - TRANSITION TO OPEN SHOULDER	25.00	58.00	14.50																						4.75	13.19	220.00	1.45	1.45
114+11.00	115+32.00	HWY. 70 ON LT. - NORTHEAST RADIUS - NOTCH & WIDEN, C.C.C. & G.	121.00			34.83	468.27	23.41				23.41			12.61	169.53	550.00	46.62	11.11	149.37	440.00	32.86	11.11	149.37	220.00	16.43	11.11	149.37	220.00	16.43	32.86
MILL & INLAY																															
110+65.00	113+05.16	HWY. 70 MAIN LANES	240.16						62.00	1654.44	281.25	281.25															62.00	1654.44	220.00	181.99	181.99
110+78.00	112+92.00	HWY. 70 EASTBOUND CHANNELIZED RIGHT TURN LANE	261.00						VAR.	808.61	137.46	137.46															VAR.	808.61	220.00	88.95	88.95
113+99.08	115+32.00	HWY. 70 WESTBOUND CHANNELIZED RIGHT TURN LANE	132.92						VAR.	307.84	52.33	52.33															VAR.	307.84	220.00	33.86	67.72
7+50.00	9+23.91	UNIVERSITY AVENUE SOUTHBOUND THROUGH LANES	173.91						38.00	734.29	124.83	124.83															38.00	734.29	220.00	80.77	80.77
9+23.91	10+13.25	HWY. 70 & UNIVERSITY AVENUE INTERSECTION	90.00						VAR.	889.28	151.18	151.18															VAR.	889.28	220.00	97.82	97.82
10+13.25	12+00.00	UNIVERSITY AVENUE MAIN LANES	186.75						VAR.	1638.17	278.49	278.49															VAR.	1638.17	220.00	180.20	180.20
TOTALS:					**14.50**		**468.27**	**23.41**		**6032.63**	**1025.54**	**1048.95**		**69.72**		**169.53**		**46.62**		**149.37**		**32.86**		**457.21**		**50.29**		**6195.19**		**681.47**	**731.76**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.7% MIN. AGGR.....4.3% ASPHALT BINDER
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
110+65.00	113+05.16	MAIN LANES - HWY. 70	62.00	1654.44
110+78.00	112+92.00	MAIN LANES - HWY. 70 EASTBOUND CHANNELIZED RIGHT LANE	VAR.	808.61
113+99.08	115+32.00	*MAIN LANES - HWY. 70 WESTBOUND CHANNELIZED RIGHT LANE	VAR.	307.84
7+50.00	9+23.91	MAIN LANES - UNIVERSITY AVENUE OUTSIDE SB THRU LANES	38.00	734.29
9+23.91	10+13.25	MAIN LANES - INTERSECTION	VAR.	889.28
10+13.25	12+00.00	MAIN LANES - UNIVERSITY AVENUE	VAR.	1638.17
TOTAL:				**6032.63**

NOTE: AVERAGE MILLING DEPTH 2".
*AVERAGE MILLING DEPTH 4".
STOCKPILE LOCATION: 3200 BROWN STREET, LITTLE ROCK, AR 72204 GPS: 34* 43' 14.94" N, 92* 18' 48.71 W

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R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
08-18-2025		6	ARK.	061510	19	45
09-10-2025		SUMMARY OF QUANTITIES AND REVISIONS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITY NHPP-STPU-9253(85)	QUANTITY 9030	TOTAL	UNIT
202	REMOVAL AND DISPOSAL OF CURB	511		511	LIN. FT.
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER	185		185	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	67		67	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS	136		136	SQ. YD.
202	REMOVAL AND DISPOSAL OF JUNCTION BOXES	2		2	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	3		3	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	6		6	EACH
SP, SS, & 210	UNCLASSIFIED EXCAVATION	301		301	CU. YD.
SP & 210	COMPACTED EMBANKMENT	229		229	CU. YD.
SP & 210	SOIL STABILIZATION	10		10	TON
SP, SS, & 303	AGGREGATE BASE COURSE (CLASS 7)	15		15	TON
SP, SS, & 309	PORTLAND CEMENT CONCRETE BASE (5" UNIFORM THICKNESS)	70		70	SQ. YD.
SS & 401	TACK COAT	1069		1069	GAL.
SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	45		45	TON
SP, SS, & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	2		2	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	32		32	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	1		1	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	690		690	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	42		42	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT	6033		6033	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	10		10	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	22		22	TON
601	MOBILIZATION	0.65	0.35	1.00	LUMP SUM
SP, SS, & 603	MAINTENANCE OF TRAFFIC	1.00		1.00	LUMP SUM
SS & 604	SIGNS	387		387	SQ. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	3019		3019	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)	4		4	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	7		7	EACH
SS & 604	VERTICAL PANELS	32		32	EACH
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	148		148	LIN. FT.
* SS & 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	148		148	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	40		40	LIN. FT.
SS & 606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)	20		20	LIN. FT.
SS & 606	12" SIDE DRAIN	50		50	LIN. FT.
SS & 606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2		2	EACH
SS & 606	SELECTED PIPE BEDDING	20		20	CU. YD.
SS & 609	DROP INLETS (TYPE C)	2		2	EACH
SS & 609	DROP INLETS (TYPE MO)	6		6	EACH
SS & 609	JUNCTION BOXES (TYPE ST)	1		1	EACH
SS & 609	DROP INLET EXTENSIONS (4')	4		4	EACH
SS & 609	DROP INLET EXTENSIONS (8')	3		3	EACH
SS & 609	YARD DRAINS	1		1	EACH
SS & 615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	3		3	TON
620	LIME	1		1	TON
620	SEEDING	0.19		0.19	ACRE
SS & 620	MULCH COVER	0.60		0.60	ACRE
620	WATER	34.0		34.0	M. GAL.
621	TEMPORARY SEEDING	0.41		0.41	ACRE
621	SILT FENCE	321		321	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	13		13	CU. YD.
621	ROCK DITCH CHECKS	6		6	CU. YD.
SS & 621	FILTER SOCK (12")	316		316	LIN. FT.
623	SECOND SEEDING APPLICATION	0.19		0.19	ACRE
624	SOLID SODDING	497		497	SQ. YD.
SP, SS, & 632	CONCRETE ISLAND	111		111	SQ. YD.
SP, SS, & 633	CONCRETE WALKS	293		293	SQ. YD.
SS & 634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	805		805	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00		1.00	LUMP SUM
SP, SS, & 641	WHEELCHAIR RAMPS (TYPE 3)	24		24	SQ. YD.
SP, SS, & 641	WHEELCHAIR RAMPS (TYPE 6)	10		10	SQ. YD.

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY NHPP-STPU-9253(85)	QUANTITY 9030	TOTAL	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)		1	1	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1		1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)		1	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	16		16	EACH
SP & 707	CENTRAL CONTROL UNIT	1		1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	4		4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4		4	EACH
708	TRAFFIC SIGNAL CABLE (3C/14 A.W.G.)	285	1749	2034	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	1083		1083	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1190	314	1504	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)		827	827	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	195	164	359	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	555	317	872	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/8 A.W.G., E.G.C.)	60		60	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)		48	48	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	200		200	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")		20	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	50	432	482	LIN. FT.
710	NON-METALLIC CONDUIT (3")	485	548	1033	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2)	3		3	EACH
SS & 711	CONCRETE PULL BOX (TYPE 3)	1		1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)		1	1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	2	1	3	EACH
SS & 711	CONCRETE PULL BOX (TYPE 3 HD)	2	5	7	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')		1	1	EACH
SP	HIGH MAST LED FIXTURE (86,000 LUMENS)	6		6	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (8'-8')		1	1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3		3	EACH
SP	PEDESTAL TYPE SERVICE POINT (100 AMP)		1	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	0.50	1.00	LUMP SUM
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (12")	342		342	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (12")	150		150	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	1856		1856	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	643		643	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	545		545	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	5		5	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	9		9	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	28		28	EACH
SP & 733	VIDEO DETECTION SYSTEM		1	1	EACH
SP & 733	VIDEO CABLE (EXTERIOR CAT 5E)	285	1749	2034	LIN. FT.

REVISIONS

DATE	REVISION	SHEET NUMBER
8/18/2025	REVISED PERMANENT PAVEMENT MARKINGS QUANTITTY BOX TO SHOW TYPE II (YELLOW/YELLOW) RAISED PAVEMENT MARKERS TO BE PAID AS "EACH" REVISED ACHM PATCHING OF EXISTING ROADWAY QUANTITY BOX TO SHOW IF AND WHERE DIRECTED BY THE ENGINEER ON SAME LINE REMOVED AVG. WIDTH TOTAL FOR ACHM SURFACE COURSE (1/2") FROM BASE AND SURFACING BOX ADDED SEEDING, TEMPORARY SEEDING, AND SECOND SEEDING APPLICATION TO SUMMARY OF QUANTITIES BOX REVISED SUMMARY OF QUANTITIES BOX TO SHOW TOTAL MULCH COVER AS 0.60 ACRE REVISED MOBILIZATION ON SUMMARY OF QUANTITIES SHEET TO SHOW 0.65 LUMP SUM UNDER NHPP-STPU-9253(85) AND 0.35 LUMP SUM UNDER 9030	16,17,18,19
9/10/2025	REMOVED "RESTRICTIONS ON THE USE OF RECYCLED ASPHALT PAVEMENT MATERIAL" SPECIAL PROVISION.	3, 19

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R061510.DGN

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	20	45
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

SURVEY CONTROL COORDINATES

Project Name: s061510
Date: 2/21/2018
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	2057009.3806	1209169.8903	260.765	CTL	ARDOT STD. MON. STAMPED PN: 1
2	2057655.6989	1209269.4757	259.477	CTL	ARDOT STD. MON. STAMPED PN: 2
3	2058197.5167	1209347.6325	263.177	CTL	ARDOT STD. MON. STAMPED PN: 3
4	2058823.8164	1209442.5537	269.595	CTL	ARDOT STD. MON. STAMPED PN: 4
5	2059444.9721	1209591.6103	293.635	CTL	ARDOT STD. MON. STAMPED PN: 5
6	2059893.1807	1209513.2804	296.212	CTL	ARDOT STD. MON. STAMPED PN: 6
7	2060345.1113	1209596.3504	289.817	CTL	ARDOT STD. MON. STAMPED PN: 7
8	2059112.2933	1211078.7313	259.086	CTL	ARDOT STD. MON. STAMPED PN: 8
9	2058955.4386	1210643.5911	266.051	CTL	ARDOT STD. MON. STAMPED PN: 9
10	2058869.2095	1209973.9433	277.754	CTL	ARDOT STD. MON. STAMPED PN: 10
11	2058876.8037	1209028.7450	267.746	CTL	ARDOT STD. MON. STAMPED PN: 11
12	2058974.6320	1208494.0284	265.288	CTL	ARDOT STD. MON. STAMPED PN: 12
13	2059004.2997	1208111.3093	265.801	CTL	ARDOT STD. MON. STAMPED PN: 13
100	2068600.1191	1219046.3343	349.025	GPS	ARDOT GPS 600034
101	2069713.4444	1199326.0851	388.042	GPS	ARDOT GPS 600060A
900	2056961.7425	1209279.4809	264.079	TBM	ARDOT CAP
901	2058800.7339	1209554.1324	269.828	TBM	SQ CUT IN TRAFFIC SIGNAL BASE
902	2060075.1130	1209508.5583	296.328	TBM	SQ CUT IN CORNER OF CURB
903	2044203.2505	1203871.2933	309.380	BM	M 320 ARDOT CAP
904	2044708.7474	1203873.0753	315.290	TBM	N 320 NE END OF C
905	2055124.3212	1209000.2233	264.145	TBM	ARDOT CAP
906	2051729.3151	1208504.3746	280.591	TBM	SQ CUT IN CENTER OF EAST END OF HEADWALL
907	2048296.3071	1207813.7093	298.760	TBM	SQ CUT IN CENTER OF EAST HDWL
908	2046828.0294	1204966.2261	288.148	TBM	SQ CUT NORTH END OF RCP
990	2044233.6092	1203863.0481	306.310	BM	NGS BM M320 RESET
991	2044648.0580	1203881.2135	312.220	BM	NGS BM N320 RESET

*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).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999764067 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 s061510gi.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: 600034-600060A
CONVERGENCE ANGLE: 00-11-31 LEFT AT LT: N 34-42-51 LG: W 092-20-34
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

HWY. 70

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	100+00.00	2058962.6747	1208148.0738
8001	PC	101+42.59	2058949.2043	1208290.0248
8003	PT	106+98.77	2058916.8548	1208845.1426
8004	PI	113+55.57	2058902.5330	1209501.7872
8005	POE	118+00.54	2058899.8651	1209946.7452

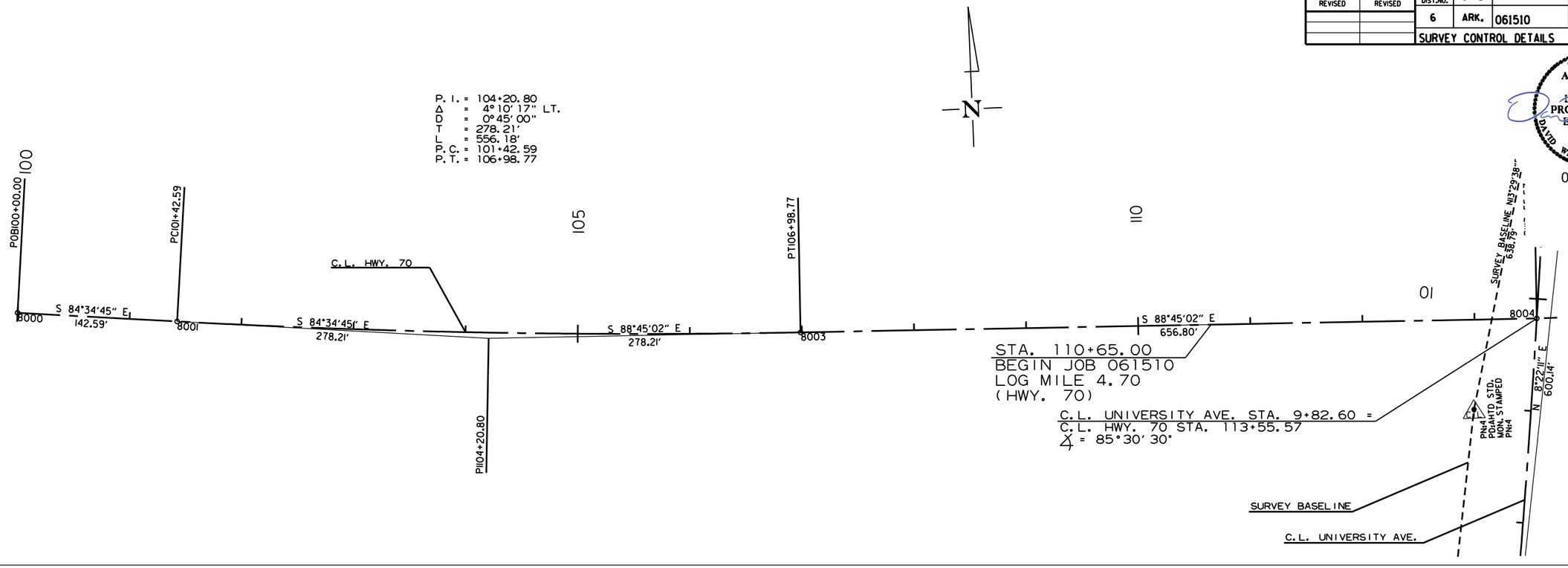
UNIVERSITY AVE.

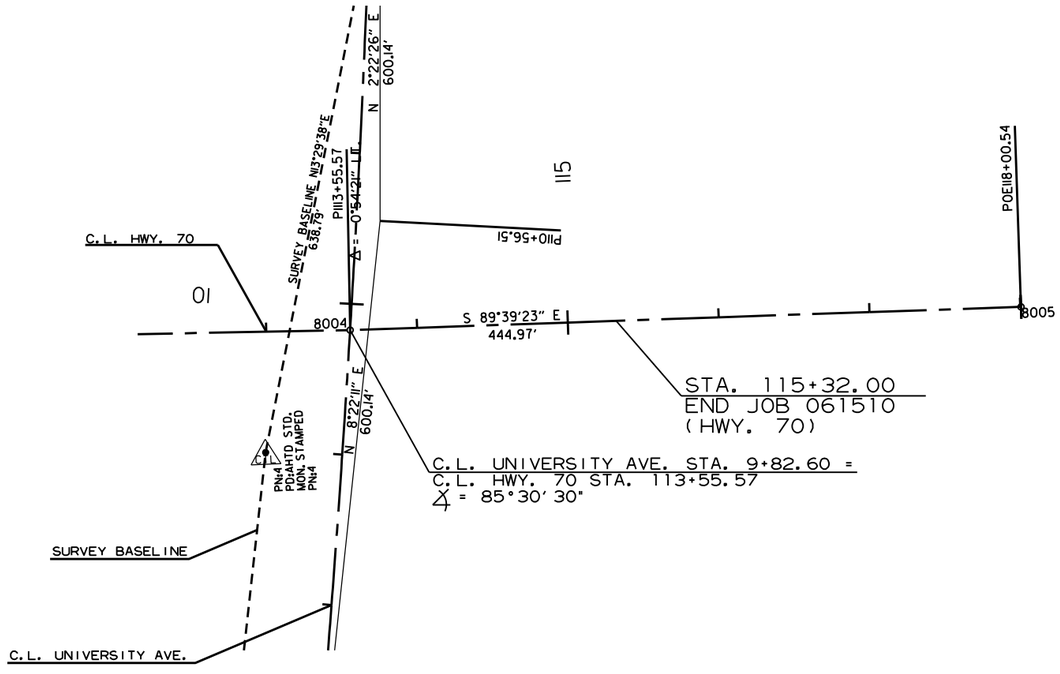
POINT NO.	TYPE	STATION	NORTHING	EASTING
8006	POB	0+00.00	2057928.8255	1209370.7389
8007	PC	4+56.37	2058380.3299	1209437.1677
8009	PT	16+55.55	2059573.7062	1209549.3817
8010	POE	20+85.17	2060002.9566	1209567.1760

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	21	45
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025



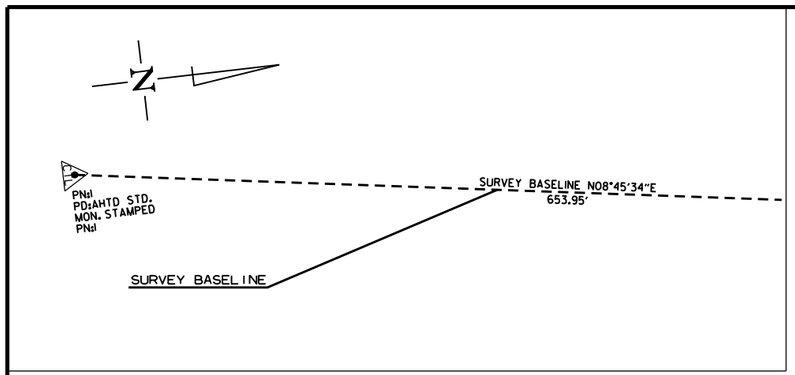


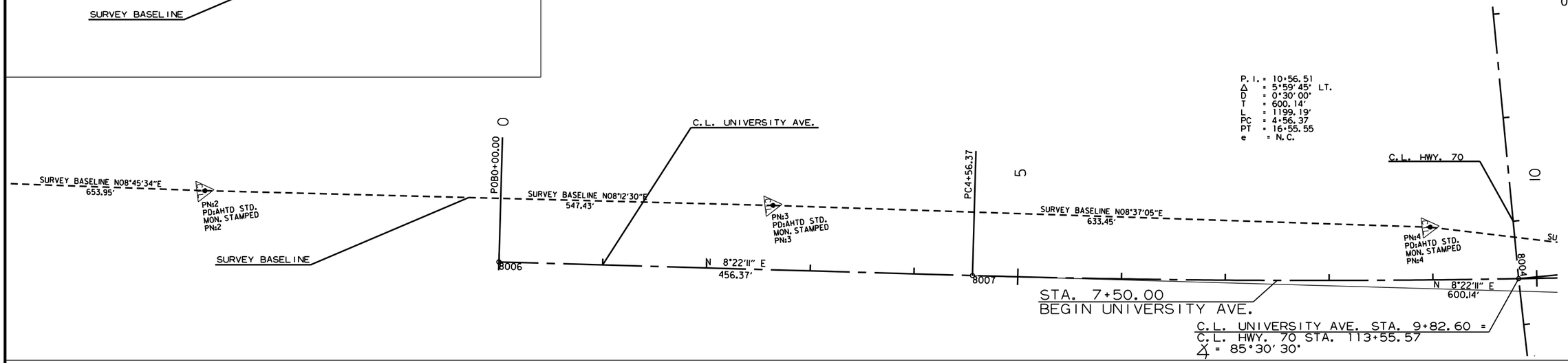
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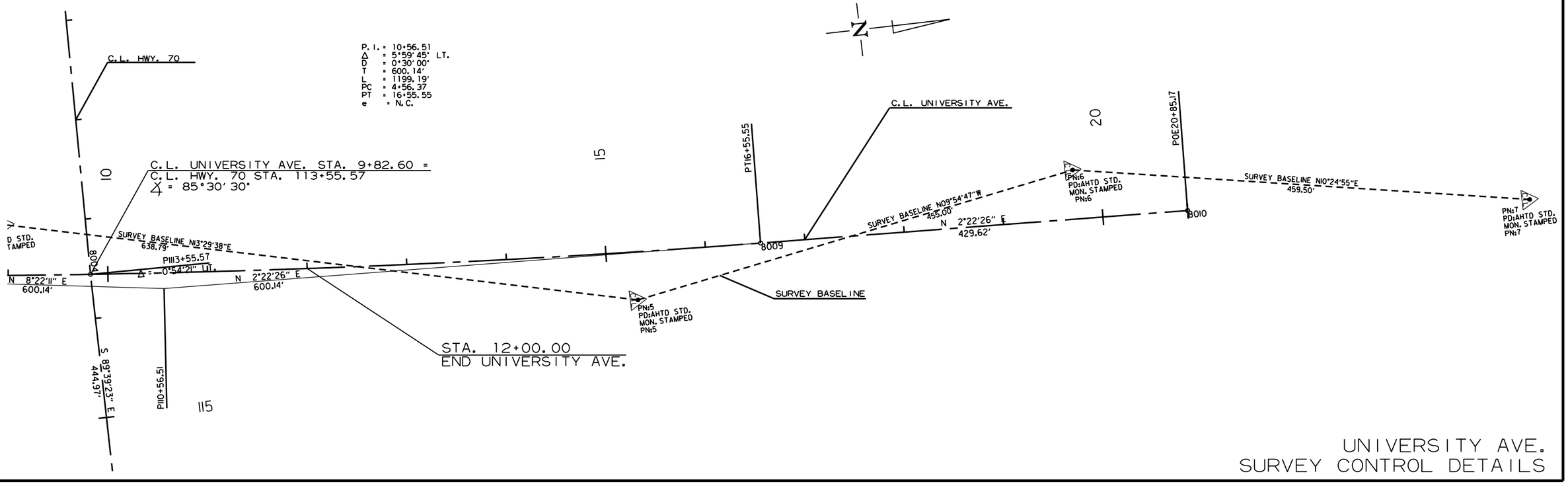
HWY. 70
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	22	45
		SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
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DAVID WILLIAM BAKER, IV
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UNIVERSITY AVE.
SURVEY CONTROL DETAILS

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	23	45
		PLAN AND PROFILE SHEETS				

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

STA. 112+76 - CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON
LT. =3.3 SQ. YD.

STA. 10+46.35 - CONSTRUCT
DROP INLET ON RT.
& 18" X 16' PIPE CULVERT
CONNECT TO DROP INLET ON RT.
@ STA. 10+61.68
TYPE MO DROP INLET = 4'
TYPE C DROP INLET = 4' X 4'
DROP INLET H = 3'-3"

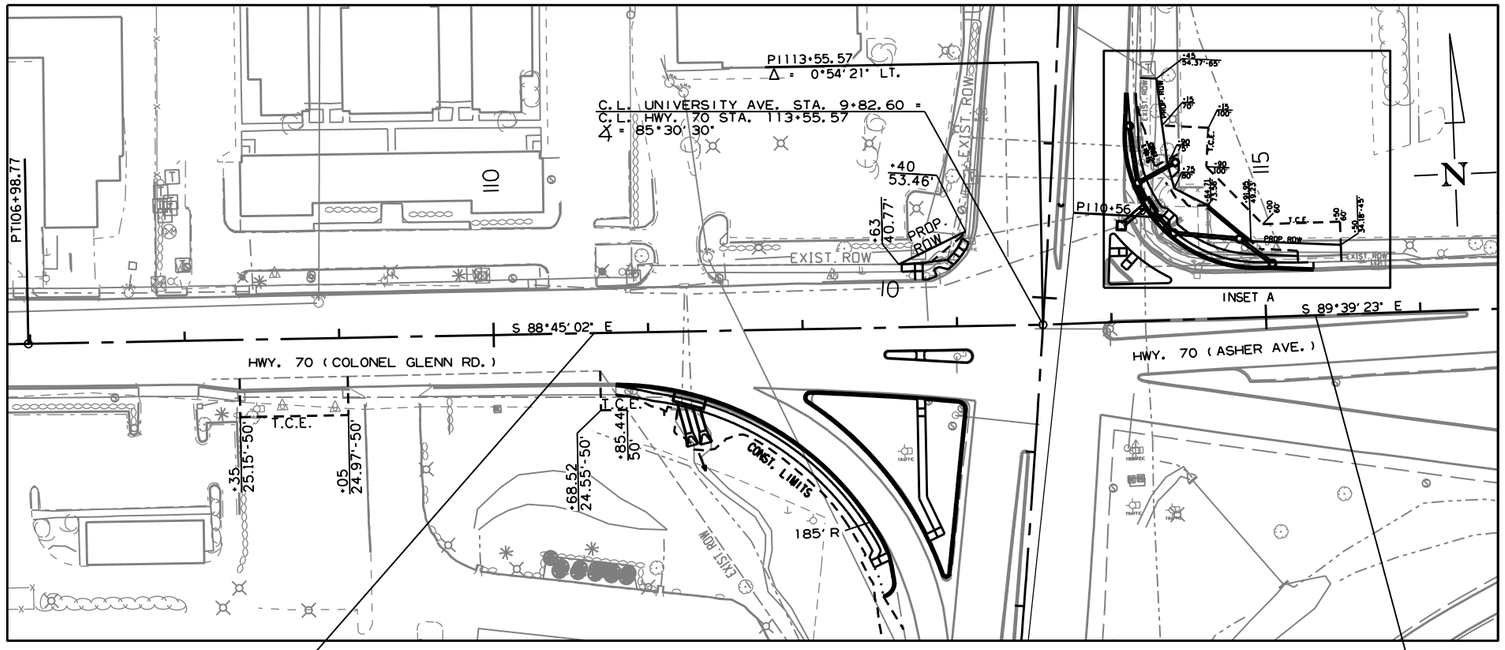
STA. 114+84.60 - CONSTRUCT
DROP INLET ON LT.
WITH 4' EXTENSION LT. & RT.
& 18" X 40' PIPE CULVERT
CONNECT TO DROP INLET ON RT.
@ STA. 10+46.35 RT. OF UNIVERSITY AVE. C.L.
TYPE MO DROP INLET = 4'
TYPE C DROP INLET = 4' X 4'
DROP INLET H = 5'-6"

STA. 115+05.41 - CONSTRUCT
DROP INLET ON LT.
& 18" X 24' PIPE CULVERT
CONNECT TO DROP INLET ON LT.
@ STA. 114+84.60
TYPE MO DROP INLET = 4'
TYPE C DROP INLET = 4' X 4'
DROP INLET H = 3'-8"

STA. 114+64 - STA. 114+97 CONSTRUCT C.C.C.&G.
(TYPE A) (1'-6") ON LT. =28 LIN. FT.

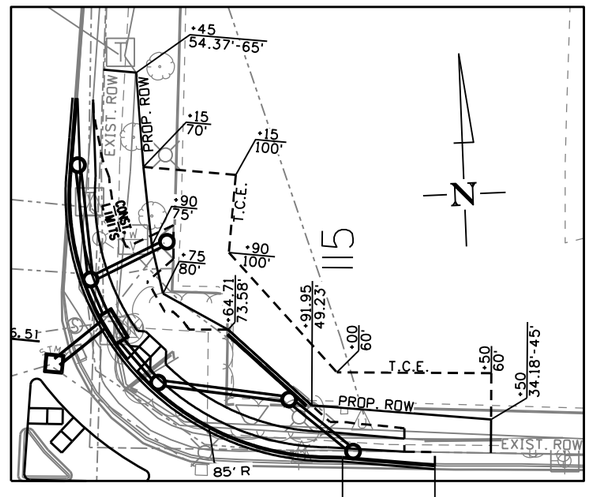
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025



SEE SPECIAL DETAILS SHEET FOR DETAILS ON ISLAND CONSTRUCTION

INSET A



STA. 115+01.98, 32.14' LT. (CURB FACE)

STA. 115+31.89, 29.83' LT. (CURB FACE)

STA. 110+65.00
BEGIN JOB 061510
LOG MILE 4.70
(HWY. 70)

STA. 111+26.68 - CONSTRUCT
DROP INLET ON RT.
& DBL. 48" X 20' R.C. PIPE CULVERT OUTLET WITH FES
CONNECT TO EXISTING PIPE CULVERTS
TYPE C DROP INLET = 20' X 6'
DROP INLET H = 7'-0"

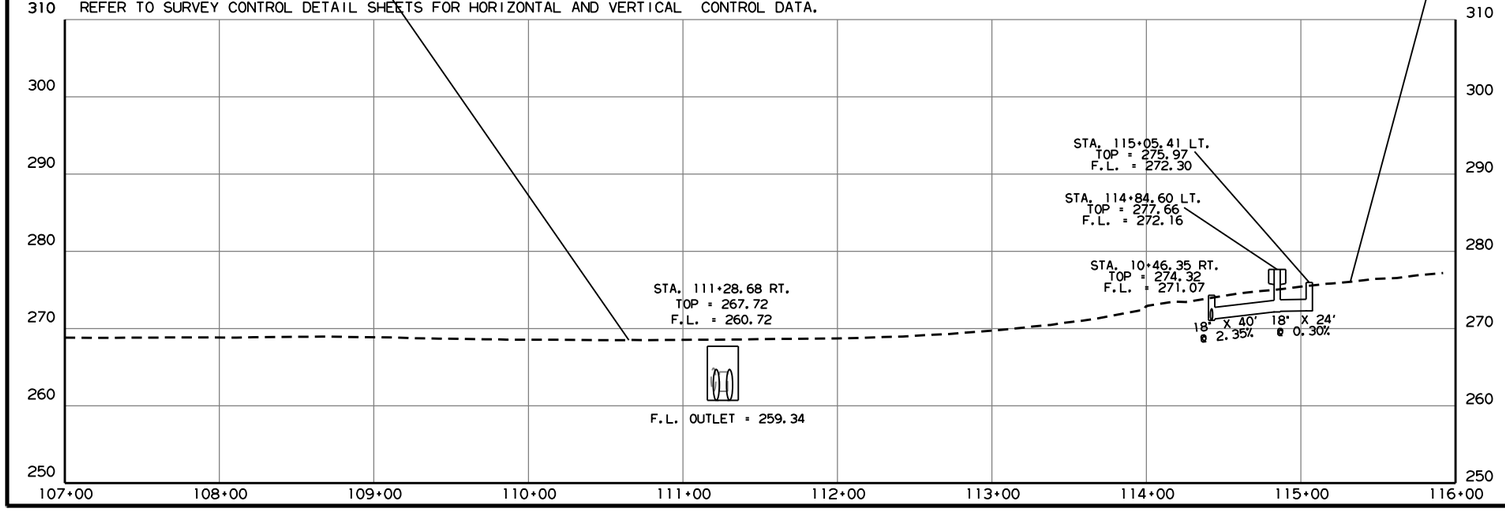
STA. 112+47 - CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON
RT. =3.5 SQ. YD.

STA. 112+76 - CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON
RT. =3.5 SQ. YD.

STA. 112+81 - CONSTRUCT
TYPE 3 WHEELCHAIR RAMP ON
RT. =3.3 SQ. YD.

STA. 115+32.00
END JOB 061510
(HWY. 70)

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



HWY. 70

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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	24	45
		PLAN AND PROFILE SHEETS				

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

P.I. = 10+56.51
Δ = 5°59'45" LT.
D = 0°30'00"
T = 600.14'
L = 1199.19'
PC = 4+56.37
PT = 16+55.55
e = N.C.

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STA. 10+26 - CONSTRUCT TYPE 6 WHEELCHAIR RAMP ON LT. =9.6 SQ. YD.

SEE SPECIAL DETAILS SHEET FOR DETAILS ON ISLAND CONSTRUCTION

C.L. UNIVERSITY AVE. STA. 9+82.60 =
C.L. HWY. 70 STA. 113+55.57
Δ = 85°30'30"

P.I. 113+55.57
Δ = 0°54'21" LT.

185' R

STA. 8+28.10, 90.74' LT. (CURB FACE)
STA. 8+10.07, 85.29' LT. (CURB FACE)
8.5' R

UNIVERSITY AVE.

P.I. 10+56.51

85' R

EXIST. ROW

STA. 7+50.00
BEGIN UNIVERSITY AVE.

STA. 10+32 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP ON RT. =3.4 SQ. YD.

STA. 10+46.35 - CONSTRUCT DROP INLET ON RT. & 18" X 16' PIPE CULVERT CONNECT TO DROP INLET ON RT. @ STA. 10+61.68 TYPE MO DROP INLET = 4' TYPE C DROP INLET = 4' X 4' DROP INLET H = 3'-3"

STA. 10+28 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP ON RT. =3.3 SQ. YD.

STA. 10+53 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP ON RT. =3.5 SQ. YD.

STA. 10+49.31 - CONSTRUCT JUNCTION BOX ON RT. CONNECT TO EXISTING PIPE CULVERT TYPE ST JUNCTION BOX = 5' X 5' DROP INLET H = 3'-6"

STA. 10+61.68 - CONSTRUCT DROP INLET ON RT. WITH 8' EXTENSION RT. & 29" X 18" X 20' R.C. ARCH PIPE CULVERT (CLASS IV) (TYPE 3 BEDDING) CONNECT TO JUNCTION BOX ON RT. @ STA. 10+49.31 TYPE C DROP INLET = 4' X 10' DROP INLET H = 3'-7"

STA. 10+77.36 - CONSTRUCT DROP INLET ON RT. WITH 8' EXTENSION & 18" X 10' PIPE CULVERT CONNECT TO DROP INLET ON RT. @ STA. 10+61.68 TYPE MO DROP INLET = 4' TYPE C DROP INLET = 4' X 4' DROP INLET H = 3'-6"

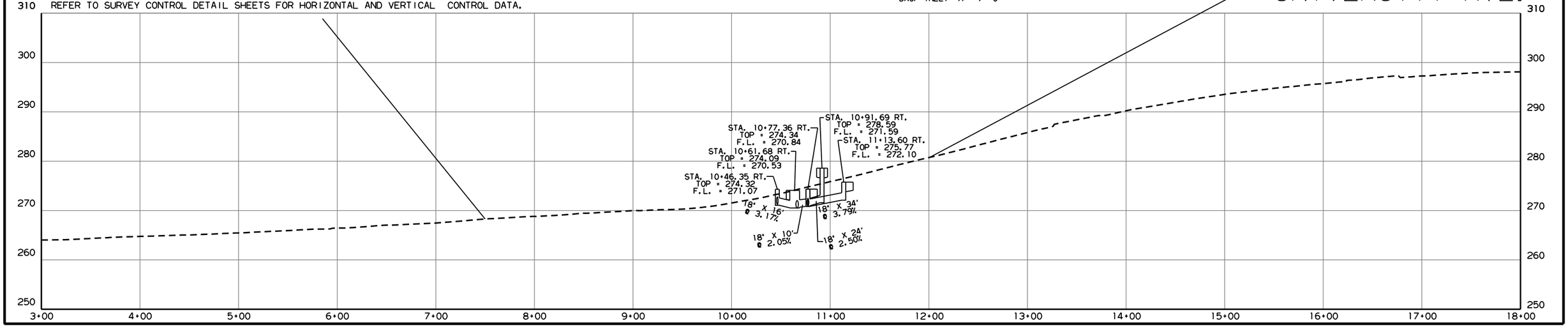
STA. 10+91.69 - CONSTRUCT DROP INLET ON RT. WITH 4' EXTENSION LT. & RT. & 18" X 24' PIPE CULVERT CONNECT TO DROP INLET ON RT. @ STA. 10+77.36 TYPE MO DROP INLET = 4' TYPE C DROP INLET = 4' X 4' DROP INLET H = 7'-0"

STA. 11+13.60 - CONSTRUCT DROP INLET ON RT. WITH 8' EXTENSION & 18" X 34' PIPE CULVERT CONNECT TO DROP INLET ON RT. @ STA. 10+77.36 TYPE MO DROP INLET = 4' TYPE C DROP INLET = 4' X 4' DROP INLET H = 3'-8"

STA. 12+00.00
END UNIVERSITY AVE.

UNIVERSITY AVE.

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



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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	25	45
		SUMMARY OF TRAFFIC SIGNAL QUANTITIES				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV

08/13/2025

TRAFFIC SIGNAL QUANTITIES

ITEM NUMBER	ITEM	QUANTITY NHPP-STPU-9253(85)	QUANTITY 9030	TOTAL	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2, E-NET (8 PHASES)		1	1	EACH
SP	TRAFFIC SIGNAL CONTROLLER (MODIFICATION)	1		1	EACH
SP	ETHERNET SWITCH, T100 HARDENED (8-PORT)		1	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	16		16	EACH
SP & 707	CENTRAL CONTROL UNIT	1		1	EACH
SP & 707	POLE MOUNTED ASSEMBLY	4		4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4		4	EACH
708	TRAFFIC SIGNAL CABLE (3C/14 A.W.G.)	285	1749	2034	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/12 A.W.G.)	1083		1083	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1190	314	1504	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)		827	827	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	195	164	359	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	555	317	872	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)		48	48	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")		20	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")		432	432	LIN. FT.
710	NON-METALLIC CONDUIT (3")	485	548	1033	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2)	3		3	EACH
SS & 711	CONCRETE PULL BOX (TYPE 3)	1		1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)		1	1	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	2	1	3	EACH
SS & 711	CONCRETE PULL BOX (TYPE 3 HD)	2	5	7	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')		1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (8'-8')		1	1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3		3	EACH
SP	PEDESTAL TYPE SERVICE POINT (100 AMP)		1	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.50	0.50	1.00	LUMP SUM
SP & 733	VIDEO DETECTION SYSTEM		1	1	EACH
SP & 733	VIDEO CABLE (EXTERIOR CAT 5E)	285	1749	2034	LIN. FT.

PERMANENT TRAFFIC SIGNAL:
PERMANENT TRAFFIC SIGNAL MUST BE INSTALLED AND OPERATIONAL AS SHOWN ON STAGE 3 TRAFFIC SIGNAL OPERATIONS SHEET PRIOR TO THE BEGINNING OF STAGE 3. SEE CONSTRUCTION SEQUENCE ON MAINTENANCE OF TRAFFIC SHEETS AND REFER TO SIGNALIZATION PLAN SHEETS FOR DETAILS.
THE ETHERNET SWITCH MUST HAVE FIBER PORTS. SEE SYSTEM LOCAL CONTROLLER SPECIAL PROVISION FOR DETAILS.
COSTS ASSOCIATED WITH SPOOLING AND RERUNING FIBER SHALL BE CONSIDERED SUBSIDIARY TO THE SYSTEM LOCAL CONTROLLER PAY ITEM. SEE CONSTRUCTION SEQUENCE ON MAINTENANCE OF TRAFFIC SHEETS AND REFER TO SIGNALIZATION PLAN SHEETS FOR DETAILS.

8/13/2025

R061510.DGN

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK COUNTY: PULASKI DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 SCALE: N/A DRAWN BY: JDH

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	26	45
		TRAFFIC SIGNAL NOTES				

TRAFFIC SIGNAL NOTES:

1. THE TRAFFIC SIGNAL SHALL NOT BE PUT INTO OPERATION OR SWITCHED TO THE NEXT CONSTRUCTION STAGE PRIOR TO THE FOLLOWING:

   A. ALL TRAFFIC SIGNAL EQUIPMENT HAS BEEN INSTALLED ACCORDING TO THE PLANS, SPECIAL PROVISIONS, AND PROPERLY FUNCTIONAL. THIS INCLUDES BUT NOT LIMITED TO: CABINETS, PULL BOXES, JUNCTION BOXES, POLES, MAST ARMS, FOUNDATIONS, LUMINAIRES, SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS, PUSH BUTTONS, DETECTION SYSTEM, CONDUITS, CONDUCTORS, CABLES, TRAFFIC CONTROLLER, CONFLICT MONITOR, COMMUNICATION SYSTEM, SERVICE POINT, AND RAILROAD INTERCONNECT SYSTEM.

   B. THE DETECTION SYSTEM SHALL BE INSTALLED, SETUP, AND CONFIGURED BY THE CONTRACTOR OR THEIR SUPPLIER PER PLANS. A TRAFFIC OPERATIONS INSPECTOR SHALL INSPECT AND PROVIDE APPROVAL IN ORDER TO PUT THE TRAFFIC SIGNAL INTO OPERATION.

   C. THE TRAFFIC CONTROLLER AND CONFLICT MONITOR SHALL BE PROGRAMMED TO OPERATE AS REQUIRED PER THE PLANS (PHASING DIAGRAM, INTERVAL CHART, AND ANY ADDITIONAL NOTES), SPECIAL PROVISIONS AND ARDOT SPECIFICATIONS.

   D. TIMING SETTINGS HAVE BEEN PROGRAMMED AND APPROVED AS REQUIRED BY TSMO DIVISION.

   E. THE TRAFFIC SIGNAL HAS BEEN INSPECTED AND APPROVED BY A TRAFFIC OPERATIONS INSPECTOR.

   F. ALL REQUIRED DOCUMENTS RELATED TO THE TRAFFIC SIGNAL EQUIPMENT, THIS INCLUDES BUT NOT LIMITED TO: TEST RESULTS, CONFIGURATION/DATA REPORTS, WARRANTIES, AND ANY OTHER DOCUMENTATION REQUIRED PER PLANS AND SPECIAL PROVISIONS.

2. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.

3. TRAFFIC SIGNAL CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.

4. THE CONTRACTOR SHALL PERFORM ALL WORK POSSIBLE THAT WILL MINIMIZE THE TIME THAT THE TRAFFIC SIGNAL IS OUT OF OPERATION. IF, IN THE OPINION OF THE ENGINEER, TRAFFIC CONDITIONS WARRANT, THE CONTRACTOR SHALL PROVIDE FLAGMEN TO DIRECT TRAFFIC WHILE THE TRAFFIC SIGNAL IS OUT OF OPERATION.

5. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (CURRENT EDITION) NATIONAL ELECTRICAL CODE, NFPA 101 (CURRENT EDITION) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.

6. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.

7. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 A.W.G. USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S/ COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.

8. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.

9. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.

10. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.

11. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.

12. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.

13. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.

14. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.

15. ONE VIDEO PROGRAMMNG MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.

16. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.

17. THE LOCAL RADIO WITH ANTENNA AND TRAFFIC SIGNAL CONTROLLER SHALL BE COMPATIBLE WITH THE EXISTING COORDINATION SYSTEM IN THE CITY/COUNTY.

18. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHOD OR AS DIRECTED BY THE ENGINEER. PVC OR HDPE CONDUIT SHALL BE USED AND SHALL BE UL LISTED. PVC CONDUIT SHALL BE MARKED "DIR. BORING" OR "DIRECTIONAL BORING" PER NEC. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED. THE ENGINEER SHALL GRANT A WRITTEN APPROVAL PRIOR TO USING THE TRENCHING METHOD.

19. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS. ALL CONDUIT UNDER THE ROADWAY, SIDEWALKS, AND DRIVEWAYS SHALL HAVE A MINIMUM DEPTH OF 24" FROM THE TOP OF THE CONDUIT TO THE FINISHED GRADE. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DRAINAGE STRUCTURES.

20. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON-METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES, POLE BASES, AND TRAFFIC SIGNAL CABINETS. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDARY TO THE PAY ITEM. ALL NON-METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.

21. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. PULL BOX LIDS SHALL CLOSE FLUSH WITHOUT PINCHING ANY CONDUCTORS. CONDUIT LENGTHS IN PULL BOXES SHALL BE SET ACCORDINGLY. ANY CONDUCTORS THAT HAVE BEEN DAMAGED BY PINCHING SHALL BE COMPLETELY REPLACED AT THE CONTRACTOR'S EXPENSE.

22. ALL CONCRETE PULL BOXES SHALL BE SET ON A GRAVEL OR CRUSHED STONE BEDDING AS SPECIFIED IN SECTION 711, CONCRETE PULL BOX, OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014.

23. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, JUNCTION BOXES AND CONTROLLER CABINETS. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.
    EXAMPLES FOR CONDUIT IN SIDE CABINET: "TO POLE A AND B" OR "TO POLE C"
    EXAMPLES FOR CONDUIT IN PULL BOX: "TO POLE A" OR "TO TRAFFIC CABINET"

24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.

25. ALL TRAFFIC SIGNAL POLES SHALL BE GALVANIZED.

26. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

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27. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.

28. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.

29. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.

30. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.

31. LED LUMINAIRE ASSEMBLIES SHALL HAVE A BUG RATING OF U0.

32. BACKPLATES SHALL BE SUPPLIED FOR ALL TRAFFIC SIGNAL HEADS, REFER TO THE RETROREFLECTIVE BACKPLATES SPECIAL PROVISION FOR REQUIREMENTS.

33. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.

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

35. ALL SIGNAL HEADS AND SIGNS ON THE TEMPORARY SPAN WIRE SHALL HAVE AN ADDITIONAL TETHER WIRE (NOT SHOWN ON SD-7) AT THE BOTTOM CHORD TO MINIMIZE MOVEMENT DUE TO WIND EFFECTS. THE BOTTOM TETHER, HARDWARE, BRACKETS, AND MATERIALS FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE TEMPORARY SIGNAL. THE BOTTOM TETHER SHALL BE INSTALLED BETWEEN THE MINIMUM AND MAXIMUM HEIGHT CLEARANCE ABOVE THE ROADWAY.

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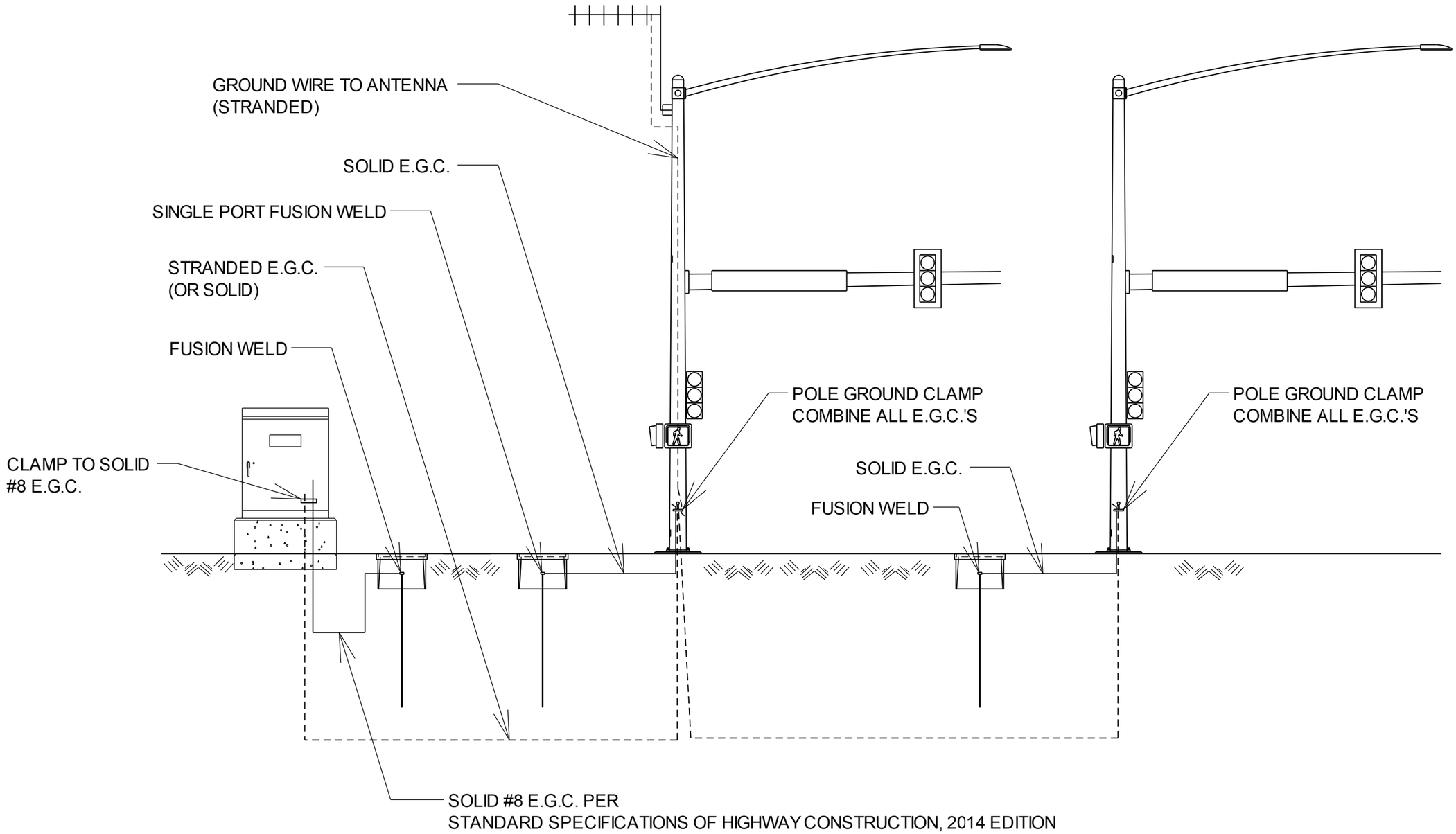
LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK COUNTY: PULASKI DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 SCALE: N/A DRAWN BY: JDH

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	27	45
		GROUNDING ARRAY DETAIL				

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS

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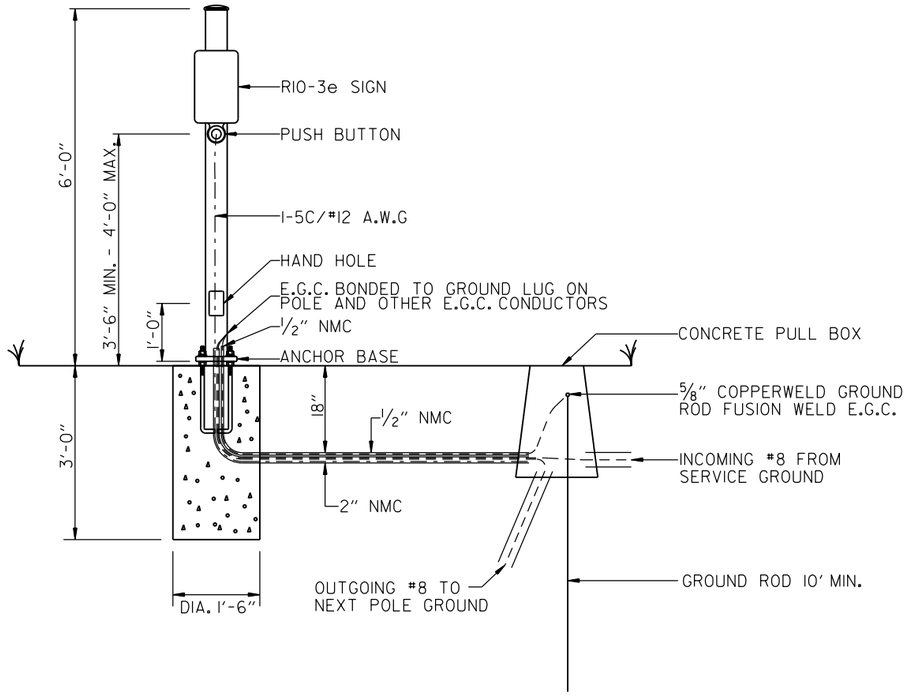


8/13/2025

R061510.DGN

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE		
CITY: LITTLE ROCK	COUNTY: PULASKI	DISTRICT: 6
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DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	28	45
		PEDESTRIAN SIGNAL DETAILS				



6' PEDESTAL POLE DETAIL

NOT TO SCALE

NOTES:

MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

POLE CAP - POLE CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

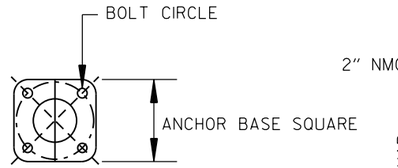
HAND HOLE - HAND HOLES SHALL BE 3 IN. X 5 IN. FOR PED POLES. MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL.

NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.

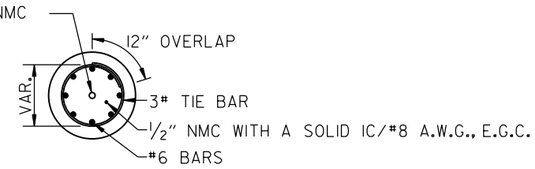
GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES, ITEM 715 FOR PEDESTAL POLES, AND ITEM 701 FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPARATELY.

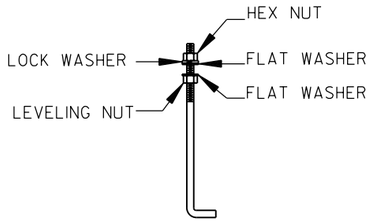
POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A 3/8" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

EACH 6' PEDESTAL POLE IS TO BE PAID FOR UNDER ITEM 715 TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION.

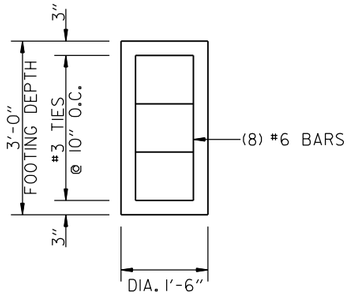


ANCHOR BASE
N.T.S.

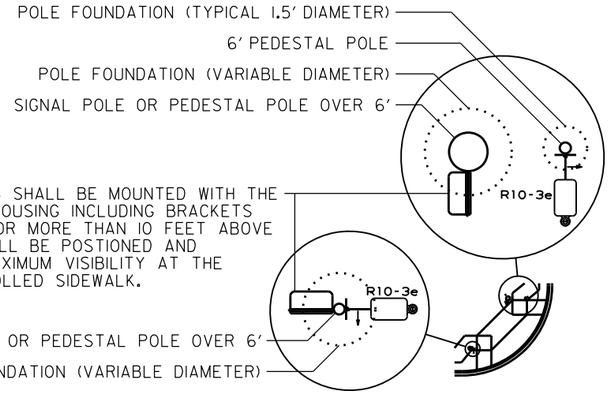




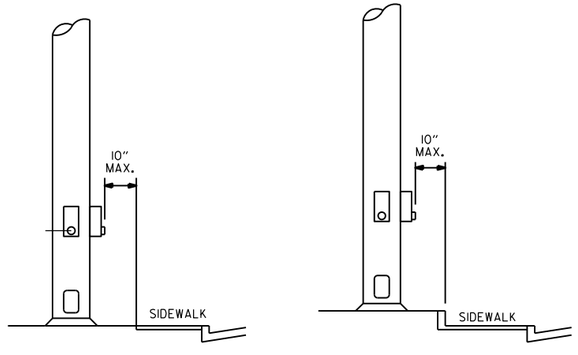
ANCHOR BOLT
N.T.S.



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TYPICAL PEDESTRIAN SIGNAL HEAD AND PUSH BUTTON MOUNTING DETAIL
NOT TO SCALE



PUSH BUTTON SIDE REACH REQUIREMENTS
NOT TO SCALE

PUSH BUTTON PLACEMENT NOTES:

PUSH BUTTONS SHALL BE PLACED SUCH THAT NO MORE THAN 10" OF SIDE REACH IS REQUIRED TO ACTIVATE THEM. PUSH BUTTON EXTENDERS (SUBSIDIARY TO POLE MOUNTED ASSEMBLY PAY ITEM) MAY BE USED TO ACCOMPLISH THIS IF NECESSARY. THE FACE OF THE PUSH BUTTONS SHALL BE ORIENTED PARALLEL TO THEIR ASSOCIATED CROSSWALKS AND BE ACCESSIBLE FROM A LEVEL AREA. IN THE EVENT THAT A TRAFFIC SIGNAL POLE CANNOT BE LOCATED AS SHOWN ON THE PLANS, CONSULT WITH THE PROJECT ENGINEER PRIOR TO MAKING ADJUSTMENTS.

EACH PEDESTRIAN PUSH BUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209. ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

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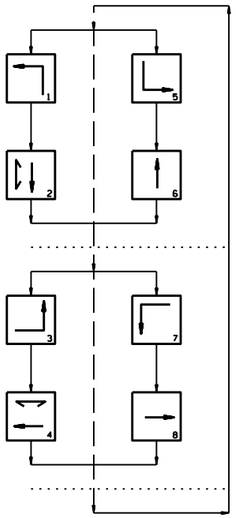
8/13/2025

R061510.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	29	45
		SIGNALIZATION PLAN SHEET				

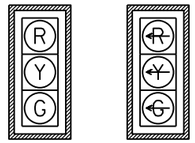
STATE OF ARKANSAS
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PHASING DIAGRAM



SIGNAL FACES

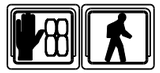
12" LENSES



3 & 4
7 & 8
10, 11, & 12
15 & 16

1 & 2
5 & 6
9
13 & 14

ONE SECTION
(SOLID SYMBOL)



18 (BAGGED)
19 & 20 (BAGGED)

NOTES:

1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETRORFLECTIVE BACKPLATES FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. PED HEADS ARE TO REMAIN BAGGED UNTIL THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A. STANDARDS.
5. ALL COMPONENTS OF THE PERMANET TRAFFIC SIGNAL ARE TO BE INSTALLED PRIOR TO STAGE 3 BEGINNING EXCEPT FOR POLE E, POLE F, PB14 AND THEIR ASSOCIATED CONDUIT/EQUIPMENT. SEE NEXT SHEET FOR EQUIPMENT LOCATIONS.
6. CONTRACTOR TO COORDINATE WITH THE CITY OF LITTLE ROCK FOR RECONNECTION OF FIBER OPTIC CABLE TO THE NEW TRAFFIC SIGNAL. SEE NEXT SHEET FOR DETAILS.

STAGE 3 INTERVAL CHART

SIGNAL FACES	HIGHWAY 70 AND UNIVERSITY AVENUE 1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQUENCE
1 & 2	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
3 & 4	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
5 & 6	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~G~~	*	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
7 & 8	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
9	~~R~~	~~R~~	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
10, 11, & 12	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
13 & 14	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	~~R~~
15 & 16	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
18	BAGGED DURING THIS STAGE														BLK
19 & 20	BAGGED DURING THIS STAGE														BLK

* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE

NOTE TO CONTRACTOR:

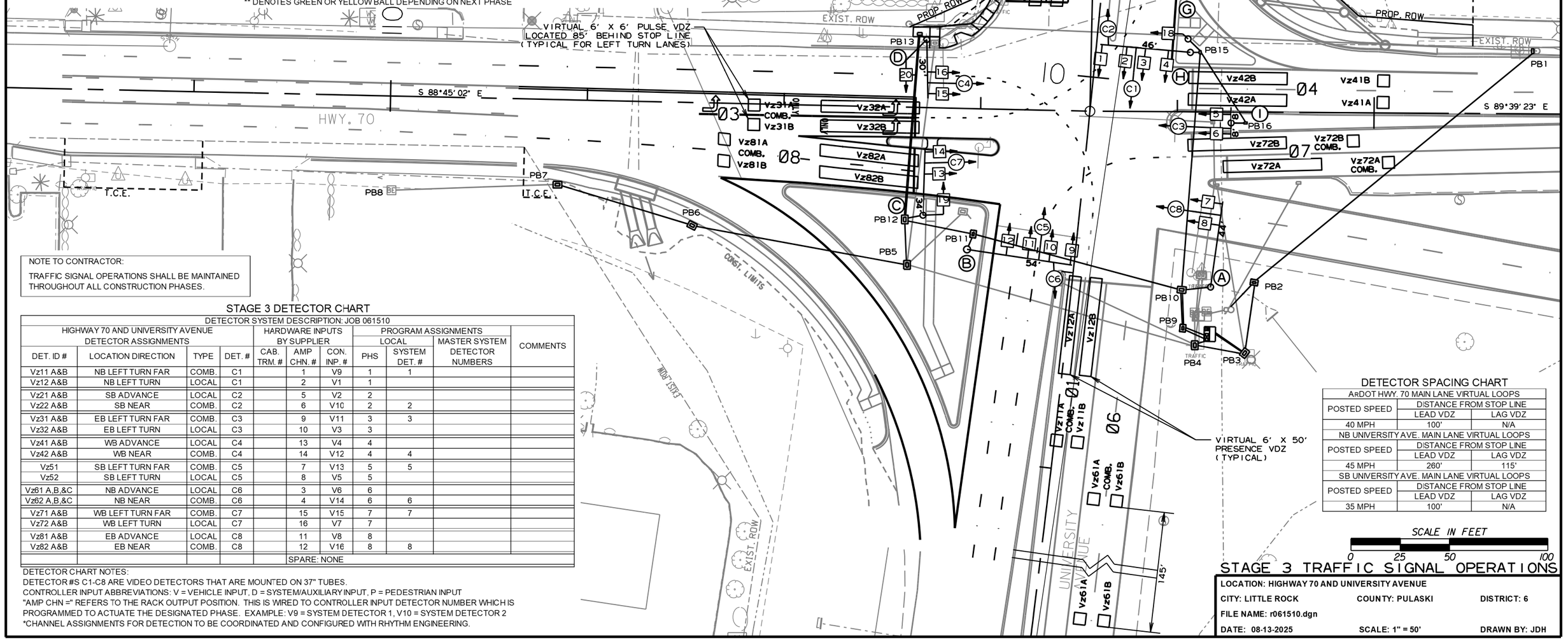
TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

STAGE 3 DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 061510

DET. ID #	LOCATION DIRECTION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER CAB. TRM. #	AMP CHN. #	CON. INP. #	PROGRAM ASSIGNMENTS LOCAL PHS	LOCAL SYSTEM DET. #	MASTER SYSTEM DETECTOR NUMBERS	COMMENTS
	HIGHWAY 70 AND UNIVERSITY AVENUE DETECTOR ASSIGNMENTS									
Vz11 A&B	NB LEFT TURN FAR	COMB.	C1		1	V9	1	1		
Vz12 A&B	NB LEFT TURN	LOCAL	C1		2	V1	1			
Vz21 A&B	SB ADVANCE	LOCAL	C2		5	V2	2			
Vz22 A&B	SB NEAR	COMB.	C2		6	V10	2	2		
Vz31 A&B	EB LEFT TURN FAR	COMB.	C3		9	V11	3	3		
Vz32 A&B	EB LEFT TURN	LOCAL	C3		10	V3	3			
Vz41 A&B	WB ADVANCE	LOCAL	C4		13	V4	4			
Vz42 A&B	WB NEAR	COMB.	C4		14	V12	4	4		
Vz51	SB LEFT TURN FAR	COMB.	C5		7	V13	5	5		
Vz52	SB LEFT TURN	LOCAL	C5		8	V5	5			
Vz61 A,B,&C	NB ADVANCE	LOCAL	C6		3	V6	6			
Vz62 A,B,&C	NB NEAR	COMB.	C6		4	V14	6	6		
Vz71 A&B	WB LEFT TURN FAR	COMB.	C7		15	V15	7	7		
Vz72 A&B	WB LEFT TURN	LOCAL	C7		16	V7	7			
Vz81 A&B	EB ADVANCE	LOCAL	C8		11	V8	8			
Vz82 A&B	EB NEAR	COMB.	C8		12	V16	8	8		
					SPARE: NONE					

DETECTOR CHART NOTES:
DETECTOR #S C1-C8 ARE VIDEO DETECTORS THAT ARE MOUNTED ON 37" TUBES.
CONTROLLER INPUT ABBREVIATIONS: V = VEHICLE INPUT, D = SYSTEM/AUXILIARY INPUT, P = PEDESTRIAN INPUT
"AMP CHN =" REFERS TO THE RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE. EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2
*CHANNEL ASSIGNMENTS FOR DETECTION TO BE COORDINATED AND CONFIGURED WITH RHYTHM ENGINEERING.



DETECTOR SPACING CHART

ArDOT HWY. 70 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	100'	N/A
NB UNIVERSITY AVE. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
SB UNIVERSITY AVE. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

SCALE IN FEET
0 25 50 100

STAGE 3 TRAFFIC SIGNAL OPERATIONS

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK COUNTY: PULASKI DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 SCALE: 1" = 50' DRAWN BY: JDH

8/13/2025
R061510.DGN

HIGHWAY 70/UNIVERSITY AVENUE
PULL BOX LOCATIONS

PULL BOX	TYPE	LOCATION & STATION	* OFFSET
PB1	2	**	
PB2	2 HD	HWY. 70 - STA. 114+39.58	86.58' RT.
PB3	3 HD	HWY. 70 - STA. 114+34.92	122.55' RT.
PB4	3 HD	HWY. 70 - STA. 114+09.62	118.68' RT.
PB5	3 HD	HWY. 70 - STA. 112+64.34	80.16' RT.
PB6	3 HD	HWY. 70 - STA. 111+54.67	62.48' RT.
PB7	3 HD	HWY. 70 - STA. 110+85.78	43.23' RT.
PB8	EXIST.	HWY. 70 - STA. 110+01.47	47.92' RT.
PB9	2 HD	HWY. 70 - STA. 114+03.42	110.03' RT.
PB10	3 HD	HWY. 70 - STA. 114+02.75	90.57' RT.
PB11	2 HD	HWY. 70 - STA. 112+97.58	63.72' RT.
PB12	3 HD	HWY. 70 - STA. 112+62.69	57.10' RT.
PB13	3	HWY. 70 - STA. 112+68.25	37.42' LT.
PB14	1 HD	HWY. 70 - STA. 112+91.89	51.56' LT.
PB15	2	HWY. 70 - STA. 114+11.42	30.23' LT.
PB16	2	HWY. 70 - STA. 114+34.71	5.52' RT.

* CENTER OF PULL BOX

THE TOP OF ALL PULL BOXES SHALL BE INSTALLED AT THE FINISHED SURFACE ELEVATION.
PB3, PB4, PB5, & PB7 ARE EXISTING PULL BOXES THAT ARE TO BE REPLACED.
**PB1 IS TO BE INSTALLED AT THE BASE OF THE POLE THAT IS SERVICING THE TRAFFIC SIGNAL. (PB1 LOCATION SHOWN ON THE PLANS IS APPROXIMATE.)

HIGHWAY 70/UNIVERSITY AVENUE
POLE DIMENSIONS & LOCATIONS

POLE	MAST ARM	* MAST ARM ANGLE	** HAND HOLE	VERT. SHAFT	LUM. ARM	* LUM. ANGLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	44'	8°	90°	21'	N/A	N/A	HWY. 70 - STA. 114+17.45	89.05' RT.	1209563.13, 2058813.11
B	54'	99°	180°	21'	N/A	N/A	HWY. 70 - STA. 112+94.65	71.62' RT.	1209439.31, 2058832.26
C	34'	2°	180°	21'	N/A	N/A	HWY. 70 - STA. 112+71.89	54.74' RT.	1209416.93, 2058849.63
D	30'	179°	180°	21'	N/A	N/A	HWY. 70 - STA. 112+71.89	34.66' LT.	1209418.88, 2058939.01
E	N/A	N/A	N/A	6'	N/A	N/A	HWY. 70 - STA. 112+83.51	35.14' LT.	1209430.51, 2058939.24
F	N/A	N/A	N/A	10'	N/A	N/A	HWY. 70 - STA. 113+00.84	52.71' LT.	1209448.22, 2058956.43
G	N/A	N/A	N/A	10'	N/A	N/A	HWY. 70 - STA. 114+05.24	37.01' LT.	1209551.68, 2058939.24
H	46'	275°	90°	21'	N/A	N/A	HWY. 70 - STA. 114+06.46	30.20' LT.	1209552.86, 2058932.43
I	8' / 8'	0° / 180°	90°/270°	21'	N/A	N/A	HWY. 70 - STA. 114+27.34	5.55' RT.	1209573.52, 2058896.55

* MAST ARM AND LUMINAIRE ARM ANGLE MEASURED FROM PLAN NORTH = 0°, CLOCKWISE ROTATION.
** HAND HOLE LOCATION MEASURED CLOCKWISE FROM MAST ARM.
TOP OF POLE FOUNDATION ELEVATION SHALL BE THREE (3) INCHES ABOVE THE FINISHED SURFACE ELEVATION AT THE LOCATIONS SHOWN ABOVE BUT MAY BE INCREASED IN ACCORDANCE WITH STANDARD DRAWING SD-11.
FOR POLES WITH 6' VERTICAL SHAFT, SEE 6' PEDESTAL POLE DETAIL ON PEDESTRIAN SIGNAL DETAILS SHEET.

DESIGN PARAMETERS

POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACH
35 MPH NORTH APPROACH
45 MPH SOUTH APPROACH

NO BUS STOPS
NO RAILROAD TRACKS
EXISTING FIBER INTERCONNECTION
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES SHOWN ON PERMANENT PAVEMENT MARKING DETAILS (SEE SEPARATE SHEET).

MINIMUM CLEAR ZONE DISTANCE:
4 FEET BEHIND CURB WHERE PRESENT
16 FEET (UNIVERSITY AVENUE) (NO CURB)
22 FEET (HWY. 70) (NO CURB)

NOTES TO CONTRACTOR:

1. CONTACT THE CITY OF LITTLE ROCK TRAFFIC ENGINEERING DEPARTMENT TO ENSURE THAT A REPRESENTATIVE OF THE CITY IS PRESENT PRIOR TO DISCONNECTION OF EXISTING FIBER OPTIC CABLE AT THE UTILITY POLE, PULLING IT BACK TO THE EXISTING PULL BOX (PB8), AND SPOOLING IT AT THE EXISTING PULL BOX.
2. CONTACT THE CITY OF LITTLE ROCK TRAFFIC ENGINEERING DEPARTMENT TO ENSURE THAT A REPRESENTATIVE OF THE CITY IS PRESENT PRIOR TO UNSPOOLING, RERUNNING, AND RECONNECTION OF FIBER OPTIC CABLE AT THE NEW UTILITY POLE.

NOTES TO CONTRACTOR:

1. CONTACT THE CITY OF LITTLE ROCK TRAFFIC ENGINEERING DEPARTMENT TO ENSURE THAT A REPRESENTATIVE OF THE CITY IS PRESENT PRIOR TO DISCONNECTION OF EXISTING FIBER OPTIC CABLE AT THE TRAFFIC CONTROLLER CABINET, PULLING IT BACK TO THE EXISTING PULL BOX (PB8), AND SPOOLING IT AT THE EXISTING PULL BOX.
2. CONTACT THE CITY OF LITTLE ROCK TRAFFIC ENGINEERING DEPARTMENT TO ENSURE THAT A REPRESENTATIVE OF THE CITY IS PRESENT PRIOR TO UNSPOOLING, RERUNNING, AND RECONNECTION OF FIBER OPTIC CABLE AT THE NEW TRAFFIC CONTROLLER CABINET.

CONTROLLER CABINET LOCATION

LOCATION & STATION	* OFFSET	* X, Y COORDINATES
HWY. 70 - STA. 114+15.65	114.53' RT.	1209561.17, 2058787.64

* CENTER OF CABINET

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	30	45

SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

P.I. 113+55.57
Δ = 0°54'21" LT.
P.I. 110+56.51
S 88°45'02" E
S 89°39'23" E
EXIST. ROW
PROP. ROW
CONST. LIMITS
T.C.E.
EXISTING CONDUIT AND PULL BOX WITH FIBER OPTIC CABLE
INSTALL NEW CONDUIT AND PULL BOXES TO RERUN FIBER OPTIC CABLE THROUGH
EXISTING CONTROLLER CABINET
EXISTING BATTERY BACKUP
2" DIA. NMC
EXISTING SERVICE POINT TO REMAIN IN USE DURING STAGED CONSTRUCTION UNTIL NEW TRAFFIC SIGNAL IS IN OPERATION.
SERVICE POINT WITH MAIN BREAKER AND BATTERY BACKUP UNIT IS TO BE MOUNTED ON SAME PAD AS CONTROLLER CABINET BY CONTRACTOR WITH 2-2" DIA. NMC INTO THE CONTROLLER
2-3" DIA. NMC
EXISTING CONDUIT
2-3" DIA. NMC
2-2" DIA. NMC
EXISTING 150' HIGH MAST (6 HPS FIXTURES) TO BE UPGRADED TO LED FIXTURES BY CONTRACTOR
1-2" DIA. NMC
INSET A
SEE INSET A
PB1 PB2 PB3 PB4 PB5 PB6 PB7 PB8 PB9 PB10 PB11 PB12 PB13 PB14 PB15 PB16
A B C D E F G H I
C1 C2 C3 C4 C5 C6 C7 C8
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
110 115
46' 54' 34' 30' 8' 8'

SCALE IN FEET
0 25 50 100

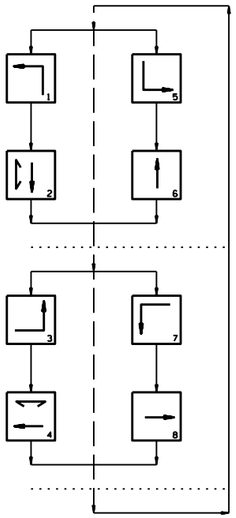
PERMANENT TRAFFIC SIGNAL

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK COUNTY: PULASKI DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 SCALE: 1" = 50' DRAWN BY: JDH

8/13/2025
R061510.DGN

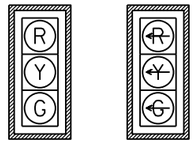
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	31	45
		SIGNALIZATION PLAN SHEET				

PHASING DIAGRAM



SIGNAL FACES

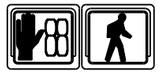
12" LENSES



3 & 4
7 & 8
10, 11, & 12
15 & 16

1 & 2
5 & 6
9
13 & 14

ONE SECTION
(SOLID SYMBOL)



17 & 18
19 & 20

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISION "RETROREFLECTIVE BACKPLATES FOR DETAILS ON REQUIREMENTS FOR BACKPLATES.
3. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
4. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEET A.D.A STANDARDS.

INTERVAL CHART

SIGNAL FACES	HIGHWAY 70 AND UNIVERSITY AVENUE 1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQUENCE
1 & 2	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
3 & 4	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
5 & 6	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~G~~	*	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
7 & 8	R	R	R	R	R	R	R	G	**	R	R	G	**		R
9	~~R~~	~~R~~	~~G~~	~~Y~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
10, 11, & 12	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
13 & 14	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	~~G~~	*	~~R~~	~~R~~	~~R~~
15 & 16	R	R	R	R	R	R	R	R	R	G	**	G	**		R
17 & 18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
19 & 20	DW	DW	W	FDW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK

* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE

NOTE TO CONTRACTOR:

TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION: JOB 061510										
HIGHWAY 70 AND UNIVERSITY AVENUE DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS
DET. ID #	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM. #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #		
Vz11 A&B	NB LEFT TURN FAR	COMB.	C1		1	V9	1	1		
Vz12 A&B	NB LEFT TURN	LOCAL	C1		2	V1	1			
Vz21 A&B	SB ADVANCE	LOCAL	C2		5	V2	2			
Vz22 A&B	SB NEAR	COMB.	C2		6	V10	2	2		
Vz31 A&B	EB LEFT TURN FAR	COMB.	C3		9	V11	3	3		
Vz32 A&B	EB LEFT TURN	LOCAL	C3		10	V3	3			
Vz41 A&B	WB ADVANCE	LOCAL	C4		13	V4	4			
Vz42 A&B	WB NEAR	COMB.	C4		14	V12	4	4		
Vz51	SB LEFT TURN FAR	COMB.	C5		7	V13	5	5		
Vz52	SB LEFT TURN	LOCAL	C5		8	V5	5			
Vz61 A,B,&C	NB ADVANCE	LOCAL	C6		3	V6	6			
Vz62 A,B,&C	NB NEAR	COMB.	C6		4	V14	6	6		
Vz71 A&B	WB LEFT TURN FAR	COMB.	C7		15	V15	7	7		
Vz72 A&B	WB LEFT TURN	LOCAL	C7		16	V7	7			
Vz81 A&B	EB ADVANCE	LOCAL	C8		11	V8	8			
Vz82 A&B	EB NEAR	COMB.	C8		12	V16	8	8		
PB2 A&B	HWY. 70 W. LEG	PED.				P2	2			
PB4 A&B	UNVIERSITY AVE. N. LEG	PED.				P4	4			
					SPARE: NONE					

DETECTOR CHART NOTES:
DETECTOR #S C1-C8 ARE VIDEO DETECTORS THAT ARE MOUNTED ON 37" TUBES.
CONTROLLER INPUT ABBREVIATIONS: V = VEHICLE INPUT, D = SYSTEM/AUXILIARY INPUT, P = PEDESTRIAN INPUT
"AMP CHN =" REFERS TO THE RACK OUTPUT POSITION. THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE. EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2
*CHANNEL ASSIGNMENTS FOR DETECTION TO BE COORDINATED AND CONFIGURED WITH RHYTHM ENGINEERING.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER, IV
08/13/2025

VIRTUAL 6' X 6' PULSE VDZ LOCATED 85' BEHIND STOP LINE (TYPICAL FOR LEFT TURN LANES)

VIRTUAL 6' X 50' PRESENCE VDZ (TYPICAL)

P.I. 13+55.57
Δ = 0°54'21" LT.

P.I. 10+56.51

S 88°45'02" E

S 89°39'23" E

N 115

CONST. LIMITS

EXIST. ROW

PROP. ROW

T.C.E.

LT.C.E.

TRAFFIC

DETECTOR SPACING CHART

ArDOT HWY. 70 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
40 MPH	100'	N/A
NB UNIVERSITY AVE. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
45 MPH	260'	115'
SB UNIVERSITY AVE. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP LINE	
	LEAD VDZ	LAG VDZ
35 MPH	100'	N/A

SCALE IN FEET
0 25 50 100

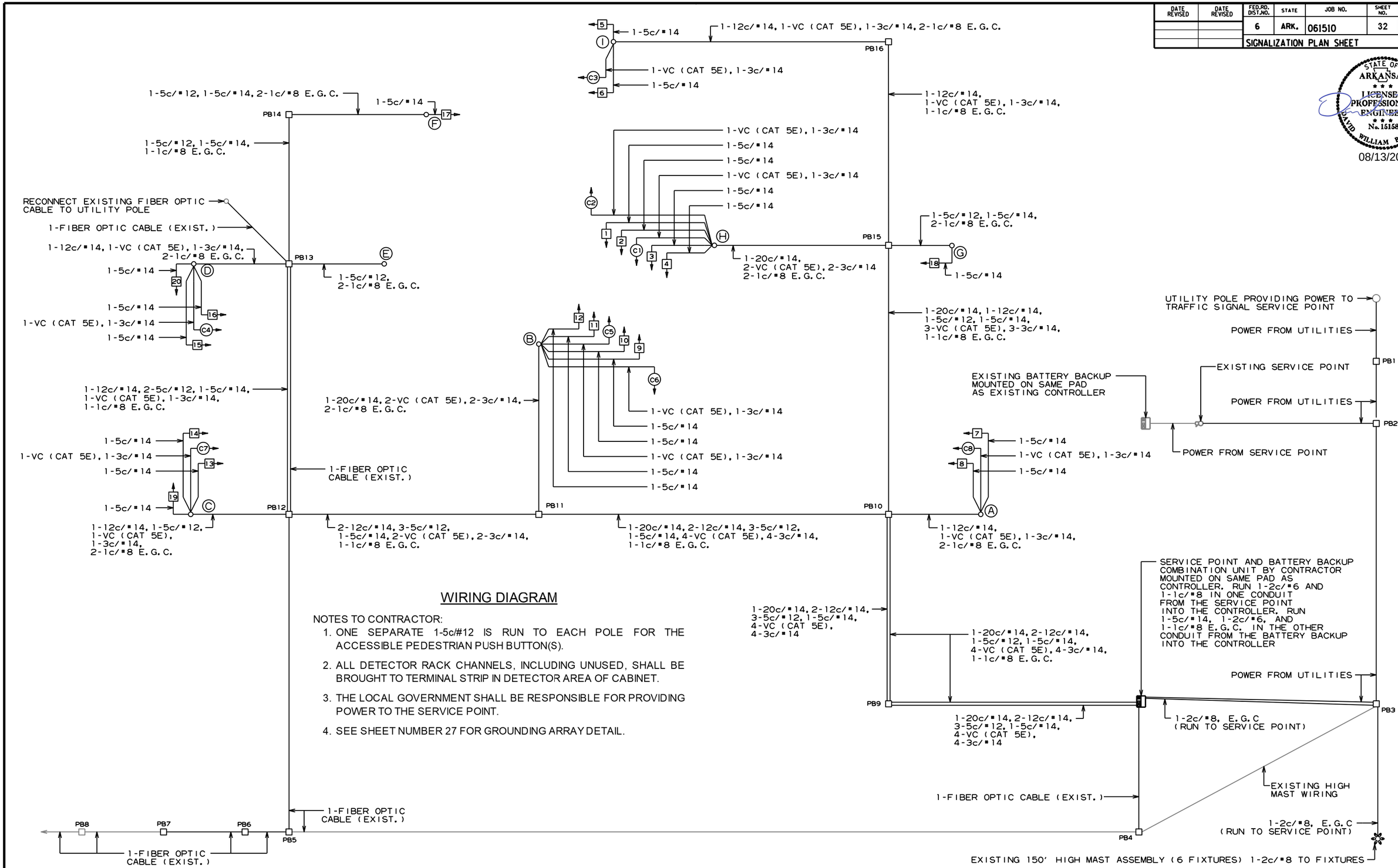
PERMANENT TRAFFIC SIGNAL

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK COUNTY: PULASKI DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 SCALE: 1" = 50' DRAWN BY: JDH

8/13/2025
R061510.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	32	45
		SIGNALIZATION PLAN SHEET				

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 15158
DAVID WILLIAM BAKER
08/13/2025



WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c/#12 IS RUN TO EACH POLE FOR THE ACCESSIBLE PEDESTRIAN PUSH BUTTON(S).
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
4. SEE SHEET NUMBER 27 FOR GROUNDING ARRAY DETAIL.

8/13/2025

R061510.DGN

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK | COUNTY: PULASKI | DISTRICT: 6
FILE NAME: r061510.dgn
DATE: 08-13-2025 | SCALE: N/A | DRAWN BY: JDH

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	33	45
		ILLUMINATION DETAILS				

GENERAL NOTES

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

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

3. THE CONTRACTOR SHALL NOT ENGAGE IN EXCAVATION OR DEMOLITION ACTIVITIES WITHOUT HAVING FIRST NOTIFIED THE ARKANSAS ONE CALL CENTER IN ACCORDANCE WITH A.C.A. §14-271 UNDERGROUND UTILITIES DAMAGE PREVENTION ACT. NOT ALL UTILITY COMPANIES ARE MEMBERS OF THE ARKANSAS ONE CALL SYSTEM. THE CONTRACTOR IS ADVISED TO CONTACT ALL NON-MEMBER UTILITIES AS WELL AS THE ONE CALL CENTER.

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

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

6. 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.

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

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

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

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

11. ALL ELECTRICAL COMPONENTS SHALL BE UL LISTED.

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

13. BEFORE FINAL ACCEPTANCE, CONTRACTOR SHALL PROVIDE 2 SETS OF LEDGER SIZE (11"X17") AS-BUILT PLANS TO THE MAINTENANCE AUTHORITY AND ARDOT.

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

15. ALL CONCRETE PULL BOXES SHALL BE TYPE 2 HD, INSTALLED WITHIN 5 FEET OF THE POLE FOUNDATION AND PEDESTAL SERVICE POINT UNLESS OTHERWISE INDICATED ON THE PLANS.

16. SLACK OF ELECTRICAL CONDUCTOR CABLES IN PULL BOXES SHALL BE 3 FEET.

17. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY (MAINTENANCE AUTHORITY) TO A SERVICE POLE WITH EXTERNAL RAINTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. THE CONTRACTOR SHALL PROVIDE THE SERVICE POINT ASSEMBLY PER PLANS SET AND CONTRACT PRIOR TO THE DATE ELECTRICAL COMPANIES PROVIDE SERVICE.

18. CONTRACTOR SHALL ATTACH A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO EACH CONDUIT AT PULLBOXES, POLE BASES, AND JUNCTION BOXES. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 1/4" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES. EACH TAG SHALL INDICATE THE END LOCATION OF CONDUIT RUN. THE COST OF THE TAGS SHALL BE SUBSIDIARY TO THE CONDUIT PAY ITEM.
    EXAMPLES FOR CONDUIT:
    PULL BOX 1 TO SERVICE POINT (I.E., PB-1 TO SP)
    PULL BOX 1 TO PULL BOX 2 (I.E., PB-1 TO PB-2)

19. CONDUIT BELL END FITTINGS SHALL BE INSTALLED ON ALL TERMINATING ENDS OF NON-METALLIC CONDUIT RUNS. THIS INCLUDES PULL BOXES AND POLE BASES. THE COST OF THE FITTINGS SHALL BE CONSIDERED SUBSIDARY TO THE PAY ITEM. ALL NON-METALLIC CONDUIT SHALL USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.

20. PRIOR TO THE ORDERING OF ALL LIGHTING EQUIPMENT, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A COPY OF THE APPLICABLE BROCHURES CONTAINING THE DESIGN CRITERIA FOR THE EQUIPMENT WHICH THE CONTRACTOR PROPOSES TO INSTALL FOR APPROVAL. THE SPECIFIC ITEMS THAT ARE PROPOSED FOR USE SHALL BE CLEARLY MARKED IN THE APPLICABLE BROCHURES. A LIST SHALL BE ATTACHED TO IDENTIFY THE PAY ITEM AND CONTAIN THE MANUFACTURER, QUANTITY, MODEL, AND IDENTIFYING DESCRIPTIONS OF EACH ITEM. ADEQUATE ENGINEERING DATA, ESSENTIAL SHOP DRAWINGS, AND SCHEMATIC DIAGRAMS SHALL BE PROVIDED FOR REVIEW. PARTIAL SUBMITTALS WILL NOT BE ACCEPTED FOR CONSIDERATION AND SHALL BE RETURNED FOR CORRECTION WITHOUT REVIEW.

    IF THE ENGINEER DETERMINES THAT THE EQUIPMENT SUBMITTAL MEETS THE DESIGN CRITERIA, AN APPROVAL WILL BE PROVIDED. IF THE EQUIPMENT SUBMITTAL FOR USE IS REJECTED, THE CONTRACTOR SHALL RE-SUBMIT THE EQUIPMENT SUBMITTAL WITHIN FIFTEEN (15) DAYS OF NOTIFICATION OF EQUIPMENT REJECTION. THE EQUIPMENT RESUBMITTAL WILL BE CONSIDERED THE STARTING POINT OF A NEW APPROVAL CYCLE AS DESCRIBED.

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

22. CONDUIT INSTALLED IN TRENCHES SHALL NOT BE LESS THEN 18 INCHES BELOW FINAL GRADE AND CONDUIT BURIED UNDER ROADWAY AND SIDEWALK SHALL HAVE MINIMUM 24" DEPTH. CONDUIT DEPTH MAY NEED TO INCREASE NEAR DROP INLETS, EXCEPT OTHERWISE INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

24. THE CONTRACTOR SHALL LABEL ALL CONDUCTORS IN PULL BOXES AND AT SPLICE POINTS.

25. CONDUCTORS SHALL CONTINUOUSLY RUN DIRECTLY FROM SERVICE POINT TO ELECTRICAL DEVICES AND/OR PULL BOXES WITHOUT SPLICES BEING MADE IN THE CONDUIT.

26. THE CONTRACTOR SHALL WORK WITH POLE MANUFACTURE TO ENSURE POLES, LOWERING ASSEMBLY, FIXTURES ARE CORRECTLY ORIENTED AS INDICATED IN THE PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY MISORIENTED POLES AND LOWERING ASSEMBLY WITHOUT ADDITIONAL COST AND TIMING TO THE DEPARTMENT.

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

28. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO MINIMIZE THE DOWN TIME OF THE EXISTING ROADWAY LIGHTING SYSTEM TO BE MODIFIED. THE CONTRACTOR SHALL COMPLETE LIGHTING SYSTEM PRIOR TO THE MAJOR ROADWAY CONSTRUCTION OF THE JOB LIMIT TO PROVIDE LIGHTING FOR CONSTRUCTION ZONE.

29. STATION AND OFFSETS PROVIDED FOR THE LOCATION OF ALL POLES, POWER SUPPLIES,PULL BOXES, CONDUITS, ETC. ARE TO THE CENTER OF THE CENTERLINE OF I-30. IF OBSTRUCTIONS ARE ENCOUNTER DURING INSTALLATION, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO APPROVE A NEW LOCATION STARTING PRIOR TO COMMENCING ANY EXCAVATION OR CONSTRUCTION WORK.

30. STATION AND OFFSETS PROVIDED FOR THE LOCATION OF ALL POLES, POWER SUPPLIES,PULL BOXES, CONDUITS, ETC. ARE TO THE CENTER OF THE CENTERLINE OF I-30. IF OBSTRUCTIONS ARE ENCOUNTER DURING INSTALLATION, THE CONTRACTOR SHALL CONTACT THE ENGINEER TO APPROVE A NEW LOCATION STARTING PRIOR TO COMMENCING ANY EXCAVATION OR CONSTRUCTION WORK.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING FULL COMPLIANCE WITH THE BUILD AMERICA, BUY AMERICA ACT (PUBLIC LAW NO. 117-58). ALL MATERIALS, PRODUCTS, AND CONSTRUCTION ACTIVITIES MUST CONFORM TO THE DOMESTIC CONTENT REQUIREMENTS OUTLINED IN THE ACT AND ANY APPLICABLE GUIDANCE FROM THE RELEVANT FEDERAL AGENCY. THE CONTRACTOR SHALL PROVIDE VERIFIABLE DOCUMENTATION DEMONSTRATING THAT ALL IRON, STEEL, MANUFACTURED PRODUCTS, AND CONSTRUCTION MATERIALS USED IN THE PROJECT MEET BUILD AMERICA, BUY AMERICA ACT. THE DOCUMENTATION MUST BE SUBMITTED PRIOR TO PRODUCT PURCHASING, INSTALLATION AND/OR INCLUSION IN THE WORK AND MUST BE SUFFICIENT TO SATISFY THE ENGINEER AND ANY RELEVANT FEDERAL OR STATE AGENCY REQUIREMENTS. FAILURE TO PROVIDE ACCEPTABLE PROOF OF COMPLIANCE MAY RESULT IN THE REJECTION OF MATERIALS, WITHHOLDING OF PAYMENT, AND OTHER REMEDIES AS DEEMED NECESSARY.

STATE OF ARKANSAS
LICENSED PPROFESSIONAL ENGINEER
No. 15408
JOSEPH D HAWKINS
6-6-25

SUMMARY OF LIGHTING QUANTITIES

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/8 A.W.G., E.G.C.)	60	LIN.FT
SP	ELECTRICAL CONDUCTOR FOR LUMINAIRES	200	LIN.FT
710	NON-METALLIC CONDUIT (2")	50	LIN.FT
SP	HIGH MAST LED FIXTURE (86,000 LUMENS)	6	EACH

LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK
COUNTY: PULASKI
DISTRICT: 6 SCALE: N/A DRAWN BY: BDD

TSMO DIVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	34	45
		ILLUMINATION DETAILS				

STATE OF ARKANSAS
LICENSED PPROFESSIONAL ENGINEER
No. 15408
BRADLEY D. HAWKINS
8-6-25

LUMINAIRE SCHEDULE					
VOLTS	WATTS	TOTAL WATTS	LUMENS	FIXTURE NAME	CURRENT
240	582	3492	483756	HMLED4 P4 40K XXXXX NAS HMLED4D120	14.6

ELECTRICAL SERVICE DATA							
CIRCUIT ID	SERVICE VOLTAGE	SERVICE CONDUIT SIZE	SERVICE CONDUCTORS	MAIN CIRCUIT BREAKER	BRANCH CIRCUIT BREAKER	BRANCH CIRCUIT (AMPS)	KVA LOAD
SERVICE POINT							
HM LIGHTING	240V, SINGLE PHASE	2" NMC	2C/8 A.W.G., E.G.C.	2P/100A	2P/40A	14.6	3.5

SERVICE POINT (CIRCUIT A)									
SEGMENT	VOLTAGE	PHASE	SETS	CONDUCTOR	CURRENT	Z/1000ft	LENGTH (FT)	VD	% VD
SP TO HM	240	1	1	8	14.6	0.78	260	5.92	2.47

NOTE: NEC 230.31(B) STATES MINIMUM UNDERGROUND SERVICE CONDUCTOR SIZE TO BE 8 AWG.

2 INCHES NONMETALLIC CONDUIT RUN		
RUN	LENGTH (FT)	TOTAL
SP TO PB3	50	50

NOTES: CONTRACTOR SHALL EXERCISE EXTREME CAUTION NOT TO DAMAGE HIGH MAST LIGHT POLE CONDUIT AND FOUNDATION.

CONDUIT FILL			
CONDUIT SIZE	CONDUCTORS	CONDUIT FILL	MAX FILL
2"	1- 2C/8 A.W.G., E.G.C.	3.34%	40%

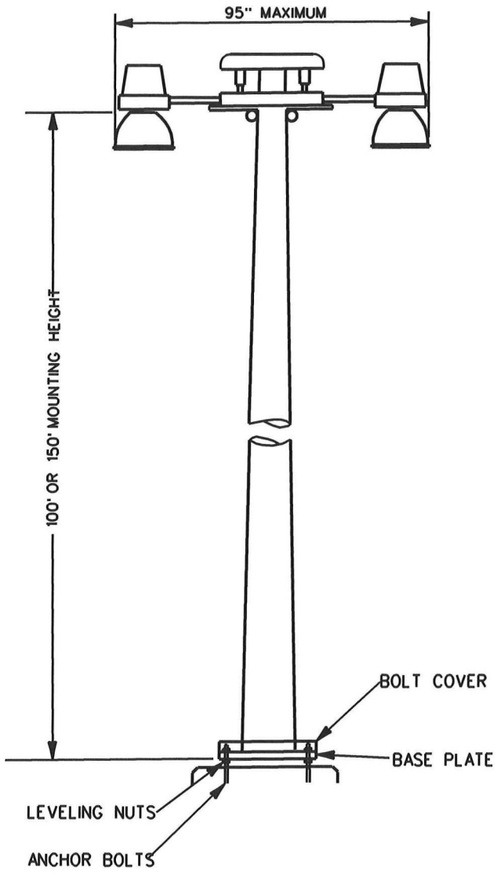
NOTE: CONDUIT FILL IS CALCULATED USING VALUES IN TABLE 5, CHAPTER 9 OF NATIONAL ELECTRICAL CODE (NFPA 70, 2023).

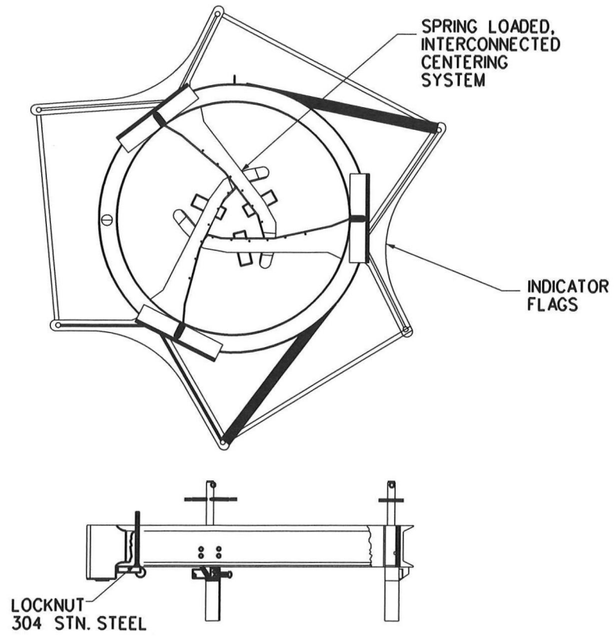
LOCATION: HIGHWAY 70 AND UNIVERSITY AVENUE
CITY: LITTLE ROCK
COUNTY: PULASKI
DISTRICT: 6 SCALE: N/A DRAWN BY: BDD

TSMO DIVISION

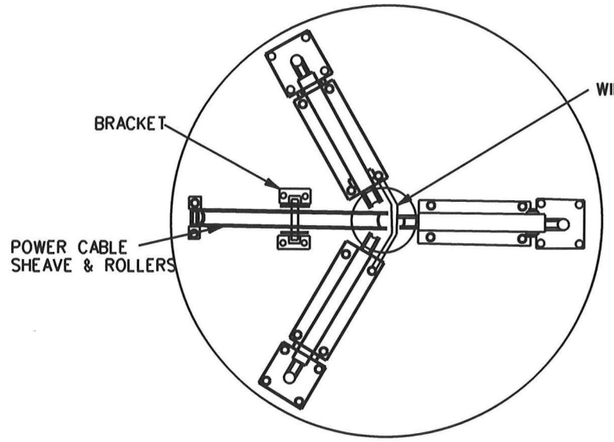
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		ILLUMINATION DETAILS				

FOR CONTRACTOR INFORMATION ONLY

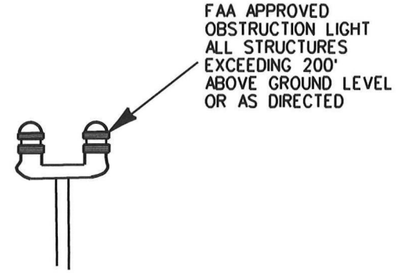




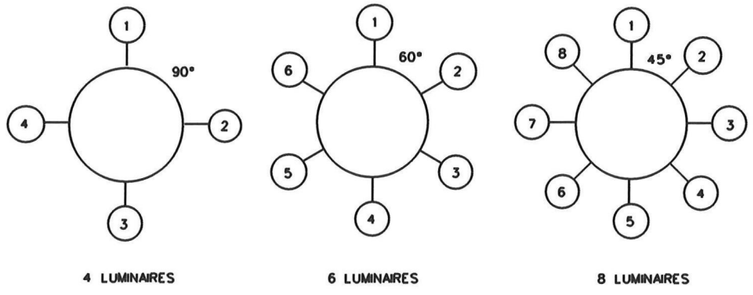
RISER SUPPORT ASSEMBLY



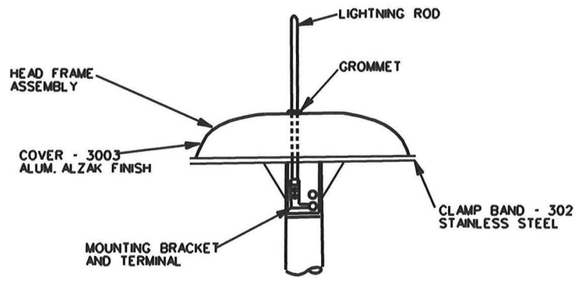
TOP VIEW



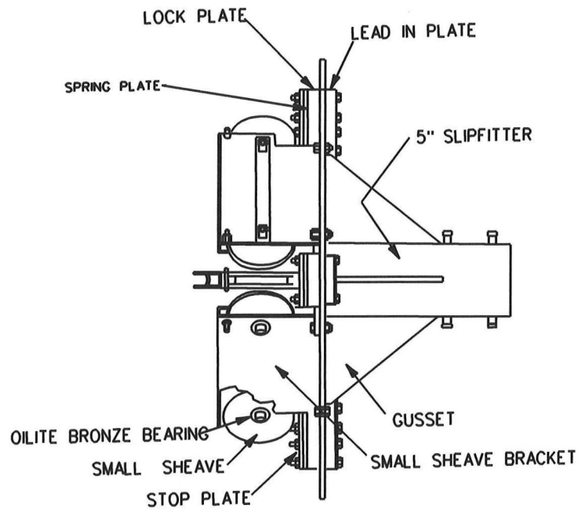
OBSTRUCTION LIGHT



TYPICAL MAST ARM LAYOUT



LIGHTNING ROD



SIDE VIEW

HEAD FRAME ASSEMBLY

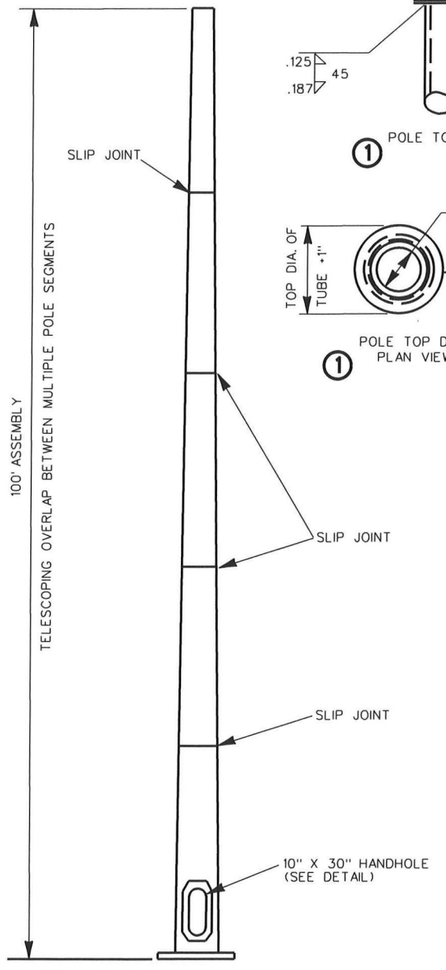
NOTE:
THESE DETAILS ARE NOT INTENDED TO LIMIT COMPETITION.
THE DETAILS AND SPECIAL PROVISIONS GOVERN THE MINIMUM QUALITY REQUIREMENTS CONCERNING MATERIALS AND OPERATION.

LOCATION:	HIGHWAY 70 AND UNIVERSITY AVENUE			
CITY:	LITTLE ROCK			
COUNTY:	PULASKI			
DISTRICT:	6	SCALE: N/A	DRAWN BY:	BDD

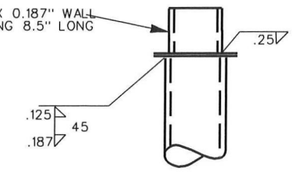
TSMO DIVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
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		ILLUMINATION DETAILS				

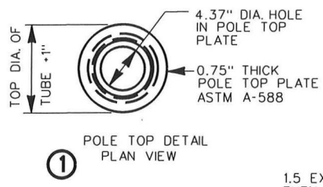
FOR CONTRACTOR INFORMATION ONLY



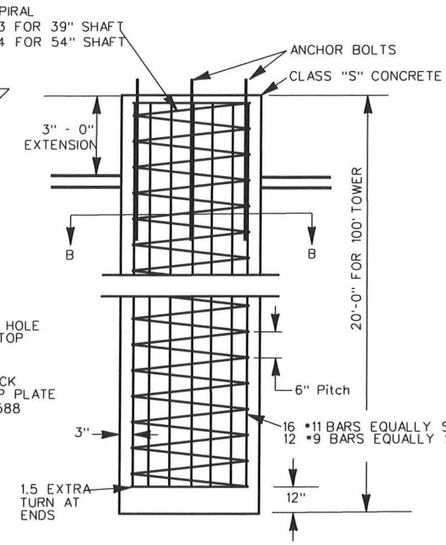
POLE DETAIL
N.T.S.



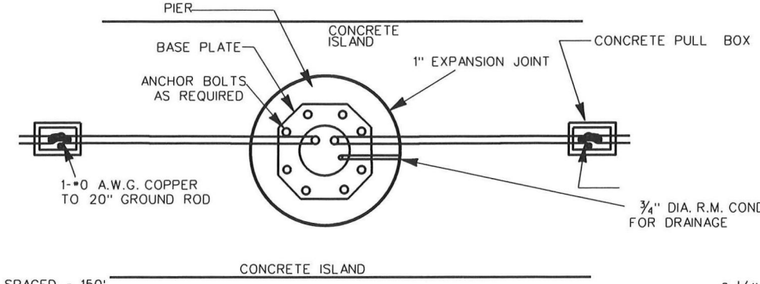
① POLE TOP DETAIL



① POLE TOP DETAIL PLAN VIEW

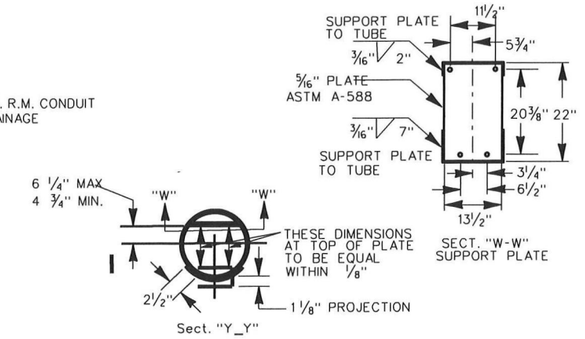


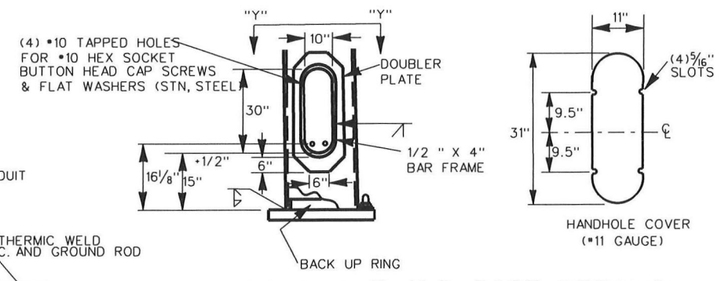
POLE FOUNDATION DETAIL
N.T.S.



PLAN VIEW

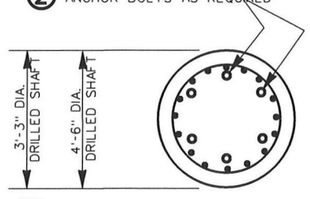
CONCRETE ISLAND DETAILS
N.T.S.



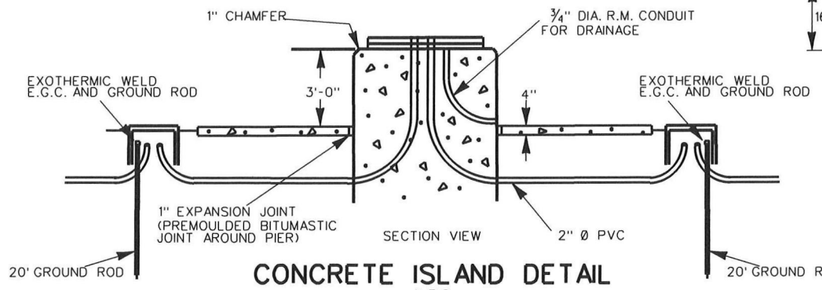


HANDHOLE AND BASE DETAILS
N.T.S.

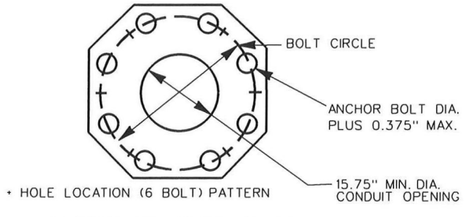
② ANCHOR BOLTS AS REQUIRED



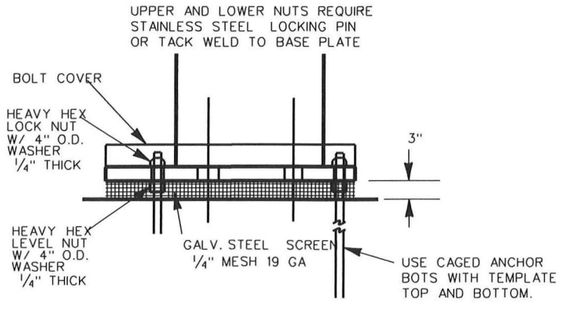
Section B-B
N.T.S.



CONCRETE ISLAND DETAIL
N.T.S.



BASE PLATE DETAIL
N.T.S.



BASE PLATE ANCHOR DETAIL
N.T.S.

NOTE:

1. THESE DETAILS ARE NOT INTENDED TO LIMIT COMPETITION. THE DETAILS AND SPECIAL PROVISIONS GOVERN THE MINIMUM QUALITY REQUIREMENTS CONCERNING MATERIALS AND OPERATION.
2. POLE AND ANCHOR BOLTS ARE DESIGNED BY THE MANUFACTURER.



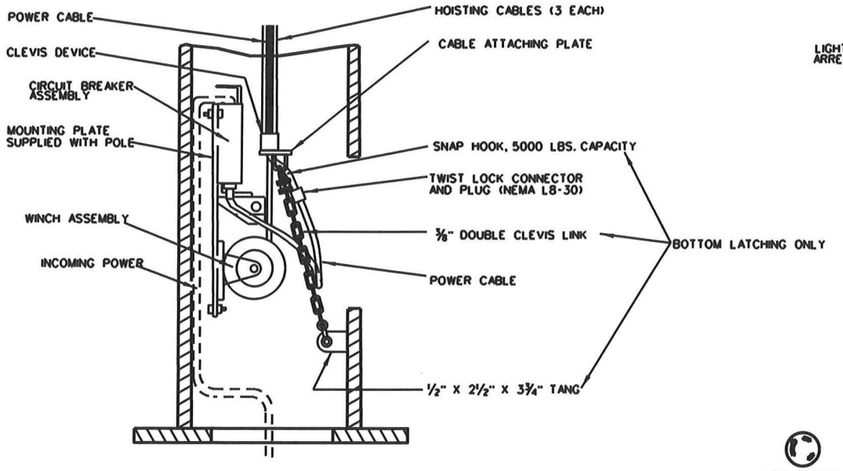
ANCHOR BOLT DETAILS
N.T.S.

LOCATION:	HIGHWAY 70 AND UNIVERSITY AVENUE				
CITY:	LITTLE ROCK				
COUNTY:	PULASKI				
DISTRICT:	6	SCALE:	N/A	DRAWN BY:	BDD

TSMO DIVISION

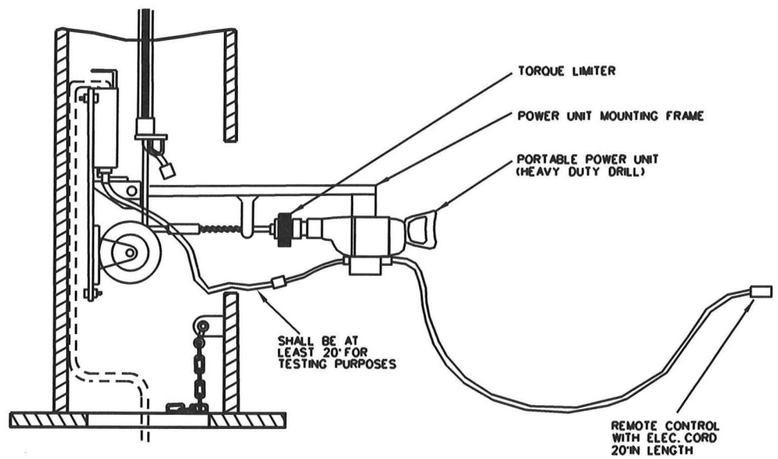
DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	37	45
		ILLUMINATION DETAILS				

FOR CONTRACTOR INFORMATION ONLY

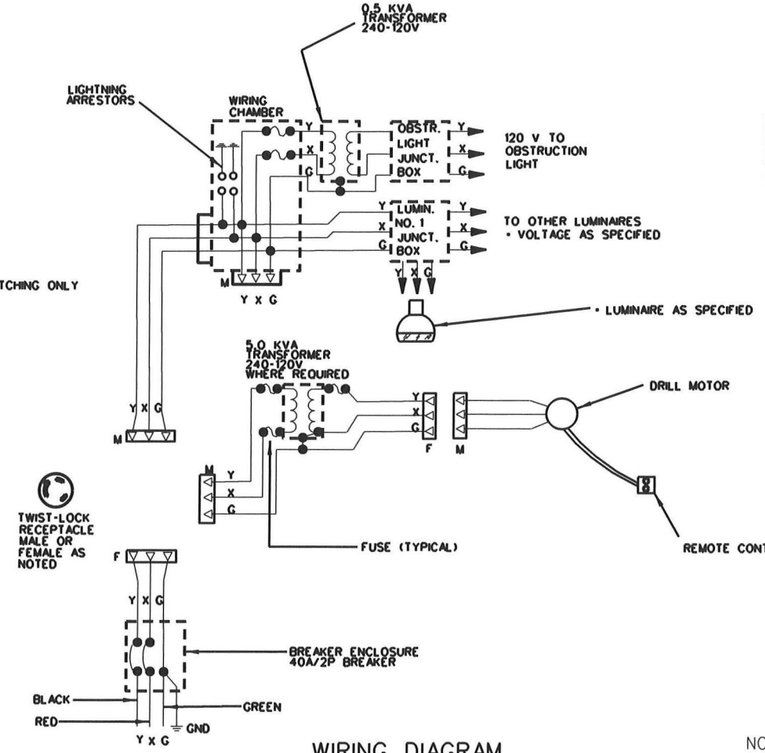


POLE BASE

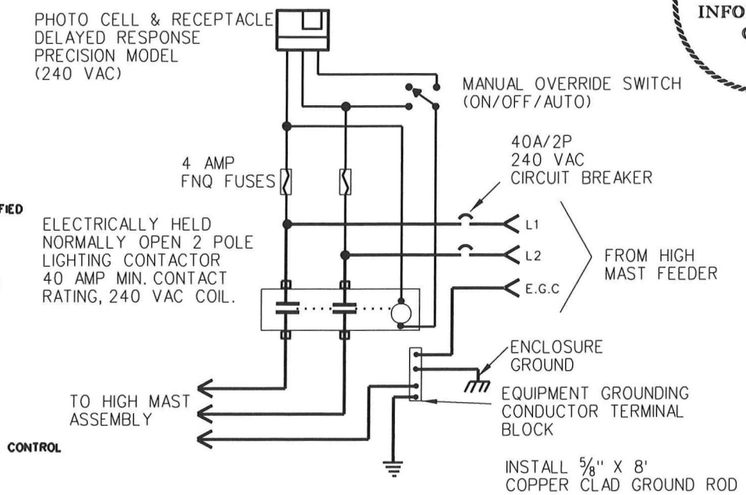
NOTE: POWER INLET CABLE SHALL BE OF SUFFICIENT LENGTH TO ALLOW ENERGIZING LUMINAIRES WHEN LUMINAIRE RING IS IN THE LOWERED POSITION.



POLE BASE
(READY FOR LOWERING)

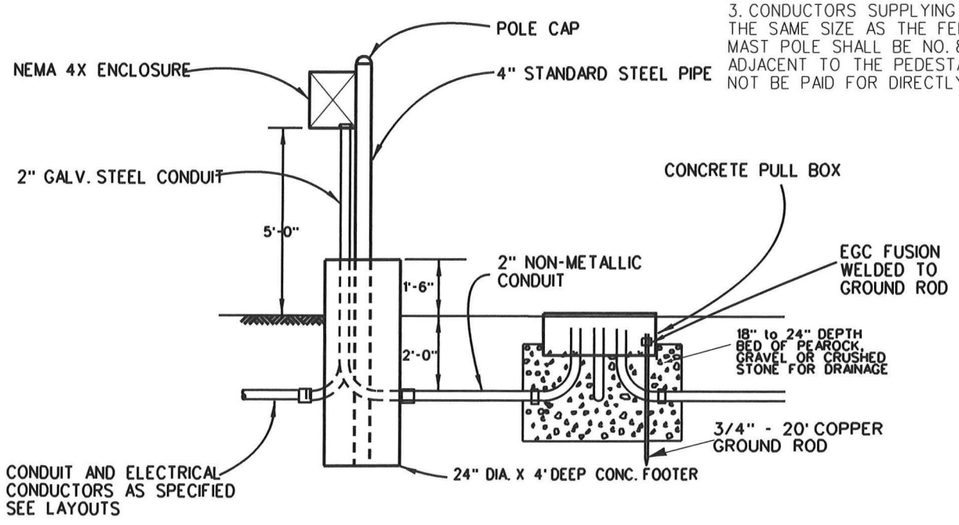


WIRING DIAGRAM



WIRING DIAGRAM FOR HIGH MAST PHOTO CONTROL AND CONTACTOR

NOTES:
1. INSTALL CONTACTOR AND EQUIPMENT IN PEDESTAL ENCLOSURE. PEDESTAL ENCLOSURE SHALL BE BUILT BY A UL LISTED INDUSTRIAL CONTROL PANEL SHOP. ASSEMBLY SHALL HAVE A UNIQUE SERIAL NUMBER AND SHALL BE LABELED WITH A "LISTED ENCLOSED UNDUSTRIAL CONTROL PANEL" UL LABEL.
2. ASSEMBLY SHALL BE LISTED FOR OPERATION AT 120/240 VAC.
3. CONDUCTORS SUPPLYING PEDESTAL FROM GROUND BOX SHOWN ON THE PLANS SHALL BE THE SAME SIZE AS THE FEEDER CIRCUIT. CONDUCTORS FROM THE PEDESTAL TO THE HIGH MAST POLE SHALL BE NO. 8 AWG. ALL CONDUIT AND CONDUCTORS FROM THE GROUND BOX ADJACENT TO THE PEDESTAL, THROUGH THE PEDESTAL, AND TO THE HIGH MAST POLE WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO THE HIGH MAST ILLUMINATION POLE.



SECONDARY SERVICE PEDESTAL DETAIL

LOCATION:	HIGHWAY 70 AND UNIVERSITY AVENUE
CITY:	LITTLE ROCK
COUNTY:	PULASKI
DISTRICT:	6
SCALE:	N/A
DRAWN BY:	BDD

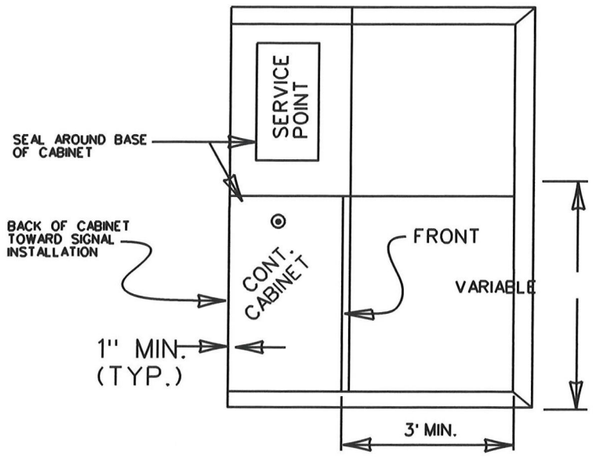
TSMO DIVISION

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	38	45
		ILLUMINATION DETAIL				

SIGNAL CONTROLLER CABINET AND SERVICE POINT DETAILS

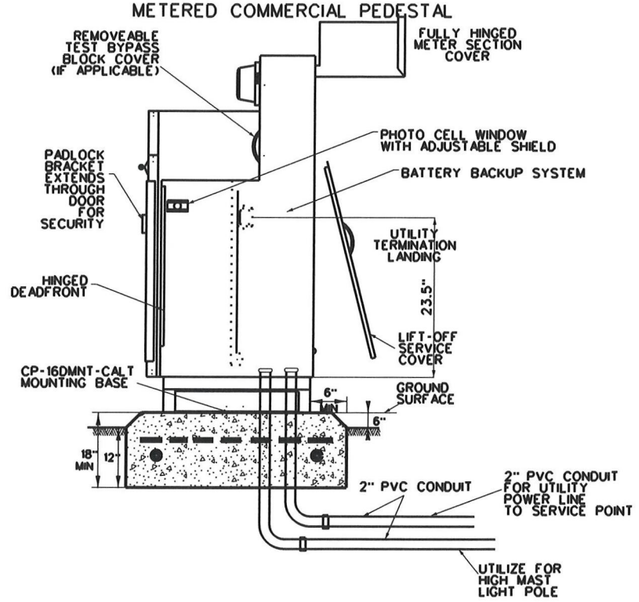
STATE OF ARKANSAS
LICENSED PPROFESSIONAL ENGINEER
No. 15408
BRAD D HAWKINS

AERIAL VIEW

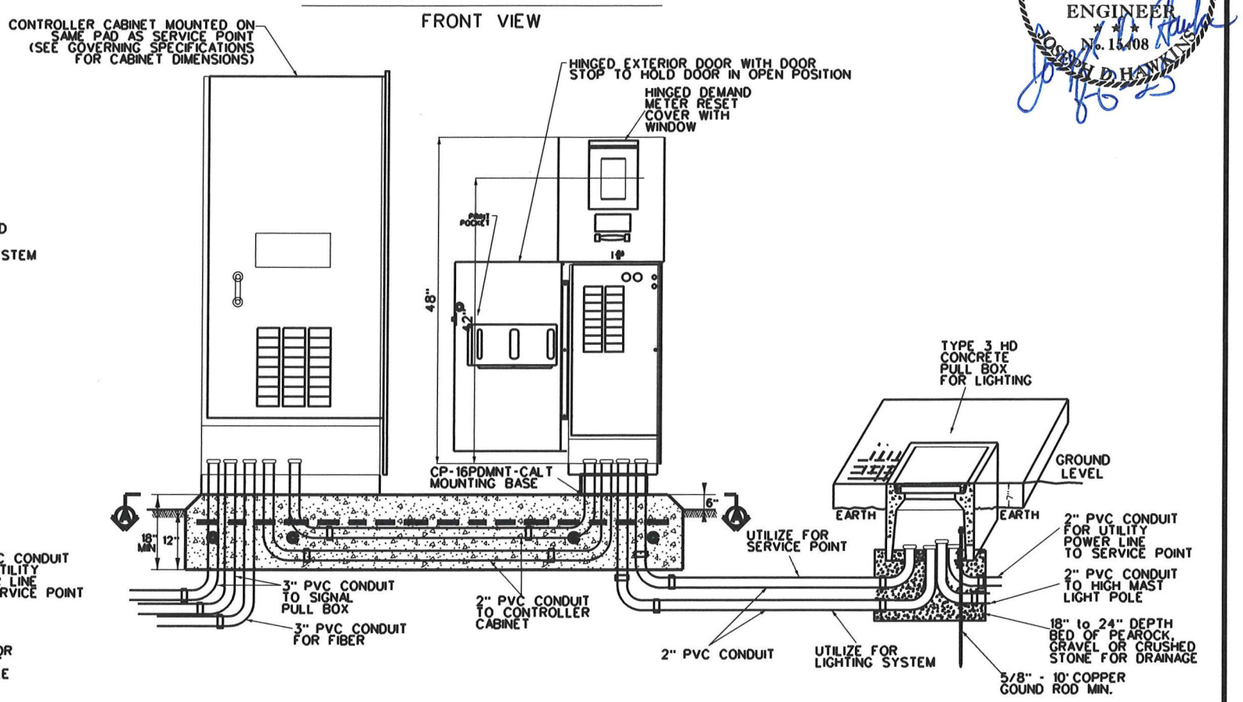


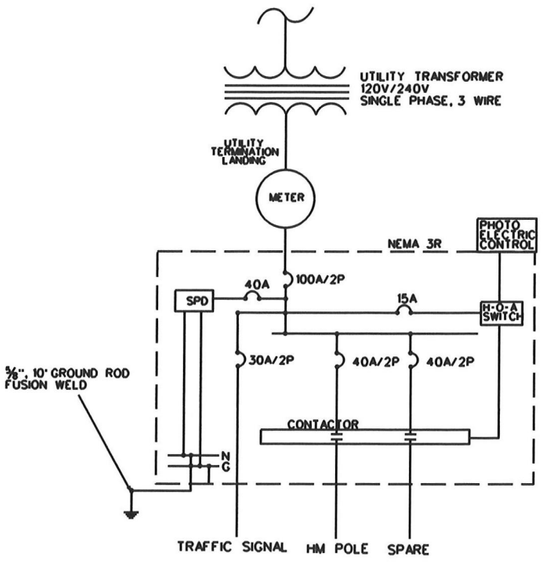
SERVICE POINT
SIDE VIEW

METERED COMMERCIAL PEDESTAL



SIGNAL CABINET AND SERVICE POINT
FRONT VIEW

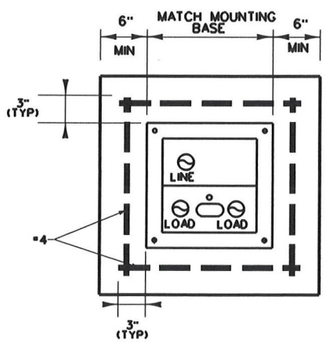




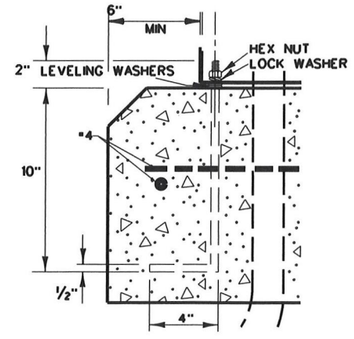
ONE-LINE DIAGRAM

METERED COMMERCIAL PEDESTAL
100 AMP (N.T.S)

•SERVICE POINT TO BE MOUNTED ON SAME PAD AS CONTROLLER



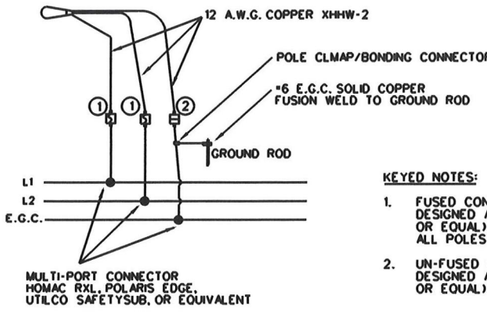
SECTION A-A



ANCHOR BOLT

NOTES:

1. CONCRETE FOR CAST-IN-PLACE FOUNDATION SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH, f'c = 3,500 PSI.
2. ALL REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO AASHTO M31 OR M53.



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

(120/240 VOLT SERVICE)

LUMINAIRE WIRING SCHEMATICS

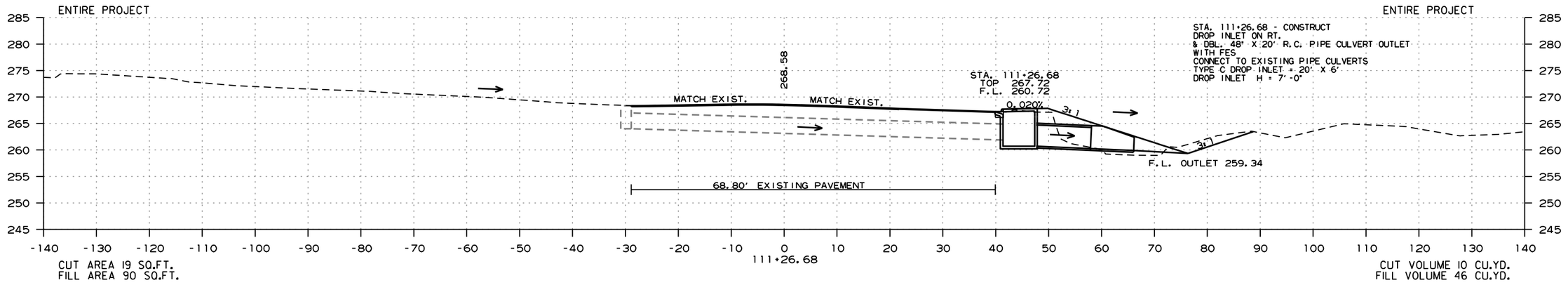
KEYED NOTES:

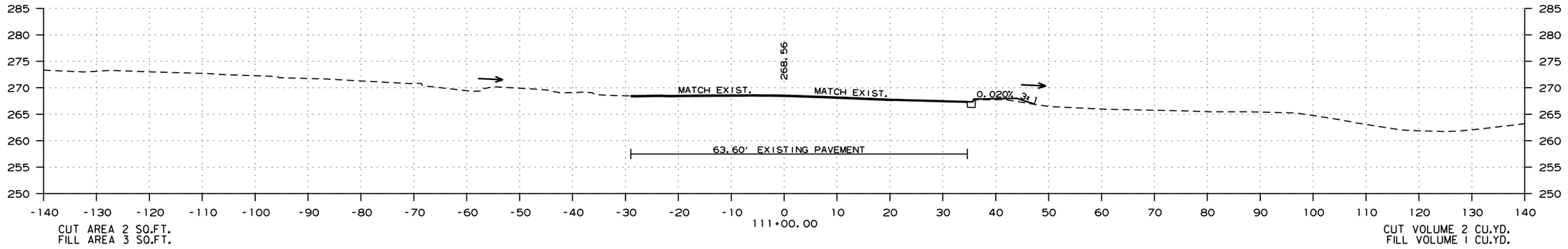
1. FUSED CONNECTOR - SHALL BE WATERTIGHT, UL-LISTED, AND DESIGNED AS BREAKAWAY (HOMAC FLOOD-SEAL, EATON BUSSMANN OR EQUAL). USE A FUSED CONNECTOR FOR THE LINE WIRE ON ALL POLES. USE MANUFACTURER'S RECOMMENDED FUSE SIZE.
2. UN-FUSED CONNECTOR - SHALL BE WATERTIGHT AND SHALL BE DESIGNED AS BREAKAWAY (HOMAC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

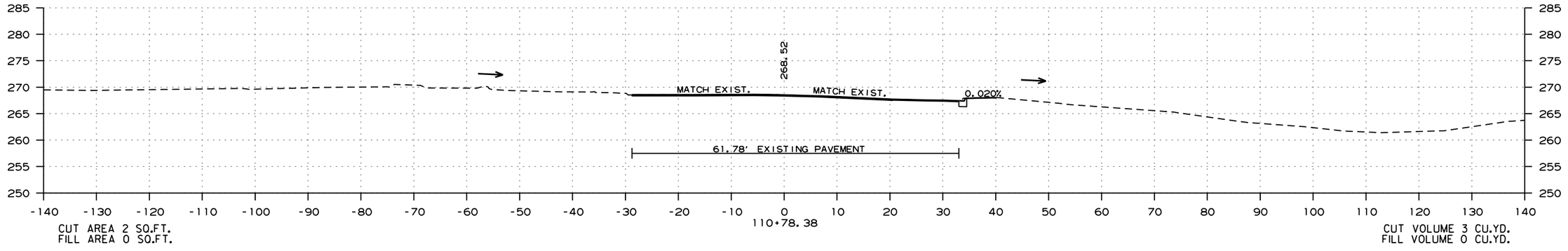
LOCATION:	HIGHWAY 70 AND UNIVERSITY AVENUE			
CITY:	LITTLE ROCK			
COUNTY:	PULASKI			
DISTRICT:	6	SCALE: N/A	DRAWN BY:	BDD

R061510.DGN 8/4/2025

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	39	45
		CROSS SECTIONS				







110+65.00
BEGIN JOB 061510
BEGIN MILL AND INLAY - HWY. 70

HWY. 70 (COLONEL GLENN RD.)
CROSS SECTION STA. 110+65.00 TO STA. 111+26.68

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	40	45
		CROSS SECTIONS				

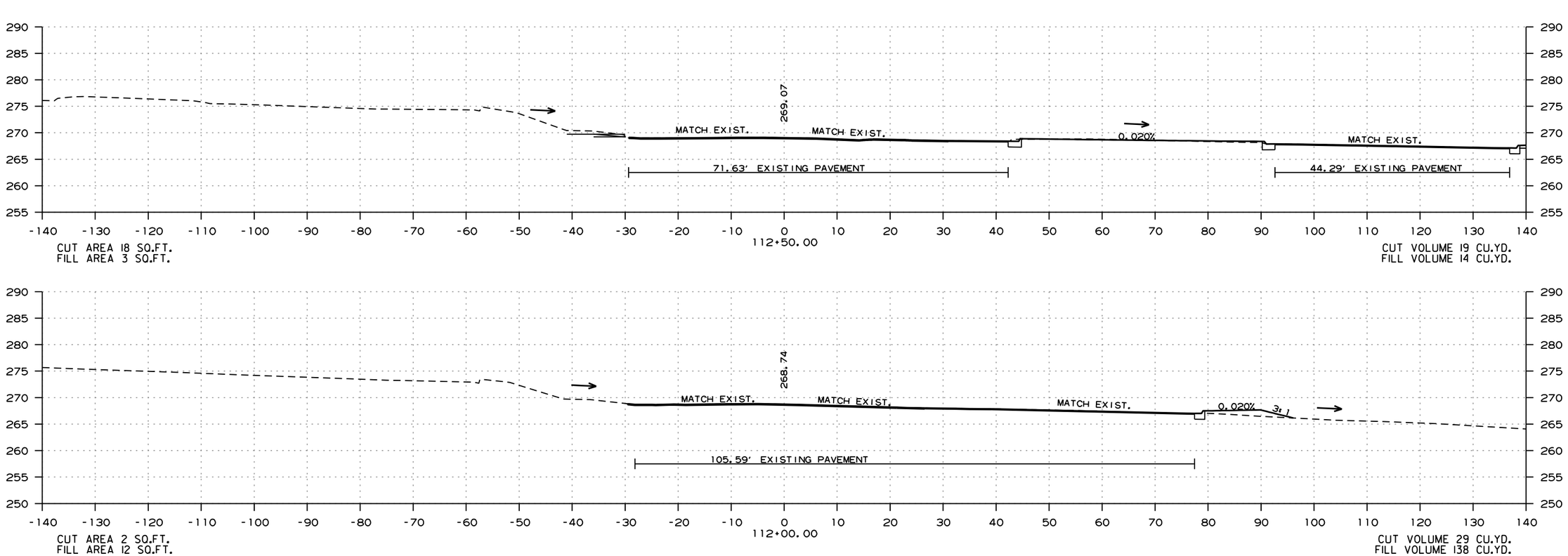
ENTIRE PROJECT

CUT AREA 0 SQ.FT.
FILL AREA 0 SQ.FT.

113+05.16 - TIE TO UNIVERSITY AVE.
LEFT LANE EDGE STA. 9+23.91
END MILL AND INLAY - HWY. 70

ENTIRE PROJECT

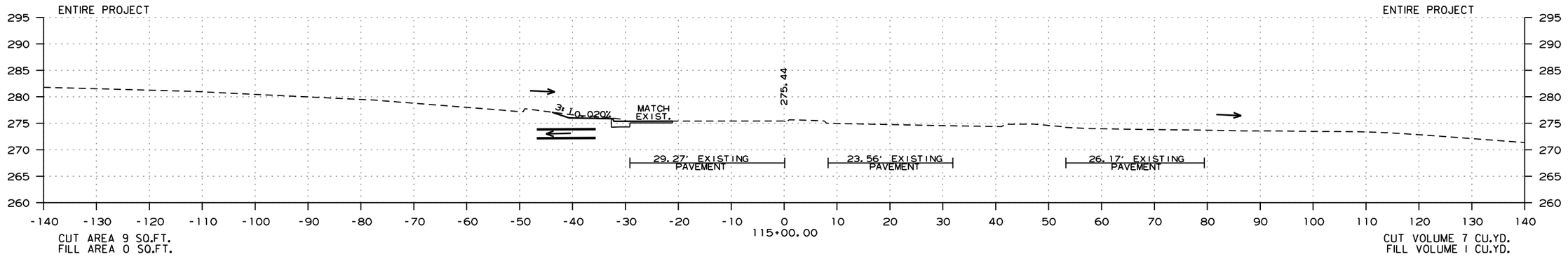
CUT VOLUME 18 CU.YD.
FILL VOLUME 3 CU.YD.

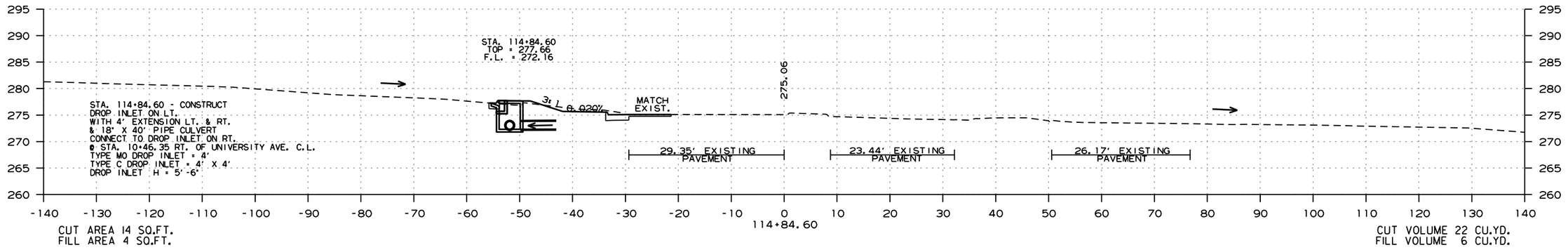


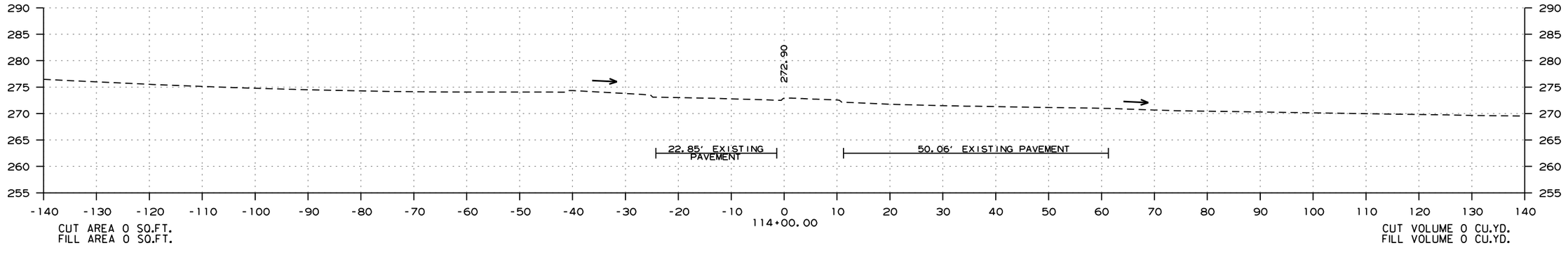
HWY. 70 (COLONEL GLENN RD.)
CROSS SECTION STA. 112+00.00 TO STA. 113+05.16

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	41	45
		CROSS SECTIONS				



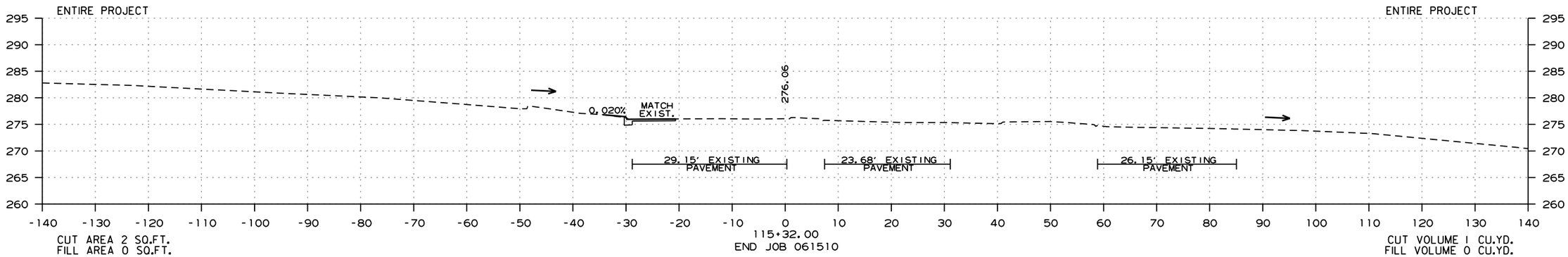


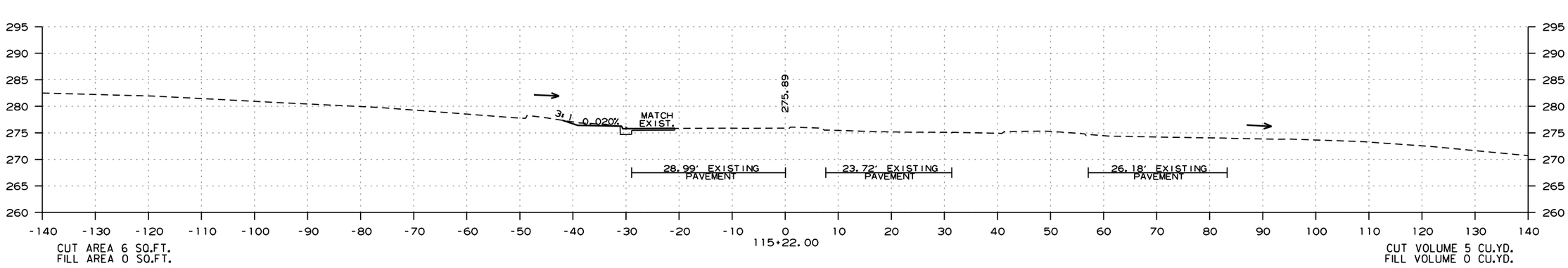


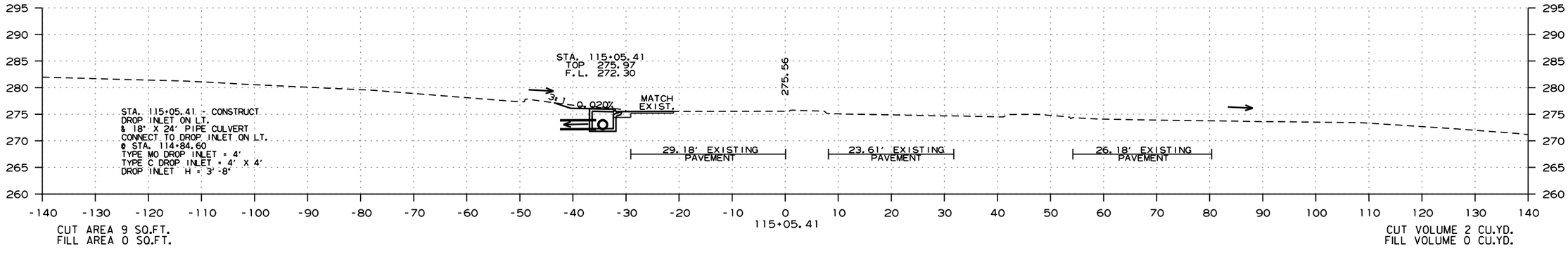
HWY. 70 (ASHER AVE.)
CROSS SECTION STA. 114+00.00 TO STA. 115+00.00

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	42	45
		CROSS SECTIONS				



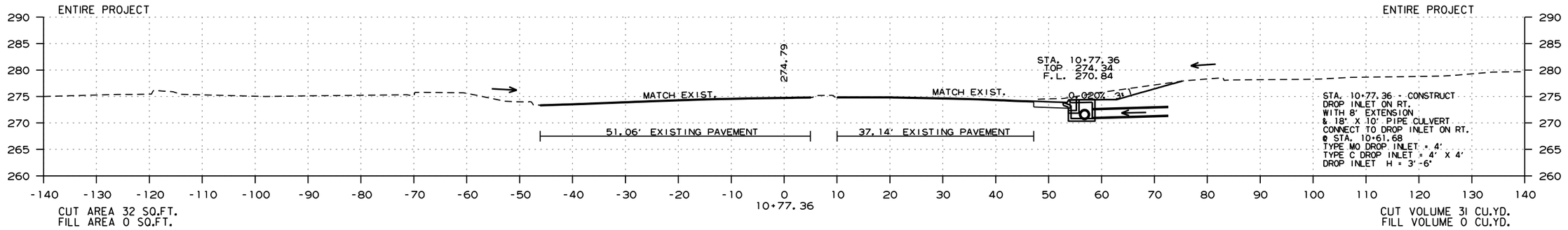


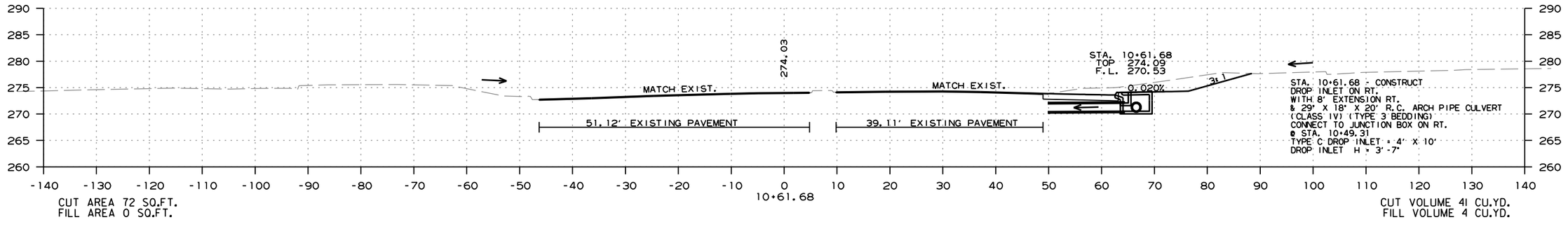


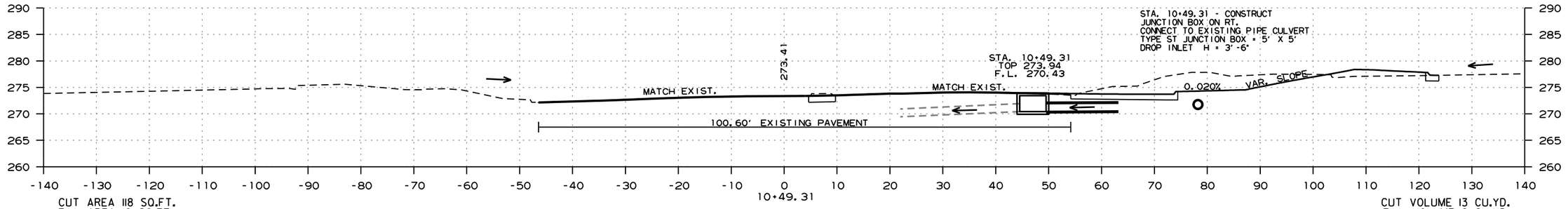
HWY. 70 (ASHER AVE.)
CROSS SECTION STA. 115+05.41 TO STA. 115+32.00

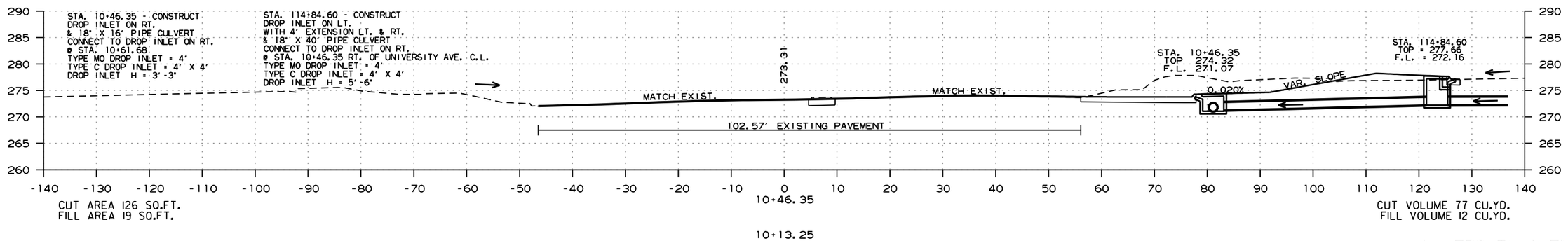
JH41264 8/13/2025 MicroStation v8.11.9.578
R061510.DGN

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	43	45
		CROSS SECTIONS				







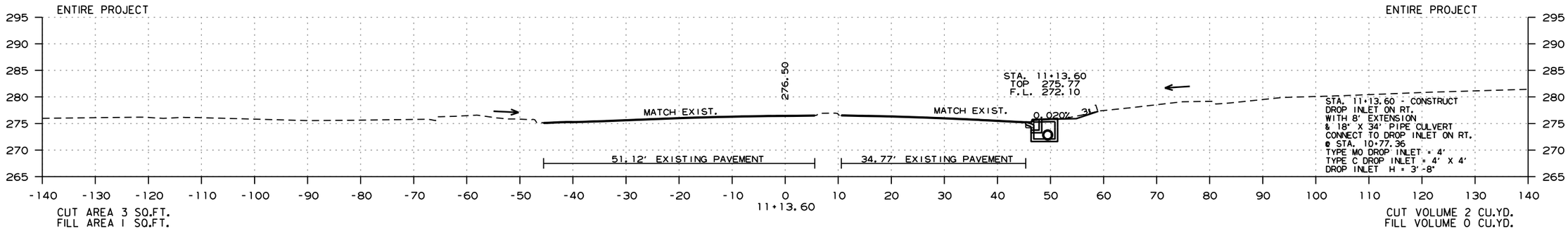


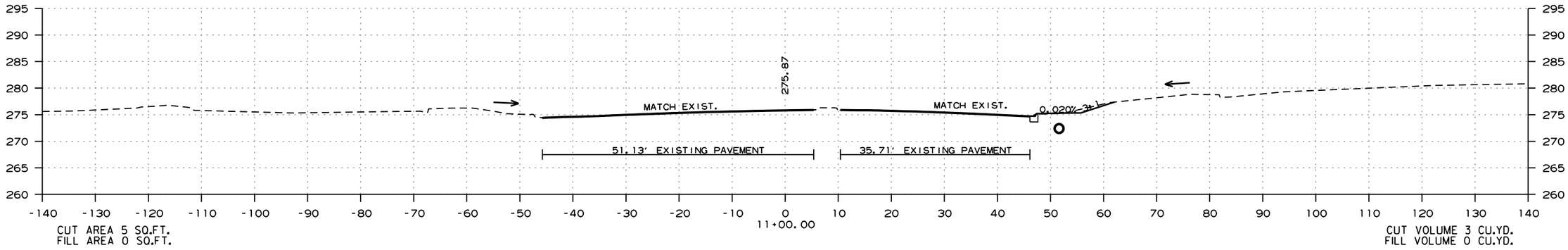
10+13.25
BEGIN MILL AND INLAY - UNIVERSITY AVE.

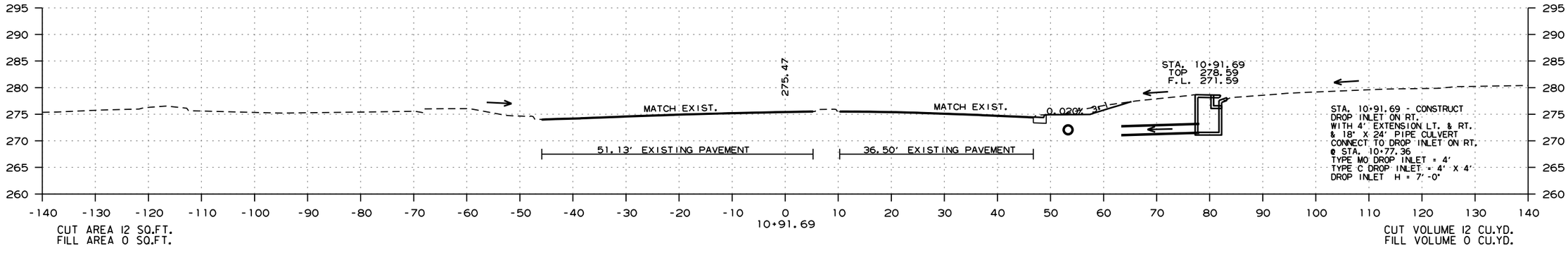
UNIVERSITY AVENUE
CROSS SECTION STA. 10+13.25 TO STA. 10+77.36

JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	44	45
		CROSS SECTIONS				



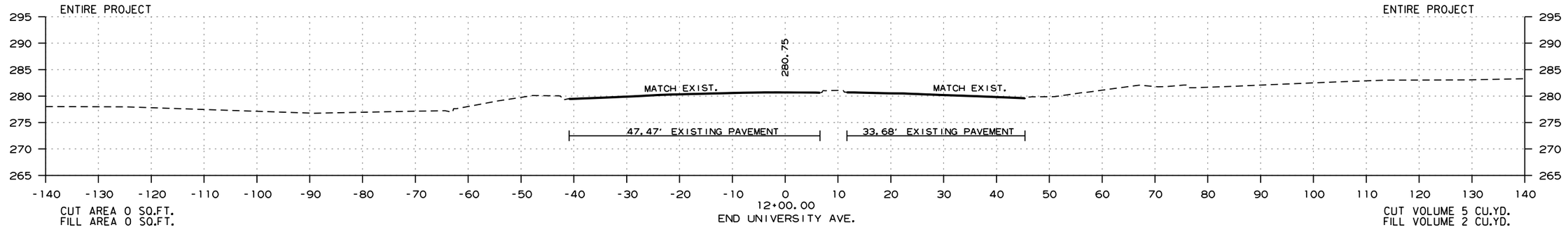




UNIVERSITY AVENUE
CROSS SECTION STA. 10+91.69 TO STA. 11+13.60

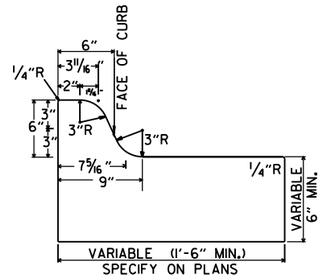
JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578

DATE REVISED	DATE REVISED	FED.RD. DIST.NO.	STATE	JOB NO.	SHEET NO.	TOTAL SHEETS
		6	ARK.	061510	45	45
		CROSS SECTIONS				

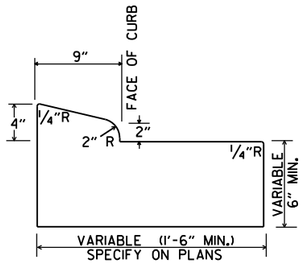


UNIVERSITY AVENUE
CROSS SECTION STA. 12+00.00 TO STA. 12+00.00

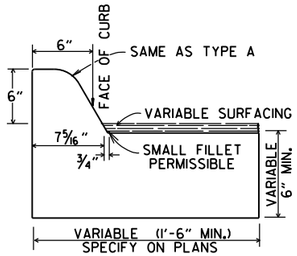
JH41264 8/13/2025
R061510.DGN MicroStation v8.11.9.578



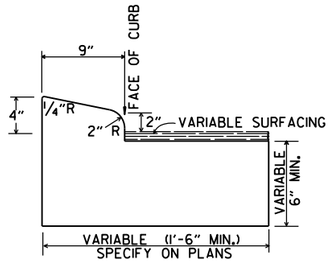
TYPE A



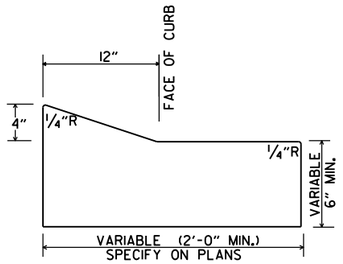
TYPE B-1



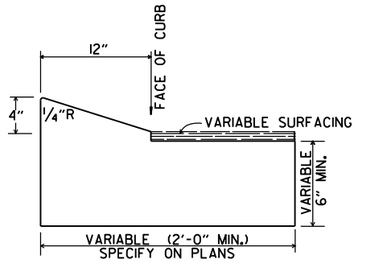
TYPE C



TYPE B-2

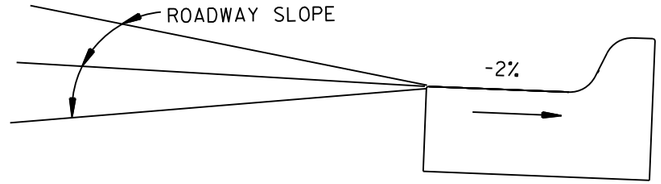


TYPE E-1



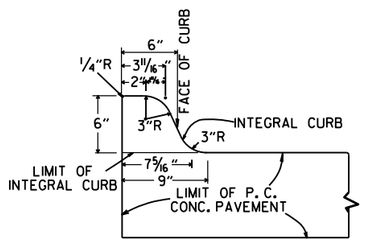
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

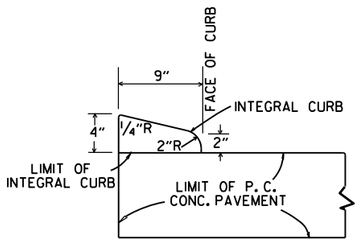


DETAIL OF GUTTER SLOPE

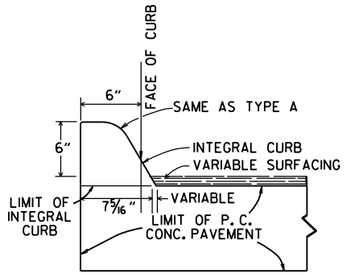
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

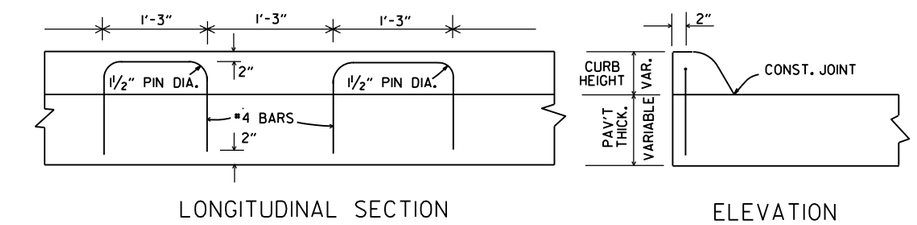


TYPE B



TYPE C

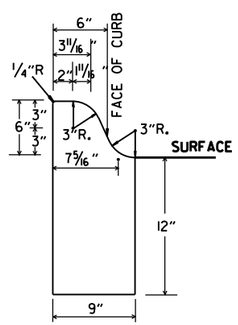
INTEGRAL CURB



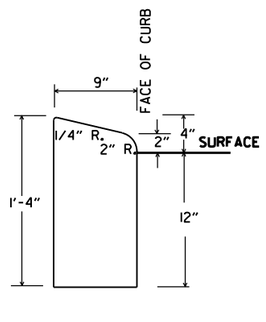
LONGITUDINAL SECTION

ELEVATION

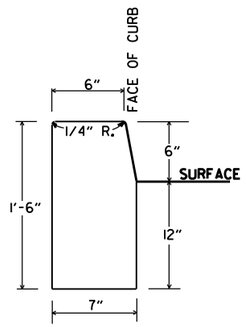
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



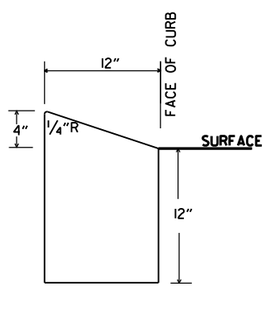
TYPE A



TYPE B

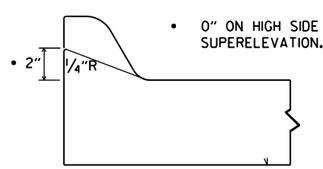


TYPE D



TYPE E

CONCRETE CURB



NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.

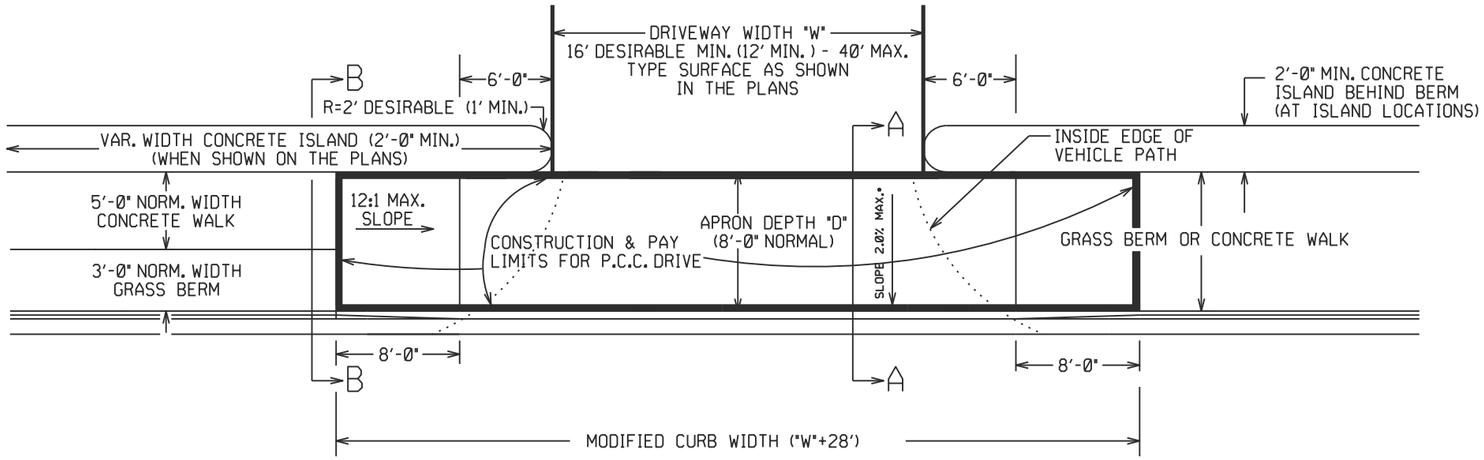
DETAILS OF MODIFIED CURB

DATE	REVISION	DATE FILMED
11-29-07	REVISED GUTTER SLOPE & MODIFIED CURB DETAILS	
11-10-05	ADDED DETAILS OF TYPE E CURBS	
11-16-01	REVISED CONCRETE CURB TYPE B	
11-18-98	REVISED MODIFIED CURB	
6-2-94	ADDED NOTE TO SPECIAL MODIFIED CURB	
8-5-93	CORRECTED GUTTER SLOPE	8-5-93
10-1-92	ADDED DETAILS OF GUTTER SLOPE	10-1-92
5-24-90	ADDED DETAILS OF MODIFIED CURB	5-24-90
11-30-89	VARIBLE DEPTH TYPE A & B I	11-30-89
7-15-88	REVISED MODIFIED CURB	630-7-15-88
11-1-73	REVISED MODIFIED CURB	500-11-1-73
10-2-72	REVISED AND REDRAWN	512-10-2-72

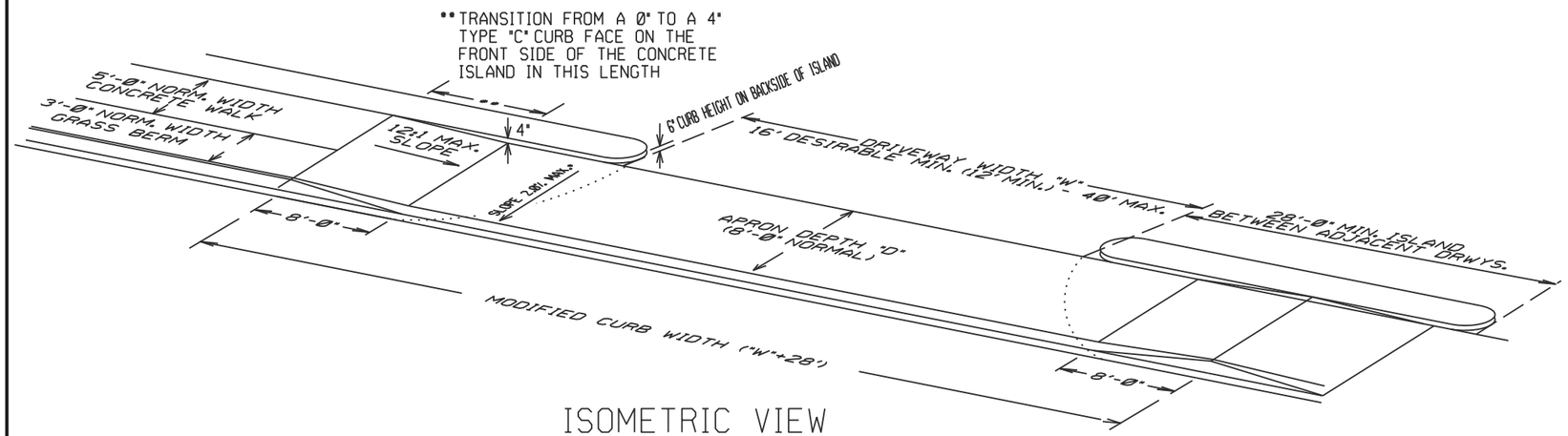
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

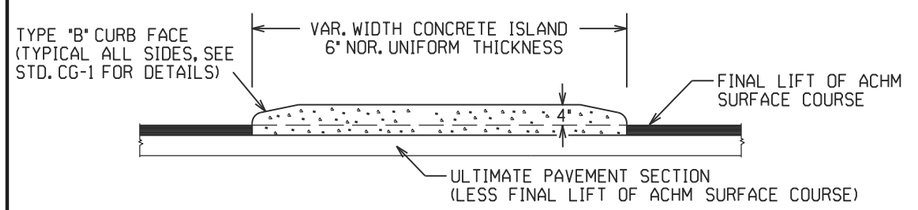
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

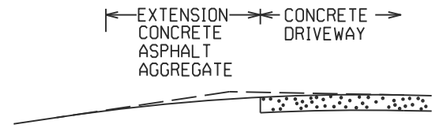


CURBED ISLANDS FOR CHANNELIZATION

CONCRETE ISLAND NOTES:

1. REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".

2. TRANSVERSE EXPANSION JOINTS, NOT LESS THAN 1/2" WIDE, SHALL BE PLACED AT MINIMUM INTERVAL OF 45'. TRANSVERSE JOINT SHALL BE CONSTRUCTED USING A JOINT FILLER COMPLYING WITH AASHTO M213.



EXTENSION TYPICAL SECTIONS

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

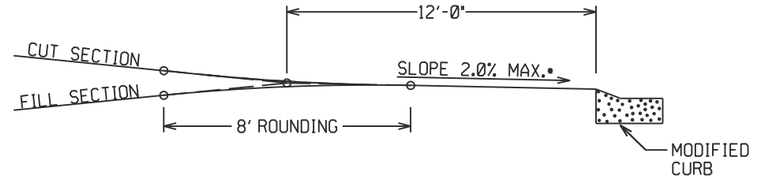
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

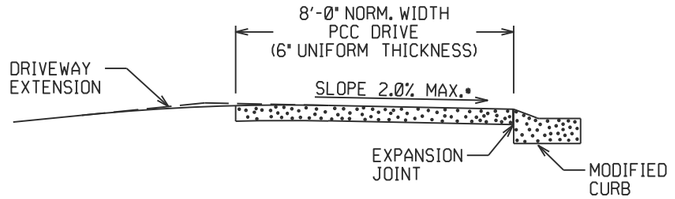
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

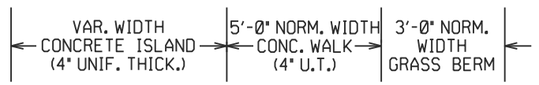


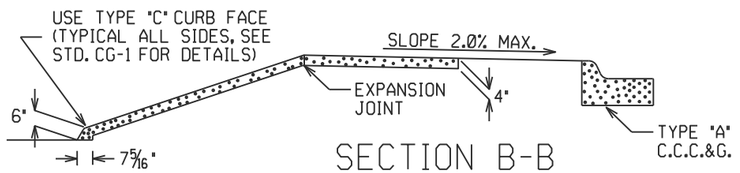
DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A





SECTION B-B

CURBED ISLAND BEHIND WALK

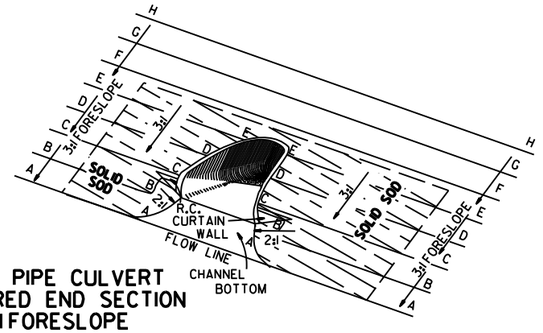
DATE REV	DESCRIPTION
05-22-25	REVISED ISLAND DETAILS & ADDED DESIRABLE MIN. DRIVEWAY WIDTH
05-19-22	REVISED ISLAND NOTES
11-07-19	REVISED WALK DETAILS
02-27-14	REVISED PLAN & ISOMETRIC VIEW
11-29-07	ADDED CHANNELIZATION ISLAND & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

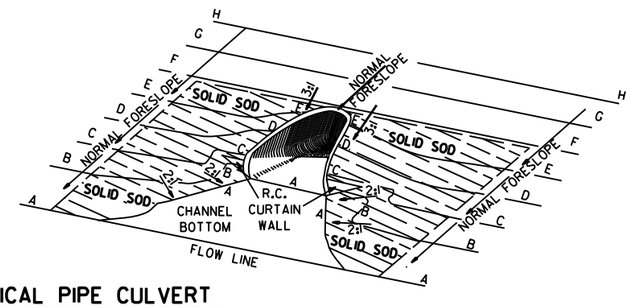
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DRIVEWAYS & ISLANDS

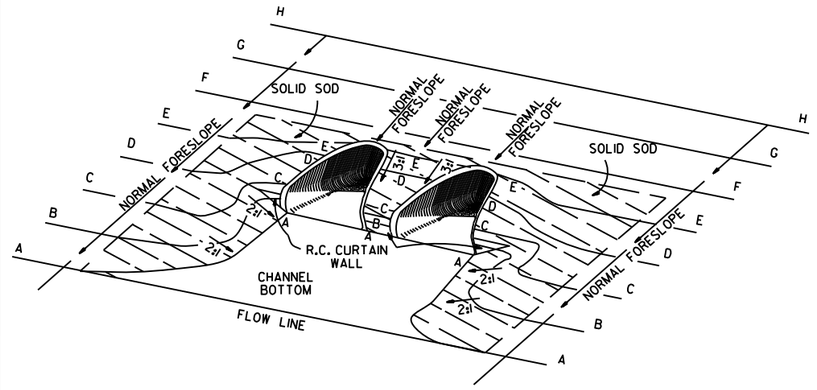
DATE EFFECTIVE	STANDARD DRAWING	DR-1
05-22-2025		



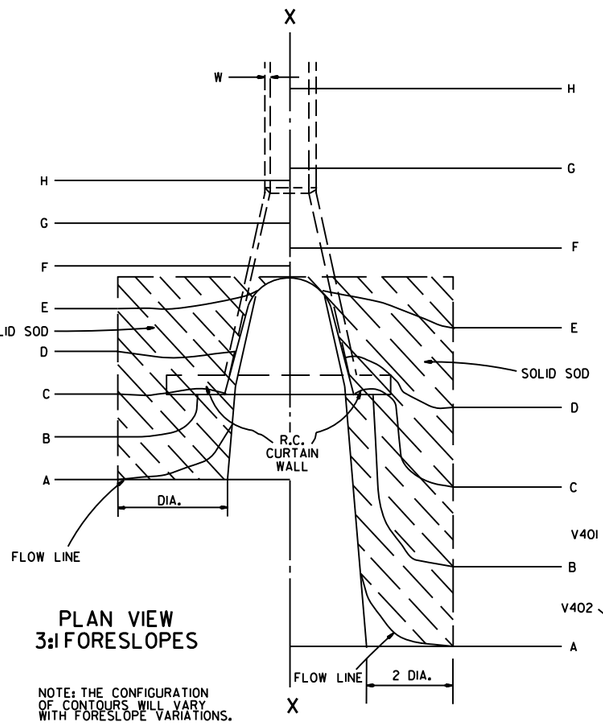
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

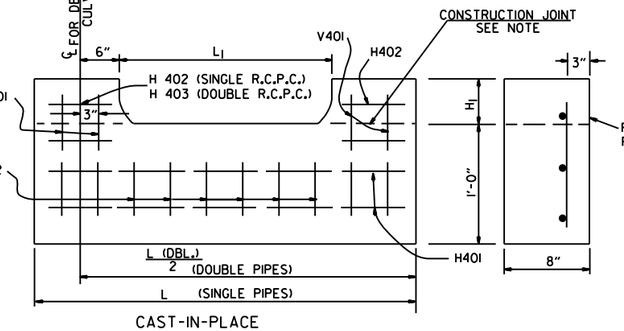
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

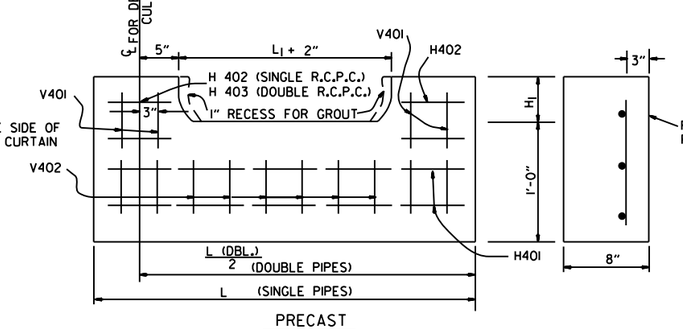
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45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

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



CAST-IN-PLACE

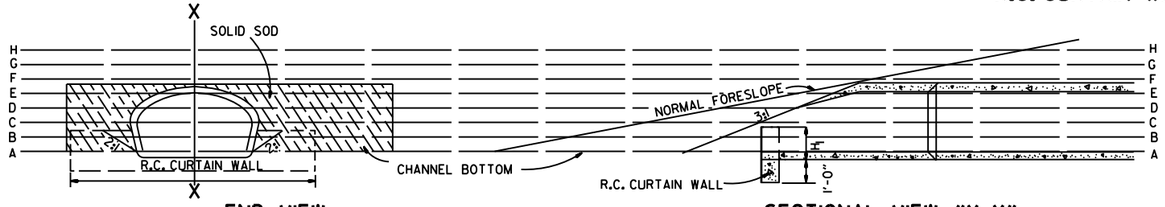
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



PRECAST

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

R.C. CURTAIN WALL DETAILS



END VIEW

SECTIONAL VIEW "X-X"

REINFORCING STEEL SCHEDULE

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

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

SOLID SODDING

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

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

GENERAL NOTES

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

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

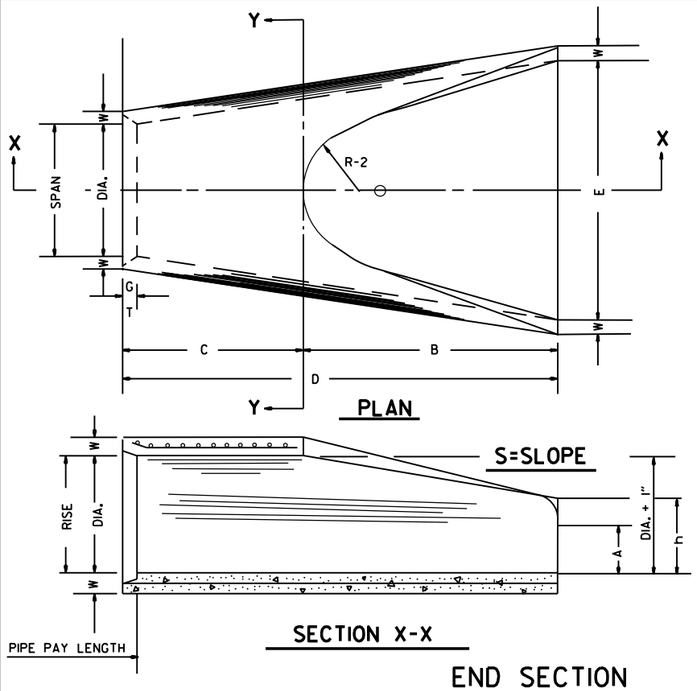
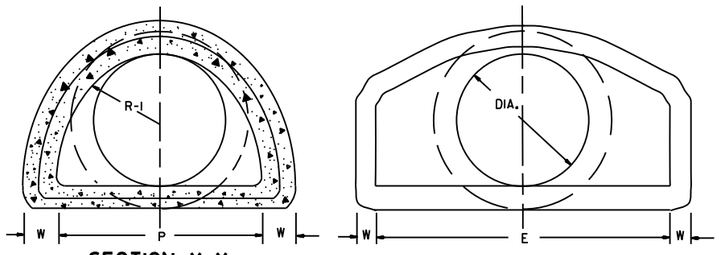


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 15/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 13/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

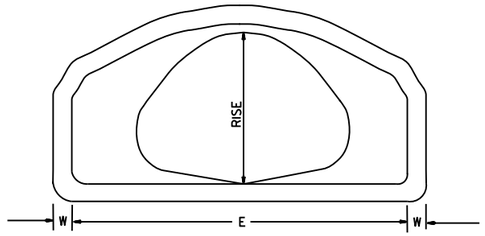


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

ARCH PIPE

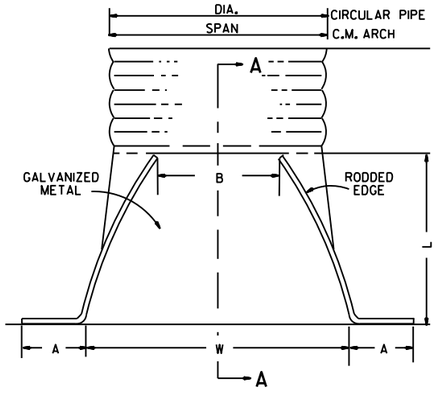
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 11/16"	20"	3"	2½:1
36	43¾	44	26⅜	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/16"	24"	5"	2¼:1

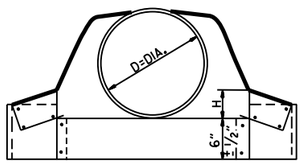
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



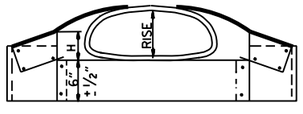
END VIEW
CONCRETE ARCH PIPE

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS





CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

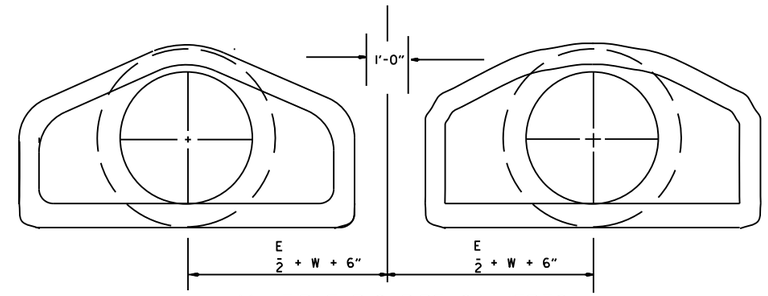
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

C.M. ARCH PIPE

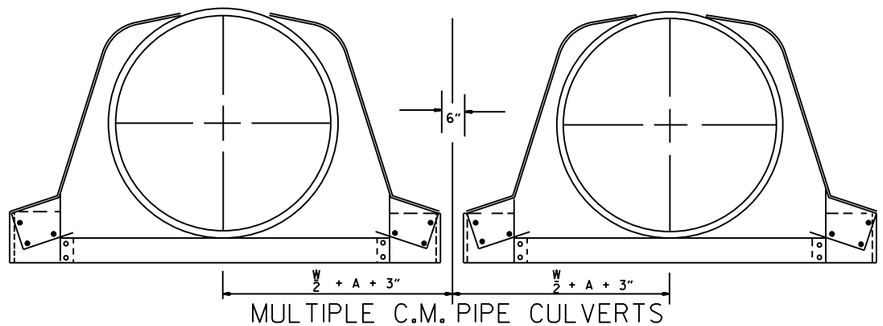
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12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

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



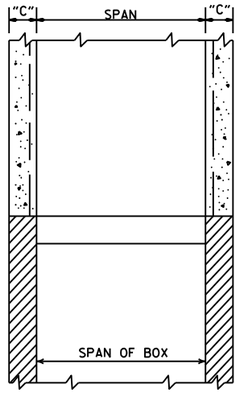
MULTIPLE C.M. PIPE CULVERTS

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

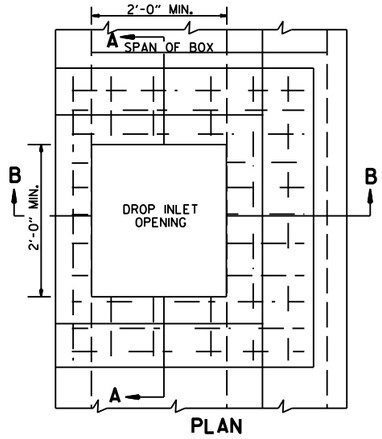
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

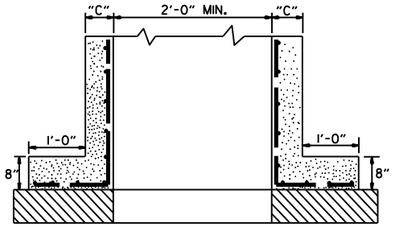
STANDARD DRAWING FES-2



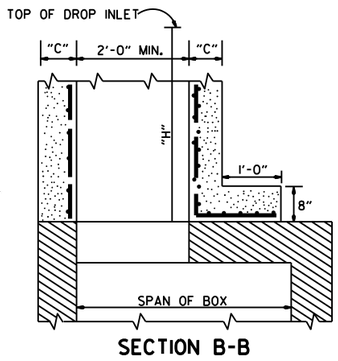
SECTION B-B



PLAN

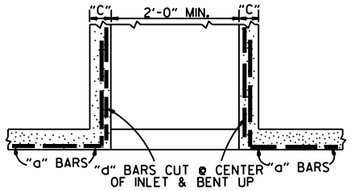


SECTION A-A

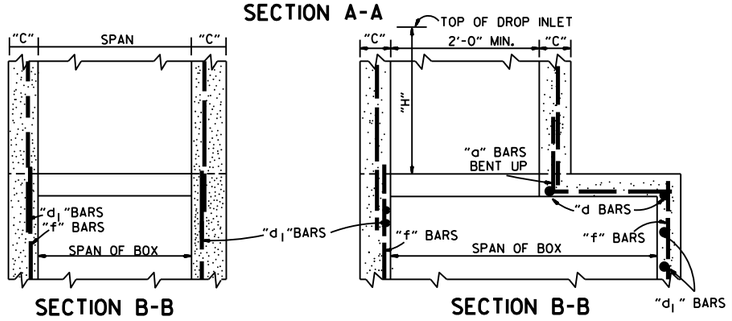


SECTION B-B

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



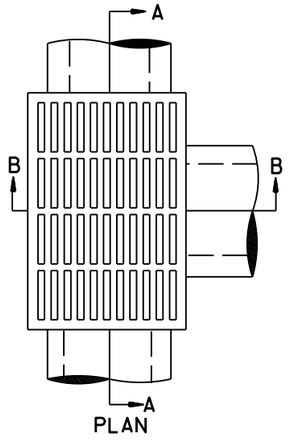
SECTION A-A



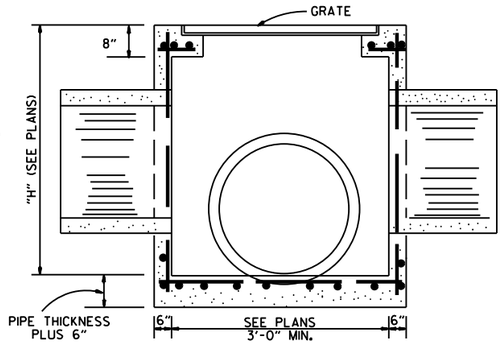
SECTION B-B SECTION B-B

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

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

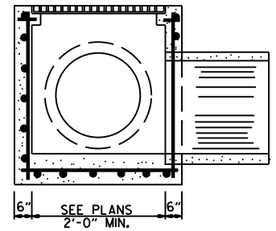


PLAN



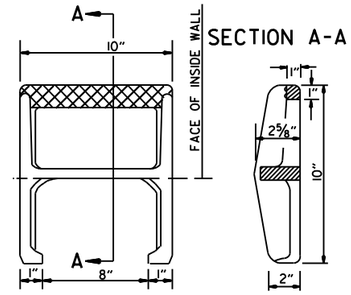
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

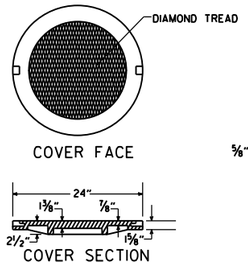


APPROX. WEIGHT = 11 LBS. (CAST IRON)

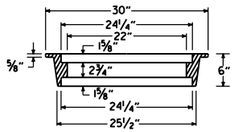
PLAN

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

DETAIL OF STEP FOR DROP INLET



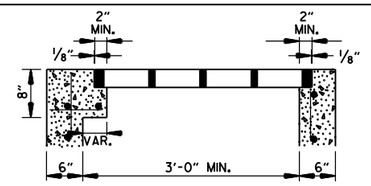
COVER SECTION



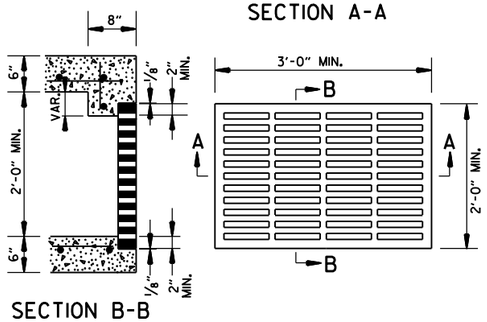
RING SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



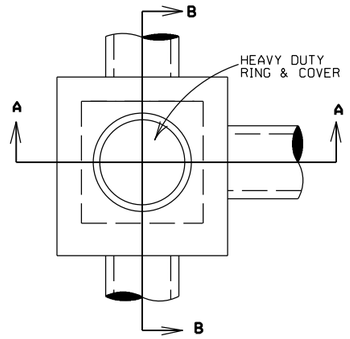
SECTION A-A



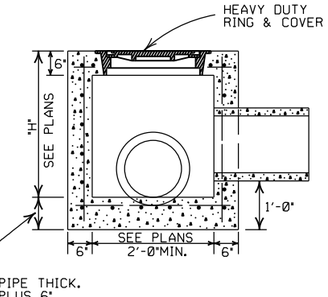
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

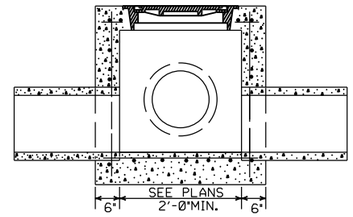


PLAN



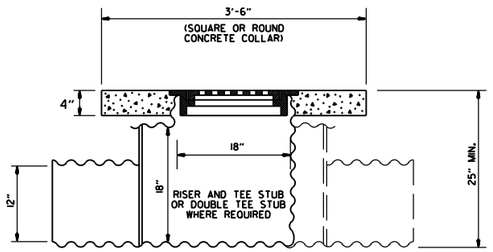
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

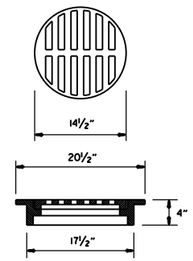


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5901-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC. CU. YDS.	HEIGHT 5'-0" REINF. STEEL POUNDS	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC. CU. YDS.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22
24"	2'-6"	1.79	156	0.28	22
30"	3'-2"	2.39	205	0.30	26
36"	3'-8"	2.63	236	0.32	28
42"	4'-4"	2.95	250	0.34	30
48"	4'-10"	3.21	265	0.36	32

NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

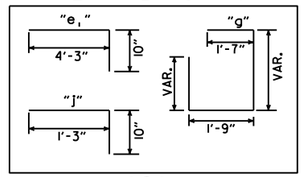
DROP INLET EXTENSION

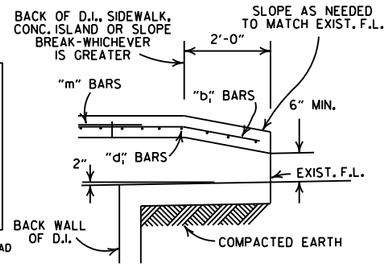
4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

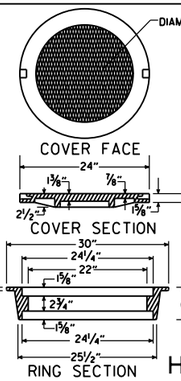
BAR DIAMETER





BACK OPENING

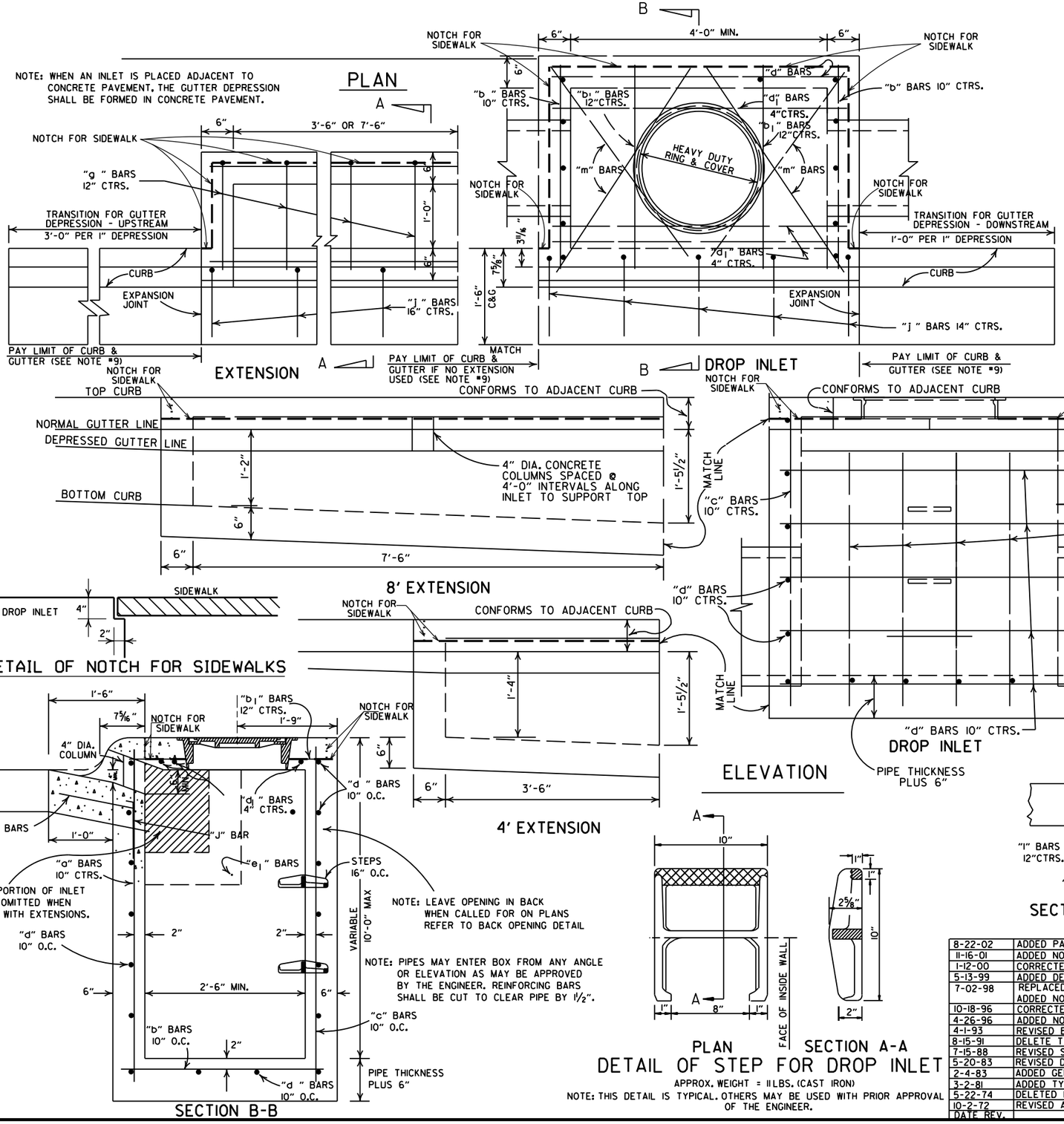
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (FPC-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.



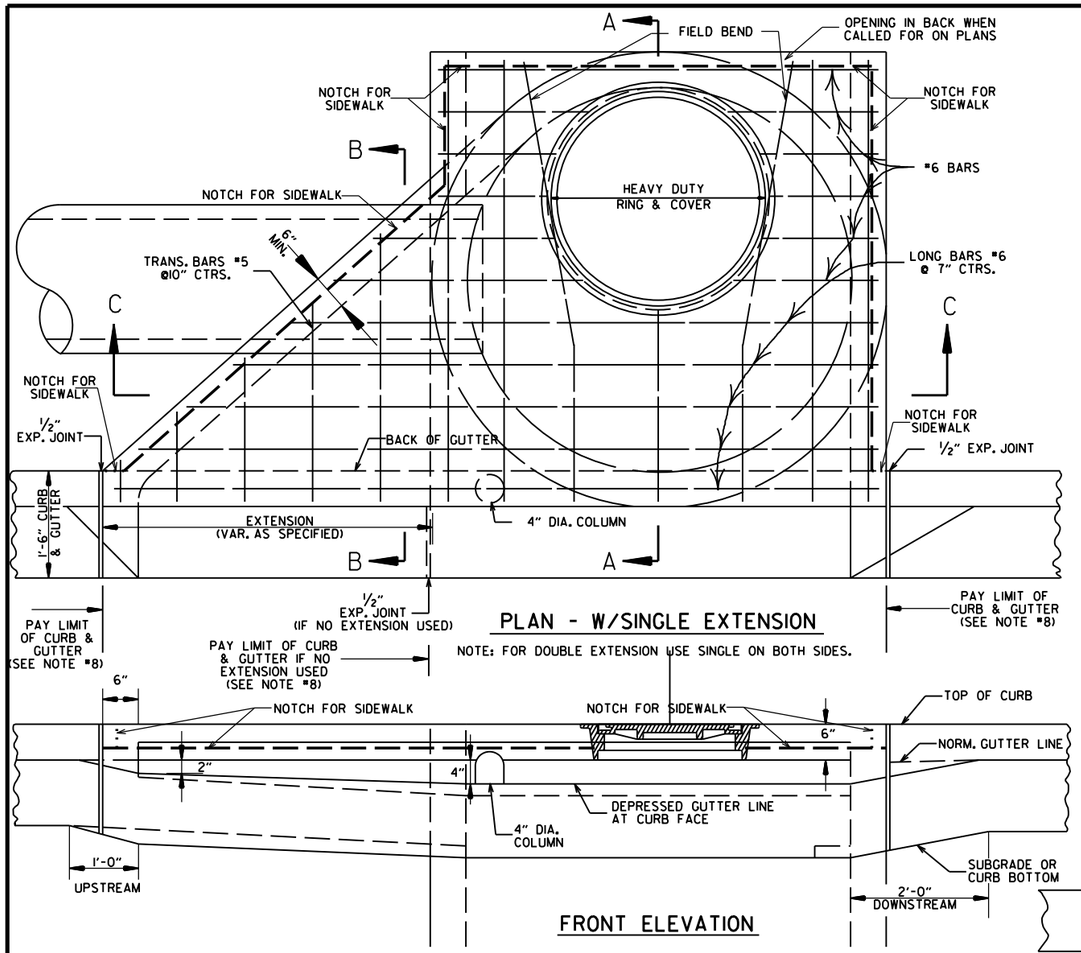
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER ADDED NOTES 9,10,&11	
10-18-96	CORRECTED SPELLING	
4-26-96	ADDED NOTE 8 & REVISED (4')(8') EXTENSION TITLES	10-18-96
4-1-93	REVISED BACK OPENING & NOTE	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

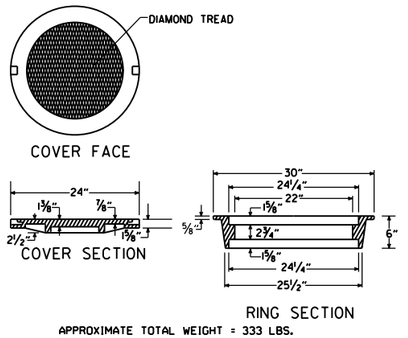
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

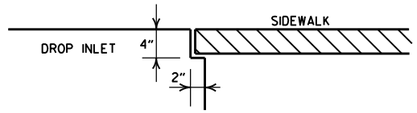




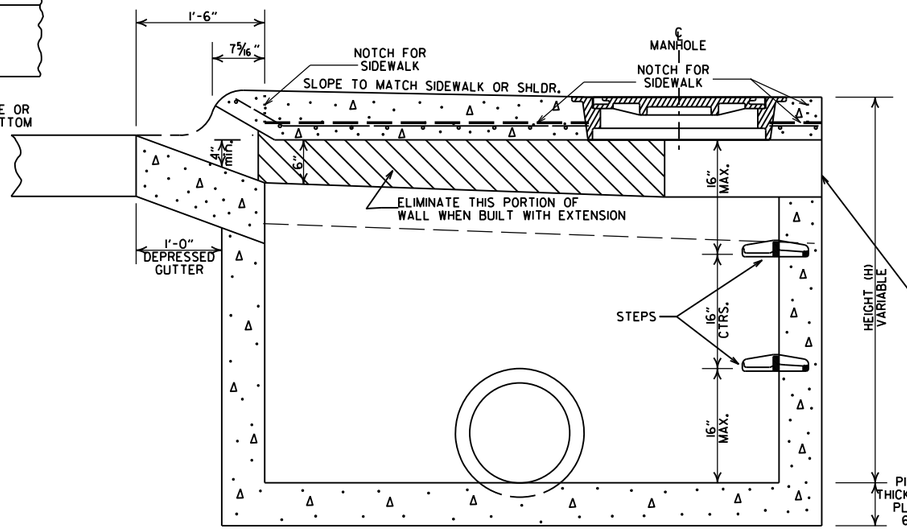
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

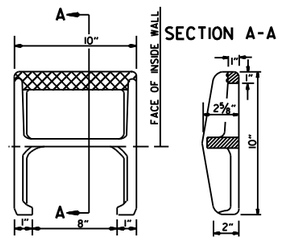
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A



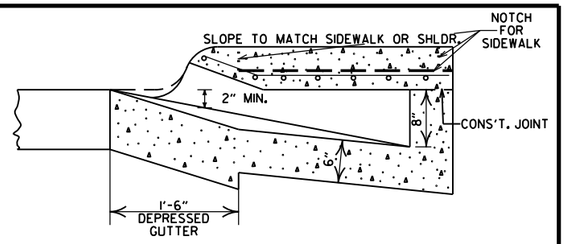
SECTION A-A

APPROX. WEIGHT = 11LBS. (CAST IRON)

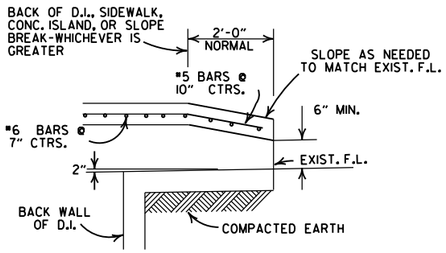
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



BACK OPENING

WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE MO).

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OR AS DIRECTED BY THE ENGINEER.
3. ALL REINFORCING BARS SHALL BE GRADE 60 AND HAVE MIN. 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. 4" DIA. COLUMNS SPACED AT MAX. 4'-0" INTERVALS SHALL BE INSTALLED ALONG INLET AND EXTENSION TO SUPPORT TOP.
6. BASE AND INLET WALLS SHALL BE CAST MONOLITHICALLY.
7. THE THROAT SHALL BE CAST INTEGRALLY WITH THE GUTTER.
8. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
9. PIPES MAY ENTER DROP INLET FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER.
10. APPROPRIATE SIZE TYPE C DROP INLETS MAY BE SUBSTITUTED FOR TYPE MO DROP INLETS AS APPROVED BY THE ENGINEER. PAYMENT TO BE AS DROP INLET (TYPE MO).
11. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

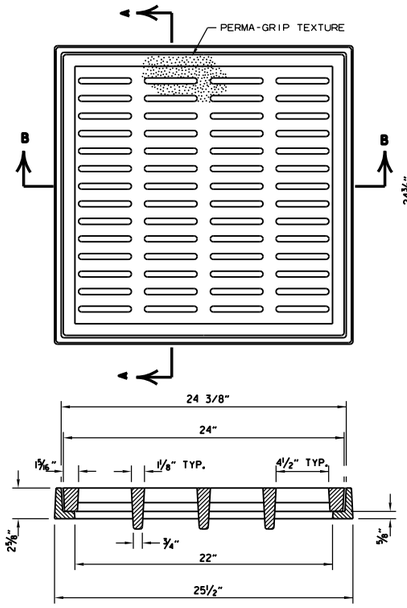
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11, ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN. DETAIL & NOTE	4-1-93
8-16-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-23-89	ADDED NOTE & MINIMUM WALL THICKNESS	513-5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	629-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

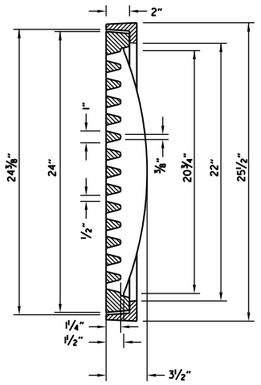
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION B-B

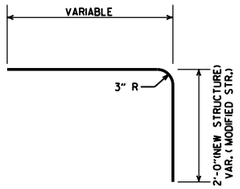


SECTION A-A

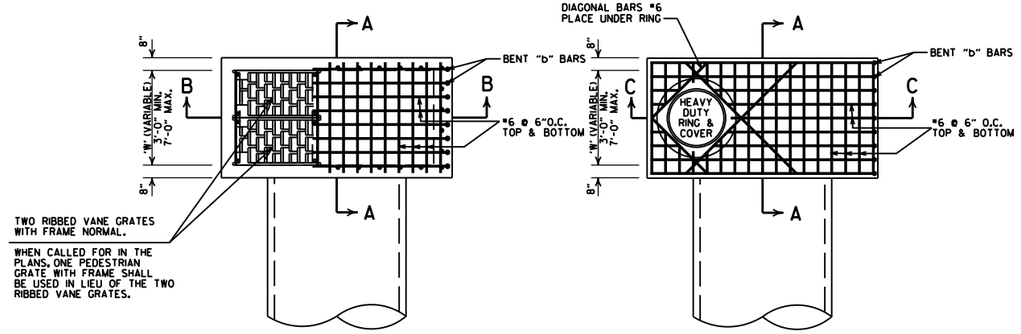
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

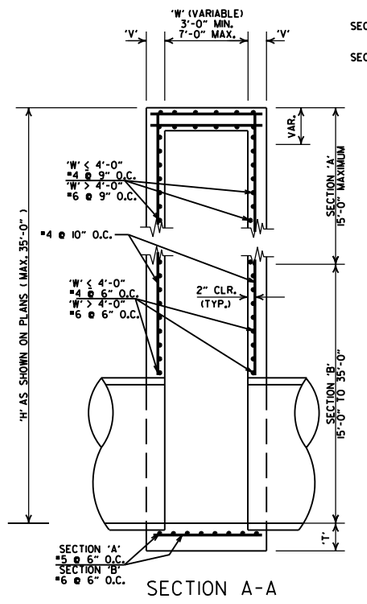
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS 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 218 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

DETAILS OF PEDESTRIAN GRATE AND FRAME



DETAIL OF BENT "b" BAR



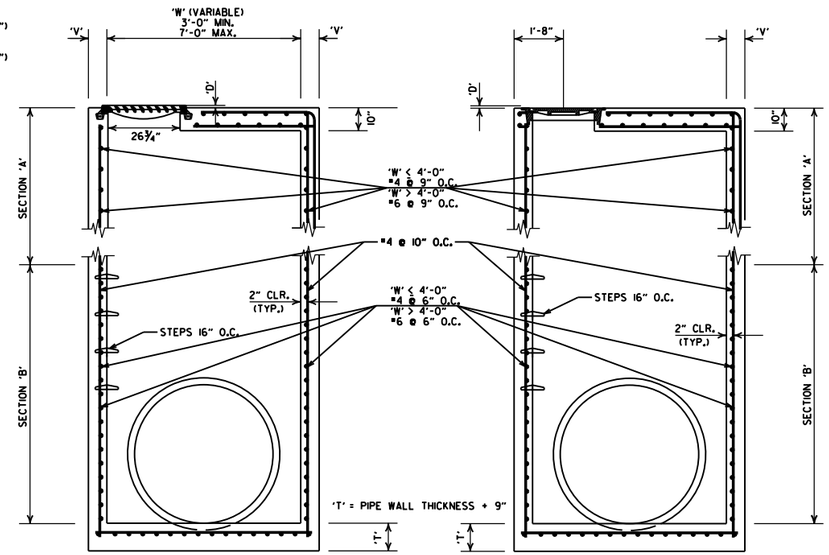


SECTION A-A

SECTION 'A'
'V' = 8"

SECTION 'B' (W≤4'-0")
'V' = 8"

SECTION 'B' (W>4'-0")
'V' = 10"



SECTION B-B

SECTION C-C

DETAILS OF DROP INLET (TYPE ST)

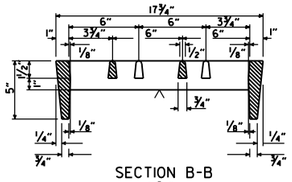
DETAILS OF JUNCTION BOX (TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

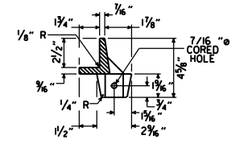
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.

GENERAL NOTES (HEAVY DUTY RING & COVER):

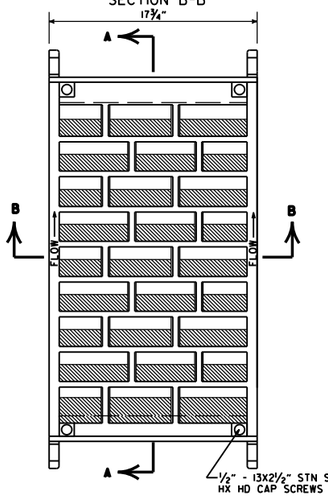
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE 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.

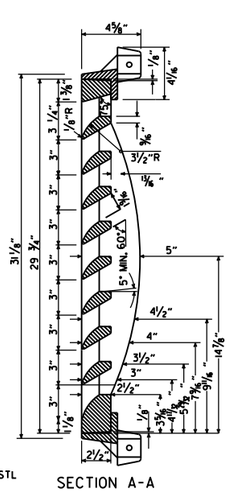


SECTION B-B



SECTION THRU FRAME



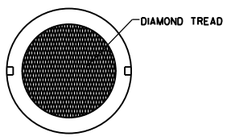


SECTION A-A

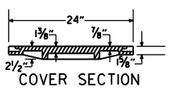
DETAILS OF RIBBED VANE GRATE AND FRAME

GENERAL NOTES (RIBBED VANE GRATE & FRAME)

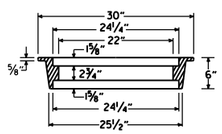
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED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



COVER FACE



COVER SECTION



RING SECTION

HEAVY DUTY RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

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	ARDOT NOMINAL	AASHTO M 206	ARDOT NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅜	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

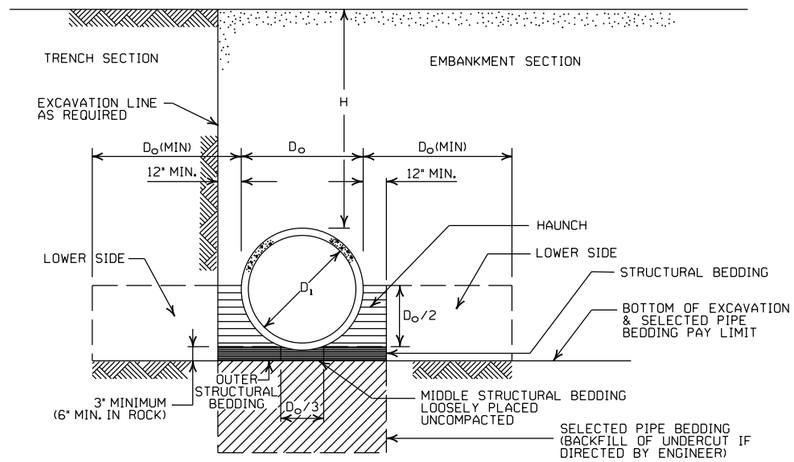
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CONSTRUCTION SEQUENCE

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

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

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

③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

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

CORRUGATED METAL PIPE ARCHES

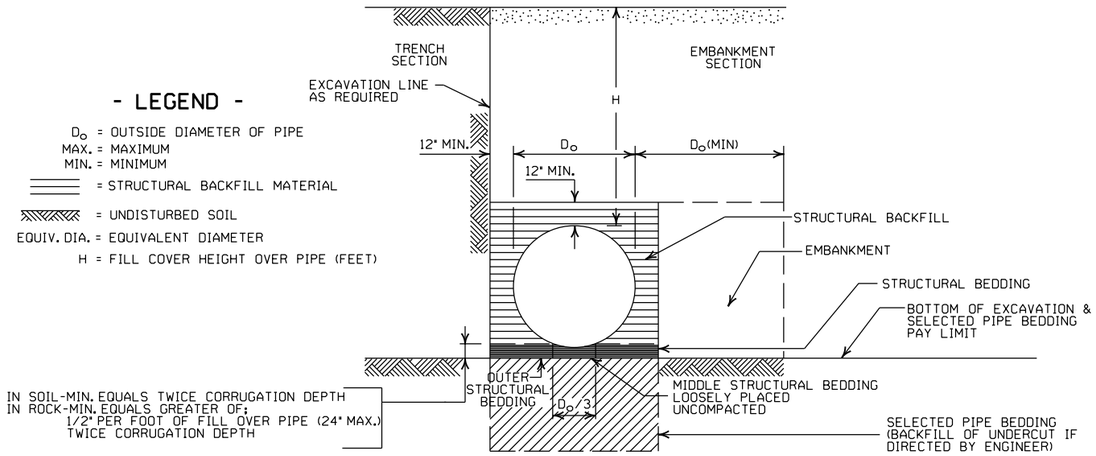
EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.)	MAX. HEIGHT OF FILL, "H" (FT.)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

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

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

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

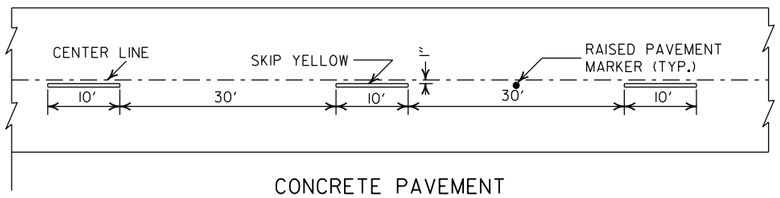
1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD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

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

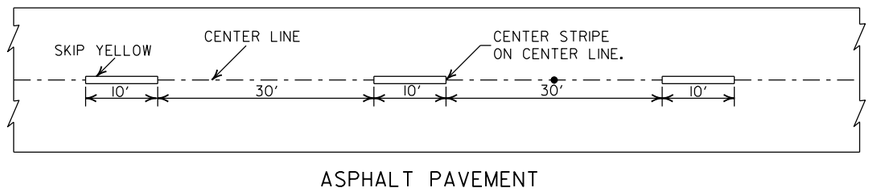
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

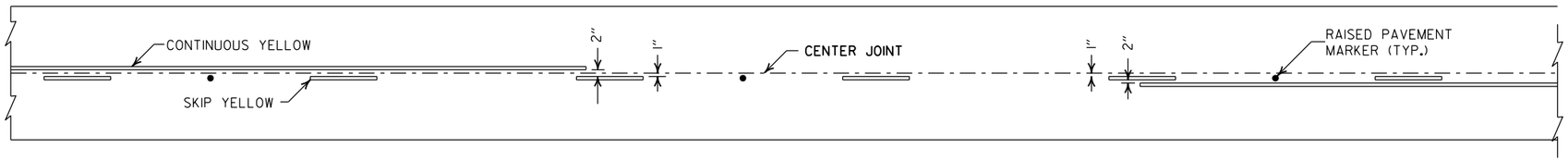


CONCRETE PAVEMENT

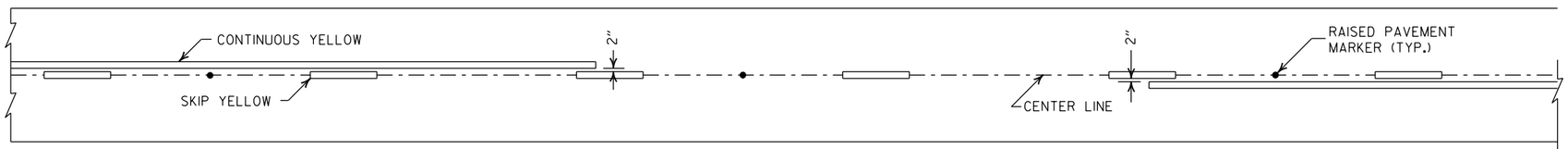


ASPHALT PAVEMENT

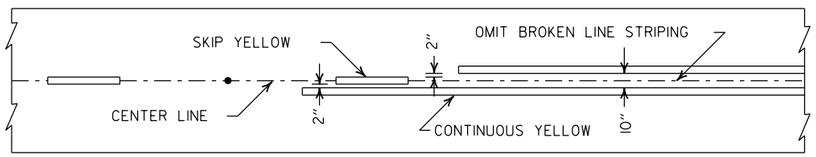
BROKEN LINE STRIPING



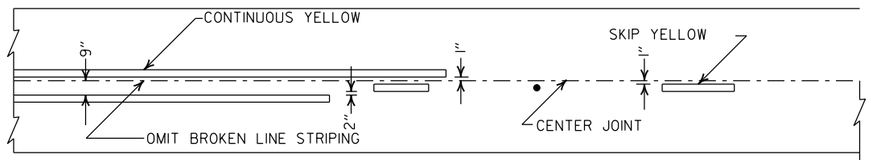
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

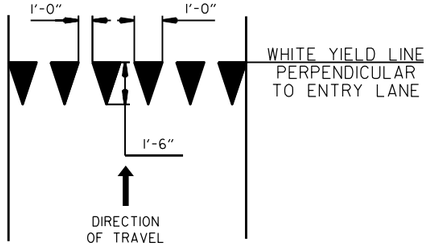


ASPHALT PAVEMENT

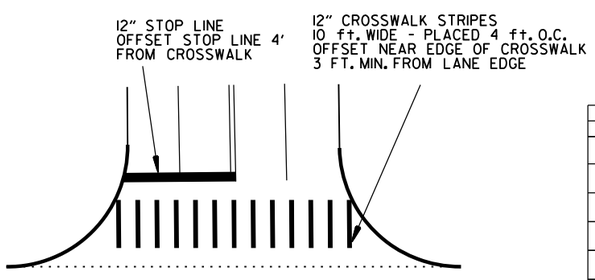


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

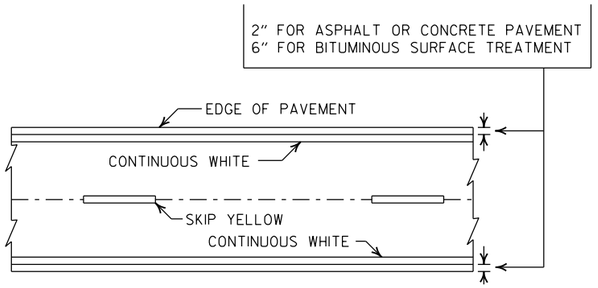


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

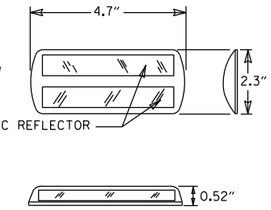
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

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

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

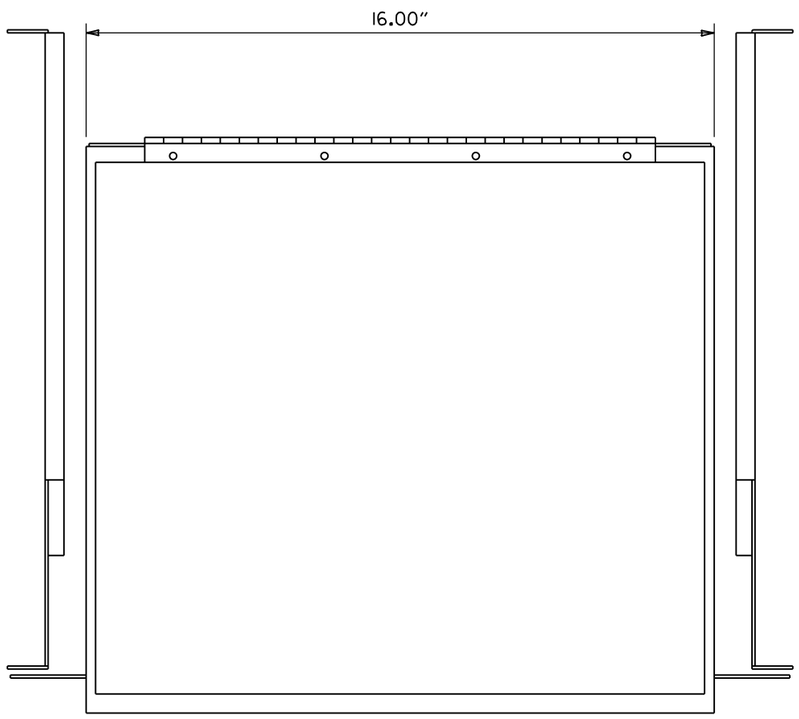
DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

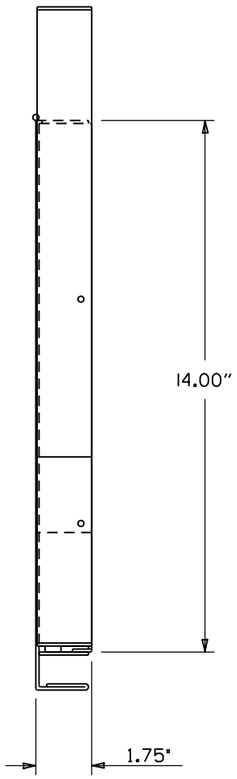
ARKANSAS STATE HIGHWAY COMMISSION

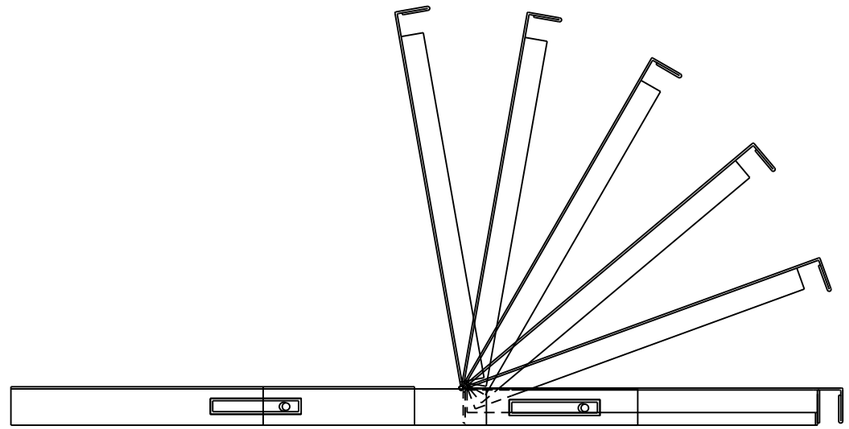
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

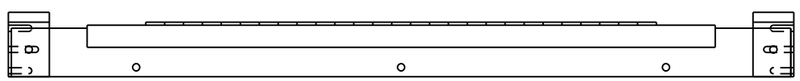
DRAWER PLAN VIEW



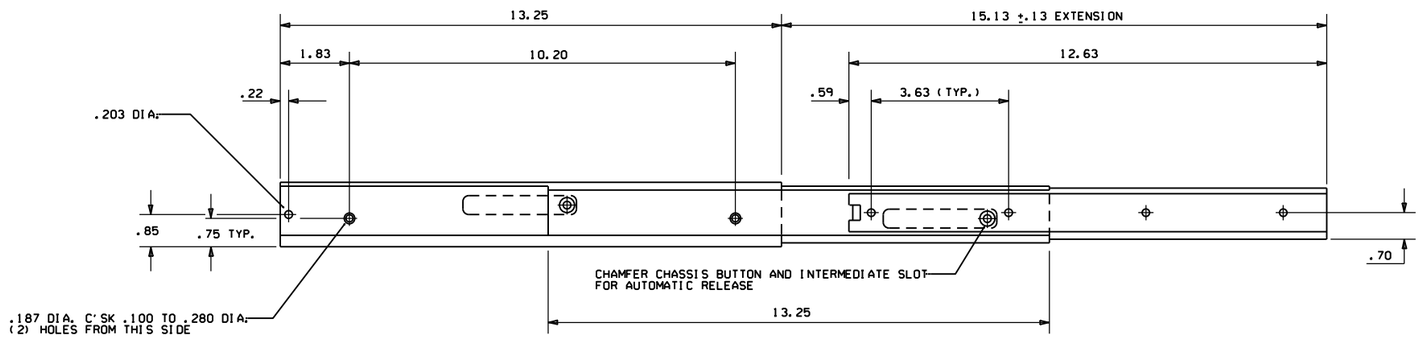




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

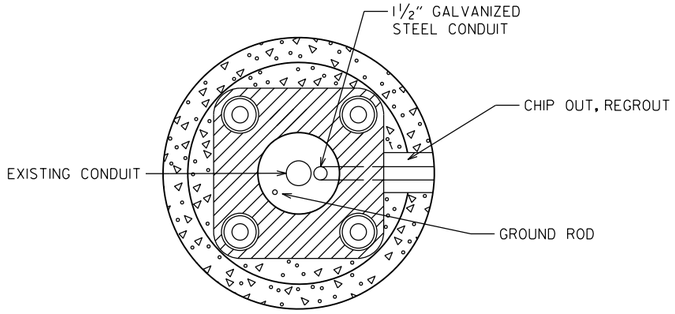
DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
6-15-05	ISSUED	

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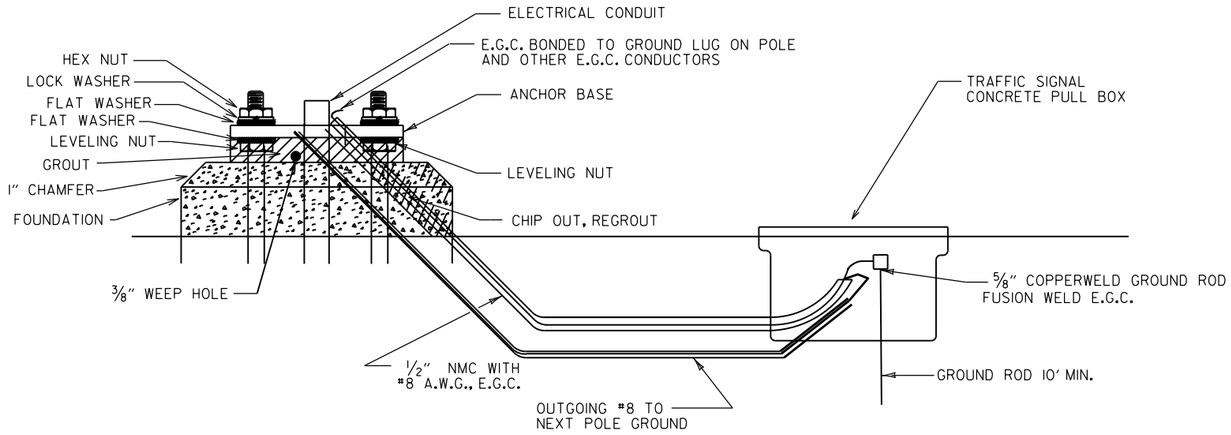
CONTROLLER CABINET UTILITY DRAWER

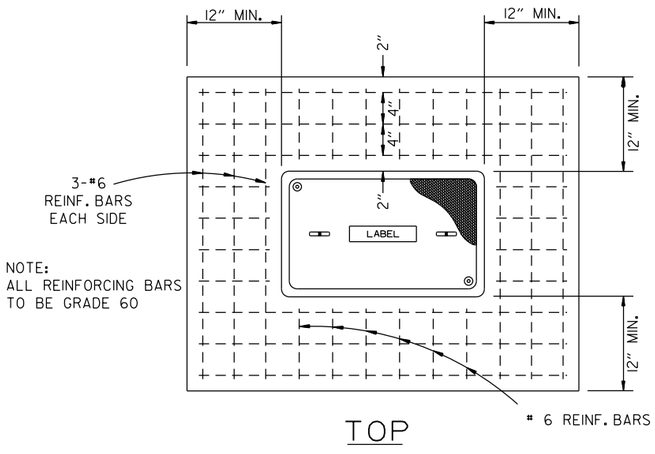
STANDARD DRAWING SD-5

CONDUIT ENTRY TO EXISTING POLE BASE

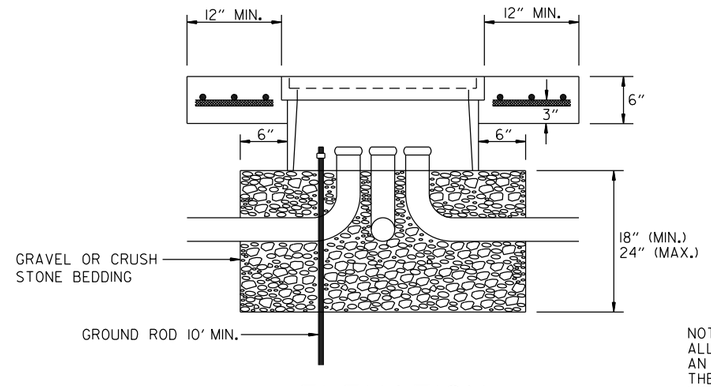


ANCHOR BASE



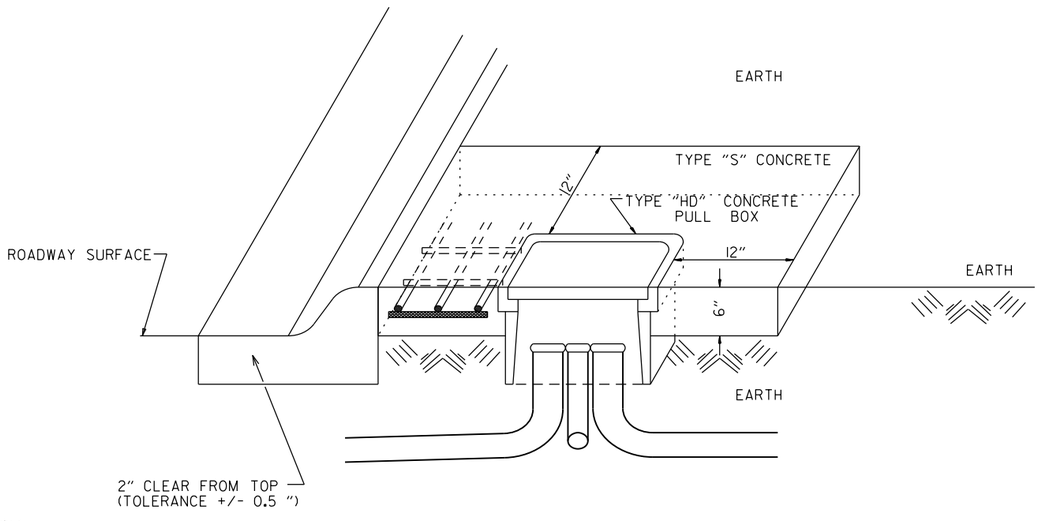


TOP



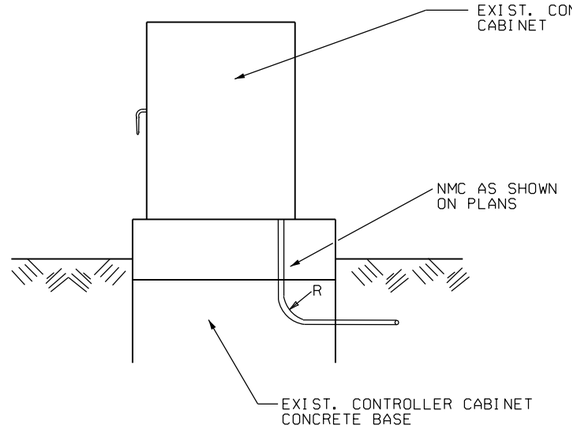
ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL



NOTE:
ALL TYPE 1 HD, TYPE 2 HD, AND TYPE 3 HD CONCRETE PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" WIDE AND 6" IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD CONCRETE PULL BOX. THE CONCRETE PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE CONCRETE PULL BOX IS REQUIRED IN CONCRETE.

CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

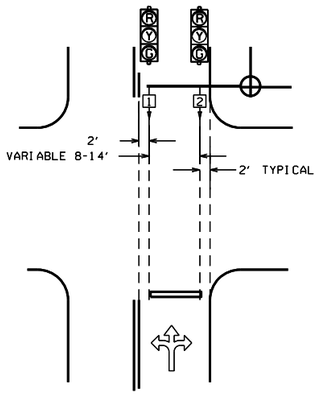
DATE	REVISION	FILMED
02-13-24	REVISED NOTES AND TYPE "HD" CONCRETE PULL BOX DETAILS	
11-16-17	REVISED NOTES	
09-02-15	REVISED PULL BOX DEPTH	
09-12-13	ISSUED AS STANDARD DRAWING	
05-21-09	REVISED GROUNDING	
07-31-08	ADDED & REVISED CONDUIT ENTRY	
06-23-04	REVISED CLEARANCE AT CURB ENTRY	
01-04-02	ADDED REINFORCING TO BOX APRON	
07-02-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

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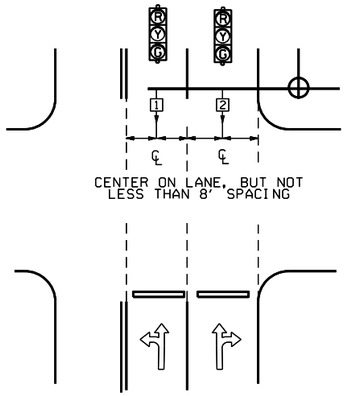
HEAVY DUTY PULL BOX

STANDARD DRAWING SD-6

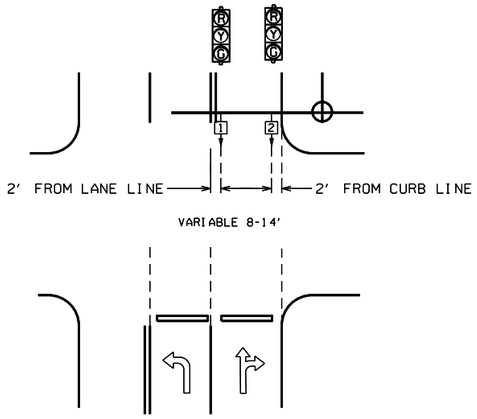
(A)



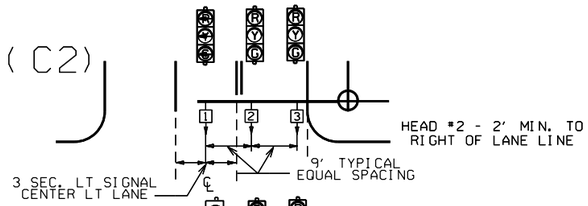
(B)



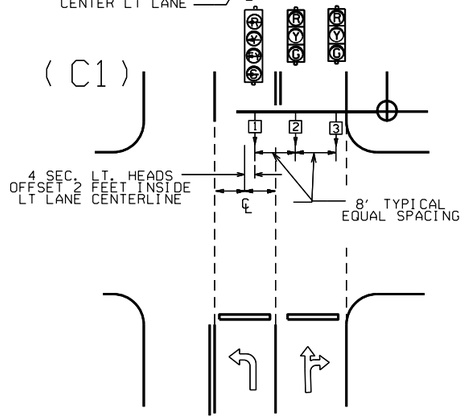
(C)



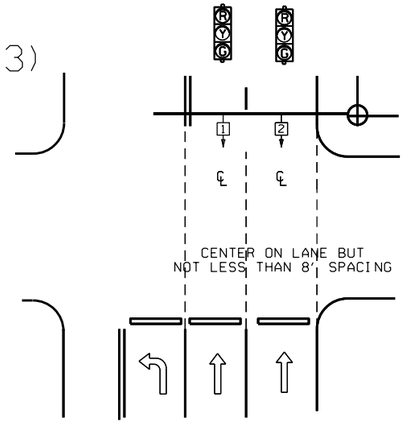
(C2)



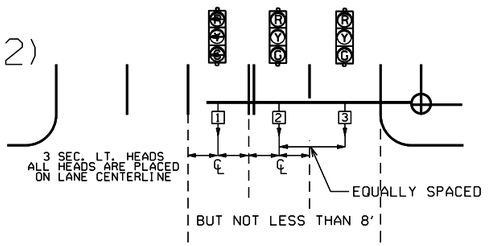
(C1)



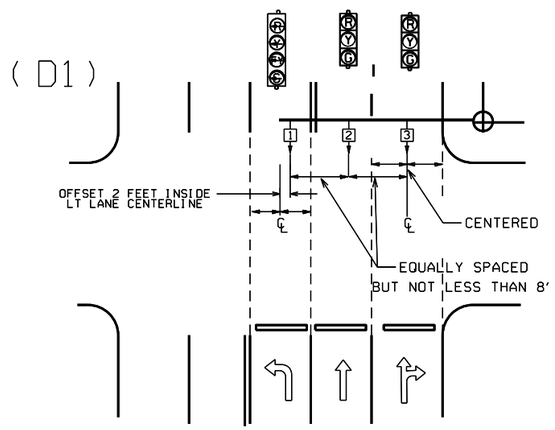
(C3)



(D2)

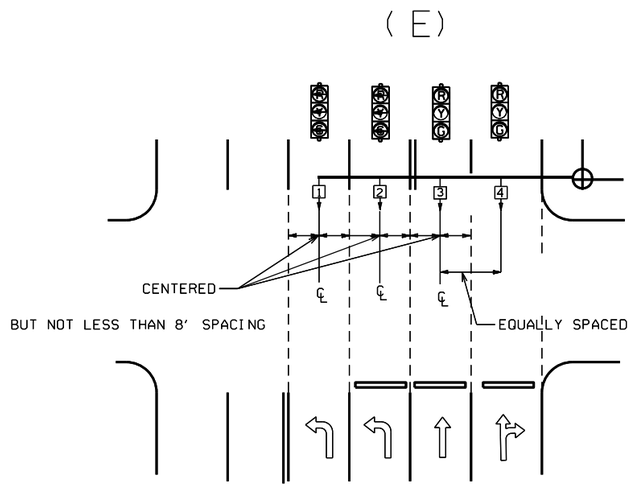


(D1)



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

(E)



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

1. FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

2. THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.

3. WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.

5. ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.

12-8-16	REVISED NOTE 6	
9-12-13	ISSUED AS STANDARD DRAWING	
3-11-10	2009 MUTCD	
12-9-99	ISSUED	
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

SIGNAL HEAD PLACEMENT

STANDARD DRAWING SD-8

NOTES:
PEDESTRIAN AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SIGN (RIO-12a) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE RIO-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF FOUR (4') FEET BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS:
DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE THE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY II FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH MAST ARMS LESS THAN 60' AND ON ROUTES WHERE THE SPEED LIMITS OF 45 MPH AND LESS WITH AN MAST ARM OF 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE THE SPEED LIMIT IS 45 MPH AND LESS AND MAST ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS:
STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN ½" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, TWELVE (12") INCH AND HAVE FIVE (5") INCH BACK PLATES:

SIGNAL HEADS AT THE END OF MAST ARM - ONE 4 SEC., 85 LB., 14.5 SQ. FT., ONE SIGN MOUNTED 3 FEET FROM SIGNAL HEAD (2'-0" X 2'-6"; 20 LB.) REMAINING SIGNAL HEADS SPACED AT 8 FT. (3 SEC., 56 LB., 8.3 SQ. FT.):
DESIGN TO ACCOMMODATE:
2 SIGNAL HEADS FOR MAST ARMS 10 FT. TO 16 FT.
3 SIGNAL HEADS FOR MAST ARMS 18 FT. TO 24 FT.
4 SIGNAL HEADS FOR MAST ARMS OVER 26 FT.

STREET NAME SIGN - 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAT 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT.
ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) - VARIABLE ARM LENGTH (MAX. WT. 75 LB., 3.3 SQ. FT.)
PEDESTRIAN SIGNALS - TWO 1 SEC., 12 INCH MOUNTED 8 FT. FROM BASE OF POLE. POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

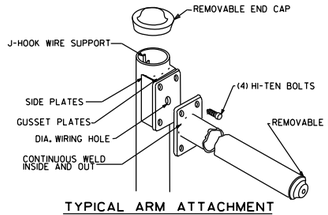
4. POLE/MAST ARM CAP - POLE AND MAST ARM CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE - HAND HOLES SHALL BE 4 IN. X 6 IN. FOR STANDARD, AND 3 IN. X 5 IN. FOR PED POLES. MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACCUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDED A HAND HOLE WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

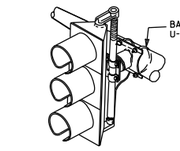
6. POLE/MAST ARM TAPER SLOPE - AVERAGE TAPER OF SIGNAL MAST ARMS AND POLE SHAFT SHALL BE 0.125 TO 0.15 INCHES PER FOOT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE MAST ARM SHALL MAINTAIN A POSITIVE SLOPE AFTER IT IS PLACED UNDER LOAD.

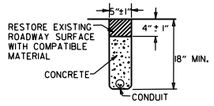
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



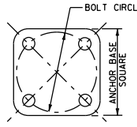
TYPICAL ARM ATTACHMENT



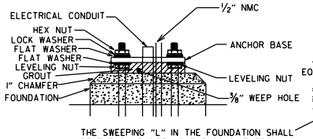
NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.

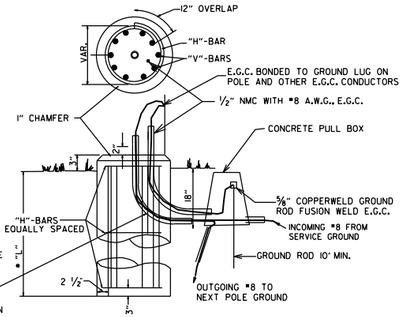


TRENCHING DETAIL
(FOR SAW CUT TRENCH IN ROADWAY)



ANCHOR BASE





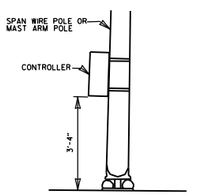
THE SWEEPING "L" IN THE FOUNDATION SHALL BE THE SAME SIZE AS THE CONDUIT FROM THE FOUNDATION TO THE PULL BOX AS SHOWN ON THE PLANS.

THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE GROUND ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

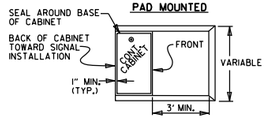
TYPICAL FOUNDATION DETAILS

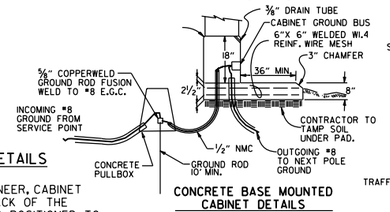
POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FOUNDATION DIAMETER	DEPTH "L"*	STEEL		
			VERTICAL	HORIZONTAL	O.C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' TO 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
OVER 12' TO 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
OVER 20' TO 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
OVER 35' TO 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
OVER 50' TO 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
TWINS TO 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
TWINS OVER 20' TO 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
TWINS OVER 44' TO 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
TWINS OVER 50' TO 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED





CONCRETE BASE MOUNTED CABINET DETAILS

CONTROLLER CABINET MOUNTING DETAILS

NOTE:
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X ⅝" GROUND ROD SHALL BE INSTALLED IN THE CONCRETE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND ½" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701FOR THE CONTROLLER. THE CONCRETE PULL BOX AND CONDUCTOR BOX SHALL BE PAID SEPERATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A ¼" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

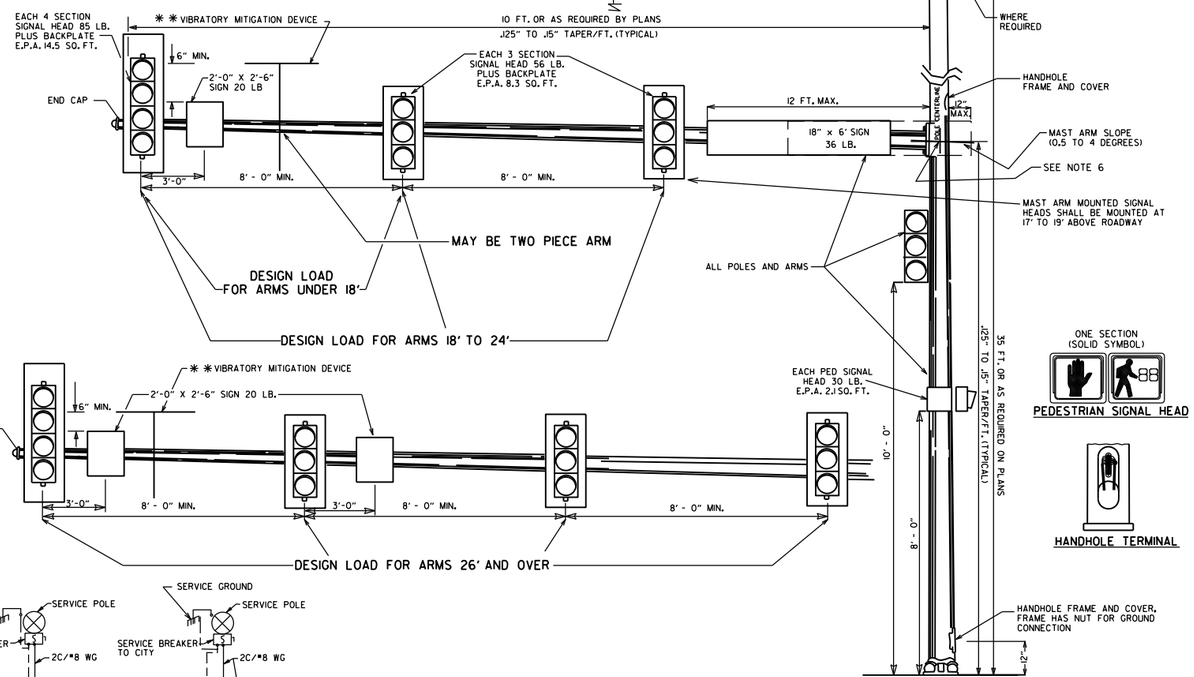
10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS "S" OR GREATER.

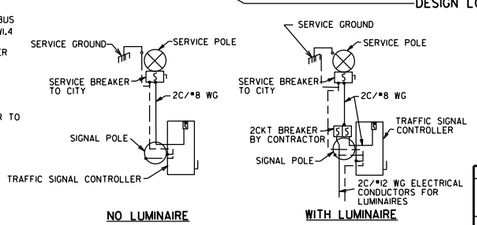
11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PEDESTRIAN PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM 707 PEDESTRIAN SIGNAL HEAD.

* WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS.

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANIFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60" X 16" X 0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH THE HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OF SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

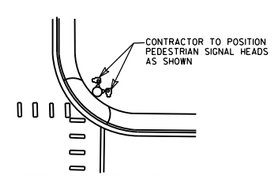
TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.





SERVICE DISCONNECT

NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES



PEDESTRIAN SIGNAL HEADS

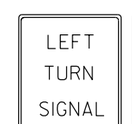
SIGNAL OPERATION NOTES:

FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

DATE	REVISION	FILMED
02-13-24	REVISED SPECIAL SIGN TO RIO-12a SIGN	
11-16-17	REVISED NOTES, ADDED PEDESTRIAN SIGNAL HEAD DETAIL, ADDED HANDHOLE TERMINAL DETAIL, ADDED TRENCHING DETAIL	
02-27-14	REVISED NOTES.	
09-12-13	ISSUED AS STANDARD DRAWING	
12-08-16	REVISED NOTES	
02-27-14	REVISED NOTES	
09-12-13	ISSUED AS STANDARD DRAWING	
07-21-11	REVISED VMD, SIGNAL HEADS	
05-21-09	REVISED GROUNDING	
07-31-08	REVISED GROUNDING	
04-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
04-18-08	REVISED AASHTO NOTES	
04-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
06-23-04	REVISED	
05-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
06-11-01	REV. NOTES & POLE MAST ARM SLOPE	
04-11-01	REVISED POLE TAPERS	
04-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	



RIO-10



RIO-12a

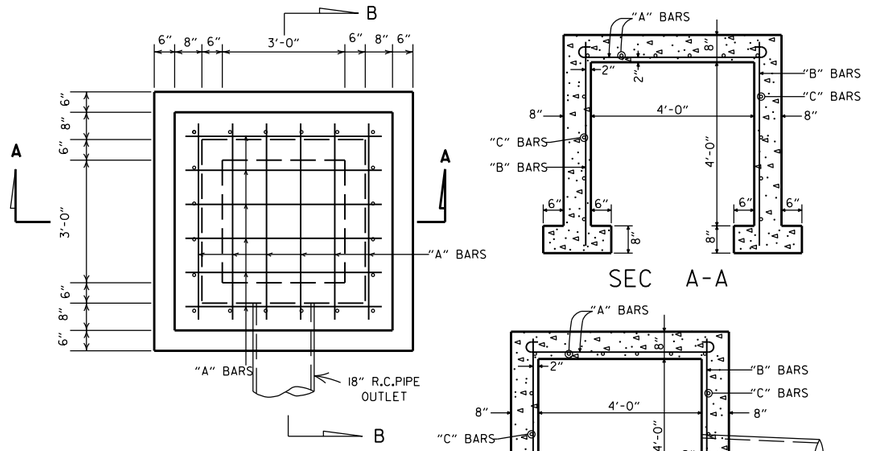


RIO-3e
(SEE MUTCD)

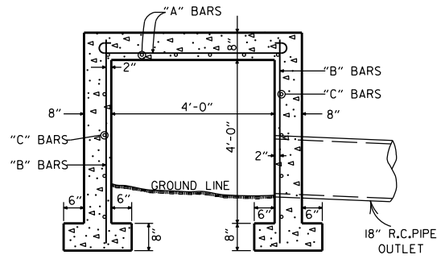
ARKANSAS STATE HIGHWAY COMMISSION

STEEL POLE WITH MAST ARM

STANDARD DRAWING SD-11



SEC A-A



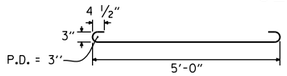
SEC B-B

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

STEEL SCHEDULE

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

ALL STEEL TO BE #4 BARS



"A" BARS

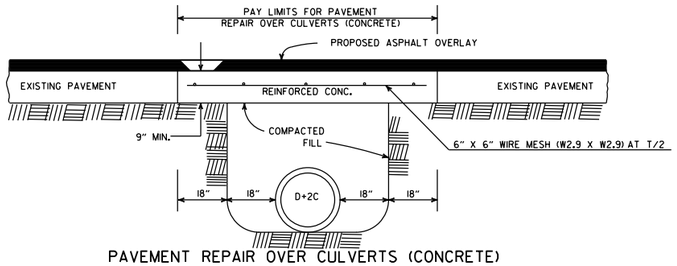
QUANTITIES

CONCRETE 3.31 CU. YDS.
REINFORCING STEEL 168 LB.

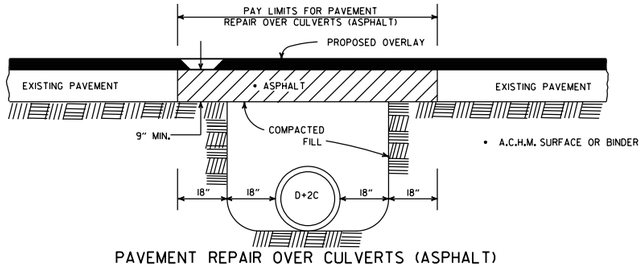
GENERAL NOTE:

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

REINFORCED CONCRETE SPRING BOX



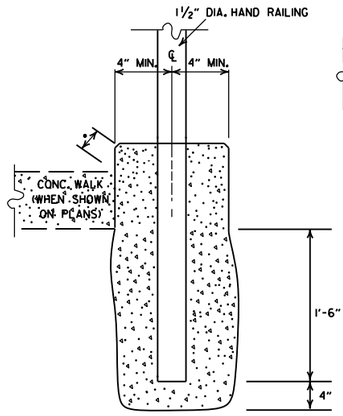
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



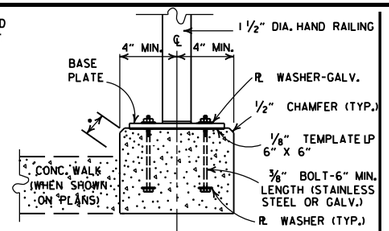
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

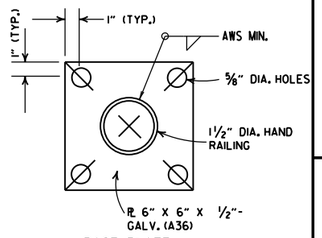
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

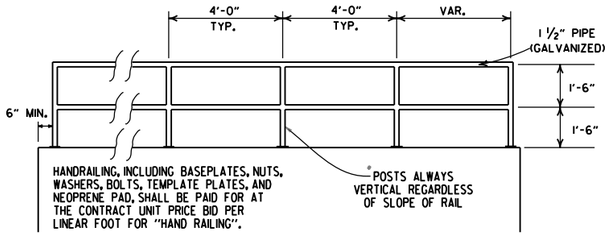


POST CONNECTION TO WALL

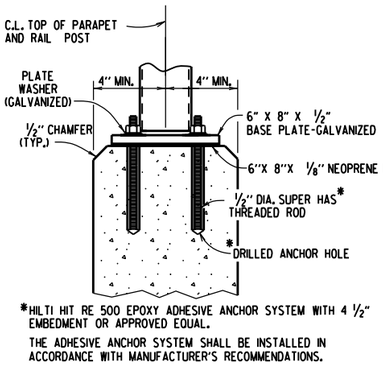


BASE PLATE

POST CONNECTION DETAILS



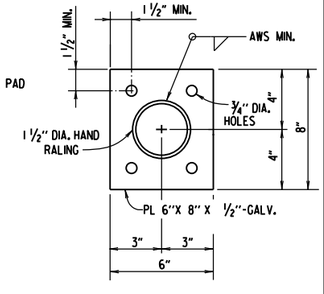
HAND RAILING SHALL CONFORM TO SECTION 633.



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

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

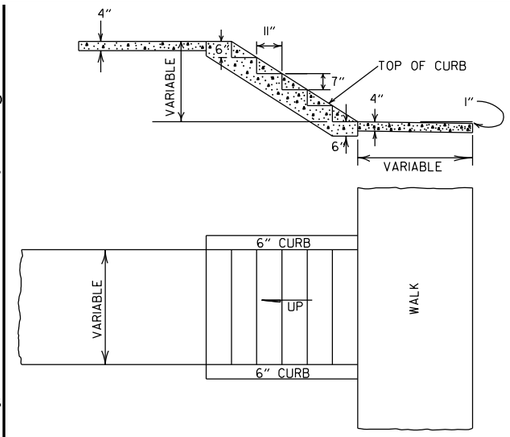
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM (EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

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

DETAILS OF CONCRETE STEPS & WALKS

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

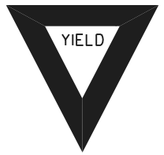
STANDARD DRAWING SI - 1

R1-1



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

R1-2



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

R2-1



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

W3-5



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

W3-5a



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

R4-1



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

R4-2



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

R2-6aP



48"X36"

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

R5-1



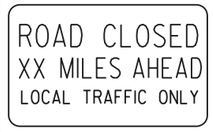
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



48"X30"

RII-3A



60"X30"

RII-4



60"X30"

W21-5a



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

W1-1



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

W1-2



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

R2-11



36"X48"

W1-3



STD. 48"X48"

W1-4



STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



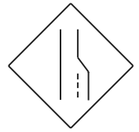
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

R56-1



STD. 18"X18"

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



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

W9-2



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

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



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

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

W8-11



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

W8-9



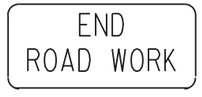
STD. 36"X36"
FWY. 48"X48"

G20-1



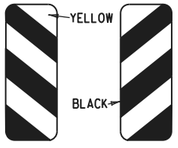
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9



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

M4-10



48"X18"

GENERAL NOTES:

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

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

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

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

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

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

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

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

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

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

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

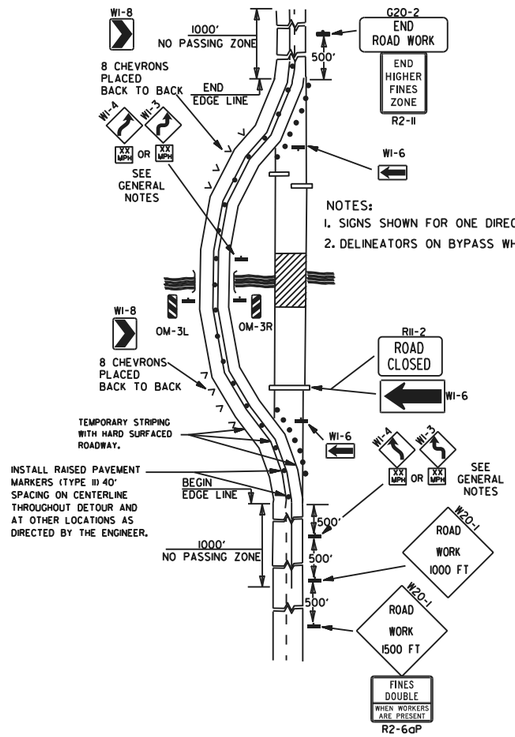
DATE REV	DESCRIPTION
08-14-25	REPLACED R55-1 WITH R2-6aP, ADDED R2-11 & REVISED NOTE 10
11-07-19	REVISED FOR MASH
04-13-17	DELETED RSP-1 & ADDED W21-5a
09-02-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS, REVISED ROAD WORK NEXT XX MILES
12-15-11	REVISED W24-1

ARDOT ARKANSAS DEPARTMENT OF TRANSPORTATION

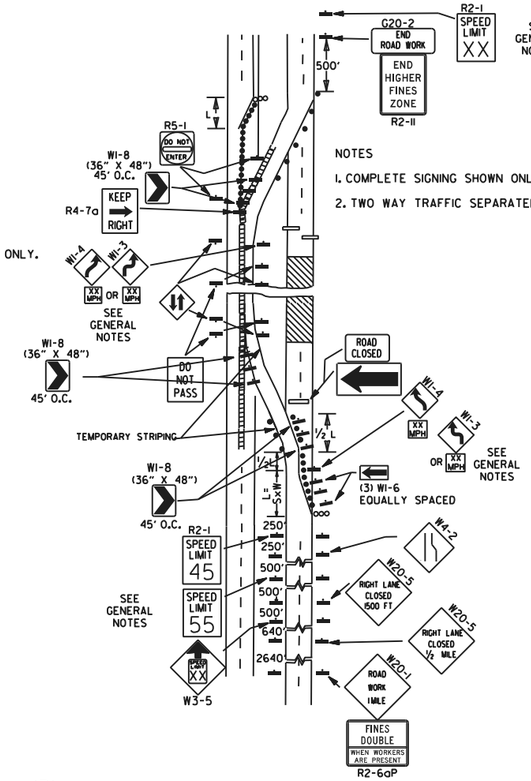
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

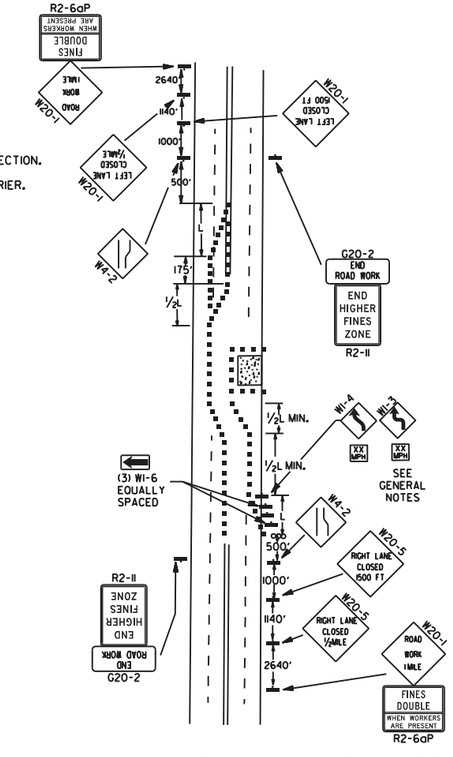
DATE EFFECTIVE	STANDARD DRAWING	TC-1
08-14-2025		



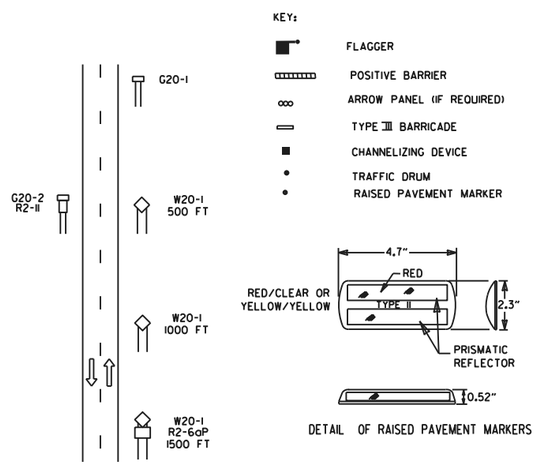
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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



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



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

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

WHERE:

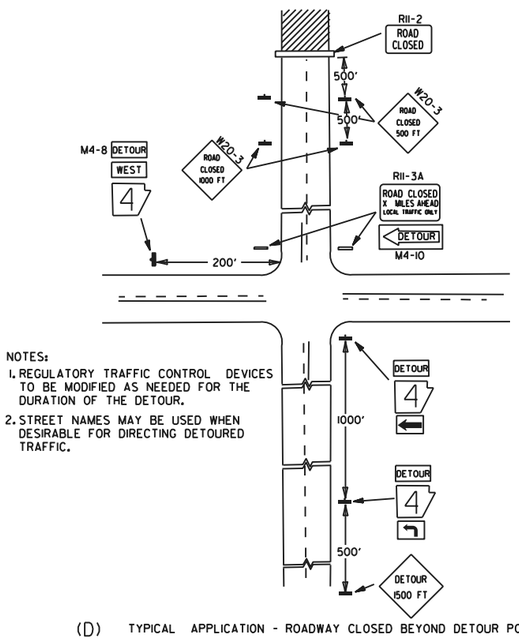
L= MINIMUM LENGTH OF TAPER.

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

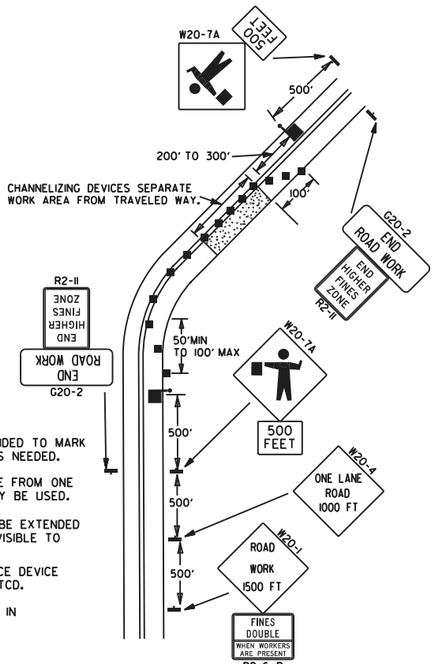
W= WIDTH OF OFFSET.

GENERAL NOTES:

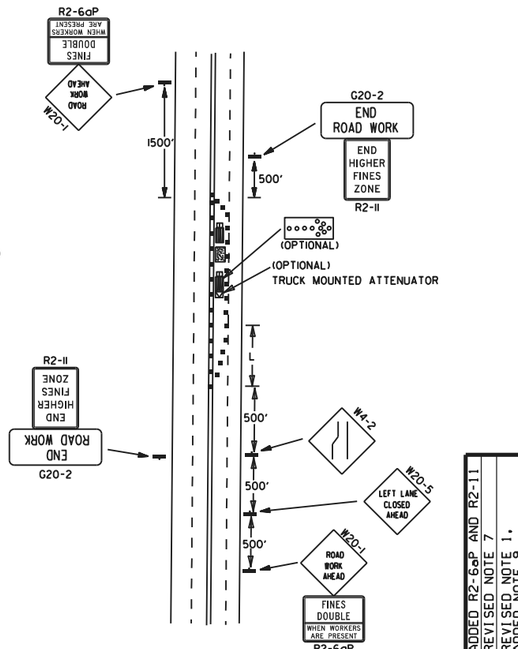
1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT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



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



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



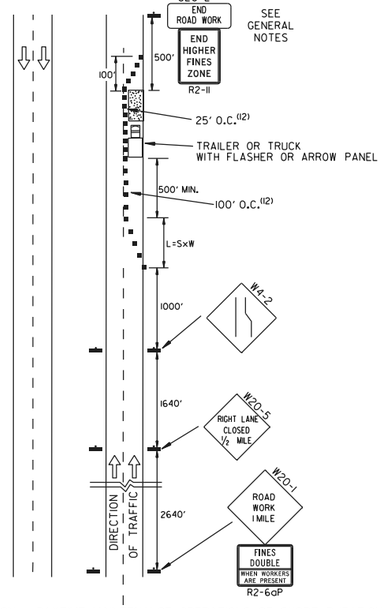
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

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

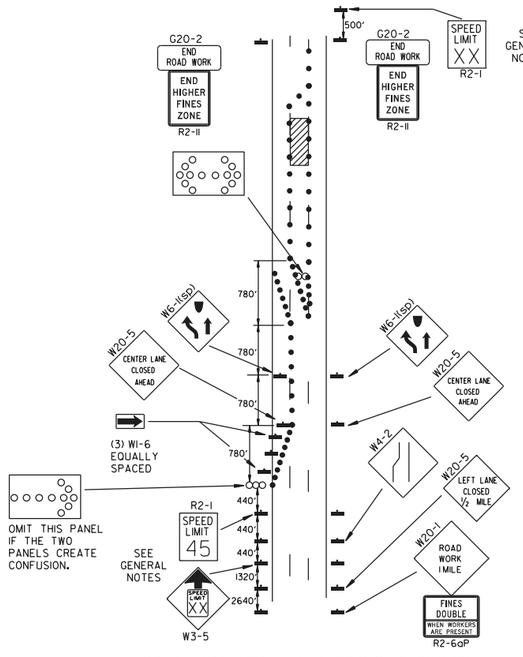
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

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



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



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

KEY:

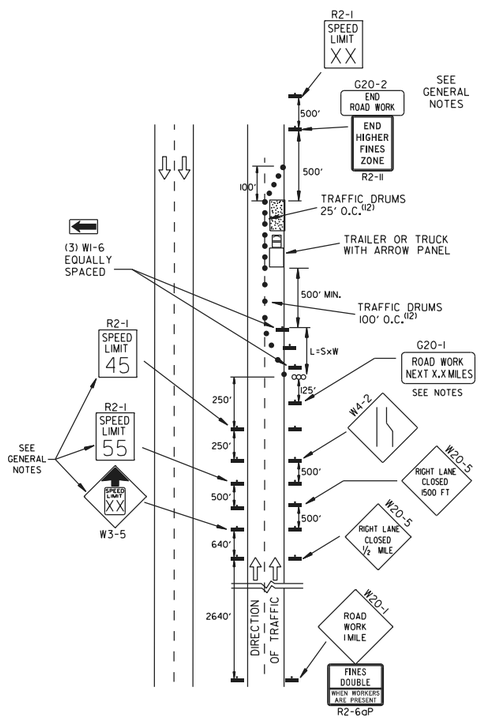
○○○ ARROW PANEL (IF REQUIRED)

■ CHANNELIZING DEVICE

● TRAFFIC DRUM

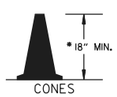
GENERAL NOTES:

1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-I(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-I 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-I(45) SHALL BE OMITTED. ADDITIONAL R2-I 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-I(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. THE G20-1 SIGN SHOULD BE INSTALLED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
8. FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
10. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
12. ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR TRAFFIC DRUMS, TUBULAR MARKERS MAY BE USED AT 50' O.C. IN STABILIZATION ZONES AND AT 10' O.C. DIRECTLY ADJACENT TO CONSTRUCTION OPERATIONS AND AT EXIT TAPERS. TUBULAR MARKERS SHALL BE STABILIZED WITH WEIGHTED BASES IN ACCORDANCE WITH THE M.U.T.C.D.

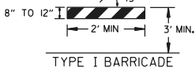


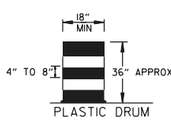
(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

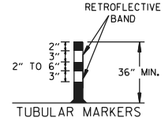
CHANNELIZING DEVICES

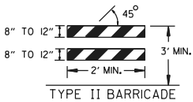


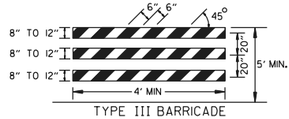
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.



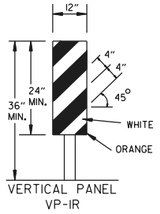


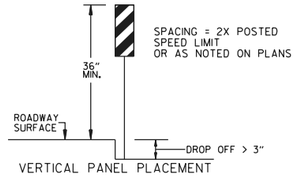


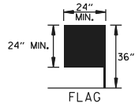




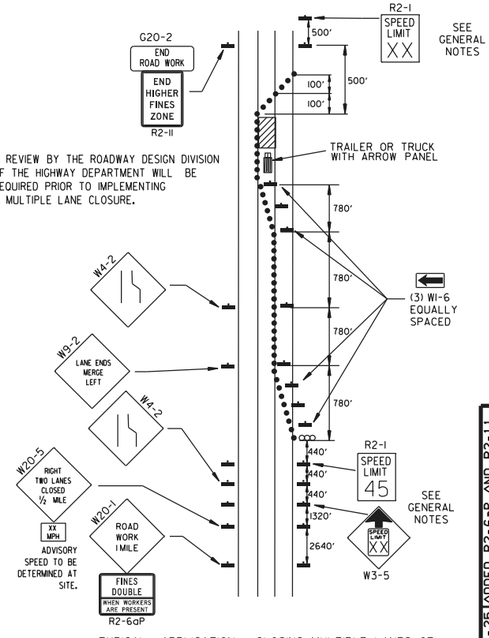
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.







FLAG SHALL BE OF GOOD GRADE RED MATERIAL



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

TRAFFIC CONTROL DEVICES

NON-INTERSTATE

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

INTERSTATE

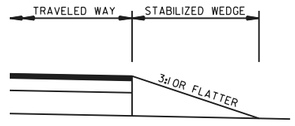
VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 3"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 6"	EDGE OF TRAVELED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

INTERSTATE AND NON-INTERSTATE

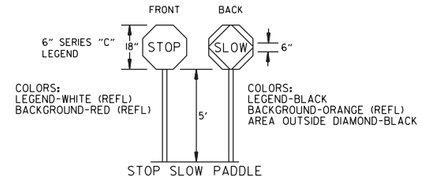
FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

GENERAL NOTES:

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



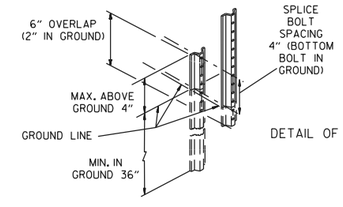
NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.

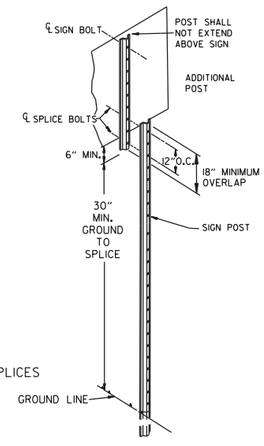


NOTES:
USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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

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





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

ARKANSAS STATE HIGHWAY COMMISSION

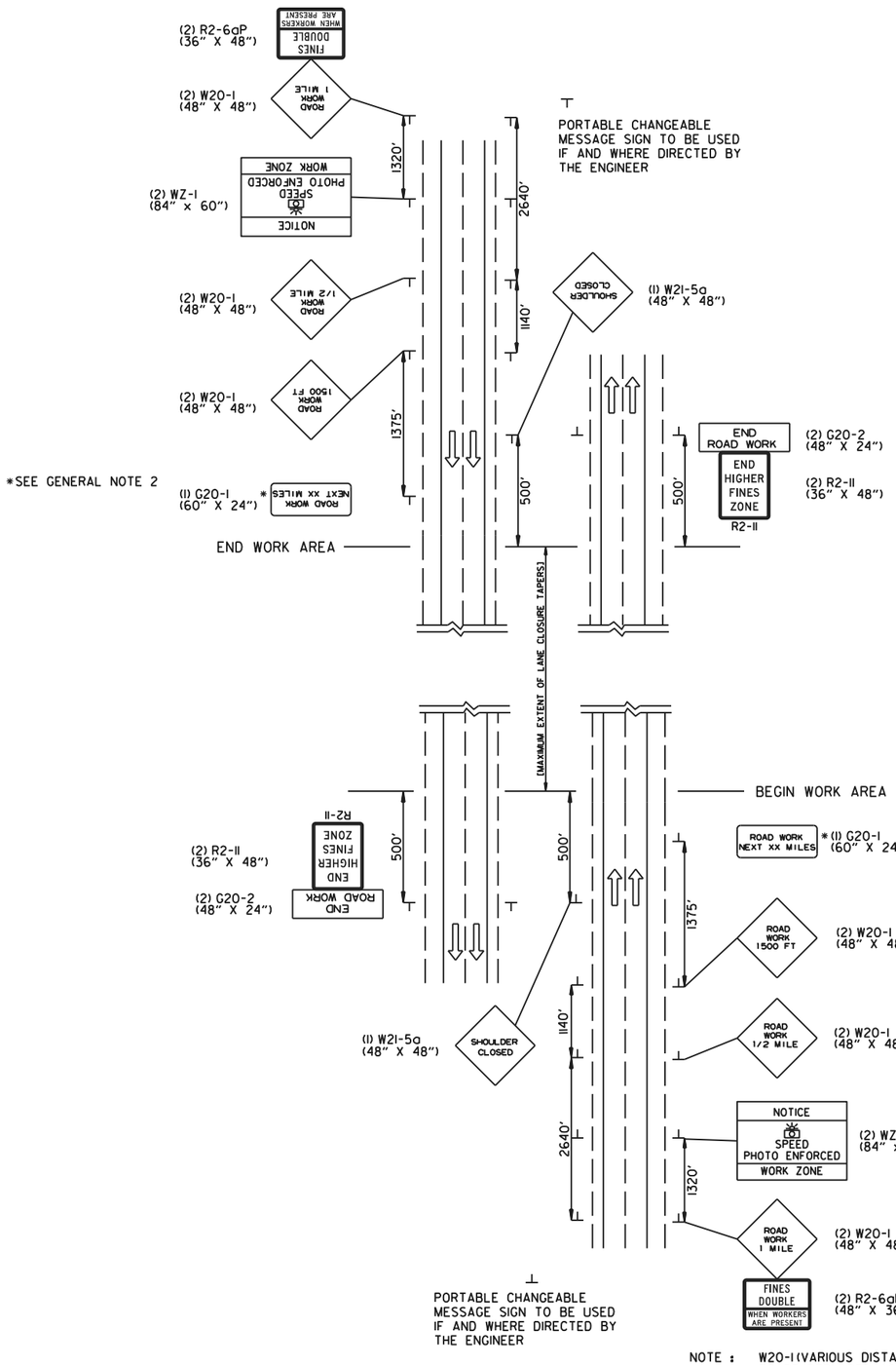
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

DATE EFFECTIVE 08-14-2025

STANDARD DRAWING

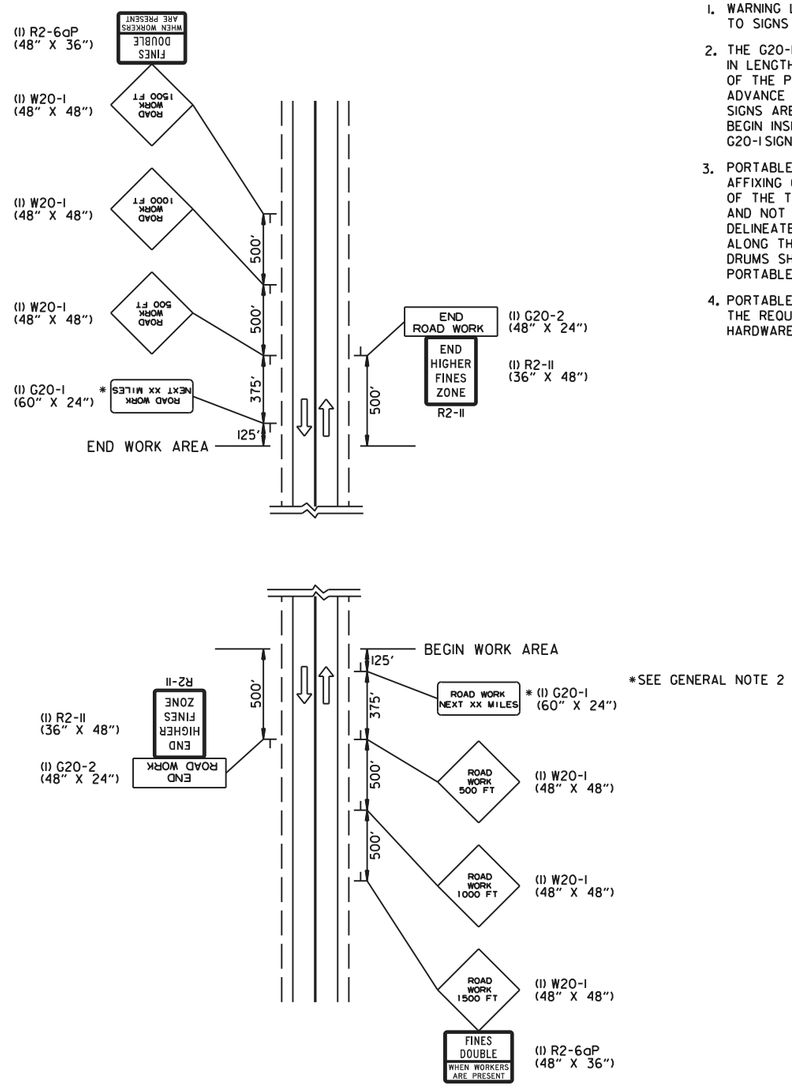
TC-3

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



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

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



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

GENERAL NOTES:

1. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
2. THE G20-1 SIGN SHOULD BE INSTALLED ON JOBS OF OVER TWO MILES IN LENGTH. WHEN THE LANE CLOSURE IS NOT AT THE BEGINNING OF THE PROJECT, THE G20-1 SIGN SHALL BE ERECTED 125' IN ADVANCE OF THE JOB LIMIT. ADDITIONAL W20-1 (1 MILE OR 1500 FT) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS. THE DISTANCE DISPLAYED ON THE G20-1 SIGN SHALL BE STATED TO THE NEAREST WHOLE MILE.
3. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THIS DEVICE SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR PORTABLE CHANGEABLE MESSAGE SIGNS.
4. PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

DATE REV	ISSUED	DESCRIPTION
08-14-25		

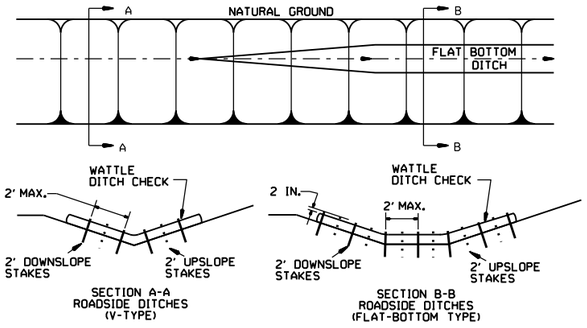
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

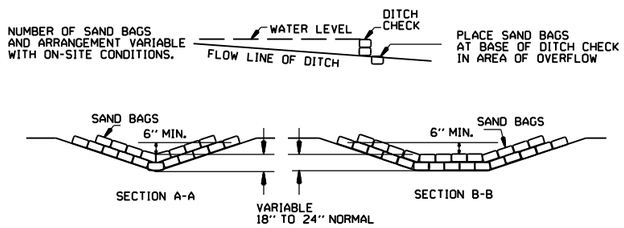
DATE EFFECTIVE	STANDARD DRAWING	TC-6
08-14-2025		

GENERAL NOTES

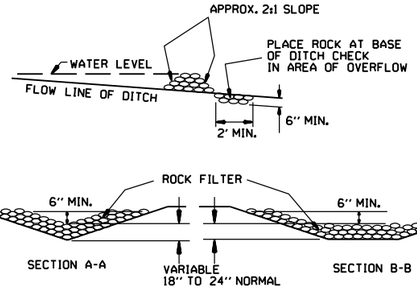
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

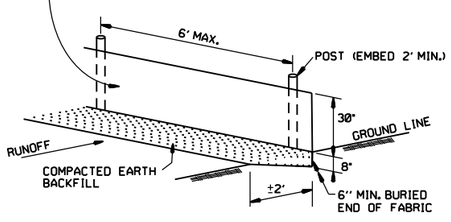


ROCK DITCH CHECK (E-6)

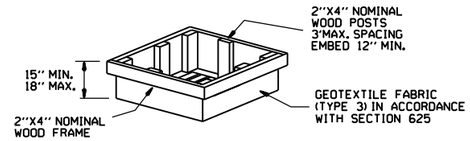
GENERAL NOTES

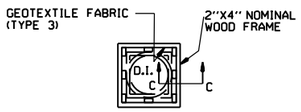
GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

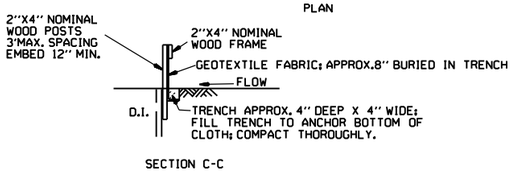
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



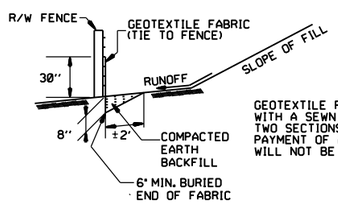
SILT FENCE (E-11)





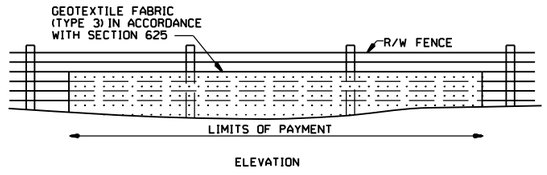


DROP INLET SILT FENCE (E-7)



GENERAL NOTES

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



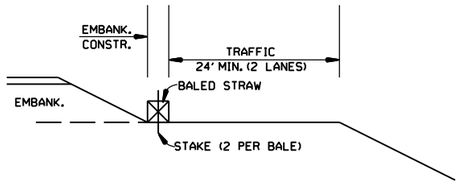
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

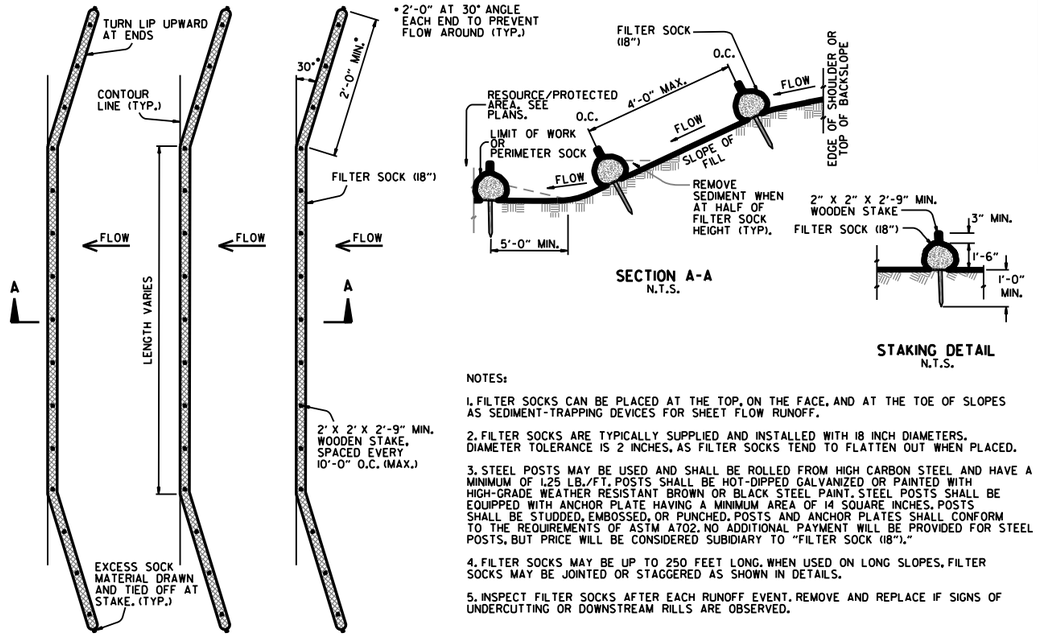
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

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



BALED STRAW FILTER BARRIER (E-2)



NOTES:

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

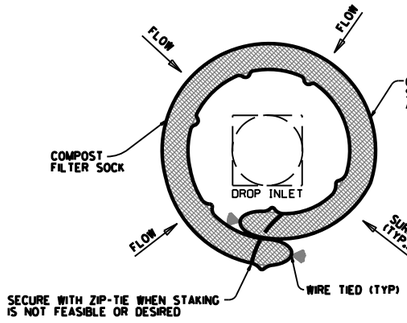
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

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

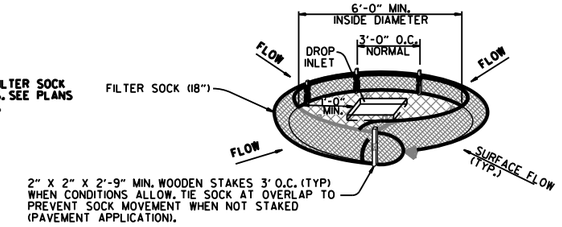
4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

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

FILTER SOCK ALONG SLOPE (E-3)



DROP INLET PLAN VIEW
N.T.S.



DROP INLET PERSPECTIVE VIEW
N.T.S.

NOTES:

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

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

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

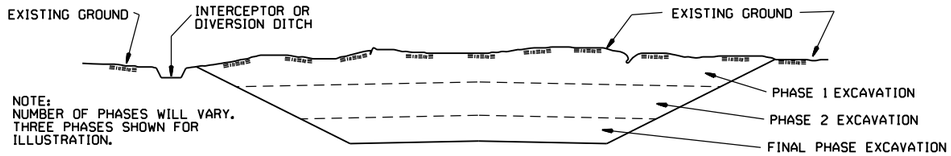
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



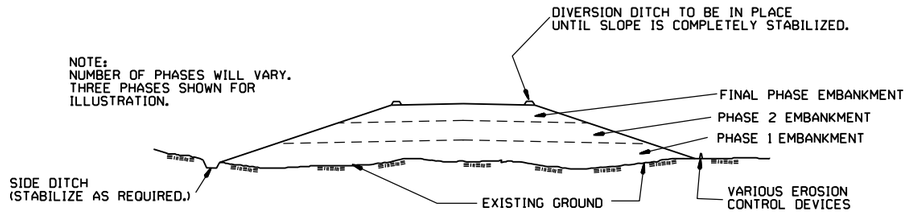
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

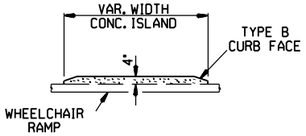
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

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

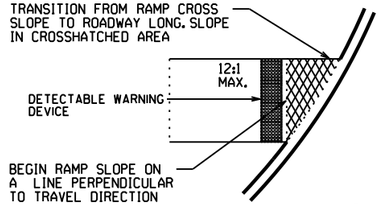
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

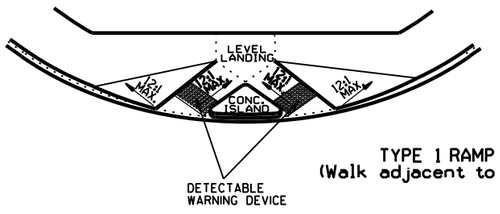
STANDARD DRAWING TEC-3



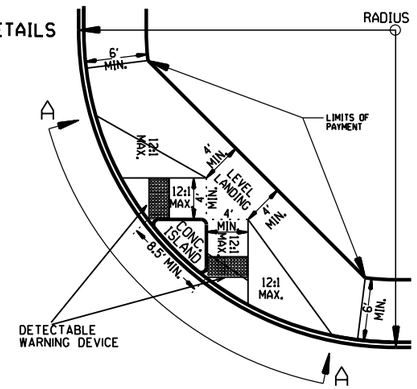
CONCRETE ISLAND DETAIL

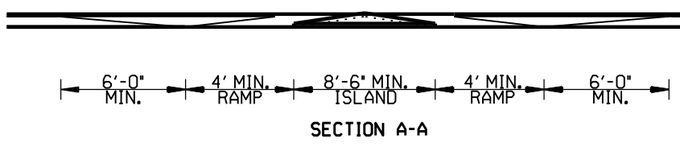


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

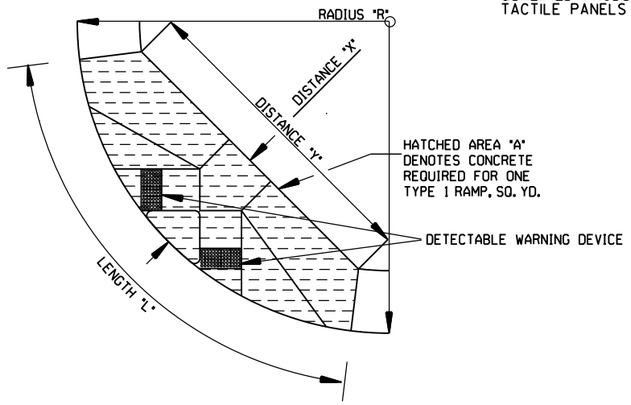




SECTION A-A

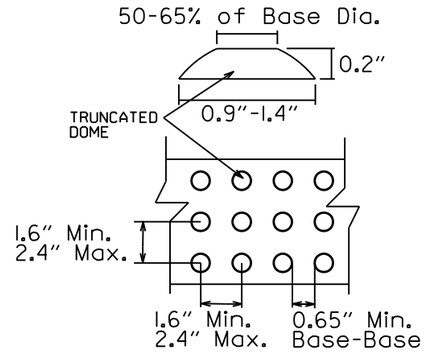
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R" FEET	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



GENERAL NOTES FOR DETECTABLE WARNING DEVICES

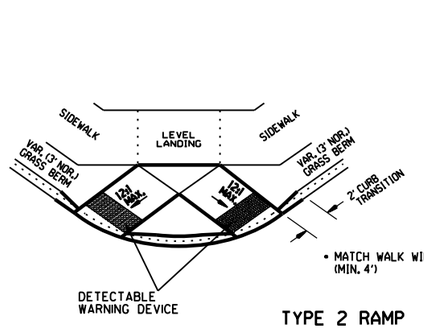
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



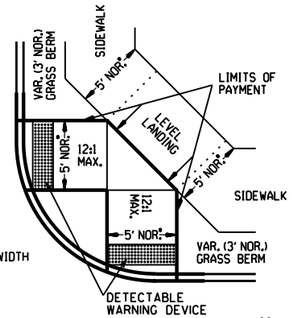
DETECTABLE WARNING DEVICE DETAIL

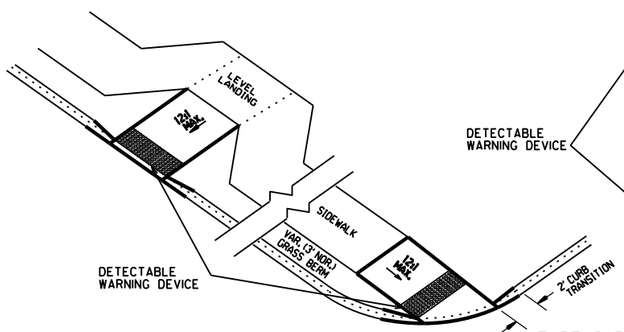
GENERAL NOTES:

IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

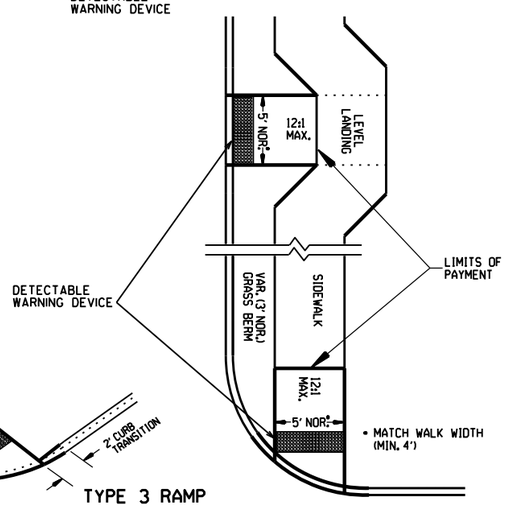


TYPE 2 RAMP

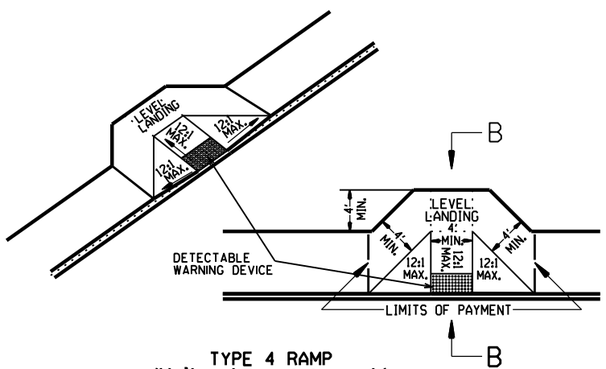




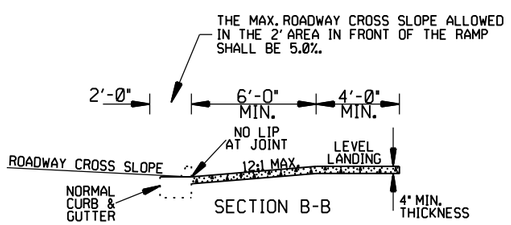
TYPE 3 RAMP



NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.



TYPE 4 RAMP
(Walk adjacent to curb)



SECTION B-B

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

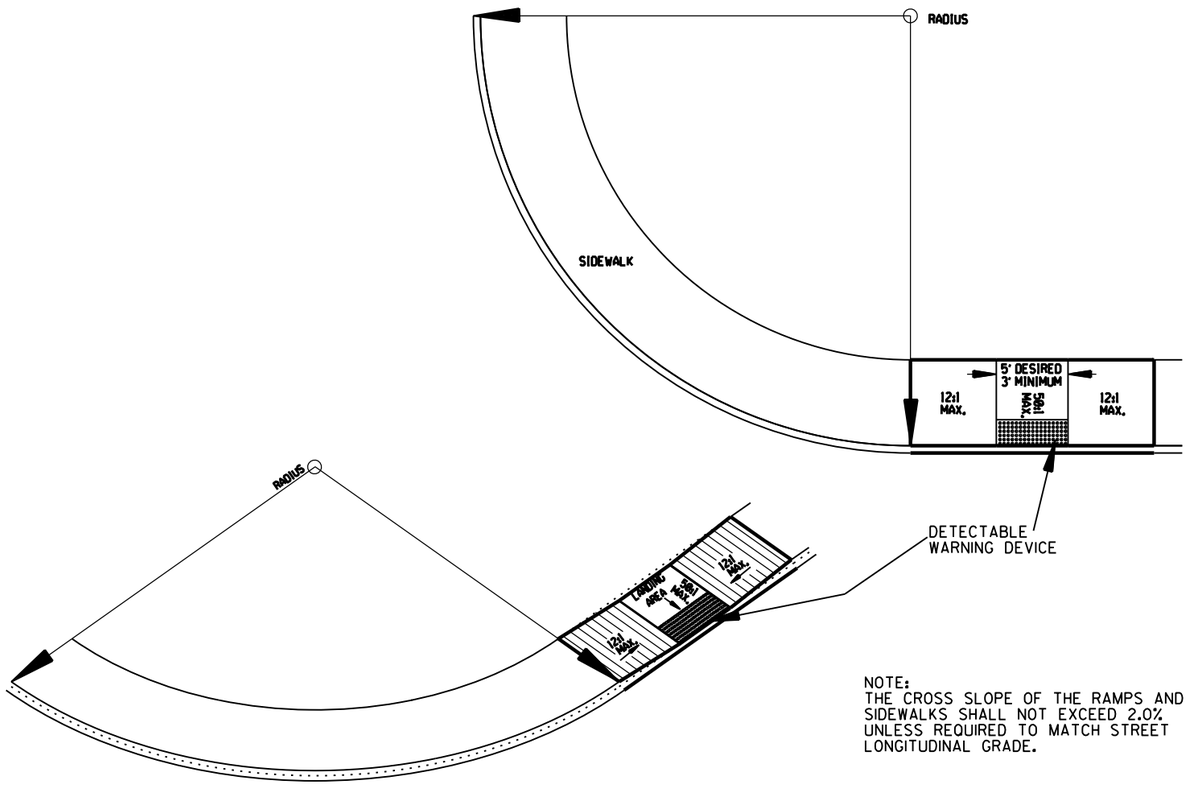
AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM8#TO12#MAX.SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD."CONC. ISLD."IN PAY ITEM	------
6-02-76	ISSUED-P.H.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

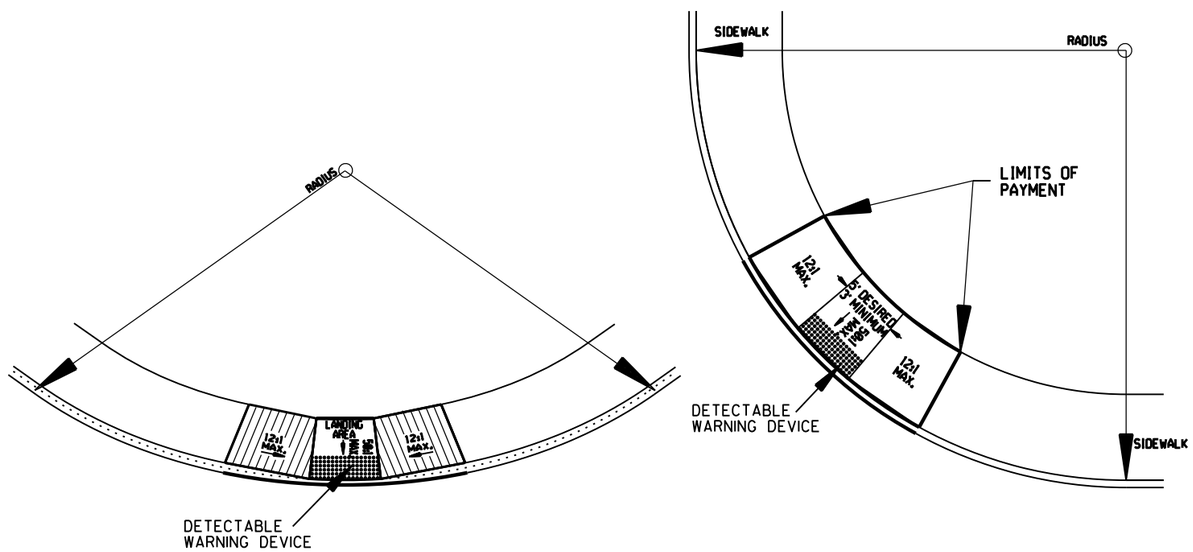
WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS

STANDARD DRAWING WR-1



NOTE:
THE CROSS SLOPE OF THE RAMPS AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.

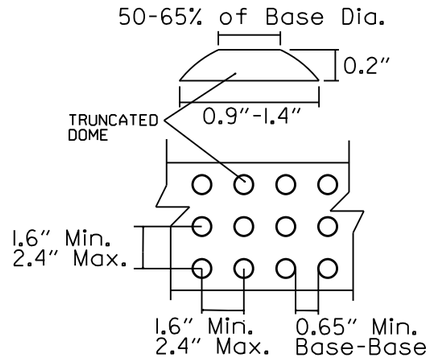
TYPE 5 RAMP



TYPE 6 RAMP

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.
DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE.
DETECTABLE WARNING DEVICE SHALL BE ON THE ARDOT QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

GENERAL NOTES:

IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4".
THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE EXISTING WALK WIDTH OR 36", WHICHEVER IS GREATER.
MINOR MODIFICATIONS OF THESE DETAILS, AS APPPROVED BY THE ENGINEER, MAY BE MADE TO ADJUST TO LOCAL CONDITIONS.

RAMP SELECTION CRITERIA

FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
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SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.

AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
10-9-03	REVISED GENERAL NOTES & ADDED NOTE.	
4-10-03	REVISED DETECTABLE WARNING DEVICE DETAIL	
8-22-02	ADDED DETECTABLE WARNING DEVICES DETAILS	
11-18-98	REV. FOURTH CHOICE NOTE	
8-12-98	REVISED TEXTURE	
7-02-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

WHEELCHAIR RAMPS ALTERATIONS ONLY

STANDARD DRAWING WR-2