DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	1	160
				(2)	HWY. 61-S. HOLLAND ST. (HWY.18) (BLYTHEVILLE) (S)			

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 61-S. HOLLAND ST.
(HWY. 18) (BLYTHEVILLE) (S)

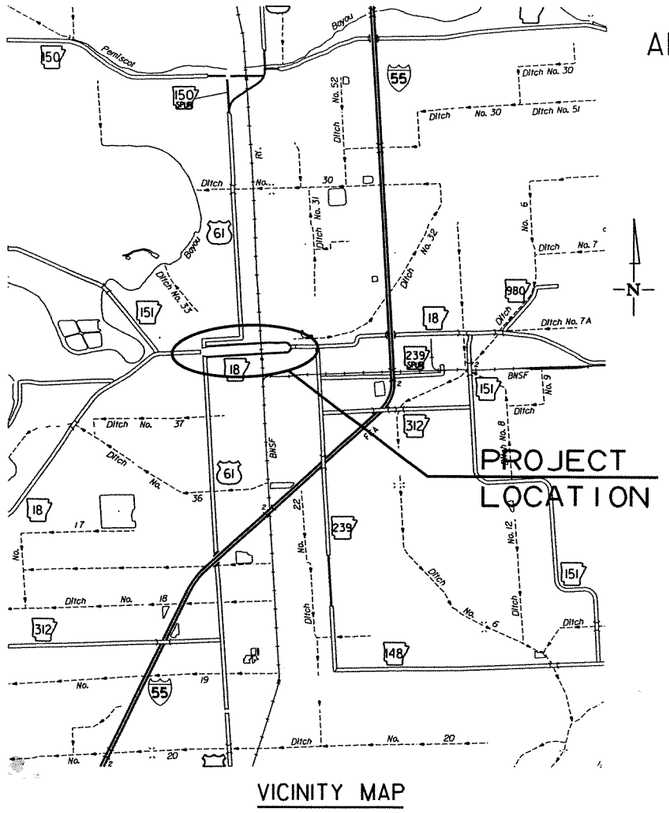
MISSISSIPPI COUNTY

ROUTE 18 SECTION 7

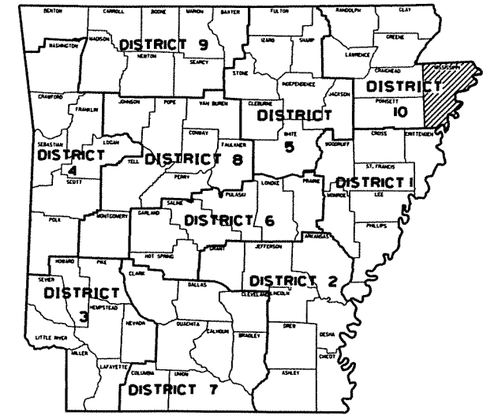
JOB 100740

FED. AID PROJ. STP-9051(7)

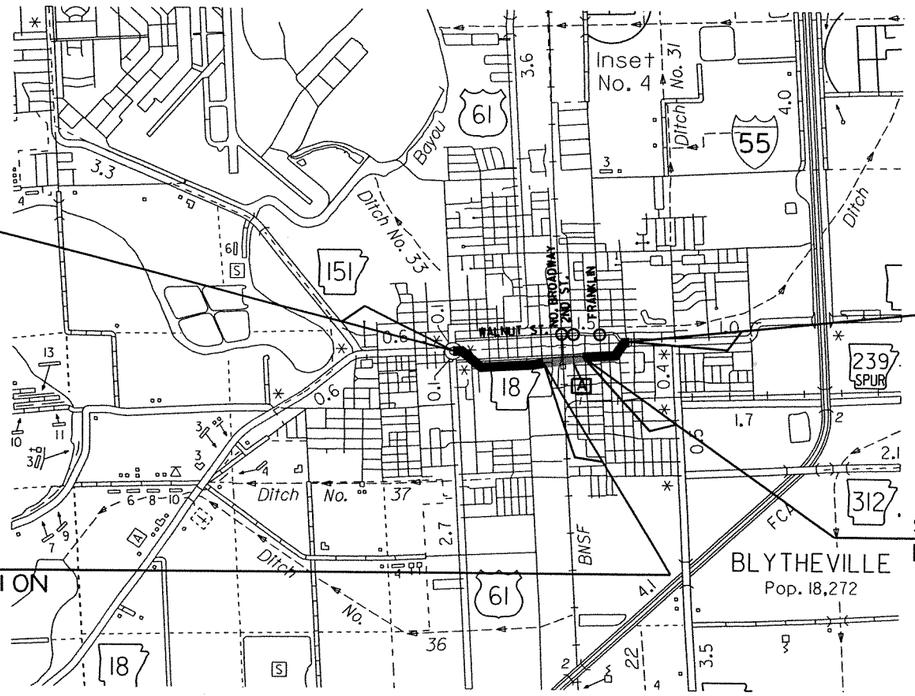
0 1 2



VICINITY MAP



ARK. HWY. DIST. NO. 10



STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.00

STA. 177+64.02
END JOB 100740

STA. 146+14.41
BEGIN JOB EXCEPTION

STA. 156+89.59
END JOB EXCEPTION

BRIDGE DATA

[A] STA. 146+50.91 BRIDGE END
1000' 2¼" COMP. PLATE GIRDER
& COMP. W-BEAM UNITS
58' CLEAR ROADWAY
1002.18' BRIDGE LENGTH
STA. 156+53.09 BRIDGE END
(SHOWN FOR INFORMATION ONLY)

○ SIGNAL EQUIPMENT REMOVAL

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2032
2012 ADT	14,000
2032 ADT	17,000
2032 DHV	1,870
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	8%
DESIGN SPEED	30 MPH

	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°55'38.6"	N 35°55'32.8"	N 35°55'39"
LONGITUDE	W 89°55'7.5"	W 89°54'29.4"	W 89°53'50.4"

GROSS LENGTH OF PROJECT	6775.02	FEET	OR	1.283	MILES
NET " " ROADWAY	5699.84	"	"	1.080	"
NET " " BRIDGES	0.00	"	"	0.000	"
NET " " PROJECT	5699.84	"	"	1.080	"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8383
SCOTT E. BENNETT

P.E. 100663
NON-PART.

11/30/09 r100740.dgn/title sheet

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
8-3-12				6	ARK.			
8-24-12				JOB NO.		100740	2	160

(2) INDEX, GOVERNING SPECIFICATIONS, AND GENERAL NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 7605
MICHAEL D. FUGETT
8/27/12

INDEX OF SHEETS

SHEET NO.	TITLE	DRWG.NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES		
3 - 5	TYPICAL SECTIONS OF IMPROVEMENT		
6 - 7	SPECIAL DETAILS		
8 - 19	TEMPORARY EROSION CONTROL DETAILS		
20 - 32	MAINTENANCE OF TRAFFIC DETAILS		
33 - 38	PERMANENT PAVEMENT MARKING DETAILS		
39 - 46	QUANTITY SHEETS		
47 - 48	SUMMARY OF QUANTITIES AND REVISIONS		
49 - 54	SURVEY CONTROL DETAILS		
55 - 65	PLAN AND PROFILE SHEETS		
66 - 67	SUMMARY OF SIGNAL QUANTITIES AND NOTES		
68 - 88	SIGNALIZATION PLAN SHEETS		
89 - 95	SIGNALIZATION DETAILS		
96	CURBING DETAILS	CG-1	11-29-07
97	DETAILS OF DRIVEWAYS & ISLANDS	DR-1	11-29-07
98	FLARED END SECTION	FES-1	10-18-96
99	FLARED END SECTION	FES-2	10-18-96
100	DETAILS OF DROP INLETS & JUNCTION BOXES	FPC-9	11-16-01
101	DETAILS OF DROP INLETS (TYPE C)	FPC-9E	8-22-02
102	DETAILS OF DROP INLET (TYPE MO)	FPC-9M	8-22-02
103	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	FPC-9S	7-26-12
104	GUARD RAIL DETAILS (TYPE C) STREET/ROAD BARRICADE OR TEMPORARY INSTALLLATION	GR-7	7-14-10
105	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	12-15-11
106	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	PCM-1	12-15-11
107	PAVEMENT MARKING DETAILS	PM-1	11-17-10
108	DETAILS OF PIPE UNDERDRAIN	PU-1	4-10-03
109	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	PCP-1	12-15-11
110	PLASTIC PIPE CULVERT (PVC F949)	PCP-2	12-15-11
111	PAVEMENT MARKING FOR RAILROAD CROSSING DETAILS	RRS-1	11-20-08
112	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	SE-2	10-18-96
113	STANDARD HIGHWAY SIGNS & SUPPORTS ASSEMBLIES	SHS-1	4-17-08
114	U-CHANNEL POST ASSEMBLIES	SHS-2	10-09-03
115	DETAILS OF SPECIAL ITEMS	SI-1	7-26-12
116	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	12-15-11
117	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	3-11-10
118	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
119	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12-15-11
120	TEMPORARY EROSION CONTROL DEVICES	TEC-2	6-02-94
121	TEMPORARY EROSION CONTROL DEVICES	TEC-3	11-03-94
122	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	WR-1	11-10-05
123 - 160	CROSS SECTIONS		

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

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 IF AND WHERE DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
7. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2003, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - TRAINING PROGRAM - JOB 100740
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-2	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1	BIDDING REQUIREMENTS AND CONDITIONS
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3	CONTROL OF WORK
107-1	WORKER VISIBILITY
108-1	LIQUIDATED DAMAGES
110-1	PROTECTION OF WATER QUALITY AND WETLANDS
303-1	AGGREGATE BASE COURSE
404-1	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1	MINERAL AGGREGATES
410-3	ASPHALT CONCRETE COLD PLANT MIX
411-1	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
606-2	PIPE CULVERTS
711-1	CONCRETE PULL BOX
714-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL MAST ARMS AND POLES
715-1	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL PEDESTAL POLES
718-2	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2	THERMOPLASTIC PAVEMENT MARKING MATERIAL
723-1	GENERAL REQUIREMENTS FOR SIGNS
JOB 100740	ARCHEOLOGICAL MONITORING
JOB 100740	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 100740	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 100740	CABINET DRAWER ASSEMBLY
JOB 100740	CONTROLLER CABINET MODIFICATION
JOB 100740	COORDINATION OF WORK
JOB 100740	EDGE CARD VIDEO PROCESSOR
JOB 100740	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 100740	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 100740	EXTENSION FOR PIPE CULVERTS
JOB 100740	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 100740	HIGH PERFORMANCE PAVEMENT MARKING
JOB 100740	INSURANCE, CONSTRUCTION, AND FLAGGING ON RAILROAD PROPERTY (BNSF)
JOB 100740	INTERNET BIDDING
JOB 100740	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 100740	LED TRAFFIC SIGNAL HEAD
JOB 100740	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 100740	MAINTENANCE OF PEDESTRIAN TRAFFIC
JOB 100740	MAINTENANCE OF TRAFFIC
JOB 100740	PARTNERING REQUIREMENTS
JOB 100740	PEDESTRIAN SIGNAL HEAD RELOCATION
JOB 100740	PLASTIC PIPE
JOB 100740	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 100740	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 100740	SERVICE POINT ASSEMBLY
JOB 100740	SITE USE (A + C METHOD)
JOB 100740	SOIL STABILIZATION
JOB 100740	STORM WATER POLLUTION PREVENTION PLAN
JOB 100740	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 100740	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 100740	TRAFFIC SIGNAL HEAD RECONFIGURATION
JOB 100740	UTILITY ADJUSTMENTS
JOB 100740	VALUE ENGINEERING
JOB 100740	VIDEO DETECTOR (COLOR)
JOB 100740	VIDEO DETECTOR ROTATION
JOB 100740	WARM MIX ASPHALT
JOB 100740	WATTLES
JOB 100740	WELLHEAD PROTECTION

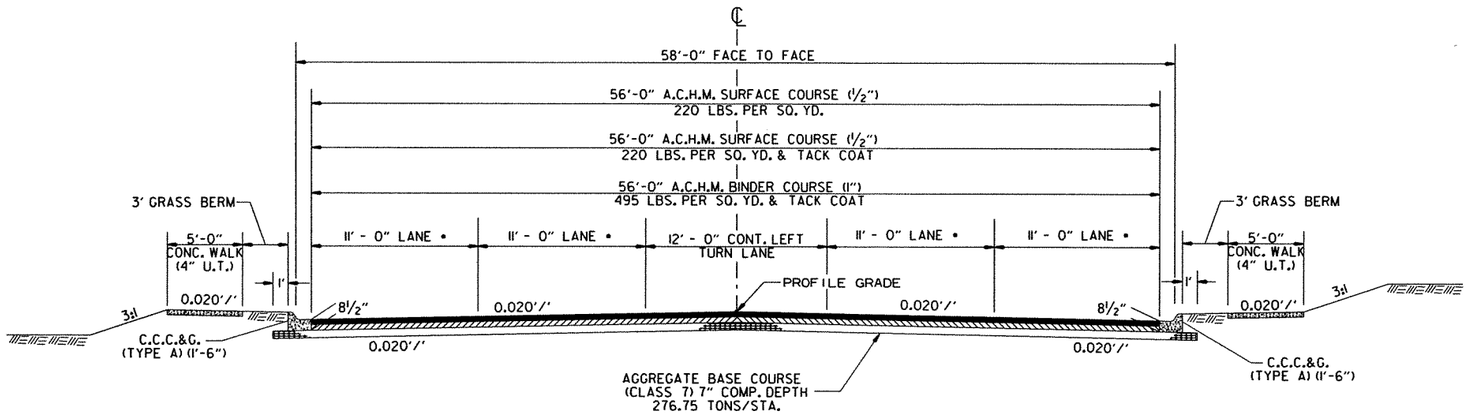
5/16/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	3	160

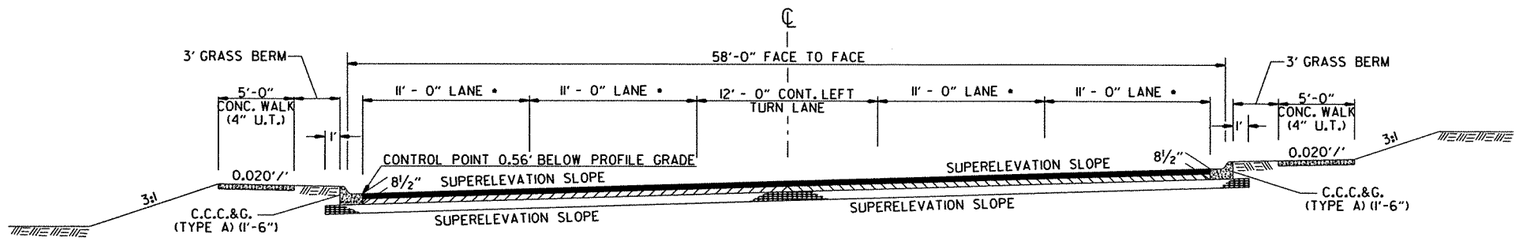
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
14765
MICHAEL D. PUGETT
6/5/12



FULL DEPTH HWY. 18

• LANE WIDTH VARIES
STA. 110+56.05 - STA. 112+79.74
STA. 112+79.74 - STA. 114+61.19
STA. 175+64+02 - STA. 176+64.02



FULL DEPTH - SUPERELEVATION HWY. 18

NOTES:

1) 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.

2) 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.

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

4) REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

5) PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR 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.

6) 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.

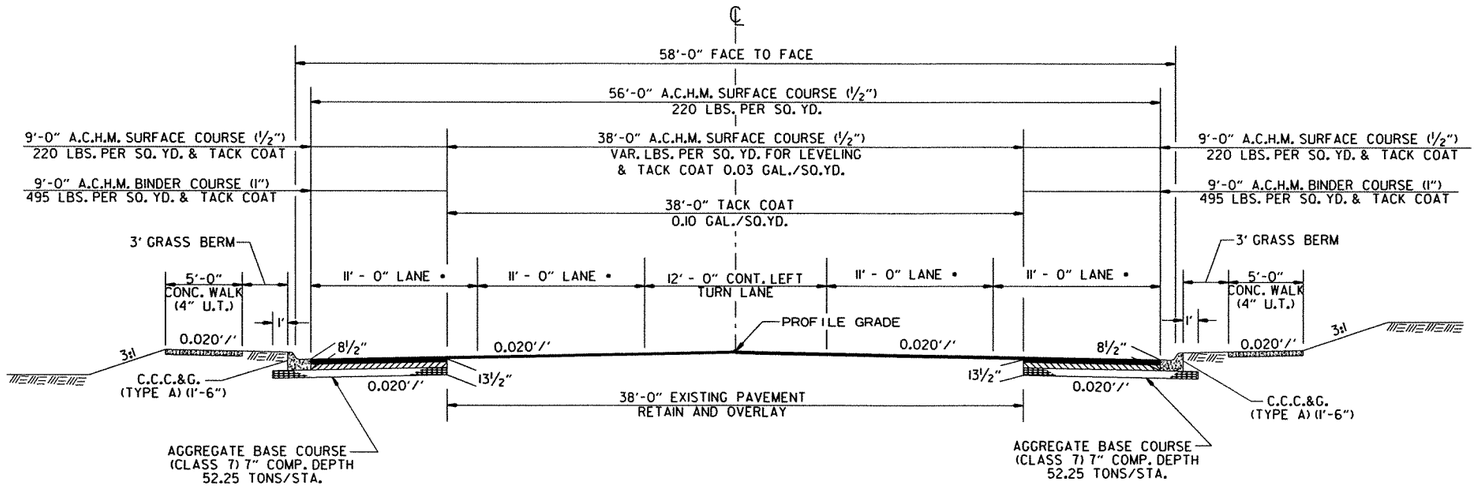
5/25/2012

R100740.DGN

TYPICAL SECTIONS OF IMPROVEMENT

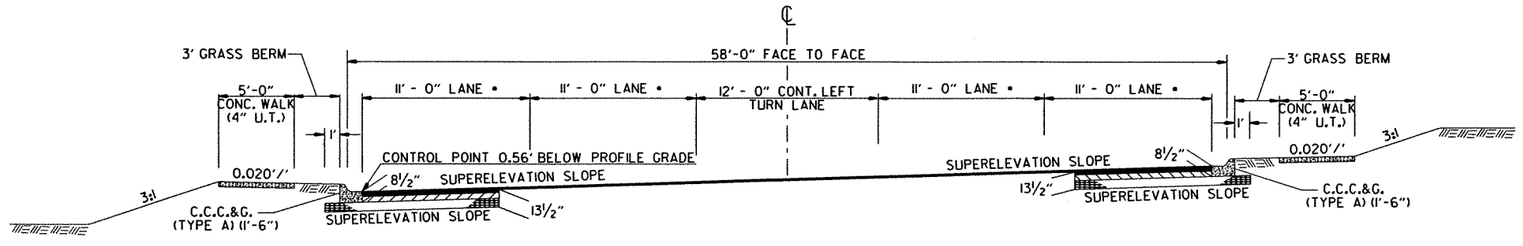
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	4	160

(2) TYPICAL SECTIONS OF IMPROVEMENT



NOTCH AND WIDEN HWY. 18

• LANE WIDTH VARIES
STA. 110+56.05 - STA. 112+79.74
STA. 112+79.74 - STA. 114+61.19
STA. 175+64+02 - STA. 176+64.02



NOTCH AND WIDEN - SUPERELEVATION HWY. 18

NOTES:

1) 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.

2) 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.

3) ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

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

5) REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

6) PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR 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.

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

5/25/2012

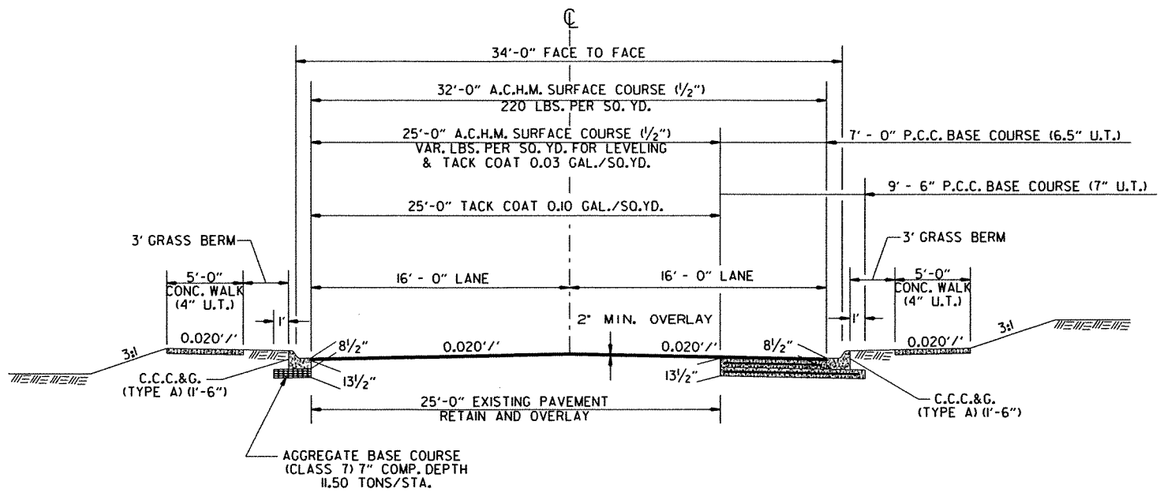
R100740.DGN

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	5	160

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12



NOTCH AND WIDEN WALNUT ST.

NOTES:

1) 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.

2) 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.

3) ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

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

5) REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

6) PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB OR 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.

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

5/25/2012

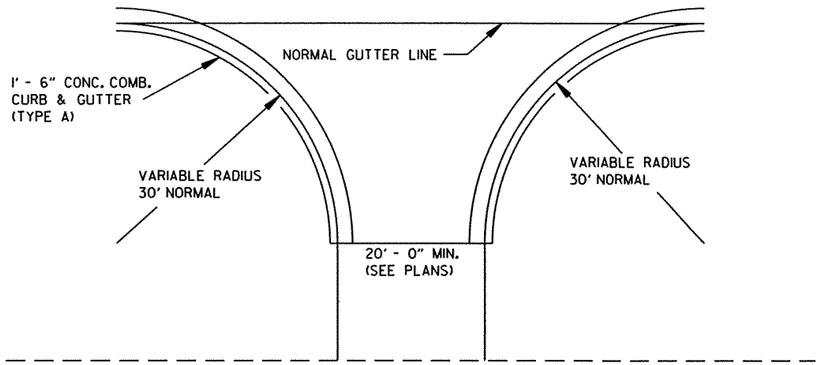
R100740.DGN

TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	6	160

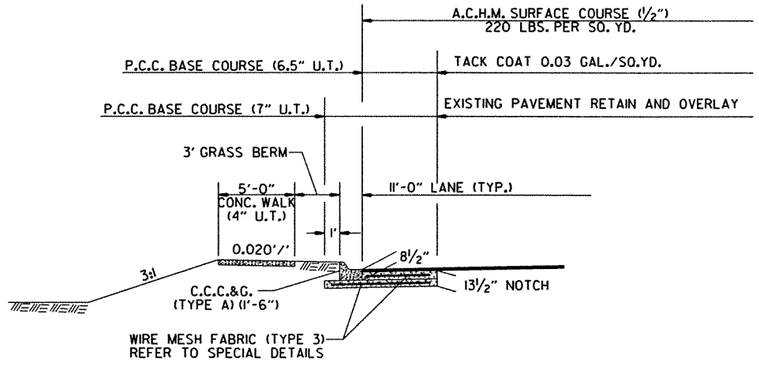
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



DETAIL OF TURNOUTS ASPHALT STREETS
CURB & GUTTER SECTION

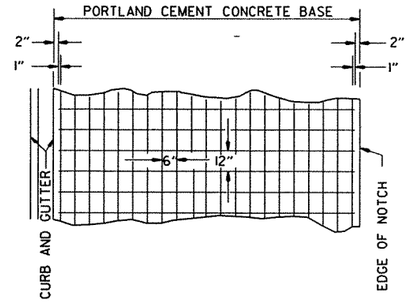
NOTE:
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES



P. C. C. BASE WIDENING DETAIL

P.C.C. BASE WIDENING TO BE USED AS SHOWN ON THE PLANS.

NOTE: P.C.C. BASE QUANTITY BASED ON AREAS WHERE NOTCH IS LESS THAN 4'



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

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 (_" U.T.).

5/15/2012

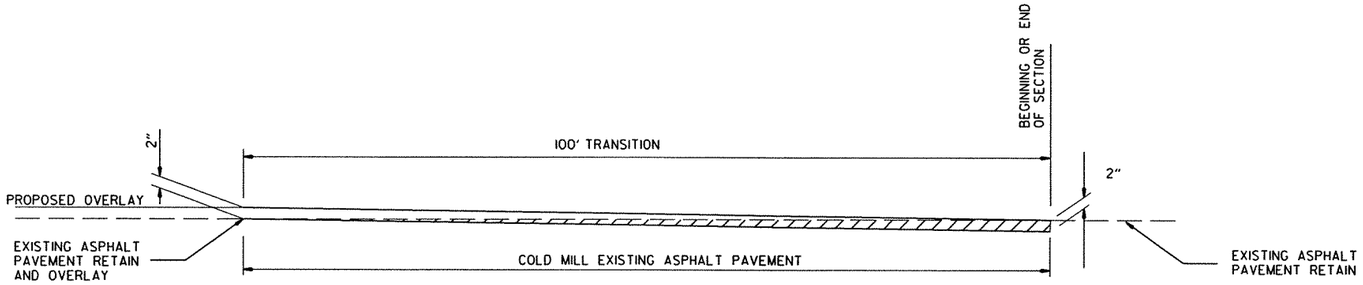
R100740.DGN

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	7	160

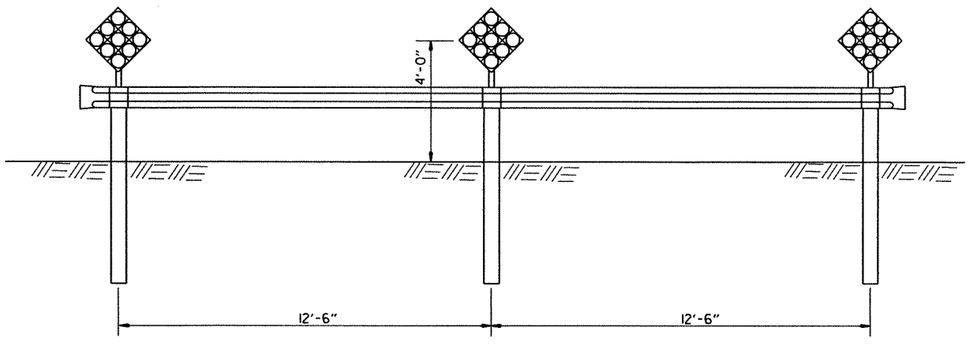
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6-5-12



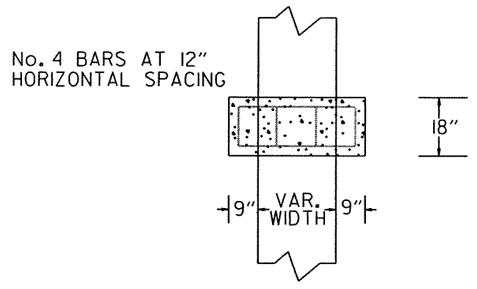
DETAIL FOR TRANSITIONS

CONSTRUCT TYPE "C" GUARDRAIL WITH RED DIAMOND REFLECTORS (OM4-3) (18" X 18") MOUNTED ON U-CHANNEL POSTS DIRECTLY BEHIND THE GUARDRAIL AT A HEIGHT OF 4'-0".



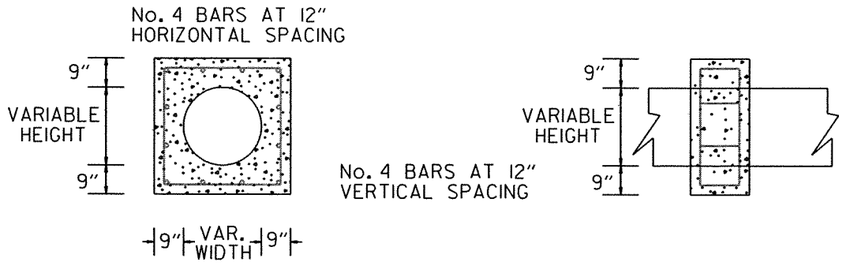
ROAD CLOSED DETAIL

TO BE USED WHERE EXISTING ROADS WILL BE PERMANENTLY CLOSED. SEE PLAN SHEETS FOR LOCATIONS. SEE STD. DWG. GR-7 FOR MORE DETAILS.



TOP VIEW

MIN 3" COVER



FRONT VIEW SIDE VIEW

PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

5/15/2012

R100740.DGN

SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	8	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000

RAMP ALIGNMENT
PI = 11+54.34
Δ = 56° 38' 43.4" LT.
D = 22°55'
T = 134.74'
L = 247.16'
PC = 10+19.60
PT = 12+66.76
NO SUPER

(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-5) SAND BAG DITCH CHECK
(E-14) SEDIMENT BASIN

DATE OF REVISION	REVISION

1/27/2012

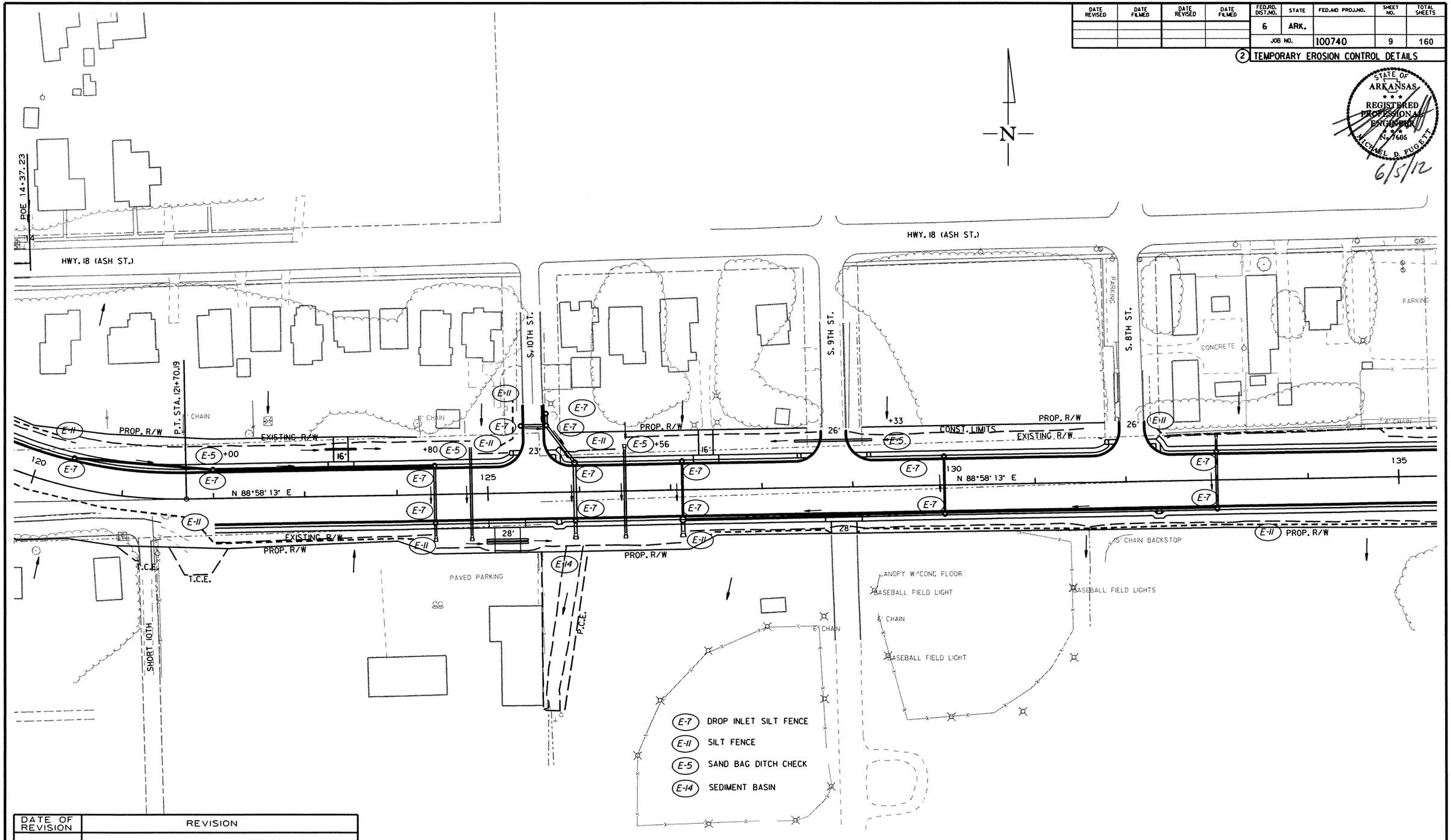
R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	9	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



DATE OF REVISION	REVISION

1/27/2012

R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	10	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7405
MICHAEL D. FUGETT
6/5/12

E-7 DROP INLET SILT FENCE
E-11 SILT FENCE
E-5 SAND BAG DITCH CHECK
E-14 SEDIMENT BASIN

N

HWY. 18 (ASH ST.)
EXISTING R/W
PAVED PARKING
PARKING
PV
MH
CB
ELM ST.
S. 5TH ST.
N. BROADWAY
S. BROADWAY
P.C. STA. 138+40.26
P.C.E.
T.C.E.
30'
30.72'
PROP. R/W
135
N 88°58' 13" E
140
P.I. STA. 141+16.34
P.C.E.
P.T. STA. 143+91.45
29'
145
40'
150
X CHAIN
CONCRETE

ANY TEMPORARY EROSION CONTROL DEVICES PLACED IN JOB 100705 IN CONFLICT WITH CONSTRUCTION WILL BE REMOVED IF AND WHERE DIRECTED BY THE ENGINEER.

DATE OF REVISION	REVISION

1/27/2012

R100740.DGN

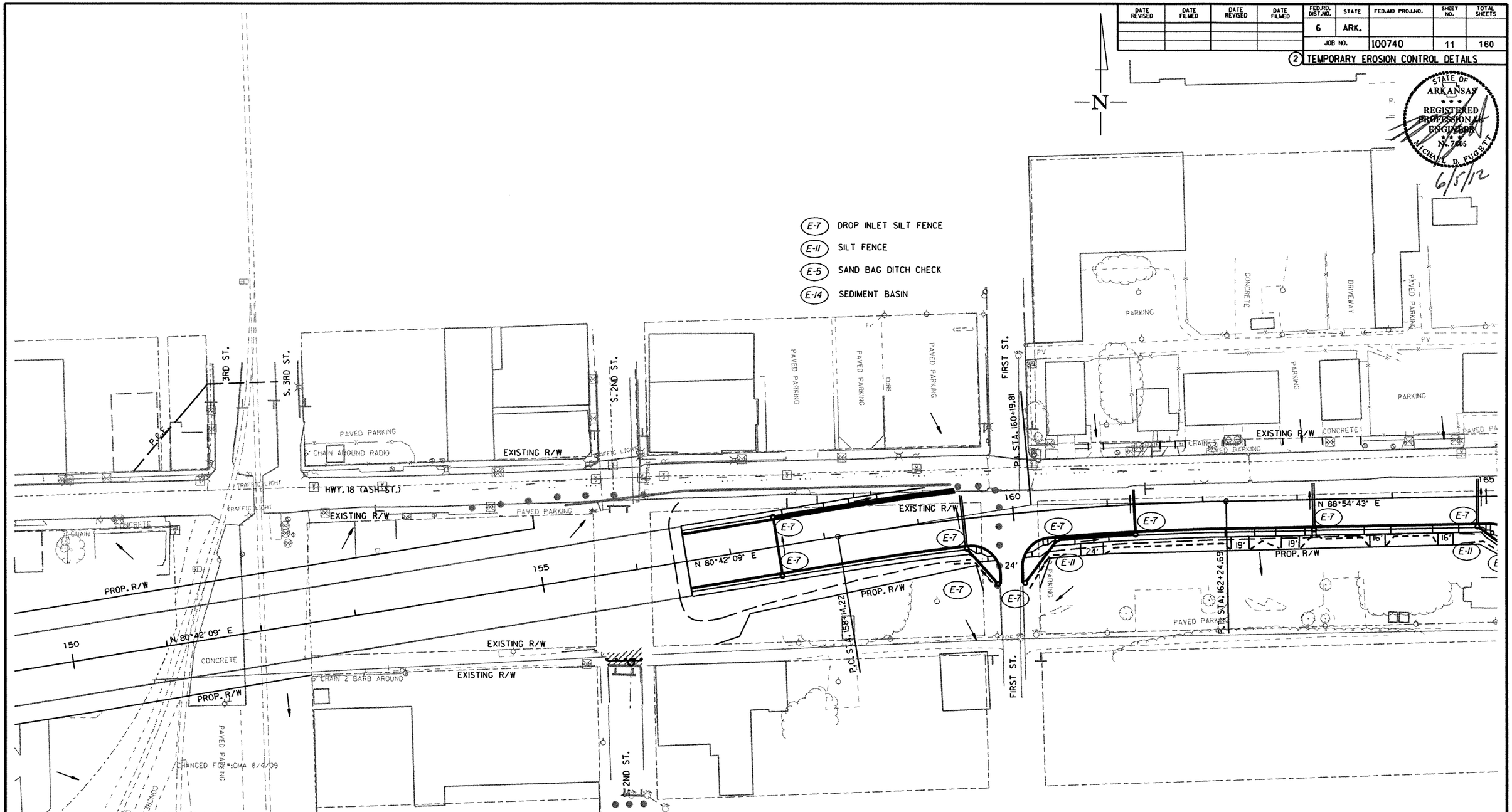
TEMPORARY EROSION CONTROL DETAILS
STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	11	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-5) SAND BAG DITCH CHECK
(E-14) SEDIMENT BASIN



DATE OF REVISION	REVISION

ANY TEMPORARY EROSION CONTROL DEVICES PLACED IN JOB 100705 IN CONFLICT WITH CONSTRUCTION WILL BE REMOVED IF AND WHERE DIRECTED BY THE ENGINEER.

TEMPORARY EROSION CONTROL DETAILS
STAGE I

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	12	180

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 7605
MICHAEL D. RUGETT
6/5/12

DATE OF REVISION	REVISION

STA. 177+64.02
END JOB 100740

STA. 504+75.61 MAIN ST.
STA. 174+94.67 HWY. 16
Δ = 75°41'36"

P.I. STA. 400+0
P.I. STA. 503+37.64
P.I. STA. 505+56.59
P.T. STA. 177+10.27
P.C. STA. 173+81.23
P.T. STA. 172+82.37
P.C. STA. 169+63.93
P.I. STA. 171+4.86

POB 500+00.00

MAIN ST.
HWY. 18
CALHOUN ST.
ACLEDE ST.
S. HOLLAND ST.
S. FRANKLIN ST.
N. LAKE ST.
NW. ASH ST.
S. LILLY ST.

N87°04'30.94"E
S 88°58'01" E
N 88°54'43" E
S 25°13'22" E

- E-7 DROP INLET SILT FENCE
- E-11 SILT FENCE
- E-5 SAND BAG DITCH CHECK
- E-14 SEDIMENT BASIN

1/27/2012

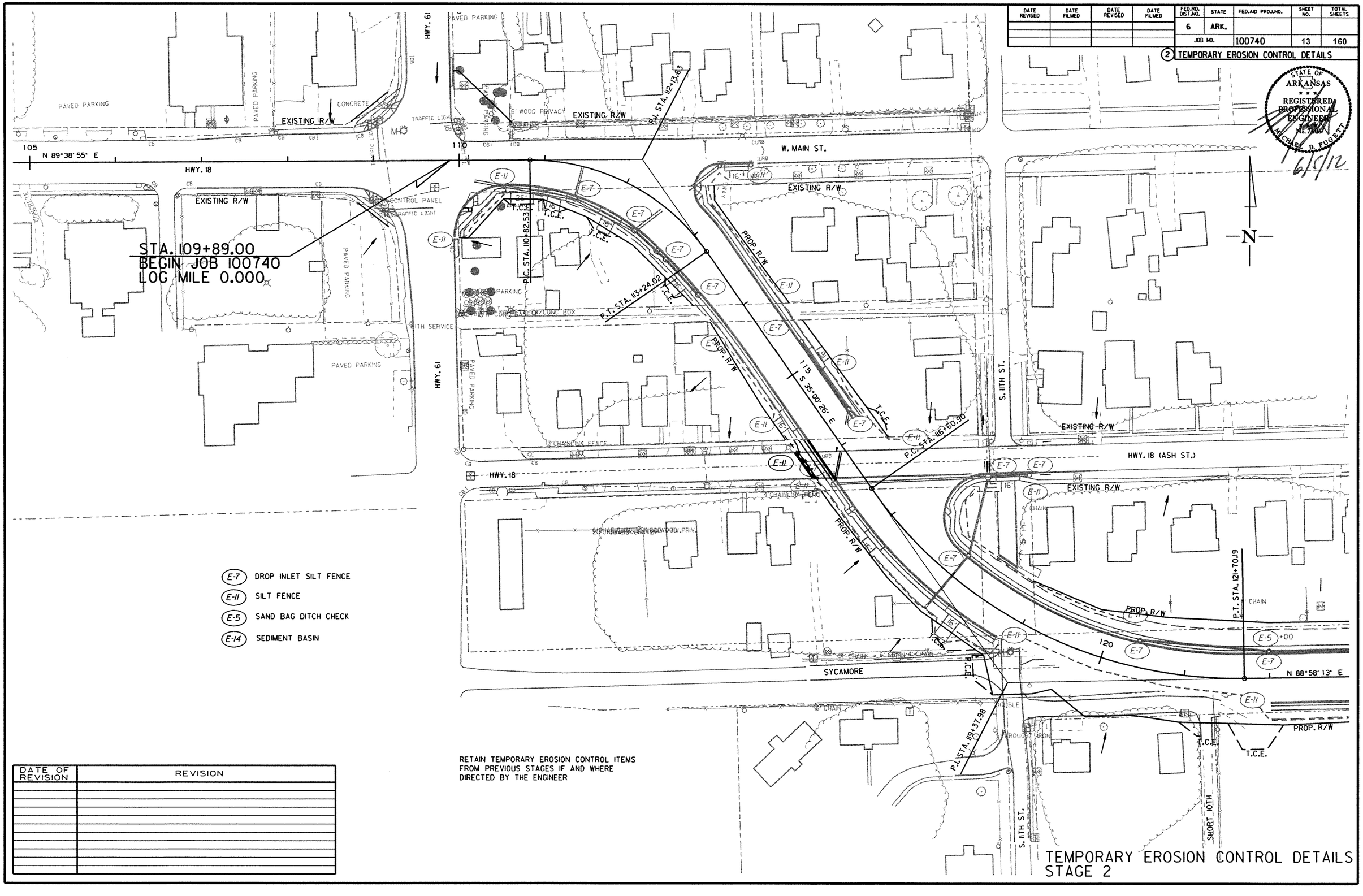
R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE I

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	13	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7709
MICHAEL D. PUGETT
6/5/12



RETAIN TEMPORARY EROSION CONTROL ITEMS FROM PREVIOUS STAGES IF AND WHERE DIRECTED BY THE ENGINEER

DATE OF REVISION	REVISION

1/27/2012

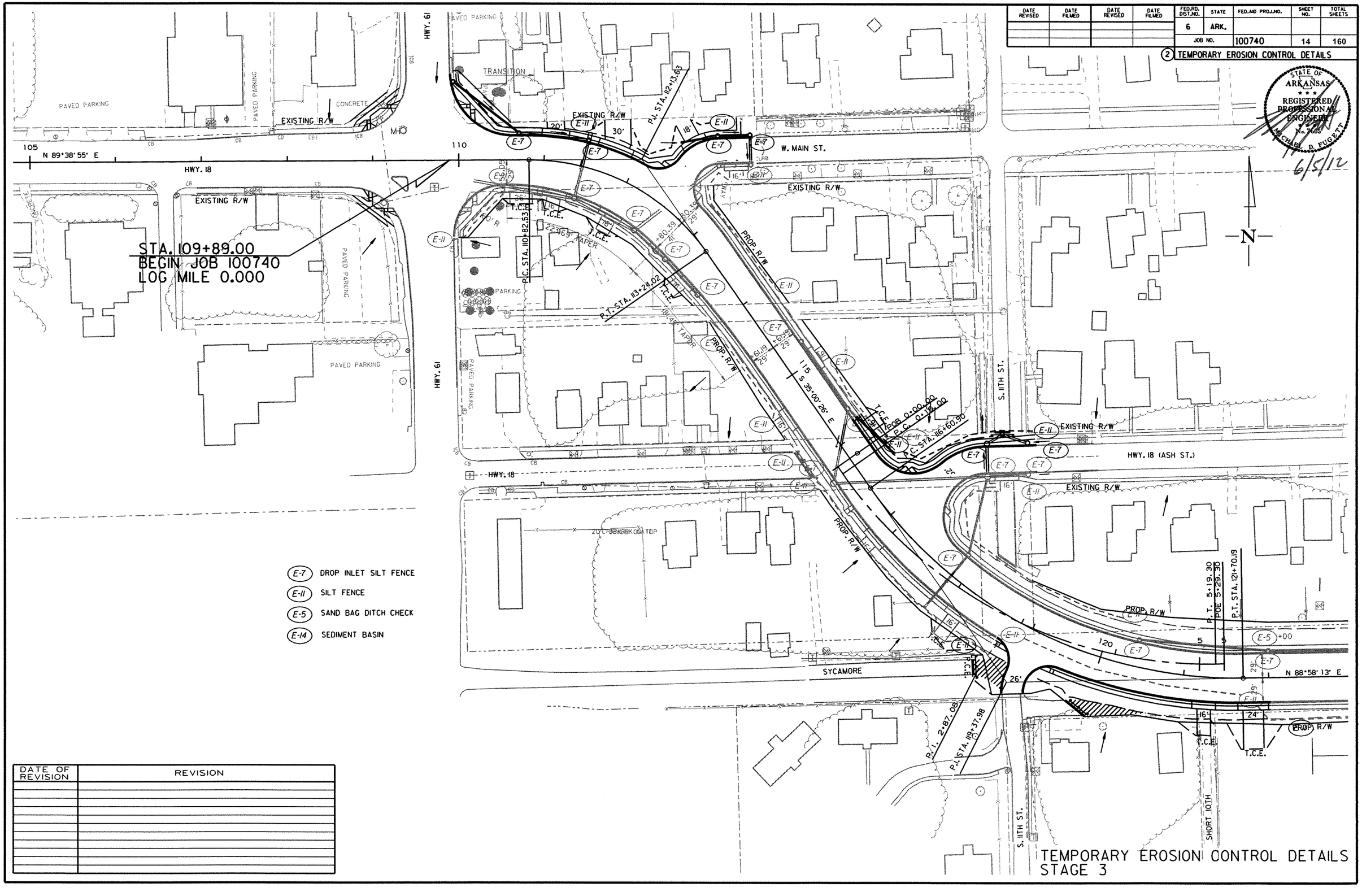
R100740.DGN

TEMPORARY EROSION CONTROL DETAILS STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	14	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
CHARLES D. FUGETT
6/5/12



E-7 DROP INLET SILT FENCE
E-11 SILT FENCE
E-5 SAND BAG DITCH CHECK
E-14 SEDIMENT BASIN

DATE OF REVISION	REVISION

1/27/2012

R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	15	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7603
MICHAEL D. FUGETT
6/5/12

HWY. 18 (ASH ST.)

HWY. 18 (ASH ST.)

S. 10TH ST.

S. 9TH ST.

S. 8TH ST.

PARKING

CONCRETE

PARKING

P.T. 5+19.30
POE 5+29.30

P.T. STA. 121+70.19

PROP. R/W

EXISTING R/W

PROP. R/W

PROP. R/W

PROP. R/W

+00

+80

+56

+33

120

125

130

135

N 88°58' 13" E

N 88°58' 13" E

16'

24'

T.C.E.

T.C.E.

SHORT 10TH

PAVED PARKING
510' TAPER

P.C.E.

ANOPY W/CONC FLOOR

E-7 DROP INLET SILT FENCE

E-11 SILT FENCE

E-5 SAND BAG DITCH CHECK

E-14 SEDIMENT BASIN

DATE OF REVISION	REVISION

1/27/2012

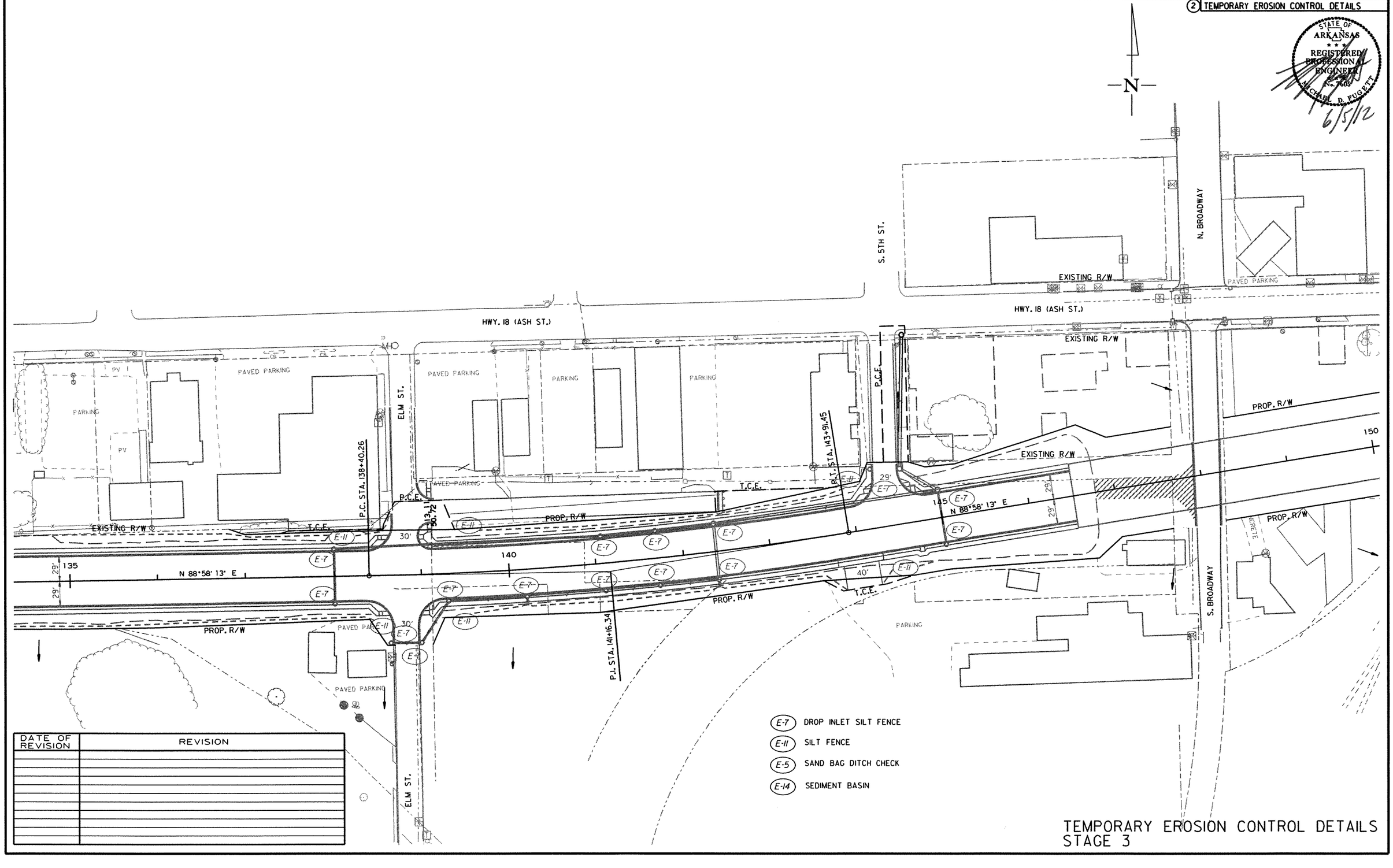
R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	16	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12



DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

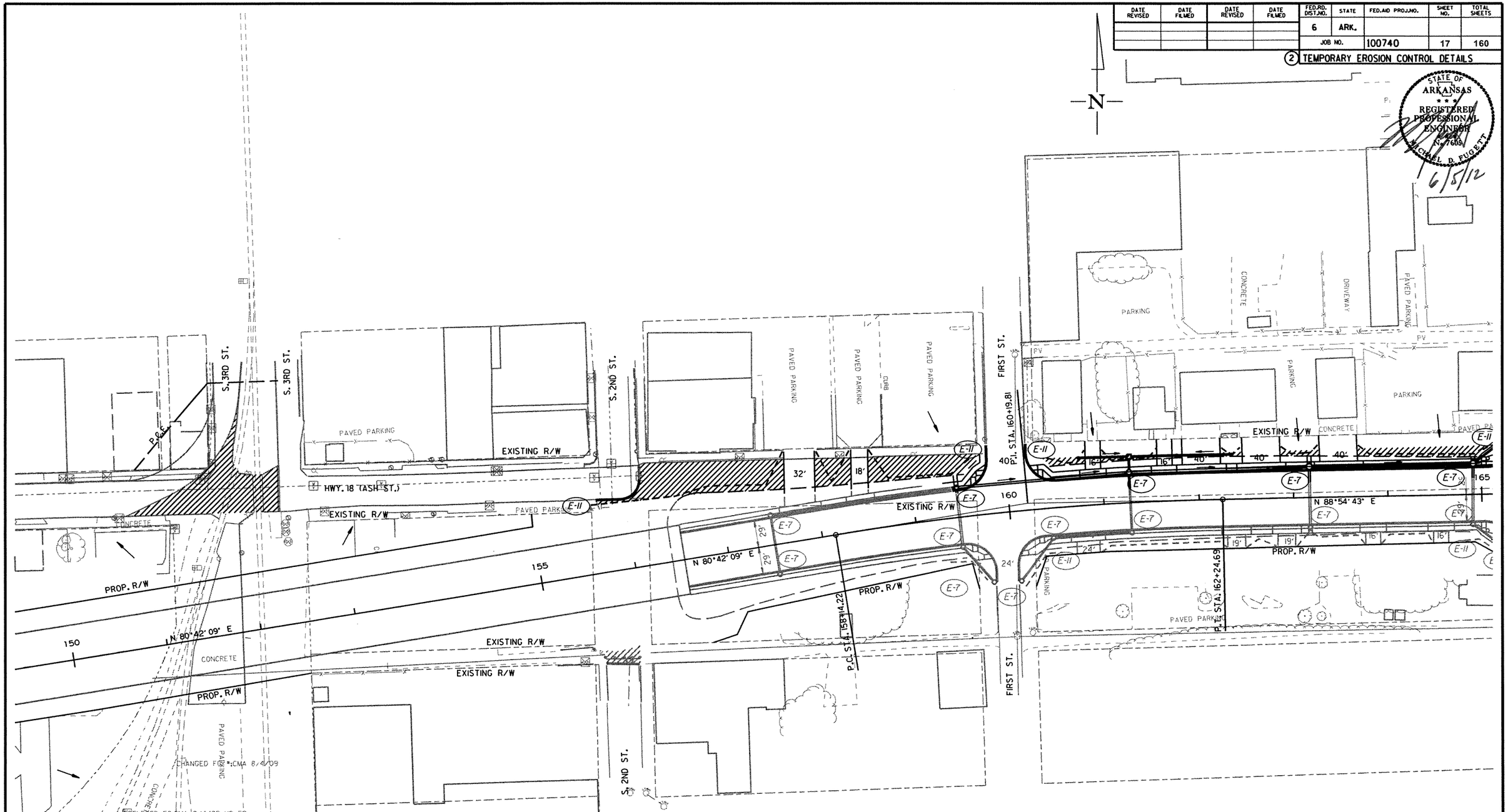
1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	17	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



DATE OF REVISION	REVISION

1/27/2012

R100740.DGN

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	18	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

DATE OF REVISION	REVISION

STA. 177+64.02
END JOB 100740

STA. 504+75.61 MAIN ST.
STA. 174+94.67 HWY. 16
Δ = 75°41'36"

P.I. STA. 400+0
P.I. STA. 503+37.64
P.I. STA. 505+15.59
P.O.B. 500+00.00
P.C. STA. 169+63.93
P.I. STA. 172+82.37
P.C. STA. 173+81.23
P.T. STA. 177+90.27
P.I. STA. 171+41.86

N87°04'30.94"E
S 88°58'01" E
N 88°54'43" E
S 25°13'28" E

MAIN ST. | HWY. 18 | LACLEDE ST. | S. HOLLAND ST. | S. FRANKLIN ST. | N. LAKE ST. | NW. ASH ST. | S. LILLY ST.

EXISTING R/W | PROP. R/W | 100' TRANSITION | 100' TAPER

PAVED PARKING | CONCRETE | PARKING | DRIVEWAY | CURB | BROKEN CONCRETE | ASPHALT | CENTERLINE WALNUT | C/L RAILROAD ST. | GATES | MH | CB | PV

T.C.E. | P.C.E.

E-7	DROP INLET SILT FENCE
E-11	SILT FENCE
E-5	SAND BAG DITCH CHECK
E-14	SEDIMENT BASIN

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	19	160

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. FUGETT
6/5/12

DATE OF REVISION	REVISION

STA. 177+64.02
END JOB 100740

HWY. 18 (WALNUT ST.)
MAIN ST.
HWY. 18
S. FRANKLIN ST.
N. LAKE ST.
S. LILLY ST.
LACLEDE ST.
S. HOLLAND ST.
NW. ASH ST.

- E-7 DROP INLET SILT FENCE
- E-11 SILT FENCE
- E-5 SANDBAG DITCH CHECK
- E-14 SEDIMENT BASIN

TEMPORARY EROSION CONTROL DETAILS
STAGE 4

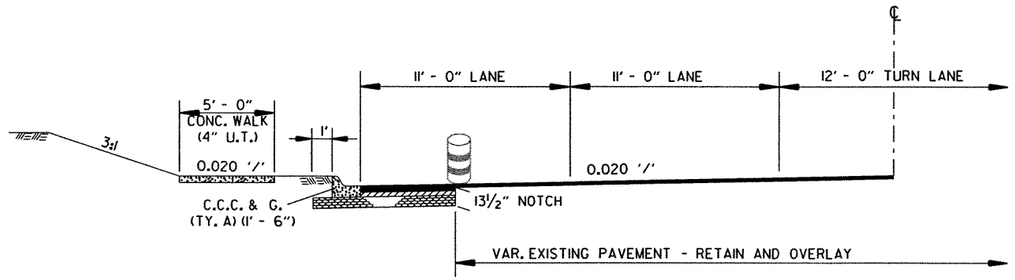
1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	20	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



NOTE: TYPICAL SHOWN FOR ONE SIDE, OTHER SIDE IS SIMILAR

CURB AND GUTTER WIDENING DETAIL

STAGE 1MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

STAGE 2 MOT

STA. 110+00 - STA. 116+75 RETAIN TRAFFIC ON 2 EASTBOUND LANES OF PROPOSED HWY. 18 AND EXISTING HWY. 18 FROM STA. 116+75 EASTWARD.

CLOSE EXISTING HWY. 18 ON WEST SIDE OF PROPOSED HWY. 18.
CONSTRUCT RT. SIDE OF PROPOSED HWY. 18.

STA. 116+75 - STA. 177+65 MAINTAIN STAGE 1CONDITIONS.

STAGE 3 MOT

STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE EXISTING HWY. 18 AT 2ND ST.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18. ON RT. SIDE.
CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.

STAGE 4 MOT

STA. 110+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE AND EXISTING HWY. 18 ON LT. SIDE.
LEVEL LT. SIDE, ONE LANE AT A TIME, AND SHIFT WESTBOUND TRAFFIC TO LT. SIDE OF PROPOSED HWY. 18.

CLOSE THE RAMP TO THE NORTH COUPLET (WALNUT ST.).

RESTRIPE WALNUT ST. AND ASH ST. FOR 2 WAY TRAFFIC.

MAINTENANCE OF TRAFFIC ALL STAGES

r100740.dgn 3-27-12

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	21	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7805
MICHAEL D. PUGETT
6/5/12

ADVANCE WARNING SET
SIMILAR TO HWY. 18 BELOW
(3) W20-1

STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000

75 TRAFFIC DRUMS
60' O.C. ROADWAY
30' O.C. ROAD CLOSED
20' O.C. TURNOUTS

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

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 110+00 TO STA. 113+00 = 260 LIN. FT.

STAGE 1 MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

RAMP ALIGNMENT
PI = 11+54.34
Δ = 56° 38' 43.4" LT.
D = 22°55'
T = 134.74'
L = 247.16'
PC = 10+19.60
PT = 12+66.76
NO SUPER

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	22	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

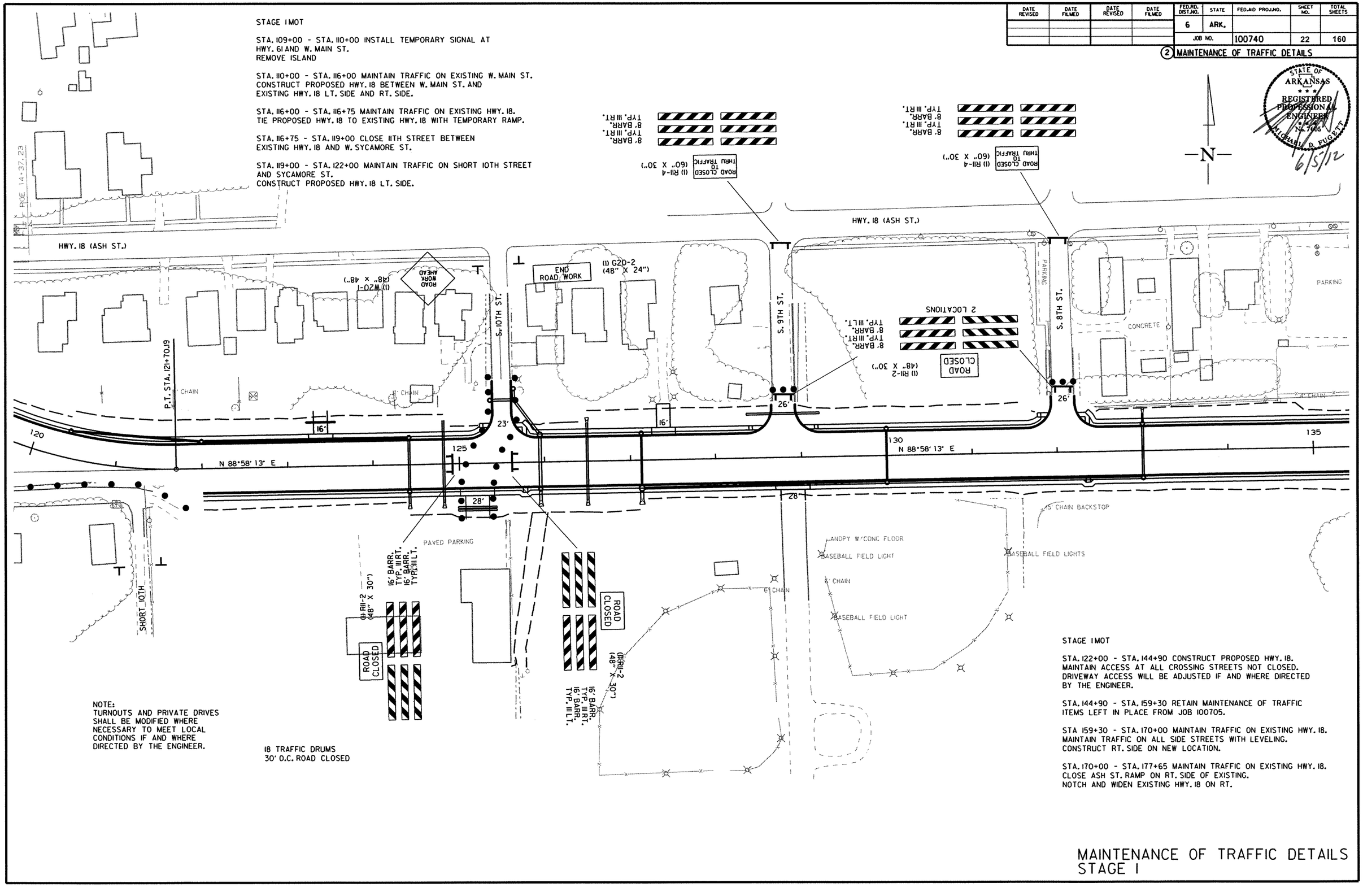
STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
M. CHARLES D. FUGETT
No. 7505
6/5/12



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

18 TRAFFIC DRUMS
30' O.C. ROAD CLOSED

STAGE I MOT

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

MAINTENANCE OF TRAFFIC DETAILS STAGE I

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	23	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE I MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STAGE I MOT

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

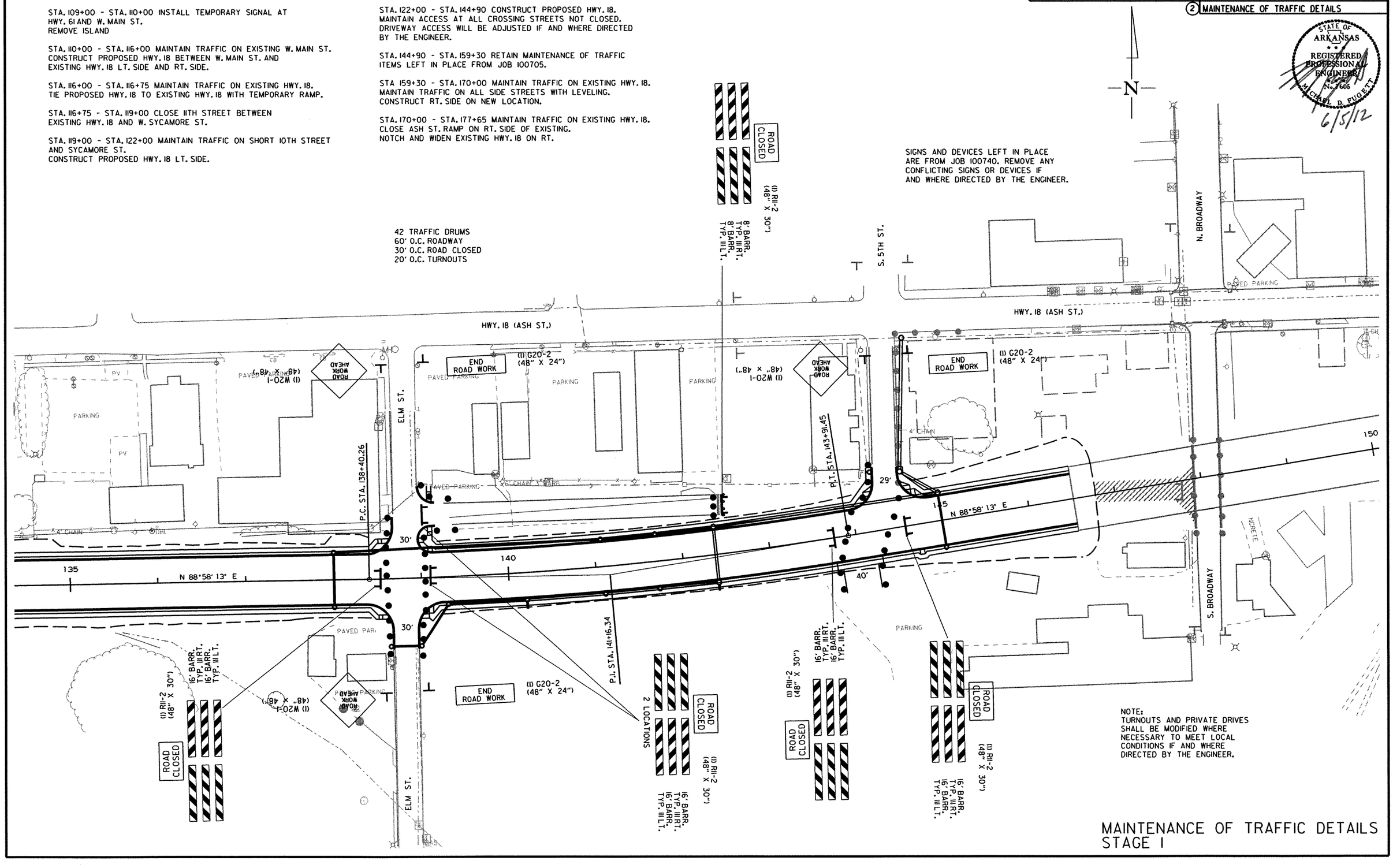
STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

SIGNS AND DEVICES LEFT IN PLACE ARE FROM JOB 100740. REMOVE ANY CONFLICTING SIGNS OR DEVICES IF AND WHERE DIRECTED BY THE ENGINEER.

42 TRAFFIC DRUMS
60' O.C. ROADWAY
30' O.C. ROAD CLOSED
20' O.C. TURNOUTS



MAINTENANCE OF TRAFFIC DETAILS
STAGE I

R100740.DGN 1/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	24	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 1 MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STAGE 1 MOT

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

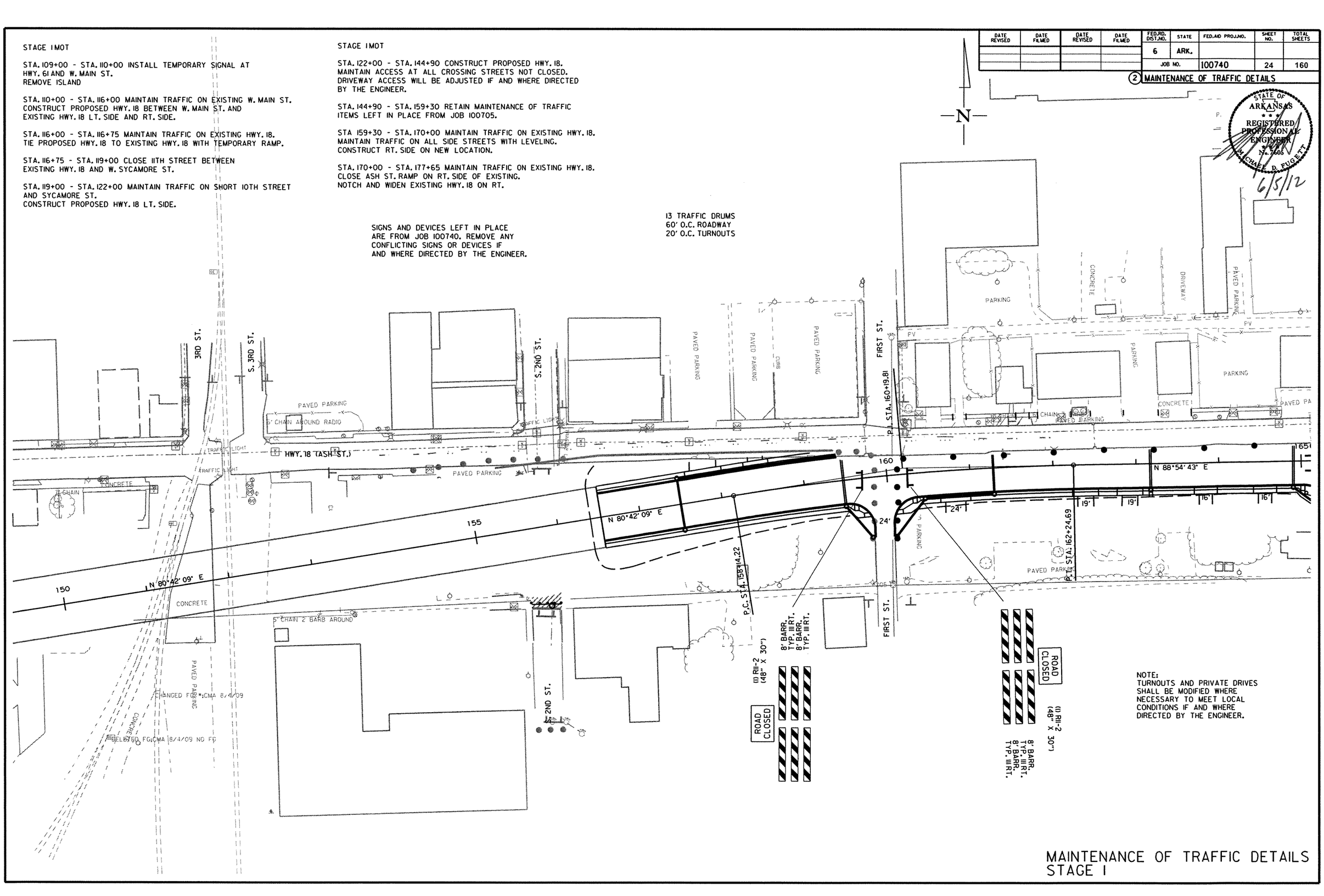
STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

SIGNS AND DEVICES LEFT IN PLACE ARE FROM JOB 100740. REMOVE ANY CONFLICTING SIGNS OR DEVICES IF AND WHERE DIRECTED BY THE ENGINEER.

13 TRAFFIC DRUMS
60' O.C. ROADWAY
20' O.C. TURNOUTS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



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

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	25	180

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

STAGE 1 MOT

STA. 109+00 - STA. 110+00 INSTALL TEMPORARY SIGNAL AT HWY. 61 AND W. MAIN ST.
REMOVE ISLAND

STA. 110+00 - STA. 116+00 MAINTAIN TRAFFIC ON EXISTING W. MAIN ST.
CONSTRUCT PROPOSED HWY. 18 BETWEEN W. MAIN ST. AND EXISTING HWY. 18 LT. SIDE AND RT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
TIE PROPOSED HWY. 18 TO EXISTING HWY. 18 WITH TEMPORARY RAMP.

STA. 116+75 - STA. 119+00 CLOSE 11TH STREET BETWEEN EXISTING HWY. 18 AND W. SYCAMORE ST.

STA. 119+00 - STA. 122+00 MAINTAIN TRAFFIC ON SHORT 10TH STREET AND SYCAMORE ST.
CONSTRUCT PROPOSED HWY. 18 LT. SIDE.

STAGE 1 MOT

STA. 122+00 - STA. 144+90 CONSTRUCT PROPOSED HWY. 18.
MAINTAIN ACCESS AT ALL CROSSING STREETS NOT CLOSED.
DRIVEWAY ACCESS WILL BE ADJUSTED IF AND WHERE DIRECTED BY THE ENGINEER.

STA. 144+90 - STA. 159+30 RETAIN MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE FROM JOB 100705.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
MAINTAIN TRAFFIC ON ALL SIDE STREETS WITH LEVELING.
CONSTRUCT RT. SIDE ON NEW LOCATION.

STA. 170+00 - STA. 177+65 MAINTAIN TRAFFIC ON EXISTING HWY. 18.
CLOSE ASH ST. RAMP ON RT. SIDE OF EXISTING.
NOTCH AND WIDEN EXISTING HWY. 18 ON RT.

P.I. STA. 400+0
N87°04'30.94"E
R762
2.5"MTL POST SWR TEL
CENTERLINE WALNUT
MAIN ST.
POB500+00.00
P.I. STA. 503+37.54
P.I. STA. 475+66.59
STA. 504+75.61 MAIN ST.
STA. 174+94.67 HWY. 16
Δ = 75°41' 36"
S 88°58' 01" E
HWY. 18
P.T. STA. 177+10.27
STA. 177+64.02
END JOB 100740
P.C. STA. 169+63.93
P.I. STA. 172+82.37
P.C. STA. 173+81.23
P.I. STA. 175+11.86
N 88°54' 43" E
N. LAKE ST.
S. FRANKLIN ST.
S. HOLLAND ST.
S. LILLY ST.
ACLEDE ST.
NW. ASH ST.

(1) G20-2 (48" X 24")
END ROAD WORK
2 LOCATIONS
(1) W20-1 (48" X 48")
ROAD WORK AHEAD
ROAD WORK 500 FT
ROAD WORK 1000 FT
ROAD CLOSED
8' BARR. TYP. III RT.
8' BARR. TYP. III RT.
(1) RII-2 (48" X 30")
16' BARR. TYP. III RT.
16' BARR. TYP. III LT.

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

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 165+00 TO STA. 177+63 = 1230 LIN. FT.

63 TRAFFIC DRUMS
30' O.C. ROADWAY
20' O.C. TURNOUTS

MAINTENANCE OF TRAFFIC DETAILS STAGE 1

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	28	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

ADVANCE WARNING SET
SIMILAR TO HWY. 18 BELOW
(3) W20-1

(1) G20-2 (48" X 24")

END ROAD WORK

PAVED PARKING

CONCRETE

HWY. 18

105

N 89°38' 55" E

CONTROLLER

CENTROLI PANEL

TRAFFIC LIGHT

STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000

ROAD WORK 300 FT

ROAD WORK 200 FT

ROAD WORK 100 FT

(1) W20-1 (48" X 48")

(1) G20-2 (48" X 24")

HWY. 18

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 110+00 TO STA. 117+00 = 2330 LIN. FT.

49 TRAFFIC DRUMS
30' O.C. DETOUR

STAGE 2

STA. 110+00 - STA. 116+75 RETAIN TRAFFIC ON 2 EASTBOUND LANES OF PROPOSED HWY. 18 AND EXISTING HWY. 18 FROM STA. 116+75 EASTWARD.

CLOSE EXISTING HWY. 18 ON WEST SIDE OF PROPOSED HWY. 18.
CONSTRUCT RT. SIDE OF PROPOSED HWY. 18.

STA. 116+75 - STA. 177+65 MAINTAIN STAGE I CONDITIONS.

(1) G20-2 (48" X 24")

END ROAD WORK

(1) W20-1 (48" X 48")

ROAD WORK AHEAD

P.I. STA. 112+13.63

6" WOOD PRIVACY

W. MAIN ST.

P.C. STA. 110+82.53

P.T. STA. 113+24.02

ROAD WORK 100 FT

(1) W20-1 (48" X 48")

ROAD WORK 200 FT

(1) W20-1 (48" X 48")

ROAD WORK 300 ft

(1) W20-1 (48" X 48")

CHAIN LINK FENCE

S 35°39' 26" E

P.C. STA. 116+60.90

HWY. 18 (ASH ST.)

16' BARR. TYP. III LT.

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

ROAD CLOSED

(1) G20-2 (48" X 24")

END ROAD WORK

ROAD WORK AHEAD

(1) W20-1 (48" X 48")

S. 11TH ST.

N

(1) G20-2 (48" X 24")

END ROAD WORK

(1) G20-2 (48" X 24")

ROAD WORK AHEAD

(1) W20-1 (48" X 48")

(1) G20-2 (48" X 24")

END ROAD WORK

(1) G20-2 (48" X 24")

ROAD WORK AHEAD

(1) W20-1 (48" X 48")

(2) W20-1 (48" X 48")

(1) G20-2 (48" X 24")

END ROAD WORK

ROAD CLOSED

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

8' BARR. TYP. III RT.
8' BARR. TYP. III LT.

SYCAMORE

P.I. STA. 119+37.98

P.T. STA. 121+70.19

N 88°58' 13" E

120

SHORT 10TH

S. 11TH ST.

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	27	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 7600
MICHAEL D. FUGETT
6/5/12

ADVANCE WARNING SET
SIMILAR TO HWY. 18 BELOW
(3) W20-1

(1) G20-2 (48" X 24")
END ROAD WORK
PAVED PARKING
CONCRETE
HWY. 61
105
N 89°38' 55" E
110
HWY. 18
STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000
ROAD WORK 300 ft
ROAD WORK 200 FT
ROAD WORK 100 FT
(1) W20-1 (48" X 48")
(1) G20-2 (48" X 24")
END ROAD WORK
HWY. 61
P.C. STA. 110+82.53
ROAD WORK 100 FT
(1) W20-1 (48" X 48")
P.T. STA. 113+24.02
ROAD WORK 200 FT
(1) W20-1 (48" X 48")
ROAD WORK 300 ft
(1) W20-1 (48" X 48")
115
S 35°00' 26" E
HWY. 18
E-U
P.I. STA. 112+13.63
20'
30'
18'
(1) G20-2 (48" X 24")
END ROAD WORK
(1) W20-1 (48" X 48")
ROAD WORK AHEAD
W. MAIN ST.
JRB
CURB
16'
32' PAVING
ROAD CLOSED
(1) R11-2 (48" X 30")
TYP. III LT.
8' BARR.
TYP. III RT.
(1) R11-4 (60" X 30")
THRU TRAFFIC
TRAFFIC SHIFT
PI = 11+54.34
Δ = 56° 38' 43.4" LT.
D = 22°55'
T = 134.74'
L = 247.16'
PC = 10+19.60
PT = 12+66.76
NO SUPER
N
ROAD CLOSED
2 LOCATIONS
16' BARR. TYP. III LT.
8' BARR. TYP. III RT.
TYP. III LT.
S. 11TH ST.
ROAD CLOSED
(1) R11-2 (48" X 30")
POB 8+00.00
P.C. 6+19.00
P.C. STA. 116+60.90
HWY. 18 (ASH ST.)
(1) R11-2 (48" X 30")
16' BARR. TYP. III LT.
ROAD CLOSED
2 LOCATIONS
ROAD CLOSED
(1) R11-2 (48" X 30")
16' BARR. TYP. III RT.
P.T. 5+19.30
POE 5+29.30
P.T. STA. 121+70.19
5
6
120'
N 68°58' 13" E
SYCAMORE
26'
16'
24'
R.I. 2+87.08
P.I. STA. 119+37.98
(1) G20-2 (48" X 24")
END ROAD WORK
ROAD WORK AHEAD
(1) W20-1 (48" X 48")
S. 11TH ST.
SHORT 10TH
ROAD WORK AHEAD
(1) W20-1 (48" X 48")

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

2 LOCATIONS
ROAD CLOSED THRU TRAFFIC
(1) R11-4 (60" X 30")
8' BARR. TYP. III RT.
8' BARR. TYP. III LT.
(1) G20-2 (48" X 24")
END ROAD WORK
ROAD WORK AHEAD
(2) W20-1 (48" X 48")
ZOYSIA/BARKOGRASS TURF
ROAD WORK AHEAD
(1) W20-1 (48" X 48")

79 TRAFFIC DRUMS
30' O.C. ROADWAY
20' O.C. TURNOUTS

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 110+00 TO STA. 120+00 = 1890 LIN. FT.

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

STAGE 3 MOT

STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE EXISTING HWY. 18 AT 2ND ST.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18. ON RT. SIDE.
CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	28	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3 MOT

STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE EXISTING HWY. 18 AT 2ND ST.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18. ON RT. SIDE.
CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

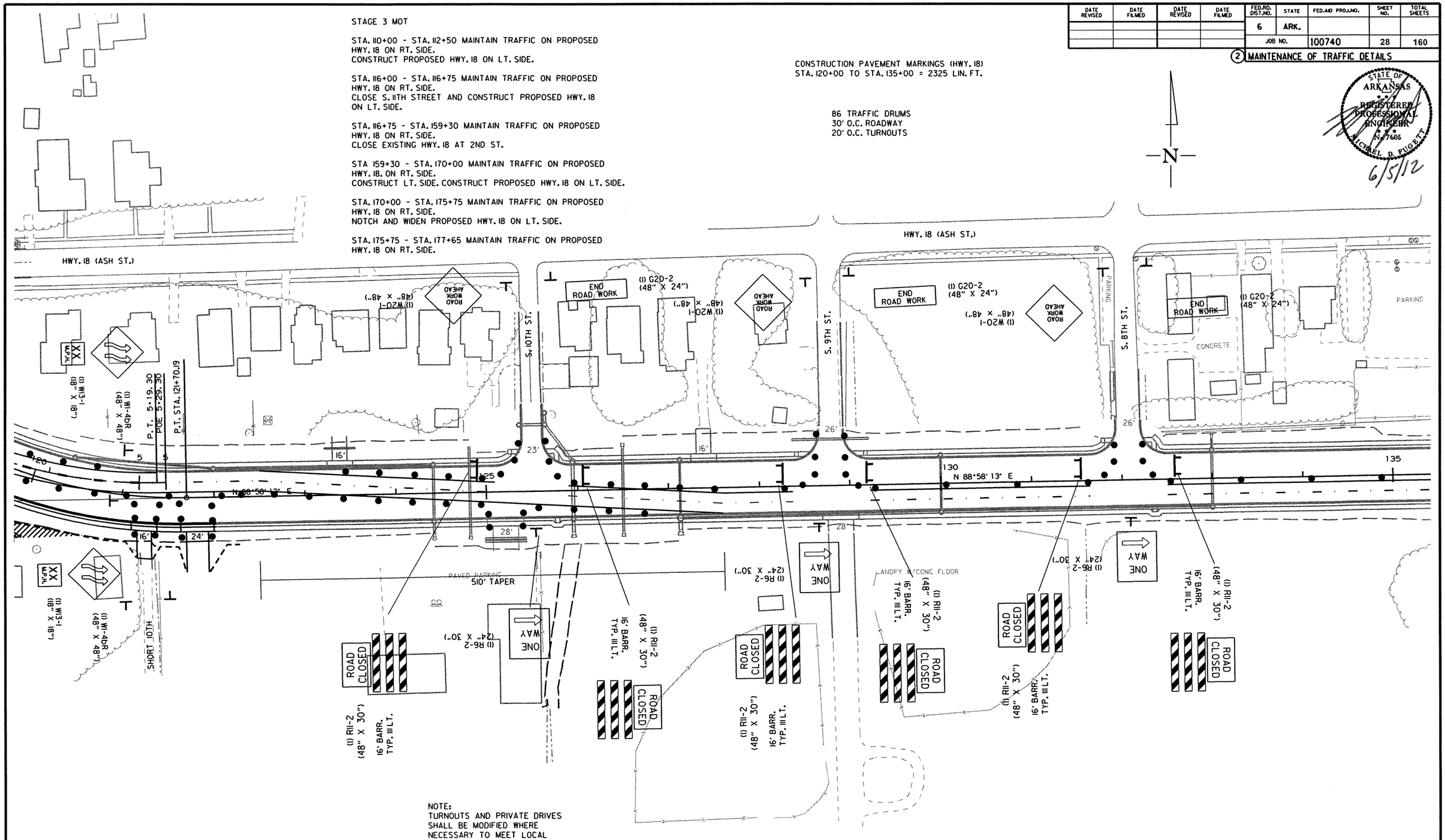
STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 120+00 TO STA. 135+00 = 2325 LIN. FT.

86 TRAFFIC DRUMS
30' O.C. ROADWAY
20' O.C. TURNOUTS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. FUGETT
No. 17605
6/5/12



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

1/27/2012

R100740.DGN

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	29	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STAGE 3 MOT

STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE EXISTING HWY. 18 AT 2ND ST.

STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18. ON RT. SIDE.
CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.

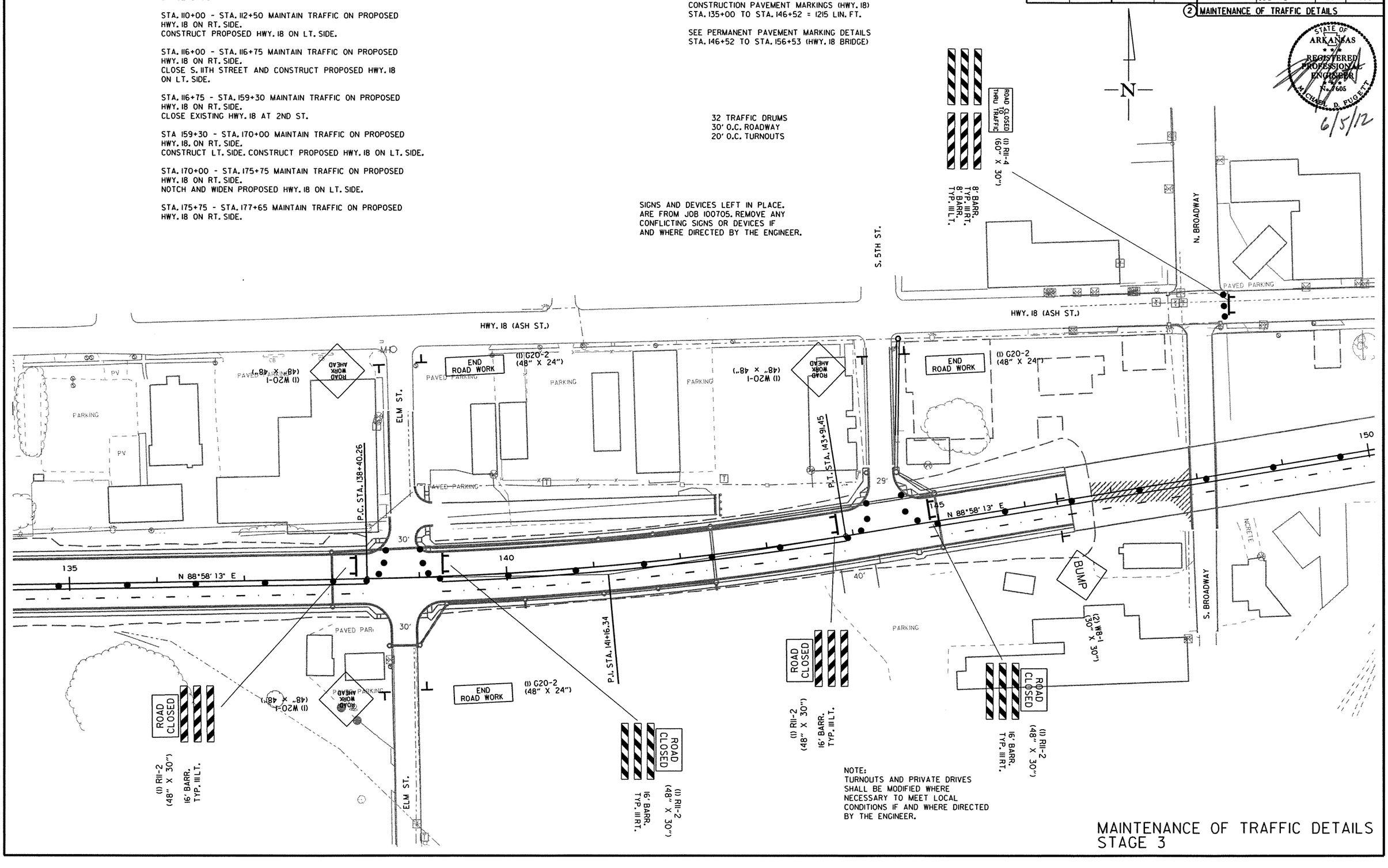
CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 135+00 TO STA. 146+52 = 1215 LIN. FT.

SEE PERMANENT PAVEMENT MARKING DETAILS
STA. 146+52 TO STA. 156+53 (HWY. 18 BRIDGE)

32 TRAFFIC DRUMS
30' O.C. ROADWAY
20' O.C. TURNOUTS

SIGNS AND DEVICES LEFT IN PLACE. ARE FROM JOB 100705. REMOVE ANY CONFLICTING SIGNS OR DEVICES IF AND WHERE DIRECTED BY THE ENGINEER.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. PUGETT
No. 7605
6/5/12



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

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	30	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7666
MICHAEL D. PUGETT
6/5/12

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

58 TRAFFIC DRUMS
60' O.C. ROADWAY
20' O.C. TURNOUTS

SIGNS AND DEVICES LEFT IN PLACE. ARE FROM JOB 100705. REMOVE ANY CONFLICTING SIGNS OR DEVICES IF AND WHERE DIRECTED BY THE ENGINEER.

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

S. 3RD ST.
S. 2ND ST.
FIRST ST.
HWY. 18 (ASH ST.)
PAVED PARKING
CONCRETE
PARKING
DRIVEWAY
CURB
BUMP
(2) W8-30 (30" X 30")
P.C. STA. 158+14.22
P.T. STA. 162+24.69
P.I. STA. 160+19.81
40°
N 88°54' 43" E
N 80°42' 09" E
150
155
160
165
32'
18'
40'
24'
16'
19'

STAGE 3 MOT

~~STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.~~
~~CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.~~

~~STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.~~
~~CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.~~

~~STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.~~
~~CLOSE EXISTING HWY. 18 AT 2ND ST.~~

~~STA 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18. ON RT. SIDE.~~
~~CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.~~

~~STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.~~
~~*NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.~~

~~STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.~~

CHANGED FG.: CMA 8/4/09
DELETED FG.: CMA 8/4/09 NO FG

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 156+53 TO STA. 165+00 = 960 LIN. FT.

SEE PERMANENT PAVEMENT MARKING DETAILS
STA. 146+52 TO STA. 156+53 (HWY. 18 BRIDGE)

MAINTENANCE OF TRAFFIC DETAILS STAGE 3

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	31	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

STAGE 3 MOT

STA. 110+00 - STA. 112+50 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+00 - STA. 116+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE S. 11TH STREET AND CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 116+75 - STA. 159+30 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CLOSE EXISTING HWY. 18 AT 2ND ST.

STA. 159+30 - STA. 170+00 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
CONSTRUCT LT. SIDE. CONSTRUCT PROPOSED HWY. 18 ON LT. SIDE.

STA. 170+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.
NOTCH AND WIDEN PROPOSED HWY. 18 ON LT. SIDE.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE.

P.I. STA. 400+0
400
CENTERLINE WALNUT
N87°04'30.94"E
PAVED PARKING
CONCRETE
TY.ASPHALT
WD.:6
BOLLARDS
IS762
2.5MTL POST SWR TEL
BROKEN LT.CONCRETE
WD.:5
2 1/2" GATES
C/L WILLOW ST
CURB
(1) G20-2 (48" X 24")
END ROAD WORK 2 LOCATIONS
(1) W20-1 (48" X 48") ROAD WORK AHEAD
PARKING
PV
LACLEDE ST.
P.I. STA. 503+37.64
P.I. STA. 475+86.59
STA. 504+75.61 MAIN ST.
STA. 174+94.67 HWY. 16
Δ = 75°41'36"
(1) W20-1 (48" X 48") ROAD WORK 500 FT
(1) W20-1 (48" X 48") ROAD WORK 1000 FT
(1) W20-1 (48" X 48") ROAD WORK 1500 FT
S. HOLLAND ST.
(1) G20-2 (48" X 24") END ROAD WORK
(1) G20-2 (48" X 24") ROAD CLOSED
(1) R11-2 (48" X 30") 16' BARR. TYP. III LT.
POB500+00.00
500
MAIN ST.
S 88°58'01" E
HWY. 18
180
STA. 177+64.02
END JOB 100740
P.T. STA. 177+10.27
(1) G20-2 (48" X 24")
S. HOLLAND ST.
N. LAKE ST.
S. FRANKLIN ST.
(1) W20-1 (48" X 48") ROAD WORK AHEAD
(1) G20-2 (48" X 24") END ROAD WORK
P.T. STA. 172+82.37
N 25°13'29" E
P.C. STA. 173+81.23
P.C. STA. 169+63.93
ROAD CLOSED
(1) R11-2 (48" X 30") 16' BARR. TYP. III LT.
NW. ASH ST.
CONCRETE
P.I. STA. 171+41.86
S. LILLY ST.
ST.
N 88°54'43" E
165
170
40'
32'
26'
24'
20'
16'

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 165+00 TO STA. 177+63 = 1325 LIN. FT.

43 TRAFFIC DRUMS
60' O.C. ROADWAY
20' O.C. TURNOUTS

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

MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

1/27/2012
R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	32	160

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

SHOULDER MATERIAL SHALL NOT BE CUT AWAY FROM THE EDGE OF PAVEMENT ON BOTH SIDES OF ANY SECTION OPEN TO TRAFFIC.

STAGE 4 MOT

STA. 110+00 - STA. 175+75 MAINTAIN TRAFFIC ON PROPOSED HWY. 18.

STA. 175+75 - STA. 177+65 MAINTAIN TRAFFIC ON PROPOSED HWY. 18 ON RT. SIDE AND EXISTING HWY. 18 ON LT. SIDE. LEVEL LT. SIDE, ONE LANE AT A TIME, AND SHIFT WESTBOUND TRAFFIC TO LT. SIDE OF PROPOSED HWY. 18.

CLOSE THE RAMP TO THE NORTH COUPLET (WALNUT ST.).

RESTRIPE WALNUT ST. AND ASH ST. FOR 2 WAY TRAFFIC.

P.I. STA. 400+0
HWY. 18 (WALNUT ST.)
CENTERLINE WALNUT
N87°04'30.94"E
P.O.B. 500+00.00
MAIN ST.
P.I. STA. 503+33.54
P.I. STA. 504+65.59
STA. 504+75.61 MAIN ST
STA. 174+94.67 HWY. 16
Δ = 75°41' 36"
LACLEDE ST.
S. HOLLAND ST.
HWY. 18
S 88°58'01" E
P.T. STA. 177+40.27
P.I. STA. 172+82.37
P.C. STA. 169+63.93
P.C. STA. 173+81.23
P.I. STA. 171+41.86
S. FRANKLIN ST.
N. LAKE ST.
NW. ASH ST.
S. LILLY ST.
N 88°54'43" E

STA. 177+64.02
END JOB 100740

PLACE ADVANCE WARNING SIGNS AT END OF JOB.

REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 18)
STA. 177+87 TO STA. 179+07 = 420 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 177+87 TO STA. 179+07 = 600 LIN. FT

CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 108+38 TO STA. 165+00 = 15750 LIN. FT.
MATCH PERMANENT PAVEMENT MARKINGS
STA. 165+00 TO STA. 177+87 = 1325 LIN. FT.

40 TRAFFIC DRUMS
60' O.C. ROADWAY
30' O.C. TAPER
20' O.C. TURNOUTS

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

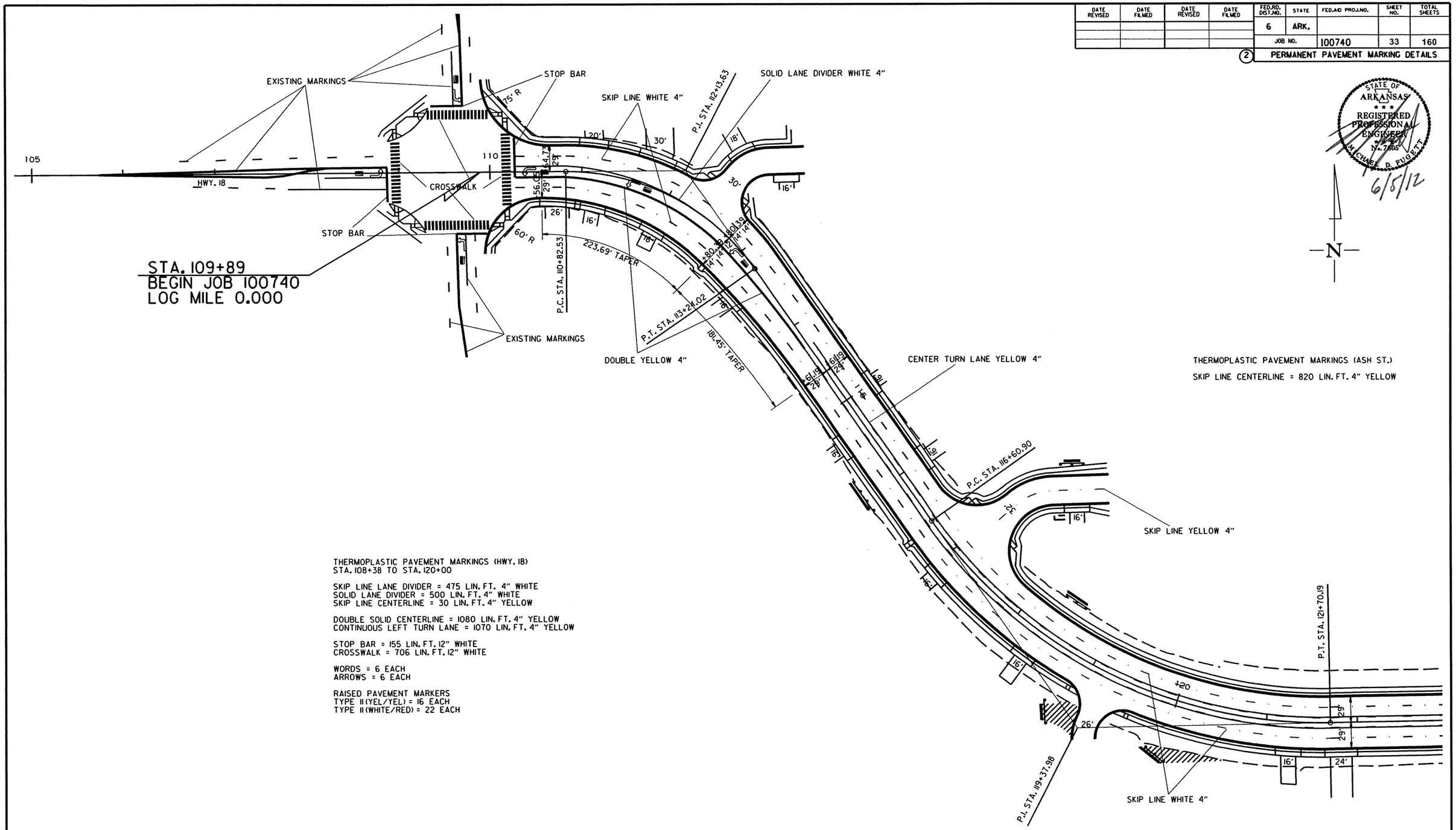
MAINTENANCE OF TRAFFIC DETAILS
STAGE 4

1/27/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	33	160

(2) PERMANENT PAVEMENT MARKING DETAILS



THERMOPLASTIC PAVEMENT MARKINGS (HWY. 18)
STA. 108+38 TO STA. 120+00

SKIP LINE LANE DIVIDER = 475 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 500 LIN. FT. 4" WHITE
SKIP LINE CENTERLINE = 30 LIN. FT. 4" YELLOW

DOUBLE SOLID CENTERLINE = 1080 LIN. FT. 4" YELLOW
CONTINUOUS LEFT TURN LANE = 1070 LIN. FT. 4" YELLOW

STOP BAR = 155 LIN. FT. 12" WHITE
CROSSWALK = 706 LIN. FT. 12" WHITE

WORDS = 6 EACH
ARROWS = 6 EACH

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 16 EACH
TYPE II (WHITE/RED) = 22 EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

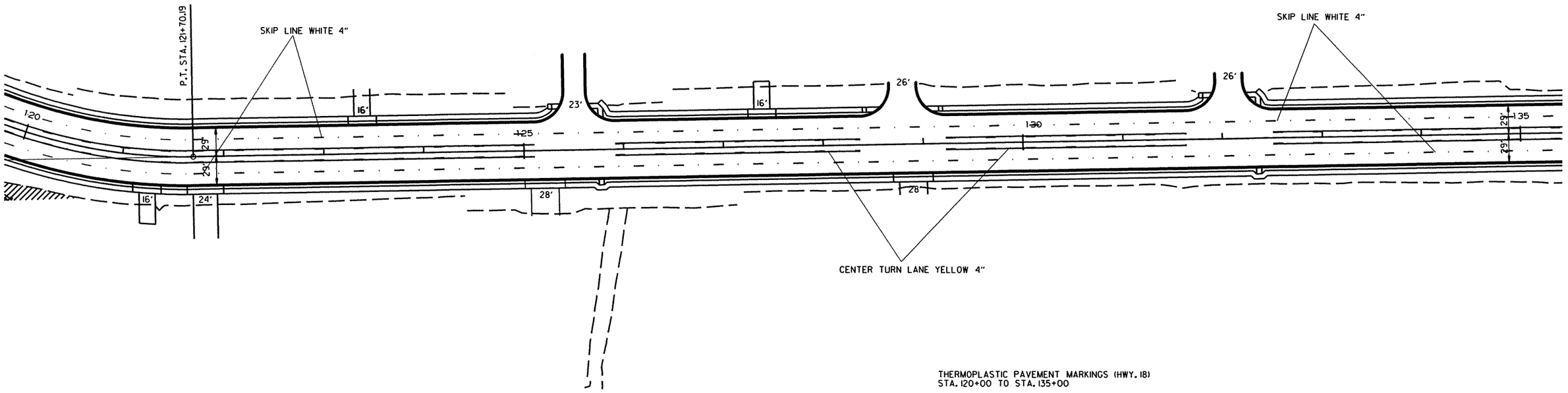
THERMOPLASTIC PAVEMENT MARKINGS (ASH ST.)
SKIP LINE CENTERLINE = 820 LIN. FT. 4" YELLOW

r100740.dgn 3/30/2010

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	34	160
				(2) PERMANENT PAVEMENT MARKING DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



THERMOPLASTIC PAVEMENT MARKINGS (HWY. 18)
STA. 120+00 TO STA. 135+00

SKIP LINE LANE DIVIDER = 620 LIN. FT. 4" WHITE

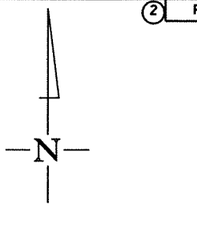
CONTINUOUS LEFT TURN LANE = 3100 LIN. FT. 4" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 32 EACH
TYPE II (WHITE/RED) = 32 EACH

r100740.dgn 3/30/2010

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	35	160
				(2)	PERMANENT PAVEMENT MARKING DETAILS			

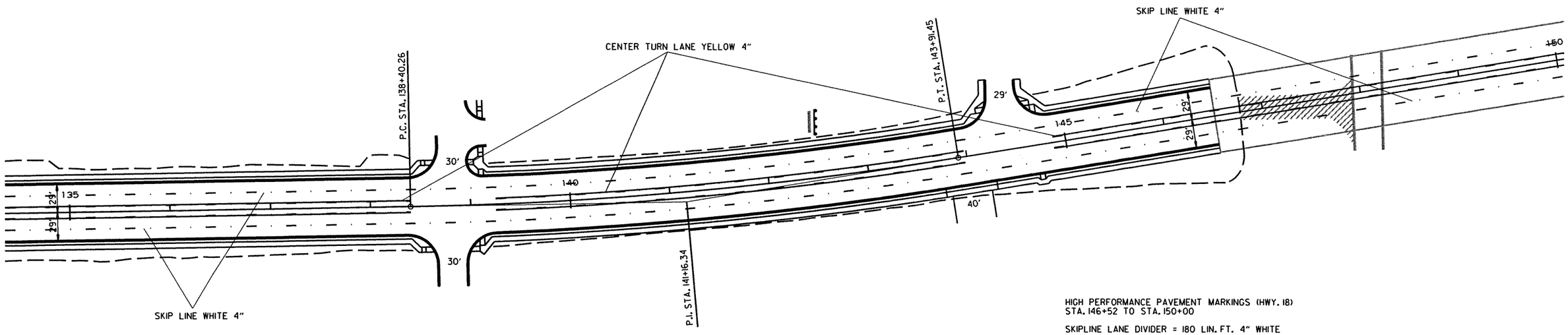


THERMOPLASTIC PAVEMENT MARKINGS (HWY. 18)
STA. 135+00 TO STA. 146+52

SKIP LINE LANE DIVIDER = 490 LIN. FT. 4" WHITE

CONTINUOUS LEFT TURN LANE = 2450 LIN. FT. 4" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 24 EACH
TYPE II (WHITE/RED) = 24 EACH



HIGH PERFORMANCE PAVEMENT MARKINGS (HWY. 18)
STA. 146+52 TO STA. 150+00

SKIPLINE LANE DIVIDER = 180 LIN. FT. 4" WHITE

CONTINUOUS LEFT TURN LANE = 870 LIN. FT. 4" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 9 EACH
TYPE II (WHITE/RED) = 9 EACH

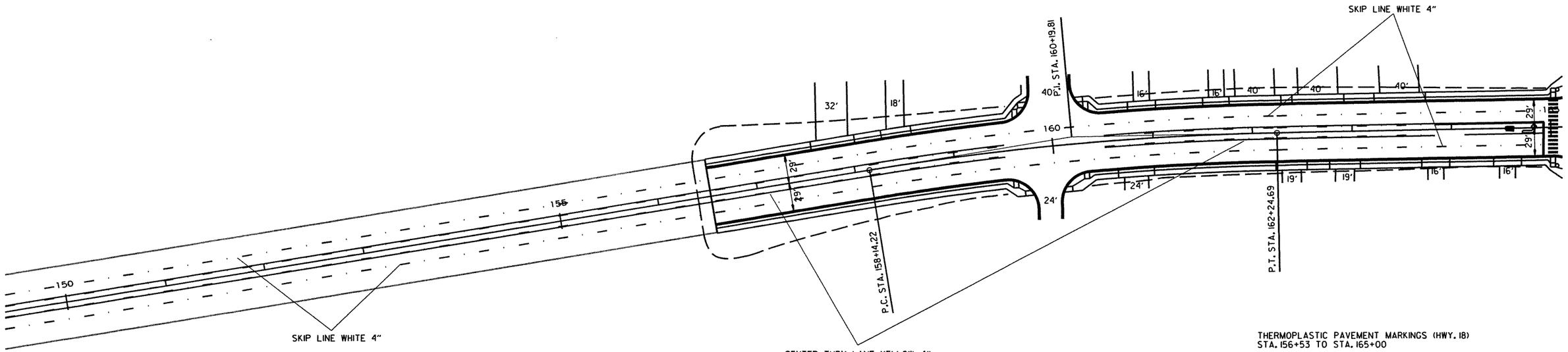
PERMANENT PAVEMENT MARKING DETAILS

r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	36	160
				(2)	PERMANENT PAVEMENT MARKING DETAILS			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

THERMOPLASTIC PAVEMENT MARKINGS (ASH ST.)
SKIP LINE CENTERLINE = 90 LIN. FT. 4" YELLOW



HIGH PERFORMANCE PAVEMENT MARKINGS (HWY. 18)
STA. 150+00 TO STA. 156+53

SKIP LINE LANE DIVIDER = 290 LIN. FT. 4" WHITE
CONTINUOUS LEFT TURN LANE = 1640 LIN. FT. 4" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 10 EACH
TYPE II (WHITE/RED) = 10 EACH

THERMOPLASTIC PAVEMENT MARKINGS (HWY. 18)
STA. 156+53 TO STA. 165+00

SKIP LINE LANE DIVIDER = 370 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 80 LIN. FT. 4" WHITE

CONTINUOUS LEFT TURN LANE = 1580 LIN. FT. 4" YELLOW
DOUBLE LANE DIVIDER = 220 LIN. FT. 4" YELLOW

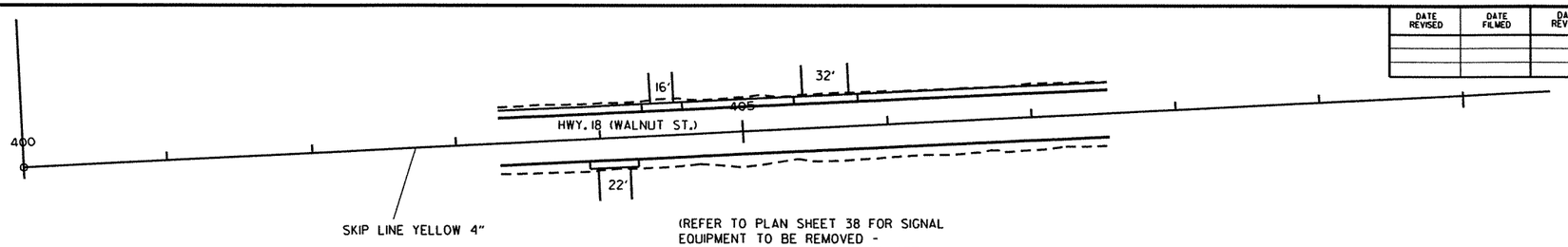
RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 20 EACH
TYPE II (WHITE/RED) = 20 EACH

r100740.dgn 3/30/2010

PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	37	160

(2) PERMANENT PAVEMENT MARKING DETAILS



(REFER TO PLAN SHEET 38 FOR SIGNAL EQUIPMENT TO BE REMOVED - RE-STRIPING QUANTITIES SHOWN ARE FOR WALNUT ST. FROM NO. BROADWAY TO NEW INTERSECTION TIE TO RELOCATED HWY. 18.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

N

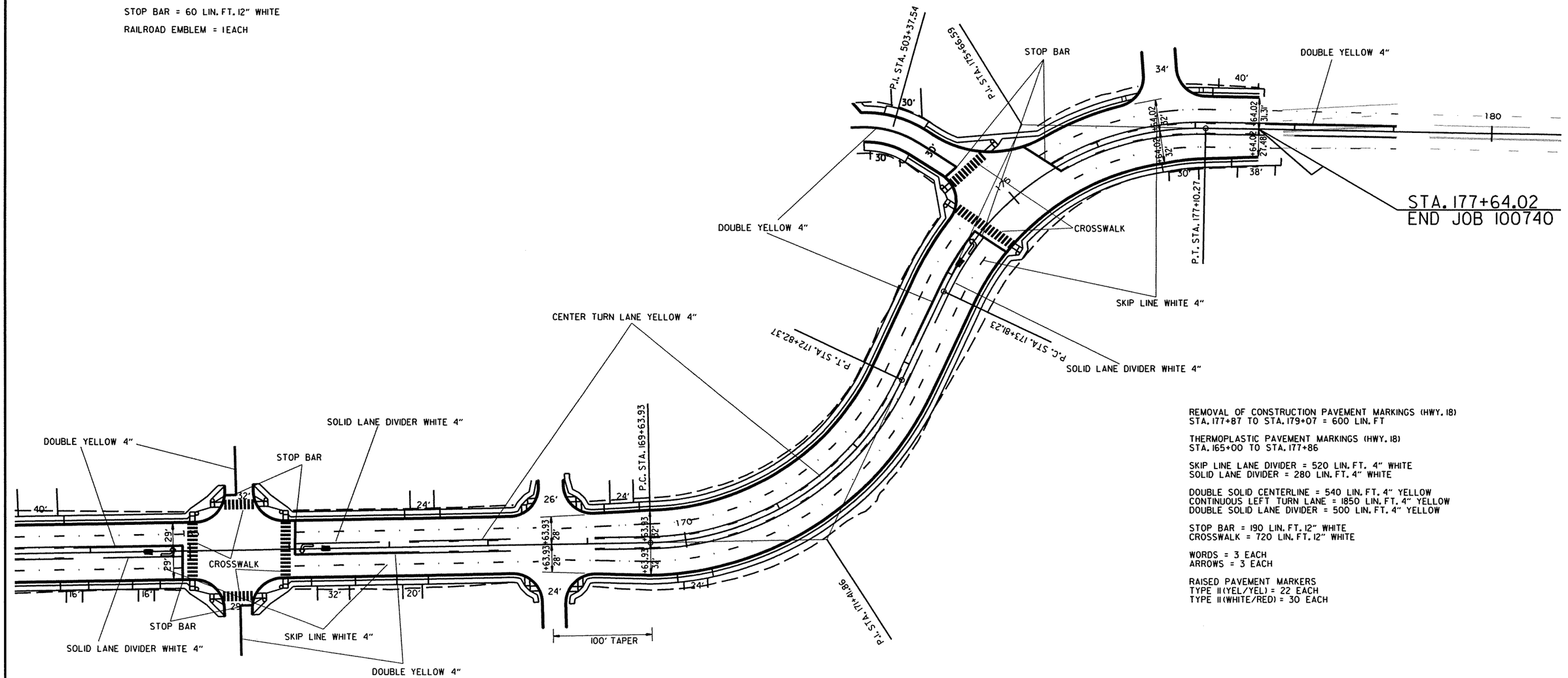
REMOVAL OF PERMANENT PAVEMENT MARKINGS (WALNUT ST.)
CENTERLINE OF WALNUT STREET = 1610 LIN. FT. 4" YELLOW
RAILROAD EMBLEMS = 1EACH
ARROWS = 2 EACH
WORDS = 1EACH

THERMOPLASTIC PAVEMENT MARKINGS (WALNUT ST.)

SKIP LINE LANE DIVIDER = 1330 LIN. FT. 4" YELLOW

STOP BAR = 60 LIN. FT. 12" WHITE

RAILROAD EMBLEM = 1EACH



REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (HWY. 18)
STA. 177+87 TO STA. 179+07 = 600 LIN. FT

THERMOPLASTIC PAVEMENT MARKINGS (HWY. 18)
STA. 165+00 TO STA. 177+86

SKIP LINE LANE DIVIDER = 520 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 280 LIN. FT. 4" WHITE

DOUBLE SOLID CENTERLINE = 540 LIN. FT. 4" YELLOW
CONTINUOUS LEFT TURN LANE = 1850 LIN. FT. 4" YELLOW
DOUBLE SOLID LANE DIVIDER = 500 LIN. FT. 4" YELLOW

STOP BAR = 190 LIN. FT. 12" WHITE
CROSSWALK = 720 LIN. FT. 12" WHITE

WORDS = 3 EACH
ARROWS = 3 EACH

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 22 EACH
TYPE II (WHITE/RED) = 30 EACH

r100740.dgn 3/30/2010

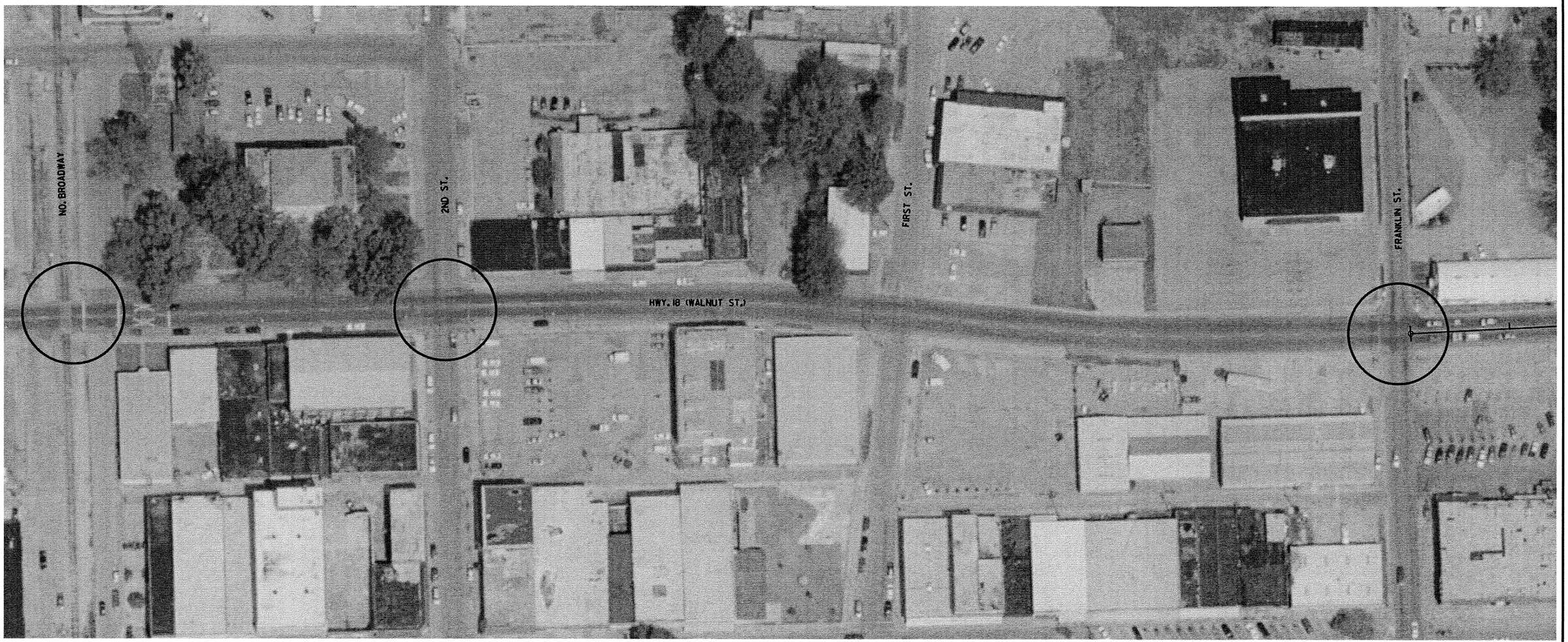
PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	38	160
				(2)	PERMANENT PAVEMENT MARKING DETAILS			

SIGNAL EQUIPMENT IS TO BE REMOVED AT THE FOLLOWING 3 LOCATIONS -
WALNUT ST. & NO. BROADWAY
WALNUT ST. & 2ND ST.
WALNUT ST. & FRANKLIN

RE-STRIPING QUANTITIES ARE SHOWN FOR WALNUT ST. FROM NO. BROADWAY TO NEW INTERSECTION TIE TO RELOCATED HWY. 18 ON PLAN SHEET 37. (WALNUT ST. CURRENTLY HAS ONE-WAY TRAFFIC BUT WILL BE STRIPED FOR TWO-WAY TRAFFIC.)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	39	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. FUGETT
6/5/12

REMOVAL AND DISPOSAL OF MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE

DESCRIPTION	SIGNS	TRAFFIC DRUMS	BARRICADES	PRECAST CONCRETE BARRIER WALL
	EACH	EACH	EACH	LIN. FT.
MAINTENANCE OF TRAFFIC ITEMS FROM JOB 100705	32	50	10	426
TOTALS:	32	50	10	426

NOTE: "SIGNS", "TRAFFIC DRUMS", AND "BARRICADES" REMOVED AS "REMOVAL AND DISPOSAL OF MAINTENANCE OF TRAFFIC ITEMS LEFT IN PLACE" WILL BECOME THE PROPERTY OF THE DISTRICT AND WILL BE STORED IF AND WHERE DIRECTED BY THE ENGINEER.

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
109+89	110+89	MAIN LANES	38	422.22
176+86	177+86	MAIN LANES	60	666.67
ENTIRE	PROJECT	IF & WHERE DIRECTED BY THE ENGINEER		300.00
TOTAL:				1388.89

NOTE: AVERAGE MILLING DEPTH 1".

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)	
												RIGHT	LEFT
			LIN. FT. - EACH						NO.	SQ. FT.	EACH	LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4		4	4	64.0			
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4		4	4	64.0			
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4		4	4	64.0			
W20-1	ROAD WORK AHEAD	48"x48"	18	18	18	20		20	20	320.0			
G20-2	END ROAD WORK	48"x24"	21	21	21	23		23	23	184.0			
W1-4AR	REVERSE CURVE RT.	48"x48"			1			1	1	16.0			
W13-1	SPEED LIMIT (ADVISORY)	24"x24"			1			1	1	4.0			
R11-2	ROAD CLOSED	48"x30"	21	21	29	1		29	29	290.0			
W8-1	BUMP	30"x30"			4			4	4	25.0			
W24-1R	DOUBLE REVERSE CURVE RT.	48"x48"				1		1	1	16.0			
W24-1L	DOUBLE REVERSE CURVE LT.	48"x48"				1		1	1	16.0			
R11-4	ROAD CLOSED TO THRU TRAFFIC	60"x30"	2	2	3			3	3	37.5			
R6-2	ONE WAY	24" x30"			3			3	3	15.0			
	TRAFFIC DRUMS		211	185	298	295		298	298		298		
	TYPE III BARRICADE-RT. (8')		11	12	11			12	12			96	
	TYPE III BARRICADE-LT. (8')		4	5	10			10	10				80
	TYPE III BARRICADE-RT. (16')		12	10	4	1		12	12			192	
	TYPE III BARRICADE-LT. (16')		10	9	20			20	20				320
TOTALS:									1115.5		298	288	400

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	END OF JOB	CONST. PAVEMENT MARKINGS			PERMANENT PAVEMENT MARKINGS								
						REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS					HIGH PERFORMANCE CONTRAST PAVEMENT MARKING (4")	
									TYPE II (WH/RED)	TYPE II (YEL/YEL)	4" WHITE	4" YELLOW	12" WHITE	WORDS	ARROWS	RAILROAD EMBLEM	WHITE	YELLOW
	LIN. FT. - EACH					LIN. FT.			EACH		LIN. FT.			EACH			LIN. FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS				420		420												
CONSTRUCTION PAVEMENT MARKINGS	1490	2330	7715	1325			12860											
REMOVABLE CONSTRUCTION PAV'T MARKINGS				600				600										
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)					123				123									
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)					133					133								
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")					3335						3335							
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")					15810							15810						
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")					1831								1831					
THERMOPLASTIC PAVEMENT MARKINGS WORDS					9									9				
THERMOPLASTIC PAVEMENT MARKINGS ARROWS					9										9			
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")					470												470	
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")					2510													2510
RAILROAD EMBLEM					1											1		
TOTALS:						420	12860	600	123	133	3335	15810	1831	9	9	1	470	2510

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	40	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
112+00	125+00	HWY. 18	13	13
119+00	125+00	HWY. 18	6	6
128+00	132+00	HWY. 18	4	4
136+00	138+00	HWY. 18	2	2
142+00	144+00	HWY. 18	2	2
162+00	166+00	HWY. 18	4	4
168+00	171+00	HWY. 18	3	3
172+00	175+00	HWY. 18	3	3
TOTALS:			37	37

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	BOX CULVERTS	DROP INLETS
		EACH	EACH	EACH
110+00	24" x 12" x 56' R.C. ARCH PIPE CULVERT AND D.I. ON LT.	1		1
112+43	18" x 31' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
110+16	24" x 269' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
112+60	24" x 52' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
115+50	24" x180' R.C. PIPE CULVERT ON LT.	1		
117+57	12" x 42' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
117+12	D.I. ON LT.			1
117+46	24" x 31' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
117+86	12" x 48' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
121+35	12" x 34' R.C. PIPE CULVERT ON RT.	1		
125+32	6" x 68' PVC PIPE CULVERT ON LT.	1		
125+40	18" x 31' R.C. PIPE CULVERT AND D.I. ON RT.	1		
125+13	2' x 1' x 31' R.C. BOX CULVERT ON RT.		1	
125+57	24" x 6' R.C. PIPE CULVERT ON LT.	1		
125+58	24" x 28' R.C. PIPE CULVERT ON LT.	1		
125+59	12" x 6' R.C. PIPE CULVERT ON LT.	1		
126+38	18" x 160' R.C. PIPE CULVERT ON RT.	1		
125+63	15" x 35' R.C. PIPE CULVERT ON LT.	1		
125+83	2' x 1' x 40' R.C. BOX CULVERT ON RT.		1	
128+83	42" x 26" x 61' R.C. ARCH PIPE CULVERT ON LT.	1		
129+22	12" x 121' R.C. PIPE CULVERT ON RT.	1		
130+80	12" x 195' C.M. PIPE CULVERT ON RT.	1		
132+11	42" x 26" x 61' R.C. ARCH PIPE CULVERT ON LT.	1		
132+13	18" x 41' R.C. PIPE CULVERT ON LT.	1		
134+96	24" x 23' R.C. PIPE CULVERT ON LT.	1		
137+09	18" x 43' R.C. PIPE CULVERT ON LT.	1		
138+83	12" x 21' R.C. PIPE CULVERT ON RT.	1		
138+97	18" x 172' R.C. PIPE CULVERT ON RT.	1		
144+23	18" x 10' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
144+23	18" x 10' R.C. PIPE CULVERT ON LT.	1		
144+55	18" x 30' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
159+78	18" x 32' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
160+19	18" x 40' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
160+31	18" x 30' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
162+50	1' x 2' x 28' R.C. BOX CULVERT AND D.I. ON LT.		1	1
162+50	1' x 2' x 19' R.C. BOX CULVERT AND D.I. ON LT.		1	1
165+30	18" x 67' R.C. PIPE CULVERT	1		
165+30	2' x 2' x 32' R.C. BOX CULVERT AND D.I. ON LT.	1		1
165+47	12" x 48' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
165+66	30" x 58' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
168+47	48" x 275' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
168+58	48" x 10' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
168+82	48" x 19' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
168+82	18" x 38' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
170+65	12" x 26' R.C. PIPE CULVERT ON RT.	1		
170+65	18" x 67' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
173+46	24" x 186' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
173+45	18" x 28' R.C. PIPE CULVERT AND D.I. ON LT.	1		1
175+22	24" x 165' R.C.PIPE CULVERT AND D.I. ON RT.	1		1
179+02	18" x 356' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
406+50	18" x 27' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
406+20	18" x 163' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
405+13	18" x 160' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
406+74	18" x 35' R.C. PIPE CULVERT AND D.I. ON RT.	1		1
406+73	DROP INLET ON LT.			1
TOTALS:		49	4	32

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

EARTHWORK

	STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
				CU. YD.		TON
	ENTIRE	PROJECT	HWY. 18	8415	12904	
	ENTIRE	PROJECT	WALNUT ST.	267	74	
	ENTIRE	PROJECT	APPROACHES	65	705	
	112+40		W. MAIN ST.		45	
	117+00		ASH ST.		60	
	119+22		S. 11TH ST.		100	
	125+50		S. 10TH ST.		45	
	128+80		S. 9TH ST.		65	
	132+08		S. 8TH ST.		20	
	138+82		ELM ST. ON LT.		10	
	138+82		ELM ST. ON RT.		30	
	144+42		S. 5TH ST.		60	
	160+00		FIRST ST. LT.		55	
	160+00		FIRST ST. RT.		55	
	165+50		FRANKLIN ST. LT.		5	
	165+50		FRANKLIN ST. RT.		5	
	168+63		N. LAKE ST.		10	
	168+63		S. LAKE ST.		20	
	176+07		E. MAIN ST.		55	
	176+07		LACLEDE ST.		60	
	125+95		CHANNEL CHANGE	96		
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			500
	TOTALS:			8843	14383	500

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

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

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB AND GUTTER	CONCRETE PAVEMENT	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS
			LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.
110+20		CONCRETE DRIVEWAY ON LT.				434	
110+35		CONCRETE DRIVEWAY ON RT.				487	
110+58	112+70	SIDEWALK ALONG MAIN ST.	46				146
110+99	112+68	SIDEWALK ALONG MAIN ST.	47				109
111+05		CONCRETE DRIVEWAY ON RT.				32	
111+08		CONCRETE DRIVEWAY ON LT.				51	
111+69		CONCRETE DRIVEWAY ON LT.				77	
111+88		CONCRETE DRIVEWAY ON RT.				109	
112+67		CONCRETE DRIVEWAY ON LT.				140	
115+58	117+58	SIDEWALK ALONG ASH ST.	285				162
115+76		CONCRETE DRIVEWAY ON CL.				133	
116+04		SIDEWALK ALONG MAIN ST.					19
116+27	118+11	SIDEWALK ALONG ASH ST.	275				152
118+29	119+16	SIDEWALK ALONG S. 11TH ST.	240				83
118+58	119+34	SIDEWALK ALONG S. 11TH ST.	149				
125+00		CONCRETE DRIVEWAY ON RT.				706	
127+40		CONCRETE DRIVEWAY ON LT.				9	
138+56		SIDEWALK ALONG ELM ST.					36
143+74		CONCRETE DRIVEWAY ALONG SYCAMORE ST.				363	
153+52		CONCRETE PARKING LOT		676			
155+20		CONCRETE PARKING LOT		706			
156+92		CONCRETE PARKING LOT					
158+46		SIDEWALK ON LT.					12
159+00	159+78	CURB AND GUTTER ON ASH ST.	187				
159+38		CONCRETE PARKING LOT		612			
160+02	165+34	SIDEWALK AND CURB AND GUTTER ON ASH ST.	697				290
160+22	165+37	SIDEWALK AND CURB AND GUTTER ON ASH ST.	541				277
160+68		CONCRETE PARKING LOT		778			
162+67		CONCRETE PARKING LOT		725			
163+52		CONCRETE DRIVEWAY ON CL.				136	
163+84		CONCRETE DRIVEWAY ON CL.				51	
164+57		CONCRETE DRIVEWAY ON CL.				48	
165+16		CONCRETE DRIVEWAY ON RT.				92	
165+52	168+54	CURB AND GUTTER ON ASH ST.	472				
165+66	168+53	CURB AND GUTTER ON ASH ST.	310				
166+35		CONCRETE PARKING LOT		627			
168+76	177+64	CURB AND GUTTER ON ASH ST.	1228				
168+77	177+64	CURB AND GUTTER ON ASH ST.	1214				
169+76		CONCRETE PARKING LOT		782			
175+71		CONCRETE ISLAND			391		
		NORTH CONNECTOR RAMP	888				
403+29	407+53	CURB AND GUTTER ON WALNUT ST. RT.	482				
403+29	407+53	CURB AND GUTTER ON WALNUT ST. LT.	423				
TOTALS:			7484	4906	391	2868	1286

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	41	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGH P.E.
6/5/12

SOIL LOG

STATION	LOCATION	DEPTH FEET	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
111+00	CL	0-5	31	11	A-6(9)	BROWN
116+30	5' RT	0-5	ND	NP	A-4(0)	BROWN
120+00	CL	0-5	ND	NP	A-4(0)	BROWN
124+00	CL	0-5	25	5	A-4(2)	BROWN
125+40	48"LT	0-5	ND	NP	A-4(0)	BROWN
128+90	CL	0-5	25	5	A-4(2)	BROWN
132+10	40'LT	0-5	28	6	A-4(4)	BROWN
136+00	CL	0-5	27	6	A-4(4)	BROWN
138+80	CL	0-5	25	6	A-4(2)	BROWN
143+00	CL	0-5	ND	NP	A-4(0)	BROWN
148+75	CL	0-5	ND	NP	A-4(0)	GR/BR
156+00	CL	0-5	25	6	A-4(3)	GR/BR
160+25	10'RT	0-5	ND	NP	A-2-4(0)	BROWN
163+00	CL	0-5	24	2	A-4(0)	BROWN
163+00	24'LT	0-5	ND	NP	A-4(0)	BROWN
163+00	24' LT	0-5	ND	NP	A-4(0)	BROWN
165+75	CL	0-5	21	2	A-4(0)	BROWN
168+75	CL	0-5	ND	NP	A-4(0)	BROWN
171+00	CL	0-5	ND	NP	A-2-4(0)	BROWN
171+00	21'LT	0-5	ND	NP	A-4(0)	BROWN
178+00	CL	0-5	25	6	A-4(4)	BROWN
402+00	CL	0-5	23	3	A-4(1)	BROWN
120+00	CL	0-5	26	4	A-4(0)	BROWN

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

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 2	TYPE 3
		SQ.YD.	
109+11	HWY. 18 ON LT.	15.2	
109+06	HWY. 18 ON RT.	13.0	
110+10	HWY. 18 ON LT.	20.7	
110+10	HWY. 18 ON RT.	18.5	
112+23	HWY. 18 ON LT.	4.3	
112+69	HWY. 18 ON LT.	10.6	
112+82	HWY. 18 ON RT.		3.4
116+67	HWY. 18 ON RT.		3.3
116+71	HWY. 18 ON LT.	10.7	
117+45	HWY. 18 ON LT.	4.4	
118+92	HWY. 18 ON RT.		5.2
119+50	HWY. 18 ON RT.		5.1
125+31	HWY. 18 ON LT.	3.7	
125+75	HWY. 18 ON LT.	12.1	
125+77	HWY. 18 ON RT.		3.1
128+50	HWY. 18 ON LT.		5.6
129+12	HWY. 18 ON LT.		5.8
131+85	HWY. 18 ON LT.	4.2	
132+34	HWY. 18 ON LT.	11.9	
132+36	HWY. 18 ON RT.		3.3
138+58	HWY. 18 ON LT.	4.1	
139+10	HWY. 18 ON LT.	13.8	
139+10	HWY. 18 ON RT.	10.9	
138+58	HWY. 18 ON RT.	4.1	
144+19	HWY. 18 ON LT.	6.9	
144+72	HWY. 18 ON LT.	13.6	
144+72	HWY. 18 ON RT.		3.0
159+68	HWY. 18 ON LT.	8.3	
159+66	HWY. 18 ON RT.	7.8	
160+22	HWY. 18 ON RT.	7.4	
160+31	HWY. 18 ON LT.	8.2	
165+15	HWY. 18 ON LT.	7.2	
165+15	HWY. 18 ON RT.	7.6	
165+83	HWY. 18 ON LT.	7.3	
165+83	HWY. 18 ON RT.	7.3	
168+42	HWY. 18 ON LT.	7.4	
168+42	HWY. 18 ON RT.	8.7	
168+87	HWY. 18 ON LT.	8.9	
168+87	HWY. 18 ON RT.	8.7	
174+60	HWY. 18 ON LT.	7.5	
175+23	HWY. 18 ON LT.	4.7	
176+41	HWY. 18 ON LT.		5.8
177+00	HWY. 18 ON LT.		5.8
TOTALS:		289.7	49.4

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
110+65	114+74	HWY. 18	409	
115+01	124+33	HWY. 18	932	
168+21	177+64	HWY. 18	943	
130+00	133+00	HWY. 18	300	
140+00	143+00	HWY. 18	300	
166+50	169+50	HWY. 18	300	
173+00	175+50	HWY. 18	250	
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			1000	14
TOTALS:			4434	14

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

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

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL		TEMPORARY EROSION CONTROL									
			WATER	SOLID SODDING	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	WATTLE (12") (E-1)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			M.GAL.	SQ.YD.	ACRE	ACRE	M.GAL.	BAG	LIN. FT.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1	95.6	7590				88	1700	5686		1070	1070	1344
ENTIRE	PROJECT	STAGE 2								75				3
ENTIRE	PROJECT	STAGE 3	41.6	3300					600	2080				
ENTIRE	PROJECT	STAGE 4	1.5	120						1300				
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			3.8	300	4.00	4.00	81.6	250	400	1000	48	300	300	352
TOTALS:			142.5	11310	4.00	4.00	81.6	338	2700	10141	48	1370	1370	1699

BASIS OF ESTIMATE:
WATER.....20.4 M.G. / ACRE OF TEMPORARY SEEDING.
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
SAND BAG DITCH CHECKS.....22 BAGS / LOCATION

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 ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

SUBGRADE PREPARATION

STATION	STATION	LOCATION	STATION
144+90	146+51	HWY. 18	1.61
156+53	159+30	HWY. 18	2.77
TOTAL:			4.38

NOTE:
THE REMOVAL AND DISPOSAL OF EXISTING GRASS AND/OR OTHER ORGANIC MATERIALS FROM THE SUBGRADE AND SUBSEQUENT REPLACEMENT OF SUBGRADE MATERIAL WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCLUDED IN THE PRICE BID "SUBGRADE PREPARATION".

YARD DRAINS

LOCATION	YARD DRAINS *	12" SIDE DRAIN
	EACH	LIN. FT.
IF AND WHERE DIRECTED BY THE	2	48
ENGINEER		
TOTAL:	2	48

* QUANTITY ESTIMATED: SEE SECTION 104.03 OF THE STANDARD SPECS.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	42	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
14760
MICHAEL D. FUGETT
6/5/12

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
109+00		RADIUS ON LT.	70
109+00		RADIUS ON RT.	60
110+25		RADIUS ON LT.	116
110+25		RADIUS ON RT.	96
110+55	118+83	SIDEWALK ON RT.	828
110+65	112+10	SIDEWALK ON LT.	145
112+28		RADIUS AND TURNOUT ON LT.	136
112+70		RADIUS AND TURNOUT ON LT.	109
112+83	116+34	SIDEWALK ON LT.	351
116+80		RADIUS AND TURNOUT ON LT.	200
117+34		RADIUS AND TURNOUT ON LT.	180
117+85	125+10	SIDEWALK ON LT.	725
118+89		RADIUS ON RT.	72
119+55		RADIUS ON RT.	52
119+60	138+36	SIDEWALK ON RT.	1876
125+23		RADIUS ON LT.	83
125+82		RADIUS ON LT.	83
125+92	128+36	SIDEWALK ON LT.	244
128+48		RADIUS ON LT.	49
129+14		RADIUS ON LT.	49
129+23	131+64	SIDEWALK ON LT.	241
131+76		RADIUS ON LT.	53
132+40		RADIUS ON LT.	43
132+50	138+37	SIDEWALK ON LT.	587
138+48		RADIUS ON LT.	59
138+48		RADIUS ON RT.	68
139+09		RADIUS ON LT.	85
139+13		RADIUS ON RT.	68
139+18	143+98	SIDEWALK ON LT.	480
139+25	146+52	SIDEWALK ON RT.	727
144+13		RADIUS ON LT.	61
144+73		RADIUS ON LT.	44
144+87	146+52	SIDEWALK ON LT.	165
156+53	159+51	SIDEWALK ON LT.	298
156+53	159+49	SIDEWALK ON RT.	296
159+62		RADIUS ON RT.	61
159+67		RADIUS ON LT.	60
160+26		RADIUS ON RT.	67
160+39		RADIUS ON LT.	59
160+40	164+94	SIDEWALK ON RT.	454
160+51	164+96	SIDEWALK ON LT.	445
165+12		RADIUS ON RT.	64
165+16		RADIUS ON LT.	63
165+85		RADIUS ON RT.	64
165+89		RADIUS ON LT.	64
166+02	168+24	SIDEWALK ON RT.	222
166+04	168+23	SIDEWALK ON LT.	219
168+37		RADIUS ON LT.	53
168+38		RADIUS ON RT.	72
168+93		RADIUS ON LT.	53
168+93		RADIUS ON RT.	71
169+07	174+40	SIDEWALK ON LT.	533
169+07	177+87	SIDEWALK ON RT.	880
174+55		RADIUS ON LT.	140
175+23		RADIUS ON LT.	207
175+55	176+33	SIDEWALK ON LT.	78
176+36		RADIUS ON LT.	65
177+05		RADIUS ON LT.	41
177+10	177+68	SIDEWALK ON LT.	58
TOTAL:			12892

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS	STANDARD DRAWINGS
										24"	
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON		
110+71	RT.	DRIVEWAY	26	110+44	110+98	33.80	39.8	4.4	16.3		
111+09	LT.	DRIVEWAY	20	110+85	111+33	49.20					
111+17	RT.	DRIVEWAY	16	110+95	111+39	51.50					
111+73	LT.	DRIVEWAY	30	111+44	112+02	132.10					
112+00	RT.	DRIVEWAY	16	111+78	112+22	54.80					
112+38	LT.	DRIVEWAY ON MAIN ST.	18	112+15	112+61	80.60					
112+83	LT.	DRIVEWAY ON MAIN ST.	16	112+61	113+05	41.60					
113+37	RT.	DRIVEWAY	16	113+15	113+59	54.90					
115+00	LT.	DRIVEWAY	16	114+78	115+22	24.90	17.6	1.9	7.2		
115+40	RT.	DRIVEWAY	16	115+18	115+62	24.90	22.2	2.4	9.1		
116+00	LT.	DRIVEWAY	16	115+78	116+22	24.90	33.2	3.7	13.6		
117+08	LT.	DRIVEWAY ON ASH ST.	16	116+86	117+30	47.20					
118+33	RT.	DRIVEWAY	16	118+11	118+55	24.90	50.6	5.6	20.7		
121+27	RT.	DRIVEWAY	16	121+05	121+49	24.90	54.0	5.9	22.1		
121+82	RT.	DRIVEWAY	24	121+56	122+08	32.00	121.0	13.3	49.4		
123+00	LT.	DRIVEWAY	16	122+78	123+22	24.90	48.5	5.3	19.8		
125+20	RT.	DRIVEWAY	28	124+92	125+48	121.10				96	PCC-1, PCM-1
127+40	LT.	DRIVEWAY	16	127+18	127+62	24.90	49.1	5.4	20.0		
128+80	RT.	DRIVEWAY	28	128+52	129+08	35.60	40.3	4.4	16.5		
144+00	RT.	DRIVEWAY	40	143+66	144+34	46.20	121.6	13.4	49.7		
157+88	LT.	DRIVEWAY	32	157+58	158+18	249.00					
158+46	RT.	DRIVEWAY	18	158+23	158+69	126.40					
160+80	LT.	DRIVEWAY	16	160+58	161+02	78.00					
160+80	RT.	DRIVEWAY	24	160+54	161+06	32.00	34.2	3.8	14.0		
161+65	LT.	DRIVEWAY	16	161+43	161+87	73.50					
162+04	LT.	DRIVEWAY	40	161+70	162+38	170.90					
162+38	RT.	DRIVEWAY	19	162+15	162+62	27.60	30.6	3.4	12.5		
162+67	LT.	DRIVEWAY	40	162+33	163+01	170.10					
162+92	RT.	DRIVEWAY	19	162+69	163+16	27.60	28.4	3.1	11.6		
163+49	LT.	DRIVEWAY	40	163+15	163+83	173.00					
163+83	RT.	DRIVEWAY	16	163+61	164+05	24.90	24.1	2.7	9.8		
164+55	RT.	DRIVEWAY	16	164+33	164+77	24.90	22.9	2.5	9.4		
166+44	RT.	DRIVEWAY	32	166+14	166+74	39.10	51.7	5.7	21.1		
167+23	RT.	DRIVEWAY	20	166+99	167+47	28.40	32.2	3.5	13.1		
167+35	LT.	DRIVEWAY	24	167+09	167+61	32.00	51.6	5.7	21.1		
169+35	LT.	DRIVEWAY	24	169+09	169+61	95.20					
170+00	RT.	DRIVEWAY	24	169+74	170+26	32.00	50.6	5.6	20.7		
174+54	LT.	DRIVEWAY ON MAIN ST.	30	174+25	174+83	37.30	40.3	4.4	16.5		
174+80	LT.	DRIVEWAY ON MAIN ST.	30	174+51	175+09	37.30	77.8	8.6	31.8		
176+72	RT.	DRIVEWAY	30	176+43	177+01	76.00					
177+64	LT.	DRIVEWAY	40	177+30	177+98	80.10					
177+64	RT.	DRIVEWAY	36	177+32	177+96	86.30					
404+00	RT.	DRIVEWAY ON WALNUT ST.	22	403+75	404+25	87.90					
404+50	LT.	DRIVEWAY ON WALNUT ST.	16	404+28	404+72	63.50					
405+50	LT.	DRIVEWAY ON WALNUT ST.	32	405+20	405+80	118.90					
* ENTIRE PROJECT TEMPORARY DRIVES									400.0		
TOTALS:						**2946.80**	**1042.3**	**114.7**	**826.0**	**96**	

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

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE GRADE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.

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

** FOR INFORMATION ONLY

NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.M. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	43	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

STRUCTURES BOX 1 OF 2

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	42"	48"	54"	29"X18"	(CLASS IV) 18"	24"	30"	36"	29"X18"	36"X23"	(CLASS V) 18"	24"	36"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	48"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"X23"	DROP INLETS TYPE MO	EXT. 4'	8'	JUNCT. BOX (TYPE E)	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.																					EACH							SQ.YD.	M.GAL	
109+92	D.I ON LT. WITH PIPE CULVERT																	94								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
110+16	JUNCTION BOX ON RT. WITH PIPE CULVERT										117																					FPC-9S, PCC-1, PCM-1
110+71	D.I ON LT. WITH PIPE CULVERT																		78							1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
111+45	D.I ON RT. WITH PIPE CULVERT																			75						1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
111+45	D.I ON RT. WITH PIPE CULVERT		66																							1						FPC-9E, FPC-9M, PCC-1, PCM-1
112+40	D.I ON LT. WITH PIPE CULVERT											120														1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
112+50	D.I ON LT. WITH PIPE CULVERT	42																34					1			1		1		5	0.06	FPC-9E, FPC-9M, FES-1, FES-2, PCC-1, PCM-1
112+68	D.I ON LT. WITH PIPE CULVERT																				33					1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
112+69	D.I ON LT. WITH PIPE CULVERT		31																							1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
112+87	D.I ON LT.																									1		1				FPC-9E, FPC-9M
113+00	D.I ON RT. WITH PIPE CULVERT																	44								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
113+60	D.I ON RT. WITH PIPE CULVERT																	52								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
114+74	D.I ON LT. WITH PIPE CULVERT																	92								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
115+70	D.I ON LT. WITH PIPE CULVERT	67	84																				1			1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
116+32	JUNCTION BOX ON RT. WITH PIPE CULVERT																		174										1			FPC-9D, PCC-1, PCM-1
117+09	D.I ON LT. WITH PIPE CULVERT																									1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
117+14	D.I ON LT. WITH PIPE CULVERT																		17							1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
117+47	D.I ON LT. WITH PIPE CULVERT			33																						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
117+55	D.I ON LT. WITH PIPE CULVERT																		27							1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
117+92	D.I ON LT. WITH PIPE CULVERT																		43							1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
118+00	D.I ON LT. WITH PIPE CULVERT	79																89					1			1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
120+40	D.I ON LT. WITH PIPE CULVERT																	148								1						FPC-9E, FPC-9M, PCC-1, PCM-1
122+00	D.I ON LT. WITH PIPE CULVERT																	238								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
124+42	D.I ON LT. WITH PIPE CULVERT								61																	1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
124+42	D.I ON RT. WITH PIPE CULVERT		9																				1			1				5	0.06	FPC-9E, FPC-9M, FES-1, FES-2, PCC-1, PCM-1
124+82	CONSTRUCT PIPE CULVERT															85								2								FES-1, FES-2, PCC-1
125+38	D.I ON LT. WITH PIPE CULVERT												24													1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
125+65	D.I ON LT. WITH PIPE CULVERT							9																		1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
125+65	D.I ON LT. WITH PIPE CULVERT							46																		1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
125+95	D.I ON LT. WITH PIPE CULVERT													59												1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
125+95	D.I ON RT. WITH PIPE CULVERT													18											1	1		1		5	0.06	FPC-9E, FPC-9M, FES-1, FES-2, PCC-1, PCM-1
126+50	CONSTRUCT PIPE CULVERT									86														2								FES-1, FES-2, PCC-1
126+50	CONSTRUCT PIPE CULVERT									86														2								FES-1, FES-2, PCC-1
127+13	D.I ON LT. WITH PIPE CULVERT	60																								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
127+13	D.I ON RT. WITH PIPE CULVERT	60																					1			1	1			5	0.06	FPC-9E, FPC-9M, FES-1, FES-2, PCC-1, PCM-1
130+00	D.I ON LT. WITH PIPE CULVERT	59																								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
130+00	D.I ON RT. WITH PIPE CULVERT																		282							1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
133+00	D.I ON LT. WITH PIPE CULVERT								16																	1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
133+00	D.I ON RT. WITH PIPE CULVERT																		296							1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
138+00	D.I ON LT. WITH PIPE CULVERT	302																								1						FPC-9E, FPC-9M, PCC-1, PCM-1
138+66	D.I ON RT. WITH PIPE CULVERT								60																	1						FPC-9E, FPC-9M, PCC-1, PCM-1
138+66	D.I ON RT. WITH PIPE CULVERT								33																	1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
138+97	D.I ON RT. WITH PIPE CULVERT																	49								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
139+30	D.I ON RT. WITH PIPE CULVERT																	86								1						FPC-9E, FPC-9M, PCC-1, PCM-1
140+19	D.I ON RT. WITH PIPE CULVERT																			87						1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
141+09	D.I ON LT. WITH PIPE CULVERT																			58						1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
141+09	D.I ON RT. WITH PIPE CULVERT																			59						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
141+71	D.I ON LT. WITH PIPE CULVERT																			63						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
141+71	D.I ON RT. WITH PIPE CULVERT																			62						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
142+38	D.I ON LT. WITH PIPE CULVERT			255																						1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
142+38	D.I ON RT. WITH PIPE CULVERT										59															1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
144+52	D.I ON LT.																									1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
145+00	D.I ON LT. WITH PIPE CULVERT																				45					1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
145+00	D.I ON RT. WITH PIPE CULVERT	60																								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
SUBTOTALS BOX 1 OF 2		729	190	288				55	109	233	176	120	24	77		85		926	917	404	78		5	6	1	49	16	27	1	20	0.24	

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.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	44	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N.7605
MICHAEL D. FUGETT
6/5/12

STRUCTURES BOX 2 OF 2

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	30"	42"	48"	54"	29"X18"	(CLASS IV) 18"	24"	30"	36"	29"X18"	36"X23"	(CLASS V) 18"	24"	36"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	48"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"X23"	DROP INLETS TYPE MO	EXT. 4'	EXT. 8'	JUNCT. BOX (TYPE E)	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.																EACH												SQ.YD.	M.GAL	
157+50	D.I ON LT. WITH PIPE CULVERT																	194								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
157+50	D.I ON RT. WITH PIPE CULVERT														59											1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
159+47	D.I. ON LT. WITH PIPE CULVERT		178																							1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
159+47	D.I. ON RT. WITH PIPE CULVERT		59																							1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
159+76	D.I. ON RT. WITH PIPE CULVERT																	46								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
160+05	D.I. ON RT. WITH PIPE CULVERT																	53								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
160+44	D.I. ON RT. WITH PIPE CULVERT																	79								1						FPC-9E, FPC-9M, PCC-1, PCM-1
161+28	D.I. ON LT. WITH PIPE CULVERT																			185						1						FPC-9E, FPC-9M, PCC-1, PCM-1
161+28	D.I. ON RT. WITH PIPE CULVERT	59																								1						FPC-9E, FPC-9M, PCC-1, PCM-1
163+17	D.I. ON LT. WITH PIPE CULVERT																				168					1						FPC-9E, FPC-9M, PCC-1, PCM-1
163+17	D.I. ON RT. WITH PIPE CULVERT									59																1						FPC-9E, FPC-9M, PCC-1, PCM-1
164+90	D.I. ON LT. WITH PIPE CULVERT				70																					1						FPC-9E, FPC-9M, PCC-1, PCM-1
164+90	D.I. ON RT. WITH PIPE CULVERT									58																1						FPC-9E, FPC-9M, PCC-1, PCM-1
165+30	D.I. ON RT. WITH PIPE CULVERT																	30								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
165+57	D.I. ON LT. WITH PIPE CULVERT																	31								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
165+65	D.I. ON RT. WITH PIPE CULVERT	90																								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
165+67	D.I. ON LT. WITH PIPE CULVERT						25																									FPC-9D, PCC-1, PCM-1
165+68	D.I. ON LT.																									1		1				FPC-9E, FPC-9M
166+83	D.I. ON LT. WITH PIPE CULVERT						110																			1						FPC-9E, FPC-9M, PCC-1, PCM-1
166+83	D.I. ON RT. WITH PIPE CULVERT														58											1						FPC-9E, FPC-9M, PCC-1, PCM-1
167+65	D.I. ON LT. WITH PIPE CULVERT																				76					1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
167+65	D.I. ON RT. WITH PIPE CULVERT														59											1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
168+18	D.I. ON LT. WITH PIPE CULVERT					47																				1						FPC-9E, FPC-9M, PCC-1, PCM-1
168+18	D.I. ON RT. WITH PIPE CULVERT		58																							1						FPC-9E, FPC-9M, PCC-1, PCM-1
168+49	D.I. ON LT. WITH PIPE CULVERT																	27								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
168+72	D.I. ON LT. WITH PIPE CULVERT																	37								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
168+75	D.I. ON RT. WITH PIPE CULVERT								100																	1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
168+75	D.I. ON RT. WITH PIPE CULVERT																	7								1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
169+02	D.I. ON RT. WITH PIPE CULVERT																	25								1						FPC-9E, FPC-9M, PCC-1, PCM-1
169+02	D.I. ON RT. WITH PIPE CULVERT	7																								1						FPC-9E, FPC-9M, PCC-1, PCM-1
169+11	D.I. ON LT. WITH PIPE CULVERT																				87					1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
170+00	D.I. ON LT. WITH PIPE CULVERT																				80					1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
170+57	JUNCTION BOX ON RT. WITH PIPE CULVERT														83								1						1	5	0.06	FPC-9D, FES-1, FES-2, PCC-1, PCM-1
170+91	D.I. ON LT. WITH PIPE CULVERT					80																				1						FPC-9E, FPC-9M, PCC-1, PCM-1
171+57	JUNCTION BOX ON RT. WITH PIPE CULVERT					92												29											1			FPC-9D, PCC-1, PCM-2
172+78	D.I. ON RT. WITH PIPE CULVERT																129									1						FPC-9E, FPC-9M, PCC-1, PCM-1
173+51	D.I. ON LT. WITH PIPE CULVERT														99											1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
173+97	D.I. ON RT. WITH PIPE CULVERT																			129						1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
174+46	D.I. ON RT. WITH PIPE CULVERT																			40						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
174+62	D.I. ON LT. WITH PIPE CULVERT		131																							1	1					FPC-9E, FPC-9M, PCC-1, PCM-1
174+87	D.I. ON LT. WITH PIPE CULVERT	31																								1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
174+97	D.I. ON RT. WITH PIPE CULVERT										40															1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
176+30	D.I. ON RT. WITH PIPE CULVERT																			91						1		1				FPC-9E, FPC-9M, PCC-1, PCM-1
177+23	D.I. ON RT. WITH PIPE CULVERT																		172							1						FPC-9E, FPC-9M, PCC-1, PCM-1
403+30	D.I. ON RT. WITH PIPE CULVERT																	113								1						FPC-9E, FPC-9M, PCC-1, PCM-1
404+50	D.I. ON RT. WITH PIPE CULVERT	200																								1						FPC-9E, FPC-9M, PCC-1, PCM-1
406+73	D.I. ON RT. WITH PIPE CULVERT																	34								1						FPC-9E, FPC-9M, PCC-1, PCM-1
406+73	D.I. ON LT. WITH PIPE CULVERT																									1						FPC-9E, FPC-9M
SUBTOTALS BOX 1 OF 2:		729	190	288				55	109	233	176	120	24	77		85		926	917	404	78		5	6	1	49	16	27	1	20	0.24	
SUBTOTALS BOX 2 OF 2:		387	426		70	219	135		100	117	40				358		129	705	172	445	168	243	1			45	8	17	2	5	0.06	
TOTALS:		**1116**	**616**	**288**	**70**	**219**	**135**	**55**	**209**	**350**	**216**	**120**	**24**	**77**	**358**	**85**	**129**	**1631**	**1089**	**849**	**246**	**243**	**6**	**6**	**1**	**94**	**24**	**44**	**3**	**25**	**0.30**	

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.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	45	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

BASE AND SURFACING

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22
			FEET			FEET				FEET			TON	FEET			TON
MAIN LANES																	
109+92	110+65	HWY. 18 AND HWY. 61 INTERSECTION	73.0	VAR.	137.4	VAR.	942.6	0.03	28.3	VAR.	292.7	495.0	72.4	VAR.	942.6	220.0	103.7
109+92	111+26	HWY. 18 NOTCH AND WIDEN	134.0	92.73	124.3	73.7	1097.3	0.03	32.9	17.9	266.5	495.0	66.0	76.6	1140.5	220.0	125.5
111+26	112+10	HWY. 18 NOTCH AND WIDEN	84.0	214.09	179.8	108.4	1011.7	0.03	30.4	44.7	417.2	495.0	103.3	108.4	1011.7	220.0	111.3
112+10	112+80	HWY. 18 W. MAIN ST. INTERSECTION	70.0	VAR.	394.1	VAR.	1761.5	0.03	52.8	VAR.	880.7	495.0	218.0	VAR.	1761.5	220.0	193.8
112+80	114+61	HWY. 18 FULL DEPTH	181.0	303.96	550.2	124.0	2493.8	0.03	74.8	62.0	1246.9	495.0	308.6	124.0	2493.8	220.0	274.3
114+61	116+34	HWY. 18 FULL DEPTH	173.0	276.74	478.8	112.0	2152.9	0.03	64.6	56.0	1076.4	495.0	266.4	112.0	2152.9	220.0	236.8
116+34	117+86	HWY. 18 AND ASH ST. INTERSECTION	152.0	VAR.	605.3	VAR.	3263.3	0.03	97.9	VAR.	1631.7	495.0	403.8	VAR.	3263.3	220.0	359.0
117+86	118+82	HWY. 18 FULL DEPTH	96.0	276.74	265.7	112.0	1194.7	0.03	35.8	56.0	597.3	495.0	147.8	112.0	1194.7	220.0	131.4
118+82	119+60	HWY. 18 AND S. 11TH ST. INTERSECTION	78.0	VAR.	291.5	VAR.	1312.3	0.03	39.4	VAR.	656.2	495.0	162.4	VAR.	1312.3	220.0	144.4
119+60	125+10	HWY. 18 FULL DEPTH	550.0	276.74	1522.1	112.0	6844.4	0.03	205.3	56.0	3422.2	495.0	847.0	112.0	6844.4	220.0	752.9
125+10	125+91	HWY. 18 AND S. 10TH ST. INTERSECTION	81.0	VAR.	317.1	VAR.	1413.9	0.03	42.4	VAR.	707.0	495.0	175.0	VAR.	1413.9	220.0	155.5
125+91	128+36	HWY. 18 FULL DEPTH	245.0	276.74	678.0	112.0	3048.9	0.03	91.5	56.0	1524.4	495.0	377.3	112.0	3048.9	220.0	335.4
128+36	129+23	HWY. 18 AND S. 9TH ST. INTERSECTION	87.0	VAR.	297.7	VAR.	1353.2	0.03	40.6	VAR.	676.6	495.0	167.5	VAR.	1353.2	220.0	148.9
129+23	131+64	HWY. 18 FULL DEPTH	241.0	276.74	666.9	112.0	2999.1	0.03	90.0	56.0	1499.6	495.0	371.2	112.0	2999.1	220.0	329.9
131+64	132+50	HWY. 18 AND S. 8TH ST. INTERSECTION	86.0	VAR.	145.5	VAR.	1379.9	0.03	41.4	VAR.	689.9	495.0	170.8	VAR.	1379.9	220.0	151.8
132+50	138+37	HWY. 18 FULL DEPTH	587.0	276.74	1624.5	112.0	7304.9	0.03	219.1	56.0	3652.4	495.0	904.0	112.0	7304.9	220.0	803.5
138+37	139+25	HWY. 18 AND ELM ST. INTERSECTION	88.0	VAR.	479.6	VAR.	2188.6	0.03	65.7	VAR.	1094.3	495.0	270.8	VAR.	2188.6	220.0	240.7
139+25	143+97	HWY. 18 FULL DEPTH	472.0	276.74	1306.2	112.0	5873.8	0.03	176.2	56.0	2936.9	495.0	726.9	112.0	5873.8	220.0	646.1
143+97	144+87	HWY. 18 AND S. 5TH ST. INTERSECTION	90.0	VAR.	324.4	VAR.	1472.1	0.03	44.2	VAR.	736.1	495.0	182.2	VAR.	1472.1	220.0	161.9
144+87	146+52	HWY. 18 FULL DEPTH	165.0	276.74	456.6	112.0	2053.3	0.03	61.6	56.0	1026.7	495.0	254.1	112.0	2053.3	220.0	225.9
156+53	159+49	HWY. 18 FULL DEPTH	296.0	276.74	819.2	112.0	3683.6	0.03	110.5	56.0	1841.8	495.0	455.8	112.0	3683.6	220.0	405.2
159+49	160+51	HWY. 18 AND FIRST ST. INTERSECTION	102.0	VAR.	451.2	VAR.	2062.6	0.03	61.9	VAR.	1031.3	495.0	255.2	VAR.	2062.6	220.0	226.9
160+51	165+03	HWY. 18 FULL DEPTH	452.0	276.74	1250.9	112.0	5624.9	0.03	168.7	56.0	2812.4	495.0	696.1	112.0	5624.9	220.0	618.7
165+03	165+95	HWY. 18 AND S. FRANKLIN ST. INTERSECTION	92.0	VAR.	392.8	VAR.	1797.0	0.03	53.9	VAR.	898.5	495.0	222.4	VAR.	1797.0	220.0	197.7
165+95	168+23	HWY. 18 FULL DEPTH	228.0	276.74	631.0	112.0	2837.3	0.03	85.1	56.0	1418.7	495.0	351.1	112.0	2837.3	220.0	312.1
168+23	169+08	HWY. 18 AND N. LAKE ST. INTERSECTION	85.0	VAR.	381.8	VAR.	1727.8	0.03	51.8	VAR.	863.9	495.0	213.8	VAR.	1727.8	220.0	190.1
169+08	169+64	HWY. 18 FULL DEPTH	56.0	276.74	155.0	112.0	696.9	0.03	20.9	56.0	348.4	495.0	86.2	112.0	696.9	220.0	76.7
169+64	170+00	HWY. 18 FULL DEPTH	36.0	313.04	112.7	128.0	512.0	0.03	15.4	64.0	256.0	495.0	63.4	128.0	512.0	220.0	56.3
170+00	171+67	HWY. 18 NOTCH AND WIDEN	167.0	235.50	393.3	111.0	2059.7	0.03	61.8	46.9	870.3	495.0	215.4	111.0	2059.7	220.0	226.6
171+67	173+45	HWY. 18 NOTCH AND WIDEN	178.0	197.67	351.9	102.4	2025.2	0.03	60.8	38.6	763.4	495.0	188.9	102.4	2025.2	220.0	222.8
173+45	174+43	HWY. 18 NOTCH AND WIDEN	98.0	198.03	194.1	102.4	1115.0	0.03	33.5	38.7	421.4	495.0	104.3	102.4	1115.0	220.0	122.7
174+43	177+87	HWY. 18 NOTCH AND WIDEN	344.0	VAR.	304.0	VAR.	2663.6	0.03	79.9	VAR.	567.3	495.0	140.4	VAR.	2679.2	220.0	294.7
403+30	407+53	WALNUT ST. NOTCH AND WIDEN	423.0			VAR.	1332.2	0.03	40.0			495.0		VAR.	1533.1	220.0	168.6
ADDITIONAL FOR LEVELING																	
109+92	112+75	HWY. 18 & GRADE RAISE	283.0											VAR.	VAR.	VAR.	21.0
116+10	116+34	HWY. 18 & GRADE RAISE	24.0											VAR.	VAR.	VAR.	16.0
170+57	177+87	HWY. 18 & GRADE RAISE	730.0											VAR.	VAR.	VAR.	274.4
403+30	407+53	WALNUT ST.	423.0											VAR.	VAR.	VAR.	134.4
TOTALS:					**16283.6**		**79300.0**		**2379.1**		**37125.1**		**9188.5**		**79559.7**		**9197.6**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER
ACHM BINDER COURSE (1").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	PORTLAND CEMENT CONCRETE BASE			
				AVG. WID.	6.5" U.T.	AVG. WID.	7" U.T.
			FEET	FEET	SQ. YD.	FEET	SQ. YD.
109+92	110+65	HWY. 18 AND HWY. 61 INTERSECTION		VAR.	18.3	VAR.	36.4
110+65	111+26	HWY. 18 NOTCH AND WIDEN	61.0	2.9	19.7	5.4	36.6
174+43	177+87	HWY. 18 NOTCH AND WIDEN		VAR.	15.6	VAR.	40.2
403+30	407+53	WALNUT ST. NOTCH AND WIDEN		VAR.	200.9	VAR.	435.9
TOTALS:					**254.5**		**549.1**

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	46	160

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ.YD.
109+00		RADIUS ON LT.		45
109+00		RADIUS ON RT.		37
110+25		RADIUS ON LT.		66
110+25		RADIUS ON RT.		55
110+55	118+83	SIDEWALK ON RT.	628	349
110+65	112+10	SIDEWALK ON LT.	71	39
112+28		RADIUS AND TURNOUT ON LT.		56
112+70		RADIUS AND TURNOUT ON LT.		16
112+83	116+34	SIDEWALK ON LT.	295	164
116+80		RADIUS AND TURNOUT ON LT.		110
117+34		RADIUS AND TURNOUT ON LT.		66
117+85	125+10	SIDEWALK ON LT.	697	387
118+89		RADIUS ON RT.		5
119+55		RADIUS ON RT.		4
119+60	138+36	SIDEWALK ON RT.	1732	962
125+23		RADIUS ON LT.		12
125+82		RADIUS ON LT.		12
125+92	128+36	SIDEWALK ON LT.	216	120
128+48		RADIUS ON LT.		4
129+14		RADIUS ON LT.		4
129+23	131+64	SIDEWALK ON LT.	241	134
131+76		RADIUS ON LT.		12
132+40		RADIUS ON LT.		13
132+50	138+37	SIDEWALK ON LT.	587	326
138+48		RADIUS ON LT.		12
138+48		RADIUS ON RT.		12
139+09		RADIUS ON LT.		23
139+13		RADIUS ON RT.		14
139+18	143+98	SIDEWALK ON LT.	480	267
139+25	146+52	SIDEWALK ON RT.	675	375
144+13		RADIUS ON LT.		34
144+73		RADIUS ON LT.		32
144+87	146+52	SIDEWALK ON LT.	165	92
156+53	159+51	SIDEWALK ON LT.	224	124
156+53	159+49	SIDEWALK ON RT.	296	164
159+62		RADIUS ON RT.		15
159+67		RADIUS ON LT.		27
160+26		RADIUS ON RT.		21
160+39		RADIUS ON LT.		13
160+40	164+94	SIDEWALK ON RT.	300	167
160+51	164+96	SIDEWALK ON LT.	233	129
165+12		RADIUS ON RT.		47
165+16		RADIUS ON LT.		47
165+85		RADIUS ON RT.		48
165+89		RADIUS ON LT.		47
166+02	168+24	SIDEWALK ON RT.	146	81
166+04	168+23	SIDEWALK ON LT.	207	115
168+37		RADIUS ON LT.		26
168+38		RADIUS ON RT.		21
168+93		RADIUS ON LT.		29
168+93		RADIUS ON RT.		22
169+07	174+40	SIDEWALK ON LT.	497	276
169+07	177+87	SIDEWALK ON RT.	752	418
174+55		RADIUS ON LT.		51
175+23		RADIUS ON LT.		91
175+55	176+33	SIDEWALK ON LT.	78	43
176+36		RADIUS ON LT.		4
177+05		RADIUS ON LT.		4
177+10	177+68	SIDEWALK ON LT.	6	3
TOTAL:				5892

SIGNS

SIGN NUMBER	DESCRIPTION	STANDARD SIGN	CHANNEL POST SIGN SUPPORT (TYPE C)
		SQ. FT.	EACH
OM4-3	CLOSE HWY. 18 ON RT.@ STATION 115+92	9.0	4
OM4-3	CLOSE S. 11TH ST. ON LT. @ STATION 117+09	6.8	3
OM4-3	CLOSE S. 11TH ST. ON LT. @ STATION 118+44	6.8	3
OM4-3	CLOSE SYCAMORE ON RT. @ STATION 118+77	6.8	3
OM4-3	CLOSE SHORT 10TH ST. ON RT. @ STATION 119+95	9.0	4
OM4-3	CLOSE SYCAMORE ON LT. @ STATION 142+48	6.8	3
OM4-3	CLOSE S. 2ND ST. ON RT. @ STATION 155+70	6.8	3
TOTALS:		52.0	23

GUARDRAIL

STATION	LOCATION	GUARDRAIL (TYPE C)
		LIN. FT.
115+93	HWY. 18 ON RT.	50.0
117+09	S. 11TH ST. ON LT.	25.0
118+44	S. 11TH ST. ON LT.	25.0
118+77	SYCAMORE ON RT.	25.0
119+95	SHORT 10TH ST. ON RT.	37.5
142+48	SYCAMORE ON LT.	25.0
155+70	S. 2ND ST. ON RT.	25.0
TOTAL:		212.5

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	300
ENGINEER	
TOTAL:	300

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

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	100
DIRECTED BY THE ENGINEER	
TOTAL:	100

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

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU.YD.
		FEET		
116+00	ASH ST.	8.50	32	7.6
117+25	ASH ST.	9.08	31	7.8
173+14	ASH ST.	7.92	36	7.9
174+85	ASH ST.	8.50	27	6.4
TOTAL:				29.7

AVG. DEPTH = 9"

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	25	50
DIRECTED BY THE ENGINEER		
TOTALS:	25	50

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	47	160

(2) SUMMARY OF QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9605
MICHAEL D. PUGETT
6/5/12

SUMMARY OF QUANTITIES (BOX 1 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		37	STATION
201	GRUBBING		37	STATION
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		7484	LIN. FT.
202	REMOVAL AND DISPOSAL OF PRECAST CONCRETE BARRIER WALL LEFT IN PLACE		426	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT		4906	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS		391	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS		2868	SQ. YD.
202	REMOVAL AND DISPOSAL OF BARRICADES LEFT IN PLACE		10	EACH
202	REMOVAL AND DISPOSAL OF WALKS		1286	SQ. YD.
202	REMOVAL AND DISPOSAL OF DROP INLETS		32	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		49	EACH
202	REMOVAL AND DISPOSAL OF BOX CULVERTS		4	EACH
202	REMOVAL AND DISPOSAL OF SIGNS LEFT IN PLACE		32	EACH
202	REMOVAL AND DISPOSAL OF TRAFFIC DRUMS LEFT IN PLACE		50	EACH
210	UNCLASSIFIED EXCAVATION		8843	CU. YD.
210	COMPACTED EMBANKMENT		14383	CU. YD.
SP & 210	SOIL STABILIZATION		500	TON
214	SUBGRADE PREPARATION		4.38	STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		17110	TON
309	PORTLAND CEMENT CONCRETE BASE (6 1/2" UNIFORM THICKNESS)		255	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (7" UNIFORM THICKNESS)		549	SQ. YD.
401	TACK COAT		2429	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		8720	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")		469	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		8828	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		6	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		478	TON
412	COLD MILLING ASPHALT PAVEMENT		1389	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		25	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		100	TON
505	PORTLAND CEMENT CONCRETE DRIVEWAY		2946.80	SQ. YD.
601	MOBILIZATION		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE		1	EACH
SP, SS, & 603	MAINTENANCE OF TRAFFIC		1.00	LUMP SUM
SS & 604	SIGNS		1116	SQ. FT.
SS & 604	BARRICADES		688	LIN. FT.
SS & 604	TRAFFIC DRUMS		298	EACH
SS & 604	CONSTRUCTION PAVEMENT MARKINGS		12860	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		600	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		420	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		1116	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		209	LIN. FT.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)		358	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	1631	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	1631	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		616	LIN. FT.
* SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	1089	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	1089	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		350	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)		85	LIN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		288	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	849	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	849	LIN. FT.
SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		216	LIN. FT.
* SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	246	LIN. FT.
* 606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	246	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)		120	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)		129	LIN. FT.
SS & 606	42" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		70	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		219	LIN. FT.
* SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	243	LIN. FT.
* 606	48" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	243	LIN. FT.
SS & 606	54" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		135	LIN. FT.
SS & 606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)		55	LIN. FT.
SS & 606	29" X 18" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)		24	LIN. FT.
SS & 606	36" X 23" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS IV)		77	LIN. FT.
SS & 606	12' SIDE DRAIN		48	LIN. FT.
SP, SS & 606	24" SIDE DRAIN		96	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		6	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		6	EACH
606	36" X 23" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS		1	EACH
606	SELECTED PIPE BEDDING		300	CU. YD.
609	DROP INLETS (TYPE MO)		94	EACH
609	JUNCTION BOXES (TYPE E)		3	EACH
609	DROP INLET EXTENSIONS (4')		24	EACH
609	DROP INLET EXTENSIONS (8')		44	EACH
609	YARD DRAINS		2	EACH
611	UNDERDRAIN OUTLET PROTECTORS		14	EACH
611	4" PIPE UNDERDRAINS		4434	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)		29.7	CU. YD.
SS & 617	GUARDRAIL (TYPE C)		213	LIN. FT.

*ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (BOX 2 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
620	MULCH COVER		4.00	ACRE
SS & 620	WATER		224.4	M.GAL.
621	TEMPORARY SEEDING		4.00	ACRE
621	SILT FENCE		10141	LIN. FT.
621	SAND BAG DITCH CHECKS		338	BAG
621	DROP INLET SILT FENCE		2700	LIN. FT.
SP	WATTLE (12")		48	LIN. FT.
621	SEDIMENT BASIN		1370	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		1370	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		1699	CU. YD.
624	SOLID SODDING		11335	SQ. YD.
633	CONCRETE WALKS		5892	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		12892	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
641	WHEELCHAIR RAMPS (TYPE 2)		290	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 3)		49	SQ. YD.
SP & 701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASES)		3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)		24	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)		7	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED		20	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)		10607	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)		2996	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)		31	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)		1452	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")		60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")		40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")		60	LIN. FT.
710	NON-METALLIC CONDUIT (2")		60	LIN. FT.
710	NON-METALLIC CONDUIT (3")		1454	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)		18	EACH
713	SPAN WIRE ASSEMBLY		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')		1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION		10	EACH
716	TREATED WOOD POLE (CLASS 3, 40')		12	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")		3335	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")		1831	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")		15810	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)		9	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)		9	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (RAILROAD EMBLEMS)		1	EACH
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)	470	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)	470	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4")	(ALTERNATE NO. 1)	2510	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4")	(ALTERNATE NO. 2)	2510	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		256	EACH

*ALTERNATE BID ITEMS

5/10/2012

R100740.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
7-11-12				6	ARK.			
8-3-12				JOB NO.		100740	48	160
8-24-12								

(2) SUMMARY OF QUANTITIES AND REVISION BOX

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
DATE 7-2005
MICHAEL D. FUGETT
8/27/12

SUMMARY OF QUANTITIES (BOX 3 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SS & 726	STANDARD SIGN	52	SQ. FT.
729	CHANNEL POST SIGN SUPPORT (TYPE C)	23	EACH
733	VIDEO CABLE	5276	LIN. FT.
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH
SP & 733	VIDEO DETECTOR (CLR)	23	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	11	EACH
SP	CONTROLLER CABINET MODIFICATION	2	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1653	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	1633	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	515	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	60	LIN. FT.
SP	LUMINAIRE ASSEMBLY	10	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	14	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
SP	VIDEO DETECTOR ROTATION	2	EACH
SP	18" STREET NAME SIGN	13	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3	EACH
SP	TRAFFIC SIGNAL HEAD RECONFIGURATION	10	EACH
SP	PEDESTRIAN SIGNAL HEAD RELOCATION	2	EACH

REVISION BOX

DATE	REVISION	SHEET NUMBER
7/11/2012	MOVED TRAFFIC SIGNAL ITEMS FROM PERMANENT TRAFFIC SIGNAL QUANTITIES TO STAGE 1 TRAFFIC SIGNAL QUANTITIES	48, 68, 78
8/3/2012	MODIFIED SPECIAL PROVISIONS - "MAINTENANCE OF TRAFFIC" AND "COORDINATION OF WORK", IN THE GOVERN. SPECS.,	2, 48, 103, 111, 115
	FHWA-1273 REVISIONS WAS DELETED AND SS 404-2__DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES WAS ADDED,	
	AND STANDARD DRAWINGS FPC-9S, RRS-1 AND SI-1 WERE UPDATED TO LATEST REVISION DATE.	
8/24/2012	ADDED "ARCHEOLOGICAL MONITORING" SP TO THE GOVERNING SPECIFICATIONS	2,48

R100740.DGN 5/10/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	49	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

SURVEY CONTROL COORDINATES

Project Name: s100663
Date: 9/2/2009
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	586789.4254	1927671.9154	255.20	CTL	T-1 5"*RBR 2" ALUM CAP
2	586787.8525	1928179.5087	255.50	CTL	T-2 5"*RBR 2" ALUM CAP
3	586789.3113	1928617.0041	255.02	CTL	T-3 5"*RBR 2" ALUM CAP
4	586363.5628	1928717.8214	254.82	CTL	T-4 5"*RBR 2" ALUM CAP
5	586430.2213	1929192.7708	255.24	CTL	T-5 5"*RBR 2" ALUM. CAP
6	586155.6092	1929289.7680	255.19	CTL	T-6 5"*RBR 2" ALUM CAP
7	586196.8889	1930515.9778	256.46	CTL	T-7 5"*RBR 2" ALUM. CAP
8	585867.5392	1931259.2208	256.05	CTL	T-8 5"*RBR 2" ALUM. CAP
9	586300.9373	1931797.9966	255.39	CTL	T-9 5"*RBR 2" ALUM. CAP
10	586388.7986	1932195.2560	256.30	CTL	T-10 5"* RBR 2" CAP
11	586534.2155	1932574.9228	257.92	CTL	T-11 5"* RBR 2" ALUM CAP
12	586505.5382	1933293.4011	255.79	CTL	T-12 5"*RBR 2" ALUM. CAP
13	586524.0532	1933900.7157	256.11	CTL	T-13 5"*RBR 2" ALUM. CAP
14	586561.5527	1934439.3941	257.34	CTL	T-14 5"*RBR 2" ALUM. CAP
15	586885.2563	1934665.0290	256.27	CTL	T-15 5"*RBR 2" ALUM CAP
16	586957.4868	1935347.5339	256.92	CTL	T-16 5"*RBR 2" ALUM CAP
17	586950.5360	1935782.5821	257.39	CTL	T-17 5"*RBR 2" ALUM CAP
18	586561.5085	1934439.3588	257.32	CTL	
100	586208.1189	1931252.5715	257.01	GPS	AHTD CAP 470015
101	586160.6100	1929868.3327	255.87	GPS	AHTP CAP 470015A
102	585034.5030	1955710.7976	256.35	GPS	AHTD GPS 470004
103	586516.2945	1924669.8830	249.23	GPS	AHTD GPS 470013
104	585214.8290	1923155.7618	249.97	GPS	AHTD GPS 470003
901	586791.5383	1928595.4760	255.36	BM	TBM 901 SQ IN CA AT COR. OF MAIN & DIVISION ST.
902	586392.5469	1929215.7386	254.93	TBM	TBM 902 SQ CUT IN CA S.W COR OF HWY. 18E.& 11TH
903	586210.0139	1930258.9515	256.37	TBM	903 SQ IN HW E. SIDE OF 9TH ST.& N.SYCAMORE ST.
904	586586.0313	1932577.6336	258.38	TBM	SQ CUT IN CB 15.0 E.OF CL OF RAILROAD ST.
905	586515.9952	1933887.4942	255.67	TBM	SQ CUT IN CA ON S.E. COR.OF ASH & FRANKLIN
906	586935.1426	1934852.6654	257.03	TBM	SQ ON E.END OF CONC. ISL.OF HWY 18 EAST&WEST
907	586950.5468	1935380.4458	257.03	TBM	SQ IN CA ON N.SIDE OF HWY. 18 IN S.W.COR.O'REILLY PK
990	585971.4669	1927821.0802	256.96	BM	NGS B 189
991	586241.5162	1931186.6680	257.55	BM	E 189 1956 USCGS DISK
992	587131.8216	1932169.6037	259.16	BM	BM Q 33 USCGS PID FE1832
1500	586113.3034	1927957.0355	255.57	CTL	RBR & ALUM CAP 23.6'3S OF S.EP SYCAMORE ST.
1501	586136.2142	1928539.5937	255.28	CTL	18.0 S.OF S.EP SYCAMORE 36.0 S.W.OF CP
1502	585238.4171	1931270.7820	254.94	CTL	22.0 S.S.E.OF PP 22.3 S OF WM
1503	584448.6930	1931230.6240	253.18	CTL	1.8 OF W. EDGE OF SIDEWALK 48.0 W.OF CP
1504	586182.9009	1934569.4867	256.10	CTL	8.0 S.E. OF HM 14.0 NW OF SW COR SIDEWALK
1505	585538.8390	1934553.1707	256.28	CTL	5.0 W FRONT EDGE OF CB NW INT CHERRY & LILLY

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.999945891 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.s100663gi.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 - 0301-NORTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 470015 - 470015A
CONVERGENCE ANGLE: 01-12-58.65 RIGHT AT POINT 100
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

HWY.18

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	100+00.00	586753.4056	1927598.3216
8001	PC	110+82.53	586760.0422	1928680.8333
8003	PT	113+24.02	586653.4665	1928887.1361
8004	PC	116+60.90	586377.5347	1929080.3968
8006	PT	121+70.19	586155.5604	1929516.3929
8007	PC	138+40.26	586185.5746	1931186.1936
8009	PT	143+91.45	586235.1397	1931734.6716
8010	PC	158+14.22	586465.0058	1933138.7439
8012	PT	162+24.69	586502.1256	1933547.1835
8013	PC	169+63.93	586516.1644	1934286.2918
8015	PT	172+82.37	586680.5031	1934540.0126
8016	PC	173+81.23	586769.9321	1934582.1418
8018	PT	177+10.27	586934.2759	1934846.4685
8019	POE	185+13.38	586919.7950	1935649.4527

HWY.18 NORTH

POINT NO.	TYPE	STATION	NORTHING	EASTING
8020	POB	165+49.78	586508.2993	1933872.2134
8021	POE	183+87.58	586922.0634	1935523.6689

r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	50	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

N

105
N 89°38' 55" E

PN:2
PD:T-2 5/8" RBR 2" ALUM CAP

SURVEY BASELINE N 89°48' 32" E 437.50'

PN:901
PD:TBM 901SO IN CA AT COR. OF MAIN

PN:3
PD:T-3 5/8" RBR 2" ALUM CAP

110

1008

P.I. STA. 112+13.63

PN:908
PD:STD AHTD CAP

STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000

SURVEY BASELINE S 13°19' 20" E 437.52'

P.C. STA. 110+82.53

E008

P.T. STA. 113+24.02

PI = 112+13.63
Δ = 55° 20' 38.86" RT.
D = 22°55'
T = 131.10'
L = 241.48'
PC = 110+82.53
PT = 113+24.02
e = 0.040'/'
Ls = 200'

115
S 35°00' 26" E

P.C. STA. 116+60.90

PN:5
PD:T-5 5/8" RBR 2" ALUM. CAP

E004

SURVEY BASELINE N 82°00' 39" E 479.60'

PN:902
PD:TBM 902 SO CUT IN CA S.W COR OF ST.

PN:4
PD:T-4 5\8"RBR 2" ALUM CAP

SURVEY BASELINE S 19°27' 14" E 291.24'

P.T. STA. 121+70.19

120

9006

N 88°58' 13" E

PN:6
PD:T-6 5/8" RBR 2"ALUM CAP

PN:1501
PD:18.0 S.OF S.EP SYCAMORE 36.0 S.

P.I. STA. 119+37.98

PI = 119+37.98
Δ = 56° 01' 21.5" LT.
D = 11°00'
T = 277.08'
L = 509.30'
PC = 116+60.90
PT = 121+70.19
e = 0.020'/'
Ls = 450'

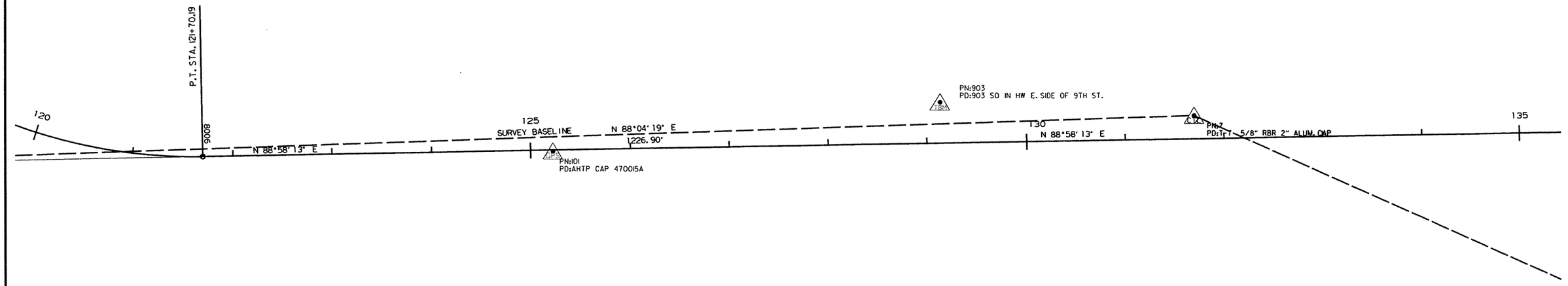
SURVEY CONTROL DETAILS

r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	51	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



r100740.dgn 3/30/2010

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	52	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

N

PI = 141+16.34
Δ = 8° 16' 04.3" LT.
D = 1°30'
T = 276.07'
L = 551.19'
PC = 138+40.26
PT = 143+91.45
NO SUPER

P.C. STA. 138+40.26

P.T. STA. 143+91.45

P.I. STA. 141+16.34

BM 7 PN:991
PID:E 189 1956 USCGS DISK

CP 8 PN:100
PID:AHTD CAP 4700F5

CP 9 PN:9
PID:T-9 5/8" RBR 2" ALUM. CAP

CP 10 PN:10
PID:T-10 5/8" RBR 2" CAP

135 — N 88°58' 13" E — 140 — 145 — N 88°58' 13" E — 150

SURVEY BASELINE N 77°31' 43" E 406.86'

SURVEY BASELINE N 51°11' 11" E 691.46'

SURVEY BASELINE S 66°06' 02" E 812.95'

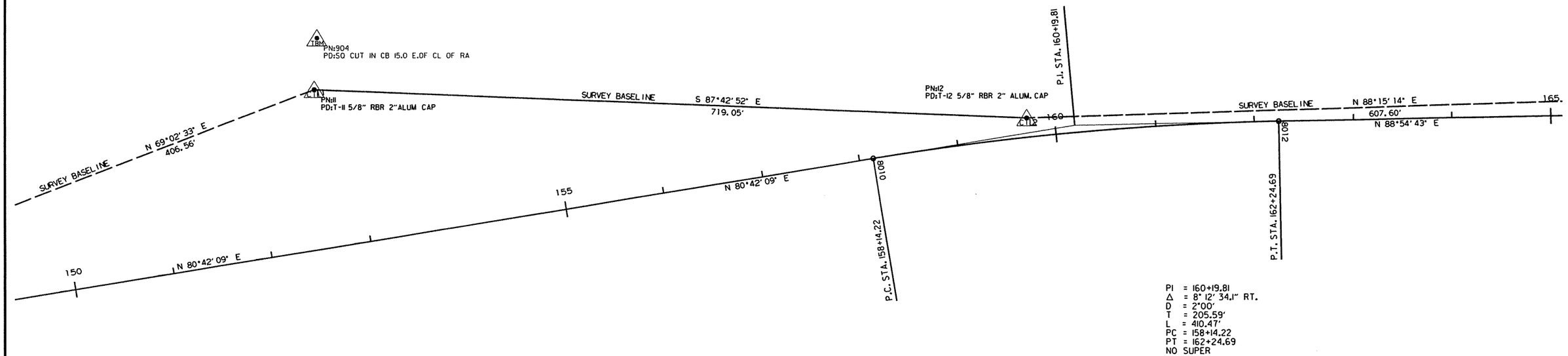
r100740.dgn 3/30/2010

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	53	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7608
MICHAEL D. FUGETT
6/5/12



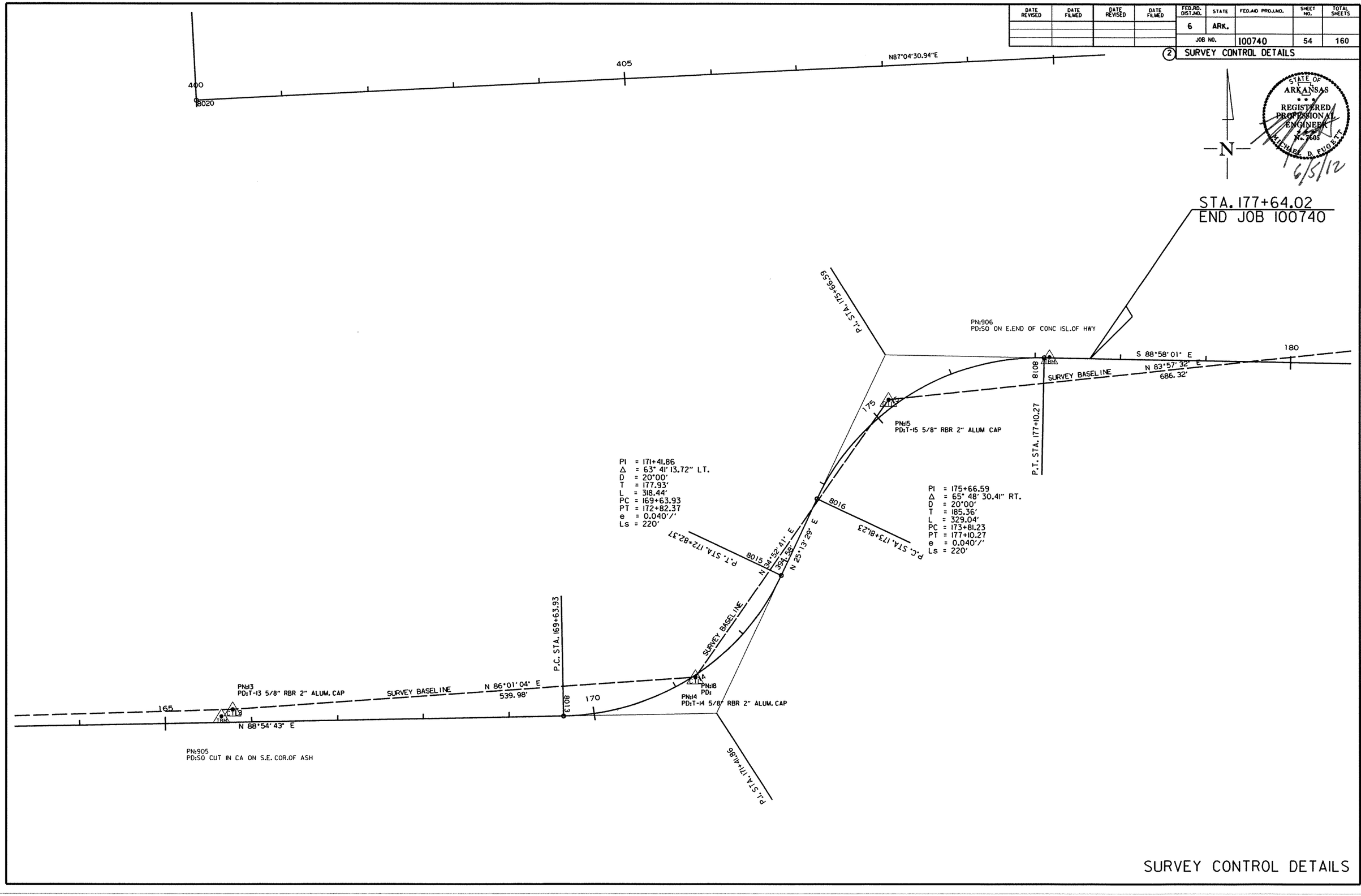
r100740.dgn 3/30/2010

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	54	160

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



SURVEY CONTROL DETAILS

r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	55	160

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
MICHAEL D. FUGETT
NO. 7606
6/5/12

STA. 109+17 - IN PLACE
DROP INLET ON LT. WITH
18" x 92' R.C. PIPE OUTLET
RETAIN

STA. 109+92 - CONSTRUCT
D.I. 92' LT. WITH 8' EXTENSION
& 18" x94' PIPE OUTLET
CONNECT TO D.I. @ STA. 110+71 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 8"

STA. 109+14 - IN PLACE
DROP INLET ON RT. WITH
24" x 102' R.C. PIPE OUTLET
RETAIN

STA. 110+16 - IN PLACE
D.I. ON RT. WITH 24" x 269'
R.C. PIPE OUTLET
REMOVE D.I. AND R.C. PIPE

STA. 110+16 - CONSTRUCT
JUNCTION BOX ON RT.
WITH EXISTING PIPE INLETS
& 30" x 117' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 111+45 RT.
TY ST = 6' x 6'
H = 5' 10"

STA. 110+71 - CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 111+17 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 111+45 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 30" x 75' PIPE OUTLET
CONNECT TO D.I. @ STA. 112+40 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 6' 0"

STA. 112+00 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 112+40 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 36" x 120' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 112+66 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 6' 0"

STA. 113+00 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 18" x 44' PIPE OUTLET
CONNECT TO D.I. @ STA. 112+40 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 0"

STA. 113+37 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 113+60 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 18" x 52' PIPE OUTLET
CONNECT TO D.I. @ STA. 113+00 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 5"

STA. 114+38 - IN PLACE
D.I. 31' RT. WITH
24" x 188' R.C. PIPE CULVERT
RETAIN

STA. 110+00 - IN PLACE
DROP INLET ON LT. WITH
24"x12"x56' R.C. ARCH PIPE OUTLET
REMOVE

STA. 110+71 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 24" x 78' PIPE OUTLET
CONNECT TO D.I. @ STA. 111+45 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 7"

STA. 115+16 - IN PLACE
D.I. 137' RT. WITH
18" x 35' R.C. PIPE CULVERT
RETAIN

STA. 115+40 CONSTRUCT
APPROACH ON RT.

STA. 115+50 - IN PLACE
D.I. 180' RT. WITH
24" x 325' R.C. PIPE CULVERT
RETAIN D.I. ON RT.
REMOVE 180' OF R.C. PIPE CULVERT

STA. 116+32 - CONSTRUCT
JUNCTION BOX ON RT.
& 24" EXISTING INLET
& 24" x 174' PIPE OUTLET
CONNECT TO DROP INLET STA. 117+44 RT.
TYPE E = 5' x 5'
H = 8' 4"

STA. 117+08 CONSTRUCT
APPROACH ON RT.

STA. 118+33 CONSTRUCT
APPROACH ON RT. = 30 CU. YDS.

STA. 119+43 - IN PLACE
D.I. 73' RT. WITH
18" x 82' R.C. PIPE CULVERT
RETAIN

STA. 109+89.00
BEGIN JOB 100740
LOG MILE 0.000

STA. 111+09 CONSTRUCT
APPROACH ON LT.

STA. 111+45 - CONSTRUCT
D.I. ON RT. WITH
OPENING IN BACK
& 24" x 66' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 111+45 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5' 10"

STA. 111+73 CONSTRUCT
APPROACH ON LT. = 20 CU. YDS.

STA. 112+38 CONSTRUCT
APPROACH ON LT. 10 CU. YDS.

STA. 112+43 - IN PLACE
DROP INLET 91' LT. WITH
18"x31' R.C. PIPE OUTLET
REMOVE

STA. 112+50 - CONSTRUCT
D.I. 103' LT. WITH 8' EXTENSION
& 18" x 42' STUB IN
& 18" x 34' PIPE OUTLET
CONNECT TO D.I. @ STA. 112+70 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 3"

STA. 112+60 - IN PLACE
DROP INLET 66' LT. WITH
24"x61' R.C. PIPE OUTLET
REMOVE 52' R.C. PIPE

STA. 112+68 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 36" x 33' PIPE OUTLET
CONNECT TO D.I. @ STA. 112+87 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 2"

STA. 112+69 - CONSTRUCT
D.I. 127' LT. WITH 8' EXTENSION
& 24" x 31' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 112+85 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 7"

STA. 112+83 CONSTRUC
APPROACH ON LT.

STA. 112+87 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
CONNECT TO EXISTING 24" OUTLET
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 11"

STA. 114+74 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 18" x 92' PIPE OUTLET
CONNECT TO D.I. @ STA. 115+70 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 115+00 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 115+70 - CONSTRUCT
D.I. ON LT. WITH
18" x 67' R.C. PIPE STUB IN
WITH FES
& 24" x 84' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 116+32 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5' 8"

STA. 116+00 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 116+00 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 79' R.C. STUB INLET
WITH FES.
& 18" x 89' PIPE OUTLET
CONNECT TO D.I. @ STA. 117+44 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 2"

STA. 117+09 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
CONNECT TO 24" EXISTING PIPE OUTLET
TY C = 5' x 5'
TY MO = 5' I.D.
H = 7' 5"

STA. 117+12 - IN PLACE
D.I. 136' LT. WITH
24" x 337' R.C. PIPE CULVERT
REMOVE D.I. ON LT.
RETAIN 24" EXISTING R.C. PIPE

STA. 117+14 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 24" x 17' PIPE OUTLET
CONNECT TO D.I. @ STA. 117+09 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 11"

STA. 117+47 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 30" x 33' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 117+09 LT.
TY C = 5' x 5'
TY MO = 5' I.D.
H = 6' 8"

STA. 117+55 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 24" x 27' PIPE OUTLET
CONNECT TO D.I. @ STA. 117+14 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

(LT. SIDE NOTES CONT.)

STA. 117+57 - IN PLACE
D.I. 168' LT. WITH
12" x 42' R.C. PIPE CULVERT
REMOVE

STA. 117+92 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 24" x 43' PIPE OUTLET
CONNECT TO D.I. @ STA. 117+47 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 8"

STA. 117+46 - IN PLACE
D.I. 113' LT. WITH
24" x 31' R.C. PIPE CULVERT
REMOVE

STA. 117+86 - IN PLACE
D.I. 154' LT. WITH
12" x 48' R.C. PIPE CULVERT
REMOVE

PI = 112+13.63
Δ = 55° 20' 38.86" RT.
D = 22°55'
T = 131.10'
L = 241.48'
PC = 110+82.53
PT = 113+24.02
e = 0.040'/'
Ls = 200'

PI = 119+37.98
Δ = 56° 01' 21.5" LT.
D = 11°00'
T = 277.08'
L = 509.30'
PC = 116+60.90
PT = 121+70.19
e = 0.020'/'
Ls = 450'

HWY. 18

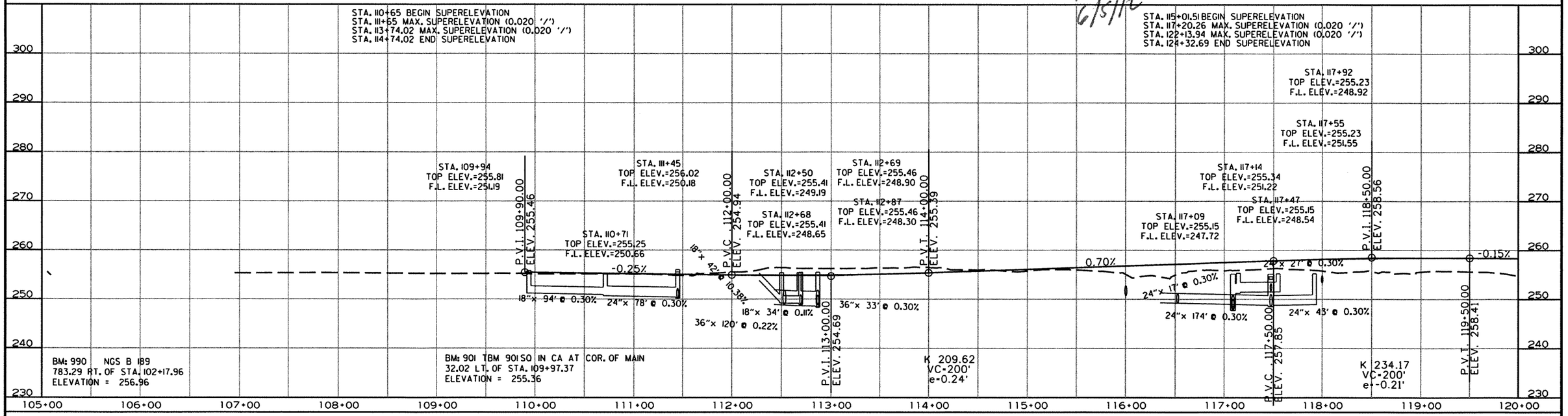
r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	56	160

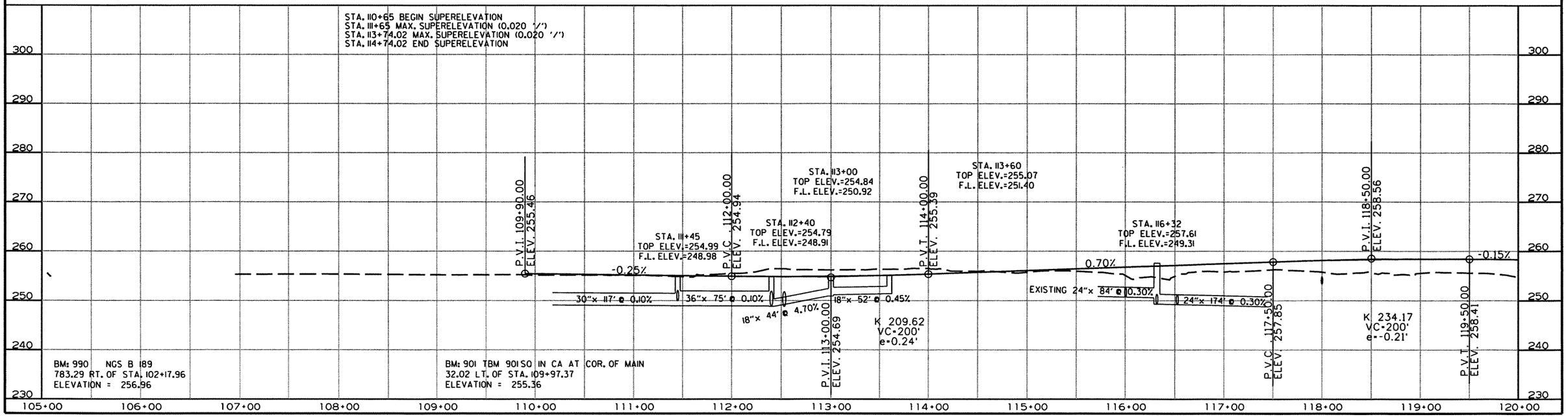
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

HWY 18. LEFT SIDE



HWY. 18 RIGHT SIDE



r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	57	160

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

N

STA. 120+40 - CONSTRUCT
D.I. ON LT. WITH
18" x 148' PIPE OUTLET
CONNECT TO D.I. @ STA. 122+00 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 122+00 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 238' PIPE OUTLET
CONNECT TO D.I. @ STA. 124+42 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 123+40 - INSTALL
24" x 34' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 30 CU. YDS.

STA. 124+42 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 24" x 61' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 124+42 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 4"

STA. 125+13 - IN PLACE
2' x 1' x 31' R.C. BOX CULVERT
ON LT.
REMOVE

STA. 125+32 - IN PLACE
6" x 68' PVC PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 125+38 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 29" x 18" x 24' R.C. ARCH PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 125+65 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 2' 7"

STA. 125+57 - IN PLACE
24" x 6' R.C. PIPE CULVERT
LT. STORM SEWER
REMOVE

STA. 125+58 - IN PLACE
24" x 6 R.C. PIPE CULVERT
LT. STORM SEWER
REMOVE

STA. 125+59 - IN PLACE
12" x 6' R.C. PIPE CULVERT
LT. STORM SEWER
REMOVE

STA. 125+63 - IN PLACE
15" EXISTING R.C. PIPE CULVERT
LT. STORM SEWER
REMOVE 35' OF R.C. PIPE

STA. 125+65 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 29" x 18" x 9' ARCH PIPE OUTLET
CONNECT TO D.I. @ STA. 125+65 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 2' 6"

STA. 125+65 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 29" x 18" x 46' ARCH PIPE OUTLET
CONNECT TO D.I. @ STA. 125+95 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 2' 8"

STA. 125+83 - IN PLACE
2' x 1' x 40' R.C. BOX CULVERT
REMOVE

STA. 125+95 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 36" x 23" x 59' R.C. ARCH PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 125+95 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 5"

STA. 127+13 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 60' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 127+13 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 5"

STA. 127+40 CONSTRUCT
APPROACH ON LT. = 50 CU. YDS.

STA. 128+80 - INSTALL
24" x 86' PIPE CULVERT
LT. SIDE DRAIN
CONSTRUCT E. 9TH ST.
APPROACH

STA. 128+83 - IN PLACE
42" x 26" x 61' ARCH PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 130+00 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 59' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 130+00 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 132+11 - IN PLACE
42" x 24" x 61' R.C. ARCH PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 132+13 - IN PLACE
18" x 41' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 133+00 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 16' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 133+00 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 8"

STA. 134+96 - IN PLACE
24" x 23' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

HWY. 18 (ASH ST.)

S. 10TH ST.

S. 9TH ST.

S. 8TH ST.

PARKING

CONCRETE

P.T. STA. 121+70.19

PROP. R/W

EXISTING R/W

CONST. LIMITS

CHAIN

N 88°58' 13" E

ABV 10527 'S' CHAIN

BOX BELT

GAS LINE UNDERGROUND CROSSING

PAVED PARKING

P.C.C.

RC BOX

SHORT 10TH

I.C.E.

PV

ROBO RR SPIKE

CANOPY W/CONC FLOOR

BASEBALL FIELD LIGHT

BASEBALL FIELD LIGHTS

6' CHAIN BACKSTOP

STA. 121+35 - IN PLACE
12" x 34' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 121+27 CONSTRUCT
APPROACH ON RT. = 35 CU. YDS.

STA. 121+82 CONSTRUCT
APPROACH ON RT. = 110 CU. YDS.

STA. 124+42 - CONSTRUCT
D.I. ON RT. WITH
24" x 9' R.C. STUB OUTLET
WITH FES.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 5"

STA. 124+82 - CONSTRUCT
24" x 85' R.C. PIPE CULVERT
(CLASS V) (TYPE 3 BEDDING)
WITH FES LT. & RT.
050 = 5.26 CFS D.A. = 1.44 ACRES

STA. 125+20 - INSTALL
DBL. 24" x 48' PIPE CULVERT
SIDE DRAIN
CONSTRUCT APPROACH = 85 CU. YDS.

STA. 125+40 - IN PLACE
18" x 31' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 125+95 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 36" x 23" x 18' R.C. ARCH STUB OUTLET
(CLASS IV) (TYPE 3 BEDDING)
WITH FES.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 5"

STA. 126+50 - CONSTRUCT
24" x 86' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
WITH FES LT. & RT.
050 = 4.82 CFS D.A. = 1.09 ACRES

STA. 126+38 - IN PLACE
18" x 160' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 127+13 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 18" x 60' R.C. STUB OUTLET
WITH FES.
TY C = 5' x 5'
TY MO = 5' I.D.
H = 4' 5"

STA. 129+22 - IN PLACE
12" x 121' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 130+00 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 24" x 282' PIPE OUTLET
CONNECT TO D.I. @ STA. 127+13 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 7"

STA. 130+80 - IN PLACE
12" x 195' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 133+00 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 24" x 296' PIPE OUTLET
CONNECT TO D.I. @ STA. 130+00 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 9"

HWY. 18

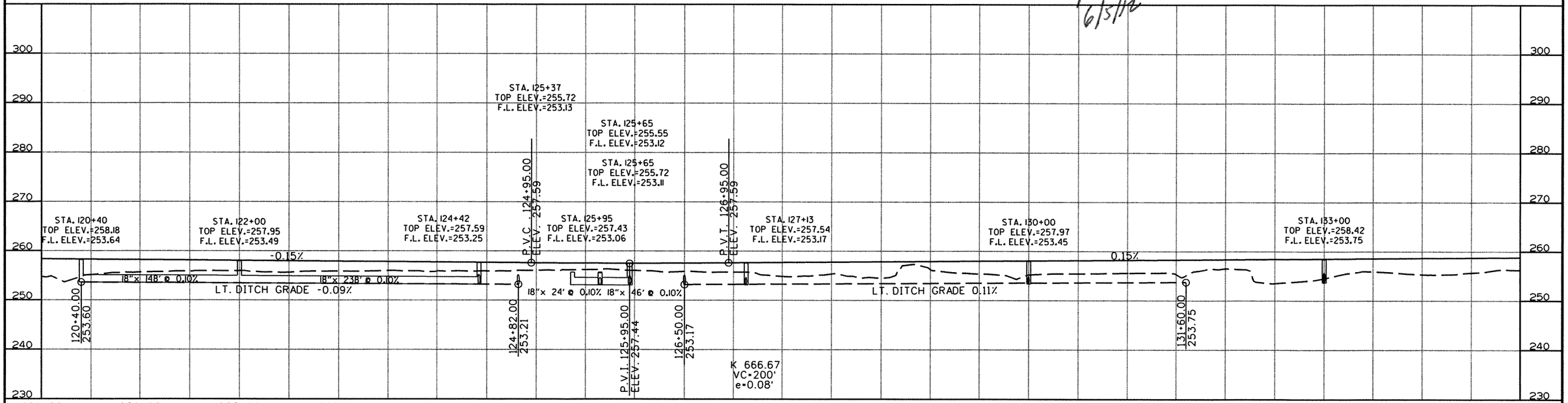
r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	58	160

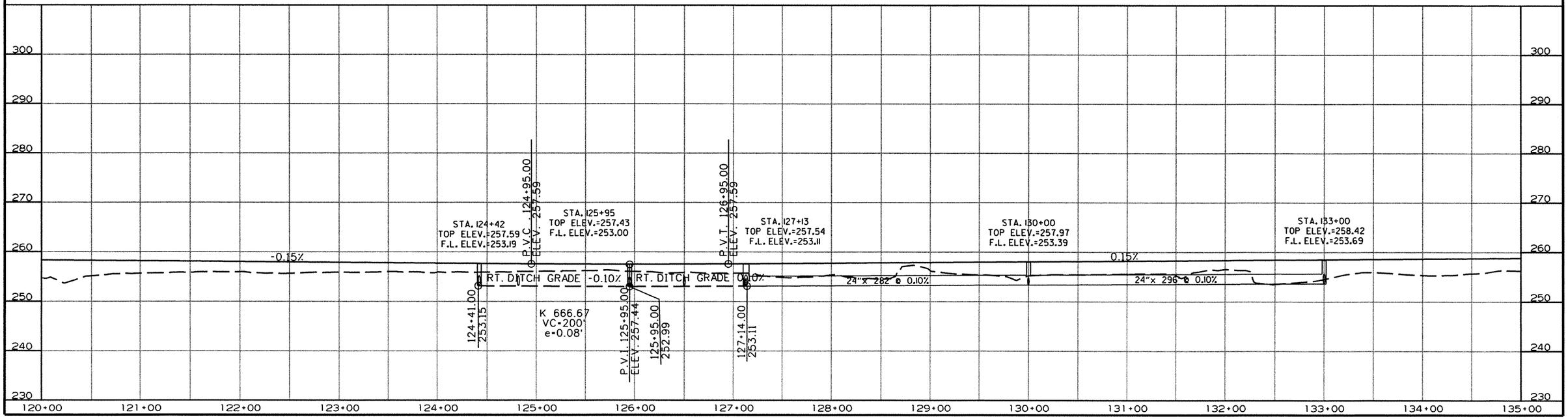
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17606
MICHAEL D. FUGETT
6/3/10

HWY. 18 LEFT SIDE



HWY. 18 RIGHT SIDE



r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	59	160
				(2) PLAN SHEETS				

STA. 137+09 - IN PLACE
18" x 43' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 138+00 - CONSTRUCT
D.I. ON LT. WITH
18" x 302' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 141+09 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 141+09 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 30" x 58' PIPE OUTLET
CONNECT TO D.I. @ STA. 141+71 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 8"

STA. 141+71 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 30" x 63' PIPE OUTLET
CONNECT TO D.I. @ STA. 142+38 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 10"

STA. 142+12 - IN PLACE
18" x 60' PVC PIPE CULVERT
LT. SIDE DRAIN
RETAIN

STA. 142+38 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 30" x 255' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 145+00 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 5' 2"

STA. 143+10 - IN PLACE
D.I. ON LT. WITH
18" x 97' PVC PIPE INLET
18" x 94' PVC PIPE OUTLET
RETAIN

STA. 144+23 - IN PLACE
D.I. ON LT. WITH
18" x 10' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 144+23 - IN PLACE
18" EXISTING PIPE CULVERT
ON LT.
REMOVE 10' OF EXISTING PIPE

STA. 144+55 - IN PLACE
D.I. ON LT. WITH
18" x 30' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 144+27 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 18" EXISTING PIPE OUTLET
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 7"

STA. 144+79 - IN PLACE
D.I. ON LT. WITH
& 36" x 147' PIPE OUTLET
RETAIN

STA. 145+00 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 36" x 45' PIPE OUTLET
CONNECT TO D.I. @ STA. 144+79 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 9' 4"

STA. 145+43 - IN PLACE
J.B. 208' LT.
& 48" EXISTING PIPE OUTLET
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

N

HWY. 18 (ASH ST.)

EXISTING R/W

PAVED PARKING

PARKING

PV

ELM ST.

S. 5TH ST.

N. BROADWAY

S. BROADWAY

P.C.F.

P.C. STA. 138+40.26

P.I. STA. 141+16.34

P.T. STA. 143+91.45

PI = 141+16.34
Δ = 8° 16' 04.3" LT.
D = 1°30'
T = 276.07'
L = 551.19'
PC = 138+40.26
PT = 143+91.45
NO SUPER

T.C.E.

PROP. R/W

CONST. LIMITS

EXISTING R/W

N 88°58'13" E

135

140

145

150

29'

30'

40'

CHAIN LINK FENCE

CONCRETE

PVC

STA. 138+43 - IN PLACE
D.I. ON RT. WITH
18" x 95' R.C. PIPE INLET
18" x 73' R.C. PIPE OUTLET
RETAIN

STA. 138+66 - CONSTRUCT
D.I. ON RT. WITH
18" x 60' R.C. PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 138+66 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 6"

STA. 138+66 - CONSTRUCT
D.I. 77' RT. WITH 8' EXTENSION
& 18" x 33' PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 138+97 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 6"

STA. 138+83 - IN PLACE
12" x 21' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 138+97 - IN PLACE
18" x 172' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 138+97 - CONSTRUCT
D.I. 77' RT. WITH 8' EXTENSION
& 18" x 49' PIPE OUTLET
CONNECT TO D.I. @ STA. 139+30 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 7"

STA. 139+30 - CONSTRUCT
D.I. ON RT. WITH
18" x 86' PIPE OUTLET
CONNECT TO D.I. @ STA. 140+19 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 11"

STA. 140+19 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 30" x 87' PIPE OUTLET
CONNECT TO D.I. @ STA. 141+09 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 9"

STA. 141+09 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 59' PIPE OUTLET
CONNECT TO D.I. @ STA. 141+71 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 7"

STA. 141+23 - IN PLACE
18" x 26' PVC PIPE CULVERT
RT. SIDE DRAIN
RETAIN

STA. 141+71 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 62' PIPE OUTLET
CONNECT TO D.I. @ STA. 142+38 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 8"

STA. 142+38 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 30" x 59' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 142+38 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 11"

STA. 144+00 - CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 145+00 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 18" x 60' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 145+00 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 8' 1"

HWY. 18

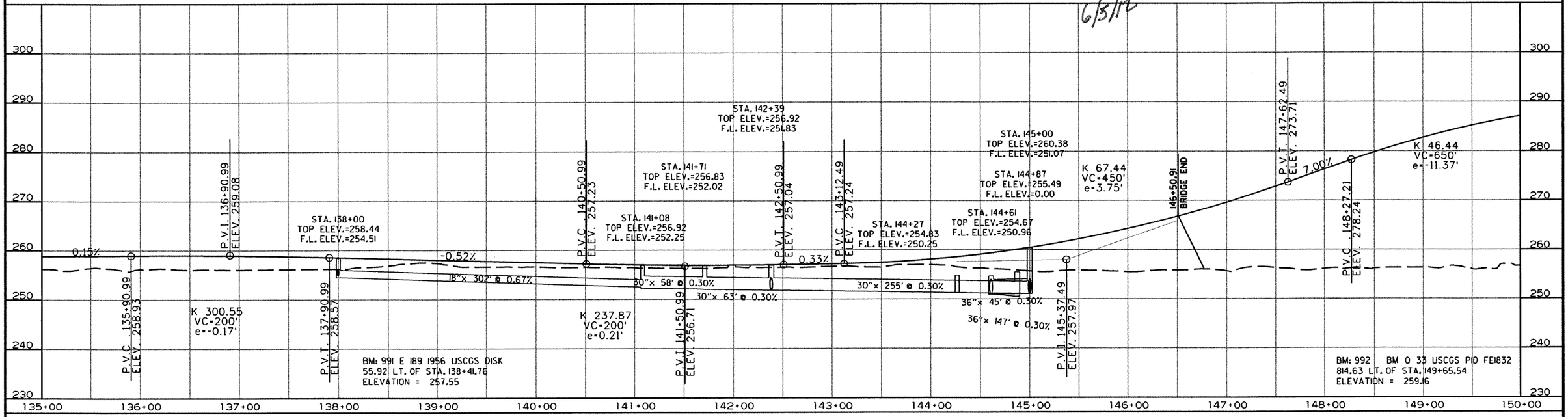
r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	60	160

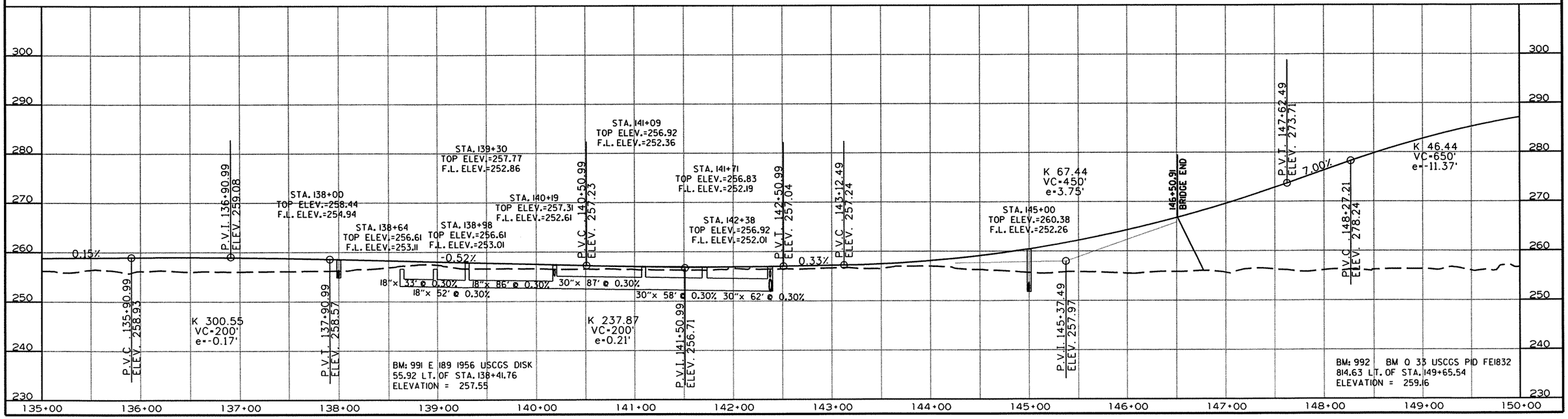
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7905
MICHAEL D. FUGETT
6/3/10

HWY. 18 LEFT SIDE



HWY. 18 RIGHT SIDE



r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	61	160
				(2)	PLAN SHEETS			

STA. 157+50 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 18" x 194' PIPE OUTLET
CONNECT TO D.I. @ STA. 159+47 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 157+88 CONSTRUCT
APPROACH ON LT. = 110 CU. YDS.

STA. 158+46 - CONSTRUCT
APPROACH ON LT. = 40 CU. YDS.

STA. 159+47 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& OPENING IN BACK
& 24" x 178' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 161+28 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 13' 2"

STA. 159+78 - IN PLACE
D.I. ON LT. WITH
18" x 32' R.C. PIPE CULVERT
REMOVE

STA. 160+19 - IN PLACE
D.I. ON LT. WITH
18" x 40' R.C. PIPE CULVERT
REMOVE

STA. 160+31 - IN PLACE
D.I. ON LT. WITH
18" x 30' R.C. PIPE CULVERT
REMOVE

STA. 160+80 CONSTRUCT
APPROACH ON LT. = 10 CU. YDS.

STA. 161+28 - CONSTRUCT
D.I. ON LT. WITH
30" x 185' PIPE OUTLET
CONNECT TO D.I. @ STA. 163+17 LT.
TY C = 5' x 5'
TY MO = 5' I.D.
H = 12' 8"

STA. 162+04 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 162+50 - IN PLACE
D.I. ON LT. WITH
1' x 2' x 28' R.C. BOX CULVERT
REMOVE

STA. 162+50 - IN PLACE
D.I. ON LT. WITH
1' x 2' x 19' R.C. BOX CULVERT
REMOVE

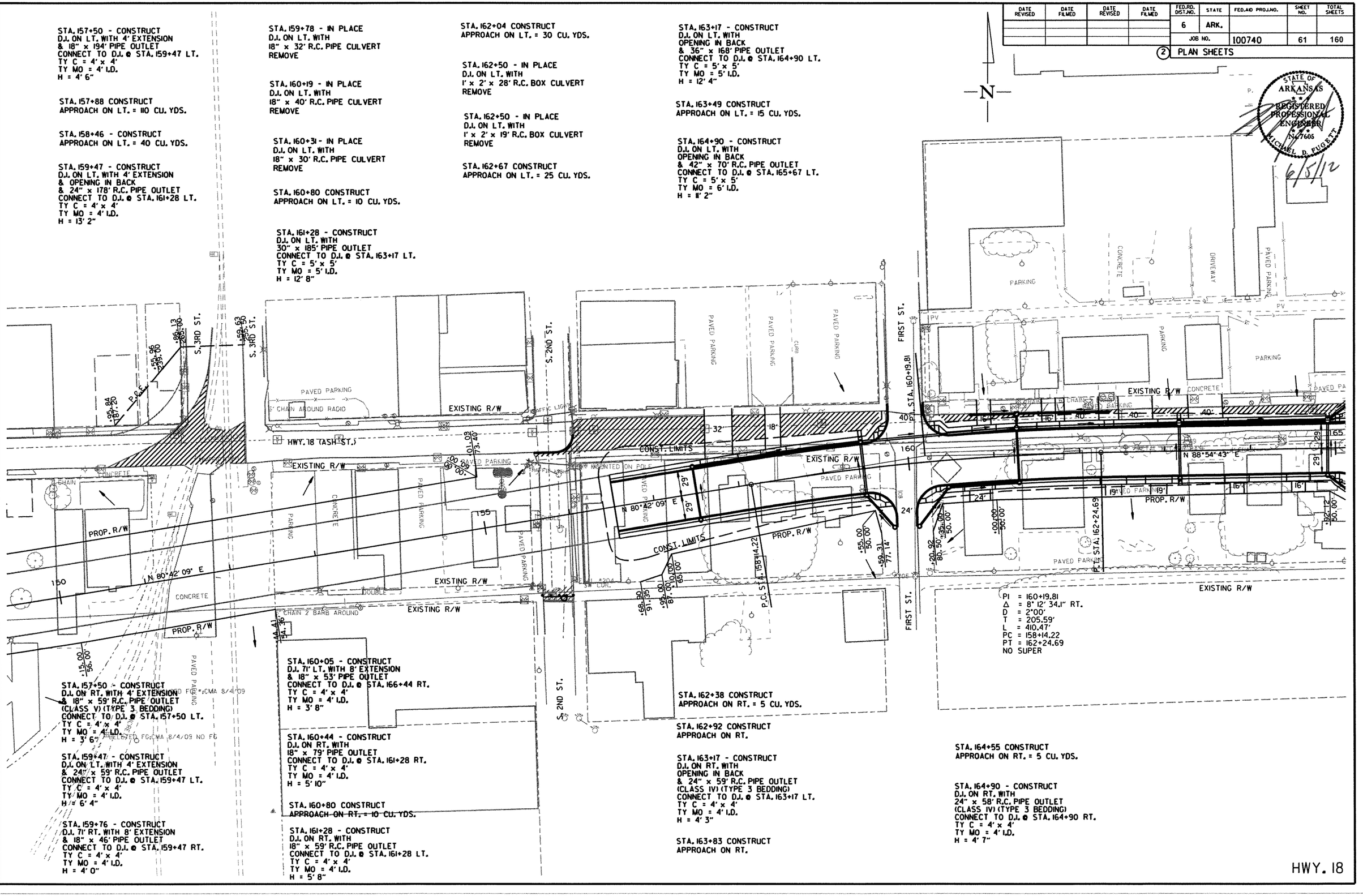
STA. 162+67 CONSTRUCT
APPROACH ON LT. = 25 CU. YDS.

STA. 163+17 - CONSTRUCT
D.I. ON LT. WITH
OPENING IN BACK
& 36" x 168' PIPE OUTLET
CONNECT TO D.I. @ STA. 164+90 LT.
TY C = 5' x 5'
TY MO = 5' I.D.
H = 12' 4"

STA. 163+49 CONSTRUCT
APPROACH ON LT. = 15 CU. YDS.

STA. 164+90 - CONSTRUCT
D.I. ON LT. WITH
OPENING IN BACK
& 42" x 70' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 165+67 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 11' 2"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. FUGETT
6/5/12



STA. 157+50 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 18" x 59' R.C. PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 157+50 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 6"

STA. 159+47 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 24" x 59' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 159+47 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 6' 4"

STA. 159+76 - CONSTRUCT
D.I. 71' RT. WITH 8' EXTENSION
& 18" x 46' PIPE OUTLET
CONNECT TO D.I. @ STA. 159+47 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 0"

STA. 160+05 - CONSTRUCT
D.I. 71' LT. WITH 8' EXTENSION
& 18" x 53' PIPE OUTLET
CONNECT TO D.I. @ STA. 166+44 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 160+44 - CONSTRUCT
D.I. ON RT. WITH
18" x 79' PIPE OUTLET
CONNECT TO D.I. @ STA. 161+28 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5' 10"

STA. 160+80 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 161+28 - CONSTRUCT
D.I. ON RT. WITH
18" x 59' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 161+28 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5' 8"

STA. 162+38 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 162+92 CONSTRUCT
APPROACH ON RT.

STA. 163+17 - CONSTRUCT
D.I. ON RT. WITH
OPENING IN BACK
& 24" x 59' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 163+17 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 3"

STA. 163+83 CONSTRUCT
APPROACH ON RT.

STA. 164+55 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 164+90 - CONSTRUCT
D.I. ON RT. WITH
24" x 58' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 164+90 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 7"

r100740.dgn 3/30/2010

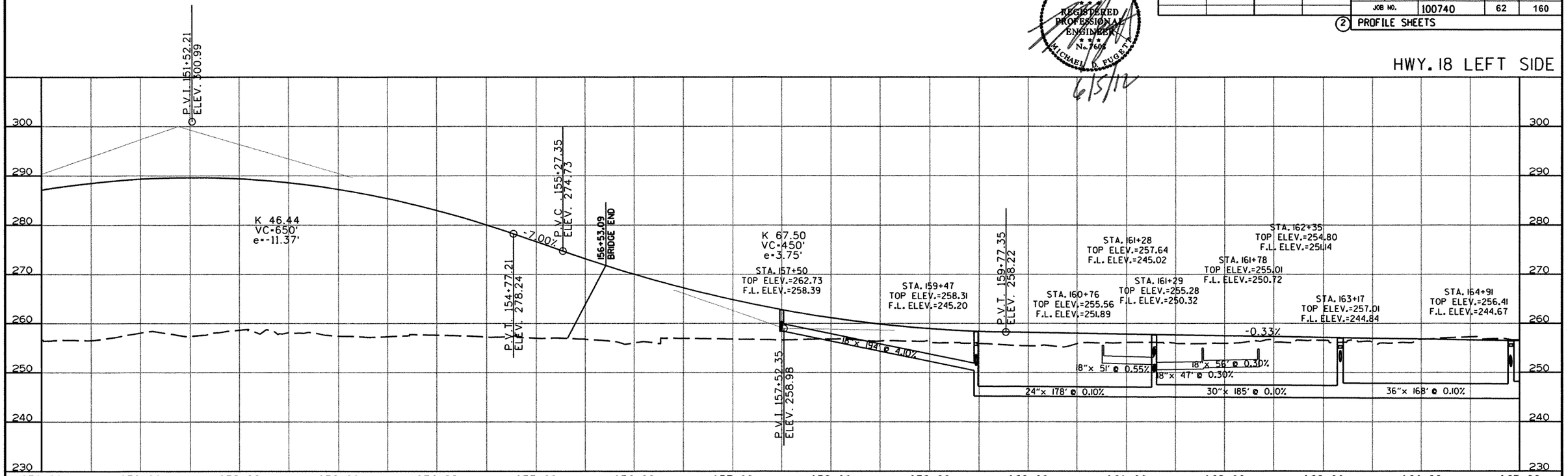
HWY. 18

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	62	160

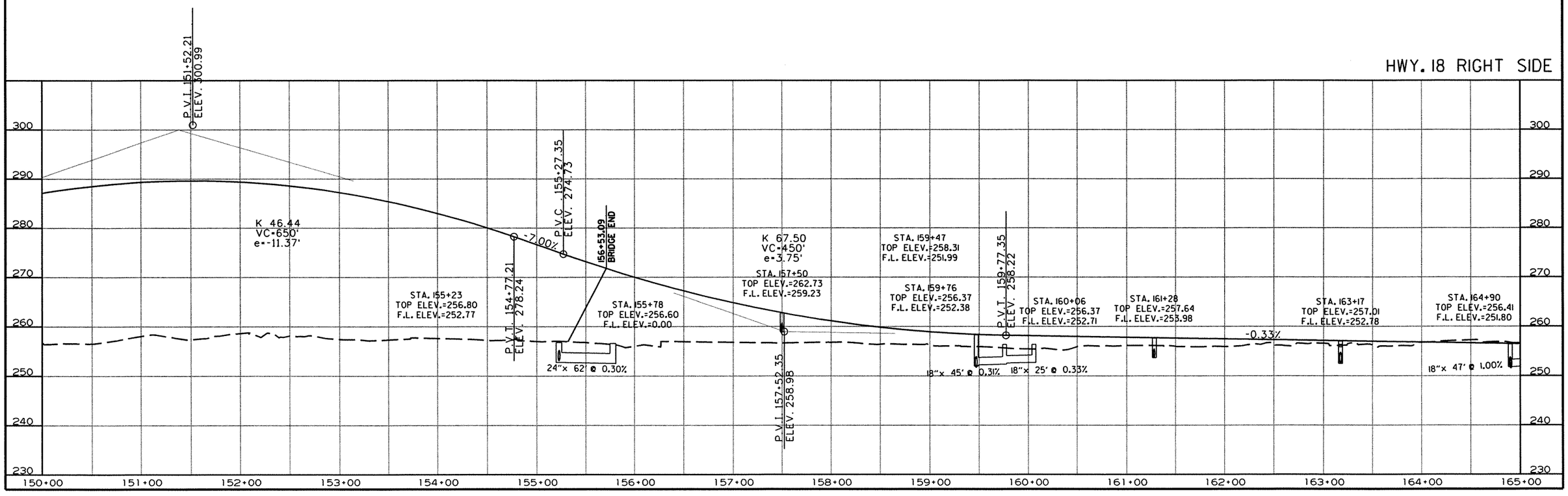
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGH
6/15/12

HWY. 18 LEFT SIDE



HWY. 18 RIGHT SIDE



r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	63	160

(2) PLAN SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGATT
6/5/12

STA. 165+30 - IN PLACE
D.I. ON LT. WITH
18" x 67' R.C. PIPE CULVERT
2' x 2' x 32' R.C. BOX CULVERT
REMOVE

STA. 165+47 - IN PLACE
D.I. ON LT. WITH
12" x 48' R.C. PIPE CULVERT
REMOVE

STA. 165+57 - CONSTRUCT
D.I. 62' LT. WITH 8' EXTENSION
& 18" x 31' PIPE CULVERT
CONNECT TO D.I. @ STA. 164+90 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 165+67 - CONSTRUCT
JUNCTION BOX ON LT.
& 54" x 25' R.C. PIPE OUTLET
CONNECT TO D.I. STA. 165+68 LT.
TYPE ST = 5' x 5'
H = 11' 4"

STA. 165+68 - CONSTRUCT
D.I. 62' LT. WITH 8' EXTENSION
CONNECT TO EXISTING 73" x 45" ARCH PIPE
TY C = 4' x 4'
TY MO = 4' I.D.
H = 9' 10"

STA. 166+83 - CONSTRUCT
D.I. ON LT. WITH
OPENING IN BACK
& 54" x 110' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 165+67 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 11' 1"

STA. 165+47 - IN PLACE
D.I. ON LT. WITH
30" EXISTING R.C. PIPE CULVERT
RETAIN D.I. AND
REMOVE 58' OF R.C. PIPE

STA. 167+35 CONSTRUCT
APPROACH ON LT.

STA. 167+65 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& OPENING IN BACK
& 48" x 76' PIPE OUTLET
CONNECT TO D.I. @ STA. 166+83 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 10' 10"

STA. 168+18 - CONSTRUCT
D.I. ON LT. WITH 0' EXTENSION
& 48" x 47' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 167+65 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 10' 10"

STA. 168+41 - CONSTRUCT
DROP INLET ON LT. H=10' 2"
WITH 48" X 47"
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5'X5'

STA. 168+47 - IN PLACE
D.I. ON LT. WITH
48" x 275' R.C. PIPE CULVERT
REMOVE

STA. 168+49 - CONSTRUCT
D.I. 60 LT. WITH 8' EXTENSION
& 18" x 27' PIPE OUTLET
CONNECT TO D.I. @ STA. 168+18 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 10' 10"

STA. 165+30 - CONSTRUCT
D.I. 62' RT. WITH 8' EXTENSION
& 18" x 30' PIPE OUTLET
CONNECT TO D.I. @ STA. 164+90 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 166+44 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 168+58 - IN PLACE
D.I. ON LT. WITH
48" x 10' R.C. PIPE CULVERT
REMOVE

STA. 168+72 - CONSTRUCT
D.I. 60' LT. WITH 8' EXTENSION
& 18" x 37' PIPE OUTLET
CONNECT TO D.I. @ STA. 169+11 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 168+82 - IN PLACE
D.I. ON LT. WITH
48" x 19' R.C. PIPE CULVERT
REMOVE

STA. 169+11 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 48" x 87' PIPE OUTLET
CONNECT TO D.I. @ STA. 168+18 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 10' 2"

STA. 169+35 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 170+00 - CONSTRUCT
D.I. ON LT. WITH 4' EXTENSION
& 48" x 80' PIPE OUTLET
CONNECT TO D.I. @ STA. 169+11 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 11' 0"

STA. 170+91 - CONSTRUCT
D.I. ON LT. WITH
48" x 80' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 170+00 LT.
TY C = 5' x 5'
TY MO = 6' I.D.
H = 11' 6"

STA. 170+65 - IN PLACE
12" EXISTING R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE 26' R.C. PIPE

STA. 170+65 - IN PLACE
D.I. ON LT. WITH
18" x 67' R.C. PIPE CULVERT
REMOVE

STA. 172+51 - CONSTRUCT
D.I. ON LT. WITH 8' EXTENSION
& 18" x 99' R.C. PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 172+78 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 9"

STA. 174+54 - CONSTRUCT
APPROACH ON LT.

STA. 174+62 - CONSTRUCT
D.I. 95' LT. WITH 4' EXTENSION
& 24" x 131' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 174+97 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 0"

STA. 174+80 CONSTRUCT
APPROACH ON LT.

STA. 165+65 - CONSTRUCT
D.I. 63' RT. WITH 8' EXTENSION
& 18" x 90' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 165+67 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 174+87 - CONSTRUCT
D.I. 102' LT. WITH 8' EXTENSION
& 18" x 31' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 174+62 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 177+64 CONSTRUCT
APPROACH ON LT.

STA. 403+30 - CONSTRUCT
D.I. ON RT. WITH
18" x 113' PIPE OUTLET
CONNECT TO D.I. @ STA. 404+50 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 10"

STA. 404+00 - CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 404+50 - CONSTRUCT
D.I. ON RT. WITH
18" x 220' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 406+73 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 5"

STA. 404+50 - CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.

STA. 405+13 - IN PLACE
D.I. ON RT. WITH
18" x 160' R.C. PIPE CULVERT
REMOVE

STA. 405+50 - CONSTRUCT
APPROACH ON LT.

STA. 166+83 - CONSTRUCT
D.I. ON RT. WITH
OPENING IN BACK
& 18" x 58' R.C. PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 166+83 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 167+23 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

STA. 167+65 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 18" x 59' R.C. PIPE OUTLET
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 167+65 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

PI = 171+41.86
Δ = 63° 41' 13.72" LT.
D = 20°00'
T = 177.93'
L = 318.44'
RC = 169+63.93
PT = 172+82.37
e = 0.040'/'
Ls = 220'

STA. 406+20 - IN PLACE
D.I. ON RT. WITH
18" x 163' R.C. PIPE CULVERT
REMOVE

STA. 406+50 - IN PLACE
D.I. ON LT. WITH
18" x 27' R.C. PIPE CULVERT
REMOVE

STA. 406+73 - CONSTRUCT
D.I. ON LT.
CONNECT TO 18" EXISTING PIPE OUTLET LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 406+73 - CONSTRUCT
D.I. ON RT. WITH
18" x 34' PIPE OUTLET
CONNECT TO D.I. @ STA. 406+73 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 406+73 - IN PLACE
D.I. ON LT. WITH
18" R.C. PIPE OULET
REMOVE D.I. ON LT.
RETAIN 18" R.C. PIPE

STA. 406+74 - IN PLACE
D.I. ON RT. WITH
18" x 135' R.C. PIPE CULVERT
REMOVE

STA. 504+75.61 MAIN ST
STA. 174+94.67 HWY. 16
Δ = 75°41' 36"

STA. 177+64.02
END JOB 100740

PI = 175+66.59
Δ = 65° 48' 30.41" RT.
D = 20°00'
T = 185.36'
L = 329.04'
PC = 173+81.23
PT = 177+10.27
e = 0.040'/'
Ls = 220'

STA. 168+18 - CONSTRUCT
D.I. ON RT. WITH
24" x 58' R.C. PIPE OUTLET
CONNECT TO D.I. @ STA. 168+41 LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 6"

STA. 168+75 - CONSTRUCT
D.I. 66' RT. WITH 8' EXTENSION
& 18" x 100' R.C. PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 168+75 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 4' 0"

STA. 168+75 - CONSTRUCT
D.I. 77' RT. WITH 4' EXTENSION
& 18" x 7' PIPE OUTLET
CONNECT TO D.I. @ STA. 168+75 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 10"

STA. 169+02 - CONSTRUCT
D.I. 66' RT. WITH
18" x 25' PIPE OUTLET
CONNECT TO D.I. @ STA. 168+18 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 169+02 - CONSTRUCT
D.I. 77' RT. WITH
18" x 7' PIPE OUTLET
CONNECT TO D.I. @ STA. 169+02 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3' 8"

STA. 170+00 CONSTRUCT
APPROACH ON RT. = 15 CU. YDS.

STA. 170+57 - CONSTRUCT
JUNCTION BOX ON RT.
& 18" x 83' R.C. PIPE STUB IN
(CLASS V) (TYPE 3 BEDDING)
CONNECT TO OPEN DITCH LT.
& EXISTING STORM SEWER ON RT.
TYPE E = 4' x 4'
H = 5' 6"

STA. 171+57 CONSTRUCT
JUNCTION BOX ON RT.
& 48" x 29' PIPE INLET
CONNECTED TO EXISTING STORM SEWER
& 48" x 92' R.C. PIPE CULVERT
CONNECT TO D.I. @ STA. 170+90 LT.
TYPE E = 5' x 5'
H = 13' 0"

STA. 171+77 - IN PLACE
D.I. ON RT.
RETAIN

STA. 173+46 - IN PLACE
D.I. ON RT. WITH
24" x 186' R.C. PIPE CULVERT
REMOVE

STA. 172+78 - CONSTRUCT
D.I. ON RT. WITH
36" x 129' PIPE OUTLET
CONNECT TO D.I. @ STA. 171+57 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 7' 3"

STA. 173+45 - IN PLACE
D.I. ON LT. WITH
18" x 28' R.C. PIPE CULVERT
REMOVE

STA. 173+97 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 30" x 129' PIPE OUTLET
CONNECT TO D.I. @ STA. 172+78 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 5' 1"

STA. 174+46 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 40' PIPE OUTLET
CONNECT TO D.I. @ STA. 173+97 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 10"

STA. 174+57 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 40' PIPE OUTLET
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO D.I. @ STA. 174+46 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 9"

STA. 175+22 - IN PLACE
D.I. ON RT. WITH
24" x 165' R.C. PIPE CULVERT
REMOVE

STA. 176+30 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 91' PIPE OUTLET
CONNECT TO D.I. @ STA. 174+57 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 5' 7"

STA. 176+72 CONSTRUCT
APPROACH ON RT.

STA. 177+46 - CONSTRUCT
D.I. ON RT. WITH
24" x 73' PIPE INLET
CONNECT TO EXISTING 24" STORM SEWER
& 24" x 99' PIPE OUTLET
CONNECT TO D.I. @ STA. 176+30 RT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5' 8")

STA. 179+02 - IN PLACE
D.I. ON RT. WITH
18" x 356' R.C. PIPE CULVERT
RETAIN D.I. ON RT.
REMOVE 255' OF 18" R.C. PIPE

HWY. 18

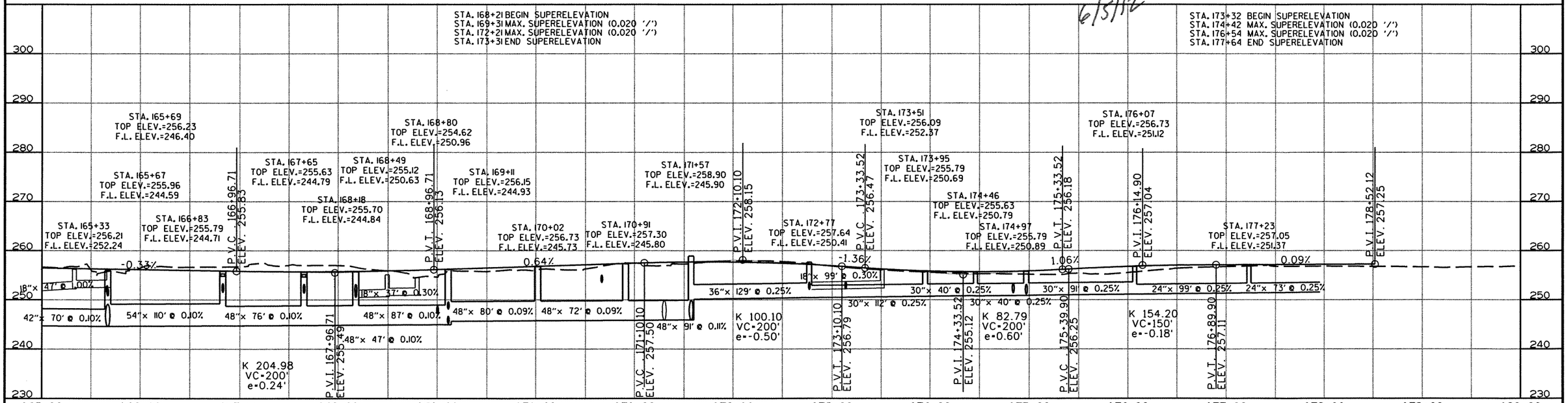
r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	64	160

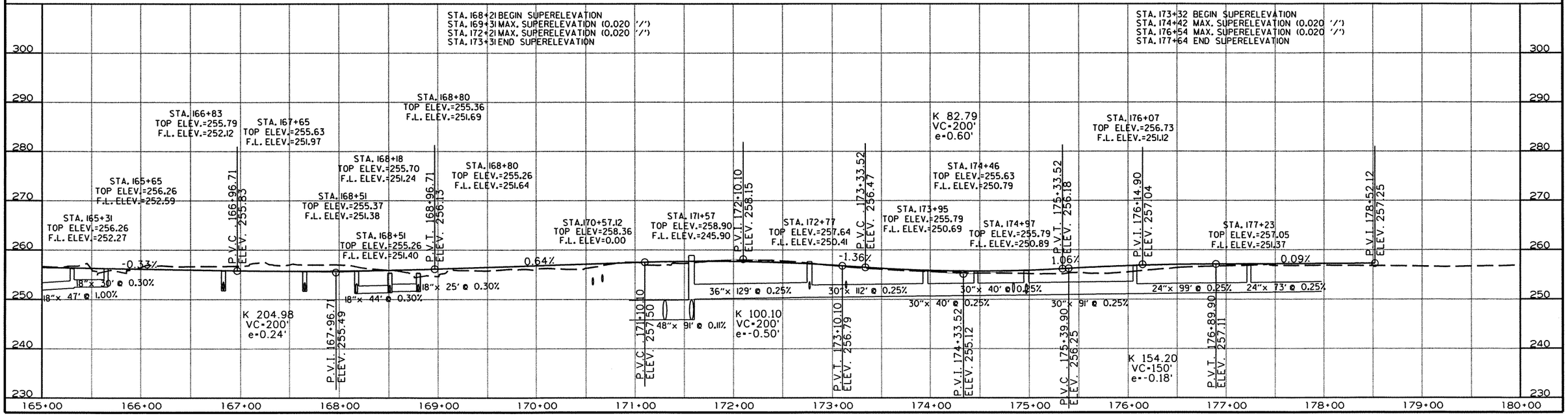
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

HWY. 18 LEFT SIDE



HWY. 18 RIGHT SIDE



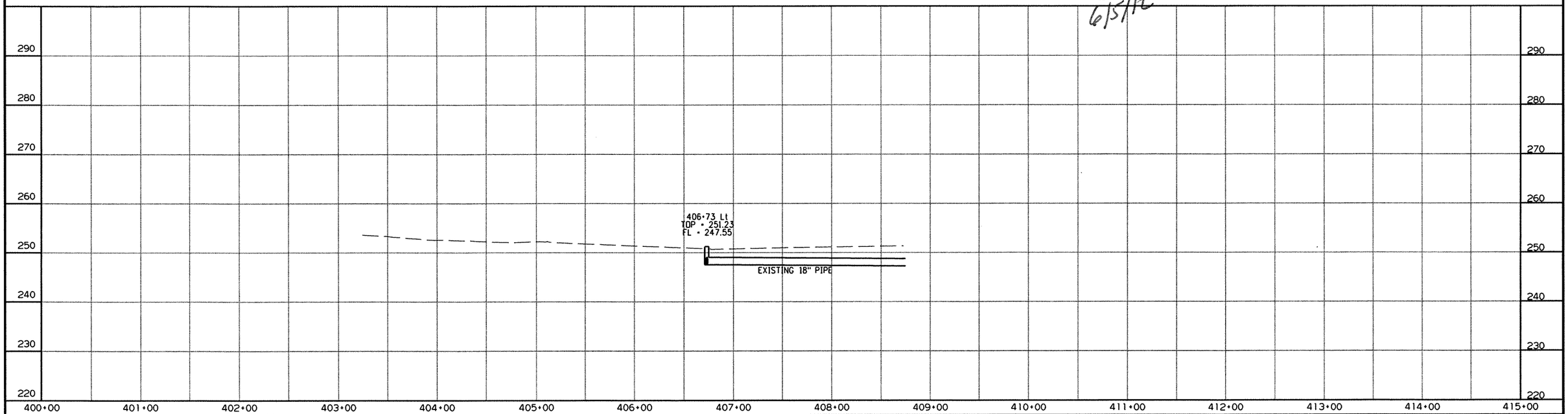
r100740.dgn 3/30/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	65	160

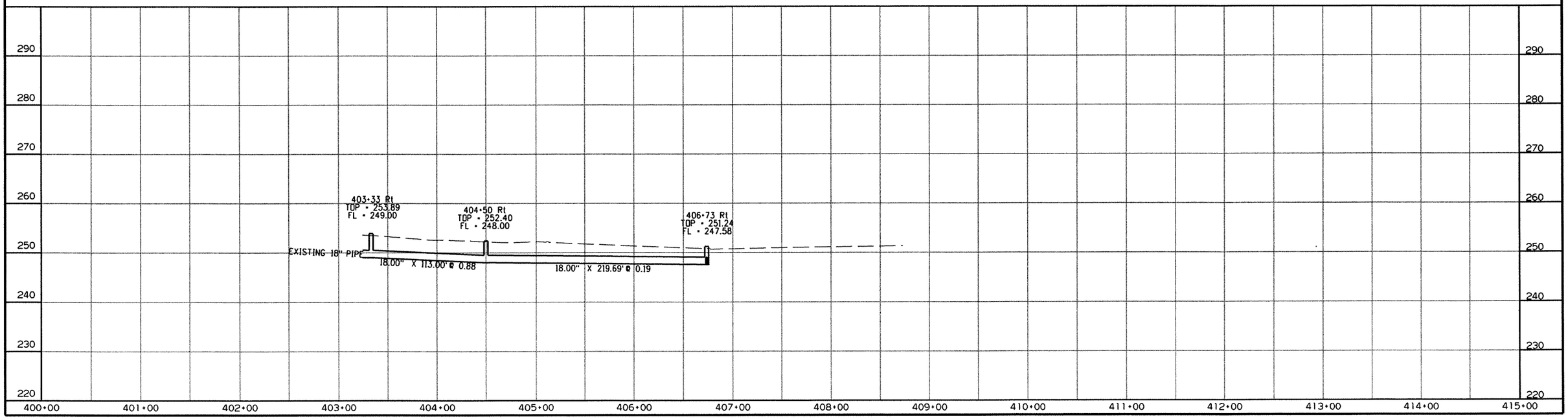
(2) PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

WALNUT ST. LEFT SIDE



WALNUT ST. RIGHT SIDE



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	66	160

(2) SUMMARY OF SIGNAL QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

ITEM NO.	ITEM	WALNUT AT N. BROADWAY	WALNUT AT 2ND.	WALNUT AT FRANKLIN	HWY. 18 AT HWY. 61	HWY. 18 AT S. FRANKLIN	HWY. 18 AT MAIN ST.	TOTAL JOB QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASE)				1	1	1	3	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)				8	8	8	24	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)				4	2	1	7	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED				8	8	4	20	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)				6672	2976	959	10607	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)				2038	828	130	2996	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)						31	31	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)				627	499	326	1452	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")				20	20	20	60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")				20	20		40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")				20	20	20	60	LIN. FT.
710	NON-METALLIC CONDUIT (2")				20	20	20	60	LIN. FT.
710	NON-METALLIC CONDUIT (3")				663	467	324	1454	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)				7	6	5	18	EACH
713	SPAN WIRE ASSEMBLY				1	1		2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')					1		1	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 (36')						1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')					2		2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')						1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')				2			2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')						1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')				1			1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')				1			1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION				4	4	2	10	EACH
716	TREATED WOOD POLE (CLASS 3, 40')				8	4		12	EACH
733	VIDEO CABLE				3665	949	662	5276	LIN. FT.
733	VIDEO MONITOR (CLR)				1	1	1	3	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)				1	1	1	3	EACH
SP&733	VIDEO DETECTOR (CLR)				13 •	6	4	23	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)				5 •	3	3	11	EACH
SP	CONTROLLER CABINET MODIFICATION				1	1		2	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES				805	581	267	1653	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)				682	569	382	1633	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)				205	210	100	515	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)				20	20	20	60	LIN. FT.
SP	LUMINAIRE ASSEMBLY				4	4	2	10	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD				8	6		14	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.20	0.20	0.20	0.20	0.20		1.00	LUMP SUM
SP	VIDEO DETECTOR ROTATION				1	1		2	EACH
SP	18" STREET NAME SIGN				6	4	3	13	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)				1	1	1	3	EACH
SP	TRAFFIC SIGNAL HEAD RECONFIGURATION				10			10	EACH
SP	PEDESTRIAN SIGNAL HEAD RELOCATION				2			2	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

DATE: 05-29-12
FILE NAME: t100740-job.dgn
MODEL: SIGNAL NOTES AND SUMMARY

LOCATION: HWY. 61-S. HOLLAND ST. (HWY. 18) (BLYTHEVILLE) (S)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	67	160
				(2)	TRAFFIC SIGNAL NOTES			

TRAFFIC SIGNAL NOTES:

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2002) NATIONAL ELECTRICAL CODE, NFPA 101(2000) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND EGC 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.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY 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 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'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 WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 AWG 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.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET SHALL HAVE 16 LOAD BAYS 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.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
11. 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 SPECIAL DETAILS). PAYMENT WILL BE INCLUDED IN SECTION 714, AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
12. ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. 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.
16. 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, 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 21' SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL 6 FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
17. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS 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.
18. 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.
19. 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.
20. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
21. ONE VIDEO PROGRAMMING 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.
22. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY 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.
23. 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.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGATT
6/5/12

DATE: 05-29-12
FILE NAME: t100740-job.dgn
MODEL: SIGNAL NOTES AND SUMMARY

LOCATION:	HWY. 61-S. HOLLAND ST. (HWY. 18) (BLYTHEVILLE) (S)		
CITY:	BLYTHEVILLE		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE: N/A	DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
7-11-12				6	ARK.			
				JOB NO.		100740	68	160
				(2)	SIGNALIZATION PLAN SHEET			

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASE)	1	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2078	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	1134	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	8	EACH
733	VIDEO CABLE	1739	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	4	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	8	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.10	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	TRAFFIC SIGNAL HEAD RECONFIGURATION	4	EACH
SP	PEDESTRIAN SIGNAL HEAD RELOCATION	2	EACH

STAGE 1 AND 2
UTILIZING THE PERMANENT TRAFFIC SIGNAL CONTROLLER AND THE EXISTING TRAFFIC SIGNAL HEADS A TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE CONSTRUCTED. MODIFY THE EXISTING 5 SECTION 1 WAY TRAFFIC SIGNAL HEADS AND RELOCATE ALL EXISTING TRAFFIC SIGNAL HEADS AND PEDESTRIAN SIGNAL HEADS AS SHOWN.
INSTALL 8 TREATED WOOD POLES (CLASS 3, 40') AND SPAN WIRE ASSEMBLY.
INSTALL ALL TRAFFIC SIGNAL CABLE AND VIDEO CABLE. REMOVE EXISTING TRAFFIC SIGNAL INSTALLATION AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 AND 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2344	LIN. FT.
SP	TRAFFIC SIGNAL HEAD RECONFIGURATION	4	EACH

STAGE 3:
RELOCATE PEDESTRIAN SIGNAL HEADS NUMBERS 13, 14, 15 AND 20 AS SHOWN.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 3 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	428	LIN. FT.
SP	TRAFFIC SIGNAL HEAD RECONFIGURATION	2	EACH
SP	VIDEO DETECTOR ROTATION	1	EACH

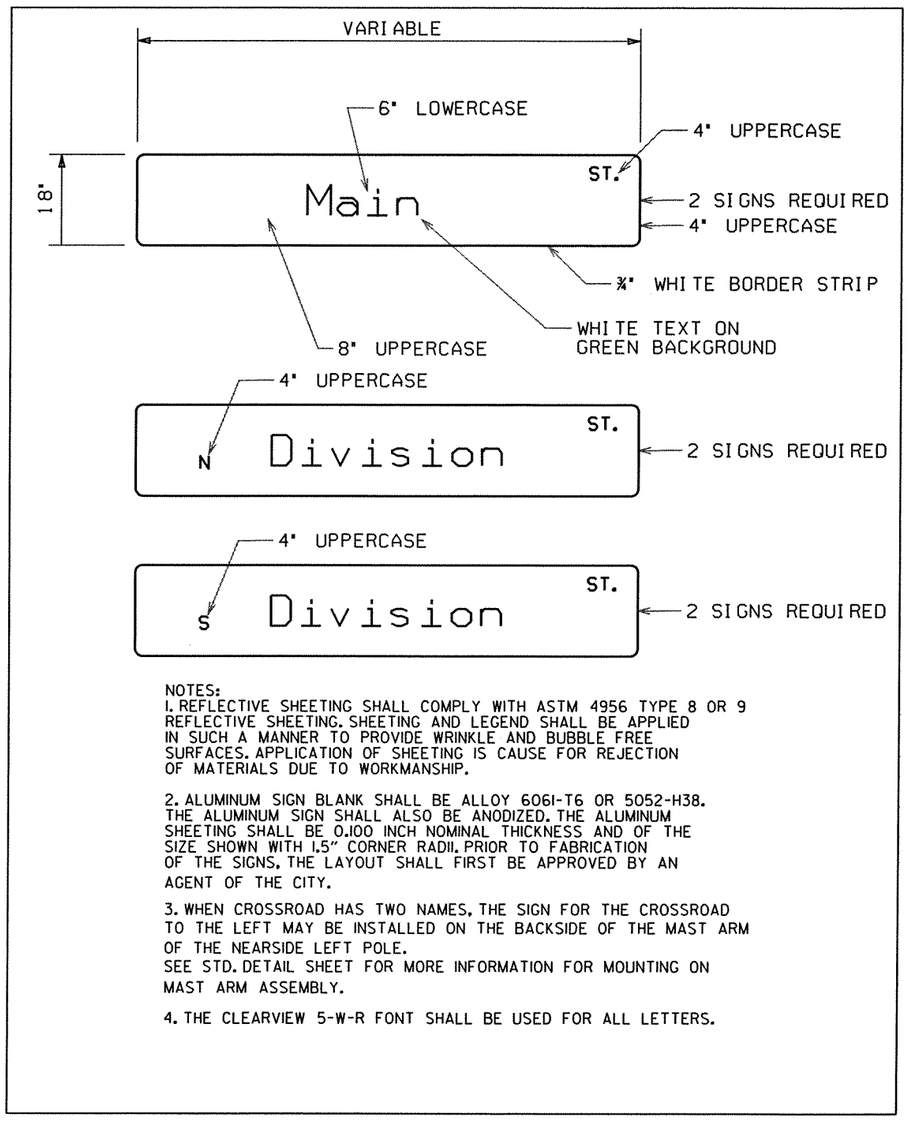
STAGE 3:
RELOCATE PEDESTRIAN SIGNAL HEADS NUMBERS 16 AND 17 AS SHOWN.
ROTATE VIDEO DETECTOR V6 AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	4	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1822	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	904	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	627	LIN. FT.
710	NON-METALLIC CONDUIT (3")	663	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	2	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
733	VIDEO CABLE	1926	LIN. FT.
• SP&733	VIDEO DETECTOR (CLR)	9	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP	CONTROLLER CABINET MODIFICATION	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	805	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	662	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	205	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.10	LUMP SUM
SP	18" STREET NAME SIGN	6	EACH

• ONE SPARE VIDEO DETECTOR AND ONE SPARE VIDEO PROCESSOR SHALL BE SUPPLIED.

PERMANENT TRAFFIC SIGNAL:
THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL.
INSTALL PERMANENT TRAFFIC SIGNAL AND REMOVE ALL STAGE 1-3 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS).



NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. FUGETT
7/12/12

DATE: 07-11-12
FILE NAME: s100740-01.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION:	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)		
CITY:	BLYTHEVILLE		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE: N/A	DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	69	160

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

EXISTING SIGNAL FACES

12" LENSES

2&3
5&6
8&9
11&12

EXISTING RE-CONFIGURE 5-SECTION HEAD

1, 4, 7&10

EXISTING PEDESTRIAN SIGNALS

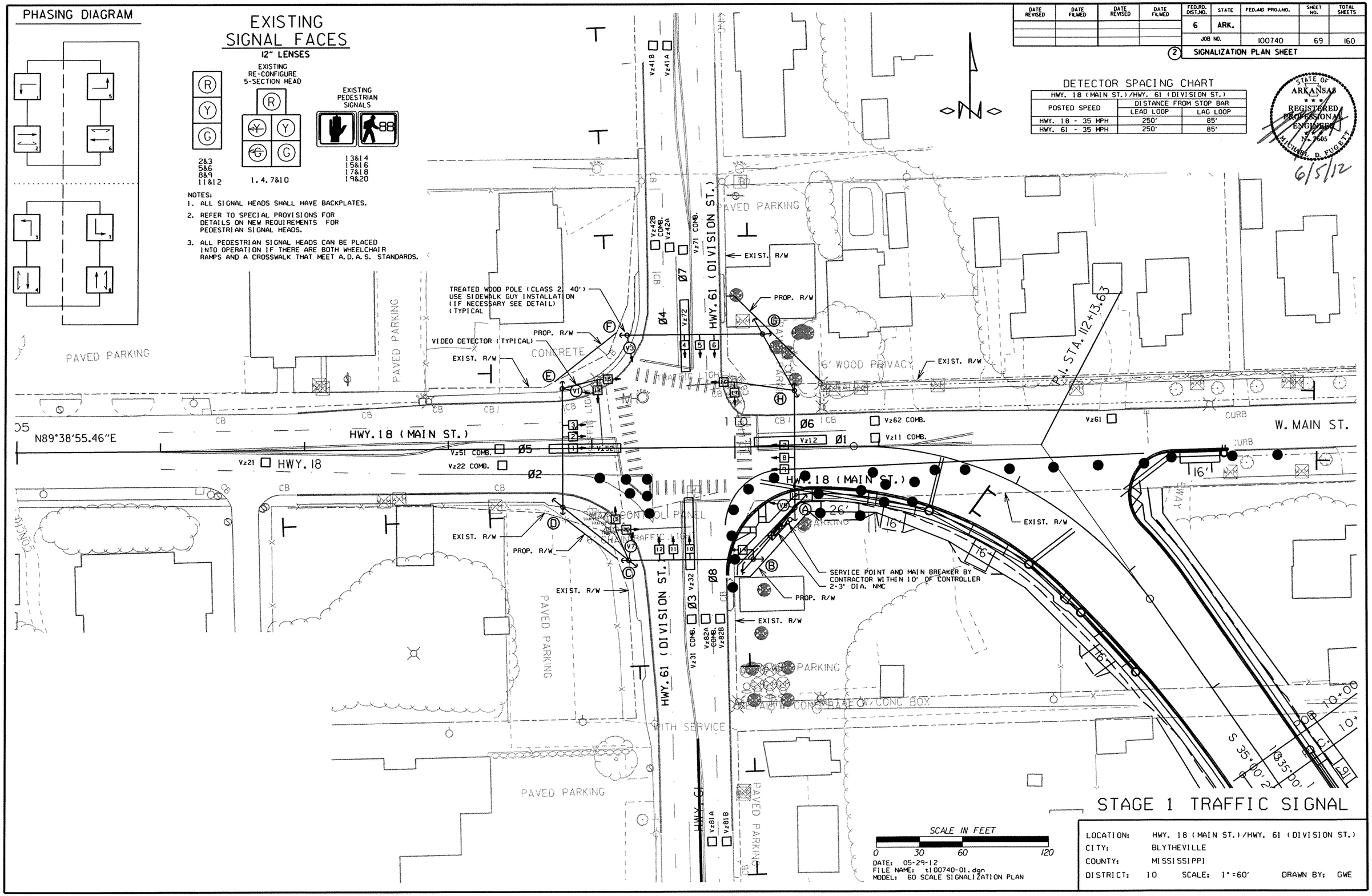
13&14
15&16
17&18
19&20

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

DETECTOR SPACING CHART

HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 18 - 35 MPH	250'	85'
HWY. 61 - 35 MPH	250'	85'

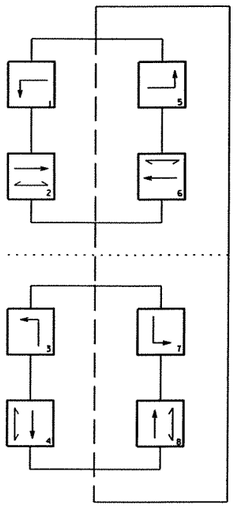
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

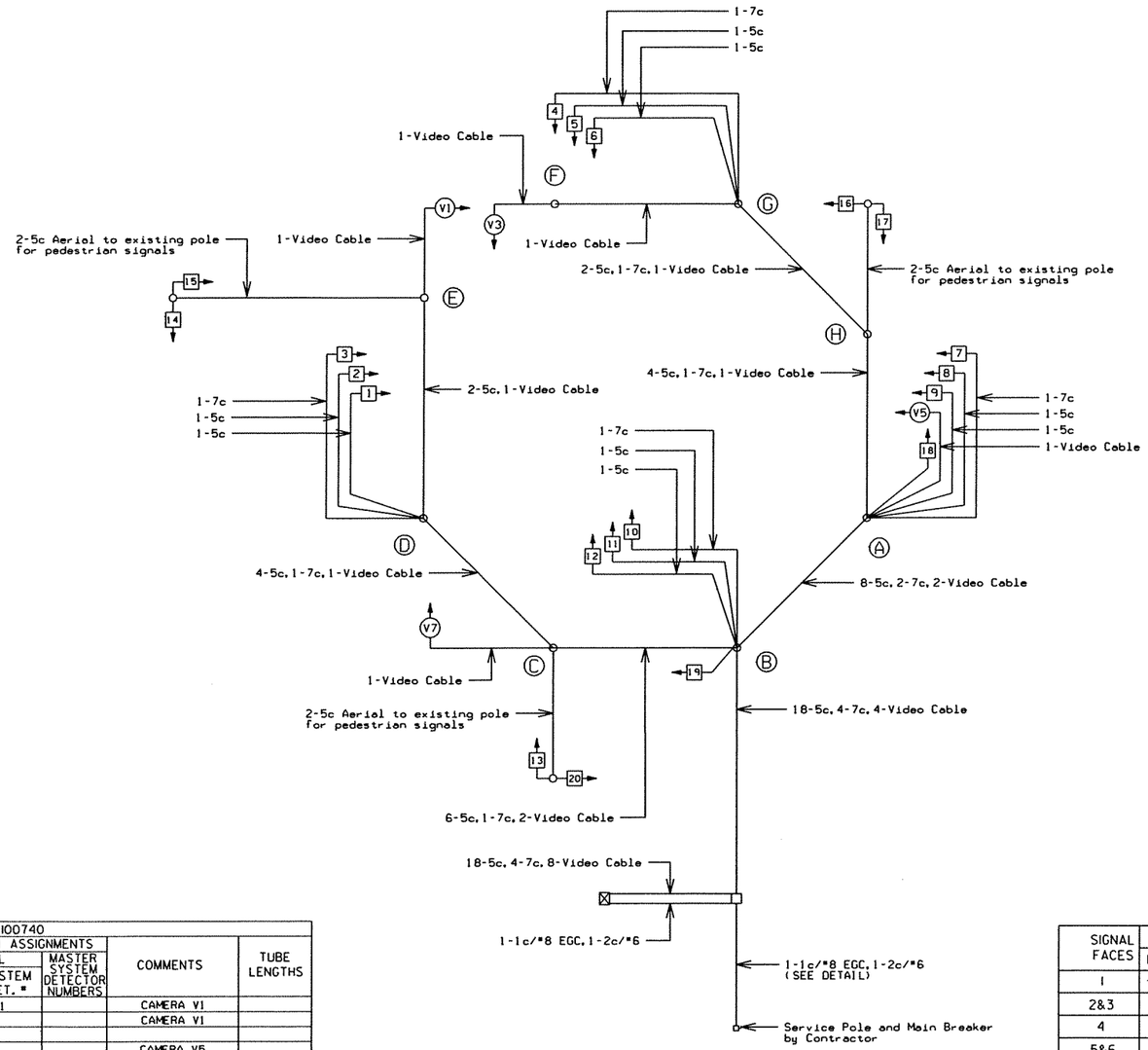

HWY. 61 (DIVISION ST.)
HWY. 18 (MAIN ST.)
W. MAIN ST.
N89°38'55.46"E
Ø1
Ø2
Ø3
Ø4
Ø5
Ø6
Ø7
Ø8
Vz72
Vz41B
Vz41A
Vz42B COMB.
Vz42A
Vz71 COMB.
Vz51 COMB.
Vz52
Vz22 COMB.
Vz21
Vz12
Vz62 COMB.
Vz11 COMB.
Vz61
Vz32
Vz31 COMB.
Vz82A COMB.
Vz82B
Vz81A
Vz81B
TREATED WOOD POLE (CLASS 2, 40')
USE SIDEWALK GUY INSTALLATION
(IF NECESSARY SEE DETAIL)
(TYPICAL
VIDEO DETECTOR (TYPICAL)
PROP. R/W
EXIST. R/W
CONCRETE
PAVED PARKING
6' WOOD PRIVACY
CONTROLLER
TRAFFIC CABINET
SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
2-3" DIA. NMC
PROP. R/W
EXIST. R/W
PAVED PARKING
WITH SERVICE
PAVED PARKING
PAVED PARKING
CONCRETE
CONC. PATH W/CONC BASE W/CONC BOX
Pl. STA. 112+13.63
POB
S 35°00'2
1835.0
10'
10'
16'
26'
CURB
CURB
CB
CB
C

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	70	160

(2) SIGNALIZATION PLAN SHEET

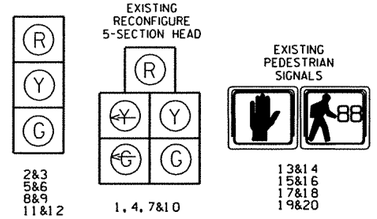
PHASING DIAGRAM





EXISTING SIGNAL FACES

12" LENSES



2&3
5&6
8&9
11&12

1, 4, 7&10

13&14
15&16
17&18
19&20

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7805
MICHAEL D. FUGETT
6/5/12

DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/HWY. 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	
Vz21	EB ADVANCE	LOCAL			5	V2	2			CAMERA V5	
Vz22	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	
Vz31	NB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	
Vz32	NB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	
Vz41A&B	SB ADVANCE	LOCAL			13	V4	4			CAMERA V7	
Vz42A&B	SB NEAR	COMB.			14	V12	4	4		CAMERA V7	
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	
Vz52	EB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	
Vz61	WB ADVANCE	LOCAL			3	V6	6			CAMERA V1	
Vz62	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	
Vz71	SB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	
Vz72	SB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	
Vz81A&B	NB ADVANCE	LOCAL			11	V8	8			CAMERA V3	
Vz82A&B	NB NEAR	COMB.			12	V16	8	8		CAMERA V3	
					SPARE						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

INTERVAL CHART

SIGNAL FACES	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.) 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	G	••	G	••	R	R	R	R	R	R	R	R	R
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	R	R	R	R	R	R	R	R	~~G~~	•	~~G~~	•	G	••	G	••	R
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	G	••	~~G~~	•	G	••	R	R	R	R	R	R	R	R	R
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	R	R	R	R	R	R	R	R	~~G~~	•	G	••	~~G~~	•	G	••	R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	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

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	71	160

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. FUGETT
6/5/12

STAGE 2 TRAFFIC SIGNAL

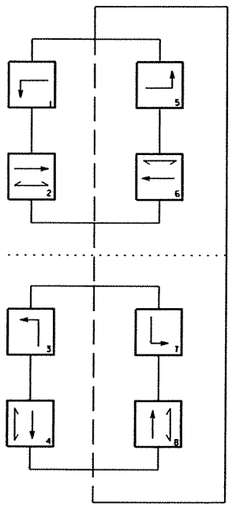
SCALE IN FEET
0 30 60 120

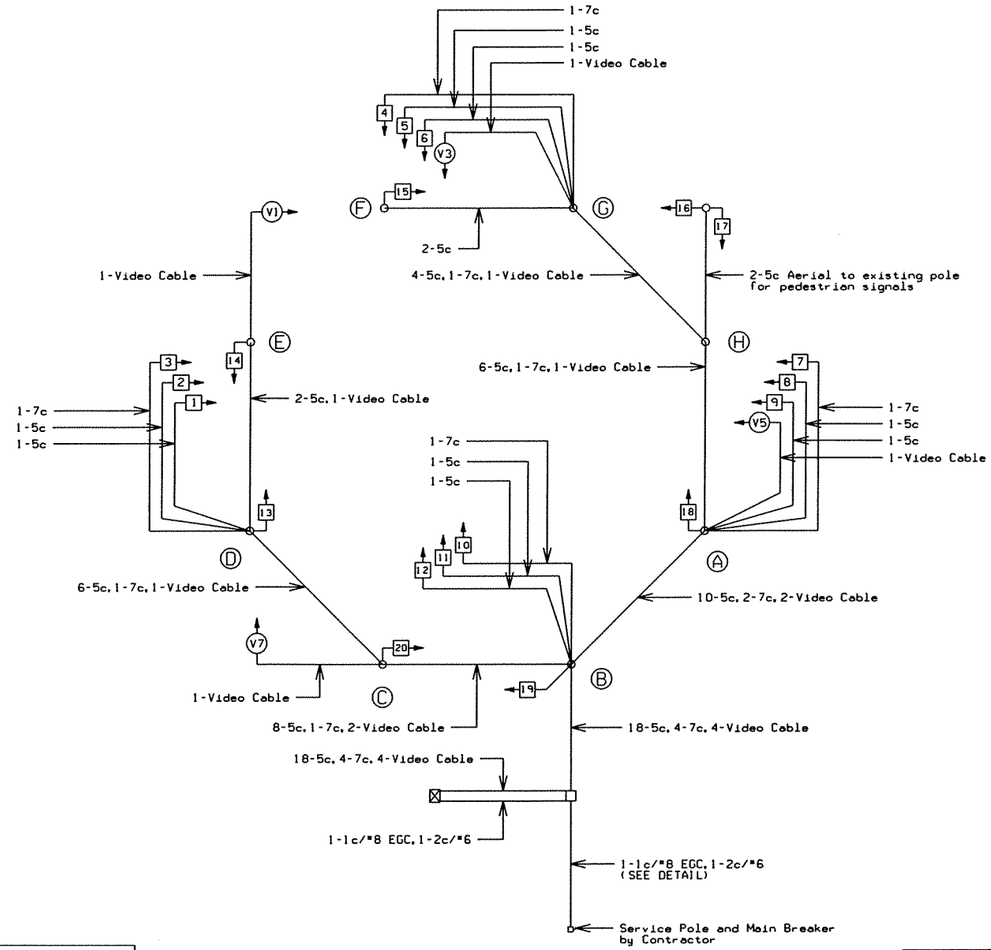
DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

LOCATION:	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)		
CITY:	BLYTHEVILLE		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE: 1"=60'	DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	72	160
				(2)	SIGNALIZATION PLAN SHEET			

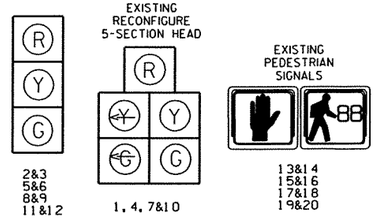
PHASING DIAGRAM





EXISTING SIGNAL FACES

12" LENSES



2&3
5&6
8&9
11&12

1, 4, 7&10

13&14
15&16
17&18
19&20

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7608
RICHARD D. FUGETT
6/5/12

DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/HWY. 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	
Vz21A&B	EB ADVANCE	LOCAL			5	V2	2			CAMERA V5	
Vz22A&B	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	
Vz31	NB LEFT TURN FAR	COMB.			9	V4	3	3		CAMERA V3	
Vz32	NB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	
Vz41A&B	SB ADVANCE	LOCAL			13	V4	4			CAMERA V7	
Vz42A&B	SB NEAR	COMB.			14	V12	4	4		CAMERA V7	
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	
Vz52	EB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	
Vz61A&B	WB ADVANCE	LOCAL			3	V6	6			CAMERA V1	
Vz62A&B	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	
Vz71	SB LEFT TURN FAR	COMB.			15	V14	7	7		CAMERA V7	
Vz72	SB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	
Vz81A&B	NB ADVANCE	LOCAL			11	V8	8			CAMERA V3	
Vz82A&B	NB NEAR	COMB.			12	V16	8	8		CAMERA V3	
					SPARE						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

INTERVAL CHART

SIGNAL FACES	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.) 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	G	••	G	••	R	R	R	R	R	R	R	R	R
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	R	R	R	R	R	R	R	R	~~G~~	•	~~G~~	•	G	••	G	••	R
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	G	••	~~G~~	•	G	••	R	R	R	R	R	R	R	R	R
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	R	R	R	R	R	R	R	R	~~G~~	•	G	••	~~G~~	•	G	••	R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	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

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	73	160

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

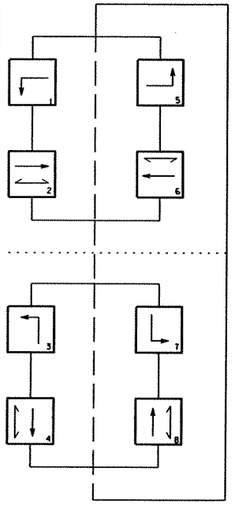
STAGE 3 TRAFFIC SIGNAL

LOCATION:	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY:	BLYTHEVILLE
COUNTY:	MISSISSIPPI
DISTRICT: 10	SCALE: 1"=60' DRAWN BY: GWE

SCALE IN FEET
0 30 60 120

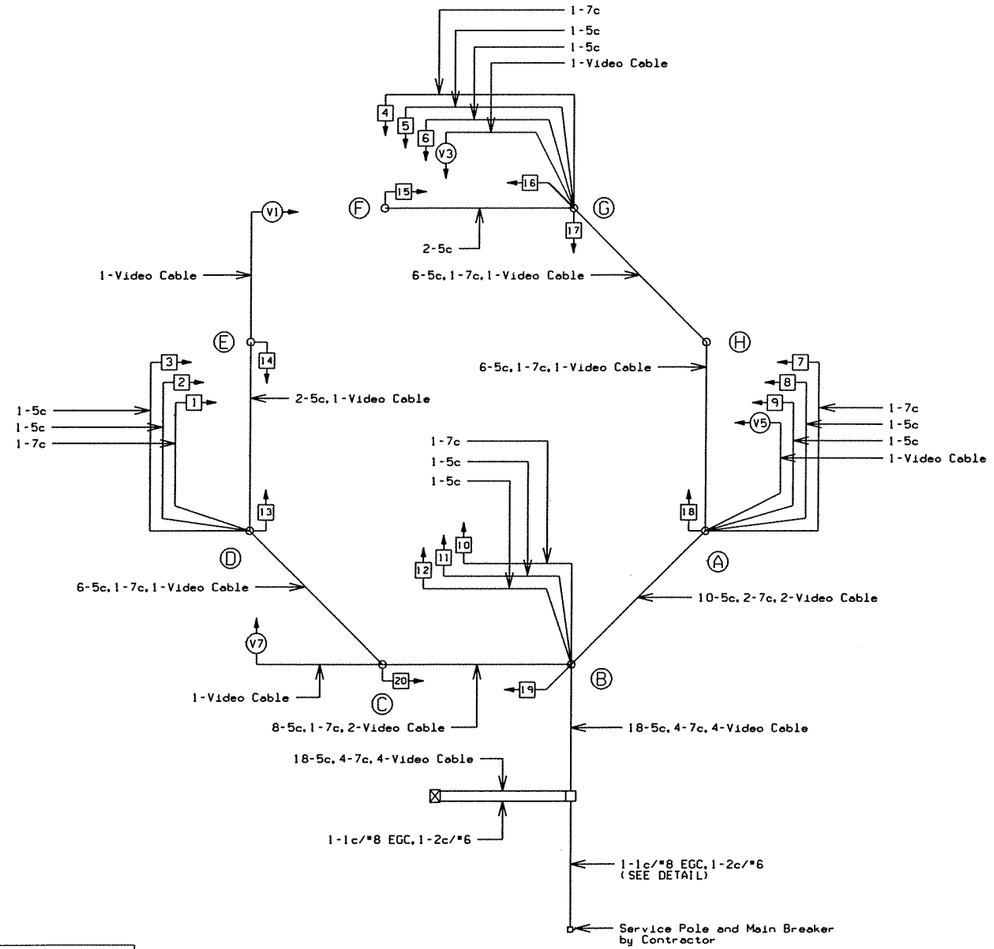
DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

PHASING DIAGRAM



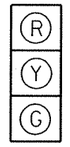
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	74	160

(2) SIGNALIZATION PLAN SHEET



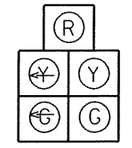
EXISTING SIGNAL FACES

12" LENSES



2&3
5&6
8&9
11&12

EXISTING RECONFIGURE 5-SECTION HEAD



1, 4, 7&10

EXISTING PEDESTRIAN SIGNALS



13&14
15&16
17&18
19&20

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N.L. TYLOS
MICHAEL D. FUGETT
6/5/12

DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/HWY. 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	
Vz21A&B	EB ADVANCE	LOCAL			5	V2	2			CAMERA V5	
Vz22A&B	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	
Vz31	NB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	
Vz32	NB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	
Vz41A&B	SB ADVANCE	LOCAL			13	V4	4			CAMERA V7	
Vz42A&B	SB NEAR	COMB.			14	V12	4	4		CAMERA V7	
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	
Vz52	EB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	
Vz61A&B	WB ADVANCE	LOCAL			3	V6	6			CAMERA V1	
Vz62A&B	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	
Vz71	SB LEFT TURN FAR	COMB.			15	V13	7	7		CAMERA V7	
Vz72	SB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	
Vz81A&B	NB ADVANCE	LOCAL			11	V8	8			CAMERA V3	
Vz82A&B	NB NEAR	COMB.			12	V16	8	8		CAMERA V3	
					SPARE						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

INTERVAL CHART

SIGNAL FACES	HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)																FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
1	~~G~~	•	~~G~~	•	G	••	G	••	R	R	R	R	R	R	R	R	R
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	R	R	R	R	R	R	R	R	~~G~~	•	~~G~~	•	G	••	G	••	R
5&6	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	G	••	~~G~~	•	G	••	R	R	R	R	R	R	R	R	R
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	R	R	R	R	R	R	R	R	~~G~~	•	G	••	~~G~~	•	G	••	R
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	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

STAGE 3 TRAFFIC SIGNAL

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	75	160

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

2&3
5&6
8&9
11&12

1, 4, 7&10

One Section (Solid Symbol)

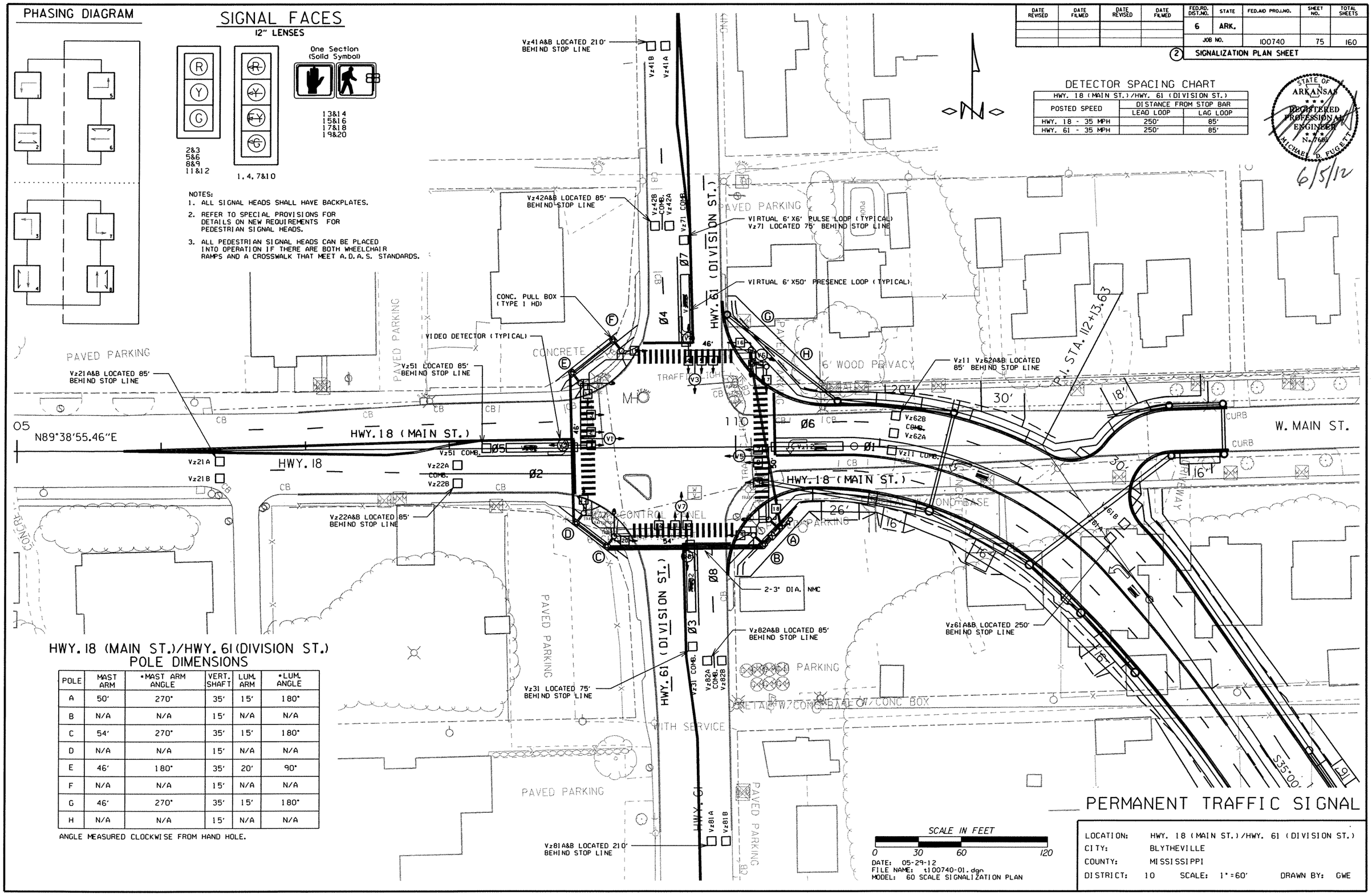
13&14
15&16
17&18
19&20

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

DETECTOR SPACING CHART

HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 18 - 35 MPH	250'	85'
HWY. 61 - 35 MPH	250'	85'

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.) POLE DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	50'	270°	35'	15'	180°
B	N/A	N/A	15'	N/A	N/A
C	54'	270°	35'	15'	180°
D	N/A	N/A	15'	N/A	N/A
E	46'	180°	35'	20'	90°
F	N/A	N/A	15'	N/A	N/A
G	46'	270°	35'	15'	180°
H	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

PERMANENT TRAFFIC SIGNAL

SCALE IN FEET
0 30 60 120

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	76	160

(2) SIGNALIZATION PLAN SHEET

HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.) POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 18 - STA. 110+23.00	50' RT.	1928621.54, 586709.32
B	HWY. 18 - STA. 110+12.23	61' RT.	1928610.99, 586698.33
C	HWY. 18 - STA. 109+15.22	61' RT.	1928513.87, 586697.73
D	HWY. 18 - STA. 108+93.78	45' RT.	1928492.37, 586713.87
E	HWY. 18 - STA. 108+92.01	45' LT.	1928489.82, 586803.66
F	HWY. 18 - STA. 109+20.52	67' LT.	1928518.43, 586826.36
G	HWY. 18 - STA. 110+10.60	67' LT.	1928608.41, 586827.04
H	HWY. 18 - STA. 110+21.47	56' LT.	1928619.48, 586815.28

DESIGN PARAMETERS

POSTED SPEED LIMIT:
35 MPH EAST AND WEST APPROACH
35 MPH NORTH AND SOUTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

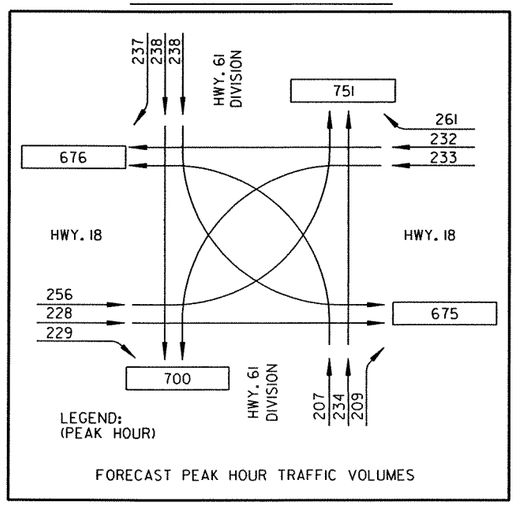
MINIMUM CLEAR ZONE DISTANCE
3.0 FEET FROM HWYS. 18 & 61

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

Vz42A&B LOCATED 85' BEHIND STOP LINE
Vz42B COMB. Vz42A
Vz71 COMB.
VIRTUAL 6'X6' PULSE LOOP (TYPICAL) Vz71 LOCATED 75' BEHIND STOP LINE
VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)
CONC. PULL BOX (TYPE 1 HD)
VIDEO DETECTOR (TYPICAL)
Vz51 LOCATED 85' BEHIND STOP LINE
Vz51 COMB.
Vz11 Vz62A&B LOCATED 85' BEHIND STOP LINE
Vz62B COMB. Vz62A
Vz11 COMB.
Vz22A COMB. Vz22B
Vz22A&B LOCATED 85' BEHIND STOP LINE
2-3" DIA. NMC
Vz82A&B LOCATED 85' BEHIND STOP LINE
Vz82A COMB. Vz82B
Vz31 COMB.
Vz31 LOCATED 75' BEHIND STOP LINE
Vz61A&B LOCATED 250' BEHIND STOP LINE
Vz61B
Vz61A

HWY. 18 (MAIN ST.)
HWY. 61 (DIVISION ST.)
PAVED PARKING
CONCRETE
6' WOOD PRIVACY
METAL W/CONC BASE
METAL W/CC
WITH SERVICE
TRAFFIC LIGHT
CONTROL PANEL
MH
CB
Ø1 Ø2 Ø3 Ø4 Ø5 Ø6 Ø7 Ø8
46' 54' 120' 110' 50' 26' 30' 18' 16'

TRAFFIC FLOW DIAGRAM



FORECAST PEAK HOUR TRAFFIC VOLUMES

SCALE IN FEET
0 20 40 80

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: 40 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=40' DRAWN BY: GWE

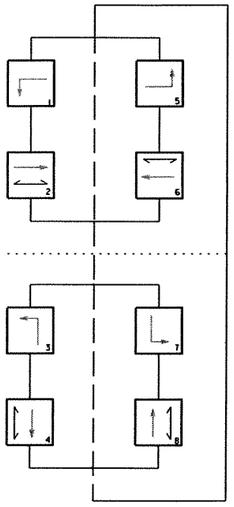
PERMANENT TRAFFIC SIGNAL

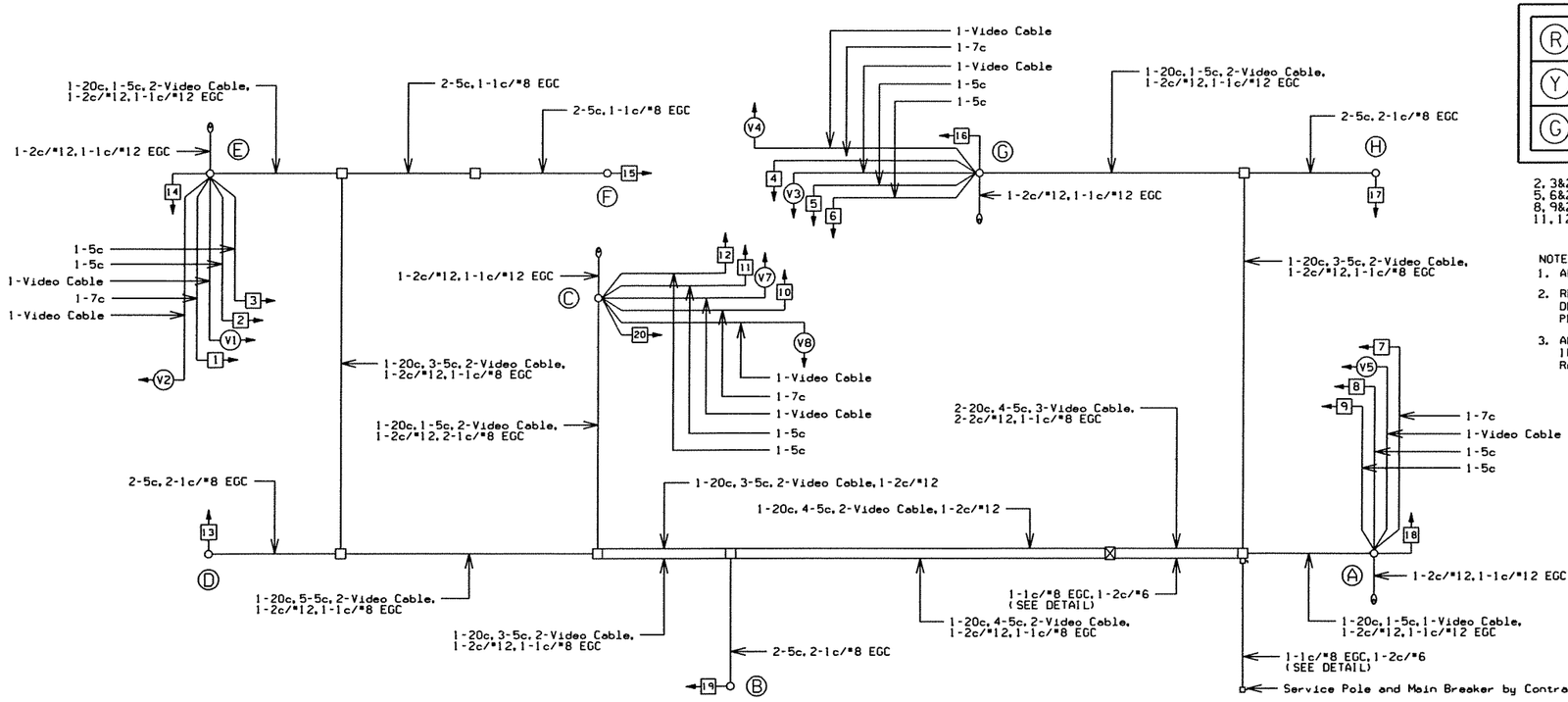
t100705-01.dgn 8/10/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	77	160

(2) SIGNALIZATION PLAN SHEET

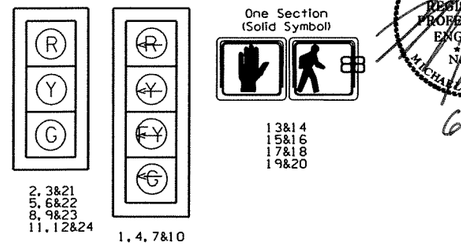
PHASING DIAGRAM





SIGNAL FACES

12" LENSES





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

DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/HWY. 61 DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM. *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	V9	1	1		CAMERA V1	37'
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	37'
Vz21A&B	EB ADVANCE	LOCAL			5	V2	2			CAMERA V2	74'
Vz22A&B	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	37'
Vz31	NB LEFT TURN FAR	COMB.			9	V11	3	3		CAMERA V3	23'
Vz32	NB LEFT TURN	LOCAL			10	V3	3			CAMERA V3	23'
Vz41A&B	SB ADVANCE	LOCAL			13	V4	4			CAMERA V4	23'
Vz42A&B	SB NEAR	COMB.			14	V12	4	4		CAMERA V7	23'
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23'
Vz52	EB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23'
Vz61A&B	WB ADVANCE	LOCAL			3	V6	6			CAMERA V6	23'
Vz62A&B	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	37
Vz71	SB LEFT TURN FAR	COMB.			15	V15	7	7		CAMERA V7	23'
Vz72	SB LEFT TURN	LOCAL			16	V7	7			CAMERA V7	23'
Vz81A&B	NB ADVANCE	LOCAL			11	V8	8			CAMERA V8	23'
Vz82A&B	NB NEAR	COMB.			12	V16	8	8		CAMERA V3	23'
PB2A&B	HWY. 61 S. LEG	PED.				P2	2				
PB4A&B	HWY. 18 W. LEG	PED.				P4	4				
PB6A&B	HWY. 61 N. LEG	PED.				P6	6				
PB8A&B	HWY. 18 E. LEG	PED.				P8	8				
					SPARE						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

INTERVAL CHART

SIGNAL FACES	HWY. 18 (MAIN ST.)/HWY. 61(DIVISION ST.) I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2,3&23	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~
5,6&24	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
8,9&21	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
10	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~
11,12&22	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
13&14	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
15&16	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
17&18	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
19&20	DW	DW	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
••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE: 05-29-12
FILE NAME: t100740-01.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 18 (MAIN ST.)/HWY. 61 (DIVISION ST.)
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
7-11-12				6	ARK.			
				JOB NO.		100740	78	160
				(2) SIGNALIZATION PLAN SHEET				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
7/12/12

STAGE 1 AND 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASE)	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1220	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	610	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	4	EACH
733	VIDEO CABLE	228	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	2	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	20	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.10	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

STAGE 1 AND 2
THE EXISTING TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL STAGE 1 TRAFFIC SIGNAL IS COMPLETED INCLUDING ALL SPAN WIRE ASSEMBLIES AND IN OPERATION.
UTILIZING THE EXISTING TRAFFIC SIGNAL HEADS AND PERMANENT TRAFFIC SIGNAL CONTROLLER A TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE CONSTRUCTED.
INSTALL 4 TREATED WOOD POLES (CLASS 3, 40') AND SPAN WIRE ASSEMBLY.
INSTALL ALL TRAFFIC SIGNAL CABLE AND VIDEO CABLE. REMOVE EXISTING TRAFFIC SIGNAL INSTALLATION AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 AND 2 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 3 TRAFFIC SIGNAL QUANTITIES

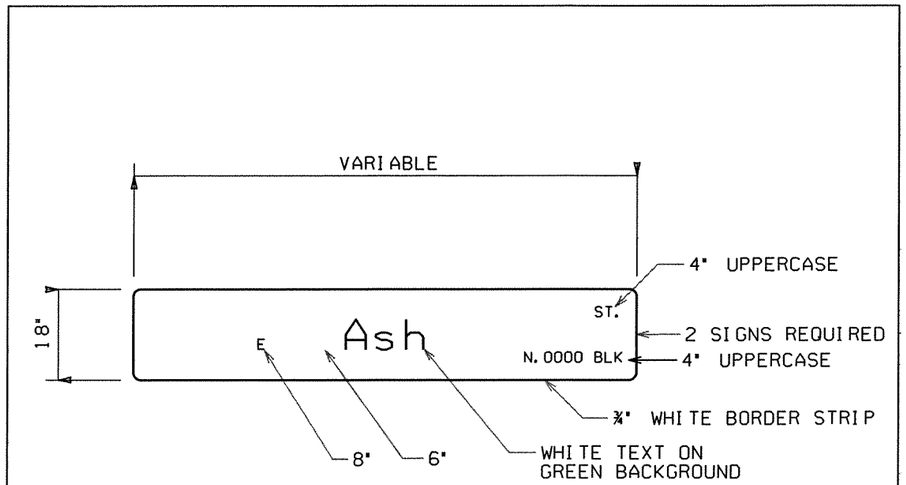
ITEM NO.	ITEM	QUANTITY	UNIT
SP	VIDEO DETECTOR ROTATION	1	EACH

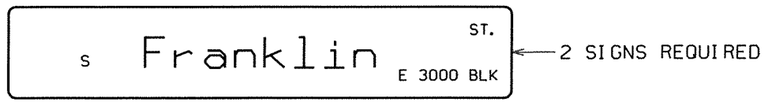
STAGE 3:
ROTATE VIDEO DETECTOR V8 AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	2	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1756	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	218	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	499	LIN. FT.
710	NON-METALLIC CONDUIT (3")	467	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')	2	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
733	VIDEO CABLE	721	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	4	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP	CONTROLLER CABINET MODIFICATION	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	581	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	549	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	210	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.10	LUMP SUM
SP	18" STREET NAME SIGN	4	EACH

PERMANENT TRAFFIC SIGNAL:
THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL REMAIN IN OPERATION UNTIL THE PERMANENT TRAFFIC SIGNAL IS COMPLETED AND OPERATIONAL.
INSTALL PERMANENT TRAFFIC SIGNAL AND REMOVE ALL STAGE 1-3 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS).





NOTES:
1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

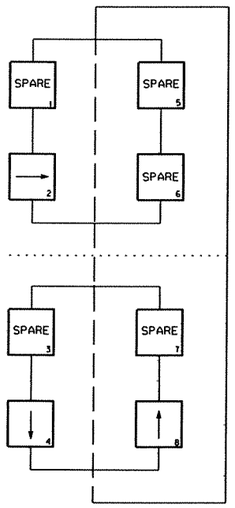
DATE: 07-11-12
FILE NAME: t100740-02.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION:	HWY. 18/S. FRANKLIN ST.				
CITY:	BLYTHEVILLE				
COUNTY:	MISSISSIPPI				
DISTRICT:	10	SCALE:	N/A	DRAWN BY:	GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	79	160

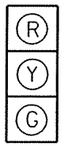
(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM



EXISTING SIGNAL FACES

12" LENSES



1&2
3&4
5&6

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
LITHA D. FUGETT
6/5/12

PAVED PARKING
PARKING
CONCRETE
PAVED PARKING
TRAFFIC LIGHT
WROUGHT IRON
CB
S. FRANKLIN ST.
Ø4
Ø2
Ø8
Vz41
Vz81
5 6
VB
1
2
4
5 SMH
165
N88°54'42.64"E
19'
19'
16'
16'
29'
32'
20'
TREATED WOOD POLE (CLASS 3, 40') (TYPICAL)
USE SIDEWALK GUY INSTALLATION
IF NECESSARY (SEE DETAIL)
2" DIA. NMC TO WEATHERHEAD (TYPICAL)
(SEE DETAIL)
SERVICE POINT AND MAIN BREAKER BY
CONTRACTOR WITHIN 10' OF CONTROLLER
2-3" DIA. NMC 1 VACANT FOR PROPOSED WIRING
4" CH

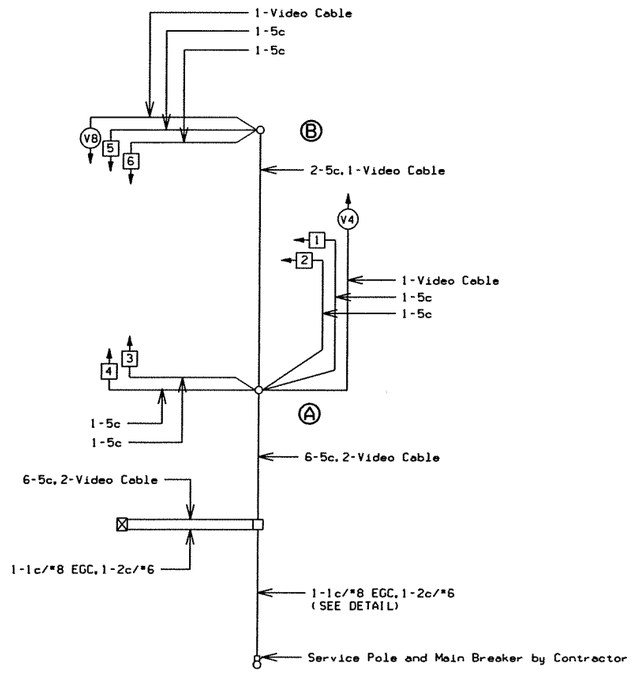
STAGE 1&2 TRAFFIC SIGNAL

SCALE IN FEET
0 20 40 80

DATE: 05-29-12
FILE NAME: t100740-02.dgn
MODEL: STAGE 1-40 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18/S. FRANKLIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	80	160
				(2)	SIGNALIZATION PLAN SHEET			



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

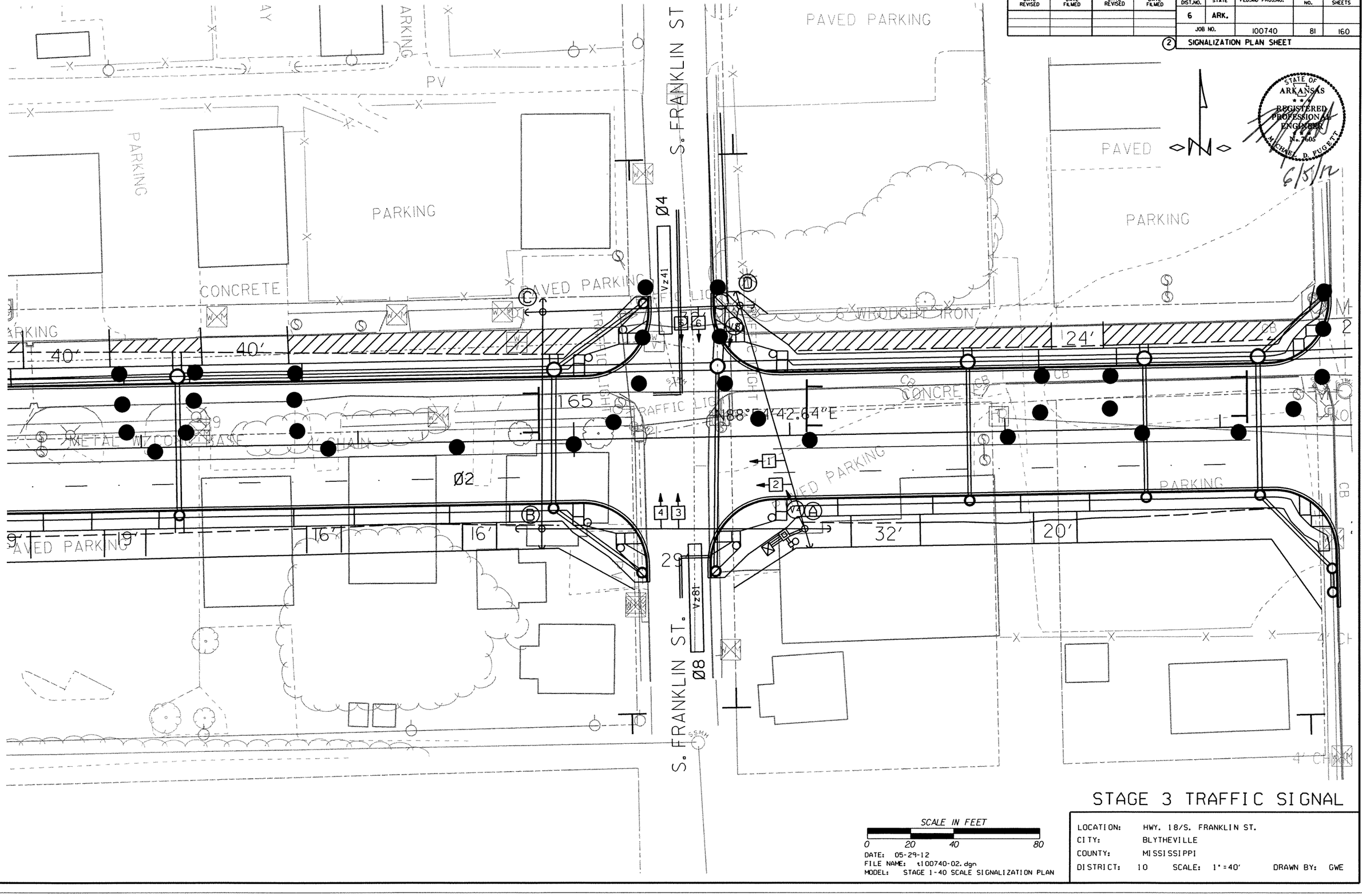
DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/S. FRANKLIN ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	COMMENTS	TUBE LENGTHS
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz41	SB NEAR	LOCAL			4	V4	4			CAMERA V4	
Vz81	NB NEAR	LOCAL			8	V8	8			CAMERA V8	

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	81	160

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



STAGE 3 TRAFFIC SIGNAL

SCALE IN FEET
0 20 40 80

DATE: 05-29-12
FILE NAME: t100740-02.dgn
MODEL: STAGE 1-40 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18/S. FRANKLIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	82	160

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

SIGNAL FACES

12" LENSES

2&3
4&5
7&8
9&10

1&6

One Section (Solid Symbol)

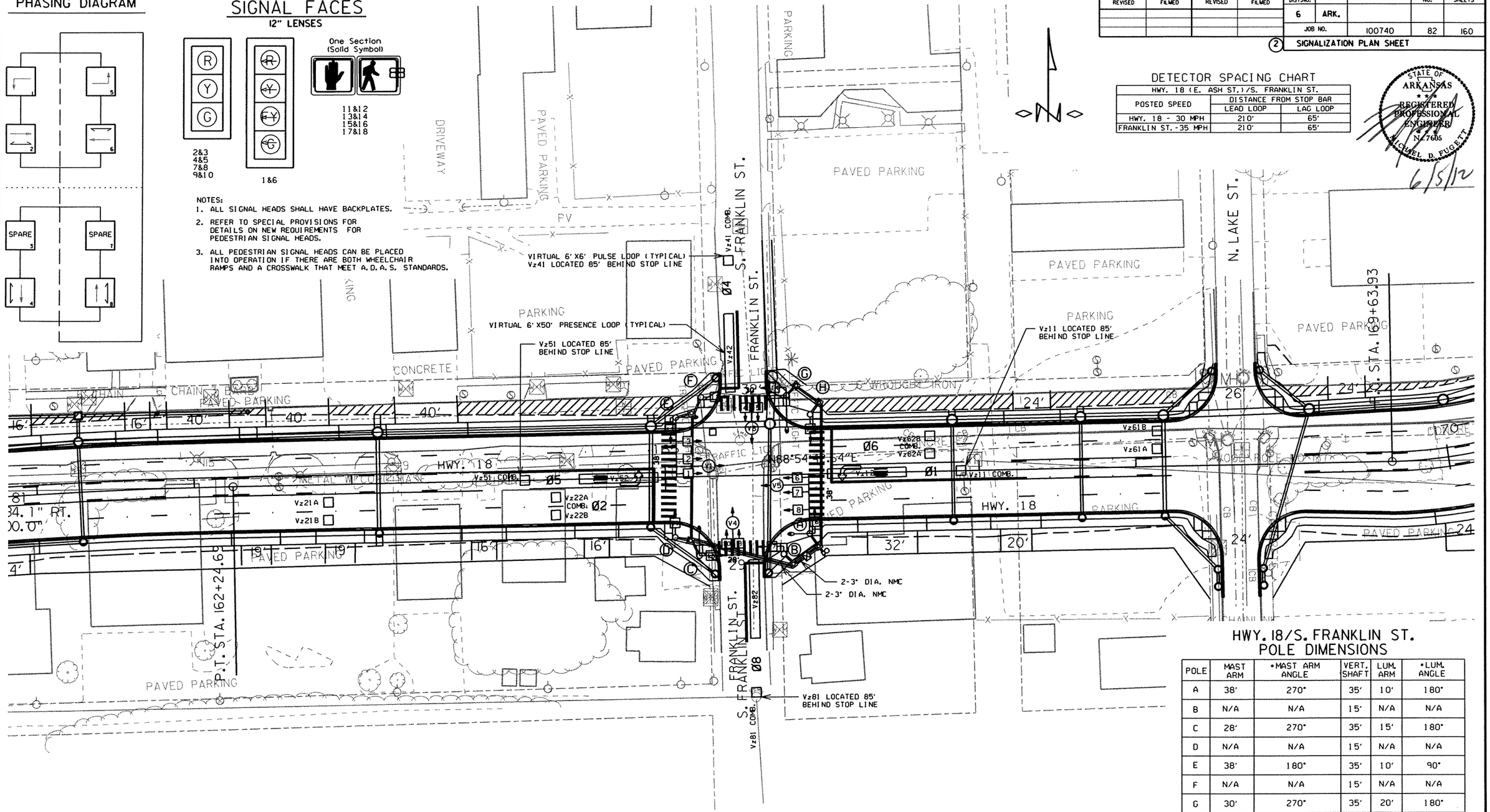
11&12
13&14
15&16
17&18

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

DETECTOR SPACING CHART

HWY. 18 (E. ASH ST.)/S. FRANKLIN ST.		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 18 - 30 MPH	210'	65'
FRANKLIN ST. -35 MPH	210'	65'

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12



HWY. 18/S. FRANKLIN ST. POLE DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	38'	270°	35'	10'	180°
B	N/A	N/A	15'	N/A	N/A
C	28'	270°	35'	15'	180°
D	N/A	N/A	15'	N/A	N/A
E	38'	180°	35'	10'	90°
F	N/A	N/A	15'	N/A	N/A
G	30'	270°	35'	20'	180°
H	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

SCALE IN FEET
0 30 60 120

DATE: 05-29-12
FILE NAME: t100740-02.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 18/S. FRANKLIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=60' DRAWN BY: GWE

HWY. 18/S. FRANKLIN ST.
POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 18 - STA. 165+91.33	38' RT.	1933914.42, 586471.43
B	HWY. 18 - STA. 165+74.26	50' RT.	1933897.86, 586458.45
C	HWY. 18 - STA. 165+21.10	50' RT.	1933844.23, 586457.43
D	HWY. 18 - STA. 165+05.75	38' RT.	1933828.86, 586469.21
E	HWY. 18 - STA. 165+07.48	38' LT.	1933828.96, 586545.16
F	HWY. 18 - STA. 165+23.40	50' LT.	1933844.87, 586558.18
G	HWY. 18 - STA. 165+77.52	50' LT.	1933899.20, 586559.21
H	HWY. 18 - STA. 165+92.86	38' LT.	1933914.54, 586546.90

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	83	160

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

VIRTUAL 6'X6' PULSE LOOP (TYPICAL)
Vz41 LOCATED 85' BEHIND STOP LINE

VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)

Vz51 LOCATED 85' BEHIND STOP LINE

Vz11 LOCATED 85' BEHIND STOP LINE

Vz81 LOCATED 85' BEHIND STOP LINE

2-3" DIA. NMC
2-3" DIA. NMC

S. FRANKLIN ST.

HWY. 18

N88°54'54.64"E

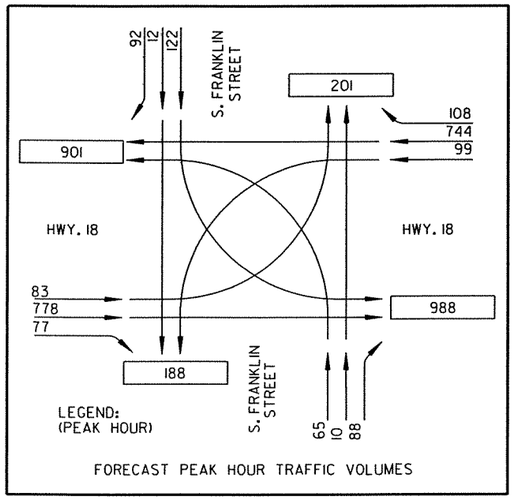
PAVED PARKING

CONCRETE

METAL W/ CONCRETE BASE

6' WROUGHT IRON

TRAFFIC FLOW DIAGRAM



FORECAST PEAK HOUR TRAFFIC VOLUMES

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH EAST AND WEST APPROACH
30 MPH NORTH AND SOUTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
3.0 FEET FROM HWY. 18

SCALE IN FEET
0 20 40 80

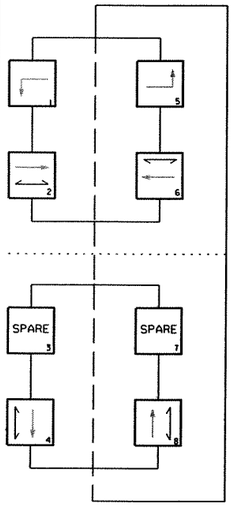
DATE: 05-29-12
FILE NAME: t100740-02.dgn
MODEL: 40 SCALE SIGNALIZATION PLAN

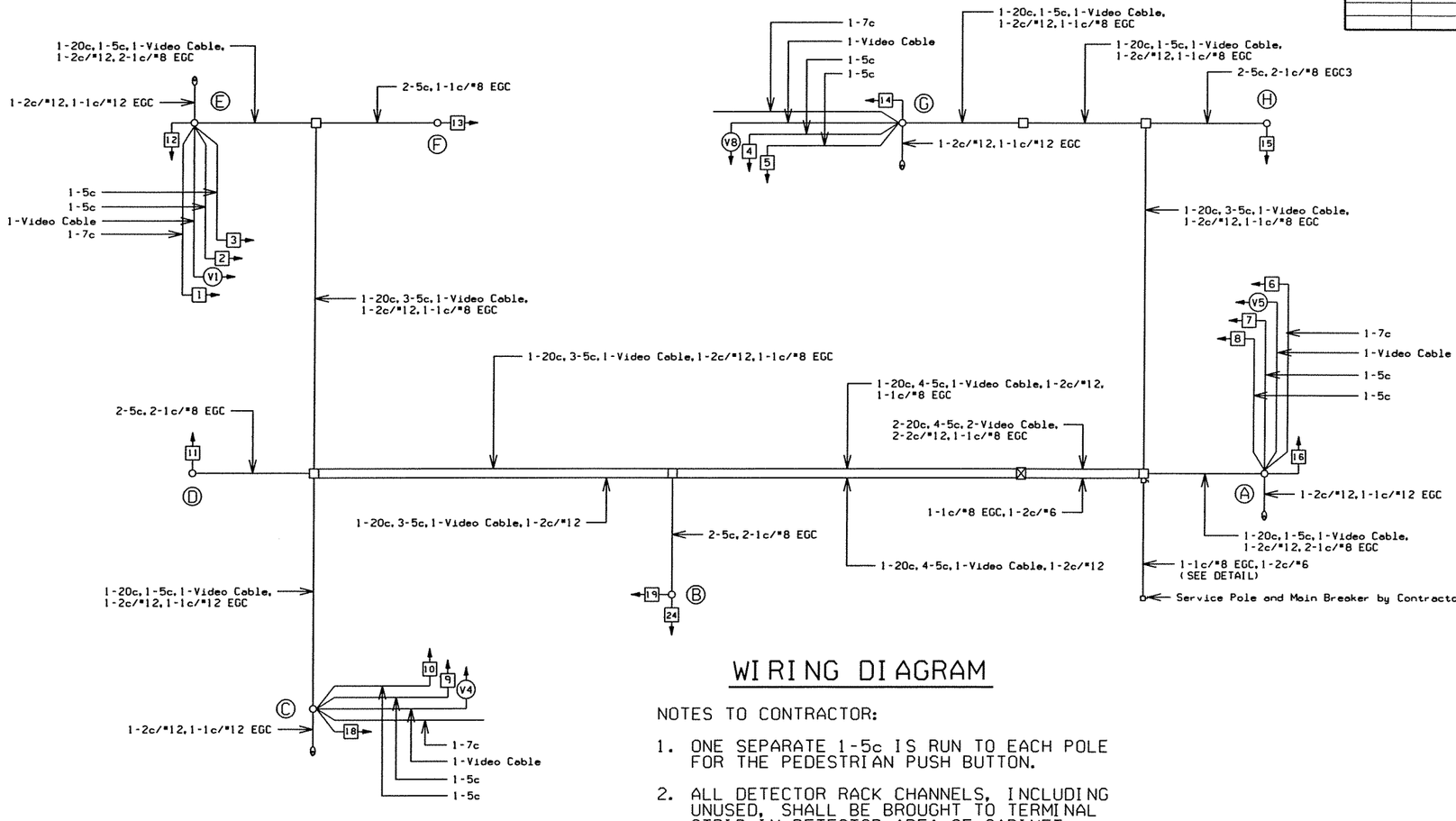
PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 18/S. FRANKLIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=40' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	84	160
				(2)	SIGNALIZATION PLAN SHEET			

PHASING DIAGRAM





WIRING DIAGRAM

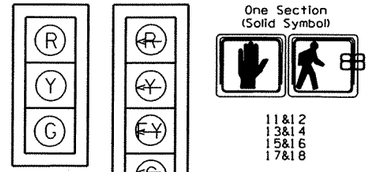
NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MITHAEL D. FUGETT
6/5/12

SIGNAL FACES

12" LENSES



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

DETECTOR SYSTEM DESCRIPTION: JOB 100740

BLYTHEVILLE - HWY. 18/S. FRANKLIN ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	WB LEFT TURN FAR	COMB.			1	V2	1	1		CAMERA V1	23'
Vz12	WB LEFT TURN	LOCAL			2	V1	1			CAMERA V1	23'
Vz21A&B	EB ADVANCE	LOCAL			5	V2	2			CAMERA V5	37'
Vz22A&B	EB NEAR	COMB.			6	V10	2	2		CAMERA V5	23'
Vz41	SB ADVANCE	COMB.			9	V12	4			CAMERA V4	23'
Vz42	SB NEAR	LOCAL			10	V4	4			CAMERA V4	23'
Vz51	EB LEFT TURN FAR	COMB.			7	V13	5	5		CAMERA V5	23'
Vz52	EB LEFT TURN	LOCAL			8	V5	5			CAMERA V5	23'
Vz61A&B	WB ADVANCE	LOCAL			3	V6	6			CAMERA V1	37'
Vz62A&B	WB NEAR	COMB.			4	V14	6	6		CAMERA V1	23'
Vz81	NB ADVANCE	COMB.			11	V16	8			CAMERA V8	23'
Vz82	NB NEAR	LOCAL			12	V8	8			CAMERA V8	23'
PB2A&B	HWY. 18 E. LEG	PED.				P2	2				
PB4A&B	FRANKLIN ST. S. LEG	PED.				P4	4				
PB6A&B	HWY. 18 W. LEG	PED.				P6	6				
PB8A&B	FRANKLIN ST. N. LEG	PED.				P8	8				
					SPARE 13, 14, 15&16						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

INTERVAL CHART

SIGNAL FACES	HWY. 18/S. FRANKLIN ST.																FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
2,3&20	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
4&5	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
7,8&19	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
9&10	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
11&12	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
13&14	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
15&16	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
17&18	DW	DW	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
••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DATE: 05-29-12
FILE NAME: t04-15-11.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

PERMANENT TRAFFIC SIGNAL

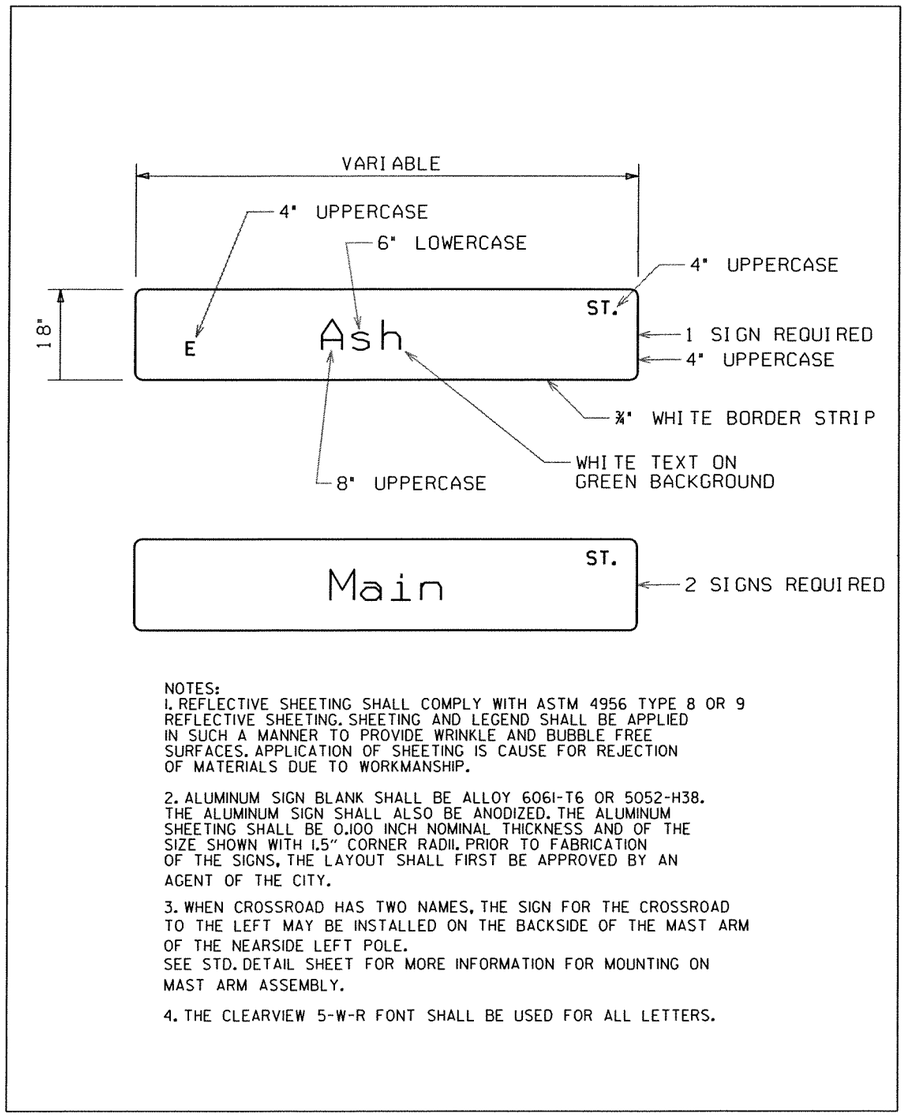
LOCATION: HWY. 18/S. FRANKLIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: N/A DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	85	160
				(2)	SIGNALIZATION PLAN SHEET			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	ACTUATED CONTROLLER TS 2-TYPE 2 (8 PHASE)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	8	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1WAY)	1	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	959	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	130	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	31	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	326	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	20	LIN. FT.
710	NON-METALLIC CONDUIT (3")	324	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	2	EACH
733	VIDEO CABLE	662	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	4	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	267	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	382	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	100	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	LIN. FT.
SP	LUMINAIRE ASSEMBLY	2	EACH
SP	18" STREET NAME SIGN	3	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 8 OR 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.

2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.

3. WHEN CROSSROAD HAS TWO NAMES, THE SIGN FOR THE CROSSROAD TO THE LEFT MAY BE INSTALLED ON THE BACKSIDE OF THE MAST ARM OF THE NEARSIDE LEFT POLE.
SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.

4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

DATE: 05-29-12
FILE NAME: t100740-03.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION:	HWY. 18/MAIN ST.				
CITY:	BLYTHEVILLE				
COUNTY:	MISSISSIPPI				
DISTRICT:	10	SCALE:	N/A	DRAWN BY:	GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	86	160
				(2) SIGNALIZATION PLAN SHEET				

HWY. 18/MAIN ST.
POLE DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	36'	270°	35'	15'	180°
B	N/A	N/A	15'	N/A	N/A
C	N/A	N/A	15'	N/A	N/A
D	48'	180°	21'	N/A	N/A
E	40'	270°	35'	15'	180°

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DETECTOR SPACING CHART

HWY. 18/MAIN ST.		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
HWY. 18 - 30 MPH	210'	65'
MAIN ST. - 35 MPH	210'	65'

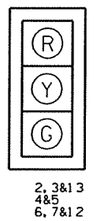
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

PUB SUU+UU.UU

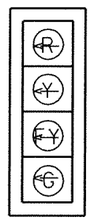
VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)
VIRTUAL 6'X6' PULSE LOOP (TYPICAL) Vz41 LOCATED 85' BEHIND STOP BAR
Vz51 LOCATED 85' BEHIND STOP BAR
VIDEO DETECTOR (TYPICAL)
SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER
2-3" DIA. NMC
Vz41 COMB.
Vz42
Vz62B COMB. Vz62A
Vz61B
Vz61A
Vz22A COMB. Vz22B
Vz21A
Vz21B
N25°W 28.92'
175'
48'
40'
30'
38'
34'
STA. 169+63.93
24' R.O.W.

PAVED PARKING
PARKING
PAVED PARKING
PAVED PARKING
PAVED PARKING
PARKING
PAVED PARKING
CONCRETE
CONCRETE
CONCRETE
PAVED
2' PIPE FENCE
CHAINLINK FENCE
WOOD PRIVACY FENCE
POLE NUMBER 324
POLE NUMBER 412 MTL.
POLE NUMBER 500
POLE NUMBER 113
POLE NUMBER 107
POLE NUMBER 210
LACLEDE ST.
S. HOLLAN
MAIN ST.
HWY. 18
N. LAKE ST.
NW. ASH ST.
PV

SIGNAL FACES
12" LENSES



2, 3&13
4&5
6, 7&12



1

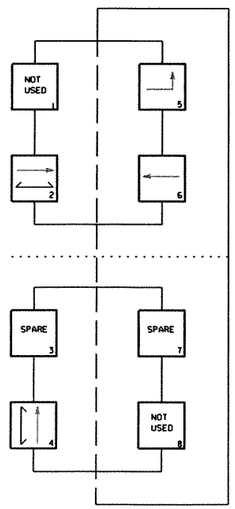
One Section (Solid Symbol)



8&9
10&11

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

PHASING DIAGRAM



SCALE IN FEET
0 30 60 120

DATE: 05-29-12
FILE NAME: t100740-03.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18/MAIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=60' DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	87	160

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
6/5/12

VIRTUAL 6'X50' PRESENCE LOOP (TYPICAL)

VIRTUAL 6'X6' PULSE LOOP (TYPICAL)
Vz41 LOCATED 85' BEHIND STOP BAR

MAIN ST.

Vz41 COMB.

Vz42

Vz61B

Vz61A

Vz62B
COMB.
Vz62A

SERVICE POINT AND MAIN BREAKER BY CONTRACTOR WITHIN 10' OF CONTROLLER

2-3" DIA. NMC

) DETECTOR (TYPICAL)

Vz51 LOCATED 85' BEHIND STOP BAR

Vz51 COMB.

Vz22A
COMB: Ø2
Vz22B

Ø1 Ø2 Ø3 Ø4 Ø5 Ø6

PAVED PARKING

PARKING

CHAINLINK FENCE

2" PIPE FENCE

POLE NUMBER 412 MTL.

POLE NUMBER 324 WTL.

POLE NUMBER 113

POLE NUMBER 107

POLE NUMBER 500

CB

30'

34'

38'

36'

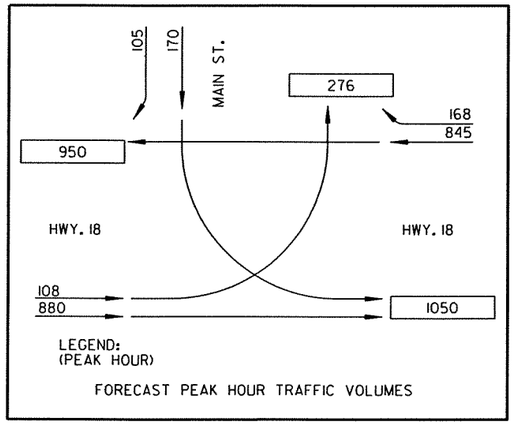
40'

48'

N25°28.92"E

175+50

TRAFFIC FLOW DIAGRAM



LEGEND:
(PEAK HOUR)

FORECAST PEAK HOUR TRAFFIC VOLUMES

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH EAST AND WEST APPROACH
30 MPH NORTH APPROACH
NO BUS STOPS
NO RAILROAD TRACKS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP LINES
SHOWN ON PAVEMENT MARKING PLAN.
SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
3.0 FEET FROM HWY. 18

HWY. 18/MAIN ST. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 18 - STA. 174+50.34	45' LT.	1934583.85, 586856.13
B	HWY. 18 - STA. 174+60.61	59' LT.	1934580.44, 586874.87
C	HWY. 18 - STA. 175+17.13	58' LT.	1934631.33, 586920.83
D	HWY. 18 - STA. 175+27.85	46' RT.	1934701.82, 586843.81
E	HWY. 18 - STA. 174+60.50	42' RT.	1934656.83, 586808.32

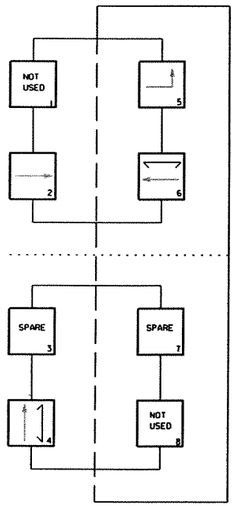
SCALE IN FEET
0 20 40 80

DATE: 05-29-12
FILE NAME: t100740-03.dgn
MODEL: 40 SCALE SIGNALIZATION PLAN

LOCATION: HWY. 18/MAIN ST.
CITY: BLYTHEVILLE
COUNTY: MISSISSIPPI
DISTRICT: 10 SCALE: 1"=40' DRAWN BY: GWE

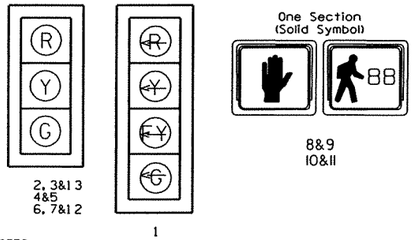
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	88	160
				(2)	SIGNALIZATION PLAN SHEET			

PHASING DIAGRAM



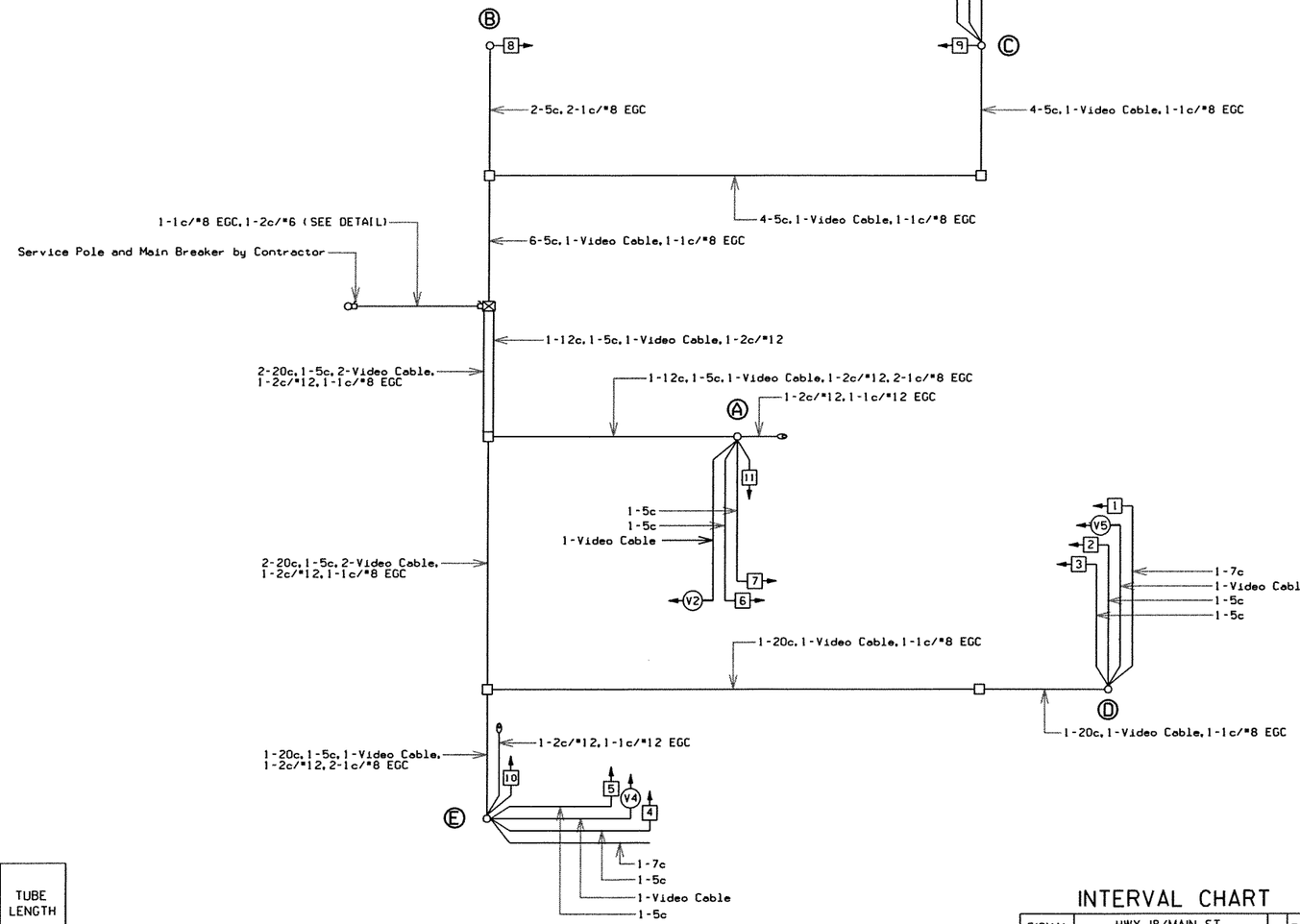
SIGNAL FACES

12" LENSES



NOTES:

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



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

SYSTEM DESCRIPTION: JOB 100740											
BLYTHEVILLE - HWY. 18/MAIN ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTH
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz21A&B	EB ADVANCE	LOCAL			1	V2	2			CAMERA V2	23'
Vz22A	EB INSIDE NEAR	COMB.			2	V10	2	2		CAMERA V5	23'
Vz22B	EB OUTSIDE NEAR	COMB.			2	V10	2	2		CAMERA V5	23'
Vz41	SB RIGHT ADVANCE	COMB.			5	V12	4	4		CAMERA V4	23'
Vz42	SB RIGHT TURN	LOCAL			6	V4	4			CAMERA V4	23'
Vz51	EB LT. TURN ADVANCE	COMB.			3	V13	5	5		CAMERA V5	23'
Vz52	EB LEFT TURN	LOCAL			4	V5	5			CAMERA V5	23'
Vz61A&B	WB ADVANCE	LOCAL			9	V6	6			CAMERA V6	74'
Vz62A	WB INSIDE NEAR	COMB.			10	V14	6	6		CAMERA V6	74'
Vz62B	WB OUTSIDE NEAR	COMB.			10	V14	6	6		CAMERA V6	74'
PB4A&B	HWY. 18 W. LEG	PED.					4				
PB6A&B	MAIN ST. N. LEG	PED.					6				
					SPARE 7, 8, 11&12						

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

WIRING DIAGRAM

NOTES TO CONTRACTOR:

1. ONE SEPARATE 1-5c IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
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.

DATE: 05-29-12
FILE NAME: t100740-03.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

INTERVAL CHART

SIGNAL FACES	HWY. 18/MAIN ST.							FLASH SEQ.
	2+5	CLR.	2+6	CLR.	4	CLR.		
1	⇒G	•	⇒FY	•••	⇒R	⇒R		⇒R
2&3	G	••	G	••	R	R		R
4,5&13	R	R	R	R	G	Y		R
6,7&12	R	R	G	••	R	R		R
8&9	DW	DW	W	FDW	DW	DW		BLK
10&11	DW	DW	DW	DW	W	FDW		BLK

- • DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
- •• DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
- ••• DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

LOCATION:	HWY. 18/MAIN ST.		
CITY:	BLYTHEVILLE		
COUNTY:	MISSISSIPPI		
DISTRICT:	10	SCALE: N/A	DRAWN BY: GWE

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	89	160

(2) SIGNALIZATION DETAILS

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

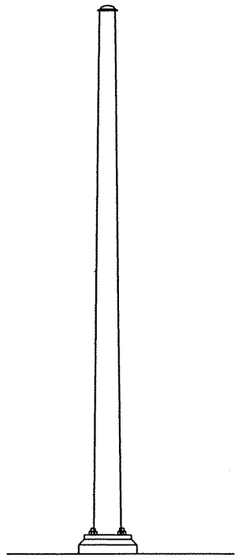
USE FATIGUE CATEGORY II.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 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.

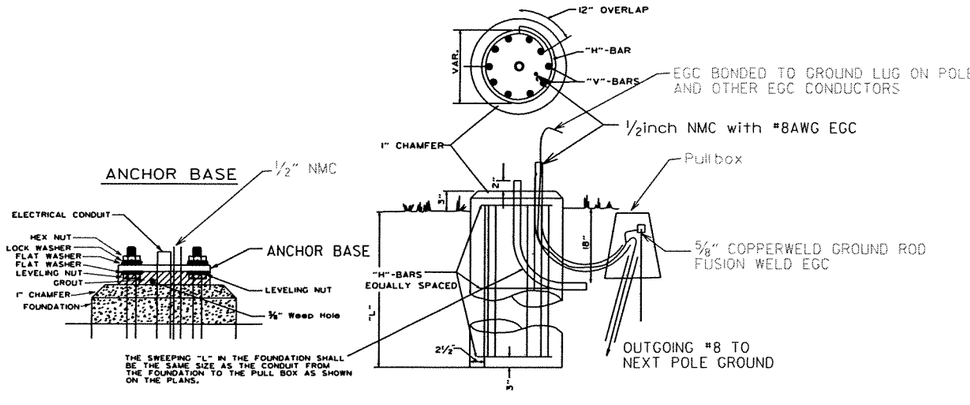
THE GROUND ROD SHALL BE FUSION WELDED TO A IC/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX PAID FOR SEPARATELY AS SHOWN ON THE PLANS.



ANTENNA POLE

NOTE: COMMUNICATION CABLE SHIELD SHALL BE TIED TO GROUND AT ONLY ONE POINT (MASTER CABINET). THE SHIELD SHALL BE MAINTAINED CONTINUOUS (THROUGH ALL SPLICES). PLEASE REFER TO TESTING PROCEDURES IN SPECIAL PROVISIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 8403
MICHAEL D. FUGETT
6/5/12



TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING.

POLE HEIGHT	FOUNDATION DIAMETER	DEPTH "L"	VERTICAL	HORIZONTAL	TIE SPACING
20.0'	30"	5'-6"	12-#7	#4	5 sp @ 12"
25.0'	30"	6'-0"	12-#7	#4	6 sp @ 11"
30.0'	30"	6'-6"	12-#7	#4	6 sp @ 12"
35.0'	30"	7'-0"	12-#7	#4	7 sp @ 11"
40.0'	30"	7'-6"	12-#7	#4	7 sp @ 12"
45.0'	36"	8'-6"	13-#8	#4	8 sp @ 12"
50.0'	36"	9'-6"	13-#8	#4	9 sp @ 12"
55.0'	36"	10'-0"	13-#8	#4	10 sp @ 11"
60.0'	36"	10'-6"	13-#8	#4	10 sp @ 12"
65.0'	36"	11'-0"	13-#8	#4	12 sp @ 10½"
70.0'	36"	11'-6"	13-#8	#4	11 sp @ 12"
75.0'	42"	13'-0"	18-#8	#4	14 sp @ 10½"
80.0'	42"	13'-6"	18-#8	#4	13 sp @ 12"
85.0'	42"	14'-6"	18-#8	#4	14 sp @ 12"
90.0'	42"	15'-0"	18-#8	#4	18 sp @ 9½"

ALL CONCRETE SHALL BE CLASS "S" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'c=3500 PSI. CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS CHAMFERED ¾" UNLESS NOTED OTHERWISE.

ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31 OR M53, GRADE 40 (YIELD STRENGTH=40,000 PSI).

PROVIDE 3" CLEAR TIES. DETAIL 3" TO FIRST TIE AT TOP OF SHAFT.

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
9-6-00	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

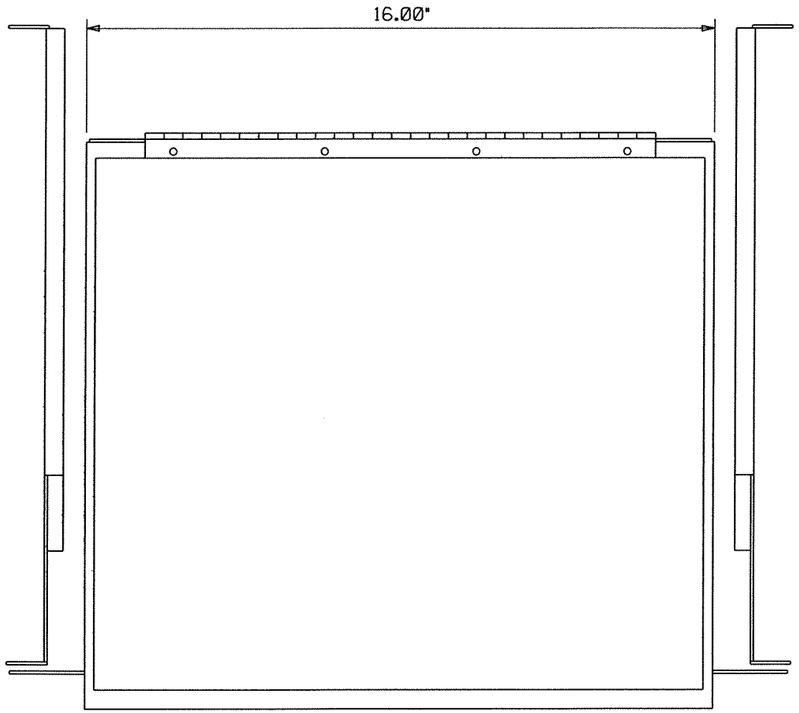
SIGNALIZATION DETAIL
(Antenna Pole)

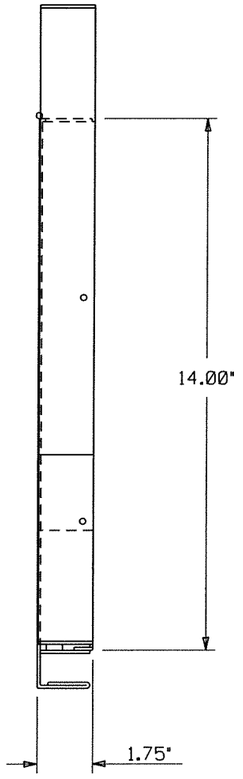
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	90	160

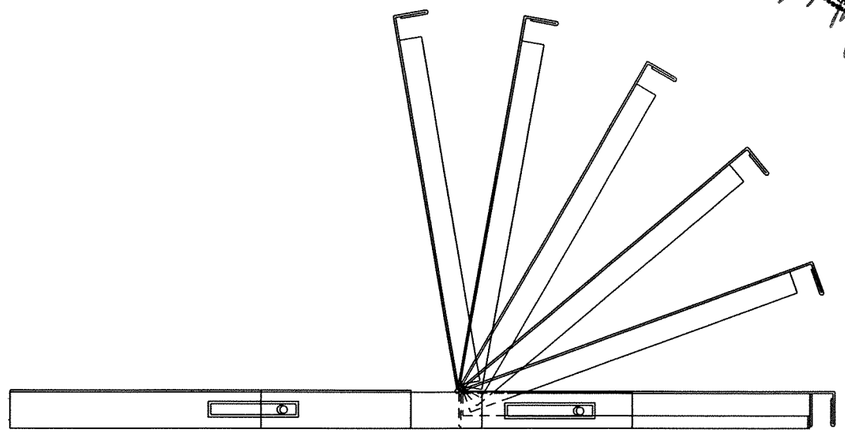
(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

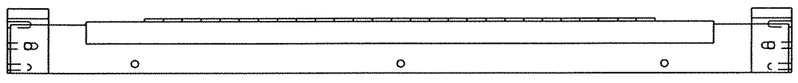
DRAWER PLAN VIEW



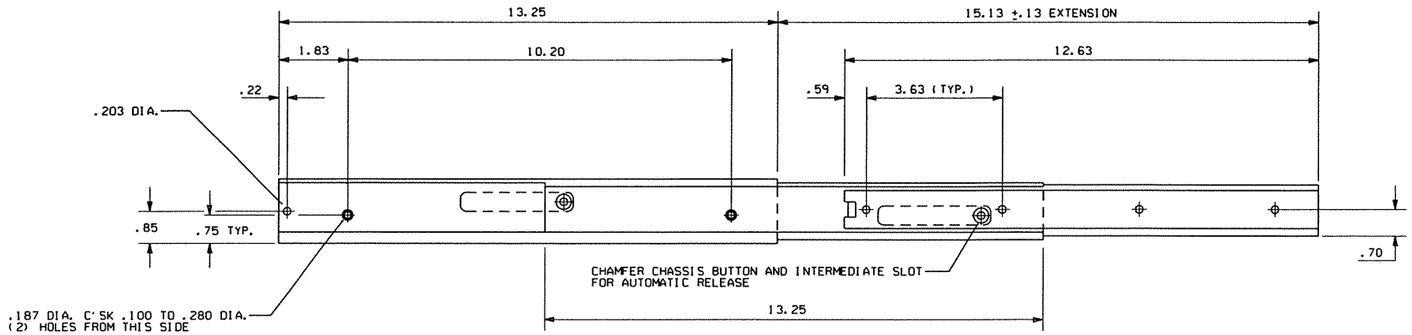




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



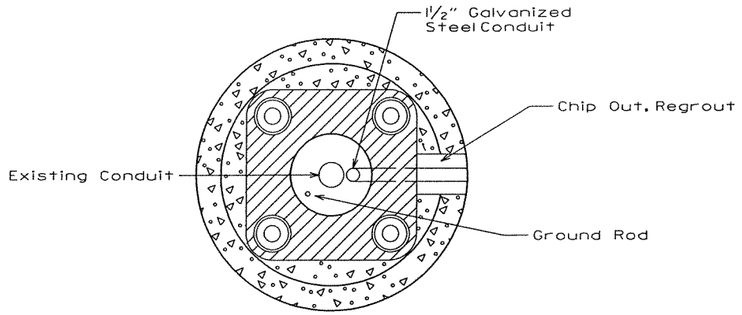
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			SIGNALIZATION DETAIL (Controller Cabinet Utility Drawer)
6-15-05	ISSUED		
DATE	REVISION	DATE FILM	

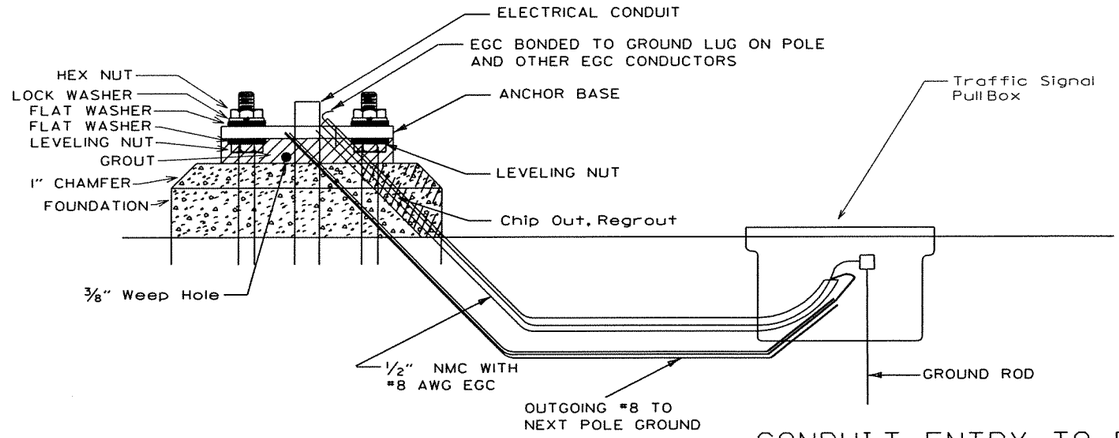
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	91	160

(2) SIGNALIZATION DETAILS

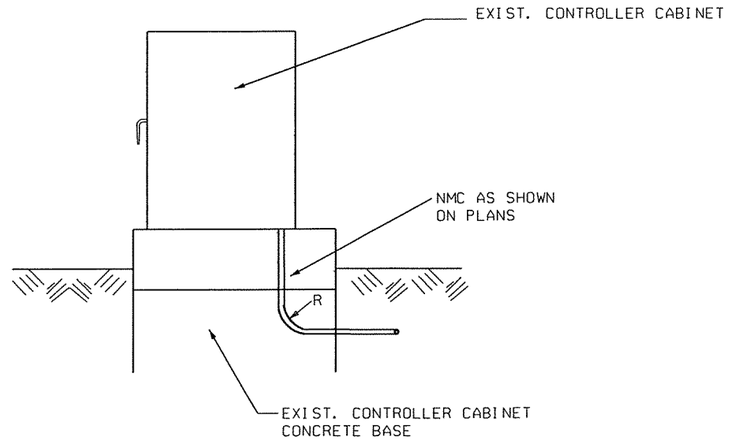
CONDUIT ENTRY TO EXISTING POLE BASE



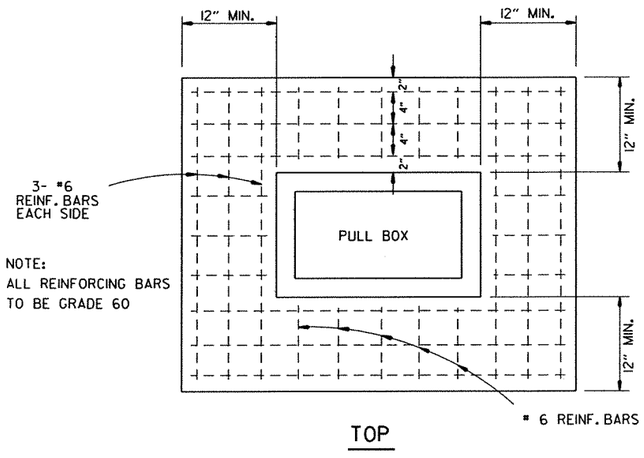
ANCHOR BASE



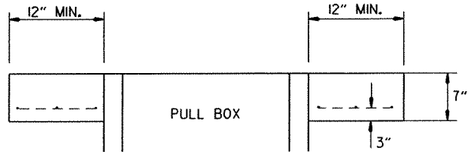
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



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

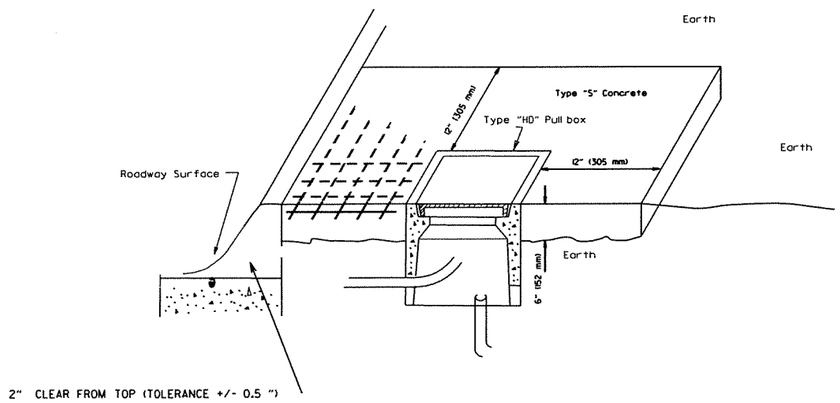


TOP



ELEVATION

Type "HD" Concrete Pull Box Detail



Note: All Type 1 and Type 2 HD pull boxes are installed with an apron of concrete 12" (305 mm) wide and 6" (152 mm) in depth. All payment shall be included in the price of the Type HD pull box. 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 pull box is required in concrete.

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Heavy Duty Pull Box)

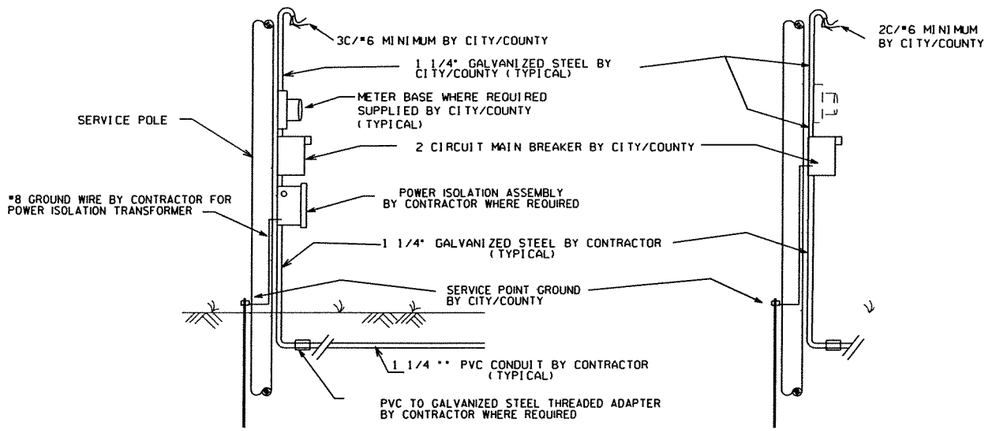
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	92	160

(2) SIGNALIZATION DETAILS

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

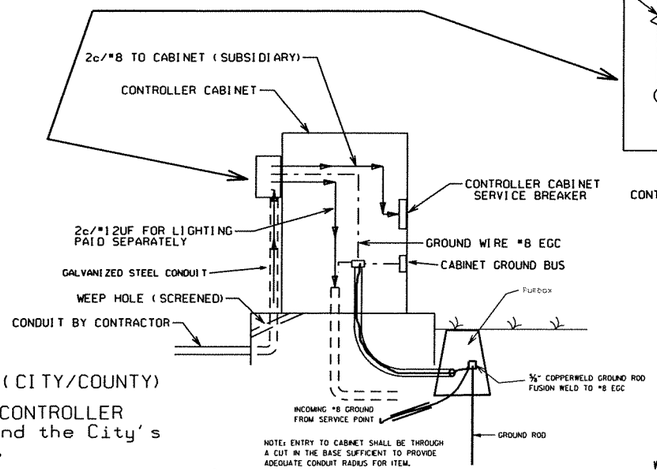
WITH POWER ISOLATION ASSEMBLY

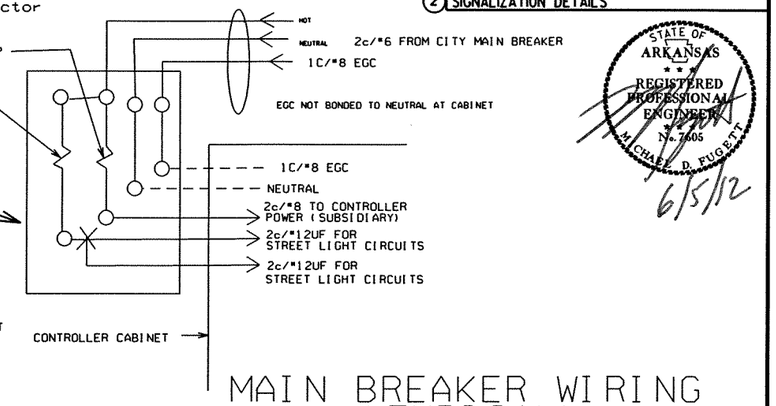


WITHOUT POWER ISOLATION ASSEMBLY

Ground Rod-A 10' x ⅝" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ½" NMC shall be included in Item 701. The pull box and conductor box shall be paid for separately.

SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)





MAIN BREAKER WIRING (TYPICAL)

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 6/5/12

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

Electrical service typically falls into two categories: MAIN BREAKER NEAR CONTROLLER CABINET; and MAIN BREAKER NOT NEAR CONTROLLER CABINET. The Contractor's and the City's or County's responsibility varies accordingly as indicated on these details.

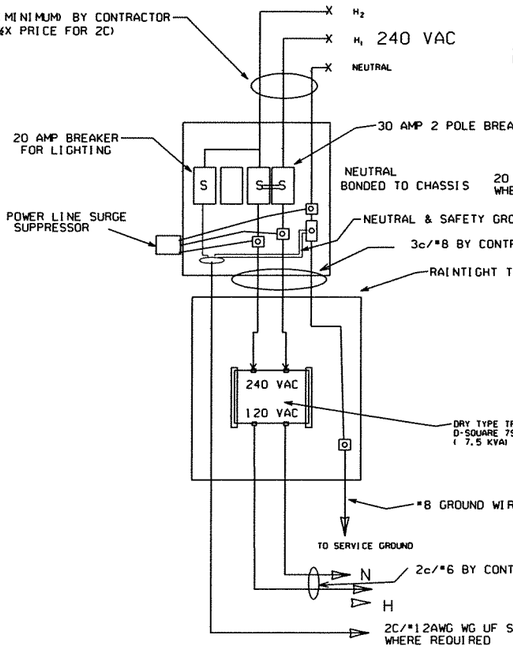
1. ALL SITUATIONS: Electrical service shall be provided by the City/County to a service pole with external raintight breaker (MAIN BREAKER) at a mutually acceptable point within the right-of-way. Service point includes galvanized steel conduit to a point 18" below ground line, two circuit main breaker, power isolation assembly where required, meter loop if required by local utility, electrical conductors and weatherhead. Where street lighting is included as part of signal installation, street lighting circuit (2c/#12 awg UF rated, typical) shall be kept separate from the circuit serving traffic signal. Service wire and wiring from the controller to main breaker is provided by the Contractor as a part of this contract. Wire and wiring from main breaker, and connection to the utility is the responsibility of the City/County.

2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The Main Breaker assembly, galvanized steel conduit, weatherhead and wire above Main Breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the Main Breaker.

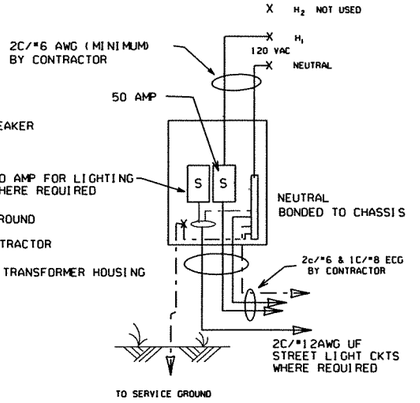
3. MAIN BREAKER NEAR CONTROLLER CABINET: All components of the service point with the exception of the wire and wiring above the Main Breaker is furnished and installed by the Contractor. Wiring from Main Breaker including connection to the utility, is the responsibility of the City/County. If meter loop is required, meter base and hardware is provided by the City/County and installed by the contractor.

Service Ground is typically tied to neutral at the Main Breaker. As such, controller ground IS NOT tied to Neutral at secondary Breaker or in controller cabinet.

WITH POWER ISOLATION ASSEMBLY 4 CIRCUIT MAIN BREAKER

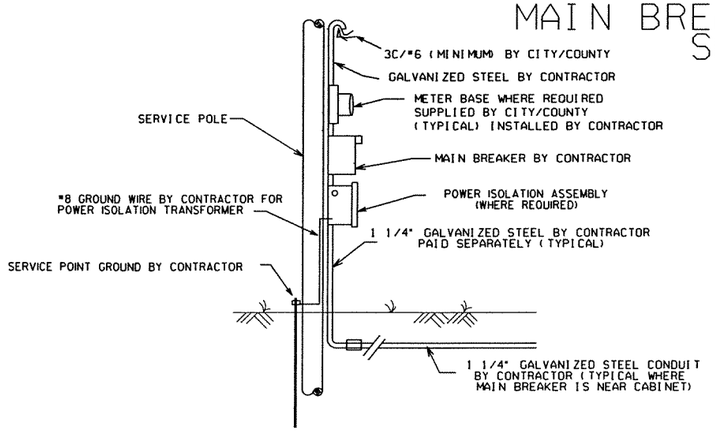


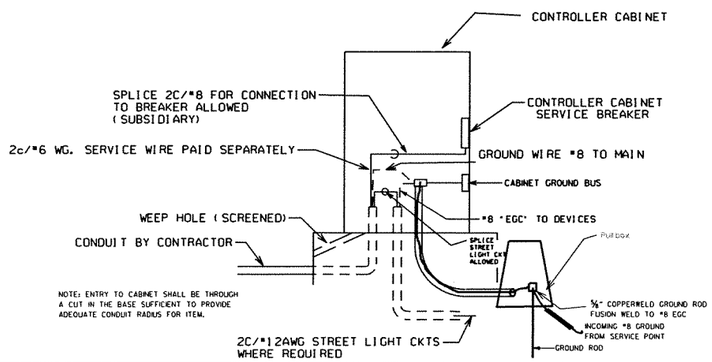
WITHOUT POWER ISOLATION ASSEMBLY 2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (EGC) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED





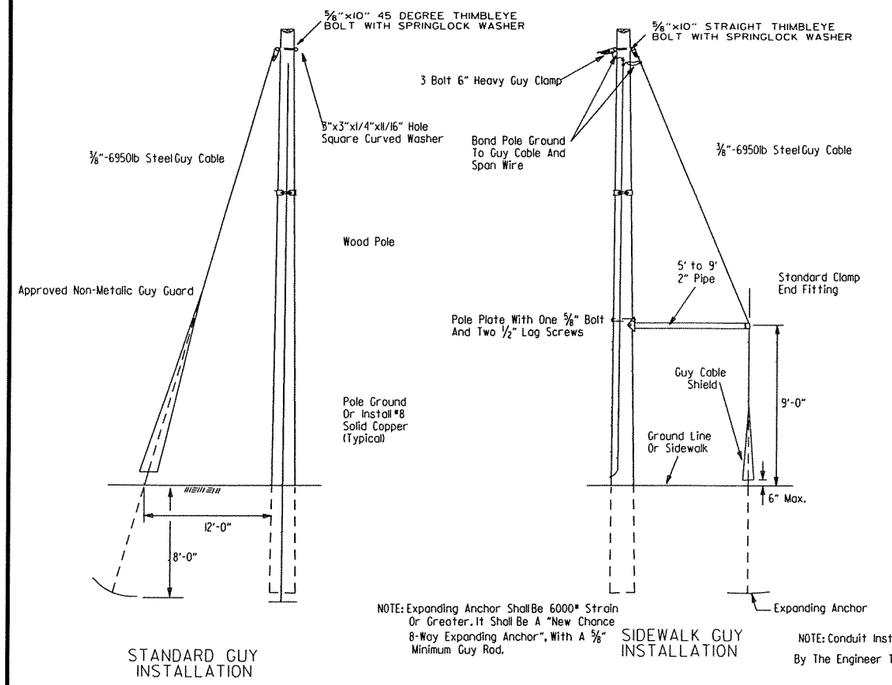
DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL (Service Point)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	93	160

(2) SIGNALIZATION DETAILS

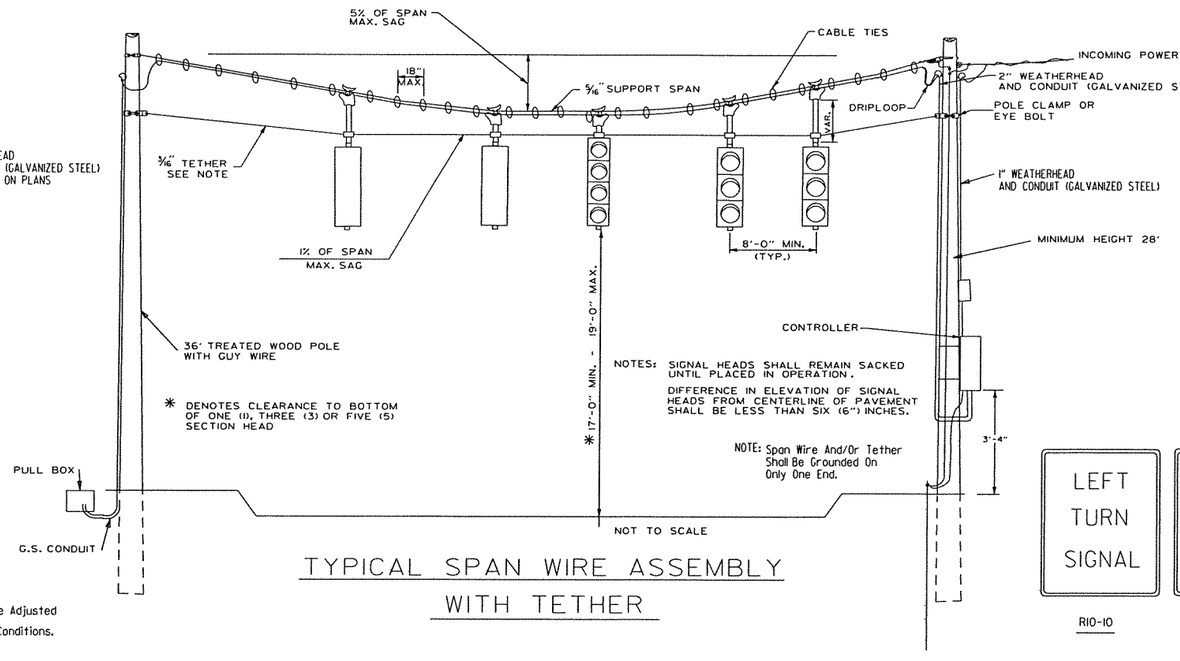


STANDARD GUY INSTALLATION

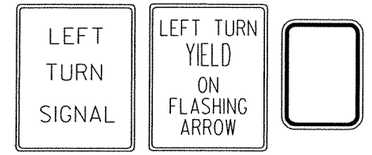
NOTE: Expanding Anchor Shall Be 6000# Strain Or Greater. It Shall Be A "New Chance 8-Way Expanding Anchor", With A 5/8" Minimum Guy Rod.

SIDEWALK GUY INSTALLATION

NOTE: Conduit Installation May Be Adjusted By The Engineer To Meet Field Conditions.



TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

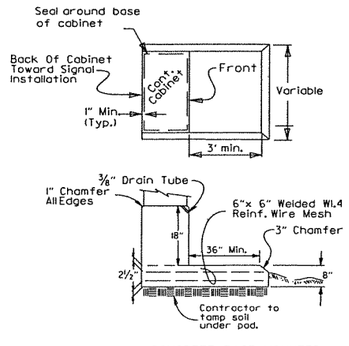


R10-10 SPECIAL R10-3e (SEE MUTCD)

NOTES: Span wire poles shall be mounted a minimum of 4' behind curb or shoulder.

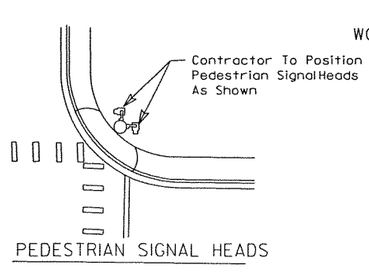
Span wire assemblies will require tether unless otherwise noted on plan sheets. Cable ties shall be suitable for outside use (black).

The controller power supply ground buss shall be bonded to the ground rod with a #8 AWG solid copper wire. On existing installations with no ground rod, Contractor shall install a 10' x 5/8" copperweld ground rod.

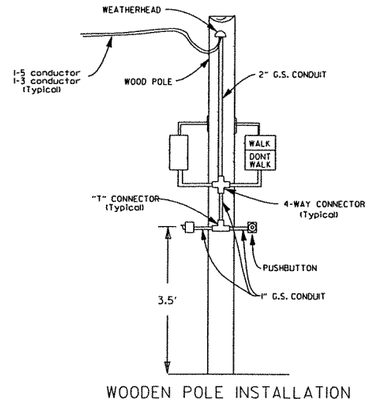


CONCRETE BASE MOUNTED CABINET DETAILS

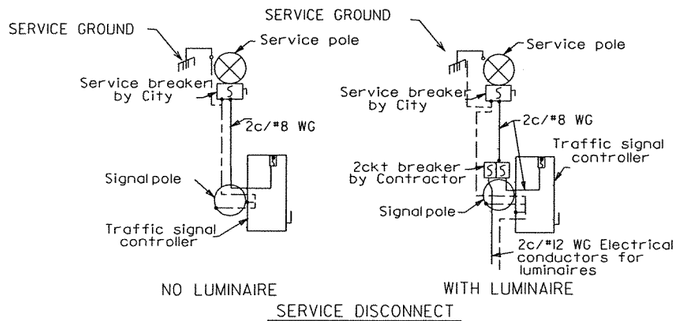
Unless otherwise directed by the engineer, cabinet orientation shall be such that the back of the cabinet is parallel to the street and positioned to allow visibility of the signal display while observing the controller front panel.



PEDESTRIAN SIGNAL HEADS



WOODEN POLE INSTALLATION OF PED HEADS



SERVICE DISCONNECT

NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

NOTES:

Each item "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" shall include a special sign as shown, attached to the mast arm or span assembly 12" to the right of the signal head unless removed within signal plan notes.

Sign blank shall be constructed of alluminum alloy (ASTM designation B-209, Alloy 5052-H38) with a thickness of 0.100 inch.

Sign face shall be constructed of high intensity sheeting (Type III) with silkscreen legend and border.

Each item "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" to be used as a left turn indication only shall include a sign (R10-10) as shown, attached to the mast arm or span assembly 12" to the right of the signal head.

SIGNAL OPERATION NOTES:

Flashing Operation - Prior to normal operation, signal shall be flashed for a period of 3 to 5 working days. 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.

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: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DATE	REVISION	DATE FILM
7-21-11	REVISED PED SIGN, CABINET GROUNDING	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENT. & SIGNAL OPER.	
5-22-02	REV. TYP. SPAN WIRE ASSEMBLY	
12-27-99	REVISED	
11-18-98	REVISED NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAILS

(Span Wire Assembly Wood Pole)

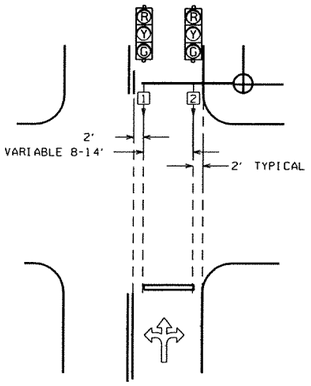
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 6/5/12

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	94	160

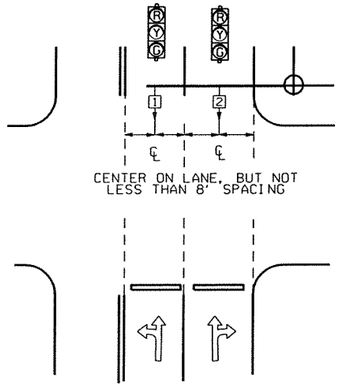
(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

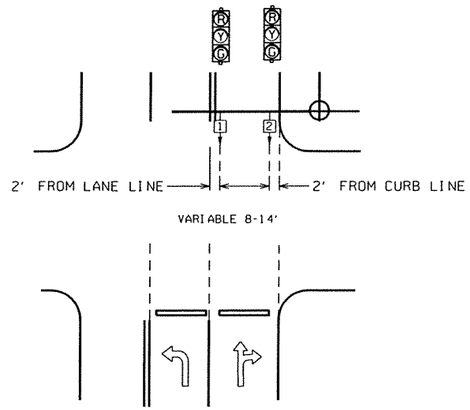
(A)



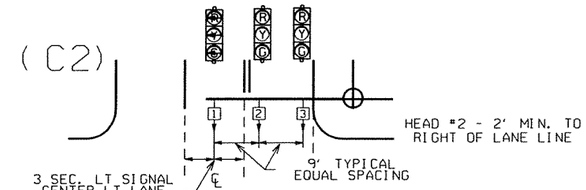
(B)



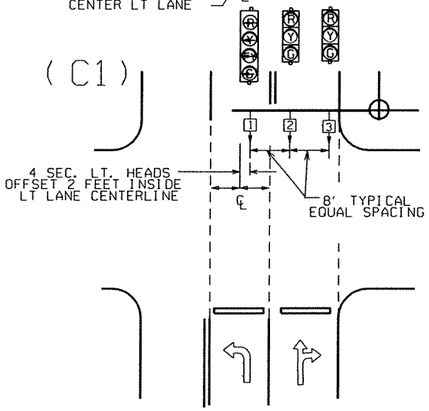
(C)



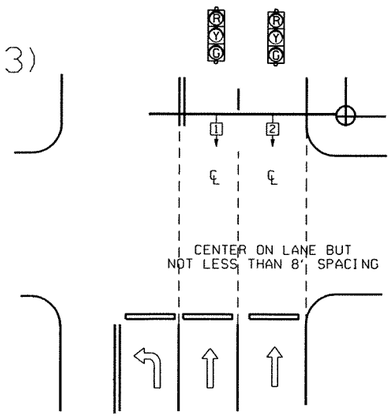
(C2)



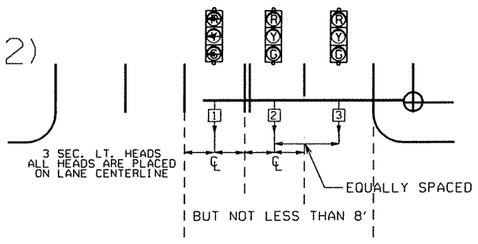
(C1)



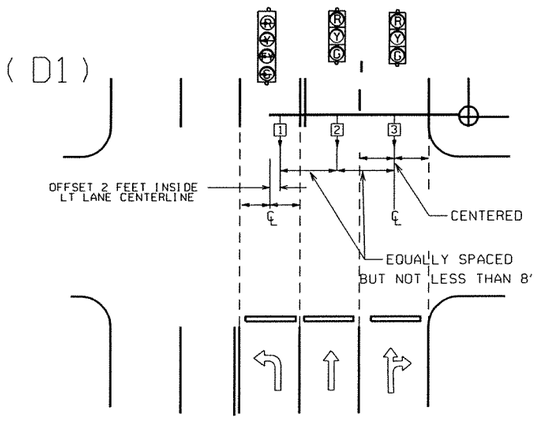
(C3)



(D2)

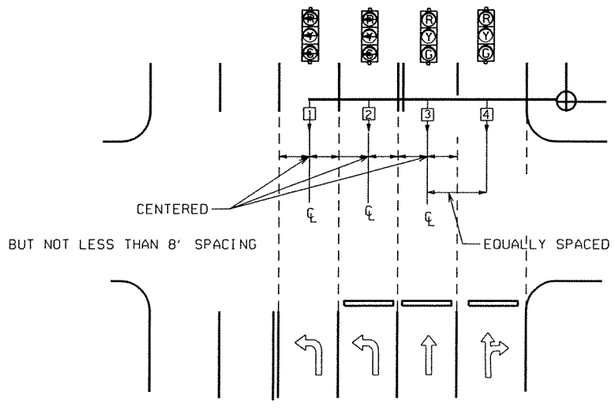


(D1)



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-1 OF 2009 MUTCD.

DATE	REVISION	DATE FILM
3-11-10	2009 MUTCD	
12-9-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Signal Head Placement)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	95	160

(2) SIGNALIZATION DETAILS

NOTES, PED AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM 'TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)' SHALL INCLUDE A SPECIAL SIGN 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 (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

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 4 FT. BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND 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 SPEED LIMIT IS GREATER THAN 45 MPH WITH AN ARM 60' OR LONGER.

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

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

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 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 1/2" 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, 12 INCH, AND HAVE 5 IN. BACK PLATES:

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL * 2' X 0' X 2' * 6", 20 LB. REMAINING HEADS SPACED A 8 FT. * 3 SEC., 56 LB., TWO 5 SEC):
14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING
2 HEADS FOR ARMS 10 TO 16 FT.
2 HEADS FOR ARMS 10 TO 16 FT., INCLUDING LB.
3 HEADS FOR 18 TO 24 FT. ARMS;
4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 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.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE.
POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

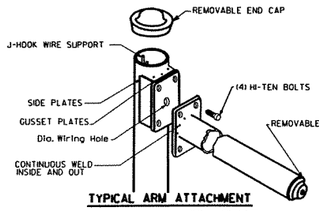
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED. FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE -- HAND HOLES SHALL BE 4 X 6 INCHES FOR STANDARD, AND 3 X 5 INCHES 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. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLD WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

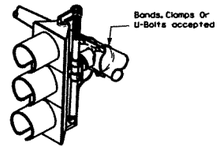
6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

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 ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

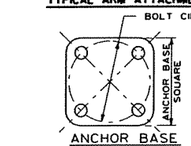
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



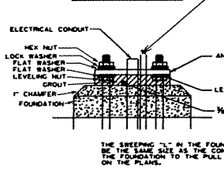
TYPICAL ARM ATTACHMENT

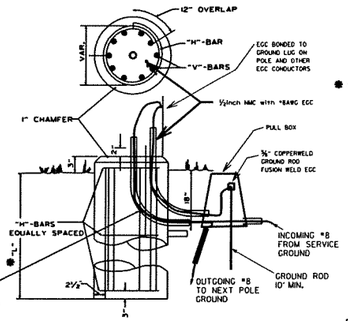


NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



ANCHOR BASE



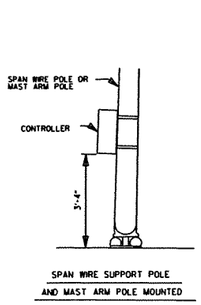


THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

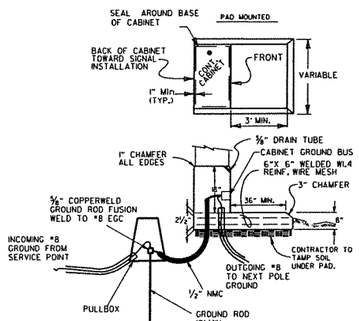
TYPICAL FOUNDATION DETAILS

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

ARM LENGTH	FDN. DIAMETER	DEPTH 'L' *	STEEL VERT.	STEEL HORZ.	STEEL 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



CONTROLLER CABINET MOUNTING DETAILS

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 5/8" GROUND ROD SHALL BE INSTALLED IN THE 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 AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

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 1/4" 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 PED PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM PEDESTRIAN SIGNAL HEAD.

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 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.

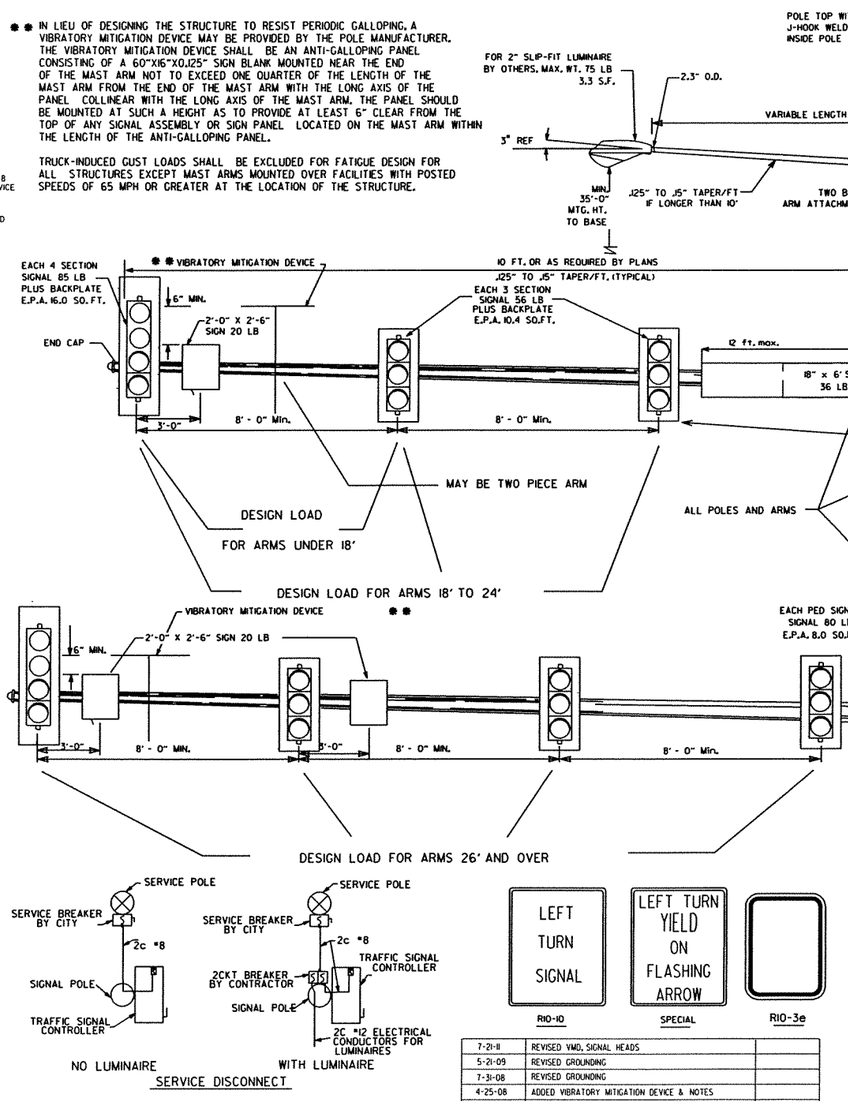
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
6/5/12

* 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 OF THE STANDARD SPECIFICATIONS.

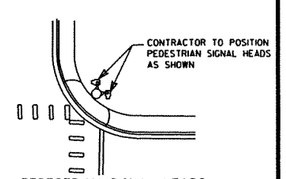
** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE 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 A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR 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

R10-10 SPECIAL R10-3e

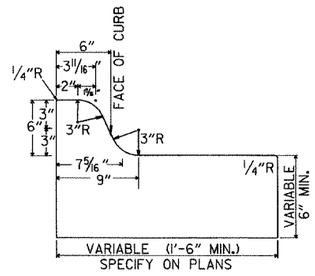


PEDESTRIAN SIGNAL HEADS

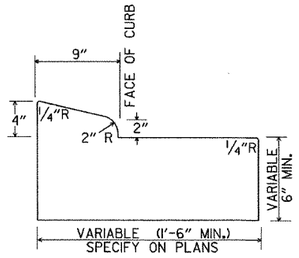
DATE	REVISION	DATE FILM
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-18-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-18-01	REV. NOTES & POLE MAST ARM SLOPE	
4-18-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
8-22-99	REVISED FOUNDATION DETAILS	
8-17-98	REVISED DETAILS AND NOTES	
8-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

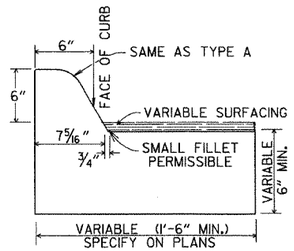
SIGNALIZATION DETAILS
(Steel Pole With Mast Arm)



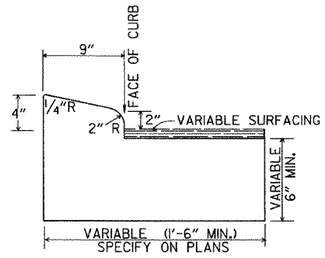
TYPE A



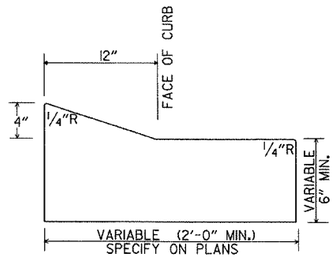
TYPE B-1



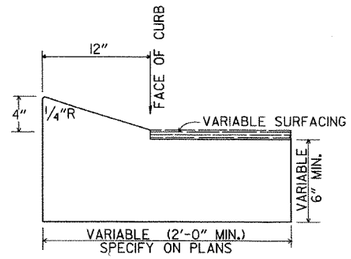
TYPE C



TYPE B-2

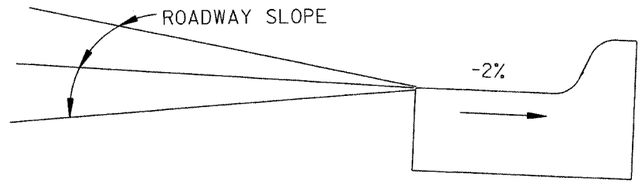


TYPE E-1



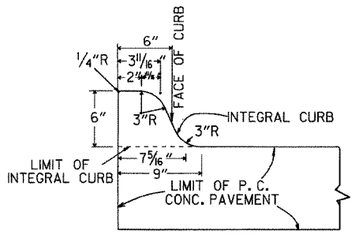
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

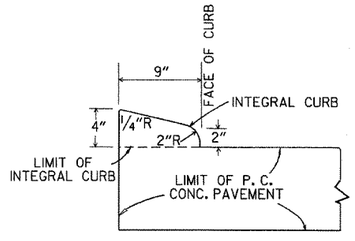


DETAIL OF GUTTER SLOPE

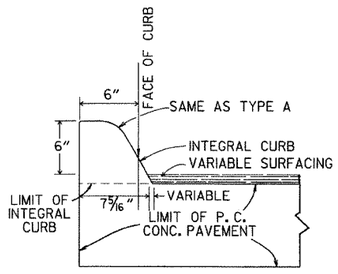
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

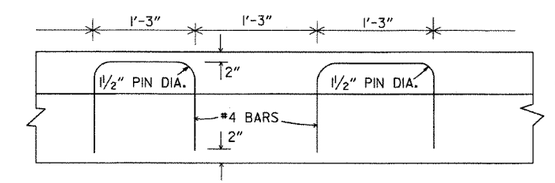


TYPE B

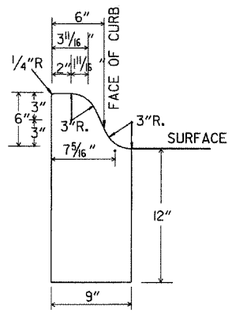


TYPE C

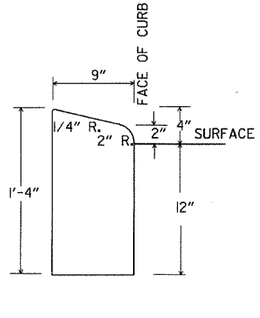
INTEGRAL CURB



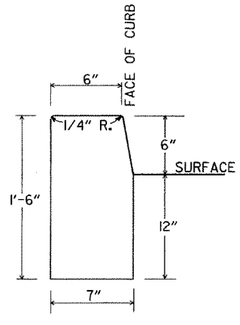
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



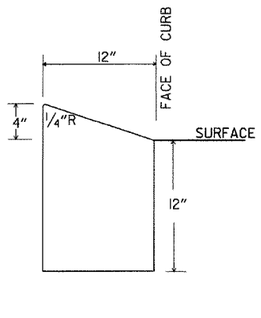
TYPE A



TYPE B

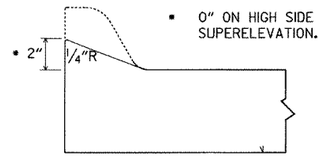


TYPE D



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.

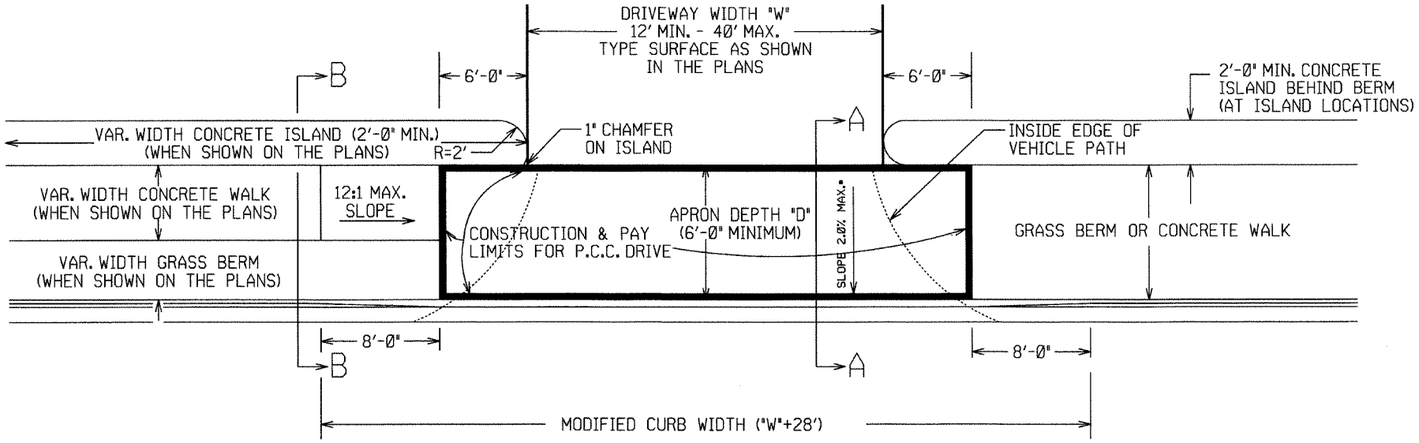
DETAILS OF MODIFIED CURB

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 1	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

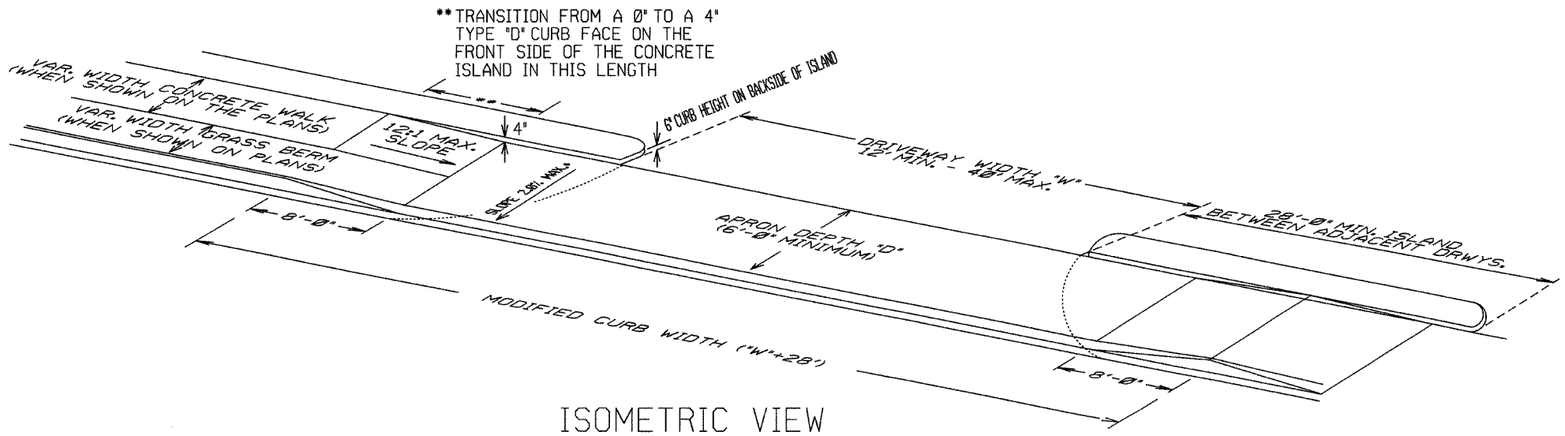
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

STANDARD DRAWING CG-1

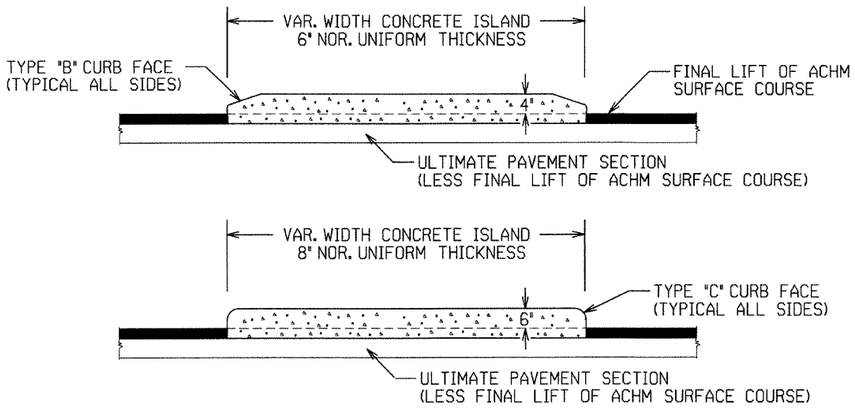


PLAN VIEW

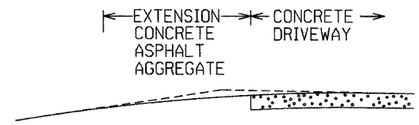


ISOMETRIC VIEW

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".



CURBED ISLANDS FOR CHANNELIZATION



EXTENSION TYPICAL SECTIONS

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

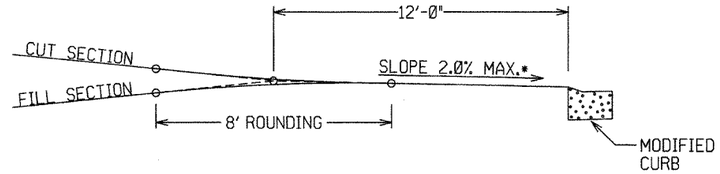
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

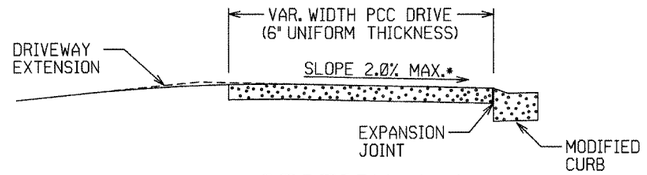
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

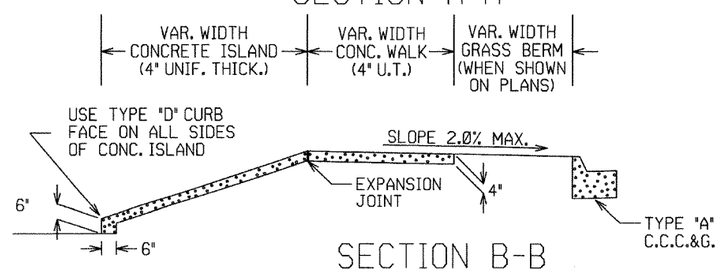


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



SECTION A-A

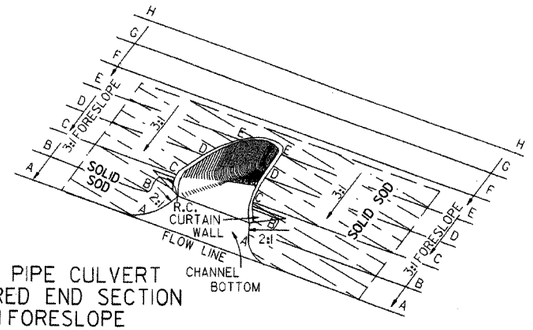


SECTION B-B

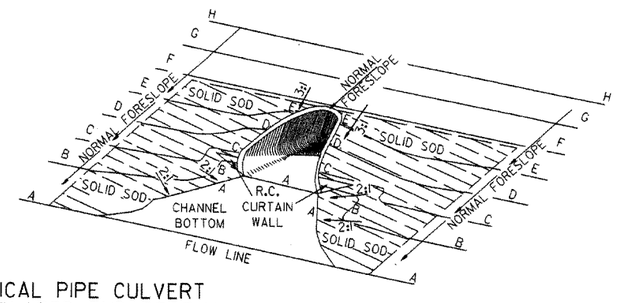
CURBED ISLAND BEHIND WALK

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

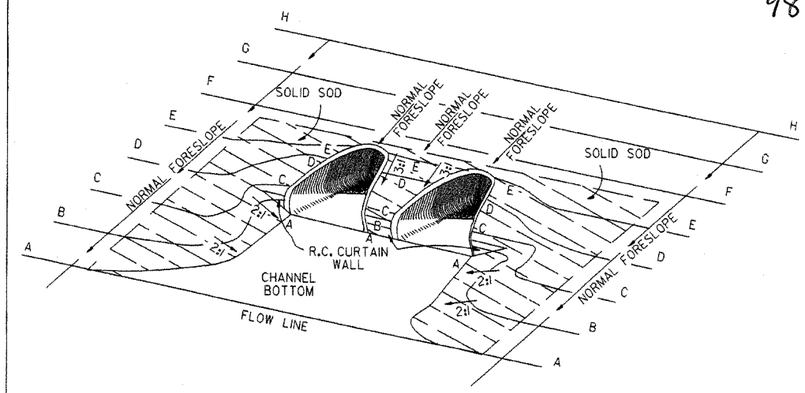
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



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



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	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.

REINFORCING STEEL SCHEDULE

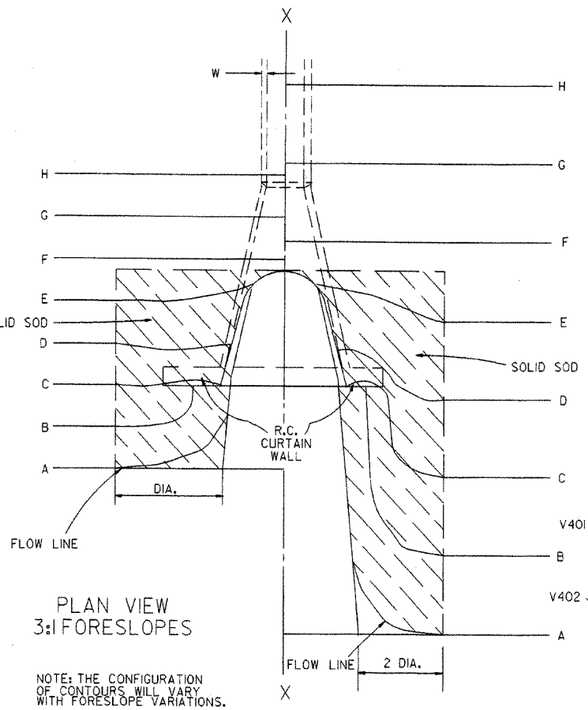
PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	NO.	H402 L	NO.	V401 L	NO.	V402 L	NO.	DOUBLE R.C. PIPE CULVERT H401 L	NO.	H402 L	NO.	H403 L	NO.	V401 L	NO.	V402 L	NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	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"	36	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

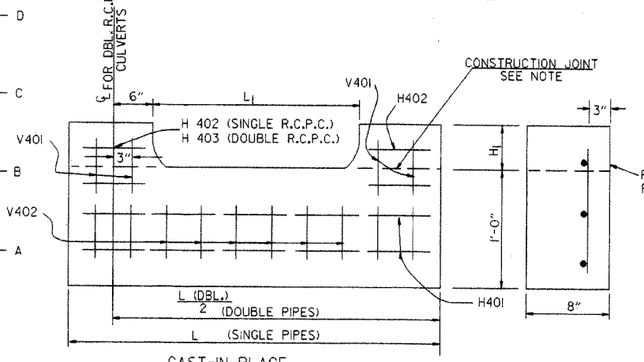
NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.



PLAN VIEW
3:1 FORESLOPES

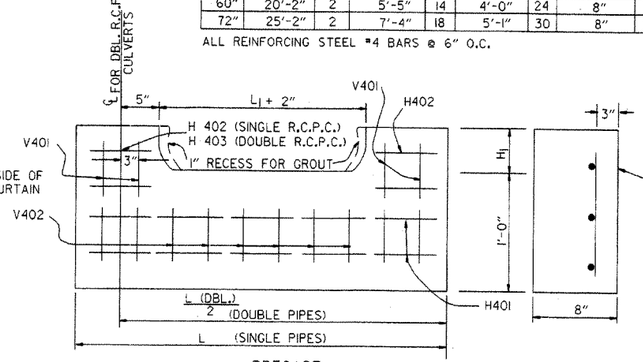
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



CAST-IN-PLACE

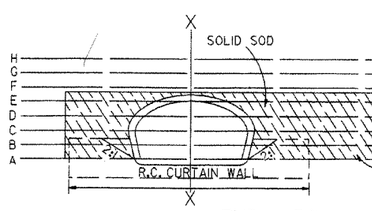
NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



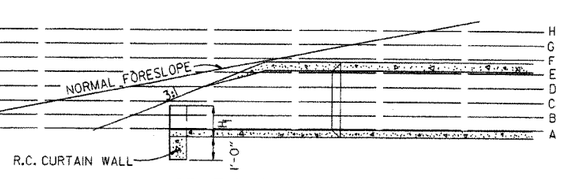
PRECAST

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

R.C. CURTAIN WALL DETAILS



END VIEW



SECTIONAL VIEW "X-X"

GENERAL NOTES

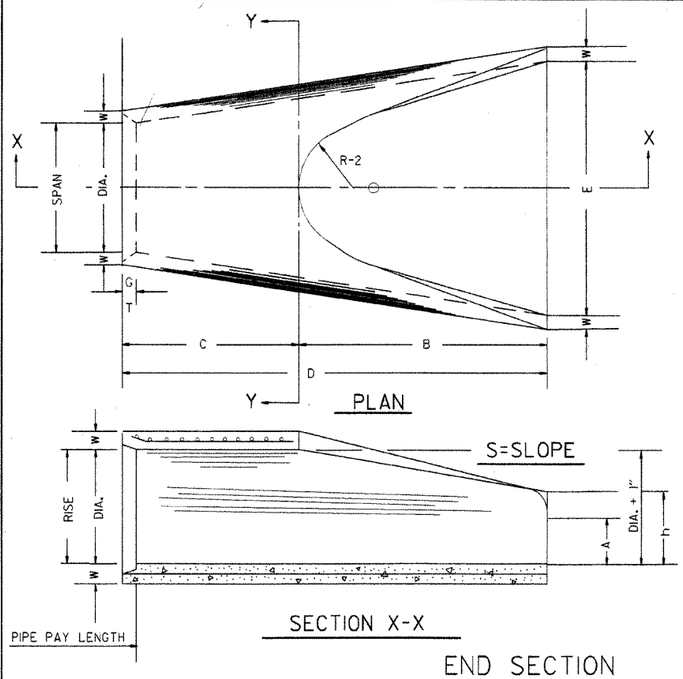
1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE: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

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	10-18-96
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

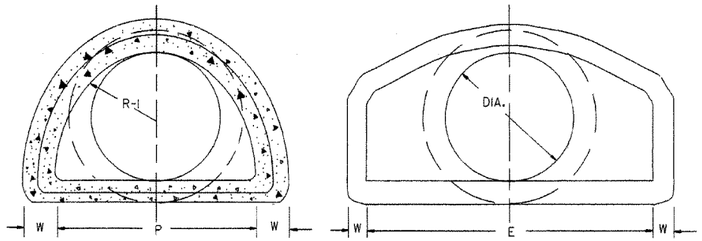
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33⅜"	16⅝"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7⅜"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¼"	8'-1¾"	6'-0"	3:1	37"	47¹³⁄₁₆"	24⅝"	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"	36¹¹⁄₁₆"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77¹¹⁄₁₆"	38⅝"	24"	5"	13250	4'-6"

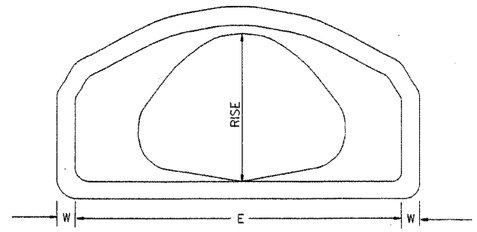


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

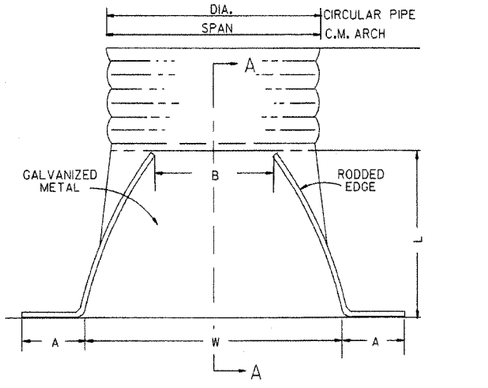
ARCH PIPE

EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36¹³⁄₁₆"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47¹³⁄₁₆"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54⅝"	22"	3½"	2½:1
42	51⅛	51	31⅝	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅝"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72¹⁄₁₆"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77¹³⁄₁₆"	24"	5"	2¼:1

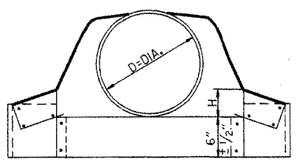
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



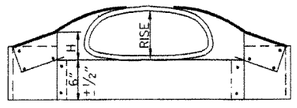
END VIEW
CONCRETE ARCH PIPE



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



CIRCULAR PIPE



C.M. ARCH PIPE

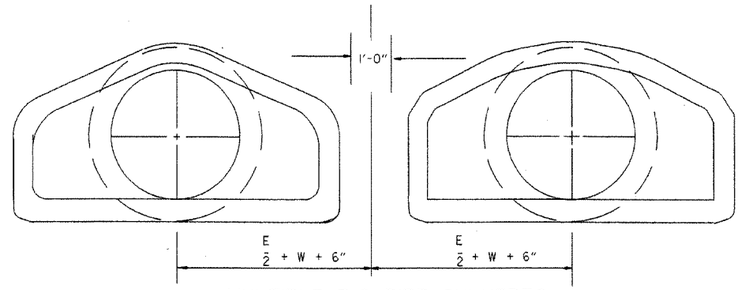
CIRCULAR PIPE

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

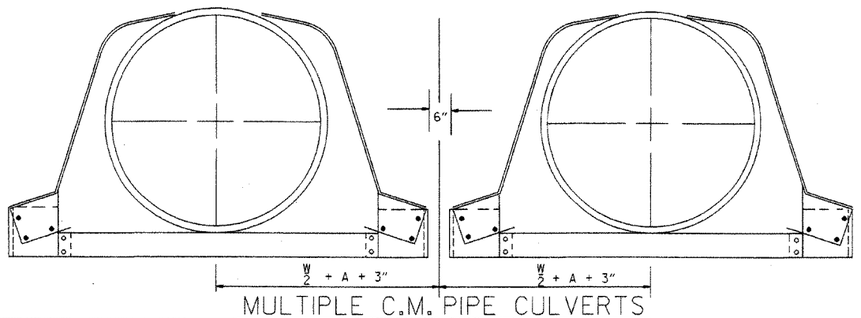
C.M. ARCH PIPE

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

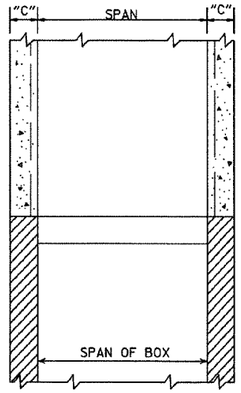
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
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 COMMISION

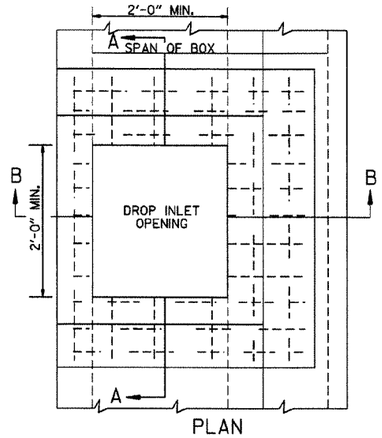
FLARED END SECTION

STANDARD DRAWING FES-2

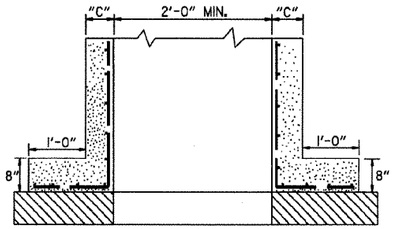
stdfes2.dgn



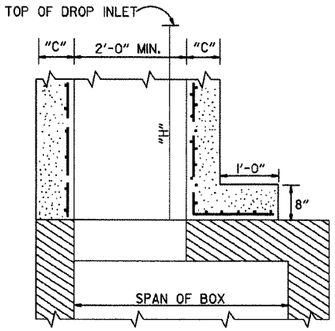
SECTION B-B



PLAN

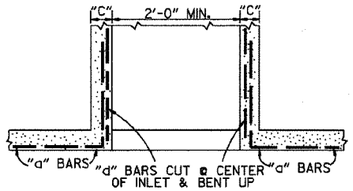


SECTION A-A

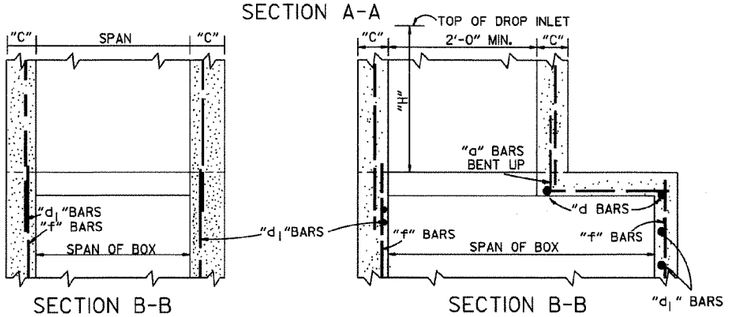


SECTION B-B

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



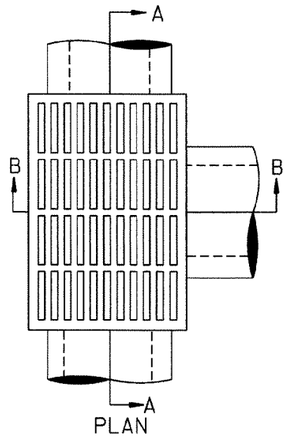
SECTION A-A



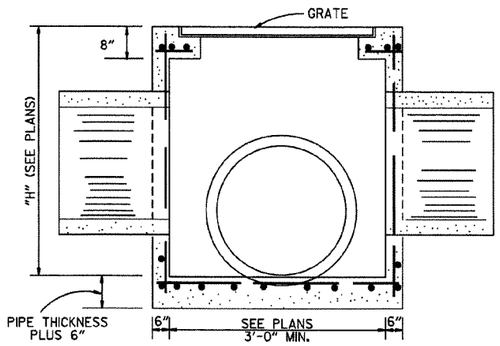
SECTION B-B SECTION B-B

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.

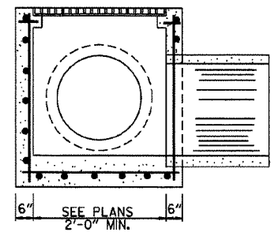


PLAN



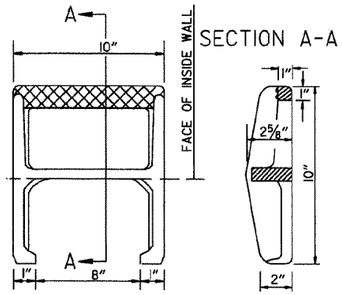
SECTION A-A

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)

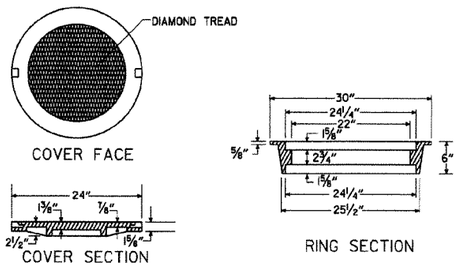


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

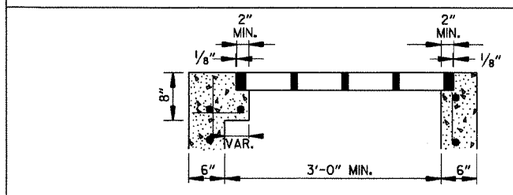
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

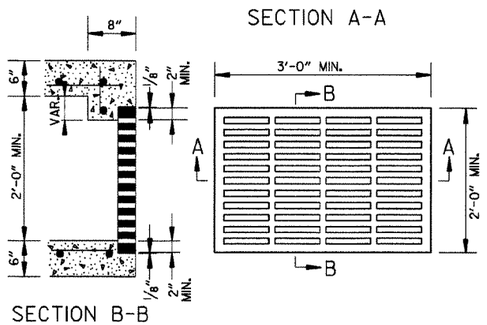


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



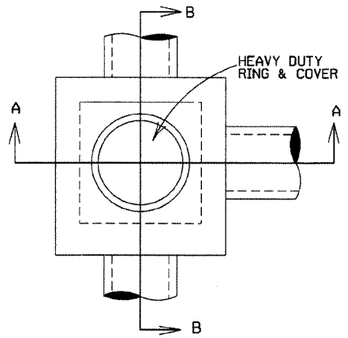
SECTION A-A



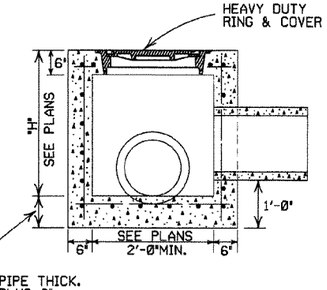
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

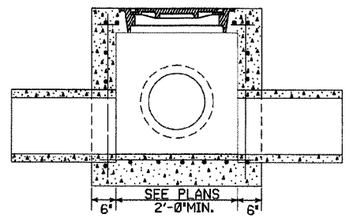


PLAN



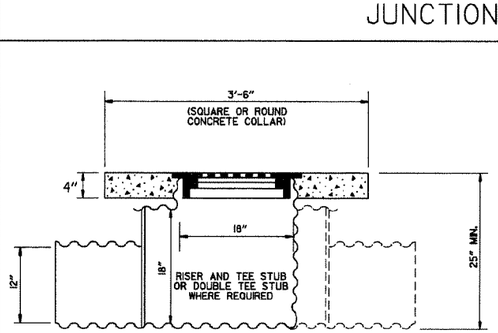
SECTION A-A

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.

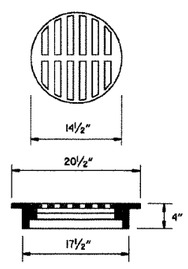


SECTION B-B

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:

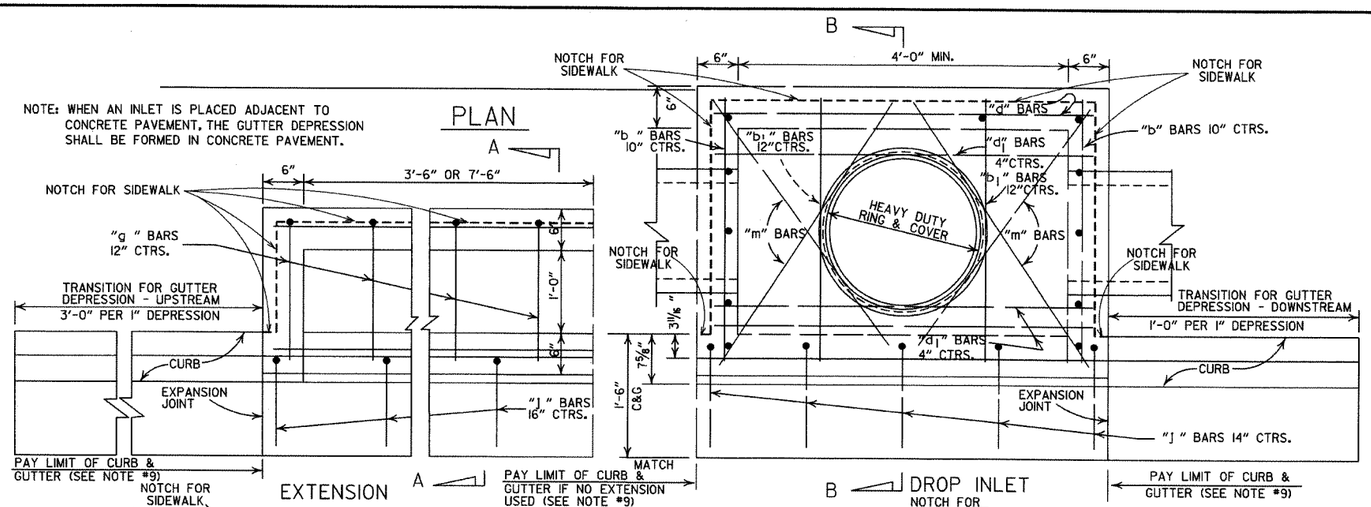
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS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

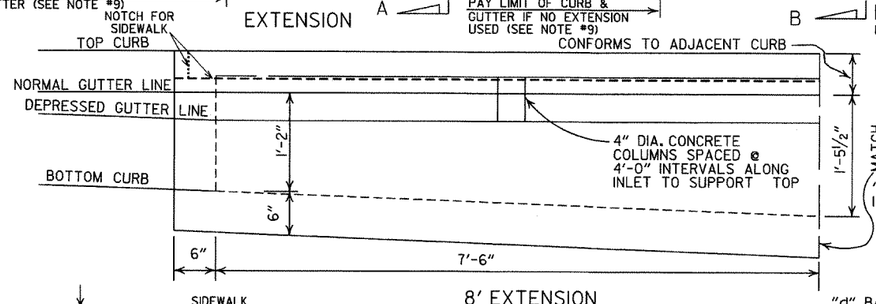
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	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	

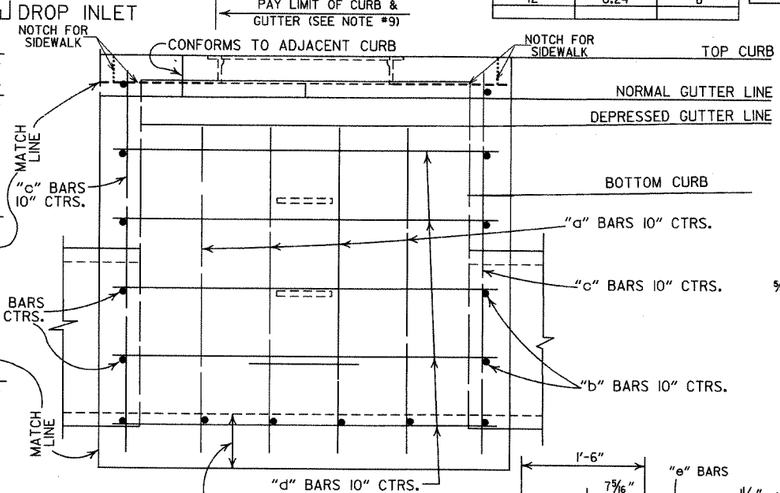
ARKANSAS STATE HIGHWAY COMMISSION

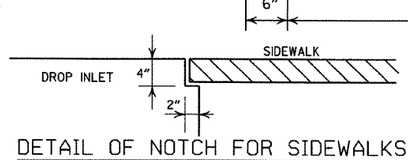
DETAILS OF DROP INLETS & JUNCTION BOXES

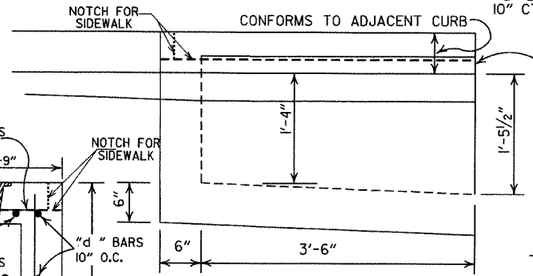
STANDARD DRAWING FPC-9

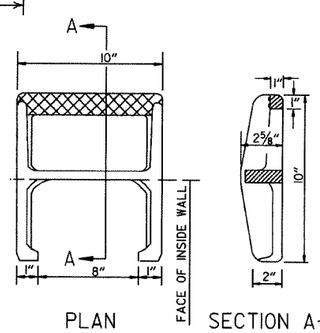


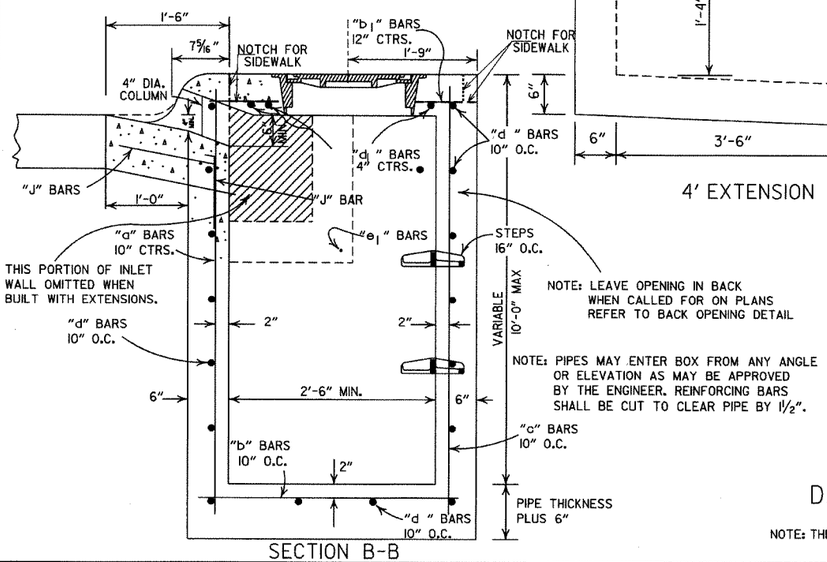


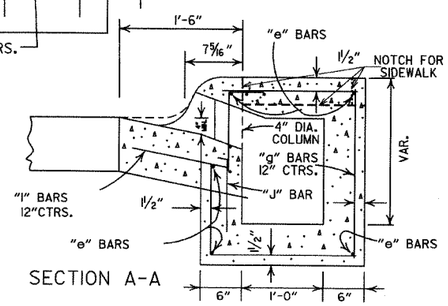












4'-0" LENGTH DROP INLET

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0" CLASS A CONC.	HEIGHT 5'-0" REINF. STEEL	PLUS OR MINUS PER LIN. FT. OF HEIGHT CLASS A CONC.	PLUS OR MINUS PER LIN. FT. OF HEIGHT REINF. STEEL
		CU. YDS.	POUNDS	CU. YDS.	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

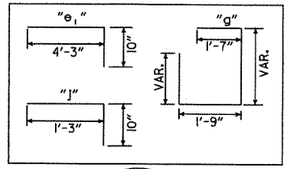
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

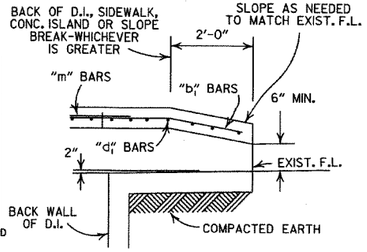
DROP INLET EXTENSION

4'-0" CLASS A CONC.	4'-0" REINF. STEEL	8'-0" CLASS A CONC.	8'-0" REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	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

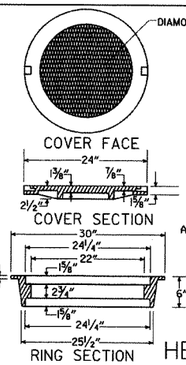
BAR DIAGRAM





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 (F.P.C.-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"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.

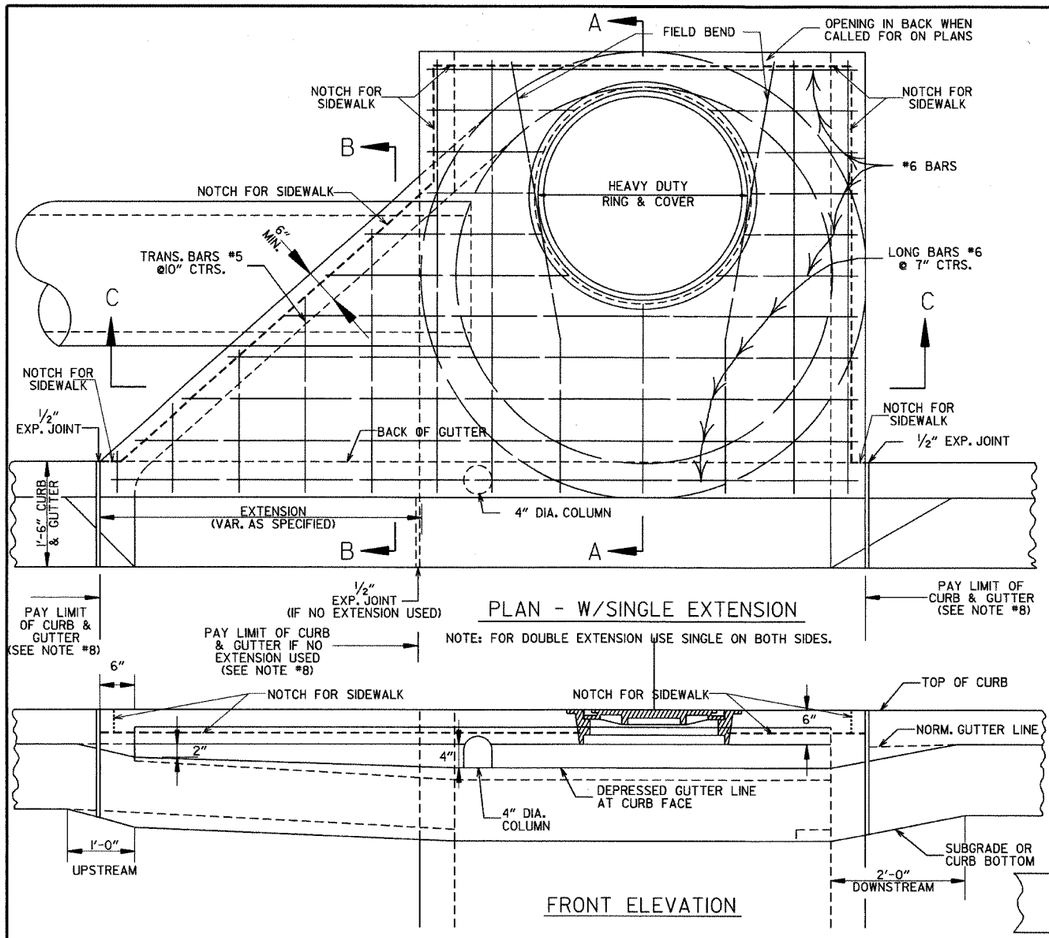
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13, REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER 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	

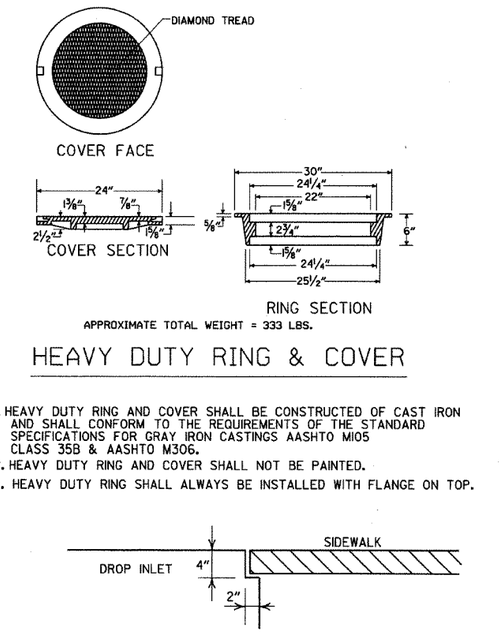
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

STANDARD DRAWING FPC-9E

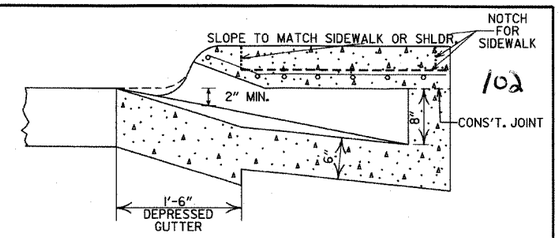




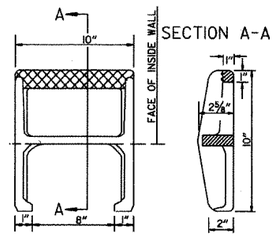
HEAVY DUTY RING & COVER

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

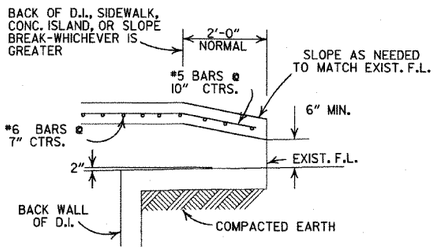


SECTION B-B



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

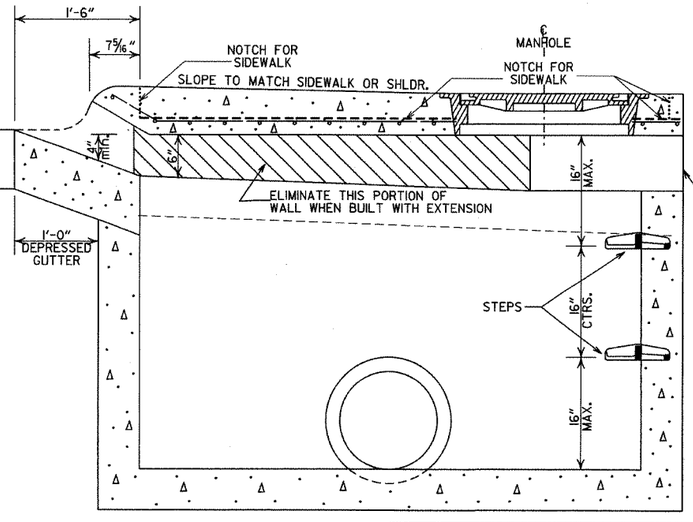
DETAIL OF STEP FOR DROP INLET



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.



SECTION A-A

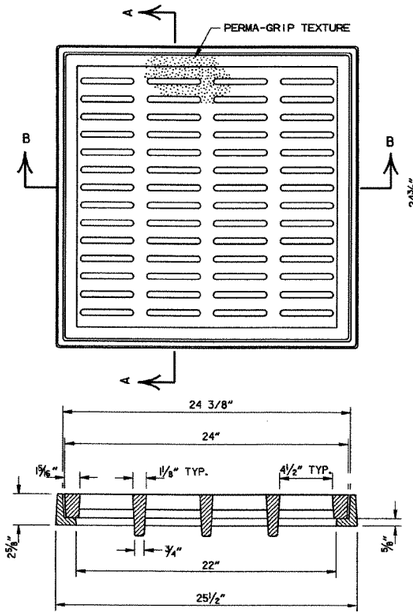
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS CAST IN PLACE	MINIMUM WALL THICKNESS PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

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	
4-28-96	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-12-95	CORRECTED *6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
7-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-1-94	REVISED GENERAL NOTES	11-3-94
1-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	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	639-7-15-88
1-14-87	MODIFIED WALL THICKNESS	781-1-14-87
6-12-87	ISSUED	4-6-12-87

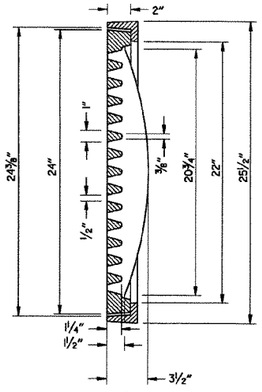
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION B-B

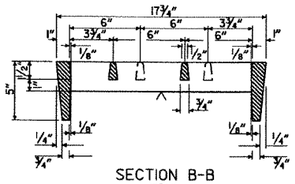


SECTION A-A

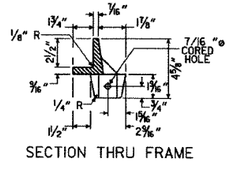
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

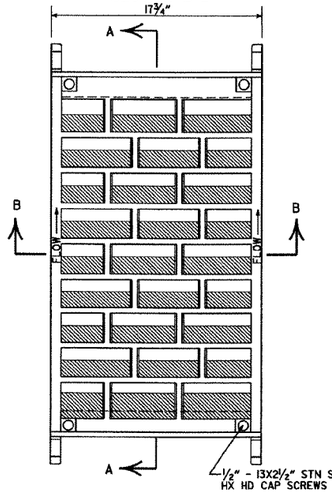
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211 LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

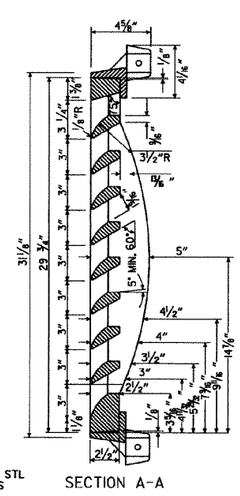


SECTION B-B



SECTION THRU FRAME



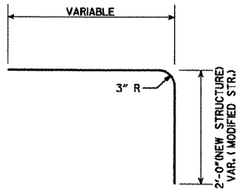


SECTION A-A

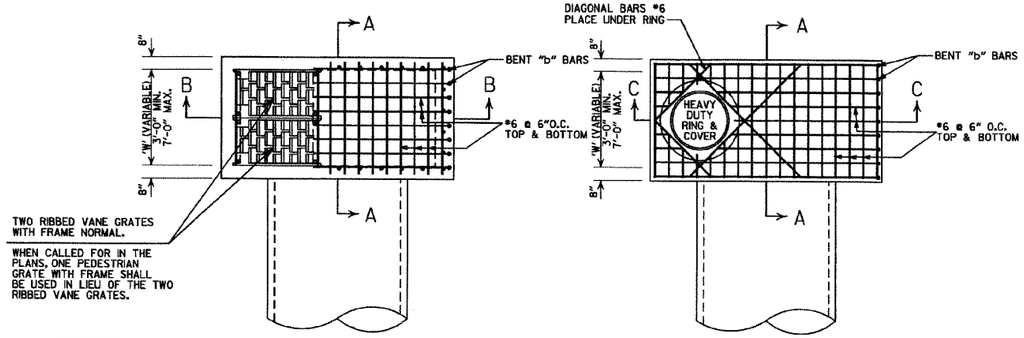
DETAILS OF RIBBED VANE GRATE AND FRAME

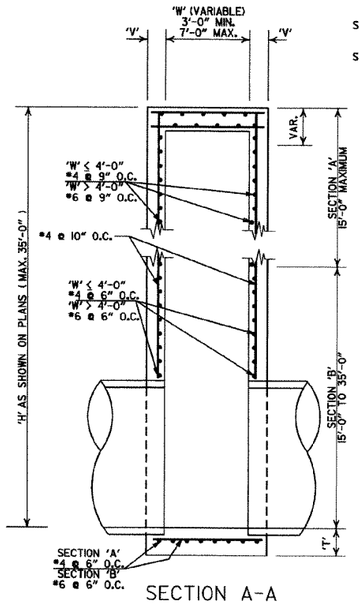
GENERAL NOTES (RIBBED VANE GRATE & FRAME)

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.



DETAIL OF BENT "b" BAR





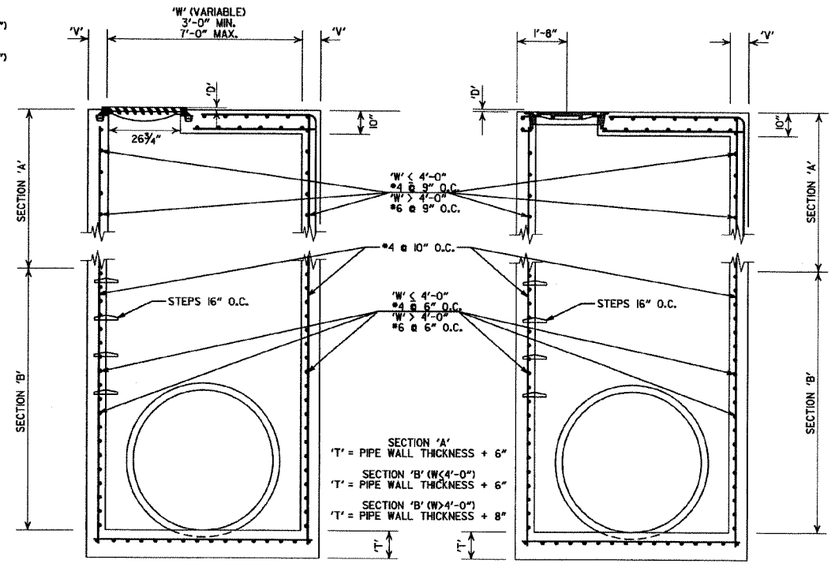
SECTION A-A

DETAILS OF DROP INLET
(TYPE ST)

SECTION 'A'
'V' = 8"

SECTION 'B' (W≤4'-0")
'V' = 8"

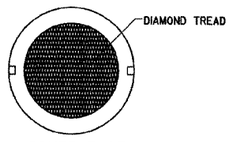
SECTION 'B' (W>4'-0")
'V' = 10"



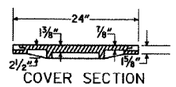
SECTION B-B

SECTION C-C

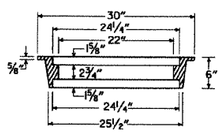
DETAILS OF JUNCTION BOX
(TYPE ST)



COVER FACE



COVER SECTION



RING SECTION

HEAVY DUTY
RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.
4. ALL #4 & #5 REINFORCING BARS ARE TO HAVE A MIN. 1½" COVER. ALL LARGER SIZE BARS ARE TO HAVE A 2" MIN. COVER.

GENERAL NOTES (HEAVY DUTY RING & COVER):

1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
4. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

DATE REVISED	DATE FILMED	DESCRIPTION
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

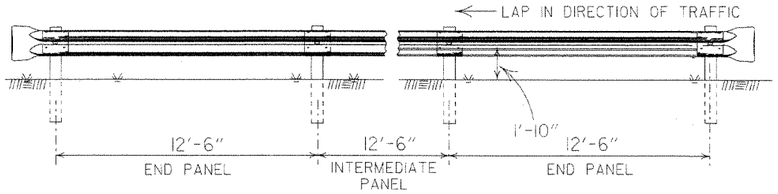
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

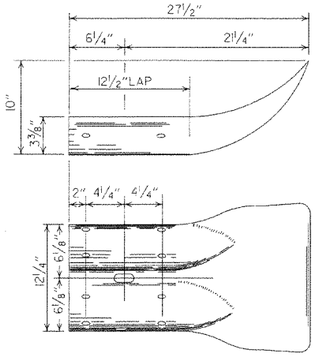
STANDARD DRAWING FPC-9S



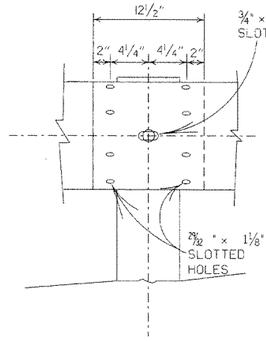
PLAN



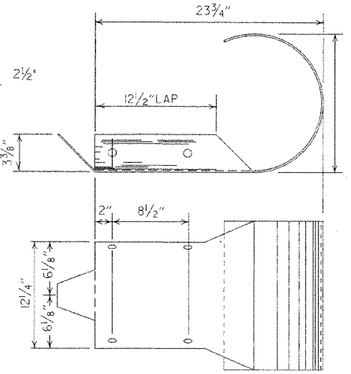
ELEVATION



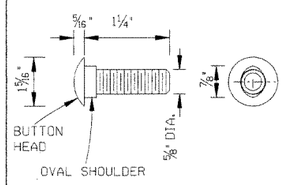
TERMINAL SECTION



RAIL SPLICE

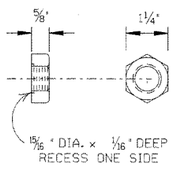


TERMINAL SECTION

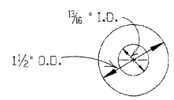


SPLICE BOLT

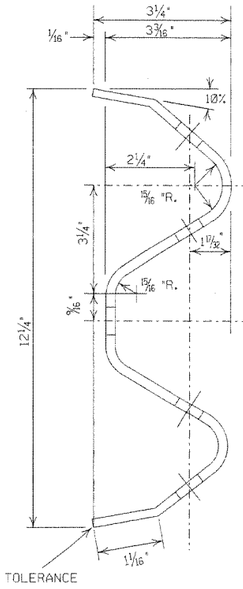
NOTE: POST BOLT SAME EXCEPT LENGTH.



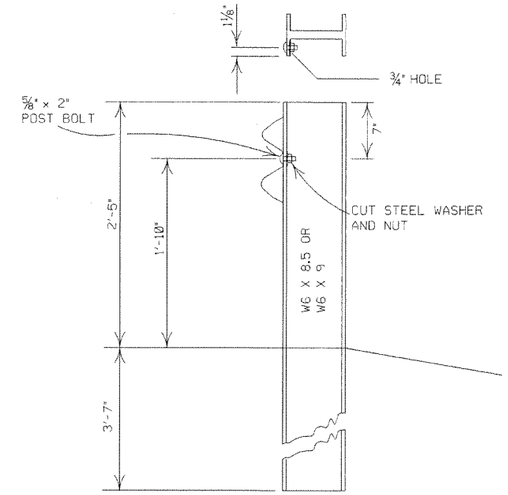
NUT



CUT STEEL WASHER

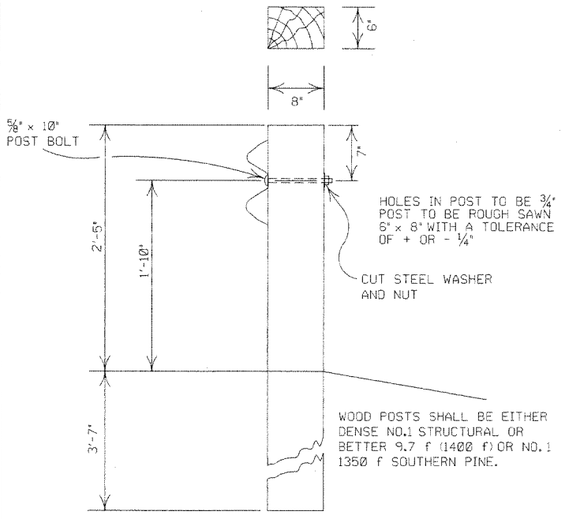


SECTION THRU RAIL



BOLT TO BE ON SIDE AWAY FROM APPROACHING TRAFFIC WHERE FEASIBLE.

STEEL POST



WOOD POST

DETAILS OF POST CONNECTIONS

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
8-22-02	REVISED DIMENSION ON STEEL POST	
11-16-01	REVISED STEEL AND WOOD POST	
8-12-98	REMOVED CONCRETE POST	
10-18-96	CHANGED WOOD POST NOTE	10-18-96
6-2-94	ADDED ALTERNATE STEEL POST SIZE	
8- 5-93	REVISED STEEL POSTS SIZE	8-5-93
8-15-91	DELETE STEEL PLATE WASHER & ADDED TYPE C TO TITLE	8-15-91
10-30-87	REMOVED DET. PLCMNT. ON HWY.	555-11-20-87
1-4-83	GRADE FOR WOOD POSTS	679-1-4-83
10-1-77	HARDENED WASHER	922-10-1-72
10-2-72	REVISED & REDRAWN	521-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS (TYPE C)

STREET / ROAD BARRICADE OR TEMPORARY INSTALLATION

STANDARD DRAWING GR-7

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

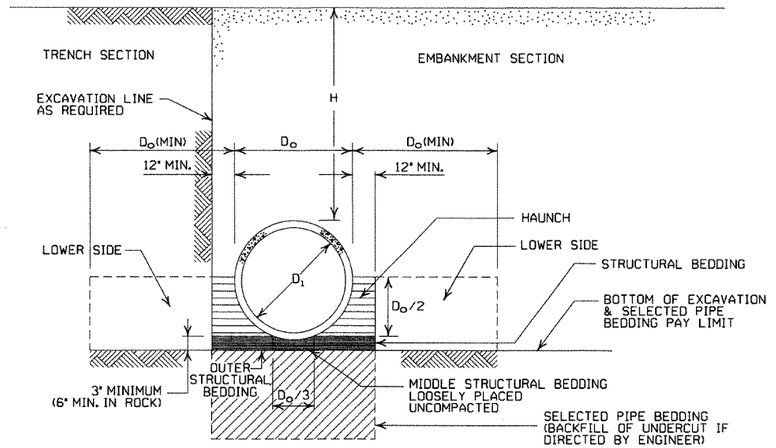
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 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
12-15-11	REVISED FOR LRFD DESIGN SPECIFICATIONS	
5-18-00	REVISED TYPE 3 BEDDING & ADDED NOTE	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL			ALUMINUM		
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION 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.

CONSTRUCTION SEQUENCE

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

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

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

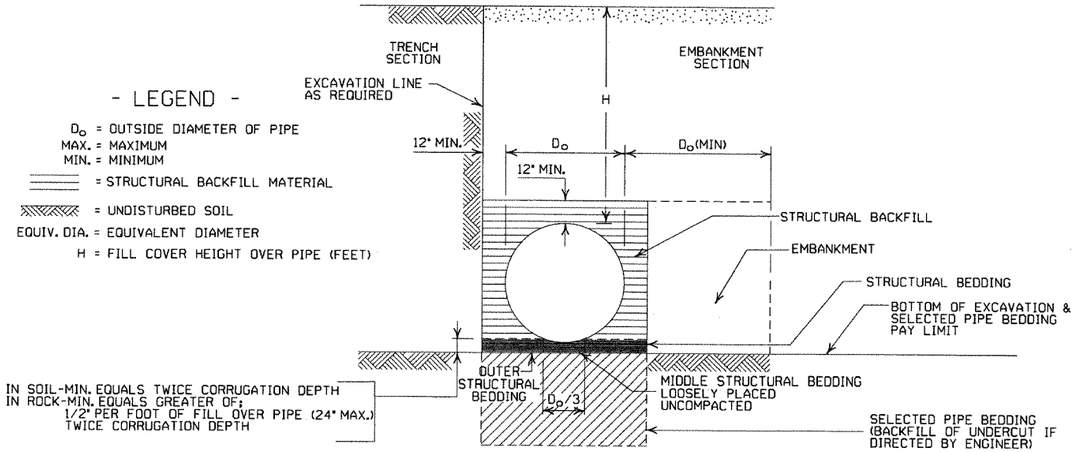
③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

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

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

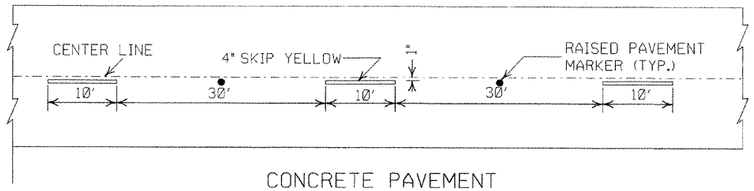
1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER 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
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

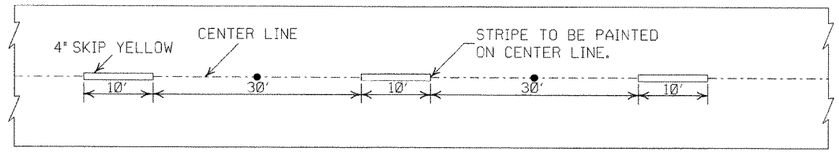
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

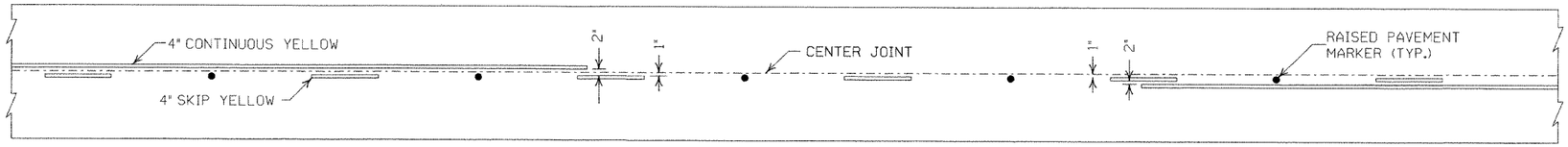


CONCRETE PAVEMENT

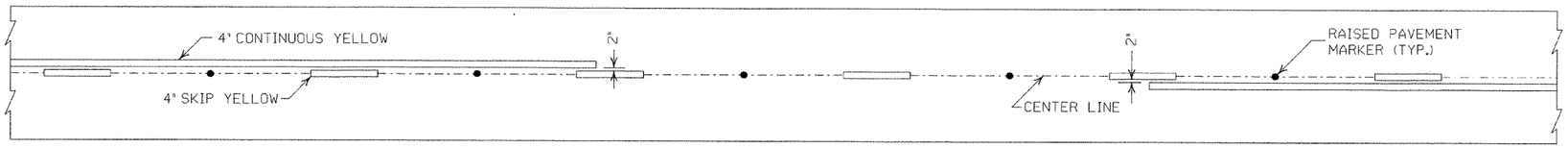


ASPHALT PAVEMENT

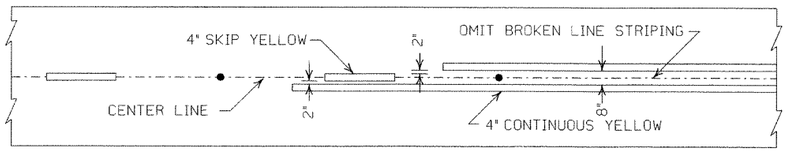
BROKEN LINE STRIPING



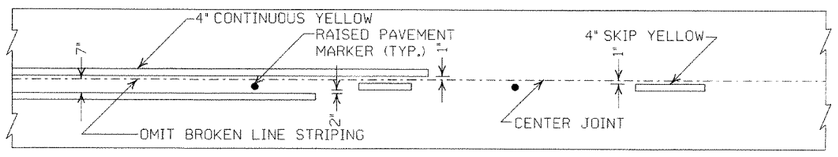
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT



ASPHALT PAVEMENT



CONCRETE PAVEMENT

GENERAL NOTES:

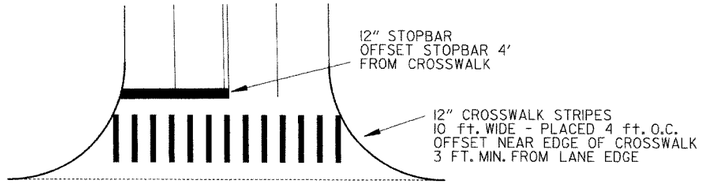
THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

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

NOTE:

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

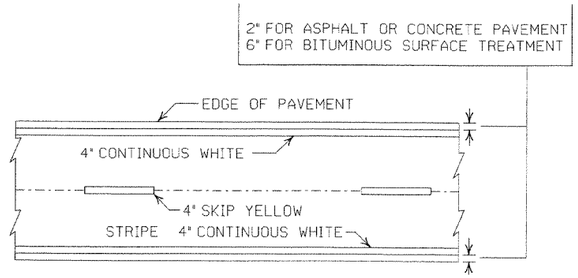
STRIPING AT ADJACENT NO PASSING LANES



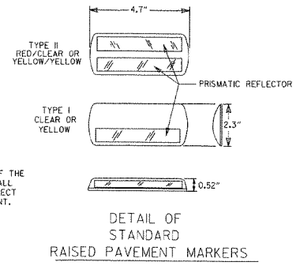
CROSSWALK AND STOPBAR DETAILS

NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE 'MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.'
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.



PAVEMENT EDGE LINE MARKING



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

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

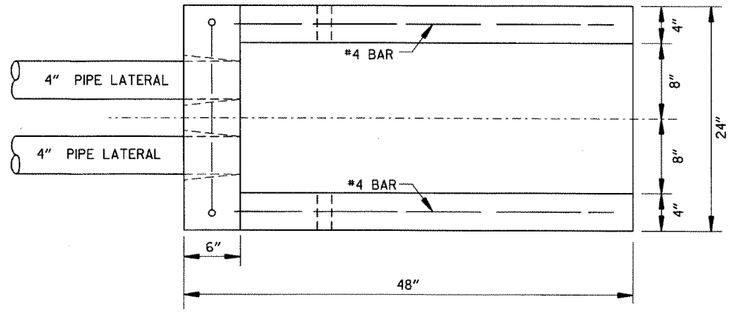
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

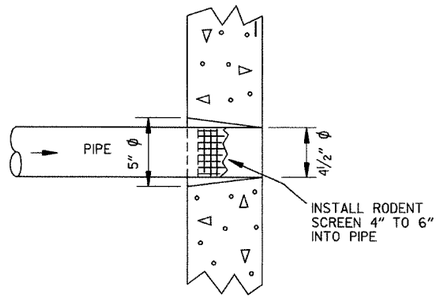
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

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

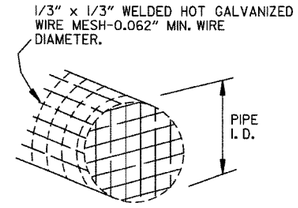
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



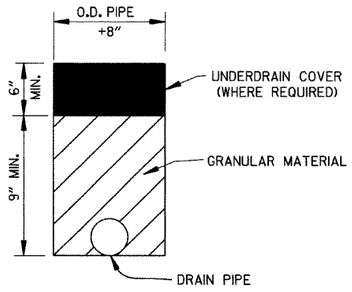
PLAN VIEW

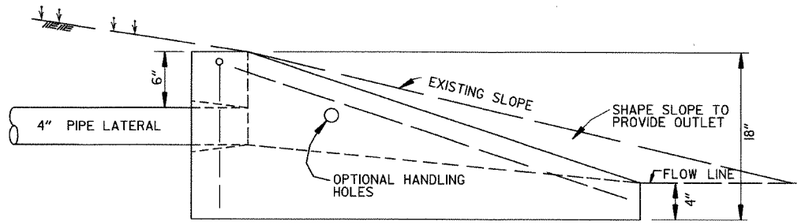


DETAIL OF HOLE FOR 4" PIPE

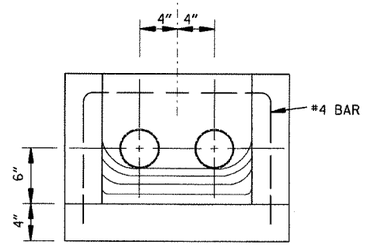


DETAIL OF RODENT SCREEN

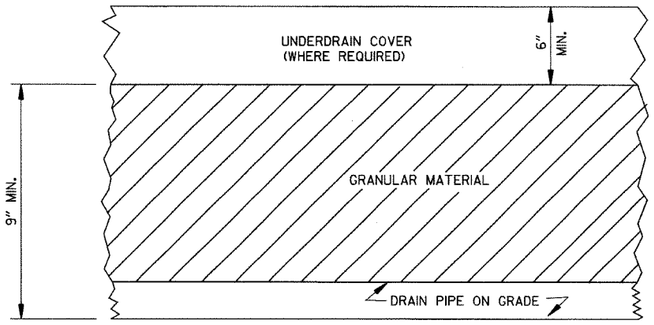




SIDE VIEW

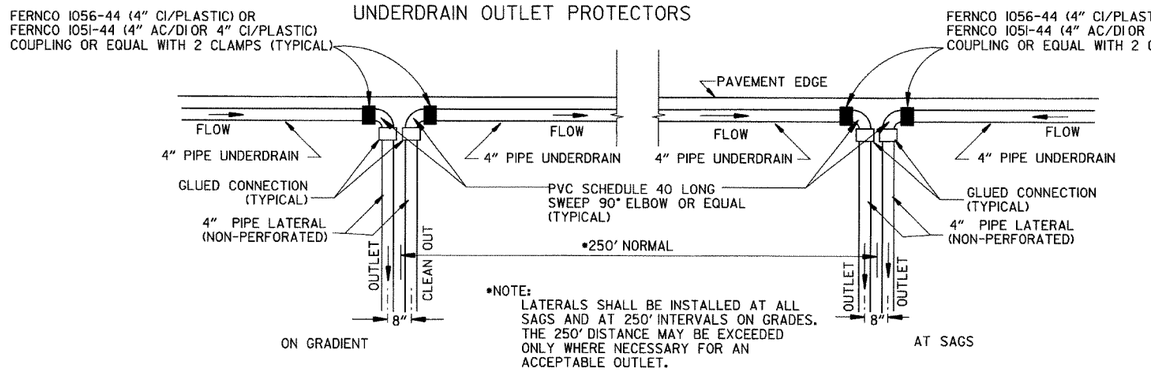


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

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

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

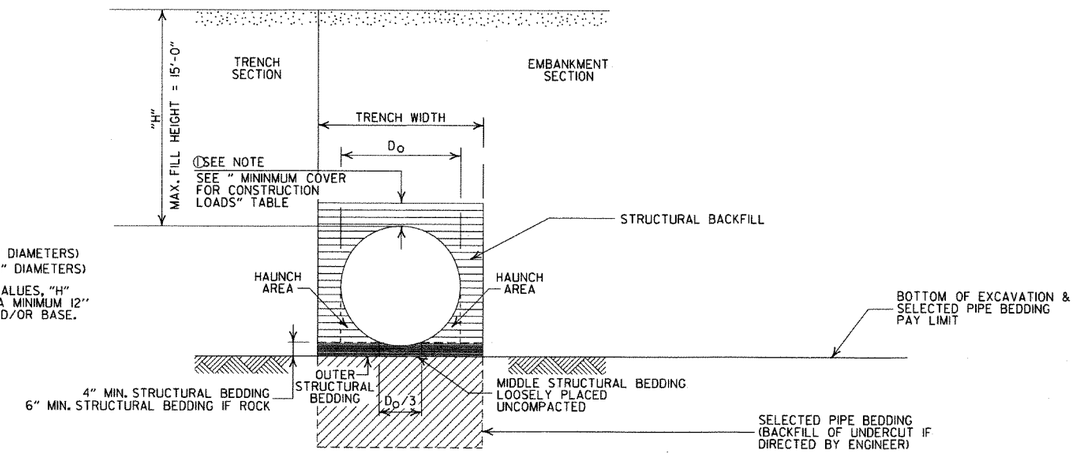
PIPE DIAMETER	TRENCH WIDTH (FEET) "H" < 10'-0"	TRENCH WIDTH (FEET) "H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)
MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS 18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
Ø = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

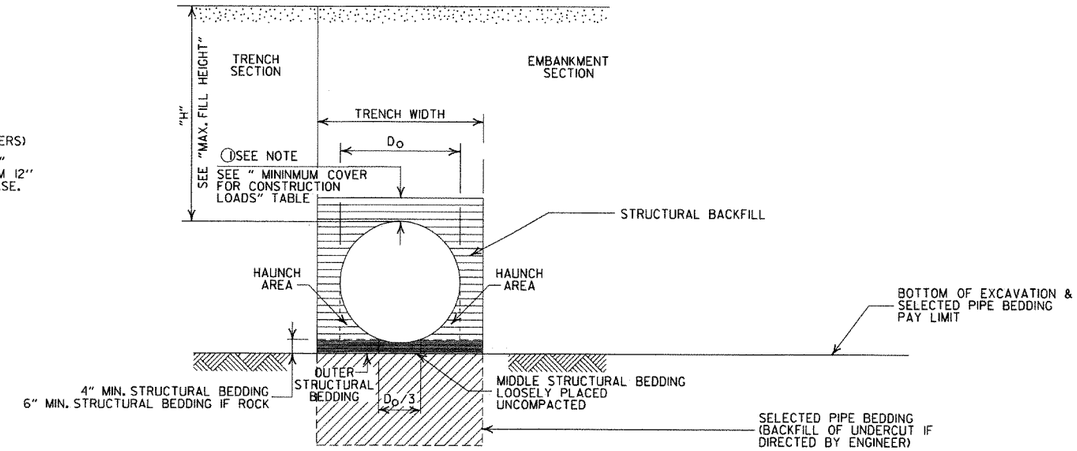
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

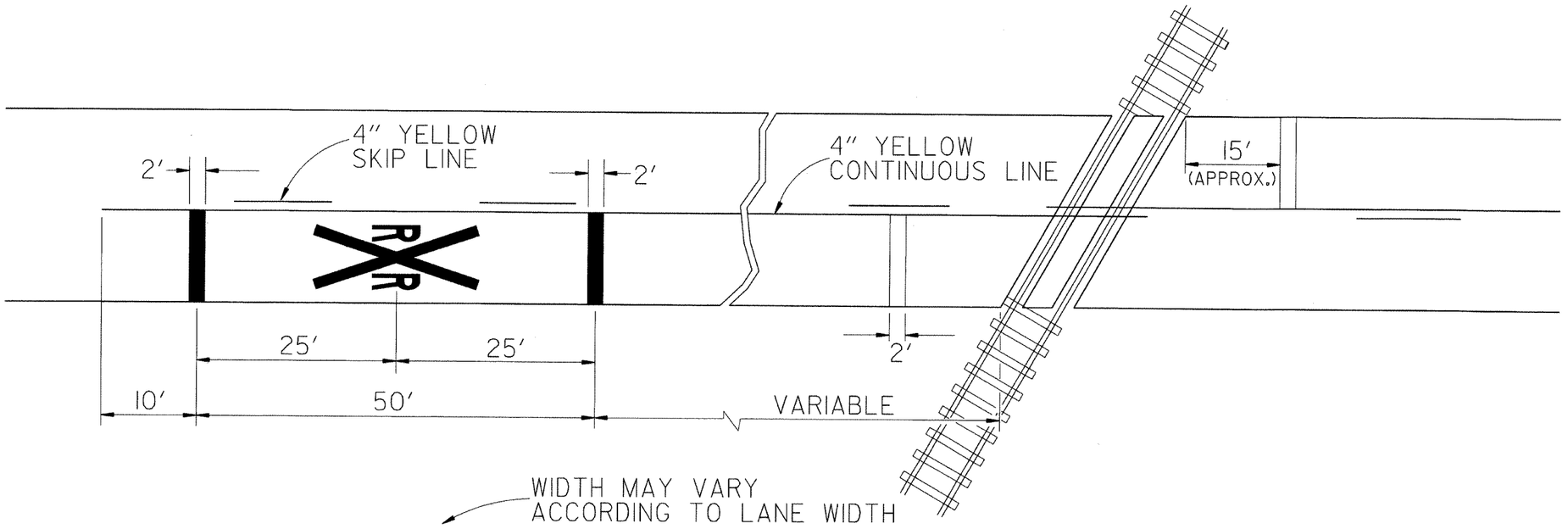
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2



DETAIL OF PAVEMENT MARKINGS FOR RAILROAD CROSSING

PAVEMENT MARKING TO BE SYMMETRICAL ABOUT RAILROAD

NOTES:
THE DISTANCE FROM THE RAILROAD CROSSING MARKING TO THE NEAREST TRACK WILL VARY ACCORDING TO THE APPROACH SPEED AND THE SIGHT DISTANCE OF THE VEHICULAR TRAFFIC APPROACHING, BUT PROBABLY SHOULD BE NOT LESS THAN 50 FEET.

A THREE LANE ROADWAY SHOULD BE MARKED WITH A CENTERLANE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL RXR SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

REFER TO STANDARD ALPHABET FOR HIGHWAY SIGNS AND MARKINGS FOR RXR SYMBOLS DETAILS.

DATE	REVISION	DATE FILMED
11-20-08	CORRECTED SPELLING	
4-10-03	REVISED NOTES	
3-2-81	DELETED LETTER & ADDED NOTE	684-3-2-81
7-20-79	STOP LINE CHGD. TO PERP.	636-8-30-79
4-23-75	SHEET RENUMBER	697-4-20-79
4-23-75	REDRAWN	860-4-23-75

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING
FOR RAILROAD CROSSING

STANDARD DRAWING RRS-1

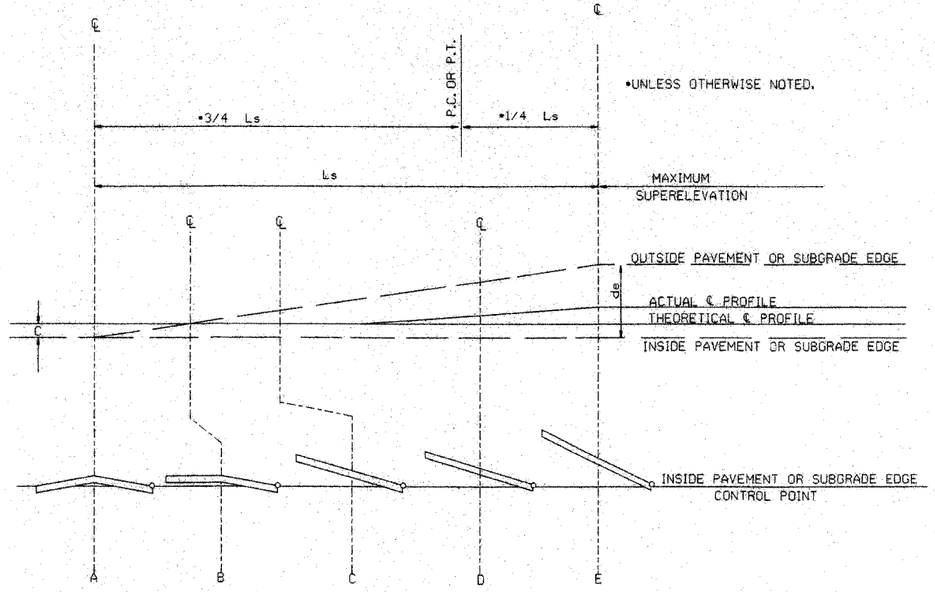
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

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

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 3° 30′

ABBREVIATIONS

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



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

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

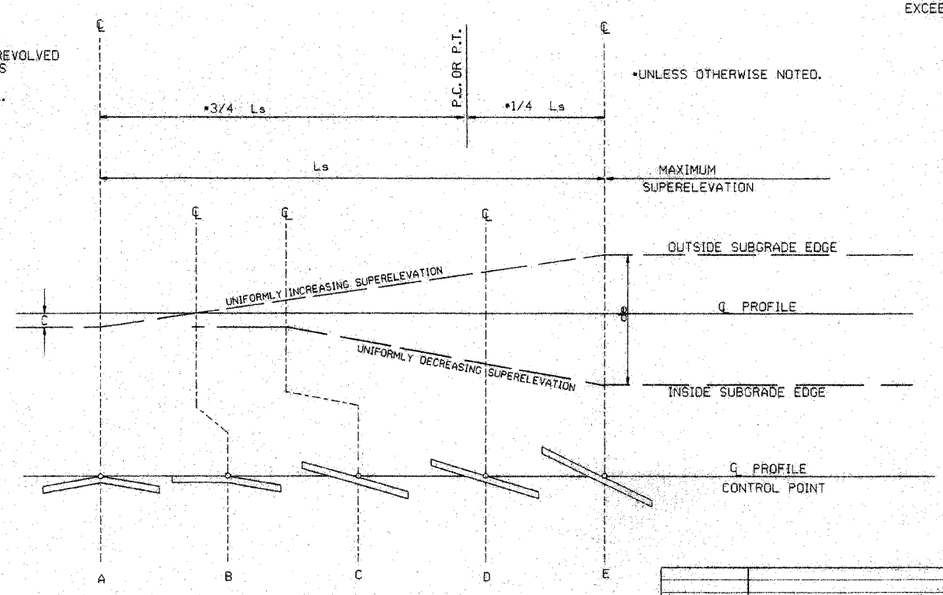
GENERAL NOTES

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

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

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

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



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

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

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

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

FILE STDSE2.DGN

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		113	
JOB NO.				

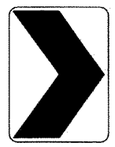
(4) STD. HWY. SIGNS & SUP ASSEMB



R1-1
30"X30"



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



W1-8
18"X24"



W2-5
30"X30"



W3-1
36"X36"



W5-1
36"X36"



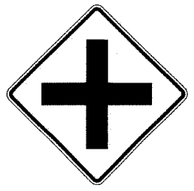
M6-3
21"X15"



R1-2
36"X36"X36"



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



W2-1
30"X30"



S1-1
36"X36"

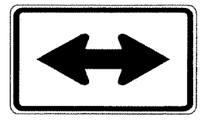


W3-2
36"X36"

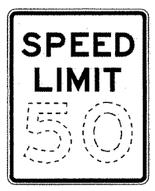


County
Route Marker
M1-5
24"X24"

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



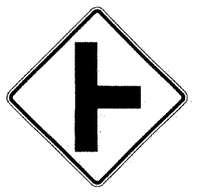
M6-4
21"X15"



R2-1
24"X30"



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



W2-2
30"X30"



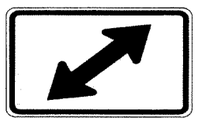
W5-2
36"X36"



W8-3
36"X36"



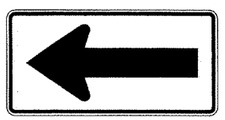
R1-3
12"X6"



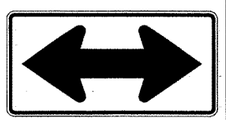
M6-5
21"X15"



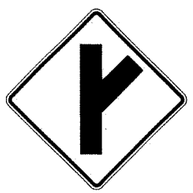
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"



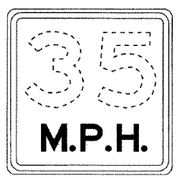
W1-7
48"X24"



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



W5-3
36"X36"

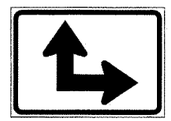


W13-1
18"X18"



M6-1
21"X15"

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



M6-6
21"X15"



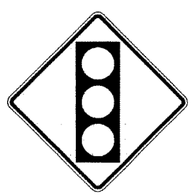
W1-2
30"X30"
(LT. or RT.)



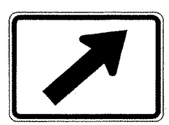
W2-4
30"X30"



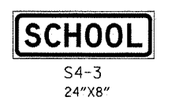
W10-1
36" DIAMETER



W3-3
36"X36"



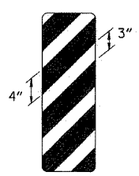
M6-2
21"X15"



S4-3
24"X8"



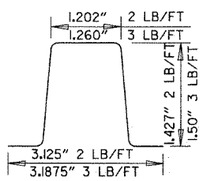
S4-2
24"X10"



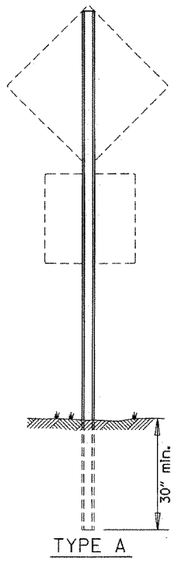
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

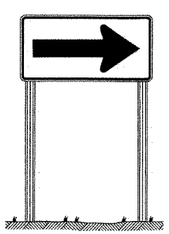


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES

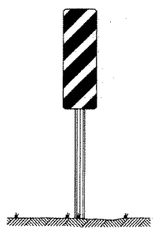


TYPE A

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



TYPE B



TYPE C

MINIMUM WEIGHT

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

STANDARD HIGHWAY SIGNS

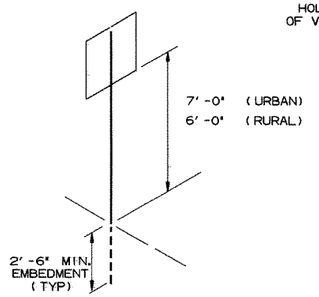
DATE	REVISION	DATE FILMED
4-17-08	REVISED SIGN DESIGNATION - W3-1& W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED W1-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2# - 3# ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

SUPPORT ASSEMBLIES

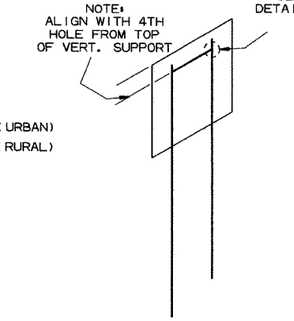
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES

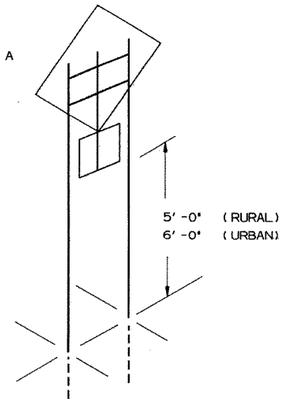
STANDARD DRAWING SHS-1



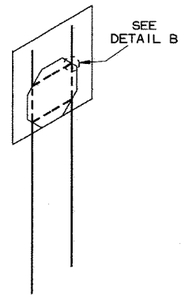
U-1



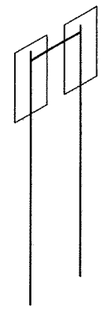
U-2



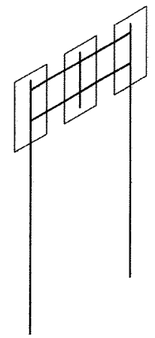
U-2 (A)



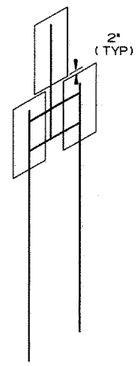
U-2 (B)



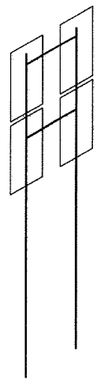
U-2 (1)



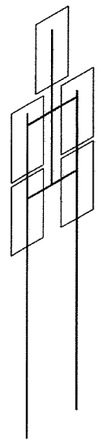
U-2 (2)



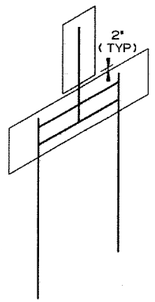
U-2 (3)



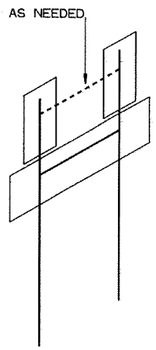
U-2 (4)



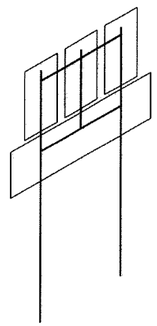
U-2 (5)



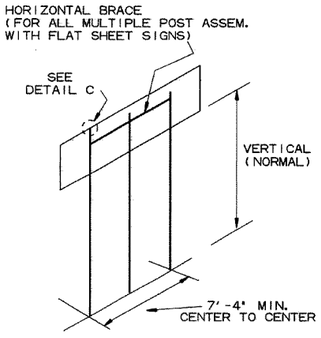
U-2 (6)



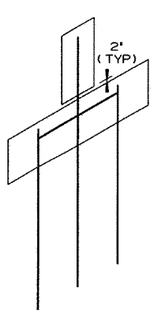
U-2 (7)



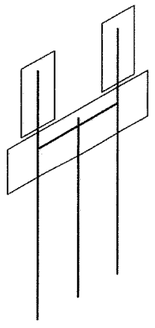
U-2 (8)



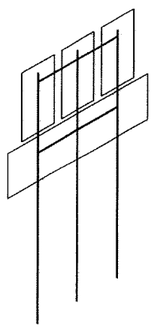
U-3



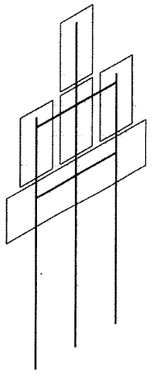
U-3 (1)



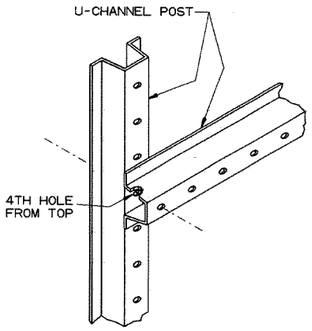
U-3 (2)



U-3 (3)

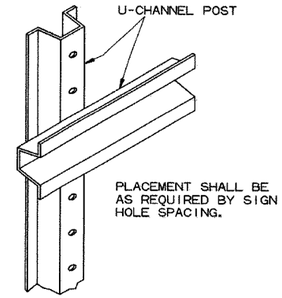


U-3 (4)



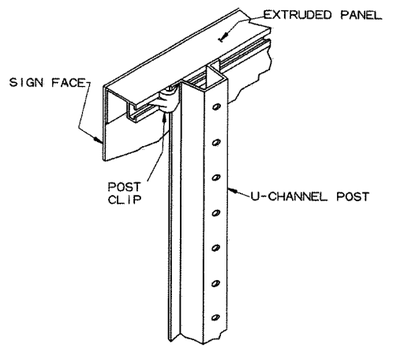
DETAIL A

SHOWING HORIZONTAL BRACE



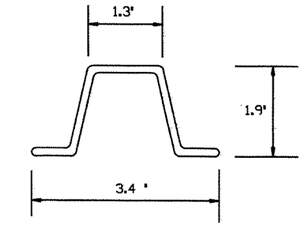
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



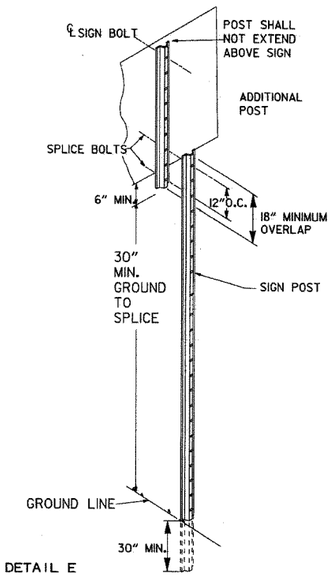
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



DETAIL D

(3 LB. U-CHANNEL POST)



DETAIL E

NOTES:

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

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

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

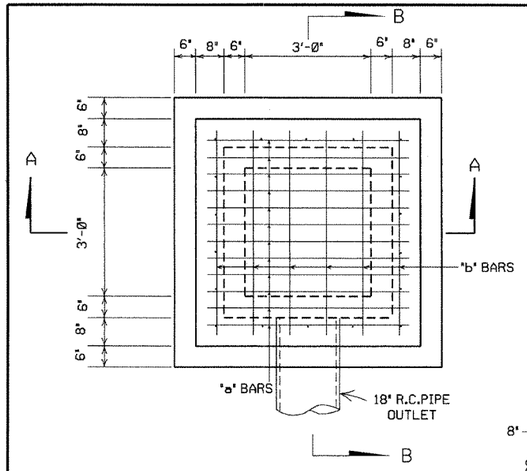
ALL SIGN POSTS SHALL BE PLUMB.

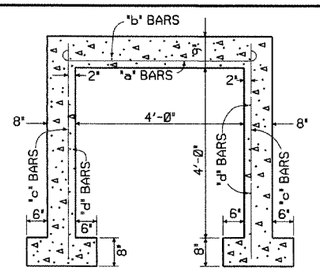
DATE	REVISION	FILMED
10-9-03	REMOVED ROUND POST & REVISED SPACING	10-9-03
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

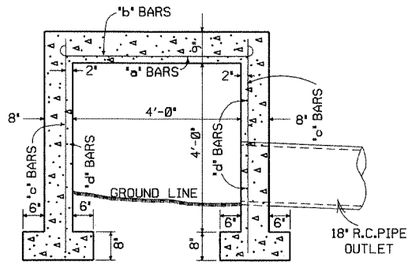
U-CHANNEL POST ASSEMBLIES

STANDARD DRAWING SHS-2





SEC A-A

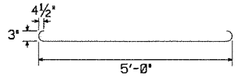


SEC B-B

STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
'a'	11	6'-0"	5'
'b'	6	6'-0"	10'
'c'	16	5'-1"	12'
'd'	16	5'-0"	12'

ALL STEEL TO BE #4 BARS



'a' & 'b' BARS

QUANTITIES

CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

GENERAL NOTE:

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

REINFORCED CONCRETE SPRING BOX

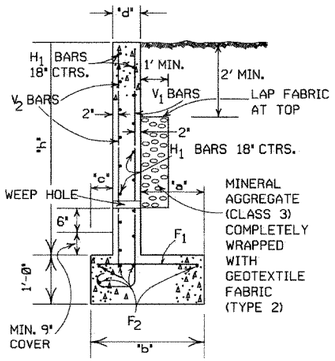
GENERAL NOTES

THE PAY ITEMS FOR THE CONSTRUCTION OF REINFORCED CONCRETE RETAINING WALL SHALL BE FOR THE QUANTITIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL AND EXCAVATION FOR STRUCTURES.

MINERAL AGGREGATE WRAPPED WITH GEOTEXTILE FABRIC (CONTINUOUS) TO BE PLACED 1'-0" IN WIDTH AND 1'-0" IN HEIGHT AS A SUBSIDIARY ITEM TO THE VARIOUS PAY ITEMS.

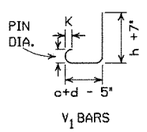
3" WEEP HOLES (MAX. SPACING 10'-0"CTRS.) TO BE PLACED WHERE SPECIFIED BY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO PLACE CONTRACTION JOINTS ON 20' CENTERS AND EXPANSION JOINTS ON 60' CENTERS.

ALL EXPOSED EDGES TO BE CHAMFERED ¾".



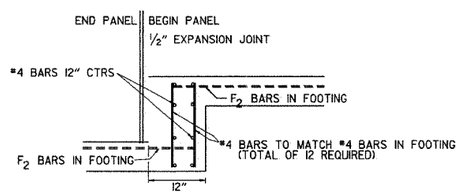
BENDING DIAGRAM

BAR SIZE	K	PIN DIA.
#4	4½"	2½"
#5	5"	3"

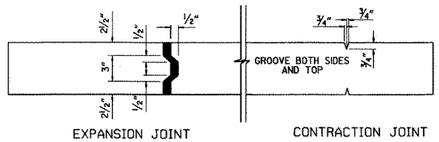


STEEL SCHEDULE

'c'	'd'	'h'	'a'	'b'	V_1 BARS SIZE	V_1 BARS SPACING	F_1 BARS SIZE	F_1 BARS SPACING	H_1 # 4 BARS SPAC.	V_2 # 4 BARS SPAC.	F_2 # 4 BARS NO. REQ'D.
8"	8"	1'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	5
8"	8"	2'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	5
8"	8"	3'-0"	8"	2'-0"	#4	12"	#4	18"	18"	18"	5
8"	8"	4'-0"	1'-2"	2'-6"	#4	12"	#4	12"	18"	18"	5
8"	8"	5'-0"	1'-8"	3'-0"	#4	9"	#4	9"	18"	18"	5
8"	8"	6'-0"	2'-2"	3'-6"	#4	6"	#4	6"	18"	18"	6
12"	8"	7'-0"	2'-4"	4'-0"	#4	8"	#4	8"	18"	18"	6
12"	8"	8'-0"	2'-10"	4'-6"	#4	6"	#4	6"	18"	18"	6
15"	10"	9'-0"	2'-11"	5'-0"	#4	5"	#4	5"	18"	18"	6
17"	10"	10'-0"	3'-3"	5'-6"	#5	6"	#5	6"	18"	18"	7



FOOTING STEPS

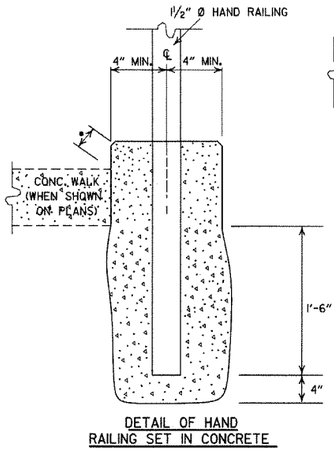


JOINT DETAILS

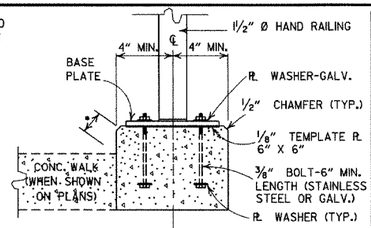
NOTE: JOINT MATERIAL SHALL BE PREFORMED MEETING THE REQUIREMENTS OF SUBSECTION 501.02(n) FOR TYPE 2

REINFORCED CONCRETE RETAINING WALL

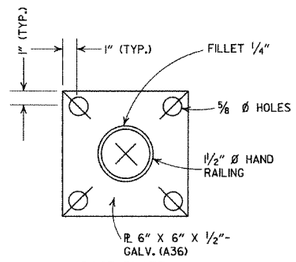
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

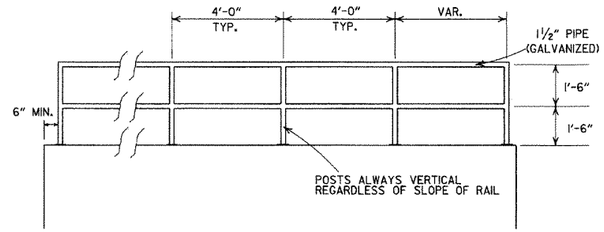


POST CONNECTION TO WALL

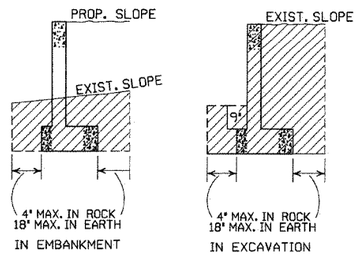


BASE PLATE

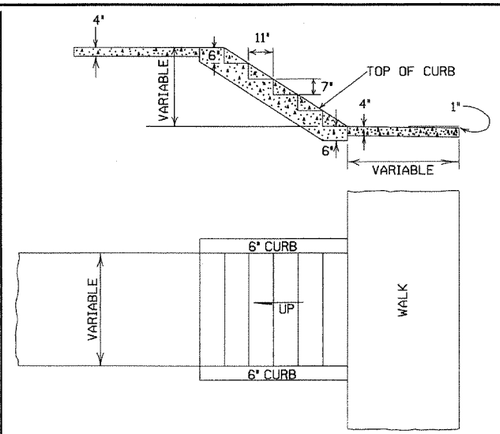
POST CONNECTION DETAILS



HAND RAILING DETAILS



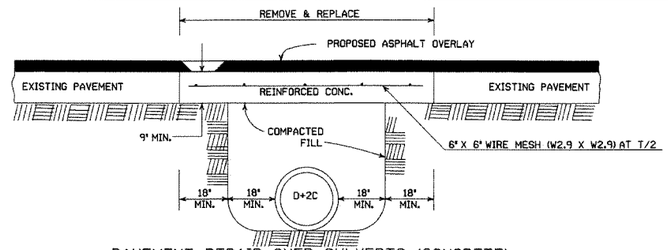
NOTE: HATCHED AREA DENOTES MAX. LIMITS OF EXCAVATION FOR STRUCTURES FOR RETAINING WALL.



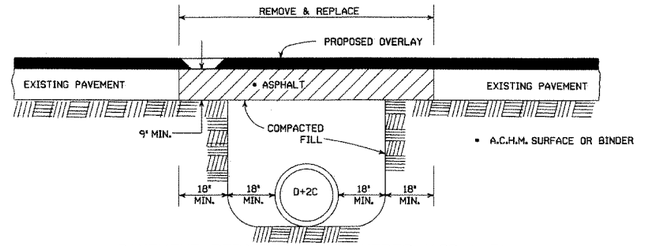
GENERAL NOTES

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. TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DETAILS OF CONCRETE STEPS & WALKS



PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

DATE	REVISION	DATE FILMED
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	ADD WEEP HOLE; REV. JOINT SPACING IN RET. WALL	
6-2-94	CHANGED CONST. TO CONTRACTION JOINT	
10-1-92	CHANGED MESH FABRIC TO WIRE MESH	10-1-92
8-15-91	DELETED HDWL MODIFICATION DETAIL	8-15-91
11-8-90	DELETED COLD MIX FROM CULV'T. REPAIR	11-8-90
11-30-89	REV. RETAINING WALL STEEL SCHEDULE	11-30-89
11-17-88	V_1 BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR	649-7-15-88
	ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	
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

4-17-08	REV. JOINT & FOOTING STEP DETAILS
11-29-07	REVISED RETAINING WALL DRAINAGE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

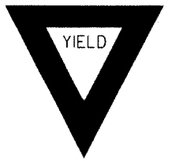
STANDARD DRAWING SI - 1

R1-1



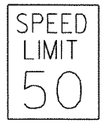
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

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"

R2-5A



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

R2-5C



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

R4-1



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

R4-2



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

R5-1



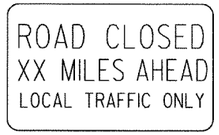
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



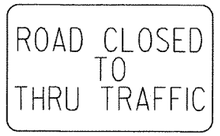
48"X30"

R11-3A



60"X30"

R11-4



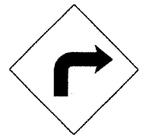
60"X30"

RSP-1



48"X30"

W1-1



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

W1-2



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

W1-3



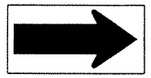
STD. 48"X48"

W1-4



STD. 48"X48"

W1-6



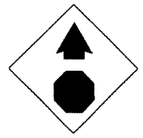
STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



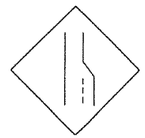
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



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

W9-2



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

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



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

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



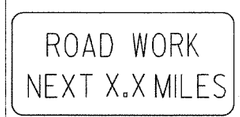
STD. 36"X36"
FWY. 48"X48"

W8-9



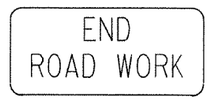
STD. 36"X36"
FWY. 48"X48"

G20-1



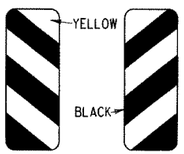
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9



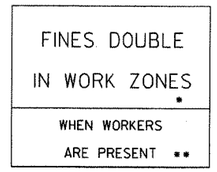
STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10



48"X18"

R55-1



36"X60"

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

ADVANCE DISTANCES
(XXXX)

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

GENERAL NOTES:

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

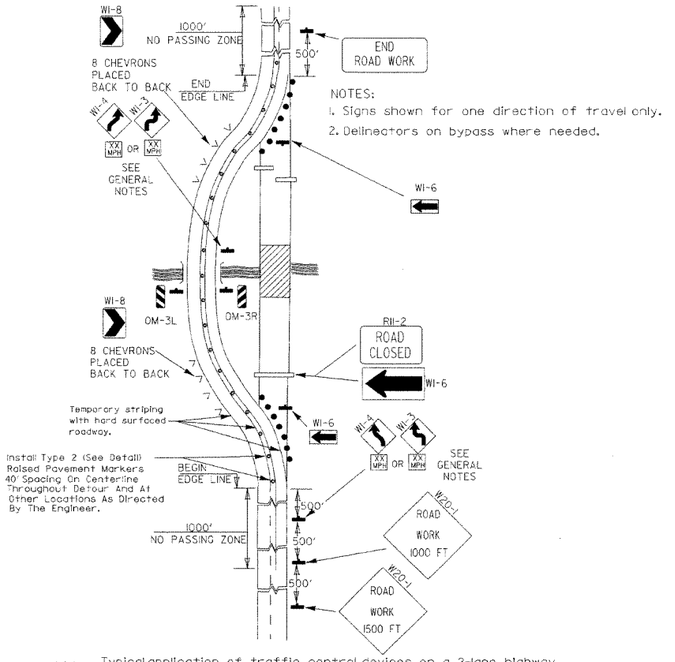
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

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

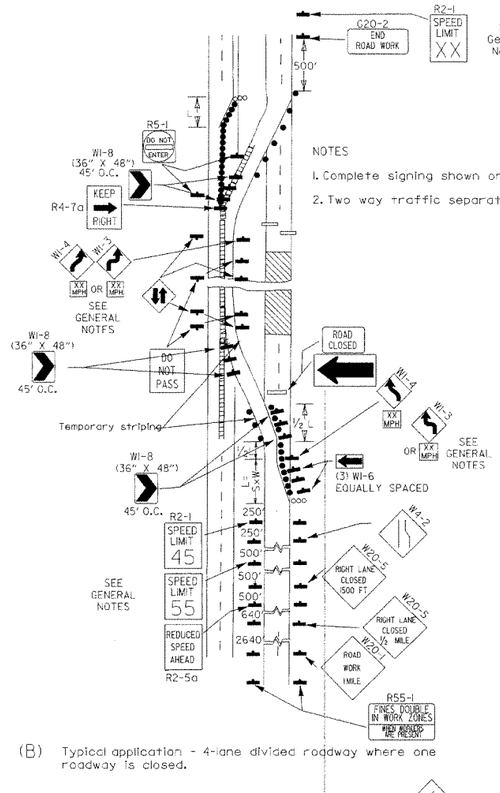
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

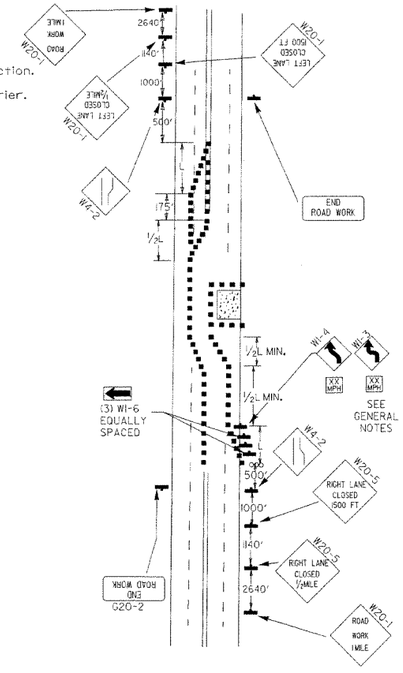
STANDARD DRAWING TC-1



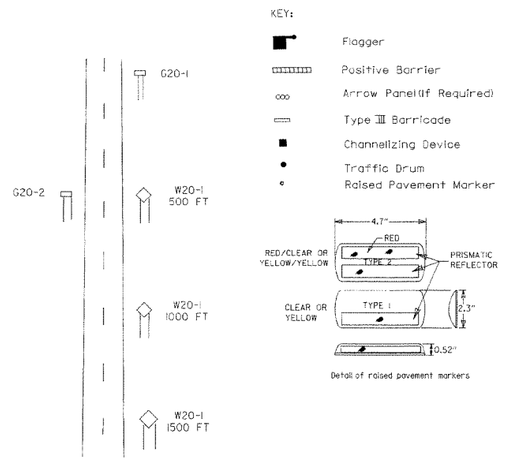
(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.



(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:

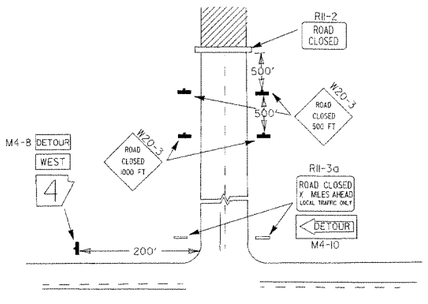
L= Minimum length of taper.

S= Numerical value of posted speed limit prior to work or 85th percentile speed.

W= Width of offset.

GENERAL NOTES:

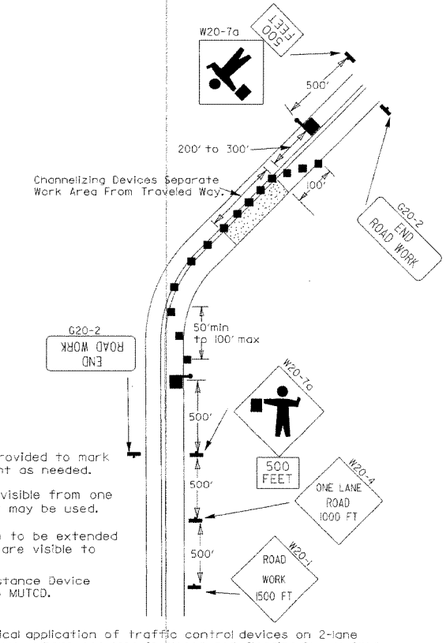
1. Advisory speed posted on WI-3 or WI-4 curve warning signs to be determined at site. Use WI-4 when speed is greater than 30mph and WI-3 when 30mph or less.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed 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.



NOTES:

1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

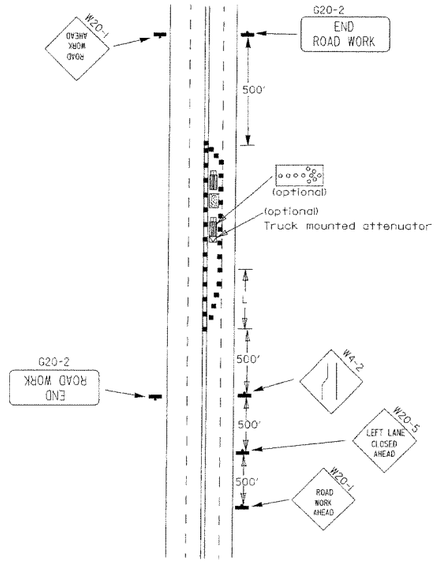
(D) Typical application - roadway closed beyond detour point.



NOTES:

1. Flood lights should be provided to mark flagger stations at night as needed.
2. If entire work area is visible from one station, a single flagger may be used.
3. Channelizing devices are to be extended to a point where they are visible to approaching traffic.
4. Automated Flagger Assistance Device (AFAD) optional. Refer to MUTCD.

(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.



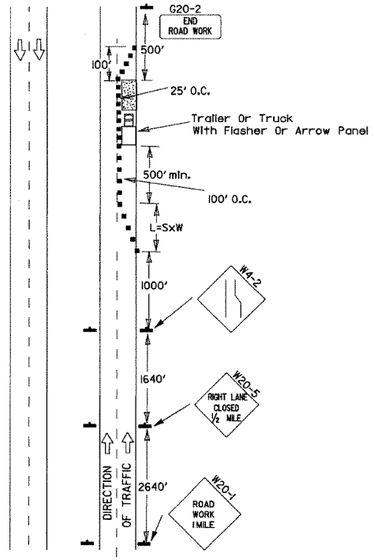
(F) Typical application - 4-lane undivided roadway with inside lane closed.

DATE	REVISION	FILMED
3-8-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON WI-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

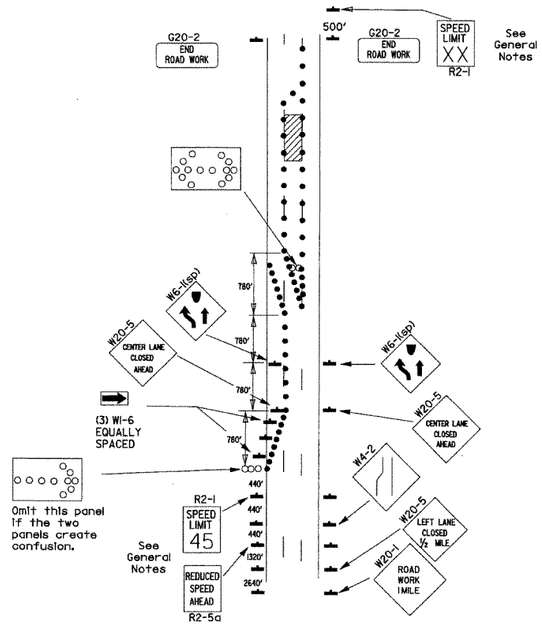
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

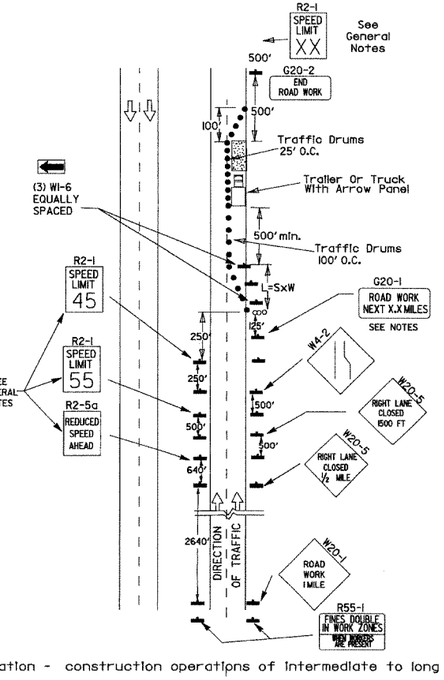
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (If Required)

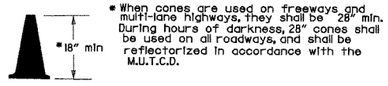
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

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

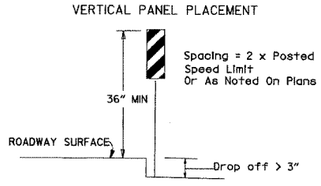
Channelizing devices

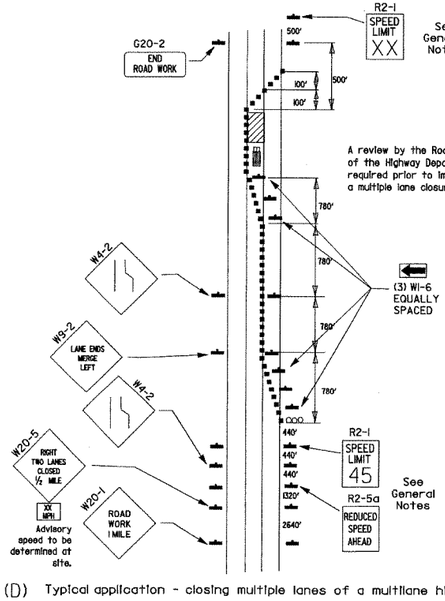


* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

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

VERTICAL PANEL PLACEMENT





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

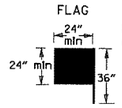
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

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

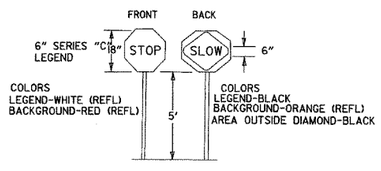
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

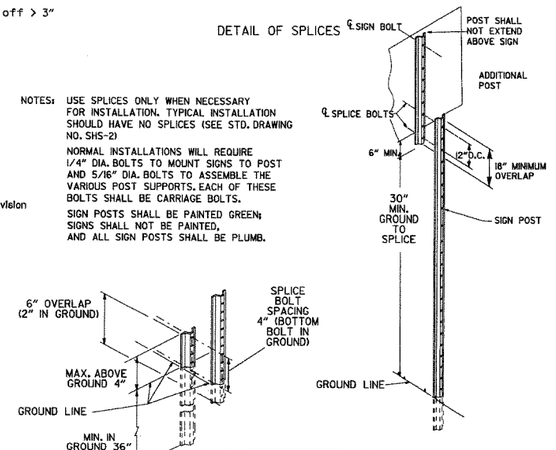


Flag shall be of good grade red material

STOP SLOW PADDLE



DETAIL OF SPLICES



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

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

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

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

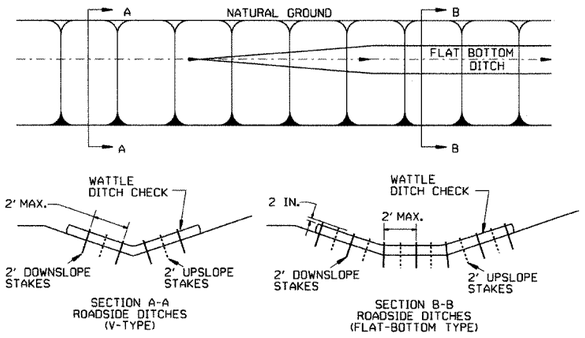
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

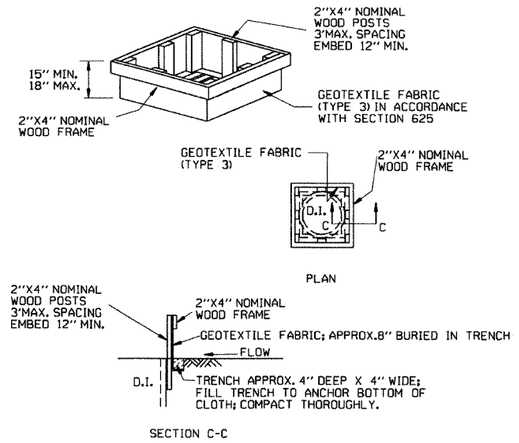
STANDARD DRAWING TC-3

GENERAL NOTES

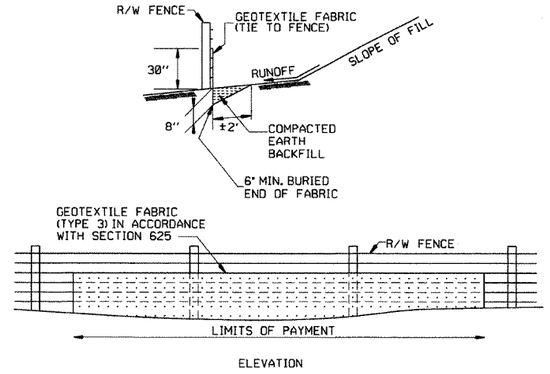
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

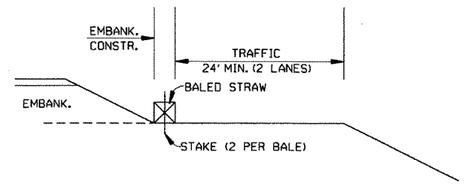
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

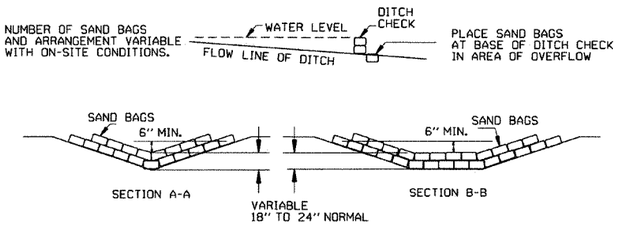
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

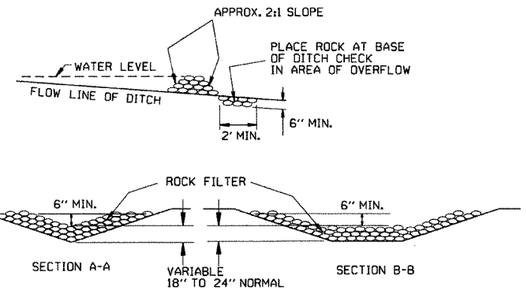
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



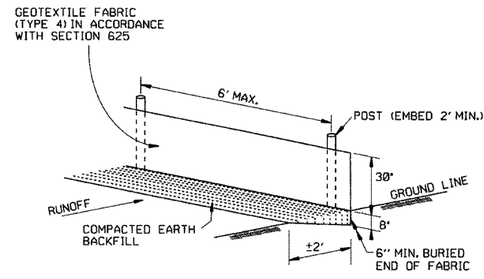
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

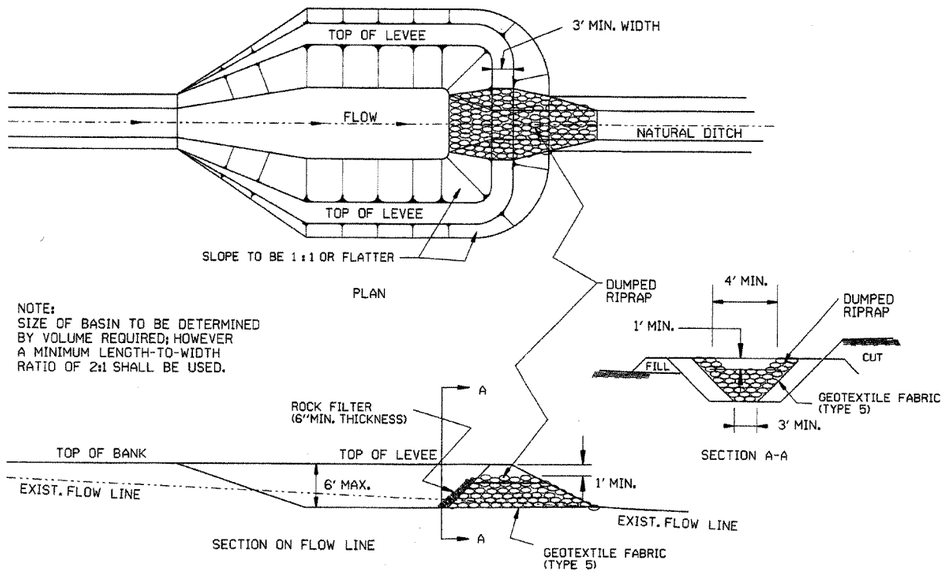
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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

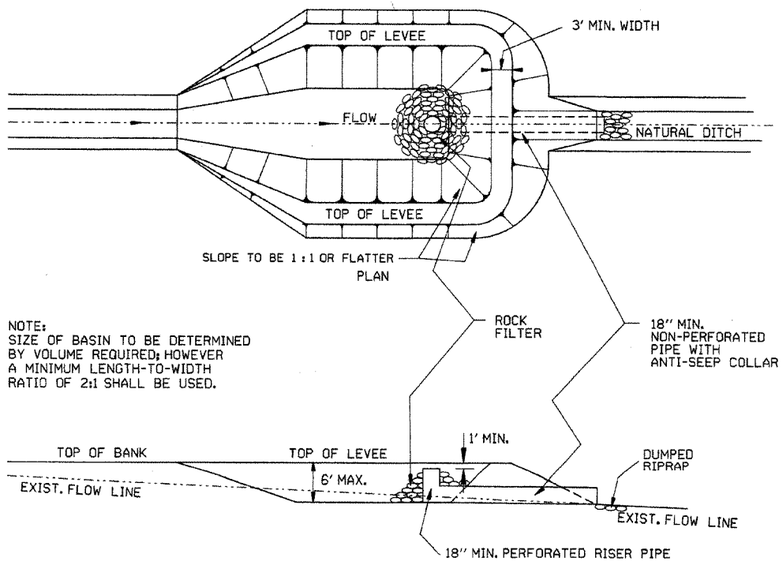
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

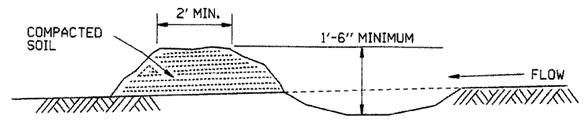
STANDARD DRAWING TEC-1



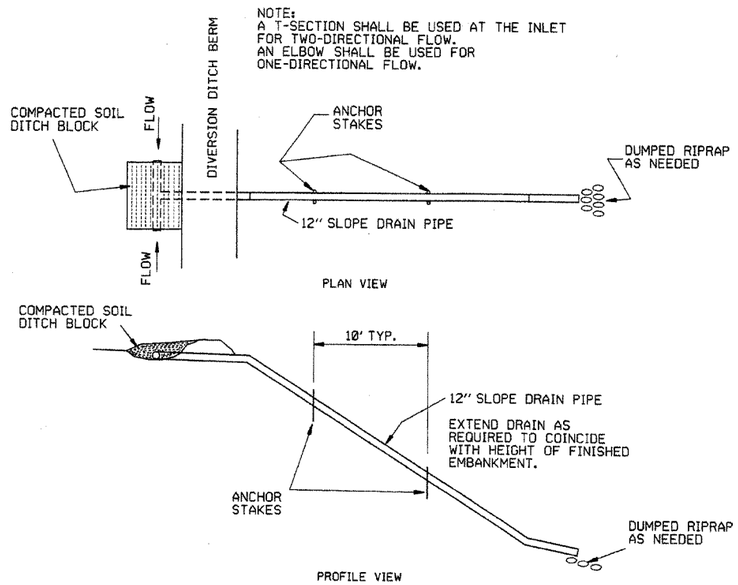
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



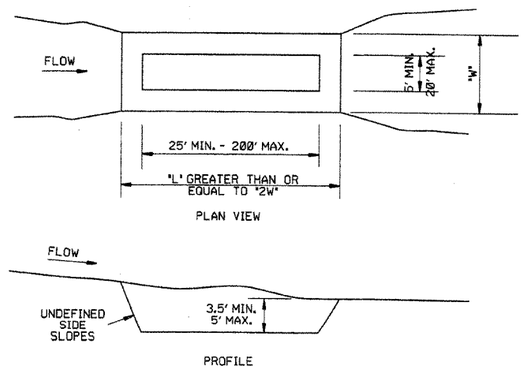
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

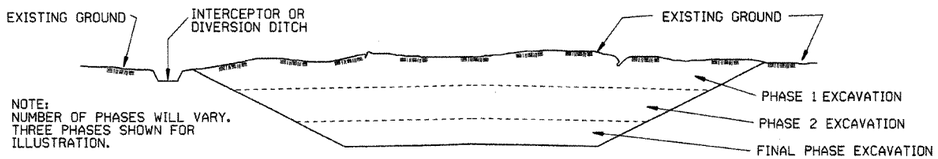
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



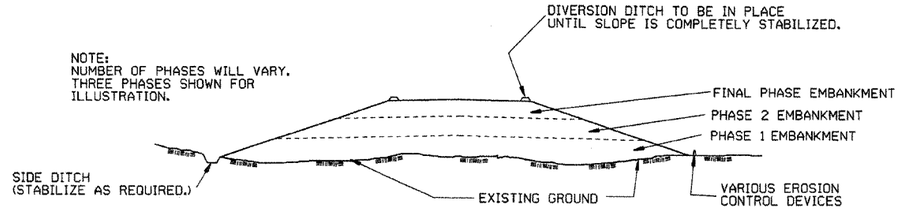
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

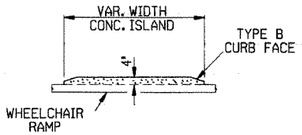
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

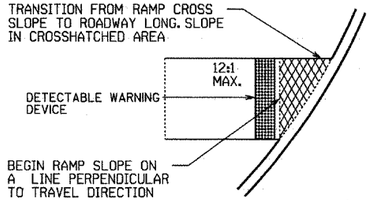
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

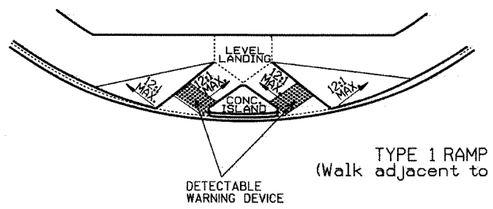
stdtec3.dgn



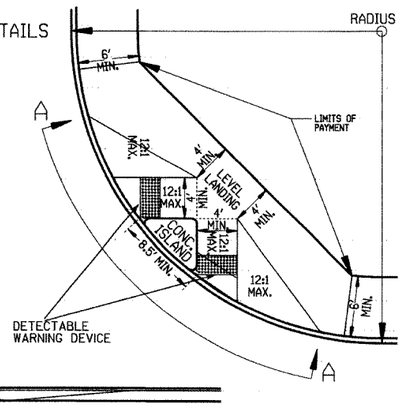
CONCRETE ISLAND DETAIL

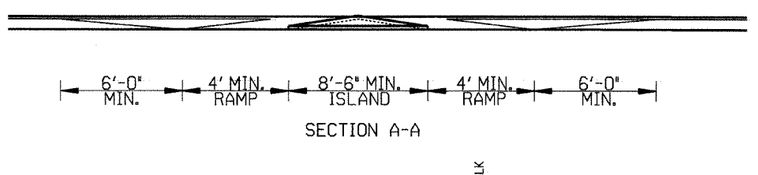


SLOPE TRANSITION DETAILS



TYPE 1 RAMP
(Walk adjacent to curb)

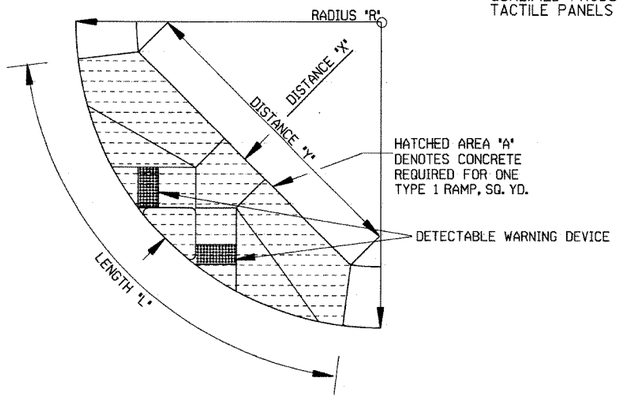




SECTION A-A

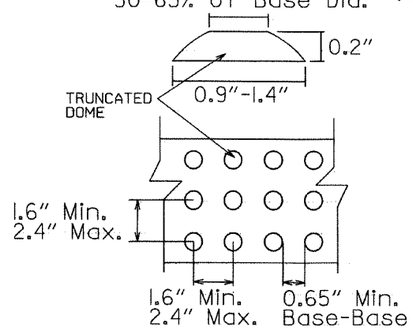
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

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

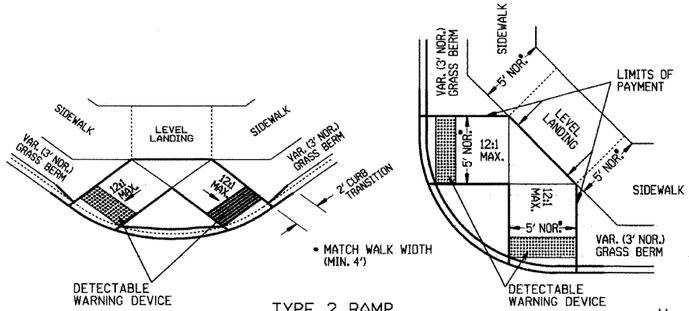
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT 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 AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

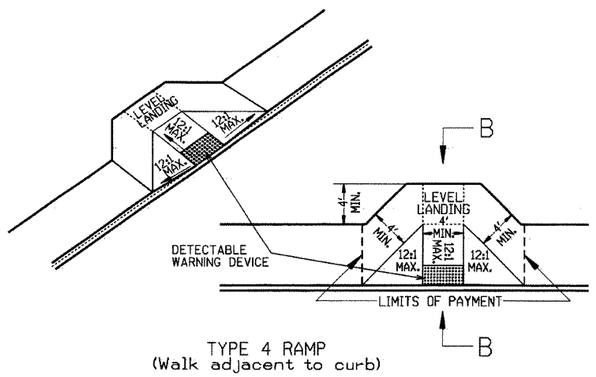
GENERAL NOTES:

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.

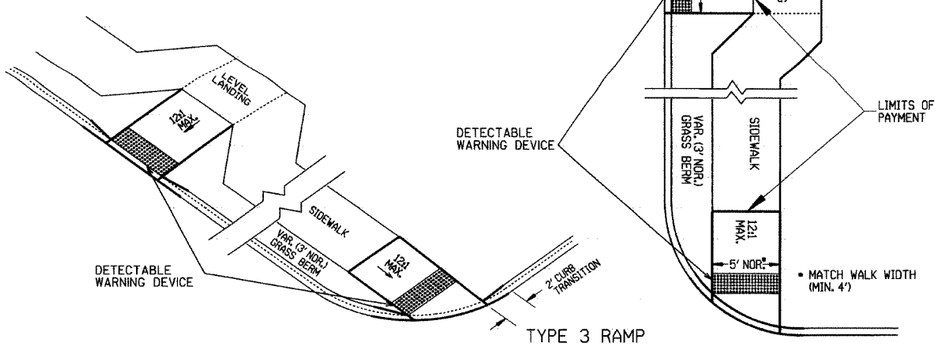


TYPE 2 RAMP

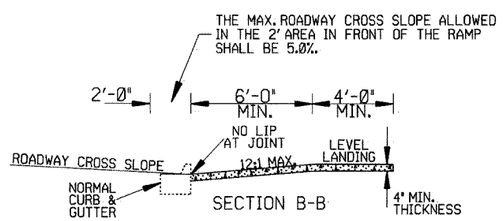
NOTE:
THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGTITUDINAL GRADE.



TYPE 4 RAMP
(Walk adjacent to curb)



TYPE 3 RAMP



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.S.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

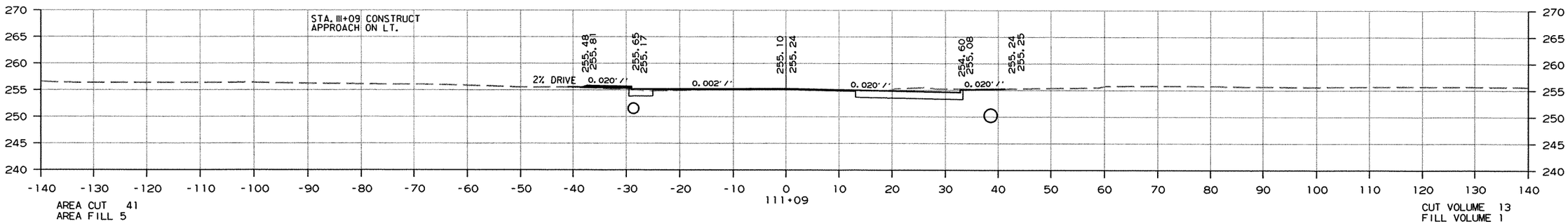
ARKANSAS STATE HIGHWAY COMMISSION

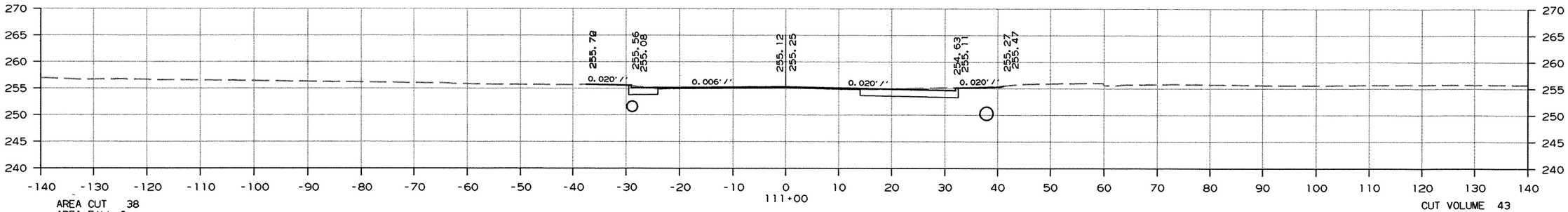
WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

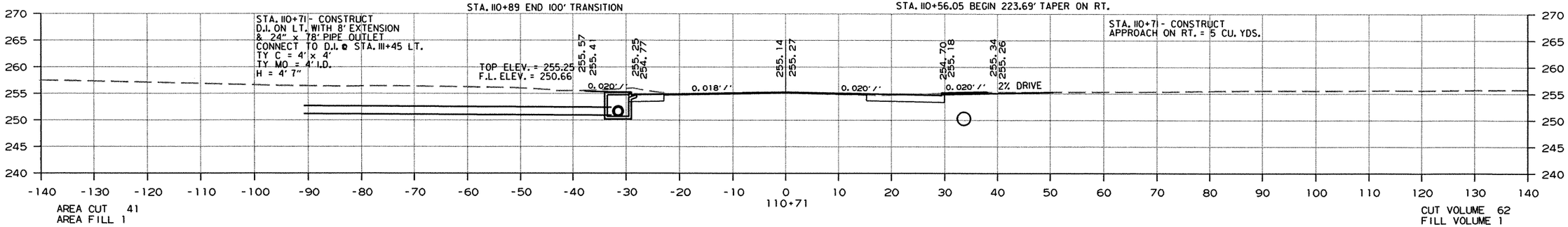
STANDARD DRAWING WR-1

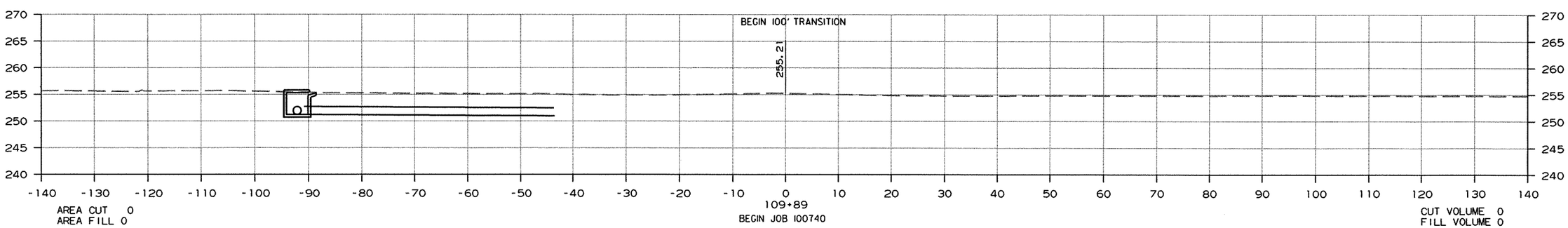
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	123	160

(2) CROSS SECTIONS







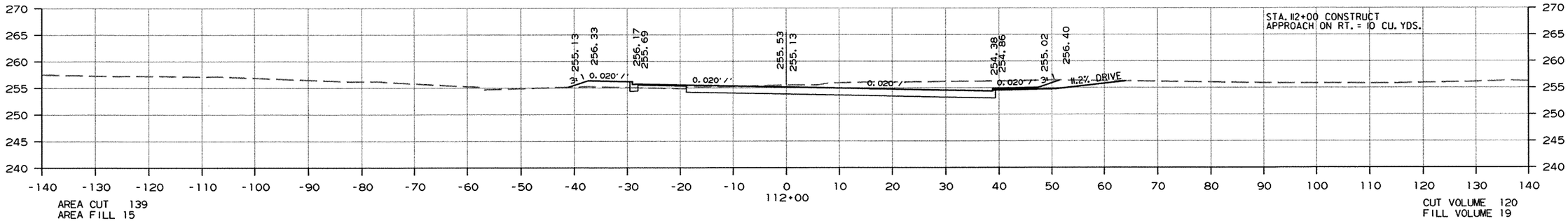


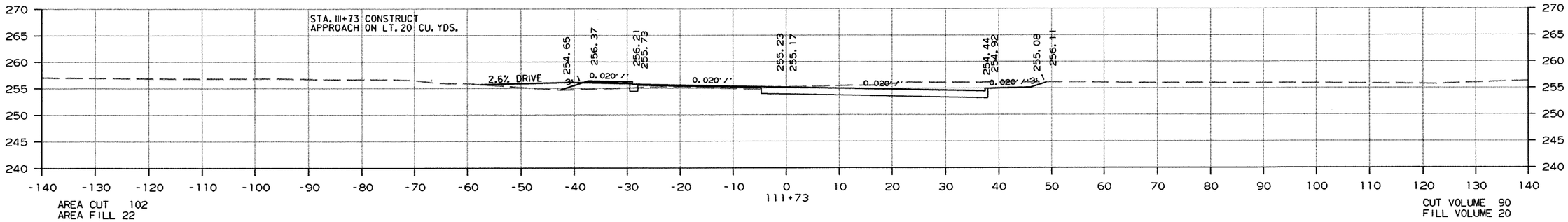
CROSS SECTION STA. 109+89 TO STA. 111+09

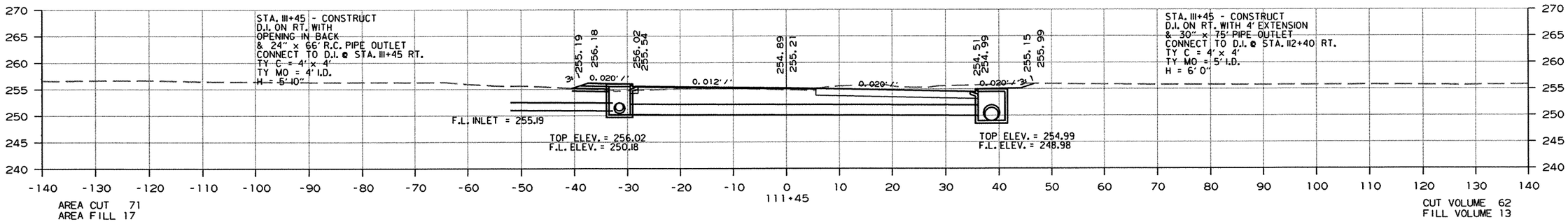
R100740.DGN 4/21/2011

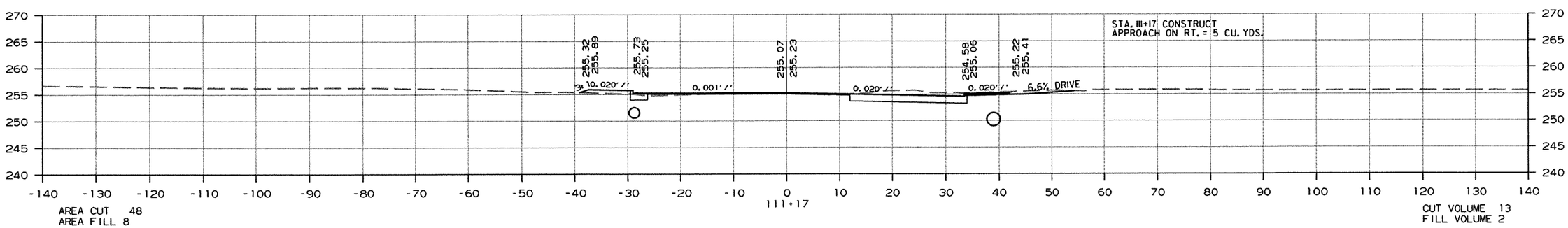
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	124	160

(2) CROSS SECTIONS







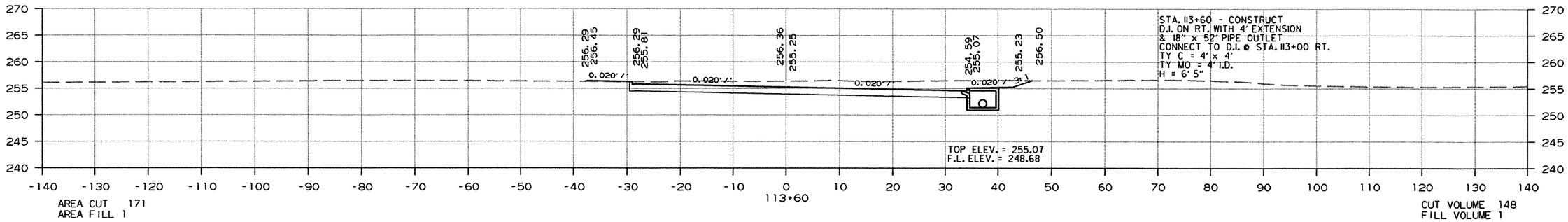


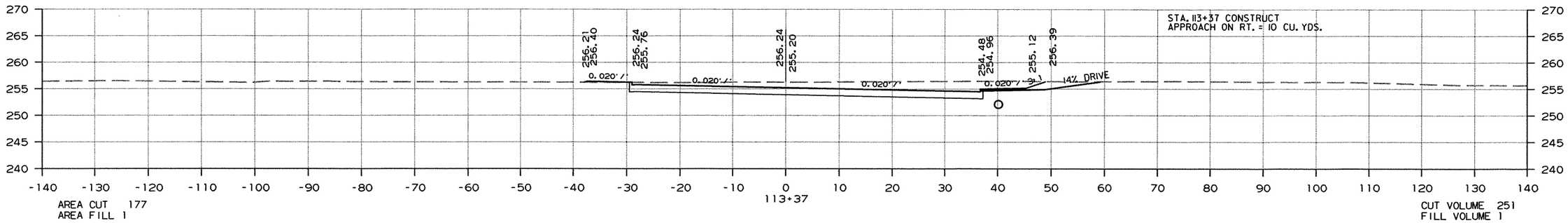
CROSS SECTION STA. 111+17 TO STA. 112+00

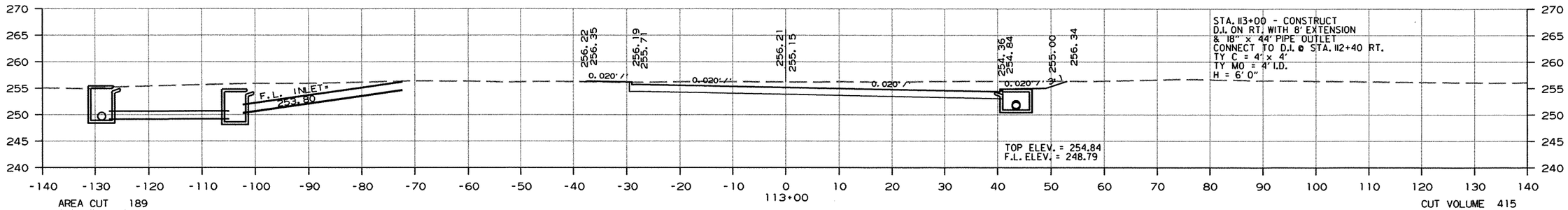
R100740.DGN 4/21/2011

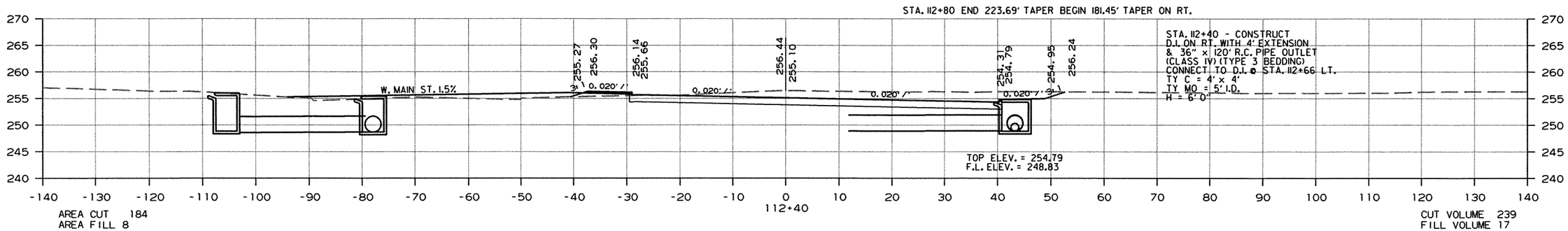
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	125	160

(2) CROSS SECTIONS







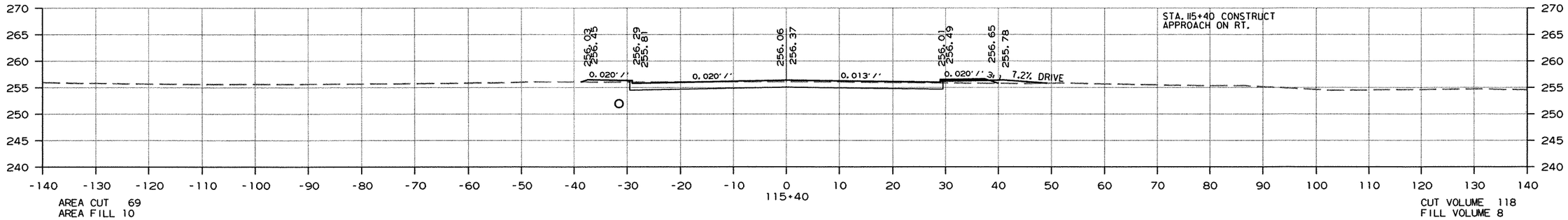


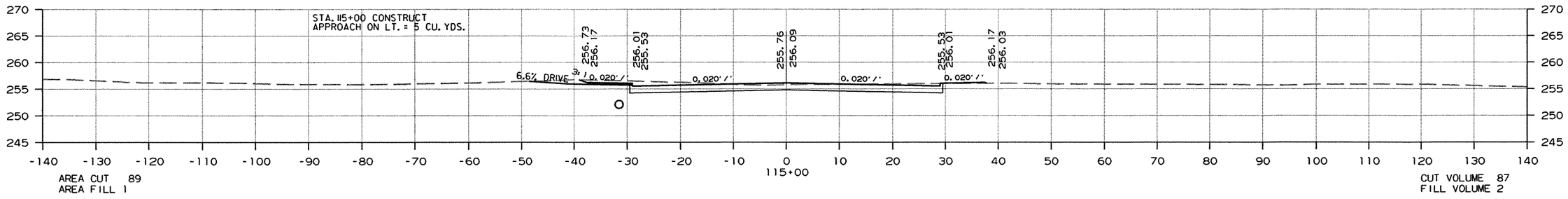
CROSS SECTION STA. 112+40 TO STA. 113+60

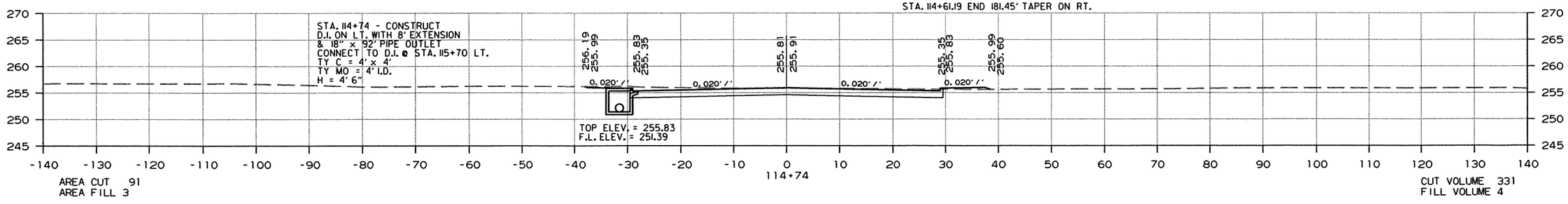
R100740.DGN 4/21/2011

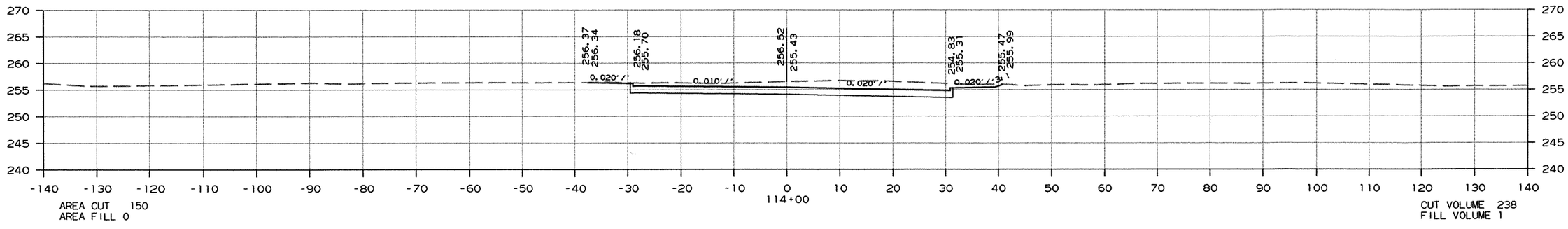
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	126	160

(2) CROSS SECTIONS







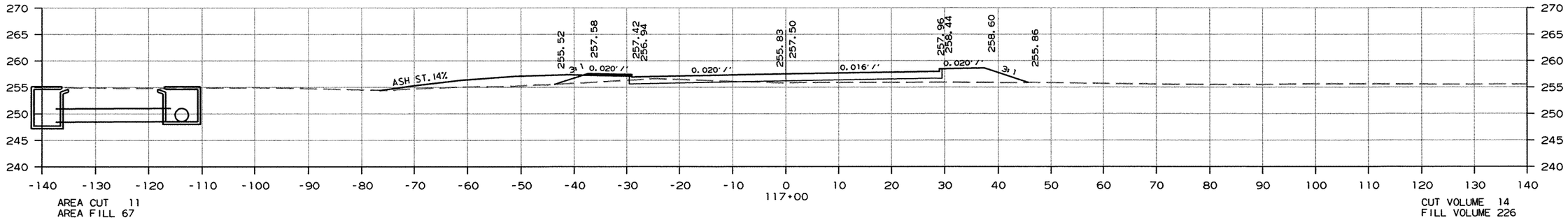


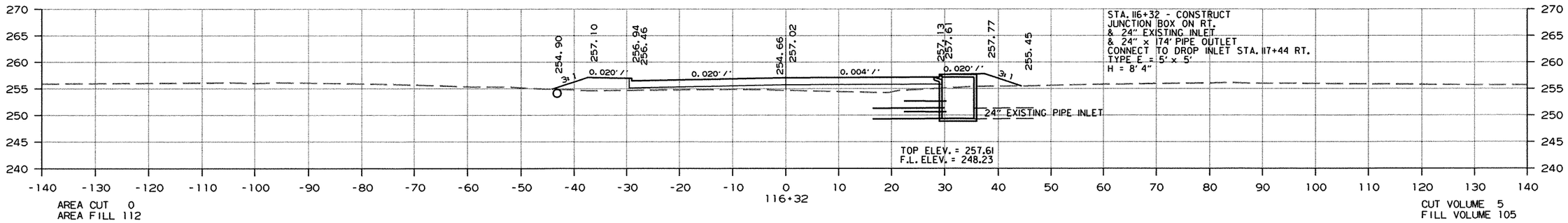
CROSS SECTION STA. 114+00 TO STA. 115+40

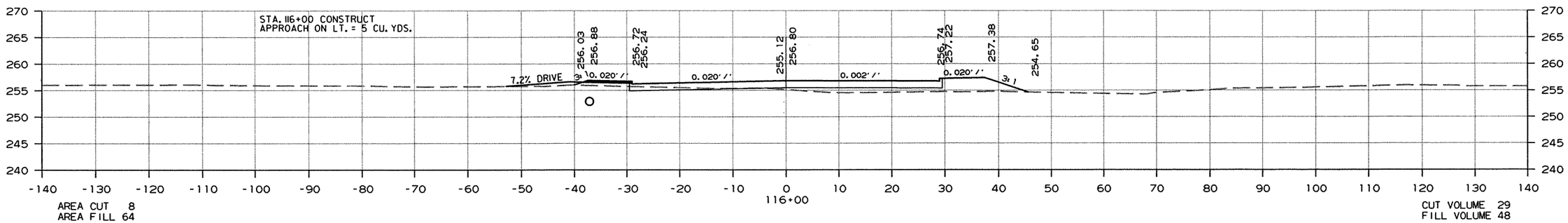
R100740.DGN 4/21/2011

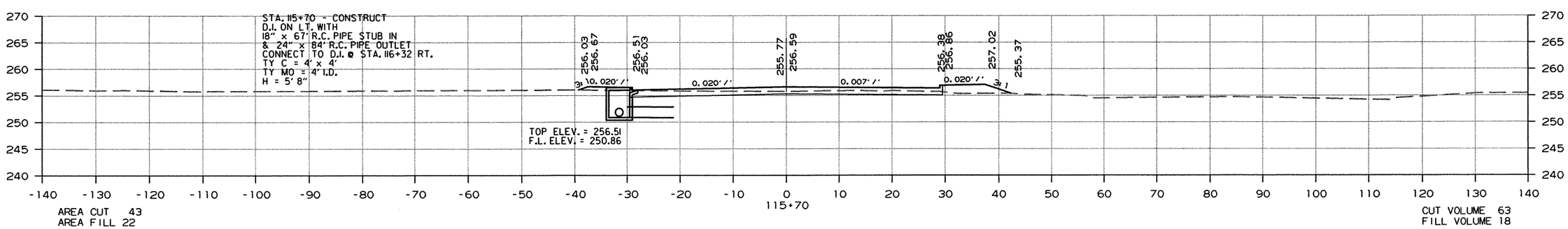
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	127	160

(2) CROSS SECTIONS







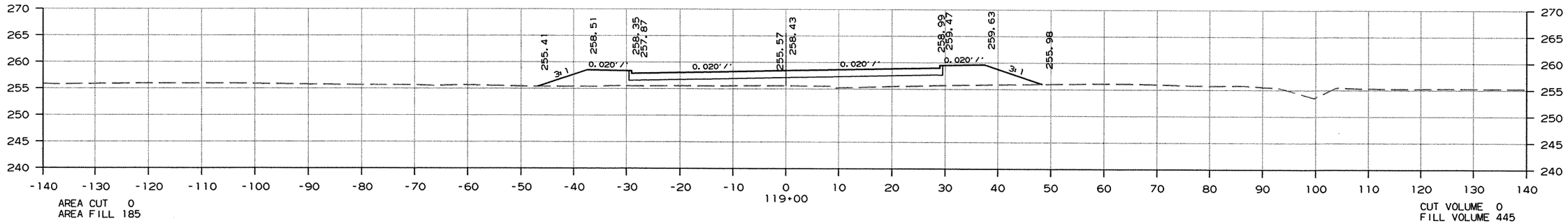


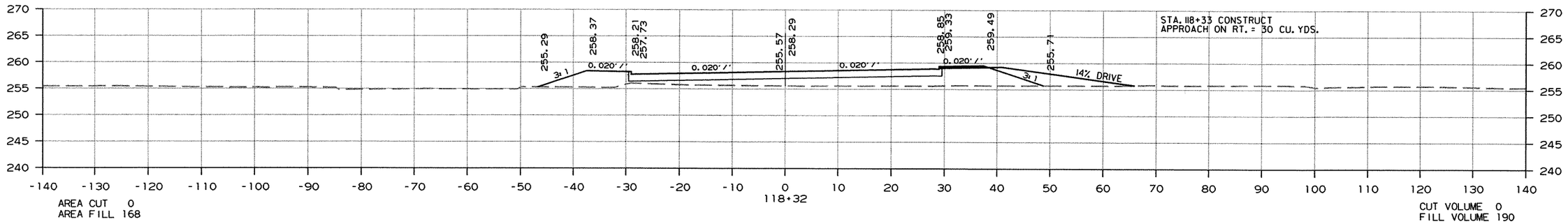
CROSS SECTION STA. 115+70 TO STA. 117+00

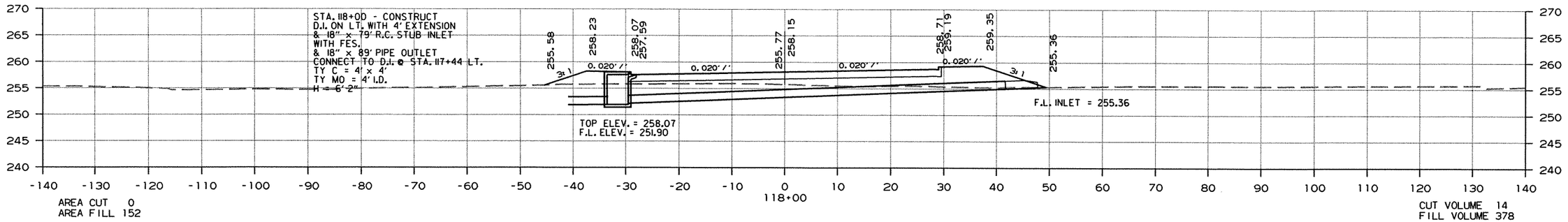
R100740.DGN 4/21/2011

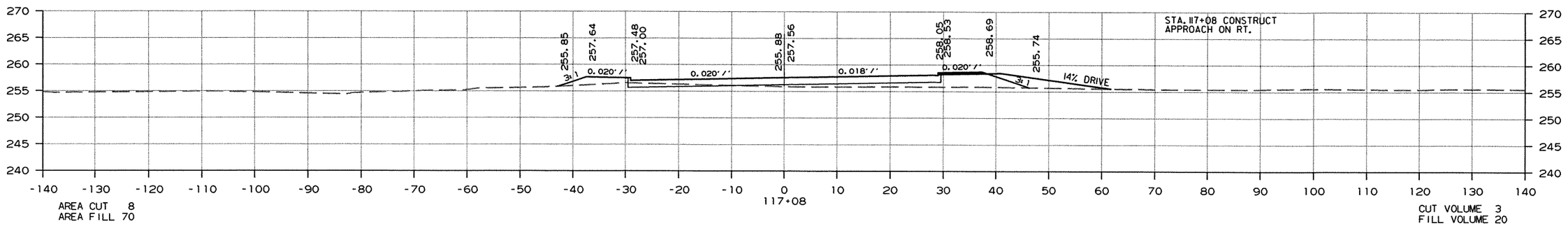
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	128	160

(2) CROSS SECTIONS







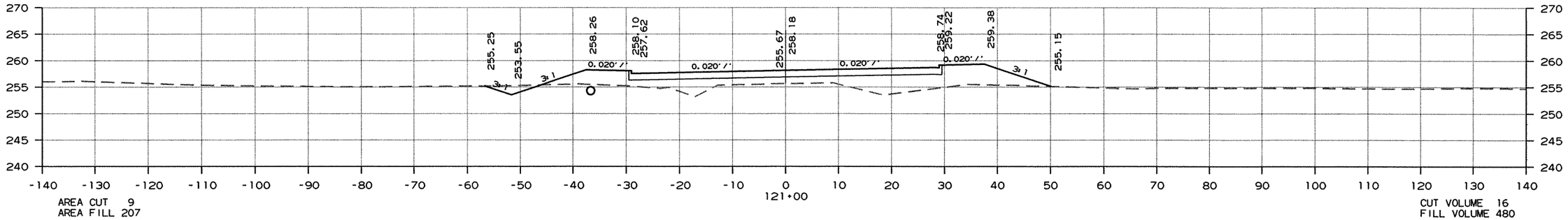


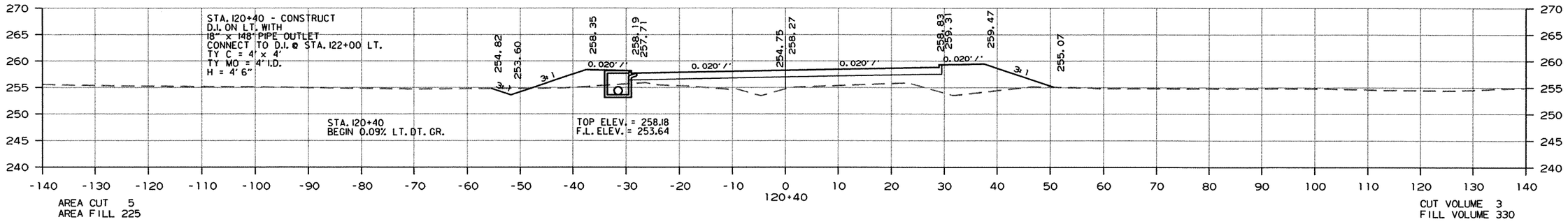
CROSS SECTION STA. 117+08 TO STA. 119+00

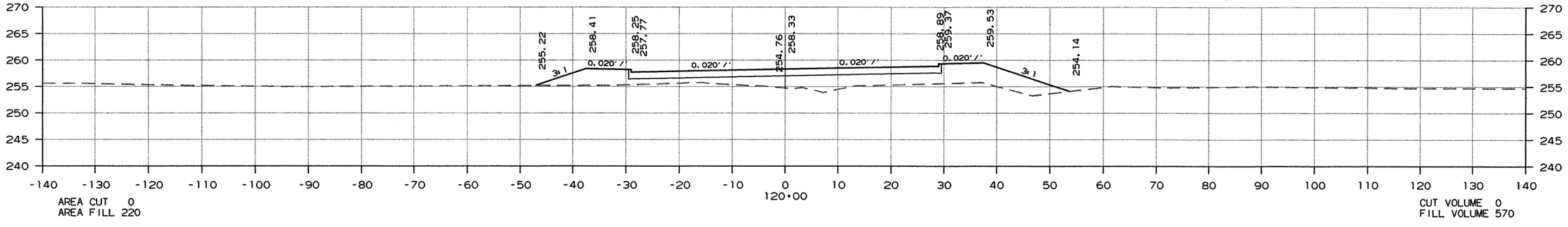
R100740.DGN 4/21/2011

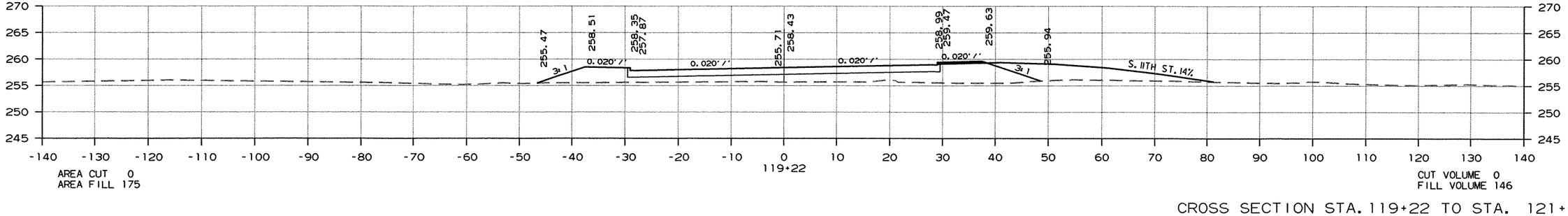
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	129	160

(2) CROSS SECTIONS







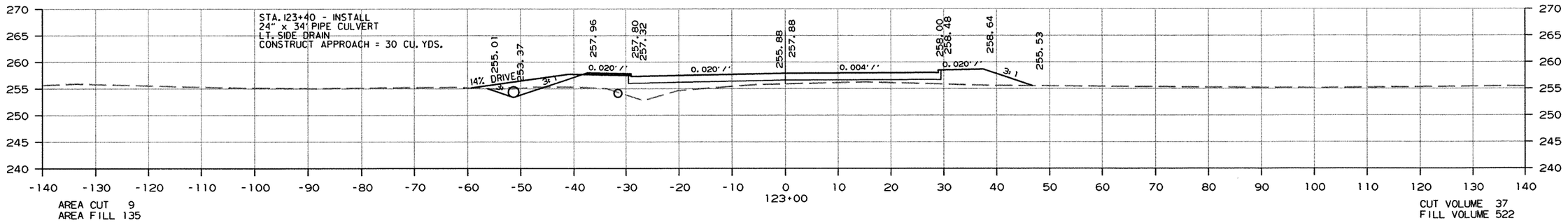


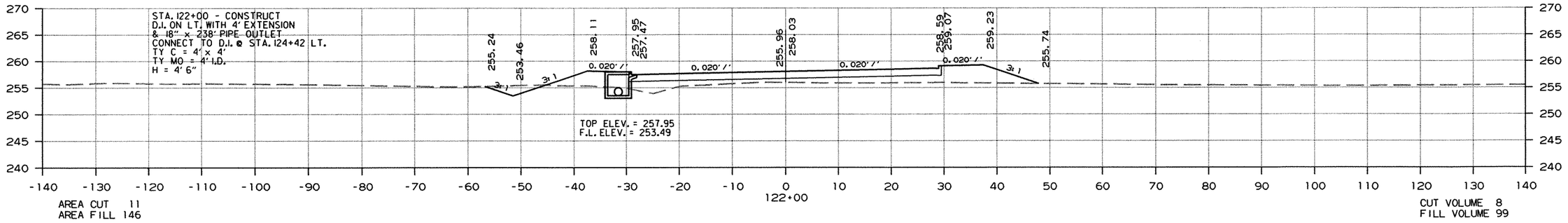
CROSS SECTION STA. 119+22 TO STA. 121+00

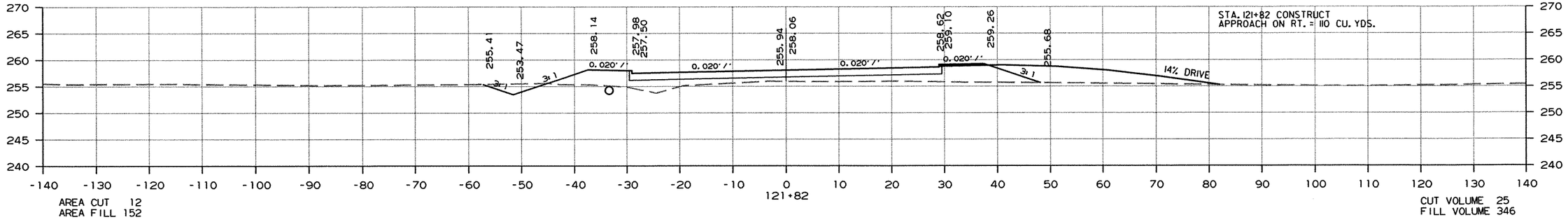
R100740.DGN 4/21/2011

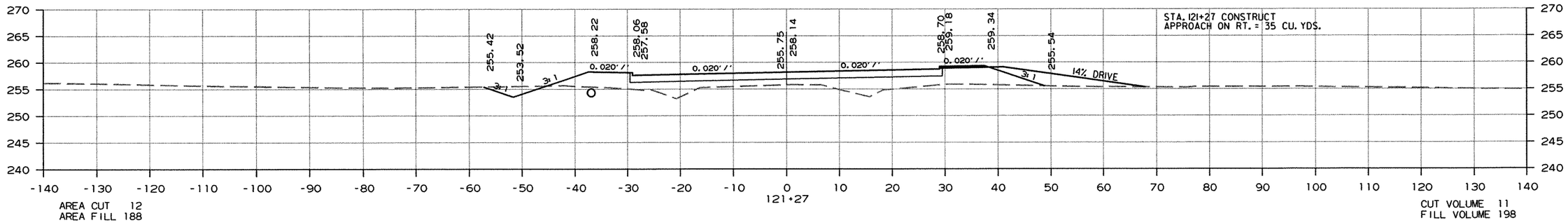
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	130	160

(2) CROSS SECTIONS







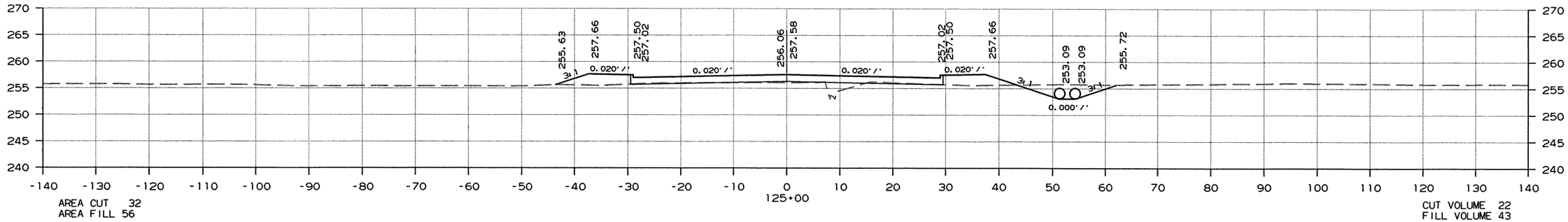


CROSS SECTION STA. 121+27 TO STA. 123+00

R100740.DGN 4/21/2011

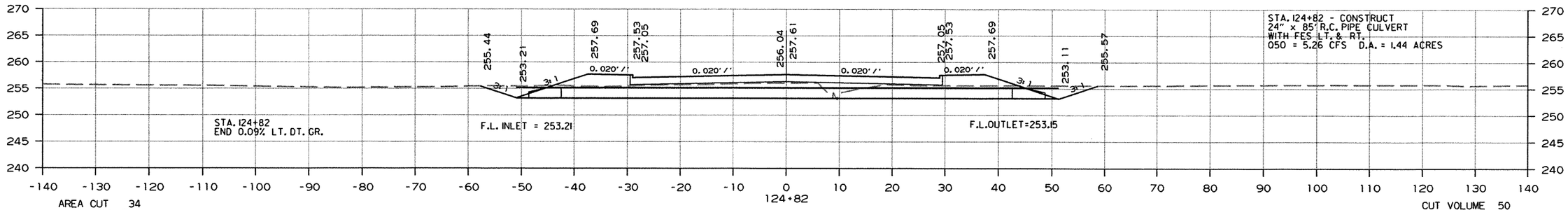
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	131	160

(2) CROSS SECTIONS



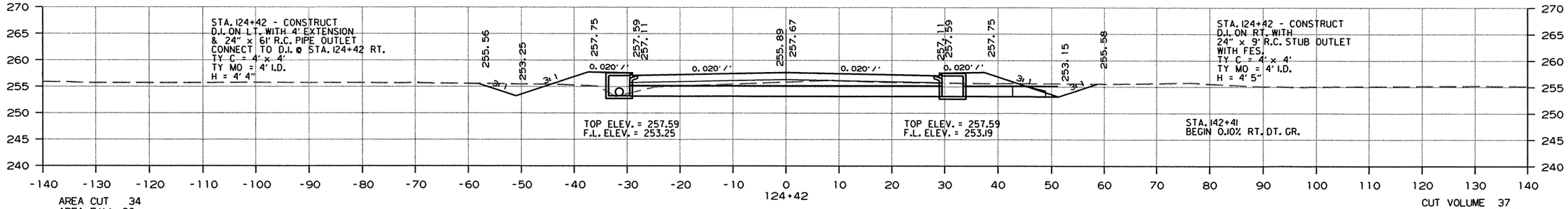
AREA CUT 32
AREA FILL 56

CUT VOLUME 22
FILL VOLUME 43



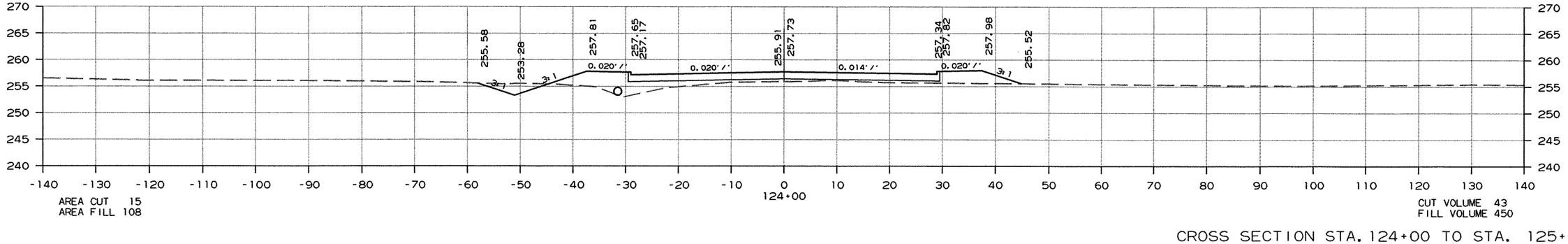
AREA CUT 34
AREA FILL 74

CUT VOLUME 50
FILL VOLUME 120



AREA CUT 34
AREA FILL 89

CUT VOLUME 37
FILL VOLUME 153



AREA CUT 15
AREA FILL 108

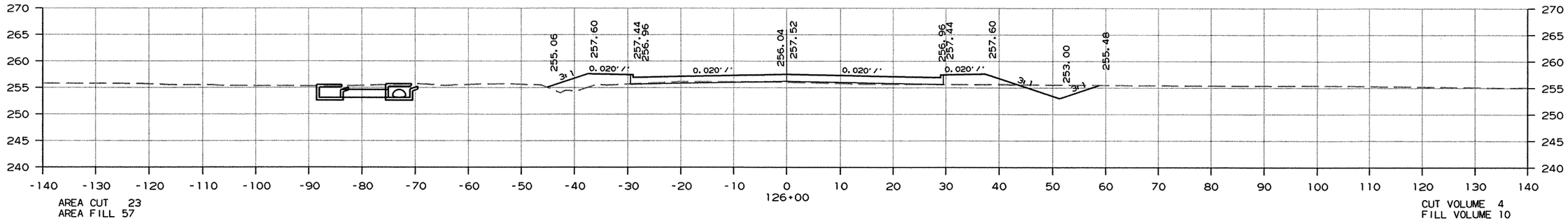
CUT VOLUME 43
FILL VOLUME 450

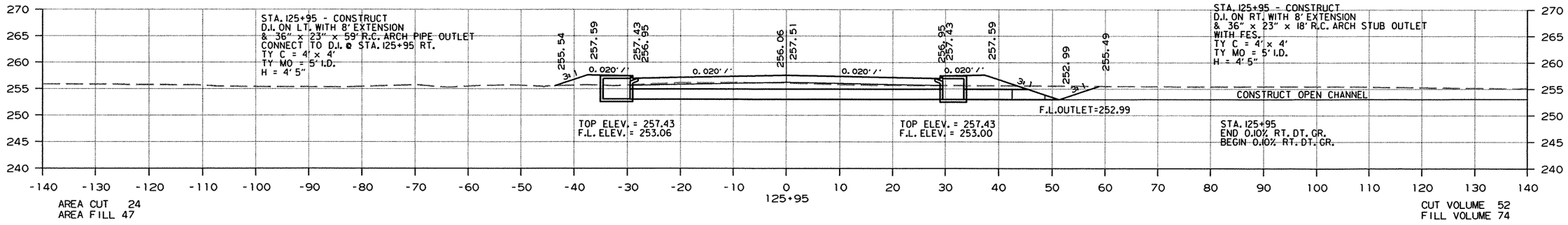
CROSS SECTION STA. 124+00 TO STA. 125+00

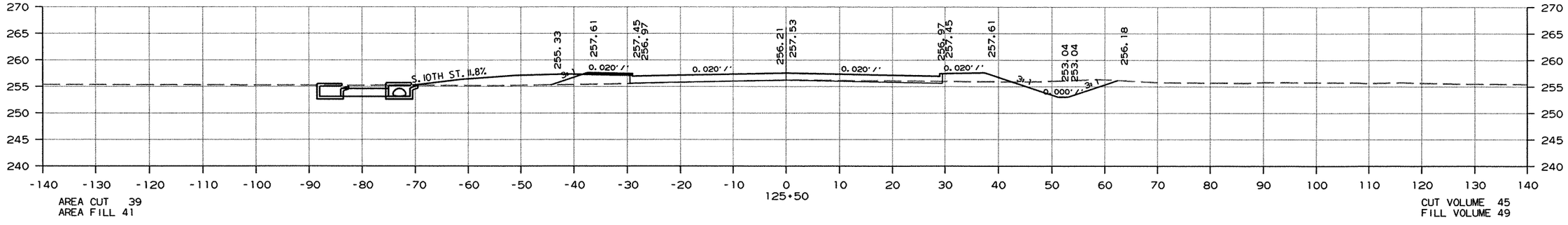
R100740.DGN 4/21/2011

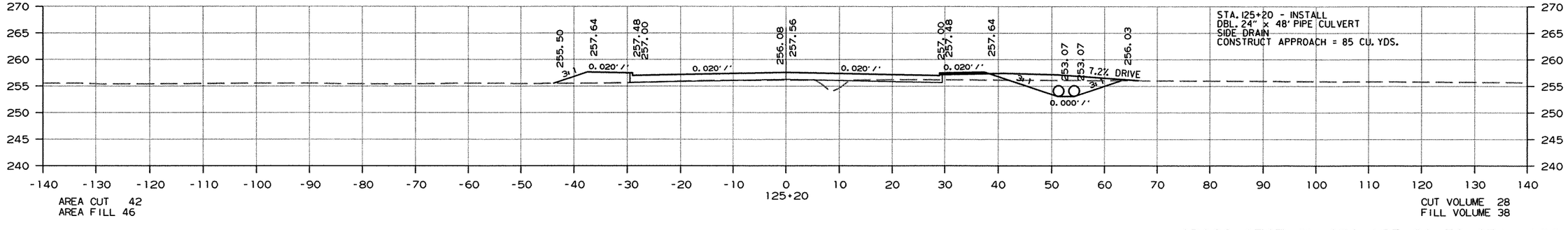
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	132	160

(2) CROSS SECTIONS







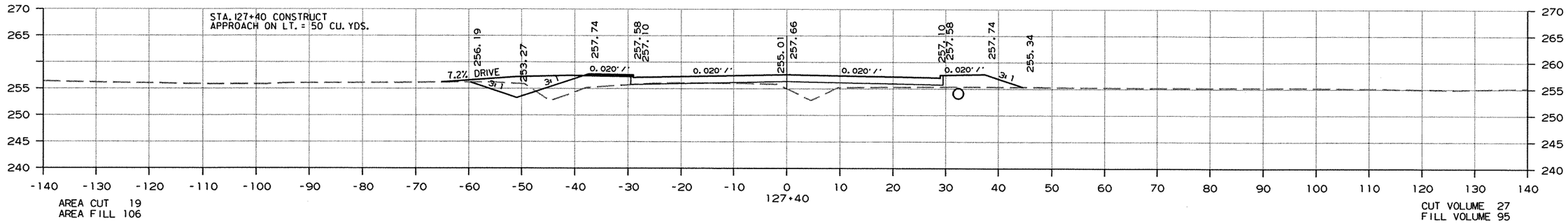


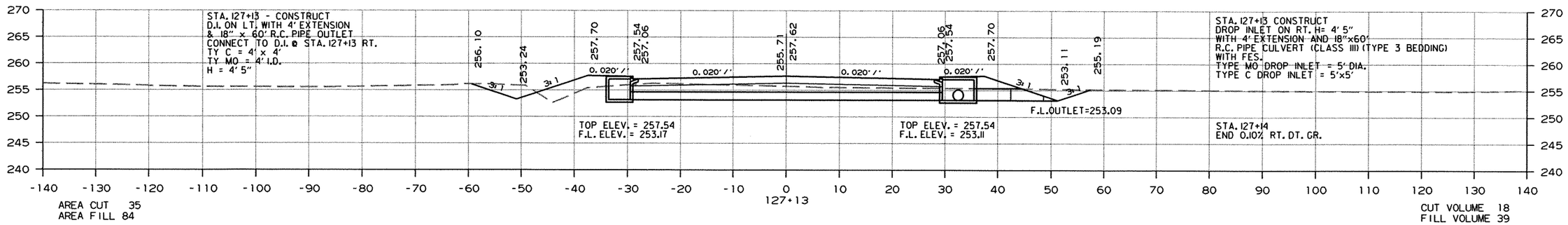
CROSS SECTION STA. 125+20 TO STA. 126+00

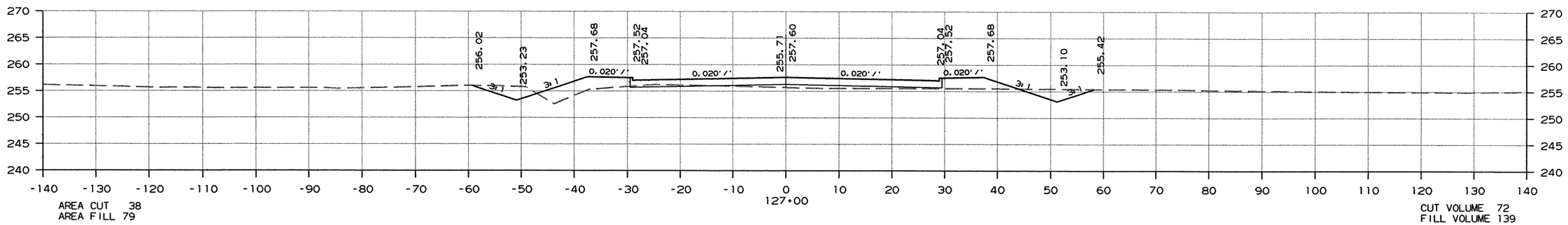
R100740.DGN 5/14/2012

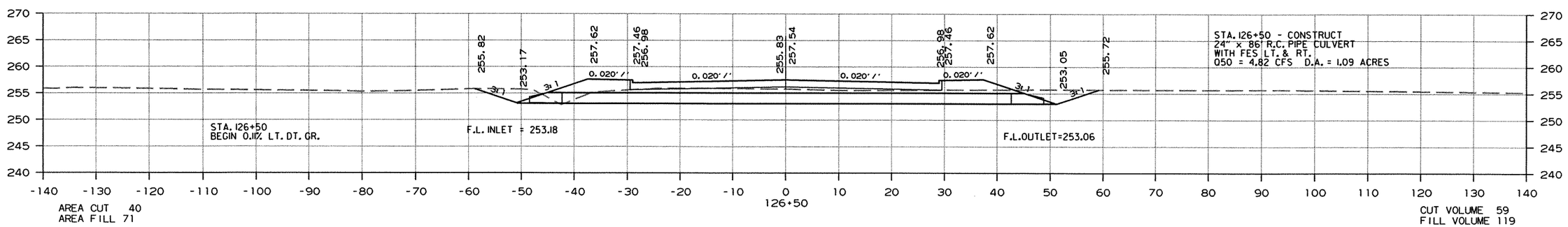
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	133	160

(2) CROSS SECTIONS







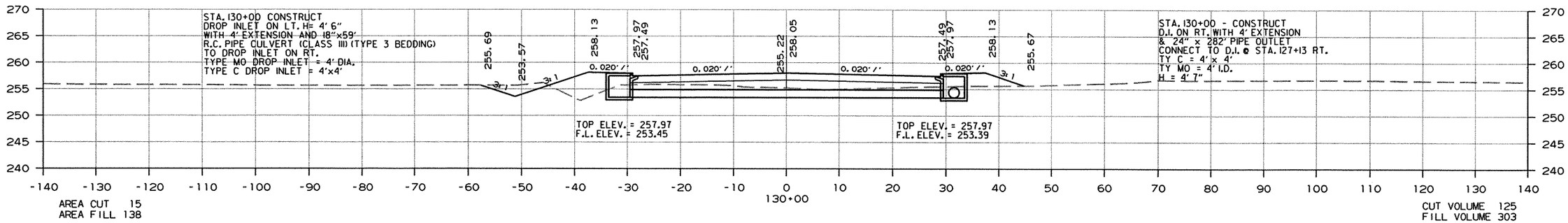


CROSS SECTION STA. 126+50 TO STA. 127+40

R100740.DGN 4/21/2011

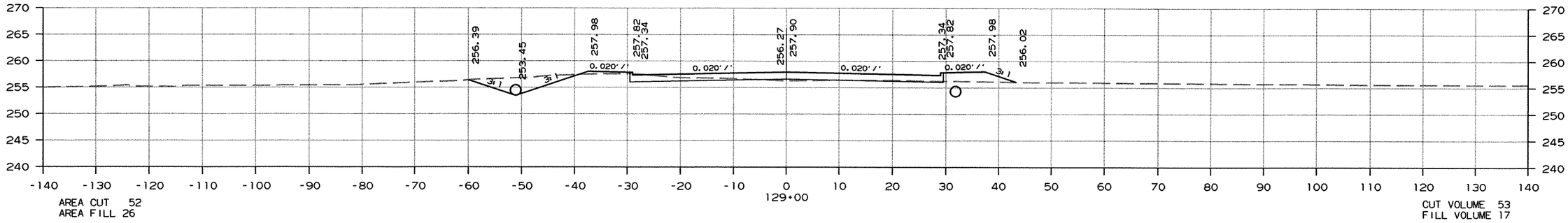
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	134	160

(2) CROSS SECTIONS



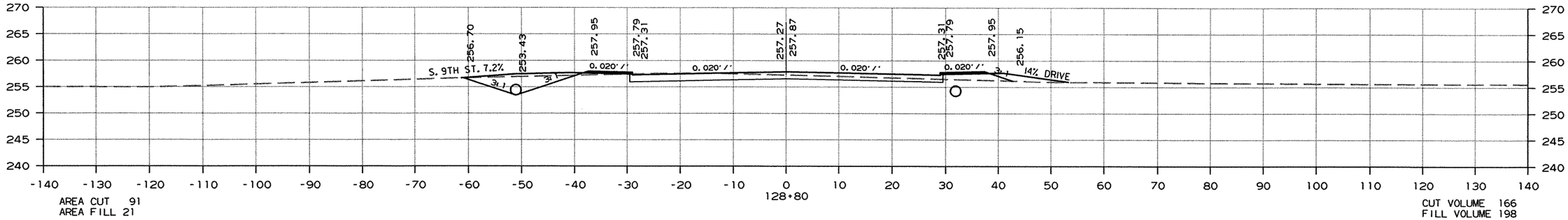
AREA CUT 15
AREA FILL 138

CUT VOLUME 125
FILL VOLUME 303



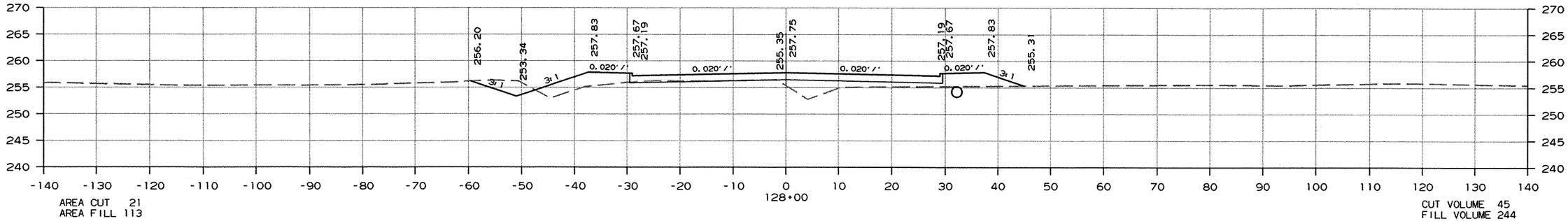
AREA CUT 52
AREA FILL 26

CUT VOLUME 53
FILL VOLUME 17



AREA CUT 91
AREA FILL 21

CUT VOLUME 166
FILL VOLUME 198



AREA CUT 21
AREA FILL 113

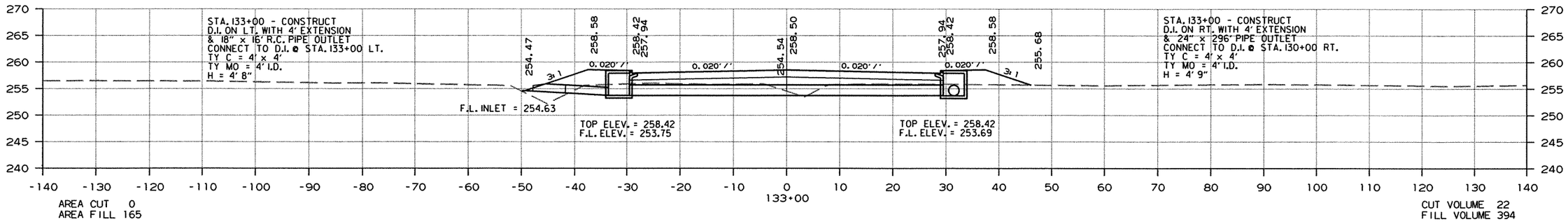
CUT VOLUME 45
FILL VOLUME 244

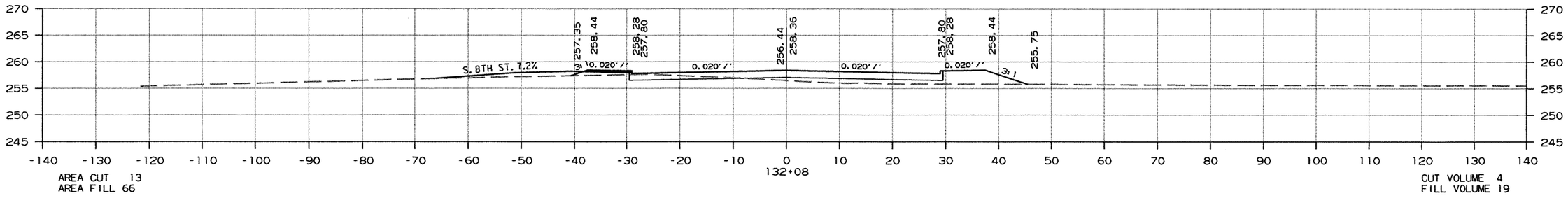
CROSS SECTION STA. 128+00 TO STA. 130+00

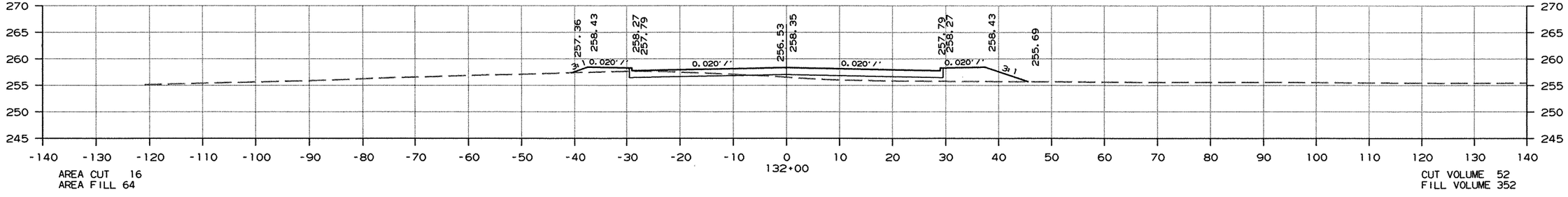
R100740.DGN 4/21/2011

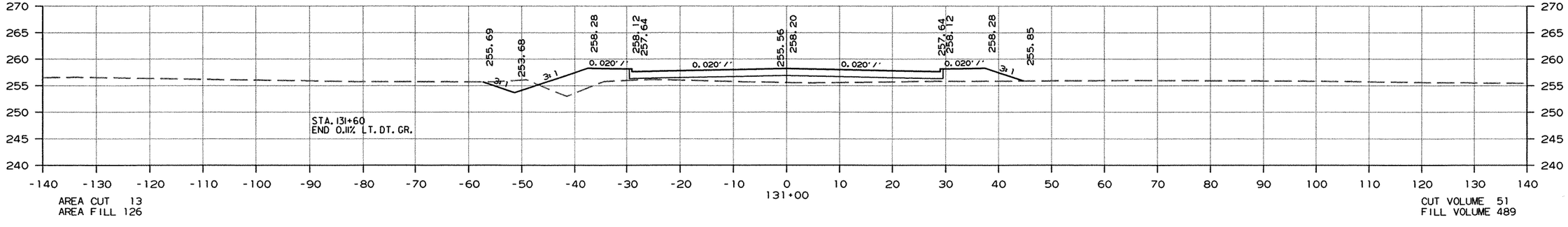
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	135	160

(2) CROSS SECTIONS







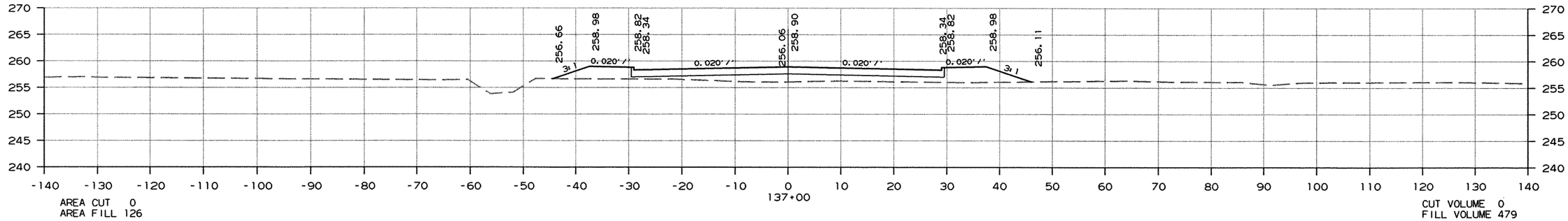


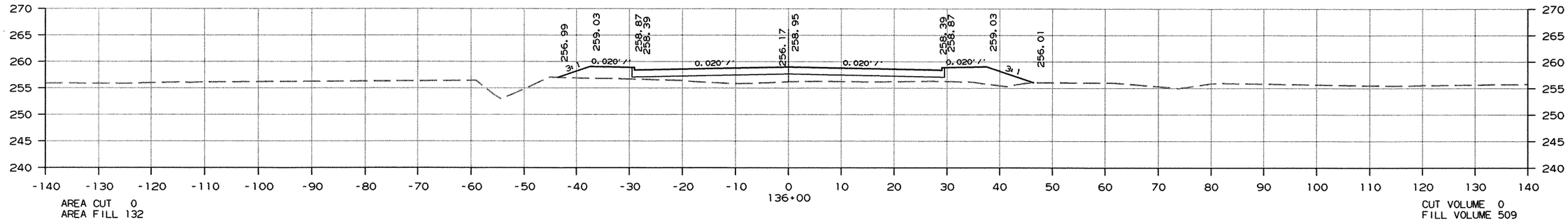
CROSS SECTION STA. 131+00 TO STA. 133+00

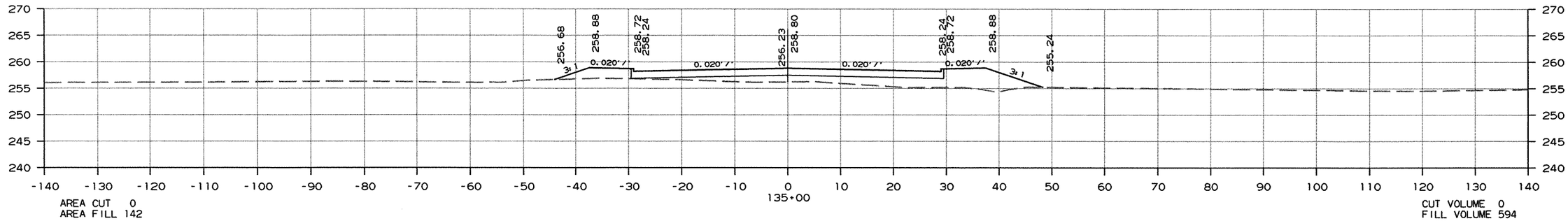
ZBORDER.CEL 8/30/2010

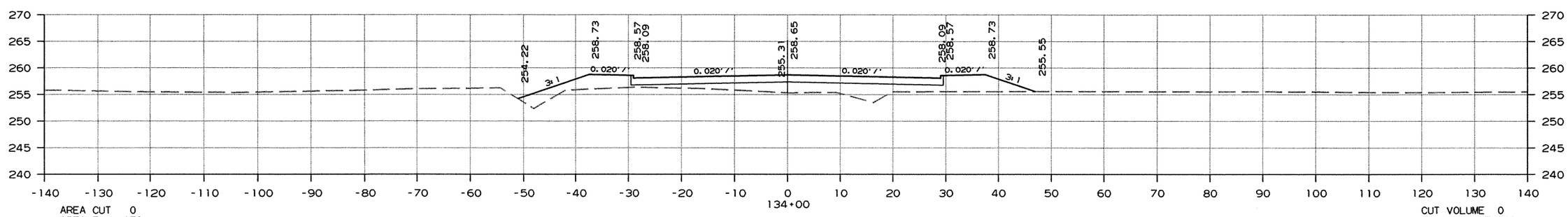
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	136	160

(2) CROSS SECTIONS







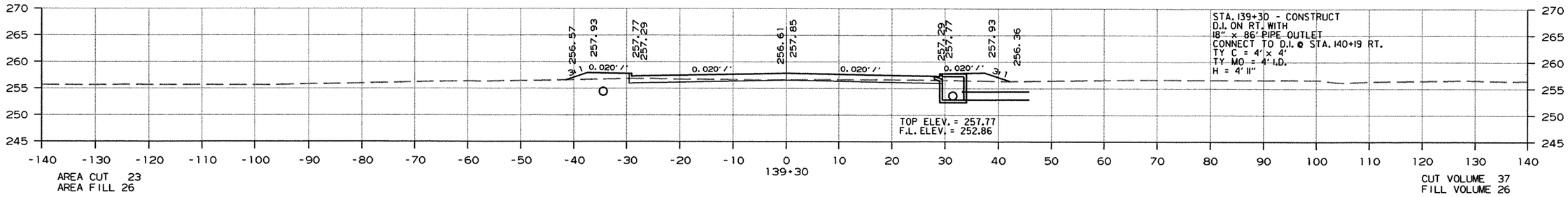


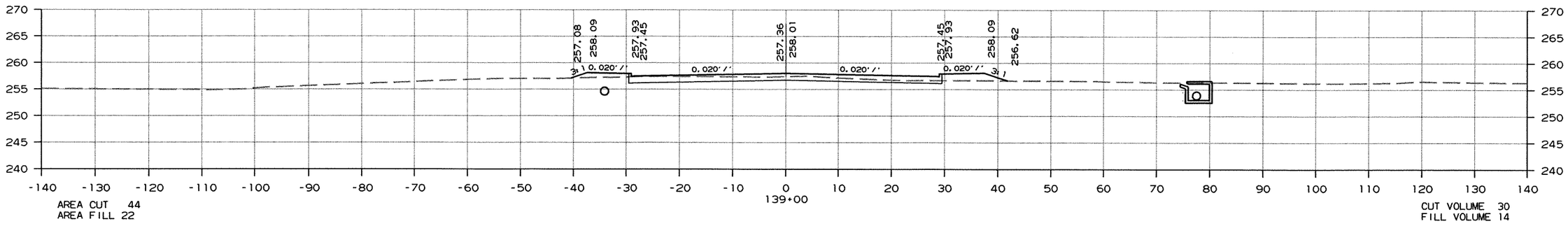
CROSS SECTION STA. 134+00 TO STA. 137+00

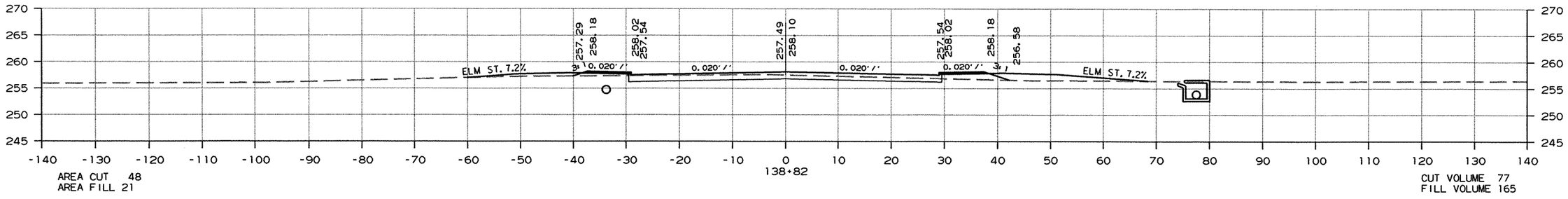
R100740.DGN 4/21/2011

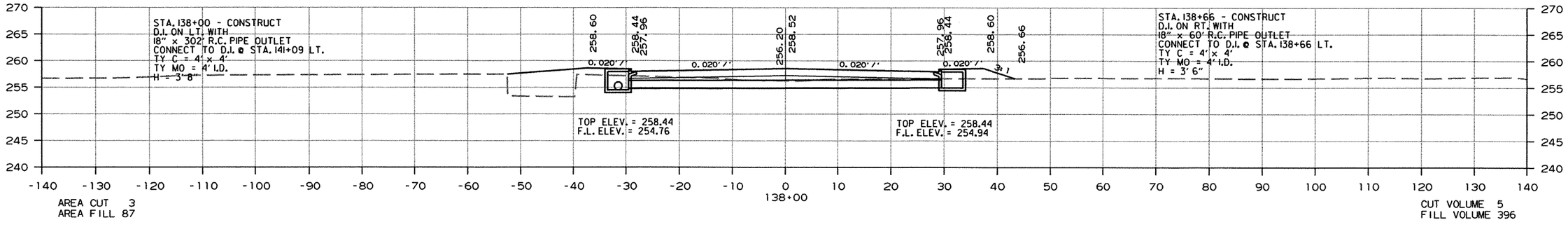
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	137	160

(2) CROSS SECTIONS







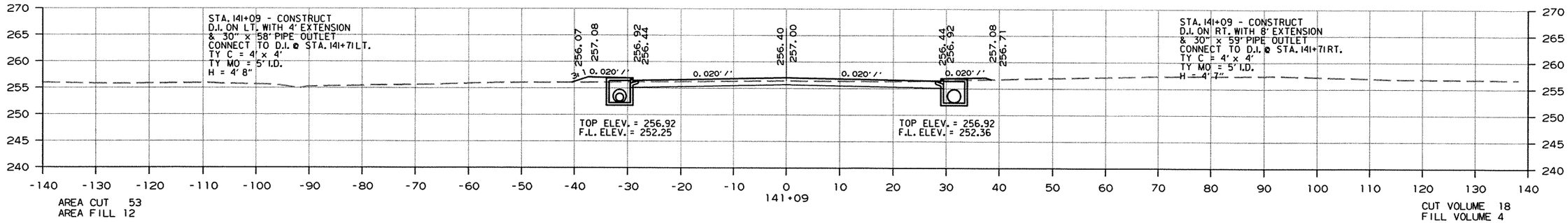


CROSS SECTION STA. 138+00 TO STA. 139+30

R100740.DGN 4/21/2011

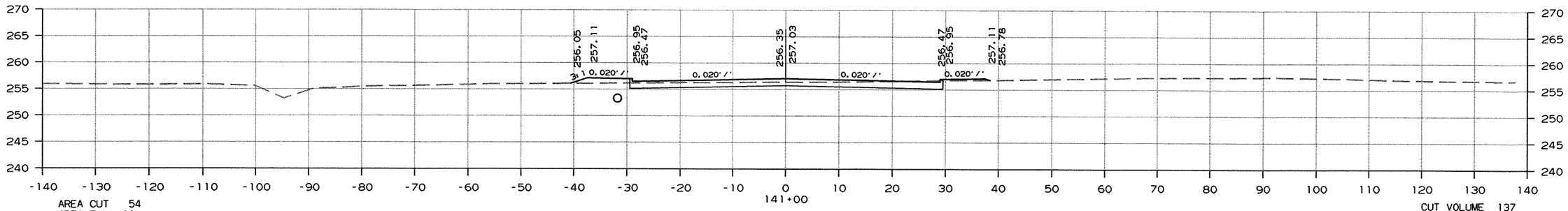
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	138	160

(2) CROSS SECTIONS



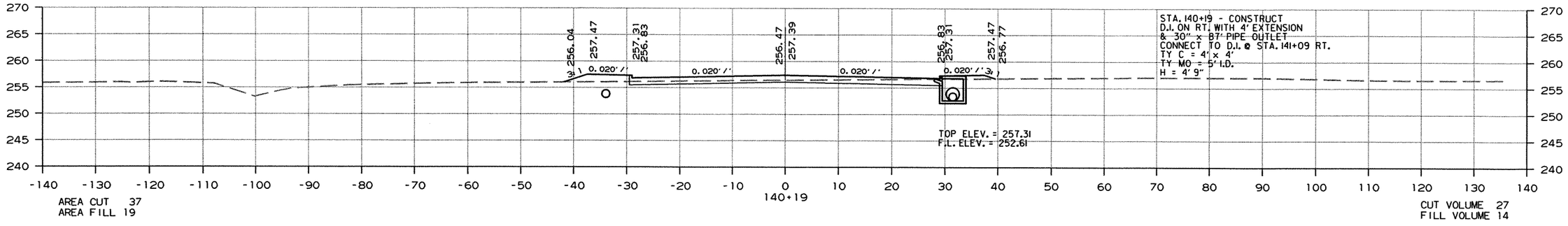
AREA CUT 53
AREA FILL 12

CUT VOLUME 18
FILL VOLUME 4



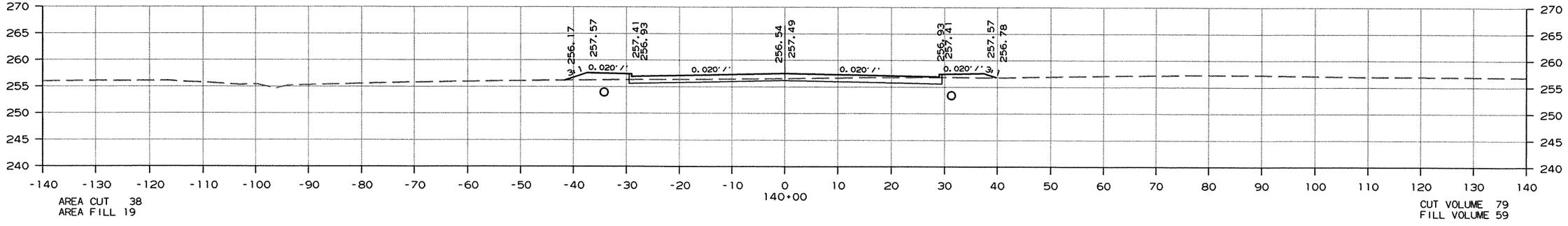
AREA CUT 54
AREA FILL 11

CUT VOLUME 137
FILL VOLUME 46



AREA CUT 37
AREA FILL 19

CUT VOLUME 27
FILL VOLUME 14



AREA CUT 38
AREA FILL 19

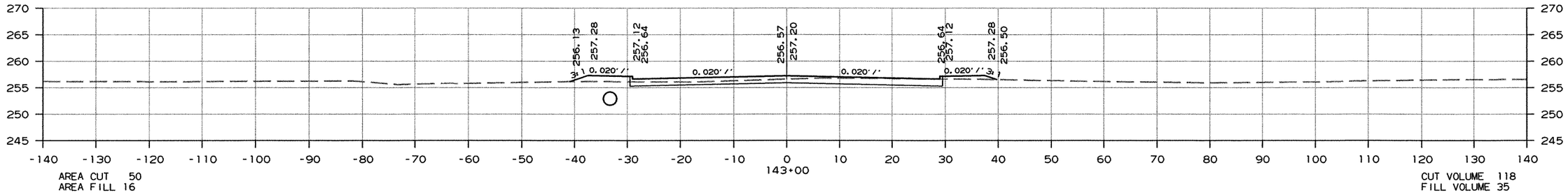
CUT VOLUME 79
FILL VOLUME 59

CROSS SECTION STA. 140+00 TO STA. 141+09

R100740.DGN 4/21/2011

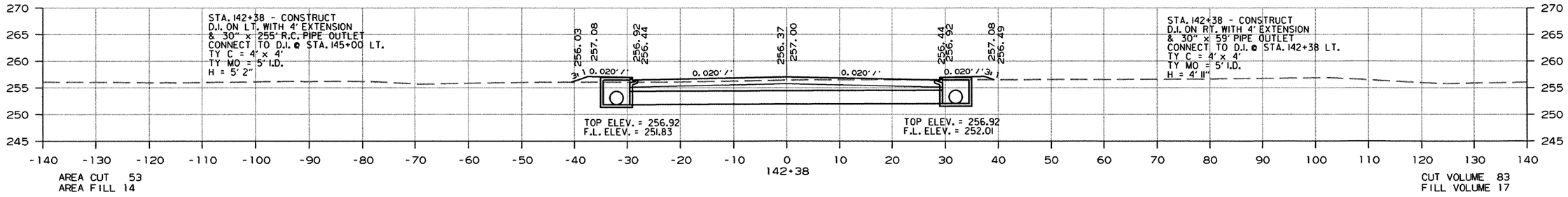
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	139	160

(2) CROSS SECTIONS



AREA CUT 50
AREA FILL 16

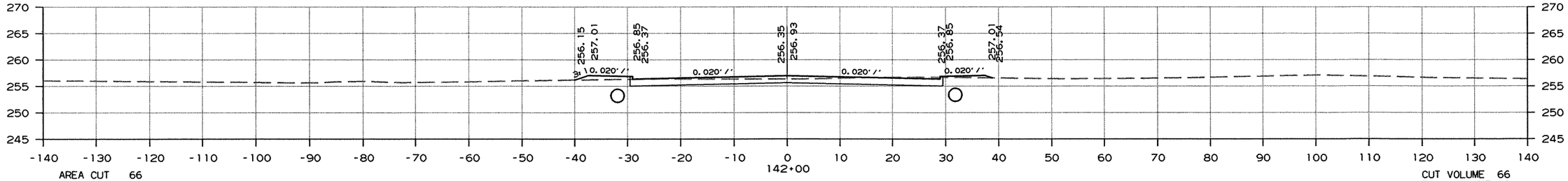
CUT VOLUME 118
FILL VOLUME 35



STA. 142+38 - CONSTRUCT
D.I. ON RT. WITH 4' EXTENSION
& 30" x 59' PIPE OUTLET
CONNECT TO D.I. @ STA. 142+38 LT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 11"

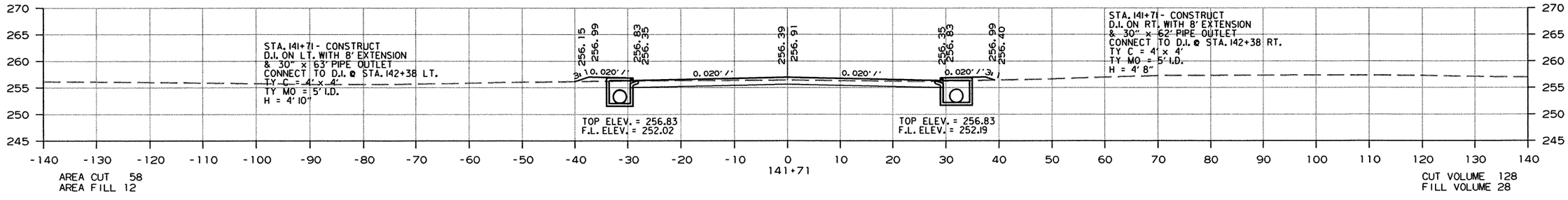
AREA CUT 53
AREA FILL 14

CUT VOLUME 83
FILL VOLUME 17



AREA CUT 66
AREA FILL 9

CUT VOLUME 66
FILL VOLUME 12



STA. 141+71 - CONSTRUCT
D.I. ON RT. WITH 8' EXTENSION
& 30" x 62' PIPE OUTLET
CONNECT TO D.I. @ STA. 142+38 RT.
TY C = 4' x 4'
TY MO = 5' I.D.
H = 4' 8"

AREA CUT 58
AREA FILL 12

CUT VOLUME 128
FILL VOLUME 28

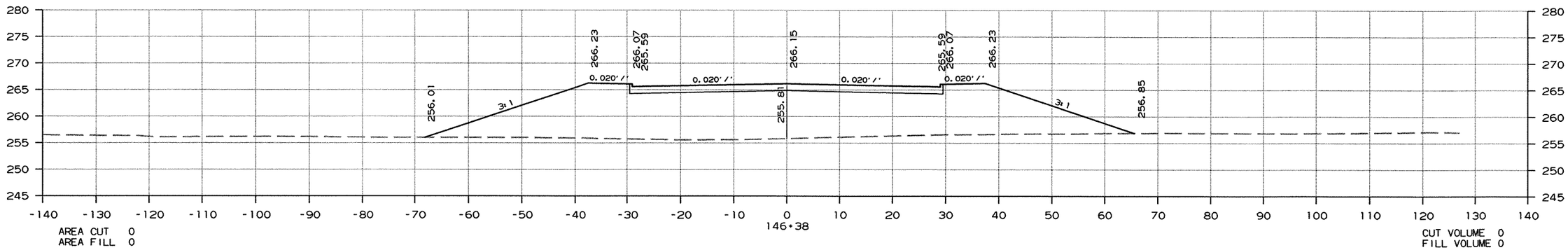
CROSS SECTION STA. 141+71 TO STA. 143+00

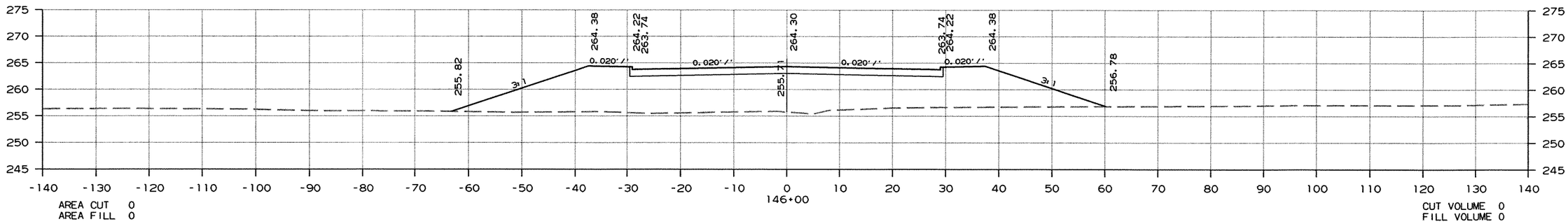
R100740.DGN 4/22/2011

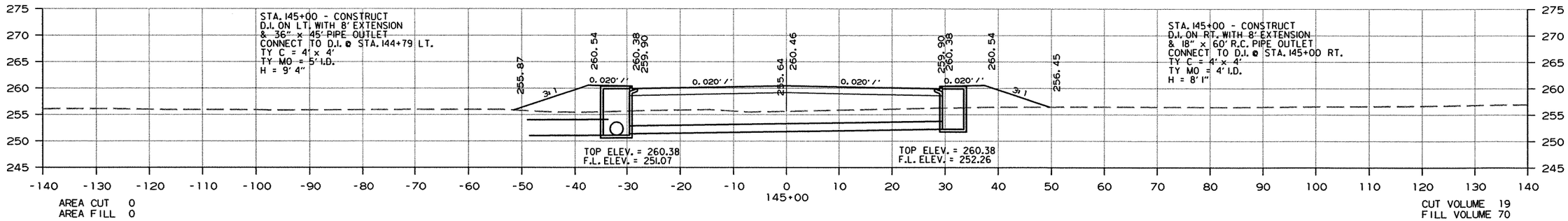
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	140	160

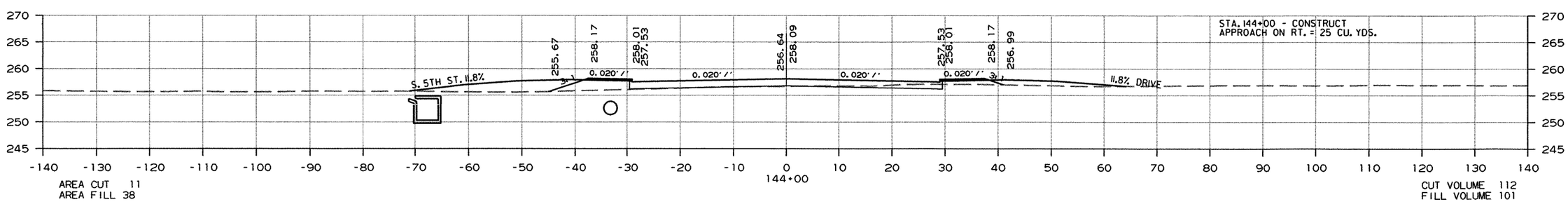
(2) CROSS SECTIONS

STA. 145+00 TO 159+47 EARTHWORK PLACED IN JOB 100705.
SUBGRADE PREPARATION IS INCLUDED IN THE QUANTITIES TO BRING EARTHWORK TO ELEVATIONS SHOWN.









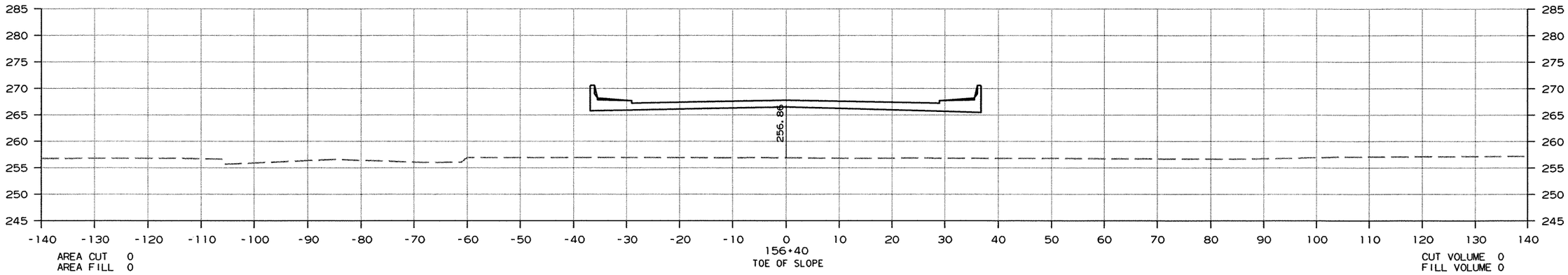
CROSS SECTION STA. 144+00 TO STA. 146+38

R100740.DGN 4/22/2011

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	141	160

(2) CROSS SECTIONS

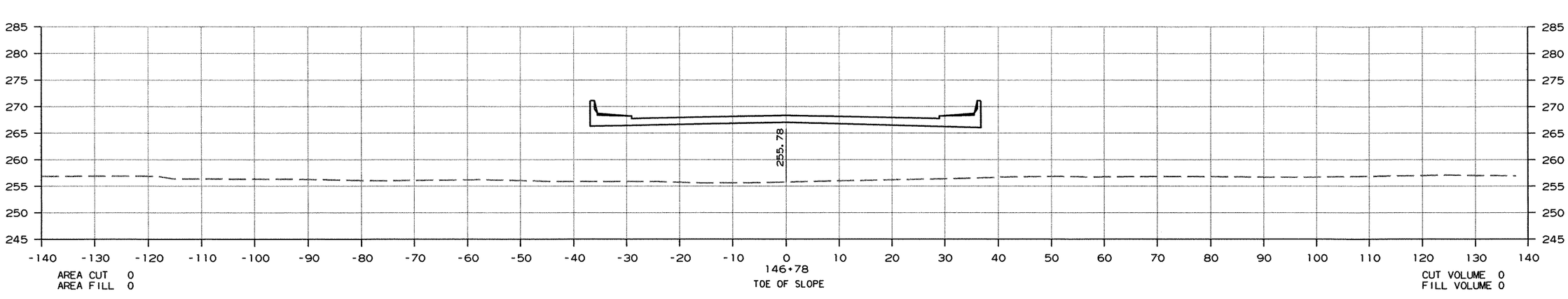
STA. 145+00 TO 159+47 EARTHWORK PLACED IN JOB 100705.
SUBGRADE PREPARATION IS INCLUDED IN THE QUANTITIES TO
BRING EARTHWORK TO ELEVATIONS SHOWN.



AREA CUT 0
AREA FILL 0

156+40
TOE OF SLOPE

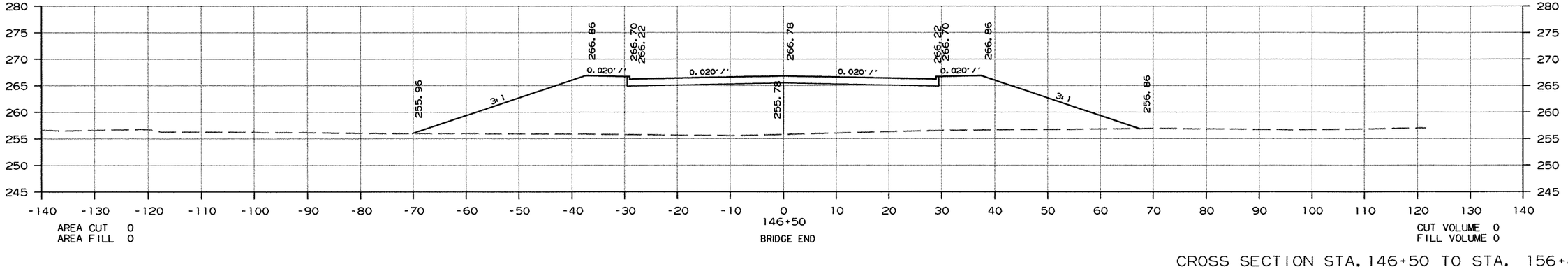
CUT VOLUME 0
FILL VOLUME 0



AREA CUT 0
AREA FILL 0

146+78
TOE OF SLOPE

CUT VOLUME 0
FILL VOLUME 0



AREA CUT 0
AREA FILL 0

146+50
BRIDGE END

CUT VOLUME 0
FILL VOLUME 0

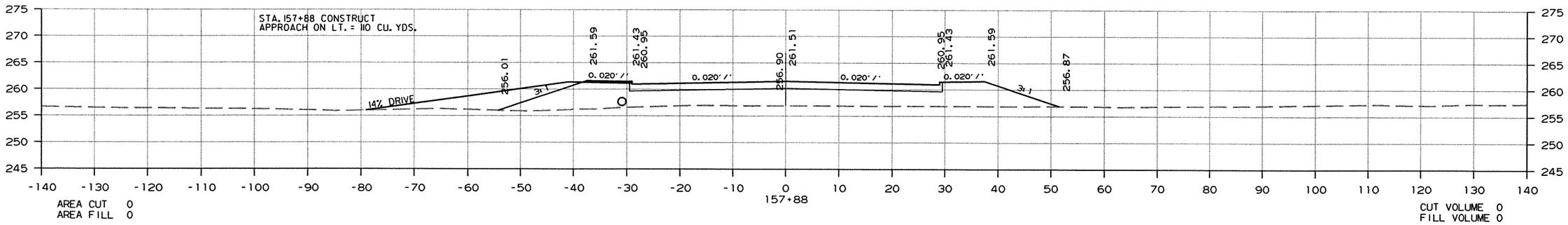
CROSS SECTION STA. 146+50 TO STA. 156+40

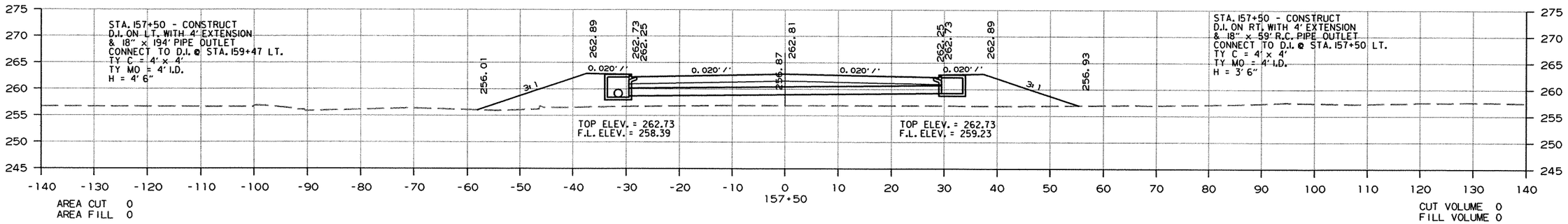
R100740.DGN 4/22/2011

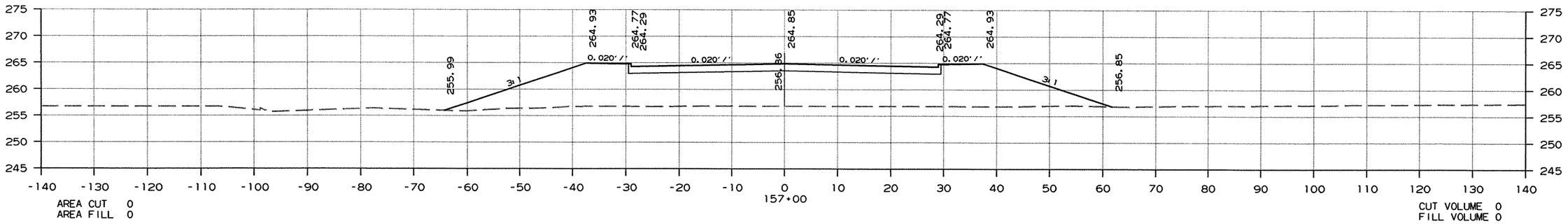
STA. 145+00 TO 159+47 EARTHWORK PLACED IN JOB 100705.
SUBGRADE PREPARATION IS INCLUDED IN THE QUANTITIES TO
BRING EARTHWORK TO ELEVATIONS SHOWN.

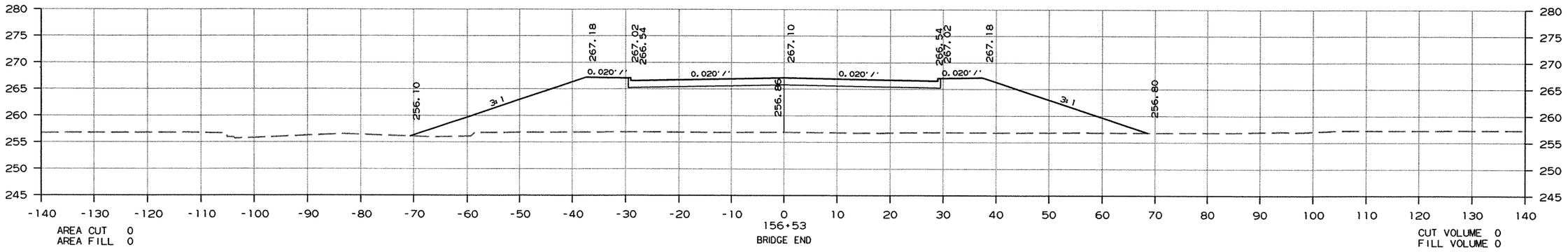
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	142	160

(2) CROSS SECTIONS









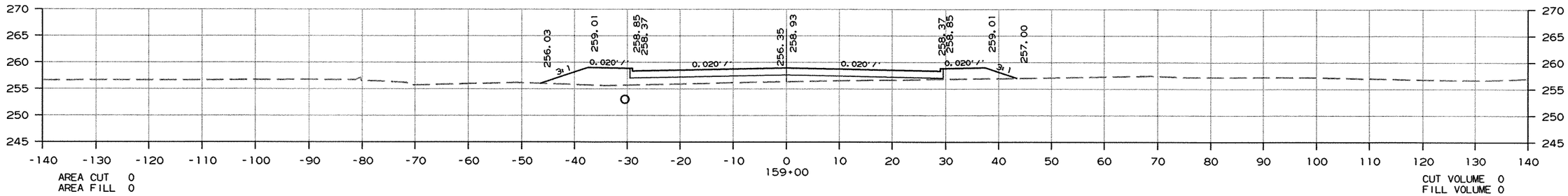
CROSS SECTION STA. 156+53 TO STA. 157+88

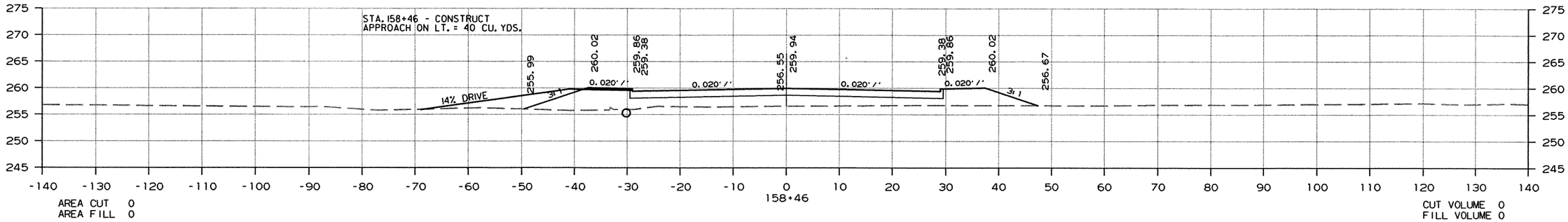
R100740.DGN 4/22/2011

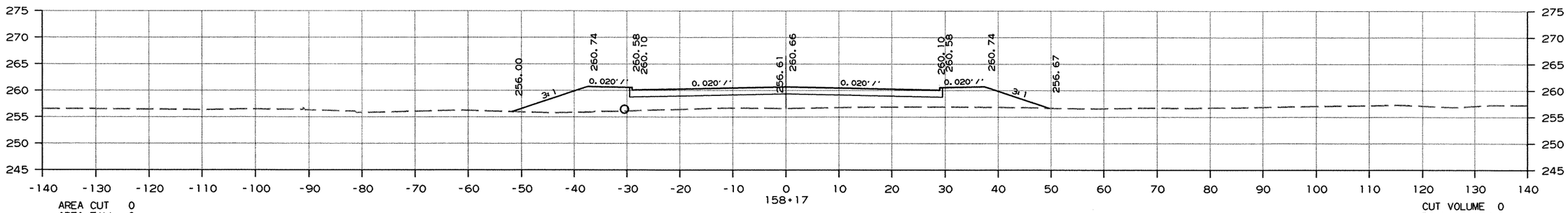
STA. 145+00 TO 159+47 EARTHWORK PLACED IN JOB 100705.
SUBGRADE PREPARATION IS INCLUDED IN THE QUANTITIES TO BRING EARTHWORK TO ELEVATIONS SHOWN.

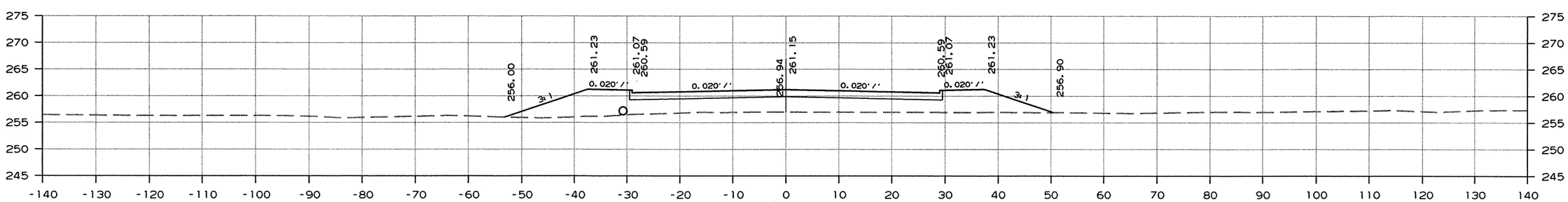
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	143	160

(2) CROSS SECTIONS









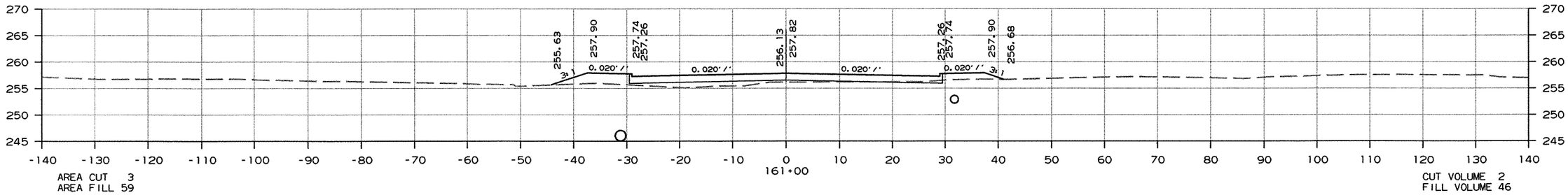
CROSS SECTION STA. 158+00 TO STA. 159+00

R100740.DGN 4/22/2011

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	144	160

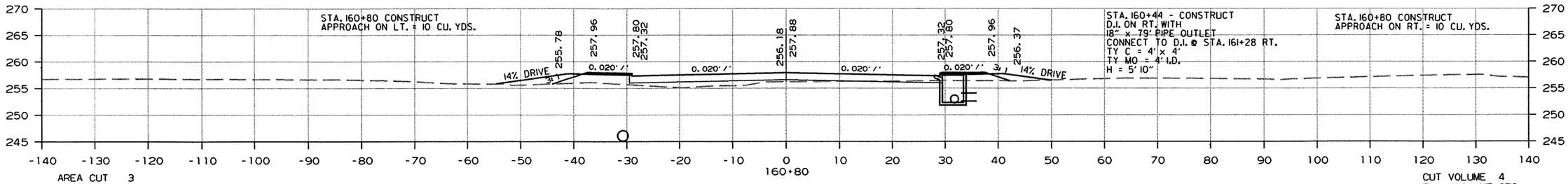
(2) CROSS SECTIONS

STA. 145+00 TO 159+47 EARTHWORK PLACED IN JOB 100705. SUBGRADE PREPARATION IS INCLUDED IN THE QUANTITIES TO BRING EARTHWORK TO ELEVATIONS SHOWN.



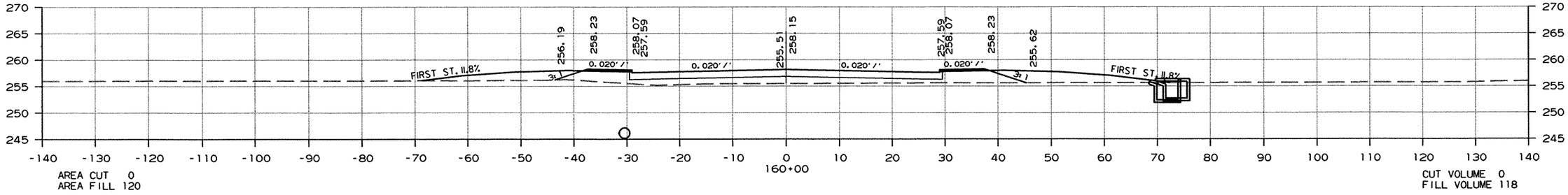
AREA CUT 3
AREA FILL 59

CUT VOLUME 2
FILL VOLUME 46



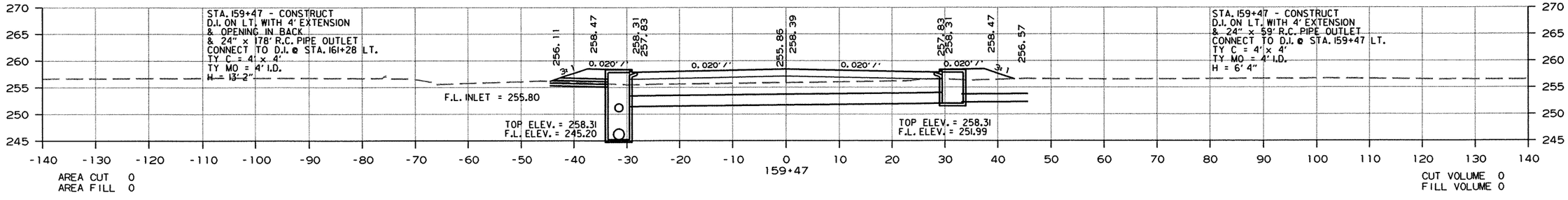
AREA CUT 3
AREA FILL 64

CUT VOLUME 4
FILL VOLUME 273



AREA CUT 0
AREA FILL 120

CUT VOLUME 0
FILL VOLUME 118



AREA CUT 0
AREA FILL 0

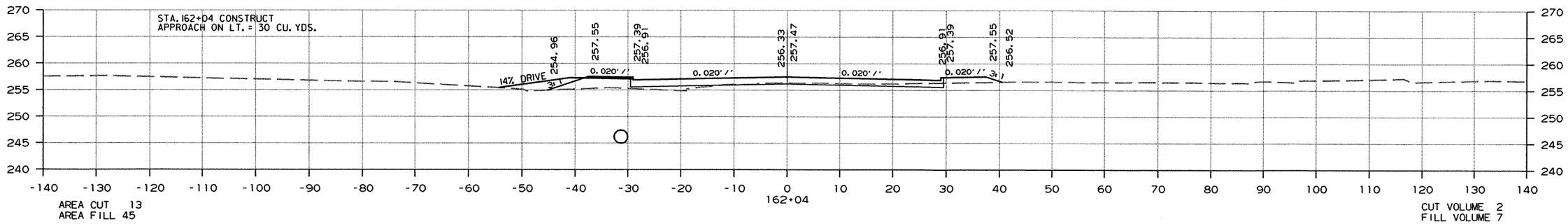
CUT VOLUME 0
FILL VOLUME 0

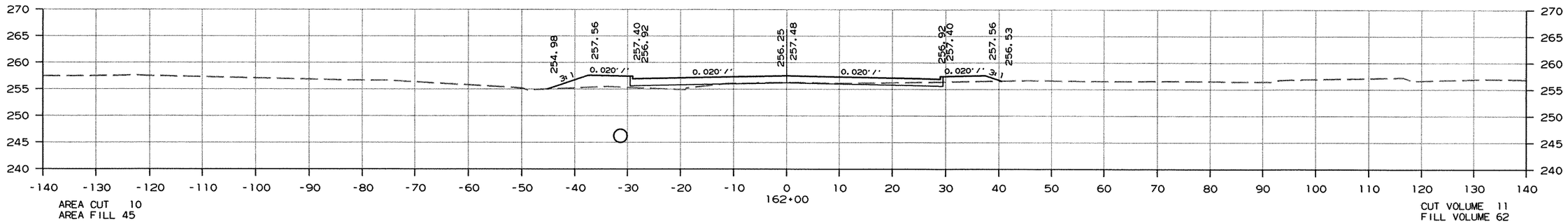
CROSS SECTION STA. 159+47 TO STA. 161+00

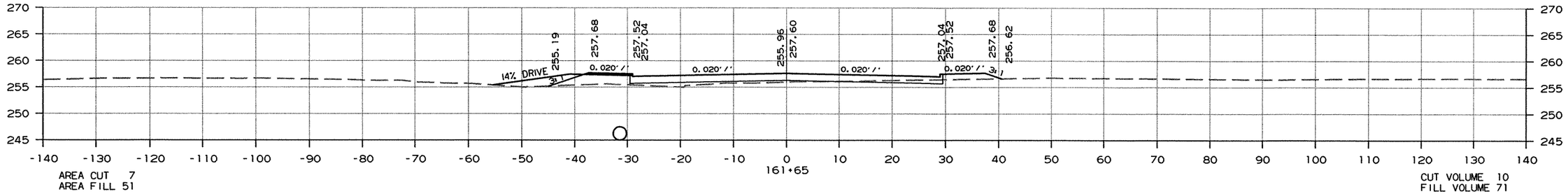
R100740.DGN 4/22/2011

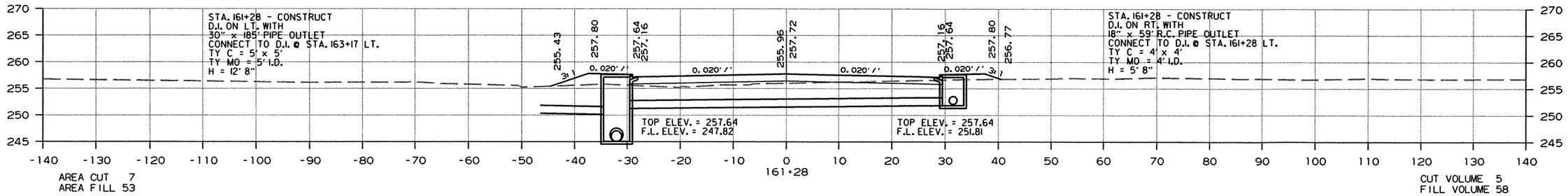
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	145	160

(2) CROSS SECTIONS







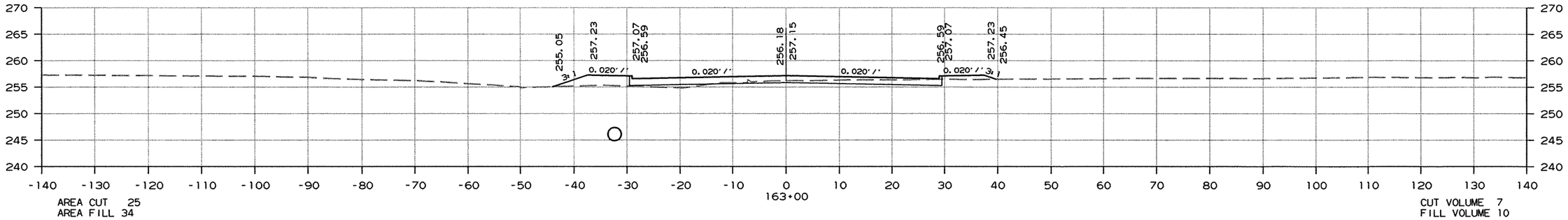


CROSS SECTION STA. 161+28 TO STA. 162+04

R100740.DGN 4/22/2011

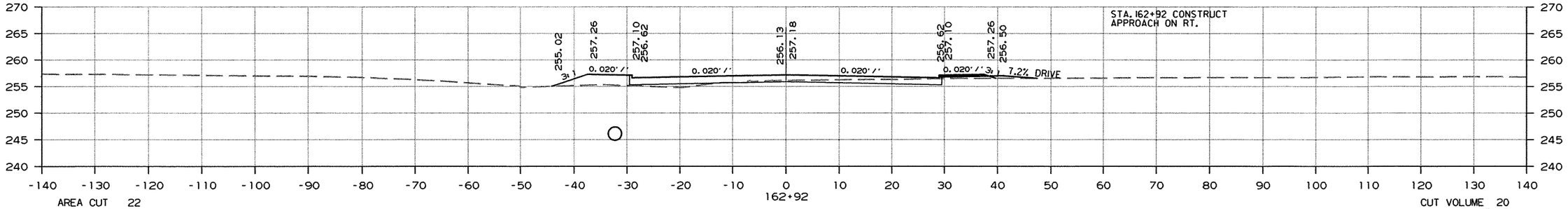
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	146	160

(2) CROSS SECTIONS



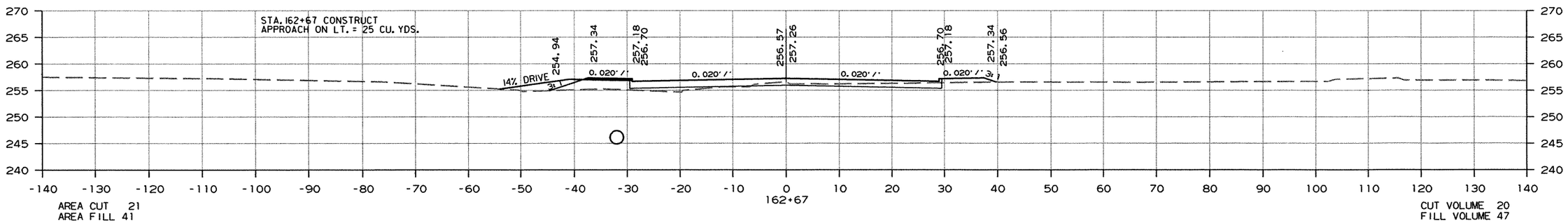
AREA CUT 25
AREA FILL 34

CUT VOLUME 7
FILL VOLUME 10



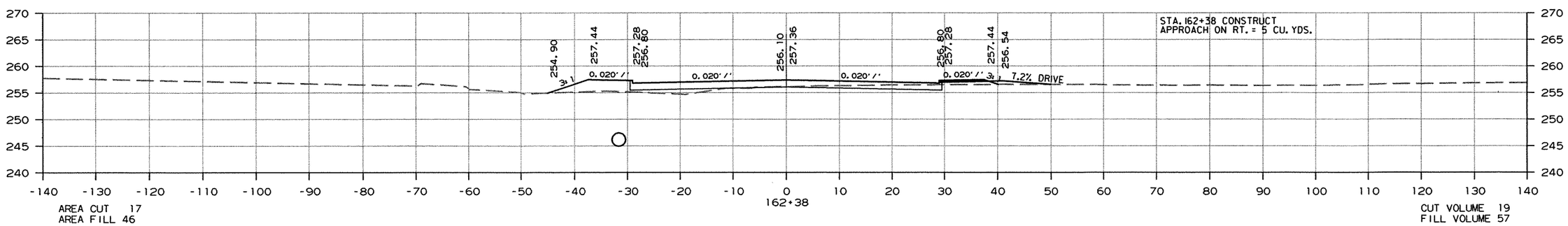
AREA CUT 22
AREA FILL 35

CUT VOLUME 20
FILL VOLUME 35



AREA CUT 21
AREA FILL 41

CUT VOLUME 20
FILL VOLUME 47



AREA CUT 17
AREA FILL 46

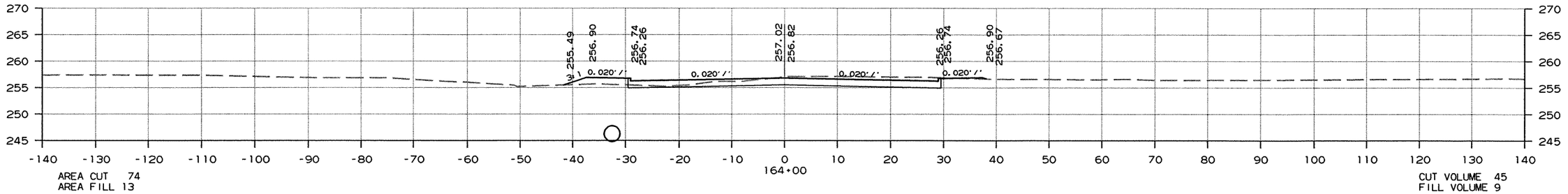
CUT VOLUME 19
FILL VOLUME 57

CROSS SECTION STA. 162+38 TO STA. 163+00

R100740.DGN 4/22/2011

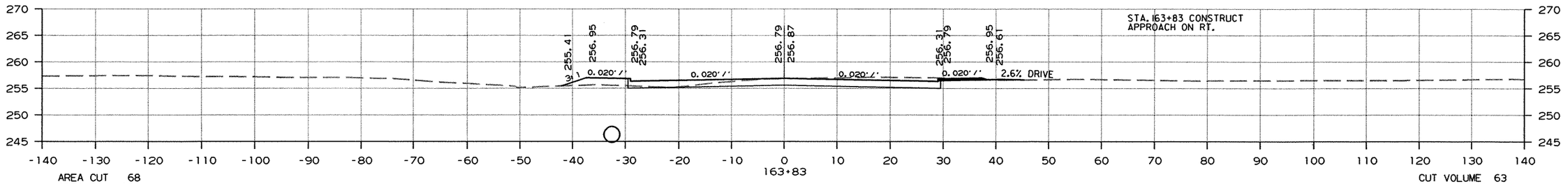
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	147	160

(2) CROSS SECTIONS



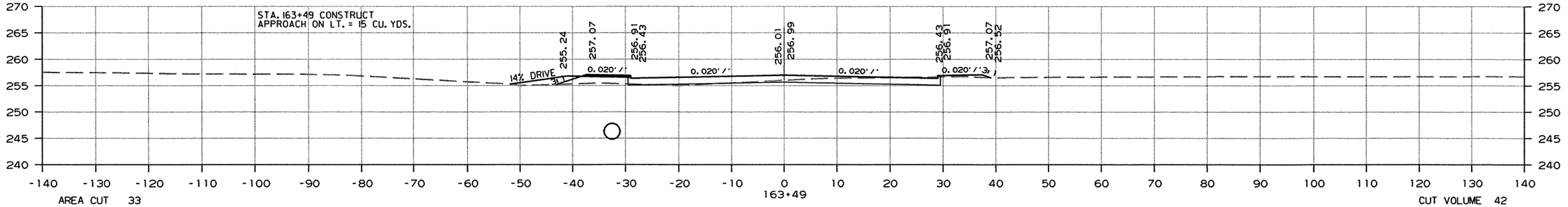
AREA CUT 74
AREA FILL 13

CUT VOLUME 45
FILL VOLUME 9



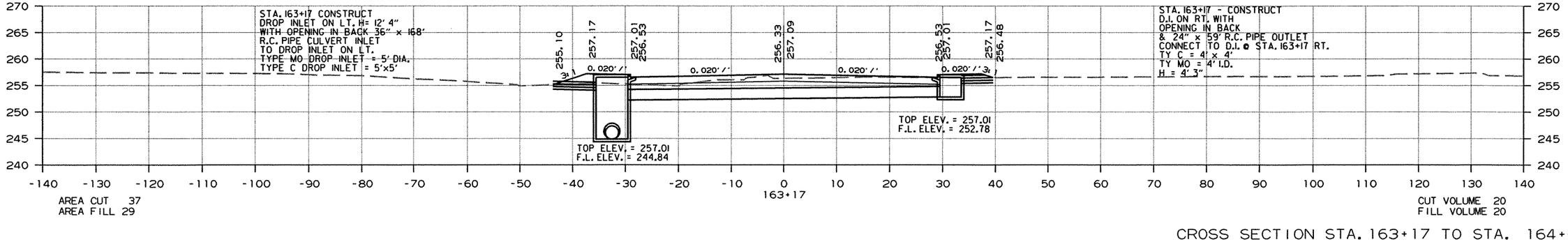
AREA CUT 68
AREA FILL 15

CUT VOLUME 63
FILL VOLUME 23



AREA CUT 33
AREA FILL 22

CUT VOLUME 42
FILL VOLUME 30



AREA CUT 37
AREA FILL 29

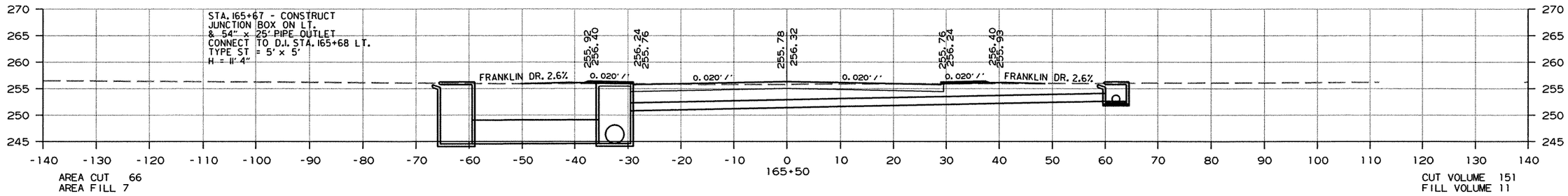
CUT VOLUME 20
FILL VOLUME 20

R100740.DGN 4/22/2011

CROSS SECTION STA. 163+17 TO STA. 164+00

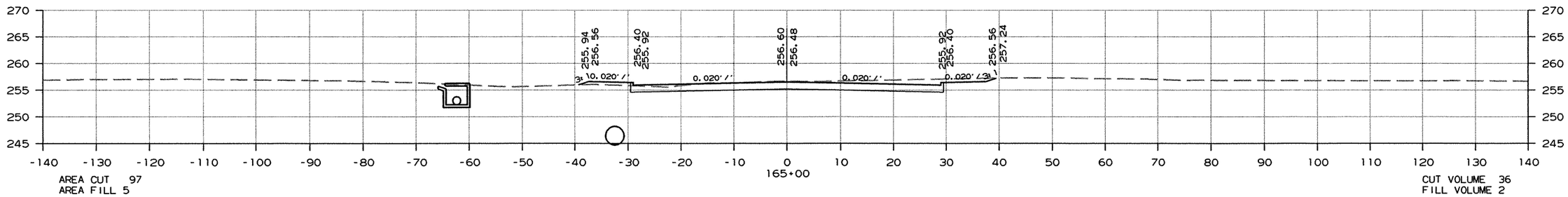
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	148	160

(2) CROSS SECTIONS



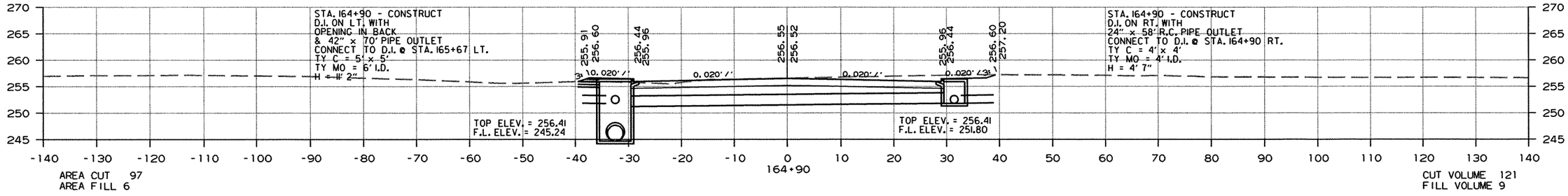
AREA CUT 66
AREA FILL 7

CUT VOLUME 151
FILL VOLUME 11



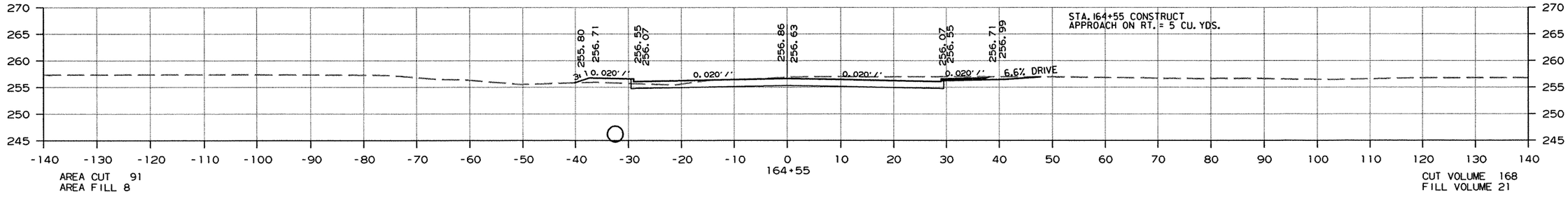
AREA CUT 97
AREA FILL 5

CUT VOLUME 36
FILL VOLUME 2



AREA CUT 97
AREA FILL 6

CUT VOLUME 121
FILL VOLUME 9



AREA CUT 91
AREA FILL 8

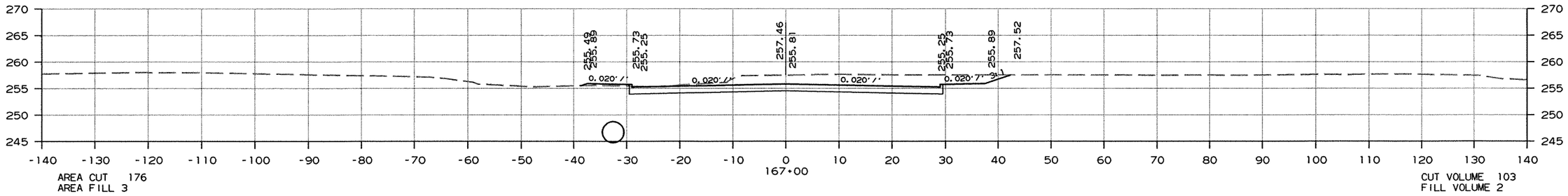
CUT VOLUME 168
FILL VOLUME 21

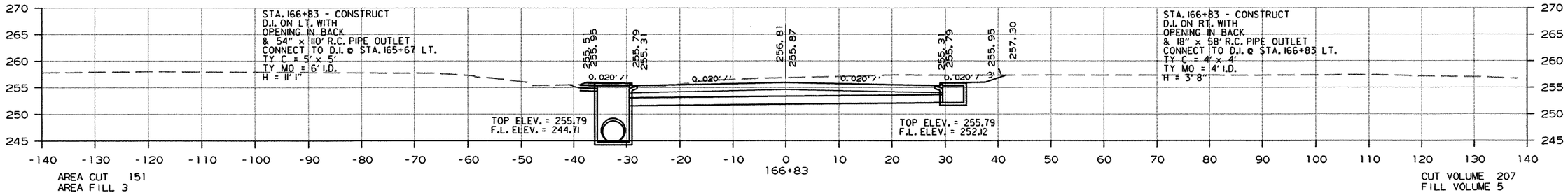
CROSS SECTION STA. 164+55 TO STA. 165+50

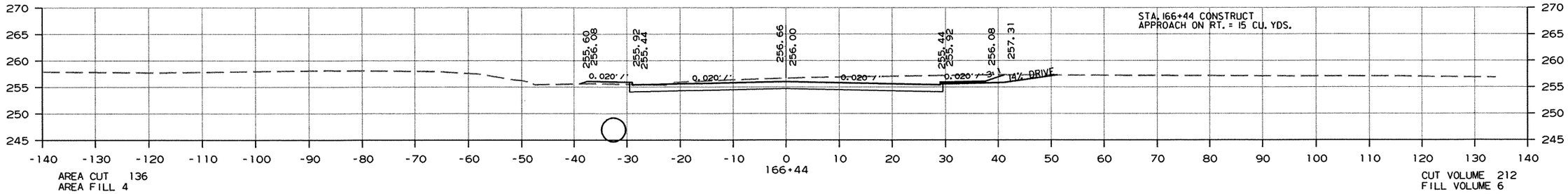
R100740.DGN 4/22/2011

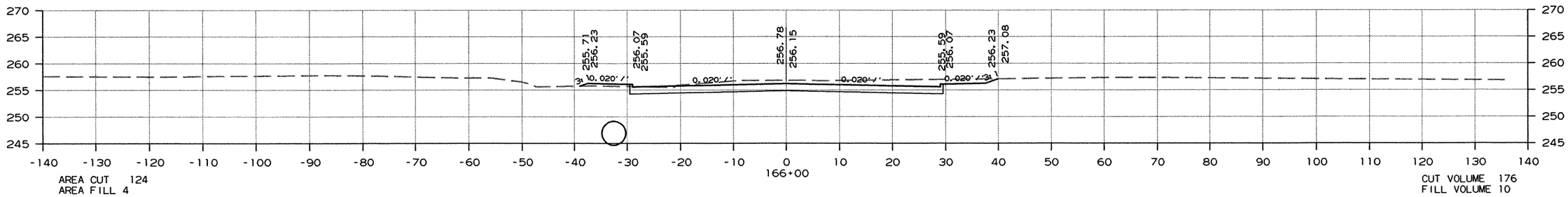
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	149	160

(2) CROSS SECTIONS







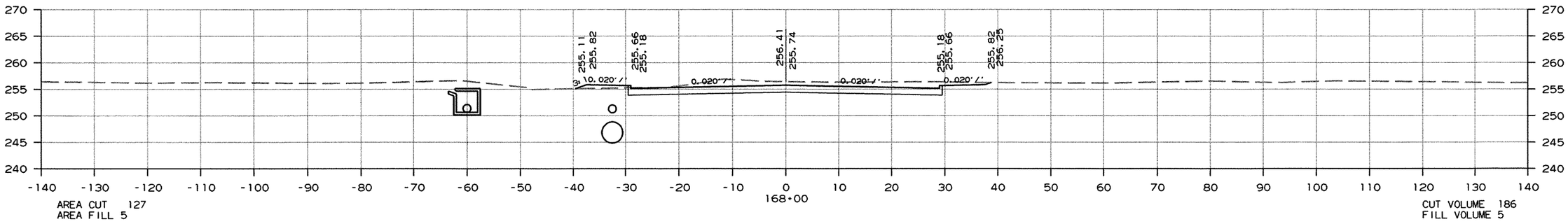


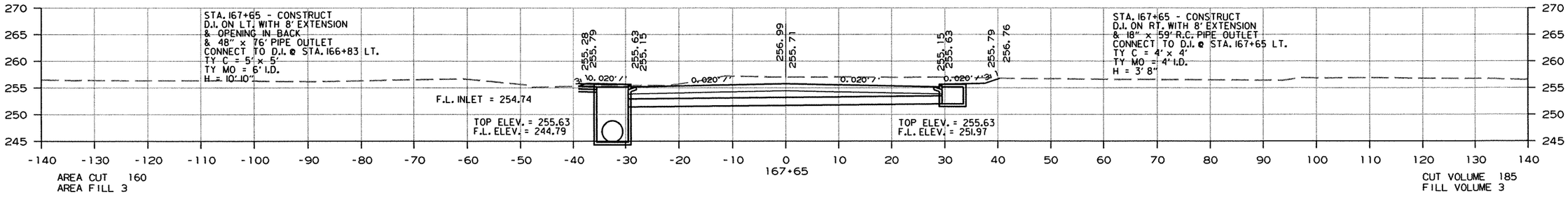
CROSS SECTION STA. 166+00 TO STA. 167+00

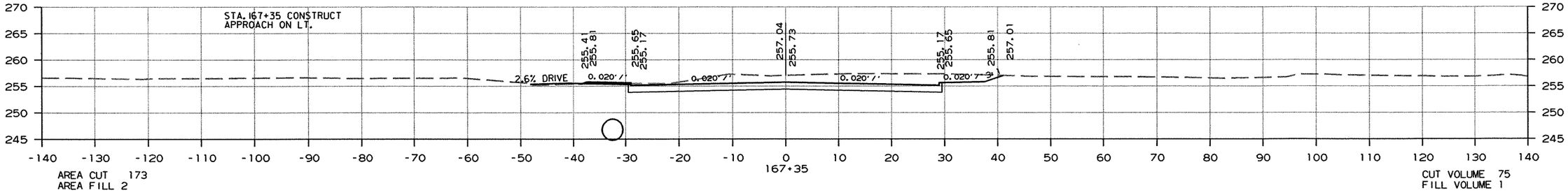
R100740.DGN 4/22/2011

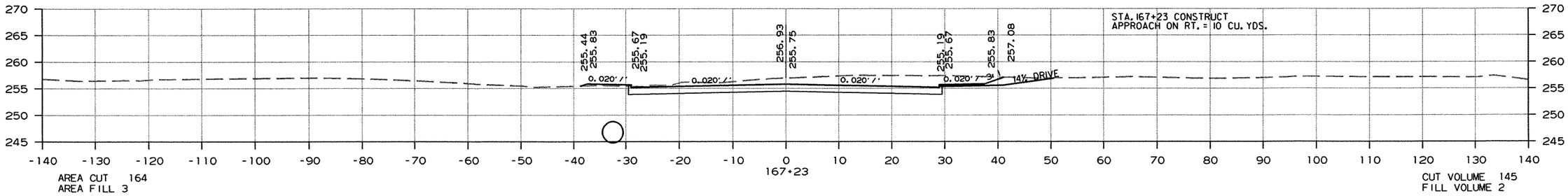
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	150	160

(2) CROSS SECTIONS







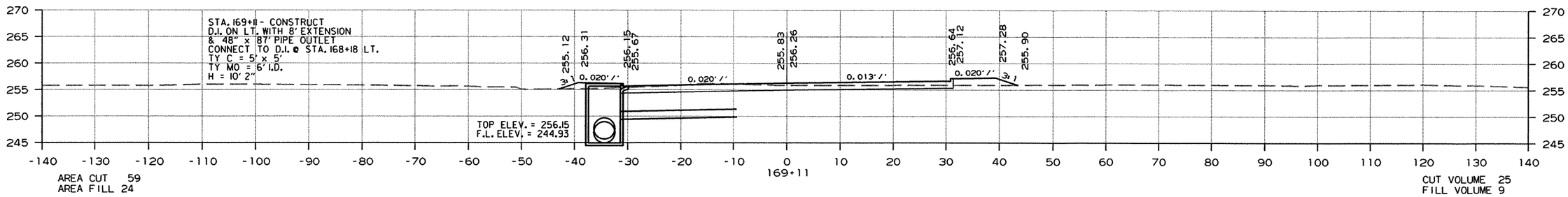


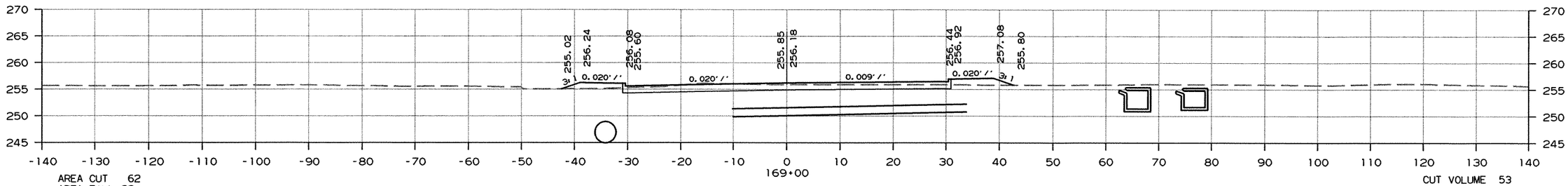
CROSS SECTION STA. 167+23 TO STA. 168+00

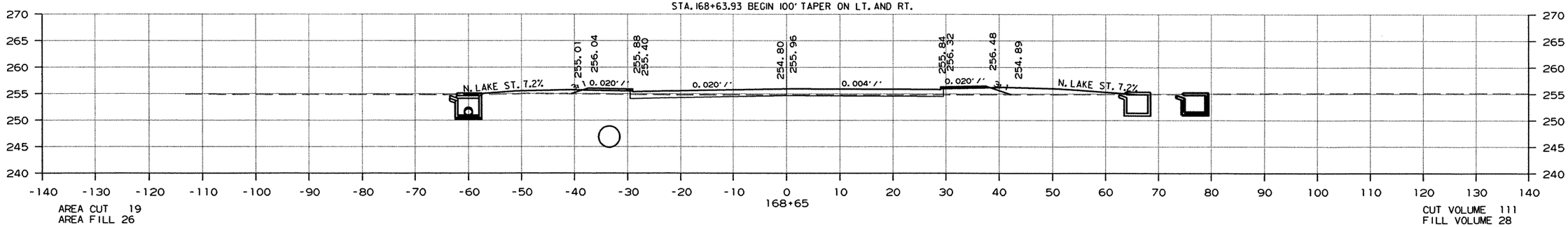
R100740.DGN 4/22/2011

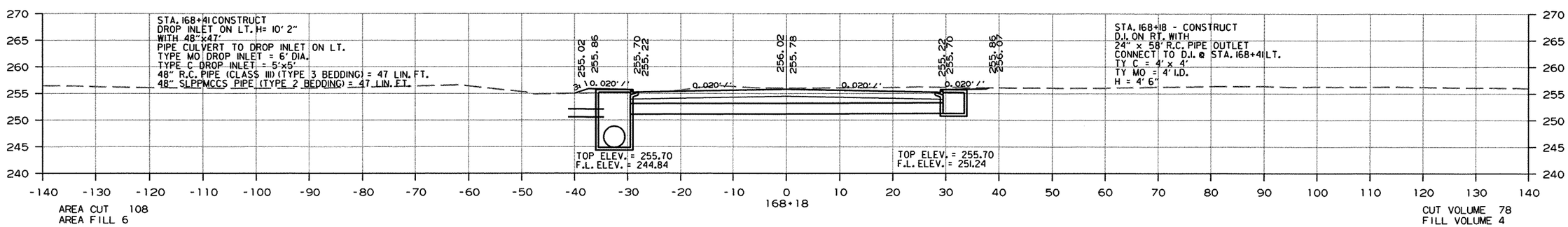
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	151	160

(2) CROSS SECTIONS







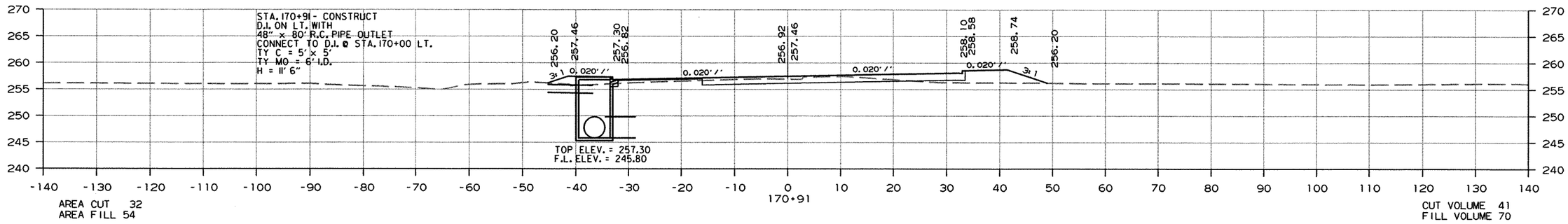


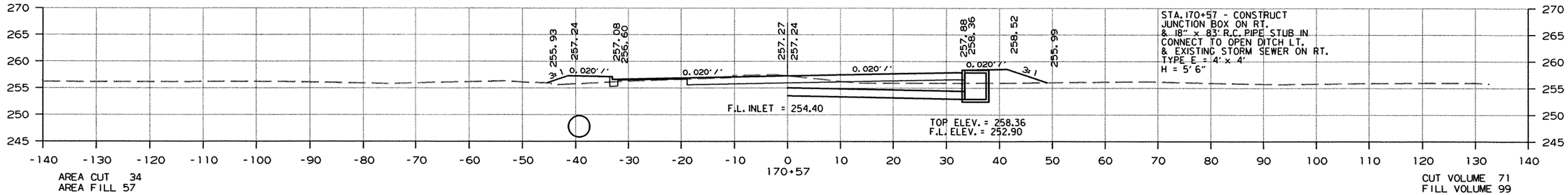
CROSS SECTION STA. 168+18 TO STA. 169+11

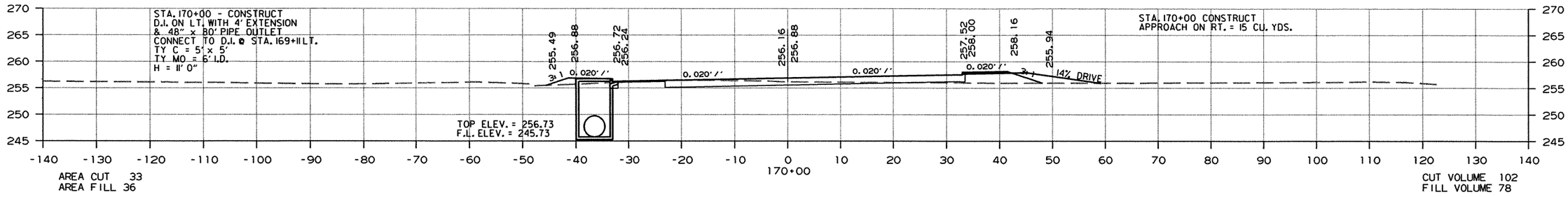
R100740.DGN 4/22/2011

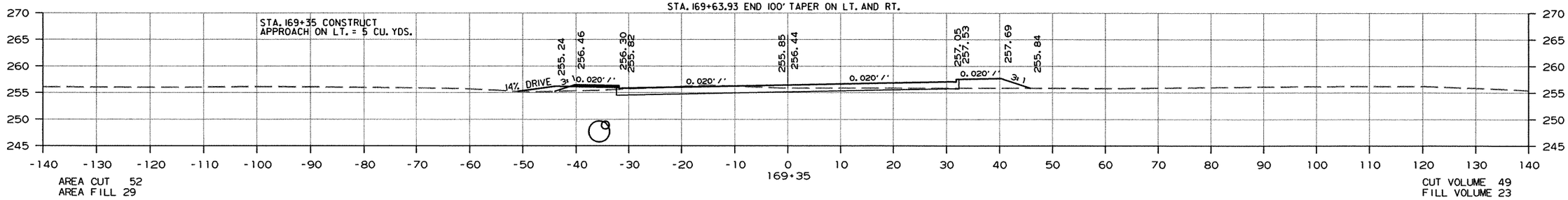
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	152	160

(2) CROSS SECTIONS







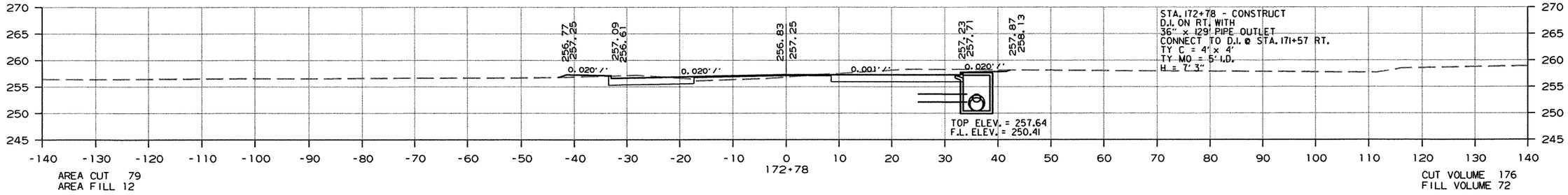


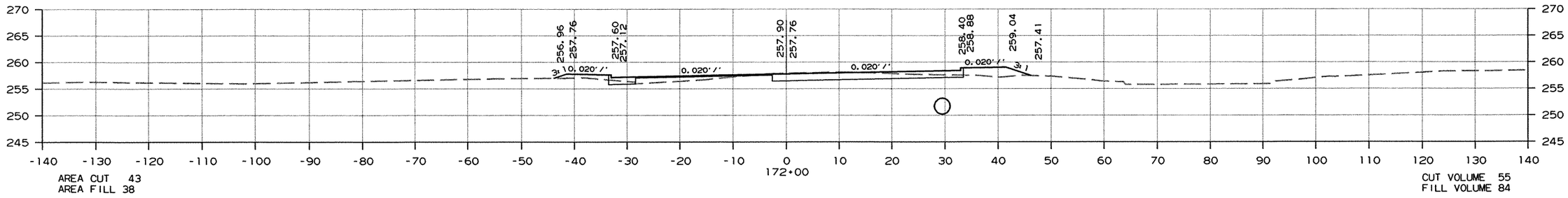
CROSS SECTION STA. 169+35 TO STA. 170+91

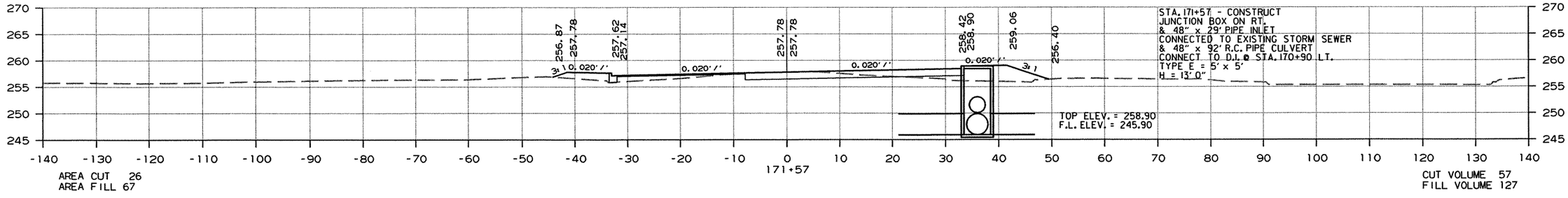
R100740.DGN 4/22/2011

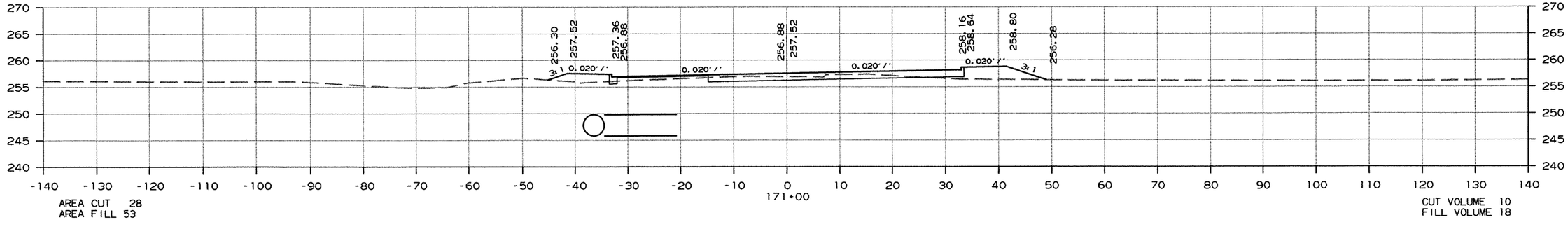
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	153	160

(2) CROSS SECTIONS







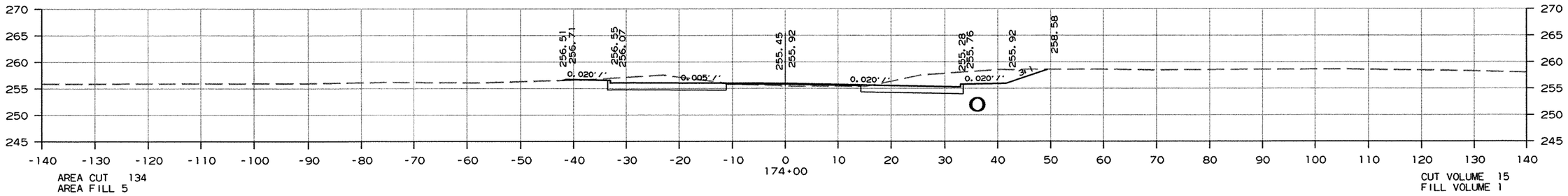


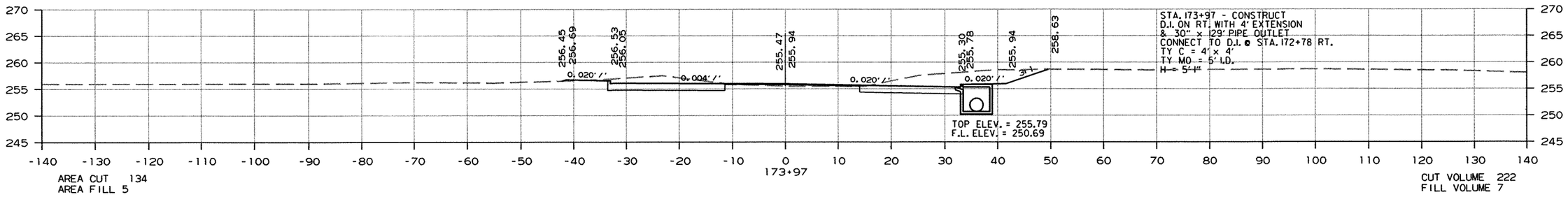
CROSS SECTION STA. 171+00 TO STA. 172+78

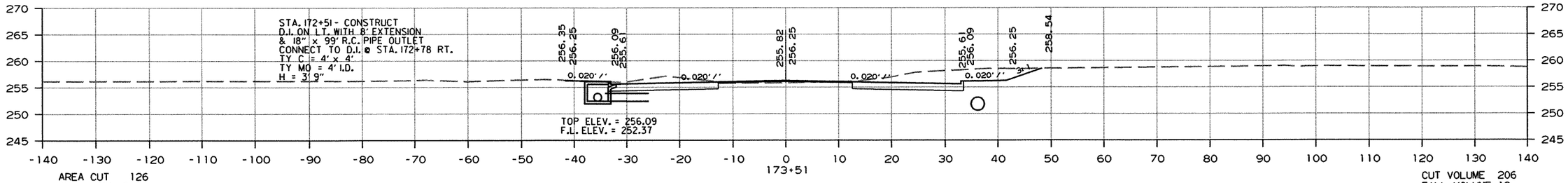
R100740.DGN 4/22/2011

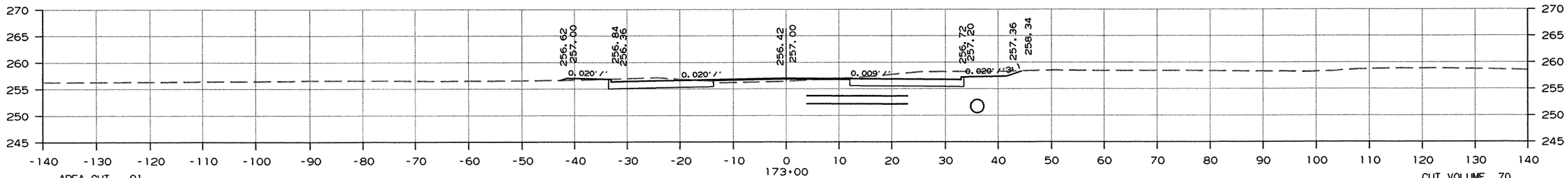
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	154	160

(2) CROSS SECTIONS







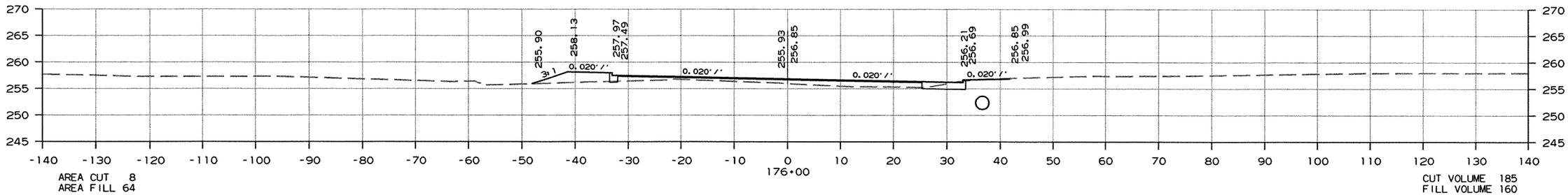


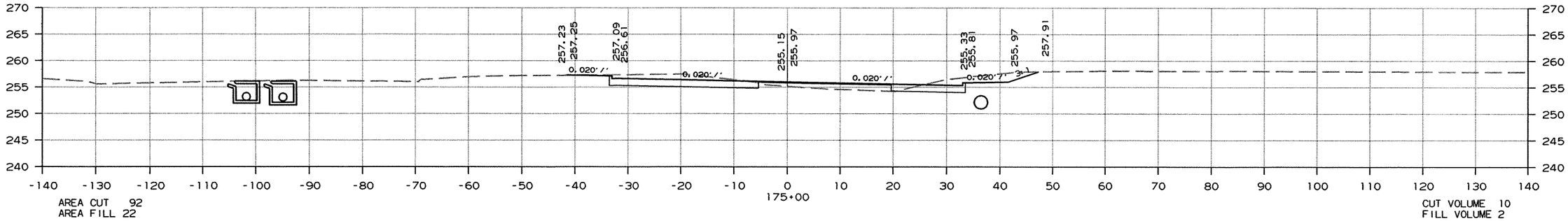
CROSS SECTION STA. 173+00 TO STA. 174+00

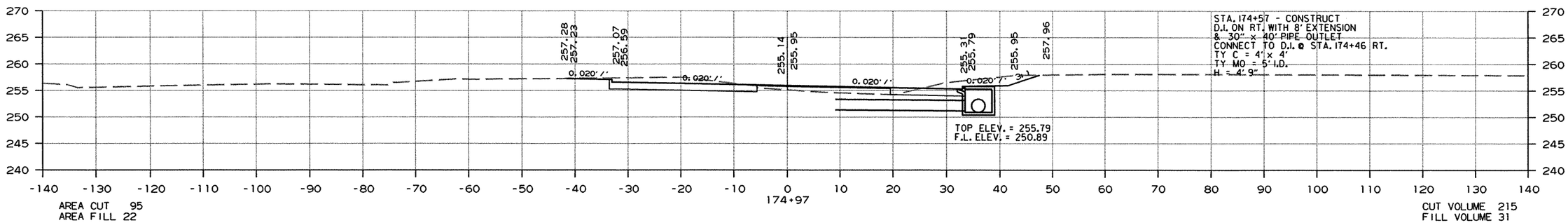
R100740.DGN 4/22/2011

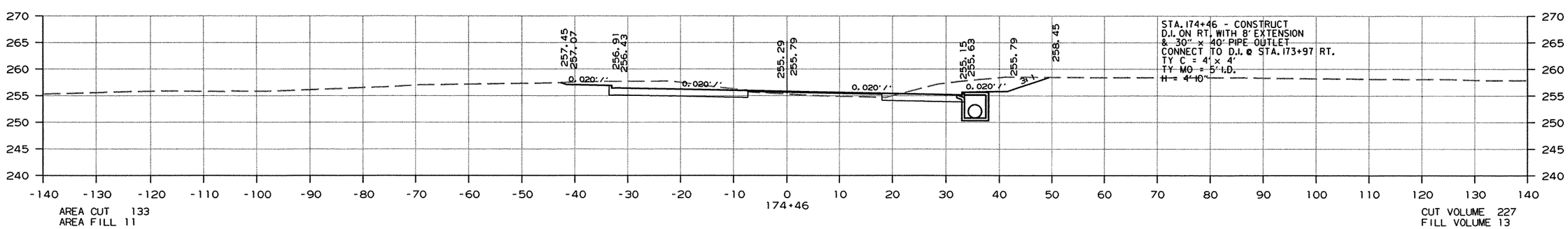
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	155	160

(2) CROSS SECTIONS







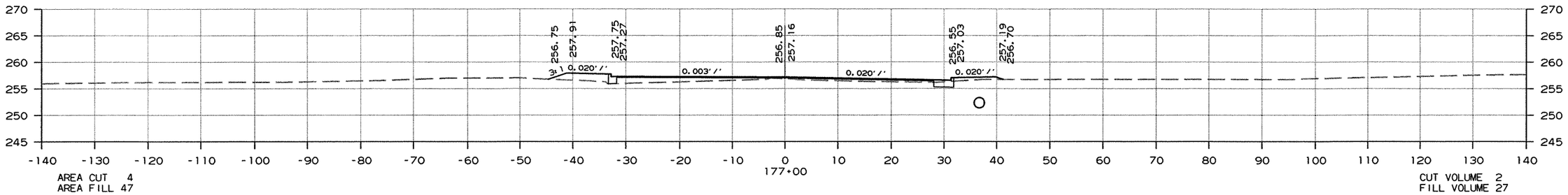


CROSS SECTION STA. 174+46 TO STA. 176+00

R100740.DGN 4/22/2011

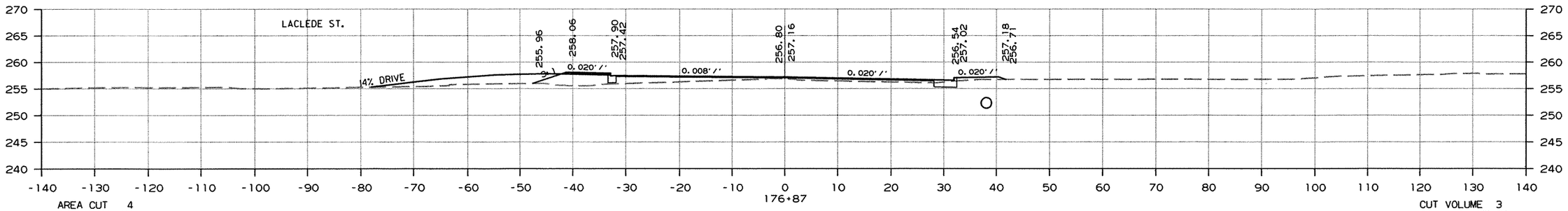
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	156	160

(2) CROSS SECTIONS



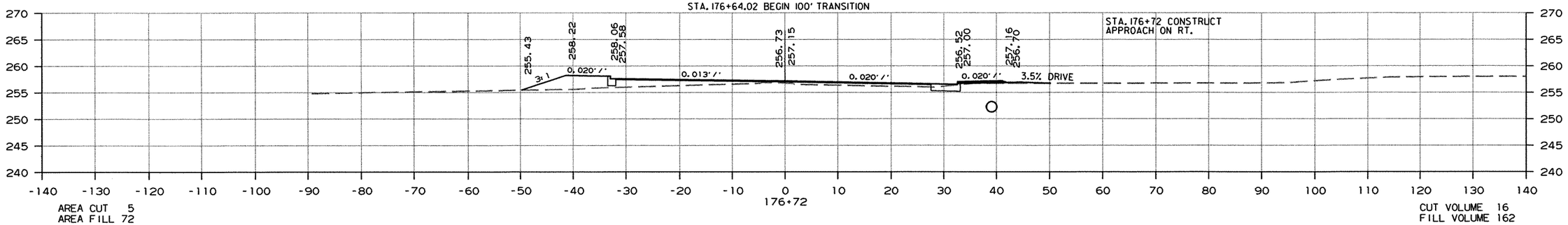
AREA CUT 4
AREA FILL 47

CUT VOLUME 2
FILL VOLUME 27



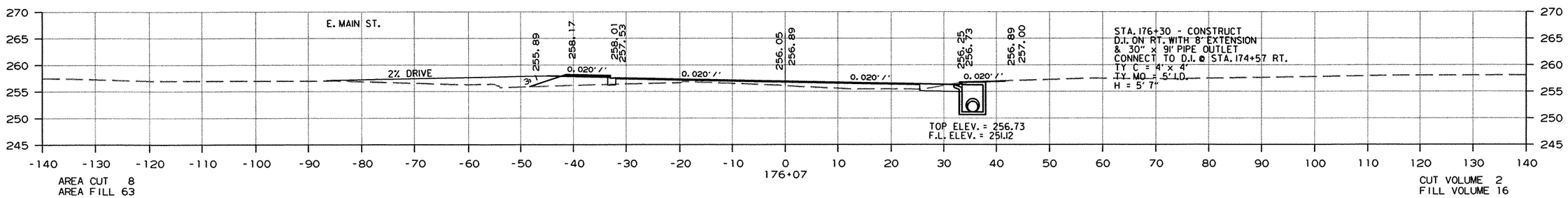
AREA CUT 4
AREA FILL 65

CUT VOLUME 3
FILL VOLUME 38



AREA CUT 5
AREA FILL 72

CUT VOLUME 16
FILL VOLUME 162



AREA CUT 8
AREA FILL 63

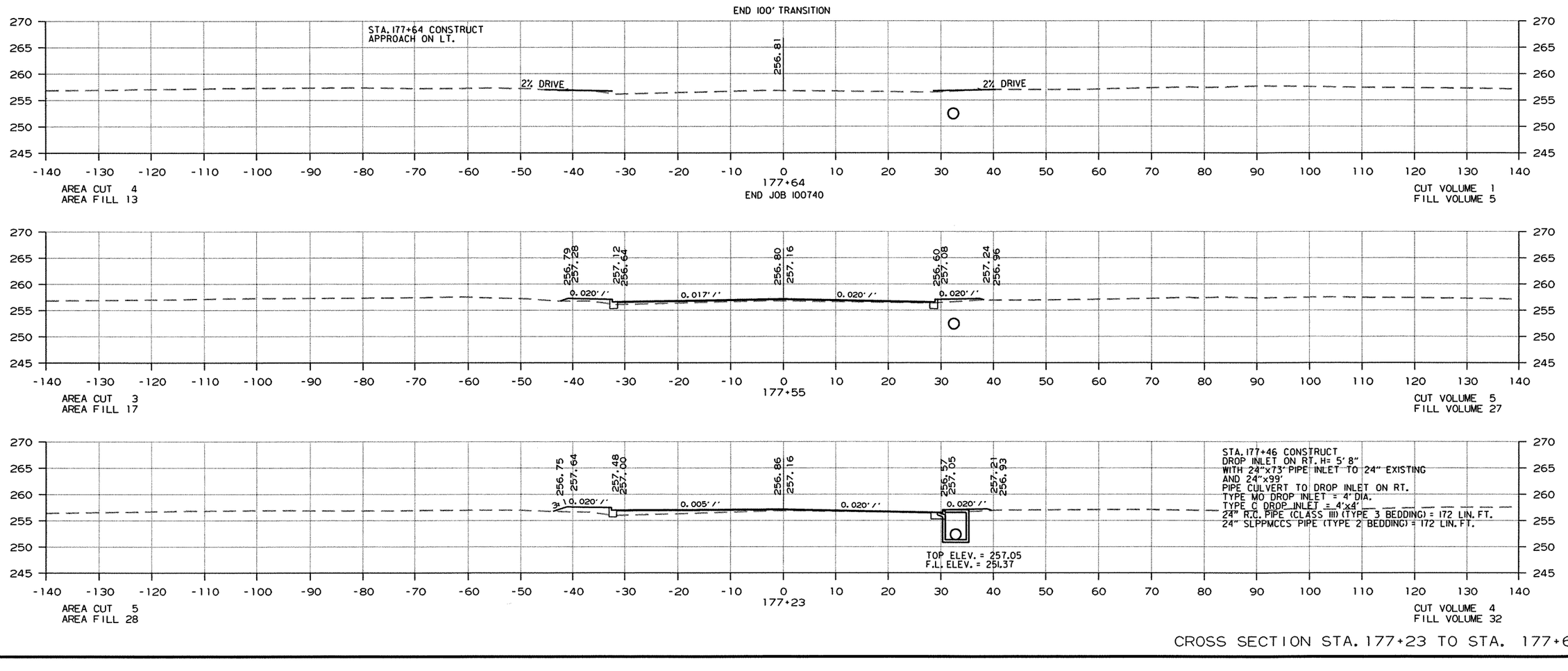
CUT VOLUME 2
FILL VOLUME 16

CROSS SECTION STA. 176+07 TO STA. 177+00

R100740.DGN 4/22/2011

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	157	160

(2) CROSS SECTIONS

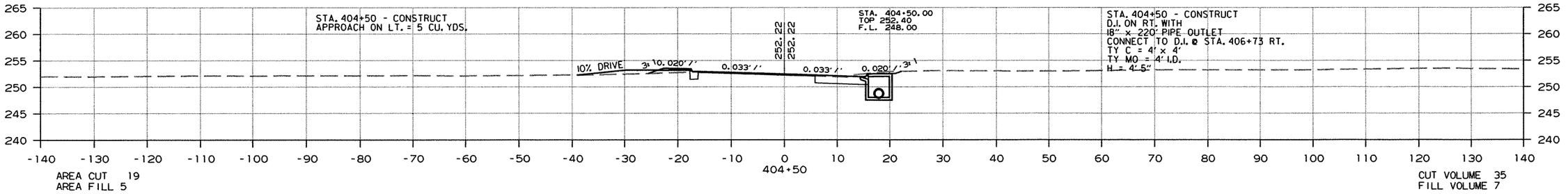


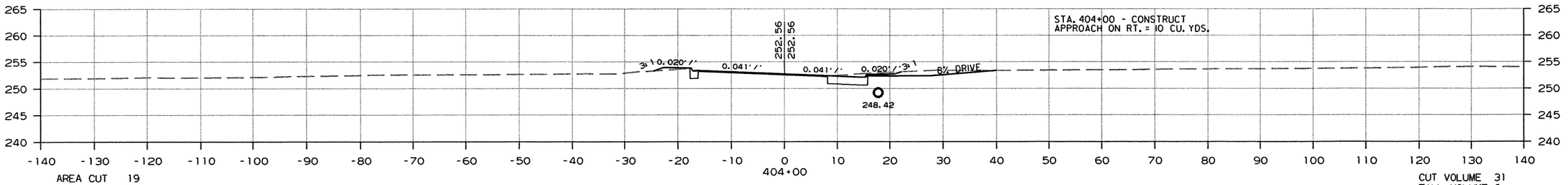
CROSS SECTION STA. 177+23 TO STA. 177+64

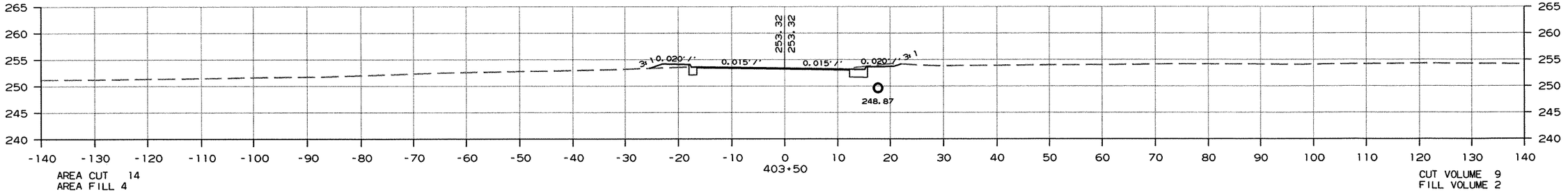
R100740.DGN 4/22/2011

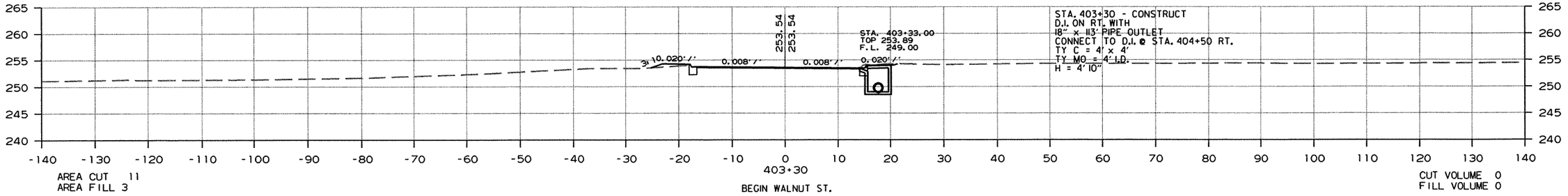
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	158	160

(2) CROSS SECTIONS







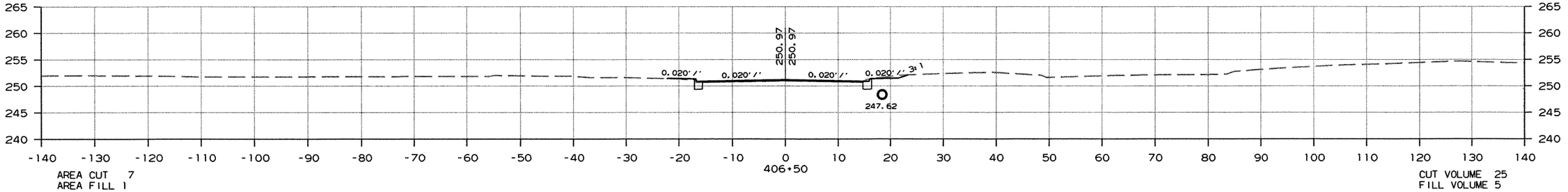


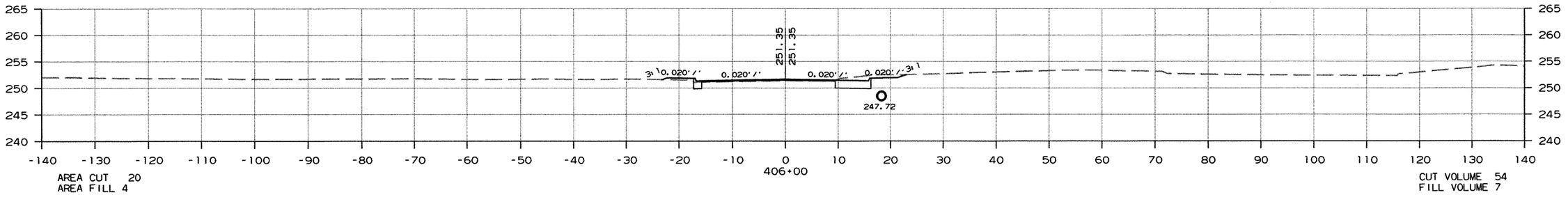
CROSS SECTION STA. 403+30 TO STA. 404+50

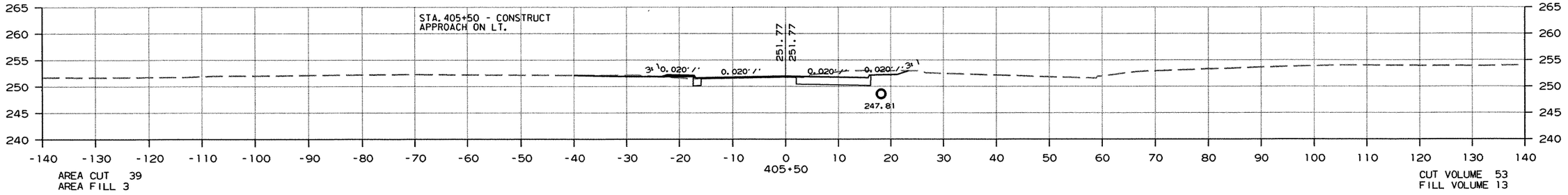
r100740.dgn 5/20/2010

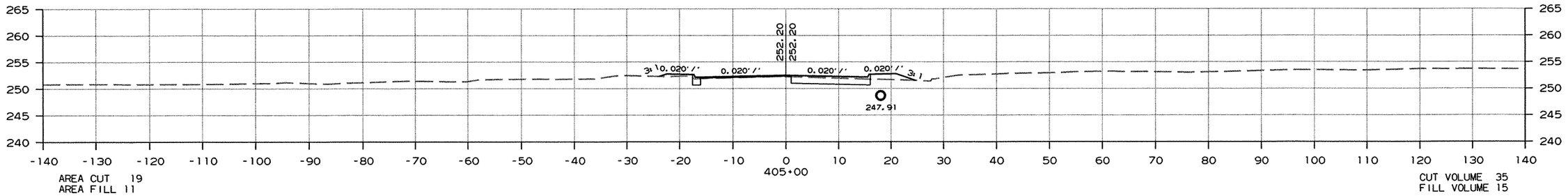
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	159	160

(2) CROSS SECTIONS







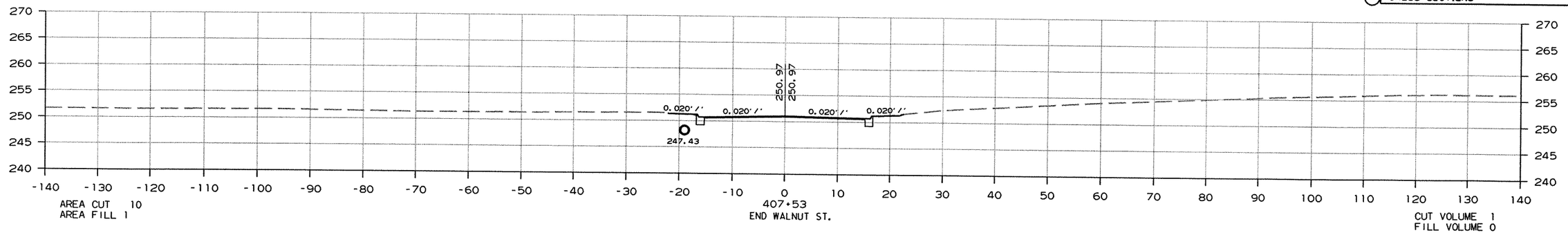


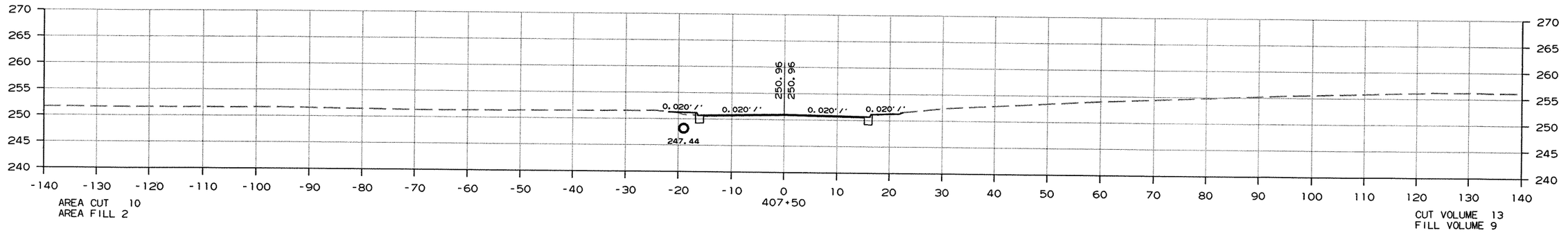
CROSS SECTION STA. 405+00 TO STA. 406+50

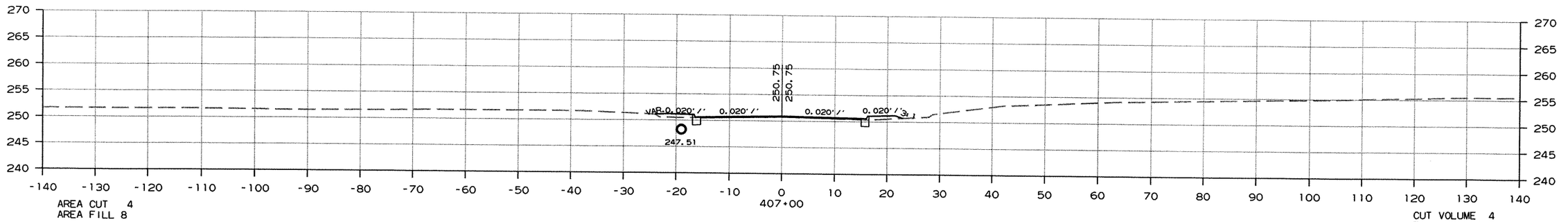
r100740.dgn 5/20/2010

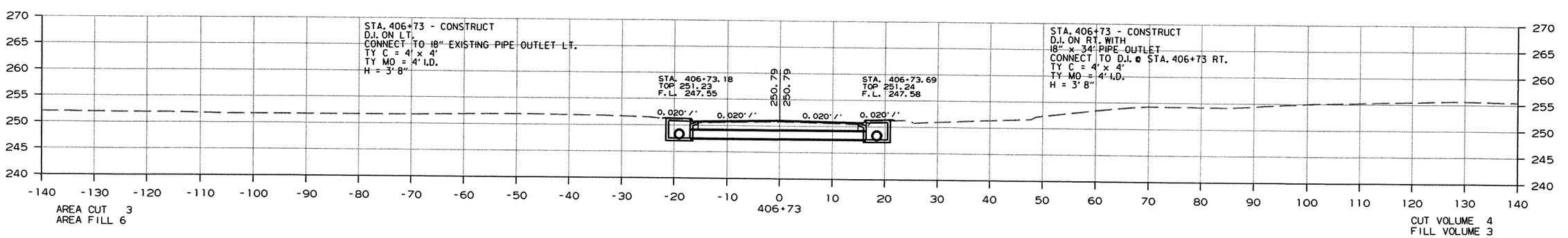
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		100740	160	160

(2) CROSS SECTIONS









CROSS SECTION STA. 406+73 TO STA. 407+53

r100740.dgn 5/20/2010