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.		040517	1	296
				(2) HWY. 45-E. JOYCE BLVD. (FAYETTEVILLE) (S)				

"THIS PROJECT IS A PARTIALLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 45-E. JOYCE BLVD. (FAYETTEVILLE) (S)

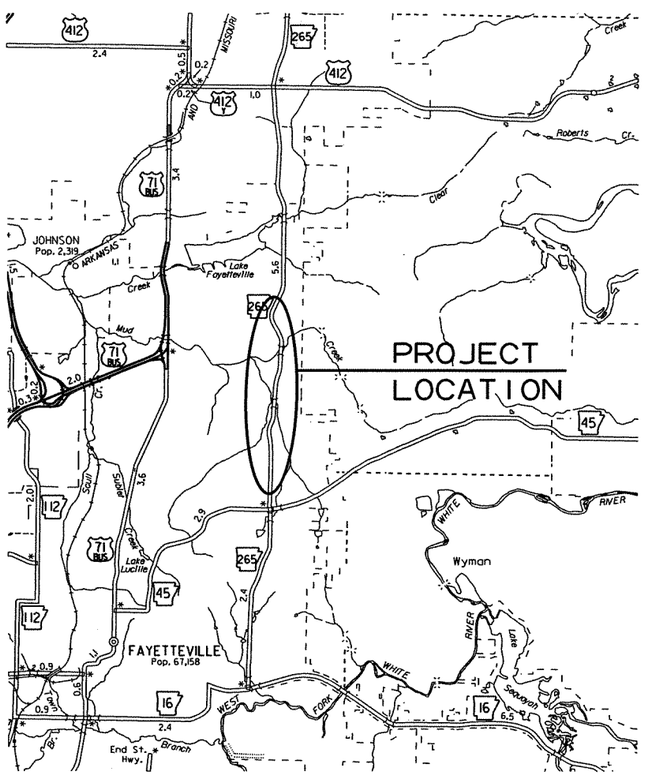
WASHINGTON COUNTY

ROUTE 265 SECTION 2

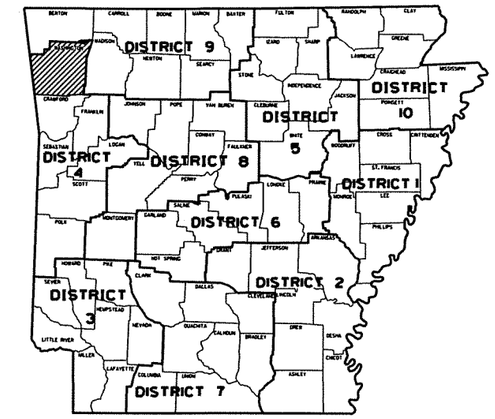
JOB 040517

FED. AID PROJ. STP-9142(24)

0 1 2



VICINITY MAP



ARK. HWY. DIST. NO. 4

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2031
2011 ADT	20,000
2031 ADT	28,000
2031 DHV	3,080
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	4%
DESIGN SPEED	40 MPH

STRUCTURES OVER 20'-0" SPAN

(1) STA. 113+64 CONSTRUCT
TRP 10' x 7' x 76' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
SPAN LENGTH = 32' - 11"

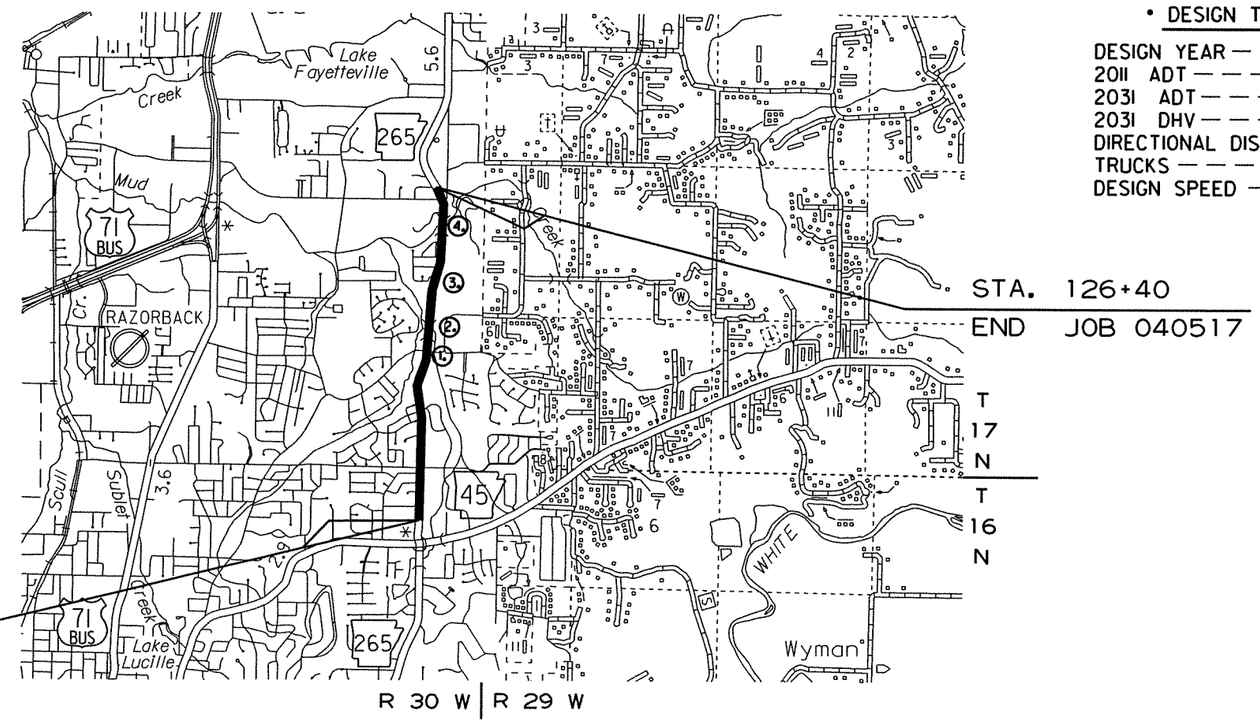
(2) STA. 75+08 CONSTRUCT
QUINT 10' x 9' x 155' R.C. BOX CULVERT
ON 45° LT. FWD SKEW
WITH 2:1 WINGS LT. AND 3:1 WINGS RT.
SPAN LENGTH = 55' - 2"

(3) STA. 90+00 CONSTRUCT
DBL. 9' x 8' x 126' R.C. BOX CULVERT
ON 15° RT FWD SKEW
WITH 3:1 WINGS LT. & RT.
SPAN LENGTH = 20' - 2"

(4) STA. 110+80 CONSTRUCT
QUAD 12' x 8' x 133' R.C. BOX CULVERT
ON 30° RT FWD SKEW
WITH 3:1 WINGS LT. & RT.
SPAN LENGTH = 51' - 10"

STA. 10+10 - BEGIN JOB 040517

LOG MILE 2.53



	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 36° 05' 24"	N 36° 06' 26"	N 36° 07' 16"
LONGITUDE	W 94° 07' 17"	W 94° 07' 14"	W 94° 07' 10"

GROSS LENGTH OF PROJECT	11630.00	FEET	OR	2.203	MILES
NET " " ROADWAY	11469.91	"	"	2.173	"
NET " " BRIDGES	160.09	"	"	0.030	"
NET " " PROJECT	11630.00	"	"	2.203	"

P.E. 040440
NON-PART.

N

APPROVED

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 3917 FRANK VOZEL

7/7/11

DEPUTY DIRECTOR AND CHIEF ENGINEER

r040517.dgn

3-9-10

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.		040517	2	296

(2) INDEX AND GOVERNING SPECIFICATIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
7-21-11

INDEX OF SHEETS

SHEET NO.	TITLE	DRWG.NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS AND GOVERNING SPECIFICATIONS		
3	GENERAL NOTES		
4 - 10	TYPICAL SECTIONS OF IMPROVEMENT		
11 - 19	SPECIAL DETAILS		
20 - 44	TEMPORARY EROSION CONTROL		
45 - 72	MAINTENANCE OF TRAFFIC		
73 - 81	PERMANENT PAVEMENT MARKINGS		
82 - 94	QUANTITY SHEETS		
95 - 96	SUMMARY OF QUANTITIES AND REVISIONS		
97 - 107	SURVEY CONTROL DETAILS		
108 - 135	PLAN AND PROFILE SHEETS		
136	SYSTEM MAP - FAYETTEVILLE		
137 - 170	SIGNALIZATION PLAN SHEETS		
171 - 176	SIGNALIZATION DETAILS		
177	LAYOUT OF CONCRETE RETAINING WALL	51284	7-10-10
178	BACK ELEVATION OF CONCRETE RETAINING WALL	51285	6-21-10
179	DETAILS OF CONCRETE RETAINING WALL	51286	6-21-10
180	CONCRETE DITCH PAVING	CDP-1	11-17-10
181	CURBING DETAILS	CG-1	11-29-07
182	DETAILS OF DRIVEWAYS & ISLANDS	DR-1	11-29-07
183	FLARED END SECTION	FES-1	10-18-96
184	FLARED END SECTION	FES-2	10-18-96
185	DETAILS OF DROP INLETS & JUNCTION BOXES	FPC-9	11-16-01
186	DETAILS OF DROP INLETS (TYPE C)	FPC-9E	8-22-02
187	DETAILS OF DROP INLET (TYPE MO)	FPC-9M	8-22-02
188	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)	FPC-9S	11-16-01
189	MAILBOX DETAILS	MB-1	11-18-04
190	PRECAST CONCRETE BOX CULVERTS	PBC-1	10-15-09
191	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	5-18-00
192	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	PCM-1	3-30-00
193	PAVEMENT MARKING DETAILS	PM-1	11-17-10
194	DETAILS OF PIPE UNDERDRAIN	PU-1	4-10-03
195	REINFORCED CONCRETE BOX CULVERT DETAILS	RCB-1	5-25-06
196	EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS	RCB-2	11-20-03
197	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	RCB-3	10-12-95
198	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	SE-1	1-09-87
199	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	SE-2	10-18-96
200	DETAILS OF SPECIAL ITEMS	SI-1	4-17-08
201	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	11-17-10
202	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	3-11-10
203	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	10-15-09
204	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-4	10-15-09
205	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER	TC-5	10-15-09
206	TEMPORARY EROSION CONTROL DEVICES	TEC-1	11-18-98
207	TEMPORARY EROSION CONTROL DEVICES	TEC-2	6-02-94
208	TEMPORARY EROSION CONTROL DEVICES	TEC-3	11-03-94
209	WIRE FENCE TYPE C AND D	WF-4	8-22-02
210	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	WR-1	11-10-05
211	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X003-1	5-10-66
212	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X15	6-13-63
213	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X153-1	5-10-66
214	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X30	7-15-63
215	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X303-1	5-10-66
216	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X45	6-15-64
217	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X453-2	6-08-64
218	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-200X-0	2-15-63
219	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-300X-0	2-28-63
220	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-215X-0	8-23-63
221	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-430X-02	6-17-66
222	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-545X-02	6-17-66
223 - 296	CROSS SECTIONS		

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

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	FHWA-1273 REVISIONS
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 040517
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)
103-1	DETERMINATION OF DBE PARTICIPATION
105-1	CONSTRUCTION CONTROL MARKINGS
105-2	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
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
409-1	MINERAL AGGREGATES
410-3	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1	ASPHALT CONCRETE COLD PLANT MIX
600-1	WATER FOR VEGETATION
603-1	MAINTENANCE OF TRAFFIC
604-1	RETROREFLECTIVE SHEETING FOR 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
JOB 040517	ANTENNA RELOCATION
JOB 040517	ARCHITECTURAL FINISH
JOB 040517	ASPHALT CONCRETE HOT MIX SURFACE COURSE SURFACE TOLERANCE AND INCENTIVE PAYMENTS
JOB 040517	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 040517	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 040517	CABINET DRAWER ASSEMBLY
JOB 040517	CAVE DISCOVERY
JOB 040517	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 040517	EDGE CARD VIDEO PROCESSOR
JOB 040517	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 040517	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 040517	EXTENSION FOR PIPE CULVERTS
JOB 040517	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 040517	INTERNET BIDDING
JOB 040517	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 040517	LED TRAFFIC SIGNAL HEAD
JOB 040517	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 040517	MAINTENANCE OF PEDESTRIAN TRAFFIC
JOB 040517	MAINTENANCE OF TRAFFIC
JOB 040517	NESTING SITES OF MIGRATORY BIRDS
JOB 040517	PARTNERING REQUIREMENTS
JOB 040517	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 040517	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB 040517	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 040517	SERVICE POINT ASSEMBLY
JOB 040517	SITE USE (A+C METHOD)
JOB 040517	SOIL STABILIZATION
JOB 040517	STAMPED CONCRETE
JOB 040517	STORM WATER POLLUTION PREVENTION PLAN
JOB 040517	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 040517	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040517	SYSTEM LOCAL CONTROLLER
JOB 040517	TEXTURED COATING FINISH
JOB 040517	UTILITY ADJUSTMENTS
JOB 040517	VALUE ENGINEERING
JOB 040517	VIDEO DETECTOR (COLOR)
JOB 040517	VIDEO DETECTOR RELOCATION
JOB 040517	VIDEO DETECTOR ROTATION
JOB 040517	WARM MIX ASHALT

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGSETT

5-31-11

GENERAL NOTES

1. LEVEL DATUM IS U. S. C. & G. S.
2. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
3. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
4. 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.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
6. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
7. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED INITIALLY, OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
9. THIS PROJECT IS COVERED UNDER A NATIONWIDE 14 SECTION 404 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
10. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
11. 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.

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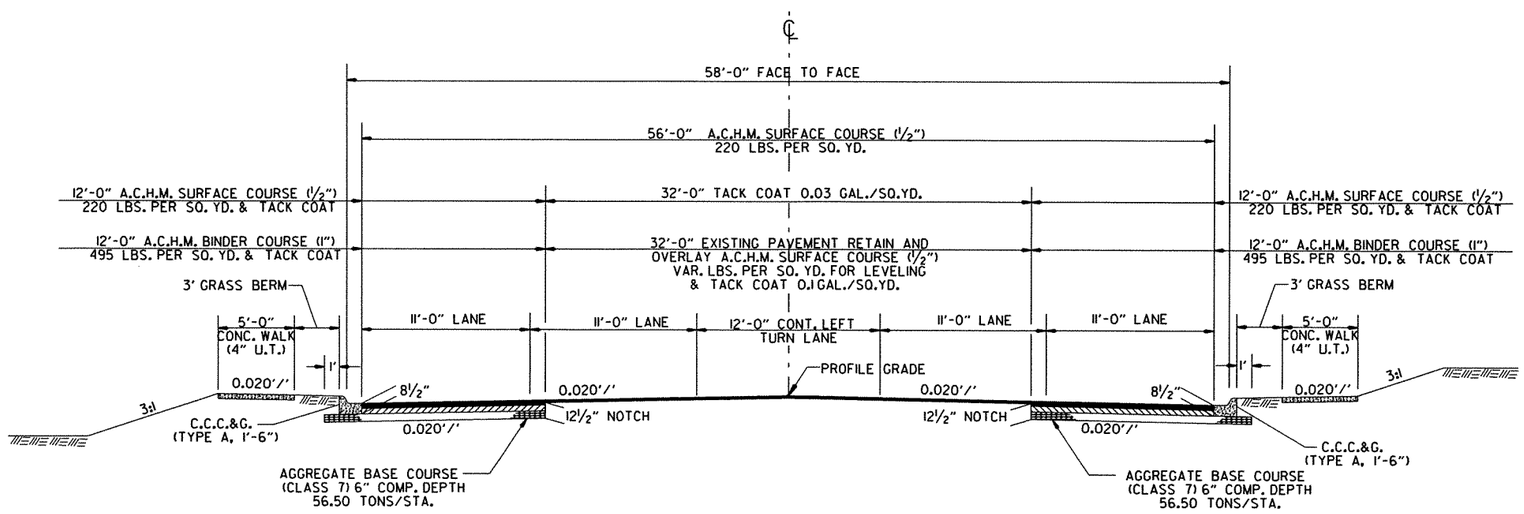
(2) TYPICAL SECTIONS OF IMPROVEMENT

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

5-31-11



HWY. 265 NOTCH AND WIDEN

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

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

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.

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

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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.

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.

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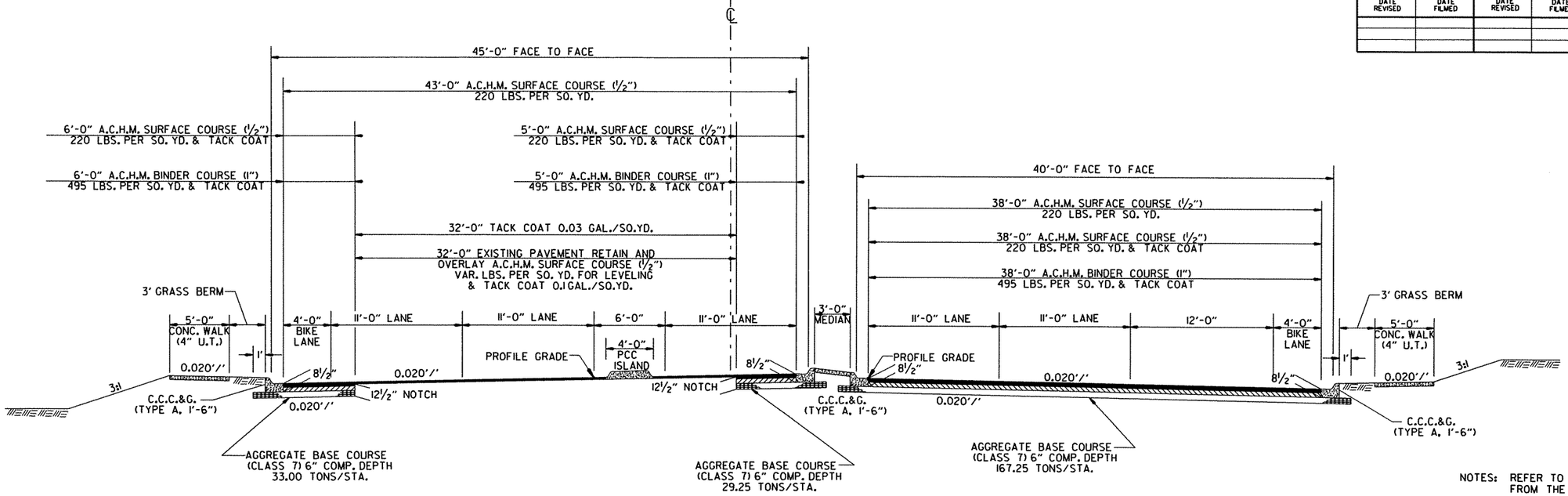
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



HWY. 265 4 LANE DIVIDED NOTCH AND WIDEN

NOTE: LEFT TURN LANE SHOWN FOR LT. SIDE, REVERSE FOR LEFT TURN LANE ON RT. SIDE.

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

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

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REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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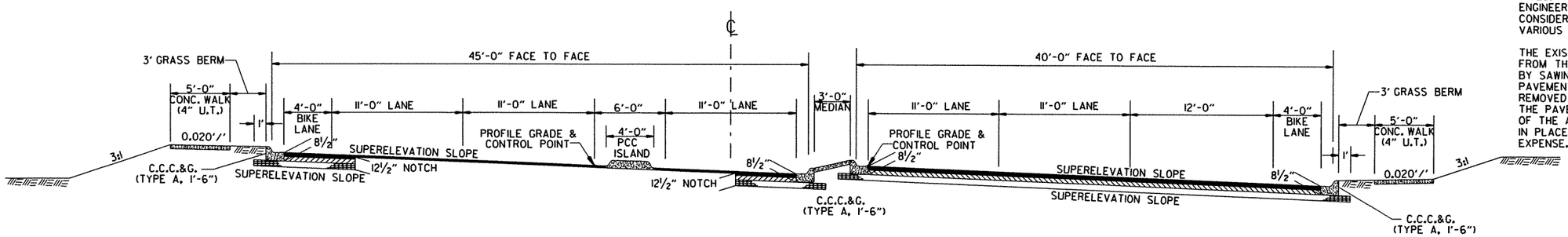

HWY. 265 FOUR LANE DIVIDED NOTCH AND WIDEN SUPERELEVATION

NOTE: SEE TYPICAL ABOVE FOR PAVEMENT STRUCTURE.

r040517.dgn

8-18-10

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
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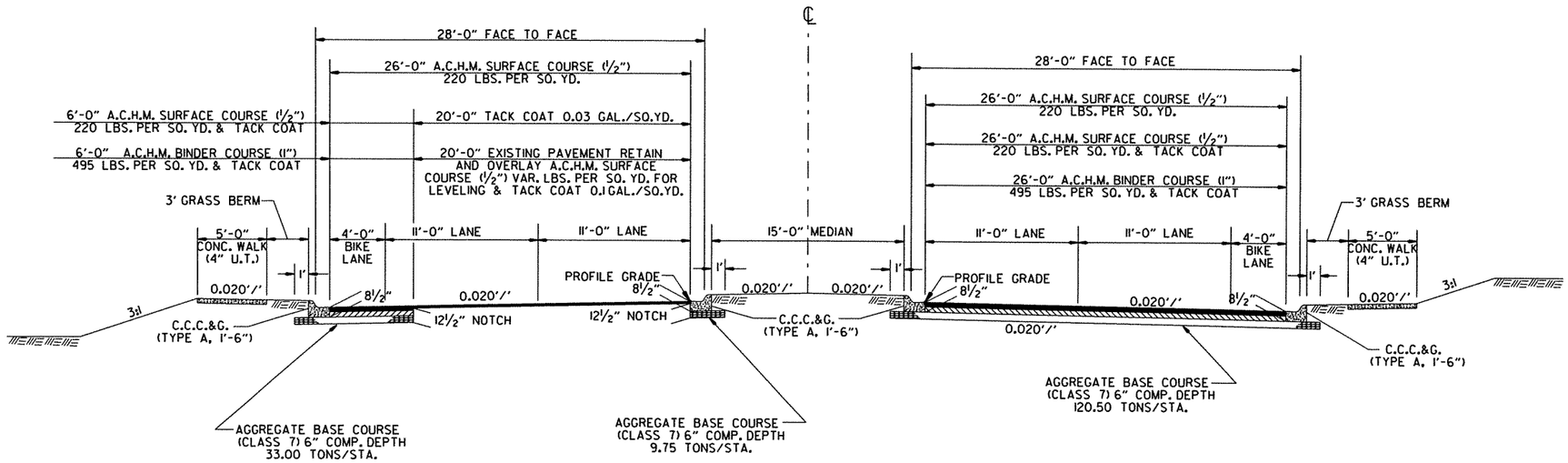
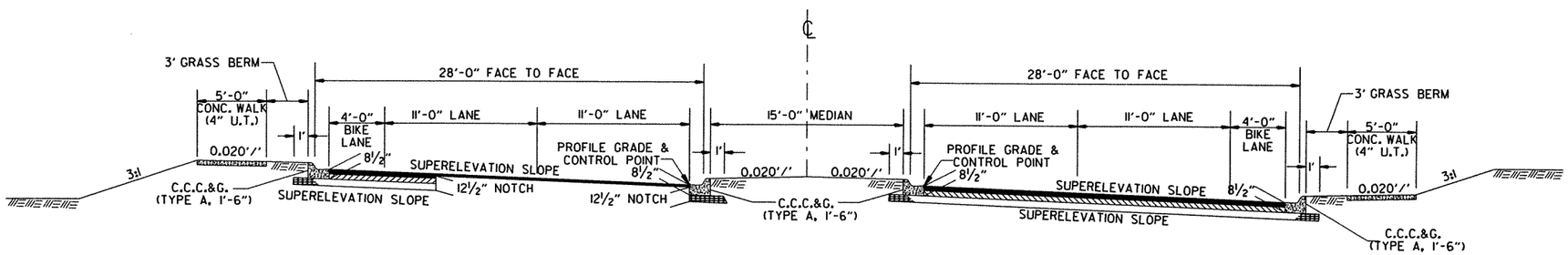
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGSETT

5-31-11



HWY. 265 4 LANE DIVIDED NOTCH AND WIDEN



HWY. 265 FOUR LANE DIVIDED NOTCH AND WIDEN SUPERELEVATION

NOTE: SEE TYPICAL ABOVE FOR PAVEMENT STRUCTURE.

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

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

REFER TO PLAN SHEETS FOR SIDEWALK LOCATIONS.

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r040517.dgn

8-18-10

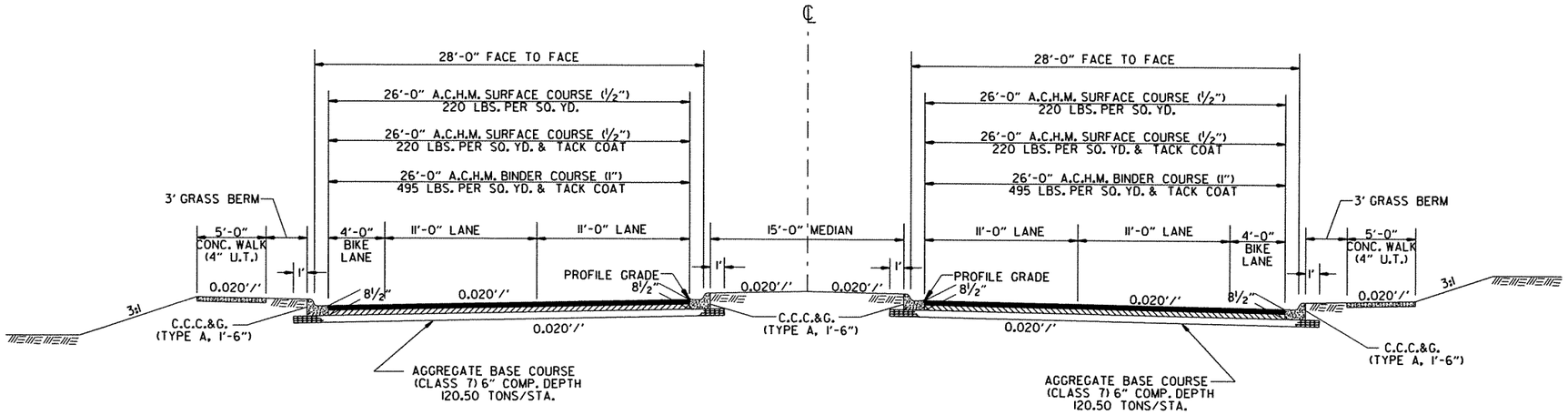
TYPICAL SECTIONS OF IMPROVEMENT

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.		040517	7	296

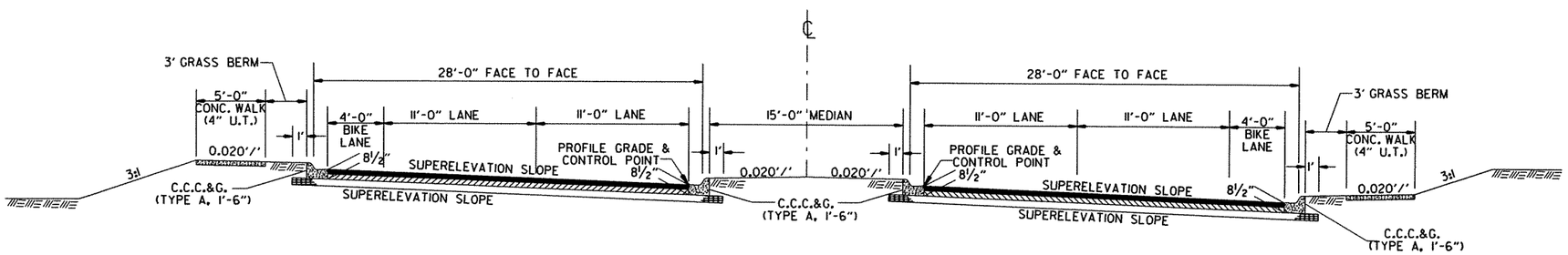
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



HWY. 265 4 LANE DIVIDED FULL DEPTH



HWY. 265 FOUR LANE DIVIDED FULL DEPTH SUPERELEVATION

NOTE: SEE TYPICAL ABOVE FOR PAVEMENT STRUCTURE.

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

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

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r040517.dgn

8-18-10

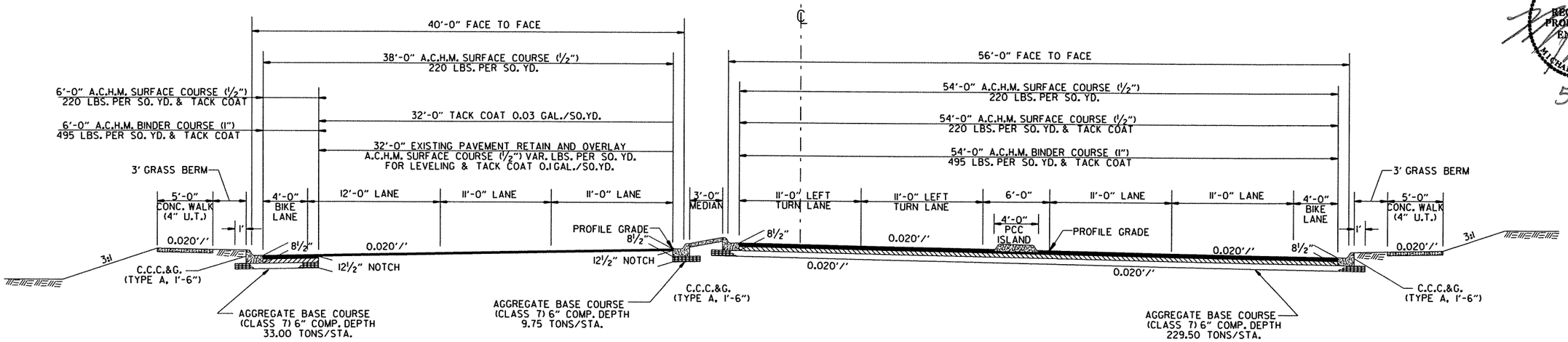
TYPICAL SECTIONS OF IMPROVEMENT

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.		040517	8	296

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. RUGGETT

5-31-11



HWY. 265 4 LANE DIVIDED NOTCH AND WIDEN

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

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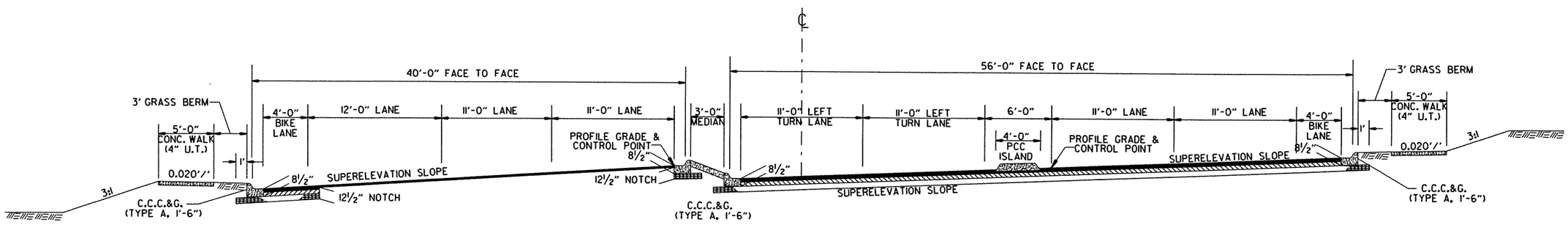


HWY. 265 FOUR LANE DIVIDED NOTCH AND WIDEN SUPERELEVATION

NOTE: SEE TYPICAL ABOVE FOR PAVEMENT STRUCTURE.

TYPICAL SECTIONS OF IMPROVEMENT

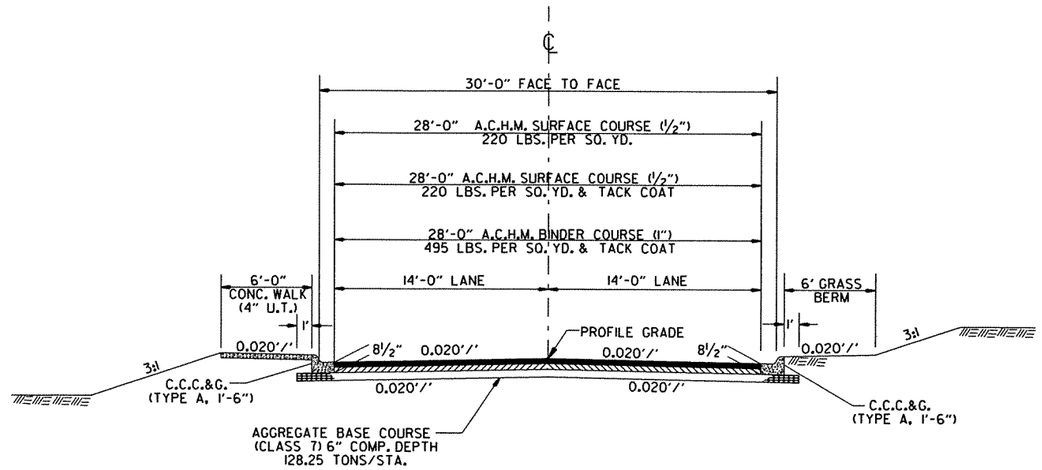
8-18-10 r040517.dgn

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.		040517	9	296

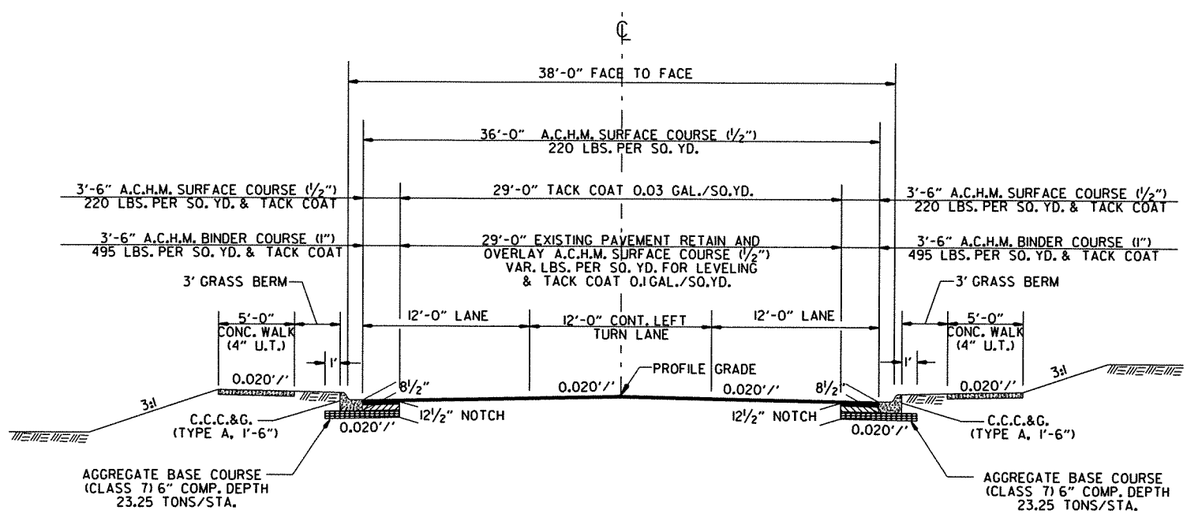
(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



KANTZ RD. FULL DEPTH



OLD WIRE RD. NOTCH AND WIDEN

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8-18-10

TYPICAL SECTIONS OF IMPROVEMENT

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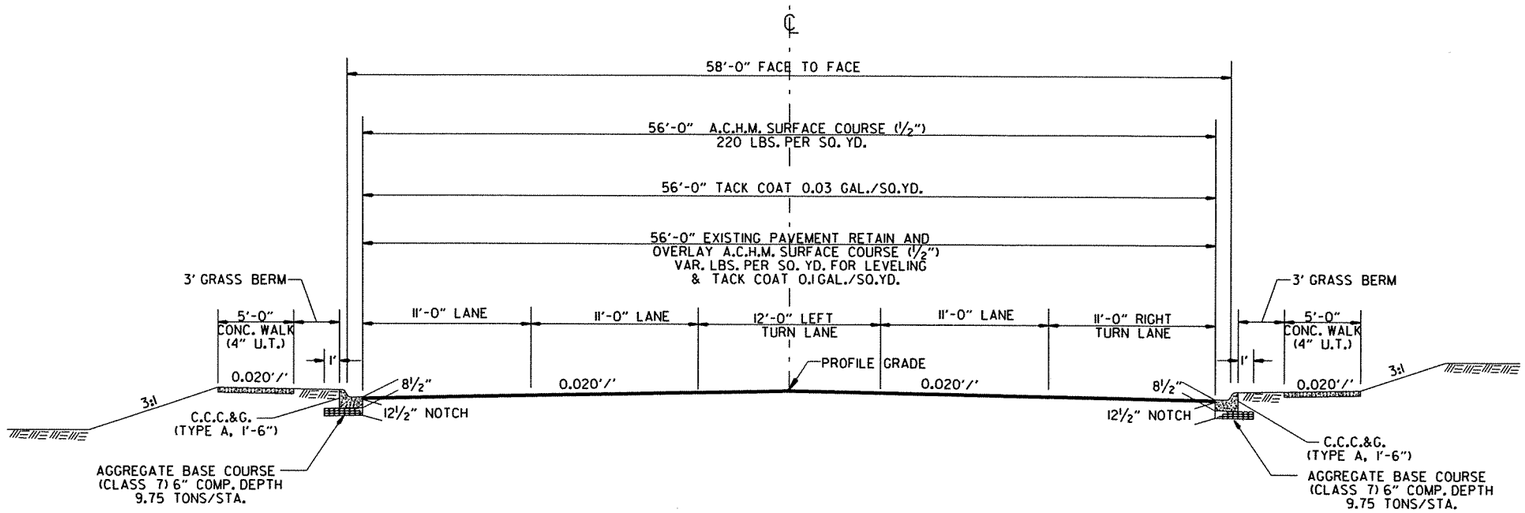
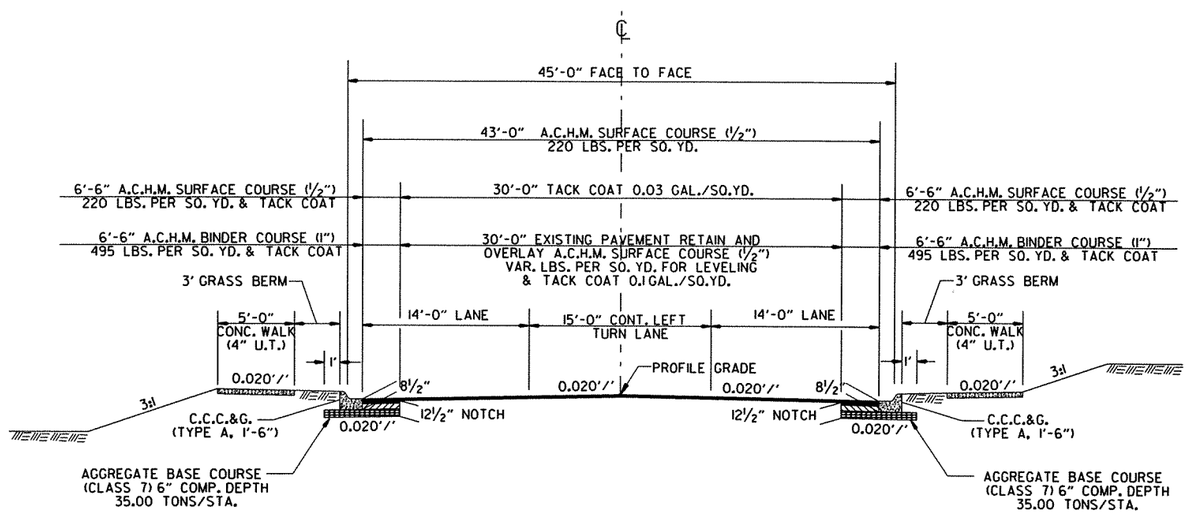
				6	ARK.			
				JOB NO.		040517	10	296

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



E. JOYCE BLVD. WEST LEG NOTCH



E. JOYCE BLVD. EAST LEG NOTCH AND WIDEN

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8-18-10

TYPICAL SECTIONS OF IMPROVEMENT

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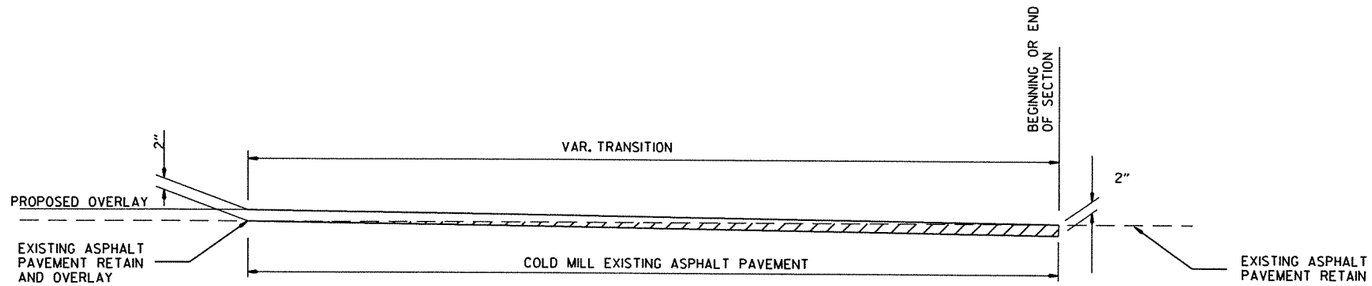
				6	ARK.			
				JOB NO.		040517	11	296

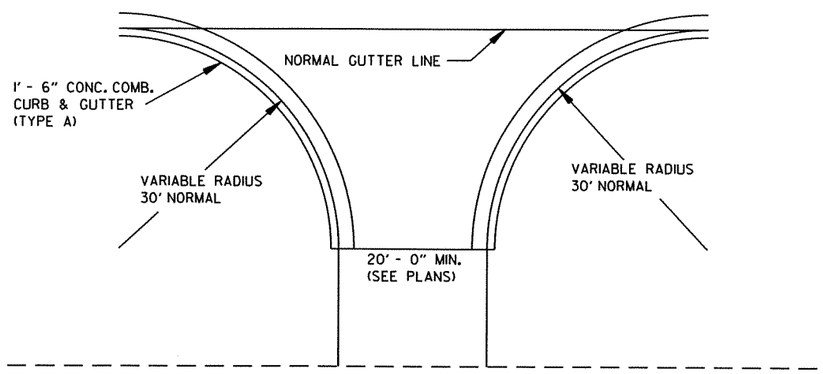
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



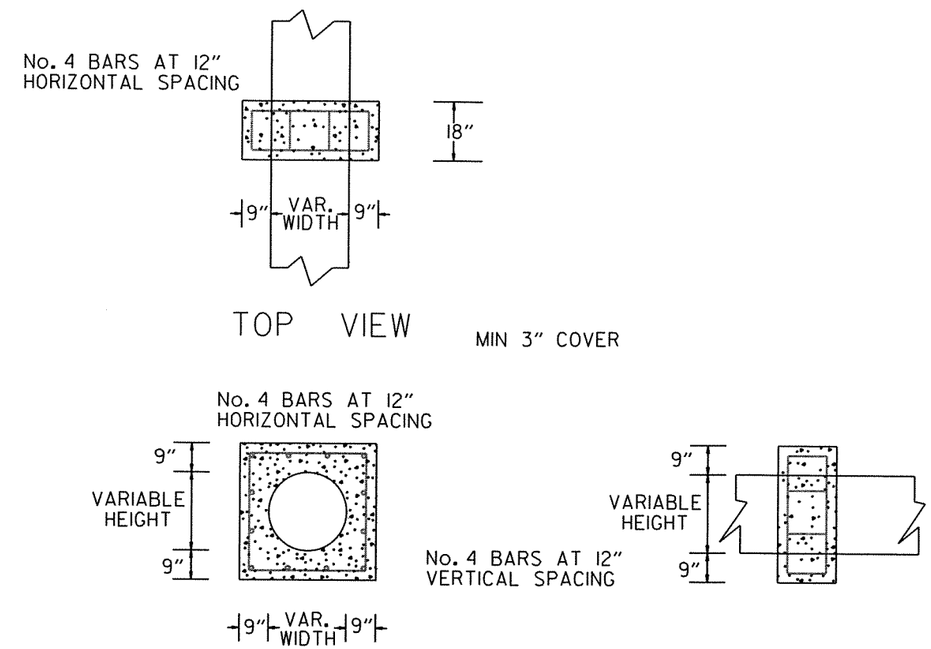
DETAIL FOR TRANSITIONS

SEE PLANS FOR TRANSITION LENGTHS



DETAIL OF TURNOUTS ASPHALT STREETS
CURB & GUTTER SECTION

NOTE:
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES



PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL

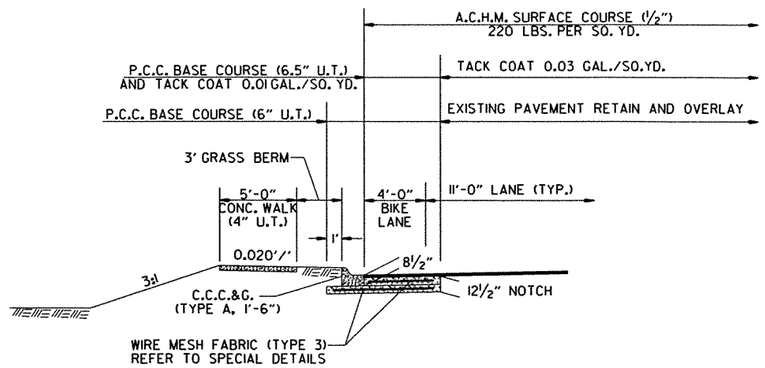
r040517.dgn
8-19-10

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
8/23/11				6	ARK.			
				JOB NO.		040517	12	296

(2) SPECIAL DETAILS

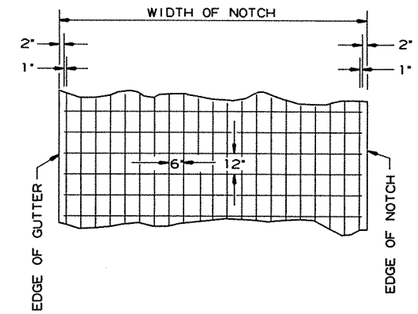
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

8-23-11



P. C. C. BASE WIDENING DETAIL

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

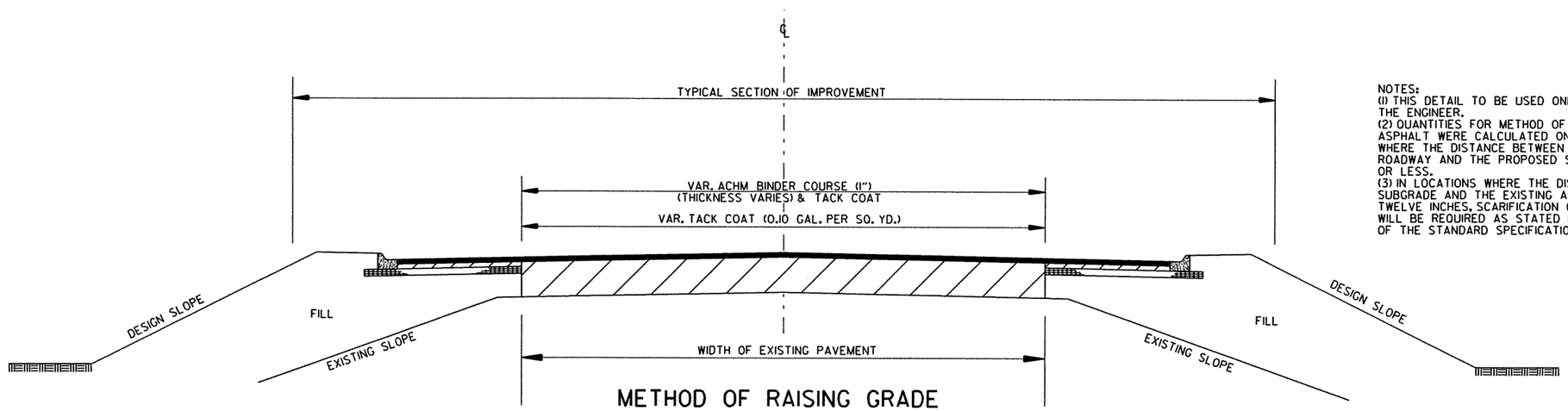


DETAIL OF REINFORCING STEEL FOR PAVEMENT (WIRE MESH TYPE 3)

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 (6.5" U.T. AND 6" U.T.).



METHOD OF RAISING GRADE

NOTES:
(1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
(2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS TWELVE INCHES OR LESS.
(3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN TWELVE INCHES, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 210, SUBSECTION 210.09 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
8-16-11				6	ARK.			
				JOB NO.		040517	96	296

(2) SUMMARY OF QUANTITIES AND REVISION BOX

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
8-16-11

SUMMARY OF QUANTITIES (BOX 3 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	918	LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	172	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	28698	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	159	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	3167	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	5585	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	36	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	50	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)	14	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	402	EACH
733	VIDEO CABLE	10090	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	41	EACH
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	6	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	13	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	3	EACH
SP & 733	VIDEO DETECTOR RELOCATION	20	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	7014	CU. YD.
802	CLASS S CONCRETE - ROADWAY	1539.11	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	181105	POUND
SP	ANTENNA RELOCATION	3	EACH
SP	VIDEO DETECTOR ROTATION	20	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	35	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	1909	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	165	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	60	LIN. FT.
SP	LUMINAIRE ASSEMBLY	3	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	250	LIN. FT.
SP	18" STREET NAME SIGN	12	EACH
SP	LOCAL RADIO WITH ANTENNA	3	EACH
SP	ANTENNA CABLE (TYPE 6)	420	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3	EACH
SP	ARCHITECTURAL FINISH	7961	SQ. FT.
SP	STAMPED CONCRETE	170	SQ.YD.
SP	TEXTURED COATING FINISH	885	SQ.YD.
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 2)	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	787	CU. YD.
802	CLASS S CONCRETE - ROADWAY	1935.65	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	329792	POUND

REVISION BOX

DATE	REVISION	SHEET NUMBER
8/16/2011	CHANGE ITEM VEHICLE DETECTOR RACK (16 CHANNEL) TO VEHICLE DETECTOR RACK (24 CHANNEL)	96, 137, 138, 149, 160

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8-20-10

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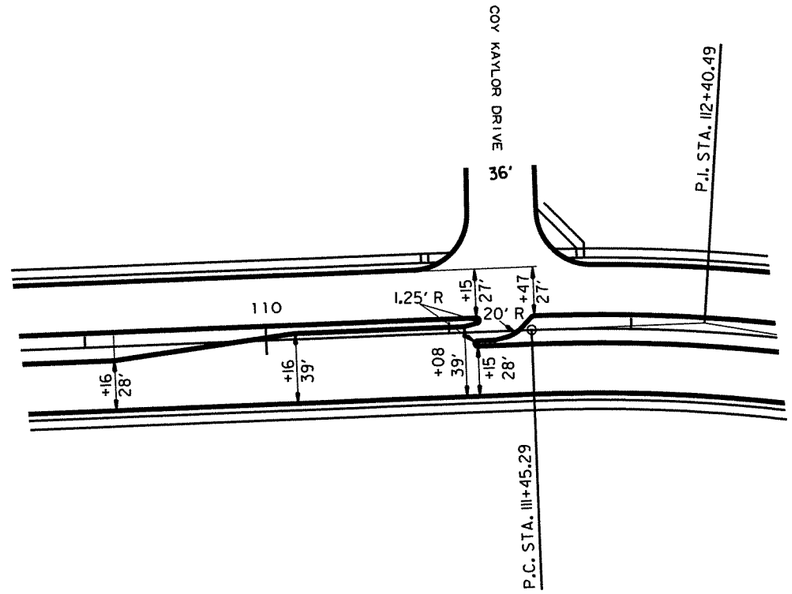
				6	ARK.			
				JOB NO.		040517	13	296

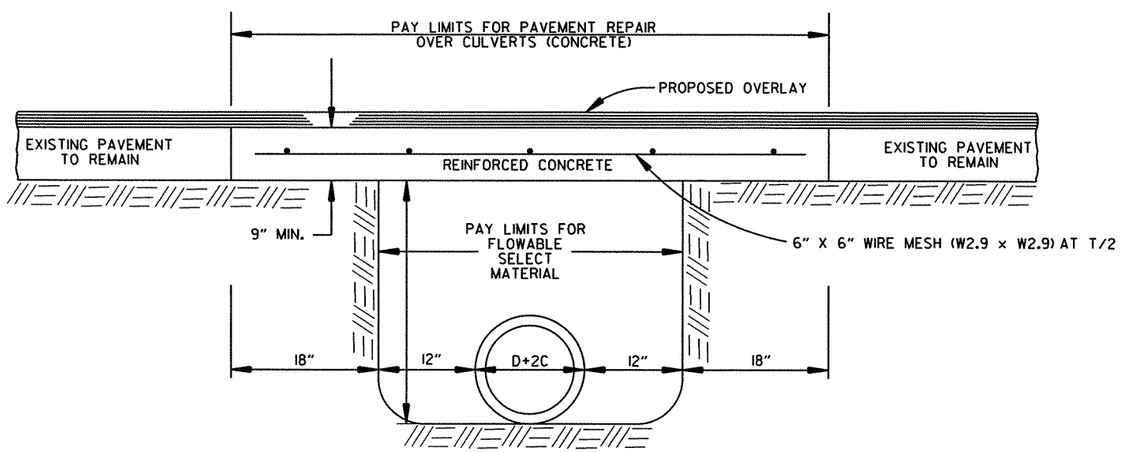
(2) SPECIAL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

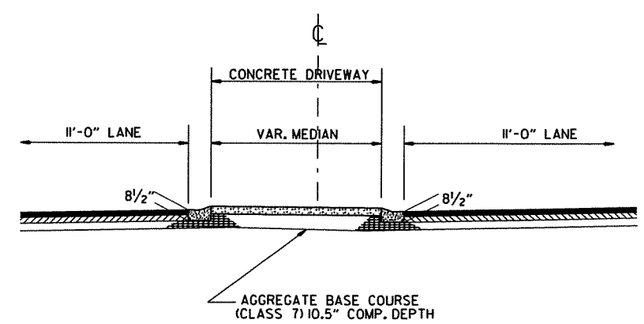
7-21-11



LEFT TURN ONLY MEDIAN CROSSING



PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



STA. 64+00 FIRE STATION MEDIAN CROSSING

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8-19-10

SPECIAL DETAILS

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				6	ARK.			
				JOB NO.		040517	14	296

(2) SPECIAL DETAILS

STATE OF ARKANSAS
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No. 7605
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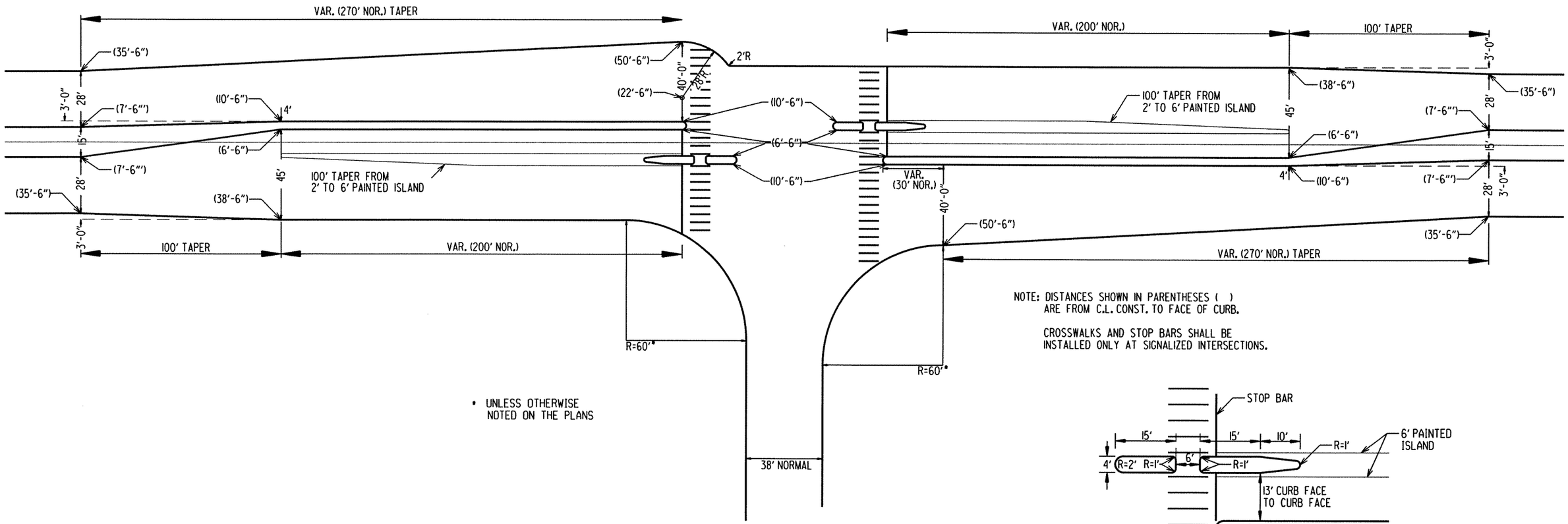
5-31-11

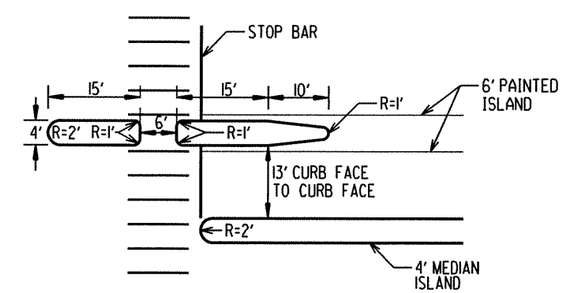


NOTE: DISTANCES SHOWN IN PARENTHESES ( ) ARE FROM C.L. CONST. TO FACE OF CURB.

CROSSWALKS AND STOP BARS SHALL BE INSTALLED ONLY AT SIGNALIZED INTERSECTIONS.

* UNLESS OTHERWISE NOTED ON THE PLANS

"T" INTERSECTION DETAILS



PEDESTRIAN REFUGE ISLAND DETAILS

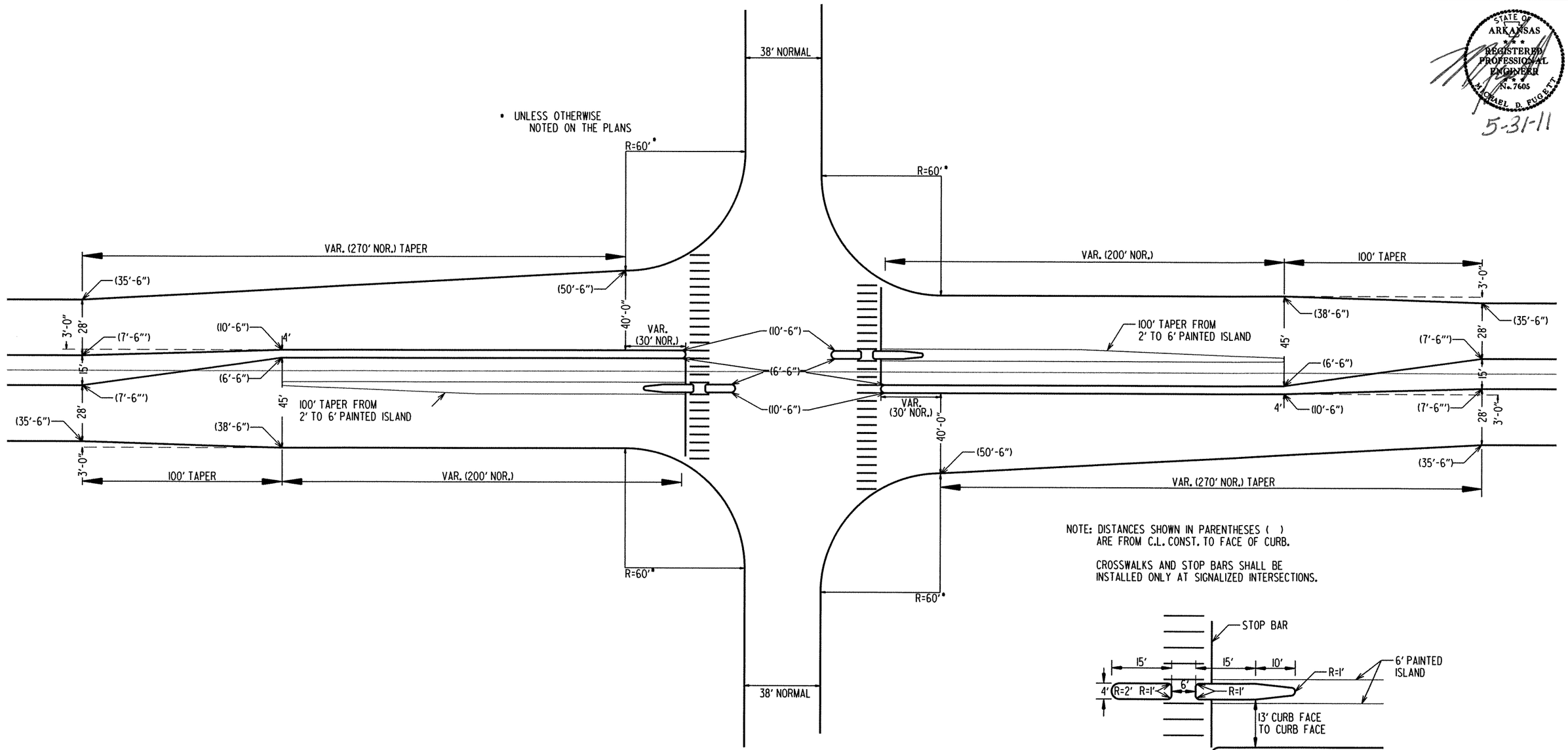
NOTE: PED. REFUGE ISLAND IS TO HAVE AN 8" THICKNESS WITH A TYPE "A" CURB FACE.

r040517.dgn
8-19-10

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.		040517	15	296

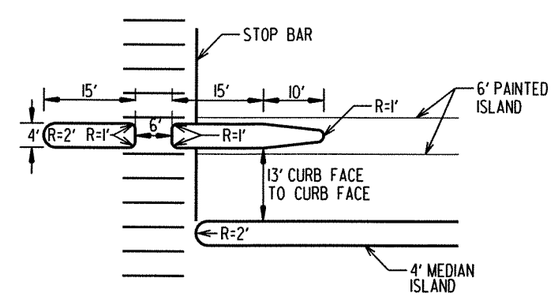
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



NOTE: DISTANCES SHOWN IN PARENTHESES ( ) ARE FROM C.L. CONST. TO FACE OF CURB.

CROSSWALKS AND STOP BARS SHALL BE INSTALLED ONLY AT SIGNALIZED INTERSECTIONS.



FULL INTERSECTION DETAILS

PEDESTRIAN REFUGE ISLAND DETAILS

NOTE: PED. REFUGE ISLAND IS TO HAVE AN 8" THICKNESS WITH A TYPE "A" CURB FACE.

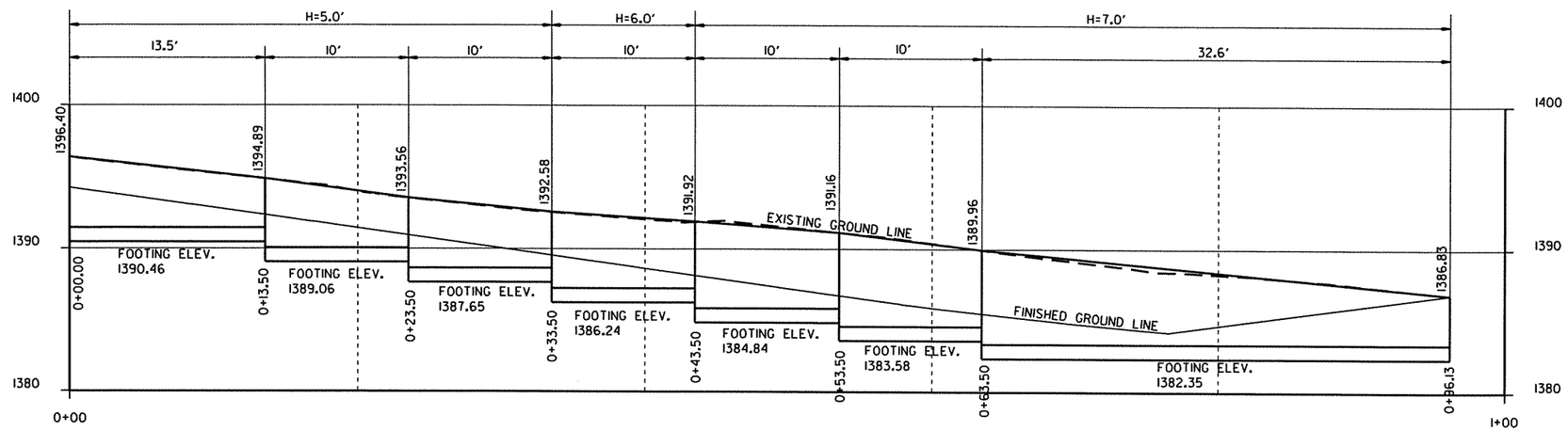
r040517.dgn

8-19-10

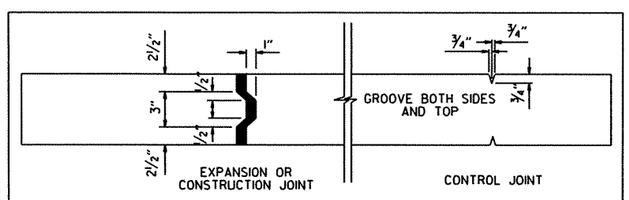
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	16	296

(2) SPECIAL DETAILS

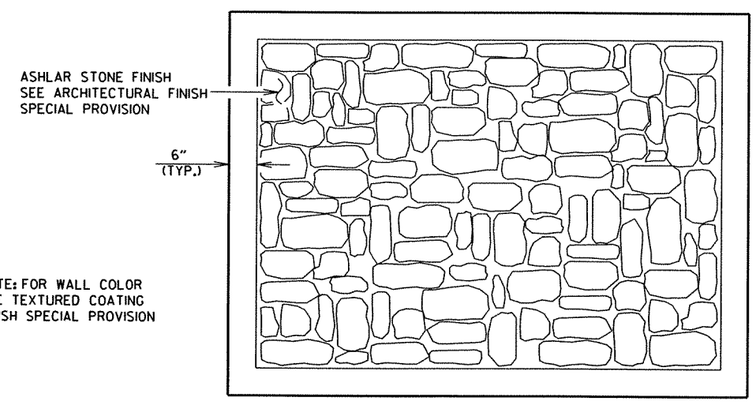
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



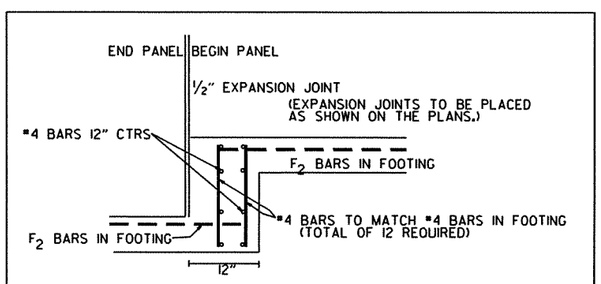
ELEVATION OF RETAINING WALL KANTZ RD. ON RT.



JOINT DETAIL



ASHLAR STONE FINISH DETAIL



FOOTING STEPS

CLASS S CONCRETE - ROADWAY	REINFORCING STEEL-ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
CU. YD.	POUND	CU. YD.	SQ. FT.	SQ. YD.
FOR INFORMATION ONLY				
47.02	2364.92	161.50	1580	176

NOTE: REFER TO STANDARD DRAWING NO. SI-1 FOR ADDITIONAL RETAINING WALL DETAILS.

r040517.dgn

8-19-10

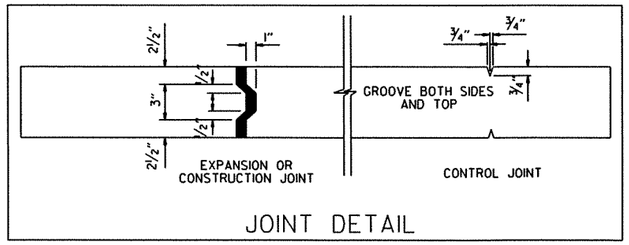
SPECIAL DETAILS

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.		040517	17	296

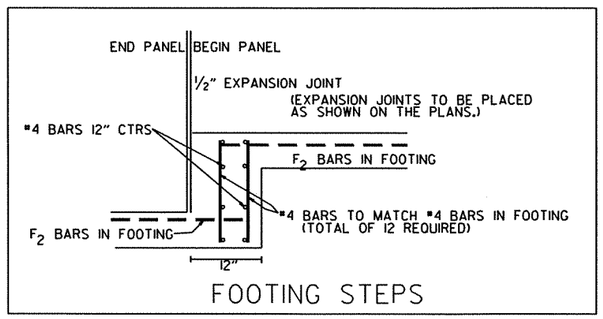
(2) SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

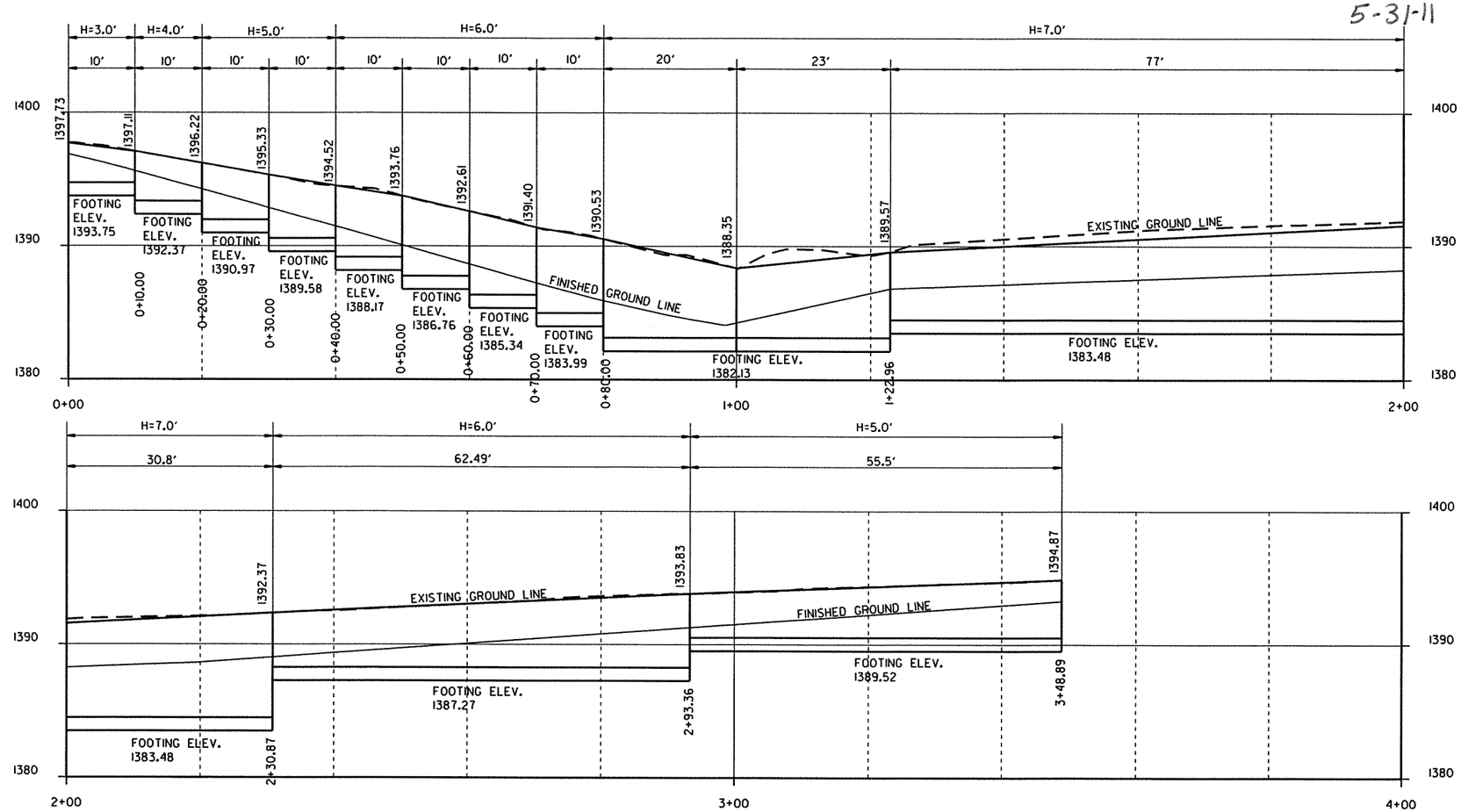
5-31-11



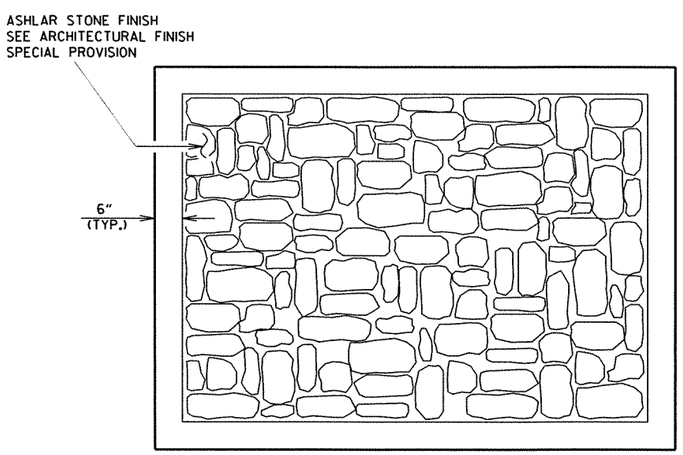
JOINT DETAIL



FOOTING STEPS



ELEVATION OF RETAINING WALL HWY. 265 ON LT. AND KANTZ RD. ON LT.



ASHLAR STONE FINISH DETAIL

NOTE: FOR WALL COLOR SEE TEXTURED COATING FINISH SPECIAL PROVISION

CLASS S CONCRETE - ROADWAY	REINFORCING STEEL - ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
CU. YD.	POUND	CU. YD.	SQ. FT.	SQ. YD.
FOR INFORMATION ONLY				
133.71	8585.54	489.68	5322	591

NOTE: REFER TO STANDARD DRAWING NO. SI-1 FOR ADDITIONAL RETAINING WALL DETAILS.

SPECIAL DETAILS

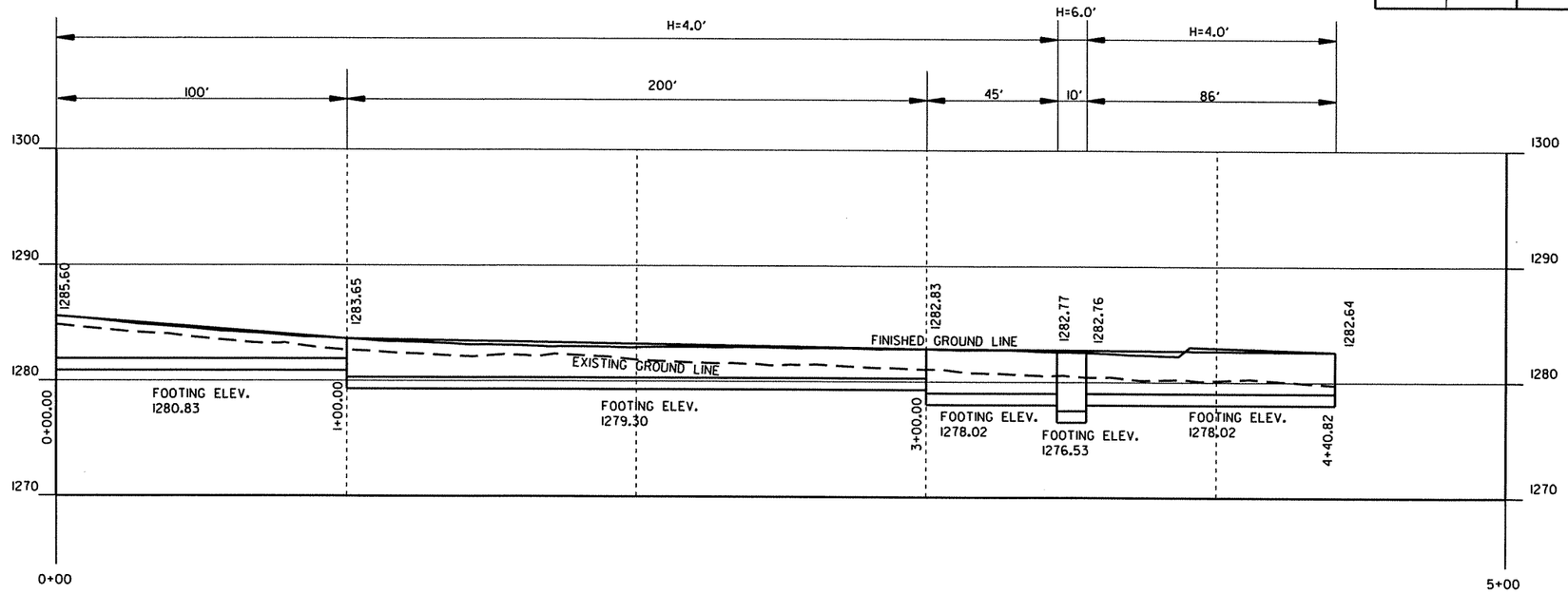
r040517.dgn
8-19-10

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.		040517	17A	296

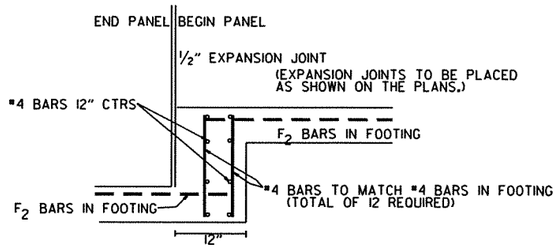
(2) SPECIAL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

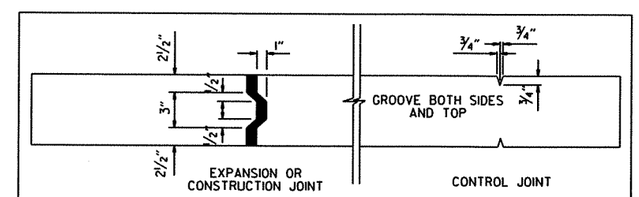
7-7-11



ELEVATION OF RETAINING WALL HWY. 265 ON LT.



FOOTING STEPS



JOINT DETAIL

CLASS S CONCRETE - ROADWAY	REINFORCING STEEL - ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY
CU. YD.	POUND	CU. YD.
FOR INFORMATION ONLY		
81.37	6307.16	408.59

NOTE: REFER TO STANDARD DRAWING NO. SI-1 FOR ADDITIONAL RETAINING WALL DETAILS.

SPECIAL DETAILS

r040517.dgn

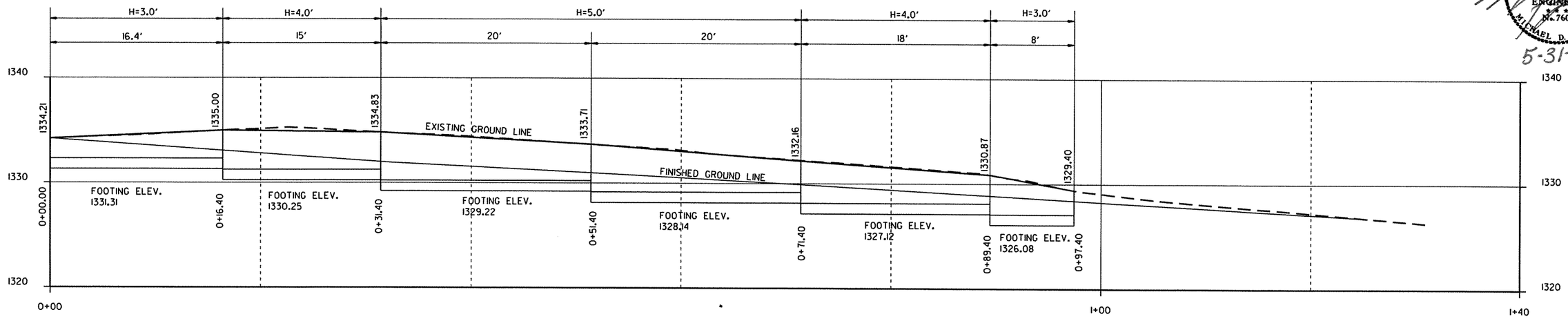
8-19-10

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.		040517	18	296

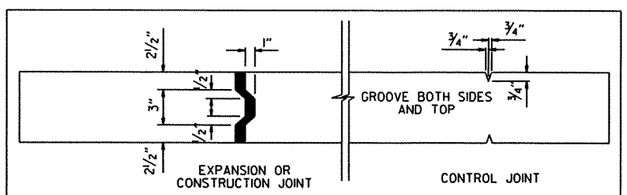
(2) SPECIAL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

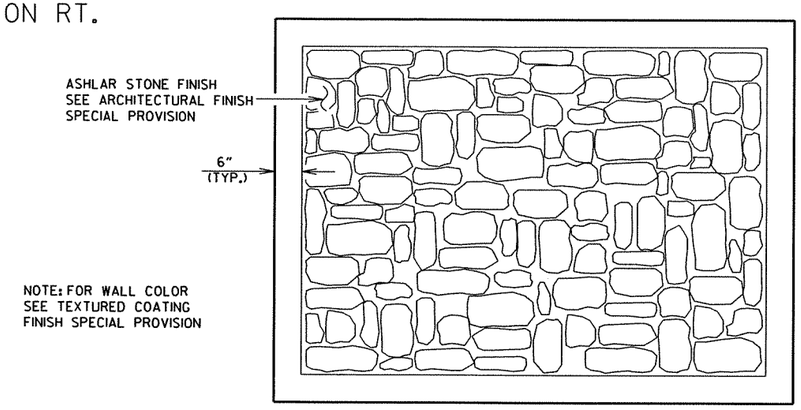
5-31-11



ELEVATION OF RETAINING WALL HWY. 265 ON RT.

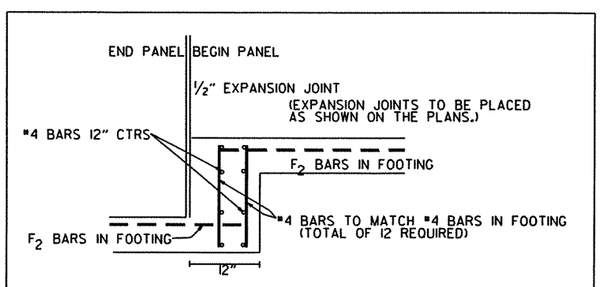


JOINT DETAIL



NOTE: FOR WALL COLOR SEE TEXTURED COATING FINISH SPECIAL PROVISION

ASHLAR STONE FINISH DETAIL



FOOTING STEPS

CLASS S CONCRETE - ROADWAY	REINFORCING STEEL - ROADWAY (GRADE 60)	UNCLASSIFIED EXCAVATION FOR STRUCTURES - ROADWAY	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
CU. YD.	POUND	CU. YD.	SQ. FT.	SQ. YD.
FOR INFORMATION ONLY				
32.17	1641.99	98.59	1059	118

NOTE: REFER TO STANDARD DRAWING NO. SI-1 FOR ADDITIONAL RETAINING WALL DETAILS.

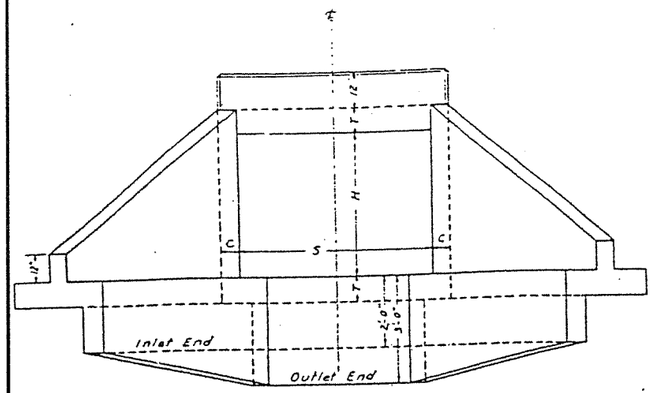
SPECIAL DETAILS

r040517.dgn

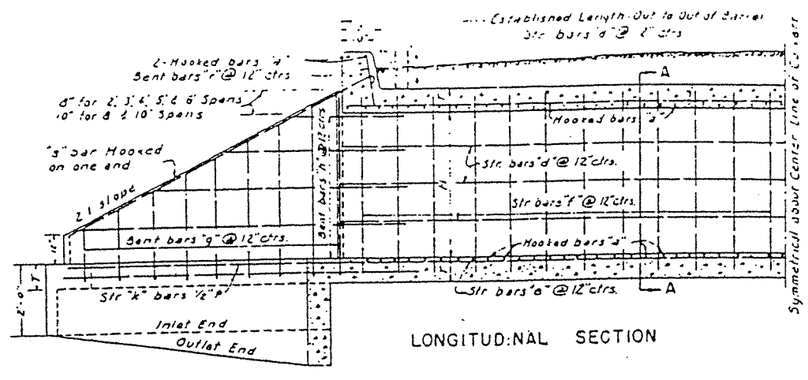
8-19-10

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.		040517	19	296

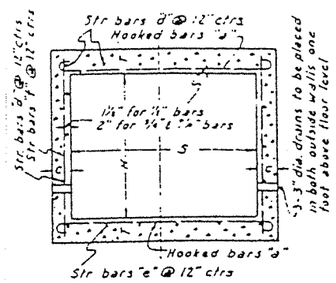
(2)



END ELEVATION



LONGITUDINAL SECTION

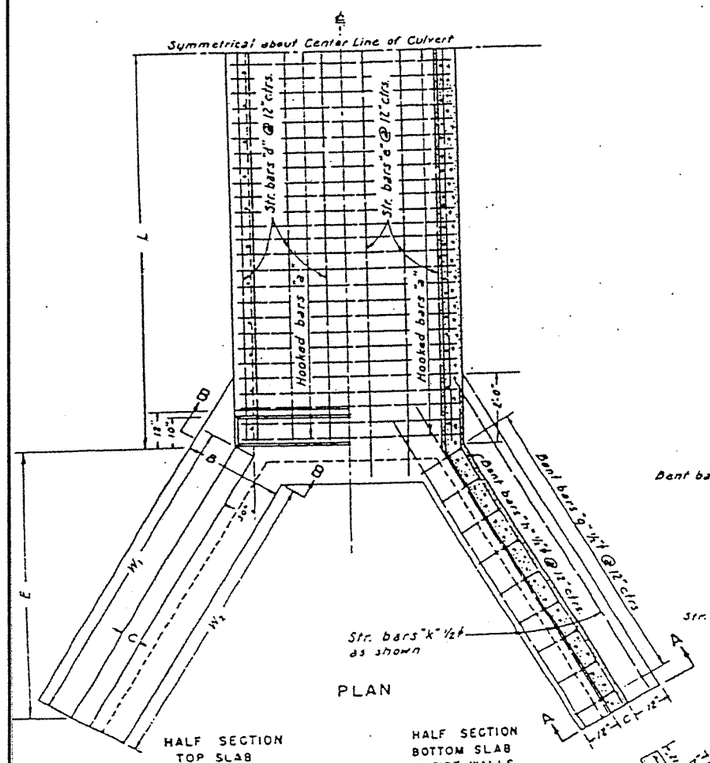


SECTION A-A

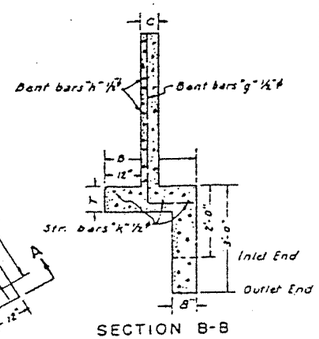
DIMENSIONS & QUANTITIES

SPAN S	HEIGHT H	AREA OF OPENING SQ. FT. A	MAXIMUM DEPTH OF COVER D	THICKNESS OF TOP & BOTTOM SLAB T	THICKNESS OF SIDE & END WALLS C	WIDTH OF FOOTING B	LENGTH OF FOOTING W_1	LENGTH OF WING WALLS W_2	LENGTH OF END BACK OF WINGWALL E	CONCRETE CU YD: HEADWALLS & WINGWALLS & FOOTING	CONCRETE CU YD: PER LINEAR FT OF BARREL	STEEL LB.: HEADWALLS & WINGWALLS & FOOTING	STEEL LB.: PER LINEAR FT OF BARREL	STEEL LB.: END BENT WALLS
2	2	4	20'-0"	6½"	6"	2'-6"	3'-6½"	3'-10"	3'-4"	2.38	.194	155	17.91	8.9
3	2	6	20'-0"	7"	6"	2'-6"	3'-6½"	3'-10"	3'-4"	3.65	.247	164	22.77	11.1
	3	9			6"		5'-10½"	6'-2"	5'-4"	4.10	.284	243	25.43	13.4
4	2	8	16'-0"	7½"	6"	2'-6"	3'-6½"	3'-10"	3'-4"	3.90	.306	173	28.28	13.4
	3	12			6"		5'-10½"	6'-2"	5'-4"	4.36	.343	251	30.94	15.6
	4	16			6"		8'-2"	8'-5¾"	7'-4"	5.98	.380	332	33.60	17.8
5	2	10	10'-0"	8"	6"	2'-6"	3'-6½"	3'-10"	3'-4"	3.15	.370	189	34.56	15.6
	3	15			6"		5'-10½"	6'-2"	5'-4"	4.60	.407	267	37.22	17.8
	4	20			6"		8'-2"	8'-5¾"	7'-4"	6.29	.444	370	38.89	20.0
	5	25			7"	2'-9"	10'-8"	10'-9¾"	9'-4"	8.78	.521	478	42.55	22.3
6	3	18	7'-0"	8½"	6"	2'-6"	5'-10½"	6'-2"	5'-4"	4.94	.478	278	41.88	20.0
	4	24			6"		8'-2"	8'-5¾"	7'-4"	6.61	.515	383	44.54	22.3
	5	30			7"	2'-9"	10'-8"	10'-9¾"	9'-4"	9.14	.592	492	47.20	24.5
	6	36			7"	3'-0"	13'-1"	13'-1"	11'-4"	11.38	.635	611	49.56	26.7
8	3	24	5'-0"	10½"	7"	2'-7"	6'-3¾"	6'-6¾"	5'-8"	6.28	.724	336	60.81	24.5
	4	32			7"	2'-7"	8'-7¾"	8'-10¾"	7'-8"	8.25	.767	429	63.47	26.7
	5	40			7"	2'-9"	11'-0¾"	11'-2"	9'-8"	10.32	.810	536	66.13	28.9
	6	48			7"	3'-0"	13'-5¾"	13'-5¾"	11'-8"	13.08	.853	673	68.80	31.2
	7	56			7"	3'-4"	16'-0"	13'-5¾"	13'-8"	16.03	.897	976	71.46	33.4
	8	64			8"	3'-10"	18'-8"	18'-1"	15'-8"	20.69	1.000	1168	74.81	35.6
10	4	40	4'-0"	11¾"	7"	2'-7"	8'-7¾"	8'-10¾"	7'-8"	8.91	.983	505	90.62	31.2
	5	50			7"	2'-9"	11'-0¾"	11'-2"	9'-8"	11.33	1.026	611	93.28	33.4
	6	60			7"	3'-0"	13'-5¾"	13'-5¾"	11'-8"	13.99	1.067	749	95.94	35.6
	7	70			7"	3'-4"	16'-0"	15'-9¾"	13'-8"	17.27	1.112	1060	98.60	37.9
	8	80			8"	3'-10"	18'-8"	18'-1"	15'-8"	21.88	1.217	1253	101.26	40.1
	9	90			9"	4'-3"	21'-2"	20'-4¾"	17'-8"	27.35	1.334	1740	111.86	42.3
	10	100			10"	4'-5"	23'-9¾"	22'-8¾"	19'-8"	34.78	1.463	2181	115.27	44.5

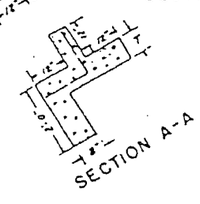
LAP NOTE:
In computing quantities of steel from the above table add one lap for culverts up to 50' in length and one lap for each additional 25' in length.



PLAN



SECTION B-B



SECTION A-A

NOTE:-
Angle of Wingwalls may be varied to conform to the natural or proposed inlet or outlet channel.

STEEL SCHEDULE

For Culvert 32' in Length Out to Out of Barrel

LENGTH OF SPAN S	HEIGHT H	"a" bars: Size	"a" bars: Spacing	"a" bars: Number	"a" bars: Length	"a" bars: X	"b" bars: Number	"b" bars: Length	"e" bars: Number	"e" bars: Length	"f" bars: Size	"f" bars: Spacing	"f" bars: Number	"f" bars: Length	"g" bars: Size	"g" bars: Spacing	"g" bars: Number	"g" bars: Length	"h" bars: Size	"h" bars: Spacing	"h" bars: Number	"h" bars: Length	"k" bars: Number	"k" bars: Length	"r" bars: Number	"r" bars: Length	"s" bars: Number	"s" bars: Length
		"a" bars: 3" for 2', 3', 4', 5', 6' & 8' Span; 6" for 10' Span; 2 in each headwall Balance in top and bottom slab of barrel					"b" bars: ½" ϕ bars spaced at 12" Centers STRAIGHT		"e" bars: Top of Bottom Slab		"f" bars: STRAIGHT Vertical bars in Sidewalls				"g" bars: Vertical bars in Wingwalls				"h" bars: ½" ϕ bars @ 12" Ctrs. Horizontal bars in Wingwalls				"k" bars: ½" ϕ Bars STRAIGHT Top of Wing Footings		"r" bars: ½" ϕ BENT Dowel Bar In Headwall		"s" bars: ½" ϕ one in Top of Each Wingwall	
2	2	½" ϕ	6¾"	122	3'-7"	2'-9"	5		3		½" ϕ	12"	64	2'-10	½" ϕ	12"	16	3'-4"	1'-4"	2'-9"	1'-3"	1'-3"	12	4'-7"	1'-4"	3'-8"	12	5'-4"	6	3'-2"	4	5'-3"
3	2	½" ϕ	6"	132	4'-7"	3'-9"	5		4		½" ϕ	12"	64	2'-11"	½" ϕ	12"	16	3'-4¾"	1'-4¾"	2'-9¾"	1'-3"	1'-3"	12	4'-7"	1'-4"	3'-8"	12	5'-4"	8	3'-2"	4	5'-3"
	3			132	4'-7"	3'-9"	5		4				64	3'-11"			24	3'-10¾"	1'-4¾"	3'-9¾"	1'-3"	1'-3"	16	5'-11"	1'-4"	6'-8"	12	7'-8"	8	3'-2"	4	7'-9"
4	2	½" ϕ	5¼"	144	5'-7"	4'-9"	7		5		½" ϕ	12"	64	3'-5"	½" ϕ	12"	16	3'-5"	1'-5"	2'-10"	1'-3"	1'-3"	12	4'-7"	1'-4"	3'-8"	12	5'-4"	10	3'-2"	4	5'-3"
	3			144	5'-7"	4'-9"	9		5				64	4'-0"			24	3'-11"	1'-7"	3'-10"	1'-3"	1'-3"	16	5'-11"	1'-4"	6'-0"	12	7'-8"	10	3'-2"	4	7'-9"
	4			144	5'-7"	4'-9"	11		5				64	5'-0"			36	4'-5"	1'-5"	4'-10"	1'-3"	1'-3"	20	7'-2"	1'-4"	8'-4"	12	10'-0"	10	3'-2"	4	10'-3"
5	2	½" ϕ	5"	158	6'-7"	5'-9"	8		6		⅝" ϕ	12"	64	3'-1"	⅝" ϕ	12"	16	3'-6"	1'-7"	2'-11"	1'-3"	1'-3"	12	4'-7"	1'-4"	3'-8"	12	5'-4"	14	3'-6"	4	5'-3"
	3			158	6'-7"	5'-9"	10		6				64	4'-1"			24	3'-11"	1'-5"	3'-11"	1'-3"	1'-3"	16	5'-11"	1'-4"	6'-0"	12	7'-8"	14	3'-6"	4	7'-9"
	4			158	6'-7"	5'-9"	12		6				64	5'-1"			36	4'-5"	1'-6"	4'-11"	1'-3"	1'-3"	20	7'-2"	1'-4"	8'-4"	12	10'-0"	14	3'-6"	4	10'-3"
	5			158	6'-7"	5'-9"	14		6				64	6'-1"			44	5'-2"	1'-7"	5'-11"	1'-4"	1'-6"	24	8'-5"	1'-4"	10'-8"	12	12'-8"	14	3'-6"	4	12'-3"
6	3	⅝" ϕ	5"	158	7'-7"	6'-9"	11		7		⅝" ϕ	12"	64	4'-2"	⅝" ϕ	12"	24	4'-1"	1'-5"	4'-3"	1'-3"	1'-3"	16	5'-11"	1'-4"	6'-0"	12	7'-8"	16	3'-6"	4	7'-9"
	4			158	7'-7"	6'-9"	13		7				64	5'-2"			36	4'-8"	1'-6"	5'-3"	1'-3"	1'-3"	20	7'-2"	1'-4"	8'-4"	12	10'-0"	16	3'-6"	4	10'-3"
	5			158	7'-7"	6'-9"	15		7				64	6'-2"			44	5'-4"	1'-7"	6'-3"	1'-4"	1'-6"	24	8'-5"	1'-4"	10'-8"	12	12'-8"	16	3'-6"	4	12'-3"
	6			158	7'-7"	6'-9"	17		7				64	7'-2"			52	5'-11"	1'-5"	7'-3"	1'-4"	1'-9"	28	9'-8"	1'-4"	13'-0"	12	14'-7"	16	3'-6"	4	15'-3"
8	3	⅝" ϕ	6"	132	9'-0"	8'-10"	13		9		½" ϕ	12"	64	4'-5"	½" ϕ	12"	24	4'-6"	1'-8"	4'-4"	1'-4"	1'-4"	16	6'-6"	1'-6"	8'-3"	12	3'-6"	20	3'-6"	4	8'-3"
	4			132	9'-0"	8'-10"	15		9				64	5'-5"			36	4'-11"	1'-9"	5'-4"	1'-4"	1'-4"	20	7'-6"	1'-6"	8'-9"	12	5'-4"	20	3'-6"	4	10'-3"
	5			132	9'-0"	8'-10"	17		9				64	6'-5"			44	5'-5"	1'-8"	6'-4"	1'-4"	1'-6"	24	8'-9"	1'-6"	11'-0"	12	12'-8"	20	3'-6"	4	13'-3"
	6			132	9'-0"	8'-10"	19		9				64	7'-5"			56	6'-0"	1'-7"	7'-4"	1'-4"	1'-9"	28	10'-0"	1'-6"	13'-4"	12	15'-0"	20	3'-6"	4	15'-3"
	7			132	9'-0"	8'-10"	21		9				64	8'-5"	⅝" ϕ	12"	64	6'-9"	1'-9"	8'-4"	1'-4"	2'-1"	32	11'-2"	1'-6"	15'-8"	12	17'-4"	20	3'-6"	4	18'-3"
	8			132	9'-0"	9'-0"	23		9				64	9'-5"			72	7'-5"	1'-7"	9'-4"	1'-5"	2'-6"	36	12'-5"	1'-6"	17'-11"	12	19'-8"	20	3'-6"	4	20'-3"
10	4	⅞" ϕ	9¼"	86	12'-4"	10'-10"	17		11		⅞" ϕ	12"	64	5'-7"	⅞" ϕ	12"	36	5'-0"	1'-10"	5'-6"	1'-4"	1'-6"	20	7'-7"	1'-6"	8'-8"	12	10'-4"	24	3'-6"	4	10'-3"
	5			86	12'-4"	10'-10"	19		11				64	6'-7"			44	5'-6"	1'-8"	6'-6"	1'-4"	1'-6"	24	8'-9"	1'-6"	11'-0"	12	12'-8"	24	3'-6"	4	13'-3"
	6			86	12'-4"	10'-10"	21		11				64	7'-7"			56	6'-1"	1'-8"	7'-6"	1'-4"	1'-9"	28	10'-0"	1'-6"	13'-4"	12	15'-0"	24	3'-6"	4	15'-3"
	7			86	12'-4"	10'-10"	23		11				64	8'-7"			64	6'-11"	1'-10"	8'-6"	1'-4"	2'-1"	32	11'-2"	1'-6"	15'-8"	12	17'-4"	24	3'-6"	4	18'-3"
	8			86	12'-6"	11'-0"	25		11				64	9'-7"			72	7'-7"	1'-8"	9'-6"	1'-5"	2'-6"	36	12'-5"	1'-6"	17'-11"	12	19'-8"	24	3'-6"	4	20'-3"
	9			86	12'-8"	11'-2"	27		11				64	10'-7"			9"	108	8'-7"	11'-8"	10'-6"	1'-6"	3'-0"	40	13'-7"	1'-6"	20'-2"	12	22'-0"	24	3'-6"	4	23'-3"
	10			86	12'-10"	11'-4"	29		11				64	11'-7"			8"	136	9'-3"	11'-10"	11'-6"	1'-7"	3'-6"	44	14'-9"	1'-6"	22'-6"	12	24'-8"	24	3'-6"	4	25'-9"

NOTE: Lengths given above do not include lap.

SPECIFICATIONS:- Arkansas Standard Road and Bridge Specifications.

REINFORCING STEEL:- To be deformed bars of structural or intermediate grade.

CHAMFER:- All exposed corners to have ¾" Chamfer

CONCRETE:- All Concrete to be Class "S"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERTS

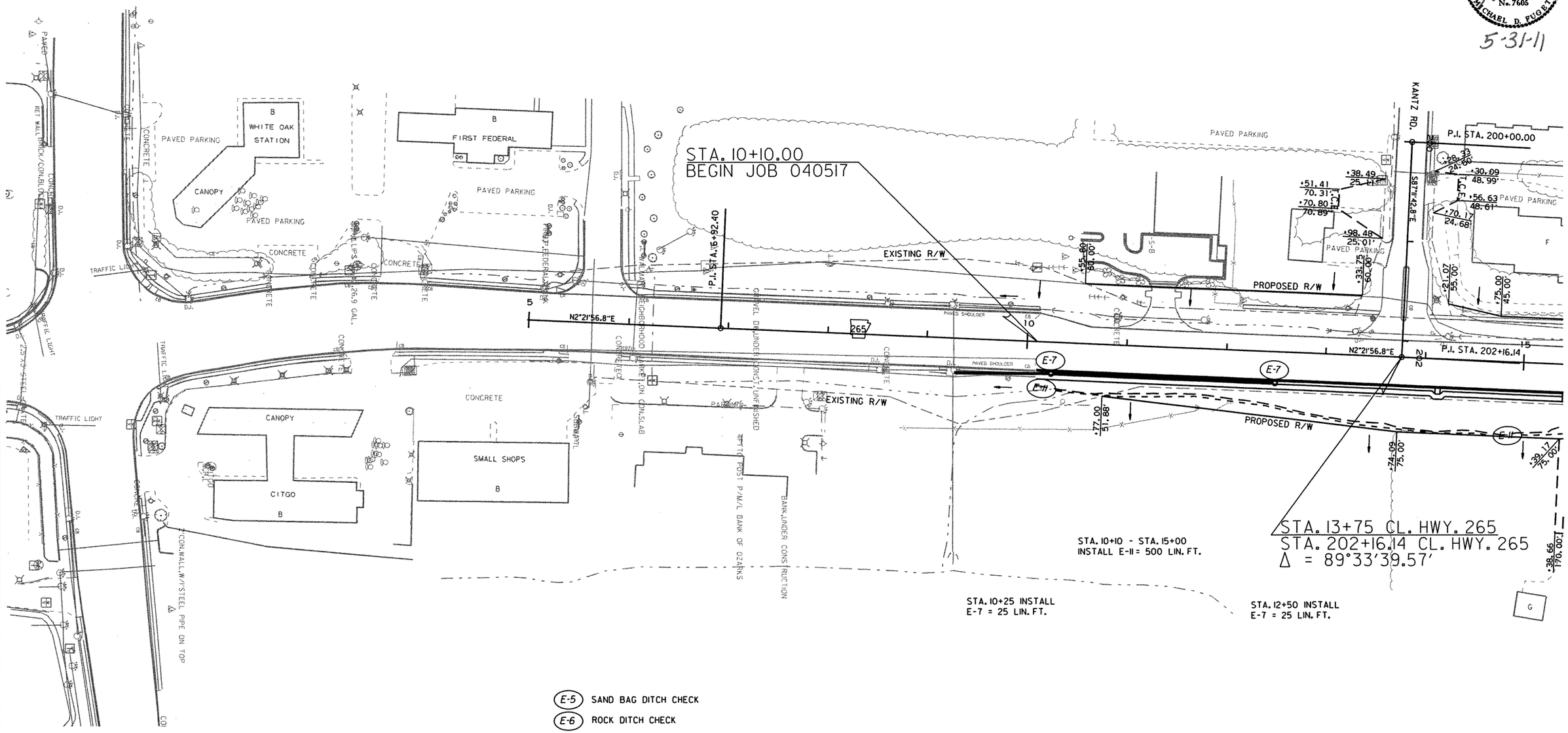
SINGLE

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.		040517	20	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL
STAGE I

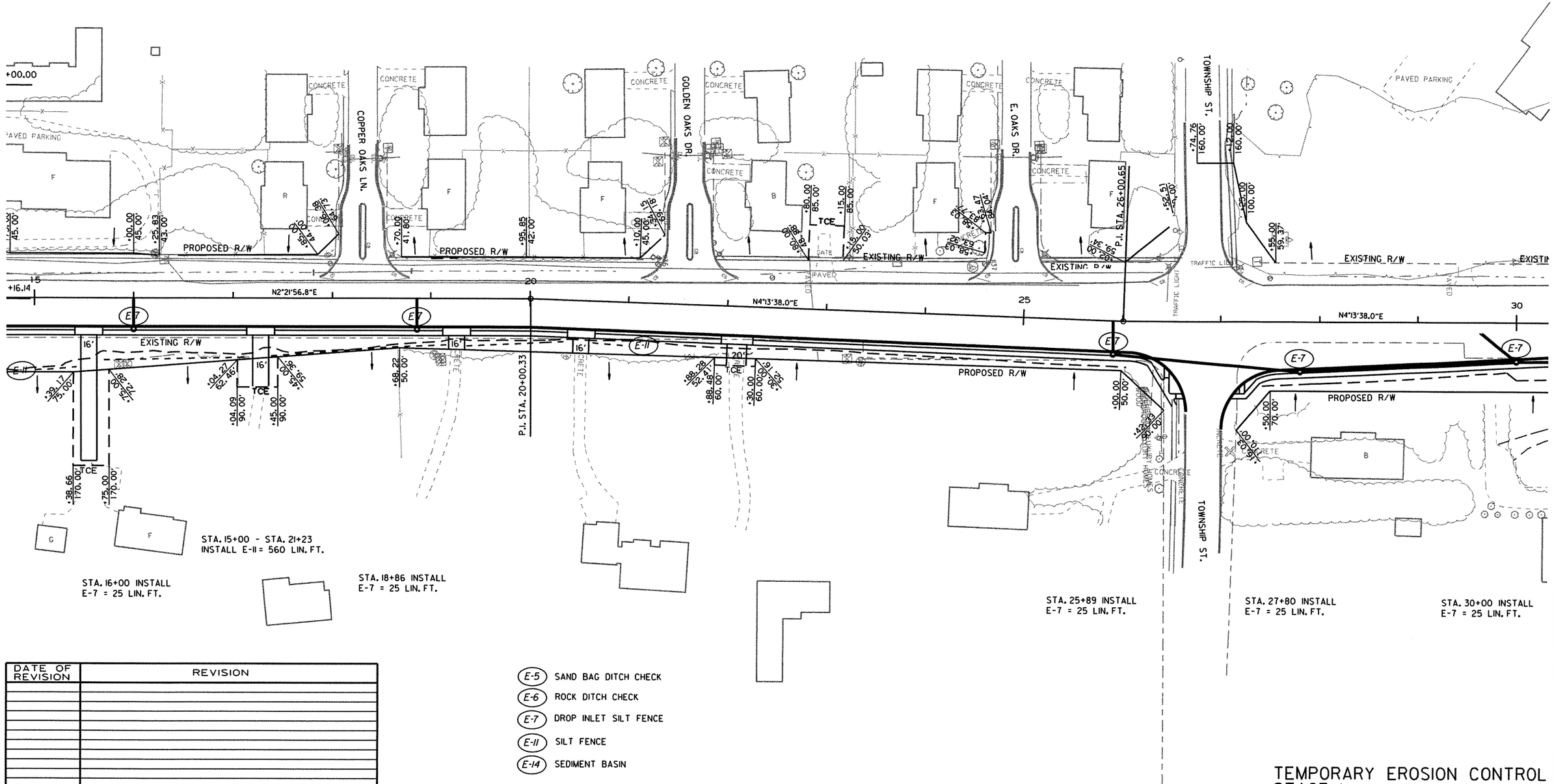
r040517.dgn
6-7-10

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.		040517	21	296

(2) TEMPORARY EROSION CONTROL

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

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK

(E-6) ROCK DITCH CHECK

(E-7) DROP INLET SILT FENCE

(E-11) SILT FENCE

(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE I

r040517.dgn

6-7-10

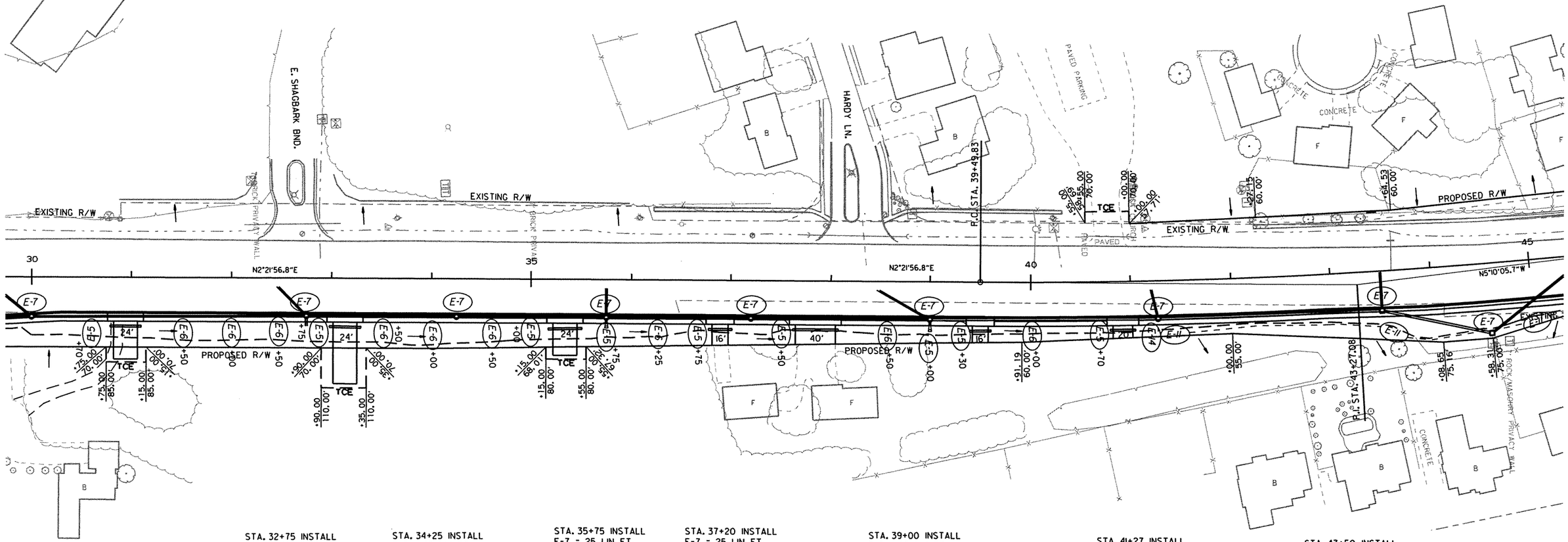
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040517	22	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 14608 MICHAEL D. FUGETT

5-31-11



STA. 32+75 INSTALL
E-7 = 25 LIN. FT.

STA. 34+25 INSTALL
E-7 = 25 LIN. FT.

STA. 35+75 INSTALL
E-7 = 25 LIN. FT.

STA. 37+20 INSTALL
E-7 = 25 LIN. FT.

STA. 39+00 INSTALL
E-7 = 25 LIN. FT.

STA. 41+27 INSTALL
E-7 = 25 LIN. FT.

STA. 43+50 INSTALL
E-7 = 22 LIN. FT.

STA. 44+58 INSTALL
E-7 = 22 LIN. FT.

STA. 41+27 INSTALL
E-14 = 1255 CU. FT.

STA. 41+30 - STA. 45+00
INSTALL E-11 = 380 LIN. FT.

DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK

(E-6) ROCK DITCH CHECK

(E-7) DROP INLET SILT FENCE

(E-11) SILT FENCE

(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL STAGE I

r040517.dgn

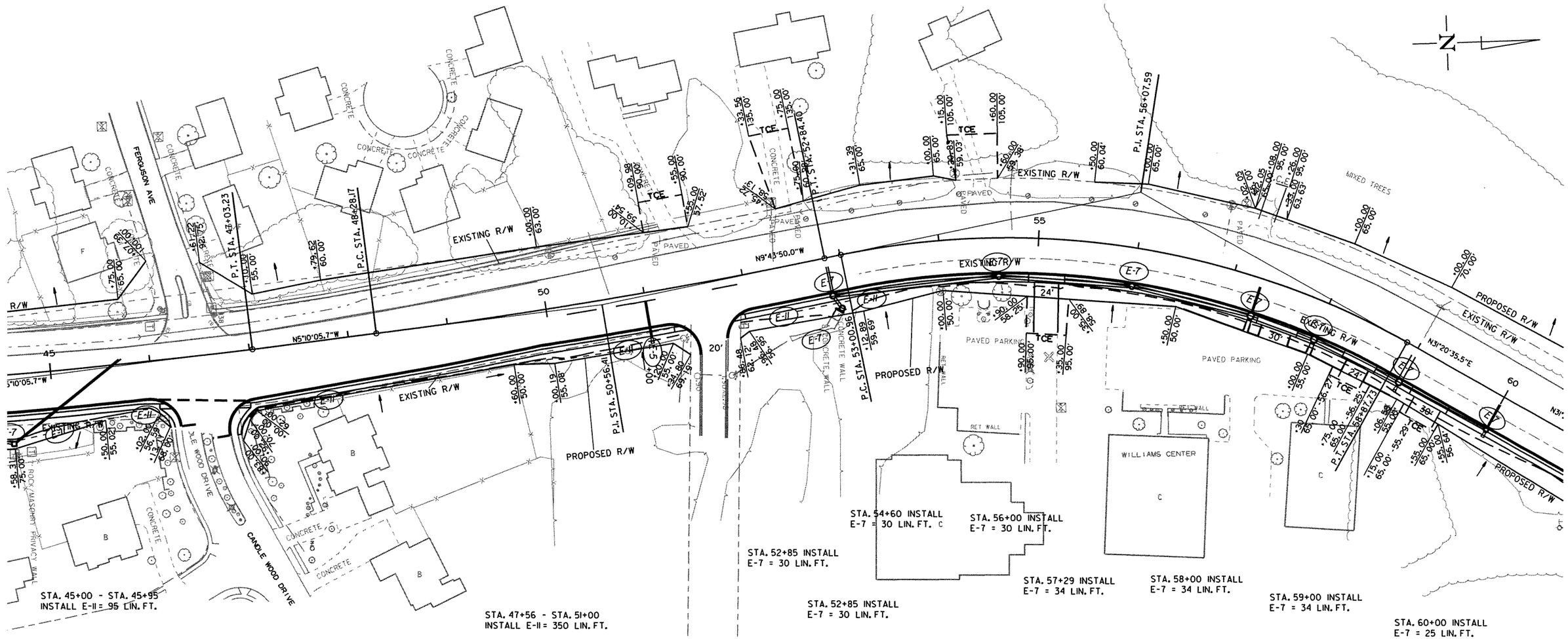
6-7-10

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.		040517	23	296

(2) TEMPORARY EROSION CONTROL

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

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

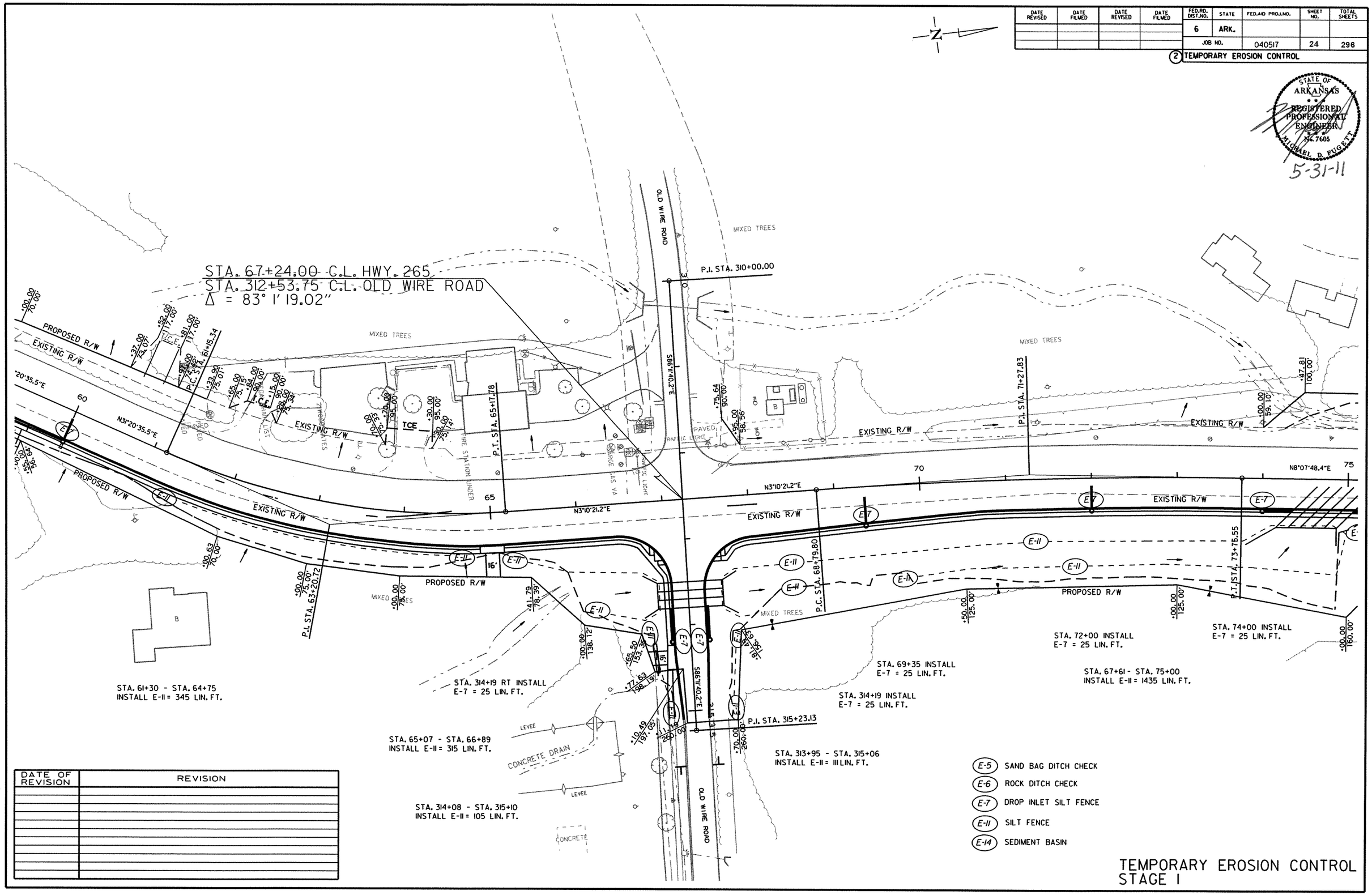
TEMPORARY EROSION CONTROL
STAGE I

r040517.dgn
6-7-10

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.		040517	24	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL
STAGE I

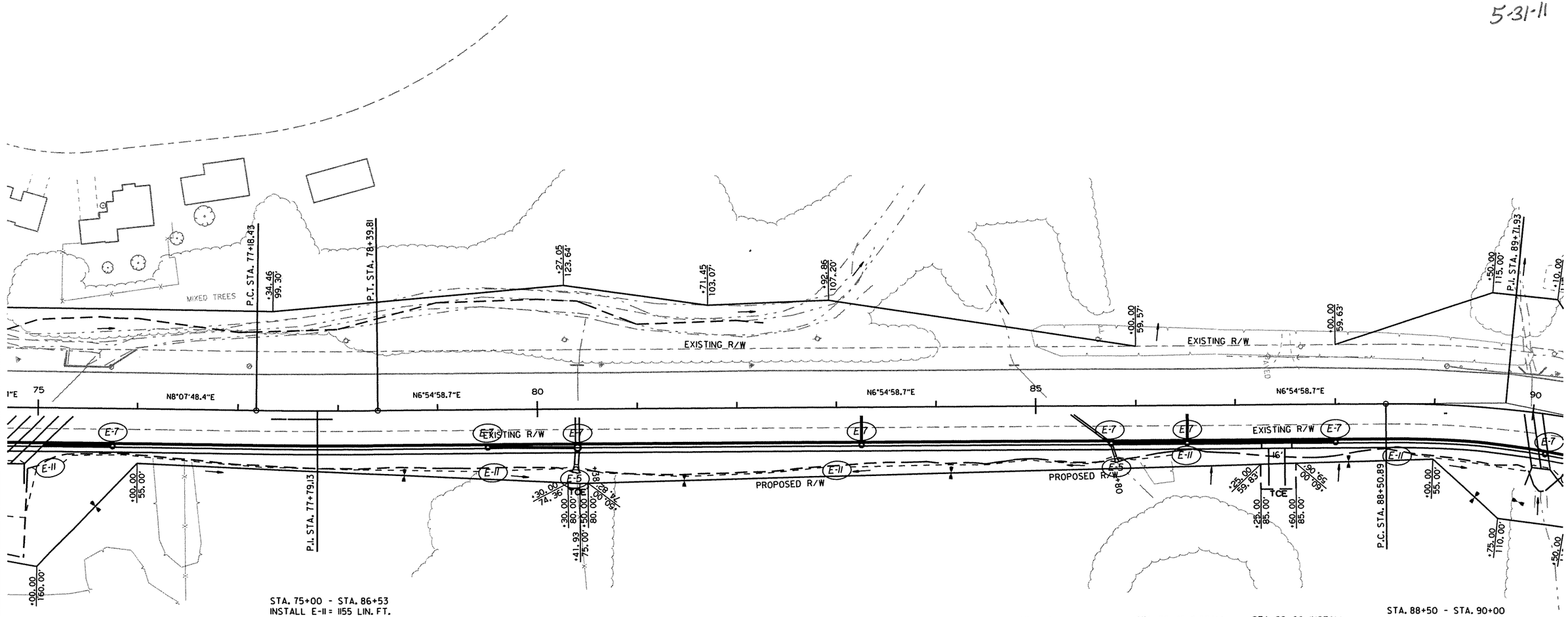
r040517.dgn
6-7-10

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.		040517	25	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 17605
MICHAEL D. PUGETT

5-31-11



STA. 75+00 - STA. 86+53
INSTALL E-11 = 1155 LIN. FT.

STA. 75+75 INSTALL
E-7 = 25 LIN. FT.

STA. 79+50 INSTALL
E-7 = 25 LIN. FT.

STA. 80+40 INSTALL
E-7 = 34 LIN. FT.

STA. 83+25 INSTALL
E-7 = 25 LIN. FT.

STA. 85+75 INSTALL
E-7 = 25 LIN. FT.

STA. 86+45 INSTALL
E-7 = 25 LIN. FT.

STA. 88+00 INSTALL
E-7 = 25 LIN. FT.

STA. 88+50 - STA. 90+00
INSTALL E-11 = 150 LIN. FT.

DATE OF REVISION	REVISION

- (E-5) SAND BAG DITCH CHECK
- (E-6) ROCK DITCH CHECK
- (E-7) DROP INLET SILT FENCE
- (E-11) SILT FENCE
- (E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE I

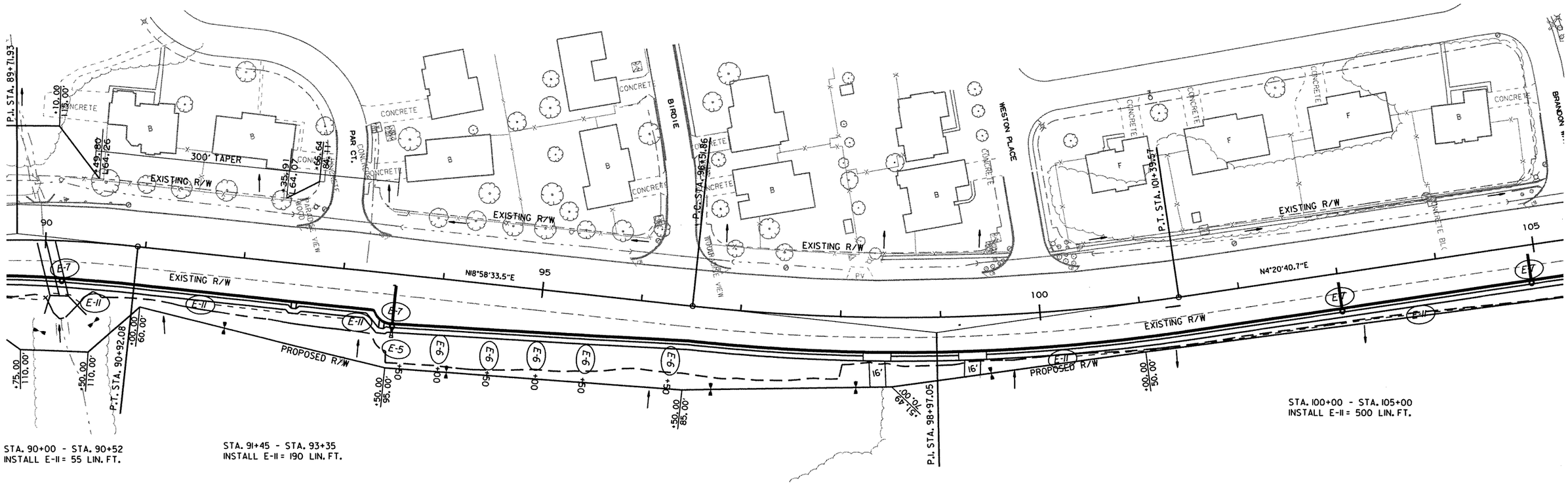
r040517.dgn
6-7-10

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.		040517	26	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE I

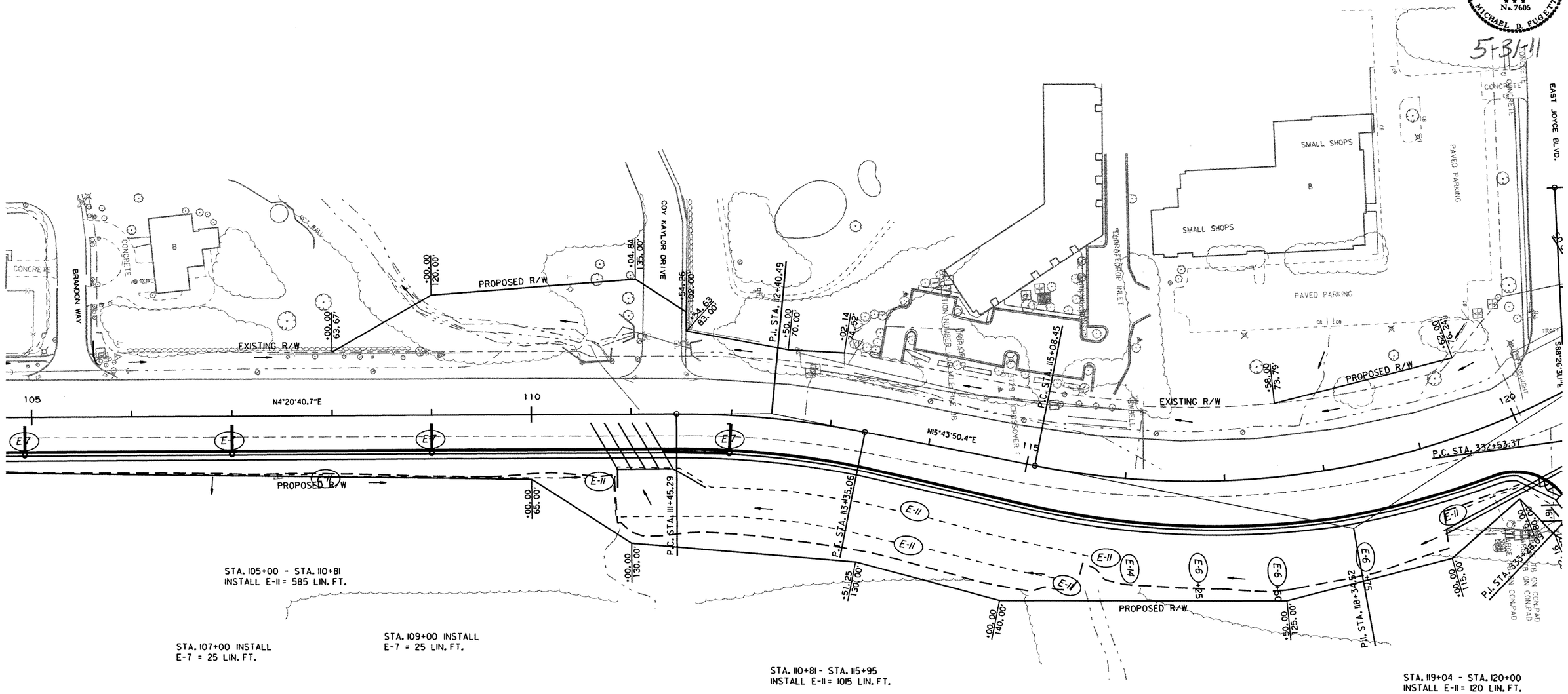
r040517.dgn
6-7-10

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.		040517	27	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE I

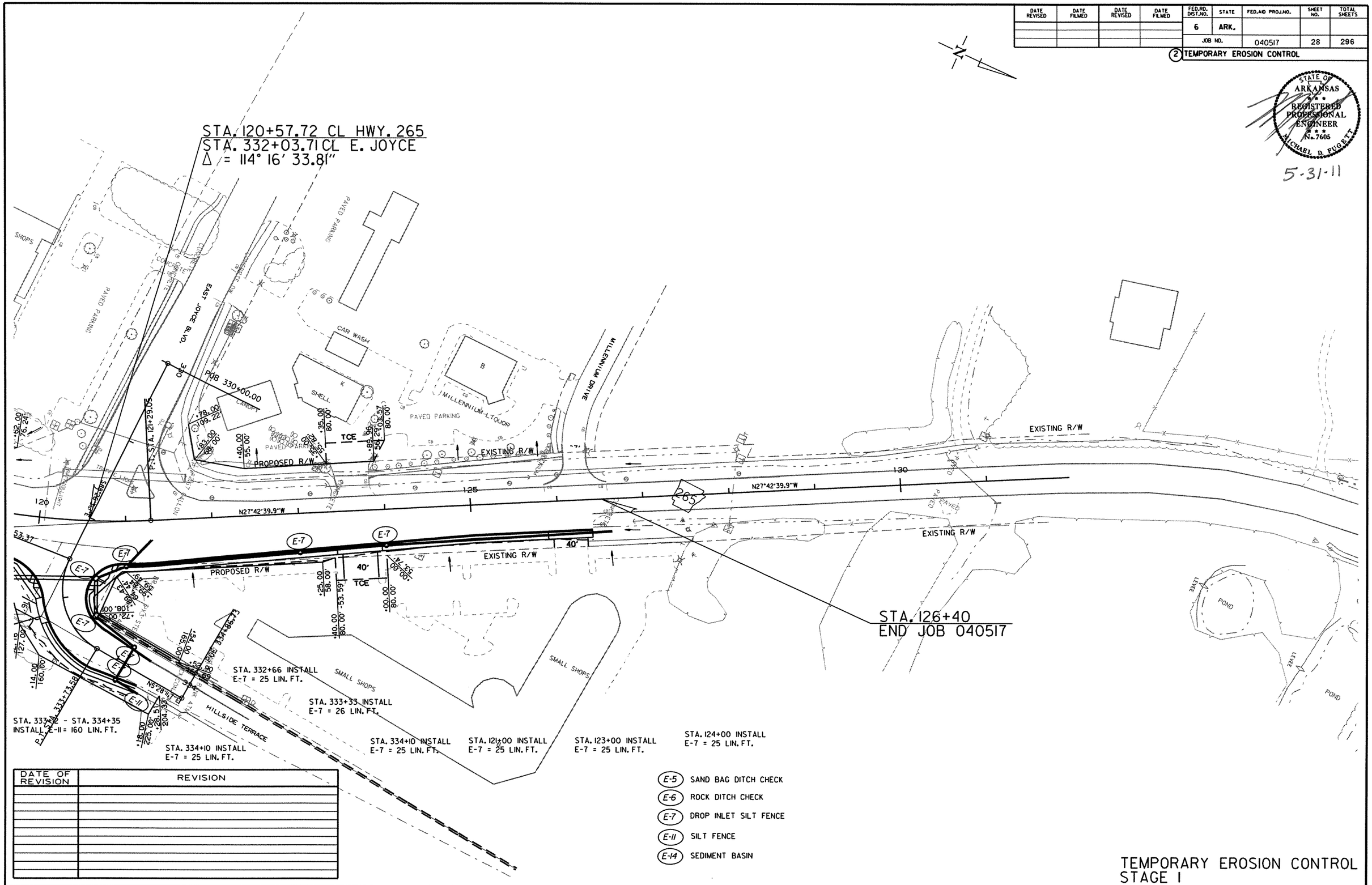
r040517.dgn
6-7-10

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.		040517	28	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE I

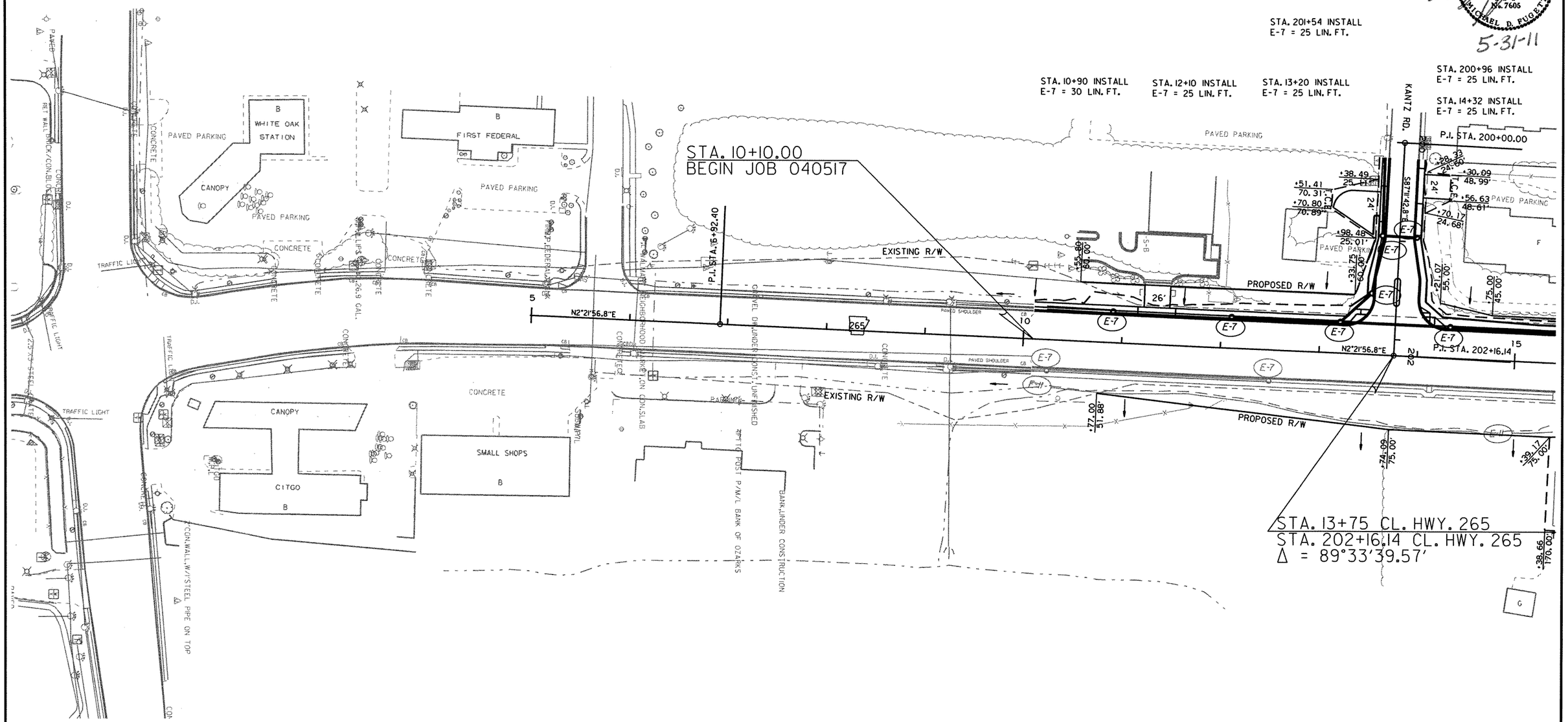
6-7-10 r040517.dgn

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.		040517	29	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK

(E-6) ROCK DITCH CHECK

(E-7) DROP INLET SILT FENCE

(E-11) SILT FENCE

(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn

6-7-10

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.		040517	30	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

STA. 16+00 INSTALL E-7 = 25 LIN. FT.

STA. 18+86 INSTALL E-7 = 25 LIN. FT.

STA. 25+89 INSTALL E-7 = 25 LIN. FT.

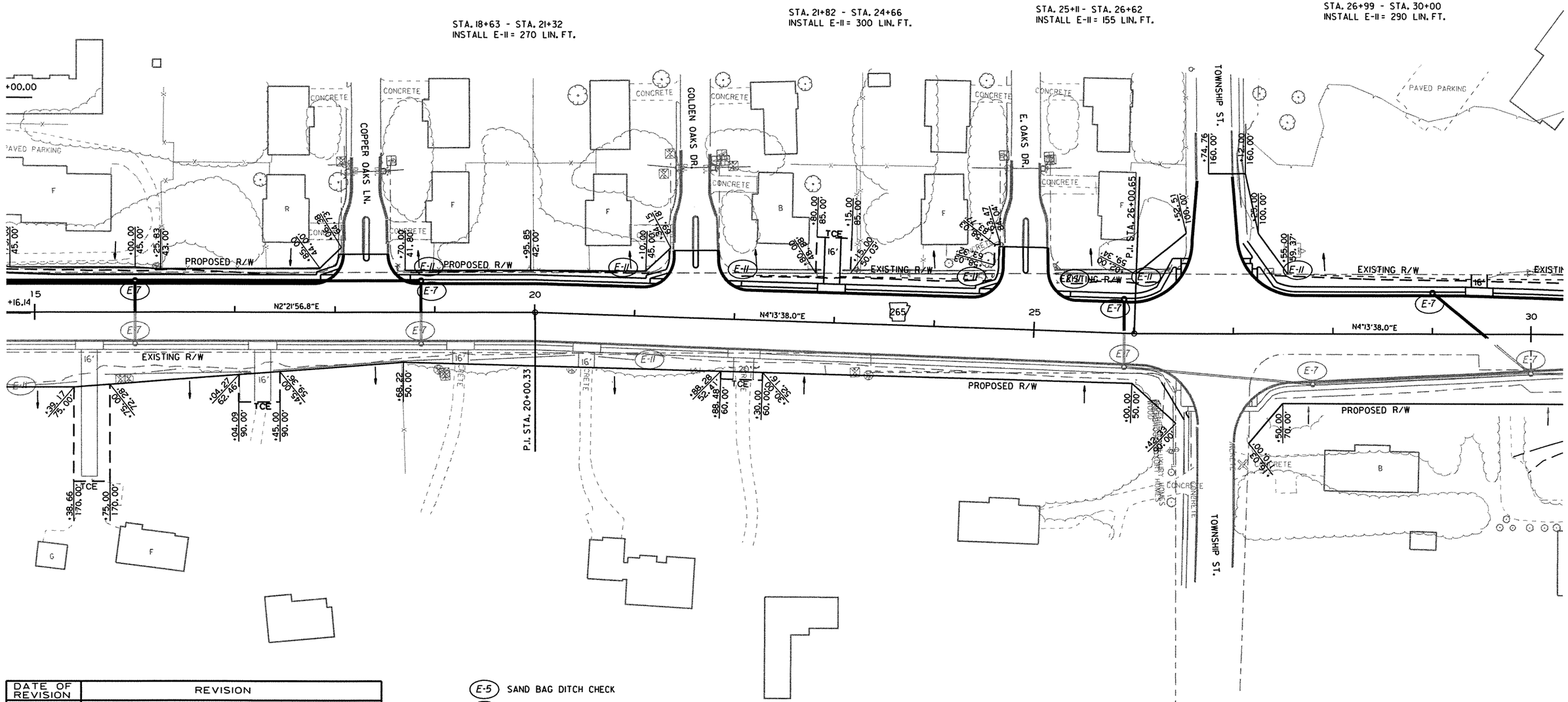
STA. 29+00 INSTALL E-7 = 25 LIN. FT.

STA. 18+63 - STA. 21+32 INSTALL E-11 = 270 LIN. FT.

STA. 21+82 - STA. 24+66 INSTALL E-11 = 300 LIN. FT.

STA. 25+11 - STA. 26+62 INSTALL E-11 = 155 LIN. FT.

STA. 26+99 - STA. 30+00 INSTALL E-11 = 290 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK

(E-6) ROCK DITCH CHECK

(E-7) DROP INLET SILT FENCE

(E-11) SILT FENCE

(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn

6-7-10

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.		040517	31	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 32+00 INSTALL
E-7 = 25 LIN. FT.

STA. 33+75 INSTALL
E-7 = 25 LIN. FT.

STA. 35+75 INSTALL
E-7 = 25 LIN. FT.

STA. 37+63 INSTALL
E-7 = 25 LIN. FT.

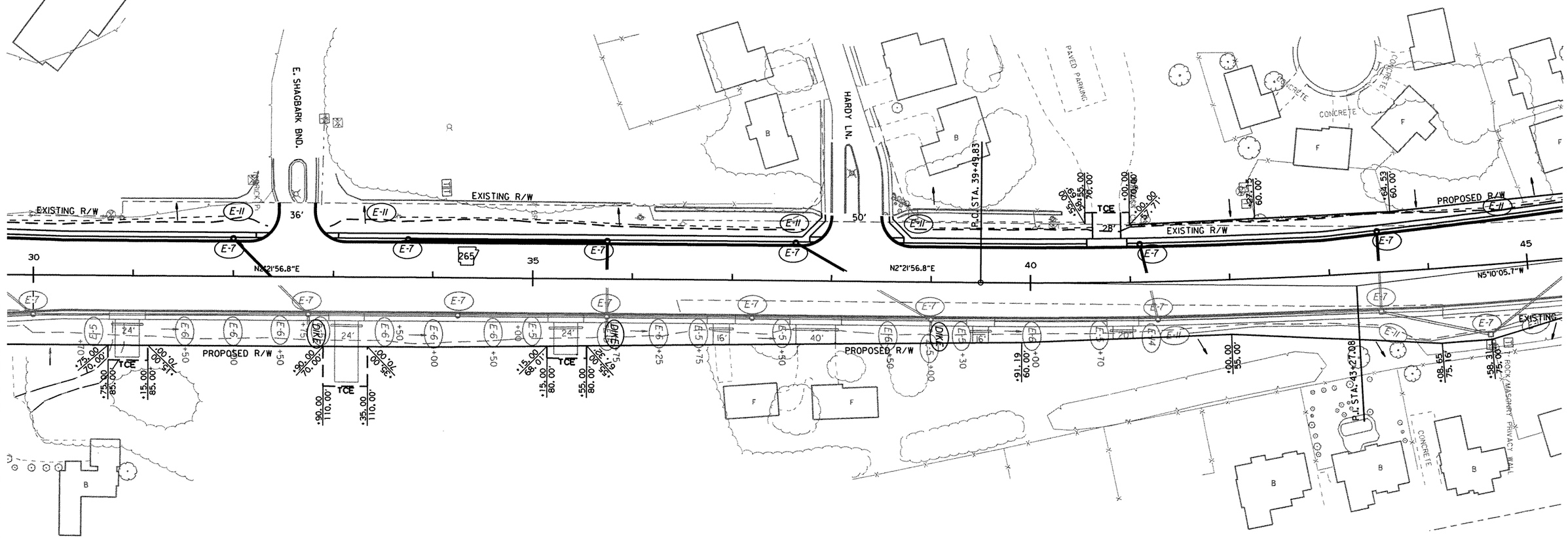
STA. 41+10 INSTALL
E-7 = 25 LIN. FT.

STA. 43+50 INSTALL
E-7 = 25 LIN. FT.

STA. 30+00 - STA. 32+44
INSTALL E-11 = 245 LIN. FT.

STA. 32+82 - STA. 39+97
INSTALL E-11 = 715 LIN. FT.

STA. 38+50 - STA. 45+00
INSTALL E-11 = 650 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn
6-7-10

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.		040517	32	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 45+76 INSTALL
E-7 = 25 LIN. FT.

STA. 47+30 INSTALL
E-7 = 25 LIN. FT.

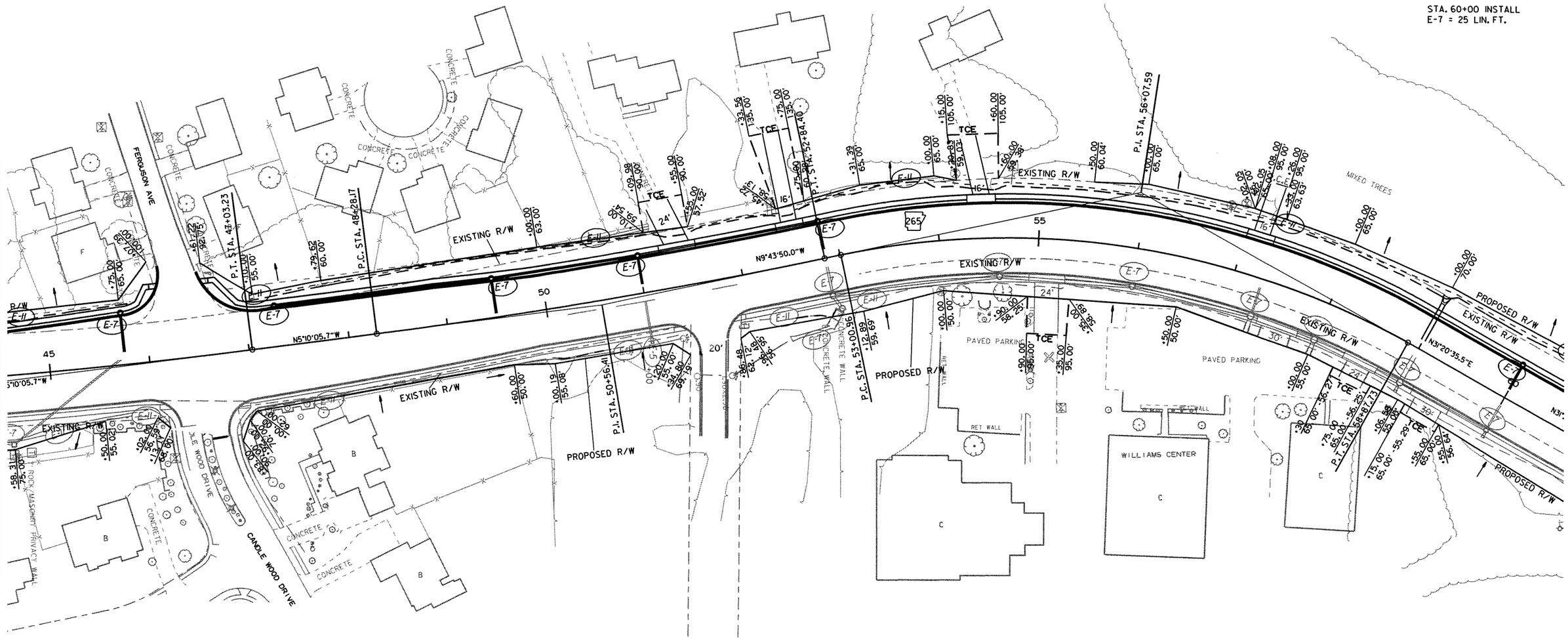
STA. 49+50 INSTALL
E-7 = 25 LIN. FT.

STA. 51+00 INSTALL
E-7 = 25 LIN. FT.

STA. 52+85 INSTALL
E-7 = 25 LIN. FT.

STA. 46+56 - STA. 60+00
INSTALL E-11 = 1290 LIN. FT.

STA. 60+00 INSTALL
E-7 = 25 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

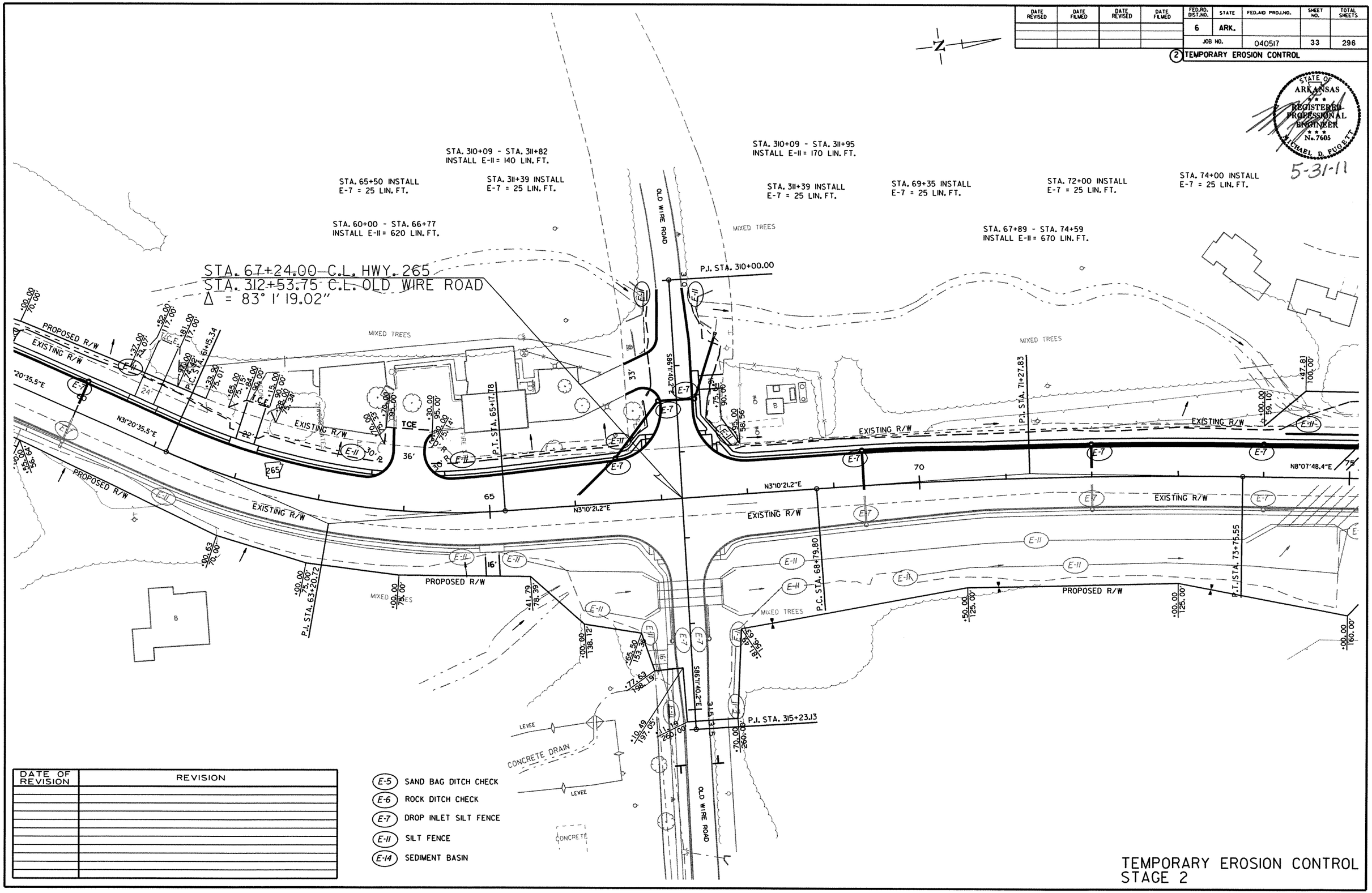
TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn
6-7-10

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.		040517	33	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11



DATE OF REVISION	REVISION

r040517.dgn

6-7-10

TEMPORARY EROSION CONTROL
STAGE 2

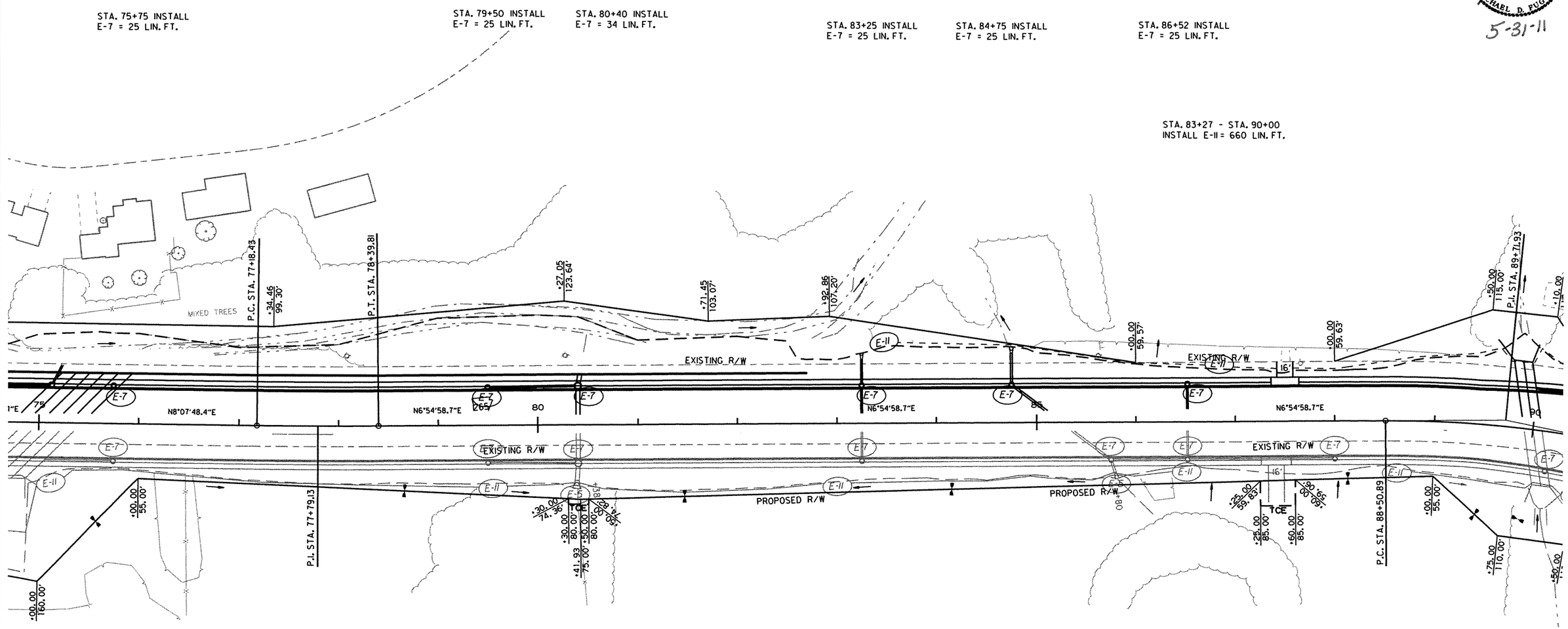
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040517	34	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGSETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn
6-7-10

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.		040517	35	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

STA. 92+00 INSTALL
E-7 = 25 LIN. FT.

STA. 93+53 INSTALL
E-7 = 25 LIN. FT.

STA. 96+83 INSTALL
E-7 = 25 LIN. FT.

STA. 101+25 INSTALL
E-7 = 25 LIN. FT.

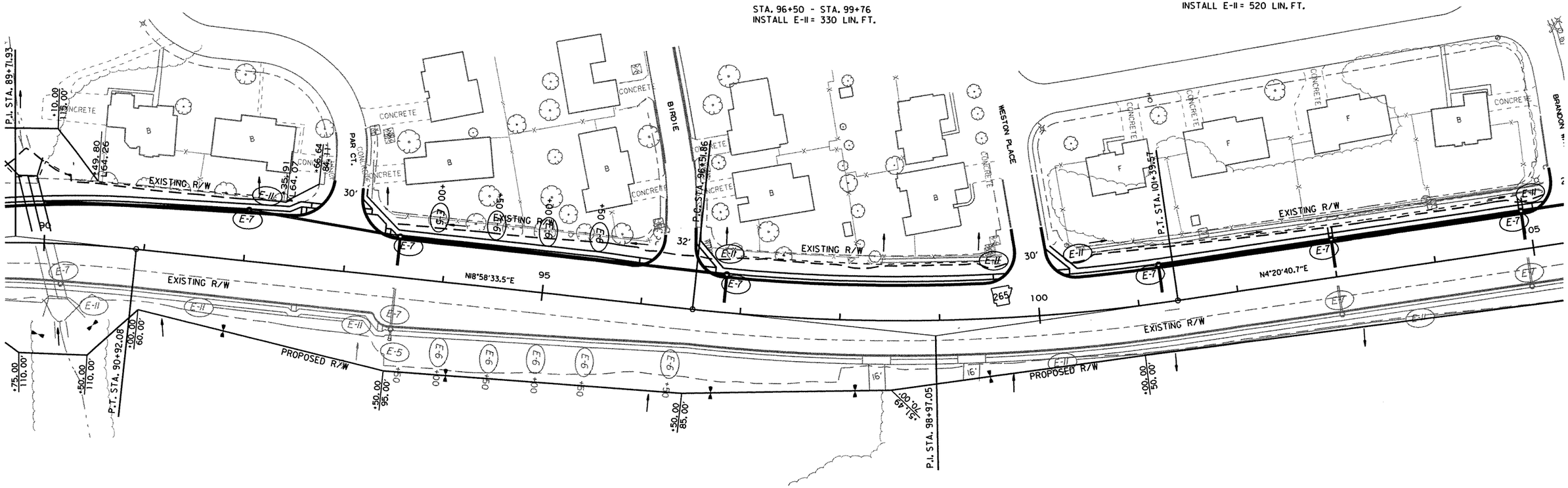
STA. 103+00 INSTALL
E-7 = 25 LIN. FT.

STA. 104+93 INSTALL
E-7 = 25 LIN. FT.

STA. 90+00 - STA. 92+80
INSTALL E-11 = 280 LIN. FT.

STA. 96+50 - STA. 99+76
INSTALL E-11 = 330 LIN. FT.

STA. 100+08 - STA. 105+25
INSTALL E-11 = 520 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn
6-7-10

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.		040517	36	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

STA. 107+00 INSTALL
E-7 = 25 LIN. FT.

STA. 109+00 INSTALL
E-7 = 25 LIN. FT.

STA. 111+52 INSTALL
E-7 = 25 LIN. FT.

STA. 114+20 INSTALL
E-7 = 28 LIN. FT.

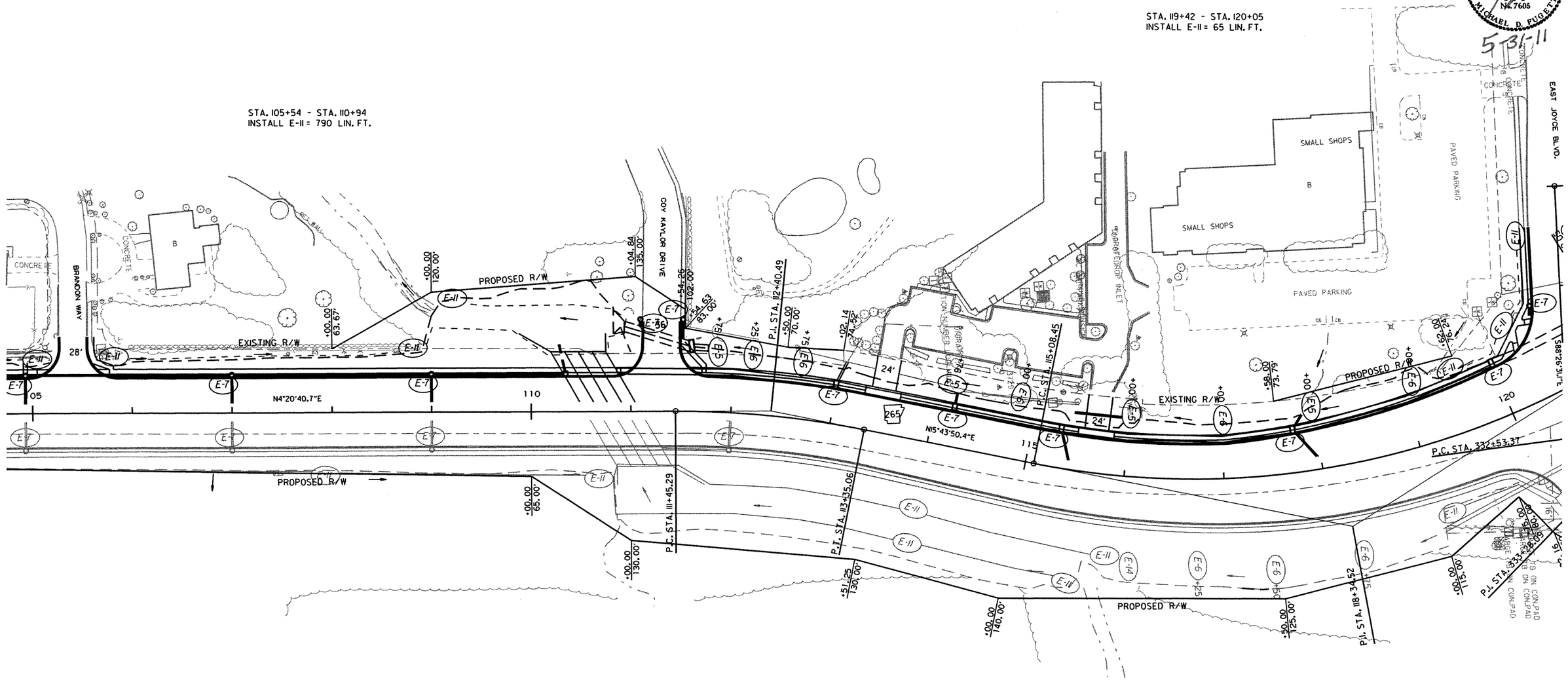
STA. 115+30 INSTALL
E-7 = 28 LIN. FT.

STA. 117+75 INSTALL
E-7 = 28 LIN. FT.

STA. 120+00 INSTALL
E-7 = 30 LIN. FT.

STA. 119+42 - STA. 120+05
INSTALL E-11 = 65 LIN. FT.

STA. 105+54 - STA. 110+94
INSTALL E-11 = 790 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 2

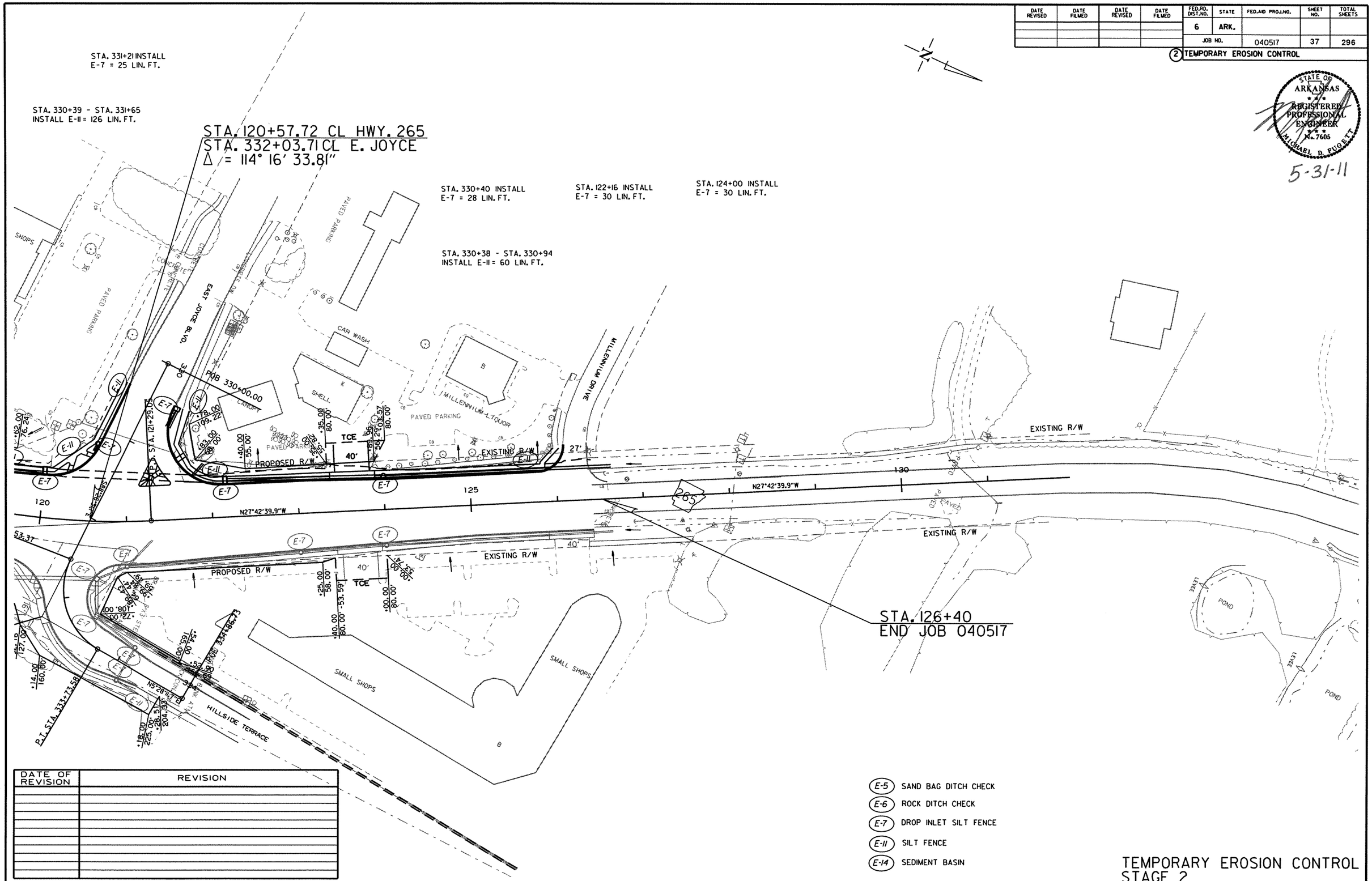
r040517.dgn
6-7-10

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.		040517	37	296

(2) TEMPORARY EROSION CONTROL

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

5-31-11



DATE OF REVISION	REVISION

TEMPORARY EROSION CONTROL
STAGE 2

r040517.dgn

6-7-10

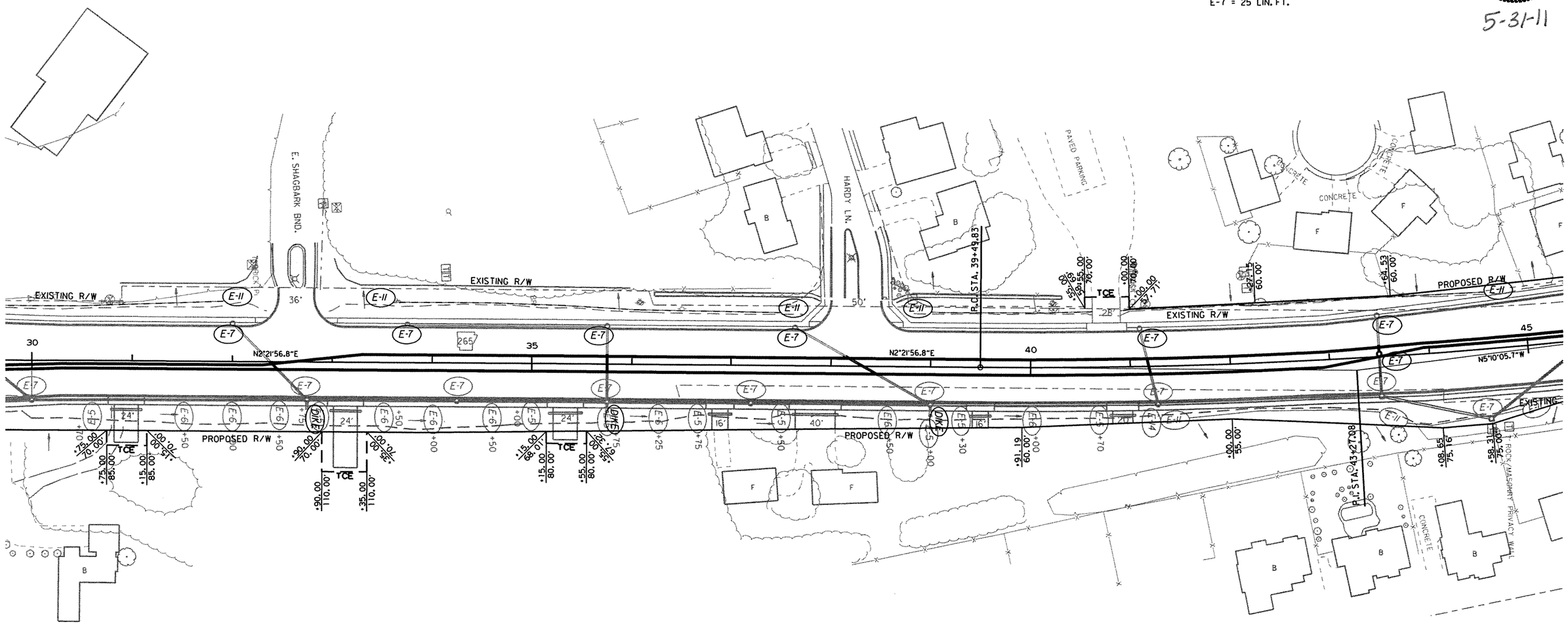
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	38	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11

STA. 43+50 INSTALL
E-7 = 25 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn
6-7-10

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.		040517	39	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

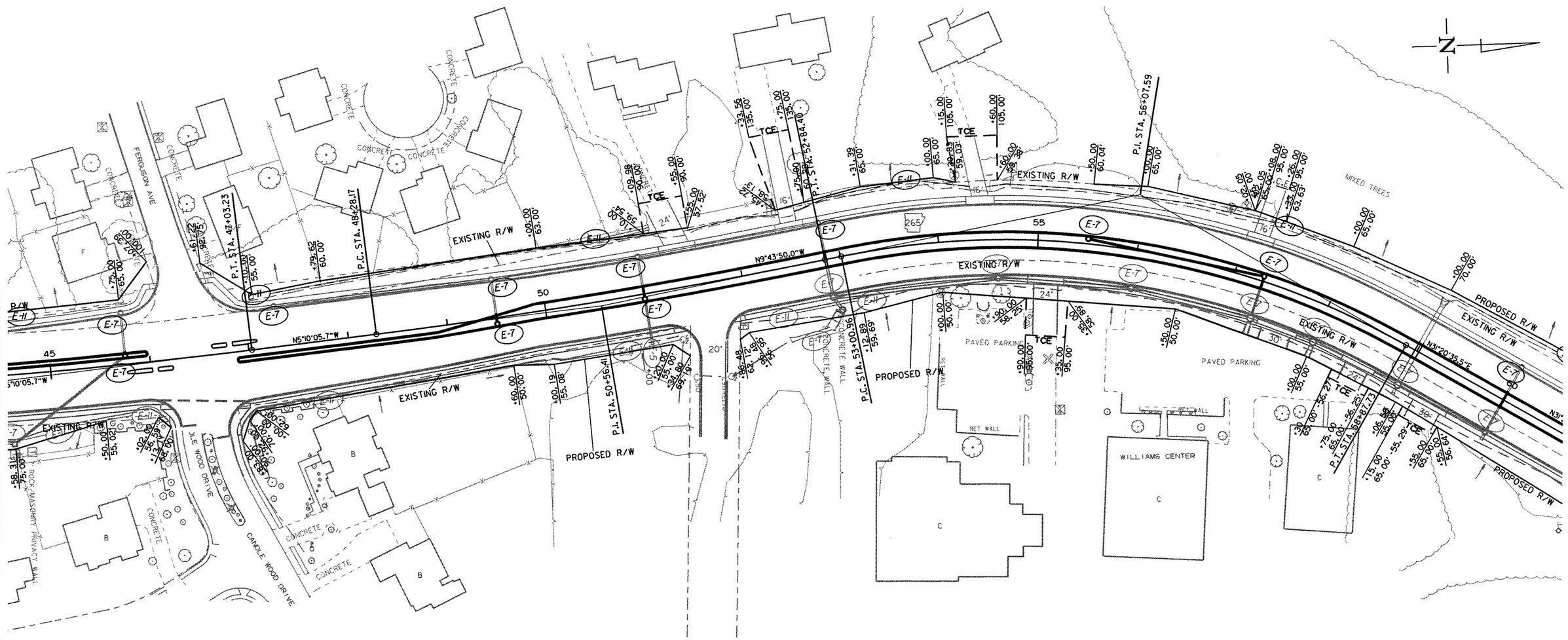
STA. 46+76 INSTALL
E-7 = 25 LIN. FT.

STA. 49+50 INSTALL
E-7 = 25 LIN. FT.

STA. 51+00 INSTALL
E-7 = 25 LIN. FT.

STA. 55+50 INSTALL
E-7 = 25 LIN. FT.

STA. 57+29 INSTALL
E-7 = 34 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

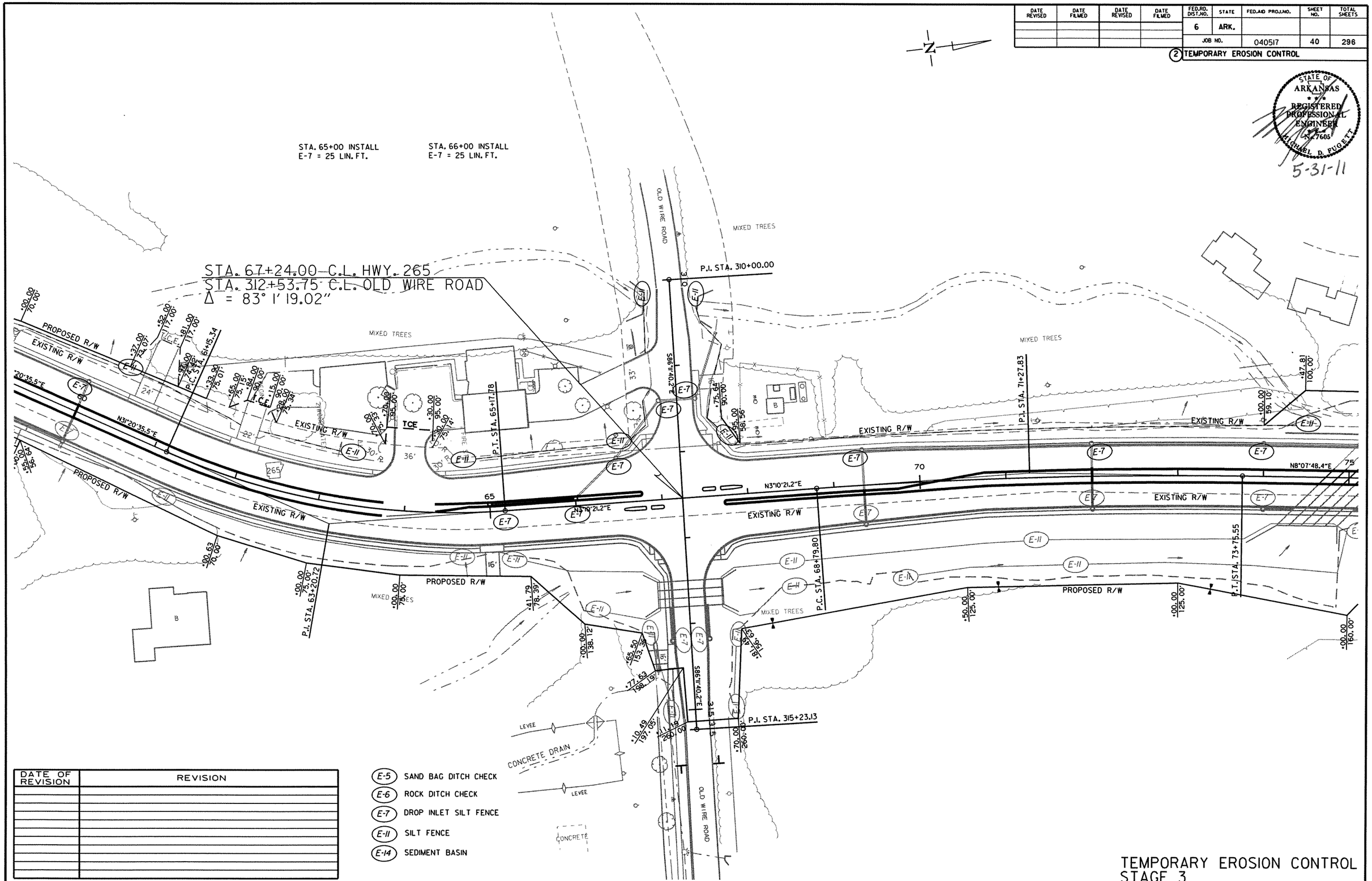
TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn
6-7-10

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.		040517	40	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUQUETT
5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 3

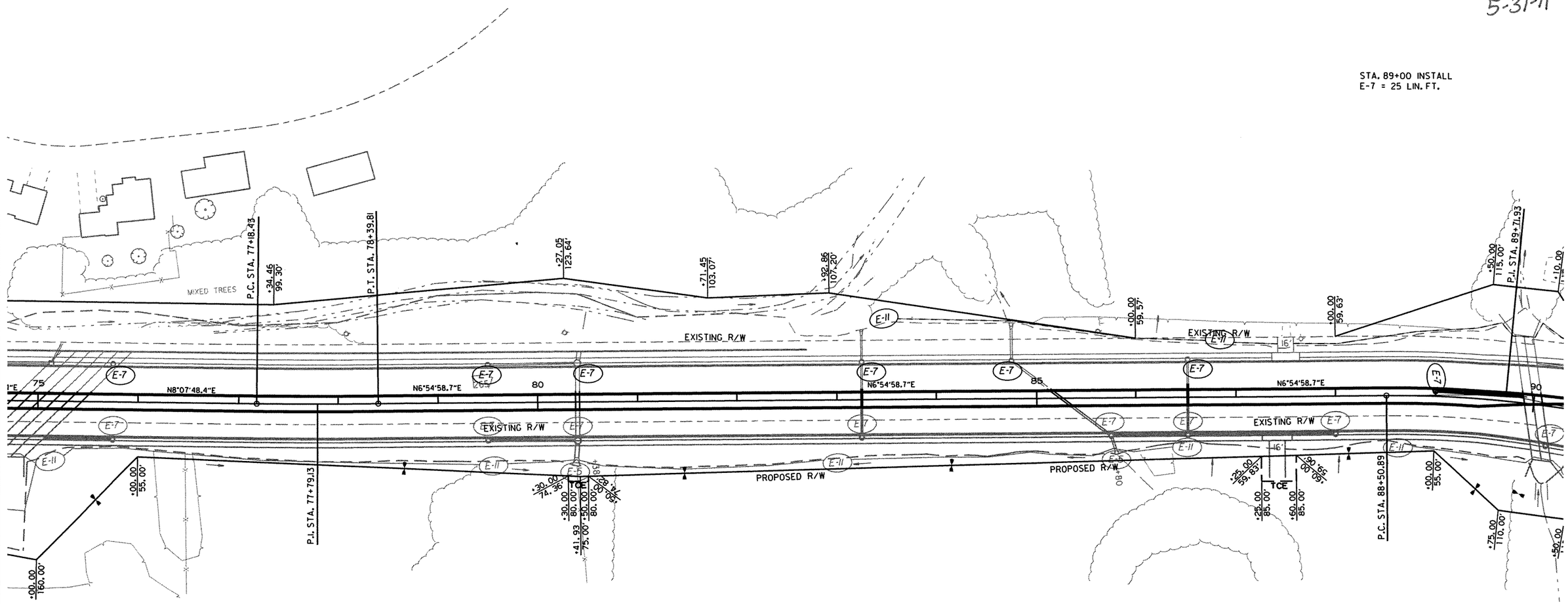
r040517.dgn
6-7-10

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.		040517	41	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 89+00 INSTALL
E-7 = 25 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn
6-7-10

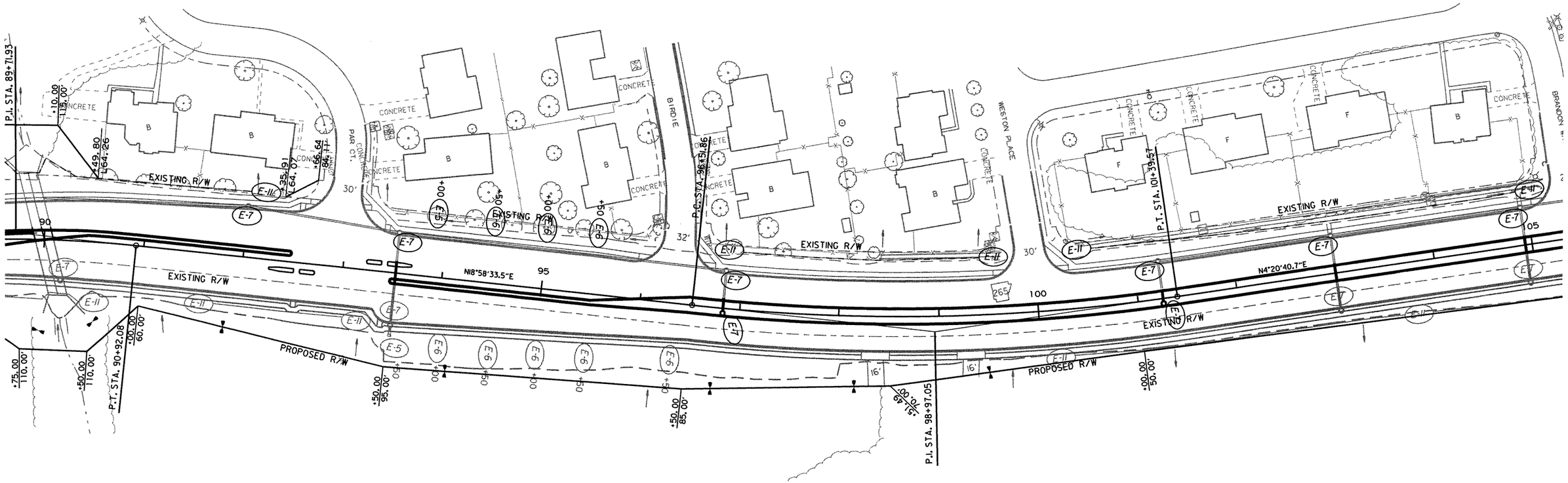
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	42	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

STA. 96+83 INSTALL
E-7 = 25 LIN. FT.

STA. 101+25 INSTALL
E-7 = 25 LIN. FT.



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

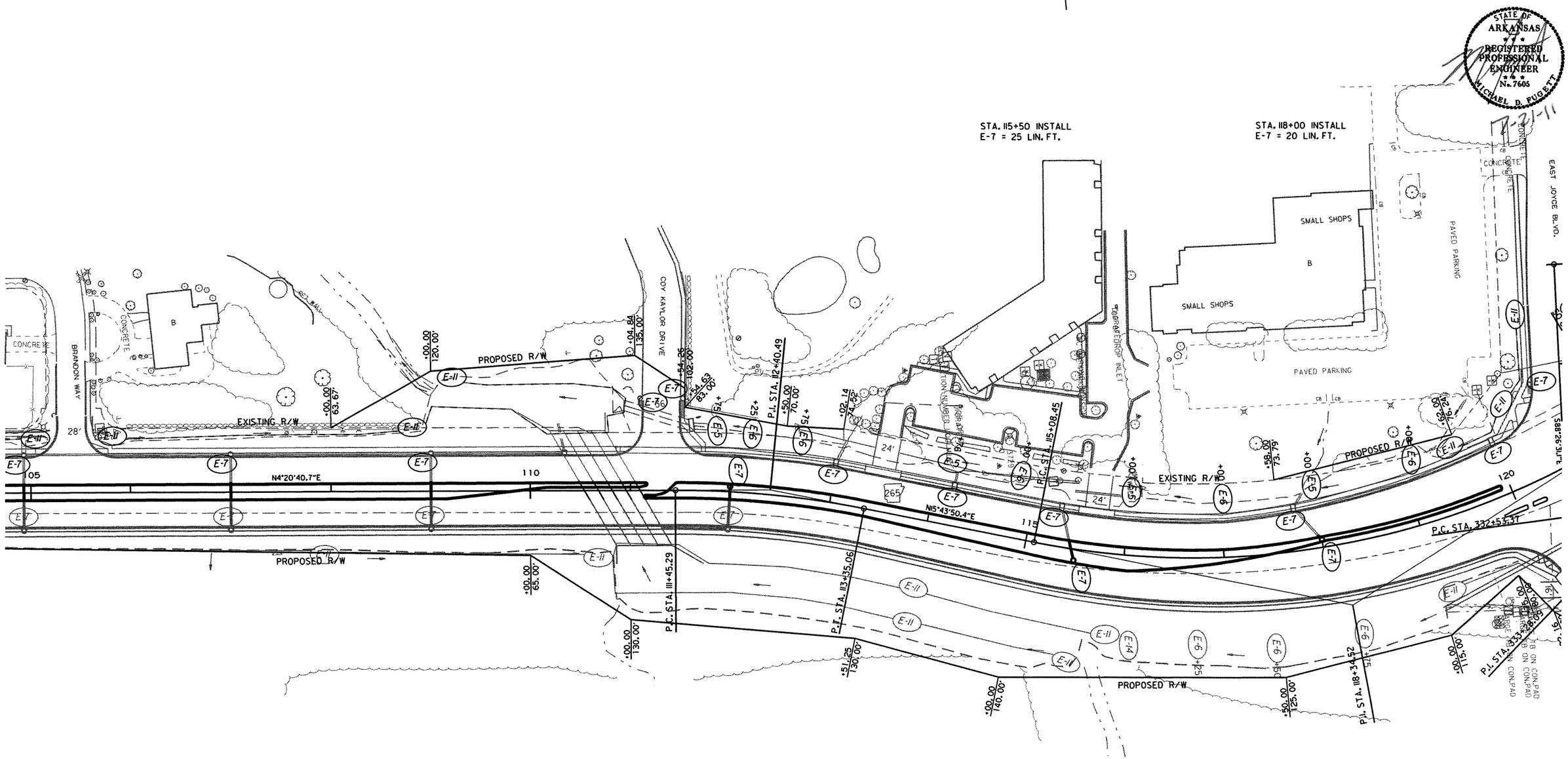
TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn
6-7-10

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.		040517	43	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGETT 7-21-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK

(E-6) ROCK DITCH CHECK

(E-7) DROP INLET SILT FENCE

(E-11) SILT FENCE

(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn

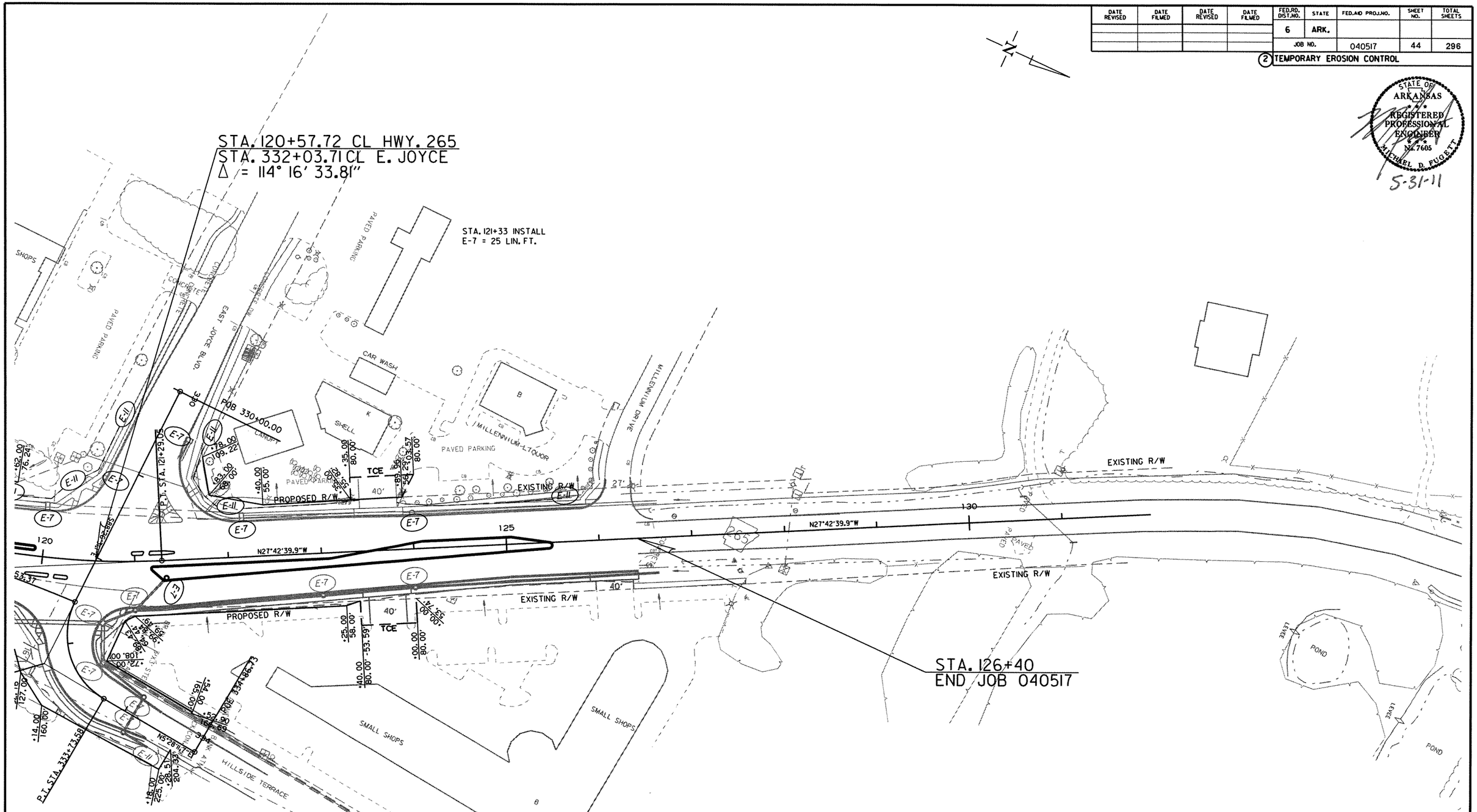
6-7-10

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.		040517	44	296

(2) TEMPORARY EROSION CONTROL

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



DATE OF REVISION	REVISION

(E-5) SAND BAG DITCH CHECK
(E-6) ROCK DITCH CHECK
(E-7) DROP INLET SILT FENCE
(E-11) SILT FENCE
(E-14) SEDIMENT BASIN

TEMPORARY EROSION CONTROL
STAGE 3

r040517.dgn
6-7-10

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.		040517	45	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGITT 5-31-11

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

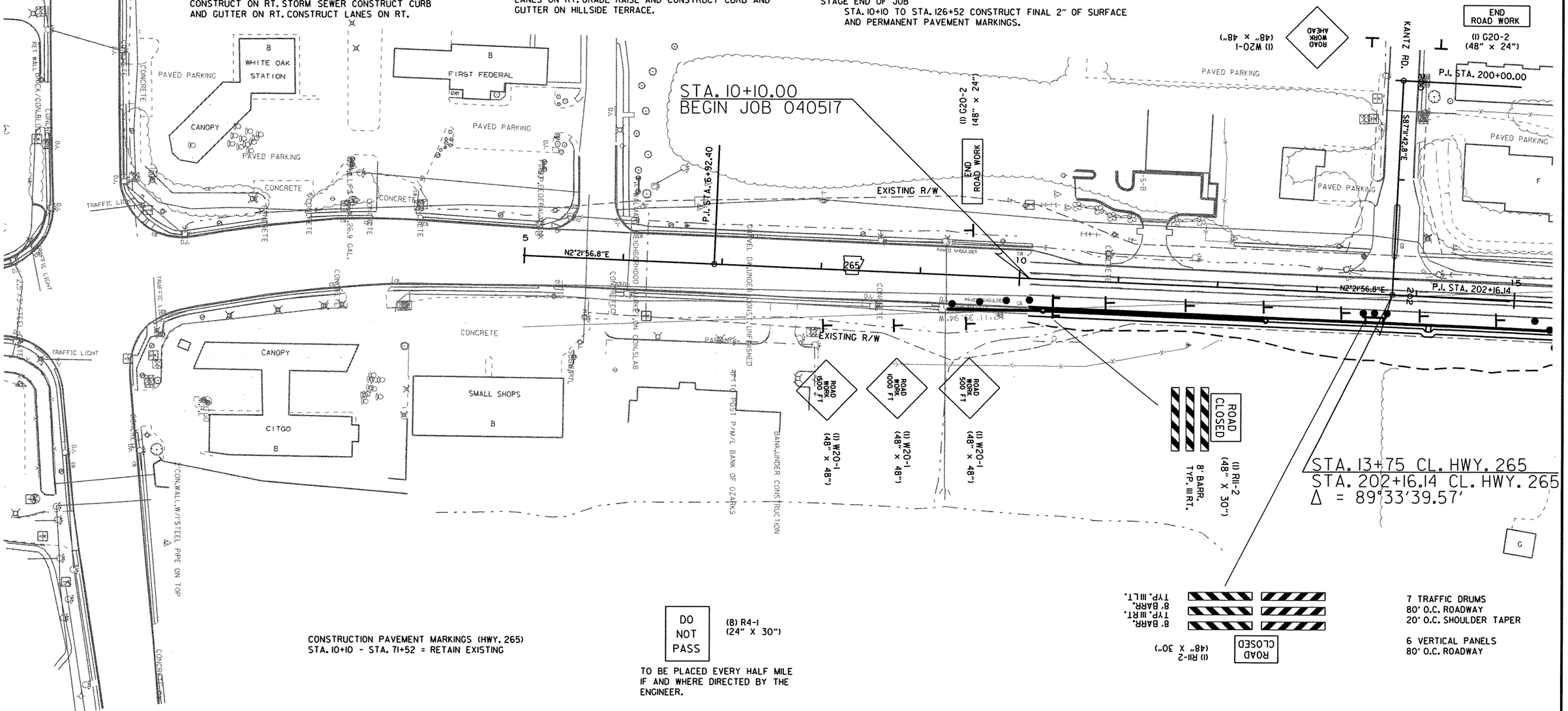
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.



CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 10+10 - STA. 71+52 = RETAIN EXISTING

DO NOT PASS
(8) R4-1 (24" X 30")
TO BE PLACED EVERY HALF MILE IF AND WHERE DIRECTED BY THE ENGINEER.

7 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. SHOULDER TAPER

6 VERTICAL PANELS
80' O.C. ROADWAY

MAINTENANCE OF TRAFFIC
STAGE I

r040517.dgn
6-7-10

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.		040517	46	296

(2) MAINTENANCE OF TRAFFIC

STATE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STATE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

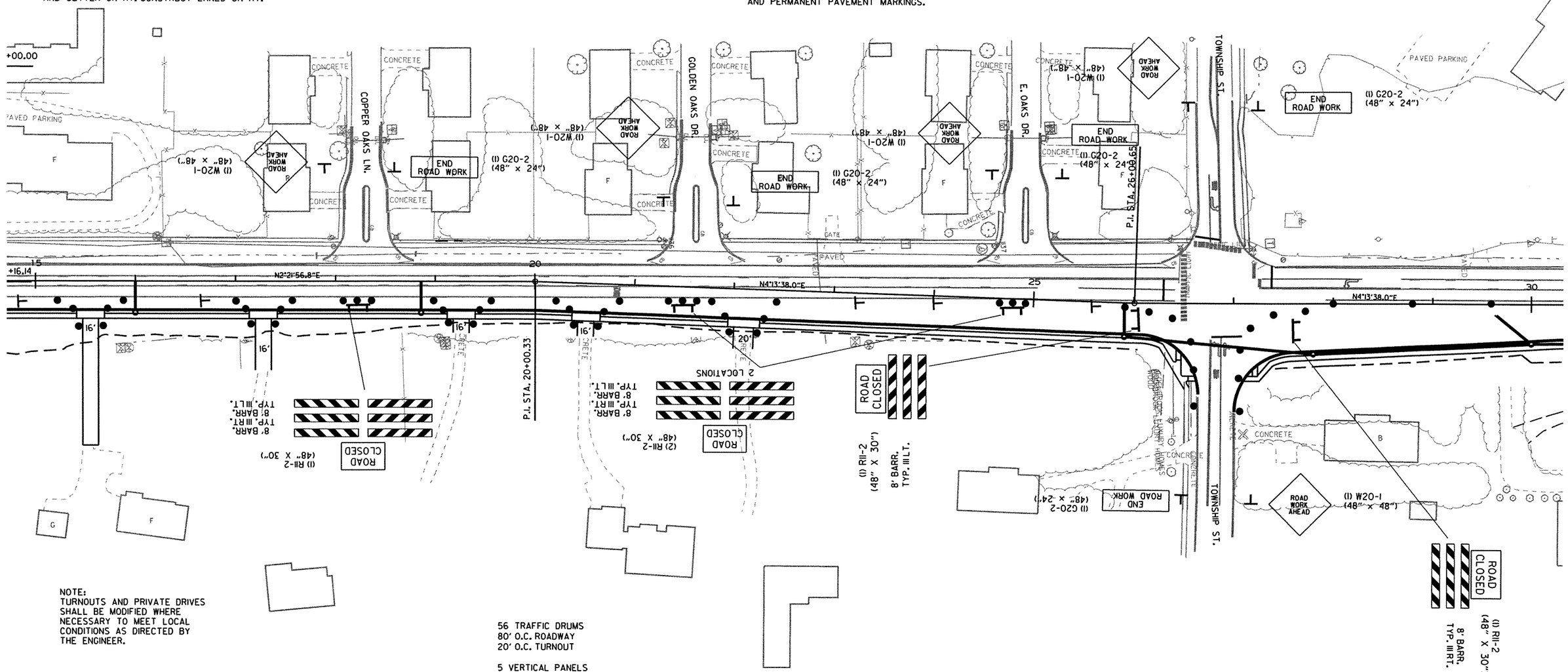
STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. 26+29 - STA. 27+39 = 135 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 26+45 - STA. 27+15 = 237 LIN. FT.



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

56 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUT

5 VERTICAL PANELS
80' O.C. ROADWAY

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	47	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

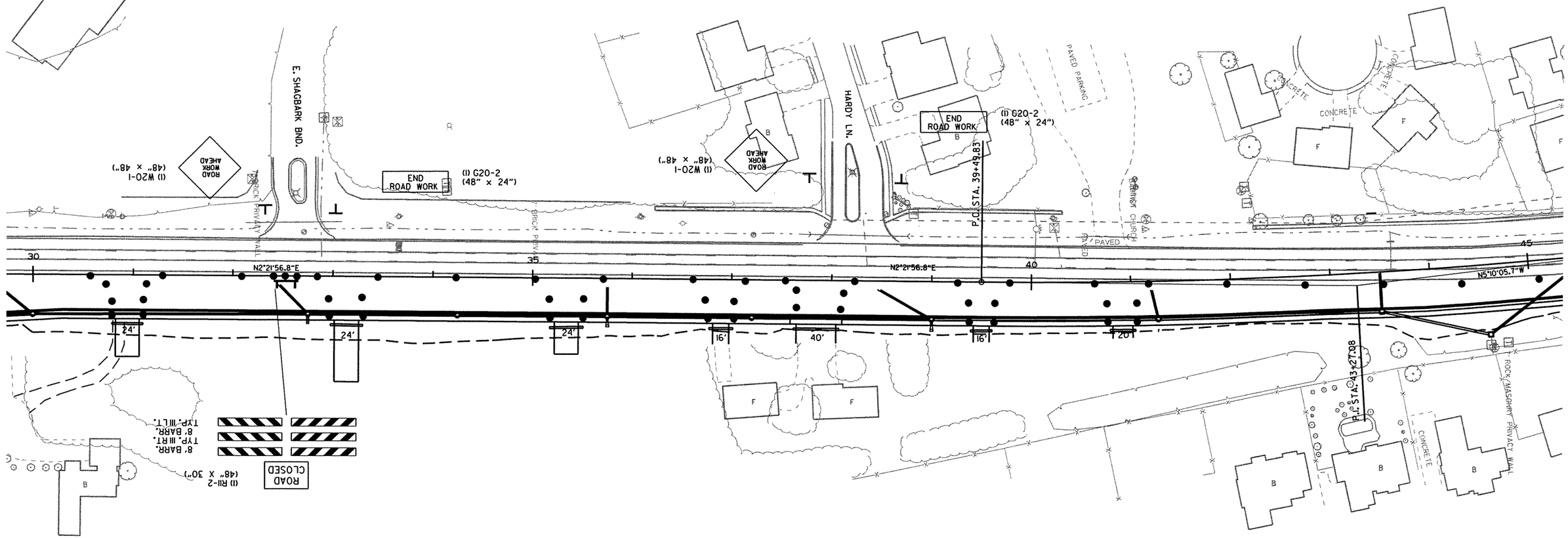
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.



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

50 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUT

MAINTENANCE OF TRAFFIC
STAGE I

r040517.dgn
6-7-10

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.		040517	48	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

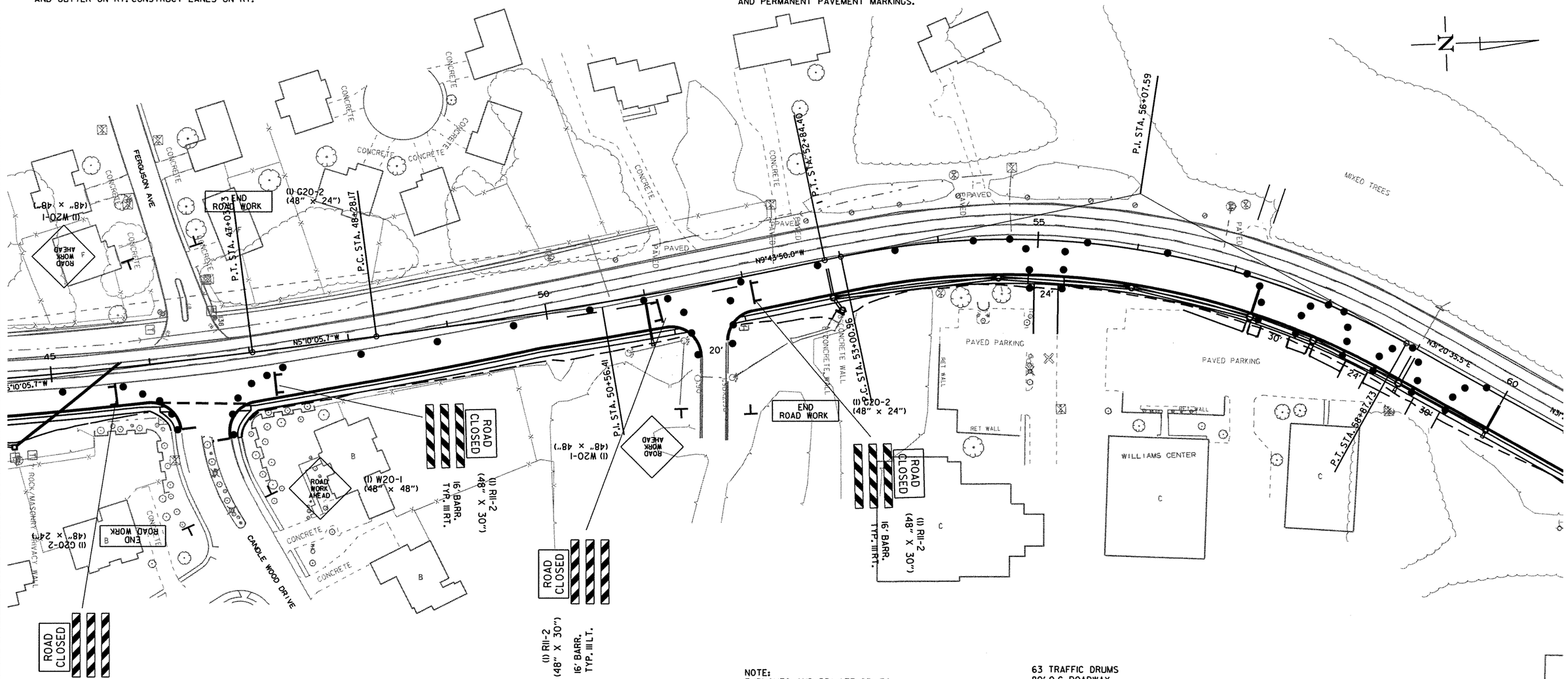
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.



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

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

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	49	296

(2) MAINTENANCE OF TRAFFIC

STATE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STATE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STATE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STATE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

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

5-31-11

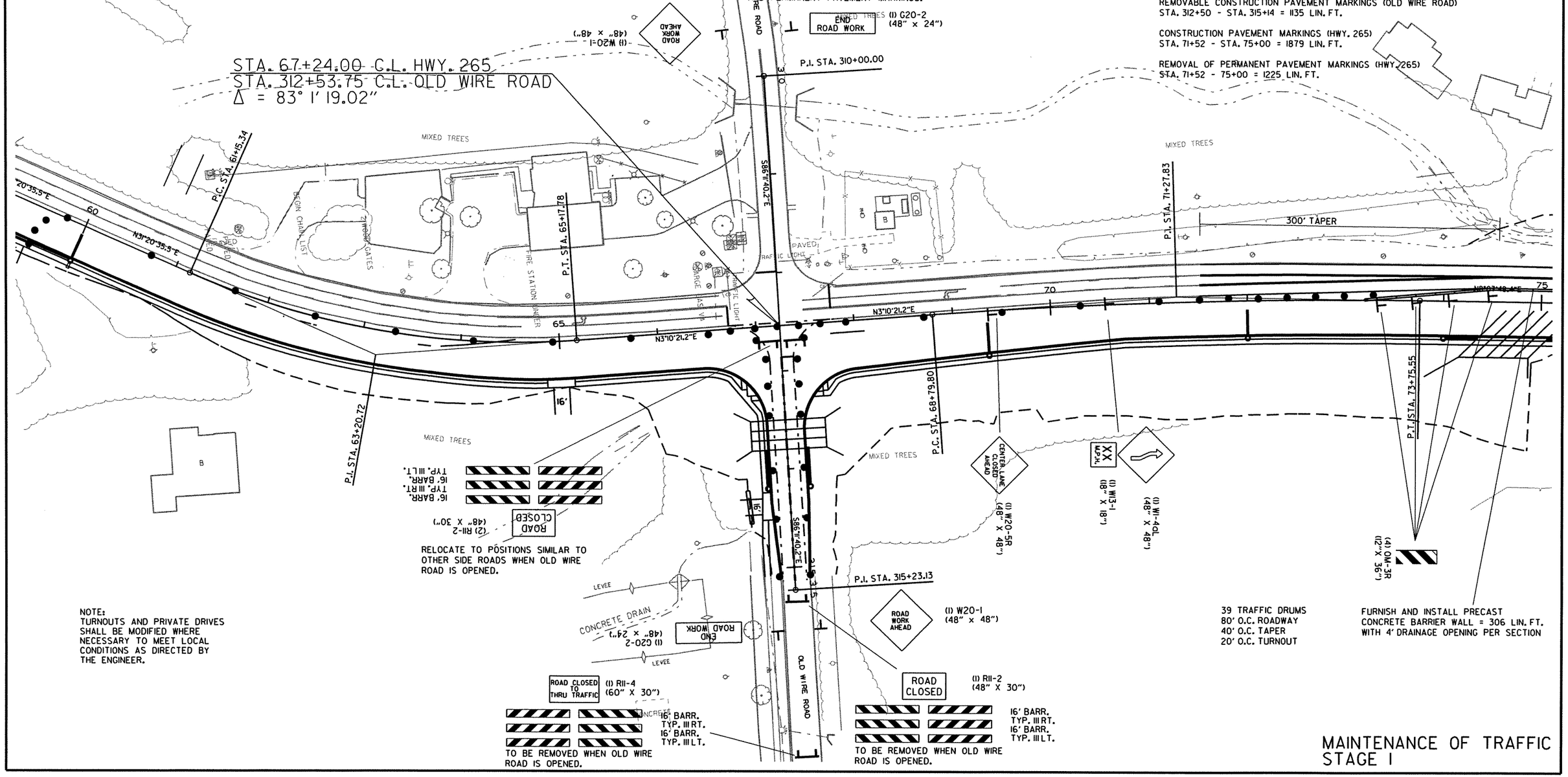
REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. - STA. = 84 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 66+75 - STA. 67+80 = 105 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (OLD WIRE ROAD)
STA. 312+50 - STA. 315+14 = 1135 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 71+52 - STA. 75+00 = 1879 LIN. FT.

REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. 71+52 - 75+00 = 1225 LIN. FT.



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

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	50	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

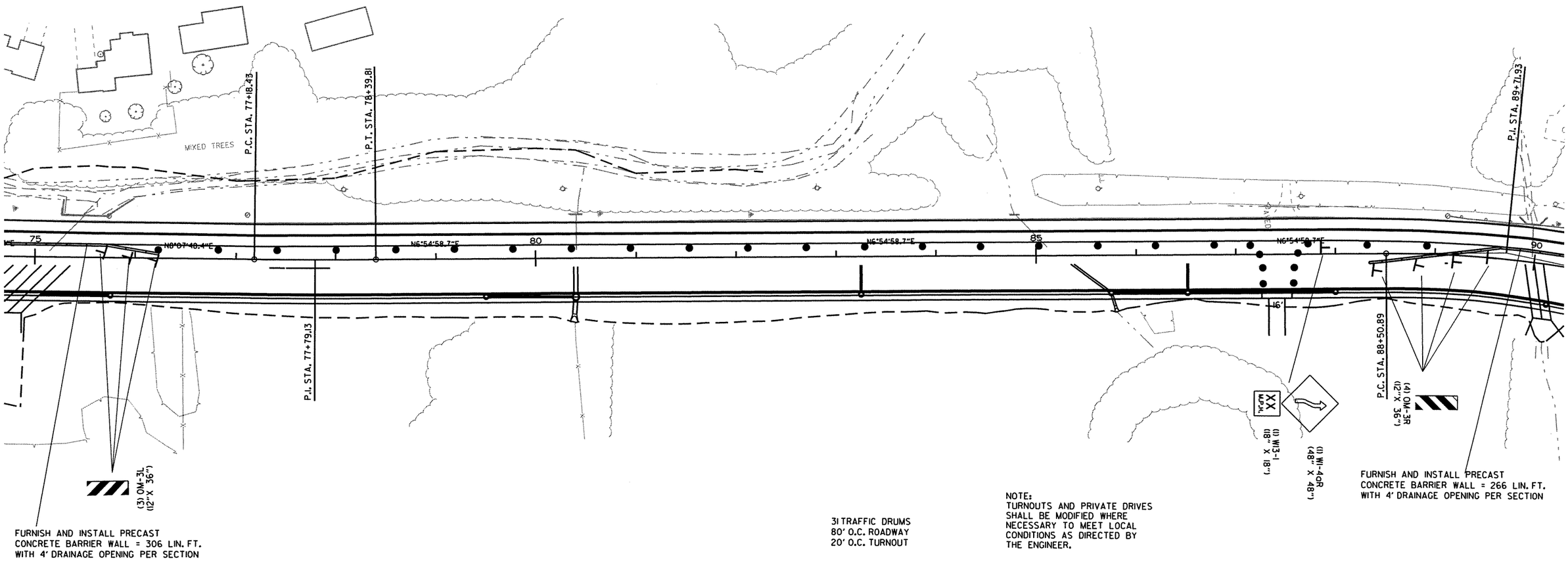
STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. 75+00 - STA. 90+00 = 3750 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 75+00 - STA. 90+00 = 6000 LIN. FT.
STA. 96+45 - STA. 107+34 = RETAIN EXISTING



31 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUT

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

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	51	296

(2) MAINTENANCE OF TRAFFIC

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

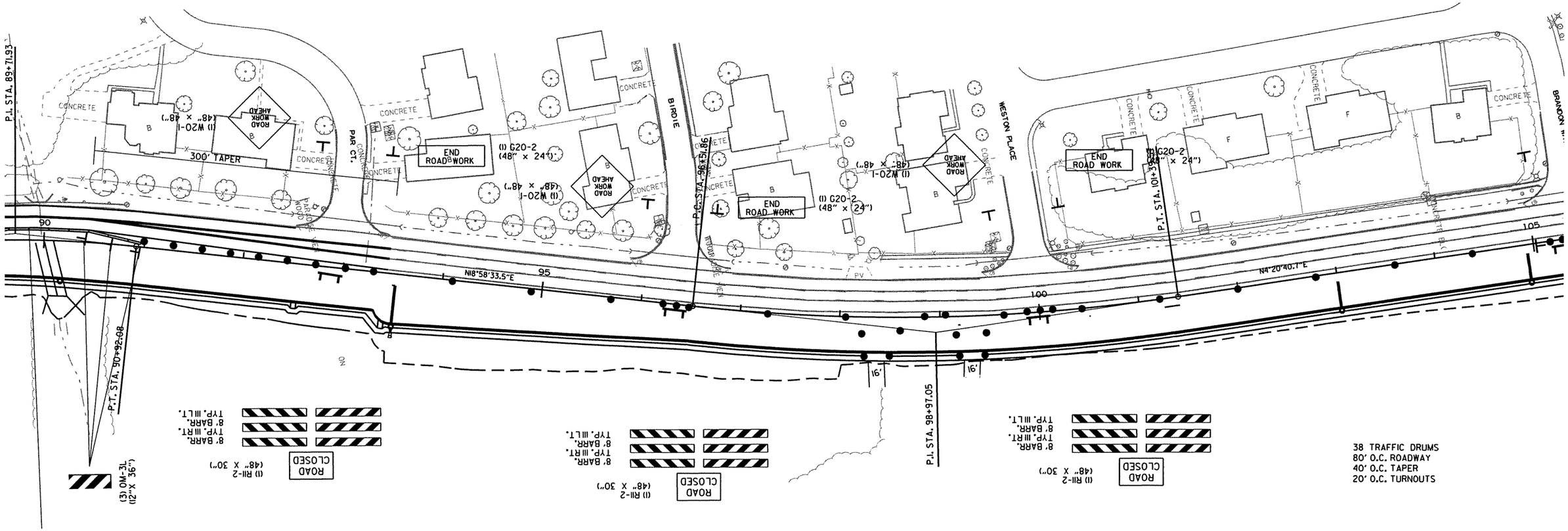
STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. 90+00 - STA. 96+45 = 865 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 90+00 - STA. 96+45 = 1990 LIN. FT.



FURNISH AND INSTALL PRECAST CONCRETE BARRIER WALL = 266 LIN. FT. WITH 4' DRAINAGE OPENING PER SECTION

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

38 TRAFFIC DRUMS
80' O.C. ROADWAY
40' O.C. TAPER
20' O.C. TURNOUTS

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	52	296

(2) MAINTENANCE OF TRAFFIC

STATE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

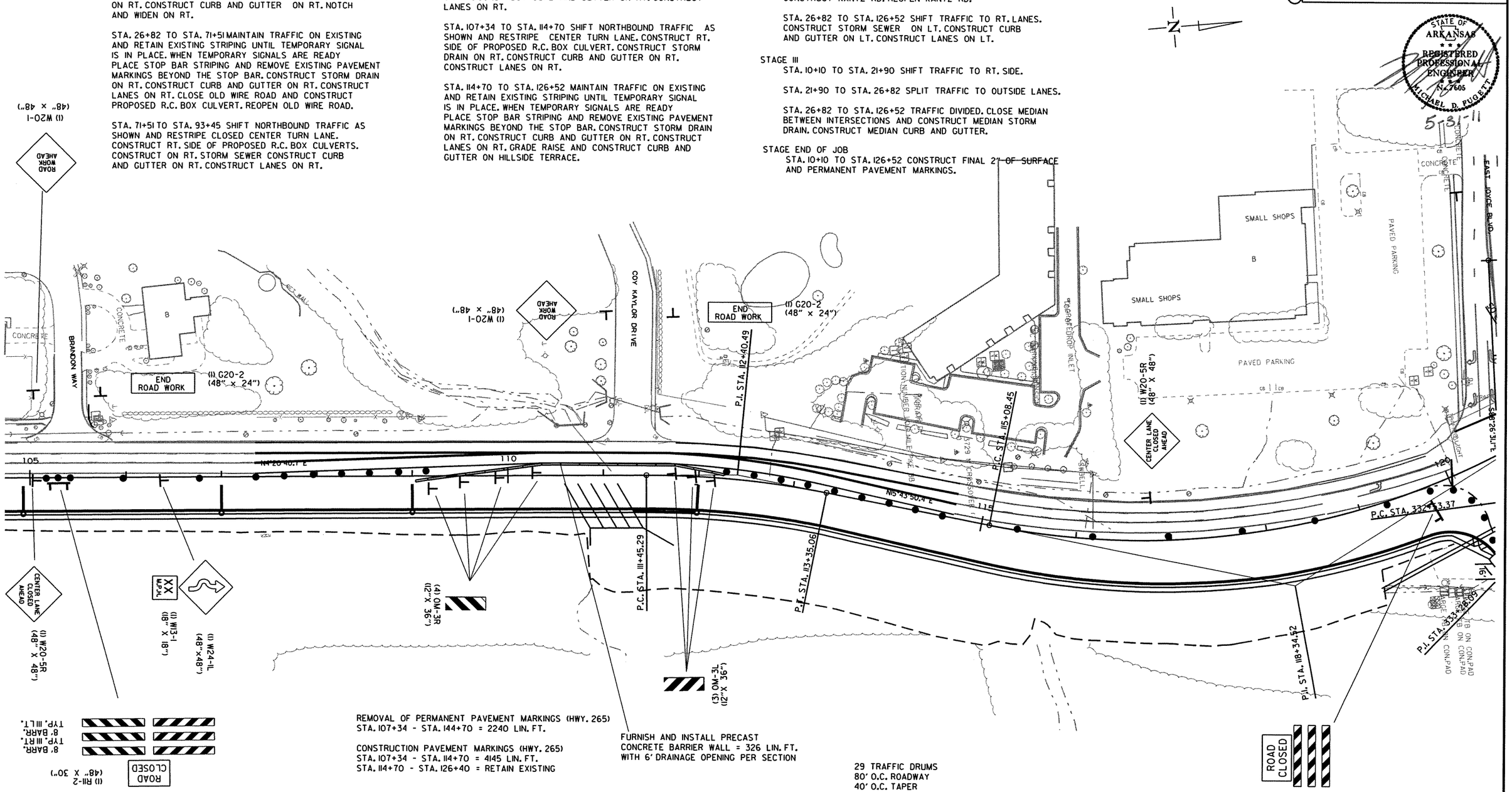
STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11



REMOVAL OF PERMANENT PAVEMENT MARKINGS (HWY. 265)
STA. 107+34 - STA. 144+70 = 2240 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 107+34 - STA. 114+70 = 4145 LIN. FT.
STA. 114+70 - STA. 126+40 = RETAIN EXISTING

FURNISH AND INSTALL PRECAST CONCRETE BARRIER WALL = 326 LIN. FT. WITH 6' DRAINAGE OPENING PER SECTION

29 TRAFFIC DRUMS
80' O.C. ROADWAY
40' O.C. TAPER

MAINTENANCE OF TRAFFIC
STAGE I

6-7-10 r040517.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.		040517	53	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT
5-31-11

STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

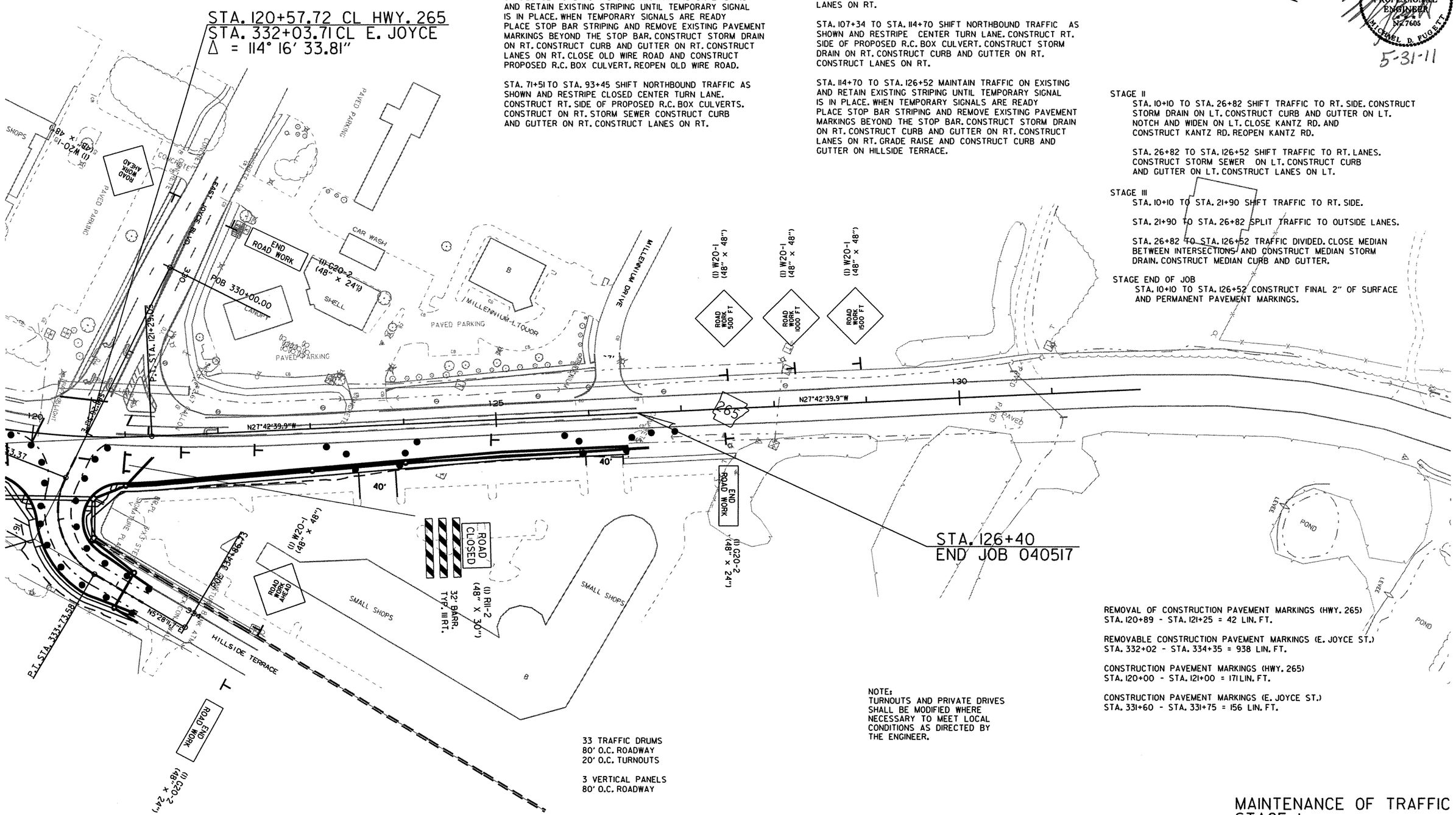
STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.



33 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUTS

3 VERTICAL PANELS
80' O.C. ROADWAY

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

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 120+89 - STA. 121+25 = 42 LIN. FT.

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (E. JOYCE ST.)
STA. 332+02 - STA. 334+35 = 938 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 120+00 - STA. 121+00 = 171 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (E. JOYCE ST.)
STA. 331+60 - STA. 331+75 = 156 LIN. FT.

MAINTENANCE OF TRAFFIC
STAGE I

r040517.dgn
6-7-10

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.		040517	54	296

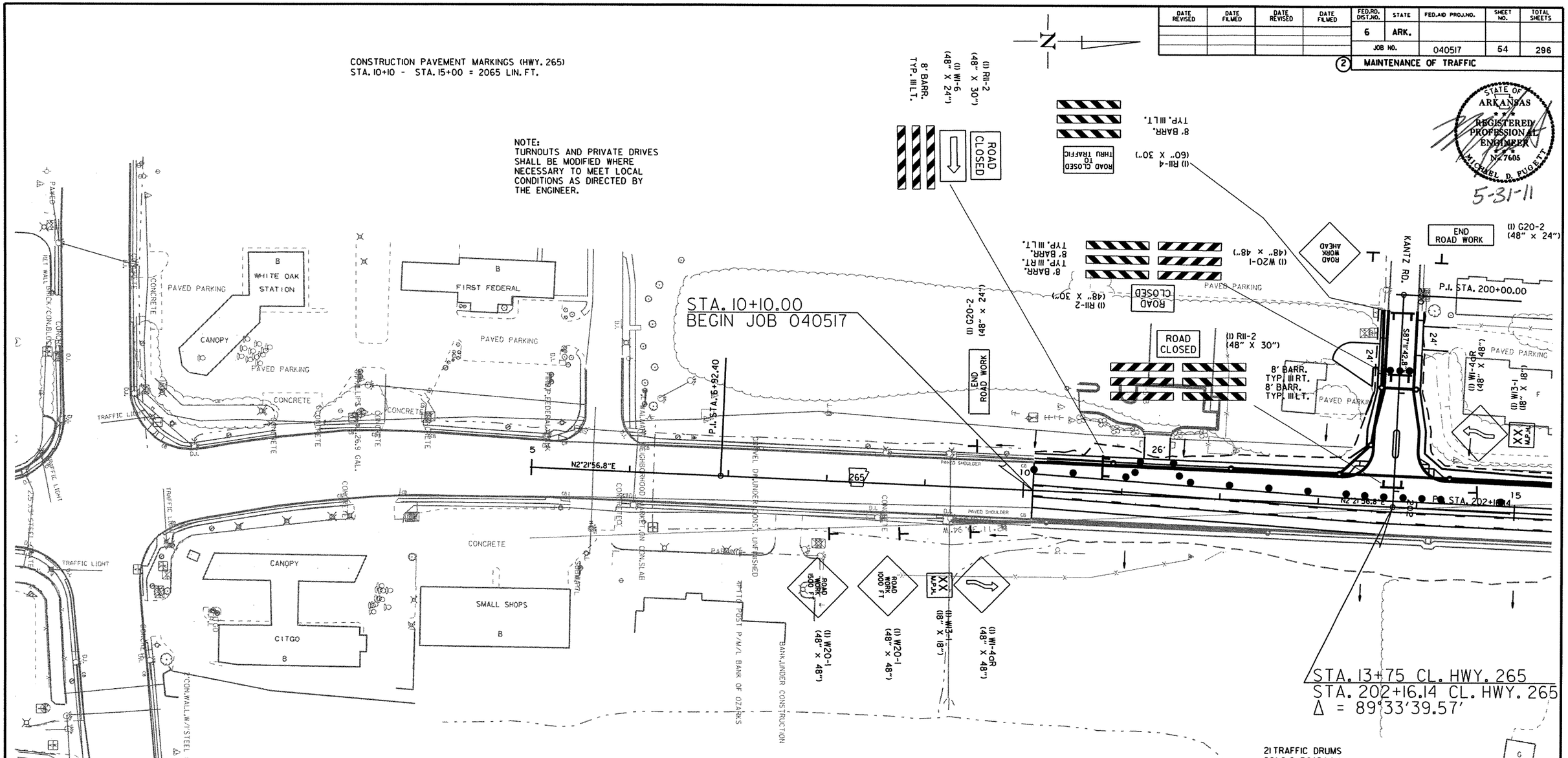
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 10+10 - STA. 15+00 = 2065 LIN. FT.

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



21 TRAFFIC DRUMS
80' O.C. ROADWAY
40' O.C. TAPER
20' TOURNOUTS

DO NOT PASS — (8) R4-1 (24" X 30")

TO BE PLACED EVERY HALF MILE IF AND WHERE DIRECTED BY THE ENGINEER.

STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

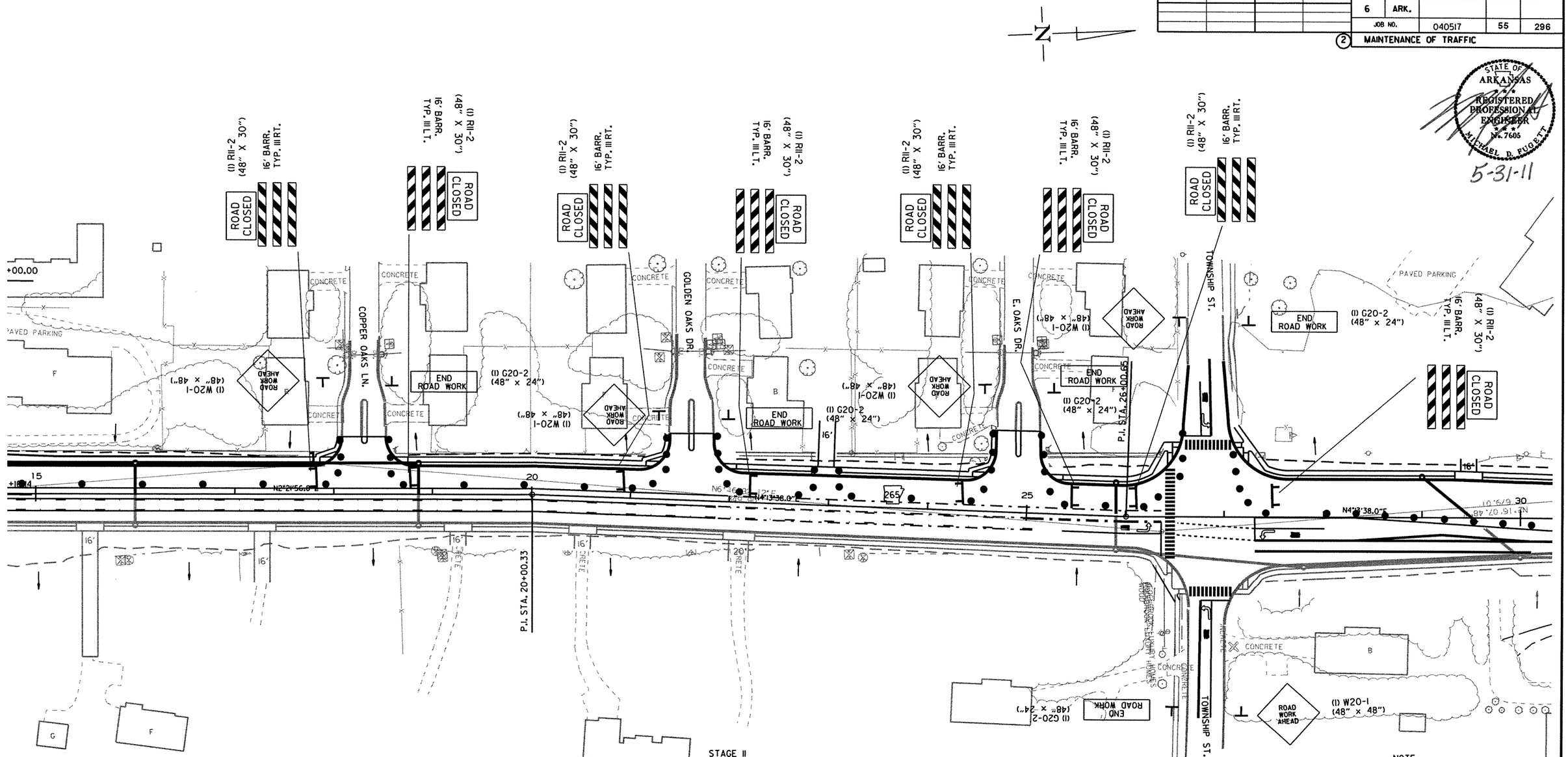
MAINTENANCE OF TRAFFIC STAGE 2

r040517.dgn
6-7-10

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.		040517	55	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

59 TRAFFIC DRUMS
80' O.C. ROADWAY
20' TURNOUTS

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

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 21+86 - STA. 26+36 = 1565 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 15+00 - STA. 30+00 = 5765 LIN. FT.
WORDS = 4 EACH
ARROWS = 4 EACH

MAINTENANCE OF TRAFFIC STAGE 2

r040517.dgn
6-7-10

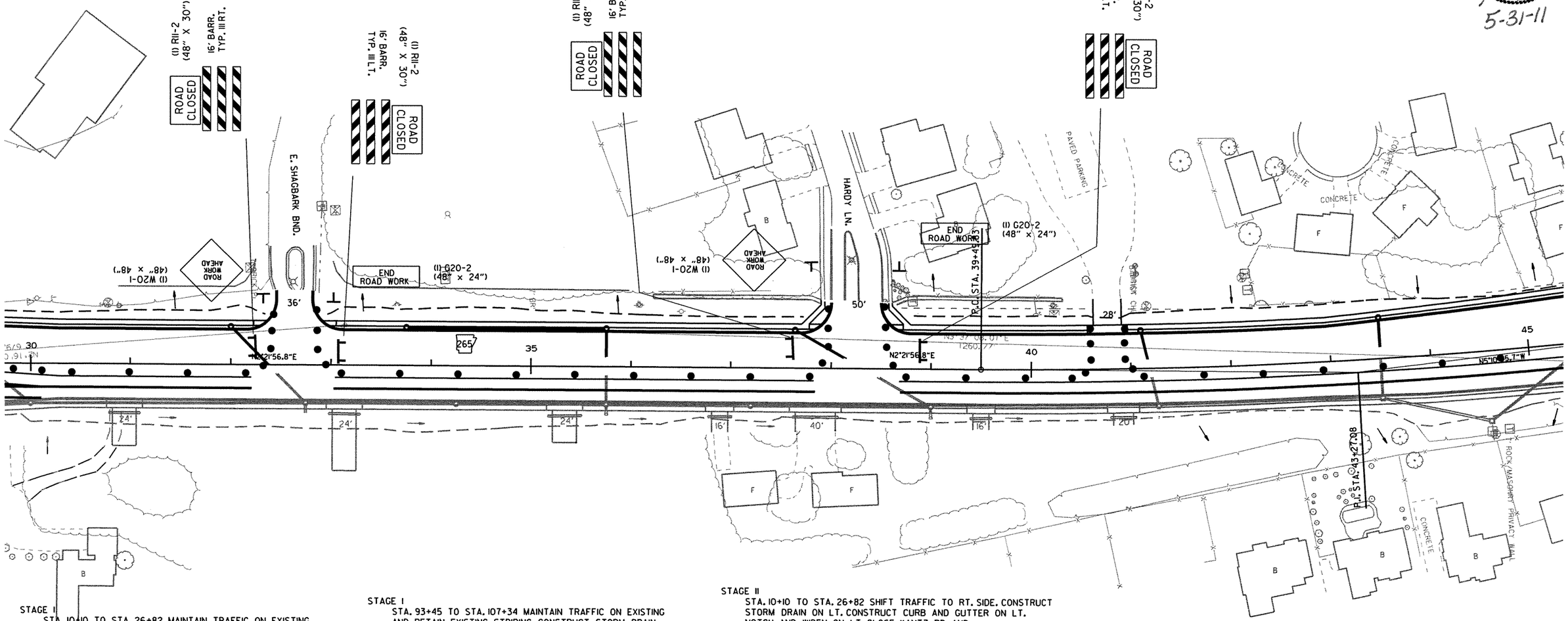
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	56	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 30+00 - STA. 45+00 = 4000 LIN. FT.

56 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUTS



STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

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

MAINTENANCE OF TRAFFIC STAGE 2

r040517.dgn
6-7-10

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.		040517	57	296

(2) MAINTENANCE OF TRAFFIC

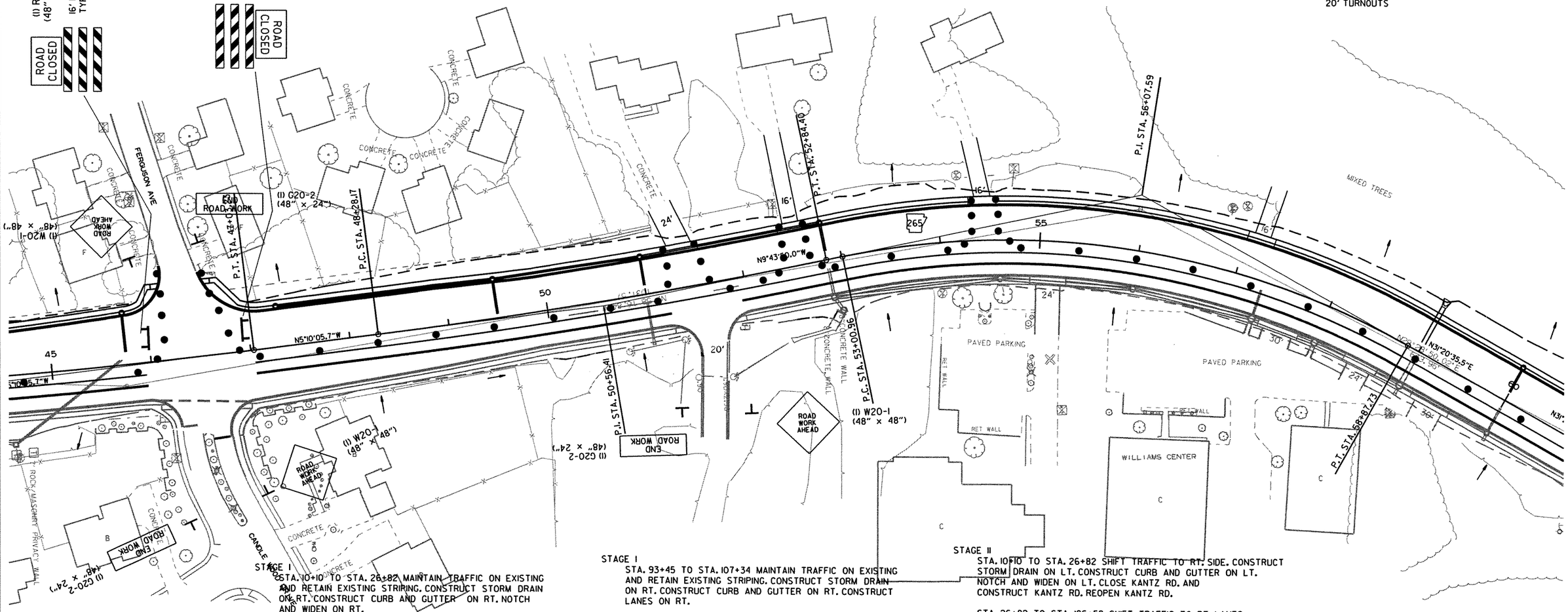
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

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

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 45+00 - STA. 60+00 = 4030 LIN. FT.

59 TRAFFIC DRUMS
80' O.C. ROADWAY
20' TURNOUTS



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 2

r040517.dgn
6-7-10

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.		040517	58	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

STAGE I

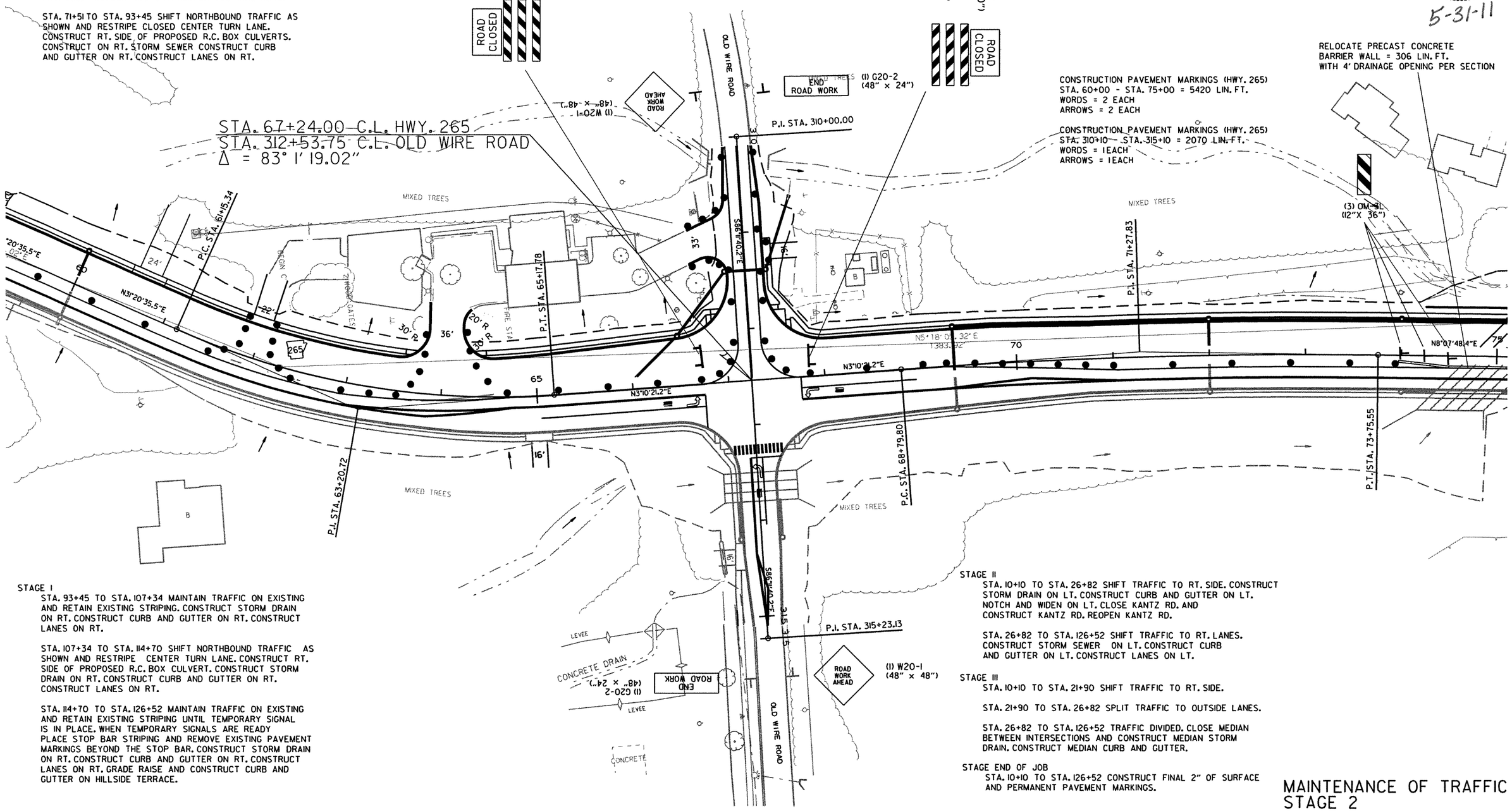
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

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

68 TRAFFIC DRUMS
80 O.C. ROADWAY
20 O.C. TURNOUTS



STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 2

6-7-10 r040517.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.		040517	59	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

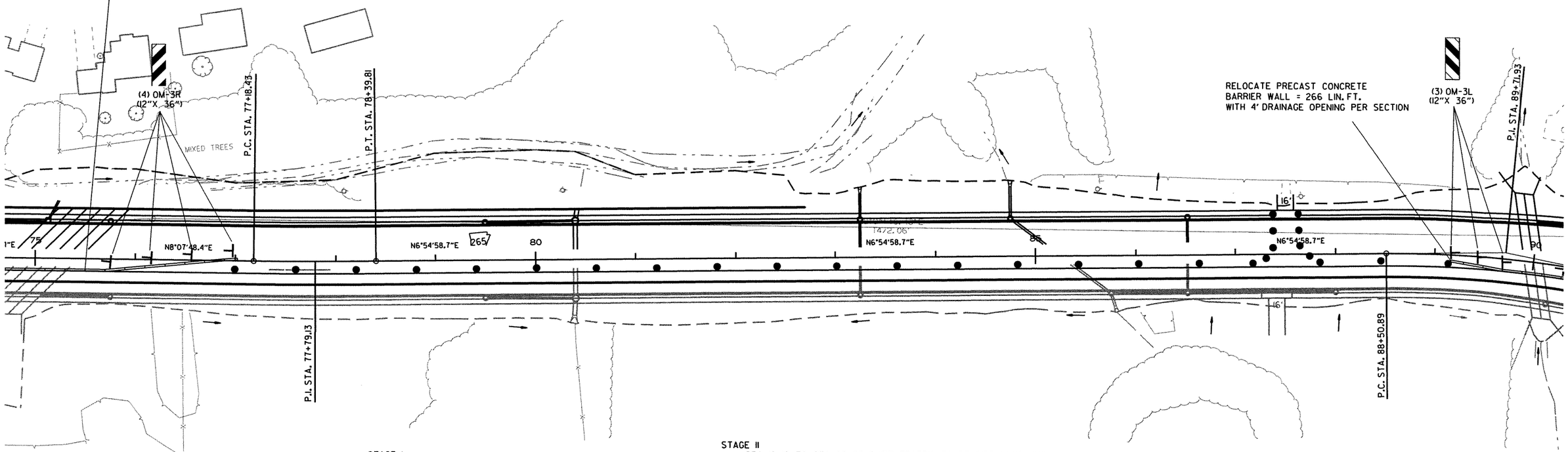
5-31-11

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 75+00 - STA. 90+00 = 4500 LIN. FT.

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

30 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUT

RELOCATE PRECAST CONCRETE BARRIER WALL = 306 LIN. FT. WITH 4' DRAINAGE OPENING PER SECTION



STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 2

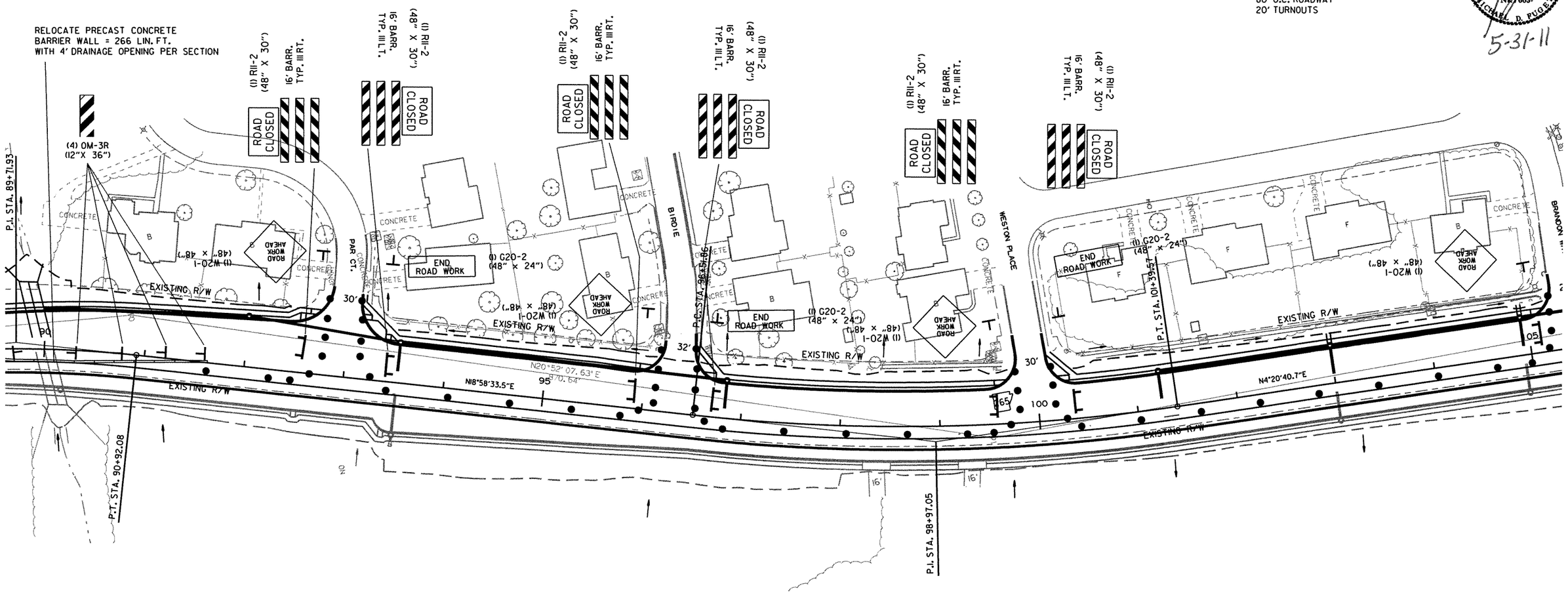
r040517.dgn 6-7-10

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.		040517	60	296

(2) MAINTENANCE OF TRAFFIC

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

5-31-11



CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 90+00 - STA. 105+00 = 4500 LIN. FT.

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 2

6-7-10 r040517.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.		040517	61	296

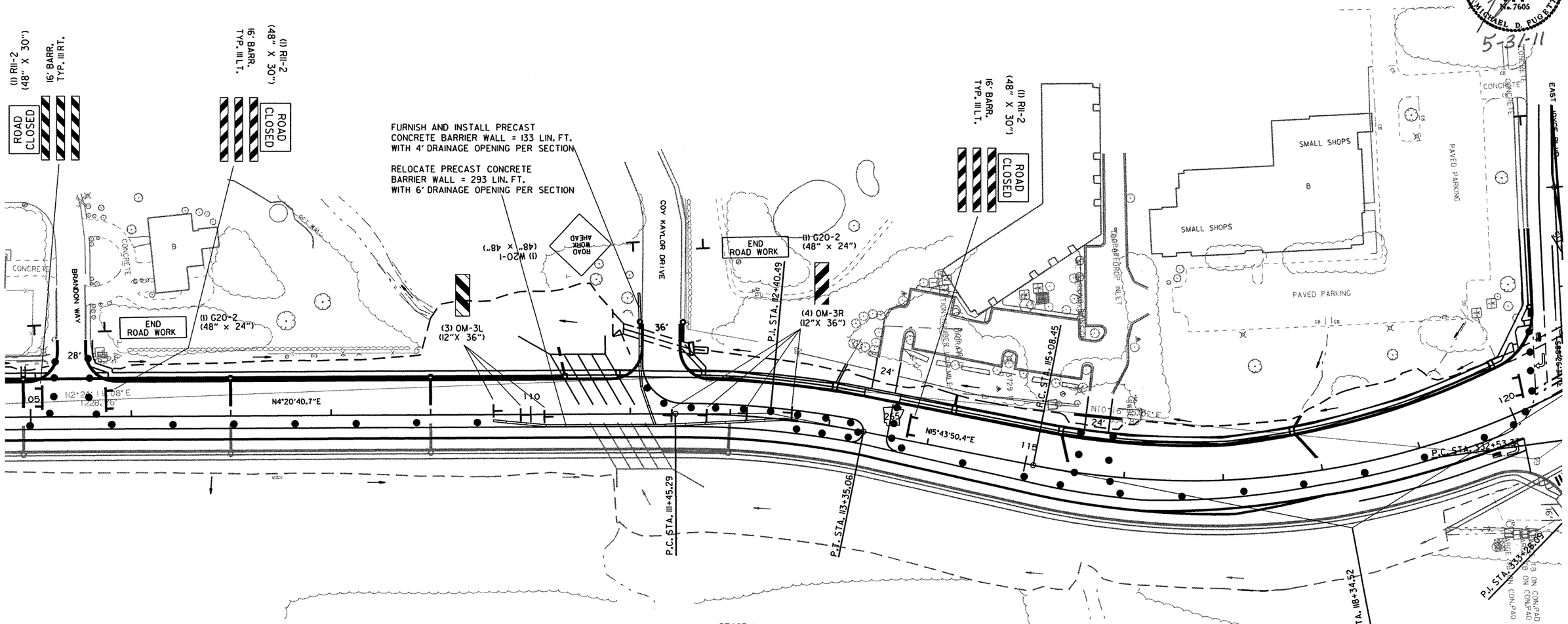
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

51 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. TURNOUTS

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



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 105+00 - STA. 120+00 = 5495 LIN. FT.
WORDS = 1 EACH
ARROWS = 1 EACH

MAINTENANCE OF TRAFFIC
STAGE 2

r040517.dgn
6-7-10

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.		040517	62	296

(2) MAINTENANCE OF TRAFFIC

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

5-31-11

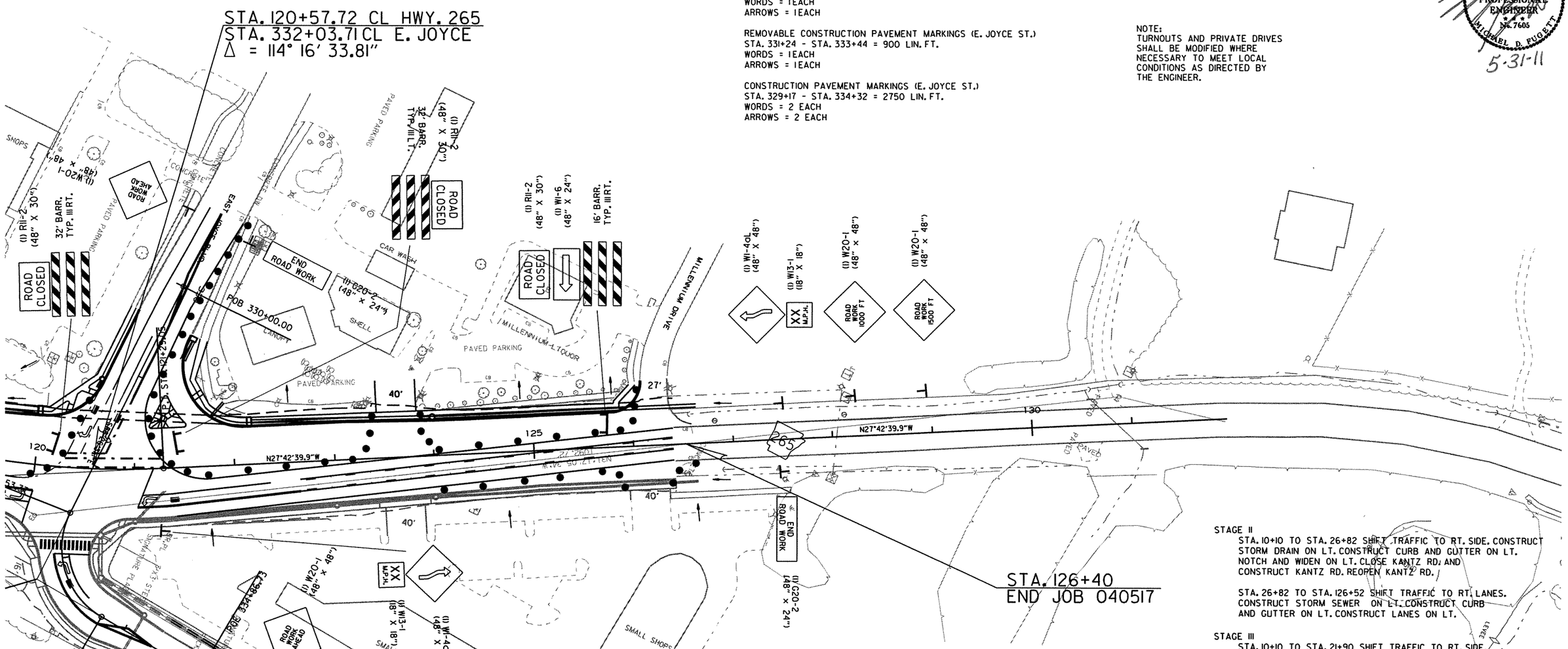
52 TRAFFIC DRUMS
80' O.C. ROADWAY
40' O.C. TAPER
20' O.C. TURNOUT

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 120+00 - STA. 126+40 = 1775 LIN. FT.
WORDS = 1 EACH
ARROWS = 1 EACH

REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (E. JOYCE ST.)
STA. 331+24 - STA. 333+44 = 900 LIN. FT.
WORDS = 1 EACH
ARROWS = 1 EACH

CONSTRUCTION PAVEMENT MARKINGS (E. JOYCE ST.)
STA. 329+17 - STA. 334+32 = 2750 LIN. FT.
WORDS = 2 EACH
ARROWS = 2 EACH

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



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC
STAGE 2

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6-7-10

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.		040517	63	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER 12,7606 MICHAEL D. FUGETT 5-31-11

STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

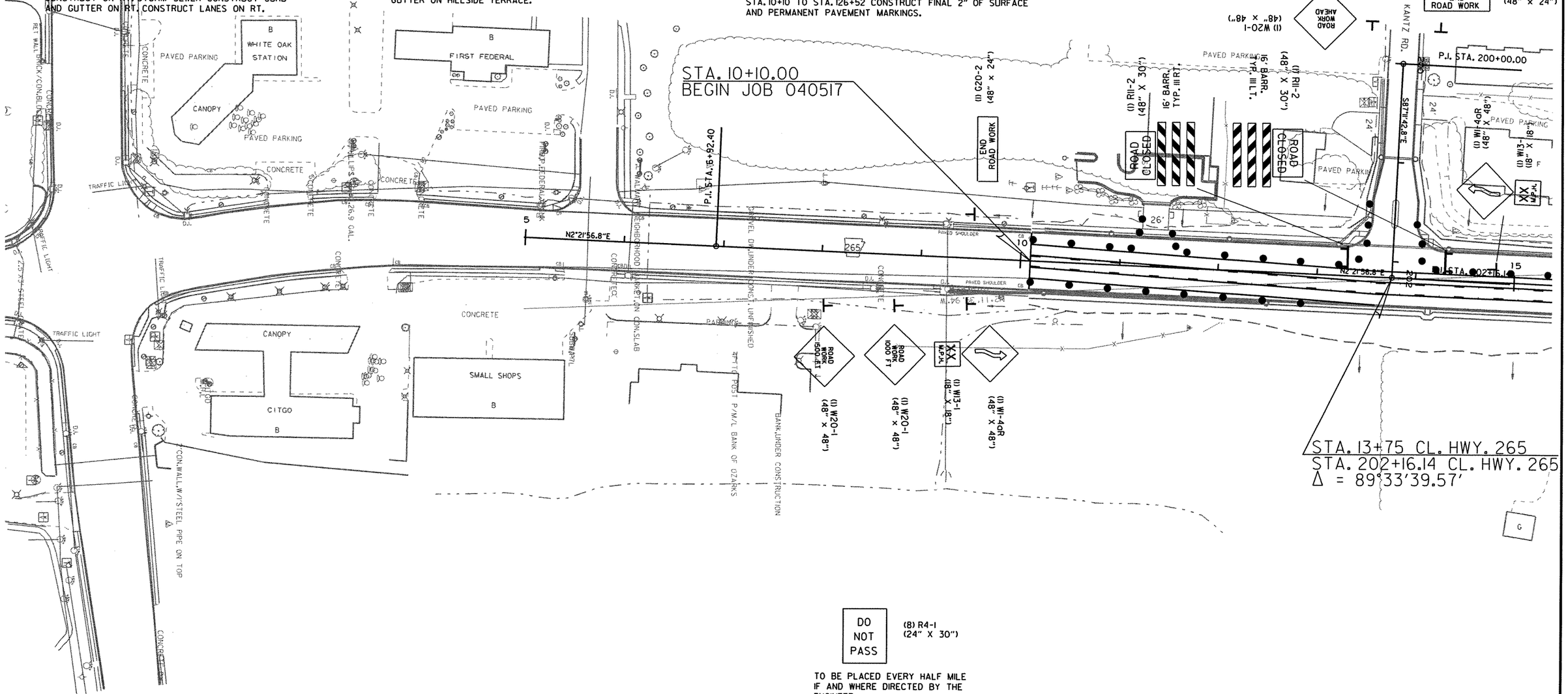
STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

28 TRAFFIC DRUMS
80' O.C. ROADWAY
40' O.C. TAPER
20' O.C. TURNOUTS



DO NOT PASS (8) R4-1 (24" X 30")

TO BE PLACED EVERY HALF MILE IF AND WHERE DIRECTED BY THE ENGINEER.

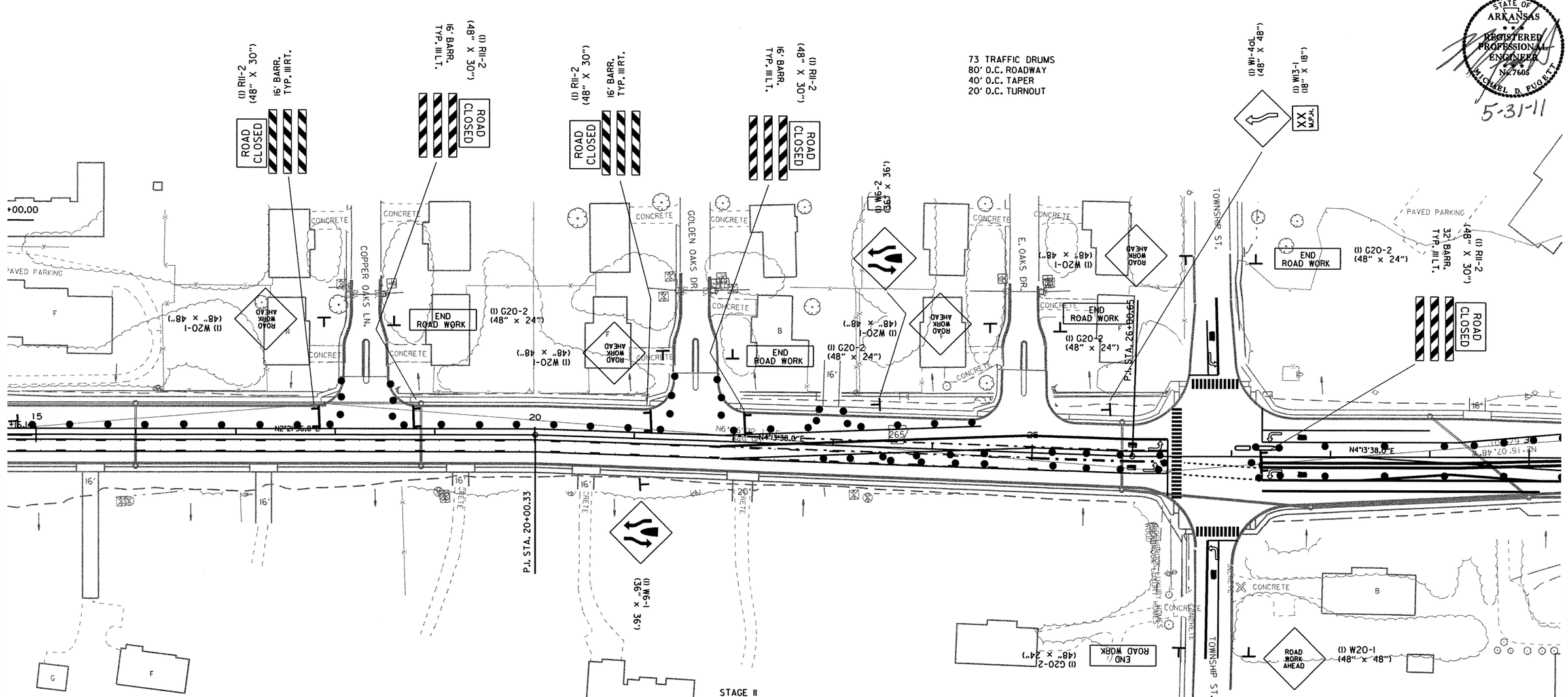
MAINTENANCE OF TRAFFIC
STAGE 3

r040517.dgn
6-7-10

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.		040517	64	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 21+86 - STA. 30+00 = 2033 LIN. FT.
ARROWS = 2 EACH
WORDS = 2 EACH

MAINTENANCE OF TRAFFIC STAGE 3

r040517.dgn
6-7-10

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.		040517	65	296

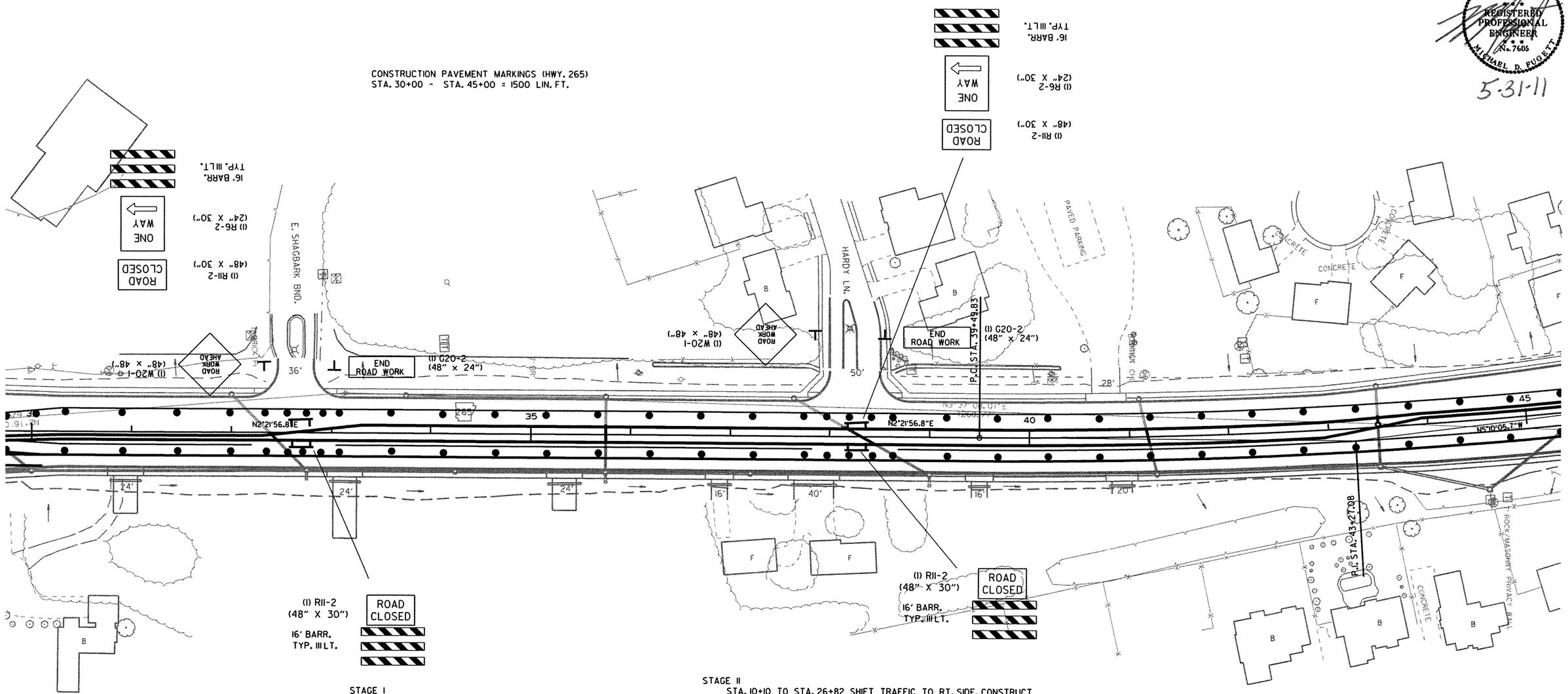
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N. 7605 MICHAEL D. FUGETT

5-31-11

70 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. MEDIAN CLOSED

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 30+00 - STA. 45+00 = 1500 LIN. FT.



STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC
STAGE 3

r040517.dgn
6-7-10

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.		040517	66	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7603 MICHAEL D. FUGETT

5-31-11

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

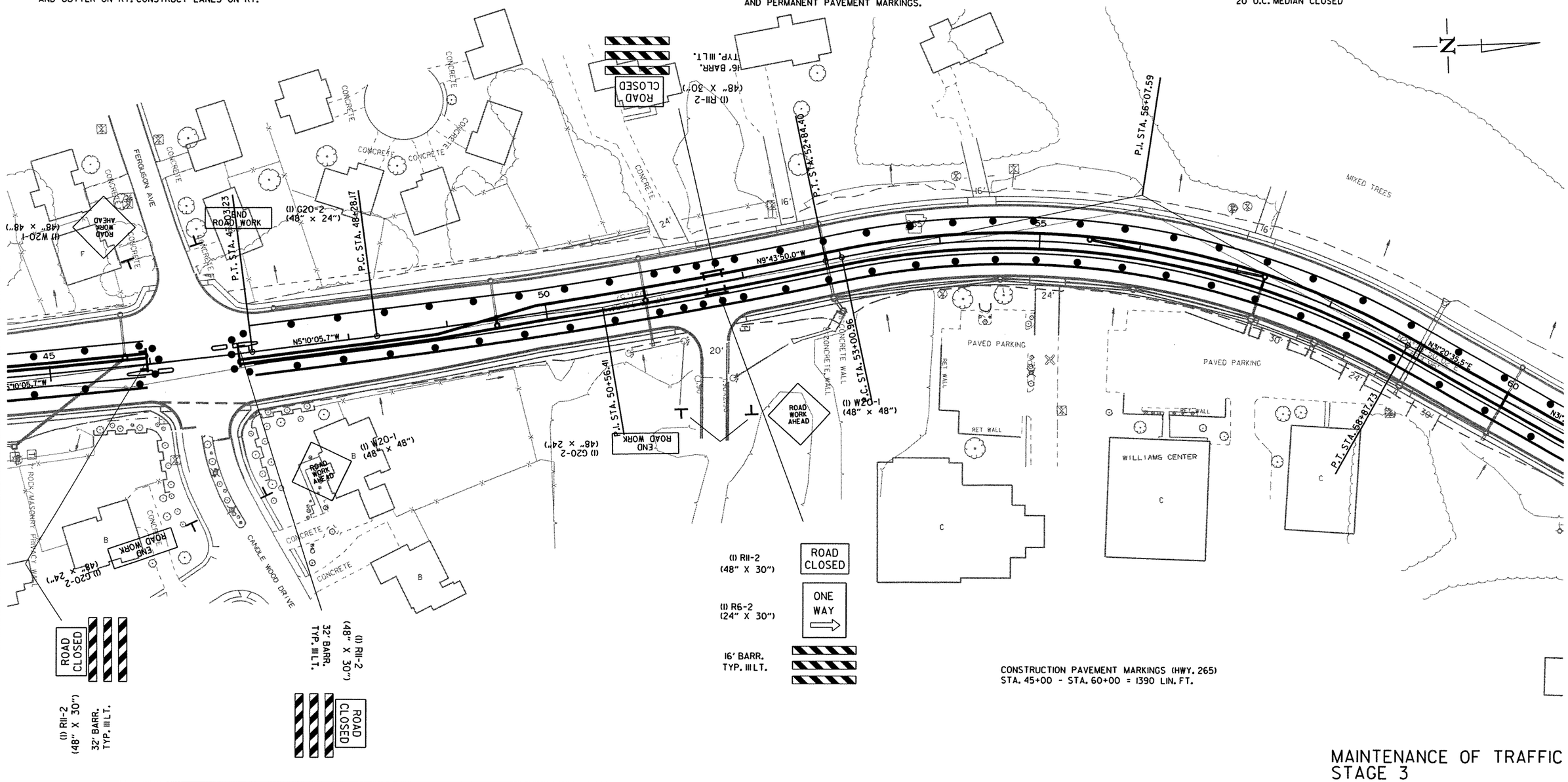
STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

71 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. MEDIAN CLOSED



CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 45+00 - STA. 60+00 = 1390 LIN. FT.

MAINTENANCE OF TRAFFIC
STAGE 3

6-7-10 r040517.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.		040517	67	296

(2) MAINTENANCE OF TRAFFIC

STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

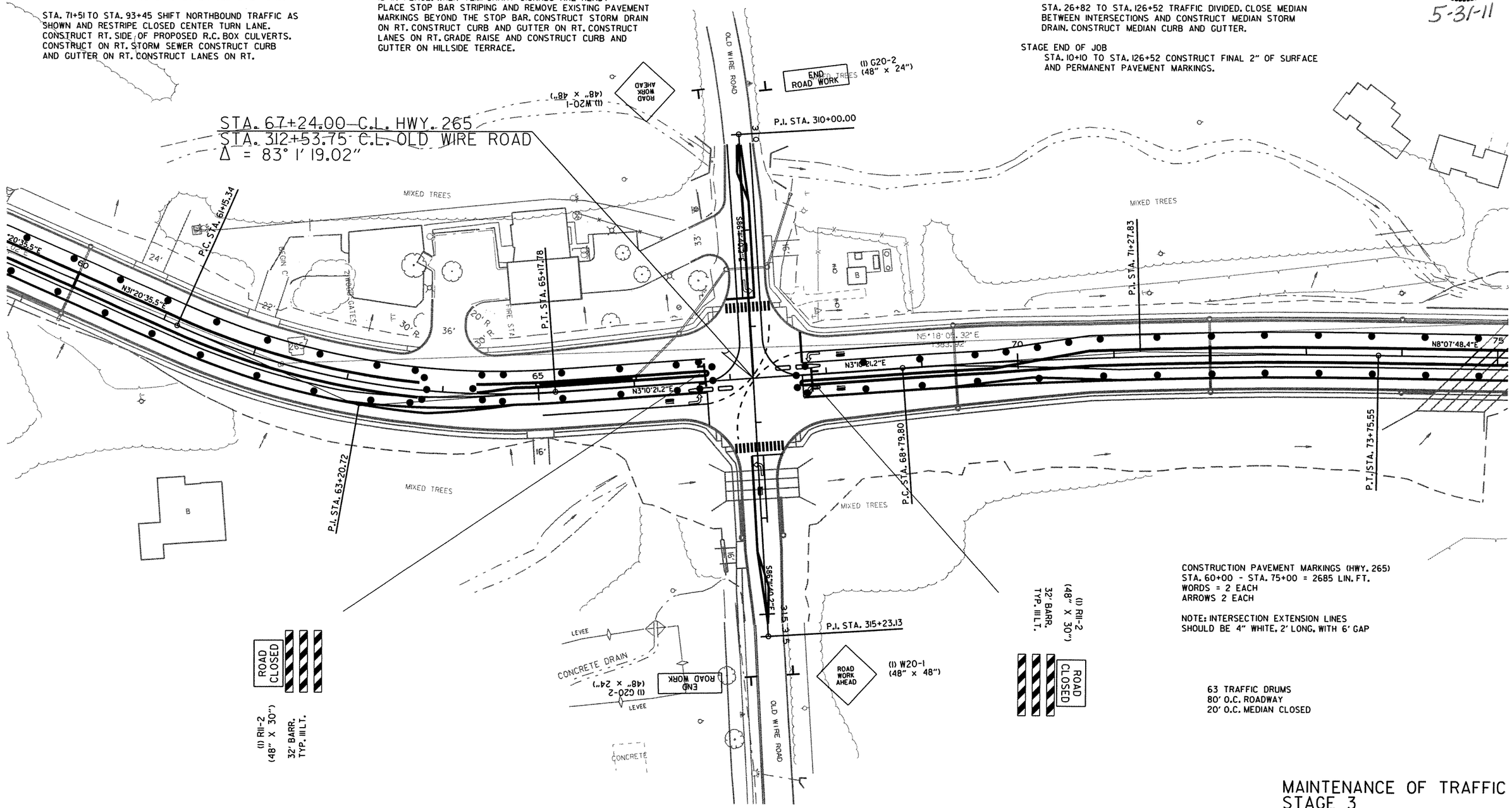
STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGITT
5-31-11



MAINTENANCE OF TRAFFIC
STAGE 3

r040517.dgn
6-7-10

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.		040517	68	296

(2) MAINTENANCE OF TRAFFIC

STAGE I

STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I

STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II

STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III

STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

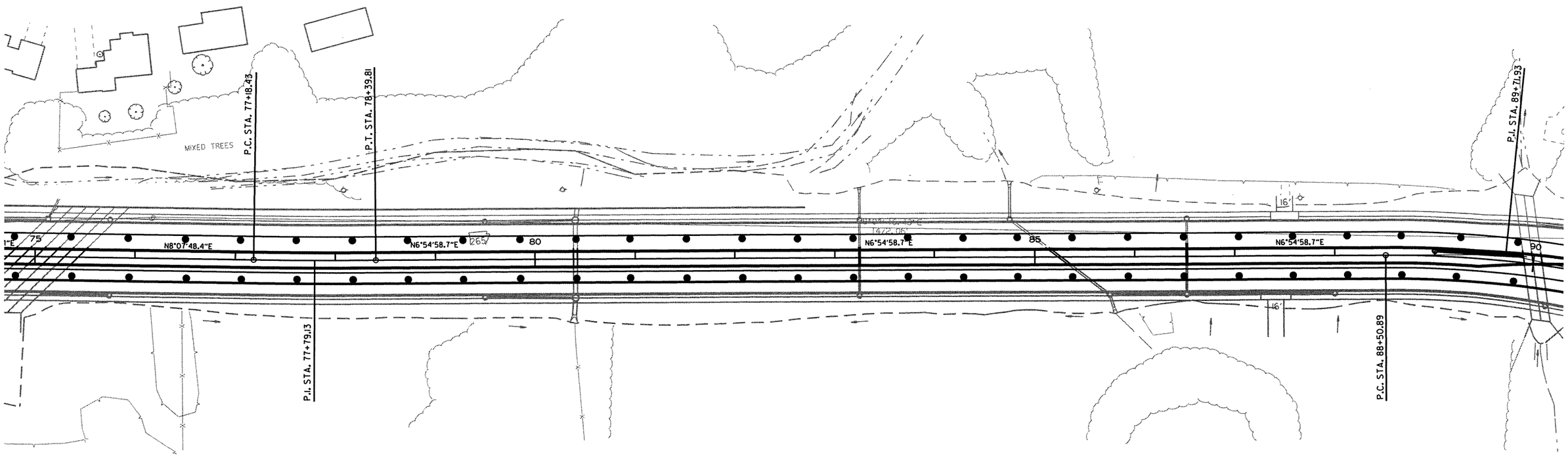
STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB

STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

54 TRAFFIC DRUMS
80' O.C. ROADWAY



CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 75+00 - STA. 90+00 = 1500 LIN. FT.

MAINTENANCE OF TRAFFIC
STAGE 3

6-7-10 r040517.dgn

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				6	ARK.			
				JOB NO.		040517	69	296

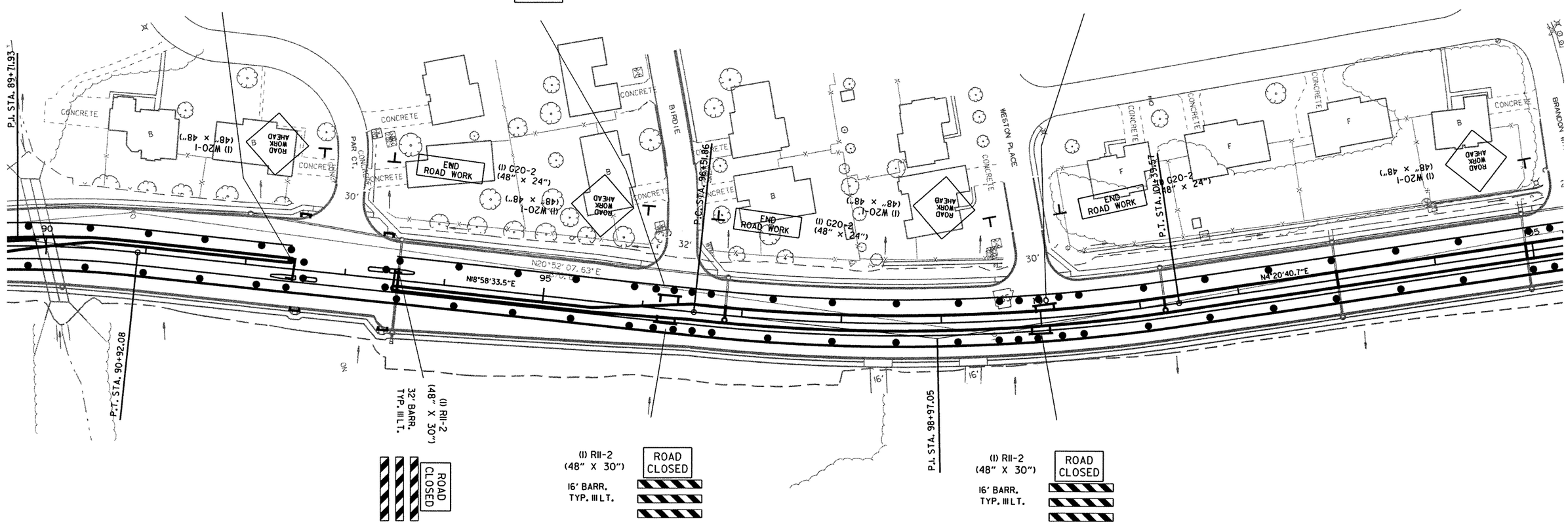
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

65 TRAFFIC DRUMS
80' O.C. ROADWAY
20' MEDIAN CLOSED

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 90+00 - STA. 105+00 = 1395 LIN. FT.



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC
STAGE 3

6-7-10 r040517.dgn

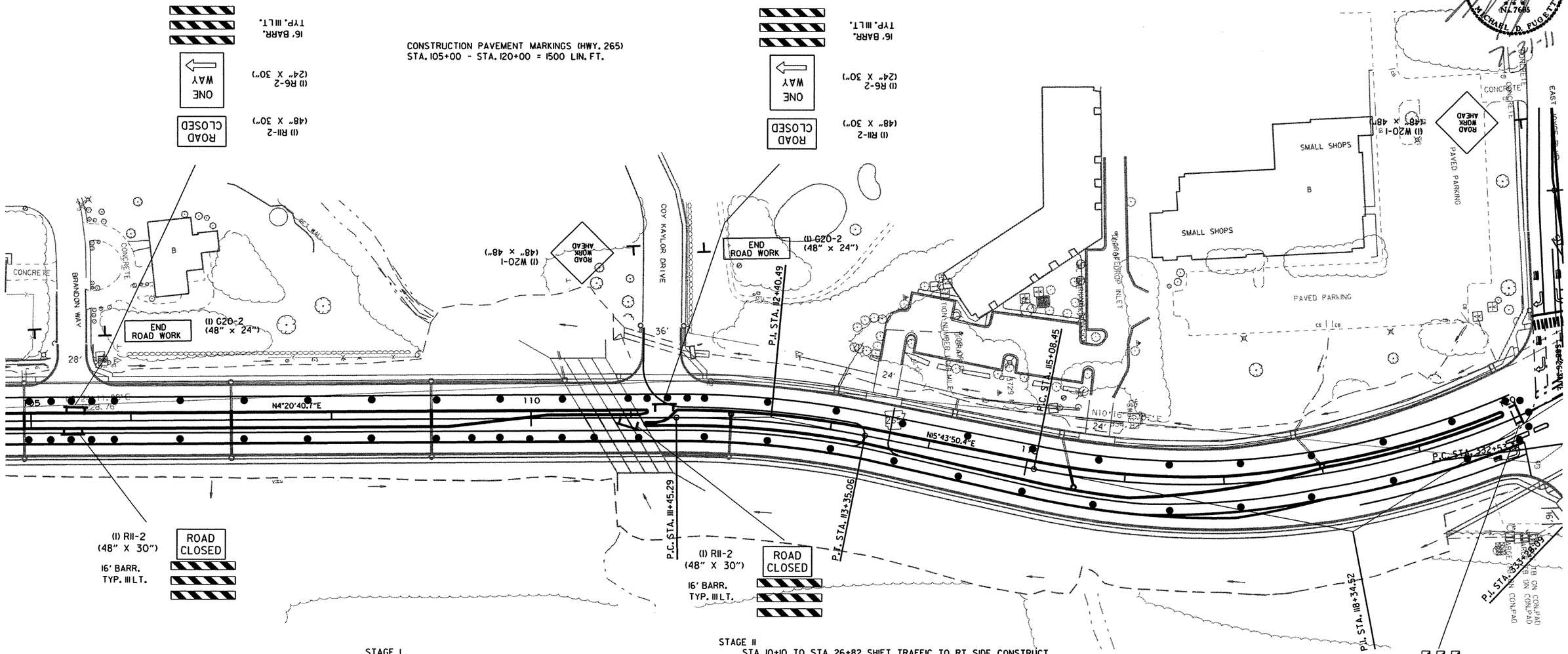
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	70	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 7605
MICHAEL D. FUGETT
7-31-11

60 TRAFFIC DRUMS
80' O.C. ROADWAY
20' O.C. MEDIAN CLOSED

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 105+00 - STA. 120+00 = 1500 LIN. FT.



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 3

r040517.dgn
6-7-10

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.		040517	71	296

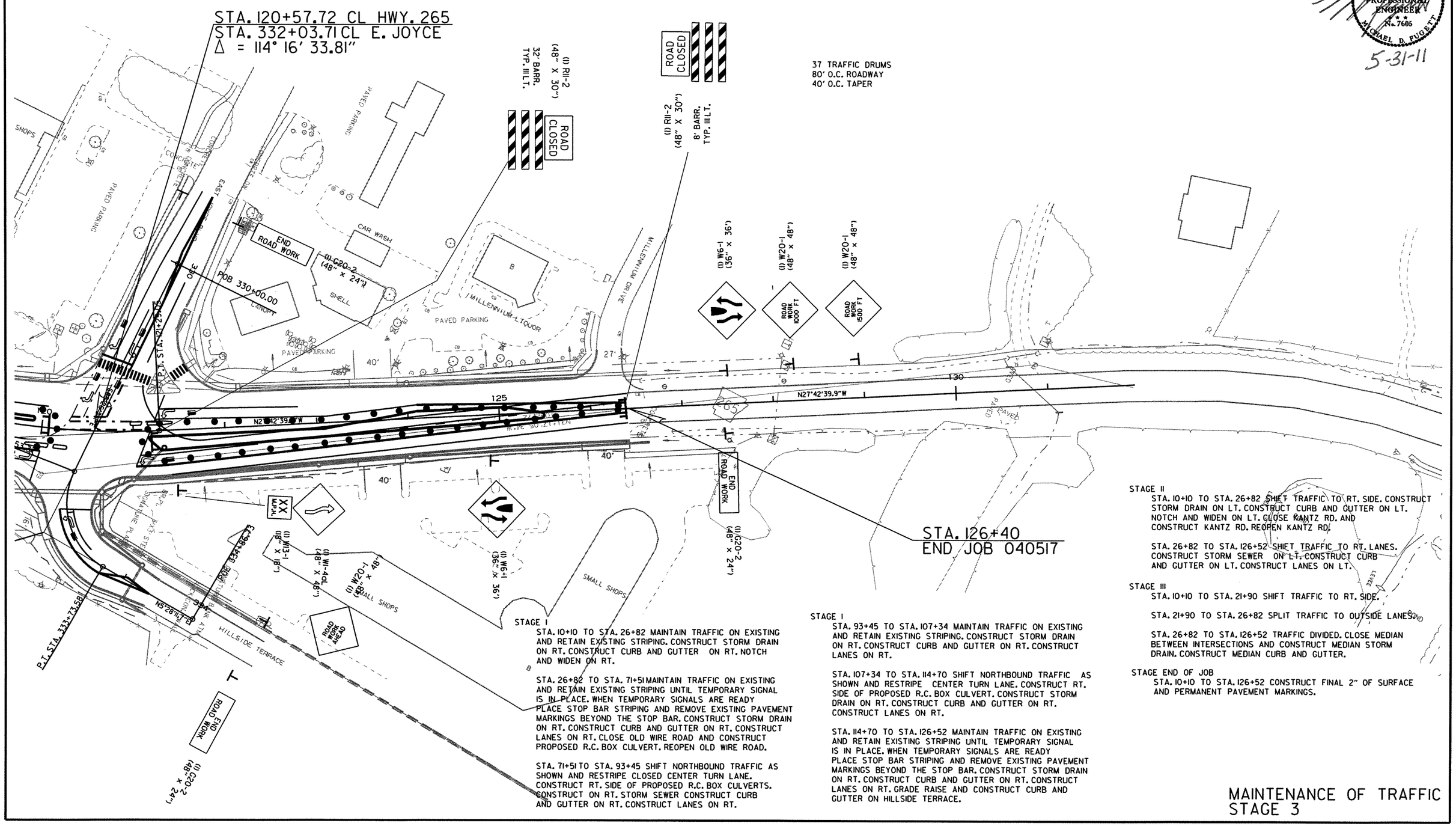
(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

CONSTRUCTION PAVEMENT MARKINGS (E. JOYCE ST.)
STA. 330+79 - STA. 331+40 = 900 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS (HWY. 265)
STA. 120+00 - STA. 126+40 = 985 LIN. FT.
WORDS = 1 EACH
ARROWS = 1 EACH



STAGE I
STA. 10+10 TO STA. 26+82 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. NOTCH AND WIDEN ON RT.

STA. 26+82 TO STA. 71+51 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. CLOSE OLD WIRE ROAD AND CONSTRUCT PROPOSED R.C. BOX CULVERT. REOPEN OLD WIRE ROAD.

STA. 71+51 TO STA. 93+45 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CLOSED CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERTS. CONSTRUCT ON RT. STORM SEWER CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STAGE I
STA. 93+45 TO STA. 107+34 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 107+34 TO STA. 114+70 SHIFT NORTHBOUND TRAFFIC AS SHOWN AND RESTRIPE CENTER TURN LANE. CONSTRUCT RT. SIDE OF PROPOSED R.C. BOX CULVERT. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT.

STA. 114+70 TO STA. 126+52 MAINTAIN TRAFFIC ON EXISTING AND RETAIN EXISTING STRIPING UNTIL TEMPORARY SIGNAL IS IN PLACE. WHEN TEMPORARY SIGNALS ARE READY PLACE STOP BAR STRIPING AND REMOVE EXISTING PAVEMENT MARKINGS BEYOND THE STOP BAR. CONSTRUCT STORM DRAIN ON RT. CONSTRUCT CURB AND GUTTER ON RT. CONSTRUCT LANES ON RT. GRADE RAISE AND CONSTRUCT CURB AND GUTTER ON HILLSIDE TERRACE.

STAGE II
STA. 10+10 TO STA. 26+82 SHIFT TRAFFIC TO RT. SIDE. CONSTRUCT STORM DRAIN ON LT. CONSTRUCT CURB AND GUTTER ON LT. NOTCH AND WIDEN ON LT. CLOSE KANTZ RD. AND CONSTRUCT KANTZ RD. REOPEN KANTZ RD.

STA. 26+82 TO STA. 126+52 SHIFT TRAFFIC TO RT. LANES. CONSTRUCT STORM SEWER ON LT. CONSTRUCT CURB AND GUTTER ON LT. CONSTRUCT LANES ON LT.

STAGE III
STA. 10+10 TO STA. 21+90 SHIFT TRAFFIC TO RT. SIDE.

STA. 21+90 TO STA. 26+82 SPLIT TRAFFIC TO OUTSIDE LANES.

STA. 26+82 TO STA. 126+52 TRAFFIC DIVIDED. CLOSE MEDIAN BETWEEN INTERSECTIONS AND CONSTRUCT MEDIAN STORM DRAIN. CONSTRUCT MEDIAN CURB AND GUTTER.

STAGE END OF JOB
STA. 10+10 TO STA. 126+52 CONSTRUCT FINAL 2" OF SURFACE AND PERMANENT PAVEMENT MARKINGS.

MAINTENANCE OF TRAFFIC STAGE 3

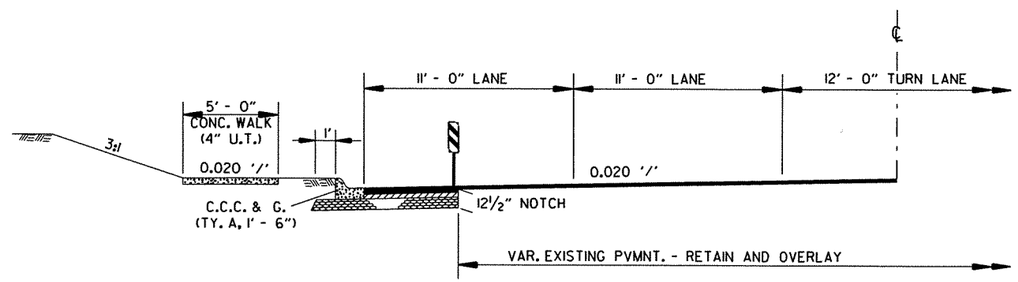
6-7-10 r040517.dgn

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.		040517	72	296

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



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

CURB AND GUTTER WIDENING DETAIL

r040517.dgn

6-7-10

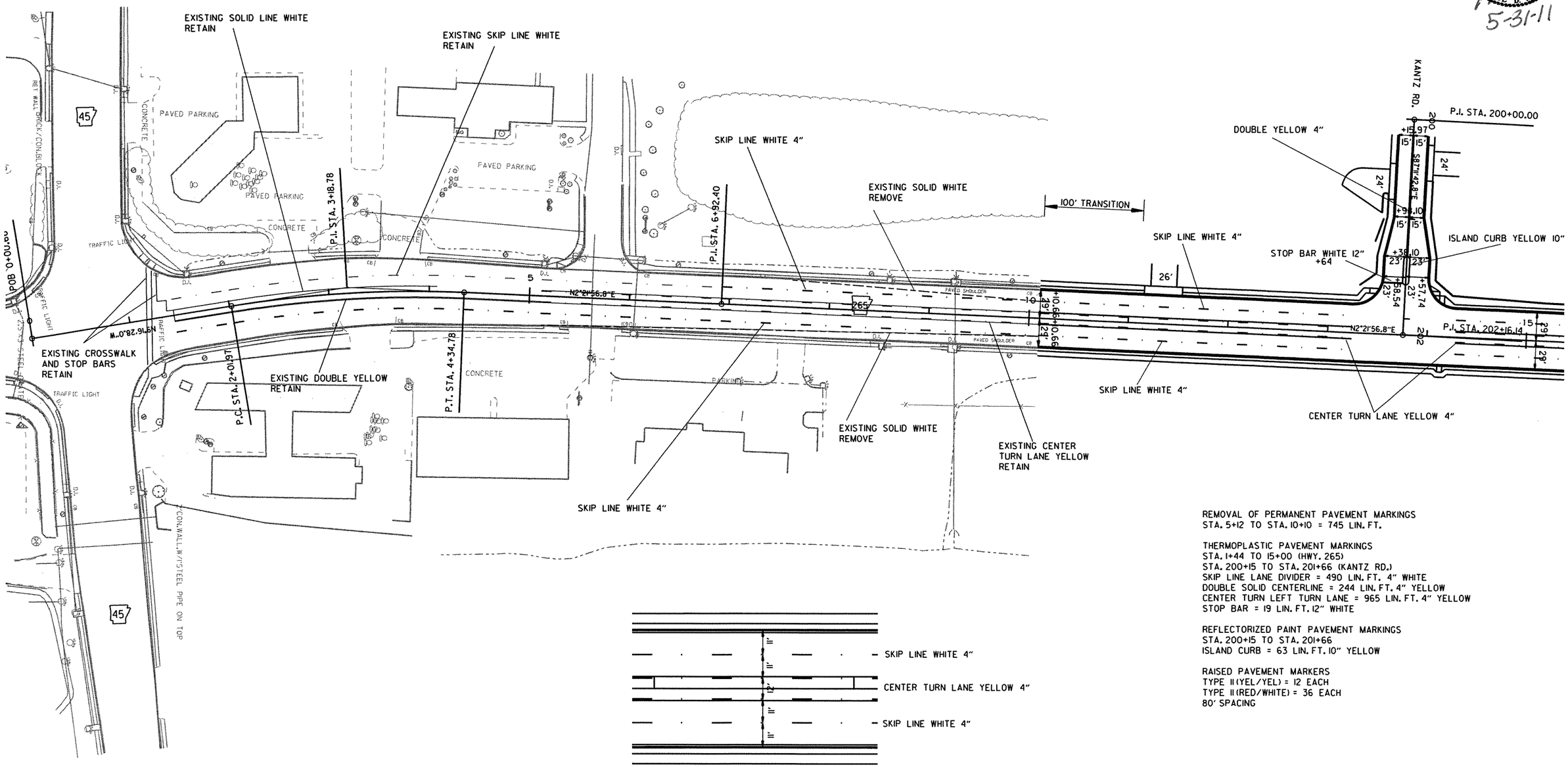
MAINTENANCE OF TRAFFIC
SPECIAL DETAILS

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.		040517	73	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N.27605
MICHAEL D. PUGETT

5-31-11



LANE DETAIL

REMOVAL OF PERMANENT PAVEMENT MARKINGS
STA. 5+12 TO STA. 10+10 = 745 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS
STA. 1+44 TO 15+00 (HWY. 265)
STA. 200+15 TO STA. 201+66 (KANTZ RD.)
SKIP LINE LANE DIVIDER = 490 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 244 LIN. FT. 4" YELLOW
CENTER TURN LEFT TURN LANE = 965 LIN. FT. 4" YELLOW
STOP BAR = 19 LIN. FT. 12" WHITE

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 200+15 TO STA. 201+66
ISLAND CURB = 63 LIN. FT. 10" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 12 EACH
TYPE II (RED/WHITE) = 36 EACH
80' SPACING

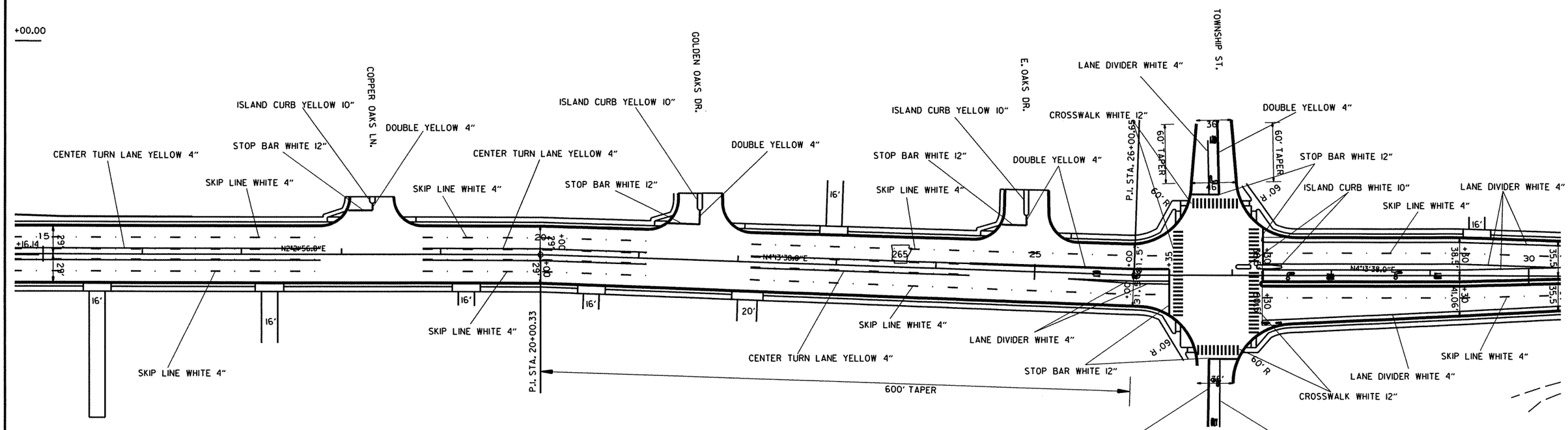
r040517.dgn
4-19-10

PERMANENT PAVEMENT MARKINGS

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.		040517	74	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 15+00 TO 30+00
SKIP LINE LANE DIVIDER = 593 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 1405 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 753 LIN. FT. 4" YELLOW
CONTINUOUS LEFT TURN LANE = 1819 LIN. FT. 4" YELLOW
STOP BAR = 233 LIN. FT. 12" WHITE
CROSSWALK = 700 LIN. FT. 12" WHITE
WORDS = 5 EACH
ARROWS = 6 EACH
BIKE EMBLEM = 1 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 15+00 TO STA. 30+00
ISLAND CURB = 90 LIN. FT. 10" WHITE
ISLAND CURB = 109 LIN. FT. 10" YELLOW

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 24 EACH
TYPE II (RED/WHITE) = 42 EACH
80' SPACING

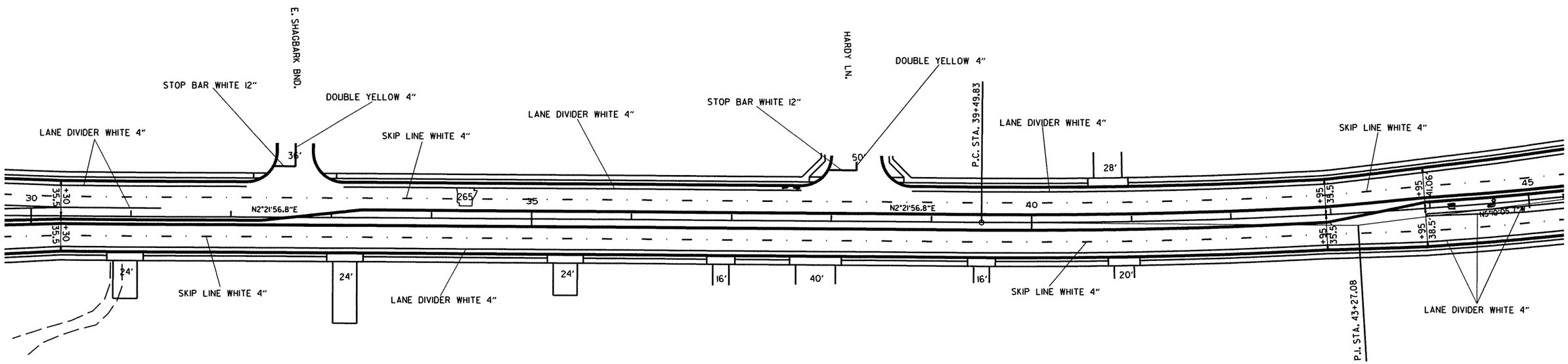
r040517.dgn
4-19-10

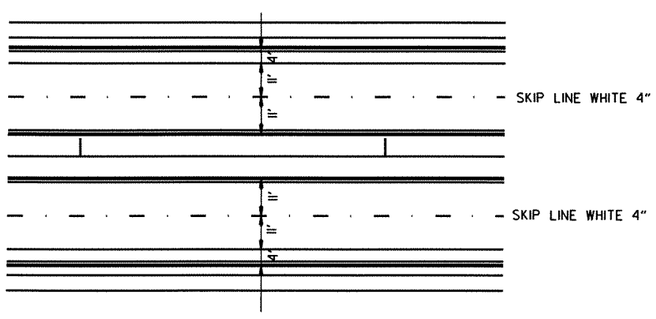
PERMANENT PAVEMENT MARKINGS

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.		040517	75	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11





LANE DETAIL

THERMOPLASTIC PAVEMENT MARKINGS
STA. 30+00 TO 45+00
SKIP LINE LANE DIVIDER = 750 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3166 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 32 LIN. FT. 4" YELLOW
STOP BAR = 48 LIN. FT. 12" WHITE
WORDS = 1 EACH
ARROWS = 1 EACH
BIKE EMBLEM = 1 EACH

RAISED PAVEMENT MARKERS
TYPE II (RED/WHITE) = 42 EACH
80' SPACING

r040517.dgn
4-19-10

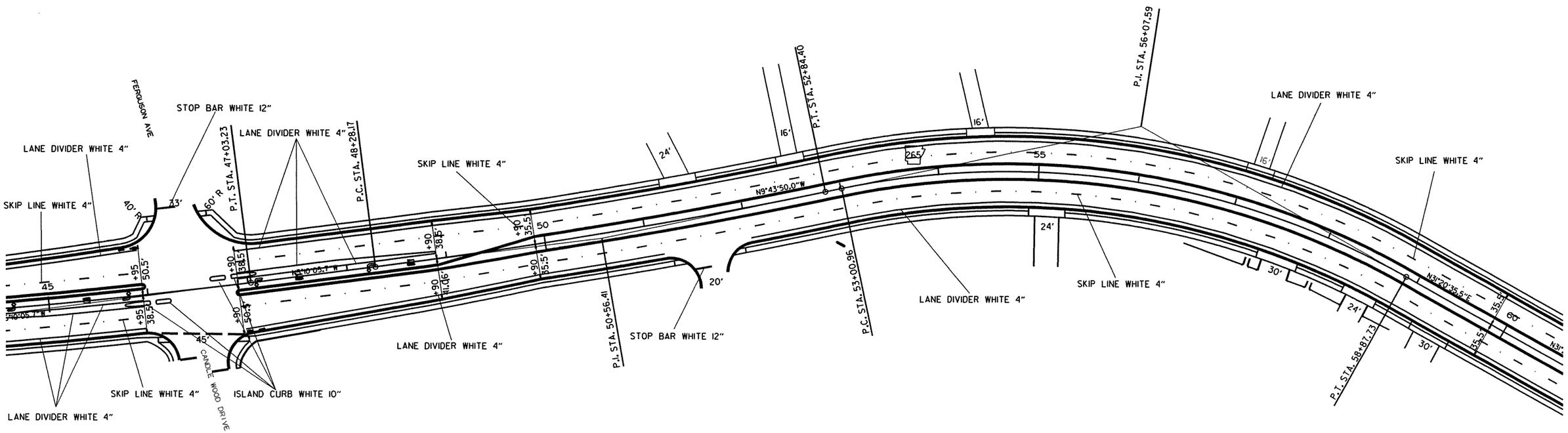
PERMANENT PAVEMENT MARKINGS

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.		040517	76	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 45+00 TO 60+00
SKIP LINE LANE DIVIDER = 701 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3407 LIN. FT. 4" WHITE
STOP BAR = 35 LIN. FT. 12" WHITE
WORDS = 3 EACH
ARROWS = 5 EACH
BIKE EMBLEM = 2 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 45+00 TO STA. 60+00
ISLAND CURB = 180 LIN. FT. 10" WHITE

RAISED PAVEMENT MARKERS
TYPE II (RED/WHITE) = 42 EACH
80' SPACING

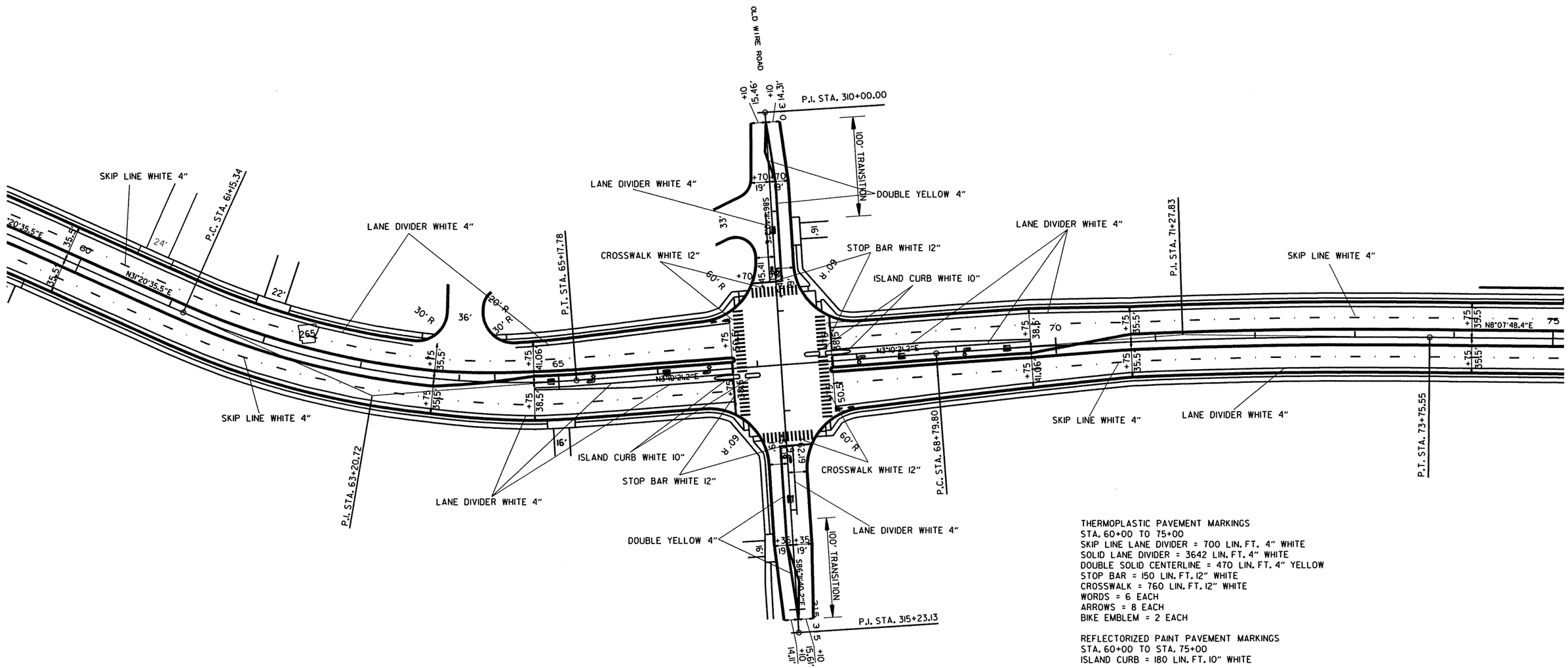
r040517.dgn
4-19-10

PERMANENT PAVEMENT MARKINGS

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.		040517	77	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 60+00 TO 75+00
SKIP LINE LANE DIVIDER = 700 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3642 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 470 LIN. FT. 4" YELLOW
STOP BAR = 150 LIN. FT. 12" WHITE
CROSSWALK = 760 LIN. FT. 12" WHITE
WORDS = 6 EACH
ARROWS = 8 EACH
BIKE EMBLEM = 2 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 60+00 TO STA. 75+00
ISLAND CURB = 180 LIN. FT. 10" WHITE

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 6 EACH
TYPE II (RED/WHITE) = 42 EACH
80' SPACING

PERMANENT PAVEMENT MARKINGS

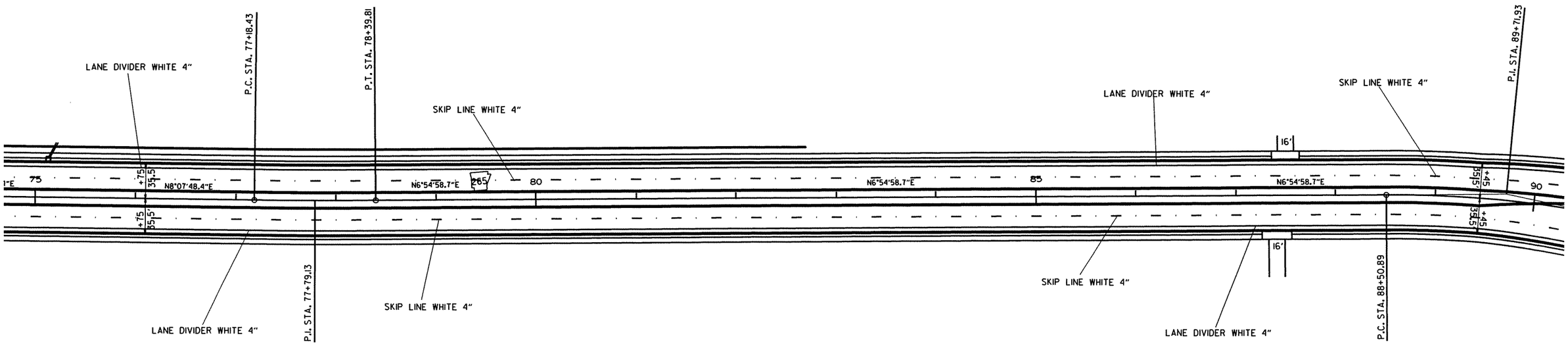
r040517.dgn
4-19-10

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.		040517	78	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 60+00 TO 90+00
SKIP LINE LANE DIVIDER = 750 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3000 LIN. FT. 4" WHITE

RAISED PAVEMENT MARKERS
TYPE II (RED/WHITE) = 38 EACH
80' SPACING

r040517.dgn
4-19-10

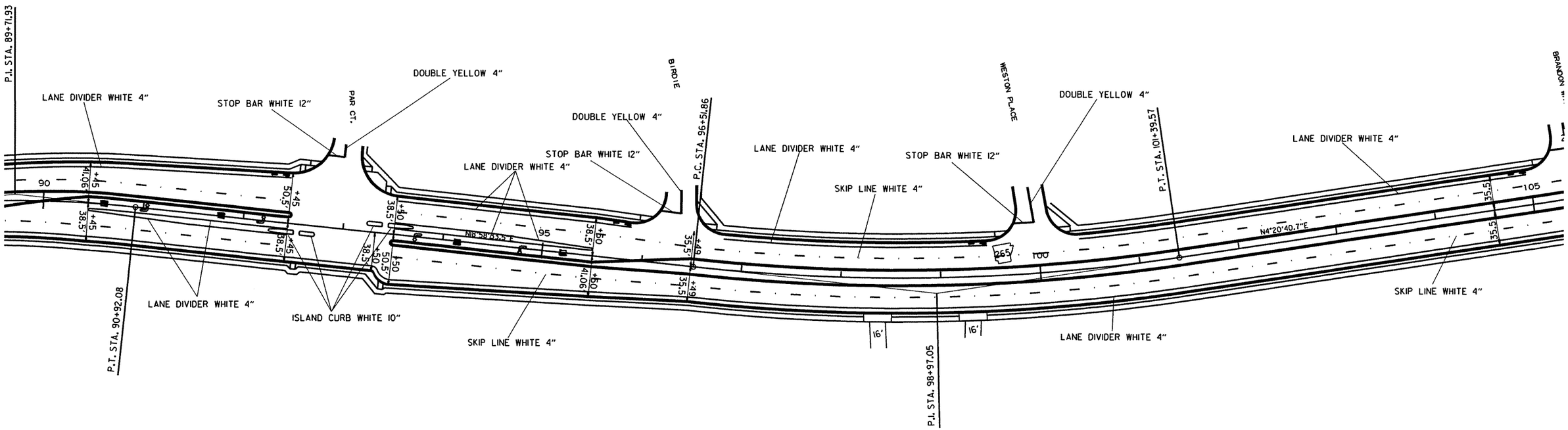
PERMANENT PAVEMENT MARKINGS

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.		040517	79	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 90+00 TO 105+00
SKIP LINE LANE DIVIDER = 696 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3507 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 74 LIN. FT. 4" YELLOW
STOP BAR = 58 LIN. FT. 12" WHITE
WORDS = 4 EACH
ARROWS = 8 EACH
BIKE EMBLEM = 4 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 90+00 TO STA. 105+00
ISLAND CURB = 180 LIN. FT. 10" WHITE

RAISED PAVEMENT MARKERS
TYPE II (RED/WHITE) = 40 EACH
80' SPACING

4-19-10 r040517.dgn

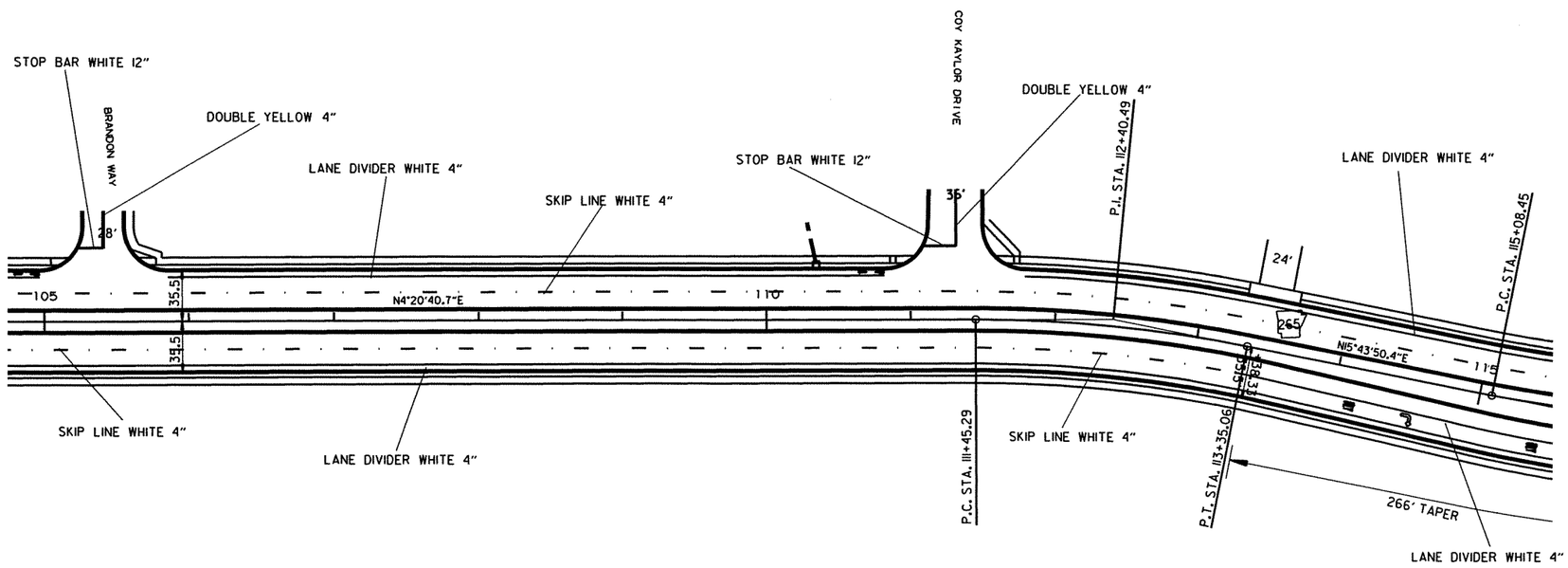
PERMANENT PAVEMENT MARKINGS

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.		040517	80	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 105+00 TO 115+00
SKIP LINE LANE DIVIDER = 458 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 1648 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 65 LIN. FT. 4" YELLOW
STOP BAR = 100 LIN. FT. 12" WHITE
WORDS = 1 EACH
ARROWS = 3 EACH
BIKE EMBLEM = 2 EACH

RAISED PAVEMENT MARKERS
TYPE II (RED/WHITE) = 26 EACH
80' SPACING

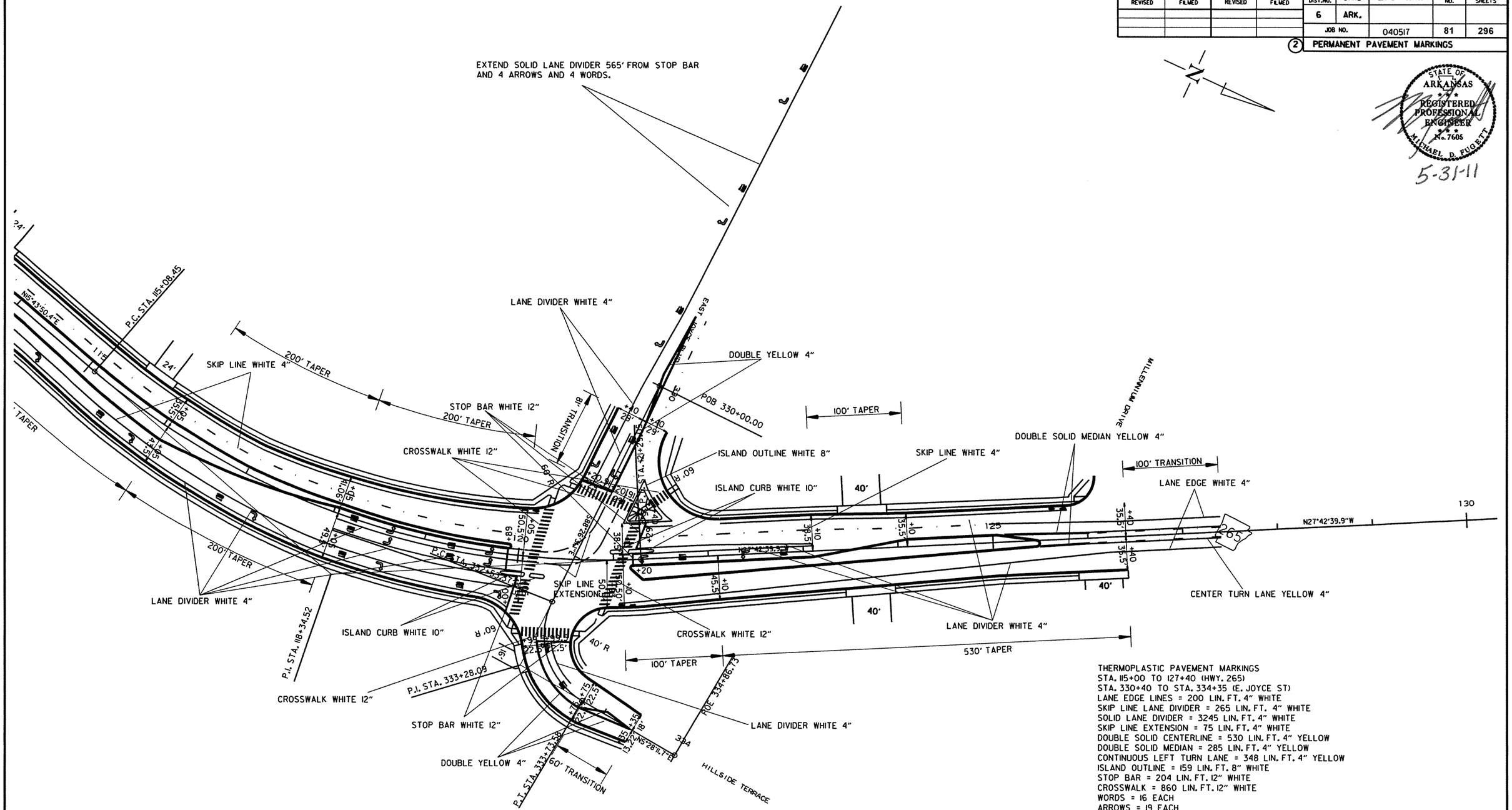
4-19-10 r040517.dgn

PERMANENT PAVEMENT MARKINGS

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.		040517	81	296

(2) PERMANENT PAVEMENT MARKINGS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



THERMOPLASTIC PAVEMENT MARKINGS
STA. 115+00 TO 127+40 (HWY. 265)
STA. 330+40 TO STA. 334+35 (E. JOYCE ST)
LANE EDGE LINES = 200 LIN. FT. 4" WHITE
SKIP LINE LANE DIVIDER = 265 LIN. FT. 4" WHITE
SOLID LANE DIVIDER = 3245 LIN. FT. 4" WHITE
SKIP LINE EXTENSION = 75 LIN. FT. 4" WHITE
DOUBLE SOLID CENTERLINE = 530 LIN. FT. 4" YELLOW
DOUBLE SOLID MEDIAN = 285 LIN. FT. 4" YELLOW
CONTINUOUS LEFT TURN LANE = 348 LIN. FT. 4" YELLOW
ISLAND OUTLINE = 159 LIN. FT. 8" WHITE
STOP BAR = 204 LIN. FT. 12" WHITE
CROSSWALK = 860 LIN. FT. 12" WHITE
WORDS = 16 EACH
ARROWS = 19 EACH
BIKE EMBLEM = 3 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS
STA. 115+00 TO STA. 127+40
ISLAND CURB = 288 LIN. FT. 10" WHITE

RAISED PAVEMENT MARKERS
TYPE II (YEL/YEL) = 12 EACH
TYPE II (RED/WHITE) = 40 EACH
80' SPACING

r040517.dgn
4-19-10

PERMANENT PAVEMENT MARKINGS

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.		040517	82	296

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	END OF JOB	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER
												RIGHT	LEFT		
			LIN.FT. - EACH					NO.	SQ. FT.	EACH				LIN. FT.	
W20-1	ROAD WORK 1500 FT.	48"x48"	2	2	2		2	2	32.0						
W20-1	ROAD WORK 1000 FT.	48"x48"	2	2	2		2	2	32.0						
W20-1	ROAD WORK 500 FT.	48"x48"	2	2			2	2	32.0						
W20-1	ROAD WORK AHEAD	48"x48"	20	20	20		20	20	320.0						
G20-2	END ROAD WORK	48"x24"	22	22	22		22	22	176.0						
W1-4AR	REVERSE CURVE RT.	48"x48"	1	2	2		2	2	32.0						
W1-4AL	REVERSE CURVE LT.	48"x48"	1	2	2		2	2	32.0						
W13-1	SPEED LIMIT (ADVISORY)	24"x24"	3	4	4		4	4	16.0						
R11-2	ROAD CLOSED	48"x30"	21	31	29		31	31	310.0						
OM-3L	OBJECT MARKER	12"x36"	9	9			9	9	27.0						
OM-3R	OBJECT MARKER	12"x36"	12	12			12	12	36.0						
W1-6	LARGE ARROW	48"x24"		2			2	2	16.0						
R4-1	DO NOT PASS	24"x30"	8	8	8		8	8	40.0						
W24-1L	DOUBLE REVERSE CURVE LT.	48"x48"	1				1	1	16.0						
R11-4	ROAD CLOSED TO THRU TRAFFIC	60"x30"	1	1			1	1	12.5						
W20-5R	CENTER LANE CLOSED AHEAD	48"x48"	2				2	2	32.0						
W6-1	DIVIDED HIGHWAY	36"x36"			2		2	2	18.0						
W6-2	DIVIDED HIGHWAY ENDS	36"x36"			2		2	2	18.0						
R6-2	ONE WAY	24"x30"			7		7	7	35.0						
	VERTICAL PANELS		14				14	14		14					
	TRAFFIC DRUMS		346	449	521		521	521			521				
	TYPE III BARRICADE-RT. (8')		11	2			11	11				88			
	TYPE III BARRICADE-LT. (8')		10	4			10	10					80		
	TYPE III BARRICADE-RT. (16')		7	14	3		14	14				224			
	TYPE III BARRICADE-LT. (16')		7	15	35		35	35					560		
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		898	133			1031							1031	
	RELOCATING PRECAST CONCRETE BARRIER			898			898								898
TOTALS:									1232.5	14	521	312	640	1031	898

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS		REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS							REFLECTORIZED PAINT PAVEMENT MARKINGS	
										TYPE. II (RED/ WHITE)	TYPE II (YEL/YEL)	4"		8" WHITE	12" WHITE	WORDS	ARROWS	BIKE EMBLEM	10"	
							WORDS	ARROWS				WHITE	YELLOW						WHITE	YELLOW
	LIN.FT. - EACH				LIN.FT.		EACH		LIN. FT.	EACH		LIN.FT.				EACH			LIN. FT.	
REMOVAL OF PERMANENT PAVEMENT MARKINGS	8080			745	8825															
CONSTRUCTION PAVEMENT MARKINGS	13840	38500	13888			66228														
CONSTRUCTION PAVEMENT MARKINGS (WORDS)		12	5				17													
CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		12	5					17												
REMOVABLE CONSTRUCTION PAV'T MARKINGS	2030	1565							3595											
RAISED PAVEMENT MARKERS TYPE II (RED/WHITE)				348						348										
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)				54							54									
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")				28698								28698								
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")				5585									5585							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (8")				159										159						
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")				3167											3167					
THERMOPLASTIC PAVEMENT MARKINGS (WORDS)				36												36				
THERMOPLASTIC PAVEMENT MARKINGS (ARROWS)				50													50			
THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)				14														14		
REFLECTORIZED PAINT PAVEMENT MARKINGS WHITE (10")				918															918	
REFLECTORIZED PAINT PAVEMENT MARKINGS YELLOW (10")				172																172
TOTALS:					8825	66228	17	17	3595	348	54	28698	5585	159	3167	36	50	14	918	172

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

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.		040517	83	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

7-7-11

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB	CURB AND GUTTER	CONCRETE PAVEMENT	CONCRETE ISLANDS	CONCRETE DRIVEWAYS	WALKS
			LIN.FT.	LIN. FT.	SQ. YD.	SQ. YD.	SQ. YD.	SQ. YD.
11+35		DRIVEWAY ON LT.					178	
12+14	13+51	SIDEWALK ON LT.						54
14+02	18+05	SIDEWALK ON LT.						177
18+30		COPPER OAKS LN.		96		12		
18+56	21+35	SIDEWALK ON LT.						116
19+26		DRIVEWAY ON RT.					35	
20+53		DRIVEWAY ON RT.					72	
21+59		GOLDEN OAKS DR.		110		15		
21+86	22+88	SIDEWALK ON LT.						42
22+09		DRIVEWAY ON RT.					121	
23+03	24+66	SIDEWALK ON LT.						67
23+42	26+55	SIDEWALK ON RT.						170
24+89		E. OAKS DR.		115		18		
* 26+81		TOWNSHIP ON LT.			585			
* 26+81		TOWNSHIP ON RT.			528			
27+13		SIDEWALK ON LT.						23
30+95		DRIVEWAY ON RT.					250	
32+26	33+01	E. SHAGBARK BND.		107				
33+14		DRIVEWAY ON RT.					160	
35+35		DRIVEWAY ON RT.					169	
36+22	37+98	SIDEWALK ON LT.						66
38+29		HARDY LN.		66				
38+51	40+32	SIDEWALK ON LT.						70
42+24	46+22	SIDEWALK ON LT.						197
44+96	46+21	SIDEWALK ON RT.						99
46+40		FURGUSON AVE.		156		27		
46+47		CANDLEWOOD DR.					341	
46+55	50+63	SIDEWALK ON LT.						185
46+73	47+57	SIDEWALK ON RT.						67
51+32		DRIVEWAY ON LT.					81	
51+62		DRIVEWAY ON RT.		98			109	
52+56		DRIVEWAY ON LT.					147	
53+16	54+97	SIDEWALK ON RT.						110
54+37		DRIVEWAY ON LT.					54	
55+09		DRIVEWAY ON RT.		88			158	
55+68	56+94	SIDEWALK ON RT.						67
64+04		DRIVEWAY ON LT.		36				
92+97		PAR CT.		134				5
96+32		BIRDIE		118				
98+41	99+75	SIDEWALK ON LT.						59
99+95		WESTON PLACE		128				16
100+14	105+23	SIDEWALK ON LT.						210
105+41		BRANDON WAY		102				7
111+33		COY KAYLOR DR.		147				23
113+46		DRIVEWAY ON LT.					155	
115+68		DRIVEWAY ON LT.					152	
120+87	123+49	SIDEWALK ON RT.						157
122+31	123+44	SIDEWALK ON LT.						104
123+64		DRIVEWAY ON LT.					269	
123+70		DRIVEWAY ON RT.		48			222	
123+83	126+08	SIDEWALK ON LT.						174
123+88	125+94	SIDEWALK ON RT.						149
126+23		DRIVEWAY ON LT.		112				4
126+23		DRIVEWAY ON RT.					213	
200+15	201+28	CURB ON RT. & LT.	226					
200+15	201+72	SIDEWALK ON LT.						65
200+52		DRIVEWAY ON LT.					73	
201+12		DRIVEWAY ON RT.					30	
* 201+24	201+98	KANTZ RD.			417			
314+50	315+10	CURB AND GUTTER ON RT.		60				
330+40	331+83	E. JOYCE BLVD. RT.		152				65
330+40	331+28	E. JOYCE BLVD. LT.		118				116
331+40		E. JOYCE BLVD. ISLAND				72		
332+35	333+49	HILLSIDE TERRACE LT.						47
333+06	334+34	HILLSIDE TERRACE LT.		122				
TOTALS:			226	2113	1530	144	2989	2711

* CONCRETE ISLANDS AND CURB AND GUTTER TO BE REMOVED AS CONCRETE PAVEMENT.

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
12+02	18+76	MAIN LANES	7	7
21+75	38+97	MAIN LANES	18	18
43+79	55+92	MAIN LANES	13	13
57+19	120+30	MAIN LANES	64	64
TOTALS:			102	102

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CONCRETE DITCH PAVING	CONCRETE STOPBLOCK	RETAINING WALL	SIGN FOUNDATIONS	GUARDRAIL	SIGNS	BRICK WALLS	BRICK COLUMNS	SPINKLER SYSTEM
			SQ. YD.	EACH	LIN.FT.	EACH	LIN.FT.	EACH	LIN. FT.	EACH	EACH
15+80		BRICK COLUMN W/LIGHTS ON RT.								2	
17+39		BRICK COLUMNS ON RT.								2	
19+27		BRICK COLUMNS ON RT.								2	
20+53		BRICK COLUMNS ON RT.								2	
22+09		BRICK WALL WITH COLUMNS ON RT.							14	4	
31+33		SIGN ON RT.						1			
40+70		DRIVEWAY ON LT.		10							
42+24	46+22	SIDEWALK ON LT.									
44+16	44+65	DITCH PAVING ON RT.	37								
46+09		BRICK WALL WITH COLUMNS ON LT.							10	2	
46+80		BRICK WALL WITH COLUMNS ON LT.							10	2	
54+90		BRICK SIGN ON RT.						1			
54+90		SIGN FOUNDATION ON RT.				1					
55+21	55+41	DITCH PAVING ON RT.	9								
89+12	90+83	GUARDRAIL ON RT.					170				
89+12	90+77	GUARDRAIL ON LT.					170				
90+50	92+26	BRICK COLUMNS 16' O.C. ON LT.								8	
92+40	92+52	BRICK WALL W/COLUMNS ON LT.							29	2	
93+27	93+47	BRICK WALL W/COLUMNS ON LT.							28	2	
93+47	95+85	BRICK COLUMNS ON LT.								6	
96+62	96+83	BRICK WALL W/COLUMNS ON LT.							28	2	
96+83	99+40	BRICK COLUMNS ON LT.								6	
99+40	99+61	BRICK WALL W/COLUMNS ON LT.							30	2	
100+25	100+46	BRICK WALL W/COLUMNS ON LT.							27	2	
104+09	105+22	BLOCK RETAINING WALLS			143						
110+09	112+30	GUARDRAIL ON RT.					220				
110+80		SIGN ON LT.						1			
110+80		SIGN FOUNDATION ON LT.				1					
121+78	123+35	SPRINKLER SYSTEM ON LT.									1
310+24		DITCH PAVING ON RT.	10								
310+60		DITCH PAVING ON RT.	10								
312+83	313+10	GUARDRAIL ON RT.					26				
312+83	313+10	GUARDRAIL ON LT.					26				
313+40	313+66	GUARDRAIL ON RT.					27				
313+40	313+66	GUARDRAIL ON LT.					27				
TOTALS:			66	10	143	2	666	3	176	46	1

REFER TO SPECIAL PROVISION "REMOVAL AND DISPOSAL OF GUARDRAIL"

r040517.dgn

8-20-10

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	84	296

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
7-7-11

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS EACH	BOX CULVERTS EACH	DROP INLETS EACH
10+89	DROP INLET ON LT.			1
10+89	36"x20' R.C. PIPE ON LT.	1		
11+76	DROP INLET ON LT.			1
11+76	30"x82' R.C. PIPE ON LT.	1		
11+76	42"x7' R.C. PIPE ON LT.	1		
13+29	DROP INLET ON LT.			1
13+29	24"x24' R.C. PIPE ON LT.	1		
14+22	DROP INLET ON LT.			1
14+22	24"x90' R.C. PIPE ON LT.	1		
14+22	24"x11' R.C. PIPE ON LT.	1		
17+28	18"x50 C.M. PIPE ON RT.	1		
18+30	18"x100' C.M. PIPE ON LT.	1		
19+27	18"x24' C.M. PIPE ON RT.	1		
19+90	18"x48' PLASTIC PIPE ON RT.	1		
20+53	18"x26' C.M. PIPE ON RT.	1		
22+10	18"x64' C.M. PIPE ON RT.	1		
29+48	18"x23' C.M. PIPE ON LT.	1		
29+83	18"x48"x48' C.M. ARCH PIPE ON RT.	1		
31+00	24"x58' C.M. PIPE ON RT.	1		
32+65	24"x96' R.C. PIPE ON LT.	1		
33+15	24"x53' C.M. PIPE ON RT.	1		
35+34	24"x53' C.M. PIPE ON RT.	1		
36+89	24"x16' R.C. PIPE ON RT.	1		
38+00	24"x27' R.C. PIPE ON RT.	1		
38+26	18"x97' C.M. PIPE ON LT.	1		
39+50	24"x24' C.M. PIPE ON RT.	1		
40+77	24"x38' R.C. PIPE ON LT.	1		
41+00	24"x23' C.M. PIPE ON RT.	1		
43+61	24"x50' R.C. PIPE CROSS DRAIN	1		
44+58	DROP INLET ON RT.			1
44+58	13' OF 30" R.C. PIPE ON RT.	1		
46+30	18"x107' R.C. PIPE ON LT.	1		
51+38	24"x45' C.M. PIPE ON LT.	1		
51+57	24"x61' R.C. PIPE ON RT.	1		
52+56	16"x28' C.M. PIPE ON LT.	1		
54+37	18"x30' C.M. PIPE ON LT.	1		
54+60	8' OF 24" PLASTIC PIPE ON RT.	1		
55+00	24"x50' C.M. PIPE ON RT.	1		
57+10	24"x38' C.M. PIPE ON RT.	1		
57+60	24"x36' C.M. PIPE ON RT.	1		
58+53	24"x36' C.M. PIPE ON RT.	1		
59+00	36"x53' R.C. PIPE CROSS DRAIN	1		
59+25	24"x41' C.M. PIPE ON RT.	1		
65+37	18"x23' C.M. PIPE ON RT.	1		
75+08	TRPL 14'x7'x64' R.C. BOX CULVERT		1	
76+38	18"x313' R.C. PIPE ON RT.	1		
80+40	42"x47' R.C. PIPE CROSS DRAIN	1		
87+45	24"x24' C.M. PIPE ON RT.	1		
87+48	18"x24' C.M. PIPE ON LT.	1		
90+00	13'x10'x40' R.C. BOX CULVERT		1	
92+96	24"x107' R.C. PIPE ON LT.	1		
96+33	24"x100' R.C. PIPE ON LT.	1		
99+30	18"x48' C.M. PIPE ON RT.	1		
99+95	24"x114' R.C. PIPE ON LT.	1		
105+42	24"x114' R.C. PIPE ON LT.	1		
112+86	DBL 18"x14' C.M. PIPE ON LT.	1		
113+46	DBL 44"x27" R.C. ARCH PIPES ON LT.	2		
115+68	DBL 44"x27" R.C. ARCH PIPES ON LT.	2		
123+64	36"x60' R.C. PIPE ON LT.	1		
123+70	24"x86' R.C. PIPE ON RT.	1		
126+14	24"x78' R.C. PIPE ON RT.	1		
126+21	24"x85' R.C. PIPE ON LT.	1		
200+00	31' OF 18" C.M. PIPE ON RT.	1		
200+48	DROP INLET ON RT.			1
200+48	18" C.M. PIPE ON RT.	1		
330+63	DROP INLET ON LT.			1
331+26	DROP INLET ON RT.			1
331+26	7' OF 18"x11' C.M. PIPE ON RT.	1		
85+00	36"x62' R.C. PIPE CROSS DRAIN	1		
TOTALS:		61	2	8

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

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE LIN. FT.	FENCE POSTS EACH	GATES EACH
17+04		FENCE POST ON RT.		2	
17+04	18+66	PICKET FENCE ON RT.	166		
18+66	20+35	PICKET FENCE ON RT.	153		
22+80	23+14	WOOD FENCE ON LT.	35	2	1
26+02	26+52	WOOD FENCE ON LT.	90		
29+42	29+54	WOOD POST WITH CABLE ON LT.	12	2	
37+00	37+10	3 RAIL SPLIT FENCE ON RT.	10		
38+00	38+20	3 RAIL SPLIT FENCE ON RT.	20		
38+90	42+55	3 RAIL WOOD FENCE ON RT.	385		2
42+27	45+04	WOOD FENCE ON LT.	277		
42+27	42+57	3 RAIL WOOD FENCE ON LT.	30		
45+04	46+11	3 RAIL WOOD FENCE ON LT.	32		
46+79	49+97	WOOD FENCE ON LT.	311		
67+85	98+46	6 STRAND BARB WIRE ON RT.	3103		2
88+00	90+00	WOOD FENCE ON LT.	200		
90+53	92+59	WOOD FENCE ON LT.	206		
93+34	96+06	WOOD FENCE ON LT.	272		
96+60	99+72	WOOD FENCE ON LT.	312		
100+42	104+94	WOOD FENCE ON LT.	452		
TOTALS:			6066	6	5

REMOVAL OF EXISTING BRIDGE STRUCTURE

STATION	STATION	LOCATION	LUMP SUM
313+10	313+40	BRIDGE ON OLD WIRE RD. (SITE NO. 1)	1.00
110+99	111+25	BRIDGE ON HWY. 265 (SITE NO. 2)	1.00

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
ENTIRE	PROJECT	STAGE 1-HWY. 265	29975	42984	
ENTIRE	PROJECT	STAGE 2-HWY. 265	3555	21670	
ENTIRE	PROJECT	STAGE 3-HWY. 265	1015	7971	
ENTIRE	PROJECT	KANTZ RD.	963	4	
ENTIRE	PROJECT	OLD WIRE RD.	129	1183	
ENTIRE	PROJECT	E. JOYCE BLVD.	155	571	
ENTIRE	PROJECT	APPROACHES	235	1595	
ENTIRE	PROJECT	CITY STREET APPROACHES	760	70	
331+65		CHANNEL CHANGE FOR R.C. BOX	1404		
75+08		CHANNEL CHANGE FOR R.C. BOX	3550		
90+00		CHANNEL CHANGE FOR R.C. BOX	1853		
110+81		CHANNEL CHANGE FOR R.C. BOX	3014		
* ENTIRE	PROJECT	UNDERCUT AND BACKFILL	2000	2000	
* ENTIRE	PROJECT	TO BE USED IF AND WHERE			200
		DIRECTED BY THE ENGINEER			
TOTALS:			48608	78048	200

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

SOIL LOG

STATION	LOCATION	DEPTH FEET	AASHTO CLASSIFICATION	LIQUID LIMIT	PLASTICITY INDEX	COLOR
11+00	15' RT.	0-5	A-4(0)	ND	NP	BROWN
11+00	35' RT.	0-4.8	A-6(3)	25	11	BROWN
19+00	15' LT.	0-2.7	A-4(0)	ND	NP	BROWN
19+00	25' LT.	0-2.7	A-4(0)	ND	NP	BROWN
28+00	15' RT.	0-5	A-4(0)	ND	NP	BROWN
28+00	25' RT.	0-4.8	A-2-4(0)	ND	NP	BROWN
43+00	5' RT.	0-5	A-7-6(13)	44	26	BROWN
43+00	25' RT.	0-5	A-4(0)	ND	NP	BROWN
51+00	15' LT.	0-4.6	A-4(2)	23	10	BROWN
51+00	25' LT.	0-4.6	A-6(2)	26	12	BROWN
59+00	15' RT.	0-5	A-6(7)	30	16	BROWN
59+00	25' RT.	0-5	A-7-6(11)	43	25	BROWN
66+00	15' LT.	0-4.2	A-4(0)	ND	NP	BROWN
66+00	25' LT.	0-5	A-4(0)	ND	NP	BROWN
75+00	15' RT.	0-4.2	A-4(0)	21	5	BROWN
75+00	25' RT.	0-4.8	A-4(0)	23	9	BROWN
83+00	15' LT.	0-5	A-6(9)	32	19	BROWN
83+00	25' LT.	0-5	A-4(3)	26	10	BROWN
91+00	15' RT.	0-5	A-4(0)	19	5	BROWN
91+00	25' RT.	0-5	A-7-6(45)	63	42	BROWN
99+00	15' LT.	0-5	A-6(10)	34	19	BROWN
99+00	25' LT.	0-3.3	A-6(6)	28	14	BROWN
107+00	15' RT.	0-5	A-7-6(14)	41	26	BROWN
107+00	25' RT.	0-4.8	A-7-6(3)	42	16	BROWN
115+00	15' LT.	0-5	A-6(6)	30	17	BROWN
115+00	25' LT.	0-5	A-6(5)	33	20	BROWN
123+00	15' RT.	0-5	A-7-6(14)	43	26	BROWN
123+00	25' RT.	0-5	A-4(2)	21	7	BROWN
						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

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.		040517	85	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGETT
5-31-11

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL							TEMPORARY EROSION CONTROL									
			SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	SOLID SODDING	WATER	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	SQ. YD.	M.GAL.	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN.FT.	LIN.FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1	5.74	11.48	5.74	585.5	5.74						264	51	1276	8236	107	107	459
ENTIRE	PROJECT	STAGE 2	3.79	7.58	3.79	386.6	3.79						110	24	1316	8346			358
ENTIRE	PROJECT	MEDIAN						11519	145.1						354				
ENTIRE	PROJECT	BERMS						8180	103.1										
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.										34.00	34.00	693.6	220	30	500	4000	100	100	267
TOTALS:			9.53	19.06	9.53	972.1	9.53	19699	248.2	34.00	34.00	693.6	594	105	3446	20582	207	207	1084

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

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

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

CONCRETE DITCH PAVING

STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
			LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
30+00	30+78	OPEN DITCH ON RT.	78.00	9	78.00	34.67	0.44
31+10	32+77	OPEN DITCH ON RT.	167.00	9	167.00	74.22	0.94
33+30	35+17	OPEN DITCH ON RT.	187.00	9	187.00	83.11	1.05
35+51	36+77	OPEN DITCH ON RT.	126.00	9	126.00	56.00	0.71
37+01	37+62	OPEN DITCH ON RT.	61.00	9	61.00	27.11	0.34
38+08	39+00	OPEN DITCH ON RT.	92.00	9	92.00	40.89	0.52
TOTALS:					711.00	316.00	4.00

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

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
39+00	39+40	OPEN DITCH ON RT.	40.0	35.6
39+61	40+79	OPEN DITCH ON RT.	118.0	104.9
41+05	41+35	OPEN DITCH ON RT.	30.0	26.7
TOTAL:				167.2

NOTE: AVERAGE WIDTH = 8'-0"

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
75+08	QUINT 10'x9'x155' R.C BOX CULVERT	1
110+80	QUAD 12'x8'x133' R.C. BOX CULVERT	1
TOTAL:		2

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

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN.FT.	EACH
52+85	60+00	HWY. 265 SUPERELEVATION	787	4
87+01	92+42	HWY. 265 SUPERELEVATION	679	4
114+23	123+17	HWY. 265 SUPERELEVATION	1470	5
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			5000	21
TOTALS:			7936	34

* 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.

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)	MAILBOX SUPPORTS (DOUBLE)
	EACH		
ENTIRE PROJECT	23	13	5
TOTALS:	23	13	5

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE D-2)	* 16'-0" GATES
			LIN. FT.	EACH
67+85	98+46	HWY. 265 ON RT.	3061	2
TOTALS:			3061	2

* DENOTES ALTERNATE BID ITEM.

r040517.dgn 8-20-10

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	86	296

(2) QUANTITIES

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

5-31-11

CONCRETE WALKS (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH LIN.FT.	CONCRETE WALKS SQ.YD.
10+10	11+14	HWY. 265 ON LT.	104	58
10+10	15+41	HWY. 265 ON RT.	531	295
11+53	13+41	HWY. 265 ON LT.	188	104
14+00	14+28	HWY. 265 IN RADIUS ON LT.		22
14+28	15+20	HWY. 265 ON LT.	92	66
15+20	17+85	HWY. 265 ON LT.	265	147
15+68	17+14	HWY. 265 ON RT.	146	81
17+42	19+11	HWY. 265 ON RT.	169	94
17+85	18+08	HWY. 256 IN RADIUS ON LT.		15
18+75	21+15	HWY. 265 ON LT.	240	133
19+39	20+39	HWY. 265 ON RT.	100	56
20+67	21+94	HWY. 265 ON RT.	127	71
21+10	21+37	HWY. 265 IN RADIUS ON LT.		19
22+06	22+82	HWY. 265 ON LT.	76	42
22+27	26+00	HWY. 265 ON RT.	373	207
23+10	24+44	HWY. 265 ON LT.	134	74
24+40	24+66	HWY. 265 IN RADIUS ON LT.		25
25+36	25+95	HWY. 265 ON LT.	59	33
25+95	26+47	HWY. 265 IN RADIUS ON LT.		41
26+00	26+56	HWY. 265 IN RADIUS ON RT.		53
27+10	27+64	HWY. 265 IN RADIUS ON LT.		46
27+19	27+56	HWY. 265 IN RADIUS ON RT.		23
27+56	30+76	HWY. 265 ON RT.	320	178
27+64	29+33	HWY. 265 ON LT.	169	94
29+62	32+23	HWY. 265 ON LT.	261	145
31+12	32+95	HWY. 265 ON RT.	183	102
33+05	37+77	HWY. 265 ON LT.	472	262
33+31	35+15	HWY. 265 ON RT.	184	102
35+52	36+75	HWY. 265 ON RT.	123	68
37+03	37+58	HWY. 265 ON RT.	55	31
37+70	37+93	HWY. 265 IN RADIUS ON LT.		16
38+10	39+36	HWY. 265 ON RT.	126	70
38+57	38+79	HWY. 265 IN RADIUS ON LT.		15
38+73	40+57	HWY. 265 ON LT.	184	102
39+64	40+76	HWY. 265 ON RT.	112	62
40+97	45+79	HWY. 265 ON LT.	482	268
41+07	45+94	HWY. 265 ON RT.	487	271
45+79	46+07	HWY. 265 IN RADIUS ON LT.		21
45+94	46+18	HWY. 265 IN RADIUS ON RT.		18
46+67	47+16	HWY. 265 IN RADIUS ON LT.		33
46+78	47+01	HWY. 265 IN RADIUS ON RT.		18
47+01	51+23	HWY. 265 ON RT.	422	234
47+16	51+22	HWY. 265 ON LT.	406	226
51+60	52+42	HWY. 265 ON LT.	82	46
51+95	54+91	HWY. 265 ON RT.	296	164
52+70	54+30	HWY. 265 ON LT.	160	89
54+57	61+81	HWY. 265 ON LT.	724	402
55+29	57+37	HWY. 265 ON RT.	208	116
57+81	58+35	HWY. 265 ON RT.	54	30
58+73	59+15	HWY. 265 ON RT.	42	23
59+57	64+87	HWY. 265 ON RT.	530	294
62+16	63+58	HWY. 265 ON LT.	142	79
64+47	66+49	HWY. 265 ON LT.	202	112
65+13	66+43	HWY. 265 ON RT.	130	72
66+43	67+00	HWY. 265 IN RADIUS ON RT.		48
66+49	66+86	HWY. 265 IN RADIUS ON LT.		25
67+47	68+04	HWY. 265 IN RADIUS ON LT.		52
67+63	67+99	HWY. 265 IN RADIUS ON RT.		24
67+99	87+26	HWY. 265 ON RT.	1927	1071
68+04	87+36	HWY. 265 ON LT.	1932	1073
87+56	98+23	HWY. 265 ON RT.	1067	593
87+64	92+42	HWY. 265 ON LT.	478	266
SUBTOTAL BOX 1 OF 2:				8620

CONCRETE WALKS (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH LIN.FT.	CONCRETE WALKS SQ.YD.
92+42	92+61	HWY. 265 IN RADIUS ON LT.		13
93+11	93+50	HWY. 265 IN RADIUS ON LT.		34
93+50	95+94	HWY. 265 ON LT.	244	136
96+47	96+76	HWY. 265 IN RADIUS ON LT.		25
96+72	99+56	HWY. 265 ON LT.	284	158
98+51	99+17	HWY. 265 ON RT.	66	37
99+45	119+60	HWY. 265 ON RT.	2015	1119
100+11	100+39	HWY. 265 IN RADIUS ON LT.		18
100+34	105+05	HWY. 265 ON LT.	471	262
105+55	105+81	HWY. 265 IN RADIUS ON LT.		29
105+77	110+90	HWY. 265 ON LT.	513	285
111+50	111+75	HWY. 265 ON LT.		27
111+70	113+29	HWY. 265 ON LT.	159	88
113+65	115+48	HWY. 265 ON LT.	183	102
115+86	120+03	HWY. 265 ON LT.	417	232
119+60	120+09	HWY. 265 ON RT.		34
120+03	120+63	HWY. 265 IN RADIUS ON LT.		45
120+61	120+93	HWY. 265 IN RADIUS ON RT.		44
120+93	123+43	HWY. 265 ON RT.	250	139
121+71	122+12	HWY. 265 IN RADIUS ON LT.		69
122+12	123+38	HWY. 265 ON LT.	126	70
123+90	125+87	HWY. 265 ON LT.	197	109
123+95	125+89	HWY. 265 ON RT.	194	108
125+82	126+04	HWY. 265 IN RADIUS ON LT.		14
200+15	200+25	KANTZ DR. ON LT.	10	7
200+61	201+58	KANTZ DR. ON LT.	97	54
311+35	311+54	OLD WIRE RD. ON LT.	19	11
313+53	314+22	OLD WIRE RD. ON RT.	69	38
314+51	315+10	OLD WIRE RD. ON RT.	59	33
330+40	331+17	E. JOYCE RD. ON RT.	77	43
333+20	334+35	E. JOYCE RD. ON RT.	115	64
SUBTOTAL BOX 1 OF 2:				8620
SUBTOTAL BOX 2 OF 2:				3447
TOTAL:				12067

CONCRETE ISLAND

STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND SQ.YD.
201+50	KANTZ DR. CENTER ISLAND	C	18
18+31	HWY. 265 STREET ISLAND ON LT.	C	4
21+60	HWY. 265 STREET ISLAND ON LT.	C	9
24+90	HWY. 265 STREET ISLAND ON LT.	C	13
27+12	HWY. 265 PEDESTRIAN ISLAND	C	6
27+34	HWY. 265 PEDESTRIAN ISLAND	C	10
29+80	HWY. 265 MEDIAN ISLAND	N/A	167
44+95	HWY. 265 MEDIAN ISLAND	N/A	64
45+90	HWY. 265 PEDESTRIAN ISLAND	C	10
46+15	HWY. 265 PEDESTRIAN ISLAND	C	6
46+95	HWY. 265 PEDESTRIAN ISLAND	C	10
47+90	HWY. 265 MEDIAN ISLAND	N/A	65
65+75	HWY. 265 MEDIAN ISLAND	N/A	64
66+71	HWY. 265 PEDESTRIAN ISLAND	C	10
66+95	HWY. 265 PEDESTRIAN ISLAND	C	6
67+56	HWY. 265 PEDESTRIAN ISLAND	C	6
67+78	HWY. 265 PEDESTRIAN ISLAND	C	10
68+75	HWY. 265 MEDIAN ISLAND	N/A	66
91+45	HWY. 265 MEDIAN ISLAND	N/A	66
92+41	HWY. 265 PEDESTRIAN ISLAND	C	10
92+65	HWY. 265 PEDESTRIAN ISLAND	C	6
93+31	HWY. 265 PEDESTRIAN ISLAND	C	6
93+56	HWY. 265 PEDESTRIAN ISLAND	C	10
94+50	HWY. 265 MEDIAN ISLAND	N/A	67
118+97	HWY. 265 MEDIAN ISLAND	N/A	62
120+00	HWY. 265 PEDESTRIAN ISLAND	C	10
120+22	HWY. 265 PEDESTRIAN ISLAND	C	6
121+03	HWY. 265 PEDESTRIAN ISLAND	C	6
121+27	HWY. 265 PEDESTRIAN ISLAND	C	10
121+35	HWY. 265 AND E. JOYCE ST.	C	46
TOTAL:			849

CONCRETE CURB

STATION	STATION	LOCATION	TYPE D LIN. FT.
56+58	57+27	HWY. 265 ROW CURB ON RT.	48
57+31	57+43	HWY. 265 ROW CURB ON RT.	30
57+75	57+97	HWY. 265 ROW CURB ON RT.	38
58+02	58+41	HWY. 265 ROW CURB ON RT.	54
58+66	58+99	HWY. 265 ROW CURB ON RT.	42
201+01	201+24	KANTZ DR. ROW CURB ON RT.	23
TOTAL:			235

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 2 SQ.YD.	TYPE 3 SQ.YD.	TYPE 4 SQ.YD.
13+44	HWY. 265 ON LT.	4.3		
14+13	HWY. 265 ON LT.	7.5		
14+13	HWY. 265 ON RT.	3.6		
17+90	HWY. 265 ON LT.		6.0	
18+70	HWY. 265 ON LT.		6.0	
21+18	HWY. 265 ON LT.		6.0	
22+00	HWY. 265 ON LT.		6.0	
24+49	HWY. 265 ON LT.		6.1	
25+32	HWY. 265 ON LT.		6.1	
26+45	HWY. 265 ON LT.	9.7		
26+48	HWY. 265 ON RT.	9.2		
27+19	HWY. 265 ON LT.	8.8		
27+19	HWY. 265 ON RT.	9.4		
32+27	HWY. 265 ON LT.		5.9	
33+00	HWY. 265 ON LT.		6.0	
37+80	HWY. 265 ON LT.		5.6	
38+70	HWY. 265 ON LT.		5.6	
46+09	HWY. 265 ON RT.		5.1	
46+10	HWY. 265 ON LT.	4.1		
46+64	HWY. 265 ON LT.	4.2		
46+90	HWY. 265 ON RT.		5.4	
51+27	HWY. 265 ON RT.		5.5	
51+91	HWY. 265 ON RT.		5.4	
63+62	HWY. 265 ON LT.		5.6	
64+43	HWY. 265 ON LT.		5.5	
66+86	HWY. 265 ON LT.	9.2		
66+86	HWY. 265 ON RT.	9.2		
67+63	HWY. 265 ON LT.	8.5		
67+63	HWY. 265 ON RT.	9.1		
92+54	HWY. 265 ON RT.	3.6		
92+56	HWY. 265 ON LT.	8.9		
93+37	HWY. 265 ON LT.	8.1		
93+42	HWY. 265 ON RT.	4.0		
95+98	HWY. 265 ON LT.		5.5	
96+68	HWY. 265 ON LT.		5.6	
99+60	HWY. 265 ON LT.		5.6	
100+30	HWY. 265 ON LT.		5.8	
105+08	HWY. 265 ON LT.		5.3	
105+74	HWY. 265 ON LT.		5.3	
110+94	HWY. 265 ON LT.		5.4	
111+67	HWY. 265 ON LT.		5.4	
120+01	HWY. 265 ON RT.	8.7		
120+39	HWY. 265 ON LT.	8.3		
120+76	HWY. 265 ON RT.	7.8		
121+26	HWY. 265 ON LT.			7.6
121+29	HWY. 265 ON LT.			8.6
121+40	HWY. 265 ON LT.			7.3
121+64	HWY. 265 ON LT.	3.6		
125+92	HWY. 265 ON LT.		5.4	
TOTAL:		149.8	141.1	23.5

8-20-10 r040517.dgn

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	87	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

CONCRETE COMBINATION CURB AND GUTTER (BOX 1 OF 3)

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
10+10	10+87	HWY. 265 ON LT.	77
10+10	10+23	HWY. 265 ON RT.	13
10+36	12+48	HWY. 265 ON RT.	212
11+01	12+08	HWY. 265 ON LT.	107
12+08	13+18	HWY. 265 ON LT.	110
12+61	15+98	HWY. 265 ON RT.	337
13+31	13+54	HWY. 265 IN RADIUS ON LT.	40
13+98	14+28	HWY. 265 ON LT.	45
14+28	14+30	HWY. 265 ON LT.	2
14+42	15+98	HWY. 265 ON LT.	156
16+11	17+79	HWY. 265 ON LT.	168
16+11	18+84	HWY. 265 ON RT.	273
17+79	18+09	HWY. 265 IN RADIUS ON LT.	46
18+52	18+82	HWY. 265 IN RADIUS ON LT.	45
18+82	18+84	HWY. 265 ON LT.	2
18+97	21+08	HWY. 265 ON LT.	211
18+97	25+79	HWY. 265 ON RT.	682
21+08	21+38	HWY. 265 IN RADIUS ON LT.	54
21+81	22+13	HWY. 265 IN RADIUS ON LT.	56
22+13	24+37	HWY. 265 ON LT.	224
24+37	24+68	HWY. 265 IN RADIUS ON LT.	68
25+11	25+43	HWY. 265 IN RADIUS ON LT.	69
25+43	25+95	HWY. 265 ON LT.	52
25+78	37+53	HWY. 265 ON LT.	1175
25+92	26+06	HWY. 265 ON RT.	14
25+95	26+64	HWY. 265 IN RADIUS ON LT.	157
26+06	26+65	HWY. 265 IN RADIUS ON RT.	92
26+97	27+64	HWY. 265 IN RADIUS ON LT.	153
27+00	27+58	HWY. 265 IN RADIUS ON RT.	91
27+27	27+30	HWY. 265 BEGIN MEDIAN	6
27+30	45+66	HWY. 265 LT. MEDIAN	1836
27+30	43+40	HWY. 265 RT. MEDIAN	1610
27+58	27+70	HWY. 265 ON RT.	12
27+64	28+90	HWY. 265 ON LT.	126
27+83	29+90	HWY. 265 ON RT.	207
29+03	31+90	HWY. 265 ON LT.	287
30+03	32+65	HWY. 265 ON RT.	262
32+03	32+15	HWY. 265 ON LT.	12
32+15	32+47	HWY. 265 IN RADIUS ON LT.	56
32+78	34+15	HWY. 265 ON RT.	137
32+81	33+12	HWY. 265 IN RADIUS ON LT.	56
33+12	33+65	HWY. 265 ON LT.	53
33+78	35+66	HWY. 265 ON LT.	188
34+28	35+69	HWY. 265 ON RT.	141
35+78	37+10	HWY. 265 ON RT.	132
37+23	38+90	HWY. 265 ON RT.	167
37+66	37+70	HWY. 265 ON LT.	4
37+70	38+00	HWY. 265 IN RADIUS ON LT.	47
38+49	38+80	HWY. 265 IN RADIUS ON LT.	47
38+80	41+00	HWY. 265 ON LT.	220
39+03	41+17	HWY. 265 ON RT.	214
41+13	43+40	HWY. 265 ON LT.	227
41+30	45+94	HWY. 265 ON RT.	464
43+53	45+66	HWY. 265 ON LT.	213
43+53	45+66	HWY. 265 RT. MEDIAN	213
45+79	46+18	HWY. 265 IN RADIUS ON LT.	66
45+79	45+95	HWY. 265 LT. MEDIAN	16
45+79	45+95	HWY. 265 RT. MEDIAN	16
45+94	46+25	HWY. 265 IN RADIUS ON RT.	47
45+95	45+98	HWY. 265 END MEDIAN	6
46+55	47+15	HWY. 265 IN RADIUS ON LT.	80
46+70	46+99	HWY. 265 IN RADIUS ON RT.	49
46+87	46+90	HWY. 265 BEGIN MEDIAN	6
46+90	55+40	HWY. 265 LT. MEDIAN	850
46+90	49+40	HWY. 265 RT. MEDIAN	250
46+99	51+16	HWY. 265 ON RT.	417
47+15	47+20	HWY. 265 ON LT.	5
47+33	49+40	HWY. 265 ON LT.	207
49+53	50+90	HWY. 265 ON LT.	137
49+53	50+94	HWY. 265 RT. MEDIAN	141
51+03	52+75	HWY. 265 ON LT.	172
51+03	63+75	HWY. 265 RT. MEDIAN	1272
51+16	51+46	HWY. 265 IN RADIUS ON RT.	30
51+73	52+03	HWY. 265 IN RADIUS ON RT.	30
52+03	52+75	HWY. 265 ON RT.	72
52+88	59+90	HWY. 265 ON LT.	702
52+88	54+50	HWY. 265 ON RT.	162
54+63	55+90	HWY. 265 ON RT.	127
55+53	57+19	HWY. 265 LT. MEDIAN	166
56+03	57+19	HWY. 265 ON RT.	116
57+32	57+90	HWY. 265 ON RT.	58
57+32	63+75	HWY. 265 LT. MEDIAN	643
58+03	58+90	HWY. 265 ON RT.	87
59+03	59+90	HWY. 265 ON RT.	87
SUBTOTAL BOX 1 OF 3:			**17685**

CONCRETE COMBINATION CURB AND GUTTER (BOX 2 OF 3)

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
60+03	63+50	HWY. 265 ON LT.	347
60+03	66+43	HWY. 265 ON RT.	640
63+50	63+84	HWY. 265 IN RADIUS ON LT.	77
63+75	63+83	HWY. 265 END MEDIAN	23
64+20	64+56	HWY. 265 IN RADIUS ON LT.	72
64+30	64+35	HWY. 265 BEGIN MEDIAN	13
64+35	64+90	HWY. 265 LT. MEDIAN	55
64+35	64+90	HWY. 265 RT. MEDIAN	55
64+56	66+40	HWY. 265 ON LT.	184
65+03	65+98	HWY. 265 LT. MEDIAN	95
65+03	65+98	HWY. 265 RT. MEDIAN	95
66+03	66+75	HWY. 265 LT. MEDIAN	72
66+03	66+75	HWY. 265 RT. MEDIAN	72
66+43	67+05	HWY. 265 IN RADIUS ON RT.	94
66+53	67+07	HWY. 265 IN RADIUS ON LT.	85
66+75	66+78	HWY. 265 END MEDIAN	6
67+41	67+99	HWY. 265 IN RADIUS ON RT.	90
67+43	68+04	HWY. 265 IN RADIUS ON LT.	95
67+72	67+75	HWY. 265 BEGIN MEDIAN	6
67+75	88+94	HWY. 265 LT. MEDIAN	2119
67+75	92+45	HWY. 265 RT. MEDIAN	2470
67+99	69+25	HWY. 265 ON RT.	126
68+04	69+25	HWY. 265 ON LT.	121
69+38	71+90	HWY. 265 ON LT.	252
69+38	71+90	HWY. 265 ON RT.	252
72+03	73+90	HWY. 265 ON LT.	187
72+03	73+94	HWY. 265 ON RT.	191
74+03	75+69	HWY. 265 ON LT.	166
74+03	75+73	HWY. 265 ON RT.	170
75+78	79+44	HWY. 265 ON LT.	366
75+82	79+44	HWY. 265 ON RT.	362
79+57	80+37	HWY. 265 ON LT.	80
79+57	80+33	HWY. 265 ON RT.	76
80+44	83+23	HWY. 265 ON LT.	279
80+48	83+19	HWY. 265 ON RT.	271
83+25	84+73	HWY. 265 ON LT.	148
83+32	85+73	HWY. 265 ON RT.	241
84+78	86+46	HWY. 265 ON LT.	168
85+78	86+46	HWY. 265 ON RT.	68
86+59	91+94	HWY. 265 ON LT.	535
86+59	87+98	HWY. 265 ON RT.	139
88+07	90+21	HWY. 265 ON RT.	214
89+03	92+45	HWY. 265 LT. MEDIAN	342
90+29	93+47	HWY. 265 ON RT.	318
92+07	92+44	HWY. 265 ON LT.	37
92+44	92+83	HWY. 265 IN RADIUS ON LT.	60
92+45	92+48	HWY. 265 END MEDIAN	6
93+10	93+51	HWY. 265 IN RADIUS ON LT.	69
93+47	93+50	HWY. 265 BEGIN MEDIAN	6
93+50	111+98	HWY. 265 LT. MEDIAN	1848
93+50	96+81	HWY. 265 RT. MEDIAN	331
93+60	102+90	HWY. 265 ON RT.	930
93+64	95+87	HWY. 265 ON LT.	223
95+87	96+18	HWY. 265 IN RADIUS ON LT.	52
96+46	96+81	HWY. 265 IN RADIUS ON LT.	65
96+90	99+47	HWY. 265 ON LT.	257
96+90	101+23	HWY. 265 RT. MEDIAN	433
99+47	99+80	HWY. 265 IN RADIUS ON LT.	70
100+06	100+41	HWY. 265 IN RADIUS ON LT.	70
100+41	101+23	HWY. 265 ON LT.	82
101+32	102+98	HWY. 265 ON LT.	166
101+32	115+48	HWY. 265 RT. MEDIAN	1416
103+03	104+83	HWY. 265 ON RT.	180
103+11	104+91	HWY. 265 ON LT.	180
104+96	106+90	HWY. 265 ON RT.	194
105+04	105+27	HWY. 265 IN RADIUS ON LT.	58
105+54	105+85	HWY. 265 IN RADIUS ON LT.	58
105+85	106+98	HWY. 265 ON LT.	113
107+03	108+90	HWY. 265 ON RT.	187
107+11	108+98	HWY. 265 ON LT.	187
109+03	111+98	HWY. 265 ON RT.	295
109+11	110+82	HWY. 265 ON LT.	171
110+82	111+14	HWY. 265 IN RADIUS ON LT.	72
111+49	111+78	HWY. 265 IN RADIUS ON LT.	72
111+78	112+98	HWY. 265 ON LT.	120
112+11	119+61	HWY. 265 ON RT.	750
112+11	117+98	HWY. 265 LT. MEDIAN	587
113+03	114+18	HWY. 265 ON LT.	115
114+23	115+28	HWY. 265 ON LT.	105
115+41	117+73	HWY. 265 ON LT.	232
115+61	117+98	HWY. 265 RT. MEDIAN	237
117+82	119+98	HWY. 265 ON LT.	216
118+03	119+89	HWY. 265 LT. MEDIAN	186
118+03	119+89	HWY. 265 RT. MEDIAN	186
119+61	120+13	HWY. 265 IN RADIUS ON RT.	78
119+89	119+92	HWY. 265 END MEDIAN	6
SUBTOTAL BOX 2 OF 3:			**22543**

CONCRETE COMBINATION CURB AND GUTTER (BOX 3 OF 3)

STATION	STATION	LOCATION	TYPE A (1' 6") LIN. FT.
120+03	120+67	HWY. 265 IN RADIUS ON LT.	73
120+57	120+98	HWY. 265 IN RADIUS ON RT.	92
121+07	122+98	HWY. 265 ON RT.	191
121+16	121+31	HWY. 265 BEGIN MEDIAN	34
121+31	125+05	HWY. 265 LT. MEDIAN	374
121+36	125+05	HWY. 265 RT. MEDIAN	369
121+52	122+13	HWY. 265 IN RADIUS ON LT.	125
122+27	123+98	HWY. 265 ON LT.	171
123+07	123+98	HWY. 265 ON RT.	91
124+07	125+79	HWY. 265 ON LT.	172
124+07	126+40	HWY. 265 ON RT.	233
125+05	125+50	HWY. 265 END MEDIAN	93
125+79	126+10	HWY. 265 IN RADIUS ON LT.	47
200+16	200+90	KANTZ RD. ON RT.	74
200+16	200+90	KANTZ RD. ON LT.	74
200+99	201+48	KANTZ RD. ON RT.	49
200+99	201+57	KANTZ RD. ON LT.	58
201+57	201+59	KANTZ RD. ON RT.	2
310+10	310+66	OLD WIRE RD. ON RT.	56
310+10	311+37	OLD WIRE RD. ON RT.	127
310+66	310+96	OLD WIRE RD. IN RADIUS ON RT.	52
311+23	311+44	OLD WIRE RD. IN RADIUS ON RT.	39
311+50	311+54	OLD WIRE RD. ON RT.	4
313+53	314+09	OLD WIRE RD. ON RT.	56
313+62	314+09	OLD WIRE RD. ON LT.	47
314+22	315+10	OLD WIRE RD. ON RT.	88
314+22	315+10	OLD WIRE RD. ON LT.	88
330+40	331+21	E. JOYCE ST. ON RT.	81
332+99	334+00	E. JOYCE ST. ON RT.	101
333+48	334+00	E. JOYCE ST. ON LT.	52
334+13	334+35	E. JOYCE ST. ON RT.	22
334+13	334+35	E. JOYCE ST. ON LT.	22
SUBTOTAL BOX 1 OF 3:			**17685**
SUBTOTAL BOX 2 OF 3:			**22543**
SUBTOTAL BOX 3 OF 3:			**3157**
TOTAL:			**43385**

QUANTITIES

r040517.dgn

8-20-10

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.		040517	88	296

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
7-7-11

PAVEMENT REPAIR OVER CULVERTS (CONCRETE)

STATION	LOCATION	WIDTH	LENGTH	CU.YD.
		FEET		
13+76	HWY. 265 ON LT.	6.92	64	16.4
16+00	HWY. 265	6.92	34	8.7
18+86	HWY. 265	6.92	34	8.7
25+89	HWY. 265	6.92	34	8.7
26+83	HWY. 265 ON RT.	6.92	42	10.8
29+30	HWY. 265	7.92	58	17.0
32+21	HWY. 265	7.92	48	14.1
35+75	HWY. 265	7.92	34	10.0
37+93	HWY. 265	7.92	70	20.5
41+15	HWY. 265	7.92	36	10.6
43+49	HWY. 265	6.92	34	8.7
45+62	HWY. 265	6.92	53	13.6
49+49	HWY. 265	7.92	34	10.0
51+00	HWY. 265	7.92	34	10.0
52+84	HWY. 265	8.50	34	10.7
59+00	HWY. 265	11.42	34	14.4
60+00	HWY. 265	7.92	34	10.0
66+17	HWY. 265	7.92	34	10.0
80+40	HWY.265	10.83	34	13.6
83+25	HWY. 265	6.92	34	8.7
85+00	HWY. 265	7.50	62	17.2
86+52	HWY. 265	7.92	34	10.0
92+99	HWY. 265 ON LT.	6.92	57	14.6
93+53	HWY. 265	6.92	34	8.7
96+34	HWY. 265 ON LT.	6.92	72	18.5
96+83	HWY. 265	6.92	34	8.7
101+25	HWY. 265	6.92	34	8.7
103+00	HWY. 265	6.92	34	8.7
104+93	HWY. 265	6.92	34	8.7
107+00	HWY. 265	6.92	34	8.7
109+00	HWY. 265	6.92	34	8.7
115+37	HWY. 265	7.92	34	10.0
117+88	HWY. 265	7.92	34	10.0
120+34	HWY. 265 ON RT.	9.83	40	14.6
311+40	HWY. 265	6.92	30	7.7
334+10	E. JOYCE BLVD.	6.92	32	8.2
TOTAL:				406.9

AVG. DEPTH = 1'-0"

FLOWABLE SELECT MATERIAL

STATION	LOCATION	CU. YD.
13+76	HWY. 265 PAVEMENT REPAIR	65
16+00	HWY. 265 PAVEMENT REPAIR	22
18+86	HWY. 265 PAVEMENT REPAIR	23
25+89	HWY. 265 PAVEMENT REPAIR	19
26+83	HWY. 265 PAVEMENT REPAIR	53
43+49	HWY. 265 PAVEMENT REPAIR	37
45+62	HWY. 265 PAVEMENT REPAIR	50
83+25	HWY. 265 PAVEMENT REPAIR	26
85+00	HWY. 265 PAVEMENT REPAIR	71
92+99	HWY. 265 PAVEMENT REPAIR	56
93+53	HWY. 265 PAVEMENT REPAIR	30
96+34	HWY. 265 PAVEMENT REPAIR	35
96+83	HWY. 265 PAVEMENT REPAIR	30
101+25	HWY. 265 PAVEMENT REPAIR	18
103+00	HWY. 265 PAVEMENT REPAIR	34
104+93	HWY. 265 PAVEMENT REPAIR	25
107+00	HWY. 265 PAVEMENT REPAIR	19
109+00	HWY. 265 PAVEMENT REPAIR	21
120+34	HWY. 265 PAVEMENT REPAIR	115
311+40	OLD WIRE RD. PAVEMENT REPAIR	35
334+10	E. JOYCE BLVD. PAVEMENT REPAIR	20
313+64	OLD WIRE RD. - R.C. BOX CULVERT	328
TOTAL:		1132

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	600
DIRECTED BY THE ENGINEER	
TOTAL:	600

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
9+10	10+10	HWY. 265	56	622.22
126+40	127+40	HWY. 265	34	377.78
310+10	311+10	OLD WIRE RD.	29	322.22
314+10	315+10	OLD WIRE RD.	29	322.22
330+40	331+21	E. JOYCE BLVD.	56	504.00
333+75	334+35	E. JOYCE BLVD.	30	200.00
TOTAL:				2348.44

NOTE: AVERAGE MILLING DEPTH 1".

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	TON	TACK COAT
		GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	55	110
DIRECTED BY THE ENGINEER		
TOTALS:	55	110

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

r040517.dgn 8-20-10

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	89	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

STRUCTURES (BOX 1 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	36"	48"	22"X14"	51"X31"	73"X45"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	51"X31"	73"X45"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	48"	22"X14"	TEMPORARY PIPE CULVERTS 18"	DROP INLETS TYPE C	MO	EXT. 4'	8'	JUNCT. BOX (TYPE E)	(TYPE ST)	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.													EACH					LIN. FT.	EACH						SQ.YD.	M.GAL	
10+25	DROP INLET ON RT.								95													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
10+90	DROP INLET ON LT.											65										1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
12+10	DROP INLET ON LT.									116												1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
12+50	DROP INLET ON RT.								220													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
13+20	DROP INLET ON LT.								106													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
16+00	DROP INLET ON LT.								164													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
16+00	DROP INLET ON RT.	59																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
18+86	DROP INLET ON LT.	282																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
18+86	DROP INLET ON RT.	60																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
25+89	DROP INLET ON LT.	64																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
25+89	DROP INLET ON RT.	186																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
27+80	DROP INLET ON RT.								216													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
29+00	DROP INLET ON LT.	124																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
30+00	DROP INLET ON RT.								271													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
32+00	DROP INLET ON LT.	103																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
32+75	DROP INLET ON RT.					2			146										1			1		1				5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
33+75	DROP INLET ON LT.								196													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
34+25	DROP INLET ON RT.								146													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
35+75	DROP INLET ON LT.	72																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
35+75	DROP INLET ON RT.	2							141						1							1	1					5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
37+20	DROP INLET ON RT.								176													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
37+63	DROP INLET ON LT.	152																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
39+00	DROP INLET ON RT.	3								224					1							1		1				5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
41+10	DROP INLET ON LT.	72																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
41+27	DROP INLET ON RT.									221												1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
43+50	DROP INLET IN MEDIAN	34																				1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
43+50	JUNCTION BOX ON RT.									109															1					FPC-9, PCC-1, PCM-1
44+58	JUNCTION BOX ON RT.																								1					FPC-9, PCC-1, PCM-1
45+76	DROP INLET ON LT.	40																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
45+76	DROP INLET IN MEDIAN	138																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
47+30	DROP INLET ON LT.								215													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
49+50	DROP INLET ON LT.								145													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
49+50	DROP INLET IN MEDIAN	41																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
51+00	DROP INLET IN MEDIAN	76																				1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
51+00	DROP INLET ON LT.								180													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
52+85	DROP INLET ON LT.		72																			1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
52+85	DROP INLET ON RT.											162										1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
52+92	DROP INLET ON RT.										11											1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
54+60	DROP INLET ON RT.											128										1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
55+50	DROP INLET IN MEDIAN								176													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
56+00	DROP INLET ON RT.											117										1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
57+29	DROP INLET IN MEDIAN	39																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
57+29	DROP INLET ON RT.												61									1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
58+00	DROP INLET ON RT.												90									1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
59+00	DROP INLET ON RT.						86								1							1	1					5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
60+00	DROP INLET ON LT.	70																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
60+00	DROP INLET ON RT.	4							95						1							1		1				5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
65+00	DROP INLET IN MEDIAN	96																			1			1						FPC-9E, PCC-1, PCM-1
66+00	DROP INLET IN MEDIAN	62																			1									FPC-9E, PCC-1, PCM-1
66+50	DROP INLET ON LT.								79													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
69+35	DROP INLET ON LT.								263													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
69+35	DROP INLET ON RT.	82																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
72+00	DROP INLET ON LT.								197													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
72+00	DROP INLET ON RT.	72																				1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
74+00	DROP INLET ON LT.								109													1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
74+00	DROP INLET ON RT.								33													1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
* 75+12	TEMPORARY JUNCTION BOX AND CULVERT ON LT.																			22						1				FPC-9, PCC-1, PCM-1
75+75	DROP INLET ON LT.																					1	1							FPC-9M, FPC-9E
75+75	DROP INLET ON RT.								68													1	1							FPC-9M, FPC-9E, PCC-1, PCM-1
79+50	DROP INLET ON LT.								85													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
79+50	DROP INLET ON RT.								85													1		1						FPC-9M, FPC-9E, PCC-1, PCM-1
SUBTOTALS:		**1933**	**72**	**0**	**0**	**2**	**86**	**0**	**3607**	**670**	**11**	**472**	**151**	**0**	**4**	**0**	**0**	**0**	**1**	**22**	**2**	**56**	**10**	**47**	**2**	**1**	**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.
* TEMPORARY JUCTION BOX REMOVAL IS CONSIDERED INCLUDED IN PRICE BID FOR JUNCTION BOX (TYPE ST).

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.		040517	90	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	36"	48"	22"X14"	51"X31"	73"X45"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	24"	30"	36"	51"X31"	73"X45"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	48"	22"X14"	TEMPORARY PIPE CULVERTS 18"	DROP INLETS TYPE C	MO	EXT. 4'	8'	JUNCT. BOX (TYPE E)	(TYPE ST)	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.													EACH					LIN. FT.	EACH						SQ.YD.	M.GAL	
80+40	DROP INLET ON LT.				7																	1					29	0.37	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
80+40	DROP INLET ON RT.				72													1				1					29	0.37	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
83+25	DROP INLET ON LT.	20													1							1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
83+25	DROP INLET ON RT.	72																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
84+75	DROP INLET ON LT.		26													1						1					8	0.10	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
85+75	DROP INLET ON RT.		134													1						1					8	0.10	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
86+52	DROP INLET ON LT.	72													1							1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
86+52	DROP INLET ON RT.								73						1							1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
88+00	DROP INLET ON RT.								144													1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
89+00	DROP INLET IN MEDIAN								87													1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
92+00	DROP INLET ON LT.								203													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
93+53	DROP INLET ON LT.	149																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
93+53	DROP INLET ON RT.	91																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
96+83	DROP INLET ON LT.	325																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
96+83	DROP INLET ON RT.	39																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
101+25	DROP INLET ON LT.	171																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
101+25	DROP INLET IN MEDIAN	39																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
103+00	DROP INLET ON LT.								189													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
103+00	DROP INLET ON RT.	72																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
104+93	DROP INLET ON LT.	203																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
104+93	DROP INLET ON RT.	72																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
107+00	DROP INLET ON LT.								196													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
107+00	DROP INLET ON RT.	72																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
109+00	DROP INLET ON LT.								130													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
109+00	DROP INLET ON RT.	72																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
* 110+33	TEMPORARY JUNCTION BOX AND CULVERT ON LT.																			32						1			FPC-9, PCC-1, PCM-1
111+10	DROP INLET ON LT.	5																				1							FPC-9M, FPC-9E, PCC-1, PCM-1
111+52	DROP INLET ON LT.	17																				1							FPC-9M, FPC-9E, PCC-1, PCM-1
111+60	JUNCTION BOX ON LT.							14																		1			FPC-9, PCC-1, PCM-1
112+00	DROP INLET IN MEDIAN	39																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
112+00	DROP INLET ON RT.	64																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
113+00	DROP INLET ON LT.							218													1								FPC-9E, PCC-1, PCM-1
114+20	DROP INLET ON LT.													117							1								FPC-9E, PCC-1, PCM-1
115+30	DROP INLET ON LT.													105							1			1					FPC-9E, PCC-1, PCM-1
115+50	DROP INLET IN MEDIAN	49																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
117+75	DROP INLET ON LT.	14												229	1						1		1				5	0.06	FPC-9E, PCC-1, PCM-1, FES-1, FES-2
118+00	DROP INLET IN MEDIAN	38																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
120+00	DROP INLET ON LT.													207							1								FPC-9E, PCC-1, PCM-1
120+68	JUNCTION BOX ON RT.				182													1								1		29	0.37	FPC-9, PCC-1, PCM-1, FES-1, FES-2
121+00	DROP INLET ON RT.								33													1	1						FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
121+33	DROP INLET IN MEDIAN	45																				1							FPC-9M, FPC-9E, PCC-1, PCM-1
122+16	DROP INLET ON LT.																				1		1						FPC-9E
123+00	DROP INLET ON RT.	198																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
124+00	DROP INLET ON LT.			261								179					1					1	1				17	0.21	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
124+00	DROP INLET ON RT.	261							96						1							1	1				5	0.06	FPC-9M, FPC-9E, PCC-1, PCM-1, FES-1, FES-2
200+96	DROP INLET ON RT.								133													1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
200+96	DROP INLET ON LT.	31																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
201+54	DROP INLET ON RT.	39																				1	1						FPC-9M, FPC-9E, PCC-1, PCM-1
311+39	DROP INLET ON RT.	79																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
311+39	DROP INLET ON LT.	79													1							1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
314+19	DROP INLET ON RT.	38																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
314+19	DROP INLET ON LT.	38																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
330+40	DROP INLET ON LT.		44																		1			1					FPC-9E, PCC-1, PCM-1
331+19	DROP INLET ON RT.	8																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
333+33	DROP INLET ON LT.											36														1			FPC-9, PCC-1, PCM-1
334+10	DROP INLET ON RT.	69																				1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
334+10	DROP INLET ON LT.								53													1		1					FPC-9M, FPC-9E, PCC-1, PCM-1
SUB TOTALS BOX 1 OF 2:		**1933**	**72**	**0**	**0**	**2**	**86**	**0**	**3607**	**670**	**11**	**472**	**151**	**0**	**4**	**0**	**0**	**0**	**1**	**22**	**2**	**56**	**10**	**47**	**2**	**1**	**25**	**0.30**	
SUBTOTALS BOX 2 OF 2		**2580**	**204**	**261**	**261**	**0**	**0**	**232**	**1337**	**0**	**0**	**215**	**0**	**658**	**6**	**2**	**1**	**2**	**0**	**32**	**7**	**46**	**15**	**28**	**3**	**1**	**130**	**1.64**	
TOTALS:		**4513**	**276**	**261**	**261**	**2**	**86**	**232**	**4944**	**670**	**11**	**687**	**151**	**658**	**10**	**2**	**1**	**2**	**1**	**54**	**9**	**102**	**25**	**75**	**5**	**2**	**155**	**1.94**	

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.
* TEMPORARY JUCTION BOX REMOVAL IS CONSIDERED INCLUDED IN PRICE BID FOR JUNCTION BOX (TYPE ST).

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.		040517	91	296

(2) QUANTITIES

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

7-7-11

R.C. BOX CULVERTS

STATION	DESCRIPTION	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL	
111+25	DBL R.C. BOX CULVERT EXTENSION ON LT.	5	4	12	15.49	2094	10	4	0.05	R-200X-0, W-X003-1, RCB-1, RCB-2, RCB-3
331+44	R.C. BOX CULVERT EXTENSION ON LT. & RT.	8	3	63	48.65	4111	24			SPECIAL DETAILS, RCB-1, RCB-2, RCB-4
SUBTOTALS:					64.14	6205	34	4	0.05	
STRUCTURES OVER 20'										
75+08	QUINT R.C. BOX CULVERT ON 45^ SKEW	10	9	153	793.02	143153	277	27	0.34	R-545X-02, W-X453-2, W-X45, RCB-1, RCB-2
90+00	DBL R.C. BOX CULVERT ON 15^ SKEW	9	8	126	252.45	35819	108	31	0.39	R-215X-0, W-X153-1, W-X15, RCB-1, RCB-2
110+80	QUAD R.C. BOX CULVERT ON 30^ SKEW	12	8	133	661.40	113718	297	49	0.62	R-430X-02, W-X30, W-X303-1, RCB-1, RCB-2
113+64	TRP R.C. BOX CULVERT	10	7	76	228.78	37102	105	33	0.42	R-300X-0, W-X003-1, RCB-1, RCB-2
SUBTOTALS:					1935.65	329792	787	140	1.77	
TOTALS:					1999.79	335997	821	144	1.82	

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

RETAINING WALLS

STATION	STATION	LOCATION	CLASS S CONCRETE-ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	ARCHITECTURAL FINISH	TEXTURED COATING FINISH
			CU.YDS.	POUNDS	CU.YDS.	SQ.FT.	SQ.YD.
200+81	201+68	KANTZ RD ON RT.	47.02	2365	162	1580	176
13+99	16+50	HWY. 265 ON LT. AND KANTZ RD. ON LT.	133.71	8586	490	5322	591
46+82	47+56	HWY. 265 ON RT.	32.17	1642	99	1059	118
74+24	82+70	HWY. 265 ON LT.	1180.70	156000	5820		
55+40	59+60	HWY. 265 ON LT.	81.37	6307	409		
TOTALS:			1474.97	174900	6980	7961	885

SELECTED PIPE BEDDING & BACKFILL

LOCATION	SELECTED PIPE BEDDING	SELECTED PIPE BACKFILL
	CU.YD.	
ENTIRE PROJECT TO BE USED IF		
AND WHERE DIRECTED BY THE	200	400
ENGINEER		
TOTALS:	200	400

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

STAMPED CONCRETE

STATION	STATION	LOCATION	PORTLAND CEMENT CONCRETE BASE		PORTLAND CEMENT CONCRETE DRIVEWAY	STAMPED CONCRETE	
			AVG. WID.	6" U.T.		AVG. WID.	8.5" U.T.
			FEET	SQ. YD.		FEET	SQ. YD.
46+50		CANDLE WOOD TURNOUT	VAR.	26.1	170.4	VAR.	170.4
TOTALS:				26.1	170.4		170.4

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

r040517.dgn 8-20-10

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	92	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 7605 MICHAEL D. PUGETT

5-31-11

BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
			FEET	TON / STATION	TON	TOTAL WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 76-22 TON
HWY. 265																	
9+10	10+10	100' TRANSITION	100.0			56.0	622.2							56.0	622.2	220.0	68.4
10+10	20+00	5 LANE NOTCH AND WIDEN LT. AND RT.	990.0	111.25	1101.4	79.6	8756.0	0.03	262.7	23.6	2596.0	495.0	642.5	79.6	8756.0	220.0	963.2
20+00	22+67	5 LANE NOTCH AND WIDEN LT. AND RT.	267.0	186.00	496.6	82.5	2447.5	0.03	73.4	25.3	750.6	495.0	185.8	82.4	2444.5	220.0	268.9
22+67	24+03	5 LANE NOTCH AND WIDEN RT.	136.0	106.75	145.2	81.9	1237.6	0.03	37.1	24.9	376.3	495.0	93.1	83.8	1266.3	220.0	139.3
24+03	26+00	5 LANE NOTCH AND WIDEN ON RT.	197.0	138.75	273.3	90.9	1989.7	0.03	59.7	30.7	672.0	495.0	166.3	90.9	1989.7	220.0	218.9
26+00	27+30	TOWNSHIP ST. INTERSECTION	130.0	VAR.	817.3	VAR.	2466.7	0.03	74.0	VAR.	380.4	495.0	94.1	VAR.	2466.7	220.0	271.3
27+30	29+30	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	150.75	301.5	54.5	1211.1	0.03	36.3	27.3	606.7	495.0	150.2	54.5	1211.1	220.0	133.2
29+30	30+30	4 LANE DIVIDED FULL DEPTH ON RT.	100.0	125.50	125.5	54.5	605.6	0.03	18.2	27.3	303.3	495.0	75.1	54.5	605.6	220.0	66.6
27+30	29+30	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	45.75	91.5	51.3	1140.0	0.03	34.2	9.3	206.7	495.0	51.2	53.3	1184.4	220.0	130.3
29+30	29+83	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	53.0	42.25	22.4	49.5	291.5	0.03	8.7	8.4	49.5	495.0	12.3	50.3	296.2	220.0	32.6
29+83	30+30	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	47.0	46.25	21.7	44.9	234.5	0.03	7.0	6.9	36.0	495.0	8.9	45.3	236.6	220.0	26.0
30+30	42+95	4 LANE DIVIDED FULL DEPTH ON RT.	1265.0	120.50	1524.3	52.0	7308.9	0.03	219.3	26.0	3654.4	495.0	904.5	52.0	7308.9	220.0	804.0
30+30	32+30	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	44.00	88.0	43.3	962.2	0.03	28.9	6.3	140.0	495.0	34.7	43.3	962.2	220.0	105.8
32+30	32+89	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	59.0	9.75	5.8	30.6	200.6	0.03	6.0					33.8	221.6	220.0	24.4
32+89	33+30	4 LANE DIVIDED NOTCH ON LT.	41.0	19.50	8.0	28.3	128.9	0.03	3.9					28.3	128.9	220.0	14.2
33+30	40+87	4 LANE DIVIDED NOTCH ON LT.	757.0	19.50	147.6	26.0	2186.9	0.03	65.6					26.0	2186.9	220.0	240.6
40+87	42+95	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	208.0	9.75	20.3									26.0	600.9	220.0	66.1
42+95	43+95	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	100.0	75.00	75.0	41.6	462.2	0.03	13.9	14.3	158.9	495.0	39.3	41.6	462.2	220.0	50.8
42+95	43+95	4 LANE DIVIDED NOTCH AND WIDEN ON RT.	100.0	120.50	120.5	60.5	672.2	0.03	20.2	26.0	288.9	495.0	71.5	60.5	672.2	220.0	73.9
43+95	45+95	4 LANE DIVIDED NOTCH AND WIDEN ON RT.	200.0	111.25	222.5	66.6	1480.0	0.03	44.4	23.6	524.4	495.0	129.8	66.6	1480.0	220.0	162.8
43+95	45+30	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	135.0	117.75	159.0	57.1	856.5	0.03	25.7	25.3	379.5	495.0	93.9	57.1	856.5	220.0	94.2
45+30	45+95	4 LANE DIVIDED FULL DEPTH ON LT.	65.0	161.50	105.0	73.1	527.9	0.03	15.8	36.5	263.6	495.0	65.2	73.1	527.9	220.0	58.1
45+95	46+90	FERGUSON AND CANDLE WOOD INTERSECTION	95.0	VAR.	35.2	VAR.	216.6	0.03	6.5	VAR.	96.6	495.0	23.9	VAR.	216.6	220.0	23.8
46+90	48+90	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	148.75	297.5	66.5	1477.8	0.03	44.3	33.3	740.0	495.0	183.2	66.5	1477.8	220.0	162.6
48+90	49+90	4 LANE DIVIDED FULL DEPTH ON RT.	100.0	125.50	125.5	54.5	605.6	0.03	18.2	27.3	303.3	495.0	75.1	54.5	605.6	220.0	66.6
46+90	48+90	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	83.25	166.5	59.4	1320.0	0.03	39.6	16.4	364.4	495.0	90.2	59.4	1320.0	220.0	145.2
48+90	49+90	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	100.0	54.00	54.0	43.4	482.2	0.03	14.5	8.9	98.9	495.0	24.5	43.4	482.2	220.0	53.0
49+90	63+75	4 LANE DIVIDED FULL DEPTH ON RT.	1385.0	120.50	1668.9	52.0	8002.2	0.03	240.1	26.0	4001.1	495.0	990.3	52.0	8002.2	220.0	880.2
49+90	52+00	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	210.0	9.75	20.5	23.4	546.0	0.03	16.4					26.0	606.7	220.0	66.7
52+00	63+75	4 LANE DIVIDED NOTCH ON LT.	1175.0	19.50	229.1	26.0	3394.4	0.03	101.8					26.0	3394.4	220.0	373.4
63+75	64+75	FIRESTATION INTERSECTION	100.0	VAR.	109.8	VAR.	811.4	0.03	24.3	VAR.	252.1	495.0	62.4	VAR.	819.7	220.0	90.2
63+75	64+75	4 LANE DIVIDED FULL DEPTH ON RT.	100.0	153.75	153.8	69.0	766.7	0.03	23.0	34.5	383.3	495.0	94.9	69.0	766.7	220.0	84.3
64+75	66+75	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	186.67	373.3	86.0	1911.1	0.03	57.3	43.0	955.6	495.0	236.5	86.0	1911.1	220.0	210.2
64+75	65+00	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	25.0	9.75	2.4	25.3	70.3	0.03	2.1					29.2	81.1	220.0	8.9
65+00	66+75	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	175.0	95.75	167.6	53.5	1040.3	0.03	31.2	19.6	381.1	495.0	94.3	53.5	1040.3	220.0	114.4
66+75	67+75	OLD WIRE RD. INTERSECTION	100.0	VAR.	314.6	VAR.	698.2	0.03	20.9	VAR.	818.8	495.0	202.7	VAR.	2643.4	220.0	290.8
67+75	69+75	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	149.25	298.5	66.8	1484.4	0.03	44.5	33.4	742.2	495.0	183.7	66.8	1484.4	220.0	163.3
69+75	70+75	4 LANE DIVIDED FULL DEPTH ON RT.	100.0	126.00	126.0	54.8	608.9	0.03	18.3	27.4	304.4	495.0	75.3	54.8	608.9	220.0	67.0
67+75	69+75	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	43.00	86.0	49.5	1100.0	0.03	33.0	8.6	191.1	495.0	47.3	51.6	1146.7	220.0	126.1
69+75	70+75	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	100.0			31.2	346.7	0.03	10.4					34.5	383.3	220.0	42.2
70+75	89+45	4 LANE DIVIDED FULL DEPTH ON RT.	1870.0	120.50	2253.4	52.0	10804.4	0.03	324.1	26.0	5402.2	495.0	1337.0	52.0	10804.4	220.0	1188.5
70+75	74+00	4 LANE DIVIDED NOTCH ON LT.	325.0	19.50	63.4	26.0	938.9	0.03	28.2					26.0	938.9	220.0	103.3
74+00	86+52	4 LANE DIVIDED FULL DEPTH ON LT.	1252.0	120.50	1508.7	52.0	7233.8	0.03	217.0	26.0	3616.9	495.0	895.2	52.0	7233.8	220.0	795.7
86+52	89+45	4 LANE DIVIDED NOTCH ON LT.	293.0	19.50	57.1	26.0	846.4	0.03	25.4					26.0	846.4	220.0	93.1
89+45	90+45	4 LANE DIVIDED FULL DEPTH ON RT.	100.0	153.50	153.5	69.0	766.7	0.03	23.0	34.5	383.3	495.0	94.9	69.0	766.7	220.0	84.3
90+45	92+45	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	186.75	373.5	86.0	1911.1	0.03	57.3	43.0	955.6	495.0	236.5	86.0	1911.1	220.0	210.2
89+45	89+65	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	20.0	9.75	2.0	25.7	57.1	0.03	1.7					26.3	58.4	220.0	6.4
89+65	90+24	4 LANE DIVIDED FULL DEPTH ON LT.	59.0	125.50	74.0	54.5	357.3	0.03	10.7	27.3	179.0	495.0	44.3	54.5	357.3	220.0	39.3
90+24	90+45	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	21.0	38.25	8.0	30.1	70.2	0.03	2.1	4.9	11.4	495.0	2.8	30.1	70.2	220.0	7.7
90+45	92+45	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	57.25	114.5	43.0	955.6	0.03	28.7	9.7	215.6	495.0	53.4	43.0	955.6	220.0	105.1
92+45	93+50	PAR CT. INTERSECTION	105.0	VAR.	299.5	VAR.	2738.4	0.03	82.2	VAR.	787.4	495.0	194.9	VAR.	1954.5	220.0	215.0
93+50	95+50	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	148.75	297.5	66.5	1477.8	0.03	44.3	33.3	740.0	495.0	183.2	66.5	1477.8	220.0	162.6
95+50	96+49	4 LANE DIVIDED FULL DEPTH ON RT.	99.0	125.50	124.2	54.5	599.5	0.03	18.0	27.3	300.3	495.0	74.3	54.5	599.5	220.0	65.9
93+50	95+50	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	44.25	88.5	49.7	1104.4	0.03	33.1	8.9	197.8	495.0	49.0	51.9	1153.3	220.0	126.9
95+50	96+49	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	99.0			30.3	333.3	0.03	10.0			495.0		34.5	379.5	220.0	41.7
96+49	116+05	4 LANE DIVIDED FULL DEPTH ON RT.	1956.0	126.50	2474.3	52.0	11301.3	0.03	339.0	26.0	5650.7	495.0	1398.5	52.0	11301.3	220.0	1243.1
96+49	108+00	4 LANE DIVIDED NOTCH ON LT.	1151.0	19.50	224.4	26.0	3325.1	0.03	99.8					26.0	3325.1	220.0	365.8
108+00	113+38	4 LANE DIVIDED FULL DEPTH ON LT.	538.0	120.50	648.3	52.0	3108.4	0.03	93.3	26.0	1554.2	495.0	384.7	52.0	3108.4	220.0	341.9
113+38	116+05	4 LANE DIVIDED NOTCH ON LT.	267.0	19.50	52.1	26.0	771.3	0.03	23.1					26.0	771.3	220.0	84.8
116+05	118+05	4 LANE DIVIDED FULL DEPTH ON RT.	200.0	175.00	350.0	80.0	1777.8	0.03	53.3	40.0	888.9	495.0	220.0	80.0	1777.8	220.0	195.6
116+05	118+05	4 LANE DIVIDED NOTCH ON LT.	200.0	19.50	39.0	27.3	606.7	0.03	18.2					27.3	606.7	220.0	66.7
118+05	119+89	4 LANE DIVIDED NOTCH AND WIDEN ON RT.	184.0	214.75	395.1	104.2	2130.3	0.03	63.9	50.2	1026.3	495.0	254.0	104.2	2130.3	220.0	234.3
118+05	119+89	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	184.0	9.75	17.9	23.8	486.6	0.03	14.6					32.8	670.6	220.0	73.8
119+89	122+10	E. JOYCE BLVD. INTERSECTION	221.0	VAR.	561.4	VAR.	4805.0	0.03	144.2	VAR.	1463.1	495.0	362.1	VAR.	4888.3	220.0	537.7
122+10	122+95	4 LANE DIVIDED FULL DEPTH ON RT.	85.0	120.75	102.6	52.1	492.1	0.03	14.8	26.1	246.5	495.0	61.0	52.1	492.1	220.0	54.1
122+95	125+05	4 LANE DIVIDED NOTCH AND WIDEN ON RT.	210.0	105.25	221.0	48.0	1120.0	0.03	33.6	22.1	515.7	495.0	127.6	48.0	1120.0	220.0	123.2
122+10	123+10	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	100.0	101.50	101.5	64.1	712.2	0.03	21.4	21.1	234.4	495.0	58.0	64.1	712.2	220.0	78.3
123+10	124+00	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	90.0	96.50	86.9	54.3	543.0	0.03	16.3	19.8	198.0	495.0	49.0	54.3	543.0	220.0	59.7
124+00	125+05	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	105.0	89.87	94.4	44.1	514.5	0.03	15.4	18.1	211.2	495.0	52.3	44.1	514.5	220.0	56.6
125+05	126+40	4 LANE DIVIDED TO UNDIVIDED	135.0	VAR.	260.1	VAR.	1290.4	0.03	38.7	VAR.	645.2	495.0	159.7	VAR.	1290.4	220.0	141.9
126+40	127+40	100' TRANSITION	100.0			34.0	377.8	0.03	11.3					34.0	377.8	220.0	41.6
SUBTOTALS BOX 1 OF 2					**21148.4**				**3708.1**				**11495.1**				**13927.3**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
ACHM BINDER COURSE (1").....95% MIN. AGGR.....5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG70-22
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

8-20-10 r040517.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.		040517	93	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

BASE AND SURFACING (BOX 2 OF 2)

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 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22
			FEET			FEET				FEET			TON	FEET			TON
SIDE STREETS																	
200+16	200+98	KANTZ RD. FULL DEPTH	82.0	73.25	60.1	56.0	510.2	0.03	15.3	28.0	255.1	495.0	63.1	56.0	510.2	220.0	56.1
200+98	201+38	KANTZ RD. FULL DEPTH	40.0	159.50	63.8	72.0	320.0	0.03	9.6	36.0	160.0	495.0	39.6	72.0	320.0	220.0	35.2
201+38	201+57	KANTZ RD. FULL DEPTH	19.0	190.50	36.2	88.0	185.8	0.03	5.6	44.0	92.9	495.0	23.0	88.0	185.8	220.0	20.4
18+18		COPPER OAKS LN. FULL DEPTH		VAR.	72.5	VAR.	362.8	0.03	10.9	VAR.	181.4	495.0	44.9	VAR.	362.8	220.0	39.9
21+48		GOLDEN OAKS DR. FULL DEPTH		VAR.	88.5	VAR.	443.3	0.03	13.3	VAR.	221.7	495.0	54.9	VAR.	443.3	220.0	48.8
24+67		E. OAKS DR. FULL DEPTH		VAR.	64.4	VAR.	566.9	0.03	17.0	VAR.	283.4	495.0	70.1	VAR.	566.9	220.0	62.4
32+75		E. SHAGBARK BND. FULL DEPTH		VAR.	79.0	VAR.	388.3	0.03	11.6	VAR.	194.2	495.0	48.1	VAR.	388.3	220.0	42.7
38+40		HARDY LN. FULL DEPTH		VAR.	83.2	VAR.	422.7	0.03	12.7	VAR.	211.3	495.0	52.3	VAR.	422.7	220.0	46.5
51+57		UN-NAMED ST. FULL DEPTH		VAR.	64.6	VAR.	310.8	0.03	9.3	VAR.	155.4	495.0	38.5	VAR.	310.8	220.0	34.2
310+10	310+70	OLD WIRE RD. NOTCH AND WIDEN	60.0			28.7	191.3	0.03	5.7					32.0	213.3	220.0	23.5
310+70	311+45	OLD WIRE RD. NOTCH AND WIDEN	75.0	22.50	16.9	36.1	300.8	0.03	9.0	3.3	27.5	495.0	6.8	39.3	327.5	220.0	36.0
313+62	314+00	OLD WIRE RD. FULL DEPTH	38.0	159.50	60.6	72.0	304.0	0.03	9.1	36.0	152.0	495.0	37.6	72.0	304.0	220.0	33.4
314+00	314+35	OLD WIRE RD. NOTCH AND WIDEN	35.0	27.46	9.6	37.9	147.4	0.03	4.4	4.6	17.9	495.0	4.4	40.6	157.9	220.0	17.4
314+35	315+10	OLD WIRE RD. NOTCH AND WIDEN	75.0			28.1	234.2	0.03	7.0					32.0	266.7	220.0	29.3
311+00		FIRESTATION INTERSECTION ON OLD WIRE RD.		VAR.	8.2	VAR.	363.3	0.03	10.9	VAR.	181.7	495.0	45.0	VAR.	363.3	220.0	40.0
96+33		E. BIRDIE LN. FULL DEPTH		VAR.	79.4	VAR.	95.5	0.03	2.9	VAR.	191.1	495.0	47.3	VAR.	95.5	220.0	10.5
100+00		WESTON PLACE FULL DEPTH		VAR.	88.3	VAR.	425.4	0.03	12.8	VAR.	212.7	495.0	52.6	VAR.	425.4	220.0	46.8
105+40		BRANDON WAY FULL DEPTH		VAR.	71.8	VAR.	344.5	0.03	10.3	VAR.	172.3	495.0	42.6	VAR.	344.5	220.0	37.9
111+32		COY KAYLOR DR. FULL DEPTH		VAR.	108.9	VAR.	541.4	0.03	16.2	VAR.	270.7	495.0	67.0	VAR.	541.4	220.0	59.6
								0.03									
ADDITIONAL FOR LEVELING AND GRADE RAISE																	
10+10	38+00	HWY. 265 LEVELING	2790.0			VAR.	VAR.	0.10	992.0					VAR.	VAR.	VAR.	931.7
38+00	41+00	HWY. 265 GRADE RAISE	300.0			VAR.	VAR.	0.03	32.1	VAR.	VAR.	VAR.	140.0	VAR.	VAR.	VAR.	118.0
41+00	53+00	HWY. 265 LEVELING	1200.0			VAR.	VAR.	0.10	423.1					VAR.	VAR.	VAR.	360.3
53+00	57+00	HWY. 265 GRADE RAISE	400.0			VAR.	VAR.	0.03	32.0	VAR.	VAR.	VAR.	81.9	VAR.	VAR.	VAR.	145.2
57+00	69+35	HWY. 265 LEVELING	1235.0			VAR.	VAR.	0.10	428.8					VAR.	VAR.	VAR.	203.3
69+35	74+00	HWY. 265 GRADE RAISE	465.0			VAR.	VAR.	0.03	42.7	VAR.	VAR.	VAR.	77.7	VAR.	VAR.	VAR.	178.5
87+00	93+00	HWY. 265 LEVELING	600.0			VAR.	VAR.	0.10	213.3					VAR.	VAR.	VAR.	115.4
93+00	102+00	HWY. 265 GRADE RAISE	900.0			VAR.	VAR.	0.03	90.3	VAR.	VAR.	VAR.	451.0	VAR.	VAR.	VAR.	344.3
102+00	104+00	HWY. 265 LEVELING	200.0			VAR.	VAR.	0.10	35.5					VAR.	VAR.	VAR.	28.7
104+00	108+00	HWY. 265 GRADE RAISE	400.0			VAR.	VAR.	0.03	32.7	VAR.	VAR.	VAR.	166.2	VAR.	VAR.	VAR.	156.4
114+20	126+40	HWY. 265 LEVELING	1220.0			VAR.	VAR.	0.10	469.3					VAR.	VAR.	VAR.	301.1
SUBTOTALS BOX 1 OF 2:					**21148.4**				**3708.1**				**11495.1**				**13927.3**
SUBTOTALS BOX 2 OF 2:					**1056.0**				**2985.4**				**1654.6**				**3603.5**
TOTALS:					**22204.4**				**6693.5**				**13149.7**				**17530.8**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% ASPHALT BINDER
ACHM BINDER COURSE (1").....95% MIN. AGGR.....5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG70-22
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

CONCRETE BASE

STATION	STATION	LOCATION	LENGTH	TACK COAT 0.1 GAL. PER SQ. YD.			PORTLAND CEMENT CONCRETE BASE			
				AVG. WID.	SQ. YD.	GAL.	AVG. WID.	6" U.T.	AVG. WID.	6.5" U.T.
			FEET	FEET			FEET	SQ. YD.	FEET	SQ. YD.
					HWY. 265					
22+67	24+03	5 LANE NOTCH AND WIDEN ON LT.	136.0	2.0	30.2	3.0	4.5	612.0	2.0	612.0
26+00	27+30	INTERSECTION AT TOWNSHIP ST.	130.0	VAR.	108.8	10.9	VAR.	177.0	VAR.	108.8
27+30	29+30	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	2.0	44.4	4.4	4.5	900.0	2.0	900.0
29+30	29+83	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	53.0	0.8	4.7	0.5	3.3	174.9	0.8	174.9
32+30	32+89	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	59.0	3.2	21.0	2.1	5.7	336.3	3.2	336.3
40+87	42+95	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	208.0	4.4	101.7	10.2	6.9	1435.2	4.4	1435.2
49+90	52+00	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	210.0	2.6	60.7	6.1	5.1	1071.0	2.6	1071.0
63+75	64+75	FIRESTATION INTERSECTION	100.0	VAR.	8.3	0.8	VAR.	18.1	VAR.	8.3
64+75	65+00	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	25.0	3.9	10.8	1.1	6.4	160.0	3.9	160.0
66+75	67+75	OLD WIRE RD. INTERSECTION	100.0	VAR.	66.4	6.6	VAR.	96.1	VAR.	66.4
69+75	70+75	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	100.0	3.3	36.7	3.7	8.3	830.0	3.3	830.0
89+45	89+65	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	20.0	0.6	1.3	0.1	3.0	60.0	0.6	60.0
92+45	93+50	PAR CT. INTERSECTION	105.0	3.5	40.8	4.1	7.0	735.0	3.5	735.0
93+50	95+50	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	200.0	2.2	48.9	4.9	4.7	940.0	2.2	940.0
95+50	96+49	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	99.0	4.2	46.2	4.6	9.2	910.8	4.2	910.8
118+05	119+89	4 LANE DIVIDED NOTCH AND WIDEN ON LT.	184.0	9.1	186.0	18.6	11.6	2134.4	9.1	2134.4
119+89	122+10	E. JOYCE BLVD. INTERSECTION	221.0	VAR.	83.3	8.3	VAR.	141.6	VAR.	83.3
314+00	314+35	OLD WIRE RD. NOTCH AND WIDEN	35.0	2.6	10.1	1.0	5.1	178.5	2.6	178.5
314+35	315+10	OLD WIRE RD. NOTCH AND WIDEN	75.0	3.9	32.5	3.3	8.9	667.5	3.9	667.5
* ENTIRE	PROJECT	IF AND WHERE DIRECTED BY THE ENGINEER						1000.0		1000.0
TOTALS:						**94.3**		**12578.4**		**12412.4**

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

r040517.dgn

8-20-10

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	94	296

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 7-7-11

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS		
										18"	21"X15"	42"X29"
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.		
11+35	LT	HWY. 265 DRIVEWAY	26	11+08	11+62	99.60						
200+44	LT	KANTZ RD. DRIVEWAY	24	200+18	200+70	102.00						
200+64	RT	KANTZ RD. DRIVEWAY	24	200+38	200+90	45.50						
15+55	RT	HWY. 265 DRIVEWAY	16	15+33	15+77	251.60						
17+28	RT	HWY. 265 DRIVEWAY	16	17+06	17+50	24.90	93.4	10.3	38.1			
19+27	RT	HWY. 265 DRIVEWAY	16	19+05	19+49	50.10						
20+53	RT	HWY. 265 DRIVEWAY	16	20+31	20+75	52.80						
22+10	RT	HWY. 265 DRIVEWAY	16	21+88	22+32	62.30						
22+96	LT	HWY. 265 DRIVEWAY	16	22+74	23+18	24.90	82.8	9.1	33.8			
29+48	LT	HWY. 265 DRIVEWAY	16	29+26	29+70	24.90	22.4	2.5	9.1			
31+00	RT	HWY. 265 DRIVEWAY	24	30+74	31+26	133.10					32	
33+15	RT	HWY. 265 DRIVEWAY	24	32+89	33+41	197.00					32	
35+34	RT	HWY. 265 DRIVEWAY	24	35+08	35+60	118.40					34	
36+89	RT	HWY. 265 DRIVEWAY	16	36+67	37+11	24.90	37.1	4.1	15.1		28	
38+00	RT	HWY. 265 DRIVEWAY	40	37+66	38+34		88.1	9.7	36.0		48	
39+50	RT	HWY. 265 DRIVEWAY	16	39+28	39+72	24.90	29.3	3.2	12.0		28	
40+77	LT	HWY. 265 DRIVEWAY	28	40+49	41+05	35.60	81.6	9.0	33.3			
41+00	RT	HWY. 265 DRIVEWAY	16	40+78	41+22	24.90	21.9	2.4	8.9		28	
51+38	LT	HWY. 265 DRIVEWAY	24	51+12	51+64	156.20						
52+56	LT	HWY. 265 DRIVEWAY	16	52+34	52+78	186.40						
54+37	LT	HWY. 265 DRIVEWAY	16	54+15	54+59	132.80						
55+00	RT	HWY. 265 DRIVEWAY	24	54+74	55+26	32.00	132.9	14.6	54.3			
57+16	LT	HWY. 265 DRIVEWAY	16	56+94	57+38	24.90	87.6	9.6	35.8			
57+60	RT	HWY. 265 DRIVEWAY	30	57+31	57+89	37.30	40.9	4.5	16.7			
58+53	RT	HWY. 265 DRIVEWAY	24	58+27	58+79	32.00	51.9	5.7	21.2			
59+36	RT	HWY. 265 DRIVEWAY	30	59+07	59+65	37.30	64.6	7.1	26.4			
60+67	LT	HWY. 265 DRIVEWAY	24	60+41	60+93	32.00	190.4	20.9	77.7			
62+00	LT	HWY. 265 DRIVEWAY	22	61+75	62+25	30.20	103.2	11.4	42.1			
64+00	MEDIAN	HWY. 265 FIRESTATION CROSSING	60	63+75	64+35	71.20			43.6			
65+00	RT	HWY. 265 DRIVEWAY	16	64+78	65+22	24.90	51.1	5.6	20.9			
311+22	LT	OLD WIRE RD. DRIVEWAY	16	311+00	311+44	24.90	51.7	5.7	21.1			
314+37	RT	OLD WIRE RD. DRIVEWAY	16	314+15	314+59	24.90	35.1	3.9	14.3			28
87+44	RT	HWY. 265 DRIVEWAY	16	87+22	87+66	24.90	66.6	7.3	27.2			
87+44	LT	HWY. 265 DRIVEWAY	16	87+22	87+66	24.90	27.8	3.1	11.4			
98+38	RT	HWY. 265 DRIVEWAY	16	98+16	98+60	24.90	46.2	5.1	18.9			
99+29	RT	HWY. 265 DRIVEWAY	16	99+07	99+51	24.90	28.1	3.1	11.5			
113+46	LT	HWY. 265 DRIVEWAY	24	113+20	113+72	32.00	83.2	9.2	34.0			
115+68	LT	HWY. 265 DRIVEWAY	24	115+42	115+94	122.90				28		
333+00	RT	E. JOYCE ST DRIVEWAY	16	332+78	333+22	24.90	43.8	4.8	17.9			
123+60	LT	HWY. 265 DRIVEWAY	40	123+26	123+94	190.90						
123+70	RT	HWY. 265 DRIVEWAY	40	123+36	124+04	46.20	135.2	14.9	55.2			
126+20	RT	HWY. 265 DRIVEWAY	40	125+86	126+54	46.20	46.6	5.1	19.0			
* ENTIRE PROJECT TEMPORARY DRIVES									500.0			
TOTALS:						**2707.10**		**191.9**	**1255.5**	**28**	**230**	**28**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.3% MIN. AGGR.....5.7% 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.

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.

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

** FOR INFORMATION ONLY

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.		040517	95	296

(2) SUMMARY OF QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

7-11-11

SUMMARY OF QUANTITIES (BOX 1 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
201	CLEARING		102	STATION
201	GRUBBING		102	STATION
202	REMOVAL AND DISPOSAL OF CURB		226	LIN. FT.
202	REMOVAL AND DISPOSAL OF CURB AND GUTTER		2113	LIN. FT.
202	REMOVAL AND DISPOSAL OF FENCE		6066	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES		5	EACH
202	REMOVAL AND DISPOSAL OF FENCE POSTS		6	EACH
202	REMOVAL AND DISPOSAL OF RETAINING WALLS		143	LIN. FT.
202	REMOVAL AND DISPOSAL OF BRICK WALLS		176	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT		1530	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS		144	SQ. YD.
202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS		2989	SQ. YD.
202	REMOVAL AND DISPOSAL OF WALKS		2711	SQ. YD.
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS		2	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS		8	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS		61	EACH
202	REMOVAL AND DISPOSAL OF BOX CULVERTS		2	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING		66	SQ. YD.
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL		666	LIN. FT.
202	REMOVAL AND DISPOSAL OF BRICK COLUMNS		46	EACH
202	REMOVAL AND DISPOSAL OF SIGNS		3	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE STOPBLOCK		10	EACH
202	REMOVAL AND DISPOSAL OF SPRINKLER SYSTEM		1	EACH
206	FLOWABLE SELECT MATERIAL		1132	CU. YD.
210	UNCLASSIFIED EXCAVATION		48608	CU. YD.
210	COMPACTED EMBANKMENT		78048	CU. YD.
SP & 210	SOIL STABILIZATION		200	TON
SS & 303	AGGREGATE BASE COURSE (CLASS 7)		23460	TON
309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)		12605	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (6 1/2" UNIFORM THICKNESS)		12412	SQ. YD.
401	TACK COAT		6898	GAL.
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")		12492	TON
SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")		658	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")		16713	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")		11	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")		999	TON
412	COLD MILLING ASPHALT PAVEMENT		2348	SQ. YD.
SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC		55	TON
SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY		600	TON
SP & 505	PORTLAND CEMENT CONCRETE DRIVEWAY		2877.50	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
603	18" TEMPORARY CULVERT		54	LIN. FT.
SS & 604	SIGNS		1233	SQ. FT.
SS & 604	BARRICADES		952	LIN. FT.
SS & 604	TRAFFIC DRUMS		521	EACH
SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		1031	LIN. FT.
SS & 604	RELOCATING PRECAST CONCRETE BARRIER		898	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS		66228	LIN. FT.
SS & 604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)		17	EACH
SS & 604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)		17	EACH
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS		3595	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS		8825	LIN. FT.
SS & 604	VERTICAL PANELS		14	EACH
605	CONCRETE DITCH PAVING (TYPE B)		711	SQ. YD.
SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		4513	LIN. FT.
* SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	4944	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	4944	LIN. FT.
SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		276	LIN. FT.
* SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	670	LIN. FT.
* 606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	670	LIN. FT.
* SS & 606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	11	LIN. FT.
* 606	30" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	11	LIN. FT.
SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		261	LIN. FT.
* SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	687	LIN. FT.
* 606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE	(ALTERNATE NO. 2)	687	LIN. FT.
SS & 606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)		261	LIN. FT.
SS & 606	22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)		2	LIN. FT.
SS & 606	51" X 31" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)		86	LIN. FT.
* SS & 606	51" X 31" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	151	LIN. FT.
* 606	49" X 33" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE	(ALTERNATE NO. 2)	151	LIN. FT.
SS & 606	73" X 45" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)		232	LIN. FT.
* SS & 606	73" X 45" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	(ALTERNATE NO. 1)	658	LIN. FT.
* 606	71" X 47" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE	(ALTERNATE NO. 2)	658	LIN. FT.
SS & 606	18" SIDE DRAIN		28	LIN. FT.
SS & 606	21" X 15" SIDE DRAIN		230	LIN. FT.
SS & 606	42" X 29" SIDE DRAIN		28	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		10	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		1	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS		2	EACH
606	22" X 14" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS		1	EACH
606	SELECTED PIPE BEDDING		200	CU. YD.
606	SELECTED PIPE BACKFILL		400	CU. YD.

*ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (BOX 2 OF 3)

ITEM NUMBER	ITEM		QUANTITY	UNIT
609	DROP INLETS (TYPE C)		9	EACH
609	DROP INLETS (TYPE MO)		102	EACH
609	JUNCTION BOXES (TYPE ST)		2	EACH
609	JUNCTION BOXES (TYPE E)		5	EACH
609	DROP INLET EXTENSIONS (4')		25	EACH
609	DROP INLET EXTENSIONS (8')		75	EACH
611	UNDERDRAIN OUTLET PROTECTORS		34	EACH
611	4" PIPE UNDERDRAINS		7936	LIN. FT.
615	PAVEMENT REPAIR OVER CULVERTS (CONCRETE)		406.9	CU. YD.
619	WIRE FENCE (TYPE D-2)		3061	LIN. FT.
* 619	16' STEEL GATES	(ALTERNATE NO. 1)	2	EACH
* 619	16' ALUMINUM GATES	(ALTERNATE NO. 2)	2	EACH
620	LIME		19	TON
620	SEEDING		9.53	ACRE
620	MULCH COVER		43.53	ACRE
SS & 620	WATER		1921.7	M.GAL.
621	TEMPORARY SEEDING		34.00	ACRE
621	SILT FENCE		20582	LIN. FT.
621	SAND BAG DITCH CHECKS		594	BAG
621	DROP INLET SILT FENCE		3446	LIN. FT.
621	SEDIMENT BASIN		207	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		207	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		1084	CU. YD.
621	ROCK DITCH CHECKS		105	CU. YD.
623	SECOND SEEDING APPLICATION		9.53	ACRE
624	SOLID SODDING		20314	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)		167	SQ. YD.
632	CONCRETE ISLAND		849	SQ. YD.
633	CONCRETE WALKS		12067	SQ. YD.
634	CONCRETE CURB (TYPE D)		235	LIN. FT.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		43385	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
637	MAILBOXES		23	EACH
637	MAILBOX SUPPORTS (SINGLE)		13	EACH
637	MAILBOX SUPPORTS (DOUBLE)		5	EACH
641	WHEELCHAIR RAMPS (TYPE 2)		150	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 3)		141	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 4)		24	SQ. YD.
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)		3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)		63	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)		18	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED		24	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)		12094	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)		649	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)		27	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)		1727	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")		60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")		120	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")		60	LIN. FT.
710	NON-METALLIC CONDUIT (2")		120	LIN. FT.
710	NON-METALLIC CONDUIT (3")		1948	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)		17	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2)		8	EACH
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)		2	EACH
713	SPAN WIRE ASSEMBLY		3	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')		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 (40')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		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 (62')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66'-42')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (74')		1	EACH
SS & 715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION		12	EACH
716	TREATED WOOD POLE (CLASS 3, 40')		12	EACH

*ALTERNATE BID ITEMS

8-20-10 r040517.dgn

SUMMARY OF QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
8-16-11				6	ARK.			
8-23-11				JOB NO.		040517	96	296

(2) SUMMARY OF QUANTITIES AND REVISION BOX

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

8-23-11

SUMMARY OF QUANTITIES (BOX 3 OF 3)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	918	LIN. FT.
SS & 718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (10")	172	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	28698	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	159	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	3167	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	5585	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	36	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	50	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (BIKE EMBLEMS)	14	EACH
721	RAISED PAVEMENT MARKERS (TYPE II)	402	EACH
733	VIDEO CABLE	10090	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	41	EACH
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	6	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	13	EACH
SP & 733	VEHICLE DETECTOR RACK (24 CHANNEL)	3	EACH
SP & 733	VIDEO DETECTOR RELOCATION	20	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	7014	CU. YD.
802	CLASS S CONCRETE - ROADWAY	1539.11	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	181105	POUND
SP	ANTENNA RELOCATION	3	EACH
SP	VIDEO DETECTOR ROTATION	20	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	35	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	1909	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	165	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	60	LIN. FT.
SP	LUMINAIRE ASSEMBLY	3	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	250	LIN. FT.
SP	18" STREET NAME SIGN	12	EACH
SP	LOCAL RADIO WITH ANTENNA	3	EACH
SP	ANTENNA CABLE (TYPE 6)	420	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3	EACH
SP	ARCHITECTURAL FINISH	7961	SQ. FT.
SP	STAMPED CONCRETE	170	SQ.YD.
SP	TEXTURED COATING FINISH	885	SQ.YD.
	STRUCTURES OVER 20' SPAN		
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 1)	1.00	LUMP SUM
205	REMOVAL OF EXISTING BRIDGE STRUCTURE (SITE NO. 2)	1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	787	CU. YD.
802	CLASS S CONCRETE - ROADWAY	1935.65	CU. YD.
804	REINFORCING STEEL-ROADWAY (GRADE 60)	329792	POUND

REVISION BOX

DATE	REVISION	SHEET NUMBER
8/16/2011	CHANGE ITEM VEHICLE DETECTOR RACK (16 CHANNEL) TO VEHICLE DETECTOR RACK (24 CHANNEL)	96, 137, 138, 149, 160
8/23/2011	ADDED 6" U.T. TO NOTE ON WIRE MESH DETAIL	12, 96

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8-20-10

COORDINATES

ARKANSAS STATE PLANE, NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.

NAME	NORTHING	EASTING	ELEVATION	PREFERENCE	des
1	644216.5807	685622.1471	1405.5031	SU	CAP/REBAR RT SH
2	645273.4278	685659.5870	1380.6598	SU	CAP\REBAR RT SH
3	646948.4251	685595.4032	1396.9722	SU	CAP/REBAR LT SH
4	647792.3868	685695.6749	1401.5784	SU	CAP\REBAR LT SH
5	648470.8660	685668.7950	1380.0250	SU	CAP\REBAR LT SH
6	649729.1265	685748.3746	1334.6784	SU	CAP/REBAR RT SH
7	650750.7247	685605.3193	1284.6645	SU	CAP/REBAR LT SH
8	651311.3048	685922.2293	1283.5595	SU	CAP\REBAR RT SH
9	652689.3058	686050.0984	1255.7446	SU	CAP/REBAR LT SH
10	654146.7832	686256.7816	1266.7649	SU	CAP/REBAR LT SH
11	654960.3097	686566.9294	1284.5916	SU	CAP/REBAR RT SH
12	656187.9888	686618.4505	1243.0225	SU	CAP\REBAR LT SH
13	657009.4378	686767.3014	1250.6790	SU	CAP\REBAR RT SH
14	657943.2692	686199.8619	1278.3876	SU	CAP/REBAR LT SH
15	658643.6852	686051.9565	1330.9231	SU	CAP\REBAR LT SH
16	659549.9636	686475.1787	1313.6071	SU	CAP\REBAR LT SH
17	660402.9109	686935.6528	1283.5865	SU	CAP\REBAR RT SH
18	661383.9005	686942.0604	1287.2372	SU	CAP/REBAR LT BANK
19	662123.9329	687013.7735	1255.9102	SU	CAP/REBAR RT SH
20	663083.9066	687005.7349	1254.3598	SU	CAP/REBAR LT SH
21	663730.1142	687089.8636	1293.2731	SU	CAP/REBAR RT SH
22	665129.4717	687103.4013	1247.1964	SU	CAP/REBAR LT SH
23	666109.9301	687158.2813	1261.5094	SU	CAP\REBAR RT SH
24	667220.5023	686754.2961	1293.7395	SU	CAP/REBAR LT SH
25	668376.4599	686889.4788	1323.8159	SU	CAP/REBAR RT SH
100	687290.3114	685979.6694	1348.9671	GPS	NGS BM G309
101	687292.3817	687917.7109	1386.0543	GPS	AHTD GPS G309A
102	660532.8248	687020.9746	1279.1723	GPS	AHTD GPS 720041
103	660597.4218	685661.6387	1273.1930	GPS	AHTD GPS 720041A
104	674121.1836	687467.8548	1349.7581	GPS	AHTD GPS 720040
105	674130.0457	690067.2511	1352.0685	GPS	AHTD GPS720040A
106	645336.2636	686711.1367	1430.6697	GPS	AHTD GPS 720014
107	645174.2429	685080.1048	1413.7370	GPS	CAP/REBAR LT SH HWY 45
108	697165.1198	688896.2073	1389.1029	GPS	AHTD GPS 040054
109	698849.7281	688757.5701	1381.1200	GPS	AHTD GPS 040054A
601	645255.7284	686225.2058	1399.9933	VPT	
602	645109.0133	684488.8769	1422.7221	VPT	
603	647845.9932	684904.7979	1379.2472	VPT	
604	647817.1581	686504.2568	1351.6667	VPT	
605	649941.6071	685214.0727	1300.1935	VPT	
606	649620.5734	686425.4200	1313.8206	VPT	
607	653059.6458	686934.6642	1309.2008	VPT	
608	653561.6739	685393.7355	1248.5545	VPT	
609	655319.5331	685622.0474	1240.0944	VPT	
610	656102.9956	687272.6773	1250.2342	VPT	
611	659470.7233	685764.2598	1302.3548	VPT	
612	659170.3407	686911.3885	1385.0916	VPT	
613	661055.8615	685785.9358	1265.7565	VPT	
614	661512.0570	687407.1955	1275.8918	VPT	
615	663084.8176	687831.3870	1269.5725	VPT	
616	662636.7201	685828.5818	1246.1788	VPT	
617	665728.4180	687673.8092	1250.8476	VPT	
618	667661.7203	686401.4940	1314.0044	VPT	
619	667907.0019	687649.1117	1322.7080	VPT	
620	670426.9576	686279.8638	1321.9334	VPT	
621	670660.2693	687824.9232	1296.1512	VPT	
622	674171.4503	686219.8041	1331.3392	VPT	
623	673772.4282	688120.0420	1343.4214	VPT	
624	676493.0860	688576.6269	1357.1215	VPT	
625	677697.1070	687522.9121	1343.2330	VPT	
626	680728.4302	687089.6394	1337.3371	VPT	
627	680608.7266	689035.7203	1354.6581	VPT	
628	683976.2724	687254.0157	1341.6591	VPT	
629	683298.6135	688746.3171	1358.2995	VPT	
630	687281.7854	687074.6525	1366.0275	VPT	
631	686807.3443	689075.6069	1398.8722	VPT	
632	691030.1268	688155.1638	1388.8976	VPT	
633	689912.0611	689206.9569	1415.1701	VPT	
701	645069.4843	685564.3780	1385.3083	HPT	PICKED CPS CONCRETE SEAM
702	647860.5641	685815.1326	1405.3935	HPT	
703	650654.8427	685752.8203	1292.1979	HPT	
704	652594.2841	686081.8792	1255.6842	HPT	
705	655575.3133	686393.2916	1258.3386	HPT	
706	658731.2892	686212.0083	1334.1357	HPT	
707	661412.5026	686991.2956	1286.4537	HPT	PICKED CPS END STRIPE
708	663100.7220	687233.9776	1255.4890	HPT	
709	665752.0423	687167.4824	1250.8401	HPT	PICKED CPS END STRIPE
710	667336.8792	686813.4844	1296.6237	HPT	
711	670660.6910	687060.7256	1313.2901	HPT	
712	674054.8434	686803.5516	1335.2680	HPT	
713	676506.0940	687584.1876	1351.0969	HPT	
714	680636.5356	688012.0564	1342.5755	HPT	
715	682450.8706	687972.7586	1352.0840	HPT	
716	686845.6526	687906.3527	1384.5482	HPT	
717	690704.6887	688894.1241	1405.0202	HPT	
769	691744.9210	689171.3768	1420.1466	HPT	

900	644408.2371	685634.0965	1398.7172	BM	SQ CUT HDWL RT CL
901	645759.5598	685607.5975	1375.1746	BM	SQ. CUT SW COR. CON. CB
902	646939.7810	685600.2292	1396.2064	BM	SQ. CUT CNTR. HW LT OF CL
903	647875.6154	685706.2280	1402.3125	BM	SQ. CUT CON. BASE OF PT RT
904	649515.5841	685756.6110	1334.2116	BM	SQ. CUT CNTR. HW RT
905	651022.4939	685761.8847	1281.1314	BM	SQ. CUT CNTR. HW RT
906	651775.9613	686058.9876	1273.2855	BM	SQ. CUT EDGE CB ON BR.
907	652598.1247	686035.7579	1255.4036	BM	SQ. CUT END HW LT CL
908	653541.0868	686156.7454	1255.0484	BM	CH SQ CENTER HW
909	654705.9378	686444.2304	1282.3376	BM	CHISELED SQ. ON CURB LT
910	656087.1494	686594.9681	1242.7612	BM	SQ. CUT NW END OF HW, LT
911	657059.3680	686720.0433	1253.1322	BM	CHISELED SQ. CUT, BASE OF PT
912	657917.9721	686214.2392	1275.2719	BM	SQ. CUT CNTR. HW LT
913	659155.4721	686322.9503	1323.5735	BM	SQ. CUT IN BACK OF CB RT
914	660283.6153	686901.9020	1285.4844	BM	SQ. CUT IN HW RT
915	661457.3572	687024.2104	1285.5362	BM	SQ. CUT BACK OF CURB
916	662607.0818	687029.1409	1248.3370	BM	ALUMINUM CAP, SET IN
917	663797.2029	687090.5975	1293.5250	BM	SQ. CUT BACK OF CURB
918	665153.3406	687102.1981	1247.1217	BM	CHISELED SQ. CENTER HW LT
919	666207.9885	687164.4689	1263.8764	BM	CAP/REBAR RT BANK
920	667451.6845	686805.8557	1298.9372	BM	SQ. CUT BACK OF CURB RT
921	668880.4521	686947.8513	1322.2330	BM	SQ CUT HDWL RT C\L
922	671505.7503	686909.6192	1306.3537	BM	SQ CUT IN HW RT OF CL
923	674150.2719	686792.4532	1336.1319	BM	SQ CUT IN PA BASE
924	677045.1009	687632.3292	1348.0902	BM	SQ CUT IN CA RIGHT OF C\L
925	679248.5360	687812.8903	1331.5916	BM	SQ CUT IN SW CORNER OF BR
926	680533.0648	687852.2858	1340.0685	BM	SQ CUT IN PA AT EMMA AV
927	683261.4502	688011.1563	1351.6032	BM	SQ CUT BASE OF SIGNAL PL
928	686350.5077	687821.3708	1372.7909	BM	SQ CUT IN CB RIGHT OF C\L
1101	645824.0452	685542.5132	1372.9644	TV	NBC LT SH
1102	646486.4927	685632.2132	1379.0571	TV	NBC RT SH
1103	647380.9424	685675.3666	1403.2652	TV	NBC RT SH
1104	649013.9798	685734.8005	1345.7090	TV	NBC RT SH
1105	650172.4408	685695.2193	1309.7597	TV	NBC RT SH
1106	650991.4908	685767.9786	1282.0359	TV	NBC RT BANK
1107	651755.3856	686011.8895	1273.2444	TV	NBC RT SH, AT INT
1108	651981.9237	686019.2851	1267.9606	TV	NBC RT SH
1109	652131.6788	686026.7705	1264.9282	TV	NBC RT SH
1110	652289.9308	686047.3854	1260.2850	TV	NBC RT SH
1111	653132.2746	686103.8964	1253.3916	TV	NBC LT SH
1112	653281.5242	686123.6448	1253.7038	TV	NBC LT SH
1113	653656.1027	686216.2538	1256.3221	TV	NBC RT SH
1114	654320.0720	686367.9104	1272.4628	TV	NBC RT DITCH
1115	654654.3029	686476.2975	1281.4685	TV	NBC RT SH
1116	655488.1408	686602.2555	1267.7984	TV	NBC RT SH
1117	655955.4195	686639.6449	1243.1205	TV	NBC RT SH
1118	656408.6551	686715.7624	1242.9683	TV	NBC RT SH
1119	657666.0335	686409.2624	1264.4026	TV	NBC RT DITCH
1120	659162.8289	686342.8104	1324.9247	TV	NBC RT BANK
1121	662629.8502	687027.9471	1249.1223	TV	NBC RT SH
1122	663491.1120	687080.2344	1280.1556	TV	NBC RT SH
1123	664133.8485	687109.6462	1283.0675	TV	NBC RT BANK
1124	664577.8506	687134.3444	1263.2559	TV	NBC RT BANK
1125	666410.9373	687067.9295	1269.4739	TV	NBC RT SH
1126	666940.9168	686884.4132	1285.9908	TV	NBC RT SH
1127	667494.7950	686808.0927	1297.2215	TV	NBC RT DITCH
1128	652554.2047	686023.5932	1255.3723	TV	NBC LT SH
1129	654083.5336	686235.0595	1264.5286	TV	NBC LT SH

USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999386648 HAS BEEN USED TO COMPUTE THE ABOVE COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME 040440GI.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88
REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL
IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.
REFERENCE POINTS HAVE BEEN ESTABLISHED BY RESECTION.
REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL.

BASIS OF BEARINGS
GRID NORTH BASED ON GPS CONTROL AT POINT NUMBER 25,
ARKANSAS STATE PLANE GRID COORDINATES NORTH ZONE,
NORTHING 668335.4649, EASTING 686847.3483.
CONVERGENCE ANGLE 1°13'58.04" RIGHT
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.
NORTH ARROW SYMBOL/BEARING STATEMENT

Note for north arrow
BEARINGS ARE GRID

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGATT

5-31-11

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.		040517	98	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

HWY. 265

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	0+00.66	645163.1061	685616.8246
8001	P.C. STA.	2+01.97	645361.7913	685584.3797
8003	P.T. STA.	4+34.78	645593.7733	685570.3766
8047	P.I. STA.	26+00.65	647756.6792	685679.2517
8048	P.C. STA.	39+49.83	649104.7073	685734.9442
8050	P.T. STA.	47+03.23	649857.3433	685716.5338
8051	P.C. STA.	48+28.17	649981.7728	685705.2793
8053	P.T. STA.	52+84.40	650434.0307	685646.1447
8054	P.C. STA.	53+00.96	650450.3552	685643.3454
8056	P.T. STA.	58+87.73	651014.4550	685751.0177
8057	P.C. STA.	61+15.34	651208.8535	685869.4147
8059	P.T. STA.	65+17.78	651589.3138	685987.6080
8060	P.C. STA.	68+79.80	651950.7807	686007.6435
8062	P.T. STA.	73+75.55	652443.9639	686056.4466
8063	P.C. STA.	77+18.43	652783.4008	686104.9376
8065	P.T. STA.	78+39.81	652903.7345	686120.8294
8066	P.C. STA.	88+50.89	653907.4488	686242.5818
8068	P.T. STA.	90+92.08	654142.0776	686296.5178
8069	P.C. STA.	96+51.86	654671.4359	686478.5421
8071	P.T. STA.	101+39.57	655147.7853	686576.8451
8072	P.C. STA.	111+45.29	656150.6194	686653.0342
8074	P.T. STA.	113+35.06	656337.1746	686686.0554
8075	P.C. STA.	115+08.45	656504.0722	686733.0646
8077	P.T. STA.	121+29.05	657106.6019	686669.8403
8078	P.C. STA.	132+15.74	658068.6502	686164.5162
8080	P.T. STA.	141+41.17	658958.2956	686165.3245
8081	P.C. STA.	155+36.09	660192.0416	686816.2231
8083	P.T. STA.	161+99.06	660828.0219	686981.3593
8084	P.I. STA.	178+90.86	662519.3808	687019.6330
8085	P.I. STA.	191+56.03	663783.1900	687078.2766
8086	P.C. STA.	212+14.78	665839.6207	687176.0906
8088	P.T. STA.	216+55.82	666273.3524	687112.7940
8089	P.C. STA.	225+48.18	667115.4059	686817.4335
8091	P.T. STA.	229+13.37	667475.2158	686776.1383
8092	POE	236+00.00	668157.7840	686850.7060

KANTZ RD

POINT NO.	TYPE	STATION	NORTHING	EASTING
8300	POB	200+00.00	646544.7244	685393.3476
8301	POE	202+16.14	646534.1481	685609.2273

OLD WIRE RD

POINT NO.	TYPE	STATION	NORTHING	EASTING
8100	POB	310+00.00	651812.0541	685745.8296
8101	POE	315+23.13	651777.3340	686267.8086

EAST JOYCE

POINT NO.	TYPE	STATION	NORTHING	EASTING
8200	POB	330+00.00	657047.6255	686496.5839
8201	P.C. STA.	332+53.37	657040.7365	686749.8645
8203	P.T. STA.	333+73.58	657113.0811	686831.6753
8204	POE	334+86.73	657225.7162	686842.4612

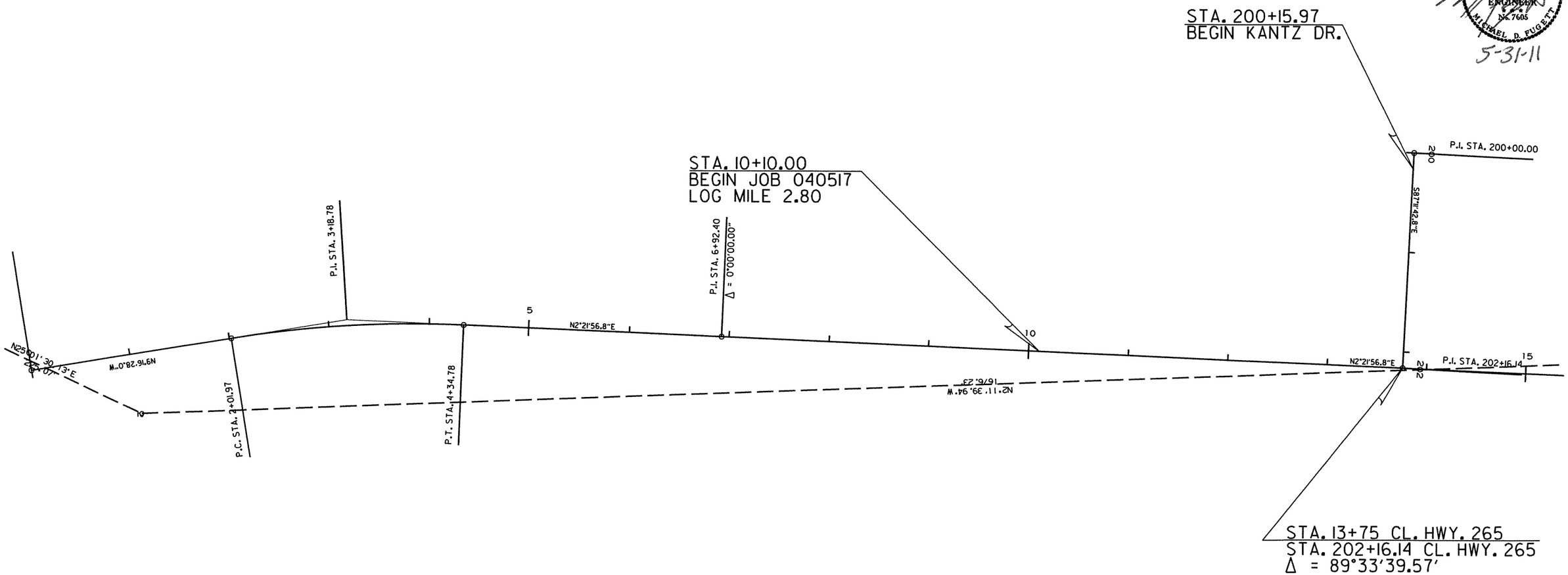
3-8-10 r-040517.dgn

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.		040517	99	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGATT

5-31-11



PI = 3+18.78
Δ = 11° 38' 24.78" RT.
D = 5° 00'
T = 116.80'
L = 232.80'
PC = 2+01.97
PT = 4+34.78

3-8-10 r040517.dgn

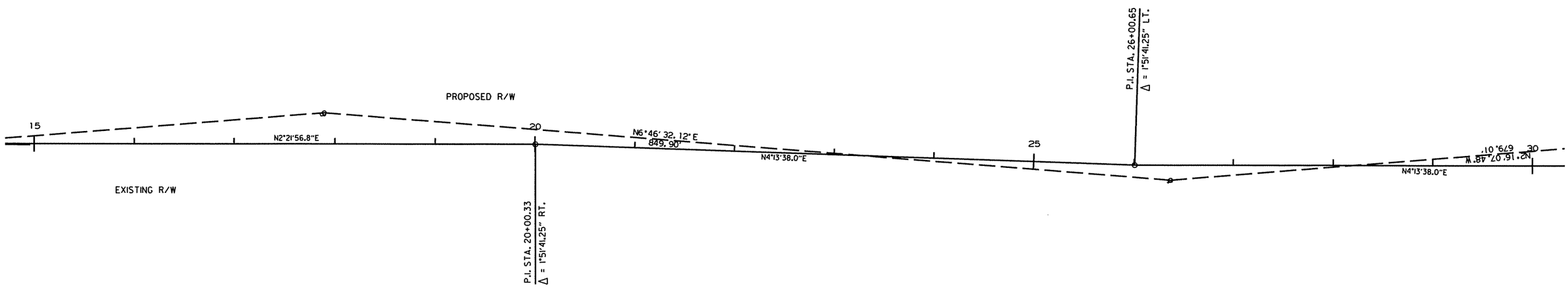
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	100	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N.7605
MICHAEL D. FUGETT

5-31-11



3-8-10 r040517.dgn

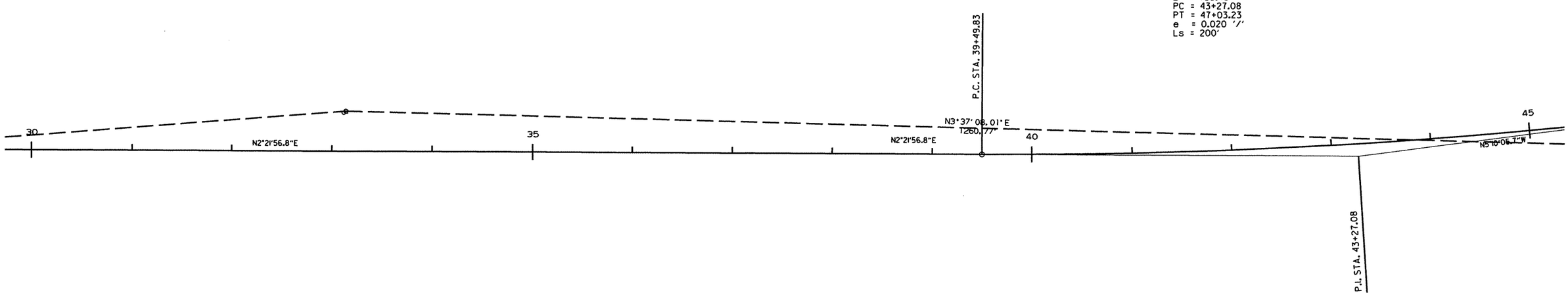
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	101	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

PI = 43+27.08
Δ = 7° 32' 2.54" LT.
D = 1°00'
T = 377.25'
L = 753.40'
PC = 43+27.08
PT = 47+03.23
e = 0.020 '/'
Ls = 200'



r040517.dgn
3-8-10

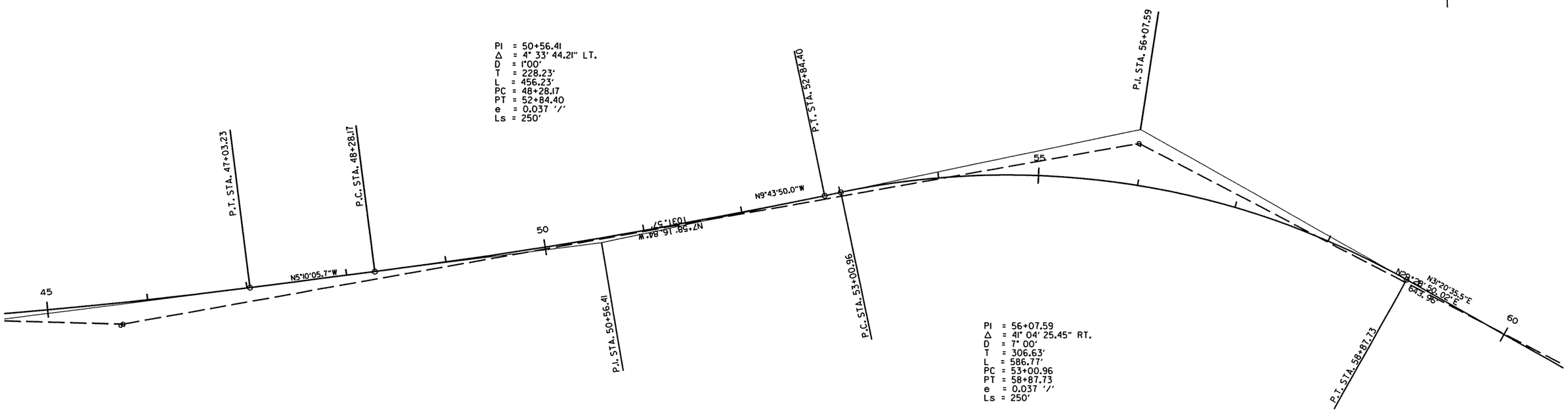
SURVEY CONTROL DETAILS

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.		040517	102	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



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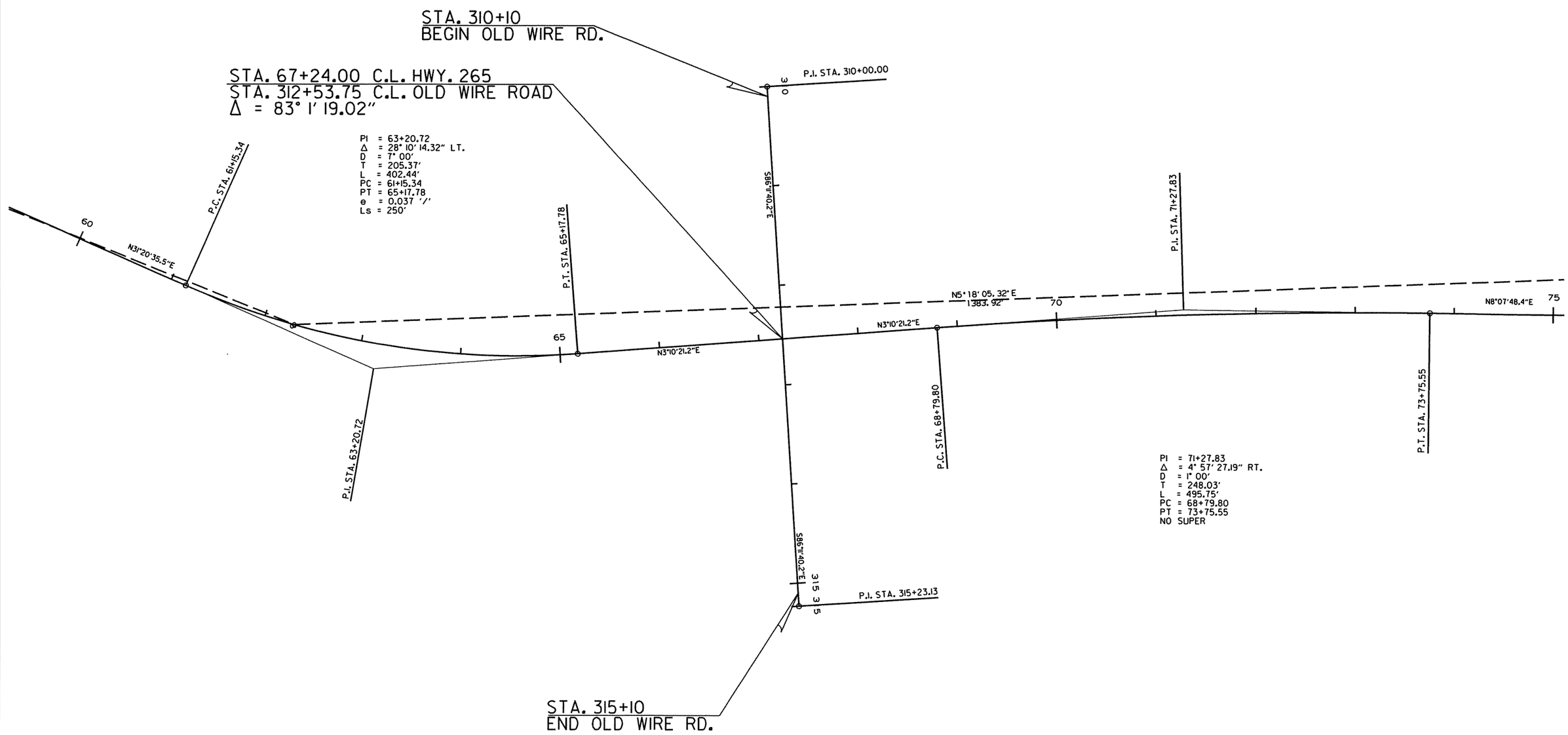
3-8-10

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.		040517	103	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGATT
5-31-11



SURVEY CONTROL DETAILS

3-8-10 r040517.dgn

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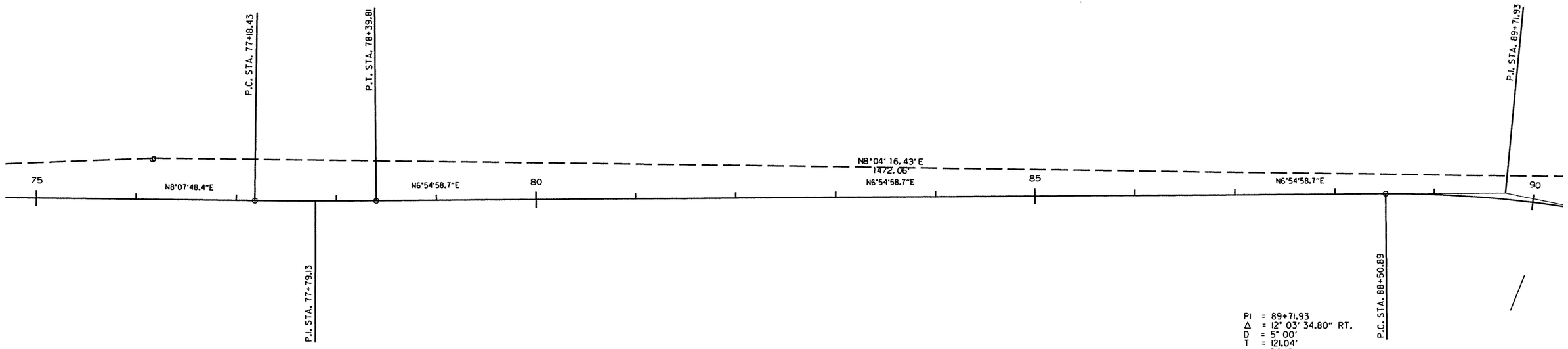
				6	ARK.			
				JOB NO.		040517	104	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

PI = 77+79.13
Δ = 1° 12' 49.71" LT.
D = 1° 00'
T = 60.69'
L = 121.38'
PC = 77+18.43
PT = 78+39.81
NO SUPER



PI = 89+71.93
Δ = 12° 03' 34.80" RT.
D = 5° 00'
T = 121.04'
L = 241.19'
PC = 88+50.89
PT = 90+92.08
e = 0.033 '/'
Ls = 200'

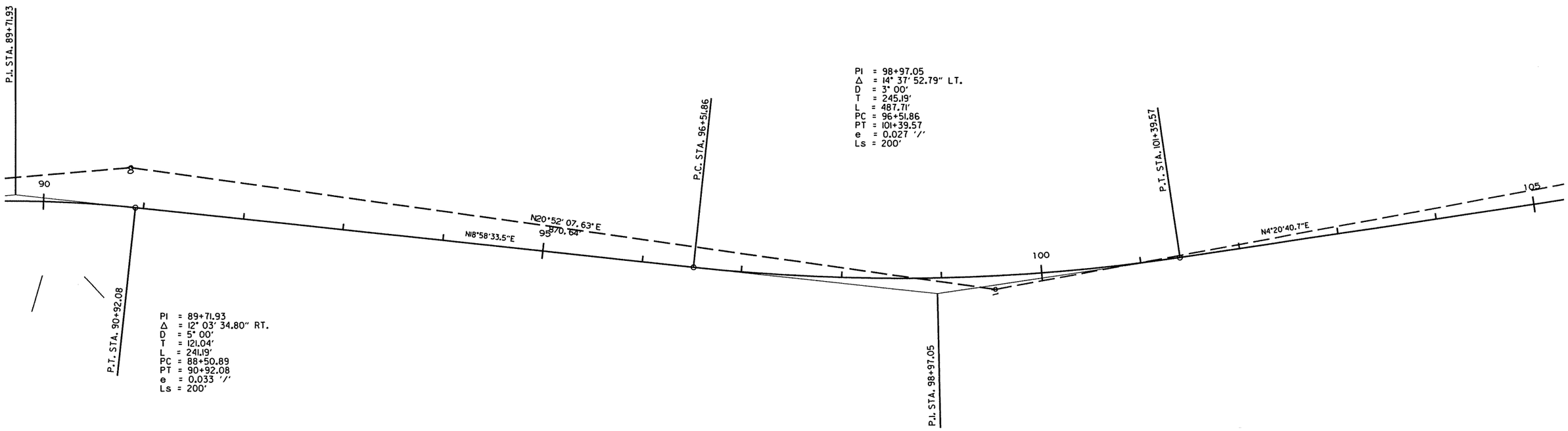
r040517.dgn
3-8-10

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.		040517	105	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N. 7605
MICHAEL D. FUGETT
5-31-11



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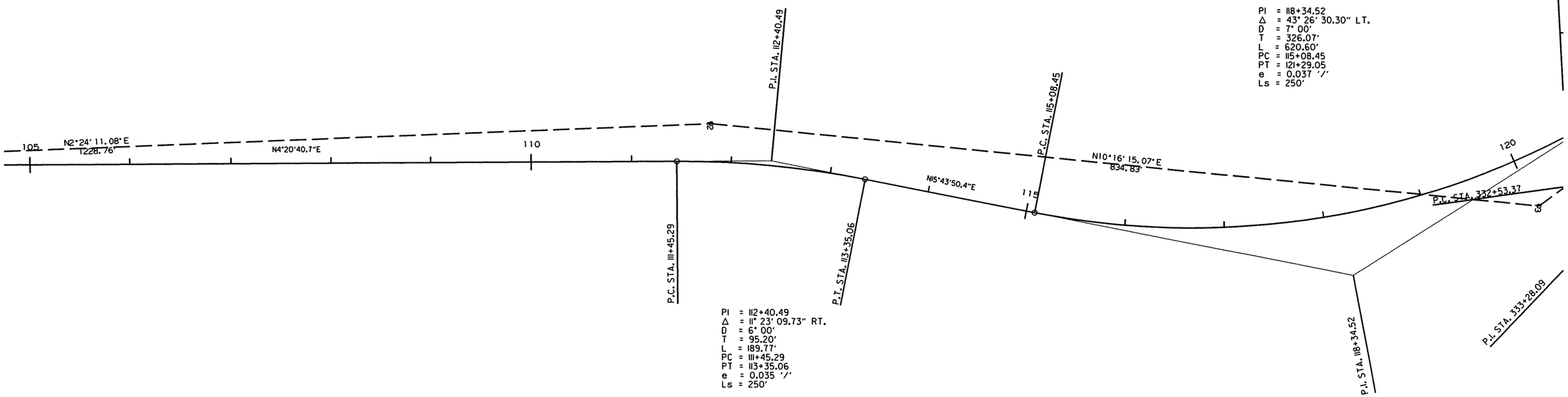
3-8-10

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.		040517	106	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



PI = 112+40.49
Δ = 11° 23' 09.73" RT.
D = 6° 00'
T = 95.20'
L = 189.77'
PC = 111+45.29
PT = 113+35.06
e = 0.035 '/'
Ls = 250'

PI = 118+34.52
Δ = 43° 26' 30.30" LT.
D = 7° 00'
T = 326.07'
L = 620.60'
PC = 115+08.45
PT = 121+29.05
e = 0.037 '/'
Ls = 250'

r040517.dgn
3-8-10

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.		040517	107	296

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
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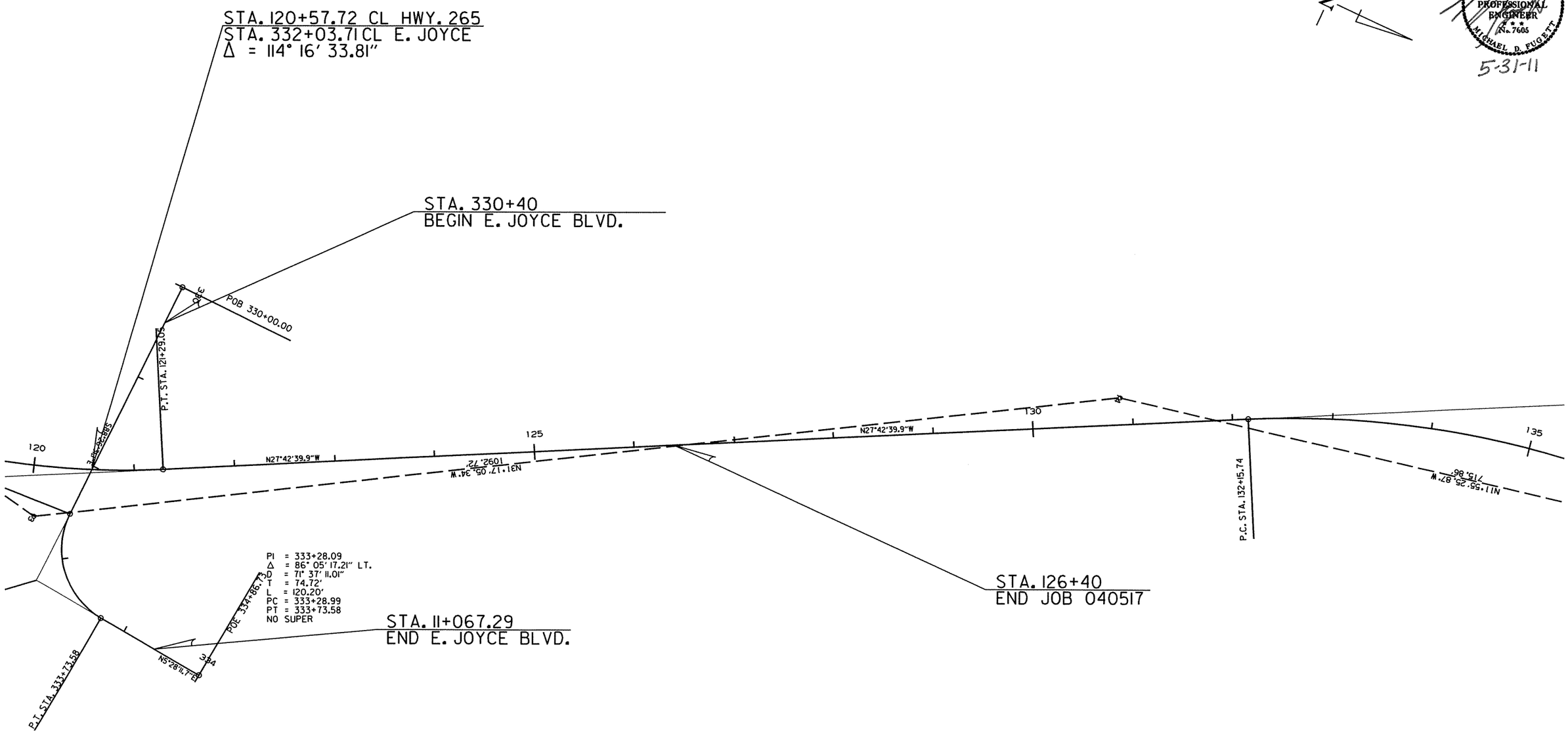
No. 7605
MICHAEL D. FUGETT
5-31-11



SURVEY CONTROL DETAILS

r040517.dgn

3-8-10

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				JOB NO.		040517	108	296

2 HWY. 265 AND KANTZ RD. PLAN

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGATT 5-31-11

STA. 9+76 IN PLACE
36" x 92' R.C. PIPE CULVERT
STORM SEWER ON LT.
RETAIN

STA. 10+90 CONSTRUCT
DROP INLET ON LT. H= 5' 8"
WITH 8' EXTENSION AND
EXISTING 24" CM PIPE INLET AND 36" x 65'
PIPE CULVERT TO EXISTING PIPE INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 65 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 65 LIN. FT.

STA. 12+10 CONSTRUCT
DROP INLET ON LT. H= 4' 6"
WITH 8' EXTENSION AND 24" x 116'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 116 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 116 LIN. FT.

STA. 10+89 IN PLACE
DROP INLET ON LT. AND
36" x 20' R.C. PIPE OUTLET
REMOVE

STA. 11+35 CONSTRUCT
APPROACH ON LT. = 15 CU. YD. CUT

STA. 13+20 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 106'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 106 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 106 LIN. FT.

STA. 14+32 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 108'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

199+95 IN PLACE
DROP INLET ON RT. WITH
18" C.M. PIPE INLET
RETAIN AND IN PLACE
18" C.M. PIPE OUTLET
REMOVE 31'

STA. 200+96 CONSTRUCT
DROP INLET ON RT. H= 5' 1"
WITH 4' EXTENSION AND 18"x78'
PIPE INLET FROM EXISTING SYSTEM AND 18" x 55'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 133 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 133 LIN. FT.

STA. 200+48 IN PLACE
DROP INLET ON RT.
REMOVE
18" C.M. PIPE OUTLET
REMOVE

STA. 200+64 CONSTRUCT
APPROACH ON RT. = 40 CU.YDS. CUT

STA. 200+44 CONSTRUCT
APPROACH ON LT. = 5 CU.YDS. CUT

STA. 200+15.97
BEGIN KANTZ DR.

STA. 201+54 CONSTRUCT
DROP INLET ON RT. H= 4' 0"
WITH 4' EXTENSION AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON HWY 265 LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

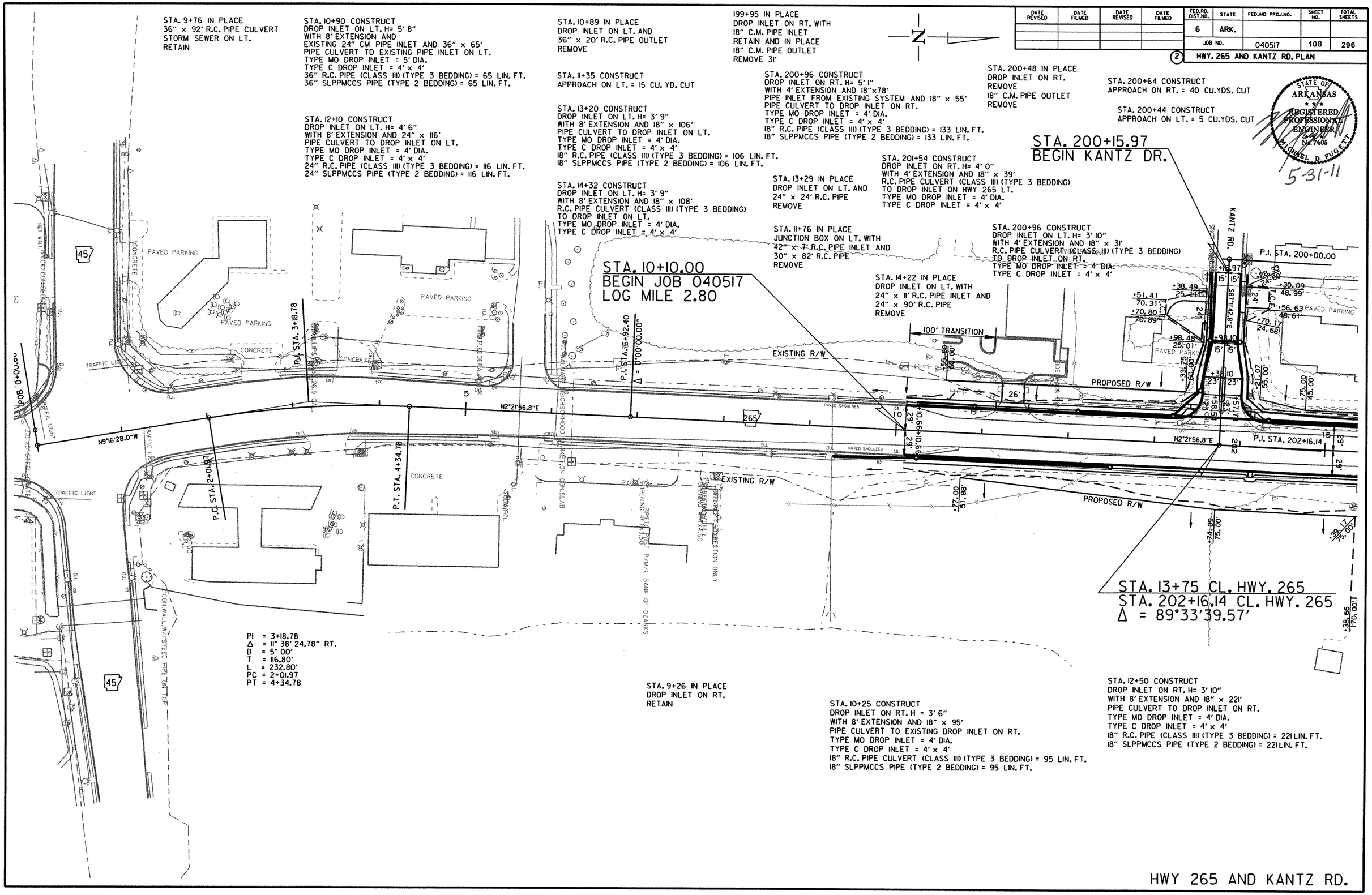
STA. 13+29 IN PLACE
DROP INLET ON LT. AND
24" x 24' R.C. PIPE
REMOVE

STA. 11+76 IN PLACE
JUNCTION BOX ON LT. WITH
42" x 7' R.C. PIPE INLET AND
30" x 82' R.C. PIPE
REMOVE

STA. 200+96 CONSTRUCT
DROP INLET ON LT. H= 3' 10"
WITH 4' EXTENSION AND 18" x 31'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 14+22 IN PLACE
DROP INLET ON LT. WITH
24" x 11' R.C. PIPE INLET AND
24" x 90' R.C. PIPE
REMOVE

STA. 10+10.00
BEGIN JOB 040517
LOG MILE 2.80



STA. 13+75 CL. HWY. 265
STA. 202+16.14 CL. HWY. 265
Δ = 89°33'39.57'

PI = 3+18.78
Δ = 11° 38' 24.78" RT.
D = 5° 00'
T = 116.80'
L = 232.80'
PC = 2+01.97
PT = 4+34.78

STA. 9+26 IN PLACE
DROP INLET ON RT.
RETAIN

STA. 10+25 CONSTRUCT
DROP INLET ON RT. H = 3' 6"
WITH 8' EXTENSION AND 18" x 95'
PIPE CULVERT TO EXISTING DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) = 95 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 95 LIN. FT.

STA. 12+50 CONSTRUCT
DROP INLET ON RT. H= 3' 10"
WITH 8' EXTENSION AND 18" x 221'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 221 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 221 LIN. FT.

HWY 265 AND KANTZ RD.

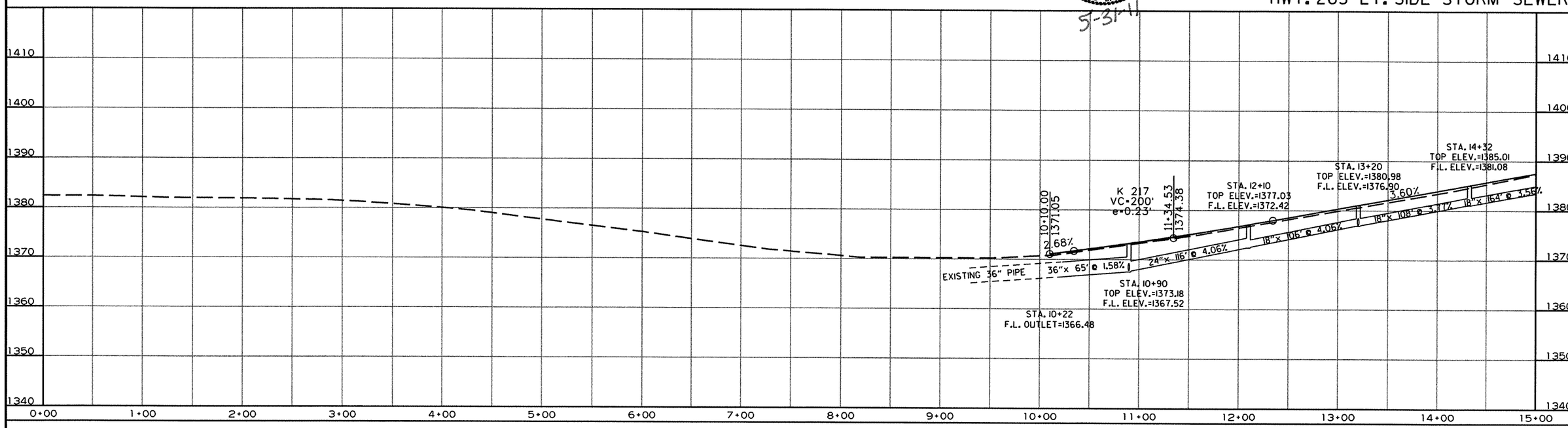
3-8-10 r040517.dgn

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.		040517	109	296

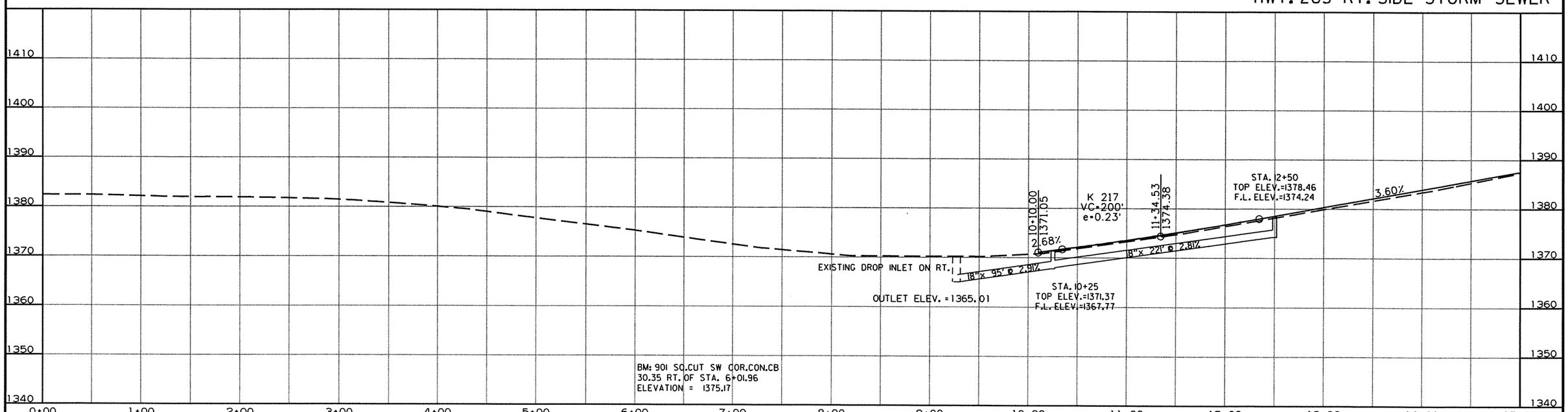
(2) HWY. 265 PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 RT. SIDE STORM SEWER



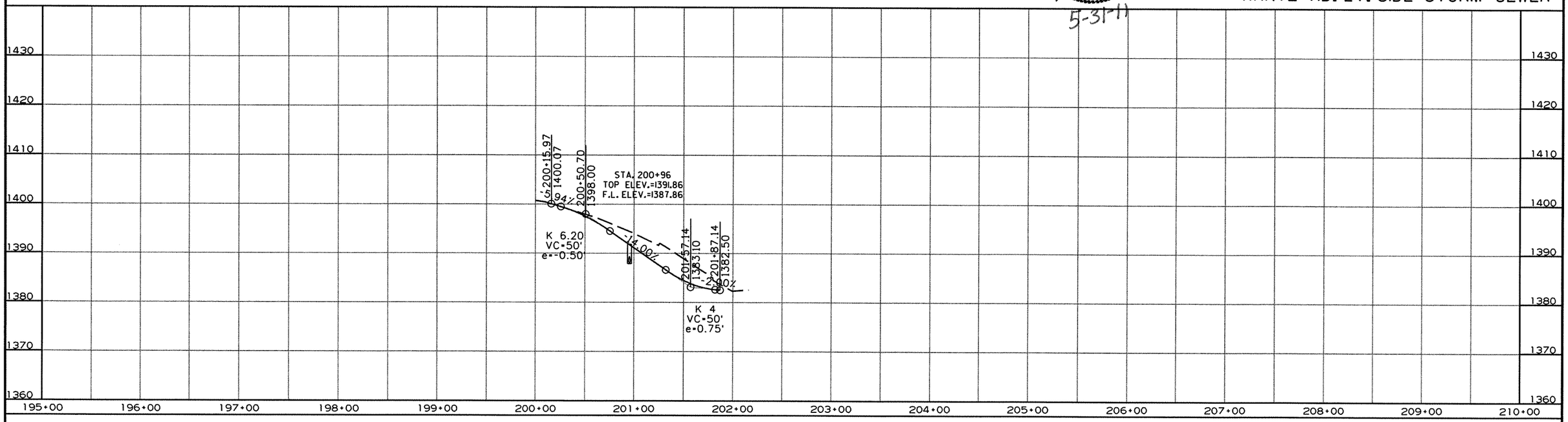
r040517.dgn
3-8-10

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.		040517	110	296

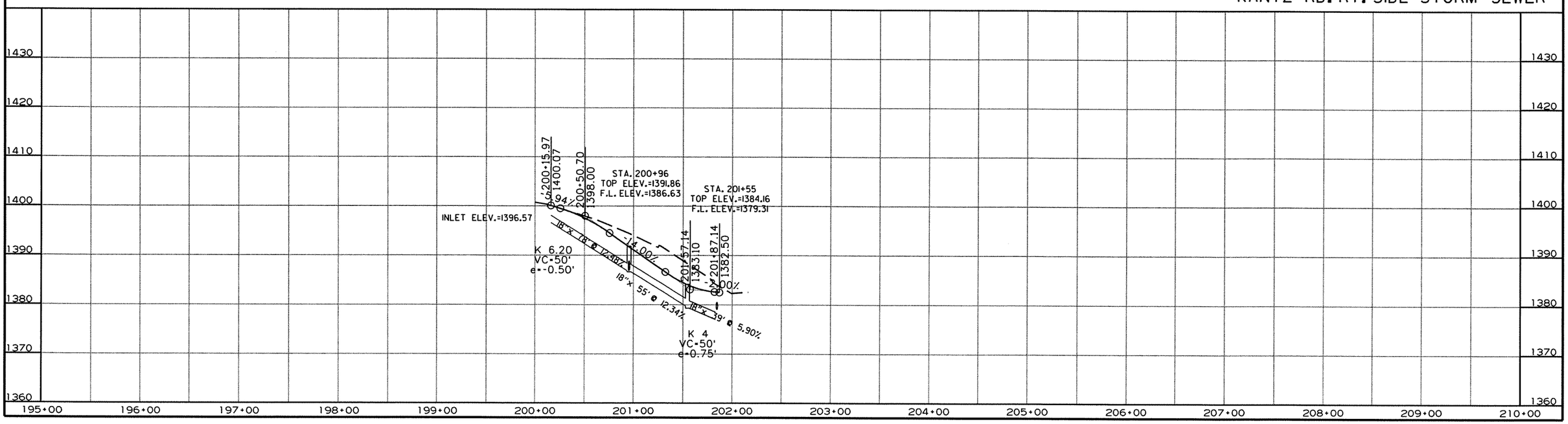
(2) KANTZ RD. PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

KANTZ RD. LT. SIDE STORM SEWER



KANTZ RD. RT. SIDE STORM SEWER



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3-8-10

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.		040517	111	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 16+00 CONSTRUCT
DROP INLET ON LT. H= 4' 1"
WITH 8' EXTENSION AND 18" x 164'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 164 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 164 LIN. FT.

STA. 18+86 CONSTRUCT
DROP INLET ON LT. H= 4' 4"
WITH 8' EXTENSION AND 18" x 282'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 18+30 IN PLACE
18" x 100' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

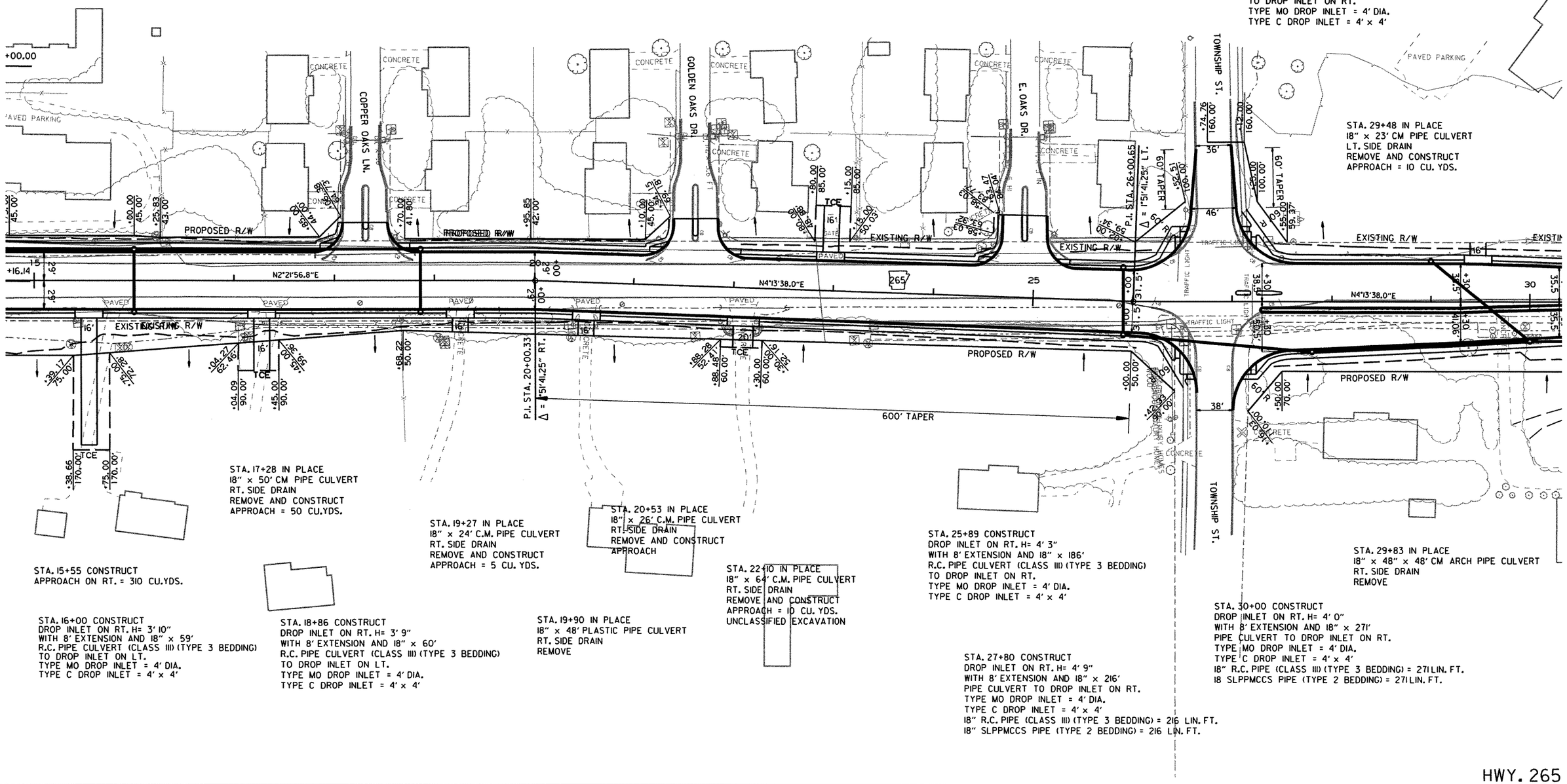
REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
17+04	18+66	RT.	166
18+66	20+35	RT.	153
22+80	23+14	LT.	35
26+02	26+52	LT.	90
29+42	29+54	LT.	12

STA. 22+96 CONSTRUCT
APPROACH ON LT. = 30 CU. YDS.

STA. 25+89 CONSTRUCT
DROP INLET ON LT. H= 3' 10"
WITH 4' EXTENSION AND 18" x 64'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 29+00 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 8' EXTENSION AND 18" x 124'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'



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3-8-10

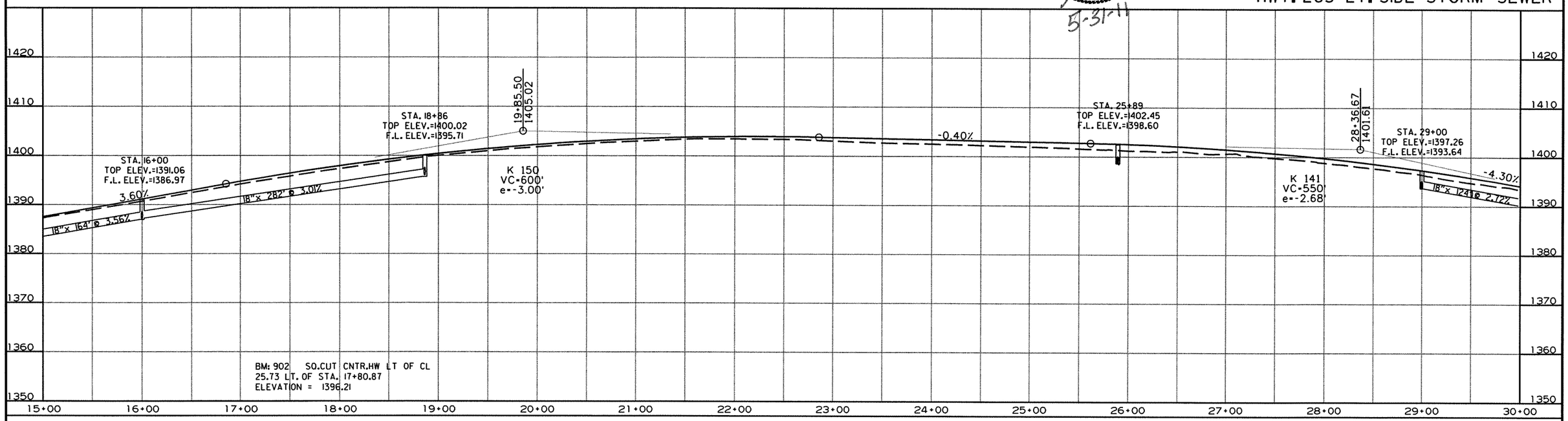
HWY. 265

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.		040517	112	296

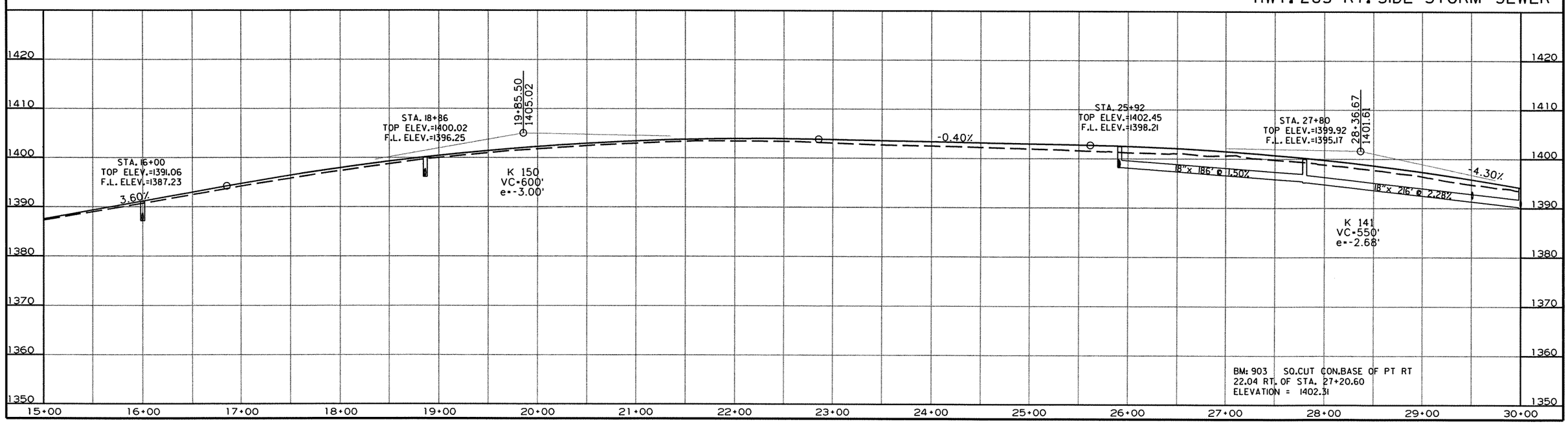
(2) HWY. 265 PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 RT. SIDE STORM SEWER



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3-8-10

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.		040517	113	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 32+00 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 8' EXTENSION AND 18" x 103'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 32+65 IN PLACE
24" x 96' RC PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 35+75 CONSTRUCT
DROP INLET ON LT. H= 3' 2"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 37+63 CONSTRUCT
DROP INLET ON LT. H= 4' 9"
WITH 8' EXTENSION AND 18" x 152'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 41+10 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 43+50 CONSTRUCT
DROP INLET ON LT. H= 3' 10"
WITH 4' EXTENSION AND 18" x 34'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET IN MEDIAN
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 33+75 CONSTRUCT
DROP INLET ON LT. H= 3' 1"
WITH 8' EXTENSION AND 18" x 196'
R.C. PIPE CULVERT
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4" x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 196 LIN. FT.

STA. 38+26 IN PLACE
18" x 97' CM PIPE CULVERT
LT. SIDE DRAIN
REMOVE

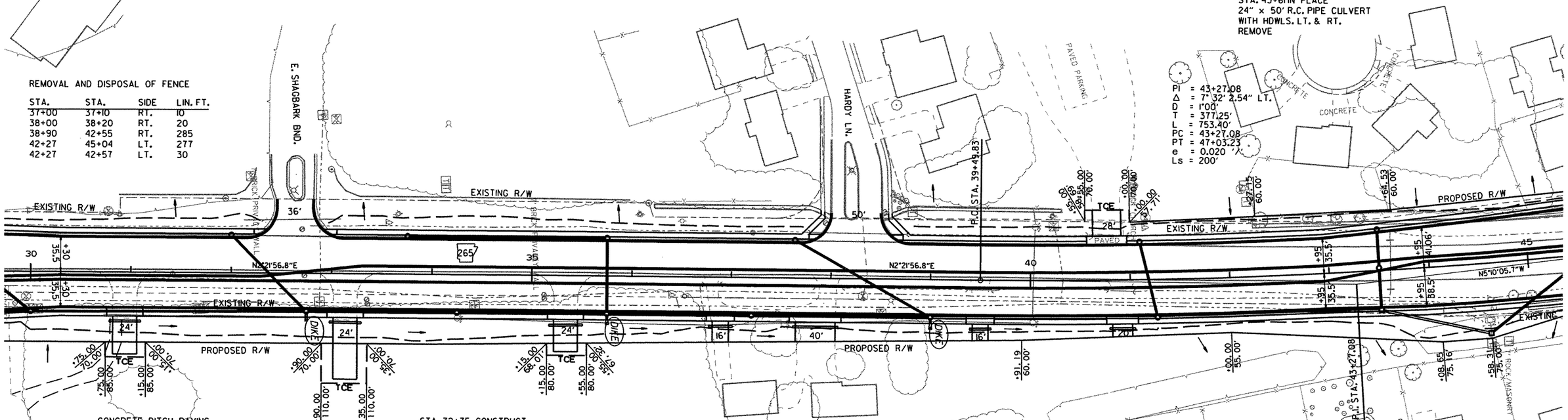
STA. 40+77 IN PLACE
24" x 38' RC PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 25 CU. YDS.

STA. 43+50 CONSTRUCT
DROP INLET IN MEDIAN H= 4' 10"
WITH 8' EXTENSION AND 18" x 38'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO JUNCTION BOX ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 43+61 IN PLACE
24" x 50' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
37+00	37+10	RT.	10
38+00	38+20	RT.	20
38+90	42+55	RT.	285
42+27	45+04	LT.	277
42+27	42+57	LT.	30



CONCRETE DITCH PAVING

STA.	STA.	SIDE	"W"	SQ. YDS.
30+00	30+78	RT.	9	78.00
31+10	32+77	RT.	9	167.00
33+30	35+17	RT.	9	187.00
35+51	36+77	RT.	9	126.00
37+01	37+62	RT.	9	61.00
38+08	39+00	RT.	9	92.00

STA. 32+75 CONSTRUCT
DIKE ON RT.
TO ELEVATION = 1382.22

STA. 35+75 CONSTRUCT
DIKE ON RT.
TO ELEVATION = 1367.21

STA. 39+00 CONSTRUCT
DIKE ON RT.
TO ELEVATION = 1345.00

STA. 31+00 IN PLACE
24" x 58' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 32' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YDS. FILL
CONSTRUCT APPROACH = 25 CU. YDS. CUT

STA. 33+15 IN PLACE
24" x 53' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 32' ARCH PIPE
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YDS. FILL
CONSTRUCT APPROACH = 70 CU. YDS. CUT

STA. 35+34 IN PLACE
24" x 53' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 34' ARCH PIPE CULVERT
CONSTRUCT APPROACH = 15 CU. YDS.
CONSTRUCT APPROACH = 10 CU. YDS.

STA. 36+89 IN PLACE
24" x 16' RC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YDS.

STA. 38+00 IN PLACE
24" x 27' RC PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 48' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 25 CU. YDS.

STA. 39+50 IN PLACE
24" x 24' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 28' ARCH PIPE
RT. SIDE DRAIN
CONSTRUCT APPROACH = 5 CU. YDS.

STA. 41+00 IN PLACE
24" x 23' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
21" x 15" x 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 10 CU. YDS.

STA. 44+58 IN PLACE
DROP INLET 56' RT.
REMOVE
30" R.C. PIPE CULVERT OUTLET
REMOVE 13' TO PROPOSED JUNCTION BOX

STA. 35+75 CONSTRUCT
DROP INLET ON RT. H= 3' 11"
WITH 4' EXTENSION AND 18" x 2'
PIPE STUB INLET (CLASS III) (TYPE 3 BEDDING)
WITH FES AND 18" x 141'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 141 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 141 LIN. FT.

STA. 39+00 CONSTRUCT
DROP INLET ON RT. H= 6' 0"
WITH 8' EXTENSION AND 18" x 3' STUB INLET
WITH FES (CLASS III) (TYPE 3 BEDDING) AND 24" x 224'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 224 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 224 LIN. FT.

STA. 43+50 CONSTRUCT
JUNCTION BOX ON RT. H= 9' 11"
WITH 24" x 109'
PIPE CULVERT TO JUNCTION BOX ON RT.
TYPE E JUNCTION BOX = 4' x 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 109 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 109 LIN. FT.

STA. 32+75 CONSTRUCT
DROP INLET ON RT. H= 3' 9"
WITH 8' EXTENSION AND 22" x 14" x 2' ARCH
PIPE INLET WITH FES (CLASS III) (TYPE 3 BEDDING) AND
18" x 146' PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18 R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 146 LIN. FT.
18 SLPPMCCS PIPE (TYPE 2 BEDDING) = 146 LIN. FT.

STA. 34+25 CONSTRUCT
DROP INLET ON RT. H= 4' 10"
WITH 8' EXTENSION AND 18" x 146'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 146 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 146 LIN. FT.

STA. 37+20 CONSTRUCT
DROP INLET ON RT. H= 5' 4"
WITH 8' EXTENSION AND 18" x 176'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 176 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 176 LIN. FT.

STA. 41+27 CONSTRUCT
DROP INLET ON RT. H= 5' 2"
WITH 8' EXTENSION AND OPENING
IN BACK AND 24" x 221'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
24" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 221 LIN. FT.
24" SLPPMCCS PIPE (TYPE 2 BEDDING) = 221 LIN. FT.

STA. 44+58 CONSTRUCT
JUNCTION BOX 70' ON RT. H= 6' 1"
WITH EXISTING 30" R.C. PIPE CULVERT
RETAIN
TYPE E JUNCTION BOX = 4' x 4'

r040517.dgn
3-8-10

HWY. 265

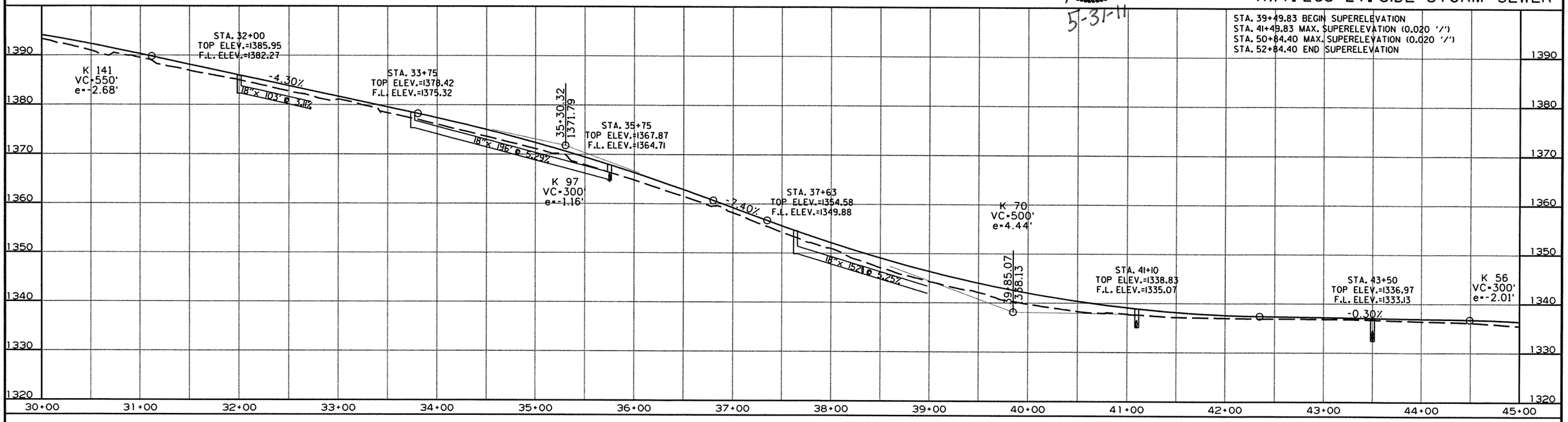
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	114	296

(2) HWY. 265 PROFILES

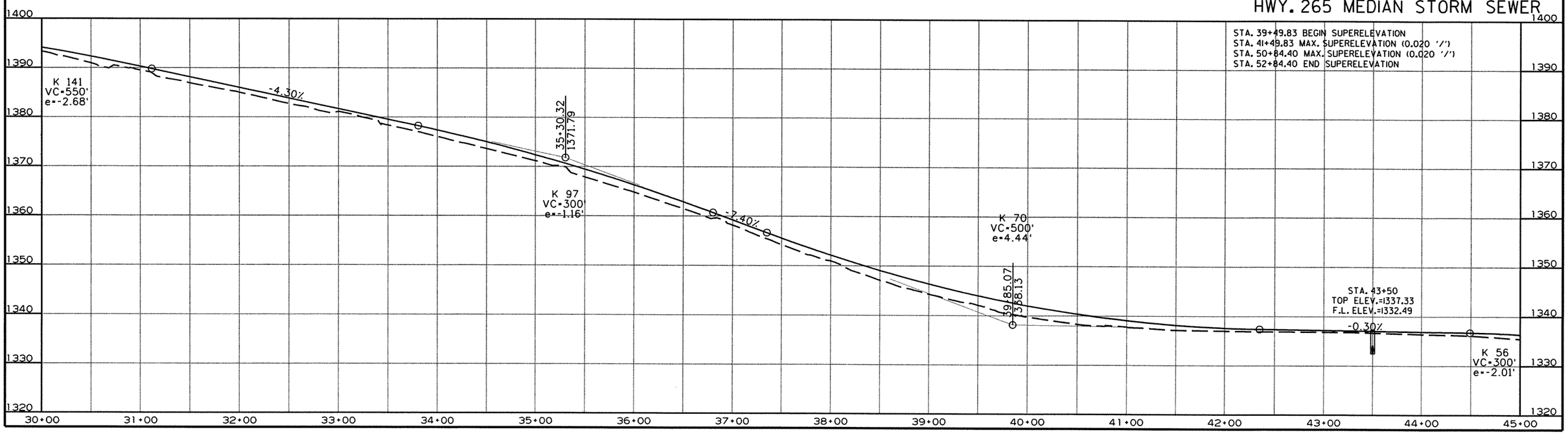
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



r040517.dgn

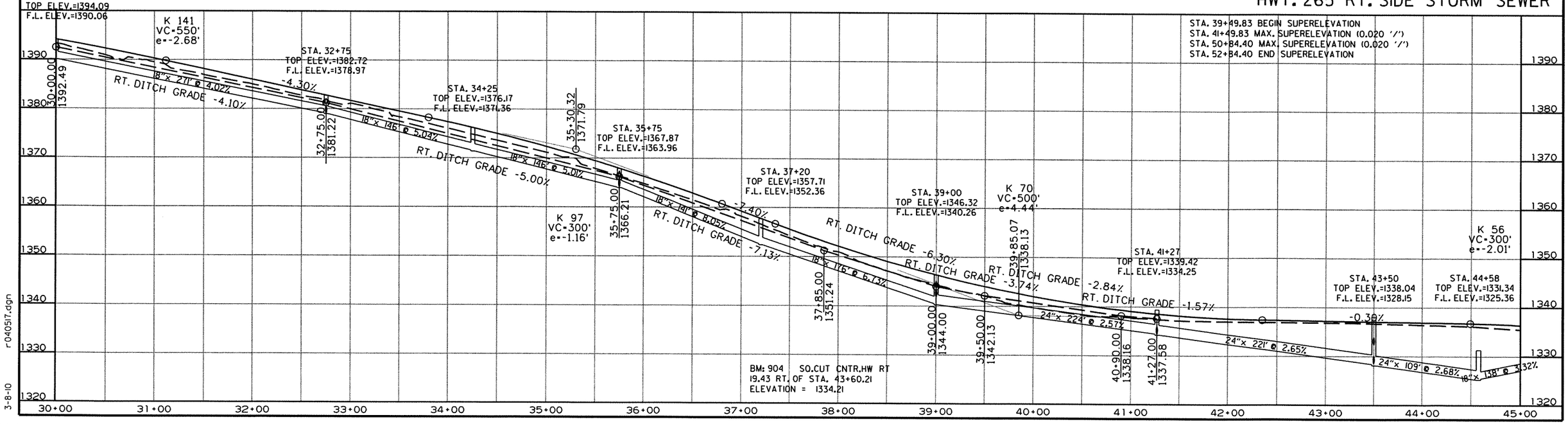
3-8-10

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

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.		040517	115	296

(2) HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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3-8-10

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.		040517	116	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 45+76 CONSTRUCT
DROP INLET ON LT. H= 4' 4"
WITH 8' EXTENSION AND 18" x 40'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET IN MEDIAN
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 47+30 CONSTRUCT
DROP INLET ON LT. H= 3' 7"
WITH 8' EXTENSION AND 18" x 215'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 215 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 215 LIN. FT.

STA. 51+00 CONSTRUCT
DROP INLET ON LT. H= 4' 0"
WITH 8' EXTENSION AND 18" x 180'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 180 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 180 LIN. FT.

STA. 52+85 CONSTRUCT
DROP INLET ON LT. H= 4' 9"
WITH 8' EXTENSION AND 24" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 55+50 CONSTRUCT
DROP INLET IN MEDIAN H= 4' 3"
WITH 8' EXTENSION AND 18" x 176'
PIPE CULVERT TO DROP INLET IN MEDIAN
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 176 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 176 LIN. FT.

STA. 49+50 CONSTRUCT
DROP INLET ON LT. H= 3' 10"
WITH 8' EXTENSION AND 18" x 145'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 145 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 145 LIN. FT.

STA. 46+30 IN PLACE
18" x 107' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 51+38 IN PLACE
24" x 45' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 35 CU. YDS.

STA. 52+56 IN PLACE
16" x 28' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 95 CU. YDS.

STA. 54+37 IN PLACE
18" x 30' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 120 CU. YDS.

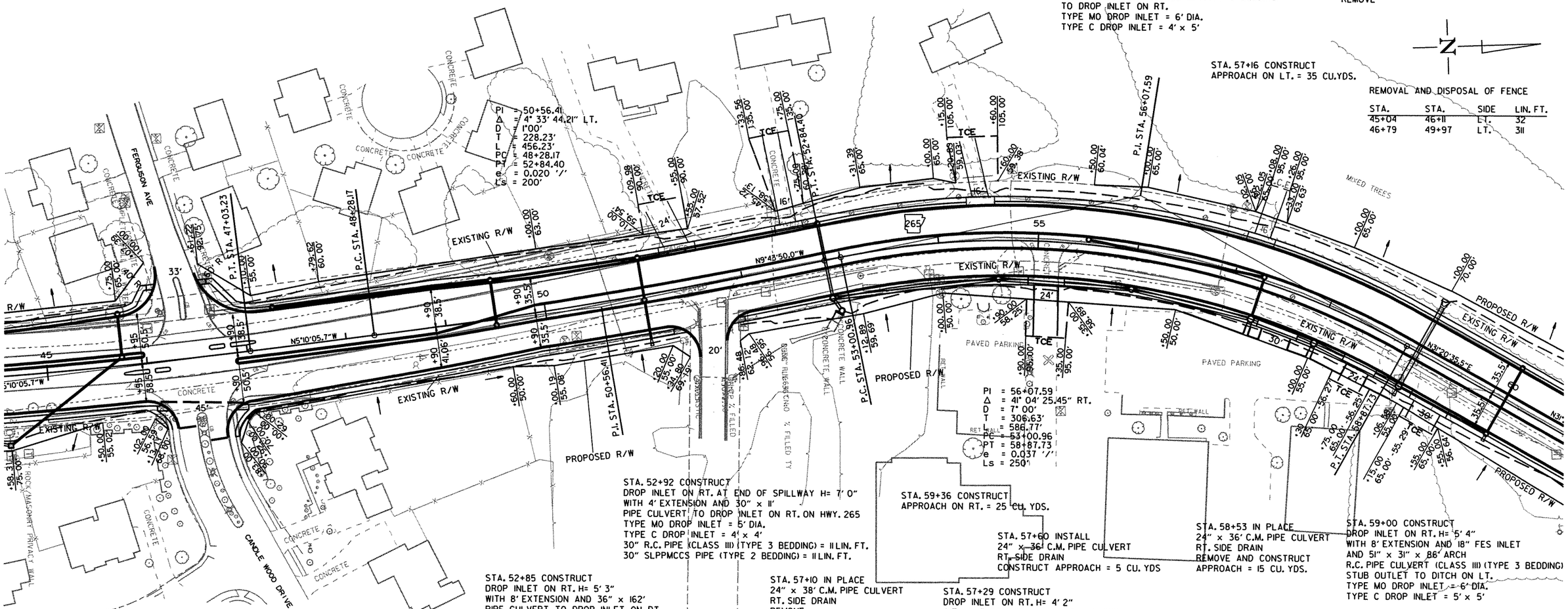
STA. 57+29 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 9"
WITH 8' EXTENSION AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4' x 5'

STA. 59+00 IN PLACE
36" x 53' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE

STA. 57+16 CONSTRUCT
APPROACH ON LT. = 35 CU.YDS.

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
45+04	46+11	LT.	32
46+79	49+97	LT.	311



STA. 52+92 CONSTRUCT
DROP INLET ON RT. AT END OF SPILLWAY H= 7' 0"
WITH 4' EXTENSION AND 30" x 11'
PIPE CULVERT TO DROP INLET ON RT. ON HWY. 265
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
30" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 11 LIN. FT.
30" SLPPMCCS PIPE (TYPE 2 BEDDING) = 11 LIN. FT.

STA. 59+36 CONSTRUCT
APPROACH ON RT. = 25 CU. YDS.

STA. 57+60 INSTALL
24" x 36' C.M. PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 5 CU. YDS

STA. 58+53 IN PLACE
24" x 36' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 15 CU. YDS.

STA. 59+00 CONSTRUCT
DROP INLET ON RT. H= 5' 4"
WITH 8' EXTENSION AND 18" FES INLET
AND 51" x 31" x 86' ARCH
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
STUB OUTLET TO DITCH ON LT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 5' x 5'

STA. 45+76 CONSTRUCT
DROP INLET IN MEDIAN H= 5' 0"
WITH 8' EXTENSION AND 18" x 138'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO JUNCTION BOX ON RT.
TYPE C DROP INLET = 4' x 3'

STA. 49+50 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 6"
WITH 8' EXTENSION AND 18" x 41'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 51+57 IN PLACE
24" x61' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 51+00 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 11"
WITH 4' EXTENSION AND 18" x 37'
R.C. PIPE STUB INLET AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 52+85 CONSTRUCT
DROP INLET ON RT. H= 5' 3"
WITH 8' EXTENSION AND 36" x 162'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 162 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 162 LIN. FT.

STA. 54+60 CONSTRUCT
DROP INLET ON RT. H= 4' 3"
WITH 8' EXTENSION AND REMOVE 8'
OF 24" IN PLACE PLASTIC PIPE INLET AND
36" x 128' PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 128 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 128 LIN. FT.

STA. 57+10 IN PLACE
24" x 38' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 55+00 IN PLACE
24" x 50' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 35 CU. YDS.

STA. 56+00 CONSTRUCT
DROP INLET ON RT. H= 4' 2"
WITH 8' EXTENSION AND 36" x 117'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 117 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 117 LIN. FT.

STA. 57+29 CONSTRUCT
DROP INLET ON RT. H= 4' 2"
WITH 8' EXTENSION AND BACK OPENING
AND 51" x 31" x 61' ARCH
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4' x 5'
51" x 31" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 61 LIN. FT.
49" x 33" SLPPMCCS PIPE (TYPE 2 BEDDING) = 61 LIN. FT.

STA. 58+00 CONSTRUCT
DROP INLET ON RT. H= 4' 8"
WITH 8' EXTENSION AND 51" x 31" x 90'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4' x 5'
51" x 31" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 90 LIN. FT.
49" x 33" SLPPMCCS PIPE (TYPE 2 BEDDING) = 90 LIN. FT.

STA. 59+25 IN PLACE
24" x 41' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

r040517.dgn
3-8-10

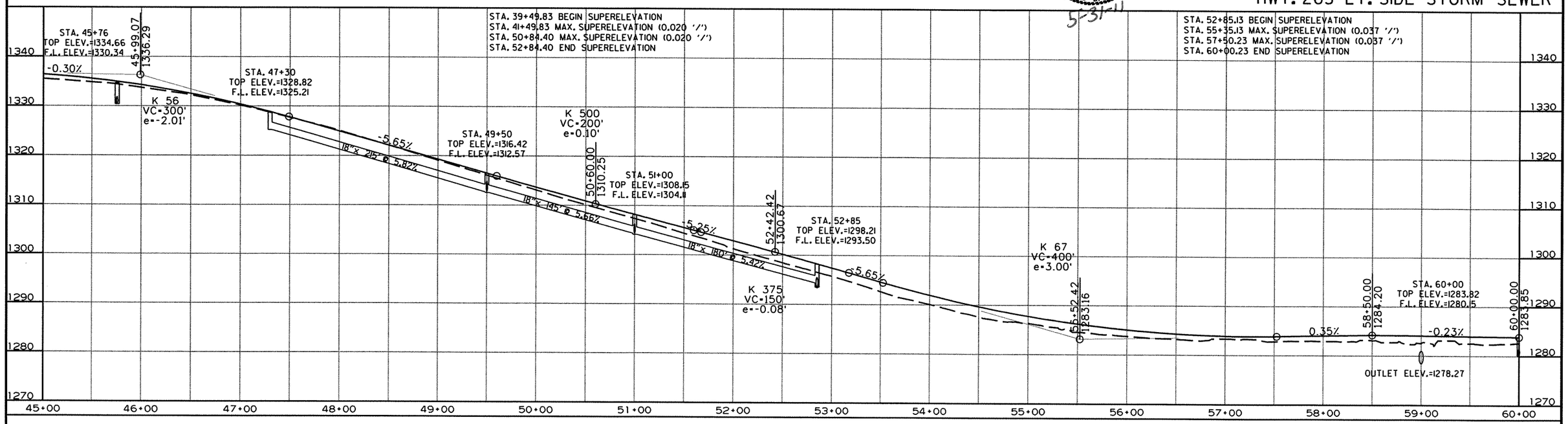
HWY. 265

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.		040517	117	296

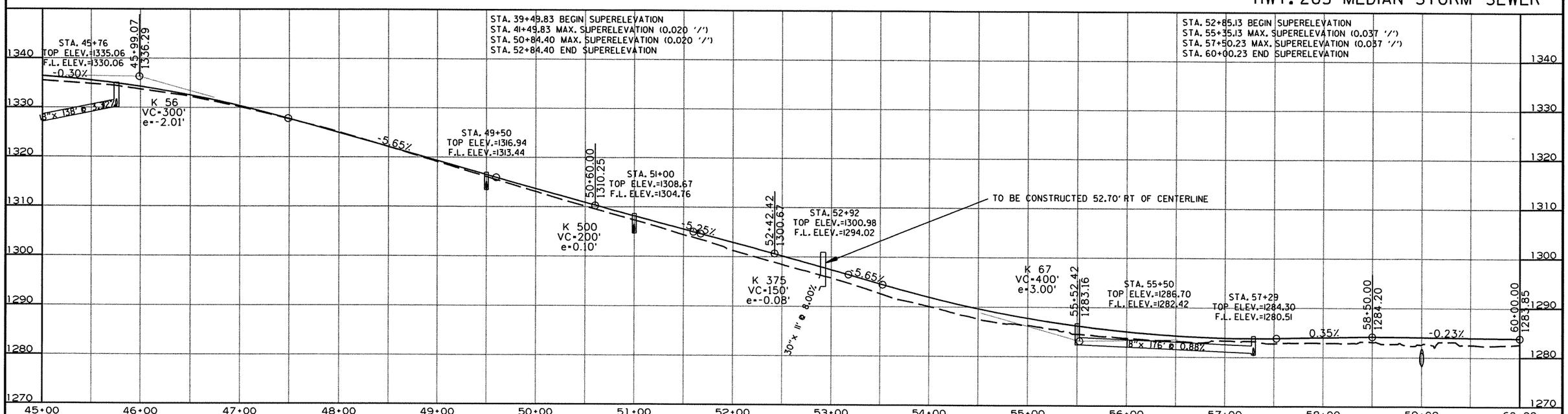
(2) HWY. 265 PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGITT
5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



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3-8-10

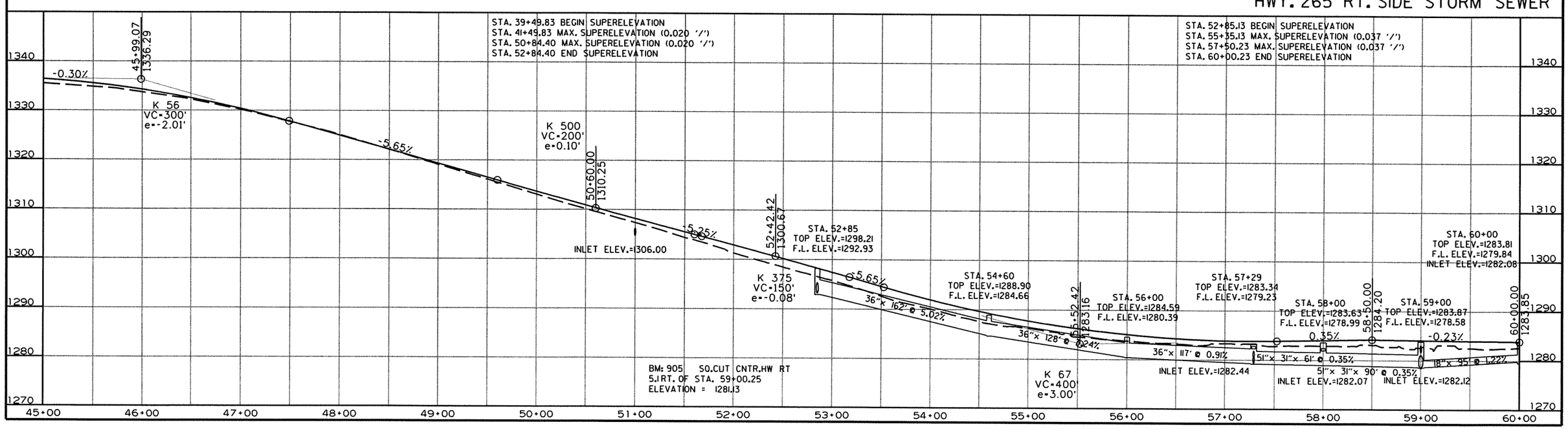
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7685
MICHAEL D. PUGETT
5-31-11

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.		040517	118	296

2 HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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3-8-10

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.		040517	119	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

STA. 60+00 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 8' EXTENSION AND 18" x 70'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 66+50 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 79'
PIPE CULVERT TO DROP INLET ON OLD WIRE RD.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 79 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 79 LIN. FT.

STA. 310+30 IN PLACE
TRPL 7' x 8' x 64' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
RETAIN

STA. 69+35 CONSTRUCT
DROP INLET ON LT. H= 5' 3"
WITH 8' EXTENSION AND 18" x 263'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 263 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 263 LIN. FT.

STA. 62+00 CONSTRUCT
APPROACH ON LT. = 45 CU.YDS.

STA. 311+39 CONSTRUCT
DROP INLET ON LT. H= 6' 3"
WITH 8' EXTENSION AND 18" x 79'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
WITH FES
TO OPEN CHANNEL ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 311+10 IN PLACE
24"x90' R.C. PIPE CULVERT
WITH FES
RT. SIDE DRAIN
RETAIN

STA. 311+39 CONSTRUCT
DROP INLET ON RT. H= 5' 3"
WITH 8' EXTENSION AND 18" x 79'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 74+00 CONSTRUCT
DROP INLET ON LT. H= 5' 0"
WITH 4' EXTENSION AND 18" x 109'
PIPE CULVERT TO R.C. BOX CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 109 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 109 LIN. FT.

STA. 72+00 CONSTRUCT
DROP INLET ON LT. H= 5' 1"
WITH 8' EXTENSION AND 18" x 197'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 197 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 197 LIN. FT.

STA. 60+67 CONSTRUCT
APPROACH ON LT. = 290 CU.YDS.

STA. 310+10
BEGIN OLD WIRE RD.

STA. 67+24.00 C.L. HWY. 265
STA. 312+53.75 C.L. OLD WIRE ROAD
Δ = 83° 1' 19.02"

PI = 63+20.72
Δ = 28° 10' 14.32" RT.
D = 7° 00'
T = 205.37'
L = 402.44'
PC = 61+15.34
PT = 65+17.78
θ = 0.037 '/'
Ls = 250'

P.I. STA. 310+00.00

STA. 311+22 CONSTRUCT
APPROACH ON LT. = 20 CU. YDS

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
67+85	98+46	RT.	3103

WIRE FENCE

STA.	STA.	SIDE	TYPE	LIN. FT.
67+85	98+46	RT.	D-2	3061

REMOVAL AND DISPOSAL OF GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
312+83	313+10	RT.	26
312+83	313+10	LT.	26
313+40	313+66	RT.	27
313+40	313+66	LT.	27

STA. 65+00 CONSTRUCT
APPROACH ON RT. = 5 CU. YDS.

STA. 63+75 TO STA. 64+35 IN MEDIAN
SEE SPECIAL DETAIL FOR FIRE STATION
CROSSING.

STA. 66+00 CONSTRUCT
DROP INLET IN MEDIAN H=3' 11"
WITH 18" x 62'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT. IN MEDIAN
TYPE C DROP INLET = 4' x 3'

STA. 65+37 IN PLACE
18" x 23' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 69+35 CONSTRUCT
DROP INLET ON RT. H= 4' 3"
WITH 8' EXTENSION AND 18" x 82'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

PI = 71+27.83
Δ = 4° 57' 27.19" RT.
D = 1° 00'
T = 248.03'
L = 495.75'
PC = 68+79.80
PT = 73+75.55
NO SUPER

STA. 74+00 CONSTRUCT
DROP INLET ON RT. H= 5' 0"
WITH 4' EXTENSION AND 18" x 33'
PIPE CULVERT TO R.C. BOX CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 33 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 33 LIN. FT.

STA. 60+00 CONSTRUCT
DROP INLET ON RT. H= 4' 0"
WITH 8' EXTENSION AND 18" x 4'
R.C. PIPE CULVERT STUB INLET WITH FES
(CLASS III) (TYPE 3 BEDDING) AND 18" x 95'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 95 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 95 LIN. FT.

STA. 313+10 - STA. 313+40 IN PLACE
31' x 42' BRIDGE CONSISTING OF CONCRETE CHANNEL BEAM
SUPERSTRUCTURE WITH CONCRETE ABUTMENTS.
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 1) = 1.00 LUMP SUM

P.I. STA. 315+23.13

STA. 314+37 INSTALL
44"x27"x28' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 35 CU. YDS

STA. 313+64 CONSTRUCT
TRP 10' x 7' x 76' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
Q50 = 1900 CFS D.A. = 2.3 SQ. MI.

STA. 72+00 CONSTRUCT
DROP INLET ON RT. H= 4' 1"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 75+08 IN PLACE
TRP 10" x 7' x 65' R.C. BOX CULVERT
LT. FWD SKEW = 45°
REMOVE AND CONSTRUCT
QUINT 10' x 9' x 153' R.C. BOX CULVERT
LT. FWD SKEW = 45°
WITH NO WINGS LT. AND 3:1 WINGS RT.
Q50 = 1940 CFS D.A. = 2.4 SQ. MI.

STA. 65+00 CONSTRUCT
DROP INLET IN MEDIAN H=2' 6"
WITH 8' EXTENSION AND 18" x 96'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT. IN MEDIAN
TYPE C DROP INLET = 4' x 3'

STA. 314+19 CONSTRUCT
DROP INLET ON RT. H=3' 11"
WITH 8' EXTENSION AND 18" x 38'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX CULVERT ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 315+10
END OLD WIRE RD.

STA. 314+64 IN PLACE
36" C.M. PIPE CULVERT
RT. SIDE DRAIN
RETAIN

STA. 314+19 CONSTRUCT
DROP INLET ON LT. H=3' 11"
WITH 8' EXTENSION AND 18" x 38'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX CULVERT ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

HWY. 265 AND OLD WIRE RD.

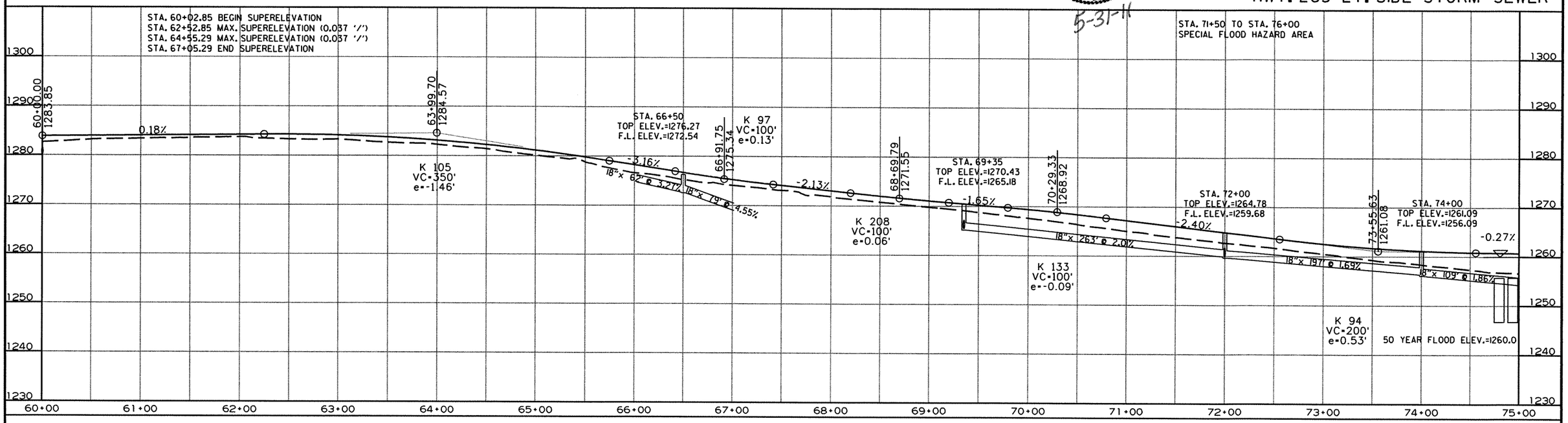
r040517.dgn
3-8-10

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.		040517	120	296

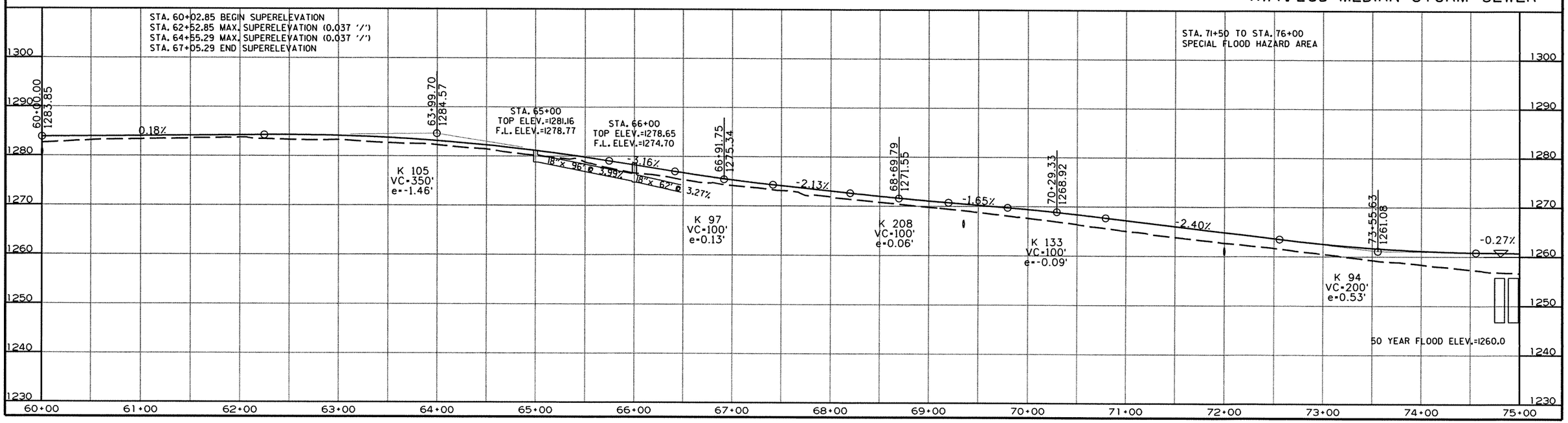
(2) HWY. 265 PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



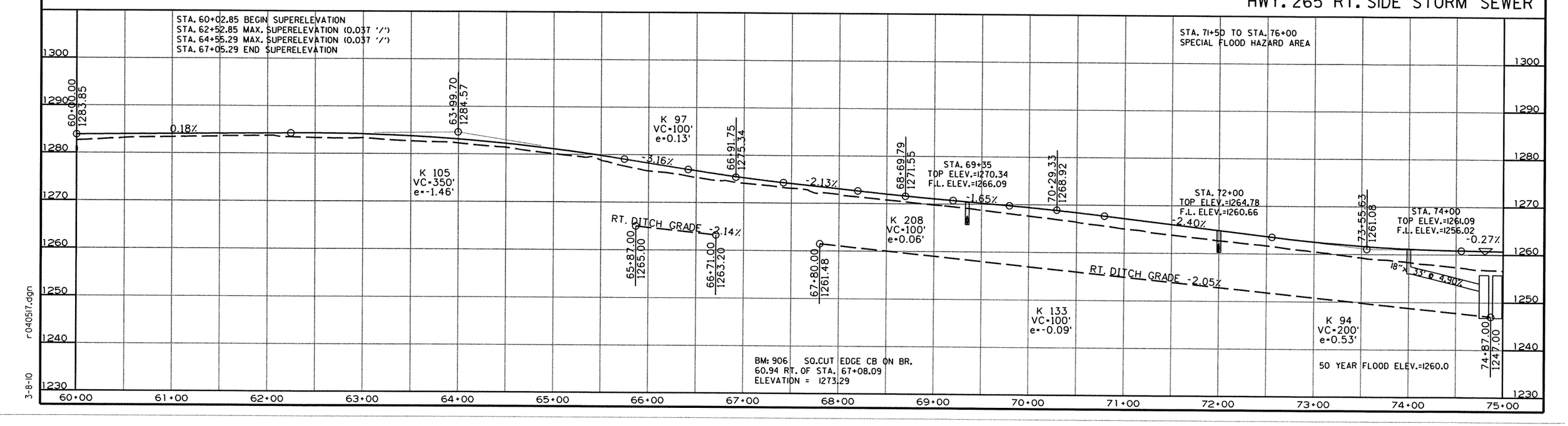
r040517.dgn
3-8-10

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

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.		040517	121	296

2 HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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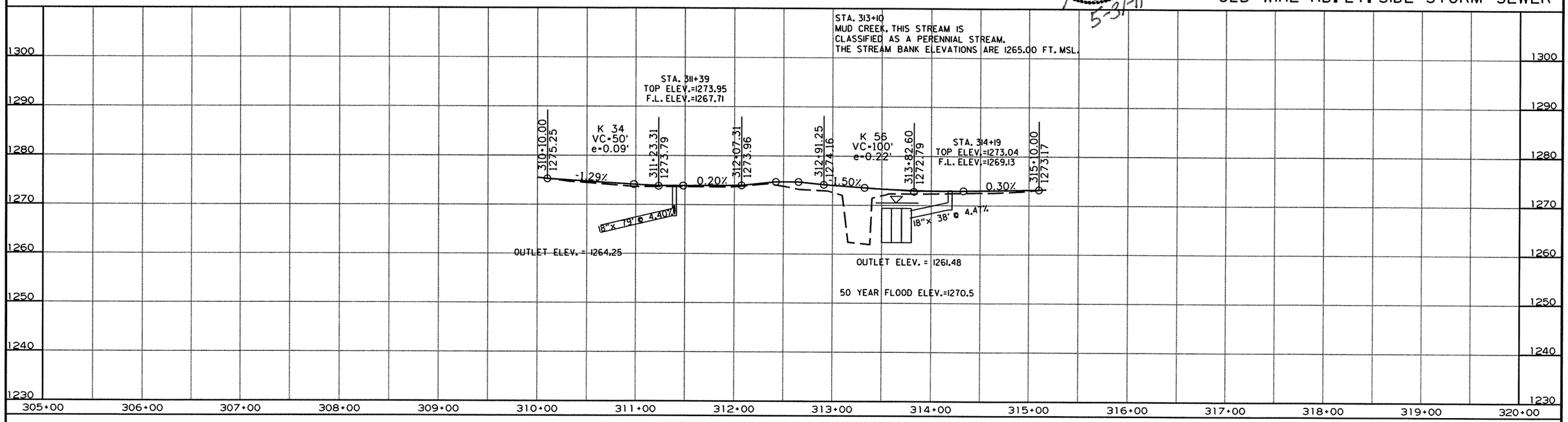
3-8-10

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.		040517	122	296

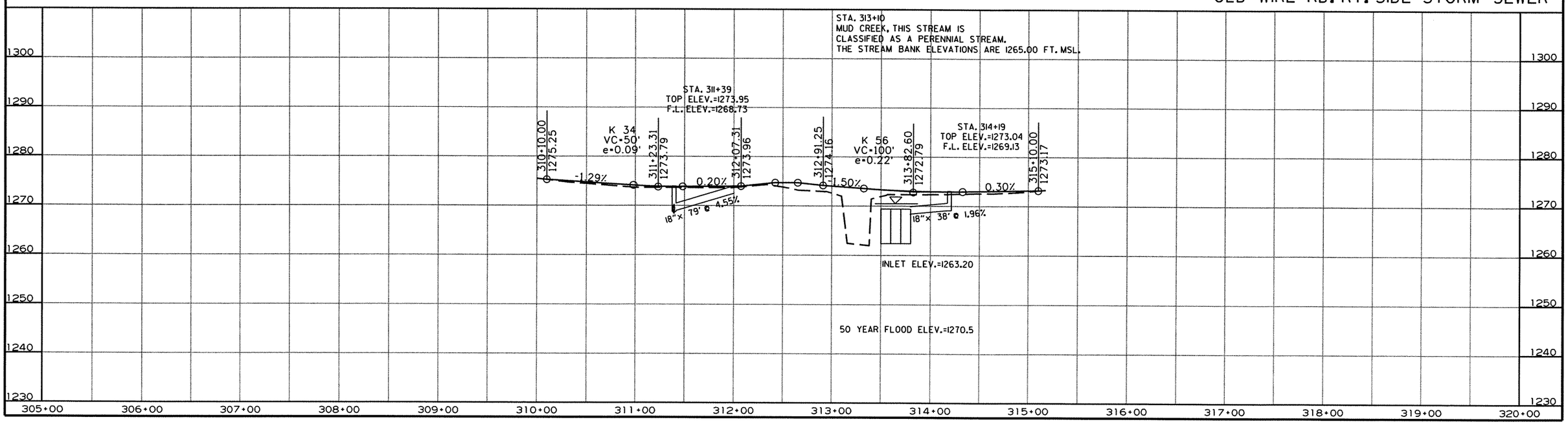
(2) OLD WIRE RD. PROFILES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGITT
5-31-11

OLD WIRE RD. LT. SIDE STORM SEWER



OLD WIRE RD. RT. SIDE STORM SEWER



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3-8-10

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.		040517	123	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

STA. 75+75 CONSTRUCT
TYPE C DROP INLET ON LT. H= 4' 2"
WITH 4' EXTENSION
CONNECT TO R.C. BOX CULVERT
TYPE C DROP INLET = 4' x 4'

STA. 79+50 CONSTRUCT
DROP INLET ON LT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 85'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 85 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 85 LIN. FT.

STA. 80+40 CONSTRUCT
DROP INLET ON LT. H= 12' 4"
WITH 48" x 7'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO OPEN CHANNEL ON LT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4' x 5'

STA. 84+75 CONSTRUCT
DROP INLET ON LT. H= 9' 0"
WITH 24" x 26'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
STUB OUTLET WITH FES.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 75+12 CONSTRUCT
JUNCTION BOX ON LT. H= 9' 5"
WITH 18" x 22' TEMPORARY PIPE CULVERT
TO OPEN DITCH ON LT.
TYPE ST JUNCTION BOX = 4' x 4'

STA. 83+25 CONSTRUCT
DROP INLET ON LT. H= 5' 2"
WITH 8' EXTENSION AND 18" x 20'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
STUB OUTLET WITH FES.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 86+52 CONSTRUCT
DROP INLET ON LT. H= 3' 8"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 80+40 IN PLACE
42" x 47' R.C. PIPE CULVERT
WITH HDWLS LT. & RT.
REMOVE

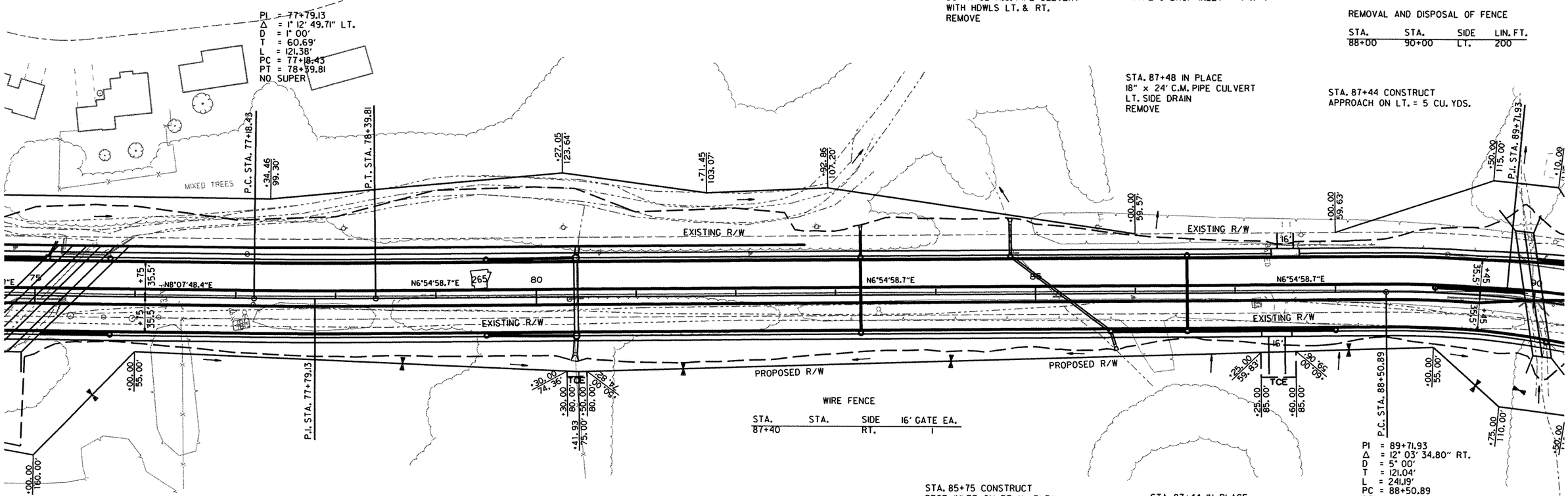
STA. 85+00 IN PLACE
36" x 62' R.C. PIPE CULVERT
WITH HDWLS LT. & RT.
REMOVE

REMOVAL AND DISPOSAL OF FENCE

STA.	STA.	SIDE	LIN. FT.
88+00	90+00	LT.	200

STA. 87+48 IN PLACE
18" x 24' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 87+44 CONSTRUCT
APPROACH ON LT. = 5 CU. YDS.



WIRE FENCE

STA.	STA.	SIDE	16' GATE EA.
87+40		RT.	1

STA. 75+75 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH 4' EXTENSION AND 18" x 68'
PIPE CULVERT TO R.C. BOX CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 68 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 68 LIN. FT.

STA. 79+50 CONSTRUCT
DROP INLET ON RT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 85'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 85 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 85 LIN. FT.

STA. 80+40 CONSTRUCT
DROP INLET ON RT. H= 8' 8"
WITH 48" x 12' R.C. PIPE INLET AND FES
AND 48" x 72' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 6' DIA.
TYPE C DROP INLET = 4' x 5'

STA. 85+75 CONSTRUCT
DROP INLET ON RT. H= 7' 7"
WITH 24" x 12' R.C. PIPE STUB INLET WITH FES
AND 24" x 122' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 87+44 IN PLACE
24" x 24' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 45 CU. YDS.

STA. 89+00 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 9"
WITH 4' EXTENSION AND 18" x 87'
PIPE CULVERT TO R.C. BOX
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 87 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 87 LIN. FT.

STA. 76+38 IN PLACE
18" x 13' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 83+25 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 86+52 CONSTRUCT
DROP INLET ON RT. H= 5' 10"
WITH 8' EXTENSION AND 18" x 73'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 73 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 73 LIN. FT.

STA. 88+00 CONSTRUCT
DROP INLET ON RT. H= 3' 0"
WITH 4' EXTENSION AND 18" x 144'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 144 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 144 LIN. FT.

r040517.dgn
3-8-10

HWY. 265

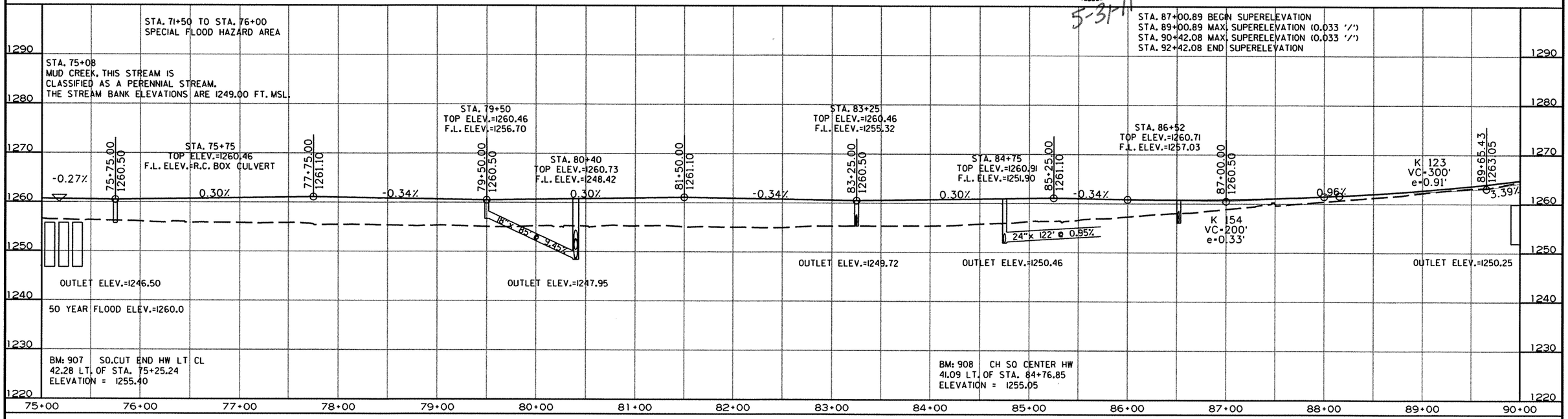
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	124	296

(2) HWY. 265 PROFILES

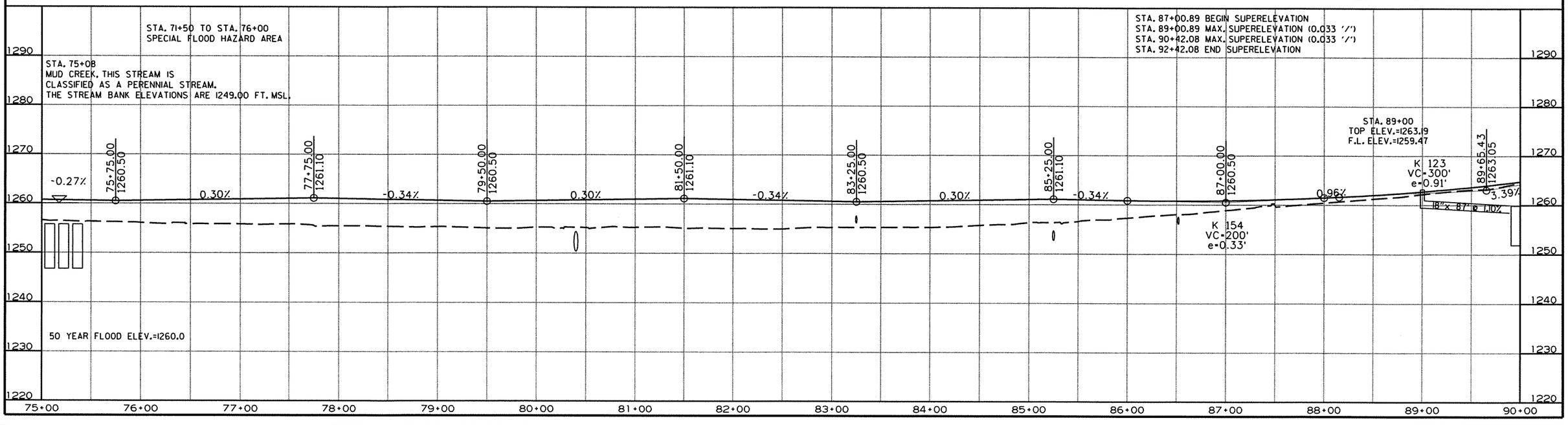
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGBETT

5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



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3-8-10

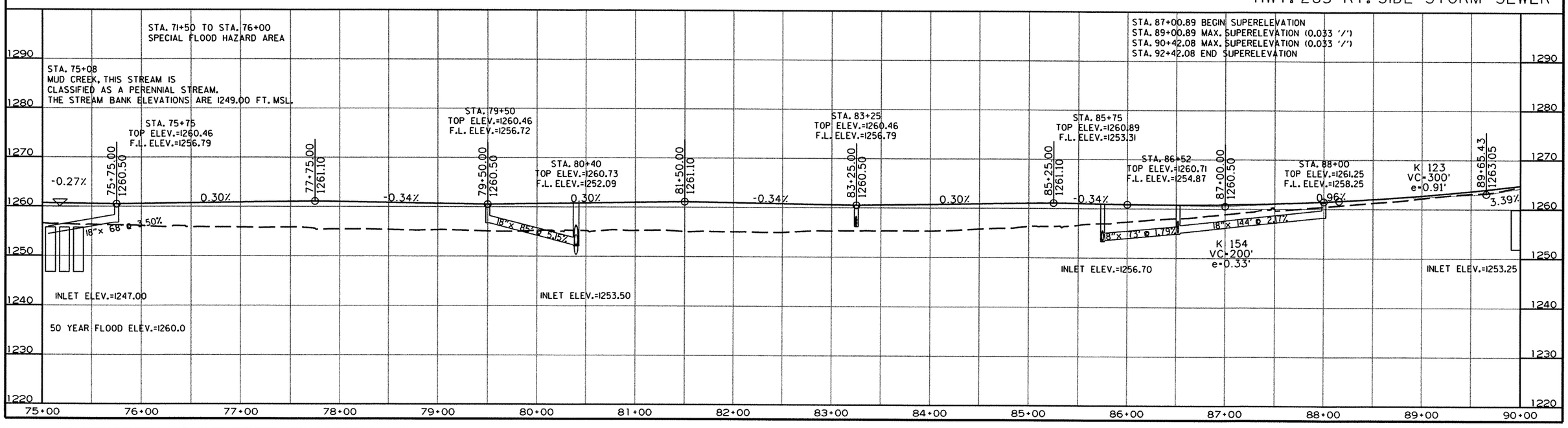
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

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.		040517	125	296

2 HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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3-8-10

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.		040517	126	296

(2) HWY. 265 PLAN

STA. 92+00 CONSTRUCT
DROP INLET ON LT. H= 7' 8"
WITH 8' EXTENSION AND 18" x 203'
PIPE CULVERT TO R.C. BOX CULVERT
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 203 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 203 LIN. FT.

STA. 93+53 CONSTRUCT
DROP INLET ON LT. H= 5' 5"
WITH 8' EXTENSION AND 18" x 149'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 96+83 CONSTRUCT
DROP INLET ON LT. H= 5' 6"
WITH 4' EXTENSION AND 18" x 325'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 103+00 CONSTRUCT
DROP INLET ON LT. H= 5' 10"
WITH 8' EXTENSION WITH
OPENING IN BACK AND 18" x 189'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 189 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 189 LIN. FT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

STA. 92+96 IN PLACE
24"x107' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

REMOVAL AND DISPOSAL OF FENCE

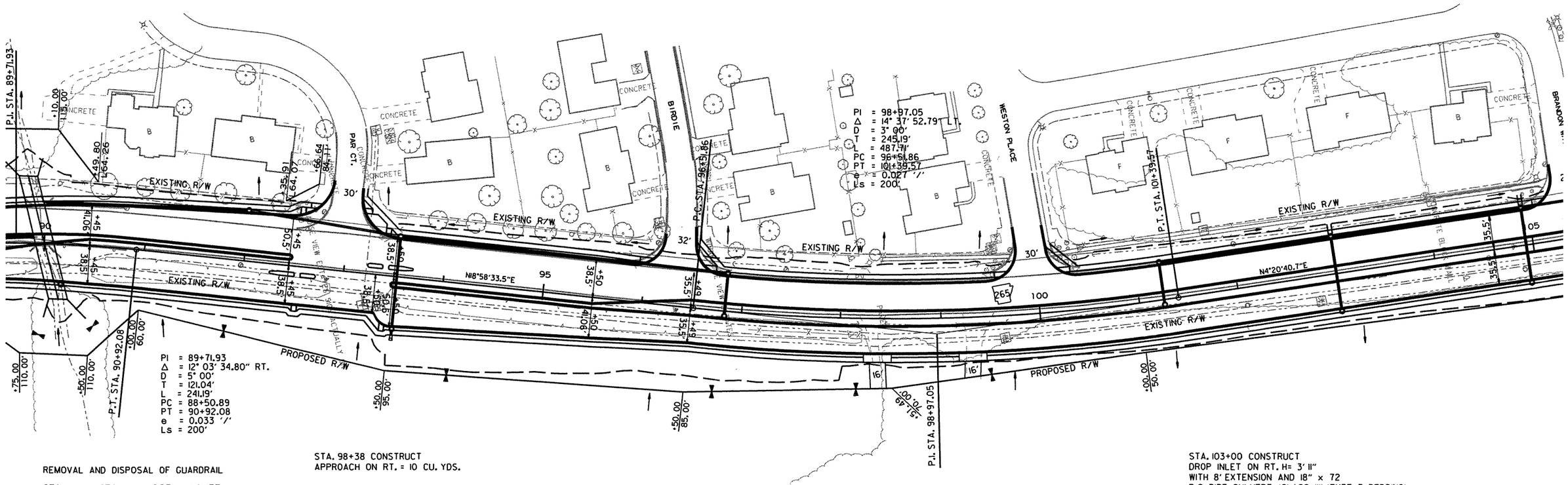
STA.	STA.	SIDE	LIN. FT.
90+53	92+59	LT.	206
93+34	96+06	LT.	272
96+60	99+72	LT.	312
100+42	104+94	LT.	452

STA. 96+33 IN PLACE
24"x100' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 101+25 CONSTRUCT
DROP INLET ON LT. H= 4' 1"
WITH 4' EXTENSION AND 18" x 171'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 171 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 171 LIN. FT.

STA. 99+95 IN PLACE
24"x114' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 104+93 CONSTRUCT
DROP INLET ON LT. H= 5' 0"
WITH 8' EXTENSION WITH
OPENING IN BACK AND 18" x 203'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 203 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 203 LIN. FT.



REMOVAL AND DISPOSAL OF GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
89+12	90+83	RT.	170
89+12	90+77	LT.	170

STA. 98+38 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS.

WIRE FENCE

STA.	STA.	SIDE	16' GATE EA.
98+37		RT.	1

STA. 90+18 CONSTRUCT
TYPE C DROP INLET ON RT. H= 3' 9"
WITH 8' EXTENSION
TO R.C. BOX CULVERT ON RT.
TYPE C DROP INLET = 4'x4'

STA. 99+29 IN PLACE
18"x48' C.M. PIPE
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 5 CU. YDS.

STA. 103+00 CONSTRUCT
DROP INLET ON RT. H= 3' 11"
WITH 8' EXTENSION AND 18" x 72
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 90+00 IN PLACE
13' x 10' x 40' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
REMOVE AND CONSTRUCT
DBL 9' x 8' x 126' R.C. BOX CULVERT
WITH 3:1 WINGS LT. & RT.
15° RT. FWD. SKEW
Q50 = 564 CFS D.A. = 135 ACRES

STA. 93+53 CONSTRUCT
DROP INLET ON RT. H= 3' 9"
WITH 8' EXTENSION AND 18" x 2'
R.C. PIPE STUB INLET AND 18" x 89'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 96+83 CONSTRUCT
DROP INLET IN MEDIAN H= 5' 6"
WITH 4' EXTENSION AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 98+38 CONSTRUCT
APPROACH ON RT. = 10 CU. YDS. CUT

STA. 101+25 CONSTRUCT
DROP INLET IN MEDIAN H= 4' 1"
WITH 4' EXTENSION AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 104+93 CONSTRUCT
DROP INLET ON RT. H= 4' 10"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

r040517.dgn
3-8-10

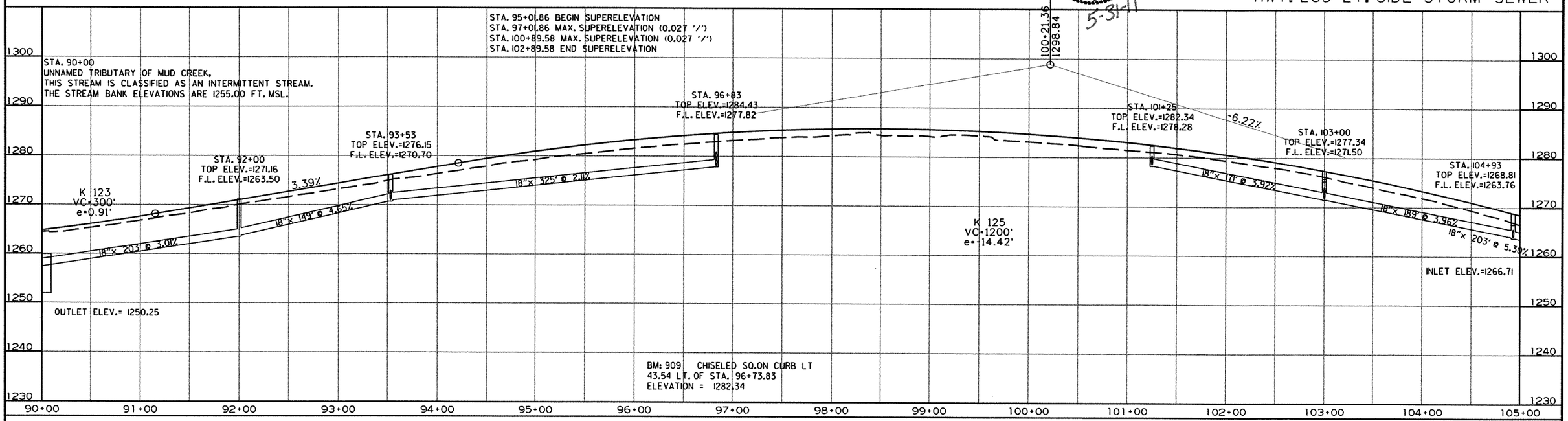
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	127	296

(2) HWY. 265 PROFILES

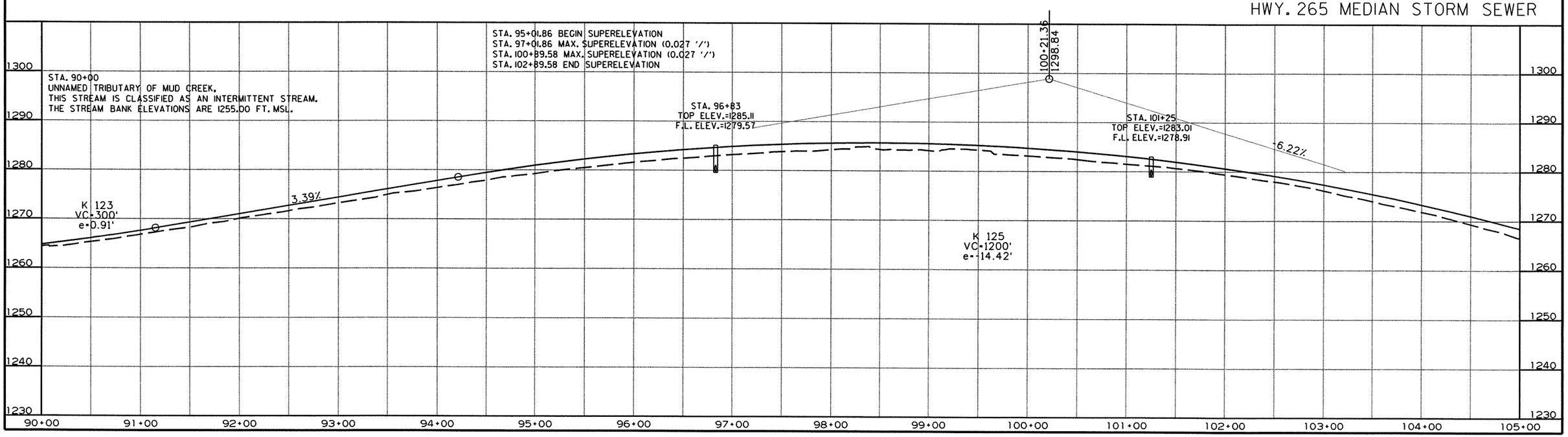
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



r040517.dgn

3-8-10

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

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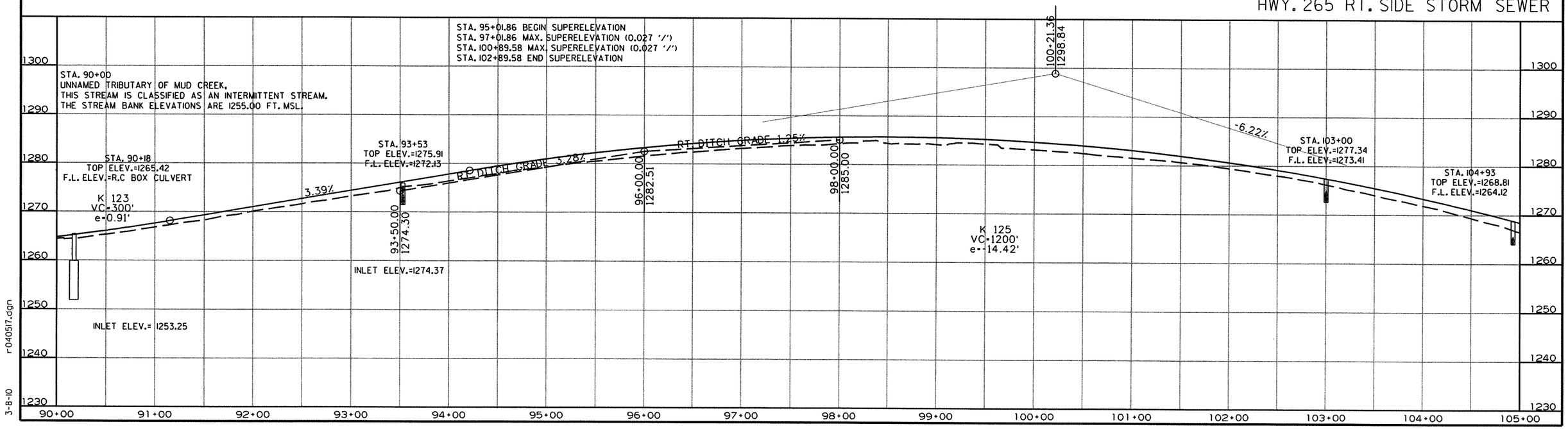
				6	ARK.			
				JOB NO.		040517	128	296

2 HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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3-8-10

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				JOB NO.		040517	129	296

(2) HWY. 265 PLAN

STA. 107+00 CONSTRUCT
DROP INLET ON LT. H= 4' 0"
WITH 8' EXTENSION AND 18" x 196'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 196 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 196 LIN. FT.

STA. 109+00 CONSTRUCT
DROP INLET ON LT. H= 6' 6"
WITH 8' EXTENSION AND 18" x 130'
PIPE CULVERT TO R.C. BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 130 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 130 LIN. FT.

STA. 111+10 CONSTRUCT
DROP INLET 92' LT. H= 3' 8"
WITH 18" x 5'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 105+42 IN PLACE
24"x114' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 111+52 CONSTRUCT
DROP INLET 92' LT. H= 3' 8"
WITH 18" x 17'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 111+60 CONSTRUCT
JUNCTION BOX 65' LT. H= 7' 11"
WITH 73" x 45" x 14'
R.C. ARCH PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TYPE E JUNCTION BOX = 4' x 12'

STA. 113+00 CONSTRUCT
DROP INLET ON LT. H= 8' 3"
24" x 22' R.C. PIPE INLET
(CLASS III) (TYPE 3 BEDDING)
CONNECTED TO EXISTING 24' PIPE WITH 73" x 45" x 218'
R.C. ARCH PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX ON LT.
TYPE C DROP INLET = 4' x 7'

STA. 111+25 IN PLACE
DBL 5'x4'x60' R.C. BOX CULVERT
LT. SIDE DRAIN
RETAIN AND EXTEND
12' ON OUTLET END
WITH 3:1 WINGS AND 15° SKEW

STA. 110+33 CONSTRUCT
TEMPORARY JUNCTION BOX ON LT. H= 9' 9"
WITH 18" x 32' TEMPORARY PIPE CULVERT
TO OPEN CHANNEL ON LT.
JUNCTION BOX TYPE ST = 4' x 4'

STA. 114+20 CONSTRUCT
DROP INLET ON LT. H= 6' 6"
WITH 18" x 4' R.C. PIPE STUB INLET
(CLASS III)(TYPE 3 BEDDING)
WITH FES AND 73" x 45" x 117'
ARCH PIPE CULVERT TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 7'
73" x 45" R.C. ARCH PIPE (CLASS III) (TYPE 3 BEDDING) = 117 LIN. FT.
71" x 47" SLPPMCCS ARCH PIPE (TYPE 2 BEDDING) = 117 LIN. FT.

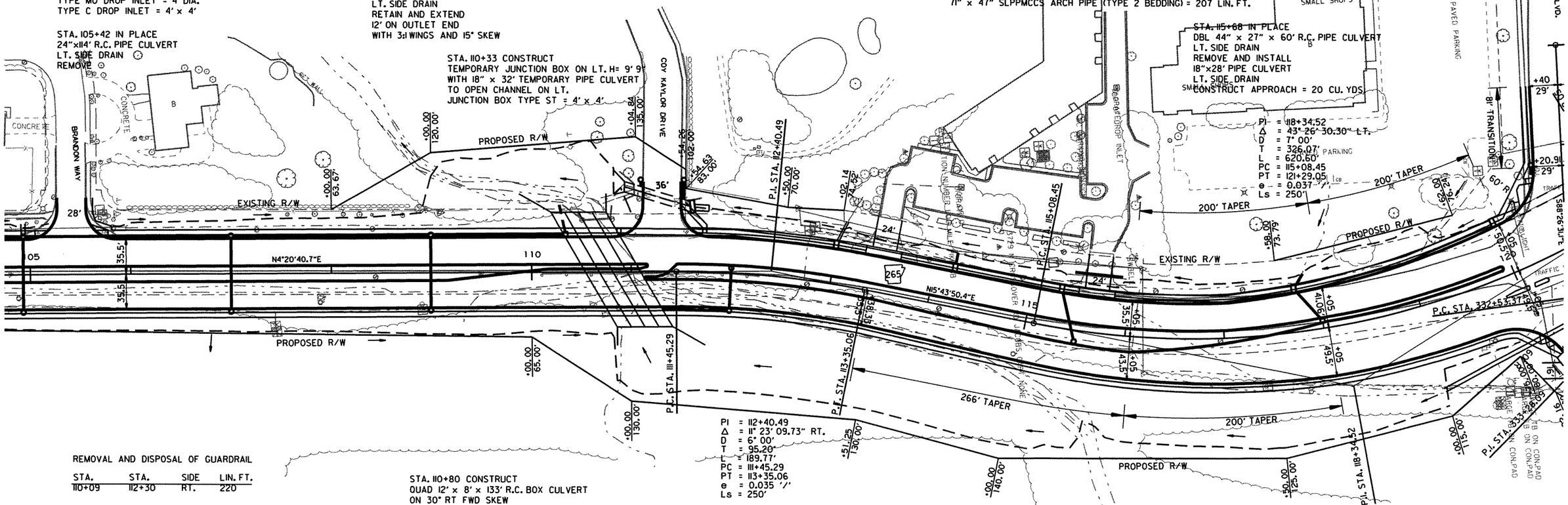
STA. 115+30 CONSTRUCT
DROP INLET ON LT. H= 6' 0"
WITH 8' EXTENSION AND 73" x 45" x 105'
PIPE CULVERT TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 7'
73" x 45" R.C. ARCH PIPE (CLASS III) (TYPE 3 BEDDING) = 105 LIN. FT.
71" x 47" SLPPMCCS ARCH PIPE (TYPE 2 BEDDING) = 105 LIN. FT.

STA. 113+46 IN PLACE
DBL 44" x 27" x 67' R.C. ARCH PIPE
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH ON LT. = 45 CU. YDS.

STA. 117+75 CONSTRUCT
DROP INLET ON LT. H= 6' 9"
WITH 4' EXTENSION AND 18" x 12'
R.C. PIPE STUB INLET (CLASS III)(TYPE 3 BEDDING)
WITH FES AND 73" x 45" x 229'
PIPE CULVERT TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 7'
73" x 45" R.C. ARCH PIPE (CLASS III) (TYPE 3 BEDDING) = 229 LIN. FT.
71" x 47" SLPPMCCS ARCH PIPE (TYPE 2 BEDDING) = 229 LIN. FT.

STA. 120+00 CONSTRUCT
DROP INLET ON LT. H= 6' 6"
WITH 73" x 45" x 207'
ARCH PIPE CULVERT TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 8'
73" x 45" R.C. ARCH PIPE (CLASS III) (TYPE 3 BEDDING) = 207 LIN. FT.
71" x 47" SLPPMCCS ARCH PIPE (TYPE 2 BEDDING) = 207 LIN. FT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
1-11



REMOVAL AND DISPOSAL OF GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
110+09	112+30	RT.	220

STA. 110+80 CONSTRUCT
QUAD 12' x 8' x 133' R.C. BOX CULVERT
ON 30° RT FWD SKEW
WITH 3:1 WINGS LT. & RT.
Q50 = 3100 CFS D.A. = 3.3 SQ. MI.

STA. 110+51 - STA. 111+28 IN PLACE
31' x 56' BRIDGE CONSISTING OF CONCRETE CHANNEL BEAM
SUPERSTRUCTURE WITH CONCRETE ABUTMENTS.
REMOVE AS EXISTING BRIDGE STRUCTURE (SITE NO. 2) = 1.00 LUMP SUM

STA. 112+00 CONSTRUCT
DROP INLET IN MEDIAN H= 6' 3"
WITH 8' EXTENSION AND 18" x 39'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 115+50 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 10"
WITH 8' EXTENSION AND 18" x 49'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 118+00 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 5"
WITH 8' EXTENSION AND 18" x 38'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE C DROP INLET = 4' x 3'

STA. 107+00 CONSTRUCT
DROP INLET ON RT. H= 3' 6"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 109+00 CONSTRUCT
DROP INLET ON RT. H= 6' 0"
WITH 8' EXTENSION AND 18" x 72'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 112+00 CONSTRUCT
DROP INLET ON RT. H= 6' 4"
WITH 8' EXTENSION AND 18" x 64'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO R.C. BOX ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

r040517.dgn
3-8-10

HWY. 265

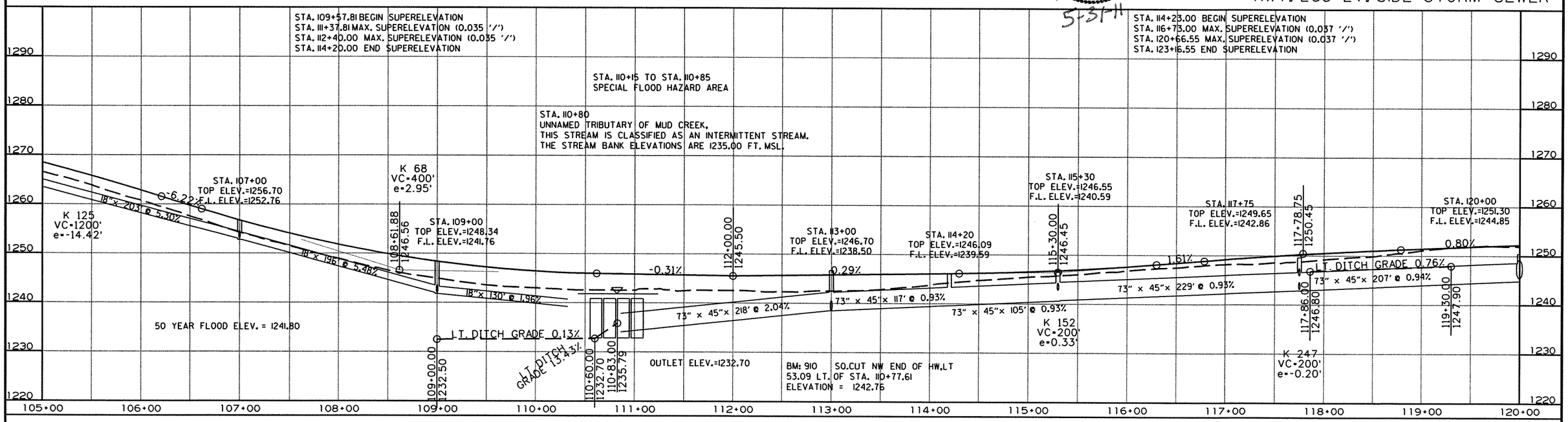
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	130	296

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGITT

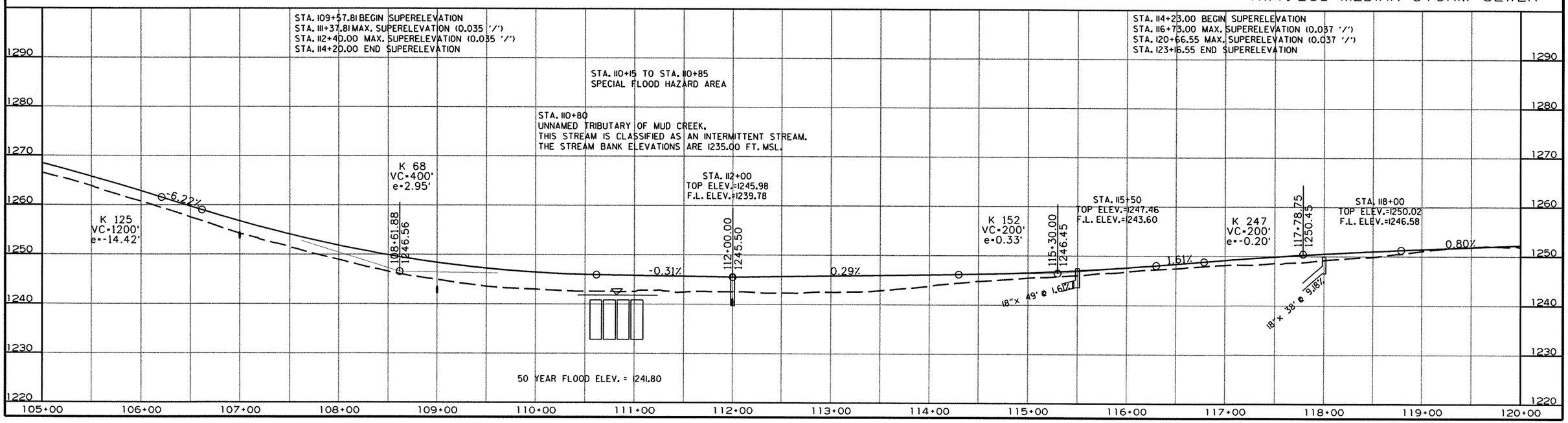
5-31-11

(2) HWY. 265 PROFILES

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



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3-8-10

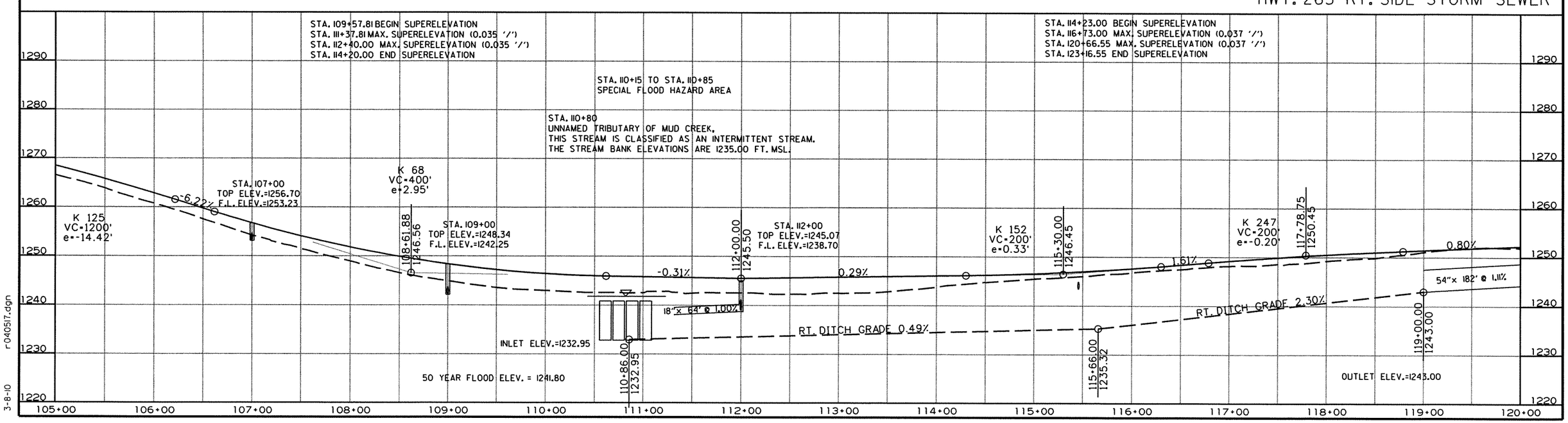
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

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.		040517	131	296

2 HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



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3-8-10

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		040517	132	296

(2) HWY. 265 PLAN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGITT
5-31-11

STA. 331+19 CONSTRUCT
DROP INLET ON RT. H= 3' 5"
WITH 8' EXTENSION AND 18" x 8'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO EXISTING 18" PIPE CULVERT ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 330+40 CONSTRUCT
TYPE C DROP INLET ON LT. H= 3' 2"
WITH 8' EXTENSION AND DBL 24" x 22'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO EXISTING 24" R.C. PIPE CULVERT ON LT.
TYPE C DROP INLET = 4' x 6'

STA. 122+16 CONSTRUCT
DROP INLET ON LT. H= 4' 10"
WITH 4' EXTENSION AND 8' x 3' x 43'
R.C. BOX CULVERT OUTLET
TO EXISTING R.C. BOX CULVERT ON LT.
TYPE C DROP INLET = 4' x 8'

STA. 331+44 IN PLACE
8' x 3' x 141' R.C. BOX CULVERT
RETAIN AND EXTEND 20' RT. & 43' LT.
TO PROPOSED STORM SEWER
NO WING WALLS, HEADWALLS, OR APRONS

STA. 124+00 CONSTRUCT
DROP INLET ON LT. H= 4' 10"
WITH 4' EXTENSION AND 36" x 261'
R.C. PIPE STUB INLET (CLASS III) (TYPE 3 BEDDING)
WITH FES AND 36" x 179'
PIPE CULVERT TO DROP INLET ON LT.
TYPE MO DROP INLET = 5' DIA.
TYPE C DROP INLET = 4' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 179 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 179 LIN. FT.

STA. 331+26 IN PLACE
DROP INLET ON RT.
REMOVE
18"x11' C.M. PIPE CULVERT
REMOVE 7'

STA. 120+57.72 CL HWY. 265
STA. 332+03.71 CL E. JOYCE
Δ = 114° 16' 33.81"

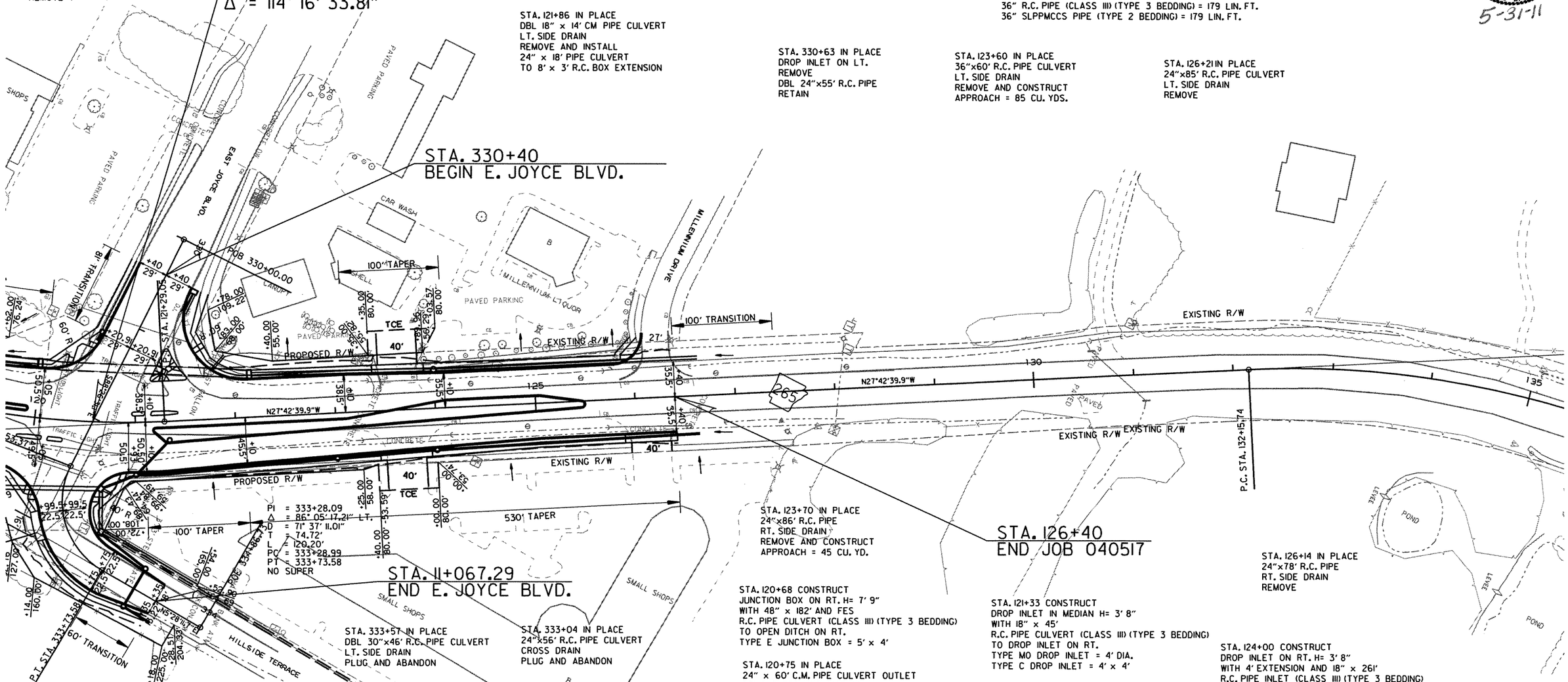
STA. 121+86 IN PLACE
DBL 18" x 14' CM PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND INSTALL
24" x 18' PIPE CULVERT
TO 8' x 3' R.C. BOX EXTENSION

STA. 330+63 IN PLACE
DROP INLET ON LT.
REMOVE
DBL 24"x55' R.C. PIPE
RETAIN

STA. 123+60 IN PLACE
36"x60' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 85 CU. YDS.

STA. 126+21 IN PLACE
24"x85' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

STA. 330+40
BEGIN E. JOYCE BLVD.



STA. 123+70 IN PLACE
24"x86' R.C. PIPE
RT. SIDE DRAIN
REMOVE AND CONSTRUCT
APPROACH = 45 CU. YD.

STA. 126+14 IN PLACE
24"x78' R.C. PIPE
RT. SIDE DRAIN
REMOVE

STA. 120+68 CONSTRUCT
JUNCTION BOX ON RT. H= 7' 9"
WITH 48" x 182' AND FES
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO OPEN DITCH ON RT.
TYPE E JUNCTION BOX = 5' x 4'

STA. 121+33 CONSTRUCT
DROP INLET IN MEDIAN H= 3' 8"
WITH 18" x 45'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 333+57 IN PLACE
DBL 30"x46' R.C. PIPE CULVERT
LT. SIDE DRAIN
PLUG AND ABANDON

STA. 333+04 IN PLACE
24"x56' R.C. PIPE CULVERT
CROSS DRAIN
PLUG AND ABANDON

STA. 120+75 IN PLACE
24" x 60' C.M. PIPE CULVERT OUTLET
REMOVE FES AND INSTALL
24" x 10' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO JUNCTION BOX ON RT.

STA. 124+00 CONSTRUCT
DROP INLET ON RT. H= 3' 8"
WITH 4' EXTENSION AND 18" x 261'
R.C. PIPE INLET (CLASS III) (TYPE 3 BEDDING)
WITH FES AND 18" x 96'
PIPE CULVERT TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 96 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 96 LIN. FT.

STA. 333+00 CONSTRUCT
APPROACH ON RT. = 40 CU. YDS.

STA. 333+33 CONSTRUCT
JUNCTION BOX ON LT. H= 7' 0"
WITH 30" x 585' EXISTING PIPE INLET AND 36" x 36'
PIPE CULVERT TO DROP INLET ON
HWY. 265 STA. 120+68 ON THE RT.
TYPE E JUNCTION BOX = 6' x 4'
36" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 36 LIN. FT.
36" SLPPMCCS PIPE (TYPE 2 BEDDING) = 36 LIN. FT.

STA. 334+10 CONSTRUCT
DROP INLET ON RT. H= 3' 7"
WITH 8' EXTENSION AND 18" x 29' INLET
AND 18" x 40' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

STA. 334+10 CONSTRUCT
DROP INLET ON LT. H= 4' 3"
WITH 8' EXTENSION AND 18" x 53'
PIPE CULVERT TO JUCNTION BOX ON LT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 53 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 53 LIN. FT.

STA. 121+00 CONSTRUCT
DROP INLET ON RT. H= 8' 3"
WITH 4' EXTENSION AND 18" x 33'
PIPE CULVERT TO JUNCTION BOX ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'
18" R.C. PIPE (CLASS III) (TYPE 3 BEDDING) = 33 LIN. FT.
18" SLPPMCCS PIPE (TYPE 2 BEDDING) = 33 LIN. FT.

STA. 123+00 CONSTRUCT
DROP INLET ON RT. H= 4' 10"
WITH 4' EXTENSION AND 18" x 198'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
TO DROP INLET ON RT.
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' x 4'

HWY. 265

r040517.dgn
3-8-10

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

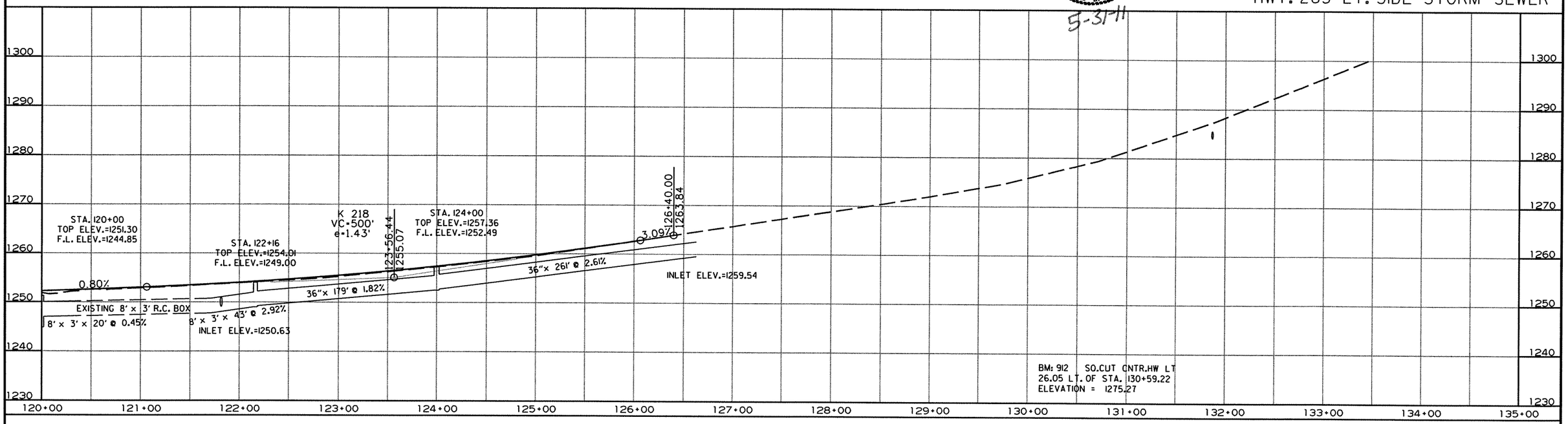
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040517	133	296

(2) HWY. 265 PROFILES

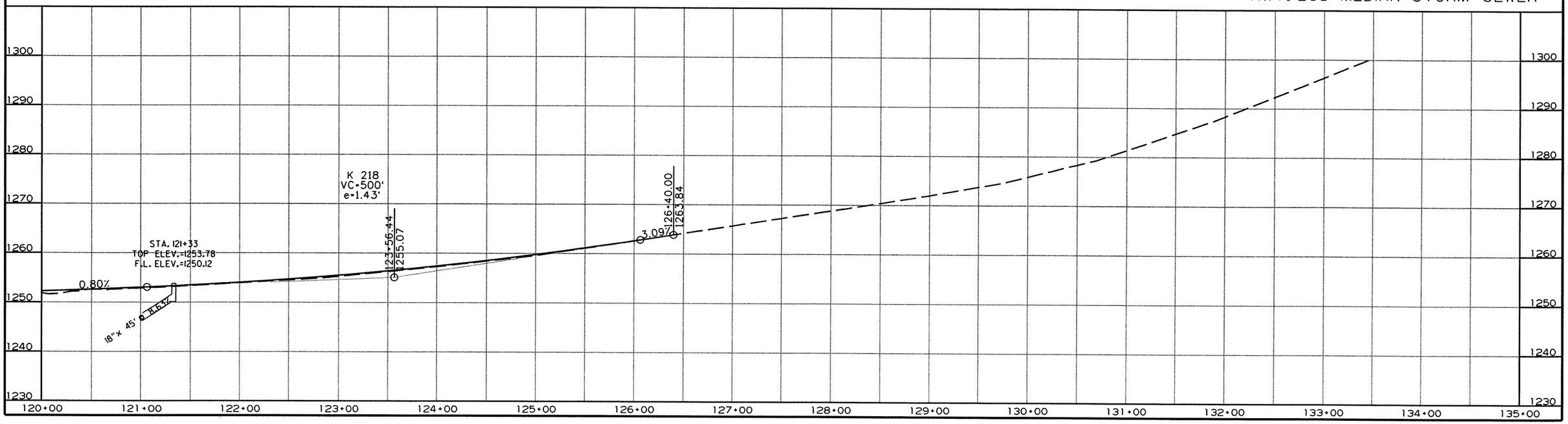
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11

HWY. 265 LT. SIDE STORM SEWER



HWY. 265 MEDIAN STORM SEWER



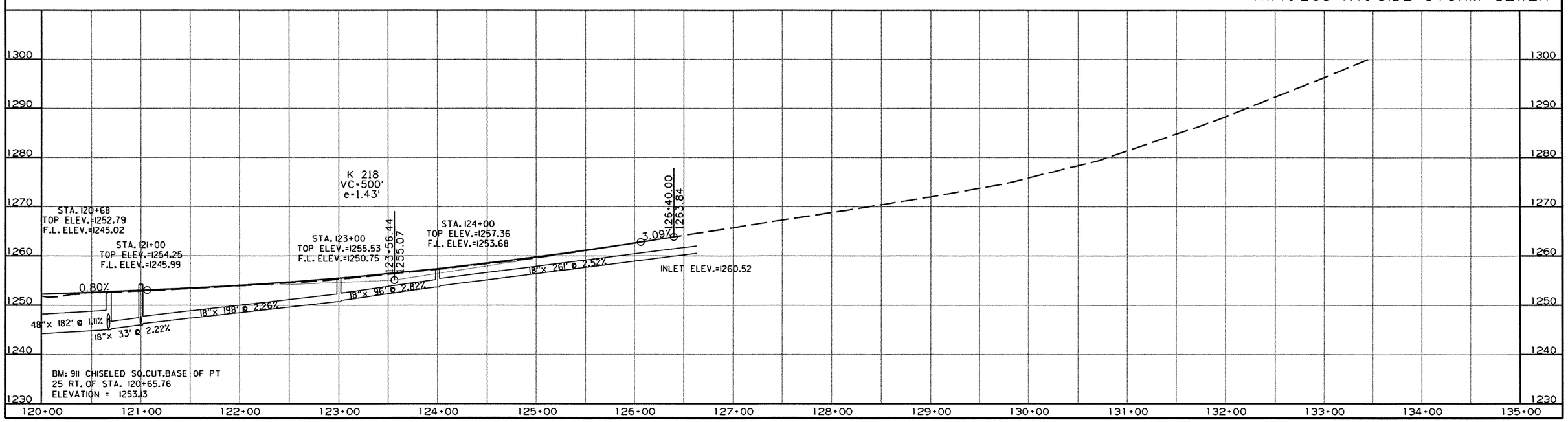
r040517.dgn
3-8-10

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. PUGETT
5-31-11

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.		040517	134	296

(2) HWY. 265 PROFILE

HWY. 265 RT. SIDE STORM SEWER



r040517.dgn
3-8-10

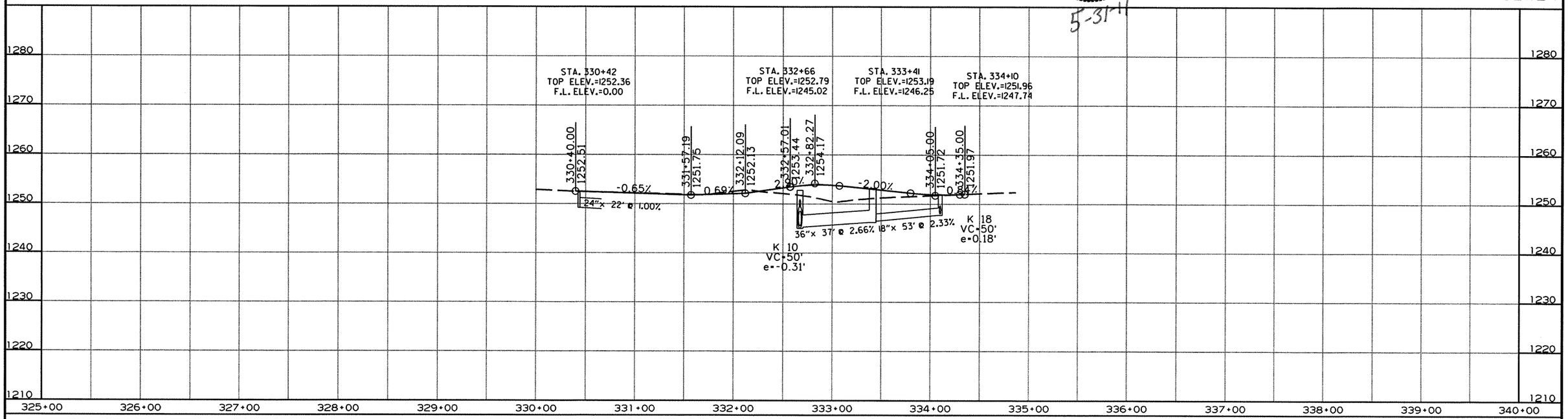
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	135	296

(2) E. JOYCE BLVD. PROFILES

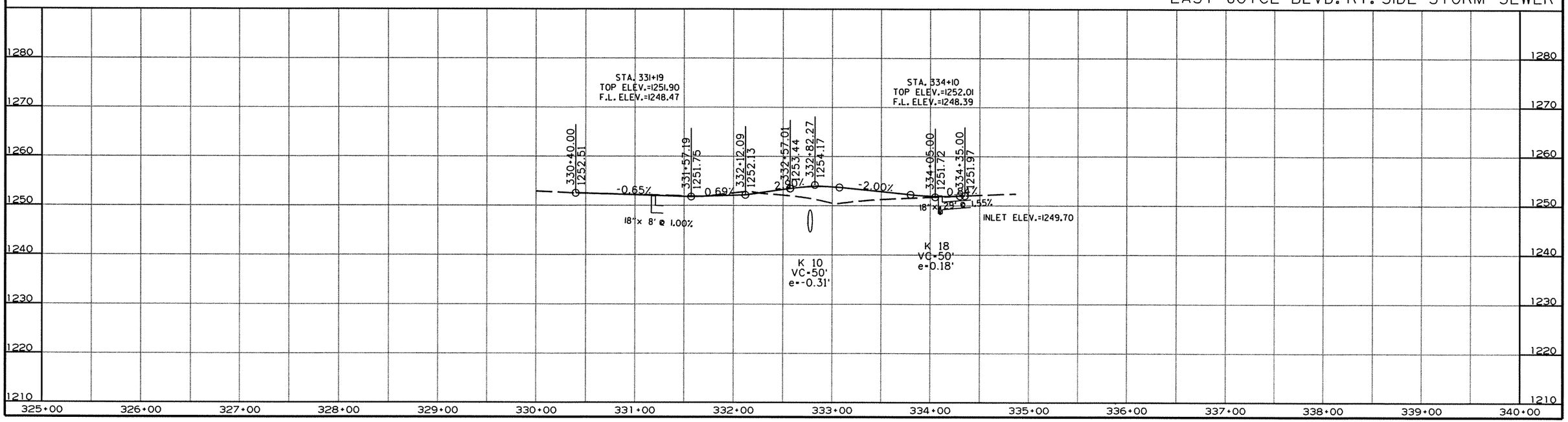
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11

EAST JOYCE BLVD. LT. SIDE STORM SEWER



EAST JOYCE BLVD. RT. SIDE STORM SEWER

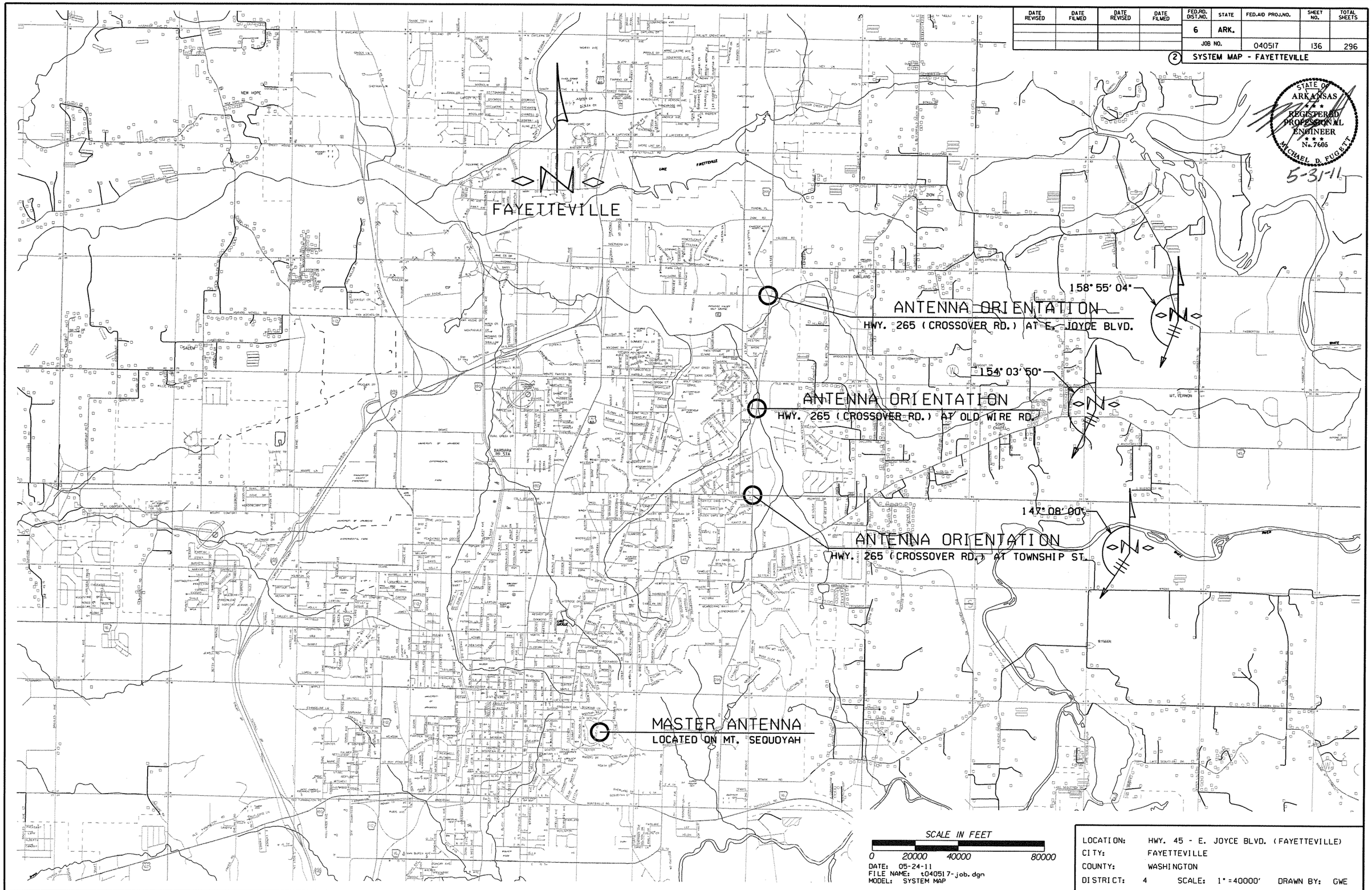


r040517.dgn
3-8-10

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.		040517	136	296

2 SYSTEM MAP - FAYETTEVILLE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



DATE: 05-24-11
FILE NAME: t040517-job.dgn
MODEL: SYSTEM MAP

LOCATION: HWY. 45 - E. JOYCE BLVD. (FAYETTEVILLE)
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=40000' DRAWN BY: GWE

t040517-job.dgn 7/9/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
8-16-11				6	ARK.			
				JOB NO.		040517	137	296

(2) SIGNALIZATION PLAN SHEET

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) 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. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY.
17. 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.
18. 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.
19. 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.
20. 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.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO ISMA STANDARDS.
22. 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.
23. 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.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. TOMAR MODEL m913 STROBECOM DETECTOR CABLE SHALL BE FURNISHED BY THE CITY OF FAYETTEVILLE TRAFFIC SIGNAL DEPARTMENT AND INSTALLED BY THE CONTRACTOR AS SHOWN ON THE PLANS. INSTALLATION OF THE CABLE SHALL BE PAID FOR UNDER ITEM 733, VIDEO CABLE.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. RUGGETT 8-16-11

JOB 040517 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	HWY. 265 & TOWNSHIP	HWY. 265 & OLD WIRE	HWY. 265 & E. JOYCE	QUANTITY	UNIT
SP&701	SYSTEM LOCAL CONTROLLER TS 2 - TYPE 2 (8 PHASE)	1	1	1	3	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	19	20	24	63	EACH
SP&706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	8	6	4	18	EACH
SP&707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	8	8	8	24	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	4856	2950	4288	12094	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	260	290	99	649	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)			27	27	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	638	581	508	1727	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	20	20	60	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	40	40	40	120	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	20	20	60	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	40	40	120	LIN. FT.
710	NON-METALLIC CONDUIT (3")	765	454	729	1948	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	10	3	4	17	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)		5	3	8	EACH
SS&711	CONCRETE PULL BOX (TYPE 1HD)		1	1	2	EACH
713	SPAN WIRE ASSEMBLY	1	1	1	3	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 (32')		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 (40')			1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1			1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	1			1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66')		1		1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66'-42')			1	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (74')			1	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	5	3	4	12	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	4	4	4	12	EACH
733	VIDEO CABLE	3574	3606	2910	10090	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	14	14	13	41	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	2	2	6	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	• 5	4	4	13	EACH
733	VIDEO MONITOR (CLR)	1	1	1	3	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	1	1	1	EACH
SP&733	VIDEO DETECTOR RELOCATION	8	5	7	20	EACH
SP	ANTENNA RELOCATION	1	1	1	3	EACH
SP	VIDEO DETECTOR ROTATION	8	7	5	20	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	9	12	14	35	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	661	611	637	1909	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	60	45	60	165	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	20	20	20	60	LIN. FT.
SP	LUMINAIRE ASSEMBLY	1	1	1	3	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	93	70	87	250	LIN. FT.
SP	18" STREET NAME SIGN	4	4	4	12	EACH
SP	LOCAL RADIO WITH ANTENNA	1	1	1	3	EACH
SP	ANTENNA CABLE (TYPE 6)	140	140	140	420	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	0.33	0.33	1.00	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	1	3	EACH

• ONE SPARE VIDEO PROCESSOR, EDGE CARD SHALL BE SUPPLIED.

DATE: 08-16-11
FILE NAME: t040517-job.dgn
MODEL: SUMMARY AND TRAFFIC SIGNAL NOTES

LOCATION: HWY. 45 - E. JOYCE BLVD. (FAYETTEVILLE)
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-job.dgn 7/9/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-16-11				6	ARK.			
				JOB NO.		040517	138	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N.27605 MICHAEL D. FUGETT

8-16-11

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL 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)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1880	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	103	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	4	EACH
733	VIDEO CABLE	1776	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	6	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	5	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
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	LOCAL RADIO WITH ANTENNA	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.12	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

* ONE SPARE VIDEO PROCESSOR, EDGE CARD SHALL BE SUPPLIED.

STAGE 1
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 PERMANENT TRAFFIC SIGNAL CONTROLLER A TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE CONSTRUCTED.
INSTALL 4 TREATED WOOD POLES (CLASS 3, 40') AND SPAN WIRE ASSEMBLY SUCH THAT THE SPAN WIRE IS LOCATED OUTSIDE OF THE EXISTING AND PROPOSED TRAFFIC SIGNAL INSTALLATIONS.
INSTALL RADIO ANTENNA, ANTENNA CABLE, ALL TRAFFIC SIGNAL CABLE AND VIDEO CABLE, RE-ESTABLISH VIDEO ZONES AND REMOVE EXISTING TRAFFIC SIGNAL.
INSTALL AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	6	EACH
SP&733	VIDEO DETECTOR RELOCATION	4	EACH
SP	VIDEO DETECTOR ROTATION	4	EACH

STAGE 2:
RELOCATE SIGNAL HEADS, ROTATE VIDEO DETECTOR AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
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
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	3	EACH
SP&733	VIDEO DETECTOR RELOCATION	4	EACH
SP	VIDEO DETECTOR ROTATION	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.11	LUMP SUM

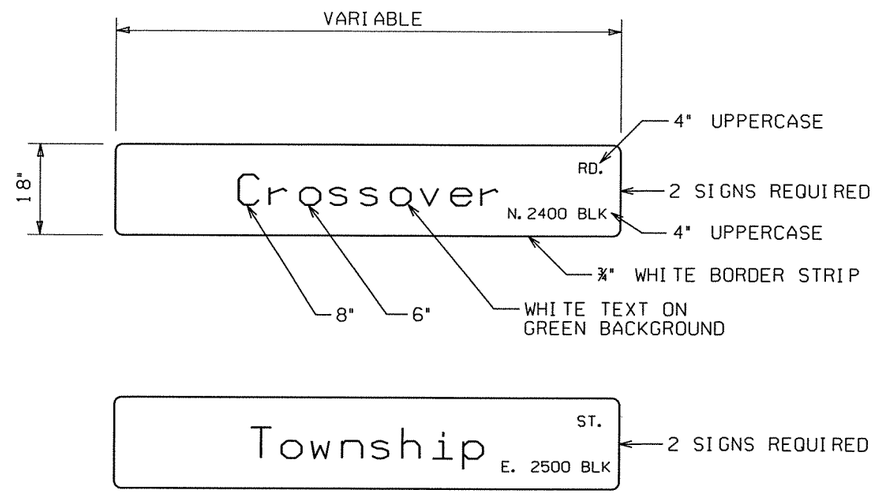
STAGE 3:
REMOVE 4 SECTION TRAFFIC SIGNAL HEAD #7 AND REPLACE WITH 3 SECTION HEAD AS SHOWN.
RELOCATE SIGNAL HEADS, ROTATE VIDEO DETECTOR AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	10	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.)	2976	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	260	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	638	LIN. FT.
710	NON-METALLIC CONDUIT (3")	662	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	7	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')	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 (50')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (62')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	5	EACH
733	VIDEO CABLE	1798	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	8	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	93	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	641	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	60	LIN. FT.
SP	ANTENNA RELOCATION	1	EACH
SP	LUMINAIRE ASSEMBLY	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.11	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, RELOCATE RADIO ANTENNA AND REMOVE ALL STAGE 1-3 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS).

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



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: 08-16-11
FILE NAME: t040517-01.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-01.dgn 7/9/2010

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.		040517	139	296

(2) SIGNALIZATION PLAN SHEET

STAGES 1- 3 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/TOWNSHIP ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DETECTOR	TUBE LENGTH
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
VZ-11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
VZ-21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
VZ-22	SB NEAR	COMB.				V10	2			CAMERA V5	
VZ-31	EB LEFT TURN	LOCAL			17	V3	3			CAMERA V3	
VZ-41A&B	WB THRU	LOCAL			29	V4	4			CAMERA V7	
VZ-51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
VZ-61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
VZ-62	NB THRU NEAR	COMB.				V14	6			CAMERA V1	
VZ-71	WB LEFT TURN	LOCAL			25	V7	7			CAMERA V7	
						V16					
VZ-81A&B	EB THRU	LOCAL			21		8			CAMERA V3	
					SPARE						

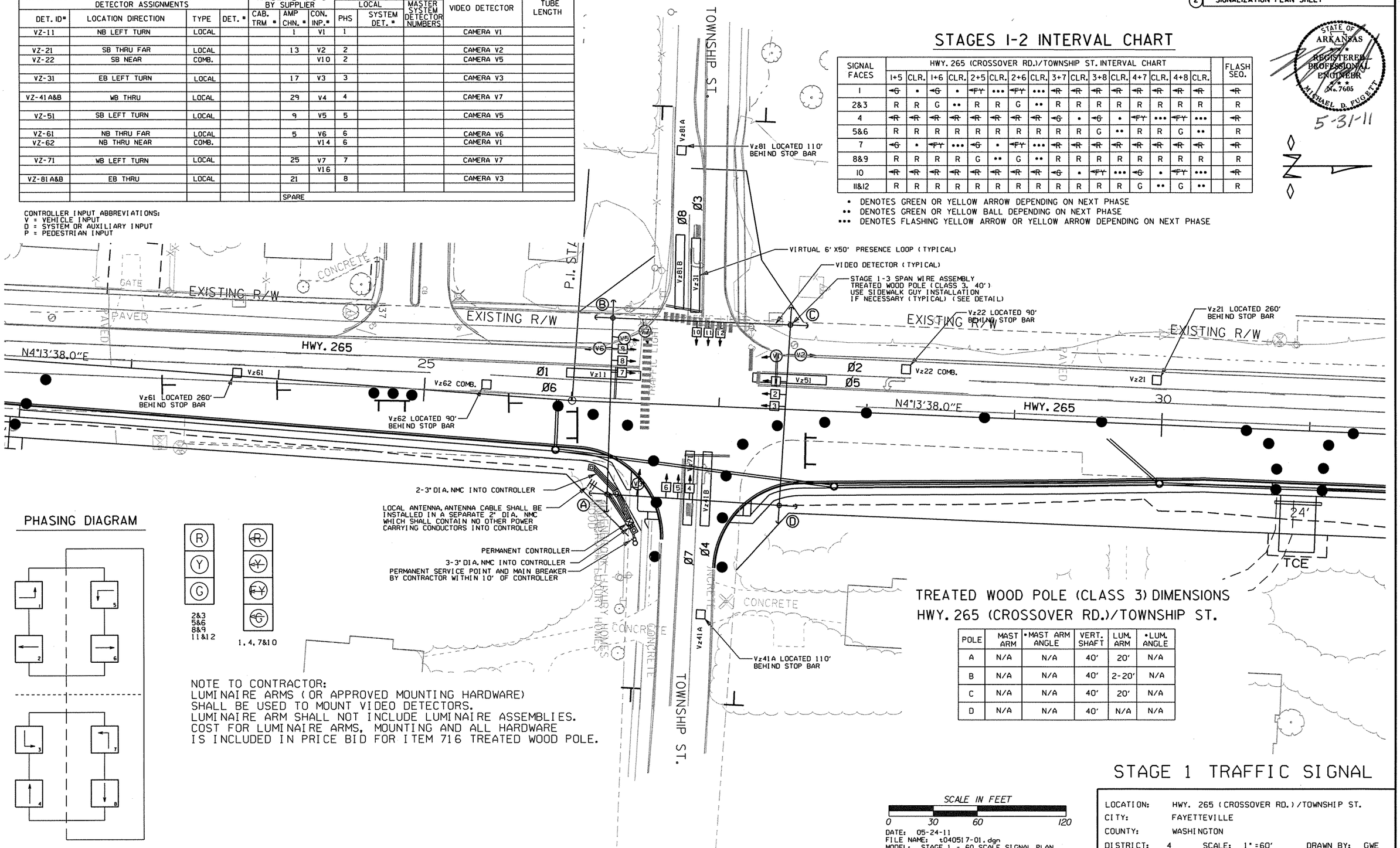
CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
D = SYSTEM OR AUXILIARY INPUT
P = PEDESTRIAN INPUT

STAGES 1-2 INTERVAL CHART

SIGNAL FACES	HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST. INTERVAL CHART																	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	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	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	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	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••		R

• 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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT
5-31-11



PHASING DIAGRAM

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

TREATED WOOD POLE (CLASS 3) DIMENSIONS HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	2-20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	N/A	N/A

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 1 - 60 SCALE SIGNAL PLAN

STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

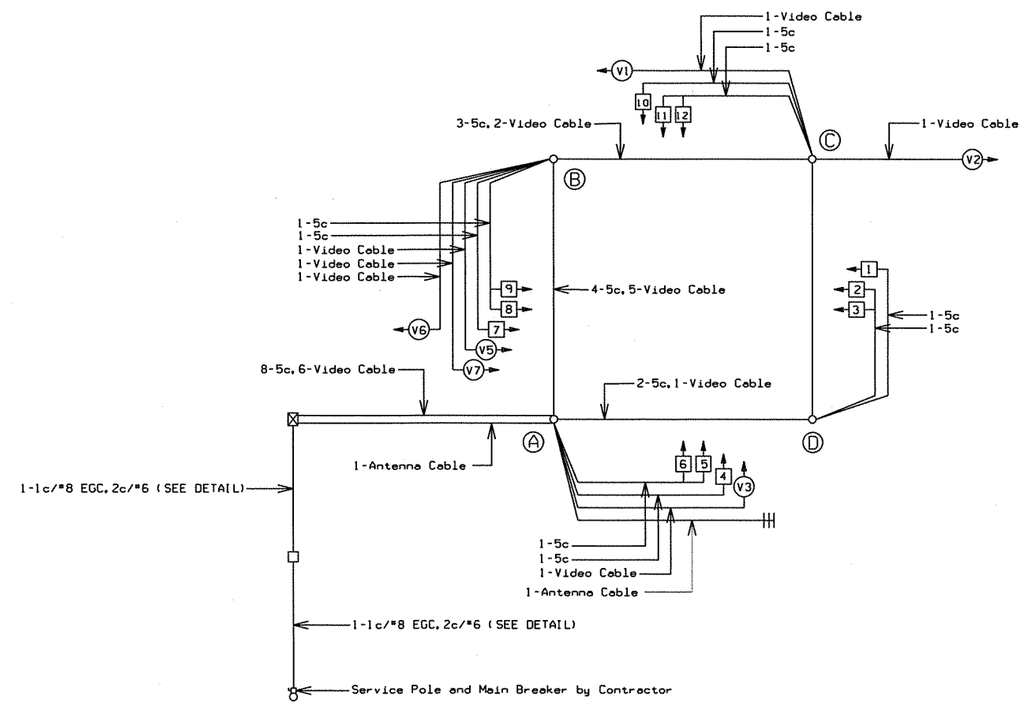
t040517-01.dgn 7/9/2010

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.		040517	140	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 1 SIGNALIZATION WIRING DIAGRAM

STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

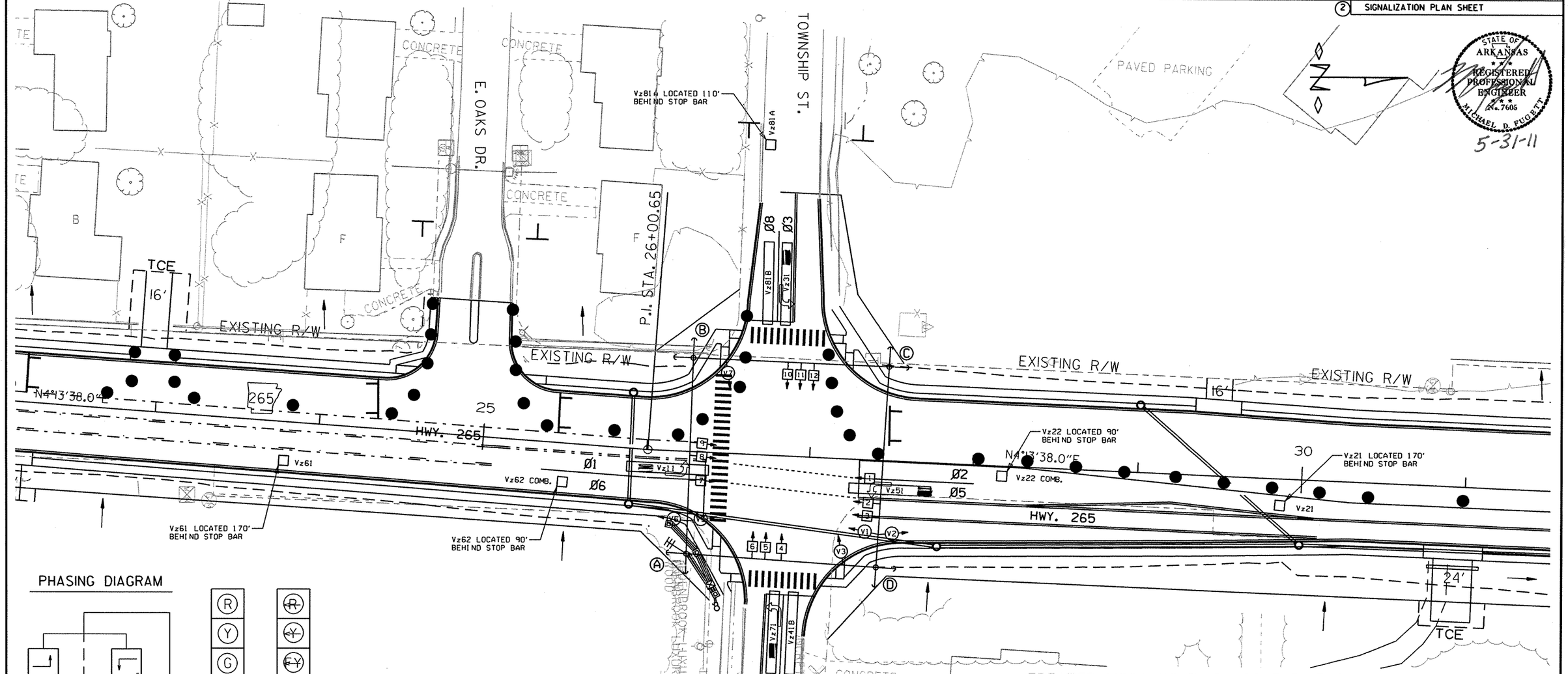
t040517-01.dgn 7/9/2010

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.		040517	141	296

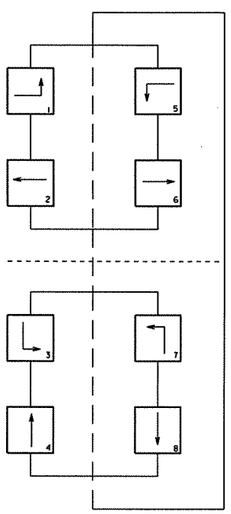
(2) SIGNALIZATION PLAN SHEET

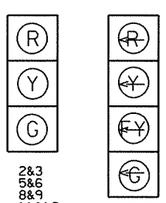
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



PHASING DIAGRAM





NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

TREATED WOOD POLE (CLASS 3) DIMENSIONS
HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	20'	N/A
C	N/A	N/A	40'	N/A	N/A
D	N/A	N/A	40'	2-20'	N/A

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 2 - 60 SCALE SIGNAL PLAN

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

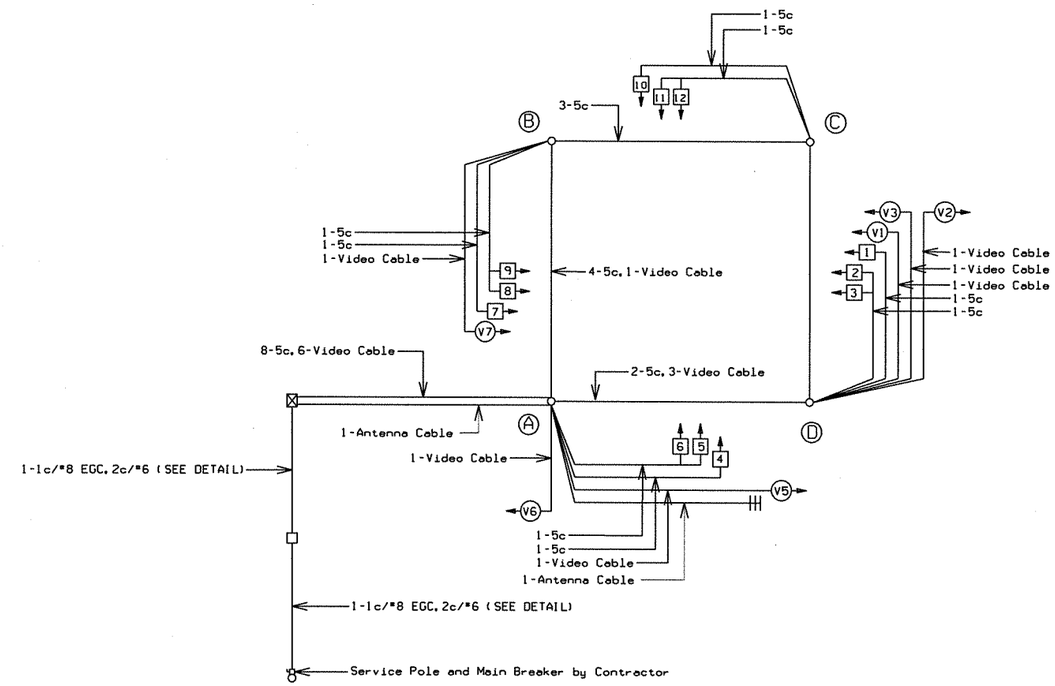
t040517-01.dgn 7/9/2010

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.		040517	142	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 2 SIGNALIZATION WIRING DIAGRAM

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

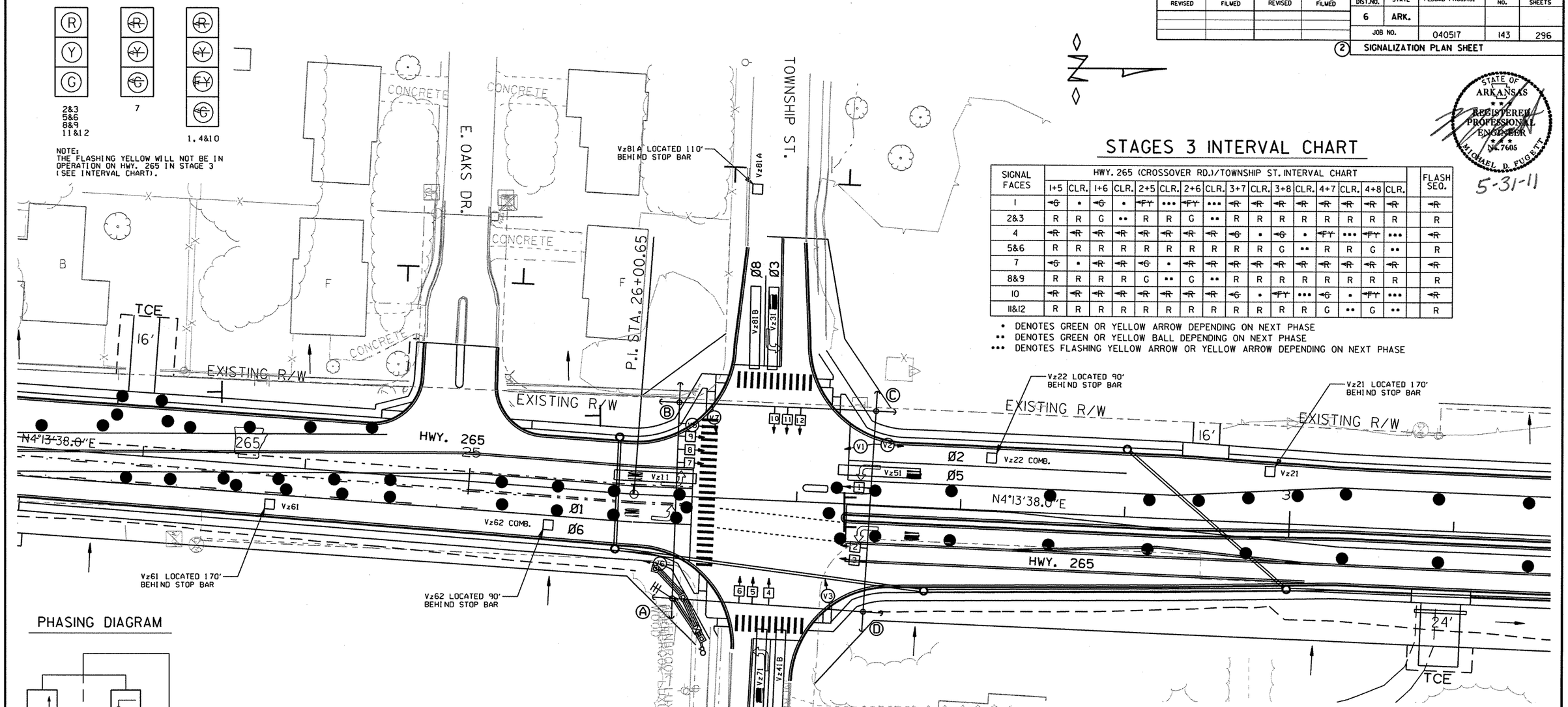
t040517-01.dgn 7/9/2010

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.		040517	143	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

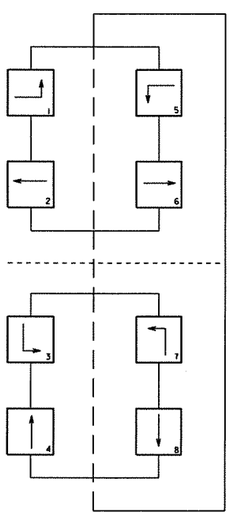


STAGES 3 INTERVAL CHART

SIGNAL FACES	HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST. INTERVAL CHART																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	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	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
7	~~G~~	•	~~R~~	~~R~~	~~G~~	•	~~R~~	~~R~~	~~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~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~
11&12	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R

• 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

PHASING DIAGRAM



NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

TREATED WOOD POLE (CLASS 3) DIMENSIONS
HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	2-20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	20'	N/A

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 3 - 60 SCALE SIGNAL PLAN

STAGE 3 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

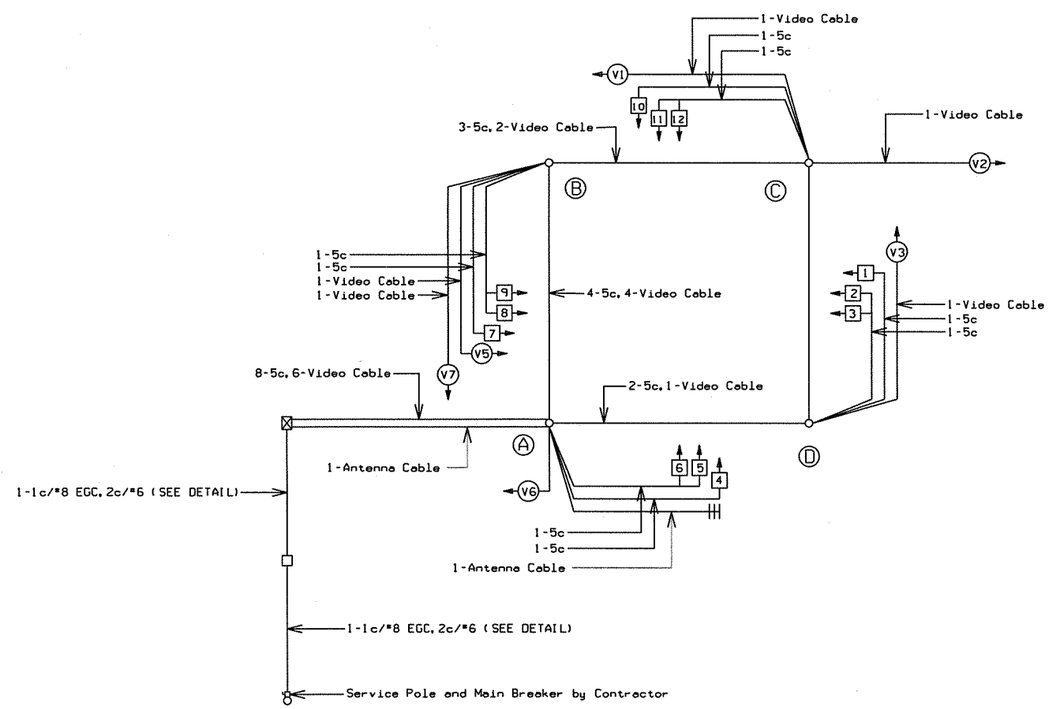
t040517-01.dgn 8/28/2010

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.		040517	144	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: STAGE 3 SIGNALIZATION WIRING DIAGRAM

STAGE 3 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-01.dgn 7/9/2010

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.		040517	145	296

(2) SIGNALIZATION PLAN SHEET

SIGNAL FACES

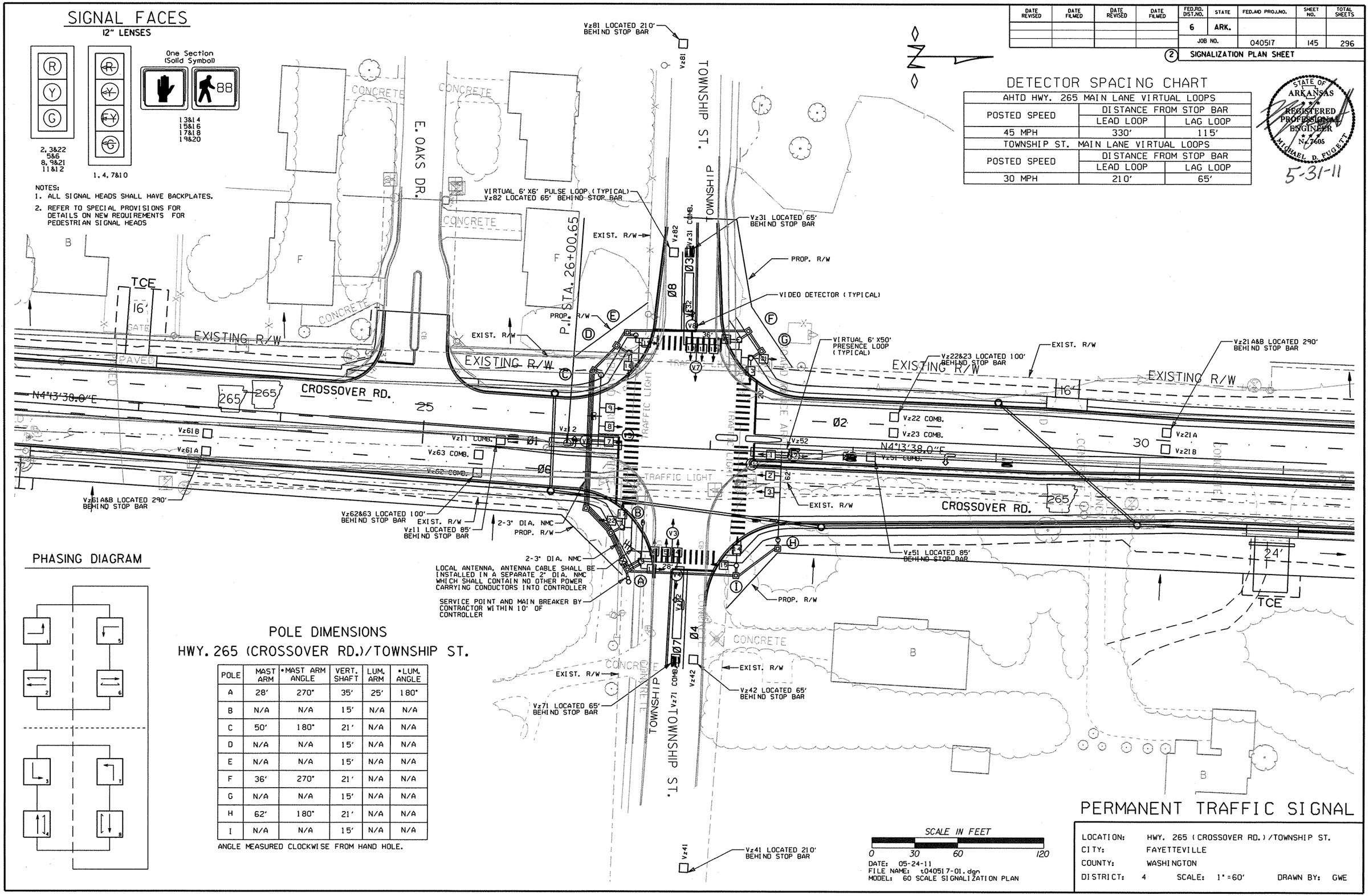
12" LENSES

NOTES:
1. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
2. REFER TO SPECIAL PROVISIONS FOR DETAILS ON NEW REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS

DETECTOR SPACING CHART

AHTD HWY. 265 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
45 MPH	330'	115'
TOWNSHIP ST. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
30 MPH	210'	65'

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N.Z. 7605 MICHAEL D. FUGETT
5-31-11



PHASING DIAGRAM

POLE DIMENSIONS

HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	28'	270°	35'	25'	180°
B	N/A	N/A	15'	N/A	N/A
C	50'	180°	21'	N/A	N/A
D	N/A	N/A	15'	N/A	N/A
E	N/A	N/A	15'	N/A	N/A
F	36'	270°	21'	N/A	N/A
G	N/A	N/A	15'	N/A	N/A
H	62'	180°	21'	N/A	N/A
I	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

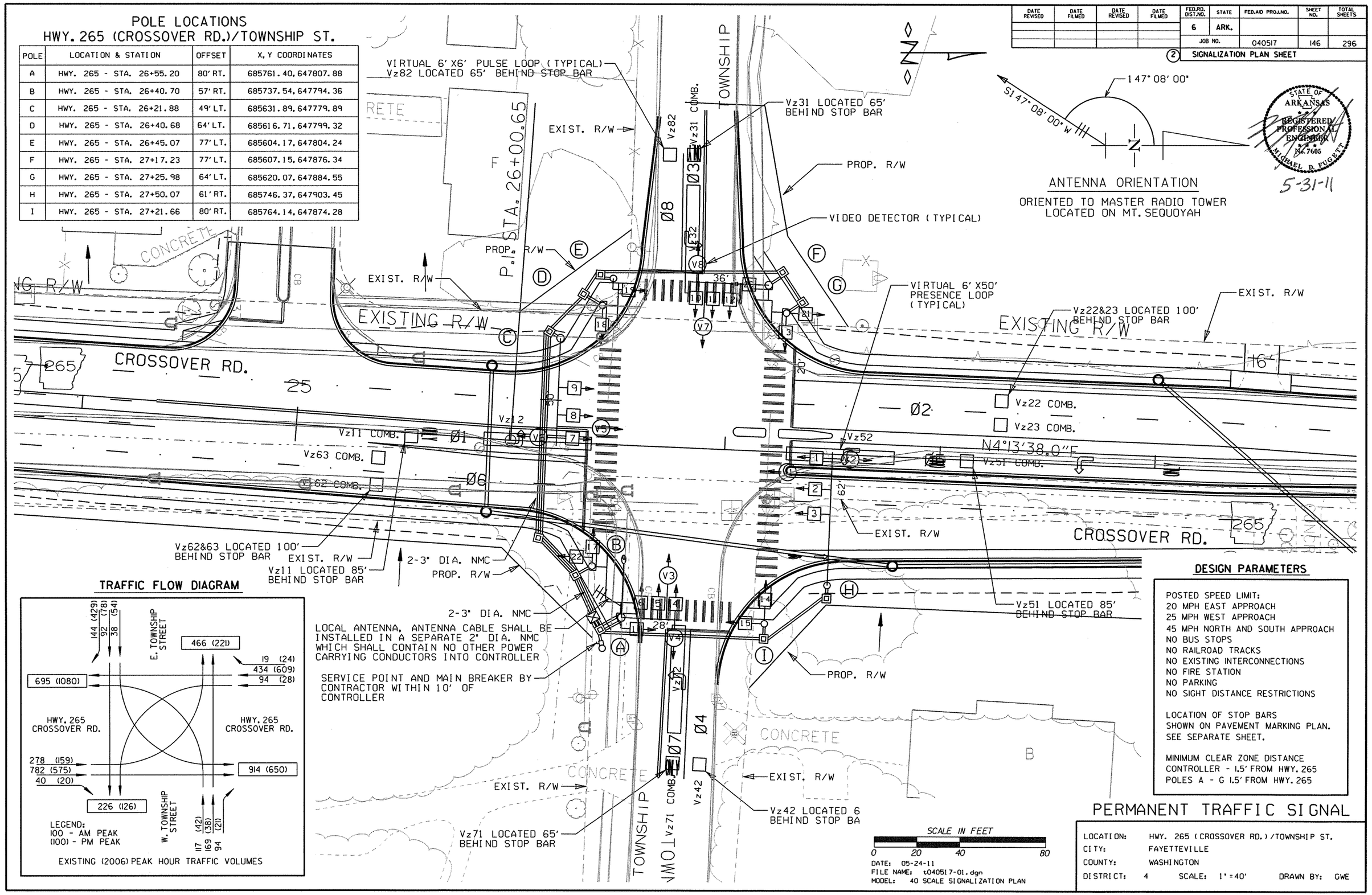
t040517-01.dgn 7/9/2010

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.		040517	146	296

(2) SIGNALIZATION PLAN SHEET

POLE LOCATIONS
HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 265 - STA. 26+55.20	80' RT.	685761.40, 647807.88
B	HWY. 265 - STA. 26+40.70	57' RT.	685737.54, 647794.36
C	HWY. 265 - STA. 26+21.88	49' LT.	685631.89, 647779.89
D	HWY. 265 - STA. 26+40.68	64' LT.	685616.71, 647799.32
E	HWY. 265 - STA. 26+45.07	77' LT.	685604.17, 647804.24
F	HWY. 265 - STA. 27+17.23	77' LT.	685607.15, 647876.34
G	HWY. 265 - STA. 27+25.98	64' LT.	685620.07, 647884.55
H	HWY. 265 - STA. 27+50.07	61' RT.	685746.37, 647903.45
I	HWY. 265 - STA. 27+21.66	80' RT.	685764.14, 647874.28



TRAFFIC FLOW DIAGRAM

DESIGN PARAMETERS

POSTED SPEED LIMIT:
20 MPH EAST APPROACH
25 MPH WEST APPROACH
45 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 BARS SHOWN ON PAVEMENT MARKING PLAN. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
CONTROLLER - 1.5' FROM HWY. 265
POLES A - G 1.5' FROM HWY. 265

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=40' DRAWN BY: GWE

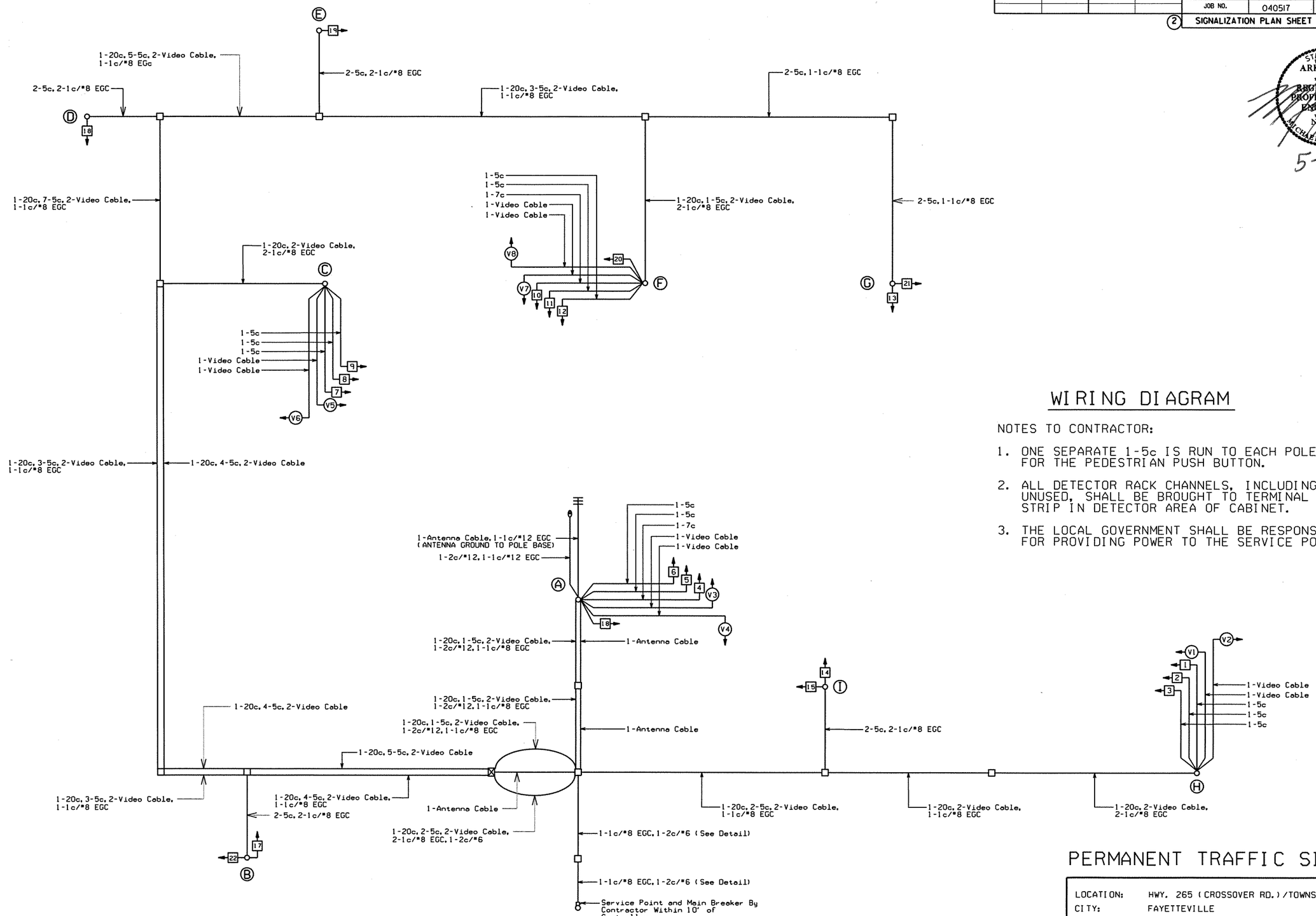
t040517-01.dgn 7/9/2010

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.		040517	147	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

PERMANENT TRAFFIC SIGNAL

LOCATION:	HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.		
CITY:	FAYETTEVILLE		
COUNTY:	WASHINGTON		
DISTRICT: 4	SCALE: N/A	DRAWN BY: GWE	

t040517-01.dgn 7/9/2010

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.		040517	148	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7606
MICHAEL D. FUGETT

5-31-11

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/TOWNSHIP ST. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	VIDEO DETECTOR	TUBE LENGTH
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP. #	PHS	SYSTEM DET. #			
VZ-11	NB LT. TURNS ADVANCE	COMB.			1	V9	1	1		CAMERA V1	23'
VZ-12	NB LEFT TURNS	LOCAL			2	V1	1			CAMERA V1	23'
VZ-21A&B	SB ADVANCE	LOCAL			13	V2	2			CAMERA V2	74'
VZ-22	SB NEAR OUTSIDE	COMB.			14	V10	2	2		CAMERA V5	23'
VZ-23	SB NEAR INSIDE	COMB.			15	V12	2	4		CAMERA V5	23'
VZ-31	EB ADVANCE	COMB.			17	V11	3	3		CAMERA V3	23'
Vz-32	EB NEAR	LOCAL			18	V3	3			CAMERA V3	23'
VZ-41	WB ADVANCE	LOCAL			21	V4	4			CAMERA V4	37'
VZ-42	WB NEAR	LOCAL			22	V4	4			CAMERA V7	23'
VZ-51	SB LEFT TURN ADVANCE	COMB.			9	V13	5	5		CAMERA V5	23'
VZ-52	SB LEFT TURN	LOCAL			10	V5	5			CAMERA V5	23'
VZ-61A&B	NB ADVANCE	LOCAL			5	V6	6			CAMERA V6	74'
VZ-62	NB NEAR OUTSIDE	COMB.			6	V14	6	6		CAMERA V1	23'
VZ-63	NB NEAR INSIDE	COMB.			7	V16	6	8		CAMERA V1	23'
VZ-71	WB LEFT TURN ADVANCE	COMB.			23	V15	7	7		CAMERA V7	23'
VZ-72	WB LEFT TURN	LOCAL			24	V7	7			CAMERA V7	23'
VZ-81	EB ADVANCE	LOCAL			19	V8	8			CAMERA V3	23'
VZ-82	EB NEAR	LOCAL			20	V8	8			CAMERA V8	23'
PB2A&B	TOWNSHIP W. LEG	PED.				P2					
PB4A&B	HWY. 265 N. LEG	PED.				P4					
PB6A&B	TOWNSHIP E. LEG	PED.				P6					
PB8A&B	HWY. 265 S. LEG	PED.				P8					
					SPARE 3, 4, 11&12						

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

INTERVAL CHART

SIGNAL FACES	HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST. INTERVAL CHART																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&22	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	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	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: 05-24-11
FILE NAME: t040517-01.dgn
MODEL: SIGNALIZATION CHARTS

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/TOWNSHIP ST.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-01.dgn 7/9/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-16-11				6	ARK.			
				JOB NO.		040517	149	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

8-16-11

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL 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)	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1480	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	30	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1HD)	1	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)	3	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	4	EACH
733	VIDEO CABLE	1866	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	6	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
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	LOCAL RADIO WITH ANTENNA	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.11	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

STAGE 1
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 PERMANENT TRAFFIC SIGNAL CONTROLLER A TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE CONSTRUCTED.
INSTALL 4 TREATED WOOD POLES (CLASS 3, 40') AND SPAN WIRE ASSEMBLY SUCH THAT THE SPAN WIRE IS LOCATED OUTSIDE OF THE EXISTING AND PROPOSED TRAFFIC SIGNAL INSTALLATIONS.
INSTALL RADIO ANTENNA, ANTENNA CABLE. ALL TRAFFIC SIGNAL CABLE AND VIDEO CABLE. RE-ESTABLISH VIDEO ZONES AND REMOVE EXISTING TRAFFIC SIGNAL.
INSTALL AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	10	EACH
SP&733	VIDEO DETECTOR RELOCATION	3	EACH
SP&706	VIDEO DETECTOR ROTATION	3	EACH

STAGE 2:
RELOCATE SIGNAL HEADS. ROTATE VIDEO DETECTOR AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
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
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	2	EACH
SP&733	VIDEO DETECTOR RELOCATION	2	EACH
SP	VIDEO DETECTOR ROTATION	4	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.11	LUMP SUM

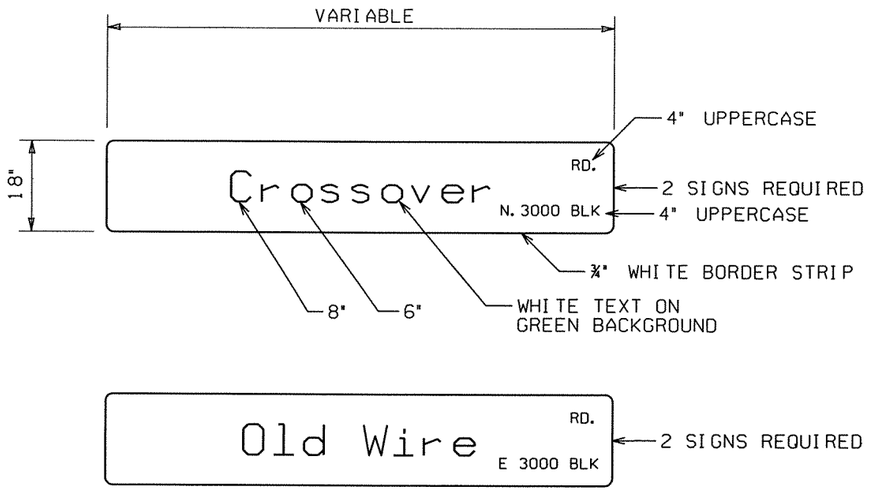
STAGE 3:
REMOVE OR RELOCATE SIGNAL HEADS. ROTATE VIDEO DETECTOR AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
VIDEO DETECTION ZONES V1 AND V5 WILL SHIFT DURING STAGE 3 TO ALLOW THE PEDESTRIAN ISLANDS TO BE CONSTRUCTED.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE 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)	10	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.)	1470	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	290	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	581	LIN. FT.
710	NON-METALLIC CONDUIT (3")	424	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2)	2	EACH
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (32')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (64')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	3	EACH
733	VIDEO CABLE	1740	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	8	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	591	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	45	LIN. FT.
SP	ANTENNA RELOCATION	1	EACH
SP	LUMINAIRE ASSEMBLY	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.11	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. RELOCATE RADIO ANTENNA AND REMOVE ALL STAGE 1-3 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS).

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



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: 08-16-11
FILE NAME: t040517-02.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-02.dgn 7/9/2010

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.		040517	150	296

(2) SIGNALIZATION PLAN SHEET

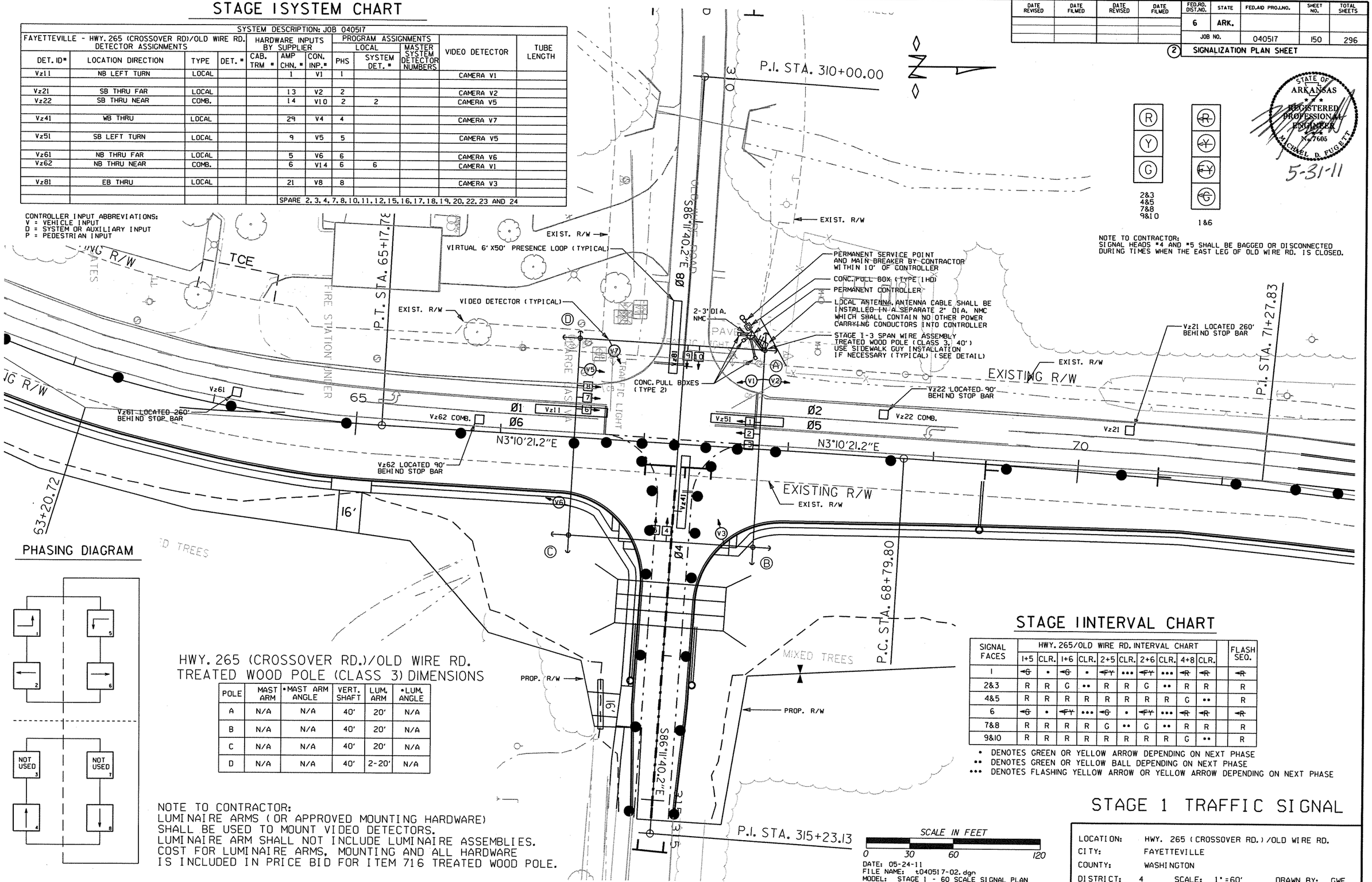
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGATT 5-31-11

STAGE 1 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/OLD WIRE RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	VIDEO DETECTOR	TUBE LENGTH
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
Vz11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
Vz21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
Vz22	SB THRU NEAR	COMB.			14	V10	2	2		CAMERA V5	
Vz41	WB THRU	LOCAL			29	V4	4			CAMERA V7	
Vz51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
Vz61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
Vz62	NB THRU NEAR	COMB.			6	V14	6	6		CAMERA V1	
Vz81	EB THRU	LOCAL			21	V8	8			CAMERA V3	
					SPARE 2, 3, 4, 7, 8, 10, 11, 12, 15, 16, 17, 18, 19, 20, 22, 23 AND 24						

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



R Y G — 2&3, 4&5, 7&8, 9&10

~~R~~ ~~Y~~ ~~FY~~ ~~G~~ — 1&6

NOTE TO CONTRACTOR:
SIGNAL HEADS #4 AND #5 SHALL BE BAGGED OR DISCONNECTED DURING TIMES WHEN THE EAST LEG OF OLD WIRE RD. IS CLOSED.

PHASING DIAGRAM

HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	2-20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STAGE 1 INTERVAL CHART

SIGNAL FACES	HWY. 265/OLD WIRE RD. INTERVAL CHART 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~	~~R~~
2&3	R	R	G	••	R	R	G	••	R	R	R
4&5	R	R	R	R	R	R	R	R	G	••	R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~
7&8	R	R	R	R	G	••	G	••	R	R	R
9&10	R	R	R	R	R	R	R	R	G	••	R

• 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

STAGE 1 TRAFFIC SIGNAL

DATE: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE 1 - 60 SCALE SIGNAL PLAN

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

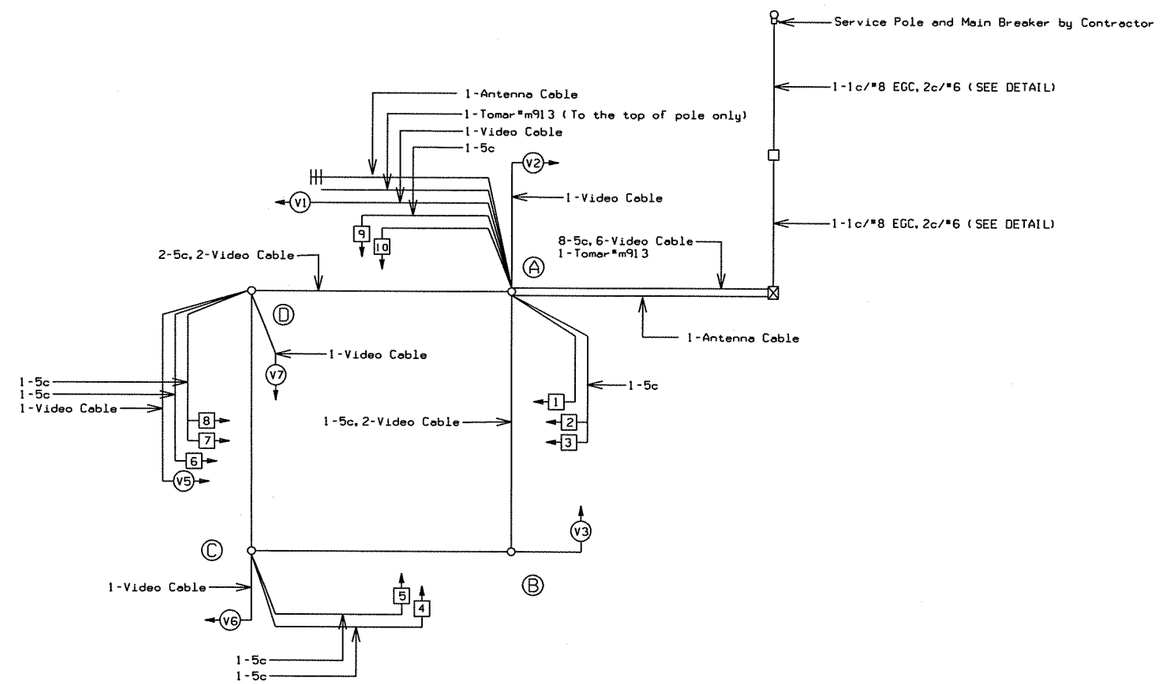
t040517-02.dgn 7/9/2010

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.		040517	151	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE I SIGNALIZATION WIRING DIAGRAM

STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-02.dgn 7/9/2010

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.		040517	152	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

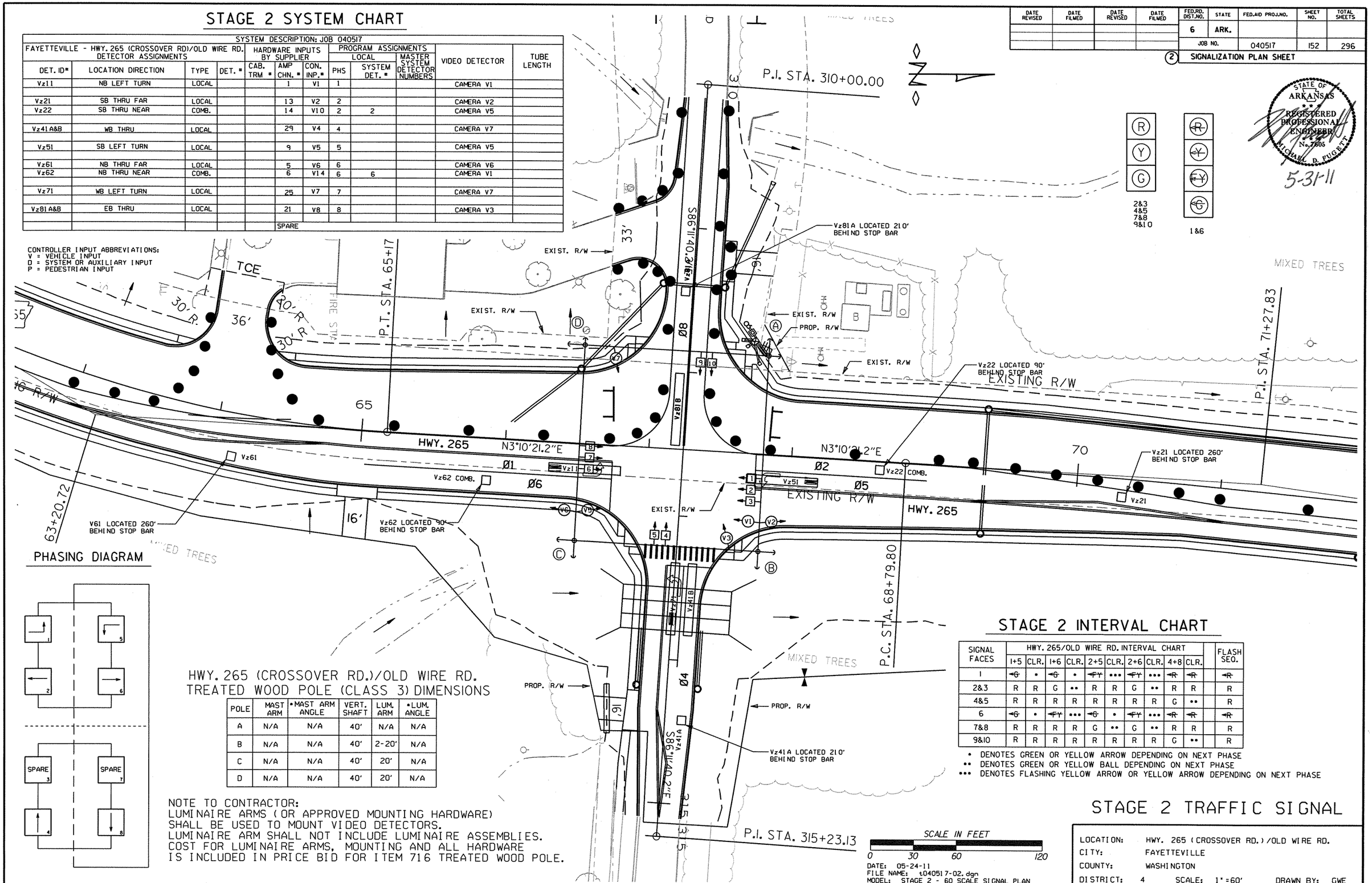
5-31-11

STAGE 2 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/OLD WIRE RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	VIDEO DETECTOR	TUBE LENGTH
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
Vz11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
Vz21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
Vz22	SB THRU NEAR	COMB.			14	V10	2	2		CAMERA V5	
Vz41A&B	WB THRU	LOCAL			29	V4	4			CAMERA V7	
Vz51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
Vz61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
Vz62	NB THRU NEAR	COMB.			6	V14	6	6		CAMERA V1	
Vz71	WB LEFT TURN	LOCAL			25	V7	7			CAMERA V7	
Vz81A&B	EB THRU	LOCAL			21	V8	8			CAMERA V3	
					SPARE						

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



PHASING DIAGRAM

HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	N/A	N/A
B	N/A	N/A	40'	2-20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STAGE 2 INTERVAL CHART

SIGNAL FACES	HWY. 265/OLD WIRE RD. INTERVAL CHART 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.		FLASH SEQ.
1	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~	~~R~~		~~R~~
2&3	R	R	G	••	R	R	G	••	R	R		R
4&5	R	R	R	R	R	R	R	R	G	••		R
6	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~		~~R~~
7&8	R	R	R	R	G	••	G	••	R	R		R
9&10	R	R	R	R	R	R	R	R	G	••		R

• 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

SCALE IN FEET 0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE 2 - 60 SCALE SIGNAL PLAN

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

t040517-02.dgn 7/9/2010

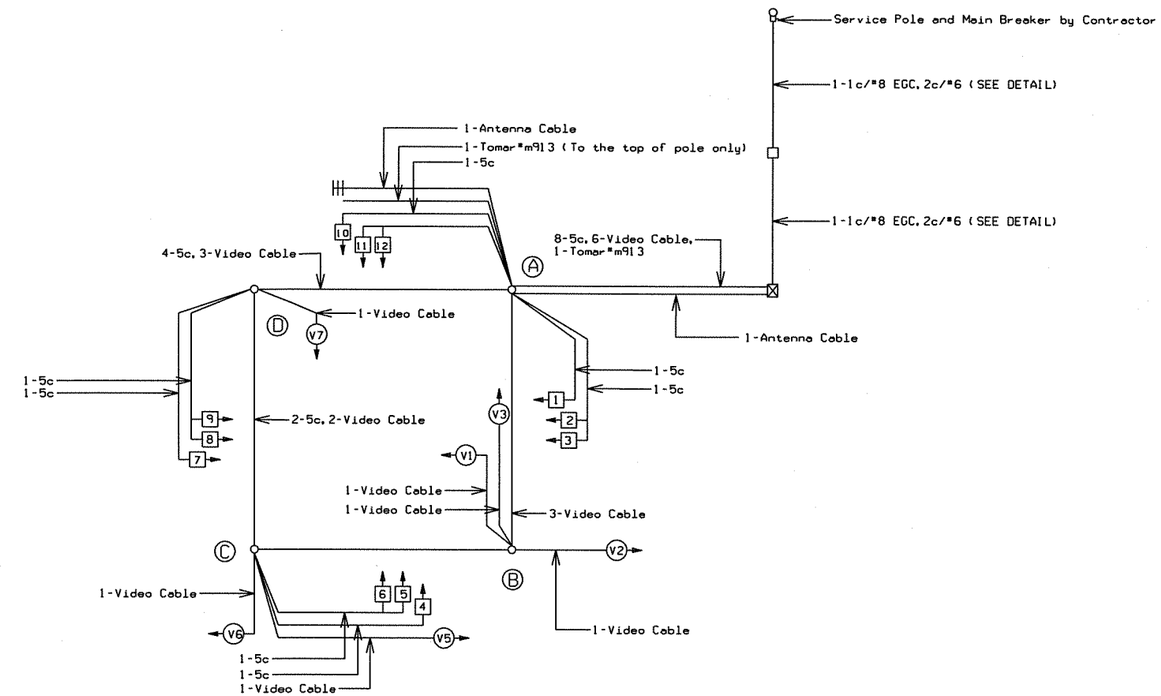
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040517	153	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE 2 SIGNALIZATION WIRING DIAGRAM

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-02.dgn 7/9/2010

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.		040517	154	296

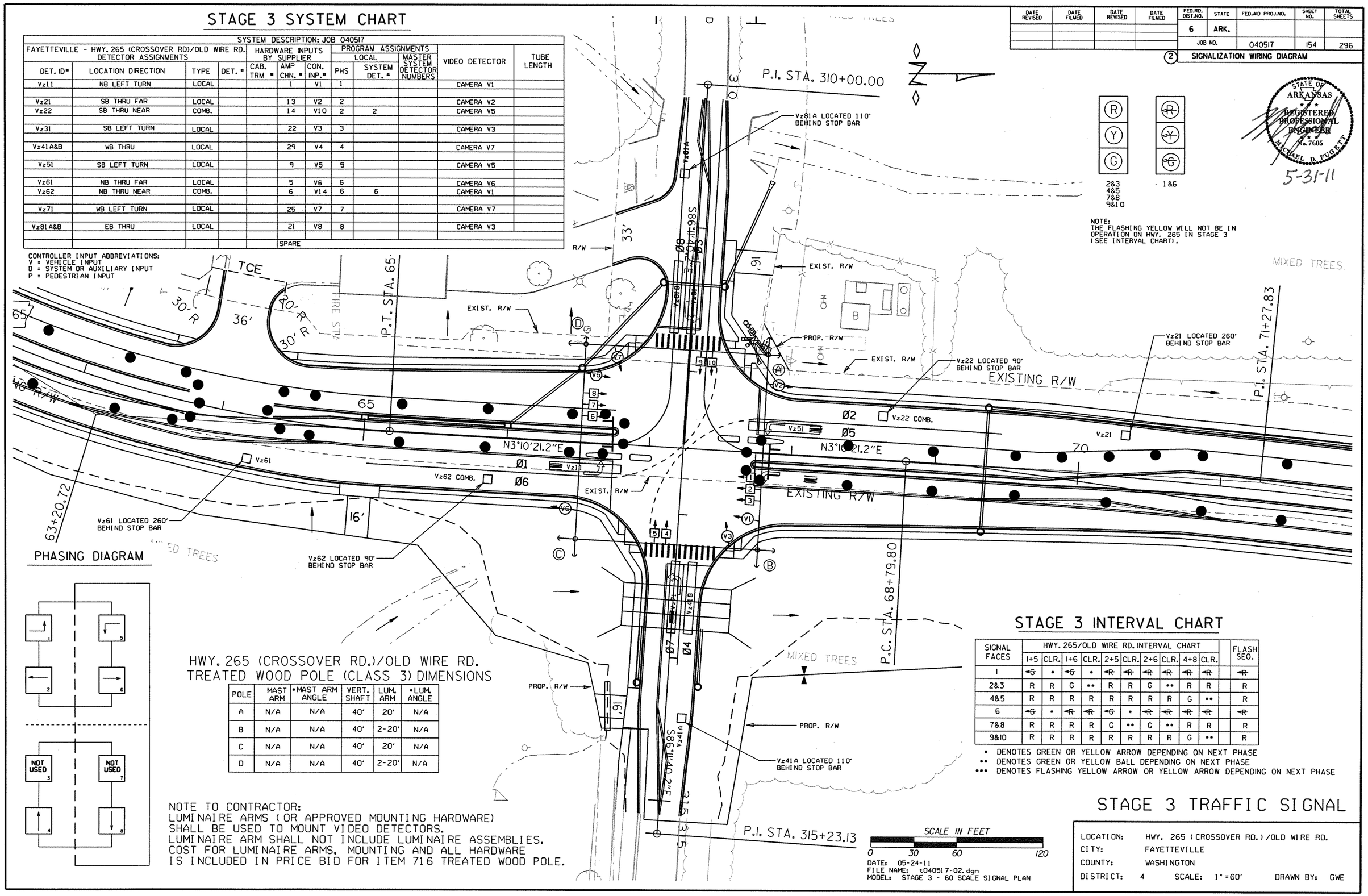
(2) SIGNALIZATION WIRING DIAGRAM

STAGE 3 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/OLD WIRE RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS				
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS	VIDEO DETECTOR	TUBE LENGTH
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
Vz11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
Vz21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
Vz22	SB THRU NEAR	COMB.			14	V10	2	2		CAMERA V5	
Vz31	SB LEFT TURN	LOCAL			22	V3	3			CAMERA V3	
Vz41A&B	WB THRU	LOCAL			29	V4	4			CAMERA V7	
Vz51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
Vz61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
Vz62	NB THRU NEAR	COMB.			6	V14	6	6		CAMERA V1	
Vz71	WB LEFT TURN	LOCAL			25	V7	7			CAMERA V7	
Vz81A&B	EB THRU	LOCAL			21	V8	8			CAMERA V3	
					SPARE						

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



PHASING DIAGRAM

HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	2-20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	2-20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.

STAGE 3 INTERVAL CHART

SIGNAL FACES	HWY. 265/OLD WIRE RD. INTERVAL CHART										FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.	
1	G	•	G	•	R	R	R	R	R	R	R
2&3	R	R	G	••	R	R	G	••	R	R	R
4&5	R	R	R	R	R	R	R	R	G	••	R
6	G	•	R	R	G	•	R	R	R	R	R
7&8	R	R	R	R	G	••	G	••	R	R	R
9&10	R	R	R	R	R	R	R	R	G	••	R

• 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

SCALE IN FEET 0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE 3 - 60 SCALE SIGNAL PLAN

STAGE 3 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

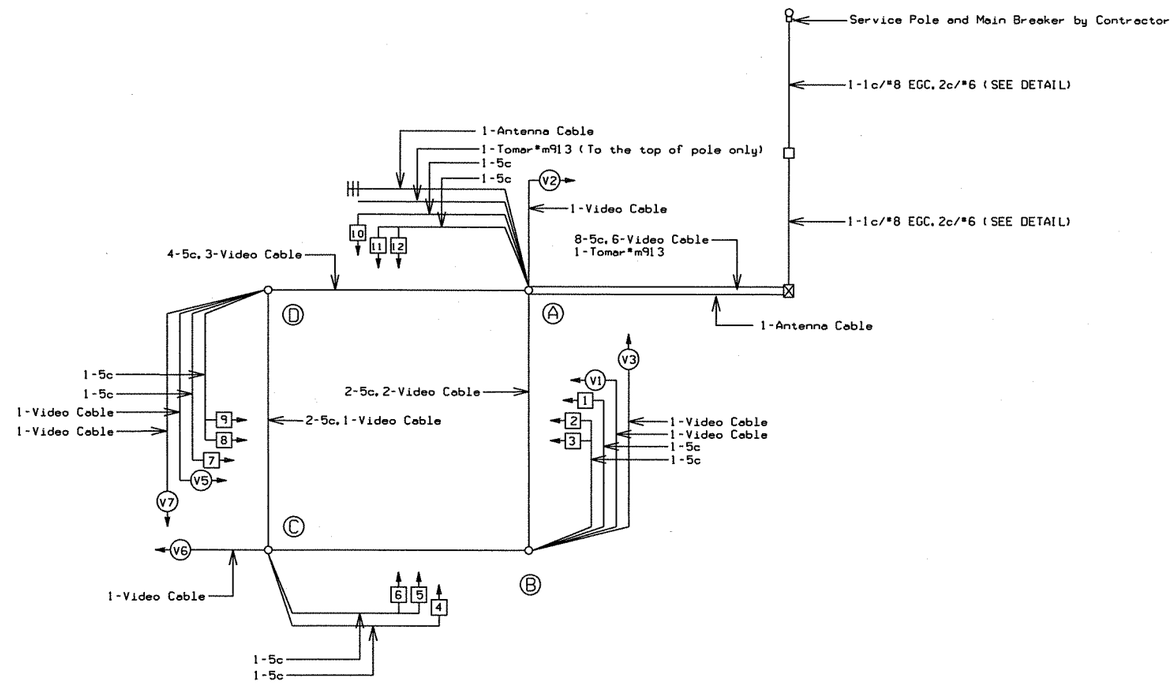
t040517-02.dgn 7/9/2010

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.		040517	155	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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.

STAGE 3 TRAFFIC SIGNAL

DATE: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: STAGE 3 SIGNALIZATION WIRING DIAGRAM

LOCATION:	HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY:	FAYETTEVILLE
COUNTY:	WASHINGTON
DISTRICT: 4	SCALE: N/A DRAWN BY: GWE

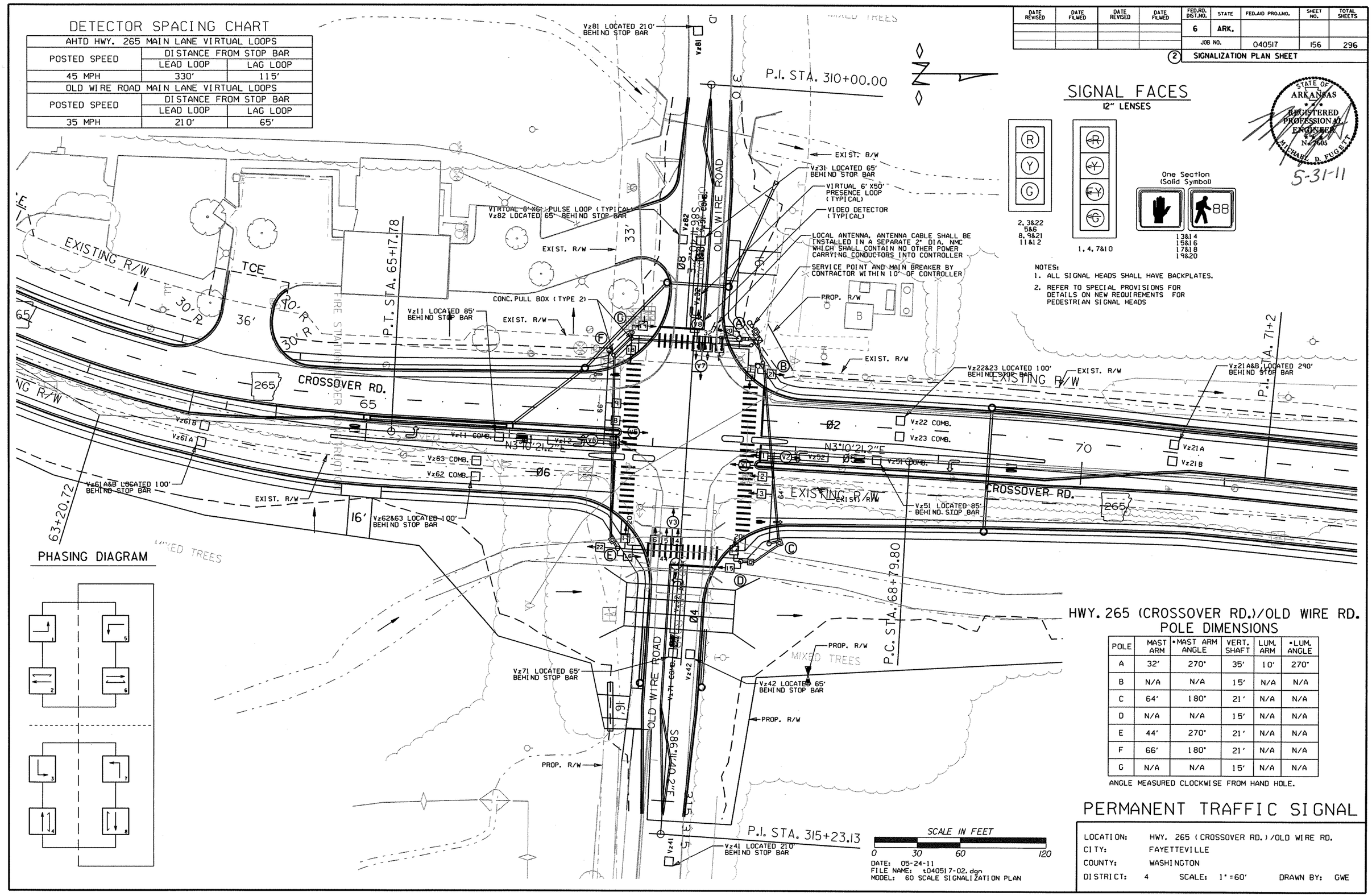
t040517-02.dgn 7/9/2010

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.		040517	156	296

(2) SIGNALIZATION PLAN SHEET

DETECTOR SPACING CHART

AHTD HWY. 265 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
45 MPH	330'	115'
OLD WIRE ROAD MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
35 MPH	210'	65'



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

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N. 2605 MICHAEL D. FUGETT
5-31-11

PHASING DIAGRAM

HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	32'	270°	35'	10'	270°
B	N/A	N/A	15'	N/A	N/A
C	64'	180°	21'	N/A	N/A
D	N/A	N/A	15'	N/A	N/A
E	44'	270°	21'	N/A	N/A
F	66'	180°	21'	N/A	N/A
G	N/A	N/A	15'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

DATE: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

t040517-02.dgn 7/9/2010

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.		040517	157	296

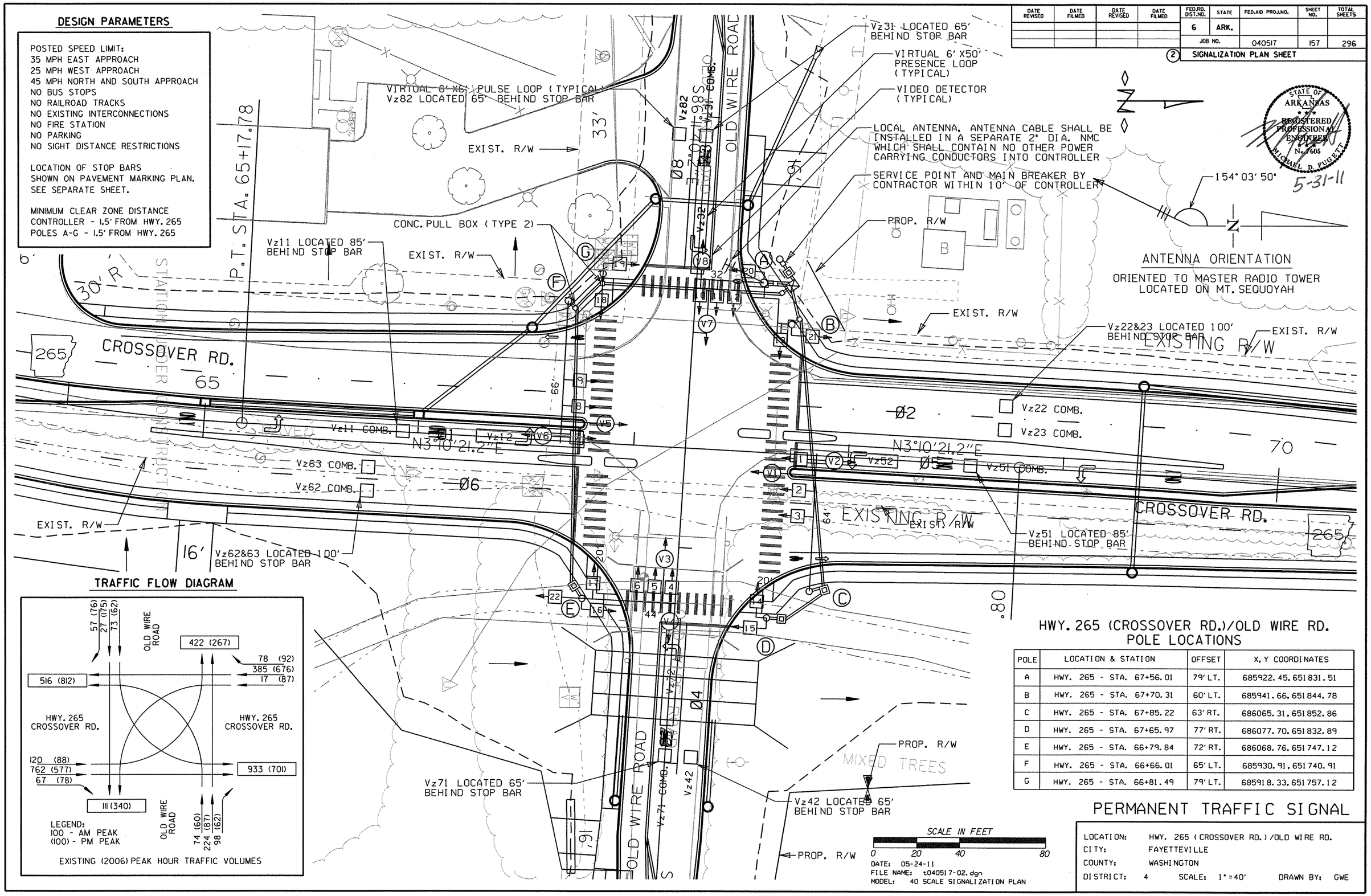
(2) SIGNALIZATION PLAN SHEET

DESIGN PARAMETERS

POSTED SPEED LIMIT:
35 MPH EAST APPROACH
25 MPH WEST APPROACH
45 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 BARS SHOWN ON PAVEMENT MARKING PLAN. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE
CONTROLLER - 1.5' FROM HWY. 265
POLES A-G - 1.5' FROM HWY. 265



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

TRAFFIC FLOW DIAGRAM

HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 265 - STA. 67+56.01	79' LT.	685922.45, 651831.51
B	HWY. 265 - STA. 67+70.31	60' LT.	685941.66, 651844.78
C	HWY. 265 - STA. 67+85.22	63' RT.	686065.31, 651852.86
D	HWY. 265 - STA. 67+65.97	77' RT.	686077.70, 651832.89
E	HWY. 265 - STA. 66+79.84	72' RT.	686068.76, 651747.12
F	HWY. 265 - STA. 66+66.01	65' LT.	685930.91, 651740.91
G	HWY. 265 - STA. 66+81.49	79' LT.	685918.33, 651757.12

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1" = 40' DRAWN BY: GWE

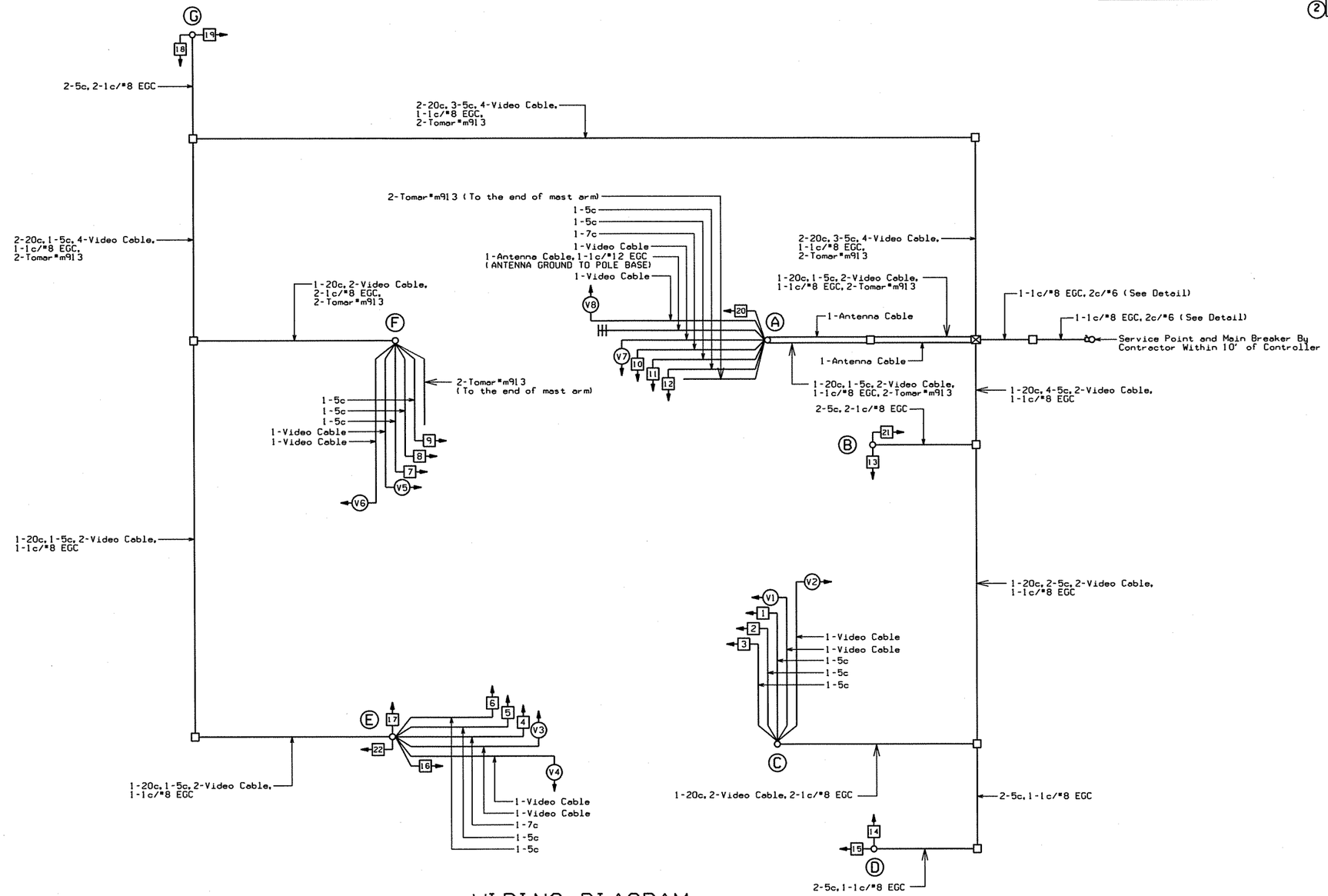
t040517-02.dgn 7/9/2010

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.		040517	158	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-02.dgn 7/9/2010

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.		040517	159	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265 (CROSSOVER RD)/OLD WIRE RD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DETECTOR	TUBE LENGTH
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
VZ-11	NB LT. TURNS ADVANCE	COMB.			1	V9	1	1		CAMERA V1	23'
VZ-12	NB LEFT TURNS	LOCAL			2	V1	1			CAMERA V1	23'
VZ-21A&B	SB ADVANCE	LOCAL			13	V2	2			CAMERA V2	74'
VZ-22	SB NEAR OUTSIDE	COMB.			14	V10	2	2		CAMERA V5	23'
VZ-23	SB NEAR INSIDE	COMB.			15	V12	2	4		CAMERA V5	23'
VZ-31	EB ADVANCE	COMB.			17	V11	3	3		CAMERA V3	37'
Vz-32	EB NEAR	LOCAL			18	V3	3			CAMERA V3	37'
VZ-41	WB ADVANCE	LOCAL			21	V4	4			CAMERA V4	37'
VZ-42	WB NEAR	LOCAL			22	V4	4			CAMERA V7	37'
VZ-51	SB LEFT TURN ADVANCE	COMB.			9	V13	5	5		CAMERA V5	23'
VZ-52	SB LEFT TURN	LOCAL			10	V5	5			CAMERA V5	23'
VZ-61A&B	NB ADVANCE	LOCAL			5	V6	6			CAMERA V6	74'
VZ-62	NB NEAR OUTSIDE	COMB.			6	V14	6	6		CAMERA V1	23'
VZ-63	NB NEAR INSIDE	COMB.			7	V16	6	8		CAMERA V1	23'
VZ-71	WB LEFT TURN ADVANCE	COMB.			23	V15	7	7		CAMERA V7	37'
VZ-72	WB LEFT TURN	LOCAL			24	V7	7			CAMERA V7	37'
VZ-81	EB ADVANCE	LOCAL			20	V8	8			CAMERA V8	37'
VZ-82	EB NEAR	LOCAL			19	V8	8			CAMERA V3	37'
PB2A&B	OLD WIRE RD. W. LEG	PED.				P2					
PB4A&B	HWY. 265 N. LEG	PED.				P4					
PB6A&B	OLD WIRE RD. E. LEG	PED.				P6					
PB8A&B	HWY. 265 S. LEG	PED.				P8					
					SPARE 3,4,11&12						

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

INTERVAL CHART

SIGNAL FACES	HWY. 265 (CROSSOVER RD.)/OLD WIRE RD. INTERVAL CHART																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&22	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	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	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: 05-24-11
FILE NAME: t040517-02.dgn
MODEL: SIGNALIZATION CHARTS

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/OLD WIRE RD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-02.dgn 7/9/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
08-18-11				6	ARK.			
				JOB NO.		040517	160	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 9605 MICHAEL D. FUGETT 8-16-11

STAGE 1 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&701	SYSTEM LOCAL 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)	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1772	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	20	LIN. FT.
709	GALVANIZED STEEL CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	20	LIN. FT.
710	NON-METALLIC CONDUIT (2")	40	LIN. FT.
710	NON-METALLIC CONDUIT (3")	90	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 1HD)	1	EACH
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	3	EACH
713	SPAN WIRE ASSEMBLY	1	EACH
716	TREATED WOOD POLE (CLASS 3, 40')	4	EACH
733	VIDEO CABLE	1288	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	6	EACH
SP&733	VEHICLE DETECTOR RACK (24 CHANNEL)	1	EACH
SP&733	VIDEO EDGE CARD EXTENDER	2	EACH
SP&733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
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	LOCAL RADIO WITH ANTENNA	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.17	LUMP SUM
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH

STAGE 1
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 PERMANENT TRAFFIC SIGNAL CONTROLLER A TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE CONSTRUCTED.
INSTALL 4 TREATED WOOD POLES (CLASS 3, 40') AND SPAN WIRE ASSEMBLY SUCH THAT THE SPAN WIRE IS LOCATED OUTSIDE OF THE EXISTING AND PROPOSED TRAFFIC SIGNAL INSTALLATIONS.
INSTALL RADIO ANTENNA, ANTENNA CABLE, ALL TRAFFIC SIGNAL CABLE AND VIDEO CABLE. RE-ESTABLISH VIDEO ZONES AND REMOVE EXISTING TRAFFIC SIGNAL.
INSTALL AND MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 1 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

STAGE 2 TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	7	EACH
SP&733	VIDEO DETECTOR RELOCATION	5	EACH
SP	VIDEO DETECTOR ROTATION	1	EACH

STAGE 2:
RELOCATE SIGNAL HEADS, ROTATE VIDEO DETECTORS AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 2 TRAFFIC SIGNAL PLANS.
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
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	2	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	7	EACH
SP&733	VIDEO DETECTOR RELOCATION	2	EACH
SP	VIDEO DETECTOR ROTATION	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.08	LUMP SUM

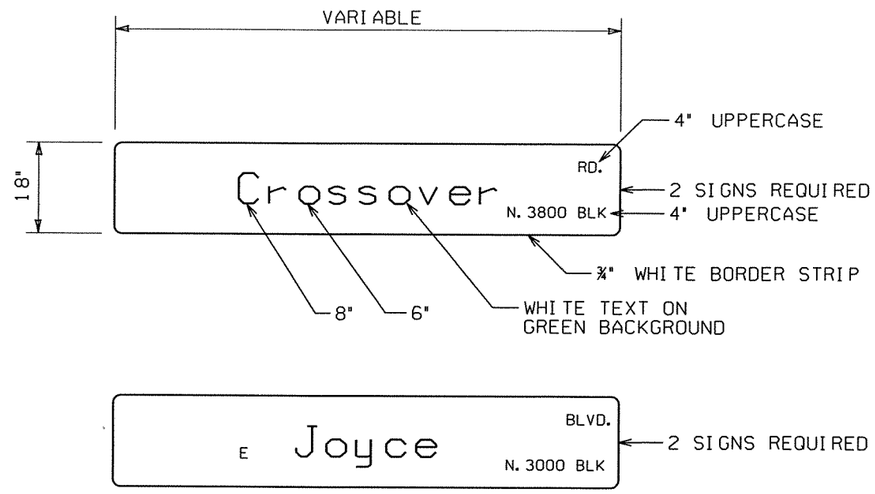
STAGE 3:
RELOCATE SIGNAL HEADS, ROTATE VIDEO DETECTORS AND ESTABLISH VIDEO ZONES AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
MAINTAIN THIS TRAFFIC SIGNAL CONFIGURATION AS SHOWN ON THE STAGE 3 TRAFFIC SIGNAL PLANS.
(REFER TO MAINTENANCE OF TRAFFIC DETAILS).

PERMANENT TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
SP&706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1WAY)	14	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.)	2516	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	99	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	27	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	508	LIN. FT.
710	NON-METALLIC CONDUIT (3")	639	LIN. FT.
SS&711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
SS&711	CONCRETE PULL BOX (TYPE 2)	3	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (40')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (66'-42')	1	EACH
SS&714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (74')	1	EACH
SS&715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	4	EACH
733	VIDEO CABLE	1622	LIN. FT.
SP&733	VIDEO DETECTOR (CLR)	7	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP	ANTENNA CABLE (TYPE 6)	70	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	87	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	617	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	60	LIN. FT.
SP	ANTENNA RELOCATION	1	EACH
SP	LUMINAIRE ASSEMBLY	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.08	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, RELOCATE RADIO ANTENNA AND REMOVE ALL STAGE 1-3 TEMPORARY TRAFFIC SIGNAL COMPONENTS.
(REFER TO PERMANENT TRAFFIC SIGNAL PLANS).

OVERHEAD STREET NAME MARKER STANDARD MAST ARM MOUNTED



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: 08-16-11
FILE NAME: t040517-03.dgn
MODEL: SIGNAL QUANTITIES AND SIGNS

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-03.dgn 7/9/2010

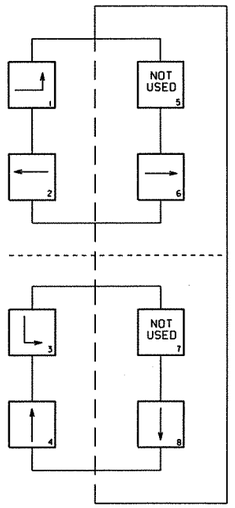
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	161	296

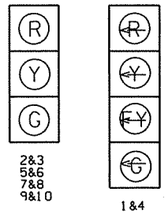
(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

PHASING DIAGRAM

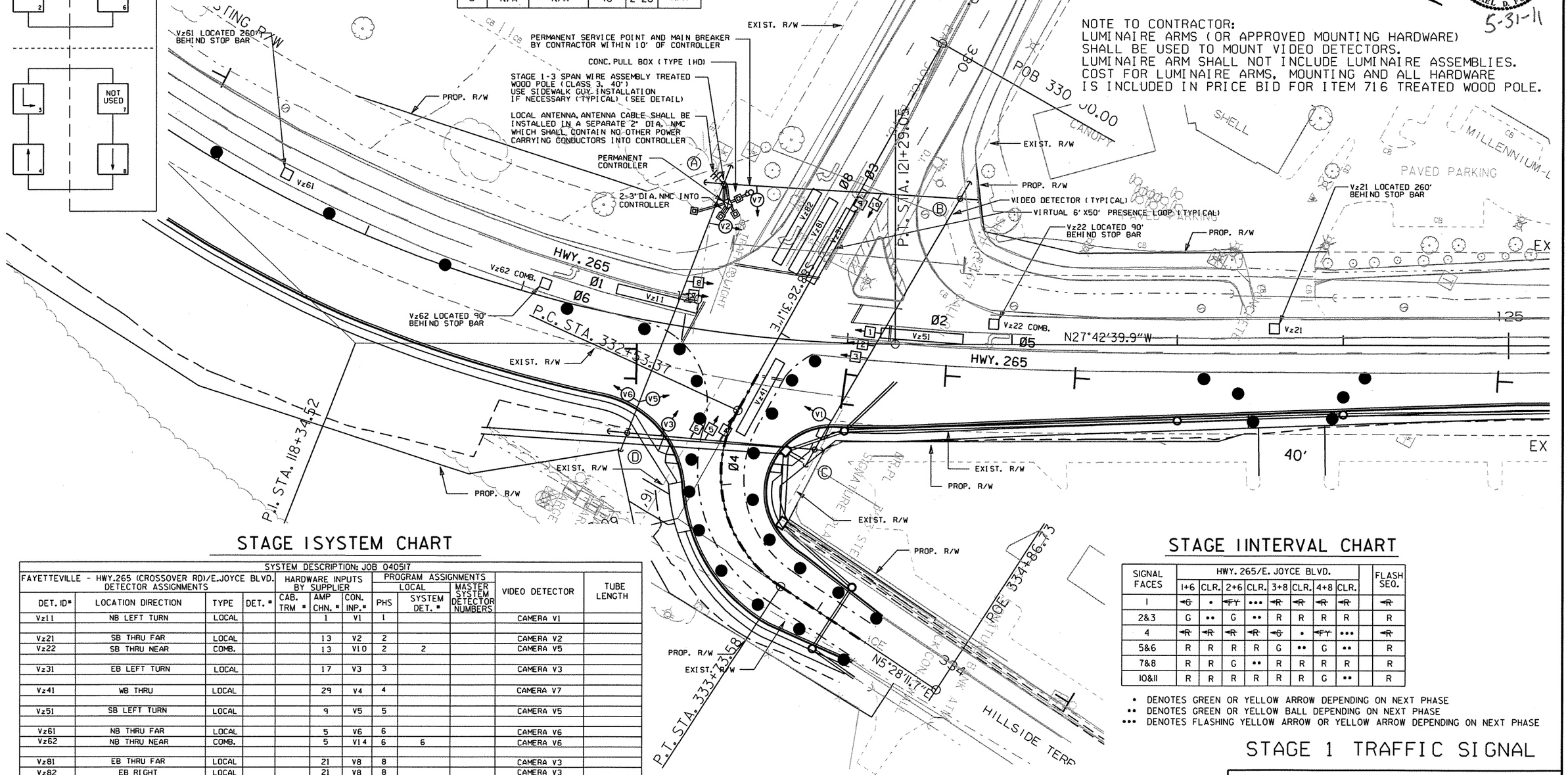




HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	2-20'	N/A
B	N/A	N/A	40'	N/A	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	2-20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



STAGE 1 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY.265 (CROSSOVER RD)/E.JOYCE BLVD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS LOCAL		MASTER SYSTEM DETECTOR NUMBERS	VIDEO DETECTOR	TUBE LENGTH
DET. ID*	LOCATION DIRECTION	TYPE	DET. *	CAB. TRM *	AMP CHN. *	CON. INP.*	PHS	SYSTEM DET. *			
Vz11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
Vz21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
Vz22	SB THRU NEAR	COMB.			13	V10	2	2		CAMERA V5	
Vz31	EB LEFT TURN	LOCAL			17	V3	3			CAMERA V3	
Vz41	WB THRU	LOCAL			29	V4	4			CAMERA V7	
Vz51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
Vz61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
Vz62	NB THRU NEAR	COMB.			5	V14	6	6		CAMERA V6	
Vz81	EB THRU FAR	LOCAL			21	V8	8			CAMERA V3	
Vz82	EB RIGHT	LOCAL			21	V8	8			CAMERA V3	
					SPARE						

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

STAGE 1 INTERVAL CHART

SIGNAL FACES	HWY. 265/E. JOYCE BLVD. 1+6	CLR.	2+6	CLR.	3+8	CLR.	4+8	CLR.		FLASH SEQ.
1	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
2&3	G	••	G	••	R	R	R	R		R
4	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~FY~~	•••		~~R~~
5&6	R	R	R	R	G	••	G	••		R
7&8	R	R	G	••	R	R	R	R		R
10&11	R	R	R	R	R	R	G	••		R

• 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

STAGE 1 TRAFFIC SIGNAL

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 1 - 60 SCALE SIGNAL PLAN

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

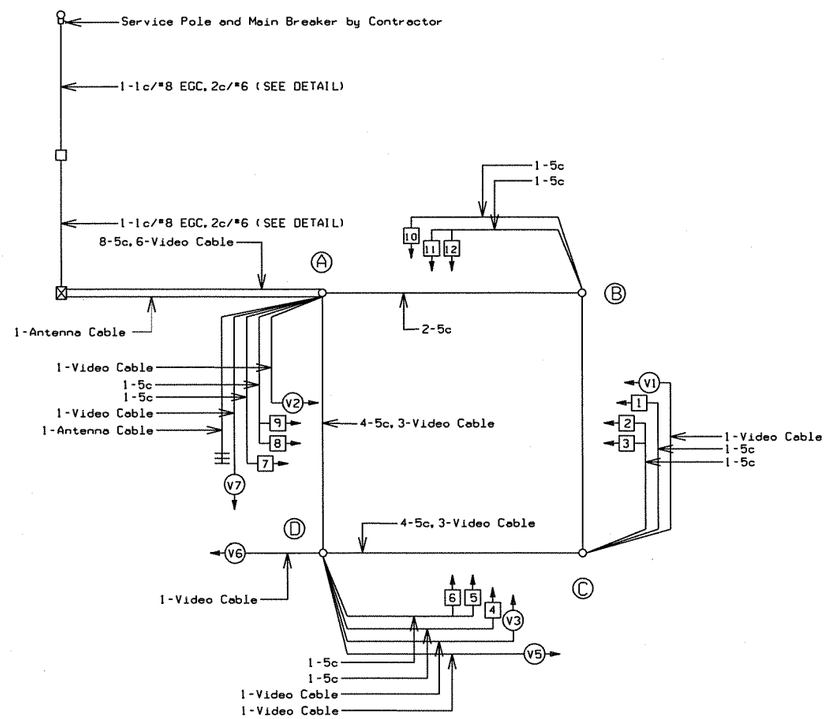
t040517-03.dgn 7/9/2010

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.		040517	162	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 1 SIGNALIZATION WIRING DIAGRAM

STAGE 1 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-03.dgn 7/12/2010

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.		040517	163	296

(2) SIGNALIZATION PLAN SHEET

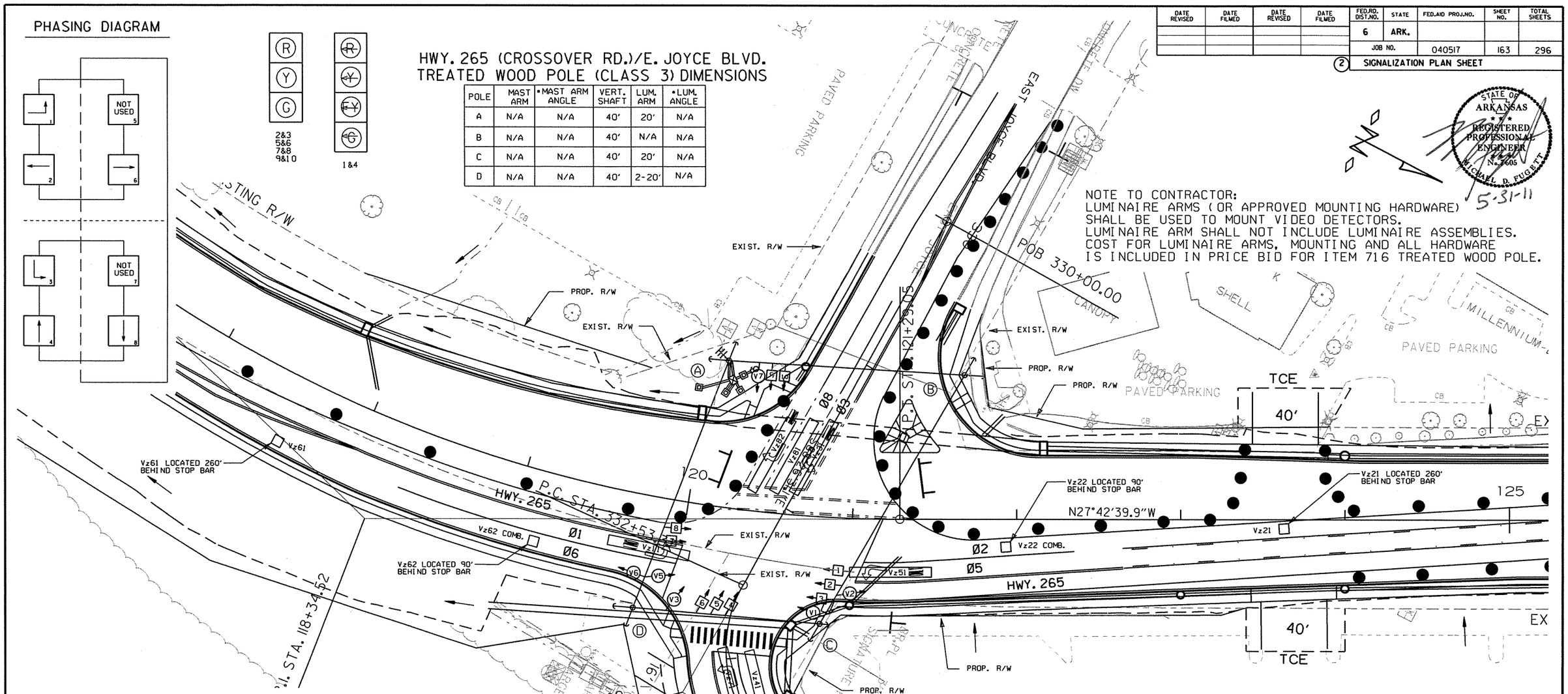
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 8605 MICHAEL D. FUGETT 5-31-11

PHASING DIAGRAM

HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

POLE	MAST ARM	•MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	•LUM. ANGLE
A	N/A	N/A	40'	20'	N/A
B	N/A	N/A	40'	N/A	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	2-20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



STAGES 2&3 SYSTEM CHART

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY.265(CROSSOVER RD)/E.JOYCE BLVD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DETECTOR	TUBE LENGTH
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #			
Vz11	NB LEFT TURN	LOCAL			1	V1	1			CAMERA V1	
Vz21	SB THRU FAR	LOCAL			13	V2	2			CAMERA V2	
Vz22	SB THRU NEAR	COMB.			14	V10	2	2		CAMERA V5	
Vz31	EB LEFT TURN	LOCAL			17	V3	3			CAMERA V3	
Vz41	WB THRU	LOCAL			29	V4	4			CAMERA V7	
Vz51	SB LEFT TURN	LOCAL			9	V5	5			CAMERA V5	
Vz61	NB THRU FAR	LOCAL			5	V6	6			CAMERA V6	
Vz62	NB THRU NEAR	COMB.				V14	6	6		CAMERA V6	
Vz71	WB LEFT TURN	LOCAL			25	V7	7			CAMERA V7	
Vz81	EB THRU	LOCAL			21	V8	8			CAMERA V3	
Vz82	EB RIGHT	LOCAL				V8	8			CAMERA V3	
					SPARE						

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

STAGE 2 INTERVAL CHART

SIGNAL FACES	HWY. 265/E. JOYCE INTERVAL CHART									FLASH SEQ.
	1+6	CLR.	2+6	CLR.	3+8	CLR.	4+8	CLR.		
1	~~G~~	•	~~FY~~	•••	~~R~~	~~R~~	~~R~~	~~R~~		~~R~~
2&3	G	••	G	••	R	R	R	R		R
4	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~FY~~	•••		~~R~~
5&6	R	R	R	R	G	••	G	••		R
7&8	R	R	G	••	R	R	R	R		R
9&10	R	R	R	R	R	R	G	••		R

• 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

STAGE 2 TRAFFIC SIGNAL

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 2 - 60 SCALE SIGNAL PLAN

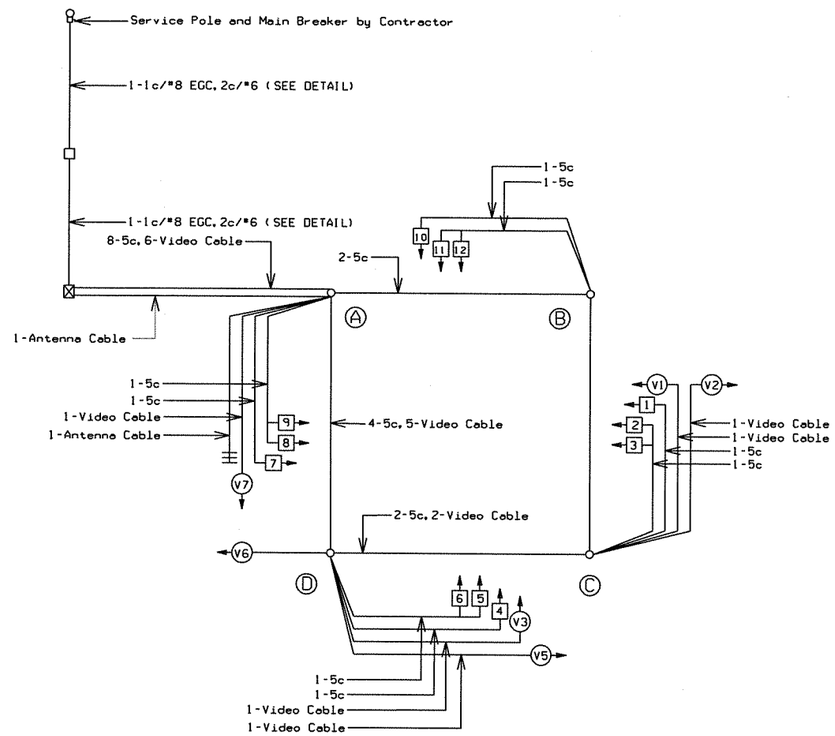
LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

t040517-03.dgn 7/12/2010

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.		040517	164	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



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: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 2 SIGNALIZATION WIRING DIAGRAM

STAGE 2 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-03.dgn 7/12/2010

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.		040517	165	296

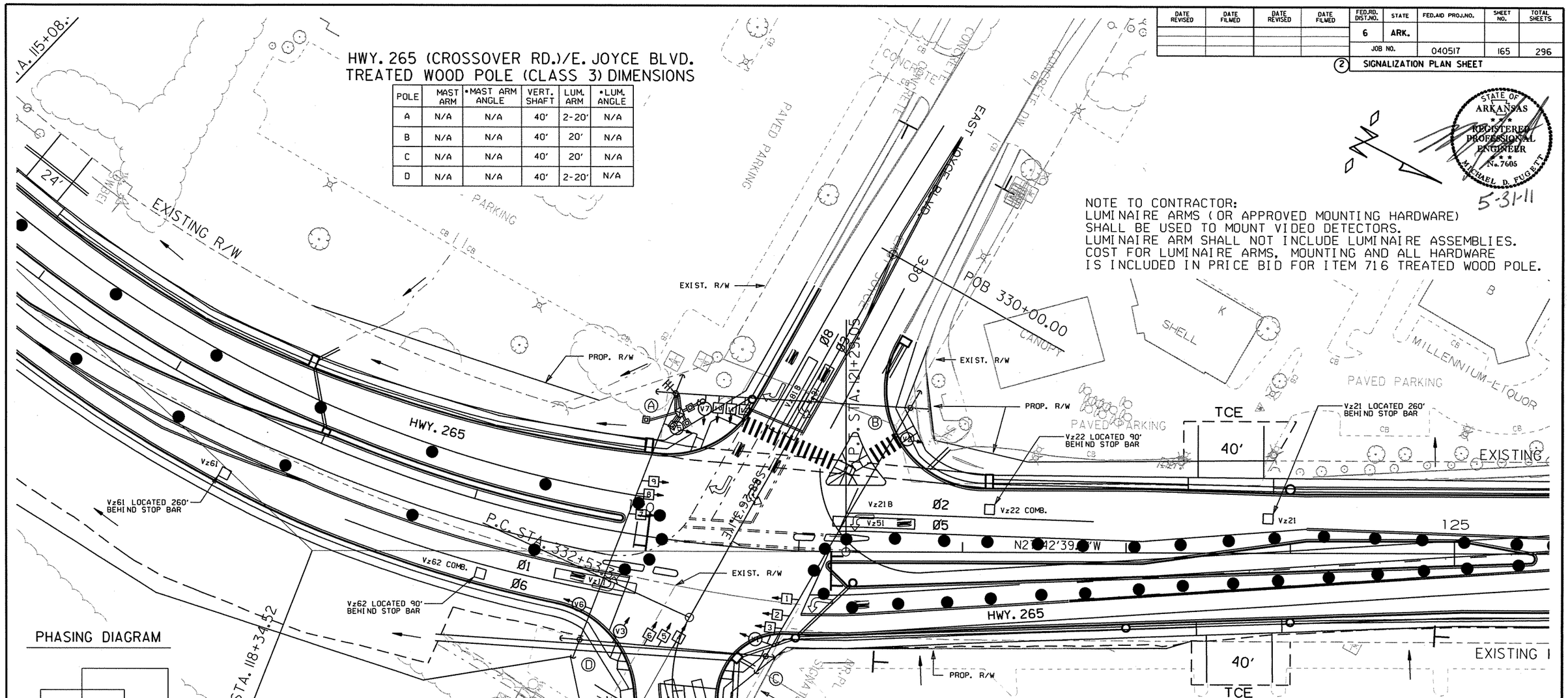
(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT 5-31-11

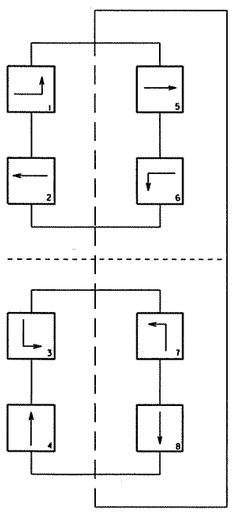
HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. TREATED WOOD POLE (CLASS 3) DIMENSIONS

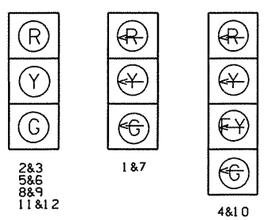
POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	N/A	N/A	40'	2-20'	N/A
B	N/A	N/A	40'	20'	N/A
C	N/A	N/A	40'	20'	N/A
D	N/A	N/A	40'	2-20'	N/A

NOTE TO CONTRACTOR:
LUMINAIRE ARMS (OR APPROVED MOUNTING HARDWARE) SHALL BE USED TO MOUNT VIDEO DETECTORS.
LUMINAIRE ARM SHALL NOT INCLUDE LUMINAIRE ASSEMBLIES.
COST FOR LUMINAIRE ARMS, MOUNTING AND ALL HARDWARE IS INCLUDED IN PRICE BID FOR ITEM 716 TREATED WOOD POLE.



PHASING DIAGRAM





NOTE:
THE FLASHING YELLOW WILL NOT BE IN OPERATION ON HWY. 265 IN STAGE 3 (SEE INTERVAL CHART).

STAGE 3 INTERVAL CHART

SIGNAL FACES	HWY. 265/E. JOYCE BLVD. INTERVAL CHART												FLASH SEQ.
	1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+8	CLR.	4+8	CLR.	
1	G	•	G	•	R	R	R	R	R	R	R	R	R
2&3	R	R	G	••	R	R	G	••	R	R	R	R	R
4	R	R	R	R	R	R	R	R	G	•	FY	•••	R
5&6	R	R	R	R	R	R	R	R	G	••	G	••	R
7	G	•	R	R	G	•	R	R	R	R	R	R	R
8&9	R	R	R	R	G	••	G	••	R	R	R	R	R
10&11	R	R	R	R	R	R	R	R	R	R	G	••	R

• 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

STAGE 3 TRAFFIC SIGNAL

SCALE IN FEET
0 30 60 120

DATE: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 3 - 60 SCALE SIGNAL PLAN

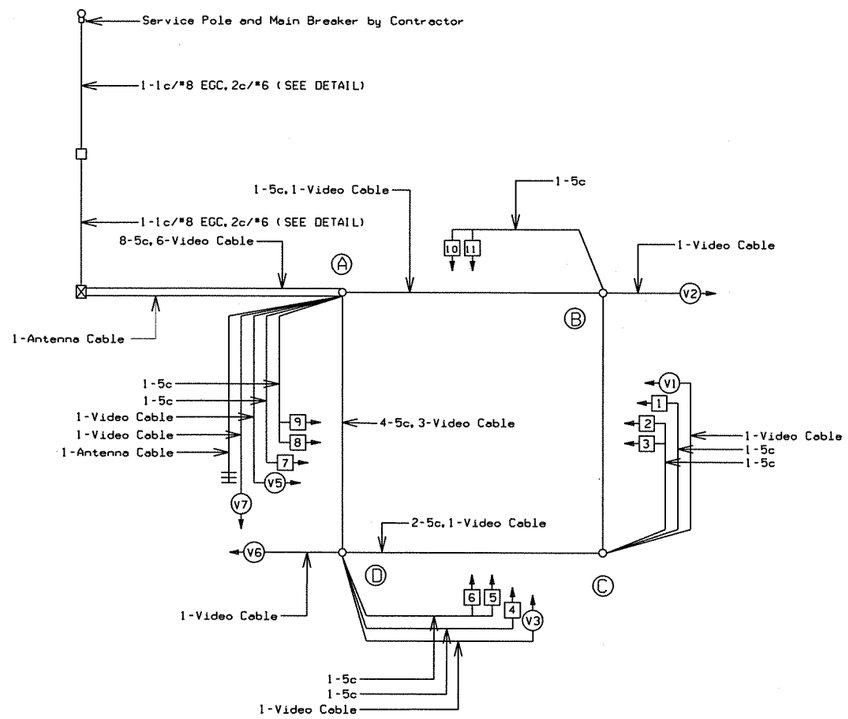
LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

t040517-03.dgn 7/12/2010

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.		040517	166	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11



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: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: STAGE 3 SIGNALIZATION WIRING DIAGRAM

STAGE 3 TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

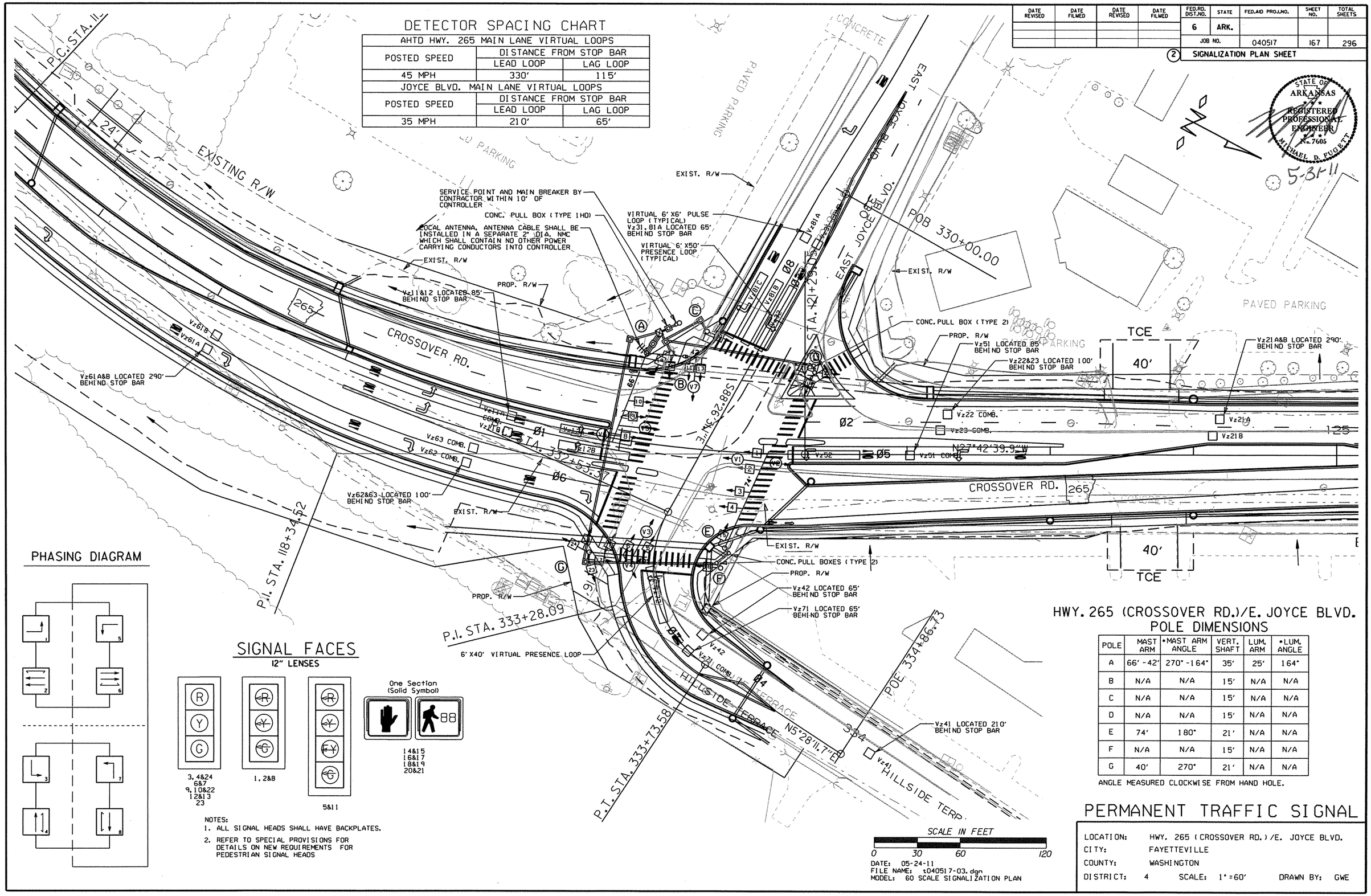
t040517-03.dgn 7/12/2010

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.		040517	167	296

(2) SIGNALIZATION PLAN SHEET

DETECTOR SPACING CHART

AHTD HWY. 265 MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
45 MPH	330'	115'
JOYCE BLVD. MAIN LANE VIRTUAL LOOPS		
POSTED SPEED	DISTANCE FROM STOP BAR	
	LEAD LOOP	LAG LOOP
35 MPH	210'	65'



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

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

HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. POLE DIMENSIONS

POLE	MAST ARM	*MAST ARM ANGLE	VERT. SHAFT	LUM. ARM	*LUM. ANGLE
A	66' - 42'	270° - 164°	35'	25'	164°
B	N/A	N/A	15'	N/A	N/A
C	N/A	N/A	15'	N/A	N/A
D	N/A	N/A	15'	N/A	N/A
E	74'	180°	21'	N/A	N/A
F	N/A	N/A	15'	N/A	N/A
G	40'	270°	21'	N/A	N/A

ANGLE MEASURED CLOCKWISE FROM HAND HOLE.

DATE: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: 60 SCALE SIGNALIZATION PLAN

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1"=60' DRAWN BY: GWE

t040517-03.dgn 1/20/2010

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.		040517	168	296

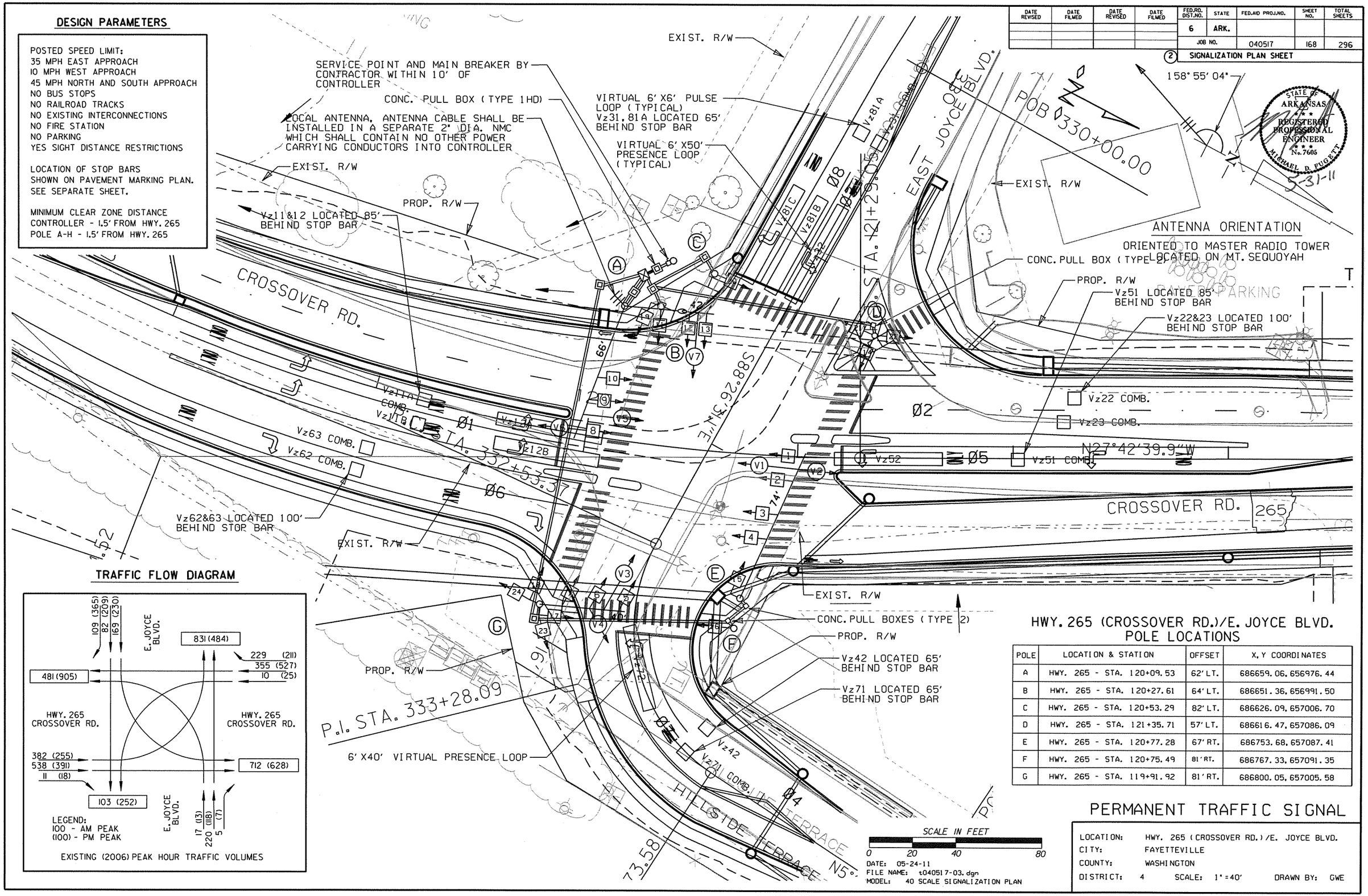
(2) SIGNALIZATION PLAN SHEET

DESIGN PARAMETERS

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

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

MINIMUM CLEAR ZONE DISTANCE
CONTROLLER - 1.5' FROM HWY. 265
POLE A-H - 1.5' FROM HWY. 265



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. PUGETT 5-31-11

TRAFFIC FLOW DIAGRAM

EXISTING (2006) PEAK HOUR TRAFFIC VOLUMES

HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. POLE LOCATIONS

POLE	LOCATION & STATION	OFFSET	X, Y COORDINATES
A	HWY. 265 - STA. 120+09.53	62' LT.	686659.06, 656976.44
B	HWY. 265 - STA. 120+27.61	64' LT.	686651.36, 656991.50
C	HWY. 265 - STA. 120+53.29	82' LT.	686626.09, 657006.70
D	HWY. 265 - STA. 121+35.71	57' LT.	686616.47, 657086.09
E	HWY. 265 - STA. 120+77.28	67' RT.	686753.68, 657087.41
F	HWY. 265 - STA. 120+75.49	81' RT.	686767.33, 657091.35
G	HWY. 265 - STA. 119+91.92	81' RT.	686800.05, 657005.58

PERMANENT TRAFFIC SIGNAL

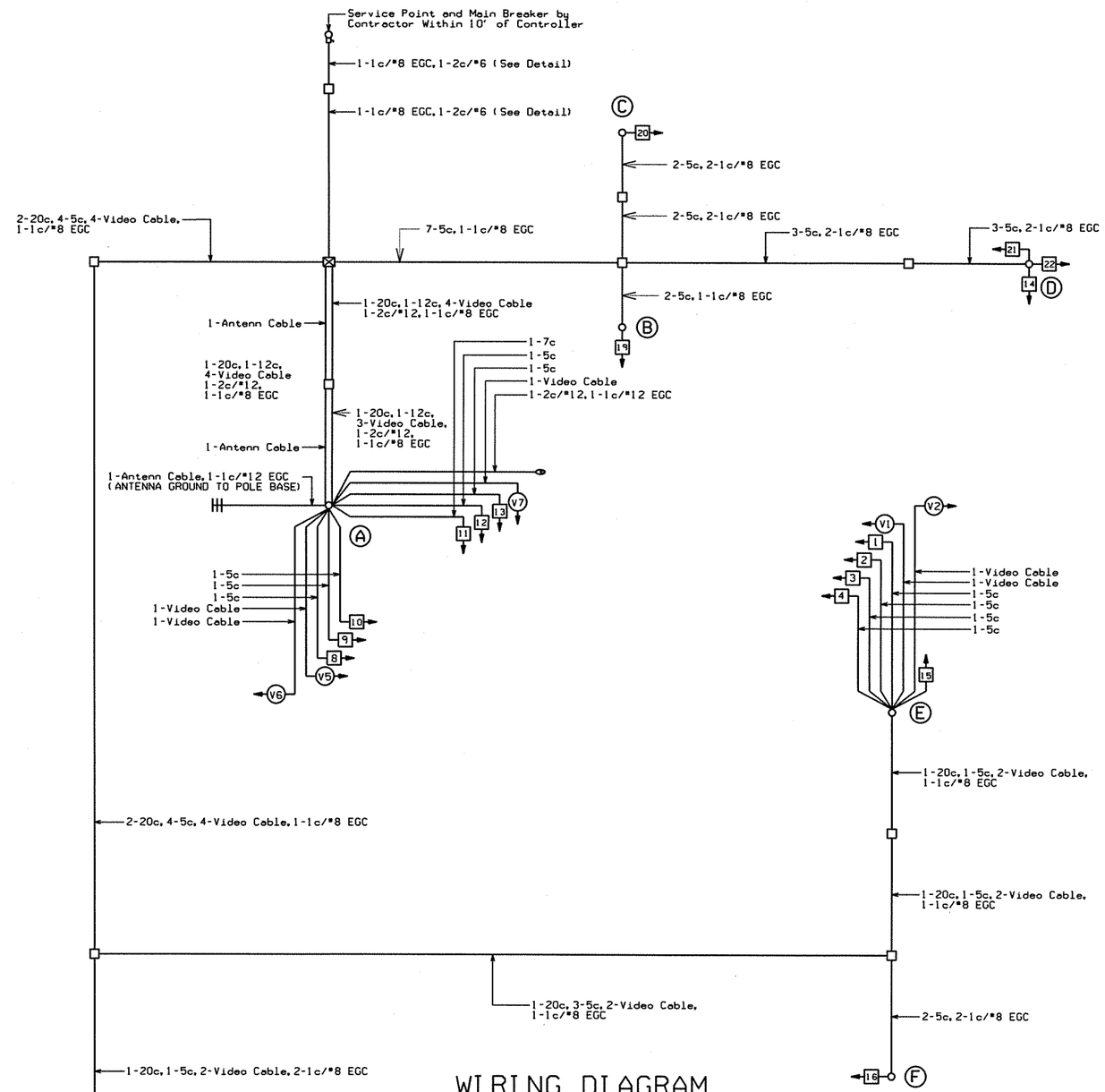
LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: 1" = 40' DRAWN BY: GWE

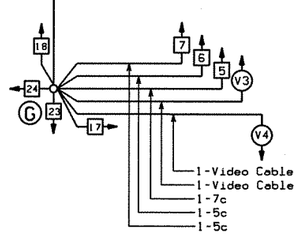
t040517-03.dgn 7/12/2010

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.		040517	169	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7605
MICHAEL D. FUGETT
5-31-11





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: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: SIGNALIZATION WIRING DIAGRAM

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-03.dgn 7/12/2010

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.		040517	170	296

(2) SIGNALIZATION PLAN SHEET

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

SYSTEM DESCRIPTION: JOB 040517

FAYETTEVILLE - HWY. 265(CROSSOVER RD)/E.JOYCE BLVD. DETECTOR ASSIGNMENTS				HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS				
							LOCAL		MASTER SYSTEM DETECTOR NUMBERS		
DET. ID#	LOCATION DIRECTION	TYPE	DET. #	CAB. TRM #	AMP CHN. #	CON. INP.#	PHS	SYSTEM DET. #		VIDEO DETECTOR	TUBE LENGTH
VZ-11A&B	NB LT. TURNS ADVANCE	COMB.			1	V9	1	1		CAMERA V1	23'
VZ-12A&B	NB LEFT TURNS	LOCAL			2	V1	1			CAMERA V1	23'
VZ-21A&B	SB ADVANCE	LOCAL			13	V2	2			CAMERA V2	74'
VZ-22	SB NEAR OUTSIDE	COMB.			14	V10	2	2		CAMERA V5	46'
VZ-23	SB NEAR INSIDE	COMB.			15	V12	2	4		CAMERA V5	46'
VZ-31	EB ADVANCE	COMB.			17	V11	3	3		CAMERA V3	46'
Vz-32	EB NEAR	LOCAL			18	V3	3			CAMERA V3	46'
VZ-41	WB ADVANCE	LOCAL			25	V4	4			CAMERA V4	37'
VZ-42	WB NEAR	LOCAL			26	V4	4			CAMERA V7	23'
VZ-51	SB LEFT TURN ADVANCE	COMB.			9	V13	5	5		CAMERA V5	46'
VZ-52	SB LEFT TURN	LOCAL			10	V5	5			CAMERA V5	46'
VZ-61A&B	NB ADVANCE	LOCAL			5	V6	6			CAMERA V6	74'
VZ-62	NB NEAR OUTSIDE	COMB.			6	V14	6	6		CAMERA V1	23'
VZ-63	NB NEAR INSIDE	COMB.			7	V16	6	8		CAMERA V1	23'
VZ-71	WB LEFT TURN ADVANCE	COMB.			25	V15	7	7		CAMERA V7	23'
VZ-72	WB LEFT TURN	LOCAL			28	V7	7			CAMERA V7	23'
VZ-81A	EB ADVANCE	LOCAL			21	V8	8			CAMERA V8	46'
VZ-81B	EB NEAR	LOCAL			22	V8	8			CAMERA V3	58'
VZ-81C	EB NEAR RIGHT TURN	LOCAL			23	V8	8			CAMERA V3	58'
PB2A&B	E. JOYCE W. LEG	PED.				P2					
PB4A&B	HWY. 265 N. LEG	PED.				P4					
PB6A&B	E. JOYCE E. LEG	PED.				P6					
PB8A&B	HWY. 265 S. LEG	PED.				P8					
					SPARE 3,4,8,11,12,16,19,20&24						

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

INTERVAL CHART

SIGNAL FACES	HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD. INTERVAL CHART																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&2	~~G~~	•	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
3,4&24	R	R	G	••	R	R	G	••	R	R	R	R	R	R	R	R	R
5	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~G~~	•	~~FY~~	•••	~~FY~~	•••	~~R~~
6&7	R	R	R	R	R	R	R	R	R	R	G	••	R	R	G	••	R
8	~~G~~	•	~~R~~	~~R~~	~~G~~	•	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
9,10&22	R	R	R	R	G	••	G	••	R	R	R	R	R	R	R	R	R
11	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	•	~~FY~~	•••	~~G~~	•	~~FY~~	•••	~~R~~
12,13&23	R	R	R	R	R	R	R	R	R	R	R	R	G	••	G	••	R
14&15	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	W	FDW	BLK
16&17	DW	DW	W	FDW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	DW	DW	BLK
18&19	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	W	FDW	BLK
20&21	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: 05-24-11
FILE NAME: t040517-03.dgn
MODEL: SIGNALIZATION CHARTS

PERMANENT TRAFFIC SIGNAL

LOCATION: HWY. 265 (CROSSOVER RD.)/E. JOYCE BLVD.
CITY: FAYETTEVILLE
COUNTY: WASHINGTON
DISTRICT: 4 SCALE: N/A DRAWN BY: GWE

t040517-03.dgn 1/20/2010

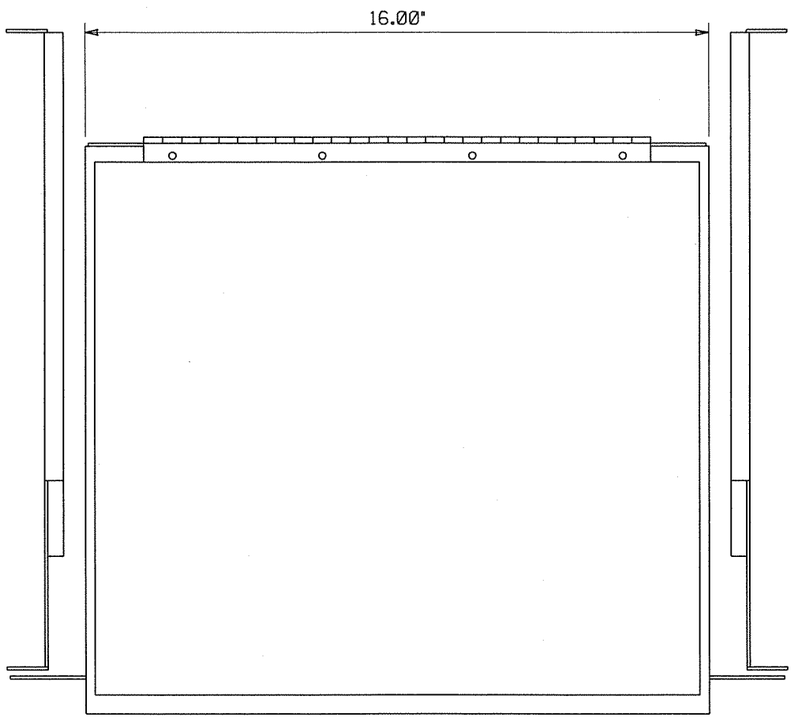
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	171	296

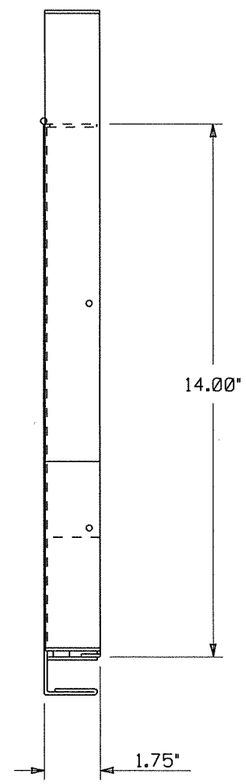
(2) SIGNALIZATION DETAILS

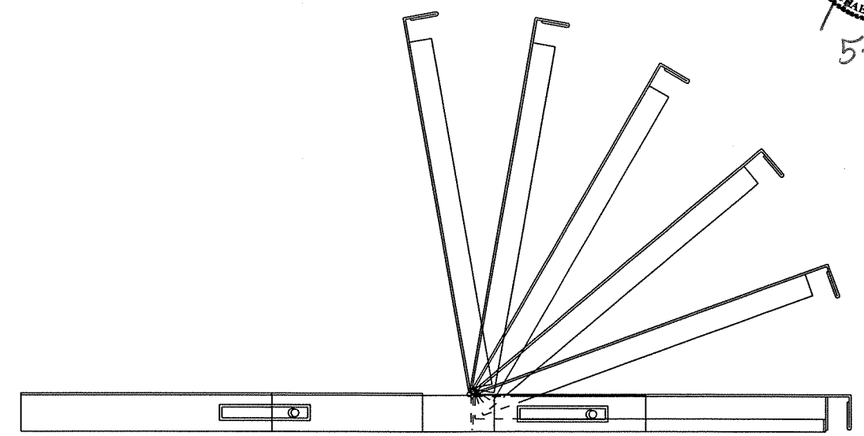
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

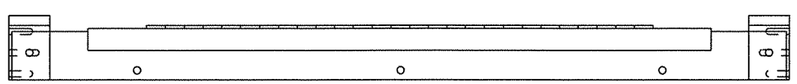
DRAWER PLAN VIEW



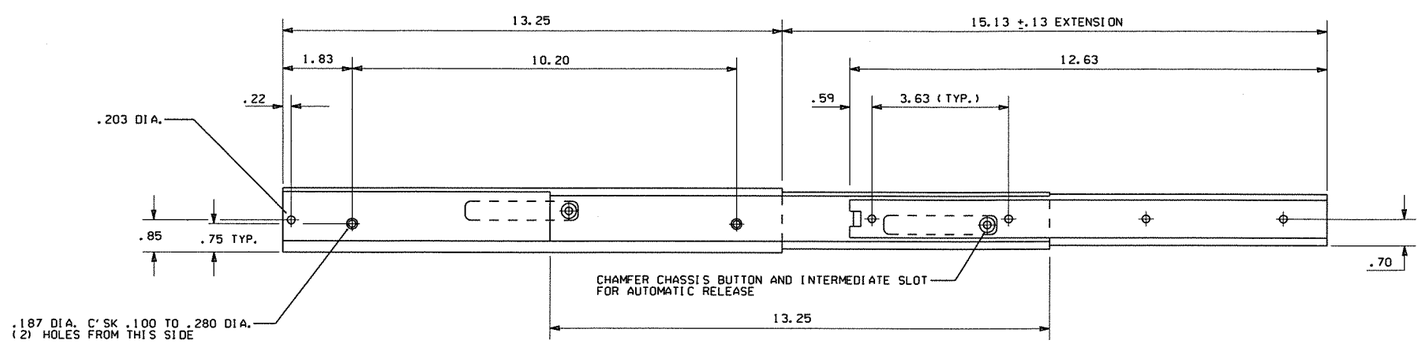




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

DATE	REVISION	DATE FILM
6-15-05	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Controller Cabinet Utility Drawer)

(040517-job.dgn 7/9/2010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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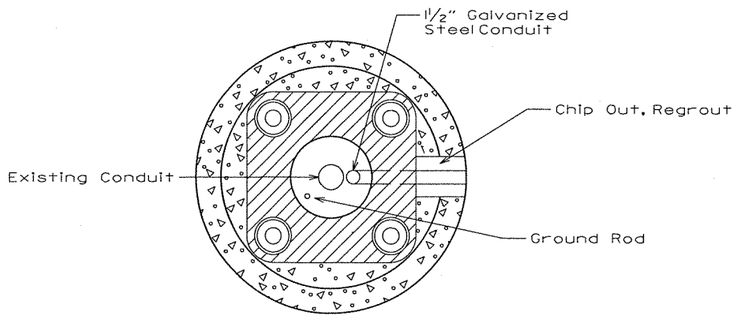
				JOB NO.		040517	172	296

(2) SIGNALIZATION DETAILS

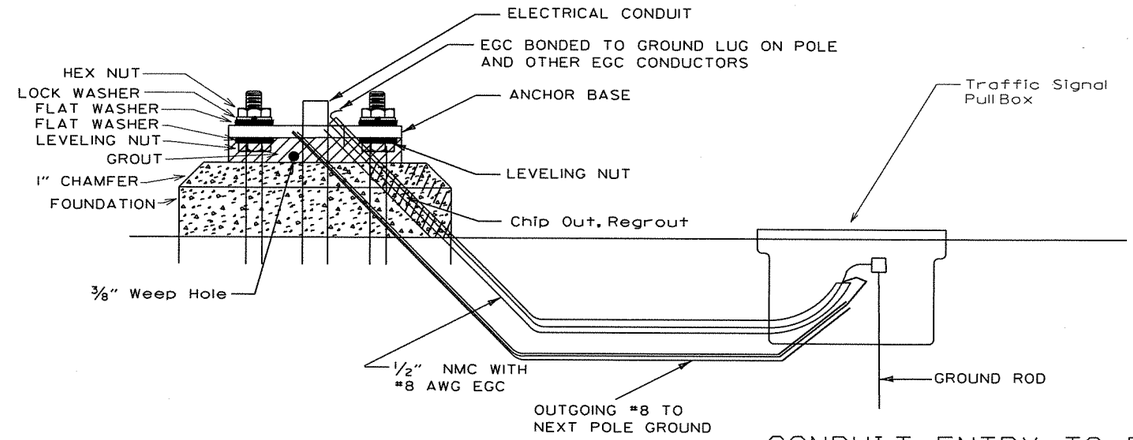
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

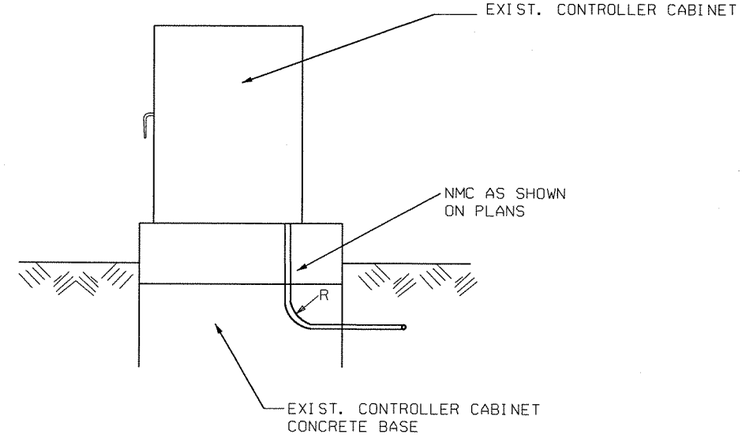
CONDUIT ENTRY TO EXISTING POLE BASE



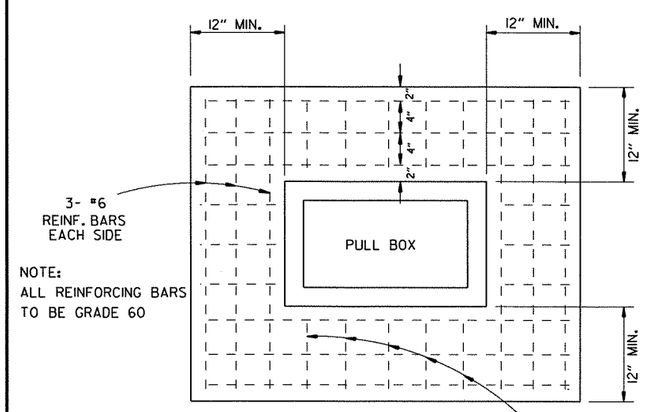
ANCHOR BASE



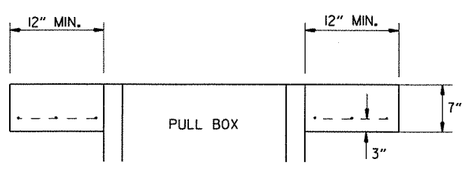
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



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

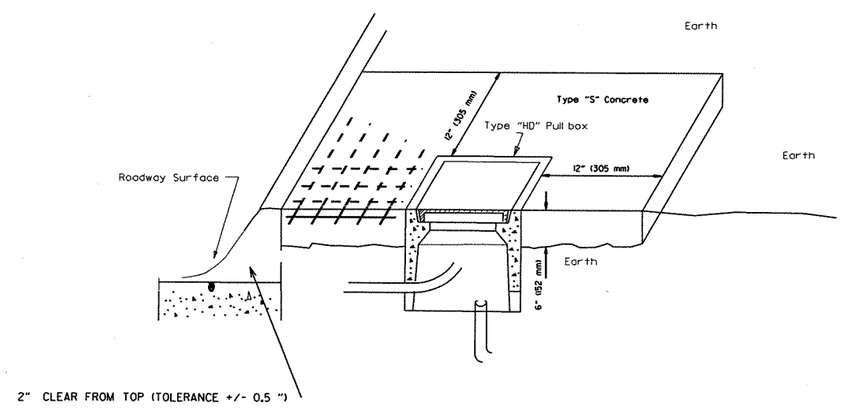


TOP



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)

1040517-job.dgn 7/9/2010

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.		040517	173	296

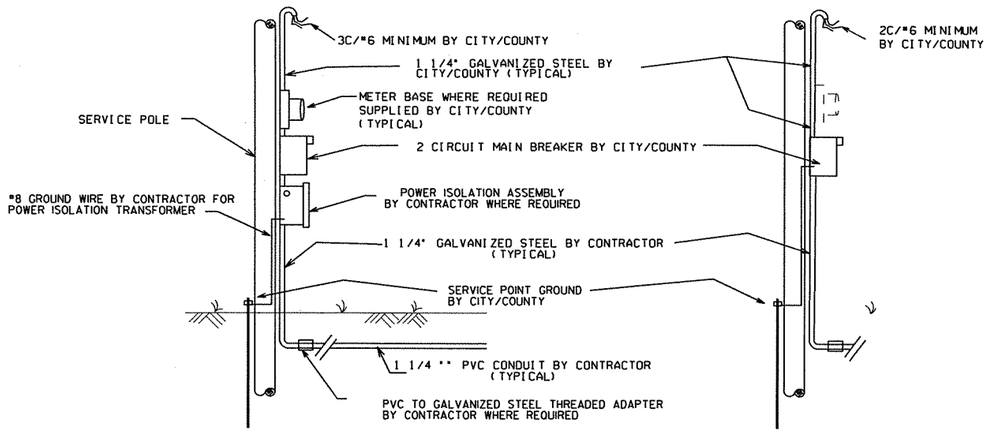
(2) SIGNALIZATION DETAILS

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

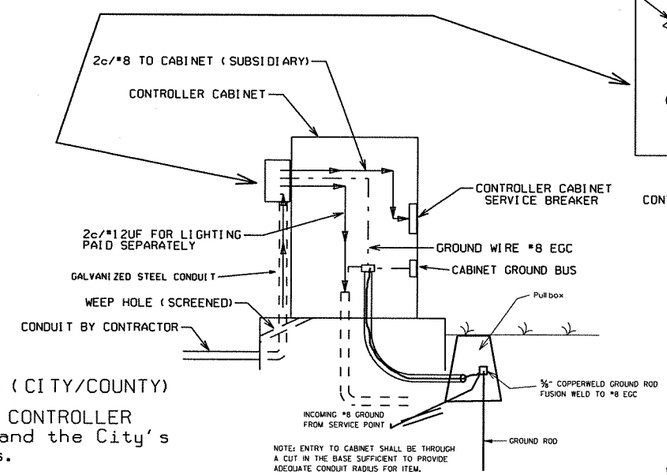
Ground Rod-A 10' x ⅝" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ½" NMC shall be included in Item 701. The pull box and conductor box shall be paid for separately.

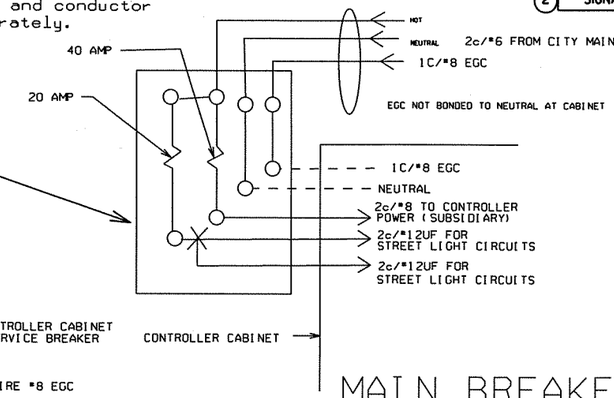
WITH POWER ISOLATION ASSEMBLY

WITHOUT POWER ISOLATION ASSEMBLY



SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)





STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11

MAIN BREAKER WIRING (TYPICAL)

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.

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

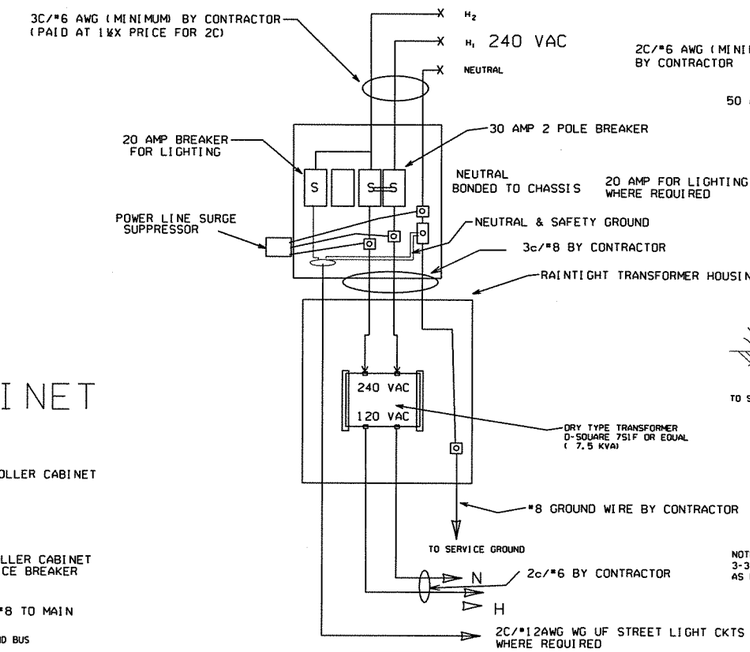
Electrical service typically falls into two categories: MAIN BREAKER NEAR CONTROLLER CABINET; and MAIN BREAKER NOT NEAR CONTROLLER CABINET. The Contractor's and the City's or County's responsibility varies accordingly as indicated on these details.

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.

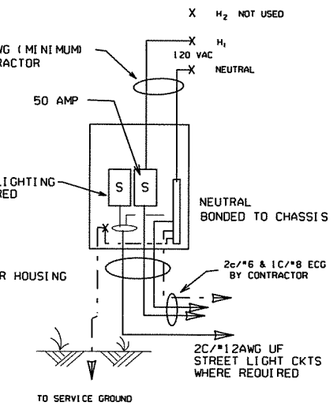
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The Main Breaker assembly, galvanized steel conduit, weatherhead and wire above Main Breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the Main 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.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

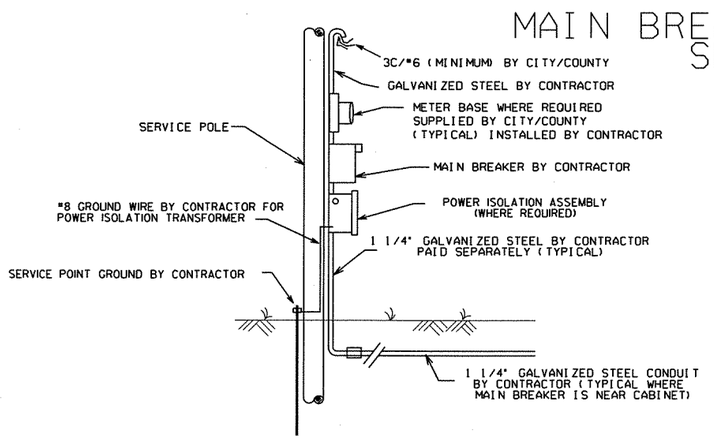


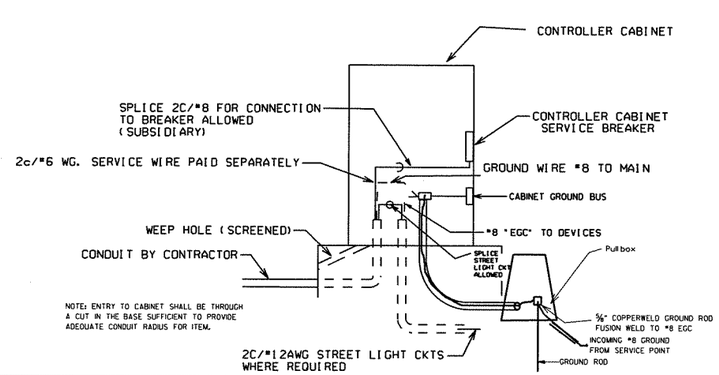
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (ECG) 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)

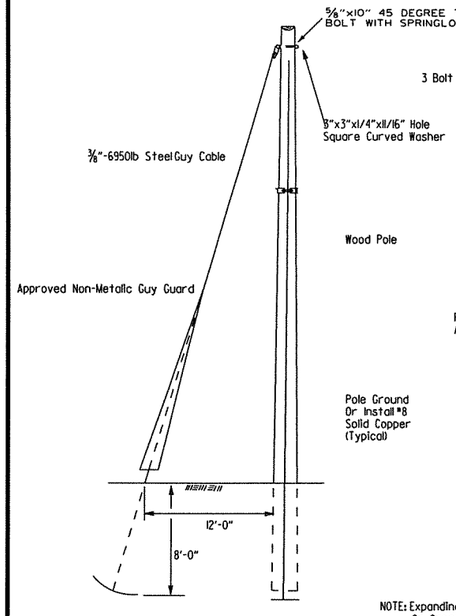
1040517-job.dgn 7/9/2010

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.		040517	174	296

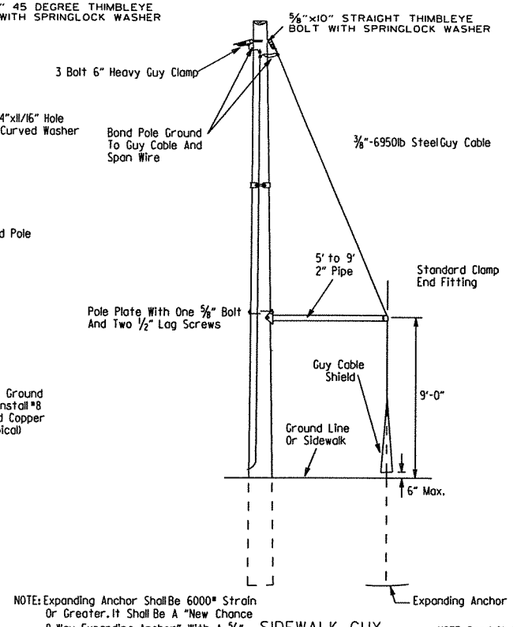
(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N.7605 MICHAEL D. FUGETT

7-8-11



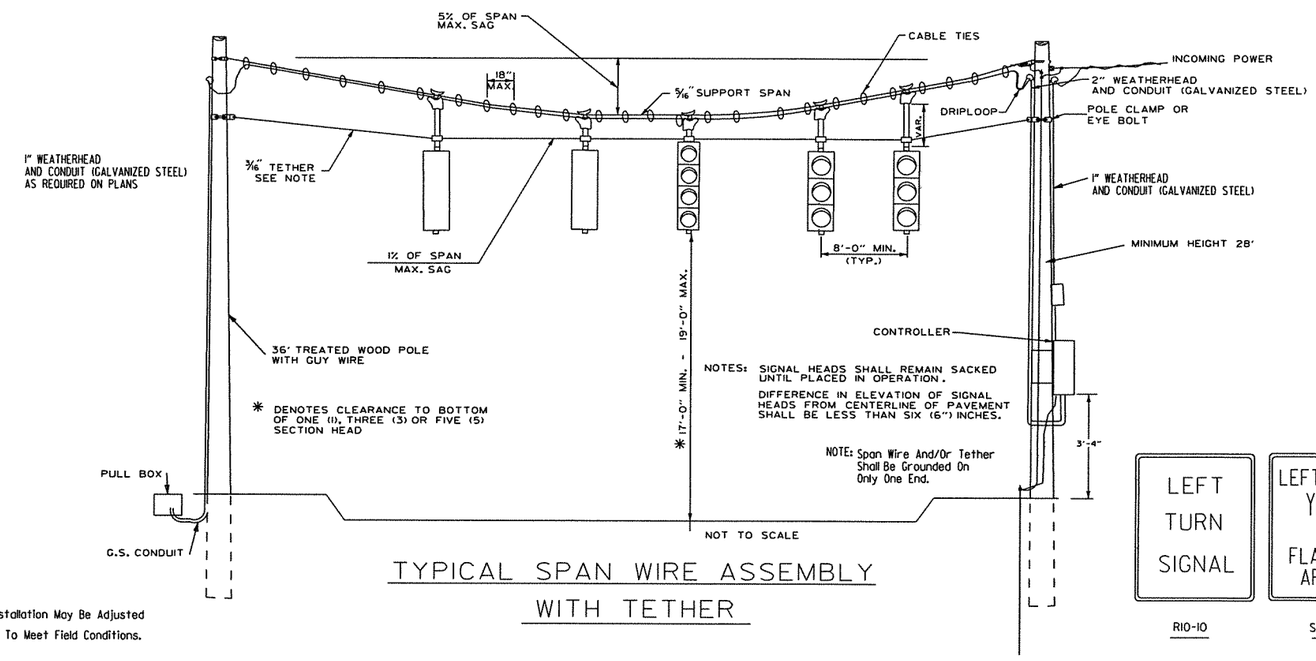
STANDARD GUY INSTALLATION



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.

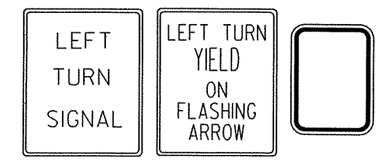


NOTES: SIGNAL HEADS SHALL REMAIN SACKED UNTIL PLACED IN OPERATION.

DIFFERENCE IN ELEVATION OF SIGNAL HEADS FROM CENTERLINE OF PAVEMENT SHALL BE LESS THAN SIX (6") INCHES.

NOTE: Span Wire And/Or Tether Shall Be Grounded On Only One End.

TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

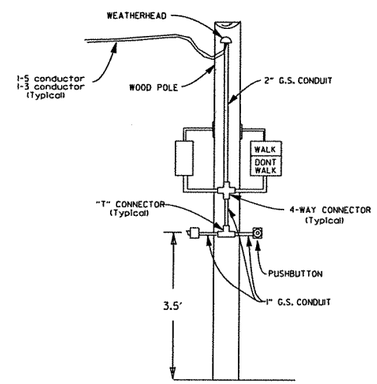


R10-10 SPECIAL R10-3e (SEE MUTCD)

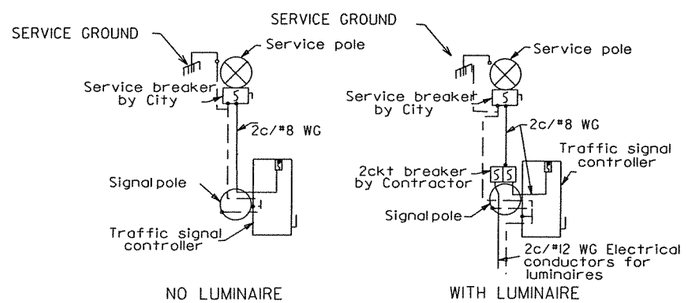
NOTES: Span wire poles shall be mounted a minimum of 4' behind curb or shoulder.

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.



WOODEN POLE INSTALLATION OF PED HEADS



NO LUMINAIRE WITH LUMINAIRE

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.

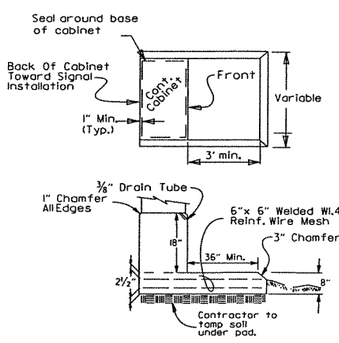
Sign face shall be constructed of high intensity sheeting (Type III) with silkscreen legend and border.

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.

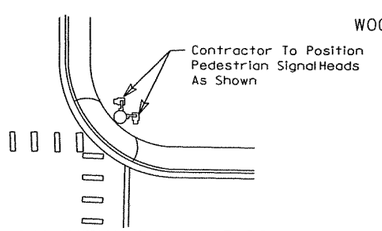
SIGNAL OPERATION NOTES:

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.



CONCRETE BASE MOUNTED CABINET DETAILS



PEDESTRIAN SIGNAL HEADS

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.

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

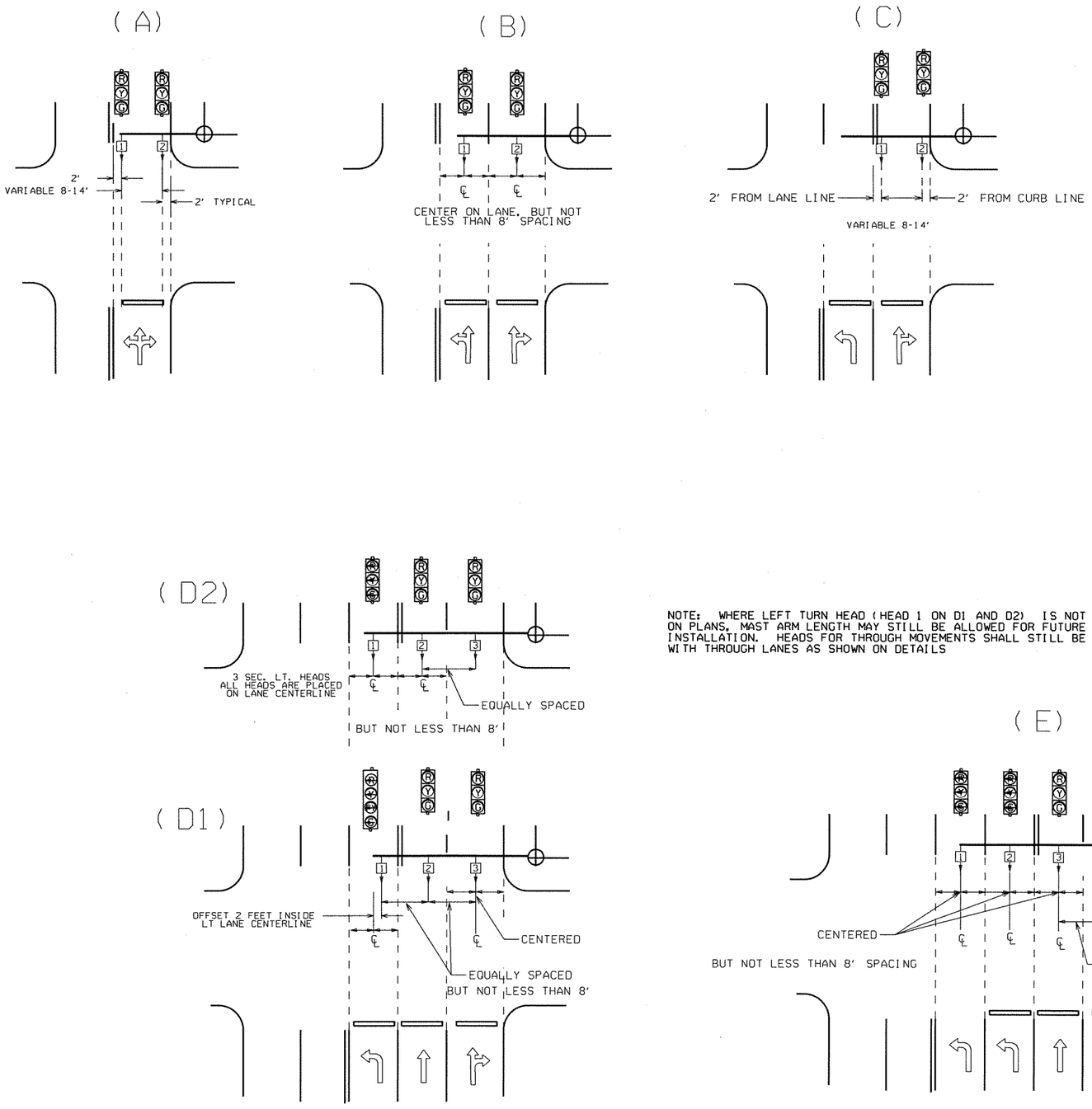
(Span Wire Assembly Wood Pole)

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.		040517	175	296

(2) SIGNALIZATION DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 7605 MICHAEL D. FUGETT

5-31-11



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

℄ = 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)

t040517-job.dgn 7/9/2010

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.		040517	176	296

(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.

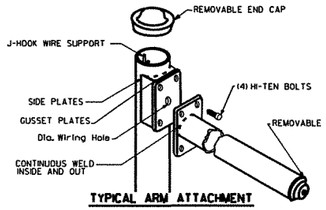
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

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).

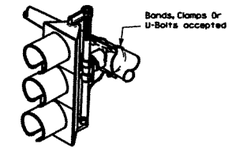
6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

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.

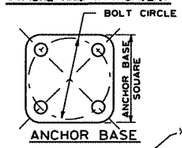
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



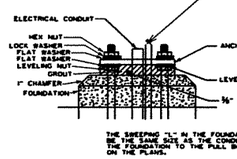
TYPICAL ARM ATTACHMENT

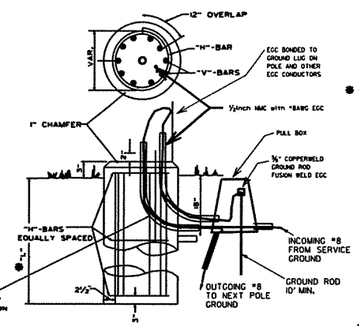


NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



ANCHOR BASE



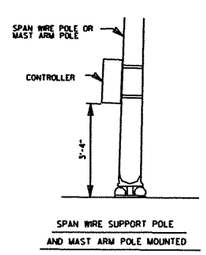


THE GROUND ROD SHALL BE FUSION WELDED TO A 10'/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

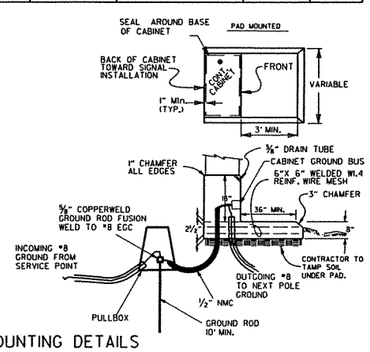
TYPICAL FOUNDATION DETAILS

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.

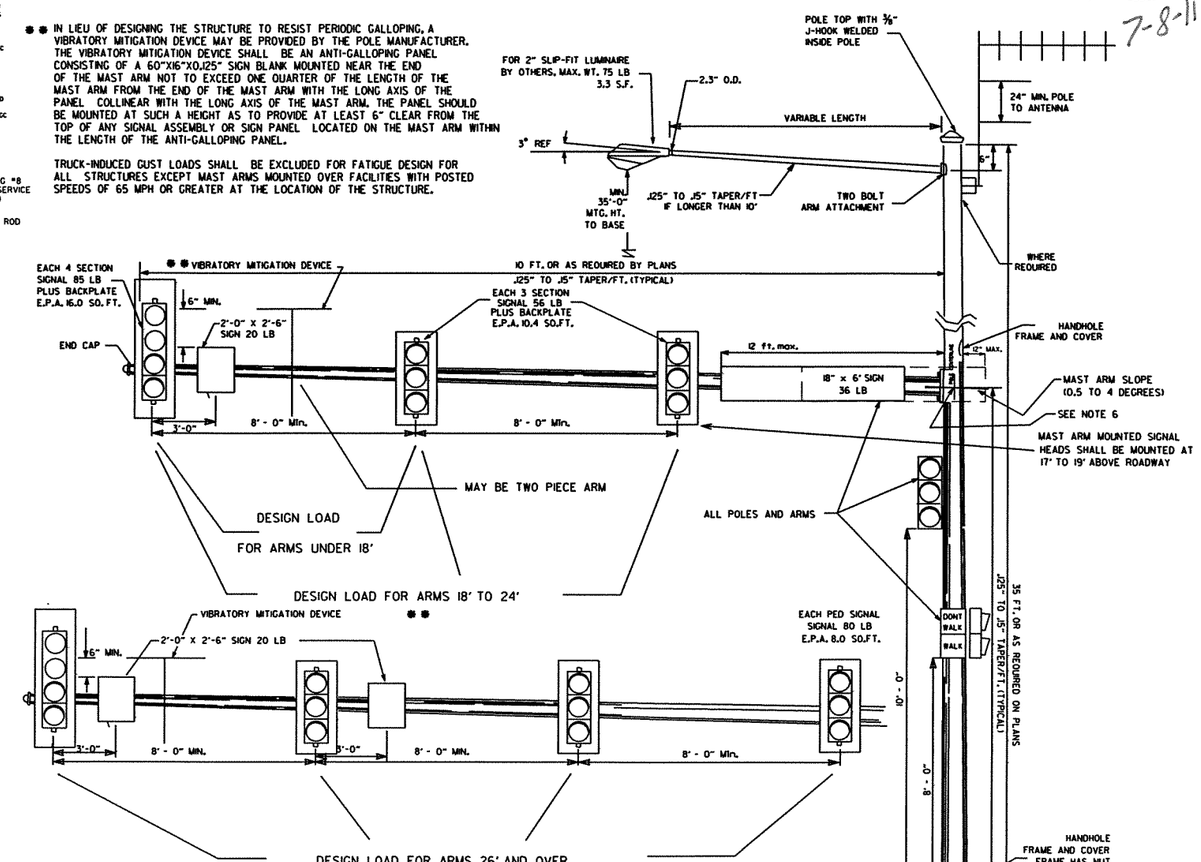
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

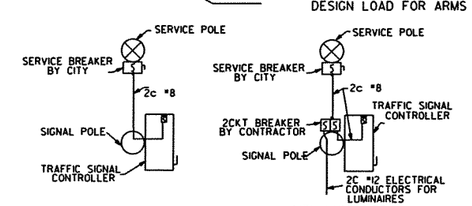
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER N.7605 MICHAEL D. FUGETT 7-8-11

* 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.

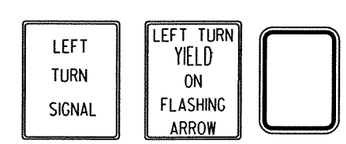
** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE 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.

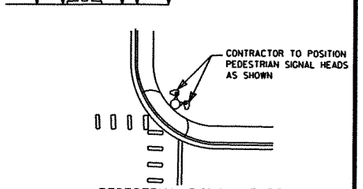




SERVICE DISCONNECT



R10-10 SPECIAL R10-3e



PEDESTRIAN SIGNAL HEADS

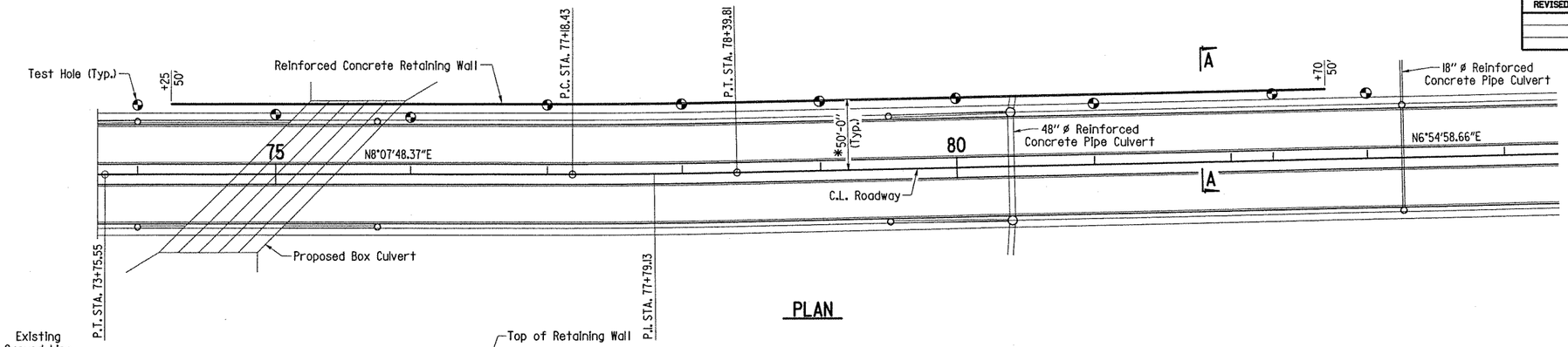
DATE	REVISION	DATE FILM
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-11-01	REV. NOTES & POLE MAST ARM SLOPE	
4-11-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

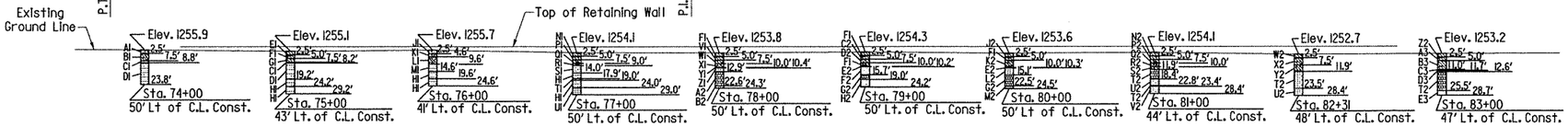
SIGNALIZATION DETAILS
(Steel Pole With Mast Arm)

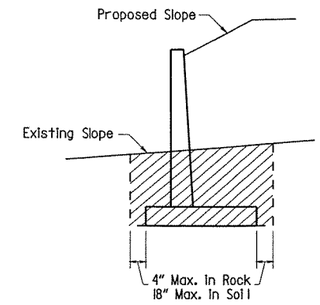
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	177	296
						RET. WALL		51284

1



PLAN

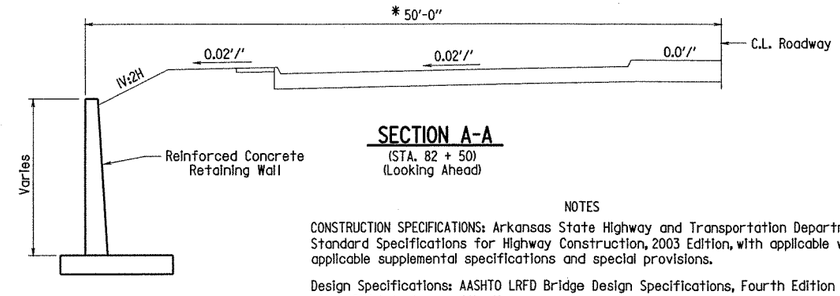




EXCAVATION LIMITS

Note: Hatched area denotes maximum pay limits of excavation.

* Note: 50' Offsets are measured to Front Face of Retaining Wall.



SECTION A-A

(STA. 82 + 50)
(Looking Ahead)

BORING LEGEND

A1-Moist, Medium Dense, Brown Sand with Clay and Gravel
B1-Moist, Stiff to Very Stiff, Brown Sandy Clay with Gravel (Sandstone Fragments)
C1-SANDSTONE - Light Gray, Poorly-Cemented
D1-SANDSTONE INTERBEDDED WITH SHALE - Gray, Medium Bedded, Cemented, with Moderate Dip and Fractured Layers (Sandstone); Dark Gray, Laminated Shale
E1-Moist, Stiff, Reddish Brown Clay with Gravel (Sandstone Fragments)
F1-Moist, Stiff, Brown Sandy Clay with Gravel (Sandstone Fragments)
G1-Moist, Hard, Brown Clay with Gravel (Chert Fragments)
H1-SANDSTONE INTERBEDDED WITH SHALE - Gray, Medium Bedded, Cemented, with Moderate Dip and Fractured Layers (Sandstone); Dark Gray, Laminated Shale
J1-Moist, Medium Dense, Brown and Light Gray Sand with Clay and Gravel (Sandstone Fragments)
K1-Moist, Loose, Brown Sand with Clay and Gravel (Sandstone Fragments)
L1-Sandstone Cobbles with Clay
M1-SANDSTONE INTERBEDDED WITH SHALE - Gray, Medium Bedded, Cemented, with Moderate Dip (Sandstone); Dark Gray, Laminated, Medium Hard, with moderate dip
N1-Moist, Hard, Brown Clay with Sand and Gravel (Sandstone Fragments)
P1-Moist, Medium Stiff, Dark Brown Clay with Sand and Gravel (Sandstone Fragments)
Q1-Moist, Very Stiff, Brown Clay with Sand and Gravel (Sandstone Fragments)
R1-Moist, Very Hard, Brown Clay with Sand and Gravel (Sandstone Fragments)
S1-SANDSTONE WITH DARK GRAY SHALE SEAMS - Brown and Gray, laminated, Cemented, with Moderate Dip and Fractured Layers
T1-SANDSTONE - Gray, Medium Bedded, Cemented, with Slight Dip
U1-SHALE - Dark Gray, Laminated, Medium Hard, with Slight Dip and Slickensides
V1-Moist, Medium Stiff, Brown Clay with Gravel (Sandstone Fragments)
W1-Moist, Very Stiff, Brown Clay with Gravel (Sandstone Fragments)
X1-Wet, Stiff, Brown and Gray Clay with Gravel (Sandstone Fragments)
Y1-Dry, Very Hard, Brown and Gray Clay with Gravel (Sandstone Fragments)
Z1-SANDSTONE - Gray, Medium Bedded, Calcareous, Cemented, with Slight Dip and Fractured Seams
A2-LIMESTONE - Gray, Medium Bedded, Moderately Hard, with Slight Dip and some Vertically Fractured Layers
B2-SANDSTONE WITH OCCASIONAL SHALE SEAMS - Gray, Medium Bedded, Calcareous, Well Cemented, with Slight Dip
C2-Moist, Medium Stiff, Brown Sandy Clay with Gravel (Sandstone Fragments)
D2-Moist, Medium Stiff, Brown Sandy Clay
E2-SANDSTONE - Gray, Poorly-Cemented
F2-SANDSTONE WITH THINLY LAMINATED SHALE - Brown and Gray, Medium Bedded, Calcareous, Well-Cemented, with Slight Dip
G2-LIMESTONE - Gray, Thick Bedded, Moderately Hard, with Slight Dip
H2-SANDSTONE WITH LIMESTONE LAYERS - Gray, Medium Bedded, Well-Cemented, with Slight Dip
J2-Moist, Stiff, Brown Sandy Clay with Gravel (Sandstone and Chert Fragments)
K2-Moist, Very Stiff, Brown Sandy Clay with Gravel (Sandstone Fragments)
L2-SANDSTONE WITH THINLY LAMINATED SHALE - Brown and Gray, Medium Bedded, Calcareous, Cemented, with Slight Dip
M2-LIMESTONE WITH DARK GRAY SHALE LAYERS - Gray, Thick Bedded, Moderately Hard, with Slight Dip
N2-Moist, Stiff, Reddish Brown, Clay with Gravel (Sandstone Fragments)
P2-Moist, Medium Stiff, Brown to Light Brown, Clay with Gravel (Sandstone Fragments)
Q2-Moist, Stiff, Dark Brown, Sandy Clay with Gravel (Sandstone Fragments)
R2-Moist, Very Stiff, Brown, Clay with Sand and Gravel (Sandstone Fragments)
S2-Moist to Wet, Stiff, Brown, Clay with Gravel (Sandstone Fragments)
T2-LIMESTONE - Gray, Thick Bedded, Slightly Weathered, Moderately Hard, with Slight Dip
U2-SANDSTONE WITH THINLY LAMINATED SHALE - Gray, Medium Bedded, Calcareous, Cemented, with Slight Dip
V2-SANDSTONE WITH THINLY LAMINATED SHALE AND OCCASIONAL LIMESTONE LAYER - Gray, Medium Bedded, Calcareous, Cemented, with Slight Dip
W2-Moist, Soft, Dark Brown, Clay with Gravel (Sandstone Fragments) and some Organic Matter
X2-Moist, Stiff, Dark Gray and Brown, Clay with Gravel (Sandstone Fragments)
Y2-Moist, Stiff, Brown, Clay with Gravel (Sandstone Fragments)
Z2-Moist, Medium Stiff, Brown, Clay with Gravel (Sandstone Fragments)
A3-Moist, Stiff, Reddish Brown, Clay with Gravel (Sandstone Fragments) and Trace of Organic Matter
B3-Moist, Stiff, Dark Brown to Brown, Clay with Gravel (Sandstone Fragments) and some Organic Matter
C3-SANDSTONE - Brown, Poorly-Cemented
D3-SANDSTONE WITH CLAY SEAMS AND LAYERS - Gray, Medium Bedded, Cemented, with Slight Dip and Fractured Layers
E3-SANDSTONE WITH DARK GRAY SHALE SEAMS - Gray, Medium Bedded, Calcareous, Well-Cemented, with Slight Dip

"N" VALUES

Sta. 74+00 - 50' Lt. of C.L. Const.
1.5- 2.5, N=11
3.0- 4.0, N=11
5.5- 6.5, N=19
7.5- 7.7, N=60(2")

Sta. 75+00 - 43' Lt. of C.L. Const.
1.5- 2.5, N=10
3.0- 4.0, N=12
5.5- 6.5, N=33
7.5- 7.7, N=60(2")

Sta. 76+00 - 41' Lt. of C.L. Const.
1.5- 2.5, N=22
3.0- 4.0, N=6

Sta. 77+00 - 50' Lt. of C.L. Const.
1.5- 2.5, N=34
3.0- 4.0, N=6
5.5- 6.5, N=19
8.0- 8.3, N=60(4")

Sta. 78+00 - 50' Lt. of C.L. Const.
1.5- 2.5, N=14
3.0- 4.0, N=8
5.5- 6.5, N=21
8.0- 9.0, N=10
10.0- 10.3, N=60(4")

Sta. 79+00 - 50' Lt. of C.L. Const.
1.5- 2.5, N=14
3.0- 4.0, N=7
5.5- 6.5, N=7
8.0- 9.0, N=11
10.0- 10.2, N=60(3")

Sta. 80+00 - 50' Lt. of C.L. Const.
1.5- 2.5, N=10
3.0- 4.0, N=13
5.5- 6.5, N=16
8.0- 9.0, N=23
10.0- 10.3, N=60(4")

Sta. 81+00 - 44' Lt. of C.L. Const.
1.5- 2.5, N=10
3.0- 4.0, N=6
5.5- 6.5, N=14
8.0- 9.0, N=16
10.5- 11.5, N=9

Sta. 82+31- 48' Lt. of C.L. Const.
1.5- 2.5, N=4
3.0- 4.0, N=10
5.5- 6.5, N=17
8.0- 9.0, N=20
10.5- 11.5, N=11

Sta. 83+00 - 47' Lt. of C.L. Const.
1.5- 2.5, N=8
3.0- 4.0, N=13
5.5- 6.5, N=9
8.0- 9.0, N=13
10.5- 11.2, N=103(9")

NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2003 Edition, with applicable with applicable supplemental specifications and special provisions.

Design Specifications: AASHTO LRFD Bridge Design Specifications, Fourth Edition (2007), with 2009 interim specifications.

SEISMIC ZONE: 1

CONCRETE: All concrete shall be Class "S" with a minimum 28 day compressive strength strength f'c=3500 psi. Exposed corners to be chamfered ¾" unless otherwise noted.

REINFORCING STEEL: Reinforcing steel shall conform to AASHTO M31 or M53, Grade 60 (fy=60,000 psi).

FINISH: All exposed surfaces of the concrete retaining wall shall be given a Class 2 finish.

FOOTINGS: Top of footings for retaining walls shall be set at top of rock or lower. Footings shall be founded into material desinated as hard sandstone on the boring legend. Foundations for footings shall be prepared in accordance with Section 801.04 of the Standard Specifications. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Top of footing shall be a minimum of 2'-0" below finished ground line.

MISC. ITEMS: The backfill material shown on the drainage detail, the 4" waterstop, the waterproofing membrane, ½" preformed joint material, and the 4" ø drain pipes shall not be paid for directly but shall be considered subsidiary to other items of the contract.

BORING LOGS: Boring logs, including laboratory results, may be obtained from the Programs and Contracts Division. A fault line crosses the Project in the vicinity of Sta. 77+00. See "Summary of Geology" transmitted with Boring Logs.

See Dwg. No. 51285 & 51286 for concrete wall details.

The Engineer shall be informed if changes in footing elevations result in a total wall height greater than 20'-4".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4437
CHARLES P. BRANDT
8/16/10

BRIDGE ENGINEER

LAYOUT OF CONCRETE RETAINING WALL
HWY. 45 - E. JOYCE BLVD.
(FAYETTEVILLE) (S)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: MJT DATE: 07/10/10 FILENAME: BR040517XI_RW.DGN
CHECKED BY: BEF DATE: 8/16/10 SCALE: NOT TO SCALE
DESIGNED BY: BEF DATE: 6/10

DRAWING NO. 51284

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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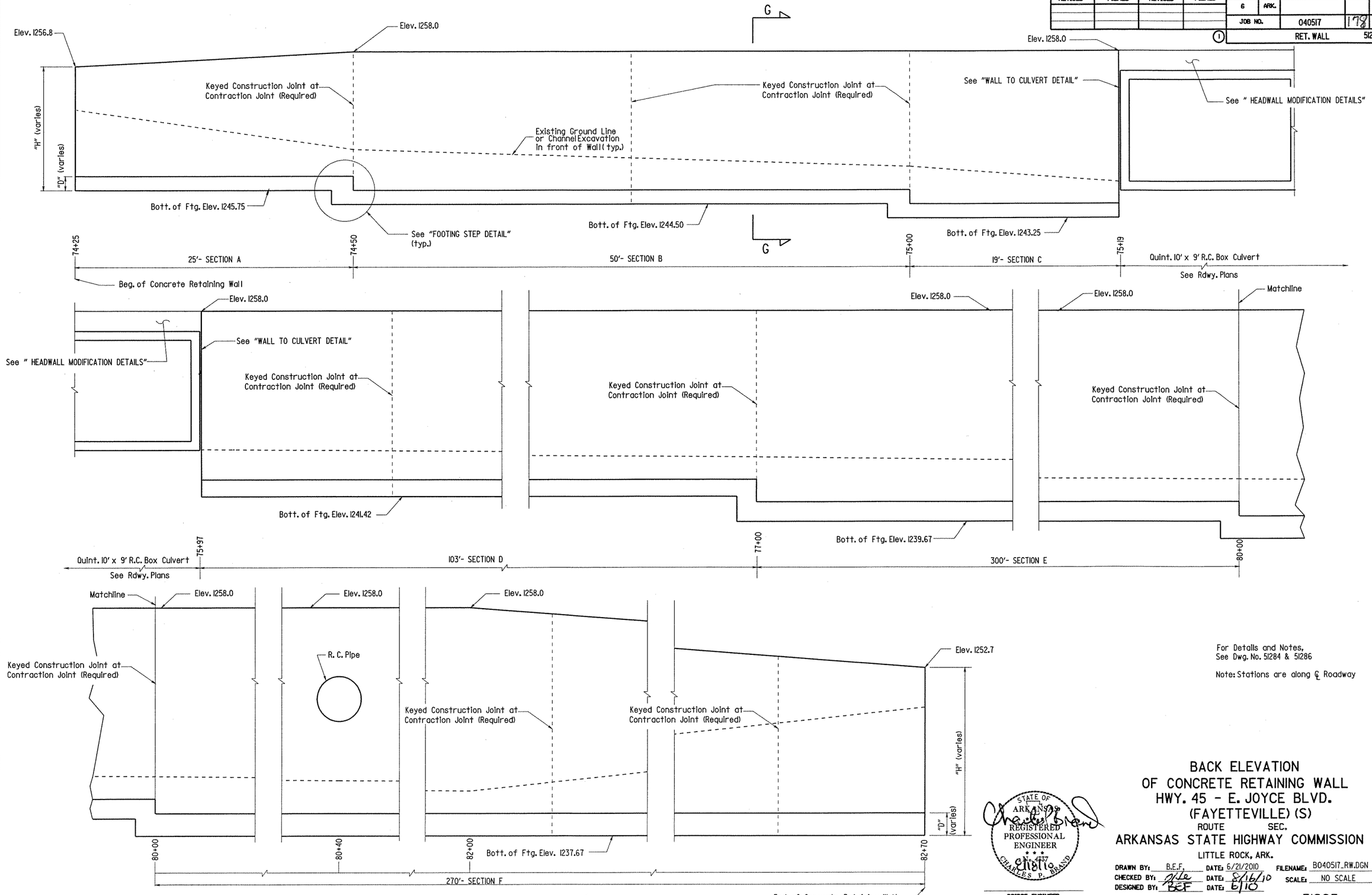
				JOB NO.		040517	178	296
				①		RET. WALL	51285	



For Details and Notes, See Dwg. No. 51284 & 51286

Note: Stations are along ℄ Roadway

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 4737
CHARLES P. BRAND

BRIDGE ENGINEER

BACK ELEVATION OF CONCRETE RETAINING WALL HWY. 45 - E. JOYCE BLVD. (FAYETTEVILLE) (S)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

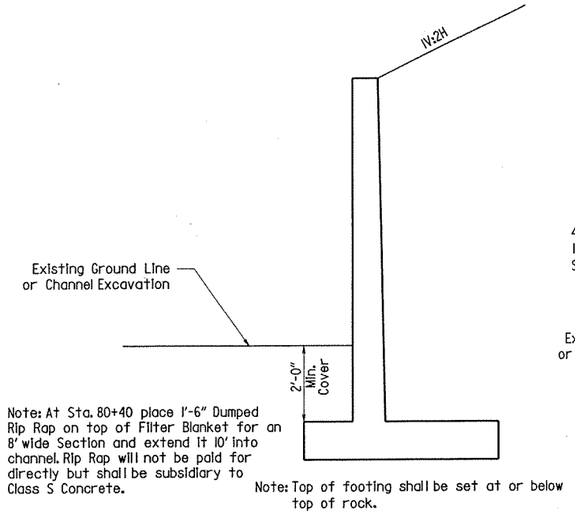
DRAWN BY: B.E.F. DATE: 6/21/2010 FILENAME: B040517_RW.DGN

CHECKED BY: DATE: 8/16/10 SCALE: NO SCALE

DESIGNED BY: BEF DATE: 6/10

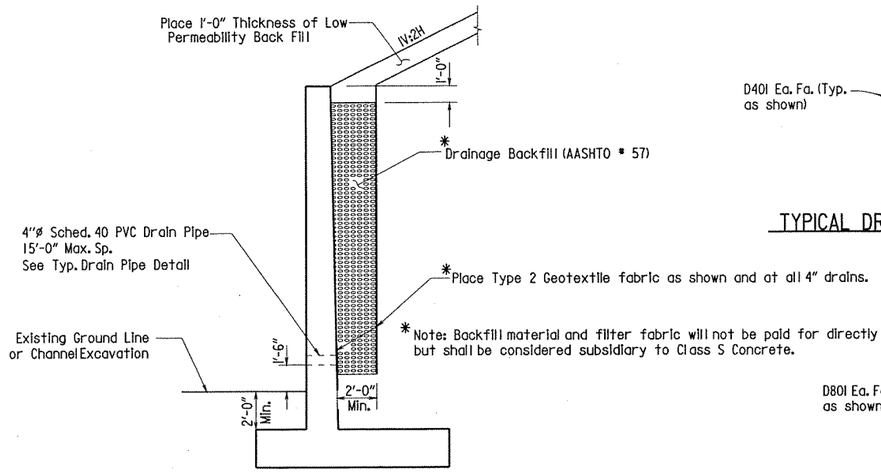
DRAWING NO. 51285

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040517	179	296
				①		RET. WALL	51286	



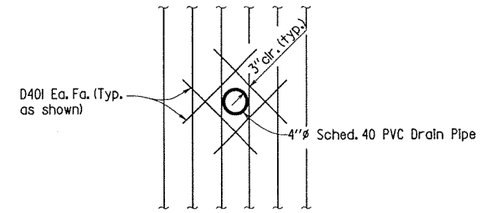
CRITERIA TO SET FOOTING DEPTH

N.T.S



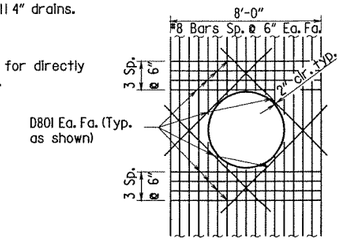
TYP. DRAINAGE DETAILS

N.T.S

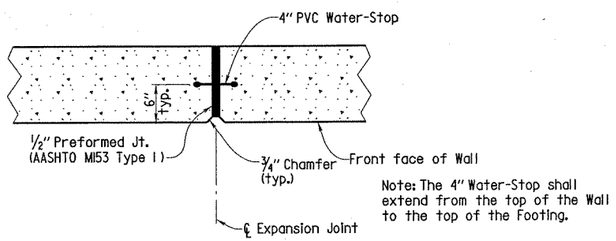


TYPICAL DRAIN PIPE REINFORCING DETAIL

N.T.S



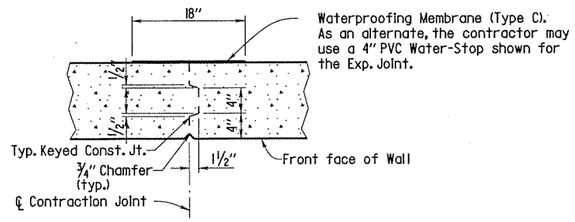
STA. 80+40 48" R.C. PIPE PROTRUSION DETAIL



TYPICAL EXPANSION JOINT DETAIL

N.T.S.

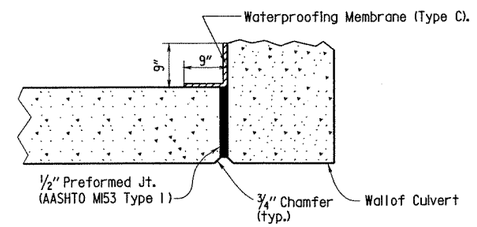
Note: 90'-0" Max Sp. between Expansion Joints.



TYPICAL CONTRACTION JOINT DETAIL

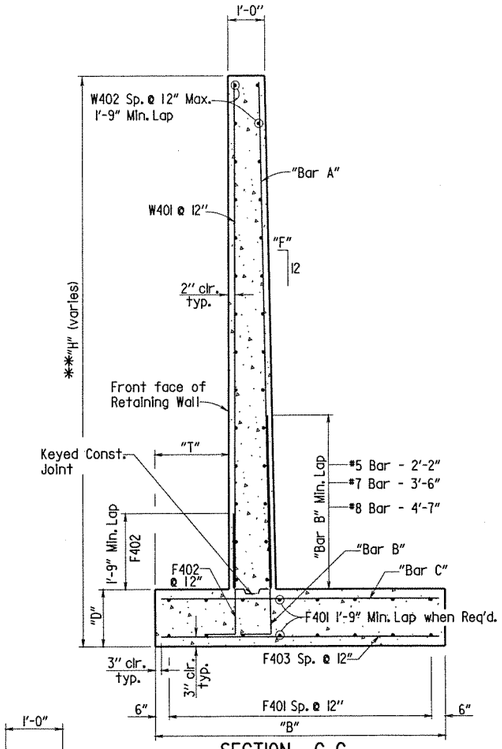
N.T.S.

Note: 30'-0" Max Sp. between Contraction Joints. Horizontal reinforcement shall be continuous through Contraction Joints.



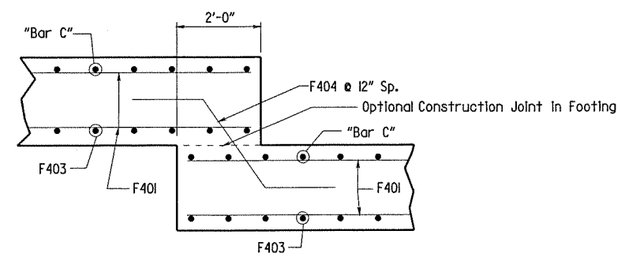
WALL TO CULVERT DETAIL

N.T.S.



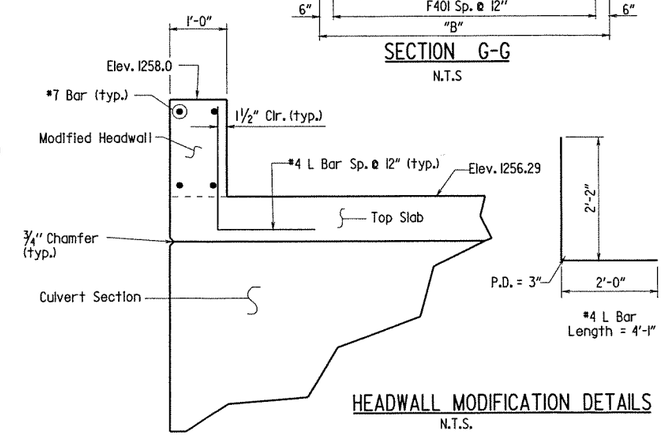
SECTION G-G

N.T.S



FOOTING STEP DETAIL

N.T.S.



HEADWALL MODIFICATION DETAILS

N.T.S.

** This is the Maximum height of the Section. Actual heights may vary in the field.

BAR LIST

MARK	LENGTH	A	B	P.D.
W401	("H"-"D"-3")			Str.
W402	AS REQUIRED			Str.
F401	AS REQUIRED			Str.
F402	4'-1"	8"	3'-6"	3"
F403	("B"- 6")			Str.
F404	5'-9"	1'-6"	2'-9"	3"
D401	2'-6"			Str.
D801	10'-0"			Str.
"Bar A"	("H"-"D"-3")			Str.
"Bar B"				
#5	4'-2"	10"	3'-5"	3 3/4"
#7	6'-6"	1'-2"	5'-6"	5 1/4"
#8	7'-6"	1'-4"	6'-4"	6"
"Bar C"	("B"- 6")			Str.

BENDING DIAGRAMS

Dimensions are out to out of bars.

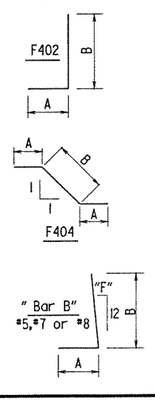


TABLE OF RETAINING WALL VARIABLES

Section	** "H"	"B"	"T"	"D"	"Bar A" Size @ Sp.	"Bar B" Size @ Sp.	"Bar C" Size @ Sp.	Batter "F"
"A"	12'-3"	7'-0"	1'-3"	1'-3"	#5 @ 7 1/2"	#5 @ 7 1/2"	#5 @ 6 1/2"	1/4
"B"	13'-6"	8'-0"	2'-0"	1'-3"	#5 @ 6 1/2"	#5 @ 6 1/2"	#5 @ 6"	1/4
"C"	14'-9"	8'-0"	2'-3"	1'-3"	#5 @ 6"	#5 @ 6"	#5 @ 6"	1/4
"D"	16'-7"	10'-0"	2'-6"	1'-6"	#7 @ 8"	#7 @ 8"	#7 @ 8"	1/4
"E"	18'-4"	12'-0"	3'-0"	1'-9"	#8 @ 7 1/2"	#8 @ 7 1/2"	#8 @ 7 1/2"	1/4
"F"	20'-4"	14'-0"	3'-9"	2'-0"	#8 @ 7 1/2"	#8 @ 7 1/2"	#8 @ 6 1/2"	1/2

APPROXIMATE QUANTITIES FOR RETAINING WALL FOR INFORMATION ONLY

Reinforcing Steel	Concrete	Unclassified Excavation
156,000 lbs.	1,180.7 Cu. Yds.	5,820 Cu. Yds.

Note: Unclassified Excavation includes approx. 642 cu. yds of rock excavation.

STATE OF ARKANSAS
Charles P. Blair
No. 4337
REGISTERED PROFESSIONAL ENGINEER
CHARLES P. BLAIR

BRIDGE ENGINEER

DETAILS OF CONCRETE RETAINING WALL HWY. 45 - E. JOYCE BLVD. (FAYETTEVILLE) (S)

ROUTE SEC.

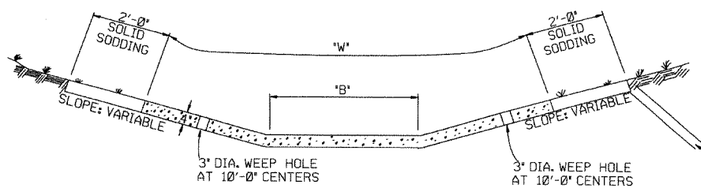
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: B.E.F. DATE: 6/21/2010 FILENAME: B040517_RW.DGN
CHECKED BY: [illegible] DATE: 8/16/10 SCALE: NO SCALE
DESIGNED BY: DEF DATE: 6/10

DRAWING NO. 51286

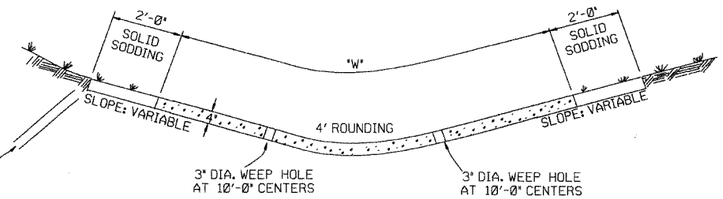
REFER TO TABULATION OF QUANTITIES
FOR "W" & "B" DIMENSIONS



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

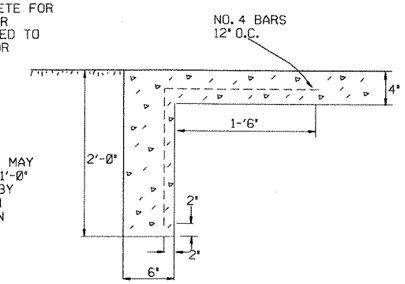
TYPE A

REFER TO TABULATION OF QUANTITIES
FOR "W" DIMENSIONS



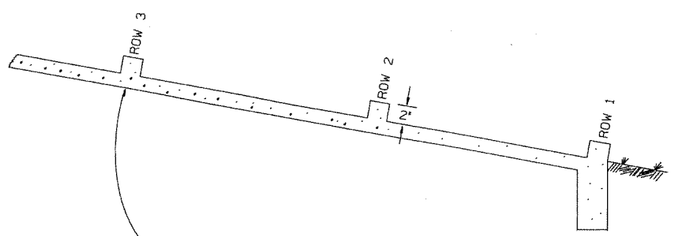
TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



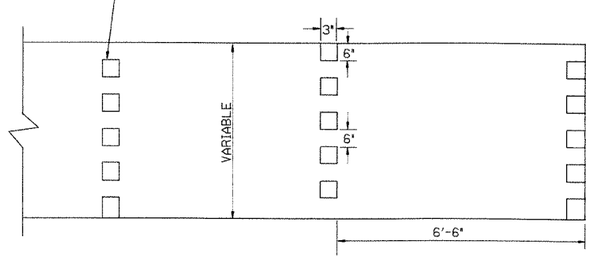
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

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



ENERGY DISSIPATORS
(NO SCALE)

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

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

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

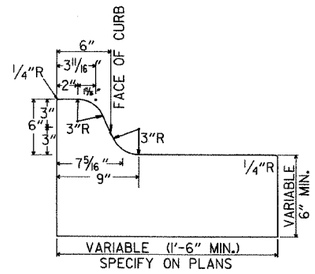
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MI'N. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

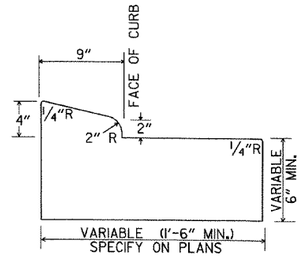
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

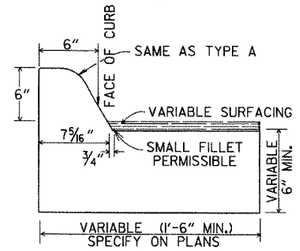
STANDARD DRAWING CDP-1



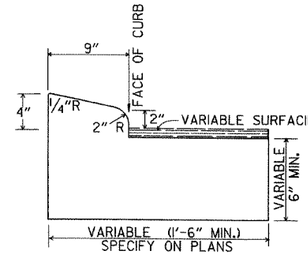
TYPE A



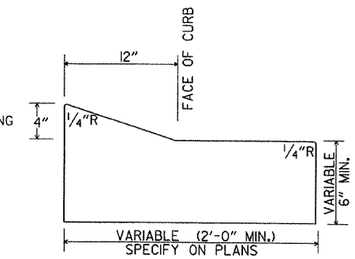
TYPE B-1



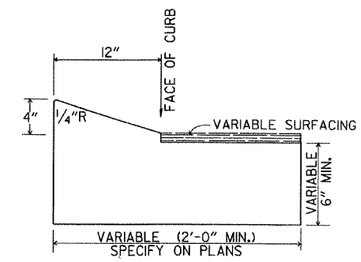
TYPE C



TYPE B-2

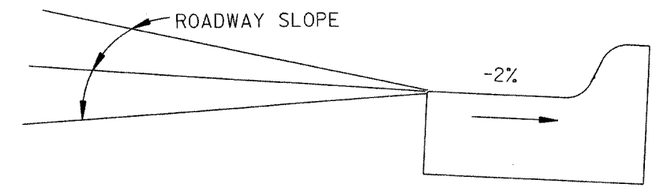


TYPE E-1



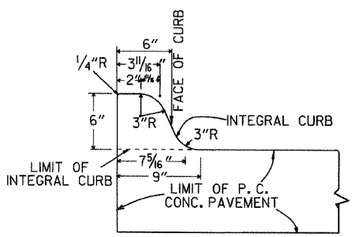
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

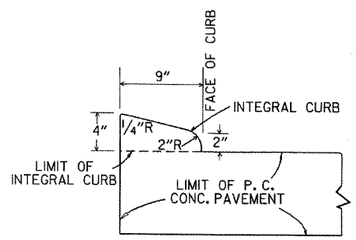


DETAIL OF GUTTER SLOPE

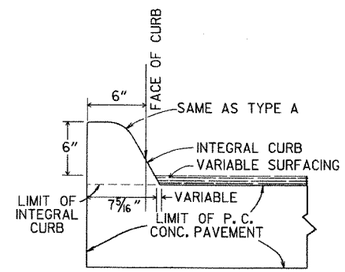
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

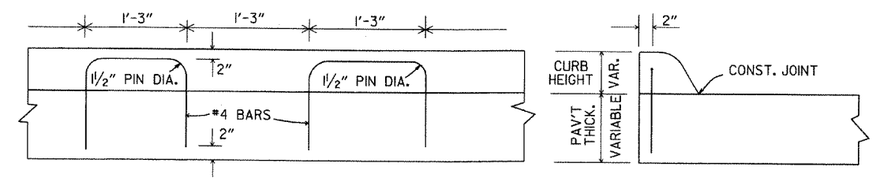


TYPE B



TYPE C

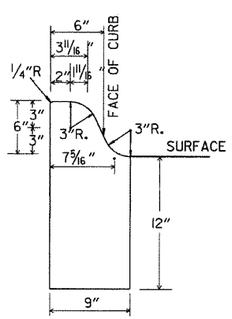
INTEGRAL CURB



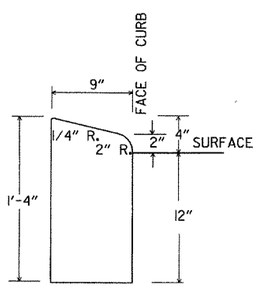
LONGITUDINAL SECTION

ELEVATION

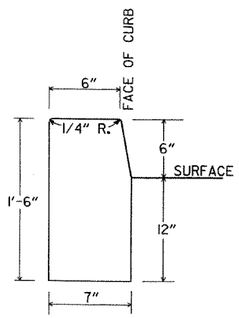
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



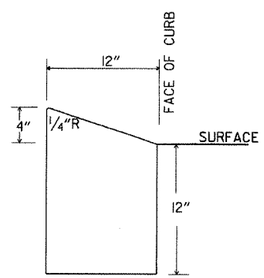
TYPE A



TYPE B

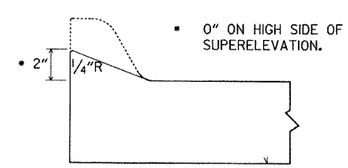


TYPE D



TYPE E

CONCRETE CURB



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

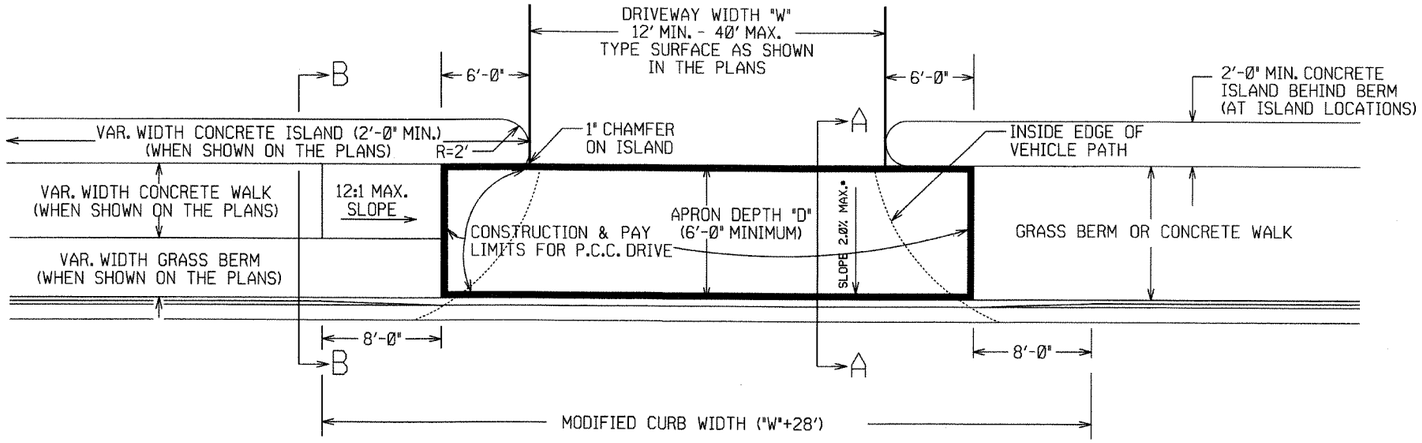
DETAILS OF MODIFIED CURB

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

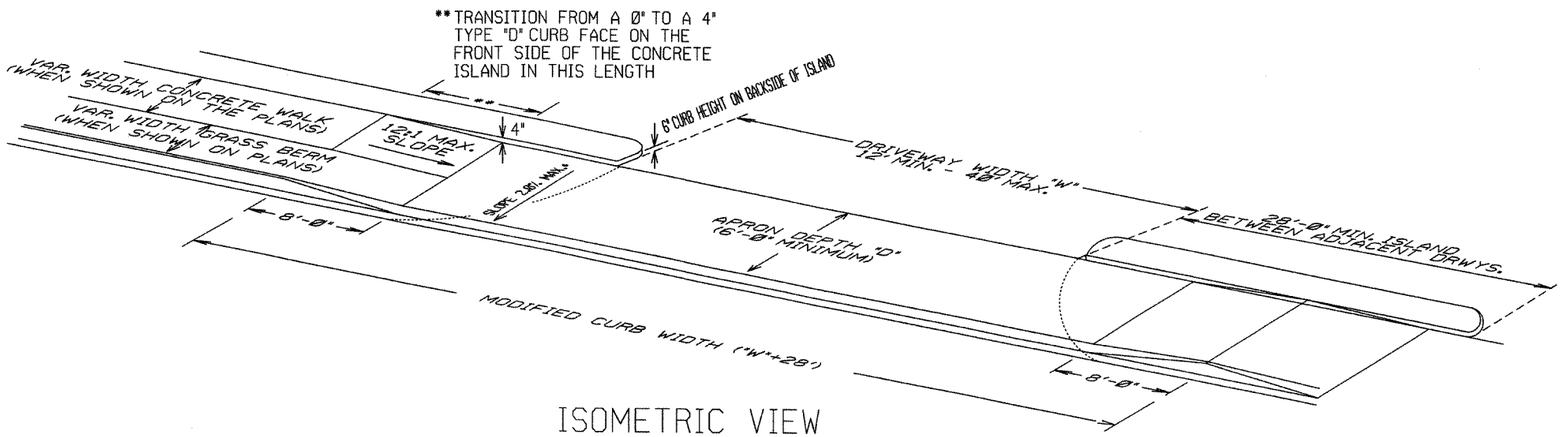
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

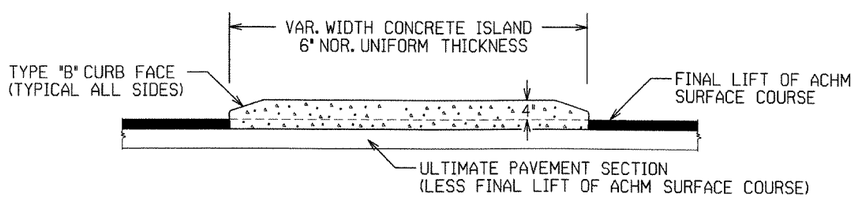
STANDARD DRAWING CG-1

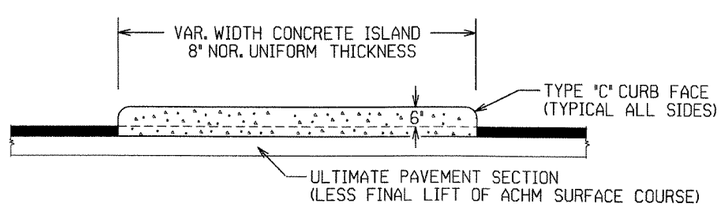


PLAN VIEW



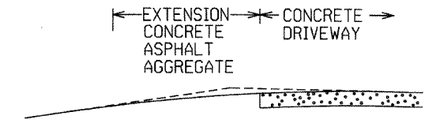
ISOMETRIC VIEW





CURBED ISLANDS FOR CHANNELIZATION

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



EXTENSION TYPICAL SECTIONS

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

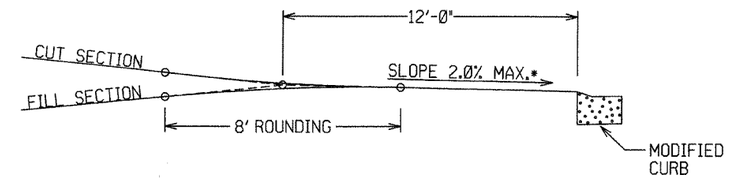
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

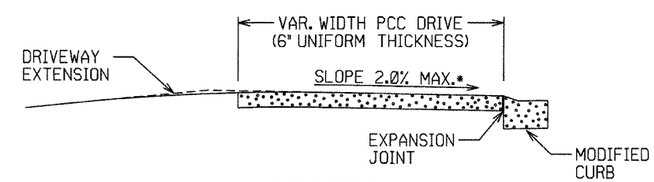
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

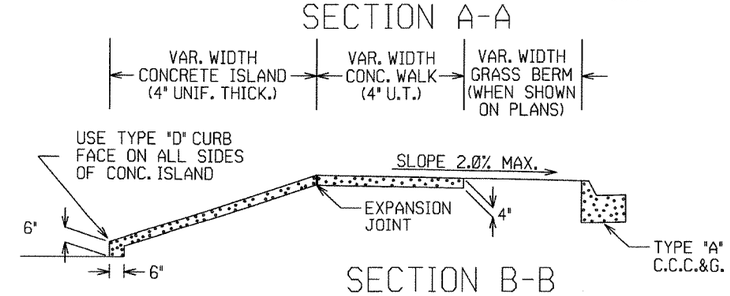


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



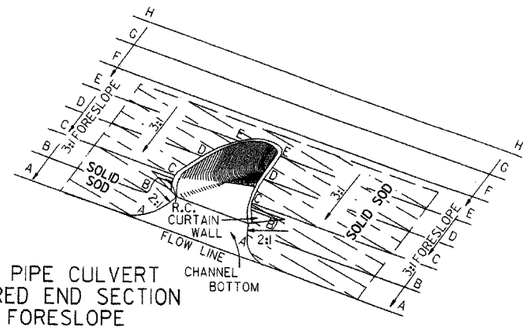
SECTION A-A



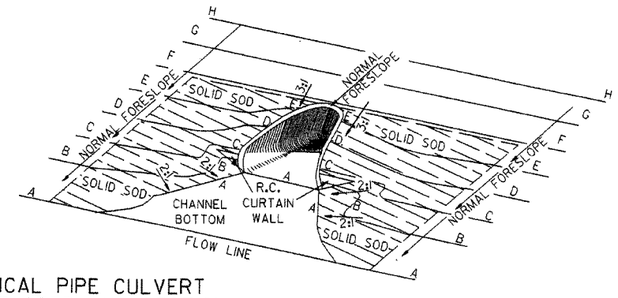
SECTION B-B
CURBED ISLAND BEHIND WALK

DATE REV	DATE FILMED	DESCRIPTION
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

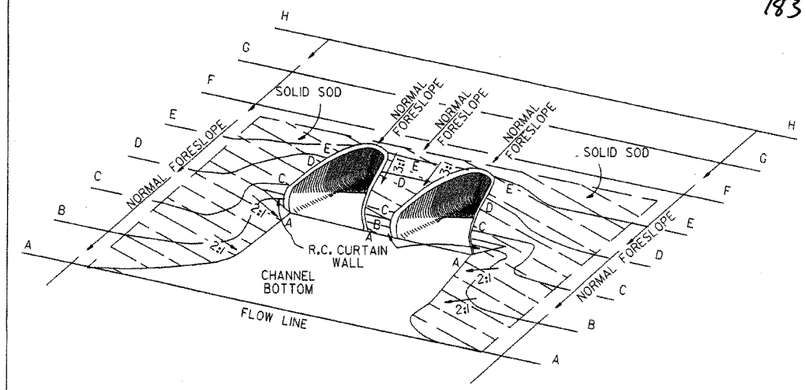
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



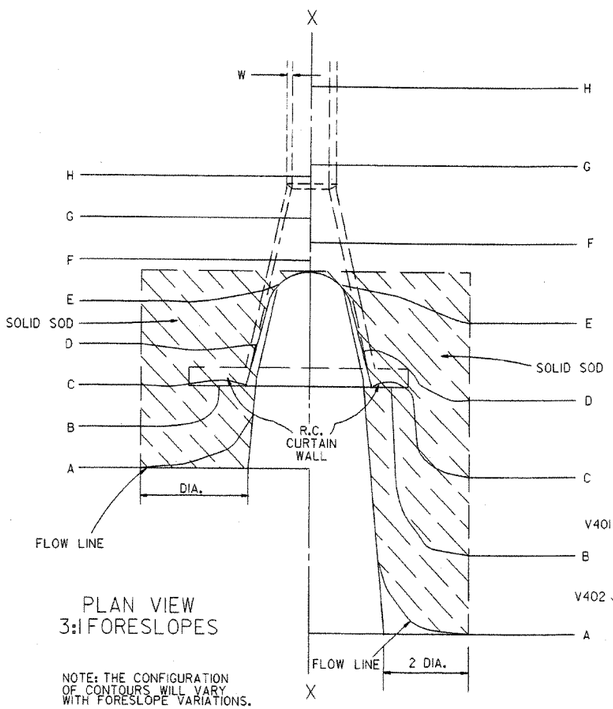
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

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

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

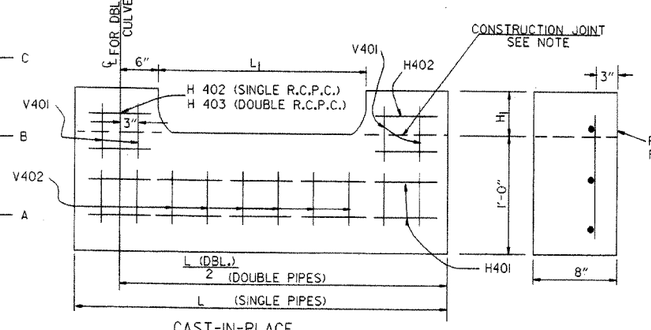
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0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

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

REINFORCING STEEL SCHEDULE

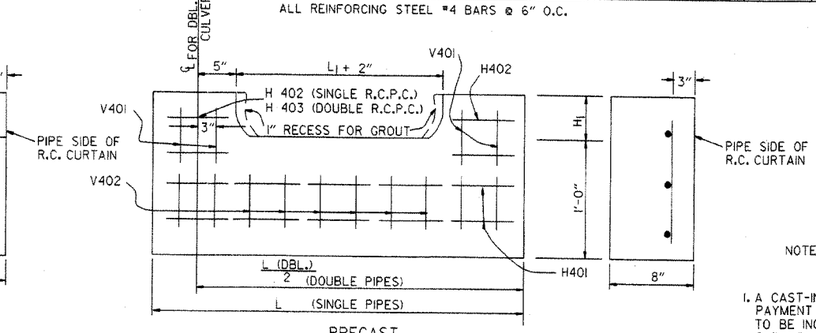
PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	V401 L	V401 NO.	V402 L	V402 NO.	DOUBLE R.C. PIPE CULVERT H401 L	H401 NO.	H402 L	H402 NO.	H403 L	H403 NO.	V401 L	V401 NO.	V402 L	V402 NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"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

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



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

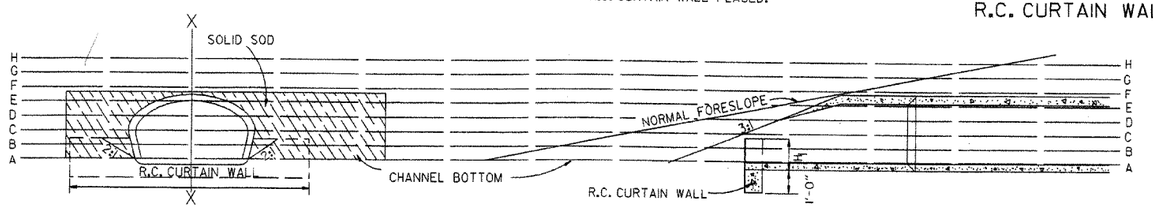
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	SINGLE R.C.P.C. 4:1	SINGLE R.C.P.C. 6:1	DOUBLE R.C.P.C. 3:1	DOUBLE R.C.P.C. 4:1	DOUBLE R.C.P.C. 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.

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 × 3 W/10 × W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	10-18-96
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

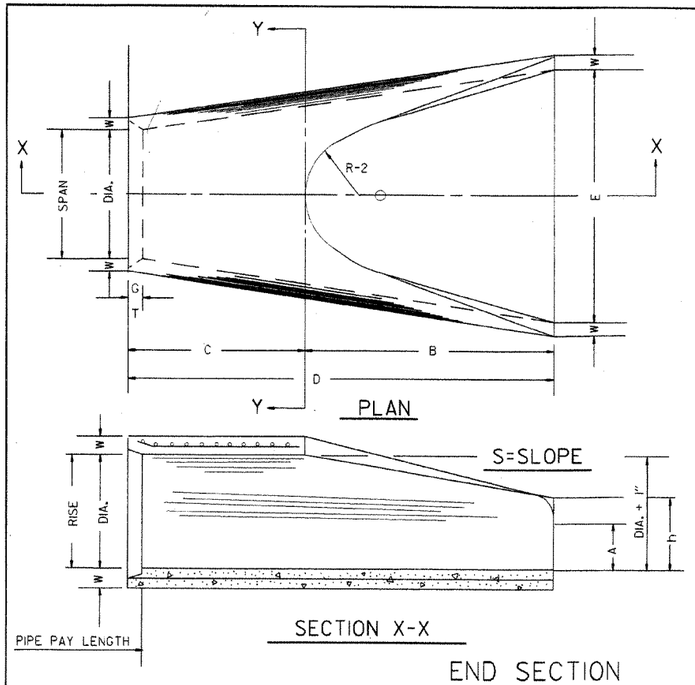


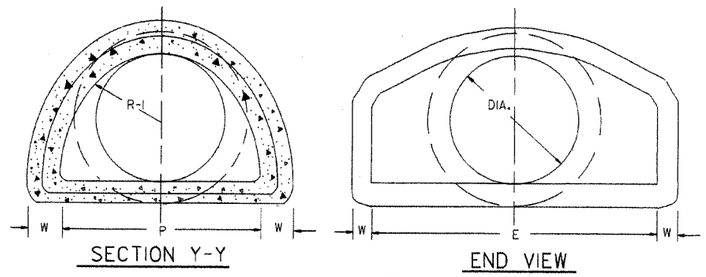
TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¼"	6'-0"	3:1	37"	47 13/16"	24 9/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 15/16"	24"	5"	13250	4'-6"

ARCH PIPE

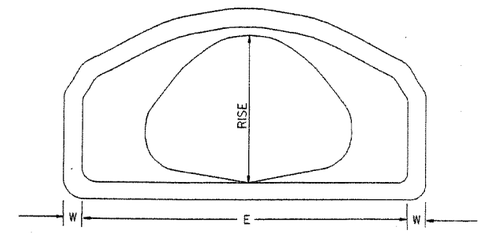
EQUIV. DIA.	* SPAN AASHTO M 206	* SPAN AHD NOMINAL	* RISE AASHTO M 206	* RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 13/16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	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.

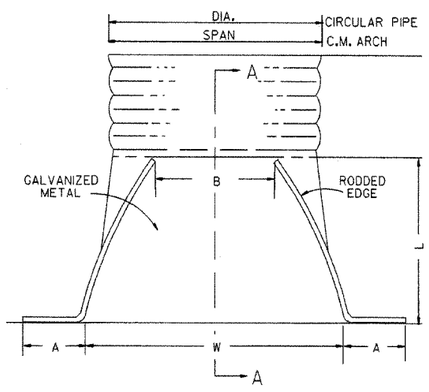


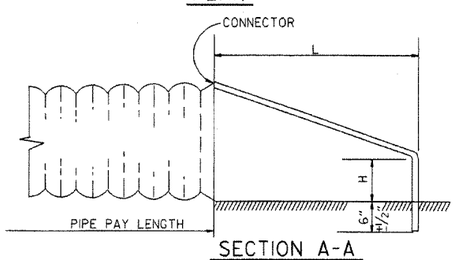
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

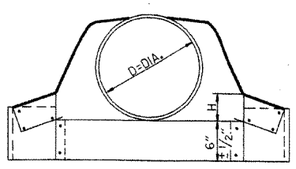
END SECTION
FOR REINFORCED CONCRETE PIPE CULVERTS



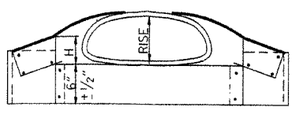
END VIEW
CONCRETE ARCH PIPE







CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

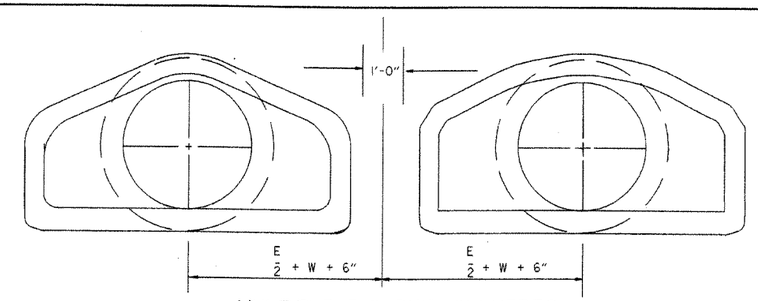
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

C.M. ARCH PIPE

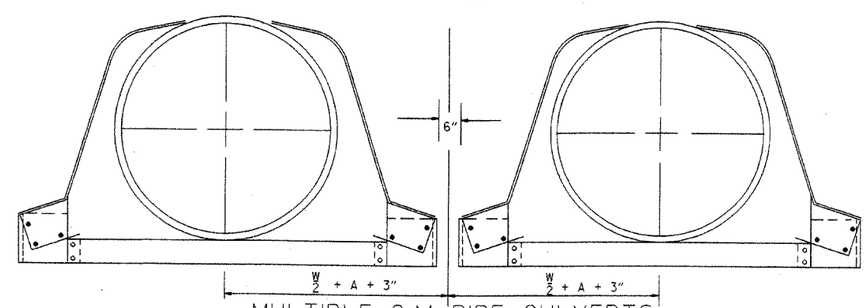
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12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

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

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



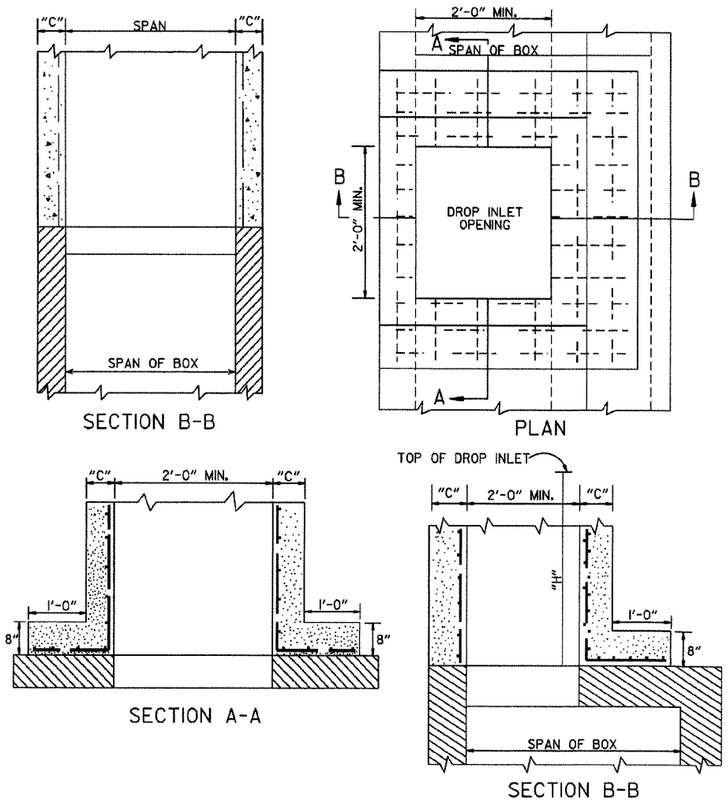
MULTIPLE R.C. PIPE CULVERTS



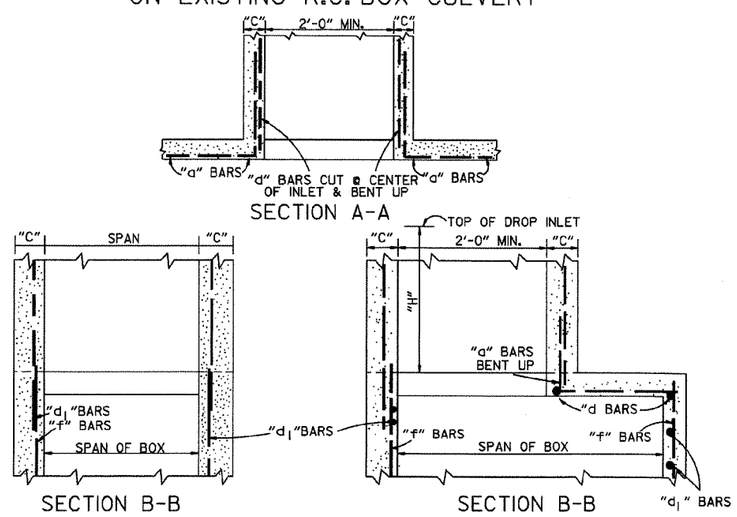
MULTIPLE C.M. PIPE CULVERTS

DATE	REVISION	FILMED	
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96	ARKANSAS STATE HIGHWAY COMMISION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	FLARED END SECTION
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	STANDARD DRAWING FES-2

stdfes2.dgn

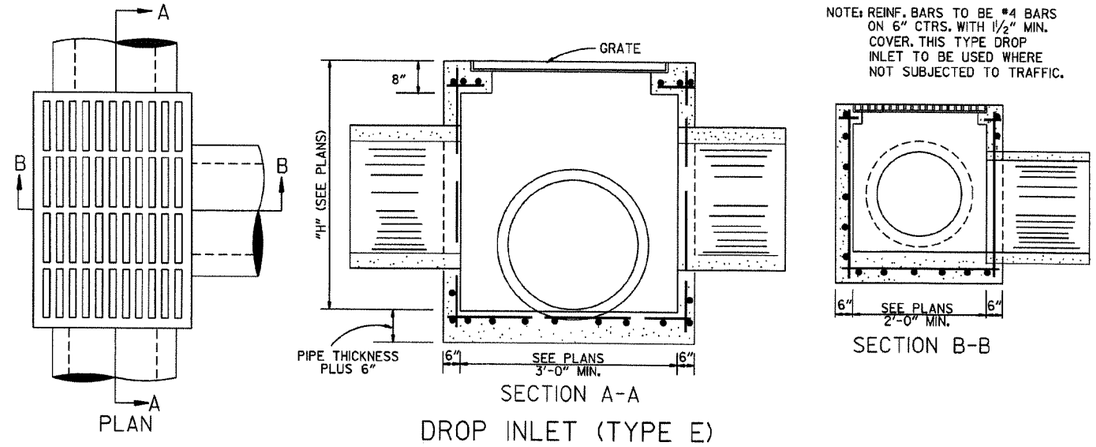


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT

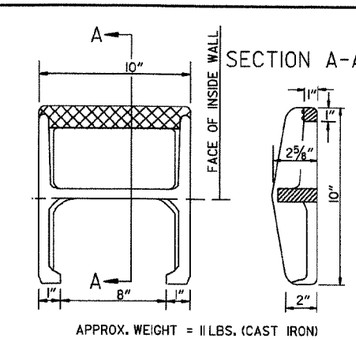


METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

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

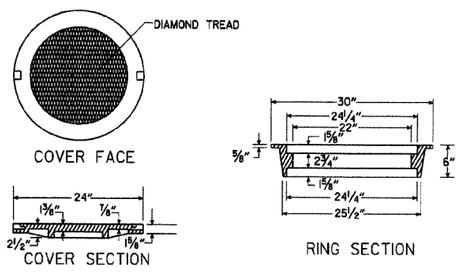


DROP INLET (TYPE E)



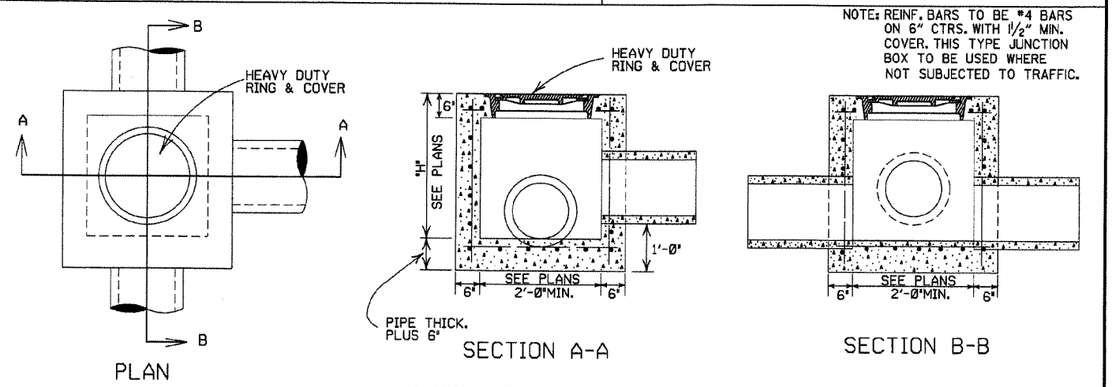
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

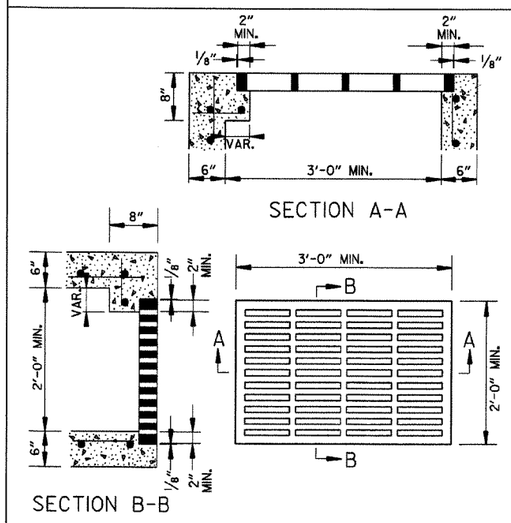


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

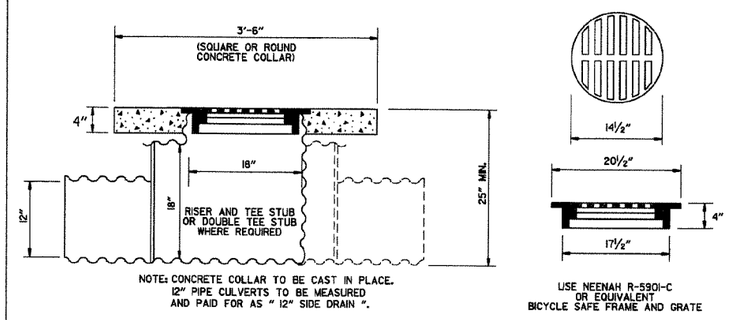


JUNCTION BOX (TYPE E)



APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET



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	

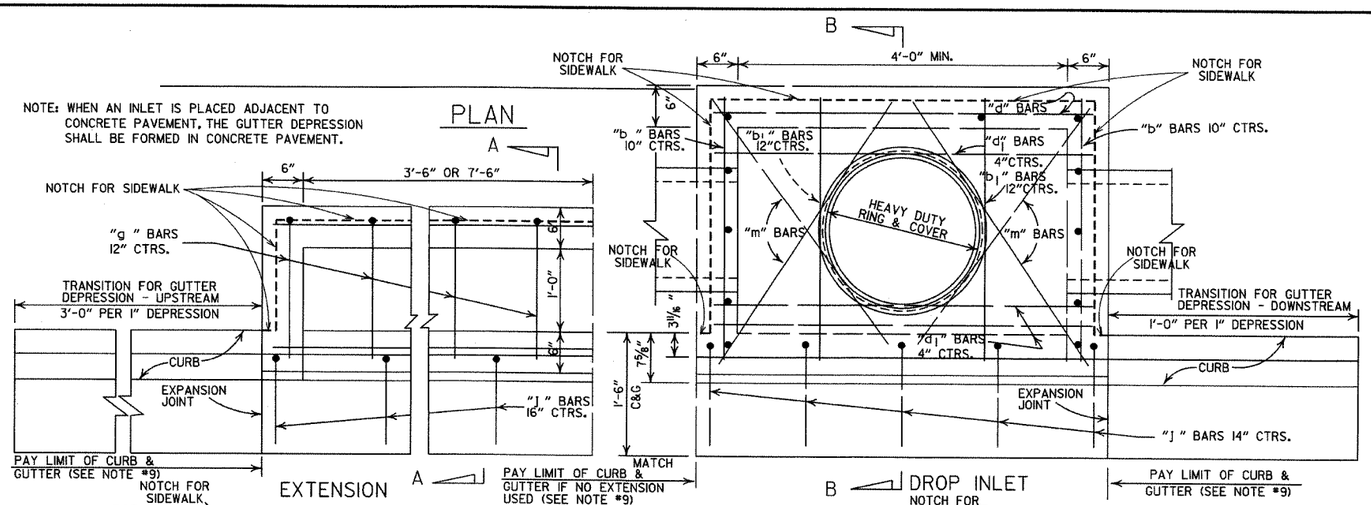
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9

186

NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.



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

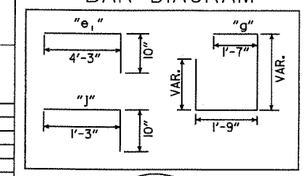
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

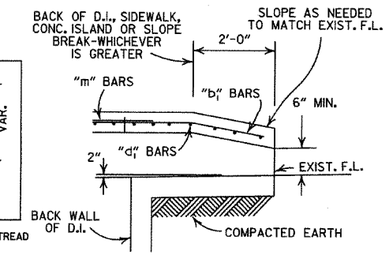
DROP INLET EXTENSION

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

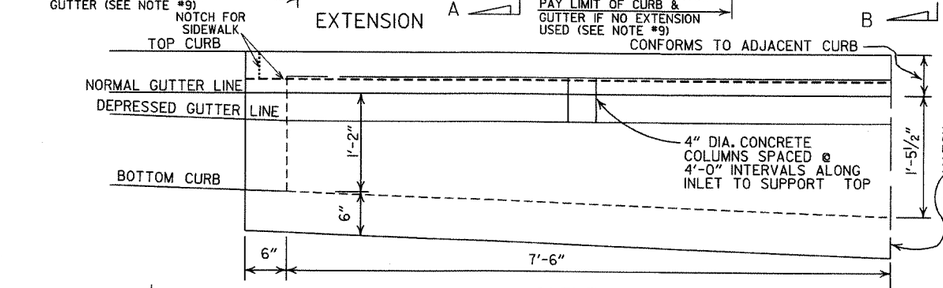
BAR DIAGRAM



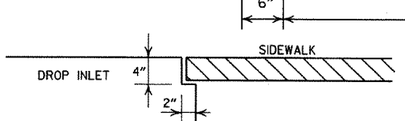


BACK OPENING

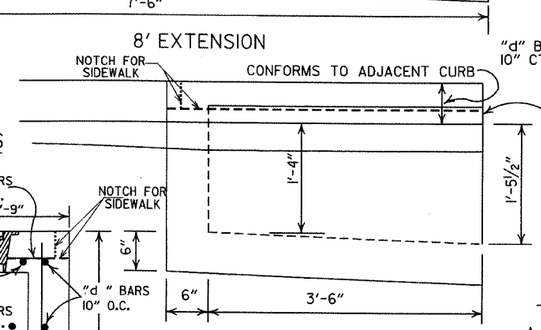
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).

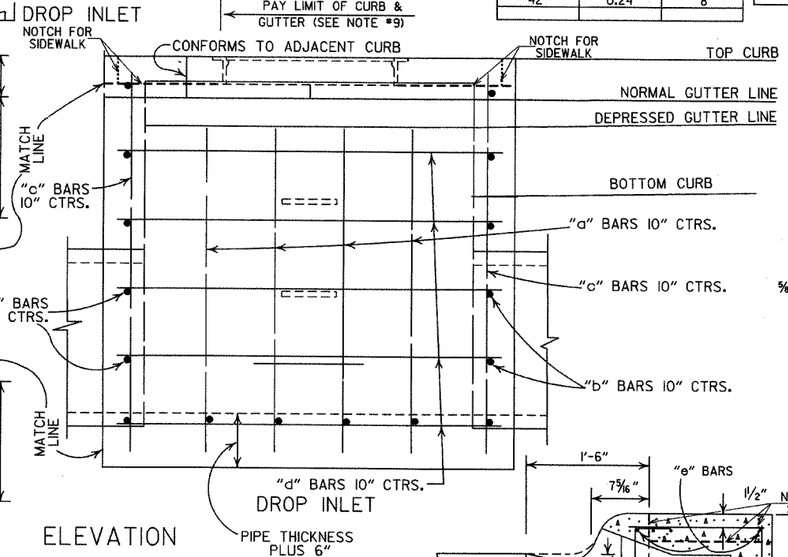


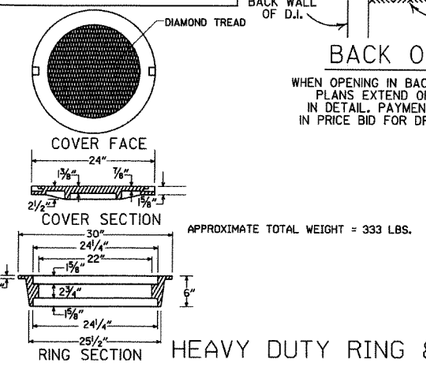
EXTENSION



DETAIL OF NOTCH FOR SIDEWALKS



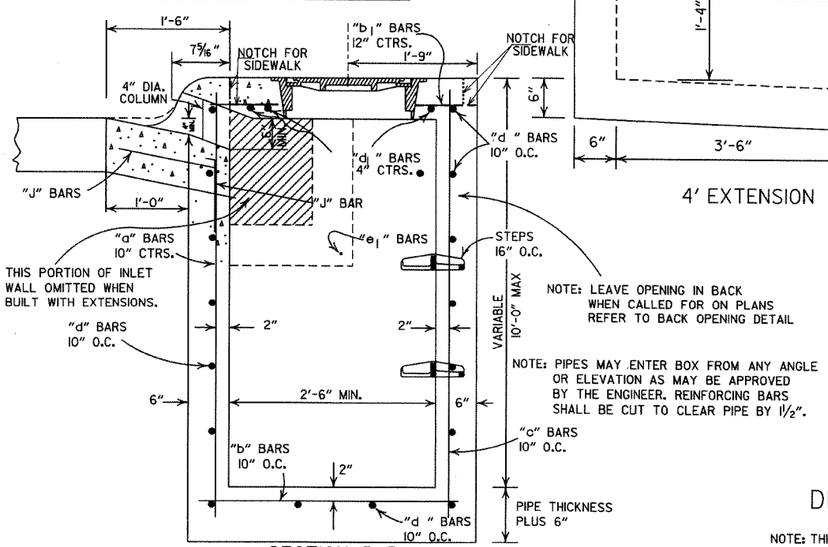




HEAVY DUTY RING & COVER

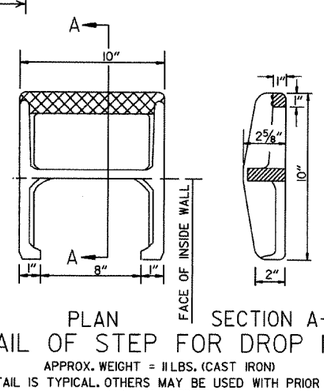
GENERAL NOTES:

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.



NOTE: LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

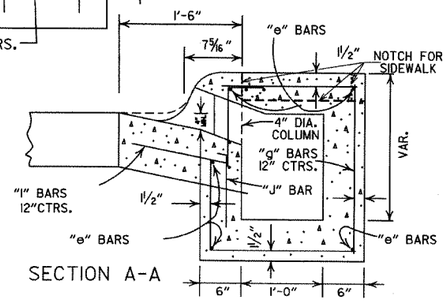
NOTE: PIPES MAY ENTER BOX FROM ANY ANGLE OR ELEVATION AS MAY BE APPROVED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 1½".



DETAIL OF STEP FOR DROP INLET

APPROX. WEIGHT = 11 LBS. (CAST IRON)

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



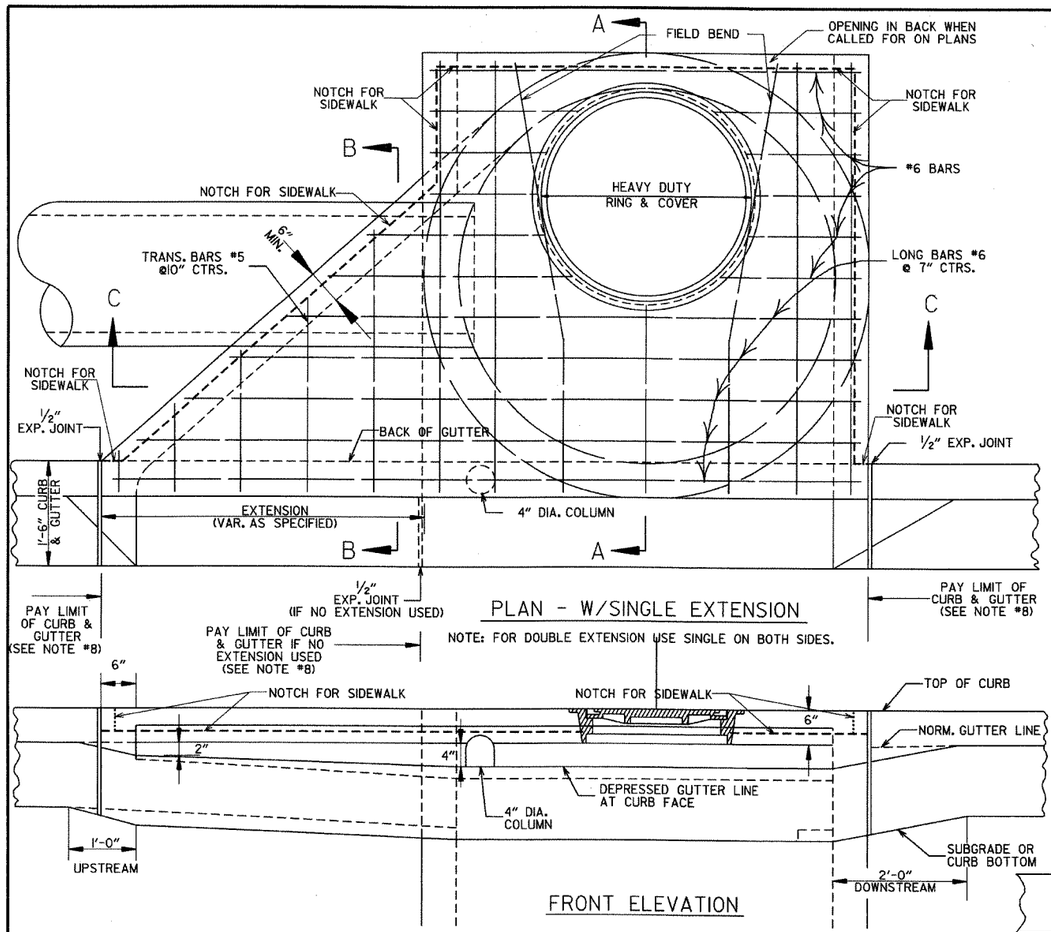
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER 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)

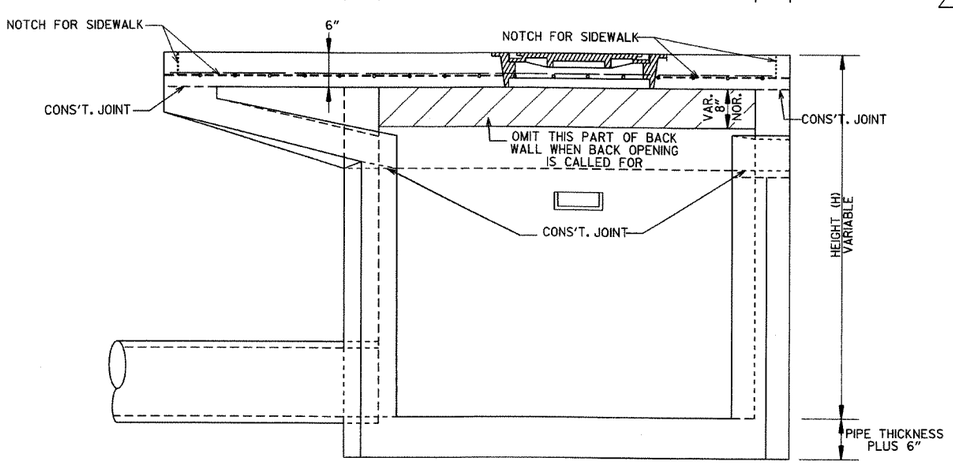
STANDARD DRAWING FPC-9E



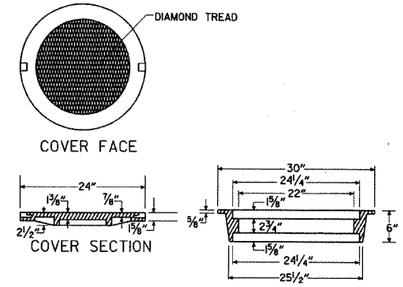
PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



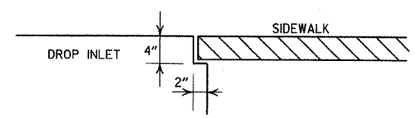
SECTION C-C



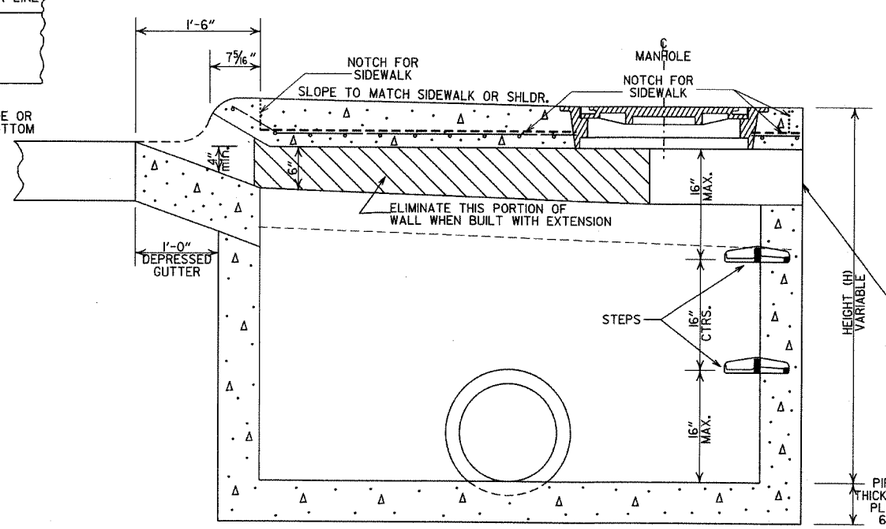
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

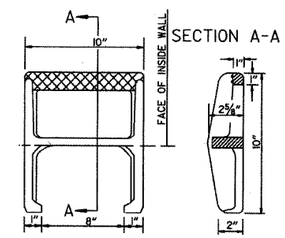
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON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



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A

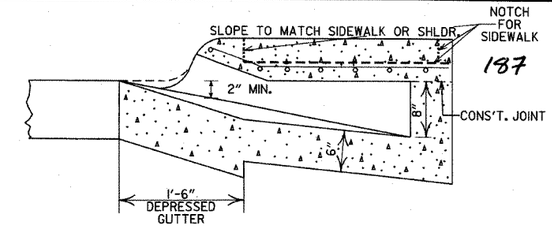


APPROX. WEIGHT = 11 LBS. (CAST IRON)

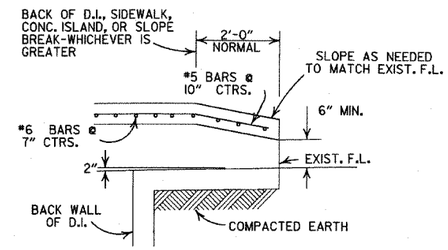
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



BACK OPENING

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

GENERAL NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" 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. 1 1/2" 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"×2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

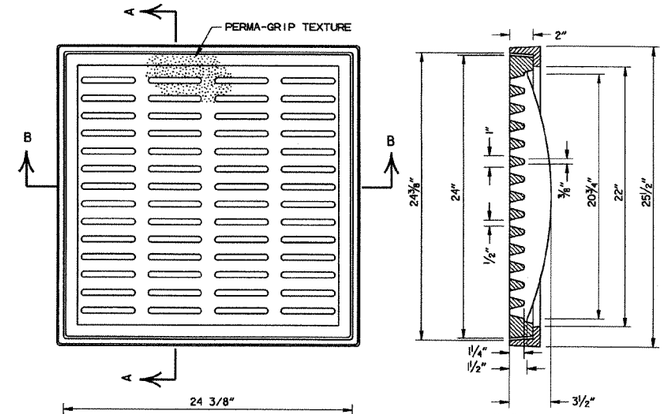
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-12-95	CORRECTED *6 BAR SPACING	
1-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE R TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 1,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
4-23-89	ADDED NOTE 8 & MINIMUM WALL THICKNESS	513-4-23-89
7-16-88	ADDED EXTEND NOTE TO SECTION A-A	633-7-16-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

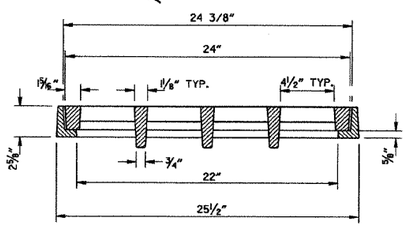
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M



SECTION A-A

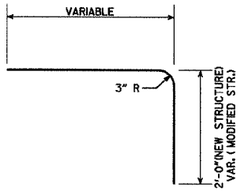


SECTION B-B

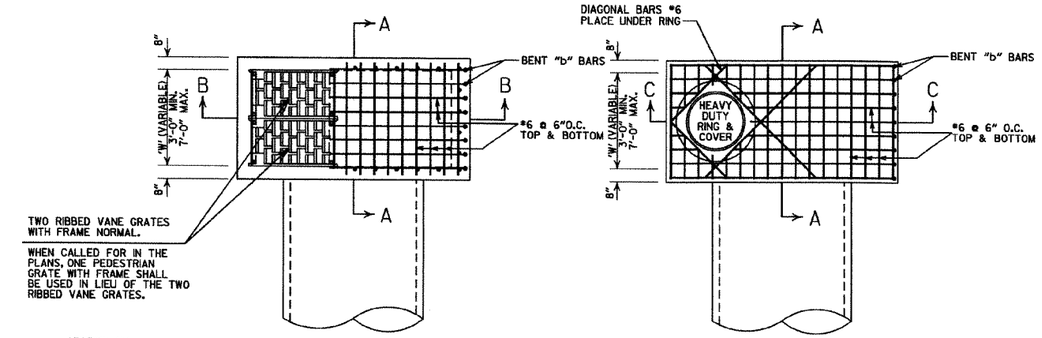
DETAILS OF PEDESTRIAN GRATE AND FRAME

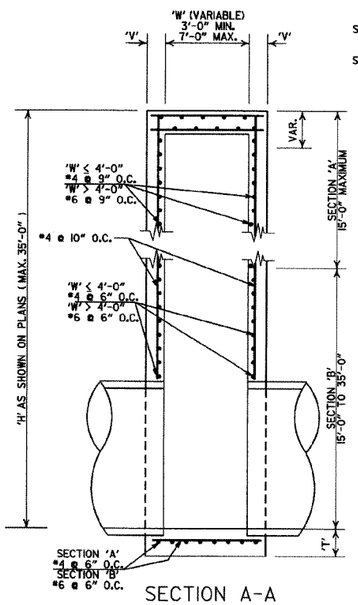
GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

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.



DETAIL OF BENT "b" BAR





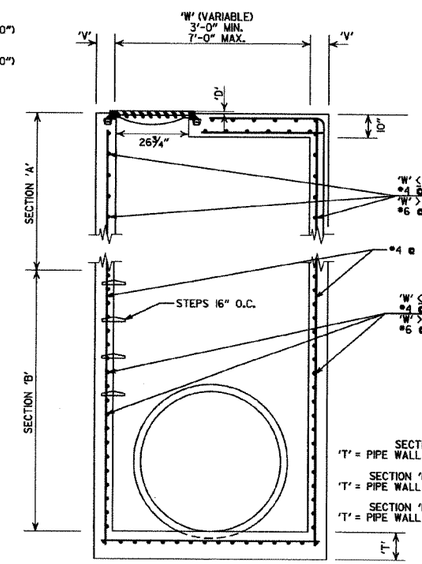
SECTION A-A

DETAILS OF DROP INLET
(TYPE ST)

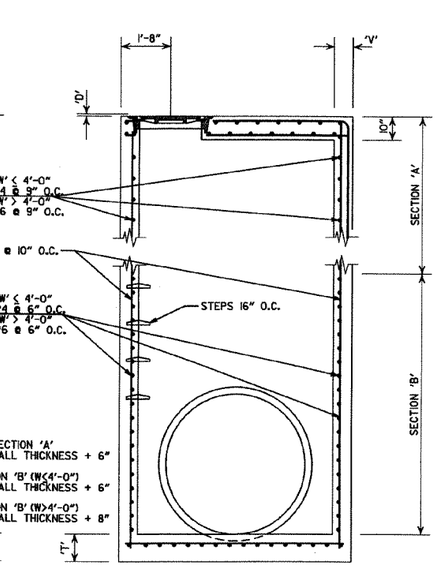
SECTION 'A'
'V' = 8"

SECTION 'B' (W≤4'-0")
'V' = 8"

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



SECTION B-B



SECTION 'A'
'T' = PIPE WALL THICKNESS + 6"

SECTION 'B' (W≤4'-0")
'T' = PIPE WALL THICKNESS + 6"

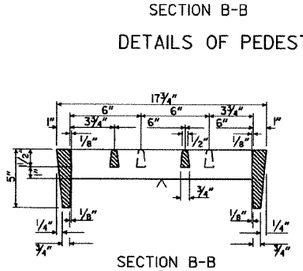
SECTION 'B' (W>4'-0")
'T' = PIPE WALL THICKNESS + 8"

SECTION C-C

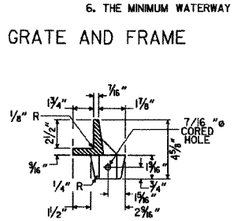
DETAILS OF JUNCTION BOX
(TYPE ST)

GENERAL NOTES (TYPE ST DROP INLET & JUNCTION BOX)

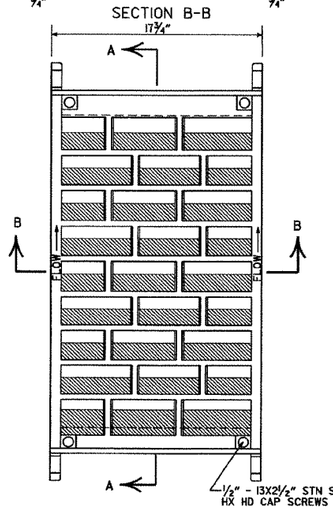
1. THE 'D' DIMENSION SHALL MATCH THE FINAL LIFT OF ACHM SURFACE COURSE SHOWN IN THE PLANS WHEN ASPHALT PAVING SURROUNDS THE GRATE OR RING COVER, AND SHALL BE 0" AT OTHER INSTALLATIONS.
2. THE STEPS SHALL BE OMITTED WHERE 'H' IS LESS THAN 4'-0".
3. ALL EXPOSED CORNERS ARE TO HAVE A ¾" CHAMFER.
4. ALL #4 & #5 REINFORCING BARS ARE TO HAVE A MIN. 1½" COVER. ALL LARGER SIZE BARS ARE TO HAVE A 2" MIN. COVER.



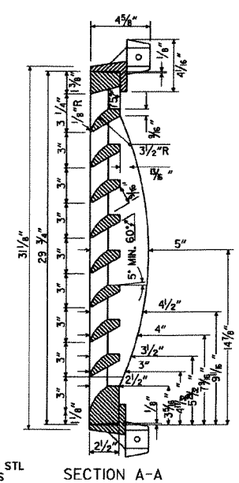
SECTION B-B



SECTION THRU FRAME



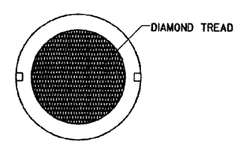
DETAILS OF RIBBED VANE GRATE AND FRAME



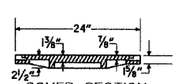
SECTION A-A

GENERAL NOTES (RIBBED VANE GRATE & FRAME)

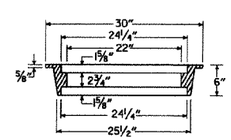
1. RIBBED VANE GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. GRATE AND FRAME SHALL NOT BE PAINTED.
3. GRATE AND FRAME SHALL BE INSTALLED IN DROP INLET IN ASSEMBLED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



COVER FACE



COVER SECTION



RING SECTION

HEAVY DUTY
RING & COVER

APPROXIMATE TOTAL WEIGHT = 333 LBS.

GENERAL NOTES (HEAVY DUTY RING & COVER):

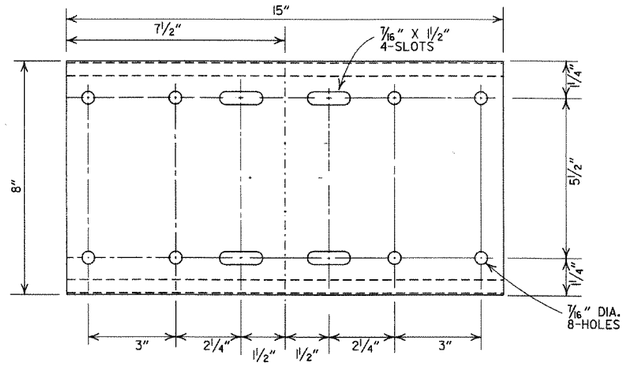
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE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

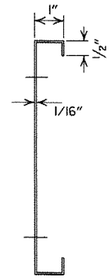
ARKANSAS STATE HIGHWAY COMMISSION

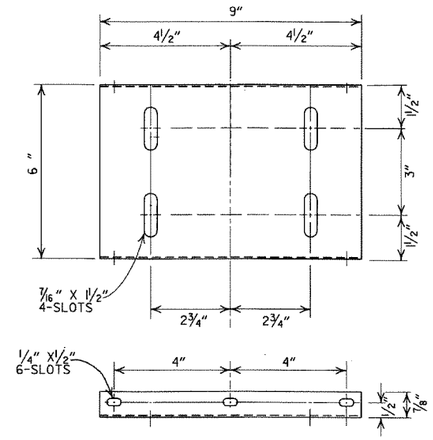
DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)

STANDARD DRAWING FPC-9S

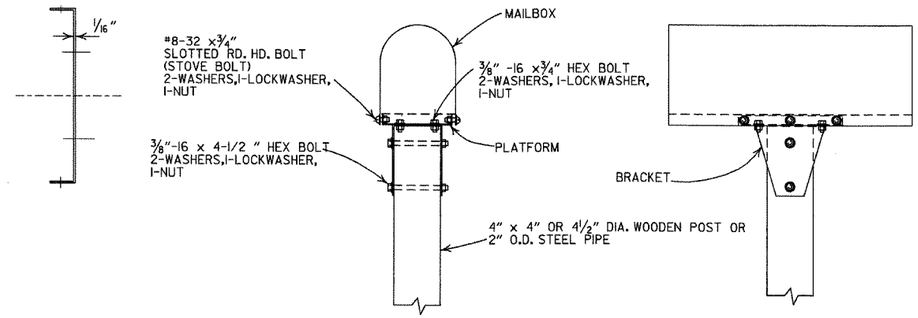


SHELF

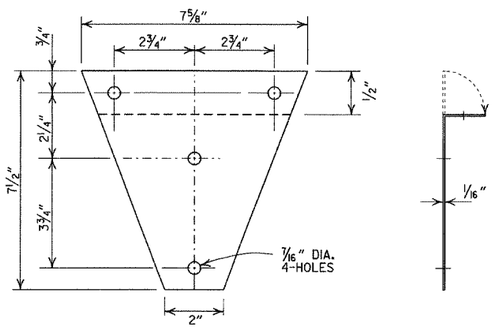




PLATFORM



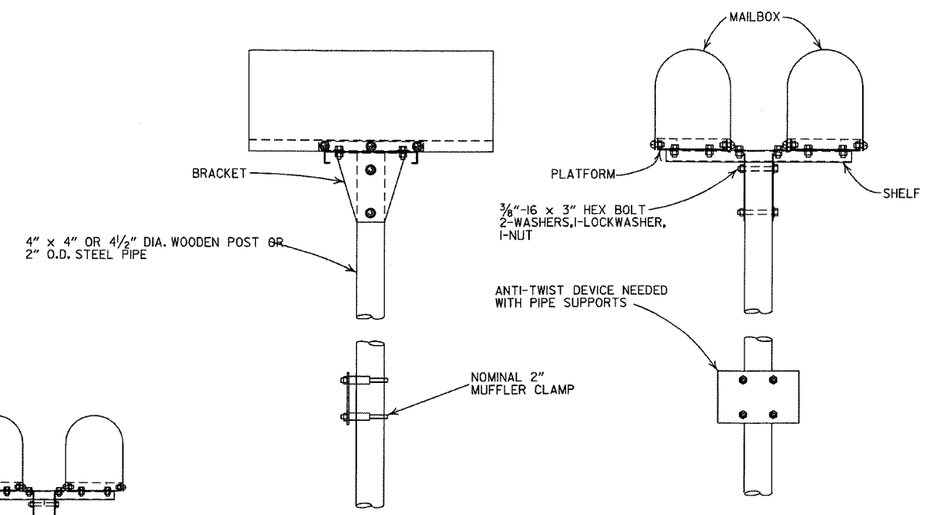
SINGLE INSTALLATION



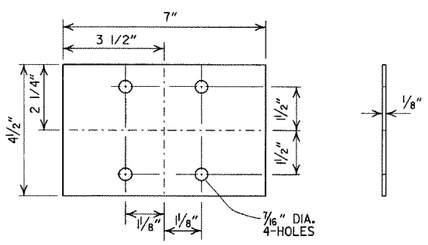
BRACKET

GENERAL NOTES

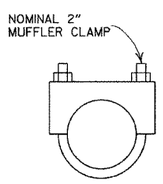
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF 3/4" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 3/4" FLATHEAD WOOD SCREWS USED TO ATTACH THE MAILBOX TO THE PLATFORM.
4. THE MAILBOX SHELF AND PLATFORM THAT IS SHOWN IS FOR STANDARD SIZE MAILBOXES. THE SHELF AND PLATFORM SIZE SHALL BE MODIFIED TO FIT MAILBOXES OF A DIFFERENT SIZE.
5. METAL PIPE FOR MAILBOX SUPPORT SHALL BE 2" OUTSIDE DIAMETER STEEL WITH A WALL THICKNESS OF 0.145" AND A WEIGHT OF 2.72 LBS PER FT. OUTSIDE DIAMETER AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO AASHTO M 181.
6. MAILBOX SUPPORT SYSTEM DIFFERING FROM THOSE SHOWN MAY BE USED, PROVIDED THEY ARE ON THE AHTD QUALIFIED PRODUCTS LIST FOR MAILBOX SUPPORTS.



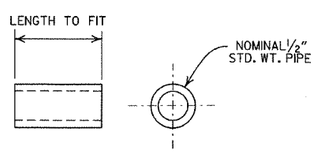
DOUBLE INSTALLATION



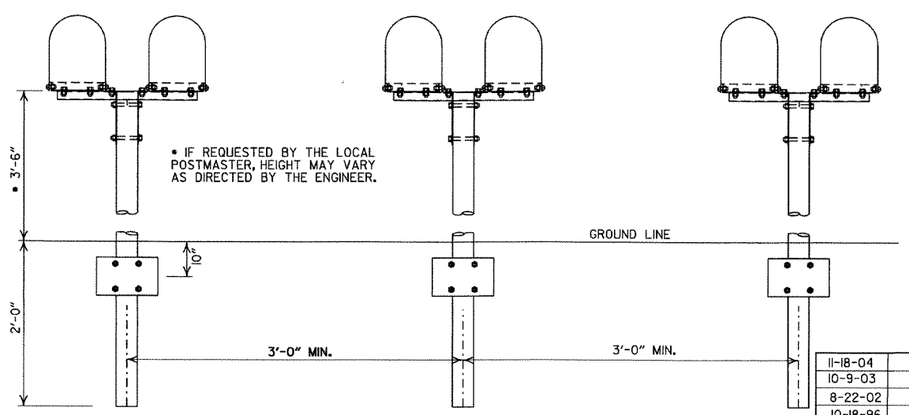
ANTI-TWIST PLATE



CLAMP



SPACER



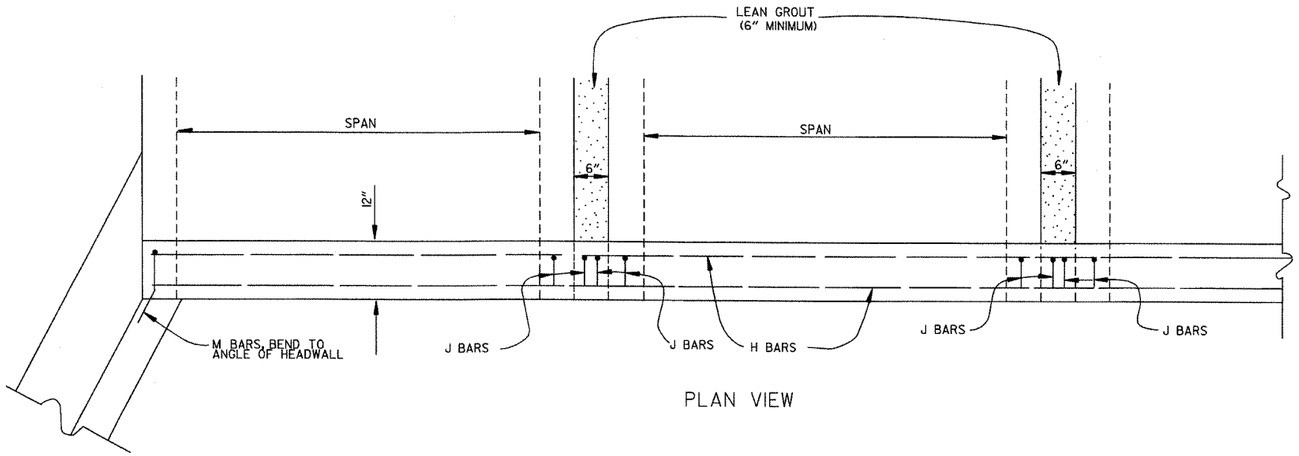
SPACING FOR MULTIPLE POST INSTALLATION

DATE	FILMED	REVISION
11-18-04		REVISED NOTES
10-9-03		REVISED NOTE 6
8-22-02		REVISED NOTE 6
10-18-96		CORRECTED AASHTO
10-1-92		CORRECTED SPELLING
9-26-91		NEW PHONE NUMBER
8-15-91		ADDED NOTE
11-30-89		ADJUSTED HEIGHT & ADDED NOTE
2-16-89		DELETED SLOTS FROM SHELF & PLTF
11-17-88	10-1-92	ADJUSTED DIMENSIONS OF STEEL POSTS
7-15-88	120-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

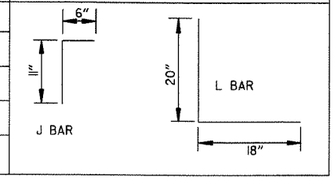
STANDARD DRAWING MB-1



PLAN VIEW

BAR LIST

BAR	NO.	SIZE	LENGTH	BAR BENDING DIAGRAM
H	2	#4	*	
I	*	#4	*	
J	*	#4	1'-5"	
L	*	#4	3'-2"	
M	*	#4	1'-8"	



* NOTE: LENGTH AND NUMBER OF BARS VARIES WITH SIZE OF CULVERT

GENERAL NOTES

WINGS, CURTAIN WALLS AND APRONS SHALL BE TIED TO THE PRECAST CULVERT SECTION BY CASTING BARS IN CULVERT END SECTIONS AS SHOWN OR BY DOWELING AND GROUTING. J BARS AND M BARS SHALL BE EMBEDDED A MINIMUM OF 10" IN PRECAST BOX.

WINGS, FOOTINGS, APRONS AND CURTAIN WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE STANDARD WING DRAWING. STEEL AND CONCRETE QUANTITIES WILL BE ADJUSTED TO FIT THE IN-PLACE WIDTH & HEIGHT OF THE PRECAST CONCRETE BOX CULVERTS.

ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFERS.

WINGWALLS AND FOOTINGS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

ALL CONCRETE, REINFORCING STEEL, LEAN GROUT, LABOR, MATERIALS AND EQUIPMENT REQUIRED FOR INSTALLING PRECAST BOX CULVERTS WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR THE ITEMS AS SPECIFIED IN SECTION 607 OF THE STANDARD SPECIFICATIONS.

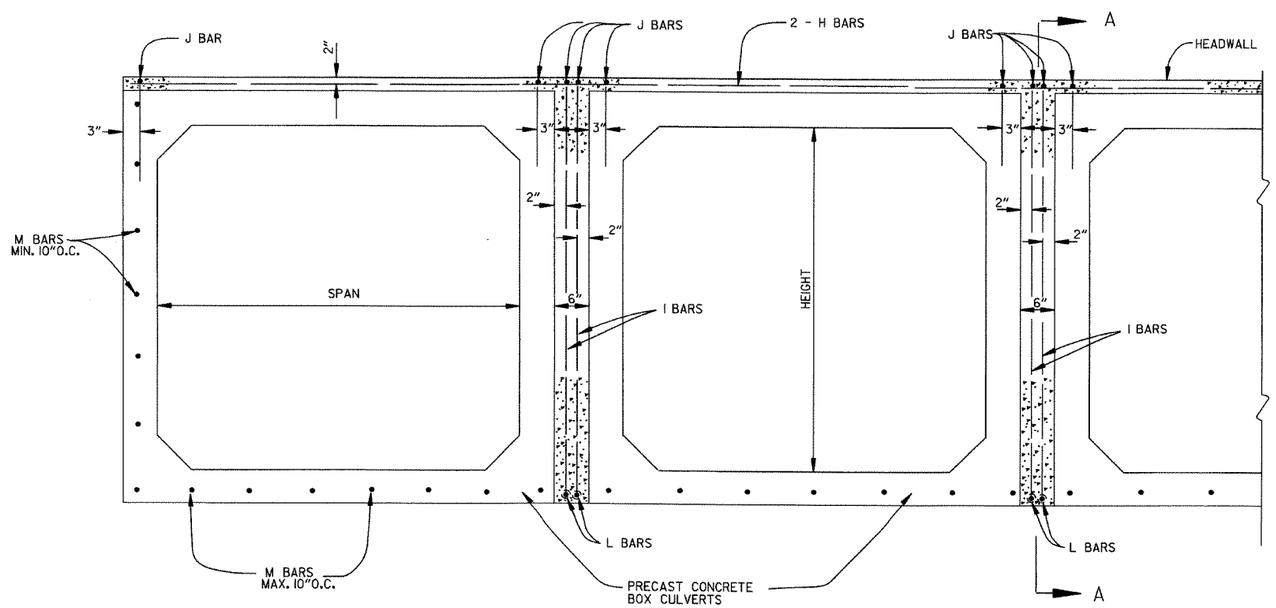
LEAN GROUT SHALL CONSIST OF A SAND CEMENT MIXTURE MEETING THE FOLLOWING REQUIREMENTS:
PORTLAND CEMENT SHALL BE TYPE I AND SHALL MEET THE REQUIREMENTS OF AASHTO M 85.
SAND SHALL MEET THE REQUIREMENTS OF FINE AGGREGATE AS SPECIFIED IN SECTION 802.02 OF THE STANDARD SPECIFICATIONS.
THE SAND CEMENT MIXTURE SHALL CONSIST OF NOT LESS THAN 1.5 SACKS OF PORTLAND CEMENT PER TON OF MATERIAL MIXTURE.
THE MIXTURE SHALL CONTAIN SUFFICIENT WATER TO HYDRATE THE CEMENTS. THE SAND CEMENT MIXTURE SHALL BE PLACED IN MAXIMUM 8 INCH THICK LIFTS, LOOSE MEASURE, AND THOROUGHLY RODDED AND TAMPED AROUND BOX TO THOROUGHLY FILL ALL VOIDS.

MEMBRANE WATERPROOFING CONFORMING TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS SHALL BE APPLIED TO ALL BOX CULVERT JOINTS.

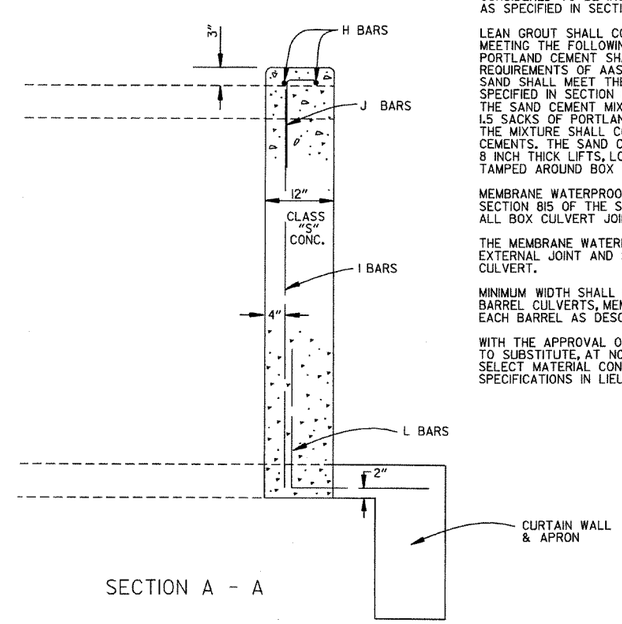
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

MINIMUM WIDTH SHALL BE 12" (6" ON EACH SIDE OF JOINT). ON MULTIPLE BARREL CULVERTS, MEMBRANE WATERPROOFING SHALL BE APPLIED TO EACH BARREL AS DESCRIBED ABOVE.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, FLOWABLE SELECT MATERIAL CONFORMING TO SECTION 206 OF THE STANDARD SPECIFICATIONS IN LIEU OF LEAN GROUT.



END VIEW



SECTION A - A

DATE	REVISION	DATE FILMED
10-15-09	ADDED GENERAL NOTE	
11-10-05	REVISED SPACING OF "M" BARS	
4-10-03	REVISED GENERAL NOTES	
10-18-96	CORRECTED AASHTO REF.	
10-1-92	ADDED NOTE FOR MEMBRANE WATERPROOFING	
8-15-91	ADDED NOTE FOR LEAN GROUT	
11- 8-90	REVISED FOR 1991 SPECS	
11-30-89	ISSUED; JABE	

ARKANSAS STATE HIGHWAY COMMISSION

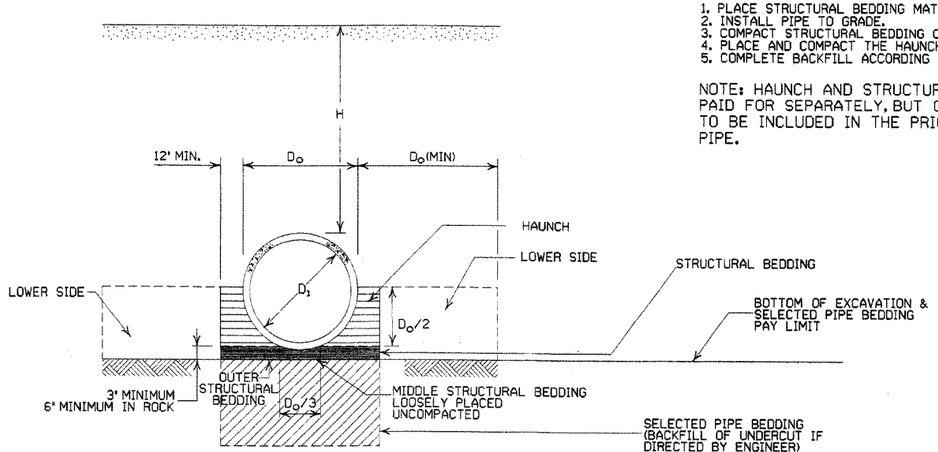
PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

CONSTRUCTION SEQUENCE

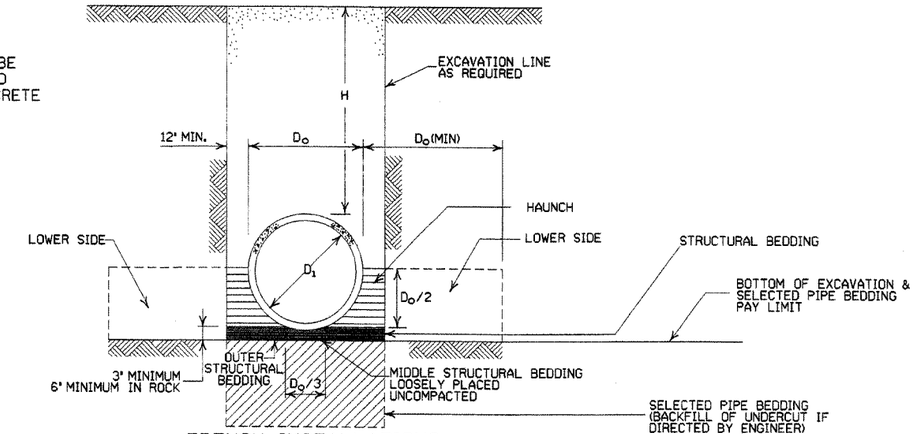
1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SPECIFICATIONS.

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.



EMBANKMENT INSTALLATIONS

1. MATERIAL IN THE LOWER SIDE, HAUNCH, AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.



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.

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	•SPAN		• RISE	
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD 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	43¾	44	26⅝	27
42	51⅛	51	31 7/16	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77¼	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 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.

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-3) OR TYPE 1 INSTALLATION MATERIAL
TYPE 3	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

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

MAXIMUM HEIGHT OF FILL OVER R.C. PIPE CULVERTS

INSTALLATION TYPE	CLASS OF PIPE		
	CLASS III	CLASS IV	CLASS V
	FEET		
TYPE 1	21	32	50
TYPE 2	17	27	41
TYPE 3	13	20	32

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

GENERAL NOTES

1. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
2. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
4. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE.
5. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
6. 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.
7. 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.
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 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.'

- LEGEND -

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

DATE	REVISION	DATE FILMED
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) H-20 LOADING

PIPE DIAMETER (INCHES)	MINUMUM COVER TOP OF PIPE TO TOP OF SUBGRADE (INCHES)	MAX. FILL HEIGHT ABOVE TOP OF PIPE (FEET)							
		METAL THICKNESS IN INCHES							
		0.064	0.079	0.109		0.138		0.168	
				ROUND	ELONG.	ROUND	ELONG.	ROUND	ELONG.
		2⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL							
12	12	84	91						
15	12	67	73						
18	12	56	61						
24	12	42	46	59					
30	12	34	36	47					
36*	12		30	39		41			
42*	12		43	46	67	48	70	50	73
48*	12		37	45	58	46	61	47	64
		3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION** RIVETED, WELDED, HELICAL, OR BOLTED							
36	12	48	60	78	88	89	111	101	131
42	12	41	51	64	72	71	90	79	102
48	12	36	45	57	64	61	77	66	85
54	12	32	40	52	59	55	71	59	79
60*	12	29	36	49	53	51	64	54	71
66	12	26	33	47		49	58	51	64
72*	12	24	30	44		47	53	49	59
78	12		28	41		46	49	47	54
84*	12		26	38		45		46	51
90	12		24	35		43		45	
96*	12		22	33		40		44	
102	24			31		38		42	
108*	24			30		35		39	
114	24			28		34		37	
120*	24			27		32		35	

* MAX. FILL CAN BE INCREASED IN THESE DIAMETER PIPES BY USING THE NEXT LARGER CORRUGATION. REFER TO 'CORRUGATED METAL PIPE', REVISED 1970, PUBLISHED BY U.S. DEPARTMENT OF TRANSPORTATION, F.H.W.A., B.P.R.

** WHERE THE STANDARD 2 ⅔" x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER A 3" x 1" OR 5" x 1" CORRUGATION PIPE OF THE SAME DIAMETER 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 GAGE AND CORRUGATION

CORRUGATED ALUMINUM PIPE (ROUND) H-20 LOADING

PIPE DIAMETER (INCHES)	MINUMUM COVER TOP OF PIPE TO TOP OF SUBGRADE (INCHES)	MAX. FILL HEIGHT 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				
12	12	45	45			
18	12	30	30	52		
24	12	22	22	39	41	
30	12	18	18	31	32	34
36	12		15	26	27	28
42	12		26	43	43	44
48	12			40	41	43
54	12			35	37	38
60	12				33	34
66	12				30	31
72	12					29

EQUIVALENT METAL THICKNESSES AND GAUGES

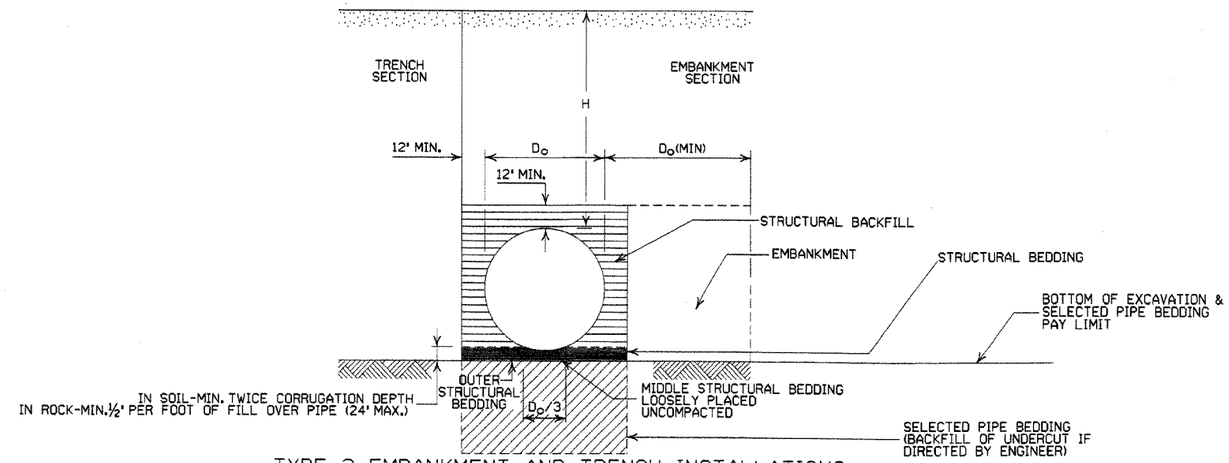
METAL THICKNESS IN INCHES			GAUGE NUMBER
STEEL			
ZINC COATED	UNCOATED	ALUMINUM	
0.064	0.0598	0.060	16
0.079	0.0747	0.075	14
0.109	0.1046	0.105	12
0.138	0.1345	0.135	10
0.168	0.1644	0.164	8
0.188	0.1838		7
0.218	0.2145		5
0.249	0.2451		3
0.280	0.2758		1

CORRUGATED METAL PIPE ARCHES (H - 20 LOADING)

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	MIN. COVER TOP OF PIPE TO TOP OF SUBGRADE FOR 2 TONS PER SQ. FT. (INCHES)	STEEL: MINIMUM THICKNESS REQUIRED INCHES	STEEL: MAX. FILL HEIGHT ABOVE TOP OF PIPE (IN FT.) FOR THE FOLLOWING CORNER BEARING PRESSURE IN TONS PER SQ. FT. 2 TONS	STEEL: 3 TONS[1]	ALUMINUM: MINIMUM THICKNESS REQUIRED INCHES	ALUMINUM: MAX. FILL HEIGHTS ABOVE TOP OF PIPE (IN FT.) FOR THE FOLLOWING CORNER BEARING PRESSURE IN TONS PER SQ. FT. 2 TONS	ALUMINUM: 3 TONS[1]
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL				2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL		
15	17x13	3	12	0.064	13	15+	0.060	15	
18	21x15	3	12	0.064	12	15+	0.060	14	
21	24x18	3	12	0.064	10	15+	0.060	12	15+
24	28x20	3	12	0.064	10	15	0.060	10	15+
30	35x24	3	12	0.079	9	14	0.075	9	14
36	42x29	3½	12	0.079	9	13	0.075	9	13
42	49x33	4	12	0.079	8	12	0.105	8	12
48	57x38	5	12	0.109	8	12	0.135	8	12
54	64x43	6	12	0.109	8	12	0.135	8	12
60	71x47	7	12	0.138	8	12	0.164	8	12
66	77x52	8	12	0.168	8	12	0.164	8	12
72	83x57	9	12	0.168	9	13			
			3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION** RIVETED, WELDED, OR HELICAL						
36	40x31	5	12	0.079	15	15+			
42	46x36	6	12	0.079	15	15+			
48	53x41	7	12	0.079	15	15+			
54	60x46	8	12	0.079	15	15+			
60	66x51	9	12	0.079	15	15+			
66	73x55	12	12	0.079	15	15+			
72	81x59	14	18	0.079	15	15+			
78	87x63	14	18	0.079	14	15+			
84	95x67	16	18	0.109	13	15+			
90	103x71	16	24	0.109	12	15+			
96	112x75	18	24	0.109	11	15+			
102	117x79	18	24	0.109	10	15			
108	128x83	18	24	0.138	9	14			

1 WHERE BEARING PRESSURE EXCEEDING 2 TONS PER SQUARE FOOT IS REQUIRED FOR GIVEN FILL HEIGHTS, THE FOUNDATION MATERIAL SHALL BE INVESTIGATED TO DETERMINE THE BEARING CAPACITY.

** WHERE THE STANDARD 2 ⅔" x ½" CORRUGATION AND GAUGE IS SPECIFIED FOR A GIVEN DIAMETER, A 3" x 1" OR 5" x 1" CORRUGATION PIPE OF THE SAME DIAMETER 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.



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. 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.

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	*SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-3)

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

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.

GENERAL NOTES

1. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
2. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
4. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE.
5. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
6. 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.
7. 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.'
8. 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.'

- LEGEND -

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

DATE	REVISION	DATE FILMED
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

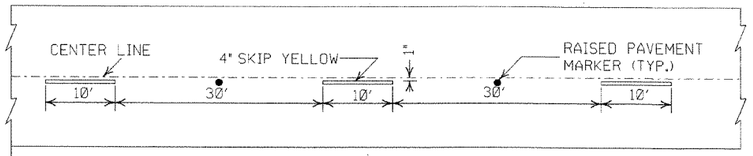
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

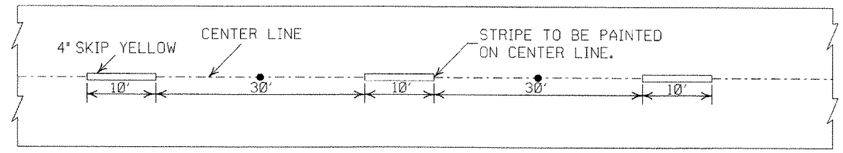
STANDARD DRAWING PCM-1

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.

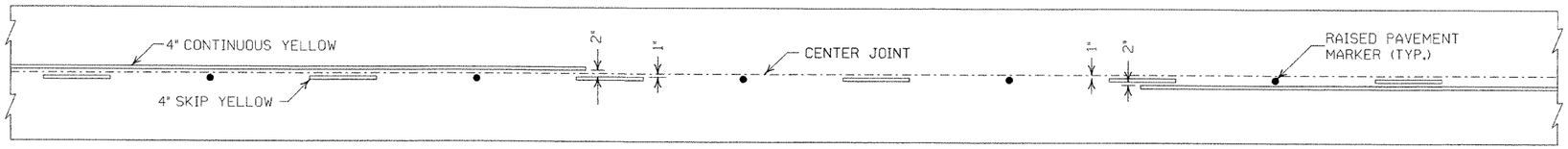


CONCRETE PAVEMENT

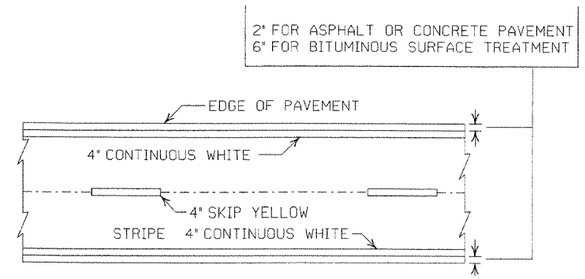


ASPHALT PAVEMENT

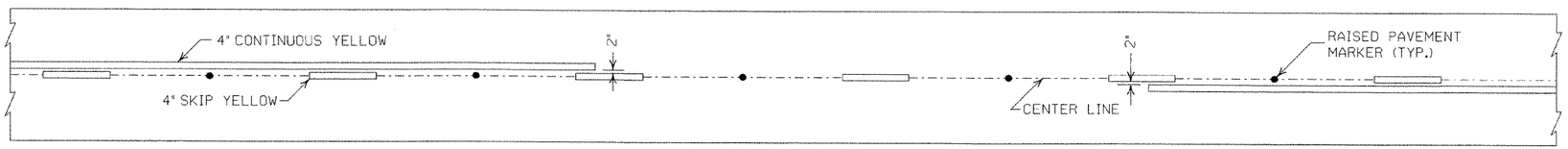
BROKEN LINE STRIPING



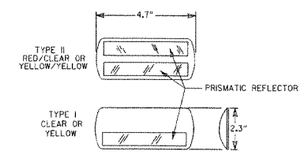
SOLID LINE STRIPING ON CONCRETE PAVEMENT



PAVEMENT EDGE LINE MARKING

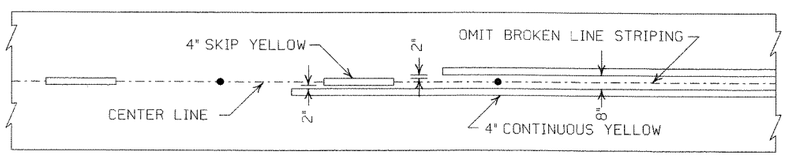


SOLID LINE STRIPING ON ASPHALT PAVEMENT

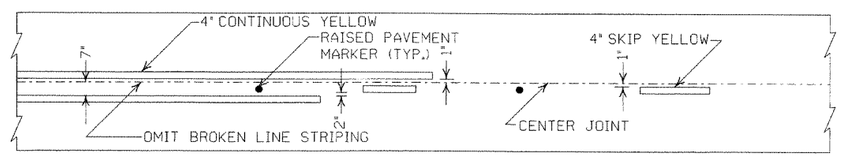


NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS



ASPHALT PAVEMENT



CONCRETE PAVEMENT

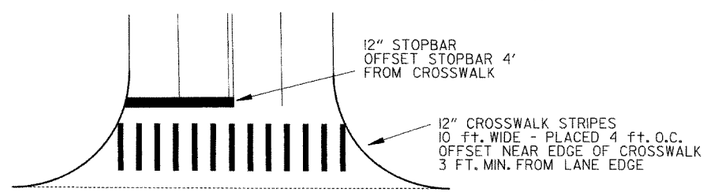
STRIPING AT ADJACENT NO PASSING LANES

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.



CROSSWALK AND STOPBAR DETAILS

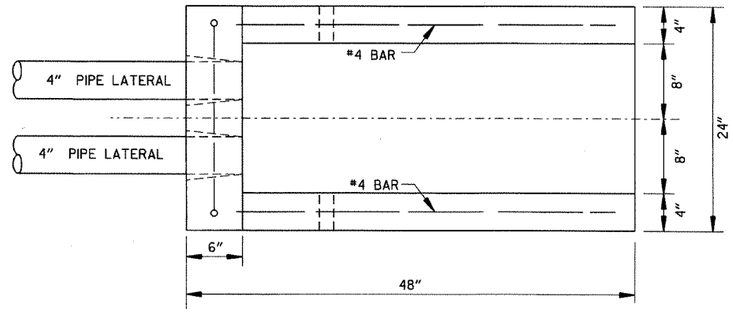
DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

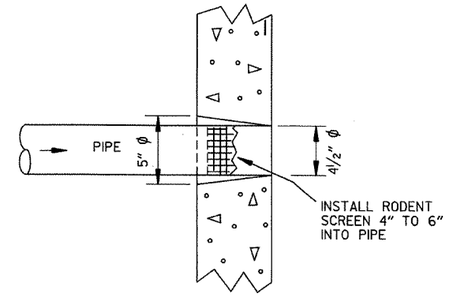
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

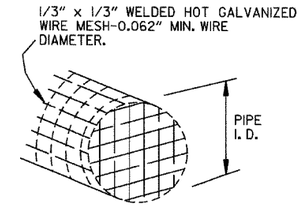
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



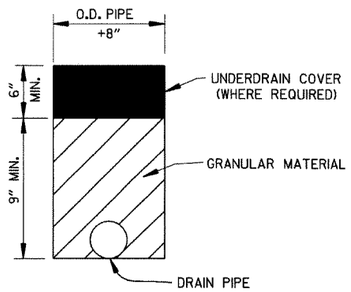
PLAN VIEW

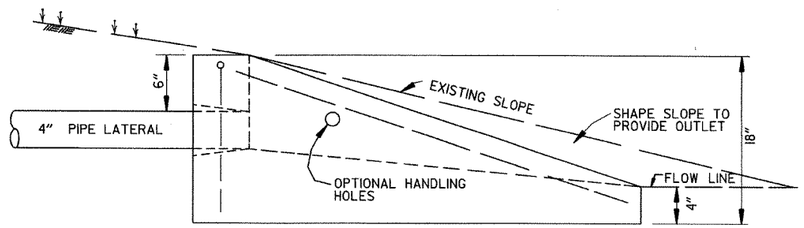


DETAIL OF HOLE FOR 4" PIPE

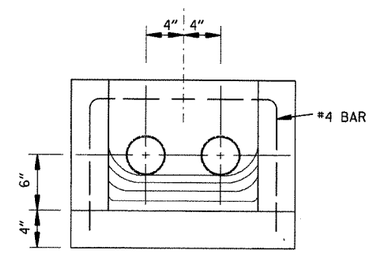


DETAIL OF RODENT SCREEN

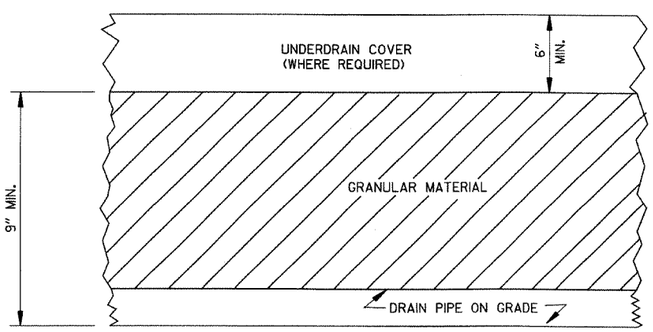




SIDE VIEW

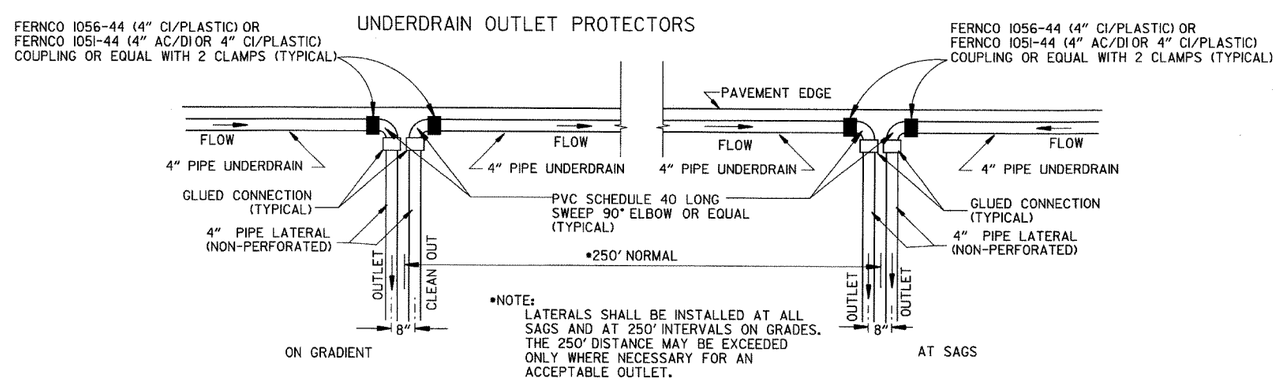


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



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

DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

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

DATE	REVISION	DATE FILMED
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; 5 1/2" 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

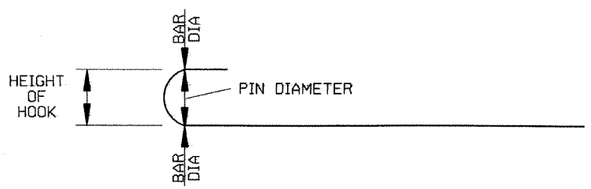
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

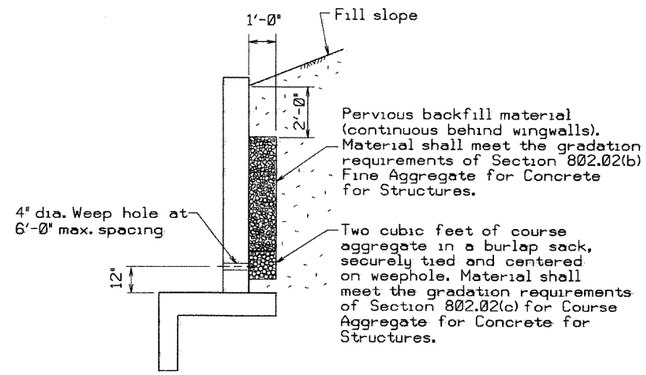
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL DRAINAGE DETAIL

REINFORCED CONCRETE BOX CULVERT GENERAL NOTES

CONCRETE SHALL BE CLASS S WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3500 PSI.

REINFORCING STEEL SHALL BE AASHTO M 31 OR M 53, GRADE 60.

CONSTRUCTION AND MATERIALS FOR WINGWALL DRAINAGE, INCLUDING WEEP HOLES AND GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BID ITEM, "CLASS S CONCRETE".

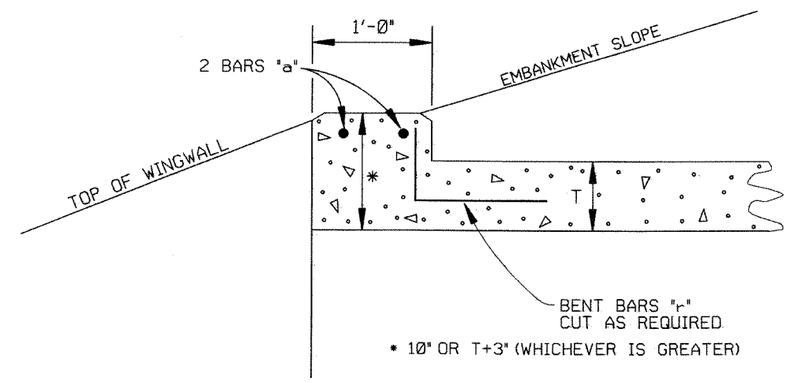
MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION 815 OF THE STANDARD SPECIFICATIONS.

MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CRSI) EXCEPT THAT THE TOLERANCE FOR TRUSS BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CRSI MANUAL SHALL BE MINUS ZERO TO PLUS ½ INCH.

WEEP HOLES IN WINGWALLS: THE MAXIMUM HORIZONTAL SPACING OF WEEP HOLES IN WINGWALLS SHALL BE 6'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND PLACED 12" ABOVE TOP OF WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



* 10" OR T+3" (WHICHEVER IS GREATER)

NOTE: FOR ALL SKEWED R.C. BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "RL". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

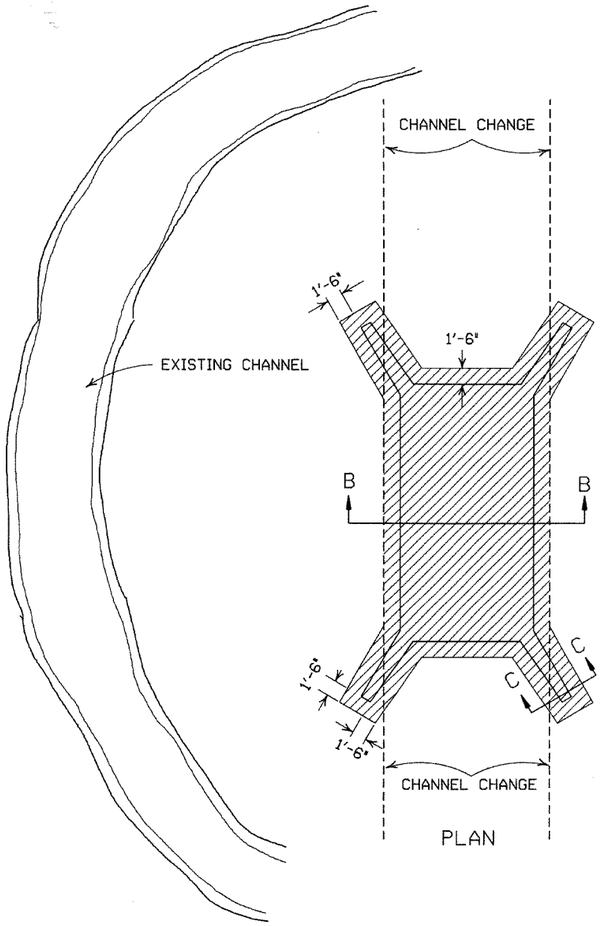
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
05-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
8-16-01	ADDED WINGWALL DRAINAGE DETAIL/EDITED GEN. NOTES	
10-18-96	REV. ASTM REF. TO AASHTO & ADDED BAR DIAGRAM	
10-12-95	MOVED SOLID SODDING DETAIL TO RCB-2	
6-2-94	ADDED SOLID SODDING PLAN DETAIL	
8-5-93	REVISED PIN DIAMETER TO SPECS.	
8-15-91	DRAWN AND ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

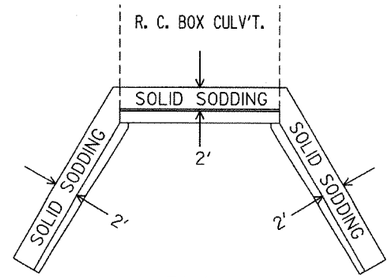
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

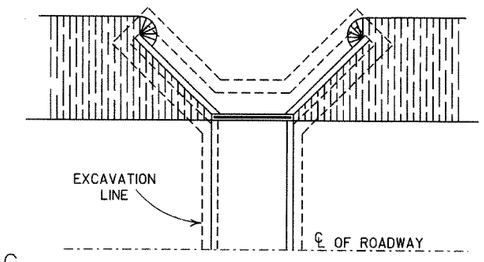
SOLID SODDING



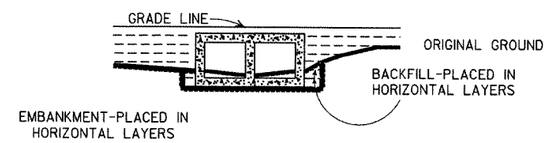
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

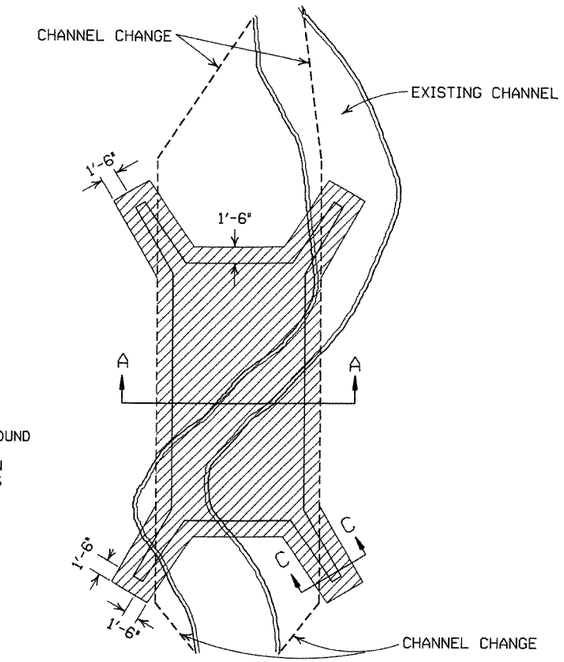


PLAN

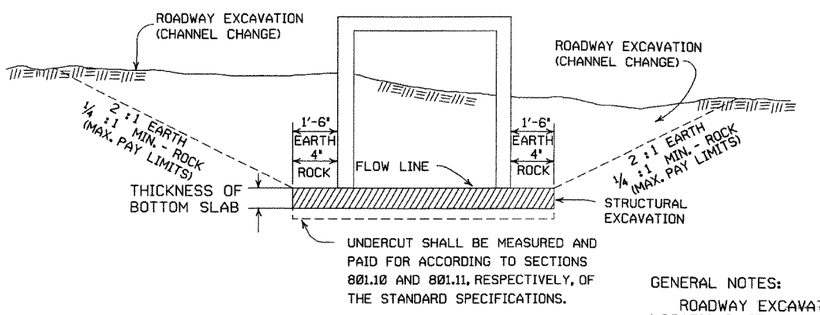


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

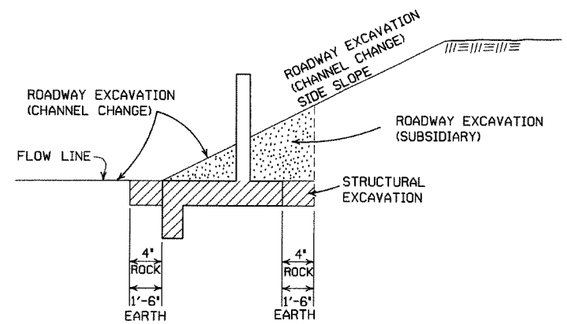


PLAN

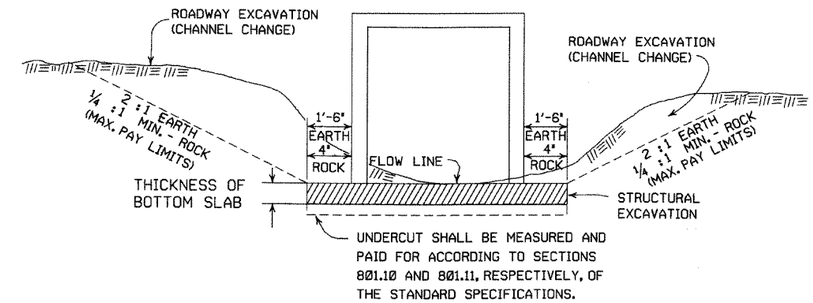


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

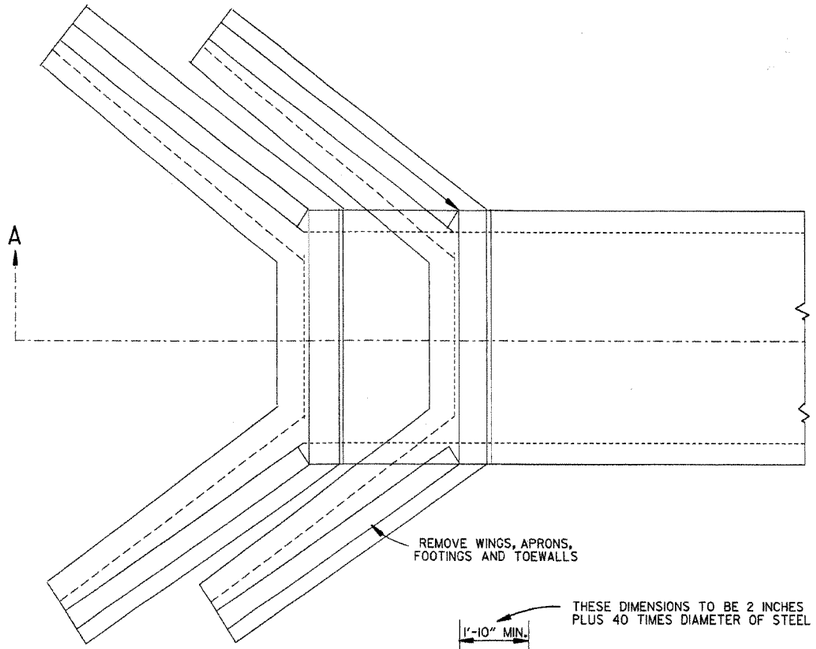
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES AND ADDED MAXIMUM PAY LIMIT NOTES.	674-1-4-83
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

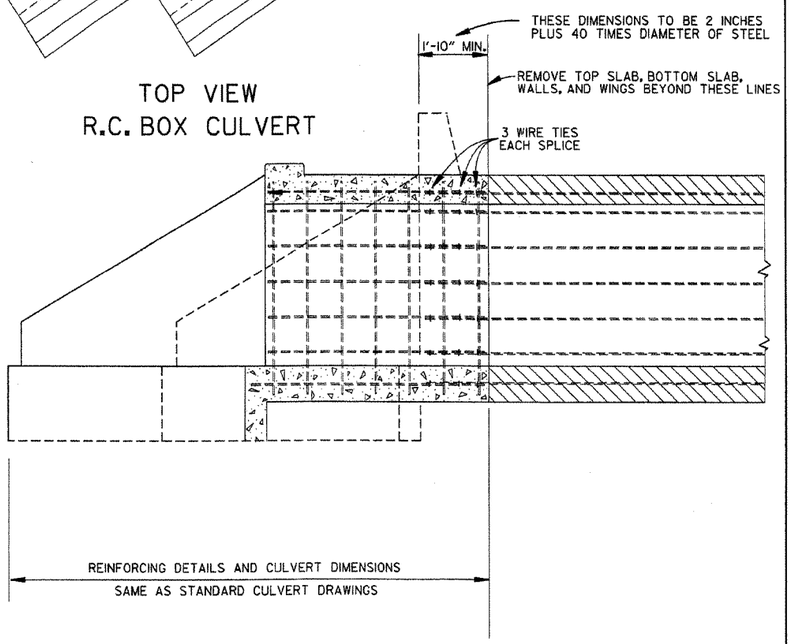
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

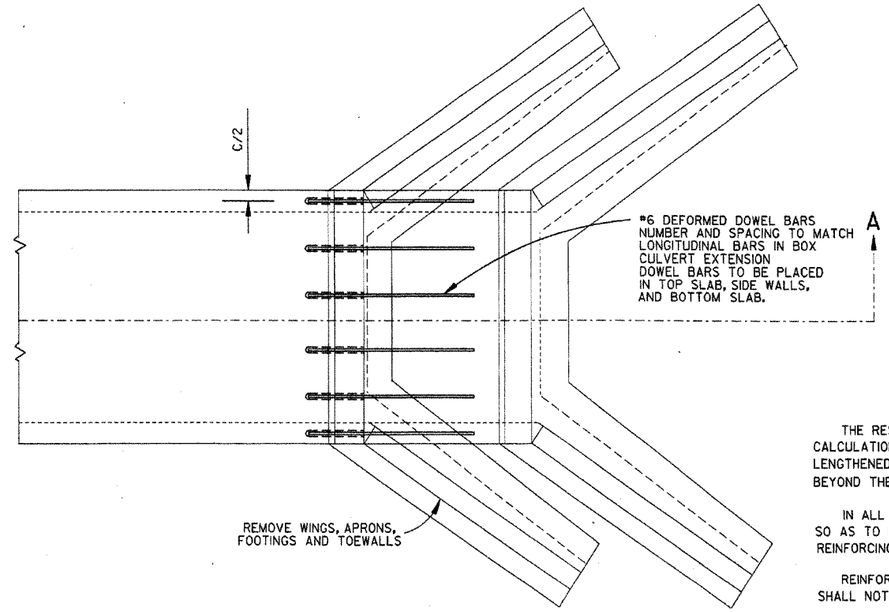


TOP VIEW
R.C. BOX CULVERT

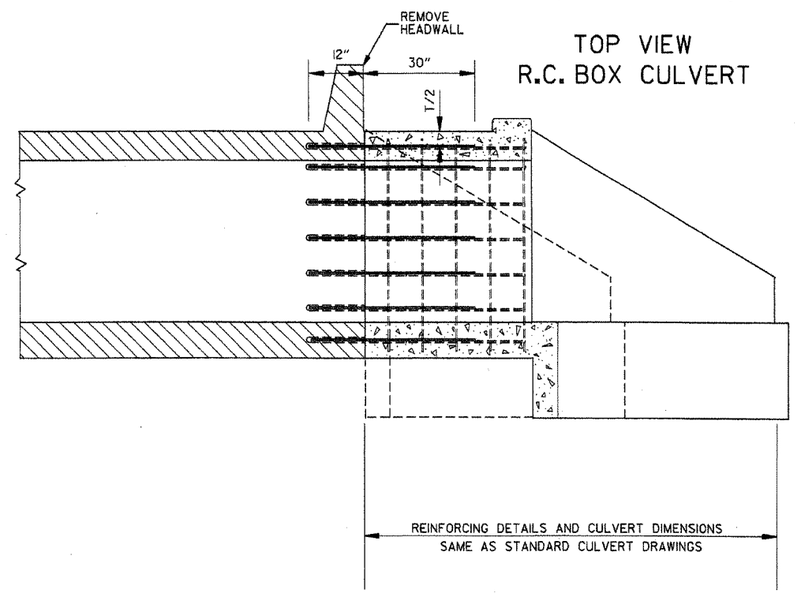


SECTION A-A

METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A

METHOD 2

GENERAL NOTES

	USE FOR METHOD
THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.	1
IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.	1
REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.	1&2
ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.	1&2
MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.	2
DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER. AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.	2
THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2. REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.	1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

DATE	REVISION	DATE FILM
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

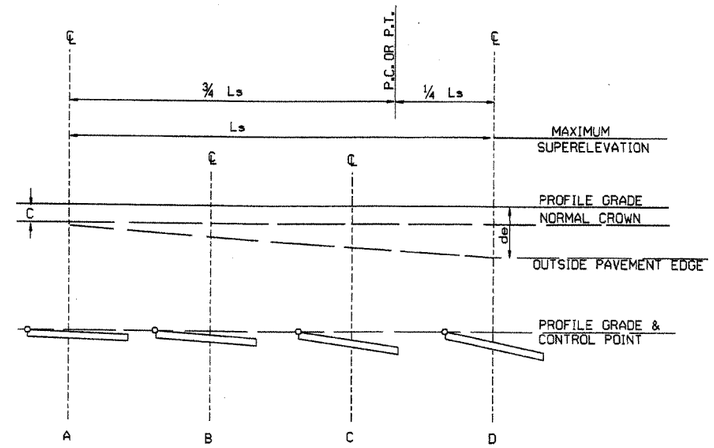
ARKANSAS STATE HIGHWAY COMMISSION

METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

SUPERELEVATION TABLE FOR ONE - 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	65 MPH e	65 MPH Ls (FT) MINIMUM	65 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N.C.	150	250	N.C.	175	250	N.C.	200	300	N.C.	225	350	N.C.	250	350	N.C.	250	350	N.C.	275	350
0° 30′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45′	N.C.			N.C.			R.C.			0.022			0.023			0.025			0.028		
1° 00′	N.C.			N.C.			0.021			0.026			0.030			0.033			0.037		
1° 15′	N.C.			R.C.			0.026			0.032			0.037			0.041			0.046		
1° 30′	N.C.			0.021			0.031			0.037			0.043			0.048			0.054		
1° 45′	N.C.			0.025			0.036			0.043			0.049			0.055			0.062		
2° 00′	R.C.			0.028			0.040			0.048			0.055			0.062			0.070		
2° 15′	R.C.			0.031			0.045			0.053			0.061			0.069	265		0.078	300	
2° 30′	0.021			0.034			0.049			0.058			0.067			0.075	280		0.085	315	400
2° 45′	0.023			0.037			0.053			0.063			0.072			0.081	300		0.091	335	
3° 00′	0.025			0.040			0.057			0.067	230		0.077	260		0.087	315		0.096	350	
3° 15′	0.027			0.043			0.061			0.072	245		0.082	275		0.090	325		0.098	360	450
3° 30′	0.029			0.046			0.055	205		0.076	255		0.086	285		0.095	340		0.100	360	
3° 45′	0.031			0.049			0.059	215		0.080	265		0.090	295	400	0.097	345				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305		0.099	350				
4° 30′	0.037			0.056			0.078	240		0.087	280	400	0.096	315							
5° 00′	0.040			0.061			0.083	250		0.091	295		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		0.096	305										
6° 30′	0.050			0.074	200		0.095	280	350	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	300	0.100	290													
8° 30′	0.061			0.087	225																
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	300																		
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 = 4° 15′			D MAX = 3° 30′		



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$

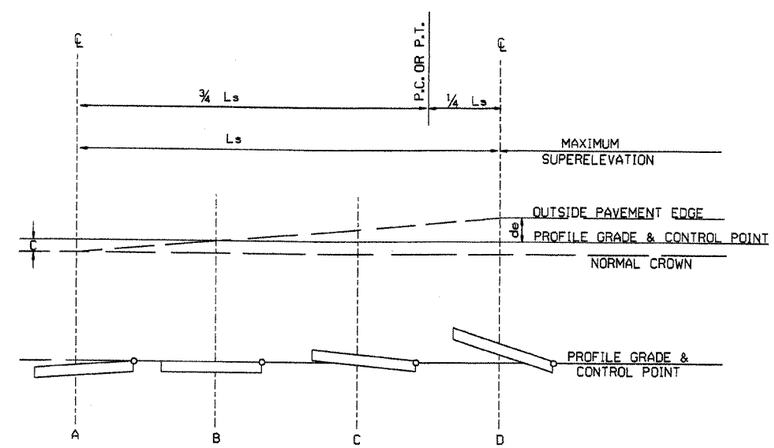
ABBREVIATIONS

NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
S - SUPERELEVATION
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT
e - MAXIMUM RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
C - NORMAL CROWN (FT.)

GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

DATE	REVISION	DATE FILMED
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

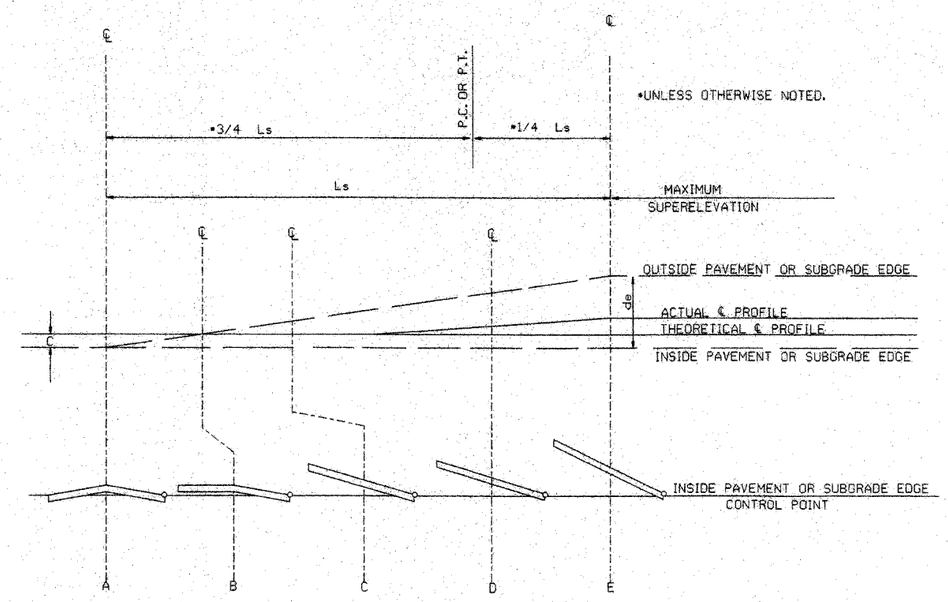
STANDARD DRAWING SE-1

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			0.046		
1° 30'	N.C.			0.021			0.031			0.037			0.043			0.054		
1° 45'	N.C.			0.025	175		0.036	200		0.043	225		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		300	0.061			0.078	300	
2° 30'	0.021			0.034			0.049			0.058			0.067			0.085	315	350
2° 45'	0.023			0.037		200	0.053			0.063			0.072			0.091	335	
3° 00'	0.025	150		0.040			0.057			0.067	230		0.077	260		0.096	350	
3° 15'	0.027			0.043			0.061			0.072	245		0.082	275		0.098	360	400
3° 30'	0.029			0.046			0.065	205		0.076	255		0.086	285		0.100	360	
3° 45'	0.031			0.049			0.069	215		0.080	265		0.090	295				
4° 00'	0.033			0.051			0.072	225		0.083	270		0.093	305	350			
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		0.098	320				
5° 30'	0.043			0.066	185		0.088	260		0.094	300	350						
6° 00'	0.046			0.070	190		0.092	270		0.096	305							
6° 30'	0.050			0.074	200		0.095	280	300	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.

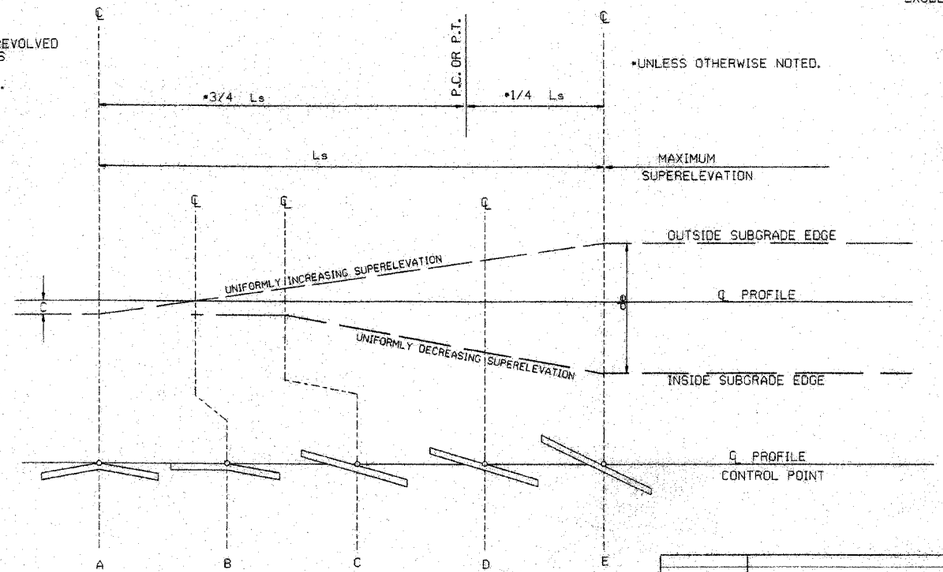
GENERAL NOTES

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 $= \frac{Lde}{Ls}$

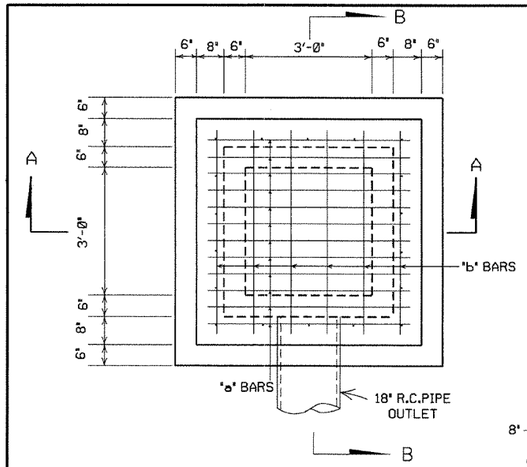
DATE	REVISION	DATE FILMED
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87

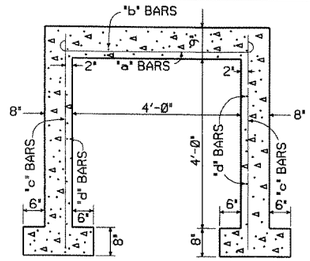
ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

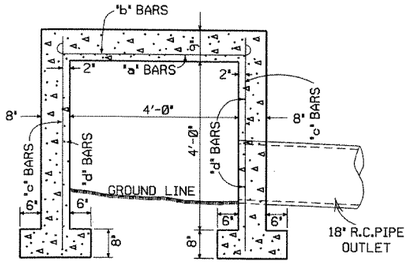
STANDARD DRAWING SE-2

FILE STDSE2.DGN





SEC A-A

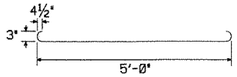


SEC B-B

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

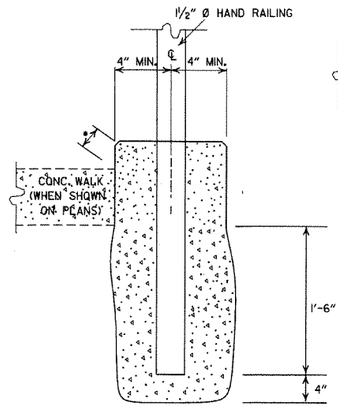
CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

GENERAL NOTE:

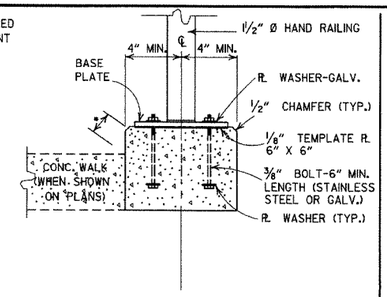
THE PAY ITEMS FOR REINFORCED CONCRETE SPRING BOXES SHALL BE FOR THE QUANTITTIES OF CONCRETE OF THE CLASS SPECIFIED, REINFORCING STEEL, EXCAVATION FOR STRUCTURES AND 18" R.C. PIPE CULVERT.

REINFORCED CONCRETE SPRING BOX

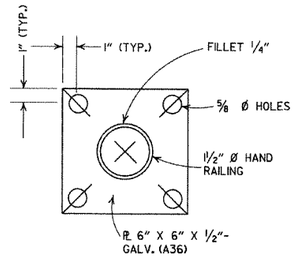
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

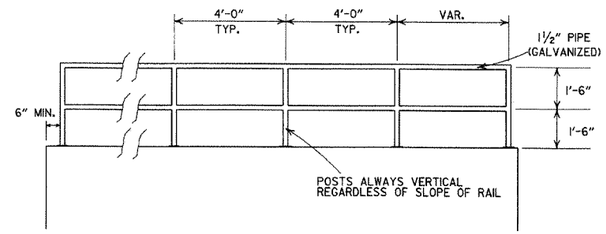


POST CONNECTION TO WALL

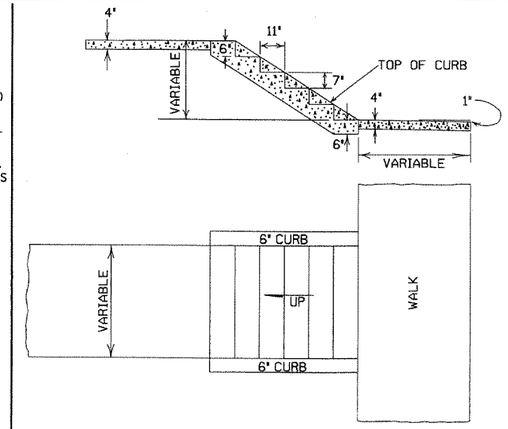


BASE PLATE

POST CONNECTION DETAILS



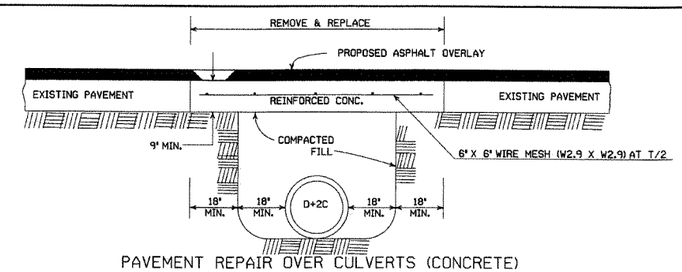
HAND RAILING DETAILS



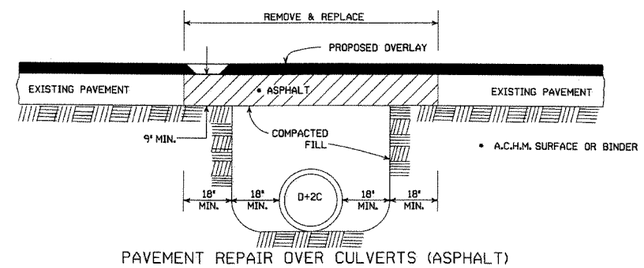
GENERAL NOTES

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

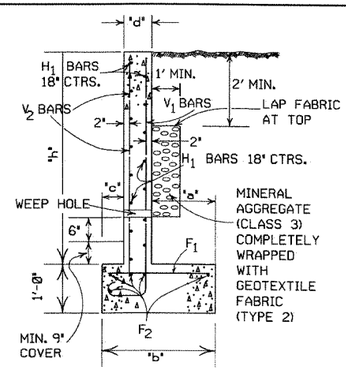
GENERAL NOTES

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.

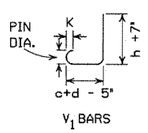
3" WEEP HOLES (MAX. SPACING 10'-0"CTRS.) TO BE PLACED WHERE SPECIFIED BY THE ENGINEER. THE CONTRACTOR WILL BE REQUIRED TO PLACE CONTRACTION JOINTS ON 20' CENTERS AND EXPANSION JOINTS ON 60' CENTERS.

ALL EXPOSED EDGES TO BE CHAMFERED ¾".



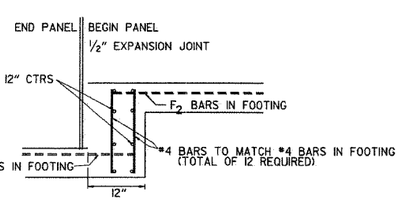
BENDING DIAGRAM

BAR SIZE	K	PIN DIA.
#4	4½"	2½"
#5	5"	3"

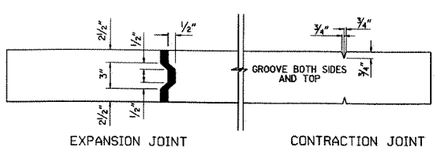


STEEL SCHEDULE

'c'	'd'	'h'	'a'	'b'	V_1 BARS SIZE	V_1 BARS SPACING	F_1 BARS SIZE	F_1 BARS SPACING	H_1 SPAC. (# 4 BARS)	V_2 SPAC. (# 4 BARS)	F_2 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

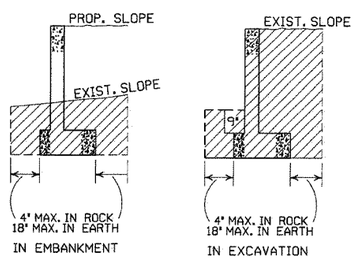


EXPANSION JOINT CONTRACTION JOINT

JOINT DETAILS

NOTE: JOINT MATERIAL SHALL BE PREFORMED MEETING THE REQUIREMENTS OF SUBSECTION 501.02(h) FOR TYPE 2

REINFORCED CONCRETE RETAINING WALL



NOTE: HATCHED AREA DENOTES MAX. LIMITS OF EXCAVATION FOR STRUCTURES FOR RETAINING WALL.

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

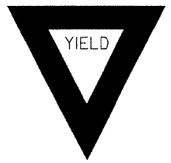
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

R1-1

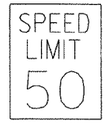
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

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"

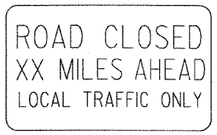
R5-1

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

R11-2

48"X30"

R11-3A



60"X30"

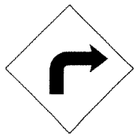
R11-4

60"X30"

RSP-1

48"X30"

W1-1



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

W1-2

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

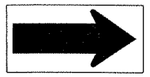
W1-3

STD. 48"X48"

W1-4

STD. 48"X48"

W1-6

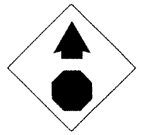


STD. 48"X24"
SPECIAL 60"X30"

W1-8

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

W3-1

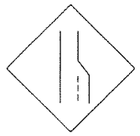


STD. 36"X36"
SPECIAL 48"X48"

W3-2

STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1

STD. 36"X36"
SPECIAL 48"X48"

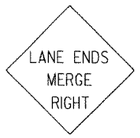
W6-3

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"

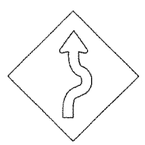
W21-2

STD. 30"X30"
SPECIAL 36"X36"

W21-5

STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b

STD. 48"X48"

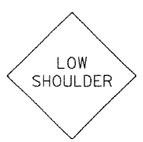
R56-1

STD. 18"X18"

W8-11

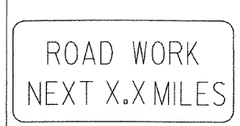
STD. 36"X36"
FWY. 48"X48"

W8-9



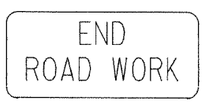
STD. 36"X36"
FWY. 48"X48"

G20-1



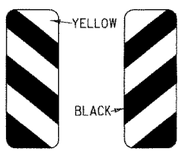
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

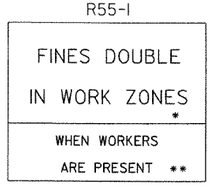
M4-9

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	1/2 MILE
1000 FT	3/4 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.

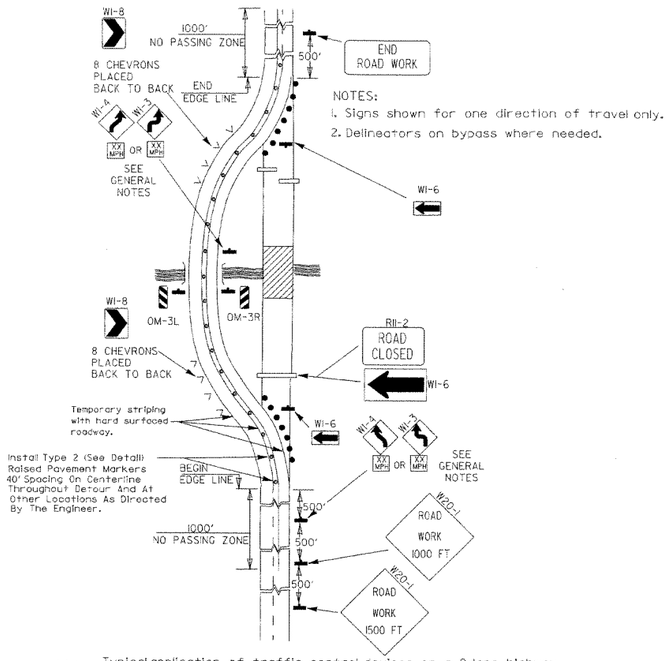
* NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

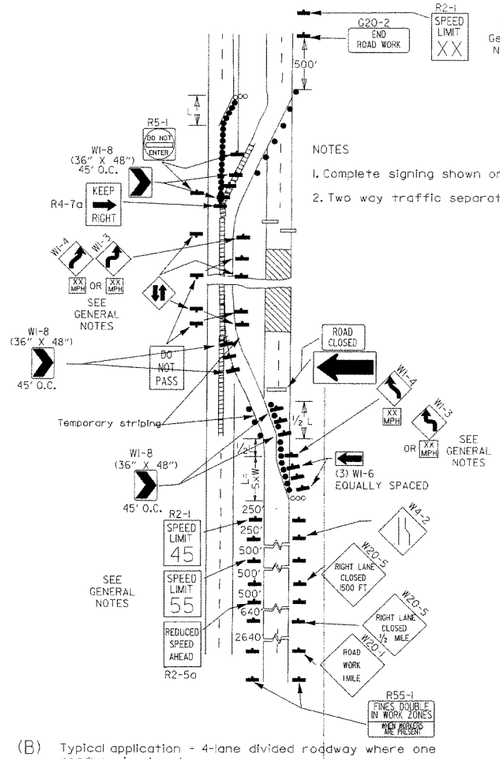
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



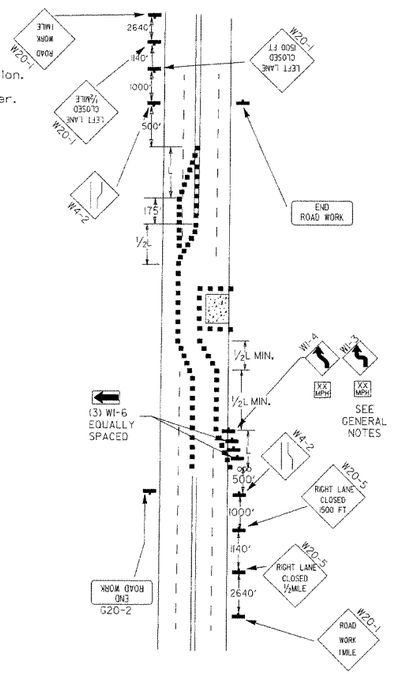
NOTES:
1. Signs shown for one direction of travel only.
2. Delineators on bypass where needed.

(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.

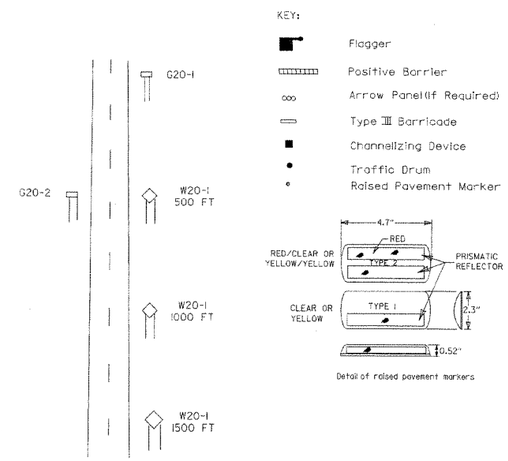


NOTES
1. Complete signing shown only in crossover direction.
2. Two way traffic separated with positive barrier.

(B) Typical application - 4-lane divided roadway where one roadway is closed.



(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



Typical advance warning sign placement

Taper formulae:

$L = S \times W$ for speeds of 45mph or more.

$L = \frac{WS^2}{60}$ for speeds of 40mph or less.

Where:

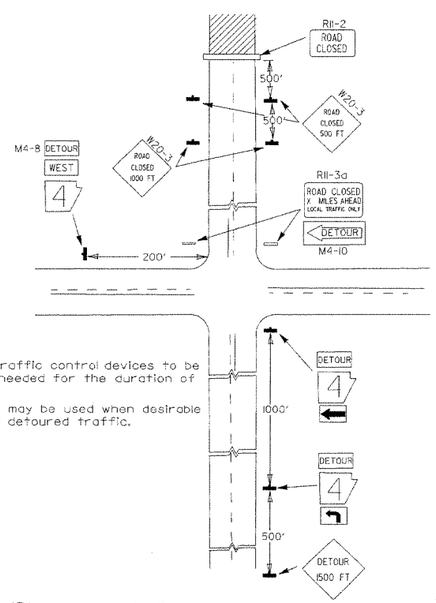
L= Minimum length of taper.

S= Numerical value of posted speed limit prior to work or 85th percentile speed.

W= Width of offset.

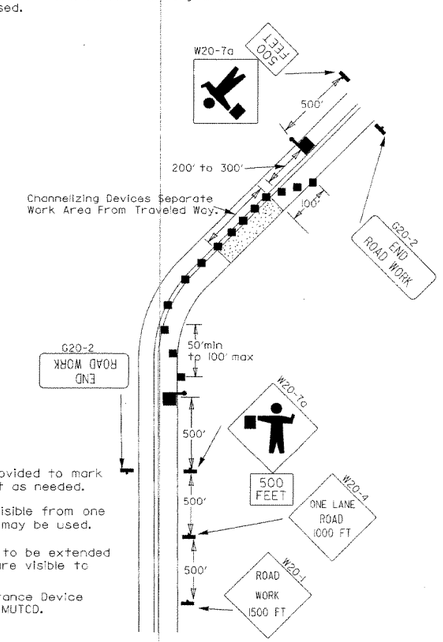
GENERAL NOTES:

1. Advisory speed posted on W1-3 or W1-4 curve warning signs to be determined at site. Use W1-4 when speed is greater than 30mph and W1-3 when 30mph or less.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the 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.



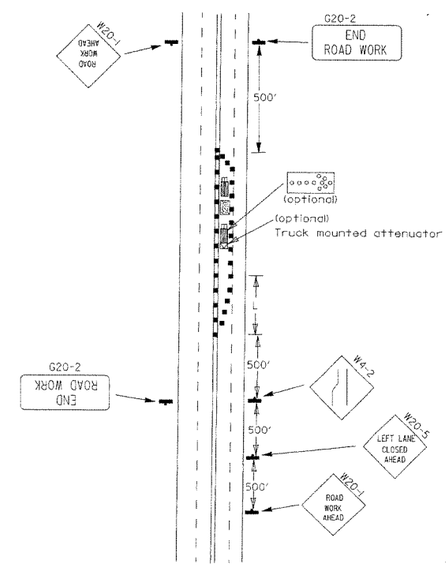
NOTES:
1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

(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.



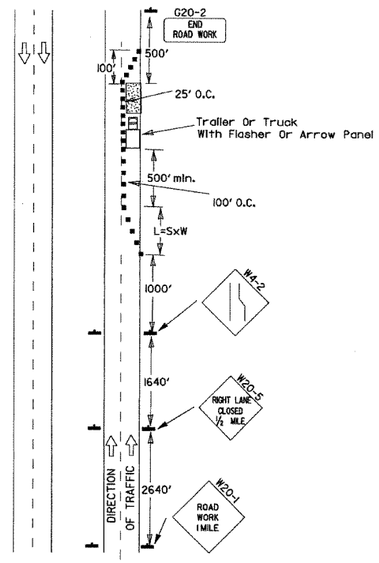
(F) Typical application - 4-lane undivided roadway with inside lane closed.

DATE	REVISION	FILMED
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

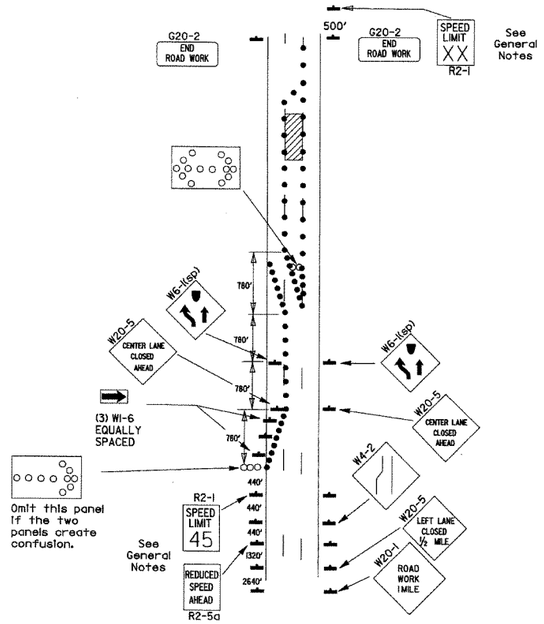
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

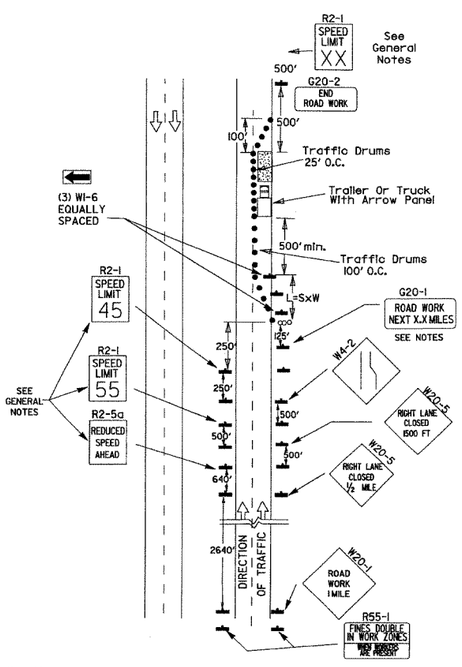
STANDARD DRAWING TC-2



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



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



(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)

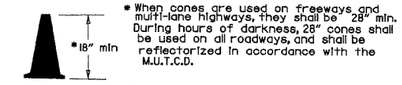
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

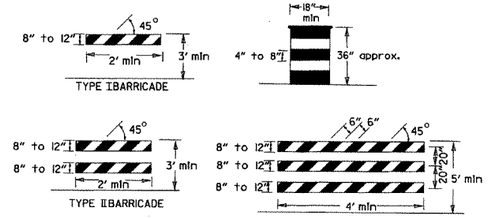
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of 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

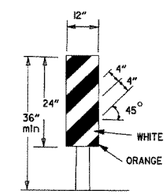


* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

CONES



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



VERTICAL PANEL
VP-1R

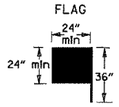
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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.

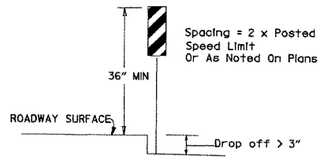
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

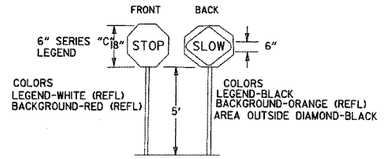


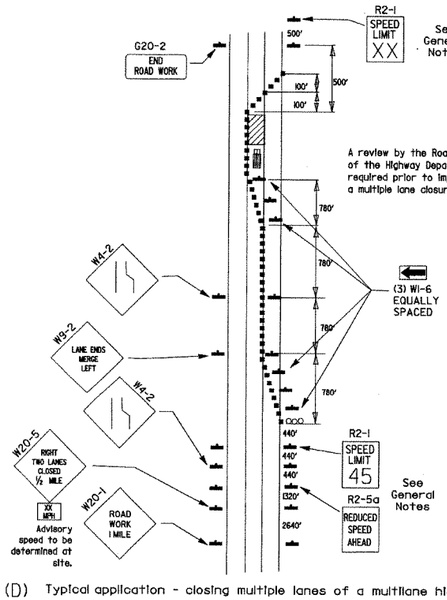
Flag shall be of good grade red material

VERTICAL PANEL PLACEMENT



STOP SLOW PADDLE





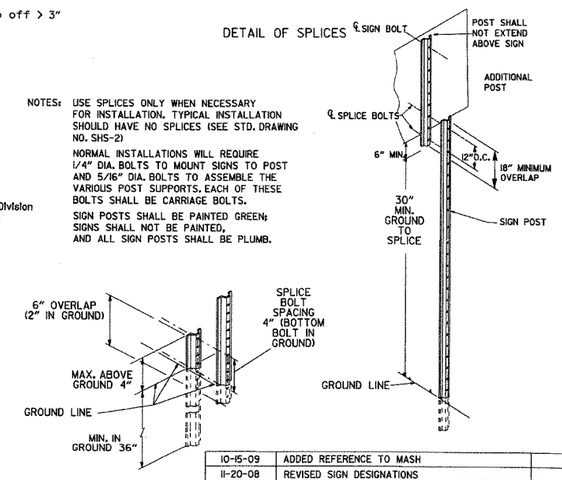
(D) Typical application - closing multiple lanes of a multilane highway.

DETAIL OF SPLICES

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

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

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



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

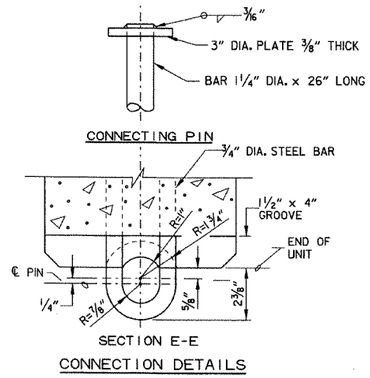
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

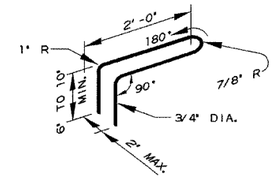
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

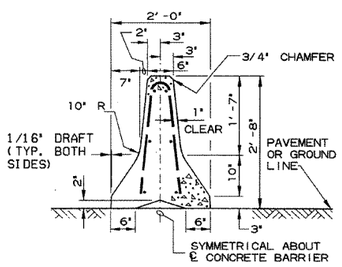
MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19' -3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6' -6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1' -6"
S-1	OVER LIFT HOLES	#4	(2)	2' -5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1' -6", 1" MIN. CLEAR TO BAR; 5' -1" BAR W/(4) 1 1/2" R BENDS & MIN. 1' -0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4' -9"; 2 3/16" R, 12°, 1 1/2", ±9", 2' -1 3/8", 4 3/8"



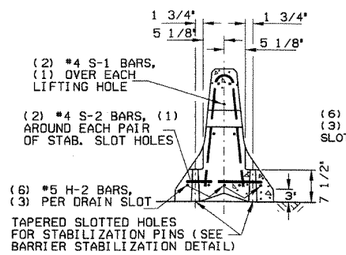
CONNECTION DETAILS



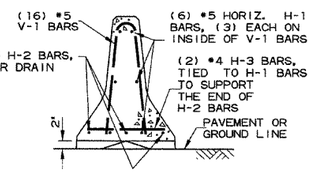
CONNECTION LOOP



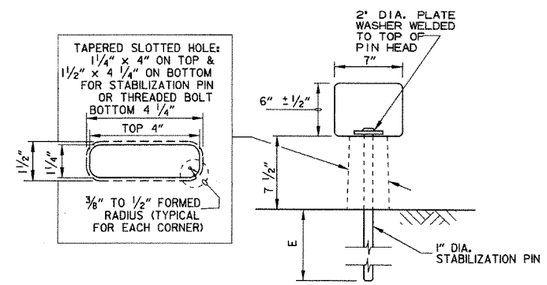
SECTION A-A



SECTION B-B



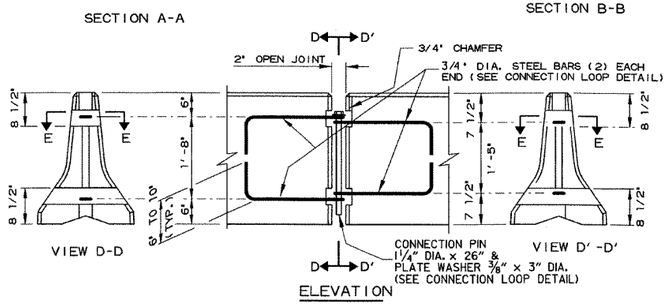
SECTION C-C



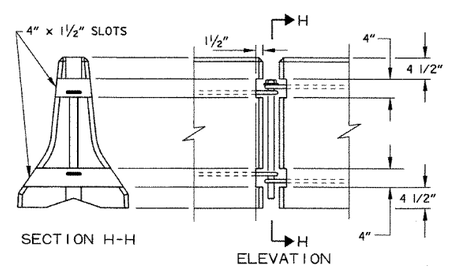
BARRIER STABILIZATION DETAIL

ROADWAY SECTION

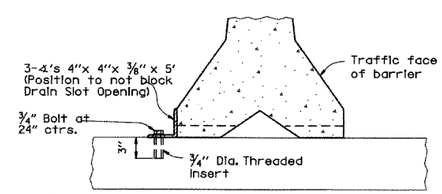
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



ELEVATION



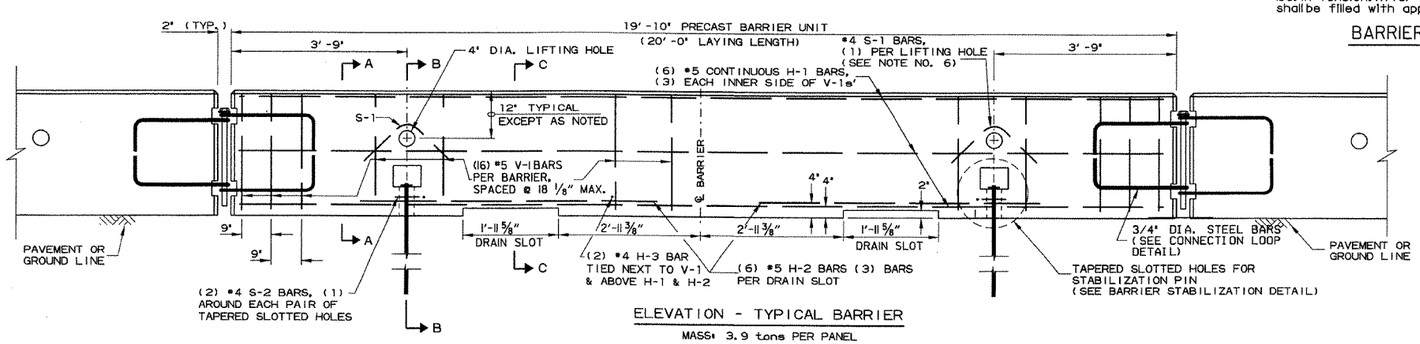
BARRIER REMOVAL SLOT DETAILS



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks to be retained. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

1. The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.

2. Materials shall meet the following minimum requirements;
   Concrete: 2500 psi compressive strength at 28 days.
   Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
   Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
   Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

   In applications where barrier wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
   Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
   Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier".
   The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.

3. Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

4. Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

5. Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

6. A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

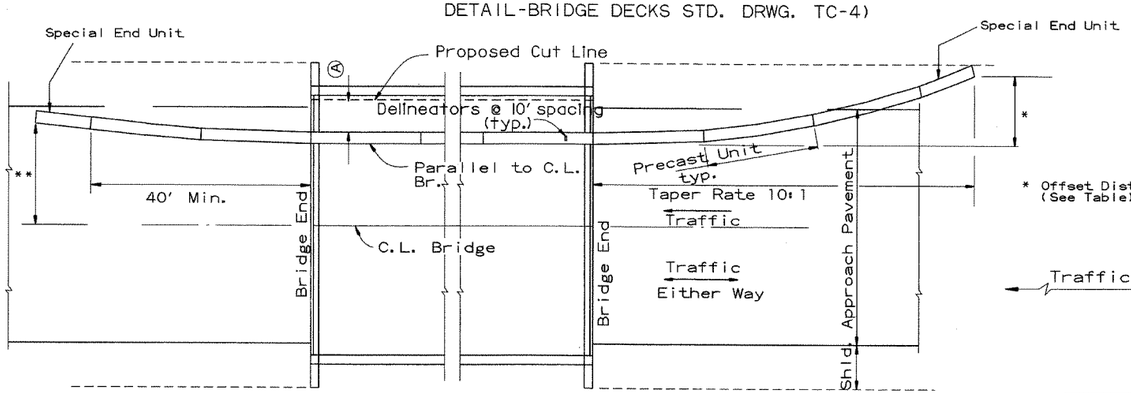
DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

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

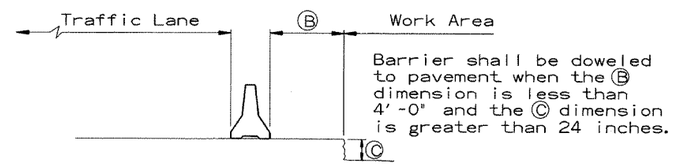


* Offset Distance (See Table)

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

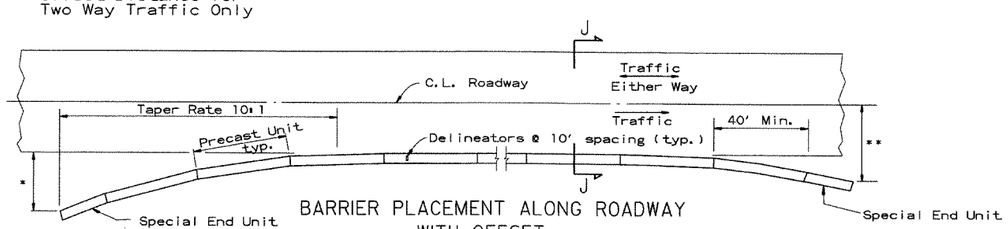
** Offset Distance for Two Way Traffic Only



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

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

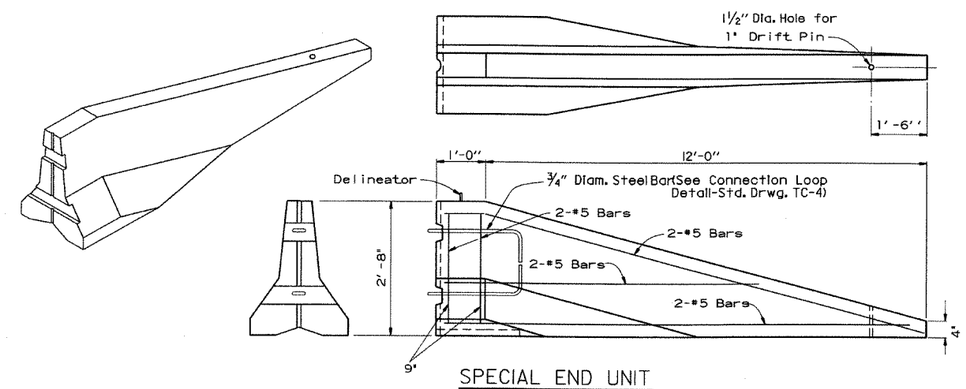
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

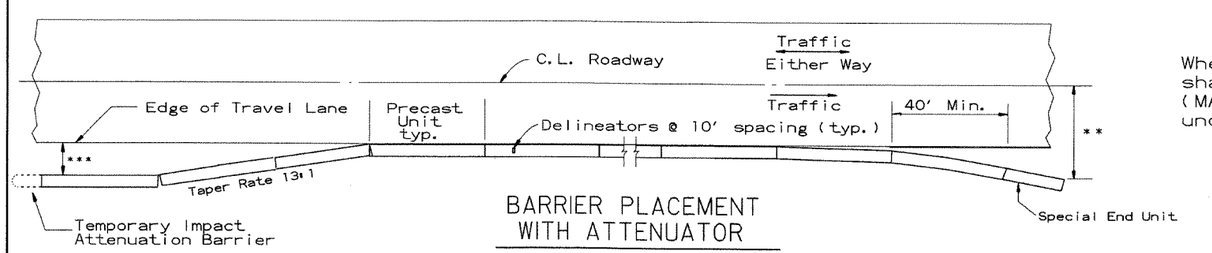
Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

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



SPECIAL END UNIT

No Scale



BARRIER PLACEMENT WITH ATTENUATOR

No Scale

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

** Offset Distance For Two Way Traffic Only

General Notes

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

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

ARKANSAS STATE HIGHWAY COMMISSION

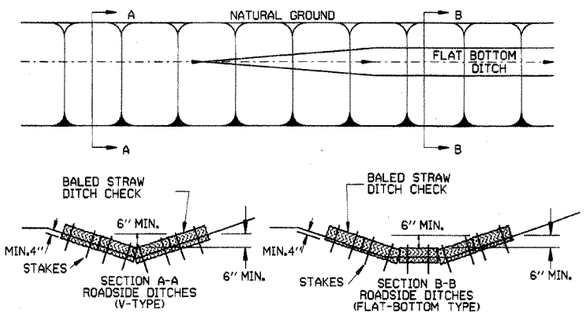
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5

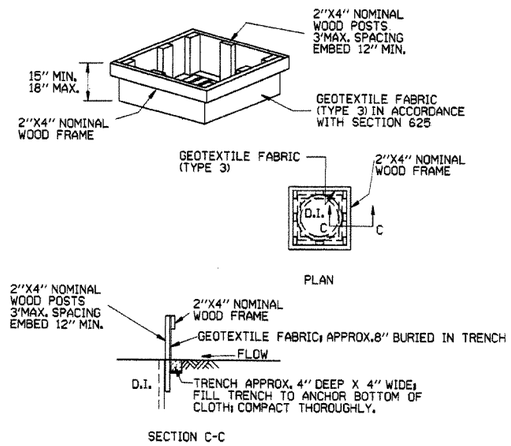
GENERAL NOTES

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.

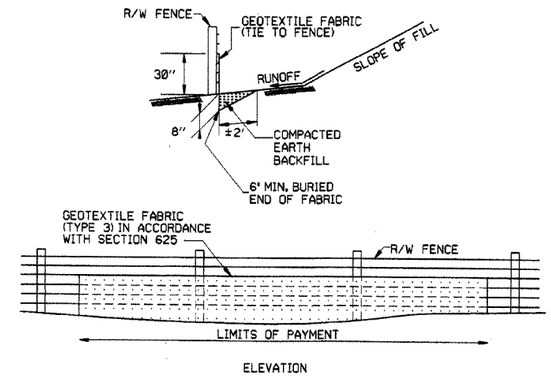
2. STRAW BALES SHALL BE KEYED INTO SOIL A MINIMUM OF 4' AND NO GAPS SHALL BE LEFT BETWEEN BALES.



BALED STRAW DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



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

GENERAL NOTES

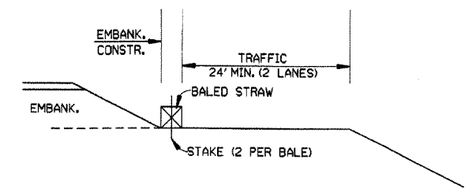
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

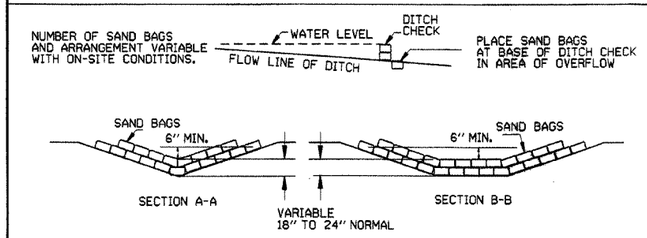
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

2. NO GAPS SHALL BE LEFT BETWEEN BALES.

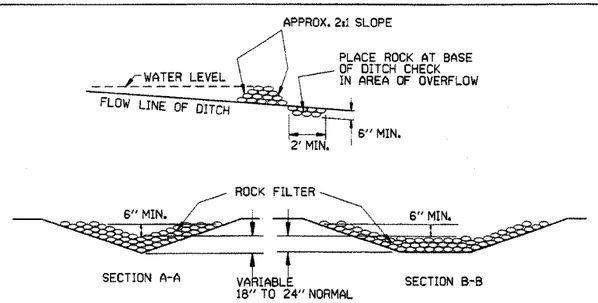
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



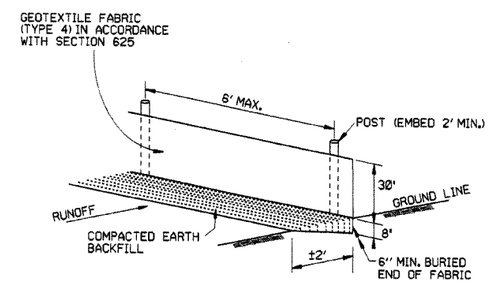
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

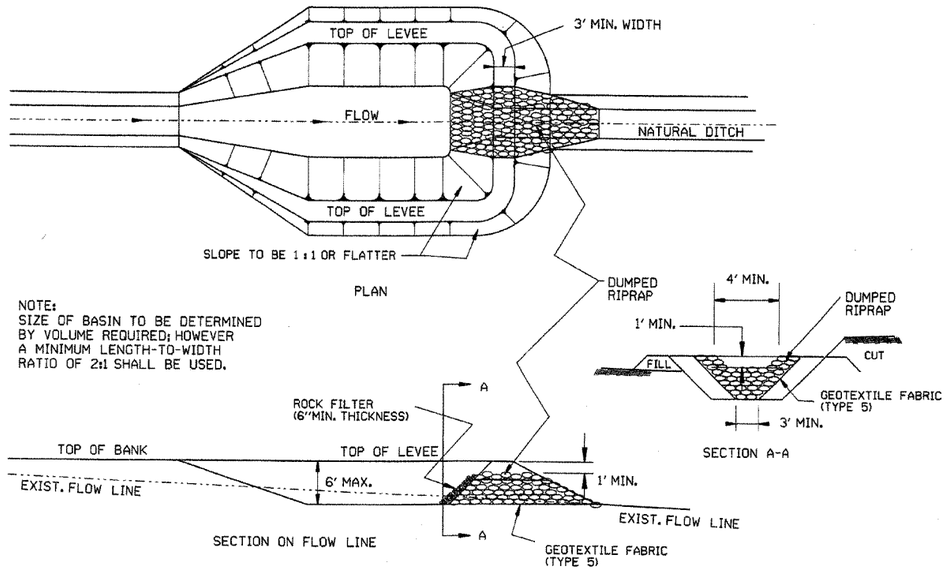
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

DATE	REVISION	FILMED
11-18-98	ADDED NOTES	11-18-98
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

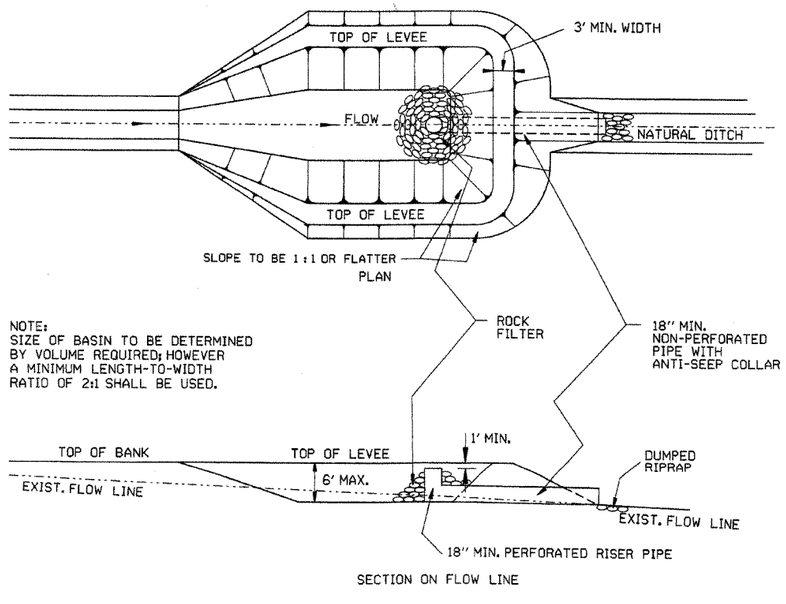
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

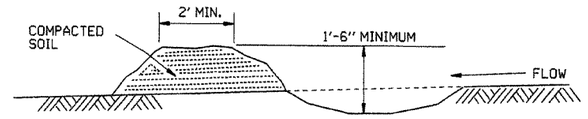
STANDARD DRAWING TEC-1



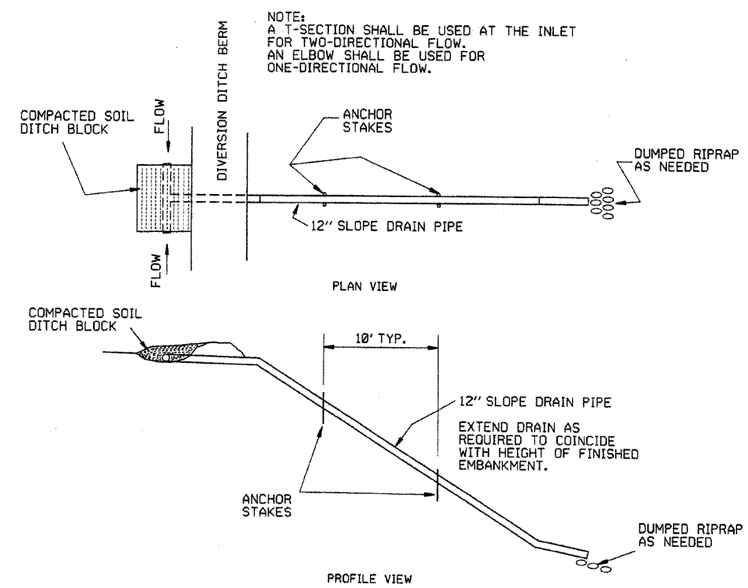
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



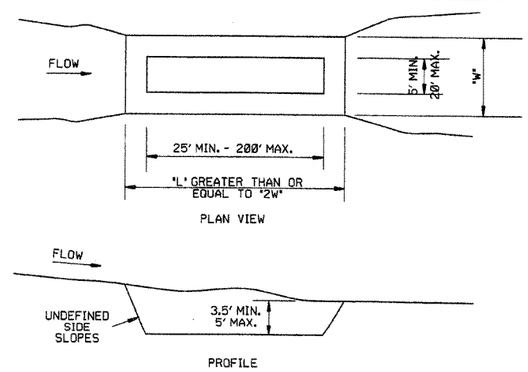
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

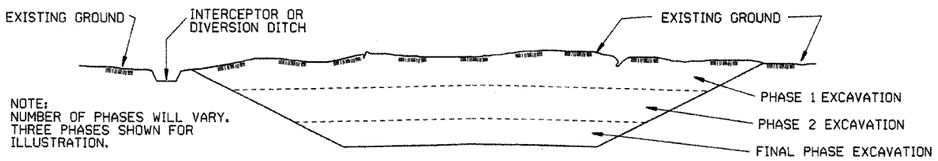
STANDARD DRAWING TEC-2

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



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR ILLUSTRATION.

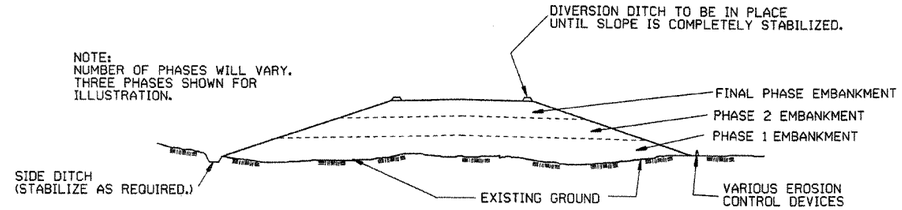
GENERAL NOTE

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



NOTE:
NUMBER OF PHASES WILL VARY.
THREE PHASES SHOWN FOR ILLUSTRATION.

GENERAL NOTE

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

CONSTRUCTION SEQUENCE

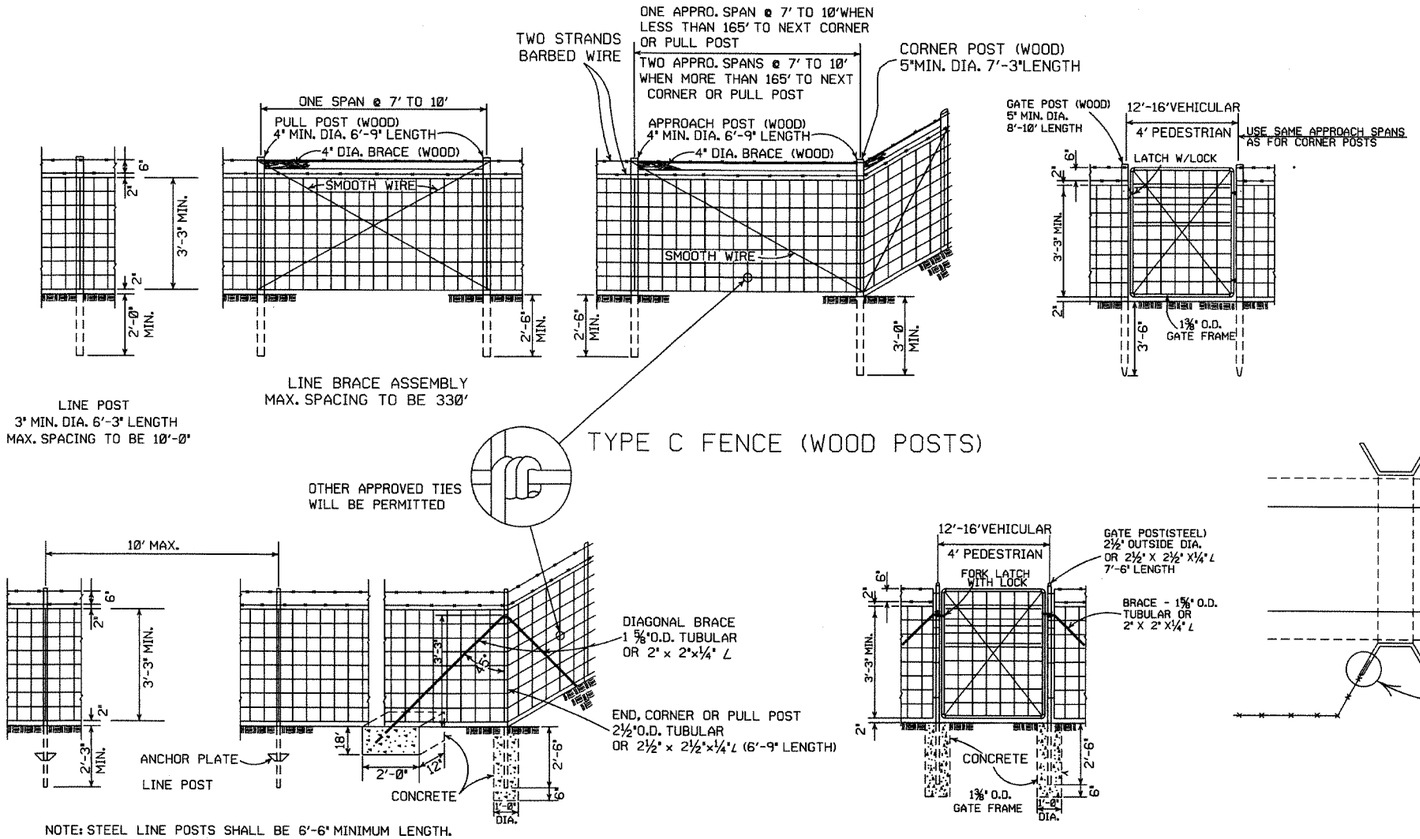
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

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

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3



GENERAL NOTES:

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

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

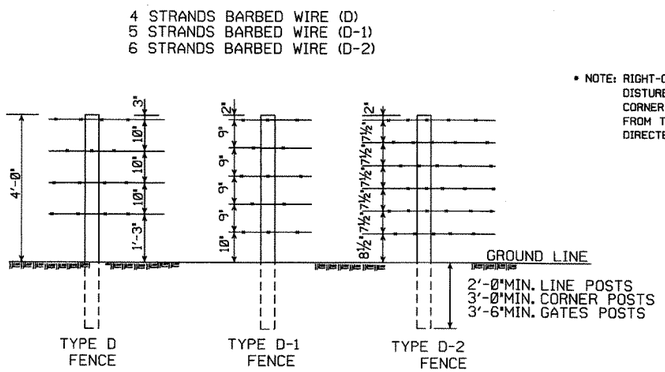
DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED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

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

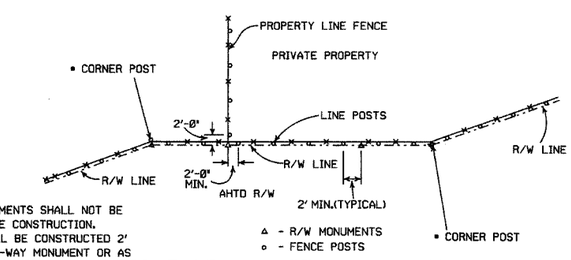
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD" AS DESCRIBED AS FOLLOWS:
THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF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

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

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

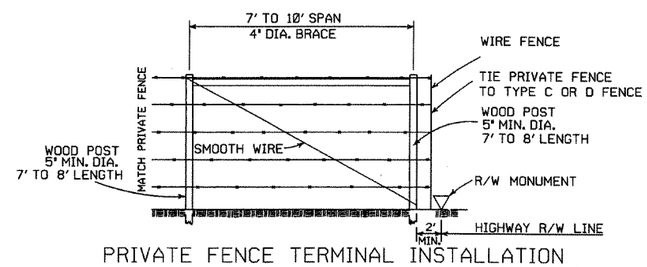


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.

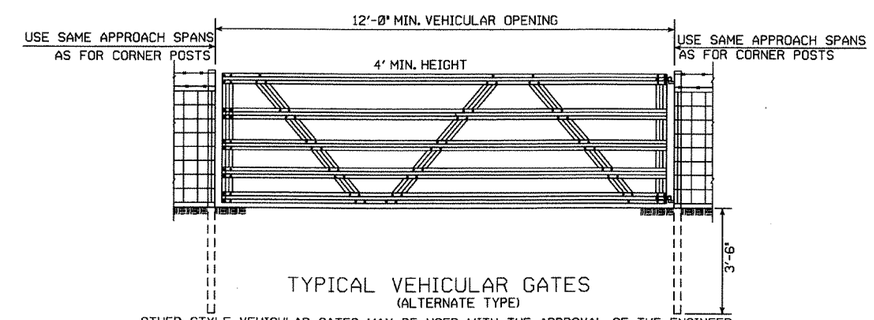


• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



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



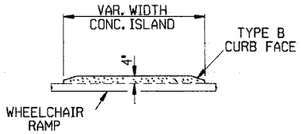
TYPICAL VEHICULAR GATES
(ALTERNATE TYPE)
OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

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

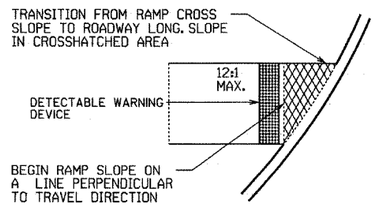
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE TYPE C AND D

STANDARD DRAWING WF-4



CONCRETE ISLAND DETAIL



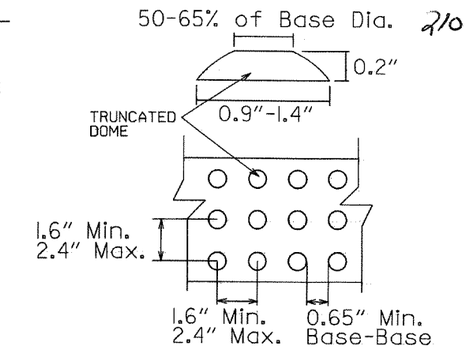
SLOPE TRANSITION DETAILS

TYPE 1 RAMP DIMENSIONS AND QUANTITIES

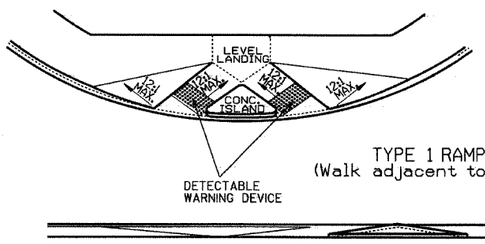
RADIUS 'R' FEET	DISTANCE 'X' FEET	DISTANCE 'Y' FEET	LENGTH 'L' FEET	RAMP AREA 'A' SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35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

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

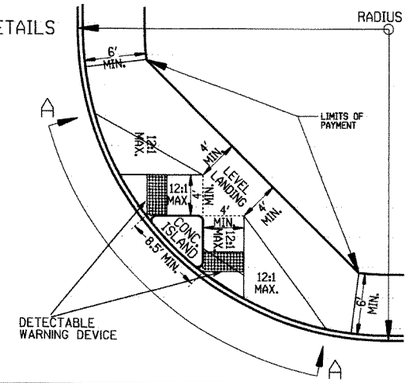
THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT 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).

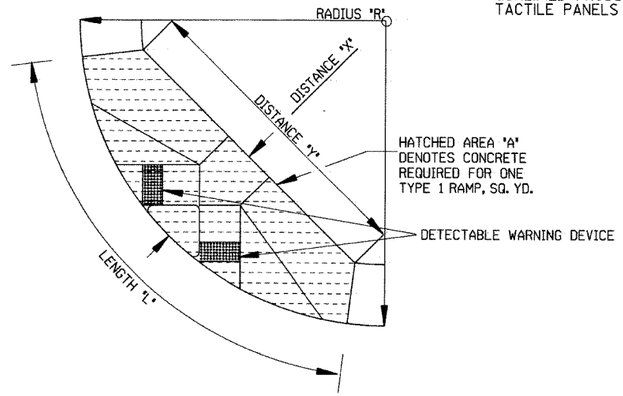


DETECTABLE WARNING DEVICE DETAIL



TYPE 1 RAMP
(Walk adjacent to curb)





GENERAL NOTES:

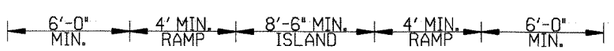
IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS.
IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK 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.

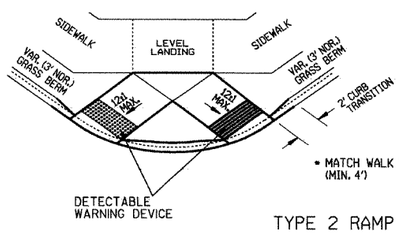
RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.

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.

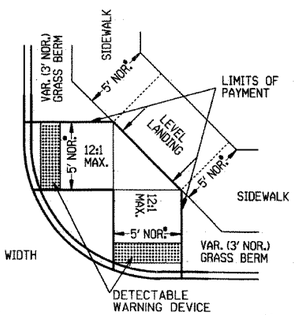


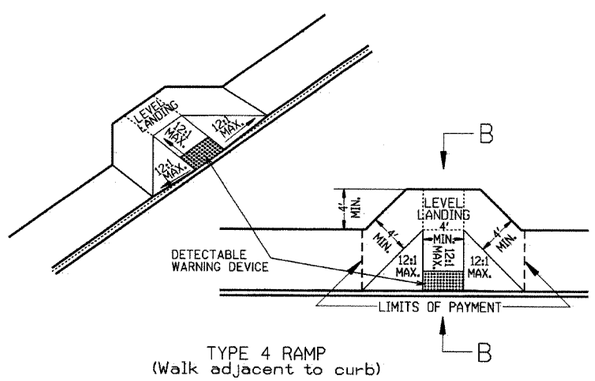
SECTION A-A

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



TYPE 2 RAMP



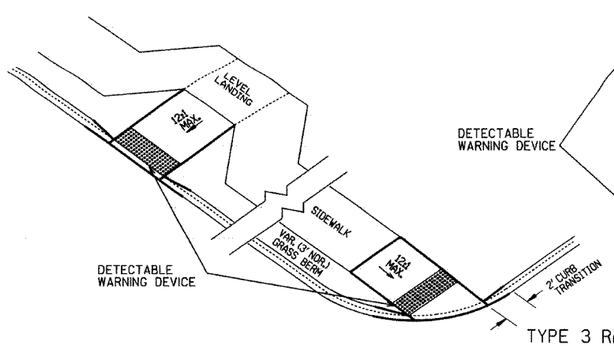


TYPE 4 RAMP
(Walk adjacent to curb)

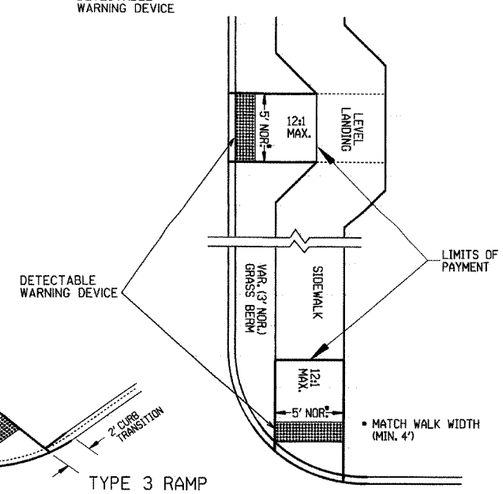
RAMP SELECTION CRITERIA

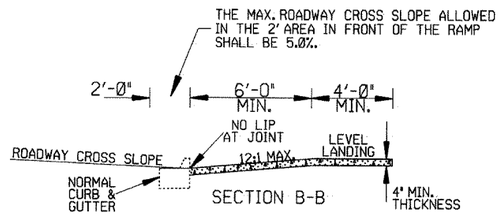
FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH 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.



TYPE 3 RAMP





SECTION B-B

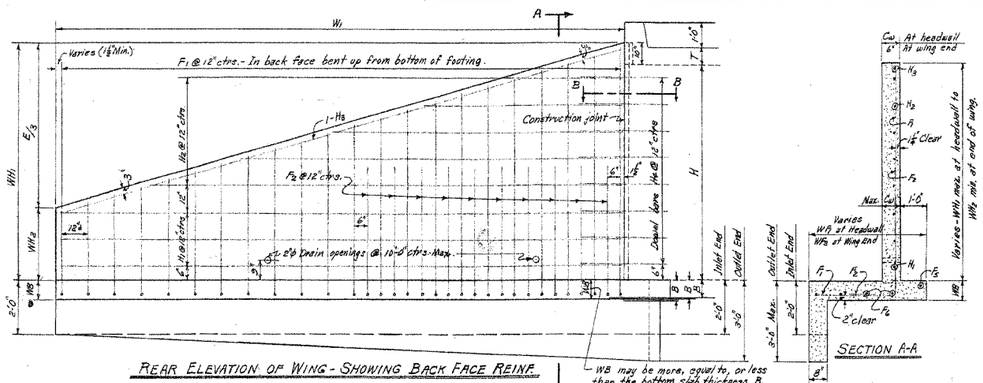
DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD.SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM:HITOI2:IMAX.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

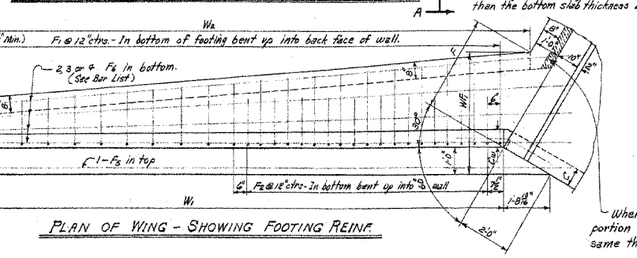
WHEELCHAIR RAMPS
NEW CONSTRUCTION
AND ALTERATIONS

STANDARD DRAWING WR-1

FIL. NO.	SHEET NO.	TOTAL SHEETS	DATE	SHEET	TOTAL SHEETS
2				211	
JOB NO.					

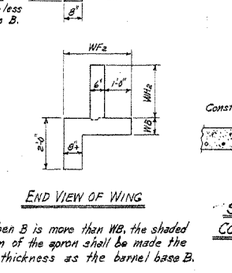


REAR ELEVATION OF WING - SHOWING BACK FACE REINF.

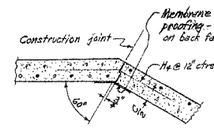


PLAN OF WING - SHOWING FOOTING REINF.

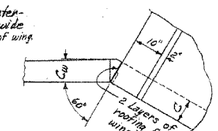
When B is more than W8, the shaded portion of the apron shall be made the same thickness as the barrel base B.



END VIEW OF WING



SECTION B-B THRU CONSTRUCTION JOINT



DETAIL AT TOP OF WING

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

WING DIMENSIONS

CLEAR HEIGHT OF BOX H	THICKNESS OF WING FOOTING WB	THICKNESS OF WING AT HEADWALL = C Cw	WINGWALL HEIGHTS AT HEADWALL WH1	WINGWALL HEIGHTS AT END OF WING WH2	WIDTHS OF WING FOOTINGS AT HEADWALL W6	WIDTHS OF WING FOOTINGS AT END OF WING W5	PERPENDICULAR FOOTING DIMENSION F	PERPENDICULAR DIST. FROM HDWL. TO END OF WING E	LENGTH OF WINGWALLS W1	INSIDE FOOTING DIMENSION W2	* QUANTITY PER WING CLASS S CONCRETE INLET END CU.YD.	OUTLET END CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-4"	2'-0"	0'-11⅝"	6'-6"	7'-6"	7'-1½"	0.889	0.986
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-4"	1'-4⅜"	8'-6"	9'-3⅝"	9'-7½"	1.338	1.466
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-8"	1'-8"	10'-6"	12'-1⅛"	12'-1½"	1.868	2.027
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-10⅝"	2'-1⅜"	12'-6"	14'-5⅛"	14'-7⅞"	2.478	2.668
		7"	5'-10"	1'-8"	3'-4"	2'-10⅝"	2'-1⅜"	12'-6"	14'-5⅛"	14'-7⅞"	2.582	2.772
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	14'-6"	16'-9"	17'-1⅞"	3.940	3.661
		7½"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	14'-6"	16'-9"	17'-1½"	3.811	3.732
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅝"	14'-6"	16'-9"	17'-1½"	3.582	3.803
7'	8½"	7½"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-1⅛"	16'-6"	19'-0⅝"	19'-8⅝"	4.505	4.758
		8"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-1⅛"	16'-6"	19'-0⅝"	19'-8⅝"	4.597	4.851
8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-8"	18'-6"	21'-6⅝"	22'-4"	5.761	6.097

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W4.

APRON DIMENSION W3

W3 = (OW - 2F)

CLEAR SPAN S	CLEAR HEIGHT H	FOOTING DIMENSION 2F	SINGLE BARREL CULVERT OW	SINGLE BARREL CULVERT W3	DOUBLE BARREL CULVERT OW	DOUBLE BARREL CULVERT W3	TRIPLE BARREL CULVERT OW	TRIPLE BARREL CULVERT W3	QUADRUPLE BARREL CULVERT OW	QUADRUPLE BARREL CULVERT W3	QUINTUPLE BARREL CULVERT OW	QUINTUPLE BARREL CULVERT W3
4'	2'	1'-11½"	5'-0"	3'-0½"	9'-8"	7'-8½"	14'-4"	12'-4½"	19'-0"	17'-0½"	23'-8"	21'-8½"
	3'	2'-8⅝"	5'-0"	2'-3⅜"	9'-8"	6'-11⅝"	14'-4"	11'-7⅝"	19'-0"	16'-3⅜"	23'-8"	20'-11⅝"
	4'	3'-6"	5'-0"	1'-6"	9'-8"	6'-2"	14'-4"	10'-10"	19'-0"	15'-6"	23'-8"	20'-2"
	5'	4'-3⅜"	5'-0"	0'-8⅝"	9'-8"	5'-4⅝"	14'-4"	10'-0⅝"	19'-0"	14'-8⅝"	23'-8"	19'-7⅝"
	6'	5'-0½"	5'-2"	0'-11"	9'-11"	4'-10½"	14'-8"	9'-7½"	19'-5"	14'-10"	24'-2"	19'-1½"
5'	3'	2'-8⅝"	6'-0"	3'-3⅜"	11'-8"	8'-11⅝"	17'-4"	14'-7⅛"	23'-0"	20'-3⅜"	28'-8"	25'-11⅝"
	4'	3'-6"	6'-0"	2'-6"	11'-8"	8'-2"	17'-4"	13'-10"	23'-0"	19'-6"	28'-8"	25'-2"
	5'	4'-3⅜"	6'-0"	1'-8⅝"	11'-8"	7'-4⅝"	17'-4"	13'-0⅝"	23'-0"	18'-8⅝"	28'-8"	24'-5⅝"
	6'	5'-0½"	6'-2"	1'-11"	11'-11"	6'-10½"	17'-8"	12'-7½"	23'-5"	18'-10"	29'-2"	24'-1½"
	7'	6'-2½"	6'-3"	0'-10½"	12'-1"	5'-10½"	17'-11"	11'-8½"	23'-9"	17'-6½"	29'-7"	23'-4½"
6'	3'	2'-8⅝"	7'-0"	4'-3⅜"	13'-8"	10'-11⅝"	20'-0"	17'-7⅛"	27'-0"	24'-3⅜"	33'-8"	30'-11⅝"
	4'	3'-6"	7'-0"	3'-6"	13'-8"	10'-2"	20'-0"	16'-10"	27'-0"	23'-6"	33'-8"	30'-2"
	5'	4'-3⅜"	7'-0"	2'-8⅝"	13'-8"	9'-4⅝"	20'-0"	16'-0⅝"	27'-0"	22'-8⅝"	33'-8"	29'-4⅝"
	6'	5'-0½"	7'-2"	2'-11½"	13'-11"	8'-10½"	20'-8"	15'-7½"	27'-3"	22'-9½"	34'-2"	29'-1½"
	7'	6'-2½"	7'-3"	1'-10½"	14'-1"	7'-10½"	20'-11"	14'-8½"	27'-9"	21'-6½"	34'-7"	28'-4½"
	8'	7'-4"	7'-4"	0'-0"	14'-2"	6'-10"	21'-0"	13'-8"	27'-10"	20'-6"	34'-8"	27'-0"
7'	4'	3'-6"	8'-0"	4'-6"	15'-8"	12'-2"	23'-4"	19'-10"	31'-0"	27'-6"	38'-8"	35'-2"
	5'	4'-3⅜"	8'-0"	3'-8⅝"	15'-8"	11'-4⅝"	23'-4"	19'-0⅝"	31'-0"	26'-8⅝"	38'-8"	34'-5⅝"
	6'	5'-0½"	8'-2"	3'-11½"	15'-11"	10'-10½"	23'-8"	18'-7½"	31'-5"	26'-9½"	39'-2"	34'-1½"
	7'	6'-2½"	8'-3"	2'-10½"	16'-1"	9'-10½"	23'-11"	17'-8½"	31'-9"	25'-6½"	39'-7"	33'-4½"
	8'	7'-4"	8'-4"	1'-0"	16'-2"	8'-10"	24'-0"	16'-8"	31'-10"	24'-6"	39'-8"	32'-4"
8'	4'	3'-6"	9'-0"	5'-6"	17'-8"	14'-2"	26'-4"	22'-10"	35'-0"	31'-6"	43'-8"	40'-2"
	5'	4'-3⅜"	9'-2"	4'-10⅝"	17'-11"	13'-7⅝"	26'-8"	22'-0⅝"	35'-5"	31'-1⅝"	44'-2"	39'-10⅝"
	6'	5'-0½"	9'-2"	4'-1½"	17'-11"	12'-10½"	26'-8"	21'-7½"	35'-5"	30'-6½"	44'-2"	39'-1½"
	7'	6'-2½"	9'-3"	3'-0½"	18'-1"	11'-10½"	26'-11"	20'-8½"	35'-9"	29'-6½"	44'-7"	38'-4½"
	8'	7'-4"	9'-4"	2'-0"	18'-2"	10'-10"	27'-0"	19'-8"	35'-10"	28'-6"	44'-8"	37'-4"
9'	5'	4'-3⅜"	10'-2"	5'-10⅝"	19'-11"	15'-7⅝"	29'-8"	25'-4⅝"	39'-5"	35'-1⅝"	49'-2"	44'-10⅝"
	6'	5'-0½"	10'-3"	5'-2½"	20'-1"	15'-0½"	29'-11"	24'-10½"	39'-9"	34'-10½"	49'-7"	44'-4½"
	7'	6'-2½"	10'-3"	4'-0½"	20'-1"	18'-10½"	29'-11"	23'-8½"	39'-9"	33'-4½"	49'-7"	43'-6½"
	8'	7'-4"	10'-4"	3'-0"	20'-2"	12'-10"	30'-0"	22'-8"	39'-10"	32'-6"	49'-8"	42'-4"
10'	5'	4'-3⅜"	11'-2"	6'-10⅝"	21'-11"	17'-7⅝"	32'-8"	28'-4⅝"	43'-5"	39'-1⅝"	54'-2"	49'-10⅝"
	6'	5'-0½"	11'-3"	6'-2½"	22'-1"	17'-0½"	32'-11"	27'-10½"	43'-9"	38'-9½"	54'-7"	49'-4½"
	7'	6'-2½"	11'-3"	5'-0½"	22'-1"	15'-10½"	32'-11"	26'-8½"	43'-9"	37'-4½"	54'-7"	48'-4½"
	8'	7'-4"	11'-4"	4'-0"	22'-2"	14'-10"	33'-0"	25'-8"	43'-10"	36'-6"	54'-8"	47'-4"
11'	6'	5'-0½"	12'-4"	7'-3½"	24'-2"	19'-7½"	36'-0"	30'-11½"	47'-10"	42'-9½"		
	7'	6'-2½"	12'-4"	6'-1½"	24'-2"	17'-11½"	36'-0"	29'-9½"	47'-10"	41'-7½"		
	8'	7'-4"	12'-5"	5'-0"	24'-2"	16'-10"	36'-0"	28'-8"	47'-10"	40'-6"		
12'	6'	5'-0½"	13'-4"	8'-3½"	26'-2"	21'-7½"	39'-0"	33'-11½"	51'-10"	46'-9½"		
	7'	6'-2½"	13'-4"	7'-1½"	26'-2"	19'-11½"	39'-0"	32'-9½"	51'-10"	45'-7½"		
	8'	7'-4"	13'-4"	6'-0"	26'-2"	18'-10"	39'-0"	31'-8"	51'-10"	44'-6"		

QUANTITIES

CLASS S CONCRETE - 4 WINGS

CLEAR SPAN S	CLEAR HEIGHT H	THICKNESS OF WING AT HEADWALL Cw	THICKNESS OF WING FOOTING WB	REINFORCING STEEL - 4 WINGS LB.	SINGLE BARREL CULVERT CU.YD.	DOUBLE BARREL CULVERT CU.YD.	TRIPLE BARREL CULVERT CU.YD.	QUADRUPLE BARREL CULVERT CU.YD.	QUINTUPLE BARREL CULVERT CU.YD.
4'	2'	6"	7"	108.0	4.50	5.46	6.42	7.38	8.34
	3'	6"	7"	169.4	6.26	7.21	8.17	9.13	10.09
	4'	6"	7"	256.6	8.33	9.28	10.24	11.20	12.16
	5'	6"	7"	357.8	10.72	11.68	12.64	13.60	14.56
	6'	7"	8"	583.1	14.55	15.53	16.52	17.51	18.49
5'	3'	6"	7"	164.9	6.47	7.43	8.39	9.36	11.12
	4'	6"	7"	256.6	8.54	9.70	10.87	10.03	12.20
	5'	6"	7"	357.8	10.94	12.10	13.26	14.43	15.59
	6'	7"	8"	583.1	14.77	15.96	17.15	18.34	19.54
	7'	7½	8½	1134.6	18.34	20.15	21.37	22.59	23.80
6'	3'	6"	7"	164.9	6.68	8.06	9.42	10.80	12.18
	4'	6"	7"	256.6	8.75	10.14	11.49	12.87	14.25
	5'	6"	7"	357.8	11.15	12.53	13.89	15.27	16.65
	6'	7"	8"	583.1	14.98	16.39	17.78	19.18	20.59
	7'	7½	8½	1134.6	19.15	20.58	22.00	23.43	24.86
	8'	8"	9"	1425.6	24.09	25.53	26.96	28.39	29.83
7'	4'	6"	7"	256.6	8.97	10.58	12.15	13.76	15.35
	5'	6"	7"	357.8	11.36	12.97	14.54	16.15	17.75
	6'	7"	8"	583.1	15.20	16.82	18.42	20.04	21.66
	7'	7½	8½	1134.6	19.38	21.02	22.69	24.28	25.92
	8'	8"	9"	1425.6	24.32	25.97	27.60	29.25	30.89
8'	4'	6"	7"	256.6	9.19	11.03	12.82	14.65	16.45
	5'	7"	7"	357.8	12.03	13.89	15.70	17.55	19.34
	6'	7"	8"	583.1	15.92	17.27	19.09	20.93	22.75
	7'	7½	8½	1134.6	19.59	21.46	23.30	25.16	26.93
	8'	8"	9"	1425.6	24.54	26.41	28.24	30.11	31.96
9'	5'	7"	7"	357.8	12.26	14.34	16.37	18.45	20.47
	6'	7½	8"	583.1	15.94	18.04	20.09	22.19	24.23
	7'	7½	8½	1134.6	19.81	21.91	23.96	26.06	28.10
	8'	8"	9"	1425.6	24.76	26.86	28.91	31.00	33.05
10'	5'	7"	7"	357.8	12.49	14.80	17.05	19.26	21.52
	6'	7½	8"	583.1	16.17	18.50	20.77	22.99	25.28
	7'	7½	8½	1134.6	20.04	22.37	24.64	26.87	29.15
	8'	8"	9"	1425.6	24.98	27.31	29.58	31.81	34.10
11'	6'	8"	8"	583.1	16.69	19.27	21.76	24.23	
	7'	8"	8½	1134.6	20.64	23.22	25.71	28.18	
	8'	8"	9"	1425.6	25.19	27.77	30.27	32.74	
12	6'	8"	8"	583.1	16.92	19.75	22.45	25.18	
	7'	8"	8½	1134.6	20.87	23.69	26.40	29.13	
	8'	8"	9"	1425.6	25.42	28.25	30.96	33.69	

* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

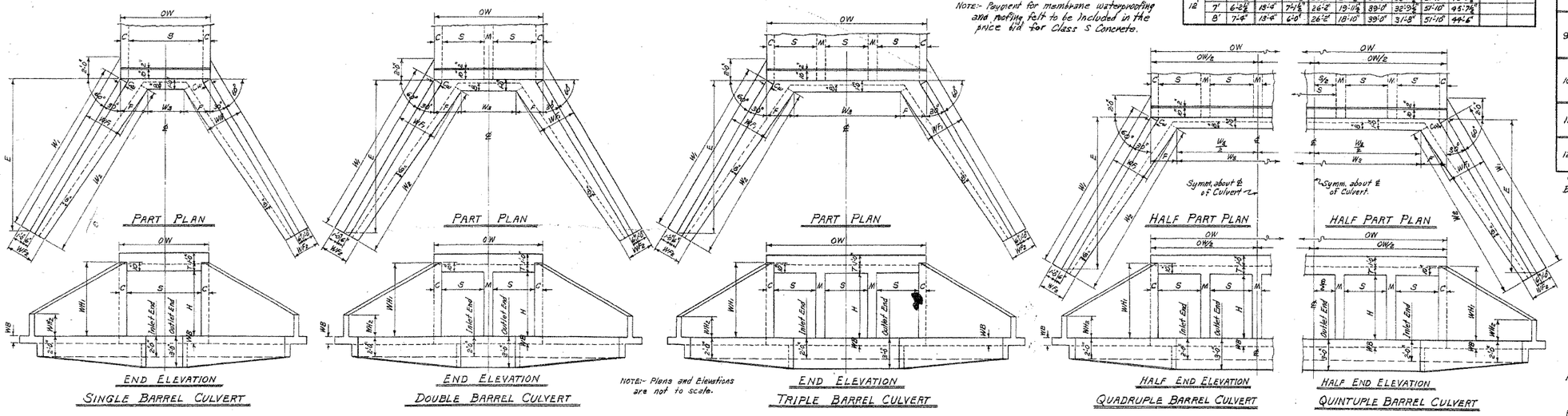
UNIT STRESSES:-

Class S Concrete (n=10) 1200#/□"

Reinforcing Steel 20,000#/□"

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		



NOTE:- Plans and Elevations are not to scale.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mappings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

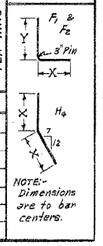
BAR LIST FOR ONE WING - 4 REQUIRED

CLEAR HEIGHT H	F1 BENT In bottom of footing, bent up into back face of wing. One bar of each length. SIZE	SPACING	No. REQ'D	LENGTHS VARY MIN.	MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.	F2 BENT In bottom of footing, bent up into back face of wing. Alt. with F1 bars. SIZE	SPACING	No. REQ'D	LENGTH	X	Y
2'	#3	12"	8	1'-6"	3'-10"	0'-8"	1'-0"	0'-11"	2'-11"	—	—	—	—	—	—
3'	#3	12"	10	2'-2"	5'-2"	0'-10"	1'-9"	1'-5"	4'-0"	—	—	—	—	—	—
4'	#3	12"	13	2'-9"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"	—	—	—	—	—	—
5'	#3	12"	15	2'-11"	7'-10"	1'-1"	1'-11"	1'-11"	6'-0"	#3	12"	4	3'-6"	1'-1"	2'-6"
6'	#4	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	7'-1"	#3	12"	4	4'-6"	1'-4"	3'-3"
7'	#4	12"	20	3'-9"	10'-9"	1'-3"	2'-9"	2'-7"	8'-1"	#4	12"	7	5'-6"	1'-7"	4'-0"
8'	#4	12"	22	4'-4"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	10	6'-6"	1'-10"	4'-9"

CLEAR HEIGHT H	F3 STRAIGHT Longitudinal in top of wing footing heel. SIZE	No. REQ'D	LENGTH	F4 STRAIGHT Longitudinal in bottom of wing footing toe. SIZE	No. REQ'D	LENGTH	H1 STRAIGHT Horizontal in back face of wing. SIZE	SPACING	No. REQ'D	LENGTH
2'	#3	1	9'-8"	#3	2	8'-6"	#3	12"	1	7'-2"
3'	#3	1	12'-0"	#3	2	11'-0"	#3	12"	1	9'-6"
4'	#3	1	14'-4"	#3	3	13'-6"	#3	12"	1	11'-10"
5'	#3	1	16'-8"	#3	3	16'-0"	#5	12"	2	14'-2"
6'	#3	1	19'-0"	#3	3	18'-6"	#3	12"	2	16'-6"
7'	#4	1	21'-4"	#4	4	21'-0"	#4	12"	2	18'-9"
8'	#4	1	23'-8"	#4	4	23'-8"	#4	12"	3	21'-1"

CLEAR HEIGHT H	H2 STRAIGHT Horizontal in back face of wing. One bar of each length. SIZE	SPACING	No. REQ'D	LENGTHS VARY MAX.	MIN.	H3 STRAIGHT In back face of wing at top-on slope. SIZE	No. REQ'D	LENGTH	H4 BENT Dowels thru construction joint at headwall. SIZE	SPACING	No. REQ'D	LENGTH	X	QUANTITY REINFORCING STEEL PER WING LB.
2'	#3	12"	1	—	9'-0"	#3	1	7'-4"	#3	12"	2	2'-8"	1'-9"	27.0
3'	#3	12"	2	7'-6"	9'-0"	#3	1	9'-9"	#3	12"	3	2'-8"	1'-9"	41.1
4'	#3	12"	3	10'-11"	9'-0"	#3	1	12'-2"	#3	12"	4	2'-8"	1'-9"	63.7
5'	#3	12"	3	10'-11"	9'-0"	#3	1	14'-7"	#3	12"	5	2'-8"	1'-9"	89.5
6'	#3	12"	4	14'-4"	9'-0"	#3	1	17'-0"	#3	12"	6	2'-8"	1'-9"	145.8
7'	#4	12"	5	17'-9"	9'-0"	#4	1	19'-5"	#4	12"	7	3'-6"	1'-9"	283.7
8'	#4	12"	5	17'-9"	9'-0"	#4	1	21'-10"	#4	12"	8	3'-6"	1'-9"	356.4

BAR BENDING DIAGRAMS



REVISIONS:- Membrane added. 5-10-66 W.C.H.

Designed By:- W.C.H. 8-20-62 Checked By:- RHS 1-9-63
Drawn By:- W.C.H. 12-4-62 Checked By:- RHS 1-31-63
Quantities By:- W.C.H. 12-17-62 Reviewed By:- RHS 3-22-63

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS

FOR

REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

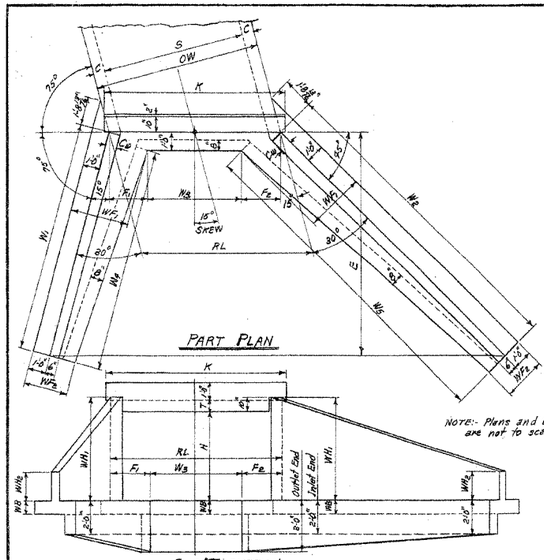
STANDARD DRAWING NO. W-X003-1

W.V.I.B.R. 3

Reshot 3-5-93

172

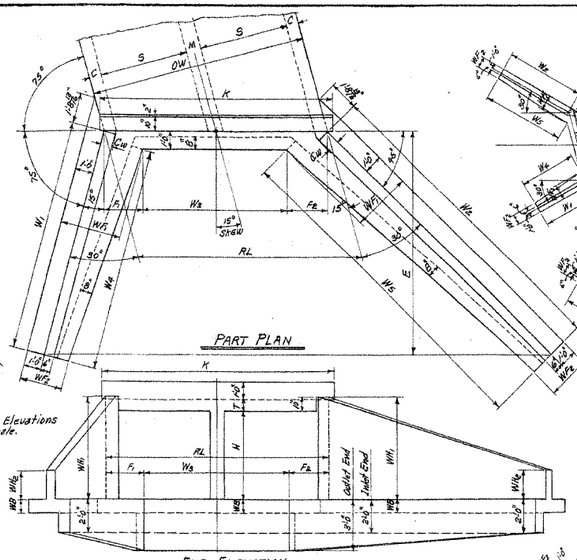
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			212	
JOB No.					



NOTE:- Plans and Elevations are not to scale.

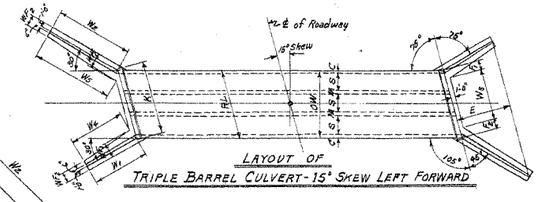
SINGLE BARREL CULVERT-15° SKEW RIGHT FORWARD

Details of Culvert with 15° Skew Left Forward is reversed, see Layout below.

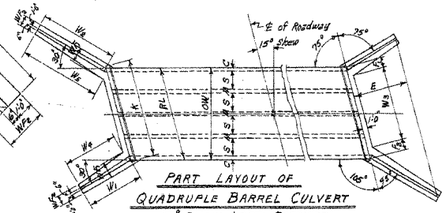


DOUBLE BARREL CULVERT-15° SKEW RIGHT FORWARD

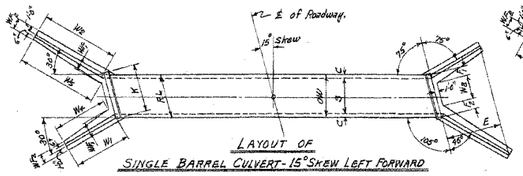
Details of Culvert with 15° Skew Left Forward is reversed, see Layout below.



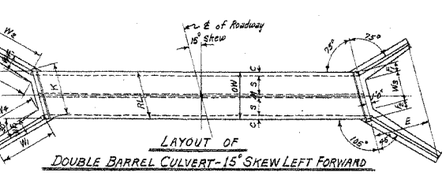
LAYOUT OF TRIPLE BARREL CULVERT-15° SKEW LEFT FORWARD



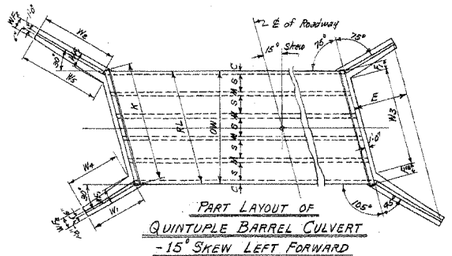
PART LAYOUT OF QUADRUPLE BARREL CULVERT -15° SKEW LEFT FORWARD



LAYOUT OF SINGLE BARREL CULVERT-15° SKEW LEFT FORWARD

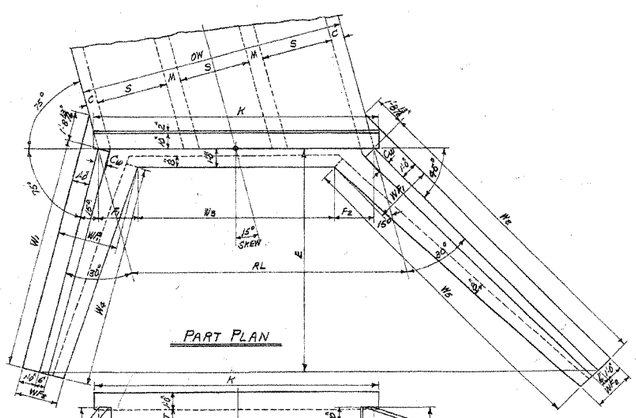


LAYOUT OF DOUBLE BARREL CULVERT-15° SKEW LEFT FORWARD



PART LAYOUT OF QUINTUPLE BARREL CULVERT -15° SKEW LEFT FORWARD

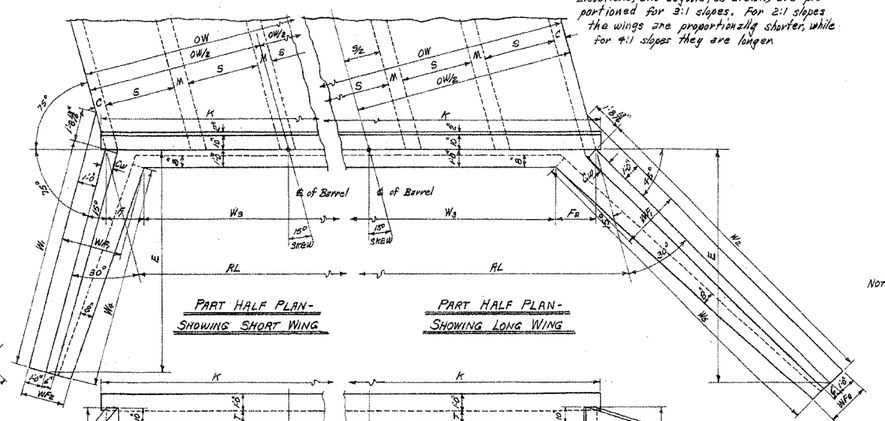
NOTE:- The length of the wings for the Plans, Elevations, and Layouts, as drawn, are proportioned for 3:1 slopes. For 2:1 slopes the wings are proportionally shorter, while for 4:1 slopes they are longer.



NOTE:- Plans and Elevations are not to scale.

TRIPLE BARREL CULVERT - 15° SKEW RIGHT FORWARD

Details of Culvert with 15° Skew Left Forward is reversed, see Layout at top center of sheet.



QUADRUPLE BARREL CULVERT- 15° SKEW RT. FWD.

Details of Culvert with 15° Skew Left Forward is reversed, see Layout at above center.

QUINTUPLE BARREL CULVERT- 15° SKEW RT. FWD.

Details of Culvert with 15° Skew Left Forward is reversed, see Layout above.

ROADWAY LENGTH RL — HEADWALL LENGTH K — APRON DIMENSION W_3

$RL = OW \times 1.035276$ — $K = RL + (6\frac{1}{2}'')$ — $W_3 = RL - (F_1 + F_2)$

USE WITH DRAWING No.	CLEAR SPAN S	CLEAR HEIGHT H	SKEW & WING DIMENSIONS F_1 & F_2	SINGLE BARREL CULVERT OW	RL	K	W_3	DOUBLE BARREL CULVERT OW	RL	K	W_3	TRIPLE BARREL CULVERT OW	RL	K	W_3	QUADRUPLE BARREL CULVERT OW	RL	K	W_3	QUINTUPLE BARREL CULVERT OW	RL	K	W_3
W-X152-1, W-X153-1 OR W-X154-1 (FOR H=8'0" OR LESS)	4'	2'	2'-0"	5'-0"	5'-2 1/8"	5'-8 5/8"	3'-2 5/8"	9'-8"	11'-0"	11'-6 5/8"	6'-0"	14'-4"	14'-10"	15'-4 5/8"	12'-10"	19'-0"	19'-8"	20'-2 5/8"	17'-8"	23'-8"	24'-6"	25'-0 5/8"	22'-6"
		3'	6'-9 3/8"	5'-0"	"	"	2'-9 3/8"	9'-8"	"	"	7'-2 5/8"	14'-4"	"	"	12'-0"	19'-0"	"	"	16'-10 5/8"	23'-8"	"	"	21'-8 5/8"
		4'	3'-7 5/8"	5'-0"	"	"	1'-7 1/8"	9'-8"	"	"	6'-10 1/8"	14'-4"	"	"	11'-2 1/8"	19'-0"	"	"	16'-0 1/8"	23'-8"	"	"	20'-10 1/8"
		5'	4'-5 5/8"	5'-0"	"	"	0'-8 5/8"	9'-8"	"	"	5'-6 5/8"	14'-4"	"	"	10'-4 5/8"	19'-0"	"	"	15'-2 5/8"	23'-8"	"	"	20'-0 5/8"
	5'	3'	2'-9 3/8"	6'-0"	6'-2 1/2"	6'-9"	3'-4 3/8"	11'-8"	12'-1"	12'-7 1/2"	3'-3 6"	17'-4"	17'-11 1/2"	18'-5 3/8"	15'-1 1/2"	23'-0"	23'-9 1/2"	24'-4 3/8"	21'-0"	28'-8"	29'-8 1/2"	30'-2 1/2"	26'-10 1/2"
		4'	3'-7 1/2"	6'-0"	"	"	2'-7"	11'-8"	"	"	8'-3 1/2"	17'-4"	"	"	14'-3 1/2"	23'-0"	"	"	20'-2 1/2"	28'-8"	"	"	26'-0 1/2"
		5'	4'-5 1/2"	6'-0"	"	"	1'-9 1/2"	11'-8"	"	"	7'-7 1/2"	17'-4"	"	"	13'-6"	23'-0"	"	"	19'-7 1/2"	28'-8"	"	"	25'-2 1/2"
		6'	5'-3 1/2"	6'-2"	6'-4 5/8"	6'-11 1/2"	1'-1 1/2"	11'-11"	12'-4"	12'-10 1/2"	7'-0 1/2"	17'-8"	18'-3 1/2"	18'-10"	13'-10"	23'-5"	24'-0 1/2"	24'-9 1/2"	18'-10"	29'-2"	30'-2 1/2"	30'-8 1/2"	26'-11 1/2"
		7'	6'-5 1/2"	6'-9"	6'-5 1/2"	7'-0 1/2"	ⓐ 0"	12'-1"	12'-6 1/2"	13'-0 1/2"	6'-0"	17'-11"	18'-6 1/2"	19'-1"	12'-10 1/2"	23'-9"	24'-7"	25'-1 1/2"	18'-1"	29'-7"	30'-7 1/2"	31'-2"	26'-1 1/2"
	6'	3'	2'-9 1/2"	7'-0"	7'-3"	7'-9 1/2"	4'-3 1/2"	13'-8"	14'-1 1/2"	14'-8 1/2"	11'-4"	20'-4"	21'-0 1/2"	21'-7"	18'-2 1/2"	27'-0"	27'-11 1/2"	28'-5"	25'-1 1/2"	33'-8"	34'-10 1/2"	35'-4 1/2"	32'-0 1/2"
		4'	3'-7 1/2"	7'-0"	"	"	3'-7 1/2"	13'-8"	"	"	10'-6 1/2"	20'-4"	"	"	17'-5"	27'-0"	"	"	24'-3 1/2"	33'-8"	"	"	31'-2 1/2"
		5'	4'-5 1/2"	7'-0"	"	"	2'-9 1/2"	13'-8"	"	"	9'-8 1/2"	20'-4"	"	"	16'-7 1/2"	27'-0"	"	"	23'-6"	33'-8"	"	"	30'-10 1/2"
		6'	5'-3 1/2"	7'-2"	7'-5"	7'-11 1/2"	2'-1 1/2"	13'-11"	14'-5"	14'-11 1/2"	9'-1 1/2"	20'-8"	21'-4 1/2"	21'-11 1/2"	16'-11 1/2"	27'-5"	28'-0 1/2"	28'-11"	23'-11 1/2"	34'-2"	35'-4 1/2"	35'-11"	30'-11 1/2"
		7'	6'-5 1/2"	7'-5"	7'-6"	8'-0 1/2"	1'-0 1/2"	14'-1"	14'-7"	15'-1 1/2"	8'-1 1/2"	20'-11"	21'-7"	22'-2 1/2"	15'-2"	27'-9"	28'-8 1/2"	29'-3 1/2"	22'-3"	34'-7"	35'-9 1/2"	36'-4"	29'-3 1/2"
		8'	7'-9 1/2"	7'-9"	7'-7 1/2"	8'-1 1/2"	ⓐ 0"	14'-2"	14'-8"	15'-2 1/2"	6'-1 1/2"	21'-0"	21'-8 1/2"	22'-3 1/2"	14'-0"	27'-10"	28'-9 1/2"	29'-4 1/2"	21'-1"	34'-8"	35'-10 1/2"	36'-5"	28'-2"
	7'	4'	3'-7 1/2"	8'-0"	8'-3 1/2"	8'-9 1/2"	4'-7 1/2"	15'-8"	16'-2 1/2"	16'-9"	12'-7"	23'-4"	24'-1 1/2"	24'-8 1/2"	20'-6 1/2"	31'-0"	32'-1 1/2"	32'-7 1/2"	28'-5 1/2"	38'-8"	40'-0 1/2"	40'-6 1/2"	36'-4 1/2"
		5'	4'-5 1/2"	8'-0"	"	"	3'-0"	15'-8"	"	"	11'-3 1/2"	23'-4"	"	"	19'-8 1/2"	31'-0"	"	"	27'-7 1/2"	38'-8"	"	"	35'-7"
		6'	5'-3 1/2"	8'-2"	8'-5 1/2"	9'-0"	3'-2 1/2"	16'-1"	16'-5 1/2"	17'-0 1/2"	11'-2 1/2"	23'-8"	24'-4"	25'-0 1/2"	19'-2 1/2"	31'-5"	32'-4 1/2"	33'-0 1/2"	27'-1"	39'-2"	40'-6 1/2"	41'-1"	35'-3 1/2"
		7'	6'-5 1/2"	8'-5"	8'-4 1/2"	9'-1"	2'-0 1/2"	16'-1"	16'-7 1/2"	17'-2 1/2"	10'-2"	23'-11"	24'-7 1/2"	25'-3 1/2"	18'-3 1/2"	31'-9"	32'-10 1/2"	33'-5"	26'-0 1/2"	39'-7"	40'-11 1/2"	41'-6 1/2"	34'-6"
		8'	7'-9 1/2"	8'-9"	8'-7 1/2"	9'-2"	0'-11"	16'-5"	16'-8 1/2"	17'-3 1/2"	9'-0 1/2"	24'-0"	24'-10 1/2"	25'-5 1/2"	17'-1 1/2"	31'-10"	32'-11 1/2"	33'-6"	25'-3"	39'-8"	41'-0 1/2"	41'-7 1/2"	33'-7 1/2"
	8'	4'	3'-7 1/2"	9'-0"	9'-3 1/2"	9'-10 1/2"	5'-8 1/2"	17'-8"	18'-2 1/2"	18'-10"	14'-8"	26'-4"	27'-3 1/2"	27'-9 1/2"	23'-7 1/2"	35'-0"	36'-2 1/2"	36'-9"	32'-7 1/2"	43'-8"	45'-2 1/2"	45'-9"	41'-7"
		5'	4'-5 1/2"	9'-2"	9'-5 1/2"	10'-0 1/2"	3'-0 1/2"	17'-11"	18'-4 1/2"	19'-1"	14'-1 1/2"	26'-8"	27'-7 1/2"	28'-1 1/2"	23'-2"	35'-5"	36'-8"	37'-2 1/2"	32'-2 1/2"	44'-2"	45'-8 1/2"	46'-3 1/2"	41'-3 1/2"
		6'	5'-3 1/2"	9'-2"	"	"	4'-3 1/2"	17'-11"	"	"	13'-3 1/2"	26'-8"	"	"	22'-8"	36'-5"	"	"	31'-8"	44'-2"	"	"	40'-5 1/2"
		7'	6'-5 1/2"	9'-3"	9'-4 1/2"	10'-1 1/2"	3'-1"	18'-1"	18'-8 1/2"	19'-2"	12'-2 1/2"	26'-11"	27'-10 1/2"	28'-4 1/2"	21'-11 1/2"	35'-9"	37'-1 1/2"	37'-7 1/2"	30'-6 1/2"	44'-7"	46'-1 1/2"	46'-8 1/2"	39'-1"
		8'	7'-9 1/2"	9'-6"	9'-5"	10'-10 1/2"	1'-11 1/2"	18'-2"	18'-9 1/2"	19'-4 1/2"	11'-1 1/2"	27'-0"	27'-11 1/2"	28'-5 1/2"	20'-3 1/2"	35'-10"	37'-1 1/2"	37'-7 1/2"	29'-1 1/2"	44'-10"	46'-2 1/2"	46'-9 1/2"	38'-6 1/2"
	9'	5'	4'-5 1/2"	10'-2"	10'-6 1/2"	11'-0 1/2"	6'-1"	19'-11"	20'-7 1/2"	21'-2"	16'-2"	29'-8"	30'-8 1/2"	31'-3"	26'-3 1/2"	39'-6"	41'-0 1/2"	41'-9 1/2"	36'-7 1/2"	49'-2"	50'-10 1/2"	51'-5 1/2"	46'-5 1/2"
		6'	5'-3 1/2"	10'-3"	10'-7 1/2"	11'-1 1/2"	5'-9 1/2"	20'-1"	20'-9 1/2"	21'-4"	15'-6 1/2"	29'-11"	30'-10 1/2"	31'-6"	25'-10 1/2"	39'-9"	41'-1 1/2"	41'-8 1/2"	35'-10 1/2"	49'-7"	51'-4"	51'-10 1/2"	46'-0 1/2"
		7'	6'-5 1/2"	10'-3"	"	"	4'-7 1/2"	20'-1"	"	"	14'-9 1/2"	29'-11"	"	"	24'-5 1/2"	39'-9"	"	"	34'-8"	49'-7"	"	"	44'-1 1/2"
		8'	7'-9 1/2"	10'-9"	10'-8 1/2"	11'-2"	3'-11 1/2"	20'-2"	20'-10 1/2"	21'-5"	13'-2"	30'-0"	31'-0 1/2"	31'-7 1/2"	23'-6 1/2"	39'-10"	41'-2 1/2"	41'-9 1/2"	33'-6 1/2"	49'-8"	51'-5"	51'-10 1/2"	43'-3 1/2"
	10'	5'	4'-5 1/2"	11'-2"	11'-6 1/2"	12'-1 1/2"	7'-1 1/2"	21'-11"	22'-8 1/2"	23'-2 1/2"	18'-3"	32'-8"	33'-9 1/2"	34'-4 1/2"	29'-1 1/2"	43'-5"	44'-11 1/2"	45'-6"	40'-1"	54'-2"	56'-1"	56'-7 1/2"	51'-7 1/2"
		6'	5'-3 1/2"	11'-3"	11'-7 1/2"	12'-2 1/2"	6'-9 1/2"	22'-1"	22'-10 1/2"	23'-5 1/2"	17'-7 1/2"	32'-11"	34'-1"	34'-7 1/2"	28'-3 1/2"	43'-9"	45'-3 1/2"	45'-10"	40'-0 1/2"	54'-7"	56'-6"	57'-0 1/2"	51'-3"
		7'	6'-5 1/2"	11'-3"	"	"	5'-7 1/2"	22'-1"	"	"	16'-9 1/2"	32'-11"	"	"	27'-7"	43'-9"	"	"	38'-3 1/2"	54'-7"	"	"	50'-1 1/2"
		8'	7'-9 1/2"	11'-9"	11'-8 1/2"	12'-3 1/2"	4'-7 1/2"	22'-2"	22'-11 1/2"	23'-6 1/2"	15'-2 1/2"	33'-0"	34'-2"	34'-8 1/2"	26'-5 1/2"	43'-10"	45'-4 1/2"	45'-11"	37'-9"	54'-8"	56'-7 1/2"	57'-1 1/2"	48'-10 1/2"
	11'	5'	4'-5 1/2"	12'-2"	12'-6 1/2"	13'-1 1/2"	7'-6"	24'-2"	25'-1 1/2"	25'-6 1/2"	19'-3"	36'-0"	37'-3 1/2"	37'-9 1/2"	32'-0"	47'-10"	49'-6 1/2"	50'-1 1/2"	44'-3"	—	—	—	—
		6'	5'-3 1/2"	12'-4"	12'-9 1/2"	13'-3 1/2"	6'-9 1/2"	24'-6"	25'-6 1/2"	26'-1"	18'-6 1/2"	36'-0"	"	"	30'-9 1/2"	47'-10"	"	"	43'-0 1/2"	—	—	—	—
		7'	6'-5 1/2"	12'-4"	"	"	5'-9 1/2"	24'-6"	"	"	17'-3 1/2"	36'-0"	"	"	29'-5 1/2"	47'-10"	"	"	41'-12 1/2"	—	—	—	—
		8'	7'-9 1/2"	12'-9"	"	"	4'-7"	24'-7"	"	"	16'-0 1/2"	36'-0"	"	"	28'-2"	47'-10"	"	"	40'-9 1/2"	—	—	—	—
	12'	5'	4'-5 1/2"	13'-1"	13'-9 1/2"	14'-4 1/2"	8'-6 1/2"	26'-8"	27'-7"	27'-7 1/2"	21'-10"	39'-0"	40'-10 1/2"	40'-11"	36'-1 1/2"	51'-10"	53'-8"	53'-12"	48'-9 1/2"	—	—	—	—
		6'	5'-3 1/2"	13'-4"	"	"	7'-3 1/2"	26'-8"	"	"	20'-7 1/2"	39'-0"	"	"	33'-10 1/2"	51'-10"	"	"	47'-2"	—	—	—	—
		7'	6'-5 1/2"	13'-4"	"	"	6'-1"	26'-8"	"	"	19'-4 1/2"	39'-0"	"	"	32'-8"	51'-10"	"	"	45'-11 1/2"	—	—	—	—
		8'	7'-9 1/2"	13'-9"	"	"	4'-11"	26'-8"	"	"	18'-1 1/2"	39'-0"	"	"	31'-5"	51'-10"	"	"	44'-7"	—	—	—	—
W-X152-2, W-X153-2 OR W-X154-2 (FOR H=9'0" & OVER)	7'	9'	8'-11 1/2"	8'-6"	8'-9 1/2"	9'-4"	ⓐ 0"	16'-5"	17'-0"	17'-6 1/2"	8'-0 1/2"	24'-4"	25'-2 1/2"	25'-8 1/2"	16'-3"	32'-8"	33'-7 1/2"	33'-11"	24'-3 1/2"	40'-8"	41'-7"	42'-1 1/2"	32'-7 1/2"
	8'	9'	8'-11 1/2"	9'-6"	9'-10"	10'-7 1/2"	0'-10 1/2"	18'-5"	19'-0 1/2"	19'-7 1/2"	10'-1 1/2"	27'-4"	28'-3 1/2"	28'-10"	19'-9 1/2"	36'-9"	37'-11 1/2"	38'-5"	27'-7 1/2"	45'-2"	46'-9 1/2"	47'-3 1/2"	37'-9 1/2"
		10'	10'-2"	9'-8"	10'-10 1/2"	10'-6 1/2"	ⓐ 0"	18'-8"	19'-3 1/2"	19'-10 1/2"	9'-2"	27'-8"	28'-7 1/2"	29'-2 1/2"	18'-5 1/2"	36'-8"	37'-11 1/2"	38'-6"	27'-2 1/2"	45'-8"	47'-3 1/2"	47'-9 1/2"	37'-1 1/2"
	9'	9'	8'-11 1/2"	10'-6"	10'-10 1/2"	11'-5"	1'-11 1/2"	20'-5"	21'-1 1/2"	21'-8 1/2"	12'-2 1/2"	30'-9"	31'-8 1/2"	31'-11 1/2"	22'-5 1/2"	40'-3"	41'-8"	42'-2 1/2"	32'-8 1/2"	50'-2"	51'-11 1/2"	52'-5 1/2"	42'-0"
		10'	10'-2"	10'-8"	11'-0 1/2"	11'-7"	0'-10 1/2"	20'-8"	21'-4 1/2"	21'-11 1/2"	11'-2 1/2"	30'-8"	31'-8"	32'-3 1/2"	21'-7"	40'-8"	42'-1 1/2"	42'-7 1/2"	31'-11 1/2"	50'-8"	52'-5 1/2"	53'-0"	42'-3 1/2"
		11'	11'-4 1/2"	10'-10"	11'-2 1/2"	11'-8"	ⓐ 0"	20'-10"	21'-6 1/2"	22'-1"	10'-2 1/2"	30'-10"	31'-11"	32'-5 1/2"	20'-11 1/2"	40'-10"	42'-3 1/2"	42'-9 1/2"	30'-10 1/2"	50'-10"	52'-7 1/2"	53'-2"	41'-2 1/2"
	10'	9'	8'-11 1/2"	11'-4"	11'-10 1/2"	12'-5 1/2"	2'-11 1/2"	22'-5"	23'-3 1/2"	23'-9"	14'-3 1/2"	33'-4"	34'-4 1/2"	35'-0 1/2"	25'-1 1/2"	44'-5"	45'-9 1/2"	46'-4 1/2"	36'-10 1/2"	55'-2"	57'-1 1/2"	59'-7 1/2"	48'-2"
		10'	10'-2"	11'-8"	12'-1"	12'-7 1/2"	1'-11"	22'-8"	23'-6 1/2"	24'-0"	13'-8 1/2"	33'-8"	34'-10 1/2"	35'-5 1/2"	24'-10 1/2"	44'-8"	46'-2 1/2"	46'-9 1/2"	36'-1"	55'-8"	57'-7 1/2"	58'-2"	47'-5 1/2"
		11'	11'-4 1/2"	11'-10"	12'-3"	12'-9 1/2"	0'-10 1/2"	22'-10"	23'-7 1/2"	24'-2"	12'-2"	33'-10"	35'-0 1/2"	35'-6 1/2"	23'-7 1/2"	44'-10"	46'-5"	46'-11 1/2"	35'-0"	55'-10"	57'-9 1/2"	58'-4"	46'-5"
		12'	12'-7 1/2"	12'-0"	12'-5 1/2"	12'-11 1/2"	ⓐ 0"	23'-0"	23'-9 1/2"	24'-4 1/2"	11'-2 1/2"	34'-0"	35'-2 1/2"	35'-8 1/2"	22'-7"	45'-0"	46'-7"	47'-1 1/2"	33'-11 1/2"	56'-0"	57'-11 1/2"	58'-6"	45'-9 1/2"
	11'	9'	8'-11 1/2"	12'-6"	12'-11 1/2"	13'-5 1/2"	4'-0"	24'-5"	25'-3 1/2"	25'-9 1/2"	16'-8"	35'-4"	37'-1 1/2"	37'-7 1/2"	28'-5"	46'-8"	49'-1 1/2"	50'-1"	41'-0 1/2"	—	—	—	—
		10'	10'-2"	12'-8"	13'-1 1/2"	13'-7 1/2"	2'-11 1/2"	24'-8"	25'-6 1/2"	26'-1"	15'-4 1/2"	35'-8"	37'-1 1/2"	38'-1"	27'-3 1/2"	46'-8"	50'-0 1/2"	50'-11"	40'-2 1/2"	—	—	—	—
		11'	11'-4 1/2"	12'-10"	13'-3 1/2"	13'-10"	1'-10 1/2"	24'-10"	25'-8 1/2"	26'-3"	14'-3 1/2"	36'-0"	38'-1 1/2"	38'-8"	26'-8"	46'-10"	50'-0 1/2"	51'-1"	39'-1"	—	—	—	—
		12'	12'-7 1/2"	13'-0"	13'-5 1/2"	14'-0"	0'-10 1/2"	25'-0"	25'-10 1/2"	26'-5"	13'-3 1/2"	37'-0"	38'-3 1/2"	38'-10"	25'-8 1/2"	49'-0"	50'-8 1/2"	51'-3 1/2"	38'-1 1/2"	—	—	—	—
	12'	9'	8'-11 1/2"	13'-2"	13'-7 1/2"	14'-2 1/2"	5'-0 1/2"	26'-5"	27'-4 1/2"	27'-10 1/2"	18'-5"	38'-4"	40'-3 1/2"	41'-3"	31'-3 1/2"	52'-3"	54'-1 1/2"	54'-7 1/2"	45'-7 1/2"	—	—	—	—
		10'	10'-2"	13'-8"	14'-1 1/2"	14'-8 1/2"	3'-11 1/2"	26'-8"	27'-7 1/2"	28'-1 1/2"	17'-5 1/2"	38'-8"	40'-10 1/2"	41'-7 1/2"	30'-10 1/2"	52'-8"	54'-6 1/2"	55'-0 1/2"	44'-7 1/2"	—	—	—	—
		11'	11'-4 1/2"	13'-10"	14'-3 1/2"	14'-10 1/2"	2'-11 1/2"	26'-10"	27'-9 1/2"	28'-3 1/2"	16'-8 1/2"	39'-0"	41'-2 1/2"	41'-9 1/2"	29'-10 1/2"	52'-10"	54'-8 1/2"	55'-2 1/2"	43'-3 1/2"	—	—	—	—
		12'	12'-7 1/2"	14'-0"	14'-5 1/2"	15'-0 1/2"	1'-10 1/2"	27'-0"	27'-11 1/2"	28'-6"	15'-8"	40'-0"	41'-5 1/2"	41'-11 1/2"	28'-9 1/2"	53'-0"	54'-10 1/2"	55'-4 1/2"	42'-3"	—	—	—	—

(A) Special case for these boxes. See Detail 'A' and Table 'A' for revised values of F_1, F_2, W_4 and W_5, when apron width is more than 1'-0" and $W_3 = 0$.
For Details 'A' and Table 'A' for each slope, see Drawing Nos. W-X152-1, W-X152-2, or W-X153-1, W-X153-2, or W-X154-1, W-X154-2.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawings for 15° Skews for each slope as listed below.

2:1 Slopes	3:1 Slopes	4:1 Slopes
W-X152-1 or W-X152-2	W-X153-1 or W-X153-2	W-X154-1 or W-X154-2.

This drawing to be used in conjunction with Std. Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-115X-0	R-215X-0	R-315X-0	R-415X-0	R-515X-0
R-115X-1	R-215X-1	R-315X-1	R-415X-1	R-515X-1
	R-215X-2	R-315X-2		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS

FOR

REINFORCED CONCRETE BOX CULVERTS

15° SKEW

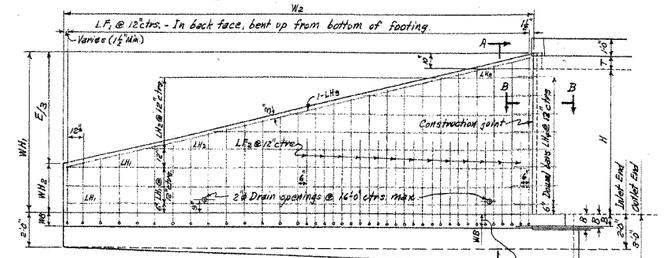
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1, 3:1 & 4:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER H=2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'.

STANDARD DRAWING NO. W-X15

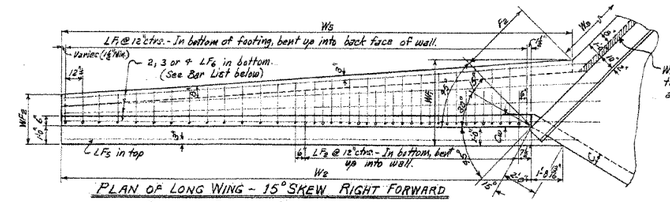
Designed by:- W.C.H. 5-22-63 Checked by:- J.E.M. 6-20-63
Traced by:- W.C.H. 6-13-63 Checked by:-
Quantities by:- Checked by:-

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			213	
JOB No.					



REAR ELEVATION OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING

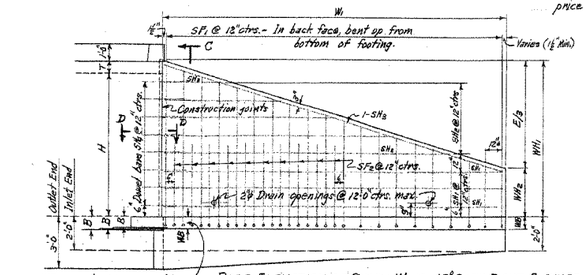
WB may be more, equal to, or less than the bottom slab thickness B.



PLAN OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING.

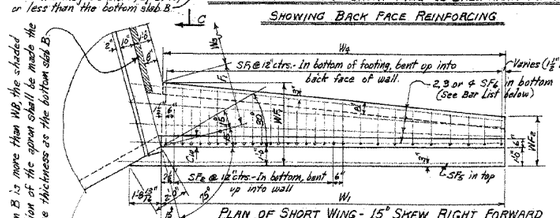
When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B.

Note:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.



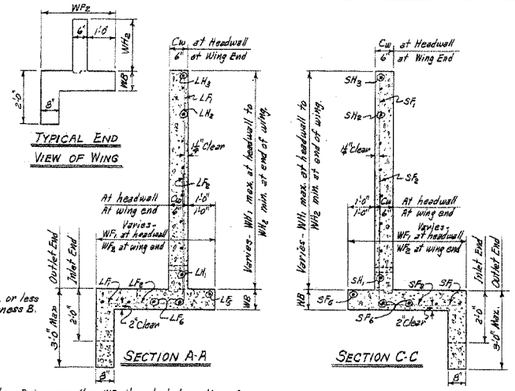
WB may be more, equal to, or less than the bottom slab B.

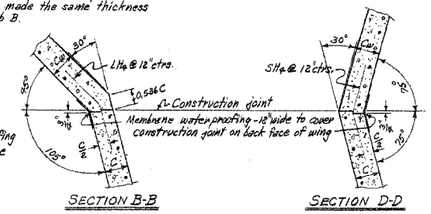
REAR ELEVATION OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING



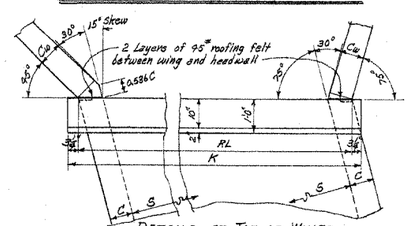
When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B.

PLAN OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING

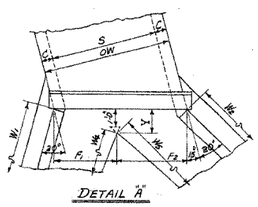




SECTIONS THRU CONSTRUCTION JOINTS



DETAILS AT TOP OF WINGS
15° SKEW RIGHT FORWARD



DETAIL "A"

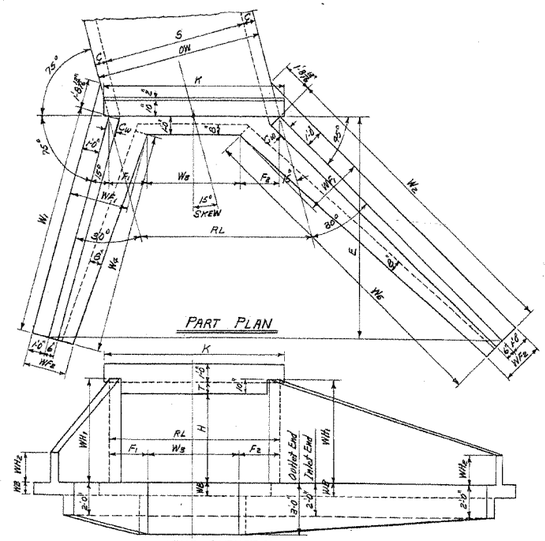
TABLE "A" - DIMENSIONS FOR DETAIL "A"

S	H	F₁	F₂	W₄	W₅	W₃	Y
5'	7'	3'-0"	9'-5⅝"	16'-10⅝"	25'-0⅝"	0"	1'-0⅝"
6'	8'	3'-6"	9'-1⅞"	19'-0⅝"	28'-3½"	0"	1'-1"

REGULAR WING DIMENSIONS - 3:1 SLOPES

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEADWALL	WINGWALL HEIGHTS AT HEADWALL	WINGWALL HEIGHTS AT END OF WING	WIDTHS OF WING FOOTINGS AT HEADWALL	WIDTHS OF WING FOOTINGS AT END OF WING	FOOTING DIMENSION - PARALLEL WITH HEADWALL SHORT WING	FOOTING DIMENSION - PARALLEL WITH HEADWALL LONG WING	PERPENDICULAR DIST. FROM END OF WING	LENGTHS OF WINGWALLS SHORT WING	LENGTHS OF WINGWALLS LONG WING	INSIDE FOOTING DIMENSIONS SHORT WING	INSIDE FOOTING DIMENSIONS LONG WING	* QUANTITY PER WING - CLASS S CONCRETE - INLET END SHORT WING	INLET END LONG WING	OUTLET END SHORT WING	OUTLET END LONG WING
H	WB	Cw	WH₁	WH₂	WF₁	WF₂	F₁	F₂	E	W₁	W₂	W₄	W₅	CU.YD.	CU.YD.	CU.YD.	CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-4"	2'-0"	1'-1⅜"	0'-10⅞"	6'-6"	6'-8⅝"	9'-2⅝"	6'-0⅝"	9'-1⅞"	0.789	1.094	0.874	1.212
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-1⅞"	1'-5⅝"	1'-4⅝"	8'-6"	8'-9½"	12'-0⅝"	8'-2⅝"	12'-3⅝"	1.186	1.650	1.300	1.808
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-3"	1'-9⅝"	1'-10"	10'-6"	10'-10⅝"	14'-10⅝"	10'-2⅝"	15'-5⅝"	1.654	2.305	1.797	2.502
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-6½"	2'-1⅞"	2'-3⅜"	12'-6"	12'-11⅝"	17'-8⅝"	12'-6⅝"	18'-7⅝"	2.196	3.059	2.363	3.295
		7"	5'-10"	1'-8"	3'-4"	2'-6½"	2'-1⅞"	2'-3⅜"	12'-6"	12'-11⅝"	17'-8⅝"	12'-6⅝"	18'-7⅝"	2.287	3.188	2.455	3.424
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅞"	2'-9⅜"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-9"	3.052	4.242	3.246	4.517
		7½"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅞"	2'-9⅜"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-9"	3.114	4.329	3.309	4.605
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-5⅞"	2'-9⅜"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-9"	3.177	4.417	3.371	4.693
* 7'	8½"	7½"	7'-10"	2'-9"	4'-2"	2'-7½"	3'-0⅞"	3'-5⅜"	16'-6"	17'-1"	23'-4"	16'-10⅝"	25'-1"	3.998	5.560	4.220	5.877
		8"	7'-10"	2'-9"	4'-2"	2'-7½"	3'-0⅞"	3'-5⅜"	16'-6"	17'-1"	23'-4"	16'-10⅝"	25'-1"	4.079	5.675	4.301	5.991
* 8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-4⅞"	3'-8⅜"	18'-6"	19'-1⅜"	26'-8"	19'-1⅛"	28'-5"	5.111	7.111	5.360	7.470

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W_3.
* See Table "A" for special values of F_1 & F_2 and W_4 & W_5 for Single 5'x7' and 6'x8' Box Culverts.



SINGLE BARREL CULVERT - 15° SKEW RIGHT FORWARD
Details of Culvert with 15° Skew Left Forward is reversed, see Drwg. No. W-X.15

TYPICAL WING DETAILS

Note:- For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X.15. For values of RL, K, and W_3 for each box, see the above Std. also.

MEMBRANE:- A membrane waterproofing 18" wide, consisting of three mappings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

REVISIONS:- Membrane Added. 5-10-66 W.C.H.

QUANTITIES

S	CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	⊛ STEEL - WINGS PER 4'	CLASS S CONCRETE - 4 WINGS - HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS - SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
		Cw	WB		LB.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.
4'	2'	6"	7"		117	4.79	5.78	6.77	7.77	8.76
	3'	6"	7"		176	6.65	7.64	8.63	9.63	10.62
	4'	6"	7"		267	8.85	9.84	10.84	11.83	12.82
	5'	6"	7"		379	11.90	12.98	13.98	14.97	15.36
	6'	7"	8"		626	15.95	16.96	17.98	18.51	19.53
5'	3'	6"	7"		176	6.87	8.07	9.28	10.48	11.69
	4'	6"	7"		267	9.08	10.28	11.49	12.69	13.90
	5'	6"	7"		379	11.61	12.81	14.02	15.23	16.44
	6'	7"	8"		626	15.67	16.90	18.14	19.38	20.61
	7'	7½"	8½"		1210	20.11	21.36	22.62	23.88	25.14
6'	3'	6"	7"		176	7.09	8.52	9.92	11.36	12.78
	4'	6"	7"		267	9.29	10.73	12.18	13.54	14.98
	5'	6"	7"		379	11.83	13.26	14.67	16.10	17.53
	6'	7"	8"		626	15.88	17.35	18.79	20.25	21.70
	7'	7½"	8½"		1210	20.33	21.81	23.28	24.76	26.24
	8'	8"	9"		1533	25.56	27.05	28.53	30.02	31.50
7'	4'	6"	7"		267	9.52	11.18	12.81	14.47	16.09
	5'	6"	7'		379	12.05	13.72	15.35	17.01	18.63
	6'	7'	8"		626	16.12	17.80	19.45	21.13	22.78
	7'	7½	8½		1210	20.56	22.26	23.94	25.64	27.33
	8'	8"	9"		1533	25.80	27.50	29.20	30.90	32.60
8'	4'	6"	7"		267	9.75	11.65	13.51	15.41	17.23
	5'	7"	7"		379	12.76	14.68	16.55	18.47	20.31
	6'	7"	8"		626	16.39	18.26	20.14	22.06	23.90
	7'	7½	8½		1210	20.78	22.72	24.62	26.55	28.42
	8'	8"	9'		1533	26.03	27.96	29.86	31.80	33.71
9'	5'	7"	7"		379	12.99	15.15	17.25	19.40	21.45
	6'	7½	8"		626	16.89	19.07	21.19	23.36	25.42
	7'	7½	8½		1210	21.01	23.19	25.31	27.48	29.54
	8'	8"	9"		1533	26.25	28.42	30.55	32.72	34.78
10'	5'	7"	7"		379	18.23	16.42	17.95	20.24	22.59
	6'	7½	8"		626	17.13	19.54	21.89	24.20	26.56
	7'	7½	8½		1210	21.44	23.66	26.01	28.32	30.68
	8'	8"	9"		1533	26.48	28.88	31.25	33.56	35.92
11'	6'	8"	8"		626	17.67	20.37	22.92	25.48	——
	7'	8"	8½		1210	21.88	24.55	27.13	29.69	——
	8'	8"	9"		1533	26.70	29.37	31.94	34.52	——
12'	6'	8"	8"		626	17.91	20.84	23.64	26.46	——
	7'	8"	8½		1210	22.11	25.04	27.85	30.67	——
	8'	8"	9"		1533	26.93	29.86	32.67	35.49	——

⊛ For reinforcing steel in Headwalls and Aprons, see Drawings listed below.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:-
This drawing to be used in conjunction with Std. Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-115X-0	R-215X-0	R-315X-0	R-415X-0	R-515X-0
R-115X-1	R-215X-1	R-315X-1	R-415X-1	R-515X-1
	R-215X-2	R-215X-2		

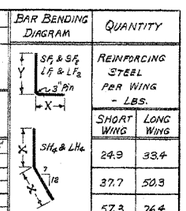
BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT H	WING LOCATION: SHORT or LONG	SF₁ & LF₁ BENT (In bottom of footing, bent up into back face of wing. One bar of each length.) SIZE	SPACING	NO. REQ'D	LENGTHS VARY MIN.	MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.	SF₂ & LF₂ BENT (In bottom of footing, bent up into back face of wing. Alt. with F₁ bars.) SIZE	SPACING	NO. REQ'D	LENGTH	X	Y
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	1'-0"	3'-10"	—	—	—	—	—	—
	Long	#3	12"	10	1'-7"	3'-11"	0'-8"	1'-0"	0'-10"	3'-0"	—	—	—	—	—	—
3'	Short	#3	12"	9	2'-2"	5'-8"	0'-10"	1'-4"	1'-5"	4'-0"	—	—	—	—	—	—
	Long	#3	12"	13	1'11"	5'-2"	0'-10"	1'-3"	1'-2"	4'-0"	—	—	—	—	—	—
4'	Short	#3	12"	11	2'-7"	6'-7"	0'-11"	1'-8"	1'-9"	5'-0"	—	—	—	—	—	—
	Long	#3	12"	15	2'-6"	6'-6"	0'-11"	1'-7"	1'-8"	5'-0"	—	—	—	—	—	—
5'	Short	#3	12"	13	3'-1"	7'-11"	1'-1"	2'-0"	2'-1"	6'-0"	#3	12"	4	3'-6"	1'-1"	2'-6"
	Long	#3	12"	18	3'-0"	7'-10"	1'-1"	1'-11"	2'-0"	6'-0"	#3	12"	5	3'-6"	1'-1"	2'-6"
6'	Short	#4	12"	16	3'-6"	9'-4"	1'-2"	2'-6"	2'-8"	7'-1"	#3	12"	4	4'-6"	1'-4"	3'-3"
	Long	#4	12"	21	3'-5"	9'-3"	1'-2"	2'-5"	2'-8"	7'-1"	#3	12"	5	4'-6"	1'-4"	3'-3"
7'	Short	#4	12"	18	3'-9"	10'-9"	1'-3"	2'-10"	2'-7"	8'-1"	#4	12"	7	5'-6"	1'-7"	4'-0"
	Long	#4	12"	24	3'-10"	10'-8"	1'-3"	2'-10"	2'-8"	8'-1"	#4	12"	9	5'-6"	1'-7"	4'-0"
8'	Short	#4	12"	20	4'-9"	12'-5"	1'-5"	3'-4"	3'-0"	9'-2"	#4	12"	10	6'-6"	1'-10"	4'-9"
	Long	#4	12"	27	4'-9"	12'-8"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	13	6'-6"	1'-10"	4'-9"

CLEAR HEIGHT H	WING LOCATION: SHORT or LONG	SF₃ & LF₃ STRAIGHT (Longitudinal in top of wing footing heel.) SIZE	NO. REQ'D	LENGTH	SF₄ & LF₄ STRAIGHT (Longitudinal in bottom of wing footing toe.) SIZE	NO. REQ'D	LENGTH	SH₁ & LH₁ BENT (Horizontal in back face of wing.) SIZE	SPACING	NO. REQ'D	LENGTH
2'	Short	#3	1	9'-2"	#3	2	7'-10"	#3	12"	1	6'-5"
	Long	#3	1	11'-8"	#3	2	10'-10"	#3	12"	1	8'-11"
3'	Short	#3	1	11'-8"	#3	2	10'-0"	#3	12"	1	8'-6"
	Long	#3	1	14'-6"	#3	2	14'-0"	#3	12"	1	11'-9"
4'	Short	#3	1	13'-4"	#3	3	12'-2"	#3	12"	1	10'-7"
	Long	#3	1	17'-1"	#3	3	17'-2"	#3	12"	1	14'-7"
5'	Short	#3	1	15'-5"	#3	3	14'-5"	#3	12"	2	12'-8"
	Long	#3	1	20'-2"	#3	3	20'-4"	#3	12"	2	17'-5"
6'	Short	#3	1	17'-4"	#3	3	16'-6"	#3	12"	2	14'-3"
	Long	#3	1	23'-10"	#3	3	23'-2"	#3	12"	2	20'-3"
7'	Short	#4	1	19'-7"	#4	4	18'-9"	#4	12"	2	16'-9"
	Long	#4	1	25'-10"	#4	4	25'-10"	#4	12"	2	23'-1"
8'	Short	#4	1	21'-8"	#4	4	21'-0"	#4	12"	3	18'-11"
	Long	#4	1	28'-3"	#4	4	30'-3"	#4	12"	3	25'-11"

CLEAR HEIGHT H	WING LOCATION: SHORT or LONG	SH₂ & LH₂ STRAIGHT (Horizontal in back face of wing. One bar of each length.) SIZE	SPACING	NO. REQ'D	LENGTHS VARY MAX.	MIN.	SH₃ & LH₃ (In back face of wing at top - on slope.) SIZE	NO. REQ'D	LENGTH	SH₄ & LH₄ BENT (Dowels thru construction joint at headwall.) SIZE	SPACING	NO. REQ'D	LENGTH	X
2'	Short	#3	12"	1	—	3'-6"	#3	1	6'-10"	#3	12"	2	2'-8"	1'-4"
	Long	#3	12"	1	—	4'-8"	#3	1	9'-1"	#3	12"	2	"	"
3'	Short	#3	12"	2	6'-7"	3'-6"	#3	1	9'-0"	#3	12"	3	"	"
	Long	#3	12"	2	8'-11"	4'-8"	#3	1	12'-0"	#3	12"	3	"	"
4'	Short	#3	12"	3	9'-8"	3'-6"	#3	1	11'-8"	#3	12"	4	"	"
	Long	#3	12"	3	12'-2"	4'-8"	#3	1	14'-11"	#3	12"	4	"	"
5'	Short	#3	12"	3	9'-8"	3'-6"	#3	1	13'-0"	#3	12"	5	"	"
	Long	#3	12"	3	13'-2"	4'-8"	#3	1	17'-10"	#3	12"	5	"	"
6'	Short	#3	12"	4	12'-9"	3'-6"	#3	1	15'-6"	#3	12"	6	"	"
	Long	#3	12"	4	17'-5"	4'-8"	#3	1	20'-9"	#3	12"	6	2'-8"	1'-4"
7'	Short	#4	12"	5	15'-10"	3'-6"	#4	1	17'-8"	#4	12"	7	3'-6"	1'-9"
	Long	#4	12"	5	21'-8"	4'-8"	#4	1	23'-8"	#4	12"	7	"	"
8'	Short	#4	12"	5	19'-10"	3'-6"	#4	1	19'-10"	#4	12"	8	"	"
	Long	#4	12"	5	21'-8"	4'-8"	#4	1	26'-11"	#4	12"	8	3'-6"	1'-9"

BAR BENDING DIAGRAM



QUANTITY - REINFORCING STEEL PER WING - LBS. SHORT WING	LONG WING
24.9	33.4
37.7	50.3
57.3	76.4
81.1	108.4
134.8	178.1
259.5	345.2
328.0	438.3

NOTE:- Bars for short wing shall be marked with prefix letter "S", while those for long wing shall be marked with letter "L".

Designed By- W.C.H. 5-13-63 Checked By- RJHS - 8-7-63
Drawn By- W.C.H. 6-20-63 Checked By-
Quantities By- W.C.H. 9-23-63 Checked By-

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
15° SKEW

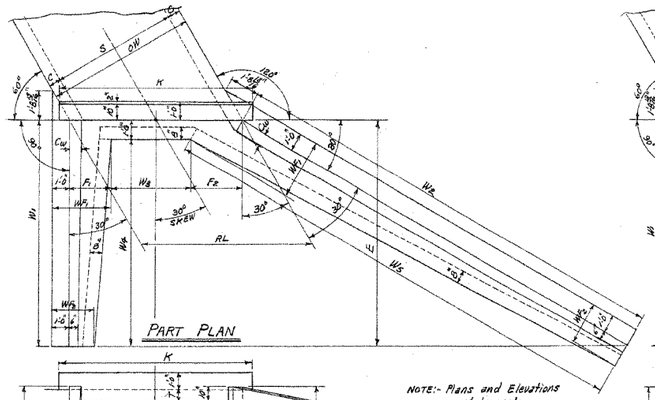
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

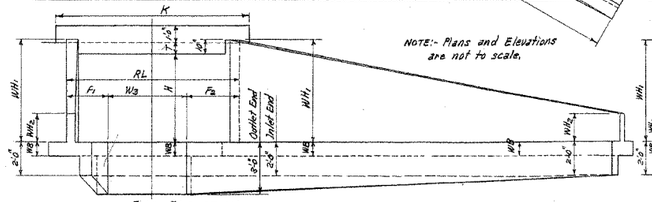
STANDARD DRAWING NO. W-X153-1

Reshot 3-8-93

191

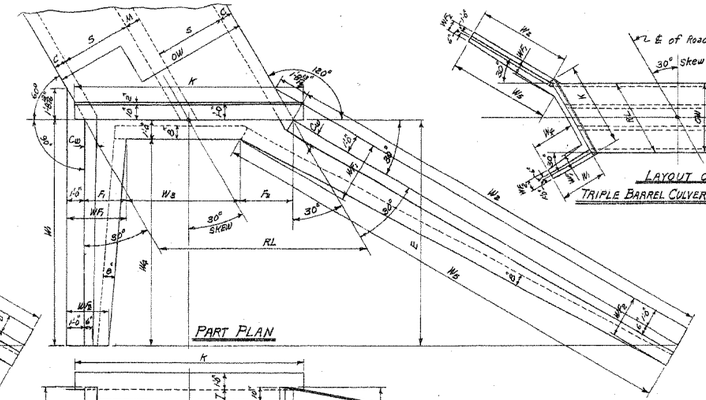
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			214	
JOB No.					

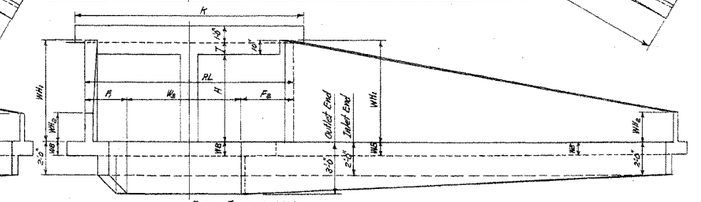




SINGLE BARREL CULVERT-30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Layout below.

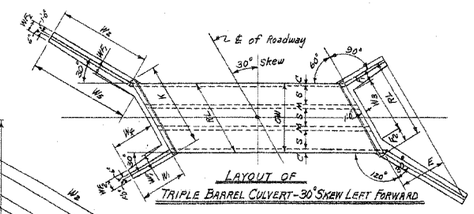




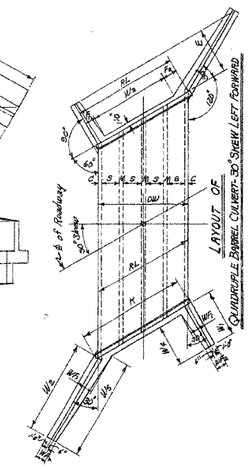
DOUBLE BARREL CULVERT-30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Layout below.

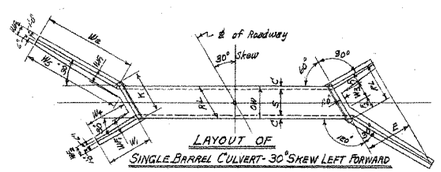
NOTE:- The length of the wings for the Plans, Elevations, and Layouts, as drawn, are proportioned for 3:1 slopes. For 2:1 slopes the wings are proportionally shorter, while for 4:1 slopes they are longer.



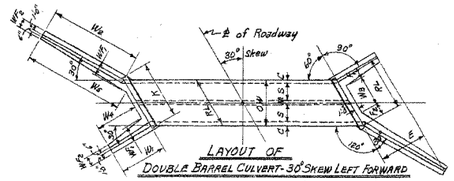
LAYOUT OF TRIPLE BARREL CULVERT-30° SKEW LEFT FORWARD



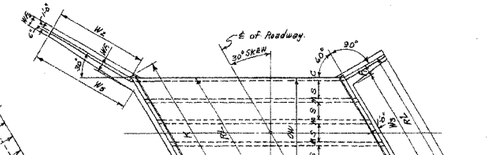
LAYOUT OF QUADRUPLE BARREL CULVERT-30° SKEW LEFT FORWARD



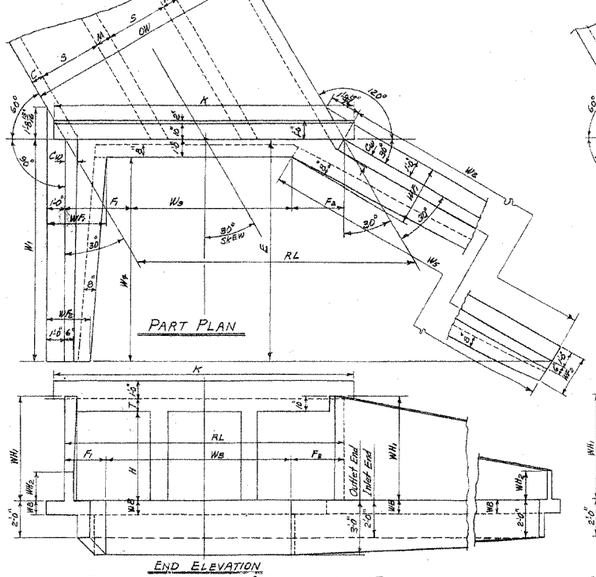
LAYOUT OF SINGLE BARREL CULVERT-30° SKEW LEFT FORWARD



LAYOUT OF DOUBLE BARREL CULVERT-30° SKEW LEFT FORWARD

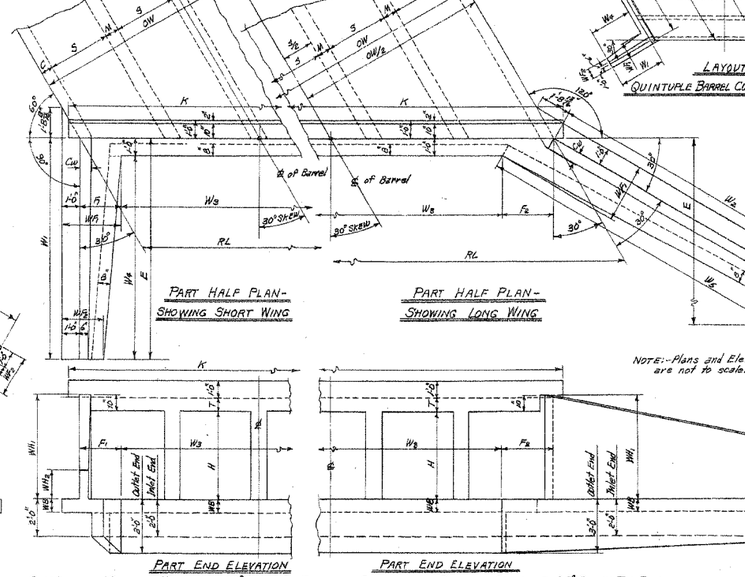


LAYOUT OF QUINTUPLE BARREL CULVERT-30° SKEW LEFT FORWARD



TRIPLE BARREL CULVERT-30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Layout at top center of sheet.



QUADRUPLE BARREL CULVERT-30° SKEW RT. FWD.

Details of Culvert with 30° Skew Left Forward is reversed, see Layout at above center.

QUINTUPLE BARREL CULVERT-30° SKEW RT. FWD.

Details of Culvert with 30° Skew Left Forward is reversed, see Layout above.

ROADWAY LENGTH RL — $RL = OW \times 1.1547$

HEADWALL LENGTH K — $K = RL + (1\frac{1}{8}\text{"}\ \text{or}\ 1\frac{3}{8}\text{"})$

APRON DIMENSION W_3 — $W_3 = RL - (F_1 + F_2)$

USE WITH DRAWING No.	CLEAR SPAN S	CLEAR HEIGHT H	SUM OF FOOTING EXTENSIONS $F_1 \& F_2$	SINGLE BARREL CULVERT OW	SINGLE BARREL CULVERT RL	SINGLE BARREL CULVERT K	SINGLE BARREL CULVERT W_3	DOUBLE BARREL CULVERT OW	DOUBLE BARREL CULVERT RL	DOUBLE BARREL CULVERT K	DOUBLE BARREL CULVERT W_3	TRIPLE BARREL CULVERT OW	TRIPLE BARREL CULVERT RL	TRIPLE BARREL CULVERT K	TRIPLE BARREL CULVERT W_3	QUADRUPLE BARREL CULVERT OW	QUADRUPLE BARREL CULVERT RL	QUADRUPLE BARREL CULVERT K	QUADRUPLE BARREL CULVERT W_3	QUINTUPLE BARREL CULVERT OW	QUINTUPLE BARREL CULVERT RL	QUINTUPLE BARREL CULVERT K	QUINTUPLE BARREL CULVERT W_3
W-X302-1, W-X303-1 OR W-X304-1. (FOR H=8'0" OR LESS)	4'	2'	2'-3⅛"	5'-0"	5'-2⅝"	6'-11⅝"	3'-6"	9'-8"	11'-2"	12'-3⅜"	8'-10⅝"	14'-4"	16'-6⅝"	17'-8½"	14'-3⅝"	19'-0"	21'-11⅝"	23'-1"	19'-8"	23'-8"	27'-4"	28'-5⅝"	25'-0⅝"
		3'	3'-3⅛"	5'-0"	"	"	2'-6"	9'-8"	"	"	7'-10⅝"	14'-9"	"	"	13'-3⅝"	19'-0"	"	"	18'-8"	23'-8"	"	"	24'-0⅝"
		4'	4'-3⅛"	5'-0"	"	"	1'-6"	9'-8"	"	"	6'-10⅝"	14'-9"	"	"	12'-8⅝"	19'-0"	"	"	17'-8"	23'-8"	"	"	23'-0⅝"
		5'	5'-3⅛"	5'-0"	5'-9⅝"	6'-11⅝"	0'-6"	9'-8"	11'-2"	12'-3⅜"	5'-10⅝"	14'-4"	16'-6⅝"	17'-8½"	11'-3⅝"	19'-0"	21'-11⅝"	23'-1"	16'-8"	23'-8"	27'-4"	28'-5⅝"	22'-0⅝"
		6'	6'-3⅛"	5'-2"	5'-11⅝"	7'-1⅝"	Ⓐ 0"	9'-11"	11'-5¼"	12'-7⅛"	5'-2⅛"	14'-8"	16'-11⅝"	18'-1"	10'-8"	19'-5"	22'-5"	24'-7"	16'-1⅝"	24'-2"	27'-10⅝"	29'-0⅝"	21'-7⅝"
	5'	3'	3'-3⅛"	6'-0"	6'-11⅝"	8'-1"	3'-7⅝"	11'-8"	13'-5⅝"	14'-7⅝"	10'-2⅛"	17'-4"	20'-0⅝"	21'-2"	16'-9"	22'-0"	26'-6⅝"	27'-8⅝"	23'-3⅛"	28'-8"	33'-1⅝"	34'-3"	29'-10"
		4'	4'-3⅛"	6'-0"	"	"	2'-7⅝"	11'-8"	"	"	9'-2⅛"	17'-4"	"	"	15'-9"	23'-0"	"	"	22'-3⅛"	28'-8"	"	"	28'-11⅝"
		5'	5'-3⅛"	6'-0"	6'-11⅝"	8'-1"	1'-7⅝"	11'-8"	13'-5⅝"	14'-7⅝"	8'-2⅛"	17'-4"	20'-0⅝"	21'-2"	14'-9"	23'-0"	26'-6⅝"	27'-8⅝"	21'-3⅛"	28'-8"	33'-1⅝"	34'-3"	27'-11⅝"
		6'	6'-3⅛"	6'-2"	7'-1½"	8'-3⅝"	0'-10⅝"	11'-11"	13'-9⅝"	14'-11"	7'-5⅝"	17'-8"	20'-4⅝"	21'-6⅝"	14'-1"	23'-5"	27'-0⅝"	28'-2⅝"	20'-9⅝"	29'-2"	33'-8⅝"	34'-10"	27'-5"
		7'	7'-3⅛"	6'-3"	7'-2⅝"	8'-4⅝"	Ⓐ 0"	12'-1"	13'-11⅝"	15'-1⅝"	6'-2⅝"	17'-11"	20'-8⅝"	21'-10"	12'-11"	23'-9"	27'-5⅝"	28'-7"	19'-8"	29'-7"	34'-2"	35'-3⅝"	26'-9⅝"
	6'	3'	3'-3½"	7'-0"	8'-1"	9'-2⅝"	4'-3⅝"	13'-8"	15'-9⅝"	16'-11⅝"	12'-6⅝"	20'-4"	23'-5⅝"	24'-7⅝"	20'-2⅝"	27'-0"	31'-2⅝"	32'-4"	27'-11"	33'-8"	38'-10⅝"	40'-0⅝"	35'-7⅝"
		4'	4'-3½"	7'-0"	"	"	3'-3½"	13'-8"	"	"	11'-6⅝"	20'-4"	"	"	19'-2⅝"	27'-0"	"	"	26'-11"	33'-8"	"	"	34'-11⅝"
		5'	5'-3½"	7'-0"	8'-1"	9'-2⅝"	2'-9⅝"	13'-8"	15'-9⅝"	16'-11⅝"	10'-6⅝"	20'-4"	23'-5⅝"	24'-7⅝"	18'-2⅝"	27'-0"	31'-2⅝"	32'-4"	25'-1"	33'-8"	38'-10⅝"	40'-0⅝"	33'-7⅝"
		6'	6'-3½"	7'-2"	8'-3⅝"	9'-5⅝"	2'-0"	13'-11"	16'-0⅝"	17'-2⅝"	9'-9⅝"	20'-8"	23'-10⅝"	25'-0⅝"	17'-7⅝"	27'-5"	31'-7⅝"	32'-9⅝"	25'-9⅝"	34'-2"	39'-5⅝"	40'-7⅝"	33'-2⅝"
		7'	7'-3½"	7'-3"	8'-4⅝"	9'-6⅝"	0'-7⅝"	14'-1"	16'-3⅝"	17'-5"	8'-6"	20'-11"	24'-1⅝"	25'-3⅝"	16'-4⅝"	27'-9"	32'-0"	33'-2⅝"	24'-3⅝"	34'-7"	39'-10⅝"	41'-1"	32'-2"
		8'	8'-3½"	7'-4"	8'-5⅝"	9'-7⅝"	Ⓐ 0"	14'-2"	16'-4⅝"	17'-6⅝"	7'-1"	21'-0"	24'-3"	25'-4⅝"	15'-1⅝"	27'-10"	32'-1⅝"	33'-3⅝"	22'-10⅝"	34'-8"	40'-0⅝"	41'-2⅝"	30'-9⅝"
	7'	4'	4'-3½"	8'-0"	9'-2⅝"	10'-5⅝"	4'-1⅝"	15'-8"	18'-1⅛"	19'-3"	13'-9⅝"	23'-4"	26'-11⅝"	28'-1⅛"	22'-8"	31'-0"	35'-9⅝"	36'-11⅛"	31'-4⅛"	38'-8"	44'-10⅝"	45'-9⅝"	40'-4⅝"
		5'	5'-3½"	8'-0"	9'-2⅝"	10'-5⅝"	3'-1⅝"	15'-8"	18'-1⅛"	19'-3"	12'-9⅝"	23'-4"	26'-11⅝"	28'-1⅛"	21'-8"	31'-0"	35'-9⅝"	36'-11⅛"	30'-4⅛"	38'-8"	44'-10⅝"	45'-9⅝"	39'-4⅝"
		6'	6'-3½"	8'-2"	10'-1"	11'-3⅝"	2'-7⅝"	15'-11"	18'-4⅝"	19'-6⅝"	12'-1⅝"	23'-8"	27'-4"	28'-5⅝"	21'-0⅝"	31'-5"	36'-3⅝"	37'-5⅝"	30'-0"	39'-2"	45'-5⅝"	46'-7⅝"	38'-11⅝"
		7'	7'-3½"	8'-3"	9'-4⅝"	10'-6⅝"	1'-9"	16'-1"	18'-6⅝"	19'-8⅝"	10'-9⅝"	23'-11"	27'-7⅝"	28'-9⅝"	19'-10⅝"	31'-9"	36'-8"	37'-9⅝"	28'-10⅝"	39'-7"	45'-10⅝"	46'-10⅝"	37'-11⅝"
		8'	8'-3½"	8'-4"	9'-5⅝"	10'-7⅝"	0'-9⅝"	16'-2"	18'-8"	19'-9⅝"	9'-4⅝"	24'-0"	27'-8⅝"	28'-10⅝"	18'-5⅝"	31'-10"	36'-9⅝"	37'-11"	27'-4"	39'-8"	45'-9⅝"	46'-11⅝"	36'-6⅝"
	8'	4'	4'-3½"	9'-0"	10'-4⅝"	11'-6⅝"	6'-1⅛"	17'-8"	20'-4⅝"	21'-6⅝"	16'-1⅝"	26'-4"	30'-4⅝"	31'-6⅝"	26'-1⅝"	35'-0"	40'-5"	41'-6⅝"	36'-1⅝"	43'-8"	50'-5⅝"	51'-7"	46'-1⅝"
		5'	5'-3½"	9'-2"	10'-7"	11'-8⅝"	5'-3⅝"	17'-11"	20'-8⅝"	21'-10"	15'-5"	26'-8"	30'-9⅝"	31'-11⅝"	25'-6⅝"	35'-5"	40'-10⅝"	42'-0⅝"	35'-2⅝"	44'-2"	51'-0"	52'-1⅝"	45'-8⅝"
		6'	6'-3½"	9'-2"	10'-7"	11'-8⅝"	4'-3⅝"	17'-11"	20'-8⅝"	21'-10"	14'-5"	26'-8"	30'-9⅝"	31'-11⅝"	24'-6⅝"	35'-5"	40'-10⅝"	42'-0⅝"	34'-7⅝"	44'-2"	51'-0"	52'-1⅝"	44'-8⅝"
		7'	7'-3½"	9'-3"	10'-8⅝"	11'-10"	2'-11"	18'-1"	20'-10⅝"	22'-0⅝"	13'-1⅝"	26'-11"	31'-1"	32'-2⅝"	23'-3⅝"	35'-9"	41'-3⅝"	42'-5⅝"	33'-6⅝"	44'-7"	51'-3⅝"	52'-7⅝"	43'-8⅝"
		8'	8'-3½"	9'-4"	10'-9⅝"	11'-11⅝"	1'-6⅝"	18'-2"	20'-11⅝"	22'-1⅝"	11'-8⅝"	27'-0"	31'-2⅝"	32'-4"	21'-11"	35'-10"	41'-4⅝"	42'-6⅝"	32'-1⅝"	44'-8"	51'-7"	52'-8⅝"	42'-3⅝"
	9'	5'	5'-3½"	10'-2"	11'-8⅝"	12'-10⅝"	6'-5⅝"	19'-11"	23'-0"	24'-1⅝"	17'-8⅝"	29'-8"	34'-3⅝"	35'-5"	28'-11⅝"	39'-5"	45'-6⅝"	46'-8"	40'-3"	49'-2"	56'-9⅝"	57'-11⅝"	51'-6"
		6'	6'-3½"	10'-3"	11'-10"	13'-0"	5'-6⅝"	20'-1"	23'-2⅝"	24'-4⅝"	16'-11"	29'-11"	34'-6⅝"	35'-8⅝"	28'-3⅝"	39'-9"	45'-9⅝"	47'-0⅝"	39'-7⅝"	49'-7"	57'-1⅝"	58'-2"	50'-11⅝"
		7'	7'-3½"	10'-3"	11'-10"	13'-0"	4'-0⅝"	20'-1"	23'-2⅝"	24'-4⅝"	15'-5"	29'-11"	34'-6⅝"	35'-8⅝"	26'-9⅝"	39'-9"	45'-9⅝"	47'-0⅝"	38'-1⅝"	49'-7"	57'-1⅝"	58'-2"	49'-5⅝"
		8'	8'-3½"	10'-4"	11'-11⅝"	13'-1"	2'-8"	20'-2"	23'-3⅝"	24'-5⅝"	14'-0⅝"	30'-0"	34'-7⅝"	35'-9⅝"	25'-4⅝"	39'-10"	46'-0"	47'-1⅝"	36'-8⅝"	49'-8"	57'-2⅝"	58'-4"	48'-1"
	10'	5'	5'-3½"	11'-2"	12'-10⅝"	14'-0⅝"	7'-7⅝"	21'-11"	25'-3⅝"	26'-5⅝"	20'-0⅝"	32'-8"	37'-0⅝"	38'-10½"	32'-5⅝"	43'-5"	50'-1⅝"	51'-3⅝"	44'-10⅝"	54'-2"	60'-6⅝"	61'-8⅝"	57'-3⅝"
		6'	6'-3½"	11'-3"	12'-11⅝"	14'-1⅝"	6'-8⅝"	22'-1"	25'-4"	26'-7⅝"	19'-2⅝"	32'-11"	38'-0⅝"	39'-2"	31'-10"	43'-9"	50'-6⅝"	51'-8"	44'-1⅝"	54'-7"	63'-0⅝"	64'-2⅝"	56'-9"
		7'	7'-3½"	11'-3"	12'-11⅝"	14'-1⅝"	5'-8⅝"	22'-1"	25'-4"	26'-7⅝"	17'-8⅝"	32'-11"	38'-0⅝"	39'-2"	30'-3"	43'-9"	50'-6⅝"	51'-8"	42'-8"	54'-7"	63'-0⅝"	64'-2⅝"	55'-3"
		8'	8'-3½"	11'-4"	12'-1"	14'-3"	3'-9⅝"	22'-2"	25'-7⅝"	26'-9"	16'-4"	33'-0"	38'-1⅝"	39'-3"	28'-10"	43'-10"	50'-7⅝"	51'-9⅝"	41'-9⅝"	54'-8"	63'-1⅝"	64'-3⅝"	53'-10⅝"
	11'	6'	6'-3½"	12'-4"	14'-2⅝"	15'-4⅝"	7'-11⅝"	24'-2"	27'-10⅝"	29'-0⅝"	21'-7⅝"	36'-0"	41'-6⅝"	42'-8⅝"	35'-3⅝"	47'-10"	55'-2⅝"	56'-4⅝"	48'-11⅝"	—	—	—	—
		7'	7'-3½"	12'-4"	"	"	6'-5⅝"	24'-2"	"	"	20'-1⅝"	36'-0"	"	"	33'-9⅝"	47'-10"	"	"	47'-5⅝"	—	—	—	—
		8'	8'-3½"	12'-5"	"	"	4'-11⅝"	24'-2"	"	"	18'-7⅝"	36'-0"	"	"	32'-3⅝"	47'-10"	"	"	45'-8⅝"	—	—	—	—
	12'	6'	6'-3½"	13'-4"	15'-2⅝"	16'-4⅝"	9'-1⅝"	26'-2"	30'-2⅝"	31'-4⅝"	23'-1⅝"	39'-0"	45'-0⅝"	46'-2⅝"	38'-9⅝"	51'-10"	59'-10⅝"	61'-0"	53'-7"	—	—	—	—
		7'	7'-3½"	13'-4"	"	"	7'-7½"	26'-2"	"	"	22'-5⅝"	39'-0"	"	"	37'-3⅝"	51'-10"	"	"	52'-1"	—	—	—	—
		8'	8'-3½"	13'-4"	"	"	6'-1⅝"	26'-2"	"	"	20'-11⅝"	39'-0"	"	"	35'-9⅝"	51'-10"	"	"	50'-7"	—	—	—	—
W-X302-2, W-X303-2 OR W-X304-2. (FOR H=9'0" & OVER)	7'	9'	10'-9⅝"	8'-6"	9'-8⅝"	10'-11⅝"	Ⓐ 0"	16'-5"	18'-11⅝"	20'-1⅝"	8'-2⅝"	28'-9"	28'-1⅝"	29'-3"	17'-9"	32'-3"	37'-2⅝"	38'-8⅝"	26'-5⅝"	40'-2"	46'-8⅝"	47'-6"	35'-7⅝"
	8'	9	10'-9⅝"	9'-6"	10'-11⅝"	12'-1⅝"	0'-2⅝"	18'-5"	21'-3⅝"	22'-5"	10'-6"	27'-9"	31'-1⅝"	32'-3⅝"	20'-9⅝"	36'-3"	41'-10⅝"	43'-0⅝"	31'-1"	45'-2"	52'-1⅝"	53'-3⅝"	41'-5⅝"
		10'	12'-3⅝"	9'-8"	11'-2"	12'-3⅝"	Ⓐ 0"	18'-8"	21'-6⅝"	22'-8⅝"	9'-3⅝"	27'-8"	31'-11⅝"	33'-1⅝"	19'-8⅝"	36'-8"	42'-4⅝"	43'-6"	30'-10⅝"	45'-8"	52'-8⅝"	53'-10⅝"	40'-5⅝"
	9'	9'	10'-9⅝"	10'-6"	12'-1⅝"	13'-3⅝"	1'-4⅝"	20'-5"	23'-6⅝"	24'-10⅝"	12'-9⅝"	30'-4"	35'-0⅝"	36'-2⅝"	24'-3"	40'-3"	46'-5⅝"	47'-7⅝"	35'-9⅝"	50'-2"	57'-11⅝"	59'-1"	47'-2"
		10'	12'-3⅝"	10'-8"	12'-3⅝"	13'-5⅝"	0'-10⅝"	20'-5"	23'-10⅝"	25'-0⅝"	11'-7⅝"	30'-8"	35'-4⅝"	36'-6⅝"	23'-1⅝"	40'-5"	46'-11⅝"	48'-1⅝"	34'-8⅝"	50'-8"	58'-4"	59'-5"	46'-2⅝"
		11'	13'-9⅝"	10'-10"	12'-6⅝"	13'-8"	Ⓐ 0"	20'-10"	24'-0⅝"	25'-2⅝"	10'-3⅝"	30'-10"	35'-7⅝"	36'-9"	21'-10"	40'-10"	47'-1⅝"	48'-3⅝"	33'-9⅝"	50'-10"	58'-8⅝"	59'-10⅝"	44'-11⅝"
	10'	9'	10'-9⅝"	11'-6"	13'-3⅝"	14'-5⅝"	2'-6⅝"	22'-5"	25'-10⅝"	27'-0⅝"	15'-3⅝"	33'-4"	38'-5⅝"	39'-7⅝"	27'-8⅝"	44'-3"	51'-1⅝"	52'-3"	40'-4"	55'-2"	63'-8⅝"	64'-10⅝"	52'-11⅝"
		10'	12'-3⅝"	11'-8"	13'-5⅝"	14'-7⅝"	1'-2⅝"	22'-8"	26'-2⅝"	27'-4"	13'-10⅝"	33'-8"	38'-10⅝"	40'-0⅝"	26'-7⅝"	44'-8"	51'-7"	52'-8⅝"	39'-3⅝"	55'-8"	64'-3⅝"	65'-5⅝"	52'-10"
		11'	13'-9⅝"	11'-10"	13'-8"	14'-9⅝"	Ⓐ 0"	22'-10"	26'-4⅝"	27'-6⅝"	12'-1⅝"	33'-10"	39'-0⅝"	40'-2⅝"	25'-3⅝"	44'-10"	51'-9⅝"	52'-11"	38'-0"	55'-10"	64'-5⅝"	65'-7⅝"	50'-8⅝"
		12'	15'-3⅝"	12'-0"	13'-10⅝"	15'-0⅝"	Ⓐ 0"	23'-0"	26'-6⅝"	27'-8⅝"	11'-3⅝"	34'-0"	39'-3⅝"	40'-5"	24'-0"	45'-0"	51'-11⅝"	53'-1⅝"	36'-8⅝"	56'-0"	64'-8"	65'-9⅝"	49'-7⅝"
	11'	9'	10'-9⅝"	12'-6"	14'-5⅝"	15'-7"	3'-8"	24'-5"	28'-2⅝"	29'-4⅝"	17'-5"	36'-6"	41'-11⅝"	43'-1⅝"	31'-2⅝"	48'-3"	55'-8⅝"	56'-10⅝"	44'-11⅝"	—	—	—	—
		10'	12'-3⅝"	12'-8"	14'-7⅝"	15'-9⅝"	2'-4⅝"	24'-8"	28'-5⅝"	29'-7⅝"	16'-2⅝"	36'-8"	42'-0⅝"	43'-2"	30'-0⅝"	48'-8"	56'-2⅝"	57'-4⅝"	43'-9⅝"	—	—	—	—
		11'	13'-9⅝"	12'-10"	14'-9⅝"	15'-11⅝"	1'-0⅝"	24'-10"	28'-8⅝"	29'-10"	14'-11"	36'-10"	42'-6⅝"	43'-8⅝"	28'-9⅝"	48'-10"	56'-4⅝"	57'-6⅝"	42'-3⅝"	—	—	—	—
		12'	15'-3⅝"	13'-0"	15'-0⅝"	16'-2"	Ⓐ 0"	25'-0"	28'-10⅝"	30'-0⅝"	13'-7⅝"	37'-0"	42'-9⅝"	43'-10⅝"	27'-5⅝"	49'-0"	56'-7"	57'-8⅝"	41'-3⅝"	—	—	—	—
	12'	9'	10'-9⅝"	13'-6"	15'-7⅝"	16'-9"	4'-9⅝"	26'-5"	30'-1"	31'-6"	19'-8⅝"	39'-1⅝"	45'-5"	46'-7"	34'-7⅝"	52'-3"	60'-9"	61'-10⅝"	49'-6⅝"	—	—	—	—
		10'	12'-3⅝"	13'-8"	15'-9⅝"	16'-11⅝"	3'-6⅝"	26'-8"	30'-9⅝"	31'-11⅝"	18'-1⅝"	39'-8"	45'-9⅝"	46'-11⅝"	33'-4⅝"	52'-8"	60'-9⅝"	61'-11⅝"	48'-4⅝"	—	—	—	—
		11'	13'-9⅝"	13'-10"	15'-11⅝"	17'-1⅝"	2'-2⅝"	26'-10"	30'-11⅝"	32'-1⅝"	17'-2⅝"	39'-10"	46'-0"	47'-1⅝"	32'-2⅝"	52'-10"	61'-0⅝"	62'-2"	47'-2⅝"	—	—	—	—
		12'	15'-3⅝"	14'-0"	16'-2"	17'-3⅝"	0'-10⅝"	27'-0"	31'-2⅝"	32'-4"	15'-11"	40'-0"	46'-2⅝"	47'-4"	30'-11"	53'-0"	61'-2⅝"	62'-4⅝"	45'-11⅝"	—	—	—	—

Ⓐ Special cases for these boxes, See Detail 'A' and Table 'A' for revised values of F_1, F_2, W_4 and W_5, when apron width is more than 1'0" and W_3=0'. For Details 'A' and Tables 'A' for each slope, see Drawing Nos. W-X302-1, W-X302-2, or W-X303-1, W-X303-2, or W-X304-1, W-X304-2.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawings for 30° Skews for each slope as listed below.

2:1 Slopes	3:1 Slopes	4:1 Slopes
W-X302-1 or W-X302-2	W-X303-1 or W-X303-2	W-X304-1 or W-X304-2.

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-130X-0	R-230X-01	R-330X-01	R-430X-01	R-530X-01
	R-230X-02	R-330X-02	R-430X-02	R-530X-02
R-130X-1	R-230X-1	R-330X-1	R-430X-1	R-530X-1
	R-230X-2	R-330X-2		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
30° SKEW

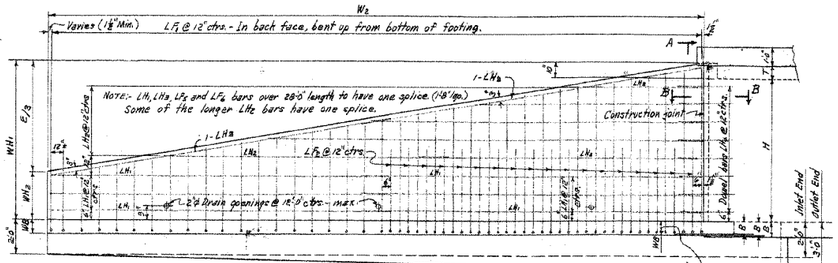
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1, 3:1 & 4:1 SLOPES
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER H=2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'.

STANDARD DRAWING NO. W-X30

Designed by:- W.C.H. 5-16-63 Checked by:- FBHS-8-21-63
Drawn by:- W.C.H. 7-15-63 Checked by:-
Quantities by:- Checked by:-

Reshot 3-8-93

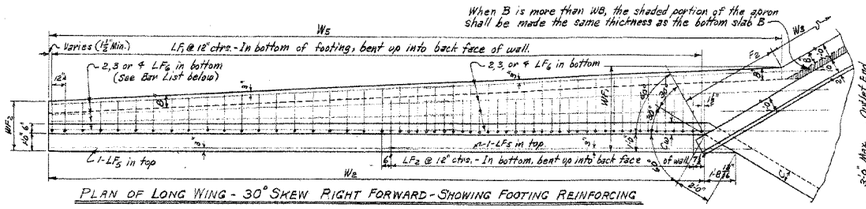
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			215	
JOB No.					



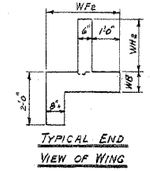
REAR ELEVATION OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING BACK FACE REINFORCING

WB may be more, equal to, or less than the bottom slab thickness B.

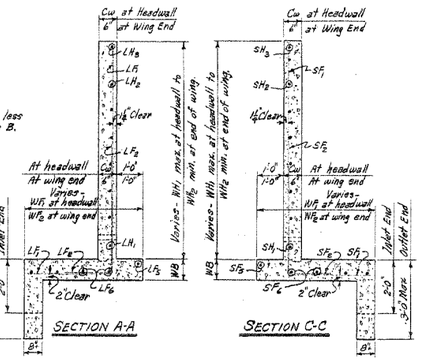
When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B



PLAN OF LONG WING - 30° SKEW RIGHT FORWARD - SHOWING FOOTING REINFORCING

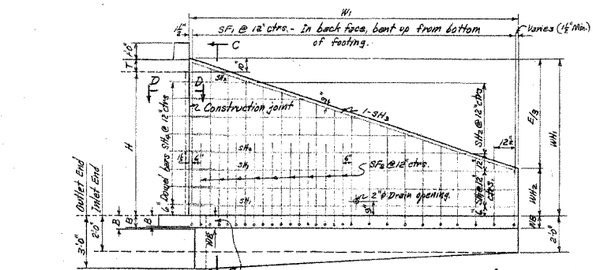


TYPICAL END VIEW OF WING



SECTION A-A

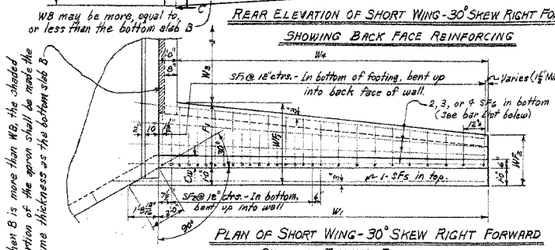
SECTION C-C



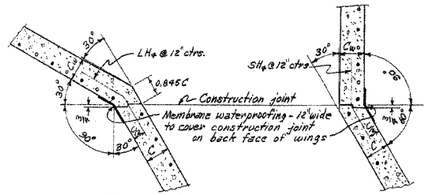
WB may be more, equal to, or less than the bottom slab B

When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B

REAR ELEVATION OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING BACK FACE REINFORCING

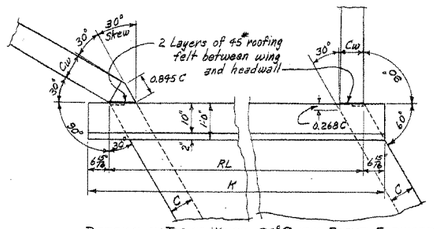


PLAN OF SHORT WING - 30° SKEW RIGHT FORWARD SHOWING FOOTING REINFORCING



SECTIONS THRU CONSTRUCTION JOINTS

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.



DETAILS AT TOP OF WINGS - 30° SKEW RIGHT FORWARD

REGULAR WING DIMENSIONS - 3:1 SLOPES

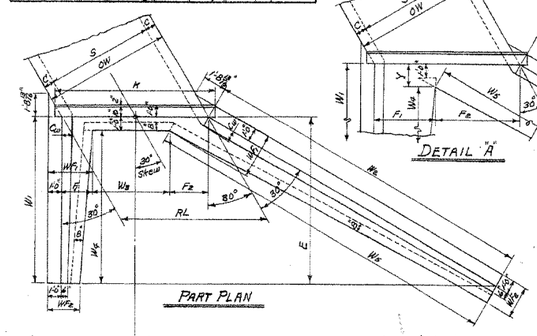
Clear Height of Box H	Thickness of Wing Footing WB	Thickness of Wing at Hdwl. Cw	Wingwall Heights At Headwall WH1	Wingwall Heights At End of Wing WH2	Widths of Wing Footings At Hdwl. WF1	Widths of Wing Footings At End of Wing WF2	Footing Dimension Parallel with Hdwl. F1	Footing Dimension Parallel with Hdwl. F2	Perpendicular Dist. from Hdwl. to End of Wing E	Lengths of Wingwalls Short Wing W1	Lengths of Wingwalls Long Wing W2	Inside Footing Dimension Short Wing W4	Inside Footing Dimension Long Wing W5	* Quantity per Wing, Class S Concrete, Inlet End Short Wing	Inlet End Long Wing	Outlet End Short Wing	Outlet End Long Wing
														Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
2'	7"	6"	2'-10"	0'-8"	2'-6"	2'-0"	1'-8"	0'-11½"	6'-6"	6'-6"	13'-0"	5'-6"	19'-3⅜"	0.752	1.599	0.836	1.717
3'	7"	6"	3'-10"	1'-0"	2'-8"	2'-1⅝"	1'-8"	1'-7½"	8'-6"	8'-6"	17'-0"	7'-6"	17'-10⅜"	1.130	2.340	1.239	2.565
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-3"	2'-0"	2'-3⅜"	10'-6"	10'-6"	21'-0"	8'-6"	22'-5⅛"	1.577	3.270	1.711	3.552
5'	7"	6"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-4"	2'-11⅛"	12'-6"	12'-6"	25'-0"	11'-6"	27'-0⅛"	2.093	4.391	2.252	4.680
		7"	5'-10"	1'-8"	3'-4"	2'-4½"	2'-4"	2'-11⅛"	12'-6"	12'-6"	25'-0"	11'-6"	27'-0⅛"	2.179	4.524	2.337	4.862
° 6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-8"	3'-7⅛"	14'-6"	14'-6"	29'-0"	13'-6"	31'-7⅛"	2.908	6.024	3.092	6.419
		7½"	6'-10"	2'-0"	3'-8"	2'-6"	2'-8"	3'-7⅛"	14'-6"	14'-6"	29'-0"	13'-6"	31'-7⅛"	2.966	6.147	3.150	6.543
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-8"	3'-7⅛"	14'-6"	14'-6"	29'-0"	13'-6"	31'-7⅛"	3.025	6.272	3.208	6.667
° 7'	8½"	7½"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-2"	4'-7⅛"	16'-6"	16'-6"	33'-0"	15'-6"	36'-5⅜"	3.811	7.895	4.019	8.350
		8"	7'-10"	2'-4"	4'-2"	2'-7½"	3'-2"	4'-7⅛"	16'-6"	16'-6"	33'-0"	15'-6"	36'-5⅜"	3.887	8.057	4.095	8.512
° 8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-8"	5'-7½"	18'-6"	18'-6"	37'-0"	17'-6"	41'-6⅜"	4.874	10.097	5.107	10.612

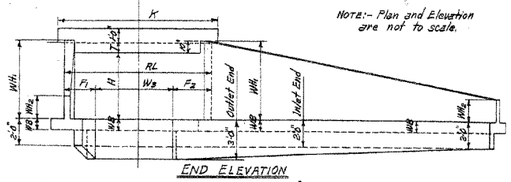
* Quantity per wing does not include headwall or that portion of apron or toewall for the length W_3.

° See Table A for special values of F_1 & F_2 and W_4 & W_5 for Single 4'x6', 5'x7' and 6'x8' Box Culverts.

TABLE "A" - DIMENSIONS FOR DETAIL "A"

S	H	F_1	F_2	W_3	Y	W_4	W_5
4'	6'	2'-7⅞"	3'-3⅜"	0"	1'-1⅞"	13'-4⅜"	31'-3⅜"
5'	7'	3'-1⅝"	4'-1"	0"	1'-3⅜"	15'-2⅜"	35'-10⅜"
6'	8'	3'-7⅛"	4'-10⅝"	0"	1'-6⅜"	17'-1⅛"	40'-6"





END ELEVATION

SINGLE BARREL CULVERT - 30° SKEW RIGHT FORWARD

Details of Culvert with 30° Skew Left Forward is reversed, see Drawing No. W-X.30.

TYPICAL WING DETAILS

NOTE:-
For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X.30.
For values of RL, K and W_3 for each box, see above Std. also.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mappings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints of wings.

QUANTITIES

Clear Span S	Clear Height H	Thickness of Wing at Headwall Cw	Thickness of Wing Footing WB	Reinforcing Steel - Wings ® LB.	Class S Concrete - 4 Wings, Headwalls, Wingwalls, Footings, Toewalls and Aprons: Single Barrel Culvert	Double Barrel Culvert	Triple Barrel Culvert	Quadruple Barrel Culvert	Quintuple Barrel Culvert
					Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
4'	2'	6"	7"	141	5.80	6.90	8.01	9.12	10.23
	3'	6"	7"	213	8.08	9.18	10.29	11.40	12.51
	4'	6"	7"	327	10.78	11.88	12.99	14.10	15.21
	5'	6"	7"	460	13.90	15.00	16.11	17.22	18.32
	6'	7"	8"	762	18.86	19.99	21.13	22.27	23.41
5'	3'	6"	7"	213	8.33	9.47	11.01	12.36	13.70
	4'	6"	7"	327	11.03	12.36	13.71	15.06	16.40
	5'	6"	7"	460	14.14	15.48	16.83	18.17	19.52
	6'	7"	8"	762	19.11	20.48	21.86	23.24	24.62
	7'	7½"	8½"	1474	24.51	25.94	27.35	28.75	30.16
6'	3'	6"	7"	213	8.87	10.17	11.73	13.33	14.92
	4'	6"	7"	327	11.27	12.86	14.43	16.03	17.62
	5'	6"	7"	460	14.38	15.98	17.55	19.15	20.73
	6'	7"	8"	762	19.35	20.98	22.59	24.21	25.83
	7'	7½"	8½"	1474	24.79	26.44	28.08	29.73	31.38
	8'	8"	9"	1870	31.15	32.87	34.51	36.17	37.83
7'	4'	6"	7"	327	11.52	13.37	15.19	17.05	18.85
	5'	6"	7"	460	14.63	16.49	18.31	20.16	21.97
	6'	7"	8"	762	19.61	21.98	23.32	25.20	27.04
	7'	7½"	8½"	1474	25.05	26.94	28.82	30.71	32.59
	8'	8"	9"	1870	31.47	33.37	35.25	37.16	39.05
8'	4'	6"	7"	327	11.77	13.89	15.97	18.09	20.12
	5'	7"	7"	460	15.46	17.60	19.70	21.83	23.99
	6'	7"	8"	762	19.86	21.98	24.05	26.17	28.20
	7'	7½"	8½"	1474	25.80	27.96	29.58	31.73	33.81
	8'	8"	9"	1870	31.72	33.88	36.00	38.16	40.27
9'	5'	7"	7"	460	15.72	18.13	20.47	22.87	25.15
	6'	7½"	8"	762	20.50	22.93	25.29	27.71	30.01
	7'	7½"	8½"	1474	25.55	27.98	30.34	32.76	35.07
	8'	8"	9"	1870	31.97	34.39	36.76	39.18	41.49
10'	5'	7"	7"	460	15.98	18.65	21.25	23.80	26.92
	6'	7½"	8"	762	20.74	23.45	26.07	28.64	31.28
	7'	7½"	8½"	1474	25.81	28.50	31.12	33.70	36.34
	8'	8"	9"	1870	32.22	34.91	37.54	40.12	42.76
11'	6'	8"	8"	762	21.39	24.98	27.25	30.11	—
	7'	8"	8½"	1474	26.55	29.53	32.41	35.27	—
	8'	8"	9"	1870	32.47	35.45	38.33	41.19	—
12'	6'	8"	8"	762	21.66	24.93	28.05	31.20	—
	7'	8"	8½"	1474	26.81	30.08	33.21	36.36	—
	8'	8"	9"	1870	32.73	35.99	39.13	42.28	—

® For reinforcing steel in Headwalls and Aprons, see Drawing Nos. of Barrel Sections listed below.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:-
This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-130X-0	R-230X-01	R-330X-01	R-430X-01	R-530X-01
	R-230X-02	R-330X-02	R-430X-02	R-530X-02
R-130X-1	R-230X-1	R-330X-1	R-430X-1	R-530X-1
	R-230X-2	R-330X-2		

BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

Clear Height H	Wing Location: Short or Long	SF1 & LF1 Bent, In bottom of footing, bent up into back face of wing. One bar (or two bars) of each length: Size	Spacing	No. Reqd.	Lengths Vary Min.	Lengths Vary Max.	X Min.	X Max.	Y Min.	Y Max.	SF2 & LF2 Bent, In bottom of footing, bent up into back face of wing. Alt. with F1 bars: Size	Spacing	No. Reqd.	Length	X	Y
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	1'-6"	3'-0"	—	—	—	—	—	—
	Long	#3	12"	14	1'-5"	3'-11"	0'-8"	1'-0"	0'-10"	3'-0"	—	—	—	—	—	—
3'	Short	#3	12"	9	2'-1"	5'-3"	0'-10"	1'-4"	1'-9"	4'-0"	—	—	—	—	—	—
	Long	#3	12"	18	1'-11"	5'-3"	0'-10"	1'-4"	1'-2"	4'-0"	—	—	—	—	—	—
4'	Short	#3	12"	11	2'-6"	6'-7"	0'-11"	1'-8"	1'-9"	5'-0"	—	—	—	—	—	—
	Long	#3	12"	22	2'-4"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"	—	—	—	—	—	—
5'	Short	#3	12"	13	2'-11"	7'-11"	1'-0"	2'-0"	2'-0"	6'-0"	#3	12"	3	3'-6"	1'-1"	2'-6"
	Long	#3	12"	26	2'-9"	7'-10"	1'-0"	1'-11"	1'-10"	6'-0"	#3	12"	6	3'-6"	1'-1"	2'-6"
6'	Short	#4	12"	15	3'-6"	9'-6"	1'-2"	2'-4"	2'-5"	7'-1"	#3	12"	3	4'-6"	1'-4"	3'-9"
	Long	#4	12"	30	3'-4"	9'-5"	1'-2"	2'-3"	2'-3"	7'-1"	#3	12"	6	4'-6"	1'-4"	3'-9"
7'	Short	#4	12"	17	3'-11"	10'-10"	1'-3"	2'-10"	2'-9"	8'-1"	#4	12"	6	5'-6"	1'-7"	4'-0"
	Long	#4	12"	34	3'-9"	10'-8"	1'-3"	2'-8"	2'-7"	8'-1"	#4	12"	12	5'-6"	1'-7"	4'-0"
8'	Short	#4	12"	19	4'-6"	12'-5"	1'-5"	3'-4"	3'-2"	9'-2"	#4	12"	9	6'-6"	1'-10"	4'-9"
	Long	#4	12"	38	4'-6"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	18	6'-6"	1'-10"	4'-9"

Clear Height H	Wing Location: Short or Long	SF2 & LF3 Straight, Longitudinal in top of wing footing heel: Size	No. Reqd.	Length	SF2 & LF4 Straight, Longitudinal in bottom of wing footing toe: Size	No. Reqd.	Length	SH1 & LH1 Straight, Horizontal in back face of wing: Size	Spacing	No. Reqd.	Length	SH2 & LH2 Straight, Horizontal in back face of wing. One bar of each length.* Size	Spacing	No. Reqd.	Lengths Vary Max.	Lengths Vary Min.
2'	Short	#3		9'-0"	#3	2	8'-0"	#3	12"	1	6'-8"	#3	12"	1	—	3'-9"
	Long	#3	1	15'-6"	#3	2	15'-6"	#3	12"	1	12'-11"	#3	12"	1	—	6'-6"
3'	Short	#3	1	11'-0"	#3	2	10'-0"	#3	12"	1	8'-3"	#3	12"	2	6'-8"	3'-9"
	Long	#3	1	19'-6"	#3	2	20'-2"	#3	12"	1	16'-8"	#3	12"	2	12'-6"	6'-6"
4'	Short	#3	1	13'-0"	#3	3	12'-0"	#3	12"	1	10'-3"	#3	12"	3	9'-8"	3'-9"
	Long	#3	1	23'-6"	#3	3	24'-0"	#3	12"	1	20'-8"	#3	12"	3	18'-6"	6'-6"
5'	Short	#3	1	15'-0"	#3	3	14'-0"	#3	12"	2	12'-3"	#3	12"	3	9'-3"	3'-9"
	Long	#3	1	27'-6"	#3	6	15'-7"	#3	12"	2	24'-8"	#3	12"	3	18'-6"	6'-6"
6'	Short	#3	1	17'-0"	#3	3	16'-0"	#3	12"	2	14'-3"	#3	12"	4	12'-3"	3'-9"
	Long	#3	2	16'-8"	#3	6	18'-0"	#3	12"	4	15'-2"	#3	12"	4	24'-6"	6'-6"
7'	Short	#4	1	19'-0"	#4	4	18'-0"	#4	12"	2	16'-3"	#4	12"	5	15'-3"	3'-3"
	Long	#4	2	18'-8"	#4	8	20'-8"	#4	12"	4	17'-2"	#4	12"	5	*30'-6"	6'-6"
8'	Short	#4	1	21'-0"	#4	4	20'-0"	#4	12"	3	18'-3"	#4	12"	5	15'-3"	3'-3"
	Long	#4	2	20'-8"	#4	8	22'-9"	#4	12"	6	19'-2"	#4	12"	5	*30'-6"	6'-6"

Clear Height H	Wing Location: Short or Long	SH3 & LH3 In back face of wing at top-on slope: Size	No. Reqd.	Length	SH4 & LH4 Bent, Dowels thru construction joint at headwall: Size	Spacing	No. Reqd.	Length	X	Quantity: Reinforcing Steel per Wing - Lbs. Short Wing	Long Wing
2'	Short	#3	1	6'-7"	#3	12"	2	2'-8"	1'-4"	29.7	45.6
	Long	#3	1	12'-11"	#3	12"	2	"	"		
3'	Short	#3	1	8'-8"	#3	12"	3	"	"	37.0	69.5
	Long	#3	1	16'-11"	#3	12"	3	"	"		
4'	Short	#3	1	10'-9"	#3	12"	4	"	"	56.2	107.2
	Long	#3	1	21'-0"	#3	12"	4	"	"		
5'	Short	#3	1	12'-11"	#3	12"	5	"	"	78.0	152.2
	Long	#3	1	25'-11"	#3	12"	5	"	"		
6'	Short	#3	1	15'-0"	#3	12"	6	"	"	127.8	253.1
	Long	#3	2	15'-5"	#3	12"	6	2'-8"	1'-4"		
7'	Short	#4	1	17'-11"	#4	12"	7	3'-6"	1'-9"	267.0	489.8
	Long	#4	2	17'-5"	#4	12"	7	"	"		
8'	Short	#4	1	19'-5"	#4	12"	8	"	"	312.9	622.3
	Long	#4	2	19'-6"	#4	12"	8	3'-6"	1'-9"		

BAR BENDING DIAGRAM: SF1 & SF2, LF1 & LF2 (Y, X, 5" Pin); SH4 & LH4 (X, 12); NOTE:- Dimensions are to bar centers.

NOTE:- Bars for short wing shall be marked with prefix letter "S", while those for long wing shall be marked with letter "L".

* Length without splice. Bars over 28'-0" length may be spliced. (1'-6" lap.)

REVISIONS:- Membrane Added. 5-10-66 W.C.H.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
30° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

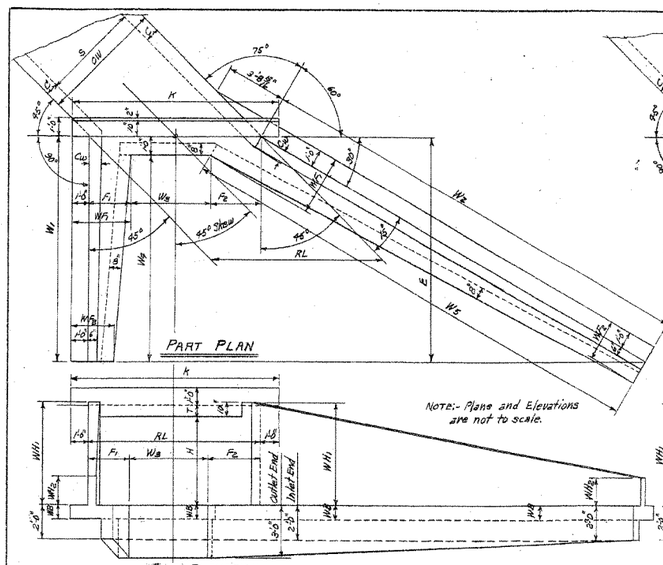
STANDARD DRAWING No. W-X303-1

Designed By:- W.C.H. 5-13-63 Checked By:- RWS 8-19-63
Drawn By:- W.C.H. 7-26-63 Checked By:- DMT 7-15-64
Quantities By:- W.C.H. 1-7-64 Checked By:- DMT 7-15-64

Reshot 3-8-93

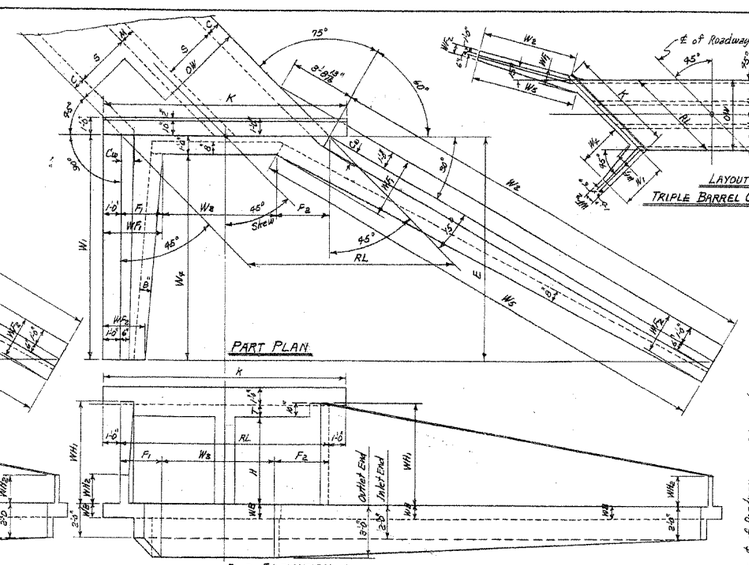
21

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			216	
JOB No.					



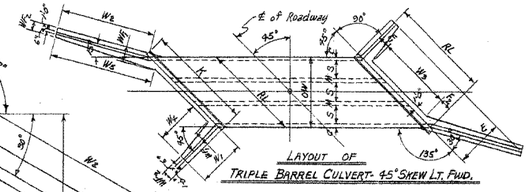
SINGLE BARREL CULVERT - 45° SKEW RIGHT FORWARD

Details of Culvert with 45° Skew Left Forward is reversed, see Layout below.

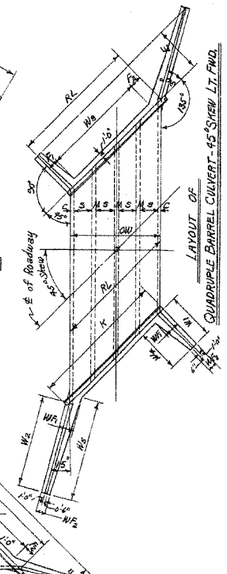


DOUBLE BARREL CULVERT - 45° SKEW RIGHT FORWARD

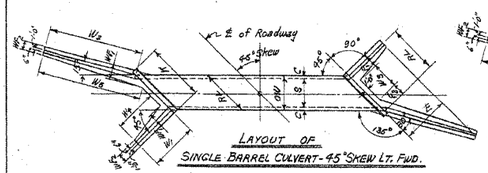
Details of Culvert with 45° Skew Left Forward is reversed, see Layout below.



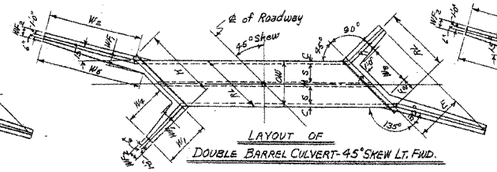
LAYOUT OF TRIPLE BARREL CULVERT - 45° SKEW LT. FWD.



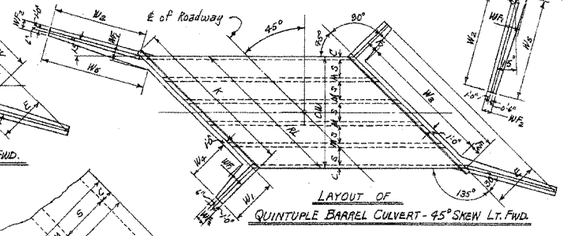
LAYOUT OF QUADRUPLE BARREL CULVERT - 45° SKEW LT. FWD.



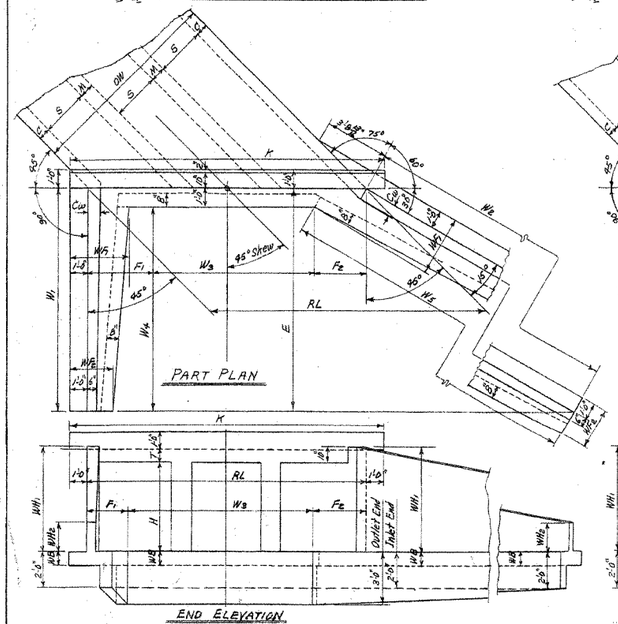
LAYOUT OF SINGLE BARREL CULVERT - 45° SKEW LT. FWD.



LAYOUT OF DOUBLE BARREL CULVERT - 45° SKEW LT. FWD.

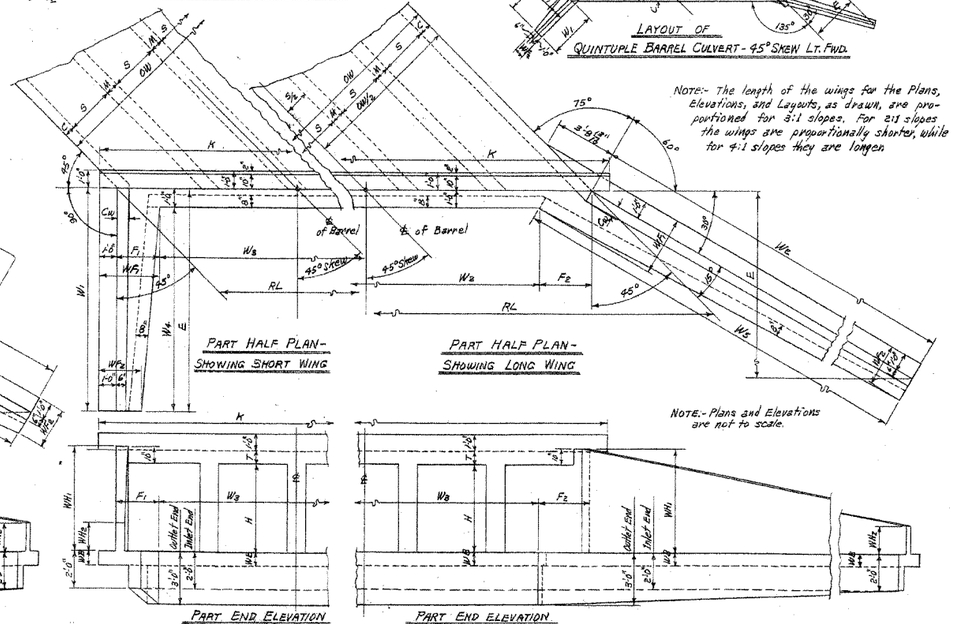


LAYOUT OF QUINTUPLE BARREL CULVERT - 45° SKEW LT. FWD.



TRIPLE BARREL CULVERT - 45° SKEW RIGHT FORWARD

Details of Culvert with 45° Skew Left Forward is reversed, see Layout at top center of sheet.



QUADRUPLE BARREL CULVERT - 45° SKEW RT. FWD.

Details of Culvert with 45° Skew Left Forward is reversed, see Layout at above center.

QUINTUPLE BARREL CULVERT - 45° SKEW RT. FWD.

Details of Culvert with 45° Skew Left Forward is reversed, see Layout above.

ROADWAY LENGTH RL — HEADWALL LENGTH K — APRON DIMENSION W_3

USE WITH DRAWING NO.	CLEAR COVER HEIGHT S	CLEAR HEIGHT H	SUM OF FOOTING DIMENSIONS F_1+F_2	Single Barrel Culvert: OW (RL = OW × 1.414421)	RL	K (K = RL+(2'-0"))	W_3 (W_3 = RL-(F_1+F_2))	Double Barrel Culvert: OW	RL	K	W_3	Triple Barrel Culvert: OW	RL	K	W_3	Quadruple Barrel Culvert: OW	RL	K	W_3	Quintuple Barrel Culvert: OW	RL	K	W_3
W-X452-1, W-X453-1 OR W-X454-1. (FOR H=9'-0" OR LESS)	4'	2	2'-3⅛	5'-8"	7'-0⅝	9'-0⅝	4'-3⅝	9'-8"	13'-8"	15'-8"	11'-4⅝	14'-4"	20'-3⅝	22'-3⅝	18'-6"	19'-0"	26'-10⅝	28'-10⅝	24'-7⅝	23'-8"	33'-5⅝	35'-5⅝	31'-2⅝
		3	3'-3⅛	5'-0"	"	"	3'-9⅝	9'-8"	"	"	10'-4⅝	14'-4"	"	"	17'-0"	19'-0"	"	"	23'-7⅝	23'-8"	"	"	30'-2⅝
		4	4'-3⅛	5'-0"	"	"	2'-9⅝	9'-8"	"	"	9'-4⅝	14'-4"	"	"	16'-0"	19'-0"	"	"	22'-7⅝	23'-8"	"	"	29'-2⅝
		5	5'-3⅛	5'-0"	7'-0⅝	9'-0⅝	1'-9⅝	9'-8"	13'-8"	15'-8"	8'-4⅝	14'-4"	20'-3⅝	22'-3⅝	15'-0"	19'-0"	26'-10⅝	28'-10⅝	21'-7⅝	23'-8"	33'-5⅝	35'-5⅝	28'-2⅝
		6	6'-3⅛	5'-2"	7'-3⅝	9'-3⅝	1'-0⅝	9'-11"	14'-0⅝	16'-0⅝	7'-0⅝	14'-8"	20'-8⅝	22'-9"	18'-5⅝	18'-5"	27'-5⅝	29'-5⅝	21'-2⅝	24'-2"	34'-2⅝	36'-2"	27'-10⅝
	5'	3	3'-3⅛	6'-0"	8'-5⅝	10'-5⅝	5'-2⅝	11'-8"	16'-6"	18'-6"	13'-2⅝	17'-4"	24'-4⅝	26'-4⅝	21'-3"	23'-0"	32'-6⅝	34'-6⅝	29'-3"	28'-8"	40'-6⅝	42'-6⅝	37'-3⅝
		4	4'-3⅛	6'-0"	"	"	4'-2⅝	11'-8"	"	"	12'-2⅝	17'-4"	"	"	20'-3"	23'-0"	"	"	28'-3"	28'-8"	"	"	36'-3⅝
		5	5'-3⅛	6'-0"	8'-5⅝	10'-5⅝	3'-2⅝	11'-8"	16'-6"	18'-6"	11'-2⅝	17'-4"	24'-4⅝	26'-4⅝	19'-3"	23'-0"	32'-6⅝	34'-6⅝	27'-3"	28'-8"	40'-6⅝	42'-6⅝	35'-3⅝
		6	6'-3⅛	6'-2"	8'-3⅝	10'-3⅝	2'-5⅝	11'-11"	16'-10⅝	18'-10⅝	10'-7"	17'-8"	24'-8⅝	26'-8⅝	20'-7"	23'-5"	33'-1⅝	35'-1⅝	26'-10⅝	29'-2"	41'-3"	43'-3"	34'-11⅝
		7	7'-3⅛	6'-8"	8'-10⅝	10'-10⅝	1'-0⅝	12'-5"	17'-1"	19'-1"	9'-3⅝	19'-1"	25'-6"	27'-6"	17'-6⅝	23'-5"	33'-7"	35'-7"	26'-9⅝	29'-7"	41'-10"	43'-10"	34'-0⅝
	6'	3	3'-3⅛	7'-0"	9'-10⅝	11'-10⅝	6'-7⅝	13'-8"	19'-3⅝	21'-4"	16'-0⅝	20'-6"	28'-8⅝	30'-9"	25'-5⅝	27'-0"	38'-2⅝	40'-2⅝	34'-11"	33'-8"	47'-7⅝	49'-7⅝	44'-4"
		4	4'-3⅛	7'-0"	"	"	5'-7⅝	13'-8"	"	"	15'-0⅝	20'-6"	"	"	24'-5⅝	27'-0"	"	"	33'-11"	33'-8"	"	"	43'-4"
		5	5'-3⅛	7'-0"	9'-10⅝	11'-10⅝	4'-7⅝	13'-8"	19'-3⅝	21'-4"	14'-0⅝	20'-6"	28'-8⅝	30'-9"	23'-5⅝	27'-0"	38'-2⅝	40'-2⅝	32'-11"	33'-8"	47'-7⅝	49'-7⅝	42'-4"
		6	6'-3⅛	7'-2"	10'-1⅝	12'-1⅝	3'-10⅝	13'-11"	19'-10⅝	21'-10⅝	13'-5"	20'-8"	29'-2⅝	31'-2⅝	22'-11⅝	27'-5"	38'-9⅝	40'-9⅝	32'-6"	34'-2"	48'-3⅝	50'-3⅝	42'-0⅝
		7	7'-3⅛	7'-8"	10'-3"	12'-3"	2'-5⅝	14'-1"	19'-11"	21'-11"	12'-1⅝	20'-11"	29'-7"	31'-7"	21'-9⅝	27'-8"	39'-3"	41'-3"	31'-5⅝	34'-7"	49'-10⅝	50'-1"	41'-1⅝
		8	8'-3⅛	7'-8"	10'-4⅝	12'-4⅝	1'-1⅝	14'-2"	20'-0⅝	22'-0⅝	10'-9⅝	21'-0"	29'-8⅝	31'-8⅝	20'-5⅝	27'-8"	39'-4⅝	41'-4⅝	30'-1"	34'-8"	49'-10⅝	51'-0⅝	39'-9"
	7'	4	4'-3⅛	9'-0"	12'-9⅝	14'-9⅝	8'-5⅝	17'-8"	24'-1⅝	26'-1⅝	20'-8⅝	26'-4"	37'-2⅝	39'-2"	32'-11⅝	35'-0"	49'-6"	51'-6"	45'-2⅝	43'-8"	61'-9"	63'-9"	57'-5⅝
		5	5'-3⅛	9'-0"	12'-9⅝	14'-9⅝	7'-8⅝	17'-8"	24'-1"	27'-4"	20'-0⅝	26'-8"	37'-6⅝	39'-8⅝	32'-1⅝	35'-5"	50'-1"	52'-1"	44'-3⅝	44'-8"	62'-5"	64'-5"	57'-2⅝
		6	6'-3⅛	9'-2"	12'-11⅝	14'-11⅝	6'-8⅝	17'-11"	25'-4"	27'-4"	19'-0⅝	26'-8"	37'-8⅝	39'-8⅝	31'-5⅝	35'-5"	50'-1"	52'-1"	43'-3⅝	44'-8"	62'-5"	64'-5"	56'-2⅝
		7	7'-3⅛	9'-5"	13'-1"	15'-1"	5'-3⅝	18'-1"	25'-6⅝	27'-7"	17'-9⅝	26'-11"	38'-0⅝	40'-0⅝	30'-8⅝	35'-7"	52'-1⅝	54'-1⅝	42'-9⅝	44'-7"	63'-0⅝	65'-0⅝	55'-3⅝
		8	8'-3⅛	9'-4"	13'-2"	15'-2⅝	3'-11⅝	18'-2"	25'-8⅝	27'-8⅝	16'-5"	27'-0"	38'-2⅝	40'-2⅝	28'-11"	35'-10"	50'-8"	52'-8"	41'-5"	44'-8"	63'-2"	65'-2"	53'-10⅝
	8'	5	5'-3⅛	10'-2"	14'-4⅝	16'-4⅝	9'-1⅝	19'-11"	28'-2"	30'-2"	22'-10⅝	28'-8"	41'-1⅝	43'-1⅝	36'-8⅝	39'-5"	57'-9"	59'-9"	50'-5⅝	49'-2"	69'-6"	71'-6"	64'-3⅝
		6	6'-3⅛	10'-5"	14'-6"	16'-6"	8'-2⅝	20'-1"	28'-4⅝	30'-4⅝	22'-1⅝	28'-11"	42'-3⅝	44'-3⅝	36'-4⅝	39'-5"	58'-2⅝	60'-2⅝	49'-11⅝	49'-7"	70'-1⅝	72'-1⅝	63'-10⅝
		7	7'-3⅛	10'-5"	14'-6"	16'-6"	6'-8⅝	20'-1"	28'-4⅝	30'-4⅝	20'-7⅝	29'-11"	42'-3⅝	44'-3⅝	34'-4⅝	39'-5"	58'-2⅝	60'-2⅝	48'-5⅝	49'-7"	70'-1⅝	72'-1⅝	62'-8⅝
		8	8'-3⅛	10'-4"	14'-2⅝	16'-2⅝	5'-4⅝	20'-2"	28'-2⅝	30'-2⅝	19'-3"	30'-0"	42'-5⅝	44'-5"	33'-2"	39'-10"	58'-7⅝	60'-7⅝	47'-0⅝	49'-8"	70'-2⅝	72'-3"	60'-11⅝
	10'	5	5'-3⅛	11'-2"	15'-9⅝	17'-9⅝	14'-6⅝	21'-11"	31'-0"	33'-0"	25'-9⅝	32'-3"	46'-2⅝	48'-2⅝	40'-11"	43'-9"	61'-8⅝	63'-8⅝	54'-6"	54'-2"	76'-7⅝	78'-7⅝	71'-4"
		6	6'-3⅛	11'-3"	15'-11"	17'-11"	13'-1"	22'-1"	31'-2⅝	33'-2⅝	24'-3⅝	32'-11"	46'-4⅝	48'-4⅝	39'-8⅝	43'-9"	61'-10⅝	63'-10⅝	53'-7⅝	54'-7"	77'-2⅝	79'-2⅝	70'-1"
		7	7'-3⅛	11'-3"	15'-11"	17'-11"	11'-8⅝	22'-1"	31'-2⅝	33'-2⅝	22'-5⅝	32'-11"	46'-4⅝	48'-4⅝	38'-3⅝	43'-9"	61'-10⅝	63'-10⅝	51'-11⅝	54'-7"	77'-2⅝	79'-2⅝	69'-5"
		8	8'-3⅛	11'-4"	16'-0⅝	18'-0⅝	10'-3⅝	22'-2"	31'-4⅝	33'-4⅝	22'-1"	33'-0"	46'-6⅝	48'-6⅝	37'-9⅝	43'-10"	61'-11⅝	63'-11⅝	50'-8⅝	54'-8"	77'-3⅝	79'-3⅝	68'-10⅝
	11'	6	6'-3⅛	12'-0"	17'-5⅝	19'-5⅝	11'-2⅝	24'-2"	34'-2⅝	36'-2"	27'-11"	36'-0"	50'-11"	52'-11"	44'-7⅝	47'-10"	67'-7⅝	69'-7⅝	61'-4⅝	—	—	—	—
		7	7'-3⅛	12'-1"	"	"	9'-8⅝	24'-2"	"	"	26'-5"	36'-0"	"	"	42'-1⅝	47'-10"	"	"	57'-10⅝	—	—	—	—
		8	8'-3⅛	12'-1"	"	"	8'-2⅝	24'-2"	"	"	24'-11"	36'-0"	"	"	41'-7⅝	47'-10"	"	"	58'-10⅝	—	—	—	—
	12'	6	6'-3⅛	13'-4"	18'-10⅝	20'-10⅝	12'-7⅝	26'-2"	37'-0⅝	39'-0"	30'-8⅝	38'-5"	55'-7⅝	57'-7⅝	49'-10⅝	51'-10"	73'-3⅝	75'-3⅝	67'-0⅝	—	—	—	—
		7	7'-3⅛	13'-4"	"	"	11'-1⅝	26'-2"	"	"	29'-2⅝	39'-0"	"	"	49'-7⅝	51'-10"	"	"	65'-6⅝	—	—	—	—
		8	8'-3⅛	13'-4"	"	"	9'-7⅝	26'-2"	"	"	27'-8⅝	39'-0"	"	"	48'-10⅝	51'-10"	"	"	66'-6⅝	—	—	—	—
W-X452-2, W-X453-2 OR W-X454-2. (FOR H=9'-0" & OVER)	7'	9	10'-3⅝	8'-6"	12'-0⅝	14'-0⅝	1'-3"	16'-5"	23'-2⅝	25'-2⅝	12'-5⅝	26'-4"	34'-5"	36'-5"	23'-7⅝	32'-3"	45'-7⅝	47'-7⅝	34'-10"	40'-2"	56'-9⅝	58'-9⅝	46'-0⅝
	8'	9	10'-3⅝	9'-6"	13'-5⅝	15'-5⅝	2'-8"	18'-5"	26'-0⅝	28'-0⅝	18'-3⅝	27'-4"	38'-7⅝	40'-7⅝	27'-10⅝	36'-3"	51'-3⅝	53'-3⅝	40'-6"	45'-2"	63'-10⅝	65'-10⅝	53'-1⅝
		10	12'-3⅝	9'-8"	13'-8"	15'-8"	1'-9⅝	18'-8"	26'-4⅝	28'-4⅝	16'-1⅝	27'-8"	39'-1⅝	41'-1⅝	26'-10⅝	36'-8"	51'-10⅝	53'-10⅝	39'-7"	45'-8"	64'-7"	66'-7"	52'-3⅝
	9'	9	10'-3⅝	10'-6"	14'-10⅝	16'-10⅝	4'-1"	20'-5"	29'-0⅝	31'-0⅝	18'-1⅝	30'-8"	42'-10⅝	44'-10⅝	32'-1⅝	40'-3"	56'-11⅝	58'-11"	44'-1⅝	50'-2"	70'-11⅝	72'-11"	60'-2⅝
		10	12'-3⅝	10'-8"	15'-1"	17'-1"	2'-9⅝	20'-8"	29'-2⅝	31'-2⅝	16'-4⅝	30'-8"	43'-1⅝	45'-1⅝	31'-1⅝	40'-8"	57'-4⅝	59'-4⅝	43'-3"	50'-8"	71'-7⅝	73'-7⅝	59'-4⅝
		11	13'-3⅝	10'-10"	15'-3⅝	17'-3⅝	1'-6⅝	20'-10"	29'-5⅝	31'-5⅝	15'-8⅝	32'-10"	43'-7⅝	45'-7⅝	29'-10"	40'-10"	57'-9"	59'-9"	43'-1⅝	50'-10"	71'-10⅝	73'-10⅝	58'-1⅝
	10'	9	10'-3⅝	11'-6"	16'-3⅝	18'-3⅝	5'-6"	22'-5"	31'-8⅝	33'-8⅝	20'-11⅝	33'-8"	47'-1⅝	49'-1⅝	36'-4⅝	44'-3"	62'-7"	64'-7"	51'-10⅝	55'-2"	78'-10⅝	80'-10⅝	67'-3"
		10	12'-3⅝	11'-8"	16'-6"	18'-6"	4'-2⅝	22'-8"	31'-11⅝	34'-0⅝	19'-9⅝	33'-8"	47'-4⅝	49'-4⅝	35'-1⅝	44'-8"	63'-2"	65'-2"	50'-10⅝	55'-8"	79'-4⅝	81'-4⅝	66'-8⅝
		11	13'-3⅝	11'-10"	16'-8⅝	18'-8⅝	2'-11⅝	22'-10"	32'-2⅝	34'-2⅝	18'-6⅝	33'-10"	47'-7⅝	49'-7⅝	34'-1"	44'-10"	63'-6⅝	65'-5"	49'-7⅝	55'-10"	79'-7⅝	81'-6⅝	65'-6⅝
		12	15'-3⅝	12'-0"	16'-11⅝	18'-11⅝	1'-8⅝	23'-0"	32'-5⅝	34'-5⅝	17'-3"	34'-0"	48'-1"	50'-1"	32'-9⅝	45'-0"	63'-9⅝	65'-9⅝	48'-4⅝	56'-0"	79'-9⅝	81'-9⅝	63'-11⅝
	11'	9	10'-3⅝	12'-6"	17'-8⅝	19'-8⅝	6'-10⅝	24'-5"	34'-6⅝	36'-6⅝	28'-9⅝	36'-8"	51'-4⅝	53'-4⅝	40'-7⅝	49'-3"	68'-0⅝	70'-0⅝	57'-3⅝	—	—	—	—
		10	12'-3⅝	12'-8"	17'-11"	19'-11"	5'-7⅝	24'-9"	34'-10⅝	36'-10⅝	22'-7⅝	36'-8"	51'-10⅝	53'-10⅝	38'-7"	49'-8"	68'-3⅝	70'-1"	55'-6⅝	—	—	—	—
		11	13'-3⅝	12'-10"	18'-1⅝	20'-1⅝	4'-4⅝	24'-10"	35'-1⅝	37'-1⅝	21'-4⅝	36'-10"	52'-1⅝	54'-1"	38'-3⅝	49'-10"	69'-0⅝	71'-0⅝	53'-3⅝	—	—	—	—
		12	15'-3⅝	13'-0"	18'-4⅝	20'-4⅝	3'-3⅝	25'-0"	35'-4⅝	37'-4⅝	20'-1"	37'-0"	52'-3⅝	54'-3"	37'-10⅝	49'-9"	69'-3⅝	71'-3⅝	54'-0⅝	—	—	—	—
	12'	9	10'-3⅝	13'-6"	19'-1⅝	21'-1"	8'-8⅝	26'-5"	37'-4⅝	39'-4⅝	28'-7"	39'-0"	55'-7⅝	57'-7⅝	44'-8⅝	52'-9"	73'-10⅝	75'-10⅝	63'-1"	—	—	—	—
		10	12'-3⅝	13'-8"	19'-3⅝	21'-3⅝	7'-10⅝	26'-8"	37'-8⅝	39'-8⅝	25'-5⅝	39'-0"	56'-1⅝	58'-1"	43'-10"	52'-8"	74'-5⅝	76'-5⅝	62'-1⅝	—	—	—	—
		11	13'-3⅝	13'-10"	19'-6⅝	21'-6⅝	5'-7⅝	26'-11"	37'-11⅝	39'-11⅝	24'-2⅝	39'-10"	56'-4"	58'-4"	42'-4⅝	52'-10"	74'-8⅝	76'-8⅝	60'-11⅝	—	—	—	—
		12	15'-3⅝	14'-0"	19'-9⅝	21'-9⅝	4'-6⅝	27'-0"	38'-2⅝	40'-2⅝	22'-11"	40'-10"	56'-6⅝	58'-6⅝	41'-3⅝	53'-0"	74'-11⅝	76'-11⅝	59'-8⅝	—	—	—	—

NOTE:- This drawing to be used in conjunction with Standard Wing Drawings for 45° Skews for each slope as listed below.

2:1 slopes	3:1 slopes	4:1 slopes
W-X452-1 or W-X452-2	W-X453-1 or W-X453-2	W-X454-1 or W-X454-2.

NOTE:-
This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.-

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-145X-0	R-245X-01	R-345X-01	R-445X-01	R-545X-01
	R-245X-02	R-345X-02	R-445X-02	R-545X-02
R-145X-1	R-245X-1	R-345X-1	R-445X-1	
	R-245X-2	R-345X-2		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS 45° SKEW

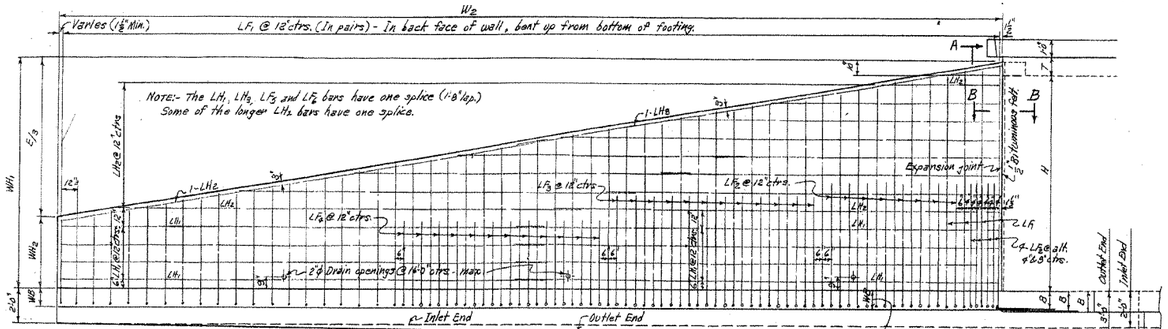
4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1, 3:1 & 4:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES — ALL DEPTHS OF COVER H= 2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'

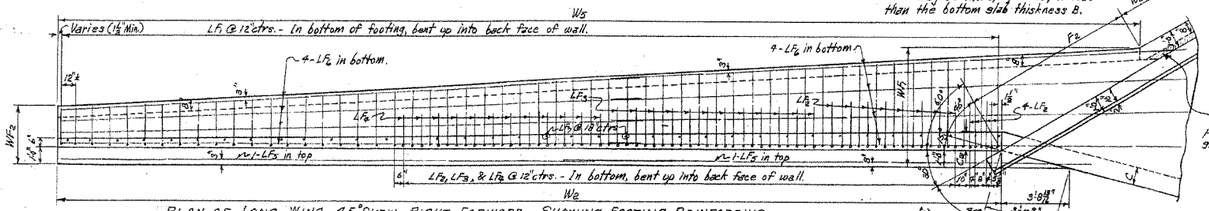
STANDARD DRAWING No. W-X45

Designed by:- W.C.H. 5-16-63 Checked by:-
Drawn by:- W.C.H. 6-15-64 Checked by:- JEM. 6-23-64
Quantities by:- Checked by:-

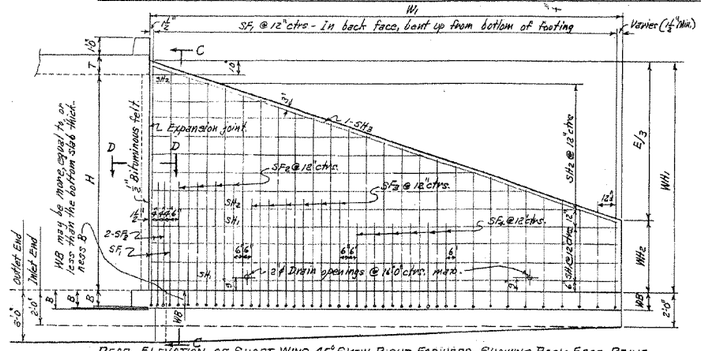
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			217	
JOB No.					



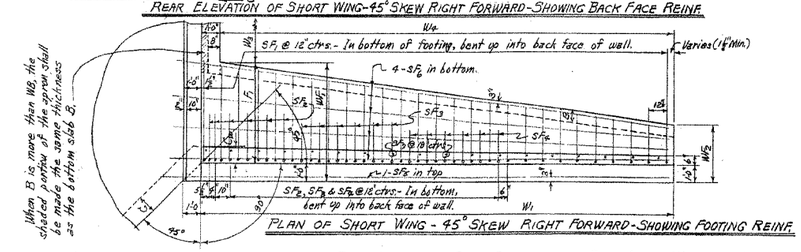
PART REAR ELEVATION OF LONG WING - 45° SKEW RIGHT FORWARD - SHOWING BACK FACE REINFORCING



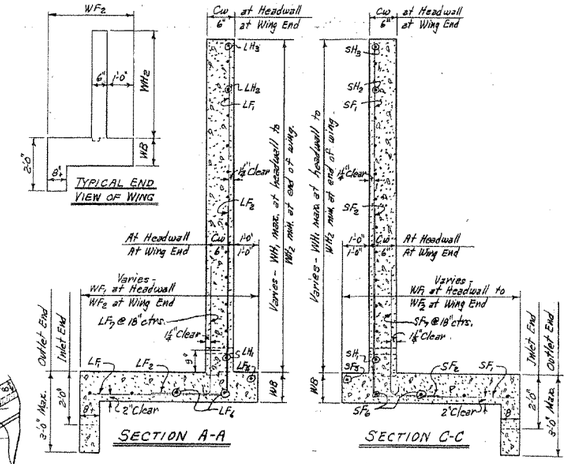
PLAN OF LONG WING - 45° SKEW RIGHT FORWARD - SHOWING FOOTING REINFORCING

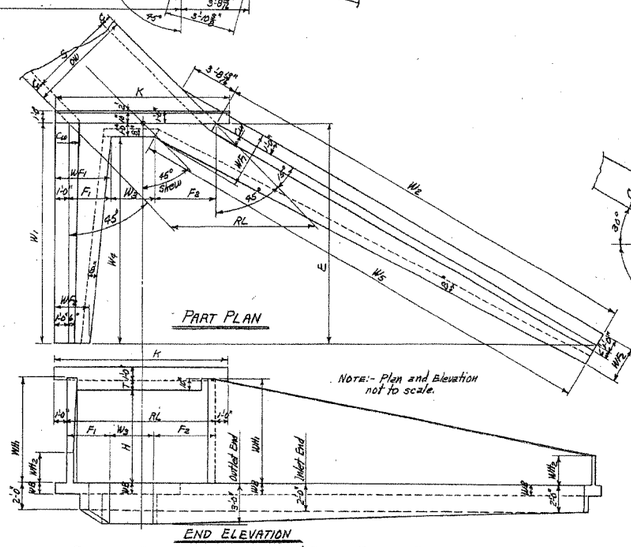


REAR ELEVATION OF SHORT WING - 45° SKEW RIGHT FORWARD - SHOWING BACK FACE REINF.



PLAN OF SHORT WING - 45° SKEW RIGHT FORWARD - SHOWING FOOTING REINF.

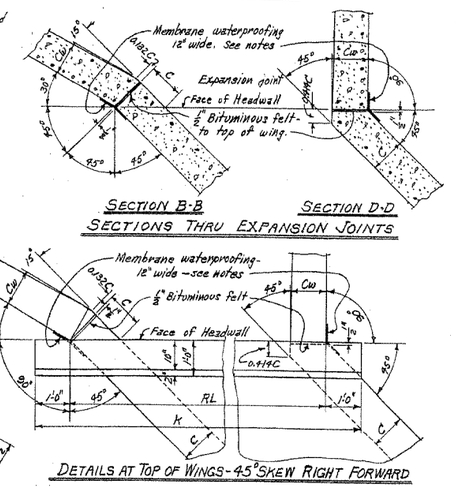




SINGLE BARREL CULVERT - 45° SKEW RIGHT FORWARD

Details of Culvert with 45° Skew Left Forward is reversed, see Drawing No. W-X45.

TYPICAL WING DETAILS



Note:-
This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-145X-0	R-245X-01	R-345X-01	R-445X-01	R-545X-01
	R-245X-02	R-345X-02	R-445X-02	R-545X-02
R-145X-1	R-245X-1	R-345X-1	R-445X-1	
	R-245X-2	R-345X-2		

Note:-
For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple, and Quintuple Span Culverts, see Std. Drawing No. W-X45.
For values of RL, K and W3 for each box, see above Std. also.

REGULAR WING DIMENSIONS - 3:1 SLOPES

CLEAR HEIGHT OF BOX	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING AT WING E.C.	WINGWALL HEIGHTS: AT HEADWALL	WINGWALL HEIGHTS: AT END OF WING	WIDTHS OF WING FOOTINGS: AT HEADWALL	WIDTHS OF WING FOOTINGS: AT END OF WING	FOOTING DIMENSION PARALLEL WITH HEADWALL: SHORT WING	FOOTING DIMENSION PARALLEL WITH HEADWALL: LONG WING	PERPENDICULAR DIST. FROM HEAD TO END OF WING	LENGTHS OF WING WALLS: SHORT WING	LENGTHS OF WING WALLS: LONG WING	INSIDE FOOTING DIMENSIONS: SHORT WING	INSIDE FOOTING DIMENSIONS: LONG WING	* QUANTITY PER WING, CLASS S CONCRETE: INLET END SHORT WING	INLET END LONG WING	OUTLET END SHORT WING	OUTLET END LONG WING
H	WB	CW	WH1	WH2	WF1	WF2	F1	F2	E	W1	W2	W3	W4	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
9'	10"	9"	9'-10"	9'-0"	5'-8"	2'-10½"	4'-2"	6'-7⅝"	20'-6"	20'-6"	41'-0"	19'-6"	40'-2½"	6.314	13.172	6.574	13.747
10'	11"	10"	10'-10"	9'-4"	5'-8"	3'-0"	4'-8"	7'-7⅝"	22'-6"	22'-6"	45'-0"	21'-6"	51'-1"	8.056	16.786	8.339	17.422
11'	12"	11"	11'-10"	9'-8"	6'-2"	3'-1½"	5'-2"	8'-7⅝"	24'-6"	24'-6"	49'-0"	23'-6"	55'-11⅝"	10.101	21.031	10.403	21.728
12'	13"	12"	12'-10"	9'-10"	6'-8"	3'-3"	5'-8"	9'-7⅝"	26'-6"	26'-6"	53'-0"	25'-6"	60'-9⅝"	12.476	25.941	12.810	26.717

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W3.

QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL FOR 4 WINGS ⊕	CLASS S CONCRETE - 4 WINGS, HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS: SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
S	H	CW	WB	LB.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
7'	9'	9"	10"	2831	40.92	43.30	45.66	48.03	50.40
8'	9'	9"	10"	2831	41.23	43.91	46.57	49.25	51.91
	10'	10"	11"	3596	51.85	54.58	57.29	60.02	62.73
9'	9'	9"	10"	2831	41.55	44.59	47.48	50.44	53.42
	10'	10"	11"	3596	52.17	55.20	58.21	61.22	64.25
	11'	11"	12"	4282	64.65	67.71	70.75	73.80	76.85
10'	9'	9"	10"	2831	41.86	45.18	48.42	51.65	54.92
	10'	10"	11"	3596	52.48	55.79	59.18	62.54	65.77
	11'	11"	12"	4282	64.97	68.33	71.68	75.03	78.39
	12'	12"	13"	5395	79.49	82.88	86.26	89.63	93.03
11'	9'	9"	10"	2831	42.16	45.84	49.39	52.92	—
	10'	10"	11"	3596	52.79	56.48	60.06	63.67	—
	11'	11"	12"	4282	65.28	68.97	72.61	76.26	—
	12'	12"	13"	5395	79.79	83.51	87.19	90.88	—
12'	9'	9"	10"	2831	42.98	46.51	50.37	54.25	—
	10'	10"	11"	3596	53.10	57.15	61.04	64.95	—
	11'	11"	12"	4282	65.59	69.64	73.59	77.50	—
	12'	12"	13"	5395	80.11	84.16	88.13	92.13	—

⊕ For reinforcing steel in Headwalls and Aprons, see Drawing Nos. of Barrel Sections listed at left below.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, footings and sidewalls shall be only where shown on plans.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three moppings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the expansion joints.

Payment for the membrane waterproofing and bituminous felt shall be included in unit price bid for Class S Concrete.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT	WING LOCATION	SF1 & LF1 BENT (In bottom of footing, bent up into back face of wing. One bar (or two bars) of each length.): SIZE	SPACING	No. READ	LENGTHS VARY MIN.	MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.	SF2 & LF2 BENT (In bottom of footing, bent up into back face of wing. Alt. with F1 bars.): SIZE ⊕	SPACING	No. READ	LENGTH	X	Y	SF3 & LF3 BENT (In bottom of footing, bent up into back face of wing. Alt. with F1 bars.): SIZE	SPACING	No. READ	LENGTH	X	Y	SF4 & LF4 BENT (In bottom of footing, bent up into back face of wing. Alt. with F1 bars.): SIZE	SPACING	No. READ	LENGTH	X	Y
H	SHORT OR LONG																											
9'	Short	#5	12"	21	5'-0"	19'-0"	1'-6"	3'-10"	3'-7"	10'-3"	#5	12"	3	7'-6"	2'-1"	5'-6"	#4	12"	6	6'-6"	1'-10"	4'-9"	—	—	—	—	—	—
	Long	#5	12"	42	4'-10"	13'-9"	1'-6"	3'-7"	3'-5"	10'-3"	#5	12"	6	7'-6"	2'-1"	5'-6"	#4	12"	12	6'-6"	1'-10"	4'-9"	—	—	—	—	—	—
10'	Short	#5	12"	23	5'-7"	15'-7"	1'-8"	4'-4"	4'-0"	11'-9"	#6	12"	3	8'-6"	2'-4"	6'-3"	#5	12"	3	7'-6"	2'-1"	5'-6"	#4	12"	6	6'-6"	1'-10"	4'-9"
	Long	#5	12"	46	5'-5"	15'-4"	1'-8"	4'-1"	3'-10"	11'-9"	#6	12"	6	8'-6"	2'-4"	6'-3"	#5	12"	6	7'-6"	2'-1"	5'-6"	#4	12"	12	6'-6"	1'-10"	4'-9"
11'	Short	#5	12"	25	6'-1"	17'-8"	1'-9"	4'-10"	4'-5"	12'-5"	#6	12"	6	8'-6"	2'-4"	6'-3"	#5	12"	3	7'-6"	2'-1"	5'-6"	#4	12"	6	6'-6"	1'-10"	4'-9"
	Long	#5	12"	50	5'-11"	16'-10"	1'-9"	4'-6"	4'-3"	12'-5"	#6	12"	12	8'-6"	2'-4"	6'-3"	#5	12"	6	7'-6"	2'-1"	5'-6"	#4	12"	12	6'-6"	1'-10"	4'-9"
12'	Short	#5	12"	27	6'-8"	18'-9"	1'-11"	5'-4"	4'-10"	13'-6"	#7	12"	6	9'-6"	2'-7"	7'-0"	#6	12"	6	8'-6"	2'-4"	6'-3"	#4	12"	6	6'-6"	1'-10"	4'-9"
	Long	#5	12"	54	6'-6"	18'-8"	1'-11"	5'-1"	4'-8"	13'-6"	#7	12"	12	9'-6"	2'-7"	7'-0"	#6	12"	12	8'-6"	2'-4"	6'-3"	#4	12"	12	6'-6"	1'-10"	4'-9"

CLEAR HEIGHT	WING LOCATION	SF5 & LF5 STRAIGHT (Longitudinal in top of wing footing heel.): SIZE	No. READ	LENGTH	SF6 & LF6 STRAIGHT (Longitudinal in bottom of wing footing toe.): SIZE	No. READ	LENGTH	SF7 & LF7 BENT (Footing dowels extending up into front face of wing.): SIZE	SPACING	No. READ	LENGTH	X	SH1 & LH1 STRAIGHT (Horizontal in back face of wing.): SIZE	SPACING	No. READ	LENGTH	SH2 & LH2 STRAIGHT (Horizontal in back face of wing. One bar of each length.*): SIZE	SPACING	No. READ	LENGTHS VARY MAX.	MIN.	SH3 & LH3 (In back face of wing at top - on slope): SIZE	No. READ	LENGTH
H	SHORT OR LONG																								
9'	Short	#4	1	22'-6"	#4	4	22'-0"	#4	18"	14	4'-0"	3'-6"	#4	12"	3	20'-3"	#4	12"	6	19'-9"	3'-9"	#4	1	21'-6"
	Long	#4	2	23'-9"	#4	8	26'-2"	#4	18"	28	4'-0"	3'-6"	#4	12"	6	21'-6"	#4	12"	6	*36'-6"	6'-6"	#4	2	21'-6"
10'	Short	#4	1	24'-9"	#4	4	24'-0"	#4	18"	16	4'-0"	3'-10"	#4	12"	3	22'-3"	#4	12"	7	21'-3"	3'-3"	#4	1	23'-5"
	Long	#4	2	25'-9"	#4	8	27'-11"	#4	18"	31	4'-0"	3'-10"	#4	12"	6	23'-6"	#4	12"	7	*38'-6"	6'-6"	#4	2	23'-6"
11'	Short	#4	1	26'-9"	#4	4	26'-0"	#4	18"	17	4'-0"	4'-2"	#4	12"	4	24'-3"	#4	12"	7	21'-3"	3'-3"	#4	1	25'-7"
	Long	#4	2	27'-9"	#4	8	30'-1"	#4	18"	33	4'-0"	4'-2"	#4	12"	8	25'-2"	#4	12"	7	*38'-6"	6'-6"	#4	2	25'-7"
12'	Short	#4	1	28'-9"	#4	4	28'-0"	#4	18"	18	5'-0"	4'-6"	#4	12"	4	26'-3"	#4	12"	8	24'-9"	3'-9"	#4	1	27'-8"
	Long	#4	2	29'-9"	#4	8	32'-6"	#4	18"	36	5'-0"	4'-6"	#4	12"	8	27'-2"	#4	12"	8	*48'-6"	6'-6"	#4	2	27'-9"

BAR BENDING DIAGRAMS	QUANTITY: REINFORCING STEEL PER WING - LBS.: SHORT WING	LONG WING
SF5-SF6 LF5-LF6 ⅝" Pin	466.6	994.0
SF7 & LF7 ⅝" Pin	596.0	1187.0
NOTE:- Dimensions are to bar centers.	708.5	1432.6
	893.0	1809.7

NOTES:- Bars for short wing to be marked with prefix letter "S", while those for long wing shall be marked with letter "L".

⊕ Except as shown at headwall.

* Lengths without splice. Bars over 28'-0" length may be spliced (1'-8" lap). Quantities include laps for LH2 bars over 28'-0" length.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
45° SKEW

7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER FOR H = 9'-0" & OVER

STANDARD DRAWING No. W-X453-2

Designed By:- W.C.H. 5-16-63 Checked By:- J.E.M. 7-20-64
Drawn By:- W.C.H. 6-9-64 Checked By:- J.E.M. 7-21-64
Quantities By:- W.C.H. 7-7-64

RESHOT 3-5-93

157

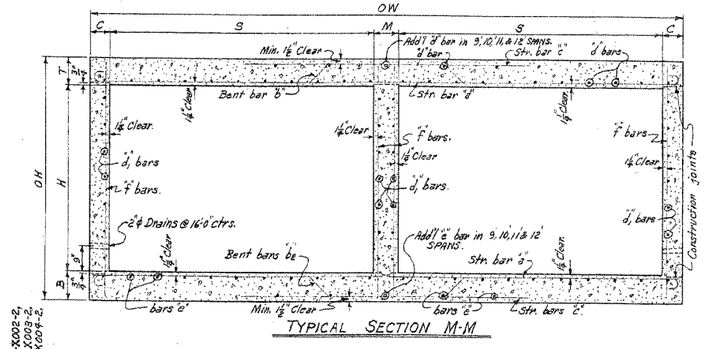
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			218	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

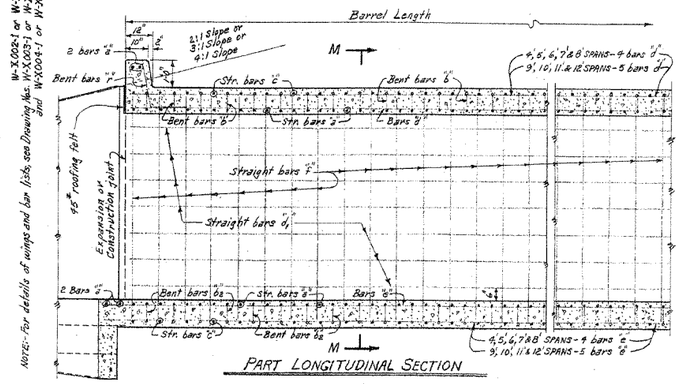
DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. 2 Add'l in Apron and Headwall - Each.				"b" bars BENT - See Diagram below. In Bottom of Top Slab bent up over Division Wall - hooked. Alternate with "a" and "c" bars.							"b2" bars BENT - See Diagram below. In Top of Bottom Slab bent down under Division Wall - hooked. Alternate with "a" and "c" bars.							"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "b" and "b2" bars.				"d" bars STRAIGHT Longitudinal in Top Slab of Barrel.			"d1" bars STRAIGHT Longitudinal in Sidewalls and Division Walls.				"e" bars STRAIGHT Longitudinal in Bottom Slab of Barrel.			"f" bars STRAIGHT Vertical in Sidewalls and Division Walls.		
D	S	H	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH
0'-0" TO 5'-0" MAXIMUM.	2 @ 4'	2'	#5	12"	128	128	#5	12"	59	59	10'-6"	0'-3"	2'-2½"	3'-9"	#5	12"	59	59	10'-6"	0'-2½"	2'-3½"	3'-6"	#5	12"	120	120	4'-8"	#5	12"	14		#4	12"	8		#4	12"	14		#4	12"	290	290	2'-10"
		3'			128	128			59	59	10'-6"	0'-3"	2'-2½"	3'-9"			59	59	10'-6"	0'-2½"	2'-3½"	3'-6"			120	120	4'-8"			14				12				14				290	290	3'-10"
		4'			128	128			59	59	10'-6"	0'-3"	2'-2½"	3'-9"			59	59	10'-6"	0'-2½"	2'-3½"	3'-6"			120	120	4'-8"			16				14				16				290	290	4'-10"
		5'			128	128			59	59	10'-6"	0'-3"	2'-2½"	3'-9"			59	59	10'-6"	0'-2½"	2'-3½"	3'-9"			120	120	4'-8"			20				16				20				290	290	5'-10"
		6'			128	128			59	59	10'-9"	0'-3"	2'-3½"	3'-5"			59	59	10'-9"	0'-2½"	2'-3½"	3'-5"			120	120	4'-9"			24				19				24				290	290	6'-10"
	2 @ 5'	3'	#6	12"	128	128	#5	12"	59	59	12'-7"	0'-3½"	2'-7½"	4'-1"	#5	12"	59	59	12'-6"	0'-3"	2'-8½"	4'-1"	#6	12"	120	120	5'-8"	#5	11½"	16		#4	12"	12		#4	12"	16		#4	12"	290	290	3'-11"
		4'			128	128			59	59	12'-7"	0'-3½"	2'-7½"	4'-1"			59	59	12'-6"	0'-3"	2'-8½"	4'-1"			120	120	5'-8"			16				16				20				290	290	4'-11"
		5'			128	128			59	59	12'-7"	0'-3½"	2'-7½"	4'-1"			59	59	12'-6"	0'-3"	2'-8½"	4'-1"			120	120	5'-8"			20				16				24				290	290	5'-11"
		6'			128	128			59	59	12'-10"	0'-3½"	2'-8½"	4'-2"			59	59	12'-9"	0'-3"	2'-9½"	4'-2"			120	120	5'-9"			24				19				28				290	290	6'-11"
		7'			128	128			59	59	13'-0"	0'-3½"	2'-9½"	4'-2½"			59	59	12'-11"	0'-3"	2'-10½"	4'-2½"			120	120	5'-10"			28				16				28				290	290	7'-11"
	2 @ 6'	3'	#6	11"	140	140	#5	11"	65	65	14'-7"	0'-4"	3'-0½"	4'-10"	#5	11"	65	65	14'-7"	0'-4"	3'-0½"	4'-10"	#6	11"	132	132	6'-8"	#5	11½"	18		#4	12"	12		#4	12"	18		#4	12"	290	290	4'-0"
		4'			140	140			65	65	14'-7"	0'-4"	3'-0½"	4'-10"			65	65	14'-7"	0'-4"	3'-0½"	4'-10"			132	132	6'-8"			18				16				20				290	290	5'-3"
		5'			140	140			65	65	14'-7"	0'-4"	3'-0½"	4'-10"			65	65	14'-7"	0'-4"	3'-0½"	4'-10"			132	132	6'-8"			20				18				24				290	290	6'-0"
		6'			140	140			65	65	14'-10"	0'-4"	3'-1½"	4'-11"			65	65	14'-10"	0'-4"	3'-1½"	4'-11"			132	132	6'-9"			24				18				28				290	290	7'-0"
		7'			140	140			65	65	15'-0"	0'-4"	3'-2½"	4'-11½"			65	65	15'-0"	0'-4"	3'-2½"	4'-11½"			132	132	6'-10"			28				18				32				290	290	8'-0"
		8'			140	140			65	65	15'-1"	0'-4"	3'-2½"	5'-0"			65	65	15'-1"	0'-4"	3'-2½"	5'-0"			132	132	6'-10"			32				18				36				290	290	9'-0"
	2 @ 7'	4'	#6	12"	128	128	#5	12"	59	59	16'-9"	0'-4½"	3'-5"	5'-7"	#5	12"	59	59	16'-9"	0'-4½"	3'-5"	5'-7"	#6	12"	120	120	7'-8"	#5	11½"	20		#4	12"	16		#4	12"	20		#4	12"	290	290	5'-1"
		5'			128	128			59	59	16'-9"	0'-4½"	3'-5"	5'-7"			59	59	16'-9"	0'-4½"	3'-5"	5'-7"			120	120	7'-8"			20				20				24				290	290	6'-1"
		6'			128	128			59	59	17'-0"	0'-4½"	3'-6"	5'-8"			59	59	17'-0"	0'-4½"	3'-6"	5'-8"			120	120	7'-9"			24				20				24				290	290	7'-1"
		7'			128	128			59	59	17'-2"	0'-4½"	3'-7"	5'-8½"			59	59	17'-2"	0'-4½"	3'-7"	5'-8½"			120	120	7'-10"			28				20				28				290	290	8'-1"
		8'			128	128			59	59	17'-3"	0'-4½"	3'-7"	5'-9"			59	59	17'-3"	0'-4½"	3'-7"	5'-9"			120	120	7'-11"			32				20				32				290	290	9'-1"
		9'			128	128			59	59	17'-6"	0'-4½"	3'-8"	5'-10"			59	59	17'-6"	0'-4½"	3'-8"	5'-10"			120	120	7'-11"			36				20				36				290	290	10'-1"
	2 @ 8'	4'	#6	11"	140	140	#5	11"	65	65	18'-10"	0'-5"	3'-10"	6'-9"			65	65	18'-10"	0'-5"	3'-10"	6'-9"			132	132	8'-8"	#5	11½"	23		#4	12"	16		#4	12"	23		#4	12"	290	290	5'-2"
		5'			140	140			65	65	19'-1"	0'-5"	3'-11"	6'-5"			65	65	19'-1"	0'-5"	3'-11"	6'-5"			132	132	8'-9"			23				20				23				290	290	6'-2"
		6'			140	140			65	65	19'-1"	0'-5"	3'-11"	6'-5"			65	65	19'-1"	0'-5"	3'-11"	6'-5"			132	132	8'-9"			23				24				23				290	290	7'-2"
		7'			140	140			65	65	19'-3"	0'-5"	4'-0"	6'-5½"			65	65	19'-3"	0'-5"	4'-0"	6'-5½"			132	132	8'-10"			23				28				23				290	290	8'-2"
		8'			140	140			65	65	19'-9"	0'-5"	4'-0"	6'-6"			65	65	19'-9"	0'-5"	4'-0"	6'-6"			132	132	8'-10"			23				32				23				290	288	9'-2"
		9'			140	140			65	65	19'-7"	0'-5"	4'-1"	6'-7"			65	65	19'-7"	0'-5"	4'-1"	6'-7"			132	132	8'-11"			23				36				23				290	290	10'-2"
		10'			140	140			65	65	19'-10"	0'-5"	4'-2"	6'-8"			65	65	19'-10"	0'-5"	4'-2"	6'-8"			132	132	9'-0"			23				40				23				288	288	11'-2"
	2 @ 9'	5'	#6	11"	140	140	#5	11"	65	65	21'-1"	0'-5½"	4'-4½"	7'-2"			65	65	21'-1"	0'-5½"	4'-3½"	7'-2"			132	132	9'-9"	#5	11½"	26		#4	12"	20		#4	12"	26		#4	12"	290	290	6'-3"
		6'			140	140			65	65	21'-3"	0'-5½"	4'-5"	7'-2½"			65	65	21'-3"	0'-5½"	4'-4½"	7'-2½"			132	132	9'-10"			26				24				26				290	290	7'-3"
		7'			140	140			65	65	21'-3"	0'-5½"	4'-5"	7'-2½"			65	65	21'-3"	0'-5½"	4'-4½"	7'-2½"			132	132	9'-10"			26				28				26				290	290	8'-3"
		8'			140	140			65	65	21'-9"	0'-5½"	4'-5½"	7'-3"			65	65	21'-9"	0'-5½"	4'-4½"	7'-3"			132	132	9'-10"			26				32				26				288	288	9'-3"
		9'			140	140			65	65	21'-7"	0'-5½"	4'-6"	7'-3"			65	65	21'-7"	0'-5½"	4'-5½"	7'-3"			132	132	9'-11"			26				36				26				290	290	10'-3"
		10'			140	140			65	65	21'-10"	0'-5½"	4'-7"	7'-5"			65	65	21'-10"	0'-5½"	4'-6½"	7'-5"			132	132	10'-0"			26				40				26				264	264	11'-3"
		11'			140	140			65	65	22'-0"	0'-5½"	4'-7"	7'-6"			65	65	22'-0"	0'-5½"	4'-6½"	7'-6"			132	132	10'-0"			26				44				25				288	288	12'-3"
	2 @ 10'	5'	#7	12"	128	128	#6	12"	59	59	23'-2"	0'-6"	4'-9"	7'-11"			59	59	23'-2"	0'-6"	4'-8"	7'-11"			120	120	10'-9"	#5	11½"	28		#4	12"	20		#4	12"	28		#4	12"	290	290	6'-9"
		6'			128	128			59	59	23'-4"	0'-6"	4'-10"	7'-11½"			59	59	23'-4"	0'-6"	4'-9"	7'-11½"			120	120	10'-10"			28				24				28				290	290	7'-9"
		7'			128	128			59	59	23'-4"	0'-6"	4'-10"	7'-11½"			59	59	23'-4"	0'-6"	4'-9"	7'-11½"			120	120	10'-10"			28				28				28				290	290	8'-9"
		8'			128	128			59	59	23'-5"	0'-6"	4'-10"	8'-0"			59	59	23'-5"	0'-6"	4'-9"	8'-0"			120	120	10'-10"			32				32				32				290	288	9'-9"
		9'			128	128			59	59	23'-8"	0'-6"	4'-11"	8'-1"			59	59	23'-8"	0'-6"	4'-10"	8'-1"			120	120	10'-11"			36				36				36				290	290	10'-9"
		10'			128	128			59	59	23'-11"	0'-6"	5'-0"	8'-2"			59	59	23'-11"	0'-6"	4'-11"	8'-2"			120	120	11'-0"			40				40				40				264	264	11'-6"
		11'			128	128			59	59	24'-1"	0'-6"	5'-0"	8'-3"			59	59	24'-1"	0'-6"	4'-11"	8'-3"			120	120	11'-0"			44				44				44				288	288	12'-6"
		12"			128	128			59	59	24'-3"	0'-6"	5'-0"	8'-4"			59	59	24'-3"	0'-6"	4'-11"	8'-4"			120	120	11'-0"			48				48				48				290	290	13'-6"
	2 @ 11'	6'	#7	12"	128	128	#6	12"	59	59	25'-5"	0'-6½"	5'-3"	8'-9"	#6	12"	59	59	25'-6"	0'-7½"	5'-1"	8'-9"	#7	12"	120	120	11'-10"	#5	11½"	30		#4	12"	24		#4	12"	30		#4	12"	290	290	7'-6"
		7'			128	128			59	59	25'-5"	0'-6½"	5'-3"	8'-9"			59	59	25'-6"	0'-7½"	5'-1"	8'-9"			120	120	11'-10"			30				28				30				290	290	8'-6"
		8'			128	128			59	59	25'-5"	0'-6½"	5'-3"	8'-9"			59	59	25'-6"	0'-7½"	5'-1"	8'-9"			120	120	11'-10"			30				32				30				290	288	9'-6"
		9'			128	128			59	59	25'-8"	0'-6½"	5'-4"	8'-10"			59	59	25'-9"	0'-7½"	5'-2"	8'-10"			120	120	11'-11"			30				36				30				290	290	10'-6"
		10'			128	128			59	59	25'-11"	0'-6½"	5'-5"	8'-11"			59	59	26'-0"	0'-7½"	5'-3"	8'-11"			120	120	12'-0"			30				40				30				264	264	11'-6"
		11'			128	128			59	59	26'-1"	0'-6½"	5'-5"	9'-0"			59	59	26'-2"	0'-7½"	5'-3"	9'-0"			120	120	12'-0"			30				44				30				288	288	12'-6"
		12"			128	128			59	59	26'-3"	0'-6½"	5'-5"	9'-1"			59	59	26'-4"	0'-7½"	5'-3"	9'-1"			120	120	12'-0"			30				48				29				290	290	13'-6"
	2 @ 12'	6'	#7	11"	140	140	#6	11"	65	65	25'-11"	0'-7"	5'-5"	9'-4"			65	65	27'-7"	0'-8½"	5'-5"	9'-4"			132	132	12'-10"			32				24				31				290	290	7'-7"
		7'			140	140			65	65	25'-11"	0'-7"	5'-5"	9'-4"			65	65	27'-7"	0'-8½"	5'-5"	9'-4"			132	132	12'-10"			32				28				31				290	290	8'-7"
		8'			140	140			65	65	25'-11"	0'-7"	5'-5"	9'-4"			65	65	27'-7"	0'-8½"	5'-5"	9'-4"			132	132	12'-10"			32				32				31				290	288	9'-7"
		9'			140	140			65	65	26'-2"	0'-7"	5'-6"	9'-5"			65	65	27'-10"	0'-8½"	5'-6"	9'-5"			132	132	12'-11"			32				36				31				290	290	10'-7"
		10'			140	140			65	65	26'-5"	0'-7"	5'-6"	9'-6"			65	65	28'-1"	0'-8½"	5'-7"	9'-6"			132	132	13'-0"			32				40				31				264	264	11'-7"
		11'			140	140			65	65	26'-7"	0'-7"	5'-6"	9'-7"			65	65	28'-3"	0'-8½"	5'-7"	9'-7"			132	132	13'-0"			32				44				31				288	288	12'-7"
		12			140	140			65	65	26'-9"	0'-7"	5'-6"	9'-8"			65	65	28'-5"	0'-8½"	5'-7"	9'-8"			132	132	13'-0"			32				48				31				290	290	13'-7"

DIMENSIONS QUANTITIES

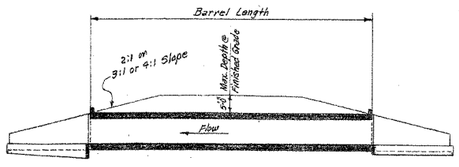
MAX. DESIGN DEPTH OF COVER	CLEAR SPANS	CLEAR HEIGHT	Sq. Ft. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF DIVISION WALL	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	CLASS S CONC. IN PT. OF BARREL	UNIT QUANTITIES REINFORCING STEEL PER LIN. FT. OF BARREL	ADDITIONAL PER LAP	ADDITIONAL TWO HEADWALLS & APRONS
D	S	H	A	OW	T	C	M	B	OH	CU.YD.	LB.	LB.	LB.
5'-0"	2 @ 4'	2'	16	9'-8"	6½"	6"	8"	6"	3'-0½"	0.496	88.15	42.71	129.56
		3'	24	9'-8"		6"	8"		4'-0½"	0.558	93.49	46.05	129.56
		4'	32	9'-8"		6"	8"		5'-0½"	0.620	98.86	49.39	129.56
		5'	40	9'-8"		6"	8"		6'-0½"	0.682	104.18	52.73	129.56
		6'	48	9'-11"		7"	9"		7'-0½"	0.809	110.74	56.07	131.65
	2 @ 5'	3'	30	11'-8"	7"	6"	8"	6½"	4'-1½"	0.671	123.34	51.19	198.64
		4'	40	11'-8"		6"	8"		5'-1½"	0.733	128.68	54.53	198.64
		5'	50	11'-8"		6"	8"		6'-1½"	0.795	134.03	57.87	198.64
		6'	60	11'-11"		7"	9"		7'-1½"	0.922	140.89	61.21	201.64
		7'	70	12'-1"		7½"	10"		8'-1½"	1.044	147.34	64.55	203.65
	2 @ 6'	3'	36	13'-8"	7½"	6"	8"	7½"	4'-5"	0.818	198.50	56.34	233.58
		4'	48	13'-8"		6"	8"		5'-5"	0.880	153.85	59.68	233.58
		5'	60	13'-8"		6"	8"		6'-5"	0.941	159.19	63.02	233.58
		6'	72	13'-11"		7"	9"		7'-5"	1.070	166.20	66.36	236.59
		7'	84	14'-1"		7½"	10"		8'-5"	1.192	172.74	69.70	238.59
		8'	96	14'-2"		8"	10"		9'-5"	1.298	183.36	73.04	239.59
	2 @ 7'	4'	56	15'-8"	8"	6"	8"	8"	5'-9"	1.021	178.15	64.83	268.97
		5'	70	15'-8"		6"	8"		6'-9"	1.082	183.99	68.17	268.97
		6'	84	15'-11"		7"	9"		7'-9"	1.212	190.59	71.51	271.97
		7'	98	16'-1"		7½"	10"		8'-9"	1.334	197.19	74.85	273.98
		8'	112	16'-2"		8"	10"		9'-9"	1.440	207.89	78.19	274.98
		9'	126	16'-5"		9"	11"		10'-9"	1.616	225.25	81.53	277.98
	2 @ 8'	4'	64	17'-8"	8½"	6"	8"	8½"	5'-5"	1.176	210.37	71.71	309.80
		5'	80	17'-8"		7"	9"		6'-5"	1.295	217.68	75.05	307.81
		6'	96	17'-11"		7"	9"		7'-5"	1.366	222.97	78.39	307.81
		7'	112	18'-1"		7½"	10"		8'-5"	1.489	229.68	81.73	309.81
		8'	128	18'-2"		8"	10"		9'-5"	1.685	244.97	85.07	310.81
		9'	144	18'-5"		9"	11"		10'-5"	1.772	258.08	88.41	313.82
		10'	160	18'-8"		10"	12"		11'-5"	1.967	271.07	91.75	316.82
	2 @ 9'	5'	90	19'-11"	9"	7"	9"	9½"	6'-6½"	1.477	239.37	82.77	345.92
		6'	108	20'-1"		7½"	10"		7'-6½"	1.584	246.08	86.11	347.93
		7'	126	20'-1"		7½"	10"		8'-6½"	1.671	251.93	89.45	347.93
		8'	144	20'-2"		8"	10"		9'-6½"	1.778	262.26	92.79	348.93
		9'	162	20'-5"		9"	11"		10'-6½"	1.956	273.95	96.13	351.93
		10'	180	20'-8"		10"	12"		11'-6½"	2.152	292.97	99.47	354.93
		11'	198	20'-10"		11"	12"		12'-6½"	2.328	306.84	102.81	356.94
	2 @ 10'	5'	100	21'-11"	9½"	7"	9"	10"	6'-7½"	1.674	273.66	87.32	479.99
		6'	120	22'-1"		7½"	10"		7'-7½"	1.792	286.50	91.26	482.71
		7'	140	22'-1"		7½"	10"		8'-7½"	1.869	291.85	94.60	482.71
		8'	160	22'-2"		8"	10"		9'-7½"	1.976	302.77	97.94	484.08
		9'	180	22'-5"		9"	11"		10'-7½"	2.155	320.74	101.28	488.16
		10'	200	22'-8"		10"	12"		11'-7½"	2.352	333.99	104.62	492.25
		11'	220	22'-10"		11"	12"		12'-7½"	2.529	348.01	107.96	494.98
		12'	240	23'-0"		12"	12"		13'-7½"	2.718	370.23	111.30	497.70
	2 @ 11'	6'	132	24'-2"	10"	8"	10"	11"	7'-9"	2.048	308.36	96.41	530.03
		7'	154	24'-2"		8"	10"		8'-9"	2.128	314.70	99.75	530.03
		8'	176	24'-2"		8"	10"		9'-9"	2.208	325.12	103.09	530.03
		9'	198	24'-5"		9"	11"		10'-9"	2.388	343.25	106.43	534.12
		10'	220	24'-8"		10"	12"		11'-9"	2.584	356.57	109.77	538.21
		11'	242	24'-10"		11"	12"		12'-9"	2.764	370.67	113.11	540.93
		12'	264	25'-0"		12"	12"		13'-9"	2.954	393.05	116.45	543.66
	2 @ 12'	6'	144	26'-2"	10½"	8"	10"	12"	7'-10½"	2.299	353.31	101.55	576.93
		7'	168	26'-2"		8"	10"		8'-10½"	2.379	368.65	104.89	576.93
		8'	192	26'-2"		8"	10"		9'-10½"	2.459	383.12	108.23	576.93
		9'	216	26'-5"		9"	11"		10'-10½"	2.640	397.52	111.57	580.52
		10'	240	26'-8"		10"	12"		11'-10½"	2.840	401.07	114.91	584.60
		11'	264	26'-10"		11"	12"		12'-10½"	3.018	415.31	118.25	587.39
		12'	288	27'-0"		12"	12"		13'-10½"	3.208	437.88	121.59	590.05



TYPICAL SECTION M-M



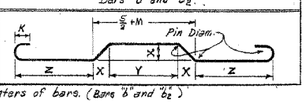
PART LONGITUDINAL SECTION



LONGITUDINAL SECTION

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#5	2⅛"	4⅛"	0'-11½"
#6	3"	5"	1'-2"

BENDING DIAGRAM FOR Bars "b" and "b2".

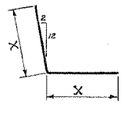


Note:- Dimensions are to centers of bars. (Bars "b" and "b2")

DOWEL BARS FOR TWO HEADWALLS

2 SPANS @	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	#4	12"s	20	2'-5"	1'-2⅛"
5'	#4	12"s	24	2'-6"	1'-3"
6'	#4	12"s	28	2'-7"	1'-3⅛"
7'	#4	12"s	32	2'-8"	1'-4"
8'	#4	12"s	36	2'-9"	1'-4½"
9'	#4	12"s	40	2'-10"	1'-5"
10'	#4	12"s	46	2'-11"	1'-5½"
11'	#4	12"s	50	3'-0"	1'-6"
12'	#4	12"s	54	3'-1"	1'-6½"

Bars "X" Dowel bars in Headwalls.



GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD

H20-S16 LO

Reshot 3-5-93

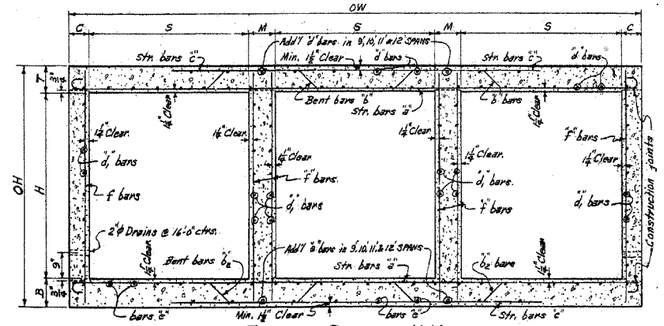
FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			219	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

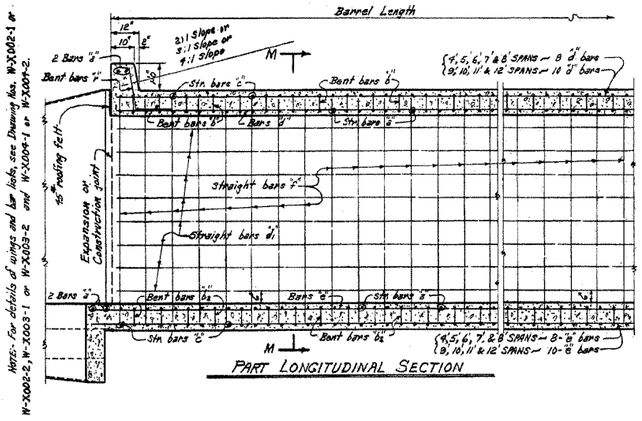
DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. 2 Add'l in Apron and Headwall - Each.				"b" bars BENT - See Diagram below. In Top of Top Slab bent up over Division Walls - hooked. Alternate with "a" and "c" bars.							"b2" bars BENT - See Diagram below. In Top of Bottom Slab bent down under Division Walls - hooked. Alternate with "a" and "c" bars.							"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "b" and b2 bars.				"d" bars STRAIGHT Longitudinal in Top Slab of Barrel			"d1" bars STRAIGHT Longitudinal in Sidewalls and Division Walls			"e" bars Longitudinal in Bottom Slab of Barrel.			"f" bars STRAIGHT Vertical in Sidewalls and Division Walls		
D	S	H	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH	X	Y	Z	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NUMBER REQ'D 3:1	NUMBER REQ'D 4:1	LENGTH
0'-0" TO 5'-0" MAXIMUM	3 @ 4'	2'			128	128			59	59	15'-9"		0'-8"	2'-2"	3'-9⅝"				59	59	15'-5"	0'-2⅝"	2'-3"	3'-6⅝"				120	120	9'-6"				22																	
		3'			128	128			59	59	15'-6"		0'-8"	2'-2"	3'-9⅝"				59	59	15'-5"	0'-2⅝"	2'-3"	3'-6⅝"				120	120	9'-9"				22																	
		4'	#5	12"	128	128	#5	12"	59	59	15'-9"		0'-8"	2'-2"	3'-9⅝"	#5	12"		59	59	15'-5"	0'-2⅝"	2'-3"	3'-6⅝"	#5	12"		120	120	9'-9"	#5	12"		22	#4	12"	22												
		5'			128	128			59	59	15'-9"		0'-8"	2'-2"	3'-9⅝"				59	59	15'-5"	0'-2⅝"	2'-3"	3'-6⅝"				120	120	9'-9"				22																	
		6'			128	128			59	59	15'-9"		0'-8"	2'-3"	3'-5⅝"				59	59	15'-5"	0'-2⅝"	2'-6"	3'-3⅝"				120	120	9'-6"				22																	
	3 @ 4'	3'			128	128			59	59	18'-5"		0'-8"	2'-7"	4'-1⅛"				59	59	18'-4"	0'-8"	2'-8"	4'-1⅛"				120	120	11'-6"				26																	
		4'			128	128			59	59	18'-5"		0'-8"	2'-7"	4'-1⅛"				59	59	18'-4"	0'-8"	2'-8"	4'-1⅛"				120	120	11'-9"				26																	
		5'	#6	12"	128	128	#5	12"	59	59	18'-5"		0'-8"	2'-7"	4'-1⅛"	#5	12"		59	59	18'-4"	0'-8"	2'-8"	4'-1⅛"	#6	12"		120	120	11'-9"	#5	11½"		26	#4	12"	29												
		6'			128	128			59	59	18'-9"		0'-8"	2'-8"	4'-2⅛"				59	59	18'-8"	0'-8"	2'-9"	4'-2⅛"				120	120	11'-6"				26																	
		7'			128	128			59	59	19'-0"		0'-8⅝"	2'-9"	4'-2⅛"				59	59	18'-11"	0'-8"	2'-10"	4'-2⅛"				120	120	11'-8"				26																	
	3 @ 5'	3'			140	140			65	65	20'-1"		0'-9"	3'-0"	4'-10⅛"				65	65	21'-5"	0'-3⅝"	3'-1"	4'-10⅛"				132	132	12'-9"				30																	
		4'			140	140			65	65	21'-6"		0'-9"	3'-0"	4'-10⅛"				65	65	21'-5"	0'-3⅝"	3'-1"	4'-10⅛"				132	132	12'-9"				30																	
		5'	#6	11"	140	140	#5	11"	65	65	21'-6"		0'-9"	3'-0"	4'-10⅛"	#5	11"		65	65	21'-5"	0'-3⅝"	3'-1"	4'-10⅛"	#6	11"		132	132	12'-9"	#5	11½"		30	#4	12"	30												
		6'			140	140			65	65	21'-0"		0'-9"	3'-1"	4'-11⅛"				65	65	21'-9"	0'-3⅝"	3'-8"	4'-11⅛"				132	132	12'-6"				30																	
		7'			140	140			65	65	22'-1"		0'-9"	3'-2"	4'-11⅛"				65	65	22'-0"	0'-3⅝"	3'-8"	4'-11⅛"				132	132	12'-6"				30																	
		8'			140	140			65	65	22'-1"		0'-9"	3'-2"	5'-10⅛"				65	65	22'-1"	0'-3⅝"	3'-13"	5'-10⅛"				132	132	13'-0"				30																	
	3 @ 6'	4'			128	128			59	59	24'-8"	0'-9⅝"	3'-5"	5'-7"					59	59	24'-8"	0'-9⅝"	3'-5⅝"	5'-7"				120	120	15'-9"				32																	
		5'			128	128			59	59	24'-8"	0'-9⅝"	3'-5"	5'-7"					59	59	24'-8"	0'-9⅝"	3'-5⅝"	5'-7"				120	120	15'-9"				32																	
		6'	#6	12"	128	128	#6	12"	59	59	25'-0"	0'-9⅝"	3'-6"	5'-8"	#6	12"			59	59	25'-0"	0'-9⅝"	3'-6⅝"	5'-8"	#6	12"		120	120	15'-6"	#5	11½"		32	#4	12"	36												
		7'			128	128			59	59	25'-3"	0'-9⅝"	3'-7"	5'-8⅝"					59	59	25'-3"	0'-9⅝"	3'-7⅝"	5'-8⅝"				120	120	15'-6"				32																	
		8'			128	128			59	59	25'-9"	0'-9⅝"	3'-7"	5'-9"					59	59	26'-6"	0'-9⅝"	3'-8"	5'-9"				120	120	15'-8"				32																	
		9'			128	128			59	59	25'-9"	0'-9⅝"	3'-8"	5'-10"					59	59	25'-8"	0'-9⅝"	3'-8⅝"	5'-10"				120	120	15'-8"				32																	
	3 @ 7'	4'			140	140			65	65	27'-9"	0'-5"	3'-10"	6'-4"					65	65	27'-9"	0'-5"	3'-10"	6'-4"				132	132	17'-4"				34																	
		5'			140	140			65	65	28'-1"	0'-5"	3'-11"	6'-5"					65	65	28'-1"	0'-5"	3'-11"	6'-5"				132	132	17'-4"				34																	
		6'	#6	11"	140	140	#6	11"	65	65	28'-1"	0'-5"	3'-11"	6'-5"	#6	11"			65	65	28'-1"	0'-5"	3'-11"	6'-5"	#6	11"		132	132	17'-4"	#5	11½"		34	#4	12"	36												
		7'			140	140			65	65	28'-6"	0'-5"	4'-0"	6'-5⅝"					65	65	28'-6"	0'-5"	4'-0"	6'-5⅝"				132	132	17'-8"				34																	
		8'			140	140			65	65	28'-5"	0'-5"	4'-0"	6'-6"					65	65	28'-5"	0'-5"	4'-0"	6'-6"				132	132	17'-8"				34																	
		9'			140	140			65	65	28'-9"	0'-5"	4'-1"	6'-7"					65	65	28'-9"	0'-5"	4'-1"	6'-7"				132	132	18'-0"				34																	
		10'			140	140			65	65	29'-1"	0'-5"	4'-2"	6'-8"					65	65	29'-1"	0'-5"	4'-2"	6'-8"				132	132	18'-0"				34																	
	3 @ 8'	5'			140	140			65	65	31'-2"	0'-5⅝"	4'-6"	7'-2"					65	65	31'-2"	0'-5⅝"	4'-6"	7'-2"				132	132	19'-8"				41																	
		6'			140	140			65	65	31'-5"	0'-5⅝"	4'-5"	7'-2⅝"					65	65	31'-5"	0'-5⅝"	4'-5"	7'-2⅝"				132	132	19'-8"				41																	
		7'			140	140			65	65	31'-5"	0'-5⅝"	4'-5"	7'-2⅝"					65	65	31'-5"	0'-5⅝"	4'-5"	7'-2⅝"				132	132	19'-8"				41																	
		8'	#6	11"	140	140	#6	11"	65	65	31'-6"	0'-5⅝"	4'-5"	7'-3"	#6	11"			65	65	31'-6"	0'-5⅝"	4'-5"	7'-3"	#6	11"		132	132	19'-8"	#5	11½"		41	#4	12"	48												
		9'			140	140			65	65	31'-10"	0'-5⅝"	4'-6"	7'-4"					65	65	31'-10"	0'-5⅝"	4'-6"	7'-4"				132	132	19'-10"				41																	
		10'			140	140			65	65	32'-2"	0'-5⅝"	4'-7"	7'-5"					65	65	32'-2"	0'-5⅝"	4'-7"	7'-5"				132	132	20'-0"				41																	
		11'			140	140			65	65	32'-6"	0'-5⅝"	4'-7"	7'-6"					65	65	32'-6"	0'-5⅝"	4'-7"	7'-6"				132	132	20'-0"				41																	
	3 @ 10'	5'			128	128			59	59	39'-3"	0'-6"	4'-9"	7'-11"					59	59	39'-3"	0'-6"	4'-10"	7'-11"				120	120	21'-6"				44																	
		6'			128	128			59	59	39'-6"	0'-6"	4'-10"	7'-11⅝"					59	59	39'-6"	0'-6"	4'-10"	7'-11⅝"				120	120	21'-8"				44																	
		7'			128	128			59	59	39'-6"	0'-6"	4'-10"	7'-11⅝"					59	59	39'-6"	0'-6"	4'-10"	7'-11⅝"				120	120	21'-8"				44																	
		8'	#7	12"	128	128	#6	12"	59	59	39'-10"	0'-6"	4'-10"	8'-0"	#6	12"			59	59	39'-10"	0'-6"	4'-10"	8'-0"	#7	12"		120	120	21'-8"	#5	11½"		44	#4	12"	48												
		9'			128	128			59	59	39'-11"	0'-6"	4'-11"	8'-1"					59	59	39'-11"	0'-6"	4'-11"	8'-1"				120	120	21'-10"				44																	
		10'			128	128			59	59	39'-5"	0'-6"	5'-0"	8'-2"					59	59	39'-5"	0'-6"	5'-0"	8'-2"				120	120	22'-0"				44																	
		11'			128	128			59	59	39'-5"	0'-6"	5'-0"	8'-3"					59	59	39'-5"	0'-6"	5'-0"	8'-3"				120	120	22'-0"				44																	
		12'			128	128			59	59	39'-7"	0'-6"	5'-0"	8'-4"					59	59	39'-7"	0'-6"	5'-0"	8'-4"				120	120	22'-0"				44																	
	3 @ 11'	6'			140	140			65	65	37'-8"	0'-6½"	5'-3"	8'-9"					65	65	37'-8"	0'-6½"	5'-3"	8'-9"				132	132	23'-8"				48																	
		7'			140	140			65	65	37'-8"	0'-6½"	5'-3"	8'-9"					65	65	37'-8"	0'-6½"	5'-3"	8'-9"				132	132	23'-8"				48																	
		8'			140	140			65	65	37'-8"	0'-6½"	5'-3"	8'-9"					65	65	37'-8"	0'-6½"	5'-3"	8'-9"				132	132	23'-8"				48																	
		9'	#7	11"	140	140	#6	11"	65	65	38'-10"	0'-6½"	5'-4"	8'-10"	#6	11"			65	65	38'-10"	0'-6½"	5'-4"	8'-10"	#7	11"		132	132	23'-10"	#5	11½"		48	#4	12"	54												
		10'			140	140			65	65	38'-9"	0'-6½"	5'-5"	8'-11"					65	65	38'-9"	0'-6½"	5'-5"	8'-11"				132	132	24'-0"				48																	
		11'			140	140			65	65	38'-7"	0'-6½"	5'-5"	9'-0"					65	65	38'-6"	0'-6½"	5'-5"	9'-0"				132	132	24'-0"				48																	
		12'			140	140			65	65	38'-8"	0'-6½"	5'-5"	9'-1"					65	65	38'-8"	0'-6½"	5'-5"	9'-1"				132	132	24'-0"				48																	
	3 @ 12'	6'			140	140			65	65	40'-9"	0'-7"	5'-8"	9'-6"					65	65	40'-9"	0'-7"	5'-8"	9'-6"				132	132	25'-8"				51																	
		7'			140	140			65	65	40'-9"	0'-7"	5'-8"	9'-6"					65	65	40'-9"	0'-7"	5'-8"	9'-6"				132	132	25'-8"				51																	
		8'			140	140			65	65	40'-9"	0'-7"	5'-8"	9'-6"					65	65	40'-9"	0'-7"	5'-8"	9'-6"				132	132	25'-8"				51																	
		9'	#7	11"	140	140	#6	11"	65	65	41'-1"	0'-7"	5'-9"	9'-7"	#6	11"			65	65	41'-1"	0'-7"	5'-9"	9'-7"	#7	11"		132	132	25'-10"	#5	11½"		51	#4	12"	54												
		10'			140	140			65	65	41'-5"	0'-7"	5'-10"	9'-8"					65	65	41'-5"	0'-7"	5'-10"	9'-8"				132	132	26'-0"				51																	
		11'			140	140			65	65	41'-7"	0'-7"	5'-10"	9'-9"					65	65	41'-7"	0'-7"	5'-10"	9'-9"				132	132	26'-0"				51																	
		12'			140	140			65	65	41'-9"	0'-7"	5'-10"	9'-10"					65	65	41'-9"	0'-7"	5'-10"	9'-10"				132	132	26'-0"				51																	

DIMENSIONS — QUANTITIES

MAX. DESIGN DEPTH OF COVER	CLEAR SPANS	CLEAR HEIGHT	Sq. Ft. OPENING	OVERALL WIDTH	THICKNESS OF TOP SLAB	THICKNESS OF SIDEWALLS	THICKNESS OF DIVISION WALLS	THICKNESS OF BOTTOM SLAB	OVERALL HEIGHT	UNIT QUANTITIES CLASS S CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL PER LIN. FT. OF BARREL	ADDITIONAL PER LAP	ADDITIONAL TWO HEADWALLS & APRONS
D	S	H	A	OW	T	C	M	B	OH	CU.YD.	LB.	LB.	LB.
0'-0" TO 5'-0" MAXIMUM	3 @ 4'	2'	24	14'-8"	6½"	6"	8"	6"	3'-0⅝"	0.726	137.76	66.63	195.33
		3'	36	16'-8"					4'-0⅝"	0.812	145.78	71.69	195.33
		4'	48	18'-8"					5'-0⅝"	0.899	153.79	76.65	195.33
		5'	60	18'-8"					6'-0⅝"	0.985	161.81	81.46	195.33
		6'	72	18'-8"					7'-0⅝"	1.158	171.56	86.97	198.11
	3 @ 5'	3'	45	17'-9"	7"	6"	8"	6½"	4'-1⅛"	0.981	185.23	81.10	298.79
		4'	60	17'-9"		6"	8"		5'-1⅛"	1.068	203.25	86.11	298.79
		5'	75	17'-9"		6"	8"		6'-1⅛"	1.154	211.27	91.12	298.79
		6'	90	17'-8"		7"	9"		7'-1⅛"	1.329	221.98	96.13	302.80
		7'	105	17'-11"		7½"	10"		8'-1⅛"	1.503	231.27	101.16	306.80
	3 @ 5'	3'	54	20'-9"	7½"	6"	8"	7"	4'-2⅝"	1.169	236.39	90.56	351.21
		4'	72	20'-9"		6"	8"		5'-2⅝"	1.266	244.91	95.57	351.21
		5'	90	20'-9"		6"	8"		6'-2⅝"	1.362	252.92	100.58	351.21
		6'	108	20'-8"		7"	9"		7'-2⅝"	1.517	262.84	105.59	355.21
		7'	126	20'-11"		7½"	10"		8'-2⅝"	1.692	272.79	110.40	359.22
		8'	144	21'-0"		8"	10"		9'-2⅝"	1.829	288.98	116.61	359.22
	3 @ 6'	4'	84	23'-9"	8"	6"	8"	7⅝"	5'-3⅝"	1.980	278.99	101.55	409.29
		5'	105	23'-9"		6"	8"		6'-3⅝"	1.566	288.01	106.56	409.29
		6'	126	23'-8"		7"	9"		7'-3⅝"	1.743	298.93	111.57	418.29
		7'	147	23'-11"		7½"	10"		8'-3⅝"	1.919	308.55	116.58	411.30
		8'	168	24'-0"		8"	10"		9'-3⅝"	2.056	324.84	121.59	418.30
		9'	189	24'-9"		8"	11"		10'-3⅝"	2.294	335.27	126.40	416.30
	3 @ 7'	4'	96	26'-6"	8"	6"	8"	8½"	5'-5"	1.727	330.89	111.85	459.38
		5'	120	26'-6"		7"	9"		6'-5"	1.898	341.69	116.86	463.38
		6'	144	26'-8"		7"	9"		7'-5"	1.992	348.45	121.87	463.38
		7'	168	26'-11"	8½"	7½"	10"	8½"	8'-5"	2.168	359.85	126.88	466.38
		8'	192	27'-0"		8"	10"		9'-5"	2.306	375.74	131.89	467.39
		9'	216	27'-8"		9"	11"		10'-5"	2.595	402.04	136.90	471.39
		10'	240	27'-8"		10"	12"		11'-5"	2.810	432.94	141.91	475.40
	3 @ 8'	5'	185	29'-6"	9"	7"	9"	9"	6'-6"	2.192	377.01	129.72	520.47
		6'	162	29'-11"		7½"	10"		7'-6"	2.310	387.21	134.73	528.48
		7'	189	29'-11"		7½"	10"		8'-6"	2.418	396.23	139.74	523.98
		8'	216	30'-0"		8"	10"		9'-6"	2.556	411.21	144.75	524.98
		9'	243	30'-6"		9"	11"		10'-6"	2.796	437.60	149.76	528.98
		10'	270	30'-8"		10"	12"		11'-6"	3.062	457.00	154.77	532.99
		11'	297	30'-10"		11"	12"		12'-6"	3.275	477.29	159.78	534.99
	3 @ 9'	5'	150	32'-8"	9½"	7"	9"	9½"	6'-7"	2.403	443.34	137.44	716.12
		6'	180	32'-11"		7½"	10"		7'-7"	2.578	453.81	142.45	720.20
		7'	210	32'-11"		7½"	10"		8'-7"	2.686	461.88	147.46	720.20
		8'	240	33'-0"		8"	10"		9'-7"	2.824	477.91	152.47	721.57
		9'	270	33'-6"		9"	11"		10'-7"	3.066	504.74	157.48	727.02
		10'	300	33'-6"		10"	12"		11'-7"	3.332	526.50	162.49	732.47
		11'	330	33'-10"		11"	12"		12'-7"	3.596	544.94	167.50	736.19
		12'	360	34'-0"		12"	12"		13'-7"	3.772	577.67	172.51	737.92
	3 @ 10'	6'	198	36'-0"	10"	8"	10"	10"	7'-8"	2.889	532.98	151.91	790.33
		7'	231	36'-0"		8"	10"		8'-8"	3.000	521.00	154.92	790.33
		8'	264	36'-0"		8"	10"		9'-8"	3.111	596.56	161.33	790.33
		9'	297	36'-6"		9"	11"		10'-8"	3.354	573.79	164.94	795.78
		10'	330	36'-8"		10"	12"		11'-8"	3.621	593.87	171.95	801.23
		11'	363	36'-10"		11"	12"		12'-8"	3.835	614.97	174.96	803.94
		12'	396	37'-0"		12"	12"		13'-8"	4.062	69.744	181.97	806.68
	3 @ 11'	6'	216	39'-0"	10½"	8"	10"	10½"	7'-9"	3.194	560.85	159.63	859.76
		7'	252	39'-0"		8"	10"		8'-9"	3.306	568.87	164.64	859.76
		8'	288	39'-0"		8"	10"		9'-9"	3.417	586.50	169.65	859.76
		9'	324	39'-6"		9"	11"		10'-9"	3.660	611.85	174.66	865.21
		10'	360	39'-8"		10"	12"		11'-9"	3.929	631.98	179.67	870.66
		11'	396	39'-10"		11"	12"		12'-9"	4.144	652.69	184.68	873.39
		12'	432	40'-0"		12"	12"		13'-9"	4.370	685.72	189.69	876.10



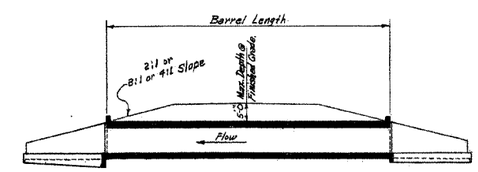
TYPICAL SECTION M-M



PART LONGITUDINAL SECTION

Note:- For details of wings and bar lists, see Drawing Nos. W-X002-1 or W-X004-1 or W-X003-2 and W-X004-2.

W-X002-2, W-X003-1 or W-X003-2

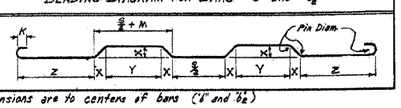


LONGITUDINAL SECTION

Note:- This drawing to be used in conjunction with Standard Wing Drawing Nos. W-X002-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing Nos. W-X002-1 or W-X002-2.

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#5	2½"	4½"	0'-11½"
#6	3"	5"	1'-2"

BENDING DIAGRAM FOR BARS "b" and "b2"

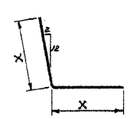


Note:- Dimensions are to centers of bars ("b" and "b2")

DOWEL BARS FOR TWO HEADWALLS

3 SPANS @	SIZE	SPACING	NO. REQ'D	LENGTH	X
4'	#4	12"c	30	2'-5"	1'-2½"
5'	#4	12"c	36	2'-6"	1'-3"
6'	#4	12"c	42	2'-7"	1'-3⅝"
7'	#4	12"c	48	2'-8"	1'-4"
8'	#4	12"c	54	2'-9"	1'-4½"
9	#4	12"c	60	2'-10"	1'-5"
10'	#4	12"c	66	2'-11"	1'-5½"
11'	#4	12"c	72	3'-0"	1'-6"
12'	#4	12"c	78	3'-1"	1'-6½"

Bars "r" Dowel bars in Headwalls.



GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" of barrel over 38'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

DESIGN LIVE LOAD

H20-S16 LOADING A.R.S.H.O. 1961

AND

SPECIAL MILITARY LOADING

Two 24,000 Lb. Axles @ 4'-0" ctrs.

UNIT STRESSES:-

Class S Concrete (n=10) 1200 #/□"

Reinforcing Steel 20,000 #/□"

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS

FOR

REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 OR 4:1 SLOPES

TRIPLES — UNDER 5'-0" COVER

STANDARD DRAWING NO. R-300X-0

Designed By:- W.C.H. 1-28-63. Checked By:- TBHS 5-17-63

Drawn By:- W.C.H. 2-28-63. Checked By:- TBHS 5-24-63

Quantities By:- W.C.H. 3-4-63. Checked By:- TBHS 5-

Reshot 3-8-93

385 ~~187~~

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			220	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

0'-0" TO 5'-0" MAXIMUM

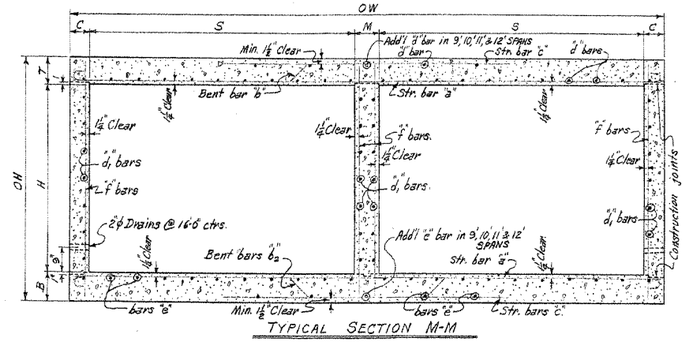
Depth of Cover D	Clear Span S	Clear Height H	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. Size	Spacing	No. Reqd	Length	"b" bars BENT - See Diagram below. In Bottom of Top Slab bent up over Division Wall - hooked. Alternate with "a" and "c" bars. Size	Spacing	No. Reqd	Length	X	Y	Z	"b2" bars BENT - See Diagram below In Top of Bottom Slab bent down under Division Wall - hooked. Alternate with "a" and "c" bars. Size	Spacing	No. Reqd	Length	X	Y	Z
2 @ 4'	2'	2'	#5	12"	120	9'-9"	#5	12"	59	10'-10"	0'-3"	2'-3½"	3'-5½"	#5	12"	59	10'-10"	0'-2½"	2'-4½"	3'-5½"
	3'	3'			120	9'-9"			59	10'-10"	"	2'-3½"	3'-5½"			59	10'-10"	"	2'-4½"	3'-5½"
	4'	4'			120	9'-9"			59	10'-10"	"	2'-3½"	3'-5½"			59	10'-10"	"	2'-4½"	3'-5½"
	5'	5'			120	9'-9"			59	10'-10"	"	2'-3½"	3'-5½"			59	10'-10"	"	2'-4½"	3'-5½"
	6'	6'			120	10'-0"			59	11'-1"	0'-3"	2'-4½"	3'-6½"			59	11'-1"	0'-2½"	2'-5½"	3'-6½"
2 @ 5'	3'	3'	#6	12"	120	11'-10"	#5	12"	59	12'-11"	0'-3½"	2'-8"	4'-3"	#5	12"	59	12'-11"	0'-3"	2'-9"	4'-3"
	4'	4'			120	11'-10"			59	12'-11"	"	2'-8"	4'-3"			59	12'-11"	"	2'-9"	4'-3"
	5'	5'			120	11'-10"			59	12'-11"	"	2'-8"	4'-3"			59	12'-11"	"	2'-9"	4'-3"
	6'	6'			120	12'-1"			59	13'-2"	"	2'-10"	4'-4"			59	13'-2"	"	2'-10"	4'-4"
	7'	7'			120	12'-8"			59	13'-9"	0'-3½"	2'-11"	4'-4½"			59	13'-9"	0'-3"	2'-11"	4'-4½"
2 @ 6'	3'	3'	#6	11"	132	13'-11"	#5	11"	65	15'-0"	0'-4"	3'-2"	5'-0"	#5	11"	65	15'-0"	0'-4"	3'-2"	5'-0"
	4'	4'			132	13'-11"			65	15'-0"	"	3'-2"	5'-0"			65	15'-0"	"	3'-2"	5'-0"
	5'	5'			132	13'-11"			65	15'-0"	"	3'-2"	5'-0"			65	15'-0"	"	3'-2"	5'-0"
	6'	6'			132	14'-2"			65	15'-3"	"	3'-3"	5'-1"			65	15'-3"	"	3'-3"	5'-1"
	7'	7'			132	14'-8"			65	15'-5"	"	3'-4"	5'-1½"			65	15'-5"	"	3'-4"	5'-1½"
	8'	8'			132	14'-5"			65	15'-6"	0'-4"	3'-4"	5'-2"			65	15'-6"	0'-4"	3'-4"	5'-2"
2 @ 7'	4'	4'	#6	12"	120	15'-11"	#5	12"	59	17'-3"	0'-4½"	3'-7"	5'-9"			59	17'-3"	0'-4½"	3'-7"	5'-9"
	5'	5'			120	15'-11"			59	17'-3"	"	3'-7"	5'-9"			59	17'-3"	"	3'-7"	5'-9"
	6'	6'			120	16'-2"			59	17'-6"	"	3'-8"	5'-10"			59	17'-6"	"	3'-8"	5'-10"
	7'	7'			120	16'-9"			59	17'-9"	"	3'-9"	5'-10½"			59	17'-9"	"	3'-9"	5'-10½"
	8'	8'			120	16'-5"			59	17'-9"	"	3'-9"	5'-11"			59	17'-9"	"	3'-9"	5'-11"
	9'	9'			120	16'-9"			59	18'-0"	0'-4½"	3'-10"	6'-0"			59	18'-0"	0'-4½"	3'-10"	6'-0"
2 @ 8'	4'	4'	#6	11"	132	18'-0"	#5	11"	65	19'-5"	0'-5"	4'-0"	6'-6½"			65	19'-5"	0'-5"	4'-0"	6'-6½"
	5'	5'			132	18'-3"			65	19'-8"	"	4'-1"	6'-7½"			65	19'-8"	"	4'-1"	6'-7½"
	6'	6'			132	18'-3"			65	19'-8"	"	4'-1"	6'-7½"			65	19'-8"	"	4'-1"	6'-7½"
	7'	7'			132	18'-5"			65	19'-10"	"	4'-2"	6'-8"			65	19'-10"	"	4'-2"	6'-8"
	8'	8'			132	18'-6"			65	19'-11"	"	4'-2"	6'-8½"			65	19'-11"	"	4'-2"	6'-8½"
	9'	9'			132	18'-9"			65	20'-2"	"	4'-3"	6'-9½"			65	20'-2"	"	4'-3"	6'-9½"
	10'	10'			132	19'-0"			65	20'-5"	0'-5"	4'-4"	6'-10½"			65	20'-5"	0'-5"	4'-4"	6'-10½"
2 @ 9'	5'	5'	#6	11"	132	20'-4"	#5	11"	65	21'-9"	0'-5½"	4'-6"	7'-5"	#5	11"	65	21'-9"	0'-5½"	4'-6"	7'-5"
	6'	6'			132	20'-6"			65	21'-11"	"	4'-7"	7'-5½"			65	21'-11"	"	4'-7"	7'-5½"
	7'	7'			132	20'-6"			65	21'-11"	"	4'-7"	7'-5½"			65	21'-11"	"	4'-7"	7'-5½"
	8'	8'			132	20'-7"			65	22'-0"	"	4'-7"	7'-6"			65	22'-0"	"	4'-7"	7'-6"
	9'	9'			132	20'-10"			65	22'-3"	"	4'-8"	7'-7"			65	22'-3"	"	4'-7½"	7'-7"
	10'	10'			132	21'-1"			65	22'-6"	"	4'-9"	7'-8"			65	22'-6"	"	4'-8½"	7'-8"
	11'	11'			132	21'-3"			65	22'-8"	0'-5½"	4'-9½"	7'-9"			65	22'-8"	0'-5½"	4'-9½"	7'-9"
2 @ 10'	5'	5'	#7	12"	120	22'-5"	#6	12"	59	23'-11"	0'-6"	5'-0"	8'-2"	#6	12"	59	23'-11"	0'-6½"	5'-1"	8'-2"
	6'	6'			120	22'-7"			59	24'-1"	"	5'-1"	8'-2½"			59	24'-1"	"	5'-1"	8'-2½"
	7'	7'			120	22'-7"			59	24'-1"	"	5'-1"	8'-2½"			59	24'-1"	"	5'-1"	8'-2½"
	8'	8'			120	22'-8"			59	24'-2"	"	5'-1"	8'-3"			59	24'-2"	"	5'-1"	8'-3"
	9'	9'			120	22'-11"			59	24'-5"	"	5'-2"	8'-3½"			59	24'-5"	"	5'-2"	8'-3½"
	10'	10'			120	23'-2"			59	24'-8"	"	5'-3"	8'-4"			59	24'-8"	"	5'-3"	8'-4"
	11'	11'			120	23'-4"			59	24'-10"	"	5'-3"	8'-4"			59	24'-10"	"	5'-3"	8'-4"
	12'	12'			120	23'-6"			59	25'-0"	0'-6"	5'-3"	8'-4½"			59	25'-0"	0'-6½"	5'-3"	8'-4½"
2 @ 11'	6'	6'	#7	12"	120	24'-9"	#6	12"	59	26'-8"	0'-6½"	5'-5"	9'-1"	#6	12"	59	26'-9"	0'-7"	5'-5"	9'-1"
	7'	7'			120	24'-9"			59	26'-9"	"	5'-5"	9'-1"			59	26'-9"	"	5'-5"	9'-1"
	8'	8'			120	24'-9"			59	26'-9"	"	5'-5"	9'-1"			59	26'-9"	"	5'-5"	9'-1"
	9'	9'			120	25'-0"			59	26'-6"	"	5'-6"	9'-2"			59	26'-9"	"	5'-6"	9'-2"
	10'	10'			120	25'-3"			59	26'-9"	"	5'-7"	9'-3"			59	26'-10"	"	5'-5"	9'-3"
	11'	11'			120	25'-5"			59	26'-11"	"	5'-7"	9'-4"			59	27'-0"	"	5'-5"	9'-4"
	12'	12'			120	25'-7"			59	27'-1"	0'-6½"	5'-7"	9'-5"			59	27'-2"	0'-7"	5'-5"	9'-5"
2 @ 12'	6'	6'	#7	11"	132	26'-10"	#6	11"	65	28'-4"	0'-7"	5'-11"	9'-10"	#6	11"	65	28'-6"	0'-8½"	5'-8"	9'-10"
	7'	7'			132	26'-10"			65	28'-4"	"	5'-11"	9'-10"			65	28'-6"	"	5'-8"	9'-10"
	8'	8'			132	26'-10"			65	28'-4"	"	5'-11"	9'-10"			65	28'-6"	"	5'-8"	9'-10"
	9'	9'			132	27'-1"			65	28'-7"	"	6'-0"	9'-11"			65	28'-9"	"	5'-9"	9'-11"
	10'	10'			132	27'-4"			65	28'-10"	"	6'-1"	10'-0"			65	29'-0"	"	5'-10"	10'-0"
	11'	11'			132	27'-6"			65	29'-0"	"	6'-1"	10'-1"			65	29'-2"	"	5'-10"	10'-1"
	12'	12'			132	27'-8"			65	29'-2"	0'-7"	6'-1"	10'-2"			65	29'-4"	0'-8½"	5'-10"	10'-2"

Depth of Cover D	Clear Span S	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "a" and "b2" bars. Size	Spacing	No. Reqd	Length	"d" bars STRAIGHT Longitudinal in Top Slab of Barrel Size	Spacing	No. Reqd	Length	"d1" bars STRAIGHT Longitudinal in Sidewalls and Division Wall Size	Spacing	No. Reqd	Length	"e" bars STRAIGHT Longitudinal in Bottom Slab of Barrel Size	Spacing	No. Reqd	Length	"f" bars STRAIGHT Verticals in Sidewalls and Division Wall Size	Spacing	No. Reqd	Length	"k" bars 2 in Top of Headwalls and Aprons - Each. Size	No. Reqd	Length
2 @ 4'	2'	#5	12"	120	4'-10"	#4	12"	14		#4	12"	8		#4	12"	14		#4	12"	240	2'-10"	#5	8	10'-8"
	3'			120	4'-10"			14				12				14				240	3'-10"		8	"
	4'			120	4'-10"			14				16				14				240	4'-10"		8	"
	5'			120	4'-10"			14				20				14				240	5'-10"		8	"
	6'			120	4'-11"			14				24				14				240	6'-10"		8	10'-6"
2 @ 5'	3'	#5	12"	120	5'-10"	#4	12"	16		#4	12"	12		#4	12"	16		#4	12"	240	3'-11"	#6	8	12'-9"
	4'			120	5'-10"			16				16				16				240	4'-11"		8	"
	5'			120	5'-10"			16				20				16				240	5'-11"		8	"
	6'			120	5'-11"			16				24				16				240	6'-11"		8	12'-7"
	7'			120	6'-0"			16				28				16				240	7'-11"		8	12'-9"
2 @ 6'	3'	#5	11"	132	6'-11"	#5	11"	18		#4	12"	14		#4	12"	18		#4	12"	240	4'-0"	#6	8	14'-5"
	4'			132	6'-11"			18				16				18				240	5'-0"		8	"
	5'			132	6'-11"			18				20				18				240	6'-0"		8	"
	6'			132	7'-0"			18				24				18				240	7'-0"		8	14'-8"
	7'			132	7'-1"			18				28				18				240	8'-0"		8	14'-10"
	8'			132	7'-1"			18				32				18				288	9'-0"		8	14'-11"
2 @ 7'	4'			120	7'-11"			20				16				20				240	5'-1"		8	16'-6"
	5'			120	7'-11"			20				20				20				240	6'-1"		8	"
	6'			120	8'-0"			20				24				20				240	7'-1"		8	16'-9"
	7'			120	8'-1"			20				28				20				240	8'-1"		8	16'-11"
	8'			120	8'-2"			20				32				20				288	9'-1"		8	17'-0"
	9'			120	10'-1"			20				36				20				288	10'-1"		8	17'-3"
2 @ 8'	4'			132	9'-0"			22				16				22				240	5'-2"		8	18'-7"
	5'			132	9'-0"			22				20				22				240	6'-2"		8	18'-10"
	6'			132	9'-0"			22				24				22				240	7'-2"		8	"
	7'			132	9'-2"			22				28				22				240	8'-2"		8	19'-0"
	8'			132	9'-2"			22				32				22				288	9'-2"		8	19'-1"
	9'			132	9'-3"			22				36				22				288	10'-2"		8	19'-4"
	10'			132	9'-4"			22				40				22				288	11'-2"		8	19'-7"
2 @ 9'	5'	#5	11½"	132	10'-1"	#4	12"	23		#4	12"	20		#4	12"	25		#4	12"	240	6'-3"		8	20'-11"
	6'			132	10'-2"			23				24				25				240	7'-3"		8	21'-1"
	7'			132	10'-2"			23				28				25				240	8'-3"		8	"
	8'			132	10'-2"			23				32				25				288	9'-3"		8	21'-2"
	9'			132	10'-3"			23				36				25				240	10'-3"		8	21'-5"
	10'			132	10'-4"			23				40				25				240	11'-3"		8	21'-8"
	11'			132	10'-4"			23				44				25				288	12'-3"		8	21'-11"
	12'			132	10'-5"			23				48				25				288	13'-3"		8	22'-2"
2 @ 10'	5'	#5	11½"	120	11'-2"	#4	12"	28		#4	12"	20		#4	12"	27		#4	12"	240	6'-4"		8	22'-11"
	6'			120	11'-3"			28				24				27				240	7'-4"		8	23'-1"
	7'			120	11'-3"			28				28				27				240	8'-4"		8	"
	8'			120	11'-3"			28				32				27				288	9'-4"		8	"
	9'			120	11'-4"			28				36				27				240	10'-4"		8	23'-8"
	10'			120	11'-5"			28				40				27				240	11'-4"		8	23'-11"
	11'			120	11'-5"			28				44				27				288	12'-4"		8	24'-2"
	12'			120	11'-5"			28				48				27				288	13'-4"		8	24'-5"
2 @ 11'	6'	#5	11½"	120	12'-8"	#4	12"	30		#4	12"	24		#4	12"	29		#4	12"	240	7'-5"		8	25'-3"
	7'			120	12'-9"			30				28				29				240	8'-5"		8	"
	8'			120	12'-9"			30				32				29				288	9'-5"		8	"
	9'			120	12'-9"			30				36				29				240	10'-5"		8	25'-6"
	10'			120	12'-10"			30				40				29				240	11'-5"		8	25'-10"
	11'			120	12'-10"			30				44				29				240	12'-5"		8	26'-0"
	12'			120	12'-10"			30				48				29				240	13'-5"		8	26'-2"
2 @ 12'	6'	#5	11½"	132	13'-3"	#4	12"	32		#4	12"	24		#4	12"	31		#4	12"	240	7'-7"		8	27'-4"
	7'			132	13'-3"			32				28				31				240	8'-7"		8	"
	8'			132	13'-3"			32				32				31				288	9'-7"		8	"
	9'			132	13'-4"			32				36				31				240	10'-7"		8	27'-7"
	10'			132	13'-6"			32				40				31				240	11'-7"		8	27'-10"
	11'			132	13'-6"			32				44				31				288	12'-7"		8	28'-0"
	12'			132	13'-6"			32				48				31				240	13'-7"		8	28'-3"

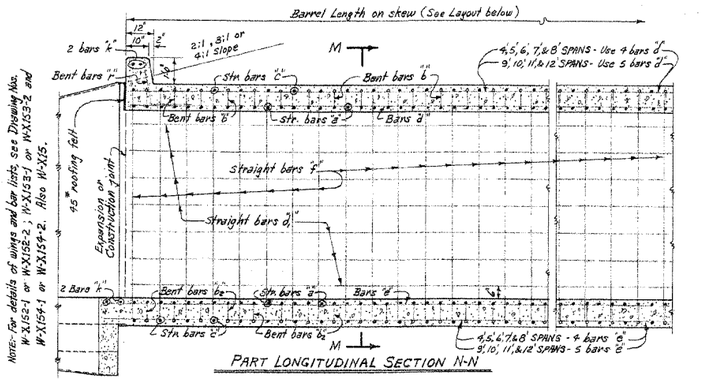
NOTE:- The "a", "b", "b2", and "c" bars are to be placed parallel with the headwalls, spacing to be parallel with barrel.

DIMENSIONS / QUANTITIES

Max. Design Depth of Cover D	Clear Span S	Clear Height H	Skew Ft. Opening A	Overall Width OW	Thickness of Top Slab T	Thickness of Wing Walls C	Thickness of Division Wall M	Thickness of Bottom Slab B	Overall Height OH	Roadway Length RL	Length of Headwall K	Class S Conc. in Barrel Cu.Yds.	Reinforcing Steel Per Lin. Ft. Barrel Lb.	Additional Per Lap Lb.	Additional Two Headwalls & Aprons Lb.
2 @ 4'	2'	2'	16	9'-8"	6½"	6"	8"	6"	3'-0½"	10'-0"	10'-6½"	0.436	83.89	92.71	136.52
	3'	3'	24	9'-8"		6"	8"		4'-0½"	"	"	0.558	95.23	94.05	136.52
	4'	4'	32	9'-8"		6"	8"		5'-0½"	"	"	0.620	100.58	99.39	136.52
	5'	5'	40	9'-8"		6"	8"		6'-0½"	"	"	0.682	105.92	52.73	136.52
	6'	6'	48	9'-11"		7"	9"		7'-0½"	10'-3½"	10'-9½"	0.809	112.98	56.07	138.60
2 @ 5'	3'	3'	30	11'-8"	7"	6"	8"	6½"	4'-1½"	12'-1"	12'-7½"	0.671	125.87	51.19	209.65
	4'	4'	40	11'-8"		6"	8"		5'-1½"	"	"	0.733	131.22	54.53	209.65
	5'	5'	50	11'-8"		6"	8"		6'-1½"	"	"	0.795	136.56	57.87	209.65
	6'	6'	60	11'-11"		7"	9"		7'-1½"	12'-4"	12'-10½"	0.922	143.43	61.21	212.66
	7'	7'	70	12'-1"		7½"	10"		8'-1½"	12'-6½"	13'-0½"	1.044	149.87	64.55	219.66
2 @ 6'	3'	3'	36	13'-8"	7½"	6"	8"	7½"	4'-3"	14'-1½"	14'-8½"	0.818	151.91	56.34	295.60
	4'	4'	48	13'-8"		6"	8"		5'-3"	"	"	0.880	157.25	59.68	295.60
	5'	5'	60	13'-8"		6"	8"		6'-3"	"	"	0.941	162.60	63.02	295.60
	6'	6'	72	13'-11"		7"	9"		7'-3"	14'-5"	14'-11½"	1.070	169.60	66.36	298.60
	7'	7'	84	14'-1"		7½"	10"		8'-3"	14'-7"	15'-1½"	1.192	176.15	69.70	250.61
	8'	8'	96	14'-2"		8"	10"		9'-3"	14'-8"	15'-2½"	1.298	186.76	73.04	251.61
2 @ 7'	4'	4'	56	15'-8"	8"	6"	8"	8"	5'-0"	16'-2½"	16'-9"	1.021	181.91	64.83	281.99
	5'	5'	70	15'-8"		6"	8"		6'-0"	"	"	1.082	187.25	68.17	281.99
	6'	6'	84	15'-11"		7"	9"		7'-0"	16'-5½"	17'-0½"	1.212	194.35	71.51	284.99
	7'	7'	98	16'-1"		7½"	10"		8'-0"	16'-7½"	17'-2½"	1.334	200.94	74.85	286.99
	8'	8'	112	16'-2"		8"	10"		9'-0"	16'-8½"	17'-3½"	1.440	211.64	78.19	288.00
	9'	9'	126	16'-5"		9"	11"		10'-0"	17'-0"	17'-6½"	1.616	223.01	81.53	291.00
2 @ 8'	4'	4'	64	17'-8"	8½"	6"	8"	8½"	5'-5"	18'-3½"	18'-10"	1.174	215.23	71.71	322.50
	5'	5'	80	17'-11"		7"	9"		6'-5"	18'-6½"	19'-1"	1.295	222.27	75.05	325.50
	6'	6'	96	17'-11"		7"	9"		7'-5"	"	"	1.366	227.62	78.39	325.50
	7'	7'	112	18'-1"		7½"	10"		8'-5"	18'-8½"	19'-3"	1.489	234.60	81.73	327.50
	8'	8'	128	18'-2"		8"	10"		9'-5"	18'-9½"	19'-4½"	1.595	245.39	85.07	328.50
	9'	9'	144	18'-5"		9"	11"		10'-5"	19'-0½"	19'-7½"	1.772	268.00	88.41	331.51
	10'	10'	160	18'-8"		10"	12"		11'-5"	19'-3½"	19'-10½"	1.947	275.99	91.75	334.51
2 @ 9'	5'	5'	90	19'-11"	9"	7"	9"	9½"	6'-6½"	20'-7½"	21'-2"	1.977	294.88	82.77	364.23
	6'	6'	108	20'-1"		7½"	10"		7'-6½"	20'-9½"	21'-4"	1.594	251.54	86.11	366.23
	7'	7'	126	20'-1"		7½"	10"		8'-6½"	"	"	1.671	266.89	89.45	366.23
	8'	8'	144	20'-2"		8"	10"		9'-6½"	20'-10½"	21'-5"	1.778	267.72	92.79	367.23
	9'	9'	162	20'-5"		9"	11"		10'-6½"	21'-1½"	21'-8½"	1.956	285.41	96.13	370.24
	10'	10'	180	20'-8"		10"	12"		11'-6½"	21'-4½"	21'-11½"	2.152	298.93	99.47	373.24
	11'	11'	198	20'-10"		11"	12"		12'-6½"	21'-6½"	22'-1½"	2.328	312.32	102.81	375.24
2 @ 10'	5'	5'	100	21'-11"	9½"	7"	9"	10"	6'-7½"	22'-8½"	23'-2½"	1.674	286.66	87.92	504.93
	6'	6'	120	22'-1"		7½"	10"		7'-7½"	22'-10½"	23'-4½"	1.792	299.52	91.26	508.15
	7'	7'	140	22'-1"		7½"	10"		8'-7½"	"	"	1.869	298.87	94.60	508.15
	8'	8'	160	22'-2"		8"	10"		9'-7½"	22'-11½"	23'-5½"	1.976	303.79	97.94	509.52
	9'	9'	180	22'-5"		9"	11"		10'-7½"	23'-2½"	23'-9"	2.155	322.76	101.28	509.97
	10'	10'	200	22'-8"		10"	12"		11'-7½"	23'-5½"	24'-0"	2.352	334.02	104.62	516.06
	11'	11'	220	22'-10"		11"	12"		12'-7½"	23'-7½"	24'-2"	2.529	355.04	107.96	516.78
	12'	12'	240	23'-0"		12"	12"		13'-7½"	23'-9½"	24'-4½"	2.718	377.25	111.30	518.51
2 @ 11'	6'	6'	132	24'-2"	10"	8"	10"	11"	7'-9"	25'-0½"	25'-6½"	2.048	316.97	96.91	551.83
	7'	7'	154	24'-2"		8"	10"		8'-9"	"	"	2.128	322.31	99.75	551.83
	8'	8'	176	24'-2"		8"	10"		9'-9"	"	"	2.208	332.74	103.09	551.83
	9'	9'	198	24'-5"		9"	11"		10'-9"	25'-3½"	25'-9½"	2.388	350.87	106.43	555.92
	10'	10'	220	24'-8"		10"	12"		11'-9"	25'-6½"	26'-1"	2.584	364.19	109.77	561.37
	11'	11'	242	24'-10"		11"	12"		12'-9"	25'-8½"	26'-3"	2.769	378.28	113.11	564.10
	12'	12'	264	25'-0"		12"	12"		13'-9"	25'-10½"	26'-5"	2.954	400.66	116.95	566.82
2 @ 12'	6'	6'	144	26'-2"	10½"	8"	10"	12"	7'-10½"	27'-1"	27'-7½"	2.299	342.24	101.55	599.59
	7'	7'	168	26'-2"		8"	10"		8'-10½"	"	"	2.379	347.60	104.89	599.59
	8'	8'	192	26'-2"		8"	10"		9'-10½"	"	"	2.459	378.07	108.23	599.59
	9'	9'	216	26'-5"		9"	11"		10'-10½"	27'-4½"	27'-10½"	2.640	396.47	111.57	603.66
	10'	10'	240	26'-8"		10"	12"		11'-10½"	27'-7½"	28'-1½"	2.840	410.39	114.91	607.77
	11'	11'	264	26'-10"		11"	12"		12'-10½"	27'-9½"	28'-3½"	3.018	424.63	118.25	610.89
	12'	12'	288	27'-0"		12"	12"		13'-10½"	27'-11½"	28'-5"	3.208	447.20	121.59	614.58



TYPICAL SECTION M-M



PART LONGITUDINAL SECTION N-N

NOTE:- For details of wings and bar lists, see Drawing Nos. W-X152-1 or W-X152-2, W-X153-1 or W-X153-2 and W-X154-1 or W-X154-2. Also W-X15.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.

REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.

BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters.

CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls, division walls and slabs shall be only where shown on plans.

SPEC

NOTE — Changed by Chg. Order No. 1 dated 7-20-76

Reshot 3-8-93 401 ~~21~~

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			221	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH – TWO 30° SKEWED ENDS

DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH	"a₁" bars STRAIGHT In Top and Bottom Slab of Barrel. (Eight of Each Length) SIZE	SPACING	No. REQD	LENGTH Max.	LENGTH Min.
0'-0" TO 5'-0" MAXIMUM	5'	6'	⊠	216	20'-7"	88	19'-9"	3'-2"			
		6'		216	20'-9"	88	19'-2"	3'-9"			
	4	7'		216	20'-9"	88	"	"			
	@	8'	#6	216	20'-10"	88	19'-8"	3'-5"	#6	11"	±
	9'	9'		216	21'-0"	88	19'-5"	3'-7"			
		10'		216	21'-3"	88	19'-8"	3'-10"			
		11'		216	21'-6"	88	19'-9"	3'-11"			
	5'	6'		196	22'-9"	88	21'-0"	3'-6"			
		6'	⊠	196	22'-11"	88	21'-2"	3'-8"			
		7'		196	22'-11"	88	"	"			
	4	8'		196	23'-0"	88	21'-5"	3'-9"			
	@	9'	#7	196	23'-2"	88	21'-5"	3'-11"	#7	12"	±
	10'	10'		196	23'-5"	88	21'-8"	4'-2"			
		11'		196	23'-8"	88	21'-9"	4'-3"			
		12'		196	23'-7"	88	21'-10"	4'-4"			
	6'	6'		208	25'-0"	112	23'-5"	2'-10"			
		7'	⊠	208	25'-0"	112	"	"	⊠		
	4	8'		208	25'-0"	112	"	"			
	@	9'	#7	208	25'-2"	112	23'-7"	3'-0"	#7	11"	±
	11'	10'		208	25'-5"	112	23'-10"	3'-3"			
		11'		208	25'-6"	112	23'-11"	3'-4"			
		12'		208	25'-7"	112	24'-0"	3'-5"			
	6'	6'		200	27'-6"	120	25'-5"	3'-3"			
		7'	⊠	200	27'-0"	120	"	"	⊠		
	4	8'		200	27'-0"	120	"	"			
	@	9'	#7	200	27'-8"	120	25'-7"	3'-5"	#7	11"	±
	12'	10'		200	27'-9"	120	25'-10"	3'-8"			
		11'		200	27'-6"	120	25'-11"	3'-9"			
		12'		200	27'-7"	120	26'-0"	3'-10"			

DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	"b" bars BENT - See Diagrams below. In Bottom of Top Slab bent up over Division Walls-hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. REQD	LENGTH	X	Y	Z	"b₁" & "b₄" bars In Top of Top Slab - some bent up over Division Walls. (2 of Each Length) "b₁" hooked one end, "b₄" bars spliced to "b" bars. Alternate with "a₁" and "c" or "c₁" bars. SIZE	SPACING	No. REQD "b₁"	No. REQD "b₄"	LENGTHS "b₁" Max.	"b₁" Min.	"b₄" Max.	"b₄" Min.	L Max.	L Min.
0'-0" TO 5'-0" MAXIMUM	5'	6'	⊠	104	21'-8"	0'-5½"	9'-4"	7'-2"				22	22	20'-10"	4'-6"	20'-8"	3'-11"	19'-9"	3'-11"
		6'		104	21'-10"	"	9'-5"	7'-2½"				24	24	21'-0"	3'-1"	20'-5"	2'-6"	19'-11"	2'-8"
	4	7'		104	21'-10"	"	"	"				24	24	"	"	"	"	"	"
	@	8'	#6	104	21'-10"	"	"	7'-8"	#6	11"	±	24	24	21'-1"	3'-2"	20'-6"	2'-7"	20'-0"	2'-7"
	9'	9'		104	22'-1"	"	4'-6"	7'-9"				24	24	21'-3"	3'-4"	20'-8"	2'-9"	20'-2"	2'-9"
		10'		104	22'-3"	"	4'-7"	7'-5"				24	24	21'-6"	3'-7"	20'-11"	3'-0"	20'-5"	3'-0"
		11'		104	22'-6"	0'-5½"	"	7'-6"				24	24	21'-7"	3'-8"	21'-0"	3'-1"	20'-6"	3'-1"
	5'	6'		92	23'-8"	0'-6"	4'-9"	7'-11"				22	22	22'-10"	4'-9"	22'-3"	4'-2"	21'-8"	4'-2"
		6'	⊠	92	23'-10"	"	4'-10"	7'-11½"				24	24	23'-0"	3'-2"	22'-5"	2'-7"	21'-10"	2'-7"
		7'		92	23'-10"	"	"	"				24	24	"	"	"	"	"	"
	4	8'		92	23'-11"	"	"	8'-0"				24	24	23'-1"	3'-3"	22'-6"	2'-8"	21'-11"	2'-8"
	@	9'	#7	92	24'-1"	"	4'-11"	8'-1"	#7	12"	±	24	24	23'-3"	3'-5"	22'-8"	2'-10"	22'-1"	2'-10"
	10'	10'		92	24'-3"	"	5'-0"	8'-2"				24	24	23'-6"	3'-8"	22'-11"	3'-1"	22'-4"	3'-1"
		11'		92	24'-4"	"	"	8'-3"				24	24	23'-7"	3'-9"	23'-0"	3'-2"	22'-5"	3'-2"
		12'		92	24'-5"	0'-6"	5'-0"	8'-4"				24	24	23'-8"	3'-10"	23'-1"	3'-3"	22'-6"	3'-3"
	6'	6'		98	25'-11"	0'-6½"	5'-8"	8'-9"				28	28	25'-2"	4'-0"	24'-7"	3'-5"	24'-0"	3'-5"
		7'	⊠	98	25'-11"	"	"	"	⊠			28	28	"	"	"	"	"	"
	4	8'		98	25'-11"	"	"	"				28	28	"	"	"	"	"	"
	@	9'	#7	98	26'-2"	"	5'-9"	8'-10"	#7	11"	±	28	28	25'-4"	4'-2"	24'-9"	3'-7"	24'-2"	3'-7"
	11'	10'		98	26'-4"	"	5'-5"	8'-11"				28	28	25'-7"	4'-5"	25'-0"	3'-10"	24'-5"	3'-10"
		11'		98	26'-5"	"	"	9'-0"				28	28	25'-8"	4'-6"	25'-1"	3'-11"	24'-6"	3'-11"
		12'		98	26'-6"	0'-6½"	5'-5"	9'-1"				28	28	25'-9"	4'-7"	25'-2"	4'-0"	24'-7"	4'-0"
	6'	6'		96	28'-0"	0'-7"	5'-8"	9'-6"				30	30	27'-5"	4'-5"	26'-8"	3'-10"	26'-0"	3'-10"
		7'	⊠	96	28'-0"	"	"	"	⊠			30	30	"	"	"	"	"	"
	4	8'		96	28'-0"	"	"	"				30	30	"	"	"	"	"	"
	@	9'	#7	96	28'-8"	"	5'-9"	9'-7"	#7	11"	±	30	30	27'-6"	4'-7"	26'-11"	4'-0"	26'-2"	4'-0"
	12'	10'		96	28'-9"	"	5'-10"	9'-8"				32	32	29'-8"	3'-8"	27'-1"	3'-9"	26'-4"	3'-9"
		11'		96	28'-10"	"	"	9'-9"				32	32	29'-9"	3'-9"	27'-2"	3'-10"	26'-5"	3'-10"
		12'		96	28'-7"	0'-7"	5'-10"	9'-10"				32	32	29'-10"	3'-9"	27'-3"	3'-10"	26'-7"	3'-10"

DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	"b₂" bars STRAIGHT In Top of Bottom Slab bent down under Division Walls-hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. REQD	LENGTH	X	Y	Z	"b₃" & "b₅" bars In Top of Bottom Slab-some bent down under Division Walls. (2 of Each Length) "b₃" hooked one end, "b₅" bars spliced to "b₂" bars. Alternate with "a₁" and "c" or "c₁" bars. SIZE	SPACING	No. REQD "b₃"	No. REQD "b₅"	LENGTHS "b₃" Max.	"b₃" Min.	"b₅" Max.	"b₅" Min.	L Max.	L Min.
0'-0" TO 5'-0" MAXIMUM	5'	6'	⊠	108	21'-8"	0'-5½"	9'-4"	7'-2"				22	22	20'-10"	4'-6"	20'-8"	3'-11"	19'-9"	3'-11"
		6'		108	21'-10"	"	9'-5"	7'-2½"				24	24	21'-0"	3'-1"	20'-5"	2'-6"	19'-11"	2'-8"
	4	7'		108	21'-10"	"	"	"				24	24	"	"	"	"	"	"
	@	8'	#6	108	21'-10"	"	"	7'-9"	#6	11"	±	24	24	21'-1"	3'-2"	20'-6"	2'-7"	20'-0"	2'-7"
	9'	9'		108	22'-1"	"	4'-6"	7'-9"				24	24	21'-3"	3'-4"	20'-8"	2'-9"	20'-2"	2'-9"
		10'		108	22'-3"	"	4'-7"	7'-5"				24	24	21'-6"	3'-7"	20'-11"	3'-0"	20'-5"	3'-0"
		11'		108	22'-6"	0'-5½"	"	7'-6"				24	24	21'-7"	3'-8"	21'-0"	3'-1"	20'-6"	3'-1"
	5'	6'		96	23'-8"	0'-6"	4'-9"	7'-11"				22	22	22'-10"	4'-9"	22'-3"	4'-2"	21'-8"	4'-2"
		6'	⊠	96	23'-10"	"	4'-10"	7'-11½"				24	24	23'-0"	3'-2"	22'-5"	2'-7"	21'-10"	2'-7"
		7'		96	23'-10"	"	"	"				24	24	"	"	"	"	"	"
	4	8'		96	23'-11"	"	"	8'-0"				24	24	23'-1"	3'-3"	22'-6"	2'-8"	21'-11"	2'-8"
	@	9'	#7	96	24'-1"	"	4'-11"	8'-1"	#7	12"	±	24	24	23'-3"	3'-5"	22'-8"	2'-10"	22'-1"	2'-10"
	10'	10'		96	24'-3"	"	5'-0"	8'-2"				24	24	23'-6"	3'-8"	22'-11"	3'-1"	22'-4"	3'-1"
		11'		96	24'-4"	"	"	8'-3"				24	24	23'-7"	3'-9"	23'-0"	3'-2"	22'-5"	3'-2"
		12'		96	24'-5"	0'-6"	5'-0"	8'-4"				24	24	23'-8"	3'-10"	23'-1"	3'-3"	22'-6"	3'-3"
	6'	6'		102	26'-0"	0'-7"	5'-2"	8'-9"				28	28	25'-8"	4'-0"	24'-7"	3'-5"	24'-0"	3'-5"
		7'	⊠	102	26'-0"	"	"	"	⊠			28	28	"	"	"	"	"	"
	4	8'		102	26'-0"	"	"	"				28	28	"	"	"	"	"	"
	@	9'	#7	102	26'-3"	"	5'-3"	8'-10"	#7	11"	±	28	28	25'-5"	4'-2"	24'-10"	3'-7"	24'-2"	3'-7"
	11'	10'		102	26'-5"	"	5'-4"	8'-11"				28	28	25'-6"	4'-5"	25'-1"	3'-10"	24'-5"	3'-10"
		11'		102	26'-6"	"	"	9'-0"				28	28	25'-9"	4'-6"	25'-2"	3'-11"	24'-6"	3'-11"
		12'		102	26'-7"	0'-7"	5'-4"	9'-1"				28	28	25'-10"	4'-7"	25'-3"	4'-0"	24'-7"	4'-0"
	6'	6'		100	28'-1"	0'-8"	5'-6"	9'-6"				30	30	27'-4"	4'-5"	26'-8"	3'-10"	26'-0"	3'-10"
		7'	⊠	100	28'-1"	"	"	"	⊠			30	30	"	"	"	"	"	"
	4	8'		100	28'-1"	"	"	"				30	30	"	"	"	"	"	"
	@	9'	#7	100	28'-9"	"	5'-7"	9'-7"	#7	11"	±	30	30	27'-6"	4'-7"	26'-11"	4'-0"	26'-2"	4'-0"
	12'	10'		100	28'-9"	"	5'-8"	9'-8"				32	32	29'-8"	3'-8"	27'-1"	3'-9"	26'-4"	3'-9"
		11'		100	28'-10"	"	"	9'-9"				32	32	29'-9"	3'-9"	27'-2"	3'-10"	26'-5"	3'-10"
		12'		100	28'-8"	0'-8"	5'-8"	9'-10"				32	32	29'-10"	3'-9"	27'-3"	3'-10"	26'-7"	3'-10"

DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "a" and "b₂" bars. SIZE	SPACING	No. REQD	LENGTH	"c₁" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b₁" & "b₄" bars (Four of Each Length) SIZE	SPACING	No. REQD	LENGTH	"d" bars STRAIGHT Longitudinal in Top Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH	"d₁" bars STRAIGHT Longitudinal in Sidewalls and Division Walls. SIZE	SPACING	No. REQD	LENGTH	"e" bars STRAIGHT Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH
0'-0" TO 5'-0" MAXIMUM	5'	6'																				
		6'																				
	4	7'																				
	@	8'																				
	9'	9'																				
		10'																				
		11'																				
	5'	6'																				
		6'																				
		7'																				
	4	8'																				
	@	9'	#7	12"	±	102	29'-3"	#7	12"	±	90	32'-9"	#5	12"	±	90	12"	±	90	12"	±	90
	10'	10'				102	29'-6"				90	32'-6"				90			98			98
		11'				102	29'-8"				90	32'-9"				90			56			56
		12'				102	29'-9"				90	32'-9"				90			53			53
	6'	6'																				
		7'																				
	4	8'																				
	@	9'	#7	12"	±	102	29'-9"	#7	12"	±	90	32'-9"	#5	11½"	±	90	12"	±	90	12"	±	90
	11'	10'				102	29'-11"				90	32'-9"				90			56			56
		11'				102	30'-0"				90	32'-9"				90			53			53
		12'				102	30'-0"				90	32'-9"				90			88			88
	6'	6'																				
		7'																				
	4	8'																				
	@	9'	#7	12"	±	102	30'-6"	#7	12"	±	90	33'-3"	#5	11½"	±	90	12"	±	90	12"	±	90
	12'	10'				102	30'-7"				90	33'-3"				90			57			57
		11'				102	30'-8"				90	33'-3"				90			57			57
		12'				102	30'-9"				90	33'-3"				90			57			57

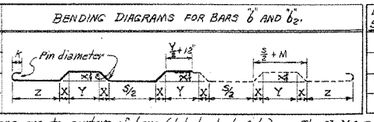
DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	"f" bars STRAIGHT Verticals in Sidewalls and Division Walls. SIZE	SPACING	No. REQD	LENGTH	"f₁" bars STRAIGHT In Bottom of Headwalls SIZE	SPACING	No. REQD	LENGTH	"f₂" bars. In Top of Headwalls and Aprons (2 Each) SIZE	SPACING	No. REQD	LENGTH
0'-0" TO 5'-0" MAXIMUM	5'	6'												
		6'												
	4	7'												
	@	8'	#4	12"	490	6'-9"	⊠	12"	23'-8"		⊠	16"	24'-3"	
	9'	9'			490	7'-3"		12"	23'-10"			16"	24'-5"	
		10'			490	8'-3"		12"	"			16"	24'-6"	
		11'		10"	576	9'-3"	#6	12"	23'-11"		#6	16"	24'-6"	
		12'		12"	490	10'-3"		12"	24'-2"			16"	24'-8"	
	5'	6'		11"	528	11'-3"		12"	24'-5"			16"	25'-0"	
		7'		10"	576	12'-3"		12"	24'-6"			16"	25'-1"	
		8'	#4	12"	490	6'-9"		12"	26'-2"			16"	26'-9"	
		9'		12"	490	7'-9"	⊠	12"	26'-5"		⊠	16"	26'-8"	
		10'		12"	490	8'-9"		12"	"			16"	"	
		11'		10"	576	9'-9"	#5	12"	26'-5"		#5	16"	27'-0"	
		12'		12"	490	10'-9"		12"	26'-9"			16"	27'-2"	
	6'	6'		11"	528	11'-9"		12"	26'-10"			16"	27'-5"	
		7'		10"	576	12'-9"		12"	27'-1"			16"	27'-8"	
		8'	#4	12"	490	7'-5"		12"	28'-9"			16"	29'-5"	
		9'		12"	490	8'-5"	⊠	12"	"		⊠	16"	"	
		10'		12"	490	9'-5"		12"	"			16"	"	
		11'		12"	490	10'-5"		12"	28'-11"			16"	29'-6"	
		12'		12"	528	11'-5"		12"	29'-2"			16"	29'-9"	
	6'	6'		10"	576	12'-5"		12"	29'-3"			16"	29'-10"	
		7'		8"	480	13'-5"		12"	29'-4"			16"	29'-11"	
		8'	#4	12"	490	7'-7"		12"	31'-0"			16"	31'-7"	
		9'		12"	490	8'-7"	⊠	12"	"		⊠	16"	"	
		10'		10"	576	9'-7"		12"	"			16"	"	
		11'		12"	490	10'-7"	#5	12"	31'-3"		#5	16"	31'-10"	
		12'		12"	528	11'-7"		12"	31'-6"			16"	32'-1"	
	5'	6'		10"	576	12'-7"		12"	31'-7"			16"	32'-2"	
		7'		8"	480	13'-7"		12"	31'-8"			16"	32'-3"	

DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	BARREL DIMENSIONS: Sq. Ft. OPENING A	OVERALL WIDTH OW	THICKNESS OF TOP SLAB T	THICKNESS OF SIDEWALLS C	THICKNESS OF DIVISION WALLS M	THICKNESS OF BOTTOM SLAB B	OVERALL HEIGHT OH	ROAD WAY LENGTH RL	LENGTH OF HEADWALLS K	* QUANTITIES: CLASS S CONC. OF BARREL CU.YD.	REINFORCING STEEL: TOTAL FOR 60'-0" LENGTH OF BARREL LB.	PER LIN. FT. OF BARREL LB.	ADDITIONAL PER LIN. LB.
5'-0"	4	5'	180	39'-5"	9"	7"	9"	9"	6'-6"	45'-6½"	46'-8"	2.823	33,390	525.66	173.24
		6'	216	39'-9"		7½"			7'-6"	45'-10½"	47'-0½"	3.042	34,297	539.85	178.94
		7'	252	39'-9"		7½"			8'-6"	"	"	3.191	34,993	550.04	186.62
	@	8'	288	39'-10"		8"			9'-6"	46'-0"	47'-1½"	3.349	36,246	571.16	193.30
	9'	9'	324	40'-3"		9"			10'-6"	46'-2½"	47'-7½"	3.459	38,309	606.26	199.98
		10'	360	40'-8"		10"			11'-6"	46'-11½"	48'-1½"	3.988	40,087	632.08	206.66
		11'	396	40'-10"		11"			12'-6"	47'-1½"	48'-3½"	4.235	41,666	658.72	213.34
	5'	5'	135	39'-5"		7"			6'-7"	50'-1½"	51'-3½"	3.179	33,611	620.21	183.56
		6'	240	39'-9"		7½"			7'-7"	50'-6½"	51'-8"	3.389	40,552	639.28	190.24
		7'	280	39'-9"		7½"			8'-7"	"	"	3.538	41,199	694.97	196.92
		8'	320	40'-10"		8"			9'-7"	50'-7½"	51'-9½"	3.706	42,544	666.82	203.60
	4	9'	360	41'-3"		9"			10'-7"	51'-1½"	52'-3"	4.012	44,721	701.92	210.28
	@	10'	400	41'-8"		10"			11'-7"	51'-7"	52'-8½"	4.248	46,451	728.27	216.94
	10'	11'	440	41'-10"		11"			12'-7"	51'-9½"	52'-11"	4.598	48,045	755.12	223.64
		12'	480	42'-0"		12"			13'-7"	51'-11½"	53'-1½"	4.861	50,690	798.87	230.32
	6'	6'	264	40'-10"		8"	10"		7'-8½"	55'-2½"	56'-4½"	3.878	46,552	789.59	200.63
		7'	308	40'-10"		8"	10"		8'-8½"	"	"	4.020	47,179	740.28	207.21
		8'	352	41'-10"		8"	10"		9'-8½"	"	"	4.162	48,430	761.03	213.89
	4	9'	396	42'-8"		9"	11"	10½"	10'-8½"	55'-5½"	56'-10½"	4.470	50,679	797.16	220.57
	@	10'	440	42'-8"		10"	12"		11'-8½"	55'-8½"	57'-0½"	4.808	52,372	823.93	227.25
	11'	11'	484	42'-10"		11"	12"		12'-8½"	55'-11½"	57'-4½"	5.059	54,025	850.07	233.93
		12'	528	43'-0"		12"	12"		13'-8½"	56'-1"	57'-8½"	5.323	56,739	894.99	240.61
	5'	6'	240	41'-5"		8"	10"		7'-10"	59'-10½"	61'-0"	4.371	49,859	782.20	210.82
		7'	336	41'-10"		8"	10"		8'-10"	"	"	4.513	50,525	792.89	217.50
		8'	384	41'-10"		8"	10"		9'-10"	"	"	4.655	51,767	813.82	224.18
	4	9'	432	42'-8"		9"	11"	11½"	10'-10"	60'-4"	61'-5½"	4.946	54,114	850.25	230.86
	@	10'	480	42'-8"		10"	12"		11'-10"	60'-8½"	61'-11½"	5.305	55,913	877.16	237.54
	12'	11'	528	42'-10"		11"	12"		12'-10"	61'-0½"	62'-2"	5.557	57,507	904.35	244.22
		12'	576	43'-0"		12"	12"		13'-10"	61'-2½"	62'-4½"	5.821	60,182	948.21	250.90

* For quantities in Wings see Standard Wing Drawings listed below. Total steel quantities listed above include one lap of longitudinal bars.

BENDING DIAGRAMS FOR BARS "b" AND "b₂"

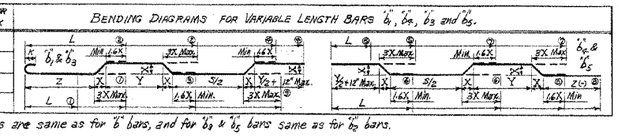
BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#6	3"	5"	1'-2"



NOTE:- Dimensions are to centers of bars (b, b₁, b₂, b₃, b₄ & b₅) ⓒⓒ ⓑⓑ Min. & Max. lengths L for bars "b₁", "b₃", "b₄" & "b₅" for each type bend. The X, Y & Z values of "b₁" & "b₄" bars are same as for "b" bars, and for "b₃" & "b₅" bars same as for "b₂" bars.

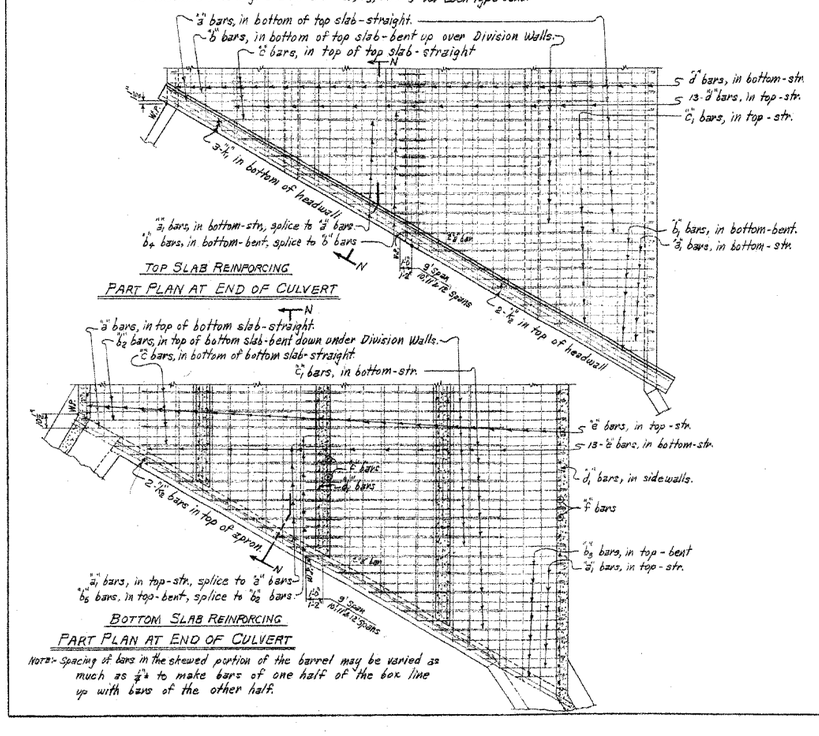
BENDING DIAGRAMS FOR VARIABLE LENGTH BARS "b₁", "b₄", "b₃" and "b₅"

BAR SIZE	PIN DIAM.	K	ADD FOR 1 HOOK
#6	3"	5"	0'-7"



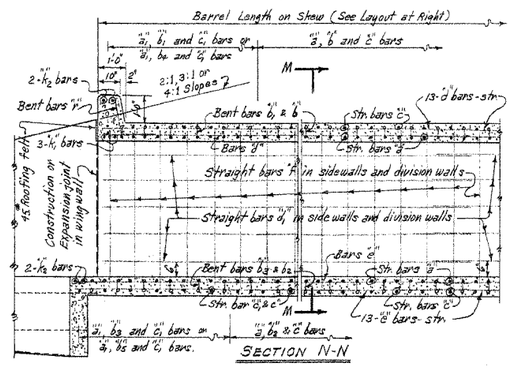
These bars are in the skewed portion of barrel only. The length of "a₁" and "c₁" bars and overall length L of "b₁, b₄, b₃ & b₅" bars vary by 1'-9" for 12" spacing and 1'-7" for 11" spacing. In the regular portion of the barrel begin and end with a set of "a" and "c" bars. If the spacing is such that the last set of bars would be "b" and "b₂" bars, use a set of "a" and "c" bars instead.

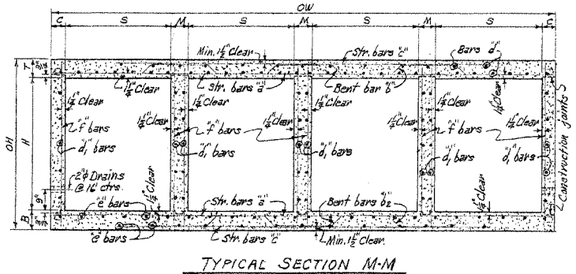
⊠ The "a₁, b₁, b₂, b₃" and "b₅" bars are to be spliced at middle division wall to make full length bars. Lap #6 bars 2'-0" min. and #7 bars 2'-4" min. Some "b" bars are to be spliced to "b₄" bars and some "b₂" bars spliced to "b₅" bars to make full length bars.



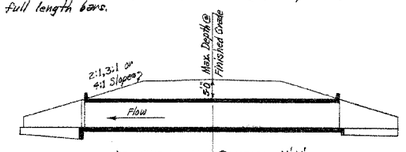
Note:- Spacing of bars in the skewed portion of the barrel may be varied as much as 3/4" to make bars of one half of the box line up with bars of the other half.

NOTE:- For Details of Standard Wings and bar lists, see Drawing No. W-X302-1 or W-X302-2; W-X303-1 or W-X303-2 and W-X304-1 or W-X304-2. Also W-X30.

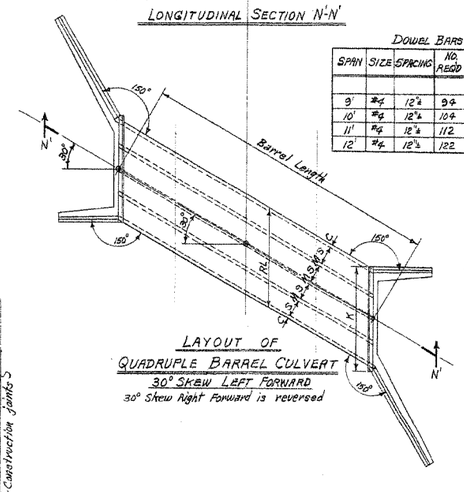




TYPICAL SECTION M-M



LONGITUDINAL SECTION N'-N'



LAYOUT OF QUADRUPLE BARREL CULVERT
30° SKEW LEFT FORWARD
30° Skew Right Forward is reversed

REVISIONS:- Bars b₃ & b₅ in Bending Diagram. 6-17-66 W.C.H.

GENERAL NOTES

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have 3/4" chamfers.
REINFORCING STEEL:- Reinforcing to be deformed bars of interm

Reshot 3-9-93

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			222	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH - TWO 45° SKEWED ENDS

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH	"a₁" bars STRAIGHT In Top and Bottom Slab of Barrel. (Eight of Each Length) SIZE	SPACING	No. REQD	LENGTH MAX.	LENGTH MIN.
0'-0" TO 5'-0" MAXIMUM	8'	4'	✕		172	22'-9"			168	21'-10"	3'-6"
		5'			168	23'-0"			176	22'-1"	2'-10"
		6'			168	23'-0"	#6	11"	168	23'-0"	#6 11"
		7'	#6	11"	168	23'-4"			176	22'-5"	3'-2"
		8'			168	23'-4"			176	"	"
		9'			168	23'-6"			176	22'-7"	3'-4"
		10'			168	23'-9"			176	22'-10"	3'-7"
	9'	5'			160	25'-2"			192	24'-7"	3'-6"
		6'	✕		156	25'-5"			192	24'-9"	3'-8"
		7'			156	25'-5"			192	"	"
		8'	#6	11"	156	25'-9"	#6	11"	194	24'-11"	2'-10"
		9'			156	26'-0"			200	25'-7"	3'-1"
		10'			156	26'-8"			200	25'-4"	3'-4"
		11'			156	26'-9"			200	25'-5"	3'-5"
	10'	5'			136	28'-2"			200	27'-2"	3'-2"
		6'	✕		136	28'-4"			200	27'-4"	3'-4"
		7'			136	28'-4"			200	"	"
		8'	#6	11"	136	28'-5"	#7	12"	200	27'-5"	3'-5"
		9'			132	28'-8"			200	27'-8"	3'-8"
		10'			132	28'-11"			208	27'-11"	2'-11"
		11'			132	29'-0"			208	28'-0"	3'-0"
		12'			132	29'-1"			208	28'-1"	3'-1"

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"b" bars BENT - See Diagrams below. In Bottom of Top Slab bent up over Division Walls - hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. REQD	LENGTH	"b₁" & "b₂" bars BENT - See Diagrams below. In Bottom of Top Slab - some bent up over Division Walls. (2 of Each Length). "b₁" hooked one end. "b₂" bars spliced to "b" bars. Alternate with "a₁" and "c" or "c₁" bars. SIZE	SPACING	No. REQD b₁	No. REQD b₂	LENGTHS b₁ MAX.	LENGTHS b₁ MIN.	LENGTHS b₂ MAX.	LENGTHS b₂ MIN.
0'-0" TO 5'-0" MAXIMUM	8'	4'	✕		80	23'-10"	0'-5"	3'-10"	6'-4"			44	44	23'-5"	3'-7"	22'-10"	3'-0"
		5'			80	24'-1"	"	3'-11"	6'-5"			44	44	23'-8"	3'-10"	23'-1"	3'-3"
		6'			80	24'-1"	"	"	"			44	44	"	"	"	"
		7'	#6	11"	80	24'-4"	"	4'-0"	6'-5½"	#6	11"	44	44	24'-10"	4'-2"	23'-5"	3'-7"
		8'			80	24'-4"	"	"	6'-6"			44	44	"	"	"	"
		9'			78	24'-7"	"	4'-1"	6'-7"			46	46	24'-2"	3'-5"	23'-7"	2'-10"
		10'			78	24'-10"	0'-5"	4'-2"	6'-8"			46	46	24'-5"	3'-8"	23'-10"	3'-1"
	9'	5'			74	26'-8"	0'-5½"	4'-4"	7'-2"			50	50	26'-3"	3'-7"	25'-8"	3'-0"
		6'	✕		74	26'-11"	"	4'-5"	7'-2½"			50	50	26'-5"	3'-9"	25'-10"	3'-2"
		7'			74	26'-11"	"	"	7'-3"			50	50	"	"	"	"
		8'	#6	11"	74	26'-11"	"	4'-6"	7'-3"	#6	11"	50	50	26'-8"	3'-10"	25'-11"	3'-3"
		9'			74	27'-2"	"	4'-6"	7'-4"			50	50	26'-9"	4'-1"	26'-2"	3'-6"
		10'			72	27'-5"	"	4'-7"	7'-5"			52	52	27'-0"	3'-5"	26'-5"	2'-10"
		11'			72	27'-6"	0'-5½"	"	7'-6"			52	52	27'-1"	3'-6"	26'-6"	2'-11"
	10'	5'			60	29'-3"	0'-6"	4'-9"	7'-11"			50	50	28'-11"	4'-2"	28'-4"	3'-7"
		6'	✕		62	29'-6"	"	4'-10"	7'-11½"			50	50	29'-1"	4'-4"	28'-6"	3'-9"
		7'			62	29'-6"	"	"	"			50	50	"	"	"	"
		8'	#6	11"	62	29'-6"	"	"	8'-0"	#6	12"	52	52	29'-2"	3'-5"	28'-7"	2'-10"
		9'			62	29'-9"	"	4'-11"	8'-1"			52	52	29'-5"	3'-8"	28'-10"	3'-1"
		10'			62	30'-0"	"	5'-0"	8'-2"			52	52	29'-8"	3'-11"	29'-1"	3'-4"
		11'			64	30'-1"	"	"	8'-3"			52	52	29'-9"	4'-0"	29'-2"	3'-5"
		12'			64	30'-2"	0'-6"	5'-0"	8'-4"			52	52	29'-10"	4'-1"	29'-3"	3'-6"

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"b₂" bars BENT - See Diagrams below. In Top of Bottom Slab bent down under Division Walls - hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. REQD	LENGTH	X	Y	Z	"b₃" & "b₅" bars BENT - See Diagrams below. In Top of Bottom Slab - some bent down under Division Walls. (2 of Each Length). "b₃" hooked one end. "b₅" bars spliced to "b" bars. Alternate with "a₁" and "c" or "c₁" bars. SIZE	SPACING	No. REQD b₃	No. REQD b₅	LENGTHS b₃ MAX.	LENGTHS b₃ MIN.	LENGTHS b₅ MAX.	LENGTHS b₅ MIN.
0'-0" TO 5'-0" MAXIMUM	8'	4'	✕		84	23'-10"	0'-5"	3'-10"	6'-4"			44	44	23'-5"	3'-7"	22'-10"	3'-0"
		5'			84	24'-1"	"	3'-11"	6'-5"			44	44	23'-8"	3'-10"	23'-1"	3'-3"
		6'			84	24'-1"	"	"	"			44	44	"	"	"	"
		7'	#6	11"	84	24'-4"	"	4'-0"	6'-5½"	#6	11"	44	44	24'-10"	4'-2"	23'-5"	3'-7"
		8'			84	24'-4"	"	"	6'-6"			44	44	"	"	"	"
		9'			82	24'-7"	"	4'-1"	6'-7"			46	46	24'-2"	3'-5"	23'-7"	2'-10"
		10'			82	24'-10"	0'-5"	4'-2"	6'-8"			46	46	24'-5"	3'-8"	23'-10"	3'-1"
	9'	5'			78	26'-8"	0'-5½"	4'-4"	7'-2"			50	50	26'-3"	3'-7"	25'-8"	3'-0"
		6'	✕		78	26'-11"	"	4'-5"	7'-2½"			50	50	26'-5"	3'-9"	25'-10"	3'-2"
		7'			78	26'-11"	"	"	7'-3"			50	50	"	"	"	"
		8'	#6	11"	78	26'-11"	"	4'-6"	7'-3"	#6	11"	50	50	26'-8"	3'-10"	25'-11"	3'-3"
		9'			78	27'-2"	"	4'-6"	7'-4"			50	50	26'-9"	4'-1"	26'-2"	3'-6"
		10'			76	27'-5"	"	4'-7"	7'-5"			52	52	27'-0"	3'-5"	26'-5"	2'-10"
		11'			76	27'-6"	0'-5½"	"	7'-6"			52	52	27'-1"	3'-6"	26'-6"	2'-11"
	10'	5'			66	29'-3"	0'-6"	4'-9"	7'-11"			50	50	28'-11"	4'-2"	28'-4"	3'-7"
		6'	✕		66	29'-6"	"	4'-10"	7'-11½"			50	50	29'-1"	4'-4"	28'-6"	3'-9"
		7'			66	29'-6"	"	"	"			50	50	"	"	"	"
		8'	#6	11"	66	29'-6"	"	"	8'-0"	#6	12"	52	52	29'-2"	3'-5"	28'-7"	2'-10"
		9'			66	29'-9"	"	4'-11"	8'-1"			52	52	29'-5"	3'-8"	28'-10"	3'-1"
		10'			66	30'-0"	"	5'-0"	8'-2"			52	52	29'-8"	3'-11"	29'-1"	3'-4"
		11'			64	30'-1"	"	"	8'-3"			52	52	29'-9"	4'-0"	29'-2"	3'-5"
		12'			64	30'-2"	0'-6"	5'-0"	8'-4"			52	52	29'-10"	4'-1"	29'-3"	3'-6"

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "b" and "b₂" bars. SIZE	SPACING	No. REQD	LENGTH	"c₁" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b₁" & "b₃" bars (Four of each Length) SIZE	SPACING	No. REQD	LENGTH MAX.	LENGTH MIN.
0'-0" TO 5'-0" MAXIMUM	8'	4'			60	34'-8"			140	34'-6"	3'-4"
		5'			60	35'-0"			140	34'-9"	2'-10"
		6'			60	35'-0"			140	"	"
		7'	#6	11"	62	35'-4"	#6	11"	140	34'-4"	3'-2"
		8'			62	35'-4"			140	34'-5"	3'-3"
		9'			60	35'-8"			140	34'-10"	3'-8"
		10'			60	36'-0"			139	35'-3"	3'-2"
	9'	5'			52	39'-0"			156	38'-6"	3'-8"
		6'			50	39'-4"			160	38'-10"	3'-4"
		7'			50	39'-4"			160	"	"
		8'	#6	11"	50	39'-8"	#6	11"	160	38'-11"	3'-2"
		9'			50	39'-8"			160	39'-4"	3'-7"
		10'			48	40'-0"			159	39'-9"	3'-1"
		11'			48	40'-0"			159	39'-10"	3'-2"
	10'	5'			169	22'-8"	(Bars ½ Length)		152	21'-2"	3'-2"
		6'			169	22'-10"			152	21'-4"	3'-4"
		7'			169	22'-10"			152	"	"
		8'	#6	11"	169	22'-10"	#7	12"	152	21'-5"	3'-5"
		9'			160	23'-0"			152	21'-8"	3'-8"
		10'			160	23'-2"			152	21'-11"	2'-11"
		11'			160	23'-2"			152	22'-0"	3'-0"
		12'			160	23'-2"			152	22'-1"	3'-1"

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"d" bars STRAIGHT Longitudinal in Top Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH	"d₁" bars STRAIGHT Longitudinal in Sidewalls and Division Walls. SIZE	SPACING	No. REQD	LENGTH	"e" bars STRAIGHT Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	No. REQD	LENGTH
0'-0" TO 5'-0" MAXIMUM	8'	4'			60				40				58	
		5'			60				50				58	
		6'			60				60				58	
		7'	#5	11½"	60		#4	12"	70		#4	12"	58	
		8'			60				80				58	
		9'			60				90				58	
		10'			60				100				58	
	9'	5'			69				50				67	
		6'			69				60				67	
		7'			69				70				67	
		8'	#5	11½"	69		#4	12"	80		#4	12"	67	
		9'			69				90				67	
		10'			69				100				67	
		11'			69				110				67	
	10'	5'			74				50				72	
		6'			74				60				72	
		7'			74				70				72	
		8'	#5	11½"	74		#4	12"	80		#4	12"	72	
		9'			74				90				72	
		10'			74				100				72	
		11'			74				110				72	
		12'			74				120				72	

DEPTH OF COVER D	SPAN S	CLEAR HEIGHT H	"f" bars STRAIGHT Verticals in Sidewalls and Division Walls. SIZE	SPACING	No. REQD	LENGTH	"h₁" bars STRAIGHT In Bottom of Headwalls. (3 Long & 4 Short bars per Headwall) SIZE	LENGTH MAX.	LENGTH MIN.	"h₂" bars In Top of Headwalls and Aprons bars (2 Rows Each) SIZE	No. REQD	LENGTH
0'-0" TO 5'-0" MAXIMUM	8'	4'			600	5'-2"		6'-8"	10'-8"			
		5'			600	6'-2"						
		6'			600	7'-2"	⊕	18	23'-6"	21'-3"	24	22'-9"
		7'	#4	12"	600	8'-2"	#7	18	23'-9"	21'-6"	24	23'-0"
		8'			600	9'-2"		18	"	"	24	"
		9'			600	10'-2"		18	24'-0"	21'-8"	24	23'-2"
		10'			720	9'-8"		18	24'-0"	21'-9"	24	23'-2"
		11'			660	11'-2"		18	24'-3"	22'-0"	24	23'-5"
		12'			600	12'-2"		18	24'-6"	22'-2"	24	23'-8"
	9'	5'			600	6'-8"		18	26'-7"	24'-10"	24	25'-7"
		6'			600	7'-8"	⊕	18	26'-9"	24'-12"	24	25'-9"
		7'			600	8'-8"		18	"	"	24	"
		8'	#4	12"	600	9'-8"	#8	18	26'-10"	24'-5"	24	25'-9"
		9'			600	10'-8"		18	27'-0"	24'-5"	24	26'-0"
		10'			660	11'-2"		18	27'-3"	24'-8"	24	26'-3"
		11'			720	12'-2"		18	27'-8"	24'-10"	24	26'-8"
	10'	5'			600	6'-8"		18	28'-9"	26'-5"	24	27'-11"
		6'			600	7'-8"	⊕	18	28'-11"	26'-7"	24	28'-1"
		7'			600	8'-8"		18	"	"	24	"
		8'	#4	12"	600	9'-8"	#8	18	28'-11"	26'-8"	24	28'-2"
		9'			600	10'-8"		18	29'-2"	26'-11"	24	28'-5"
		10'			660	11'-2"		18	29'-5"	27'-2"	24	28'-8"
		11'			720	12'-2"		18	29'-6"	27'-3"	24	28'-8"
		12'			600	13'-2"		18	29'-6"	27'-3"	24	28'-9"

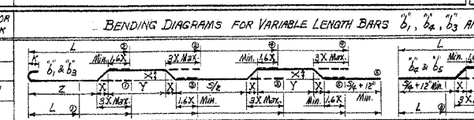
BARREL DIMENSIONS & QUANTITIES

D	S	H	A	OW	T	C	M	B	OH	RL	K	CLASS S CONC PER LIN. FT. OF BARREL	REINFORCING STEEL TOTAL LENGTH OF BARREL	REINFORCING STEEL PER LIN. FT. OF BARREL	REINFORCING STEEL ADDITIONAL PER LAP
												CU.YD.	LB.	LB.	LB.
5'-0"	8' @ 8"	4'	160	43'-8"	8½"	6"	8"	8½"	5'-5"	61'-9"	63'-9"	2.834	37,704	581.49	186.13
		5'	200	44'-2"		7"	9"		6'-5"	62'-5½"	64'-5½"	3.089	38,820	599.21	191.98
		6'	240	44'-7"		7½"	9"		7'-5"	"	"	3.343	39,629	612.57	202.58
		7'	280	44'-7"		7½"	10"		8'-5"	63'-10½"	65'-10½"	3.528	40,770	630.84	211.16
		8'	320	44'-8"		8"	10"		9'-5"	63'-2"	65'-2"	3.726	42,333	656.95	218.53
		9'	360	45'-2"		9"	11"		10'-5"	63'-10½"	65'-10½"	4.082	44,812	699.51	227.88
		10'	400	45'-8"		10"	12"		11'-5"	64'-7"	66'-7"	4.435	47,097	731.58	236.23
	9' @ 8"	5'	225	49'-2"		7"	9"		6'-6"	69'-6½"	71'-6½"	3.503	43,555	661.59	217.64
		6'	270	49'-7"		7½"	10"		7'-6"	70'-1½"	72'-1½"	3.779	44,927	678.77	225.99
		7'	315	49'-7"		7½"	10"		8'-6"	"	"	3.943	45,235	692.13	234.39
		8'	360	49'-8"		8"	10"		9'-6"	70'-2½"	72'-3"	4.142	46,668	718.90	242.69
		9'	405	50'-2"		9"	11"		10'-6"	70'-11½"	72'-11½"	4.509	49,689	762.21	251.02
		10'	450	50'-8"		10"	12"		11'-6"	71'-7½"	73'-7½"	4.914	51,631	798.35	259.39
		11'	495	50'-10"		11"	12"		12'-6"	71'-10½"	73'-10½"	5.201	53,614	827.44	267.74
	10' @ 8"	5'	250	54'-2"		7"	9"		6'-7"	76'-7½"	78'-7½"	3.948	51,684	792.33	230.61
		6'	300	54'-7"		7½"	10"		7'-7"	77'-2½"	79'-2½"	4.219	52,832	808.92	238.86
		7'	350	54'-7"		7½"	10"		8'-7"	"	"	4.389	53,460	823.26	247.21
		8'	400	54'-8"		8"	10"		9'-7"	77'-3½"	79'-3½"	4.588	55,955	849.79	255.56
		9'	450	55'-2"		9"	11"		10'-7"	78'-0½"	80'-0½"	4.957	57,772	884.34	264.91
		10'	500	55'-8"		10"	12"		11'-7"	78'-8½"	80'-8½"	5.363	60,066	927.10	272.26
		11'	550	55'-10"		11"	12"		12'-7"	78'-11½"	80'-11½"	5.651	61,847	960.38	280.61
		12'	600	56'-0"		12"	12"		13'-7"	79'-2½"	81'-2½"	5.951	65,184	1014.14	289.96

For quantities in wings, see Std. Wing Drawings listed below.
Total steel quantities listed above include one lap of longitudinal bars.

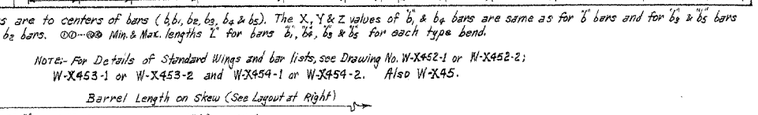
BENDING DIAGRAMS FOR BARS "b" AND "b₂"

BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#6	3"	5"	1'-2"



BENDING DIAGRAMS FOR VARIABLE LENGTH BARS "b₁", "b₃", "b₄", "b₅" AND "b₆"

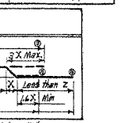
BAR SIZE	PIN DIAM.	K	ADD FOR 1 HOOK
#6	3"	5"	0'-7"



NOTE:- Dimensions are to centers of bars (b, b₁, b₂, b₃, b₄ & b₅). The X, Y & Z values of "b₁" & "b₄" bars are same as for "b" bars and for "b₃" & "b₅" bars same as for b₂ bars. ⓧ-ⓨ Min. & Max. lengths "L" for each type bend.

DOWEL BARS FOR TWO HEADWALLS

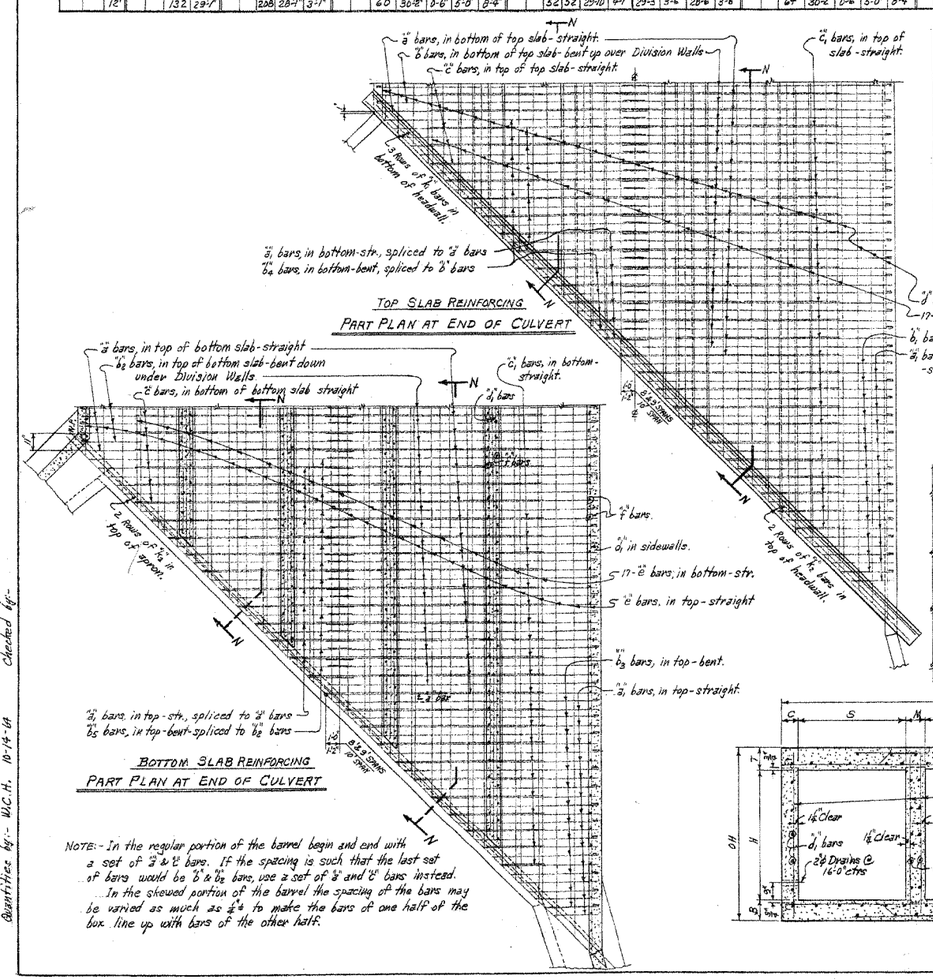
SPAN	SIZE	SPACING	No. REQD	LENGTH	X	Dowel bars "r" in Two Headwalls
8'	#4	12"	128	2'-9"	1'-4½"	
9'	#4	12"	142	2'-10"	1'-5"	
10'	#4	12"	156	2'-11"	1'-5½"	



These bars are in the skewed portion of barrel only.
The lengths of "a₁" and "c₁" bars and overall length "L" of "b₁" & "b₄" and "b₃" & "b₅" bars vary by 1'-0" for 12" spacing and 0'-6" for 11" spacing.
✕ These bars are to be spliced at center of center span to make full length bar. Some "b" bars are to be spliced to "b₂" bars and some "b₂" bars to "b₃" to make full length bars. Lap #6 bars 2'-0" and #7 bars 2'-4".
Some "a" bars are to be spliced to "a₁" bars, and in 10'-0" SPANS some "c" bars are spliced to "c₁" bars.
⊕ These bars have two splices, the "h₂" bars being of equal lengths, but the "h₁" bars are spliced at quarter points of 2nd & 4th Spans near 2nd and 3rd division walls.

GENERAL NOTES

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.
REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
BAR LAP:- In computing the quantities of steel from the tables add one lap for each additional 33'-0" length of barrel over 32'-0". Lap longitudinal bars 30 diameters min.
CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

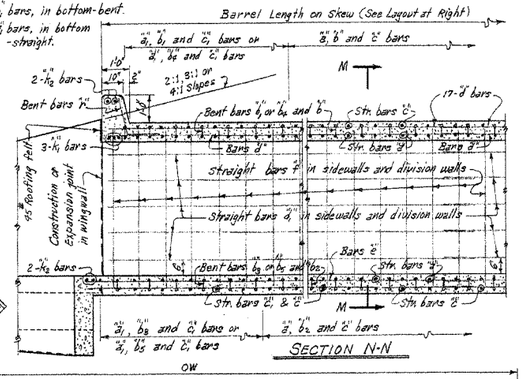


TOP SLAB REINFORCING
PART PLAN AT END OF CULVERT

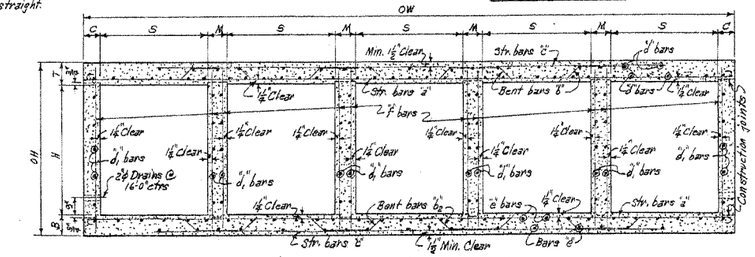
BOTTOM SLAB REINFORCING
PART PLAN AT END OF CULVERT

NOTE:- In the regular portion of the barrel begin and end with a set of "a" & "c" bars. If the spacing is such that the last set of bars would be "b" & "b₂" bars, use a set of "a" and "c" bars instead.
In the skewed portion of the barrel the spacing of the bars may be varied as much as ¼" to make the bars of one half of the box line up with bars of the other half.

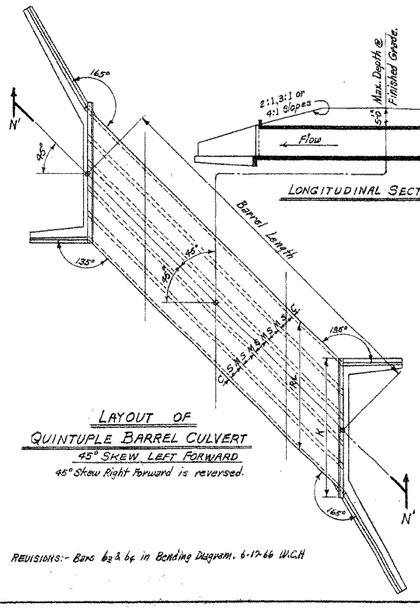
NOTE:- For Details of Standard Wings and bar lists, see Drawing No. W-X452-1 or W-X452-2; W-X453-1 or W-X453-2 and W-X454-1 or W-X454-2. Also W-X45.



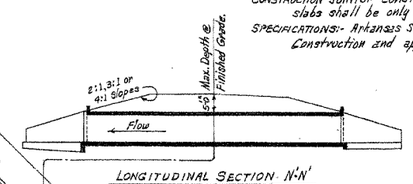
SECTION N-N



TYPICAL SECTION M-M



LAYOUT OF
QUINTUPLE BARREL CULVERT
45° SKEW LEFT FORWARD
45° Skew Right Forward is reversed.



LONGITUDINAL SECTION N-N'

DESIGN LIVE LOAD
H20-S16 LOADING A.A.S.H.O. 1961
AND
SPECIAL MILITARY LOADING
Two 24,000 Lb. Axles @ 4'-0" ctrs.

UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:- This drawing to be used in conjunction with Standard Wing Drawing Nos. W-X452-1 or W-X452-2; W-X453-1 or W-X453-2; and W-X454-1 or W-X454-2. Also W-X45.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS
FOR
REINFORCED CONCRETE BOX CULVERTS
45° SKEW

8', 9' AND 10' SPANS — 2:1, 3:1 OR 4:1 SLOPES
QUINTUPLES — UNDER 5'-0" COVER

STANDARD DRAWING No. R-545X-02

REVISIONS:- Bars b₃ & b₅ in Bending Diagram. 6-17-66 W.C.H.

Designed by:- W.C.H. 1-23-63. Checked by:- R.H.S. 5-29-63.
Drawn by:- W.C.H. 8-7-63. Checked by:-
Quantities by:- W.C.H. 10-14-64 Checked by:-