

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080492	1
						② I-40-THOMAS G. WILSON DR. (CONWAY) (S)		

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

I-40-THOMAS G. WILSON DR.
(CONWAY) (S)

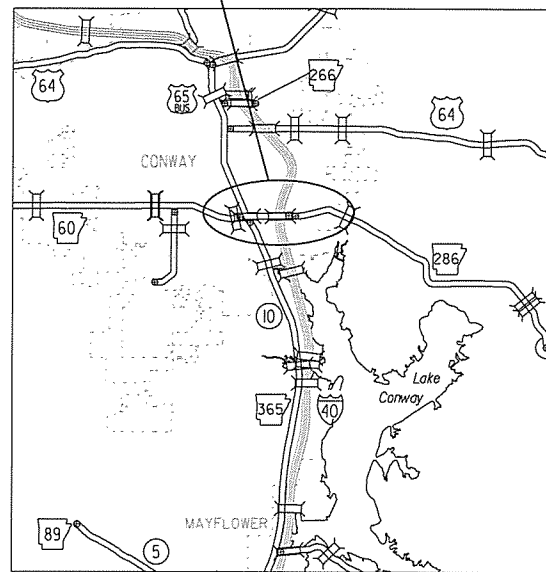
FAULKNER COUNTY

ROUTE 65B & 286 SECTION 9B & 2

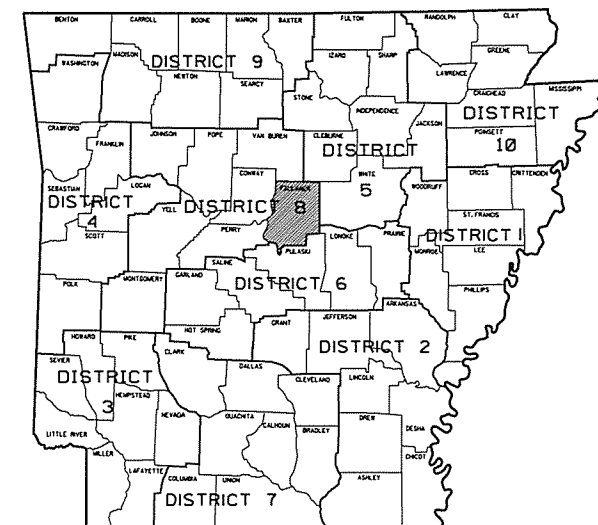
FEDERAL AID PROJECT STPF-9095(30)

JOB 080492

PROJECT LOCATION



VICINITY MAP

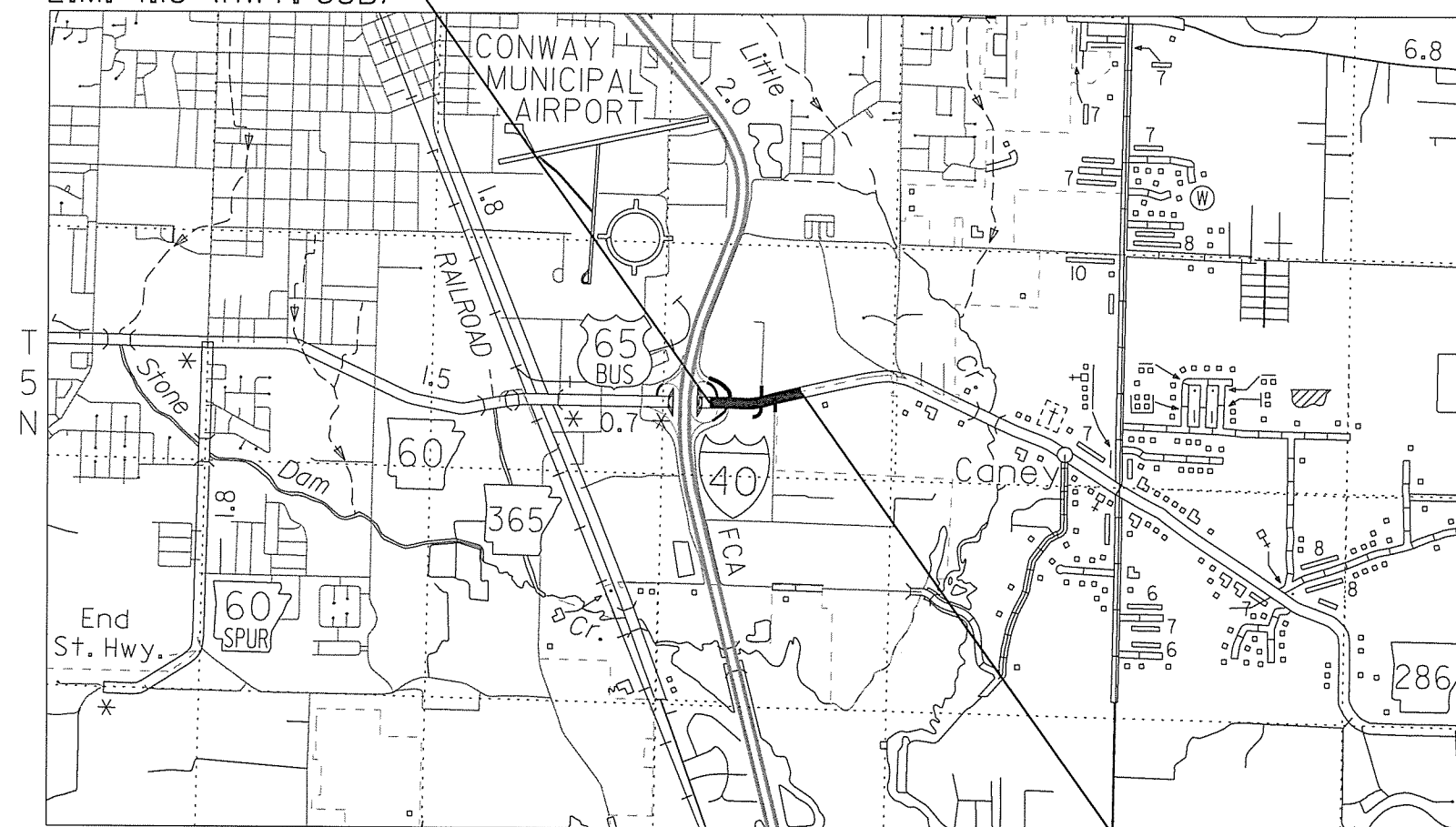


ARKANSAS HIGHWAY DISTRICT 8

STA. 32+20.00

NOT TO SCALE

BEGIN JOB 080492
L.M. 4.18 (HWY. 65B)



T 5 N

RI4W ←→ RI3W

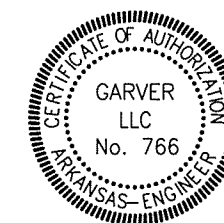
STA. 57+00.00

END JOB 080492
L.M. 0.41 (HWY. 286)

N

DESIGN TRAFFIC DATA

DESIGN YEAR-----	2035
2015 ADT-----	37,000
2035 ADT-----	55,000
2035 DHV-----	6,050
DIRECTIONAL DISTRIBUTION-----	60%
TRUCKS-----	4%
DESIGN SPEED-----	40 MPH



3-18-15

PROJECT COORDINATES

	BEGIN	MID-POINT	END
L ATITUDE	N 35° 03' 59"	N 35° 03' 59"	N 35° 04' 02"
L ONGITUDE	W 92° 25' 00"	W 92° 24' 45"	W 92° 24' 30"
S TATION	32+20.00	44+60.00	57+00.00

LENGTH COMPUTED ALONG C.L. MEDIAN	
GROSS LENGTH OF PROJECT	2480.00 FEET OR 0.470 MILES
NET LENGTH OF ROADWAY	2480.00 FEET OR 0.470 MILES
NET LENGTH OF BRIDGES	0.00 FEET OR 0.000 MILES
NET LENGTH OF PROJECT	2480.00 FEET OR 0.470 MILES

P.E. JOB 080491

socrabson 12/11/2015 8:48:38 AM
 WORKSPACE: AHTD
 L:\2010\101716 - Hwy 286 Widening and Improvements\Drawings\080492\080492_IDX_01.dgn
 REVISED DATE:

INDEX OF SHEETS			
SHEET NO.	TITLE	DRAWING NO.	DATE
1	TITLE SHEET		
2	INDEX OF SHEETS, GOVERNING SPECIFICATIONS, AND GENERAL NOTES		
3-11	TYPICAL SECTIONS OF IMPROVEMENT		
12-24	SPECIAL DETAILS		
25-39	TEMPORARY EROSION CONTROL DETAILS		
40-47	MAINTENANCE OF TRAFFIC DETAILS		
48-50	PERMANENT PAVEMENT MARKING DETAILS		
51	SOIL BORING LOG		
52-56	QUANTITIES		
57-58	SUMMARY OF QUANTITIES AND REVISIONS		
59-62	SURVEY CONTROL DETAILS		
63-66	PLAN AND PROFILE - HWY. 65B/286		
67	PLAN AND PROFILE - ROUNDABOUT 1 AND 2		
68	INTERCHANGE LAYOUT		
69	PLAN AND PROFILE - RAMP 1		
70	PLAN AND PROFILE - RAMP 3		
71	PLAN AND PROFILE - RAMP 4 AND N. AMITY BYPASS LANE		
72	PLAN AND PROFILE - NORTH AMITY ROAD		
73	PLAN AND PROFILE - PARKING LOT		
74-75	PLAN AND PROFILE - ENTERPRISE AVE. AND S. AMITY RD.		
76	PLAN AND PROFILE - THOMAS G. WILSON DRIVE		
77-78	TRAFFIC SIGNAL NOTES, SUMMARY OF SIGNAL QUANTITIES, AND SIGNAL QUANTITIES		
79-95	SIGNALIZATION PLANS		
96	LIGHTING LEGEND AND QUANTITIES		
97-100	LIGHTING PLANS		
101-104	LIGHTING DETAILS		
105-106	SIGN QUANTITIES		
107-123	SIGN PLACEMENT SHEETS		
124	CONCRETE DITCH PAVING	CDP-1	11/17/10
125	CURBING DETAILS	CG-1	11/29/07
126	DETAILS OF DRIVEWAYS & ISLANDS	DR-1	2/27/14
127	FLARED END SECTION	FES-1	10/18/96
128	FLARED END SECTION	FES-2	10/18/96
129	DETAILS OF DROP INLETS & JUNCTION BOXES	FPC-9	11/16/01
130	DETAILS OF DROP INLETS	FPC-9D	8/22/02
131	DETAILS OF DROP INLETS (TYPE C)	FPC-9E	8/22/02
132	DETAILS OF DROP INLET (TYPE MO)	FPC-9M	8/22/02
133	GUARD RAIL DETAILS	GR-8	7/14/10
134	GUARD RAIL DETAILS	GR-9A	4/17/08
135	GUARD RAIL DETAILS	GRT-1	7/14/10
136	MAILBOX DETAILS	MB-1	11/18/04
137	PRECAST CONCRETE BOX CULVERTS	PBC-1	1/28/15
138	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING	PCC-1	2/27/14
139	METAL PIPE CULVERT FILL HEIGHTS & BEDDING	PCM-1	2/27/14
140	PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)	PCP-1	2/27/14
141	PLASTIC PIPE CULVERT (PVC F949)	PCP-2	2/27/14
142	PAVEMENT MARKING DETAILS	PM-1	9/12/13
143	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS	PM-2	9/12/13
144	DETAILS OF PIPE UNDERDRAIN	PU-1	4/10/03
145	REINFORCED CONCRETE BOX CULVERT DETAILS	RCB-1	7/26/12
146	EXCAVATION PAY LIMITS, BACKFILL AND SOLID SODDING FOR BOX CULVERTS	RCB-2	11/20/03
147	METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS	RCB-3	10/12/95
148	SPAN WIRE ASSEMBLY STEEL POLE	SD-3	2/27/14
149	LOOP DETECTOR INSTALLATION	SD-4	9/12/13
150	CONTROLLER CABINET UTILITY DRAWER	SD-5	9/12/13
151	HEAVY DUTY PULL BOX	SD-6	9/2/15
152	SPAN WIRE ASSEMBLY WOOD POLE	SD-7	2/27/14
153	SIGNAL HEAD PLACEMENT	SD-8	9/12/13
154	SERVICE POINT	SD-9	9/12/13
155	STEEL POLE WITH MAST ARM	SD-11	2/27/14
156	TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC	SE-1	1/9/87
157	TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC	SE-2	10/18/96
158	STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES	SHS-1	9/12/13
159	U-CHANNEL POST ASSEMBLIES	SHS-2	2/27/14
160	DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS	SHS-4	9/12/13
161	DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS	SHS-7	9/12/13
162	DETAILS OF SPECIAL ITEMS	SI-1	9/12/13
163	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-1	9/2/15
164	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-2	9/2/15
165	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	TC-3	9/2/15

INDEX OF SHEETS			
SHEET NO.	TITLE	DRAWING NO.	DATE
166	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	TC-4	2/27/14
167	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	TC-5	10/15/09
168	TEMPORARY EROSION CONTROL DEVICES	TEC-1	12/15/11
169	TEMPORARY EROSION CONTROL DEVICES	TEC-2	6/2/94
170	TEMPORARY EROSION CONTROL DEVICES	TEC-3	11/3/94
171	TEMPORARY EROSION CONTROL DEVICES	TEC-4	7/26/12
172	WIRE FENCE TYPE A AND B	WF-1	8/22/02
172A	WIRE FENCE TYPE C AND D	WF-4	8/22/02
173	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS	WR-1	11/10/05
174	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS	W-X003-1	5/10/66
175	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-100X-0	2/8/63
176	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS	R-200X-0	2/15/63
177-209	CROSS SECTIONS		

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

GENERAL NOTES:

- GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
- ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
- 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.
- 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.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- 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.
- 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.
- 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.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENT REMOVED SHALL BE PAID FOR UNDER PAY ITEM 210 - EXCAVATION AND EMBANKMENT, UNLESS OTHERWISE NOTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-21-15				6	ARK.			
12-11-15								

JOB NO. 080492 SHEET NO. 2 TOTAL SHEETS 209

INDEX OF SHEETS, GOV. SPECS., & GEN. NOTES

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
100-3	CONTRACTOR'S LICENSE
108-1	LIQUIDATED DAMAGES
400-1	TACK COATS
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1	PIPE CULVERTS FOR SIDE DRAINS
620-1	MULCH COVER
JOB 080492	ASSESSMENT OF WORKING DAYS-SATURDAYS
JOB 080492	BIDDING REQUIREMENTS AND CONDITIONS
JOB 080492	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 080492	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 080492	CABINET DRAWER ASSEMBLY
JOB 080492	CHANNEL POST SIGN SUPPORT
JOB 080492	CONCRETE PULL BOX
JOB 080492	CONCRETE WALKS (TYPE SPECIAL)
JOB 080492	COORDINATION OF WORK
JOB 080492	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 080492	EDGE CARD VIDEO PROCESSOR
JOB 080492	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 080492	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 080492	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM
JOB 080492	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 080492	HIGH PERFORMANCE PAVEMENT MARKING
JOB 080492	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
JOB 080492	LED TRAFFIC SIGNAL HEAD
JOB 080492	LOUVERS FOR SIGNAL HEADS
JOB 080492	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 080492	MAINTENANCE OF TRAFFIC
JOB 080492	MANDATORY ELECTRONIC CONTRACT
JOB 080492	NESTING SITES OF MIGRATORY BIRDS
JOB 080492	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB 080492	PARTNERING REQUIREMENTS
JOB 080492	PLASTIC PIPE
JOB 080492	PROSECUTION AND PROGRESS - CALENDAR DAY CONTRACT WITH CPM
JOB 080492	REFLECTORIZED PAINT PAVEMENT MARKING SYMBOLS (WHEELCHAIR)
JOB 080492	RELOCATION OF TRAFFIC SIGNAL HEAD
JOB 080492	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
JOB 080492	ROADWAY ILLUMINATION POLE
JOB 080492	ROADWAY ILLUMINATION POLE, RELOCATED
JOB 080492	SERVICE POINT ASSEMBLY (TRAFFIC CONTROL DEVICES)
JOB 080492	SERVICE POINT ASSEMBLY (UNDERGROUND SECONDARY SERVICE, ROADWAY LIGHTING)
JOB 080492	SHORING FOR CULVERTS
JOB 080492	SIGN PANEL MATERIALS AND FABRICATION
JOB 080492	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 080492	SOIL STABILIZATION
JOB 080492	STORM WATER POLLUTION PREVENTION PLAN
JOB 080492	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 080492	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 080492	SYSTEM LOCAL CONTROLLER (RCM TELEMETRY)
JOB 080492	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)
JOB 080492	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 080492	UTILITY ADJUSTMENTS
JOB 080492	VALUE ENGINEERING
JOB 080492	VIDEO DETECTOR (COLOR)
JOB 080492	VIDEO DETECTOR RELOCATION
JOB 080492	WARM MIX ASPHALT

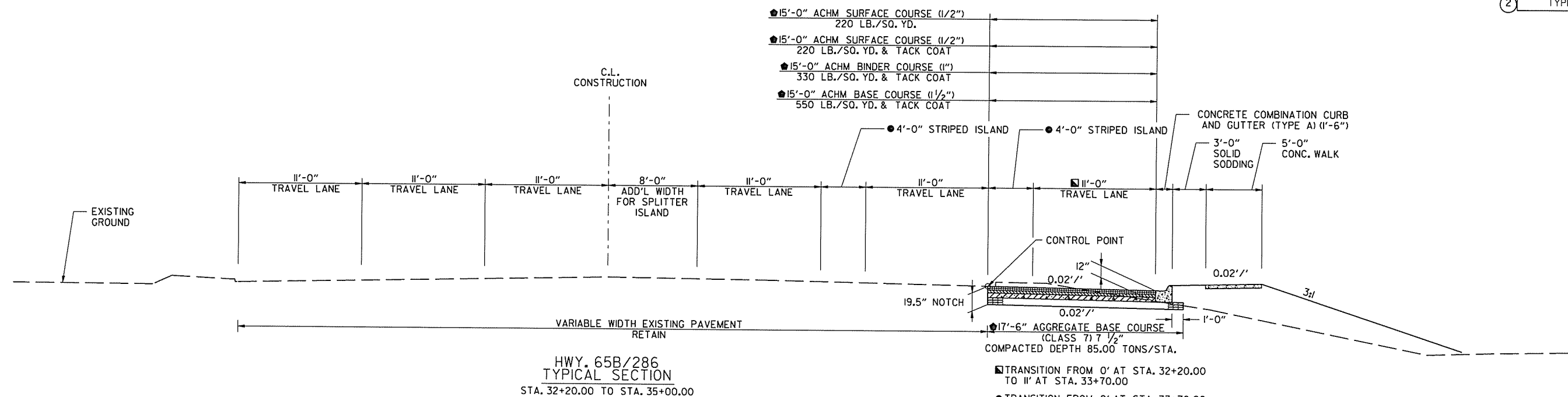
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2 TYPICAL SECTIONS OF IMPROVEMENT



3-12-15



HWY. 65B/286
TYPICAL SECTION
STA. 32+20.00 TO STA. 35+00.00

- TRANSITION FROM 0' AT STA. 32+20.00 TO 11' AT STA. 33+70.00
- TRANSITION FROM 0' AT STA. 33+70.00 TO 4' AT STA. 34+70.00
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

NOTES:

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

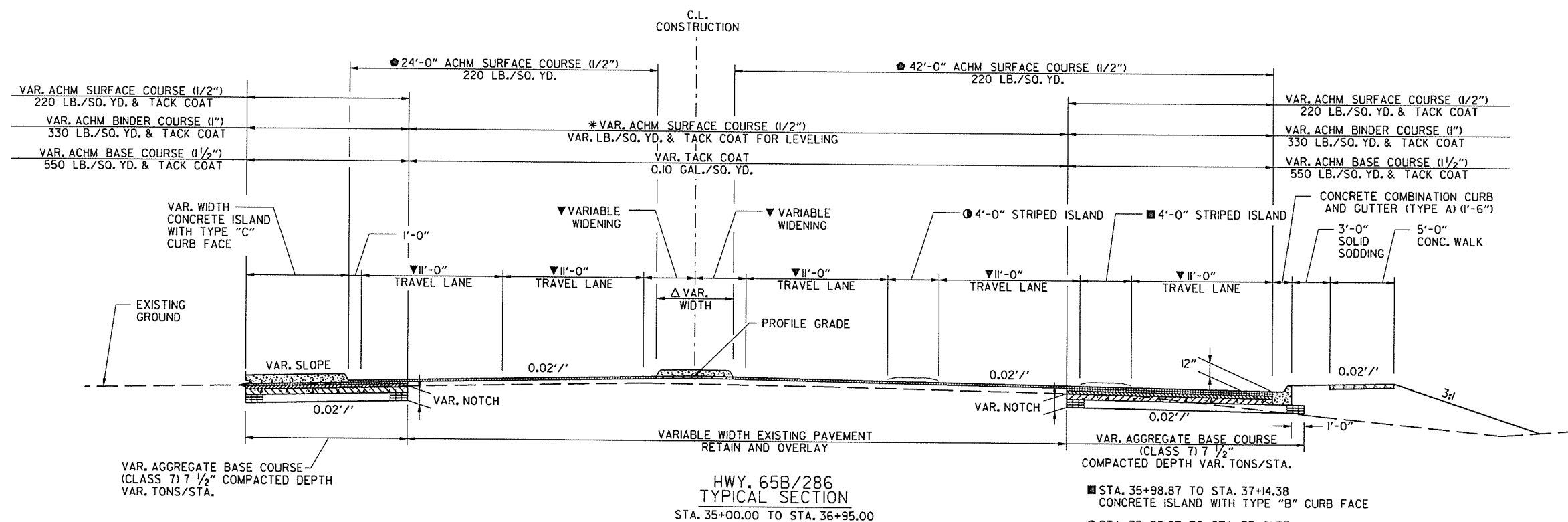
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

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

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

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HWY. 65B/286
TYPICAL SECTION
STA. 35+00.00 TO STA. 36+95.00

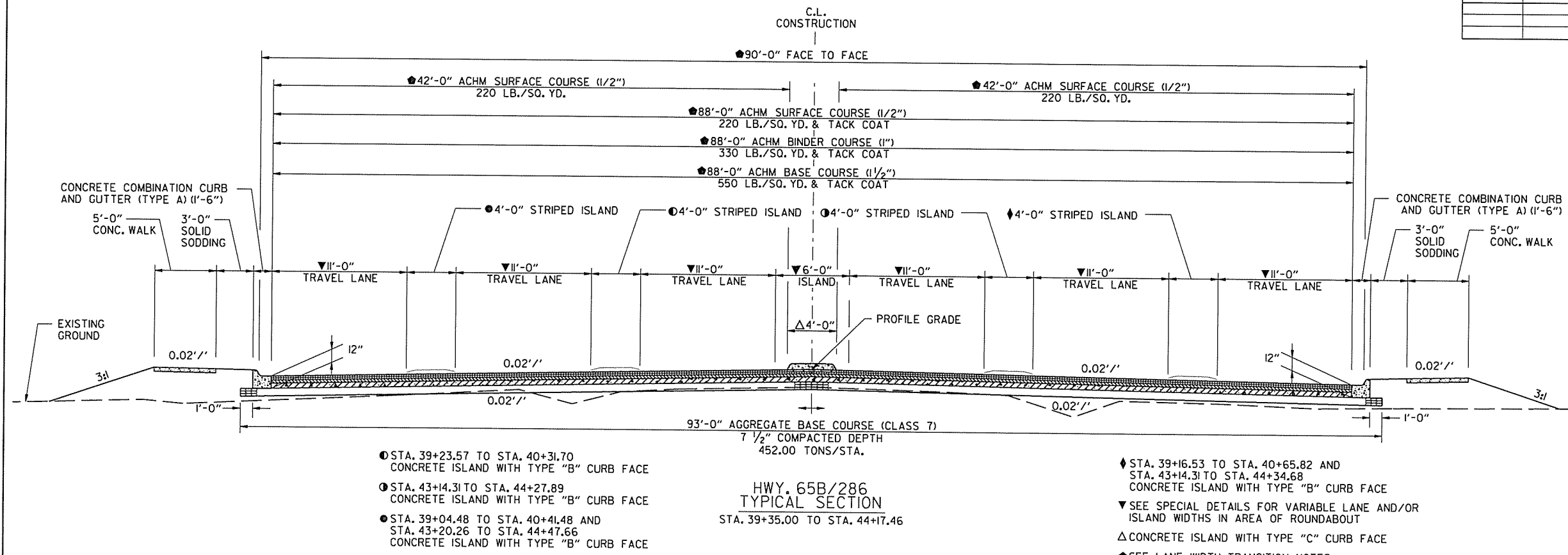
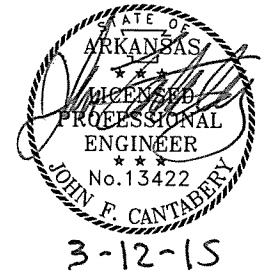
- STA. 35+98.87 TO STA. 37+14.38 CONCRETE ISLAND WITH TYPE "B" CURB FACE
- STA. 35+98.87 TO STA. 37+01.35 CONCRETE ISLAND WITH TYPE "B" CURB FACE
- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- △ CONCRETE ISLAND WITH TYPE "C" CURB FACE
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTIONS OF IMPROVEMENT

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2 TYPICAL SECTIONS OF IMPROVEMENT



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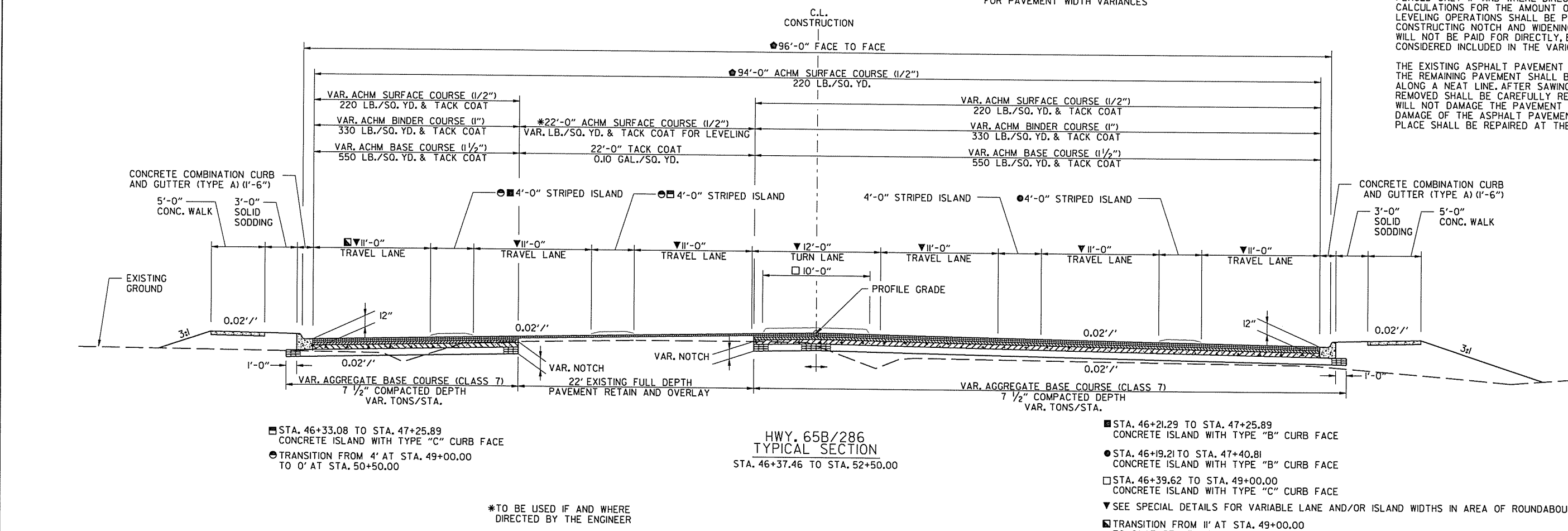
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■ STA. 46+21.29 TO STA. 47+25.89 CONCRETE ISLAND WITH TYPE "B" CURB FACE

● STA. 46+19.21 TO STA. 47+40.81 CONCRETE ISLAND WITH TYPE "B" CURB FACE

□ STA. 46+39.62 TO STA. 49+00.00 CONCRETE ISLAND WITH TYPE "C" CURB FACE

▽ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT

■ TRANSITION FROM 11' AT STA. 49+00.00 TO 0' AT STA. 50+50.00

◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTIONS OF IMPROVEMENT

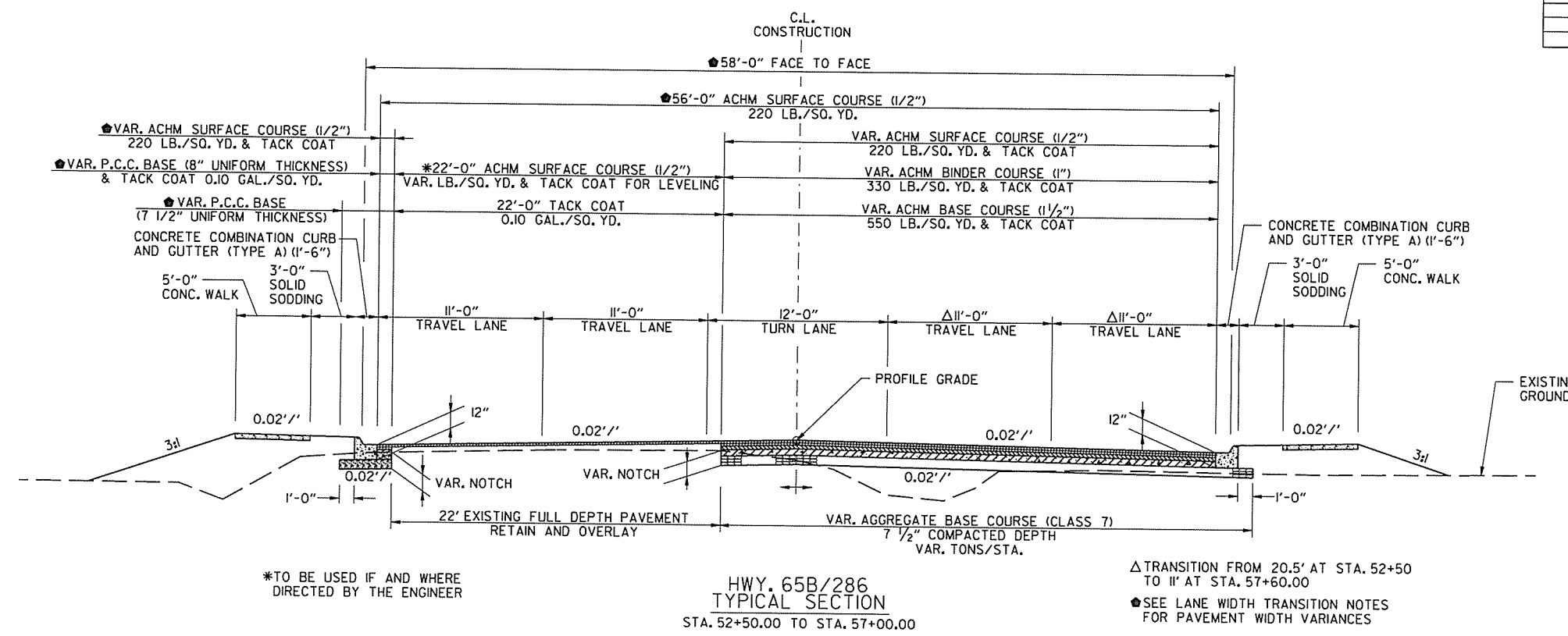
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2 TYPICAL SECTIONS OF IMPROVEMENT



3-12-15



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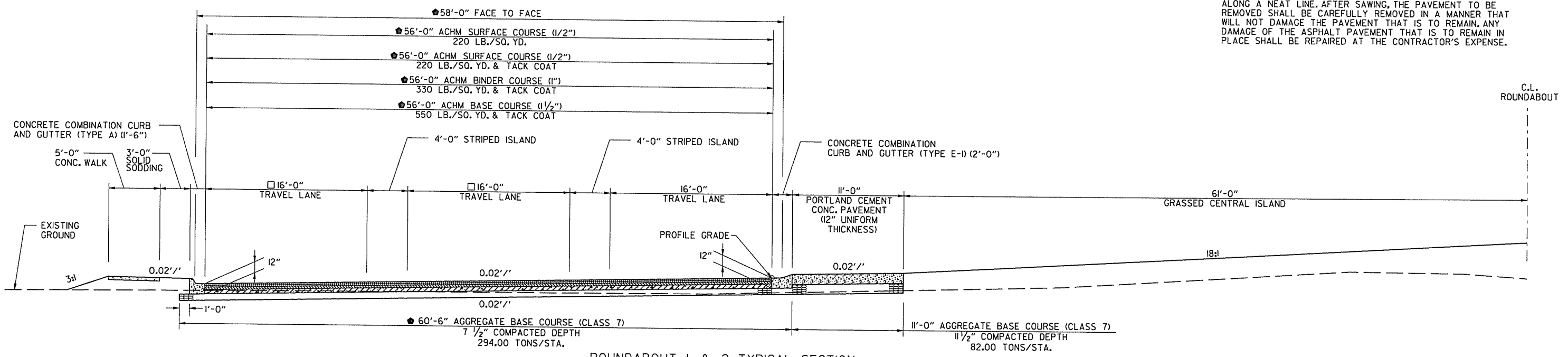
THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN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

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

HWY. 65B/286
TYPICAL SECTION
STA. 52+50.00 TO STA. 57+00.00

Δ TRANSITION FROM 20.5' AT STA. 52+50 TO 11' AT STA. 57+60.00

● SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES



□ ROUNDBABOUT 1 - 2 LANES FROM STA. 12+04.22 TO 12+58.52
ROUNDBABOUT 2 - 1 LANE FROM STA. 10+00.00 TO 10+27.12
AND STA. 14+24.47 TO 14+64.96

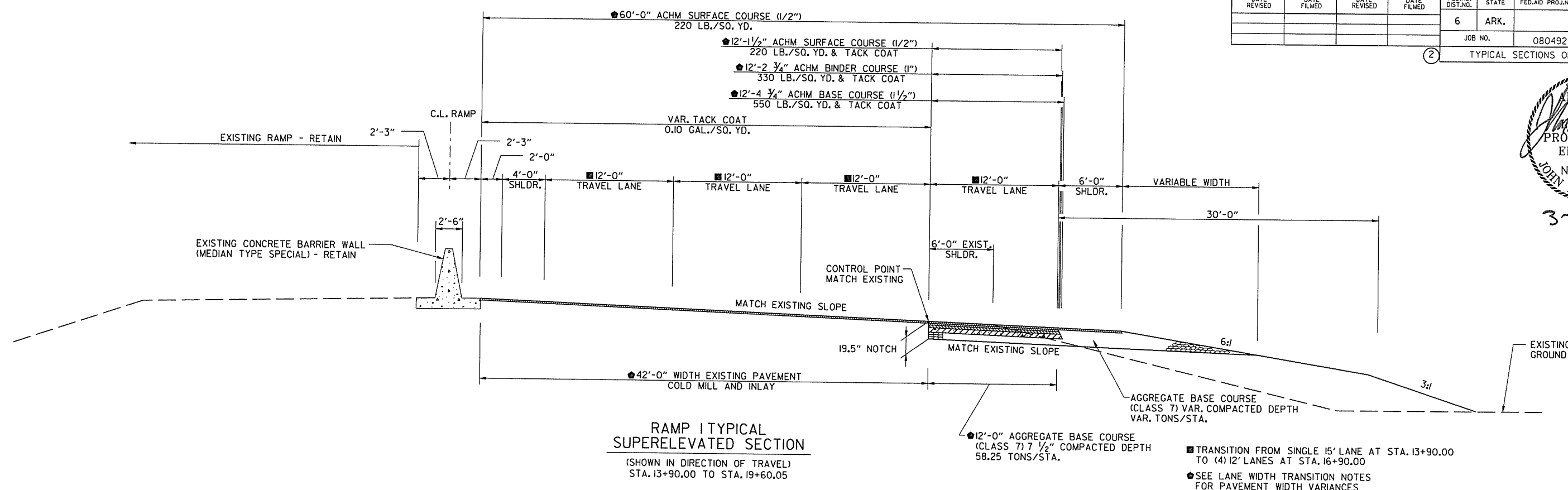
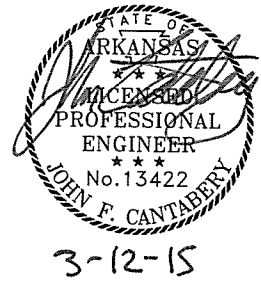
● SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

ROUNDBABOUT 1 & 2 TYPICAL SECTION
ROUNDBABOUT 1 STA. 10+00.00 TO STA. 14+64.96
ROUNDBABOUT 2 STA. 10+00.00 TO STA. 14+64.96

NOTE: SEE ROUNDBABOUT SPECIAL DETAILS FOR LANE DROPS WITHIN ROUNDBABOUT

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				JOB NO.		080492	6	209
TYPICAL SECTIONS OF IMPROVEMENT								



RAMP 1 TYPICAL SUPERELEVATED SECTION
 (SHOWN IN DIRECTION OF TRAVEL)
 STA. 13+90.00 TO STA. 19+60.05

- TRANSITION FROM SINGLE 15' LANE AT STA. 13+90.00 TO (4) 12' LANES AT STA. 16+90.00
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

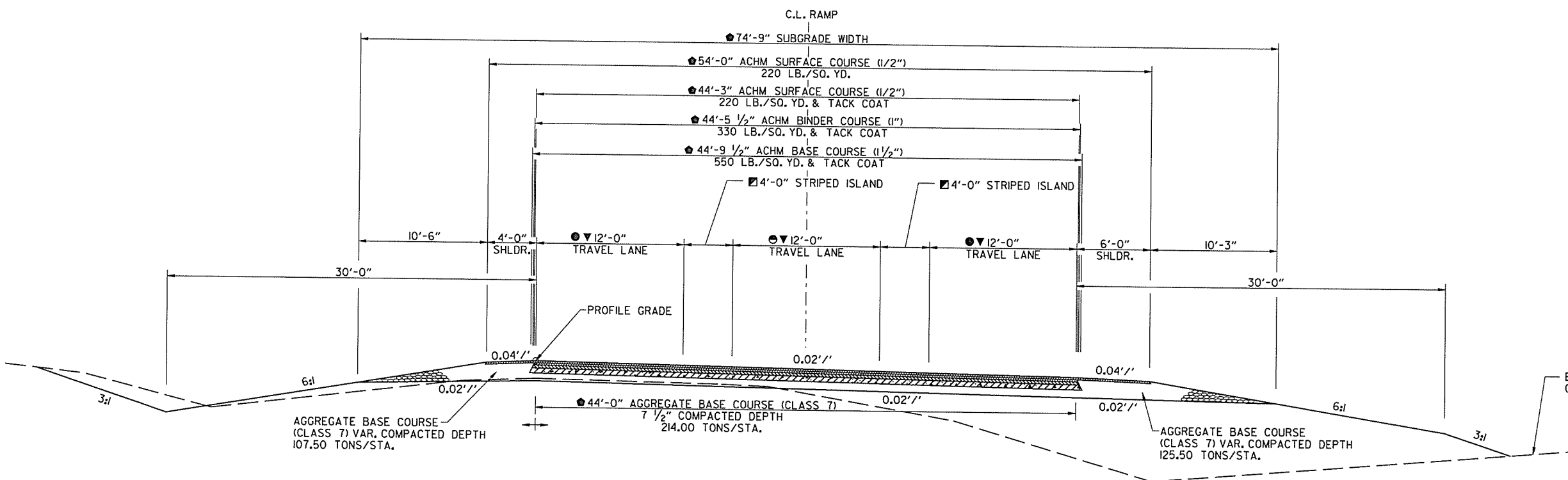
NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS FROM 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 THE TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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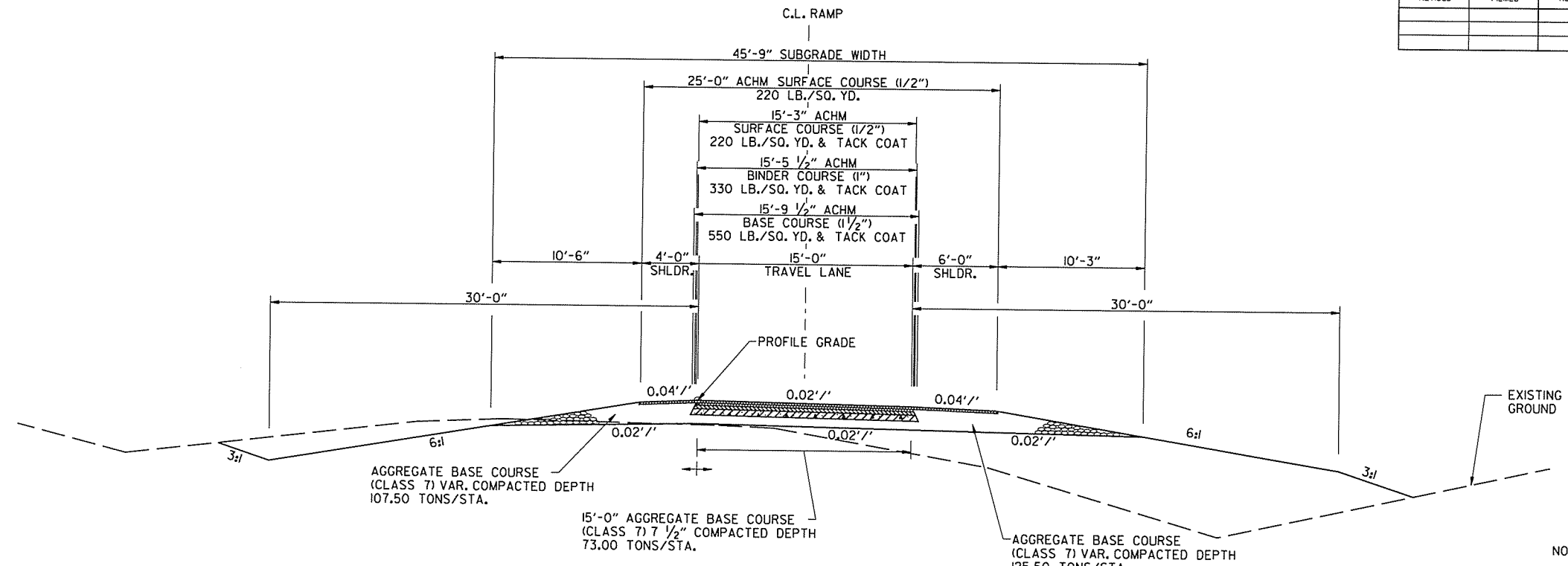
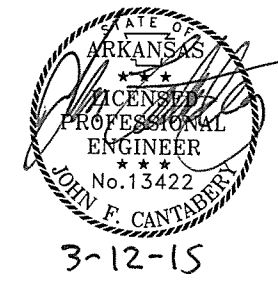


RAMP 3 TYPICAL SECTION
 (SHOWN IN DIRECTION OF TRAVEL)
 STA. 21+32.13 TO STA. 27+05.20

- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- TRANSITION FROM 12' AT STA. 25+05.20 TO 0' AT STA. 27+05.20
- TRANSITION FROM 4' AT STA. 25+05.20 TO 0' AT STA. 27+05.20
- TRANSITION FROM 12' AT STA. 25+05.20 TO 15' AT STA. 27+05.20
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

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TYPICAL SECTIONS OF IMPROVEMENT								



**RAMP 3
TYPICAL SECTION**
(SHOWN IN DIRECTION OF TRAVEL)
STA. 27+05.20 TO STA. 27+14.41

NOTES:

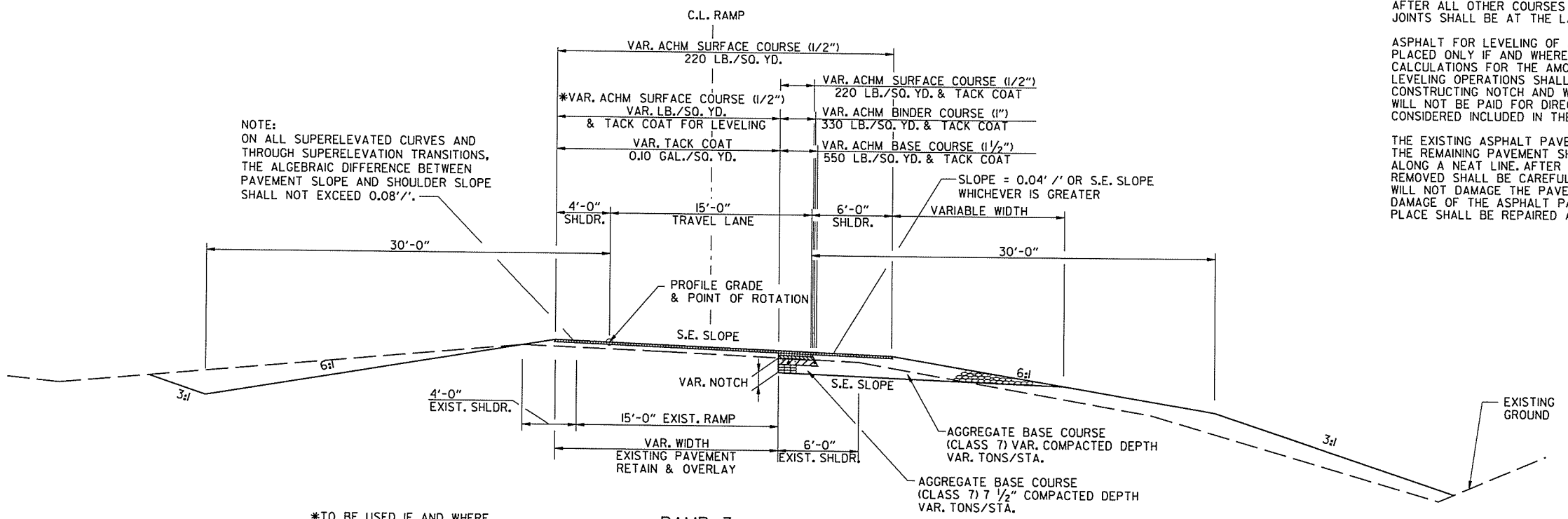
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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NOTE:
ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08'/'.

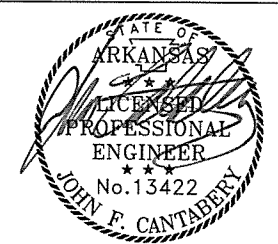
*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

**RAMP 3
SUPERELEVATED SECTION**
(SHOWN IN DIRECTION OF TRAVEL)
STA. 27+14.41 TO STA. 30+00.00

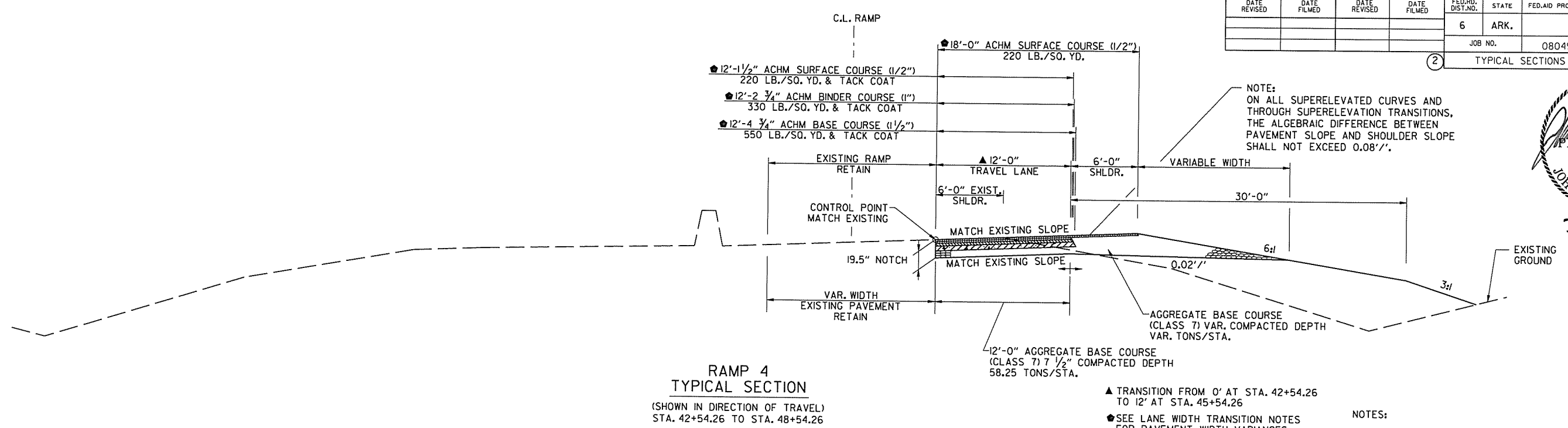
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② TYPICAL SECTIONS OF IMPROVEMENT



3-12-15



NOTES:

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

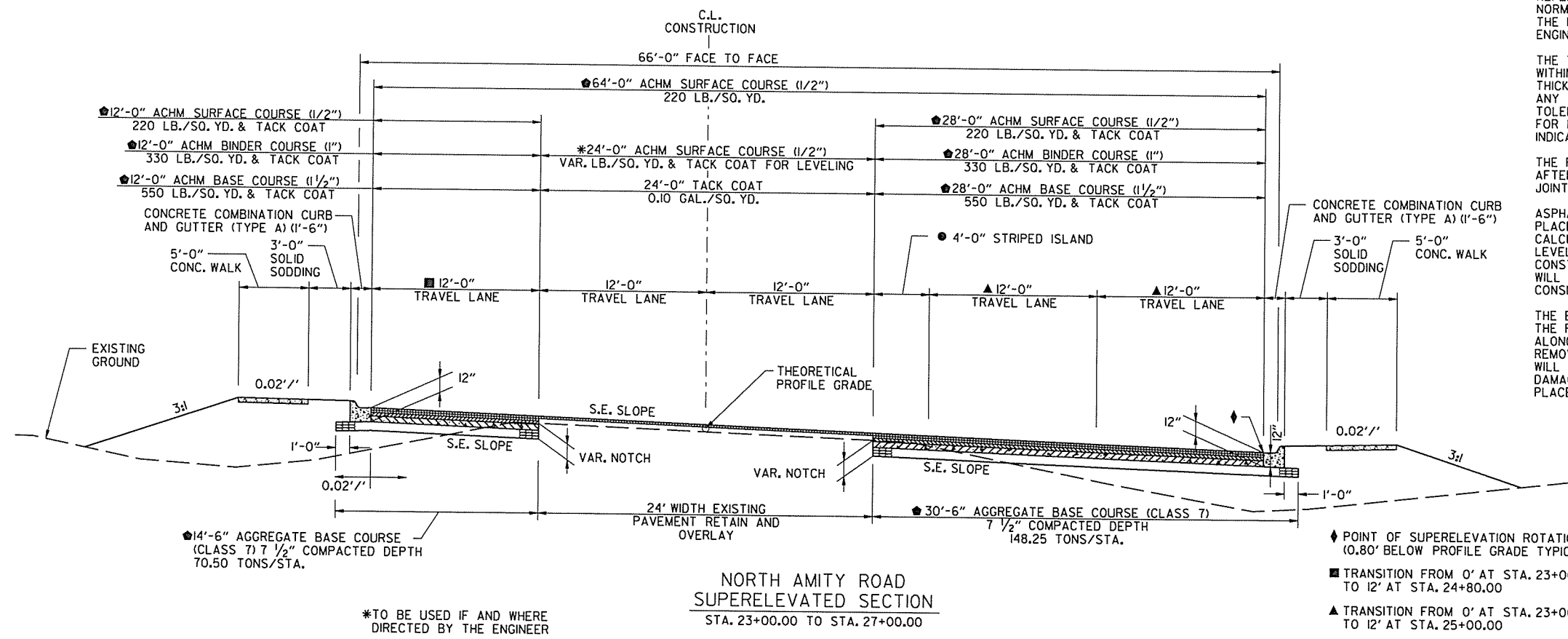
REFER TO CROSS SECTIONS FOR DEVIATIONS FROM NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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NORTH AMITY ROAD SUPERELEVATED SECTION
STA. 23+00.00 TO STA. 27+00.00

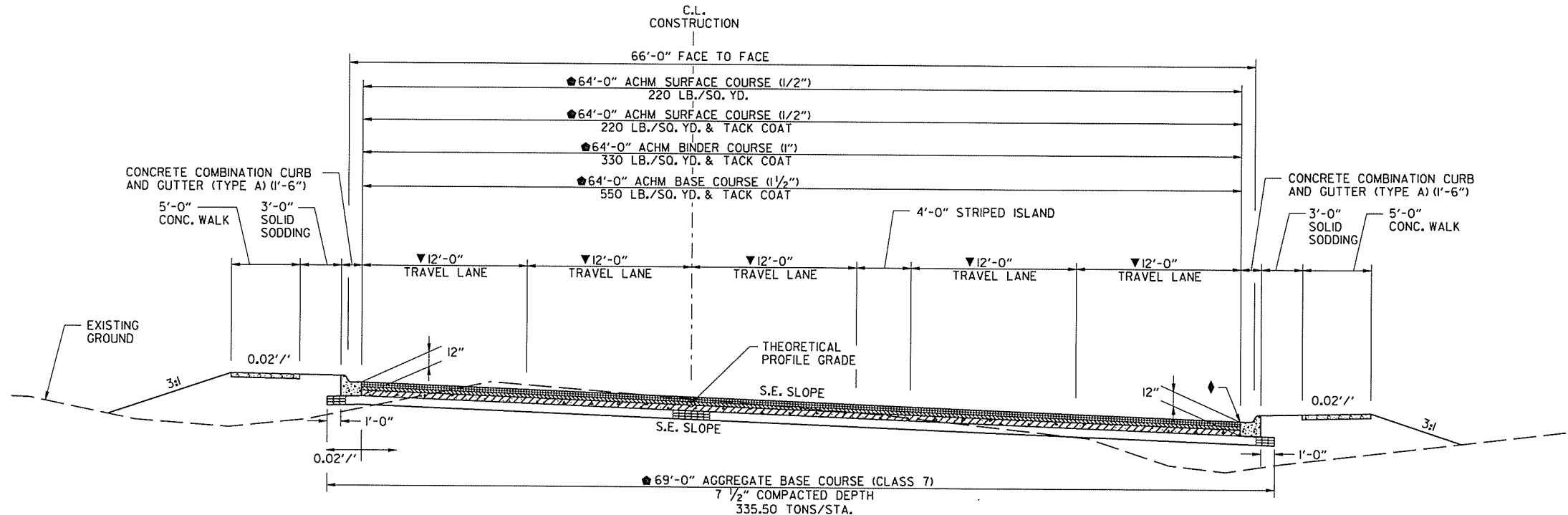
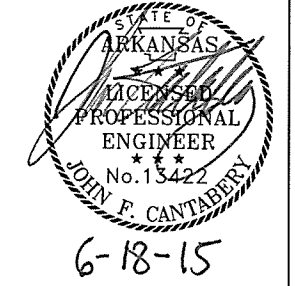
*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

TYPICAL SECTIONS OF IMPROVEMENT

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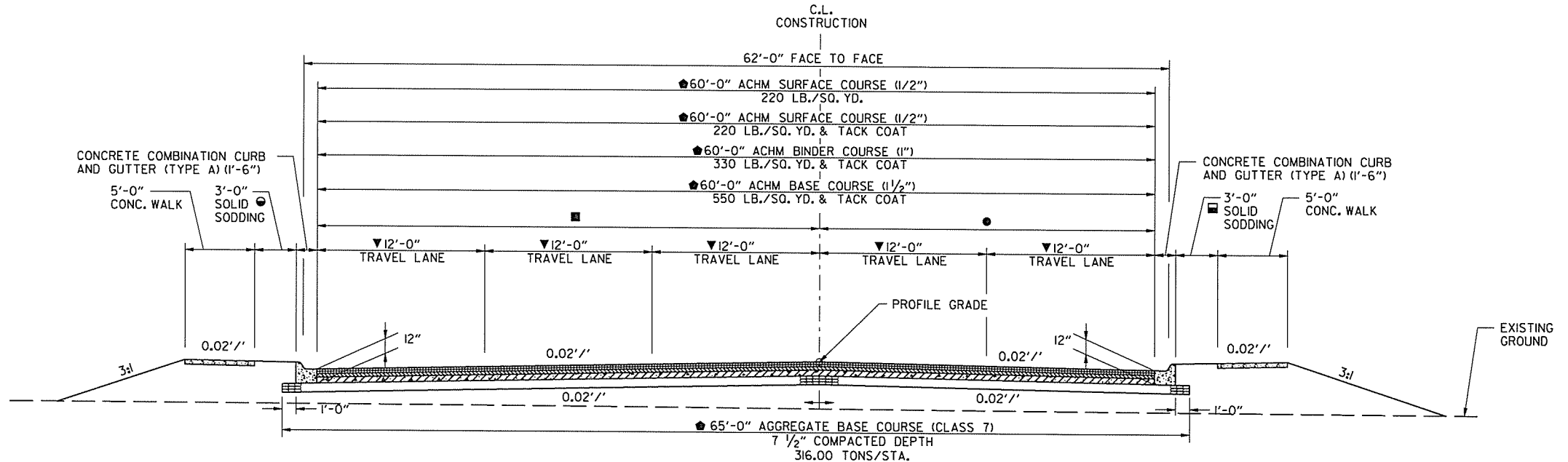
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2 TYPICAL SECTIONS OF IMPROVEMENT



NORTH AMITY ROAD
SUPERELEVATED SECTION
STA. 27+00.00 TO STA. 28+66.27

- ◆ POINT OF SUPERELEVATION ROTATION (0.80' BELOW PROFILE GRADE TYPICALLY)
- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES



SOUTH AMITY ROAD
TYPICAL SECTION
STA. 11+27.40 TO STA. 14+83.21

- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- TRANSITION FROM 3' AT STA. 13+23.21 TO 6' AT STA. 14+83.21
- TRANSITION FROM 3' AT STA. 14+03.21 TO 6' AT STA. 14+83.21
- TRANSITION FROM 24' AT STA. 14+03.21 TO 20.32' AT STA. 14+83.21
- TRANSITION FROM 39' AT STA. 13+23.21 TO 29.68' AT STA. 14+83.21
- SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES

NOTES:

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

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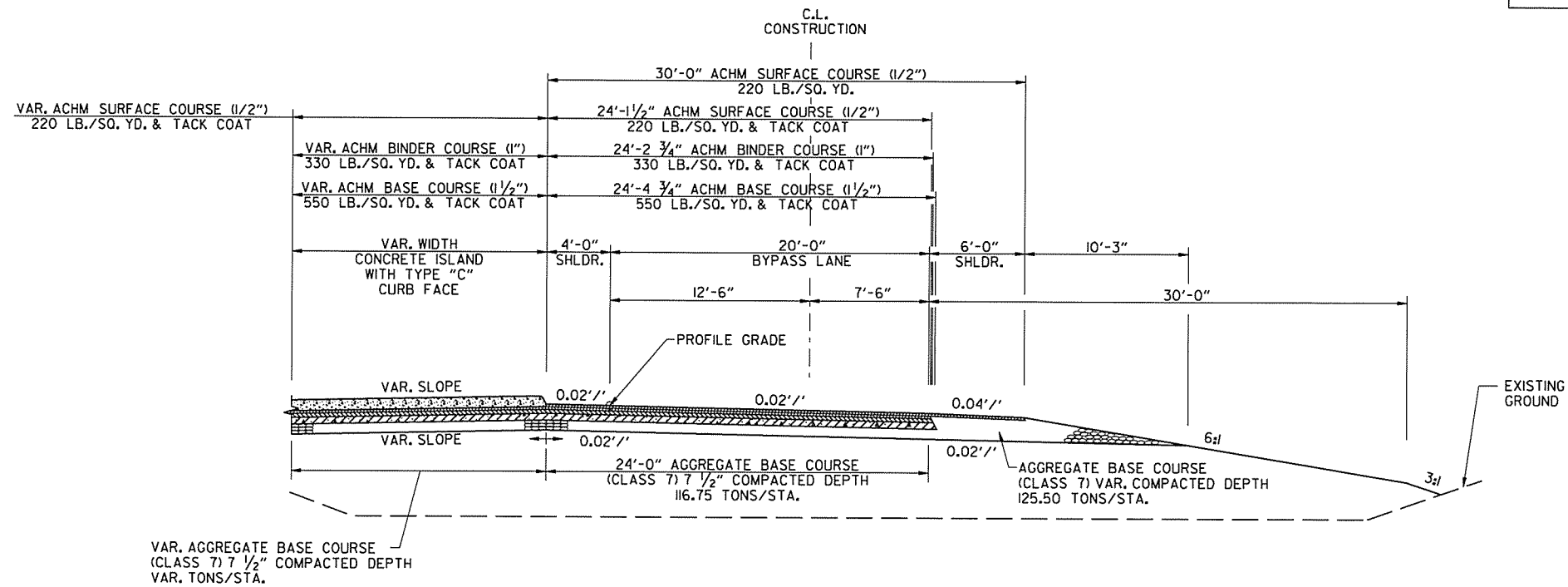
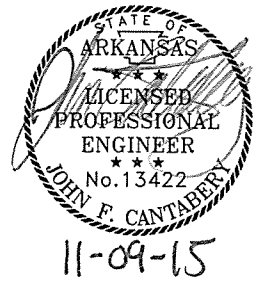
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT THE LANE LINES.

TYPICAL SECTIONS OF IMPROVEMENT

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2 TYPICAL SECTIONS OF IMPROVEMENT



**NORTH AMITY BYPASS LANE
TYPICAL SECTION**
(SHOWN IN DIRECTION OF TRAVEL)
STA. 48+50.20 TO STA. 50+43.30

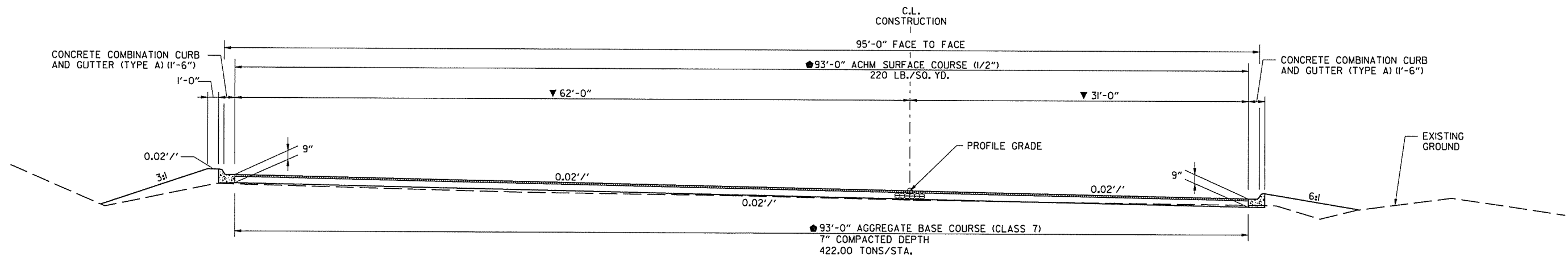
NOTES:

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**PARKING LOT
TYPICAL SECTION**
STA. 10+24.00 TO STA. 13+60.34

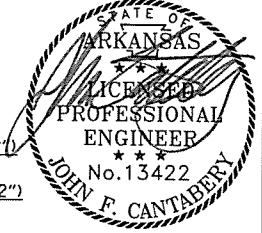
◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES
▼ SEE PARKING LOT PLAN AND PROFILE SHEET FOR VARIATIONS IN WIDTHS

TYPICAL SECTIONS OF IMPROVEMENT

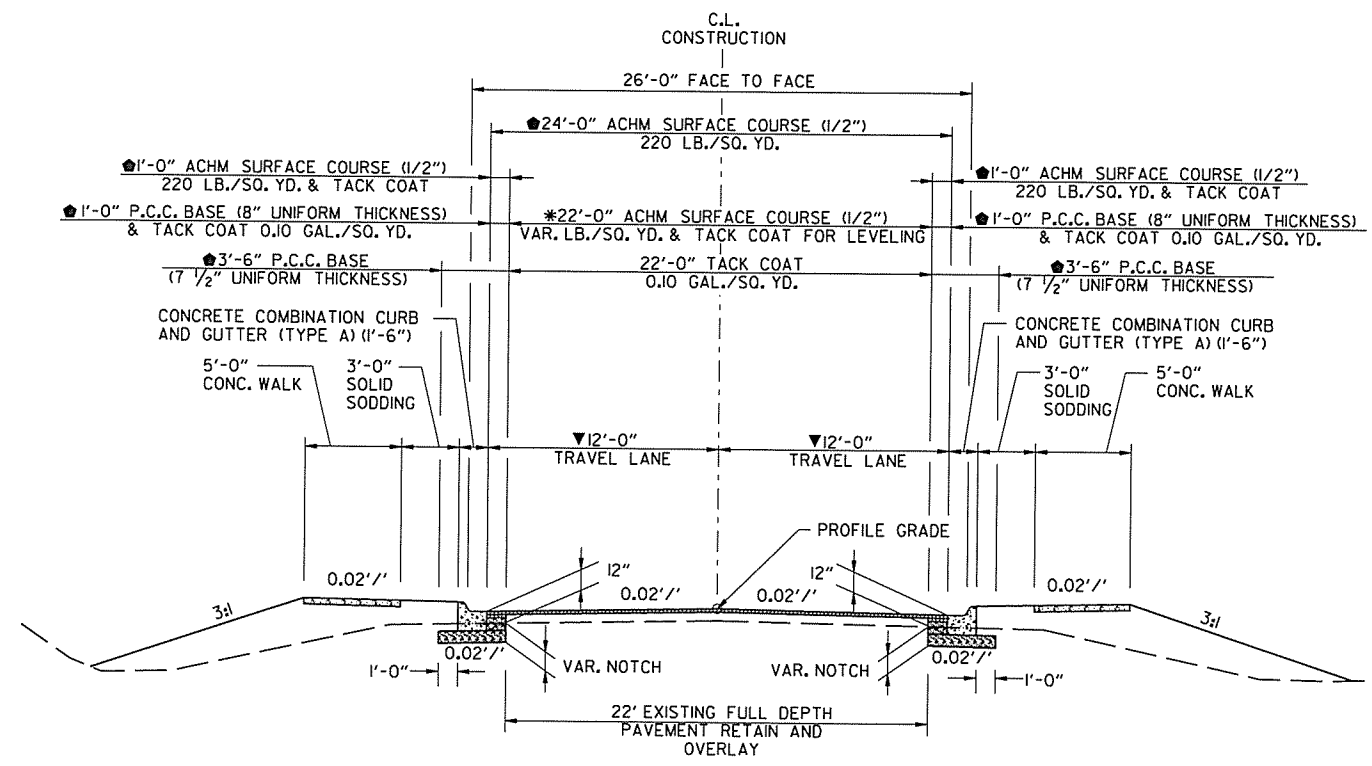
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2 TYPICAL SECTIONS OF IMPROVEMENT

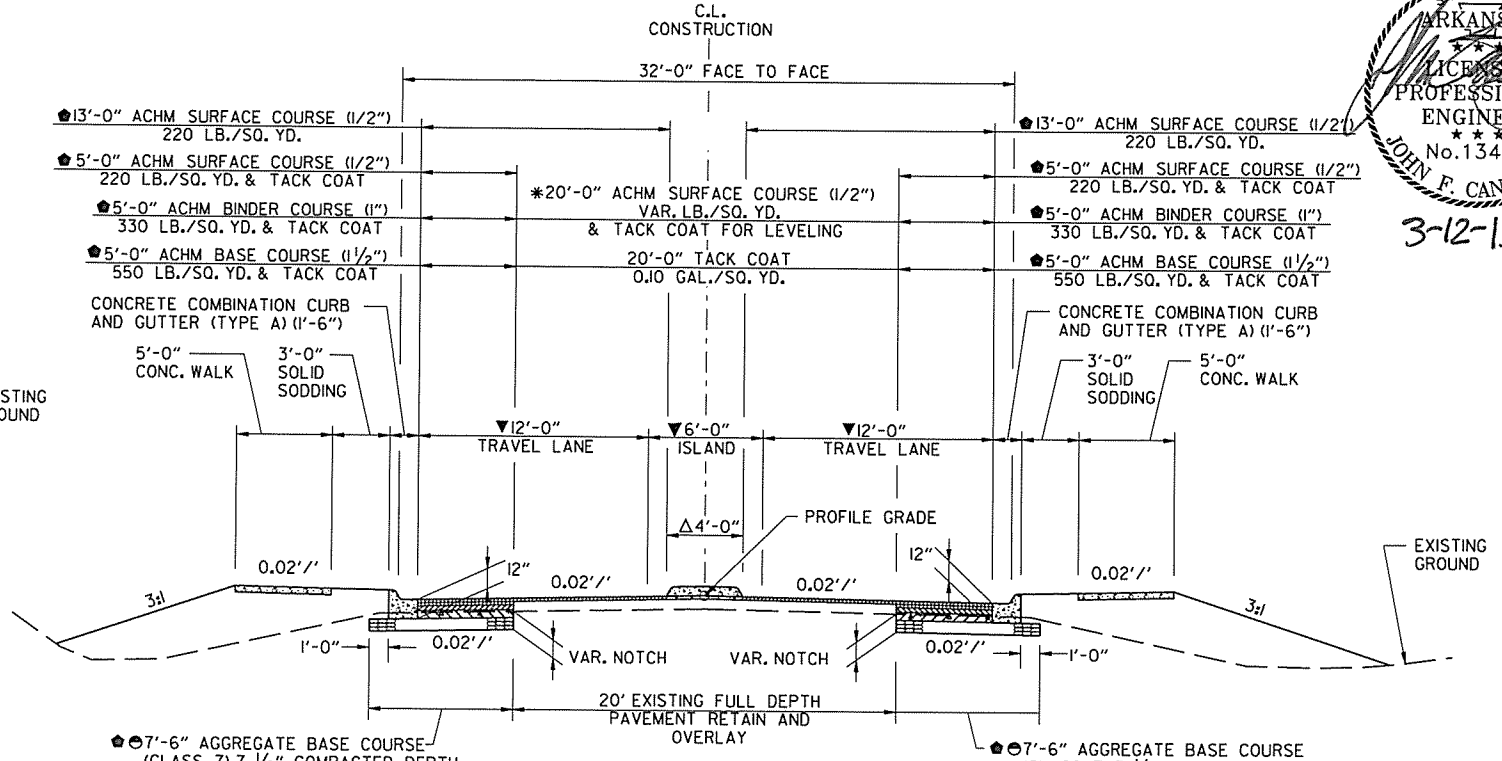


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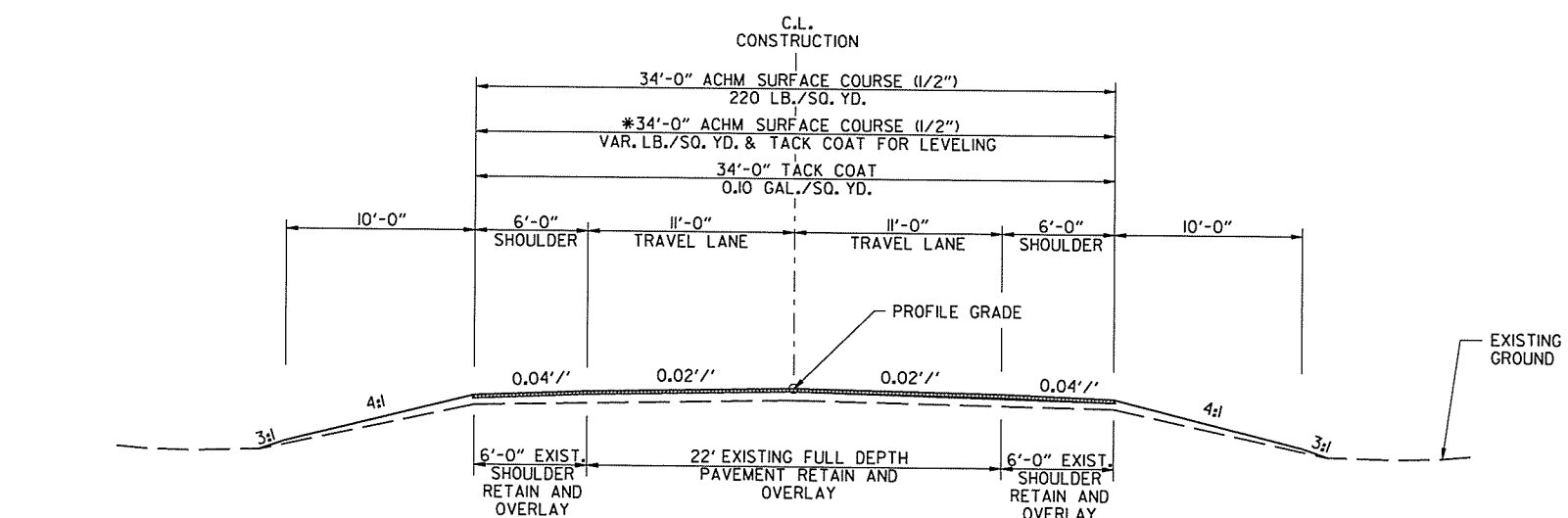
THOMAS G. WILSON DRIVE
TYPICAL SECTION
STA. 10+48.05 TO STA. 11+53.28

- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES



ENTERPRISE AVENUE
TYPICAL SECTION
STA. 17+00.00 TO STA. 18+73.92

- ▼ SEE SPECIAL DETAILS FOR VARIABLE LANE AND/OR ISLAND WIDTHS IN AREA OF ROUNDABOUT
- △ CONCRETE ISLAND WITH TYPE "C" CURB FACE
- ◆ SEE LANE WIDTH TRANSITION NOTES FOR PAVEMENT WIDTH VARIANCES
- FROM STA. 18+00.00 TO STA. 18+35.00, ACHM BASE COURSE (1 1/2") SHALL BE SUBSTITUTED FOR AGGREGATE BASE COURSE (CLASS 7) 7 1/2" COMPACTED DEPTH FOR CONSTRUCTION OVER BOX CULVERT.



THOMAS G. WILSON DRIVE
TYPICAL SECTION
STA. 11+53.28 TO STA. 12+00.00

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

NOTES:

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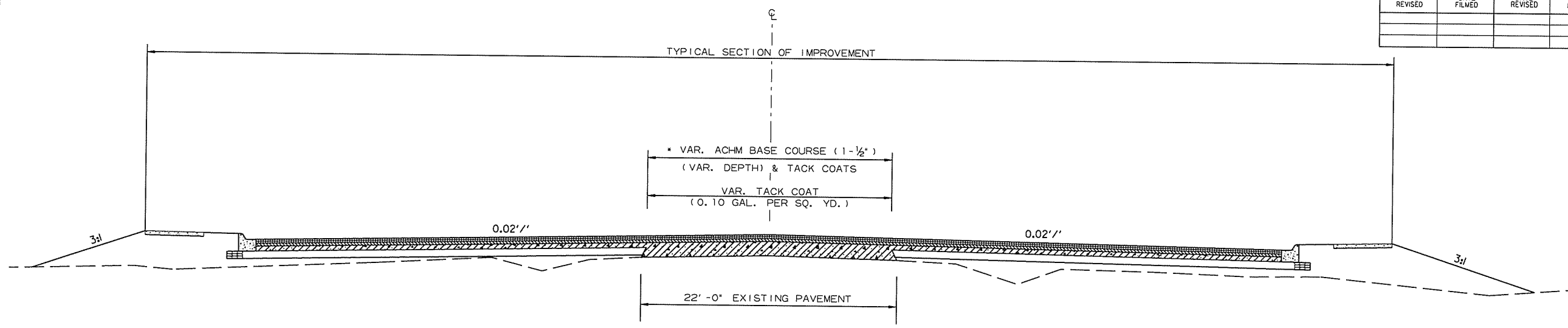
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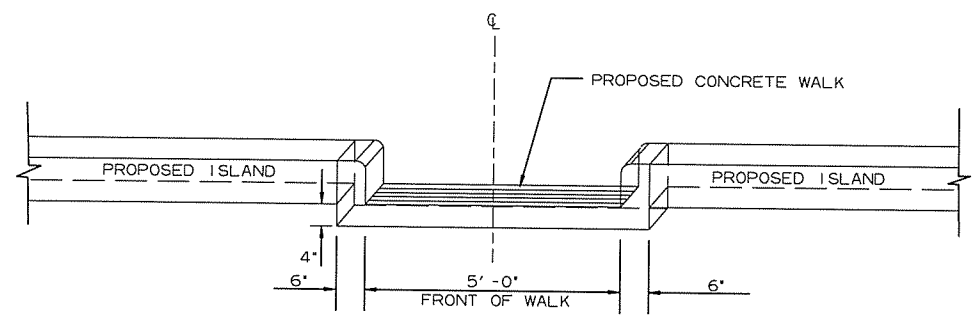
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				JOB NO.		080492	12	209
				SPECIAL DETAILS				



* 7 1/2" AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH A.C.H.M. BASE COURSE (1-1/2")

METHOD OF RAISING GRADE

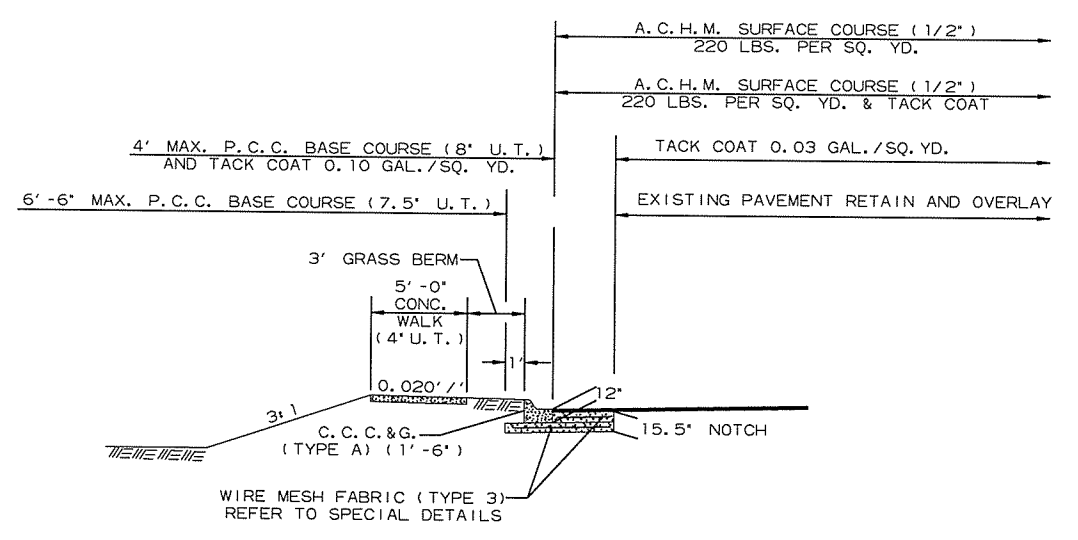
- NOTES:
- (1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
 - (2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
 - (3) IN LOCATIONS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



FACE SHALL MEET REQUIREMENTS OF TYPE B CURB

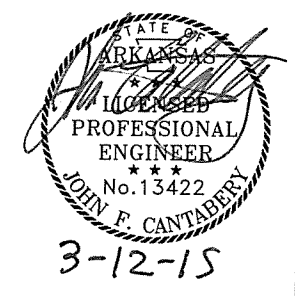
NOTE: CONCRETE WALK THROUGH ISLAND SHALL BE POURED MONOLITHICALLY. ALL MATERIALS REQUIRED TO CONSTRUCT CONCRETE WALK THRU ISLAND SHALL BE INCLUDED IN THE PRICE BID FOR CONCRETE ISLAND.

CONCRETE WALK THROUGH ISLAND



P.C.C. BASE WIDENING DETAIL

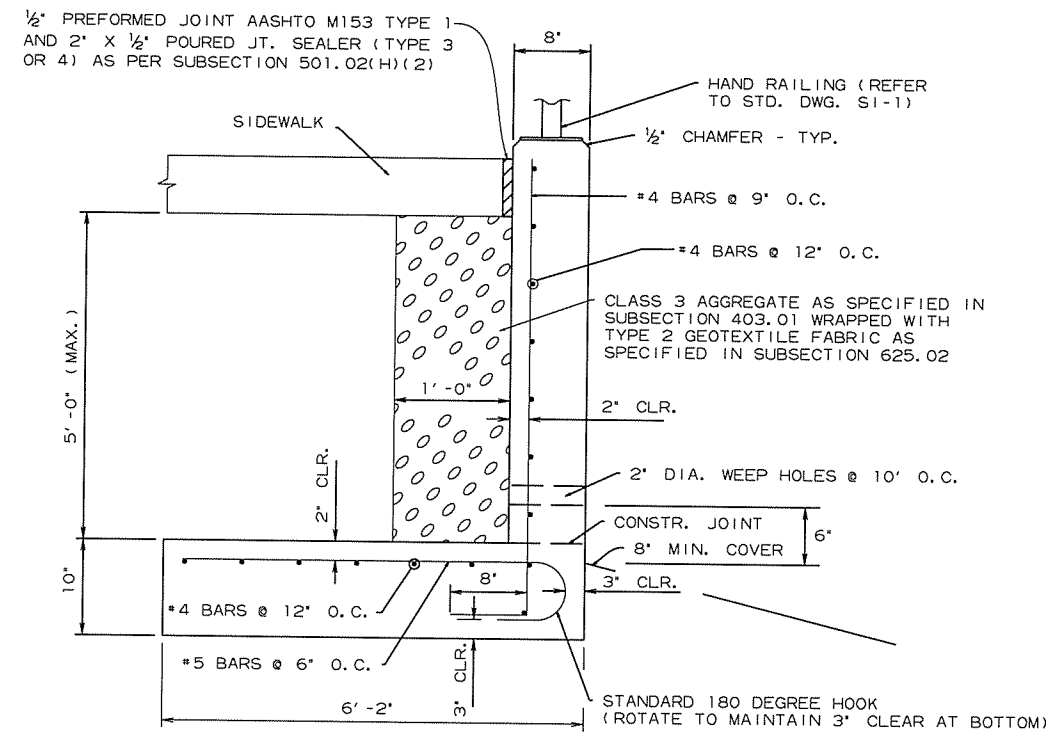
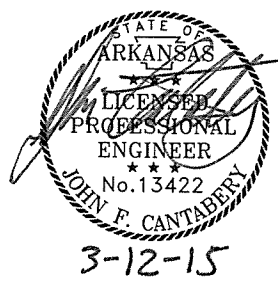
P.C.C. BASE WIDENING TO BE USED AS SHOWN ON THE PLANS.



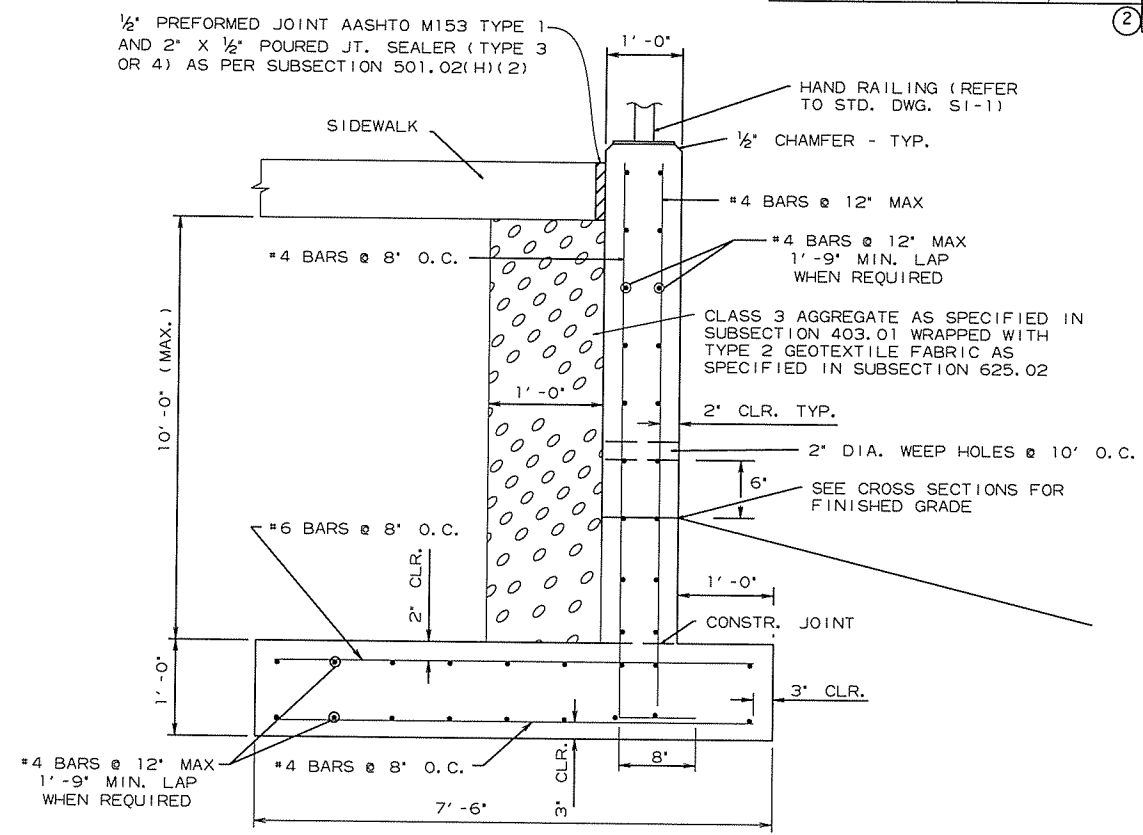
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				JOB NO.	080492	13	209	

② SPECIAL DETAILS

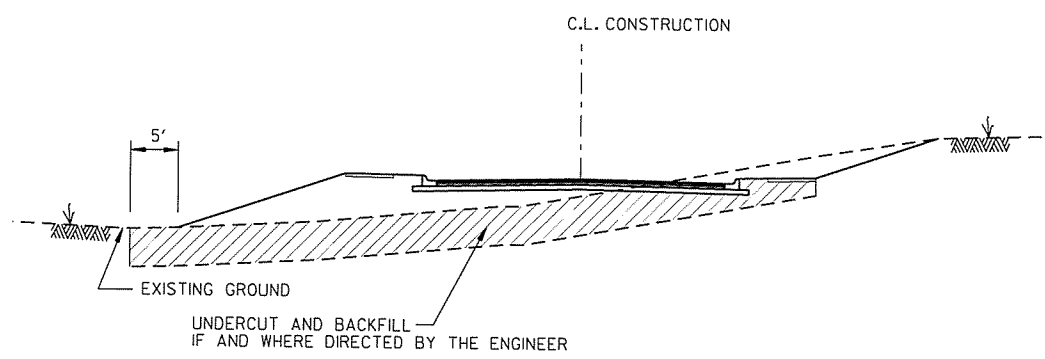


CONCRETE WALKS (TYPE SPECIAL)
MAX HEIGHT 5'-0"



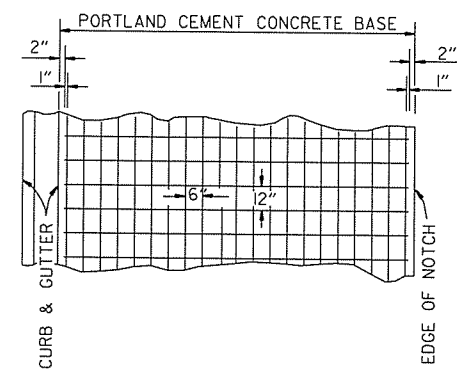
CONCRETE WALKS (TYPE SPECIAL)
HEIGHT OF 5'-0" TO 10'-0"

NOTES:
JOINTS IN THE WALL SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE WALK.
ALL CONCRETE SHALL BE CLASS S (F'C=3,500 PSI) AND SHALL BE POURED IN THE DRY.
REINFORCING STEEL SHALL BE AASHTO M31 OR M53, GRADE 60 (FY=60,000 PSI).
PAYMENT FOR THE WEEP HOLES, CLASS 3 AGGREGATE, TYPE 2 GEOTEXTILE FABRIC, PREFORMED JOINT FILLER, POURED JOINT SEALER, REINF. STEEL, AND CONCRETE SHALL BE INCLUDED IN THE UNIT BID PRICE PER SQ. YD. FOR CONCRETE WALKS (TYPE SPECIAL).



NOTE:
A QUANTITY OF SOIL STABILIZATION HAS BEEN INCLUDED IN THIS PROJECT TO STABILIZE EXISTING SOILS THAT ARE DETERMINED TO BE UNSTABLE BY THE ENGINEER. UNDERCUT SHALL BE UTILIZED WHERE SOIL STABILIZATION IS NOT DESIRABLE IF AND WHERE DIRECTED BY THE ENGINEER.

DETAIL OF UNDERCUT



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

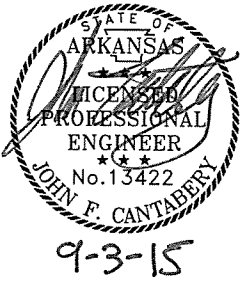
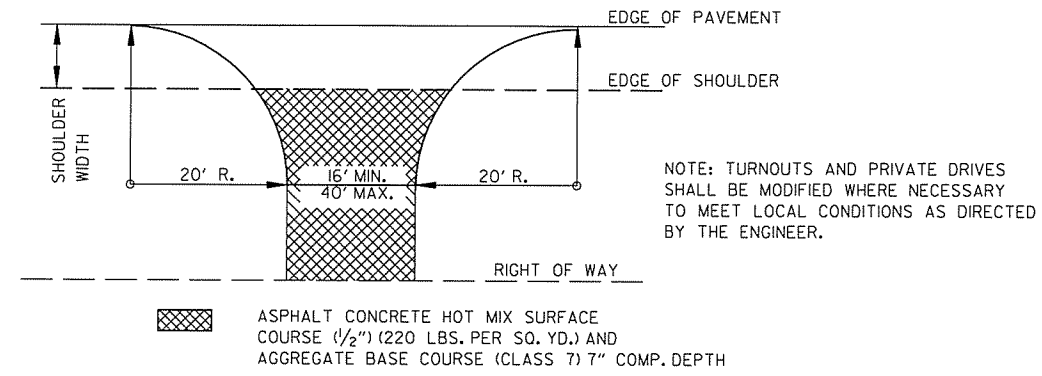
6"X 12" MESH FABRIC (TYPE 3) (W5.5 X W2.9) = 4.26 LBS./SQ.YD.

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 (7.5" & 8" U.T.)

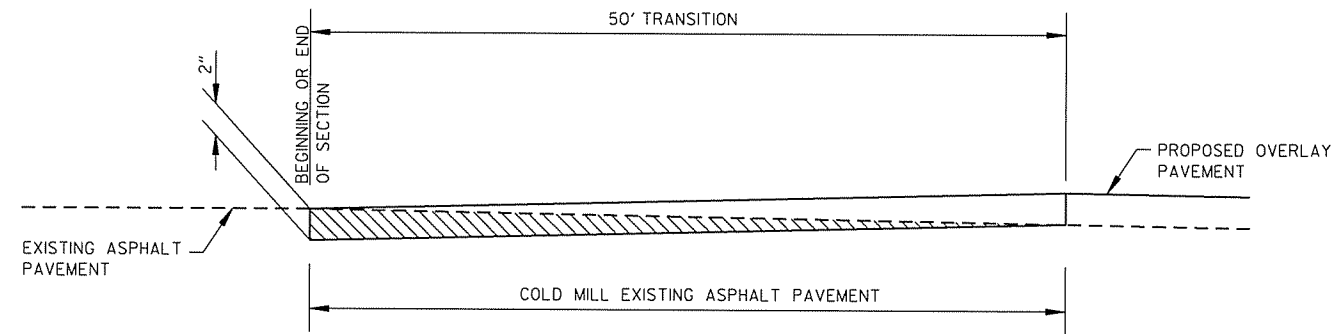
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				6	ARK.			
				JOB NO.	080492	14	209	

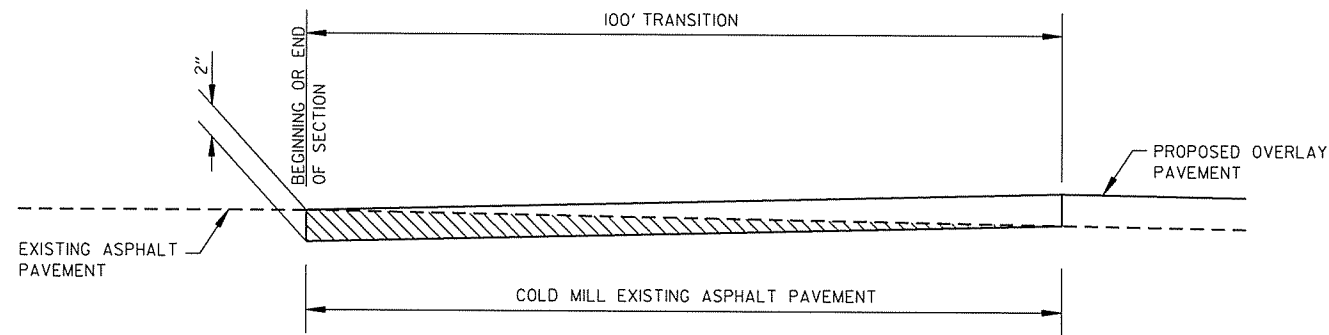
2 SPECIAL DETAILS



DETAIL FOR ENTERPRISE AVENUE DRIVEWAY TURNOUT AT STA. 13+65



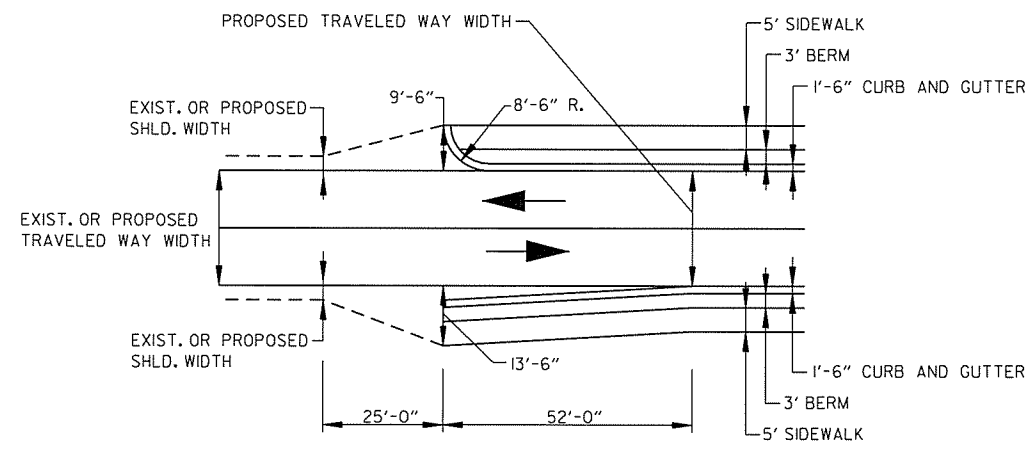
DETAIL FOR TRANSITIONS
(NORTH AMITY ROAD, ENTERPRISE AVENUE AND THOMAS G. WILSON DRIVE)



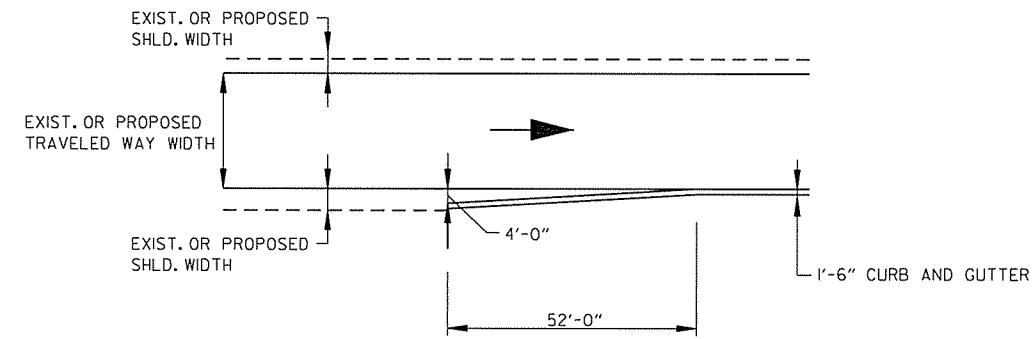
DETAIL FOR TRANSITIONS
(HWY. 65B/286 AND RAMP 3)

SPECIAL DETAILS

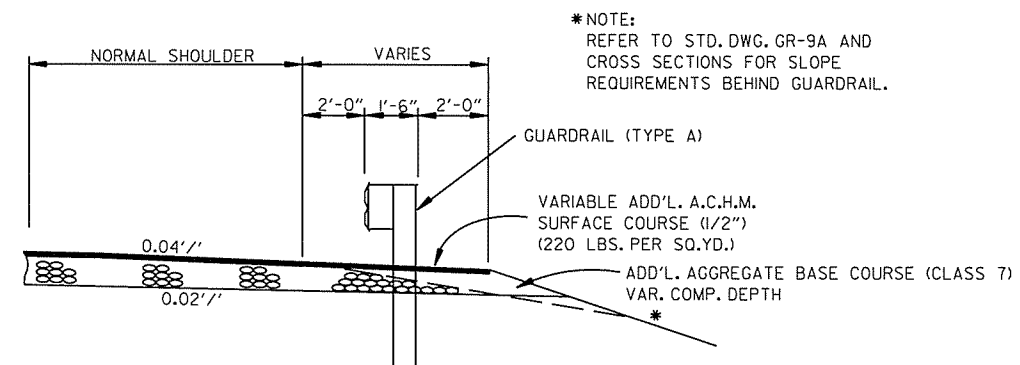
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				6	ARK.			
				JOB NO.	080492		15	209
				SPECIAL DETAILS				



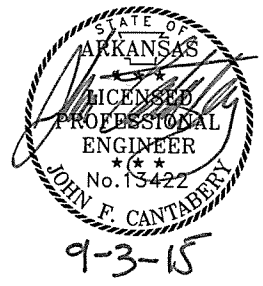
TRANSITION FROM OPEN SHOULDER TO CURB AND GUTTER SECTION



RAMP TRANSITION FROM OPEN SHOULDER TO CURB AND GUTTER SECTION



WIDENING FOR GUARDRAIL AT PROPOSED SHOULDER EDGE



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				6	ARK.			
				JOB NO.		080492	16	209
SPECIAL DETAILS								

POINT	STATION	OFFSET	ELEVATION
RB-1	36+22.24	1.54' RT.	299.39'
RB-2	36+85.17	14.59' RT.	298.75'
RB-3	35+90.39	44.75' RT.	298.86'
RB-4	36+53.33	57.80' RT.	298.04'
RB-5	37+65.47	115.57' RT.	298.63'
RB-6	38+04.54	128.38' RT.	298.94'
RB-7	37+86.63	157.53' RT.	298.93'
RB-8	38+15.42	197.91' RT.	297.95'
RB-9	38+32.59	175.21' RT.	298.24'
RB-10	38+86.45	118.66' RT.	299.68'
RB-11	39+07.45	101.96' RT.	299.84'
RB-12	39+30.81	28.96' RT.	300.04'
RB-13	40+81.22	44.00' RT.	298.22'
RB-14	40+26.91	4.93' RT.	299.27'
RB-15	40+78.66	3.00' LT.	299.05'
RB-16	40+78.66	44.00' LT.	298.23'
RB-17	40+33.96	1.55' LT.	299.30'
RB-18	40+48.62	43.38' LT.	298.39'
RB-19	40+19.54	0.59' LT.	299.40'
RB-20	39+78.53	61.27' LT.	298.39'
RB-21	39+31.88	27.20' LT.	299.72'
RB-22	39+08.50	102.38' LT.	299.35'
RB-23	38+71.26	138.58' LT.	299.61'
RB-24	37+83.59	221.86' LT.	301.52'
RB-25	37+47.85	236.38' LT.	301.40'
RB-26	37+74.66	119.86' LT.	300.21'

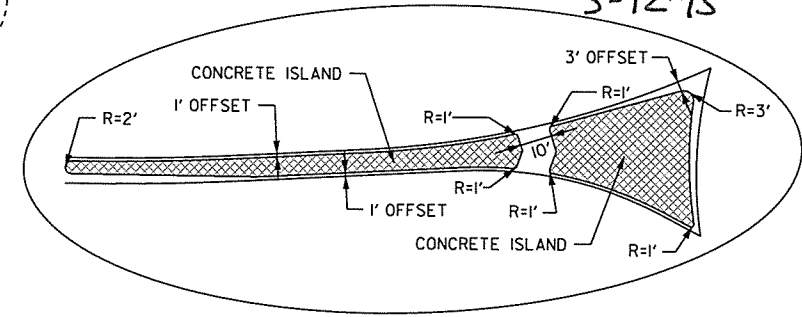
POINT	STATION	OFFSET
RI-33	35+98.87	16.12' RT.
RI-34	36+34.43	15.88' RT.
RI-35	36+44.38	17.53' RT.
RI-36	37+01.35	42.05' RT.
RI-37	37+87.55	186.09' RT.
RI-38	38+01.27	160.60' RT.
RI-39	38+06.72	152.15' RT.
RI-40	38+25.61	130.56' RT.
RI-41	39+23.57	51.86' LT.
RI-42	39+39.27	42.63' LT.
RI-43	39+42.73	40.58' LT.
RI-44	39+59.32	30.70' LT.
RI-45	39+68.23	26.02' LT.
RI-46	40+31.70	14.43' LT.
RI-47	39+39.26	64.76' LT.
RI-48	39+42.74	62.71' LT.

NOTE: ALL ROUNDABOUT POINTS BASED ON HWY. 286 ALIGNMENT

POINT	STATION	OFFSET	ELEVATION
RB-27	37+46.21	139.33' LT.	299.41'
RB-28	37+15.48	90.54' LT.	299.32'
RB-28A	37+26.10	95.86' LT.	299.69'
RB-29	35+82.83	132.19' LT.	298.75'
RB-30	35+65.60	122.02' LT.	298.44'
RB-31	36+91.55	61.77' LT.	298.95'
RB-32	36+79.71	55.84' LT.	298.89'
RB-33	36+99.02	32.08' LT.	299.27'
RB-34	35+65.31	24.74' LT.	299.62'
RB-35	35+91.80	4.45' LT.	299.65'
RB-36	36+96.62	20.49' RT.	298.81'
RB-37	39+47.65	17.84' LT.	299.41'
RB-38	38+41.86	128.90' LT.	300.12'
RB-39	37+79.66	130.67' LT.	300.10'
RB-40	39+45.22	80.08' RT.	298.75'
RB-41	40+34.35	4.44' RT.	299.25'
RB-42	40+78.66	3.00' RT.	299.05'
RB-43	34+97.75	22.00' LT.	300.90'
RB-44	35+50.73	23.76' LT.	299.88'
RB-45	34+97.75	0.00'	301.36'
RB-46	35+52.19	1.81' LT.	300.30'
RB-47	34+97.75	8.00' RT.	301.21'
RB-48	35+52.73	6.17' RT.	300.20'
RB-49	34+97.75	49.00' RT.	300.38'
RB-49A	35+55.45	47.08' RT.	299.34'

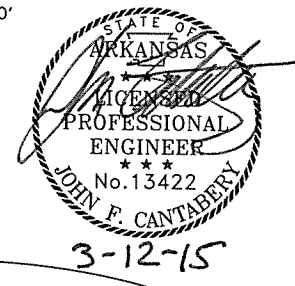
NOTE: ALL ROUNDABOUT POINTS BASED ON HWY. 286 ALIGNMENT

POINT	STATION	OFFSET
RI-1	35+98.87	31.15' RT.
RI-2	36+29.81	32.58' RT.
RI-3	36+39.60	34.74' RT.
RI-4	37+14.38	70.13' RT.
RI-5	38+01.19	194.45' RT.
RI-6	38+16.68	168.72' RT.
RI-7	38+23.11	160.71' RT.
RI-8	38+55.01	127.42' RT.
RI-9	39+16.53	77.08' RT.
RI-10	39+66.50	51.25' RT.
RI-11	39+75.75	47.70' RT.
RI-12	40+65.82	31.12' RT.
RI-13	40+41.48	30.04' LT.
RI-14	39+77.63	42.45' LT.
RI-15	39+68.76	47.25' LT.
RI-16	39+04.48	84.97' LT.



TYPICAL SPLITTER ISLAND DETAILS

SPECIAL DETAILS ROUNDABOUT DETAILS



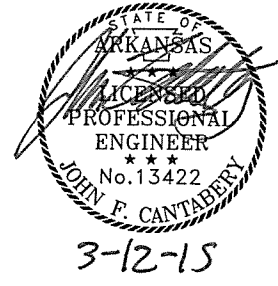
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				6	ARK.		17	209
				JOB NO.		080492		
				SPECIAL DETAILS				

ROUNDBOUT 2 POINT TABLE (BOX 1 OF 4)			
POINT	STATION	OFFSET	ELEVATION
RB-50	42+64.13	44.00' RT.	297.31'
RB-51	42+64.13	3.00' RT.	298.13'
RB-52	43+07.35	43.11' RT.	297.11'
RB-53	43+34.32	0.57' RT.	297.82'
RB-54	43+81.02	66.14' RT.	296.28'
RB-55	43+95.22	76.91' RT.	295.99'
RB-56	44+12.73	23.93' RT.	296.96'
RB-57	44+23.79	32.35' RT.	296.99'
RB-58	44+31.28	133.25' RT.	293.94'
RB-59	44+33.57	143.21' RT.	293.79'
RB-60	44+26.24	279.96' RT.	292.42'
RB-61	44+62.94	141.28' RT.	294.46'
RB-62	44+58.21	120.03' RT.	295.26'
RB-63	44+99.07	129.72' RT.	295.07'
RB-64	44+21.08	293.64' RT.	292.32'
RB-65	45+10.99	202.15' RT.	293.04'
RB-66	44+80.57	177.96' RT.	294.05'
RB-67	45+43.16	145.02' RT.	294.34'
RB-68	45+71.34	117.73' RT.	295.13'
RB-69	45+94.83	101.20' RT.	295.33'
RB-70	46+46.30	76.06' RT.	294.67'
RB-71	46+34.63	25.16' RT.	295.39'
RB-72	47+10.39	10.45' RT.	295.43'
RB-73	47+52.69	49.46' RT.	294.86'
RB-74	47+34.45	43.81' LT.	294.88'
RB-75	47+02.44	1.14' LT.	295.57'

ROUNDBOUT 2 POINT TABLE (BOX 3 OF 4)			
POINT	STATION	OFFSET	ELEVATION
RB-97	48+06.37	46.57' LT.	295.18'
RB-98	48+35.77	47.00' LT.	295.32'
RB-99	48+07.65	4.59' LT.	296.03'
RB-100	48+35.77	5.00' LT.	296.16'
RB-101	48+07.95	5.41' RT.	296.02'
RB-102	48+35.77	5.00' RT.	296.16'

NOTE: ALL ROUNDBOUT POINTS BASED ON HWY. 286 ALIGNMENT

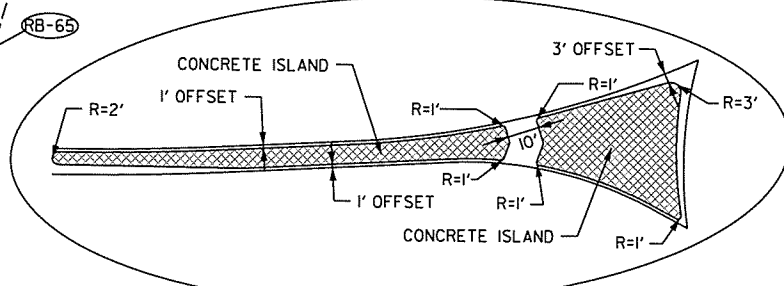


NOTE: ALL ROUNDBOUT POINTS BASED ON HWY. 286 ALIGNMENT

ROUNDBOUT 2 POINT TABLE (BOX 2 OF 4)			
POINT	STATION	OFFSET	ELEVATION
RB-76	46+36.72	15.93' LT.	295.23'
RB-77	46+65.16	60.79' LT.	294.77'
RB-78	46+38.00	76.45' LT.	294.87'
RB-79	45+85.37	104.78' LT.	295.47'
RB-80	45+90.88	134.41' LT.	294.91'
RB-81	45+82.20	276.90' LT.	295.70'
RB-82	45+67.87	270.18' LT.	295.90'
RB-83	45+59.90	262.46' LT.	295.86'
RB-84	45+51.38	209.85' LT.	295.65'
RB-85	45+38.86	211.37' LT.	295.41'
RB-86	45+50.01	199.66' LT.	295.64'
RB-87	45+34.87	192.22' LT.	295.37'
RB-88	45+23.08	138.95' LT.	295.65'
RB-89	45+15.45	129.76' LT.	296.12'
RB-90	44+66.62	123.61' LT.	296.57'
RB-91	44+46.85	115.44' LT.	296.76'
RB-92	44+19.21	41.01' LT.	297.68'
RB-93	44+30.16	46.80' LT.	297.84'
RB-94	43+85.36	83.23' LT.	295.92'
RB-95	42+68.17	3.01' LT.	298.11'
RB-96	42+29.19	44.00' LT.	297.48'

NOTE: ALL ROUNDBOUT POINTS BASED ON HWY. 286 ALIGNMENT

ROUNDBOUT 2 POINT TABLE (BOX 4 OF 4)		
POINT	STATION	OFFSET
RI-17	43+14.31	29.79' RT.
RI-18	43+76.18	43.05' RT.
RI-19	43+84.74	48.09' RT.
RI-20	44+34.68	85.99' RT.
RI-21	46+19.21	70.33' RT.
RI-22	46+67.47	49.93' RT.
RI-23	46+76.96	47.08' RT.
RI-24	47+40.81	36.98' RT.
RI-25	47+25.89	30.39' LT.
RI-26	46+80.66	35.73' LT.
RI-27	46+71.15	39.10' LT.
RI-28	46+21.29	66.32' LT.
RI-29	44+47.42	96.51' LT.
RI-30	43+83.83	63.41' LT.
RI-31	43+74.64	59.18' LT.
RI-32	43+20.26	40.58' LT.
RI-49	43+14.31	14.78' LT.
RI-50	43+85.90	26.93' RT.
RI-51	43+94.53	31.90' RT.
RI-52	44+27.89	56.85' RT.
RI-53	46+33.08	37.64' LT.
RI-54	46+64.25	21.90' LT.
RI-55	46+73.87	18.86' LT.
RI-56	47+25.89	15.37' LT.
RI-57	46+36.25	57.79' LT.
RI-58	46+39.75	55.78' LT.



TYPICAL SPLITTER ISLAND DETAILS

SPECIAL DETAILS ROUNDBOUT DETAILS

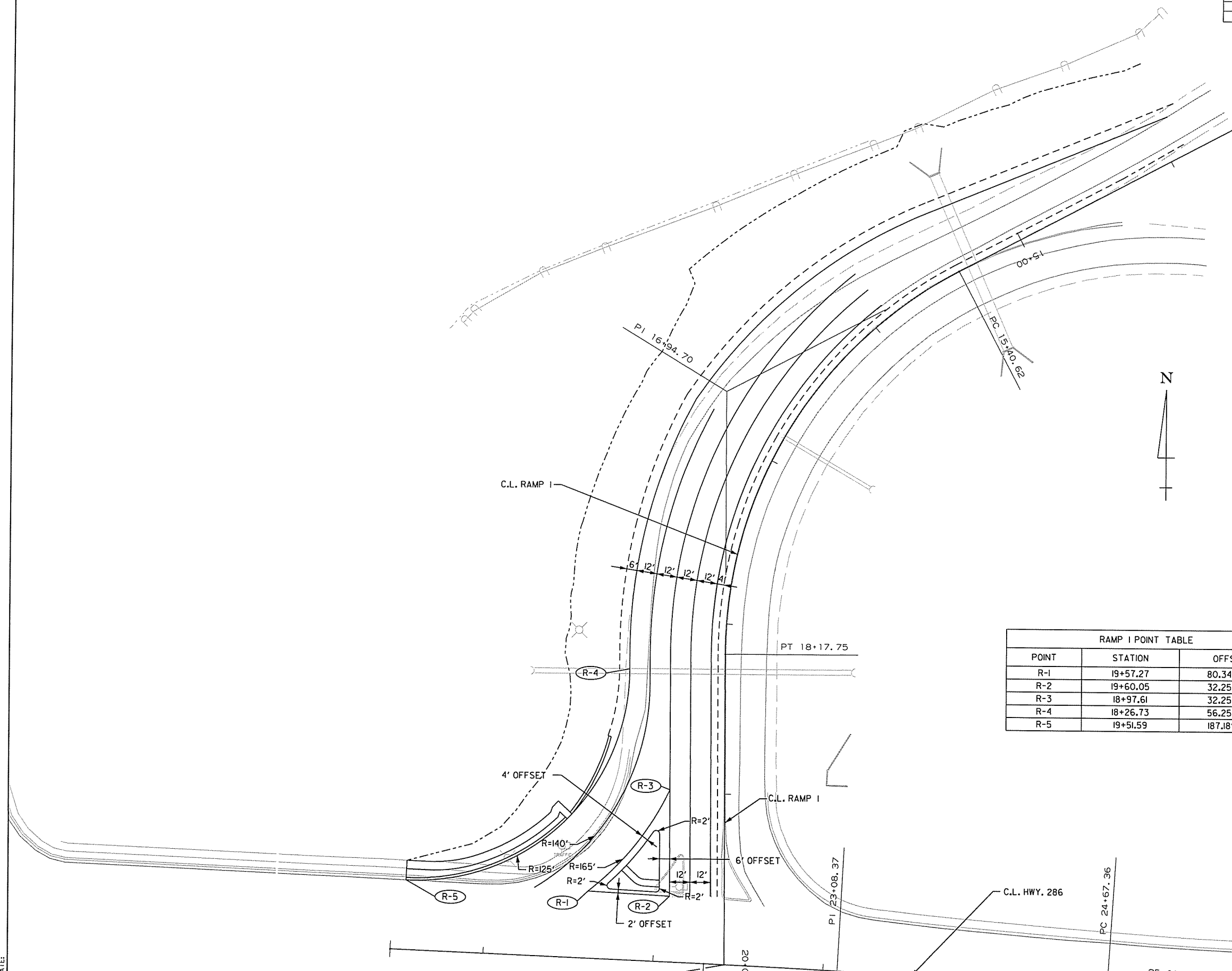
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				6	ARK.			
				JOB NO.		080492	18	209

② SPECIAL DETAILS



3-12-15



POINT	STATION	OFFSET
R-1	19+57.27	80.34' RT.
R-2	19+60.05	32.25' RT.
R-3	18+97.61	32.25' RT.
R-4	18+26.73	56.25' RT.
R-5	19+51.59	187.18' RT.

C.L. HWY. 65B/286 STA. 22+41.90=
 C.L. RAMP I STA. 20+00.00
 Δ = 87°33'59"

SPECIAL DETAILS
 RAMP I DETAILS

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MID-SECTION

R.C. BOX SECTION		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINF. STEEL		BOTTOM SLAB DISTRIBUTION REINF. STEEL		SIDE WALL DISTRIBUTION REINF. STEEL		INTERIOR WALL DISTRIBUTION REINF. STEEL							
D	S	H	T	B	C	W	OW	OH	SL	SIZE	L	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D						
A	2	5	3	10.0	10	6.0	8	11'-8"	4'-8"	95.83	4	11'-4"	8	11'-7"	5	11'-4"	17	67	4	11'-4"	4	11'-7"	4	11'-4"	22	52	4	9	NO. REQ'D	254	4'-4"	4	12	190	4'-4"	4	11	27	4	11	27	4	12	6	4	12	6

INLET SLOPE SECTION(S)

R.C. BOX SECTION		DESIGN FILL DEPTH (FT.)		CLEAR SPAN (FT.)		CLEAR HEIGHT (FT.)		TOP SLAB THK.		BOTTOM SLAB THK.		SIDE WALL THK.		INTERIOR WALL THK.		OVER ALL WIDTH		OVER ALL HEIGHT		SECTION LENGTH (FT.)		TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINF. STEEL		BOTTOM SLAB DISTRIBUTION REINF. STEEL		SIDE WALL DISTRIBUTION REINF. STEEL		INTERIOR WALL DISTRIBUTION REINF. STEEL								
D	S	H	T	B	C	W	OW	OH	SL	SIZE	L	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D	SIZE	L	SIZE	L	SPACING	NO. REQ'D							

INLET SKEWED END SECTION

SK	SLOPE	FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL		BOTTOM SLAB DISTRIBUTION REINFORCING STEEL		SIDE WALL DISTRIBUTION REINFORCING STEEL		INTERIOR WALL DISTRIBUTION REINFORCING STEEL																	
													SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D	SIZE	SPACING	LENGTH	NO. REQ'D				
20	3:1	2	5	3	4'-1"	8	3	9	6	8	11'-8"	4'-5"	4	6	Max 11'-4" Min 4'-6" 11'-4"	6	4	5	Max 11'-4" Min 4'-6" 11'-4"	5	4	8.5	4	4	11	4	9	12	4'-1"	4	12	10	4'-1"	4	12	23	4	12	23	4	12	3	3	LONG 6'-0" SHORT 1'-10"	4	12	6	3'-11"

INLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WINGWALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL		CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B	WING A	WING B		
OW	H	WB	CW	SK	SL	K	HL	WH1	WH2	AF1	AF2	WE	WF1	WF2	G1	G2	W1	W2	W3	W4	CU.YD	LBS.
11'-8"	3'-0"	0'-9"	0'-8"	20	3:1	11'-4 1/4"	1'-0"	3'-10"	1'-0"	10	50	2'-2"	2'-2"	2'-2 7/8"	0'-4"	0'-3 -1/2"	8'-6"	13'-0"	10'-4 5/8"	14'-10 5/8"	3.90	366

MID-SECTION

BAR LAP TABLE

# of Long. Laps Req'd.	SL = Section Length
0	<40.0 ft
1	>40.0 ft - 78.0 ft
2	>78.0 ft - 116.0 ft
3	>116.0 ft - 154.0 ft
4	>154.0 ft - 192.0 ft
5	>192.0 ft - 230.0 ft
6	>230.0 ft - 268.0 ft
7	>268.0 ft - 306.0 ft
8	>306.0 ft - 344.0 ft

Mn. Bar Lap Length	
#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Pin Dia. Table	
#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"

This drawing to be used in conjunction with SHEET 1 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "GENERAL NOTES & LONGITUDINAL SECTION LENGTH SCHEDULE", SHEET 3 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF MULTI-BARREL R.C. BOX CULVERT", SHEET 4 OF 4, "GENERAL DETAILS OF R.C. BOX CULVERT", "DETAILS OF WINGWALLS", and STANDARD DRAWING RCB-2.

For additional information and outlet sections, see Sheet 2 of 2.

TABULAR DATA BY: SAD DATE: 01/09/2015
 CHECKED BY: MRA DATE: 01/12/2015



3-12-15

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

CLASS "S" CONCRETE (includes HDWL)	REINFORCING STEEL (GR 60) (includes HDWL)
CU. YDS.	LBS.
3.54	540

Bar Lap - Add one long lap for each Slope Section, and one additional long lap for Slope Sections greater than 40'-0" in length.

Design Fill Depth	Range of Actual Fill Depth
2	0.0 ft - 2.0 ft
5	>2.0 ft - 5.0 ft
10	>5.0 ft - 10.0 ft
15	>10.0 ft - 15.0 ft
20	>15.0 ft - 20.0 ft
25	>20.0 ft - 25.0 ft
30	>25.0 ft - 30.0 ft
35	>30.0 ft - 35.0 ft
40	>35.0 ft - 40.0 ft

Data shown for Mid-Section, Slope Section(s), and Skewed End Section is based on the design fill depth shown in the table, see PLAN AND PROFILE SHEETS for actual fill depth.

SHEET 1 OF 2
 DETAILS OF R.C. BOX CULVERT
 DOUBLE BARREL BOX CULVERT
 ENTERPRISE AVE. St+18+15

SPECIAL DETAILS

CLASS "S" CONCRETE	REINFORCING STEEL (GR. 60)	ADTL. REINF. PER LONG LAP LOCATION (S)
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.
0.91	106	77

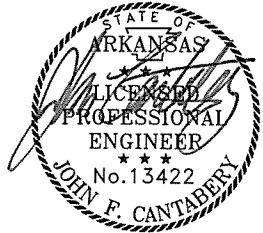


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OUTLET WINGWALL TABLE

OVER ALL WIDTH	CLEAR HEIGHT	FOOTING THK.	WING WALL THK.	BOX SKEW (DEG.)	SLOPE	HDWL LENGTH	HEEL	WALL HEIGHT		WINGWALL ANGLE (DEGREE)		FOOTING WIDTH AT WALL END	WIDTH OF WING FOOTINGS AT HDWL		FOOTING DIMENSION PARALLEL WITH HDWL		LENGTH OF WINGWALLS		LENGTH OF FOOTING HEEL		CLASS "S" CONCRETE (Includes apron)	REINFORCING STEEL (Includes apron and laps if required)
								AT HDWL	AT WING END	WING A	WING B		WING A	WING B	WING A	WING B	WING A	WING B				
								WH1	WH2	AF1	AF2		WE	WF1	WF2	G1	G2	W1	W2	W3		
11'-8"	3'-0"	0'-9"	0'-8"	20	3:1	11'-4 1/4"	1'-0"	3'-10"	1'-0"	10	50	2'-2"	2'-2"	2'-2 7/8"	0'-4"	0'-3 -1/2"	8'-6"	13'-0"	10'-4 5/8"	14'-10 5/8"	4.43	366

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		20	209
SPECIAL DETAILS								



3-12-15

TABULAR DATA BY: SAD DATE: 01/09/2015
 CHECKED BY: MRA DATE: 01/12/2015

Min. Bar Lap Length

#4	1'-9"
#5	2'-2"
#6	2'-7"
#7	3'-6"
#8	4'-7"

Bar Fin Dia. Table

#4	3"
#5	3 3/4"
#6	4 1/2"
#7	5 1/4"
#8	6"

Any Bar Lap Required for the Skewed End Section shall be considered subsidiary to the item "Reinforcing Steel - Roadway (Gr. 60)."

OUTLET SKEWED END SECTION

SK SKEW (DEGREE)	SLOPE	FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	SECTION LENGTH	TOP SLAB THK.	HDWL THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL		INTERIOR WALL REINFORCING STEEL		TOP SLAB DISTRIBUTION REINFORCING STEEL			BOTTOM SLAB DISTRIBUTION REINFORCING STEEL			SIDE WALL DISTRIBUTION REINFORCING STEEL			INTERIOR WALL DISTRIBUTION REINFORCING STEEL															
													a		c		d		f		f0		f1		g			e			d1			d2															
													SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	SIZE	SPACING	LENGTHS VARY	NO. REQ'D	
20	3:1	2	5	3	4'-1"	8	3	9	6	8	11'-8"	4'-5"	4	6	Max 11'-4" Min 4'-6" 11'-4"	6	4	5	Max 11'-4" Min 4'-6" 11'-4"	7	4	8.5	4	4	11	Max 11'-4" Min 4'-6" 11'-4"	3	4	9	12	4'-1"	4	12	10	4'-1"	4	12	23	Max 6'-1" Min 1'-10"	4	12	23	Max 6'-1" Min 1'-10"	3	LONG 6'-0" SHORT 1'-11"	4	12	6	3'-11"

CLASS "S" CONCRETE (includes HDWL)	REINFORCING STEEL (Gr. 60) (includes HDWL)
CU. YDS.	LBS.
3.54	540

OUTLET SLOPE SECTIONS

R.C. BOX SECTION	DESIGN FILL DEPTH (FT.)	CLEAR SPAN (FT.)	CLEAR HEIGHT (FT.)	TOP SLAB THK.	BOTTOM SLAB THK.	SIDE WALL THK.	INTERIOR WALL THK.	OVER ALL WIDTH	OVER ALL HEIGHT	SECTION LENGTH (FT.)	TOP SLAB REINFORCING STEEL				BOTTOM SLAB REINFORCING STEEL				SIDE WALL REINFORCING STEEL "f0"		INTERIOR WALL REINFORCING STEEL "f1"		TOP SLAB DISTRIBUTION REINF. STEEL "g"			BOTTOM SLAB DISTRIBUTION REINF. STEEL "e"			SIDE WALL DISTRIBUTION REINF. STEEL "d1"			INTERIOR WALL DISTRIBUTION REINF. STEEL "d2"		
											LENGTH = OW - 4' + BENDS				LENGTH = OW - 4' + BENDS				LENGTH = OH - 4'		LENGTH = OH - 4'		LENGTH = SL			LENGTH = SL			LENGTH = SL			LENGTH = SL		
											a	Bent b	c	SPACING	d	Bent b1	f	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D	SIZE	SPACING	NO. REQ'D
HDWL THK.	ADDITIONAL REINF. FOR HDWL										"h" BARS																							
HW	LBS.										SIZE	Y	LENGTH	NO. REQ'D																				

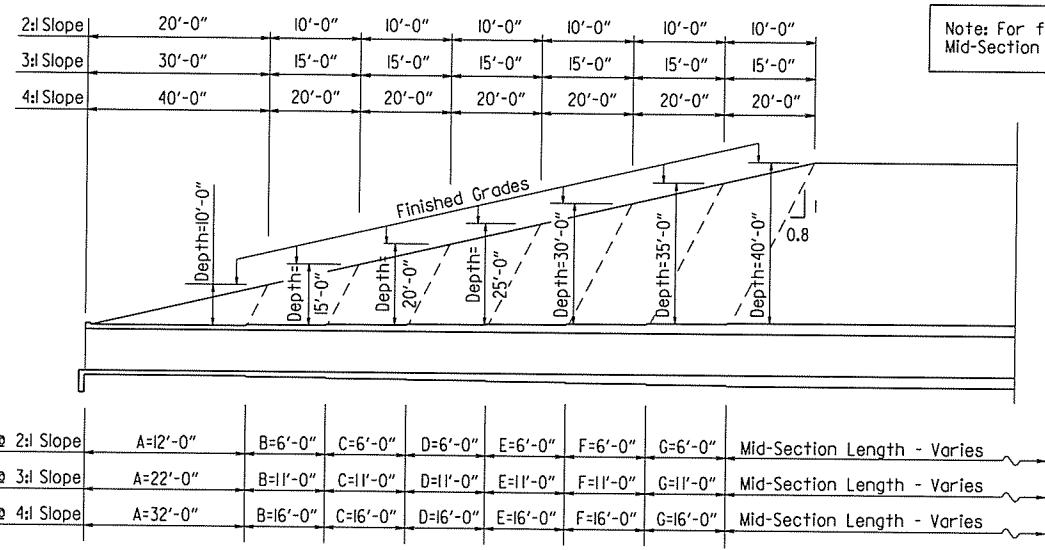
CLASS "S" CONCRETE	REINFORCING STEEL (Gr. 60)	ADTL. REINF. PER LONG LAP LOCATION	ADDITIONAL CONCRETE FOR HDWL	TOTAL ADDITIONAL REINF. FOR HDWL
CU. YDS. PER LIN. FT.	LBS. PER LIN. FT.	LBS.	CU. YDS.	LBS.

Bar Lap - Add one long lap for each Slope Section, and one additional long lap for Slope Sections greater than 40'-0" in length.

The required number of bars and lengths shown are for estimating purpose only. The actual number and length required shall be determined in field.
 Unless otherwise noted, all dimensions are in inches.



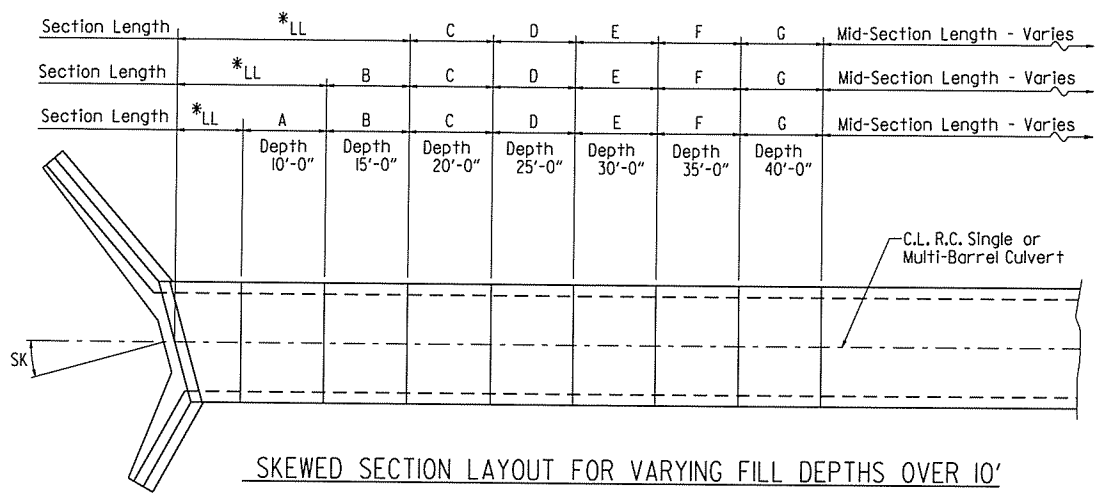
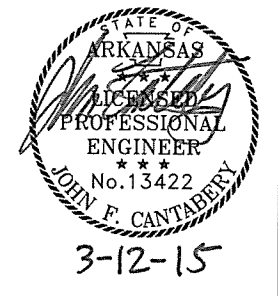
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				6	ARK.			
				JOB NO.	O80492	21	209	



Note: For fill depths 10' and under, use Mid-Section full length of box culvert.

* LL = Skewed End Section Length - See "Skewed End Section Details". Length LL varies with skew angle, overall box width and fill depth and may eliminate the need for some slope section lengths as shown.

SPECIAL DETAILS



LONGITUDINAL SECTION LENGTH SCHEDULE FOR VARYING FILL DEPTHS OVER 10'
Lengths for Non-Skewed Boxes

SKewed SECTION LAYOUT FOR VARYING FILL DEPTHS OVER 10'

GENERAL NOTES:

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition) with applicable Supplemental Specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the Plans.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications, Fifth Edition (2010) with 2010 interim revisions.

LIVE LOADING: HL-93

All concrete shall be Class S with a minimum 28-day compressive strength of 3,500 psi and shall be poured in the dry. All exposed corners to have 1/4" chamfers.

Reinforcing Steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

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 1/2 inch.

Excavation and backfilling shall be in accordance with the requirements of Section 801.

Membrane Waterproofing shall conform to the requirements of Section 815. Membrane Waterproofing shall be Type C and as directed by the Engineer applied to all construction joints in the top slab and the sidewalls of R.C. Box culverts and to the construction joint between wingwalls and R.C. Box culvert walls.

Weep Holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab.

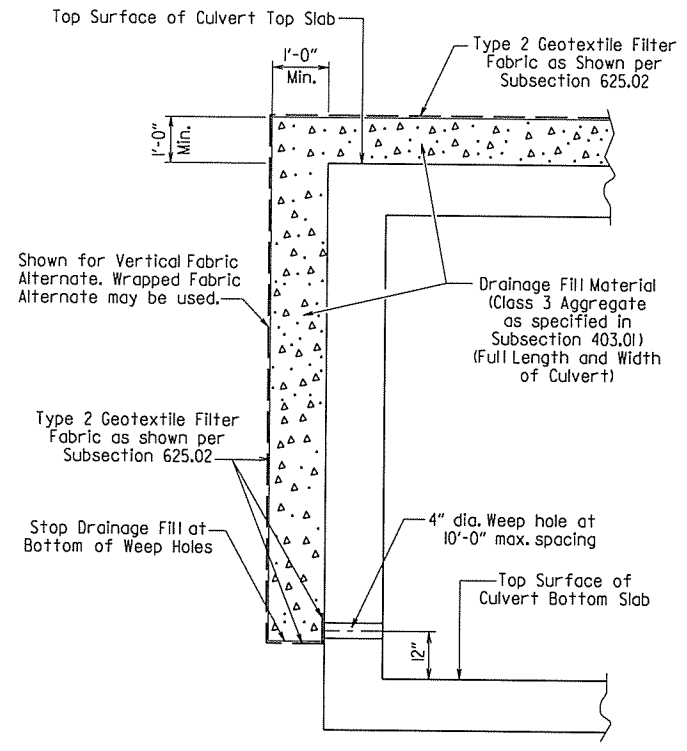
Weep Holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain opening shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The barrel components of the culvert may be constructed using continuous pours. For longer culvert construction, the Contractor may use multiple pours with transverse construction joints spaced a minimum of 50 feet apart unless superseded by stage construction or site constraints as approved by the Engineer. Construction joints between footings and walls shall be made only where shown in the Plans. Joints shall be normal to the centerline of barrel and shall be keyed. Longitudinal reinforcing shall be continuous through joints unless shown otherwise. All longitudinal construction joints shall be submitted to the Engineer for approval.

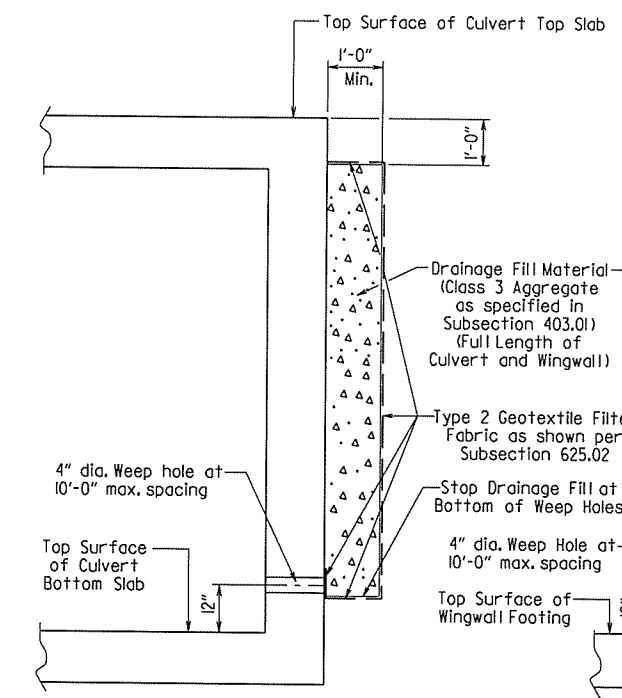
Membrane Waterproofing, Weep Holes, Geotextile Filter Fabric, and Drainage Fill Material will not be paid for directly but shall be considered subsidiary to Class S Concrete.

When the top slab of the box culvert serves as finished roadway surface, curing and finishing shall be in accordance with subsections 802.17 and 802.20 for bridge roadway surface and a tine finish shall be applied in accordance with subsection 802.19 for Class 5 Tined Bridge Roadway Surface Finish. Curing and finishing shall not be paid for directly, but shall be considered incidental to the item "Class S Concrete-Roadway". Class 1 Protective Surface Treatment shall be applied to the roadway surface and this work shall be paid for under the unit price bid for "Class 1 Protective Surface Treatment".

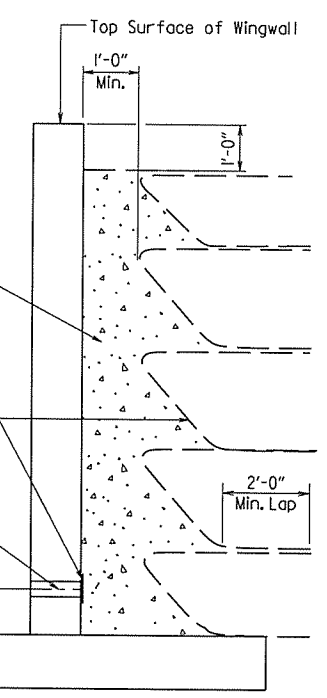
When precast reinforced concrete box culverts are substituted for cast in place box culverts, they shall be manufactured according to ASTM C 1577 and meet the requirements of Section 607. When the top slab of the box culvert serves as the finished roadway surface, a precast reinforced concrete box culvert substitution is not allowed.



CULVERT DRAINAGE DETAIL FOR ROCK FILL
This detail shall be used when rock fill is specified for embankment construction.



VERTICAL FABRIC ALTERNATE
(Shown for Culvert, Similar for Wingwall)



WRAPPED FABRIC ALTERNATE
(Shown for Wingwall, Similar for Culvert)

For Details of Excavation and Pay Limits, see Standard Drawing RCB-2.

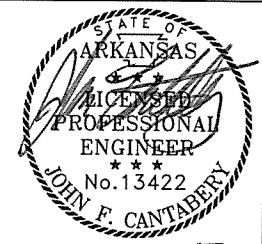
WINGWALL & CULVERT DRAINAGE DETAIL

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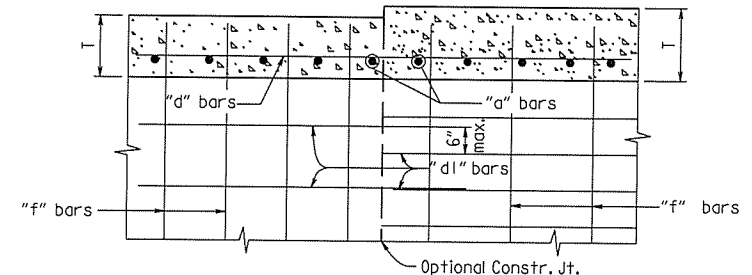
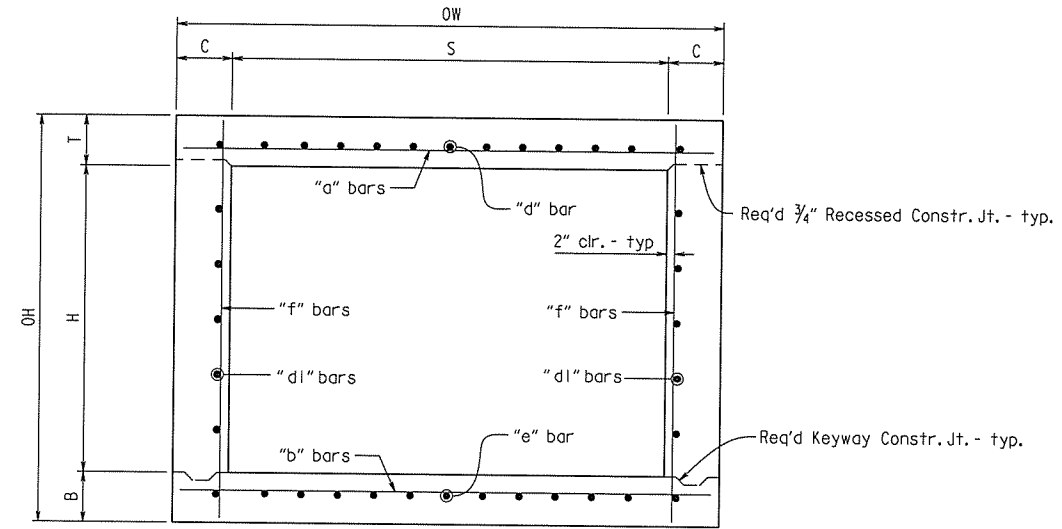
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1 SPECIAL DETAILS

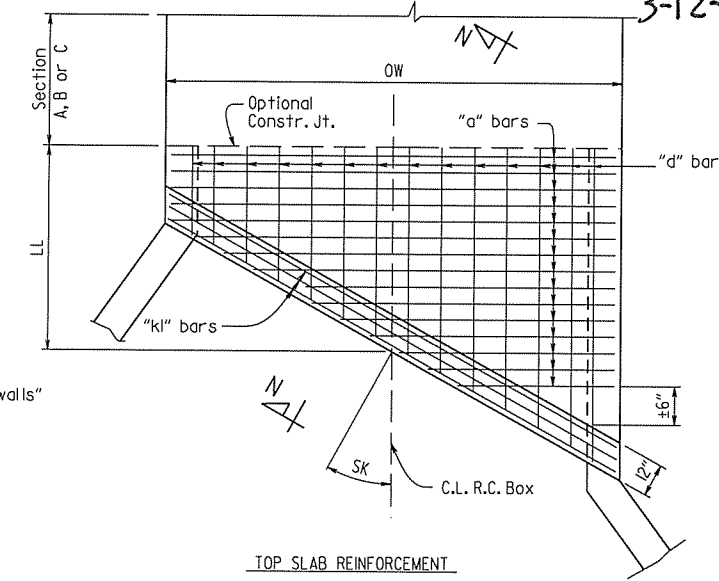


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Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.

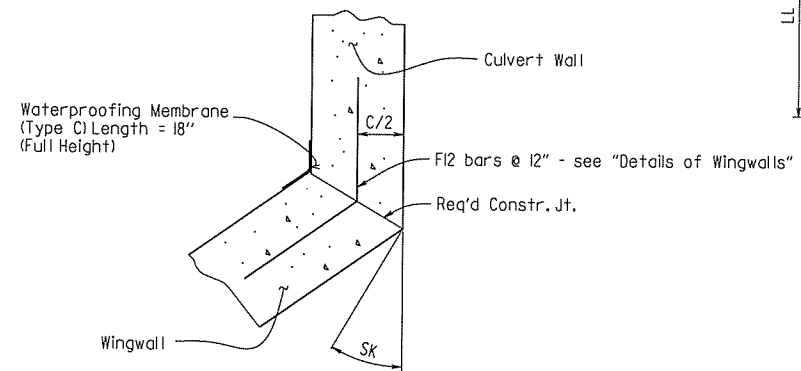


LONGITUDINAL LAP DETAIL AT CHANGE IN SECTIONS
TOP SLAB SHOWN, BOTTOM SLAB SIMILAR

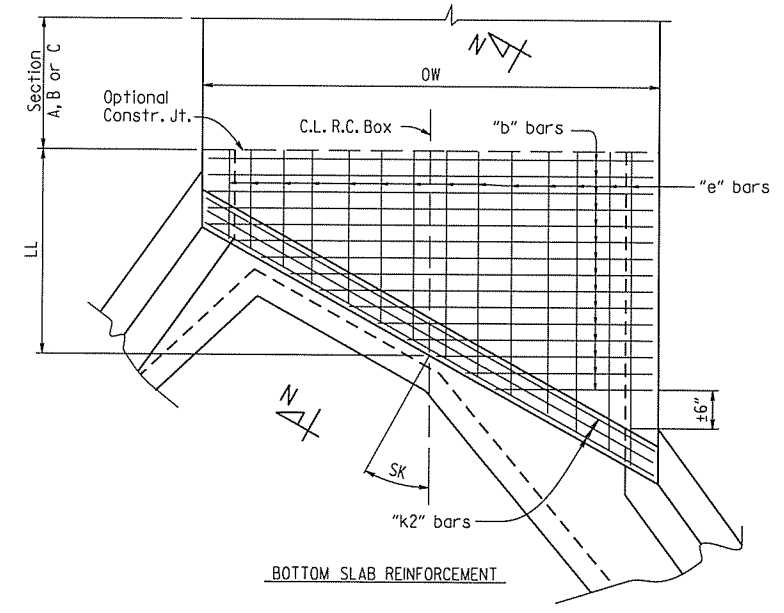


TOP SLAB REINFORCEMENT

TYPICAL SECTION M-M



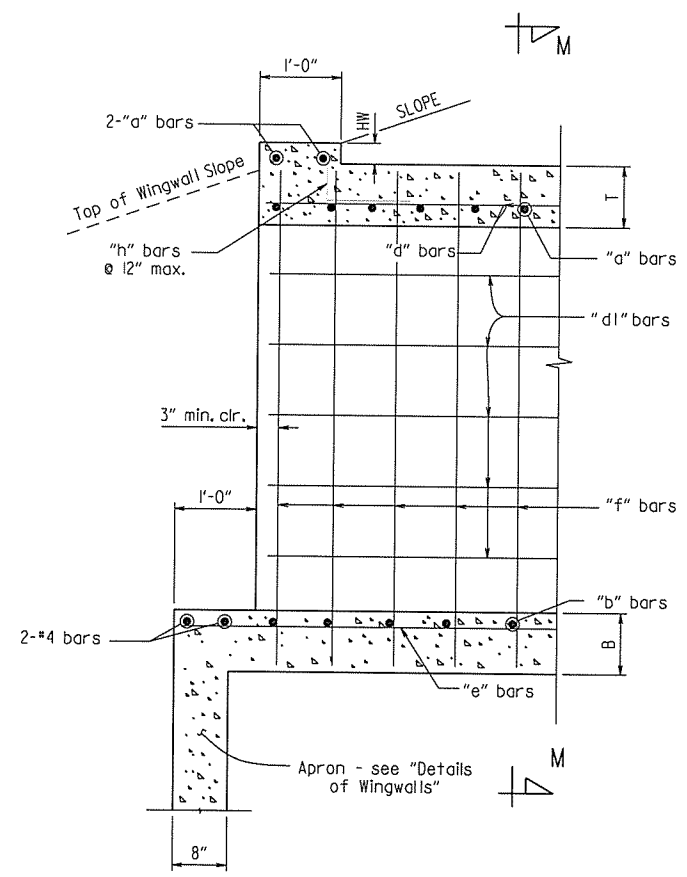
WINGWALL ATTACHMENT
See "Details of Wingwalls" for additional information and wingwall details.



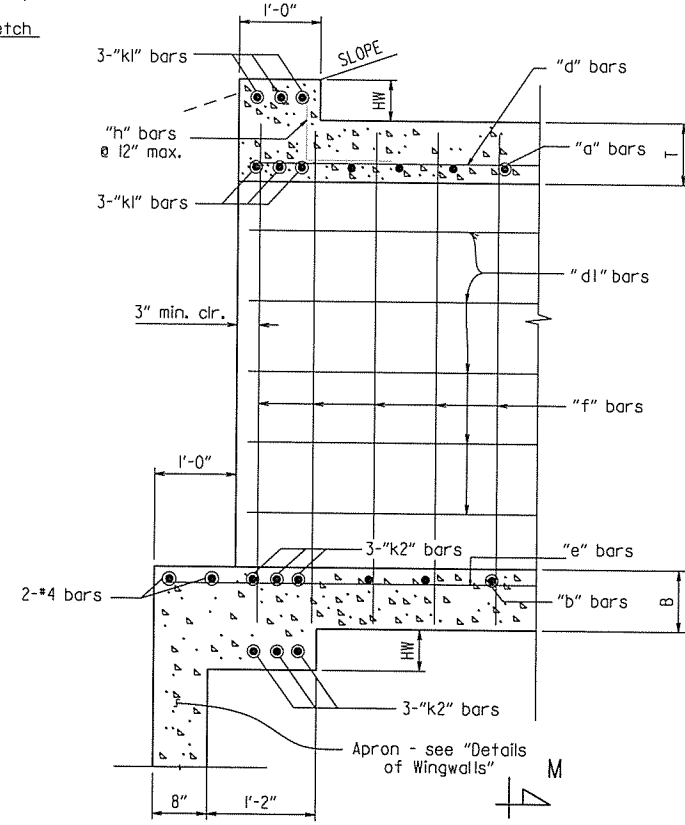
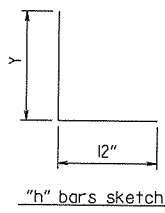
BOTTOM SLAB REINFORCEMENT

SKewed END SECTION DETAILS

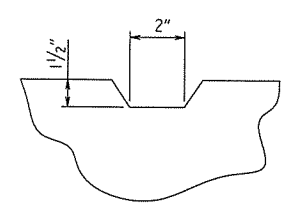
SHEET 2 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF SINGLE BARREL
R.C. BOX CULVERT
SPECIAL DETAILS



PART LONGITUDINAL SECTION
(Non-Skewed Ends)



PART LONGITUDINAL SECTION N-N
(Skewed Ends)



TYPICAL KEYWAY DETAIL
(All Construction Joints)

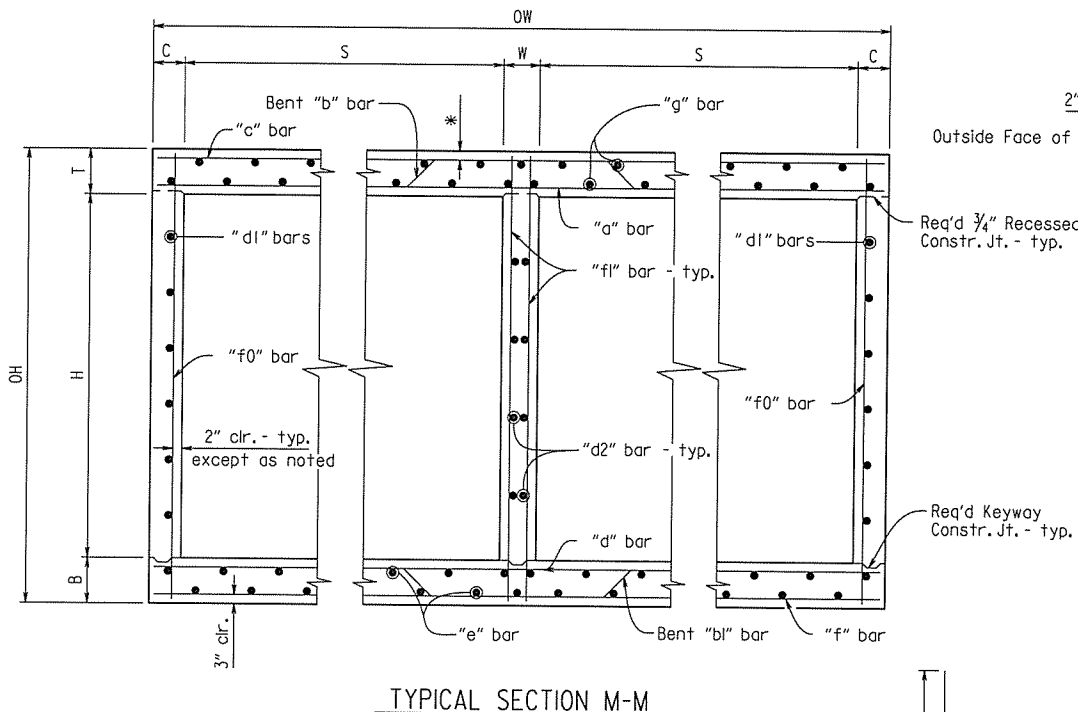
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SPECIAL DETAILS								

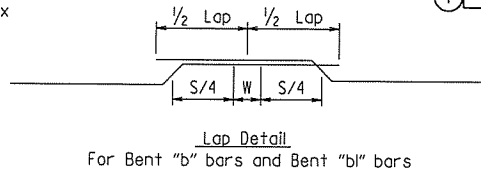
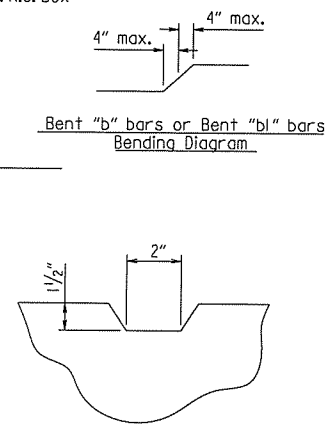
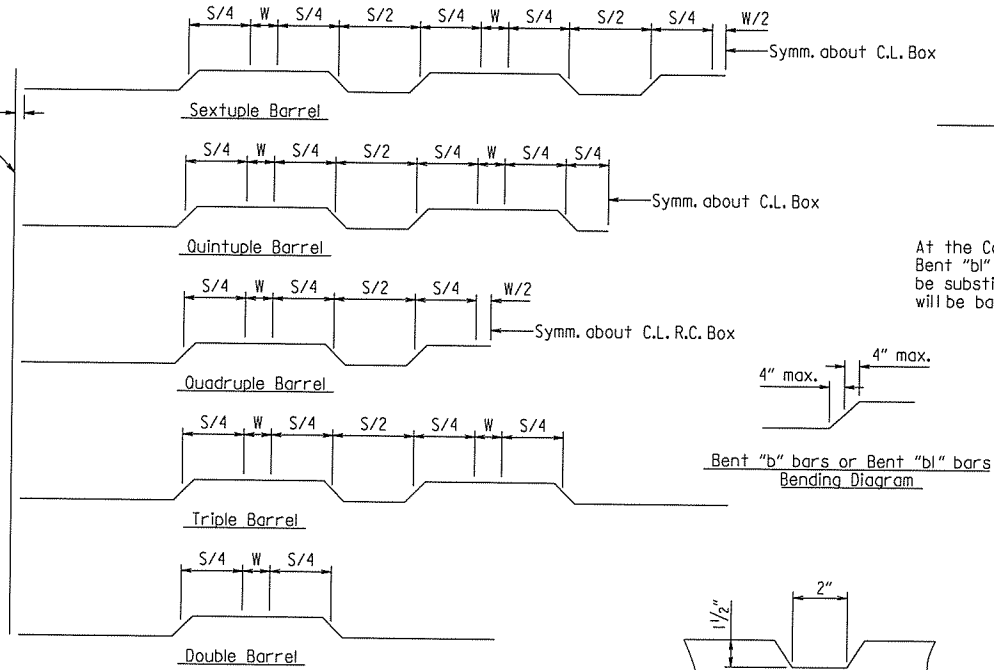
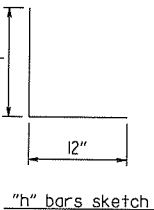
*2" clr. for fill depth (D) greater than 2 ft.
 2 1/2" clr. for fill depth (D) equal to or less than 2 ft.

Note: When top slab of culvert serves as finished roadway surface, see General Notes on Sheet 1 of 4.

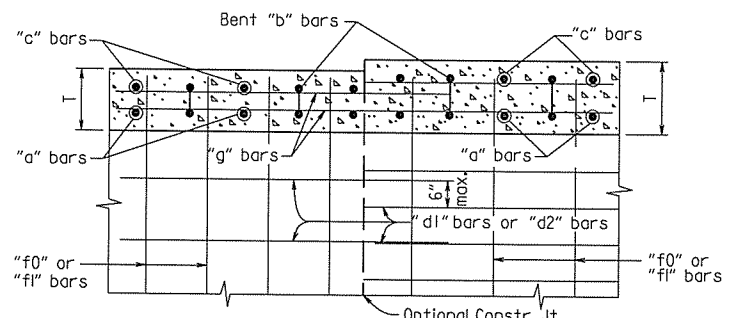
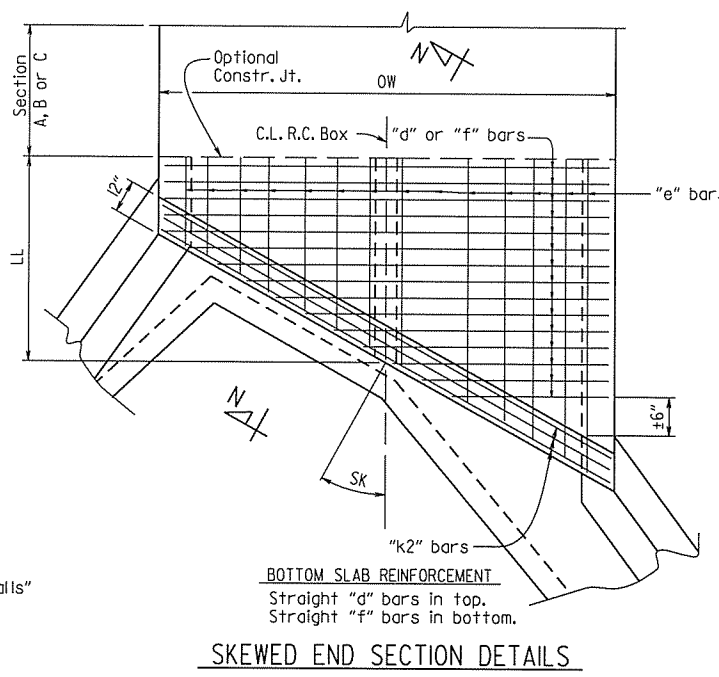
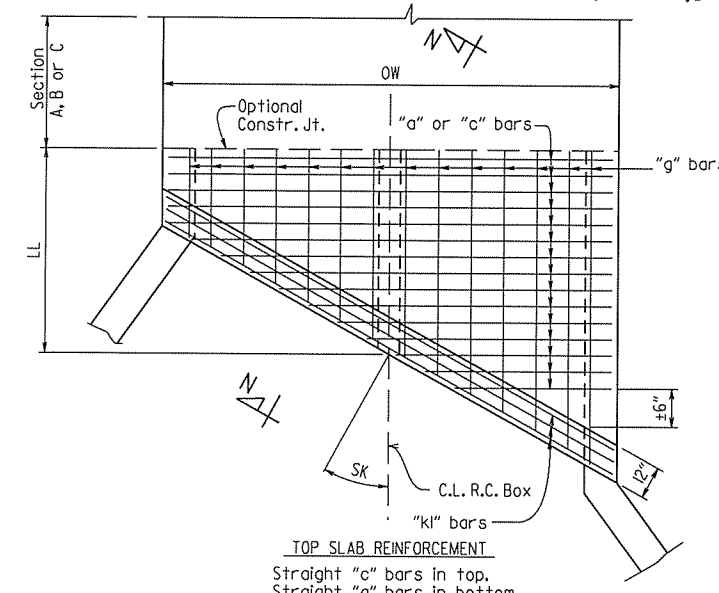
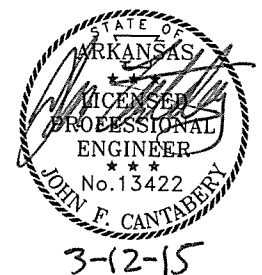


Top Slab
 Straight "c" bars shall alternate with Bent "b" bars in top.
 Straight "a" bars shall alternate with Bent "b" bars in bottom.

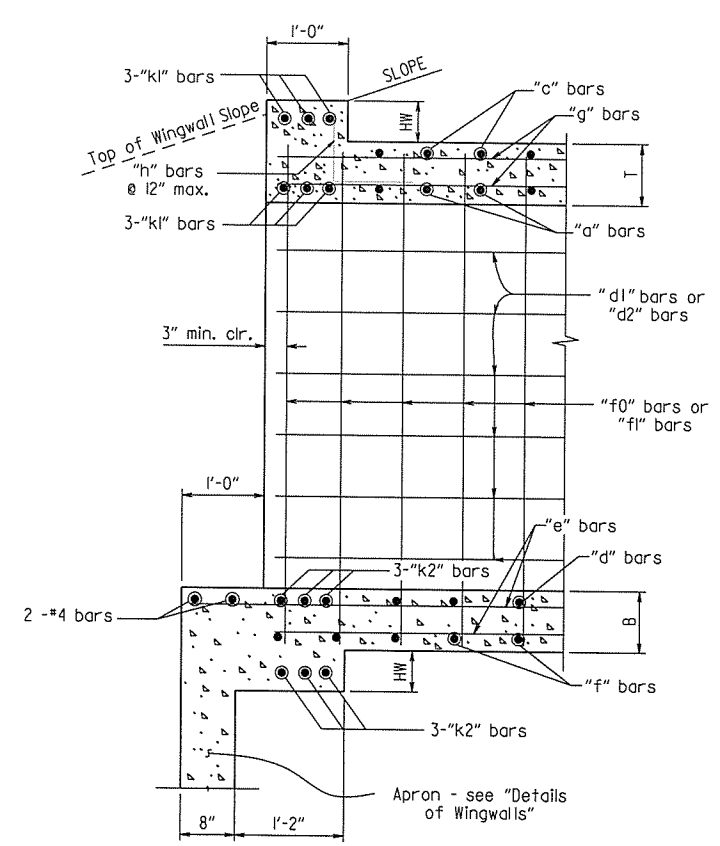
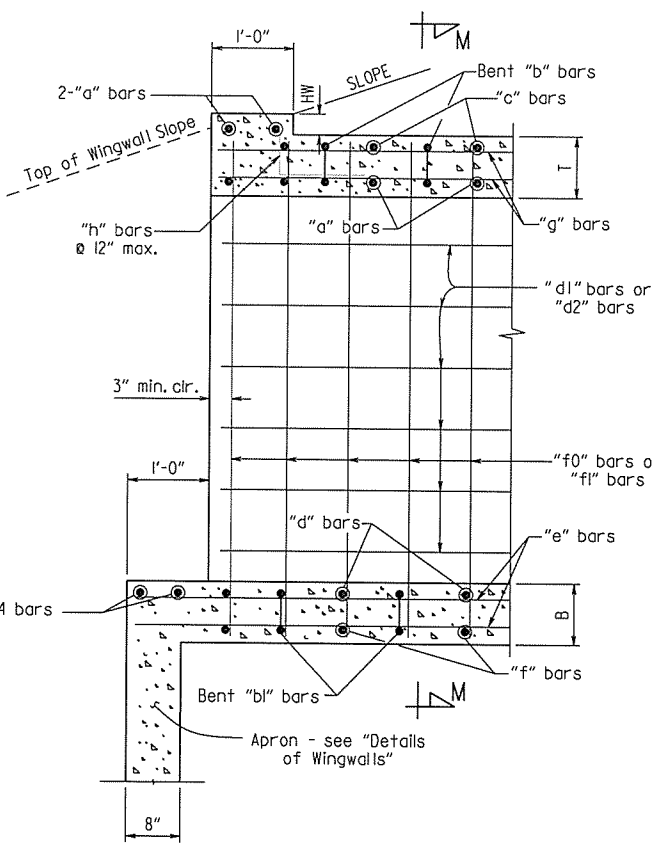
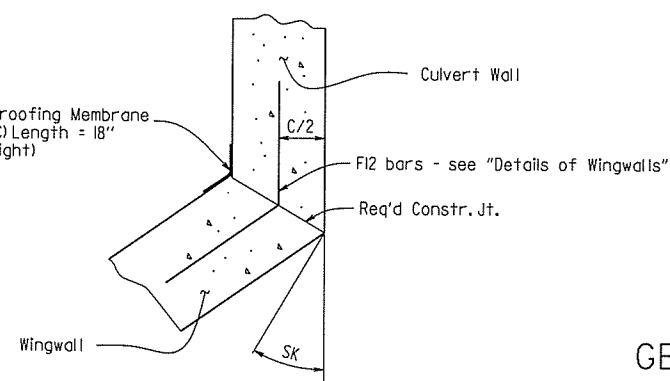
Bottom Slab
 Straight "d" bars shall alternate with Bent "bl" bars in top.
 Straight "f" bars shall alternate with Bent "bl" bars in bottom.



At the Contractor's option in lieu of providing Bent "b" or Bent "bl" bars, one bar top and bottom of equivalent size may be substituted for each bent bar. Payment for the reinforcing will be based on the weight of the "b" or "bl" bar.



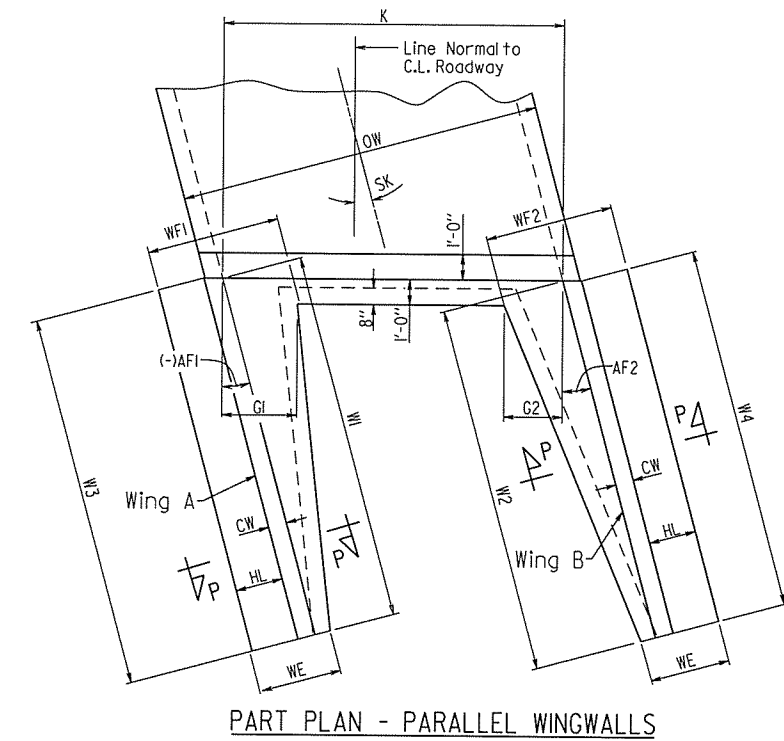
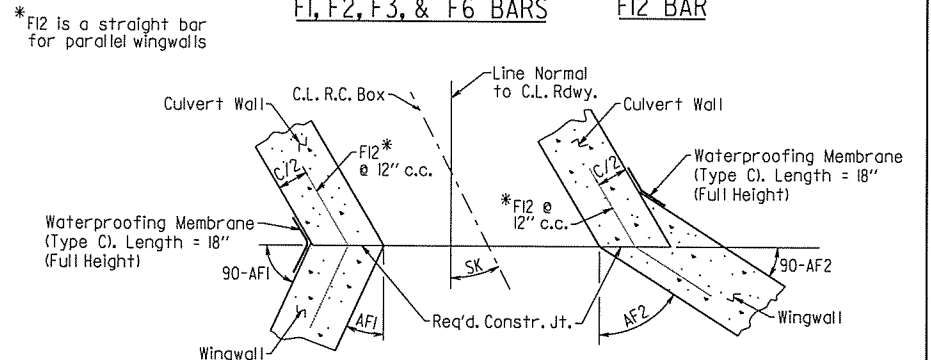
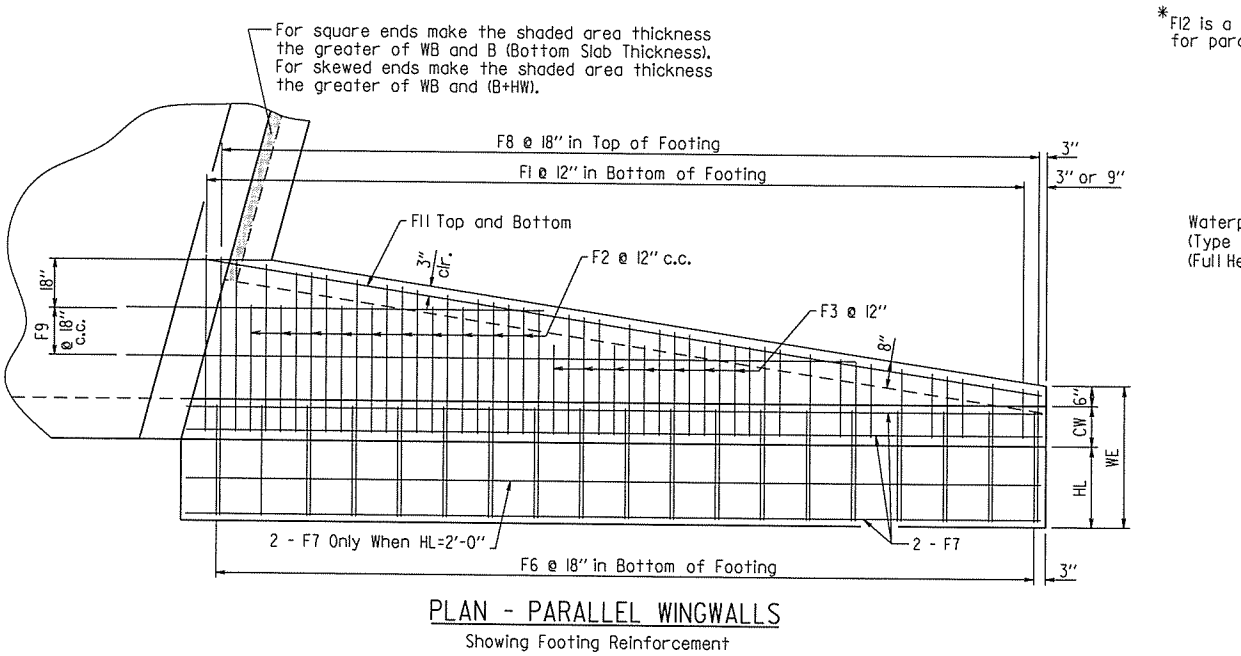
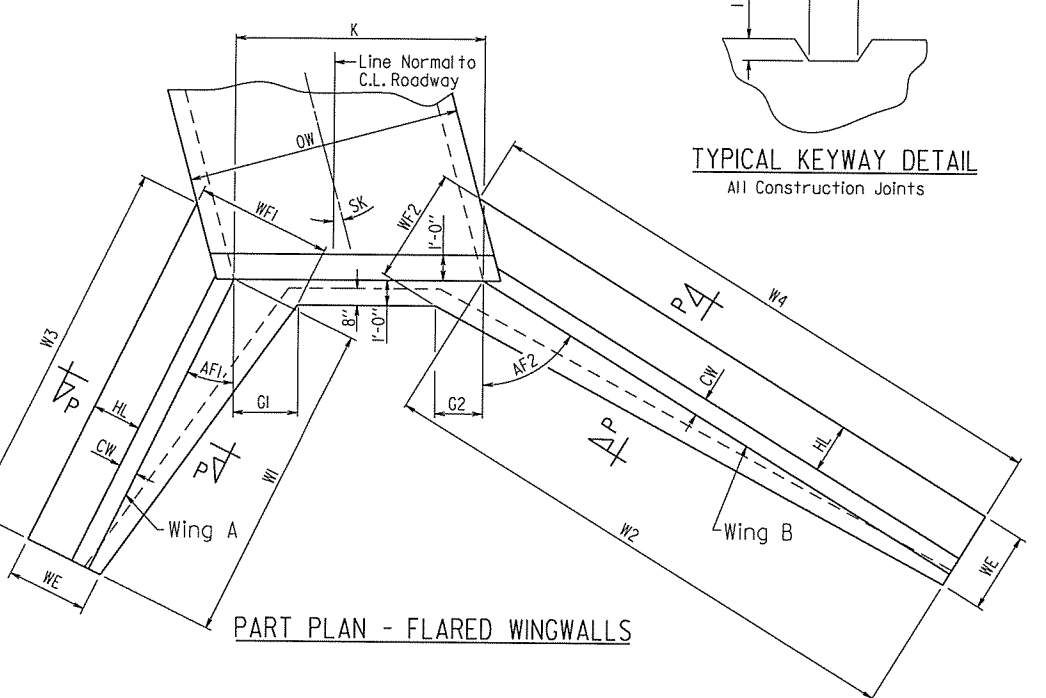
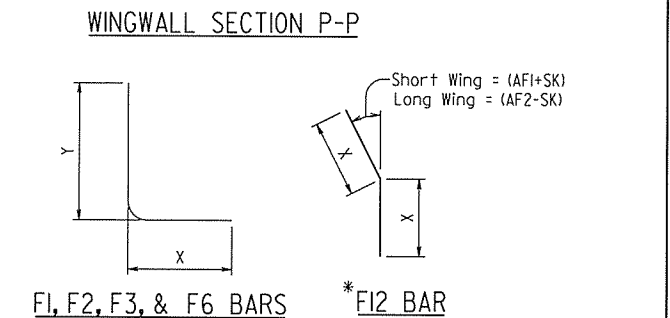
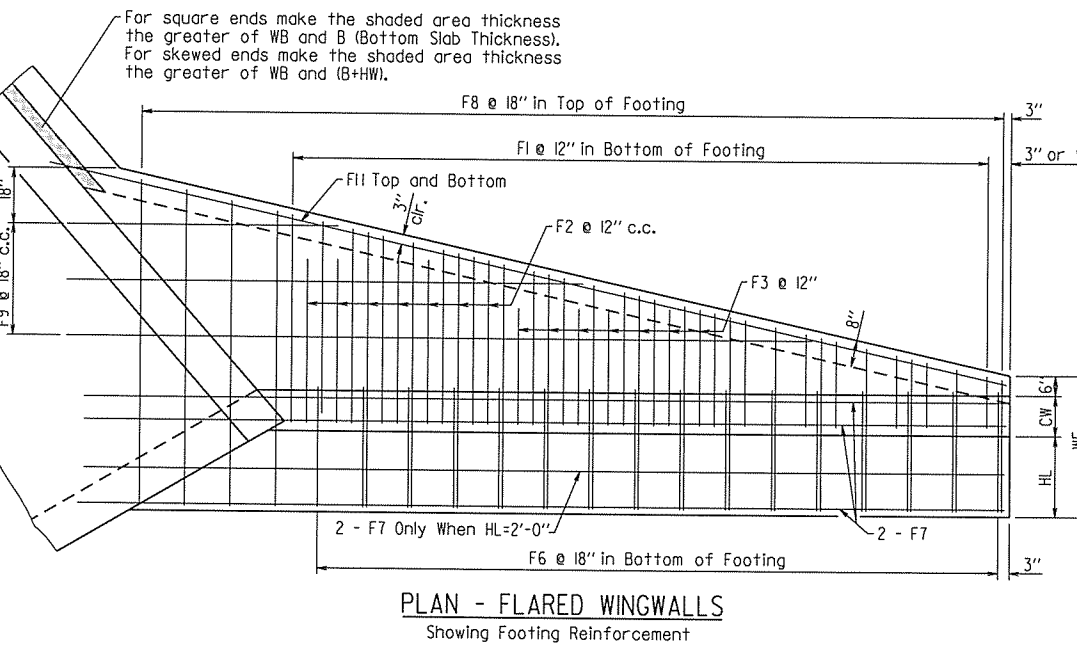
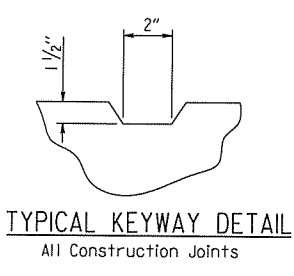
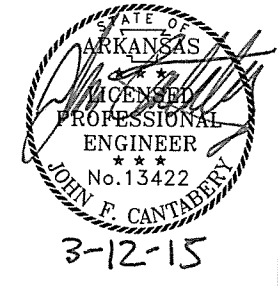
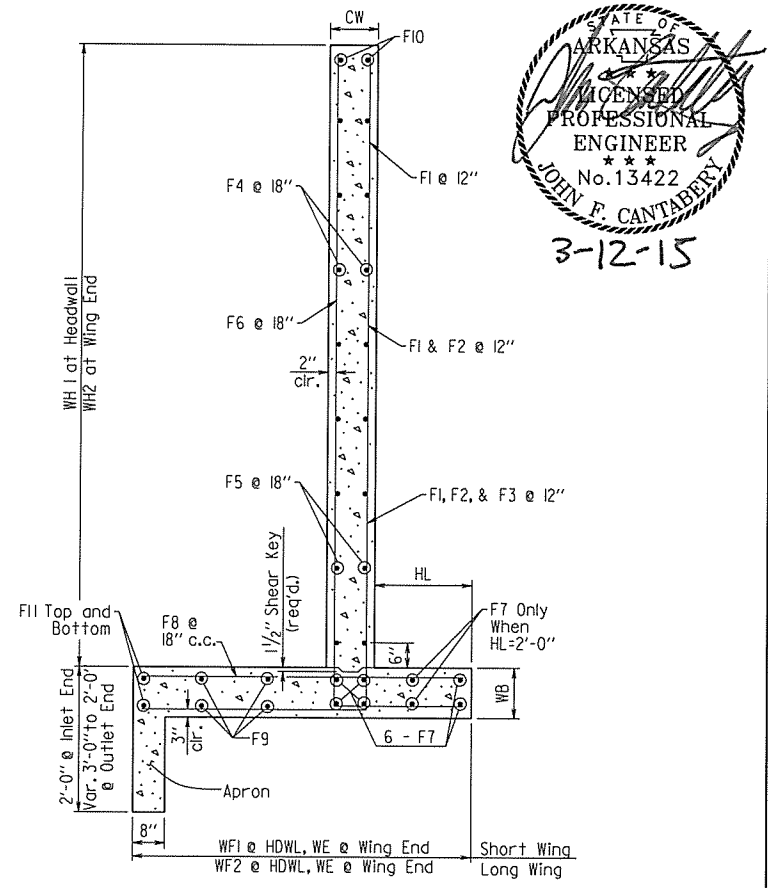
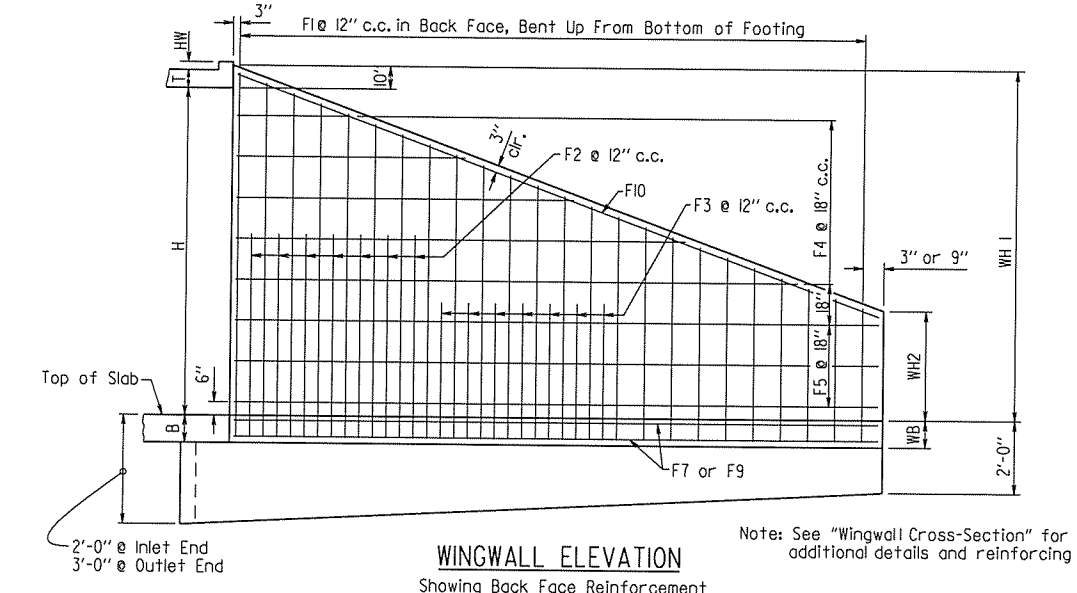
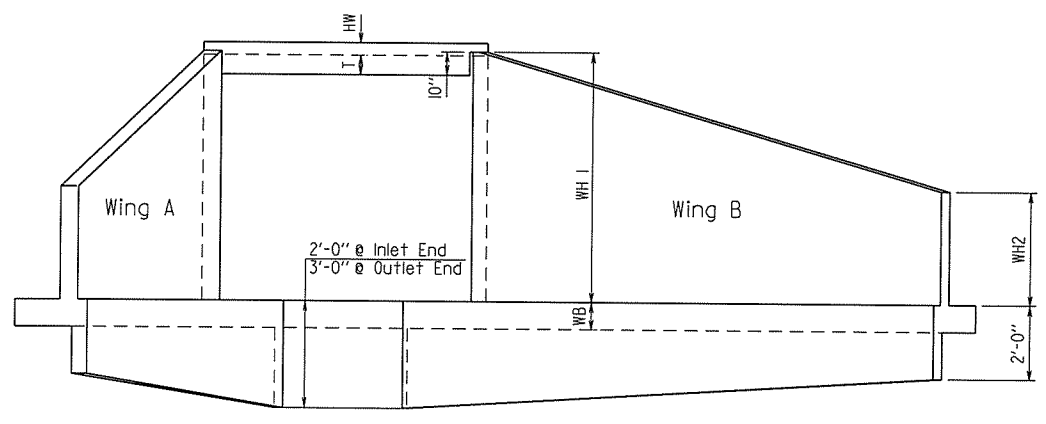
Longitudinal Bar Spacing at individual sections shall be maintained, which may result in noncontact bar laps.



SHEET 3 OF 4
 GENERAL DETAILS OF R.C. BOX CULVERT
 DETAILS OF MULTI-BARREL R.C. BOX CULVERT
 SPECIAL DETAILS

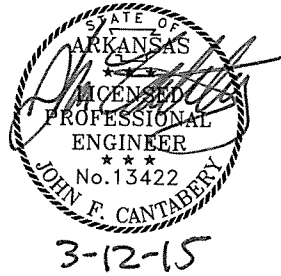
3/12/2015 10:04:27 AM
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	24	209
SPECIAL DETAILS								

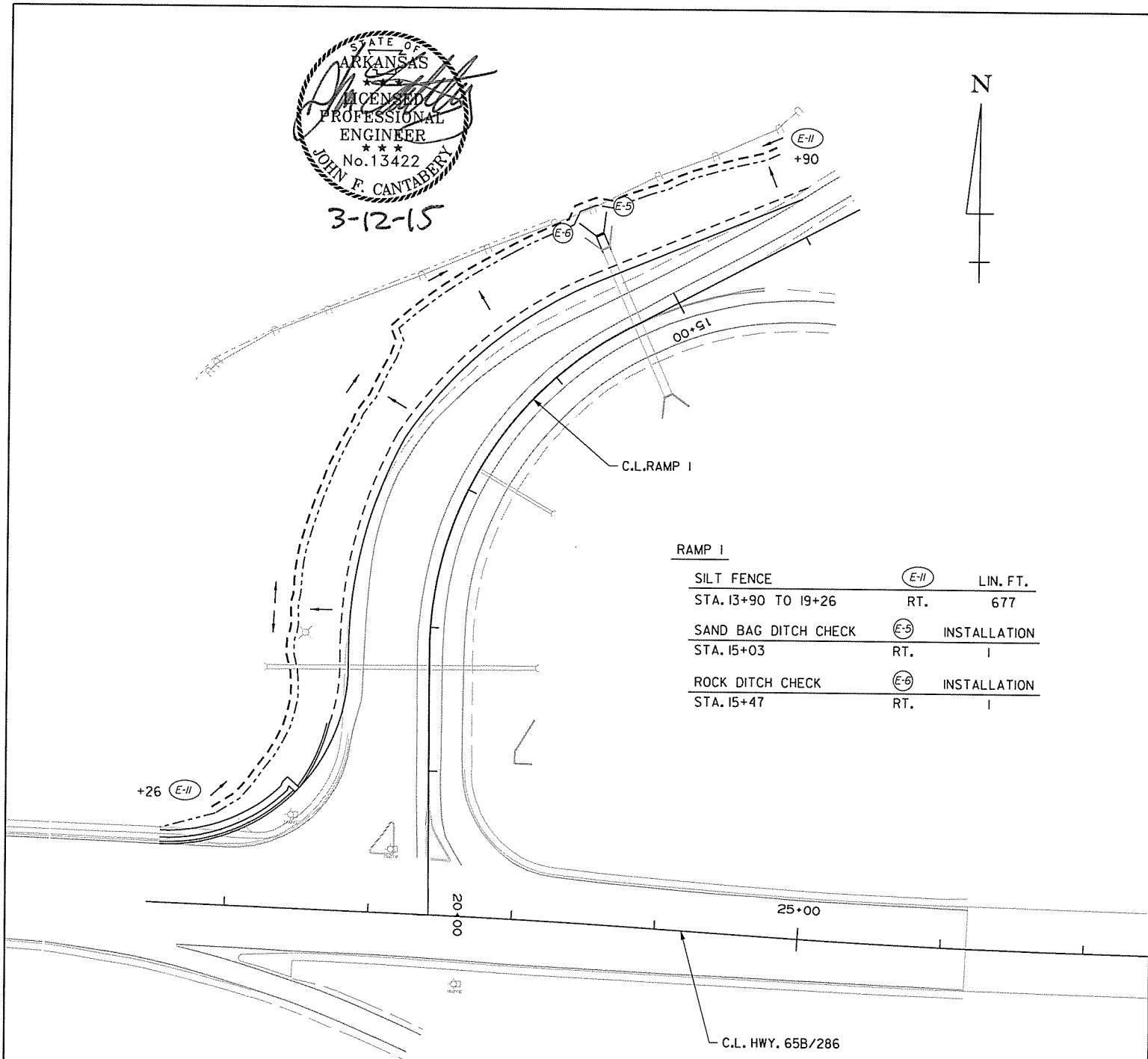


SHEET 4 OF 4
GENERAL DETAILS OF R.C. BOX CULVERT
DETAILS OF WINGWALLS
SPECIAL DETAILS

3/12/2015 10:04:27 AM
 coppervasini
 WORKSPACE: AHTD
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 REVISION DATE:

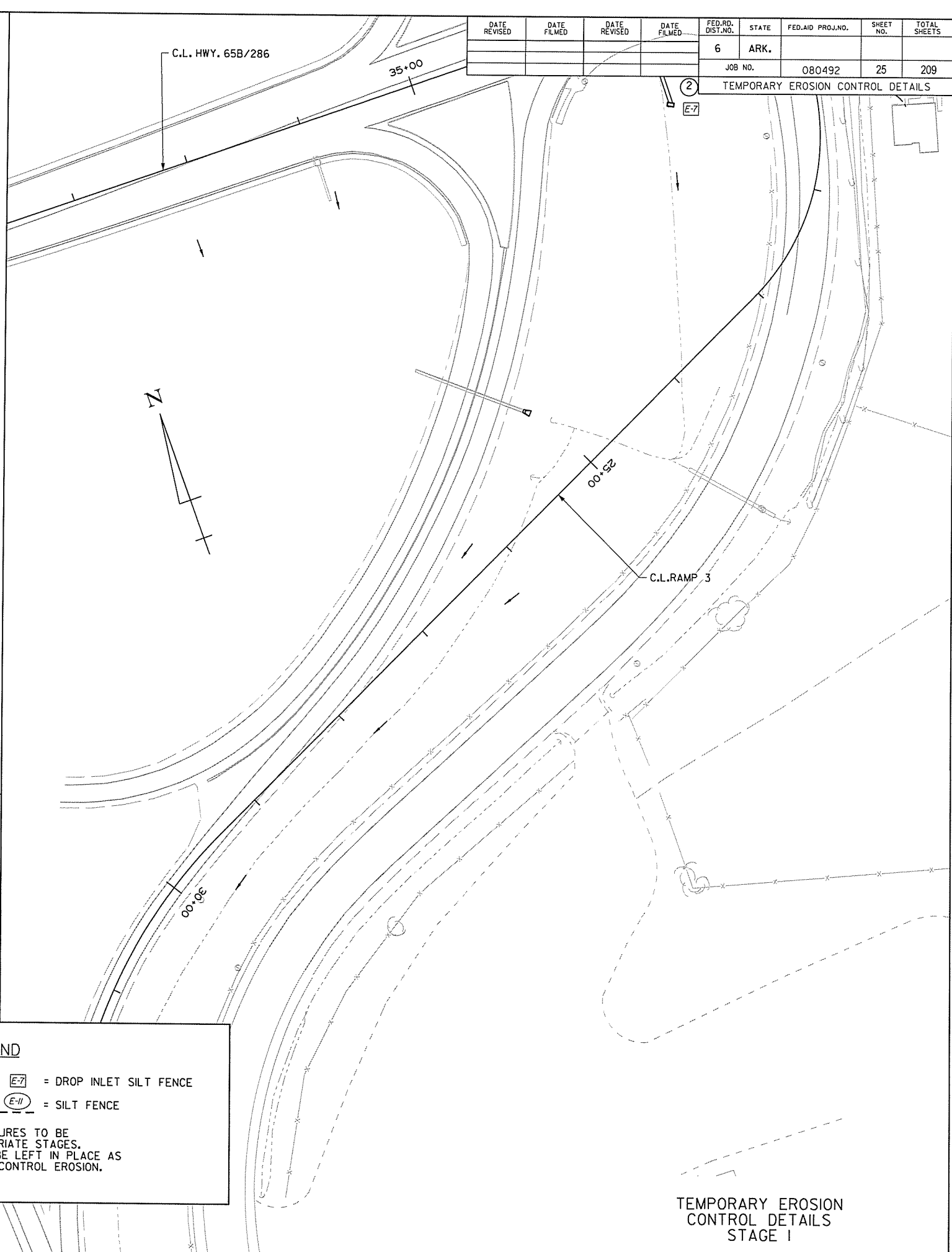


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	25	209	
TEMPORARY EROSION CONTROL DETAILS								



RAMP 1

DESCRIPTION	SYMBOL	RT.	LIN. FT.
SILT FENCE	E-11		677
STA. 13+90 TO 19+26			
SAND BAG DITCH CHECK	E-5		INSTALLATION
STA. 15+03			
ROCK DITCH CHECK	E-6		INSTALLATION
STA. 15+47			



REVISIONS

DATE	REVISION

LEGEND

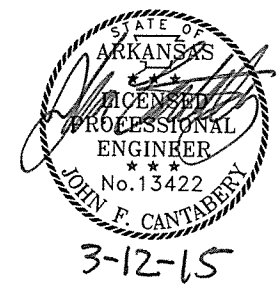
- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-7 = DROP INLET SILT FENCE
- E-11 = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS
STAGE 1

3/12/2015 10:04:28 AM
 WORKSPACE: AHTD
 L:\2011\011716 - Hwy 286 Widening and Improvements\Drawings\080492_r080492_EC_STG1.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	26
							080492	209
(2) TEMPORARY EROSION CONTROL DETAILS								



HWY. 286

DROP INLET SILT FENCE		LIN. FT.
STA. 37+03	LT.	20
STA. 37+03	RT.	20
STA. 42+00	LT.	20

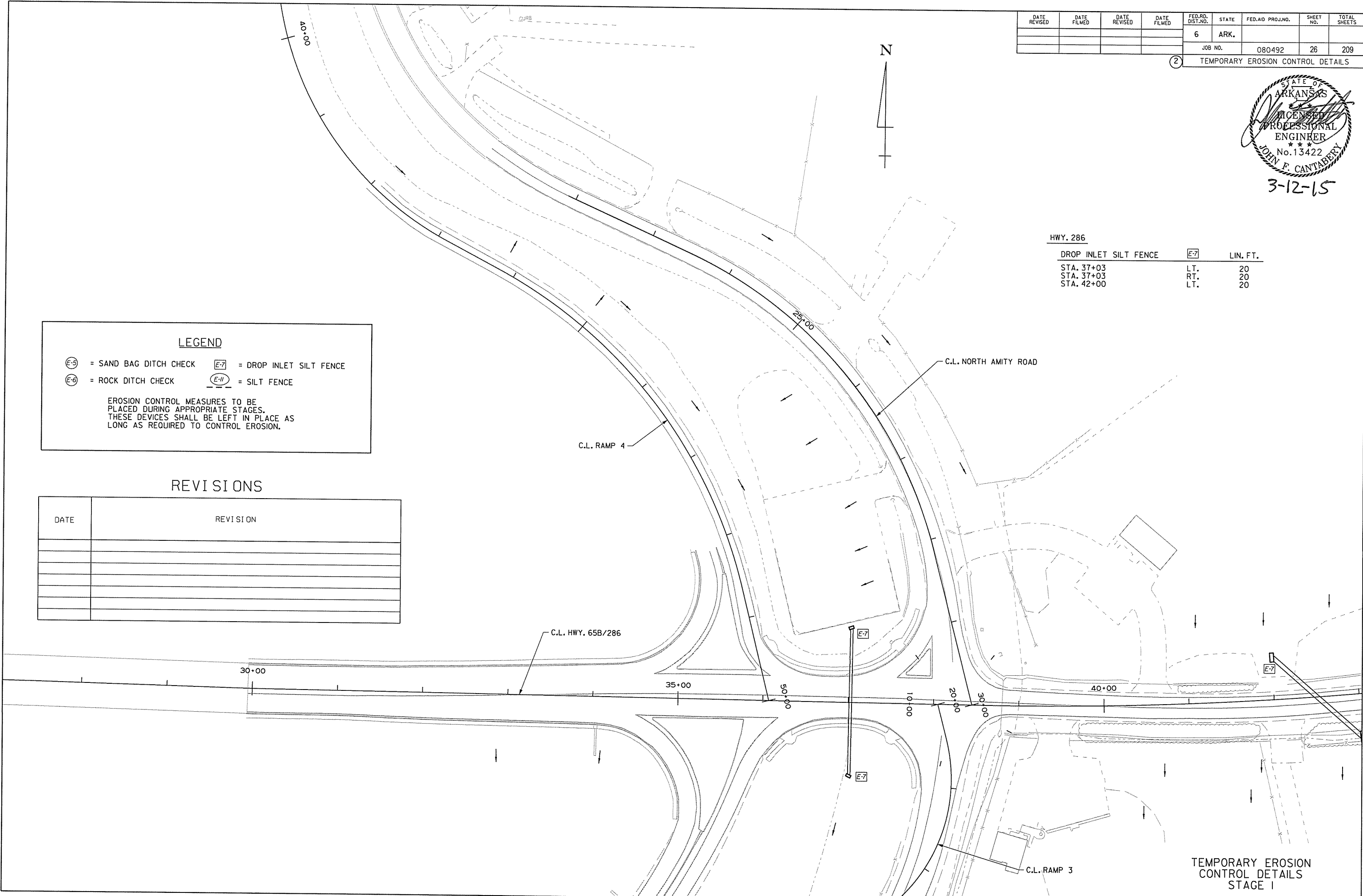
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

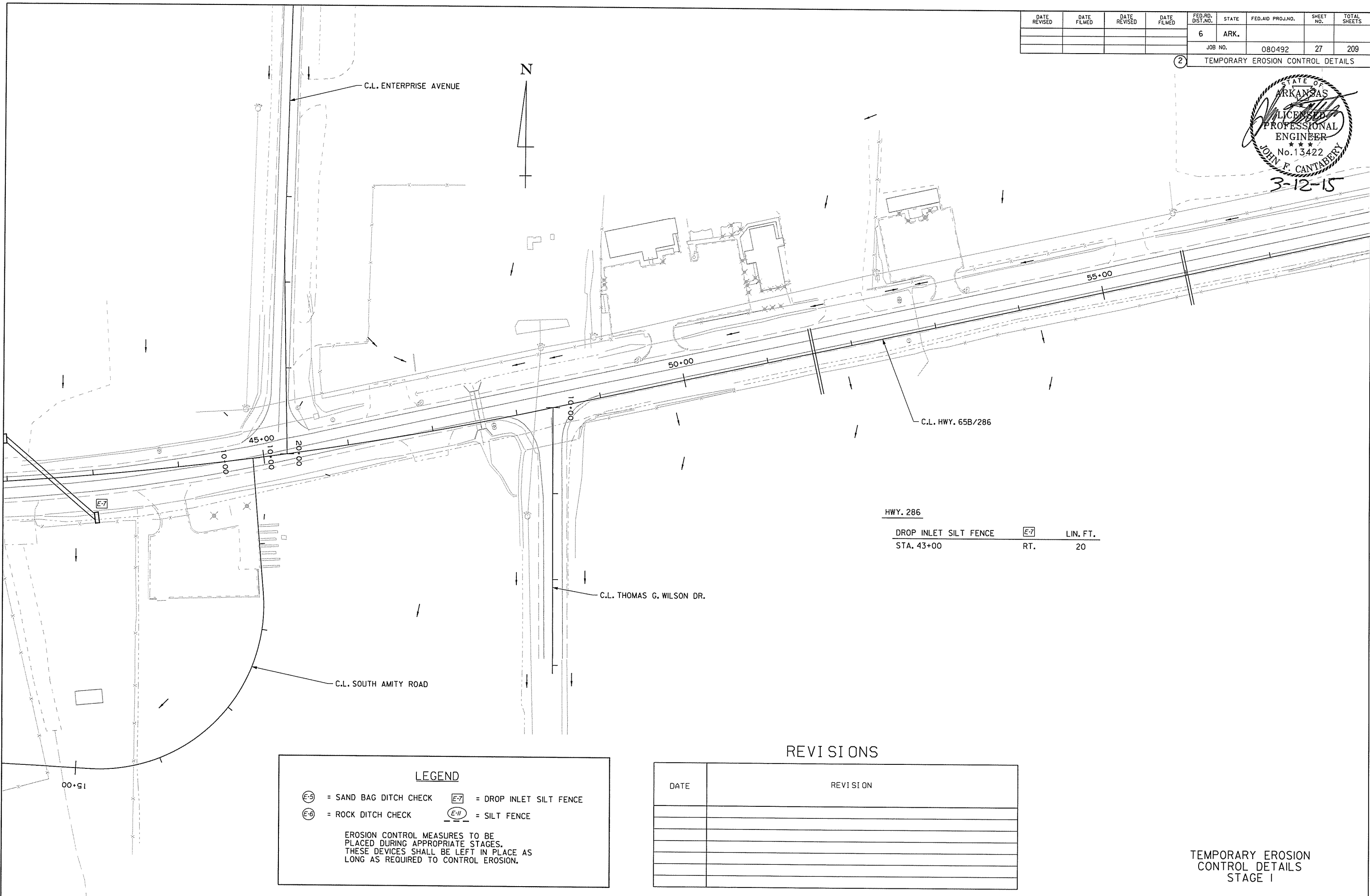
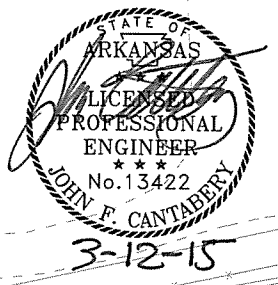


TEMPORARY EROSION CONTROL DETAILS
STAGE I

3/12/2015 10:04:32 AM
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	27	209

② TEMPORARY EROSION CONTROL DETAILS



LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

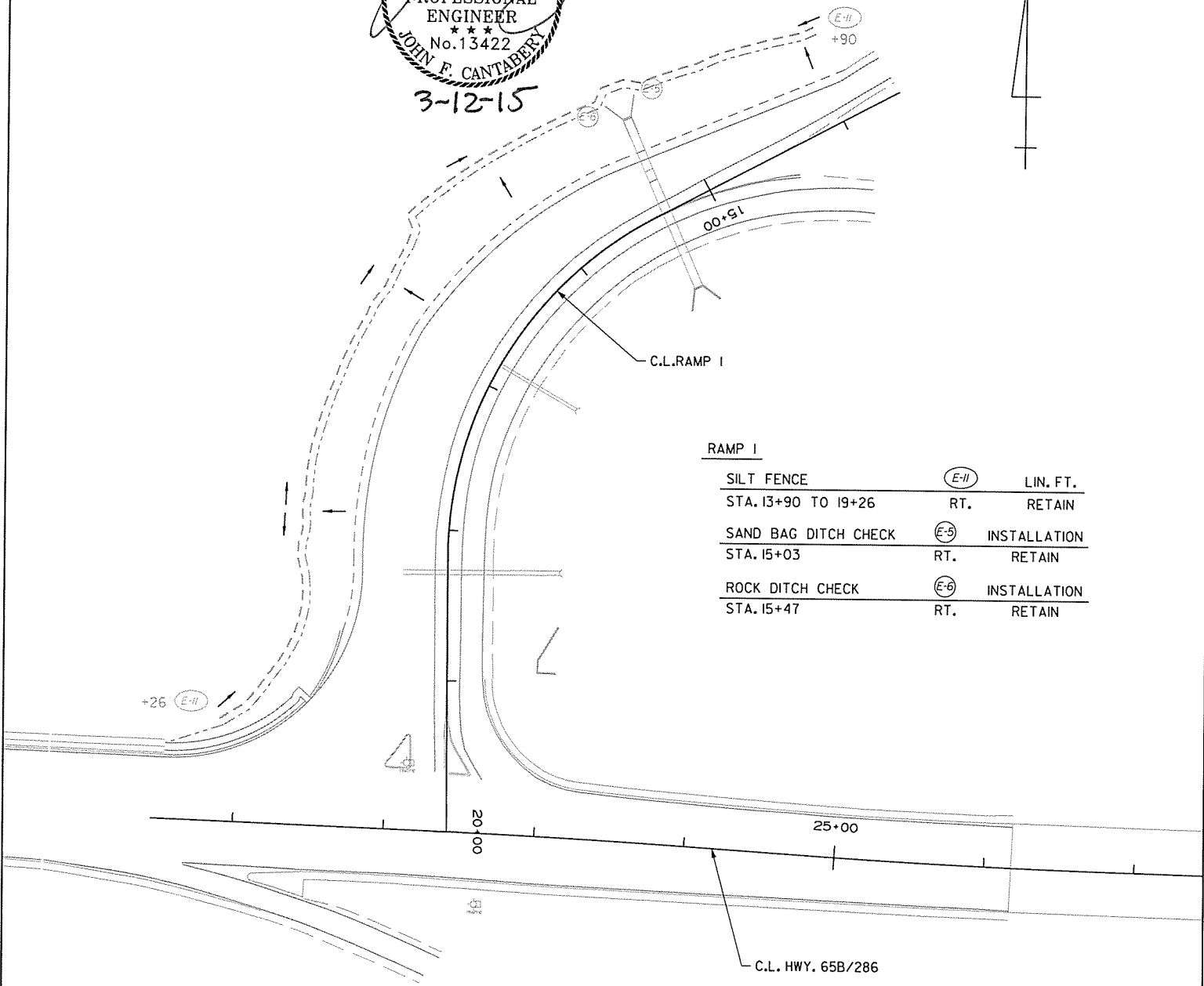
HWY. 286
 DROP INLET SILT FENCE (E-7) LIN. FT.
 STA. 43+00 RT. 20

3/12/2015 10:04:32 AM
 C:\perv\as\in\ WORKSPACE_AHTD L\2015\101716 - Hwy 286 Widening and Improvements\Drawings\080492\080492_EC_STG1_03.dgn
 REVISION DATE:

TEMPORARY EROSION CONTROL DETAILS
 STAGE I

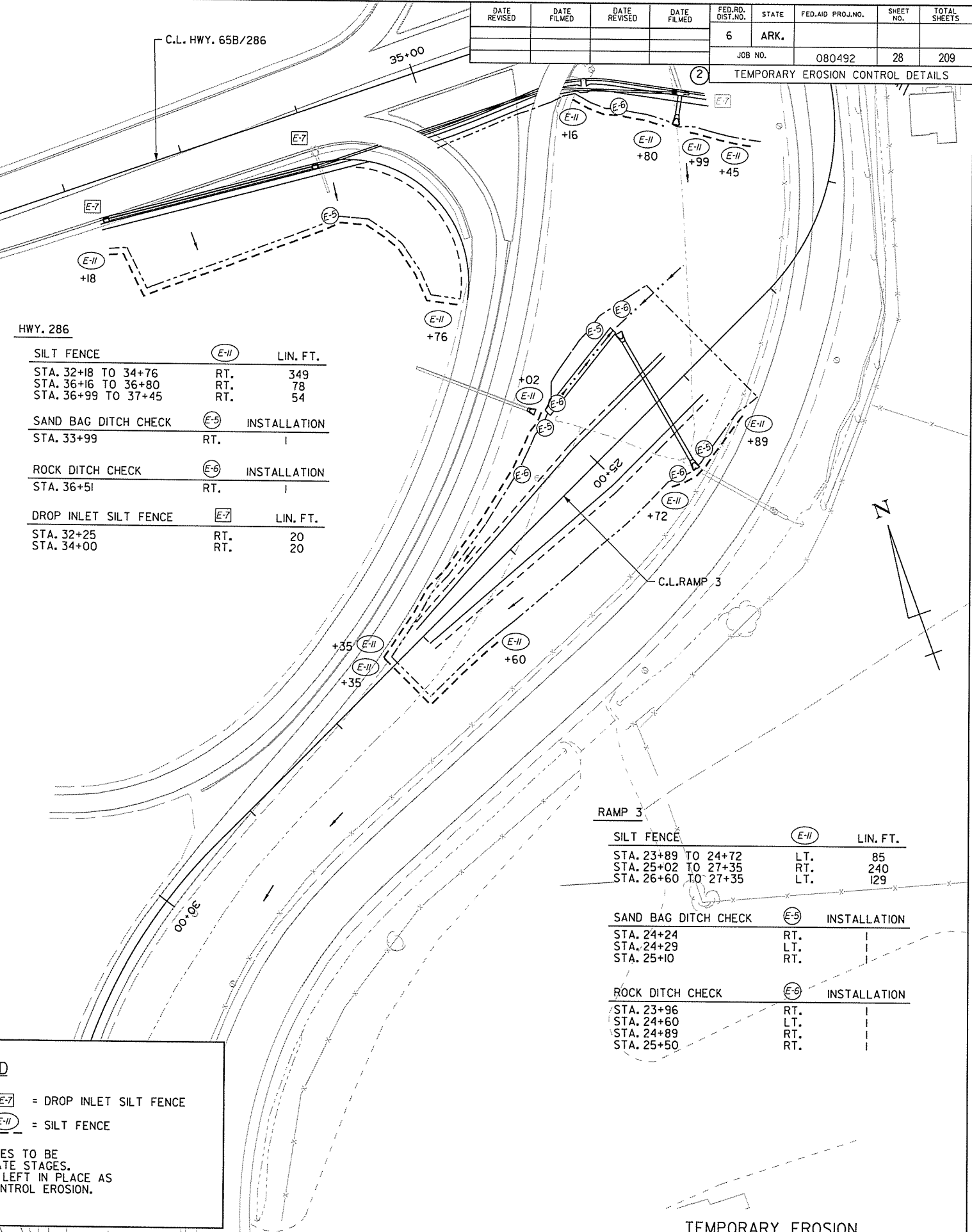
STATE OF ARKANSAS
 LICENSED PROFESSIONAL ENGINEER
 No. 13422
 JOHN F. CANTABERY
 3-12-15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							28	209
TEMPORARY EROSION CONTROL DETAILS								



RAMP 1

MEASURE	RT.	LIN. FT.
SILT FENCE	E-11	
STA. 13+90 TO 19+26	RT.	RETAIN
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 15+03	RT.	RETAIN
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 15+47	RT.	RETAIN



HWY. 286

MEASURE	RT.	LIN. FT.
SILT FENCE	E-11	
STA. 32+18 TO 34+76	RT.	349
STA. 36+16 TO 36+80	RT.	78
STA. 36+99 TO 37+45	RT.	54
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 33+99	RT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 36+51	RT.	1
DROP INLET SILT FENCE	E-7	LIN. FT.
STA. 32+25	RT.	20
STA. 34+00	RT.	20

RAMP 3

MEASURE	RT.	LIN. FT.
SILT FENCE	E-11	
STA. 23+89 TO 24+72	LT.	85
STA. 25+02 TO 27+35	RT.	240
STA. 26+60 TO 27+35	LT.	129
SAND BAG DITCH CHECK	E-5	INSTALLATION
STA. 24+24	RT.	1
STA. 24+29	LT.	1
STA. 25+10	RT.	1
ROCK DITCH CHECK	E-6	INSTALLATION
STA. 23+96	RT.	1
STA. 24+60	LT.	1
STA. 24+89	RT.	1
STA. 25+50	RT.	1

REVISIONS

DATE	REVISION

LEGEND

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

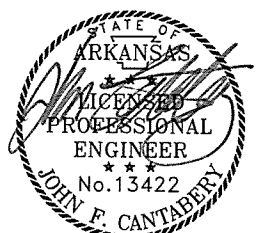
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS
 STAGE 2

3/12/2015 10:04:34 AM
 WORKSPACE: AHTD
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							29	209

② TEMPORARY EROSION CONTROL DETAILS



3-12-15

HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 38+89 TO 43+91	RT.	553
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 37+03	LT.	RETAIN
STA. 37+03	RT.	RETAIN
STA. 41+00	RT.	20
STA. 42+00	LT.	RETAIN

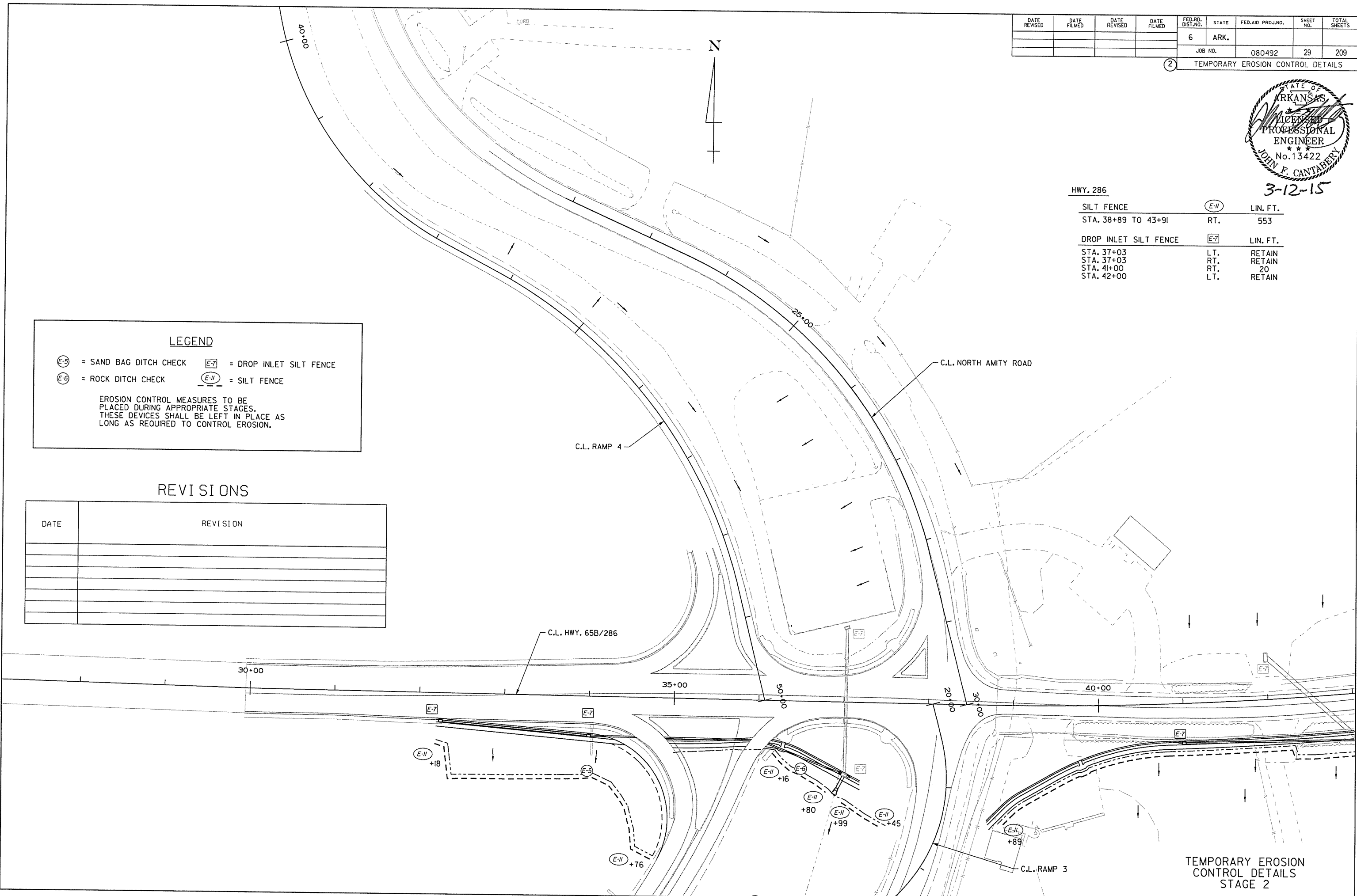
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

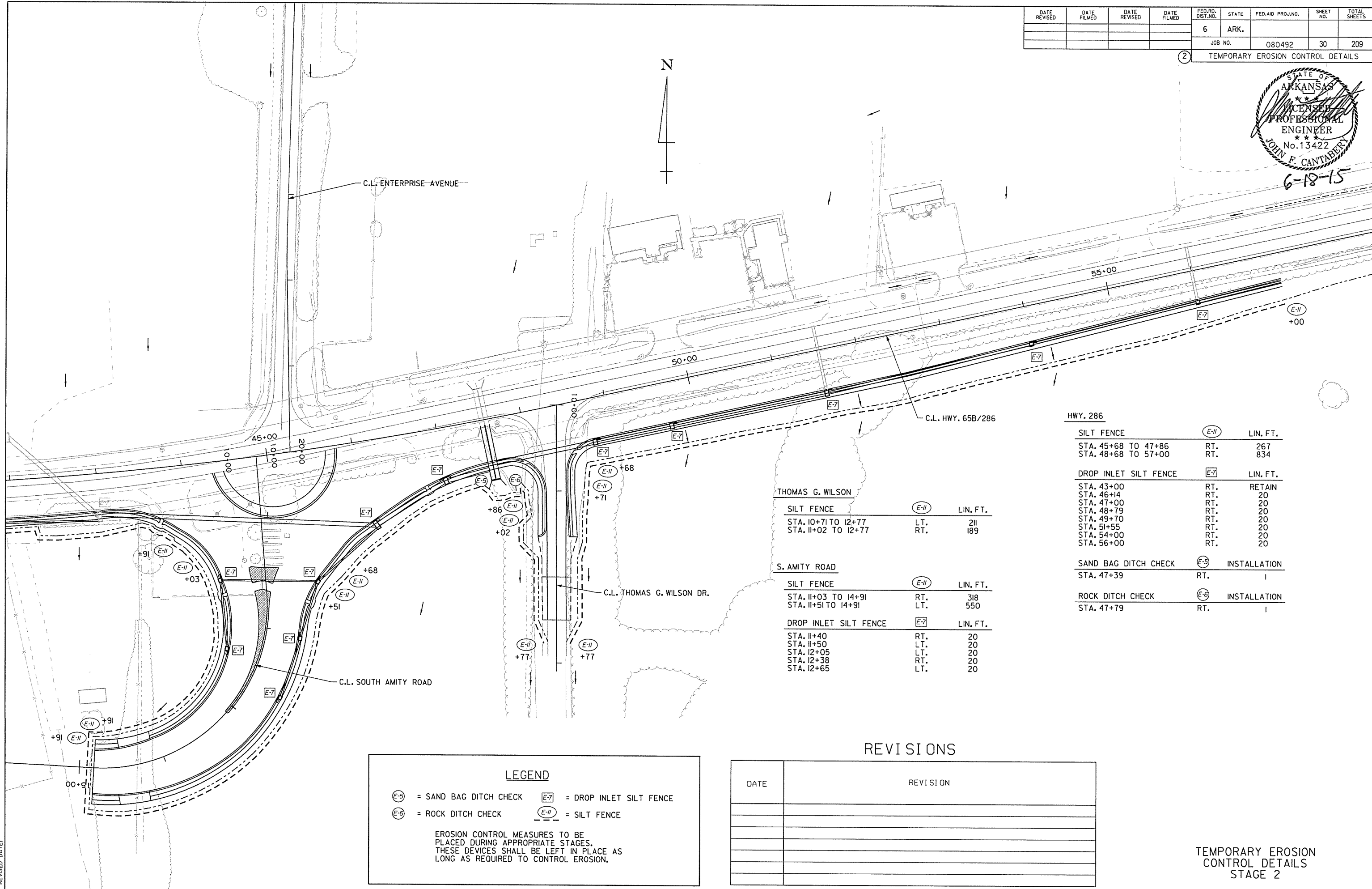
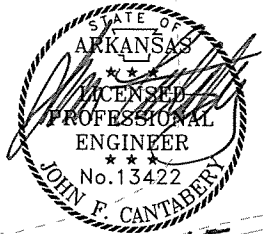


TEMPORARY EROSION CONTROL DETAILS
STAGE 2

c:\piper\vasini\3/12/2015 10:04:39 AM
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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	30	209	

2 TEMPORARY EROSION CONTROL DETAILS



HWY. 286		
SILT FENCE	(E-11)	LIN. FT.
STA. 45+68 TO 47+86	RT.	267
STA. 48+68 TO 57+00	RT.	834
DROP INLET SILT FENCE		
(E-7)		LIN. FT.
STA. 43+00	RT.	RETAIN
STA. 46+14	RT.	20
STA. 47+00	RT.	20
STA. 48+79	RT.	20
STA. 49+70	RT.	20
STA. 51+55	RT.	20
STA. 54+00	RT.	20
STA. 56+00	RT.	20
SAND BAG DITCH CHECK		
(E-5)	INSTALLATION	
STA. 47+39	RT.	1
ROCK DITCH CHECK		
(E-6)	INSTALLATION	
STA. 47+79	RT.	1

THOMAS G. WILSON		
SILT FENCE	(E-11)	LIN. FT.
STA. 10+71 TO 12+77	LT.	211
STA. 11+02 TO 12+77	RT.	189
S. AMITY ROAD		
SILT FENCE	(E-11)	LIN. FT.
STA. 11+03 TO 14+91	RT.	318
STA. 11+51 TO 14+91	LT.	550
DROP INLET SILT FENCE		
(E-7)		LIN. FT.
STA. 11+40	RT.	20
STA. 11+50	LT.	20
STA. 12+05	LT.	20
STA. 12+38	RT.	20
STA. 12+65	LT.	20

LEGEND

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

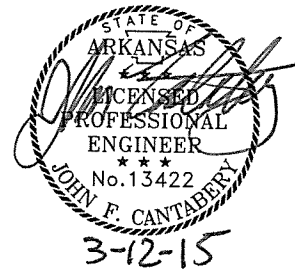
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

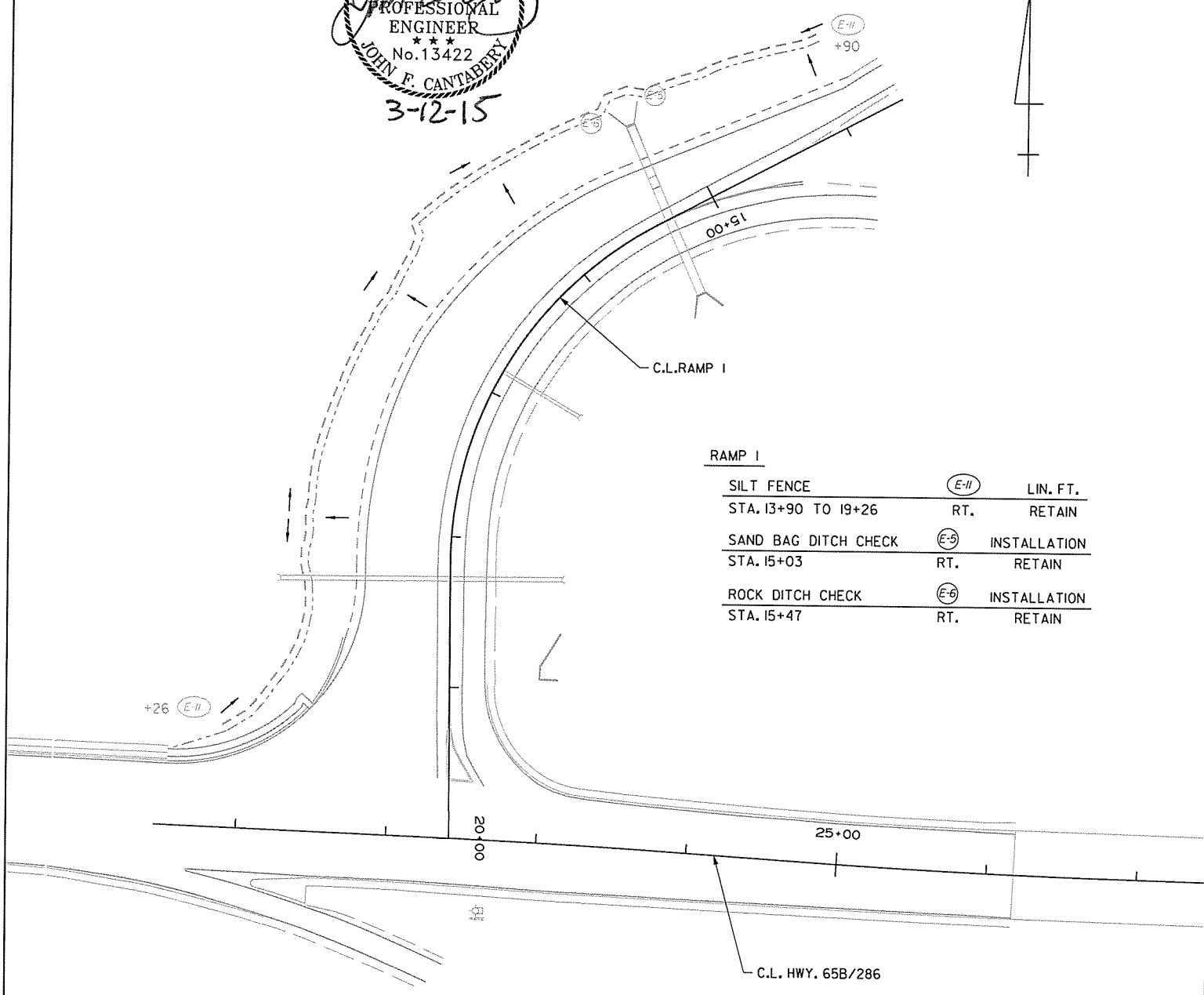
DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS STAGE 2

6/18/2015 11:26:53 PM
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 REVISION DATE:

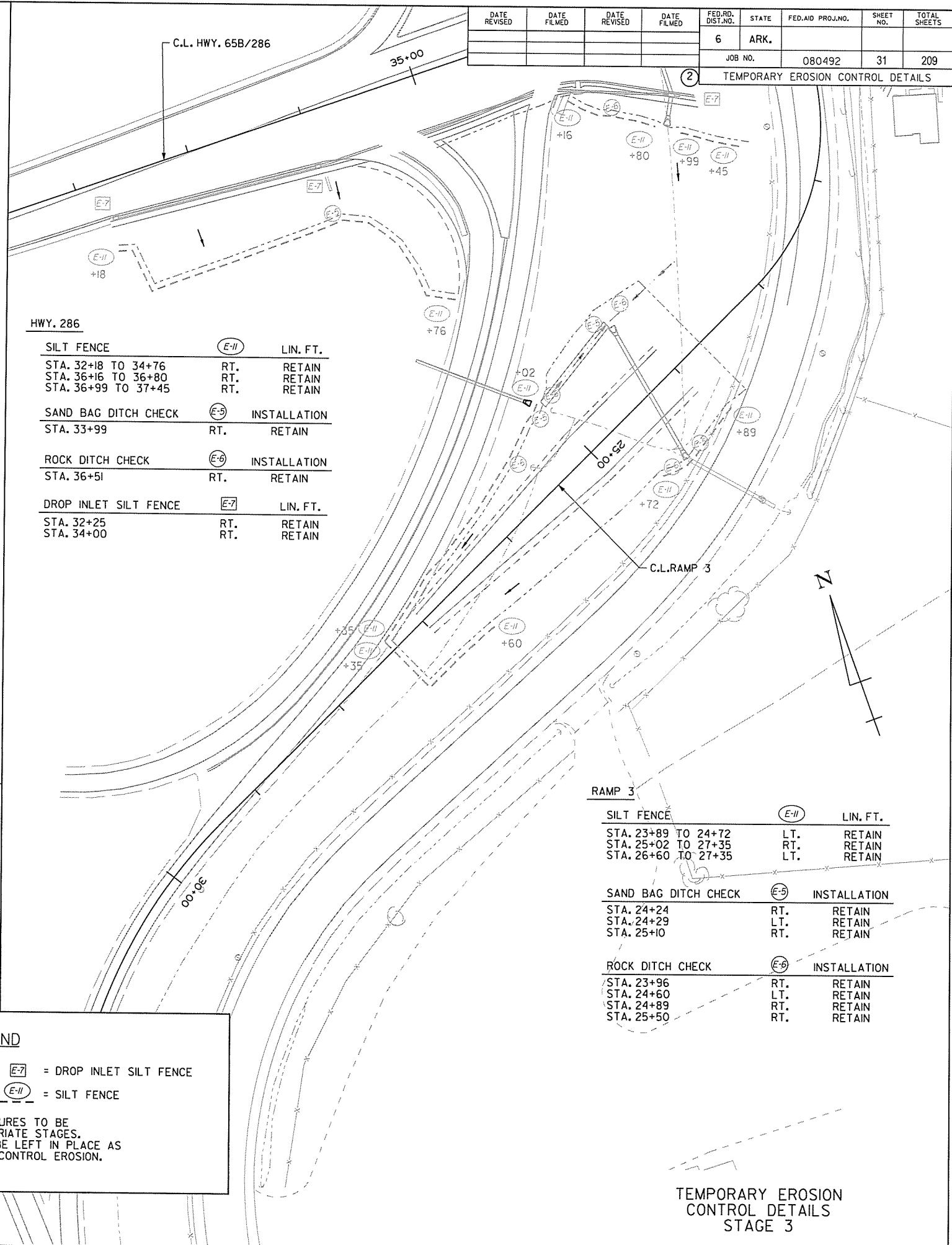


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		31	209
TEMPORARY EROSION CONTROL DETAILS								



RAMP 1

MEASURE	SYMBOL	DIRECTION	LIN. FT.
SILT FENCE	E-11	RT.	RETAIN
STA. 13+90 TO 19+26			
SAND BAG DITCH CHECK	E-5	RT.	RETAIN
STA. 15+03			
ROCK DITCH CHECK	E-6	RT.	RETAIN
STA. 15+47			



HWY. 286

MEASURE	SYMBOL	DIRECTION	LIN. FT.
SILT FENCE	E-11	RT.	RETAIN
STA. 32+18 TO 34+76			
STA. 36+16 TO 36+80		RT.	RETAIN
STA. 36+99 TO 37+45		RT.	RETAIN
SAND BAG DITCH CHECK	E-5	RT.	RETAIN
STA. 33+99			
ROCK DITCH CHECK	E-6	RT.	RETAIN
STA. 36+51			
DROP INLET SILT FENCE	E-7	RT.	RETAIN
STA. 32+25			
STA. 34+00			

RAMP 3

MEASURE	SYMBOL	DIRECTION	LIN. FT.
SILT FENCE	E-11	LT.	RETAIN
STA. 23+89 TO 24+72			
STA. 25+02 TO 27+35		RT.	RETAIN
STA. 26+60 TO 27+35		LT.	RETAIN
SAND BAG DITCH CHECK	E-5	RT.	RETAIN
STA. 24+24			
STA. 24+29		LT.	RETAIN
STA. 25+10		RT.	RETAIN
ROCK DITCH CHECK	E-6	RT.	RETAIN
STA. 23+96			
STA. 24+60		LT.	RETAIN
STA. 24+89		RT.	RETAIN
STA. 25+50		RT.	RETAIN

REVISIONS

DATE	REVISION

LEGEND

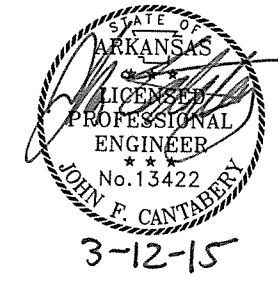
- E-5 = SAND BAG DITCH CHECK
- E-6 = ROCK DITCH CHECK
- E-7 = DROP INLET SILT FENCE
- E-11 = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS STAGE 3

3/12/2015 10:04:42 AM
 WORKSPACE: AHTD
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							32	209
(2) TEMPORARY EROSION CONTROL DETAILS								



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 38+93 TO 44+87	LT.	624
STA. 38+89 TO 43+91	RT.	RETAIN

DROP INLET SILT FENCE

(E-7)	LIN. FT.
STA. 41+00	RT. RETAIN
STA. 42+00	LT. RETAIN
STA. 37+03	LT. RETAIN
STA. 37+03	RT. RETAIN
STA. 39+41	LT. 20
STA. 40+35	LT. 20
STA. 37+35	LT. 20

N. AMITY ROAD

SILT FENCE	(E-11)	LIN. FT.
STA. 22+20 TO 22+66	LT.	75
STA. 22+20 TO 23+55	RT.	149
STA. 23+04 TO 25+16	LT.	268
STA. 25+59 TO 28+74	LT.	353

DROP INLET SILT FENCE

(E-7)	LIN. FT.
STA. 25+50	RT. 20
STA. 26+75	RT. 20
STA. 28+73	LT. 20

SAND BAG DITCH CHECK INSTALLATION

(E-5)	INSTALLATION
STA. 26+30	LT. 1

RAMP 4

SILT FENCE	(E-11)	LIN. FT.
STA. 42+91 TO 45+59	LT.	274

DROP INLET SILT FENCE

(E-7)	LIN. FT.
STA. 46+13	LT. 20
STA. 48+38	LT. 20
STA. 48+41	LT. 20
STA. 48+62	LT. 20

ROCK DITCH CHECK INSTALLATION

(E-6)	INSTALLATION
STA. 45+07	LT. 1

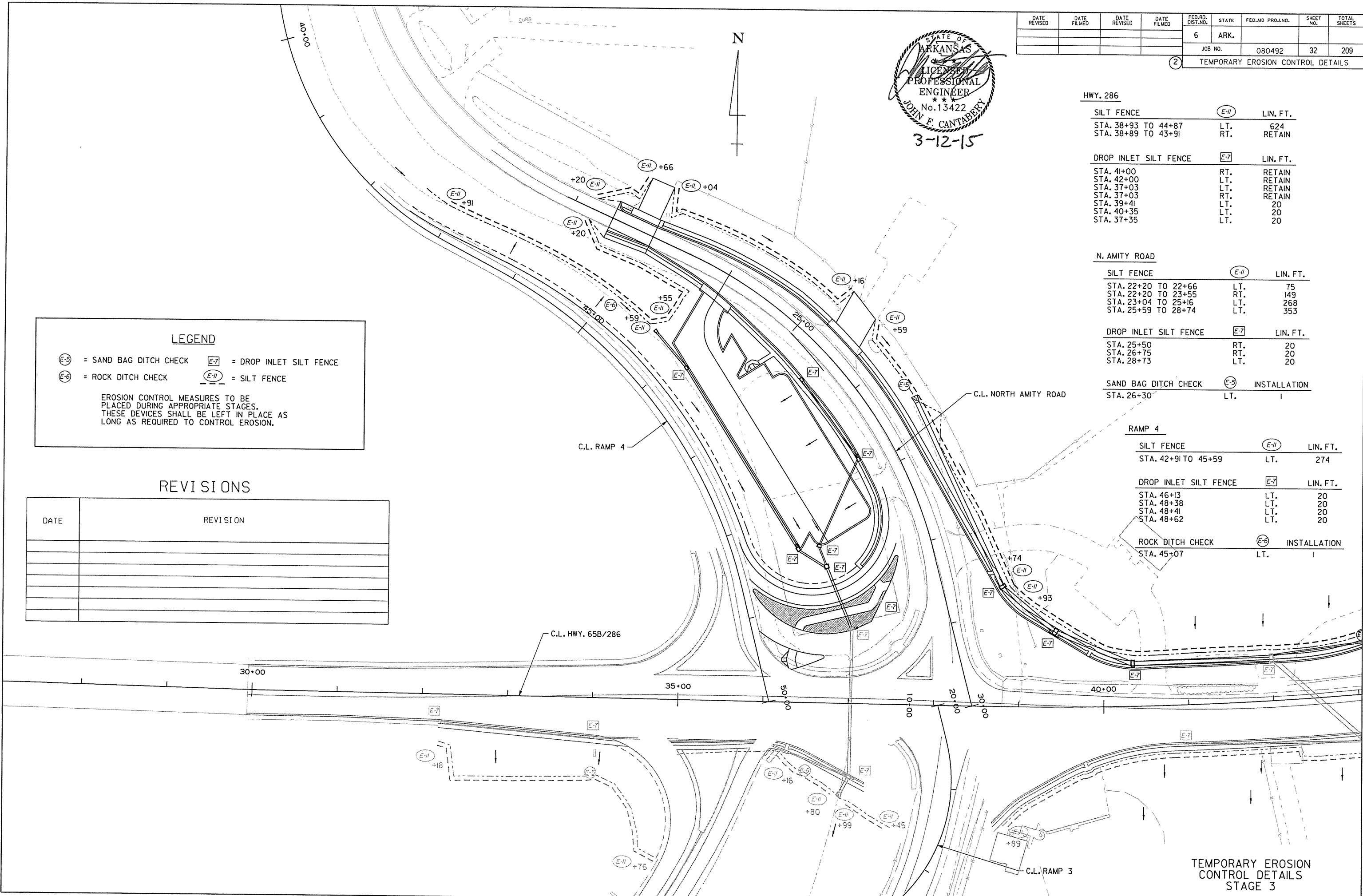
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION



**TEMPORARY EROSION CONTROL DETAILS
STAGE 3**

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WORKSPACE_AHTD
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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	080492
							SHEET NO.	33
							TOTAL SHEETS	209

2 TEMPORARY EROSION CONTROL DETAILS



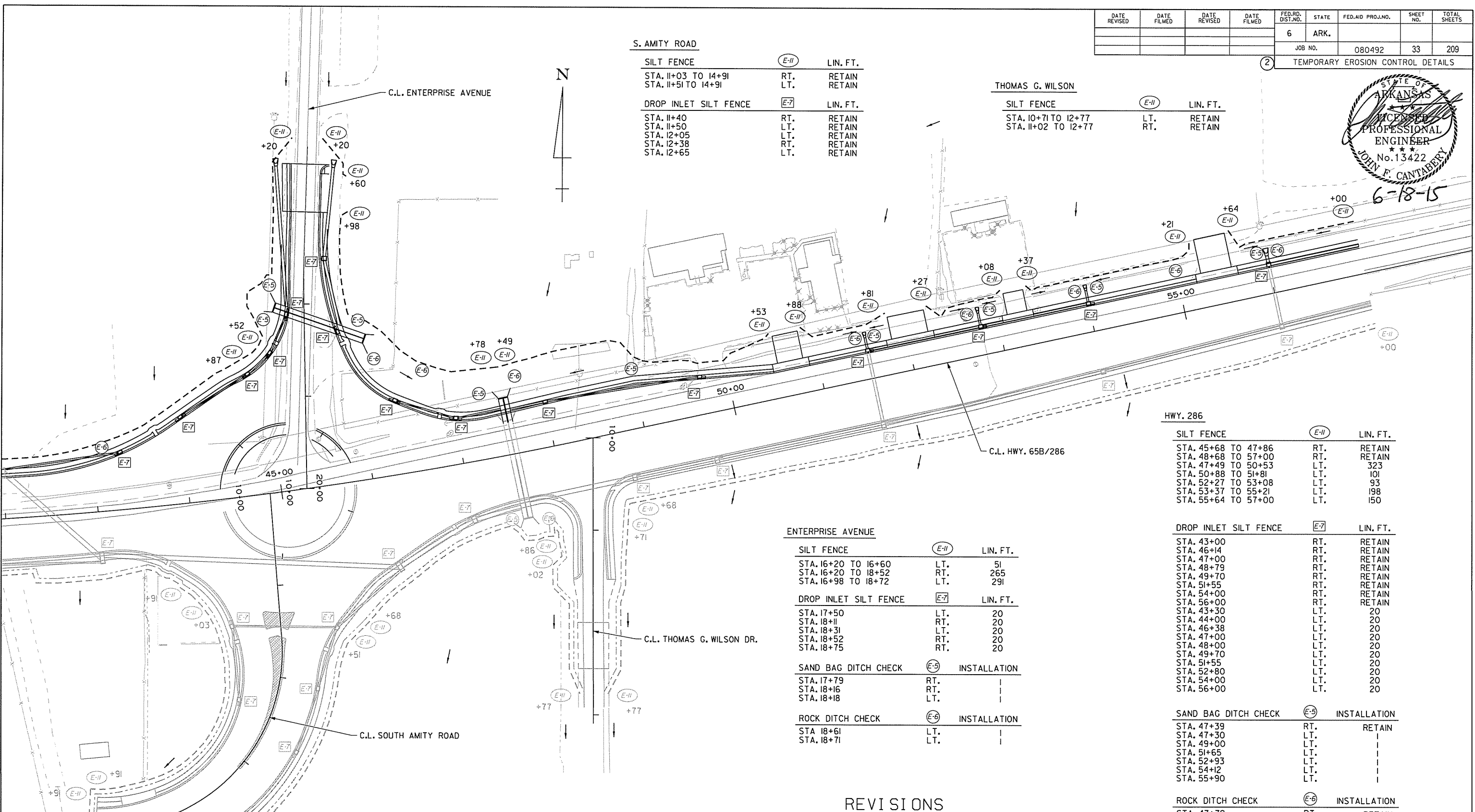
6-18-15

S. AMITY ROAD

SILT FENCE	(E-11)	LIN. FT.
STA. 11+03 TO 14+91	RT.	RETAIN
STA. 11+51 TO 14+91	LT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 11+40	RT.	RETAIN
STA. 11+50	LT.	RETAIN
STA. 12+05	LT.	RETAIN
STA. 12+38	RT.	RETAIN
STA. 12+65	LT.	RETAIN

THOMAS G. WILSON

SILT FENCE	(E-11)	LIN. FT.
STA. 10+71 TO 12+77	LT.	RETAIN
STA. 11+02 TO 12+77	RT.	RETAIN



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 45+68 TO 47+86	RT.	RETAIN
STA. 48+68 TO 57+00	RT.	RETAIN
STA. 47+49 TO 50+53	LT.	323
STA. 50+88 TO 51+81	LT.	101
STA. 52+27 TO 53+08	LT.	93
STA. 53+37 TO 55+21	LT.	198
STA. 55+64 TO 57+00	LT.	150

ENTERPRISE AVENUE

SILT FENCE	(E-11)	LIN. FT.
STA. 16+20 TO 16+60	LT.	51
STA. 16+20 TO 18+52	RT.	265
STA. 16+98 TO 18+72	LT.	291
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 17+50	LT.	20
STA. 18+11	RT.	20
STA. 18+31	LT.	20
STA. 18+52	RT.	20
STA. 18+75	RT.	20

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 17+79	RT.	
STA. 18+16	RT.	
STA. 18+18	LT.	

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 18+61	LT.	
STA. 18+71	LT.	

DROP INLET SILT FENCE

(E-7)	LIN. FT.
STA. 43+00	RT. RETAIN
STA. 46+14	RT. RETAIN
STA. 47+00	RT. RETAIN
STA. 48+79	RT. RETAIN
STA. 49+70	RT. RETAIN
STA. 51+55	RT. RETAIN
STA. 54+00	RT. RETAIN
STA. 56+00	RT. RETAIN
STA. 43+30	LT. 20
STA. 44+00	LT. 20
STA. 46+38	LT. 20
STA. 47+00	LT. 20
STA. 48+00	LT. 20
STA. 49+70	LT. 20
STA. 51+55	LT. 20
STA. 52+80	LT. 20
STA. 54+00	LT. 20
STA. 56+00	LT. 20

SAND BAG DITCH CHECK

(E-5)	INSTALLATION
STA. 47+39	RT. RETAIN
STA. 47+30	LT.
STA. 49+00	LT.
STA. 51+65	LT.
STA. 52+93	LT.
STA. 54+12	LT.
STA. 55+90	LT.

ROCK DITCH CHECK

(E-6)	INSTALLATION
STA. 47+79	RT. RETAIN
STA. 43+10	LT.
STA. 47+72	LT.
STA. 51+44	LT.
STA. 52+68	LT.
STA. 53+88	LT.
STA. 55+00	LT.
STA. 56+12	LT.

LEGEND

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

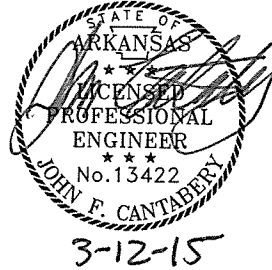
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

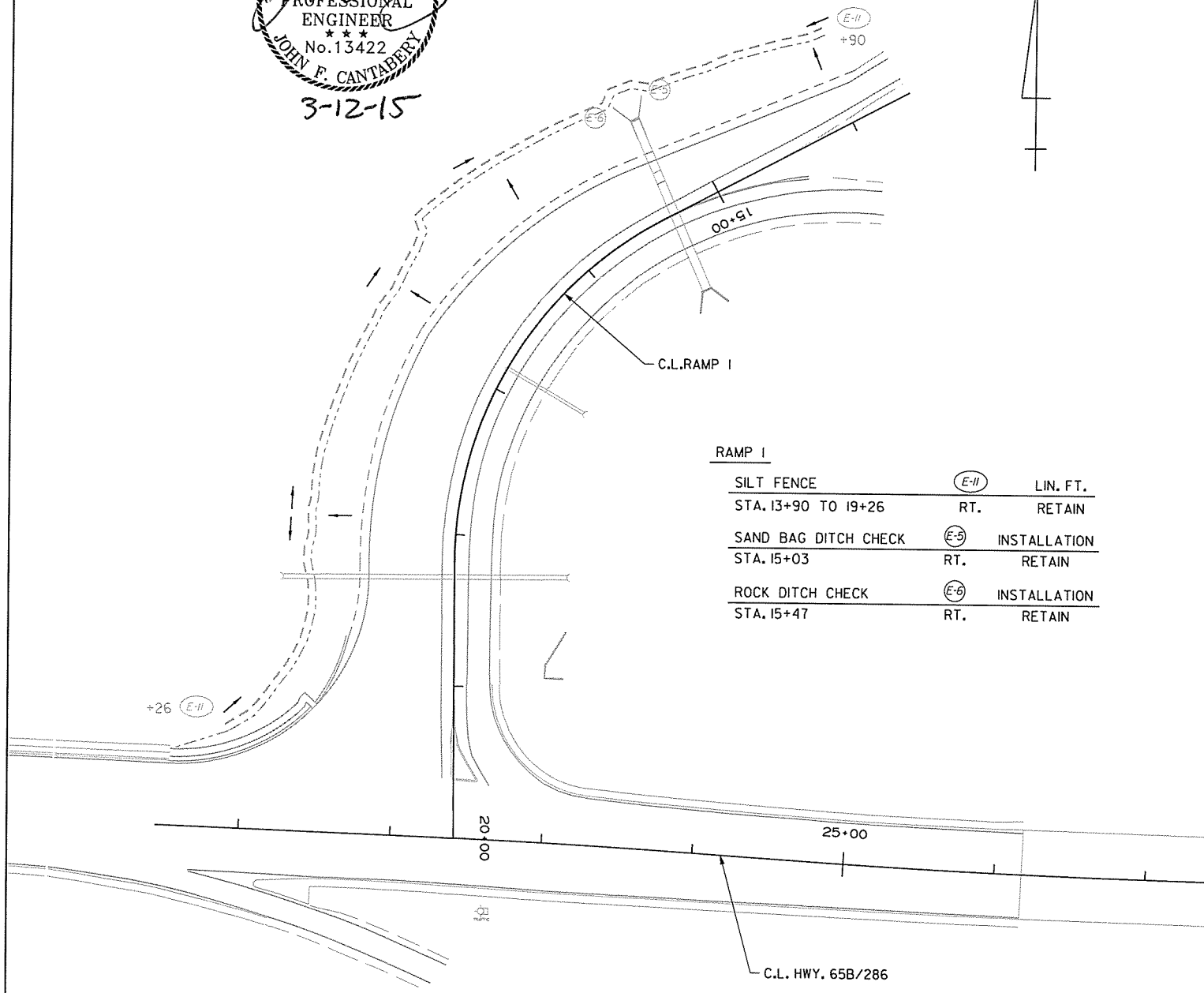
DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 3

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WORKSPACE: AHTD
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REVISION DATE:

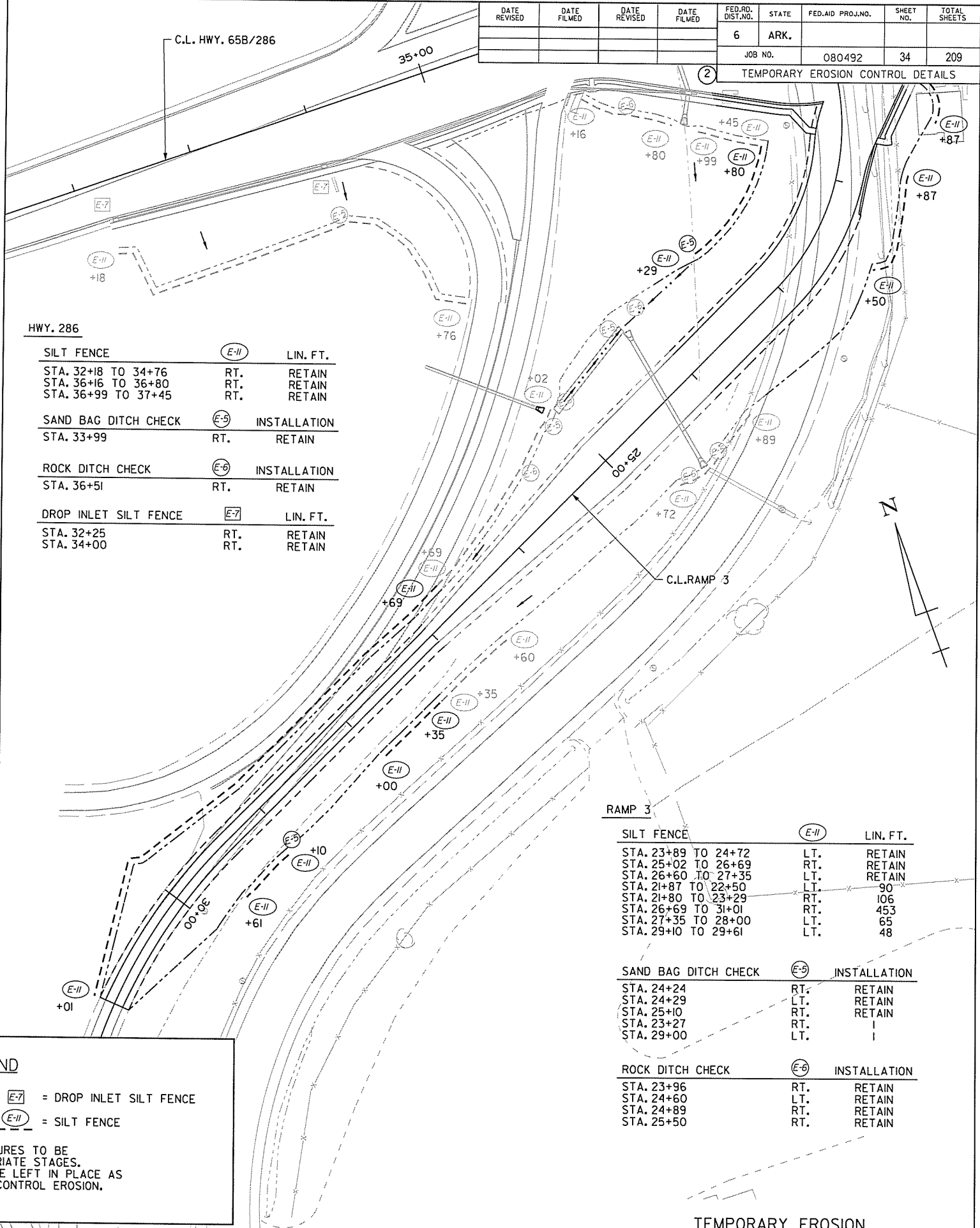


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							34	209
TEMPORARY EROSION CONTROL DETAILS								



RAMP 1

SILT FENCE	(E-11)	LIN. FT.
STA. 13+90 TO 19+26	RT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 15+03	RT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 15+47	RT.	RETAIN



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 32+18 TO 34+76	RT.	RETAIN
STA. 36+16 TO 36+80	RT.	RETAIN
STA. 36+99 TO 37+45	RT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 33+99	RT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 36+51	RT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 32+25	RT.	RETAIN
STA. 34+00	RT.	RETAIN

RAMP 3

SILT FENCE	(E-11)	LIN. FT.
STA. 23+89 TO 24+72	LT.	RETAIN
STA. 25+02 TO 26+69	RT.	RETAIN
STA. 26+60 TO 27+35	LT.	RETAIN
STA. 21+87 TO 22+50	LT.	90
STA. 21+80 TO 23+29	RT.	106
STA. 26+69 TO 31+01	RT.	453
STA. 27+35 TO 28+00	LT.	65
STA. 29+10 TO 29+61	LT.	48
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 24+24	RT.	RETAIN
STA. 24+29	LT.	RETAIN
STA. 25+10	RT.	RETAIN
STA. 23+27	RT.	1
STA. 29+00	LT.	1
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 23+96	RT.	RETAIN
STA. 24+60	LT.	RETAIN
STA. 24+89	RT.	RETAIN
STA. 25+50	RT.	RETAIN

REVISIONS

DATE	REVISION

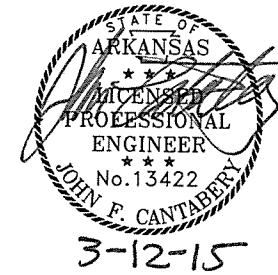
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS
STAGE 4A

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	209
							080492	35
(2) TEMPORARY EROSION CONTROL DETAILS								



HWY. 286		
SILT FENCE	(E-11)	LIN. FT.
STA. 38+93 TO 44+87	LT.	RETAIN
STA. 38+87 TO 38+89	RT.	38
STA. 38+89 TO 43+91	RT.	RETAIN
DROP INLET SILT FENCE (E-7)		
STA. 41+00	RT.	RETAIN
STA. 42+00	LT.	RETAIN
STA. 37+03	LT.	RETAIN
STA. 37+03	RT.	RETAIN
STA. 39+41	LT.	RETAIN
STA. 40+35	LT.	RETAIN
STA. 37+35	LT.	RETAIN
N. AMITY ROAD		
SILT FENCE (E-11)		LIN. FT.
STA. 22+20 TO 22+66	LT.	RETAIN
STA. 22+20 TO 23+55	RT.	RETAIN
STA. 23+04 TO 25+16	LT.	RETAIN
STA. 25+59 TO 28+74	LT.	RETAIN
DROP INLET SILT FENCE (E-7)		
STA. 25+50	RT.	RETAIN
STA. 26+75	RT.	RETAIN
STA. 28+73	LT.	RETAIN
SAND BAG DITCH CHECK (E-5) INSTALLATION		
STA. 26+30	LT.	RETAIN

RAMP 4		
SILT FENCE (E-11)		LIN. FT.
STA. 42+91 TO 45+59	LT.	RETAIN
DROP INLET SILT FENCE (E-7)		
STA. 46+13	LT.	RETAIN
STA. 48+38	LT.	RETAIN
STA. 48+41	LT.	RETAIN
STA. 48+62	LT.	RETAIN
ROCK DITCH CHECK (E-6) INSTALLATION		
STA. 45+07	LT.	RETAIN

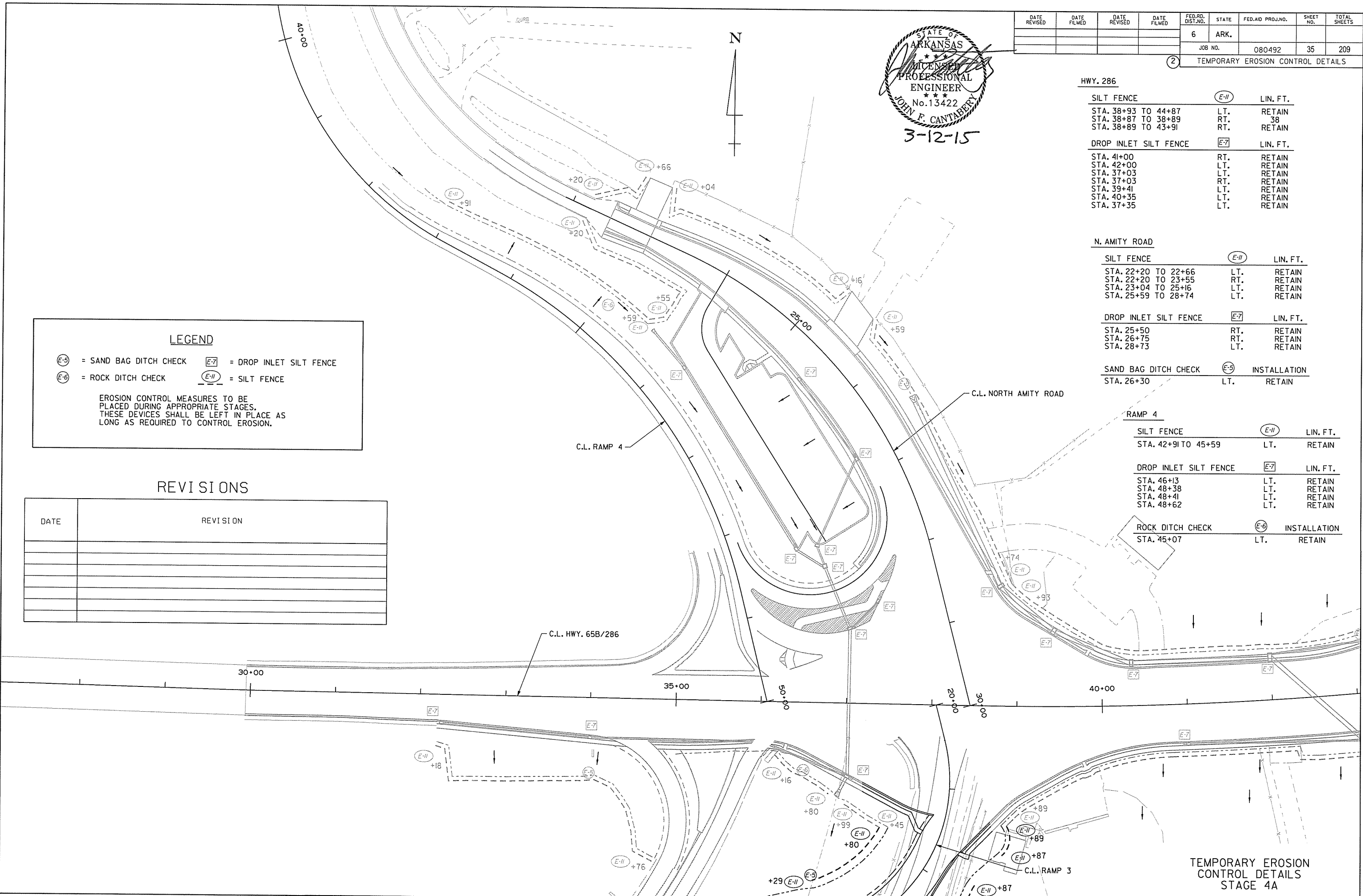
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

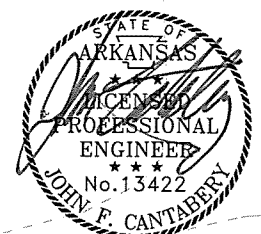


**TEMPORARY EROSION CONTROL DETAILS
STAGE 4A**

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		36	209

2 TEMPORARY EROSION CONTROL DETAILS



6-18-15

S. AMITY ROAD

SILT FENCE	(E-II)	LIN. FT.
STA. 11+03 TO 14+91	RT.	RETAIN
STA. 11+51 TO 14+91	LT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 11+40	RT.	RETAIN
STA. 11+50	LT.	RETAIN
STA. 12+05	LT.	RETAIN
STA. 12+38	RT.	RETAIN
STA. 12+65	LT.	RETAIN

THOMAS G. WILSON

SILT FENCE	(E-II)	LIN. FT.
STA. 10+71 TO 12+77	LT.	RETAIN
STA. 11+02 TO 12+77	RT.	RETAIN

HWY. 286

SILT FENCE	(E-II)	LIN. FT.
STA. 45+68 TO 47+86	RT.	RETAIN
STA. 48+68 TO 57+00	RT.	RETAIN
STA. 47+49 TO 50+53	LT.	RETAIN
STA. 50+88 TO 51+81	LT.	RETAIN
STA. 52+27 TO 53+08	LT.	RETAIN
STA. 53+37 TO 55+21	LT.	RETAIN
STA. 55+64 TO 57+00	LT.	RETAIN

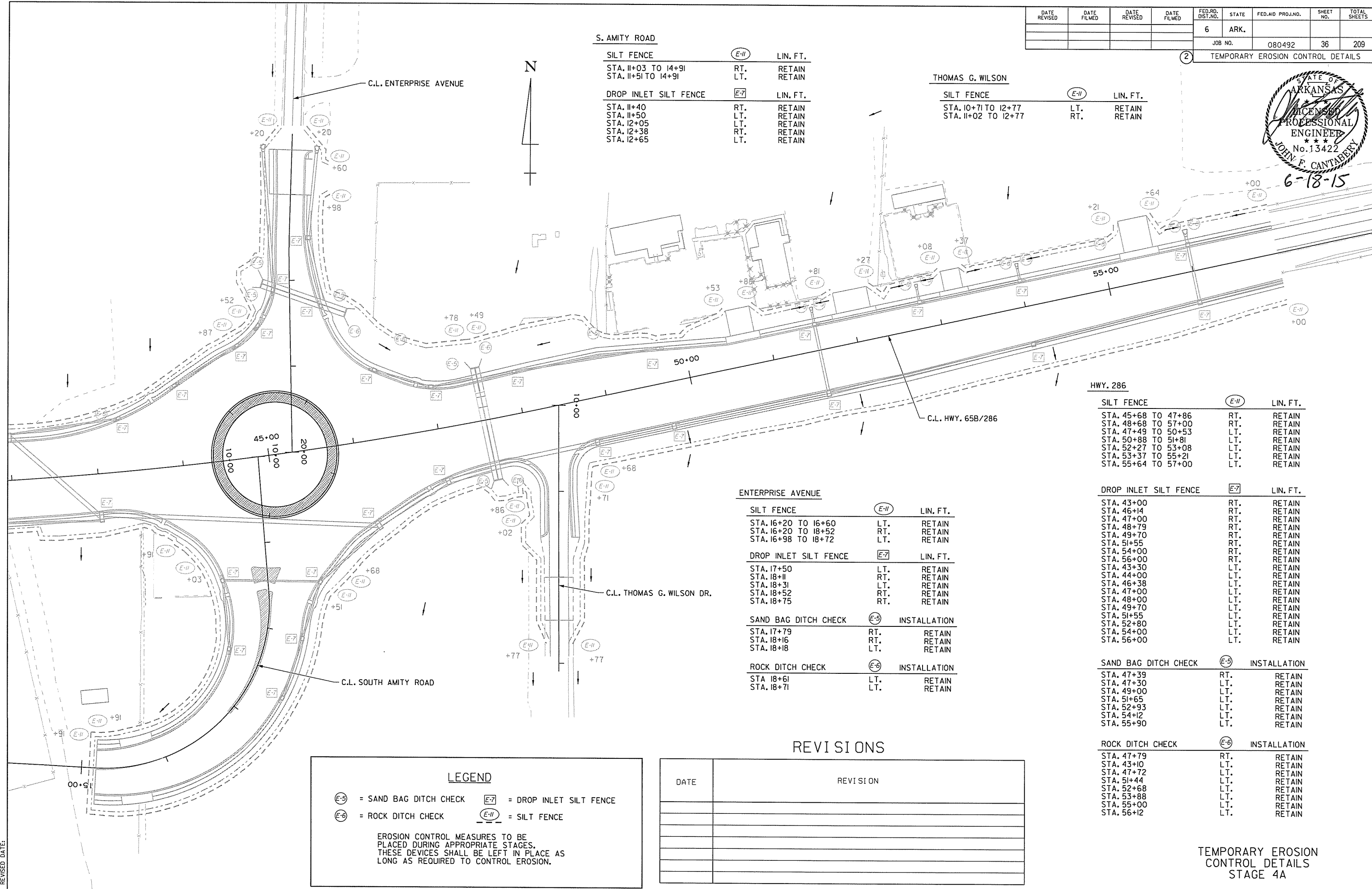
ENTERPRISE AVENUE

SILT FENCE	(E-II)	LIN. FT.
STA. 16+20 TO 16+60	LT.	RETAIN
STA. 16+20 TO 18+52	RT.	RETAIN
STA. 16+98 TO 18+72	LT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 17+50	LT.	RETAIN
STA. 18+11	RT.	RETAIN
STA. 18+31	LT.	RETAIN
STA. 18+52	RT.	RETAIN
STA. 18+75	RT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 17+79	RT.	RETAIN
STA. 18+16	RT.	RETAIN
STA. 18+18	LT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 18+61	LT.	RETAIN
STA. 18+71	LT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 43+00	RT.	RETAIN
STA. 46+14	RT.	RETAIN
STA. 47+00	RT.	RETAIN
STA. 48+79	RT.	RETAIN
STA. 49+70	RT.	RETAIN
STA. 51+55	RT.	RETAIN
STA. 54+00	RT.	RETAIN
STA. 56+00	RT.	RETAIN
STA. 43+30	LT.	RETAIN
STA. 44+00	LT.	RETAIN
STA. 46+38	LT.	RETAIN
STA. 47+00	LT.	RETAIN
STA. 48+00	LT.	RETAIN
STA. 49+70	LT.	RETAIN
STA. 51+55	LT.	RETAIN
STA. 52+80	LT.	RETAIN
STA. 54+00	LT.	RETAIN
STA. 56+00	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 47+39	RT.	RETAIN
STA. 47+30	LT.	RETAIN
STA. 49+00	LT.	RETAIN
STA. 51+65	LT.	RETAIN
STA. 52+93	LT.	RETAIN
STA. 54+12	LT.	RETAIN
STA. 55+90	LT.	RETAIN

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 47+79	RT.	RETAIN
STA. 43+10	LT.	RETAIN
STA. 47+72	LT.	RETAIN
STA. 51+44	LT.	RETAIN
STA. 52+68	LT.	RETAIN
STA. 53+88	LT.	RETAIN
STA. 55+00	LT.	RETAIN
STA. 56+12	LT.	RETAIN



LEGEND

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

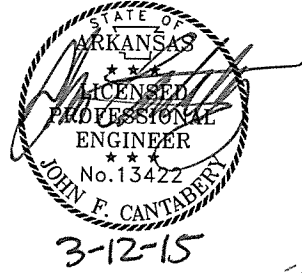
EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

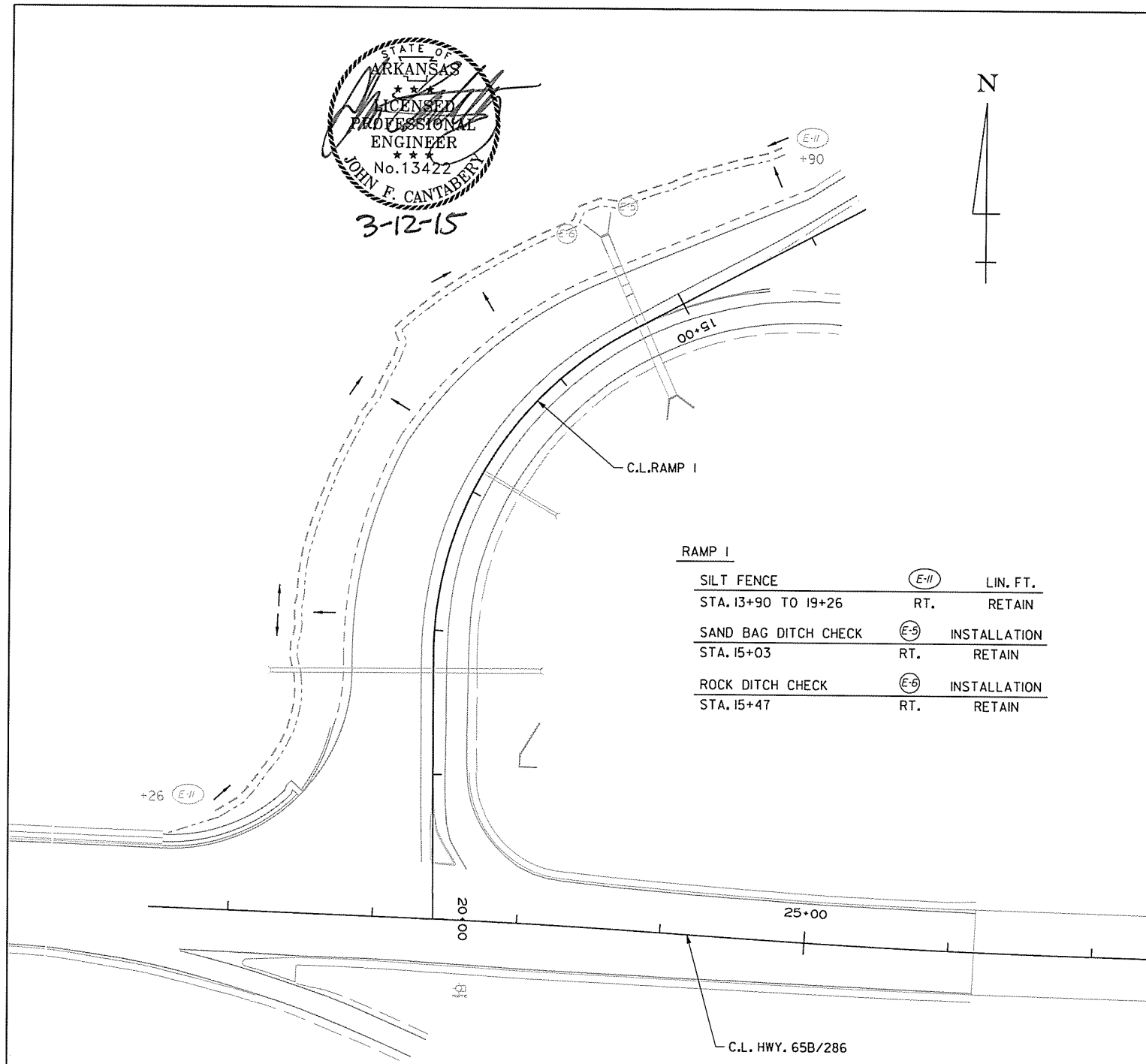
TEMPORARY EROSION CONTROL DETAILS STAGE 4A

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REVISION DATE:



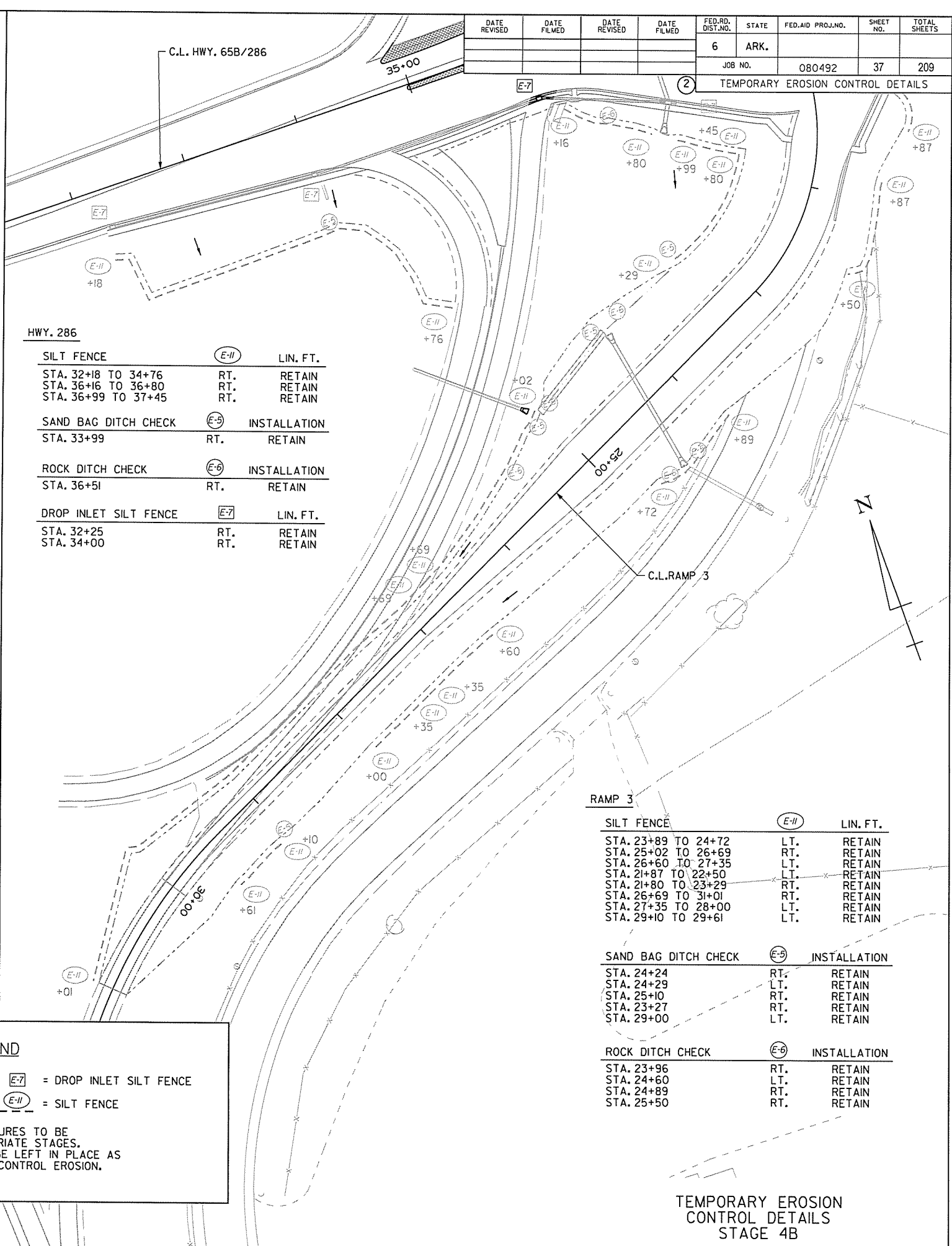
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	37	209

TEMPORARY EROSION CONTROL DETAILS



RAMP 1

SILT FENCE	(E-11)	LIN. FT.
STA. 13+90 TO 19+26	RT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 15+03	RT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 15+47	RT.	RETAIN



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 32+18 TO 34+76	RT.	RETAIN
STA. 36+16 TO 36+80	RT.	RETAIN
STA. 36+99 TO 37+45	RT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 33+99	RT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 36+51	RT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 32+25	RT.	RETAIN
STA. 34+00	RT.	RETAIN

RAMP 3

SILT FENCE	(E-11)	LIN. FT.
STA. 23+89 TO 24+72	LT.	RETAIN
STA. 25+02 TO 26+69	RT.	RETAIN
STA. 26+60 TO 27+35	LT.	RETAIN
STA. 21+87 TO 22+50	LT.	RETAIN
STA. 21+80 TO 23+29	RT.	RETAIN
STA. 26+69 TO 31+01	RT.	RETAIN
STA. 27+35 TO 28+00	LT.	RETAIN
STA. 29+10 TO 29+61	LT.	RETAIN
SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 24+24	RT.	RETAIN
STA. 24+29	LT.	RETAIN
STA. 25+10	RT.	RETAIN
STA. 23+27	RT.	RETAIN
STA. 29+00	LT.	RETAIN
ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 23+96	RT.	RETAIN
STA. 24+60	LT.	RETAIN
STA. 24+89	RT.	RETAIN
STA. 25+50	RT.	RETAIN

REVISIONS

DATE	REVISION

LEGEND

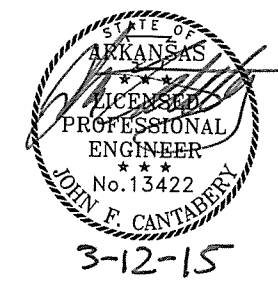
- (E-5) = SAND BAG DITCH CHECK
- (E-6) = ROCK DITCH CHECK
- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

TEMPORARY EROSION CONTROL DETAILS
STAGE 4B

3/12/2015 10:04:47 AM
 WORKSPACE: AHTD
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	38	209
(2) TEMPORARY EROSION CONTROL DETAILS								



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 38+93 TO 44+87	LT.	RETAIN
STA. 38+87 TO 38+89	RT.	RETAIN
STA. 38+89 TO 43+91	RT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 36+00	RT.	20
STA. 41+00	RT.	RETAIN
STA. 42+00	LT.	RETAIN
STA. 37+03	LT.	RETAIN
STA. 37+03	RT.	RETAIN
STA. 39+41	LT.	RETAIN
STA. 40+35	LT.	RETAIN
STA. 37+35	LT.	RETAIN

N. AMITY ROAD

SILT FENCE	(E-11)	LIN. FT.
STA. 22+20 TO 22+66	LT.	RETAIN
STA. 22+20 TO 23+55	RT.	RETAIN
STA. 23+04 TO 25+16	LT.	RETAIN
STA. 25+59 TO 28+74	LT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 25+50	RT.	RETAIN
STA. 26+75	RT.	RETAIN
STA. 28+73	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 26+30	LT.	RETAIN

RAMP 4

SILT FENCE	(E-11)	LIN. FT.
STA. 42+91 TO 45+59	LT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 46+13	LT.	RETAIN
STA. 48+38	LT.	RETAIN
STA. 48+41	LT.	RETAIN
STA. 48+62	LT.	RETAIN

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 45+07	LT.	RETAIN

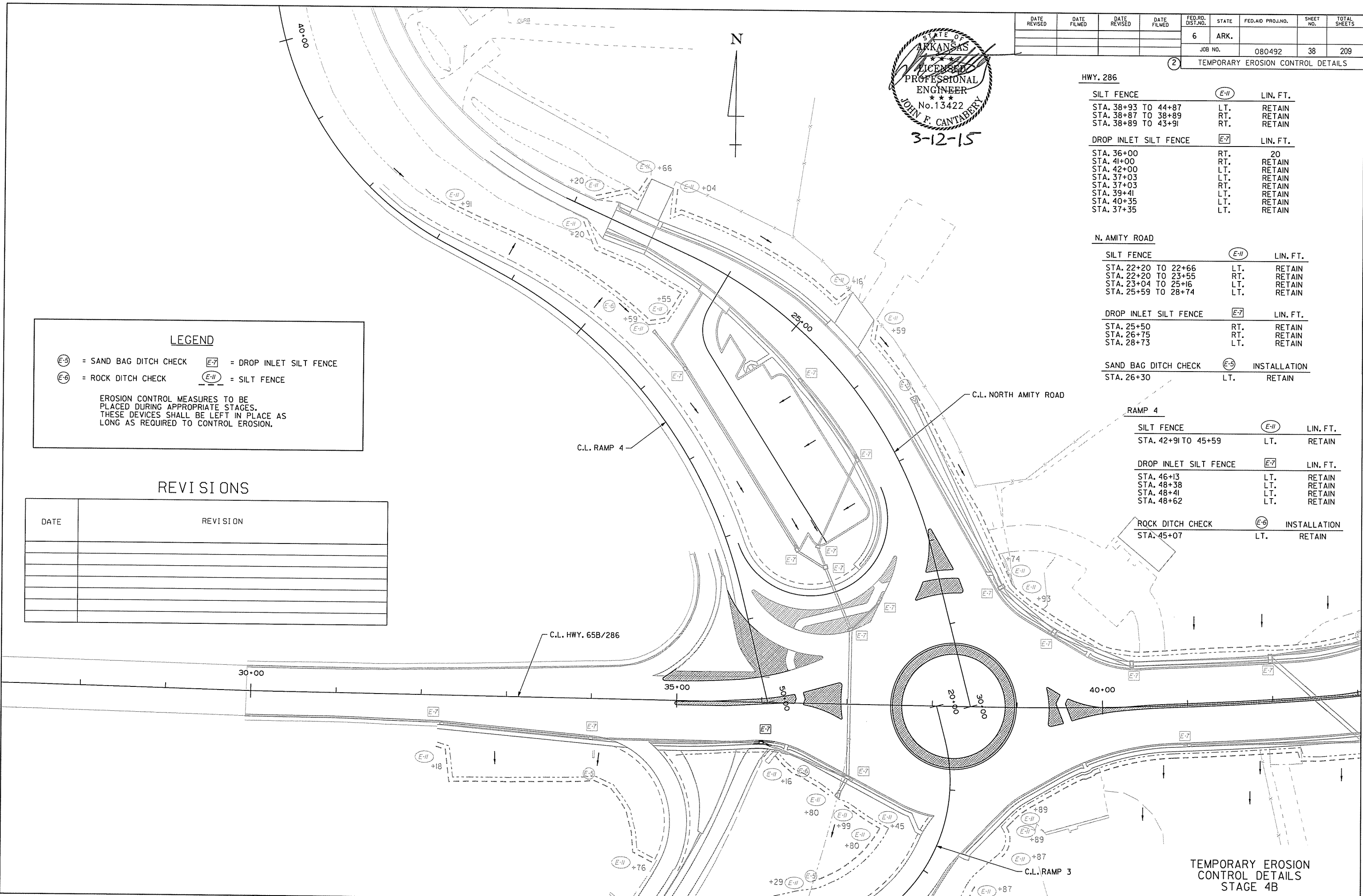
LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

REVISIONS

DATE	REVISION

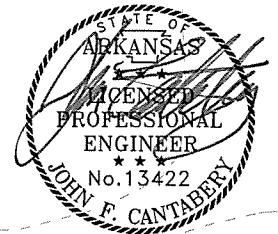


TEMPORARY EROSION CONTROL DETAILS
STAGE 4B

3/12/2015 10:04:48 AM
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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							39	209

2 TEMPORARY EROSION CONTROL DETAILS

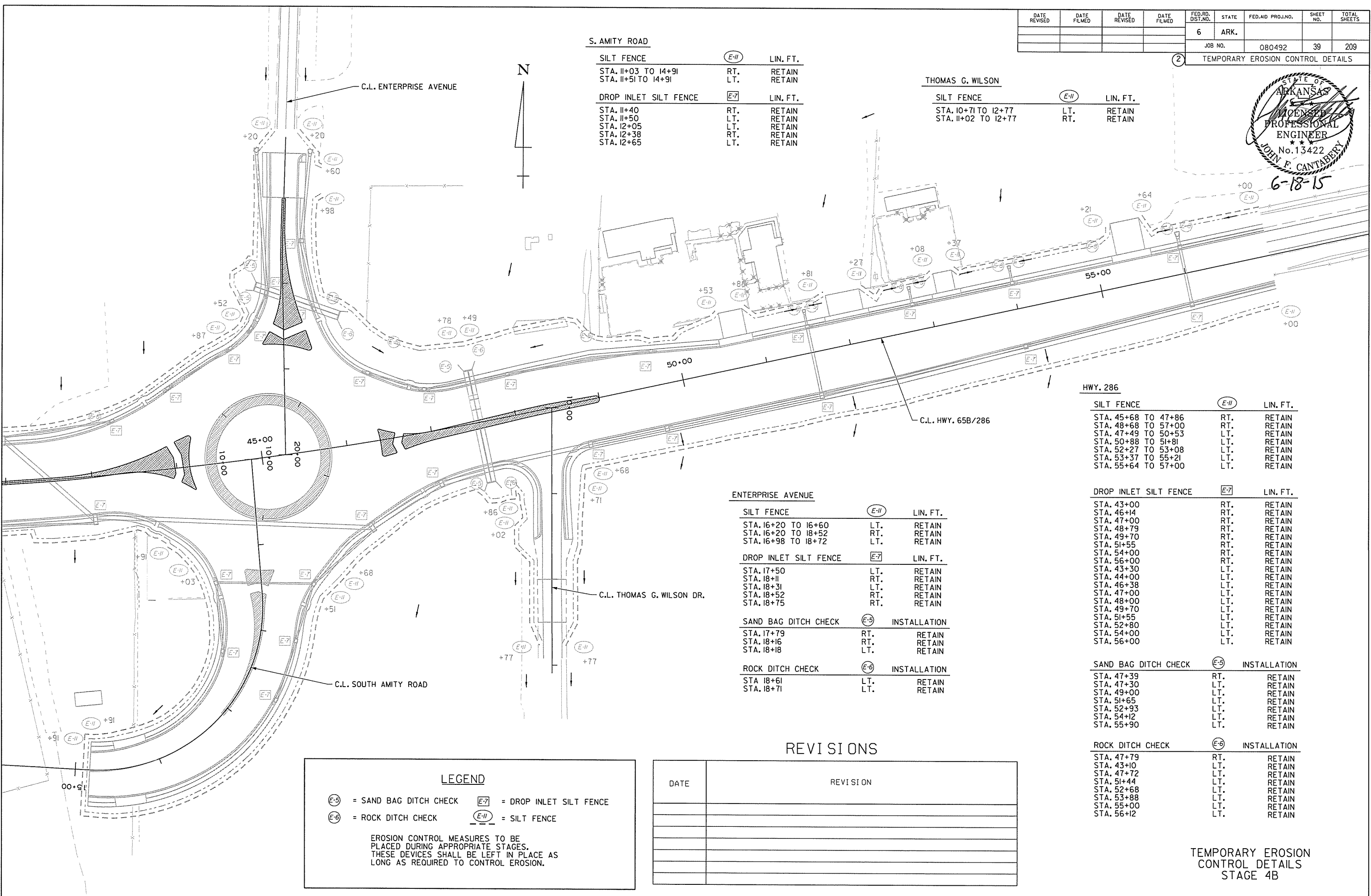


S. AMITY ROAD

SILT FENCE	(E-11)	LIN. FT.
STA. 11+03 TO 14+91	RT.	RETAIN
STA. 11+51 TO 14+91	LT.	RETAIN
DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 11+40	RT.	RETAIN
STA. 11+50	LT.	RETAIN
STA. 12+05	LT.	RETAIN
STA. 12+38	RT.	RETAIN
STA. 12+65	LT.	RETAIN

THOMAS G. WILSON

SILT FENCE	(E-11)	LIN. FT.
STA. 10+71 TO 12+77	LT.	RETAIN
STA. 11+02 TO 12+77	RT.	RETAIN



HWY. 286

SILT FENCE	(E-11)	LIN. FT.
STA. 45+68 TO 47+86	RT.	RETAIN
STA. 48+68 TO 57+00	RT.	RETAIN
STA. 47+49 TO 50+53	LT.	RETAIN
STA. 50+88 TO 51+81	LT.	RETAIN
STA. 52+27 TO 53+08	LT.	RETAIN
STA. 53+37 TO 55+21	LT.	RETAIN
STA. 55+64 TO 57+00	LT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 43+00	RT.	RETAIN
STA. 46+14	RT.	RETAIN
STA. 47+00	RT.	RETAIN
STA. 48+79	RT.	RETAIN
STA. 49+70	RT.	RETAIN
STA. 51+55	RT.	RETAIN
STA. 54+00	RT.	RETAIN
STA. 56+00	RT.	RETAIN
STA. 43+30	LT.	RETAIN
STA. 44+00	LT.	RETAIN
STA. 46+38	LT.	RETAIN
STA. 47+00	LT.	RETAIN
STA. 48+00	LT.	RETAIN
STA. 49+70	LT.	RETAIN
STA. 51+55	LT.	RETAIN
STA. 52+80	LT.	RETAIN
STA. 54+00	LT.	RETAIN
STA. 56+00	LT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 47+39	RT.	RETAIN
STA. 47+30	LT.	RETAIN
STA. 49+00	LT.	RETAIN
STA. 51+65	LT.	RETAIN
STA. 52+93	LT.	RETAIN
STA. 54+12	LT.	RETAIN
STA. 55+90	LT.	RETAIN

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 47+79	RT.	RETAIN
STA. 43+10	LT.	RETAIN
STA. 47+72	LT.	RETAIN
STA. 51+44	LT.	RETAIN
STA. 52+68	LT.	RETAIN
STA. 53+88	LT.	RETAIN
STA. 55+00	LT.	RETAIN
STA. 56+12	LT.	RETAIN

ENTERPRISE AVENUE

SILT FENCE	(E-11)	LIN. FT.
STA. 16+20 TO 16+60	LT.	RETAIN
STA. 16+20 TO 18+52	RT.	RETAIN
STA. 16+98 TO 18+72	LT.	RETAIN

DROP INLET SILT FENCE	(E-7)	LIN. FT.
STA. 17+50	LT.	RETAIN
STA. 18+11	RT.	RETAIN
STA. 18+31	LT.	RETAIN
STA. 18+52	RT.	RETAIN
STA. 18+75	RT.	RETAIN

SAND BAG DITCH CHECK	(E-5)	INSTALLATION
STA. 17+79	RT.	RETAIN
STA. 18+16	RT.	RETAIN
STA. 18+18	LT.	RETAIN

ROCK DITCH CHECK	(E-6)	INSTALLATION
STA. 18+61	LT.	RETAIN
STA. 18+71	LT.	RETAIN

LEGEND

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

EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES. THESE DEVICES SHALL BE LEFT IN PLACE AS LONG AS REQUIRED TO CONTROL EROSION.

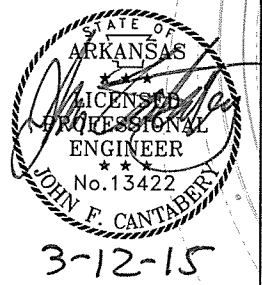
REVISIONS

DATE	REVISION

TEMPORARY EROSION CONTROL DETAILS
STAGE 4B

6/18/2015 12:26:55 PM
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	40	209	
(2) MAINTENANCE OF TRAFFIC DETAILS								



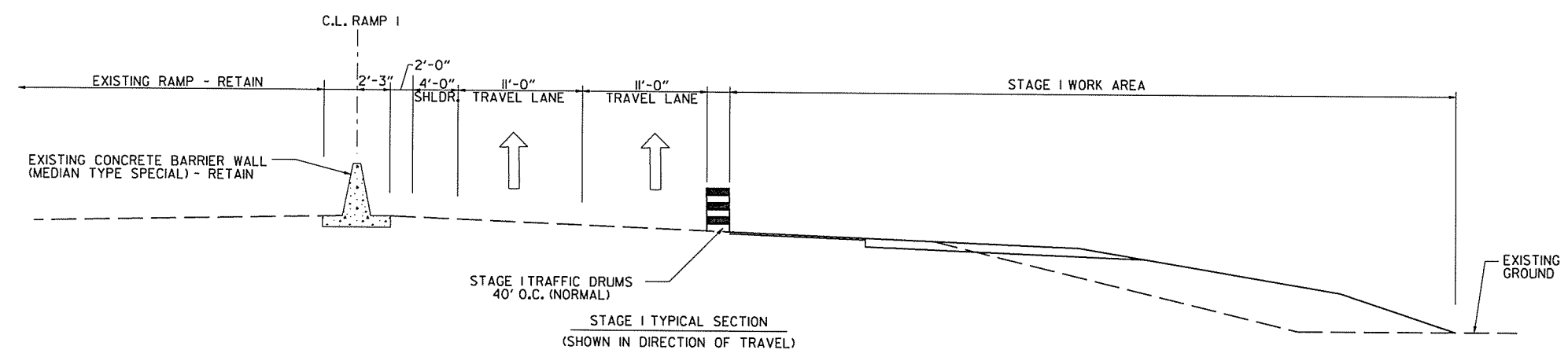
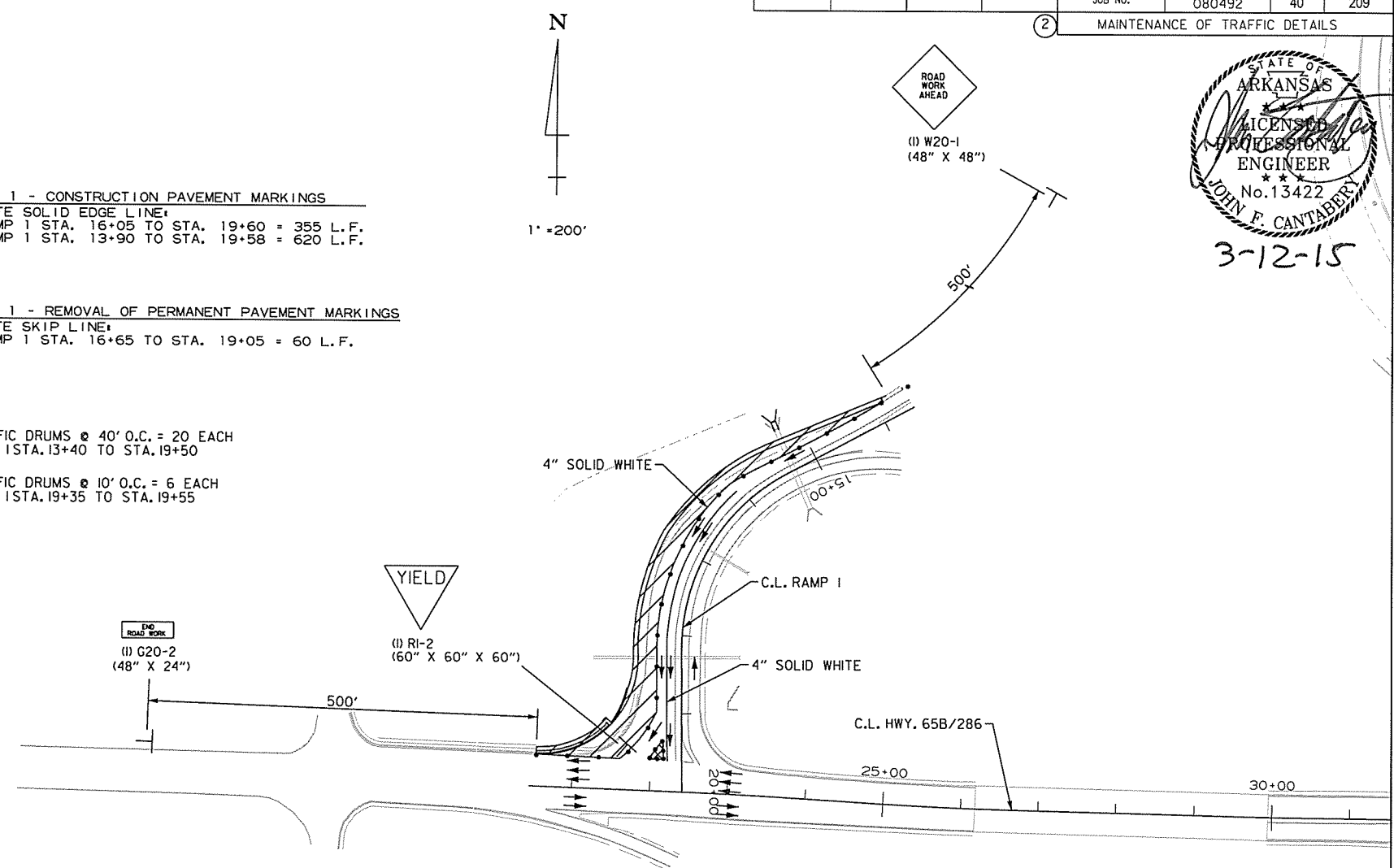
ALL STAGES	
DO NOT PASS (2) R4-1 (24" X 30")	SHOULDER CLOSED (4) RSP-1 (48" X 30")
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	

STAGE 1 - CONSTRUCTION PAVEMENT MARKINGS
 4" WHITE SOLID EDGE LINE:
 RAMP 1 STA. 16+05 TO STA. 19+60 = 355 L.F.
 RAMP 1 STA. 13+90 TO STA. 19+58 = 620 L.F.

STAGE 1 - REMOVAL OF PERMANENT PAVEMENT MARKINGS
 4" WHITE SKIP LINE:
 RAMP 1 STA. 16+65 TO STA. 19+05 = 60 L.F.

TRAFFIC DRUMS @ 40' O.C. = 20 EACH
 RAMP 1 STA. 13+40 TO STA. 19+50

TRAFFIC DRUMS @ 10' O.C. = 6 EACH
 RAMP 1 STA. 19+35 TO STA. 19+55



STAGE 1 CONSTRUCTION SEQUENCE NOTES

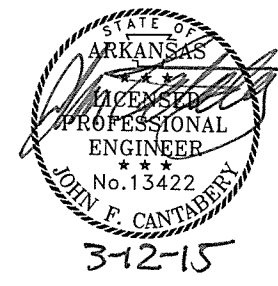
1. MAINTAIN TRAFFIC ON EXISTING LANES ON HWY. 65B/286. MAINTAIN TRAFFIC ON EXISTING TWO INSIDE LANES ON RAMP 1.
2. PLACE CONSTRUCTION PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS AS SHOWN BEFORE OPENING TO STAGE 1 TRAFFIC.
3. MAINTAIN AT LEAST 11' LANES DURING RAMP 1 CONSTRUCTION.
4. CONSTRUCT RAMP 1 AS SHOWN.

- STAGE I CONSTRUCTION (GRADING AND PAVING)
- STAGE I CONSTRUCTION (DEMOLISH AND RAISE TO GRADE)
- STAGE I TRAFFIC
- TRAFFIC DRUMS

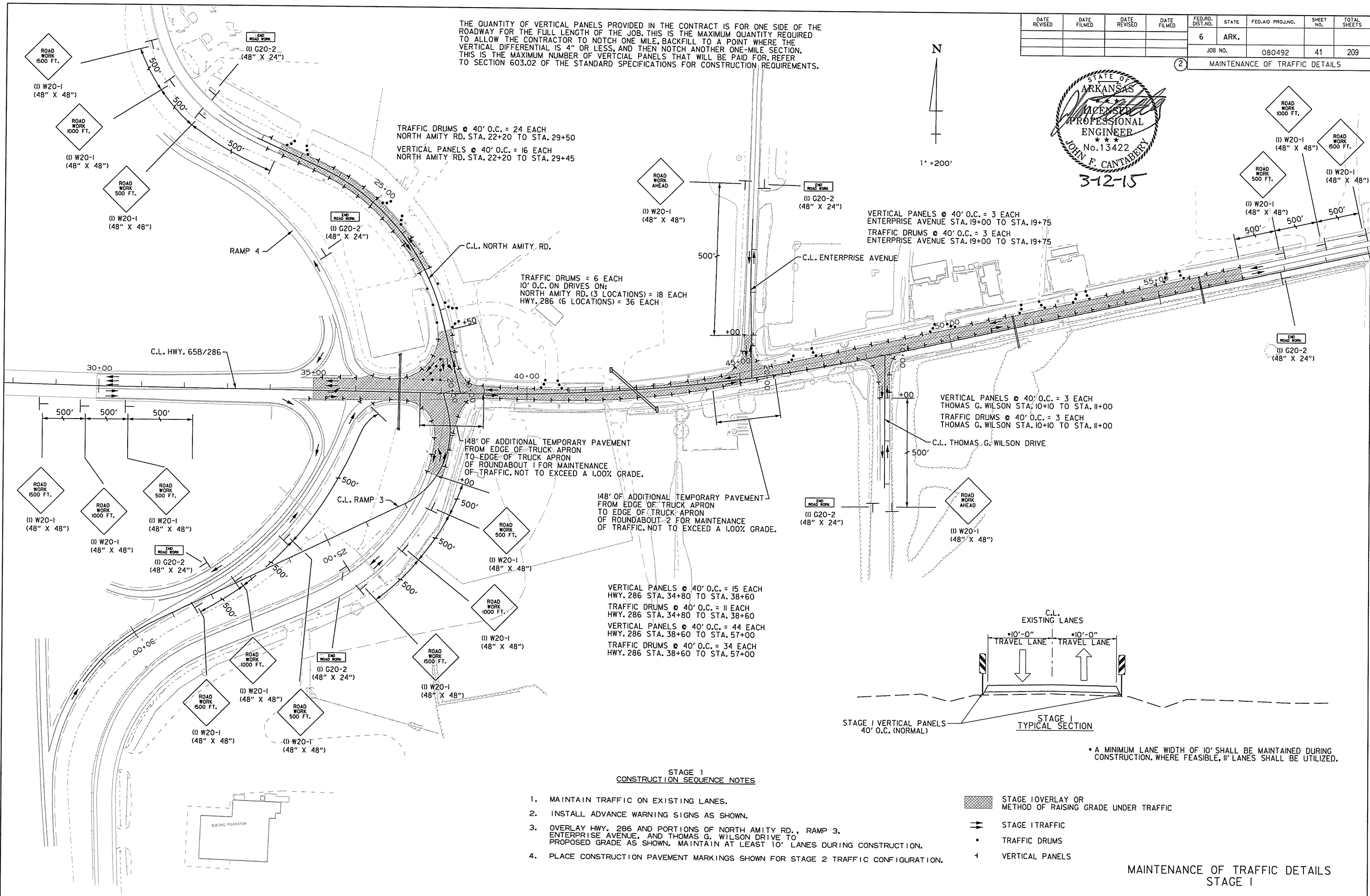
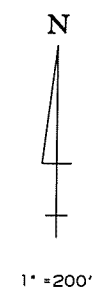
MAINTENANCE OF TRAFFIC DETAILS
 STAGE 1

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				6	ARK.			
				JOB NO.	080492	41	209	
② MAINTENANCE OF TRAFFIC DETAILS								



THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.



TRAFFIC DRUMS @ 40' O.C. = 24 EACH
NORTH AMITY RD. STA. 22+20 TO STA. 29+50
VERTICAL PANELS @ 40' O.C. = 16 EACH
NORTH AMITY RD. STA. 22+20 TO STA. 29+45

TRAFFIC DRUMS = 6 EACH
10' O.C. ON DRIVES ON:
NORTH AMITY RD. (3 LOCATIONS) = 18 EACH
HWY. 286 (6 LOCATIONS) = 36 EACH

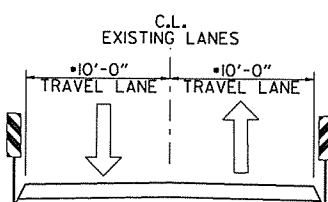
VERTICAL PANELS @ 40' O.C. = 3 EACH
ENTERPRISE AVENUE STA. 19+00 TO STA. 19+75
TRAFFIC DRUMS @ 40' O.C. = 3 EACH
ENTERPRISE AVENUE STA. 19+00 TO STA. 19+75

VERTICAL PANELS @ 40' O.C. = 3 EACH
THOMAS G. WILSON STA. 10+10 TO STA. 11+00
TRAFFIC DRUMS @ 40' O.C. = 3 EACH
THOMAS G. WILSON STA. 10+10 TO STA. 11+00

VERTICAL PANELS @ 40' O.C. = 15 EACH
HWY. 286 STA. 34+80 TO STA. 38+60
TRAFFIC DRUMS @ 40' O.C. = 11 EACH
HWY. 286 STA. 34+80 TO STA. 38+60
VERTICAL PANELS @ 40' O.C. = 44 EACH
HWY. 286 STA. 38+60 TO STA. 57+00
TRAFFIC DRUMS @ 40' O.C. = 34 EACH
HWY. 286 STA. 38+60 TO STA. 57+00

148' OF ADDITIONAL TEMPORARY PAVEMENT
FROM EDGE OF TRUCK APRON
TO EDGE OF TRUCK APRON
OF ROUNDABOUT 1 FOR MAINTENANCE
OF TRAFFIC. NOT TO EXCEED A 1.00% GRADE.

148' OF ADDITIONAL TEMPORARY PAVEMENT
FROM EDGE OF TRUCK APRON
TO EDGE OF TRUCK APRON
OF ROUNDABOUT 2 FOR MAINTENANCE
OF TRAFFIC. NOT TO EXCEED A 1.00% GRADE.



STAGE I VERTICAL PANELS
40' O.C. (NORMAL)

STAGE I TYPICAL SECTION

* A MINIMUM LANE WIDTH OF 10' SHALL BE MAINTAINED DURING CONSTRUCTION. WHERE FEASIBLE, 11' LANES SHALL BE UTILIZED.

STAGE 1
CONSTRUCTION SEQUENCE NOTES

1. MAINTAIN TRAFFIC ON EXISTING LANES.
2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
3. OVERLAY HWY. 286 AND PORTIONS OF NORTH AMITY RD., RAMP 3, ENTERPRISE AVENUE, AND THOMAS G. WILSON DRIVE TO PROPOSED GRADE AS SHOWN. MAINTAIN AT LEAST 10' LANES DURING CONSTRUCTION.
4. PLACE CONSTRUCTION PAVEMENT MARKINGS SHOWN FOR STAGE 2 TRAFFIC CONFIGURATION.

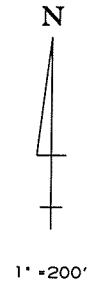
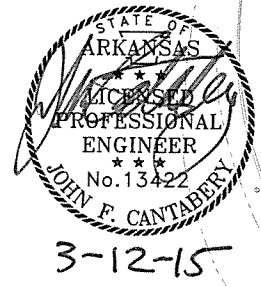
- STAGE I OVERLAY OR METHOD OF RAISING GRADE UNDER TRAFFIC
- STAGE I TRAFFIC
- TRAFFIC DRUMS
- VERTICAL PANELS

MAINTENANCE OF TRAFFIC DETAILS
STAGE I

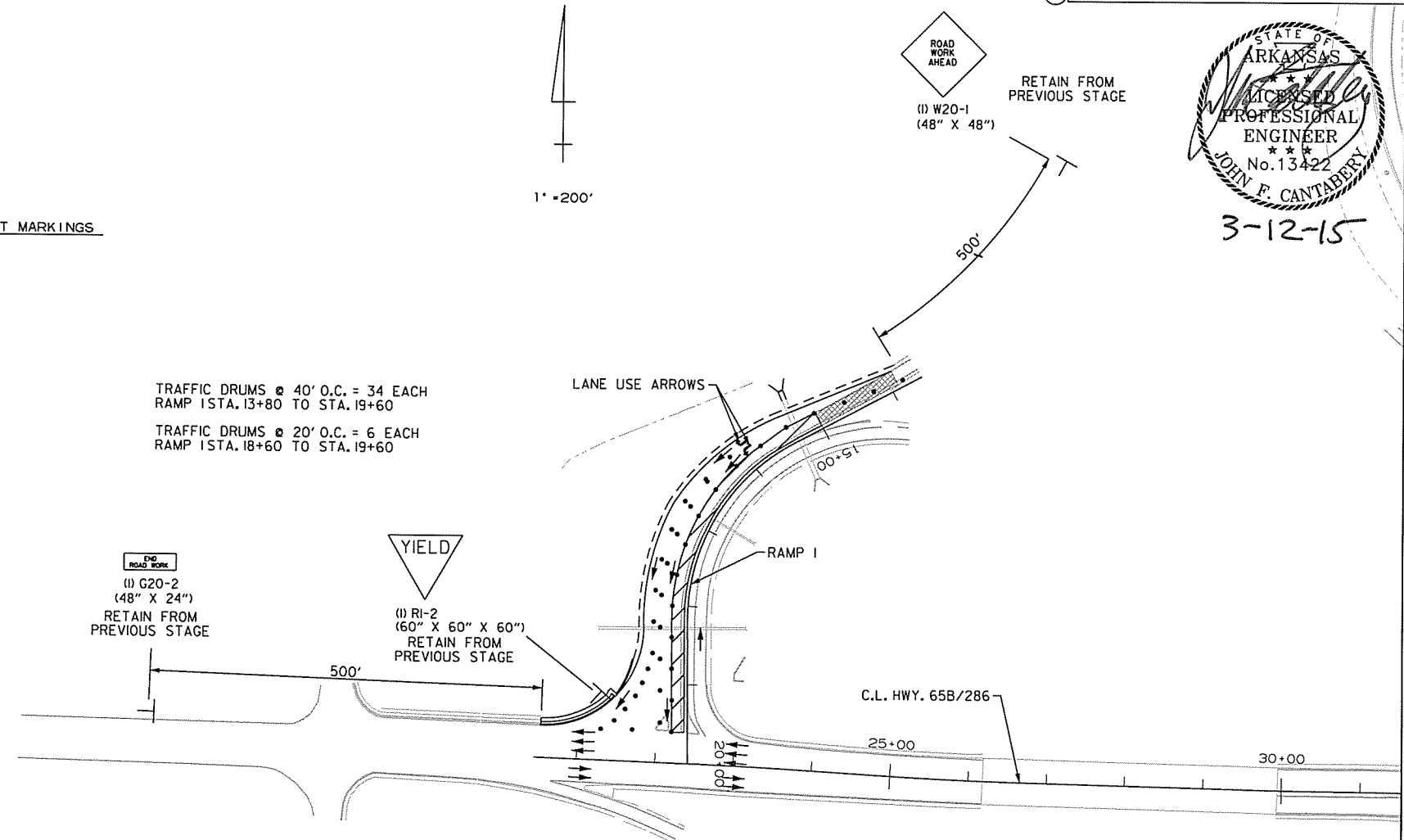
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				6	ARK.			
JOB NO. 080492							42	209

② MAINTENANCE OF TRAFFIC DETAILS



STAGE 2 - CONSTRUCTION PAVEMENT MARKINGS
ARROWS = 2 EACH

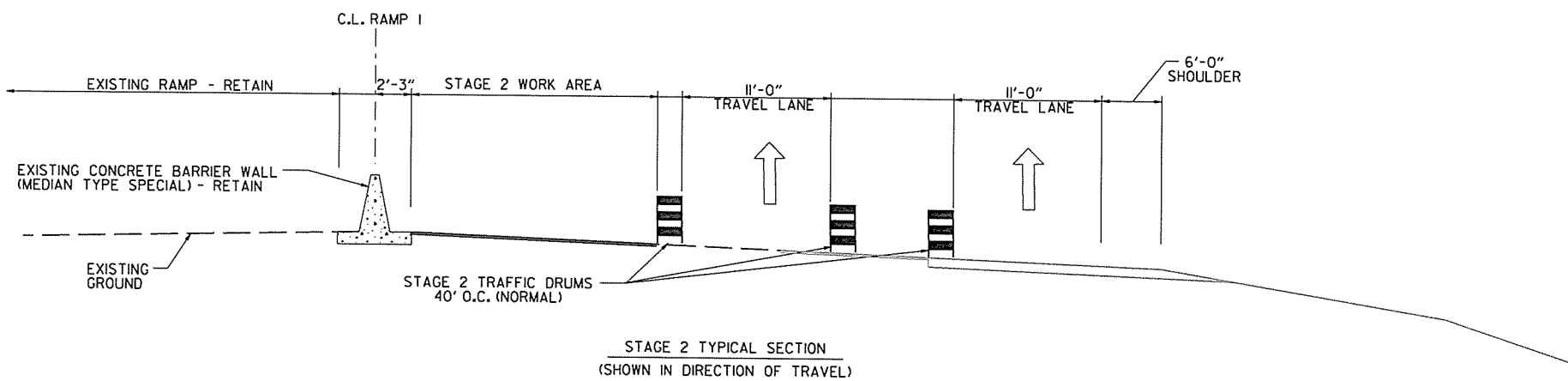


TRAFFIC DRUMS @ 40' O.C. = 34 EACH
RAMP 1 STA. 13+80 TO STA. 19+60

TRAFFIC DRUMS @ 20' O.C. = 6 EACH
RAMP 1 STA. 18+60 TO STA. 19+60

END ROAD WORK
(1) G20-2
(48" X 24")
RETAIN FROM PREVIOUS STAGE

YIELD
(1) R1-2
(60" X 60" X 60")
RETAIN FROM PREVIOUS STAGE



STAGE 2 TYPICAL SECTION
(SHOWN IN DIRECTION OF TRAVEL)

STAGE 2
CONSTRUCTION SEQUENCE NOTES

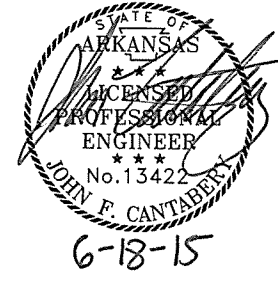
1. MAINTAIN TRAFFIC ON EXISTING LANES ON HWY. 65B/286.
2. PLACE CONSTRUCTION PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS AS SHOWN BEFORE OPENING TO STAGE 2 TRAFFIC.
3. MOVE TRAFFIC ON RAMP 1 TO CONFIGURATION SHOWN AND MAINTAIN AT LEAST 11' LANES.
4. CONSTRUCT RAMP 1 AS SHOWN.

- STAGE 2 CONSTRUCTION
- STAGE 2 OVERLAY UNDER TRAFFIC
- STAGE 2 TRAFFIC
- TRAFFIC DRUMS

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

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				6	ARK.			
JOB NO.						080492	43	209



THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

VERTICAL PANELS @ 40' O.C. = 31 EACH
HWY. 286 STA. 32+20 TO STA. 38+60
TRAFFIC DRUMS @ 40' O.C. = 7 EACH
HWY. 286 STA. 32+20 TO STA. 38+60

VERTICAL PANELS @ 40' O.C. = 45 EACH
HWY. 286 STA. 38+60 TO STA. 57+00
TRAFFIC DRUMS @ 40' O.C. = 33 EACH
HWY. 286 STA. 38+60 TO STA. 57+00

TRAFFIC DRUMS = 6 EACH
10' O.C. ON DRIVES ON:
NORTH AMITY RD. (3 LOCATIONS) = 18 EACH
HWY. 286 (7 LOCATIONS) = 42 EACH

STAGE 2 - CONSTRUCTION PAVEMENT MARKINGS

4" DOUBLE YELLOW CENTERLINE:
HWY. 286 STA. 35+00 TO STA. 57+00 = 4178 L.F.
NORTH AMITY RD. STA. 22+48 TO STA. 29+46 = 1096 L.F.
RAMP 3 STA. 20+36 TO STA. 22+03 = 336 L.F.

4" WHITE SOLID EDGE LINE:
HWY. 286 STA. 35+00 TO STA. 57+00 = 4148 L.F.
NORTH AMITY RD. STA. 22+48 TO STA. 29+90 = 1184 L.F.
RAMP 3 STA. 20+39 TO STA. 22+00 = 168 L.F.

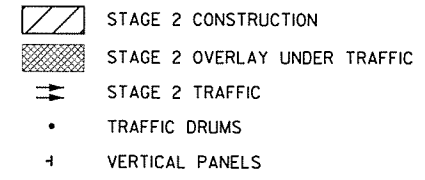
4" WHITE SOLID FOR TURN LANE LINES:
HWY. 286 STA. 35+00 TO STA. 37+59 = 261 L.F.
NORTH AMITY RD. STA. 28+95 TO STA. 29+44 = 50 L.F.
RAMP 3 STA. 20+39 TO STA. 22+00 = 168 L.F.

12" WHITE STOP BARS:
HWY. 286 = 50 L.F.
NORTH AMITY RD. = 24 L.F.
RAMP 3 = 36 L.F.

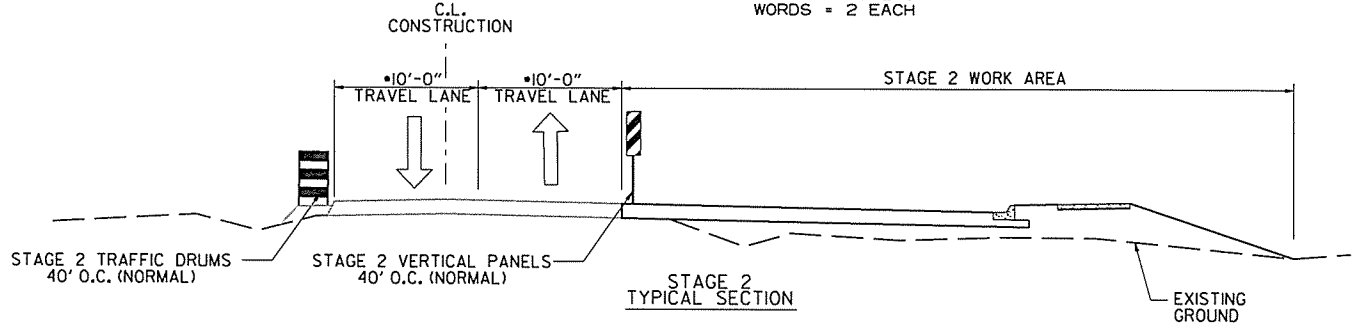
ARROWS = 3 EACH
WORDS = 2 EACH

STAGE 2 CONSTRUCTION SEQUENCE NOTES

1. MAINTAIN TRAFFIC ON EXISTING LANES.
2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
3. CONSTRUCT HWY. 286, RAMP 3, ROUNDABOUT 1, ROUNDABOUT 2, SOUTH AMITY RD., AND THOMAS G. WILSON AS SHOWN.
4. PLACE CONSTRUCTION PAVEMENT MARKINGS SHOWN FOR STAGE 3 TRAFFIC CONFIGURATION.



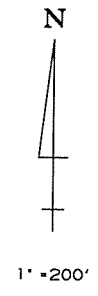
MAINTENANCE OF TRAFFIC DETAILS STAGE 2



* A MINIMUM LANE WIDTH OF 10' SHALL BE MAINTAINED DURING CONSTRUCTION. WHERE FEASIBLE, 11' LANES SHALL BE UTILIZED.

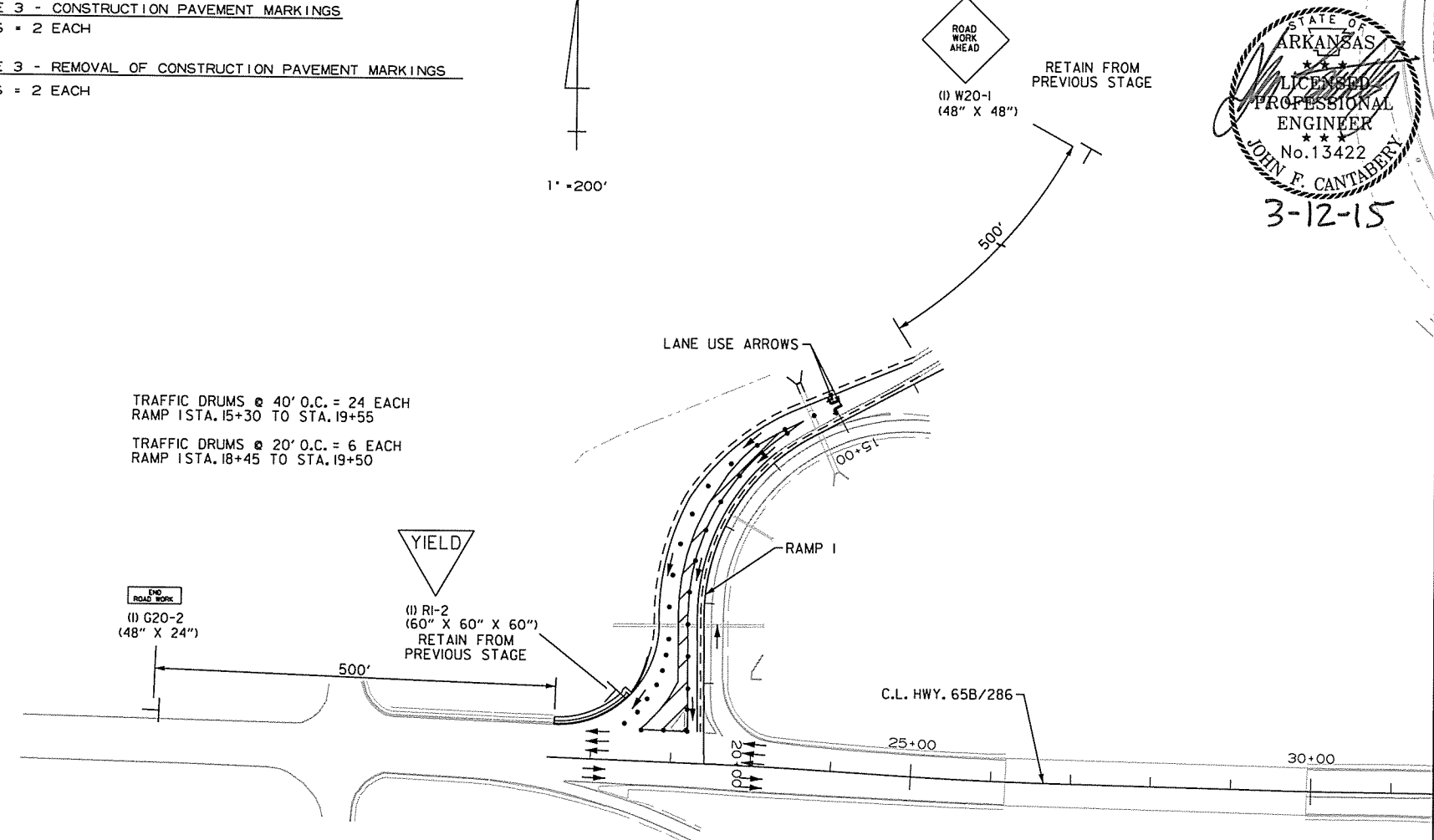
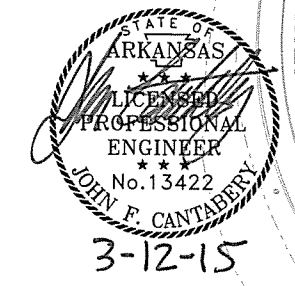
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				JOB NO.	080492	44	209	
② MAINTENANCE OF TRAFFIC DETAILS								



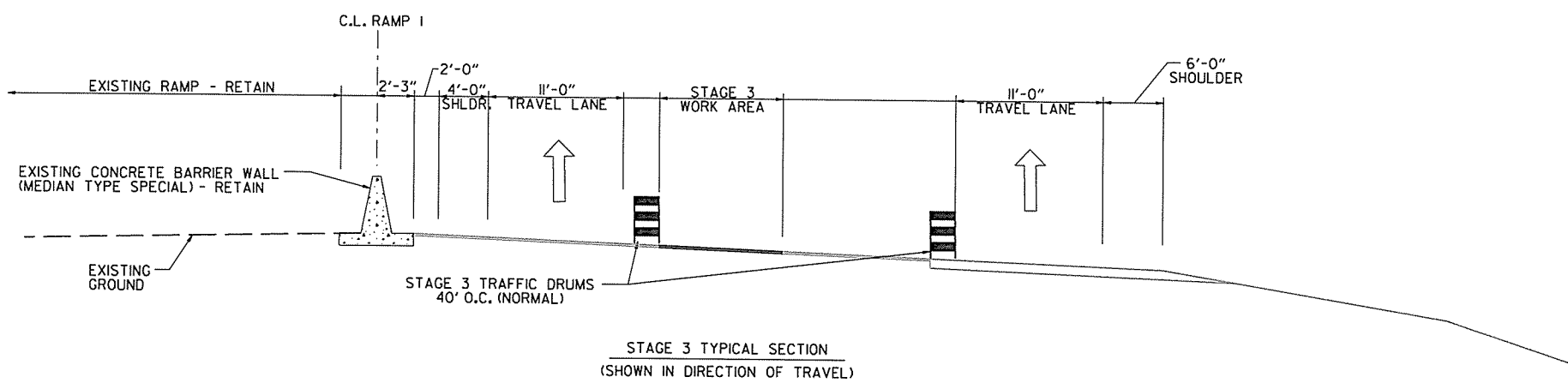
STAGE 3 - CONSTRUCTION PAVEMENT MARKINGS
ARROWS = 2 EACH

STAGE 3 - REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
ARROWS = 2 EACH



TRAFFIC DRUMS @ 40' O.C. = 24 EACH
RAMP 1 STA. 15+30 TO STA. 19+55

TRAFFIC DRUMS @ 20' O.C. = 6 EACH
RAMP 1 STA. 18+45 TO STA. 19+50



- STAGE 3 CONSTRUCTION SEQUENCE NOTES
1. MAINTAIN TRAFFIC ON EXISTING LANES ON HWY. 65B/286.
 2. PLACE CONSTRUCTION PAVEMENT MARKINGS AND ADVANCE WARNING SIGNS AS SHOWN BEFORE OPENING TO STAGE 3 TRAFFIC.
 3. MOVE TRAFFIC ON RAMP 1 TO CONFIGURATION SHOWN AND MAINTAIN AT LEAST 11' LANES.
 4. CONSTRUCT RAMP 1 AS SHOWN.

- STAGE 3 CONSTRUCTION
- STAGE 3 TRAFFIC
- TRAFFIC DRUMS

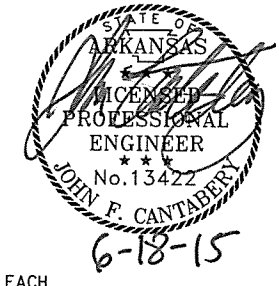
MAINTENANCE OF TRAFFIC DETAILS
STAGE 3

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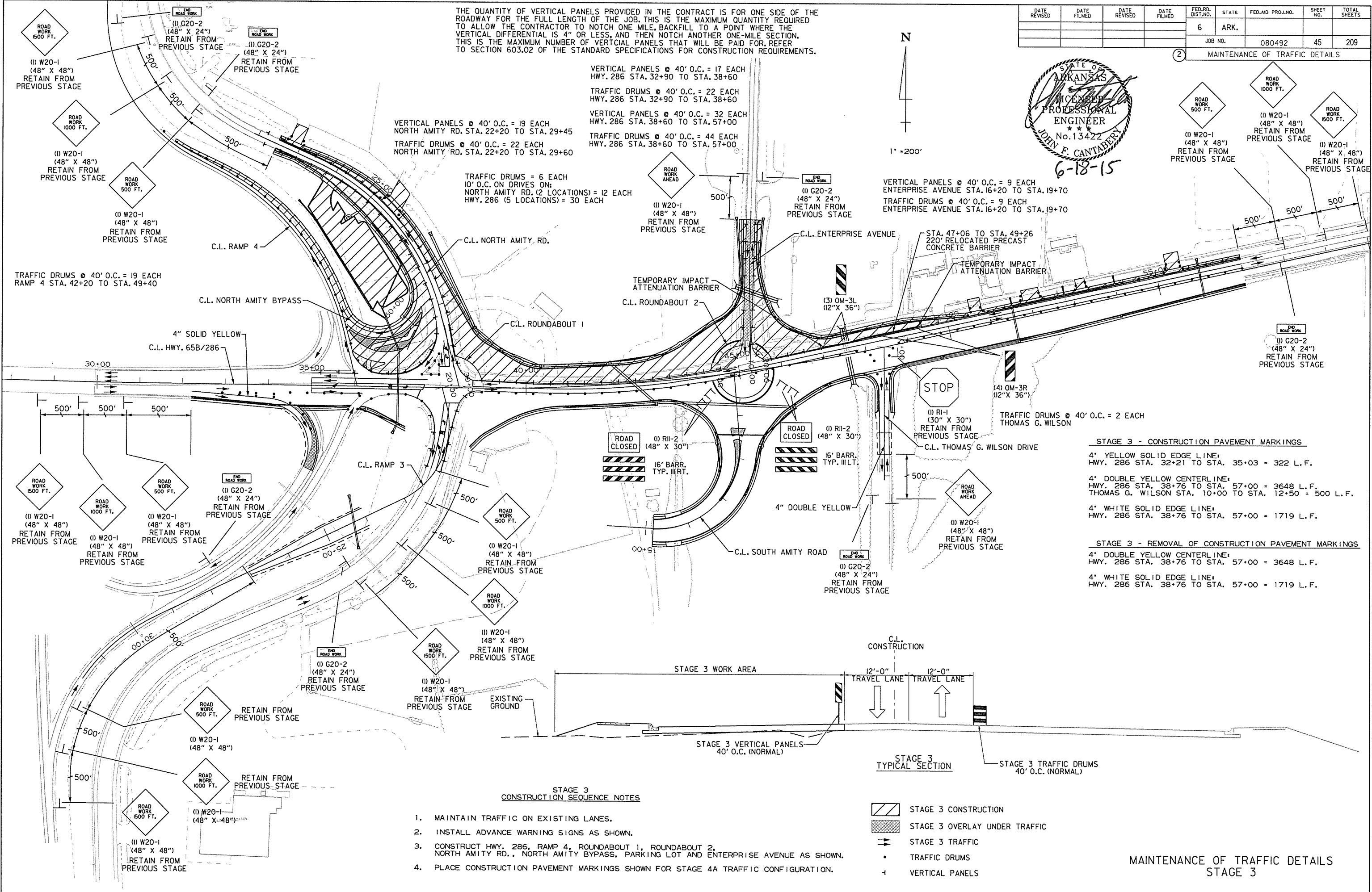
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				6	ARK.		45	209

② MAINTENANCE OF TRAFFIC DETAILS



THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.



VERTICAL PANELS @ 40' O.C. = 17 EACH
 HWY. 286 STA. 32+90 TO STA. 38+60
 TRAFFIC DRUMS @ 40' O.C. = 22 EACH
 HWY. 286 STA. 32+90 TO STA. 38+60
 VERTICAL PANELS @ 40' O.C. = 32 EACH
 HWY. 286 STA. 38+60 TO STA. 57+00
 TRAFFIC DRUMS @ 40' O.C. = 44 EACH
 HWY. 286 STA. 38+60 TO STA. 57+00

VERTICAL PANELS @ 40' O.C. = 19 EACH
 NORTH AMITY RD. STA. 22+20 TO STA. 29+45
 TRAFFIC DRUMS @ 40' O.C. = 22 EACH
 NORTH AMITY RD. STA. 22+20 TO STA. 29+60

TRAFFIC DRUMS = 6 EACH
 10' O.C. ON DRIVES ON:
 NORTH AMITY RD. (2 LOCATIONS) = 12 EACH
 HWY. 286 (5 LOCATIONS) = 30 EACH

VERTICAL PANELS @ 40' O.C. = 9 EACH
 ENTERPRISE AVENUE STA. 16+20 TO STA. 19+70
 TRAFFIC DRUMS @ 40' O.C. = 9 EACH
 ENTERPRISE AVENUE STA. 16+20 TO STA. 19+70

STAGE 3 - CONSTRUCTION PAVEMENT MARKINGS

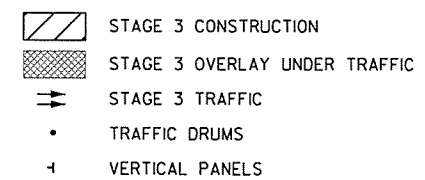
- 4" YELLOW SOLID EDGE LINE:
 HWY. 286 STA. 32+21 TO STA. 35+03 = 322 L.F.
- 4" DOUBLE YELLOW CENTERLINE:
 HWY. 286 STA. 38+76 TO STA. 57+00 = 3648 L.F.
 THOMAS G. WILSON STA. 10+00 TO STA. 12+50 = 500 L.F.
- 4" WHITE SOLID EDGE LINE:
 HWY. 286 STA. 38+76 TO STA. 57+00 = 1719 L.F.

STAGE 3 - REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS

- 4" DOUBLE YELLOW CENTERLINE:
 HWY. 286 STA. 38+76 TO STA. 57+00 = 3648 L.F.
- 4" WHITE SOLID EDGE LINE:
 HWY. 286 STA. 38+76 TO STA. 57+00 = 1719 L.F.

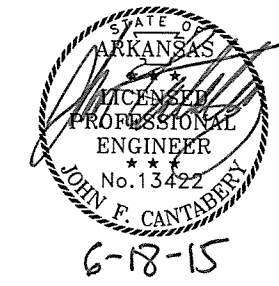
STAGE 3 CONSTRUCTION SEQUENCE NOTES

1. MAINTAIN TRAFFIC ON EXISTING LANES.
2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
3. CONSTRUCT HWY. 286, RAMP 4, ROUNDABOUT 1, ROUNDABOUT 2, NORTH AMITY RD., NORTH AMITY BYPASS, PARKING LOT AND ENTERPRISE AVENUE AS SHOWN.
4. PLACE CONSTRUCTION PAVEMENT MARKINGS SHOWN FOR STAGE 3A TRAFFIC CONFIGURATION.

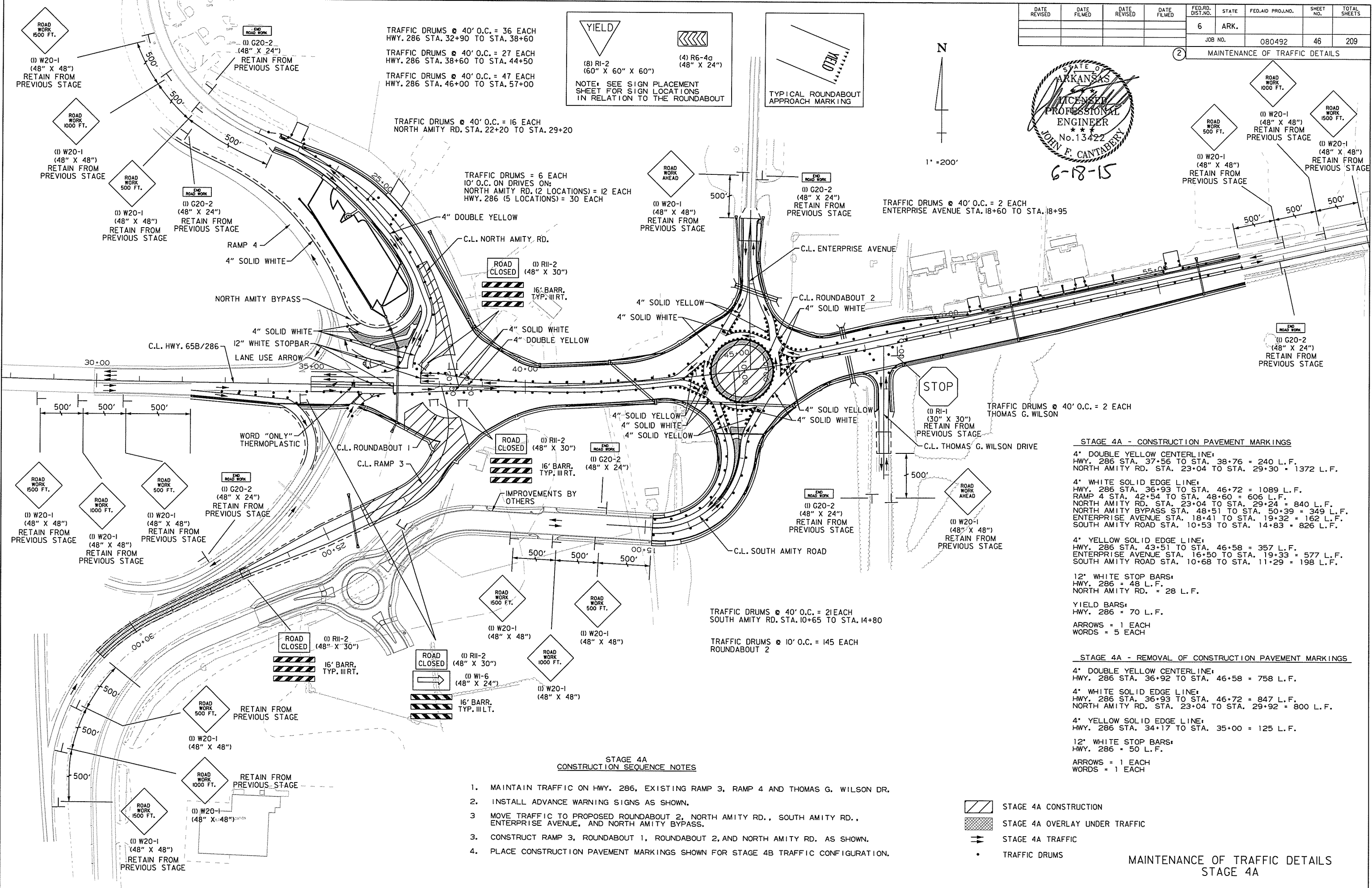
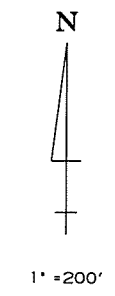
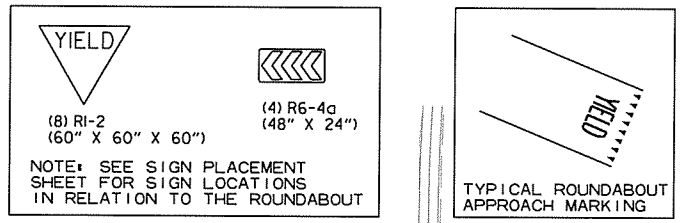


MAINTENANCE OF TRAFFIC DETAILS
 STAGE 3

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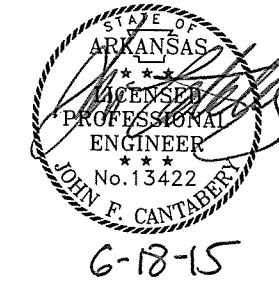


MAINTENANCE OF TRAFFIC DETAILS

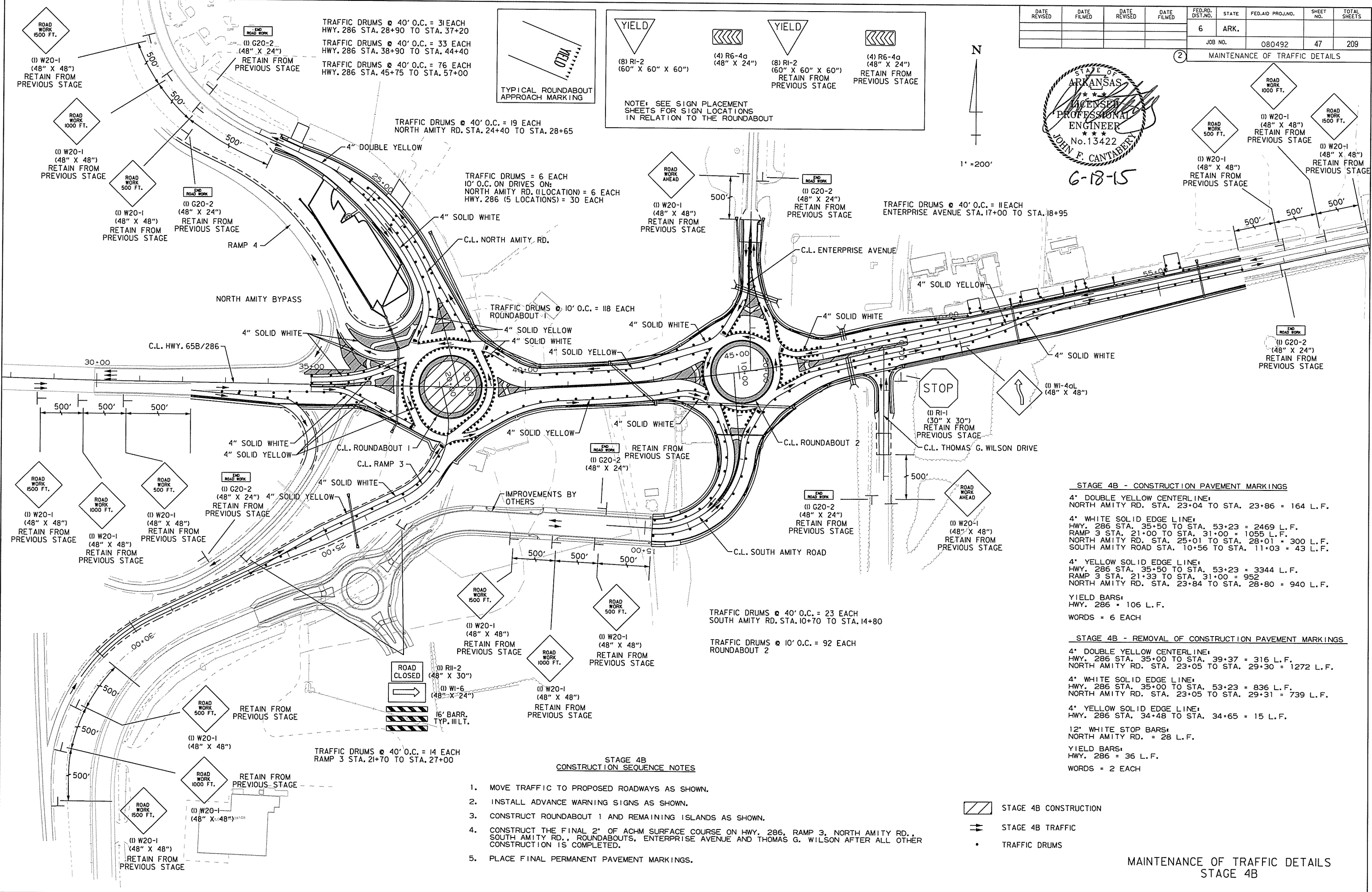


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MAINTENANCE OF TRAFFIC DETAILS

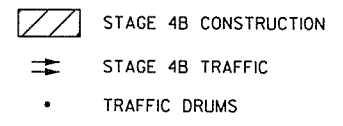


NOTE: SEE SIGN PLACEMENT SHEETS FOR SIGN LOCATIONS IN RELATION TO THE ROUNDABOUT

- STAGE 4B - CONSTRUCTION PAVEMENT MARKINGS**
- 4" DOUBLE YELLOW CENTERLINE: NORTH AMITY RD. STA. 23+04 TO STA. 23+86 = 164 L.F.
 - 4" WHITE SOLID EDGE LINE: HWY. 286 STA. 35+50 TO STA. 53+23 = 2469 L.F. RAMP 3 STA. 21+00 TO STA. 31+00 = 1055 L.F. NORTH AMITY RD. STA. 25+01 TO STA. 28+01 = 300 L.F. SOUTH AMITY ROAD STA. 10+56 TO STA. 11+03 = 43 L.F.
 - 4" YELLOW SOLID EDGE LINE: HWY. 286 STA. 35+50 TO STA. 53+23 = 3344 L.F. RAMP 3 STA. 21+33 TO STA. 31+00 = 952 L.F. NORTH AMITY RD. STA. 23+84 TO STA. 28+80 = 940 L.F.
 - YIELD BARS: HWY. 286 = 106 L.F.
 - WORDS = 6 EACH

- STAGE 4B - REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS**
- 4" DOUBLE YELLOW CENTERLINE: HWY. 286 STA. 35+50 TO STA. 39+37 = 316 L.F. NORTH AMITY RD. STA. 23+05 TO STA. 29+30 = 1272 L.F.
 - 4" WHITE SOLID EDGE LINE: HWY. 286 STA. 35+00 TO STA. 53+23 = 836 L.F. NORTH AMITY RD. STA. 23+05 TO STA. 29+31 = 739 L.F.
 - 4" YELLOW SOLID EDGE LINE: HWY. 286 STA. 34+48 TO STA. 34+65 = 15 L.F.
 - 12" WHITE STOP BARS: NORTH AMITY RD. = 28 L.F.
 - YIELD BARS: HWY. 286 = 36 L.F.
 - WORDS = 2 EACH

- STAGE 4B CONSTRUCTION SEQUENCE NOTES**
1. MOVE TRAFFIC TO PROPOSED ROADWAYS AS SHOWN.
 2. INSTALL ADVANCE WARNING SIGNS AS SHOWN.
 3. CONSTRUCT ROUNDABOUT 1 AND REMAINING ISLANDS AS SHOWN.
 4. CONSTRUCT THE FINAL 2" OF ACHM SURFACE COURSE ON HWY. 286, RAMP 3, NORTH AMITY RD., SOUTH AMITY RD., ROUNDABOUTS, ENTERPRISE AVENUE AND THOMAS G. WILSON AFTER ALL OTHER CONSTRUCTION IS COMPLETED.
 5. PLACE FINAL PERMANENT PAVEMENT MARKINGS.



MAINTENANCE OF TRAFFIC DETAILS
STAGE 4B

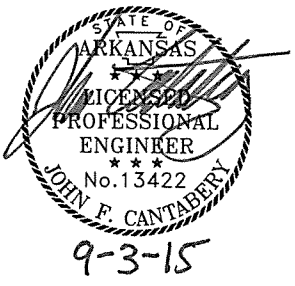
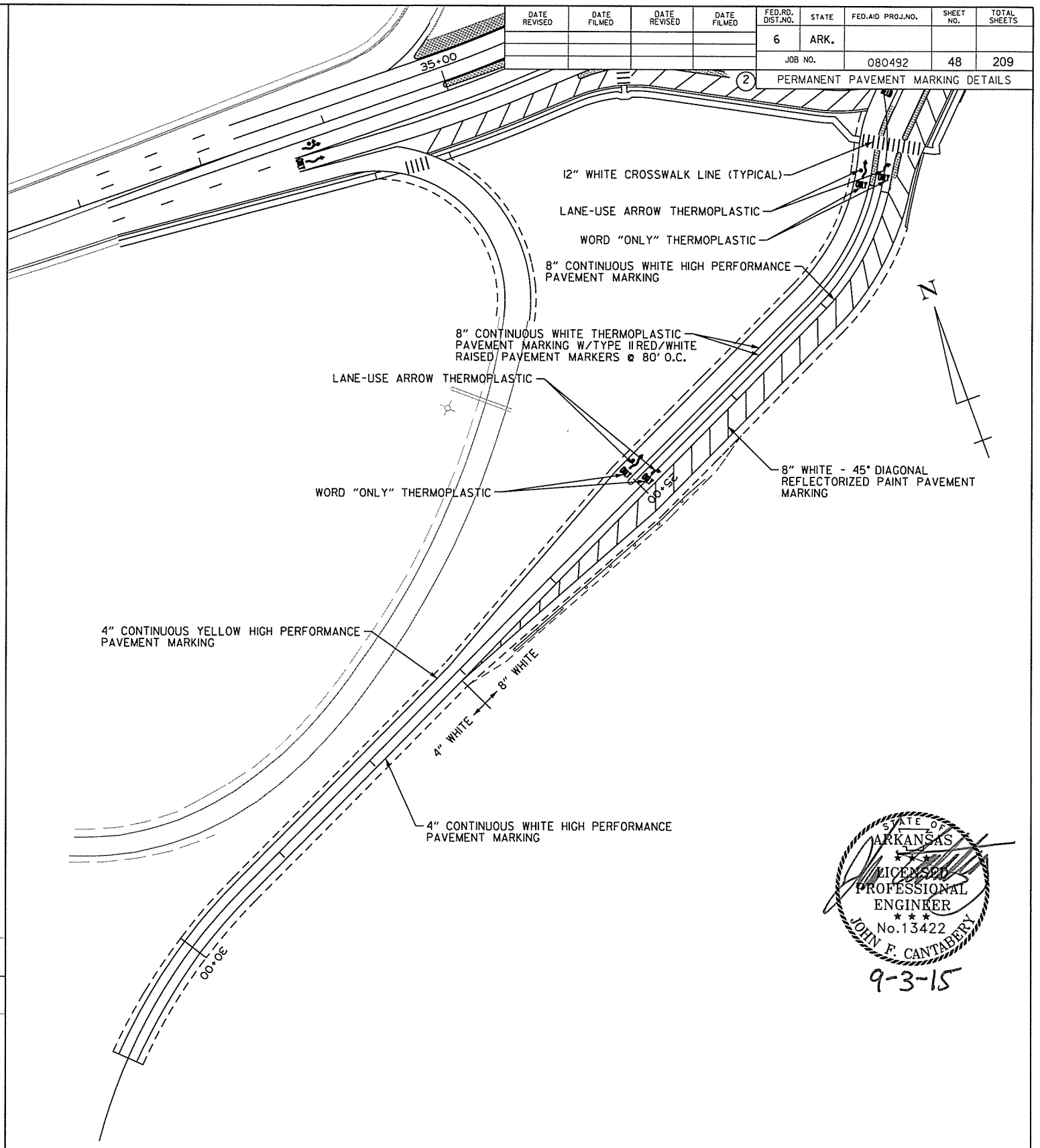
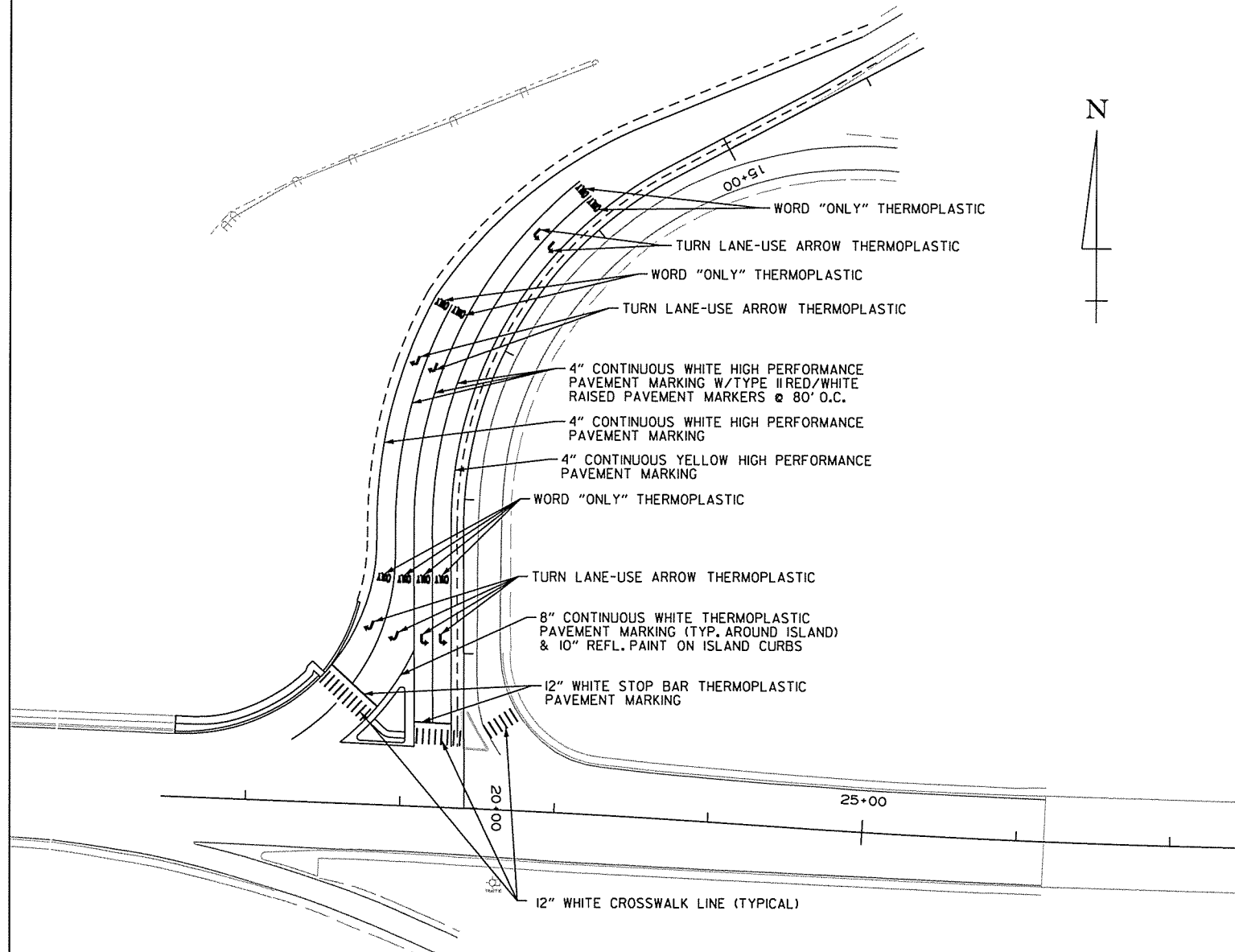
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 REVISION DATE:

PERMANENT PAVEMENT MARKING QUANTITIES

THERMOPLASTIC PAVEMENT MARKING (WORDS) = 46 EACH
 THERMOPLASTIC PAVEMENT MARKING (ARROWS) = 57 EACH
 THERMOPLASTIC PAVEMENT MARKING WHITE (4") = 5969 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING YELLOW (4") = 5241 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING WHITE (8") = 5742 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING YELLOW (8") = 3104 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING WHITE (12") = 1875 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING WHITE (48") = 867 LIN. FT.
 THERMOPLASTIC PAVEMENT MARKING WHITE (YIELD LINE) = 200 LIN. FT.
 HIGH PERFORMANCE PAVEMENT MARKING WHITE (4") = 2610 LIN. FT.
 HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4") = 1696 LIN. FT.
 HIGH PERFORMANCE PAVEMENT MARKING WHITE (8") = 601 LIN. FT.
 REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4") = 1654 LIN. FT.
 REFLECTORIZED PAINT PAVEMENT MARKING WHITE (8") = 3034 LIN. FT.
 REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10") = 3697 LIN. FT.
 REFLECTORIZED PAINT PAVEMENT MARKING SYMBOLS (WHEELCHAIR) = 3 EACH
 TYPE II RAISED PAVEMENT MARKERS WHITE/RED = 59 EACH
 TYPE II RAISED PAVEMENT MARKERS YELLOW/YELLOW = 33 EACH

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							48	209

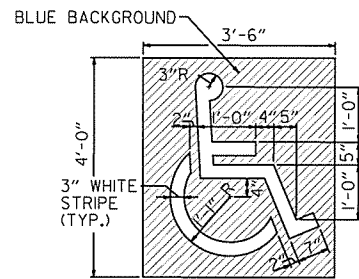
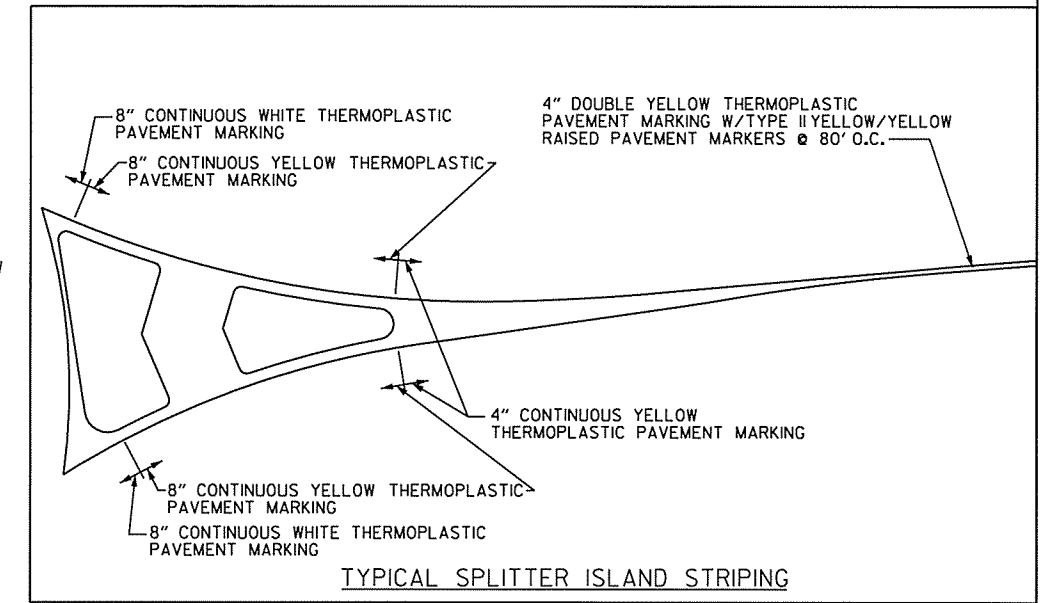
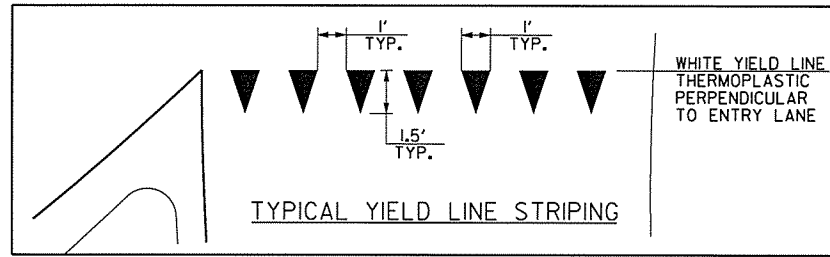
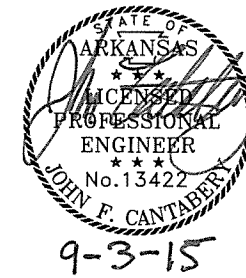
PERMANENT PAVEMENT MARKING DETAILS



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PERMANENT PAVEMENT MARKING DETAILS

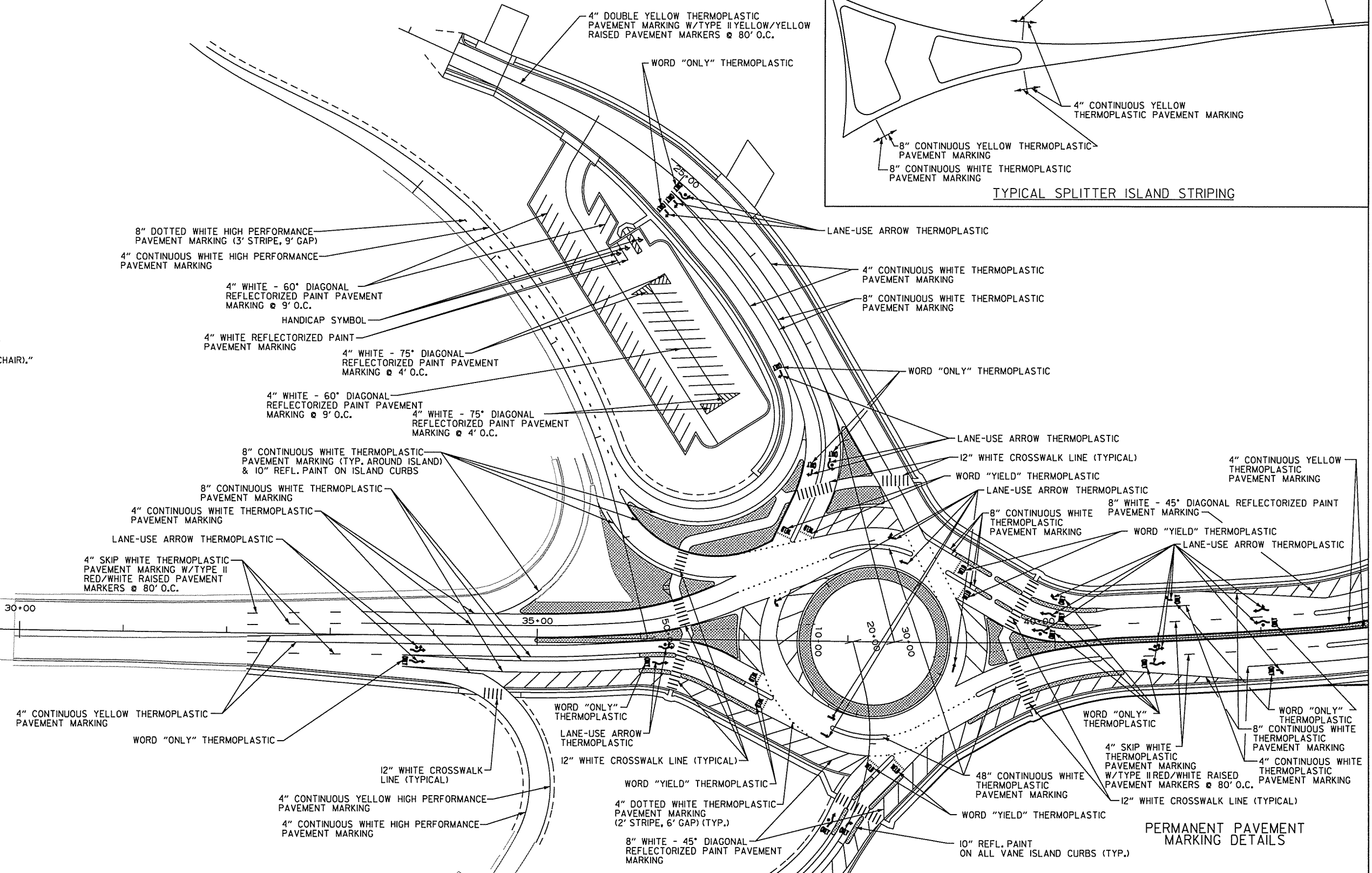
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				6	ARK.			
				JOB NO.	080492	49	209	
				PERMANENT PAVEMENT MARKING DETAILS				



HANDICAPPED MARKING

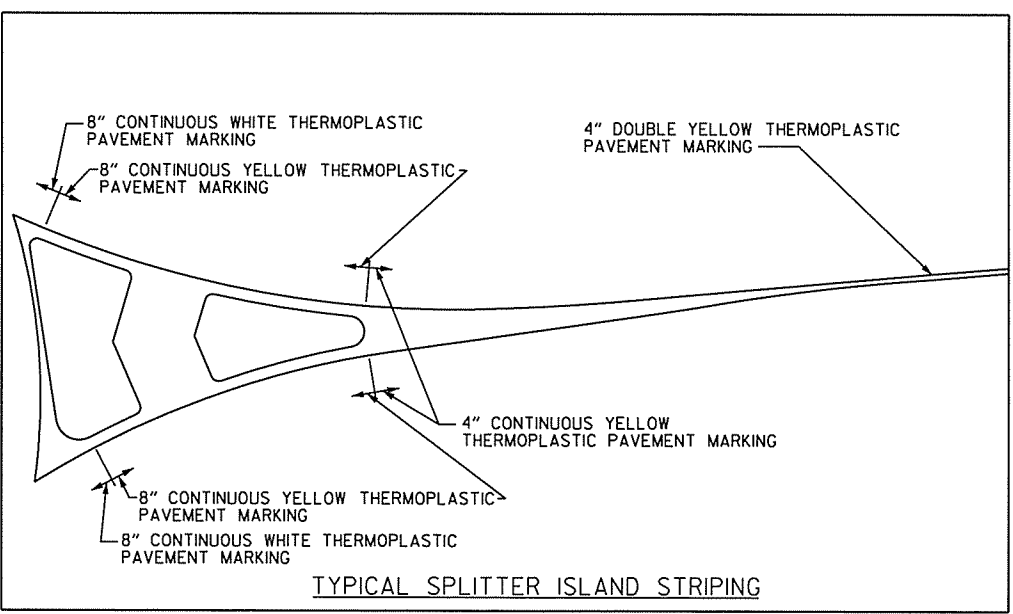
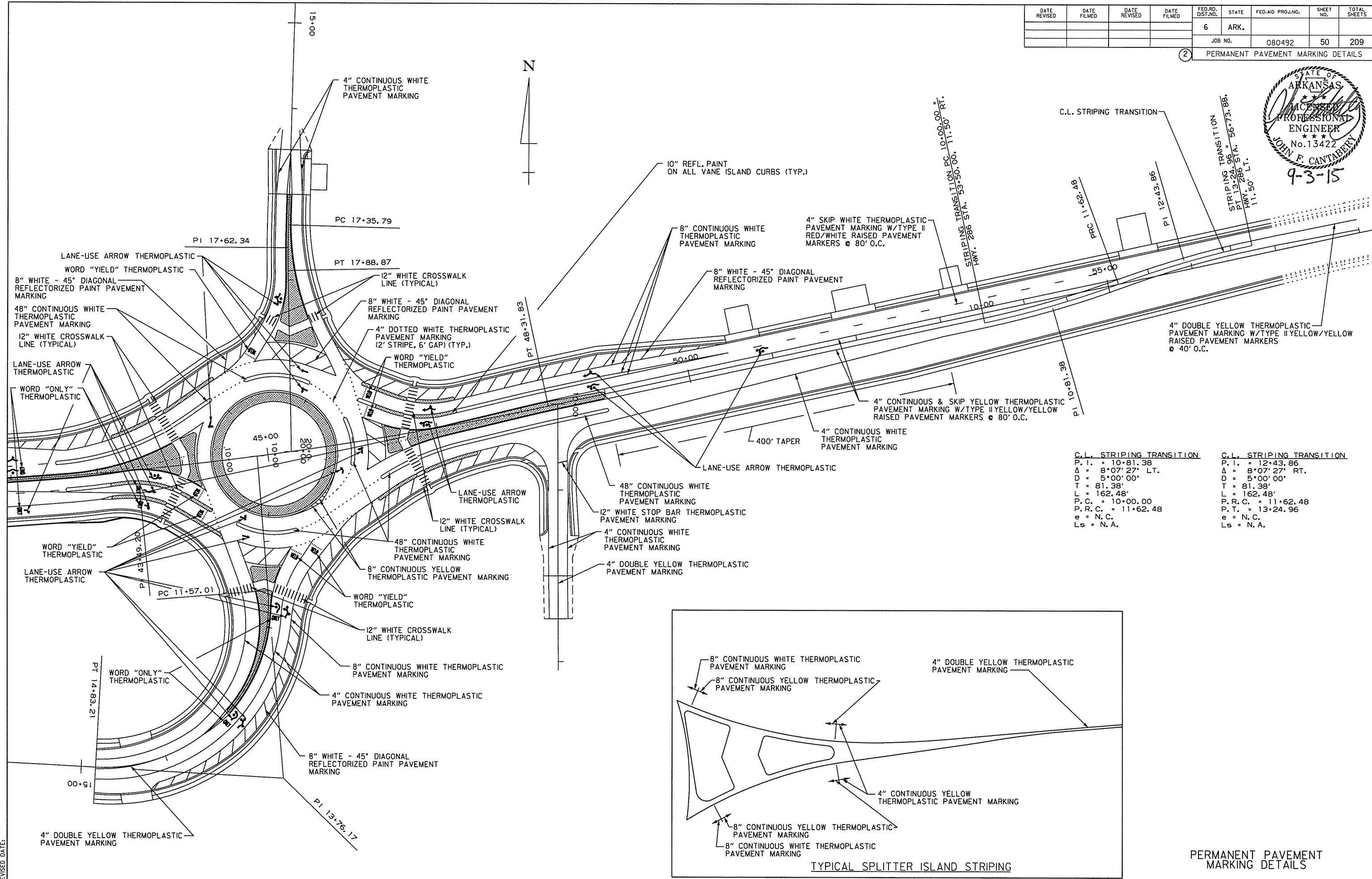
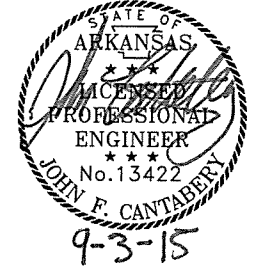
HANDICAPPED MARKING SHALL BE PAID UNDER ITEM "REFLECTORIZED PAINT PAVEMENT MARKING SYMBOLS (WHEELCHAIR)."

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PERMANENT PAVEMENT MARKING DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		50	209
				(2) PERMANENT PAVEMENT MARKING DETAILS				



PERMANENT PAVEMENT MARKING DETAILS

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	51	209

② SOIL BORING LOG



3-12-15

BORING/ TEST PIT No.	APPROX STATION		SAMPLE DEPTH (ft.)	WATER CONTENT (%)	ATTERBERG LIMITS			PERCENT PASSING #200	UNIFIED CLASS.	AASHTO CLASS.
					LIQUID	PLASTIC	PLASTICITY			
	STA	OFFSET (ft.)			LIMIT	LIMIT	INDEX			
R6	56+00	10' R	0.5-1.5	8	23	17	6	21	GM-GC	A-1-b
R7	52+50	30' L	0.5-1.5	6	22	17	5	20	GC	A-1-b
R8	48+85	15' R	0.5-1.5	3	23	17	6	9	GM-GP	A-1-b
R8	48+85	15' R	2.5-3.5	13	36	20	16	40	GC	A-6
R9	44+80	30' L	0.5-1.5	9	29	17	12	32	GC	A-2-6
R9	44+80	30' L	4.5-5.5	25	30	19	11	89	CL	A-6
R10	40+80	20' R	0.5-1.5	9	27	17	10	34	GC	A-2-4
R11	37+70	60' L	0.5-1.5	15	34	19	15	49	GC	A-6
R12	32+95	40' R	1.5-2.0	10	32	18	14	30	GC	A-2-4
R13	31+50	35' L	1.5-2.0	11	32	17	15	46	GC	A-6
RB3	45+80	30' L	0.5-1.5	17	34	20	14	54	CL	A-6
RB3	45+80	30' L	4.5-5.5	25	29	17	12	86	CL	A-6
RB4	45+00	100' R	0.5-1.5	11	32	20	12	46	GC	A-6
RB4	45+00	100' R	2.5-3.5	20	25	20	5	86	CL-ML	A-4
RB5	43+85	170' R	0.5-1.5	13	30	18	12	62	CL	A-6
RB6	38+75	50' L	0.5-1.5	19	38	20	18	86	CL	A-6
RB7	37+70	60' R	0.5-1.5	2	23	19	4	7	GM-GP	A-1-b
RB7	37+70	60' R	4.5-5.5	17	26	18	8	56	CL	A-4
TP-1	44+65	120' R	0.5-2.0	16	28	20	8	80	CL	A-4

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.

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 REVISED DATE:

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	3	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	5311	L.F.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	642	L.F.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	514	L.F.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	257	L.F.
709	GALVANIZED STEEL CONDUIT (1.25")	45	L.F.
710	NON-METALLIC CONDUIT (1.25")	22	L.F.
710	NON-METALLIC CONDUIT (2")	5955	L.F.
710	NON-METALLIC CONDUIT (3")	1504	L.F.
SP & 711	CONCRETE PULL BOX (TYPE SPECIAL HD)	66	EACH
711	CONCRETE PULL BOX (TYPE 2)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
713	SPAN WIRE ASSEMBLY (TEMPORARY)	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60-40')	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	1	EACH
716	TREATED WOOD POLE (CLASS 1, 44')	6	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")	1654	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (8")	3034	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	3697	L.F.
SP & 718	REFLECTORIZED PAINT PAVEMENT MARKING SYMBOLS (WHEELCHAIR)	3	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	57	EACH
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	46	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")	5969	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8")	5742	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	1875	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (48")	867	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	5241	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8")	3104	L.F.
SP & 719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	200	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4")	2610	L.F.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (4")	2610	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	1696	L.F.
SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4")	1696	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8")	601	L.F.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (8")	601	L.F.
721	RAISED PAVEMENT MARKERS (TYPE II)	92	EACH
SP & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	902	SQ. FT.
SP & 726	STANDARD SIGN	1010	SQ. FT.
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	21	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2)	25	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(A))	23	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(1))	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	6529	LB.
730	BREAKAWAY SIGN SUPPORT (TYPE G2-5)	561	LB.
731	TEMPORARY IMPACT ATTENUATION BARRIER	4	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	4	EACH
SP & 733	VIDEO DETECTOR RELOCATION	8	EACH
SP & 733	VIDEO DETECTOR (CLR)	13	EACH
733	VIDEO CABLE	4499	L.F.
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	13	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	70	CU. YD.
802	CLASS S CONCRETE - ROADWAY	184.99	CU. YD.
804	REINFORCING STEEL - ROADWAY (GRADE 60)	25230	LB.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	32	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	614	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	110	L.F.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	512	L.F.
SP	LOUVERS	32	EACH
SP	LUMINAIRE ASSEMBLY	3	EACH
SP	MODEM (RCM TELEMETRY)	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	11	EACH
SP	18" STREET NAME SIGN	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	2	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, SHOE BASE, 30')	42	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180° APART, SHOE BASE, 30')	7	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 90° APART, BREAKAWAY BASE, 30')	1	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, BREAKAWAY BASE, 30')	11	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180° APART, BREAKAWAY BASE, 30')	2	EACH
SP	ROADWAY ILLUMINATION POLE, RELOCATED (400-WATT INTERSTATE LUMINAIRE, SHOE BASE, 37')	5	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/2 A.W.G.)	3643	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/2 A.W.G., E.G.C.)	3643	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/3 A.W.G.)	958	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/3 A.W.G., E.G.C.)	958	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/4 A.W.G.)	1379	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/4 A.W.G., E.G.C.)	1379	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/6 A.W.G.)	2393	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/6 A.W.G., E.G.C.)	2393	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/10 A.W.G.)	1406	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/10 A.W.G., E.G.C.)	1406	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (3C/2 A.W.G.)	50	L.F.
SP	SERVICE POINT ASSEMBLY (UNDERGROUND SECONDARY SERVICE, ROADWAY LIGHTING)	1	EACH

* DENOTES ALTERNATE BID ITEMS.



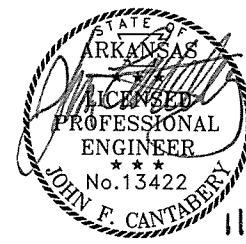
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15		12-11-15		6	ARK.			
10-21-15		12-21-15						
11-09-15								
						JOB NO.	080492	58
						SUMMARY OF QUANTITIES AND REVISIONS		

DATE	REVISION	SHEET NUMBER
10-09-15	REVISED LIGHTING SHEET NOTES TO SHOW SCHEDULE 40 CONDUIT INSTEAD OF SCHEDULE 80 CONDUIT.	58, 97, 98, 99, 100
10-21-15	ADDED TACK COATS SUPPLEMENTAL SPECIFICATION; REVISED PROSECUTION AND PROGRESS SP; REVISED SITE USE (A+C METHOD) SP.	2, 57, 58
11-09-15	REVISED PARKING LOT PAVEMENT SECTION.	10, 54, 56, 57, 58, 203, 204
12-11-15	ADDED 100-3 SUPPLEMENTAL SPECIFICATION.	2, 58
12-21-15	REVISED HIGH PERFORMANCE PAVEMENT MARKING SPECIAL PROVISION.	58

SUMMARY OF QUANTITIES AND REVISIONS

SUMMARY OF QUANTITIES (BOX 1 OF 2)



11-09-15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-21-15				6	ARK.		57	209
11-09-15						080492		
				JOB NO.	080492		57	209
(2) SUMMARY OF QUANTITIES								

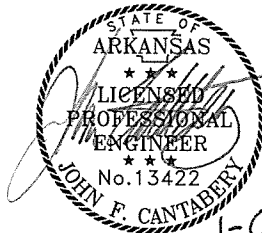
ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	25	STA.
201	GRUBBING	25	STA.
202	REMOVAL AND DISPOSAL OF CURB	1999	L.F.
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	764	SQ. YD.
202	REMOVAL AND DISPOSAL OF DROP INLETS	4	EACH
202	REMOVAL AND DISPOSAL OF FENCE	3651	L.F.
202	REMOVAL AND DISPOSAL OF GATES	10	EACH
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLE AND FOUNDATION	11	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	22	EACH
202	REMOVAL AND DISPOSAL OF WALKS	548	SQ. YD.
202	REMOVAL AND DISPOSAL OF DELINEATOR POST	15	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	34	EACH
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	19	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE SLABS	43	SQ. YD.
202	REMOVAL AND DISPOSAL OF HOUSE FOUNDATION	285	L.F.
202	REMOVAL AND DISPOSAL OF BILLBOARDS	3	EACH
202	REMOVAL AND DISPOSAL OF SPRINKLER SYSTEM	1	EACH
210	UNCLASSIFIED EXCAVATION	19822	CU. YD.
210	COMPACTED EMBANKMENT	55287	CU. YD.
SP & 210	SOIL STABILIZATION	500	TON
303	AGGREGATE BASE COURSE (CLASS 7)	22264	TON
309	PORTLAND CEMENT CONCRETE BASE (7 1/2" UNIFORM THICKNESS)	538	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (8" UNIFORM THICKNESS)	194	SQ. YD.
SS & 401	TACK COAT	4796	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	11767	TON
SP & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	478	TON
SP, SS & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	5787	TON
SP, SS & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	260	TON
SP, SS & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	10275	TON
SP, SS & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	21	TON
SP, SS & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	543	TON
412	COLD MILLING ASPHALT PAVEMENT	4383	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	12	TON
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	100	TON
501	PORTLAND CEMENT CONCRETE PAVEMENT (12" UNIFORM THICKNESS)	1021	SQ. YD.
505	PORTLAND CEMENT CONCRETE DRIVEWAY	483.44	SQ. YD.
601	MOBILIZATION	1.00	L.S.
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP & 603	MAINTENANCE OF TRAFFIC	1.00	L.S.
SS & 604	SIGNS	731	SQ. FT.
SS & 604	TRAFFIC DRUMS	453	EACH
SS & 604	BARRICADES	64	L.F.
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	220	L.F.
604	RELOCATING PRECAST CONCRETE BARRIER	220	L.F.
604	CONSTRUCTION PAVEMENT MARKINGS	35224	L.F.
604	CONSTRUCTION PAVEMENT MARKINGS (WORDS)	13	EACH
604	CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	8	EACH
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	11189	L.F.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (WORDS)	3	EACH
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS (ARROWS)	3	EACH
SS & 604	VERTICAL PANELS	82	EACH
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	60	L.F.
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	12	WEEK
605	CONCRETE DITCH PAVING (TYPE B)	112	SQ. YD.
SP, SS & 606	24" SIDE DRAIN	118	L.F.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	362	L.F.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	1081	L.F.
606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	1081	L.F.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	90	L.F.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	612	L.F.
606	24" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	612	L.F.
606	30" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	75	L.F.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	558	L.F.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	706	L.F.
606	36" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	706	L.F.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	143	L.F.
606	22" X 14" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	322	L.F.
606	21" X 15" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE (ALTERNATE NO. 2)	322	L.F.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	110	L.F.
606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	110	L.F.
606	59" X 36" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	694	L.F.
606	59" X 36" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	862	L.F.
606	57" X 38" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL ARCH PIPE (ALTERNATE NO. 2)	862	L.F.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	4	EACH
606	30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	6	EACH
606	59" X 36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	SELECTED PIPE BEDDING	100	CU. YD.
609	DROP INLETS (TYPE C)	6	EACH
609	DROP INLETS (TYPE MO)	34	EACH
609	DROP INLETS (TYPE RM)	1	EACH
609	JUNCTION BOXES (TYPE E)	4	EACH
609	DROP INLET EXTENSIONS (4)	35	EACH
609	DROP INLET EXTENSIONS (8)	2	EACH
611	4" PIPE UNDERDRAINS	300	L.F.
615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	85	TON
617	GUARDRAIL (TYPE A)	150	L.F.
617	TERMINAL ANCHOR POSTS (TYPE 1)	1	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	1	EACH
619	WIRE FENCE (TYPE A)	445	L.F.
619	WIRE FENCE (TYPE C)	233	L.F.
619	WIRE FENCE (TYPE D-1)	875	L.F.
620	LIME	9	TON
620	SEEDING	4.28	ACRE
SS & 620	MULCH COVER	8.56	ACRE
620	WATER	589.0	M.G.
621	TEMPORARY SEEDING	4.28	ACRE
621	SILT FENCE	9049	L.F.
621	SAND BAG DITCH CHECKS	400	BAG
621	DROP INLET SILT FENCE	1000	L.F.
621	SEDIMENT BASIN	30	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	30	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	100	CU. YD.
621	ROCK DITCH CHECKS	285	CU. YD.
621	TRIANGULAR SILT DIKE	100	L.F.
624	SECOND SEEDING APPLICATION	4.28	ACRE
624	SOLID SODDING	5160	SQ. YD.
632	CONCRETE ISLAND	3532	SQ. YD.
633	HAND RAILING	561	L.F.
633	CONCRETE WALKS	3131	SQ. YD.
SP & 633	CONCRETE WALKS (TYPE SPECIAL)	313	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (16")	7844	L.F.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE E-1) (20")	930	L.F.
635	ROADWAY CONSTRUCTION CONTROL	1.00	L.S.
637	MAILBOXES	5	EACH
637	MAILBOX SUPPORTS (SINGLE)	5	EACH
641	WHEELCHAIR RAMPS (TYPE 3)	64	SQ. YD.
641	WHEELCHAIR RAMPS (TYPE 4)	25	SQ. YD.

* DENOTES ALTERNATE BID ITEMS

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	3	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	5311	L.F.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	642	L.F.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	514	L.F.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	257	L.F.
709	GALVANIZED STEEL CONDUIT (1.25")	45	L.F.
710	NON-METALLIC CONDUIT (1.25")	22	L.F.
710	NON-METALLIC CONDUIT (2")	5955	L.F.
710	NON-METALLIC CONDUIT (3")	1504	L.F.
SP & 711	CONCRETE PULL BOX (TYPE 2)	66	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
713	SPAN WIRE ASSEMBLY (TEMPORARY)	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50-40')	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	1	EACH
716	TREATED WOOD POLE (CLASS 1, 44')	6	EACH
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (4")	1654	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (8")	3034	L.F.
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (10")	3697	L.F.
SP & 718	REFLECTORIZED PAINT PAVEMENT MARKING SYMBOLS (WHEELCHAIR)	3	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)	57	EACH
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)	46	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (4')	5969	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (8')	5742	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12')	1875	L.F.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (48')	867	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4')	5241	L.F.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (8')	3104	L.F.
SP & 719	THERMOPLASTIC PAVEMENT MARKING (YIELD LINE)	200	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4")	2610	L.F.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (4")	2610	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	1696	L.F.
SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4")	1696	L.F.
SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8")	601	L.F.
SP	HIGH PERFORMANCE MARKING TAPE WHITE (8")	601	L.F.
721	RAISED PAVEMENT MARKERS (TYPE II)	92	EACH
SP & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	902	SQ. FT.
SP & 726	STANDARD SIGN	1010	SQ. FT.
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	21	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2)	25	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(A))	23	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(1))	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	6529	LB.
730	BREAKAWAY SIGN SUPPORT (TYPE G-2-5)	561	LB.
731	TEMPORARY IMPACT ATTENUATION BARRIER	4	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	4	EACH
SP & 733	VIDEO DETECTOR RELOCATION	8	EACH
SP & 733	VIDEO DETECTOR (CLR)	13	EACH
733	VIDEO CABLE	4499	L.F.
733	VIDEO MONITOR (CLR)	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	13	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	3	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY	70	CU. YD.
802	CLASS S CONCRETE - ROADWAY	184.99	CU. YD.
804	REINFORCING STEEL - ROADWAY (GRADE 60)	25230	LB.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	32	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	614	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	110	L.F.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	512	L.F.
SP	LOUVERS	32	EACH
SP	LUMINAIRE ASSEMBLY	3	EACH
SP	MODEM (RGM TELEMETRY)	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	3	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	11	EACH
SP	18" STREET NAME SIGN	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	2	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, SHOE BASE, 30')	42	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180° APART, SHOE BASE, 30')	7	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 90° APART, BREAKAWAY BASE, 30')	1	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, BREAKAWAY BASE, 30')	11	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180° APART, BREAKAWAY BASE, 30')	2	EACH
SP	ROADWAY ILLUMINATION POLE, RELOCATED (400-WATT INTERSTATE LUMINAIRE, SHOE BASE, 37')	5	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/2 A.W.G.)	3643	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/2 A.W.G., E.G.C.)	3643	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/3 A.W.G.)	958	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/3 A.W.G., E.G.C.)	958	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/4 A.W.G.)	1379	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/4 A.W.G., E.G.C.)	1379	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/6 A.W.G.)	2393	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/6 A.W.G., E.G.C.)	2393	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.)	1406	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/10 A.W.G., E.G.C.)	1406	L.F.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (3C/2 A.W.G.)	50	L.F.
SP	SERVICE POINT ASSEMBLY (UNDERGROUND SECONDARY SERVICE, ROADWAY LIGHTING)	1	EACH

* DENOTES ALTERNATE BID ITEMS.



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15		12-11-15		6	ARK.			
10-21-15		12-21-15						
11-09-15		01-06-16						

2 SUMMARY OF QUANTITIES AND REVISIONS

DATE	REVISION	SHEET NUMBER
10-09-15	REVISED LIGHTING SHEET NOTES TO SHOW SCHEDULE 40 CONDUIT INSTEAD OF SCHEDULE 80 CONDUIT.	58, 97, 98, 99, 100
10-21-15	ADDED TACK COATS SUPPLEMENTAL SPECIFICATION; REVISED PROSECUTION AND PROGRESS SP; REVISED SITE USE (A+C METHOD) SP.	2, 57, 58
11-09-15	REVISED PARKING LOT PAVEMENT SECTION.	10, 54, 56, 57, 58, 203, 204
12-11-15	ADDED 100-3 SUPPLEMENTAL SPECIFICATION.	2, 58
12-21-15	REVISED HIGH PERFORMANCE PAVEMENT MARKING SPECIAL PROVISION.	58
01-06-16	REVISED ELECTRICAL DUCT DETAIL AND NOTES.	58, 101

SUMMARY OF QUANTITIES AND REVISIONS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	59	209

2 SURVEY CONTROL DETAILS

SURVEY CONTROL COORDINATES

Project Name: s080491
Date: 9/5/2014
Coordinate System: Arkansas State Plane Coordinates
Horizontal Control Based on GPS Points 230020-230026, Vertical Control Based on TBM Point 906 from Job# 080211
Projected to Ground Coordinates
Units: U.S. Survey Foot



3-12-15

COORDINATES LISTED BELOW ARE GROUND (Localized) COORDINATES !!!!

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description
1	267093.5254	0.0210	1193478.112	0.0230	275.647	0.0031	CTL	PD:STD AHTD MON. STAMPED PN:1
2	267462.2318	0.0290	1192701.6	0.0290	283.051	0.003	CTL	PD:STD AHTD MON. STAMPED PN:2
3	267712.0921	0.0110	1192218.19	0.0130	292.426	0.003	CTL	PD:STD AHTD MON. STAMPED PN:3
4	266830.0073	0.0140	1192181.124	0.0160	283.004	0.003	CTL	PD:STD AHTD MON. STAMPED PN:4
5	268504.6075	0.0210	1192132.597	0.0190	310.572	0.003	CTL	PD:STD AHTD MON. STAMPED PN:5
6	267684.0263	0.0360	1191495.158	0.0350	300.413	0.003	CTL	PD:STD AHTD MON. STAMPED PN:6
7	267529.7603	0.0230	1190784.121	0.0270	304.644	0.002	CTL	PD:STD AHTD MON. STAMPED PN:7
8	267358.9822	0.0240	1189999.37	0.0200	299.244	0.002	CTL	PD:STD AHTD MON. STAMPED PN:8
9	267217.1459	0.0280	1189335.641	0.0240	292.716	0.002	CTL	PD:STD AHTD MON. STAMPED PN:9
10	267060.6713	0.0290	1188483.72	0.0280	296.770	0.002	CTL	PD:STD AHTD MON. STAMPED PN:10
11	266949.1896	0.0300	1188095.375	0.0310	295.936	0.002	CTL	PD:STD AHTD MON. STAMPED PN:11
901	267714.3602	30.0000	1192214.61	30.0000	292.665	0.003	TBM	PD:CH SQ IN NE COR. OF CATCH BASIN IN NE COR OF INTERSEC. HWY 286 AND MAJOR LANE
902	267637.8393	0.0750	1191104.934	0.0770	309.270	0.003	TBM	PD:CHISELED SQUARE SE COR. OF CONC. BASE OF ELEC.BOX
903	267155.4571	30.0000	1189260.464	30.0000	292.625	0.000	TBM	PD:TBM 906 FROM JOB 080211
904	267055.646	0.0650	1187506.759	0.0550	323.921	0.003	TBM	PD:AHTD CAP SE COR. OF BR. OVER I-40
100	269803.7906	0.0000	1182741.344	0.0000	298.567	0.000	GPS	PD:AHTD GPS 230020
101	258584.1872	0.0000	1187187.763	0.0000	288.367	0.000	GPS	PD:AHTD GPS 230026

*Standard Primary Control Monument - Rebar and Cap - Standard - 5/8"x 24" Rebar with 2"Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. AHTD monuments will be stamped "Arkansas Hwy & Trans Dept" with "PN:####" & "Job#####". Monuments that are set by Consultants will be stamped "Arkansas Hwy & Trans Dept" with "PN:####", "Job#####", & "PS#####". The consultant Professional Surveyor in charge will stamp his/her PS license number on the cap.

**Standard GPS Control Point Monument - 5/8" x 48" Rebar with 2.5"Aluminum Cap stamped: "(include all common information here)" plus other markings indicated in the point description of the individual point. These monuments will be stamped "Ark. State Hwy Trans. Dept.", "GPS Survey", & "Point No. #####".

SX, SY, SZ - Represents the standard error estimate of the coordinate values of each point at the 67% confidence level (one sigma) based on the least squares analysis of the control network. See the AASHTO SDMS Technical Data Guide data tag definition for SX, SY, and SZ: for additional information. These values shall be used when control points are added and the entire network is reprocessed using least square analysis. A value of 0.001 is defined as fixed (no adjustment) in the least square analysis process. A value of 30 is defined as location by handheld GPS device or scaled from USGS Quadmap.

Reference Control points (1500 series) shall be used to re-establish horizontal datum if the primary control has been destroyed. These reference control points shall not be used for vertical control unless the elevation has been established from the project datum with 3-wire level techniques.

All additional project control shall be occupied, measured, and adjusted with direct survey ties to at least two of the control points listed in the table above. New survey control shall not be independent of the survey control listed above. This includes horizontal coordinates and elevations.

Positional Accuracy: Horizontal - GPS (1.0 cm± 1PPM) PN: 100-101
Horizontal - Primary (2.0cm± 20PPM): PN: 1-11
Horizontal - Secondary (3 cm ± 50PPM): PN: N/A
Vertical - NGS 1st Order (±4mm x vdist in km) PN: N/A
Vertical - NGS 2nd Order (±6mm x vdist in km) PN: 901-904
Vertical - NGS 3rd Order (±8mm x vdist in km) PN: N/A

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0301-North Zone
The adjustment year is based on metadata in the SDMS Control file
A project CAF of: 0.999957613 has been used to compute the above coordinates.
The project CAF shall have a minimum precision of 9 digits right of the decimal.
This CAF is intended for use within the project limits only.
Grid Distance = Ground Distance X CAF
If Coordinates are listed as Ground:
To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0
If Coordinates are listed as Grid:
To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM:
A project Elevation Factor of: 0.999986020 has been computed and incorporated in the above CAF.
This is based on the average elevation of the project: 292.263 Feet
3-Wire Leveling techniques have been used to establish elevations on
Points:
From NGS BM: *SEE HEADER

Basis of Bearing: Grid Bearings based on GPS Points: 230020-230026
Convergence Angle is: 00-14-17 LEFT at PN: 8
LT: 35-04-01 N LG: 092-24-31 W
Grid Azimuth = Astronomical Azimuth - Convergence Angle

Note: Information in Italics is for clarification only. It is not to be part of the actual Control Table or Control Detail Sheets.

ALIGNMENT NAME: HWY. 286/65B

POINT	STATION	TYPE	NORTHING	EASTING
8000	20+45.30	POB	267127.3783	1186559.8619
8001	22+29.85	PC	267120.7386	1186744.2969
8002	23+08.37	PI	267117.9113	1186822.7642
8003	23+86.88	PT	267112.9366	1186901.1245
8004	24+67.36	PC	267107.8373	1186981.4467
8005	25+77.54	PI	267100.8566	1187091.4038
8006	26+87.69	PT	267098.1084	1187201.5481
8007	29+61.40	PC	267091.2814	1187475.1717
8008	30+00.00	PI	267090.3186	1187513.7571
8009	30+38.60	PT	267089.8758	1187552.3521
8010	38+62.44	PC	267080.4245	1188376.1376
8011	43+49.20	PI	267074.8402	1188862.8689
8012	48+31.83	PT	267178.2694	1189338.5168
8013	71+83.22	PC	267677.9010	1191636.2122

ALIGNMENT NAME: ROUNDABOUT 1

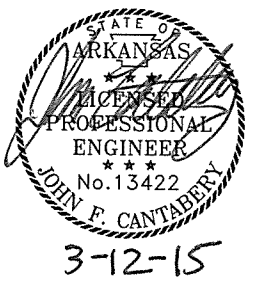
POINT	STATION	TYPE	NORTHING	EASTING
8030	10+00.00	PC	267081.7029	1188264.7080
8031	12+32.48	PCC	267080.0050	1188412.6983
8032	14+64.96	PT	267081.7029	1188264.7080

ALIGNMENT NAME: ROUNDABOUT 2

POINT	STATION	TYPE	NORTHING	EASTING
8040	10+00.00	PC	267111.7739	1188945.8763
8041	12+32.48	PCC	267130.9627	118092.6271
8042	14+64.96	PT	267111.7739	1188945.8763

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	60	209

2 SURVEY CONTROL DETAILS



ALIGNMENT NAME: RAMP 1

POINT	STATION	TYPE	NORTHING	EASTING
8100	13+58.27	POB	267614.0252	1187052.2014
8101	15+40.62	PC	267528.7075	1186891.0375
8102	16+94.70	PI	267456.6167	1186754.8591
8103	18+17.75	PT	267302.5349	1186755.5339
8104	20+00.00	POE	267120.2908	1186756.3322

ALIGNMENT NAME: NORTH AMITY ROAD

POINT	STATION	TYPE	NORTHING	EASTING
8090	21+90.00	POB	267671.3277	1187879.1403
8091	23+48.17	PC	267605.9898	1188023.1896
8092	25+98.07	PI	267502.7665	1188250.7643
8093	28+14.17	PT	267260.6646	1188312.6674
8094	30+00.00	POE	267080.6245	1188358.7018

ALIGNMENT NAME: RAMP 3

POINT	STATION	TYPE	NORTHING	EASTING
8110	20+00.00	POB	267081.0834	1188318.7045
8111	20+42.48	PC	267039.9232	1188329.2287
8112	21+99.40	PI	266887.8963	1188368.1005
8113	23+05.20	PT	266820.2716	1188226.5021
8114	29+39.41	PC	266546.9547	1187654.2077
8115	30+56.41	PI	266496.5330	1187548.6305
8116	31+68.13	PT	266400.3863	1187481.9618

ALIGNMENT NAME: ENTERPRISE AVENUE

POINT	STATION	TYPE	NORTHING	EASTING
8060	12+85.81	POB	267838.1709	1189046.0478
8061	17+35.79	PC	267388.3327	1189034.7051
8062	17+62.34	PI	267361.7960	1189034.0360
8063	17+88.87	PT	267335.2568	1189034.5964
8064	20+00.00	POE	267124.1781	1189039.0533

ALIGNMENT NAME: RAMP 4

POINT	STATION	TYPE	NORTHING	EASTING
8120	38+47.84	PC	268003.6303	1187536.8378
8121	41+12.74	PI	267740.9254	1187502.7704
8122	43+11.07	PT	267616.9491	1187736.8736
8123	43+82.86	PC	267583.3517	1187800.3152
8124	46+39.81	PI	267463.0975	1188027.3900
8125	48+65.95	PT	267213.5482	1188088.6209
8126	50+00.00	POE	267083.3567	1188120.5655

ALIGNMENT NAME: SOUTH AMITY ROAD

POINT	STATION	TYPE	NORTHING	EASTING
8130	10+00.00	POB	267118.6506	1188999.4372
8131	11+57.01	PC	266962.1894	1189012.5034
8132	13+76.17	PI	266743.7822	1189030.7428
8133	14+83.21	PT	266755.5866	1188811.8935
8134	15+88.94	POE	266761.2812	1188706.3176

ALIGNMENT NAME: NORTH AMITY BYPASS LANE

POINT	STATION	TYPE	NORTHING	EASTING
8080	48+11.34	PC	267269.1089	1188084.6858
8081	51+02.91	PT	267336.3996	1188251.4015

ALIGNMENT NAME: THOMAS G. WILSON DR.

POINT	STATION	TYPE	NORTHING	EASTING
8150	10+00.00	POB	267180.6859	118349.6300
8151	13+09.39	POE	266871.3030	1189351.0768

ALIGNMENT NAME: PARKING LOT

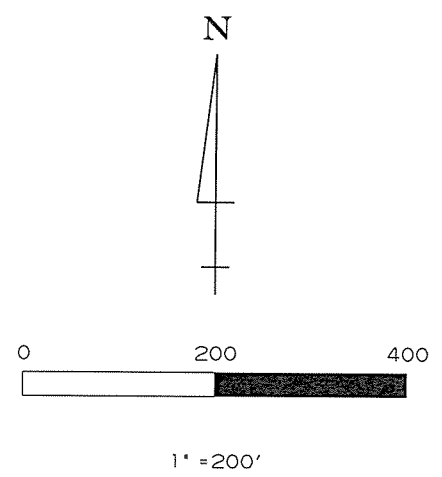
POINT	STATION	TYPE	NORTHING	EASTING
8160	10+00.00	POB	267582.2714	1188069.2448
8161	10+44.28	PC	267543.9640	1188047.0397
8162	10+74.65	PI	267517.6833	1188031.8061
8163	10+98.87	PT	267492.0529	1188048.1100
8164	13+60.34	POE	267271.4394	1188188.4461

SURVEY CONTROL DETAILS

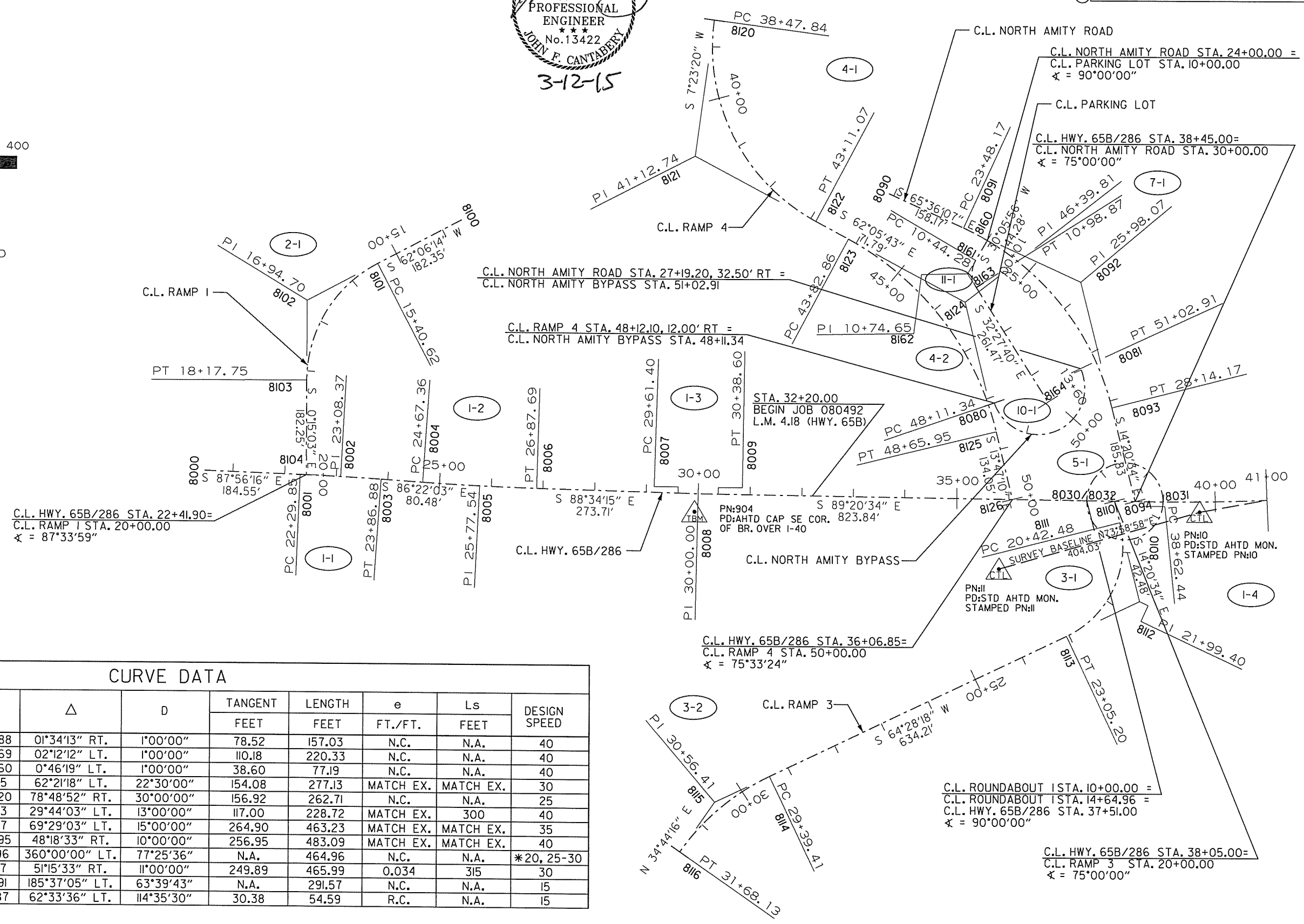
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				6	ARK.			
				JOB NO.	080492	61	209	
				SURVEY CONTROL DETAILS				

STATE OF ARKANSAS
 JOHN F. CANTABERY
 PROFESSIONAL ENGINEER
 No. 13422
 3-12-15



ALL BEARINGS ARE GRID
 BASED ON GPS
 ALL DISTANCES ARE GROUND



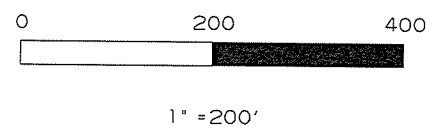
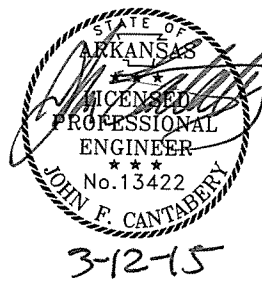
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						FEET	FEET	FT./FT.	FEET	
1-1	22+29.85	23+08.37	23+86.88	01°34'13" RT.	1°00'00"	78.52	157.03	N.C.	N.A.	40
1-2	24+67.36	25+77.54	26+87.69	02°12'12" LT.	1°00'00"	110.18	220.33	N.C.	N.A.	40
1-3	29+61.40	30+00.00	30+38.60	0°46'19" LT.	1°00'00"	38.60	77.19	N.C.	N.A.	40
2-1	15+40.62	16+94.70	18+17.75	62°21'18" LT.	22°30'00"	154.08	277.13	MATCH EX.	MATCH EX.	30
3-1	20+42.48	21+99.40	23+05.20	78°48'52" RT.	30°00'00"	156.92	262.71	N.C.	N.A.	25
3-2	29+39.41	30+56.41	31+68.13	29°44'03" LT.	13°00'00"	117.00	228.72	MATCH EX.	300	40
4-1	38+47.84	41+12.74	43+11.07	69°29'03" LT.	15°00'00"	264.90	463.23	MATCH EX.	MATCH EX.	35
4-2	43+82.86	46+39.81	48+65.95	48°18'33" RT.	10°00'00"	256.95	483.09	MATCH EX.	MATCH EX.	40
5-1	10+00.00	N.A.	14+64.96	360°00'00" LT.	77°25'36"	N.A.	464.96	N.C.	N.A.	*20, 25-30
7-1	23+48.17	25+98.07	28+14.17	51°15'33" RT.	11°00'00"	249.89	465.99	0.034	315	30
10-1	48+11.34	N.A.	51+02.91	185°37'05" LT.	63°39'43"	N.A.	291.57	N.C.	N.A.	15
11-1	10+44.28	10+98.87	10+98.87	62°33'36" LT.	114°35'30"	30.38	54.59	R.C.	N.A.	15

* 20 MPH (NATURAL PATH METHOD)
 25-30 MPH (FASTEST PATH METHOD)
 D = 44°04'25" AT OUTER EDGE OF ROUNDABOUT

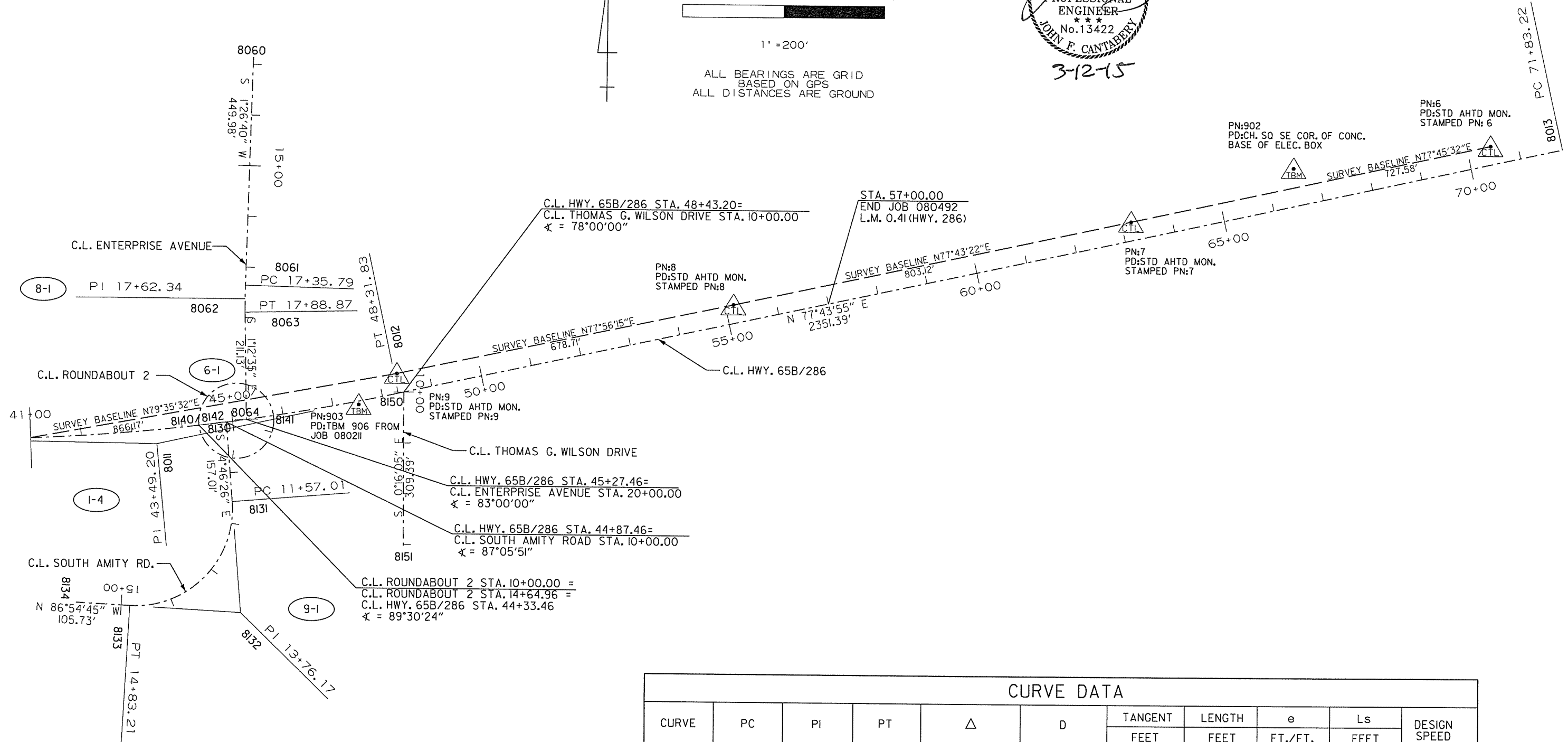
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	62	209	



ALL BEARINGS ARE GRID
BASED ON GPS
ALL DISTANCES ARE GROUND

② SURVEY CONTROL DETAILS



CURVE DATA										
CURVE	PC	PI	PT	Δ	D	TANGENT	LENGTH	e	Ls	DESIGN SPEED
						FEET	FEET	FT./FT.	FEET	
1-4	38+62.44	43+49.20	48+31.83	12°55'31" LT.	1°20'00"	486.76	969.39	N.C.	N.A.	40
6-1	10+00.00	N.A.	14+64.96	360°00'00" LT.	77°25'36"	N.A.	464.96	N.C.	N.A.	*20, 25-30
8-1	17+35.79	17+62.34	17+88.87	2°39'15" LT.	5°00'00"	26.55	53.08	N.C.	N.A.	30
9-1	11+57.01	13+76.17	14+83.21	97°51'40" RT.	30°00'00"	219.17	326.20	N.C.	N.A.	25

*20 MPH (NATURAL PATH METHOD)
25-30 MPH (FASTEST PATH METHOD)
D = 44°04'25" AT OUTER EDGE OF ROUNDABOUT

3/12/2015 10:05:17 AM
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 REVISED DATE:



C.L. HWY. 65B/286
 P.I. = 30+00.00
 $\Delta = 00^{\circ}46'19''$ LT.
 $D = 1^{\circ}00'00''$
 $T = 38.60'$
 $L = 77.19'$
 $P.C. = 29+61.40$
 $P.T. = 30+38.60$
 $e = N.C.$
 $Ls = N.A.$

STA.	REMOVAL AND DISPOSAL OF FENCE	UNIT
39+58	41+92 HWY. 286 RT.	256 LIN. FT.
42+12	43+44 HWY. 286 RT.	152 LIN. FT.

STA. 37+02 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 8'-11", W/ 36" X 172' R.C. PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 5'-0" DIA. TYPE C INLET = 5'-0" X 2'-6"

STA. 37+02 IN PLACE DROP INLET WITH PIPE CULVERT INLET AND OUTLET ON LT. REMOVE

STA. 36+25 LT. CONSTRUCT TYPE 4 WHEELCHAIR RAMP = 7.46 SQ. YDS.

STA. 37+35 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 4'-0", W/ 18" X 43' PIPE CULVERT TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6"

C.L. NORTH AMITY BYPASS

C.L. HWY. 65B/286 STA. 38+05.00 =
 C.L. RAMP 3 STA. 20+00.00
 $\Delta = 75^{\circ}00'00''$

C.L. HWY. 65B/286

STA. 32+20.00
 BEGIN JOB 080492
 L.M. 4.18 (HWY. 65B)

C.L. HWY. 65B/286 STA. 36+06.85 =
 C.L. RAMP 4 STA. 50+00.00
 $\Delta = 75^{\circ}33'24''$

STA. 32+25 CONSTRUCT DROP INLET ON RT. H = 5'-3", W/18" X 172' PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6"

STA. 34+00 CONSTRUCT DROP INLET ON RT. H = 5'-3", W/18" X 196' R.C. PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6"

STA. 34+04 IN PLACE DROP INLET WITH PIPE CULVERT OUTLET ON RT. REMOVE

STA. 36+00 CONSTRUCT DROP INLET ON RT. H = 5'-3", W/18" X 105' PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6"

STA. 37+02 CONSTRUCT DROP INLET ON RT. W/ 4' EXT. LT. & RT. H = 7'-10", W/36" X 16' R.C. PIPE OUTLET W/ F.E.S. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 5'-0" DIA. TYPE C INLET = 5'-0" X 2'-6"

STA. 37+02 IN PLACE DROP INLET WITH PIPE CULVERT OUTLET ON RT. REMOVE

STA. 34+30 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 7.16 SQ. YDS.

STA. 34+80 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 4.79 SQ. YDS.

STA. 36+30 RT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.67 SQ. YDS.

STA. 38+79 CONSTRUCT TYPE E JUNCTION BOX, 141' LT. H = 9'-0" X 3'-0" X 7'-0" W/ 59" X 36" X 236' R.C. ARCH PIPE INLET ON LT. W/ F.E.S. AND W/ 59" X 36" X 79' ARCH PIPE CULVERT OUTLET TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING

STA. 38+80 IN PLACE PIPE CULVERT REMOVE

STA. 39+41 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. & RT. H = 7'-6", W/59" X 36" X 96' ARCH PIPE CULVERT TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING TYPE C INLET = 4'-0" X 7'-0"

STA. 40+34 CONSTRUCT TYPE E JUNCTION BOX, ON' LT. H = 8'-11" X 3'-0" X 7'-0" W/ 59" X 36" X 160' ARCH PIPE CULVERT TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING

STA. 40+57 IN PLACE SIDE DRAIN LT. REMOVE

STA. 42+00 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. H = 7'-9", W/59" X 36" X 137' R.C. ARCH PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE C INLET = 4'-0" X 10'-0"

STA. 39+82 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.67 SQ. YDS.

C.L. HWY. 65B/286
 P.I. = 43+49.20
 $\Delta = 12^{\circ}55'31''$ LT.
 $D = 1^{\circ}20'00''$
 $T = 486.76'$
 $L = 969.39'$
 $P.C. = 38+62.44$
 $P.T. = 48+31.83$
 $e = N.C.$
 $Ls = N.A.$

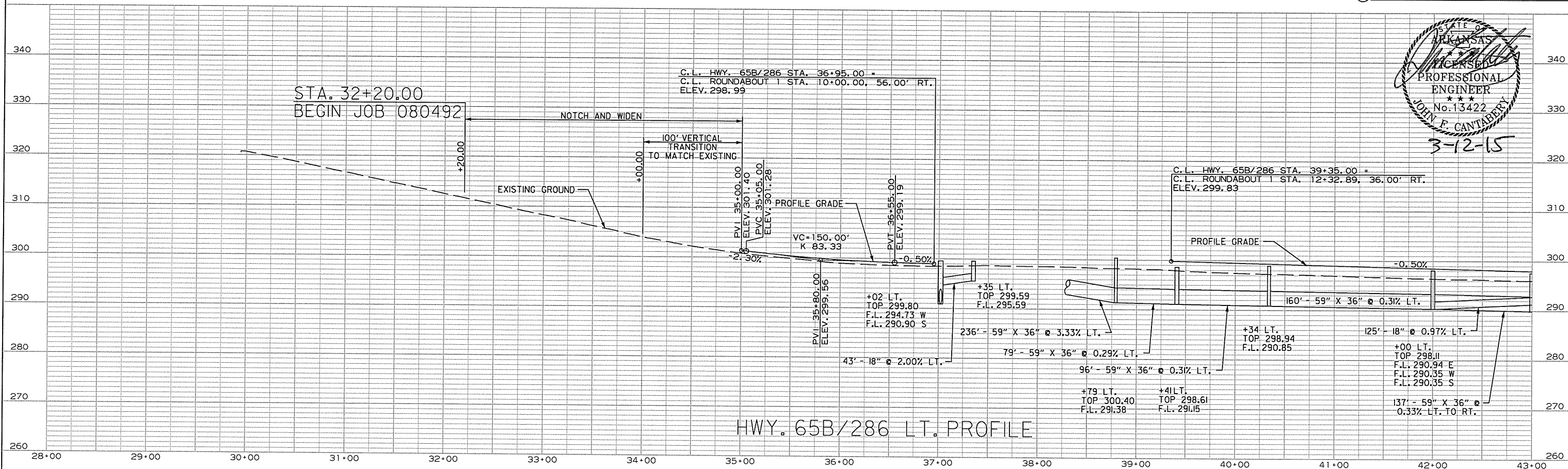
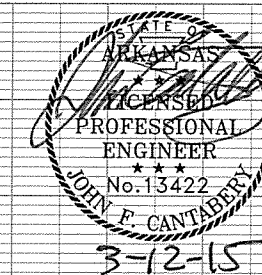
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				6	ARK.	080492	63	209

PLAN - HWY. 65B/286

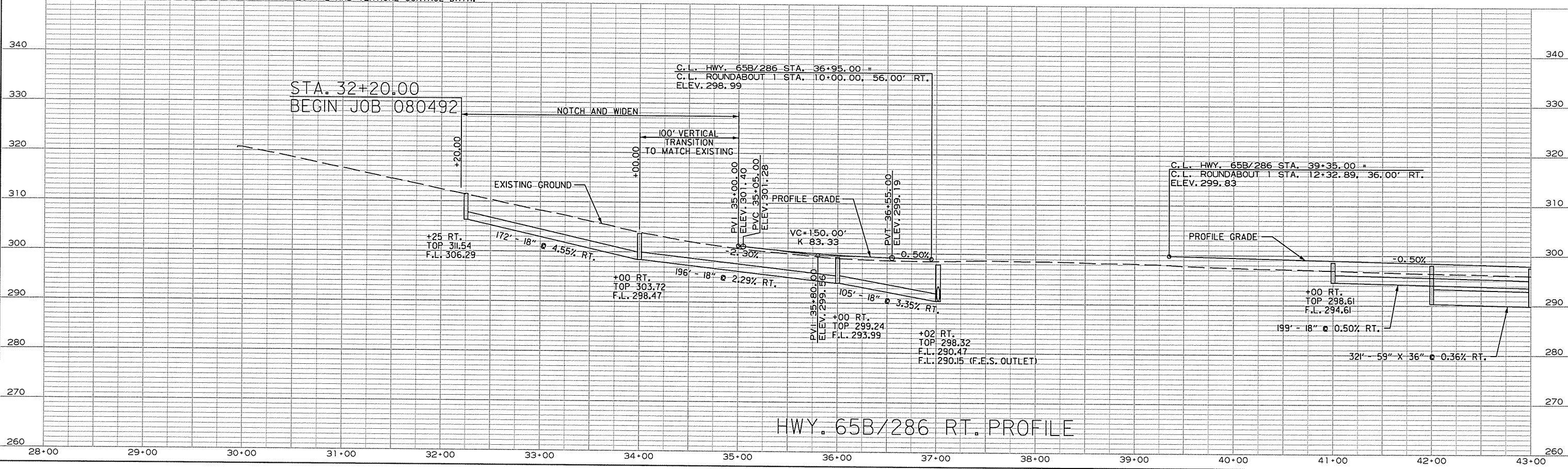
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				JOB NO.	080492			

2 PROFILE - HWY. 65B/286

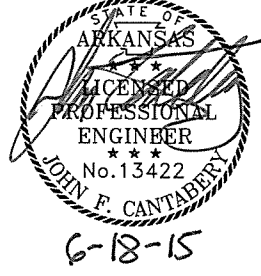


REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



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				6	ARK.			
				JOB NO.		080492	65	209
				PLAN - HWY. 65B/286				



STA. 43+30 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. H = 5'-7", W/18" X 125' PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6" (CLASS III) TYPE 3 BEDDING

STA. 44+00 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. & RT. H = 4'-9", W/18" X 83' PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6" (CLASS III) TYPE 3 BEDDING

C.L. HWY. 65B/286
P. I. = 43+49.20
Δ = 12°55'31" LT.
D = 1°20'00"
L = 486.76'
T = 969.39'
P. C. = 38+62.44
P. T. = 48+31.83
e = N. C.
Ls = N. A.

STA. 46+37 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. & RT. H = 5'-0", W/18" X 65' PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0" (CLASS III) TYPE 3 BEDDING

STA. 48+00 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 5'-5", W/18" X 37' PIPE CULVERT TO R.C. BOX CULVERT ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6" (CLASS III) TYPE 3 BEDDING

STA. 52+80 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 6'-0" W/24" X 14' R.C. PIPE CULVERT INLET ON LT. W/ F.E.S. AND W/24" X 12' PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0" (CLASS III) TYPE 3 BEDDING

STA. 56+00 CONSTRUCT DROP INLET ON LT. H = 6'-6", W/ 36" X 8' R.C. PIPE INLET ON LT. W/ F.E.S. AND 36" X 98' STUB TO STA. 57+00 (CLASS III) TYPE 3 BEDDING (PLUG AND BURY FOR FUTURE CONNECTION) AND W/36" X 65' R.C. PIPE CULVERT TO DROP INLET ON RT. (CLASS IV) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 4'-0"

STA. 44+80 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. H = 5'-9", W/18" X 30' PIPE CULVERT TO DROP INLET ENTERPRISE RT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6" (CLASS III) TYPE 3 BEDDING

STA. 47+00 CONSTRUCT DROP INLET ON LT. W/8' EXT. ON RT. H = 5'-2", W/18" X 47' PIPE CULVERT TO R.C. BOX CULVERT ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0" (CLASS III) TYPE 3 BEDDING

STA. 49+70 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 5'-6", W/18" X 166' R.C. PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6" (CLASS III) TYPE 3 BEDDING

STA. 54+00 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 6'-0" W/24" X 13' R.C. PIPE CULVERT INLET ON LT. W/ F.E.S. AND W/24" X 116' PIPE CULVERT TO DROP INLET ON LT. TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0" (CLASS III) TYPE 3 BEDDING

STA. 43+70 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.67 SQ. YDS.

STA. 46+83 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.67 SQ. YDS.

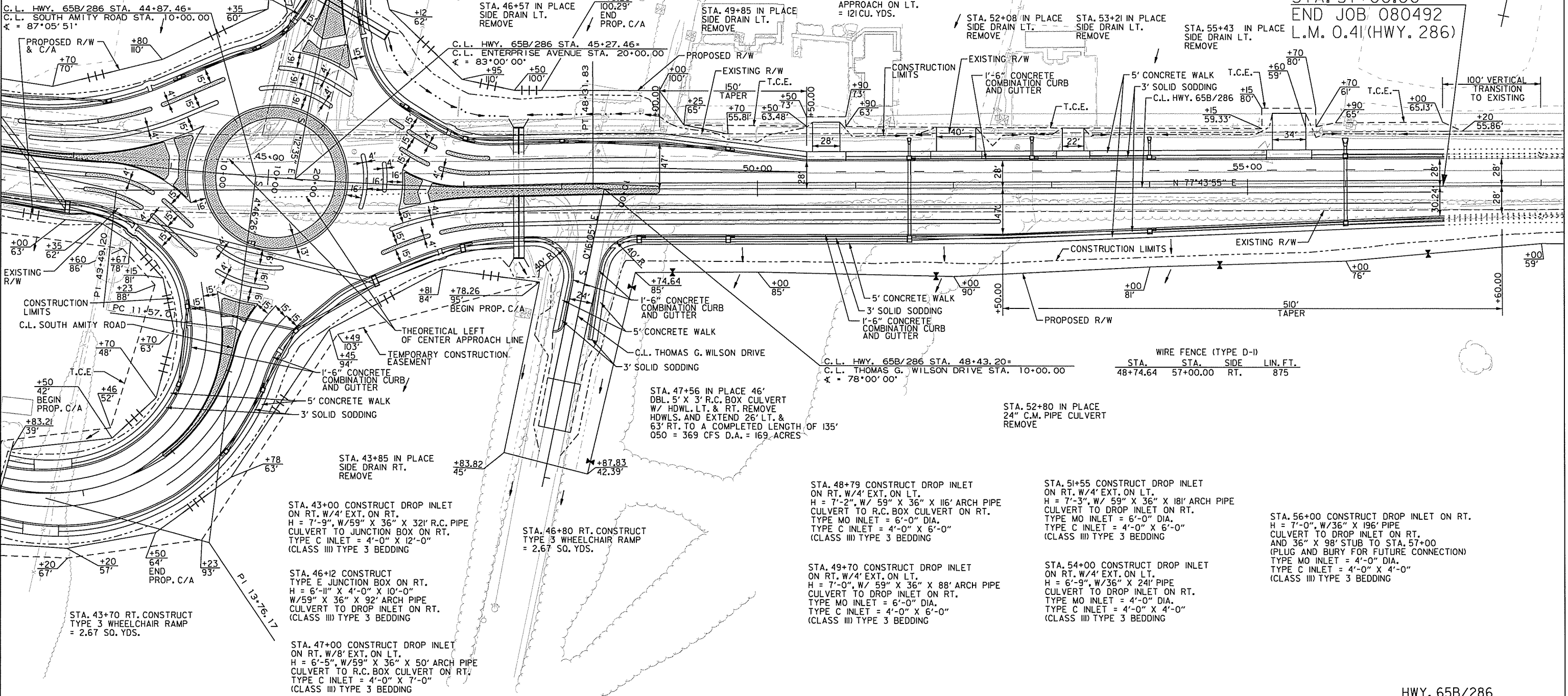
STA. 51+55 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 6'-9" W/24" X 13' R.C. PIPE CULVERT INLET ON LT. W/ F.E.S. (CLASS III) TYPE 3 BEDDING AND W/36" X 78' R.C. PIPE CULVERT TO DROP INLET ON RT. (CLASS IV) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0"

STA. 52+03 CONSTRUCT APPROACH ON LT. = 39 CU. YDS.

STA. 53+22 CONSTRUCT APPROACH ON LT. = 18 CU. YDS.

STA. 55+43 CONSTRUCT APPROACH ON LT. = 52 CU. YDS.

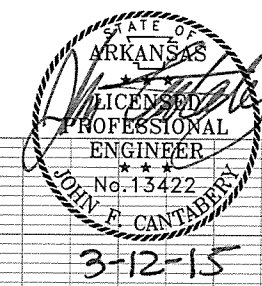
STA. 57+00.00
END JOB 080492
L.M. O.41(HWY. 286)



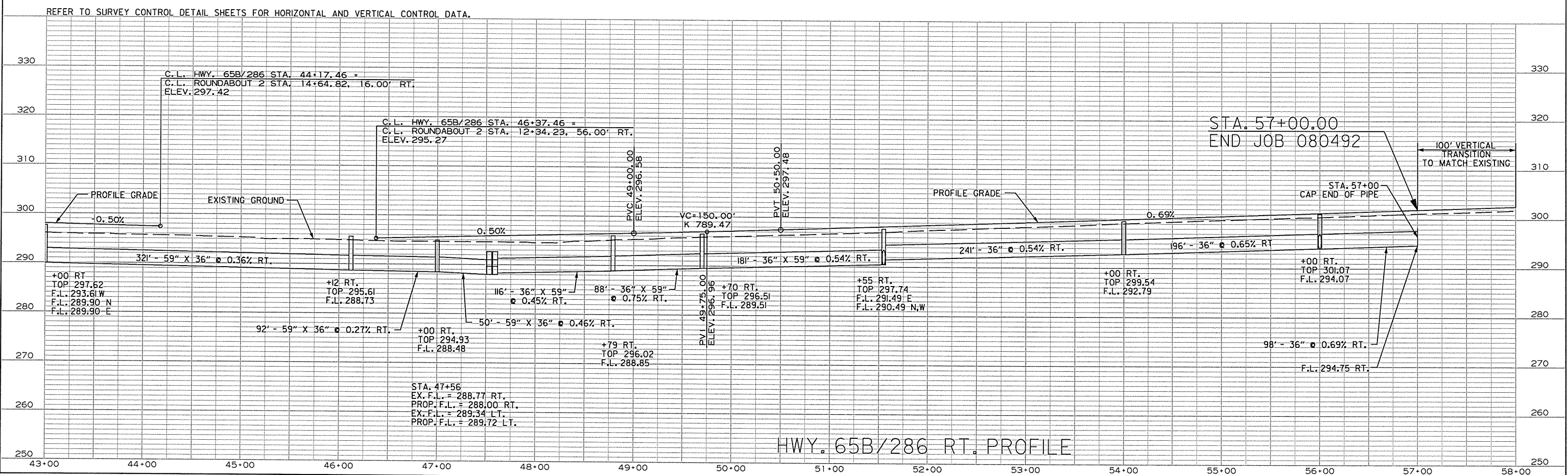
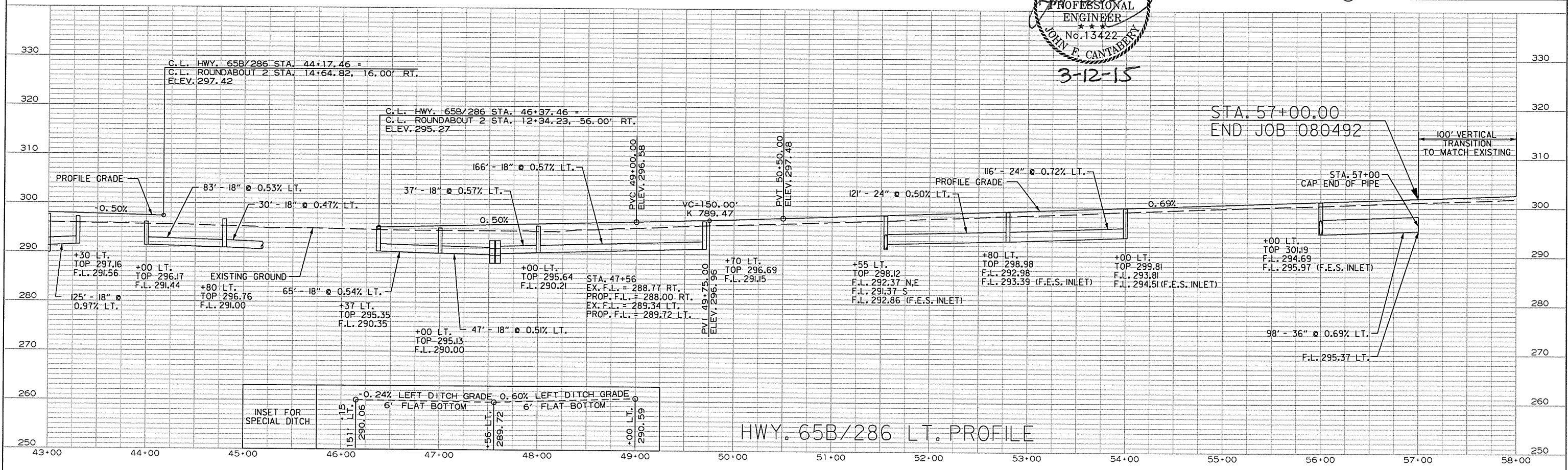
WIRE FENCE (TYPE D-I)			
STA.	STA.	SIDE	LIN. FT.
48+74.64	57+00.00	RT.	875

6/18/2015 1:27:06 PM
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				6	ARK.			
				JOB NO.		080492	66	209



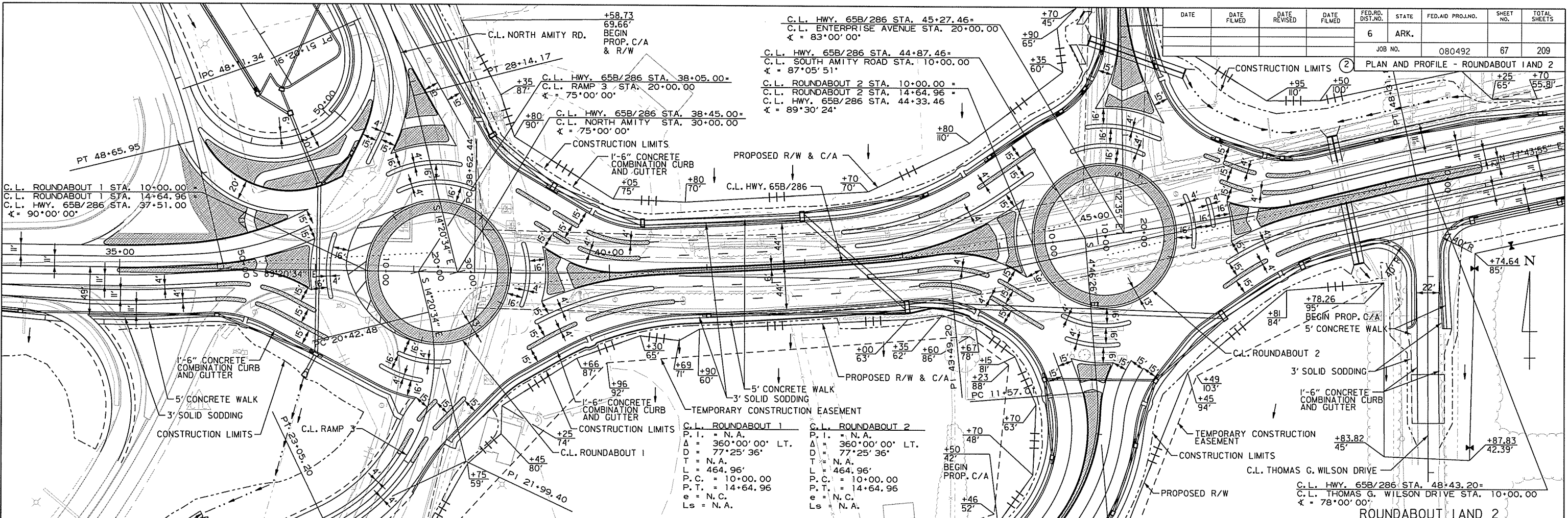
2 PROFILE - HWY. 65B/286



3/12/2015 10:05:19 AM
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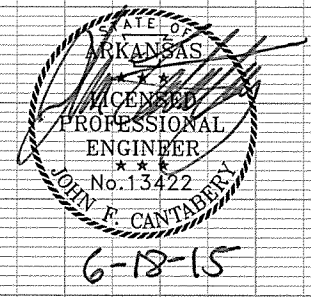
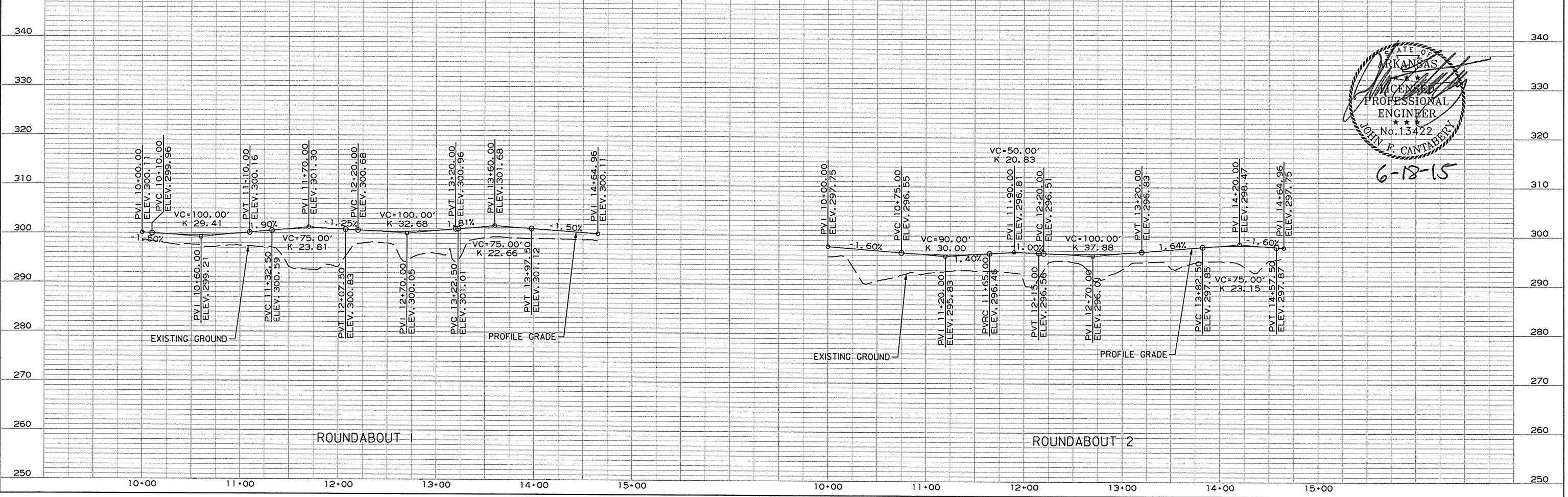
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							67	209



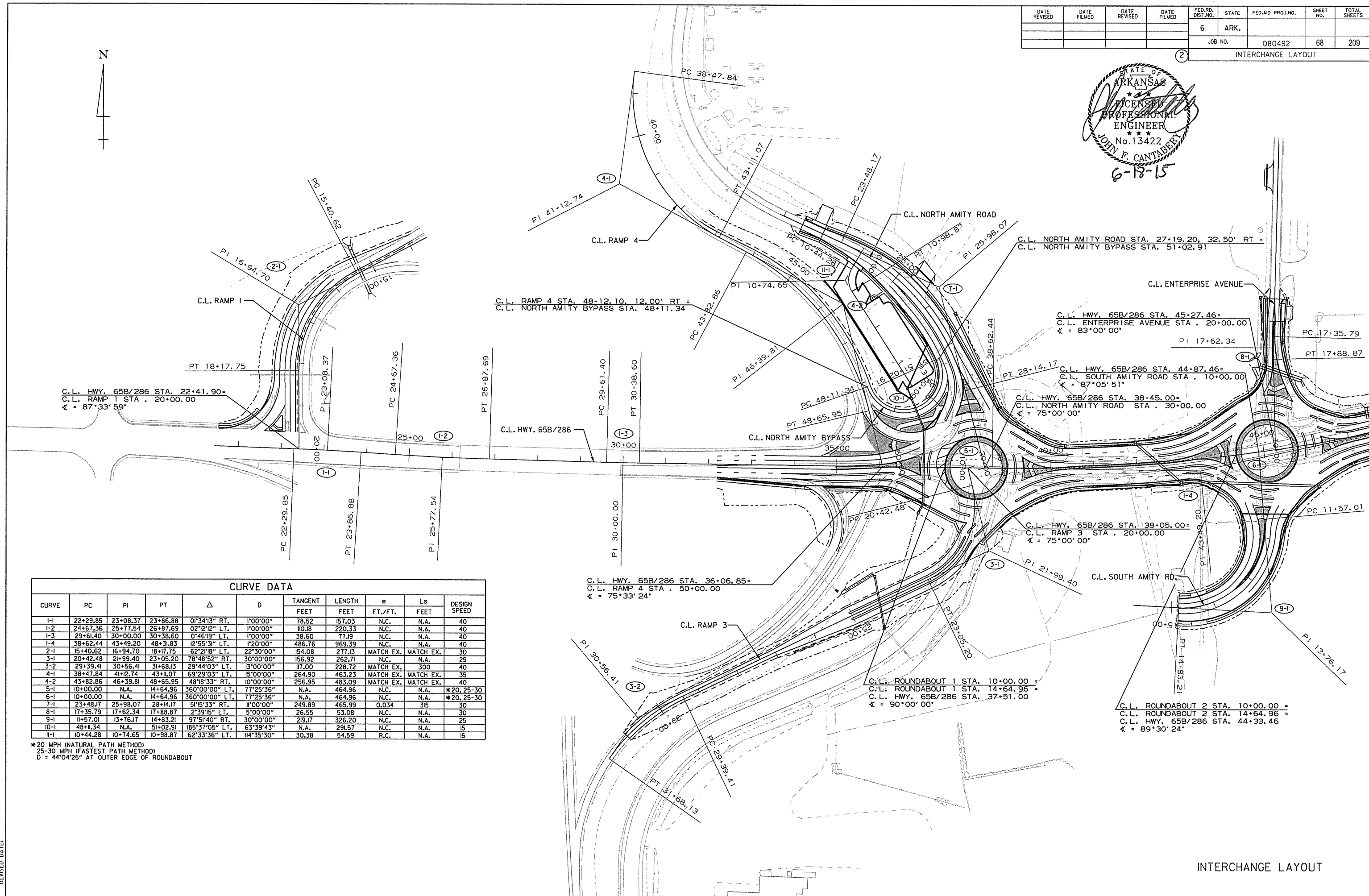
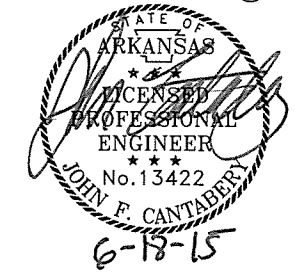
C.L. ROUNDABOUT 1	C.L. ROUNDABOUT 2
P.I. = N.A.	P.I. = N.A.
Δ = 360°00'00" LT.	Δ = 360°00'00" LT.
D = 77°25'36"	D = 77°25'36"
T = N.A.	T = N.A.
r = 464.96'	r = 464.96'
P.C. = 10+00.00	P.C. = 10+00.00
P.T. = 14+64.96	P.T. = 14+64.96
e = N.C.	e = N.C.
Ls = N.A.	Ls = N.A.

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



6/18/2015 12:10:07 PM
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	68	209	
				INTERCHANGE LAYOUT				



CURVE DATA

CURVE	PC	PI	PT	Δ	D	TANGENT		e	Ls	DESIGN SPEED
						FEET	FEET			
I-1	22+29.85	23+08.37	23+86.88	01°34'13" RT.	1°00'00"	78.52	157.03	N.C.	N.A.	40
I-2	24+67.36	25+77.54	26+87.69	02°12'12" LT.	1°00'00"	110.18	220.33	N.C.	N.A.	40
I-3	29+61.40	30+00.00	30+38.60	0°46'19" LT.	1°00'00"	38.60	77.19	N.C.	N.A.	40
I-4	38+62.44	43+49.20	48+31.83	12°55'31" LT.	1°20'00"	486.76	969.39	N.C.	N.A.	40
2-1	15+40.62	16+94.70	18+17.75	62°21'18" LT.	22°30'00"	154.08	277.13	MATCH EX.	MATCH EX.	30
3-1	20+42.48	21+99.40	23+05.20	78°48'52" RT.	30°00'00"	156.92	262.71	N.C.	N.A.	25
3-2	29+39.41	30+56.41	31+68.13	29°44'03" LT.	13°00'00"	117.00	228.72	MATCH EX.	300	40
4-1	38+47.84	41+12.74	43+11.07	69°29'03" LT.	15°00'00"	264.90	463.23	MATCH EX.	MATCH EX.	35
4-2	43+82.86	46+39.81	48+65.95	48°18'33" RT.	10°00'00"	256.95	483.09	MATCH EX.	MATCH EX.	40
5-1	10+00.00	N.A.	14+64.96	360°00'00" LT.	77°25'36"	N.A.	464.96	N.C.	N.A.	*20, 25-30
6-1	10+00.00	N.A.	14+64.96	360°00'00" LT.	77°25'36"	N.A.	464.96	N.C.	N.A.	*20, 25-30
7-1	23+48.17	25+98.07	28+14.17	51°15'33" RT.	11°00'00"	249.89	465.99	0.034	315	30
8-1	17+35.79	17+62.34	17+88.87	2°39'15" LT.	5°00'00"	26.55	53.08	N.C.	N.A.	30
9-1	11+57.01	13+76.17	14+83.21	97°51'40" RT.	30°00'00"	219.17	326.20	N.C.	N.A.	25
10-1	48+11.34	N.A.	51+02.91	185°37'05" LT.	63°39'43"	N.A.	291.57	N.C.	N.A.	15
11-1	10+44.28	10+74.65	10+98.87	62°33'36" LT.	11°45'35" RT.	30.38	54.59	R.C.	N.A.	15

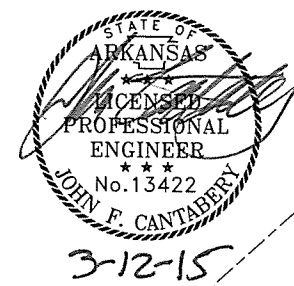
*20 MPH (NATURAL PATH METHOD)
 25-30 MPH (FASTEST PATH METHOD)
 D = 44'04"25" AT OUTER EDGE OF ROUNDABOUT

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 REVISION DATE:

INTERCHANGE LAYOUT

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	69	209	

PLAN AND PROFILE - RAMP 1



C.L. RAMP 1
 P.I. = 16+94.70
 Δ = 62°21'18" LT.
 D = 22°30'00"
 T = 154.08'
 L = 277.13'
 P.C. = 15+40.62
 P.T. = 18+17.75
 e = MATCH EXISTING
 Ls = MATCH EXISTING

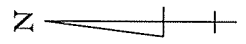
STA. 15+32 IN PLACE
 6' X 5' X 12' R.C. BOX CULVERT
 W/ HDWL. LT. & RT.
 REMOVE HDWL. RT. AND EXTEND 11' RT.
 TO A COMPLETED LENGTH OF 123'
 050 = 205 CFS D.A. = 130 ACRES

STA. 16+84.00 IN PLACE
 D.I. W/ 30" X 58' R.C. PIPE CULVERT
 WITH FES. LT.
 RETAIN

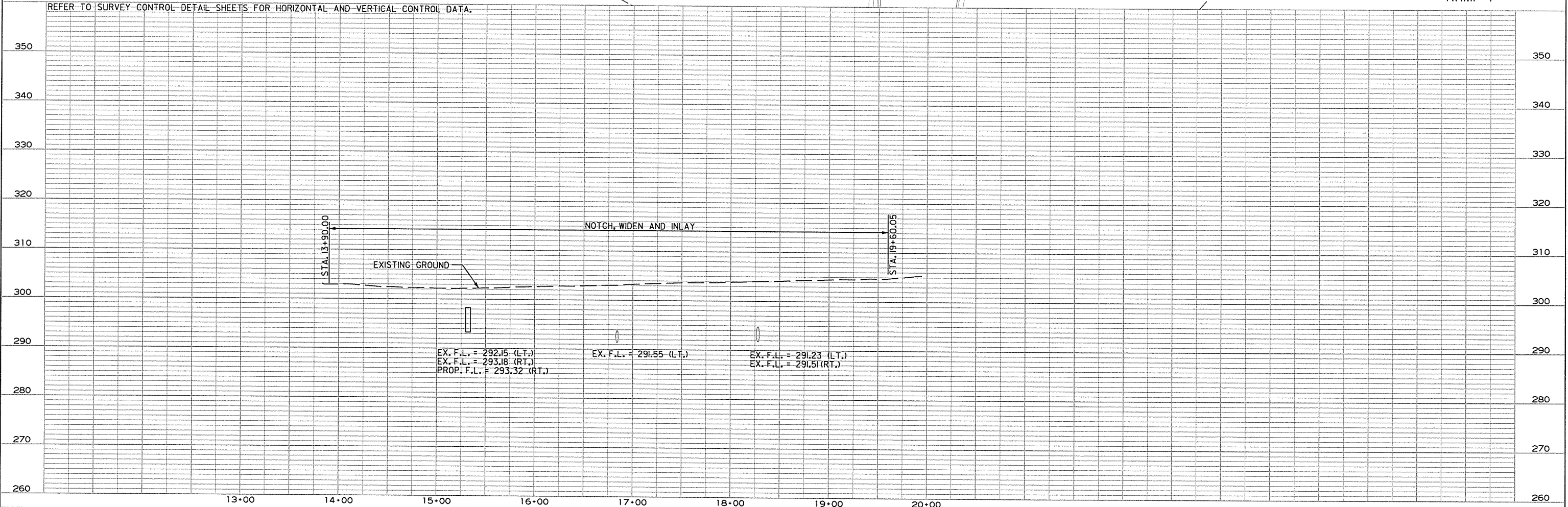
STA. 18+28.00 IN PLACE
 D.I. W/ 36" X 168' R.C. PIPE CULVERT
 WITH FES. LT. AND RT.
 RETAIN

C.L. HWY. 65B/286 STA. 22+41.90 =
 C.L. RAMP 1 STA. 20+00.00
 Δ = 87°33'59"

STA. 19+10 RT. CONSTRUCT
 TYPE 3 WHEELCHAIR RAMP = 2.69 SQ. YDS.



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

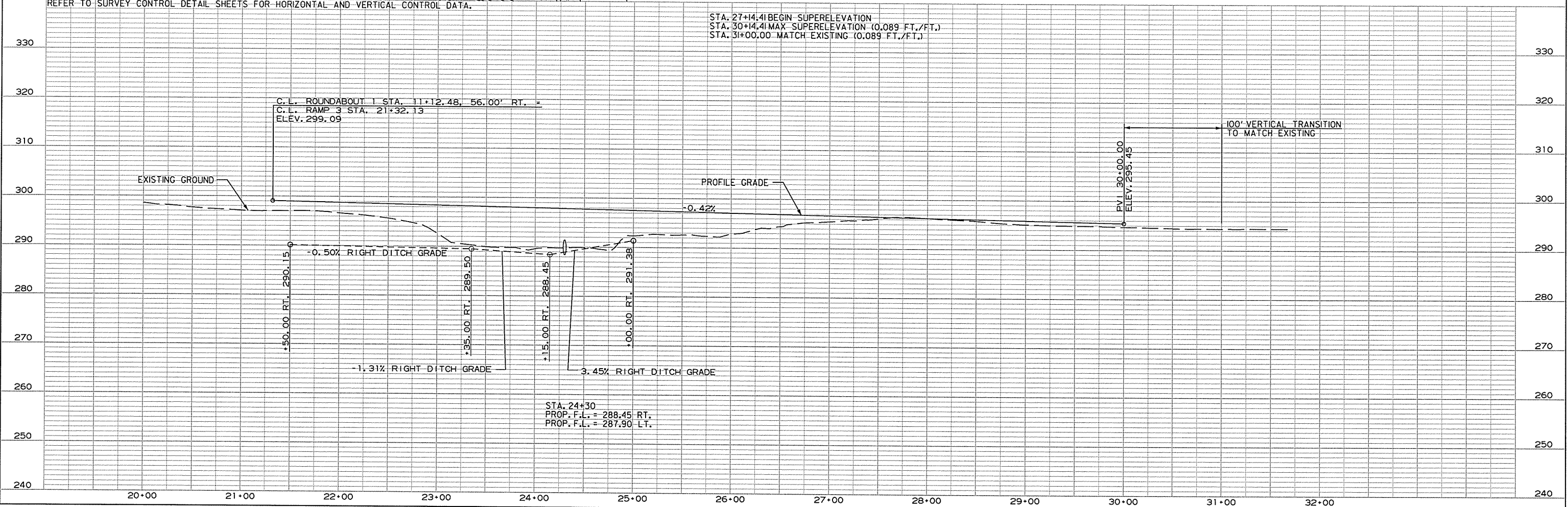
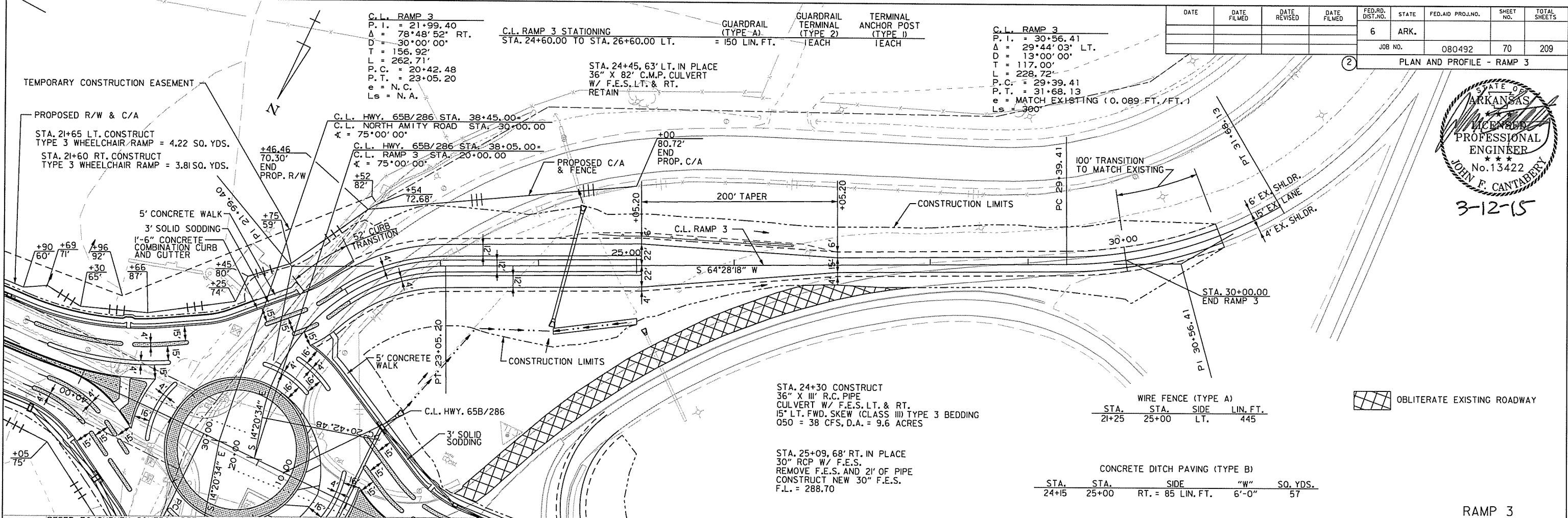
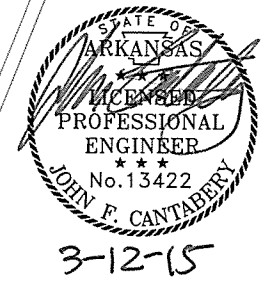


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 REVISED DATE:

RAMP 1

DATE	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		70	209
				JOB NO.	080492			

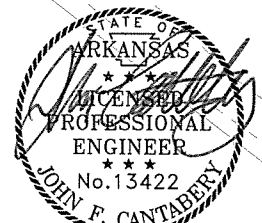
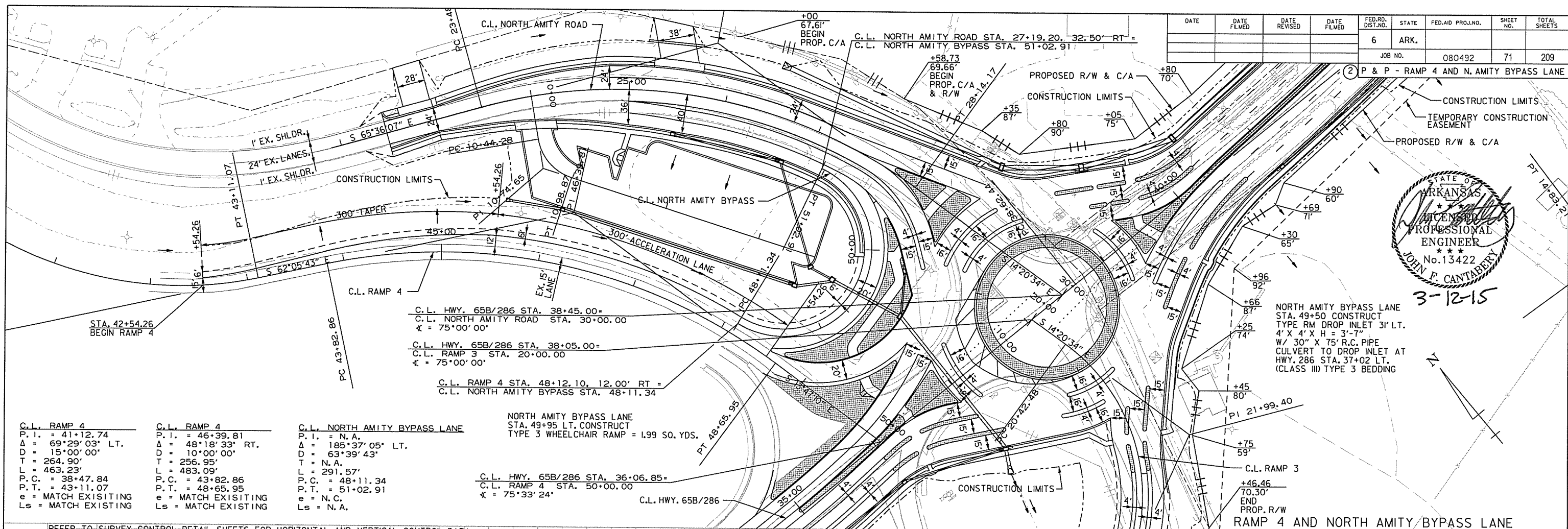
PLAN AND PROFILE - RAMP 3



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 REVISION DATE:

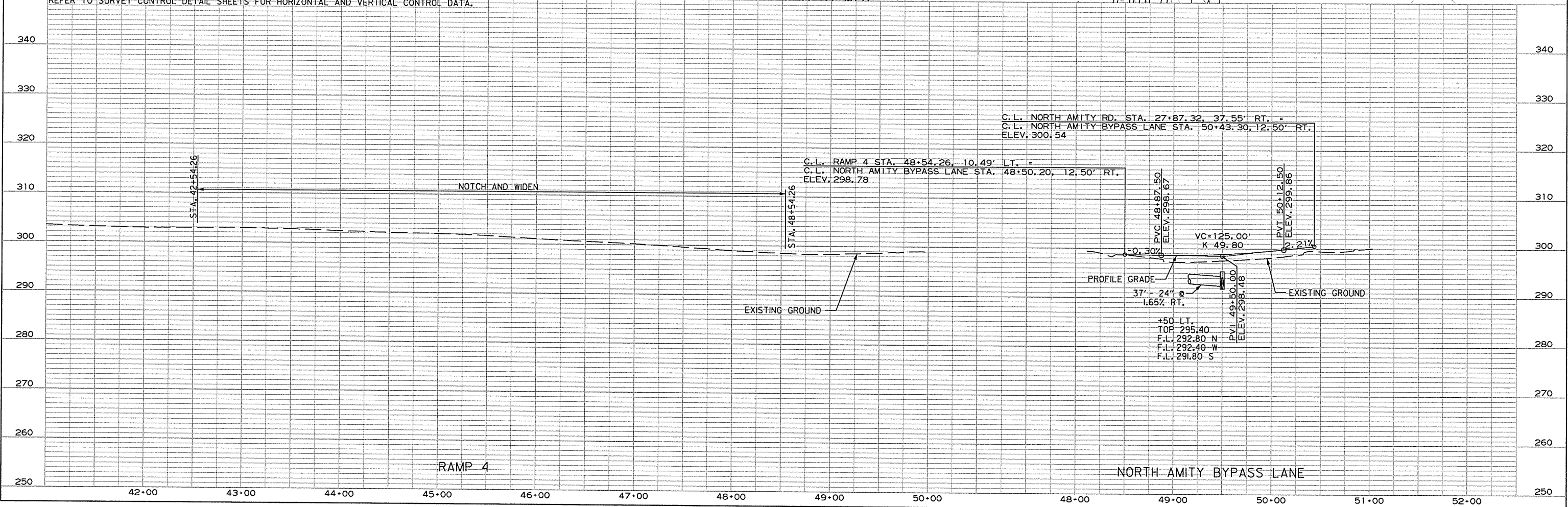
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				6	ARK.		71	209
				JOB NO.	080492		71	209

② P & P - RAMP 4 AND N. AMITY BYPASS LANE



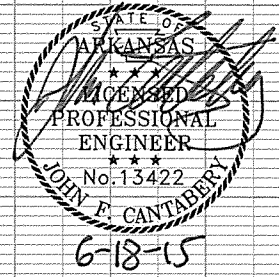
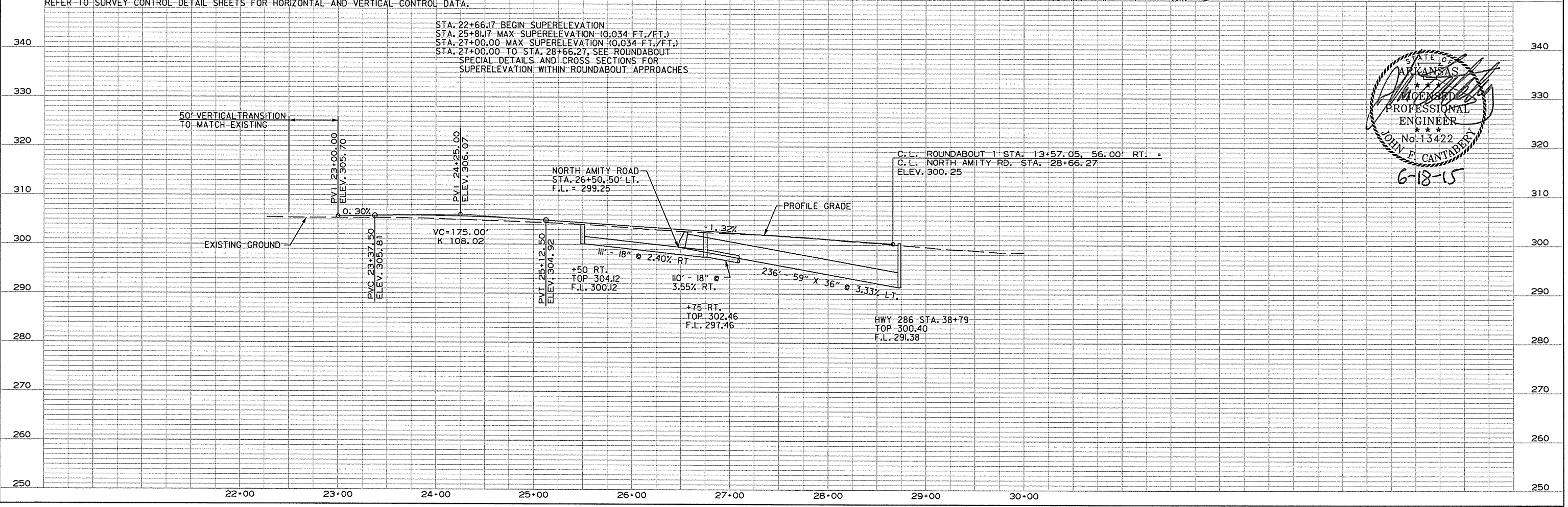
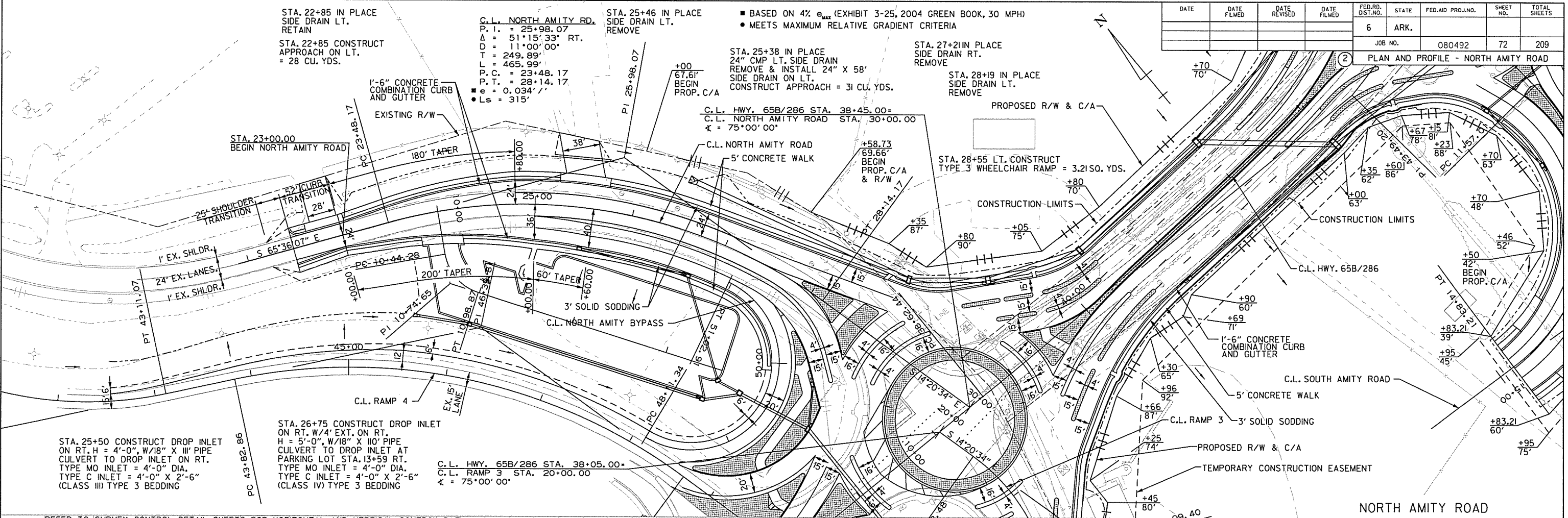
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REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.



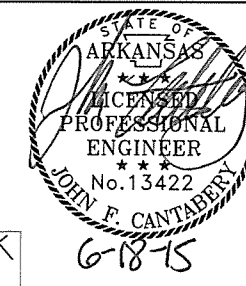
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				6	ARK.		72	209
				JOB NO.	080492		72	209



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				6	ARK.		73	209



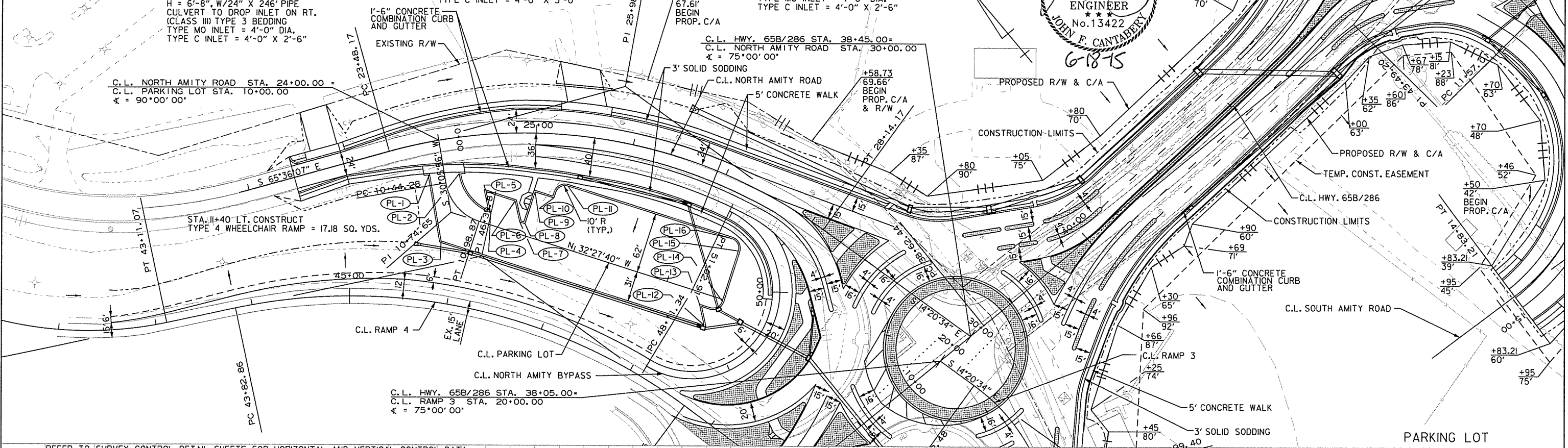
STA. 10+72.82, 55.21' RT.
CONSTRUCT FES W/24" X 50' R.C. PIPE
CULVERT TO DROP INLET ON RT.
(CLASS III) TYPE 3 BEDDING

STA. 11+00 CONSTRUCT DROP INLET ON RT.
H = 6'-8", W/24" X 246' PIPE
CULVERT TO DROP INLET ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"

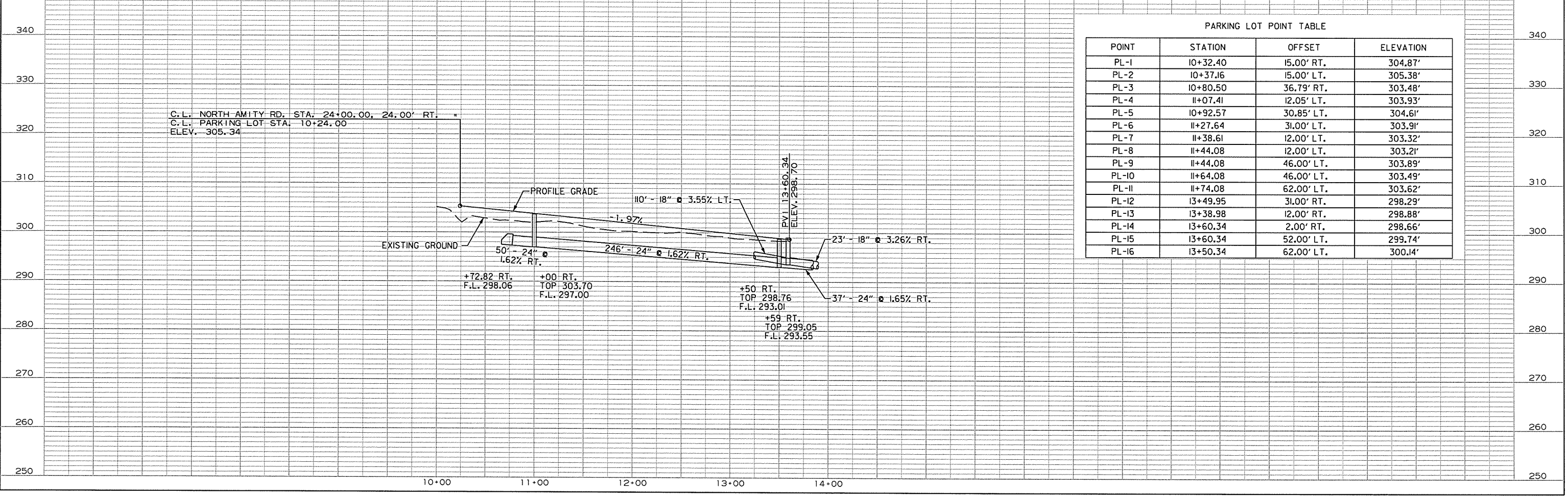
STA. 13+50 CONSTRUCT DROP INLET ON RT.
W/ 4' EXTENSION
H = 5'-9", W/24" X 37' PIPE
CULVERT TO DROP INLET AT
NORTH AMITY BYPASS STA. 49+50 RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"

STA. 13+59 CONSTRUCT DROP INLET II' RT.
H = 5'-6", W/18" X 23' PIPE
CULVERT TO DROP INLET AT
NORTH AMITY BYPASS STA. 49+50 RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"

PLAN AND PROFILE - PARKING LOT



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



PARKING LOT POINT TABLE

POINT	STATION	OFFSET	ELEVATION
PL-1	10+32.40	15.00' RT.	304.87'
PL-2	10+37.16	15.00' LT.	305.38'
PL-3	10+80.50	36.79' RT.	303.48'
PL-4	11+07.41	12.05' LT.	303.93'
PL-5	10+92.57	30.85' LT.	304.61'
PL-6	11+27.64	31.00' LT.	303.91'
PL-7	11+38.61	12.00' LT.	303.32'
PL-8	11+44.08	12.00' LT.	303.21'
PL-9	11+44.08	46.00' LT.	303.89'
PL-10	11+64.08	46.00' LT.	303.49'
PL-11	11+74.08	62.00' LT.	303.62'
PL-12	13+49.95	31.00' RT.	298.29'
PL-13	13+38.98	12.00' RT.	298.88'
PL-14	13+60.34	2.00' RT.	298.66'
PL-15	13+60.34	52.00' LT.	299.74'
PL-16	13+50.34	62.00' LT.	300.14'

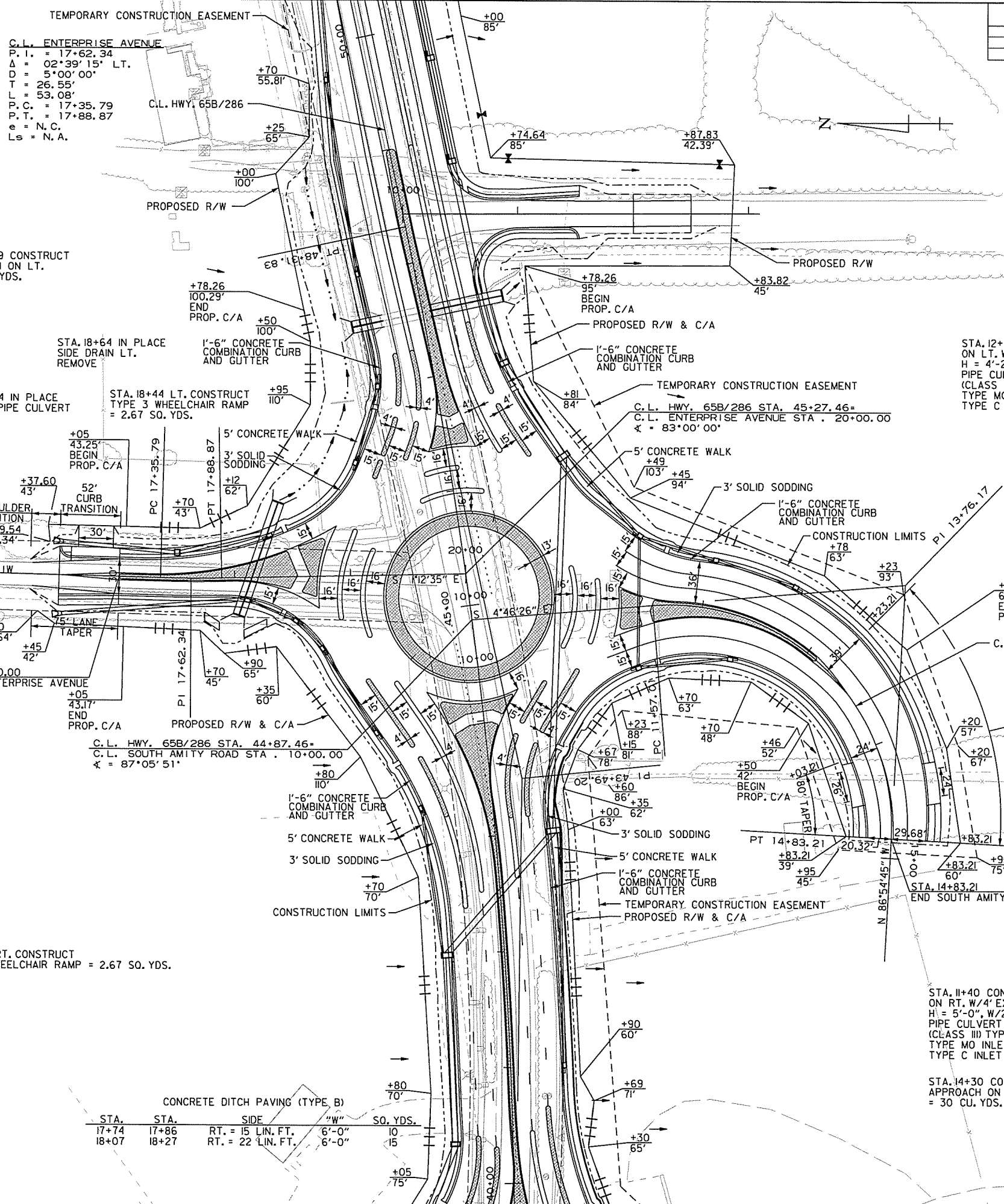
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				6	ARK.			
				JOB NO.	080492	74	209	

PLAN - ENTERPRISE AVE. AND S. AMITY RD.



6-18-15



STA. 16+53 CONSTRUCT F.E.S. ON LT. W/36" X 97' R.C. PIPE CULVERT TO JUNCTION BOX ON LT. (CLASS III) TYPE 3 BEDDING

STA. 17+50 CONSTRUCT TYPE E JUNCTION BOX 22' LT. (4'-0" X 4'-6" X H= 4'7") W/ 36" X 73' PIPE CULVERT OUTLET TO BOX CULVERT STA. 18+15 ON LT. (CLASS III) TYPE 3 BEDDING

STA. 18+31 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. H = 1'-8", CONNECT TO BOX CULVERT TYPE C INLET = 4'-0" X 2'-6"

STA. 16+79 CONSTRUCT APPROACH ON LT. = 58 CU. YDS.

STA. 18+64 IN PLACE SIDE DRAIN LT. REMOVE

STA. 19+64 IN PLACE 24" C.M. PIPE CULVERT REMOVE

STA. 18+44 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.67 SQ. YDS.

STA. 13+65 CONSTRUCT 24" X 60' PIPE CULVERT RT. SIDE DRAIN CONST APPROACH = 33 CU. YDS.

STA. 16+53 CONSTRUCT F.E.S. ON RT. W/36" X 154' R.C. PIPE CULVERT TO BOX CULVERT STA. 18+15 (CLASS III) TYPE 3 BEDDING

STA. 18+11 CONSTRUCT DROP INLET ON RT. W/4' EXT. ON LT. & RT. H = 1'-8", CONNECT TO BOX CULVERT TYPE C INLET = 4'-0" X 2'-6"

STA. 18+15 CONSTRUCT DBL. 5' X 3' X 104' BOX CULVERT 20' LT. FWD. SKEW Q25 = 122 CFS, D.A. = 56 ACRES

STA. 18+53 CONSTRUCT DROP INLET ON RT. W/4' EXT. ON LT. H = 5'-2", W/18" X 4' PIPE CULVERT TO BOX CULVERT ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 2'-6"

C.L. SOUTH AMITY RD.
P.I. = 13+76.17
Δ = 97°51'40" RT.
D = 30°00'00"
T = 219.17'
L = 326.20'
P.C. = 11+57.01
P.T. = 14+83.21
e = N.C.
Ls = N.A.

STA. 12+50 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON LT. H = 5'-8", W/24" X 92' PIPE CULVERT TO DROP INLET HWY. 286 ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0"

STA. 12+65 CONSTRUCT DROP INLET ON LT. W/4' EXT. ON RT. H = 3'-0", W/22" X 14" X 69' ARCH PIPE CULVERT TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0"

STA. 12+70 LT. CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 2.66 SQ. YDS.

STA. 14+31 CONSTRUCT APPROACH ON LT. = 28 CU. YDS.

STA. 14+38 CONSTRUCT APPROACH ON RT. = 30 CU. YDS.

STA. 12+40 CONSTRUCT DROP INLET ON RT. W/4' EXT. ON RT. H = 5'-0", W/22" X 14" X 112' ARCH PIPE CULVERT TO DROP INLET ON LT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0"

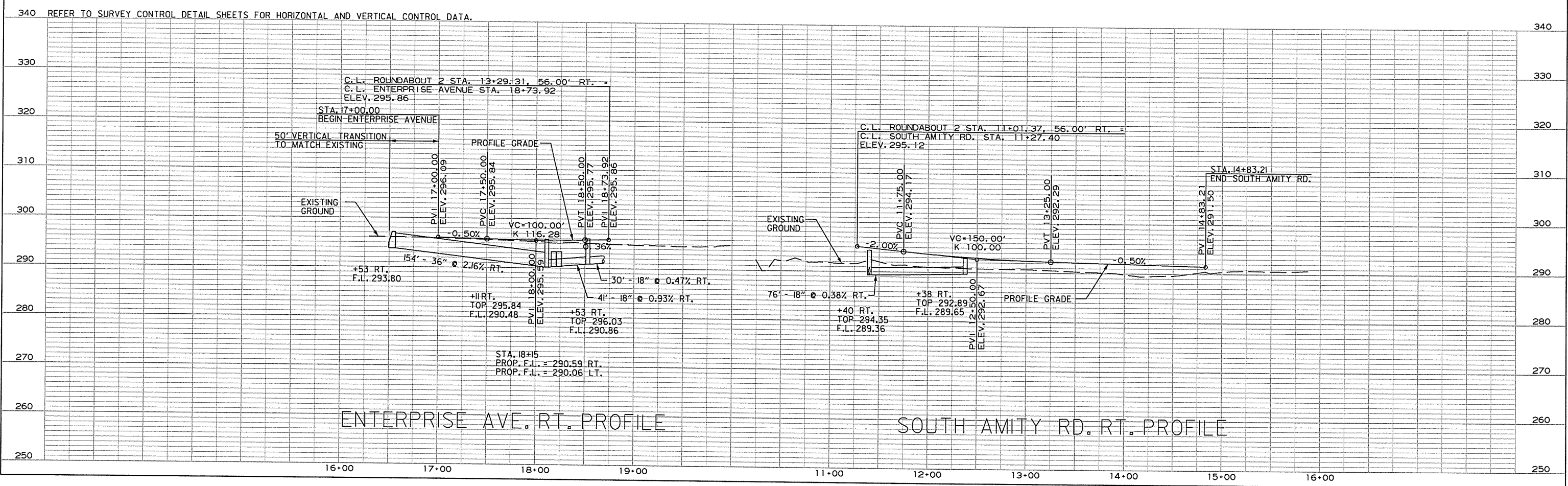
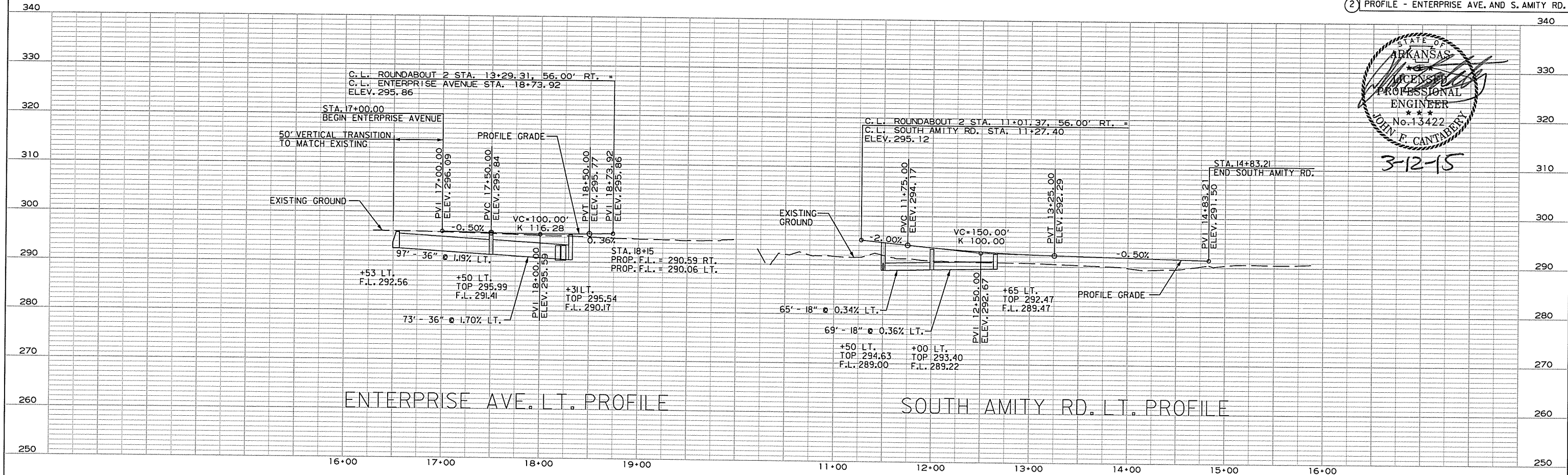
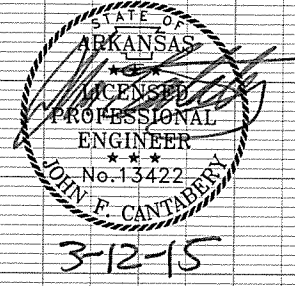
STA. 12+38 CONSTRUCT DROP INLET ON RT. W/4' EXT. ON LT. H = 3'-3", W/22" X 14" X 76' ARCH PIPE CULVERT TO DROP INLET ON RT. (CLASS III) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 3'-0"

STA.	STA.	SIDE	"W"	SO. YDS.
17+74	17+86	RT. = 15 LIN. FT.	6'-0"	10
18+07	18+27	RT. = 22 LIN. FT.	6'-0"	15

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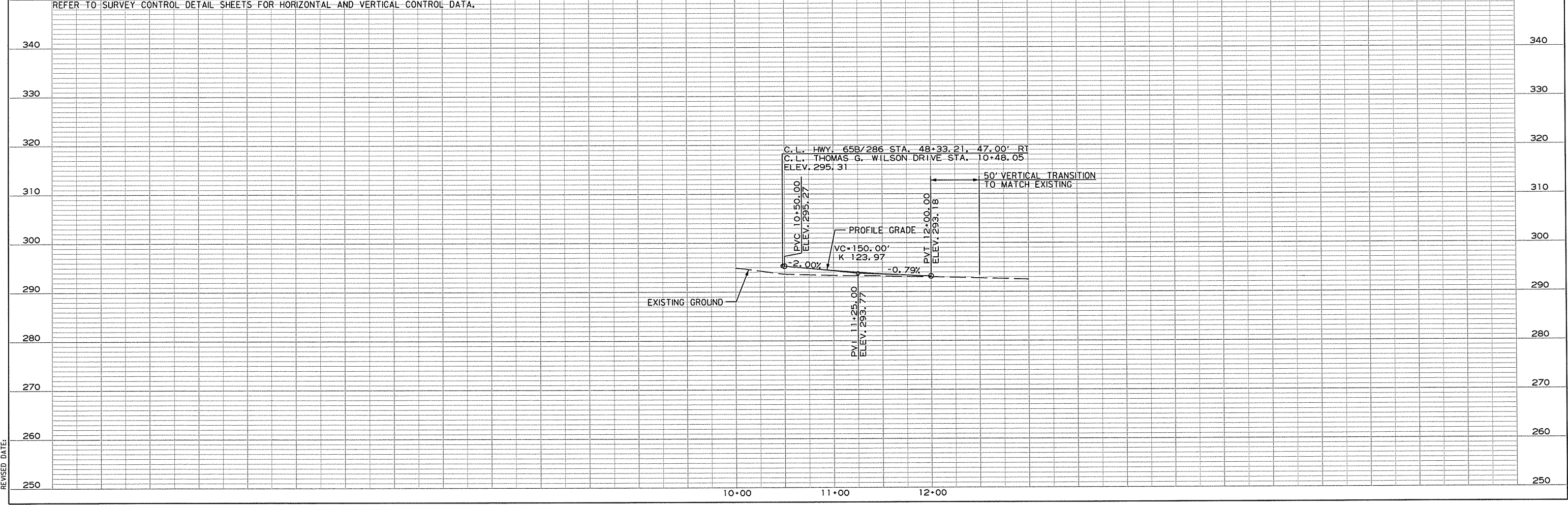
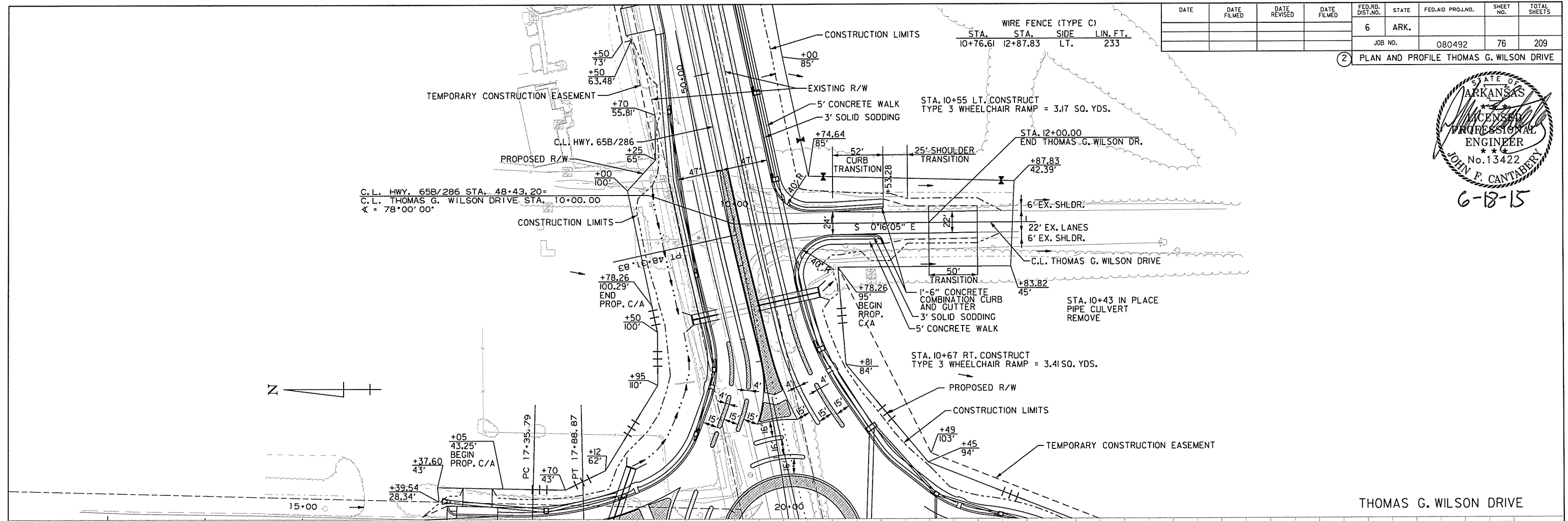
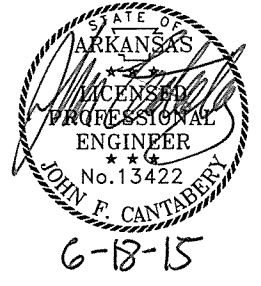
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				6	ARK.			
				JOB NO.	080492	75	209	

2 PROFILE - ENTERPRISE AVE. AND S. AMITY RD.



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				6	ARK.			
						JOB NO.	080492	76
						2 PLAN AND PROFILE THOMAS G. WILSON DRIVE		



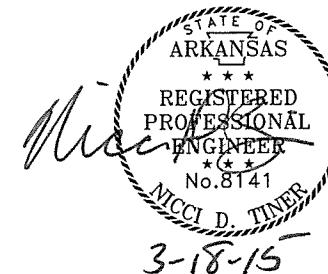
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TRAFFIC SIGNAL NOTES

- PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2014) NATIONAL ELECTRICAL CODE, NFPA 101(2012) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
- 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.
- ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT 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, ARE NEEDED 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.
- CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
- TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
- CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
- 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.
- 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 AS SHOWN IN THE DETAILS MAY BE USED.
- TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
- PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PAVEMENT MARKING PLAN SHEETS.
- 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.
- ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.
- CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
- LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
- 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.
- 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 FEET 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.
- 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.
- 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 IS KEYED INTO COMPETENT ROCK.
- CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HANDHOLE 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 POLE WITH FOUNDATION.
- CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.
- 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.
- 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.
- 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.
- NEW TRAFFIC SIGNALS MUST BE OPERATIONAL PRIOR TO REMOVAL OF EXISTING SIGNALS.
- TRAFFIC SIGNAL EQUIPMENT REMOVED FROM THE INTERSECTIONS SHALL BE THE PROPERTY OF THE CITY OF CONWAY. (SEE SPECIAL PROVISION)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	77	209

② TRAFFIC SIGNAL NOTES AND SUMM. OF QUANT.



SUMMARY OF TRAFFIC SIGNAL QUANTITIES

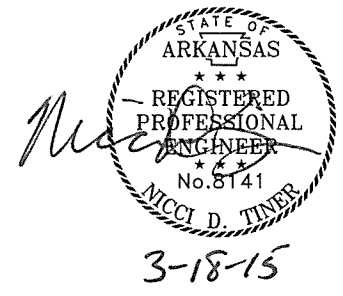
ITEM NO.	ITEM	HWY. 65B AT EXCHANGE AVE.	HWY. 65B AT I-40 EB RAMP	HWY. 286 AT AMITY RD.	TOTAL	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	1	1	3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	3	11	8	22	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	0	2	4	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	0	3	0	3	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	273	1634	3404	5311	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	126	0	516	642	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	0	514	0	514	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	138	119	0	257	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	15	15	15	45	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	9	13	0	22	LIN. FT.
710	NON-METALLIC CONDUIT (3")	165	489	0	654	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	0	1	0	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	2	4	0	6	EACH
713	SPAN WIRE ASSEMBLY (TEMPORARY)	0	1	2	3	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	0	1	0	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	0	1	0	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50'-40')	0	1	0	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	0	1	0	1	EACH
716	TREATED WOOD POLE (CLASS 1, 44')	0	0	6	6	EACH
SP & 733	VIDEO DETECTOR RELOCATION	2	2	4	8	EACH
SP & 733	VIDEO DETECTOR (CLR)	0	7	6	13	EACH
733	VIDEO CABLE	121	1458	2920	4499	LIN. FT.
733	VIDEO MONITOR (CLR)	1	1	1	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	5	4	13	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	1	1	3	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	9	13	10	32	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G, EGC)	9	605	0	614	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G, EGC)	0	110	0	110	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	0	512	0	512	LIN. FT.
SP	LOUVERS	17	15	0	32	EACH
SP	LUMINAIRE ASSEMBLY	0	3	0	3	EACH
SP	MODEM (RCM TELEMETRY)	1	1	0	2	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	0.33	0.34	1.00	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	1	3	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	2	3	6	11	EACH
SP	18" STREET NAME SIGN	0	1	0	1	EACH

* ONE ADDITIONAL VIDEO DETECTOR AND ONE ADDITIONAL VIDEO PROCESSOR, EDGE CARD SHALL BE PROVIDED FOR FUTURE USE.

LOCATION: HWY. 286/65B
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: 1" = 40' DRAWN BY: CEM

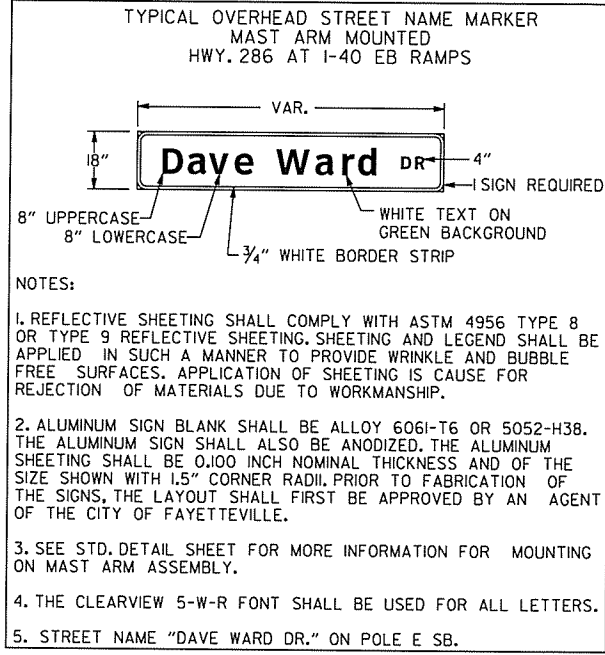
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	78	209	

② SIGNAL QUANT. AND MAST ARM MOUNTED SIGNS



TRAFFIC SIGNAL QUANTITIES HWY. 65B AT EXCHANGE AVE.

ITEM NO.	ITEM	STAGE 1	FINAL	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	0	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	3	0	3	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	0	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	273	0	273	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	126	0	126	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	138	0	138	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	15	0	15	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	9	0	9	LIN. FT.
710	NON-METALLIC CONDUIT (3")	165	0	165	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2 HD)	2	0	2	EACH
SP & 733	VIDEO DETECTOR RELOCATION	2	0	2	EACH
733	VIDEO CABLE	121	0	121	LIN. FT.
733	VIDEO MONITOR (CLR)	1	0	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	0	4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	0	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	9	0	9	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G. EGC)	9	0	9	LIN. FT.
SP	LOUVERS	17	0	17	EACH
SP	MODEM (RCM TELEMETRY)	1	0	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	0.00	0.33	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	0	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	2	0	2	EACH



TRAFFIC SIGNAL QUANTITIES HWY. 65B AT I-40 EB OFF RAMP

ITEM NO.	ITEM	STAGE 1	FINAL	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	0	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	3	11	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	1	2	3	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	1508	126	1634	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	514	0	514	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	119	0	119	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	15	0	15	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	13	0	13	LIN. FT.
710	NON-METALLIC CONDUIT (3")	402	87	489	LIN. FT.
711	CONCRETE PULL BOX (TYPE 2)	0	1	1	EACH
711	CONCRETE PULL BOX (TYPE 2 HD)	4	0	4	EACH
713	SPAN WIRE ASSEMBLY (TEMPORARY)	1	0	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	0	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	0	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50'-40')	1	0	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION	1	0	1	EACH
SP & 733	VIDEO DETECTOR RELOCATION	0	2	2	EACH
SP & 733	VIDEO DETECTOR (CLR)	5	2	7	EACH
733	VIDEO CABLE	1389	69	1458	LIN. FT.
733	VIDEO MONITOR (CLR)	1	0	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	1	5	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	0	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	13	0	13	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G. EGC)	605	0	605	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G. EGC)	110	0	110	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	512	0	512	LIN. FT.
SP	LOUVERS	15	0	15	EACH
SP	LUMINAIRE ASSEMBLY	2	1	3	EACH
SP	MODEM (RCM TELEMETRY)	1	0	1	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.33	0.00	0.33	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	0	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	0	3	3	EACH
SP	18" STREET NAME SIGN	1	0	1	EACH

* ONE ADDITIONAL VIDEO DETECTOR AND ONE ADDITIONAL VIDEO PROCESSOR, EDGE CARD SHALL BE PROVIDED FOR FUTURE USE.

TRAFFIC SIGNAL QUANTITIES HWY. 286 AT AMITY RD.

ITEM NO.	ITEM	STAGE 1	STAGE 4A	QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	0	1	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	8	0	8	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	1	1	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2432	972	3404	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	344	172	516	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	15	0	15	LIN. FT.
713	SPAN WIRE ASSEMBLY (TEMPORARY)	1	1	2	EACH
716	TREATED WOOD POLE (CLASS 1, 44')	4	2	6	EACH
SP & 733	VIDEO DETECTOR RELOCATION	0	4	4	EACH
SP & 733	VIDEO DETECTOR (CLR)	6	0	6	EACH
733	VIDEO CABLE	2114	806	2920	LIN. FT.
733	VIDEO MONITOR (CLR)	1	0	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	0	4	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	0	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	10	0	10	LIN. FT.
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	0.34	0.00	0.34	L.S.
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	0	1	EACH
SP	RELOCATION OF TRAFFIC SIGNAL HEAD	0	6	6	EACH

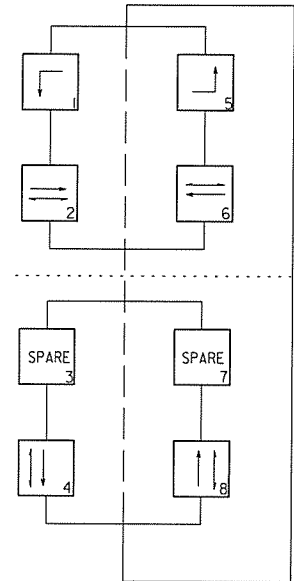
LOCATION: HWY. 286/65B
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: 1" = 80' DRAWN BY: CEM

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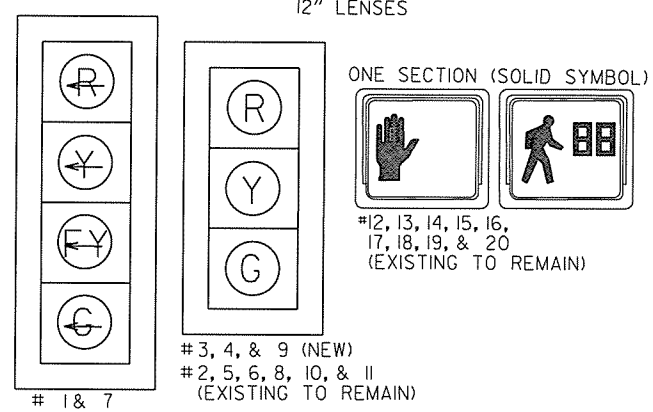
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	79	209

② SIGNALIZATION PLANS (HWY. 65B AT EXCHANGE AVE.)

STAGE 1 AND FINAL PHASING DIAGRAM



STAGE 1 AND FINAL SIGNAL FACES



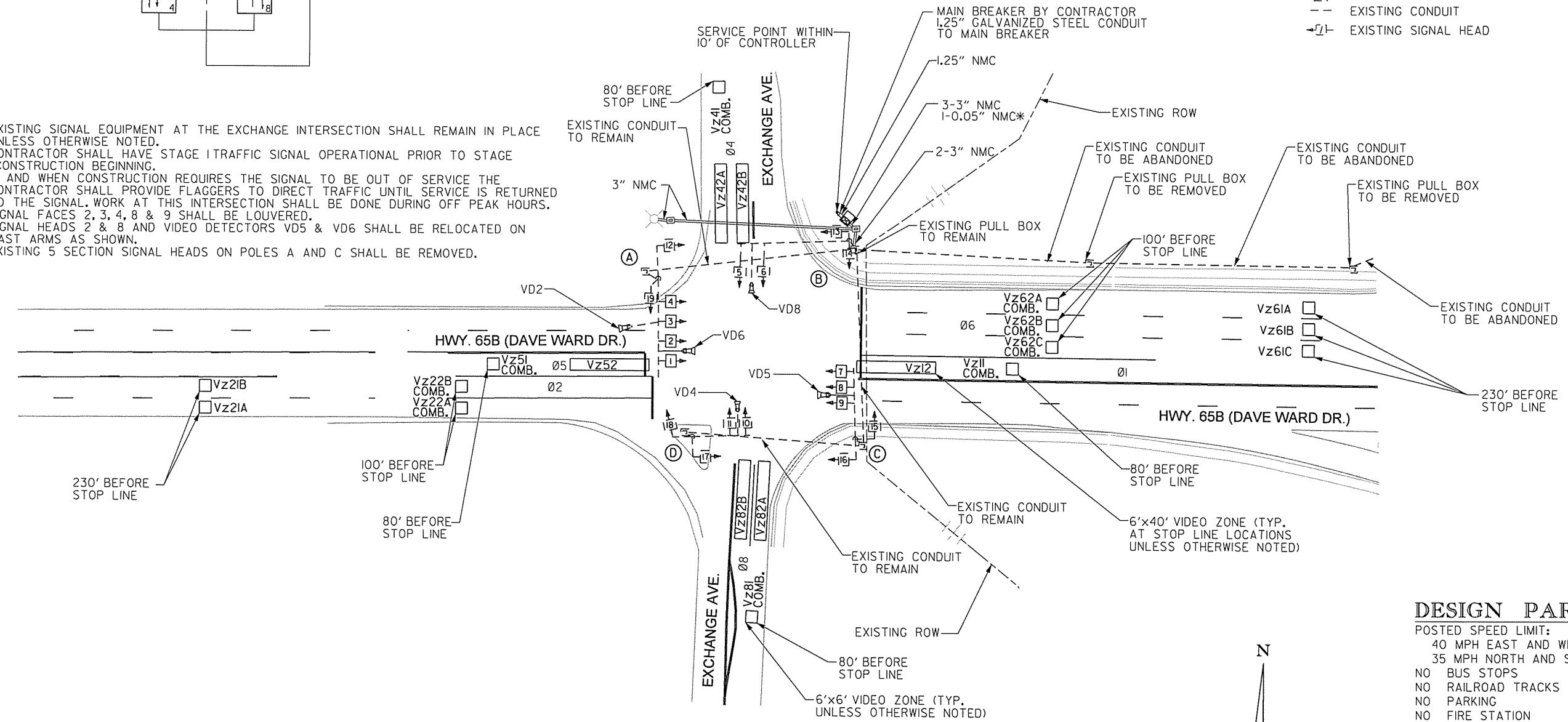
LEGEND

- ☐ TYPE 1HD PULL BOX
- ☐ TYPE 1PULL BOX
- ☐ TYPE 2 HD PULL BOX
- ☐ TYPE 2 PULL BOX
- ☐ CONTROLLER CABINET
- ☐ SIGNAL HEAD
- ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- == NMC - NON METALLIC CONDUIT
- ☐ VIDEO DETECTOR
- ☐ EXISTING PULL BOX
- EXISTING SIGNAL POLE
- ☐ EXISTING CONTROLLER CABINET
- - - EXISTING CONDUIT
- ☐ EXISTING SIGNAL HEAD



3-12-15

- NOTES:
- EXISTING SIGNAL EQUIPMENT AT THE EXCHANGE INTERSECTION SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL HAVE STAGE I TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE I CONSTRUCTION BEGINNING.
 - IF AND WHEN CONSTRUCTION REQUIRES THE SIGNAL TO BE OUT OF SERVICE THE CONTRACTOR SHALL PROVIDE FLAGGERS TO DIRECT TRAFFIC UNTIL SERVICE IS RETURNED TO THE SIGNAL. WORK AT THIS INTERSECTION SHALL BE DONE DURING OFF PEAK HOURS.
 - SIGNAL FACES 2, 3, 4, 8 & 9 SHALL BE LOUVERED.
 - SIGNAL HEADS 2 & 8 AND VIDEO DETECTORS VD5 & VD6 SHALL BE RELOCATED ON MAST ARMS AS SHOWN.
 - EXISTING 5 SECTION SIGNAL HEADS ON POLES A AND C SHALL BE REMOVED.

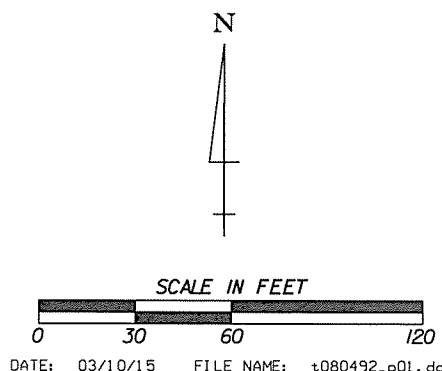


DESIGN PARAMETERS

- POSTED SPEED LIMIT:
 40 MPH EAST AND WEST APPROACHES
 35 MPH NORTH AND SOUTH APPROACHES
 NO BUS STOPS
 NO RAILROAD TRACKS
 NO PARKING
 NO FIRE STATION
 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE I AND FINAL PLANS

LOCATION: HWY. 65B AT EXCHANGE AVE.
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: SRD



*0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

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 REVISION DATE:

POLE DIMENSIONS

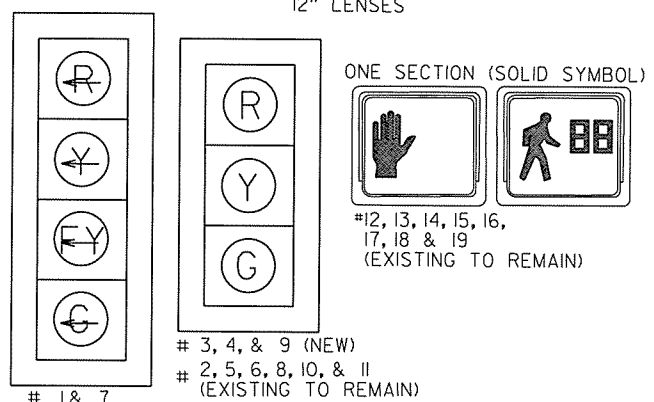
POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	STATION HWY. 65B	OFFSET	NORTHING	EASTING
A	EXISTING POLE TO REMAIN								
B	EXISTING POLE TO REMAIN								
C	EXISTING POLE TO REMAIN								
D	EXISTING POLE TO REMAIN								

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		80	209

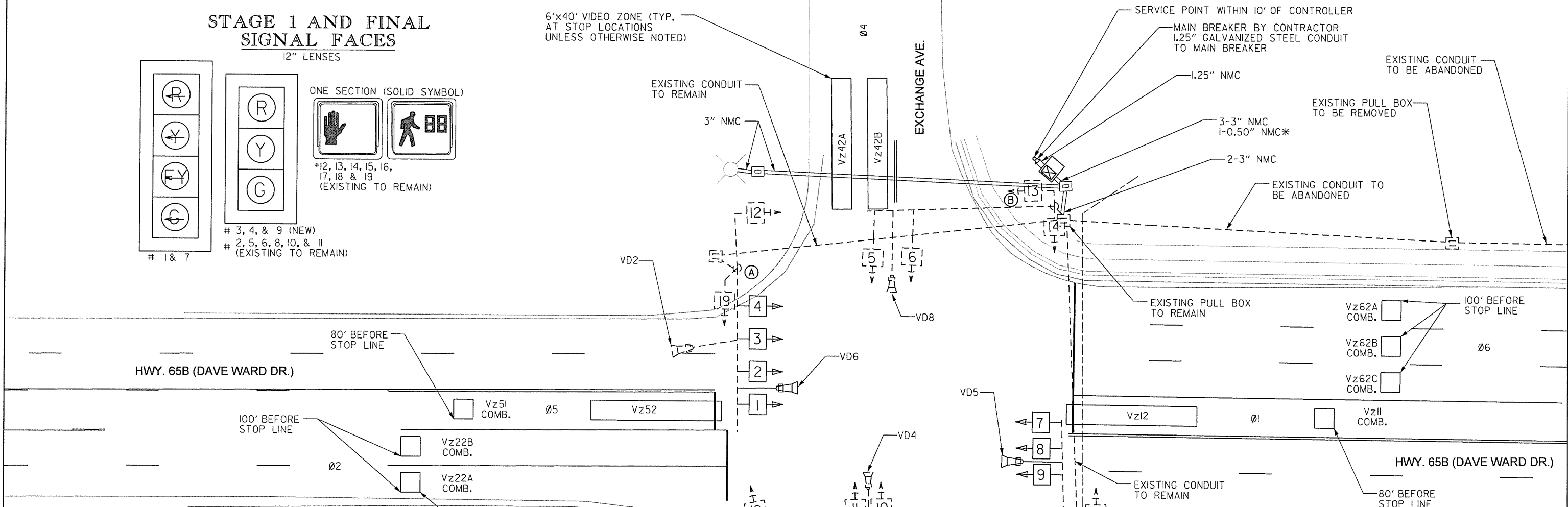
JOB NO. 080492

2 SIGNALIZATION PLANS (HWY. 65B AT EXCHANGE AVE.)

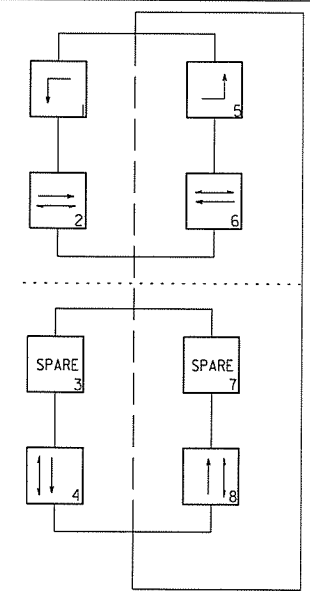
STAGE 1 AND FINAL SIGNAL FACES



6'x40' VIDEO ZONE (TYP. AT STOP LOCATIONS UNLESS OTHERWISE NOTED)

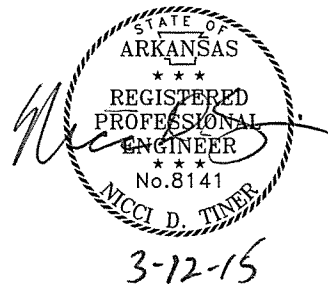


STAGE 1 AND FINAL PHASING DIAGRAM



LEGEND

- ☐ TYPE 1HD PULL BOX
- ☐ TYPE 1 PULL BOX
- ☐ TYPE 2 HD PULL BOX
- ☐ TYPE 2 PULL BOX
- ☐ CONTROLLER CABINET
- ☐ SIGNAL HEAD
- ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON METALLIC CONDUIT
- ☐ VIDEO DETECTOR
- ☐ EXISTING PULL BOX
- ☐ EXISTING SIGNAL POLE
- ☐ EXISTING CONTROLLER CABINET
- - - EXISTING CONDUIT
- ☐ EXISTING SIGNAL HEAD



NOTE:

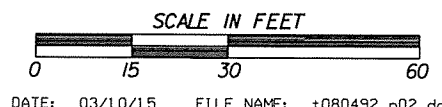
1. EXISTING SIGNAL EQUIPMENT AT THE EXCHANGE INTERSECTION SHALL REMAIN IN PLACE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL HAVE STAGE I TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE I CONSTRUCTION BEGINNING.
2. IF AND WHEN CONSTRUCTION REQUIRES THE SIGNAL TO BE OUT OF SERVICE THE CONTRACTOR SHALL PROVIDE FLAGGERS TO DIRECT TRAFFIC UNTIL SERVICE IS RETURNED TO THE SIGNAL. WORK AT THIS INTERSECTION SHALL BE DONE DURING OFF PEAK HOURS.
3. SIGNAL FACES 2, 3, 4, 8, AND 9 SHALL BE LOUVERED.
4. SIGNAL HEADS 2 & 8 AND VIDEO DETECTORS VD5 & VD6 SHALL BE RELOCATED ON MAST ARMS AS SHOWN.
5. EXISTING 5 SECTION SIGNAL HEADS ON POLES A AND C SHALL BE REMOVED.

DESIGN PARAMETERS

- POSTED SPEED LIMIT:
 40 MPH EAST AND WEST APPROACHES
 35 MPH NORTH AND SOUTH APPROACHES
- NO BUS STOPS
 NO RAILROAD TRACKS
 NO PARKING
 NO FIRE STATION
 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE I AND FINAL PLANS

LOCATION: HWY. 65B AT EXCHANGE AVE.
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM



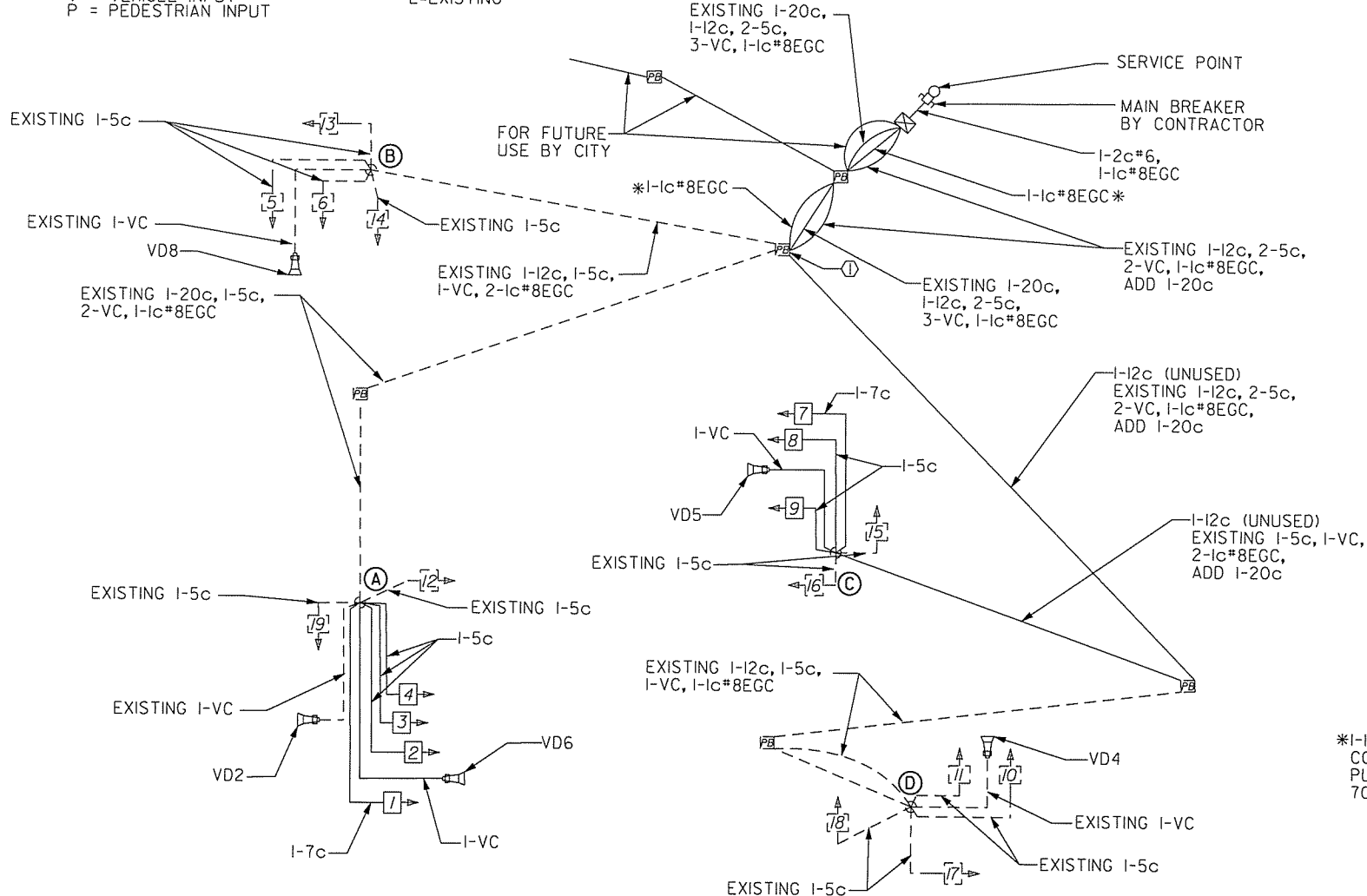
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 REVISED DATE:

*0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

DETECTOR CHART (STAGE 1 AND FINAL)

DETECTOR I.D. #	DIRECTION & LOCATION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DET. TUBE LENGTH	COMMENT
				CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL		MSTR. SYS. DET. #		
							PHS.	SYS. DET. #			
Vz11	WB LEFT FAR	COMB.		1	V9	1	1		E	VD6	
Vz12	WB LEFT NEAR	LOCAL		2	V1	1			E	VD6	
Vz21A&B	EB THRU FAR	LOCAL		5	V2	2			E	VD2	
Vz22A&B	EB THRU NEAR	COMB.		6	V10	2	2		E	VD5	
Vz41	SB FAR	COMB.		9	V12	4	4		E	VD4	
Vz42A&B	SB NEAR	LOCAL		10	V4	4			E	VD4	
Vz51	EB LEFT FAR	COMB.		7	V13	5	5		E	VD5	
Vz52	EB LEFT NEAR	LOCAL		8	V5	5			E	VD5	
Vz61A,B,&C	WB THRU FAR	LOCAL		3	V6	6			E	VD6	
Vz62A,B,&C	WB THRU NEAR	COMB.		4	V14	6	6		E	VD6	
Vz81	NB FAR	COMB.		13	V16	8	8		E	VD8	
Vz82A&B	NB NEAR	LOCAL		14	V8	8			E	VD8	
P2	W TO E	PED.				P2	2				
P4	N TO S	PED.				P4	4				
P6	E TO W	PED.				P6	6				
P8	S TO N	PED.				P8	8				

CONTROLLER INPUT ABBREVIATIONS: V = VEHICLE INPUT, P = PEDESTRIAN INPUT
 VIDEO DETECTOR TUBE LENGTH: E=EXISTING
 SPARE AMP CHN. # = 11, 12, 15, 16

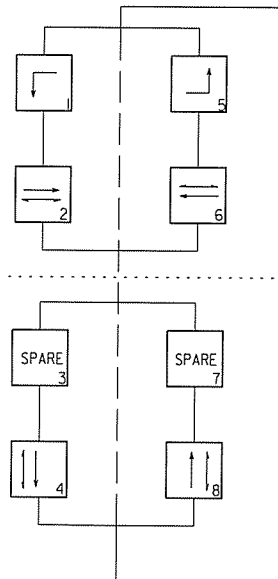


WIRING DIAGRAM (STAGE 1 AND FINAL)

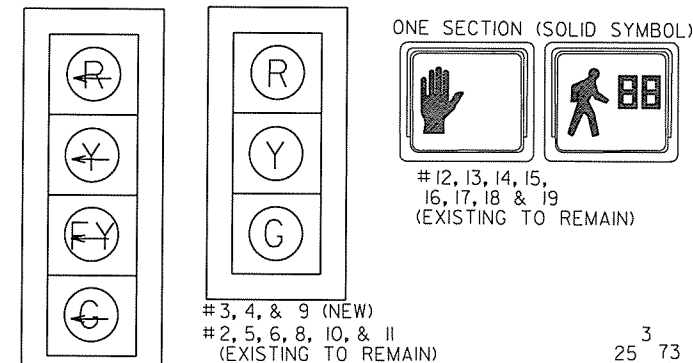
- TYPICAL WIRING INCLUDES:
- SEPARATE 5c/#14 AWG FROM EACH 3 SEC SIGNAL HEAD TO BASE OF POLE.
 - SEPARATE 5c/#14 AWG TO EACH POLE WITH PEDESTRIAN PUSH BUTTONS.
 - SEPARATE 7c/#14 AWG FROM EACH 4 SEC SIGNAL HEAD TO BASE OF POLE.
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

KEYED NOTES:
 ① INCORPORATE EXISTING WIRING INTO NEW CONDUIT TO NEW CONTROLLER. ABANDON I-12c.

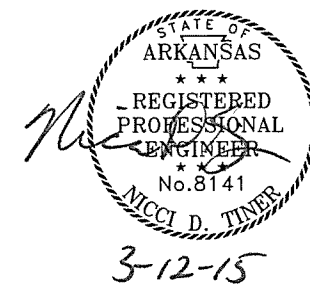
STAGE 1 AND FINAL PHASING DIAGRAM



STAGE 1 AND FINAL SIGNAL FACES



2 SIGNALIZATION PLANS (HWY. 65B AT EXCHANGE AVE.)

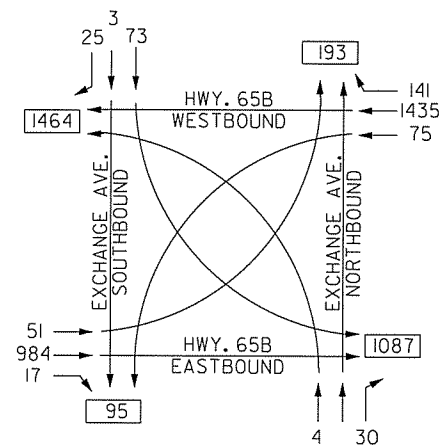


INTERVAL CHART (STAGE 1 AND FINAL)

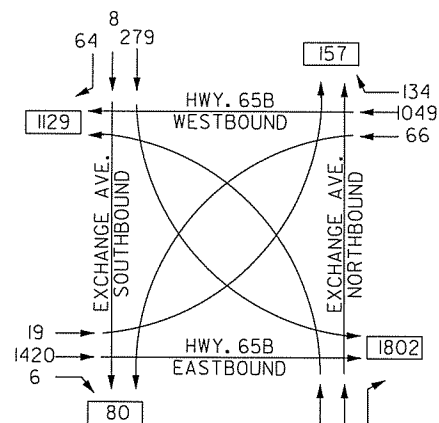
SIGNAL FACES	INTERSECTION INTERVALS										FLASH SEQ.
	I+5	CLR.	I+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.	
1	←	**	←	**	←	**	←	**	←	**	←
2,3,&4	R	R	G	*	R	R	G	*	R	R	R
5&6	R	R	R	R	R	R	R	R	G	Y	R
7	←	**	←	**	←	**	←	**	←	**	←
8&9	R	R	R	R	G	*	G	*	R	R	R
10&11	R	R	R	R	R	R	R	R	G	Y	R
12&13	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	B
14&15	DW	DW	DW	DW	DW	DW	DW	W	FDW	B	
16&17	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	B
18&19	DW	DW	DW	DW	DW	DW	DW	DW	W	DW	B

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

*I-1c#8EGC SHOWN SEPARATELY FROM CONTROLLER OR POLE TO NEAREST PULL BOX IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.



HWY. 65B AT EXCHANGE AVE. TRAFFIC FLOW DIAGRAM 2014 TRAFFIC VOLUME A.M. PEAK HOUR

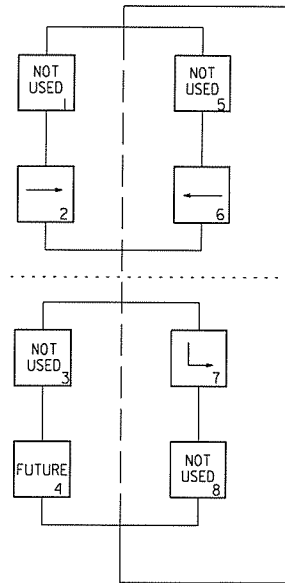


HWY. 65B AT EXCHANGE AVE. TRAFFIC FLOW DIAGRAM 2014 TRAFFIC VOLUME P.M. PEAK HOUR

STAGE 1 AND FINAL PLANS

LOCATION: HWY. 65B AT EXCHANGE AVE.
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

STAGE 1 PHASING DIAGRAM



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		82	209
				JOB NO. 080492				

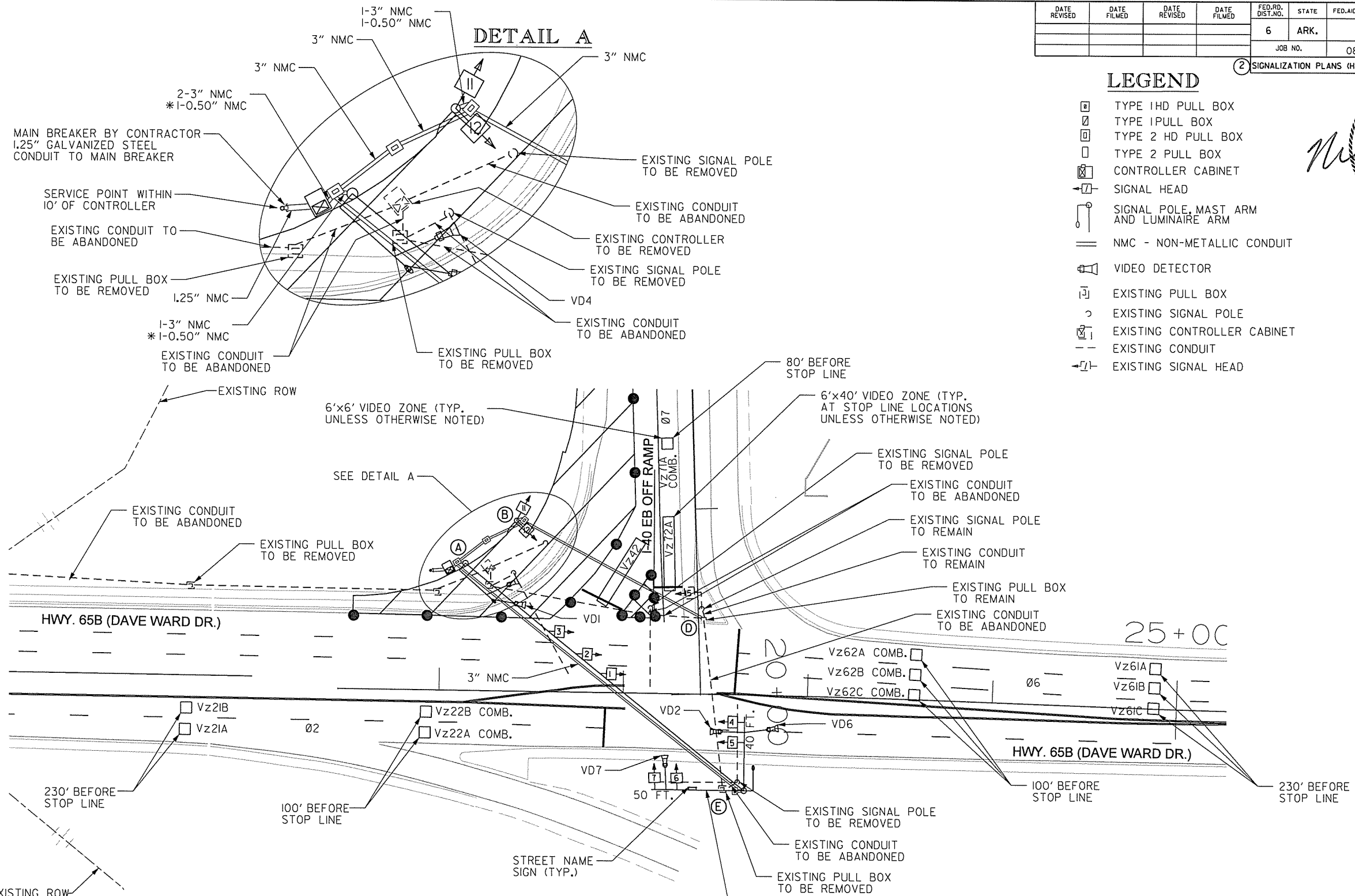
(2) SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMPS)

LEGEND

- [] TYPE 1 HD PULL BOX
- [] TYPE 1 PULL BOX
- [] TYPE 2 HD PULL BOX
- [] TYPE 2 PULL BOX
- [] CONTROLLER CABINET
- [] SIGNAL HEAD
- [] SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- [] NMC - NON-METALLIC CONDUIT
- [] VIDEO DETECTOR
- [] EXISTING PULL BOX
- [] EXISTING SIGNAL POLE
- [] EXISTING CONTROLLER CABINET
- [] EXISTING CONDUIT
- [] EXISTING SIGNAL HEAD

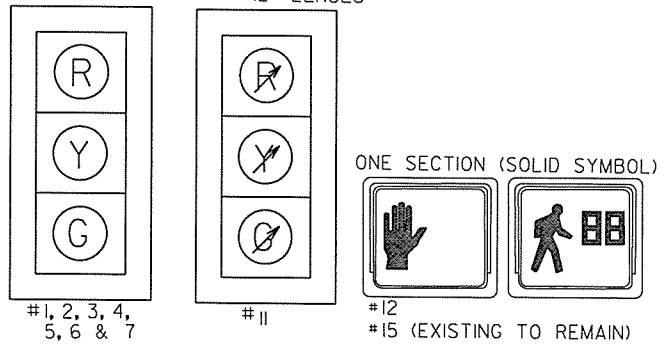


3-18-15



*0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

STAGE 1 SIGNAL FACES



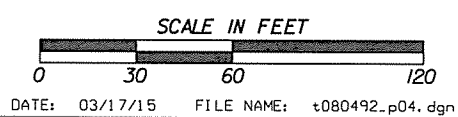
- NOTES:**
1. STAGED CONSTRUCTION AT THIS INTERSECTION DOES NOT NEED TO COINCIDE WITH STAGED CONSTRUCTION ON THE EAST SIDE OF PROJECT. CONSTRUCTION HERE MAY BEGIN ONCE ALL PARTS NEEDED TO CONSTRUCT SIGNAL AS SHOWN ARE AVAILABLE.
 2. CONTRACTOR SHALL HAVE STAGE 1 TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 1 CONSTRUCTION AT THIS INTERSECTION BEGINNING.
 3. PEDESTRIAN SIGNAL HEADS SHALL BE BLANK DURING CONSTRUCTION STAGING.
 4. POLE A MAST ARM AND SIGNAL HEADS TO BE INSTALLED DURING STAGE 3.
 5. VIDEO DETECTORS VDI AND VD4 SHALL BE INSTALLED IN TEMPORARY LOCATIONS AS SHOWN.
 6. TEMPORARY SPAN WIRE SHALL RUN FROM POLE E TO POLE A TO ALLOW FOR SIGNAL HEAD PLACEMENT FOR WESTBOUND APPROACH.
 7. SIGNAL FACES 1-3 SHALL BE LOUVERED.
 8. SIGNAL HEAD 11 SHALL BE BLANK DURING STAGED CONSTRUCTION.

DESIGN PARAMETERS

- POSTED SPEED LIMIT:
40 MPH EAST AND WEST APPROACHES
- MPH NORTH APPROACH
- NO BUS STOPS
 - NO RAILROAD TRACKS
 - NO PARKING
 - NO FIRE STATION
 - 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 - 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE 1 PLANS

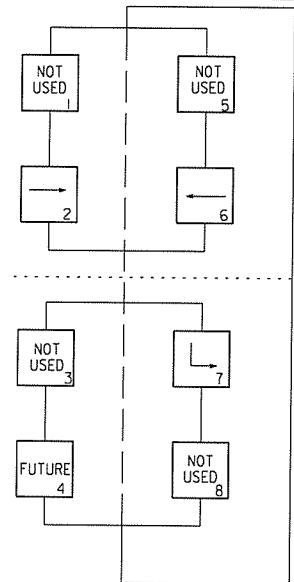
LOCATION: HWY. 65B AT I-40 EB RAMPS
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: SRD



DATE: 03/17/15 FILE NAME: t080492_p04.dgn

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 REVISED DATE:

STAGE 1 PHASING DIAGRAM

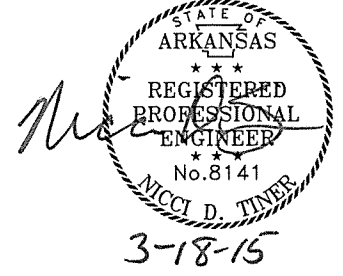


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		83	209
				JOB NO. 080492				

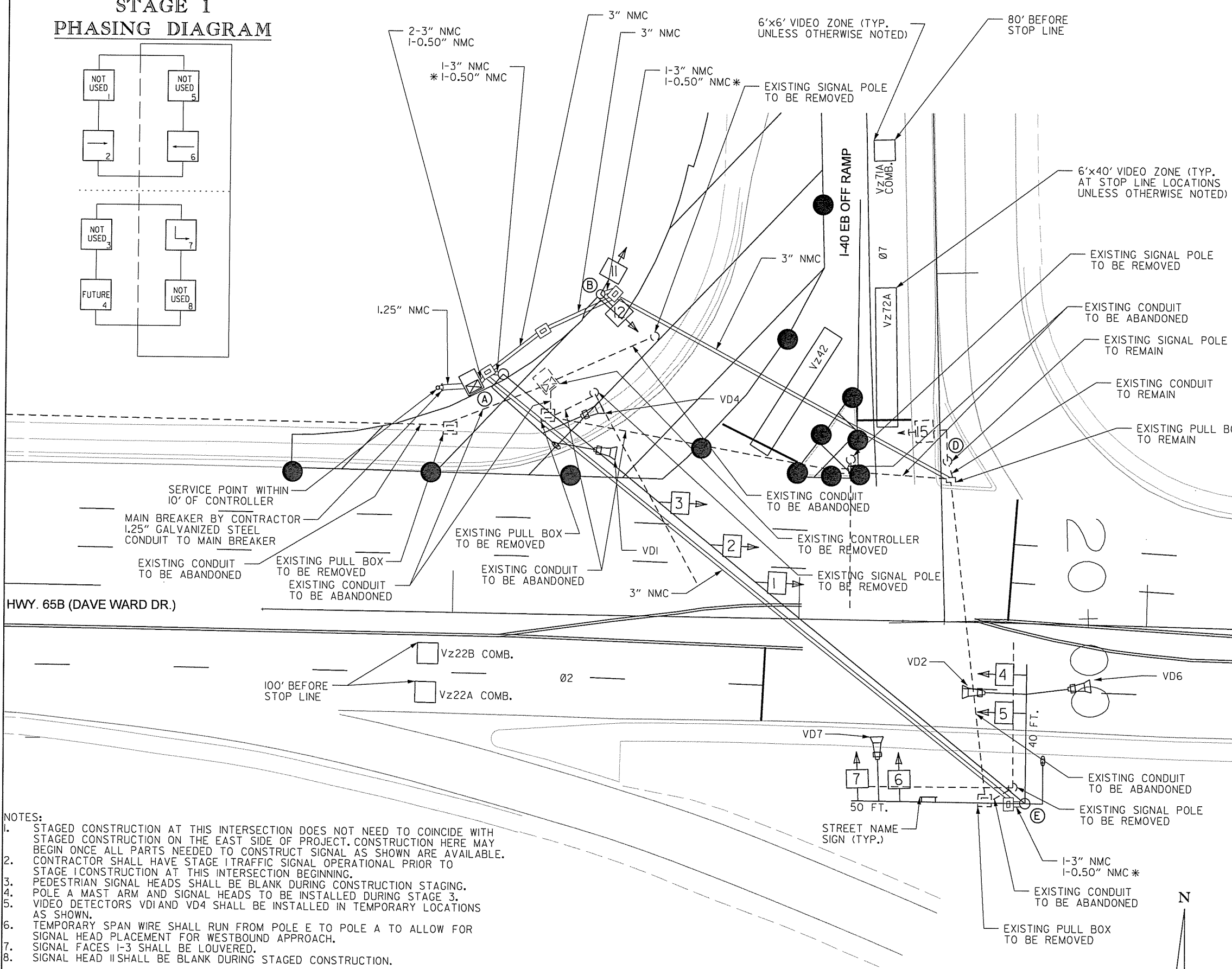
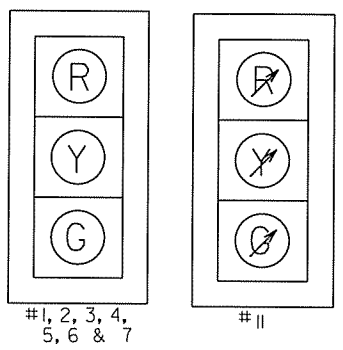
2 SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMPS)

LEGEND

- TYPE 1 HD PULL BOX
 - TYPE 1 PULL BOX
 - TYPE 2 HD PULL BOX
 - TYPE 2 PULL BOX
 - CONTROLLER CABINET
 - SIGNAL HEAD
 - SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
 - NMC - NON-METALLIC CONDUIT
 - VIDEO DETECTOR
 - EXISTING PULL BOX
 - EXISTING SIGNAL POLE
 - EXISTING CONTROLLER CABINET
 - EXISTING CONDUIT
 - EXISTING SIGNAL HEAD
- ONE SECTION (SOLID SYMBOL)
- #15 (EXISTING TO REMAIN)
 - #12
- 12" LENSES
- #1, 2, 3, 4, 5, 6 & 7
 - #11



STAGE 1 SIGNAL FACES

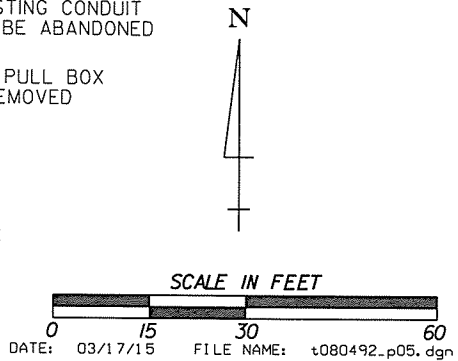


- NOTES:
- STAGED CONSTRUCTION AT THIS INTERSECTION DOES NOT NEED TO COINCIDE WITH STAGED CONSTRUCTION ON THE EAST SIDE OF PROJECT. CONSTRUCTION HERE MAY BEGIN ONCE ALL PARTS NEEDED TO CONSTRUCT SIGNAL AS SHOWN ARE AVAILABLE.
 - CONTRACTOR SHALL HAVE STAGE I TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE I CONSTRUCTION AT THIS INTERSECTION BEGINNING.
 - PEDESTRIAN SIGNAL HEADS SHALL BE BLANK DURING CONSTRUCTION STAGING.
 - POLE A MAST ARM AND SIGNAL HEADS TO BE INSTALLED DURING STAGE 3.
 - VIDEO DETECTORS VDI AND VD4 SHALL BE INSTALLED IN TEMPORARY LOCATIONS AS SHOWN.
 - TEMPORARY SPAN WIRE SHALL RUN FROM POLE E TO POLE A TO ALLOW FOR SIGNAL HEAD PLACEMENT FOR WESTBOUND APPROACH.
 - SIGNAL FACES 1-3 SHALL BE LOUVERED.
 - SIGNAL HEAD 11 SHALL BE BLANK DURING STAGED CONSTRUCTION.

POLE DIMENSIONS

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	STATION HWY. 65B	OFFSET	NORTHING	EASTING
A	-	-	35'-0"	25'-0"	90 DEGREES	21+13.53	69' LT.	267193.5714	1186630.5152
B	-	-	15'-0"	-	-	21+41.07	92' LT.	267216.0801	1186658.8850
D	EXISTING TO REMAIN		-	-	-	-	-	-	-
E	50 FT.	90 DEGREES	35'-0"	15'-0"	180 DEGREES	22+66.11	52' RT.	267067.6086	1186778.3384
	40 FT.	180 DEGREES	-	-	-	-	-	-	-

*0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.



DESIGN PARAMETERS

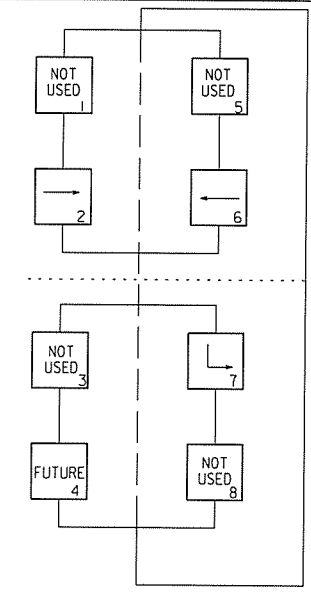
- POSTED SPEED LIMIT:
 40 MPH EAST AND WEST APPROACHES
 - MPH NORTH APPROACH
- NO BUS STOPS
 - NO RAILROAD TRACKS
 - NO PARKING
 - NO FIRE STATION
 - 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 - 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE I PLANS

LOCATION: HWY. 65B AT I-40 EB RAMPS
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

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 REVISION DATE:

STAGE 2 PHASING DIAGRAM



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		84	209
				JOB NO.		080492		

2 SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMP)

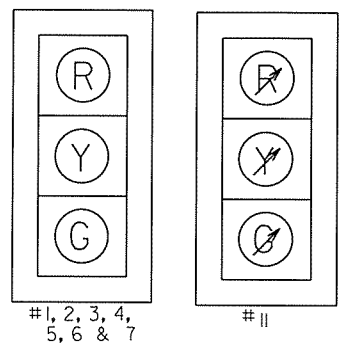
LEGEND

- ☐ TYPE 1 HD PULL BOX
 - ☐ TYPE 1 PULL BOX
 - ☐ TYPE 2 HD PULL BOX
 - ☐ TYPE 2 PULL BOX
 - ☐ CONTROLLER CABINET
 - ☐ SIGNAL HEAD
 - ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
 - NMC - NON-METALLIC CONDUIT
 - ☐ VIDEO DETECTOR
 - ☐ EXISTING PULL BOX
 - ☐ EXISTING SIGNAL POLE
 - ☐ EXISTING CONTROLLER CABINET
 - EXISTING CONDUIT
 - ☐ EXISTING SIGNAL HEAD
- ONE SECTION (SOLID SYMBOL)
- ☐ #1, 2, 3, 4, 5, 6 & 7
 - ☐ #11
 - ☐ #12
 - ☐ #15 (EXISTING TO REMAIN)



STAGE 2 SIGNAL FACES

12" LENSES



6'x6' VIDEO ZONE (TYP. UNLESS OTHERWISE NOTED)

80' BEFORE STOP LINE

6'x40' VIDEO ZONE (TYP. AT STOP LINE LOCATIONS UNLESS OTHERWISE NOTED)

I-40 EB OFF RAMP

HWY. 65B (DAVE WARD DR.)

HWY. 65B (DAVE WARD DR.)

- NOTES:
1. STAGED CONSTRUCTION AT THIS INTERSECTION DOES NOT NEED TO COINCIDE WITH STAGED CONSTRUCTION ON THE EAST SIDE OF PROJECT.
 2. CONTRACTOR SHALL HAVE STAGE 2 TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 2 CONSTRUCTION AT THIS INTERSECTION BEGINNING.
 3. PEDESTRIAN SIGNAL HEADS AT SHALL BE BLANK DURING CONSTRUCTION STAGING.
 4. POLE A MAST ARM AND SIGNAL HEADS TO BE INSTALLED DURING STAGE 3.
 5. VIDEO DETECTORS VDI AND VD4 SHALL BE INSTALLED IN TEMPORARY LOCATIONS AS SHOWN.
 6. TEMPORARY SPAN WIRE SHALL RUN FROM POLE E TO POLE A TO ALLOW FOR SIGNAL HEAD PLACEMENT FOR WESTBOUND APPROACH.
 7. SIGNAL FACES 1-3 SHALL BE LOUVERED.
 8. SIGNAL HEAD 11 SHALL BE BLANK DURING STAGED CONSTRUCTION.

POLE DIMENSIONS

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	STATION HWY. 65B	OFFSET	NORTHING	EASTING
A	INSTALLED DURING STAGE 1								
B	INSTALLED DURING STAGE 1								
D	EXISTING TO REMAIN								
E	INSTALLED DURING STAGE 1								

DESIGN PARAMETERS

- POSTED SPEED LIMIT:
 40 MPH EAST AND WEST APPROACHES
 - MPH NORTH APPROACH
- NO BUS STOPS
 NO RAILROAD TRACKS
 NO PARKING
 NO FIRE STATION
 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE 2 PLANS

LOCATION: HWY. 65B AT I-40 EB RAMP
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

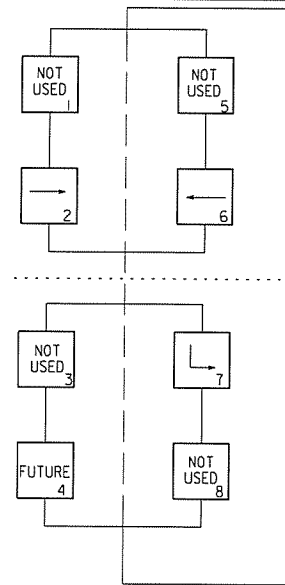
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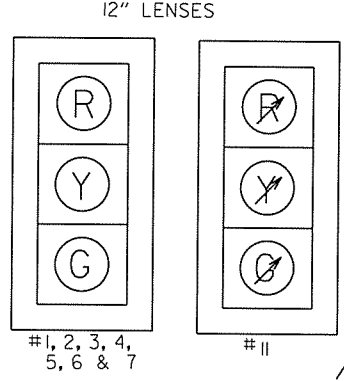
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 REVISION DATE:

STAGE 3 PHASING DIAGRAM



STAGE 3 SIGNAL FACES



6'x6' VIDEO ZONE (TYP. UNLESS OTHERWISE NOTED)

80' BEFORE STOP LINE

6'x40' VIDEO ZONE (TYP. AT STOP LINE LOCATIONS UNLESS OTHERWISE NOTED)

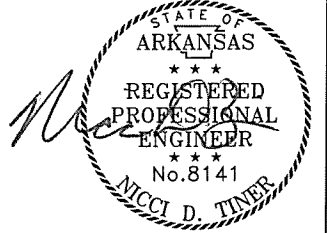
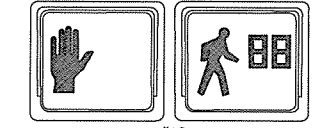
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				6	ARK.		85	209
				JOB NO.	080492		85	209

2 SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMP)

LEGEND

- ☐ TYPE 1 HD PULL BOX
- ☐ TYPE 1 PULL BOX
- ☐ TYPE 2 HD PULL BOX
- ☐ TYPE 2 PULL BOX
- ☐ CONTROLLER CABINET
- ☐ SIGNAL HEAD
- ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- == NMC - NON-METALLIC CONDUIT
- ☐ VIDEO DETECTOR
- ☐ EXISTING PULL BOX
- ☐ EXISTING SIGNAL POLE
- ☐ EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- ☐ EXISTING SIGNAL HEAD

ONE SECTION (SOLID SYMBOL)



3-12-15

HWY. 65B (DAVE WARD DR.)

HWY. 65B (DAVE WARD DR.)

- NOTES:
1. STAGED CONSTRUCTION AT THIS INTERSECTION DOES NOT NEED TO COINCIDE WITH STAGED CONSTRUCTION ON THE EAST SIDE OF PROJECT.
 2. CONTRACTOR SHALL HAVE STAGE 3 TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 3 CONSTRUCTION AT THIS INTERSECTION BEGINNING.
 3. PEDESTRIAN SIGNAL HEADS AT SHALL BE BLANK DURING CONSTRUCTION STAGING.
 4. POLE A MAST ARM AND SIGNAL HEADS TO BE INSTALLED DURING STAGE 3.
 5. VIDEO DETECTORS VDI AND VD4 SHALL BE INSTALLED IN TEMPORARY LOCATIONS AS SHOWN.
 6. TEMPORARY SPAN WIRE SHALL RUN FROM POLE E TO POLE A TO ALLOW FOR SIGNAL HEAD PLACEMENT FOR WESTBOUND APPROACH.
 7. SIGNAL FACES 1-3 SHALL BE LOUVERED.
 8. SIGNAL HEAD II SHALL BE BLANK DURING STAGED CONSTRUCTION.

POLE DIMENSIONS

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	STATION HWY. 65B	OFFSET	NORTHING	EASTING
A	INSTALLED DURING STAGE I								
B	INSTALLED DURING STAGE I								
D	EXISTING TO REMAIN								
E	INSTALLED DURING STAGE I								

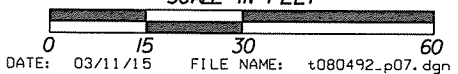
DESIGN PARAMETERS

- POSTED SPEED LIMIT:
 40 MPH EAST AND WEST APPROACHES
 - MPH NORTH APPROACH
- NO BUS STOPS
 - NO RAILROAD TRACKS
 - NO PARKING
 - NO FIRE STATION
 - 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 - 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE 3 PLANS

LOCATION:	HWY. 65B AT I-40 EB RAMP
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	AS SHOWN
DRAWN BY:	CEM

SCALE IN FEET



DATE: 03/11/15 FILE NAME: t080492.p07.dgn

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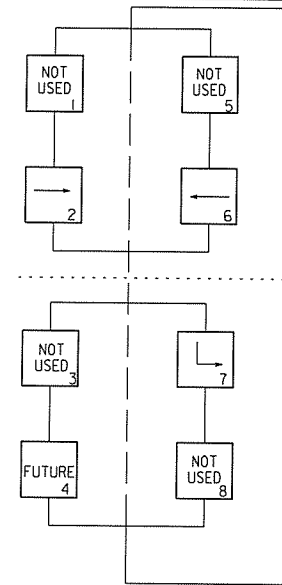
DETECTOR CHART (STAGES 1, 2 & 3)

DETECTOR I.D. #	DIRECTION & LOCATION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DET. TUBE LENGTH	COMMENT
				CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL		MSTR. SYS. DET. #		
							PHS.	SYS. DET. #			
Vz21A&B	EB FAR	LOCAL		1	V2	2			74"	VD5	
Vz22A&B	EB NEAR	COMB.		2	V10	2	2		74"	VD5	
Vz42	SB RIGHT NEAR	LOCAL		10	V4	4			23"	VD4	
Vz61A,B,&C	WB FAR	LOCAL		5	V6	6			23"	VD6	
Vz62A,B,&C	WB NEAR	COMB.		6	V14	6	6		74"	VD1	
Vz71A	SB LEFT FAR	COMB.		11	V15	7	7		23"	VD7	
Vz72A	SB LEFT NEAR	LOCAL		12	V7	7			23"	VD7	
P6	W TO E	PED.				P6	6				

CONTROLLER INPUT ABBREVIATIONS:
 V = VEHICLE INPUT
 P = PEDESTRIAN INPUT

SPARE AMP CHN. # = 3, 4, 7, 8, 13, 14, 15, & 16

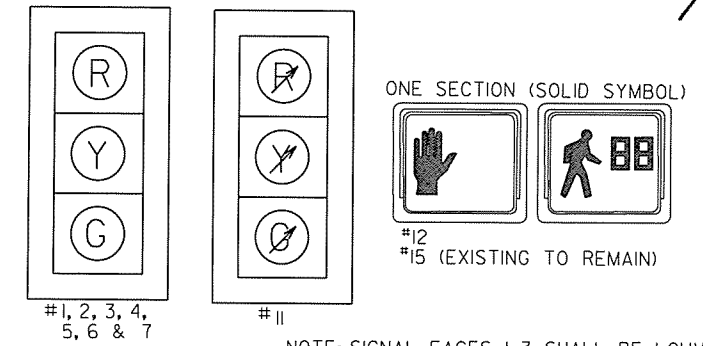
STAGES 1, 2, & 3 PHASING DIAGRAM



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		86	209

② SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMPS)

STAGES 1, 2 & 3 SIGNAL FACES



NOTE: SIGNAL FACES 1-3 SHALL BE LOUVERED.



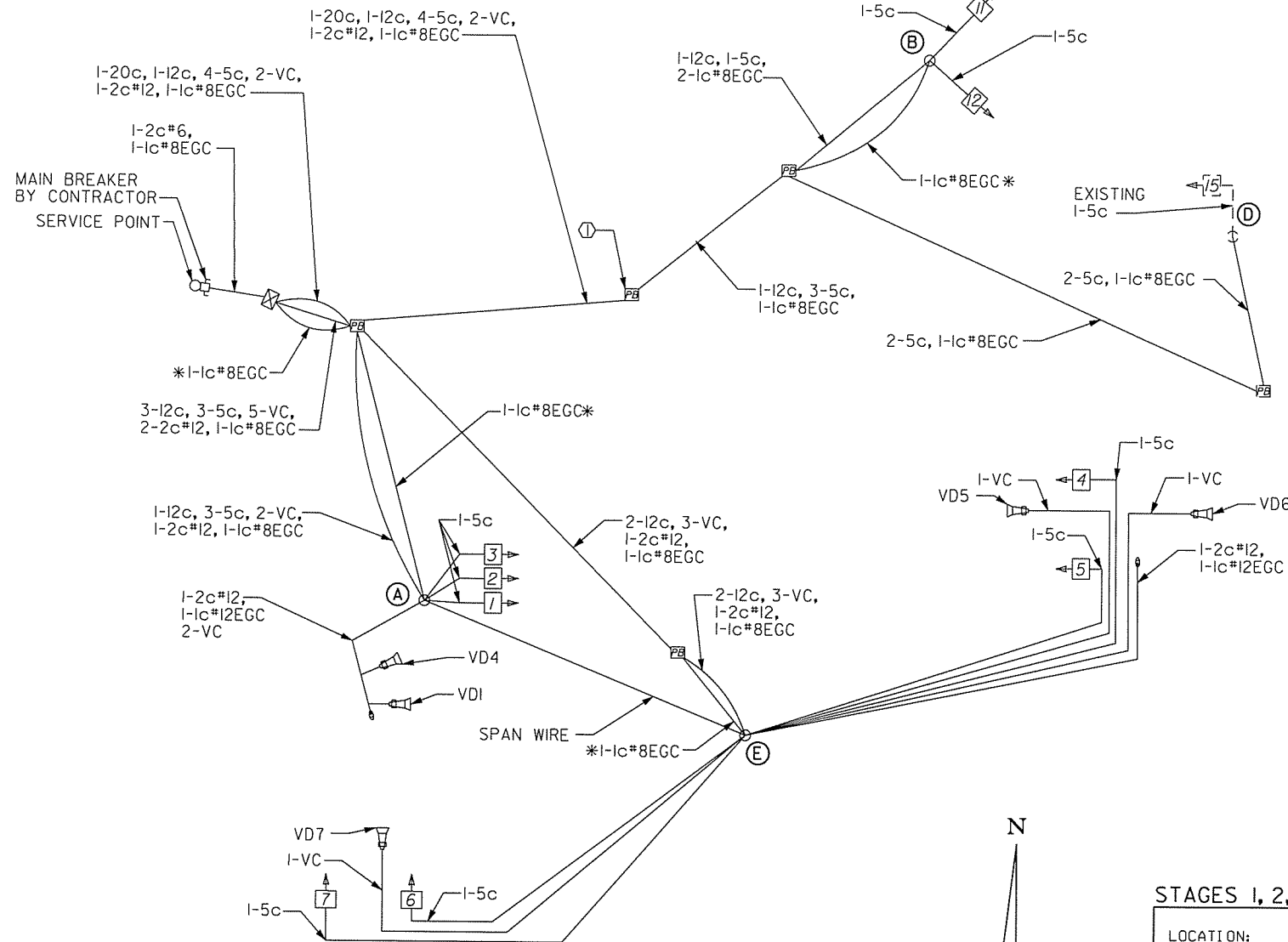
3-12-15

INTERVAL CHART (STAGES 1, 2 & 3)

SIGNAL FACES	INTERSECTION INTERVALS				FLASH SEQ.
	2+6	CLR.	7	CLR.	
1,2,&3	G	Y	R	R	R
4&5	G	Y	R	R	R
6&7	R	R	G	Y	R
11	B	B	B	B	B
12&15	B	B	B	B	B

*1-1c#8EGC SHOWN SEPARATELY FROM CONTROLLER OR POLE TO NEAREST PULL BOX IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

KEYED NOTES:
 ① PROVIDE SUFFICIENT UNSPLICED LENGTH OF 20c, 5c, VIDEO CABLE, 2c#12 AND 1c#8EGC TO EXTEND TO FUTURE POLE C IN FINAL WIRING. COIL CABLE IN PULL BOX FOR FUTURE USE. SEAL ENDS OF CABLES WITH WATERPROOF TAPE.



WIRING DIAGRAM (STAGES 1, 2 & 3)

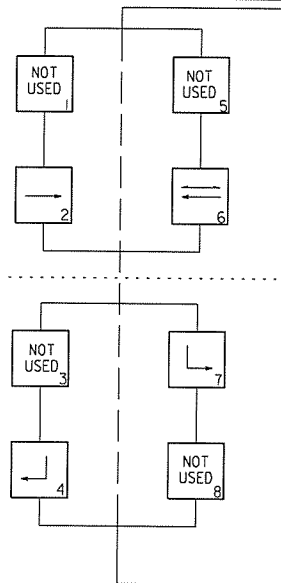
- TYPICAL WIRING INCLUDES:
- SEPARATE 5c/#14 AWG FROM EACH 3 SEC SIGNAL HEAD TO BASE OF POLE.
 - SEPARATE 5c/#14 AWG TO EACH POLE WITH PEDESTRIAN PUSH BUTTONS.
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

STAGES 1, 2, & 3 PLANS

LOCATION: HWY. 65B AT I-40 EB RAMPS
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

DATE: 03/11/15 FILE NAME: t080492.p08.dgn

FINAL PHASING DIAGRAM

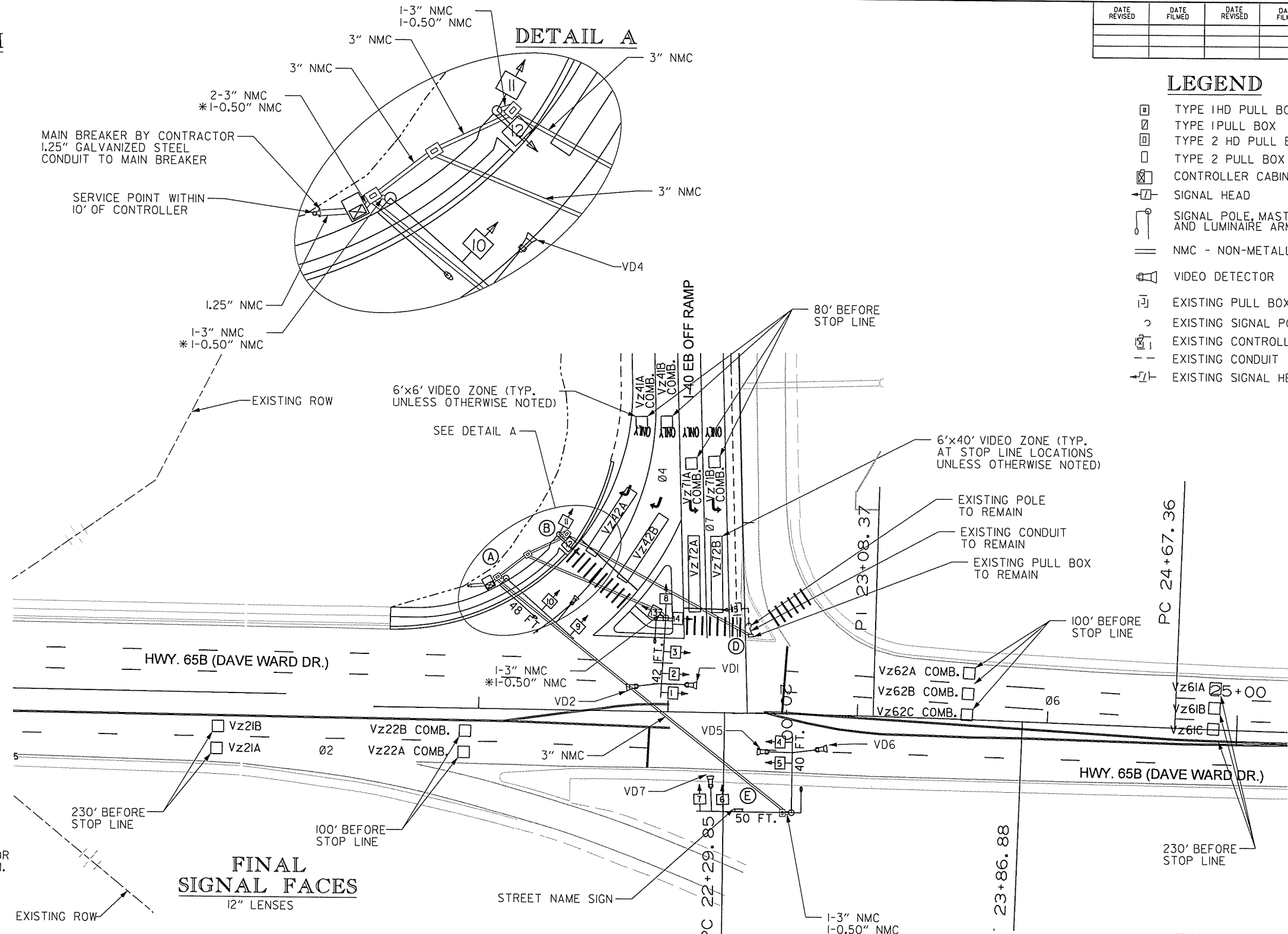


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				JOB NO.	080492			

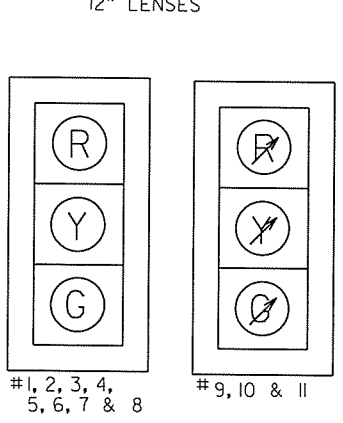
2 SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMP)

LEGEND

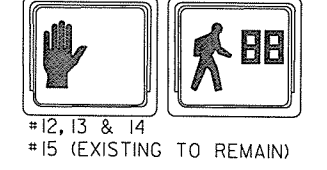
- TYPE 1HD PULL BOX
- TYPE 1 PULL BOX
- TYPE 2 HD PULL BOX
- TYPE 2 PULL BOX
- CONTROLLER CABINET
- SIGNAL HEAD
- SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON-METALLIC CONDUIT
- VIDEO DETECTOR
- EXISTING PULL BOX
- EXISTING SIGNAL POLE
- EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- EXISTING SIGNAL HEAD



FINAL SIGNAL FACES



ONE SECTION (SOLID SYMBOL)



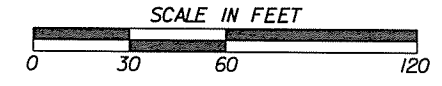
* 0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

DESIGN PARAMETERS

- POSTED SPEED LIMIT:
 - 40 MPH EAST AND WEST APPROACHES
 - MPH NORTH APPROACH
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO PARKING
- NO FIRE STATION
- 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
- 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

FINAL PLANS

LOCATION: HWY. 65B AT I-40 EB RAMP
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: SRD



DATE: 03/11/15 FILE NAME: t080492_p09.dgn

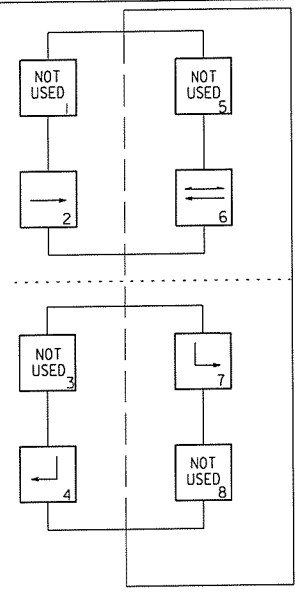
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 REVISION DATE:

NOTE:
 1. FINAL SIGNALIZATION PLANS INCLUDE ITEMS INSTALLED DURING STAGED CONSTRUCTION.
 2. SIGNAL FACES 1-3 SHALL BE LOUVERED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		88	209
				JOB NO.		080492	88	209

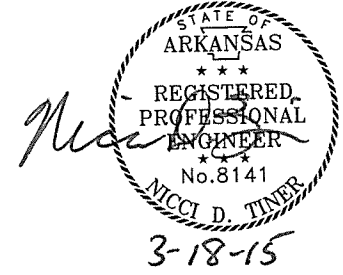
2 SIGNALIZATION PLANS (HWY. 65B AT I-40 EB RAMP)

FINAL PHASING DIAGRAM



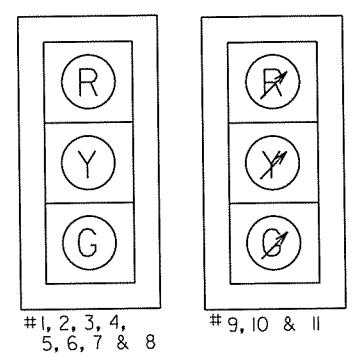
LEGEND

- ☐ TYPE 1 HD PULL BOX
- ☐ TYPE 1 PULL BOX
- ☐ TYPE 2 HD PULL BOX
- ☐ TYPE 2 PULL BOX
- ☐ CONTROLLER CABINET
- ☐ SIGNAL HEAD
- ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON-METALLIC CONDUIT
- ☐ VIDEO DETECTOR
- ☐ EXISTING PULL BOX
- ☐ EXISTING SIGNAL POLE
- ☐ EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- ☐ EXISTING SIGNAL HEAD

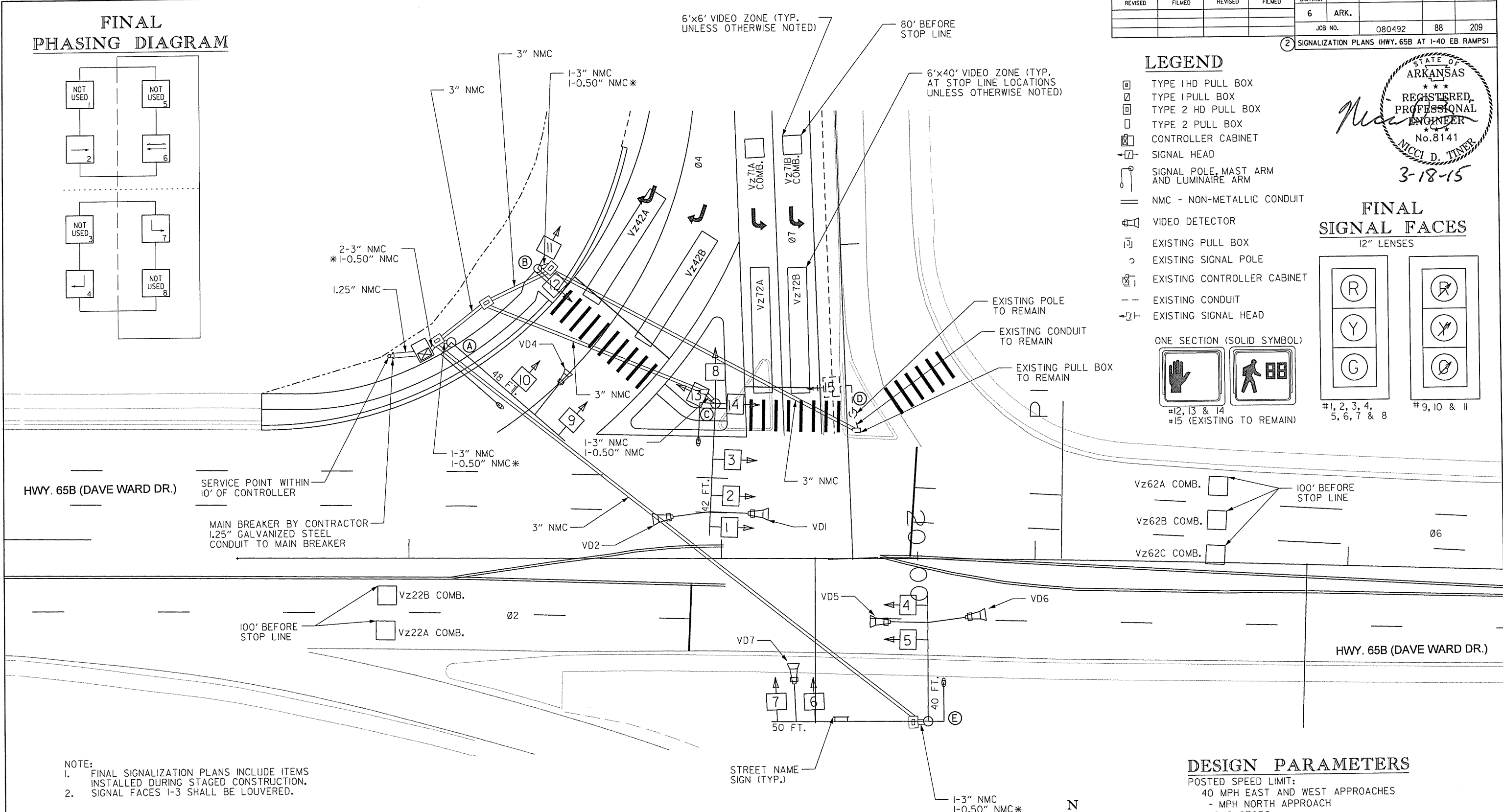


FINAL SIGNAL FACES

12" LENSES



- ONE SECTION (SOLID SYMBOL)
- ☐ #12, 13 & 14
 - ☐ #15 (EXISTING TO REMAIN)



NOTE:
 1. FINAL SIGNALIZATION PLANS INCLUDE ITEMS INSTALLED DURING STAGED CONSTRUCTION.
 2. SIGNAL FACES 1-3 SHALL BE LOUVERED.

POLE DIMENSIONS

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	STATION HWY. 65B	OFFSET	NORTHING	EASTING
A	48 FT.	90 DEGREES	35'-0"	25'-0"	90 DEGREES	21+13.53	69' LT.	267193.5714	1186630.5152
B	-	-	15'-0"	-	-	21+41.07	92' LT.	267216.0801	1186658.8850
C	42 FT.	180 DEGREES	35'-0"	15'-0"	180 DEGREES	21+98.13	49' LT.	267171.1243	1186714.3675
D	-	-	15'-0"	-	-	22+41.91	46' LT.	267166.3766	1186758.1023
E	50 FT.	90 DEGREES	35'-0"	15'-0"	180 DEGREES	22+66.11	52' RT.	267067.6086	1186778.3384
	40 FT.	180 DEGREES	-	-	-	-	-	-	-

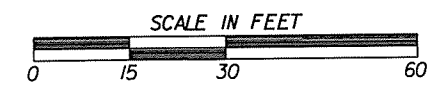
*0.50" NMC FOR CONTROLLER OR POLE GROUND ROD CONNECTION. THE COST OF 0.50" NMC IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

DESIGN PARAMETERS

- POSTED SPEED LIMIT: 40 MPH EAST AND WEST APPROACHES - MPH NORTH APPROACH
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO PARKING
- NO FIRE STATION
- 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
- 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

FINAL PLANS

LOCATION: HWY. 65B AT I-40 EB RAMP
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM



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 REVISION DATE:

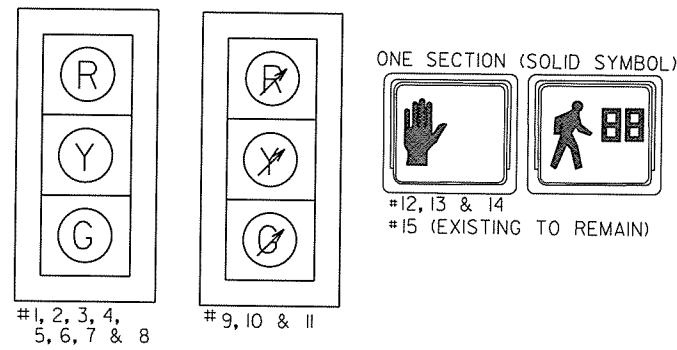
DETECTOR CHART (FINAL)

DETECTOR I.D. #	DIRECTION & LOCATION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DET. TUBE LENGTH	COMMENT
				CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL		MSTR. SYS. DET. #		
							PHS.	SYS. DET. #			
Vz21A&B	EB FAR	LOCAL			1	V2	2		74"	VD2	
Vz22A&B	EB NEAR	COMB.			2	V10	2	2	74"	VD5	
Vz41A&B	SB RIGHT FAR	COMB.			9	V12	4	4	23"	VD4	
Vz42A&B	SB RIGHT NEAR	LOCAL			10	V4	4		23"	VD4	
Vz61A,B,&C	WB FAR	LOCAL			5	V6	6		74"	VD6	
Vz62A,B,&C	WB NEAR	COMB.			6	V14	6	6	74"	VD1	
Vz71A&B	SB LEFT FAR	COMB.			11	V15	7	7	23"	VD7	
Vz72A&B	SB LEFT NEAR	LOCAL			12	V7	7		23"	VD7	
P6	W TO E	PED.					P6	6			

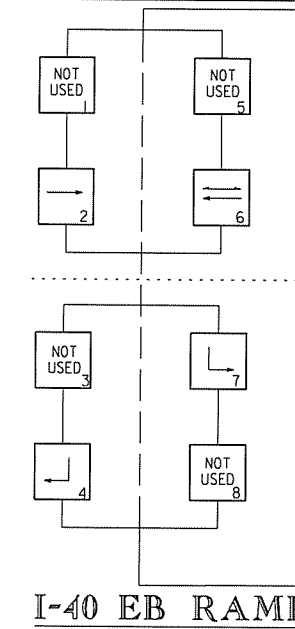
CONTROLLER INPUT ABBREVIATIONS:
 V = VEHICLE INPUT
 P = PEDESTRIAN INPUT

SPARE AMP CHN. # = 3, 4, 7, 8, 13, 14, 15, & 16

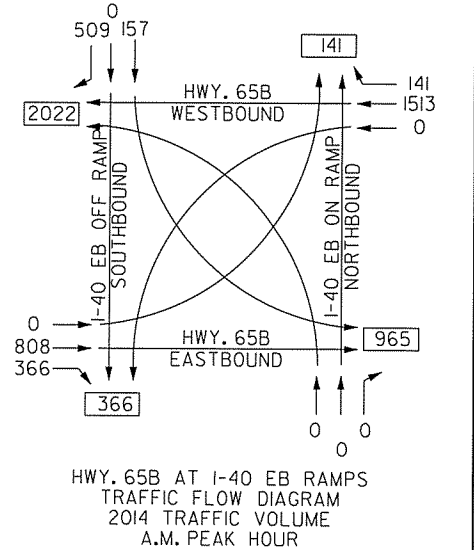
FINAL SIGNAL FACES



FINAL PHASING DIAGRAM

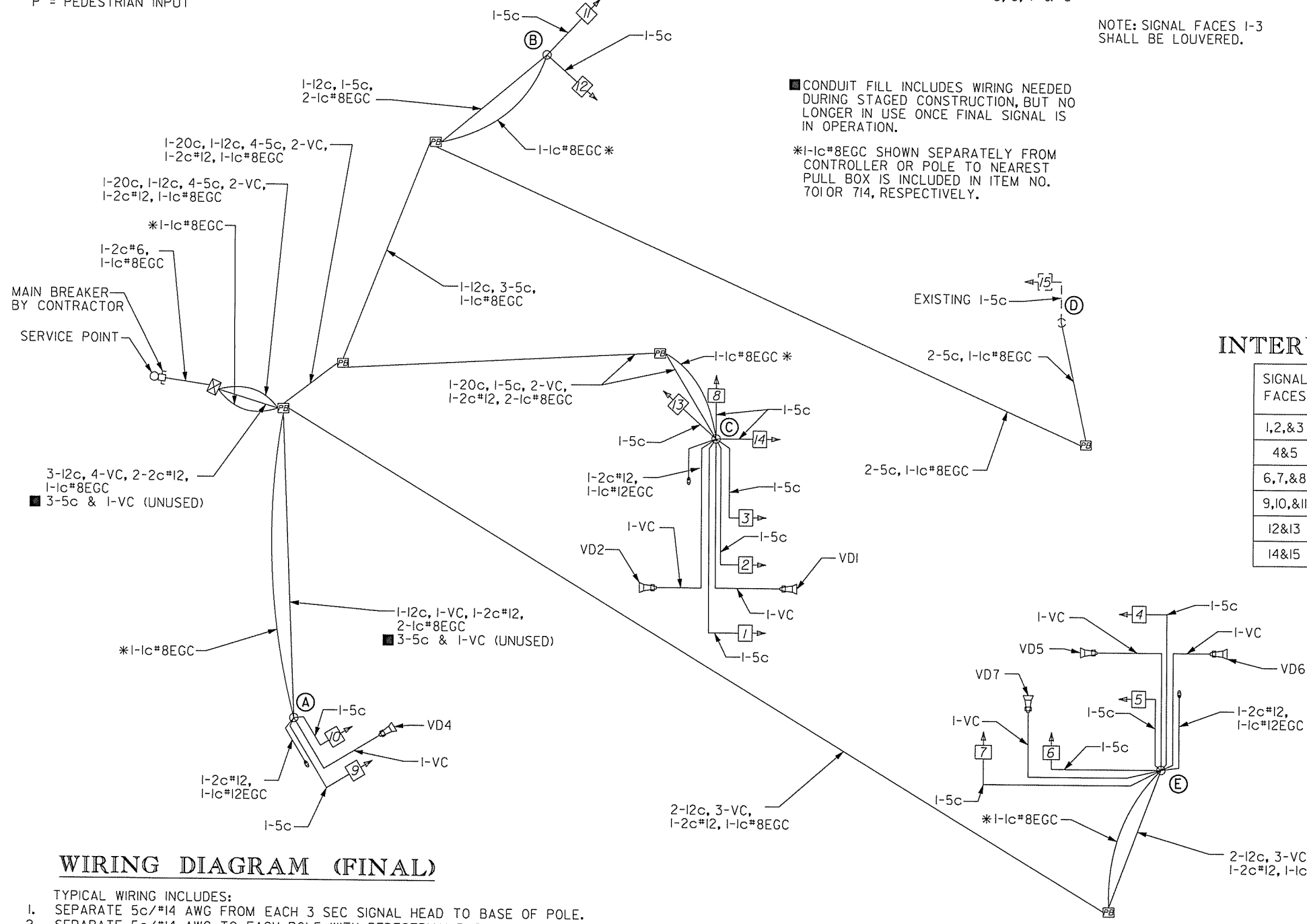
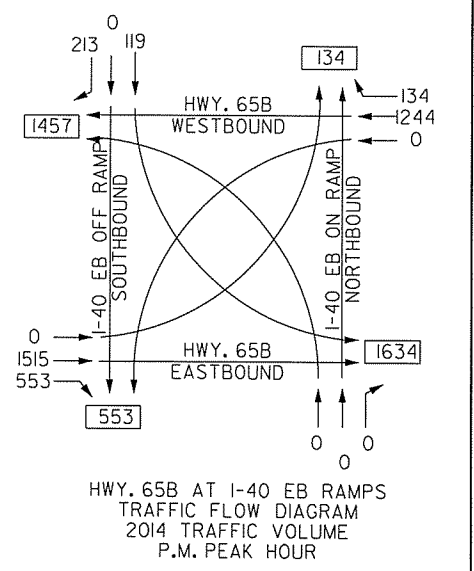


STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 MICHELLE D. JONES
 3-18-15



INTERVAL CHART (FINAL)

SIGNAL FACES	INTERSECTION INTERVALS				FLASH SEQ.
	2+6	CLR.	4+7	CLR.	
1,2,&3	G	Y	R	R	R
4&5	G	Y	R	R	R
6,7,&8	R	R	G	Y	R
9,10,&11	R	R	G	Y	R
12&13	W	FDW	DW	DW	B
14&15	W	FDW	DW	DW	B



CONDUIT FILL INCLUDES WIRING NEEDED DURING STAGED CONSTRUCTION, BUT NO LONGER IN USE ONCE FINAL SIGNAL IS IN OPERATION.
 *I-1c#8EGC SHOWN SEPARATELY FROM CONTROLLER OR POLE TO NEAREST PULL BOX IS INCLUDED IN ITEM NO. 701 OR 714, RESPECTIVELY.

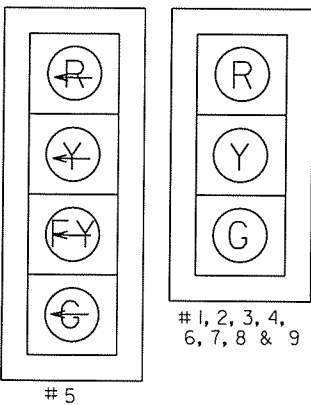
WIRING DIAGRAM (FINAL)

- TYPICAL WIRING INCLUDES:
- SEPARATE 5c/#14 AWG FROM EACH 3 SEC SIGNAL HEAD TO BASE OF POLE.
 - SEPARATE 5c/#14 AWG TO EACH POLE WITH PEDESTRIAN PUSH BUTTONS.
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

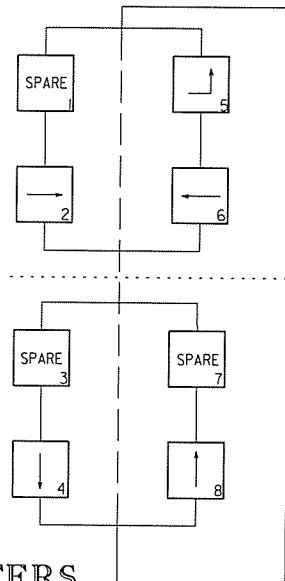
FINAL PLANS
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 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

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 WORKSPACE: AHTD
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 REVISION DATE:

STAGE 1 SIGNAL FACES
12" LENSES



STAGE 1 PHASING DIAGRAM



POLE DIMENSIONS (STAGE 1)

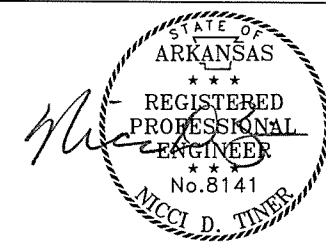
POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION	STATION HWY. 64	OFFSET	NORTHING	EASTING
A	-	-	44'-0"	25'-0"	AS SHOWN	37+45.53	118' RT.	266963.9449	1188257.8820
B	-	-	44'-0"	25'-0"	AS SHOWN	37+09.97	94' LT.	267176.0802	1188224.7535
C	-	-	44'-0"	25'-0"	AS SHOWN	39+34.05	106' LT.	267185.9368	1188447.1971
D	-	-	44'-0"	-	-	39+15.76	111' RT.	266968.7437	1188429.5679

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	90	209

2 SIGNALIZATION PLANS (HWY. 286 AT AMITY RD, NORTH)

LEGEND

- ☐ TYPE 1 HD PULL BOX
- ☐ TYPE 1 PULL BOX
- ☐ TYPE 2 HD PULL BOX
- ☐ TYPE 2 PULL BOX
- ☐ CONTROLLER CABINET
- ☐ SIGNAL HEAD
- ☐ SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- == NMC - NON-METALLIC CONDUIT
- ☐ VIDEO DETECTOR
- ☐ EXISTING PULL BOX
- EXISTING SIGNAL POLE
- ☐ EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- ☐ EXISTING SIGNAL HEAD

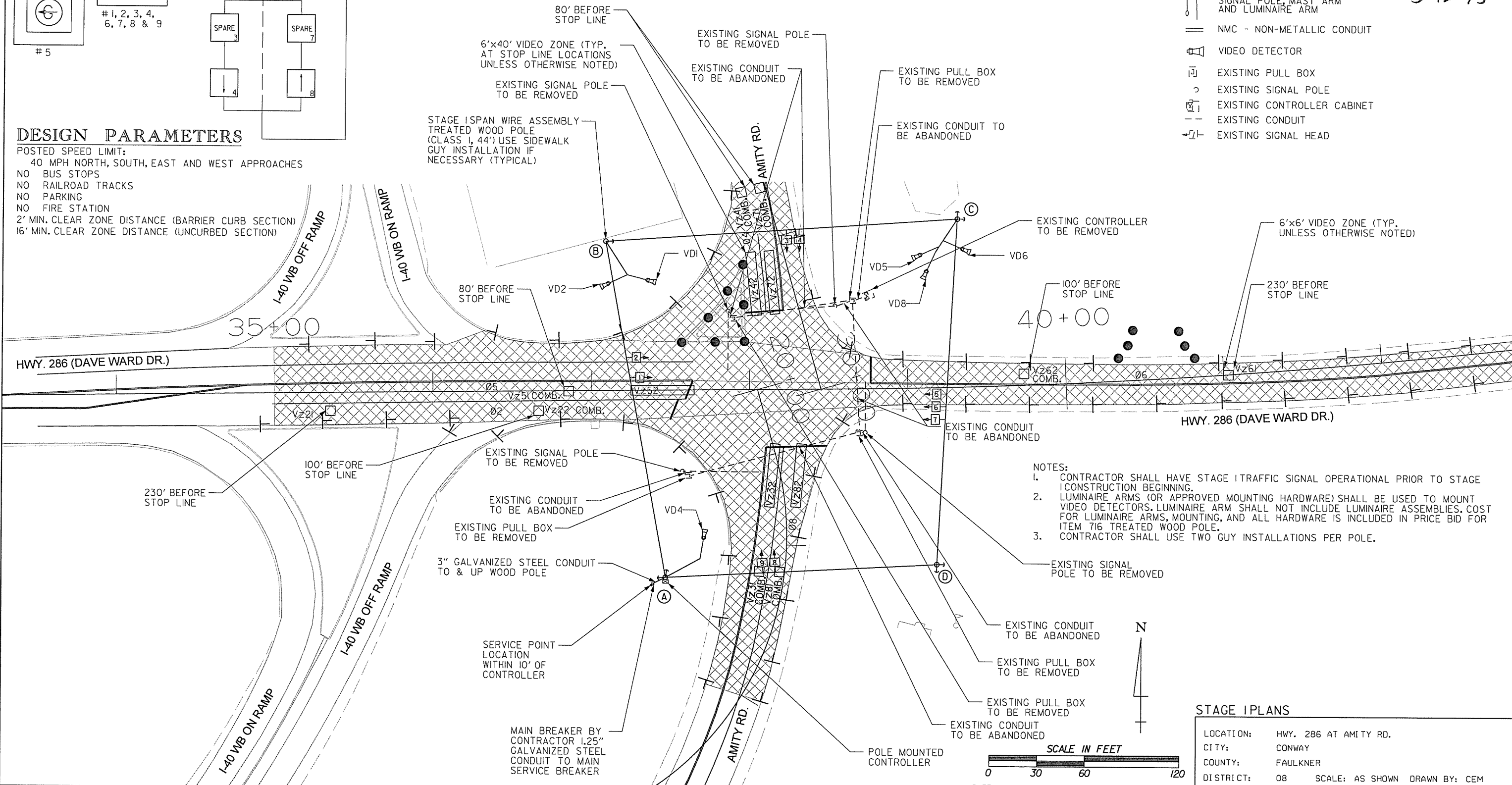


3-12-15

DESIGN PARAMETERS

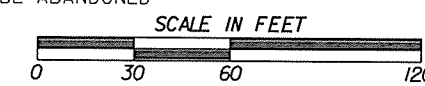
- POSTED SPEED LIMIT:
40 MPH NORTH, SOUTH, EAST AND WEST APPROACHES
- NO BUS STOPS
 - NO RAILROAD TRACKS
 - NO PARKING
 - NO FIRE STATION
 - 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 - 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

STAGE I CONSTRUCTION (UNDER TRAFFIC)



NOTES:

1. CONTRACTOR SHALL HAVE STAGE I TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE I CONSTRUCTION BEGINNING.
2. 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.
3. CONTRACTOR SHALL USE TWO GUY INSTALLATIONS PER POLE.

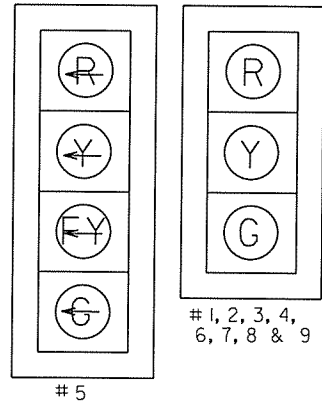


STAGE I PLANS

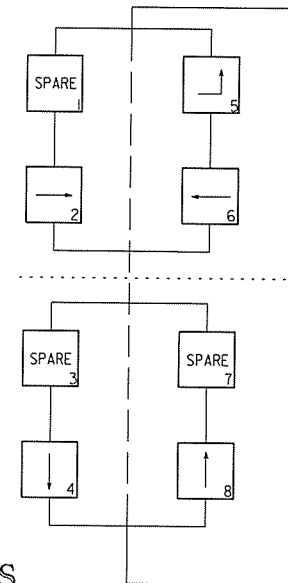
LOCATION: HWY. 286 AT AMITY RD.
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

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**STAGE 2
SIGNAL FACES**
12" LENSES

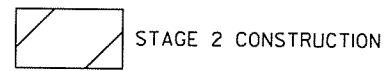


**STAGE 2
PHASING DIAGRAM**



POLE DIMENSIONS (STAGE 2)

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION	STATION HWY. 64	OFFSET	NORTHING	EASTING
A	INSTALLED DURING STAGE 1								
B	INSTALLED DURING STAGE 1								
C	INSTALLED DURING STAGE 1								
D	INSTALLED DURING STAGE 1								



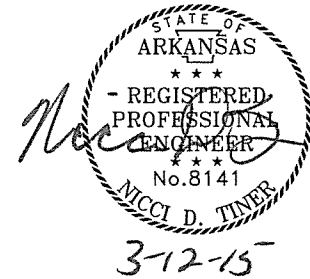
NOTES:
1. CONTRACTOR SHALL HAVE STAGE 2 TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 2 CONSTRUCTION BEGINNING.

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				6	ARK.			
				JOB NO.	080492		91	209

2 SIGNALIZATION PLANS (HWY. 286 AT AMITY RD, NORTH)

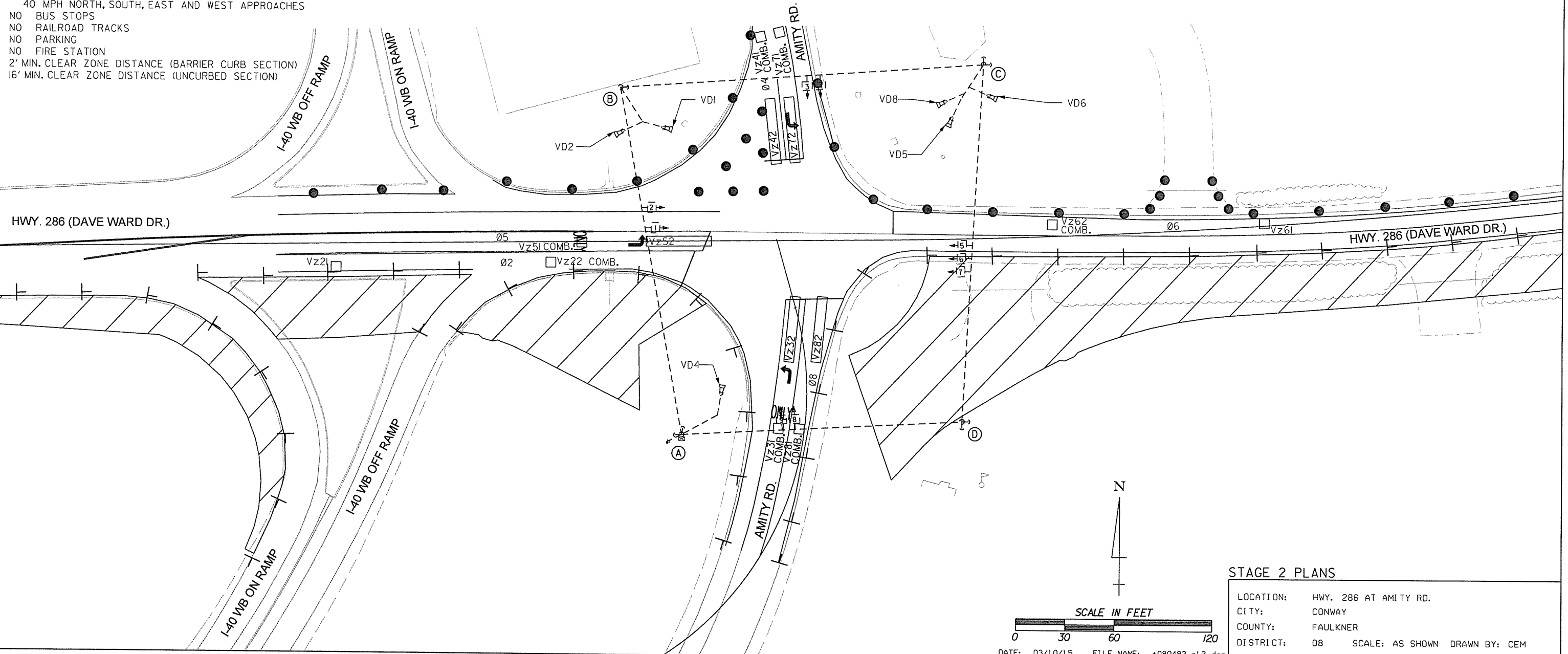
LEGEND

- TYPE 1 HD PULL BOX
- TYPE 1 PULL BOX
- TYPE 2 HD PULL BOX
- TYPE 2 PULL BOX
- CONTROLLER CABINET
- ◁ SIGNAL HEAD
- SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON-METALLIC CONDUIT
- ◁ VIDEO DETECTOR
- ◁ EXISTING PULL BOX
- ◁ EXISTING SIGNAL POLE
- ◁ EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- ◁ EXISTING SIGNAL HEAD

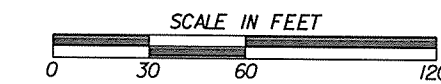


DESIGN PARAMETERS

- POSTED SPEED LIMIT:
40 MPH NORTH, SOUTH, EAST AND WEST APPROACHES
- NO BUS STOPS
 - NO RAILROAD TRACKS
 - NO PARKING
 - NO FIRE STATION
 - 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
 - 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)



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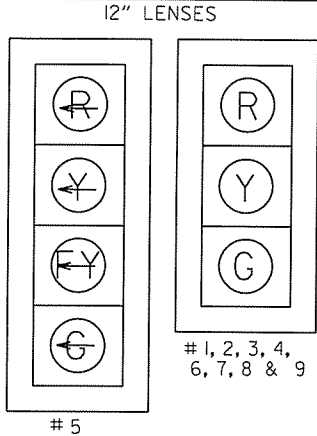


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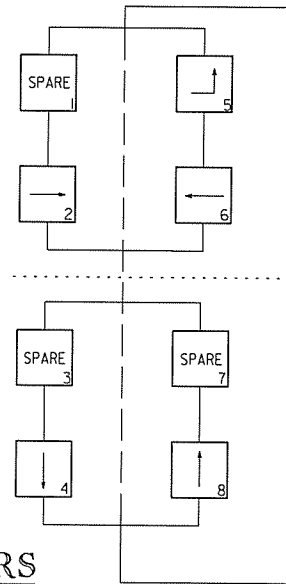
STAGE 2 PLANS

LOCATION:	HWY. 286 AT AMITY RD.
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	AS SHOWN
DRAWN BY:	CEM

STAGE 3 SIGNAL FACES



STAGE 3 PHASING DIAGRAM



POLE DIMENSIONS (STAGE 3)

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION	STATION HWY. 64	OFFSET	NORTHING	EASTING
A	INSTALLED DURING STAGE 1								
B	INSTALLED DURING STAGE 1								
C	INSTALLED DURING STAGE 1								
D	INSTALLED DURING STAGE 1								

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	92	209	

2 SIGNALIZATION PLANS (HWY. 286 AT AMITY RD. NORTH)

LEGEND

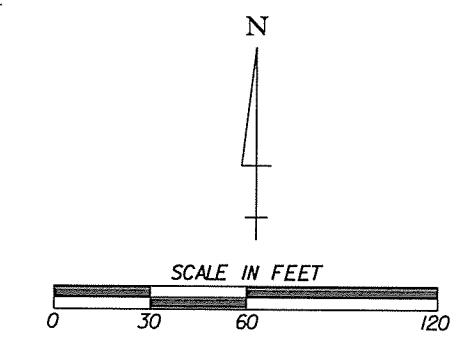
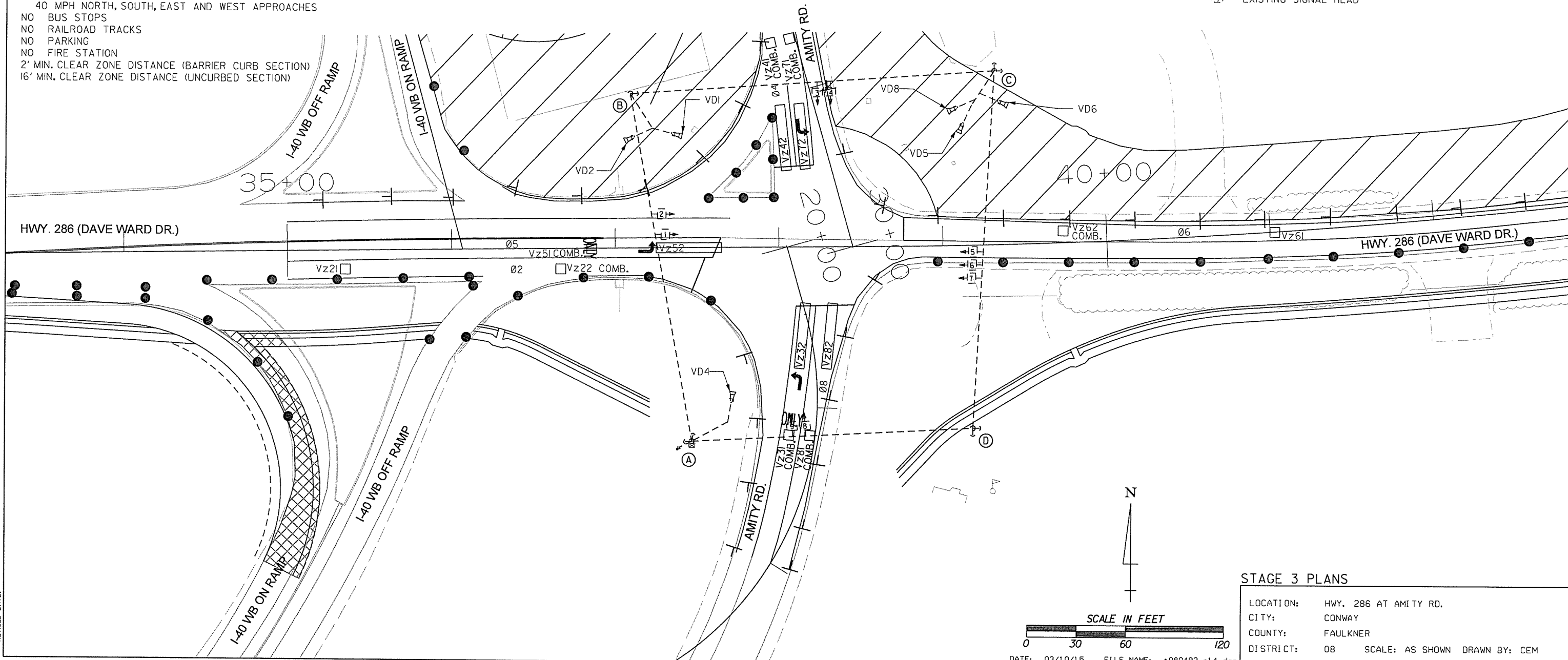
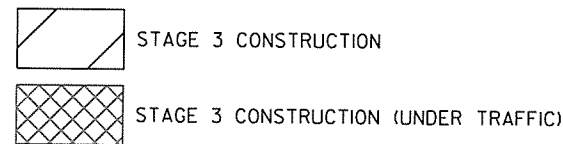
- TYPE 1 HD PULL BOX
- TYPE 2 HD PULL BOX
- TYPE 2 PULL BOX
- CONTROLLER CABINET
- SIGNAL HEAD
- SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON-METALLIC CONDUIT
- VIDEO DETECTOR
- EXISTING PULL BOX
- EXISTING SIGNAL POLE
- EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- EXISTING SIGNAL HEAD



DESIGN PARAMETERS

- POSTED SPEED LIMIT: 40 MPH NORTH, SOUTH, EAST AND WEST APPROACHES
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO PARKING
- NO FIRE STATION
- 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
- 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

NOTES:
1. CONTRACTOR SHALL HAVE STAGE 3 TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 3 CONSTRUCTION BEGINNING.



STAGE 3 PLANS	
LOCATION:	HWY. 286 AT AMITY RD.
CITY:	CONWAY
COUNTY:	FAULKNER
DISTRICT:	08
SCALE:	AS SHOWN
DRAWN BY:	CEM

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 REVISION DATE:

DETECTOR CHART (STAGES 1, 2 & 3)

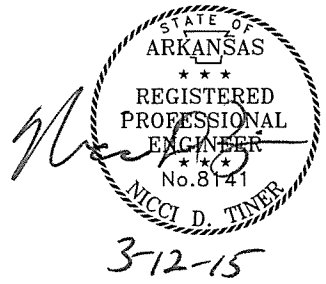
DETECTOR I.D. #	DIRECTION & LOCATION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DET. TUBE LENGTH	COMMENT
				CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL		MSTR. SYS. DET. #		
							PHS.	SYS. DET. #			
Vz21	EB THRU FAR	LOCAL			5	V2	2			23"	VD2
Vz22	EB THRU NEAR	COMB.			6	VI0	2	2		23"	VD5
Vz31	NB LEFT FAR	COMB.			13	VII	8	3		23"	VD8
Vz32	NB LEFT NEAR	LOCAL			14	V3	8			23"	VD8
Vz41	SB FAR	COMB.			9	VI2	4	4		23"	VD4
Vz42	SB NEAR	LOCAL			10	V4	4			23"	VD4
Vz51	EB LEFT FAR	COMB.			7	VI3	5	5		23"	VD5
Vz52	EB LEFT NEAR	LOCAL			8	V5	5			23"	VD5
Vz61	WB THRU FAR	LOCAL			1	V6	6			23"	VD6
Vz62	WB THRU NEAR	COMB.			2	VI4	6	6		23"	VD1
Vz71	SB LEFT FAR	COMB.			11	VI5	4	7		23"	VD4
Vz72	SB LEFT NEAR	LOCAL			12	V7	4			23"	VD4
Vz81	NB THRU FAR	COMB.			15	VI6	8	8		23"	VD8
Vz82	NB THRU NEAR	LOCAL			16	V8	8			23"	VD8

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
P = PEDESTRIAN INPUT

SPARE AMP CHN. # = 3 & 4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		93	209
							JOB NO.	080492

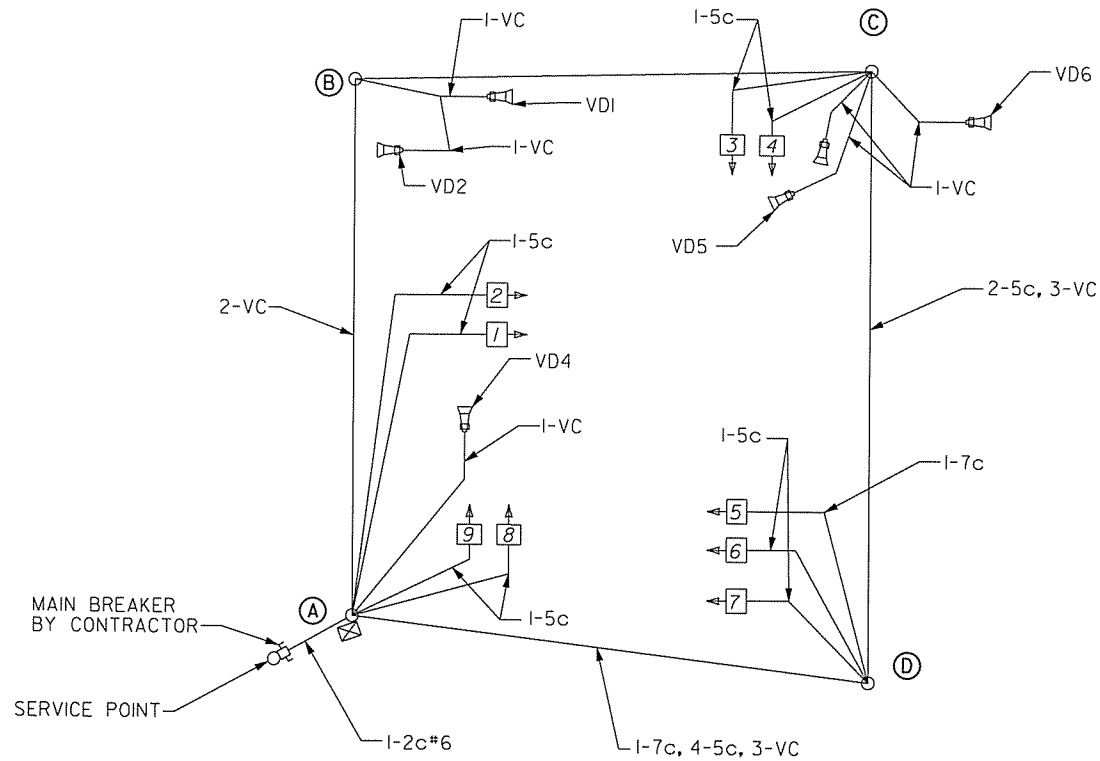
② SIGNALIZATION PLANS (HWY. 286 AT AMITY RD.)



INTERVAL CHART (STAGES 1, 2 & 3)

SIGNAL FACES	INTERSECTION INTERVALS						FLASH SEQ.
	2+5	CLR.	2+6	CLR.	4+8	CLR.	
1 & 2	R	R	G	*	R	R	R
3 & 4	R	R	R	R	G	*	R
5	G	**	R	**	R	R	R
6 & 7	G	*	G	*	R	R	R
8 & 9	R	R	R	R	G	*	R

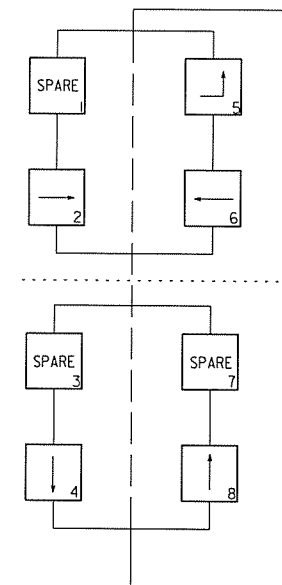
* DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
** DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE



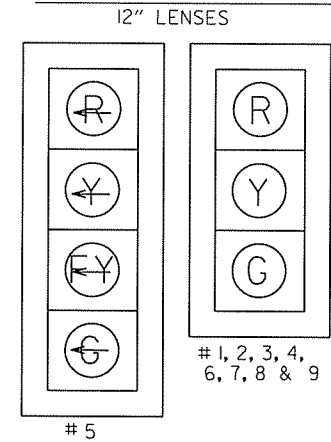
WIRING DIAGRAM (STAGES 1, 2 & 3)

- TYPICAL WIRING INCLUDES:
- SEPARATE 5c/#14 AWG FROM EACH 3 SEC SIGNAL HEAD TO CONTROLLER.
 - SEPARATE 7c/#14 AWG FROM EACH 4 SEC SIGNAL HEAD TO CONTROLLER.
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

STAGES 1, 2 & 3 PHASING DIAGRAM



STAGES 1, 2 & 3 SIGNAL FACES

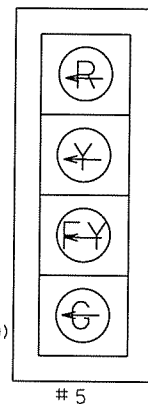
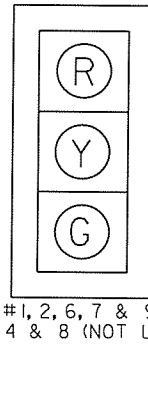
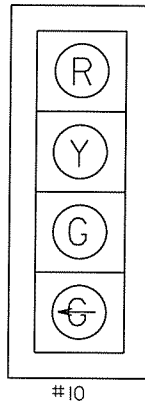


STAGES 1, 2 & 3 PLANS

LOCATION: HWY. 286 AT AMITY RD.
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

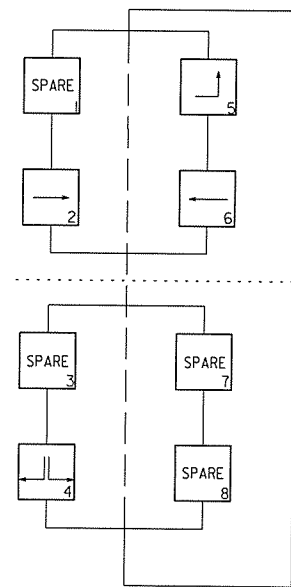
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WORKSPACE: AHTD
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REVISED DATE:

**STAGE 4A
SIGNAL FACES**
12" LENSES



#1, 2, 6, 7 & 9
3, 4 & 8 (NOT USED)

**STAGE 4A
PHASING DIAGRAM**

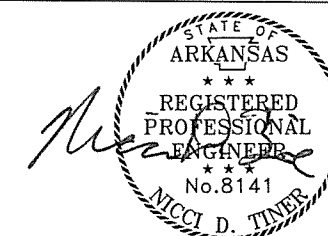


POLE DIMENSIONS (STAGE 4A)

POLE	MAST ARM(S) LENGTH	MAST ARM(S) ORIENTATION ANGLE FROM HAND HOLE (CLOCKWISE)	VERTICAL SHAFT LENGTH	LUM. ARM LENGTH	LUM. ARM(S) ORIENTATION	STATION HWY. 64	OFFSET	NORTHING	EASTING
A	INSTALLED DURING STAGE 1								
B	INSTALLED DURING STAGE 1								
C	-	-	44'-0"	25'-0"	AS SHOWN	37+83.43	46' LT.	267126.8626	1188297.6586
D	-	-	44'-0"	25'-0"	AS SHOWN	36+76.57	83' RT.	266999.3826	1188189.3247

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	94	209	

2 SIGNALIZATION PLANS (HWY. 286 AT AMITY RD.)



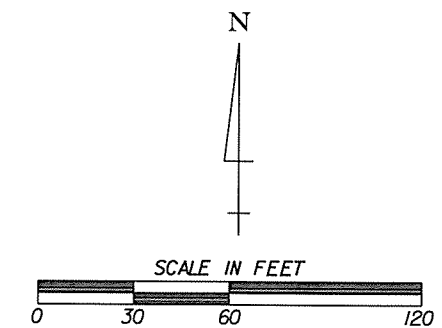
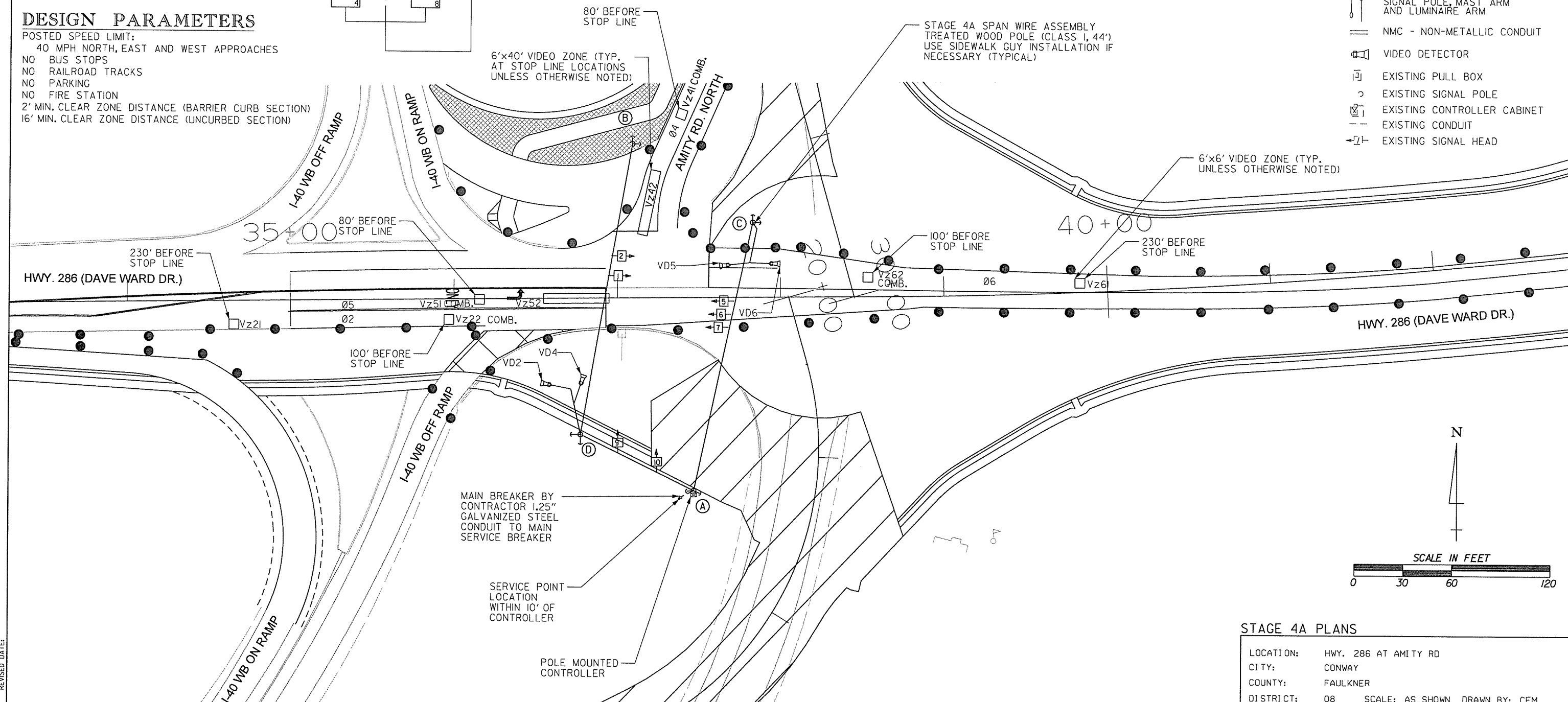
LEGEND 3-12-15

- TYPE 1 HD PULL BOX
- TYPE 2 HD PULL BOX
- TYPE 2 PULL BOX
- CONTROLLER CABINET
- SIGNAL HEAD
- SIGNAL POLE, MAST ARM AND LUMINAIRE ARM
- NMC - NON-METALLIC CONDUIT
- VIDEO DETECTOR
- EXISTING PULL BOX
- EXISTING SIGNAL POLE
- EXISTING CONTROLLER CABINET
- EXISTING CONDUIT
- EXISTING SIGNAL HEAD

DESIGN PARAMETERS

- POSTED SPEED LIMIT:
40 MPH NORTH, EAST AND WEST APPROACHES
- NO BUS STOPS
- NO RAILROAD TRACKS
- NO PARKING
- NO FIRE STATION
- 2' MIN. CLEAR ZONE DISTANCE (BARRIER CURB SECTION)
- 16' MIN. CLEAR ZONE DISTANCE (UNCURBED SECTION)

- NOTES:**
1. CONTRACTOR SHALL HAVE STAGE 4A TRAFFIC SIGNAL OPERATIONAL PRIOR TO STAGE 4A CONSTRUCTION BEGINNING.
 2. 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.
 3. CONTRACTOR SHALL USE TWO GUY INSTALLATIONS PER POLE.
 4. CONTRACTOR SHALL RELOCATE SIGNAL HEADS AND VIDEO DETECTORS FROM STAGES 1-3 FOR USE DURING STAGE 4A.
 5. CONTRACTOR SHALL MAINTAIN CONTROLLER AND SERVICE POINT FROM STAGES 1-3.



STAGE 4A PLANS

LOCATION: HWY. 286 AT AMITY RD
 CITY: CONWAY
 COUNTY: FAULKNER
 DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	95	209	

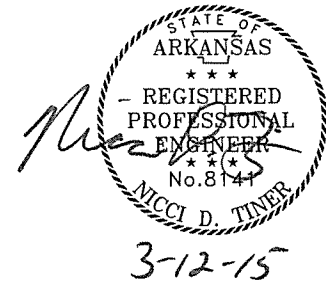
② SIGNALIZATION PLANS (HWY. 286 AT AMITY RD. NORTH)

DETECTOR CHART (STAGE 4A)

DETECTOR I.D. #	DIRECTION & LOCATION	TYPE	DET. #	HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			VIDEO DET. TUBE LENGTH	COMMENT
				CAB. TRM. #	AMP CHN. #	CON. INP. #	LOCAL		MSTR. SYS. DET. #		
							PHS.	SYS. DET. #			
Vz21	EB THRU FAR	LOCAL			1	V2	2		23"	VD2	
Vz22	EB THRU NEAR	COMB.			2	V10	2	2	23"	VD5	
Vz41	SB FAR	COMB.			9	V12	4	4	23"	VD4	
Vz42	SB NEAR	LOCAL			10	V4	4		23"	VD4	
Vz51	EB LEFT FAR	COMB.			3	V13	5	5	23"	VD5	
Vz52	EB LEFT NEAR	LOCAL			4	V5	5		23"	VD5	
Vz61	WB THRU FAR	LOCAL			5	V6	6		23"	VD6	
Vz62	WB THRU NEAR	COMB.			6	V14	6	6	23"	VD6	

CONTROLLER INPUT ABBREVIATIONS:
V = VEHICLE INPUT
P = PEDESTRIAN INPUT

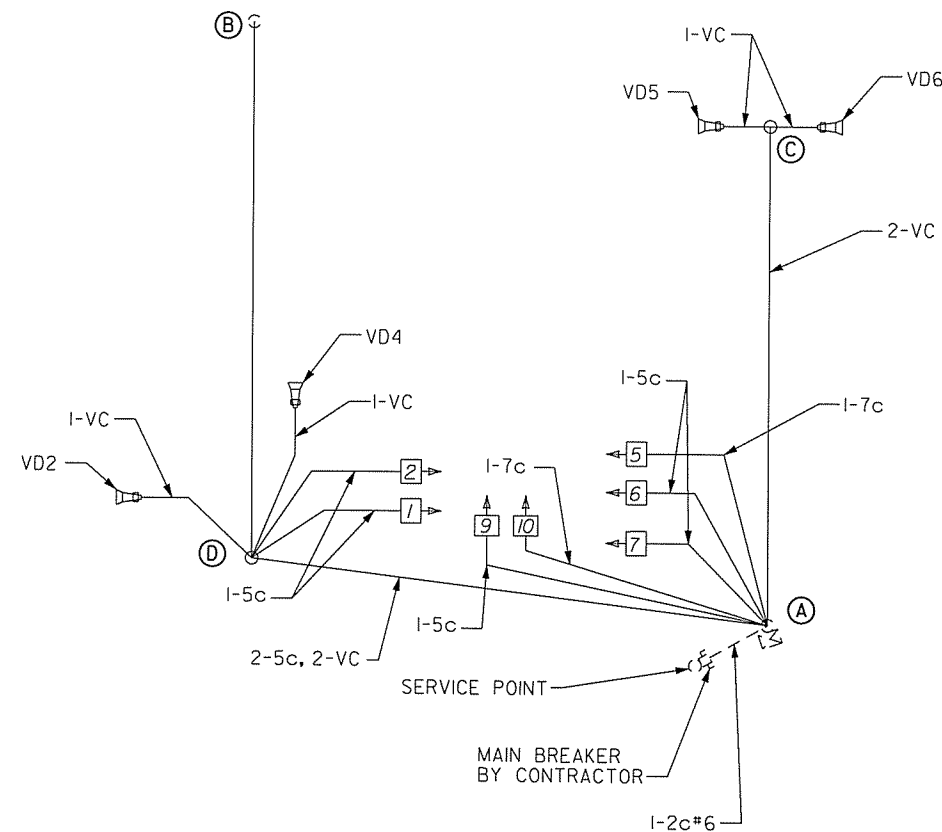
SPARE AMP CHN. # = 7, 8, 11 & 12, 13-16



INTERVAL CHART (STAGE 4A)

SIGNAL FACES	INTERSECTION INTERVALS						FLASH SEQ.
	2+5	CLR.	2+6	CLR.	4	CLR.	
1 & 2	R	R	G	*	R	R	R
5	←	**	←	**	←	←	←
6 & 7	G	*	G	*	R	R	R
9	R	R	R	R	G	*	R
10	←	←	←	←	G	*	R

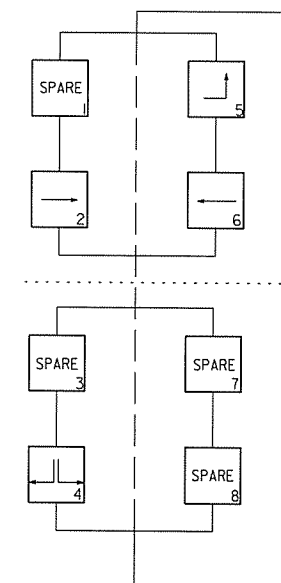
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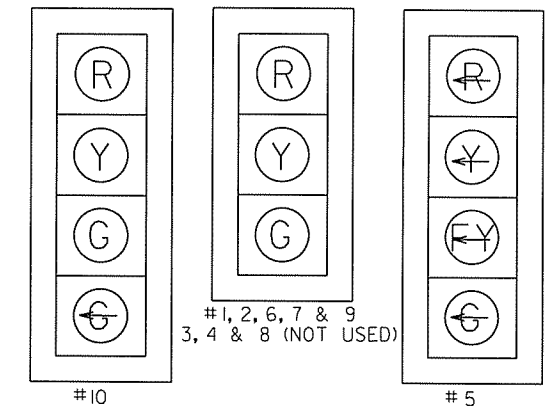
WIRING DIAGRAM (STAGE 4A)

- TYPICAL WIRING INCLUDES:
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STAGE 4A PHASING DIAGRAM



STAGE 4A SIGNAL FACES 12" LENSES



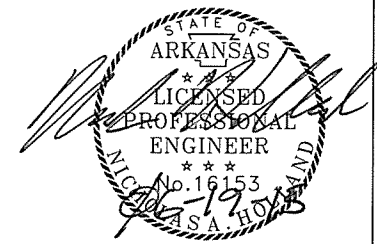
STAGE 4A PLANS

LOCATION: HWY. 286 AT AMITY RD. NORTH
CITY: CONWAY
COUNTY: FAULKNER
DISTRICT: 08 SCALE: AS SHOWN DRAWN BY: CEM

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WORKSPACE: AHTD
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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	96	209

(2) LIGHTING LEGEND & QUANTITIES



ELECTRICAL SYMBOLS LEGEND

	NEW SINGLE ARM DECORATIVE LIGHT FIXTURE, SEE NOTES, PLANS AND SCHEDULES FOR MORE INFORMATION.
	NEW DUAL ARM DECORATIVE LIGHT FIXTURE, ARROWS INDICATE FIXTURE LIGHT DISTRIBUTION AIMING DIRECTION, SEE NOTES, PLANS AND SCHEDULES FOR MORE INFORMATION.
	NEW DUAL ARM DECORATIVE LIGHT FIXTURE, ARROWS INDICATE FIXTURE LIGHT DISTRIBUTION AIMING DIRECTION, SEE NOTES, PLANS AND SCHEDULES FOR MORE INFORMATION.
	PULL BOX
	CONDUIT & WIRE AS NOTED IN NOTES AND IN SCHEDULES.
	RELAY CONTACT, NORMALLY OPEN.
	CIRCUIT BREAKER, TRIP RATING SHOWN, 2-POLE UNLESS NOTED OTHERWISE.
	SURGE PROTECTIVE DEVICE WITH INDICATING LIGHTS.
	3/4" x 10' COPPER CLAD GROUND ROD.
	SERVICE POINT LOCATION
	20 AMP DUPLEX RECEPTACLE, WITH GROUND WIRE, "GFCI" INDICATES GROUND FAULT CIRCUIT INTERRUPTER.

ABBREVIATIONS

AMP	AMP	LO	LUGS ONLY
ABC	ABOVE COUNTER	LOR	LOCAL-OFF-REMOTE
ACS	ACCESS CONTROL SYSTEM	LSI	LONG, SHORT, INSTANTANEOUS
ACU	AIR CONDITIONING UNIT	LSIG	LONG, SHORT, INSTANTANEOUS, GROUND
AHU	AIR HANDLING UNIT	LV	LOW VOLTAGE
AIC	AMPS INTERRUPTING CAPACITY	MCB	MAIN CIRCUIT BREAKER
AM	AMP-METER	MCC	MOTOR CONTROL CENTER
ANN	ANNUNCIATOR	MCP	MOTOR CIRCUIT PROTECTOR
AP	AERIAL PRIMARY	MFR	MANUFACTURER
AS	AERIAL SECONDARY	MIN	MINIMUM
ATS	AUTOMATIC TRANSFER SWITCH	MLO	MAIN LUGS ONLY
AUX	AUXILIARY	MN	MASS NOTIFICATION
BFI	BLOWN FUSE INDICATOR	MON	MONACO
BI	BYPASS ISOLATION	MS	MOTOR STARTER
BKR	BREAKER	MTS	MANUAL TRANSFER SWITCH
C	CONDUIT	N	NEUTRAL
CB	CIRCUIT BREAKER	NFDS	NON-FUSED DISCONNECT SWITCH
CCTV	CLOSED CIRCUIT TELEVISION	NL	NIGHT LIGHT
CGRS	PVC COATED GALVANIZED RIGID STEEL	OH	OVERHEAD
CKT	CIRCUIT	OHP	OVERHEAD PRIMARY
COM	COMMON	OHS	OVERHEAD SECONDARY
CONT	CONTINUOUS	OL	OVERLOAD
CP	CONTROL PANEL	PB	PUSH BUTTON
CPT	CONTROL POWER TRANSFORMER	PEC	PHOTO ELECTRIC CELL
CR	CONTROL RELAY	PF	POWER FACTOR
CRI	COLOR RENDERING INDEX	PFCC	POWER FACTOR CORRECTION CAPACITOR
CS	CORD SET	PL	PILOT LIGHT
CU	COEFFICIENT OF UTILIZATION	FMR	PHASE MONITOR RELAY
DEB	DIRECT EARTH BURIED	PNL	PANEL
EC	EMPTY OR EMBEDDED CONDUIT	PTT	PUSH-TO-TEST
EF	EXHAUST FAN	PTZ	PAN-TILT-ZOOM
EG	EQUIPMENT GROUND	PVC	SCHEDULE 40 POLYVINYL CONDUIT
EL	ELEVATION	RECPT	RECEPTACLE
EMT	ELECTRICAL METALLIC TUBING	RVAT	REDUCED VOLTAGE AUTO-TRANSFORMER STARTER
ETM	ELAPSED TIME METER	SA	SURGE ARRESTER
FC	FAN COIL	SDBC	SOFT DRAWN BARE COPPER
FDS	FUSED DISCONNECT SWITCH	SE	SERVICE ENTRANCE
FOC	FIBER OPTIC CABLE	SN	SOLID NEUTRAL
FVNR	FULL VOLTAGE NON-REVERSING STARTER	SPD	SURGE PROTECTIVE DEVICE
FVR	FULL VOLTAGE REVERSING STARTER	SS	STAINLESS STEEL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	STA	STATION
GND	GROUND	SW	SWITCH
GRS	GALVANIZED RIGID STEEL	TC	TIME CLOCK
HID	HIGH INTENSITY DISCHARGE	TD	TIME DELAY
HOA	HAND-OFF-AUTO	TDD	TIME DELAY ON DE-ENERGIZATION
HP	HORSEPOWER OR HEAT PUMP	TDE	TIME DELAY ON ENERGIZATION
IDS	INTRUSION DETECTION SYSTEM	TEL	TELEPHONE
HR	HOUR	THD	TOTAL HARMONIC DISTORTION
IG	ISOLATED GROUND	TMGB	TELECOMMUNICATIONS MAIN GROUND BAR
ISP	INDIVIDUALLY SHIELDED PAIR	TGB	TELECOMMUNICATIONS GROUND BAR
JB	JUNCTION BOX	TR	TAMPER RESISTANT
KVA	KILOVOLT-AMPERE	UG	UNDERGROUND
KVAR	KILOVOLT-AMPERE, REACTIVE	UGE	UNDERGROUND ELECTRIC
KW	KILOWATT	UGP	UNDERGROUND PRIMARY
LA	LIGHTNING ARRESTER	UGS	UNDERGROUND SECONDARY
LC	LIGHTING CONTACTOR	UH	UNIT HEATER
LLF	LIGHT LOSS FACTOR	UON	UNLESS OTHERWISE NOTED
		UTP	UNSHIELDED TWISTED PAIR
		V	VOLT
		VA	VOLT-AMP
		VFD	VARIABLE FREQUENCY DRIVE
		VM	VOLT-METER
		W	WATT OR WIRE
		WAP	WIRELESS ACCESS POINT
		WH	WEATHER HEAD
		WM	WATT METER
		WP	WEATHERPROOF
		XFMR	TRANSFORMER

SUMMARY OF LIGHTING QUANTITIES

ITEM NO.	ITEM	QUANTITIES	
		TOTAL	UNIT
710	NON-METALLIC CONDUIT 2"	5955	LIN. FT.
710	NON-METALLIC CONDUIT 3"	650	LIN. FT.
SP & 711	CONCRETE PULL BOX (TYPE SPECIAL HD)	66	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, SHOE BASE, 30')	42	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180" APART, SHOE BASE, 30')	7	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 90" APART, BREAKAWAY BASE, 30')	1	EACH
SP	ROADWAY ILLUMINATION POLE (1 x 160W LED LUMINAIRE, BREAKAWAY BASE, 30')	11	EACH
SP	ROADWAY ILLUMINATION POLE (2 x 160W LED LUMINAIRE 180" APART, BREAKAWAY BASE, 30')	2	EACH
SP	ROADWAY ILLUMINATION POLE, RELOCATED (400-WATT INTERSTATE LUMINAIRE, SHOE BASE, 37')	5	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/2 A.W.G.)	3643	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/2 A.W.G., E.G.C.)	3643	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/3 A.W.G.)	958	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/3 A.W.G., E.G.C.)	958	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/4 A.W.G.)	1379	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/4 A.W.G., E.G.C.)	1379	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (2C/6 A.W.G.)	2393	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (1C/6 A.W.G., E.G.C.)	2393	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/10 A.W.G.)	1406	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/10 A.W.G., E.G.C.)	1406	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT, ALUMINUM (3C/2 A.W.G.)	50	LIN. FT.
SP	SERVICE POINT ASSEMBLY (UNDERGROUND SECONDARY SERVICE, ROADWAY LIGHTING)	1	EACH

GENERAL NOTES:

- SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET BUT NOT BE UTILIZED ON THE PROJECT.
- LIGHTING LEGEND SHOWS EXAMPLE IDENTIFIERS, REFER TO LIGHT FIXTURE SCHEDULE FOR SPECIFIC REQUIREMENTS.
- ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARDS AND DETAILS, AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
- CONDUIT INSTALLED UNDER ROADWAY SECTIONS SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD MAY BE USED.
- CONTRACTOR MAY USE HDPE OR PVC FOR BORING. SECTIONAL PVC SHALL BE UL LISTED AND MARKED FOR USE IN DIRECTIONAL BORING.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
10-09-15				6	ARK.			
				JOB NO.		080492	97	209
				(2) LIGHTING RELOCATION PLAN I				



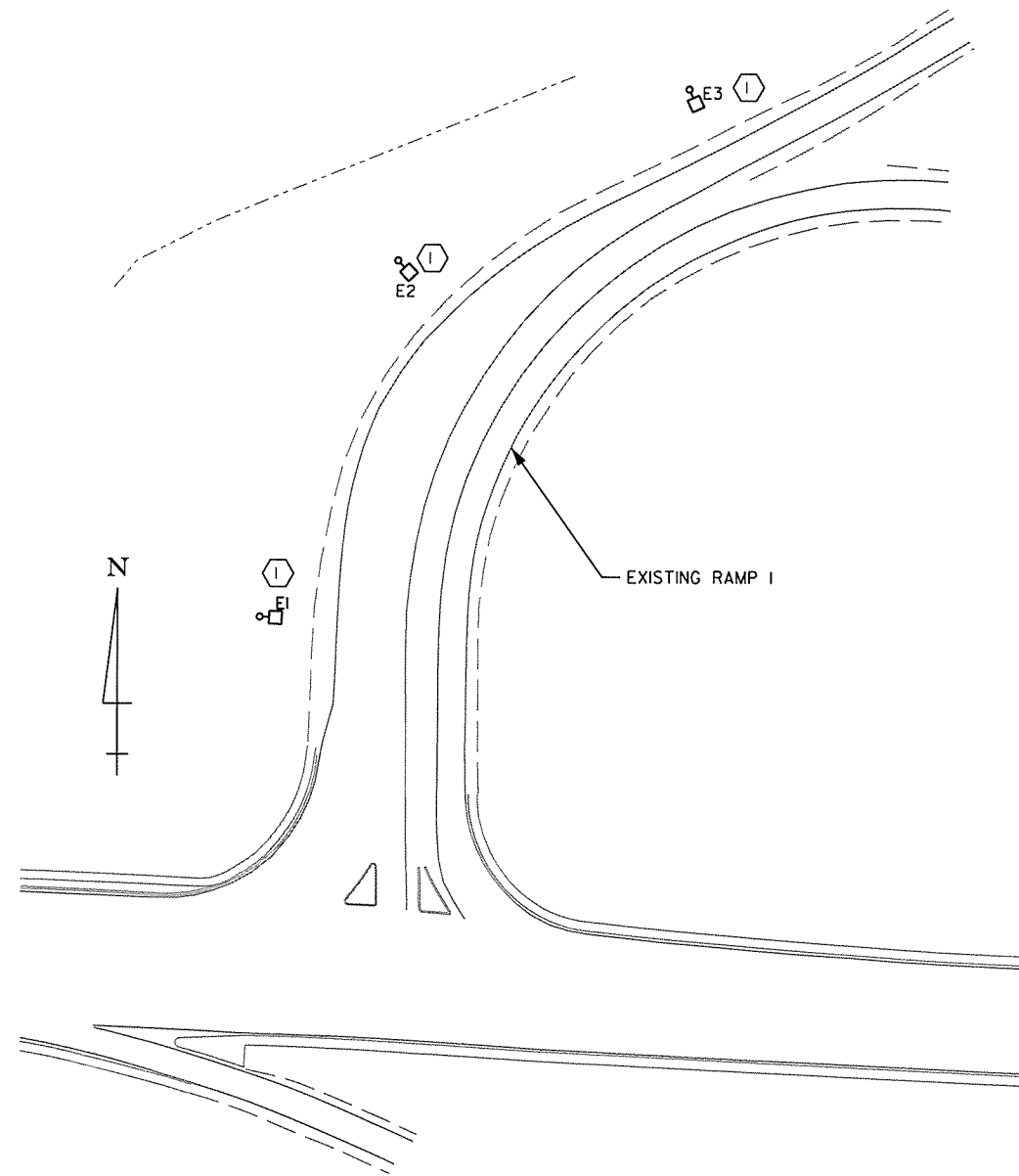
KEYED NOTES

- 1 EXISTING LIGHT FIXTURES AND POLES REQUIRED TO BE RELOCATED TO NEW LOCATIONS. 30' MINIMUM CLEARANCE REQUIRED FROM EDGE OF LANE TO FACE OF POLE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONFIRM NEW POLE LOCATIONS MEET REQUIRED CLEARANCE. CONTRACTOR SHALL EXTEND AND RECONNECT EXISTING UNDERGROUND CONDUIT AND CIRCUITS TO NEW LOCATIONS AS REQUIRED. UTILIZE SCHEDULE 40 PVC, MATCH EXISTING CONDUIT AND WIRE SIZE, TO EXTEND AND RECONNECT LIGHT FIXTURES.

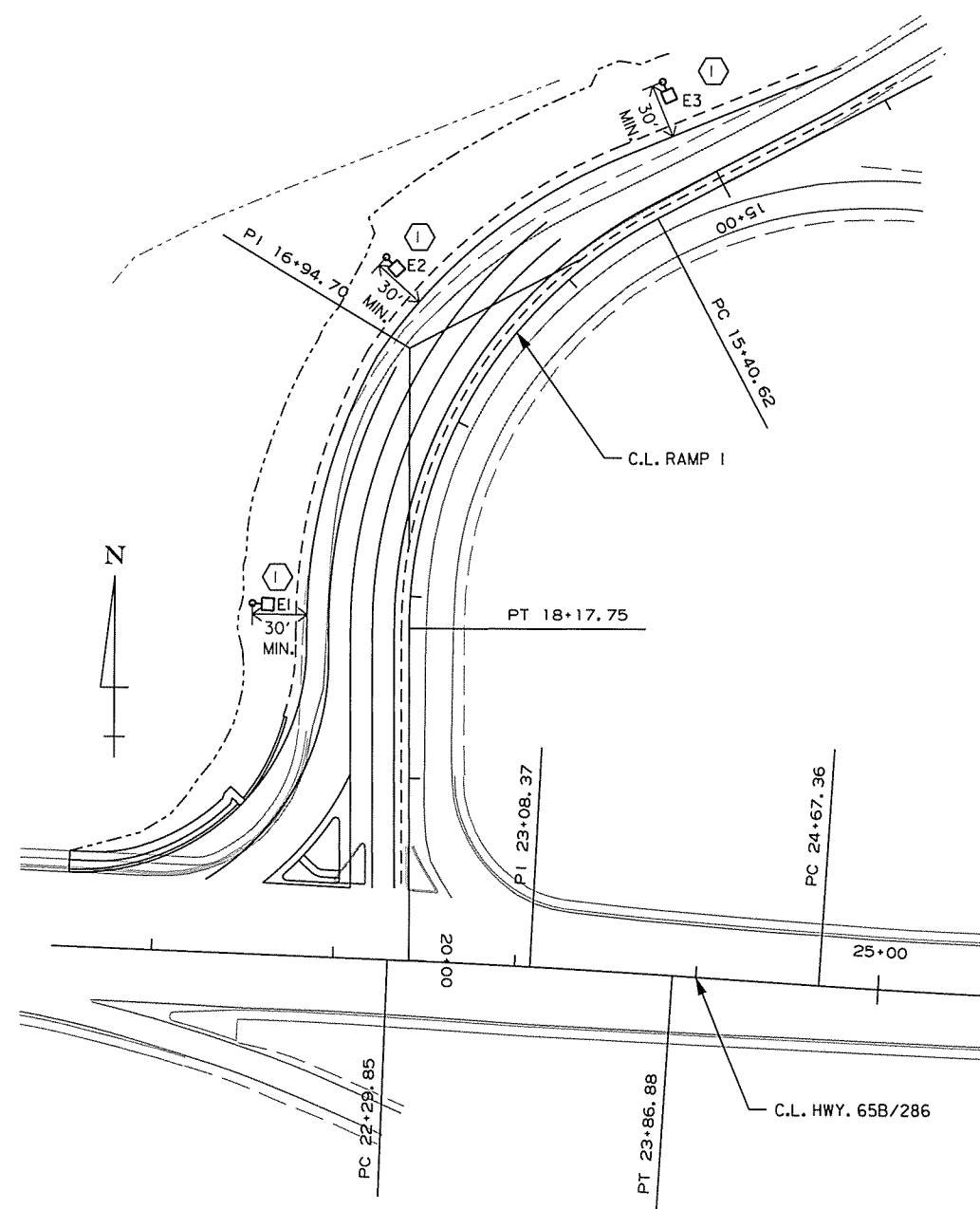
LIGHT FIXTURE TABLE			
POLE #	LIGHT FIXTURE	HEIGHT	ORIENTATION ANGLE (PLAN NORTH = 0°, ROTATION CCW)
E1	1 x EXIST	EXIST	264°
E2	1 x EXIST	EXIST	222°
E3	1 x EXIST	EXIST	204°

GENERAL NOTES

- COORDINATE WITH CONWAY CORPORATION ON SERVICE DISCONNECTION AND RECONNECTION FOR EXISTING LIGHT FIXTURES.
- COORDINATE ALL ELECTRICAL WORK WITH THE ROADWAY LAYOUT. CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF CONDUIT WITH ROADWAY PLANS.
- CONDUIT UNDERGROUND OR UNDER ROADWAY SURFACE SHALL BE SCHEDULE 40 PVC.
- LABEL CABLES IN ALL PULL BOXES. (TYPICAL)

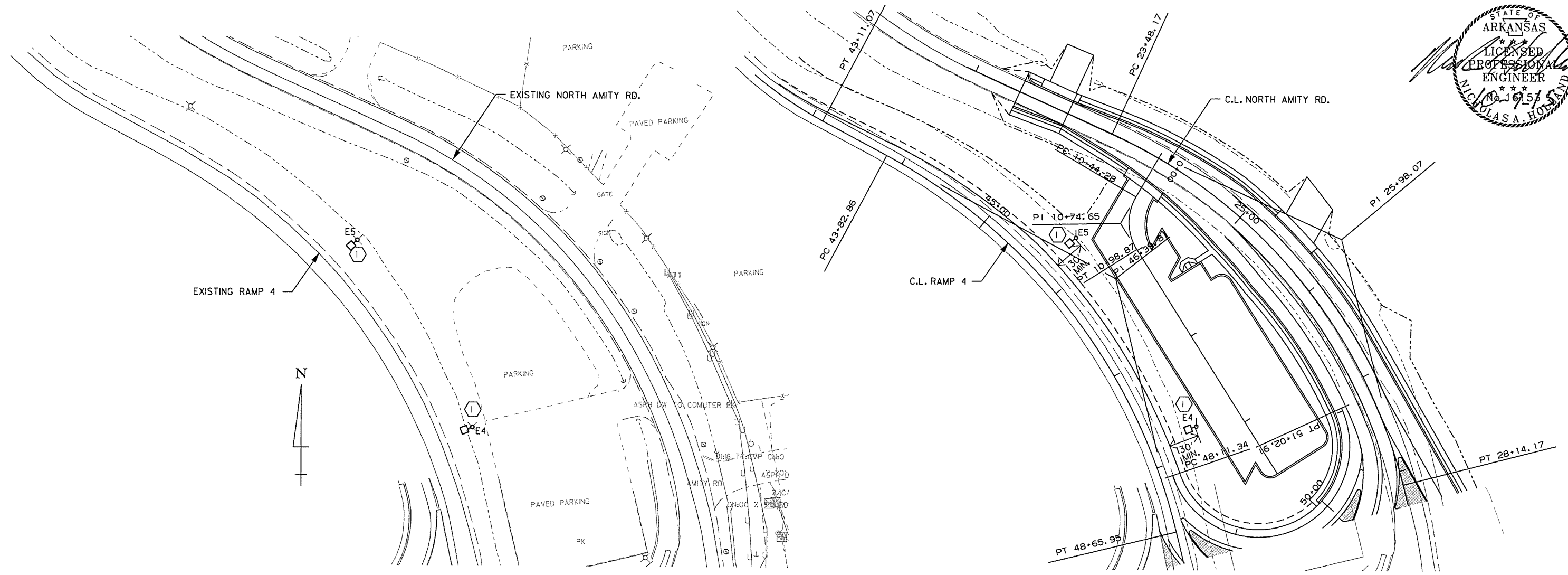
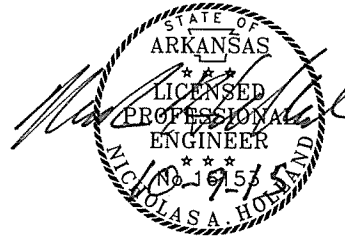


A EXISTING LIGHTING - RAMP I
SCALE: 1"=50'



B EXISTING LIGHTING RELOCATION - RAMP I
SCALE: 1"=50'

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				(2) LIGHTING RELOCATION PLAN II				



A EXISTING LIGHTING - RAMP 4
SCALE: 1"=50'

B EXISTING LIGHTING RELOCATION - RAMP 4
SCALE: 1"=50'

KEYED NOTES

- 1. EXISTING LIGHT FIXTURES AND POLES REQUIRED TO BE RELOCATED TO NEW LOCATIONS. 30' MINIMUM CLEARANCE REQUIRED FROM EDGE OF LANE TO FACE OF POLE. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND CONFIRM NEW POLE LOCATIONS MEET REQUIRED CLEARANCE. CONTRACTOR SHALL EXTEND AND RECONNECT EXISTING UNDERGROUND CONDUIT AND CIRCUITS TO NEW LOCATIONS AS REQUIRED. UTILIZE SCHEDULE 40 PVC. MATCH EXISTING CONDUIT AND WIRE SIZE, TO EXTEND AND RECONNECT LIGHT FIXTURES.

GENERAL NOTES

- 1. COORDINATE WITH CONWAY CORPORATION ON SERVICE DISCONNECTION AND RECONNECTION FOR EXISTING LIGHT FIXTURES.
- 2. COORDINATE ALL ELECTRICAL WORK WITH THE ROADWAY LAYOUT. CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF CONDUIT WITH ROADWAY PLANS.
- 3. CONDUIT UNDERGROUND OR UNDER ROADWAY SURFACE SHALL BE SCHEDULE 40 PVC.
- 4. LABEL CABLES IN ALL PULL BOXES. (TYPICAL)

LIGHT FIXTURE TABLE

POLE #	LIGHT FIXTURE	HEIGHT	ORIENTATION ANGLE (PLAN NORTH = 0°, ROTATION CCW)
E4	1 x EXIST	EXIST	110°
E5	1 x EXIST	EXIST	132°

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							LIGHTING LAYOUT PLAN I	



FIXTURE SCHEDULE							
TYPE	DESCRIPTION	DISTRIBUTION		LAMPS		REMARKS	
		LUMEN OUTPUT (MINIMUM)	TYPE	WATTS	VOLTAGE		
A	EXTERIOR DECORATIVE DOWNLIGHT FIXTURE W/SHADE	TYPE 4, FORWARD THROW		160W	LED	240V	I
B	EXTERIOR DECORATIVE DOWNLIGHT FIXTURE W/SHADE	TYPE 3R, ROADWAY		160W	LED	240V	I
C	EXTERIOR DECORATIVE DOWNLIGHT FIXTURE W/SHADE	TYPE 2, NARROW		160W	LED	240V	I

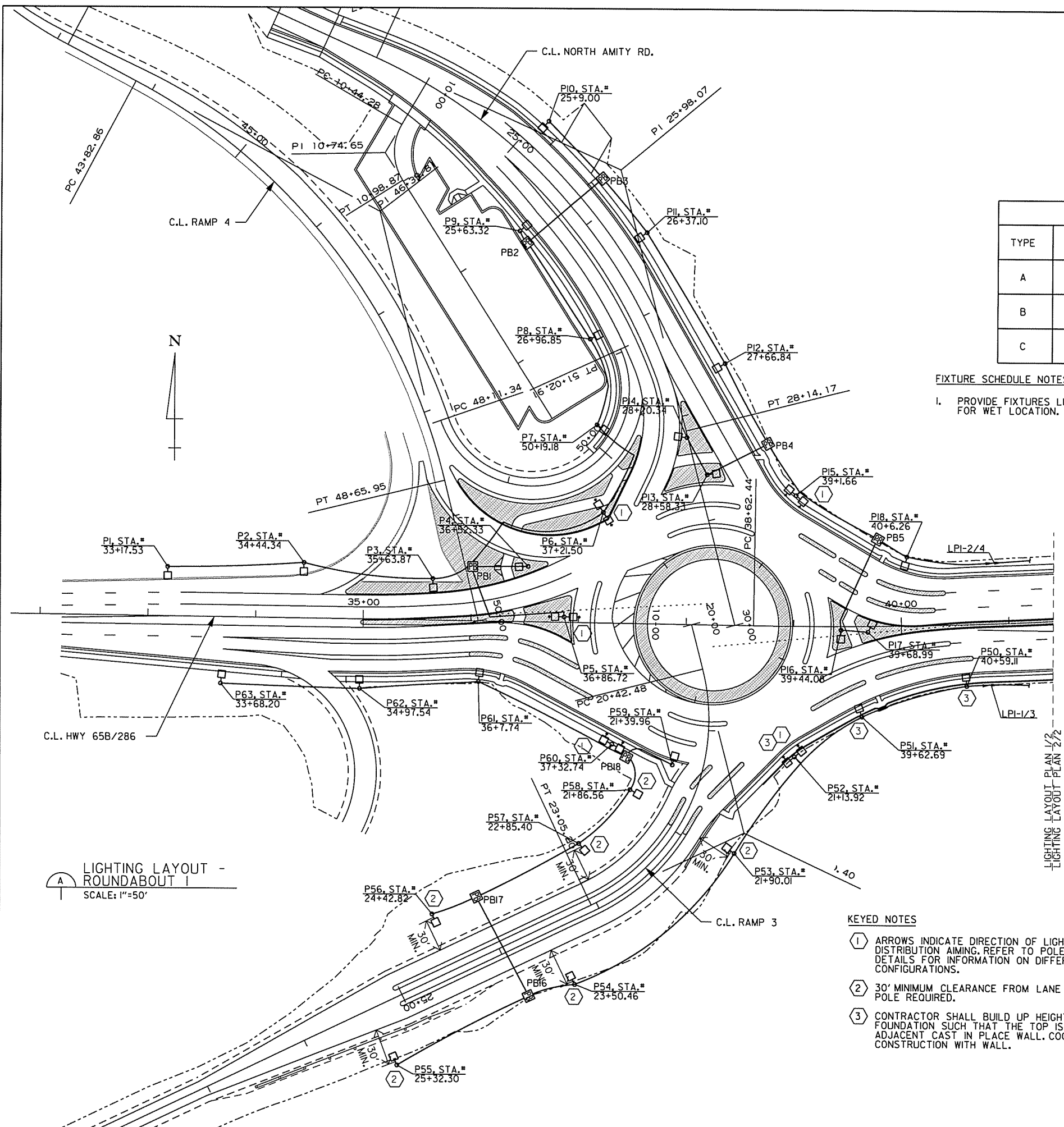
FIXTURE SCHEDULE NOTES:
 1. PROVIDE FIXTURES LISTED AND LABELED FOR WET LOCATION.

CALCULATED STATISTICS (BASED ON 0.77 LLF)				
DESCRIPTION	AVG	MAX	MIN	AVG/MIN
ROADWAY	1.6 fc	3.4 fc	0.7 fc	2.4:1
ROUNDBABOUTS	2.2 fc	4.2 fc	0.7 fc	2.9:1

LIGHTING CALCULATIONS NOTES:
 1. LIGHTING CALCULATIONS WERE PERFORMED USING LITHONIA LIGHTING VISUAL PROFESSIONAL EDITION VERSION 2.7 SOFTWARE.
 2. LIGHTING LEVELS ARE IN FOOTCANDLE UNITS (fc).
 3. DESIGN BASIS IS THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA, IESNA LIGHTING HANDBOOK, 10TH EDITION, FHWA LIGHTING HANDBOOK (AUG 2012), IES RP-8-00, IES DG-19-08, AND AASHTO ROADWAY LIGHTING DESIGN GUIDE (OCT 2005).

ILLUMINATION DESIGN CRITERIA TABLE		
DESCRIPTION	AVG	AVG/MIN
ROADWAY	0.9 fc	3.0:1
ROUNDBABOUTS	1.8 fc	3.0:1

GENERAL NOTES
 1. COORDINATE WITH CONWAY CORPORATION ON SERVICE CONNECTION FOR NEW LIGHT FIXTURES.
 2. LIGHTING IS DESIGNED AROUND STERNBERG MODEL #1970LED. APPROVED EQUALS ARE ALLOWED, BUT SHALL BE REQUIRED TO MEET LIGHTING CHARACTERISTICS DETAILED IN ROADWAY ILLUMINATION POLES SP.
 3. FIXTURE SHALL BE MOUNTED ON 30' STEEL POLE WITH VIBRATION DAMPENER INSTALLED INTEGRAL TO THE POLE.
 4. COORDINATE ALL ELECTRICAL WORK WITH THE ROADWAY LAYOUT. CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF CONDUIT WITH ROADWAY PLANS.
 5. EXPOSED CONDUIT SHALL BE COATED GALVANIZED RIGID STEEL. CONDUIT UNDERGROUND OR UNDER ROADWAY SURFACE SHALL BE SCHEDULE 40 PVC.
 6. LABEL CABLES IN ALL PULL BOXES. (TYPICAL)
 7. REFER TO VOLTAGE DROP TABLES FOR CONDUIT AND CONDUCTOR INFORMATION BETWEEN LIGHT POLES.
 8. LIGHT FIXTURE AND POLE COLORS SHALL BE COORDINATED AND SELECTED BY THE CITY OF CONWAY AND ENGINEER DURING SHOP DRAWING REVIEW. ALL FIXTURES SHALL BE WET LOCATION RATED.



LIGHTING LAYOUT - ROUNDBABOUT I
 SCALE: 1"=50'

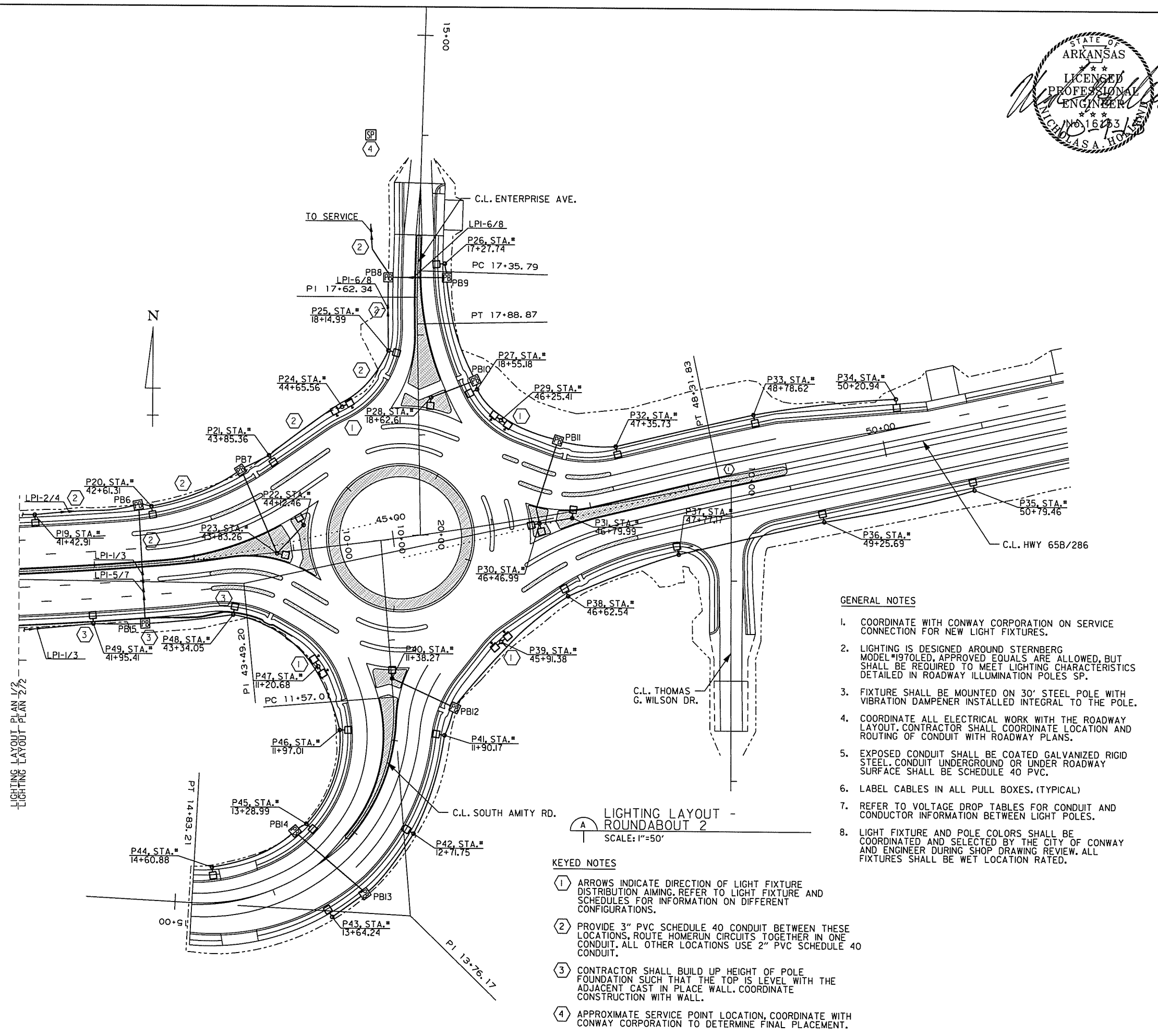
KEYED NOTES
 1 ARROWS INDICATE DIRECTION OF LIGHT FIXTURE DISTRIBUTION AIMING. REFER TO POLE SCHEDULE AND DETAILS FOR INFORMATION ON DIFFERENT CONFIGURATIONS.
 2 30' MINIMUM CLEARANCE FROM LANE EDGE TO FACE OF POLE REQUIRED.
 3 CONTRACTOR SHALL BUILD UP HEIGHT OF POLE FOUNDATION SUCH THAT THE TOP IS LEVEL WITH THE ADJACENT CAST IN PLACE WALL. COORDINATE CONSTRUCTION WITH WALL.

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2 LIGHTING LAYOUT PLAN II



POLE SCHEDULE					
POLE #	LIGHT FIXTURE*	BREAKAWAY BASE**	PULL BOX AT BASE**	HEIGHT	ORIENTATION ANGLE (PLAN NORTH = 0°, ROTATION CCW)
P1	1 x B		YES	30'	181°
P2	1 x B		YES	30'	180°
P3	1 x B		YES	30'	184°
P4	1 x B	YES		30'	93°
P5	2 x B	YES	YES	30'	90°, 270°
P6	1 x B, 1 x A	YES	YES	30'	B @ 32°, A @ 213°
P7	1 x C		YES	30'	235°
P8	1 x B		YES	30'	298°
P9	1 x B			30'	311°
P10	1 x B		YES	30'	137°
P11	1 x B		YES	30'	124°
P12	1 x B		YES	30'	120°
P13	1 x C	YES	YES	30'	277°
P14	1 x B	YES		30'	83°
P15	2 x A		YES	30'	50°, 230°
P16	1 x C	YES	YES	30'	179°
P17	1 x C	YES		30'	332°
P18	1 x C		YES	30'	167°
P19	1 x B		YES	30'	185°
P20	1 x B			30'	190°
P21	1 x B		YES	30'	213°
P22	1 x B	YES		30'	30°
P23	1 x B	YES	YES	30'	259°
P24	2 x A		YES	30'	118°, 298°
P25	1 x B		YES	30'	255°
P26	1 x B			30'	95°
P27	1 x B			30'	117°
P28	1 x B	YES	YES	30'	176°
P29	2 x A		YES	30'	54°, 234°
P30	2 x A	YES	YES	30'	103°, 193°
P31	1 x B	YES		30'	353°
P32	1 x B		YES	30'	195°
P33	1 x B		YES	30'	193°
P34	1 x B		YES	30'	187°
P35	1 x B		YES	30'	12°
P36	1 x B		YES	30'	12°
P37	1 x B		YES	30'	12°
P38	1 x B		YES	30'	25°
P39	2 x A		YES	30'	131°, 311°
P40	1 x A	YES	YES	30'	0°
P41	1 x B		YES	30'	81°
P42	1 x B		YES	30'	58°
P43	1 x B			30'	31°
P44	1 x B		YES	30'	188°
P45	1 x B			30'	231°
P46	1 x B		YES	30'	272°
P47	2 x A		YES	30'	32°, 212°
P48	1 x B		YES	30'	349°
P49	1 x B		YES	30'	5°
P50	1 x B		YES	30'	5°
P51	1 x C		YES	30'	18°
P52	2 x A		YES	30'	129°, 309°
P53	1 x A		YES	30'	53°
P54	1 x B		YES	30'	27°
P55	1 x B			30'	22°
P56	1 x B			30'	206°
P57	1 x B		YES	30'	221°
P58	1 x A		YES	30'	242°
P59	1 x B	YES		30'	345°
P60	2 x A			30'	62°, 242°
P61	1 x C		YES	30'	353°
P62	1 x B		YES	30'	0°
P63	1 x B		YES	30'	353°

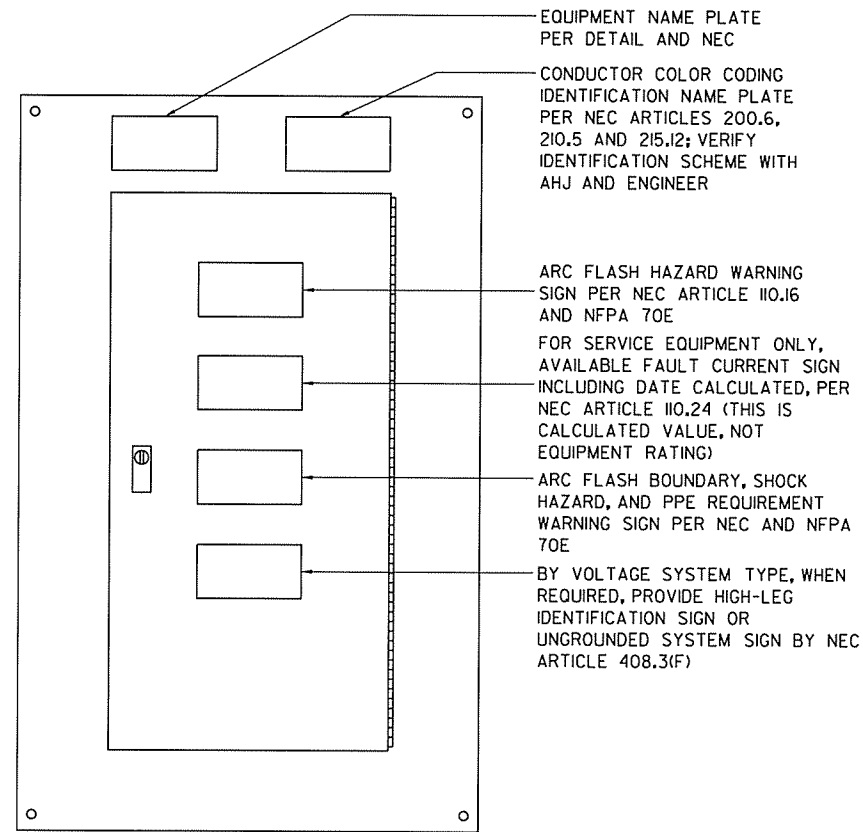
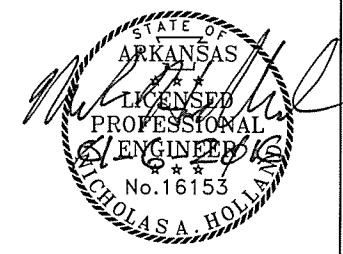
- GENERAL NOTES**
- COORDINATE WITH CONWAY CORPORATION ON SERVICE CONNECTION FOR NEW LIGHT FIXTURES.
 - LIGHTING IS DESIGNED AROUND STERNBERG MODEL #1970LED, APPROVED EQUALS ARE ALLOWED, BUT SHALL BE REQUIRED TO MEET LIGHTING CHARACTERISTICS DETAILED IN ROADWAY ILLUMINATION POLES SP.
 - FIXTURE SHALL BE MOUNTED ON 30' STEEL POLE WITH VIBRATION DAMPENERS INSTALLED INTEGRAL TO THE POLE.
 - COORDINATE ALL ELECTRICAL WORK WITH THE ROADWAY LAYOUT. CONTRACTOR SHALL COORDINATE LOCATION AND ROUTING OF CONDUIT WITH ROADWAY PLANS.
 - EXPOSED CONDUIT SHALL BE COATED GALVANIZED RIGID STEEL. CONDUIT UNDERGROUND OR UNDER ROADWAY SURFACE SHALL BE SCHEDULE 40 PVC.
 - LABEL CABLES IN ALL PULL BOXES. (TYPICAL)
 - REFER TO VOLTAGE DROP TABLES FOR CONDUIT AND CONDUCTOR INFORMATION BETWEEN LIGHT POLES.
 - LIGHT FIXTURE AND POLE COLORS SHALL BE COORDINATED AND SELECTED BY THE CITY OF CONWAY AND ENGINEER DURING SHOP DRAWING REVIEW. ALL FIXTURES SHALL BE WET LOCATION RATED.

- KEYED NOTES**
- ARROWS INDICATE DIRECTION OF LIGHT FIXTURE DISTRIBUTION AIMING. REFER TO LIGHT FIXTURE AND SCHEDULES FOR INFORMATION ON DIFFERENT CONFIGURATIONS.
 - PROVIDE 3" PVC SCHEDULE 40 CONDUIT BETWEEN THESE LOCATIONS, ROUTE HOMERUN CIRCUITS TOGETHER IN ONE CONDUIT. ALL OTHER LOCATIONS USE 2" PVC SCHEDULE 40 CONDUIT.
 - CONTRACTOR SHALL BUILD UP HEIGHT OF POLE FOUNDATION SUCH THAT THE TOP IS LEVEL WITH THE ADJACENT CAST IN PLACE WALL. COORDINATE CONSTRUCTION WITH WALL.
 - APPROXIMATE SERVICE POINT LOCATION, COORDINATE WITH CONWAY CORPORATION TO DETERMINE FINAL PLACEMENT.

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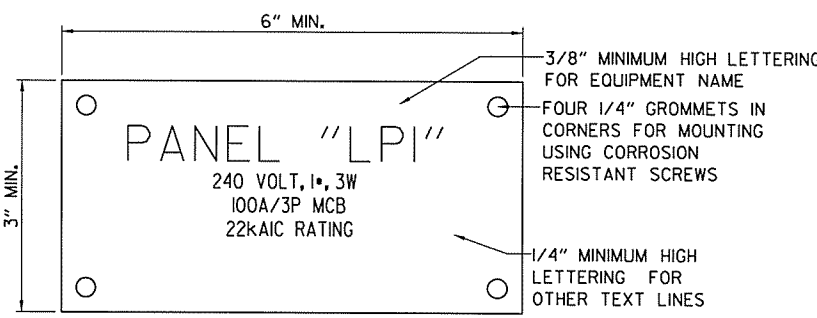
2 LIGHTING DETAILS I



PANEL FRONT VIEW

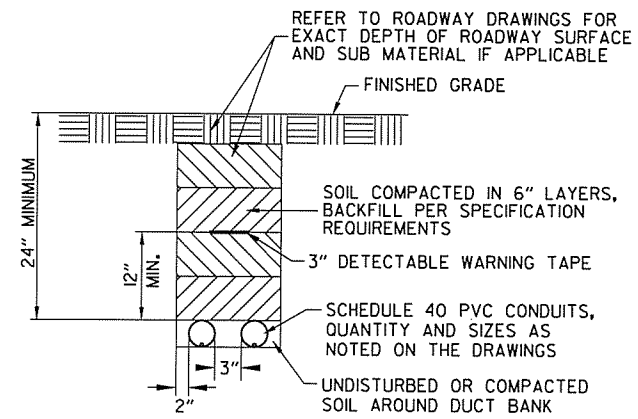
- EQUIPMENT NAME PLATE PER DETAIL AND NEC
- CONDUCTOR COLOR CODING IDENTIFICATION NAME PLATE PER NEC ARTICLES 200.6, 210.5 AND 215.12; VERIFY IDENTIFICATION SCHEME WITH AHJ AND ENGINEER
- ARC FLASH HAZARD WARNING SIGN PER NEC ARTICLE 110.16 AND NFPA 70E
- FOR SERVICE EQUIPMENT ONLY, AVAILABLE FAULT CURRENT SIGN INCLUDING DATE CALCULATED, PER NEC ARTICLE 110.24 (THIS IS CALCULATED VALUE, NOT EQUIPMENT RATING)
- ARC FLASH BOUNDARY, SHOCK HAZARD, AND PPE REQUIREMENT WARNING SIGN PER NEC AND NFPA 70E
- BY VOLTAGE SYSTEM TYPE, WHEN REQUIRED, PROVIDE HIGH-LEG IDENTIFICATION SIGN OR UNGROUNDED SYSTEM SIGN BY NEC ARTICLE 408.3(F)

- NAMEPLATE GENERAL NOTES:**
- INSTALL ALL NAME PLATES AND WARNING SIGNS IN ACCORDANCE WITH NEC AND NFPA 70E REQUIREMENTS.
 - INSTALL NAME PLATES AND WARNING SIGNS ON ALL ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SWITCHES, CONTROL PANELS AND MOTOR CONTROL CENTERS.
 - EXTERIOR EQUIPMENT SHALL HAVE WEATHER-RESISTANT, NON-FADING NAME PLATES AND SIGNAGE.
 - REFER TO SPECIFICATIONS FOR ADDITIONAL NAME PLATE AND SIGNAGE REQUIREMENTS.



A ENGRAVED NAME PLATE AND SIGNAGE DETAIL SCALE: N.T.S.

- EQUIPMENT NAME PLATE NOTES:**
- INSTALL 2-PLEX ACRYLIC, WHITE ON BLACK CORE, MULTIPLE LINES TEXT, CUSTOM ENGRAVED NAME PLATES.
 - MOUNT WITH STAINLESS STEEL SCREWS.
 - SEAL SCREW HOLES WITH SILICONE RUBBER.
 - NAME PLATE INFORMATION SHALL INCLUDE:
 - A. IDENTIFICATION NAME
 - B. VOLTAGE SYSTEM
 - C. AMPACITY RATING AND TYPE
 - D. EQUIPMENT AIC RATING
 - E. FEEDER DESCRIPTION

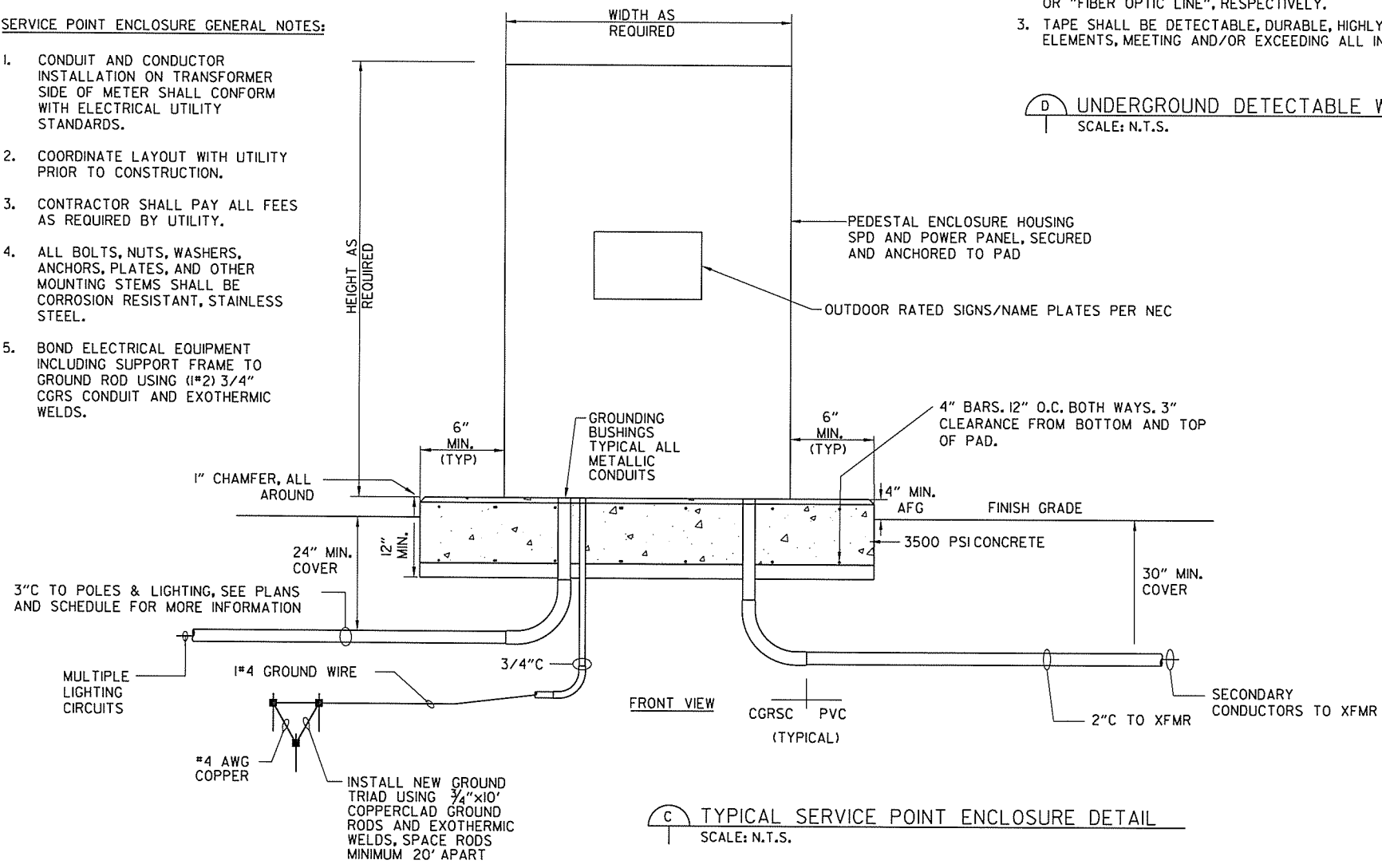


B TYPICAL ELECTRICAL DUCT DETAIL SCALE: N.T.S.

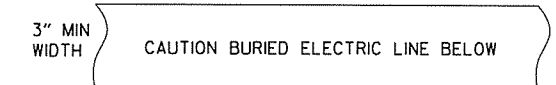
- ELECTRICAL DUCT GENERAL NOTES:**
- CONTRACTOR SHALL STAKE THE DUCT INSTALLATION IN PLAN AND ELEVATION FOR NEW ELECTRICAL DUCTS TO AVOID EXISTING UTILITIES, STAKING PLAN SHALL BE APPROVED BY THE CONTRACTING OFFICER PRIOR TO WORK.
 - CONTRACTOR SHALL ADJUST THE DEPTH OF THE ELECTRICAL DUCTS AS REQUIRED TO MAINTAIN THE MINIMUM COVER REQUIREMENT INDICATED AND AVOID EXISTING UTILITIES.
 - SIMILAR CONSTRUCTION FOR OTHER DUCT SIZES.
 - INSTALL CONDUITS AND CABLES AS NOTED ON DRAWINGS. INSTALL PULL WIRE IN ALL SPARE DUCTS AND CONDUITS.

SERVICE POINT ENCLOSURE GENERAL NOTES:

- CONDUIT AND CONDUCTOR INSTALLATION ON TRANSFORMER SIDE OF METER SHALL CONFORM WITH ELECTRICAL UTILITY STANDARDS.
- COORDINATE LAYOUT WITH UTILITY PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PAY ALL FEES AS REQUIRED BY UTILITY.
- ALL BOLTS, NUTS, WASHERS, ANCHORS, PLATES, AND OTHER MOUNTING STEMS SHALL BE CORROSION RESISTANT, STAINLESS STEEL.
- BOND ELECTRICAL EQUIPMENT INCLUDING SUPPORT FRAME TO GROUND ROD USING (1#2) 3/4" CGRS CONDUIT AND EXOTHERMIC WELDS.



C TYPICAL SERVICE POINT ENCLOSURE DETAIL SCALE: N.T.S.



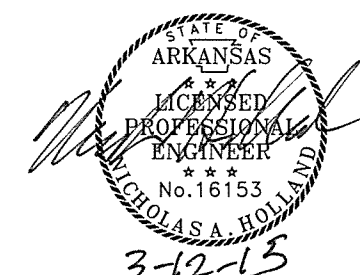
- WARNING TAPE GENERAL NOTES:**
- POWER MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH RED BACKGROUND AND BLACK LETTERING.
 - COMMUNICATION MARKING TAPES SHALL BE DETECTABLE TYPE CONSTRUCTION WITH ORANGE BACKGROUND AND BLACK LETTERING, "TELEPHONE LINE" OR "FIBER OPTIC LINE", RESPECTIVELY.
 - TAPE SHALL BE DETECTABLE, DURABLE, HIGHLY VISIBLE, RESISTANT TO ELEMENTS, MEETING AND/OR EXCEEDING ALL INDUSTRY STANDARDS.

D UNDERGROUND DETECTABLE WARNING TAPE SCALE: N.T.S.

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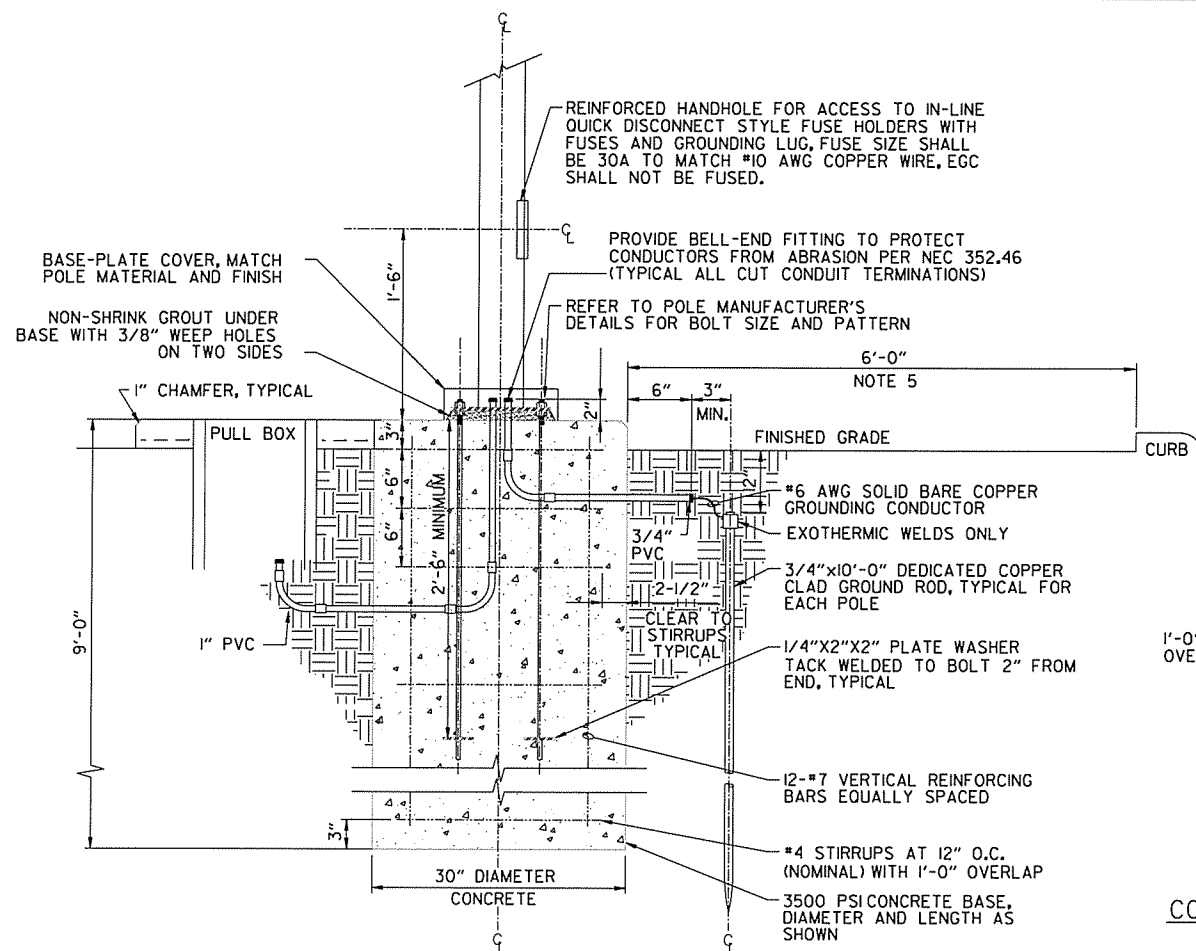
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② LIGHTING DETAILS II

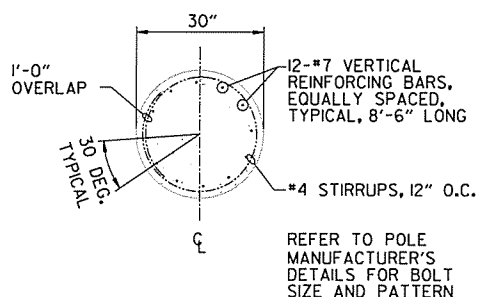


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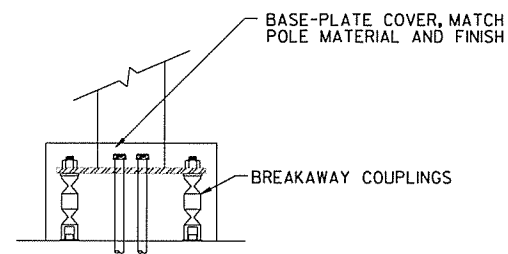
- ALL HARDWARE SHALL BE CORROSION RESISTANT, GALVANIZED RIGID STEEL.
- CONSTRUCT FOUNDATION IN ACCORDANCE WITH POLE MANUFACTURER'S GUIDELINES, INSTALLING BOLT TEMPLATE LEVELING UNIT, ANCHOR BOLTS, FULL BASE-PLATE BOLT COVER, AND ACCESSORIES FOR A COMPLETE INSTALLATION.
- REFER TO POLE SCHEDULE FOR CONDUIT AND CONDUCTOR SIZES. USE LONG SWEEP 90 DEGREE ELBOWS ON ALL CONDUIT BENDS.
- TIE POLE, EQUIPMENT GROUND AND ALL OTHER METAL EQUIPMENT AND GROUNDING LUGS TOGETHER USING #6 AWG SOLID BARE COPPER AND APPROVED GROUNDING CLAMPS AND CONNECT TO GROUND ROD SYSTEM.
- MINIMUM 6'-0" CLEAR FROM BACK OF ROAD OR PARKING LOT CURB TO CLOSEST EDGE OF ROADLIGHTING LIGHT POLE BASE.
- WHERE POLE FOUNDATION IS ON A SLOPED SURFACE PROVIDE 1' FLAT GRADE EARTH BEFORE RETURNING TO SLOPE. COORDINATE WITH ROADWAY PLANS.



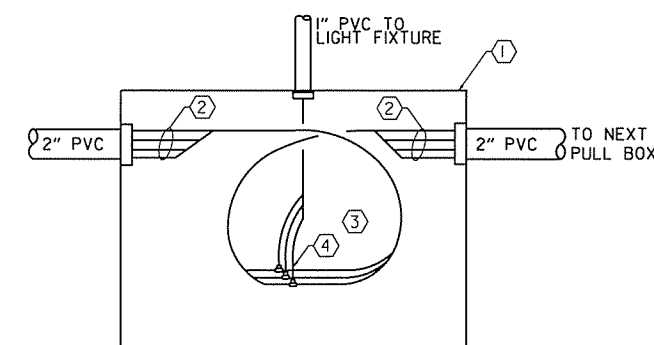
A INDEPENDENT LIGHT POLE FOUNDATION DETAIL
SCALE: N.T.S.



CONCRETE BASE PLAN VIEW



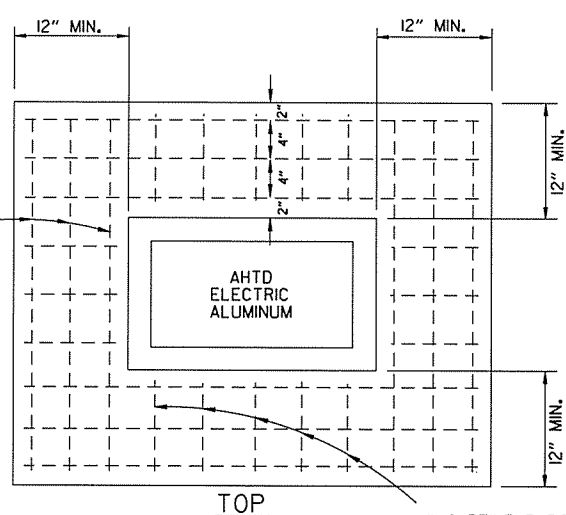
BREAKAWAY BASE VIEW



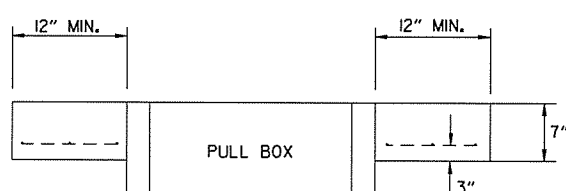
KEYED NOTES:

- INSTALL TYPE "HD" PULL BOX AS PER AHTD STANDARD SPECIFICATION 711 AND SP.
- LOOP THE NEW LIGHTING CIRCUITS WITHIN EACH JUNCTION BOX, SLACK WIRE EQUAL TO ONE COMPLETE LOOP FOR FUTURE USE. NEATLY TRAIN AND LACE BRANCH CIRCUIT BUNDLES TOGETHER WITHIN THE BOX WITH A SEPARATE BUNDLE FOR EACH BRANCH CIRCUIT.
- ALL CABLES, SPLICES, TERMINATIONS, ETC. SHALL BE RATED 600 VOLTS, WATERPROOF METHOD.
- ALL CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO EQUIPMENT TERMINATION WITHOUT SPLICES. WHERE LIGHT FIXTURE TAPS ARE REQUIRED, TAPS SHALL BE MADE USING A SEALED, INSULATED PRESSURE CONNECTOR PROVIDING BOTH INSULATION AND JACKET EQUAL TO THE CABLE. CONNECTORS SHALL BE 600V RATED, 150 DEGREE C TEMPERATURE RATED, AND UL LISTED.

C INTERIOR PULLBOX VIEW
SCALE: N.T.S.

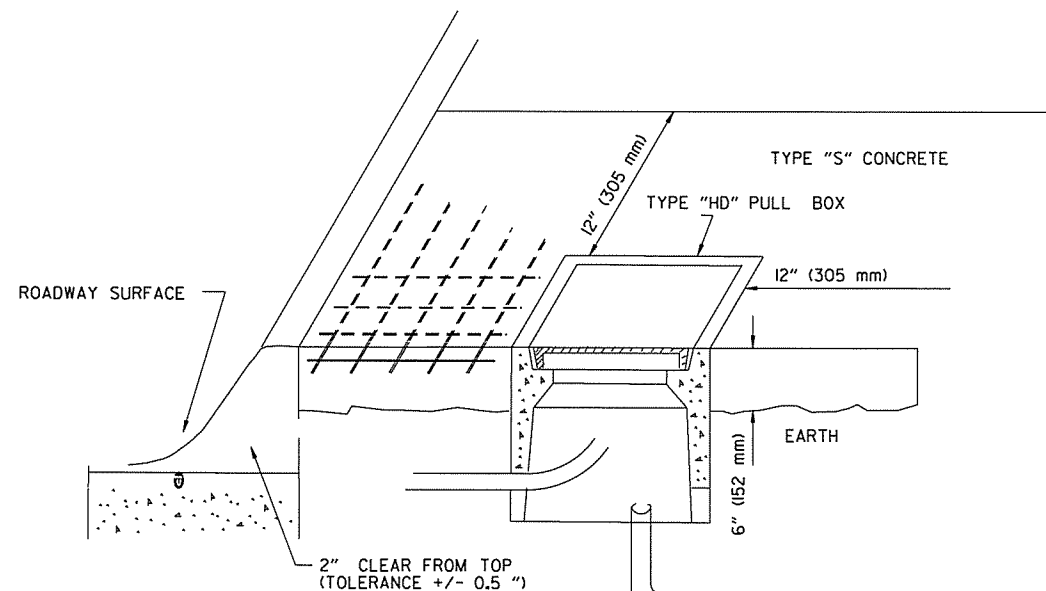


NOTE:
ALL REINFORCING BARS TO BE GRADE 60



B CONCRETE PULL BOX (TYPE SPECIAL HD) DETAIL
SCALE: N.T.S.

TYPE "HD" CONCRETE PULL BOX DETAIL



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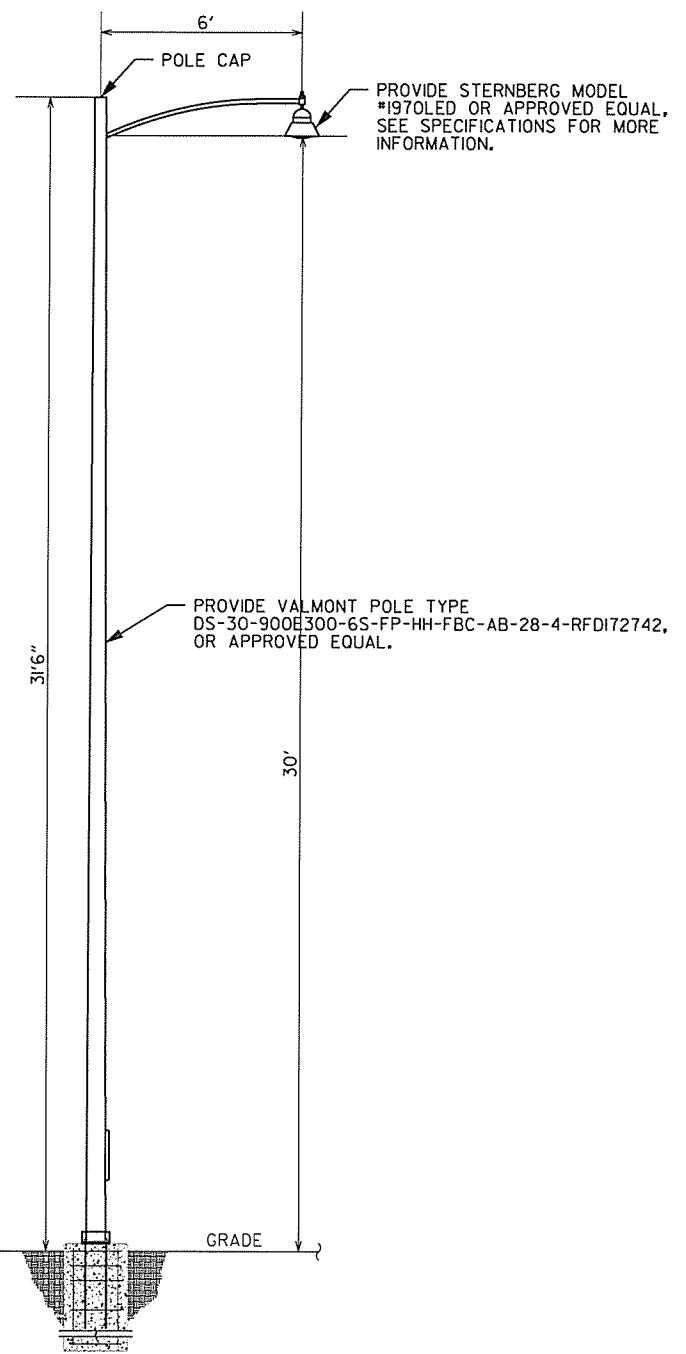
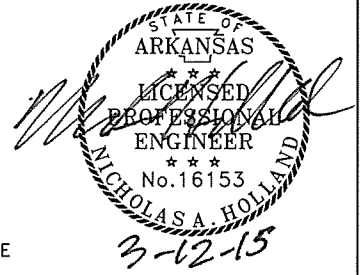
NOTES:

- ALL TYPE 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 ARE REQUIRED IN CONCRETE.
- UL LISTED PULL BOX AND EXTRA HEAVY-DUTY COVER SHALL BE DESIGNED FOR A TEST LOAD OF 33,750 LBS AND A DESIGN LOAD OF 22,500 LBS.
- PULL BOX INTERIOR DIMENSIONS SHALL BE 18"L x 24"W x 18"D (OPEN BOTTOM).
- PROVIDE MINIMUM 3' SLACK CABLE LOOP FOR EACH CABLE.
- COLOR CODE, TAG AND IDENTIFY ALL CABLES IN UL LISTED PULL BOX.
- EXACT LOCATION OF EACH UL LISTED PULL BOX SHALL BE APPROVED BY THE OWNER AND ENGINEER.

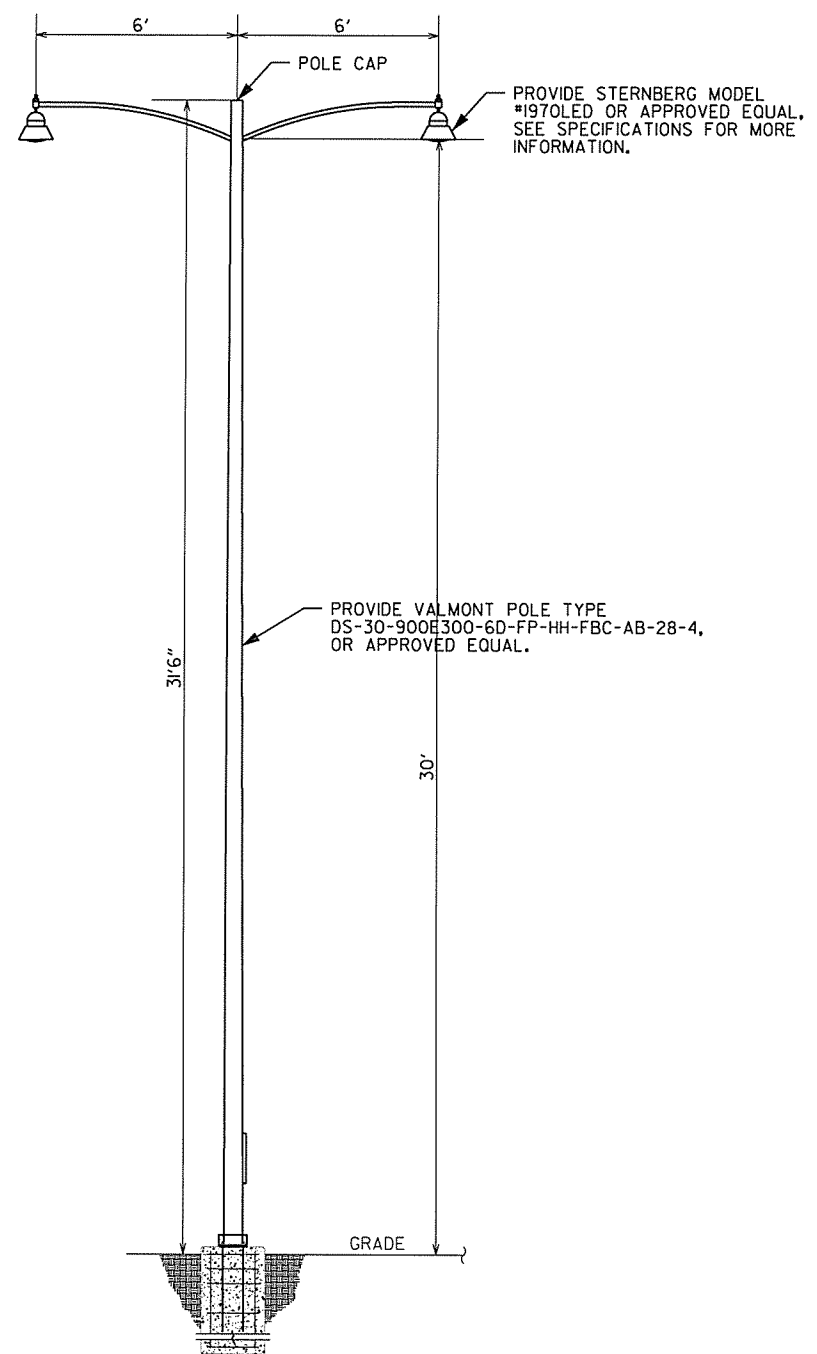
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	103	209

2 LIGHTING DETAILS III



A SINGLE LIGHT FIXTURE ON POLE ELEVATION
SCALE: N.T.S.

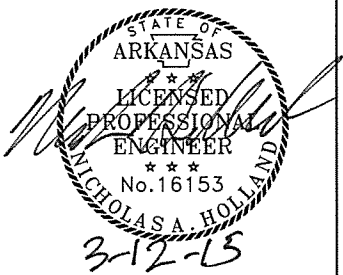


B DUAL LIGHT FIXTURE ON POLE ELEVATION
SCALE: N.T.S.

GENERAL NOTES:

- INSTALL NEW ROUND, TAPERED, STEEL POLE, ACCESSIBLE GROUNDING PROVISION, BASE COVER, VIBRATION DAMPER, AND ALL REQUIRED MOUNTING ACCESSORIES. POLE SHALL BE DESIGNED FOR THE TOTAL EFFECTIVE PROJECTED AREA OF ALL LIGHT FIXTURES AT A 90 MPH BASIC WIND SPEED WITH 3 SECOND GUST. ALL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, CURRENT EDITION.
- LIGHT FIXTURE, ARM, AND POLE COLORS SHALL BE COORDINATED AND SELECTED BY THE OWNER AND ENGINEER DURING SHOP DRAWING REVIEW. STEEL POLE SHALL INCLUDE PRE-TREATMENT PROCESSES AND POWDER COAT FINISH TO PREVENT CORROSION. ALL FIXTURES TO BE WET LOCATION RATED.
- ACCEPTANCE CRITERIA SHALL CONSIST OF THE FOLLOWING:
 - SUBMIT COMPLETE SHOP DRAWING DATA FOR FIXTURE AND LAMP, INCLUDING IES FILE AND LLF CALCULATION.
 - SUBMIT COMPLETE POINT-BY-POINT PHOTOMETRIC LIGHTING ANALYSIS OF ALL GIVEN AREAS FOR BOTH INITIAL LUMEN AND LLF CALCULATIONS.
 - LLF DESIGN LIGHTING ANALYSIS VALUES SHALL MEET OR EXCEED THE ILLUMINATION DESIGN CRITERIA TABLE REQUIREMENTS, NO EXCEPTION.
- FINAL ACCEPTANCE TESTING PROCEDURE SHALL CONSIST OF THE FOLLOWING:
 - SUBMIT TEST PROCEDURE FOR REVIEW AND APPROVAL.
 - CONDUCT MINIMUM 14-DAY FINAL ACCEPTANCE TEST FOR THE COMPLETE LIGHTING SYSTEM. CORRECT MALFUNCTIONING EQUIPMENT AND RETEST, OTHERWISE REMOVE AND REPLACE WITH NEW EQUIPMENT.
 - REPLACE BURNED OUT AND NOTICEABLY DIM LAMPS AND RETEST.
 - DURING FINAL ACCEPTANCE TEST PERIOD, TAKE FIELD LIGHT LEVEL MEASUREMENTS (ILLUMINANCE) ALONG THE ENTIRE STRUCTURE, IN A 10' GRID PATTERN COVERING ALL PAVED AREAS, WITH AN ILLUMINANCE METER THAT IS LED RATED. FIELD LEVEL MEASUREMENTS AND CALCULATIONS SHALL MEET OR EXCEED INITIAL LUMEN DESIGN CALCULATIONS. COORDINATE FIELD WORK WITH OWNER AND ENGINEER.
- DUAL LIGHT FIXTURE CONFIGURATION REQUIRES PROPER ORIENTATION OF FIXTURE ASSEMBLY DUE TO INTERNAL SHIELDING AND LENSES. REFER TO LAYOUT SHEETS TO DETERMINE AIMING.
- LUMINAIRE ASSEMBLY SHALL BE OF THE FULL CUTOFF TYPE OR HAVE AN UPLIGHT RATING OF U0.

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 REVISION DATE:



VOLTAGE DROP CALCULATIONS HWY 286 ROUNDABOUT, NORTH CIRCUIT LP1-2/4

FROM	TO	Wire Size	Voltage (Line-to-Line)	Phase	Wire Type	Conduit Type	Impedance (Ω/1000ft)	Voltage Drop (Volts)	%VD
P1	P2	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.08	0.03%
P2	P3	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.15	0.06%
P3	PB1	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.07	0.03%
P4	PB1	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.07	0.03%
P5	PB1	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.35	0.15%
PB1	P6	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.44	0.18%
P6	P7	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.41	0.17%
P7	P8	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.40	0.17%
P8	PB2	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.43	0.18%
P9	PB2	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.03	0.01%
PB2	PB3	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.41	0.17%
P10	PB3	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.10	0.04%
PB3	P11	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.32	0.13%
P11	P12	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.73	0.30%
P12	PB4	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.46	0.19%
P14	P13	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.06	0.02%
P13	PB4	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.19	0.08%
PB4	P15	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.34	0.14%
P15	PB5	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.66	0.27%
P17	P16	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.04	0.02%
P16	PB5	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.27	0.11%
PB5	P18	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.40	0.17%
P18	SERVICE	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	6.30	2.63%
TOTAL								11.60	4.83%

*Copper is used for poles that are split off from the main circuit, thus not contributing to overall/worst case voltage drop.

VOLTAGE DROP CALCULATIONS HWY 286 ROUNDABOUT, NORTH CIRCUIT LP1-6/8

FROM	TO	Wire Size	Voltage (Line-to-Line)	Phase	Wire Type	Conduit Type	Impedance (Ω/1000ft)	Voltage Drop (Volts)	%VD
P34	P33	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.14	0.06%
P33	P32	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.27	0.11%
P32	PB11	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.16	0.07%
P31	P30	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.05	0.02%
P30	PB11	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.38	0.16%
PB11	P29	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.36	0.15%
P29	P27	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.31	0.13%
P27	PB10	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.17	0.07%
P28	PB10	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.07	0.03%
PB10	PB9	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.43	0.18%
P26	PB9	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.03	0.01%
PB9	PB8	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.62	0.26%
PB8	SERVICE	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	1.50	0.62%
TOTAL								3.96	1.65%
P19	P20	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.11	0.05%
P20	PB7	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.19	0.08%
P22	P23	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.06	0.02%
P23	PB7	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.26	0.11%
PB7	P21	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.12	0.05%
P21	P24	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.44	0.18%
P24	P25	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.51	0.21%
P25	PB8	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	0.55	0.23%
PB8	SERVICE	2#6, 1#6 EGC, 3" C	240	1	Aluminum	PVC	0.71	1.14	0.47%
TOTAL								3.06	1.27%

*Copper is used for poles that are split off from the main circuit, thus not contributing to overall/worst case voltage drop.

VOLTAGE DROP CALCULATIONS HWY 286 ROUNDABOUT, SOUTH CIRCUIT LP1-1/3

FROM	TO	Wire Size	Voltage (Line-to-Line)	Phase	Wire Type	Conduit Type	Impedance (Ω/1000ft)	Voltage Drop (Volts)	%VD
P63	P62	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.12	0.05%
P62	P61	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.21	0.09%
P61	P60	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.40	0.17%
P60	PB18	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.12	0.05%
P59	PB18	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.07	0.03%
PB18	P58	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.13	0.05%
P58	P57	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.30	0.13%
P57	PB17	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.53	0.22%
P56	PB17	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.07	0.03%
PB17	PB16	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.47	0.20%
P55	PB16	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.21	0.09%
PB16	P54	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.22	0.09%
P54	P53	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	1.09	0.45%
P53	P52	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.55	0.23%
P52	P51	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.46	0.19%
P51	P50	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.62	0.26%
P50	PB15	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	1.22	0.51%
PB15	SERVICE	2#2, 1#2 EGC, 3" C	240	1	Aluminum	PVC	0.3	4.10	1.71%
TOTAL								10.53	4.39%

*Copper is used for poles that are split off from the main circuit, thus not contributing to overall/worst case voltage drop.

VOLTAGE DROP CALCULATIONS HWY 286 ROUNDABOUT, SOUTH CIRCUIT LP1-5/7

FROM	TO	Wire Size	Voltage (Line-to-Line)	Phase	Wire Type	Conduit Type	Impedance (Ω/1000ft)	Voltage Drop (Volts)	%VD
P35	P36	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.15	0.06%
P36	P37	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.28	0.12%
P37	P38	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.34	0.14%
P38	P39	2#6, 1#6 EGC, 2" C	240	1	Aluminum	PVC	0.71	0.33	0.14%
P39	PB12	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.32	0.13%
P40	PB12	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.10	0.04%
PB12	P41	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.13	0.05%
P41	P42	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.51	0.21%
P42	PB13	2#4, 1#4 EGC, 2" C	240	1	Aluminum	PVC	0.46	0.43	0.18%
P43	PB13	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.06	0.02%
PB13	PB14	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.46	0.19%
P44	PB14	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.11	0.04%
PB14	P45	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.11	0.05%
P45	P46	2#3, 1#3 EGC, 2" C	240	1	Aluminum	PVC	0.37	0.61	0.25%
P46	P47	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.37	0.15%
P47	P48	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.63	0.26%
P48	PB15	2#2, 1#2 EGC, 2" C	240	1	Aluminum	PVC	0.3	0.57	0.24%
P49	PB15	2#10, 1#10 EGC, 2" C	240	1	Copper	PVC	1.1	0.08	0.03%
PB15	SERVICE	2#2, 1#2 EGC, 3" C	240	1	Aluminum	PVC	0.3	4.35	1.81%
TOTAL								9.60	4.00%

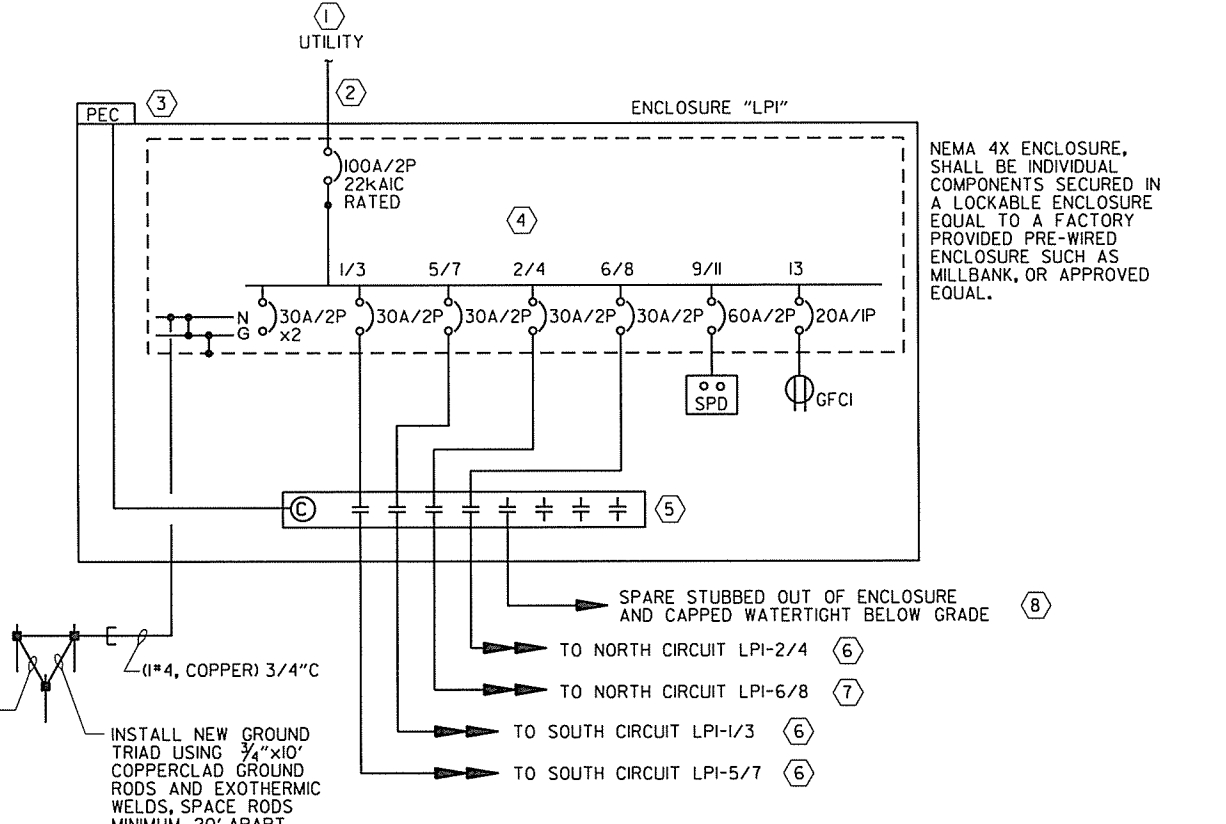
*Copper is used for poles that are split off from the main circuit, thus not contributing to overall/worst case voltage drop.

GENERAL NOTES

- ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2014) NATIONAL ELECTRICAL CODE, NFPA 101(2015) LIFE SAFETY CODE, STATE ELECTRICAL CODE, AND LOCAL ELECTRICAL CODE.
- COORDINATE ELECTRICAL POWER SUPPLY WITH EQUIPMENT SUPPLIED.
- COORDINATE ALL ELECTRICAL WORK AND POWER OUTAGES WITH CITY AND POWER UTILITY.
- SERVICE WIRING SHALL BE MINIMUM TYPE THHN/THWN-2.
- EQUIPMENT SHORT CIRCUIT CURRENT RATINGS AND AVAILABLE INTERRUPTING CURRENT RATINGS SHALL BE FULLY RATED TO INTERRUPT SYMMETRICAL SHORT CIRCUIT CURRENT AVAILABLE AT TERMINALS. SERIES RATED SYSTEMS SHALL NOT BE USED.
- NEUTRAL BUSES SHALL BE COPPER 100% RATED UNLESS OTHERWISE NOTED.
- GROUND BUSES SHALL BE COPPER UNLESS OTHERWISE NOTED.
- INSTALL AN EQUIPMENT GROUNDING CONDUCTOR IN ALL FEEDER AND BRANCH CIRCUITS.
- INSTALL ALL CONDUCTORS AND CABLES IN CONDUIT UNLESS OTHERWISE NOTED.
- INSTALL LUGS AND JUNCTION BOXES AS REQUIRED TO FIT WIRING.
- INSTALL NEW TYPED PANEL SCHEDULES IN ALL ELECTRICAL PANELS INDICATING WORK PERFORMED.
- THE POWER UTILITY POINT OF CONTACT IS DALE GOTTSPONER, CONWAY CORPORATION, PHONE NUMBER 501-450-6049.
- CONDUIT FILL IS PER NEC 2014 CHAPTER 9 CALCULATIONS AND TABLES.

KEYED NOTES:

- UTILITY TRANSFORMER BY CONWAY CORPORATION, SECONDARY SERVICE 240/120V, 1PHASE, 3W, COORDINATE ALL WORK AND EQUIPMENT WITH CONWAY CORPORATION
- 3" x 2" UTILIZE ALUMINUM CONDUCTOR FOR SERVICE
- WEATHERPROOF PHOTOCELL FOR LIGHTING CONTROL
- 100A LOAD CENTER AND APPURTENANCES WITH ENCLOSURE
- SIXTEEN POLE 30A LIGHTING CONTACTOR
- 2" x 2" EGC, 3" C
- 2" x 2" EGC, 3" C
- 2" CONDUIT WITH PULL WIRE (2 REQUIRED)



#4 AWG COPPER
INSTALL NEW GROUND TRIAD USING 3/4" x 10' COPPERCLAD GROUND RODS AND EXOTHERMIC WELDS, SPACE RODS MINIMUM 20' APART

PANEL NAME: LP1	VOLTAGE: 120/240	PHASE: 1	WIRE: 3	NEUTRAL RATING: 100%	PANEL DESCRIPTION: Lighting Panel						
MAINS: 100A MCB	MOUNTING: Surface	MAX. NO. OF CIRCUITS: 16	MANUFACTURER:	PANEL A.I.C. RATING: 22,000	LOCATION: Exterior Mounted Enclosure						
NO	DESCRIPTION	BRANCH POLES	WIRE (AWG)	VA	Load Type	VA	WIRE (AWG)	BRANCH POLES	DESCRIPTION	NO.	
1	LIGHTING SOUTH	2	30	1280	L L	1680	2	30	LIGHTING NORTH	2	
3		-	-	1280	L L	1680	2	-		4	
5	LIGHTING SOUTH	2	30	1360	L L	1520	6	30	LIGHTING NORTH	6	
7		-	-	1360	L L	1520	6	-		8	
9	SPD	2	60	6	E	-	-	30	SPARE	10	
11		-	-	6	E	-	-	-	SPARE	12	
13	GFCI RECEPTACLE	1	20	12	R	-	-	30	SPARE	14	
15	SPACE	-	-	-	-	-	-	-	SPARE	16	
Total											
Description	Code	L1	L2	SUM	%	Design Load (KVA)		Total Connected Load			
LIGHTING	L	5840	5840	11680	89	14.60	63.4 Amps	13.18 kVA			
RECEPT	R	1500	0	1500	11	1.50	Total Design Load *				
EQUIP.	E	0	0	0	0	0.00	91.1 Amps	18.94 kVA			
OTHER	0	0	0	0	0	0.00	* Total Design Load includes calculated Design Loads per NEC Demand Factors and the stated Spare Capacity.				
HVAC	H	0	0	0	0	0.00					
CUSTOM	HC	0	0	0	0	0.00					
ADDITIONAL	0	0	0	0	0	0.00					
TOTAL		7340	5840	13180		16.10					
DEMAND		7340	5840	13180	100						
%		56	44								

A PROPOSED ONE LINE DIAGRAM FOR ROUNDABOUT LIGHTING
SCALE: N.T.S.

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 WORKSPACE: AHTD
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		105	209

MAIN LANES SIGNING QUANTITIES ROADSIDE MOUNTED I-BEAM SIGN SUPPORTS

② SIGN QUANTITIES



3-12-15

SIGN NO./ LOCATION	STRUCTURE TYPE		SIGN				BREAKAWAY SIGN SUPPORT											
	TYPE		STANDARD SIGN SQ. FT.	GUIDE SIGN		STEEL SECT. A-572	SIGN POST LENGTH			STUB POST			FOOTINGS			SIGN POST AND STUB POUND		
	G-2	G2-5		LENGTH FT.	HEIGHT FT.		H-1	H-2	H-3	H-1	H-2	H-3	DIA.	DEPTH	EMBED.			
						BEAM	LBS	LIN FT			LIN FT			LIN FT				
GM-286-23-STA25+94EB	1			12.00	9.00	108.00	W8	18	17.75	19.75		6.00	6.00		3	8.5	5.67	890.89
GM-286-23-STA40+69EB	1			14.00	9.00	126.00	W8	18	19.75	20		6.00	6.00		3	8.5	5.67	931.39
GM-286-23-STA42+50WB	1			9.00	9.00	81.00	W8	18	16.25	17.5		5.00	5.00		2.5	7	4.67	787.39
GM-286-23-STA58+46WB	1			14.00	9.00	126.00	W8	18	16.5	19.5		6.00	6.00		3	8.5	5.67	863.89
GM-ENTERPRISE-23-STA16+45SB	1			15.50	7.00	108.50	W6	15	15.75	14.75		5.66	5.66		3	8	5.33	627.41
GM-N.AMITY-23-STA22+41SB	1			19.50	6.00	117.00	W8	18	16.25	17.5		6.00	6.00		3	8.5	5.67	823.39
GM-S.AMITY-23-STA14+83NB	1			15.50	8.00	124.00	W8	18	15.75	16.75		6.00	6.00		3	8.5	5.67	800.89
SS-RAMP1-23-STA14+44SB		1	15.38	6.50	1.50	9.75	W6	9	10.75	11.5		3.33	3.33	1.5	4.5	3.00	260.19	
SS-RAMP1-23-STA17+45SB		1	24.13	8.00	3.50	28.00	W6	9	12	12.75		4.33	4.33	2	6	4.00	300.69	
GM-RAMP3-23-STA28+58NB	1			10.50	7.00	73.50	W8	18	16.5	17.5		5.33	5.33		3	7.5	5.00	803.89
TOTALS:	8	2	39.51			901.75												7090.02

NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H-1, H-2, AND EACH STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-2)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (30')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (44')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	2	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (50')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (56')	1	EACH
SP & 725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	902	SQ. FT.
SP & 726	STANDARD SIGN	1010	SQ. FT.
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-1)	21	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2)	25	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(A))	23	EACH
SP & 729	CHANNEL POST SIGN SUPPORT (TYPE U-2(1))	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	6529	POUND
730	BREAKAWAY SIGN SUPPORT (TYPE G2-5)	561	POUND

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 REVISION DATE:

SIGN QUANTITIES

STANDARD SIGN QUANTITIES
U-CHANNEL POSTS

SIGN NO./LOCATION	U-CHANNEL POST ASSEMBLIES			
	U-1	U-2	U-2(A)	U-2(1)
	EACH	EACH	EACH	EACH
SS-286-23-STA32+12EB	1			
SS-286-23-STA34+20EB			1	
SS-286-23-STA34+98EB	1			
SS-286-23-STA36+21EB			1	
SS-286-23-STA36+39EB/WB			1	
SS-286-23-STA36+45WB				1
SS-286-23-STA36+47WB			1	
SS-286-23-STA36+90EB		1		
SS-286-23-STA37+03EB		1		
SS-286-23-STA37+95EB		1		
SS-286-23-STA38+54WB		1		
SS-286-23-STA39+26WB		1		
SS-286-23-STA39+41EB	1			
SS-286-23-STA39+41WB		1		
SS-286-23-STA39+65EB/WB			1	
SS-286-23-STA39+76EB			1	
SS-286-23-STA39+99WB			1	
SS-286-23-STA40+99WB	1			
SS-286-23-STA43+45EB			1	
SS-286-23-STA43+72WB			1	
SS-286-23-STA43+95EB		1		
SS-286-23-STA44+12EB/WB			1	
SS-286-23-STA44+13EB		1		
SS-286-23-STA44+14WB				1
SS-286-23-STA44+92EB		1		
SS-286-23-STA45+54WB		1		
SS-286-23-STA46+41EB	1			
SS-286-23-STA46+42EB	1			
SS-286-23-STA46+43WB		1		
SS-286-23-STA46+44WB		1		
SS-286-23-STA46+69EB/WB			1	
SS-286-23-STA46+91EB			1	
SS-286-23-STA46+94WB			1	
SS-286-23-STA47+40EB	1			
SS-286-23-STA47+77WB	1			
SS-286-23-STA61+50EB	1			
SS-286-23-STA61+50WB	1			
SS-286-23-STA64+50WB	1			
SS-ENTERPRISE-23-STA17+41NB	1			
SS-ENTERPRISE-23-STA18+25SB			1	
SS-ENTERPRISE-23-STA18+44NB/SB			1	
SS-ENTERPRISE-23-STA18+46NB			1	
SS-ENTERPRISE-23-STA18+67SB		1		
SS-ENTERPRISE-23-STA18+69SB		1		
SS-ENTERPRISE-23-STA18+72NB		1		
SS-ENTERPRISE-23-STA19+60SB		1		
SS-N.AMITY.BYP-23-STA49+29NB			1	
SS-N.AMITY.BYP-23-STA50+06NB	1			
SS-N.AMITY-23-STA24+88NB	1			
SS-N.AMITY-23-STA24+93NB	1			
SS-N.AMITY-23-STA24+96NB	1			
SS-N.AMITY-23-STA25+06NB	1			
SS-N.AMITY-23-STA26+45NB	1			
SS-N.AMITY-23-STA27+82NB	1			
SS-N.AMITY-23-STA28+29SB			1	
SS-N.AMITY-23-STA28+34NB/SB			1	
SS-N.AMITY-23-STA28+44NB	1			
SS-N.AMITY-23-STA28+58SB		1		
SS-N.AMITY-23-STA28+63NB		1		
SS-N.AMITY-23-STA28+64NB			1	
SS-N.AMITY-23-STA28+68SB		1		
SS-N.AMITY-23-STA29+48SB		1		
SS-RAMP3-23-STA20+52NB		1		
SS-S.AMITY-23-STA10+23NB		1		
SS-S.AMITY-23-STA11+31SB		1		
SS-S.AMITY-23-STA11+34NB		1		
SS-S.AMITY-23-STA11+35NB		1		
SS-S.AMITY-23-STA11+41NB/SB			1	
SS-S.AMITY-23-STA11+53SB			1	
SS-S.AMITY-23-STA11+78NB			1	
SS-T.G.WILSON-23-STA10+64NB	1			
TOTALS	21	25	23	2

MAIN LANES SIGNING QUANTITIES
SQUARE TUBE POSTS

SIGN NO./LOCATION	SQUARE TUBE POST ASSEMBLIES				
	G-1	G-2	G2-1	G2-2	G2-3
	EACH	EACH	EACH	EACH	EACH
SS-RAMP1-23-STA19+27SB	1				
SS-RAMP3-23-STA21+35NB					1
SS-RAMP3-23-STA21+40NB					1
SS-RAMP3-23-STA21+69NB				1	
SS-RAMP3-23-STA21+72NB				1	
SS-RAMP3-23-STA26+40SB(L)		1			
SS-RAMP3-23-STA26+40SB(R)		1			
SS-RAMP4-23-STA47+20NB			1		
TOTALS	1	2	1	2	2

STANDARD ROADSIDE SIGNS
SHEET ALUMINUM 0.100" THICKNESS
(5 SQ. FT. OR LESS)

STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.100" THICKNESS (5 SF OR LESS)					
SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
M1-1	24" x 24"	4.00	6	24.00	WHITE/BLUE
M1-4	24" x 24"	4.00	2	8.00	BLACK/WHITE
M1-5	30" x 24"	5.00	6	30.00	BLACK/WHITE
M3-2	24" x 12"	2.00	2	4.00	BLACK/WHITE
M3-4	24" x 12"	2.00	7	14.00	BLACK/WHITE
M4-3	24" x 12"	2.00	2	4.00	BLACK/WHITE
M4-5	24" x 12"	2.00	1	2.00	BLACK/WHITE
M5-1L	21" x 15"	2.19	2	4.38	BLACK/WHITE
M5-1R	21" x 15"	2.19	3	6.56	BLACK/WHITE
M5-6	24" x 18"	3.00	1	3.00	BLACK/WHITE
M6-2R	21" x 15"	2.19	7	15.31	BLACK/WHITE
M6-3	21" x 15"	2.19	1	2.19	BLACK/WHITE
R3-2	24" x 24"	4.00	1	4.00	BLACK&RED/WHITE
R6-1L	36" x 12"	3.00	3	9.00	BLACK/WHITE
R6-1R	36" x 12"	3.00	3	9.00	BLACK/WHITE
R7-8T	12" x 18"	1.50	3	4.50	GREEN&BLUE/WHITE
R7-8P	12" x 6"	0.50	1	0.50	GREEN/WHITE
W16-7pL	24" x 12"	2.00	17	34.00	BLACK/YELLOW
W16-7pR	24" x 12"	2.00	15	30.00	BLACK/YELLOW
OM3-R	12" x 36"	3.00	2	6.00	BLACK/YELLOW
TOTAL 0.100" THICKNESS				214.44	

STANDARD ROADSIDE SIGNS
SHEET ALUMINUM 0.125" THICKNESS
(GREATER THAN 5 SQ. FT.)

STANDARD ROADSIDE SIGNS SHEET ALUMINUM 0.125" THICKNESS (GREATER THAN 5 SF)					
SIGN NO.	SIZE OF SIGN	UNIT AREA (SQ. FT.)	QUANTITY REQUIRED	TOTAL SIGN AREA (SQ. FT.)	LEGEND/BACKGROUND
D1-2 (AMITY RD)	36" x 24"	6.00	2	12.00	WHITE/GREEN
D1-2 (ENTERPRISE AVE)	48" x 24"	8.00	1	8.00	WHITE/GREEN
R1-1	36" x 36"	9.00	1	9.00	WHITE/RED
R1-2	48" x 48" x 48"	6.93	14	96.99	RED/WHITE
R1-2	60" x 60" x 60"	10.83	2	21.65	RED/WHITE
R2-1	30" x 36"	7.50	2	15.00	BLACK/WHITE
R3-5A	30" x 36"	7.50	5	37.50	BLACK/WHITE
R3-5L	30" x 36"	7.50	2	15.00	BLACK/WHITE
R3-5R	30" x 36"	7.50	6	45.00	BLACK/WHITE
R3-6	30" x 36"	7.50	1	7.50	BLACK/WHITE
R3-6L	30" x 36"	7.50	3	22.50	BLACK/WHITE
R3-6R	30" x 36"	7.50	1	7.50	BLACK/WHITE
R3-7R	36" x 36"	9.00	1	9.00	BLACK/WHITE
R5-1	36" x 36"	9.00	4	36.00	RED/WHITE
R5-1A	42" x 30"	8.75	3	26.25	WHITE/RED
R6-4a	48" x 24"	8.00	8	64.00	BLACK/YELLOW
W1-8L	30" x 36"	7.50	3	22.50	BLACK/YELLOW
W3-5	36" x 36"	9.00	1	9.00	BLACK/YELLOW
W4-1R	48" x 48"	16.00	1	16.00	BLACK/YELLOW
W4-2R	36" x 36"	9.00	2	18.00	BLACK/YELLOW
W11-2	36" x 36"	9.00	32	288.00	BLACK/YELLOW
W14-1	36" x 36"	9.00	1	9.00	BLACK/YELLOW
TOTAL 0.125" THICKNESS				795.39	

MAIN LANES SIGNING QUANTITIES
OVERHEAD MOUNTED ON
SIGNAL POLES WITH MAST ARMS

POLES			
ROADWAY	STATION	MAST ARM LENGTH	VERTICAL SHAFT LENGTH
HWY. 286	33+67EB	44 FT.	21'-0"
RAMP 3	25+04NB	56 FT.	21'-0"
N. AMITY RD.	24+91SB	48 FT.	21'-0"
S. AMITY RD.	13+18NB	48 FT.	21'-0"
HWY. 286	52+50WB	30 FT.	21'-0"
HWY. 286	41+67EB	50 FT.	21'-0"
HWY. 286	41+50WB	52 FT.	21'-0"

SIGN QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						080492	106	209

2 SIGN QUANTITIES

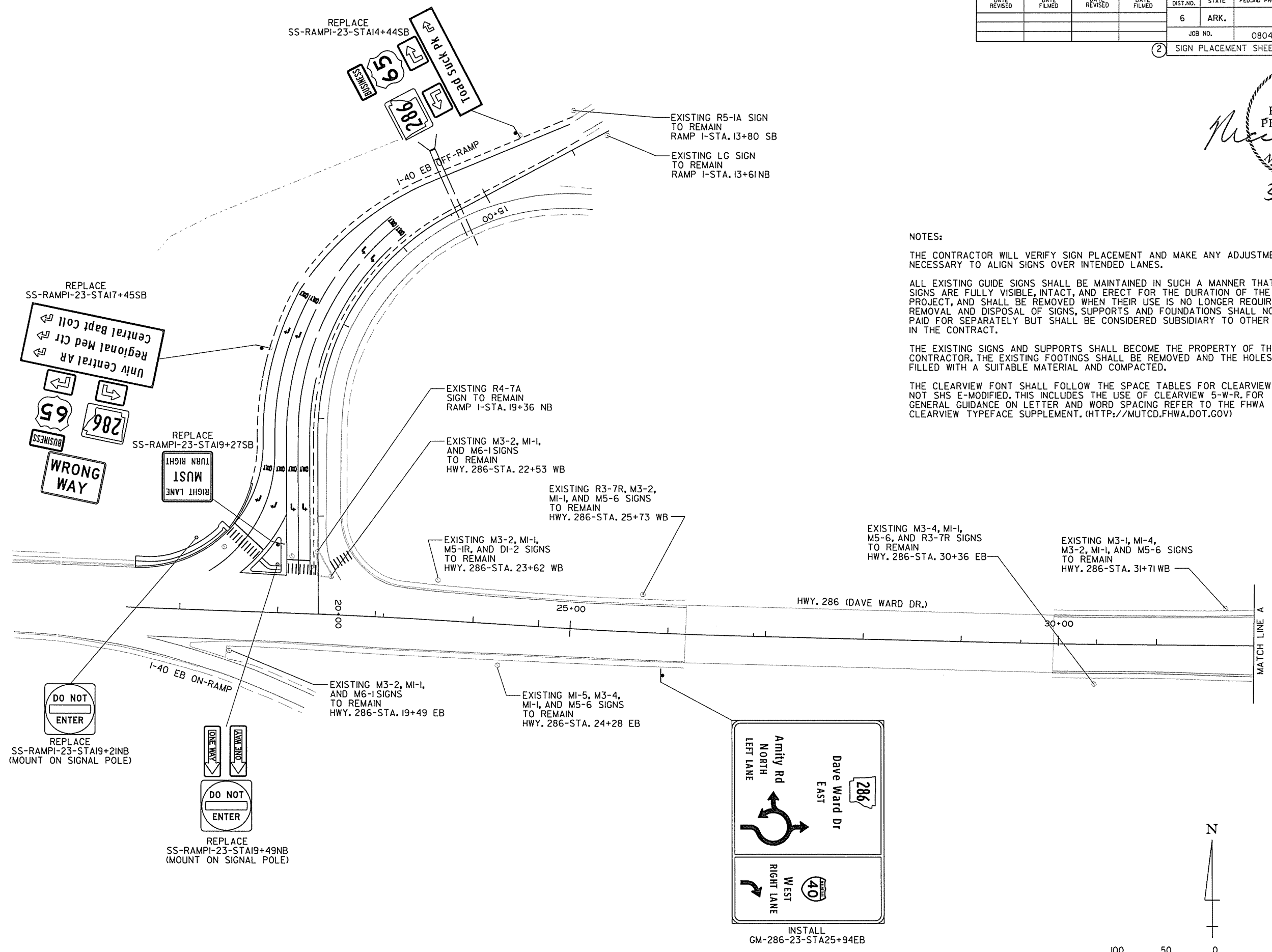
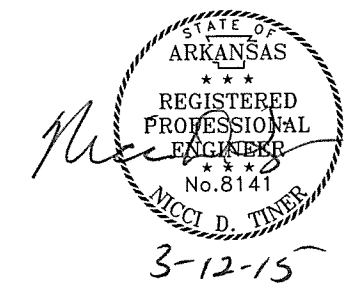


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				JOB NO.	080492	107	209	

2 SIGN PLACEMENT SHEET



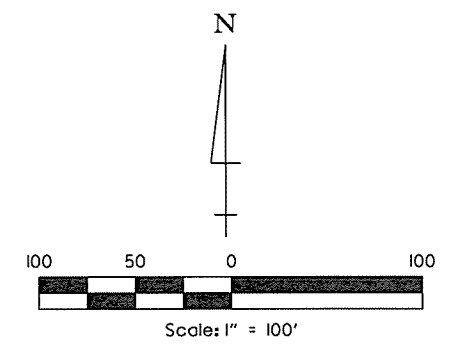
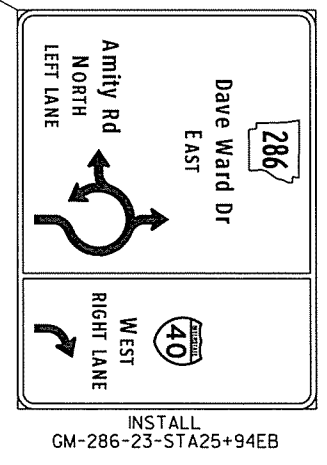
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THE CONTRACTOR WILL VERIFY SIGN PLACEMENT AND MAKE ANY ADJUSTMENTS NECESSARY TO ALIGN SIGNS OVER INTENDED LANES.

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

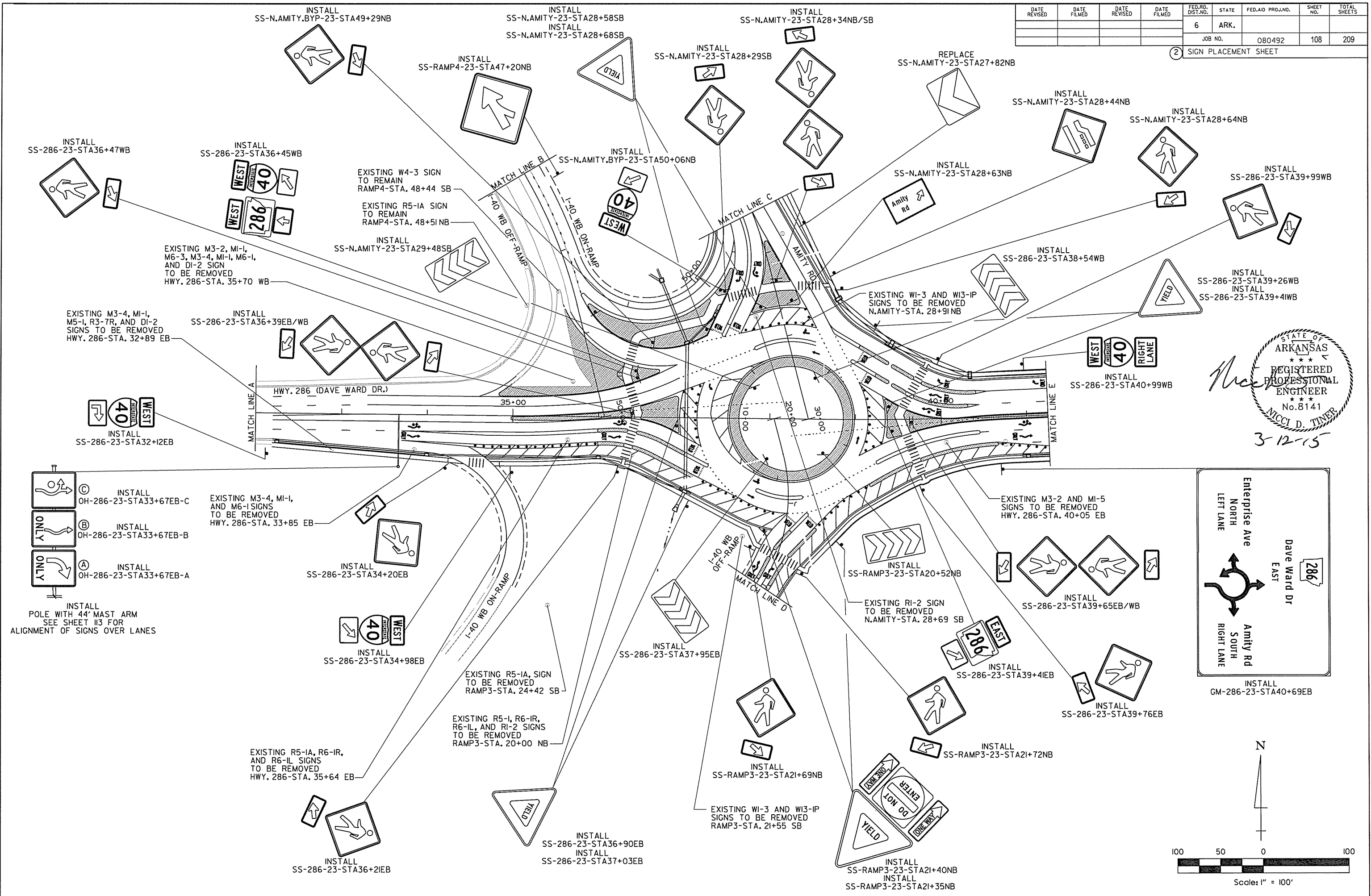
THE EXISTING SIGNS AND SUPPORTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR. THE EXISTING FOOTINGS SHALL BE REMOVED AND THE HOLES FILLED WITH A SUITABLE MATERIAL AND COMPACTED.

THE CLEARVIEW FONT SHALL FOLLOW THE SPACE TABLES FOR CLEARVIEW AND NOT SHS E-MODIFIED. THIS INCLUDES THE USE OF CLEARVIEW 5-W-R. FOR GENERAL GUIDANCE ON LETTER AND WORD SPACING REFER TO THE FHWA CLEARVIEW TYPEFACE SUPPLEMENT. ([HTTP://MUTCD.FHWA.DOT.GOV](http://mutcd.fhwa.dot.gov))



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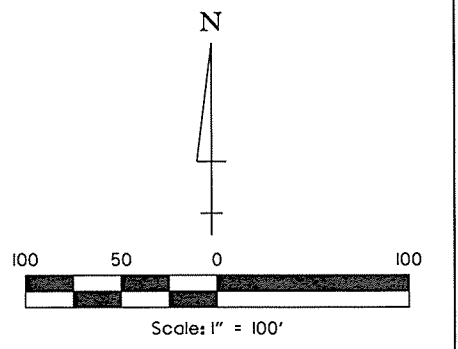
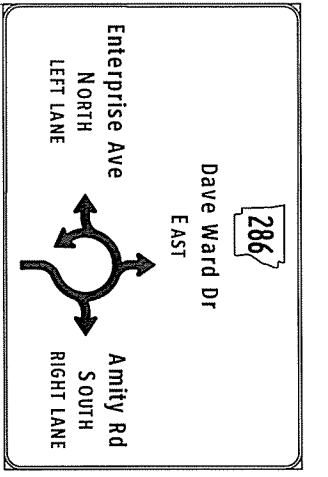
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						JOB NO.	080492	108
						SIGN PLACEMENT SHEET		



2 SIGN PLACEMENT SHEET

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 NICCI D. TINEP
 3-12-15

- INSTALL OH-286-23-STA33+67EB-C
- INSTALL OH-286-23-STA33+67EB-B
- INSTALL OH-286-23-STA33+67EB-A
- INSTALL POLE WITH 44' MAST ARM SEE SHEET I13 FOR ALIGNMENT OF SIGNS OVER LANES

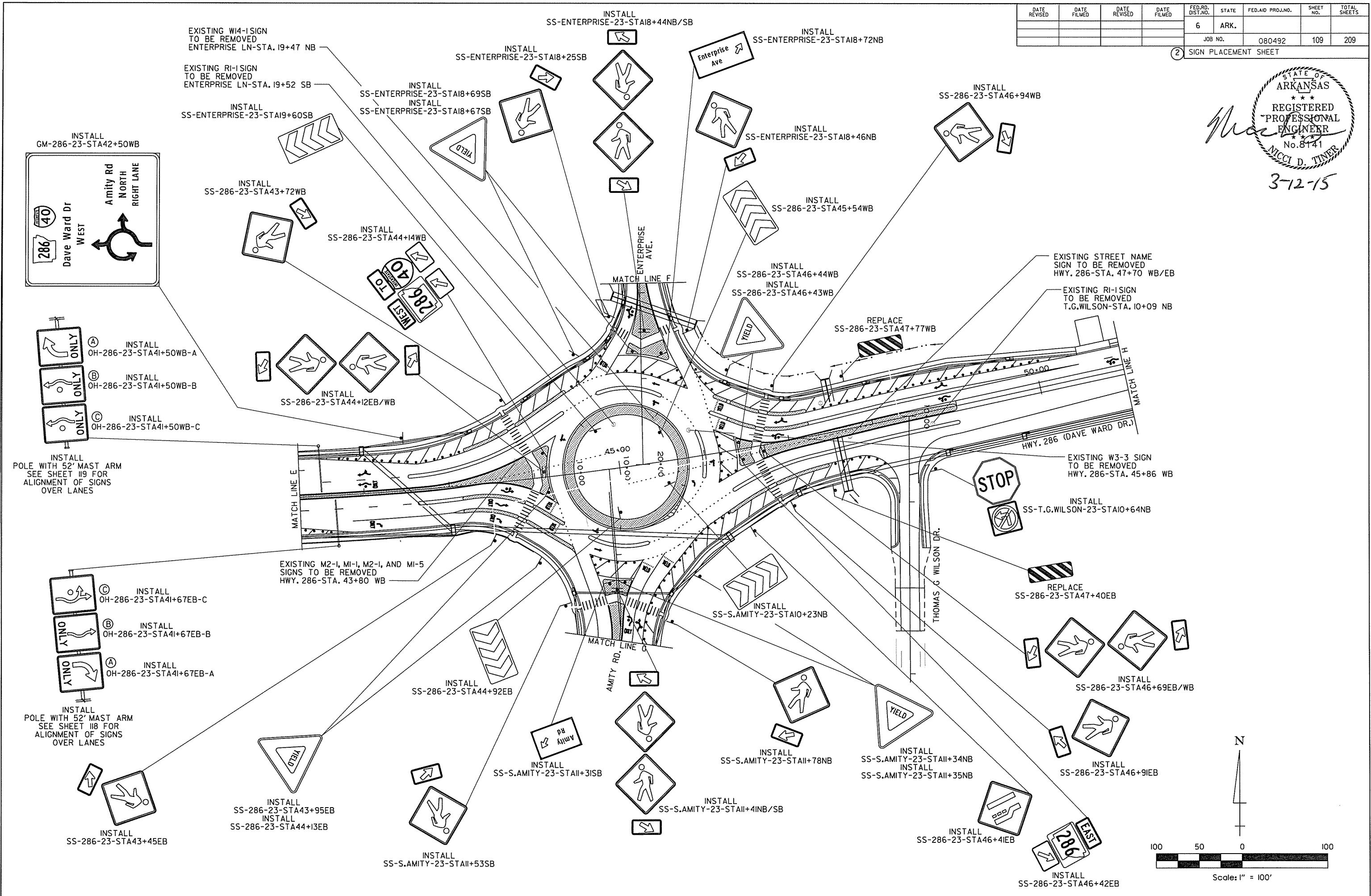


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				6	ARK.		109	209

2 SIGN PLACEMENT SHEET

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 NICCI D. TINEER
 3-12-15



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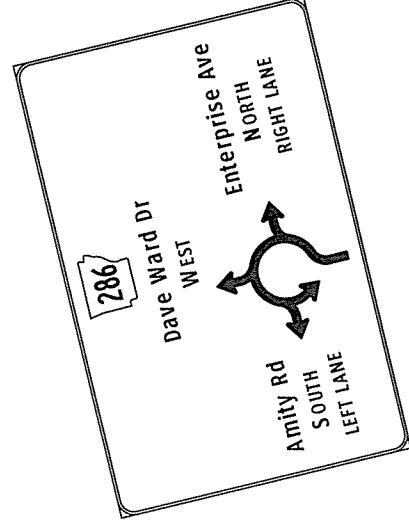
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				6	ARK.			
				JOB NO.	080492		110	209

2 SIGN PLACEMENT SHEET



3-12-15

INSTALL
GM-286-23-STA58+46WB



INSTALL
SS-286-23-STA61+50WB

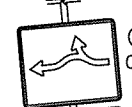


EXISTING R2-5C
SIGN TO BE REMOVED
HWY. 286-STA. 61+06 WB

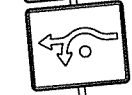
INSTALL
SS-286-23-STA64+50WB



INSTALL
POLE WITH 30' MAST ARM
SEE SHEET I17 FOR
ALIGNMENT OF SIGNS
OVER LANES



INSTALL
OH-286-23-STA52+50WB-A



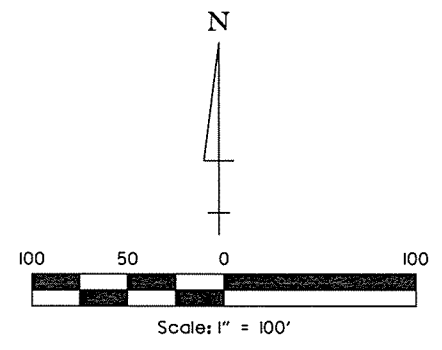
INSTALL
OH-286-23-STA52+50WB-B



INSTALL
SS-286-23-STA61+50EB

EXISTING R2-1
SIGNS TO BE REMOVED
HWY. 286-STA. 52+66 WB/EB

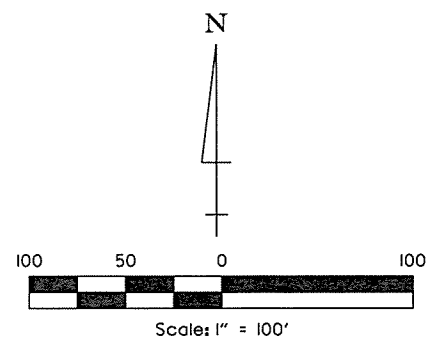
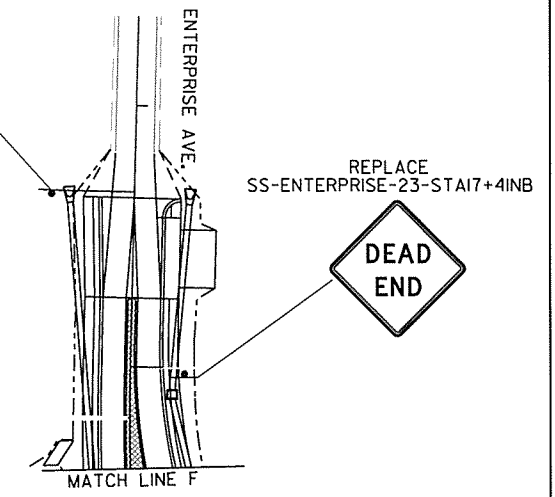
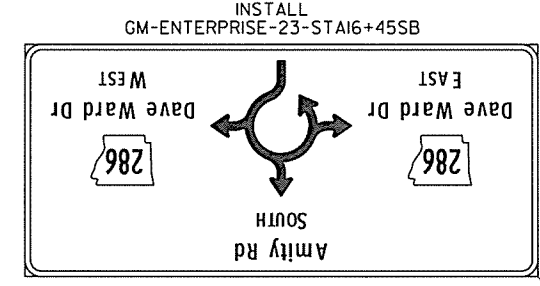
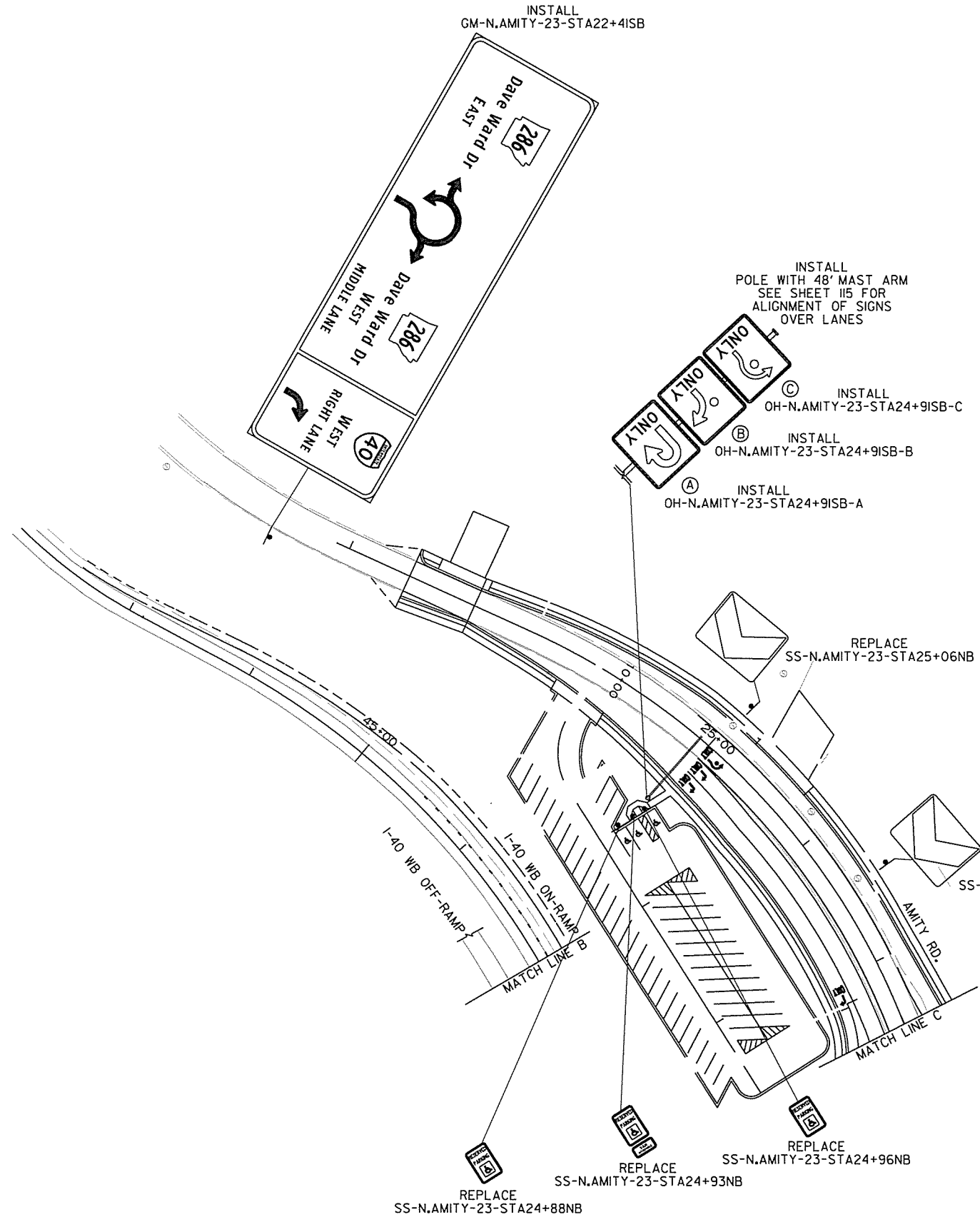
MATCH LINE H



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						JOB NO.	080492	111
						2 SIGN PLACEMENT SHEET		

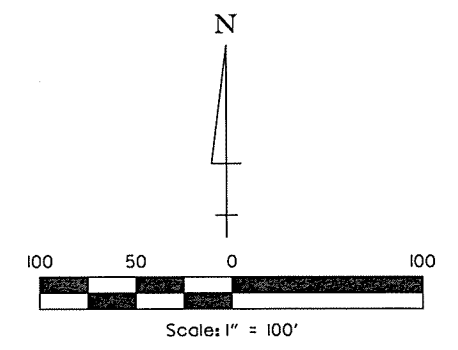
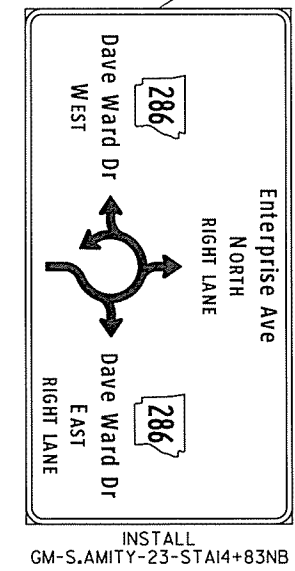
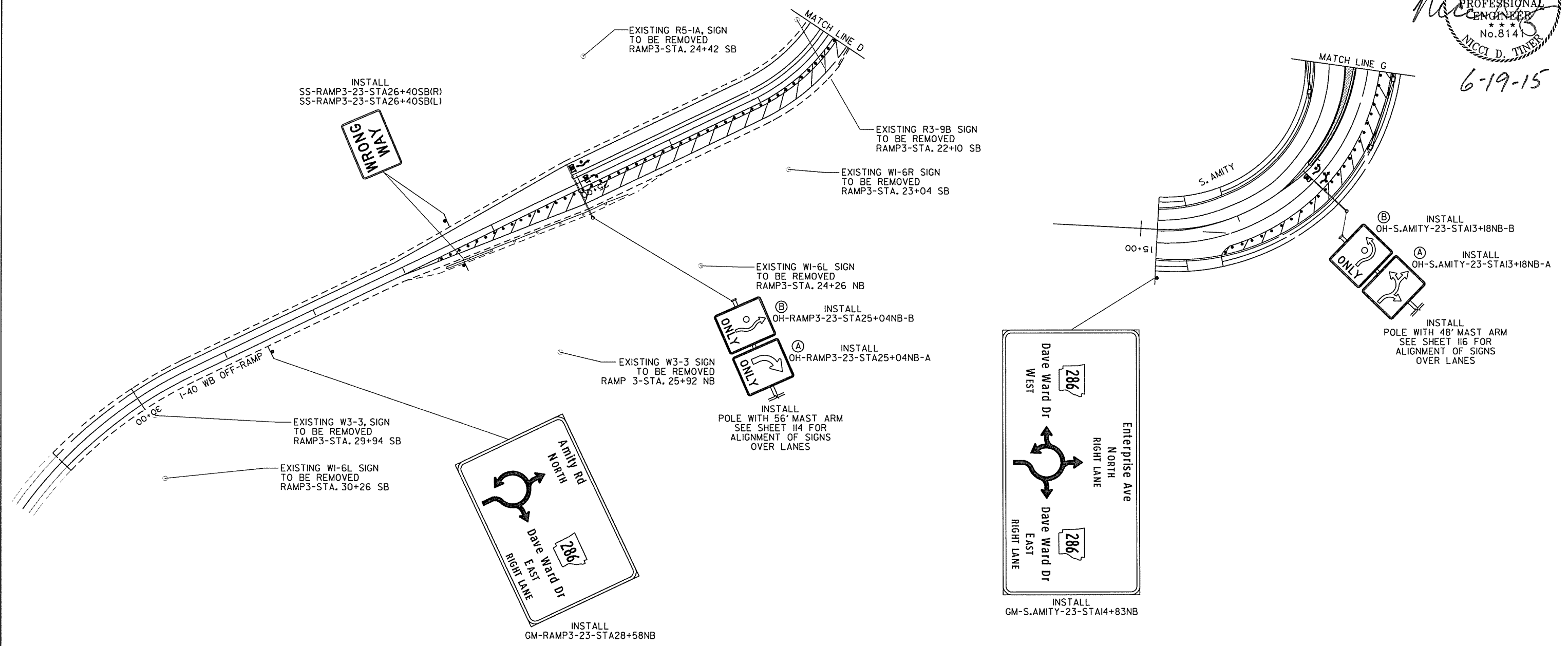
STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 MICCI D. TUNER
 3-12-15



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 copper-vasini
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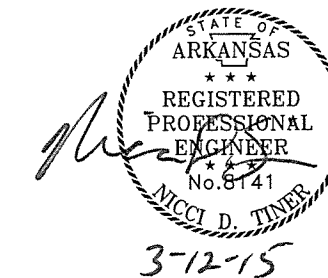
2 SIGN PLACEMENT SHEET



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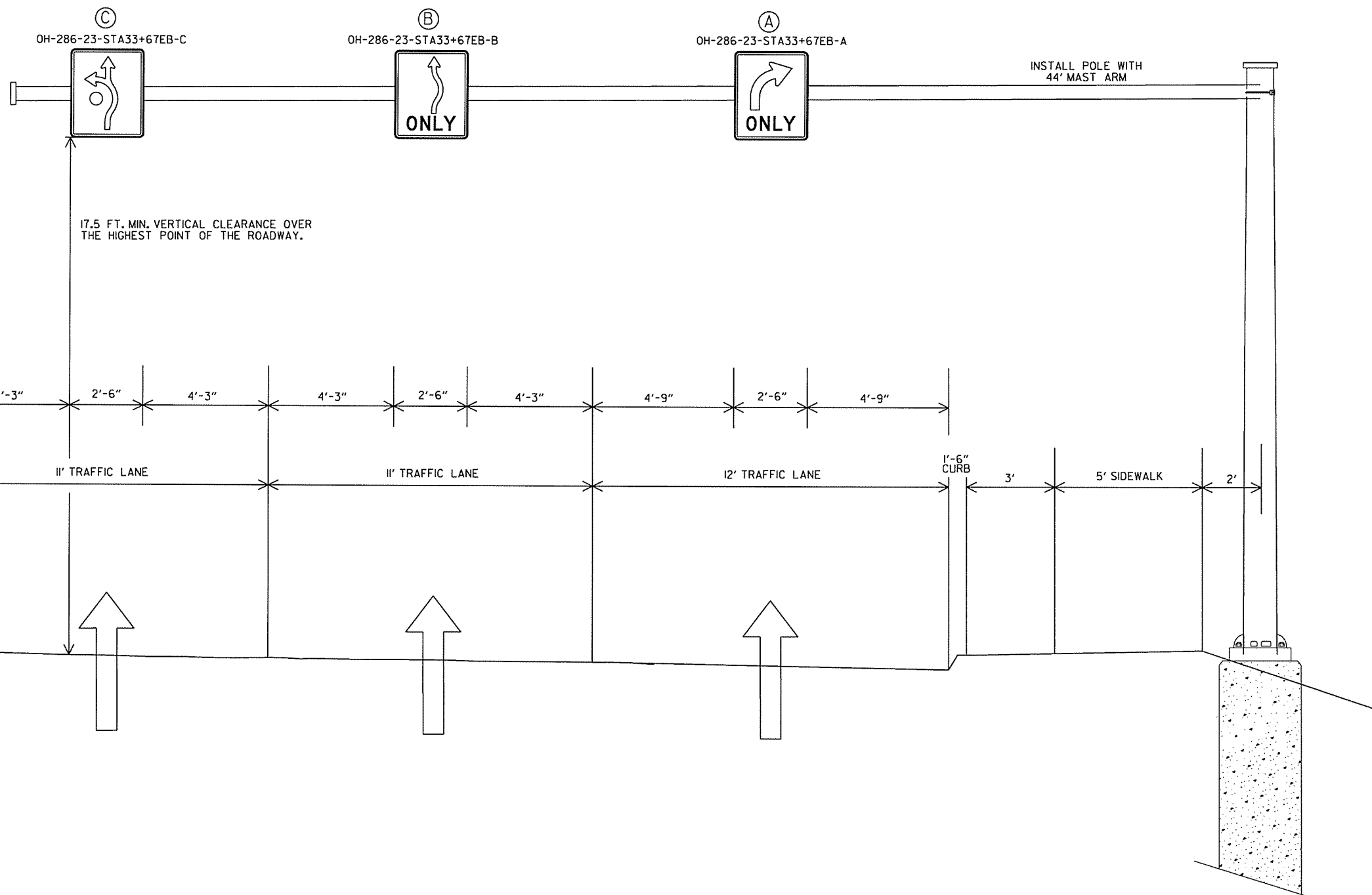
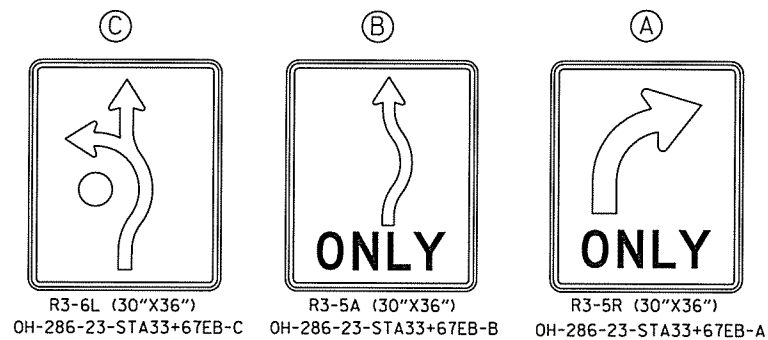
② SIGN PLACEMENT SHEET



NOTES:

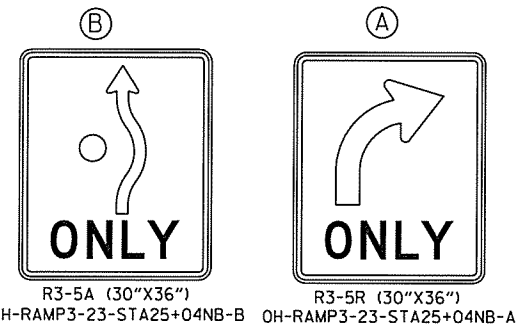
THE CONTRACTOR WILL VERIFY SIGN PLACEMENT AND MAKE ANY ADJUSTMENTS NECESSARY TO ALIGN SIGNS OVER INTENDED LANES.

SINCE THE CONTRACTOR WILL BE REQUIRED TO INSTALL OVERHEAD SIGNS ON STRUCTURES WHICH ARE LOCATED OVER THE ROADWAYS WHICH ARE CURRENTLY OPEN TO TRAFFIC, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE LANE CLOSURES AS A PART OF TRAFFIC CONTROL. PAYMENT FOR PROVIDING LANE CLOSURES WILL BE PAID SUBSIDIARY TO THE PAY ITEM "MAINTENANCE OF TRAFFIC". ALL MAINTENANCE OF TRAFFIC WORK MUST CONFORM WITH THE MUTCD.

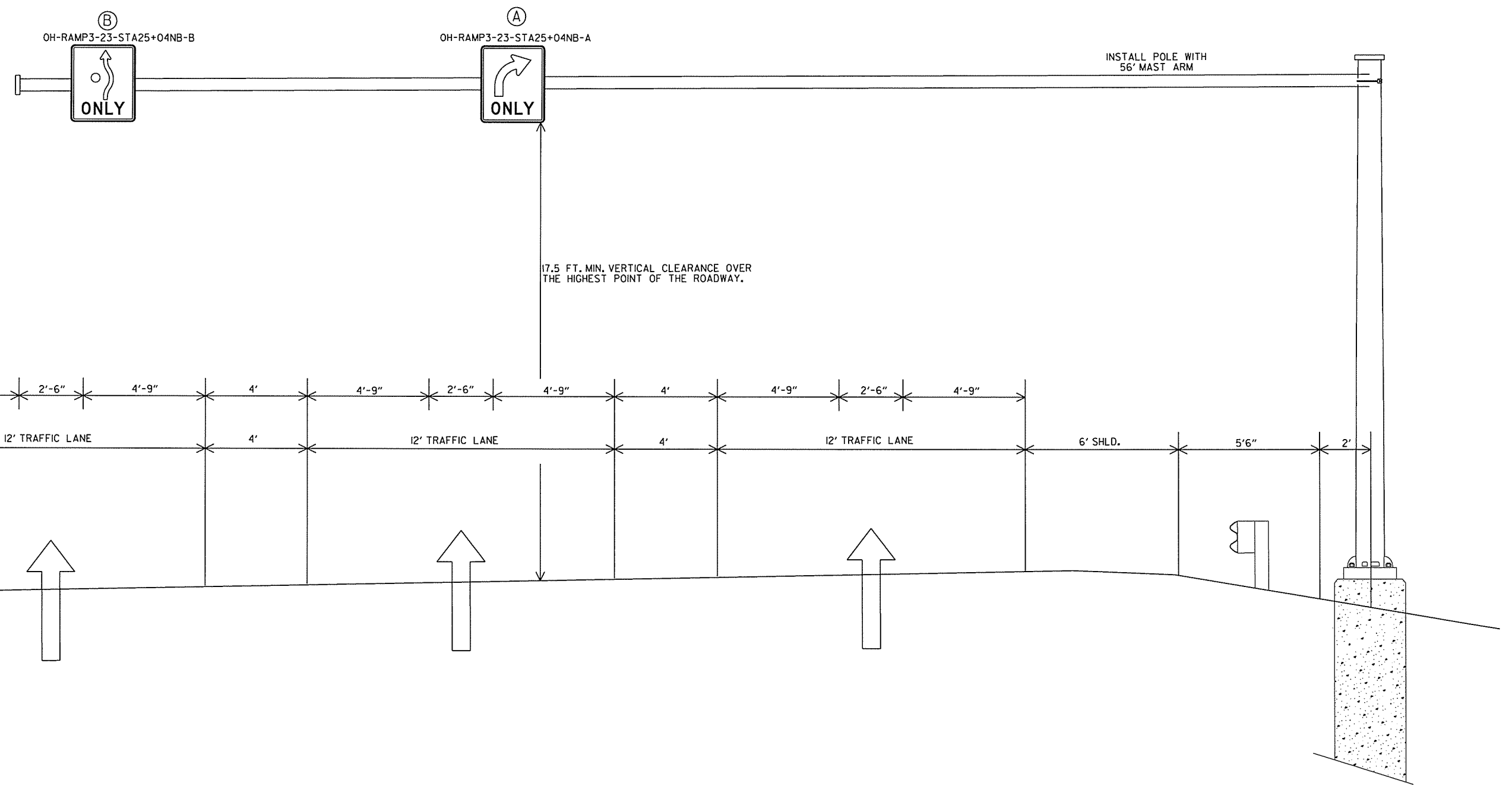


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						JOB NO.	080492	114
						2 SIGN PLACEMENT SHEET		



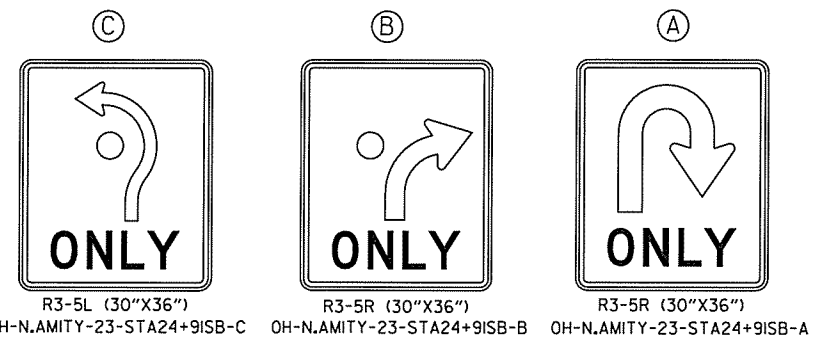
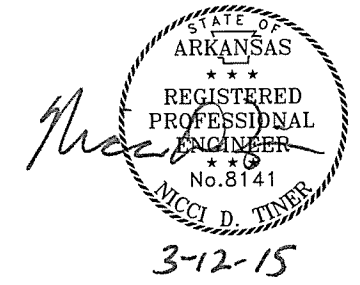
NOTES:
 THE CONTRACTOR WILL VERIFY SIGN PLACEMENT AND MAKE ANY ADJUSTMENTS NECESSARY TO ALIGN SIGNS OVER INTENDED LANES.
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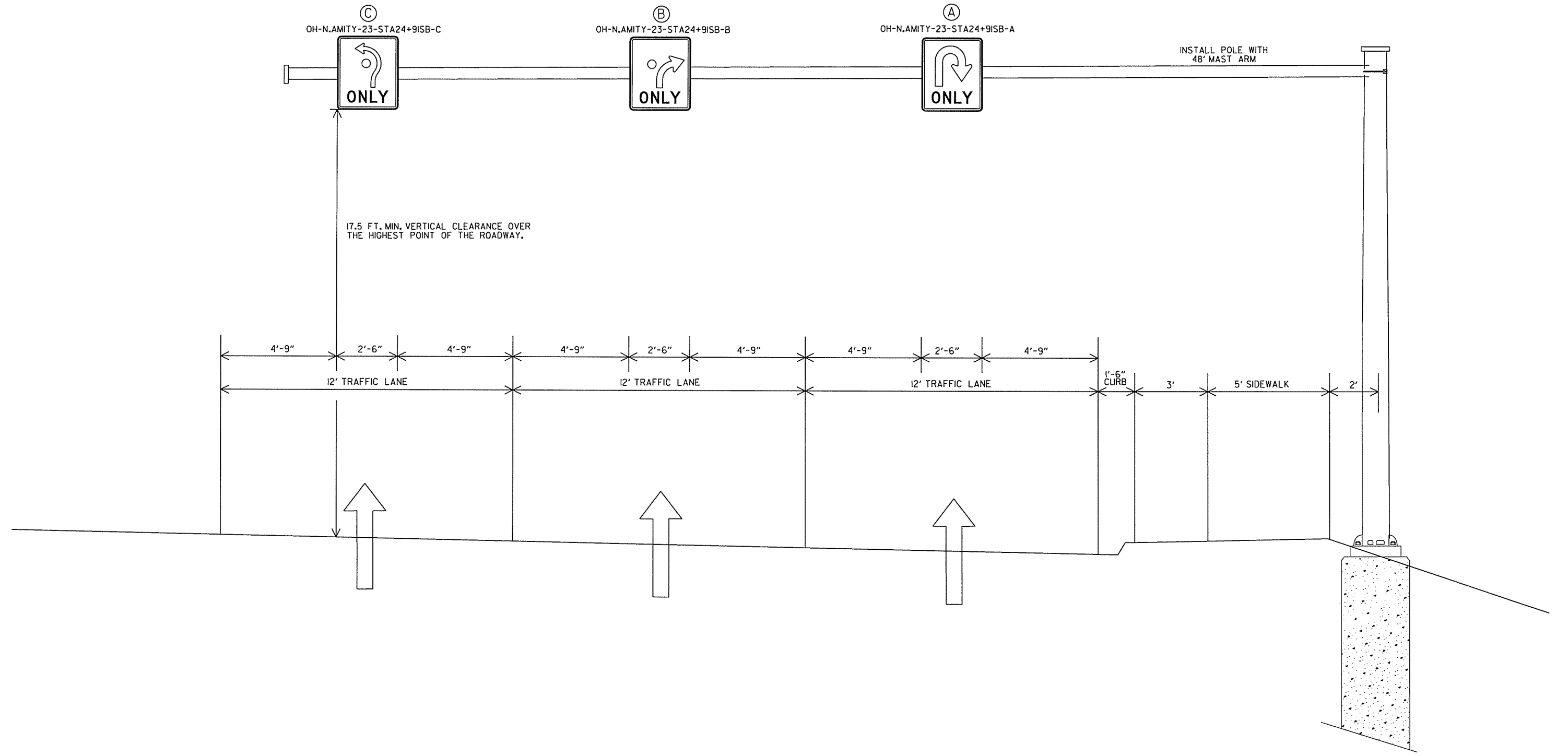
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				6	ARK.			
				JOB NO.	080492		115	209

2 SIGN PLACEMENT SHEET



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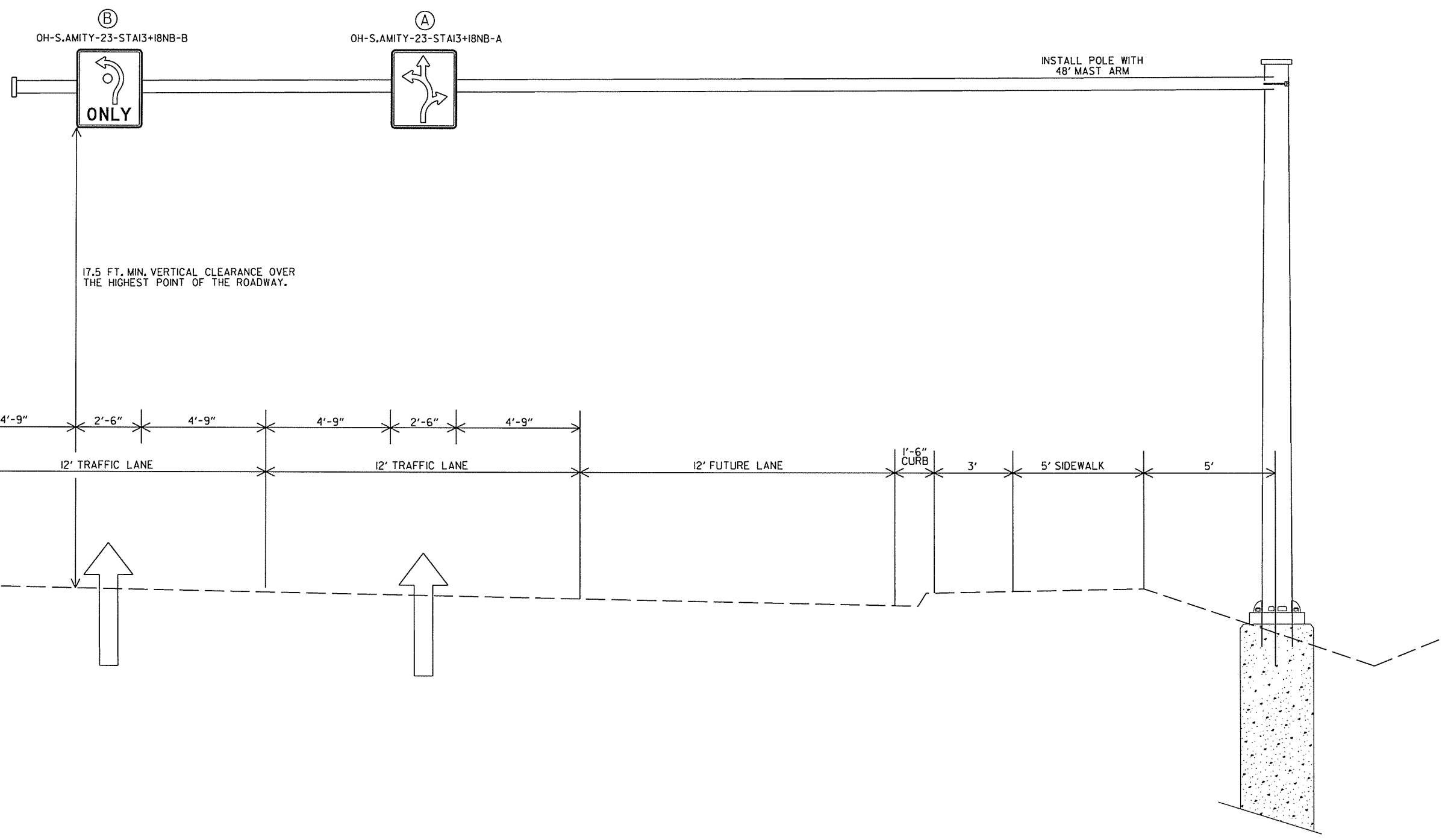
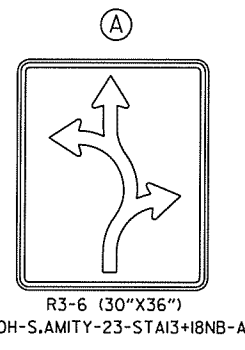
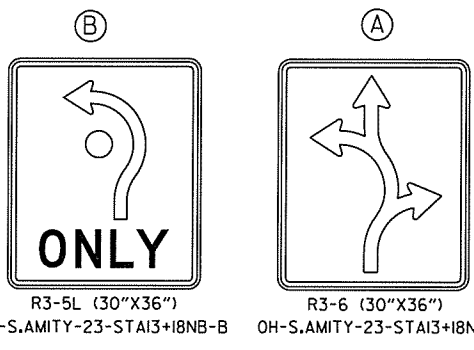
2 SIGN PLACEMENT SHEET



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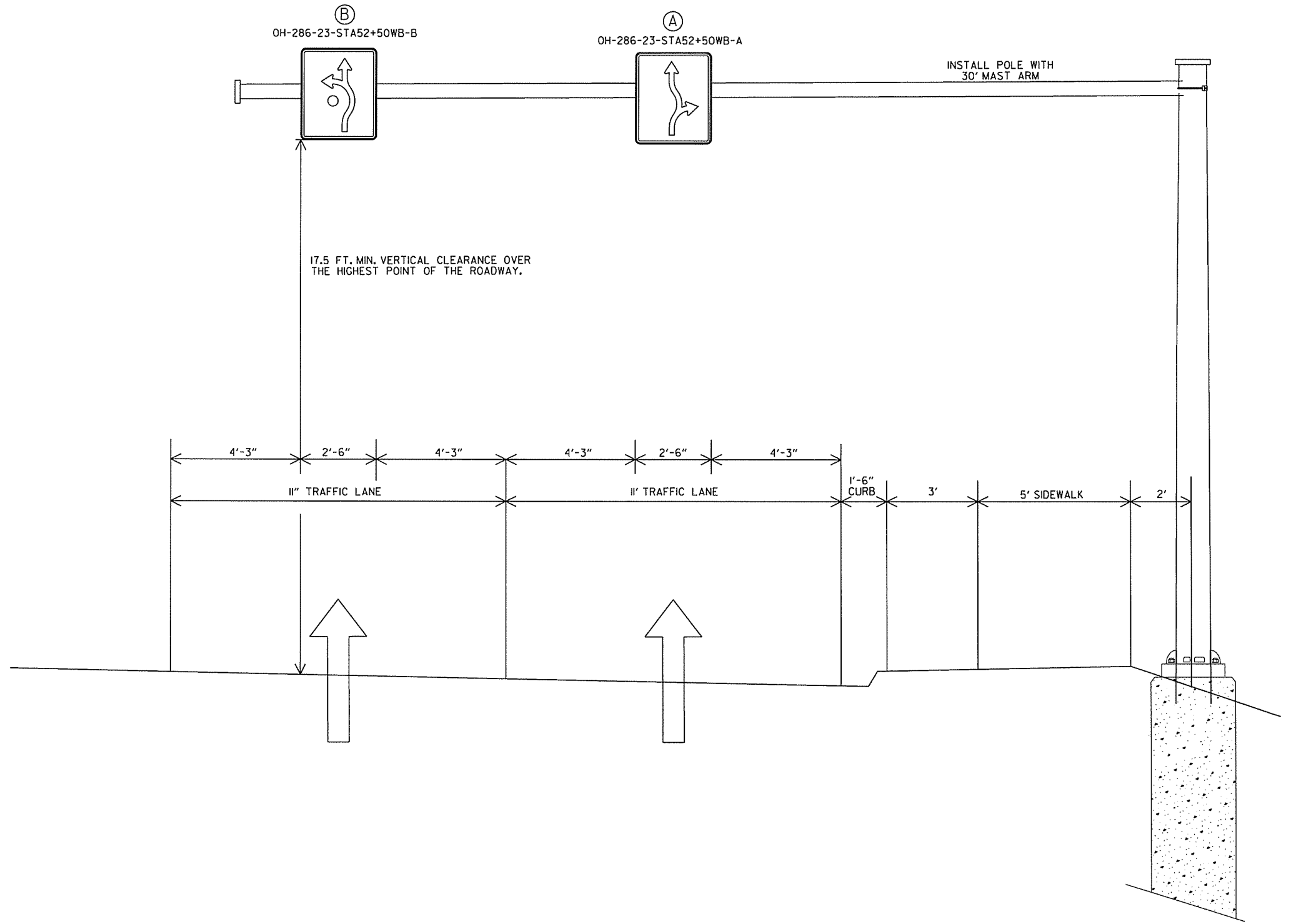
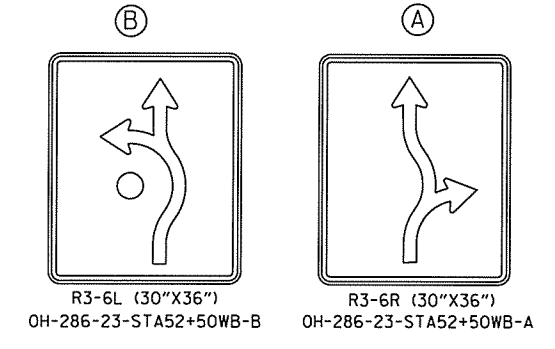
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2 SIGN PLACEMENT SHEET

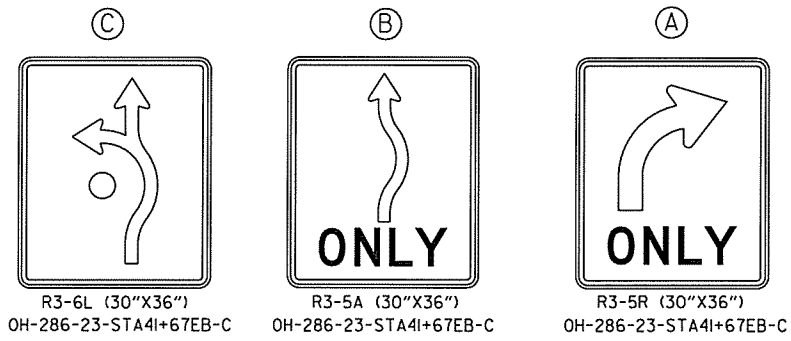
STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 MICCI D. TIVER
 3-12-15

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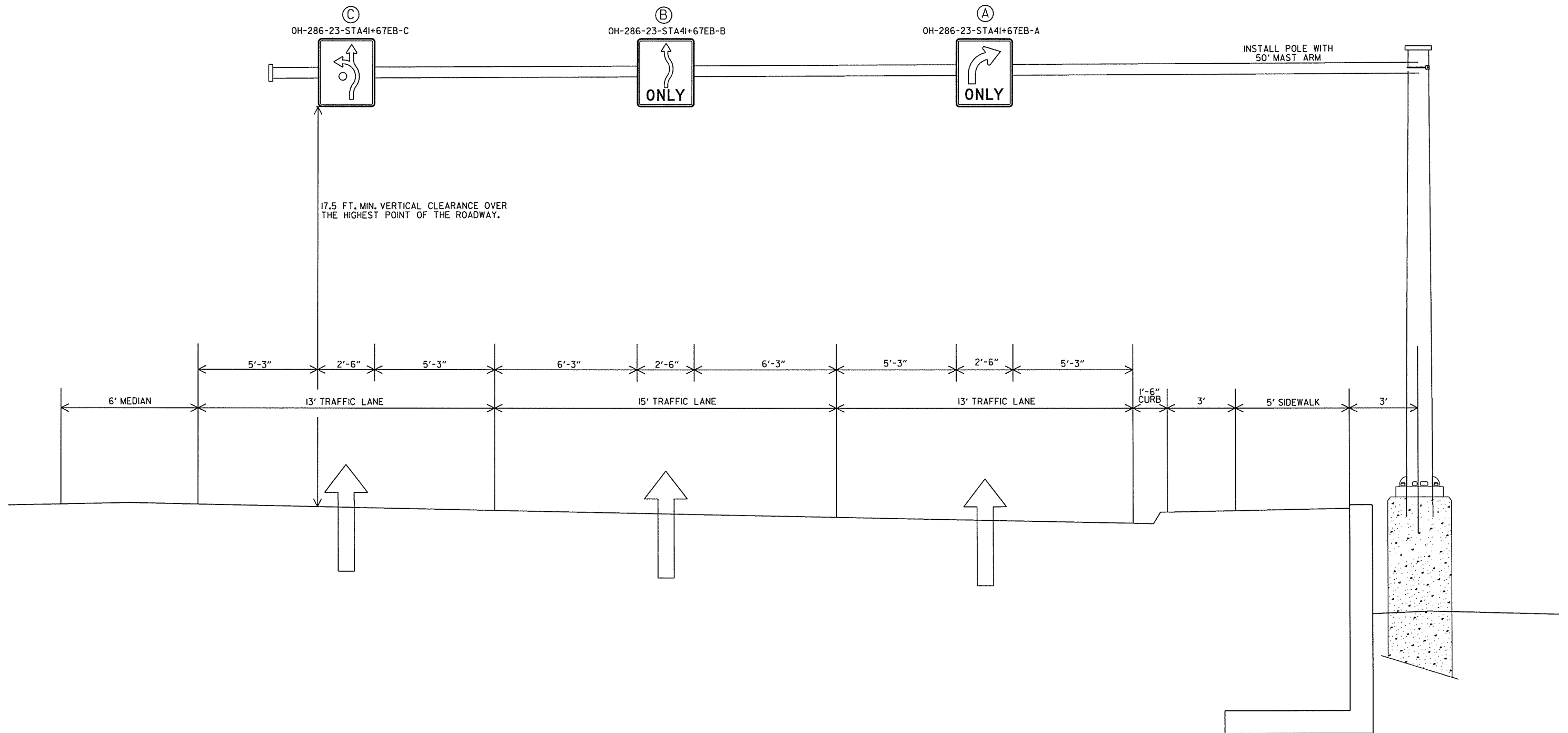
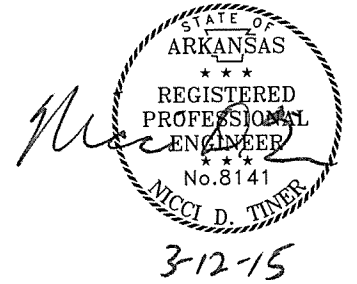


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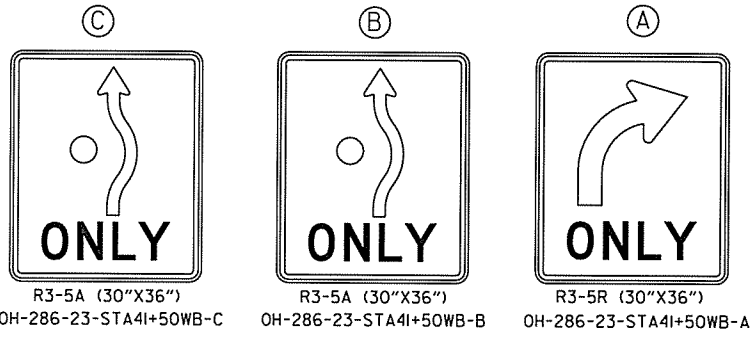
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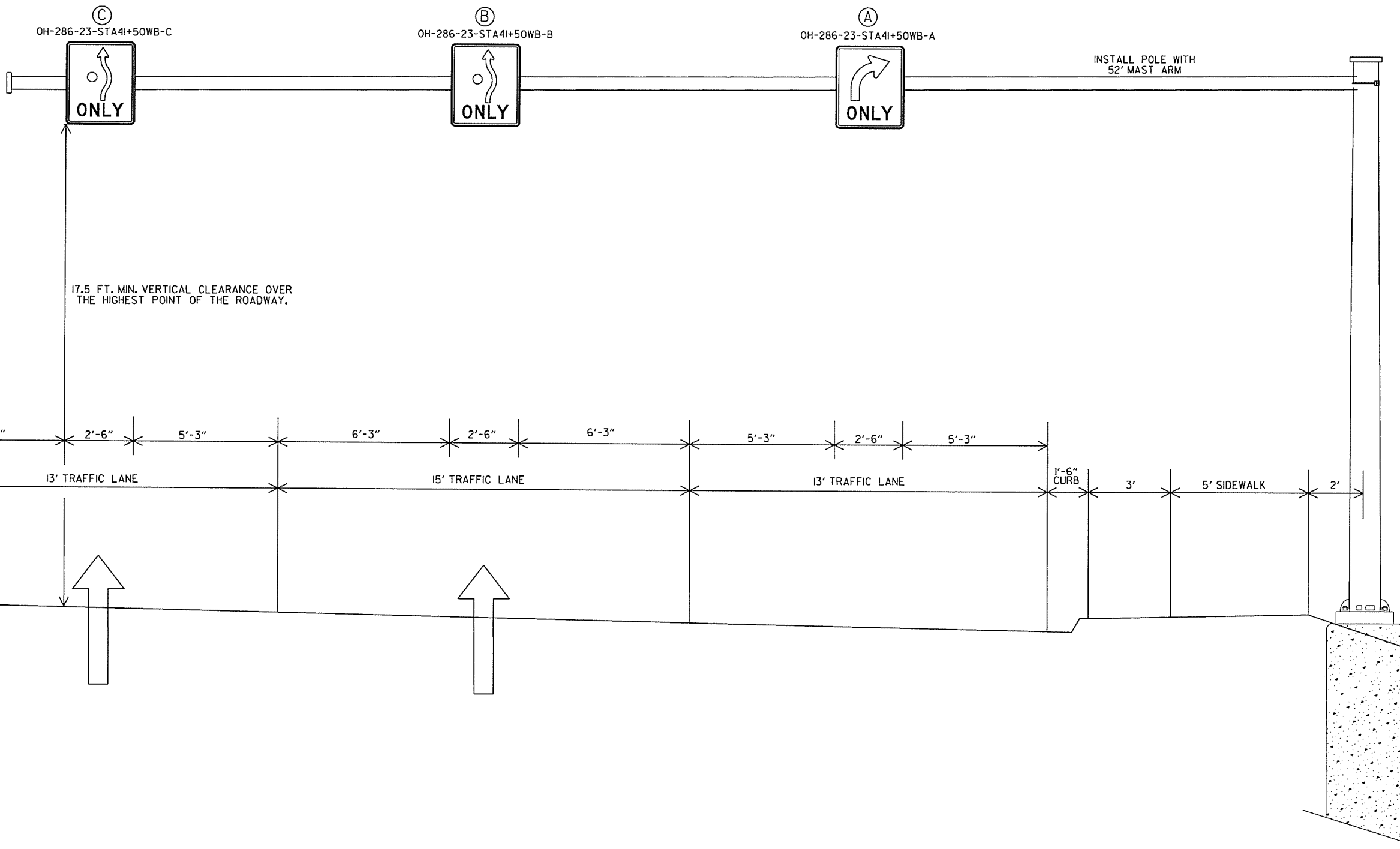
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				JOB NO.		080492	119	209

2 SIGN PLACEMENT SHEET

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 No. 8141
 MICCI D. TINNER
 3-12-15



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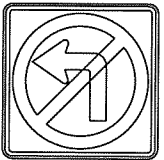
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2 SIGN PLACEMENT SHEET

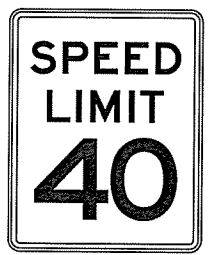


RI-1 (36"X36")



R3-2 (24"X24")

SS-T.G.WILSON-23-STA10+64NB



R2-1 (30"X36")

SS-286-23-STA61+50WB



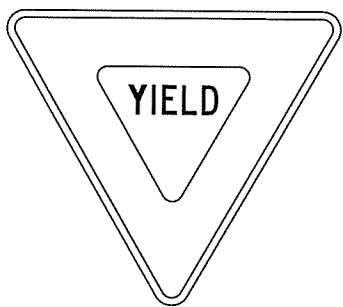
R2-1 (30"X36")

SS-286-23-STA61+50EB



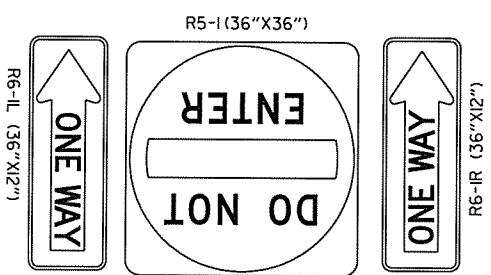
R3-7R (36"X36")

SS-RAMPI-23-STA19+27SB

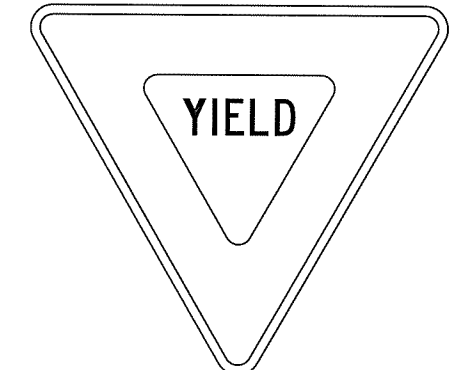


RI-2 (48"X48"X48")

SS-286-23-STA36+90EB
 SS-286-23-STA37+03EB
 SS-286-23-STA39+26WB
 SS-286-23-STA39+41WB
 SS-286-23-STA43+95EB
 SS-286-23-STA44+13EB
 SS-286-23-STA46+43WB
 SS-286-23-STA46+44WB
 SS-N.AMITY-23-STA28+58SB
 SS-N.AMITY-23-STA28+68SB
 SS-S.AMITY-23-STA11+34NB
 SS-S.AMITY-23-STA11+35NB
 SS-ENTERPRISE-23-STA18+67SB
 SS-ENTERPRISE-23-STA18+69SB



R5-1 (36"X36")

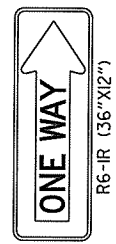


RI-2 (60"X60"X60")

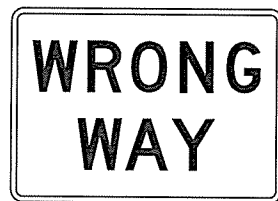
SS-RAMP3-23-STA21+35NB
 SS-RAMP3-23-STA21+40NB



R6-1L (36"X12")

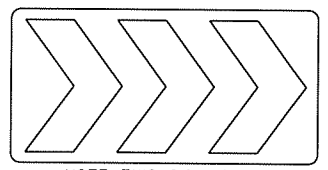


R6-1R (36"X12")



R5-1A (42"X30")

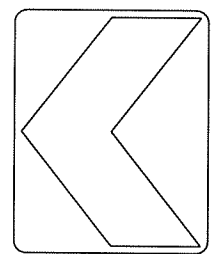
SS-RAMP3-23-STA26+40SB(R)
 SS-RAMP3-23-STA26+40SB(L)



NOTE: THIS SIGN IS TO BE BLACK & WHITE

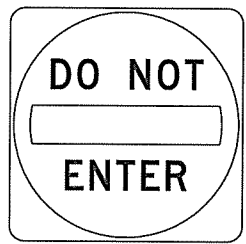
R6-4a (48"X24")

SS-286-23-STA37+95EB
 SS-286-23-STA38+54WB
 SS-286-23-STA44+92EB
 SS-286-23-STA45+54WB
 SS-RAMP3-23-STA20+52NB
 SS-N.AMITY-23-STA29+48SB
 SS-S.AMITY-23-STA10+23NB
 SS-ENTERPRISE-23-STA19+60SB



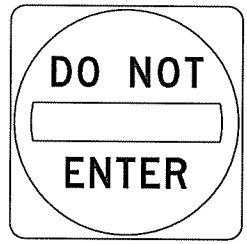
W1-8L (30"X36")

SS-N.AMITY-23-STA25+06NB
 SS-N.AMITY-23-STA26+45NB
 SS-N.AMITY-23-STA27+82NB



R5-1 (36"X36")

SS-RAMPI-23-STA19+49NB



R5-1 (36"X36")

SS-RAMPI-23-STA19+21NB



W3-5 (36"X36")

SS-286-23-STA64+50WB

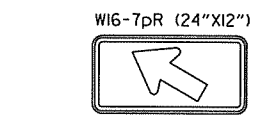


W11-2 (36"X36")



W16-7pL (24"X12")

SS-286-23-STA34+20EB
 SS-286-23-STA36+21EB
 SS-286-23-STA36+47WB
 SS-286-23-STA39+76EB
 SS-286-23-STA39+99WB
 SS-286-23-STA43+45EB
 SS-286-23-STA43+72WB
 SS-286-23-STA46+91EB
 SS-286-23-STA46+94WB
 SS-RAMP3-23-STA21+72NB
 SS-N.AMITY-23-STA28+29SB
 SS-N.AMITY-23-STA28+64NB
 SS-N.AMITY.BYP-23-STA49+29NB
 SS-S.AMITY-23-STA11+53SB
 SS-S.AMITY-23-STA11+78NB
 SS-ENTERPRISE-23-STA18+25SB
 SS-ENTERPRISE-23-STA18+46NB



W16-7pR (24"X12")

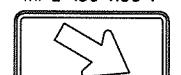
W11-2 (36"X36")



W11-2 (36"X36")

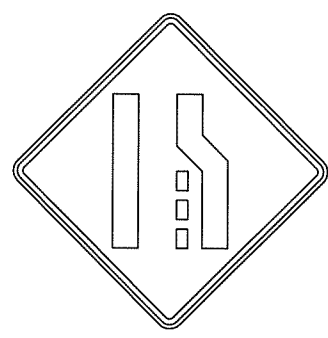


W11-2 (36"X36")



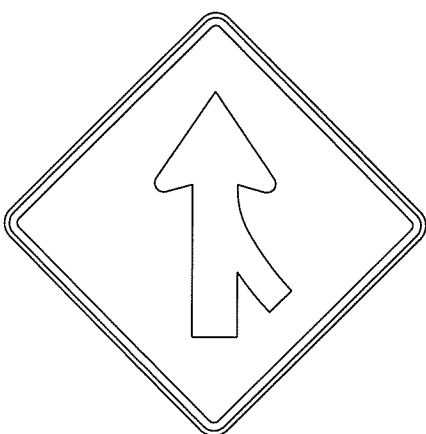
W16-7pR (24"X12")

SS-286-23-STA36+39EB/WB
 SS-286-23-STA39+65EB/WB
 SS-286-23-STA44+12EB/WB
 SS-286-23-STA46+69EB/WB
 SS-N.AMITY-23-STA28+34NB/SB
 SS-S.AMITY-23-STA11+41NB/SB
 SS-ENTERPRISE-23-STA18+44NB/SB



W4-2R (36"X36")

SS-N.AMITY-23-STA28+44NB
 SS-286-23-STA46+41EB



W4-1R (48"X48")

SS-RAMP4-23-STA47+20NB



W14-1 (36"X36")

SS-ENTERPRISE-23-STA17+41NB



W11-2 (36"X36")



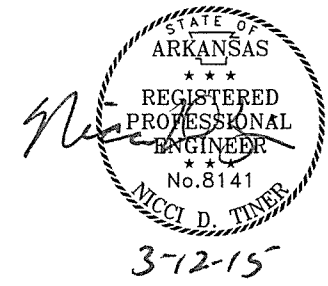
W16-7pR (24"X12")

SS-RAMP3-23-STA21+69NB

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				JOB NO.	080492	121	209	

2 SIGN PLACEMENT SHEET

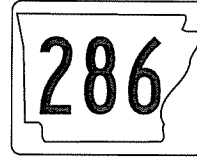


R5-1A (42"X30")



BUSINESS

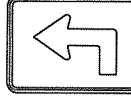
M4-3 (24"X12")



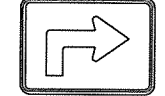
MI-5 (30"X24")



MI-4 (24"X24")



M5-1L (21"X15")



M5-1R (21"X15")



OM3-R (12"X36")
SS-286-23-STA47+40EB
SS-286-23-STA47+77WB



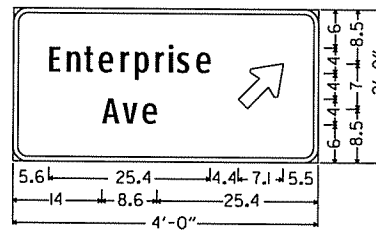
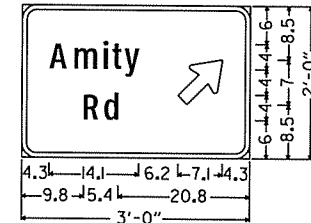
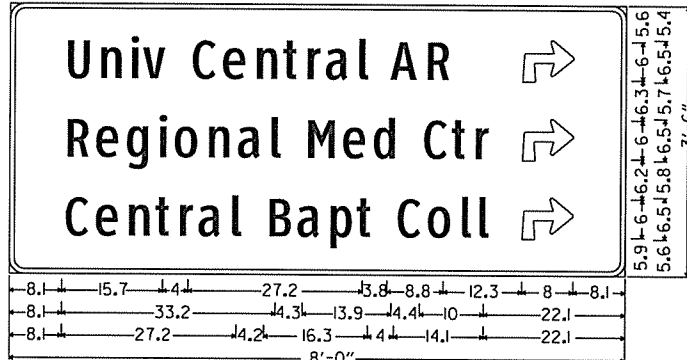
R7-8T (12"X18")
SS-N.AMITY-23-STA24+88NB
SS-N.AMITY-23-STA24+96NB



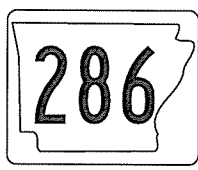
R7-8T (12"X18")



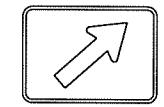
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SS-N.AMITY-23-STA24+93NB



EAST
M3-2 (24"X12")



MI-5 (30"X24")

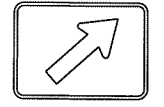


M6-2R (21"X15")
SS-286-23-STA39+41EB
SS-286-23-STA46+42EB

WEST
M3-4 (24"X12")



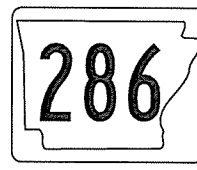
MI-1 (24"X24")



M6-2R (21"X15")
SS-286-23-STA34+98EB
SS-N.AMITY.BYP-23-STA50+06NB

BUSINESS

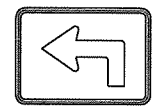
M4-3 (24"X12")



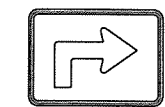
MI-5 (30"X24")



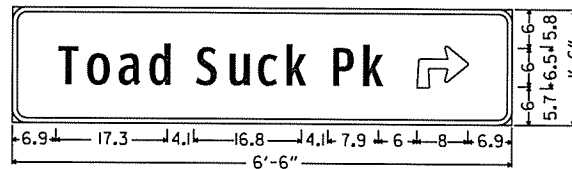
MI-4 (24"X24")



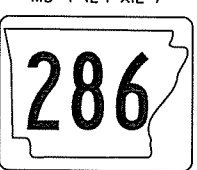
M5-1L (21"X15")



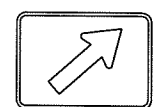
M5-1R (21"X15")



WEST
M3-4 (24"X12")



MI-5 (30"X24")

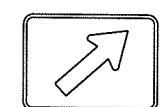


M6-2R (21"X15")

TO
M4-5 (24"X12")



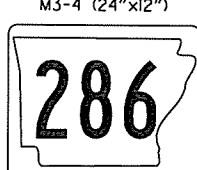
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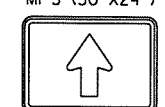
M6-2R (21"X15")

SS-286-23-STA44+14WB

WEST
M3-4 (24"X12")



MI-5 (30"X24")

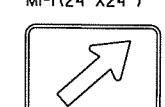


M6-3 (21"X15")

WEST
M3-4 (24"X12")



MI-1 (24"X24")



M6-2R (21"X15")

SS-286-23-STA36+45WB

WEST
M3-4 (24"X12")



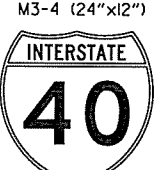
MI-1 (24"X24")



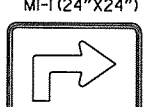
M5-6 (24"X18")

SS-286-23-STA40+99WB

WEST
M3-4 (24"X12")



MI-1 (24"X24")



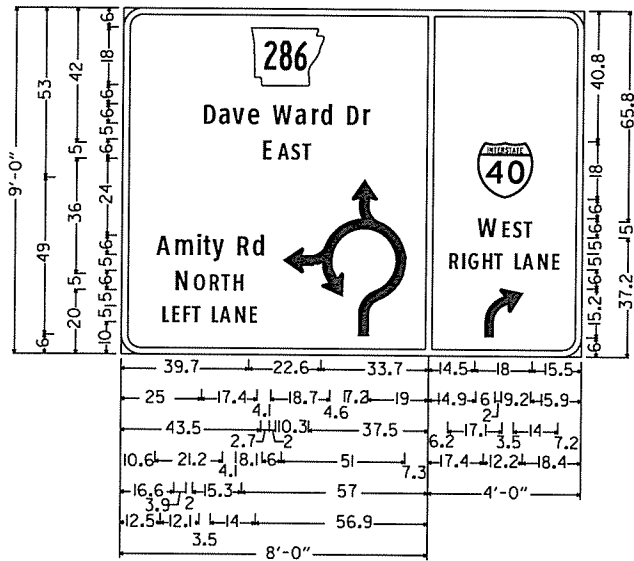
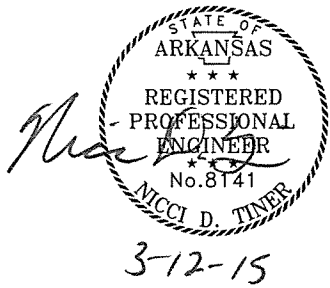
M5-1R (21"X15")

SS-286-23-STA32+12EB

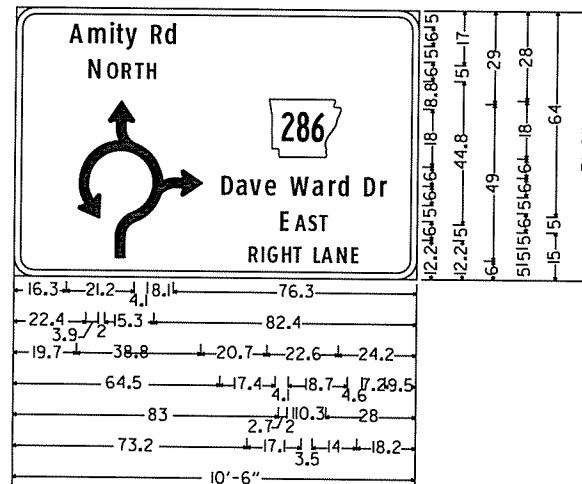
3/12/2015 10:06:04 AM
 c:\pervasive\hwy286\workspace\amtd\l\2015\101716 - hwy 286 widening and improvements\080492\080492.sp_hwy286_14-15.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		122	209

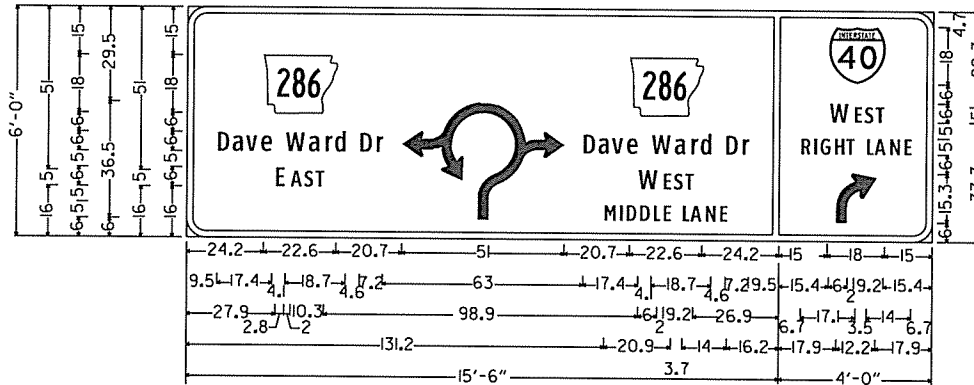
2 SIGN PLACEMENT SHEET



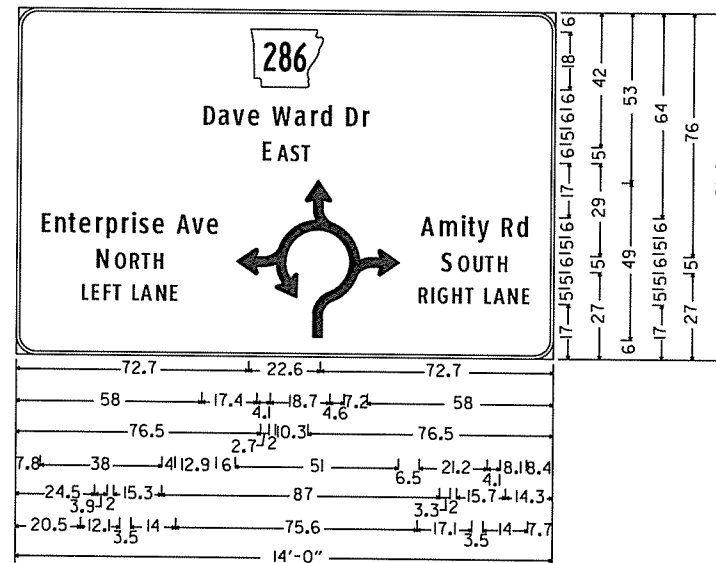
GM-286-23-STA25+94EB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 [Amity Road] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W;
 [LEFT LANE] ClearviewHwy-2-W;
 Circular Intersection DirectionalArrow_6" Text;
 6.0" Radius, 1.0" Border, White on Green;
 [WEST] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



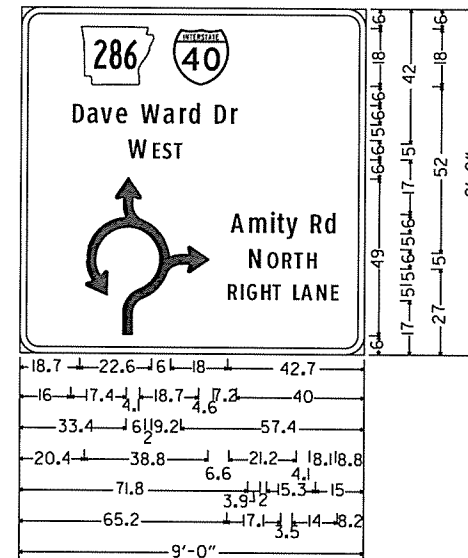
GM-RAMP3-23-STA28+58NB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Amity Rd] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W specified length;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W;
 Circular Intersection DirectionalArrow_6" Text;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



GM-N.AMITY-23-STA22+41SB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 Circular Intersection DirectionalArrow_6" Text;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W;
 [MIDDLE LANE] ClearviewHwy-2-W;
 6.0" Radius, 1.0" Border, White on Green;
 [WEST] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



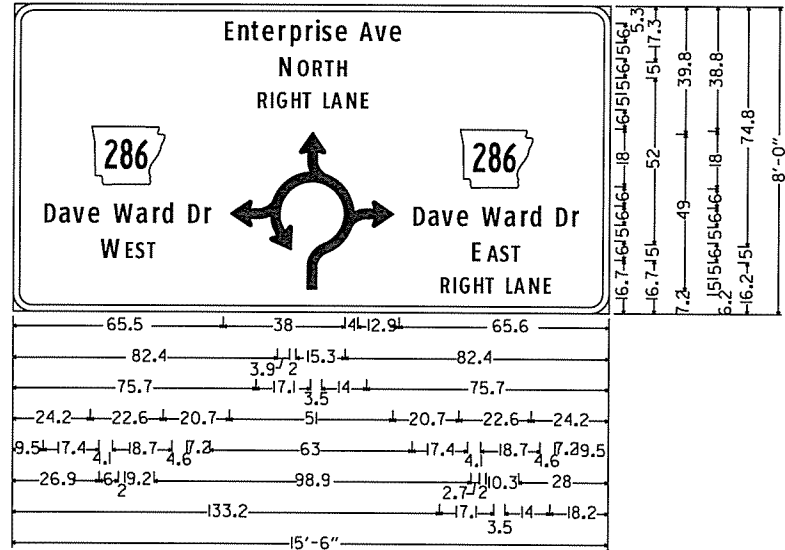
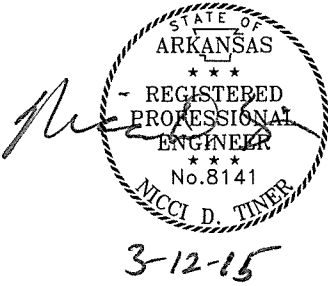
GM-286-23-STA40+69EB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 [Enterprise Ave] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W;
 [LEFT LANE] ClearviewHwy-2-W;
 Circular Intersection DirectionalArrow_6" Text;
 [Amity Rd] ClearviewHwy-2-W;
 [SOUTH] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



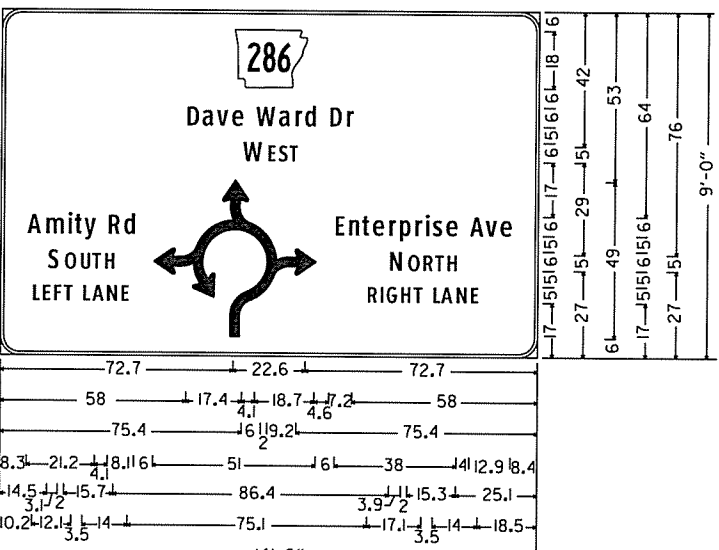
GM-286-23-STA42+50WB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W specified length;
 Circular Intersection DirectionalArrow_6" Text;
 [Amity Rd] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	209
							080492	123

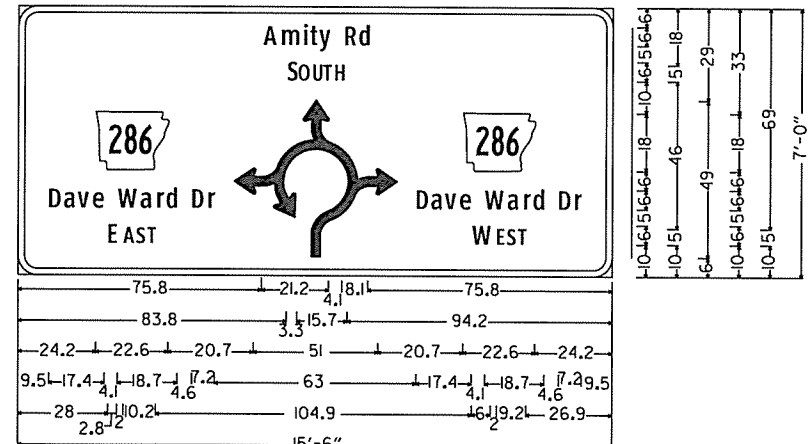
2 SIGN PLACEMENT SHEET



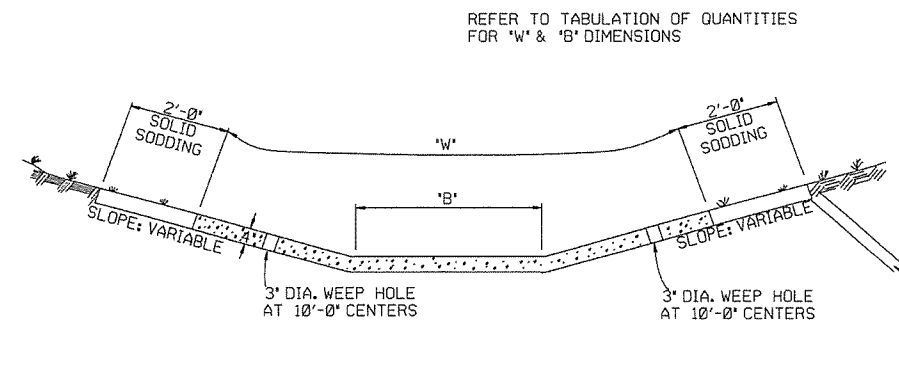
GM-S, AMITY-23-STA14+83NB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Enterprise Ave] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W specified length;
 [RIGHT LANE] ClearviewHwy-2-W;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W;
 Circular Intersection Directional Arrow_6" Text;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



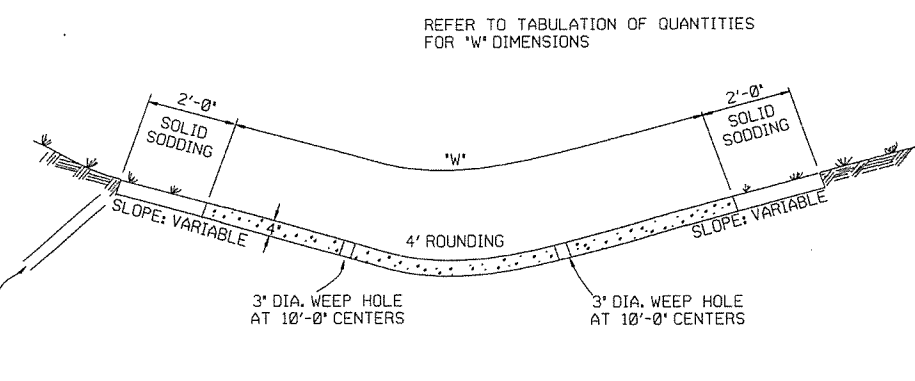
GM-286-23-STA58+46WB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W specified length;
 [Amity Rd] ClearviewHwy-2-W;
 [SOUTH] ClearviewHwy-2-W;
 [LEFT LANE] ClearviewHwy-2-W;
 Circular Intersection Directional Arrow_6" Text;
 [Enterprise Ave] ClearviewHwy-2-W;
 [NORTH] ClearviewHwy-2-W;
 [RIGHT LANE] ClearviewHwy-2-W;



GM-ENTERPRISE-23-STA16+45SB (EXTRUDED PANEL)
 6.0" Radius, 2.0" Border, White on Green;
 [Amity Rd] ClearviewHwy-2-W;
 [SOUTH] ClearviewHwy-2-W specified length;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [EAST] ClearviewHwy-2-W;
 Circular Intersection Directional Arrow_6" Text;
 [Dave Ward Dr] ClearviewHwy-2-W;
 [WEST] ClearviewHwy-2-W;



TYPE A

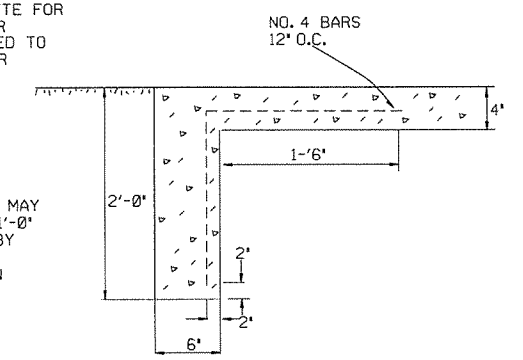


TYPE B

EXCAVATE TO NEAT LINES TO CONSTRUCT DITCH PAVING AND SOLID SODDING.

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.'

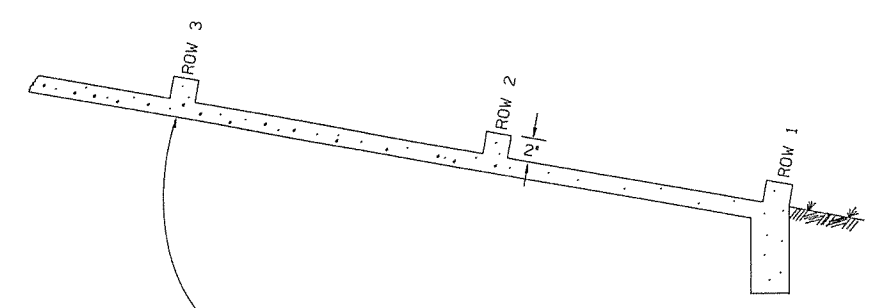
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION



TOE WALL DETAIL FOR CONCRETE DITCH PAVING

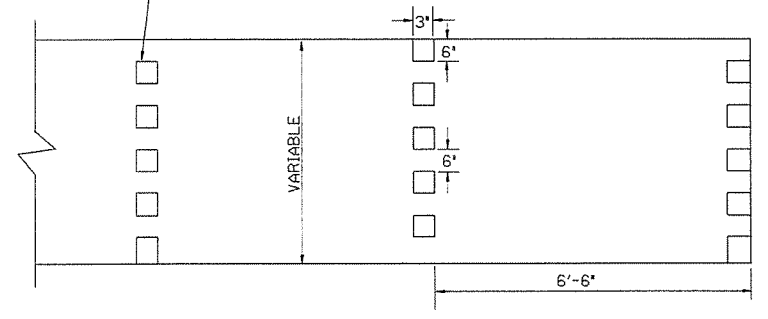
GENERAL NOTES:

- 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.



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED

ENERGY DISSIPATORS TO BE USED FOR THE ENTIRE LENGTH OF DITCH WHEN SLOPE OF DITCH PAVING EXCEEDS 7%. THE DISSIPATORS WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR CONCRETE DITCH PAVING.



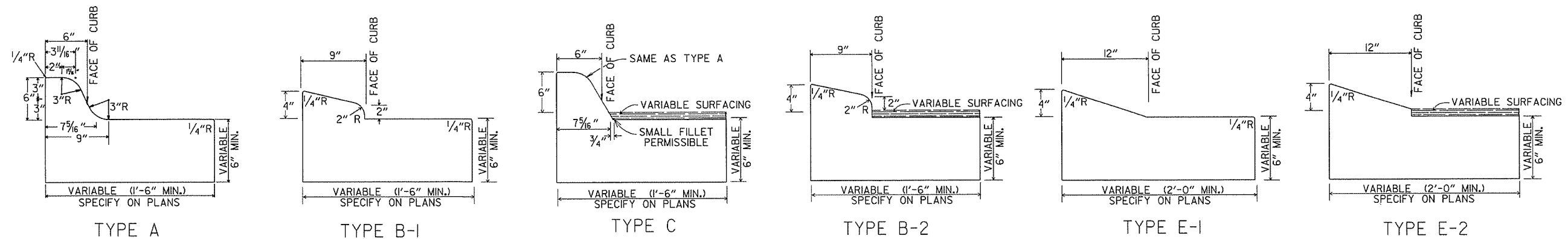
ENERGY DISSIPATORS
(NO SCALE)

DATE	REVISION	DATE FILM'D
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	11-30-89
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	508-11-1-84
11-1-84	ADDED	
11-1-84	EXCAVATION DETAILS ADDED	
	TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

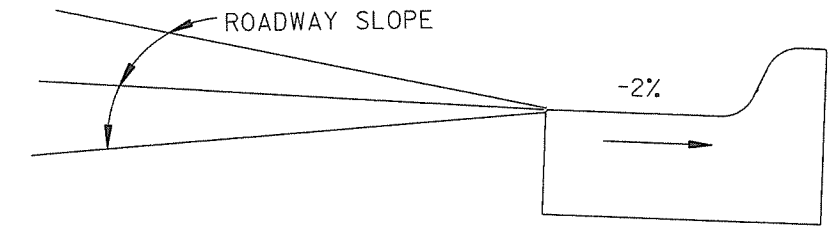
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

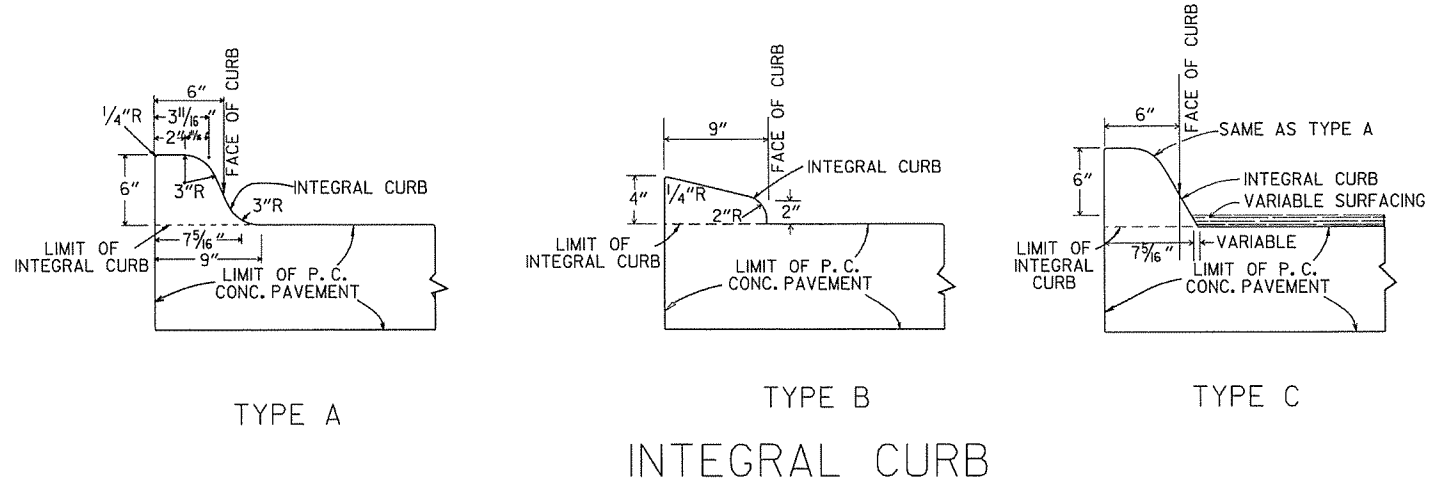
STANDARD DRAWING CDP-1



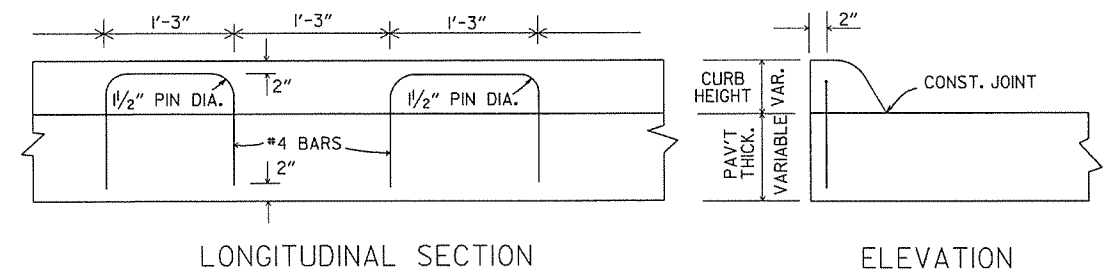
CONCRETE COMBINATION CURB AND GUTTER



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

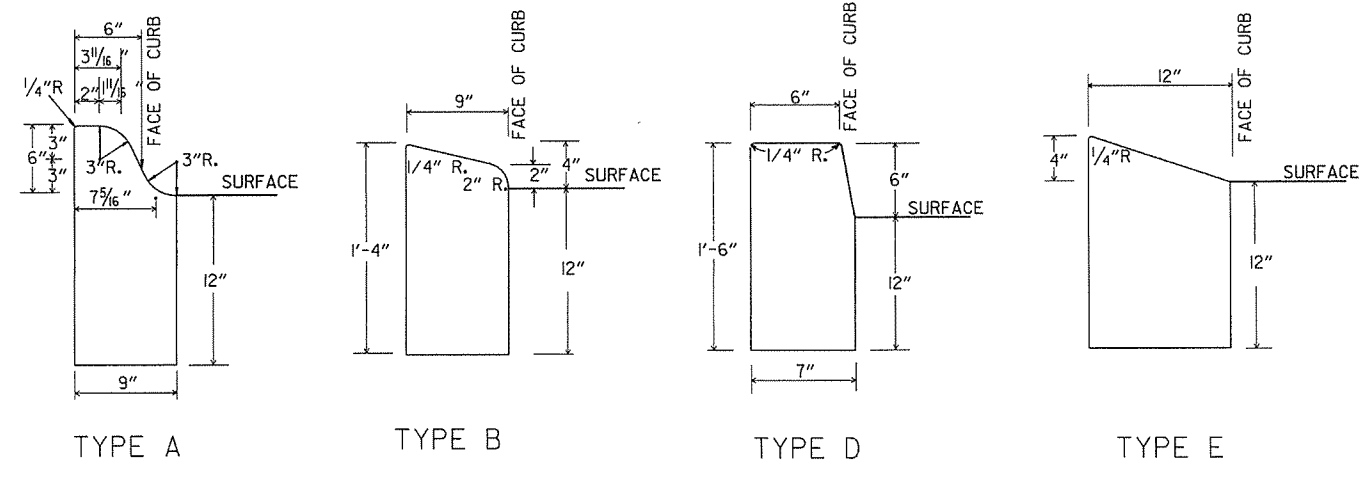


INTEGRAL CURB

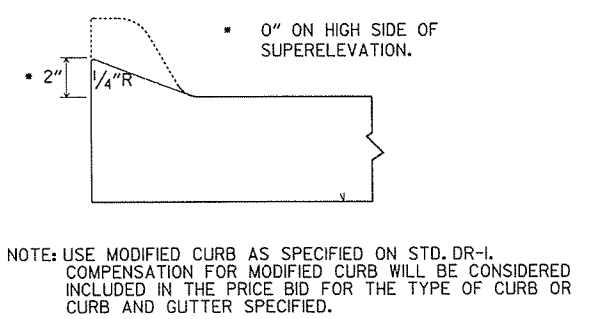


LONGITUDINAL SECTION ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



CONCRETE CURB



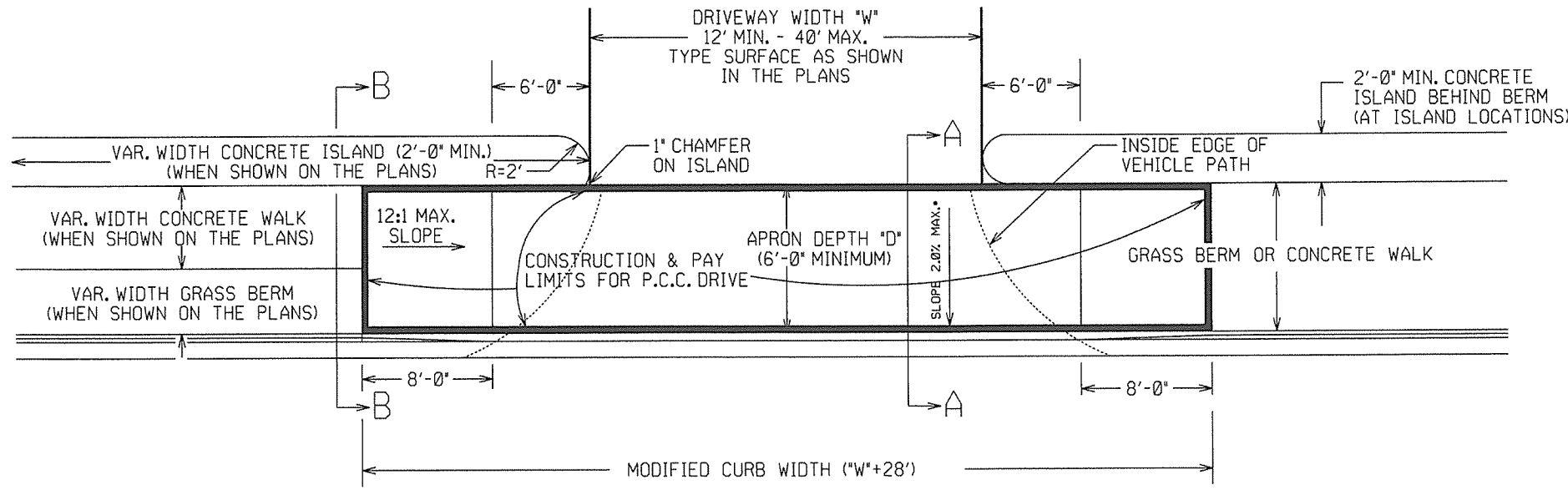
DETAILS OF MODIFIED CURB

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	VARIABLE 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

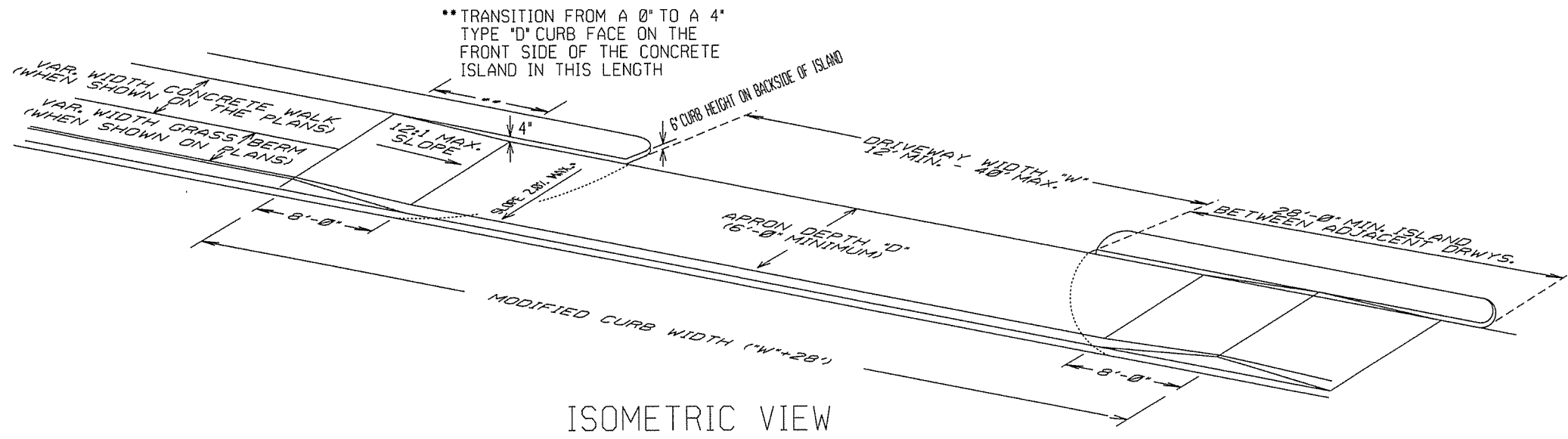
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

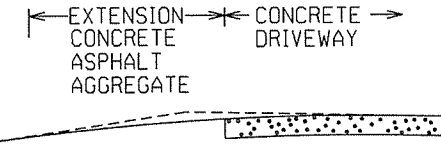
STANDARD DRAWING CG-1



PLAN VIEW



ISOMETRIC VIEW

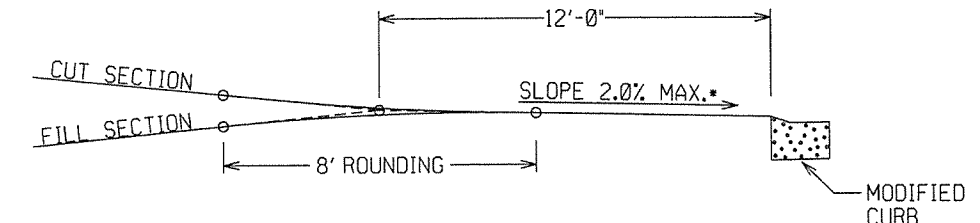


EXTENSION TYPICAL SECTIONS

- 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

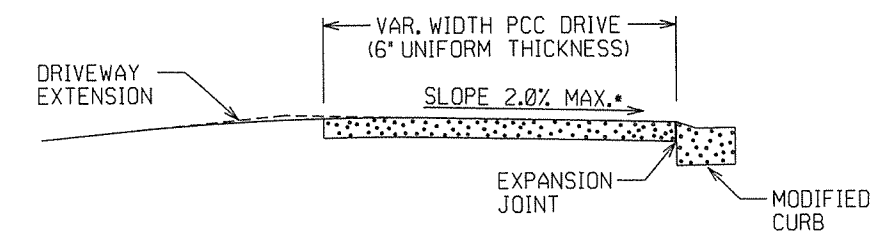
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

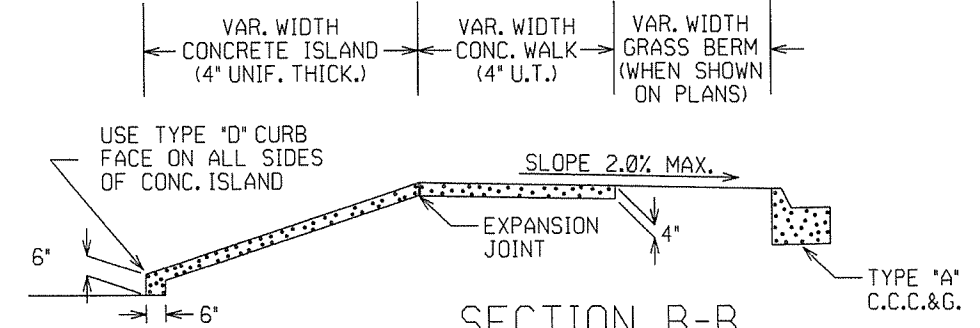


DRIVEWAY VERTICAL ALIGNMENT DETAILS

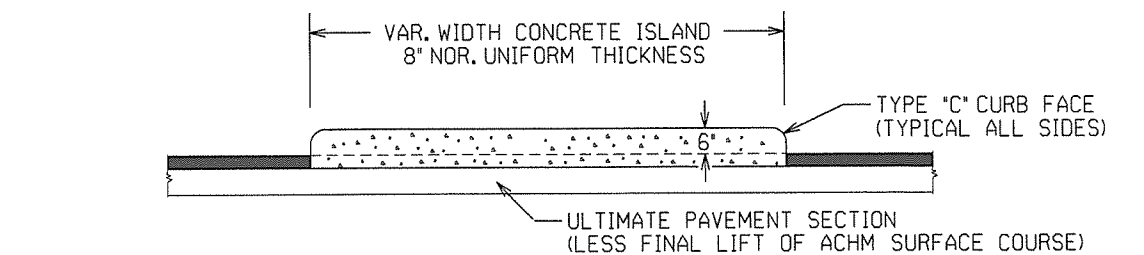
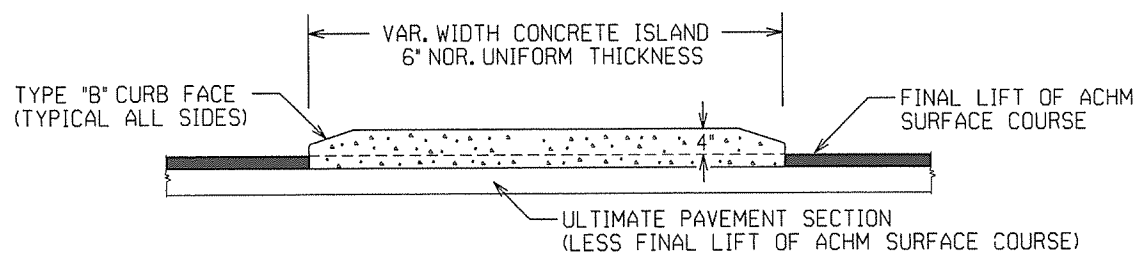
* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



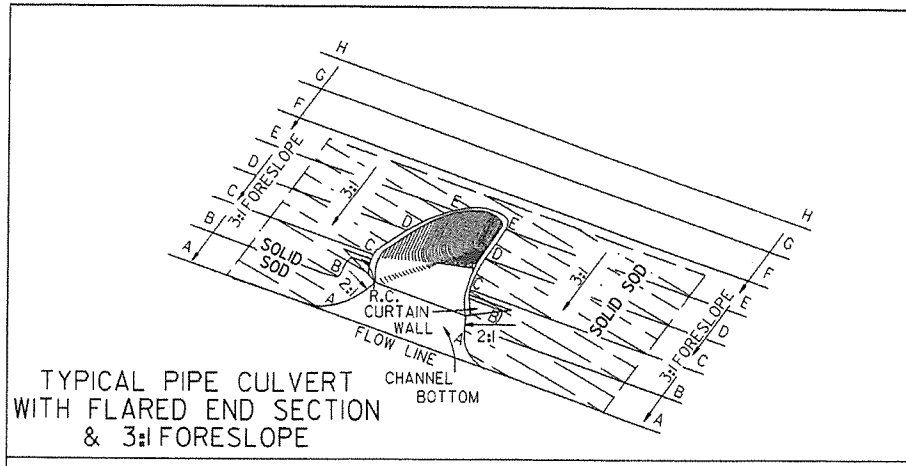
SECTION B-B
CURBED ISLAND BEHIND WALK



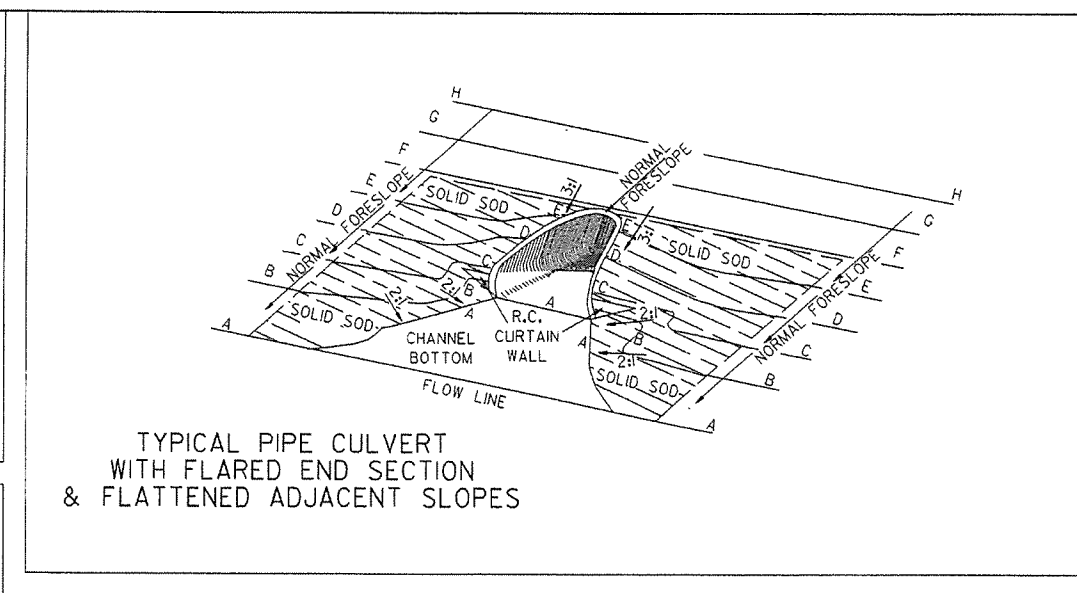
CURBED ISLANDS FOR CHANNELIZATION

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".

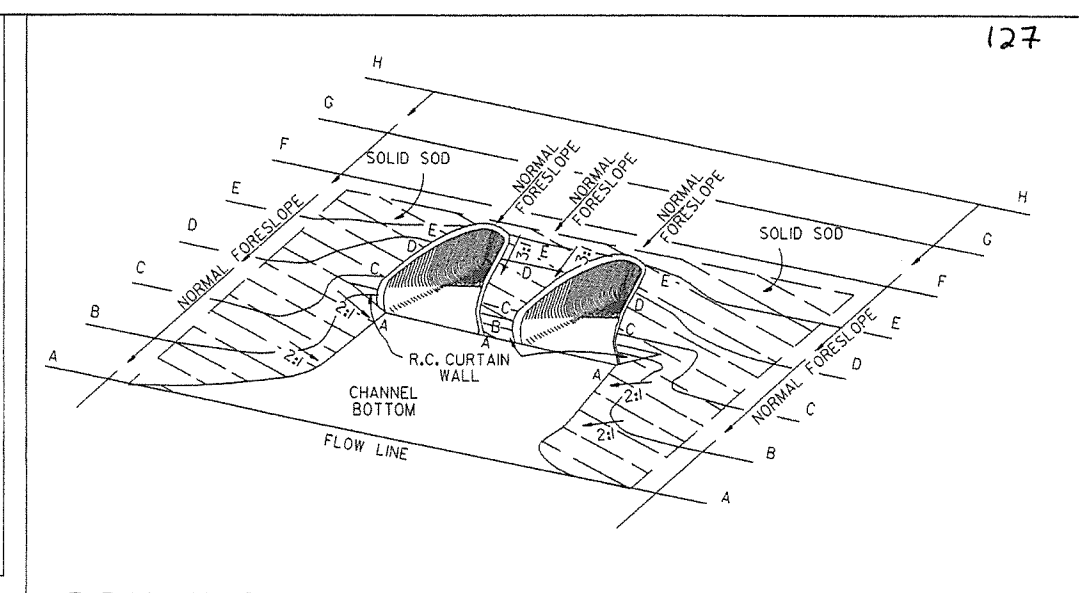
DATE	REV	DATE FILMED	DESCRIPTION
2-27-14			REVISED PLAN & ISOMETRIC VIEW
11-29-07			ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05			REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02			ADDED ISLAND DETAILS & NOTES
3-30-00			REV. MOD.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



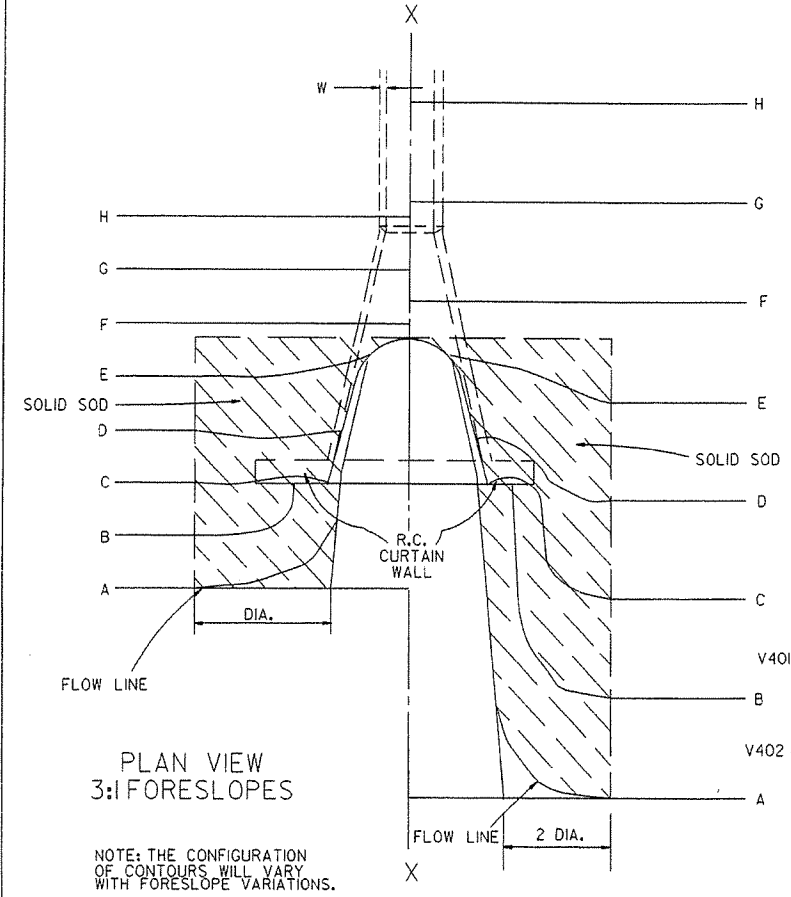
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



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

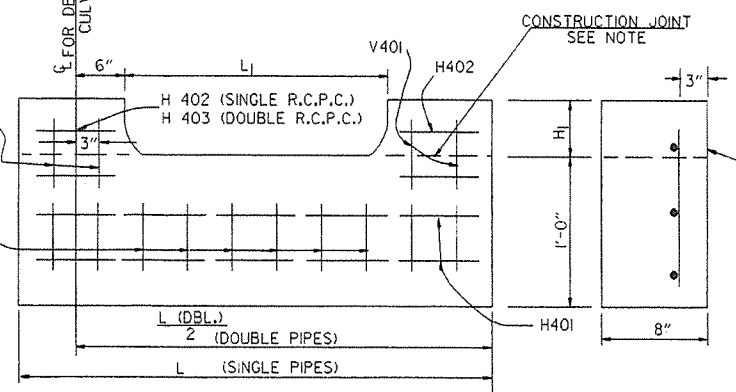
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

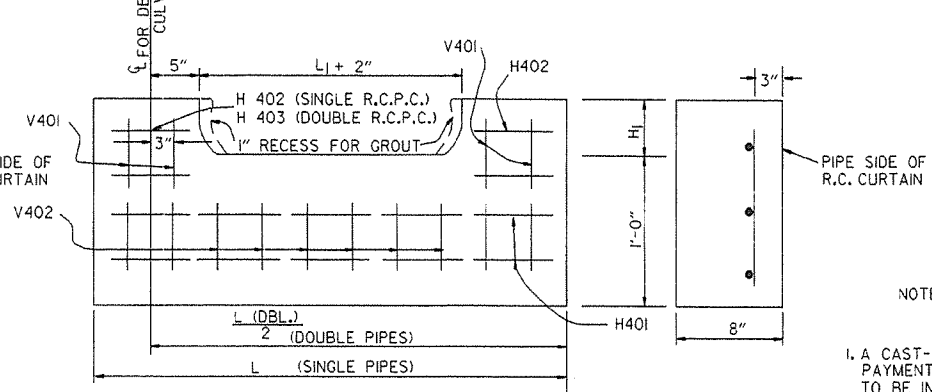
PIPE DIA.	H ₁	L ₁	L	L (DBL.) 2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11 1/2"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0 1/2"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3 1/2"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1 1/2"	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'-9 1/2"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

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



CAST-IN-PLACE

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



PRECAST

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

R.C. CURTAIN WALL DETAILS

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT								DOUBLE R.C. PIPE CULVERT									
	H401		H402		V401		V402		H401		H402		H403		V401		V402	
	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.	L	NO.
18"	7'-8"	2	1'-11 1/2"	4	1'-7 1/2"	8	8"	8	12'-2"	2	1'-11 1/2"	4	8"	2	1'-7 1/2"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8 1/2"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8 1/2"	12	8"	18
30"	10'-8"	2	2'-4 1/2"	4	1'-11 1/2"	10	8"	12	17'-8"	2	2'-4 1/2"	4	8"	2	1'-11 1/2"	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'-9 1/2"	8	2'-9 1/2"	16	8"	15	23'-8"	2	3'-9 1/2"	8	8"	4	2'-9 1/2"	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'-8 1/2"	12	3'-5 1/2"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5 1/2"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

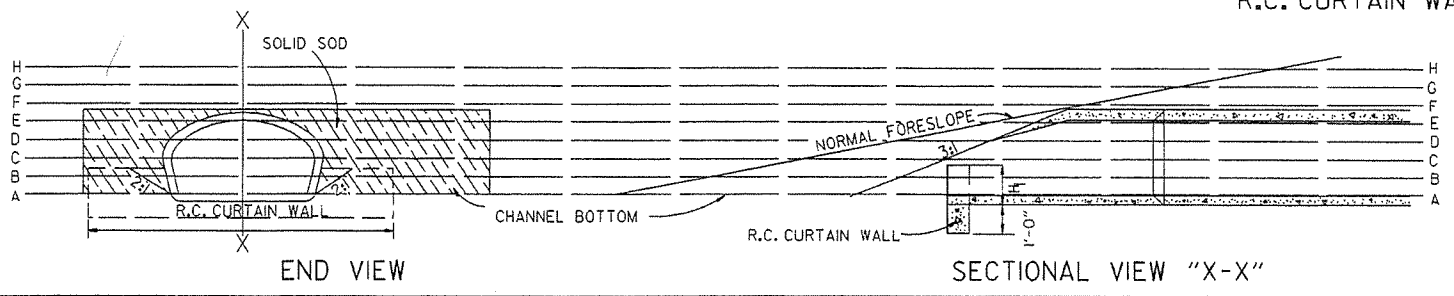
ALL REINFORCING STEEL #4 BARS @ 6" O.C.

SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C.						DOUBLE R.C.P.C.									
	3:1		4:1		6:1		3:1		4:1		6:1					
	SQ. YDS.						SQ. YDS.									
18"	5	8	12	12	6	8	13	18	24	36	36	24	30	45	54	81
24"	8	12	18	18	9	13	20	24	36	54	54	36	45	68	81	108
30"	13	18	27	27	14	19	30	36	54	81	81	54	68	102	126	162
36"	17	24	36	36	18	24	40	48	72	108	108	72	90	135	162	216
42"	23	30	45	45	24	32	54	64	96	144	144	96	120	180	216	288
48"	29	36	54	54	30	40	70	84	126	180	180	126	156	234	288	384
54"	35	45	68	68	36	48	87	102	153	216	216	153	192	288	360	480
60"	45	60	90	90	48	64	117	138	207	288	288	207	264	396	480	648
72"	64	92	136	136	67	90	162	192	288	396	396	288	360	540	648	864

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 3/4".
 3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
 4. WELDED WIRE MESH 3 x 3 W/10 x W/10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

SECTIONAL VIEW "X-X"

10-18-96 ADDED NOTE TO SOLID SODDING	10-18-96	ARKANSAS STATE HIGHWAY COMMISSION
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		
DATE	REVISION	FILMED
		STANDARD DRAWING FES-1

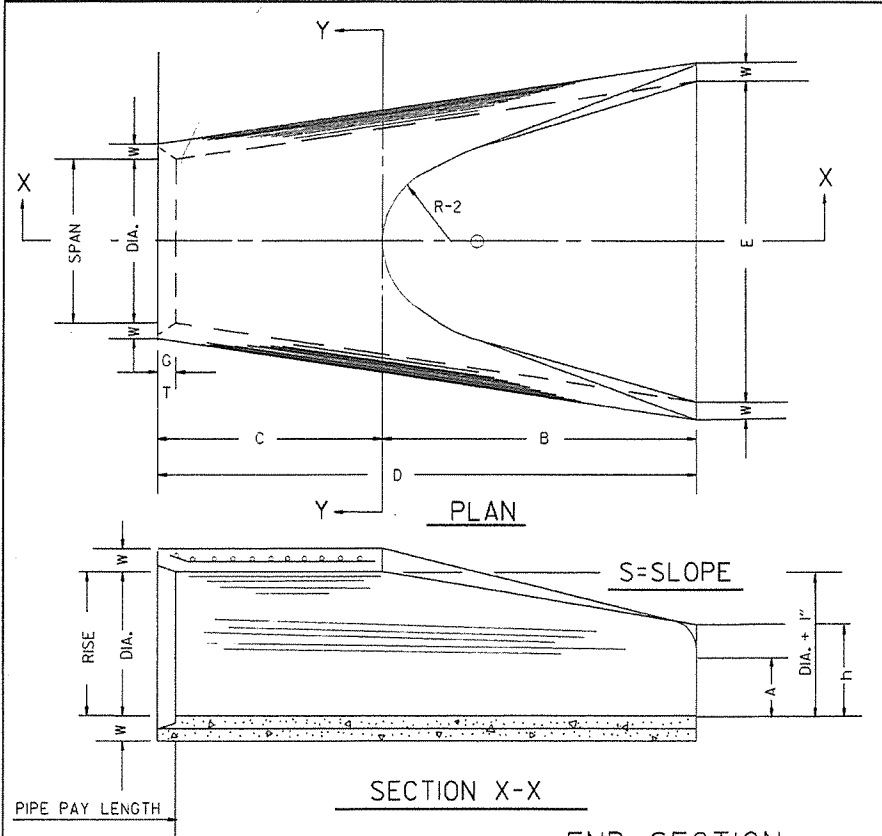
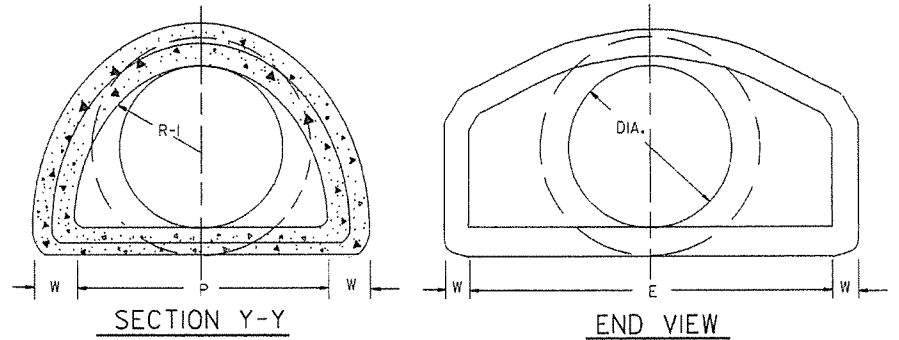


TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2 1/2"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15 1/2"	12"	2"	1000	1'-0 1/2"
24"	3"	9 1/2"	3'-7 1/2"	2'-6"	6'-1 1/2"	4'-0"	3:1	25"	33 3/8"	16 1/8"	14"	2 1/2"	1600	1'-1 1/2"
30"	3 1/2"	1'-0"	4'-6"	1'-7 3/4"	6'-3 3/4"	5'-0"	3:1	31"	37"	18 1/2"	15"	3 1/4"	1940	1'-4 3/8"
36"	4"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/8"	24 3/8"	20"	3 1/2"	4100	1'-8"
42"	4 1/2"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 1/8"	27 1/2"	22"	3 1/2"	5380	2'-2 1/2"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56 1/2"	28 3/8"	22"	3 1/2"	6550	2'-6"
54"	5 1/2"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65 1/2"	33 3/8"	24"	4"	8750	2'-10 1/2"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72 1/2"	36 1/8"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/8"	38 1/8"	24"	5"	13250	4'-6"



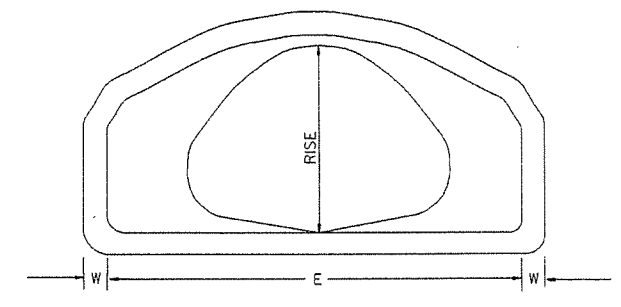
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

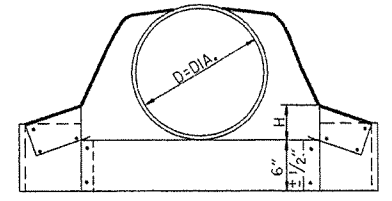
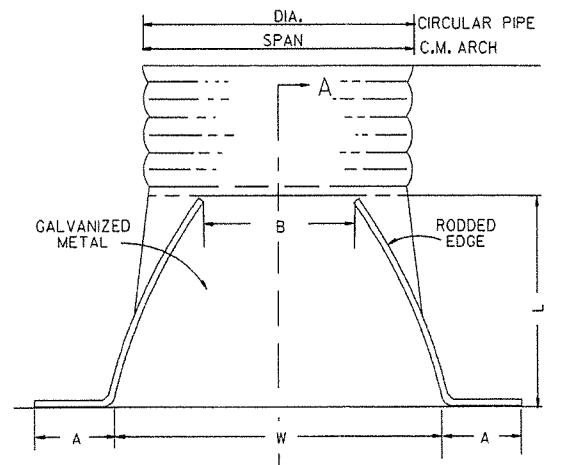
ARCH PIPE

EQUIV. DIA.	SPAN		RISE		W	A	B	C	D	E	P	R2	G-T	S
	AASHTO M 206	AHD NOMINAL	AASHTO M 206	AHD NOMINAL										
INCHES														
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1 1/2"	2 1/2:1
18	22	22	13 1/2	14	2 1/2"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32 1/8"	13"	2 1/2"	2 1/2:1
21	26	26	15 1/2	16	2 3/4"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34 1/8"	14"	2 1/2"	2 1/2:1
24	28 1/2	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 1/8"	15"	2 1/2"	2 1/2:1
30	36 1/4	36	22 1/2	23	3 1/2"	10"	3'-1"	3'-0 1/2"	6'-1 1/2"	6'-0"	47 1/8"	20"	3"	2 1/2:1
36	43 3/4	44	26 5/8	27	4"	10 1/2"	4'-0"	2'-1 1/2"	6'-1 1/2"	6'-6"	54 1/8"	22"	3 1/2"	2 1/2:1
42	51 1/8	51	31 1/8	31	4 1/2"	11 1/2"	4'-7"	1'-10 1/4"	6'-5 1/4"	7'-2"	59 1/2"	23"	3 3/4"	2 1/2:1
48	58 1/2	59	36	36	5"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	7'-10"	70 3/8"	24"	4 1/4"	2 1/2:1
54	65	65	40	40	5 1/2"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/8"	24"	4 3/4"	2 1/2:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 3/8"	24"	5"	2 1/2:1

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



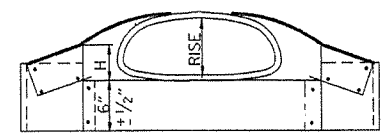
END VIEW CONCRETE ARCH PIPE



CIRCULAR PIPE

CIRCULAR PIPE

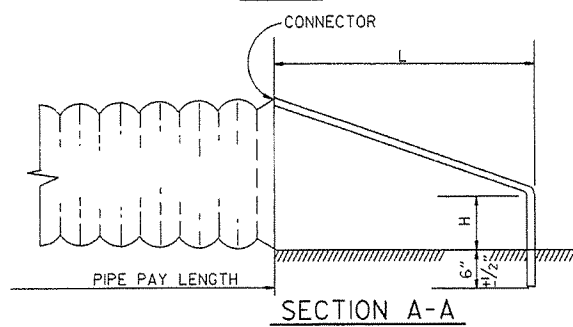
D. DIA.	GAUGE	A 1" ±	B. MAX. 1" ±	H 1 1/2" ±	L 1 1/2" ±	W 2" ±	S
12	16	6	6	6	21	24	2 1/2:1
15	16	7	8	6	26	30	2 1/2:1
18	16	8	10	6	31	36	2 1/2:1
21	16	9	12	6	36	42	2 1/2:1
24	16	10	13	6	41	48	2 1/2:1
30	14	12	16	8	51	60	2 1/2:1
36	14	14	19	9	60	72	2 1/2:1
42	12	16	22	11	69	84	2 1/2:1
48	12	18	27	12	78	90	2 1/2:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1 3/4:1
66	12	18	36	12	87	120	1 1/2:1
72	12	18	39	12	87	126	1 1/3:1



C.M. ARCH PIPE

C.M. ARCH PIPE

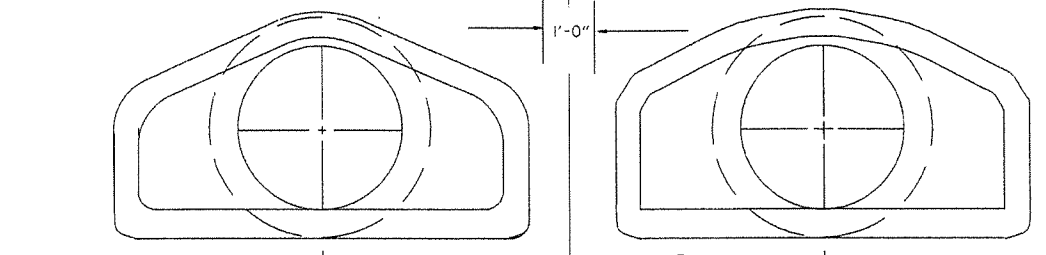
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX. 1" ±	H 1 1/2" ±	L 2" ±	W	S	GAUGE
15"	17	13	7	9	6	19	30	2 1/2:1	16
18"	21	15	7	10	6	23	36	2 1/2:1	16
21"	24	18	8	12	6	28	42	2 1/2:1	16
24"	28	20	9	14	6	32	48	2 1/2:1	16
30"	35	24	10	16	6	39	60	2 1/2:1	14
36"	42	29	12	18	8	46	75	2 1/2:1	14
42"	49	33	13	21	9	53	85	2 1/2:1	12
48"	57	38	16	26	12	63	90	2 1/2:1	12
54"	64	43	18	30	12	70	102	2 1/2:1	12
60"	71	47	18	33	12	77	114	2 1/4:1	12



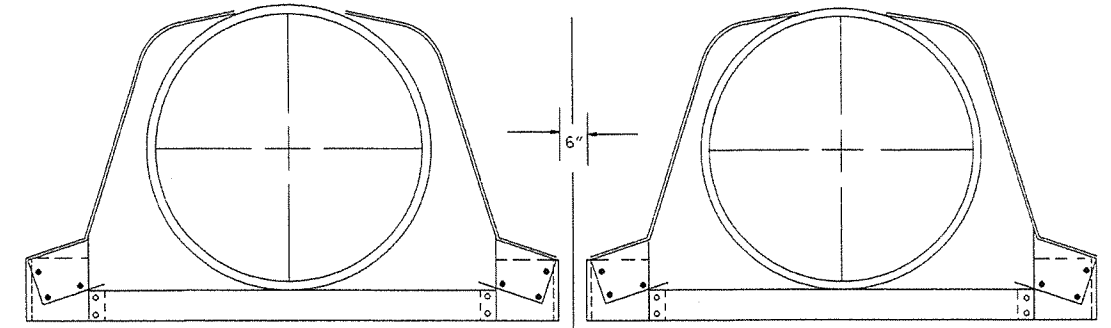
SECTION A-A

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

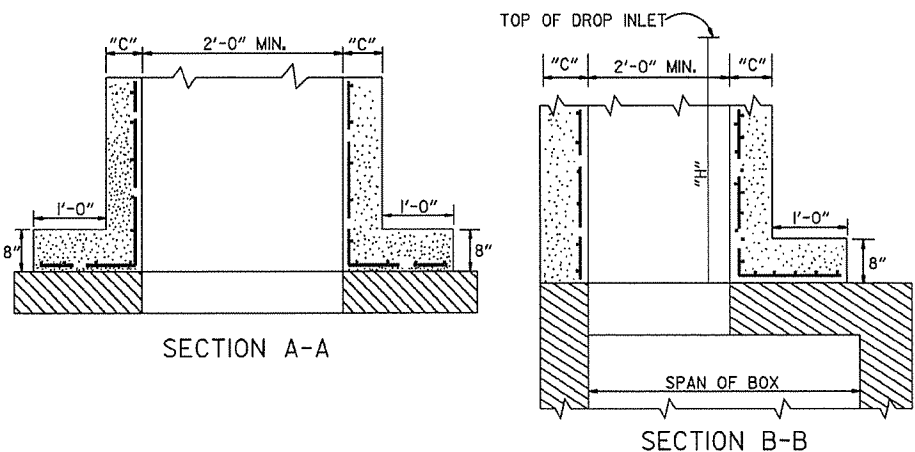
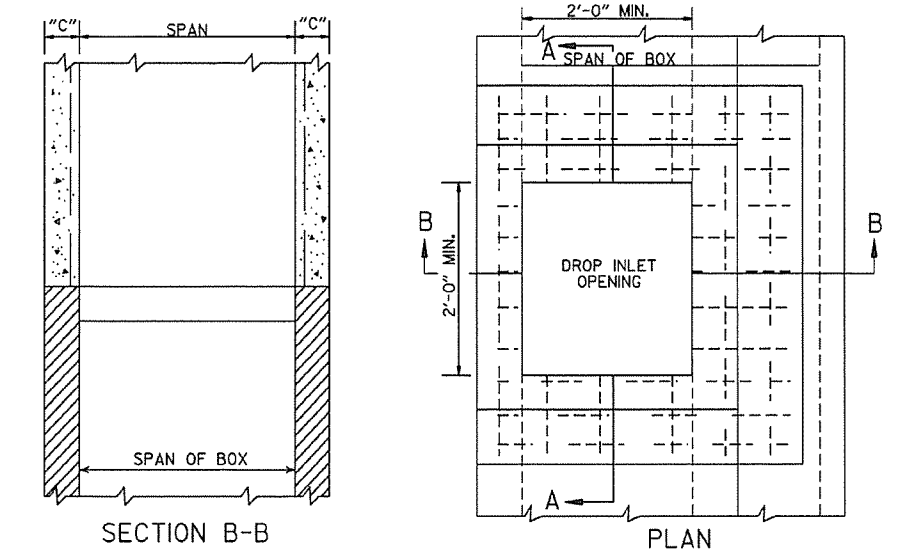


MULTIPLE C.M. PIPE CULVERTS

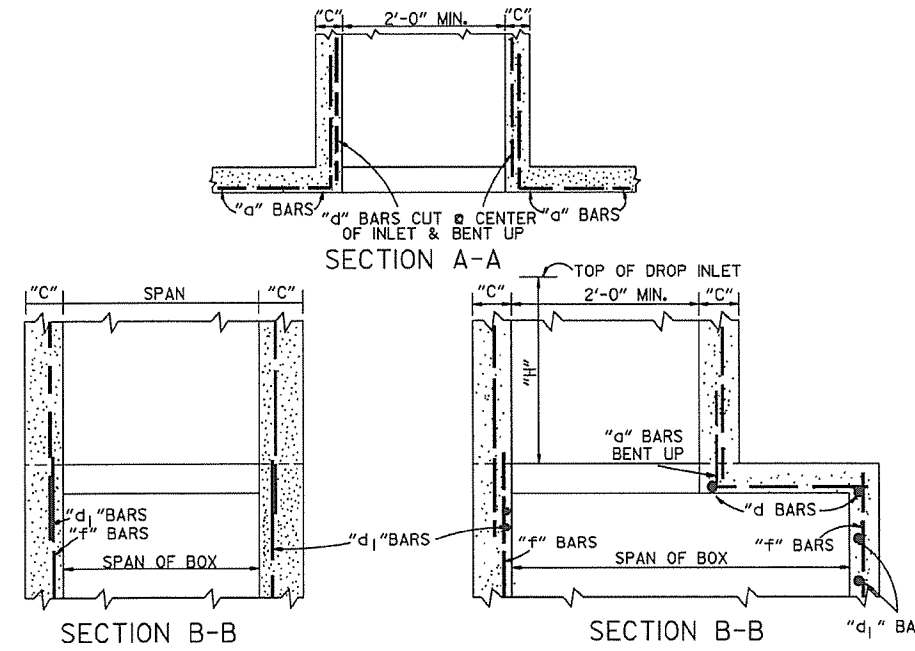
10-18-96	REVISED ASTM REF. TO AASHTO	10-17-96	ARKANSAS STATE HIGHWAY COMMISSION
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80	
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78	
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75	
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74	
5-24-73	CMP END SECTION, SHOW PIPE PAY LENGTH	627-5-24-73	
10-2-72	REVISED AND REDRAWN	760-10-2-72	
DATE	REVISION	FILMED	

FLARED END SECTION

STANDARD DRAWING FES-2

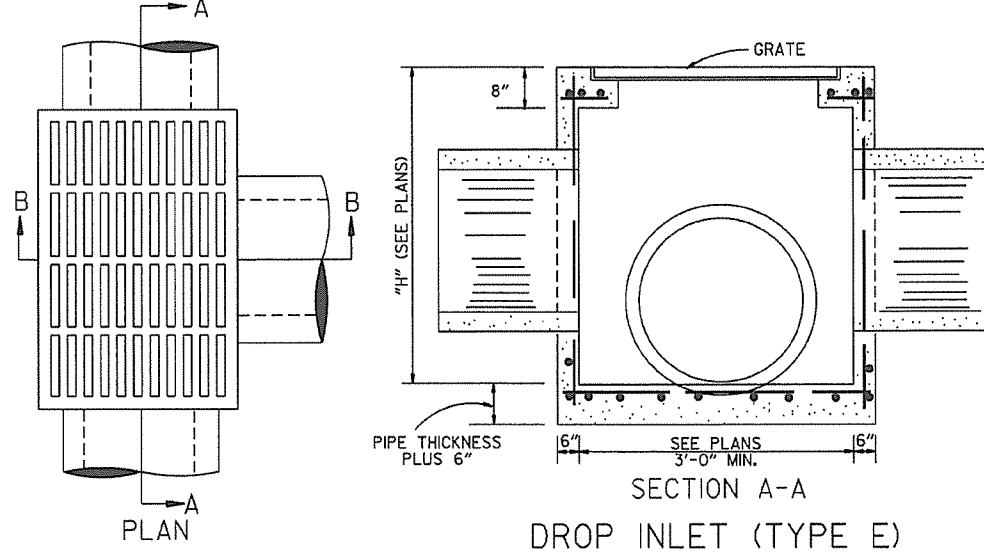


METHOD OF CONSTRUCTING DROP INLET ON EXISTING R.C. BOX CULVERT



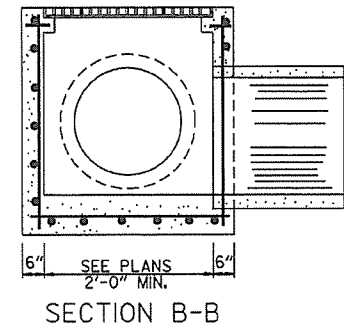
METHOD OF CONSTRUCTING DROP INLET ON NEW R.C. BOX CULVERT

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

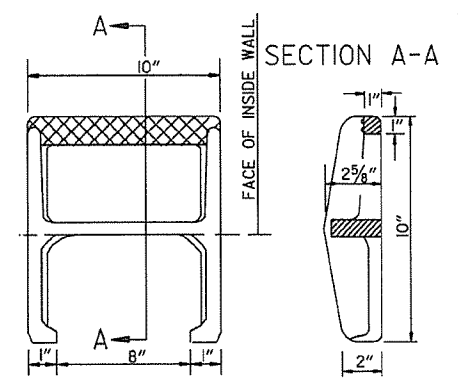


DROP INLET (TYPE E)

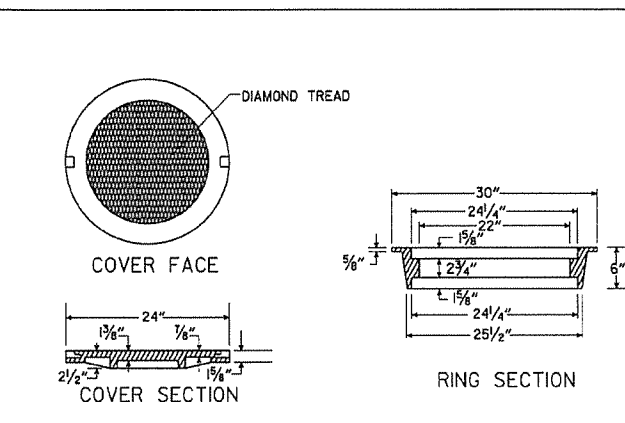
NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVEF. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



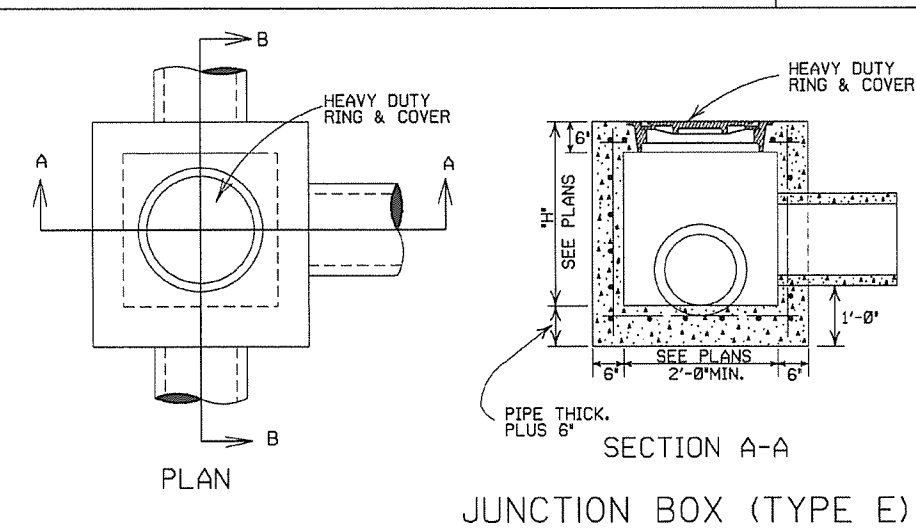
SECTION B-B



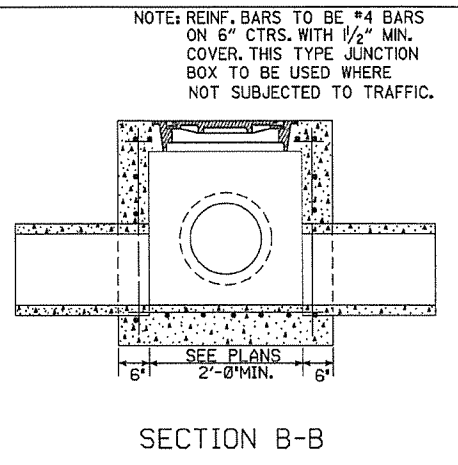
DETAIL OF STEP FOR DROP INLET
APPROX. WEIGHT = 11 LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.



HEAVY DUTY RING & COVER
APPROXIMATE TOTAL WEIGHT = 333 LBS.

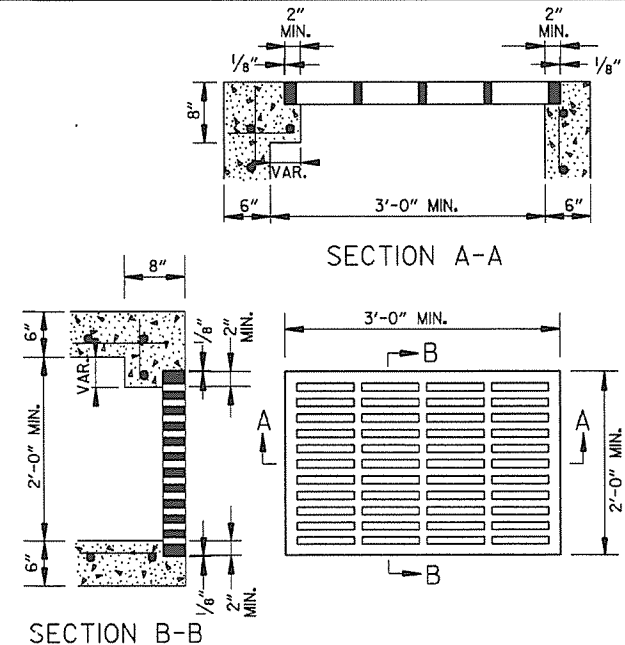


JUNCTION BOX (TYPE E)

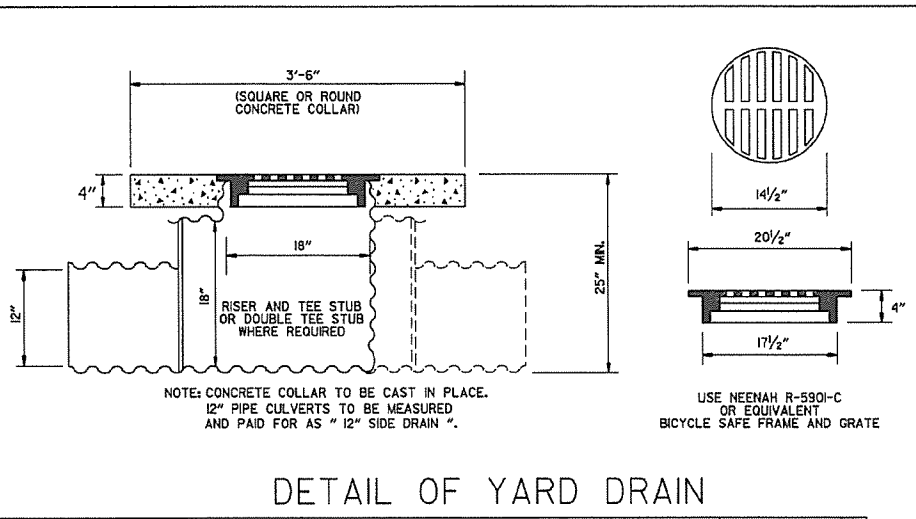


SECTION B-B

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1/2" MIN. COVEF. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



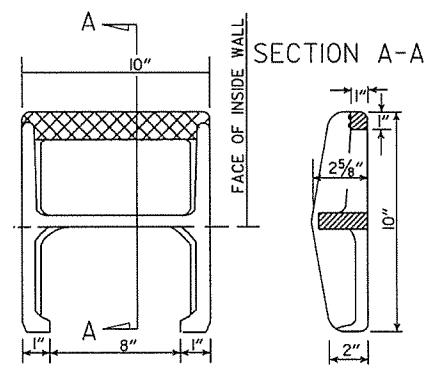
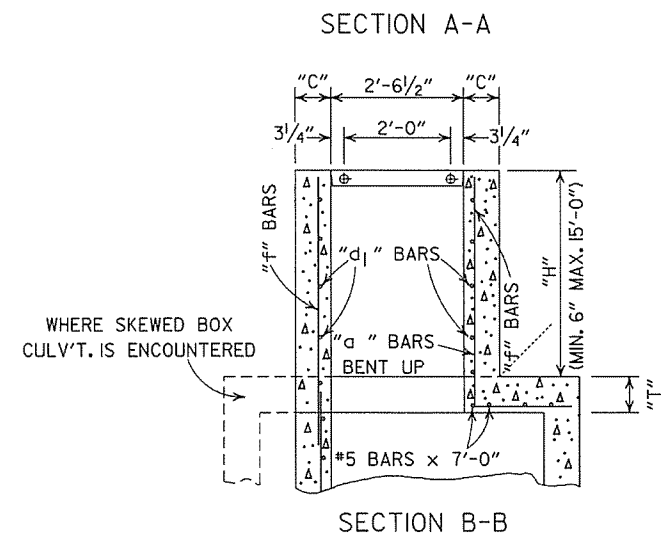
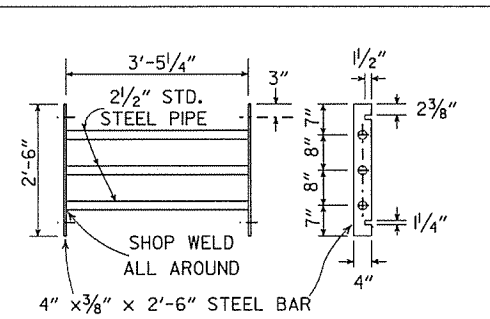
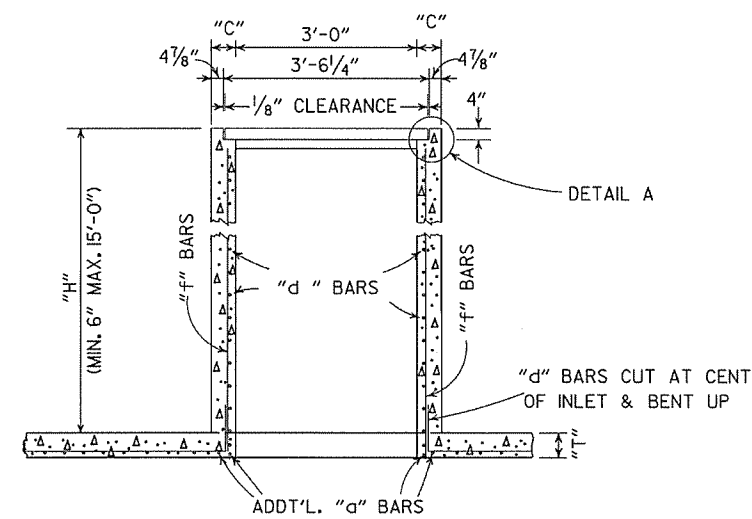
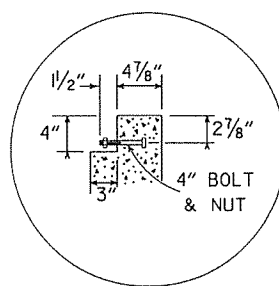
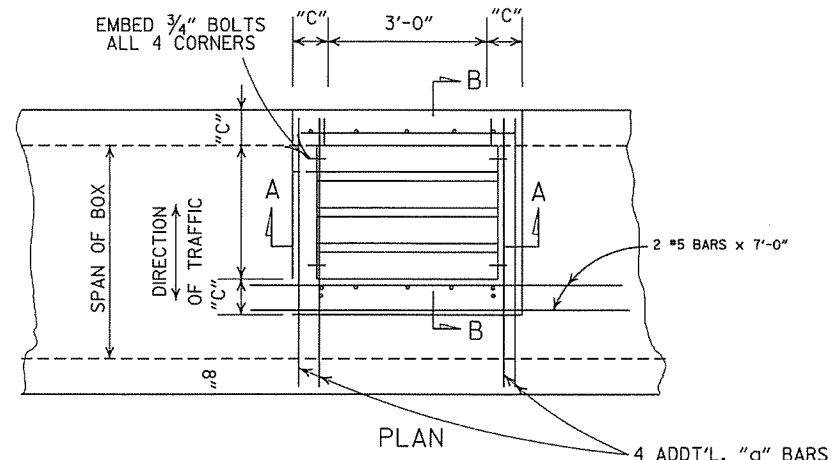
GRATE FOR TYPE E DROP INLET
APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.



DETAIL OF YARD DRAIN

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	

- GENERAL NOTES:
- ALL EXPOSED CORNERS SHALL BE 3/4" CHAMFERED.
 - STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
 - EXPANSION JOINT MATERIAL SHALL BE 3/4" PREFORMED FIBER.
 - 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.
 - GRATE AND FRAME SHALL NOT BE PAINTED.
 - GRATE SHALL BE BICYCLE SAFE.
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - 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.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 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.

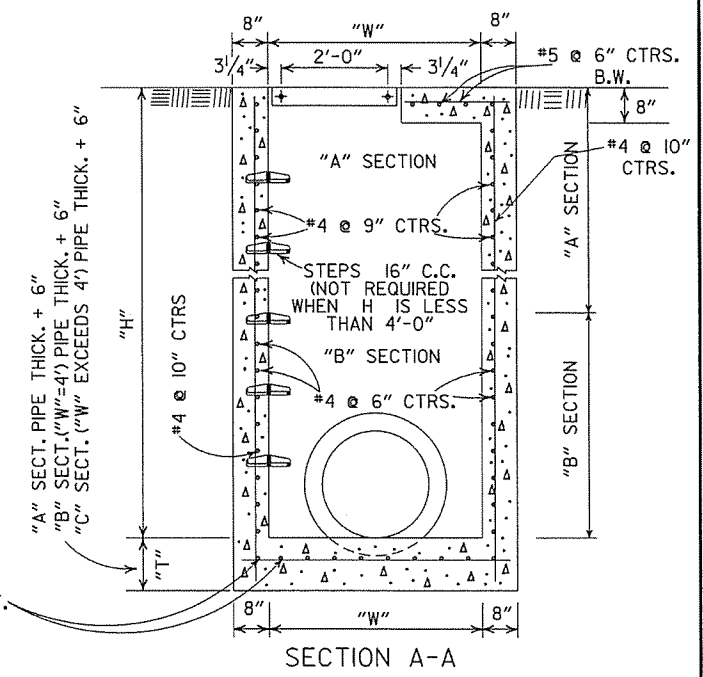
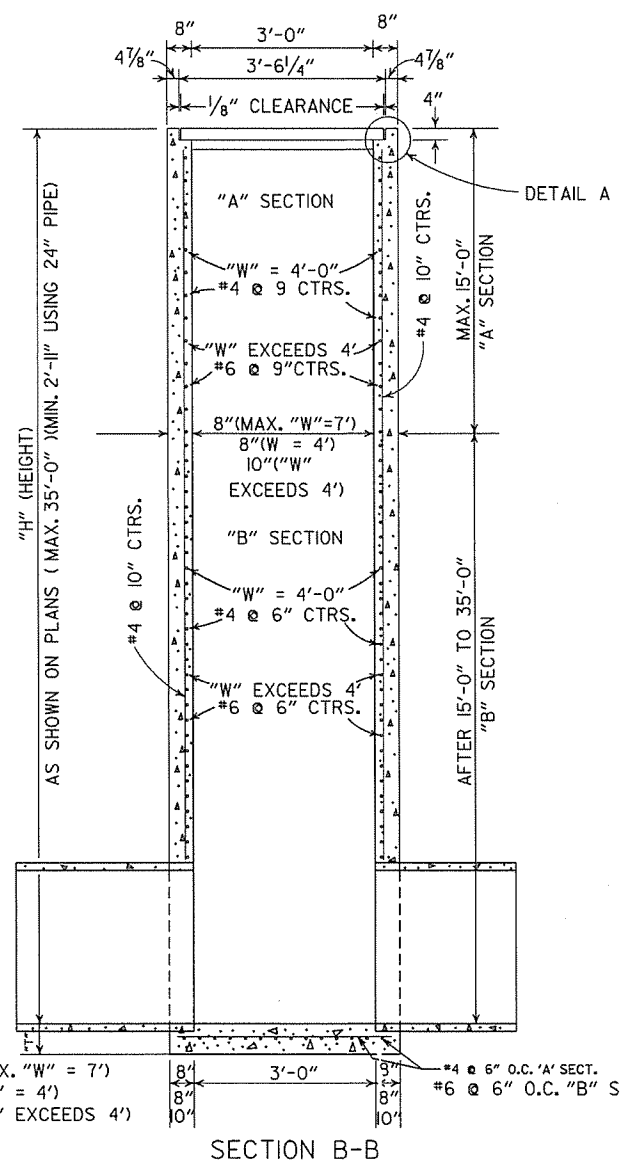
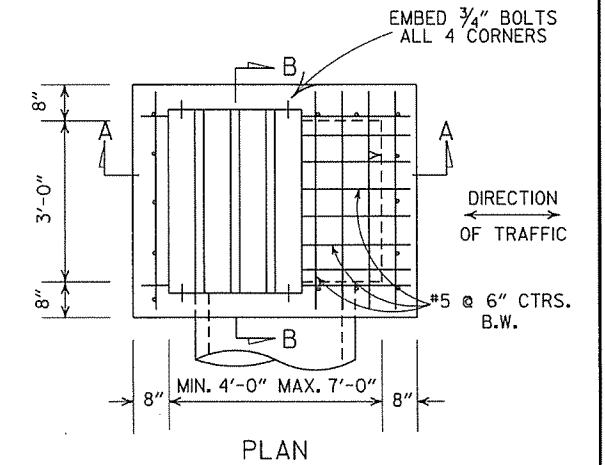


- GENERAL NOTES:
1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 10R 2, ASTM A307 OR AASHTO M 164.
 2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
 3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
 4. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1/2" COVER. LARGER SIZES TO HAVE 2" COVER.
 6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TABLE OF "W" DIMENSIONS

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

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



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

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

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

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

"A" SECT. (MAX. "W" = 7')
 "B" SECT. ("W" = 4')
 "C" SECT. ("W" EXCEEDS 4')

DROP INLET (TYPE RM)

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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

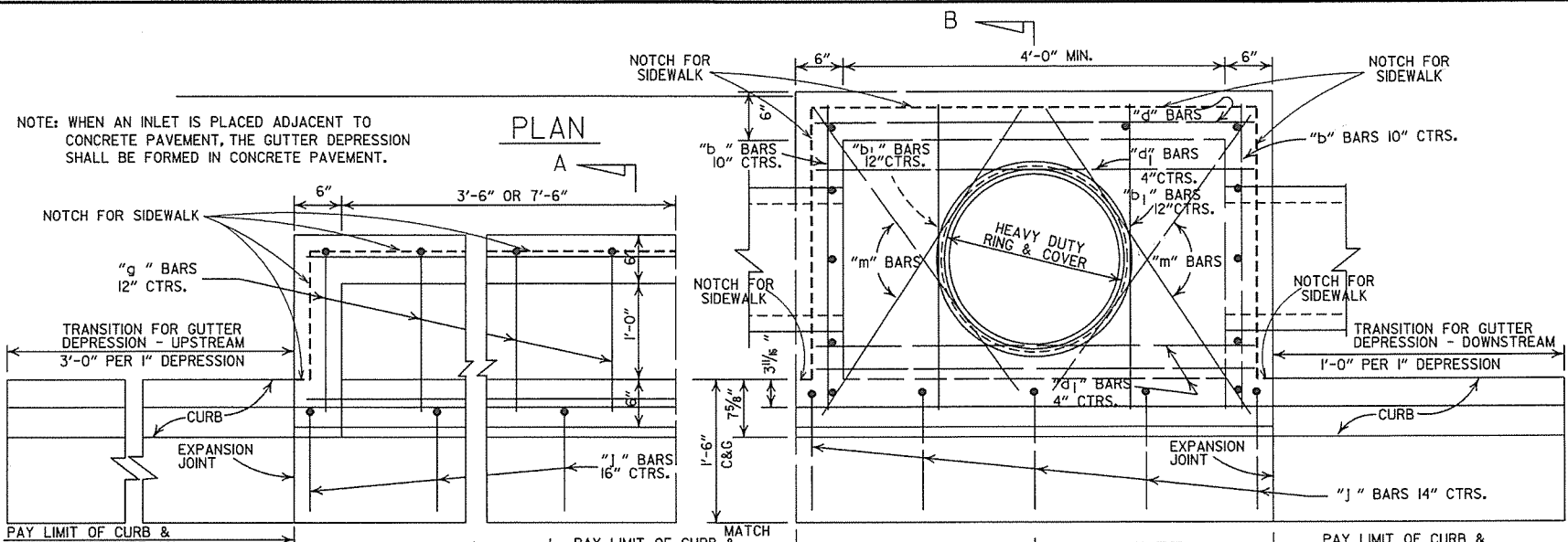
STANDARD DRAWING FPC-9D

4'-0" LENGTH DROP INLET DROP INLET EXTENSION

PIPE SIZE	MIN. WIDTH	HEIGHT 5'-0"		PLUS OR MINUS PER LIN. FT. OF HEIGHT		4'-0"		8'-0"	
		CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS	CLASS A CONC. CU. YDS.	REINF. STEEL POUNDS
18"	2'-6"	1.77	156	0.28	22	0.58	36	0.67	72
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				
						DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.			
						0.04	3		

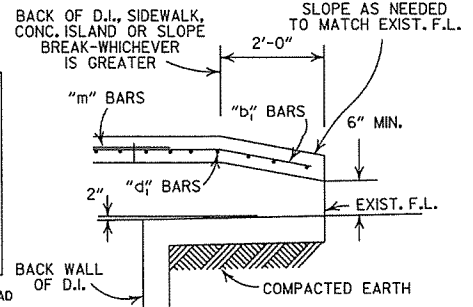
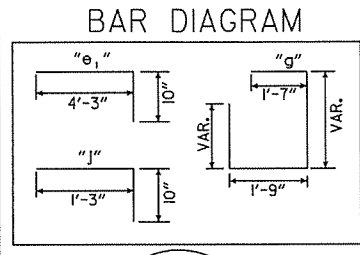
NOTE: QUANTITIES ARE APPROXIMATE AND ARE SHOWN FOR BIDDER INFORMATION ONLY.

NOTE: WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.

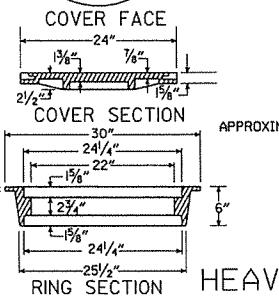
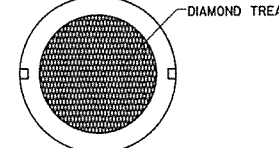


DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

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

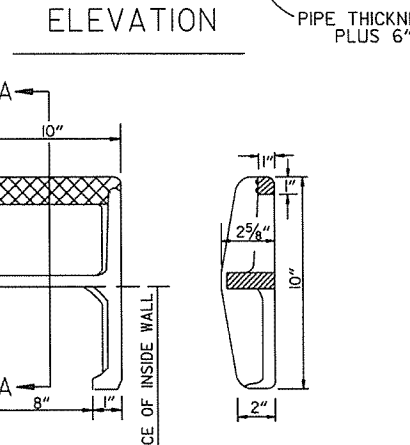
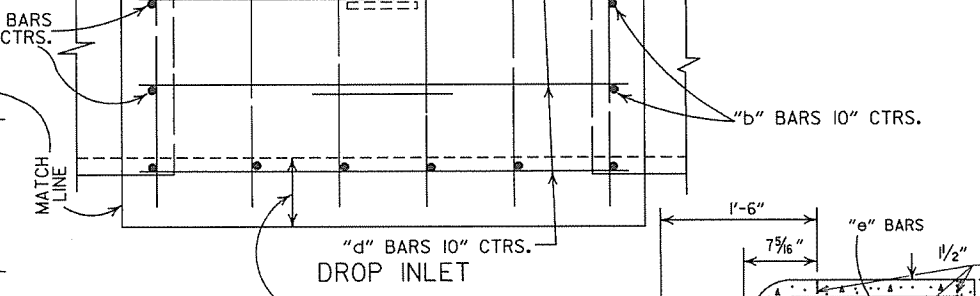
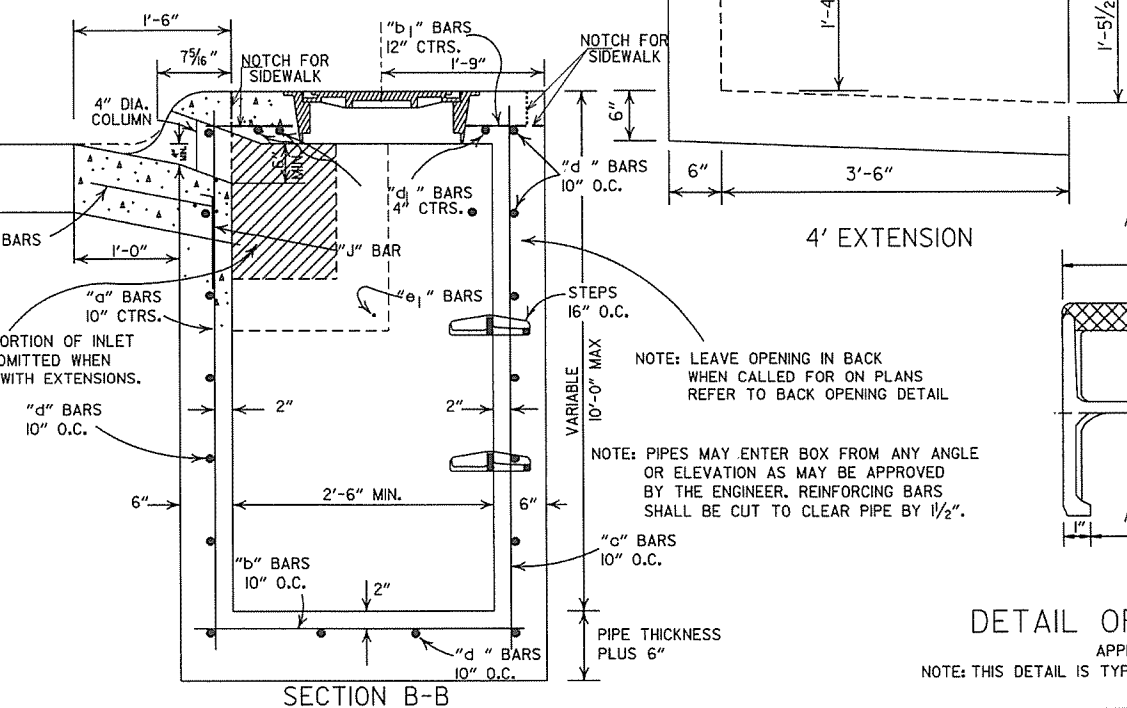
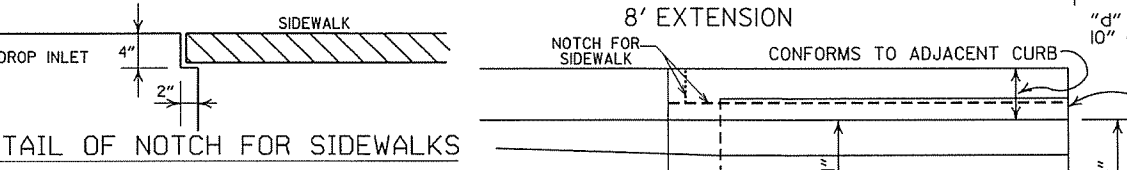
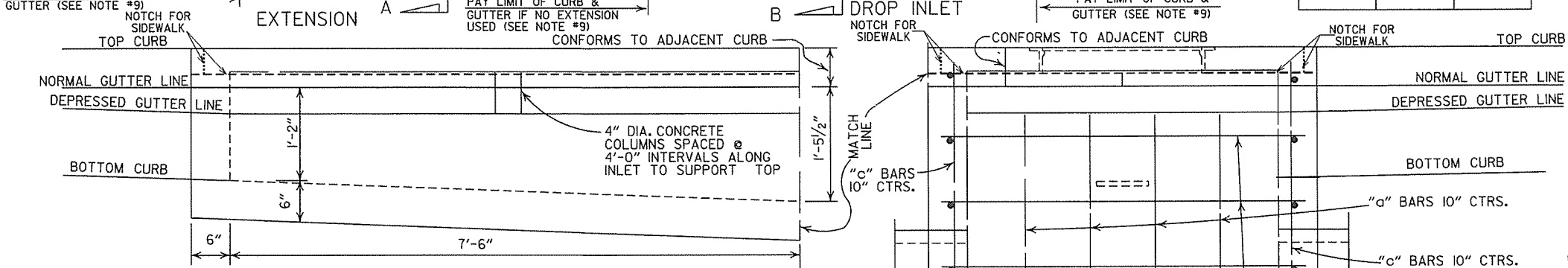


BACK OPENING
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



HEAVY DUTY RING & COVER

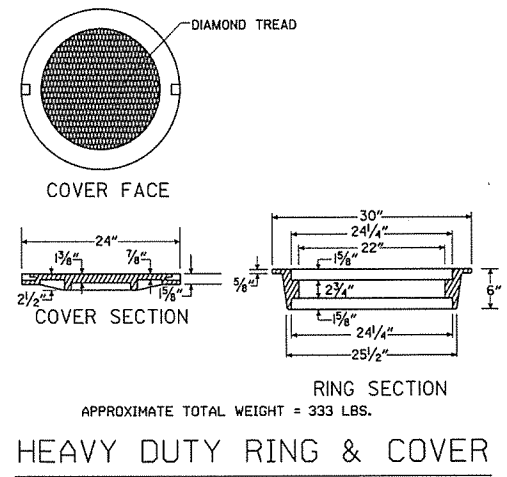
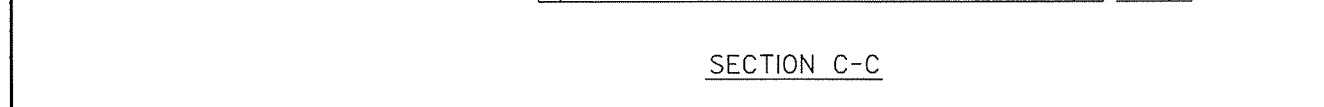
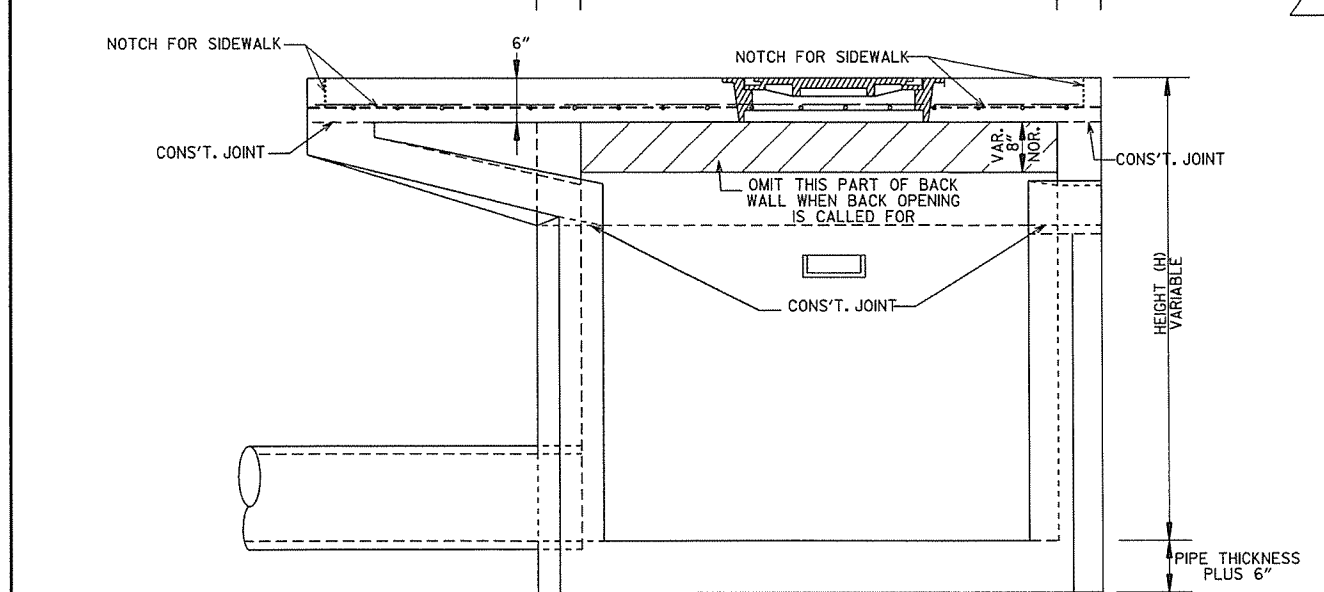
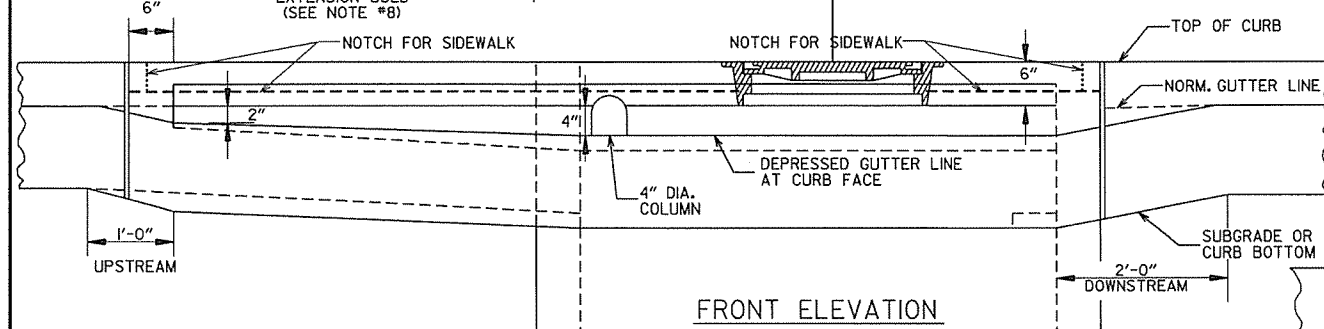
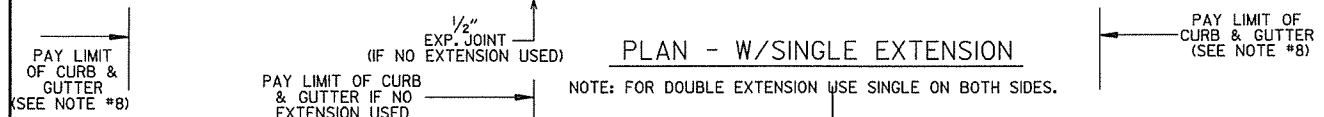
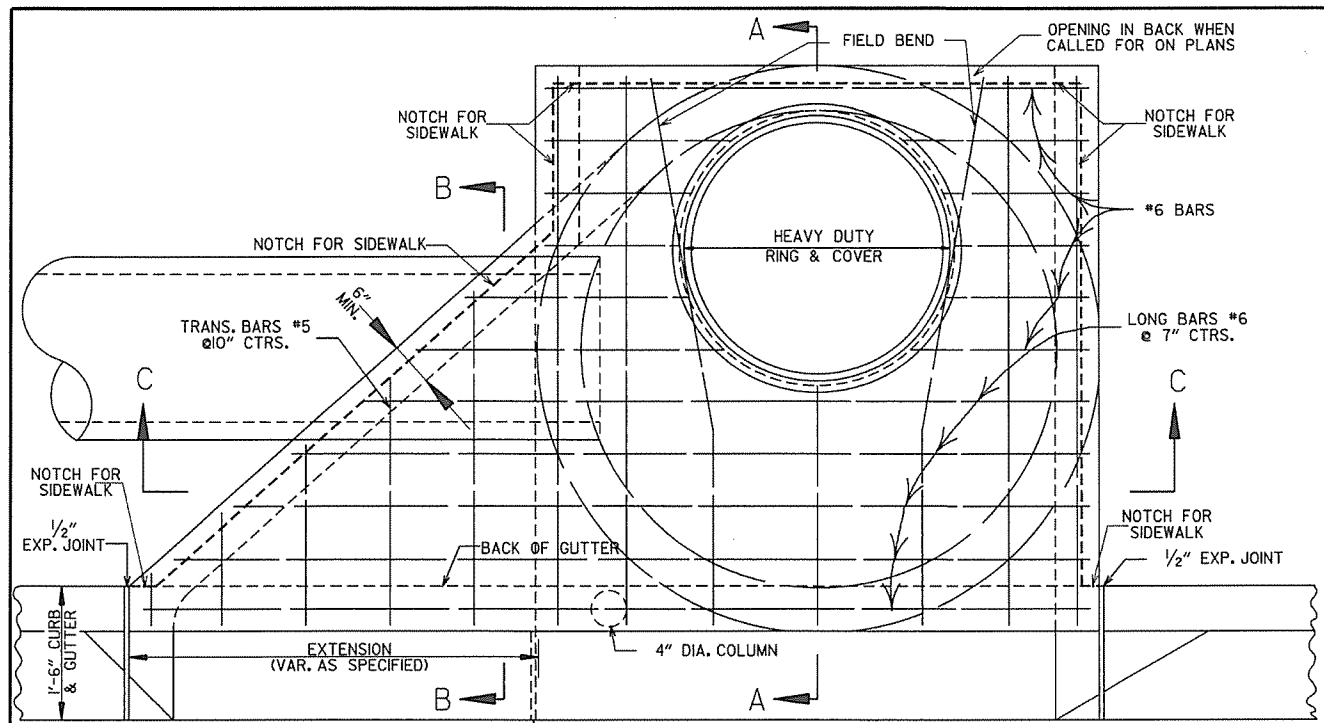
- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
 - STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER AS APPROVED BY THE ENGINEER.
 - ALL REINF. BARS SHALL BE #4 AND HAVE 1/2" COVER.
 - DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
 - THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
 - 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).
 - HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
 - DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
 - 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.
 - 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.
 - HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
 - 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
 - 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.



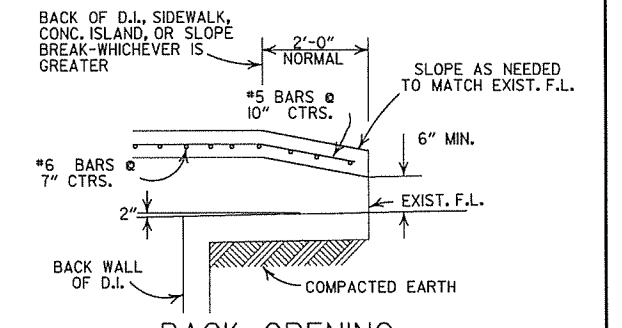
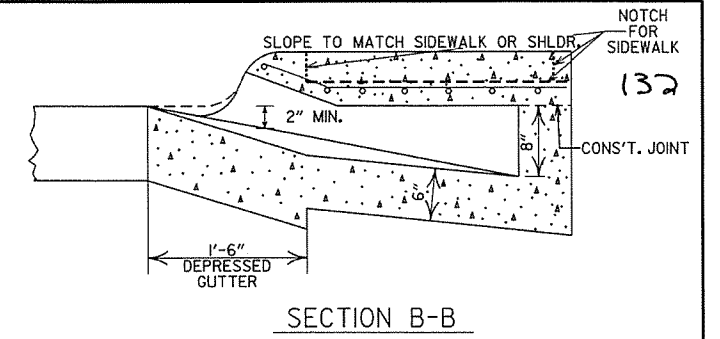
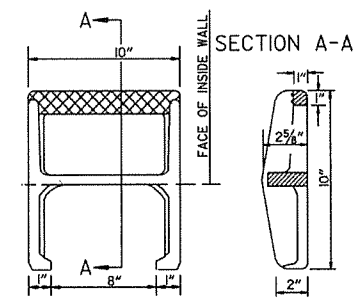
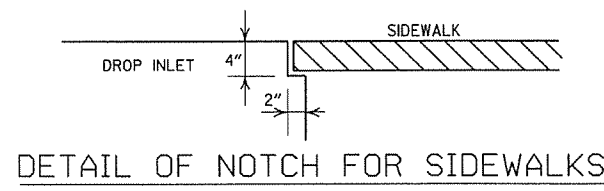
PLAN SECTION A-A
DETAIL OF STEP FOR DROP INLET
APPROX. WEIGHT = 11LBS. (CAST IRON)
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DATE	REV.	DESCRIPTION	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'x8') EXTENSION TITLES	10-18-96	
4-1-93		REVISED BACK OPENING & NOTCH		
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



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.



- 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. 1/2" 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"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.

LEAVE OPENING IN BACK WHEN CALLED FOR ON PLANS REFER TO BACK OPENING DETAIL

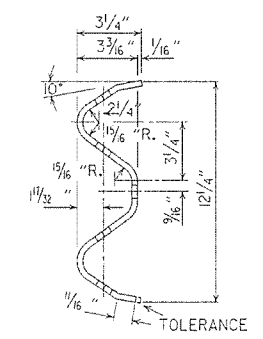
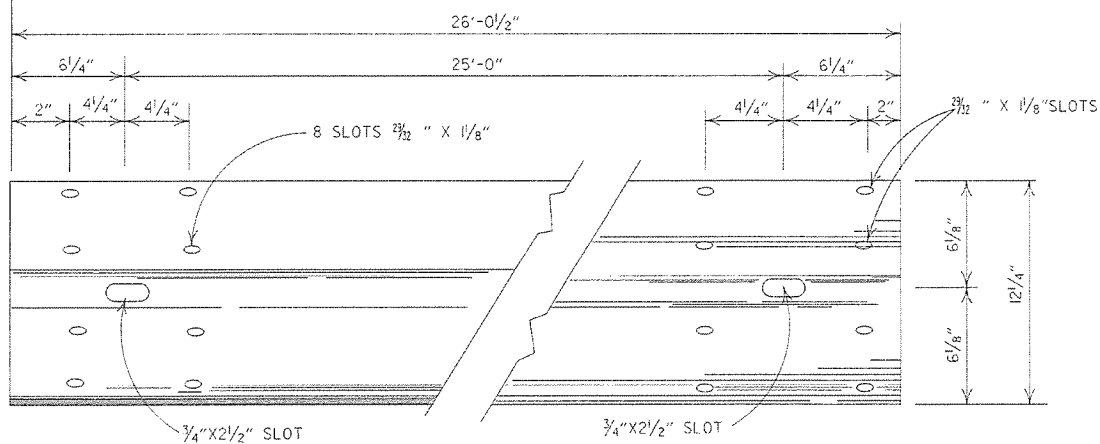
MINIMUM WALL THICKNESS			
DIA. OF D.I.	DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

DATE	ISSUED	REVISIONS	DATE FILED
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		
10-12-95	CORRECTED #6 BAR SPACING		
7-20-95	CORRECTED DIAMETER OF D.I. IN BOX		
2-2-95	TYPE C TO MO OPEN BACK DETAIL		
11-3-94	REVISED GENERAL NOTES		
4-1-93	REV. BACK OPEN DETAIL & NOTE		
8-15-91	REVISED NOTES 11, 12 & ADDED BK. OPEN DETAIL		
11-30-89	ADDED NOTE NO. 12		
8-23-89	ADDED NOTE & MINIMUM WALL THICKNESS		
7-16-88	ADDED EXTEND NOTE TO SECTION A-A		
1-14-87	MODIFIED WALL THICKNESS		
6-12-86	ISSUED		

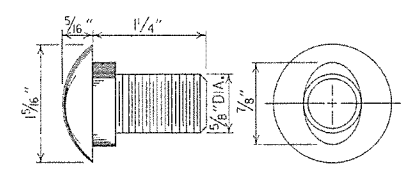
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

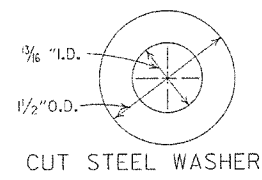
STANDARD DRAWING FPC-9M



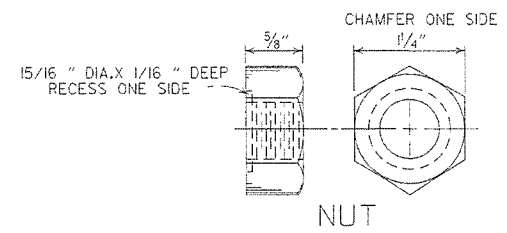
DETAILS OF W-BEAM GUARD RAIL
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



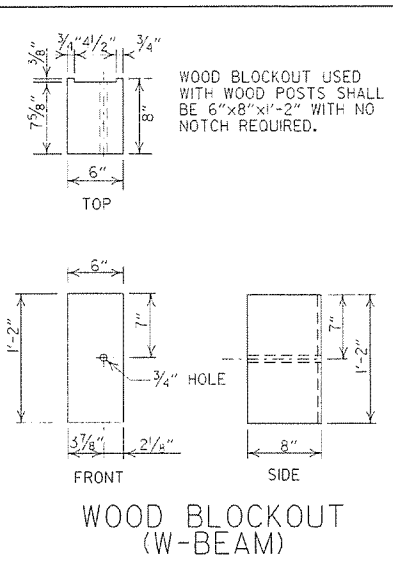
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



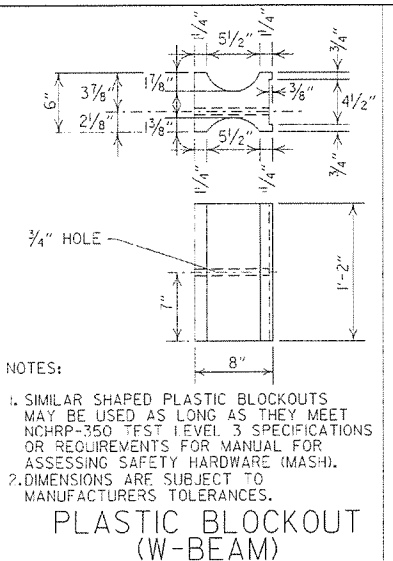
CUT STEEL WASHER



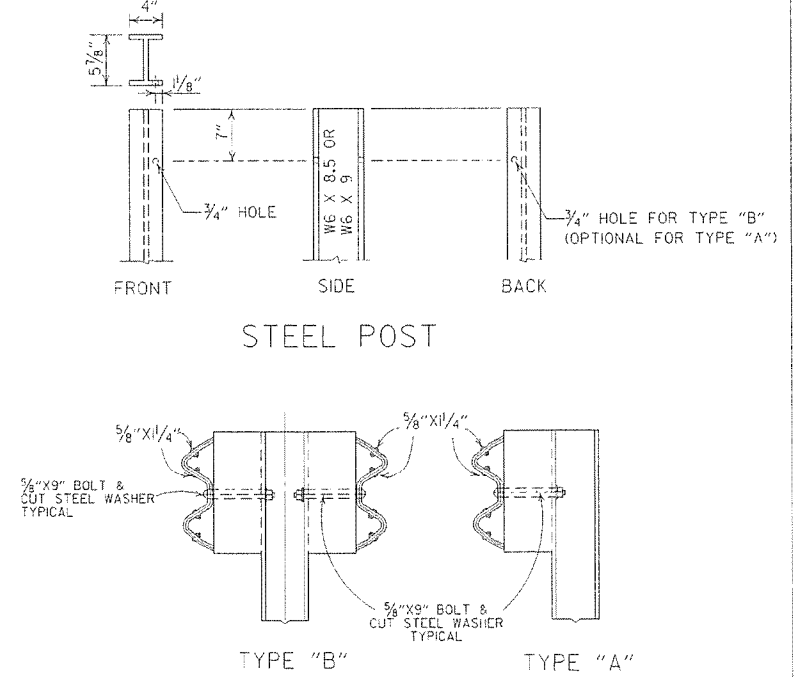
NUT



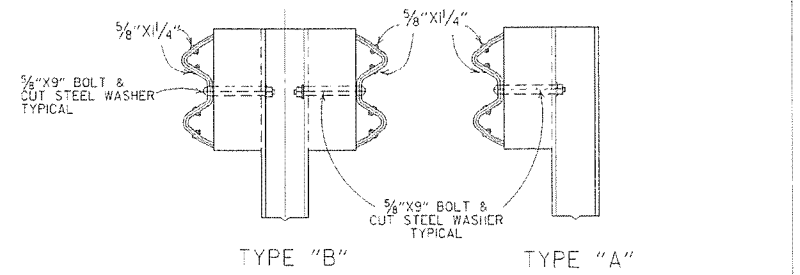
WOOD BLOCKOUT (W-BEAM)



PLASTIC BLOCKOUT (W-BEAM)



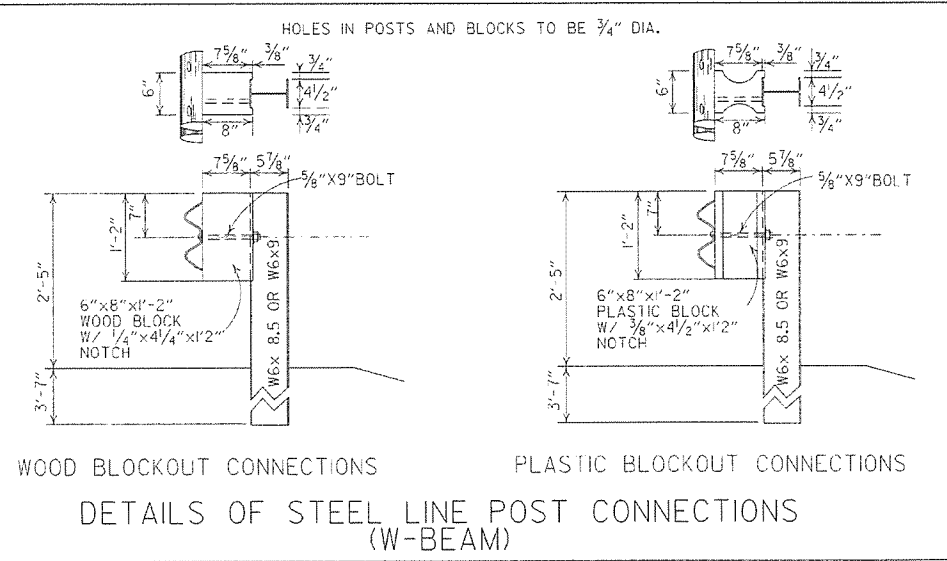
STEEL POST



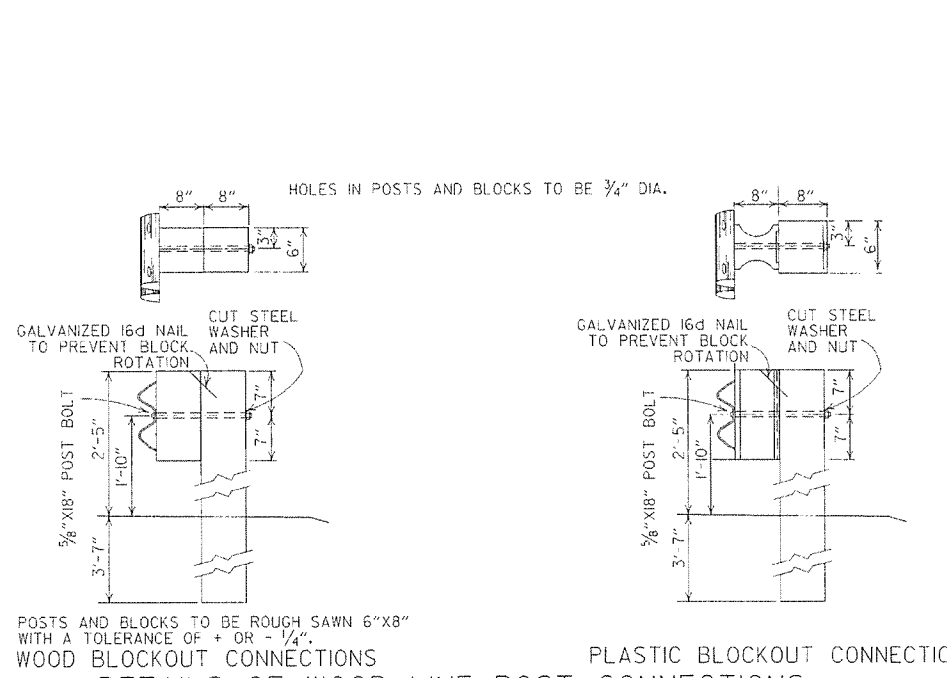
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 1/4" BEYOND IT.
WHERE W-BEAM GUARD RAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.
W-BEAM GUARD RAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.
USE W-BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARD RAIL, W-BEAM GUARD RAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.
ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.



WOOD BLOCKOUT CONNECTIONS
PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



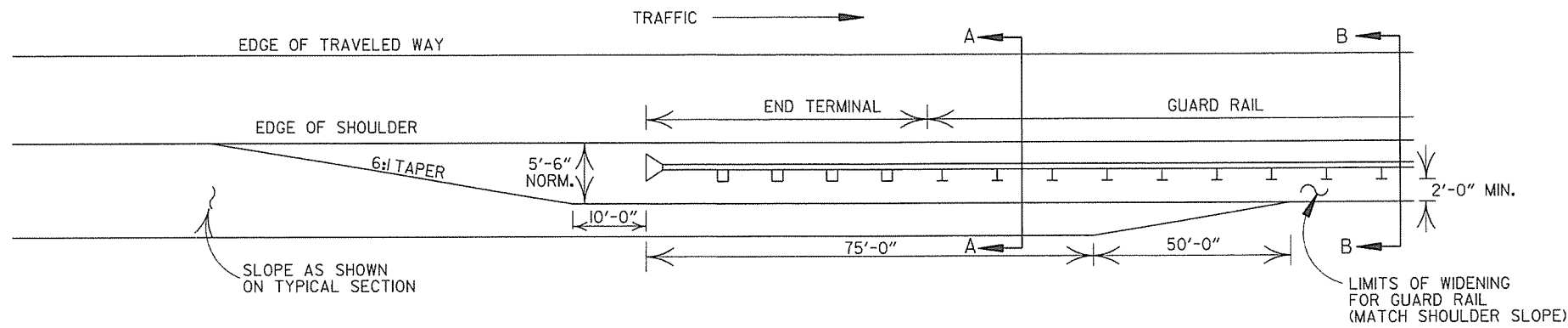
WOOD BLOCKOUT CONNECTIONS
PLASTIC BLOCKOUT CONNECTIONS
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

7-4-10	RAISED HEIGHT OF GUARD RAIL 1"	
0-15-09	ADDED REFERENCE TO MASH	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & ON STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
3-30-00	REMOVED GUARD RAIL AT BRIDGE ENDS	
1-2-00	ADDED PLASTIC BLOCKOUT	
8-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARD RAIL REPLACE BEHIND CURB & DET. OF POST PLACE IN SOLID ROCK & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
4-3-97	REMOVED "LAP" IN DIRECTION OF TRAFFIC NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
6-2-94	ADDED ALT. STEEL POST SIZE	
8-5-93	REVISED STEEL POST SIZE	8-5-93
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED WASHER NOTE	8-15-91
8-2-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
0-9-87	REDRAWN & REVISED	802-10-9-87
DATE	REVISION	DATE FILM

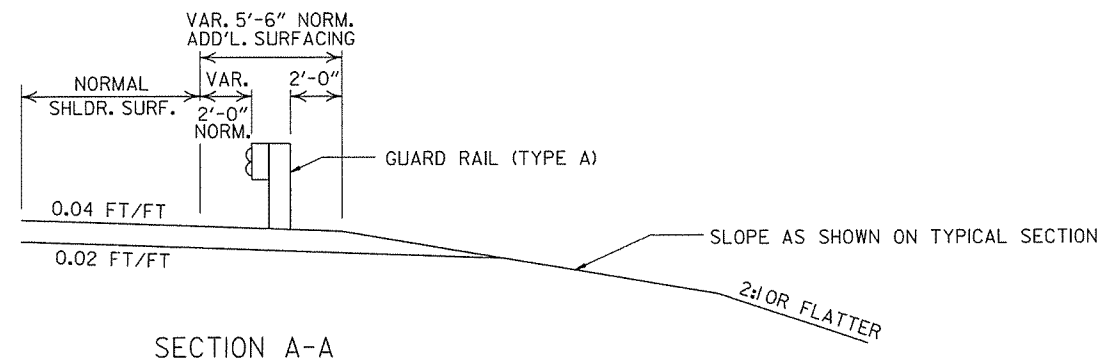
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

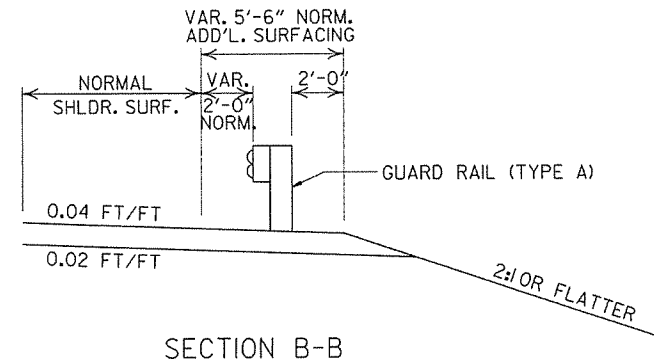
STANDARD DRAWING GR-8



NOTE: NORMAL SECTION TO BE WIDENED APPROX. 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

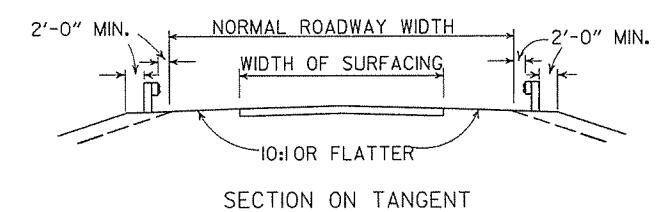


SECTION A-A

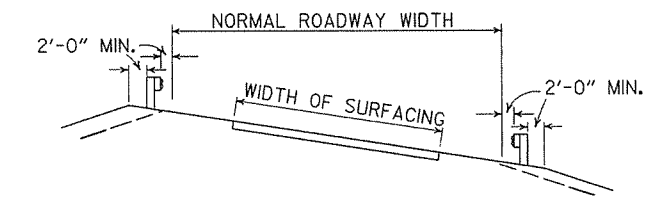


SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

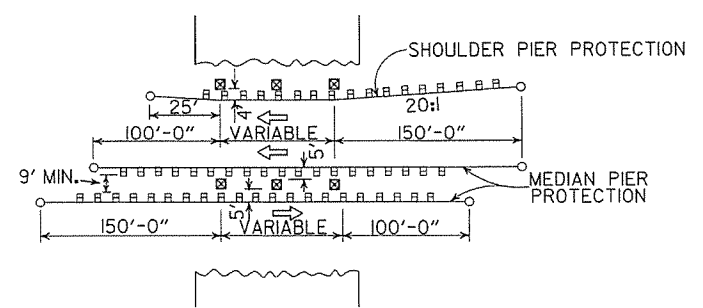


SECTION ON TANGENT



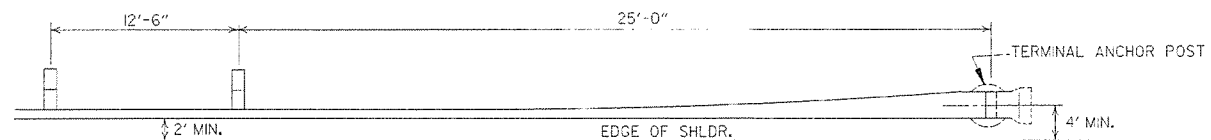
SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

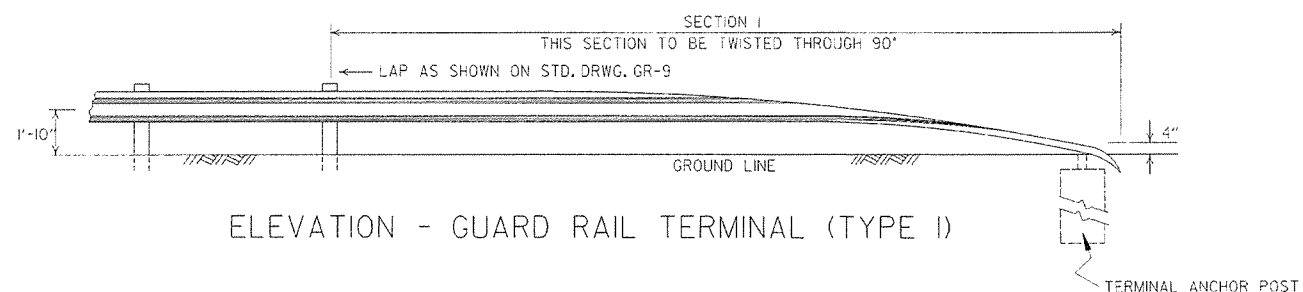


METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

ARKANSAS STATE HIGHWAY COMMISSION			
GUARD RAIL DETAILS			
STANDARD DRAWING GR-9A			
4-17-08	MINOR REVISION		
11-10-05	DRAWN		
DATE	REVISION	DATE	FILM

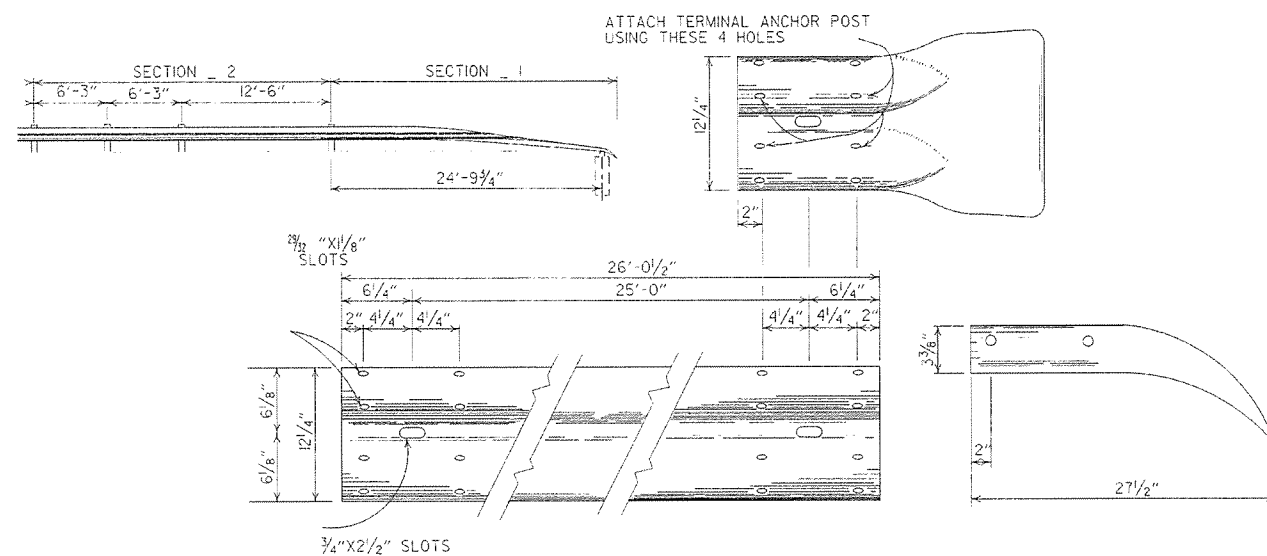


PLAN - GUARD RAIL TERMINAL (TYPE I)



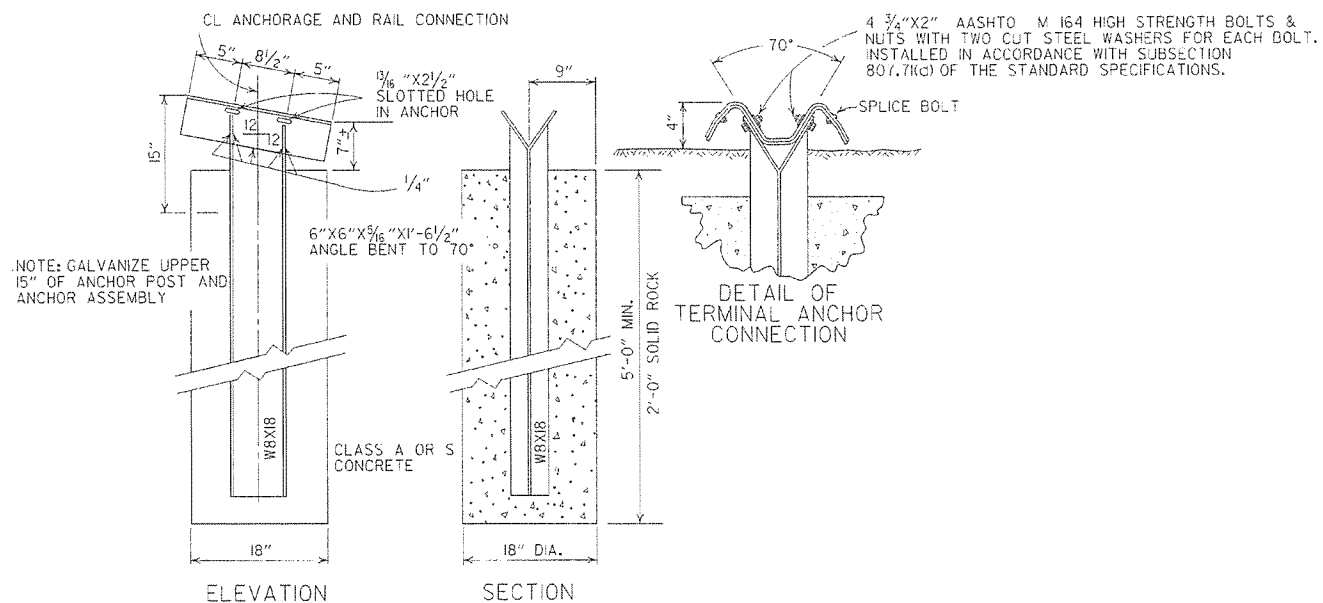
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
SECTIONS 1 AND 2 OF GUARD RAIL TERMINAL
SHALL BE PAID FOR AT THE PRICE BID PER
LINEAR FOOT OF THE TYPE OF GUARD RAIL SPECIFIED.



SECTION 1

TERMINAL SECTION



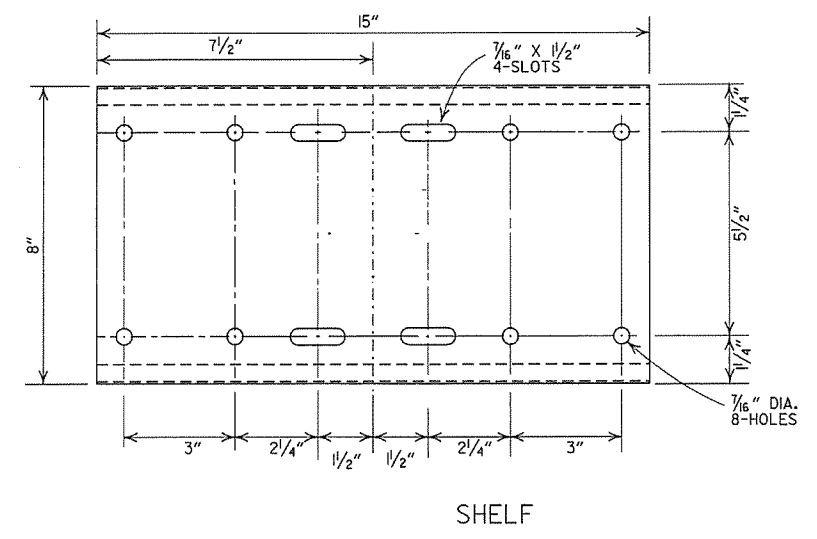
ELEVATION

SECTION

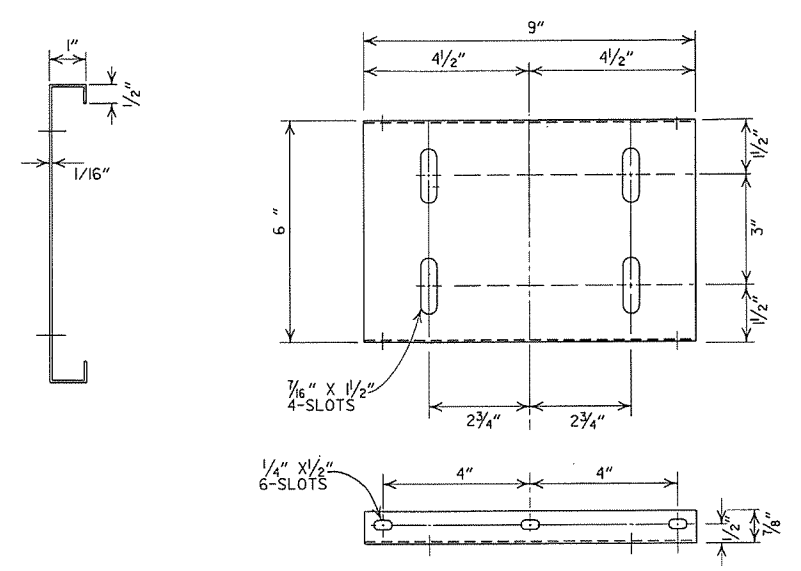
DETAIL OF TERMINAL ANCHOR POST (TYPE I)

NOTE: GALVANIZE UPPER 15" OF ANCHOR POST AND ANCHOR ASSEMBLY
NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND & W/ IT POST IF CONTRACTOR SO DESIRES.

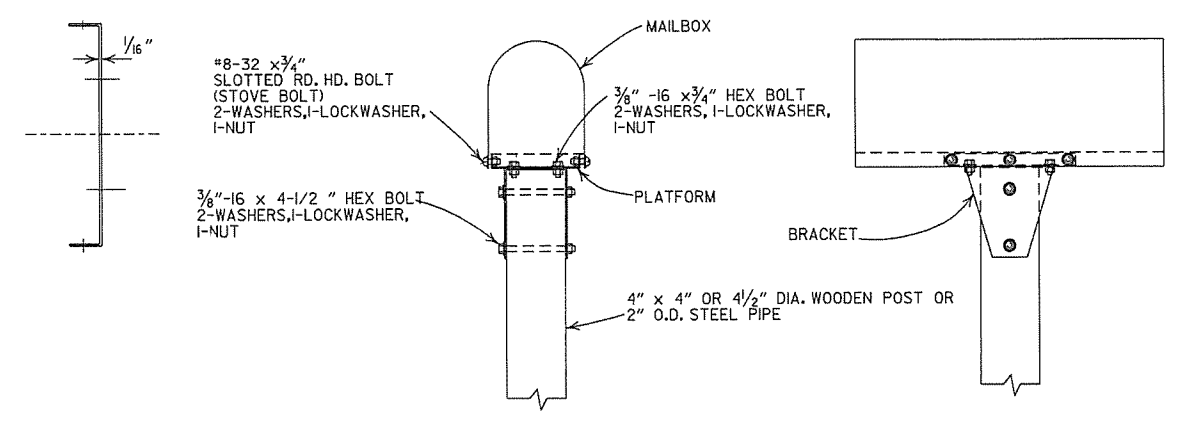
			ARKANSAS STATE HIGHWAY COMMISSION
			GUARD RAIL DETAILS
			STANDARD DRAWING GRT-1
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"		
6-26-97	REVISED LAP NOTE		
10-18-96	REVISED ASTY REF. TO AASHTO		
11-3-94	DIMENSION TERMINAL DETAIL		
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92	
10-1-92	DRAWN & ISSUED	10-1-92	
DATE	REVISION	DATE	FILM



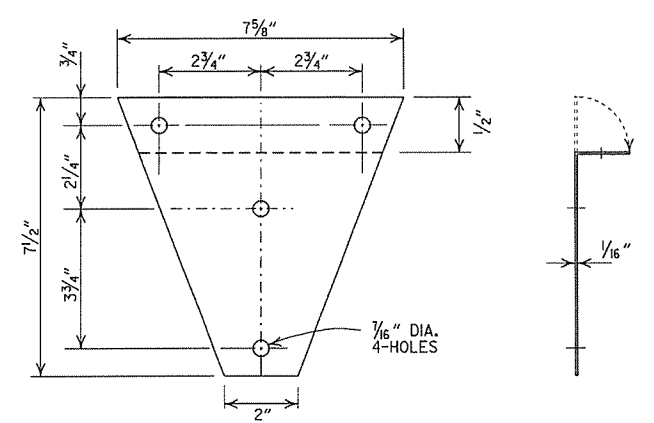
SHELF



PLATFORM

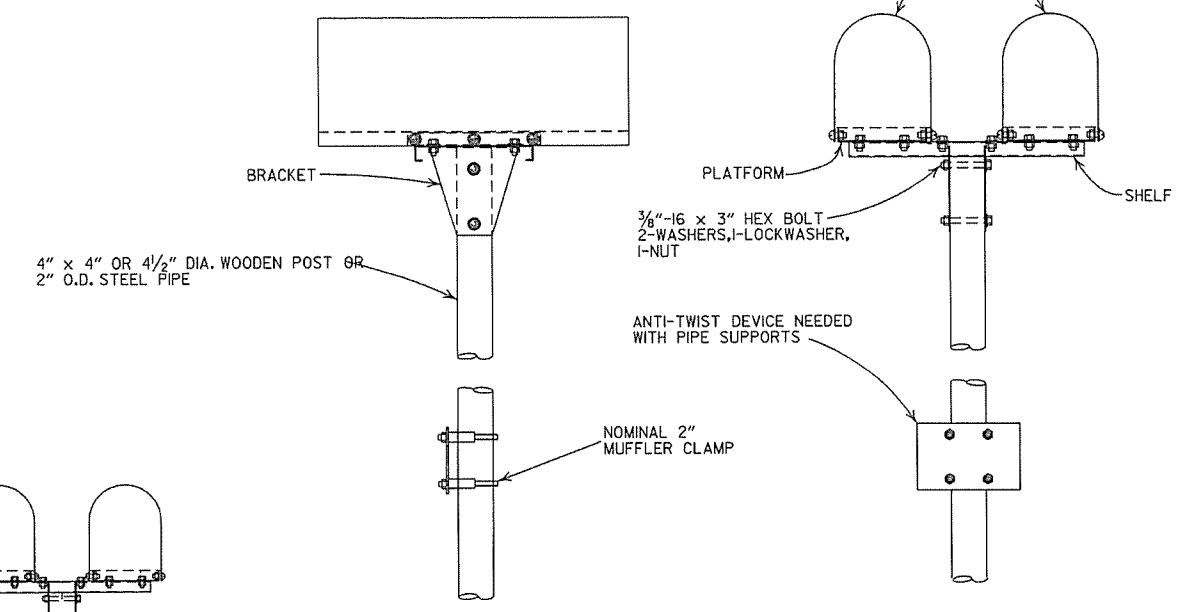


SINGLE INSTALLATION

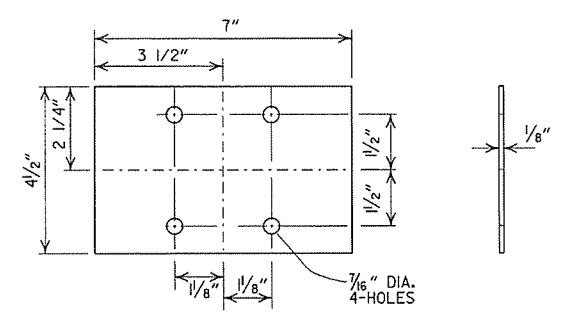


BRACKET

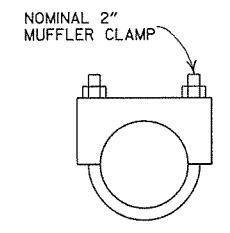
- GENERAL NOTES
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
 2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
 3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED 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.



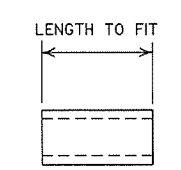
DOUBLE INSTALLATION



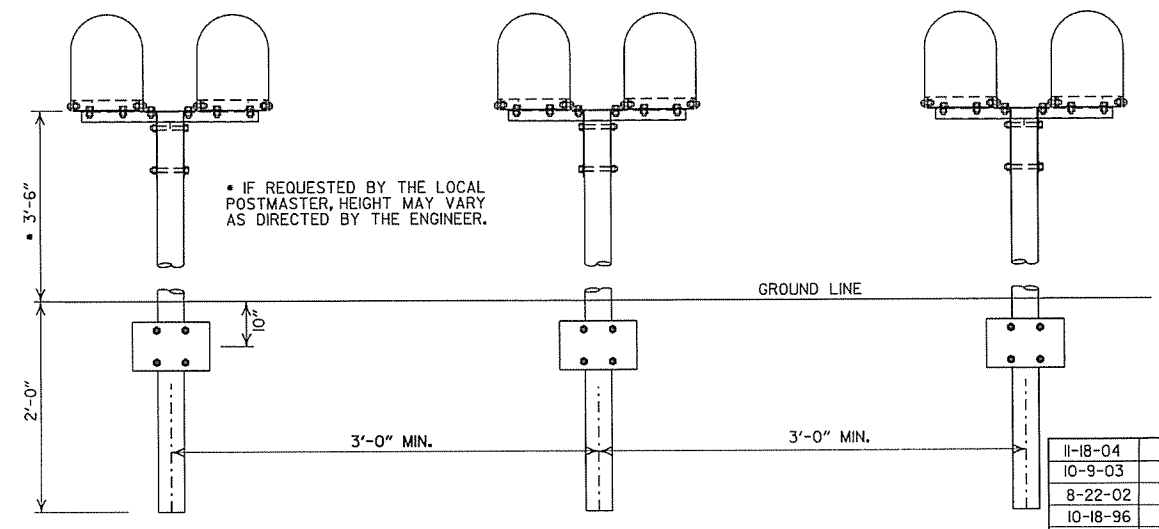
ANTI-TWIST PLATE



CLAMP



SPACER



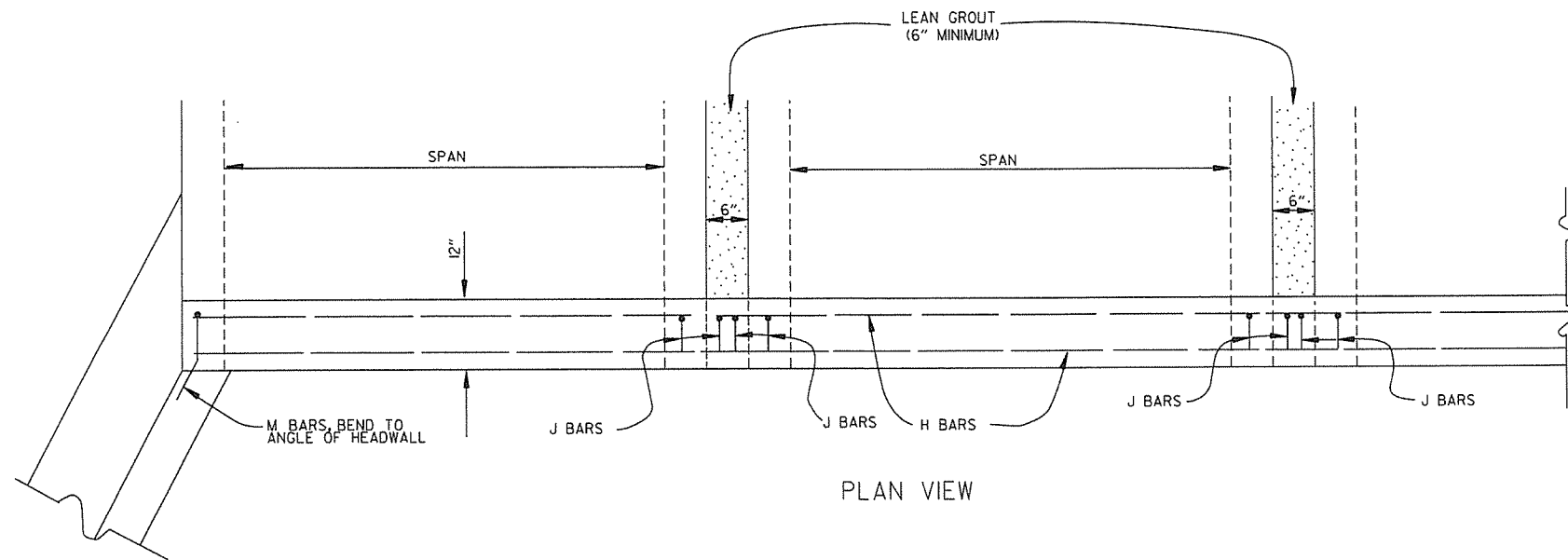
SPACING FOR MULTIPLE POST INSTALLATION

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



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 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, MEMBRANE WATERPROOFING, DRAINAGE FILL MATERIAL, GEOTEXTILE FILTER FABRIC, 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.

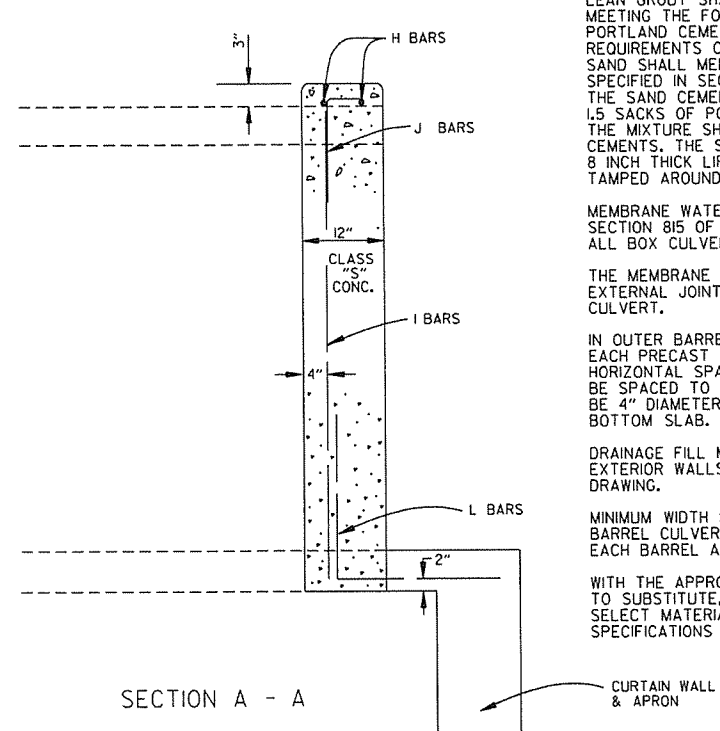
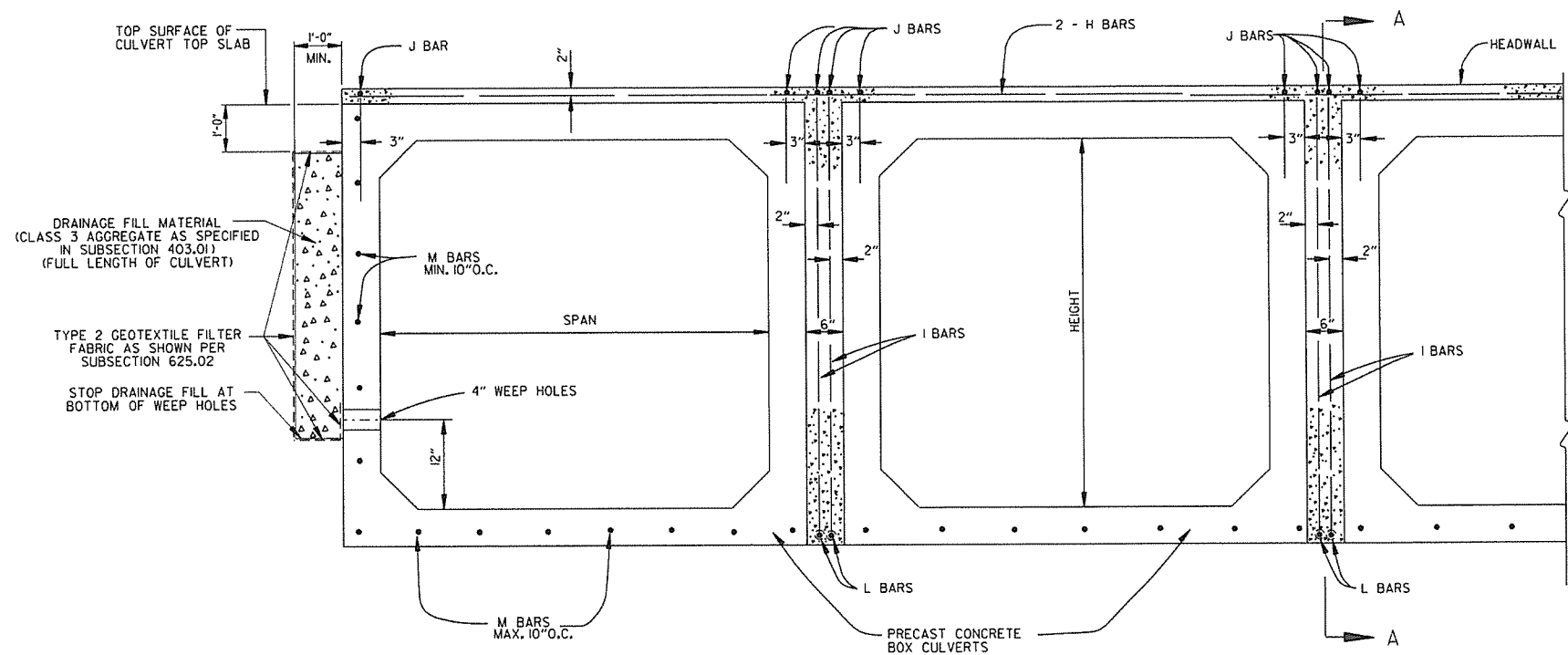
THE MEMBRANE WATERPROOFING WILL BE REQUIRED ON THE TOP EXTERNAL JOINT AND SHALL EXTEND 1 FOOT DOWN THE SIDES OF THE CULVERT.

IN OUTER BARRELS, ONE WEEP HOLE IS REQUIRED IN EXTERIOR WALLS OF EACH PRECAST CULVERT SECTION. WEEP HOLES SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" IN THE ASSEMBLED CULVERT AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

DRAINAGE FILL MATERIAL WITH GEOTEXTILE FABRIC IS REQUIRED AT THE EXTERIOR WALLS OF THE ASSEMBLED CULVERT, SEE DETAILS ON THIS DRAWING.

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

1-28-15	REVISED GEOTEXTILE FABRIC PLACEMENT	
12-15-11	ADDED NOTE & DTLS FOR WEEP HOLE AND DRAINAGE FILL	
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	
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

PRECAST CONCRETE BOX CULVERTS

STANDARD DRAWING PBC-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13 1/2	14
21	26	26	15 1/2	16
24	28 1/2	29	18	18
30	36 1/4	36	22 1/2	23
36	43 3/8	44	26 5/8	27
42	51 1/6	51	31 1/6	31
48	58 1/2	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	77 1/2	77
108	138	138	87 1/8	87
120	154	154	96 3/8	97
132	168 3/4	169	106 1/2	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

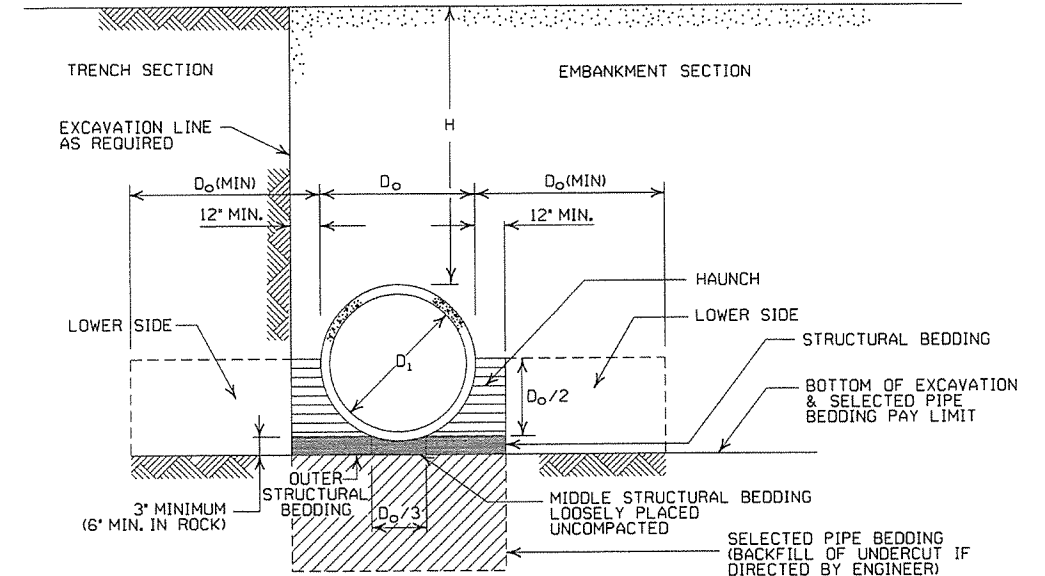
NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

- LEGEND -

- D₁ = NORMAL INSIDE DIAMETER OF PIPE
- D_o = OUTSIDE DIAMETER OF PIPE
- H = FILL COVER HEIGHT OVER PIPE (FEET)
- MIN. = MINIMUM
- UNDISTURBED SOIL

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

* SM-3 WILL NOT BE ALLOWED.
** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT
FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

Table with columns for PIPE DIAMETER (INCHES), MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET), MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET), and METAL THICKNESS (INCHES) with sub-columns for 0.064, 0.079, 0.109, 0.138, 0.168. Includes notes for 2 1/2 inch and 3 inch by 1 inch corrugation.

CONSTRUCTION SEQUENCE

- 1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. COMPLETE STRUCTURAL BACKFILL OPERATION BY WORKING FROM SIDE TO SIDE OF THE PIPE...

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

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

SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

Table with columns for METAL THICKNESS IN INCHES (STEEL, ZINC COATED, UNCOATED, ALUMINUM) and GAUGE NUMBER.

CORRUGATED ALUMINUM PIPE (ROUND)

Table with columns for PIPE DIAMETER (INCHES), MINIMUM COVER TOP OF PIPE TO TOP OF GROUND "H" (FEET), MAX. FILL HEIGHT "H" ABOVE TOP OF PIPE (FEET), and METAL THICKNESS IN INCHES with sub-columns for 0.060, 0.075, 0.105, 0.135, 0.164.

CORRUGATED METAL PIPE ARCHES

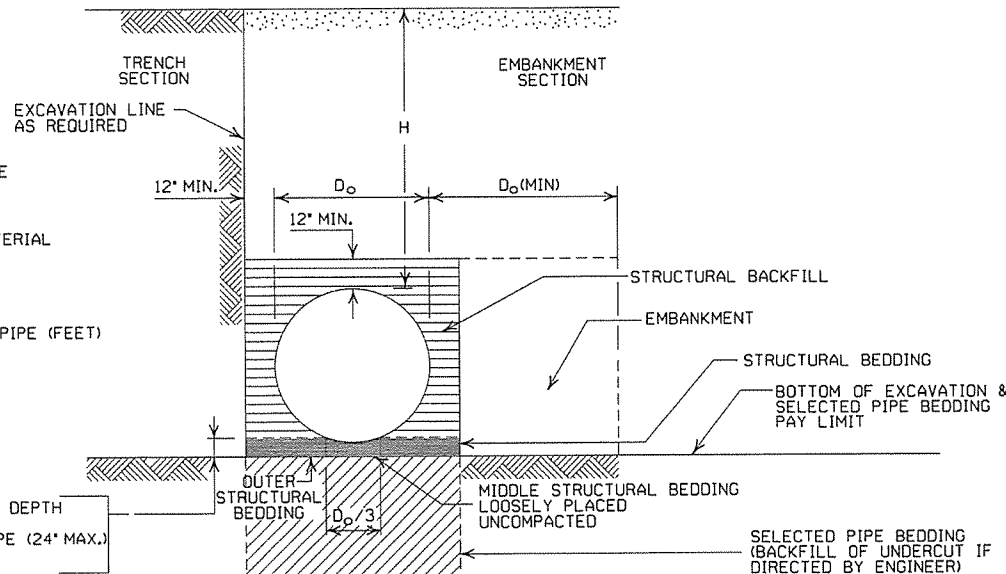
Table with columns for EQUIV. DIA., PIPE DIMENSION SPAN X RISE (INCHES), MINIMUM CORNER RADIUS (INCHES), MIN. THICKNESS REQUIRED INCHES, MIN. HEIGHT OF FILL "H" (FT.), MAX. HEIGHT OF FILL "H" (FT.), and MIN. THICKNESS REQUIRED INCHES for STEEL and ALUMINUM.

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

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

LEGEND

- D0 = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM
= STRUCTURAL BACKFILL MATERIAL
= UNDISTURBED SOIL
EQUIV. DIA. = EQUIVALENT DIAMETER
H = FILL COVER HEIGHT OVER PIPE (FEET)



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

- 1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS...
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS...
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING.
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE.

Table with columns for DATE, REVISION, and DATE FILMED. Includes entries for 2-27-14, 12-15-11, 3-30-00, and 11-06-97.

ARKANSAS STATE HIGHWAY COMMISSION
METAL PIPE CULVERT
FILL HEIGHTS & BEDDING
STANDARD DRAWING PCM-1

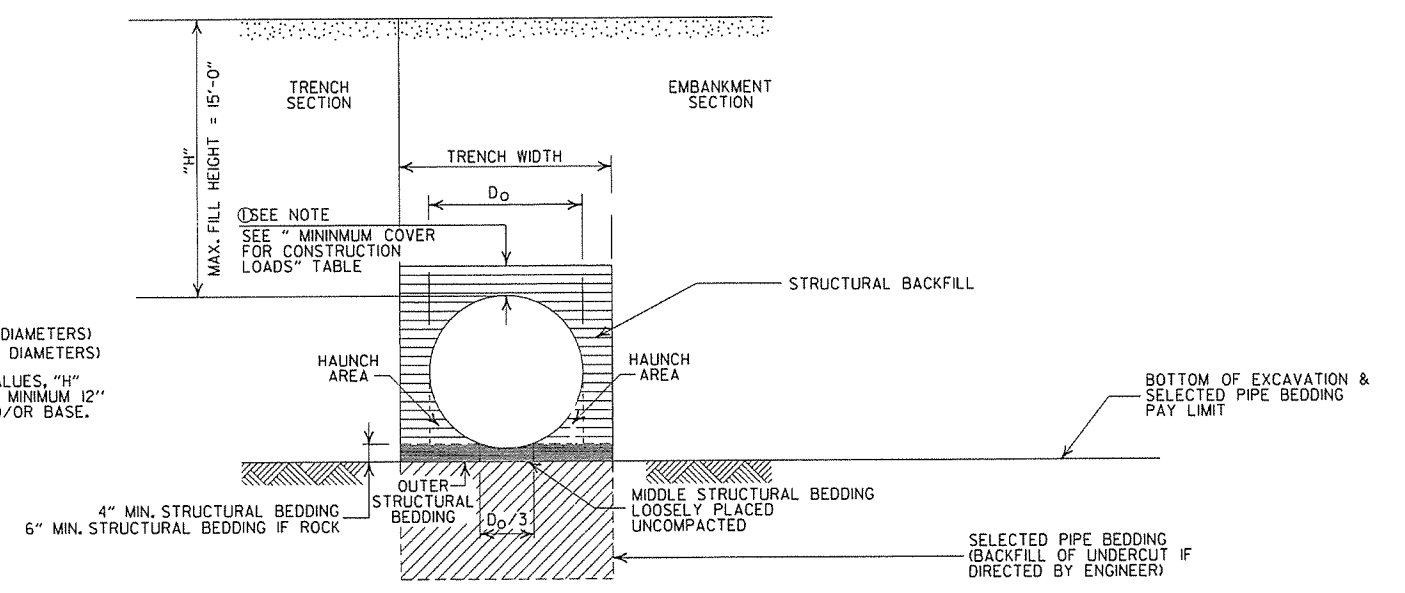
INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR STRUCTURAL BACKFILL AND STRUCTURAL BEDDING
TYPE 2	•SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4)

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL.
 - SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF HDPE PIPE.

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET)	
	"H" < 10'-0"	"H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

NOTE:
 18" MIN. (18" - 30" DIAMETERS)
 24" MIN. (36" - 48" DIAMETERS)
 MINIMUM COVER VALUES, "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS
 I. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

- H = FILL HEIGHT (FT.)
- D_o = OUTSIDE DIAMETER OF PIPE
- MAX. = MAXIMUM
- MIN. = MINIMUM
- ===== = STRUCTURAL BACKFILL MATERIAL
- ||||||| = UNDISTURBED SOIL

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

ARKANSAS STATE HIGHWAY COMMISSION		
PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)		
STANDARD DRAWING PCP-1		
2-27-14	REVISED GENERAL NOTE I.	
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	
DATE	REVISION	DATE FILMED

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

- AGGREGATE BASE COURSE (CLASS 4, 5, 6, OR 7) MAY BE USED IN LIEU OF SELECTED MATERIAL. SM3 WILL NOT BE ALLOWED.
 - STRUCTURAL BEDDING MATERIAL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 1/4 INCH. STRUCTURAL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL, STONES LARGER THAN 1.50 INCH IN GREATEST DIMENSION, OR FROZEN LUMPS.
- STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PVC PIPE.

MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

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

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

MINIMUM TRENCH WIDTH
BASED ON FILL HEIGHT "H"

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

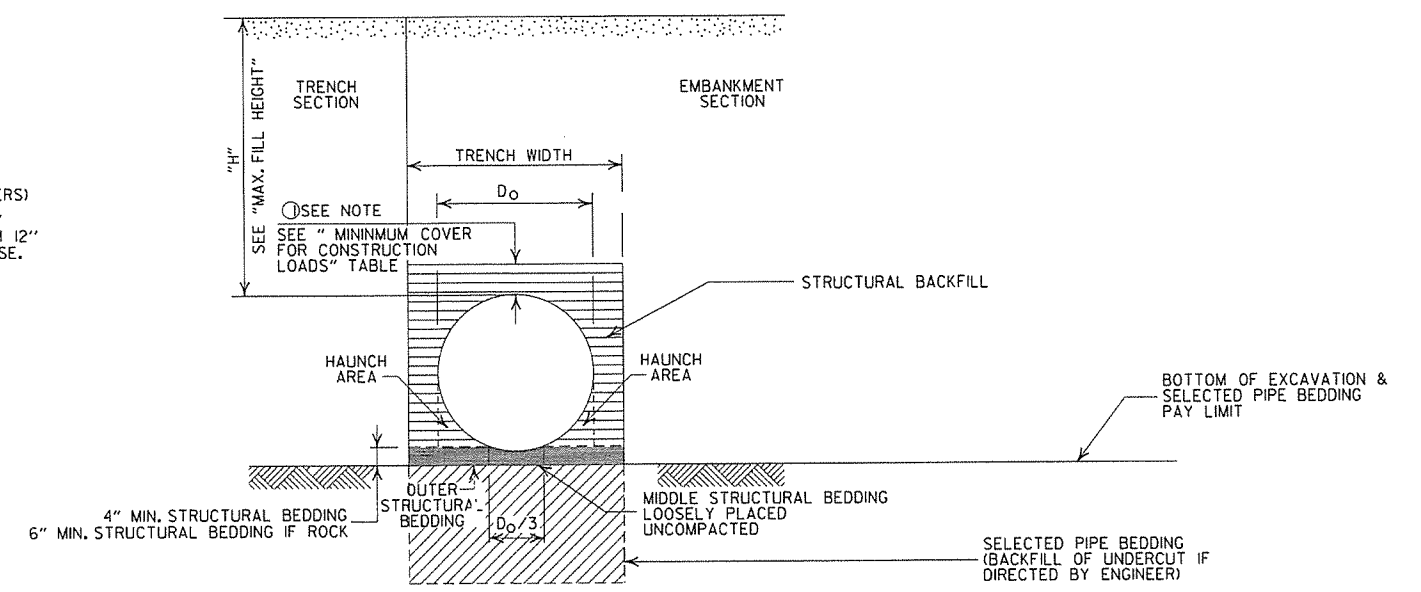
MULTIPLE INSTALLATION OF
PVC PIPES

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

MINIMUM COVER FOR
CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

② MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

- LEGEND -

H = FILL HEIGHT (FT.)
D_o = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

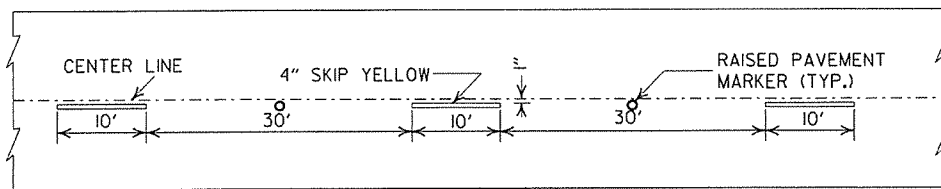
==== = STRUCTURAL BACKFILL MATERIAL
===== = UNDISTURBED SOIL

GENERAL NOTES

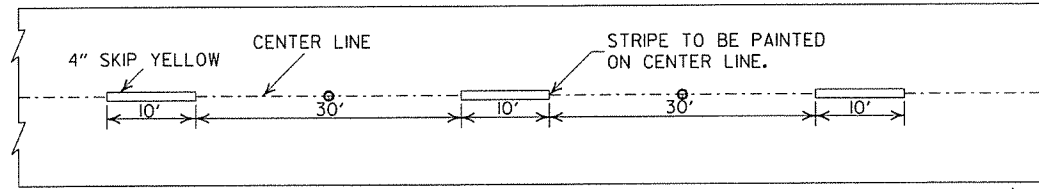
1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
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5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

		ARKANSAS STATE HIGHWAY COMMISSION	
		PLASTIC PIPE CULVERT (PVC F949)	
		STANDARD DRAWING PCP-2	
2-27-14	REVISED GENERAL NOTE 1		
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL		
11-17-10	ISSUED		
DATE	REVISION		DATE FILMED



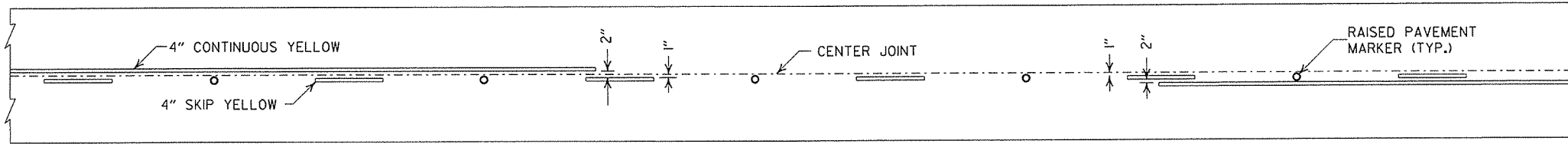


CONCRETE PAVEMENT

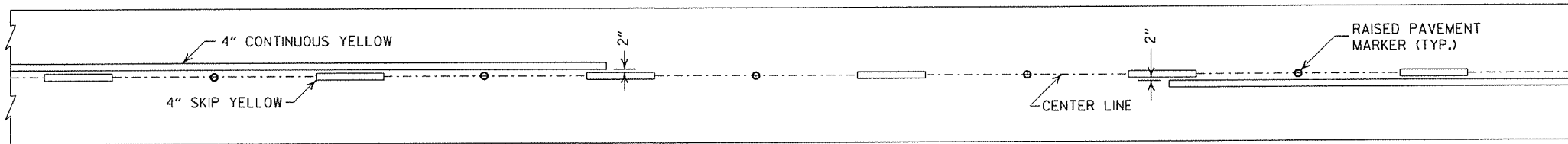


ASPHALT PAVEMENT

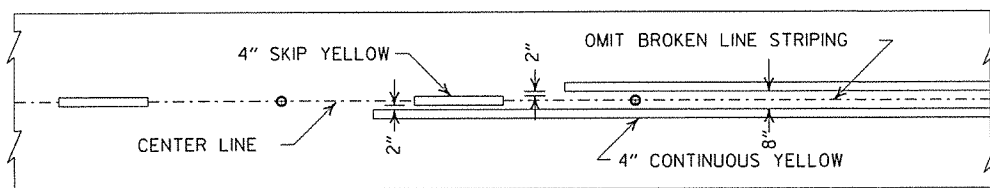
BROKEN LINE STRIPING



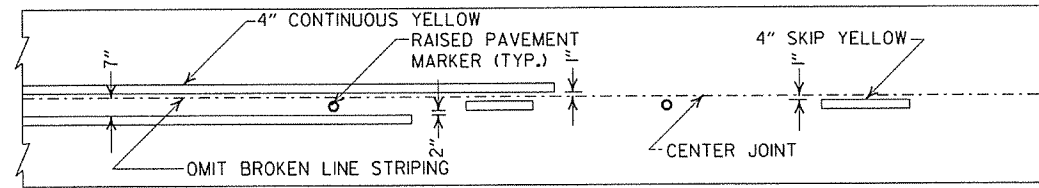
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

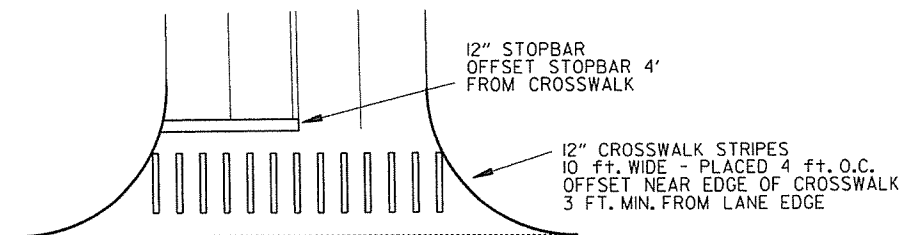


ASPHALT PAVEMENT



CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

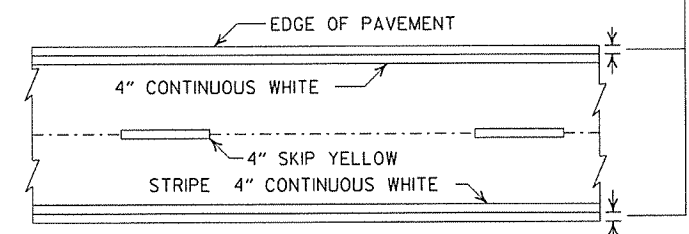


CROSSWALK AND STOPBAR DETAILS

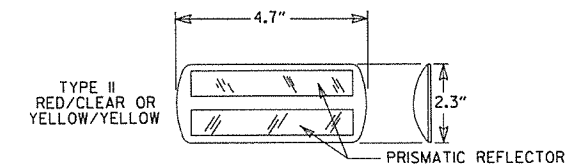
NOTES:

1. 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.

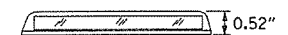
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING



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



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

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.

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

ARKANSAS STATE HIGHWAY COMMISSION

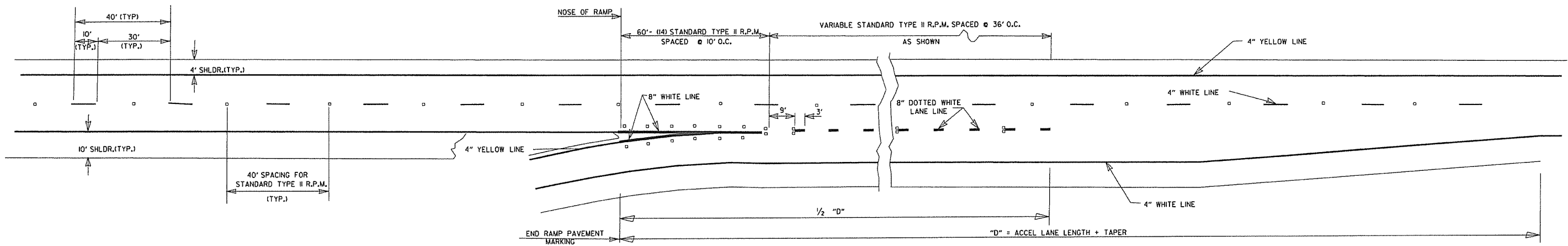
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

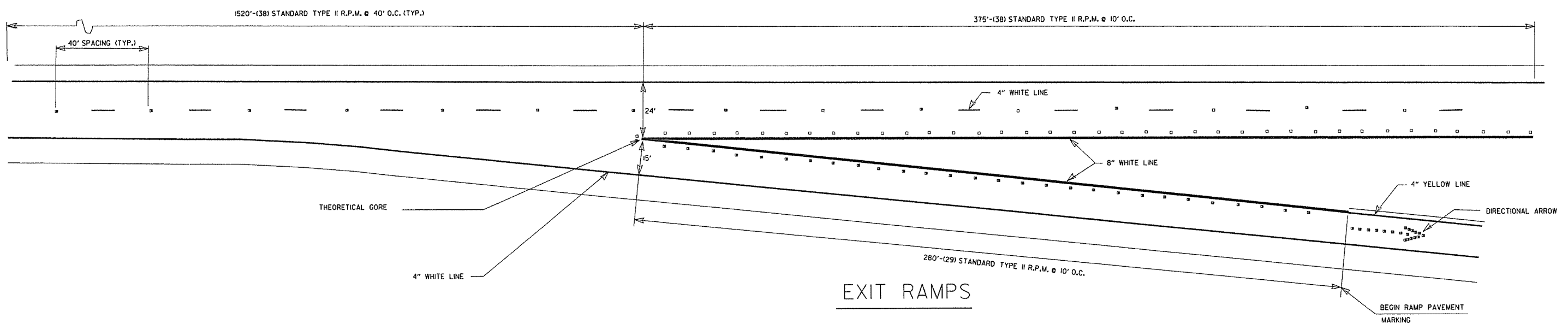
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

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

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



ENTRANCE RAMPS

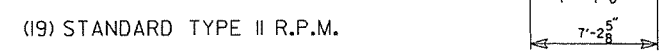
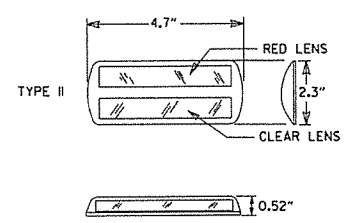


EXIT RAMPS

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

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

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



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

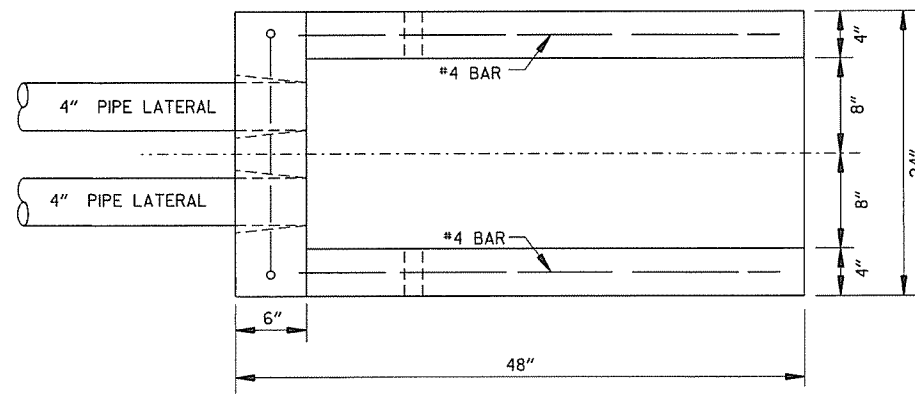
(19) STANDARD TYPE II R.P.M.
DIRECTIONAL ARROWS

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

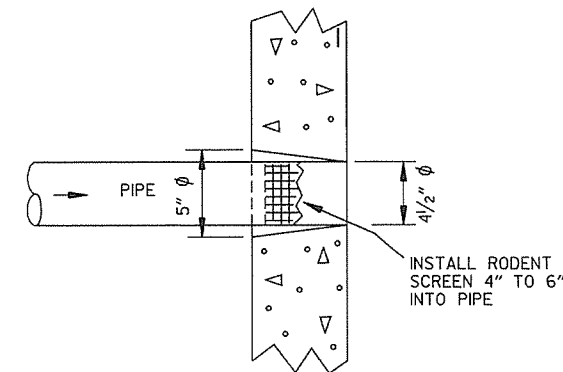
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION
PERMANENT PAVEMENT MARKING
ON ACCESS CONTROLLED ROADWAYS

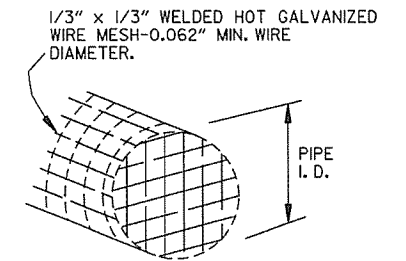
NOTE:
 1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.
 2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.
 3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



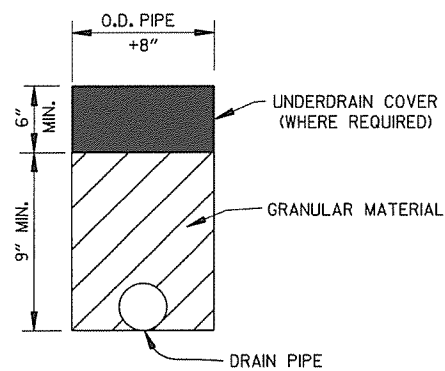
PLAN VIEW



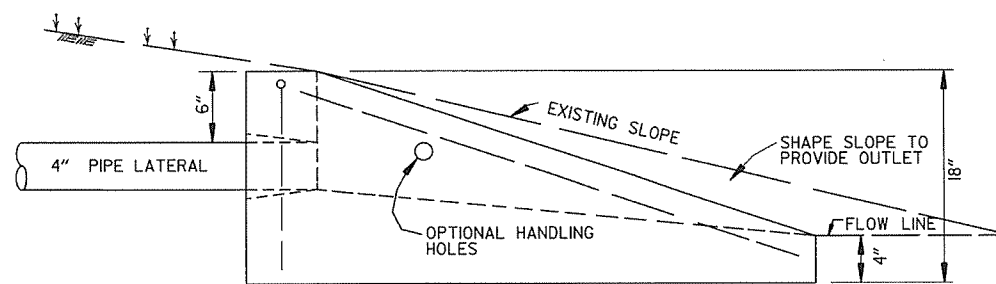
DETAIL OF HOLE FOR 4" PIPE



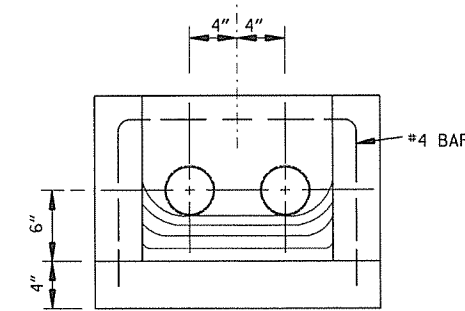
DETAIL OF RODENT SCREEN



DETAILS OF PIPE UNDERDRAIN



SIDE VIEW

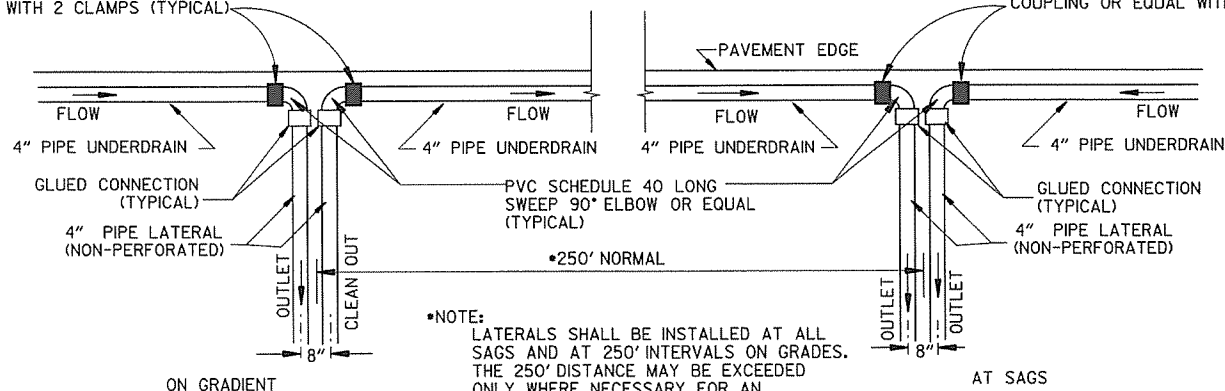


FRONT VIEW

FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)

UNDERDRAIN OUTLET PROTECTORS

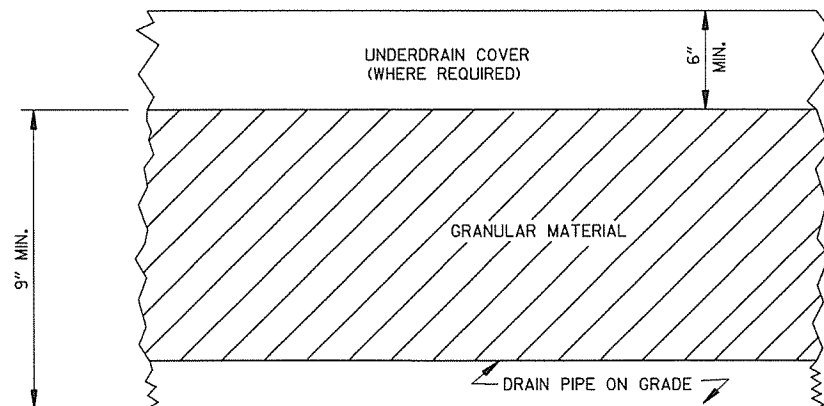
FERNCO 1056-44 (4" CI/PLASTIC) OR FERNCO 1051-44 (4" AC/DI OR 4" CI/PLASTIC) COUPLING OR EQUAL WITH 2 CLAMPS (TYPICAL)



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 POLYETHYLENE 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

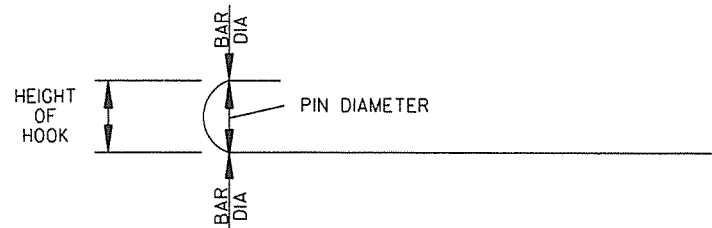
DETAILS OF PIPE UNDERDRAIN

STANDARD DRAWING PU-1

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2 1/4"	4"
4	3"	4 1/2"
5	3 3/4"	5"
6	4 1/2"	6"
7	5 1/4"	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 2 3/4 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

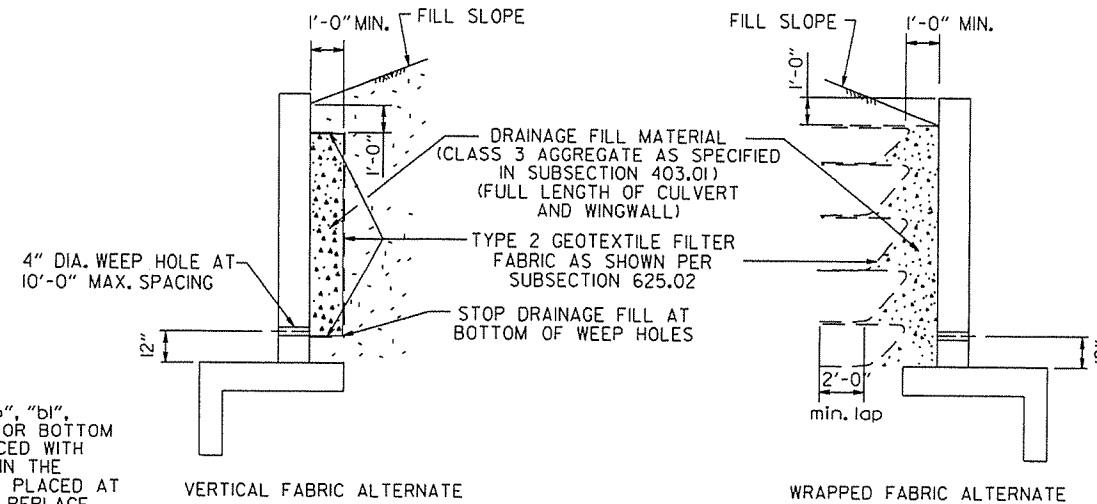
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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 & CULVERT 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 & CULVERT 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.

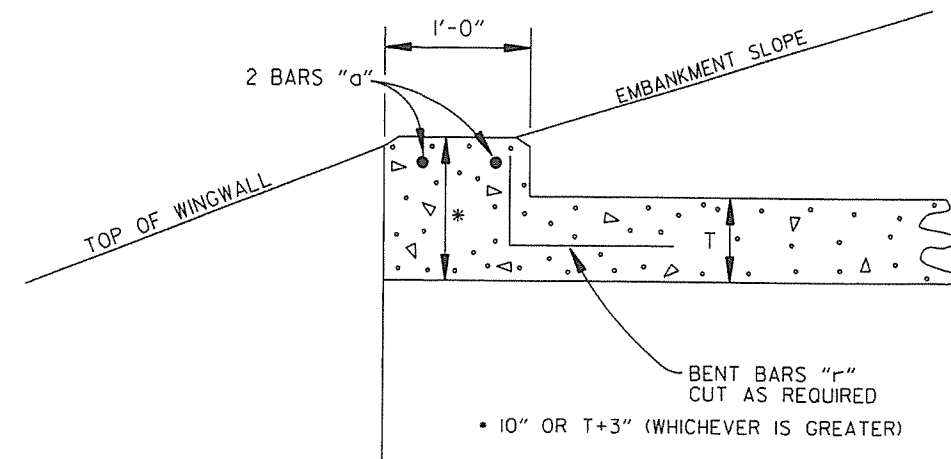
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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 1/2 INCH.

WEEP HOLES IN BOX CULVERT WALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN WINGWALLS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THERE SHALL BE A MINIMUM OF TWO (2) WEEP HOLES IN EACH WINGWALL. THE DRAIN OPENING SHALL BE 4" DIAMETER AND SHALL BE PLACED 12" ABOVE THE TOP OF THE WINGWALL FOOTING.

THE REQUIREMENTS SHOWN ON THIS DRAWING SHALL SUPERCEDE THE CORRESPONDING REQUIREMENTS ON ALL REINFORCED CONCRETE BOX CULVERT STANDARD DRAWINGS.



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.

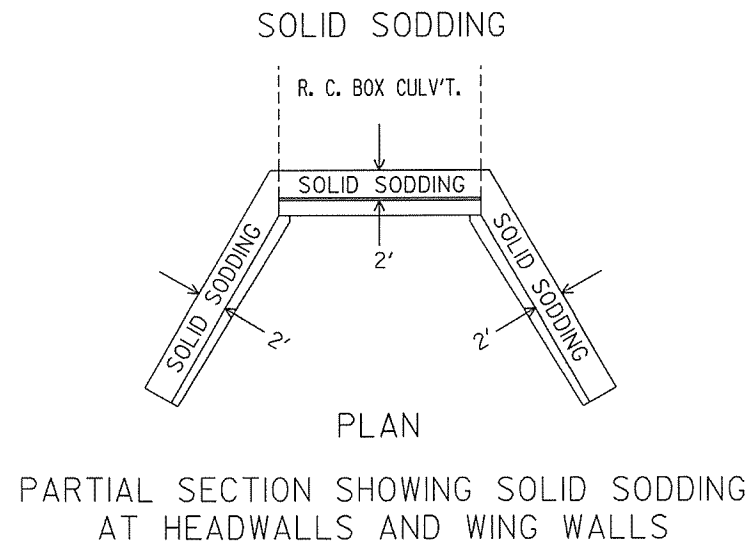
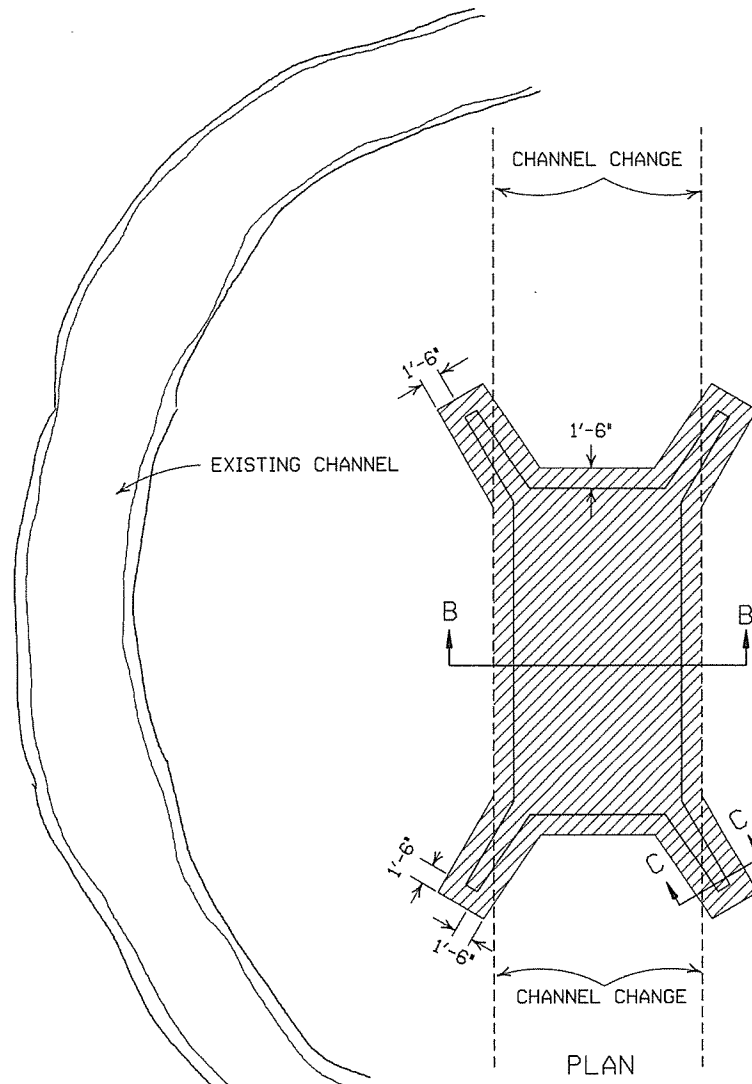
R.C. BOX CULVERT HEADWALL MODIFICATIONS

DATE	REVISION	DATE FILMED
7/26/12	REV. DRAINAGE FILL MATERIAL & DETAIL	
12/15/11	REQUIRE WEEP HOLES IN BOX CULVERT WALLS	
5-25-06	REV. GEN. NOTES AND DETAILS FOR WEEP HOLES; BAR DIAGRAM	
11-16-01	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	

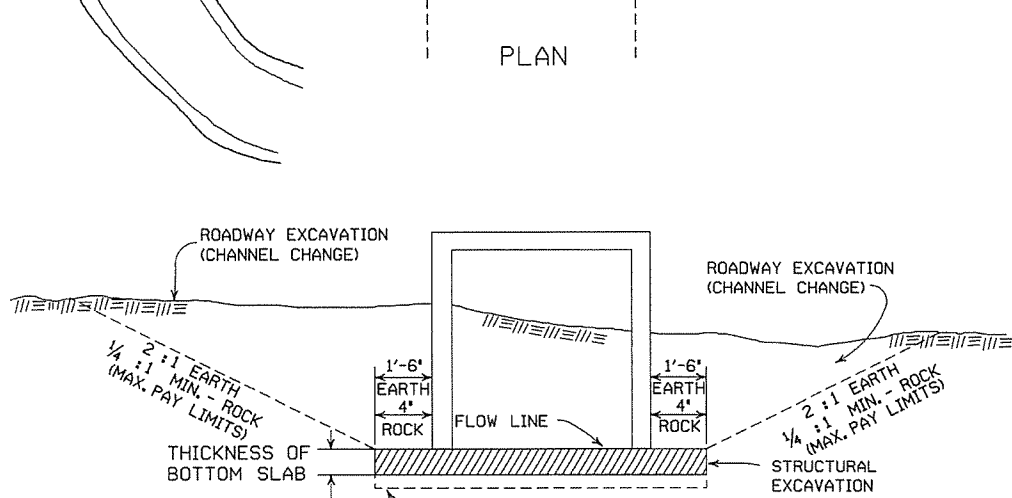
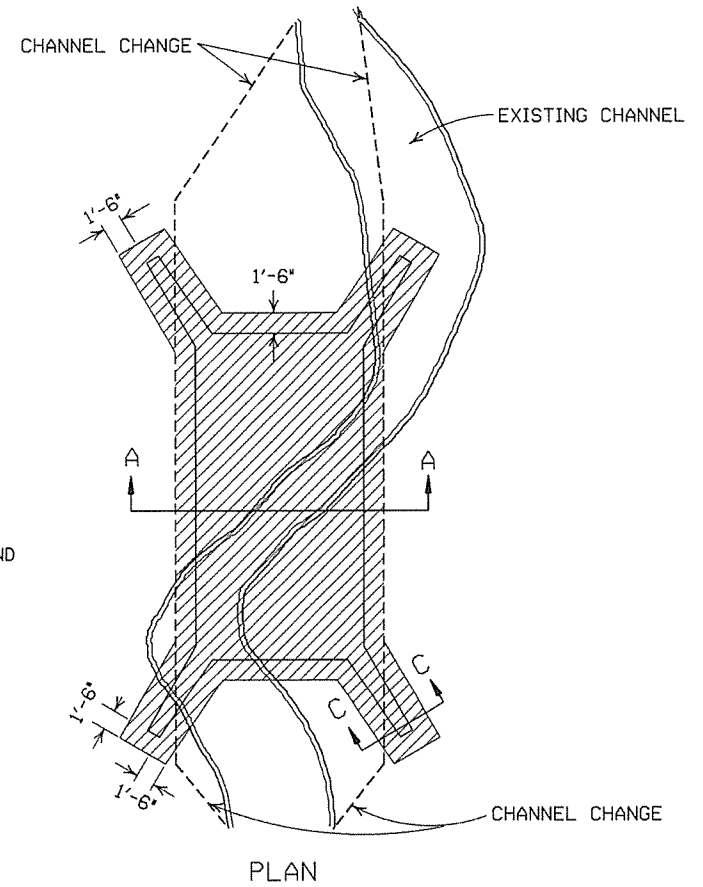
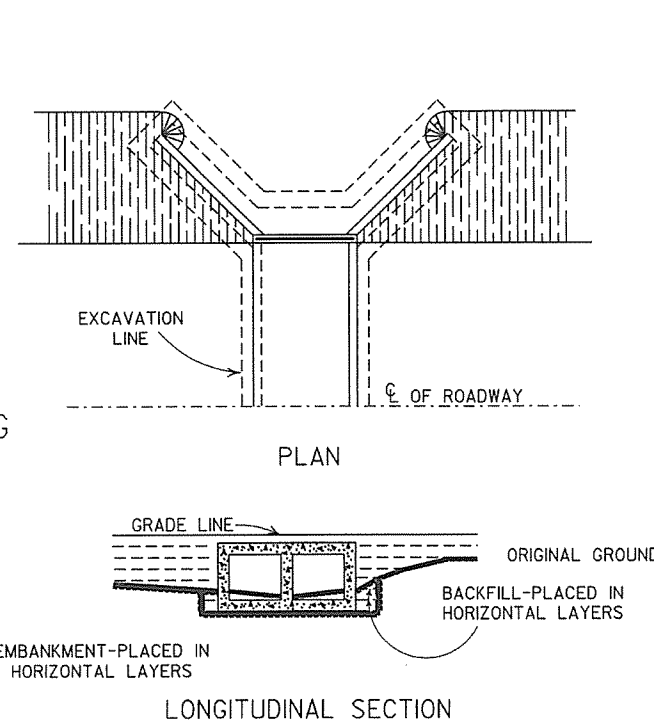
ARKANSAS STATE HIGHWAY COMMISSION

REINFORCED CONCRETE BOX CULVERT DETAILS

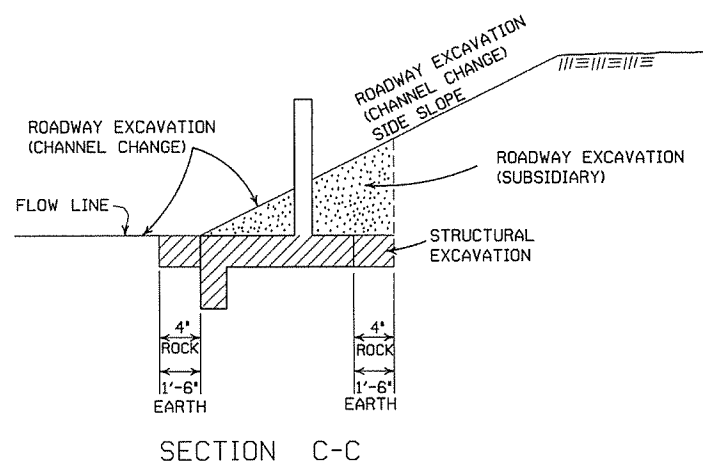
STANDARD DRAWING RCB-1



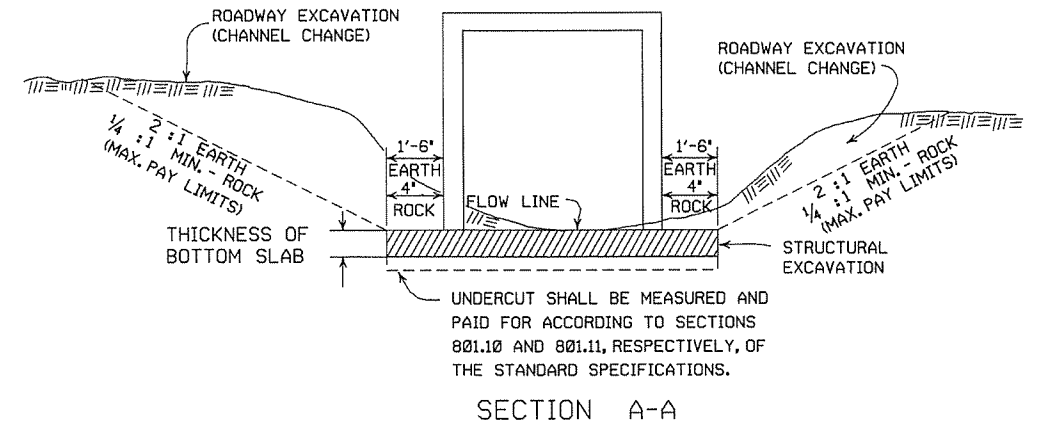
NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.



SECTION B-B
DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A
DETAILS THROUGH EXISTING CHANNELS

UNDERCUT SHALL BE MEASURED AND PAID FOR ACCORDING TO SECTIONS 801.10 AND 801.11, RESPECTIVELY, OF THE STANDARD SPECIFICATIONS.

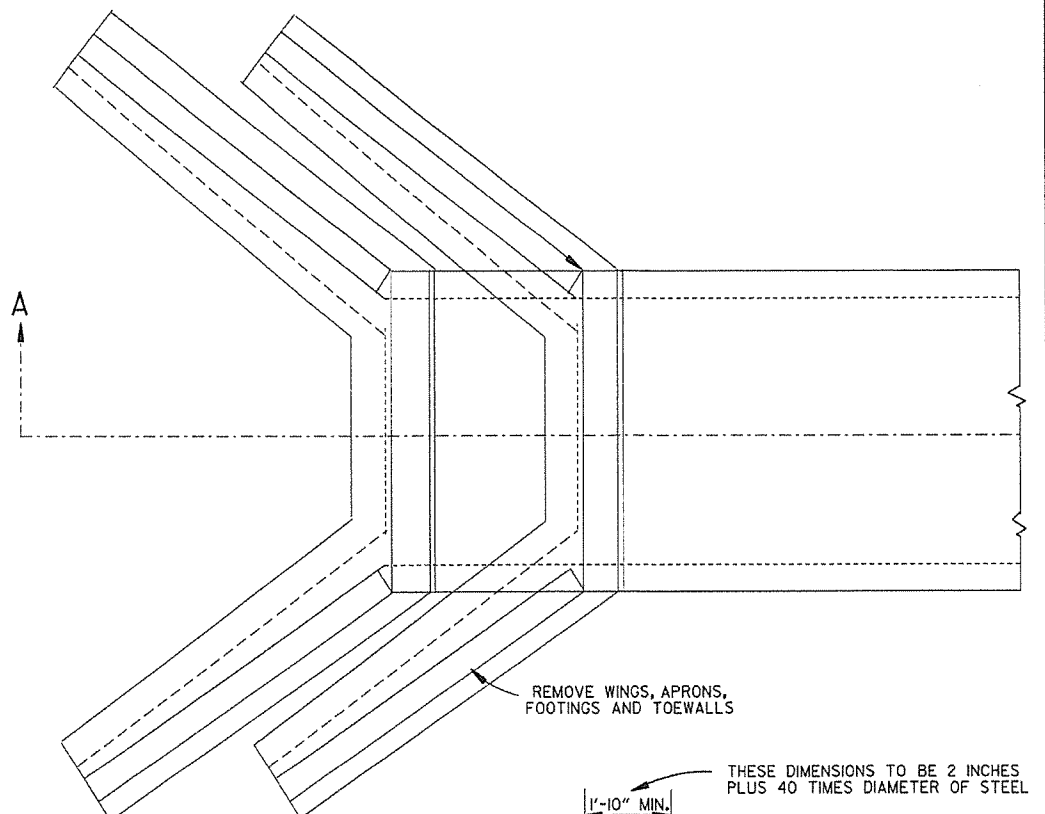
GENERAL NOTES:
ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS 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.

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
DATE	REVISION	FILMED

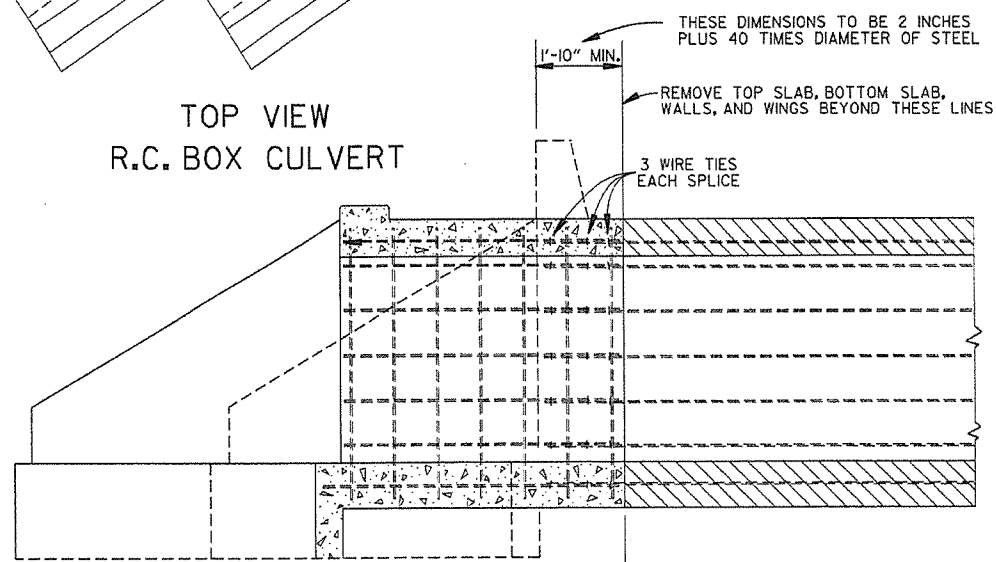
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

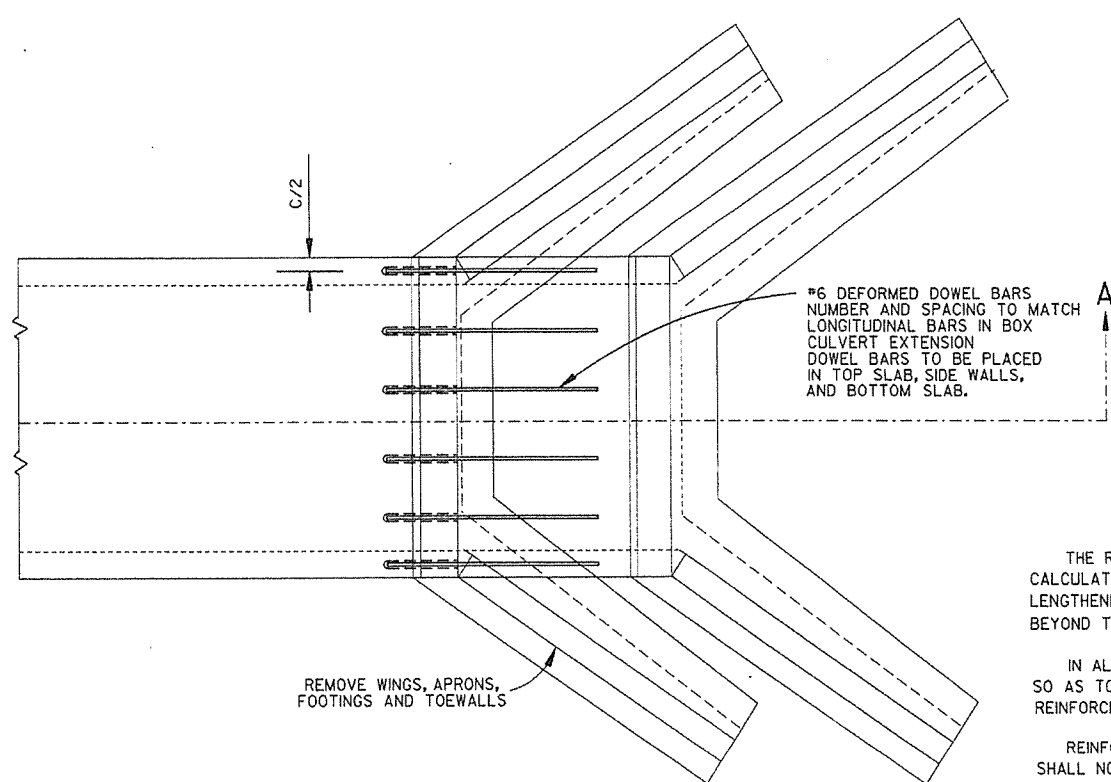


TOP VIEW
R.C. BOX CULVERT

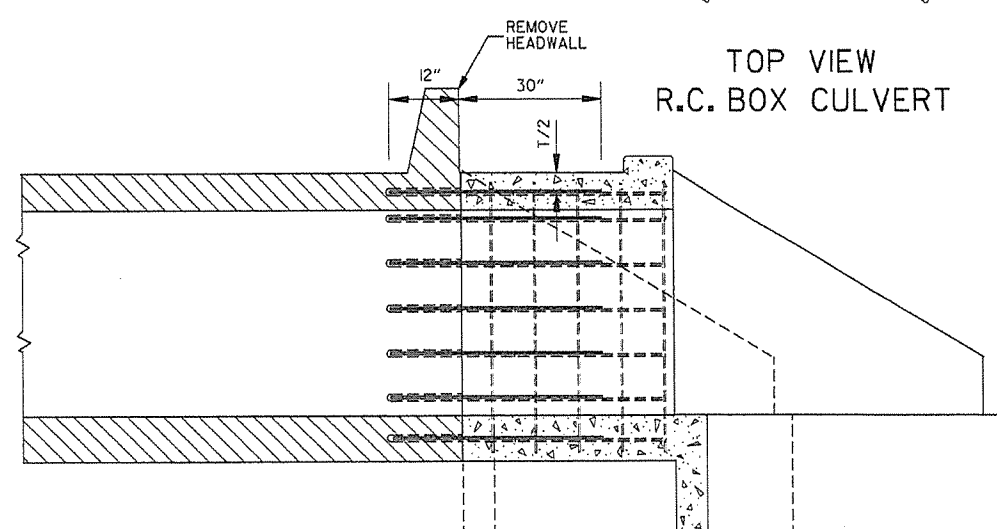


REINFORCING DETAILS AND CULVERT DIMENSIONS
SAME AS STANDARD CULVERT DRAWINGS

SECTION A-A
METHOD 1



TOP VIEW
R.C. BOX CULVERT



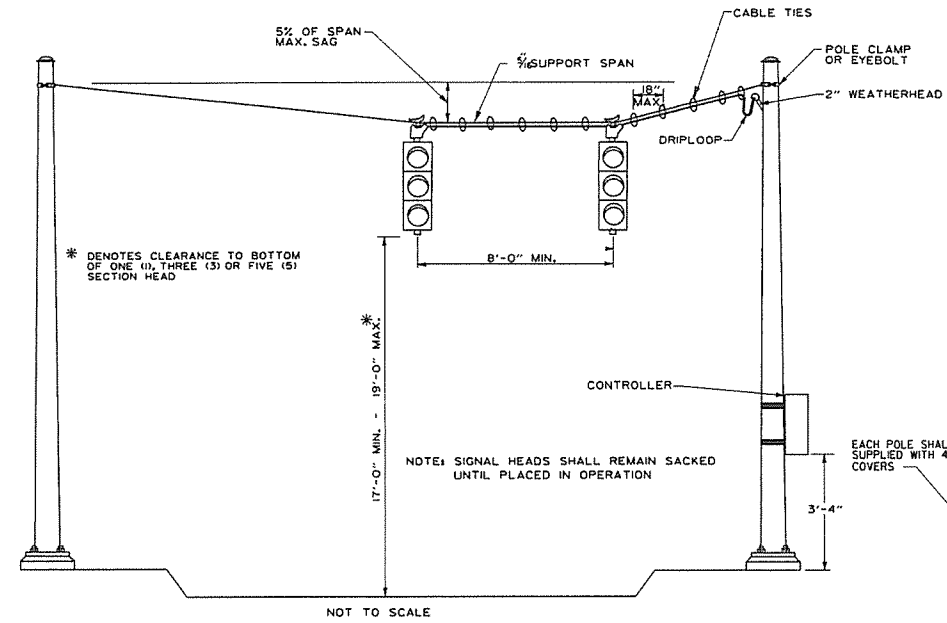
REINFORCING DETAILS AND CULVERT DIMENSIONS
SAME AS STANDARD CULVERT DRAWINGS

SECTION A-A
METHOD 2

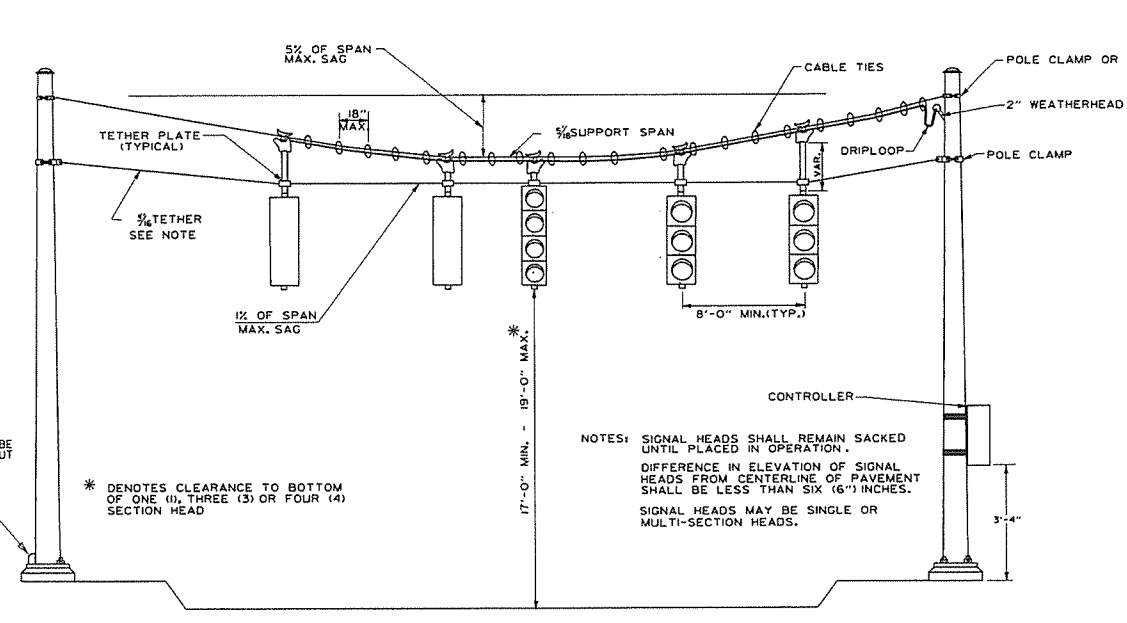
- GENERAL NOTES
- 1 THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.
 - 1 IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.
 - 1&2 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.
 - 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.
 - 1&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.

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.

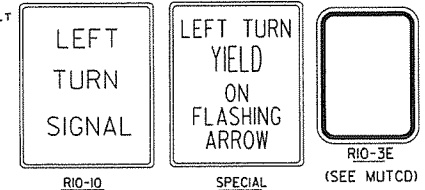
			ARKANSAS STATE HIGHWAY COMMISSION
			METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
			STANDARD DRAWING RCB-3
10-12-95	CHANGED DRAWING * FROM 144-A		
4-1-93	ADDED GENERAL NOTE		
10-1-92	ADDED ALT. METHOD OF EXTENSION		
11-30-89	REDRAWN		
1-4-83	ELIMINATED CONCRETE CLASS		
12-20-56	RETRACED		
DATE	REVISION	DATE FILM	



TYPICAL SPAN WIRE ASSEMBLY

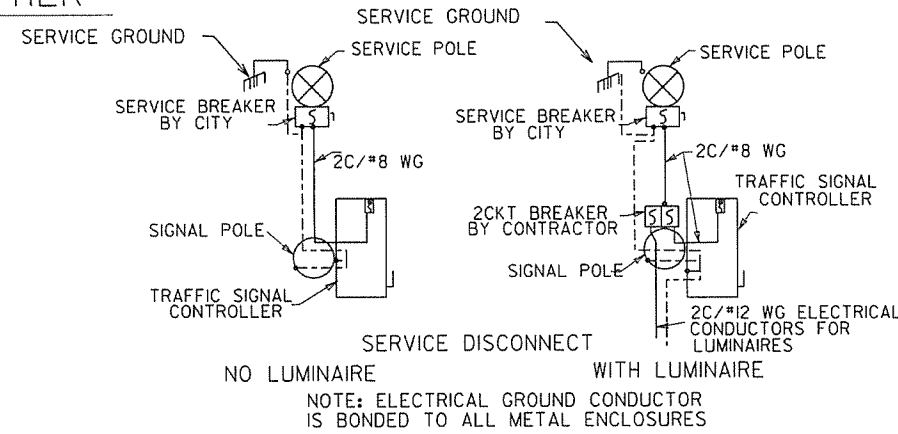
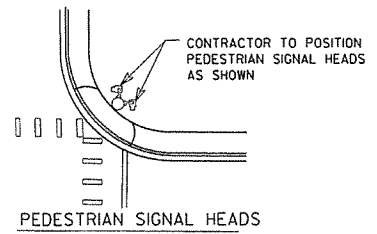


TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

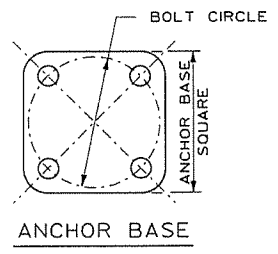


NOTES:
EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)" SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN SIGNAL PLAN NOTES.
SIGN BLANK SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) 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 (RIO-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.
TETHER STRAND SHALL BE EITHER 5*32" OR 3*16" HIGH FATIGUE STAINLESS STEEL AIRCRAFT CABLE IN 7/19 CONFIGURATION, MIL-W-83420 CERTIFIED, WITH A MINIMUM STRENGTH OF 2400 LB.

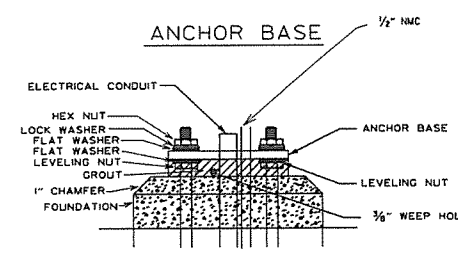
NOTES: SPAN WIRE POLES SHALL BE MOUNTED A MINIMUM OF 4' BEHIND CURB OR SHOULDER.
OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND POLES AND ARMS. ALL POLES AND ARMS IN A JOB MUST BE OF THE SAME SHAPE.
SPAN WIRE ASSEMBLIES WILL REQUIRE TETHER UNLESS OTHERWISE NOTED ON PLAN SHEETS.
CABLE TIES SHALL BE SUITABLE FOR OUTSIDE USE (BLACK).
THE ANCHOR BOLTS AND SWEEPING "L" CONDUIT SHALL BE PLACED IN THE FOUNDATION IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. THE FOUND ROD SHALL EXTEND A MINIMUM OF 8' BELOW CABINET FOUNDATION.
THE CONTROLLER POWER SUPPLY GROUND BUSS SHALL BE BONDED TO THE FOUNDATION GROUND ROD WITH A #8 AWG SOLID COPPER WIRE. ON EXISTING FOUNDATIONS WITH NO GROUND ROD, CONTRACTOR SHALL INSTALL A 10' X 5/8" COPPERWELD GROUND ROD.



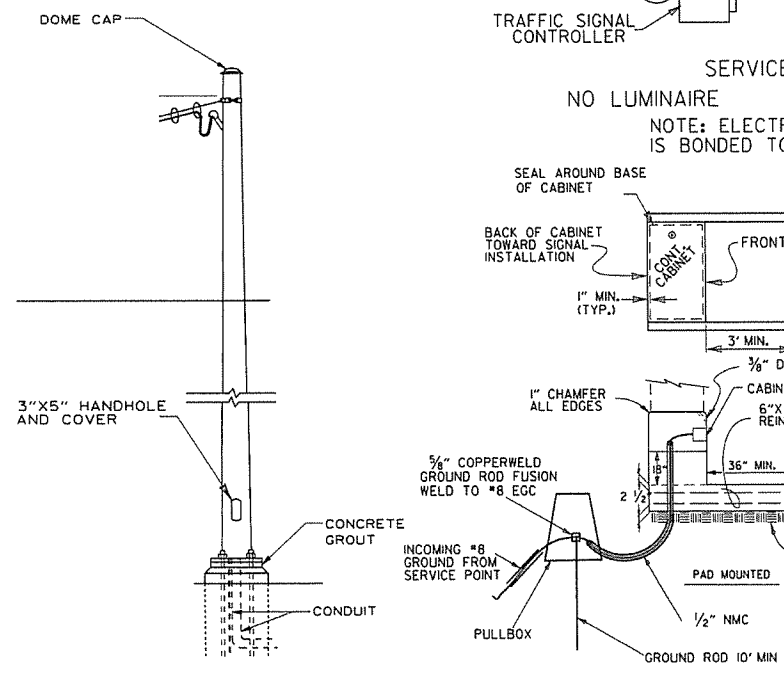
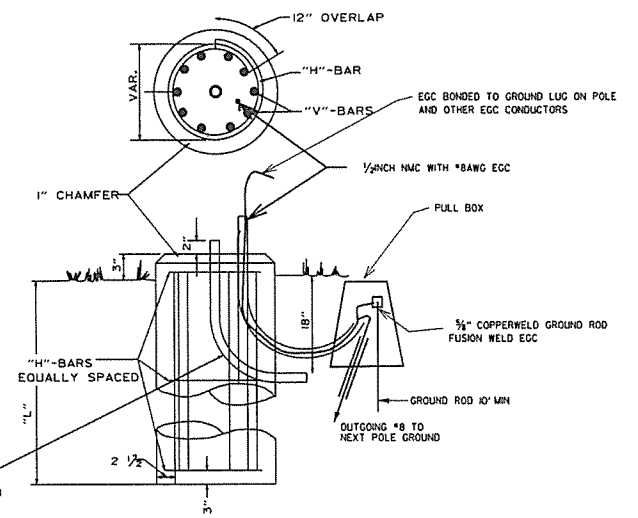
SIGNAL OPERATION NOTES:
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. 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.



ANCHOR BASE



TYPICAL FOUNDATION DETAILS



SPAN WIRE ASSEMBLY WITH SPAN WIRE SUPPORT POLE

CONCRETE BASE MOUNTED CABINET DETAILS

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 II.
CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.
BASE WIND SPEED: 90 MPH
STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHАРPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

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 713 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND EGC CONDUCTOR SHALL BE PAID FOR SEPARATELY.
ALL CONCRETE SHALL BE CLASS "S" WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH F'c=3500 PSI. CONCRETE SHALL BE POURED IN THE DRY AND ALL EXPOSED CORNERS CHAMFERED 3/4" UNLESS NOTED OTHERWISE.
ALL REINFORCING STEEL SHALL CONFORM TO AASHTO M31OR M53, GRADE 40 (YIELD STRENGTH=40,000 PSI).

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.

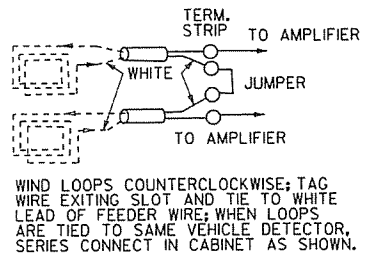
2-27-14	REVISED NOTES.	
9-12-13	ISSUED AS STANDARD DRAWING	
7-21-11	REVISED PEDESTRIAN SIGN & GROUNDING	
5-21-09	REVISED GROUNDING	
9-10-08	REV. STEEL AIRCRAFT CABLE CONFIGURATION NOTE	
7-31-08	REVISED GROUNDING	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REV. CABINET ORIENTATION & SIGNAL OPERATION	
5-22-02	REVISED	
12-27-99	REVISED	
11-18-98	REVISION TO NOTES	
11-21-95	ISSUED	
DATE	REVISION	DATE FILM

LOOP DETECTOR INSTALLATION AND TESTING

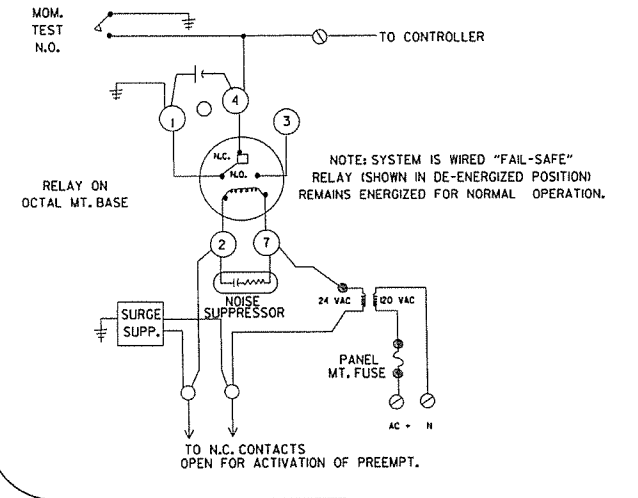
NOTES:

1. LOOPS WITH A PERIMETER GREATER THAN 40' SHALL HAVE TWO TURNS. LOOPS WITH A PERIMETER LESS THAN OR EQUAL TO 40' SHALL HAVE THREE TURNS, UNLESS OTHERWISE NOTED ON THE PLANS. QUADRUPOLE LOOPS SHALL BE TWO TURNS (2-4-2 CONFIGURATION) UNLESS OTHERWISE NOTED.
2. LOOP AND FEEDER WIRE SHALL BE CONTINUOUS WITHOUT SPLICES EXCEPT AT THE LOOP/FEEDER WIRE SPLICE AS SHOWN. SPLICE SHALL BE ROSIN SOLDERED AND WATERPROOFED WITH AN ACCEPTED SPLICE KIT. DRAIN WIRE SHALL BE GROUNDED IN CABINET AND INSULATED AT LOOP TO FEEDER SPLICE.
3. THE LOOP TO FEEDER SPLICE, FEEDER JACKET AND JACKET OF LOOP WIRE IN DUCT SHALL BE COMPLETELY SEALED AND WATERPROOFED.
4. CONTRACTOR MAY MAKE CONNECTIONS TO SIGNAL CABLE AND LOOP TO FEEDER CONNECTION AT TERMINAL STRIPS MOUNTED TO POLE INSIDE HAND HOLD COVER AS SHOWN IN DETAIL. TERMINALS MUST BE EASILY ACCESSIBLE, BUT PROTECTED AGAINST ACCIDENTAL CONTACT. CONNECTION OF POWER CARRYING CIRCUITS MUST BE SEPARATED FROM LOOP OR LOGIC CIRCUITS. ALL CONNECTIONS TO TERMINAL STRIPS SHALL UTILIZE SPADE LUGS OR AS APPROVED BY THE ENGINEER.
5. EACH LOOP SHALL HAVE A SEPARATE "FEEDER WIRE" UNLESS OTHERWISE NOTED. ALL FEEDER WIRES SHALL BE LABELED AS TO LOOP NUMBER AS DESIGNATED ON THE PLANS.
6. ALL LOOP WIRE ENTERING PULL BOXES SHALL BE ENCLOSED IN CONDUIT. EACH LOOP WIRE SHALL ENTER PULL BOX OR POLE BASE THROUGH A SEPARATE PIECE OF ONE INCH (1") CONDUIT.
7. LOOP WIRE FROM LOOP TO CONDUIT IS NOT TWISTED. LOOP WIRE IN THE CONDUIT MUST BE TWISTED TWO TO FIVE TURNS PER FOOT.
8. WARRANTY PERIOD FOR LOOPS SHALL NOT COMMENCE UNTIL TESTED BY THE CONTRACTOR AND ACCEPTED BY THE ENGINEER. CONTRACTOR SHALL PERFORM TEST AND PROVIDE A RECORD TO THE ENGINEER AS LISTED IN THE DETECTOR LOOP TESTING PROCEDURE.
9. UNLESS OTHERWISE APPROVED BY THE ENGINEER, BACKER ROD SHALL BE INSTALLED IN SHORT SECTIONS SPACED NOT MORE THAN 18" APART AND WEDGED INTO SLOT TO HOLD CABLE IN PLACE. CABLE SHALL BE TOTALLY ENCAPSULATED IN SEALER.
10. "HOT POUR" SEALER SHALL NOT BE ALLOWED WITH 705-LOOP WIRING IN DUCT.
11. WHERE UNDERGROUND SPLICES OF SIGNAL CABLE ARE REQUIRED, CONNECTIONS SHALL BE SOLDERED AND COMPLETELY WATERPROOFED TO THE SATISFACTION OF THE ENGINEER. WATERPROOFING SHALL EXTEND A MINIMUM OF TWO INCHES PAST THE SIGNAL CABLE JACKET AND SHALL COMPLETELY COVER ALL INDIVIDUAL CONDUCTORS OF THE SIGNAL CABLE. WATERPROOFING DOES NOT APPLY TO CONNECTIONS MADE IN POLE BASES.
12. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE. ONLY ONE NEUTRAL IS REQUIRED FOR PEDESTRIAN SIGNALS. A SEPARATE 5C (TYPICAL) IS PROVIDED FOR PEDESTRIAN PUSH BUTTONS.
13. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO CONTROLLER. CONTROLLER CABINET SHALL BE WIRED SUCH POWER TO LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS DURING FLASH OPERATION.

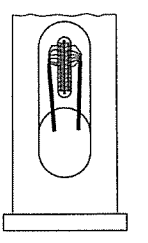
SERIES CONNECTED LOOPS



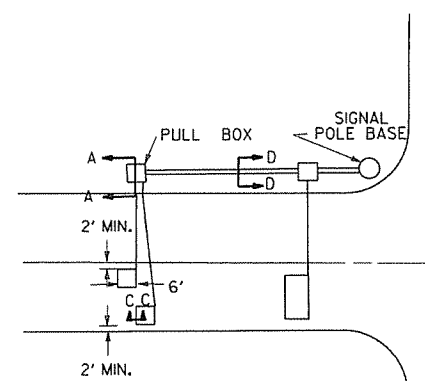
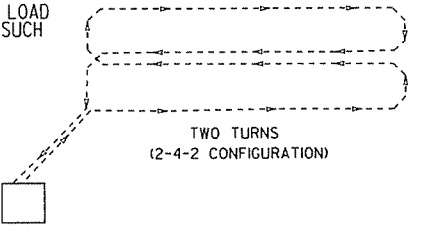
TRAFFIC SIGNAL PRE-EMPTION INTERFACE WIRING DIAGRAM



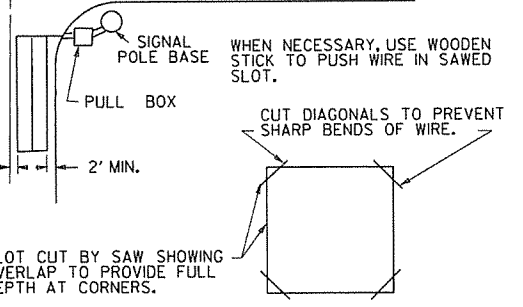
HANDHOLE TERMINAL



QUADRUPOLE LOOP



TYPICAL INTERSECTION

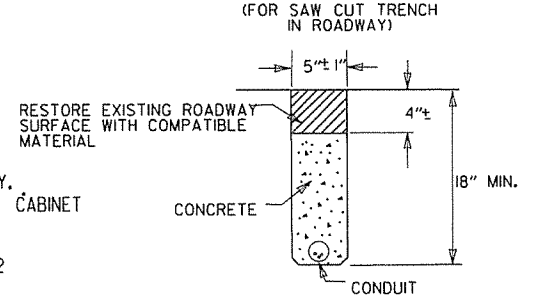


TYPICAL PROCEDURE FOR DETECTOR LOOP TESTING

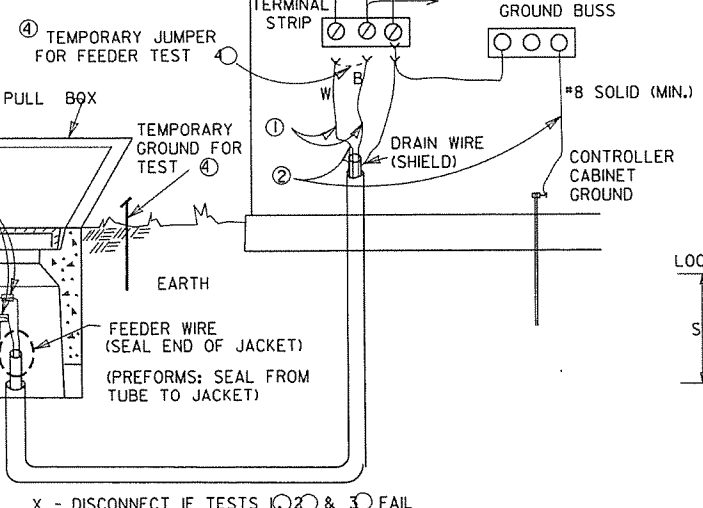
- 1 DISCONNECT AND TEST CONTINUITY (< 10 OHMS) IF CONTINUITY IS BAD, GO TO TEST 3
- 2 TEST INSULATION (@ 500 VOLT TEST > 10 MEG-OHM) IF TESTS 1 & 2 ARE GOOD, NO FURTHER TESTING IS NECESSARY. RECORDED RESULTS CONSIST OF TESTS 1 & 2 FROM CONTROL CABINET WITH FEEDER WIRE CONNECTED TO LOOP.
- 3 OPEN SPLICE (DO NOT BREAK CONNECTION) REPEAT TEST 1 & 2 IF TEST 3 IS BAD, GO TO TEST 4
- 4 BREAK SPLICE, INSTALL JUMPER IN CABINET, REPEAT TESTS 1 & 2 SEPARATELY FOR FEEDER AND FOR LOOP

FAILURES TYPICALLY RESULT FROM BROKEN WIRE IN PAVEMENT, FAULTY INSULATION OF LOOP OR FEEDER WIRE, OR POORLY INSULATED SPLICE CONNECTION.

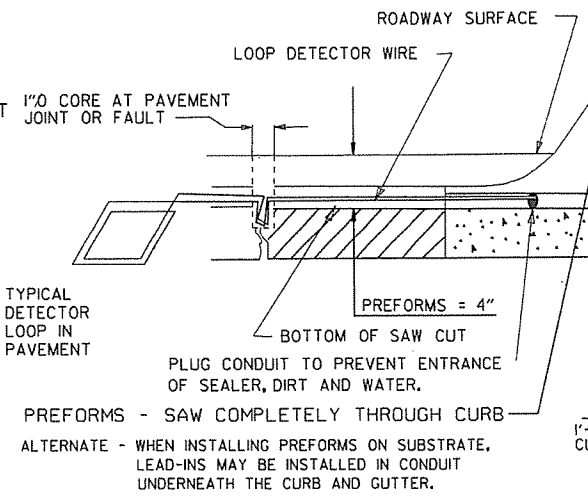
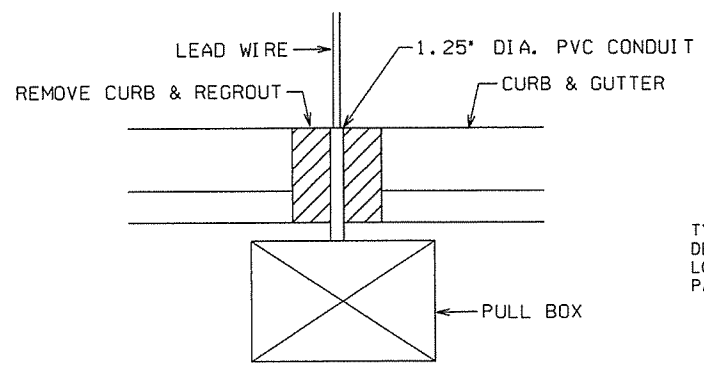
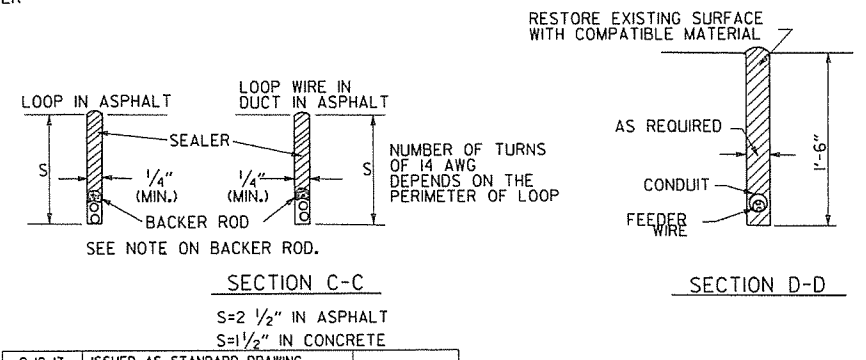
TRENCHING DETAIL



NOTE: PULL BOX COVERS SHALL BE NON-METALLIC AND NON-CONDUCTIVE.



TYPICAL SECTIONS FOR PULSE AND PRESENCE LOOP DETECTORS



SECTION A-A

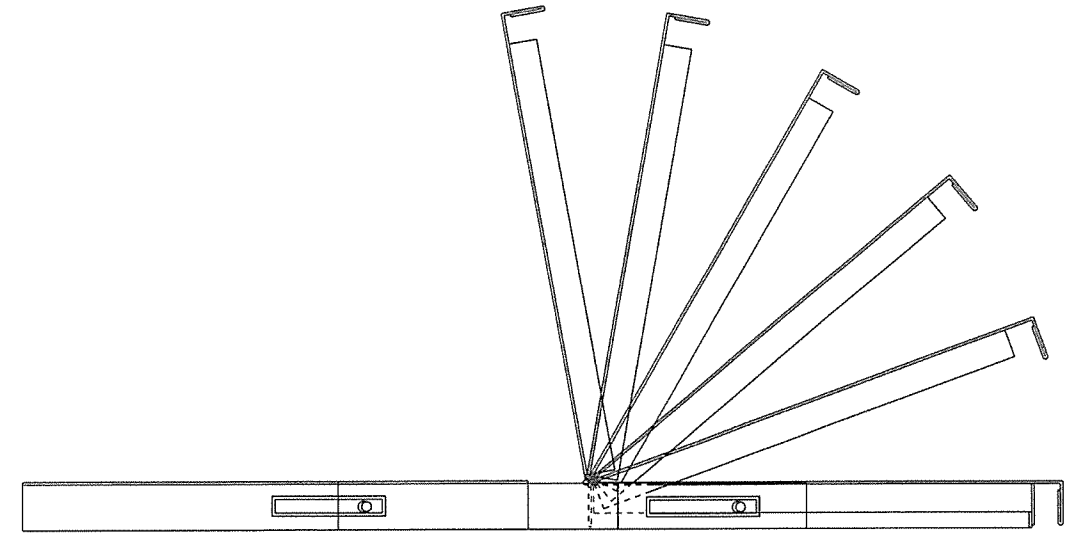
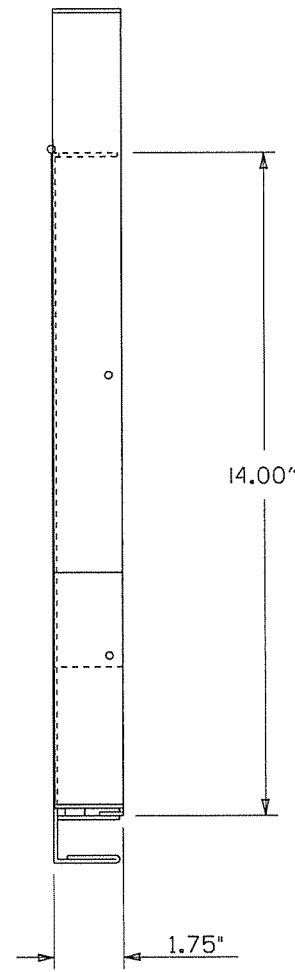
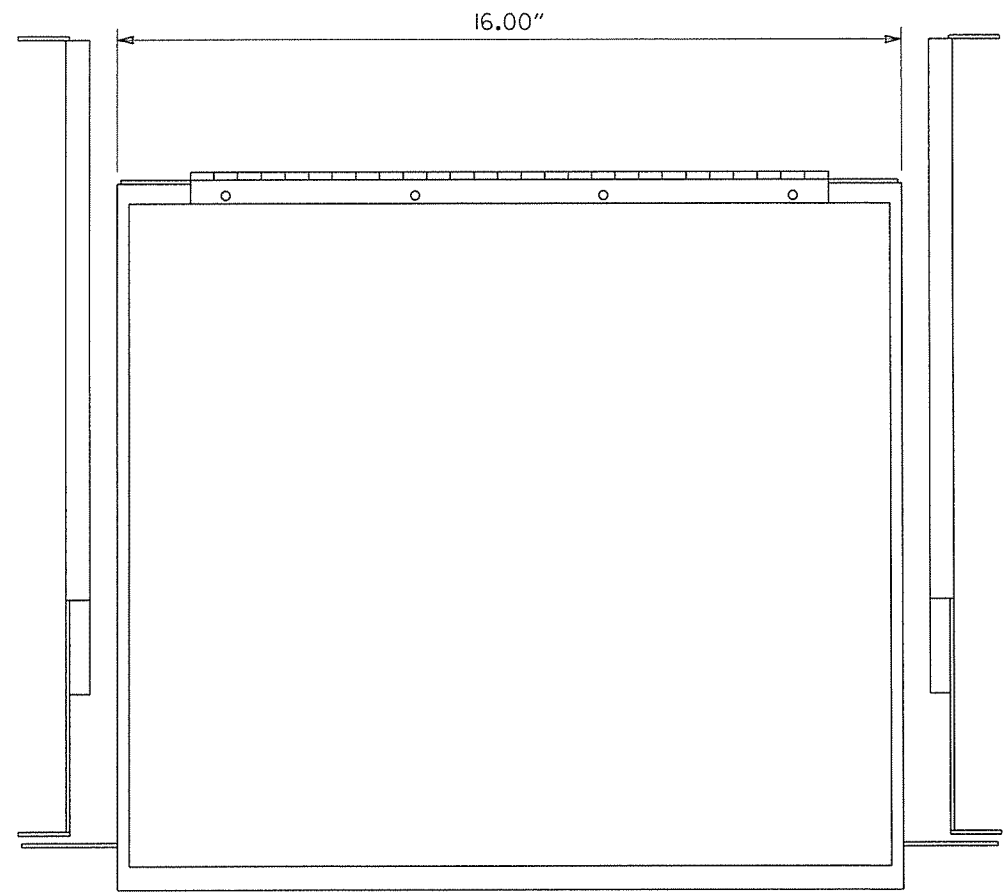
1'-6" CONCRETE COMBINATION CURB AND GUTTER

SPECIAL NOTE
IF FEEDER WIRE JACKET IS LEFT UNSEALED AND WATER IS ALLOWED TO ENTER JACKET, CONTRACTOR WILL BE REQUIRED TO REPLACE FEEDER AT NO COST TO THE DEPARTMENT.

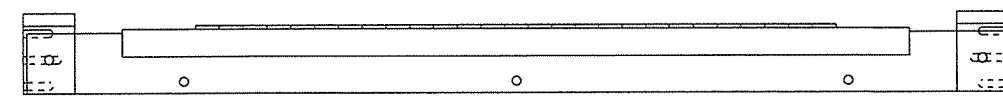
9-12-13	ISSUED AS STANDARD DRAWING	
5-17-01	REVISED	
4-11-01	REVISED	
2-4-00	REVISED PRE-EMPTION TEST SWITCH	
11-18-98	REVISED NOTES	
11-21-95	ISSUED	
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION
LOOP DETECTOR INSTALLATION
STANDARD DRAWING SD-4

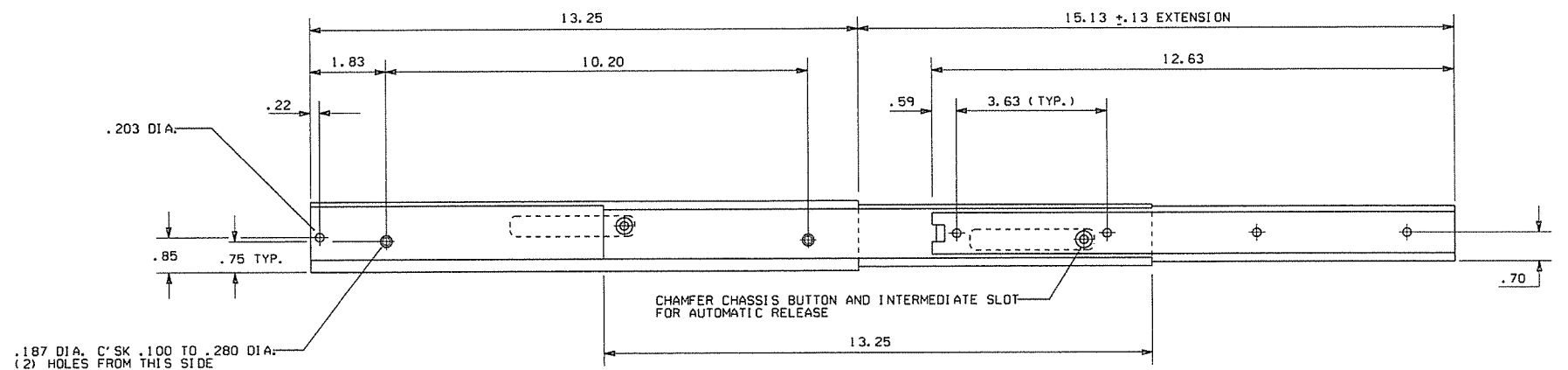
DRAWER PLAN VIEW



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



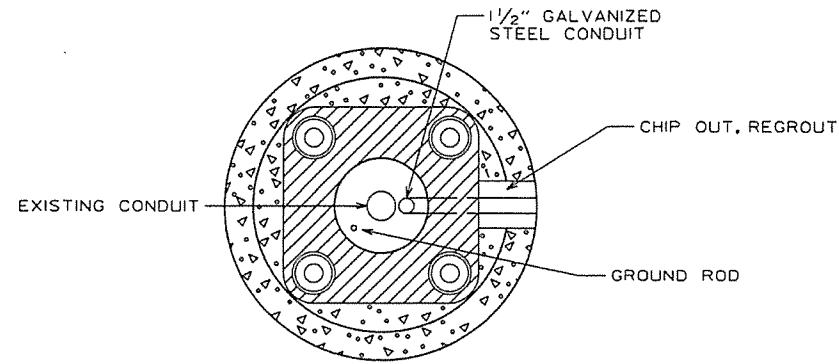
FRONT VIEW



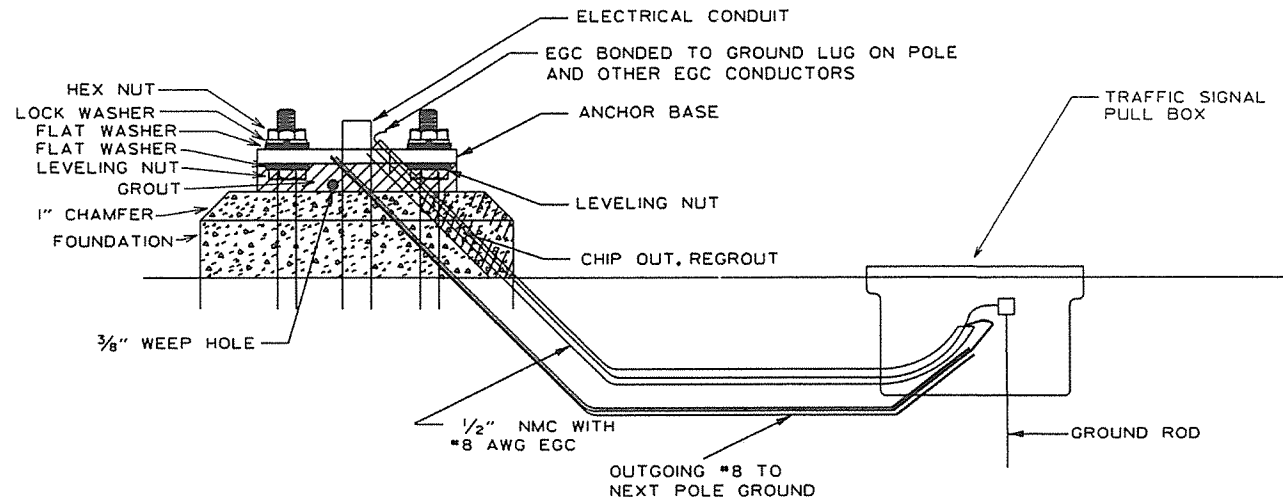
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-5

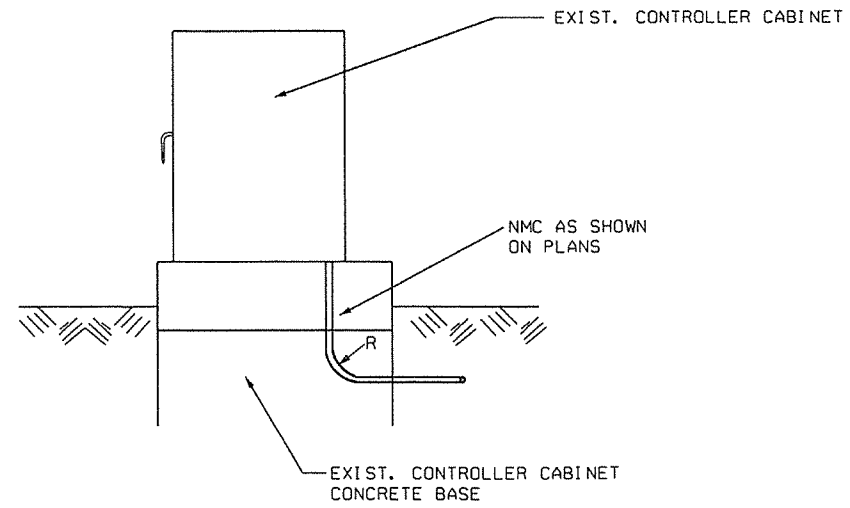
CONDUIT ENTRY TO EXISTING POLE BASE



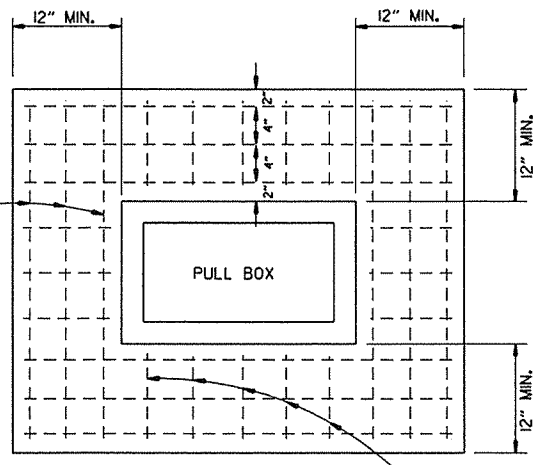
ANCHOR BASE



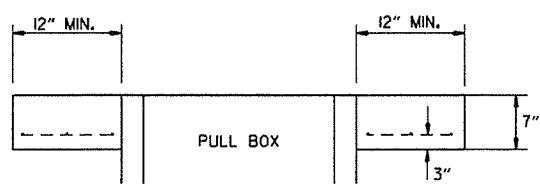
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



3- #6 REINF. BARS EACH SIDE
NOTE: ALL REINFORCING BARS TO BE GRADE 60

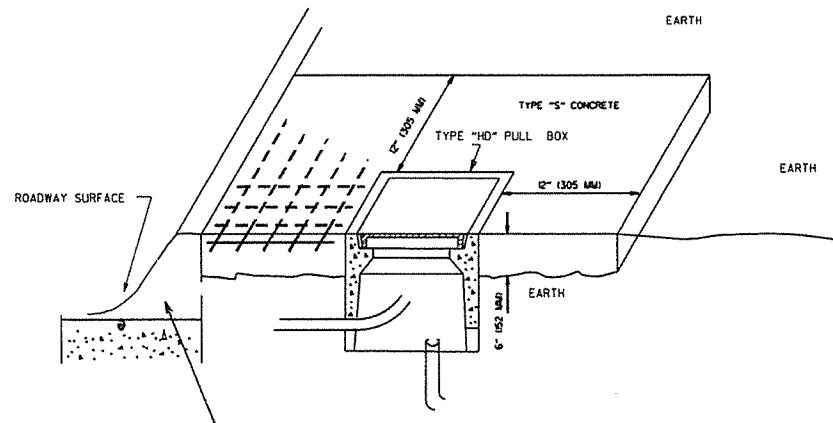


TOP



ELEVATION

TYPE "HD" CONCRETE PULL BOX DETAIL

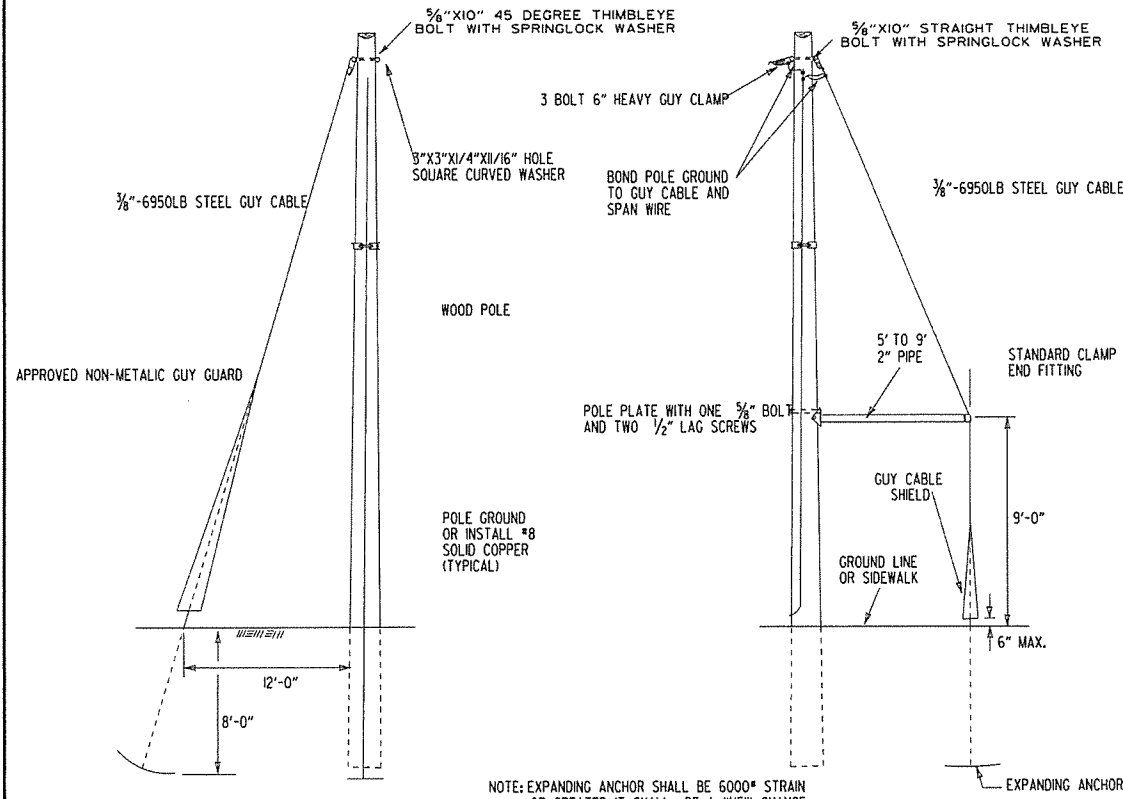


2" CLEAR FROM TOP (TOLERANCE +/- 0.5")

NOTE: ALL TYPE 1 AND TYPE 2 HD PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" (305 MM) WIDE AND 7" (178 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.

9-2-15	REVISED PULL BOX DEPTH	
9-12-13	ISSUED AS STANDARD DRAWING	
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	
DATE	REVISION	DATE FILM

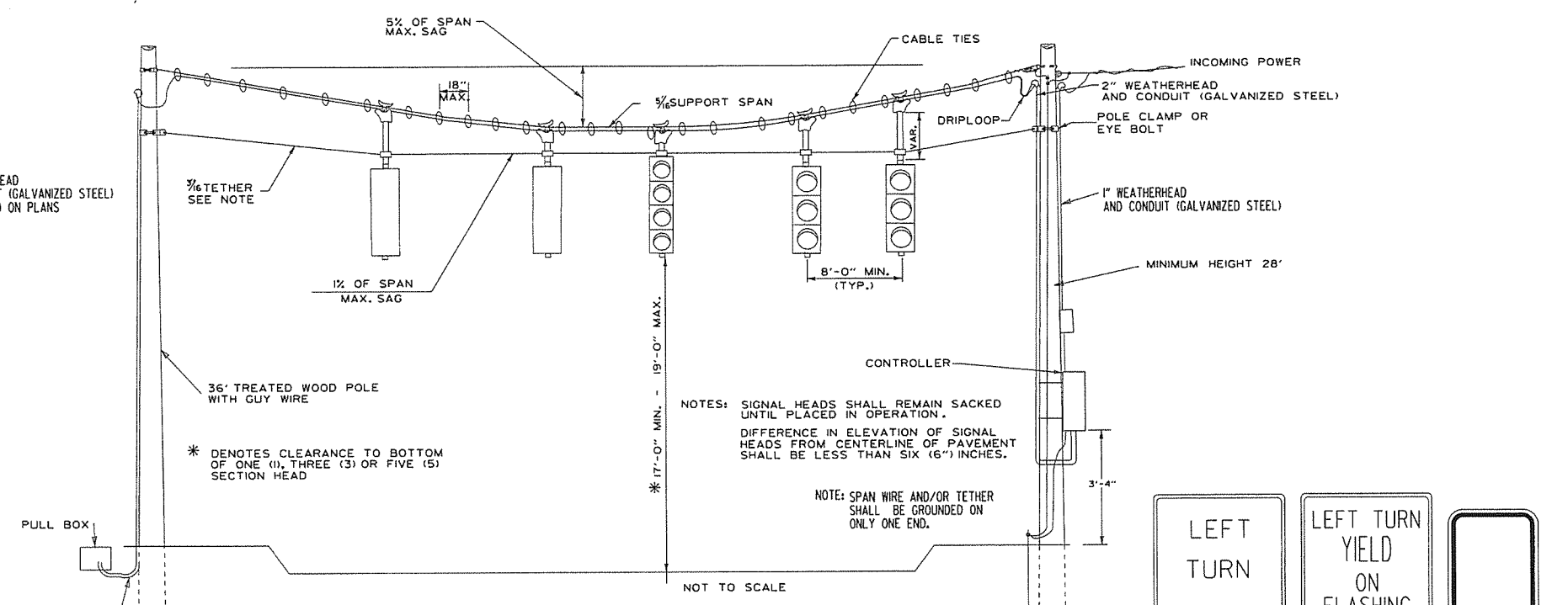
ARKANSAS STATE HIGHWAY COMMISSION
HEAVY DUTY PULL BOX
STANDARD DRAWING SD-6



STANDARD GUY INSTALLATION

NOTE: EXPANDING ANCHOR SHALL BE 6000* STRAIN OR GREATER. IT SHALL BE A "NEW CHANCE 8-WAY EXPANDING ANCHOR", WITH A 3/8" MINIMUM GUY ROD.

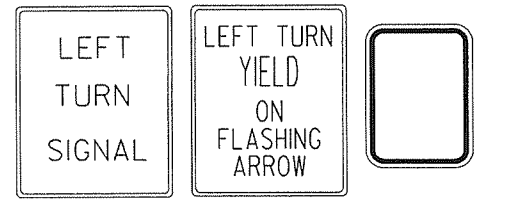
NOTE: CONDUIT INSTALLATION MAY BE ADJUSTED BY THE ENGINEER TO MEET FIELD CONDITIONS.



TYPICAL SPAN WIRE ASSEMBLY WITH TETHER

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.



RIO-10 SPECIAL RIO-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 3/4" COPPERWELD GROUND ROD.

NOTES: EACH ITEM "TRAFFIC SIGNAL HEAD (4 SEC., I-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 ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH A THICKNESS OF 0.100 INCH.

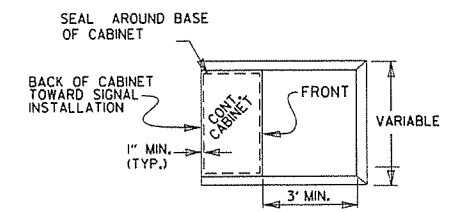
SIGN FACE SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

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

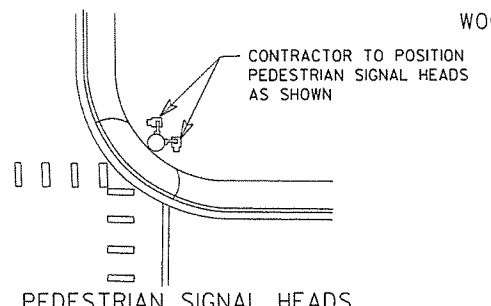
SIGNAL OPERATION NOTES:

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.

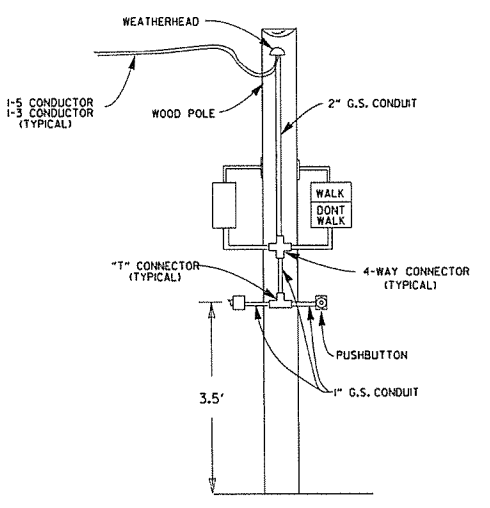
THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME THE INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS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



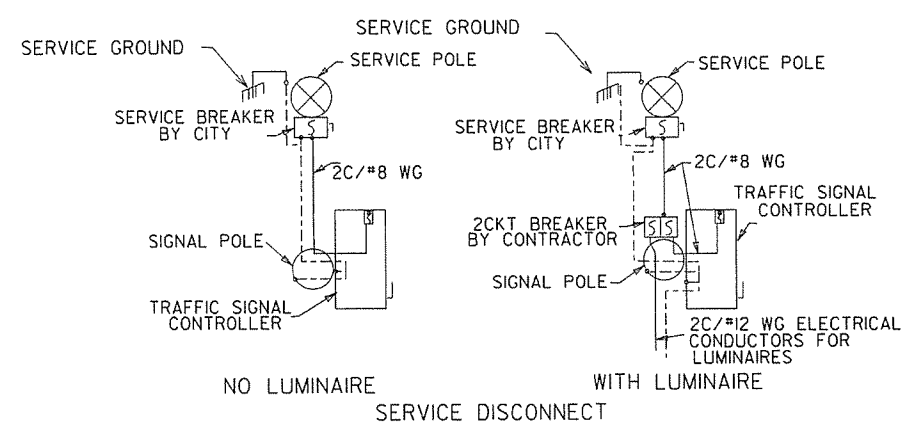
CONCRETE BASE MOUNTED CABINET DETAILS



PEDESTRIAN SIGNAL HEADS



WOODEN POLE INSTALLATION OF PED HEADS



NOTE: ELECTRICAL GROUND CONDUCTOR IS BONDED TO ALL METAL ENCLOSURES

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 (CURRENT 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.

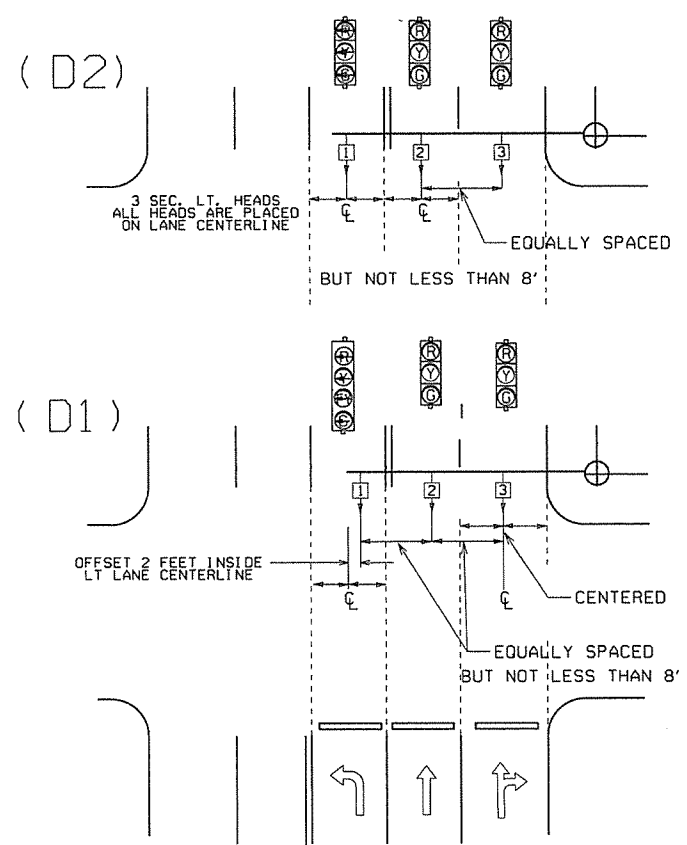
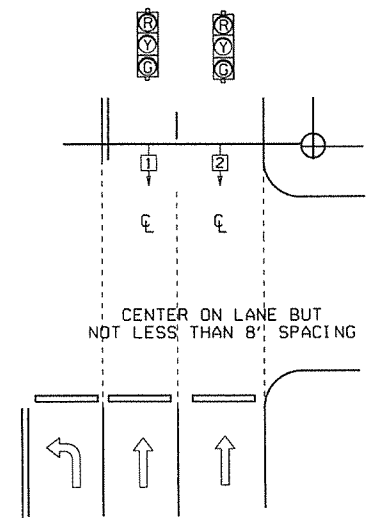
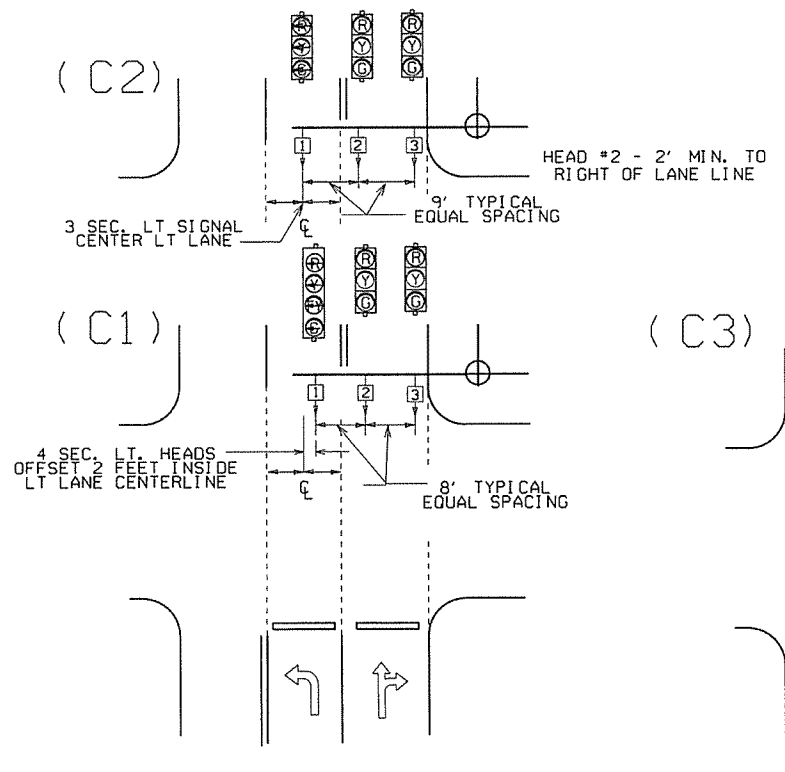
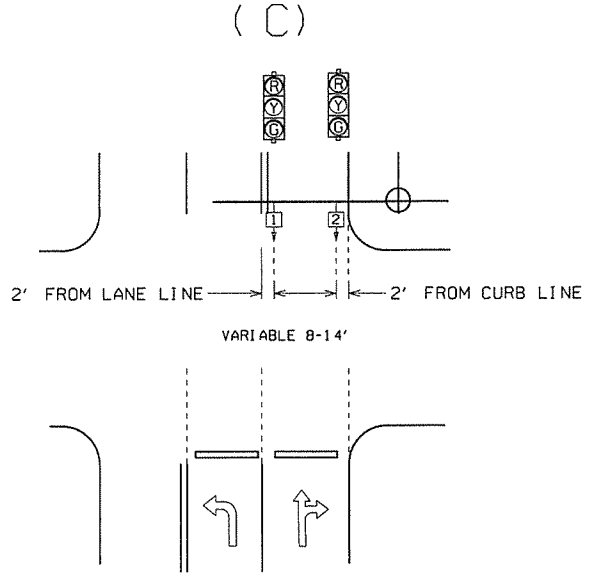
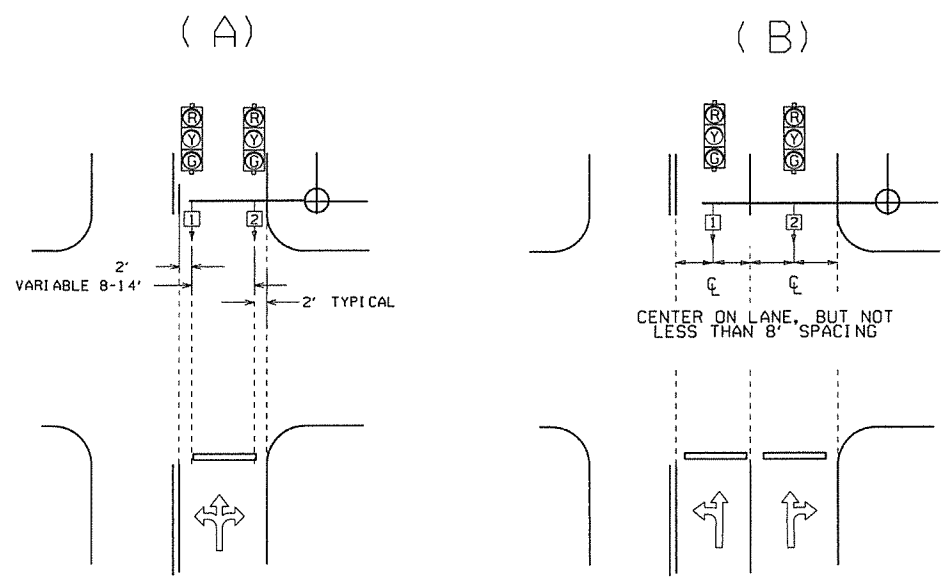
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

DATE	REVISION	DATE FILM
2-27-14	REVISED NOTES.	
9-12-13	ISSUED AS STANDARD DRAWING	
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	

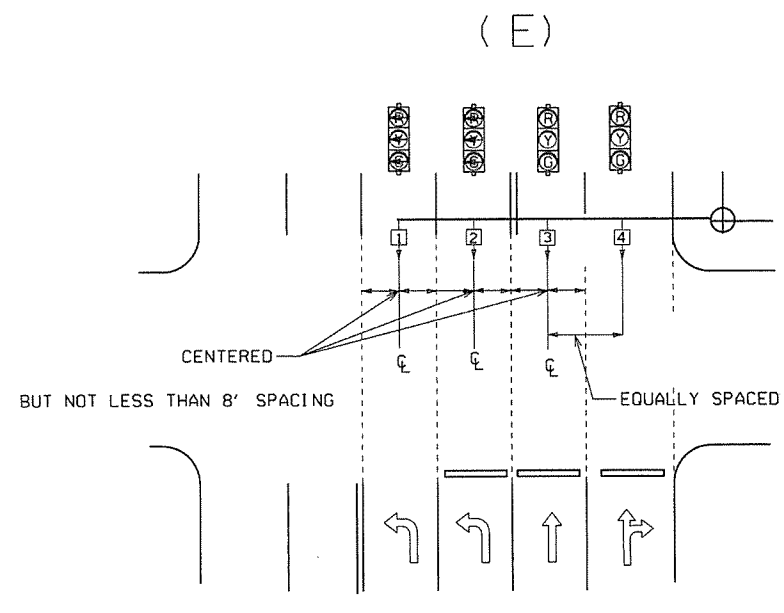
ARKANSAS STATE HIGHWAY COMMISSION

SPAN WIRE ASSEMBLY WOOD POLE

STANDARD DRAWING SD-7



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.



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.

℄ = CENTER OF LANE FROM APPROACH SIDE

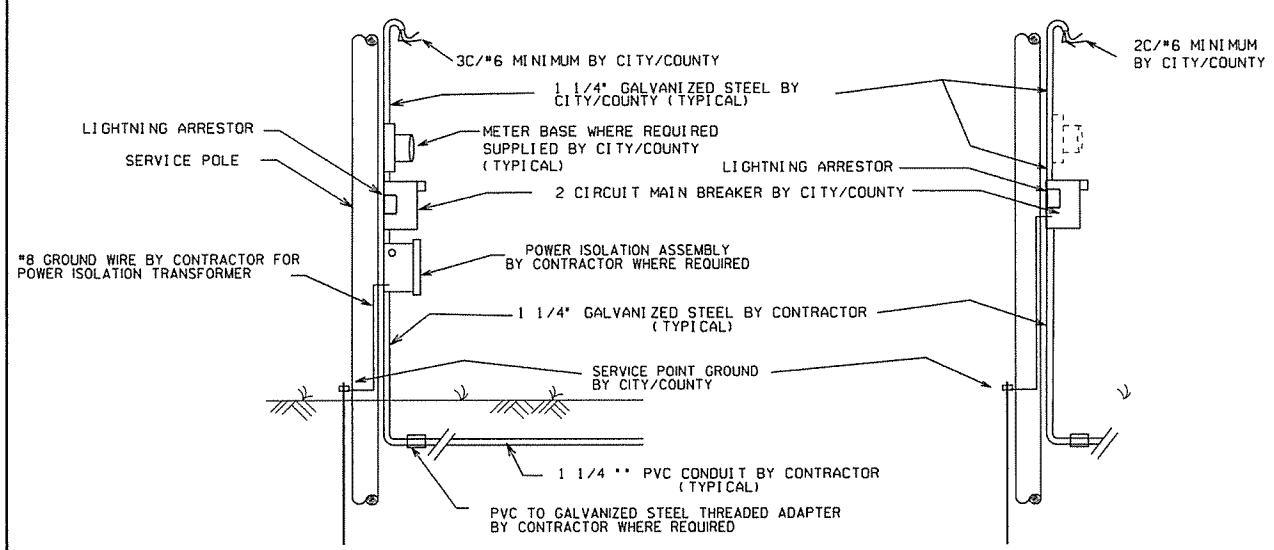
			ARKANSAS STATE HIGHWAY COMMISSION
9-12-13	ISSUED AS STANDARD DRAWING		SIGNAL HEAD PLACEMENT
3-11-10	2009 MUTCD		
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	STANDARD DRAWING SD-8

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

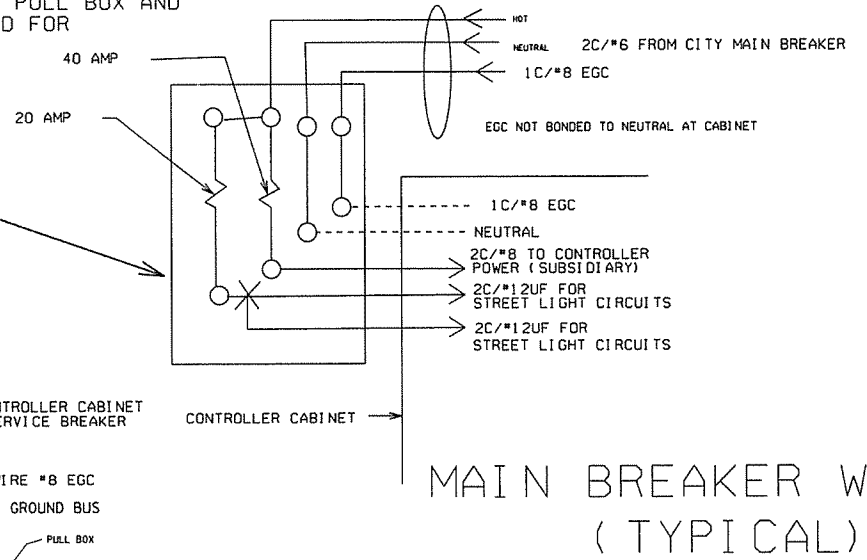
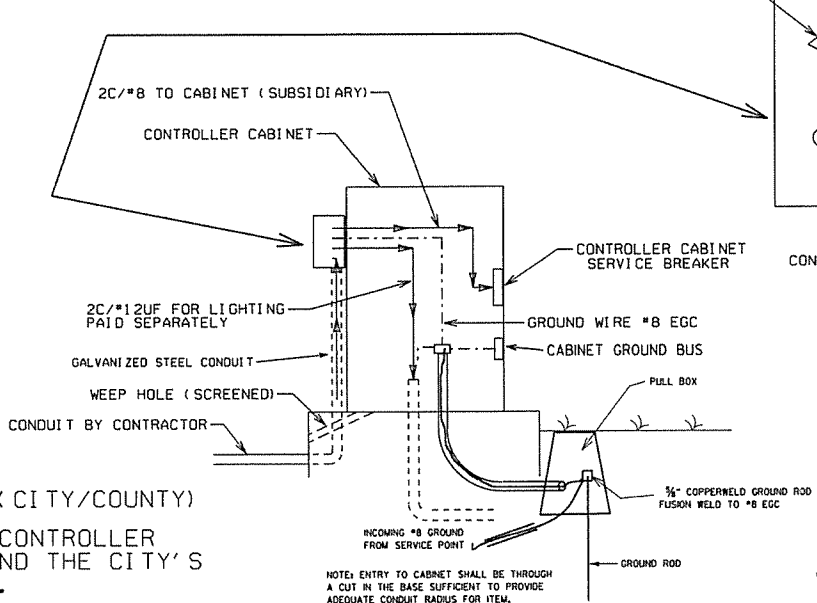
GROUND ROD-A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

WITH POWER ISOLATION ASSEMBLY

WITHOUT POWER ISOLATION ASSEMBLY



SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



MAIN BREAKER WIRING (TYPICAL)

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 RAIN TIGHT 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, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2C/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

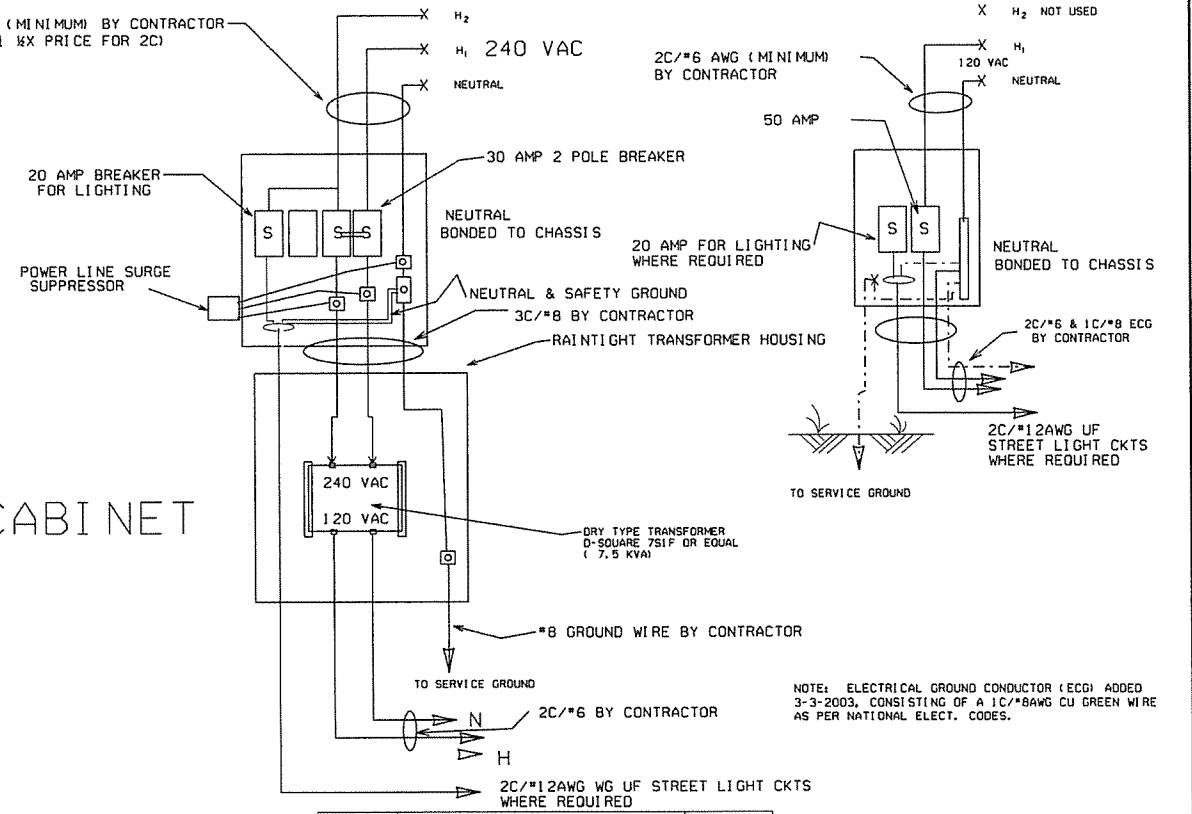
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

3. MAIN BREAKER NEAR CONTROLLER CABINET: ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

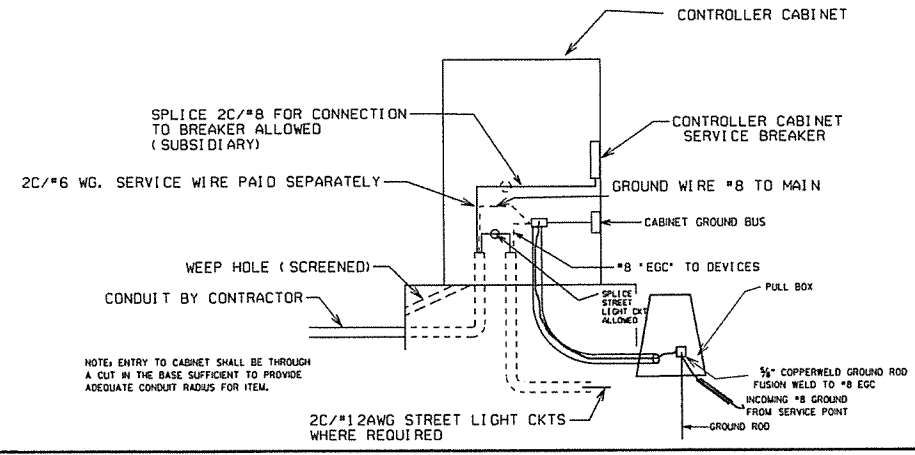
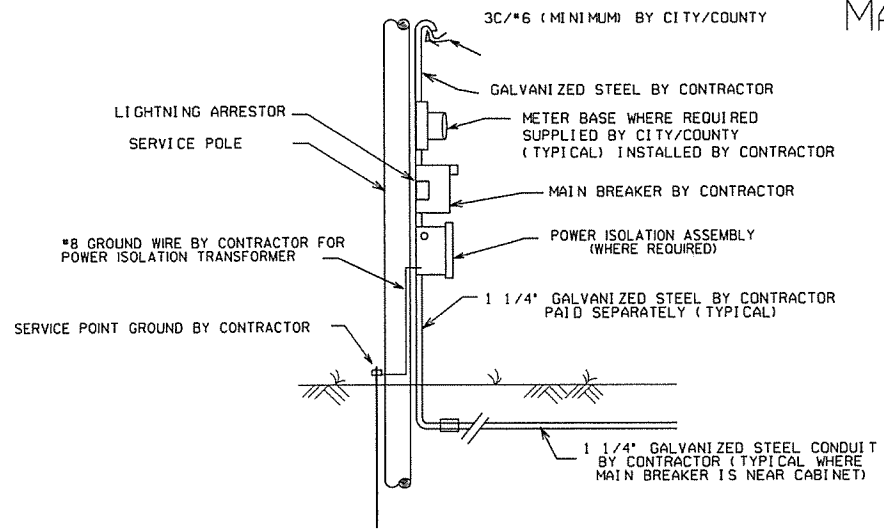
SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED



DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
4-18-13	ADDED LIGHTNING ARRESTOR	
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

SERVICE POINT

STANDARD DRAWING SD-9

NOTE: ELECTRICAL GROUND CONDUCTOR (EGC) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

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 (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 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.

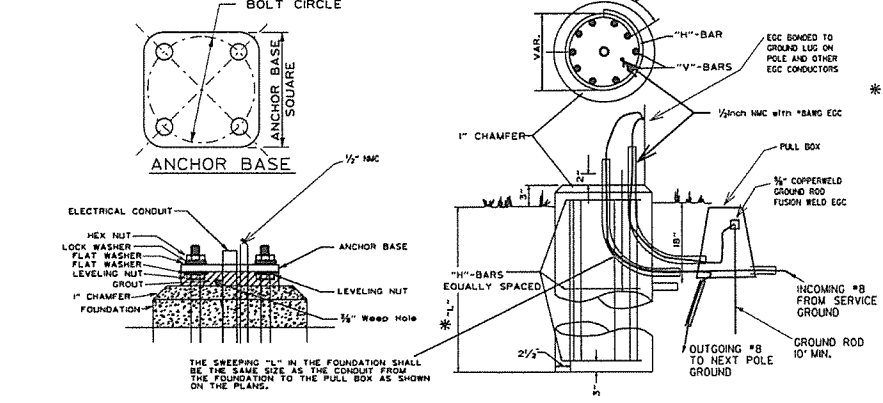
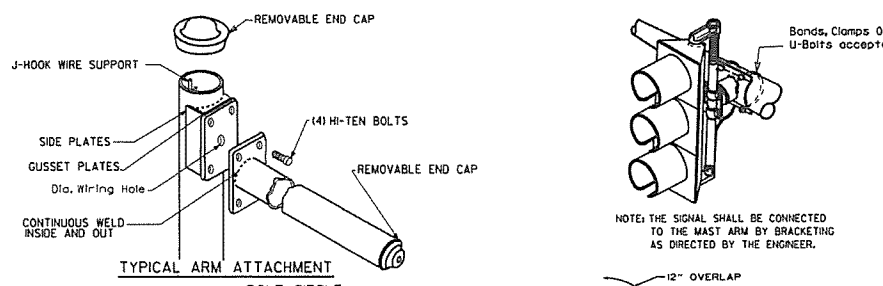
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

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.

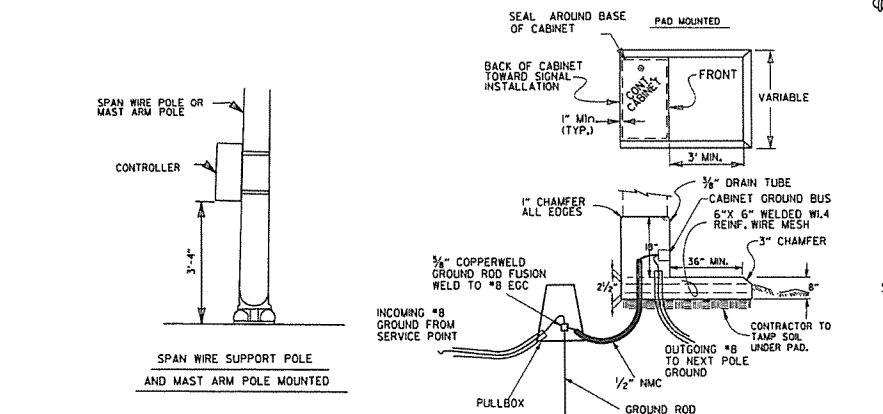
MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

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



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

ARM LENGTH	FDN. DIAMETER	DEPTH * L *	STEEL		
			VERT.	HORZ.	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'

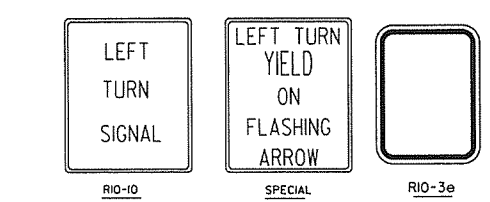
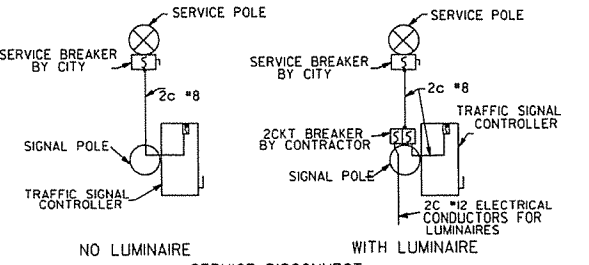
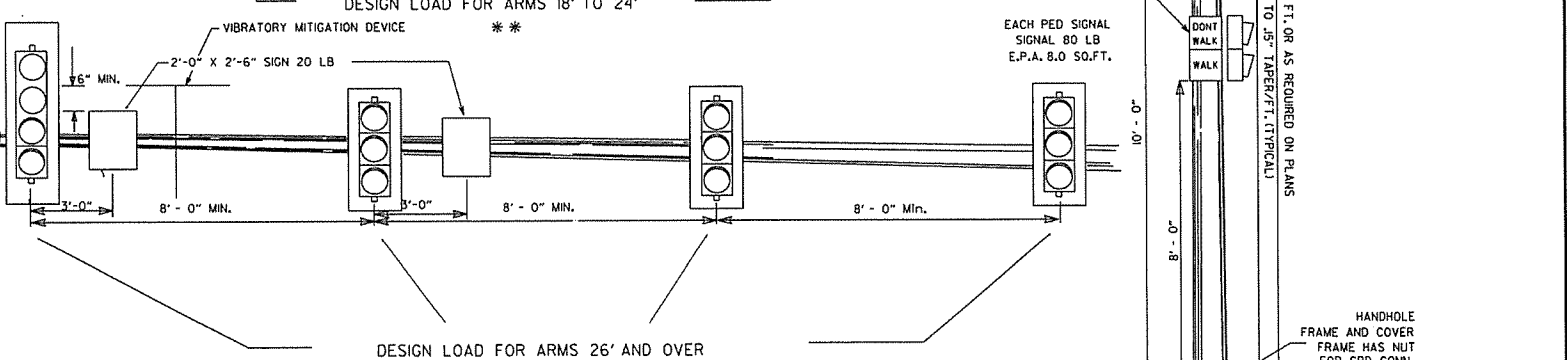
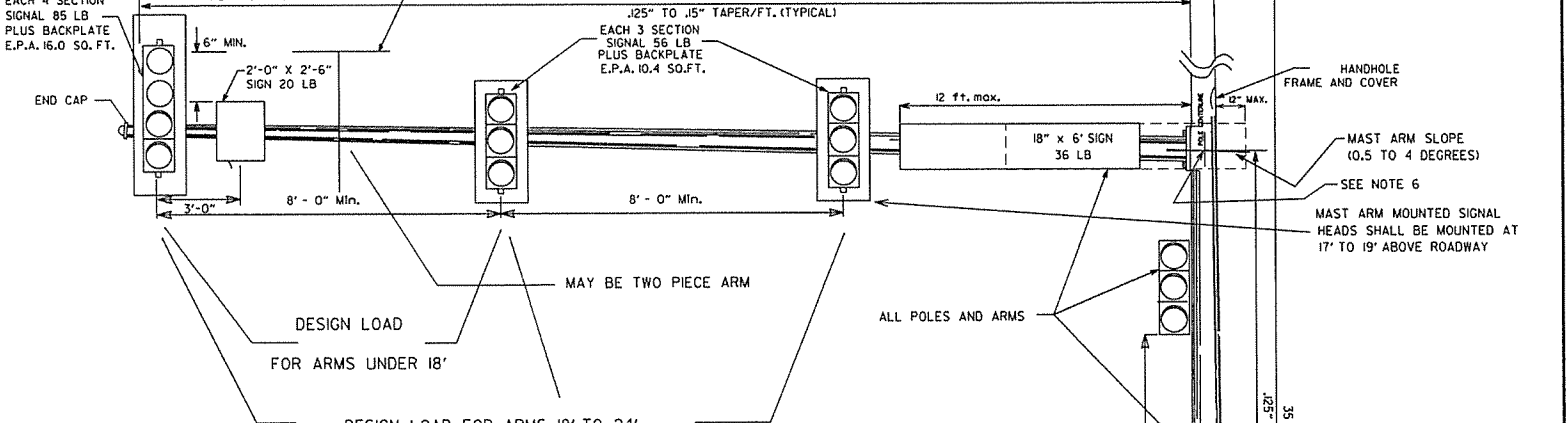
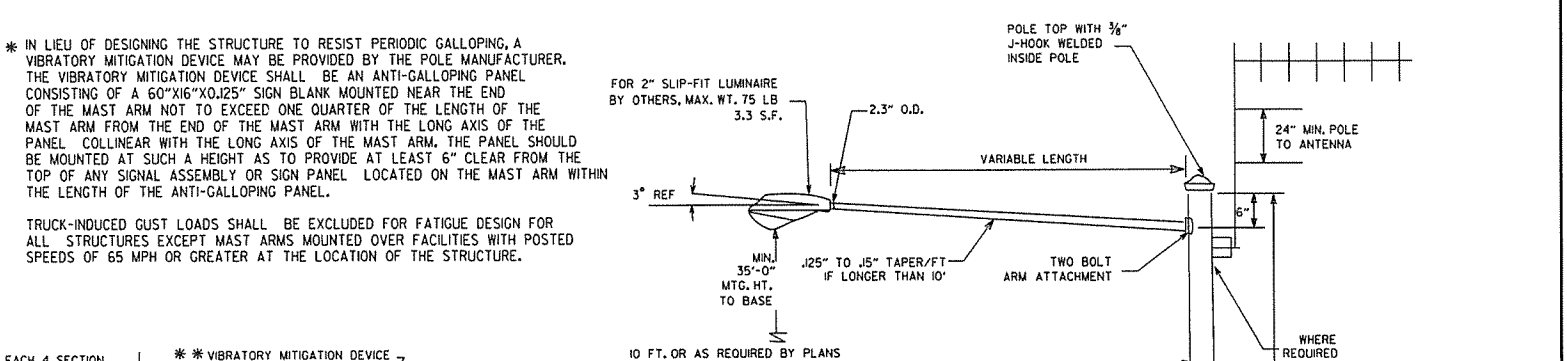


CONTROLLER CABINET MOUNTING DETAILS
UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

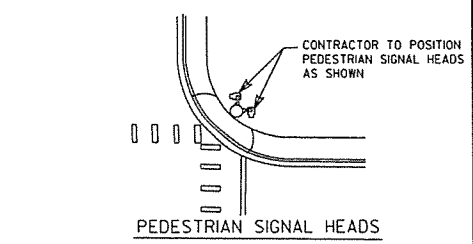
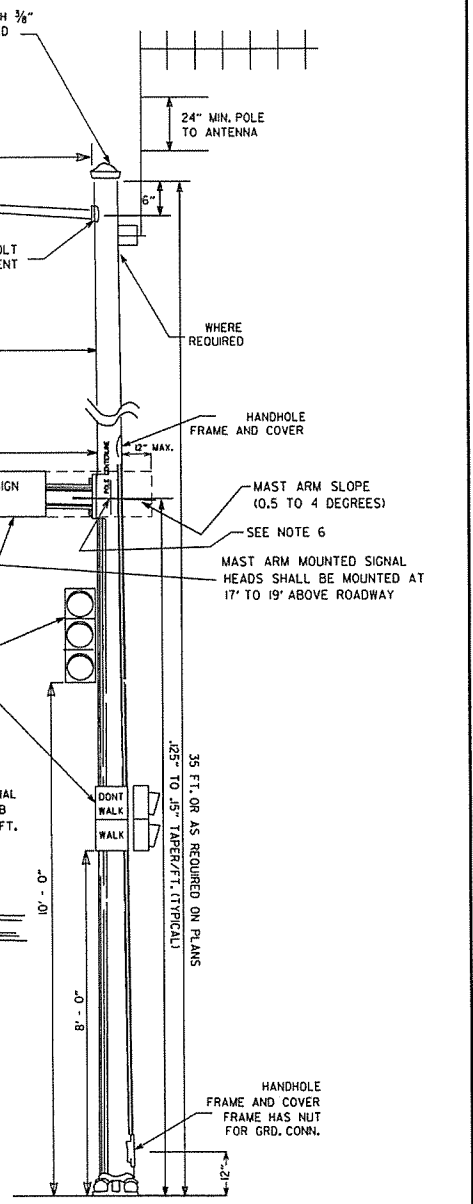
8. GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

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.

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.
* 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.

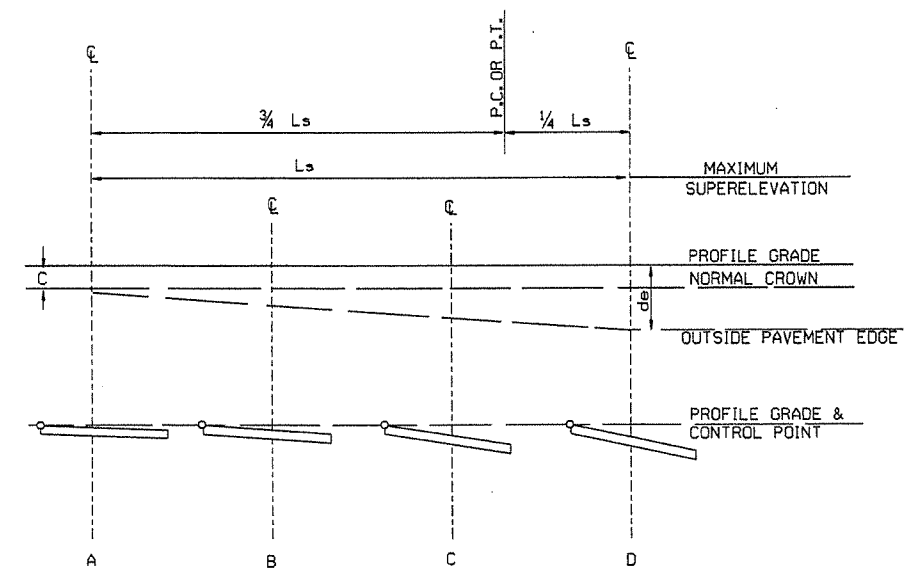


DATE	REVISION	DATE FILM
2-27-14	REVISED NOTES.	
9-12-13	ISSUED AS STANDARD DRAWING	
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-9-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-11-01	REV. NOTES & POLE MAST ARM SLOPE	
4-9-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-11-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	



SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH		40 MPH		50 MPH		55 MPH		60 MPH		65 MPH		70 MPH	
	Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)		Ls (FT)	
	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE	MINIMUM	DESIRABLE
0° 15'	N.C.		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.		N.C.	
0° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 00'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 15'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 30'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
1° 45'	N.C.		N.C.		N.C.		N.C.		N.C.		N.C.		N.C.	
2° 00'	R.C.		R.C.		R.C.		R.C.		R.C.		R.C.		R.C.	
2° 15'	R.C.		R.C.		R.C.		R.C.		R.C.		R.C.		R.C.	
2° 30'	0.021		0.031		0.041		0.051		0.061		0.071		0.081	
2° 45'	0.023		0.033		0.043		0.053		0.063		0.073		0.083	
3° 00'	0.025		0.035		0.045		0.055		0.065		0.075		0.085	
3° 15'	0.027		0.037		0.047		0.057		0.067		0.077		0.087	
3° 30'	0.029		0.039		0.049		0.059		0.069		0.079		0.089	
3° 45'	0.031		0.041		0.051		0.061		0.071		0.081		0.091	
4° 00'	0.033		0.043		0.053		0.063		0.073		0.083		0.093	
4° 30'	0.037		0.047		0.057		0.067		0.077		0.087		0.097	
5° 00'	0.040		0.050		0.060		0.070		0.080		0.090		0.100	
5° 30'	0.043		0.053		0.063		0.073		0.083		0.093		0.100	
6° 00'	0.046		0.056		0.066		0.076		0.086		0.096		0.100	
6° 30'	0.050		0.060		0.070		0.080		0.090		0.099		0.100	
7° 00'	0.053		0.063		0.073		0.083		0.093		0.099		0.100	
7° 30'	0.056		0.066		0.076		0.086		0.096		0.099		0.100	
8° 00'	0.058		0.068		0.078		0.088		0.098		0.099		0.100	
8° 30'	0.061		0.071		0.081		0.091		0.099		0.100		0.100	
9° 00'	0.063		0.073		0.083		0.093		0.099		0.100		0.100	
10° 00'	0.068		0.078		0.088		0.098		0.099		0.100		0.100	
11° 00'	0.072		0.082		0.092		0.099		0.100		0.100		0.100	
12° 00'	0.076		0.086		0.096		0.099		0.100		0.100		0.100	
13° 00'	0.080		0.090		0.100		0.100		0.100		0.100		0.100	
14° 00'	0.083		0.093		0.100		0.100		0.100		0.100		0.100	
15° 00'	0.086		0.096		0.100		0.100		0.100		0.100		0.100	
16° 00'	0.089		0.099		0.100		0.100		0.100		0.100		0.100	
17° 00'	0.091		0.101		0.100		0.100		0.100		0.100		0.100	
18° 00'	0.093		0.103		0.100		0.100		0.100		0.100		0.100	
19° 00'	0.095		0.105		0.100		0.100		0.100		0.100		0.100	
20° 00'	0.097		0.107		0.100		0.100		0.100		0.100		0.100	
21° 00'	0.098		0.108		0.100		0.100		0.100		0.100		0.100	
22° 00'	0.099		0.109		0.100		0.100		0.100		0.100		0.100	
23° 00'	0.099		0.109		0.100		0.100		0.100		0.100		0.100	
24° 00'	0.100		0.110		0.100		0.100		0.100		0.100		0.100	



SUPERELEVATION FORMULA = $S = - \frac{L(d_e - C)}{L_s} - C$

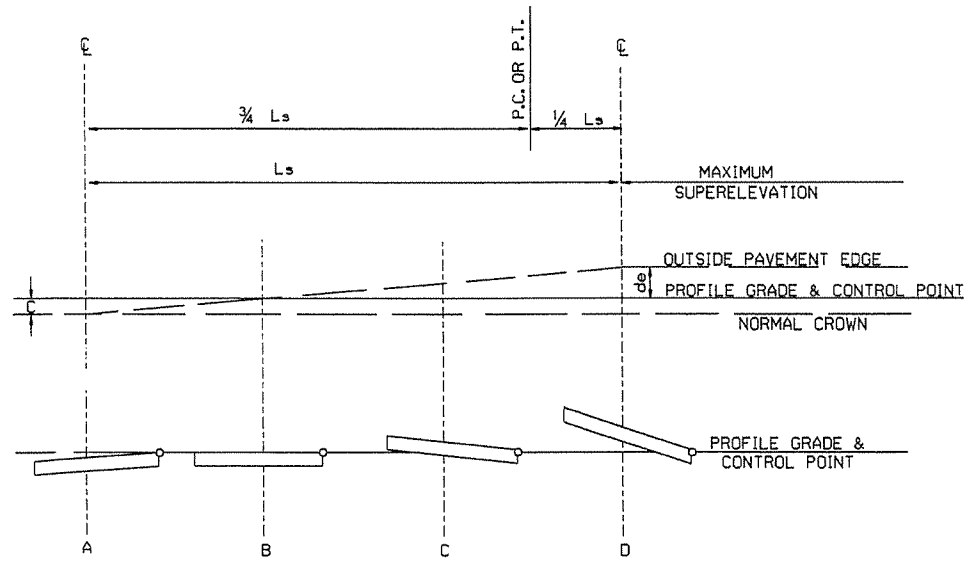
ABBREVIATIONS

- 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 FOLLOWS:

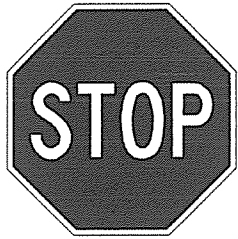
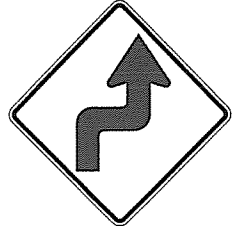
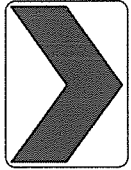
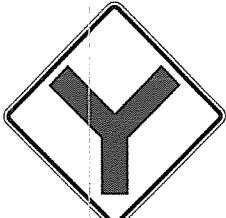

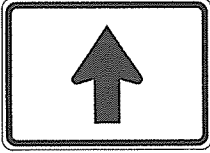
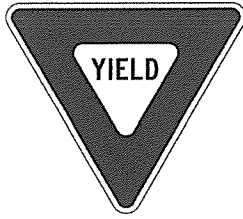
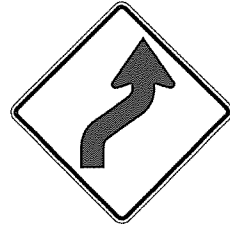

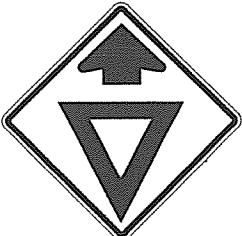

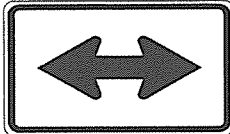
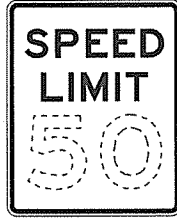
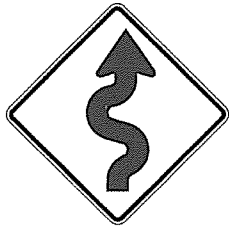
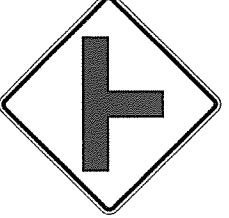




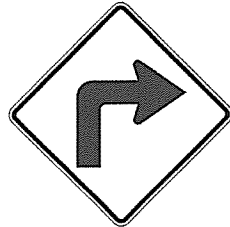
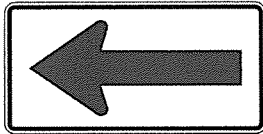
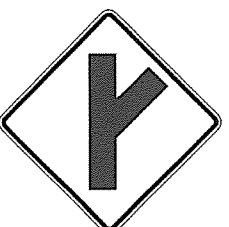

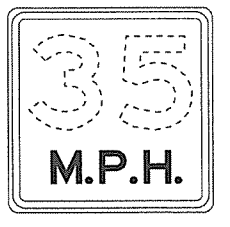
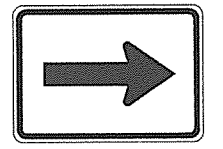
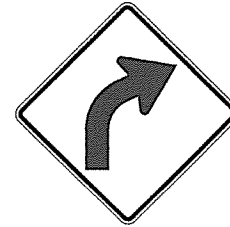
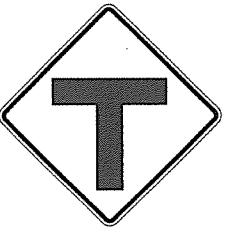
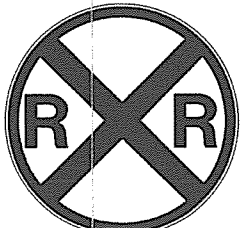
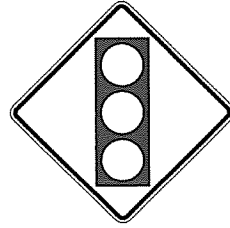

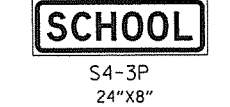
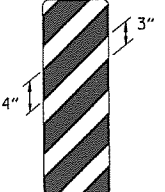
6 LANE DIVIDED-----+20%
8 LANE DIVIDED-----+50%

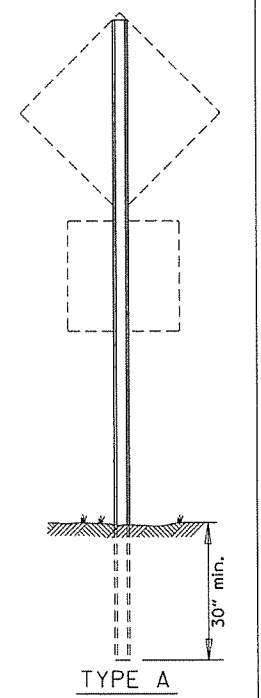
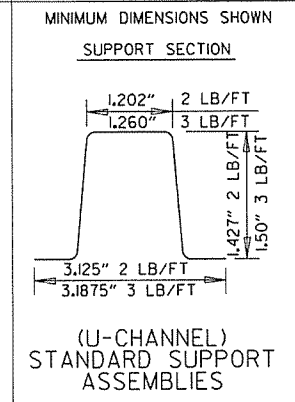


SUPERELEVATION FORMULA = $S = + \frac{L(d_e + C)}{L_s} - C$

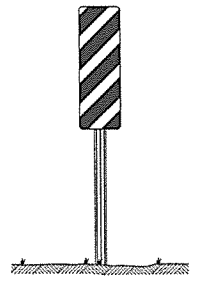
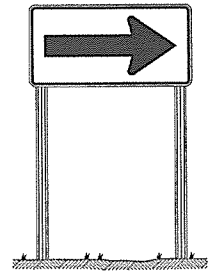
01-09-87	ISSUED	578-1-15-87
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
TABLES AND METHOD OF SUPERELEVATION
FOR ONE-WAY TRAFFIC
STANDARD DRAWING SE-1

 RI-1 30"x30"	 W1-3 30"x30" (LT. OR RT.)	 W1-8 18"x24"	 W2-5 30"x30"	 W3-1 36"x36"	 W5-1 36"x36"	 M6-3 21"x15"
 RI-2 36"x36"x36"	 W1-4 30"x30" (LT. OR RT.)	 W2-1 30"x30"	 SI-1 36"x36"	 W3-2 36"x36"	 LASSEN 16 COUNTY County Route Marker MI-6 24"x24"	 M6-4 21"x15"
 R2-1 24"x30"	 W1-5 30"x30" (LT. OR RT.)	 W2-2 30"x30"	 NARROW BRIDGE W5-2 36"x36"	 PAVEMENT ENDS W8-3 36"x36"	 ALL WAY RI-3P 18"x6"	 M6-5 21"x15"
 W1-1 30"x30" (LT. OR RT.)	 W1-6 48"x24"	 W2-3 30"x30" (LT. OR RT.)	 ONE LANE BRIDGE W5-3 36"x36"	 35 M.P.H. W13-IP 18"x18"	 M6-1 21"x15"	 M6-6 21"x15"
 W1-2 30"x30" (LT. OR RT.)	 W1-7 48"x24"	 T W2-4 30"x30"	 R X R W10-1 36" DIAMETER	 W3-3 36"x36"	 M6-2 21"x15"	 SCHOOL S4-3P 24"x8"
					 WHEN CHILDREN ARE PRESENT S4-2P 24"x10"	 OM-3 12"x36" (LT. OR RT.)



NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.



TYPE B

TYPE C

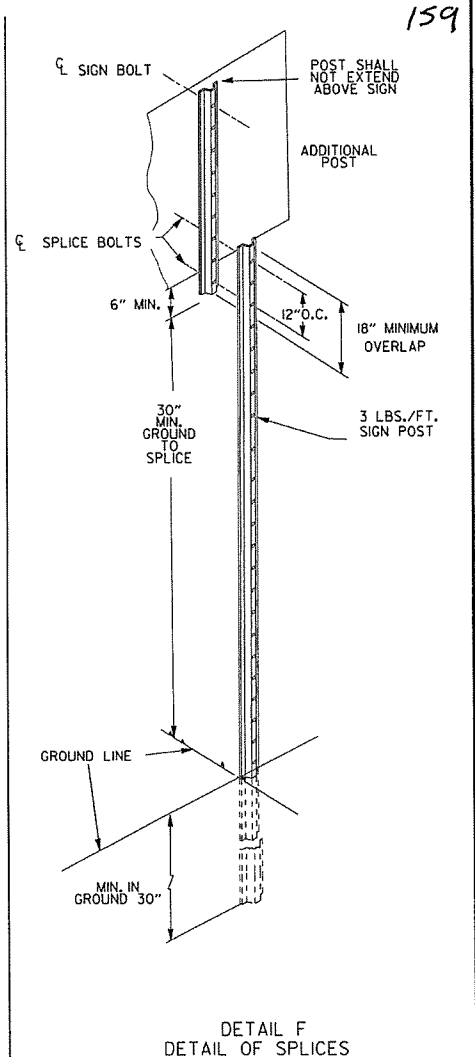
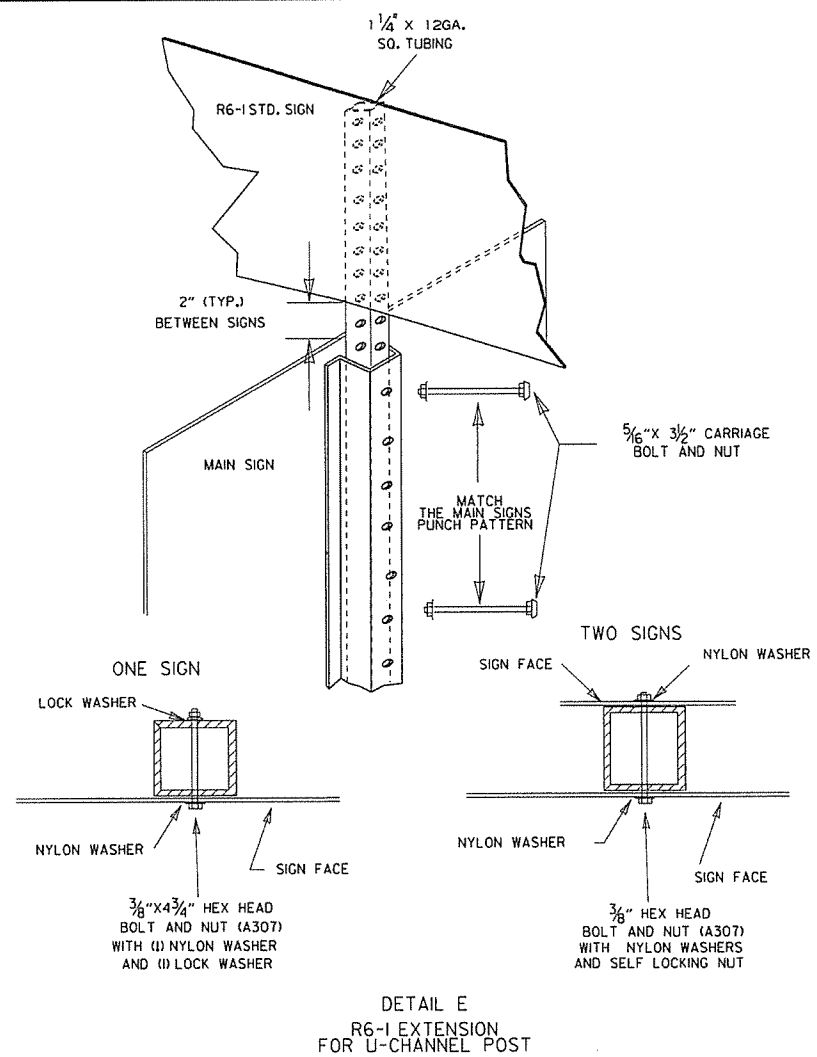
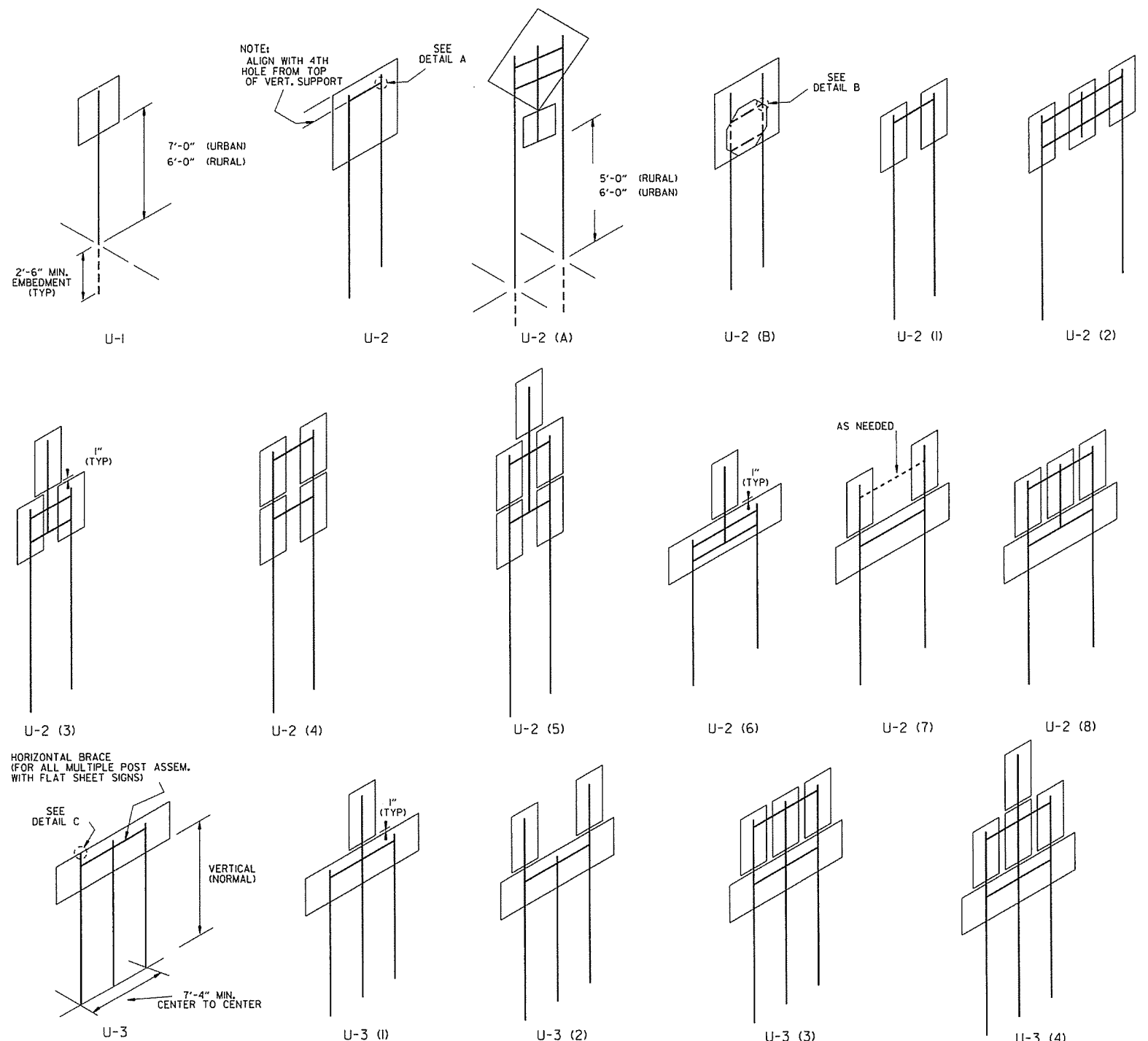
MINIMUM WEIGHT
TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

STANDARD HIGHWAY SIGNS

SUPPORT ASSEMBLIES

9-12-13	DELETED JOB NO. BLOCK; REVISED RI-1 TO RI-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1 & W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED W1-8	
1-9-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	SIGEL POST WT. FROM 2"-3"; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION
STANDARD HIGHWAY SIGNS
AND SUPPORT ASSEMBLIES
STANDARD DRAWING SHS-1



NOTES:

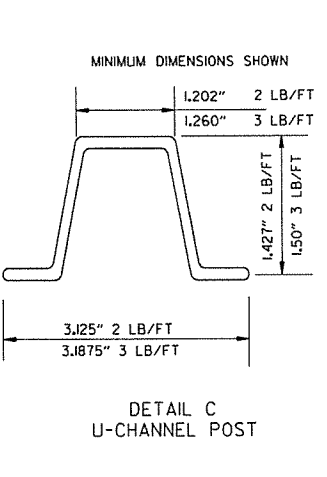
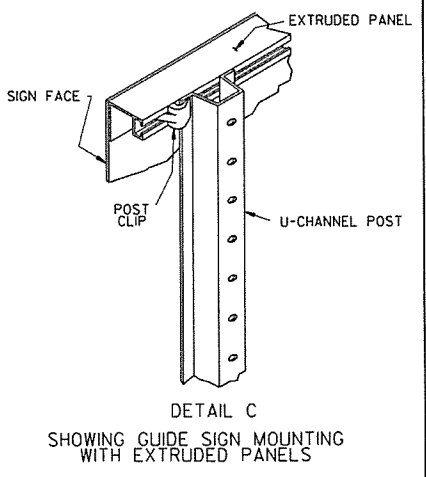
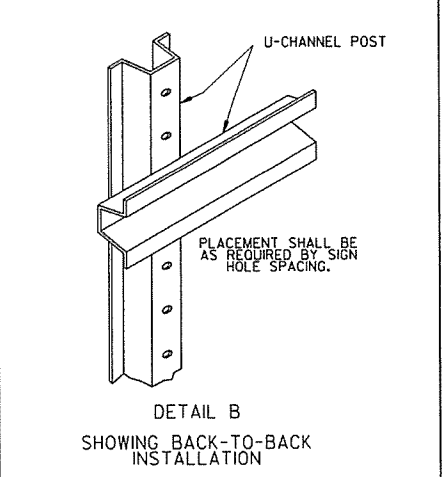
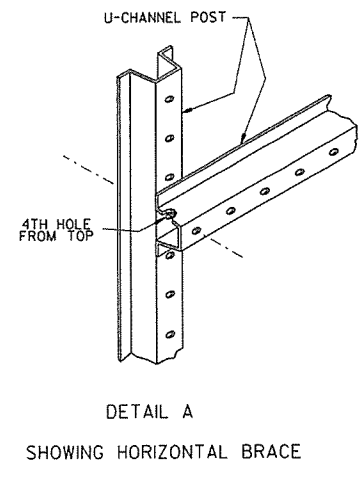
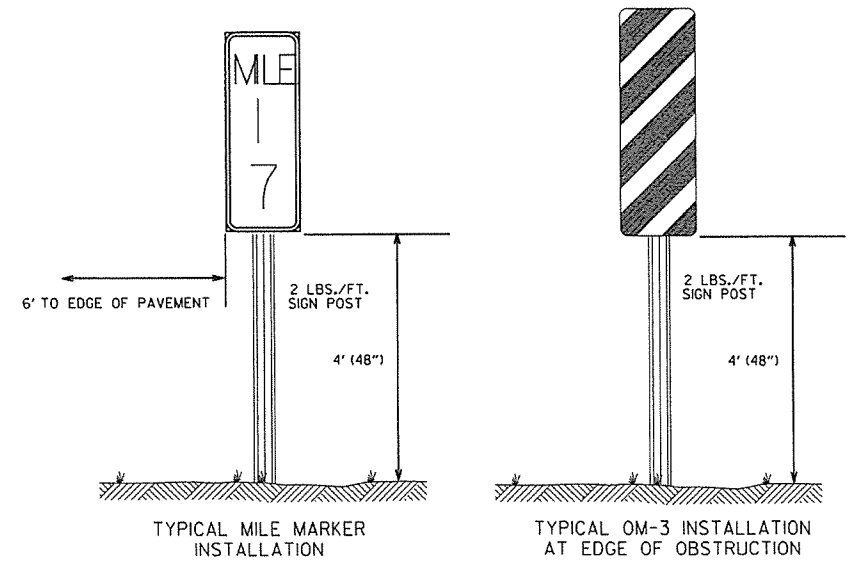
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).

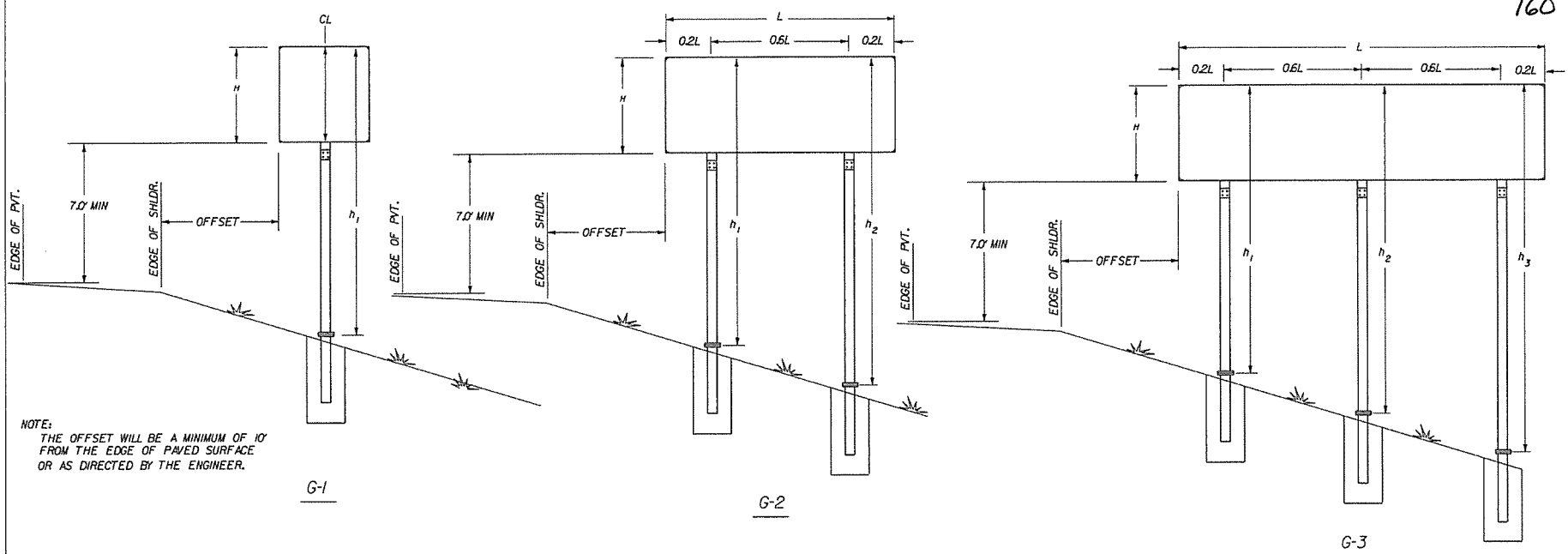
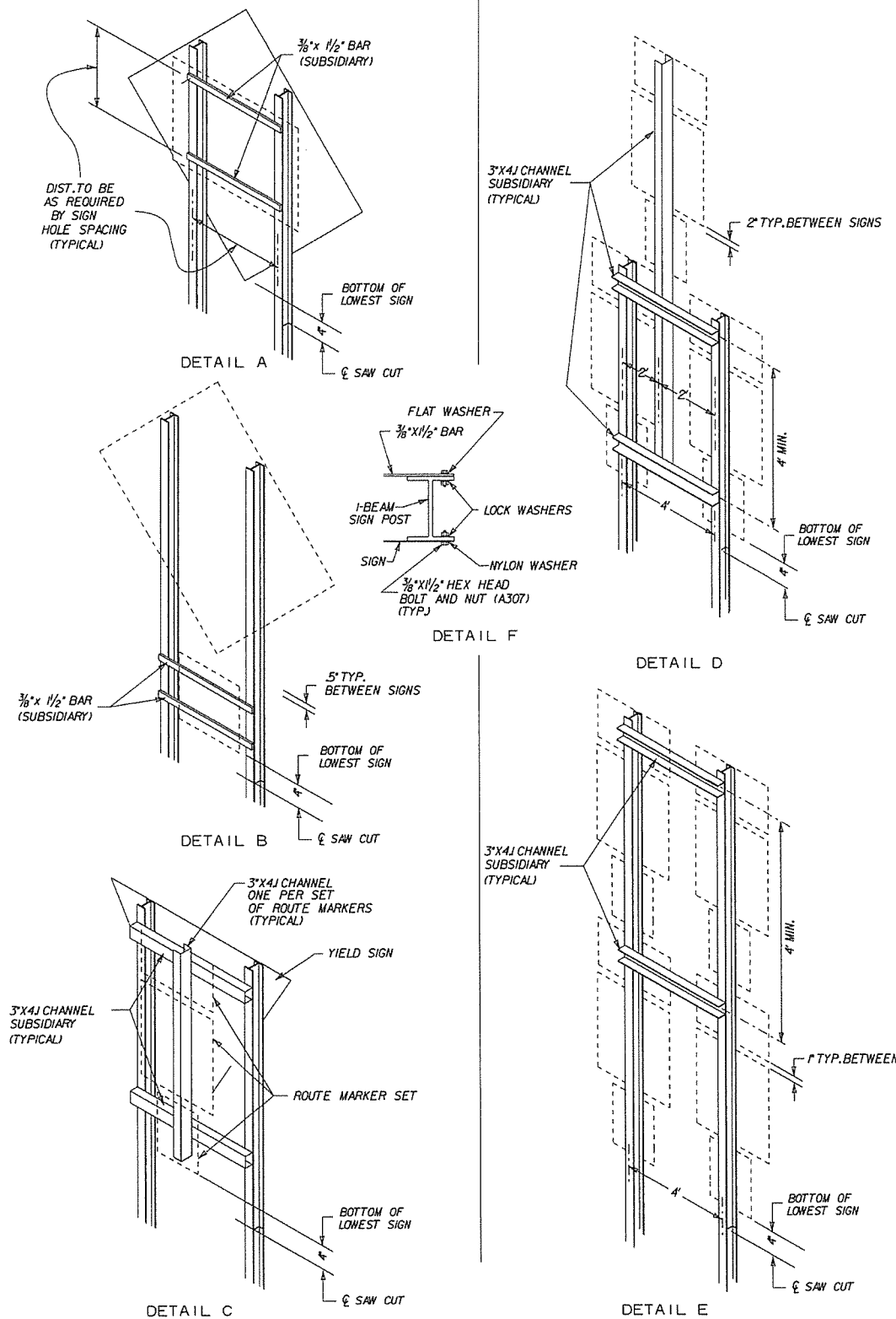
NORMAL INSTALLATIONS WILL REQUIRE 5/16" DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

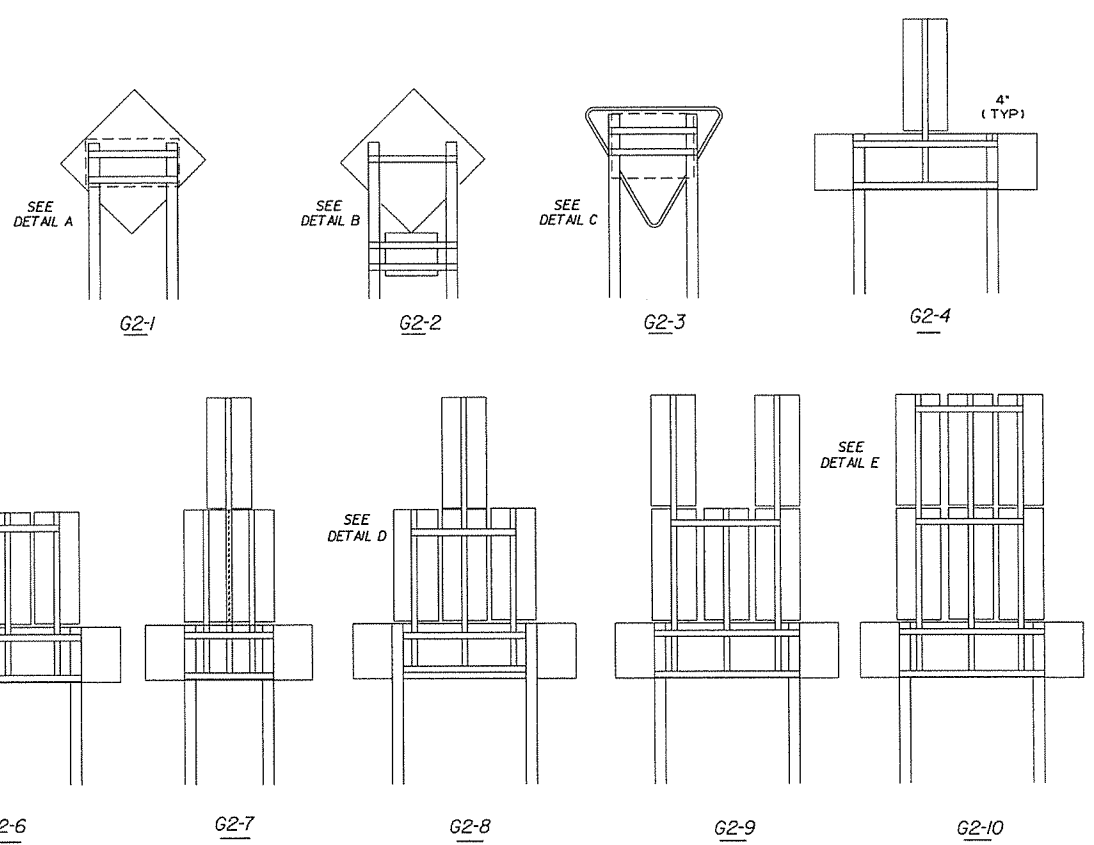
THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



ARKANSAS STATE HIGHWAY COMMISSION			
U-CHANNEL POST ASSEMBLIES			
STANDARD DRAWING SHS-2			
DATE	REVISION		
9-12-13	REVISED U-2(3), U-2(6), U-3(I), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS		
10-9-03	REMOVED ROUND POST & REVISED SPACING		
10-12-95	MOVED UPPER SPLICE		
6-8-95	REVISED SPLICE DETAIL	6-8-95	
2-2-95	REDRAWN	2-2-95	
			FILMED

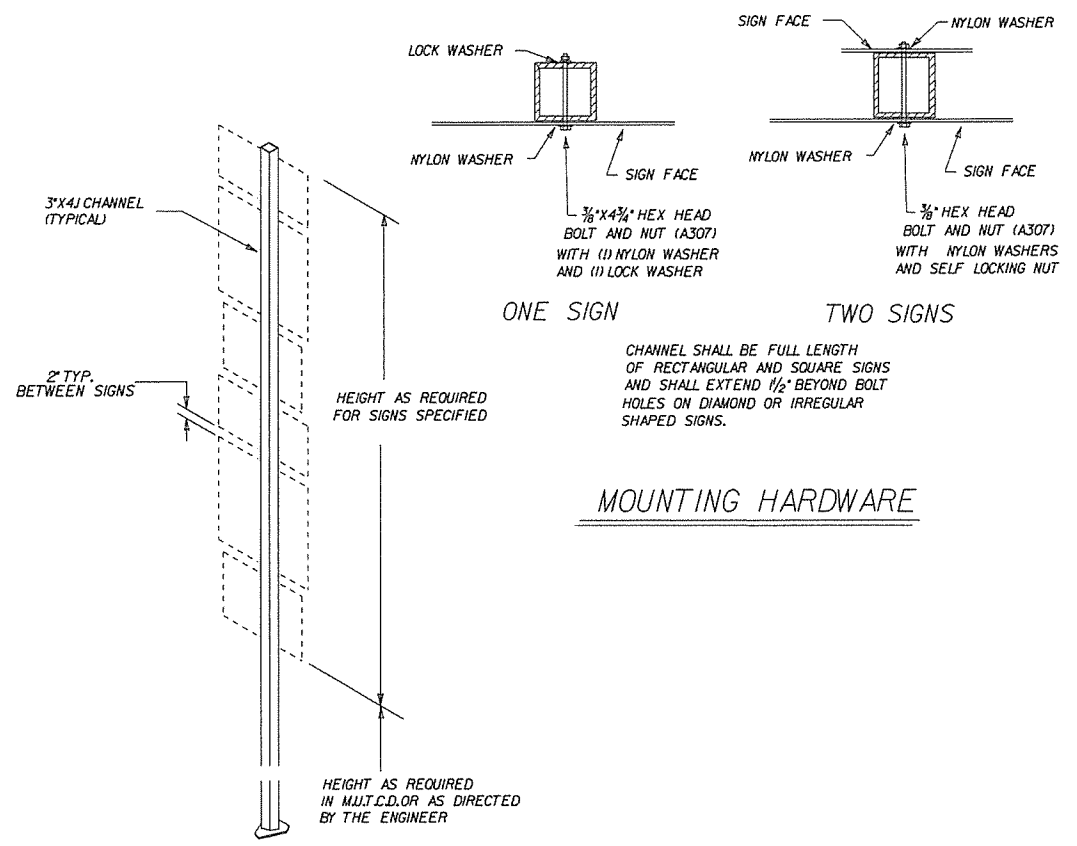


NOTE:
THE OFFSET WILL BE A MINIMUM OF 10'
FROM THE EDGE OF PAVED SURFACE
OR AS DIRECTED BY THE ENGINEER.

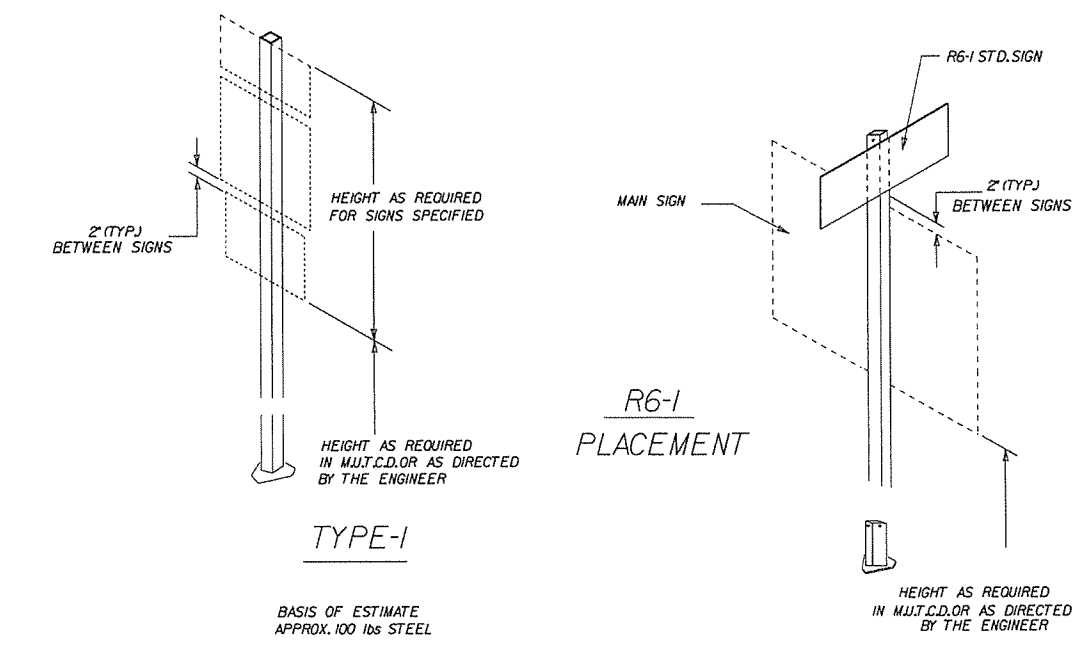


NOTE
ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.
THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS."
ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

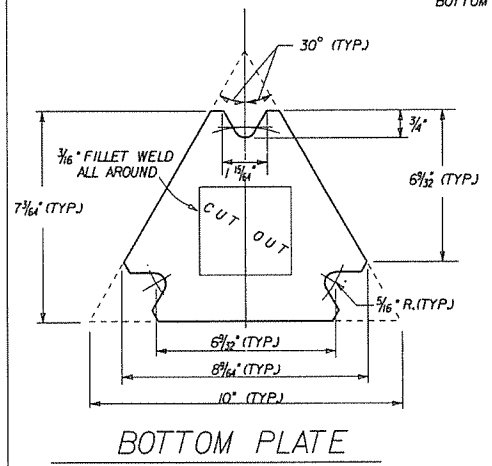
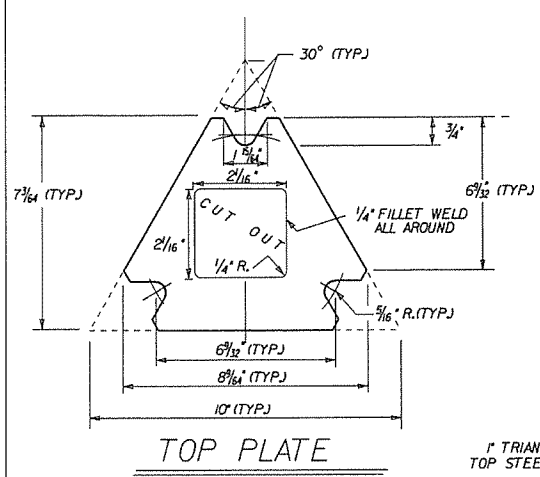
ARKANSAS STATE HIGHWAY COMMISSION		
DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS		
9-12-13	ISSUED	STANDARD DRAWING SHS-4
DATE	REVISION	FILMED



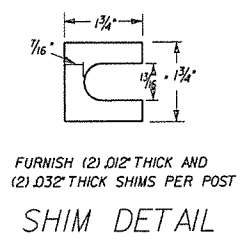
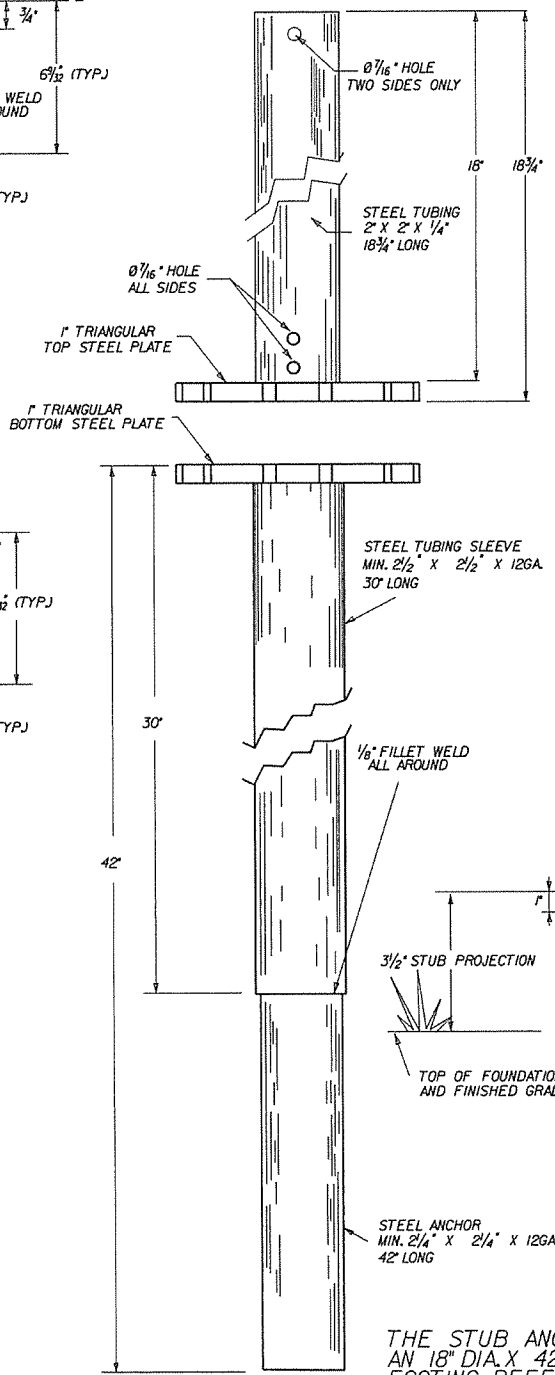
MOUNTING HARDWARE



R6-1 PLACEMENT



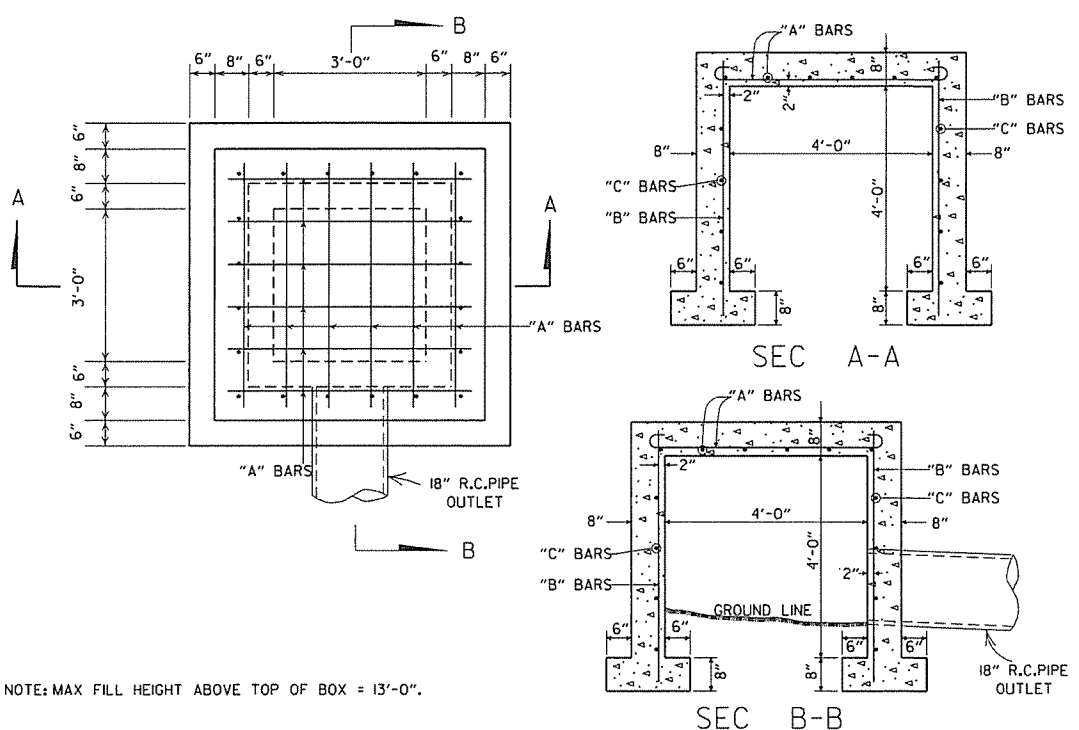
GENERAL NOTES:
 THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.
 INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE. ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING. FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF 1-500.
 OTHER MASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2 1/4 X 2 1/4 SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.



SHIM DETAIL

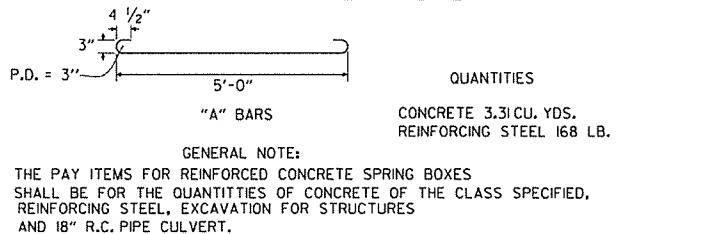
THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD. DRWG. SHS-3 FOR THE FOOTING DETAILS.

ARKANSAS STATE HIGHWAY COMMISSION			
DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS			
STANDARD DRAWING SHS-7			
9-12-13	ISSUED	REVISION	FILMED
DATE			

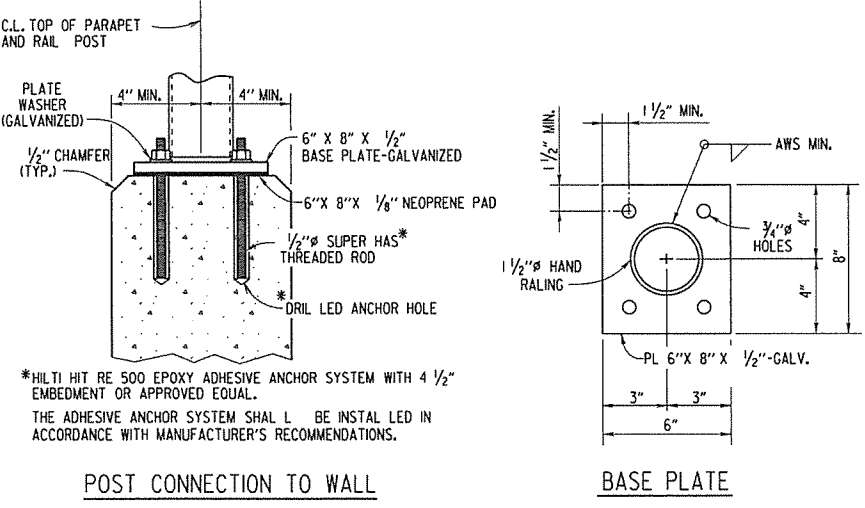
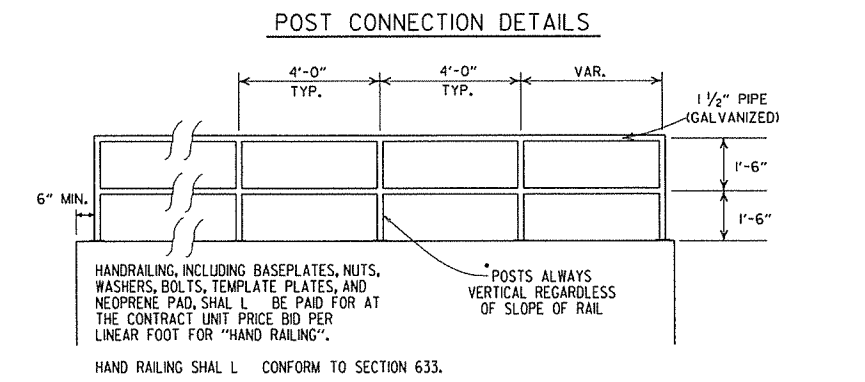
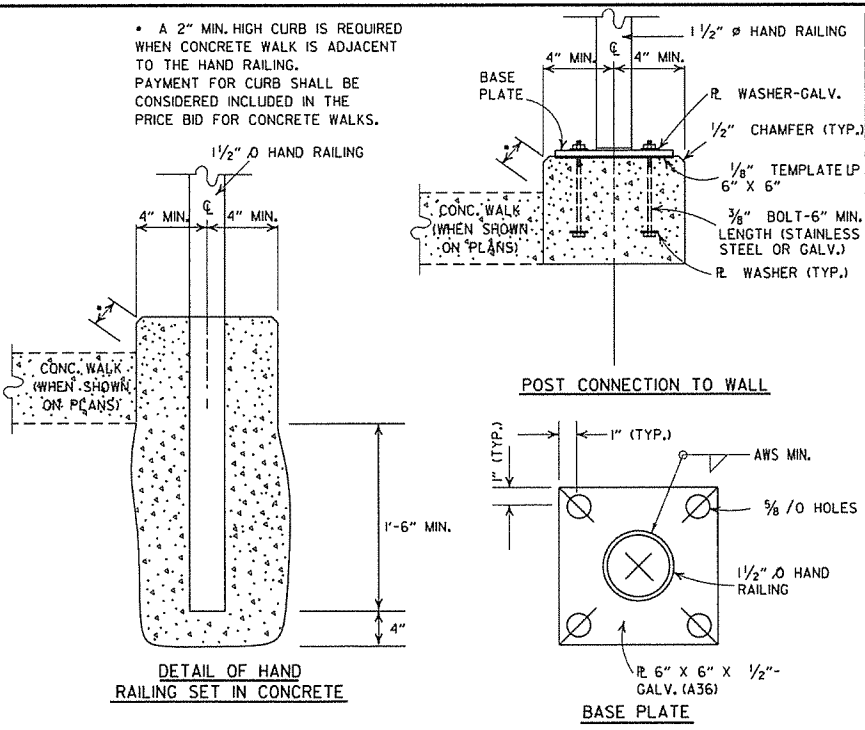
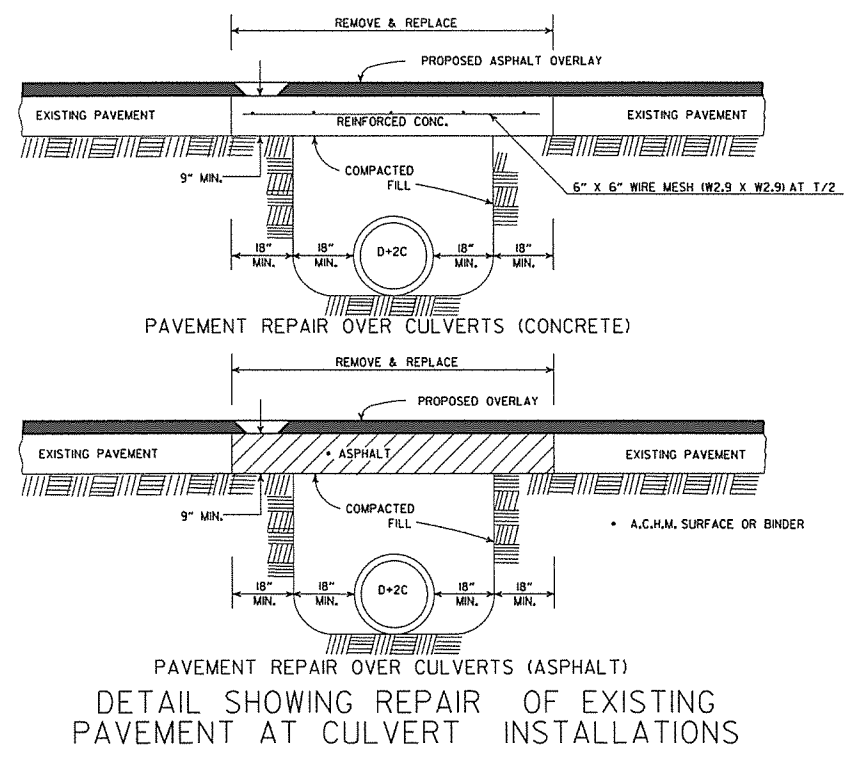


STEEL SCHEDULE

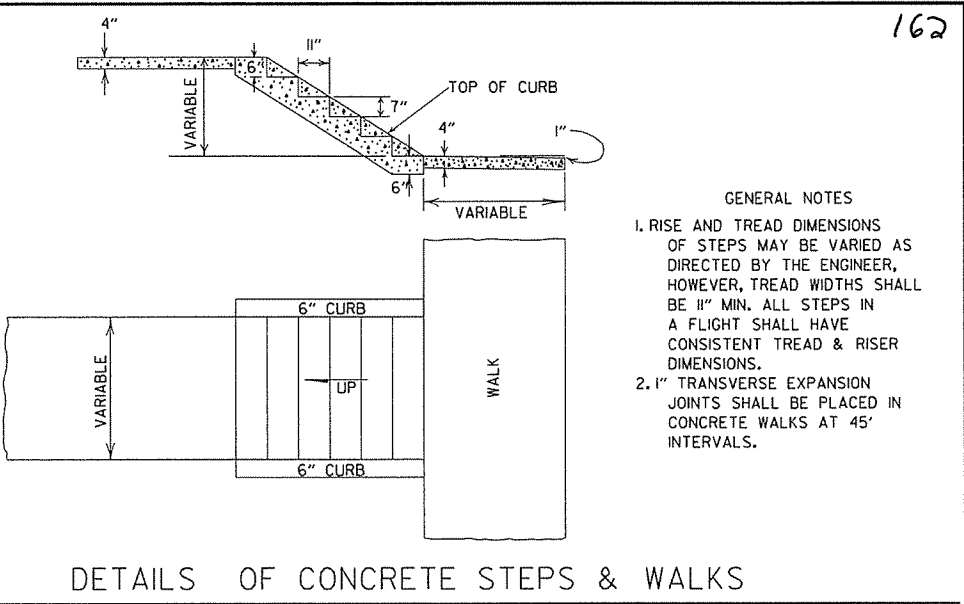
BAR	NUMBER	LENGTH	SPACING
"A"	12	6'-0"	10"
"B"	20	5'-0"	10 1/2"
"C"	16	5'-0"	12"



REINFORCED CONCRETE SPRING BOX



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 & RISE DIMENSIONS.
 2. 1" TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.

DATE	REVISION	DATE FILMED
9-12-13	REVISED REINFORCED CONCRETE SPRING BOX	
7-26-12	REMOVED RETAINING WALL DETAILS & REVISED HAND RAILING DETAILS	
4-17-08	REV. JOINT & FOOTING STEP DETAILS	
11-29-07	REVISED RETAINING WALL DRAINAGE	
5-25-06	REVISED PVMT REPAIR OVER CULVERTS (CONC); REVISED REINFORCED CONC SPRING BOX	
10-9-03	REVISED PIPE RAILING DETAILS TO HAND RAILING DETAILS	
4-10-03	REVISED RETAINING WALL DRAWING	
8-22-02	ADDED HAND RAILING DETAIL	
11-16-01	REVISED PVMT REPAIR OVER CULVERTS (CONC); CORRECTED SPELLING IN GENERAL NOTES	
11-18-98	ADDED GENERAL NOTES TO CONCRETE STEPS & WALKS	
7-02-98	ENLARGED PIPE	
4-03-97	ADDED NOTE TO STEEL BAR SCHED.	
10-18-96	CORRECTED SPELLING	
4-26-96	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. BARS BEHIND ARROW	665-11-17-88
7-15-88	REV. PAVEMENT REPAIR	649-7-15-88
11-1-84	ADDED HDWL, MODS, DEL. PIPE UNDERDRAINS	
1-4-83	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF "UNDERDRAIN"	721-3-2-81
4-20-79	REV. UNDERDRAIN DET & PAVEMENT REPAIR	674-4-20-79
2-2-76	12" MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72

ARKANSAS STATE HIGHWAY COMMISSION


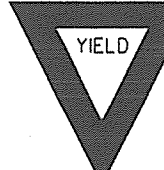

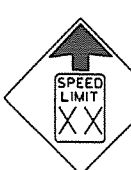
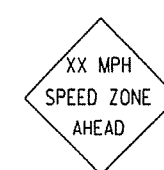
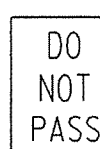
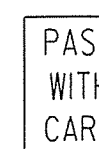


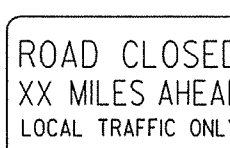
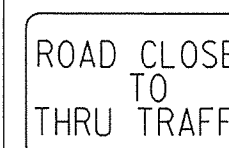
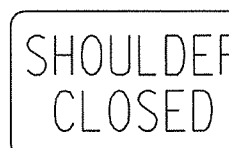
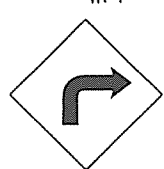
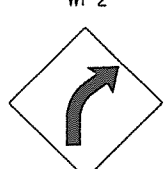
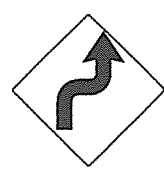
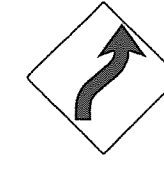
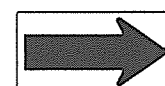
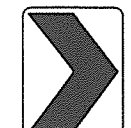
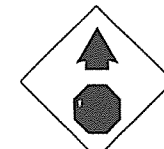
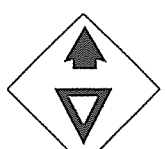
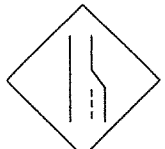

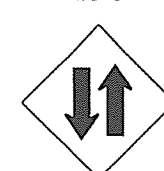
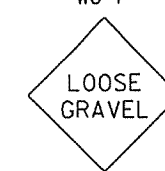


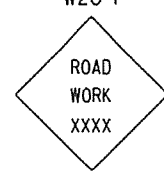




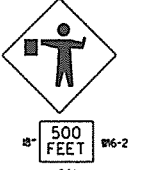


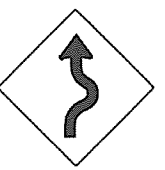


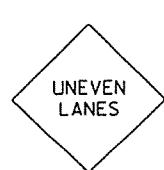

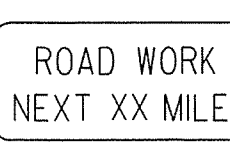
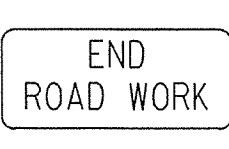
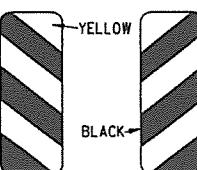

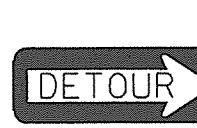
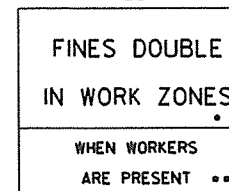
DETAILS OF SPECIAL ITEMS

STANDARD DRAWING SI - 1

ADVANCE DISTANCES
(XXXX)
500 FT 1/2 MILE
1000 FT 3/4 MILE
1500 FT 1 MILE AHEAD

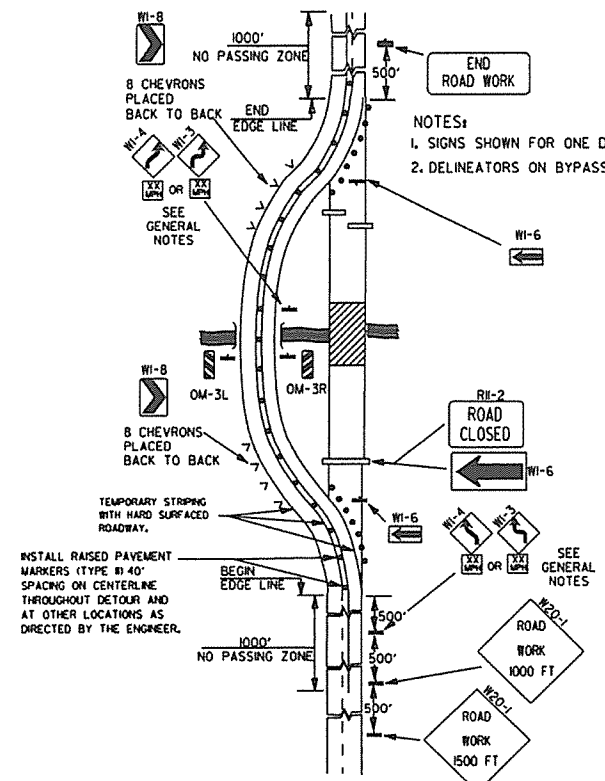
GENERAL NOTES:

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

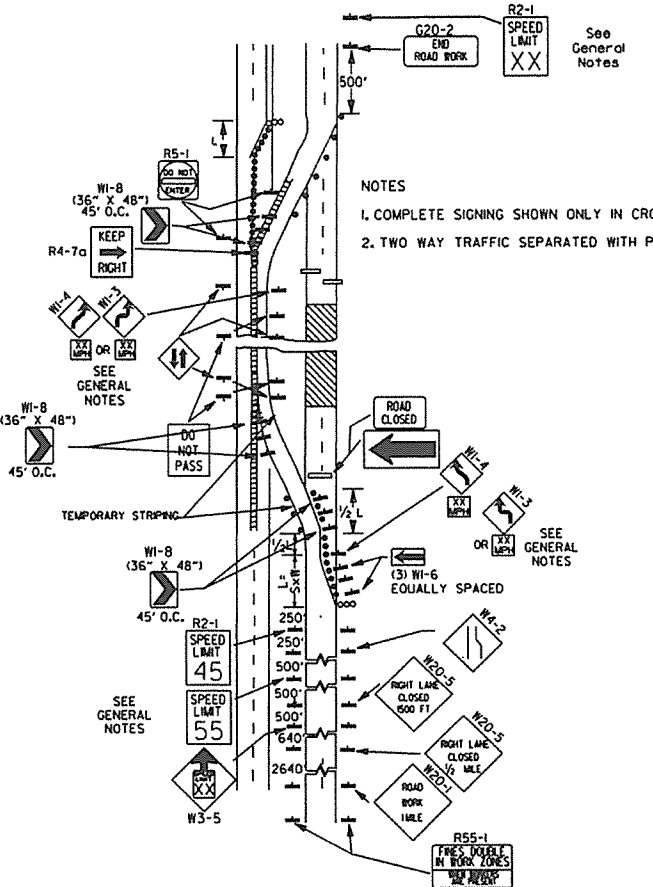
<p>RI-1</p>  <p>STANDARD 30"x30" EXPRESSWAY 36"x36" SPECIAL 48"x48"</p>	<p>RI-2</p>  <p>STD. 36"x36"x36" EXPWY. 48"x48"x48" FWY. 60"x60"x60"</p>	<p>R2-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>W3-5</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>W3-5a</p>  <p>STD. 36"x36" EXPWY. 48"x48" FWY. 48"x48"</p>	<p>R4-1</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	<p>R4-2</p>  <p>STD. 24"x30" EXPWY. 36"x48" FWY. 48"x60"</p>	
<p>R5-1</p>  <p>STD. 30"x30" EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>R11-2</p>  <p>48"x30"</p>	<p>R11-3A</p>  <p>60"x30"</p>	<p>R11-4</p>  <p>60"x30"</p>	<p>RSP-1</p>  <p>48"x30"</p>	<p>W1-1</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W1-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W1-3</p>  <p>STD. 48"x48"</p>	<p>W1-4</p>  <p>STD. 48"x48"</p>	<p>W1-6</p>  <p>STD. 48"x24" SPECIAL 60"x30"</p>	<p>W1-8</p>  <p>STD. 18"x24" SPECIAL 24"x30" EXPWY. 30"x36" FWY. 36"x48"</p>	<p>W3-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W3-2</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W4-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	
<p>W5-1</p>  <p>STD. 36"x36" SPECIAL 48"x48"</p>	<p>W6-3</p>  <p>EXPWY. 36"x36" SPECIAL 48"x48"</p>	<p>W8-7</p>  <p>EXPWY. 36"x36" FWY. 48"x48"</p>	<p>W9-2</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W13-1</p>  <p>STD. 24"x24"</p>	<p>W20-1</p>  <p>STD. 48"x48"</p>	<p>W20-2</p>  <p>STD. 48"x48"</p>	<p>W20-3</p>  <p>STD. 48"x48"</p>
<p>W20-4</p>  <p>STD. 48"x48"</p>	<p>W20-5</p>  <p>STD. 48"x48"</p>	<p>W20-7a</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W21-2</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W21-5</p>  <p>STD. 30"x30" SPECIAL 36"x36"</p>	<p>W24-1</p>  <p>STD. 36"x36"</p>	<p>W1-4b</p>  <p>STD. 48"x48"</p>	<p>R56-1</p>  <p>STD. 18"x18"</p>
<p>W8-11</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>W8-9</p>  <p>STD. 36"x36" FWY. 48"x48"</p>	<p>G20-1</p>  <p>60"x24"</p>	<p>G20-2</p>  <p>48"x24"</p>	<p>OM-3L OM-3R</p>  <p>12"x36"</p>	<p>M4-9</p>  <p>STD. 30"x24" SPECIAL 48"x36" SPECIAL 60"x48"</p>	<p>M4-10</p>  <p>48"x18"</p>	<p>R55-1</p>  <p>36"x60" • USE 6" C LETTERS •• USE 4" D LETTERS</p>

9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-1	REVISED W24-1	
1-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
1-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	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	
8-15-94	DRAWN AND PLACED IN USE	
DATE	REVISION	FILED

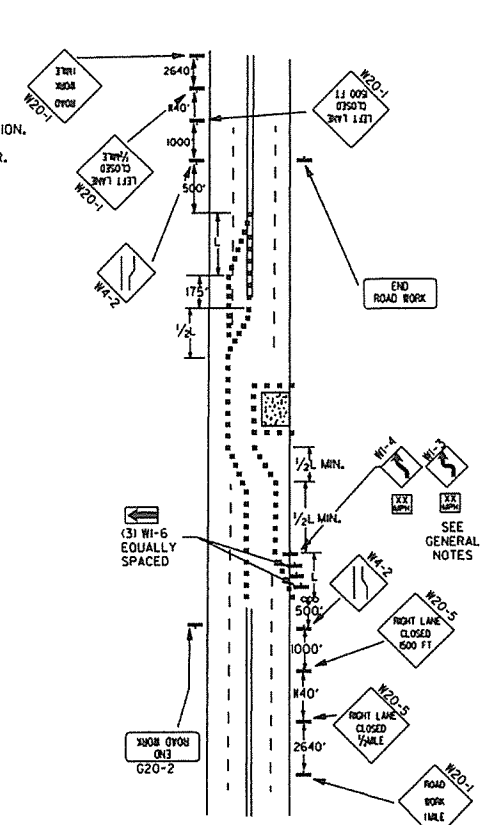
ARKANSAS STATE HIGHWAY COMMISSION
STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-1



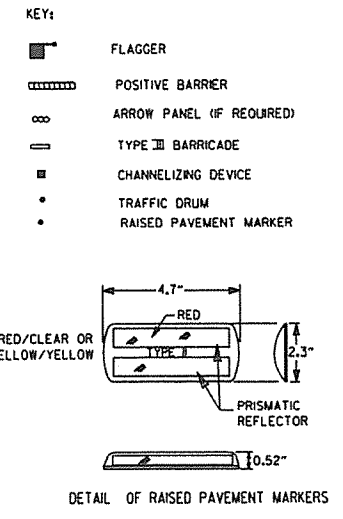
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



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



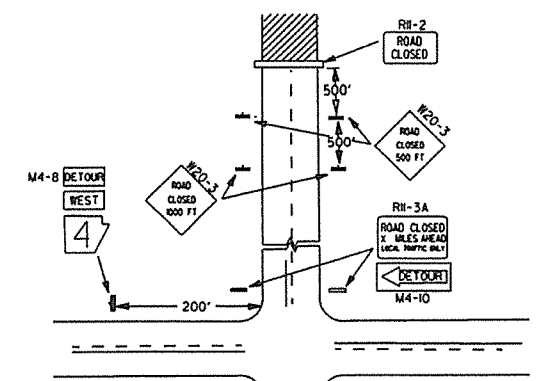
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



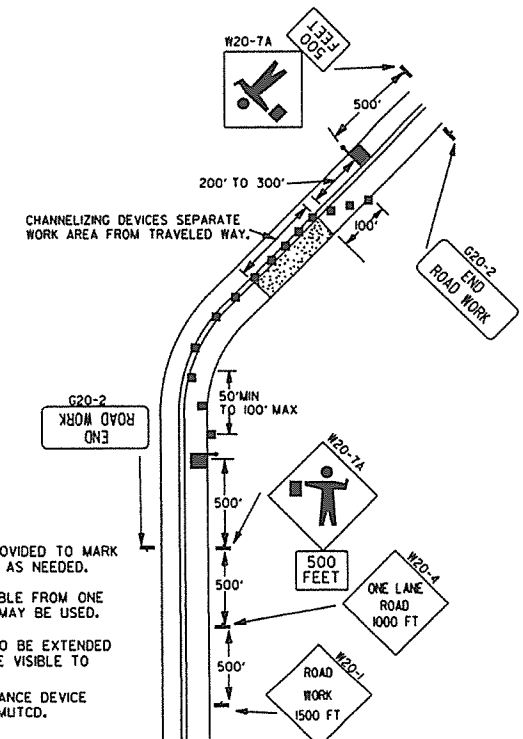
TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:
L= SXW FOR SPEEDS OF 45MPH OR MORE.
L= $\frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.
WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

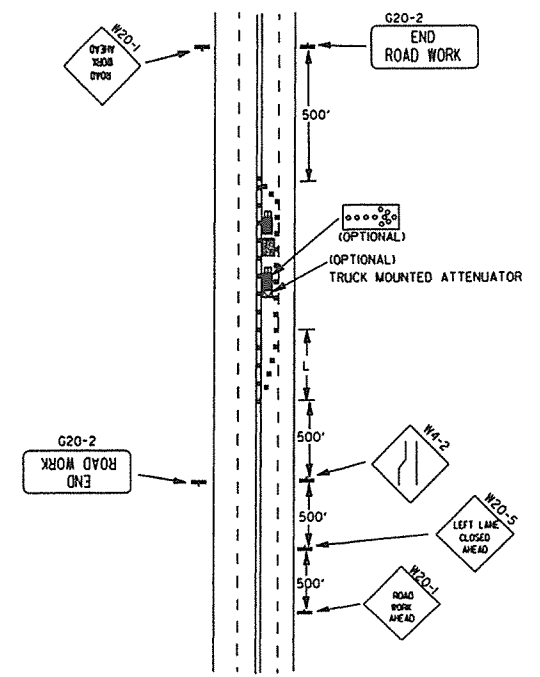
- GENERAL NOTES:
- ADVISORY SPEED POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS TO BE DETERMINED AT SITE. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS.
 - WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(155) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(1XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(145) SHALL BE OMITTED. ADDITIONAL R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(1XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
 - 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.
 - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
 - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
 - 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.
 - 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.



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



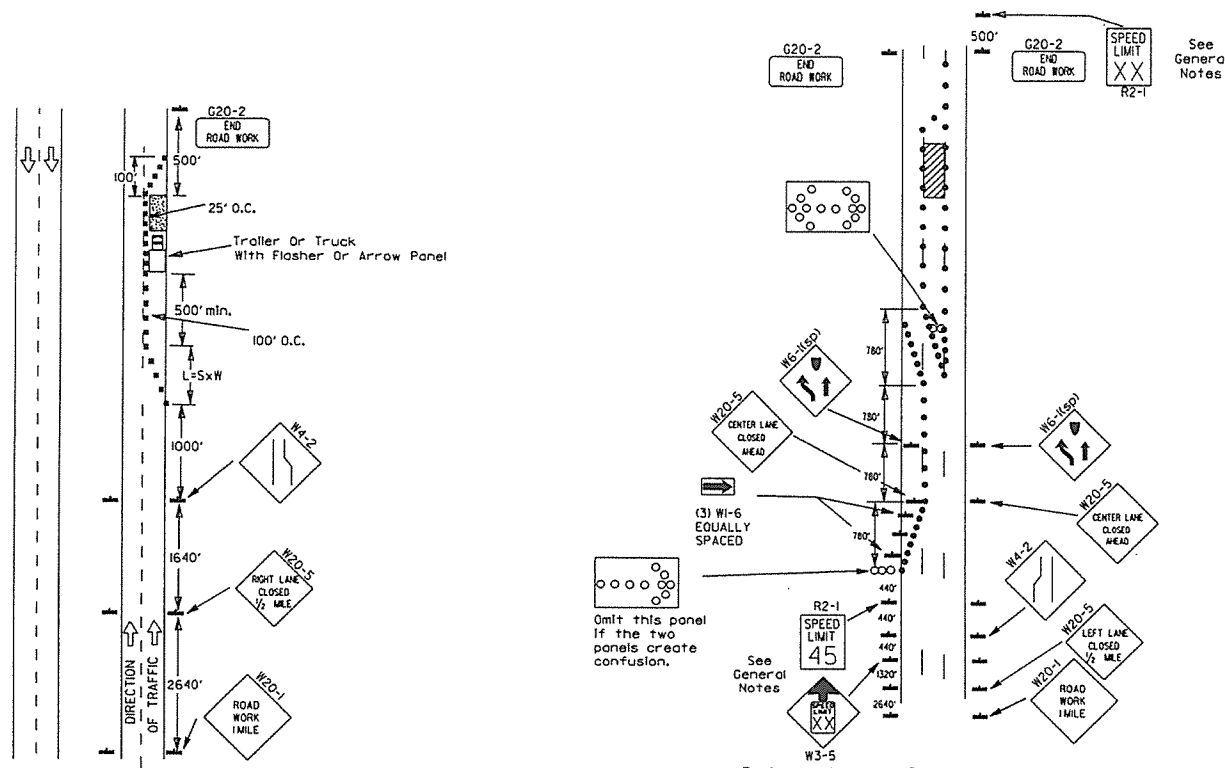
(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



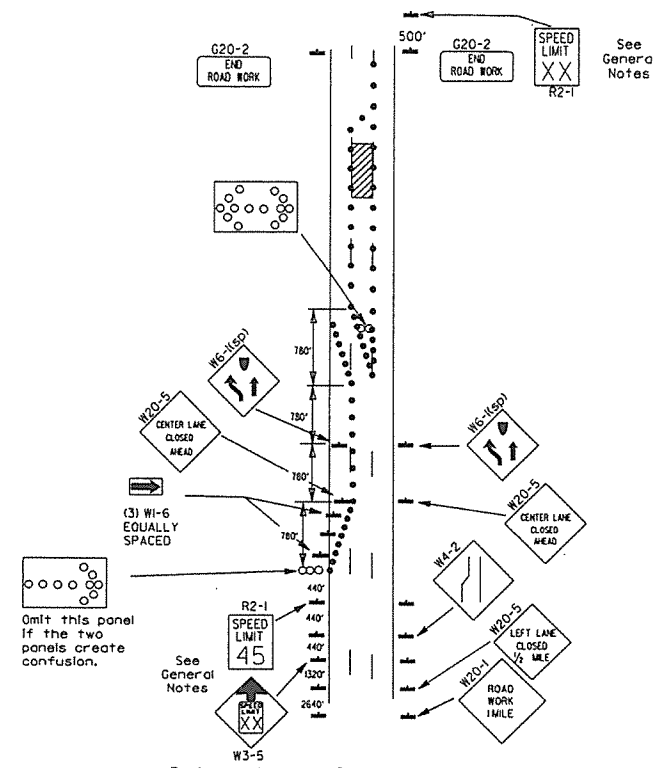
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	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	
DATE	REVISION	FILED

Channelizing devices



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



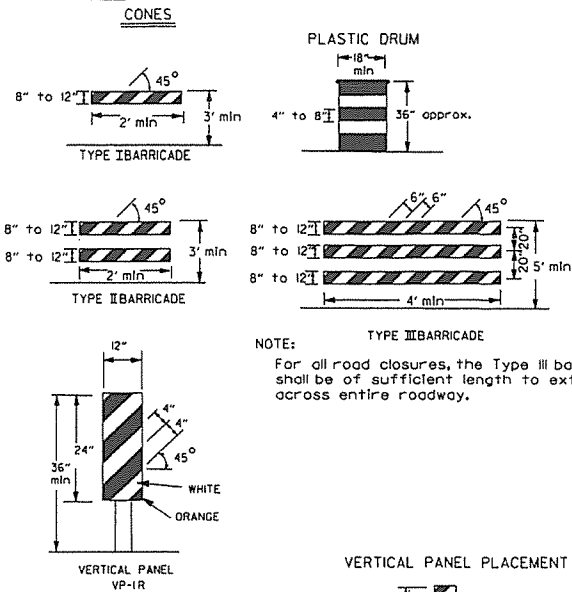
(B) Typical application - 3-lane one-way roadway where center lane is closed.

- KEY:
- ◻ Arrow Panel (if Required)
 - Channelizing Device
 - Traffic drum

- GENERAL NOTES:
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
 2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(K55) shall be omitted and the W3-5 shall be installed at that location. Additional R2-145mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1XX 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(K65) shall be omitted. Additional R2-155mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1XX 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.

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

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

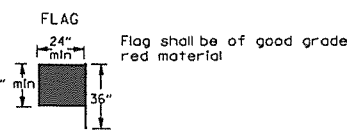
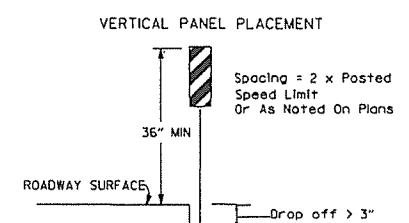


NOTE: For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

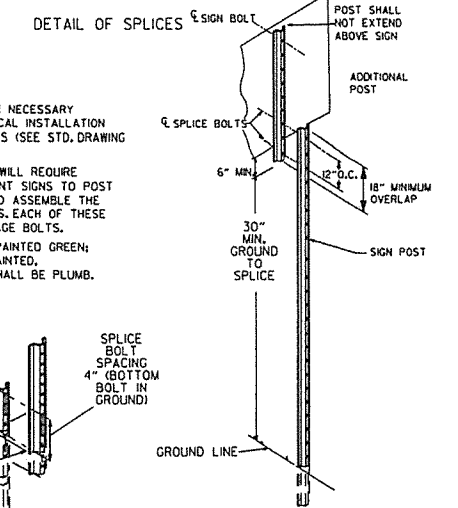
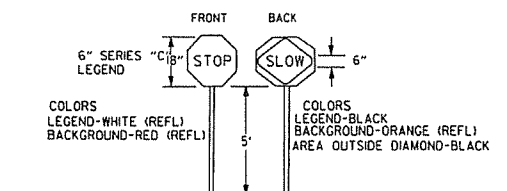
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

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-land vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

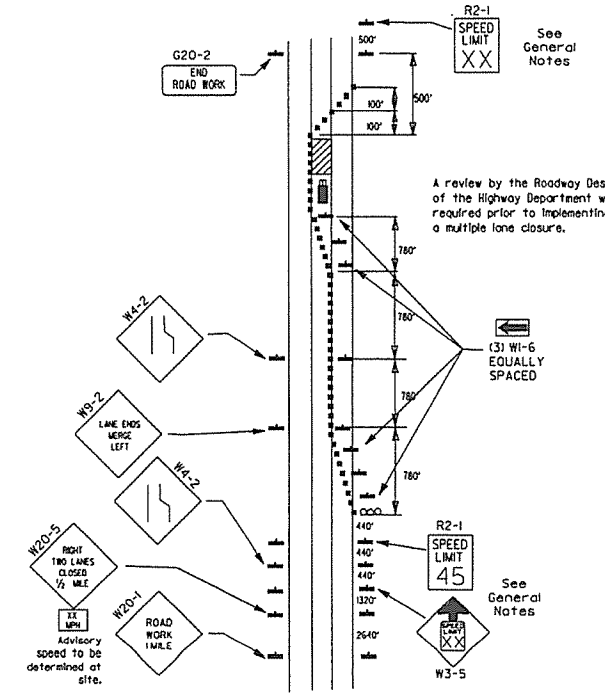
* When shown on the plans concrete barrier will be used. When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.



STOP SLOW PADDLE



- 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.

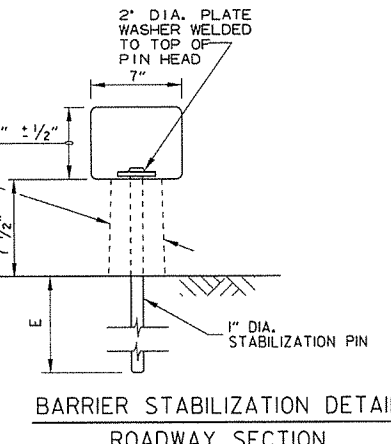
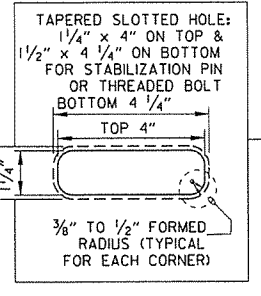
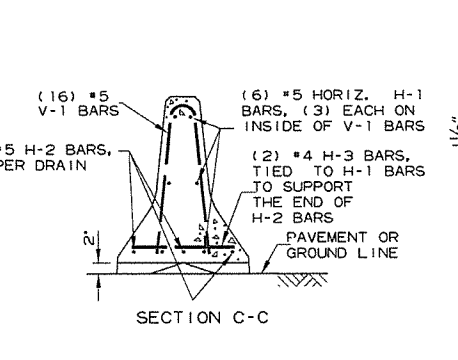
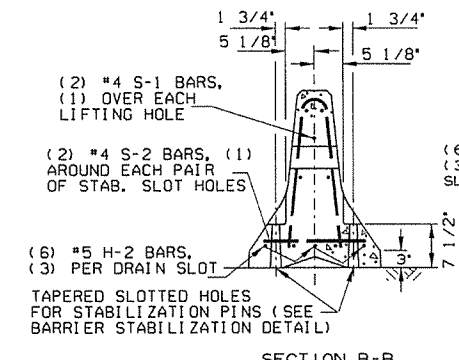
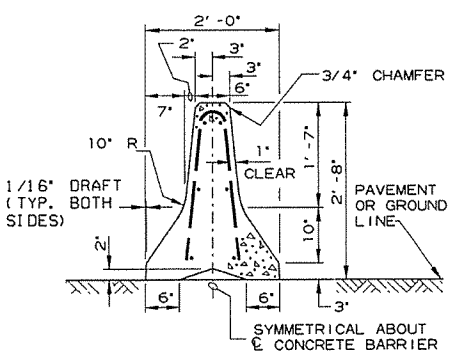
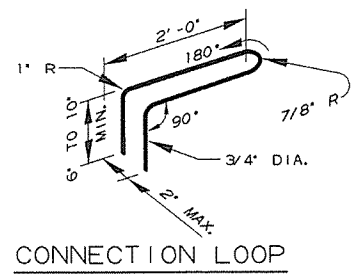
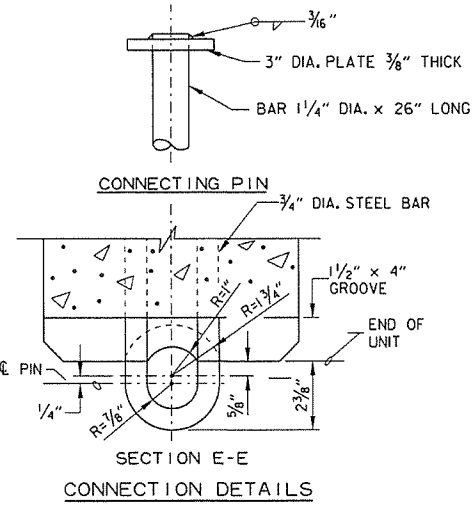


(D) Typical application - closing multiple lanes of a multilane highway.

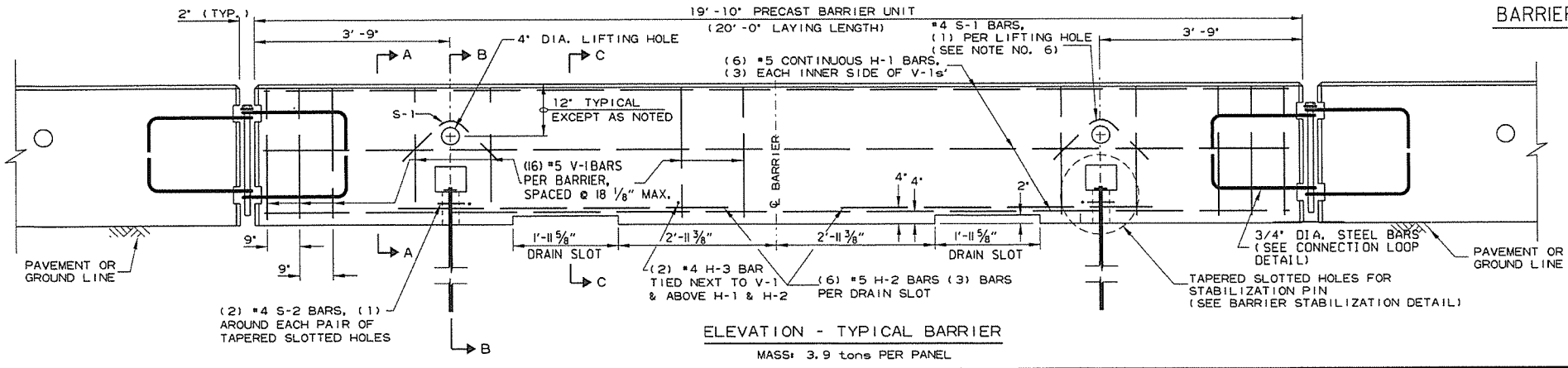
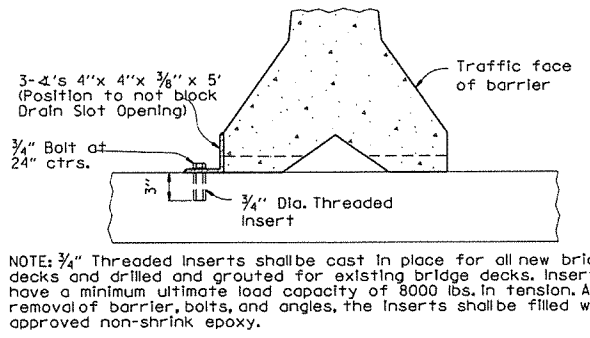
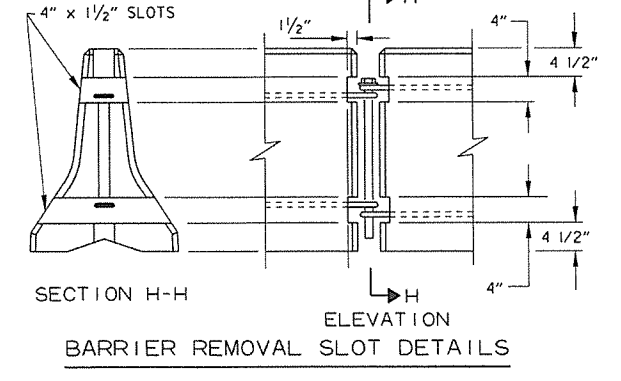
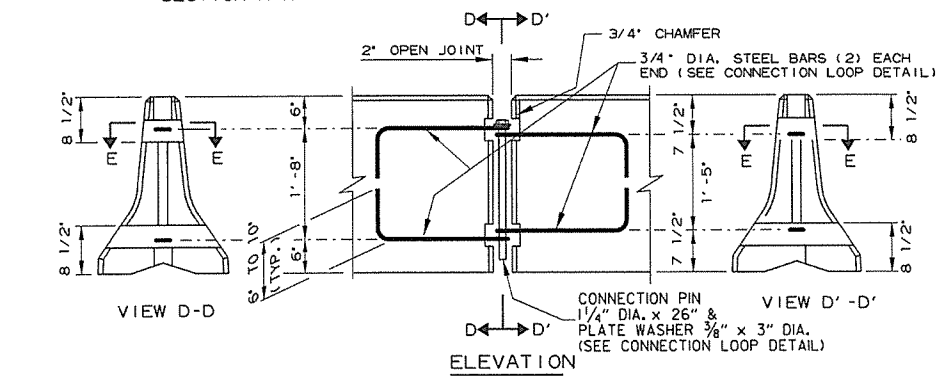
DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SPI) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
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)
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)
S-1	OVER LIFT HOLES	#4	(2)
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S & DRAIN SLOTS	#4	(2)
V-1	VERTICAL IN BARRIER (3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)



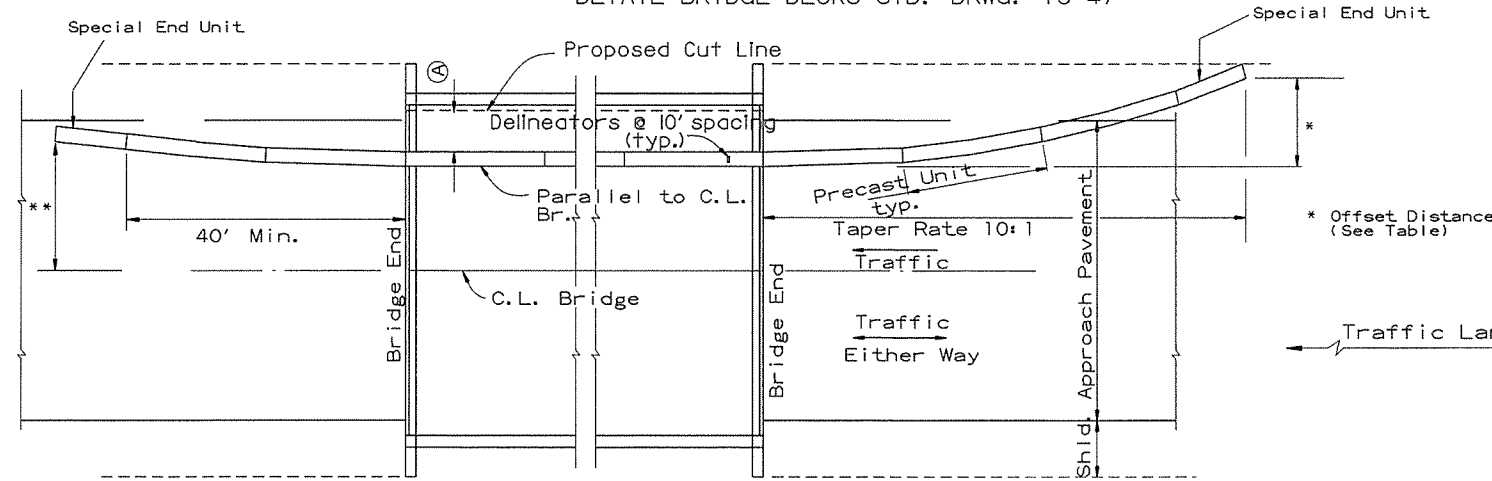
- General Notes**
- The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.
 - Materials shall meet the following 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 walls 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.
 - 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.
 - 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.
 - Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.
 - 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	FILED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-3-03	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

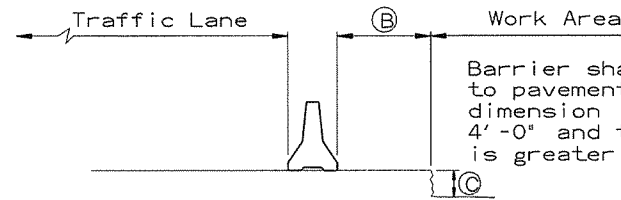
(A) 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

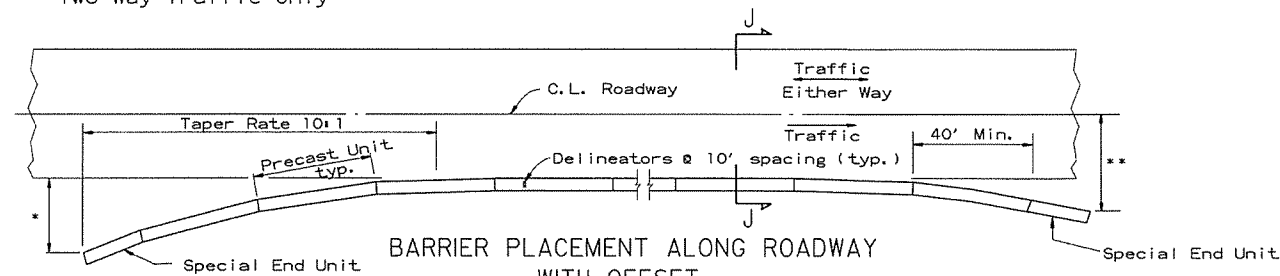
No Scale

** Offset Distance for Two Way Traffic Only



SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

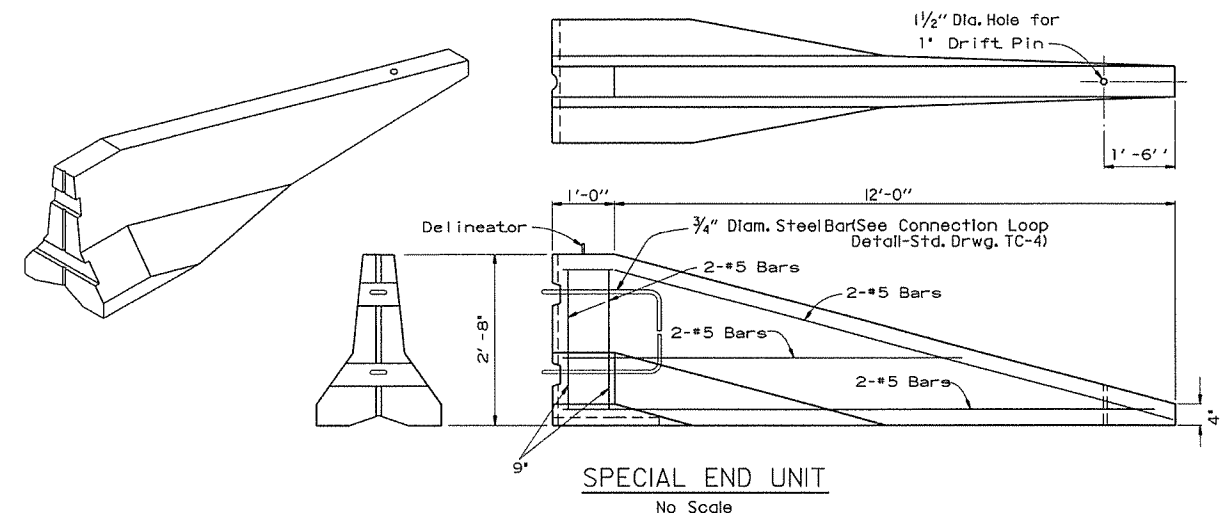
** Offset Distance For Two Way Traffic Only

* Offset Distance (See Table)

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.

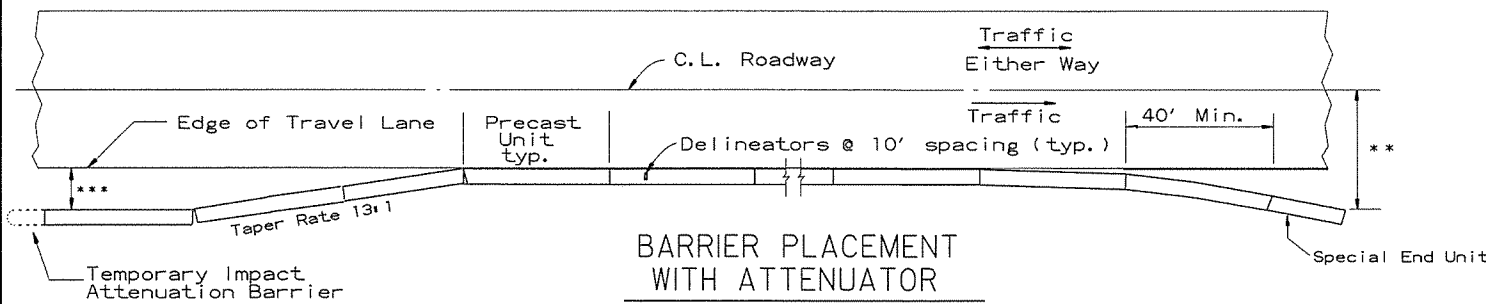


SPECIAL END UNIT

No Scale

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.'



BARRIER PLACEMENT WITH ATTENUATOR

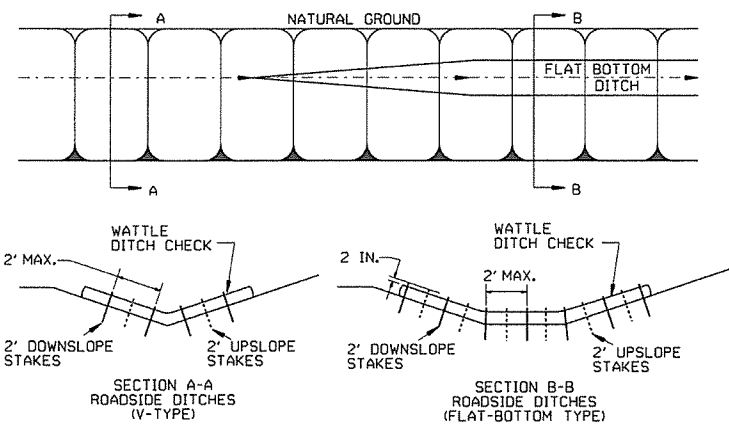
No Scale

* * * Offset Distance For Two Way Traffic Only

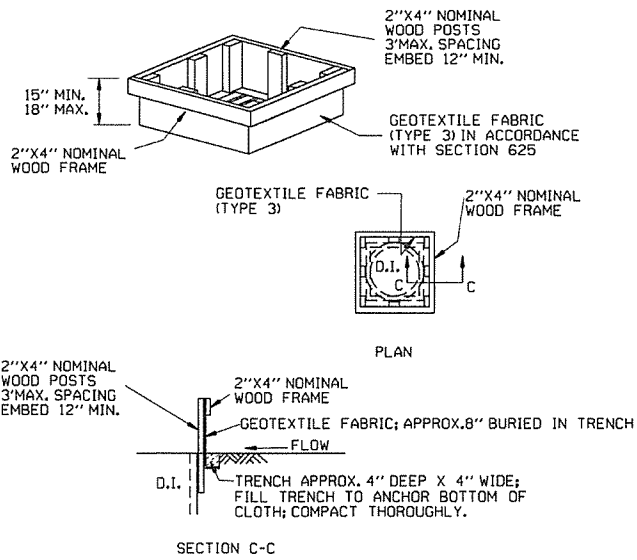
* * * Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator

			ARKANSAS STATE HIGHWAY COMMISSION	
			STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER	
			STANDARD DRAWING TC-5	
10-15-08	ADDED REFERENCE TO MASH			
5-25-06	REVISED BARRIER PLACEMENT			
8-22-02	ISSUED NEW DRAWING			
DATE	REVISION		FILMED	

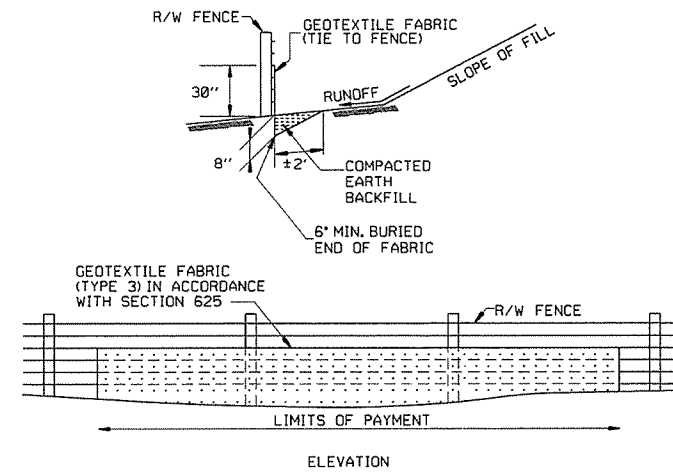
GENERAL NOTES
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



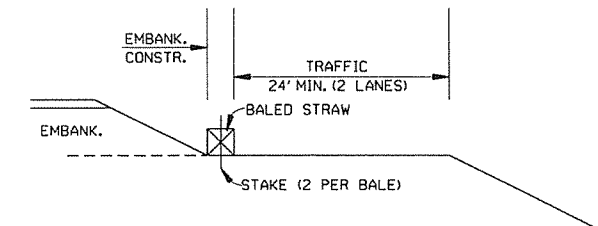
DROP INLET SILT FENCE (E-7)



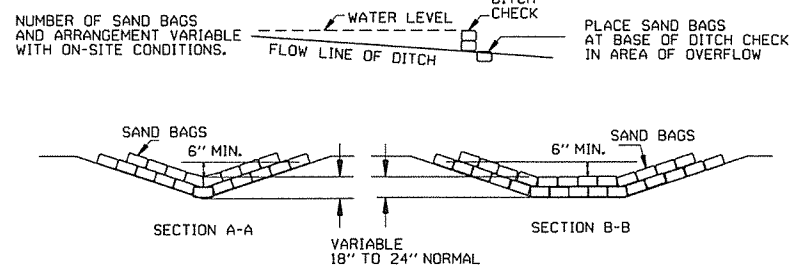
SILT FENCE ON R/W FENCE (E-4)

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

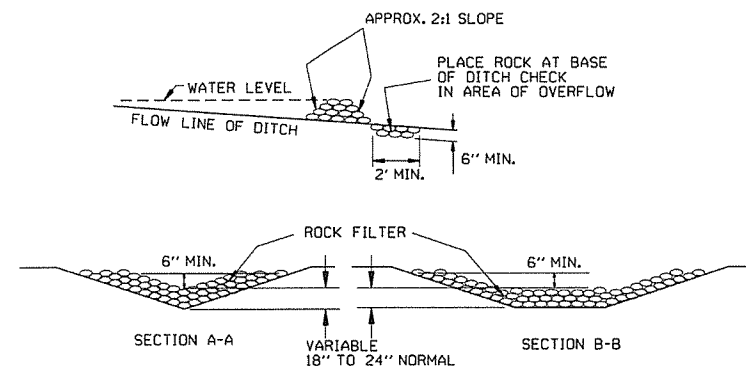
GENERAL NOTES
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE \$10 PER BALE FOR BALED STRAW DITCH CHECKS.



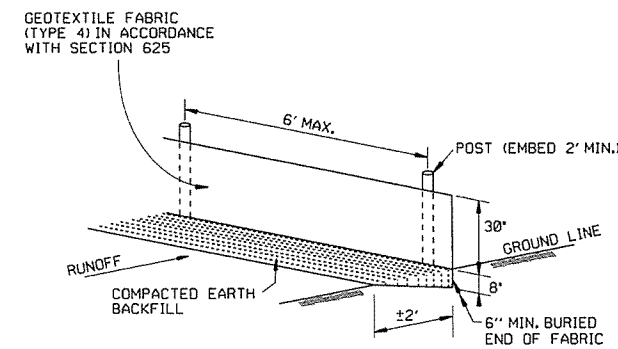
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



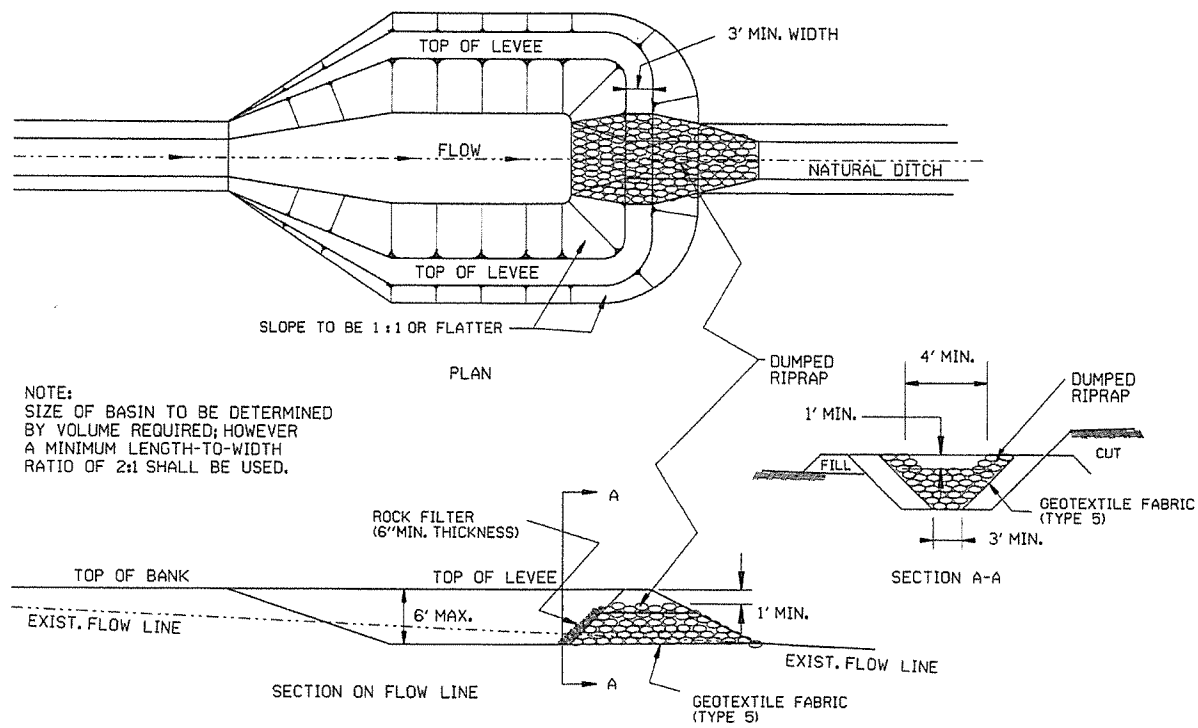
ROCK DITCH CHECK (E-6)



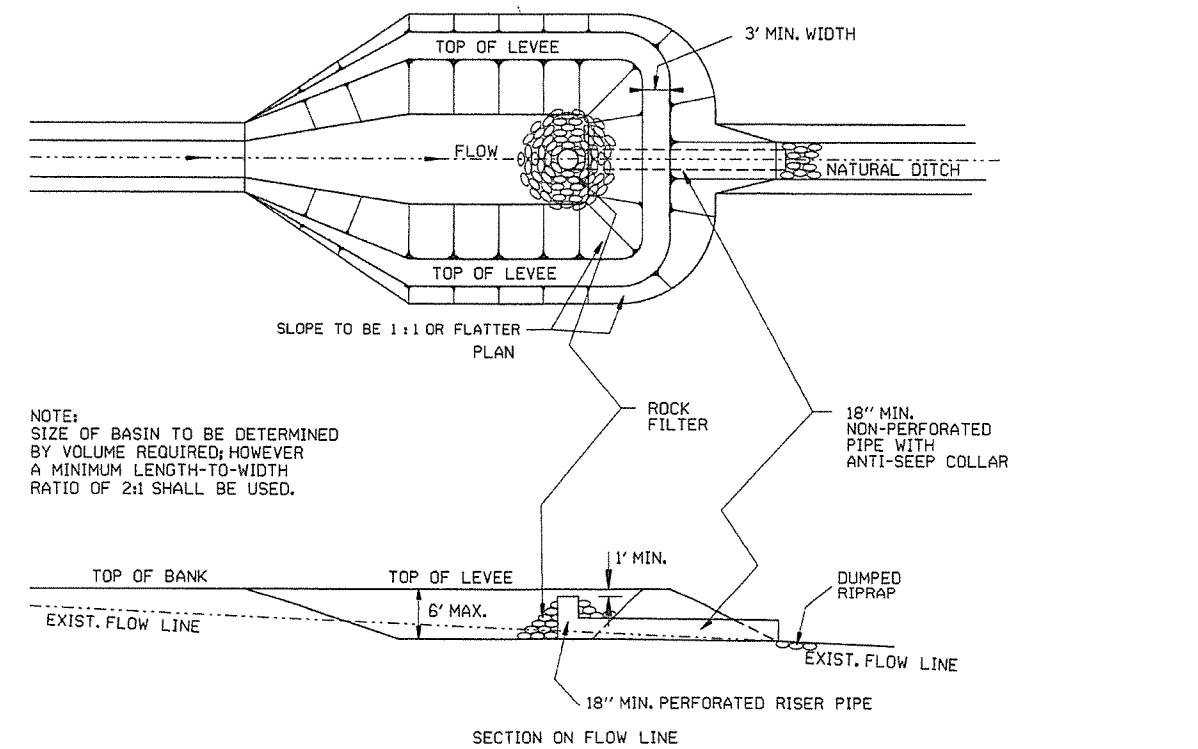
SILT FENCE (E-11)

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.

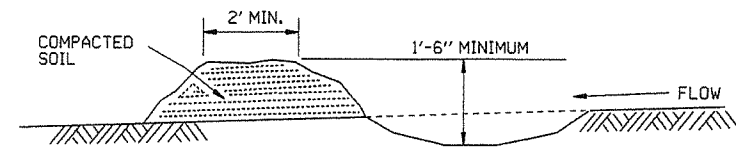
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK		ARKANSAS STATE HIGHWAY COMMISSION
11-18-98	ADDED NOTES		
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)		
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95	
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC		
6-2-94	REVISED E-1, 4,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



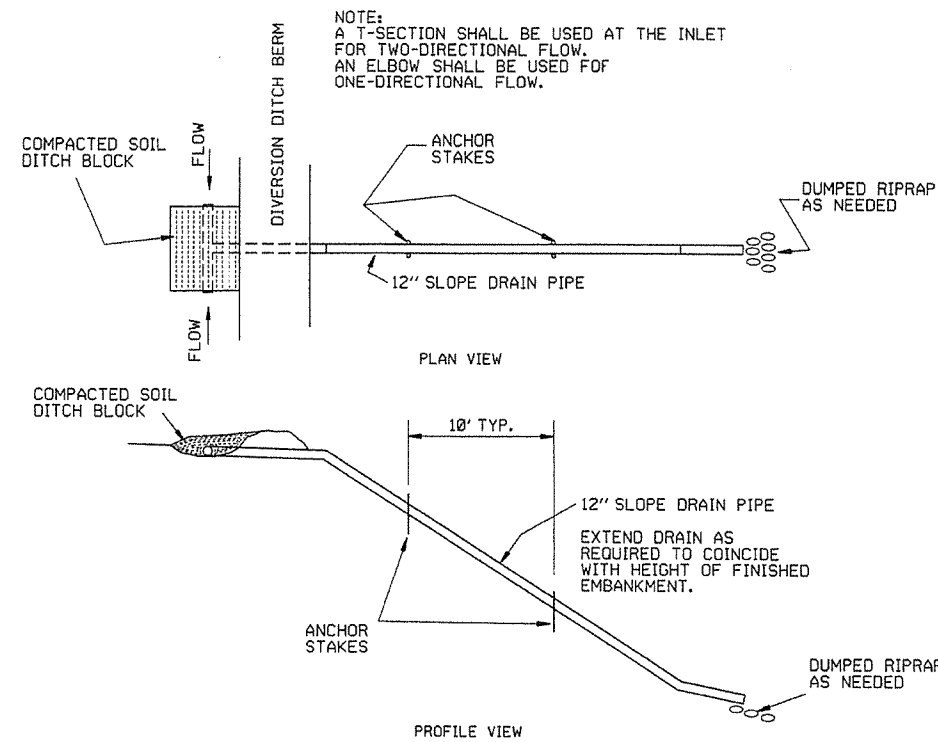
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



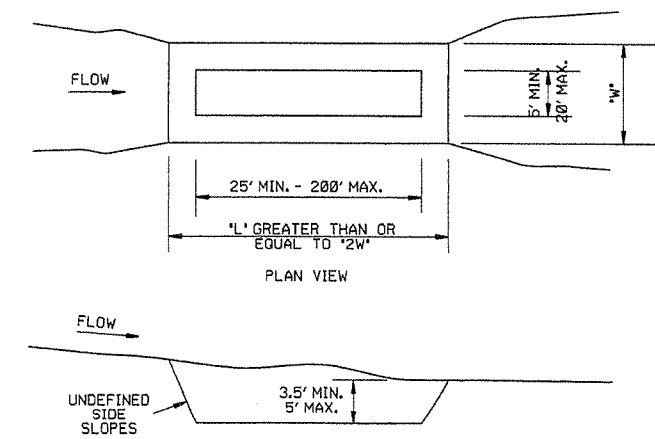
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

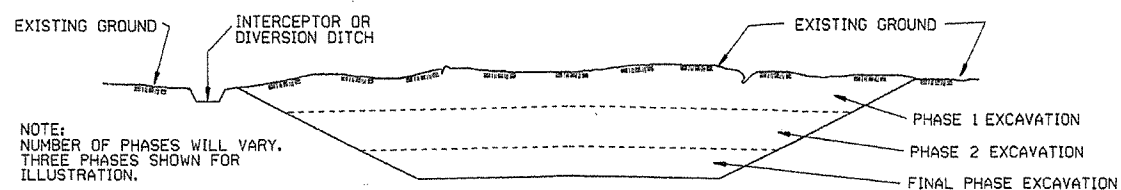
		ARKANSAS STATE HIGHWAY COMMISSION	
		TEMPORARY EROSION CONTROL DEVICES	
6-2-94	Revised E-8 & E-12r Added E-14 & Deleted E-13		
4-1-93	ISSUED		
DATE	REVISION		FILMED

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.

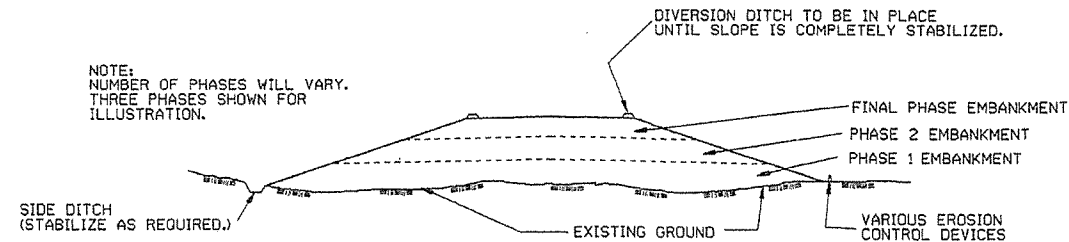
GENERAL NOTE

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.

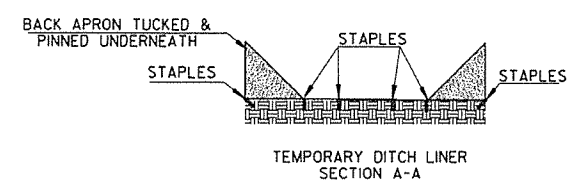
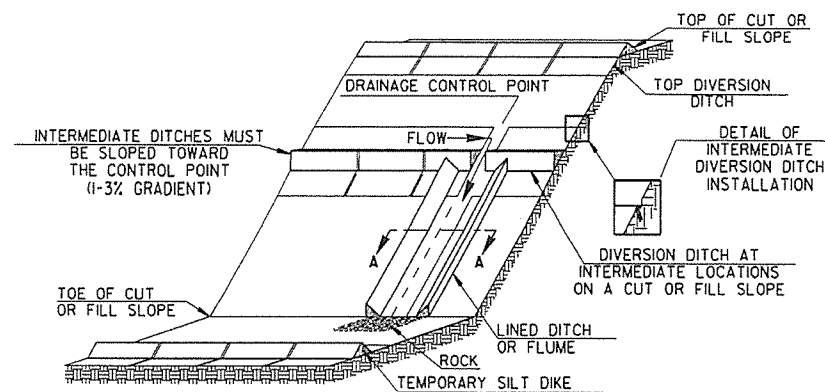
GENERAL NOTE

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.

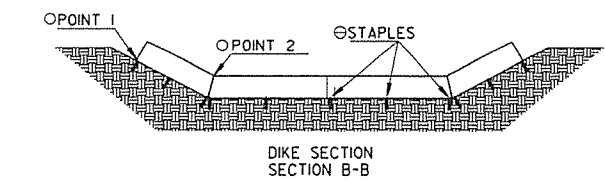
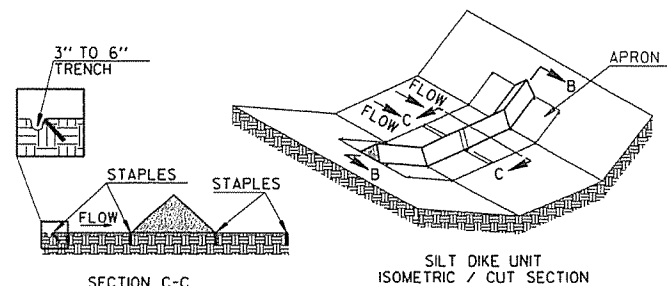
CONSTRUCTION SEQUENCE

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.

ARKANSAS STATE HIGHWAY COMMISSION		
TEMPORARY EROSION CONTROL DEVICES		
STANDARD DRAWING TEC-3		
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94
DATE	REVISION	FILMED

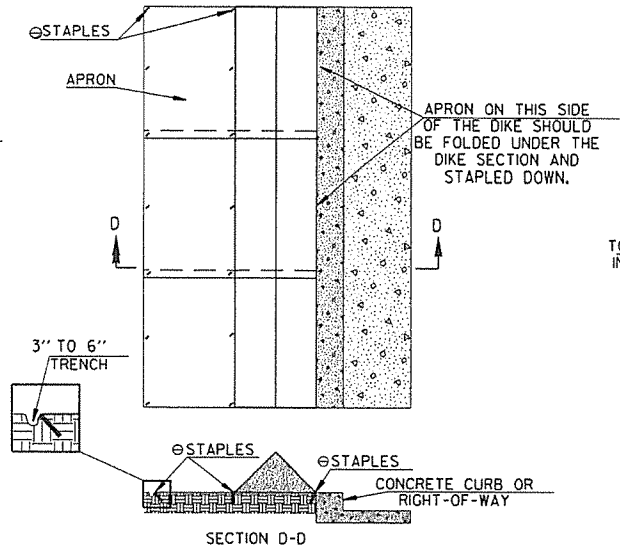


TRIANGULAR SILT DIKE INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER

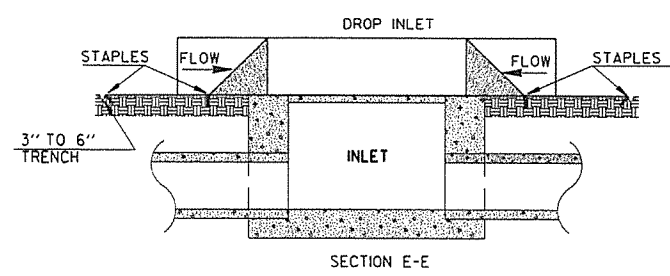
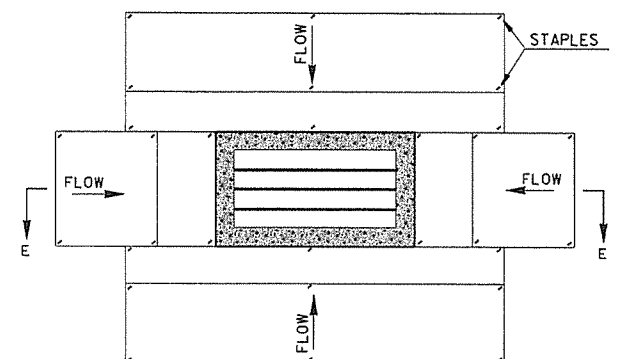


TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

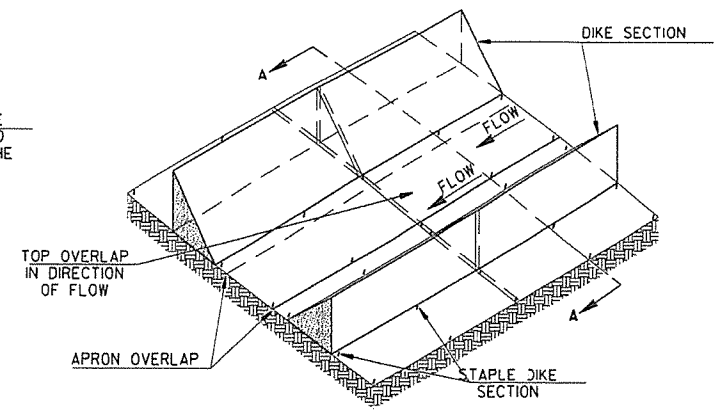
○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.
 ⊗ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION FOR CONTINUOUS BARRIER



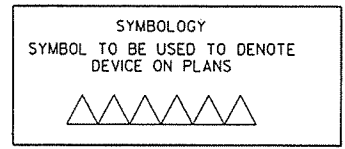
TRIANGULAR SILT DIKE INSTALLATION FOR DROP INLETS



TRIANGULAR SILT DIKE INSTALLATION FOR TEMPORARY DITCH LINER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.
2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.
3. THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.



NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

		ARKANSAS STATE HIGHWAY COMMISSION
		TEMPORARY EROSION CONTROL DEVICES
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	
DATE	REVISION	FILMED
		STANDARD DRAWING TEC-4

GENERAL NOTES:

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

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

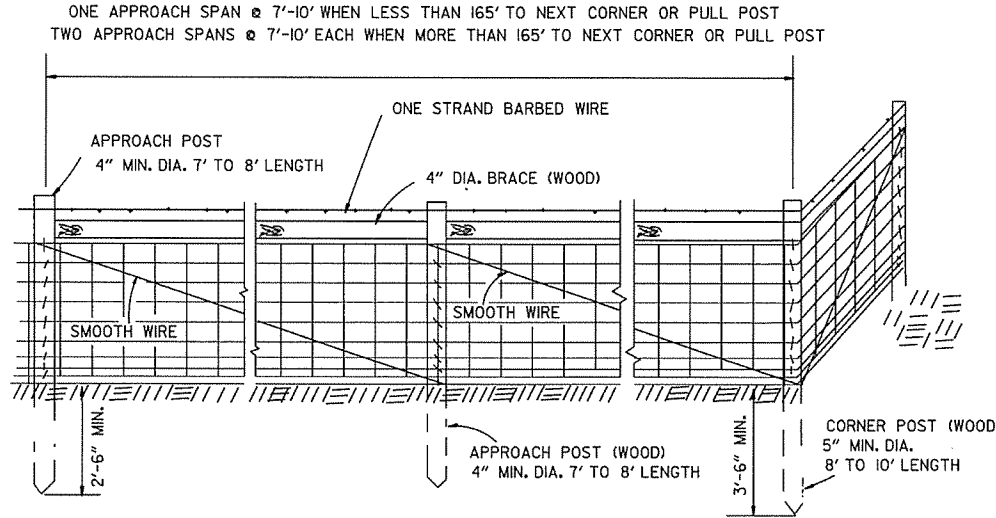
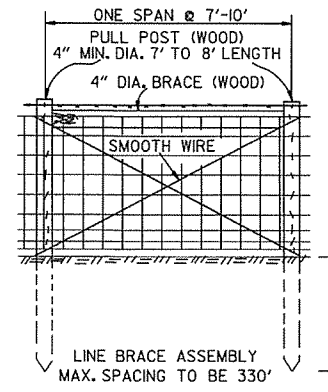
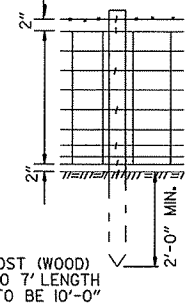
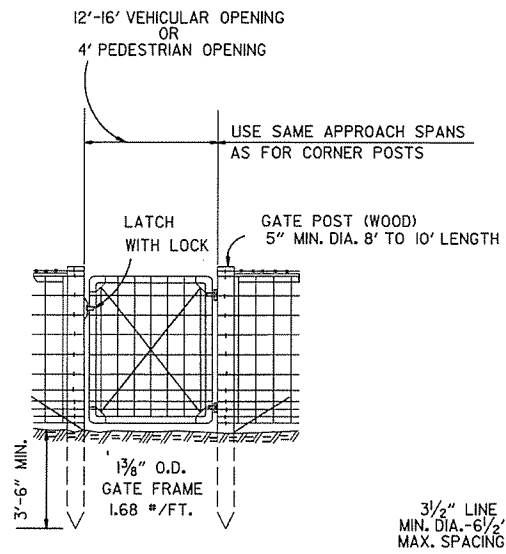
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

GATE HINGES AND LATCHES WITH LOCKS TO BE OF A TYPE APPROVED BY THE ENGINEER. DRIVEWAY GATES, EITHER SINGLE 12' OR 16' OR DOUBLE 6' TO 8' OPENINGS OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE FOR USE BY MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF BANK TO THE BRIDGE STRUCTURE, A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO THE BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

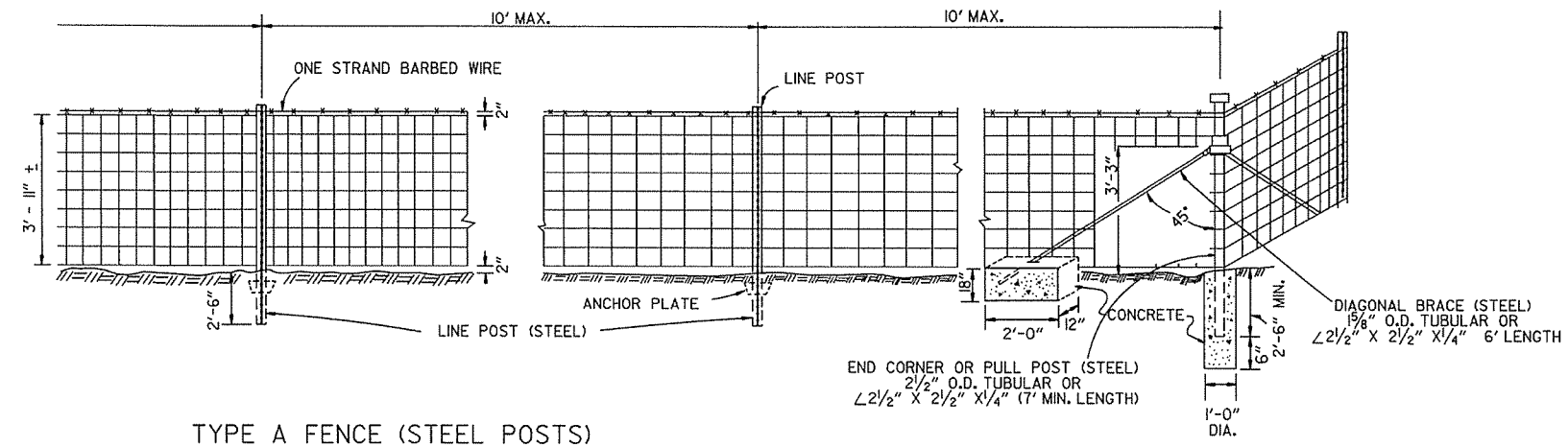
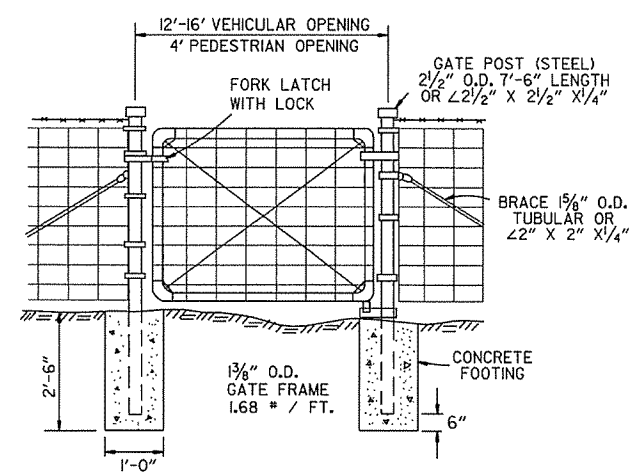
SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

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

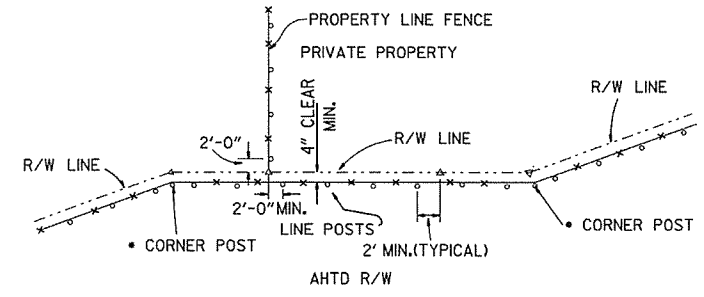


NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE A FENCE (WOOD POSTS)



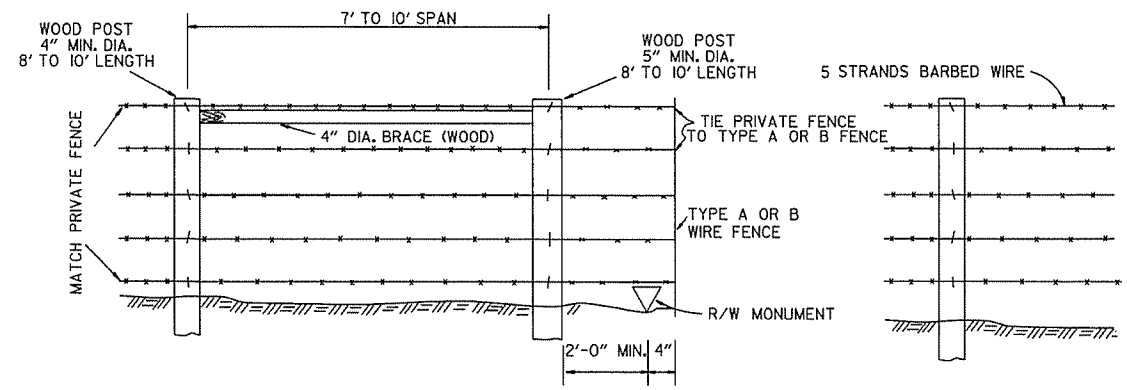
TYPE A FENCE (STEEL POSTS)



*NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

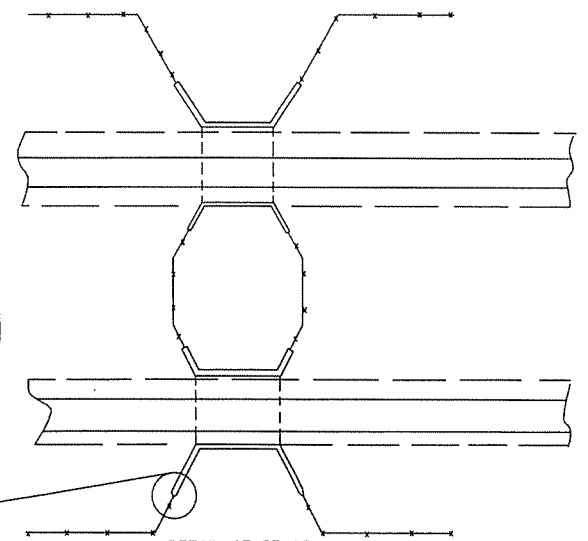
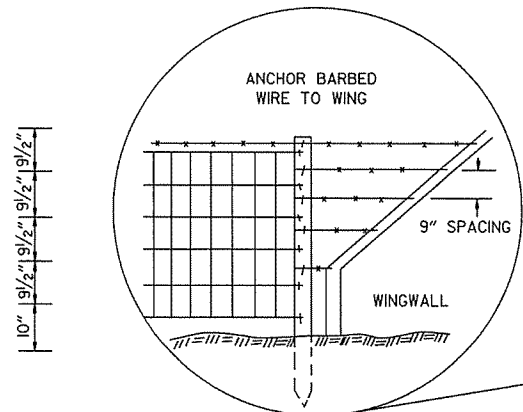
△ - R/W MONUMENTS
○ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



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

PRIVATE FENCE TERMINAL INSTALLATION



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

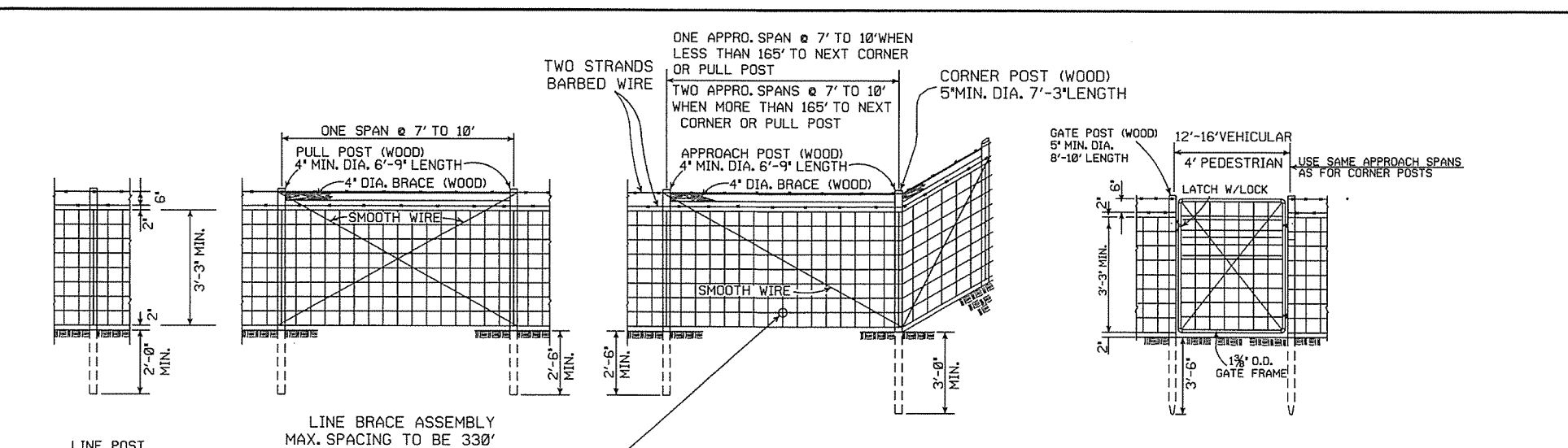
TYPE B FENCE

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

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

STANDARD DRAWING WF-1

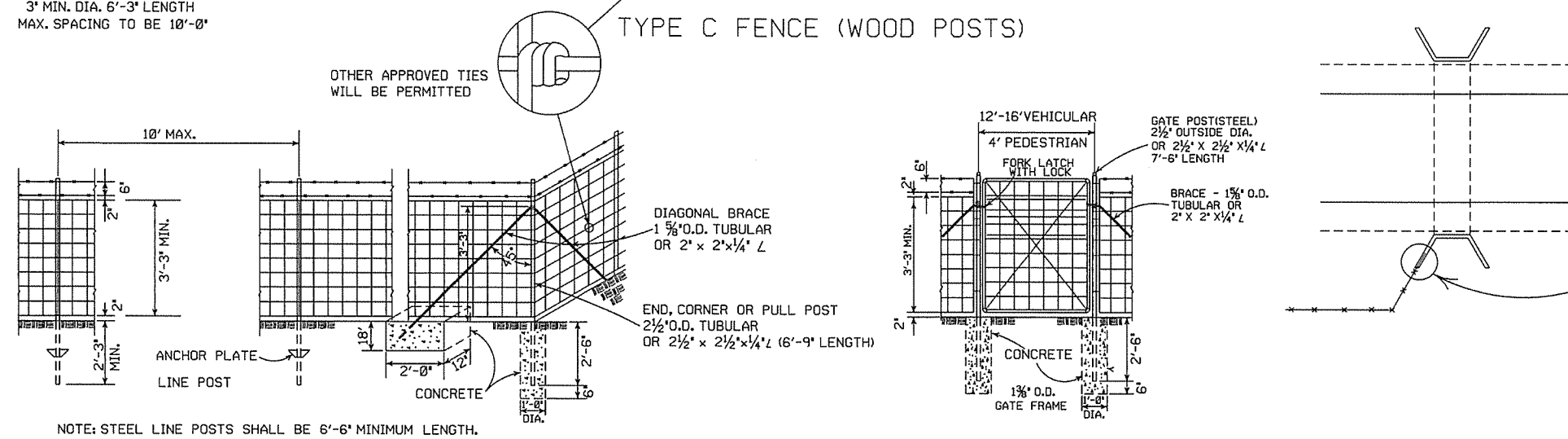


GENERAL NOTES:
 STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED. TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.
 AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE -1" TO +2".
 TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

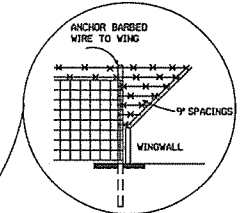
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF TIMBER LINE POSTS OF 7 FOOT LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

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.



NOTE: USE 3/4" x 1 1/2" LAG BOLT & SHIELD OR AS APPROVED BY THE ENGINEER.



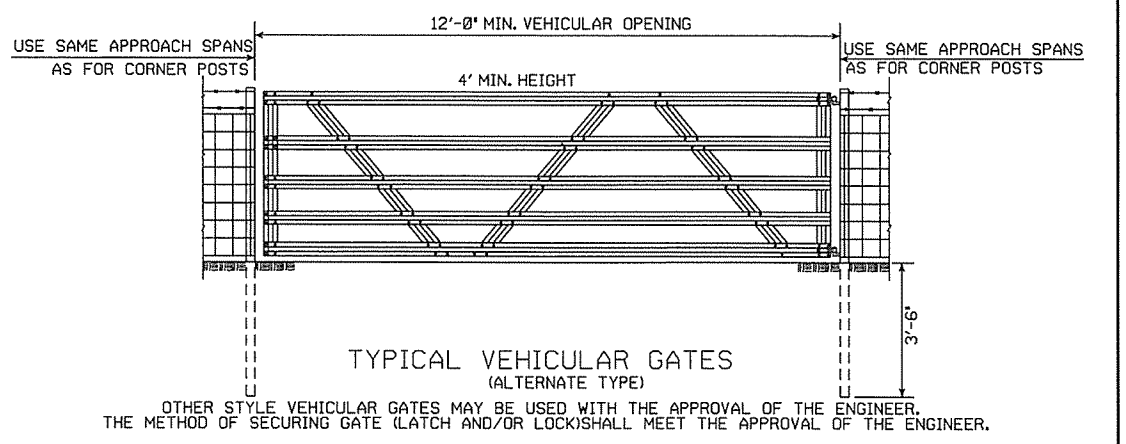
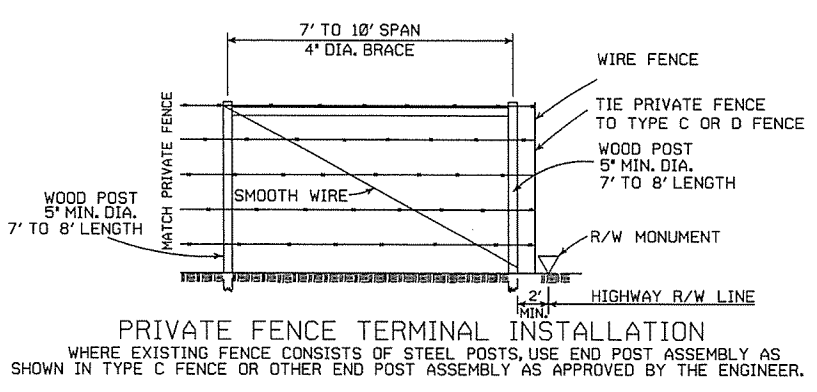
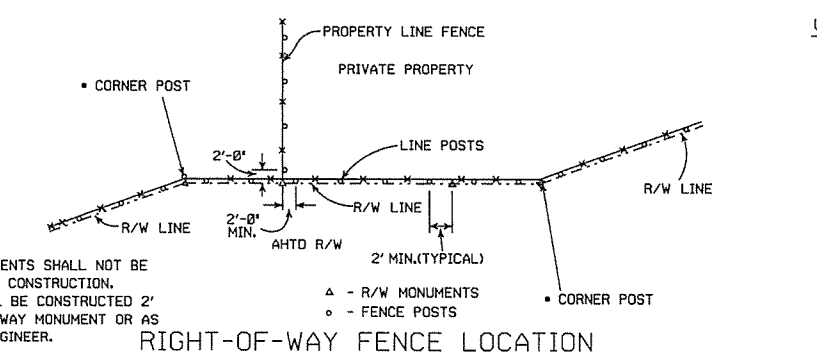
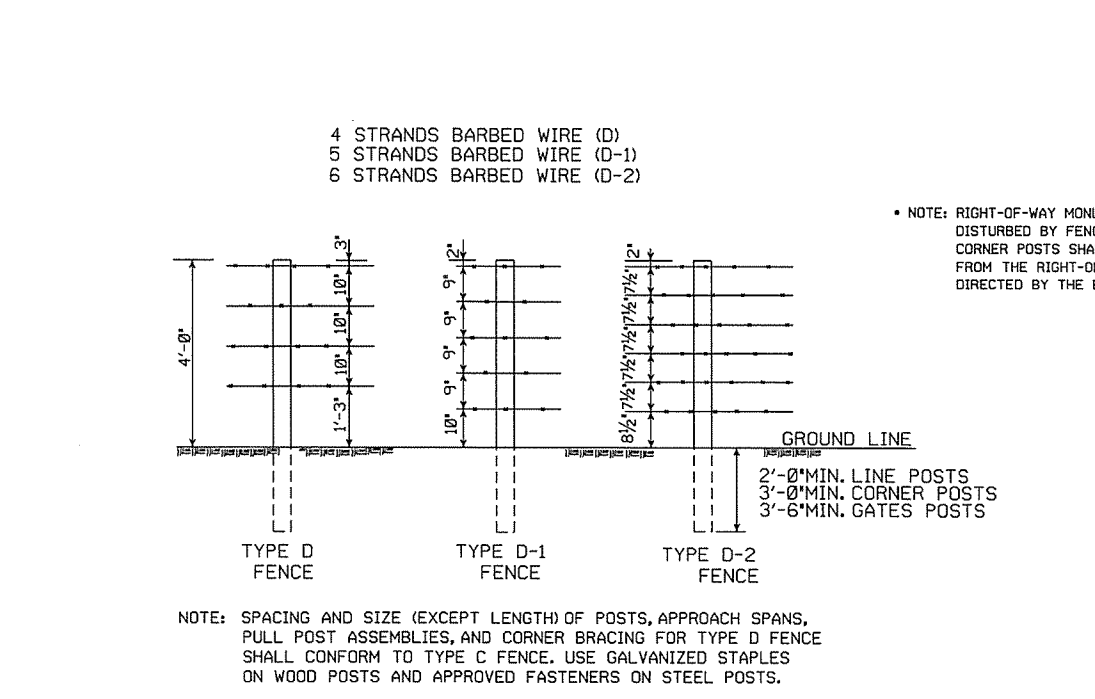
DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

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.

TYPE C FENCE (STEEL POSTS)

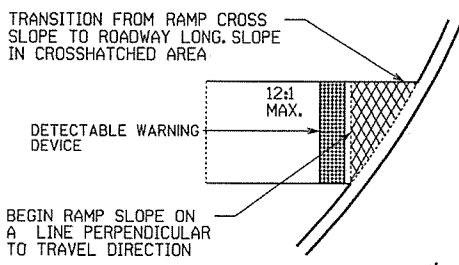
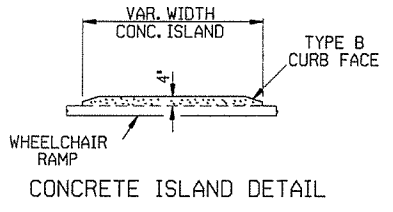


8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
7-15-88	ADDED SPLICE NOTE	700-7-15-88
10-30-87	GENERAL REVISIONS	549-10-30-87
11-1-84	MAX. POST SPACING MIN. WIRE GAUGE	507-11-1-84
1-4-83	MIN. DIA. LINE POST	648-1-4-83
3-2-81	TOLERANCE FOR POST LENGTH	722-3-2-81
12-1-72	ADDED D-1 & FENCE INSTALLATION	564-12-1-72
10-2-72	REVISED AND REDRAWN	540-10-2-72
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

**WIRE FENCE
 TYPE C AND D**

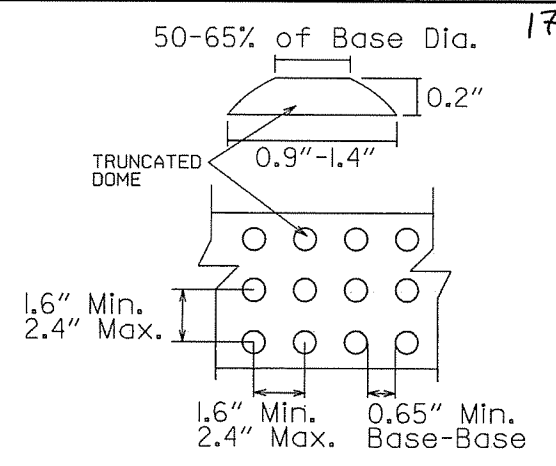
STANDARD DRAWING WF-4



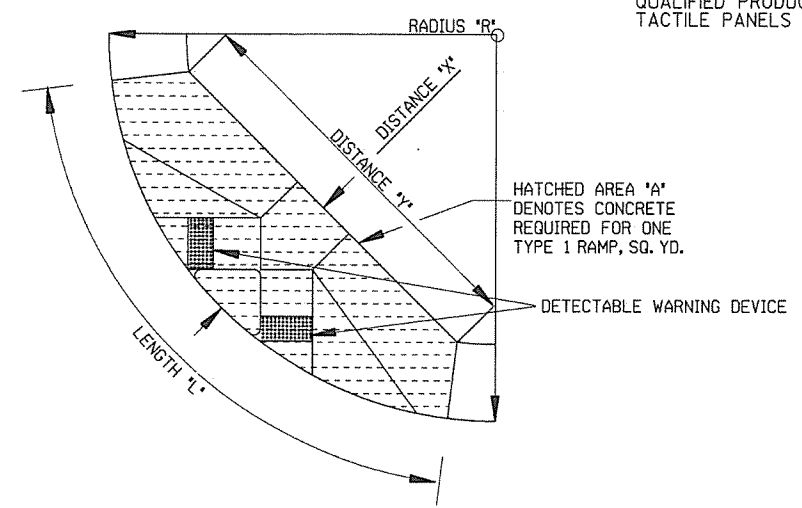
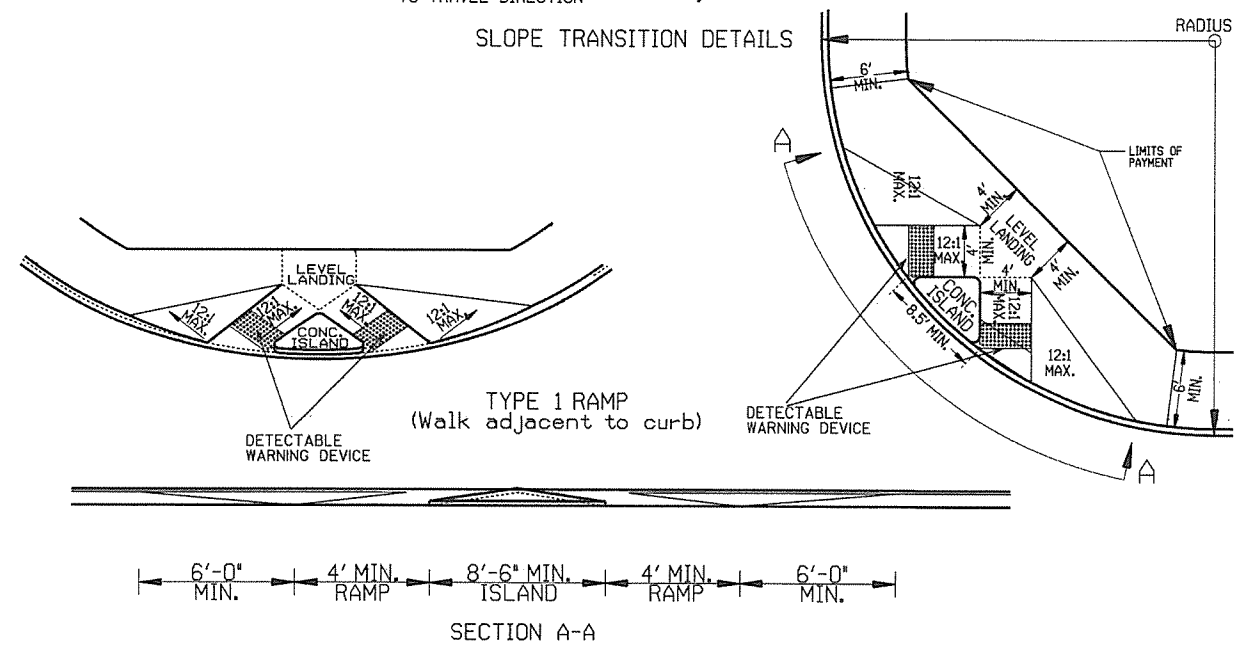
TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R"	DISTANCE "Y"	DISTANCE "Y"	LENGTH "L"	RAMP AREA "A"
FEET	FEET	FEET	FEET	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

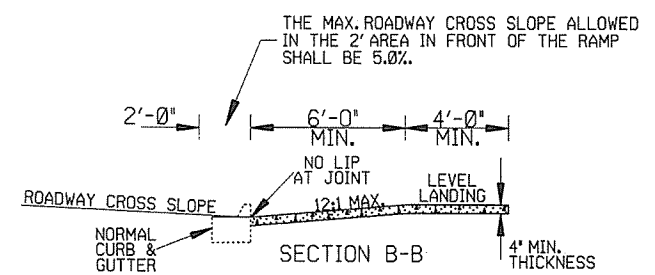
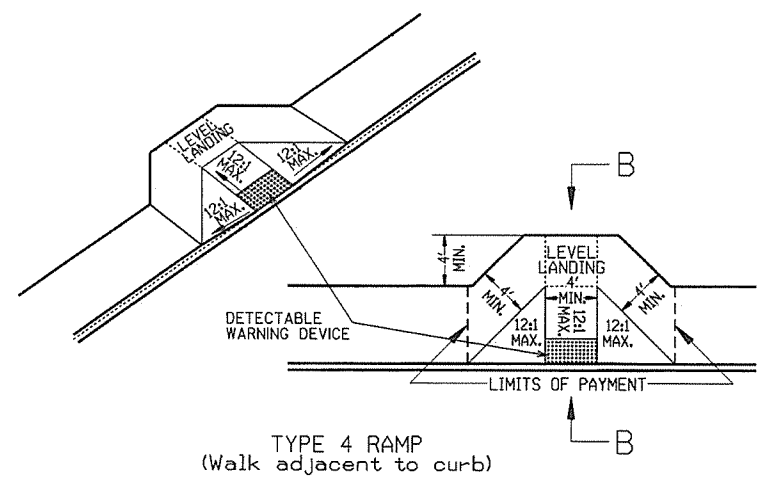
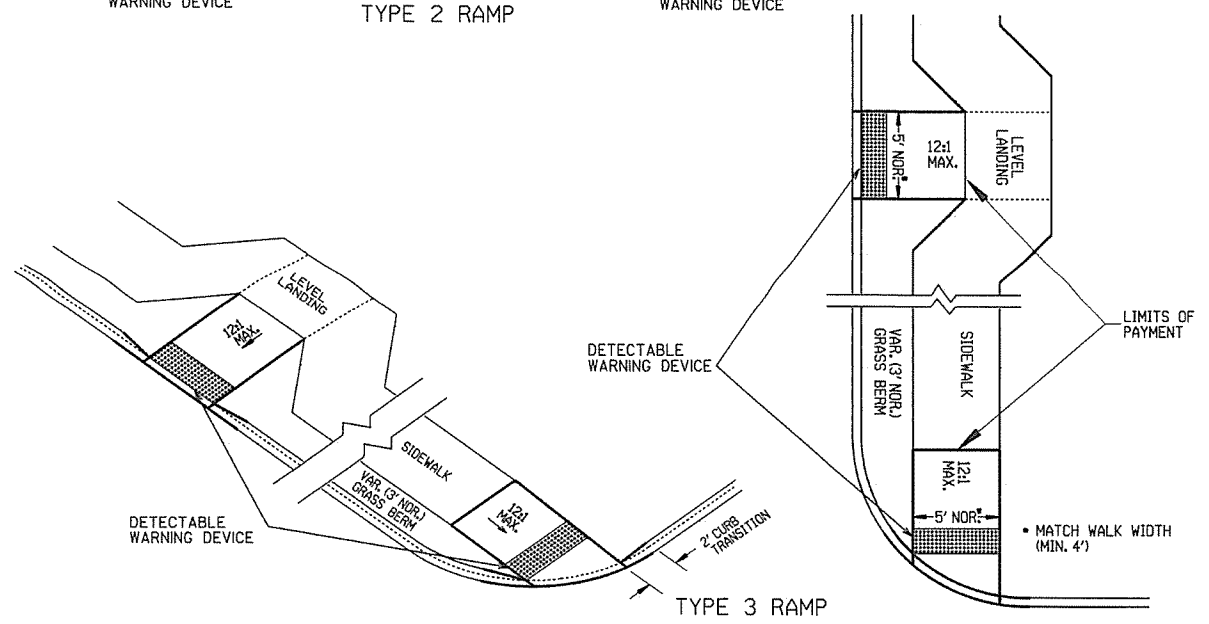
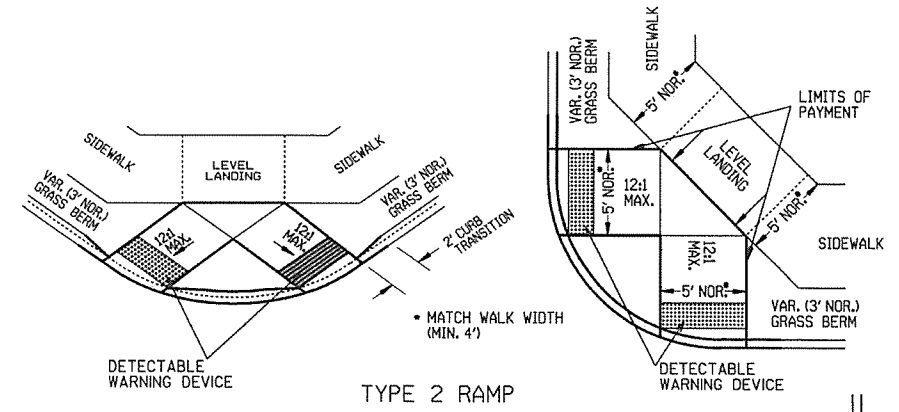
GENERAL NOTES FOR DETECTABLE WARNING DEVICES
 THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB.
 TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN.
 DOMES SHALL 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



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



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 RAMP 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.

RAMP SELECTION CRITERIA

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

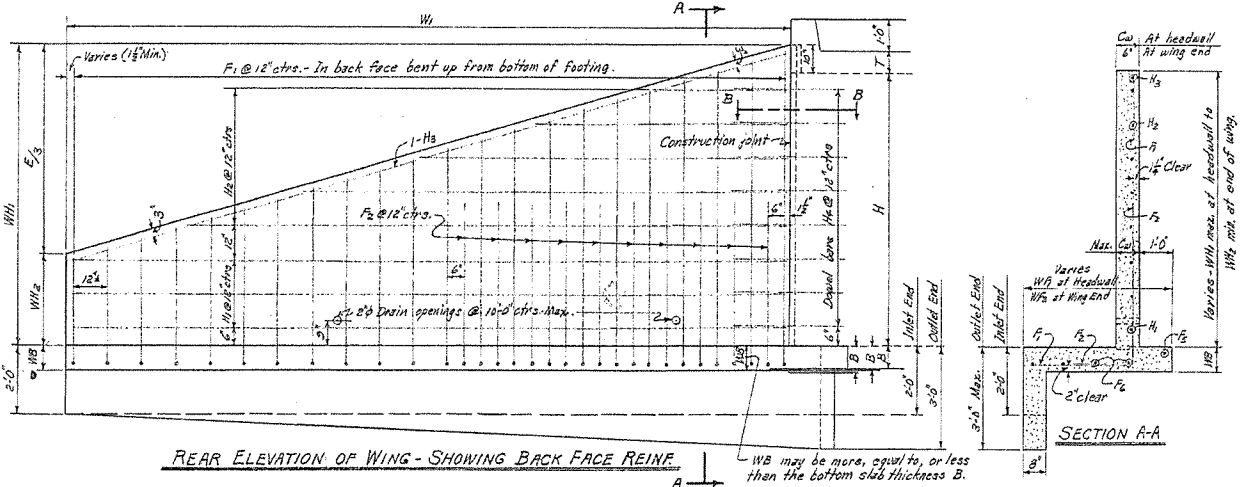
NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED.
 AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILM
11-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD SLOPE TRANS. & REV. ISL. DIMS.	
11-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM 10:1 MAX. SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCLUD. CONC. ISL. 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

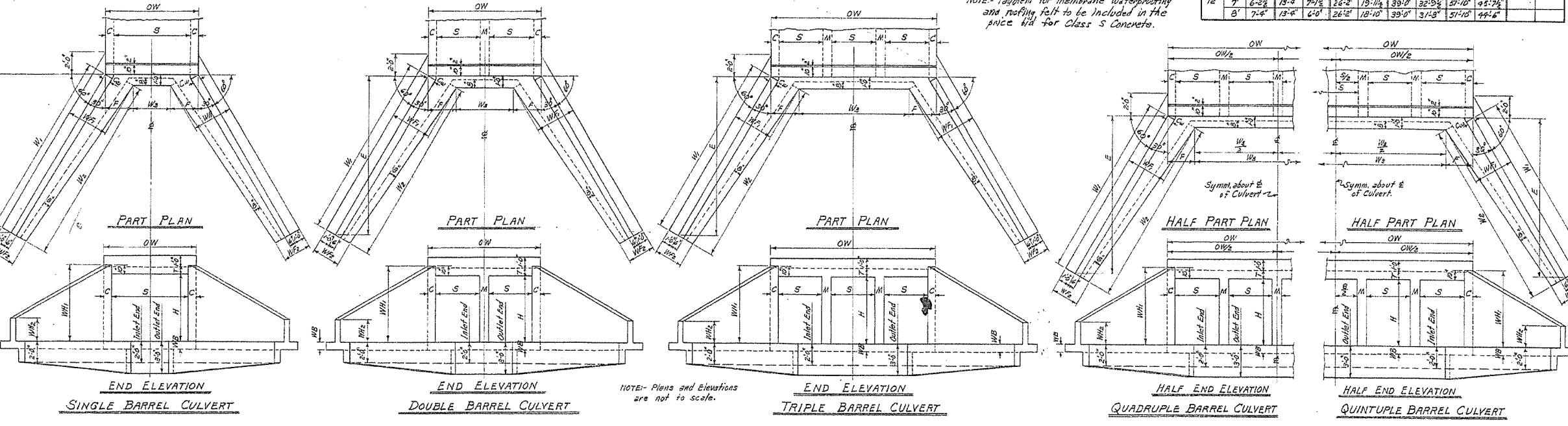
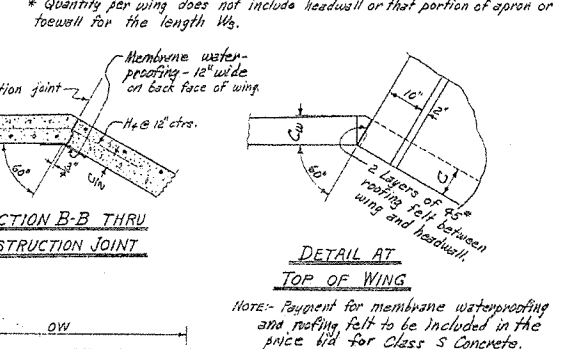
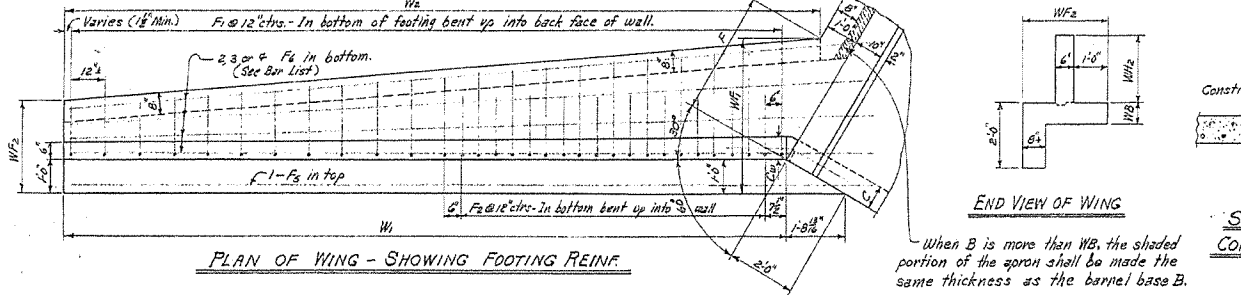


WING DIMENSIONS

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING AT HEADWALL	THICKNESS OF WING AT HEADWALL	WING WALL HEIGHTS		WIDTHS OF WING FOOTINGS		PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HDWL TO END OF WING	LENGTH OF WING WALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING
			AT HEADWALL	AT END OF WING	AT END OF WING	AT END OF WING					
H	WB	CW	WH	WF	WF	WF	F	E	W	W	CLASS S CONCRETE
											INLET END
											OUTLET END
2'	7"	6"	2'-0"	0'-8"	2'-4"	2'-0"	0'-11"	6'-6"	7'-6"	7'-1 1/2"	0.889
3'	7"	6"	3'-0"	1'-0"	2'-8"	2'-4"	1'-4"	8'-6"	9'-6"	9'-2 1/2"	1.338
4'	7"	6"	4'-0"	1'-4"	3'-0"	2'-5"	1'-9"	10'-6"	12'-1 1/2"	12'-1 1/2"	1.868
5'	7"	6"	5'-0"	1'-8"	3'-4"	2'-9"	2'-1 1/2"	12'-6"	14'-5 1/2"	14'-7 1/2"	2.478
6'	7"	6"	6'-0"	2'-0"	3'-8"	2'-6"	2'-4"	14'-6"	16'-9"	17'-1 1/2"	3.111
7'	8 1/2"	7 1/2"	7'-0"	2'-4"	4'-2"	2'-7"	3'-1 1/2"	16'-6"	19'-0 1/2"	19'-8 1/2"	4.505
8'	8 1/2"	7 1/2"	8'-0"	2'-8"	4'-6"	3'-1 1/2"	3'-1 1/2"	18'-6"	21'-4 1/2"	22'-4 1/2"	6.097

APRON DIMENSION W₃
W₃ = (CW - 2F)

CLEAR SPAN	CLEAR HEIGHT	SINGLE BARREL CULVERT					DOUBLE BARREL CULVERT					TRIPLE BARREL CULVERT					QUADRUPLE BARREL CULVERT					QUINTUPLE BARREL CULVERT				
		S	H	2F	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃	OW	W ₃		
4'	3'	1'-1 1/2"	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"	28'-4"	26'-4"	33'-0"	31'-0"	37'-6"	35'-6"	42'-2"	40'-2"	46'-8"	44'-8"	51'-4"	49'-4"		
5'	4'	1'-3 1/2"	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"	28'-4"	26'-4"	33'-0"	31'-0"	37'-6"	35'-6"	42'-2"	40'-2"	46'-8"	44'-8"	51'-4"	49'-4"		
6'	5'	1'-5 1/2"	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"	28'-4"	26'-4"	33'-0"	31'-0"	37'-6"	35'-6"	42'-2"	40'-2"	46'-8"	44'-8"	51'-4"	49'-4"		
7'	6'	1'-7 1/2"	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"	28'-4"	26'-4"	33'-0"	31'-0"	37'-6"	35'-6"	42'-2"	40'-2"	46'-8"	44'-8"	51'-4"	49'-4"		
8'	7'	1'-9 1/2"	5'-0"	3'-0"	9'-8"	7'-8"	14'-4"	12'-4"	19'-0"	17'-0"	23'-8"	21'-8"	28'-4"	26'-4"	33'-0"	31'-0"	37'-6"	35'-6"	42'-2"	40'-2"	46'-8"	44'-8"	51'-4"	49'-4"		



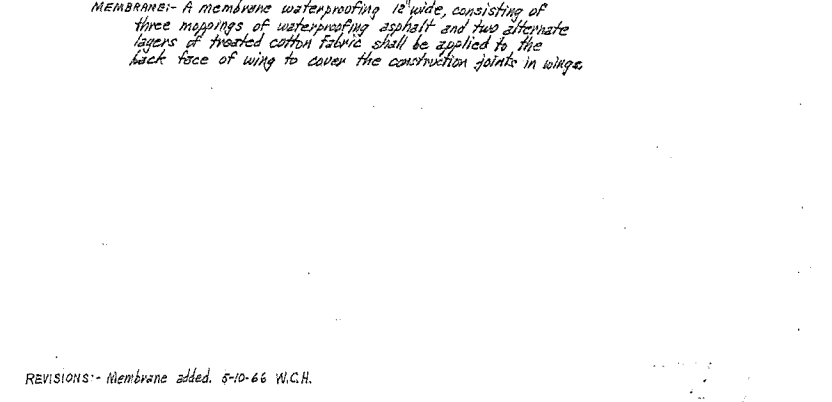
QUANTITIES

CLASS S CONCRETE - 4 WINGS

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WING AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL FOR 4 WINGS	HEADWALLS, WING WALLS, FOOTINGS, TOEWALLS AND APRONS				
					SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
4'	3'	6"	7"	108.0	4.50	5.44	6.42	7.36	8.34
5'	4'	6"	7"	169.4	6.24	7.21	8.17	9.13	10.09
6'	5'	6"	7"	254.4	8.93	9.28	10.24	11.20	12.16
7'	6'	6"	7"	357.8	10.72	11.48	12.44	13.60	14.56
8'	7'	6"	7"	583.1	14.53	15.53	16.52	17.51	18.49

BAR LIST FOR ONE WING - 4 REQUIRED

CLEAR HEIGHT	F ₁ BENT						F ₂ BENT						F ₃ STRAIGHT						F ₄ STRAIGHT						H ₁ BENT						QUANTITY PER WING	BAR BENDING DIAGRAMS
	SIZE	SPACING	No. Reqd.	LENGTH VARY	X	Y	SIZE	SPACING	No. Reqd.	LENGTH	X	Y	SIZE	SPACING	No. Reqd.	LENGTH	SIZE	SPACING	No. Reqd.	LENGTH	SIZE	SPACING	No. Reqd.	LENGTH	SIZE	SPACING	No. Reqd.	LENGTH				
2'	#3	12"	8	1'-6"	3'-0"	0'-8"	1'-0"	0'-11"	2'-11"	---	---	---	#3	1	9'-8"	#3	2	8'-6"	#3	12"	1	7'-4"	#3	12"	2	2'-8"	1'-4"	27.0				
3'	#3	12"	10	2'-2"	5'-2"	0'-10"	1'-5"	1'-5"	4'-0"	---	---	---	#3	1	12'-0"	#3	2	11'-0"	#3	12"	2	7'-6"	#3	12"	3	2'-8"	1'-4"	41.1				
4'	#3	12"	13	2'-4"	6'-6"	0'-11"	1'-7"	1'-6"	5'-0"	---	---	---	#3	1	14'-0"	#3	3	13'-6"	#3	12"	1	11'-10"	#3	12"	3	2'-8"	1'-4"	63.7				
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"	#3	1	14'-8"	#3	12"	2	14'-2"	#3	12"	5	2'-8"	1'-4"	89.5	
6'	#4	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	2'-5"	8'-4"	---	---	---	#3	12"	4	4'-6"	1'-4"	3'-3"	#3	1	19'-2"	#3	12"	3	14'-4"	#3	12"	6	2'-8"	1'-4"	145.8	
7'	#4	12"	20	3'-9"	10'-9"	1'-3"	2'-9"	2'-7"	8'-4"	---	---	---	#4	12"	7	5'-6"	1'-7"	4'-0"	#4	1	21'-4"	#4	12"	2	18'-9"	#4	12"	5	3'-6"	1'-9"	263.7	
8'	#4	12"	22	4'-4"	12'-3"	1'-5"	3'-2"	3'-0"	9'-2"	---	---	---	#4	12"	10	6'-4"	1'-10"	4'-9"	#4	1	23'-8"	#4	12"	3	21'-4"	#4	12"	8	3'-6"	1'-9"	356.4	



GENERAL NOTES:
 CONCRETE: All concrete to be Class S, and shall be poured in the dry. All exposed corners to have 3/8" 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^{psi}; Reinforcing Steel 20,000^{psi}.
 NOTE: This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.
 SINGLES: R-100X-0, R-100X-X1, R-100X-X2
 DOUBLES: R-200X-0, R-200X-X1, R-200X-X2, R-200X-X3
 TRIPLES: R-300X-0, R-300X-X1, R-300X-X2, R-300X-X3
 QUADRUPLES: R-400X-0, R-400X-X1, R-400X-X2
 QUINTUPLES: R-500X-0, R-500X-X1

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, ALL DEPTHS OF COVER
 QUADRUPLES & QUINTUPLES. FOR H=8'-0" OR LESS
 STANDARD DRAWING NO. W-X003-1

Designed By: M.C.H. 6-20-62. Checked By: R.H.S. 1-9-63
 Drawn By: M.C.H. 12-4-62. Checked By: R.H.S. 1-31-63
 Quantities By: M.C.H. 12-14-62. Checked By: R.H.S. 3-29-63

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			175	
JOB No.					

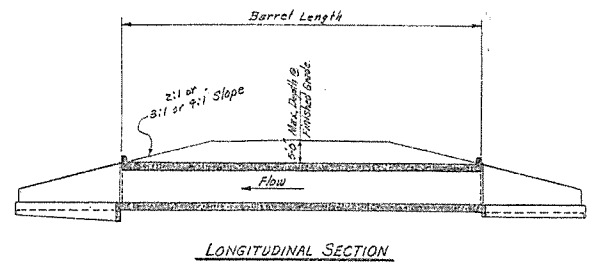
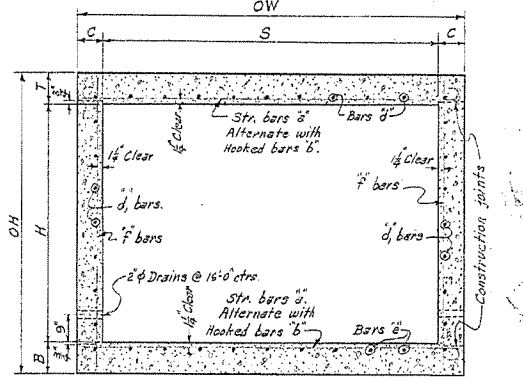
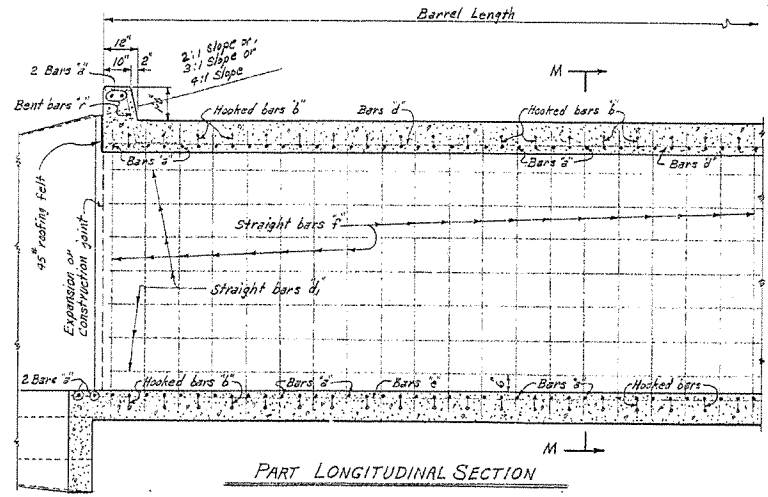
BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BAR LIST																							
			a bars				b bars				c bars				d bars											
			STRAIGHT		BENT - See Diagram below		STRAIGHT		BENT - See Diagram below		STRAIGHT		BENT - See Diagram below		STRAIGHT											
D	S	H	SIZE	SPACING	NUM. REQ'D	LENGTH	SIZE	SPACING	NUM. REQ'D	LENGTH	SIZE	SPACING	NUM. REQ'D	LENGTH	SIZE	SPACING	NUM. REQ'D	LENGTH	SIZE	SPACING	NUM. REQ'D	LENGTH				
			In Top and Bottom Slabs of Barrel. 2 Add'l in Aeron and Headwall - Each.				In Top and Bottom Slabs of Barrel. Alternate with 'a' bars.				Longitudinal in Top Slab of Barrel				Longitudinal in Side walls				Longitudinal in Bottom Slab of Barrel				Verticals in Side walls			

DIMENSIONS QUANTITIES

MAX. DESIGN DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	BARREL DIMENSIONS						UNIT QUANTITIES					
			H	A	O	W	T	C	B	OH	CU YD	LB.	LB.	LB.
D	S	H	A	O	W	T	C	B	OH	CU YD	LB.	LB.	LB.	

Note: For details of wings and bar lists, see Drawing Nos. W-X002-1 or W-X002-2 or W-X003-1 or W-X003-2 or W-X004-1 or W-X004-2.



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 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 33'-0". Lap longitudinal bars 30 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls and slabs shall be only where shown on plans.
 SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

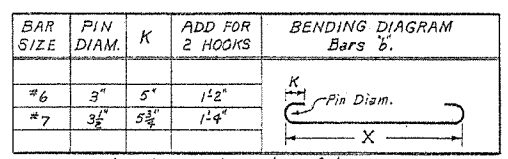
DESIGN LIVE LOAD
 H20-S16 LOADING A.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 24,000 Lb. Axles @ 9'-0" ctrs.

UNIT STRESSES:-
 Class S Concrete (n=10) 1200 psi
 Reinforcing Steel 20,000 psi

Note: This drawing to be used in conjunction with Standard Drawing Nos. W-X003-1 or W-X003-2 and W-X004-1 or W-X004-2. Also Drawing No. W-X002-1 or W-X002-2.

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
 SINGLES UNDER 5'-0" COVER
 STANDARD DRAWING NO. R-100X-0



SPAN	SIZE	SPACING	NUM. REQ'D	LENGTH	X
4'	#4	11"	12	2'-6"	1'-3"
5'	#4	11"	14	2'-7"	1'-3 1/2"
6'	#4	11"	16	2'-8"	1'-4"
7'	#4	11"	18	2'-9"	1'-4 1/2"
8'	#4	11 1/2"	20	2'-11"	1'-5 1/2"
9'	#4	11 1/2"	22	3'-0"	1'-6"
10'	#4	11 1/2"	24	3'-1"	1'-6 1/2"
11'	#4	12"	26	3'-2"	1'-7"
12'	#4	12"	28	3'-3"	1'-7 1/2"

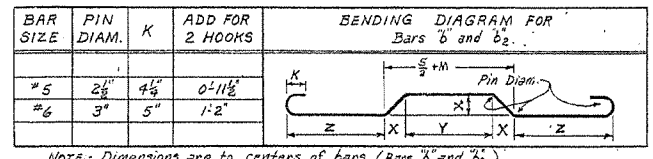
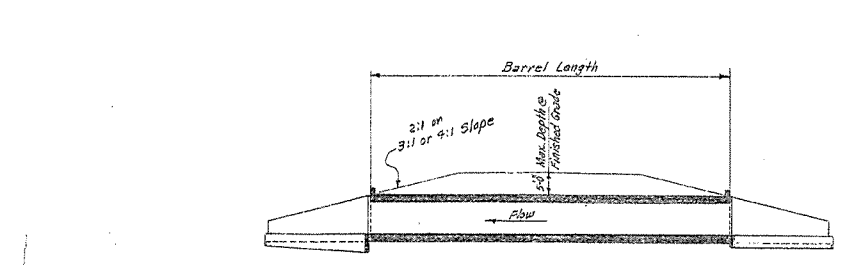
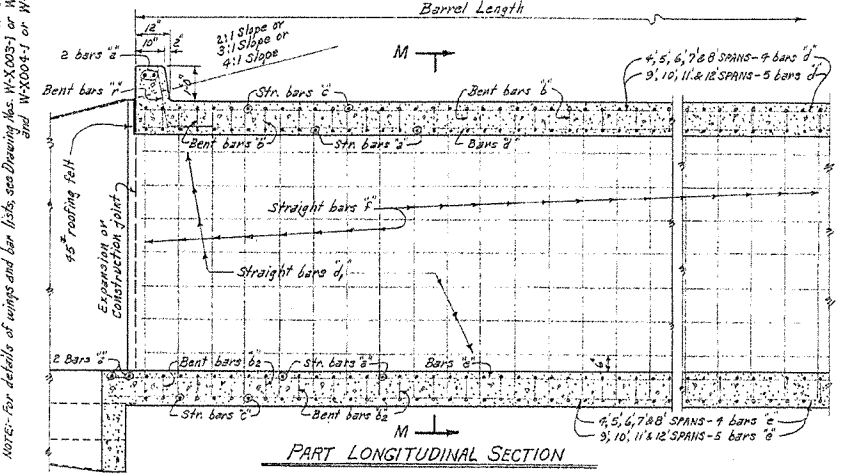
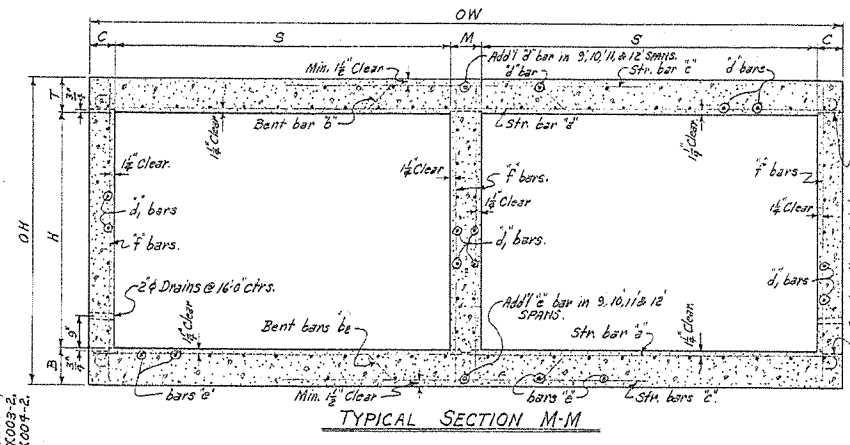
Designed By: M.C.H. 1-23-63. Checked By: R.H.K. 5-25-63.
 Drawn By: M.C.H. 2-8-63. Checked By: R.H.K. 5-27-63.
 Quantities By: M.C.H. 2-12-63. Checked By: R.H.K. 5-24-63.

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			176	
JOB No.					

BAR LIST FOR BARREL SECTION 60'-0" IN LENGTH

DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	6" bars												8" bars												10" bars												12" bars											
			STRAIGHT				BENT - See Diagram below.				BENT - See Diagram below.				STRAIGHT				STRAIGHT				STRAIGHT				STRAIGHT																							
D	S	H	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z	SIZE	SPACING	NUMBER REQ'D	LENGTH	X	Y	Z													
0'-0" TO 5'-0" MAXIMUM.	12	12	#6	12"	12	12	12	12	12	#8	12"	12	12	12	12	12	#10	12"	12	12	12	12	12	#12	12"	12	12	12	12	12	12	12	12	12	12	12	12	12												

MAX. DESIGN DEPTH OF COVER	DIMENSIONS										QUANTITIES									
	D	S	H	A	OW	T	C	M	B	OH	CUYD	LB.	LB.	LB.	PER LAP	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL	PER LIN. FT. OF BARREL
2	12	12	12	12	12	12	12	12	12	12	0.496	88.15	42.71	129.56	4.06	0.558	93.49	46.03	129.56	4.06



DOWEL BARS FOR TWO HEADWALLS				
SPACING @	SIZE	SPACING	NO. BARS	LENGTH
4'	#4	12"	20	2'-5"
5'	#4	12"	24	2'-6"
6'	#4	12"	28	2'-7"
7'	#4	12"	32	2'-8"
8'	#4	12"	36	2'-9"
9'	#4	12"	40	2'-10"
10'	#4	12"	46	2'-11"
11'	#4	12"	50	3'-0"
12'	#4	12"	54	3'-1"

GENERAL NOTES:-
 CONCRETE:- All concrete to be Class S, and shall be poured in the dry.
 All exposed corners to have 3/8 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 33'-0". Lap longitudinal bars 50 diameters.
 CONSTRUCTION JOINTS:- Construction joints between wingwalls, side walls, 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.A.S.H.O. 1961
 AND
 SPECIAL MILITARY LOADING
 Two 24,000 lb. Axles @ 4'-0" ctrs.
UNIT STRESSES:-
 Class S Concrete (n=10) 1200²/6
 Reinforcing Steel 20,000²/6

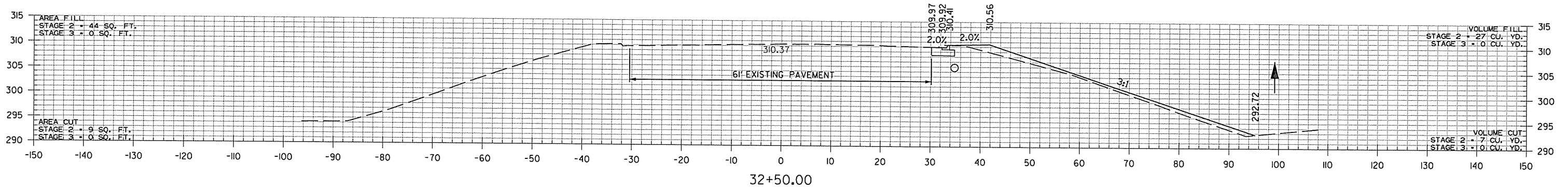
Note:- This drawing to be used in conjunction with Standard Wing Drawing Nos. W-X008-1 or W-X008-2 and W-X009-1 or W-X009-2. Also drawing No. W-X002-1 or W-X002-2.

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
 UNDER 5'-0" COVER
 DOUBLES
 STANDARD DRAWING NO. R-200X-0.

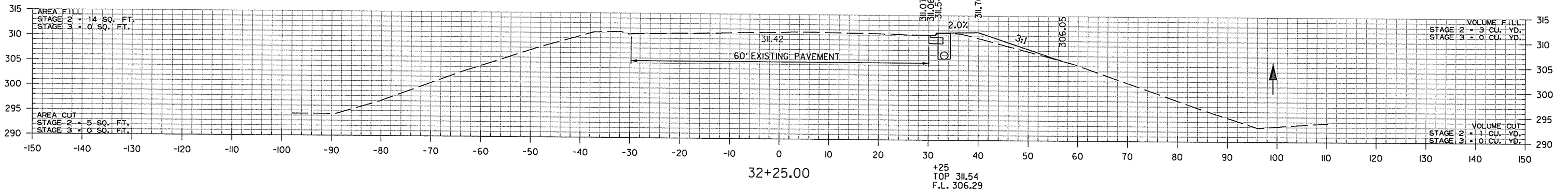
Checked by: TMS, 5-14-63
 Checked by: TMS, 5-24-63
 Checked by: TMS, 5-26-63
 Designed by: W.C.H., 1-17-63.
 Drawn by: W.C.H., 2-15-63.
 Quantities by: W.C.H., 2-19-63.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080492	177
						209		

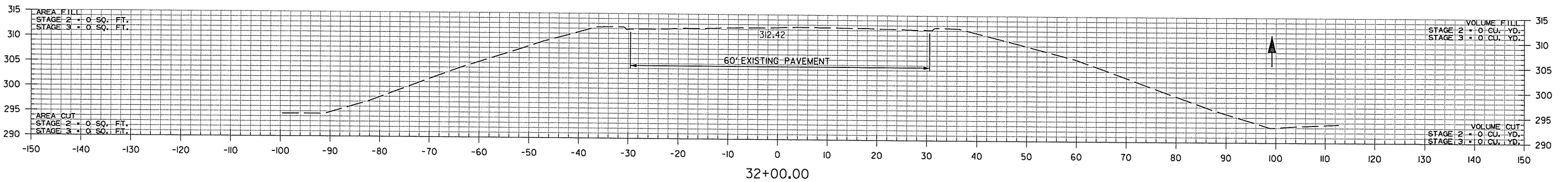
② CROSS SECTIONS



STA. 32+25 CONSTRUCT
DROP INLET ON RT.
H = 5'-3", W/18" X 172' PIPE
CULVERT TO DROP INLET ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"

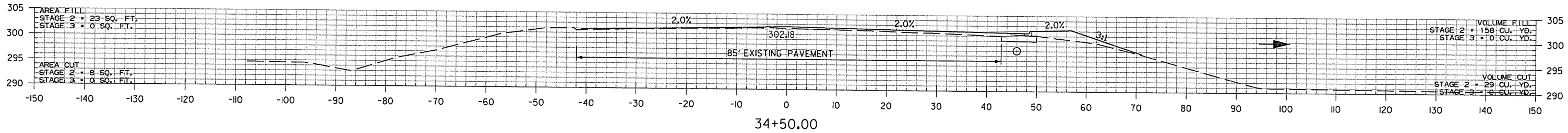


STA. 32+20.00 BEGIN JOB 080492



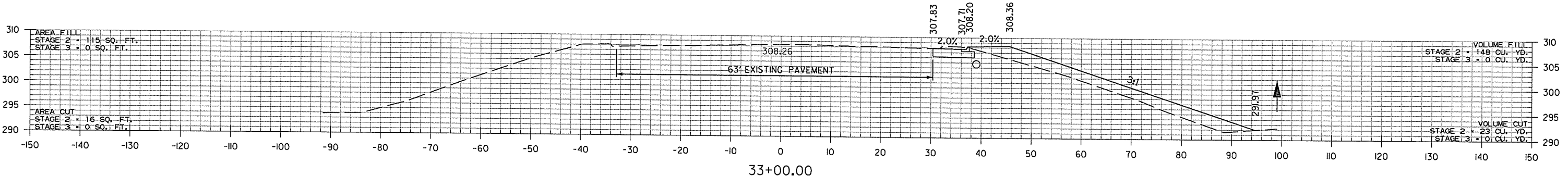
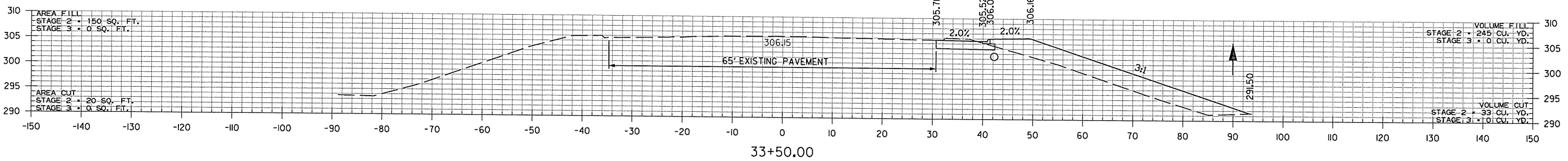
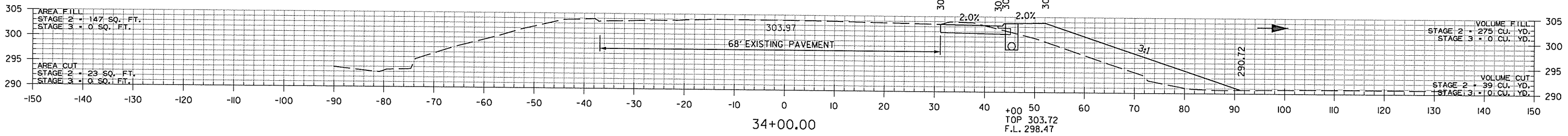
HWY. 65B/286
STA. 32+00 TO STA. 32+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	178	209
(2) CROSS SECTIONS								



STA. 34+00 BEGIN VERTICAL TRANSITION

STA. 34+00 CONSTRUCT
DROP INLET ON RT.
H = 5'-3", W/18" X 196" PIPE
CULVERT TO DROP INLET ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"



HWY. 65B/286
STA. 33+00 TO STA. 34+50

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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080492	179
						209		

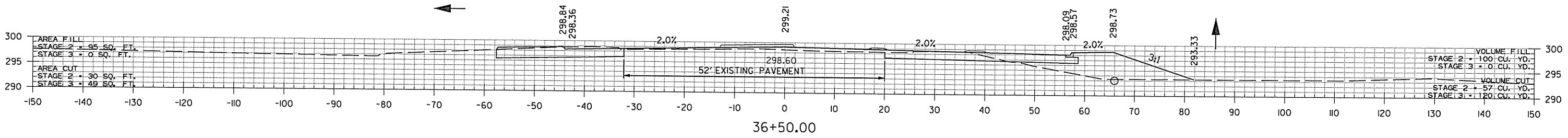
2 CROSS SECTIONS

ROUNDABOUT EARTHWORK

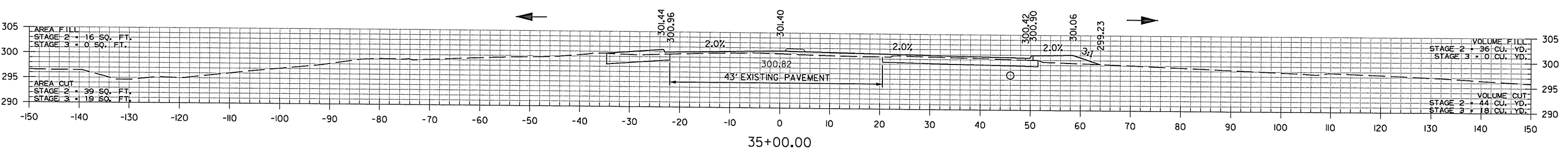
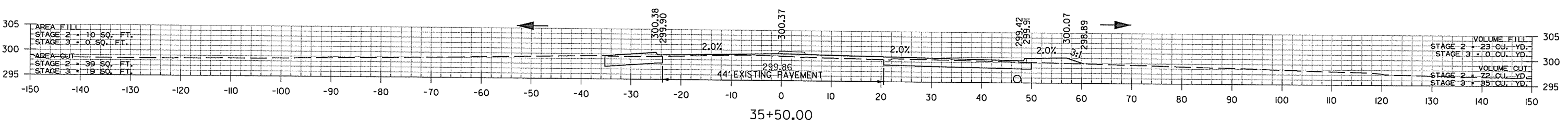
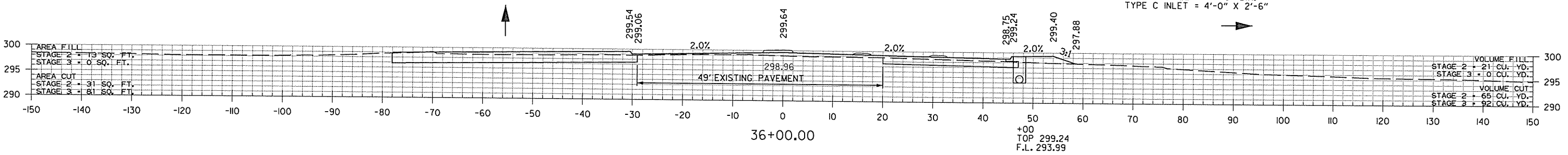
VOLUME FILL
 STAGE 2 = 538 CU. YD.
 STAGE 3 = 585 CU. YD.
 STAGE 4 = 6284 CU. YD.

VOLUME CUT
 STAGE 2 = 56 CU. YD.
 STAGE 3 = 13 CU. YD.
 STAGE 4 = 42 CU. YD.

NOTE: SEE ROUNDABOUT SPECIAL DETAILS FOR INFORMATION FROM STA. 36+95.00 TO STA. 39+35.00



STA. 36+00 CONSTRUCT DROP INLET ON RT.
 H = 5'-3", W/18" X 105' PIPE
 CULVERT TO DROP INLET ON RT.
 (CLASS III TYPE 3 BEDDING
 TYPE M0 INLET = 4'-0" DIA.
 TYPE C INLET = 4'-0" X 2'-6"

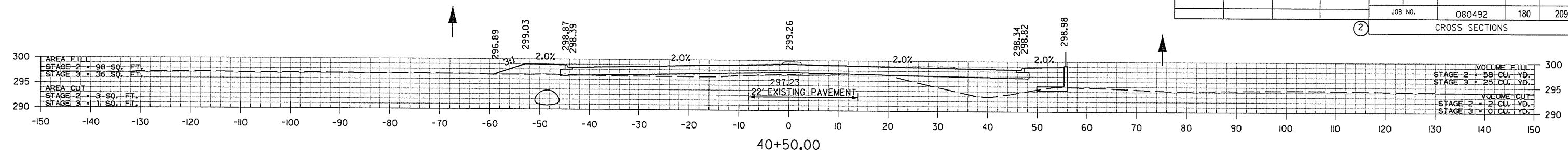


HWY. 65B/286
 STA. 35+00 TO STA. 36+50

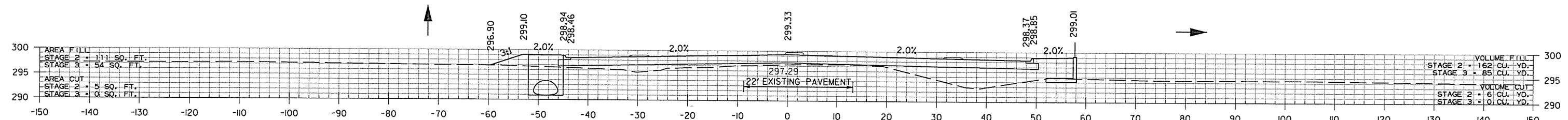
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							180	209

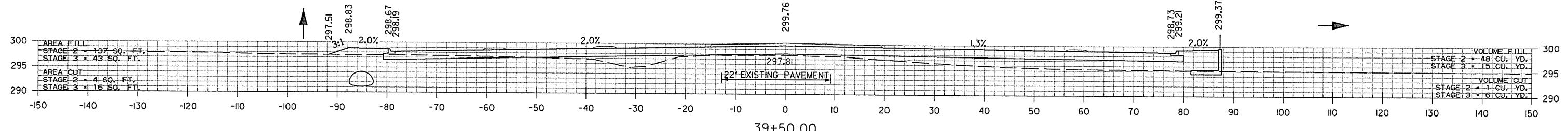
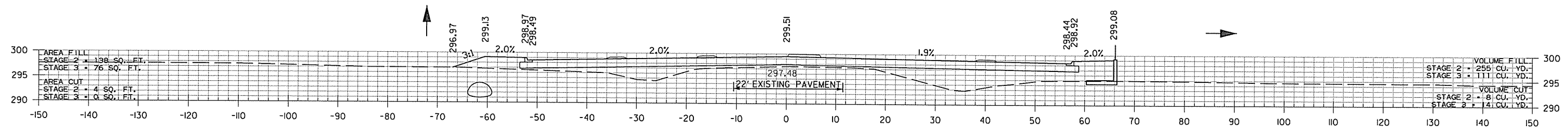
(2) CROSS SECTIONS



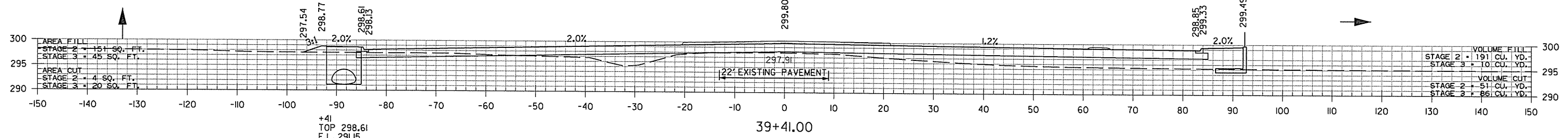
STA. 40+34 CONSTRUCT
TYPE E JUNCTION BOX, ON LT.
H = 8'-1" X 3'-0" X 7'-0"
W/ 59" X 36" X 160' PIPE
CULVERT TO DROP INLET ON LT.
(CLASS III) TYPE 3 BEDDING



+34
TOP 298.94
F.L. 290.85



STA. 39+41 CONSTRUCT DROP INLET ON LT.
W/ 4' EXT. ON LT. & RT.
H = 7'-6", W/ 59" X 36" X 96' ARCH PIPE
CULVERT TO DROP INLET ON LT.
TYPE C INLET = 4'-0" X 7'-0"
(CLASS III) TYPE 3 BEDDING



+41
TOP 298.61
F.L. 291.15

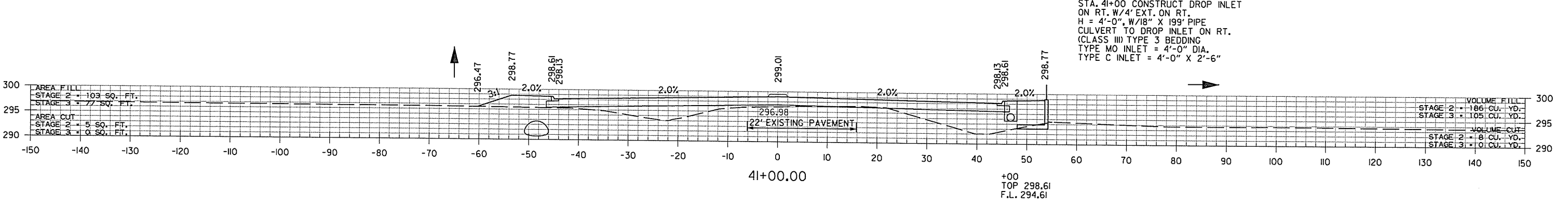
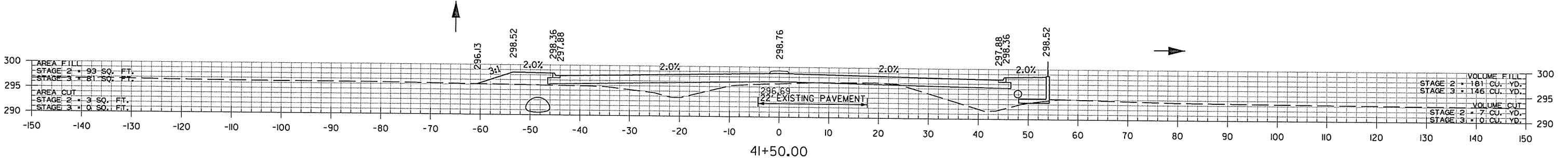
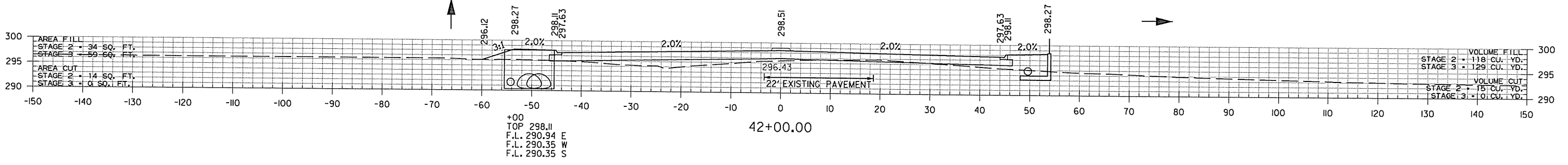
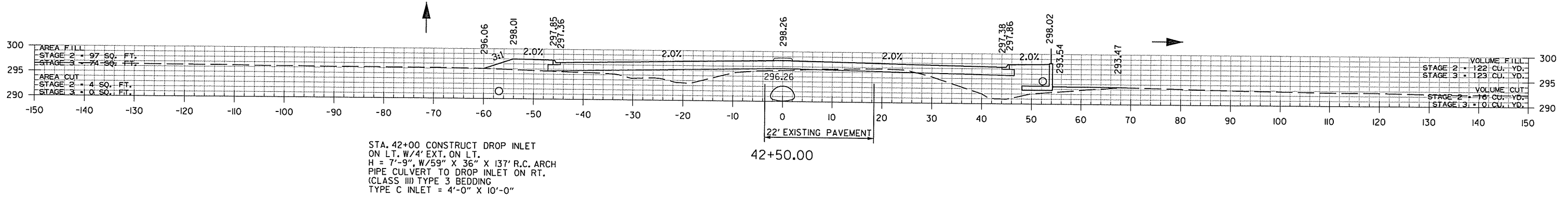
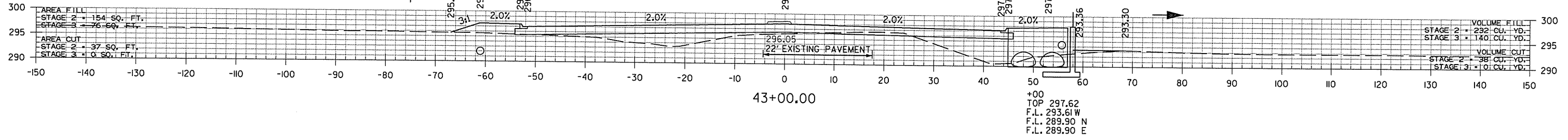
HWY. 65B/286
STA. 39+41 TO STA. 40+50

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 REVISION DATE:

STA. 43+00 CONSTRUCT DROP INLET
 ON RT. W/4' EXT. ON RT.
 H = 7'-9", W/59" X 36" X 32" R.C. PIPE
 CULVERT TO JUNCTION BOX ON RT.
 TYPE C INLET = 4'-0" X 12'-0"
 (CLASS III) TYPE 3 BEDDING

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	181	209	

(2) CROSS SECTIONS

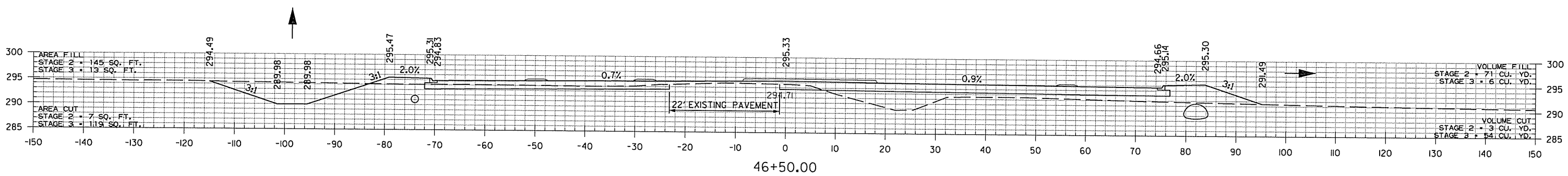


HWY. 65B/286
 STA. 41+00 TO STA. 43+00

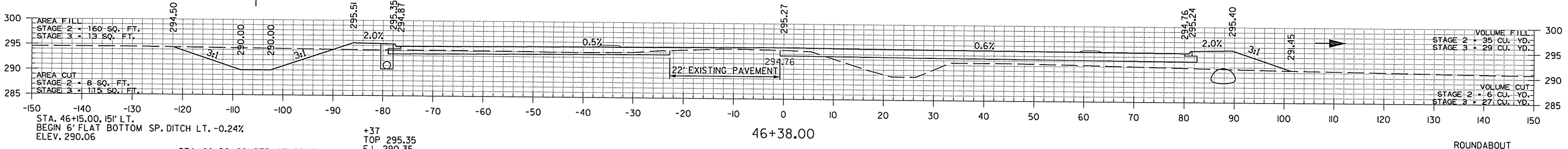
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				6	ARK.			
				JOB NO.	080492		182	209

② CROSS SECTIONS



STA. 46+37 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON LT. & RT.
H = 5'-0", W/18" X 65" PIPE
CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"
(CLASS III) TYPE 3 BEDDING



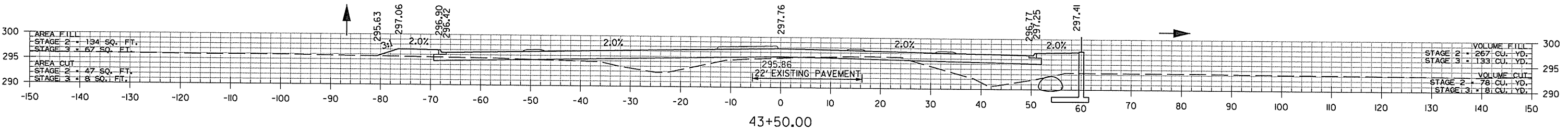
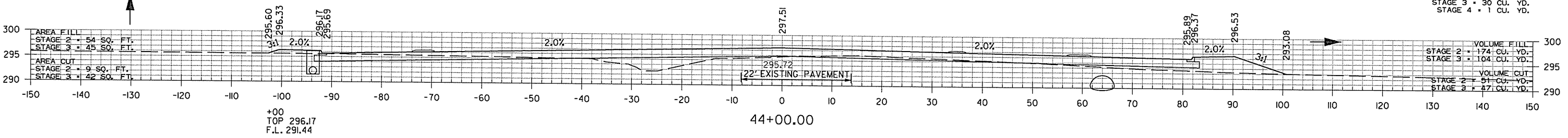
STA. 44+00 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON LT. & RT.
H = 4'-9", W/18" X 83" PIPE
CULVERT TO DROP INLET ON LT.
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"
(CLASS III) TYPE 3 BEDDING

NOTE: SEE ROUNDABOUT SPECIAL DETAILS FOR INFORMATION
FROM STA. 44+17.46 TO STA. 46+37.46

ROUNDABOUT
EARTHWORK

VOLUME FILL:
STAGE 2 = 1058 CU. YD.
STAGE 3 = 564 CU. YD.
STAGE 4 = 6468 CU. YD.

VOLUME CUT:
STAGE 2 = 54 CU. YD.
STAGE 3 = 30 CU. YD.
STAGE 4 = 1 CU. YD.

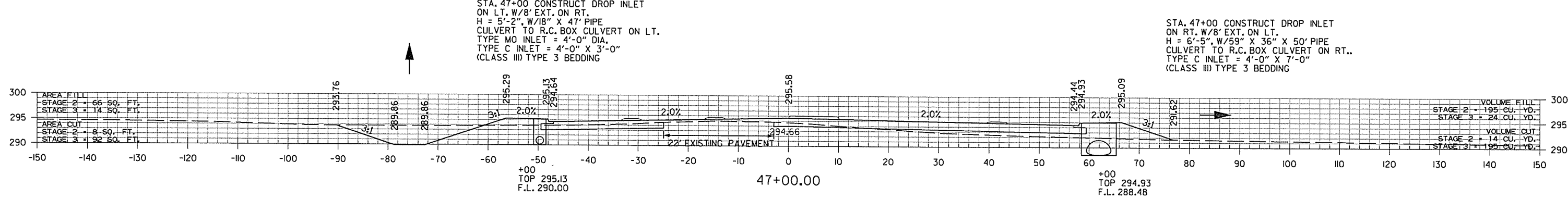
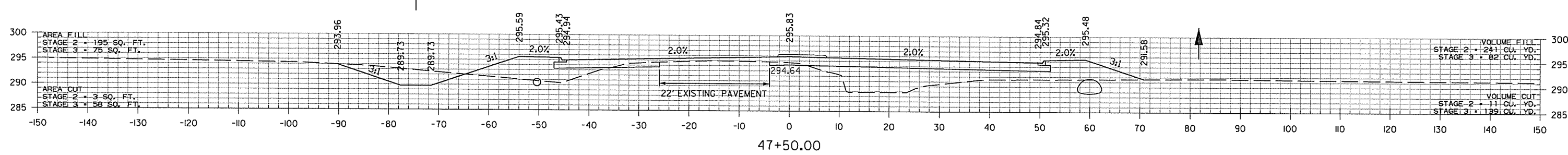
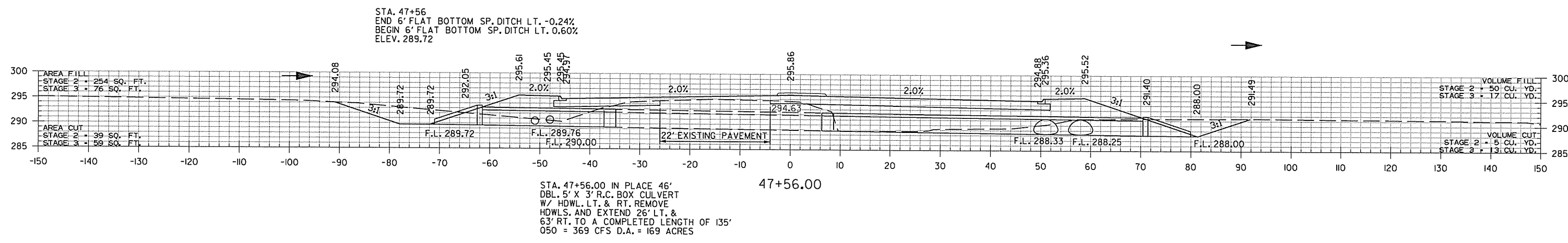
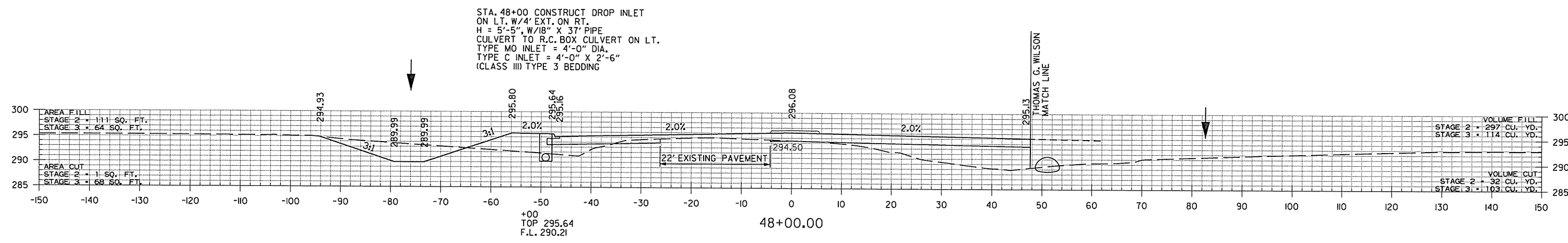


HWY. 65B/286
STA. 43+50 TO STA. 46+50

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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	183	209

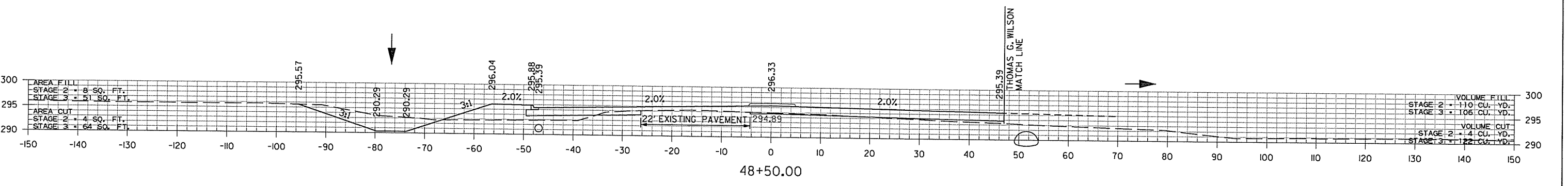
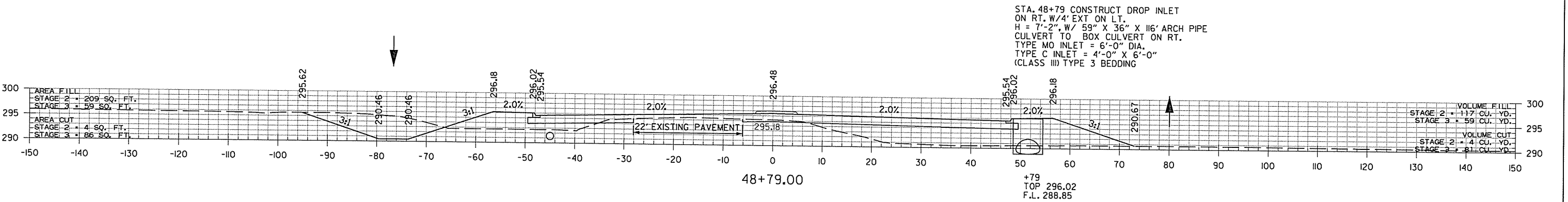
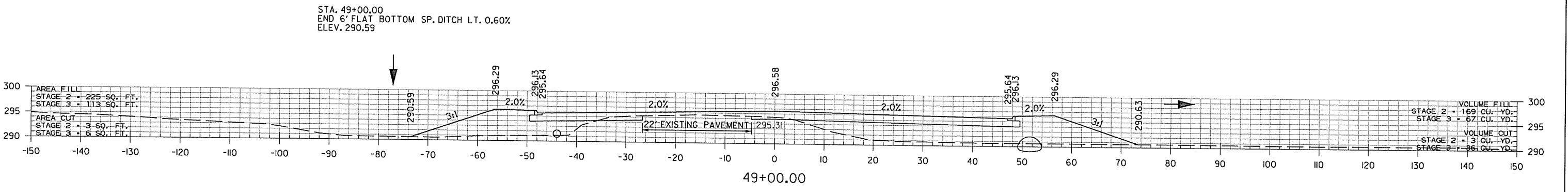
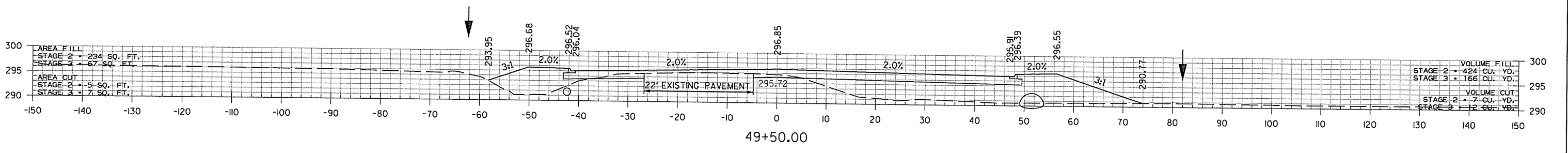
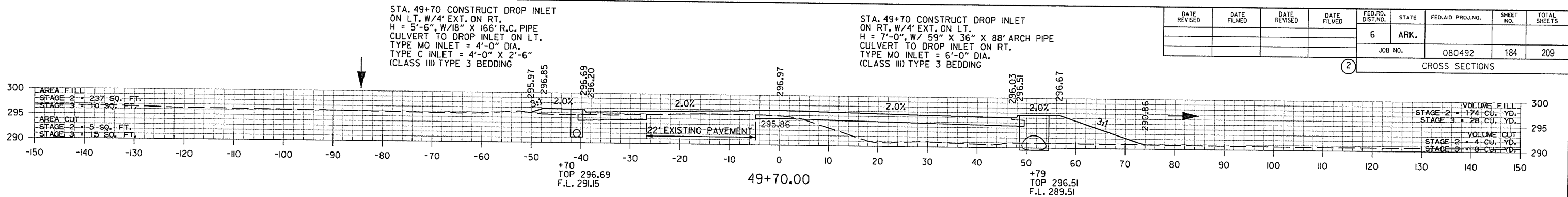
(2) CROSS SECTIONS



HWY. 65B/286
STA. 47+00 TO STA. 48+00

3/12/2015 10:05:06 AM
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 REVISION DATE:

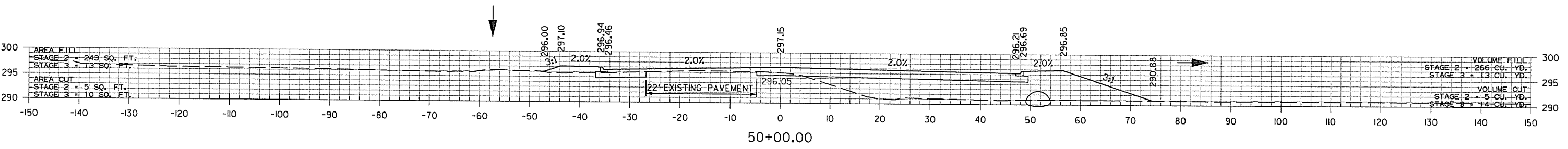
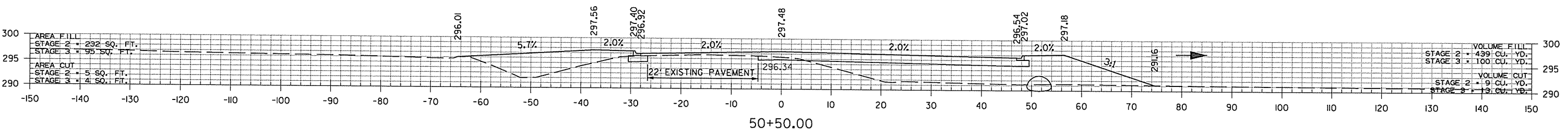
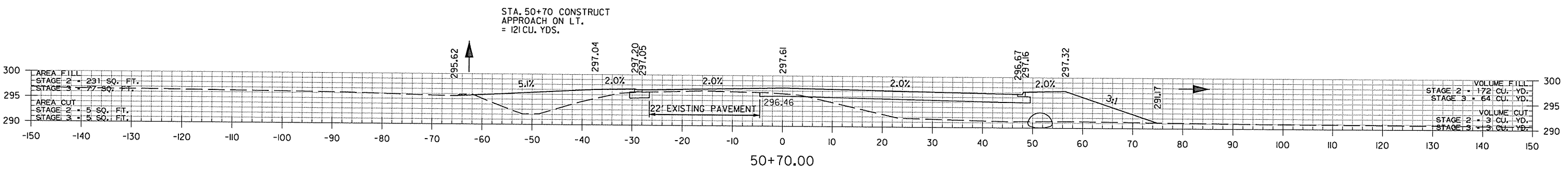
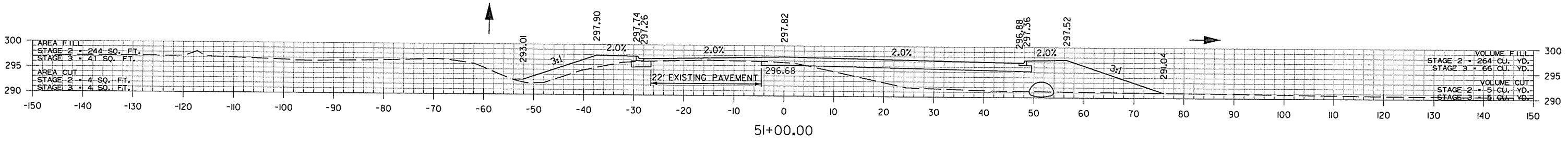
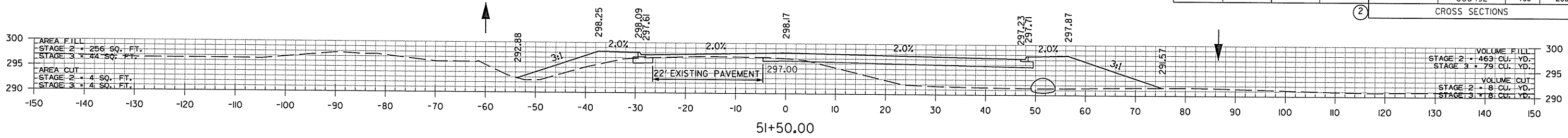
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							184	209
(2) CROSS SECTIONS								



3/12/2015 10:09:06 AM
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 WORKSPACE: AHTD
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO.	080492	185

2 CROSS SECTIONS

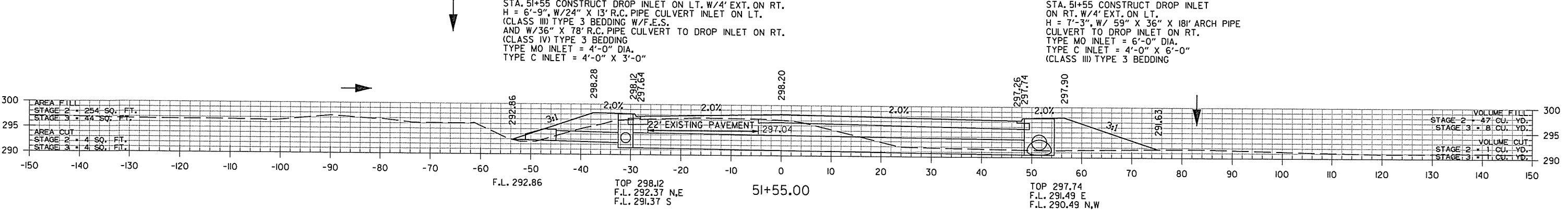
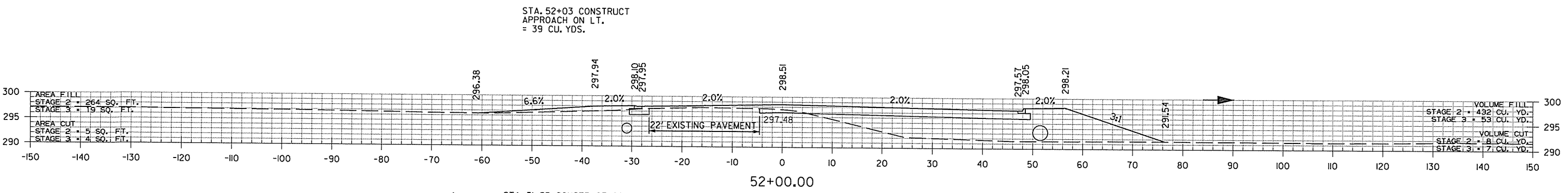
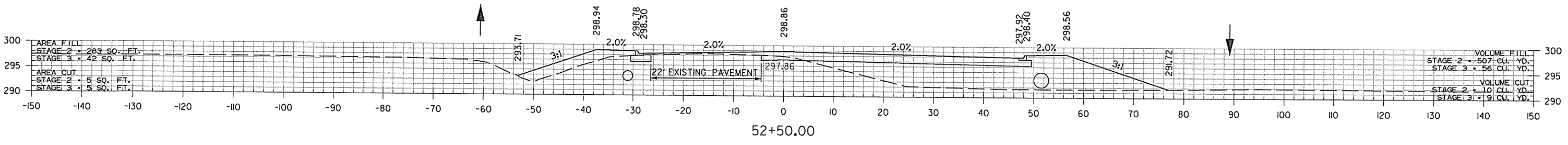
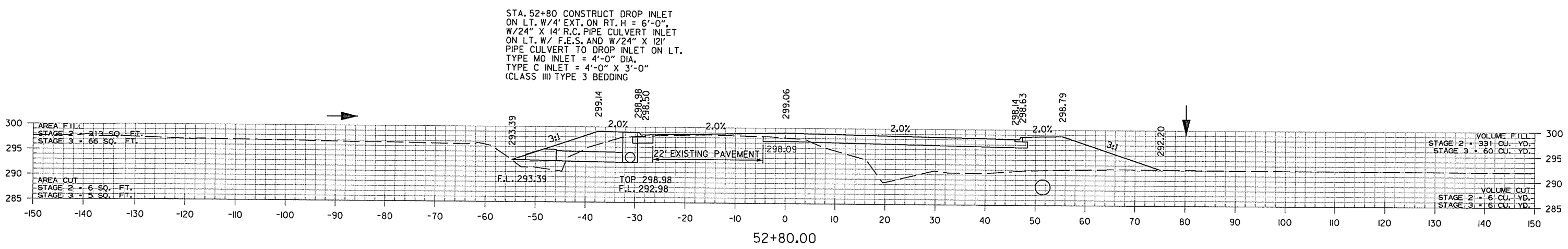


HWY. 65B/286
STA. 50+00 TO STA. 51+50

3/12/2015 10:09:07 AM
 WORKSPACE: AHTD
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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	186	209

② CROSS SECTIONS

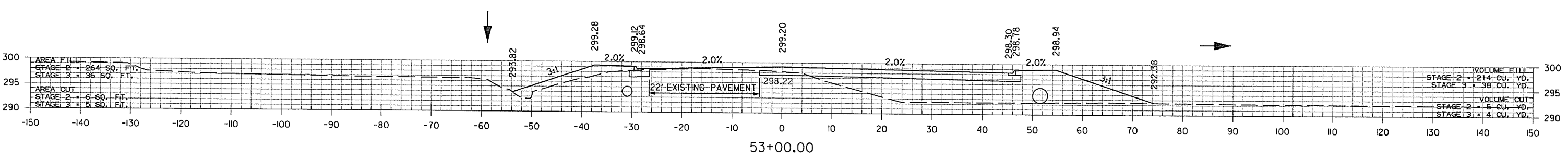
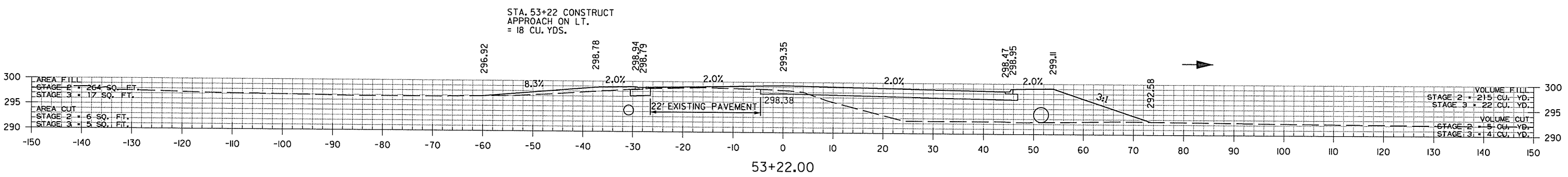
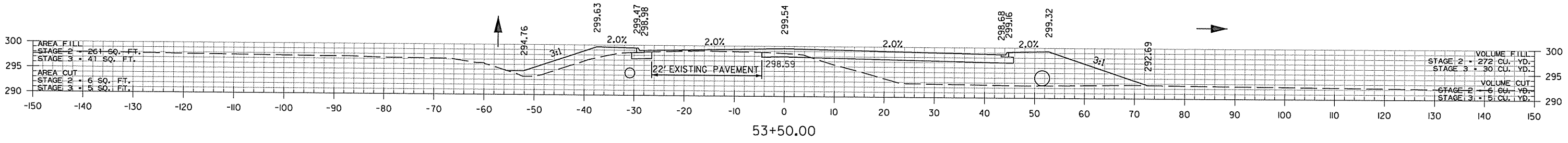
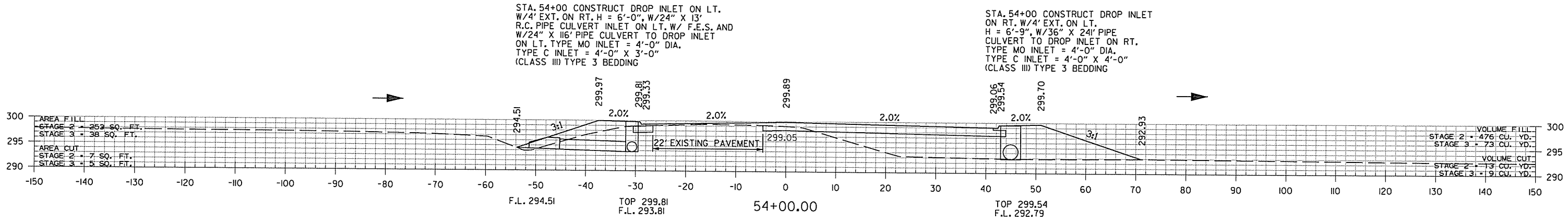


HWY. 65B/286
STA. 51+55 TO STA. 52+80

3/12/2015 10:09:07 AM
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 WORKSPACE\ AHTD
 L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\1-080492_CX_HWY286.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
						JOB NO. 080492	187	209

2 CROSS SECTIONS



HWY. 65B/286
STA. 53+00 TO STA. 54+00

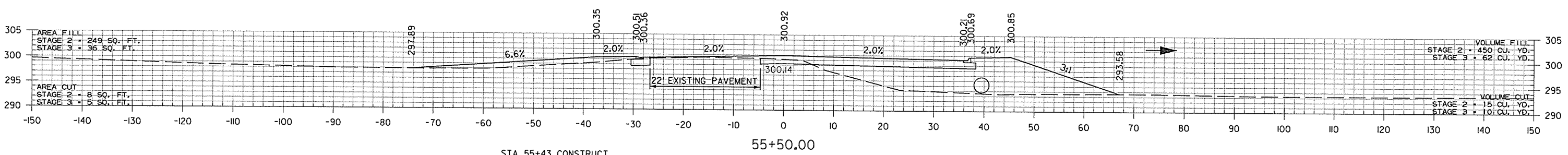
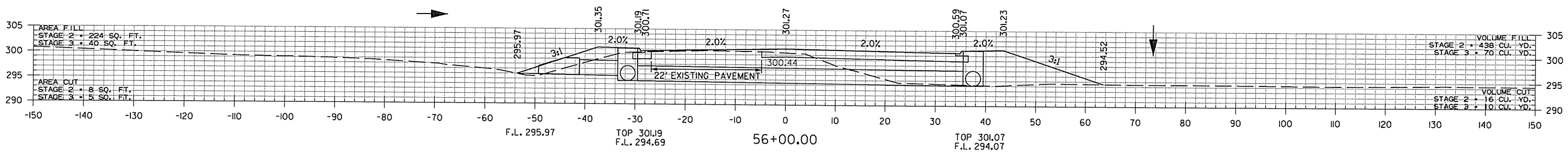
copper-vasini 3/12/2015 10:09:07 AM
WORKSPACE: AHTD
L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\080492-CX-HWY286.dgn
REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	188	209

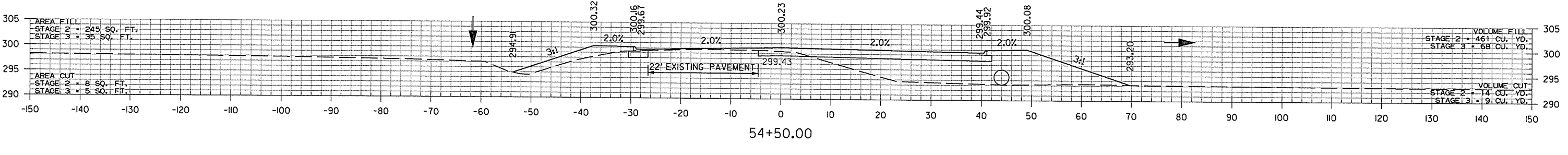
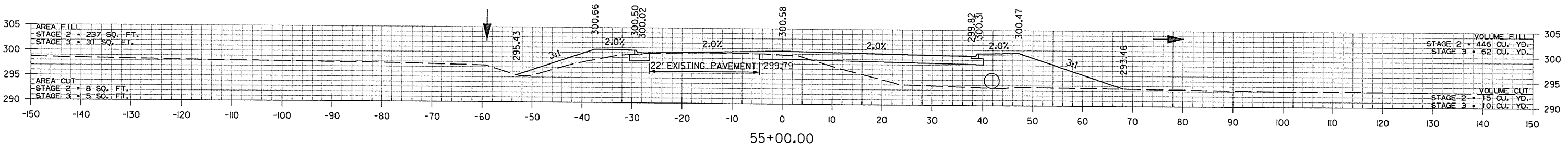
2 CROSS SECTIONS

STA. 56+00 CONSTRUCT DROP INLET ON LT. H = 6'-6", W/ 36" X 8' R.C. PIPE INLET ON LT. W/ F.E.S. AND 36" X 98' STUB TO STA. 57+00 (CLASS III) TYPE 3 BEDDING (PLUG AND BURY FOR FUTURE CONNECTION) AND W/ 36" X 65' R.C. PIPE CULVERT TO DROP INLET ON RT. (CLASS IV) TYPE 3 BEDDING TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 4'-0"

STA. 56+00 CONSTRUCT DROP INLET ON RT. H = 7'-0", W/ 36" X 196' PIPE CULVERT TO DROP INLET ON RT. AND 36" X 98' STUB TO STA. 57+00 (PLUG AND BURY FOR FUTURE CONNECTION) TYPE MO INLET = 4'-0" DIA. TYPE C INLET = 4'-0" X 4'-0" (CLASS III) TYPE 3 BEDDING



STA. 55+43 CONSTRUCT APPROACH ON LT. = 52 CU. YDS.

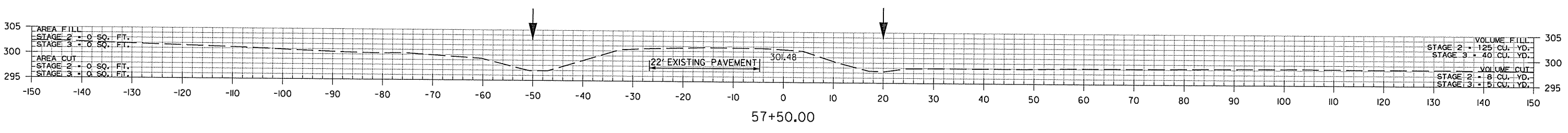
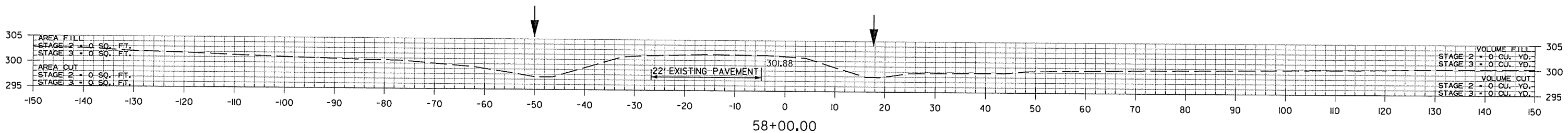
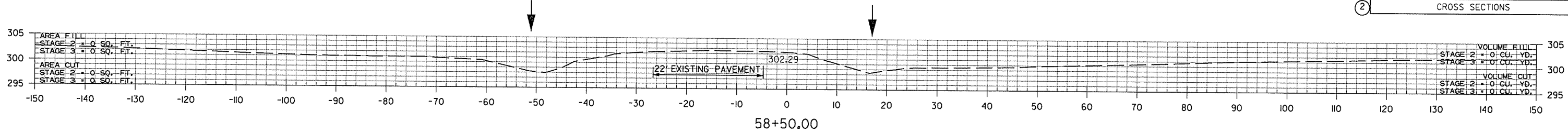


HWY. 65B/286
STA. 54+50 TO STA. 56+00

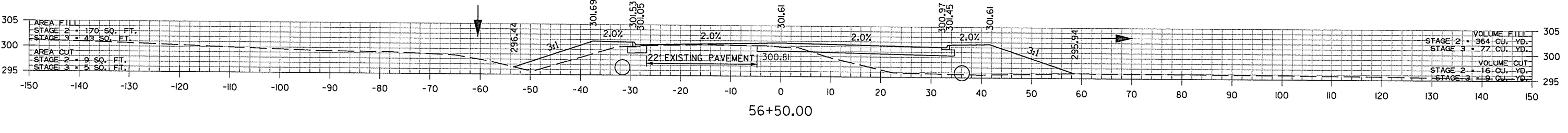
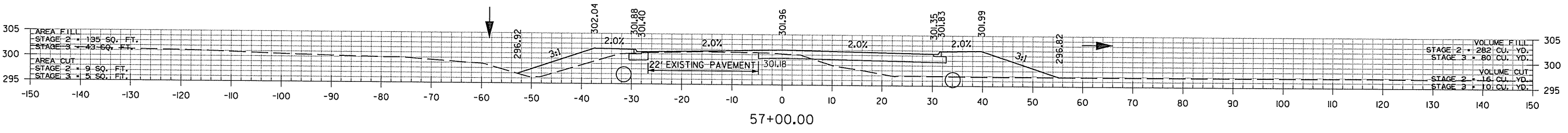
3/12/2015 10:09:07 AM
 C:\Users\jv\OneDrive\Documents\Drawings\080492\080492.CX.HWY286.dgn
 WORKSPACE: AHTD
 L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\080492.CX.HWY286.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	189	209	

2 CROSS SECTIONS



STA. 57+00.00 END JOB 080492

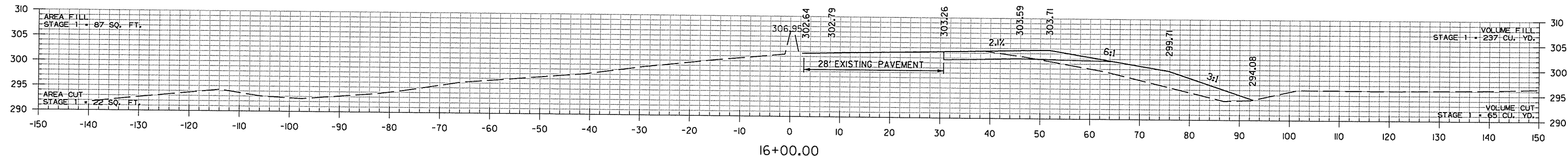


HWY. 65B/286
STA. 56+50 TO STA. 58+50

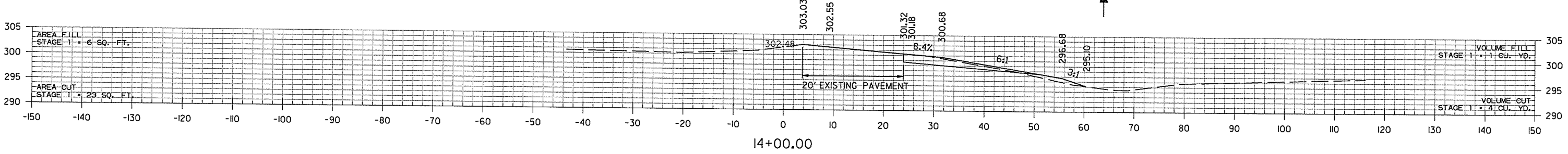
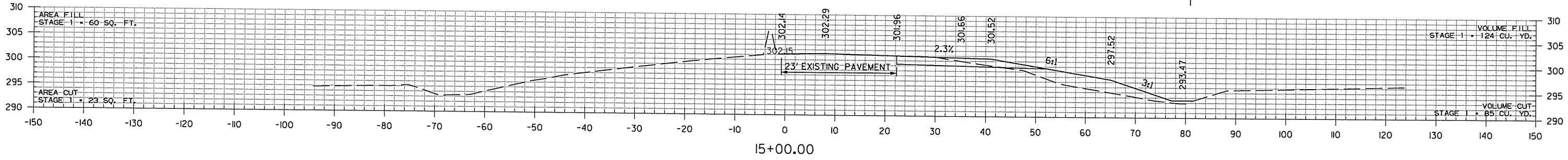
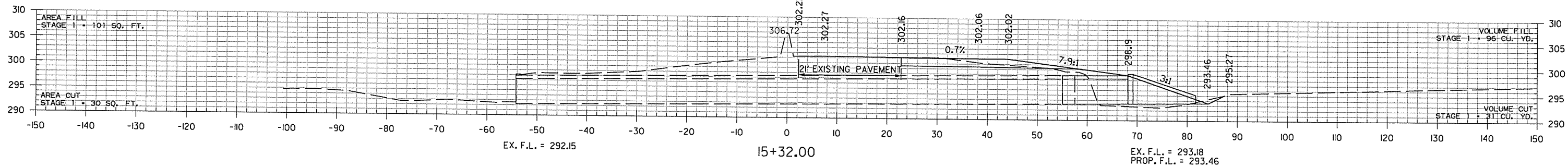
3/12/2015 10:09:08 AM
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 WORKSPACE: AHTD
 L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\1-080492_CX_Hwy286.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492		190	209

2 CROSS SECTIONS



STA. 15+32 IN PLACE
 6' X 5' X 12' R.C. BOX CULVERT
 W/ HDWL, LT. & RT.
 REMOVE HDWL, RT. AND EXTEND 11' RT.
 TO A COMPLETED LENGTH OF 123'
 050 = 205 CFS D.A. = 130 ACRES



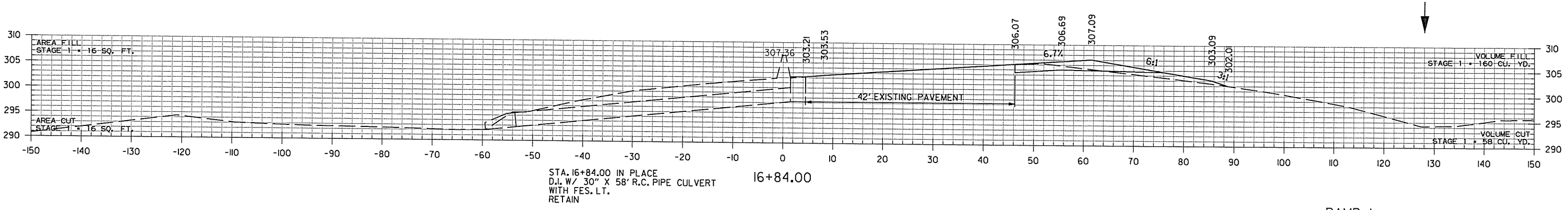
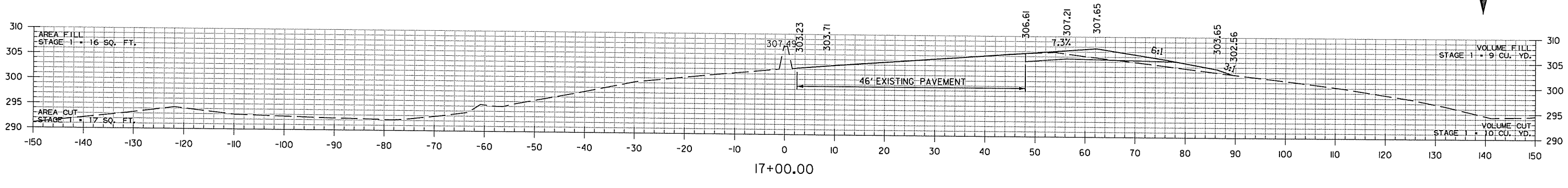
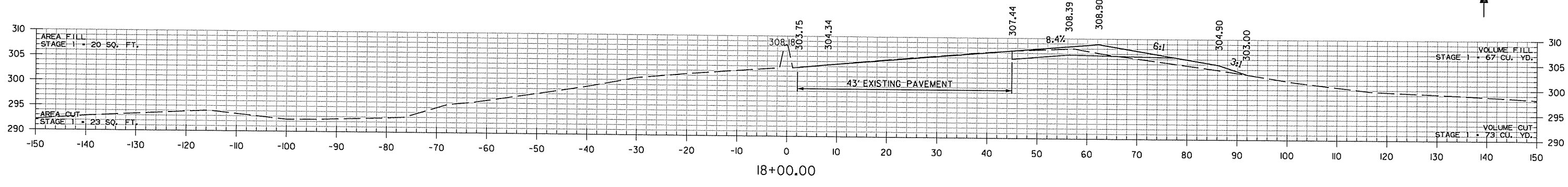
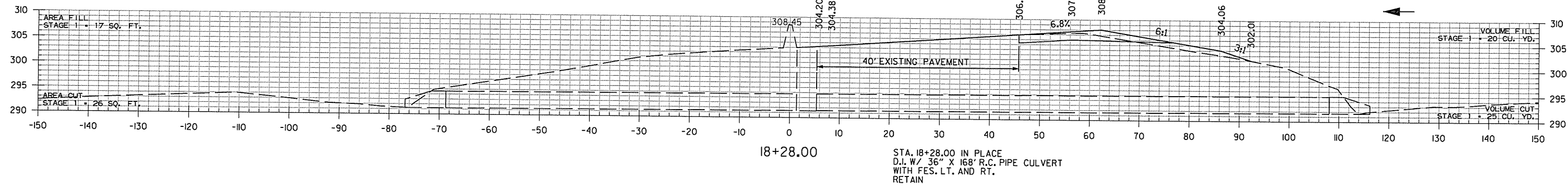
STA. 13+90.00 BEGIN RAMP 1

RAMP 1
 STA. 14+00 TO STA. 16+00

3/12/2015 10:09:08 AM
 copper-vasini
 WORKSPACE: AHTD
 L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\CX_RAMP.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
JOB NO.							080492	191	209

② CROSS SECTIONS

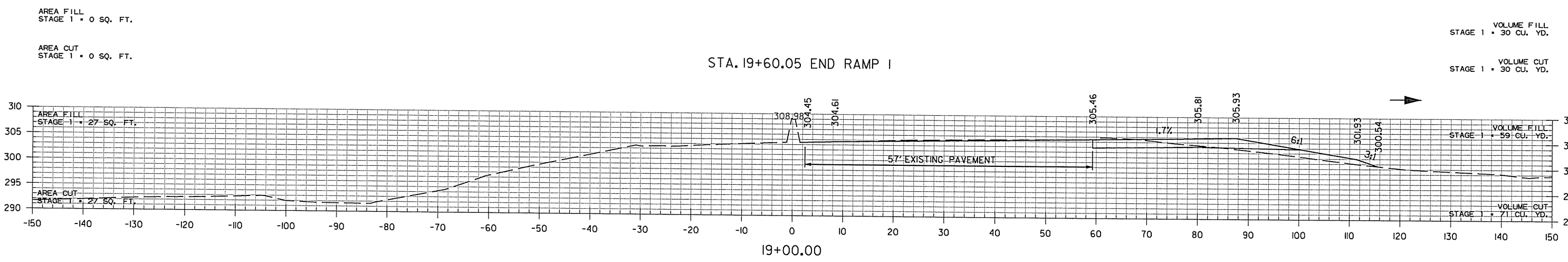


RAMP I
STA. 16+84 TO STA. 18+28

3/12/2015 10:09:05 AM
 WORKSPACE: AHTD
 L:\2011\0716 - Hwy 286 Widening and Improvements\Drawings\080492\1-080492-CX-RAMP1.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	080492	192	209	

② CROSS SECTIONS

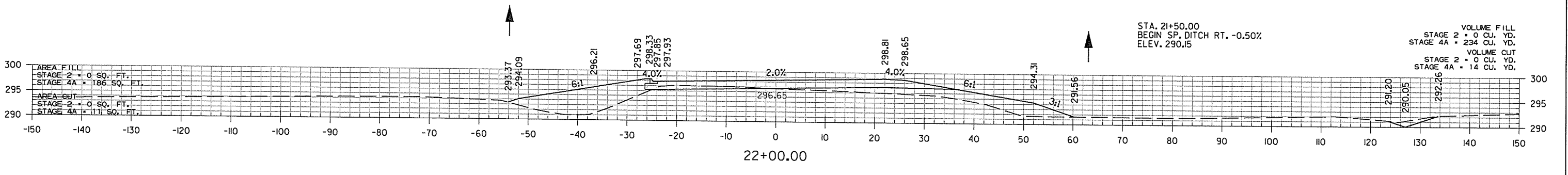
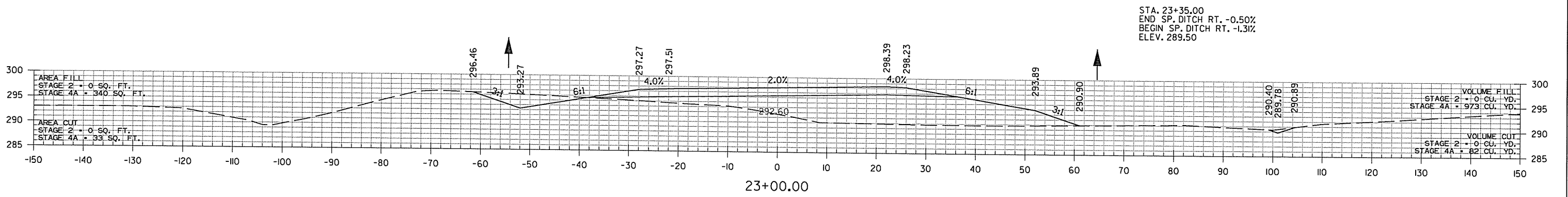
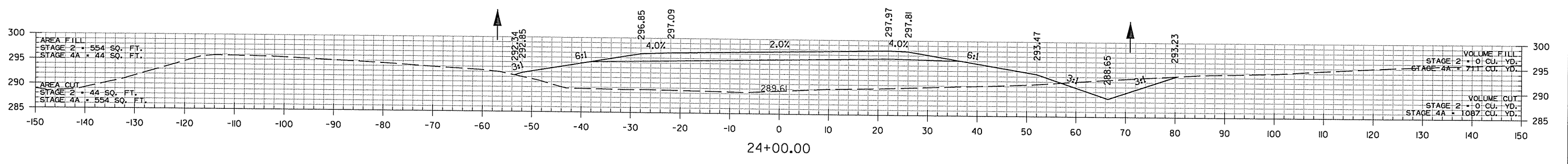
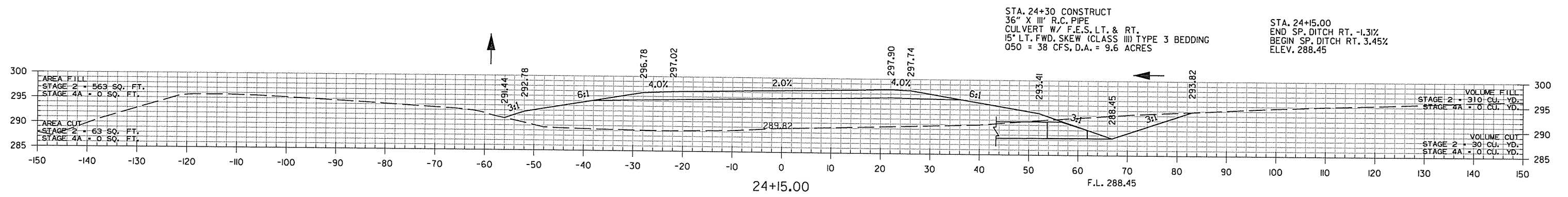


RAMP 1
STA. 19+00 TO STA. 19+00

3/12/2015 10:09:09 AM
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 WORKSPACE_AHTD
 L:\2011\101716 - Hwy 286 Widening and Improvements\Drawings\080492\080492_CX_RAMP1.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	193	209

2 CROSS SECTIONS



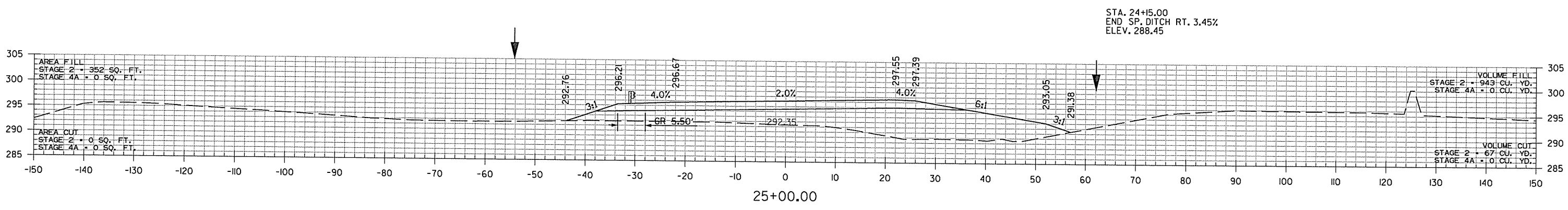
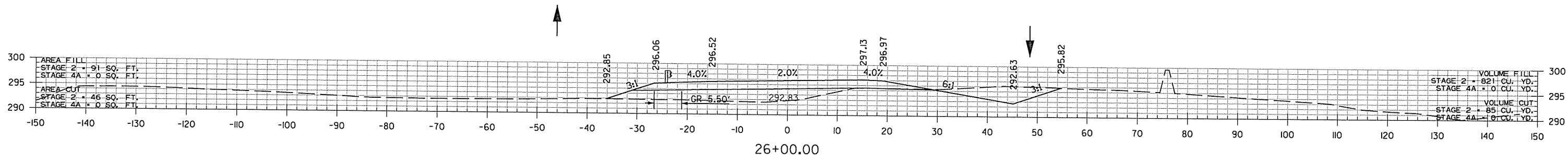
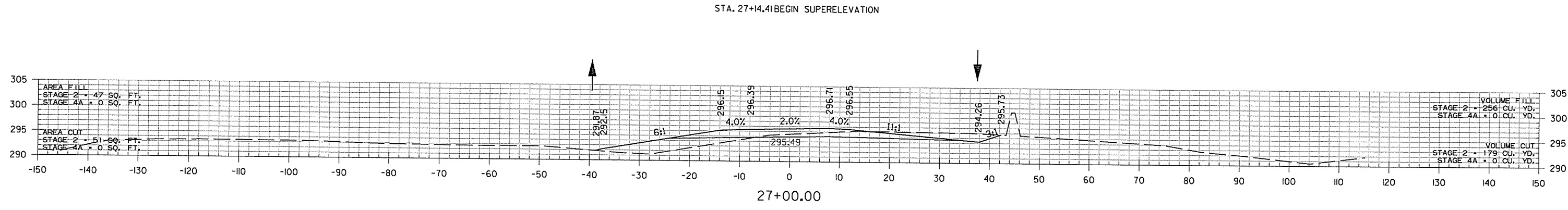
STA. 21+32.13 BEGIN RAMP 3

RAMP 3
STA. 22+00 TO STA. 24+15

3/12/2015 10:09:09 AM
 cooper.vasini
 WORKSPACE: AHTD
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 REVISED DATE:

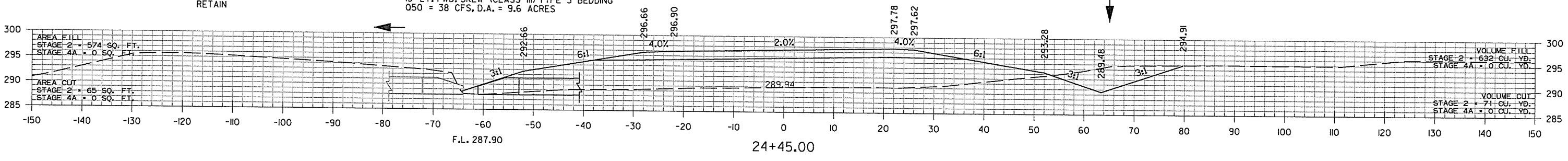
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	080492
								194
								209

2 CROSS SECTIONS



STA. 24+45, 63' LT. IN PLACE
36" X 82' C.M.P. CULVERT
W/ F.E.S. LT. & RT.
RETAIN

STA. 24+30 CONSTRUCT
36" X III' R.C. PIPE
CULVERT W/ F.E.S. LT. & RT.
15' LT. FWD. SKEW (CLASS III) TYPE 3 BEDDING
Q50 = 38 CFS, D.A. = 9.6 ACRES



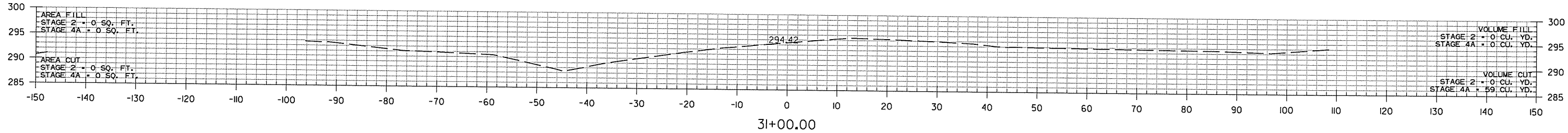
RAMP 3
STA. 24+45 TO STA. 27+00

3/12/2015 10:09:09 AM
 copper-vasini
 WORKSPACE: AHTD
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 080492	195	209
(2) CROSS SECTIONS									

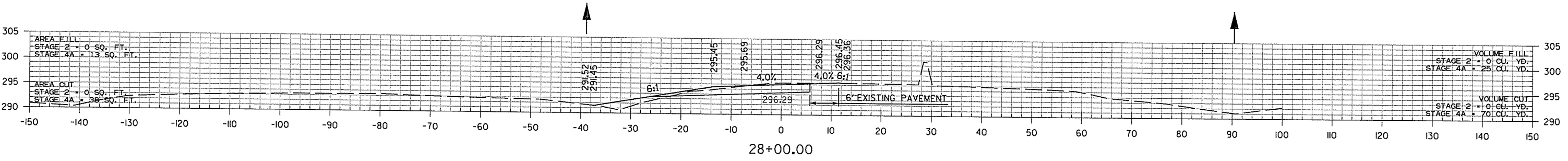
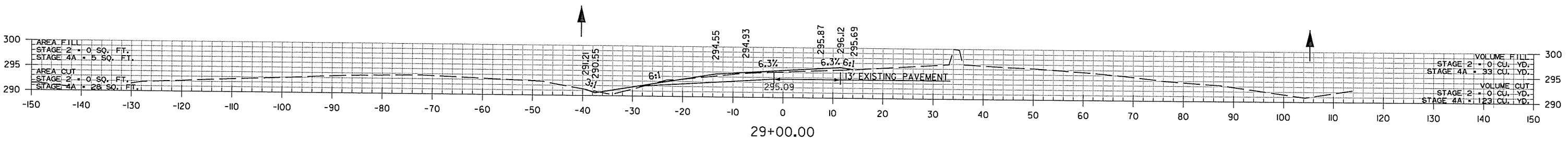
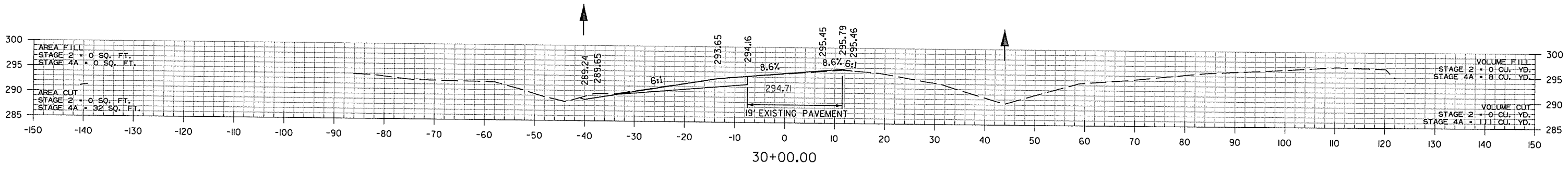
STA. 31+00.00 MATCH EXISTING (0.089 FT./FT.)

STA. 31+00.00 END TRANSITION



STA. 30+14.41 MAX SUPERELEVATION (0.089 FT./FT.)

STA. 30+00.00 END RAMP 3

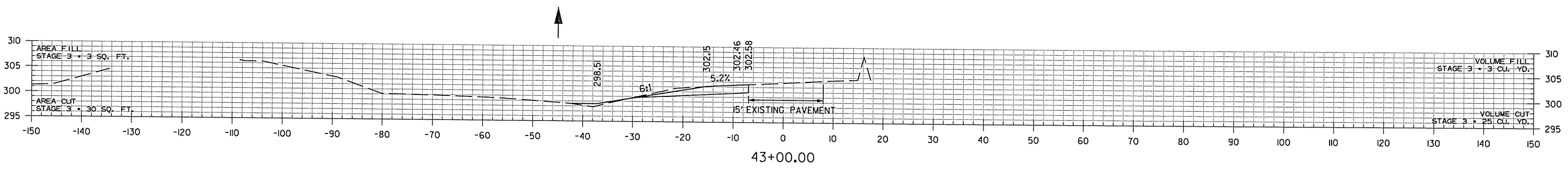
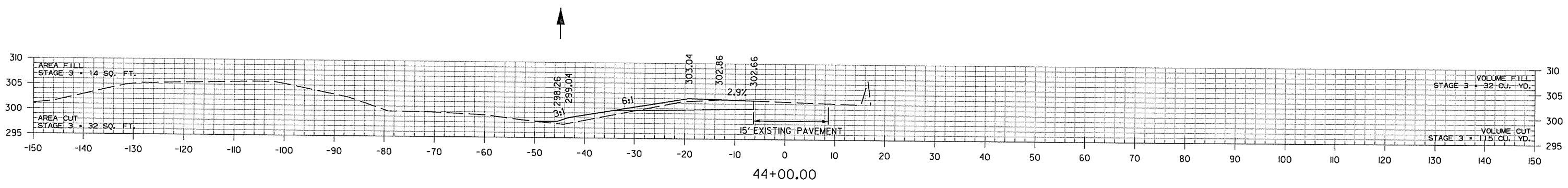
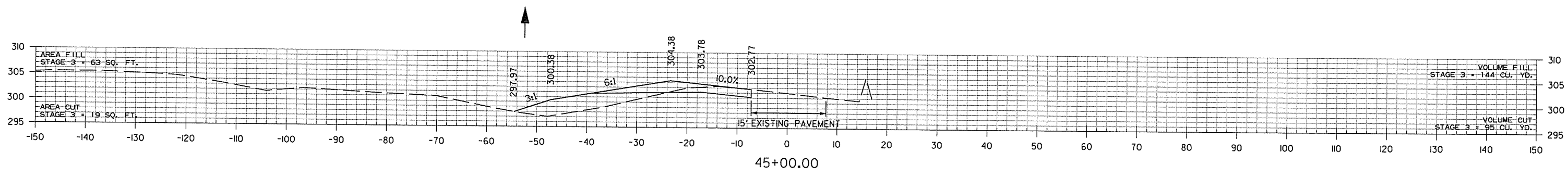


RAMP 3
STA. 28+00 TO STA. 31+00

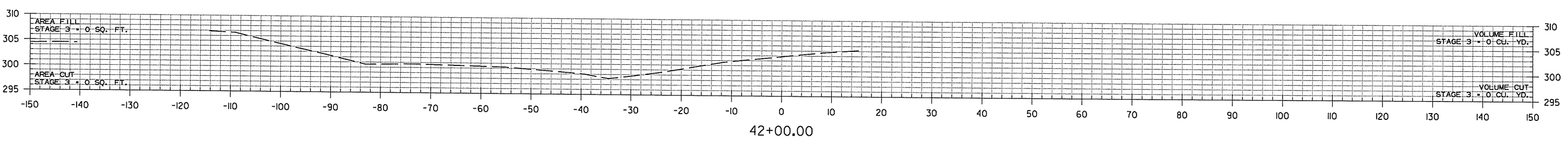
3/12/2015 10:09:10 AM
 WORKSPACE: AHTD
 L:\2011\101716 - Hwy 286 Widening and Improvements\Drawings\080492\1-080492-CX-RAMP3.dgn
 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	196	209

② CROSS SECTIONS



STA. 42+54.26 BEGIN RAMP 4

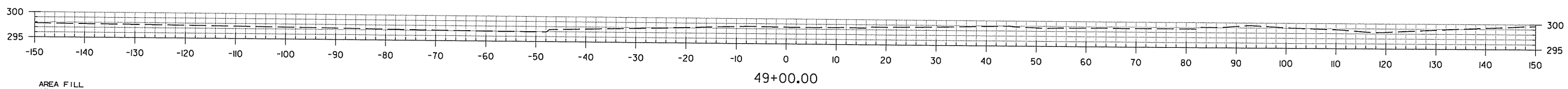


RAMP 4
STA. 42+00 TO STA. 45+00

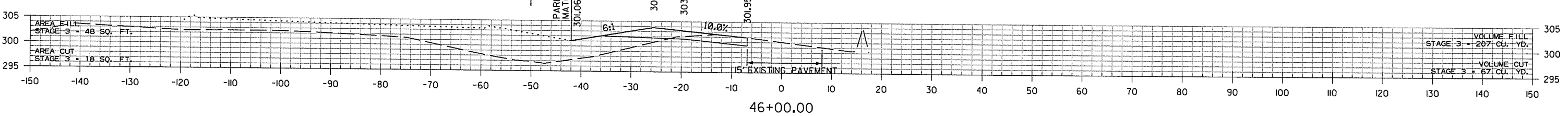
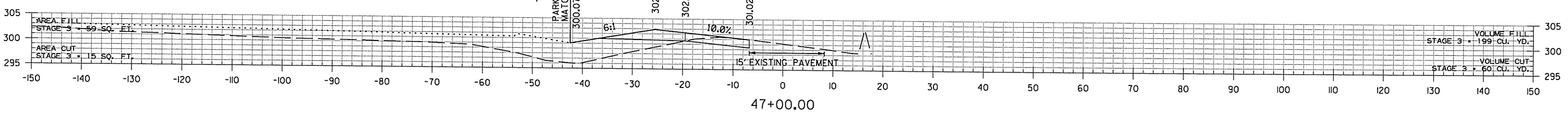
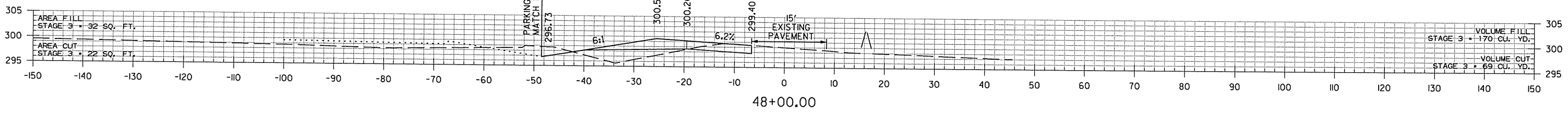
cggervasi 3/12/2015 10:08:10 AM
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
							JOB NO.	209
							080492	197

2 CROSS SECTIONS



STA. 48+54.26 END RAMP 4



RAMP 4
STA. 46+00 TO STA. 49+00

3/12/2015 10:05:10 AM
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 WORKSPACE: AHTD
 L:\2011\01716 - Hwy 286 Widening and Improvements\Drawings\080492\080492_CX_RAMP4.dgn
 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 080492	198	209

② CROSS SECTIONS

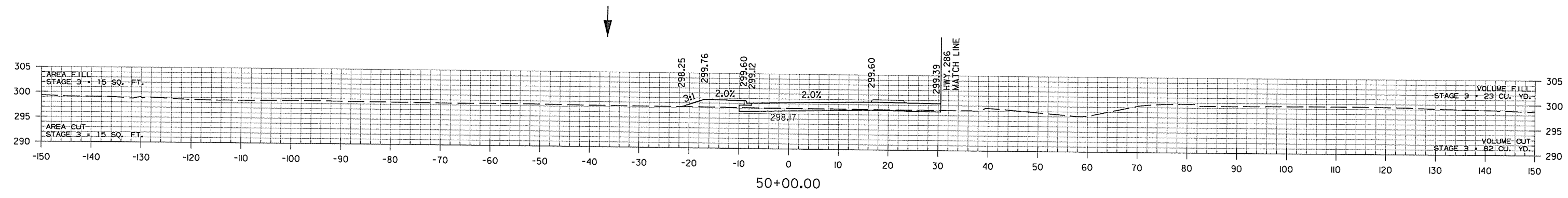
AREA FILL
STAGE 3 = 0 SQ. FT.

AREA CUT
STAGE 3 = 0 SQ. FT.

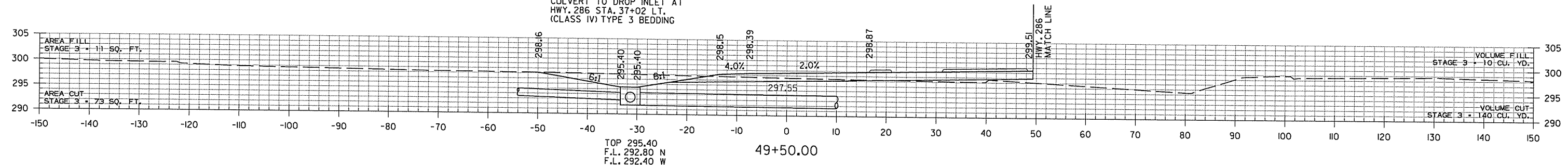
VOLUME FILL
STAGE 3 = 12 CU. YD.

VOLUME CUT
STAGE 3 = 12 CU. YD.

STA. 50+43.30 END NORTH AMITY BYPASS LANE

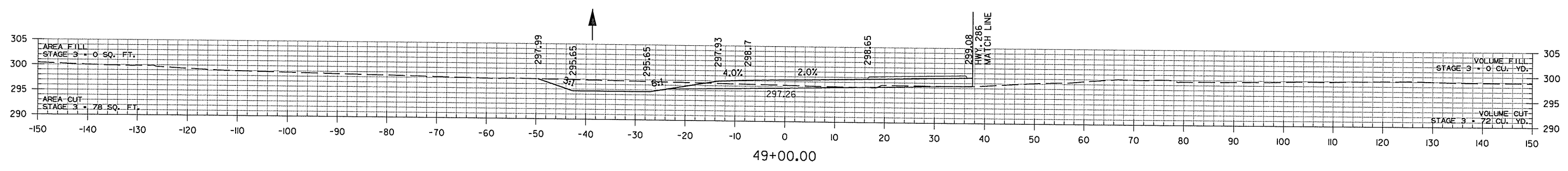


NORTH AMITY BYPASS LANE
STA. 49+50 CONSTRUCT
TYPE RM DROP INLET 3' LT.
4' X 4' X H = 3'-7"
W/ 30" X 75' R.C. PIPE
CULVERT TO DROP INLET AT
HWY. 286 STA. 37+02 LT.
(CLASS IV) TYPE 3 BEDDING



TOP 295.40
F.L. 292.80 N
F.L. 292.40 W
F.L. 291.80 S

STA. 48+50.20 BEGIN NORTH AMITY BYPASS LANE

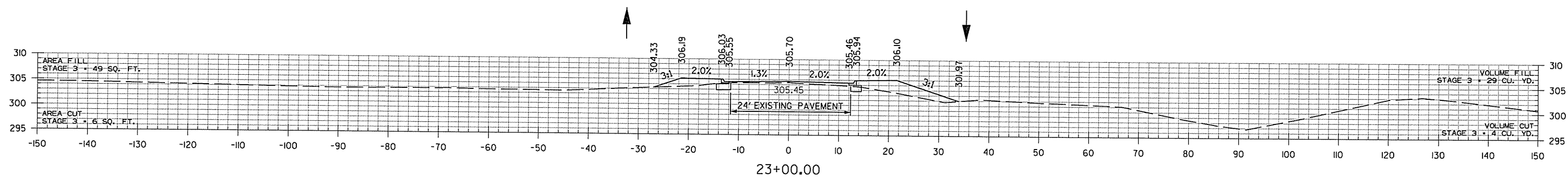


NORTH AMITY BYPASS LANE
STA. 49+00 TO STA. 50+00

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 WORKSPACE: AHTD
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 REVISED DATE:

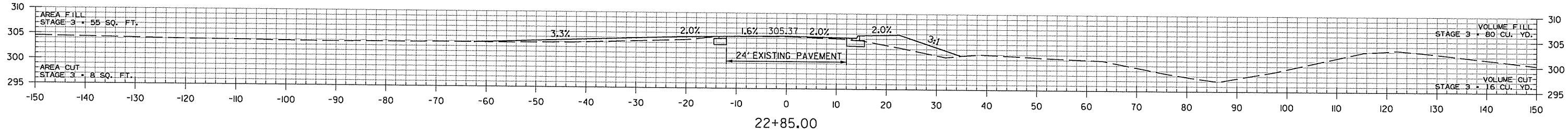
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 080492	199	209

② CROSS SECTIONS

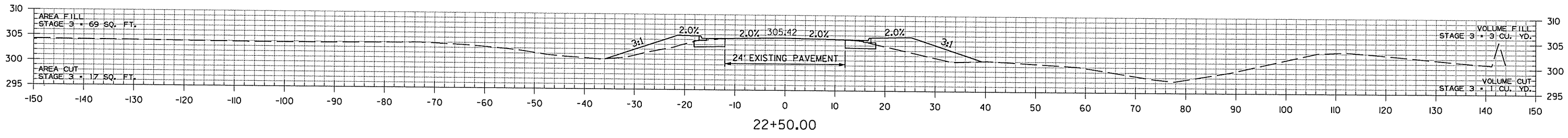


STA. 23+00.00 BEGIN NORTH AMITY ROAD

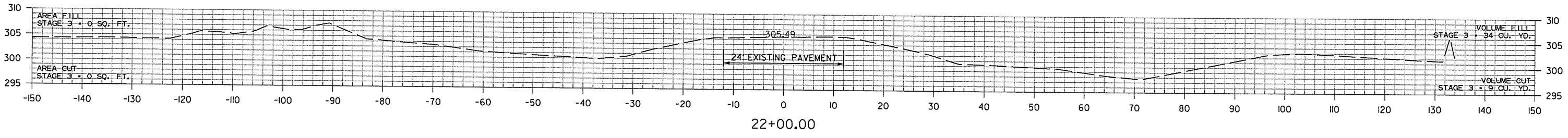
STA. 22+85 CONSTRUCT APPROACH ON LT. = 28 CU. YDS.



STA. 22+66.17 BEGIN SUPERELEVATION



STA. 22+48.00 BEGIN TRANSITION

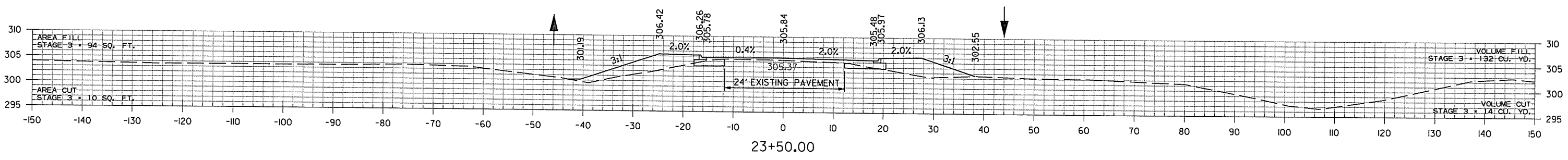
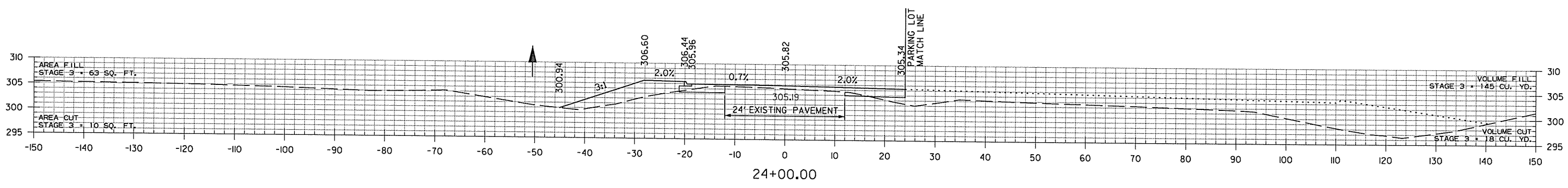
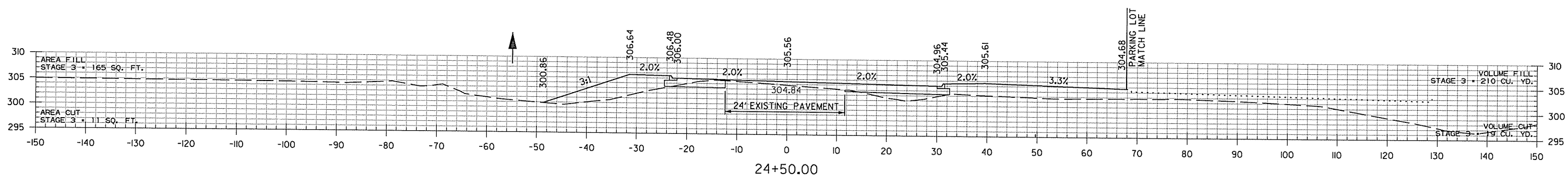
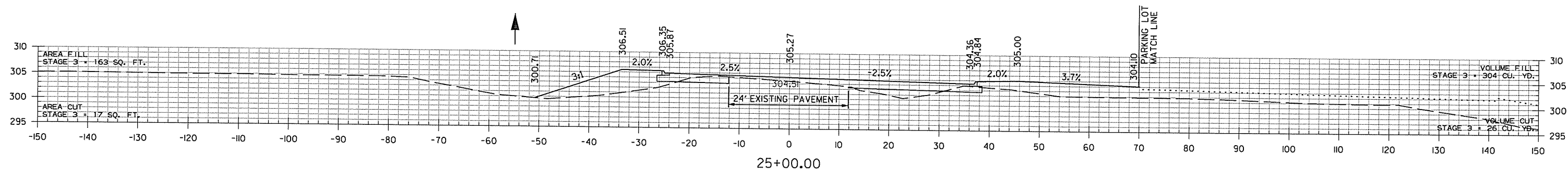


NORTH AMITY ROAD
STA. 22+00 TO STA. 23+00

3/12/2015 10:05:11 AM
 WORKSPACE: AHTD
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							200	209

2 CROSS SECTIONS

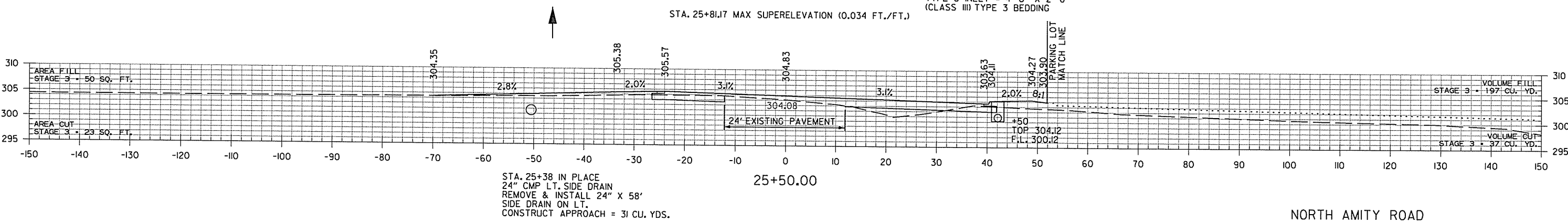
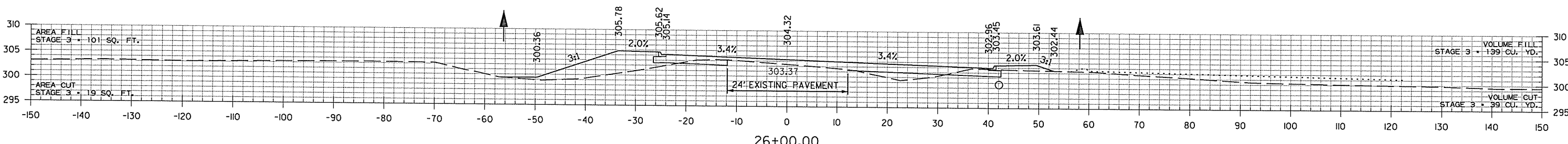
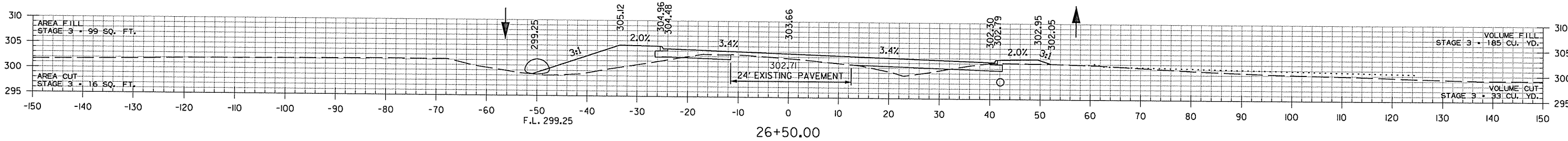
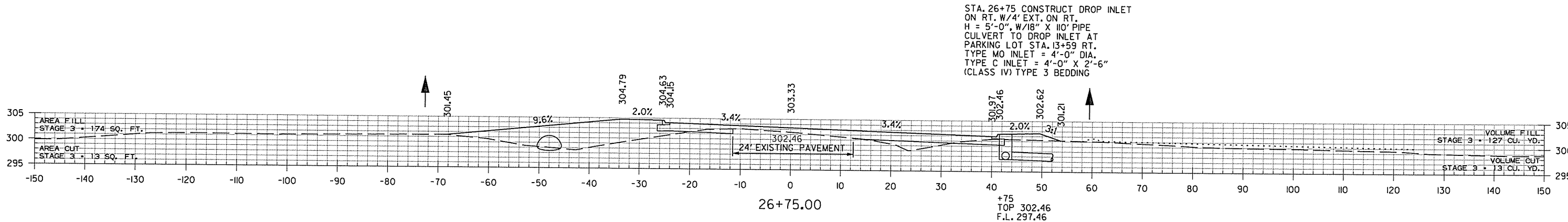


NORTH AMITY ROAD
STA. 23+50 TO STA. 25+00

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 WORKSPACE\AHTD
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	201	209

2 CROSS SECTIONS



NORTH AMITY ROAD
STA. 25+50 TO STA. 26+75

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 WORKSPACE_AHTD
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	202	209

2 CROSS SECTIONS

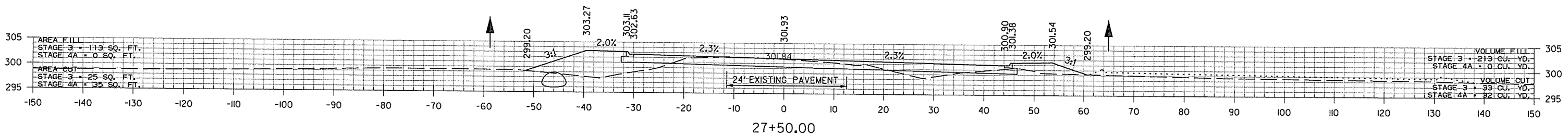
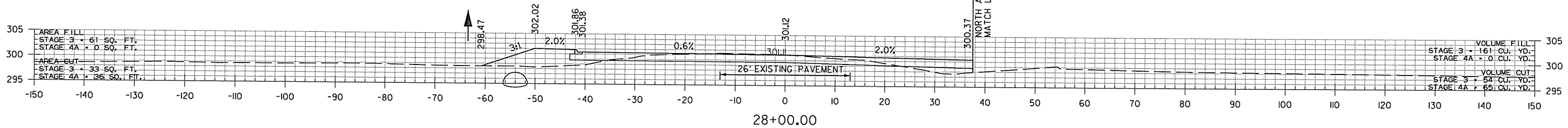
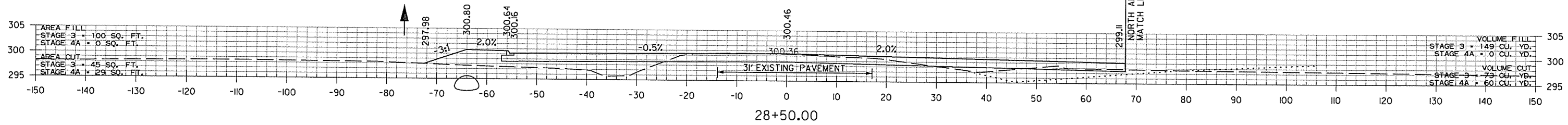
AREA FILL
STAGE 3 = 0 SQ. FT.
STAGE 4A = 0 SQ. FT.

AREA CUT
STAGE 3 = 0 SQ. FT.
STAGE 4A = 29 SQ. FT.

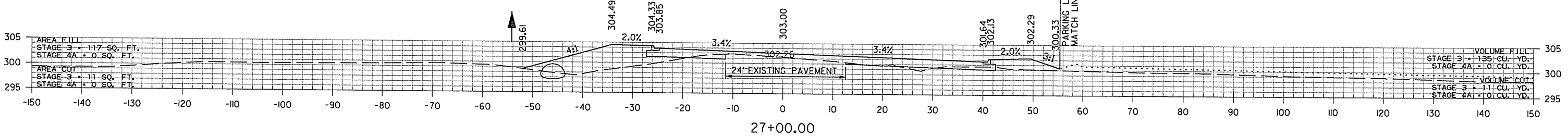
VOLUME FILL
STAGE 3 = 30 CU. YD.
STAGE 4A = 0 CU. YD.

VOLUME CUT
STAGE 3 = 14 CU. YD.
STAGE 4A = 18 CU. YD.

STA. 28+66.27 END NORTH AMITY ROAD

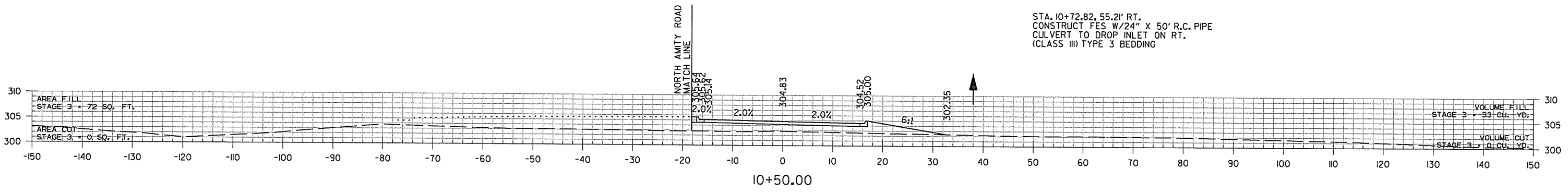
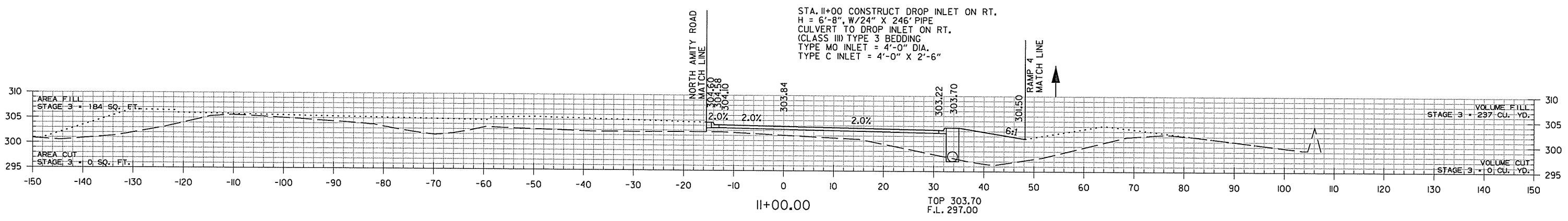
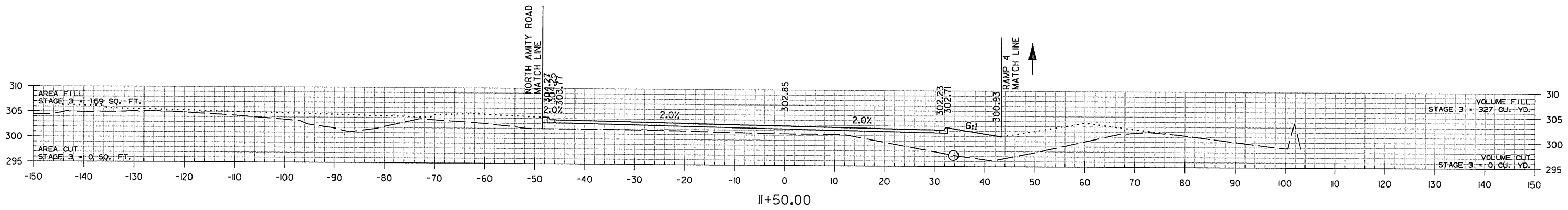
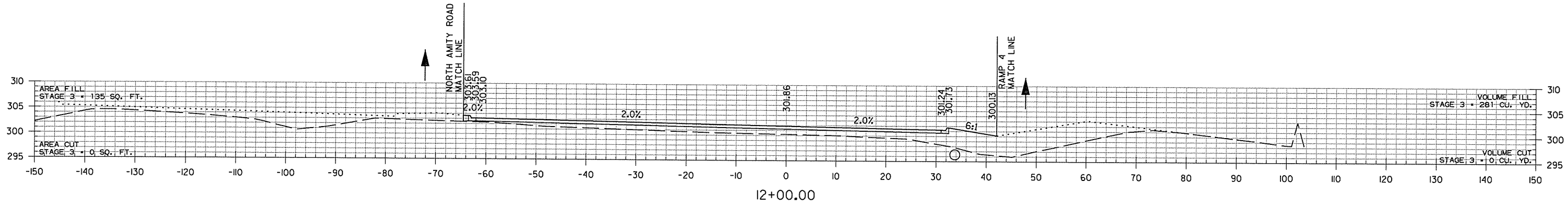


STA. 27+00.00 MAX SUPERELEVATION (0.034 FT./FT.)



NORTH AMITY ROAD
STA. 27+00 TO STA. 28+50

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-09-15				6	ARK.			
						JOB NO. 080492	203	209
(2) CROSS SECTIONS								



STA. 10+24.94 BEGIN PARKING LOT

PARKING LOT
STA. 10+50 TO STA. 12+00

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 WORKSPACE: AHTD
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 REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11-09-15				6	ARK.			
						JOB NO. 080492	204	209
(2) CROSS SECTIONS								

AREA FILL
STAGE 3 = 0 SQ. FT.

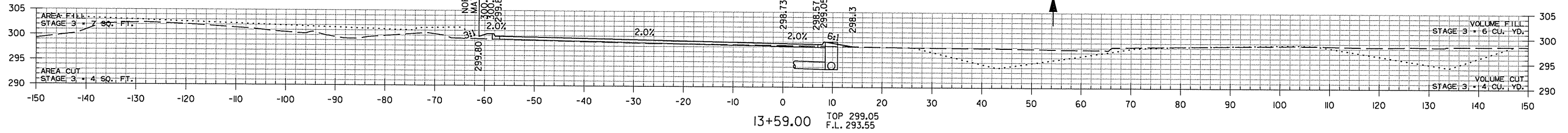
AREA CUT
STAGE 3 = 0 SQ. FT.

VOLUME FILL
STAGE 3 = 0 CU. YD.

VOLUME CUT
STAGE 3 = 0 CU. YD.

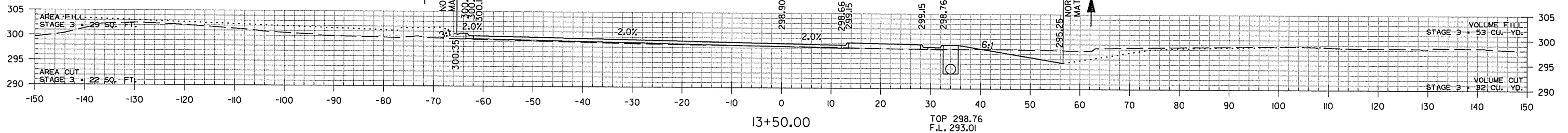
STA. 13+60.34 END PARKING LOT

STA. 13+59 CONSTRUCT DROP INLET 11" RT.
H = 5'-6", W/18" X 23' PIPE
CULVERT TO DROP INLET AT
NORTH AMITY BYPASS STA. 49+50 RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"

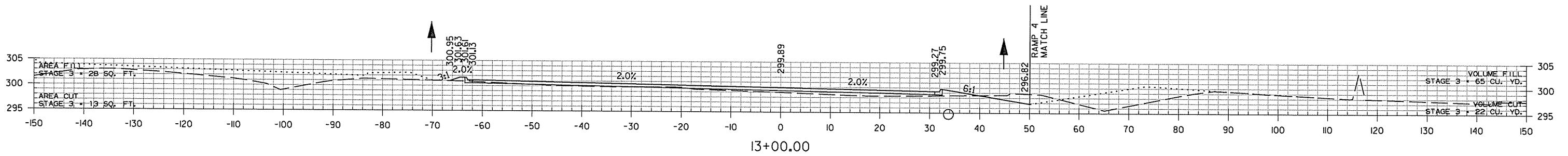


13+59.00 TOP 299.05
F.L. 293.55

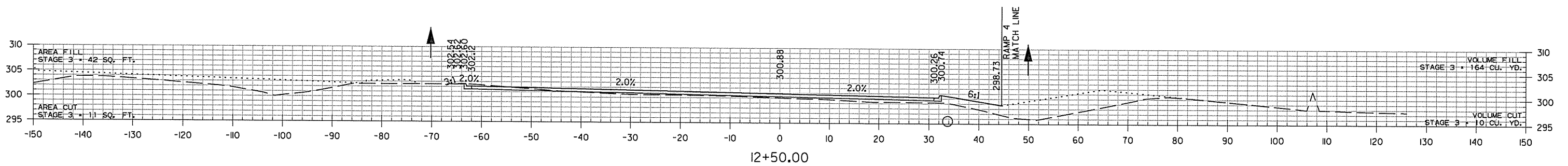
STA. 13+50 CONSTRUCT DROP INLET ON RT.
W/ 4' EXTENSION ON RT.
H = 5'-9", W/24" X 37' PIPE
CULVERT TO DROP INLET AT
NORTH AMITY BYPASS STA. 49+50 RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



13+50.00 TOP 298.76
F.L. 293.01



13+00.00

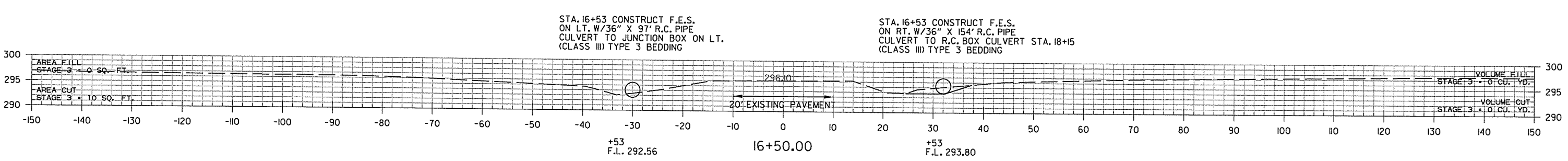
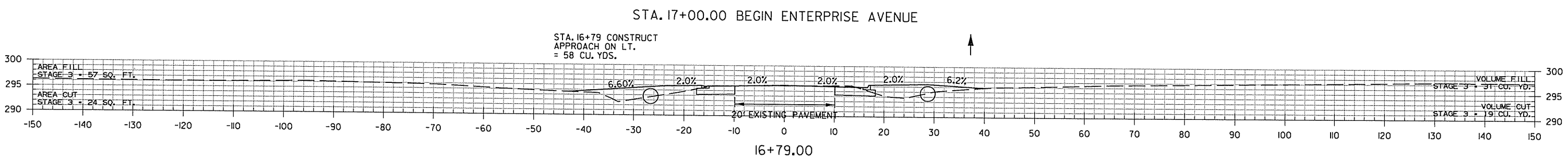
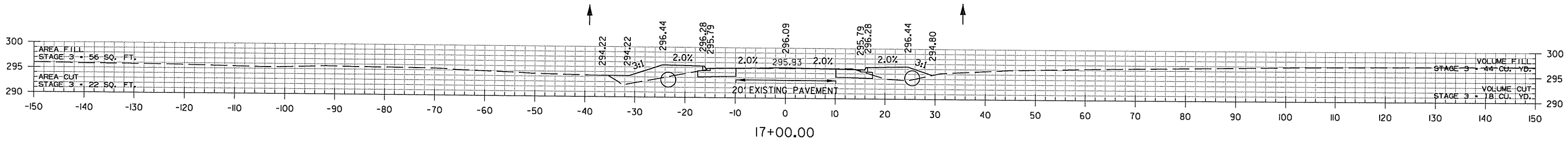
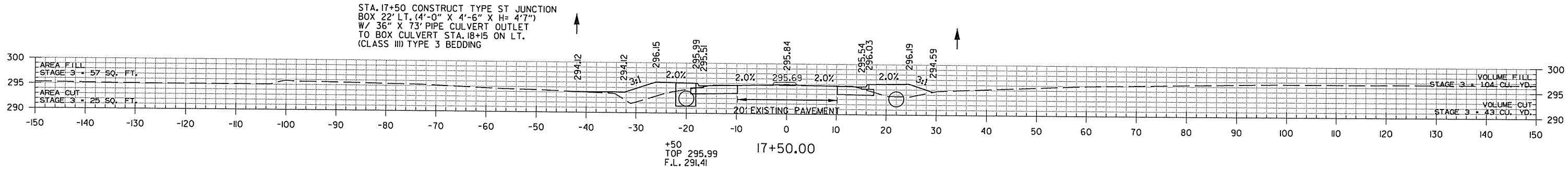
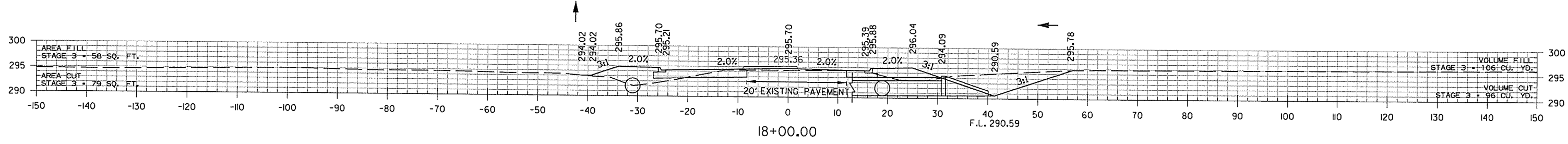
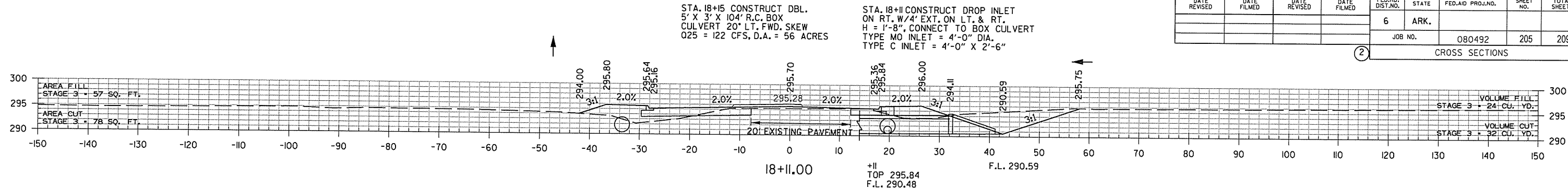


12+50.00

PARKING LOT
STA. 12+50 TO STA. 13+59

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	O80492	205	209	

2 CROSS SECTIONS



STA. 16+48.00 BEGIN TRANSITION

ENTERPRISE AVENUE
STA. 16+50 TO STA. 18+11

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 REVISION DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS	
				6	ARK.				
							JOB NO. 080492	206	209
(2) CROSS SECTIONS									

AREA FILL
STAGE 3 = 0 SQ. FT.

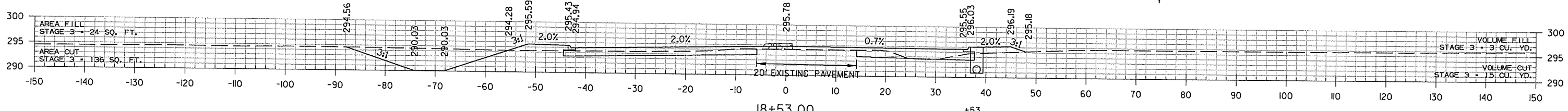
AREA CUT
STAGE 3 = 0 SQ. FT.

VOLUME FILL
STAGE 3 = 9 CU. YD.

VOLUME CUT
STAGE 3 = 53 CU. YD.

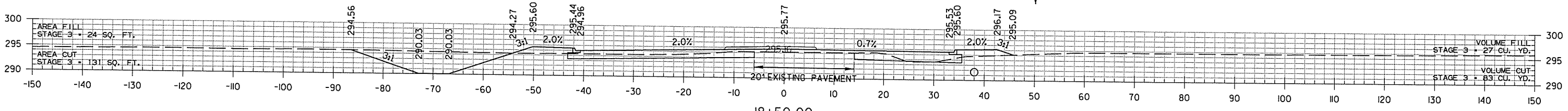
STA. 18+73.92 END ENTERPRISE AVENUE

STA. 18+53 CONSTRUCT DROP INLET
ON RT. W/4' EXT. ON LT.
H = 5'-2", W/18" X 41' PIPE
CULVERT TO BOX CULVERT ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"



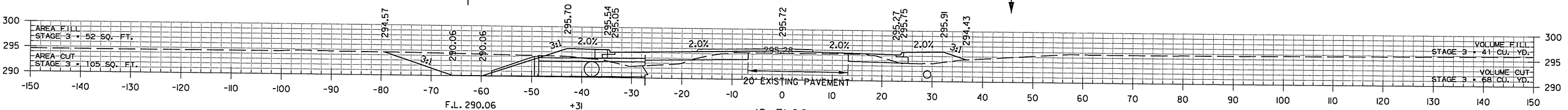
18+53.00

+53
TOP 296.03
F.L. 290.86



18+50.00

STA. 18+31 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON LT.
H = 1'-8", CONNECT TO BOX CULVERT
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 2'-6"



18+31.00

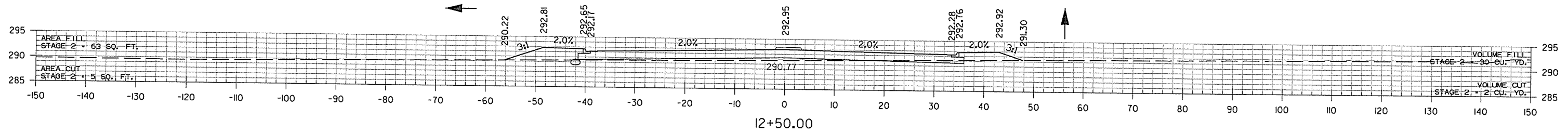
HWY. 286 STA. 46+15, 15' LT.
BEGIN 6' FLAT BOTTOM SP. DITCH LT. -0.24%
ELEV. 290.06

+31
TOP 295.54
F.L. 290.17

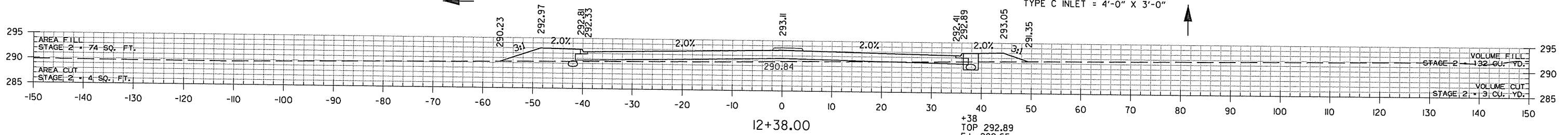
ENTERPRISE AVENUE
STA. 18+31 TO STA. 18+53

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 WORKSPACE: AHTD
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 REVISD DATE:

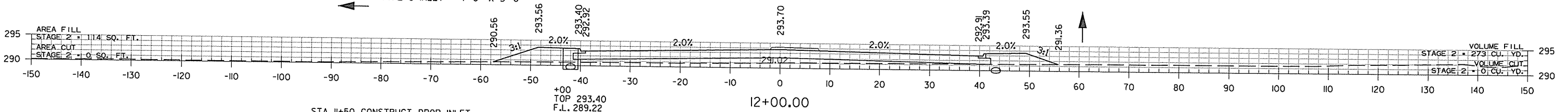
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				6	ARK.			
						JOB NO. 080492	207	209
(2) CROSS SECTIONS								



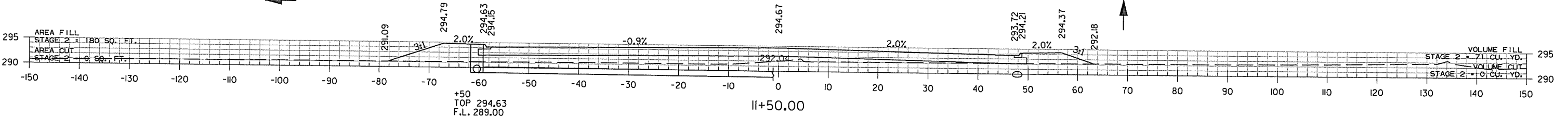
STA. 12+38 CONSTRUCT DROP INLET
ON RT. W/4' EXT. ON LT.
H = 3'-3", W/22" X 14" X 76' ARCH PIPE
CULVERT TO DROP INLET ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE M0 INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



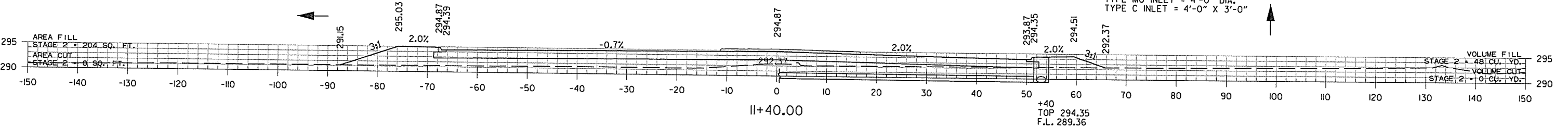
STA. 12+00 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON LT.
H = 4'-2", W/22" X 14" X 65' ARCH PIPE
CULVERT TO DROP INLET ON LT.
(CLASS III) TYPE 3 BEDDING
TYPE M0 INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



STA. 11+50 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON LT.
H = 5'-8", W/24" X 92' PIPE
CULVERT TO DROP INLET HWY 286 ON RT.
(CLASS III) TYPE 3 BEDDING
TYPE M0 INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



STA. 11+40 CONSTRUCT DROP INLET
ON RT. W/4' EXT. ON RT.
H = 5'-0", W/22" X 14" X 112' ARCH PIPE
CULVERT TO DROP INLET ON LT.
(CLASS III) TYPE 3 BEDDING
TYPE M0 INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



STA. 11+27.40 BEGIN SOUTH AMITY ROAD

SOUTH AMITY ROAD
STA. 11+40 TO STA. 12+50

3/12/2015 10:09:13 AM
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AREA FILL
STAGE 2 = 59 SQ. FT.

AREA CUT
STAGE 2 = 9 SQ. FT.

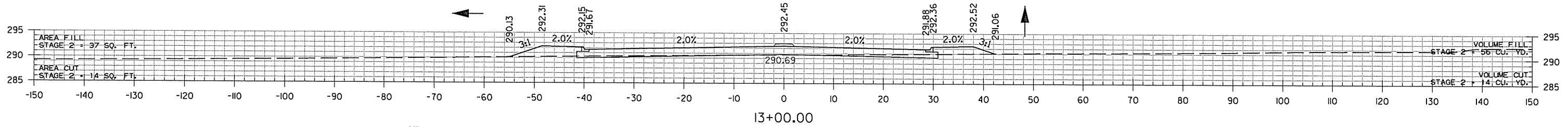
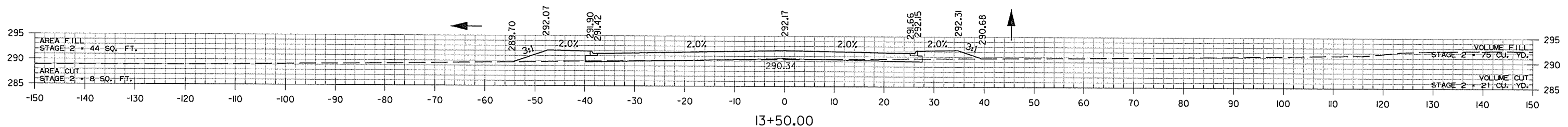
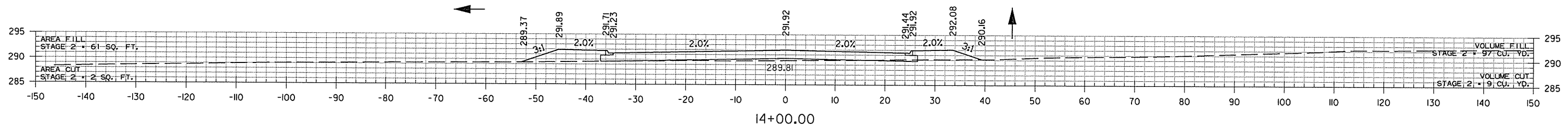
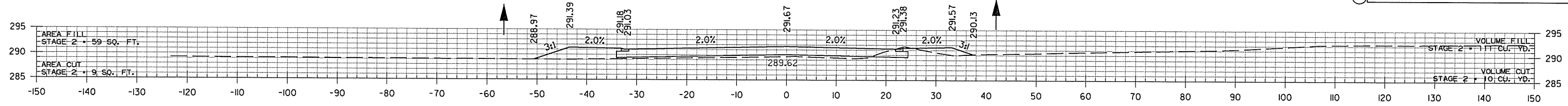
STA. 14+83.21 END SOUTH AMITY ROAD

VOLUME FILL
STAGE 2 = 73 CU. YD.

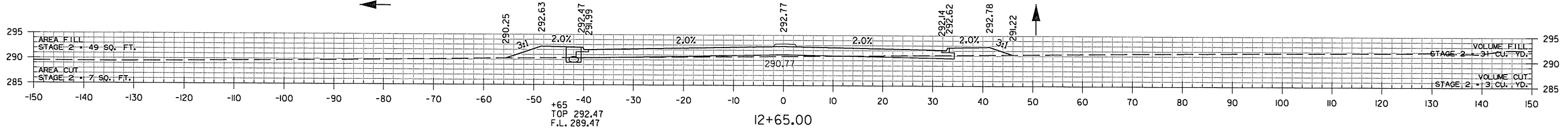
VOLUME CUT
STAGE 2 = 11 CU. YD.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
JOB NO. 080492							208	209

2 CROSS SECTIONS



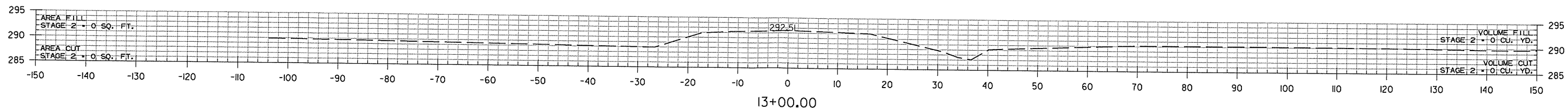
STA. 12+65 CONSTRUCT DROP INLET
ON LT. W/4' EXT. ON RT.
H = 3'-0", W/22" X 14" X 69' ARCH PIPE
CULVERT TO DROP INLET ON LT.
(CLASS III) TYPE 3 BEDDING
TYPE MO INLET = 4'-0" DIA.
TYPE C INLET = 4'-0" X 3'-0"



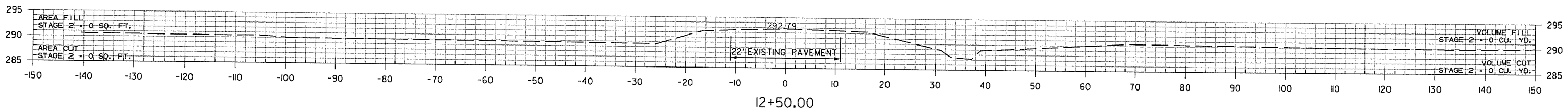
SOUTH AMITY ROAD STA. 12+65 TO STA. 14+50

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 REVISED DATE:

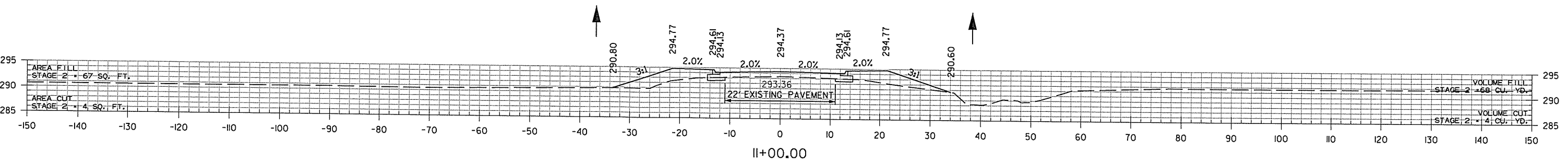
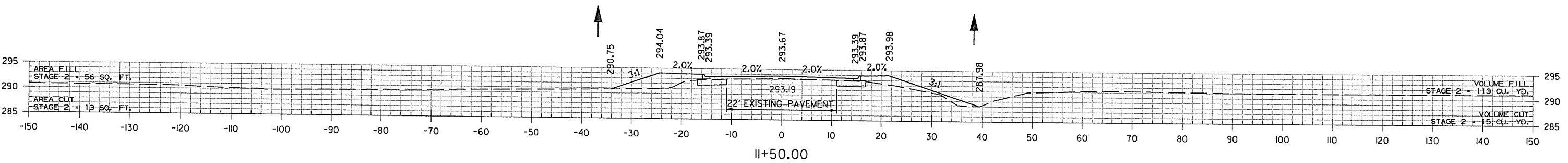
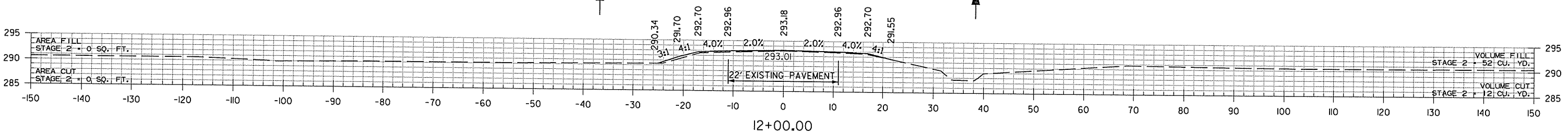
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. RD. DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		080492	209	209
				(2) CROSS SECTIONS				



↑ STA. 12+50.00 END TRANSITION ↑



↑ STA. 12+00.00 BEGIN TRANSITION
STA. 12+00.00 END THOMAS G. WILSON DRIVE ↑



↑ STA. 10+45.00 BEGIN THOMAS G. WILSON DRIVE ↑

THOMAS G. WILSON DR.
STA. 11+00 TO STA. 13+00

3/12/2015 10:09:14 AM
 WORKSPACE: AHTD
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 REVISION DATE: