DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	1	239

(2) HWY.62 BYPASS (BS.&SURF.)PRAIRIE GROVE(S)

"A PARTIALLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

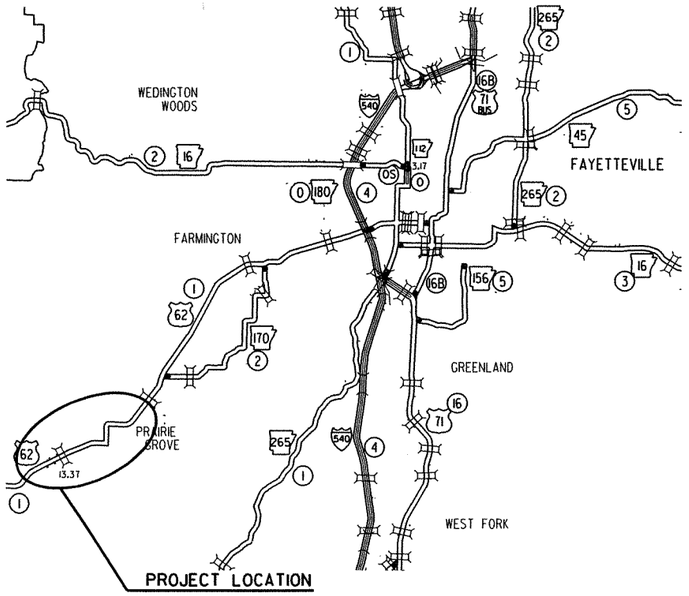
HWY. 62 BYPASS (BS. & SURF.) (PRAIRIE GROVE) (S)

WASHINGTON COUNTY

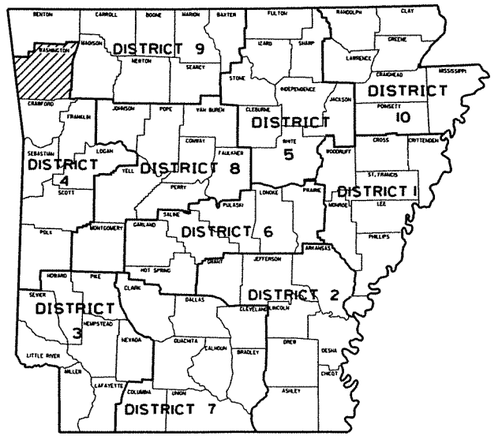
ROUTE 62 SECTION 1

FEDERAL AID PROJ. STP-0072(42)

JOB 040521



VICINITY MAP



ARK. HWY. DIST. NO. 4

DESIGN TRAFFIC DATA

DESIGN YEAR	2030
2010 ADT	11900
2030 ADT	16660
2030 DHV	1833
DIRECTIONAL DISTRIBUTION	0.60
TRUCKS	12%
DESIGN SPEED	60 MPH

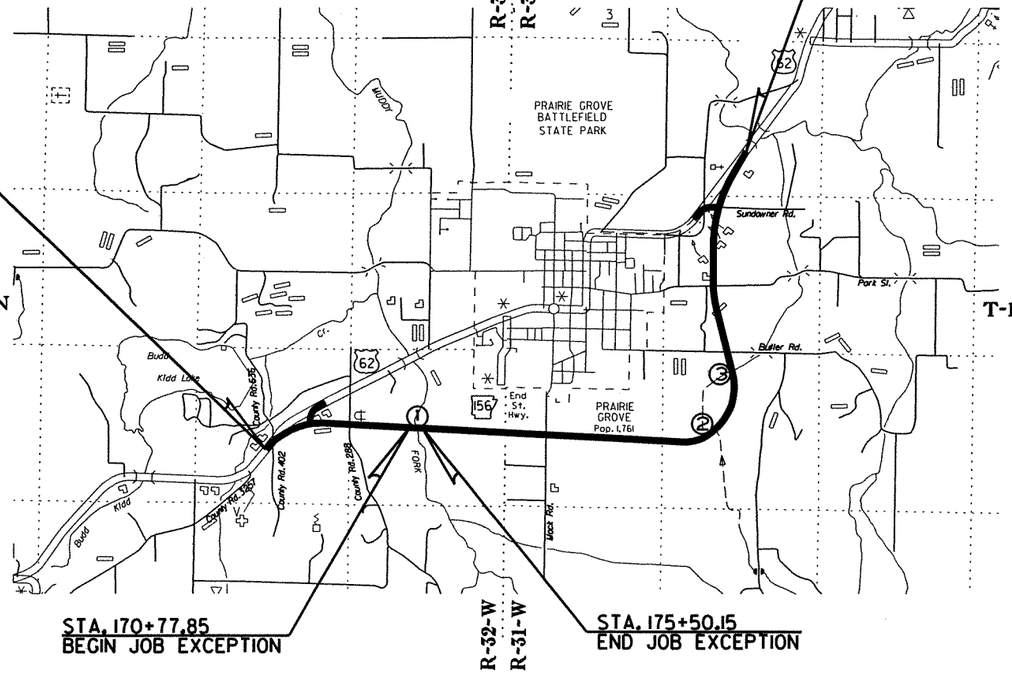
STRUCTURES OVER 20'-0" SPAN

(1) STA. 170+77.85 BR. END
470'-0" CONTINUOUS COMP. W-BEAM
38'-0" CLEAR ROADWAY
BR. NO. 07178
STA. 175+50.15 BR. END
RETAIN

(2) STA. 271+47 IN PLACE
TRI. 10' x 5' x 110' R.C. BOX CULV'T.
(35° LT. FWD. SKEW)
Q50=1100cfs, D.A.=.602Ac.
(SPAN 37.72')
RETAIN

(3) STA. 295+05 IN PLACE
TRI. 10' x 6' x 116' R.C. BOX CULV'T.
(25°26' RT. FWD. SKEW)
Q50=1420cfs, D.A.=.825Ac.
(SPAN 38.13')
RETAIN

NOT TO SCALE



	BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE	N 35°57'47"	N 35°34'31"	N 35°59'27"
LONGITUDE	W 94°20'59"	W 94°10'52"	W 94°17'41"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF	PROJECT	25405.00	FEET	OR	4.812	MILES
NET	ROADWAY	24932.70			4.722	MILES
NET	BRIDGES	0.00			0.000	MILES
NET	PROJECT	24932.70			4.722	MILES

P.E. JOB 040411
NON-PART.

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 3917
FRANK VOZEL

10/19/12

DEPUTY DIRECTOR AND CHIEF ENGINEER

8/9/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	2	239

(2) INDEX OF SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

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2	INDEX OF SHEETS			
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16 - 18	SPECIAL DETAILS			
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68 - 76	QUANTITIES			
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140	CONCRETE DITCH PAVING		CDP-1	11-17-10
141	CURBING DETAILS		CG-1	11-29-07
142	DETAILS OF DRIVEWAYS & ISLANDS		DR-1	11-29-07
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150	GUARD RAIL DETAILS		GR-9A	4-17-08
151	GUARD RAIL DETAILS		GR-10	7-14-10
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169	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-4	10-15-09
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178	DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS		W-X003-1	5-10-66
179	DETAILS OF STANDARD BARREL SECTIONS FOR REINFORCED CONCRETE BOX CULVERTS		R-200X-0	2-15-63
180 - 239	CROSS SECTIONS			

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

10/1/2012

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(2) GOVERNING SPECS. AND GENERAL NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA_____	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__	SUPPLEMENT - TRAINING PROGRAM - JOB 040521
FHWA-1273__	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__	SUPPLEMENT - WAGE RATE DETERMINATION
100-2_____	MANUAL FOR ASSESSING SAFETY HARDWARE (MASH)
102-1_____	BIDDING REQUIREMENTS AND CONDITIONS
103-1_____	DETERMINATION OF DBE PARTICIPATION
105-1_____	CONSTRUCTION CONTROL MARKINGS
105-2_____	EQUIPMENT AND MATERIAL STORAGE ON BRIDGE STRUCTURES
105-3_____	CONTROL OF WORK
107-1_____	WORKER VISIBILITY
108-1_____	LIQUIDATED DAMAGES
110-1_____	PROTECTION OF WATER QUALITY AND WETLANDS
303-1_____	AGGREGATE BASE COURSE
404-1_____	PRODUCTION VERIFICATION OF ASPHALT CONCRETE HOT MIX
404-2_____	DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
409-1_____	MINERAL AGGREGATES
410-3_____	DENSITY TESTING FOR ACHM LEVELING COURSES AND BOND BREAKERS
411-1_____	ASPHALT CONCRETE COLD PLANT MIX
600-1_____	WATER FOR VEGETATION
603-1_____	MAINTENANCE OF TRAFFIC
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-2_____	INSPECTION OF TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1_____	PIPE CULVERTS FOR SIDE DRAINS
606-2_____	PIPE CULVERTS
711-1_____	CONCRETE PULL BOX
714-1_____	DESIGN AND MATERIAL REQUIREMENTS FOR TRAFFIC SIGNAL MAST ARMS AND POLES
718-2_____	REFLECTORIZED PAINT PAVEMENT MARKINGS
719-2_____	THERMOPLASTIC PAVEMENT MARKING MATERIAL
804-1_____	INSTALLATION OF DOWEL BARS AND TIE BARS
JOB 040521__	ANTENNA SUPPORT
JOB 040521__	ASPHALT CONCRETE HOT MIX SURFACE COURSE SURFACE TOLERANCE AND INCENTIVE PAYMENTS
JOB 040521__	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 040521__	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 040521__	CABINET DRAWER ASSEMBLY
JOB 040521__	CLOSED LOOP TRAFFIC SYSTEM WITH ETHERNET RADIO COMMUNICATIONS
JOB 040521__	EDGE CARD VIDEO PROCESSOR (ETHERNET ENABLED MULTI PORT EDGE CARD SWITCH)
JOB 040521__	ELECTRICAL CONDUCTORS FOR LUMINAIRES
JOB 040521__	ELECTRICAL CONDUCTORS-IN-CONDUIT
JOB 040521__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 040521__	HIGH PERFORMANCE PAVEMENT MARKING
JOB 040521__	INTERNET BIDDING
JOB 040521__	LED TRAFFIC SIGNAL HEAD
JOB 040521__	LOOP WIRING-CLASSIFIED
JOB 040521__	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
JOB 040521__	PARTNERING REQUIREMENTS
JOB 040521__	PLASTIC PIPE
JOB 040521__	SERVICE POINT ASSEMBLY
JOB 040521__	SOIL STABILIZATION
JOB 040521__	STORM WATER POLLUTION PREVENTION PLAN
JOB 040521__	STREET NAME SIGN (MAST ARM MOUNTED)
JOB 040521__	SUBGRADE PREPARATION
JOB 040521__	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 040521__	TEMPORARY IMPACT ATTENUATION BARRIER
JOB 040521__	UTILITY ADJUSTMENTS
JOB 040521__	VALUE ENGINEERING
JOB 040521__	VIDEO DETECTOR (COLOR)
JOB 040521__	WARM MIX ASPHALT
JOB 040521__	WATER GATES

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. 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.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. 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.
7. 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.
8. THIS PROJECT IS COVERED UNDER A SECTION 404 NATIONWIDE 14 PERMIT. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2003, FOR PERMIT REQUIREMENTS.
9. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

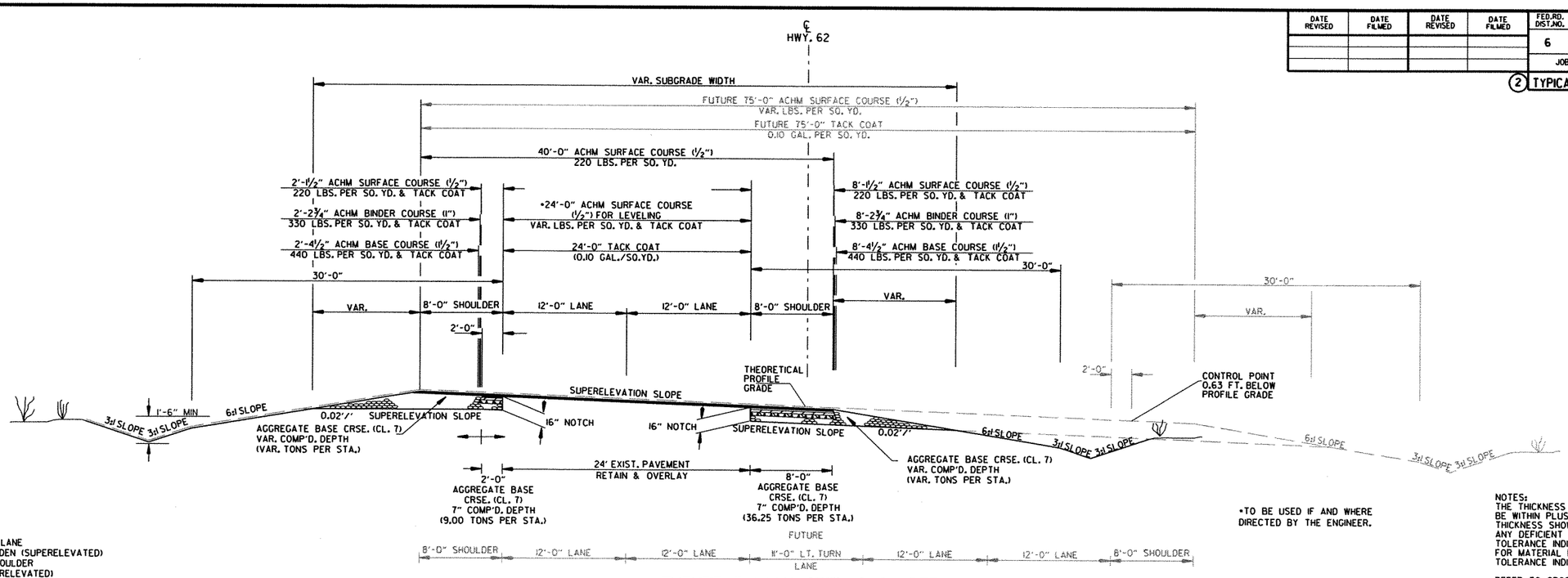
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
TRINITY D. SMITH
REGISTERED PROFESSIONAL ENGINEER
No. 11425
10-19-12



FUTURE 5 LANE OPEN SHOULDER
NOTCH & WIDEN
SUPERELEVATED SECTION
STA. 120+95.00-121+15.26[1]

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

1. STA. 121+15.26-123+80.00
TRANSITION FROM FUTURE 5 LANE
OPEN SHOULDER NOTCH & WIDEN (SUPERELEVATED)
TO FUTURE 5 LANE OPEN SHOULDER
BUILD 2 LANES ON LT. (SUPERELEVATED)

2. STA. 126+77.17-130+08.75
TRANSITION FROM FUTURE 5 LANE
OPEN SHOULDER BUILD 2 LANES ON LT.
(SUPERELEVATED)
TO FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES ON LT. (SUPERELEVATED)

3. STA. 132+48.14-134+90.91
TRANSITION FROM FUTURE 5 LANE
OPEN SHOULDER BUILD 3 LANES ON LT.
(SUPERELEVATED)
TO FUTURE 5 LANE OPEN SHOULDER
BUILD 2 LANES ON LT. (SUPERELEVATED)

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

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

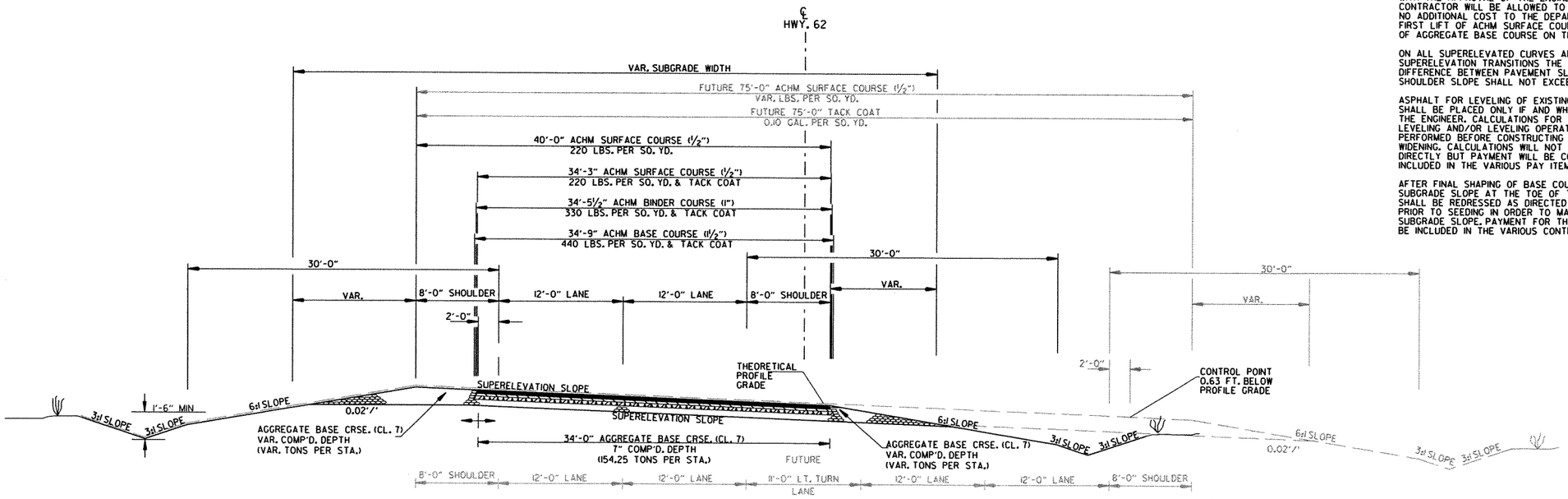
THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (1/2") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

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

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.

AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.



FUTURE 5 LANE OPEN SHOULDER
BUILD 2 LANES ON LT.
FULL DEPTH
SUPERELEVATED SECTION
STA. [1]123+80.00 - 126+77.17[2]
STA. [3]134+90.91 - 138+78.23

10/1/2012

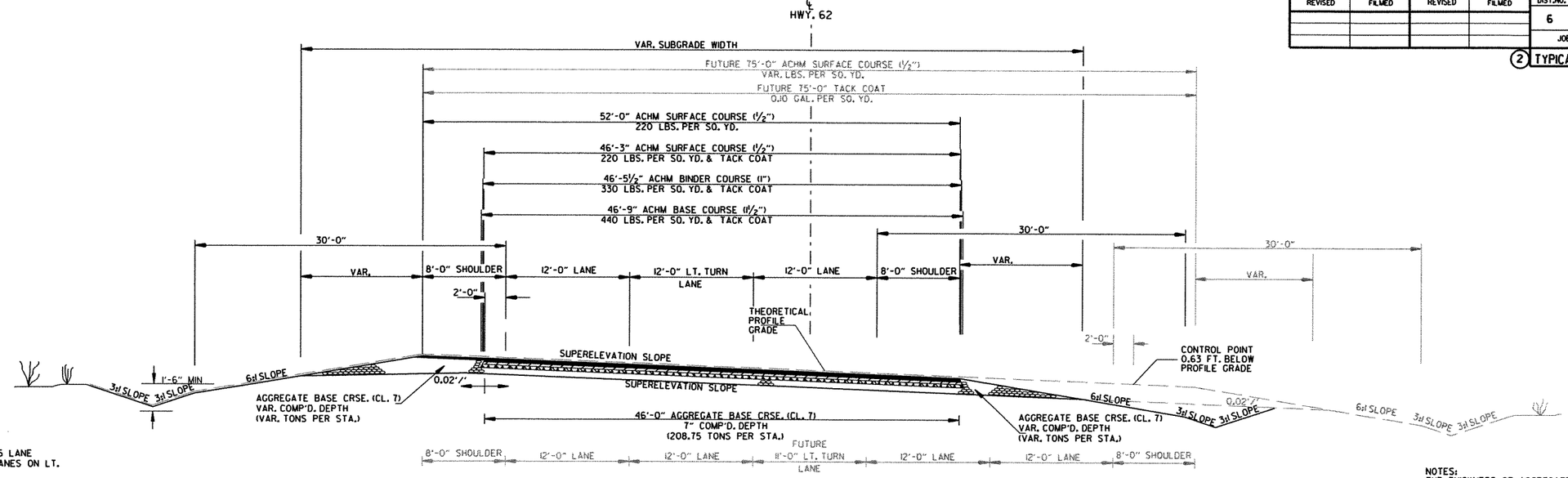
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES ON LT.
FULL DEPTH
SUPERELEVATED SECTION
STA. [2]130+08.75-132+48.14[3]

2. STA. 126+77.17-130+08.75
TRANSITION FROM FUTURE 5 LANE
OPEN SHOULDER BUILD 2 LANES ON LT.
(SUPERELEVATED)
TO FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES ON LT. (SUPERELEVATED)

3. STA. 132+48.14-134+90.91
TRANSITION FROM FUTURE 5 LANE
OPEN SHOULDER BUILD 3 LANES ON LT.
(SUPERELEVATED)
TO FUTURE 5 LANE OPEN SHOULDER
BUILD 2 LANES ON LT. (SUPERELEVATED)

4. STA. 140+00.00-149+49.99
TRANSITION FROM
FUTURE 5 LANE
BUILD 2 LANES ON LT. (TANGENT)
TO FUTURE 4 LANE DIVIDED
BUILD LT. LANES (TANGENT)

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

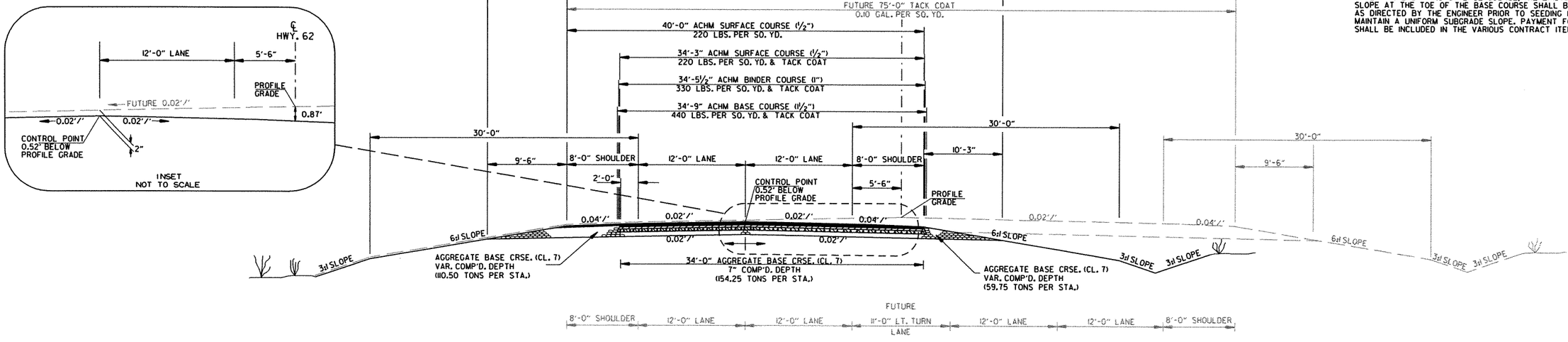
REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (½") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

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

AFTER FINAL SHAPING OF BASE COURSE, THE EXISTING SUBGRADE SLOPE AT THE TOE OF THE BASE COURSE SHALL BE REDRESSED AS DIRECTED BY THE ENGINEER PRIOR TO SEEDING IN ORDER TO MAINTAIN A UNIFORM SUBGRADE SLOPE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS CONTRACT ITEMS.



FUTURE 5 LANE OPEN SHOULDER
BUILD 2 LANES ON LT.
FULL DEPTH
TANGENT SECTION
STA. 138+78.23 - 140+00.00[4]

10/1/2012

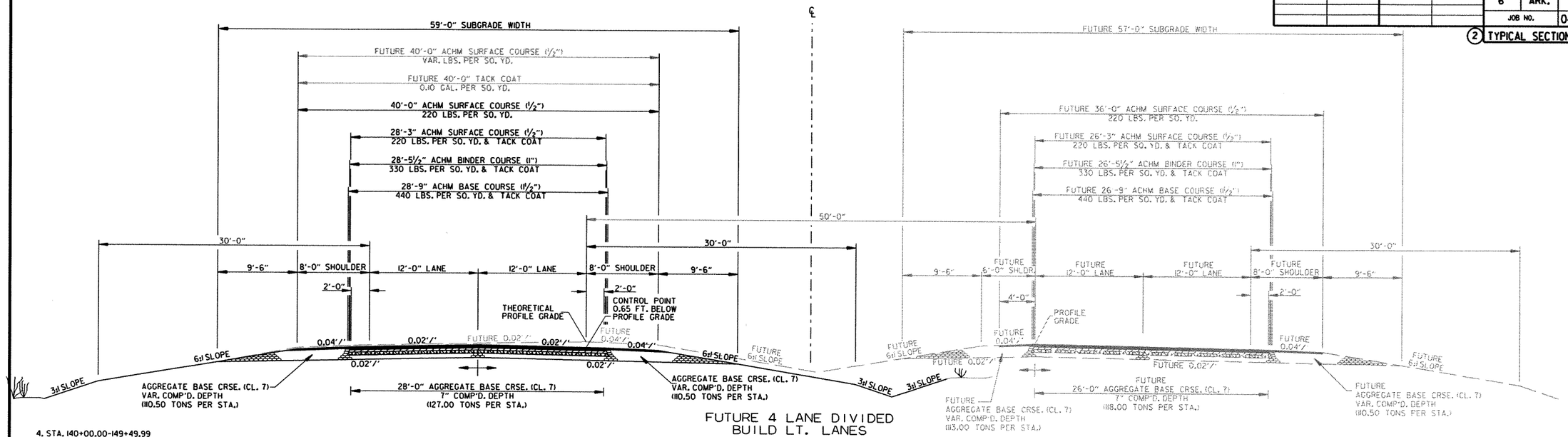
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TYPICAL SECTIONS OF IMPROVEMENT

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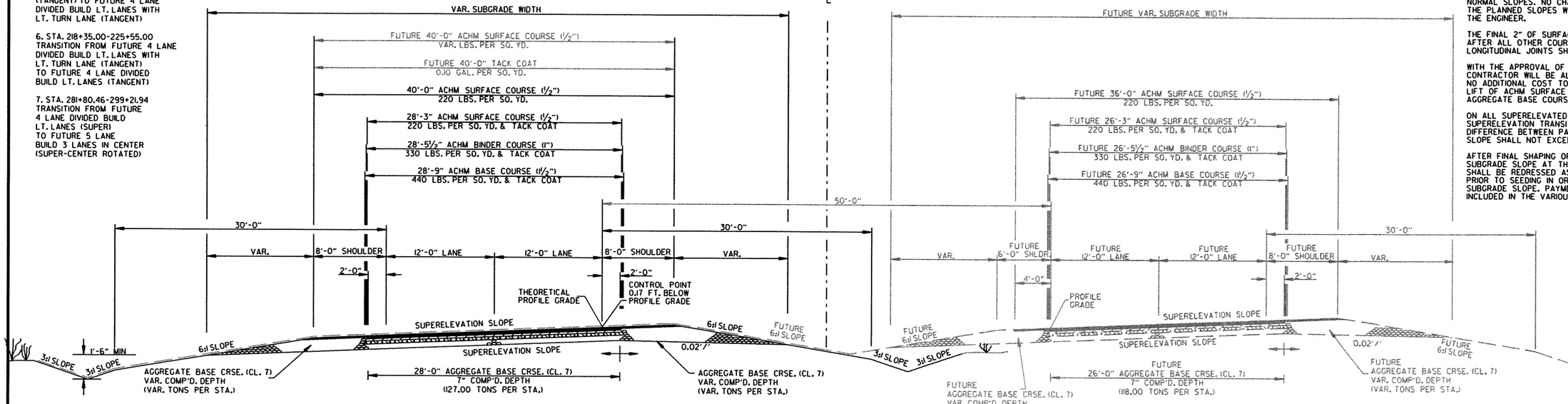
FUTURE 4 LANE DIVIDED
BUILD LT. LANES
FULL DEPTH
TANGENT SECTION
STA. [4]149+49.99 - 167+00.00
STA. 179+00.00 - 207+90.00[5]
STA. [6]225+55.00 - 248+28.03
STA. 269+08.47 - 270+63.66

4. STA. 140+00.00-149+49.99
TRANSITION FROM
FUTURE 5 LANE
BUILD 2 LANES ON LT. (TANGENT)
TO FUTURE 4 LANE DIVIDED
BUILD LT. LANES (TANGENT)

5. STA. 207+90.00-215+10.00
TRANSITION FROM FUTURE
4 LANE DIVIDED BUILD LT. LANES
(TANGENT) TO FUTURE 4 LANE
DIVIDED BUILD LT. LANES WITH
LT. TURN LANE (TANGENT)

6. STA. 218+35.00-225+55.00
TRANSITION FROM FUTURE 4 LANE
DIVIDED BUILD LT. LANES WITH
LT. TURN LANE (TANGENT)
TO FUTURE 4 LANE DIVIDED
BUILD LT. LANES (TANGENT)

7. STA. 281+80.46-299+21.94
TRANSITION FROM FUTURE
4 LANE DIVIDED BUILD
LT. LANES (SUPER)
TO FUTURE 5 LANE
BUILD 3 LANES IN CENTER
(SUPER-CENTER ROTATED)



FUTURE 4 LANE DIVIDED
BUILD LT. LANES
FULL DEPTH
SUPERELEVATED SECTION
STA. 167+00.00-170+77.85
STA. 175+50.15-179+00.00
STA. 248+28.03-269+08.47
STA. 270+63.66-281+80.46[7]

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

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10/1/2012

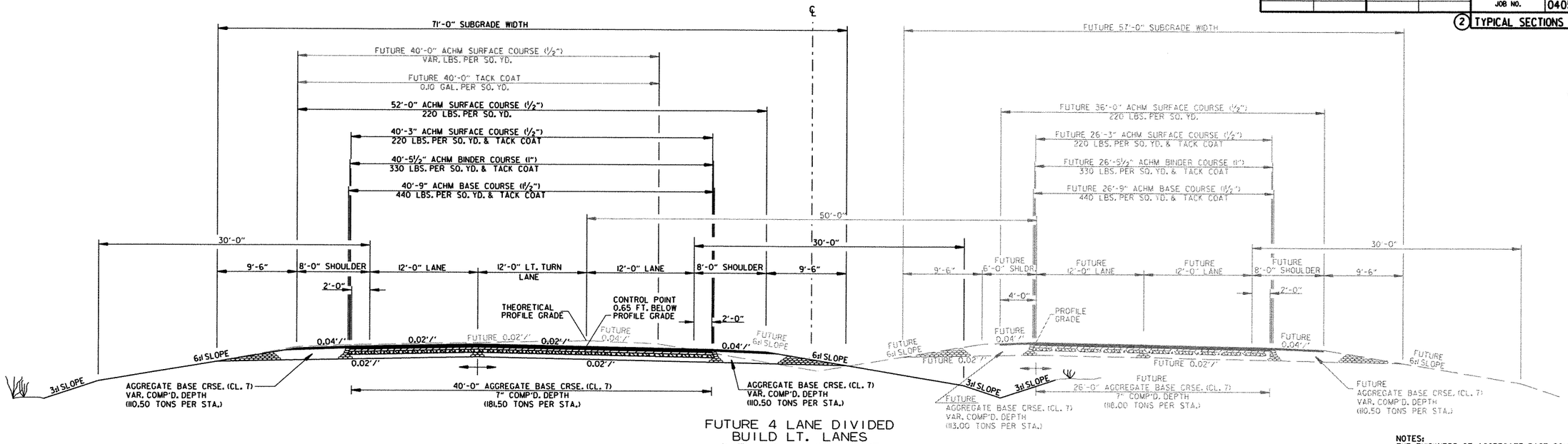
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TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	7	239

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

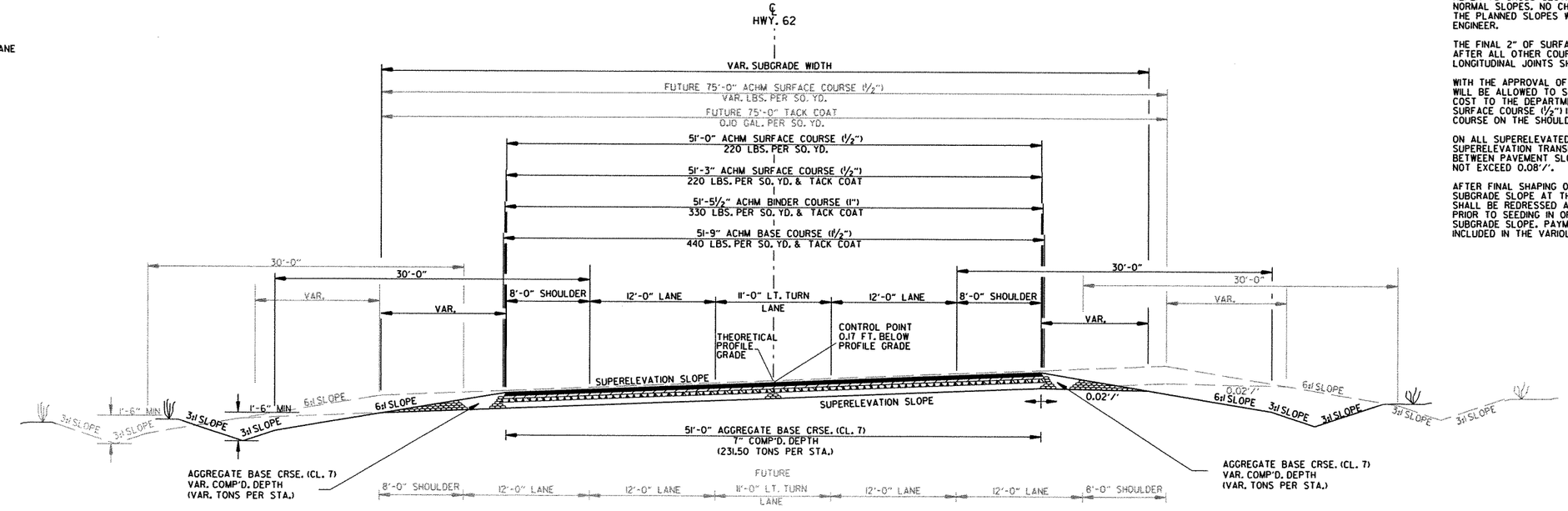


FUTURE 4 LANE DIVIDED
BUILD LT. LANES
WITH LT. TURN LANE
FULL DEPTH
TANGENT SECTION
STA. [5]215+10.00 - 218+35.00[6]

5. STA. 207+90.00-215+10.00
TRANSITION FROM FUTURE
4 LANE DIVIDED BUILD LT. LANES
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DIVIDED BUILD LT. LANES WITH
LT. TURN LANE (TANGENT)

6. STA. 218+35.00-225+55.00
TRANSITION FROM FUTURE 4 LANE
DIVIDED BUILD LT. LANES WITH
LT. TURN LANE (TANGENT)
TO FUTURE 4 LANE DIVIDED
BUILD LT. LANES (TANGENT)

7. STA. 281+80.46-299+21.94
TRANSITION FROM FUTURE
4 LANE DIVIDED BUILD
LT. LANES (SUPER)
TO FUTURE 5 LANE
BUILD 3 LANES IN CENTER
(SUPER-CENTER ROTATED)



FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES IN CENTER
FULL DEPTH
SUPERELEVATED SECTION (ROTATED ABOUT C.L.)
STA. [7]299+21.94-309+15.80

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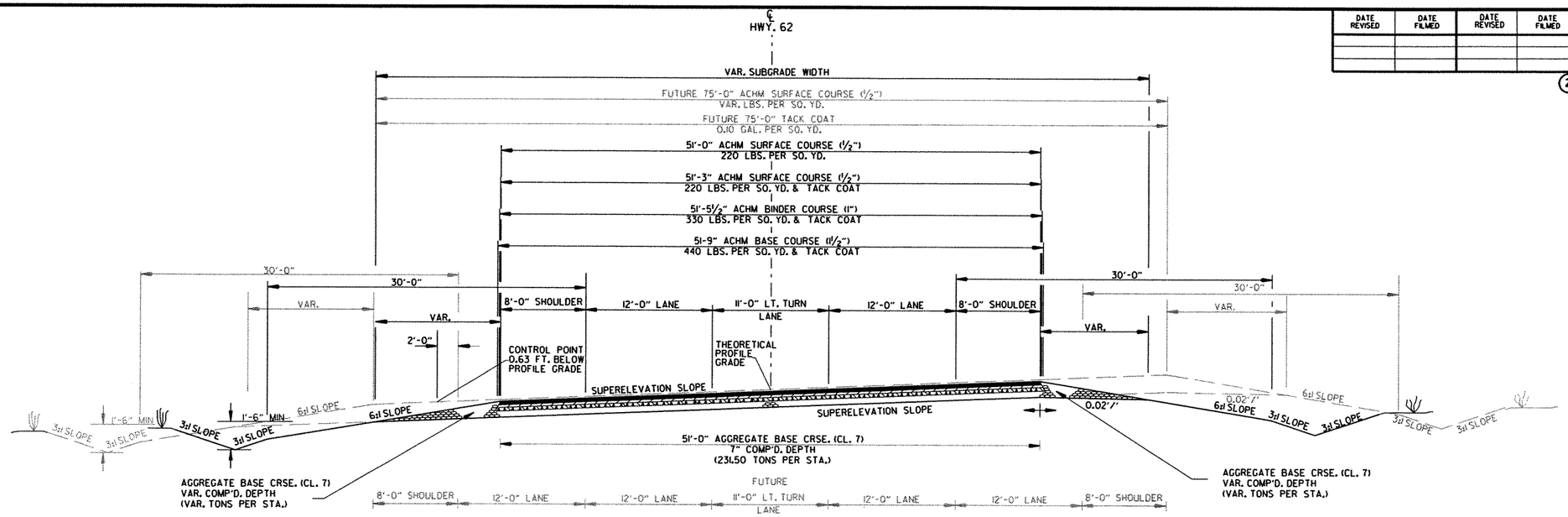
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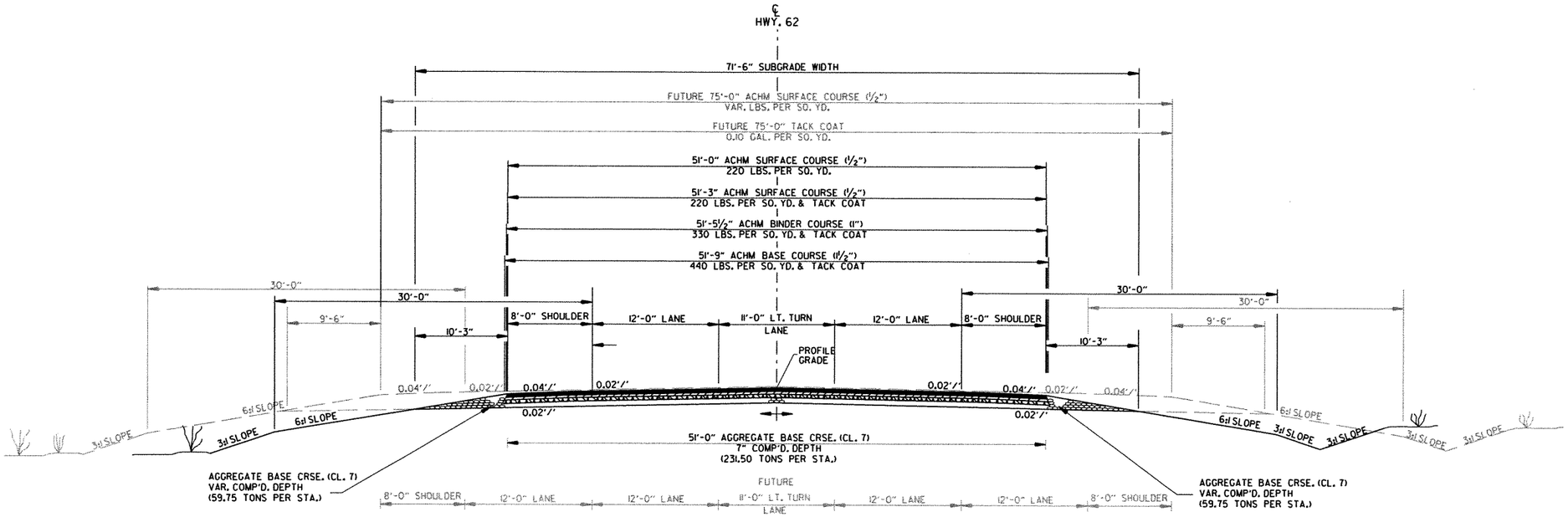
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				JOB NO.		040521	8	239

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES IN CENTER
FULL DEPTH
SUPERELEVATED SECTION
STA. 309+15.81-334+32.63
STA. 339+47.12-363+88.77



FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES IN CENTER
FULL DEPTH
TANGENT SECTION
STA. 334+32.63-339+47.12
STA. 363+88.77-364+95.00
STA. 368+50.00-372+00.00

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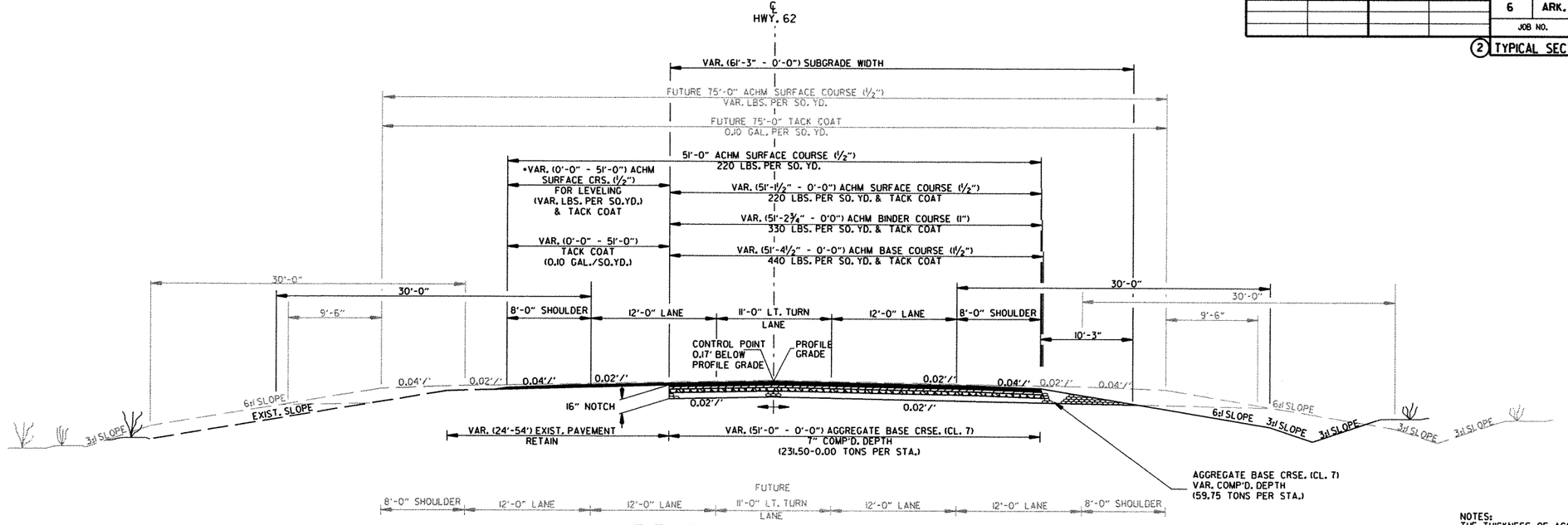
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12



FUTURE 5 LANE OPEN SHOULDER
BUILD 3 LANES IN CENTER
NOTCH & WIDEN
TANGENT SECTION
STA. 364+95.00-368+50.00

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

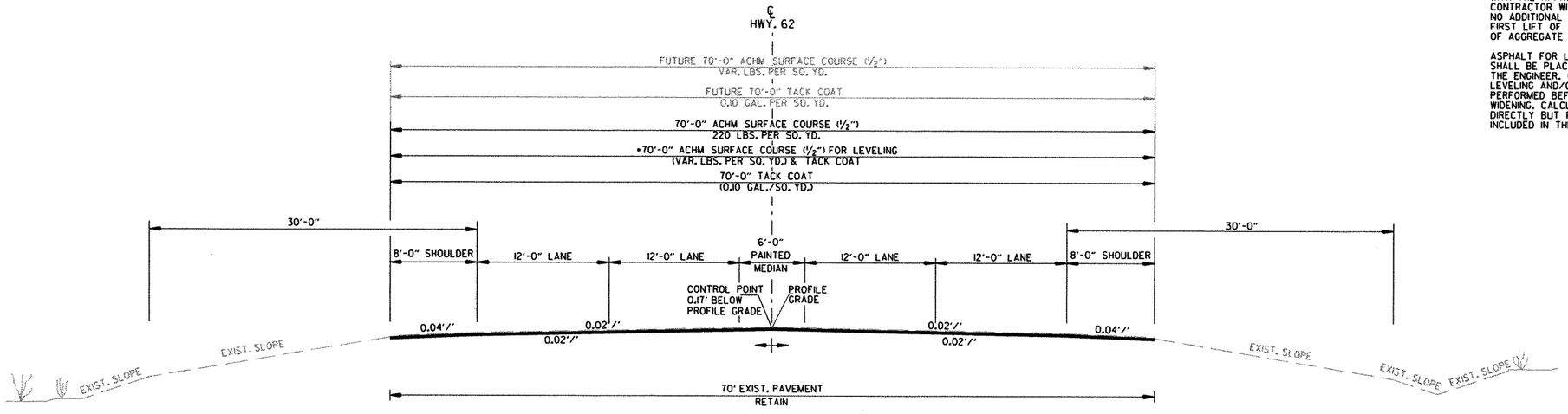
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4 LANE OPEN SHOULDER
WITH 6' PAINTED MEDIAN
OVERLAY
TANGENT SECTION
STA. 372+00.00-375+00.00

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

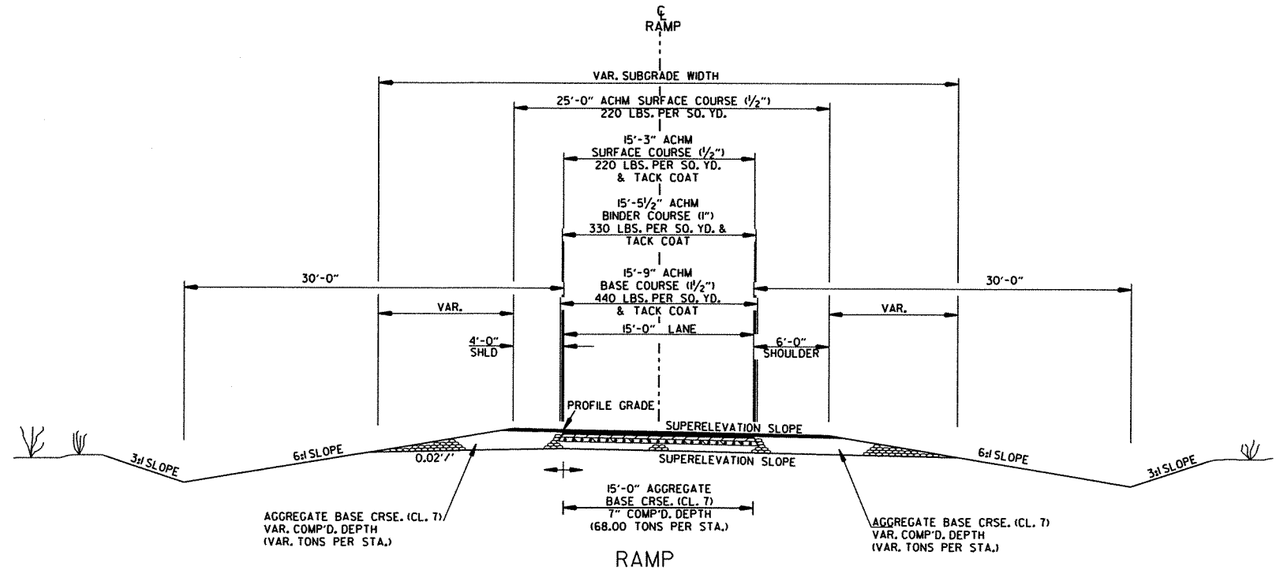
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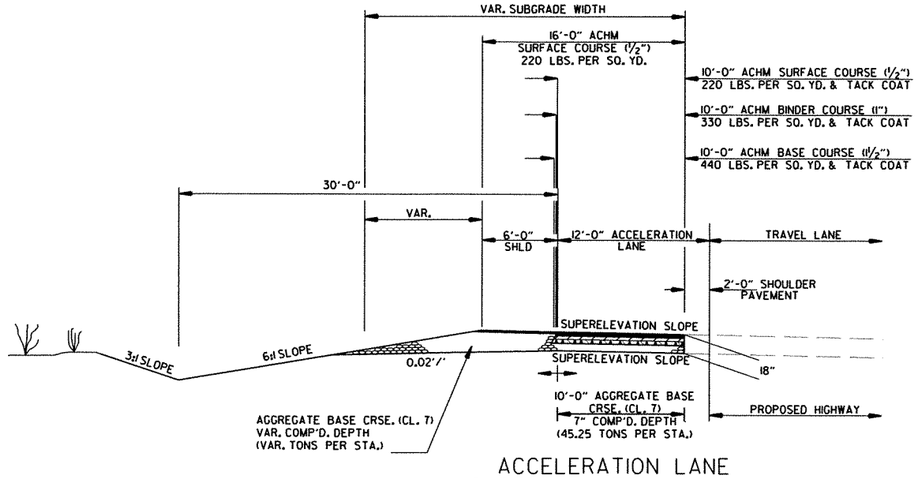
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				JOB NO.		040521	10	239

(2) TYPICAL SECTIONS OF IMPROVEMENT



RAMP
SUPERELEVATED SECTION



ACCELERATION LANE
SUPERELEVATED SECTION

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

10/1/2012

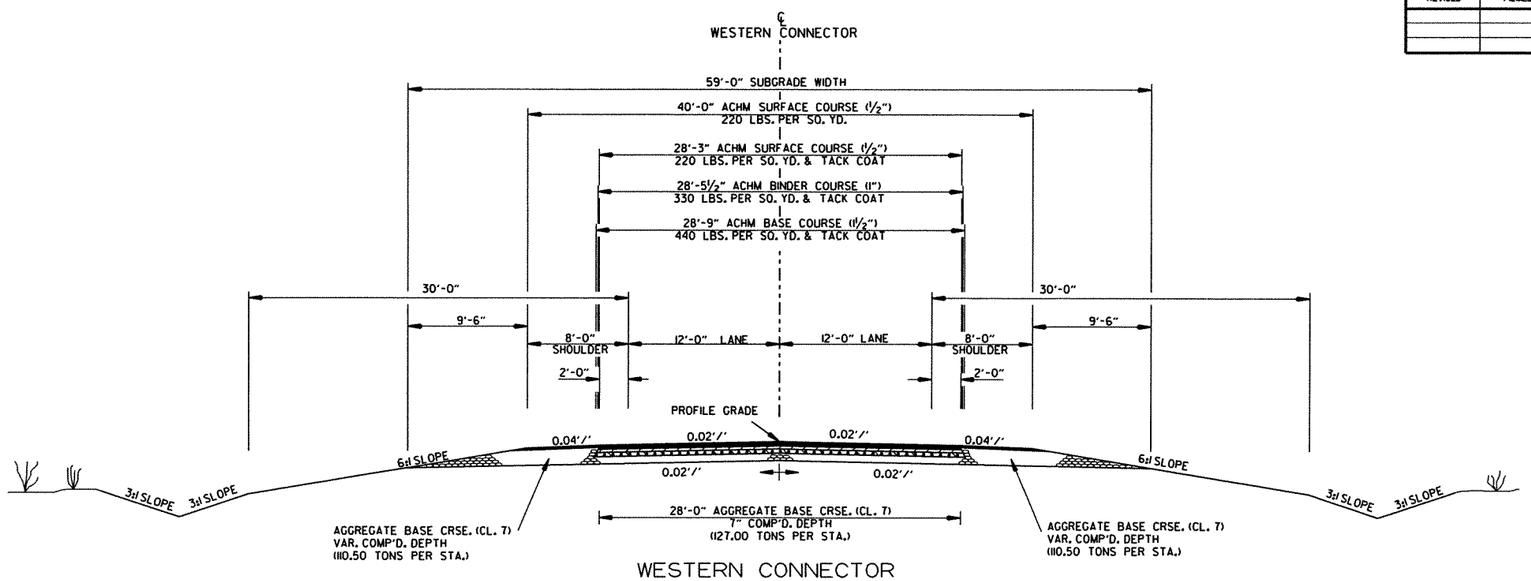
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



WESTERN CONNECTOR
FULL DEPTH
TANGENT SECTION
STA. 100+87.80-101+05.22

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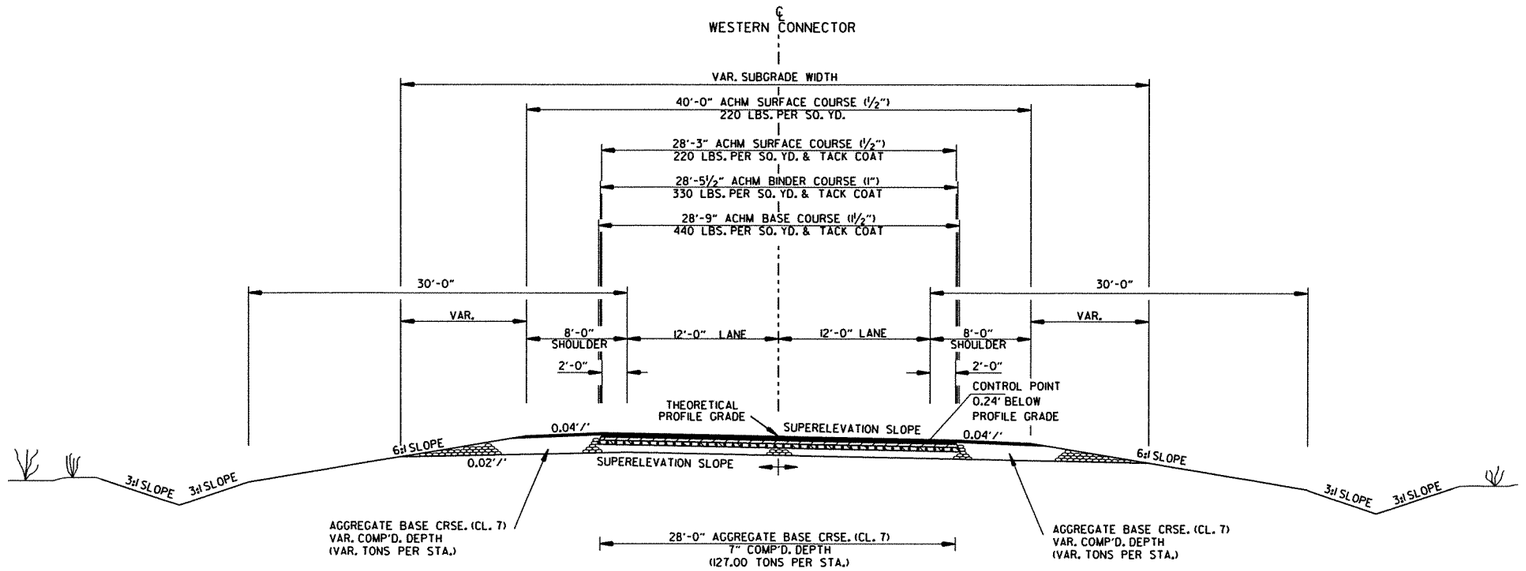
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WESTERN CONNECTOR
FULL DEPTH
SUPERELEVATED SECTION
STA. 101+05.22-106+00.00

10/1/2012

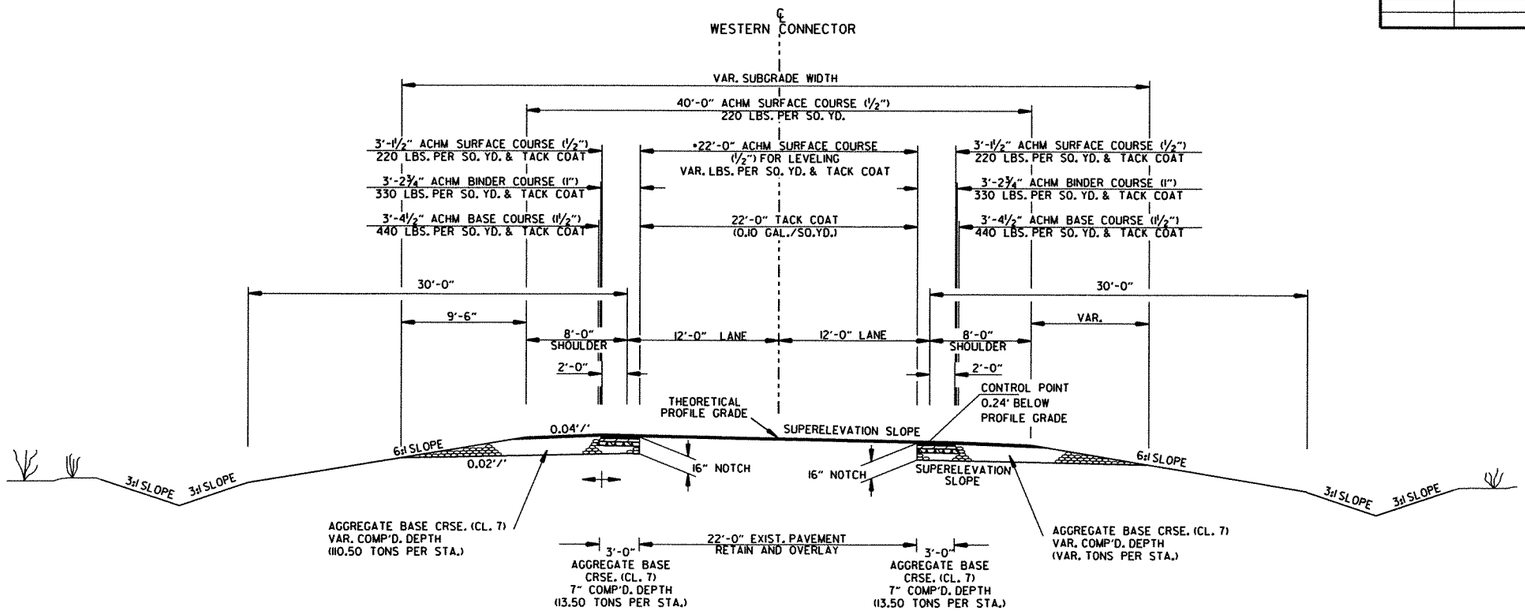
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TYPICAL SECTIONS OF IMPROVEMENT

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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-17-12



WESTERN CONNECTOR
NOTCH AND WIDEN
SUPERELEVATED SECTION
STA, 106+00.00-107+35.63

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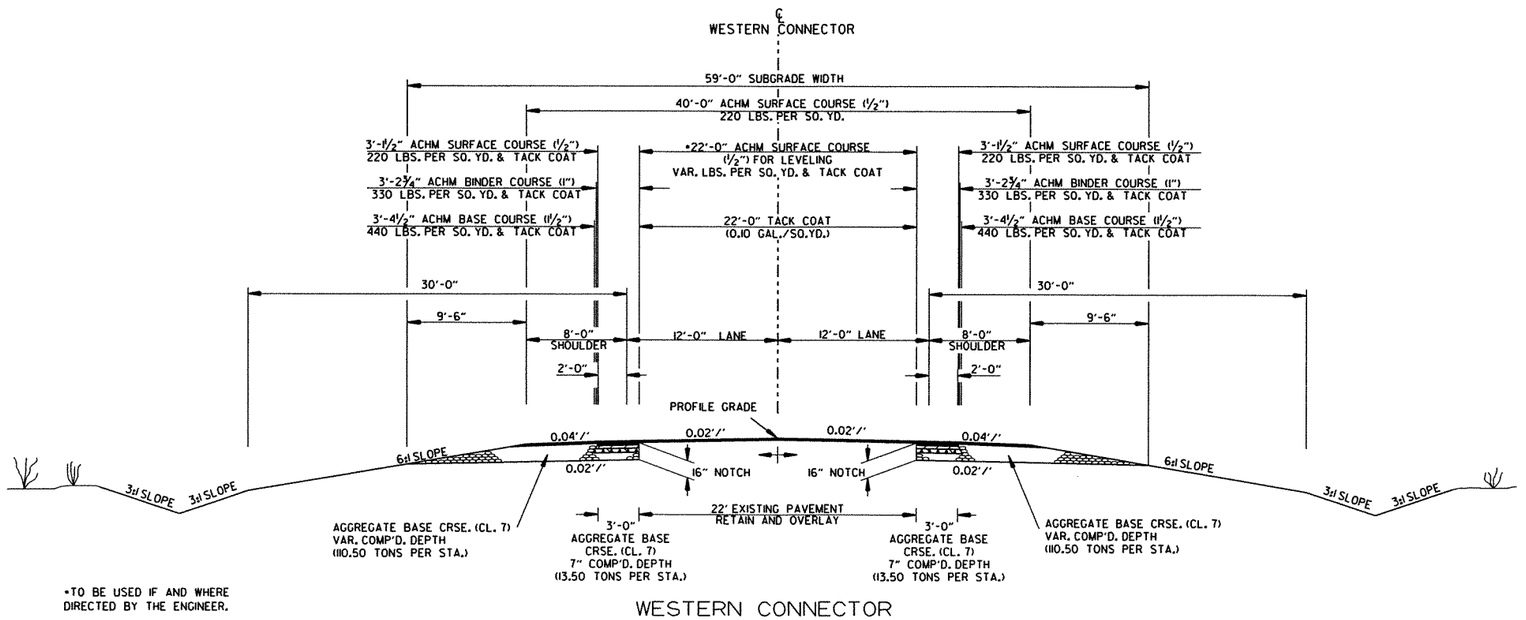
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WESTERN CONNECTOR
NOTCH AND WIDEN
TANGENT SECTION
STA. 107+35.63-108+00.00

10/1/2012

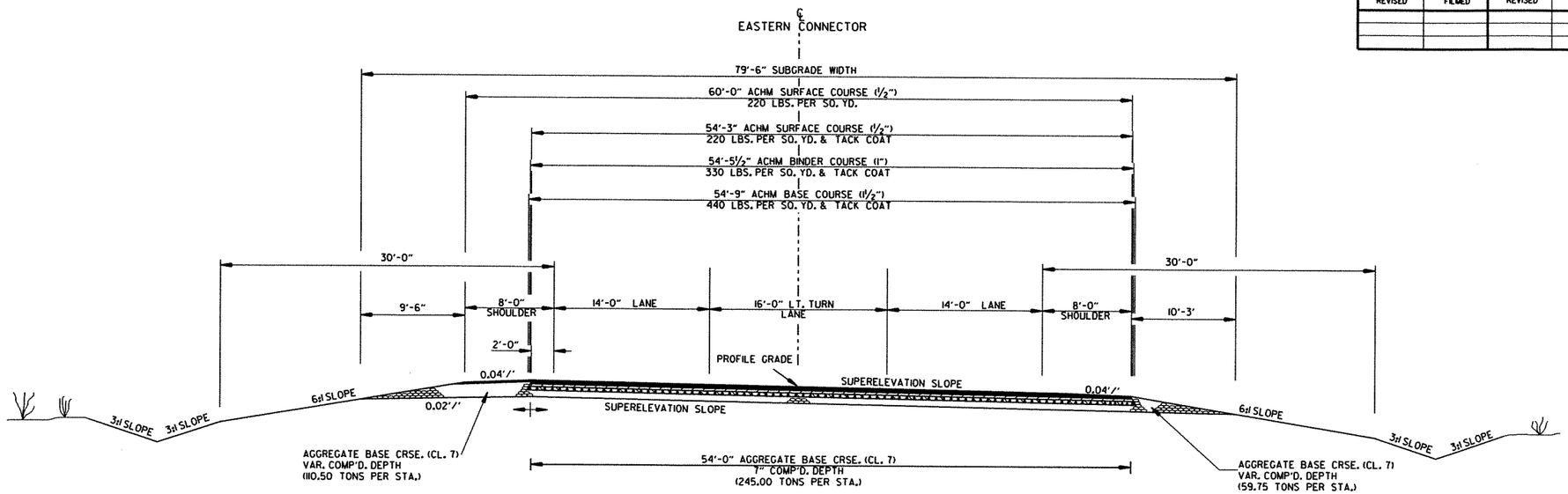
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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



EASTERN CONNECTOR
FULL DEPTH
SUPERELEVATED SECTION
STA. 343+00.00-345+14.45

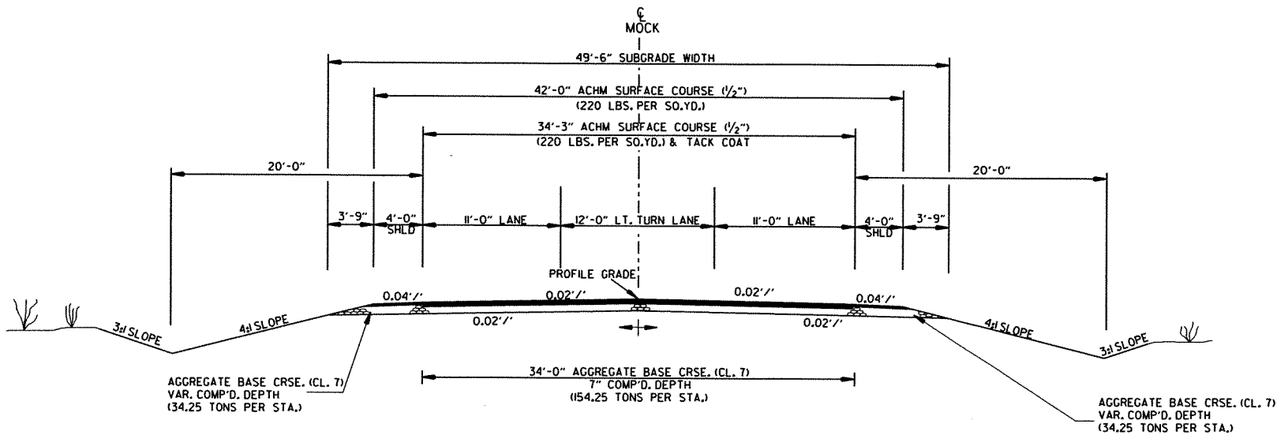
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MOCK ST.
TANGENT SECTION

10/1/2012

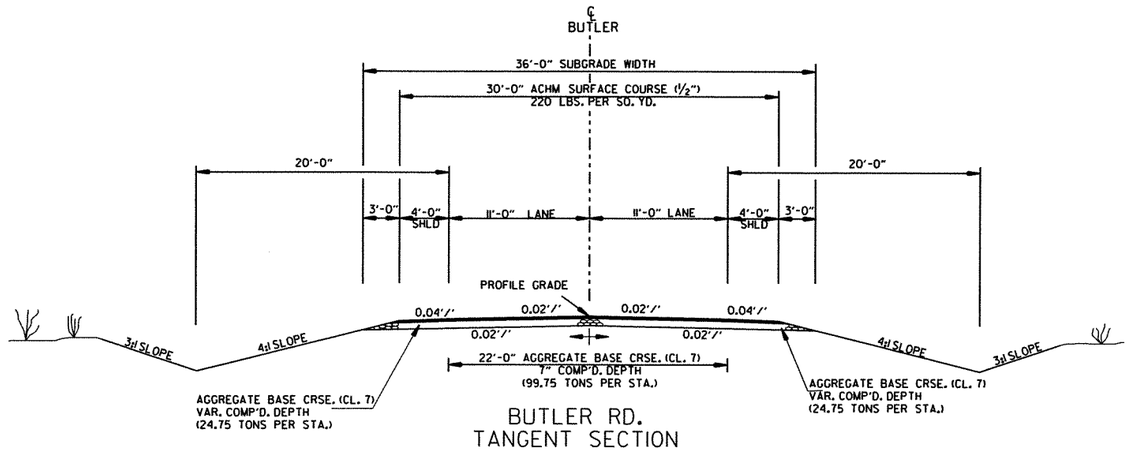
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BUTLER RD.
TANGENT SECTION

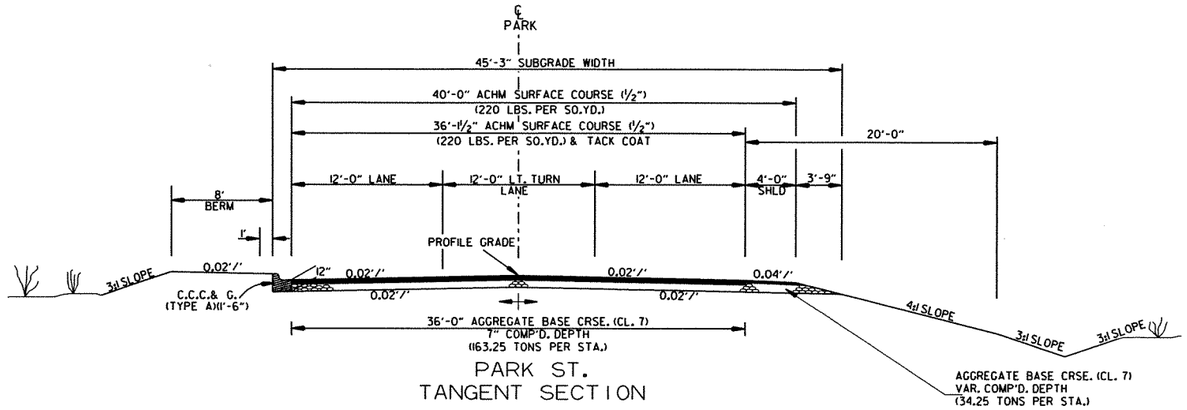
NOTES:
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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

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

WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACHM SURFACE COURSE (½") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

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.



PARK ST.
TANGENT SECTION

10/1/2012

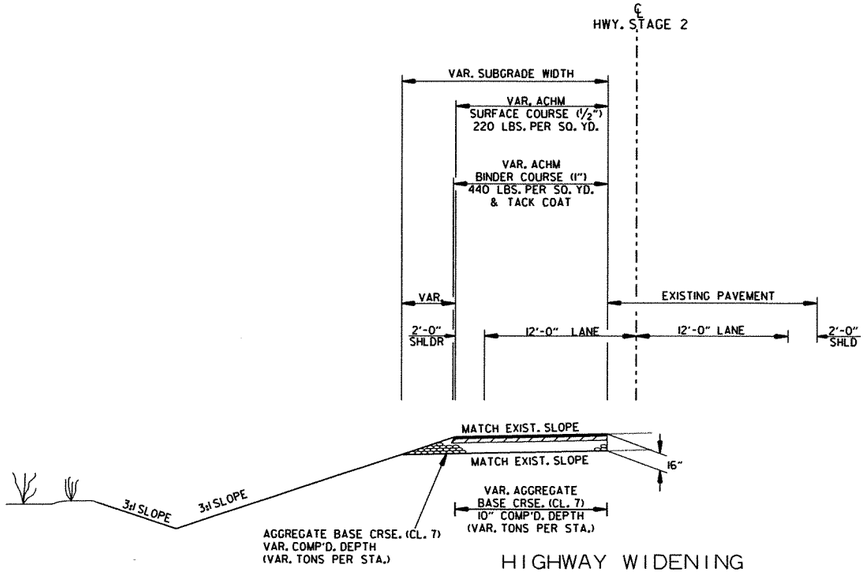
R040521.DGN

TYPICAL SECTIONS OF IMPROVEMENT

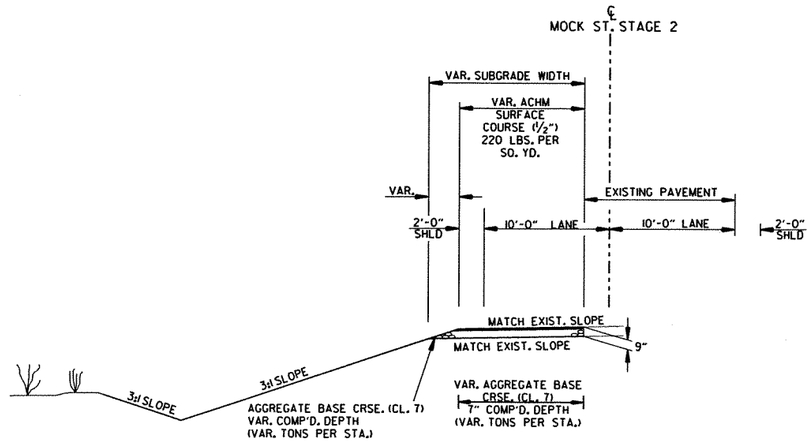
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				6	ARK.			
				JOB NO.		040521	15	239

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



HIGHWAY WIDENING
FOR MAINTENANCE OF TRAFFIC

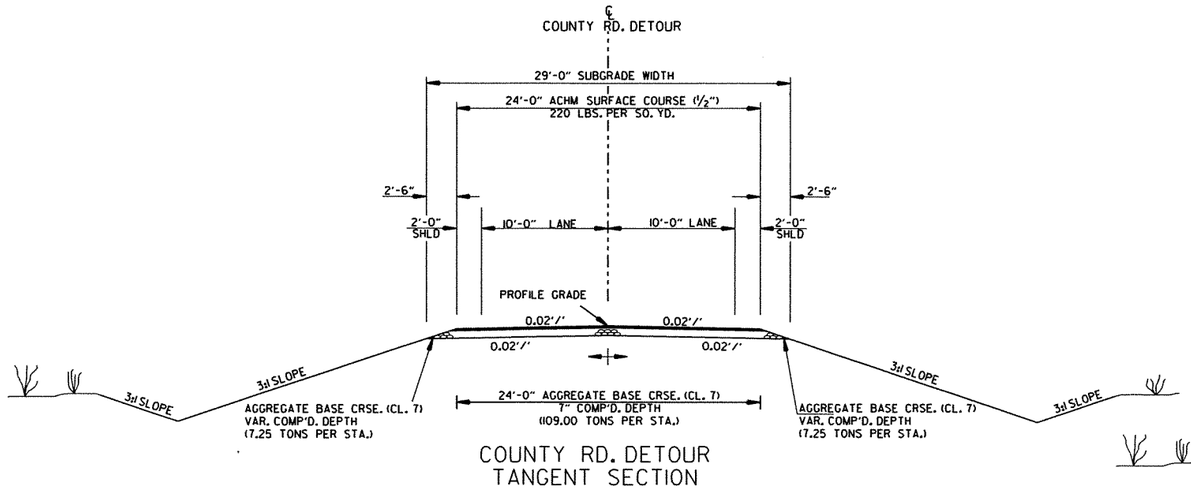


MOCK ST. WIDENING
FOR MAINTENANCE OF TRAFFIC

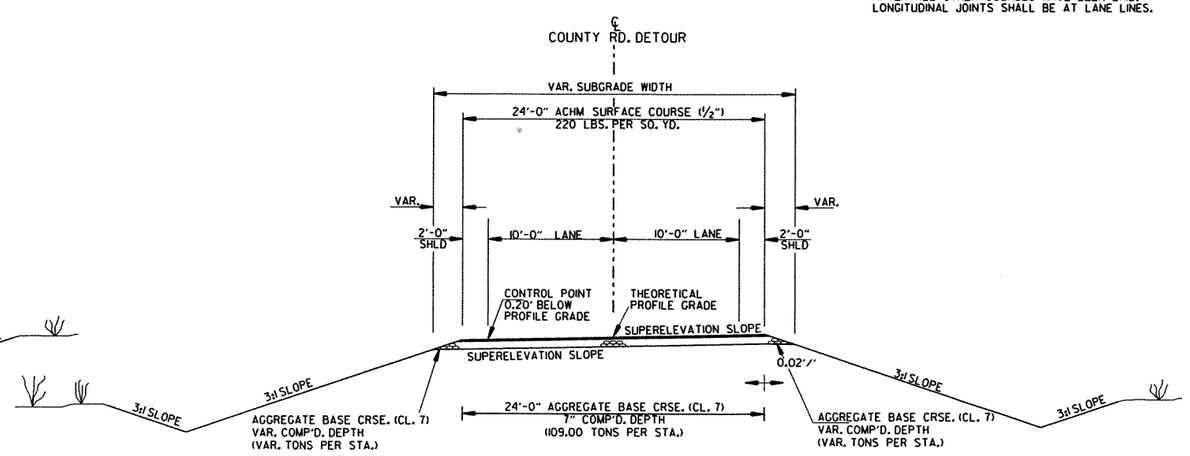
NOTES:
THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

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

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



COUNTY RD. DETOUR
TANGENT SECTION



COUNTY RD. DETOUR
SUPERELEVATED SECTION

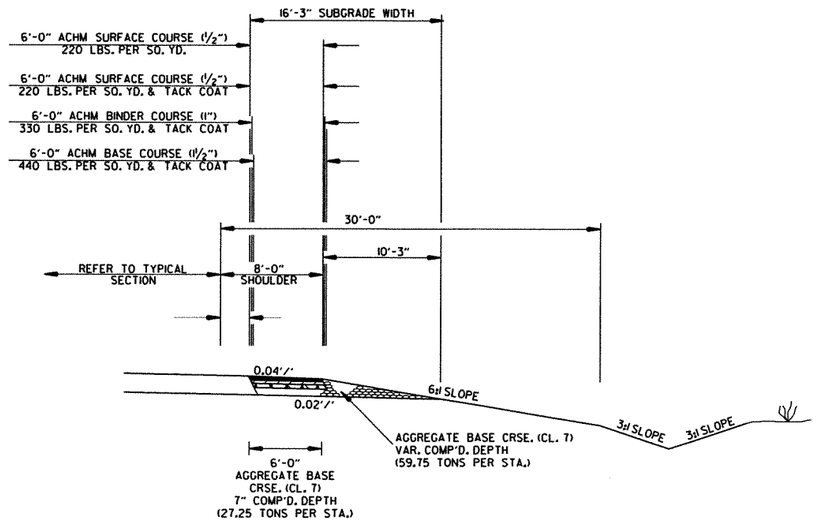
10/1/2012

R040521.DGN

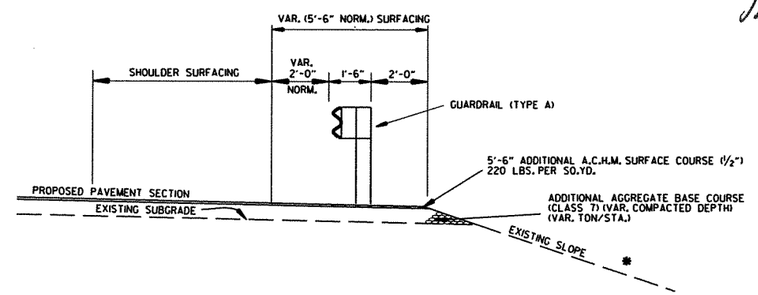
TYPICAL SECTIONS OF IMPROVEMENT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	16	239

(2) SPECIAL DETAILS



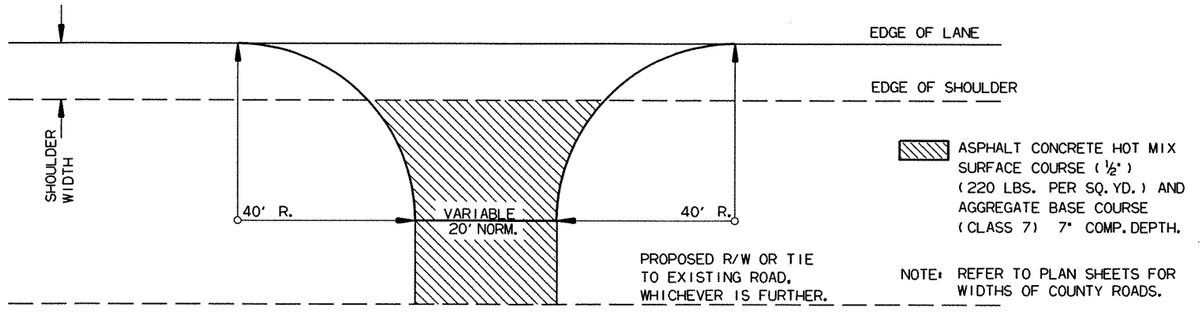
WESTERN CONNECTOR
FULL DEPTH SHOULDER
FOR MAINTENANCE OF TRAFFIC



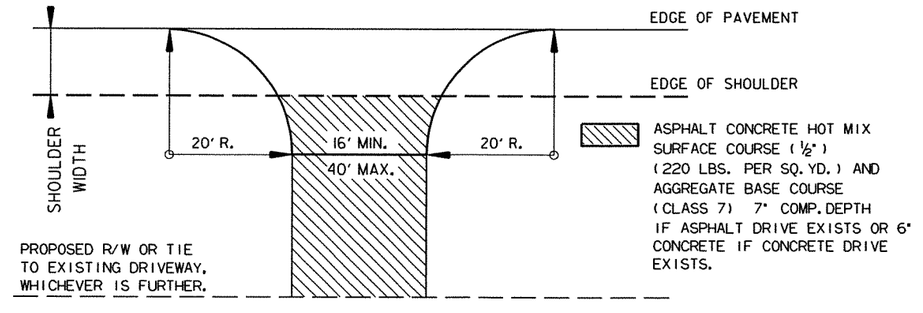
DETAIL OF WIDENING FOR GUARDRAIL WITH EXISTING SUBGRADE

* REFER TO STANDARD DRAWING GR-9A FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



DETAIL FOR COUNTY ROAD TURNOUTS



DETAIL FOR DRIVEWAY TURNOUTS

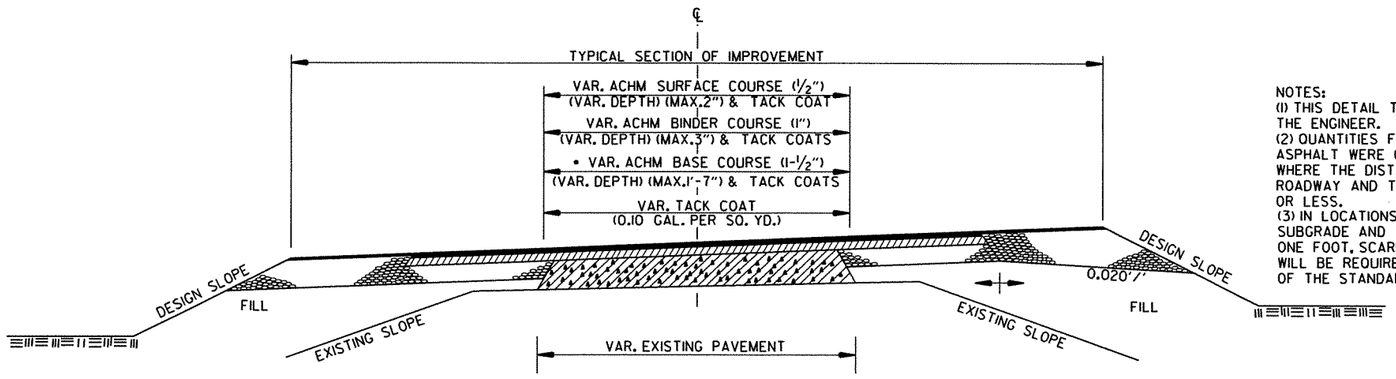
10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	17	239

(2) SPECIAL DETAILS

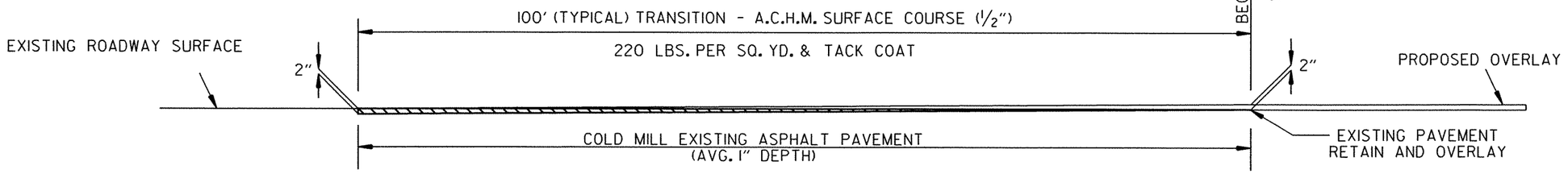
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



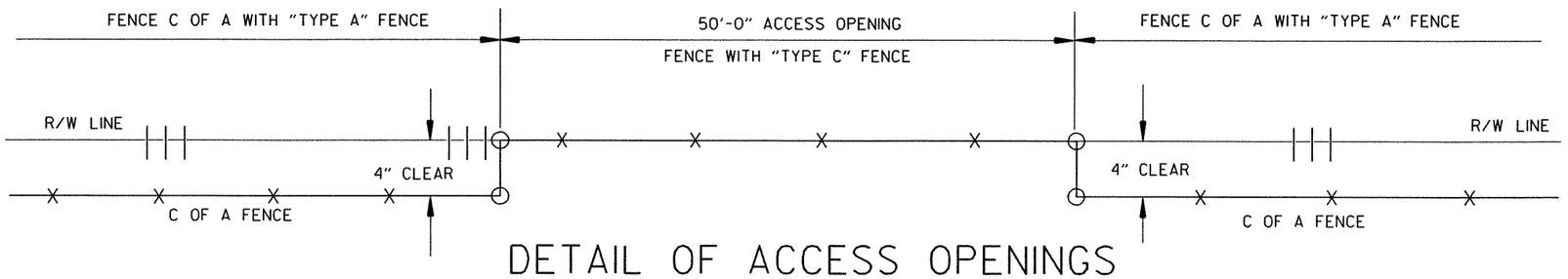
• 7" AGGREGATE BASE COURSE (CLASS 7)
TO BE REPLACED WITH A.C.H.M. BASE COURSE (1 1/2")

NOTES:
(1) THIS DETAIL TO BE USED ONLY IF AND 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, EDITION OF 2003.

METHOD OF RAISING GRADE



DETAIL FOR PAVEMENT TRANSITION



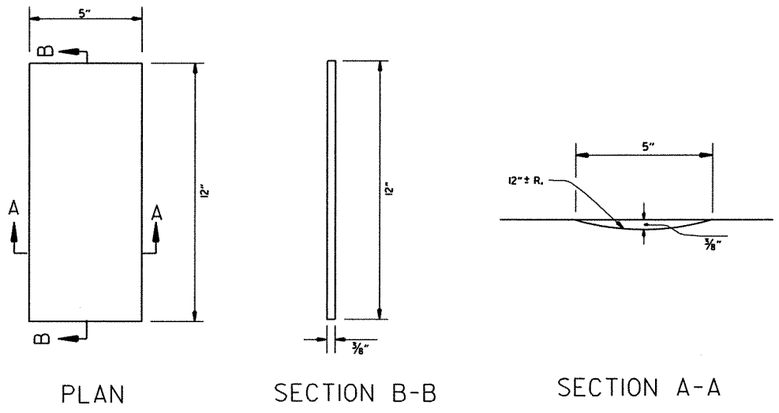
DETAIL OF ACCESS OPENINGS

10/1/2012
R040521.DGN

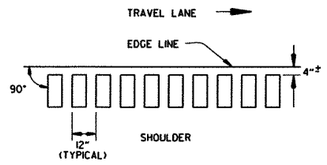
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	18	239

(2) SPECIAL DETAILS

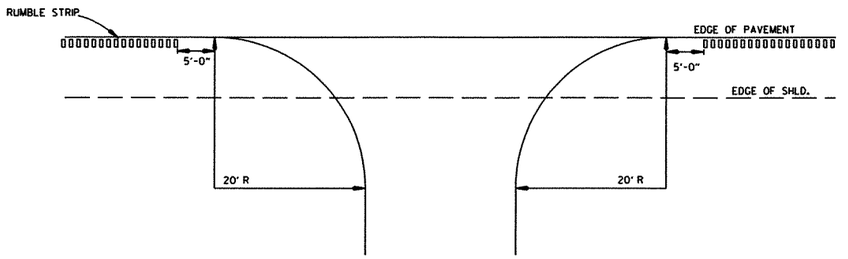
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



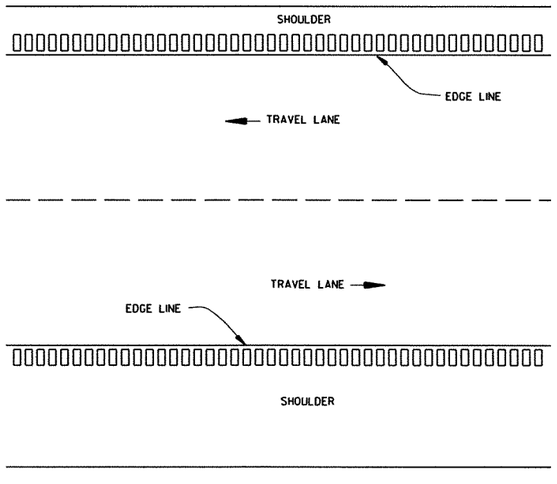
DETAILS OF RUMBLE STRIPS



LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER



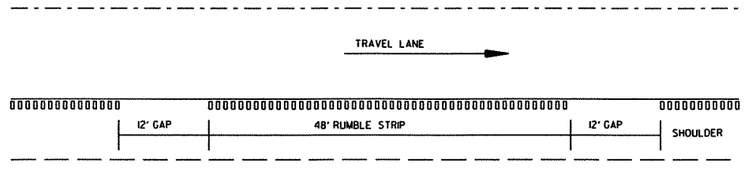
DETAIL FOR RUMBLE STRIP GAP
AT DRIVEWAY TURNOUTS



PLAN VIEW

GENERAL NOTES

1. RUMBLE STRIPS SHALL NOT BE INSTALLED ON CURB SECTIONS, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.
2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.
3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.
4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL ONLY INCLUDE THAT PORTION OF THE SHOULDER ON WHICH RUMBLE STRIPS HAVE BEEN CONSTRUCTED. NO MEASUREMENT OR PAYMENT WILL BE MADE FOR GAPS, DRIVEWAYS, TURNOUTS, OR OTHER PUBLIC ROAD INTERSECTIONS WHERE RUMBLE STRIPS HAVE NOT BEEN CONSTRUCTED.
5. THE 3/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.



DETAIL FOR GAP PATTERN RUMBLE STRIP

NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

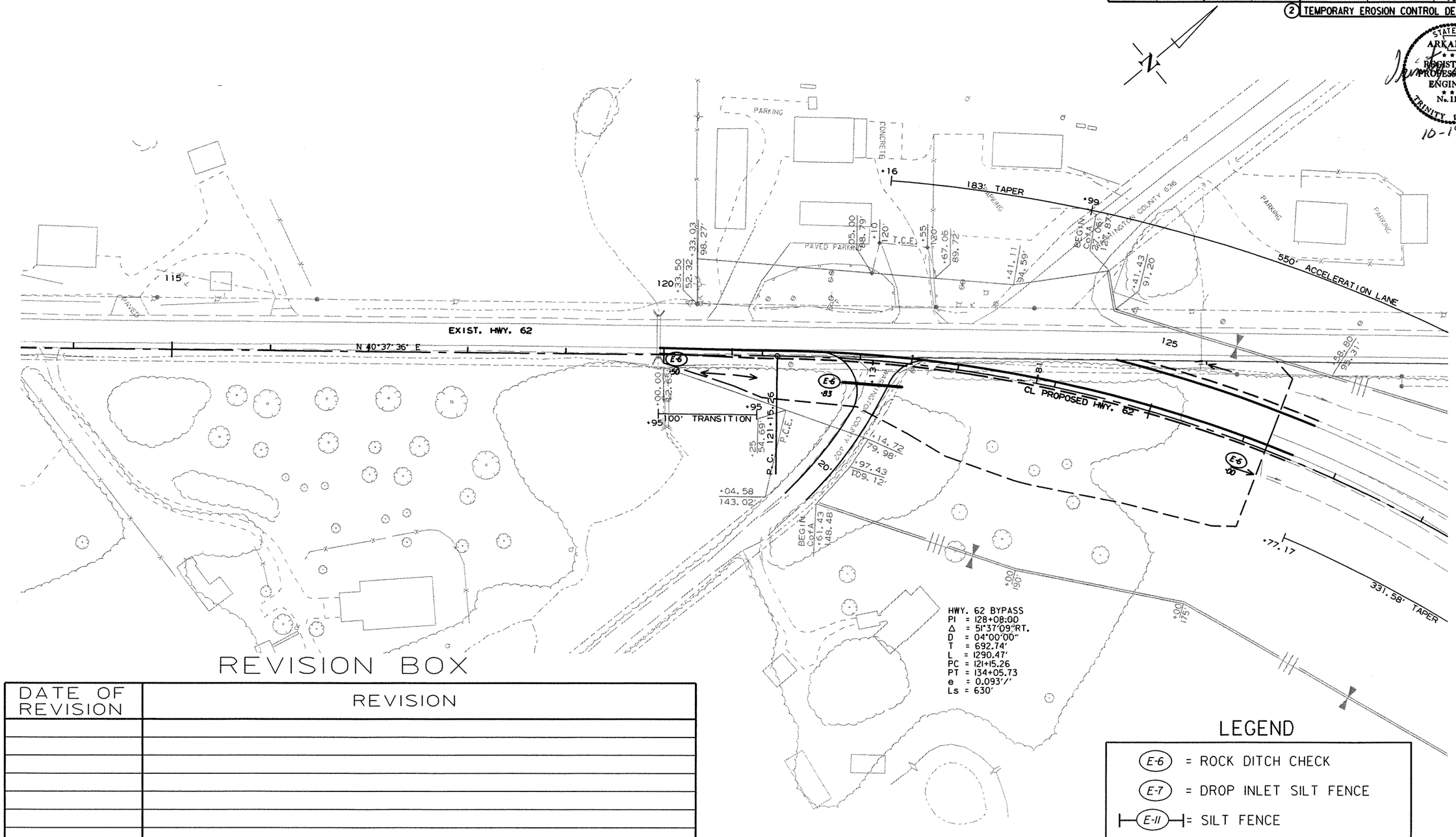
10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	19	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

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

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

REVISION BOX

DATE OF REVISION	REVISION

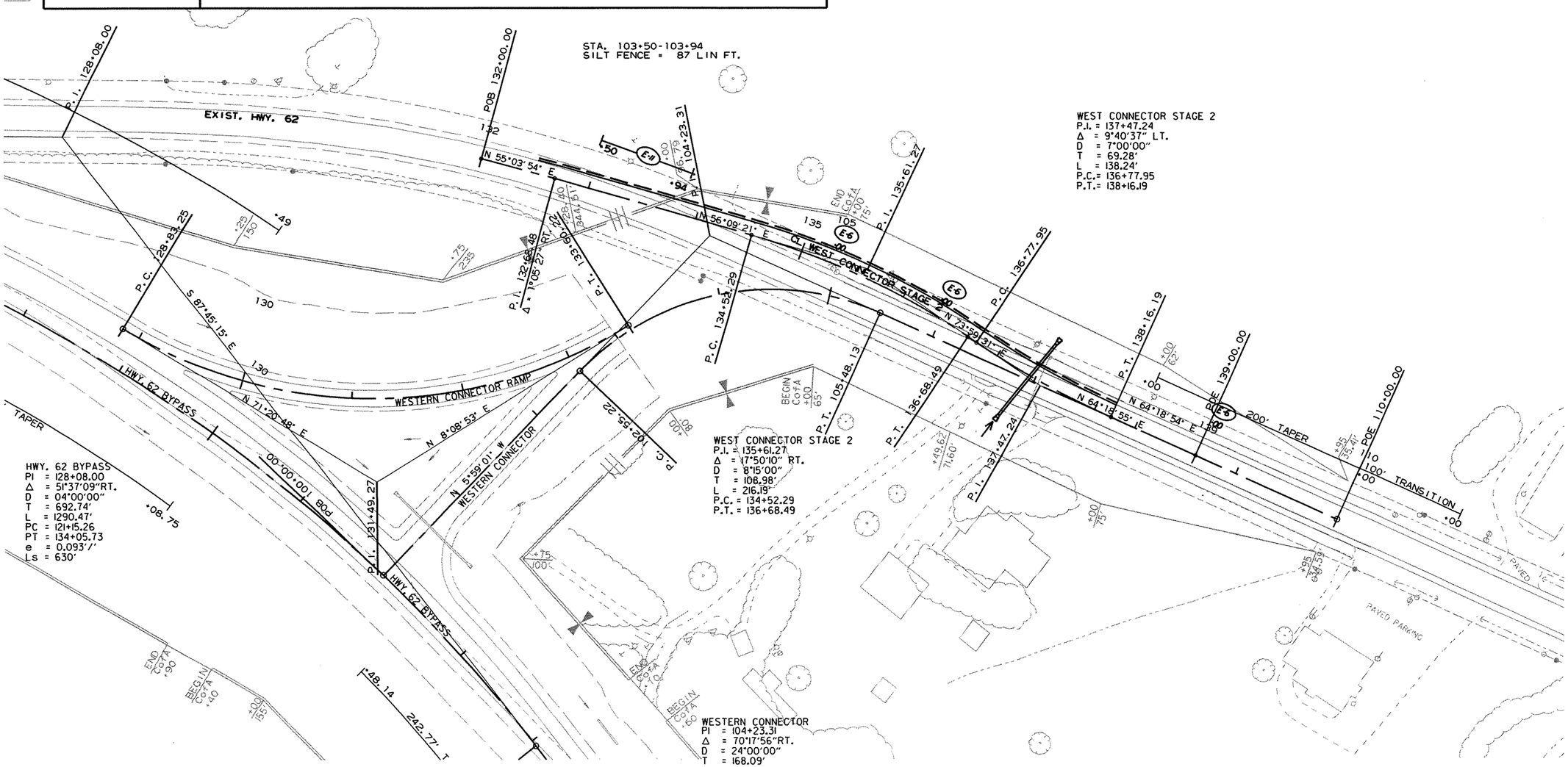
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				6	ARK.			
				JOB NO.		040521	20	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

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



R040521_MDT.DGN 9/27/2012

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	21	239

(2) TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

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

EAST CONNECTOR STAGE 2
P.I. = 341+68.05
Δ = 4°34'45" LT.
D = 8°15'00"
T = 27.77'
L = 55.51'
P.C. = 341+40.28
P.T. = 341+95.79

EAST CONNECTOR STAGE 2
P.I. = 344+57.86
Δ = 5°43'08" LT.
D = 8°15'00"
T = 34.69'
L = 69.32'
P.C. = 344+23.17
P.T. = 344+92.49

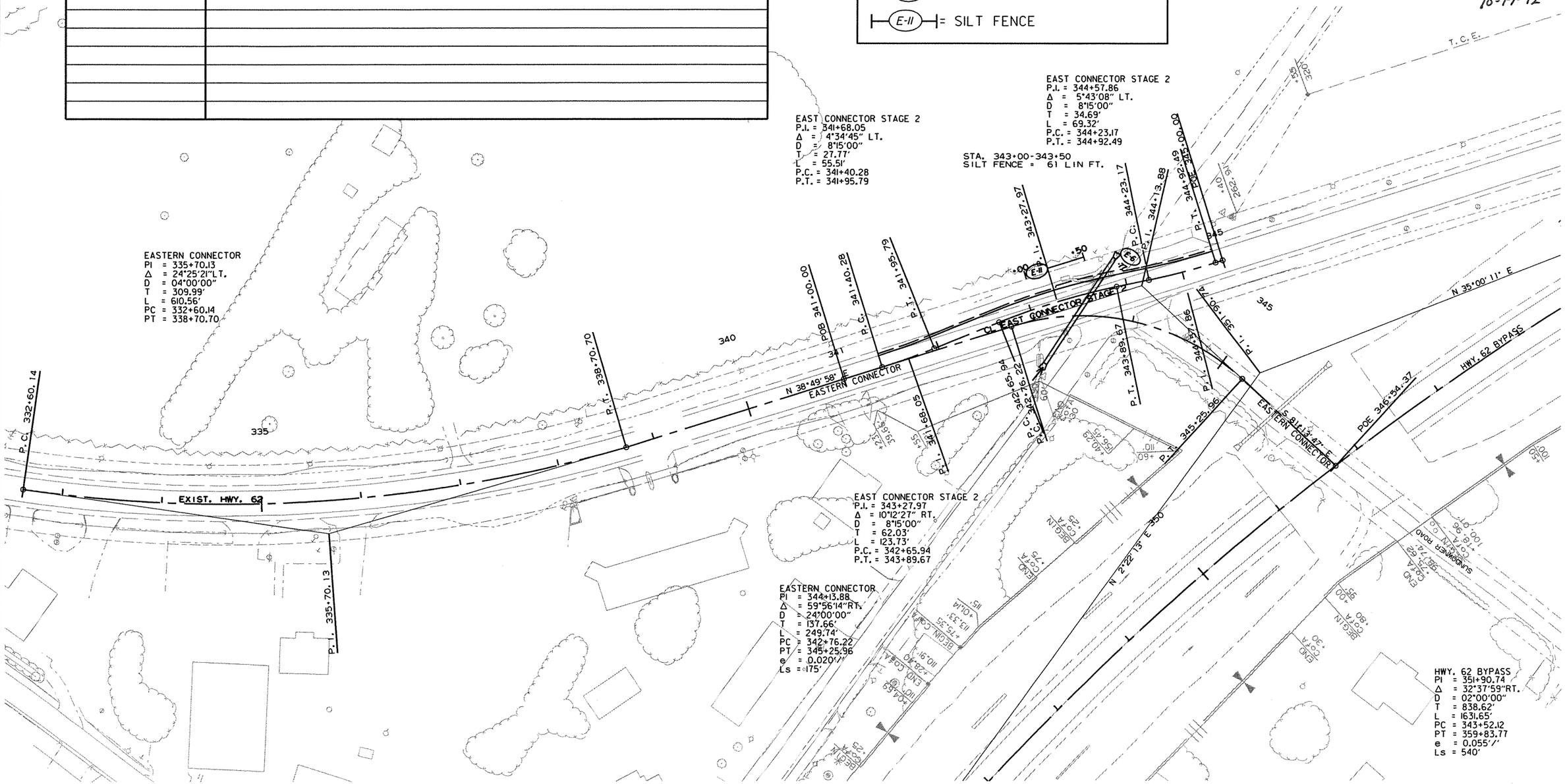
STA. 343+00-343+50
SILT FENCE = 61 LIN FT.

EASTERN CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

EAST CONNECTOR STAGE 2
P.I. = 343+27.97
Δ = 10°12'27" RT.
D = 8°15'00"
T = 62.03'
L = 123.73'
P.C. = 342+65.94
P.T. = 343+89.67

EASTERN CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'



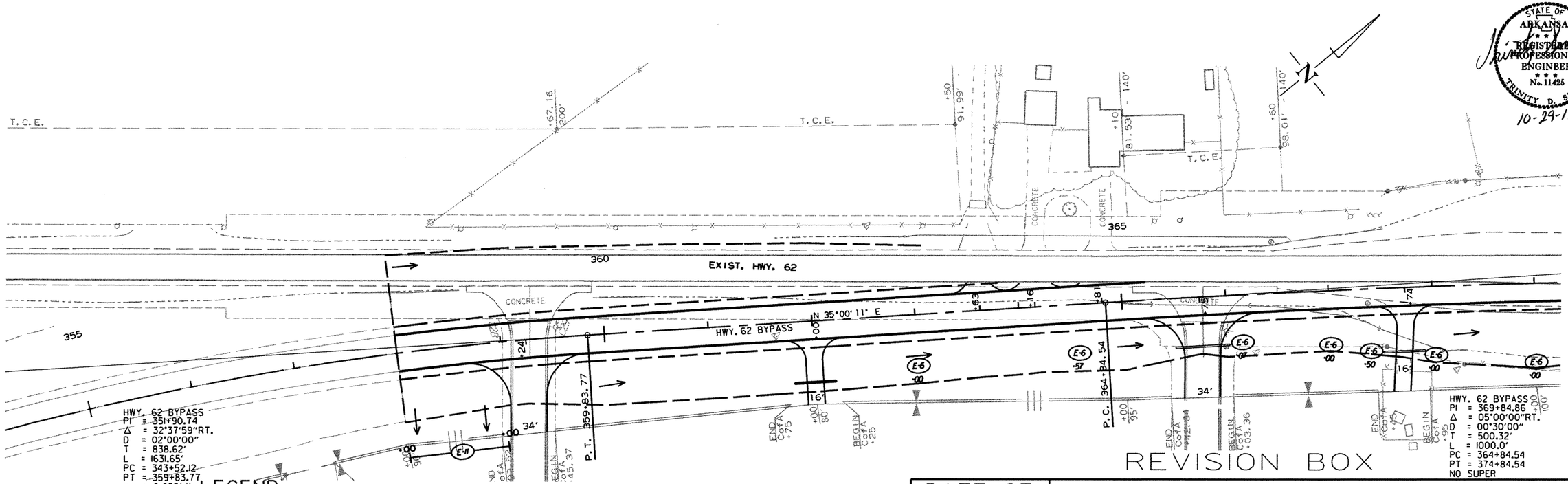
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

9/27/2012
R040521_MDT.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	22	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-24-12



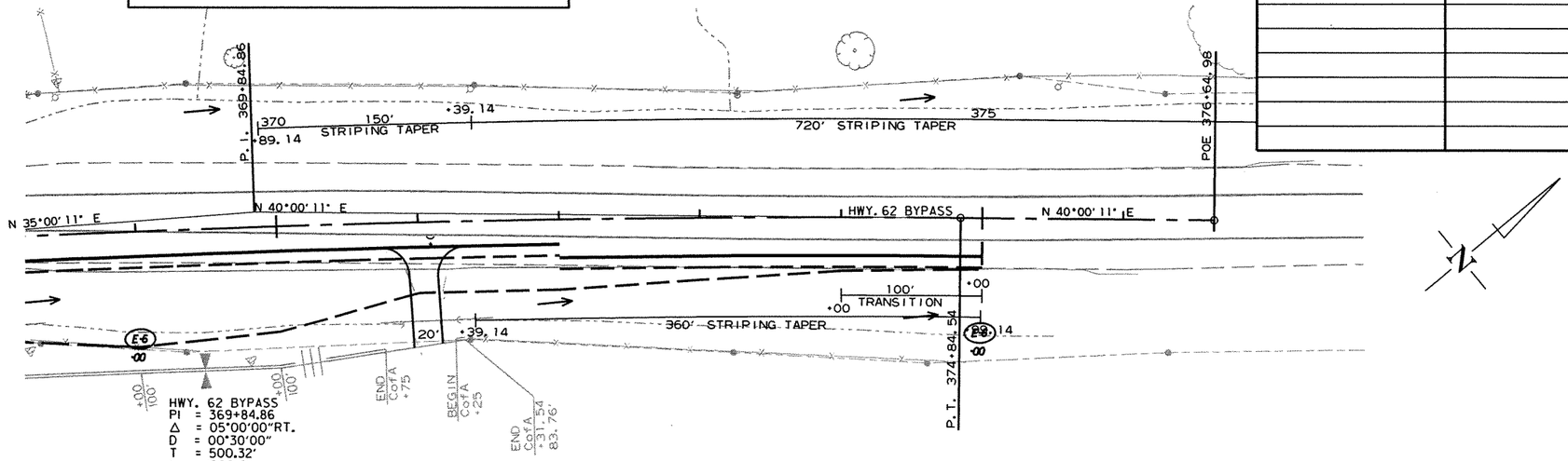
LEGEND

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

STA. 358+00-359+00
SILT FENCE = 96 LIN FT.

REVISION BOX

DATE OF REVISION	REVISION



STAGE 1
TEMPORARY EROSION CONTROL DETAILS

9/27/2012
R040521_MDT.DGN

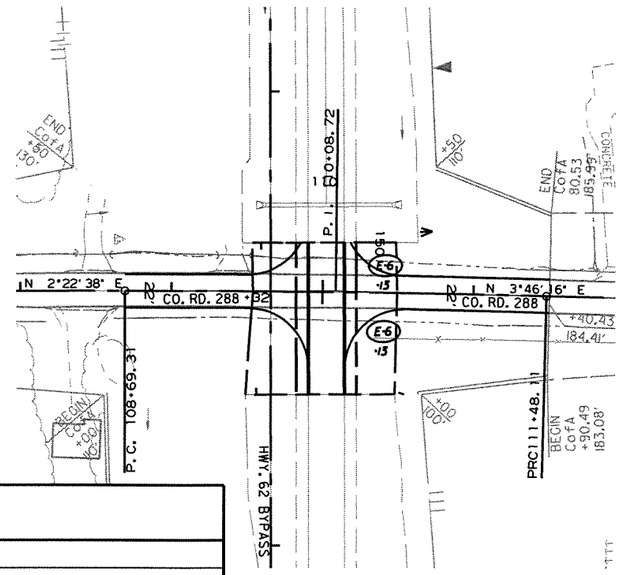
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				JOB NO.		040521	23	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

REVISION BOX

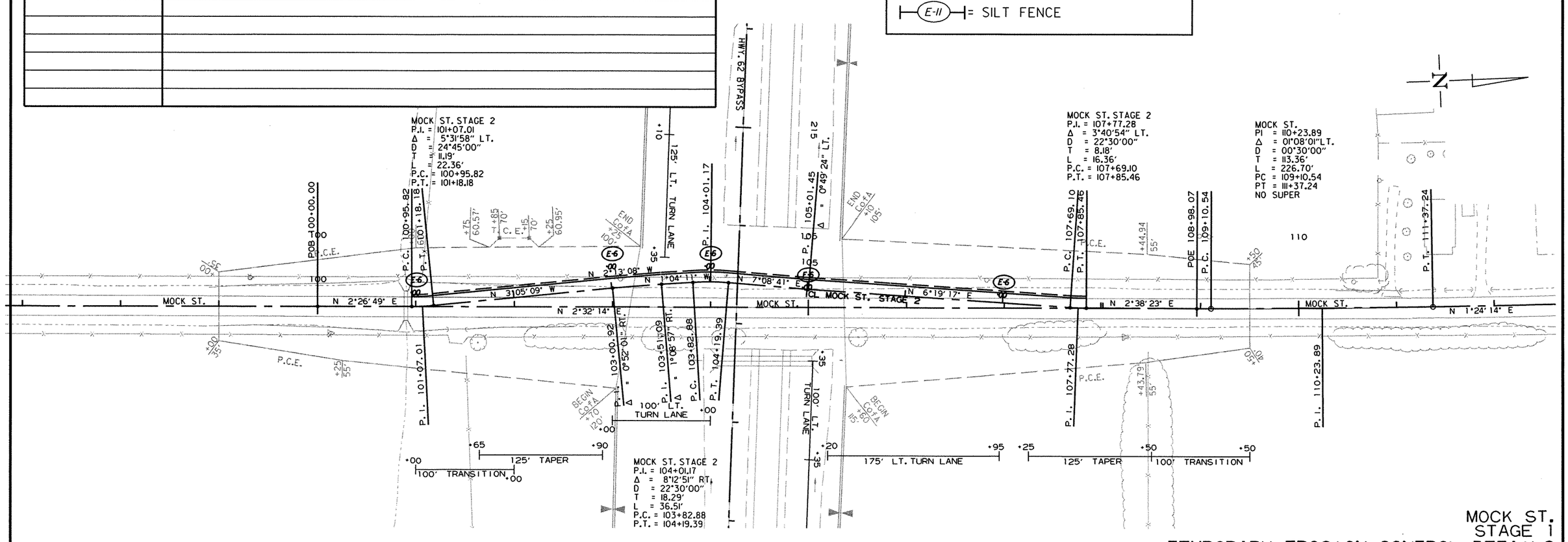
DATE OF REVISION	REVISION



LEGEND

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

CO. RD. 288



MOCK ST.
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

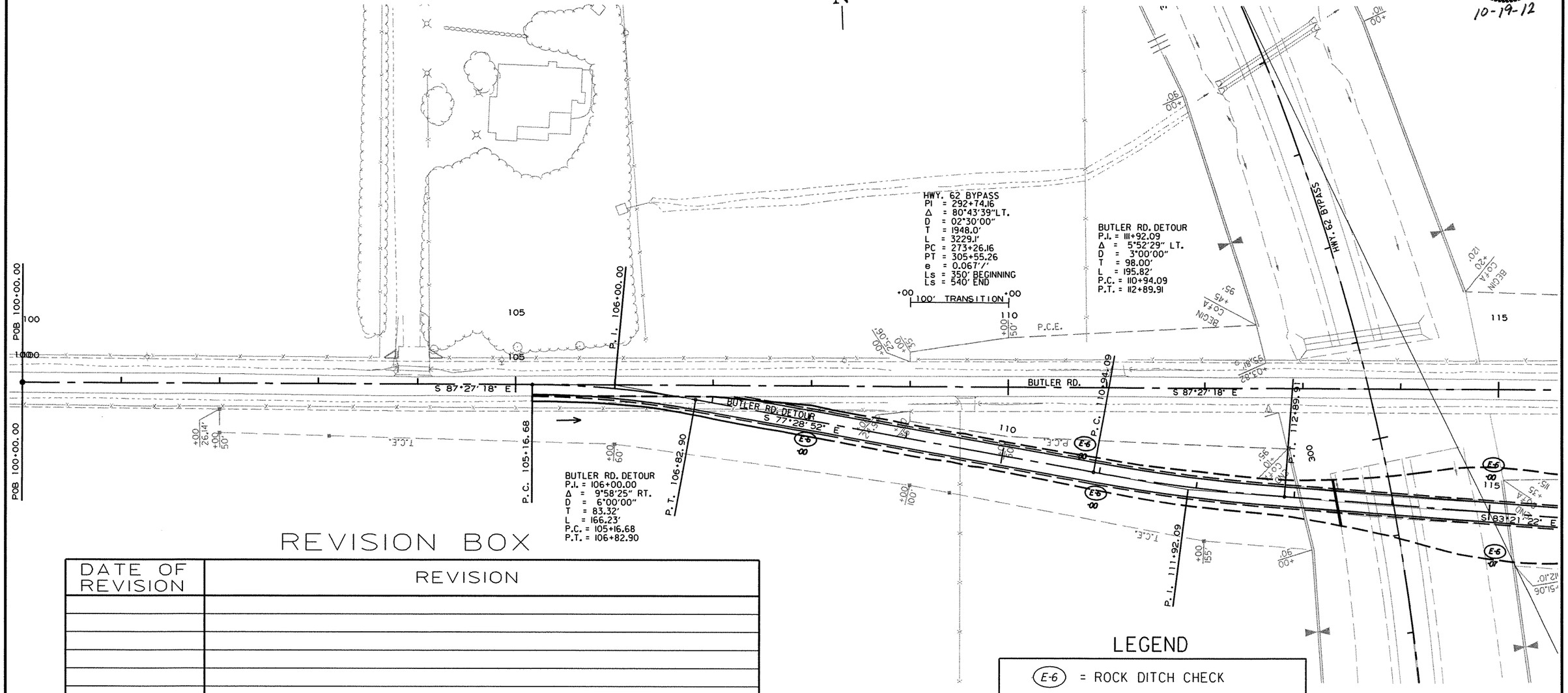
9/27/2012

R040521_MOT.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	24	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

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

BUTLER RD.
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	25	239

(2) TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

BUTLER RD. DETOUR
P.I. = 117+75.56
Δ = 27°27'07" LT.
D = 8°00'00"
T = 174.93'
L = 343.15'
P.C. = 116+00.62
P.T. = 119+43.77

BUTLER RD. DETOUR
P.I. = 121+32.96
Δ = 23°21'11" RT.
D = 7°00'00"
T = 169.16'
L = 333.61'
P.C. = 119+63.81
P.T. = 122+97.42

P.I. 124+28.27
Δ = 0°38'23" RT.
P.I. 127+51.42

S 88°08'13" E BUTLER RD.
S 87°27'18" E
S 87°29'50" E
S 83°21'22" E
N 69°11'32" E
BUTLER RD. DETOUR
100' TRANSITION
P.C.E.
T.C.E.
P.C. 116+00.62
P.T. 119+43.77
P.C. 119+63.81
P.I. 117+75.56
P.T. 122+97.42
P.I. 124+00.00
Δ = 0°40'55" LT.
POE 124+28.27
+51.06
112.10'

LEGEND

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

9/27/2012

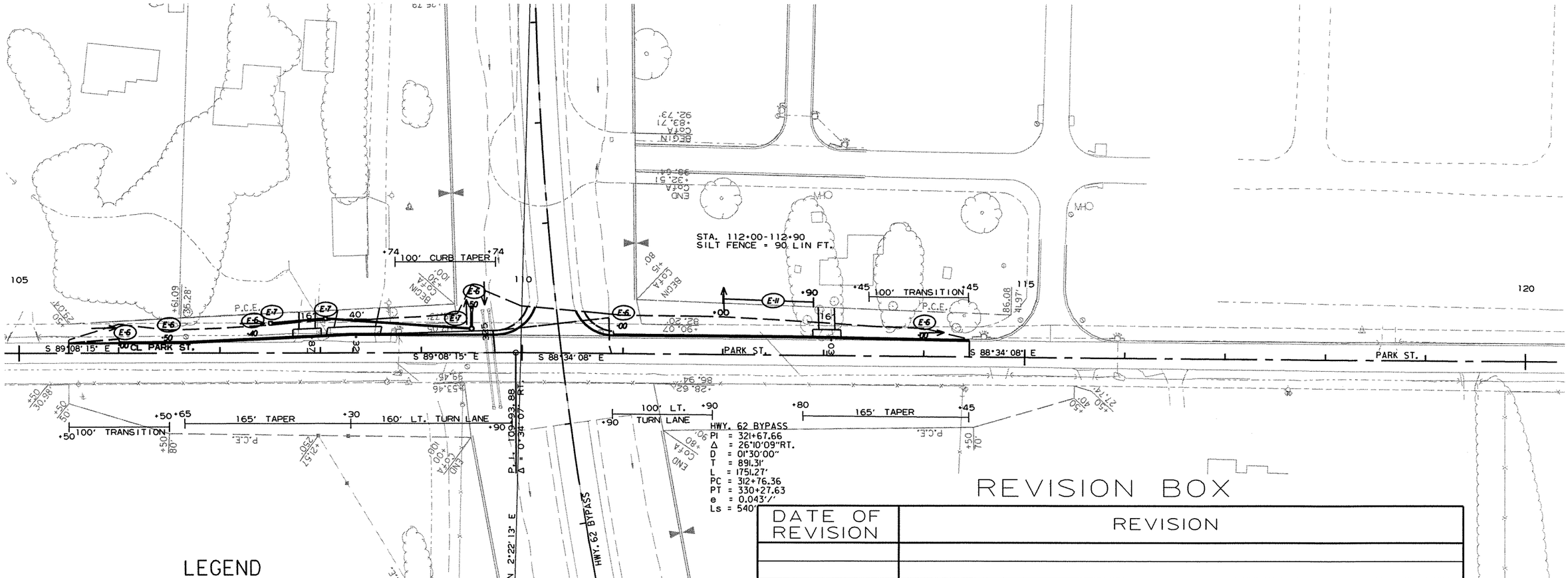
R040521_MDT.DGN

BUTLER RD.
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	26	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



LEGEND

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

REVISION BOX

DATE OF REVISION	REVISION

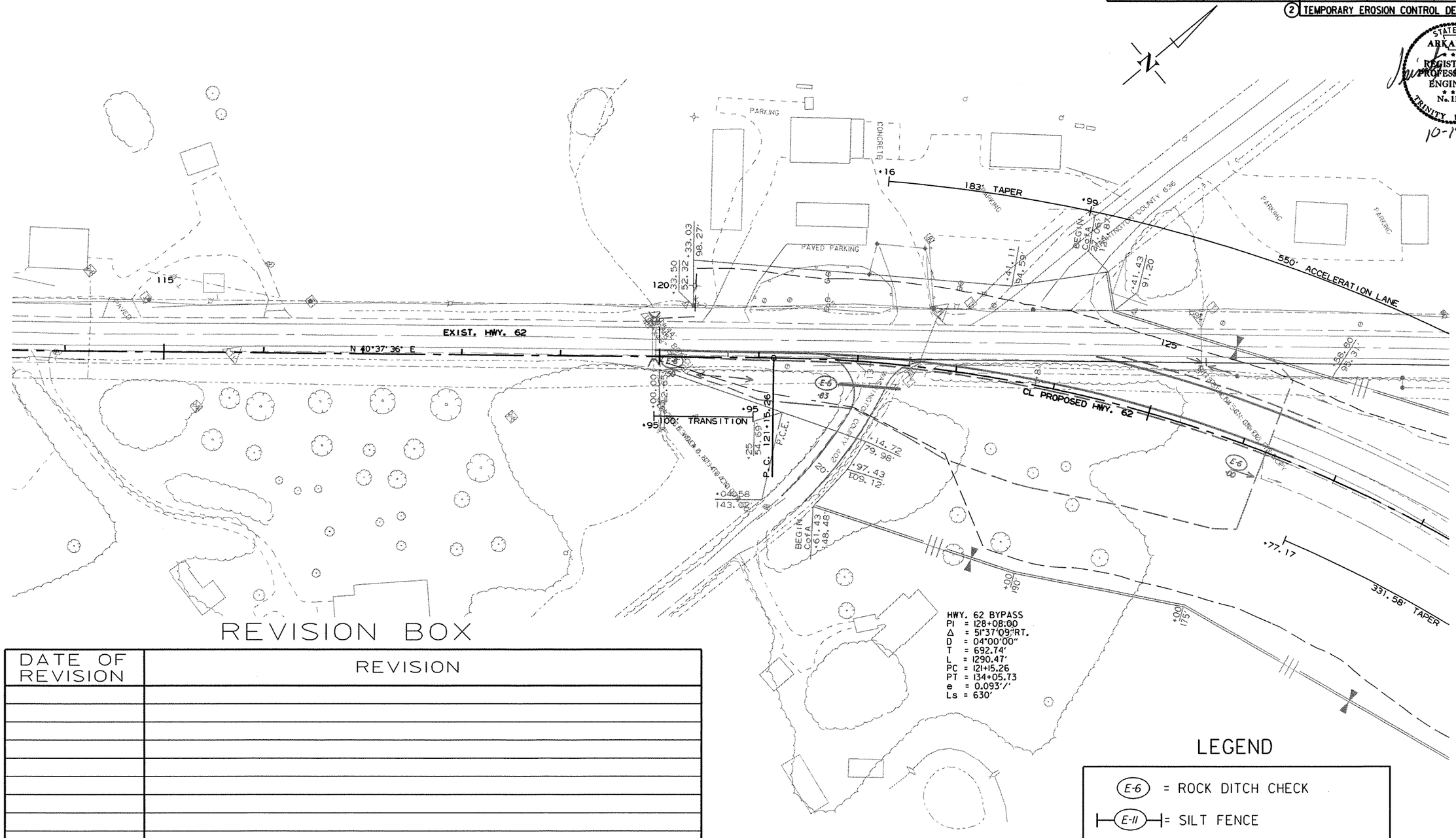
PARK ST.
STAGE 1
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	27	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

9/27/2012

R040521_MDT.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	28	239

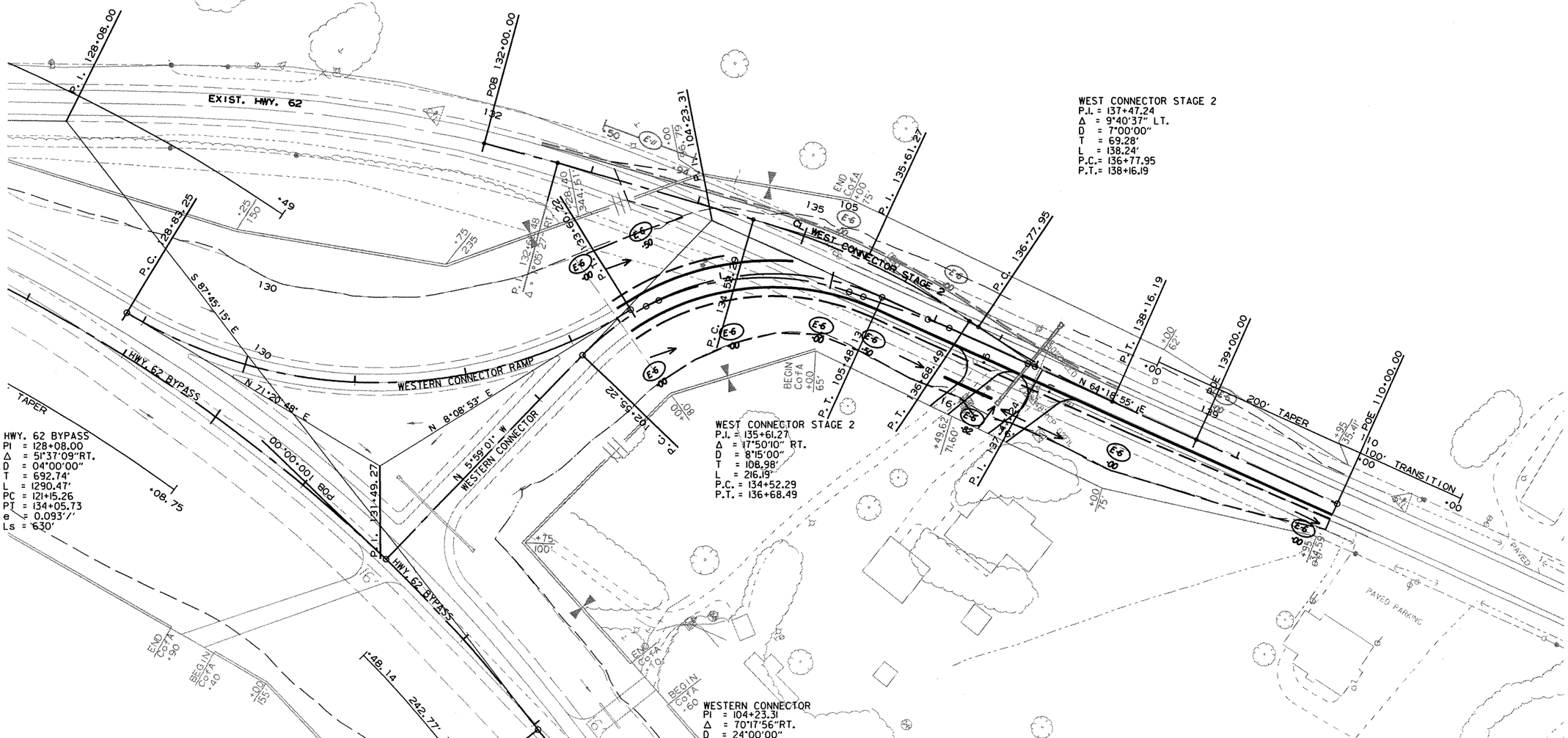
(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE



STAGE 2
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

REVISION BOX

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	29	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

EASTERN CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

EAST CONNECTOR STAGE 2
P.I. = 341+68.05
Δ = 4°34'45" LT.
D = 8°15'00"
T = 27.77'
L = 55.51'
P.C. = 341+40.28
P.T. = 341+95.79

EAST CONNECTOR STAGE 2
P.I. = 344+57.86
Δ = 5°43'08" LT.
D = 8°15'00"
T = 34.69'
L = 69.32'
P.C. = 344+23.17
P.T. = 344+92.49

EAST CONNECTOR STAGE 2
P.I. = 343+27.97
Δ = 10°12'27" RT.
D = 8°15'00"
T = 62.03'
L = 123.73'
P.C. = 342+65.94
P.T. = 343+89.67

EASTERN CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

STA. 343+84-344+69
SILT FENCE = 85 LIN. FT.

N 38°49'58" E EASTERN CONNECTOR

N 35°00'11" E

N 22°13'E 350

EXIST. HWY. 62

HWY. 62 BYPASS

EAST CONNECTOR

SUNDOWNER ROAD

T.C.E.

P.C. 332+60.14

P.T. 338+70.70

P.T. 335+70.13

P.C. 341+40.28

P.T. 341+95.79

P.C. 344+23.17

P.T. 344+92.49

P.T. 343+89.67

P.T. 345+25.96

POE 346+54.37

335

340

341

CONCRETE

R040521_MDT.DGN 9/27/2012

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	30	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

MOCK ST. STAGE 2
P.I. = 101+07.01
Δ = 5°31'58" LT.
D = 24°45'00"
T = 11.19'
L = 22.36'
P.C. = 100+95.82
P.T. = 101+18.18

MOCK ST. STAGE 2
P.I. = 107+77.28
Δ = 3°40'54" LT.
D = 22°30'00"
T = 8.18'
L = 16.36'
P.C. = 107+69.10
P.T. = 107+85.46

MOCK ST.
PI = 110+23.89
Δ = 01°08'01"LT.
D = 00°30'00"
T = 113.36'
L = 226.70'
PC = 109+10.54
PT = 111+37.24
NO SUPER

MOCK ST. STAGE 2
P.I. = 104+01.17
Δ = 8°12'51" RT.
D = 22°30'00"
T = 18.29'
L = 36.51'
P.C. = 103+82.88
P.T. = 104+19.39

MOCK ST. | MOCK ST. STAGE 2 | MOCK ST.

125' LT. TURN LANE | 100' LT. TURN LANE | 175' LT. TURN LANE

125' TAPER | 100' TRANSITION | 720' TAPER | 125' TAPER | 100' TRANSITION

P.C.E.

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

REVISION BOX

DATE OF REVISION	REVISION

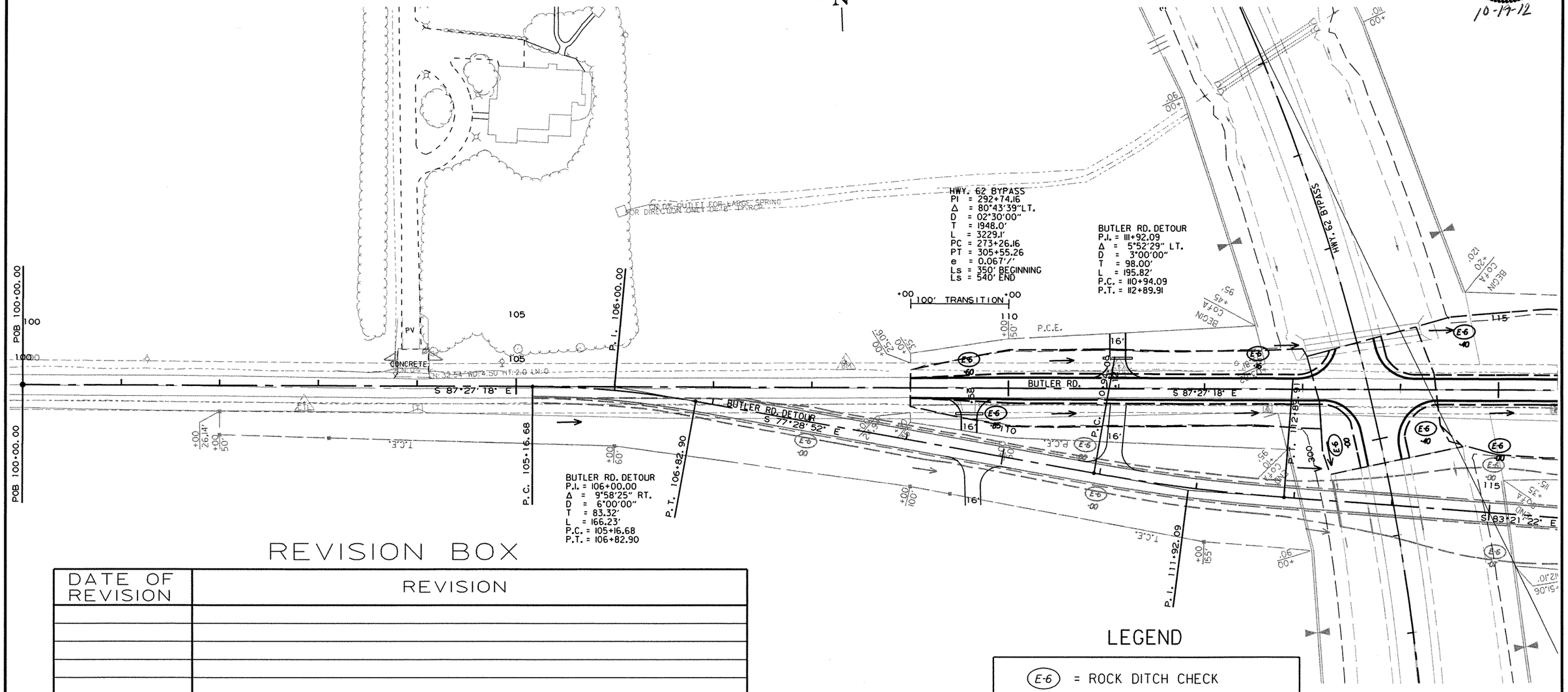
MOCK ST.
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	31	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-17-12



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

BUTLER RD.
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	32	239

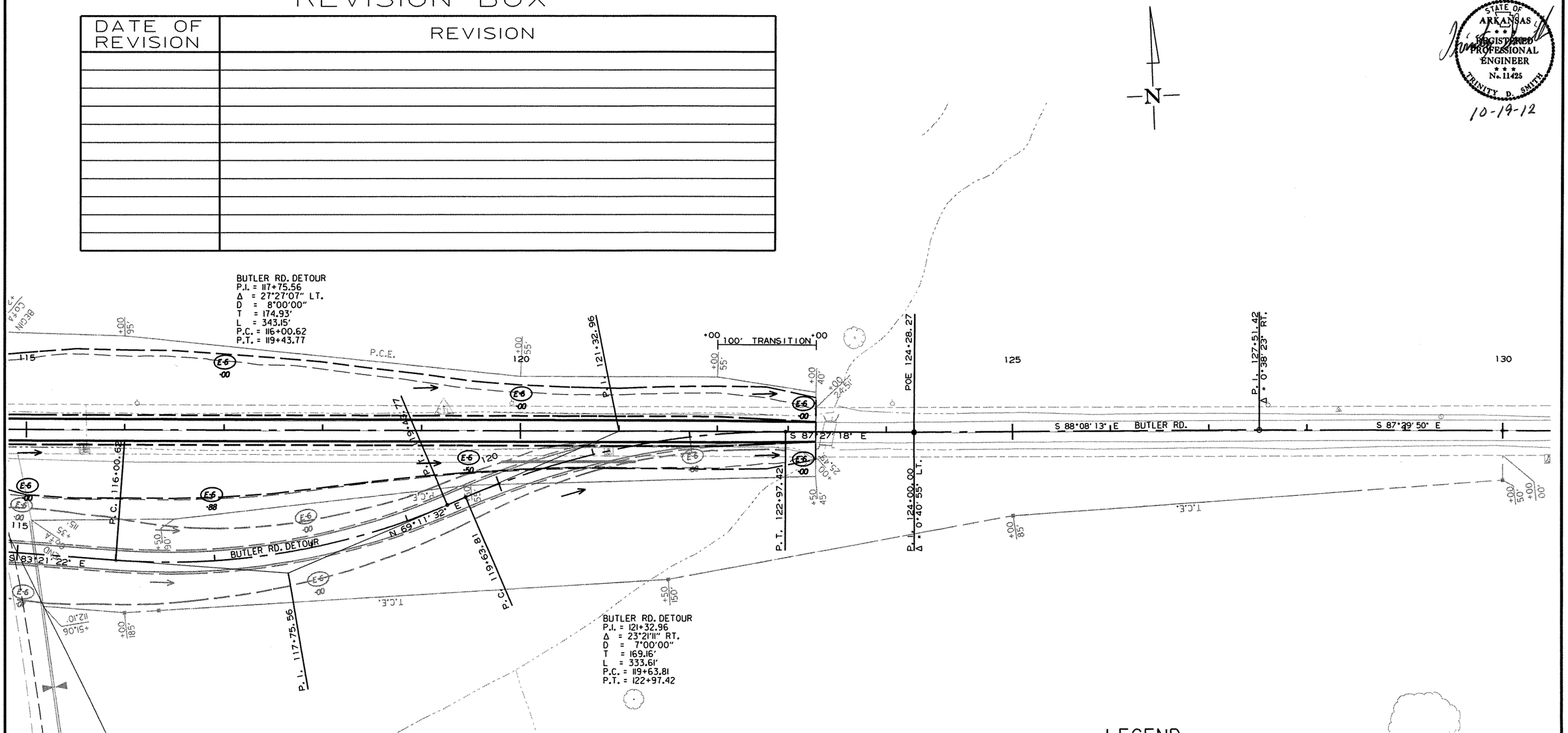
(2) TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

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

10-19-12



LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

R040521_MDT.DGN 9/27/2012

BUTLER RD.
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		040521	33	239

(2) TEMPORARY EROSION CONTROL DETAILS

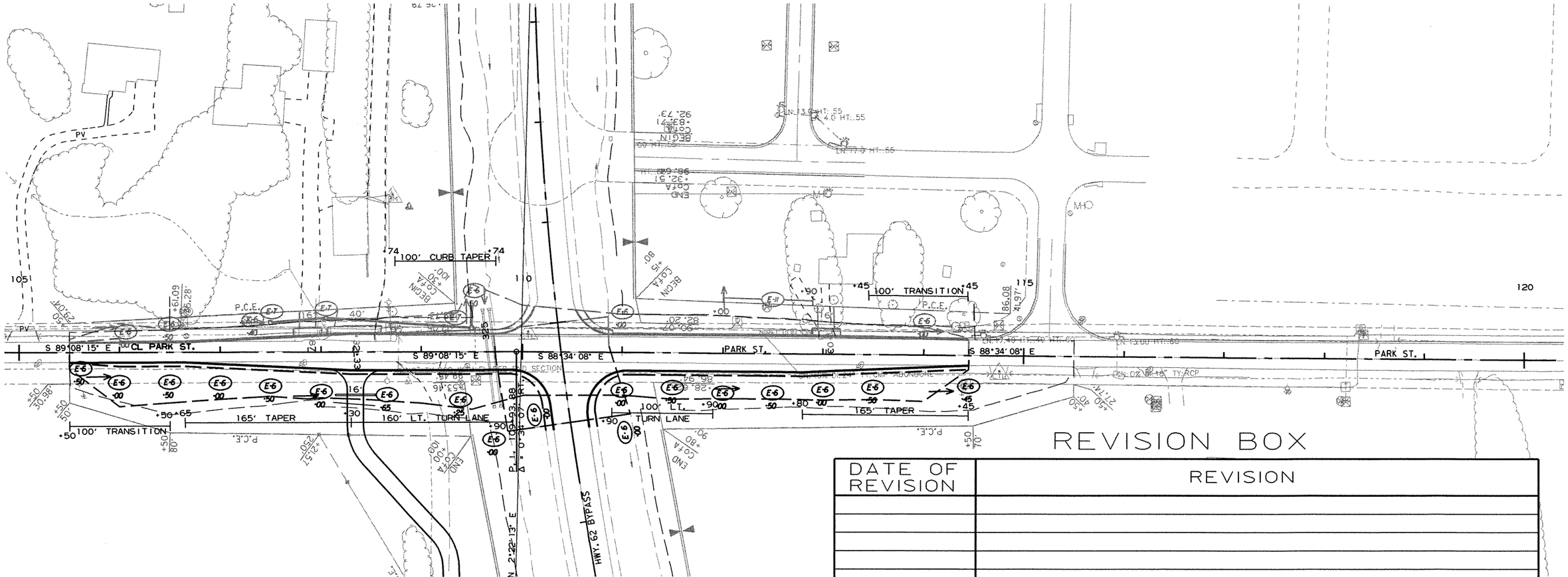
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

N



REVISION BOX

DATE OF REVISION	REVISION

PARK ST.
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	34	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-14-12

LEGEND

(E-6) = ROCK DITCH CHECK

REVISION BOX

DATE OF REVISION	REVISION

MOCK ST. STAGE 3
P.I. = 102+90.41
Δ = 2°44'53" LT.
D = 24°00'00"
T = 5.73'
L = 11.45'
P.C. = 102+84.68
P.T. = 102+96.13

MOCK ST. STAGE 3
P.I. = 107+25.02
Δ = 2°44'53" LT.
D = 24°00'00"
T = 5.73'
L = 11.45'
P.C. = 107+19.29
P.T. = 107+30.74

MOCK ST.
PI = 110+23.89
Δ = 01°08'01"LT.
D = 00°30'00"
T = 113.36'
L = 226.70'
PC = 109+10.54
PT = 111+37.24
NO SUPER

MOCK ST.
STAGE 3
TEMPORARY EROSION CONTROL DETAILS

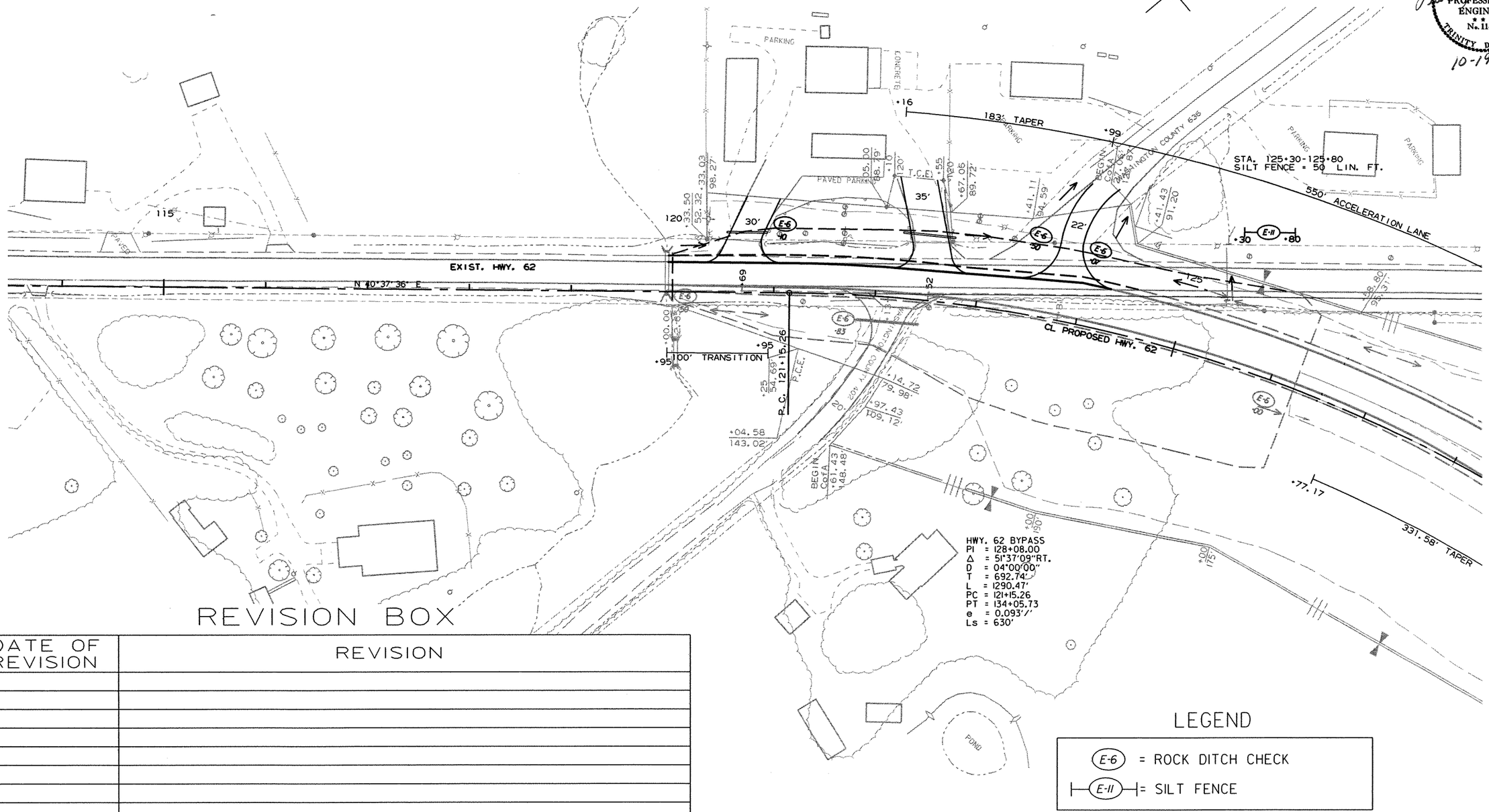
9/27/2012

R040521_MDT.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	35	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



REVISION BOX

DATE OF REVISION	REVISION

LEGEND

E-6 = ROCK DITCH CHECK
E-11 = SILT FENCE

STAGE 4
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 10/16/2012

REVISION BOX

DATE OF REVISION	REVISION

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	36	239

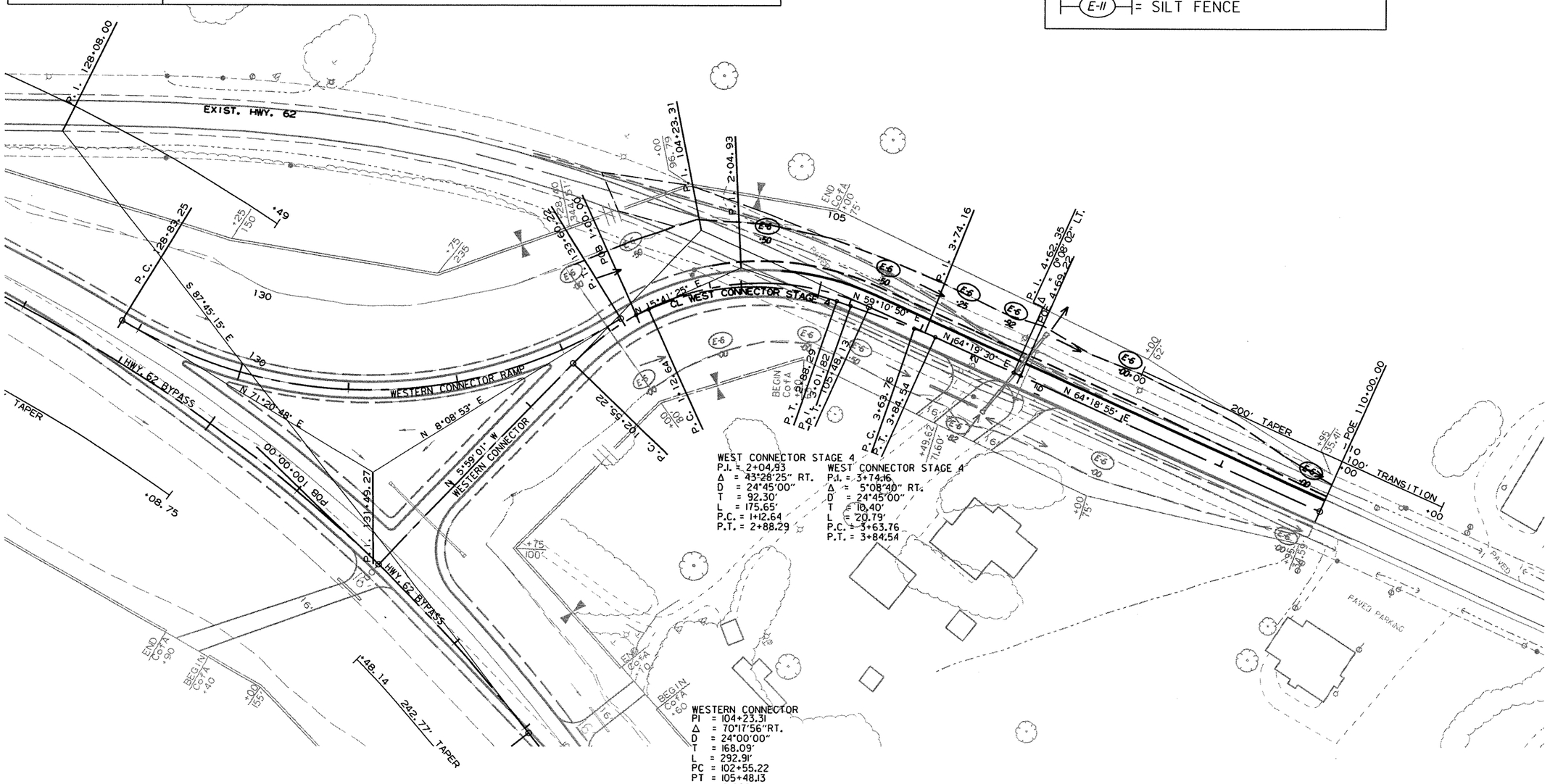
(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE



STAGE 4
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 10/16/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	37	239

(2) TEMPORARY EROSION CONTROL DETAILS

REVISION BOX

DATE OF REVISION	REVISION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

STA. 344+30-344+55
SILT FENCE = 38 LIN. FT.

EASTERN CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

EAST CONNECTOR STAGE 4
P.I. = 3+11.50
Δ = 9°59'45" RT.
D = 24°45'00"
T = 20.25'
L = 40.39'
P.C. = 2+91.25
P.T. = 3+31.64

EASTERN CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

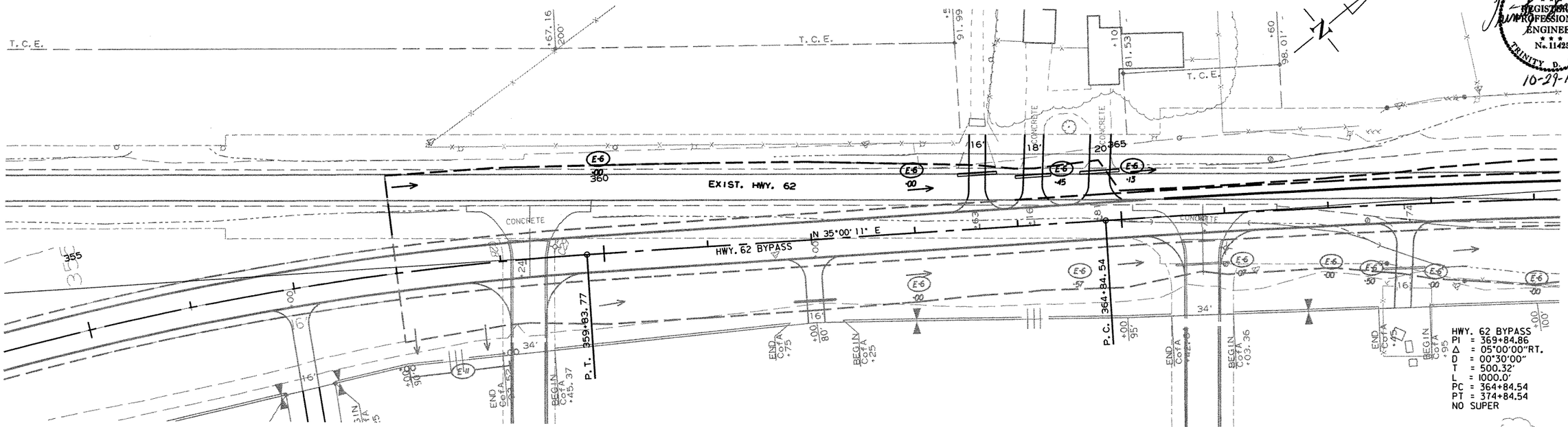
STAGE 4
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 10/16/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	38	239

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12



HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

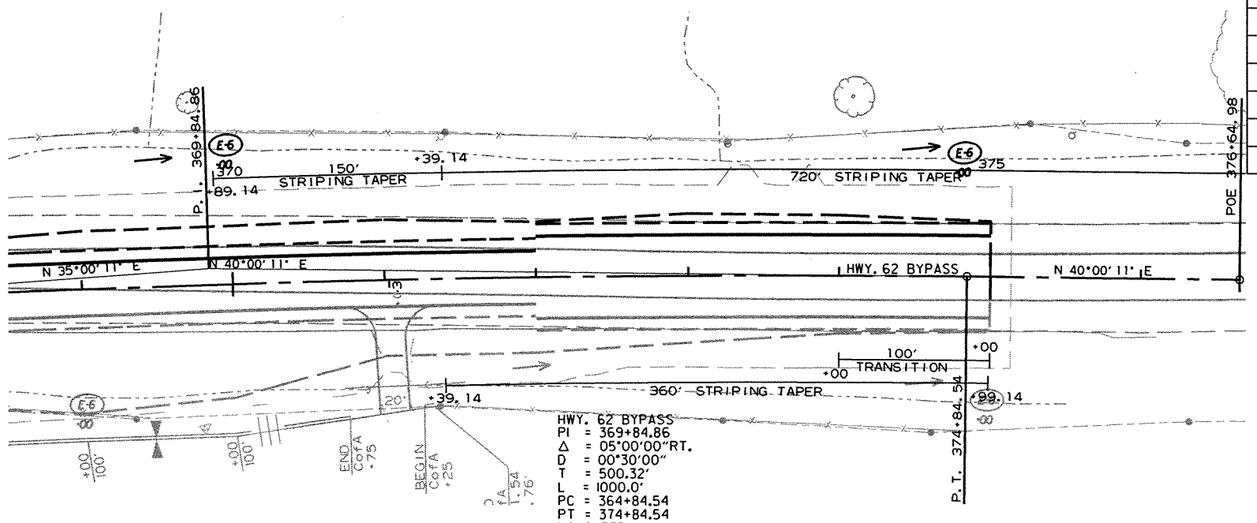
LEGEND

E-6 = ROCK DITCH CHECK

E-11 = SILT FENCE

REVISION BOX

DATE OF REVISION	REVISION



HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER

STAGE 4
TEMPORARY EROSION CONTROL DETAILS

R040521_MDT.DGN 10/16/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	39	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

DO NOT PASS — (4) R4-1 (24" X 30")

LOW SHOULDER — (8) W8-9 (36" X 36")

SHOULDER CLOSED — (8) RSP-1 (48" X 30")

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

CONSTRUCTION PAVEMENT MARKINGS
STA. 119+95-123+80 = 1540 LIN.FT.

VERTICAL PANELS
STATIONS 120+00-123+60 RT. OF EXIST. HWY.
@ 50' O.C. = 8 EACH

TRAFFIC DRUMS
STATIONS 123+60-126+30 RT. OF EXIST. HWY.
@ 50' O.C. = 6 EACH

(1) G20-2 (48" x 24") — END ROAD WORK — ALL STAGES

(1) W20-1 (48" x 48") — ROAD WORK 1500 FT — ALL STAGES

(1) W20-1 (48" x 48") — ROAD WORK 1000 FT

(1) W20-1 (48" x 48") — ROAD WORK 500 FT

(1) G20-2 (48" x 24") — END ROAD WORK — ALL STAGES

(1) W20-1 (48" x 48") — ROAD WORK AHEAD — ALL STAGES

(1) W20-1 (48" x 48") — ROAD WORK AHEAD — ALL STAGES

ALL STAGES — END ROAD WORK — (1) G20-2 (48" x 24") — 550' ACCELERATION LANE

EXIST. HWY. 62

N 40°37'36" E

115

120

125

VERTICAL PANELS @ 50' O.C.

VERTICAL PANELS @ 50' O.C.

TRAFFIC DRUMS @ 50' O.C.

PAVED PARKING

CONCRETE PARKING

PARKING

WASHINGTON COUNTY 635

183' TAPER

+99

+16

+95

100' TRANSITION

P.C. 121+15.26

CL PROPOSED HWY. 62

20' TRAFFIC DRUMS = 10 EACH

+77.17

331.58' TAPER

HWY. 62 BYPASS
PI = 128+08.00
Δ = 51°37'09"RT.
D = 04°00'00"
T = 692.74'
L = 1290.47'
PC = 121+15.26
PT = 134+05.73
e = 0.093'/'
Ls = 630'

ROAD CLOSED — (1) R11-2 (48" X 30")

(2) 16' BARR. TYP. III RT.
(2) 16' BARR. TYP. III LT.

LEFT IN PLACE
ON JOB 040524
REMOVE & DISPOSE
AFTER STAGE 3

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

R040521_MOT.DGN 8/24/2012

STAGE 1
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	40	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

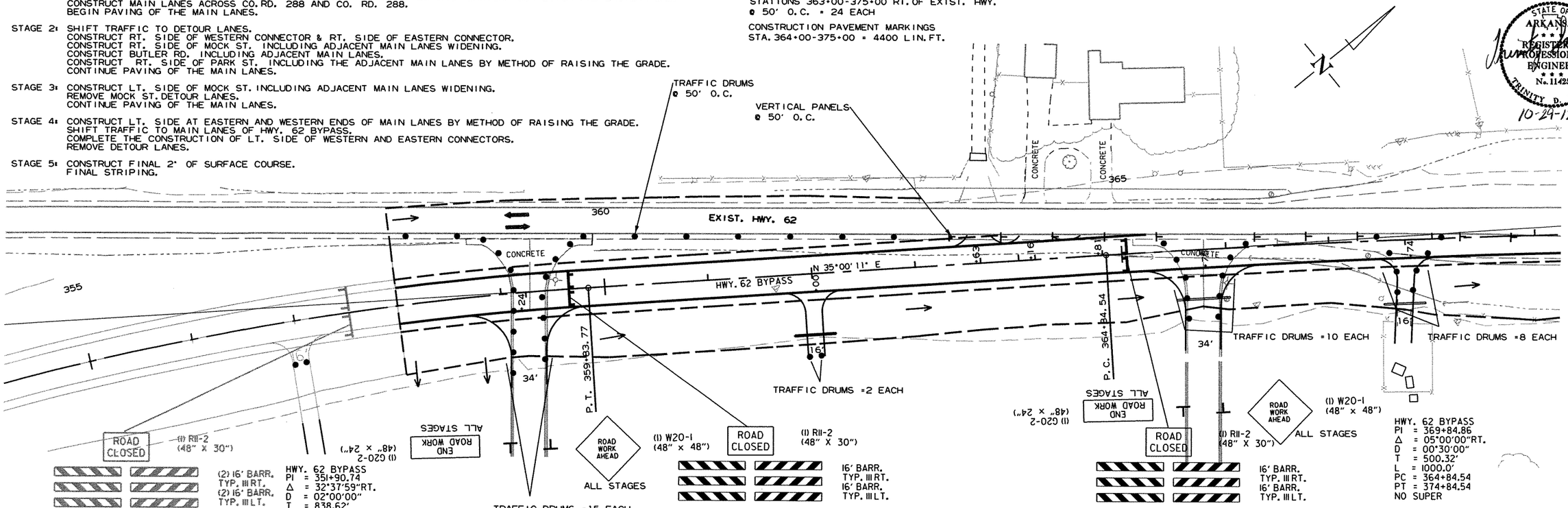
STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

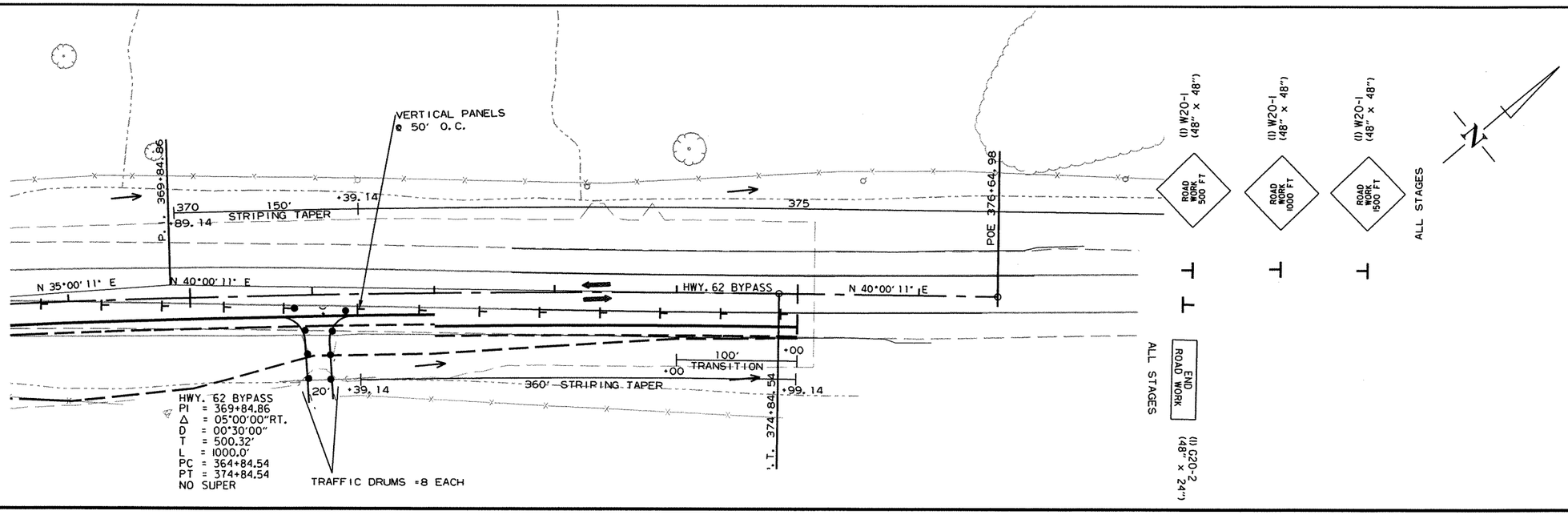
TRAFFIC DRUMS
STATIONS 358+00-363+00 RT. OF EXIST. HWY.
@ 50' O.C. = 10 EACH

VERTICAL PANELS
STATIONS 363+00-375+00 RT. OF EXIST. HWY.
@ 50' O.C. = 24 EACH

CONSTRUCTION PAVEMENT MARKINGS
STA. 364+00-375+00 = 4400 LIN. FT.

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STAGE 1
MAINTENANCE OF TRAFFIC

8/24/2012

R040521_MDT.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	41	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD. & EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

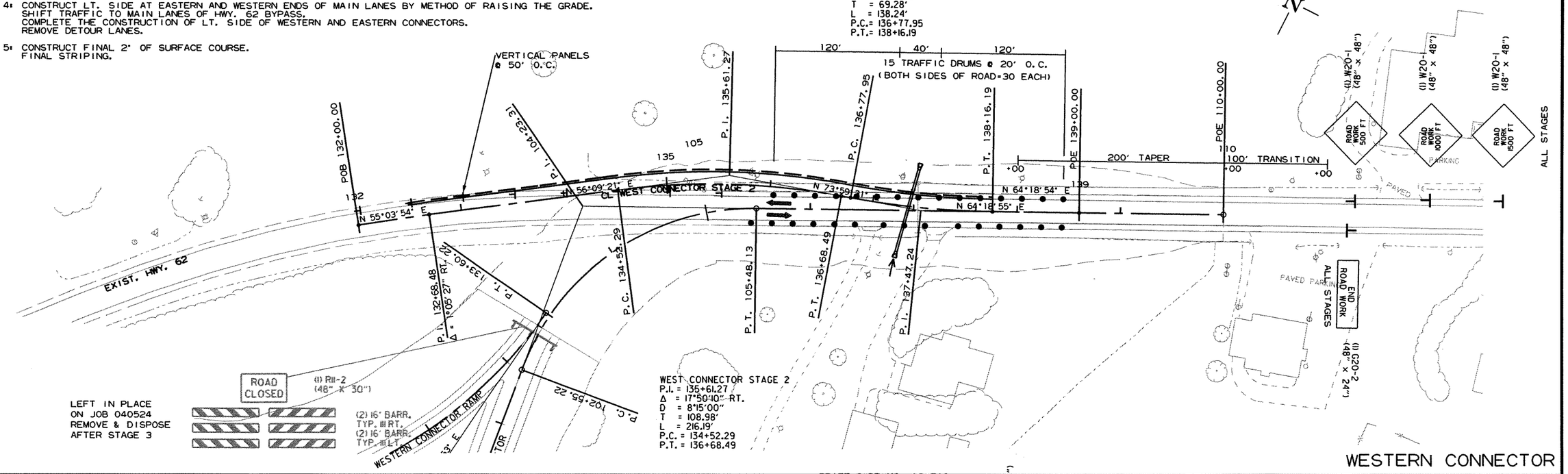
STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

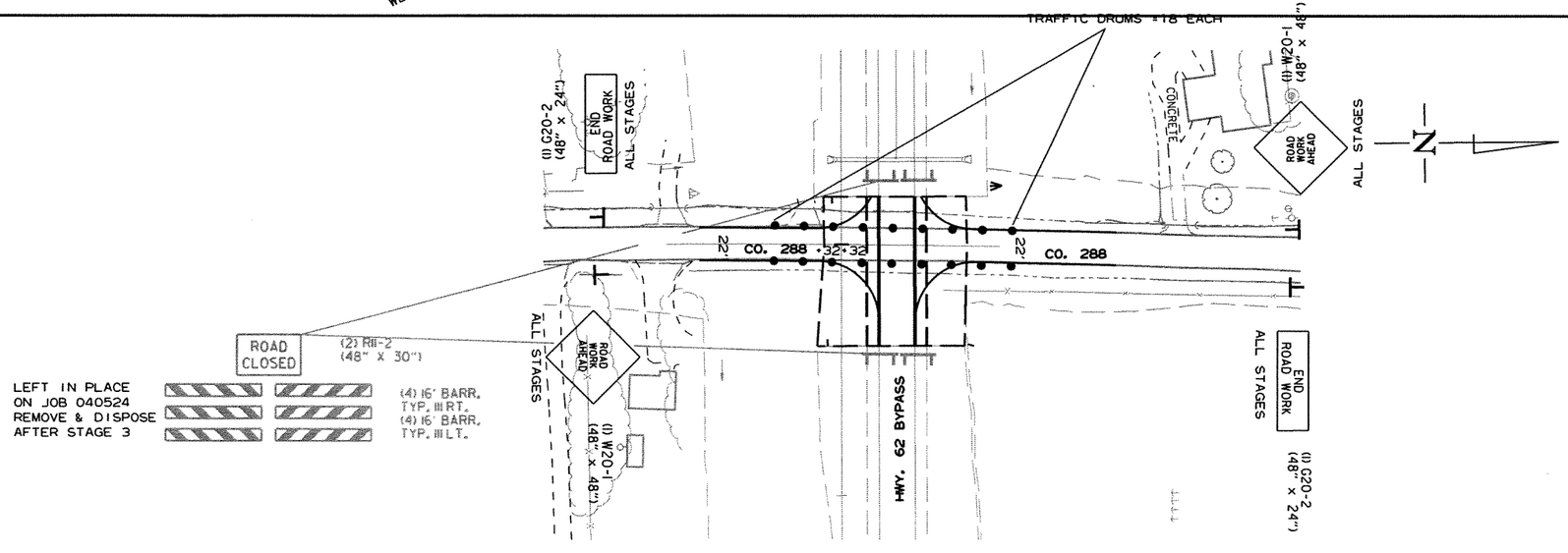
VERTICAL PANELS
STATIONS 132+00-138+50 LT. OF EXIST. HWY.
@ 50' O.C. = 14 EACH

WEST CONNECTOR STAGE 2
P.I. = 137+47.24
Δ = 9°40'37" LT.
D = 7°00'00"
T = 69.28'
L = 138.24'
P.C. = 136+77.95
P.T. = 138+16.19

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WESTERN CONNECTOR



CO. RD. 288
STAGE 1
MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	42	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

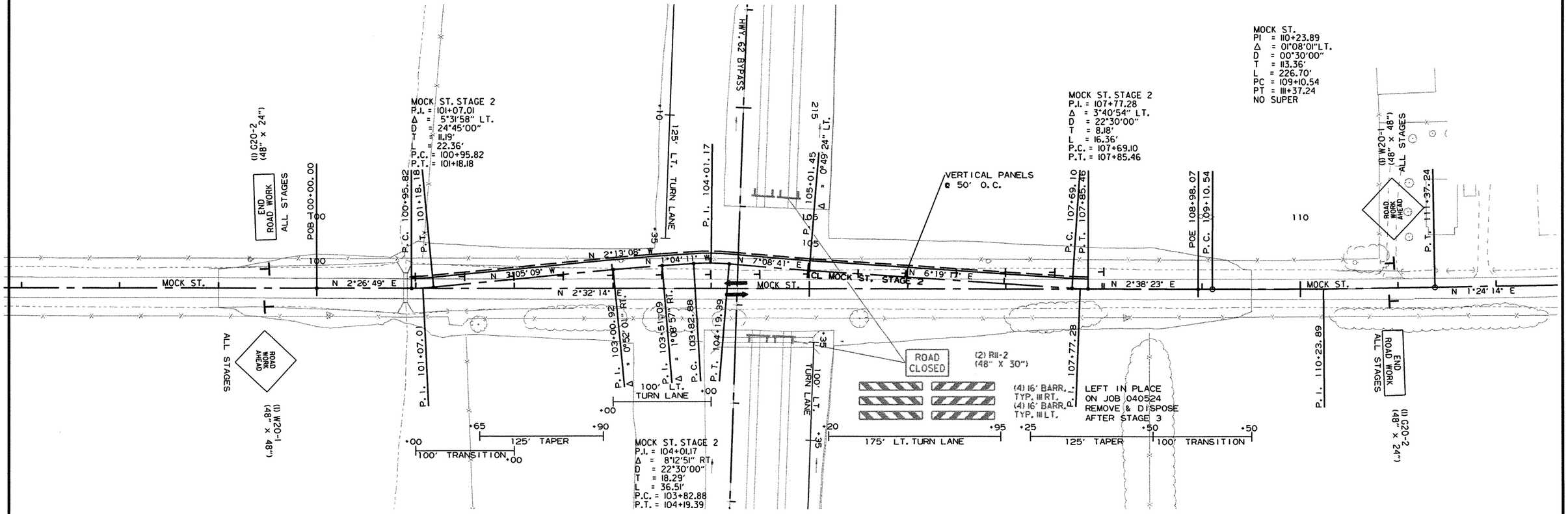
STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

VERTICAL PANELS
STATIONS 101+00-108+00 LT.
@ 50' O.C. = 15 EACH

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MOCK ST.
STAGE 1
MAINTENANCE OF TRAFFIC

8/24/2012

R040521_MOT.DGN

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				6	ARK.			
				JOB NO.		040521	43	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

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N

VERTICAL PANELS
STATIONS 105+00-107+50 RT.
@ 50' O.C. = 6 EACH

TRAFFIC DRUMS
STATIONS 108+00-120+00 RT.
@ 50' O.C. = 25 EACH

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

BUTLER RD. DETOUR
P.I. = 111+92.09
Δ = 5°52'29" LT.
D = 3°00'00"
T = 98.00'
L = 195.82'
P.C. = 110+94.09
P.T. = 112+89.91

VERTICAL PANELS
@ 50' O.C.
+00 100' TRANSITION +00

TRAFFIC DRUMS
@ 50' O.C.

(1) C20-2
(48" x 24")
END ROAD WORK
ALL STAGES

(1) W20-1
(48" x 48")
ROAD WORK AHEAD
ALL STAGES

POB 100+00.00

P.I. 106+00.00

P.C. 105+16.68

P.T. 106+82.90

BUTLER RD. DETOUR
P.I. = 106+00.00
Δ = 9°58'25" RT.
D = 6°00'00"
T = 83.32'
L = 166.23'
P.C. = 105+16.68
P.T. = 106+82.90

S 87°27'18" E

BUTLER RD. DETOUR
S 77°28'52" E

BUTLER RD.

S 87°27'18" E

P.C. 110+94.09

P.T. 112+89.91

P.I. 111+92.09

S 83°21'22" E

HWY. 62 BYPASS

BUTLER RD. DETOUR
STA. 113+44 INSTALL
18" X 48" TEMPORARY PIPE CULVERT
ON A 15° RT. FWD. SKEW
IN THE DITCH OF THE HWY. 62 BYPASS

ROAD CLOSED
(2) R11-2
(48" X 30")

(4) 16' BARR. TYP. III RT.
(4) 16' BARR. TYP. III LT.

LEFT IN PLACE
ON JOB 040524
REMOVE & DISPOSE
AFTER STAGE 3

BUTLER RD.
STAGE 1
MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	44	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

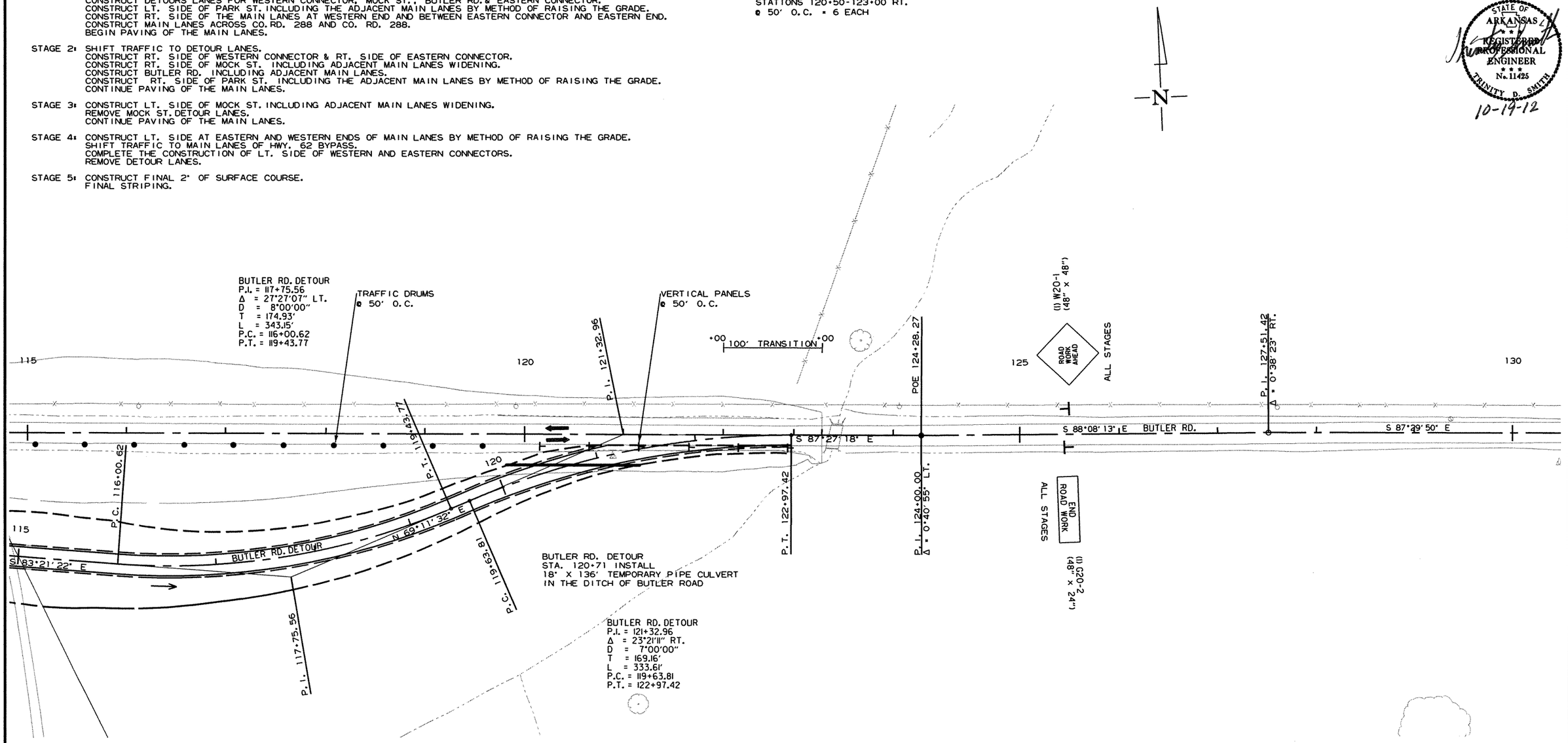
STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

VERTICAL PANELS
STATIONS 120+50-123+00 RT.
@ 50' O.C. = 6 EACH

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BUTLER RD.
STAGE 1
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	45	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

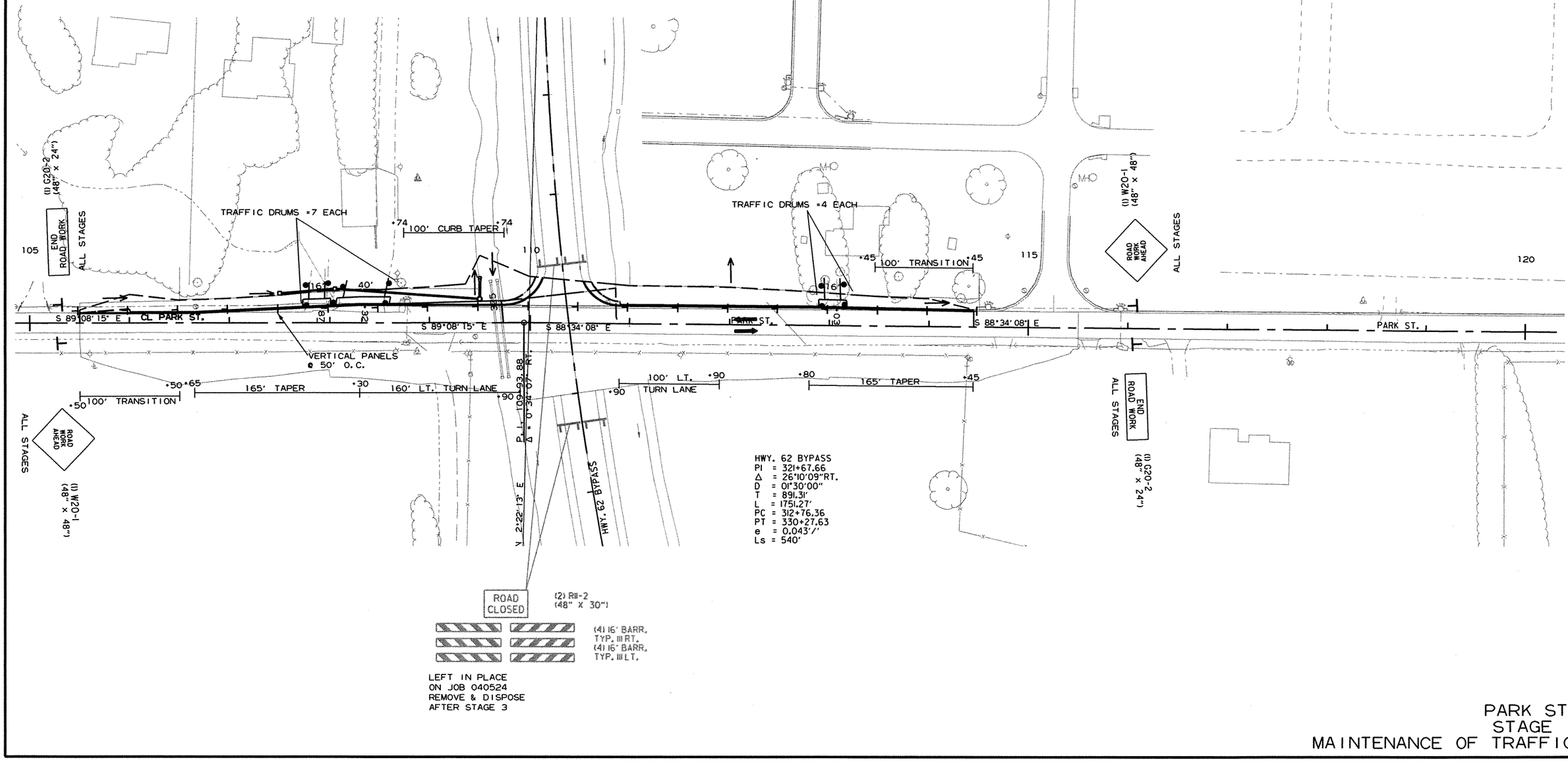
STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

CONSTRUCTION PAVEMENT MARKINGS
STA. 105+50-114+45 = 3580 LIN. FT.

VERTICAL PANELS
STATIONS 105+50-114+50 LT.
@ 50' O.C. =19 EACH



HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°10'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.27'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

ROAD CLOSED
(2) R11-2 (48" X 30")

LEFT IN PLACE
ON JOB 040524
REMOVE & DISPOSE
AFTER STAGE 3

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PARK ST.
STAGE 1
MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	46	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD. & EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

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VERTICAL PANELS
STATIONS 341+00-345+00 LT.
@ 50' O.C. = 8 EACH

12 TRAFFIC DRUMS @ 20' O.C.
(BOTH SIDES OF ROAD=24 EACH)

(1) W20-1 (48" x 48")

ALL STAGES

ROAD WORK AHEAD

END ROAD WORK ALL STAGES

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

TRAFFIC DRUMS =9 EACH

EAST CONNECTOR STAGE 2
P.I. = 344+57.86
Δ = 5°43'08" LT.
D = 8°15'00"
T = 34.69'
L = 69.32'
P.C. = 344+23.17
P.T. = 344+92.49

EAST CONNECTOR STAGE 2
P.I. = 341+68.05
Δ = 4°34'45" LT.
D = 8°15'00"
T = 27.77'
L = 55.51'
P.C. = 341+40.28
P.T. = 341+95.79

VERTICAL PANELS
@ 50' O.C.

EASTERN CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

P.C. 332+60.14

EXIST. HWY. 62

P.T. 335+70.13

335

340

341

345

P.I. 338+70.70

P.I. 341+00.00

P.C. 341+40.28

P.T. 341+95.76

P.I. 343+27.97

P.C. 344+23.17

P.T. 344+92.49

P.I. 344+57.86

P.I. 345+25.86

P.T. 345+90.74

P.C. 346+54.37

P.I. 343+86.67

P.C. 342+76.22

P.T. 342+65.94

P.I. 341+89.05

N 38°49'58" E
EASTERN CONNECTOR

N 35°00'11" E

S 81°13'47" E
EASTERN CONNECTOR

N 2°22'13" E 350

CL EAST CONNECTOR STAGE 2

HWY. 62 BYPASS

SUNDOWNER ROAD

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

(1) W20-1 (48" x 48")

ROAD WORK AHEAD

ALL STAGES

END ROAD WORK

ROAD CLOSED

(2) R11-2 (48" x 30")

(4) 16' BARR. TYP. III RT.
(4) 16' BARR. TYP. III LT.
LEFT IN PLACE ON JOB 040524
REMOVE & DISPOSE AFTER STAGE 3

2 TRAFFIC DRUMS PER DRIVE
(41 RURAL DRIVES ON HWY. 62 BYPASS = 82 EACH)

EAST CONNECTOR STAGE 2
P.I. = 343+27.97
Δ = 10°12'27" RT.
D = 8°15'00"
T = 62.03'
L = 123.73'
P.C. = 342+65.94
P.T. = 343+89.67

EASTERN CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

POE 346+54.37

BATTERY DR.

HWY. 62 BYPASS

ROAD WORK AHEAD

ALL STAGES

(1) W20-1 (48" x 48")

END ROAD WORK

(1) G20-2 (48" x 24") (4 STAGES)

EAST CONNECTOR STAGE 2

EASTERN CONNECTOR

EXISTING HWY. 62

EASTERN CONNECTOR STAGE 1 MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	47	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD. & EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

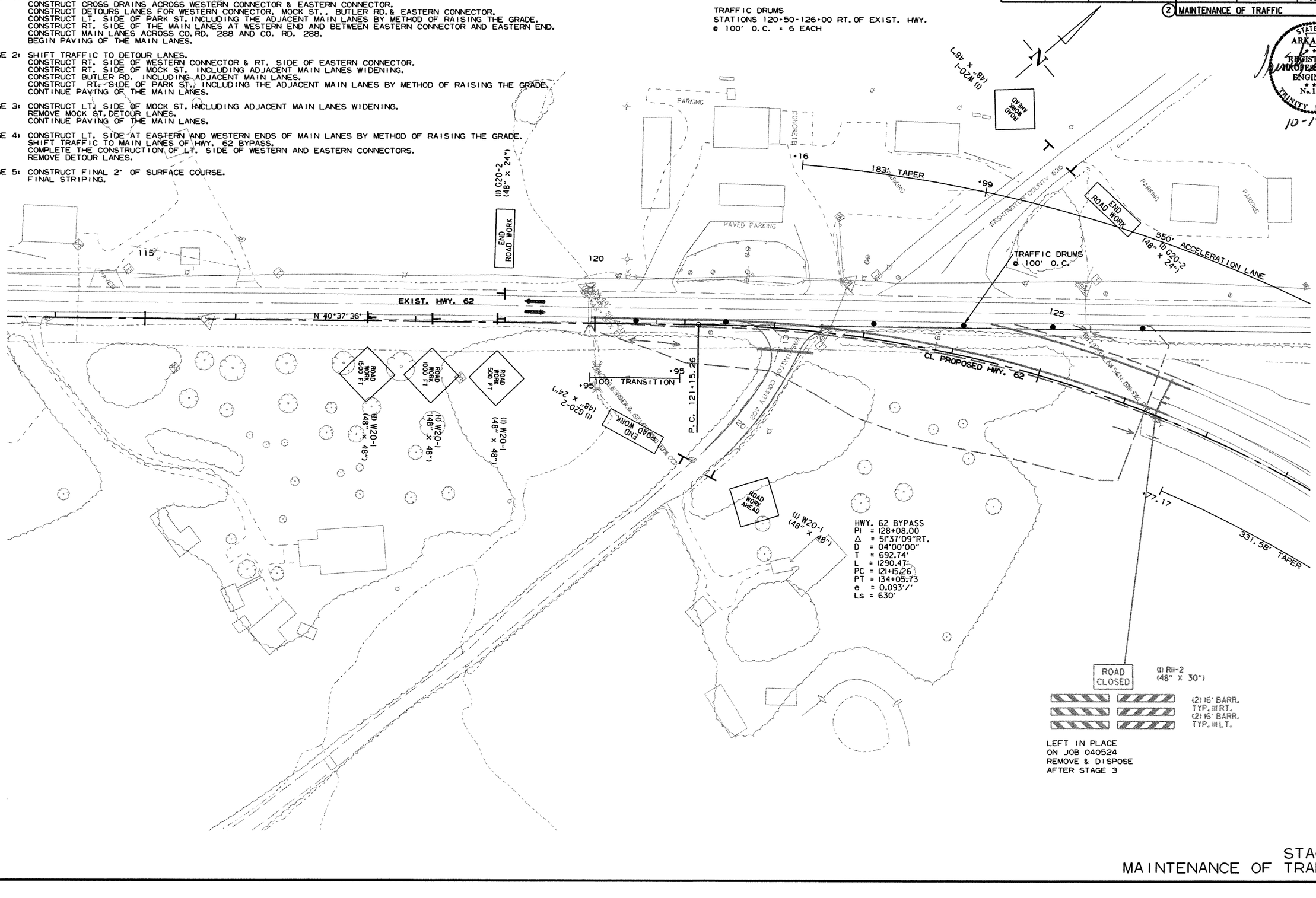
STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

TRAFFIC DRUMS
STATIONS 120+50-126+00 RT. OF EXIST. HWY.
@ 100' O.C. = 6 EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



STAGE 2
MAINTENANCE OF TRAFFIC

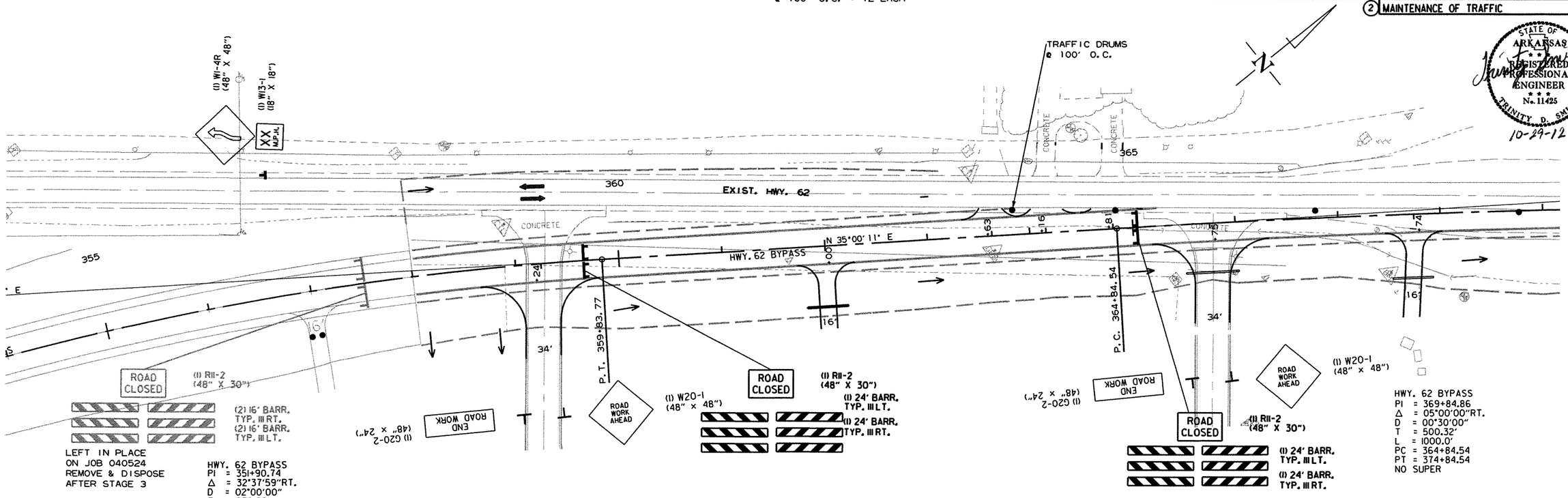
R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	48	239

(2) MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12

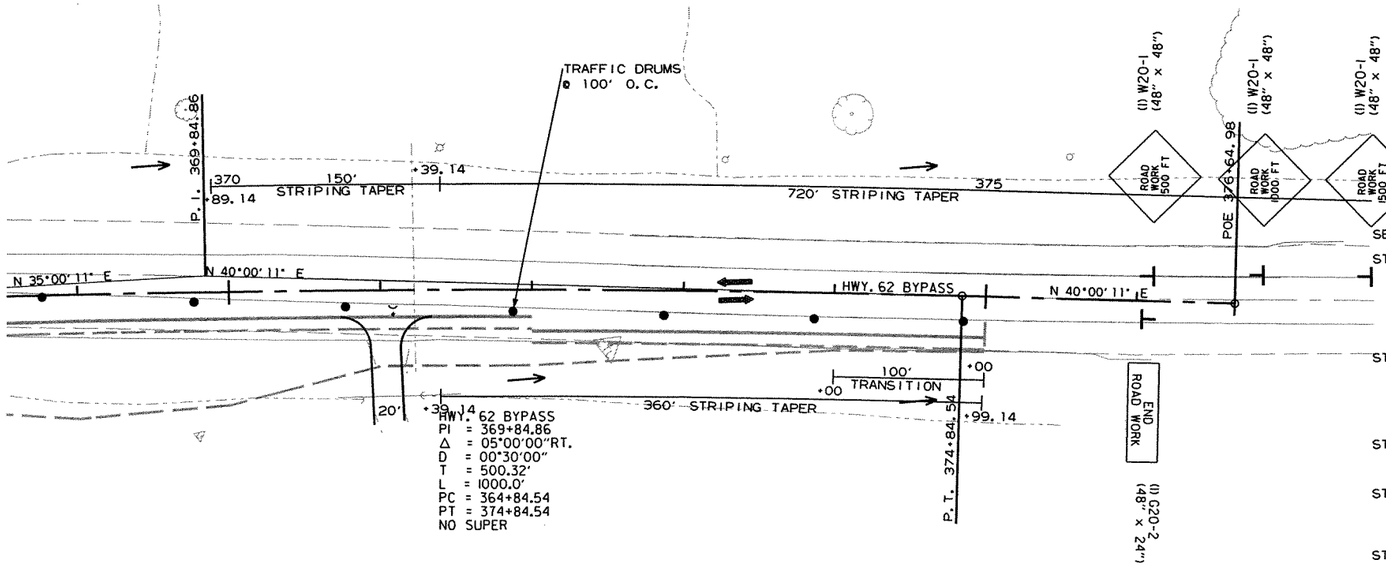
TRAFFIC DRUMS
STATIONS 364+00-375+00 RT. OF EXIST. HWY.
@ 100' O.C. = 12 EACH



LEFT IN PLACE
ON JOB 040524
REMOVE & DISPOSE
AFTER STAGE 3

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER



SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

STAGE 2
MAINTENANCE OF TRAFFIC

9/27/2012

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				6	ARK.			
				JOB NO.		040521	49	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

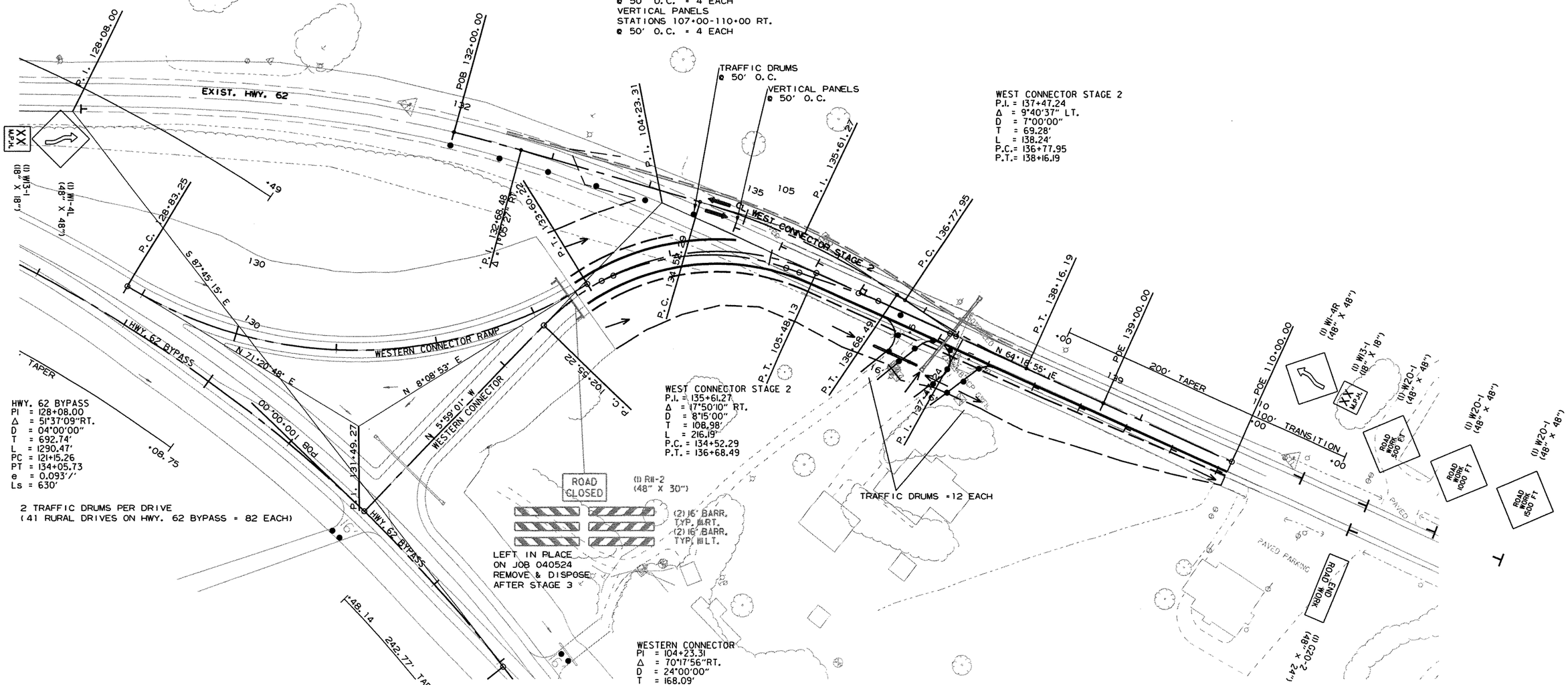
STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

TRAFFIC DRUMS
STATIONS 132+00-134+50 RT.
@ 50' O.C. = 6 EACH
VERTICAL PANELS
STATIONS 135+00-136+50 RT.
@ 50' O.C. = 4 EACH
VERTICAL PANELS
STATIONS 107+00-110+00 RT.
@ 50' O.C. = 4 EACH

REMOVAL OF PERMANENT PAVEMENT MARKINGS
STA. 132+50-138+16 = 2264 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 132+50-138+16 = 2264 LIN. FT.

WEST CONNECTOR STAGE 2
P.I. = 137+47.24
Δ = 9°40'37" LT.
D = 7°00'00"
T = 69.28'
L = 138.24'
P.C.= 136+77.95
P.T.= 138+16.19



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WESTERN CONNECTOR
STAGE 2
MAINTENANCE OF TRAFFIC

RO40521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	50	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD. & EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

REMOVAL OF PERMANENT PAVEMENT MARKINGS
STA. 100+96-107+83 = 687 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 100+96-107+85 = 2756 LIN. FT.

VERTICAL PANELS
STATIONS 100+00-109+50 RT.
@ 50' O.C. = 20 EACH

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MOCK ST.
PI = 110+23.89
Δ = 01°08'01" LT.
D = 00°30'00"
T = 113.36'
L = 226.70'
PC = 109+10.54
PT = 111+37.24
NO SUPER

MOCK ST. STAGE 2
P.I. = 101+07.01
Δ = 5°31'58" LT.
D = 24°45'00"
T = 11.19'
L = 22.36'
P.C. = 100+95.82
P.T. = 101+18.18

MOCK ST. STAGE 2
P.I. = 107+77.28
Δ = 3°40'54" LT.
D = 22°30'00"
T = 8.18'
L = 16.36'
P.C. = 107+69.10
P.T. = 107+85.46

MOCK ST. STAGE 2
P.I. = 104+01.17
Δ = 8°12'51" RT.
D = 22°30'00"
T = 18.29'
L = 36.51'
P.C. = 103+82.88
P.T. = 104+19.39

VERTICAL PANELS @ 50' O.C.

HWY. 62 BYPASS

125' LT. TURN LANE

100' LT. TURN LANE

175' LT. TURN LANE

END ROAD WORK
(1) C20-2 (48" X 24")

ROAD WORK AHEAD
(1) W20-1 (48" X 48")

XX M.P.H.
(1) W13-1 (18" X 18")

(1) W1-4L (48" X 48")

(1) W1-4R (48" X 48")

(1) W1-6R (48" X 24")

TRAFFIC DRUMS =6 EACH

ROAD CLOSED
(1) R11-2 (48" X 30")
(1) W1-6L (48" X 24")
(1) 16' BARR. TYP. III RT.

ROAD CLOSED
(2) R11-2 (48" X 30")
(4) 16' BARR. TYP. III RT.
(4) 16' BARR. TYP. III LT.
LEFT IN PLACE ON JOB 040524 REMOVE & DISPOSE AFTER STAGE 3

ROAD CLOSED
(1) R11-2 (48" X 30")
(1) W1-6R (48" X 24")
(1) 16' BARR. TYP. III LT.

125' TAPER
100' TRANSITION
175' LT. TURN LANE
125' TAPER
100' TRANSITION
720' TAPER

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MOCK ST.
STAGE 2
MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	51	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

STATE OF ARKANSAS
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10-19-12

N

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39" LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

CONSTRUCTION PAVEMENT MARKINGS
STA. 105+17-122+97 = 7120 LIN. FT.

TRAFFIC DRUMS
STATIONS 105+00-123+00 LT.
@ 50' O.C. = 37 EACH

BUTLER RD. DETOUR
P.I. = 111+92.09
Δ = 5°52'29" LT.
D = 3°00'00"
T = 98.00'
L = 195.82'
P.C. = 110+94.09
P.T. = 112+89.91

TRAFFIC DRUMS =12 EACH

TRAFFIC DRUMS
@ 50' O.C.

100' TRANSITION

TRAFFIC DRUMS =6 EACH

(8) W8-1 (8" X 24")

P.I. 111+92.09

P.T. 111+85.91

300

(1) G20-2 (48" X 24") END ROAD WORK

(1) W20-1 (48" X 48") ROAD WORK AHEAD

(1) W13-1 (18" X 18") XX M.P.H.

(1) W1-4R (48" X 48")

(1) W13-1 (18" X 18") XX M.P.H.

(1) W1-4R (48" X 48")

POB 100+00.00

P.C. 105+16.68

P.T. 106+82.90

P.I. 106+00.00

BUTLER RD. DETOUR
P.I. = 106+00.00
Δ = 9°58'25" RT.
D = 6°00'00"
T = 83.32'
L = 166.23'
P.C. = 105+16.68
P.T. = 106+82.90

ROAD CLOSED

(1) R11-2 (48" X 30")

(1) W1-6R (48" X 24")

(1) 16' BARR. TYP. III LT.

ROAD CLOSED

(2) R11-2 (48" X 30")

(4) 16' BARR. TYP. III RT.

(4) 16' BARR. TYP. III LT.

LEFT IN PLACE
ON JOB 040524
REMOVE & DISPOSE
AFTER STAGE 3

CONCRETE
EL=1076.54 RD=4.50 HT=2.0 LN:G

PV

BUTLER RD.

BUTLER RD. DETOUR

S 87°27'18" E

S 77°28'52" E

S 83°21'20" E

HWY. 62 BYPASS

BUTLER RD.
STAGE 2
MAINTENANCE OF TRAFFIC

9/27/2012

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				6	ARK.			
				JOB NO.		040521	52	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR. MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

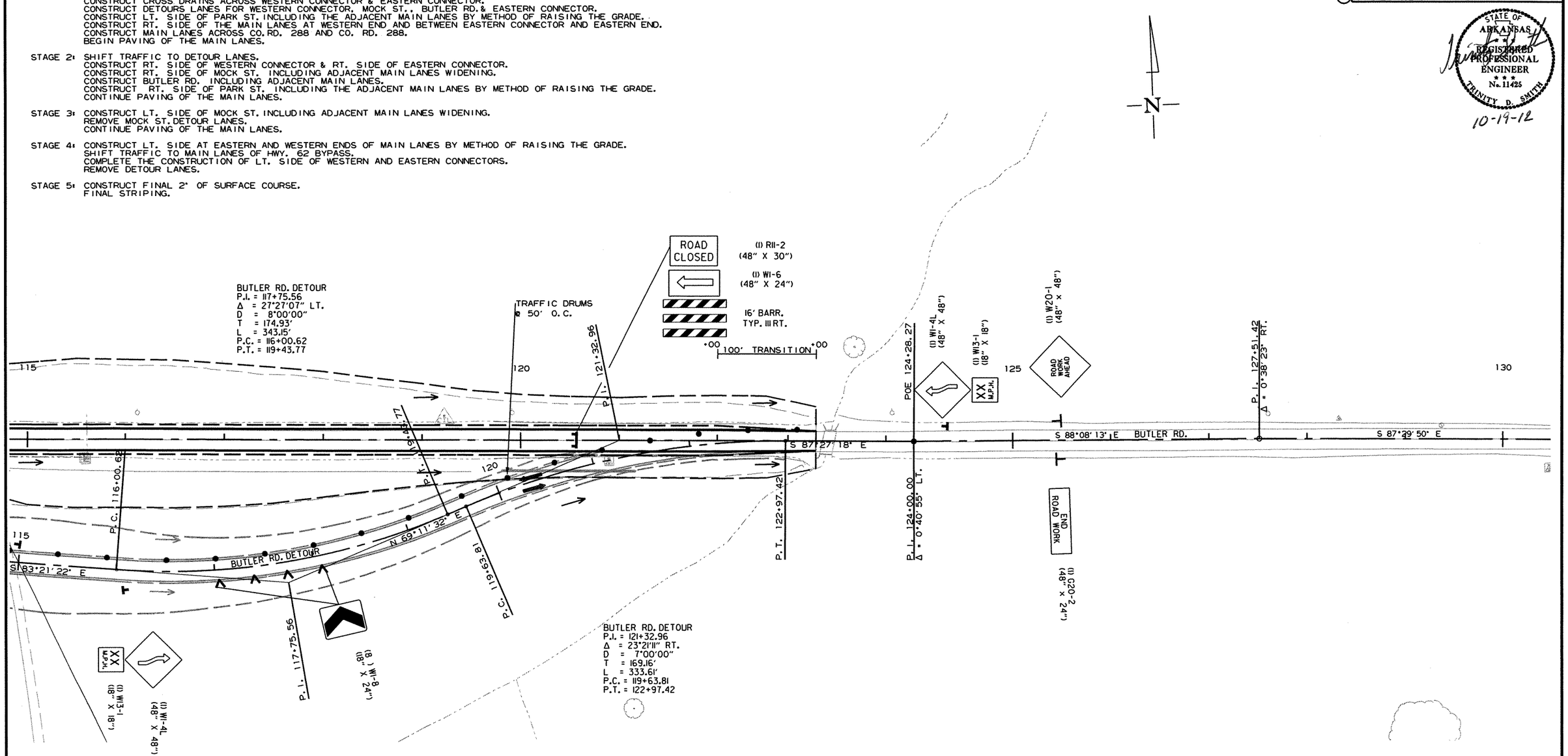
STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

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BUTLER RD.
STAGE 2
MAINTENANCE OF TRAFFIC

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				6	ARK.			
				JOB NO.		040521	53	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD. & EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

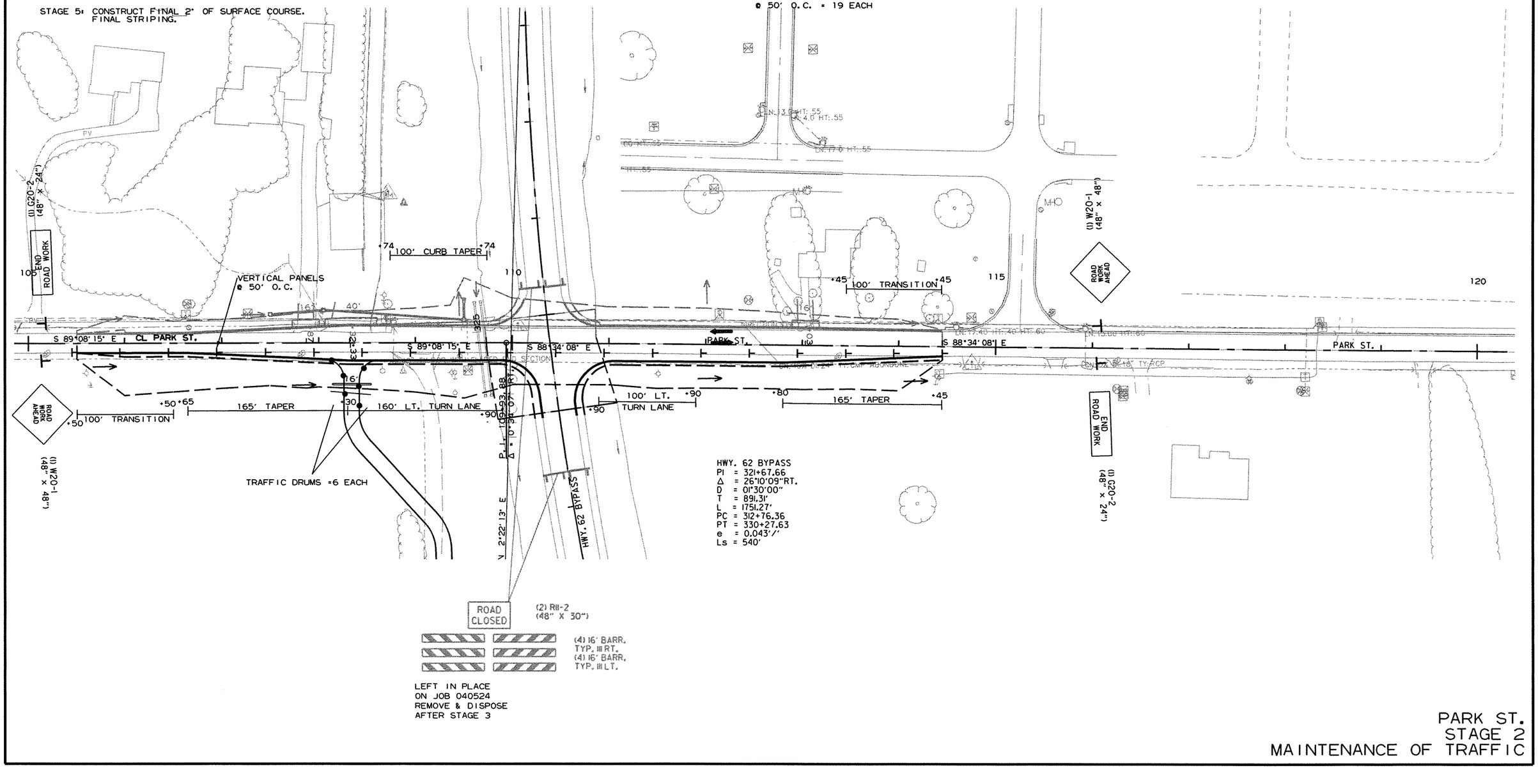
STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

CONSTRUCTION PAVEMENT MARKINGS
STA. 105+50-114+45 = 3580 LIN. FT.

VERTICAL PANELS
STATIONS 105+50-114+50 RT.
@ 50' O.C. = 19 EACH



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PARK ST.
STAGE 2
MAINTENANCE OF TRAFFIC

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	54	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

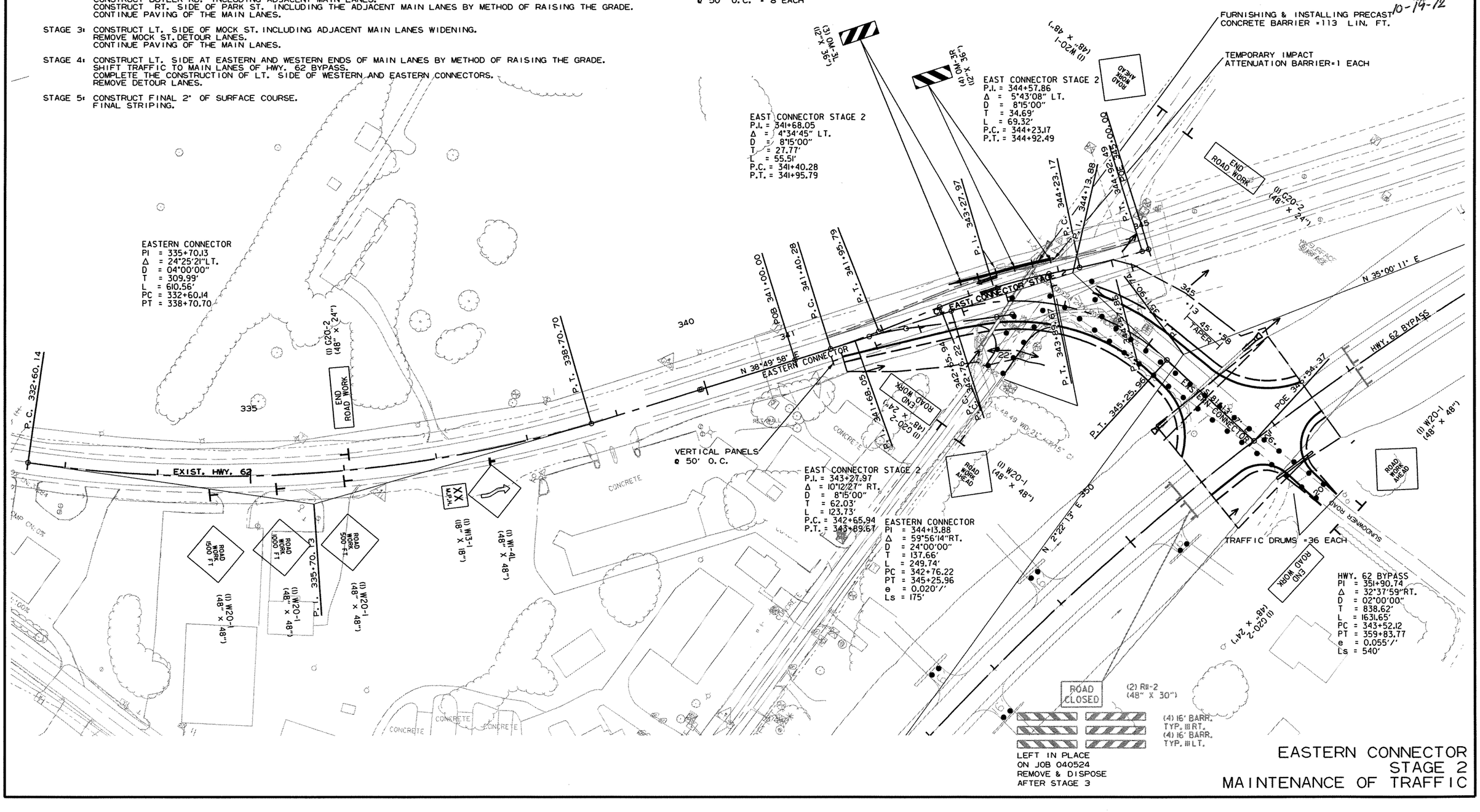
STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

REMOVAL OF PERMANENT PAVEMENT MARKINGS
STA. 341+40-344+92 = 1408 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 341+40-344+92 = 1408 LIN. FT.

VERTICAL PANELS
STATIONS 341+40-345+00 RT.
@ 50' O.C. = 8 EACH

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TRINITY D. SMITH
10-14-12



EASTERN CONNECTOR STAGE 2
MAINTENANCE OF TRAFFIC

R040521_MDT.DGN 9/27/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	55	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

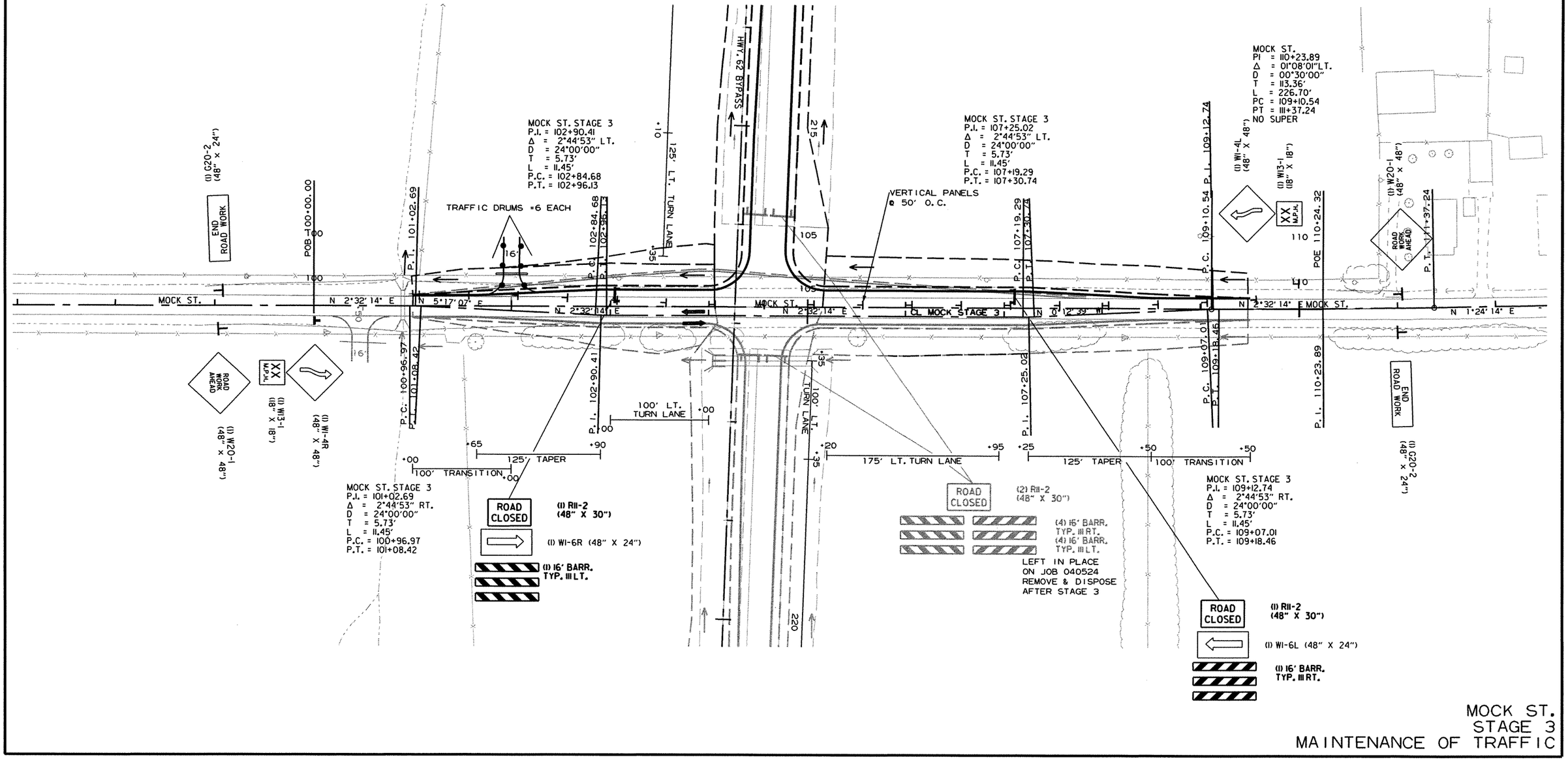
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
STA. 100+96-107+85 = 2756 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 100+96-109+18 = 3288 LIN. FT.

VERTICAL PANELS
STATIONS 101+00-109+50 LT.
@ 50' O.C. = 18 EACH

2 TRAFFIC DRUMS PER DRIVE
(41 RURAL DRIVES ON HWY. 62 BYPASS = 82 EACH)

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



MOCK ST.
STAGE 3
MAINTENANCE OF TRAFFIC

8/24/2012

R040521_MOT.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	56	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

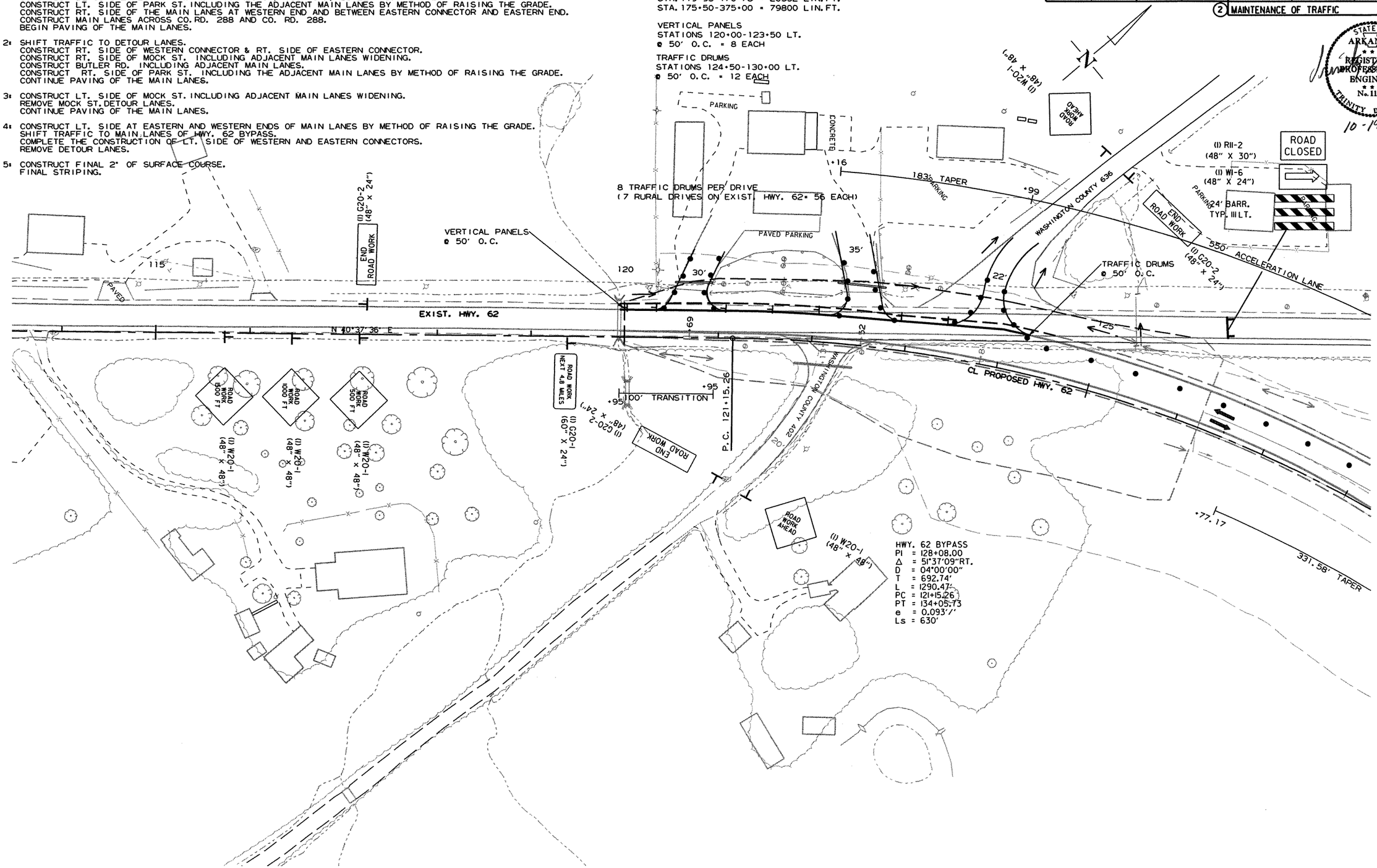
STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
STA. 119+95-123+80 = 1540 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS
STA. 119+95-170+78 = 20332 LIN. FT.
STA. 175+50-375+00 = 79800 LIN. FT.

VERTICAL PANELS
STATIONS 120+00-123+50 LT.
@ 50' O.C. = 8 EACH
TRAFFIC DRUMS
STATIONS 124+50-130+00 LT.
@ 50' O.C. = 12 EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



STAGE 4
MAINTENANCE OF TRAFFIC

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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.		040521	57	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

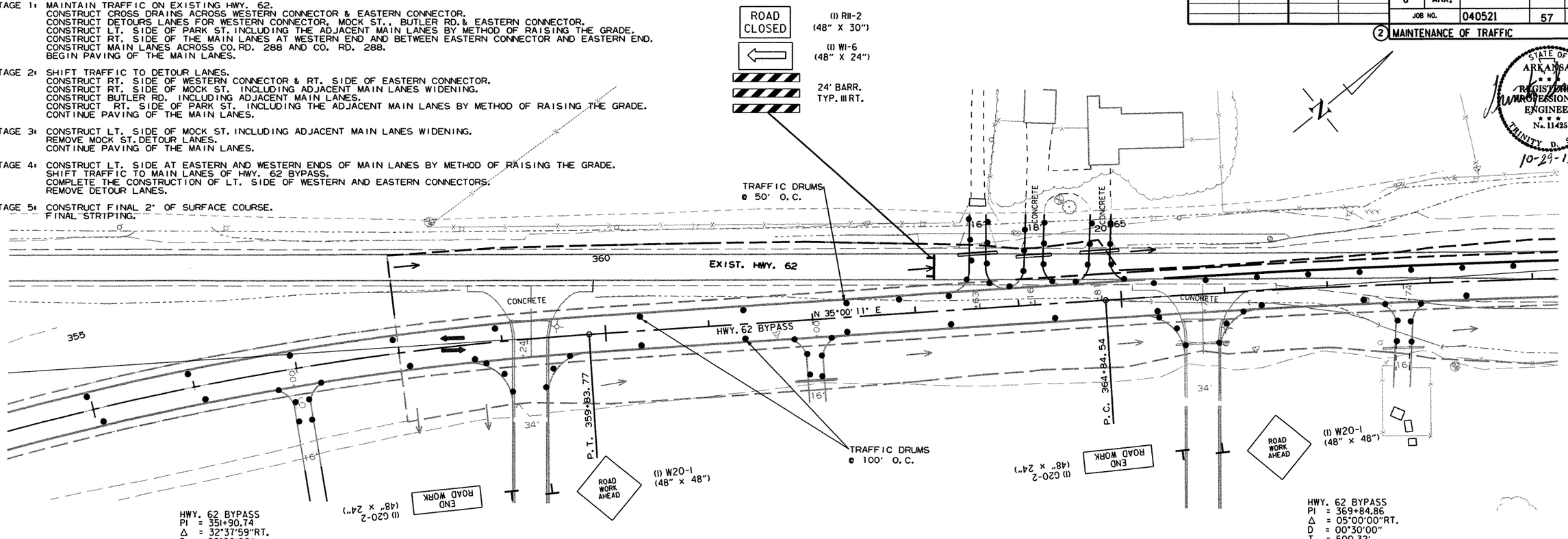
STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO. RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

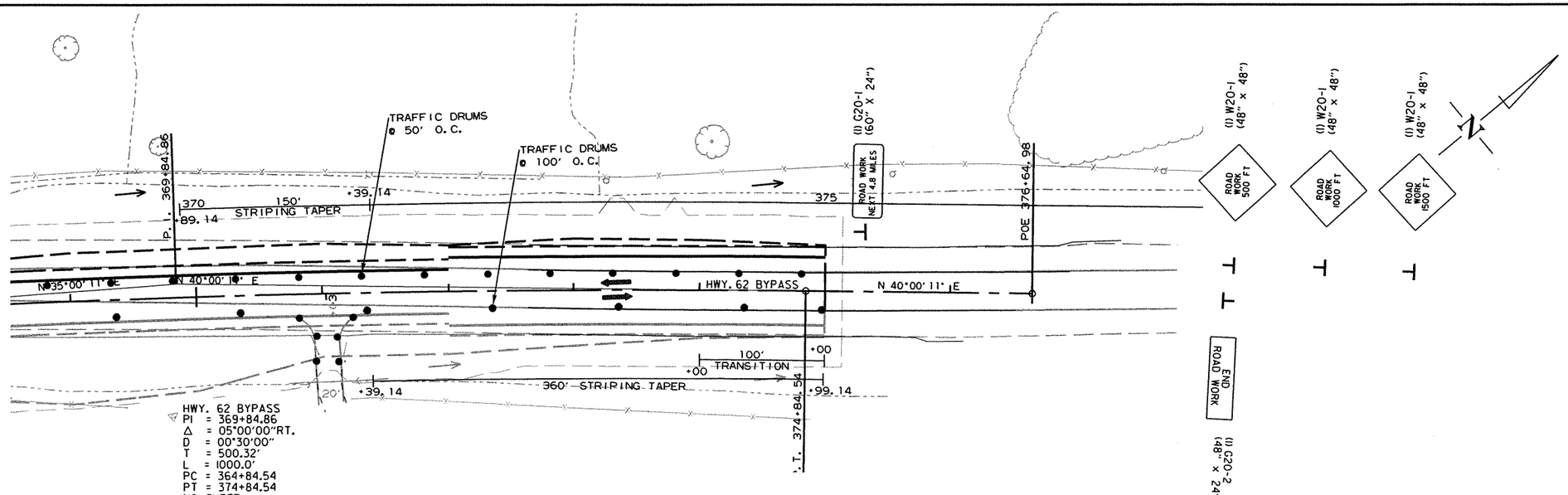
STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.



HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER



HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER

HWY. 62 BYPASS
TRAFFIC DRUMS @ 100' O.C.
STATIONS 292+00-300+20 LT. = 9 EACH
STATIONS 300+90-324+15 LT. = 24 EACH
STATIONS 325+25-351+20 LT. = 27 EACH
STATIONS 352+30-362+00 LT. = 10 EACH
STATIONS 292+00-300+20 RT. = 9 EACH
STATIONS 300+90-324+15 RT. = 24 EACH
STATIONS 325+25-351+20 RT. = 27 EACH
STATIONS 352+30-375+00 RT. = 24 EACH
TRAFFIC DRUMS @ 50' O.C.
STATIONS 362+00-375+00 LT. = 27 EACH

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
STA. 364+00-375+00 = 4400 LIN. FT.

STAGE 4
MAINTENANCE OF TRAFFIC

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12

8/24/2012
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				6	ARK.			
				JOB NO.		040521	58	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-19-12

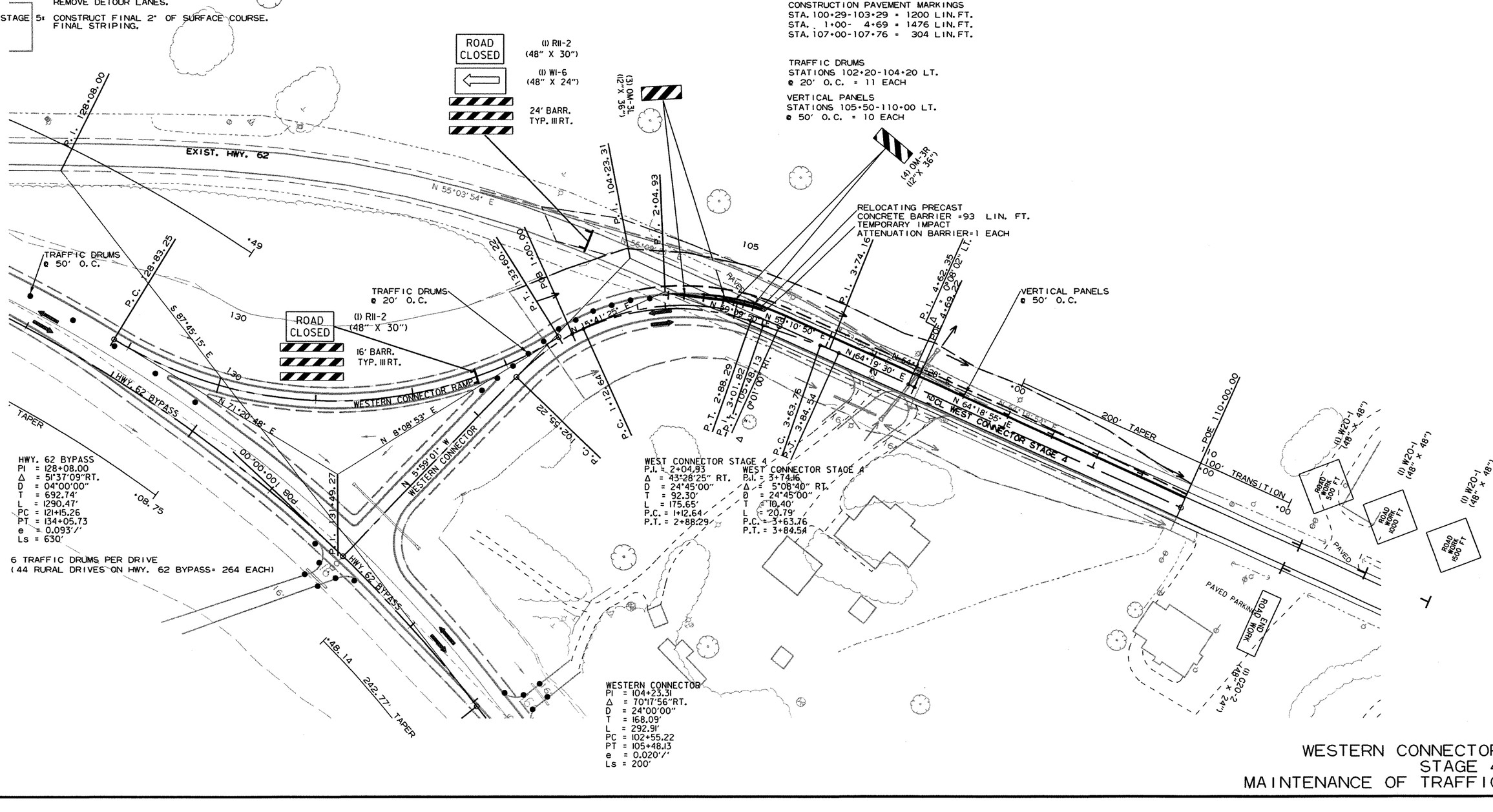
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
STA. 135+00-138+16 = 1264 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 100+29-103+29 = 1200 LIN. FT.
STA. 1+00- 4+69 = 1476 LIN. FT.
STA. 107+00-107+76 = 304 LIN. FT.

TRAFFIC DRUMS
STATIONS 102+20-104+20 LT.
@ 20' O.C. = 11 EACH

VERTICAL PANELS
STATIONS 105+50-110+00 LT.
@ 50' O.C. = 10 EACH

REMOVAL OF PERMANENT PAVEMENT MARKINGS
STA. 135+00-138+16 = 1264 LIN. FT.



WESTERN CONNECTOR
STAGE 4
MAINTENANCE OF TRAFFIC

R040521_MOT.DGN 8/24/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	59	239

(2) MAINTENANCE OF TRAFFIC

SEQUENCE OF CONSTRUCTION:

STAGE 1: MAINTAIN TRAFFIC ON EXISTING HWY. 62.
CONSTRUCT CROSS DRAINS ACROSS WESTERN CONNECTOR & EASTERN CONNECTOR.
CONSTRUCT DETOURS LANES FOR WESTERN CONNECTOR, MOCK ST., BUTLER RD.& EASTERN CONNECTOR.
CONSTRUCT LT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONSTRUCT RT. SIDE OF THE MAIN LANES AT WESTERN END AND BETWEEN EASTERN CONNECTOR AND EASTERN END.
CONSTRUCT MAIN LANES ACROSS CO.RD. 288 AND CO. RD. 288.
BEGIN PAVING OF THE MAIN LANES.

STAGE 2: SHIFT TRAFFIC TO DETOUR LANES.
CONSTRUCT RT. SIDE OF WESTERN CONNECTOR & RT. SIDE OF EASTERN CONNECTOR.
CONSTRUCT RT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
CONSTRUCT BUTLER RD. INCLUDING ADJACENT MAIN LANES.
CONSTRUCT RT. SIDE OF PARK ST. INCLUDING THE ADJACENT MAIN LANES BY METHOD OF RAISING THE GRADE.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 3: CONSTRUCT LT. SIDE OF MOCK ST. INCLUDING ADJACENT MAIN LANES WIDENING.
REMOVE MOCK ST. DETOUR LANES.
CONTINUE PAVING OF THE MAIN LANES.

STAGE 4: CONSTRUCT LT. SIDE AT EASTERN AND WESTERN ENDS OF MAIN LANES BY METHOD OF RAISING THE GRADE.
SHIFT TRAFFIC TO MAIN LANES OF HWY. 62 BYPASS.
COMPLETE THE CONSTRUCTION OF LT. SIDE OF WESTERN AND EASTERN CONNECTORS.
REMOVE DETOUR LANES.

STAGE 5: CONSTRUCT FINAL 2" OF SURFACE COURSE.
FINAL STRIPING.

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-19-12

EASTERN CONNECTOR
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
STA. 341+40-344+92 = 1408 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
STA. 1+00- 4+47 = 1388 LIN. FT.
STA. 343+41-345+69 = 912 LIN. FT.

TRAFFIC DRUMS
STATIONS 342+50-346+25 LT.
@ 50' O.C. = 9 EACH

VERTICAL PANELS
STATIONS 341+50-342+00 LT.
@ 50' O.C. = 2 EACH

(1) R11-2 (48" X 30")
(1) W1-6 (48" X 24")
24' BARR. TYP. III LT.

VERTICAL PANELS @ 50' O.C.

EASTERN CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

EASTERN CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

EAST CONNECTOR STAGE 4
P.I. = 3+11.50
Δ = 9°59'45" RT.
D = 24°45'00"
T = 20.25'
L = 40.39'
P.C. = 2+91.25
P.T. = 3+31.64

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

EXIST. HWY. 62
P.C. 332+60.14
P.T. 335+70.13
P.T. 338+70.70
P.C. 342+76.22
P.T. 345+25.96
P.I. 3+11.50
P.C. 2+91.25
P.T. 3+31.64
P.I. 344+13.88
POB 1+00.00
POE 346+56.37
N 38°48'35" E
N 38°49'58" E
N 48°49'43" E
N 47°11'55" E
N 2°22'15" E
EASTERN CONNECTOR STAGE 4
CL EAST CONNECTOR STAGE 4
EASTERN CONNECTOR
TRAFFIC DRUMS @ 50' O.C.
300' TAPER
45' TAPER
SUNDOWNER ROAD
ROAD CLOSED
END ROAD WORK
ROAD WORK AHEAD
ROAD WORK 1500 FT
ROAD WORK 1000 FT
ROAD WORK 500 FT
(1) W20-1 (48" x 48")
(1) W20-2 (48" x 24")
(1) W20-2 (48" x 72")

EASTERN CONNECTOR
STAGE 4
MAINTENANCE OF TRAFFIC

R040521_MDT.DGN 8/24/2012

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	60	239

(2) PERMANENT PAVEMENT MARKING DETAILS

THERMOPLASTIC PAVEMENT MARKINGS:

4" WHITE SOLID EDGE LINES
STA. 119+95-121+58 RT. = 163 LIN. FT.
STA. 122+70-149+81 RT. = 2,985 LIN. FT.
STA. 150+83-216+27 RT. = 6,544 LIN. FT.
STA. 217+41-299+86 RT. = 8,245 LIN. FT.
STA. 300+89-324+04 RT. = 2,315 LIN. FT.
STA. 324+82-339+80 RT. = 1,516 LIN. FT.
STA. 340+84-351+39 RT. = 1,055 LIN. FT.
STA. 352+43-358+64 RT. = 621 LIN. FT.
STA. 359+81-365+18 RT. = 537 LIN. FT.
STA. 366+33-375+00 RT. = 867 LIN. FT.
STA. 119+95-123+36 LT. = 346 LIN. FT.
STA. 124+30-128+83 LT. = 453 LIN. FT.
STA. 129+27-131+83 LT. = 261 LIN. FT.
STA. 132+68-149+82 LT. = 1,714 LIN. FT.
STA. 150+84-216+23 LT. = 6,539 LIN. FT.
STA. 217+37-300+12 LT. = 8,275 LIN. FT.
STA. 301+20-324+20 LT. = 2,300 LIN. FT.
STA. 325+35-350+61 LT. = 2,526 LIN. FT.
STA. 352+75-375+00 LT. = 2,225 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS:

4" DBL. YELLOW SOLID
STA. 119+95-121+95 = 400 LIN. FT.
STA. 122+44-123+60 = 232 LIN. FT.
STA. 124+09-131+88 = 1572 LIN. FT.
STA. 132+25-150+08 = 3570 LIN. FT.
STA. 150+58-170+78 = 4040 LIN. FT.
STA. 175+50-216+35 = 8170 LIN. FT.
STA. 207+90-214+12 = 1244 LIN. FT.
STA. 217+35-225+55 = 1640 LIN. FT.
STA. 219+56-299+22 = 15932 LIN. FT.
STA. 292+26-299+22 = 1392 LIN. FT.
STA. 322+15-324+15 = 400 LIN. FT.
STA. 325+25-327+25 = 400 LIN. FT.
STA. 347+75-351+25 = 700 LIN. FT.
STA. 352+31-353+81 = 300 LIN. FT.
STA. 369+89-375+00 = 1022 LIN. FT.
STA. 369+89-375+00 = 1022 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS:

4" WHITE DOTTED
STA. 125+82-129+27 = 86 LIN. FT.

WORDS = 1 EACH

ARROWS = 1 EACH

THERMOPLASTIC PAVEMENT MARKINGS:

4" DBL. YELLOW SOLID
(CO. RD. 636) = 206 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS:

4" YELLOW SOLID FOR CENTER TURN LANE
STA. 299+22-300+26 = 208 LIN. FT.
STA. 300+76-322+15 = 4278 LIN. FT.
STA. 327+25-340+07 = 2564 LIN. FT.
STA. 340+57-347+75 = 1436 LIN. FT.
STA. 353+81-358+99 = 1036 LIN. FT.
STA. 359+49-365+50 = 1202 LIN. FT.
STA. 366+00-369+89 = 778 LIN. FT.

4" YELLOW SKIP FOR CENTER TURN LANE
STA. 299+22-300+26 = 52 LIN. FT.
STA. 300+76-322+15 = 1070 LIN. FT.
STA. 327+25-340+07 = 641 LIN. FT.
STA. 340+57-347+75 = 359 LIN. FT.
STA. 353+81-358+99 = 259 LIN. FT.
STA. 359+49-365+50 = 301 LIN. FT.
STA. 366+00-369+89 = 195 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS (HWY. 62):

4" WHITE SOLID TURN LANE (HWY. 62)
STA. 130+09-131+88 = 179 LIN. FT.
STA. 215+10-216+35 = 125 LIN. FT.
STA. 217+35-218+35 = 100 LIN. FT.
STA. 323+15-324+15 = 100 LIN. FT.
STA. 325+25-326+25 = 100 LIN. FT.
STA. 348+25-351+25 = 300 LIN. FT.
STA. 352+20-353+31 = 111 LIN. FT.

24" WHITE SOLID FOR STOP BAR
STA. 216+35 = 25 LIN. FT.
STA. 217+35 = 24 LIN. FT.
STA. 324+15 = 25 LIN. FT.
STA. 325+25 = 25 LIN. FT.
STA. 351+25 = 23 LIN. FT.
STA. 352+20 = 27 LIN. FT.
STA. 352+31 = 11 LIN. FT.

RAISED PAVEMENT MARKERS:

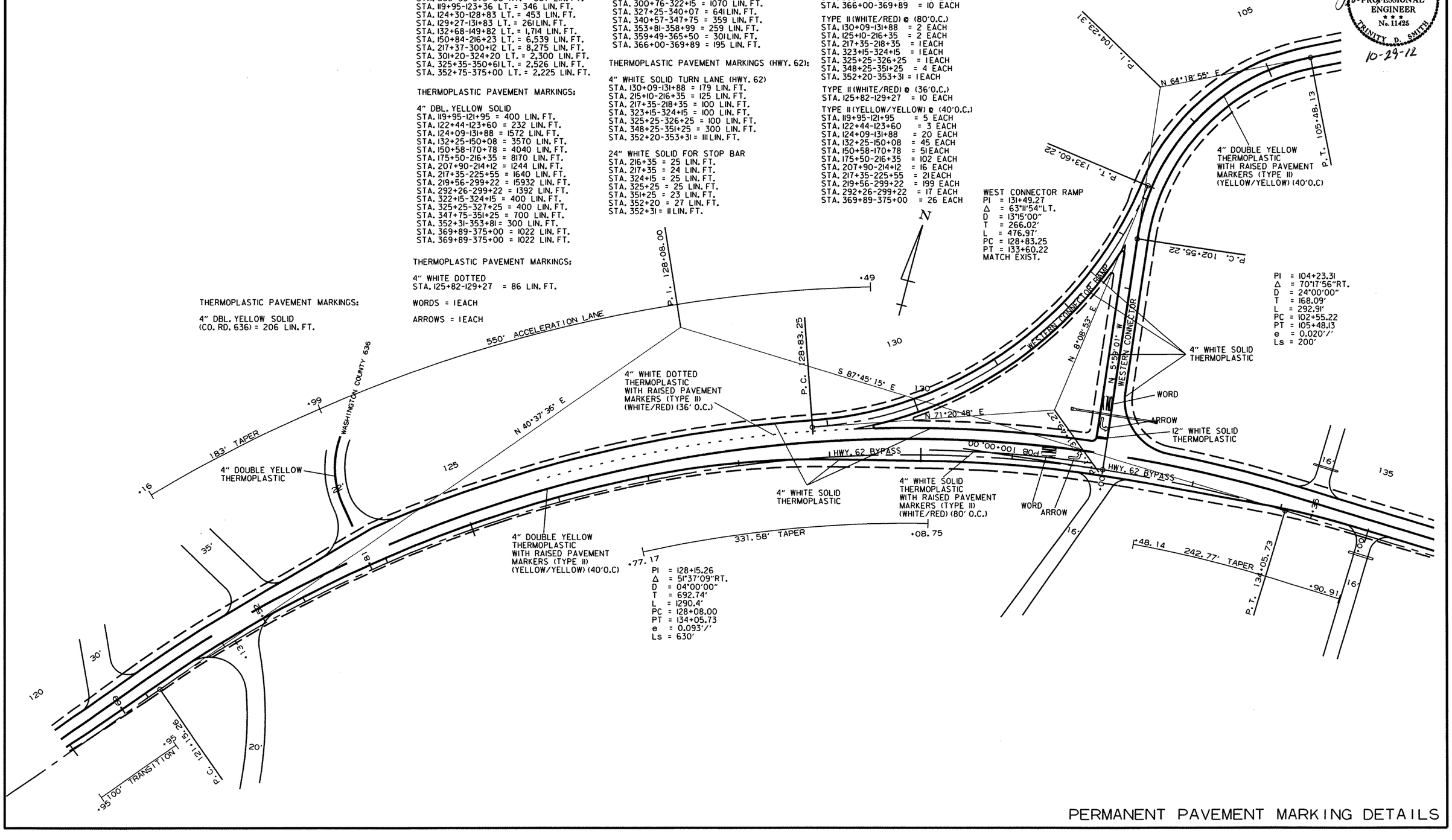
TYPE II (YELLOW/YELLOW) @ (80'O.C.)
STA. 299+22-300+26 = 2 EACH
STA. 300+76-322+15 = 54 EACH
STA. 322+15-324+15 = 3 EACH
STA. 325+25-327+25 = 3 EACH
STA. 327+25-340+07 = 32 EACH
STA. 340+57-347+75 = 18 EACH
STA. 347+75-351+25 = 4 EACH
STA. 352+31-353+81 = 2 EACH
STA. 353+81-358+99 = 12 EACH
STA. 359+49-365+50 = 16 EACH
STA. 366+00-369+89 = 10 EACH

TYPE II (WHITE/RED) @ (80'O.C.)
STA. 130+09-131+88 = 2 EACH
STA. 125+10-216+35 = 2 EACH
STA. 217+35-218+35 = 1 EACH
STA. 323+15-324+15 = 1 EACH
STA. 325+25-326+25 = 1 EACH
STA. 348+25-351+25 = 4 EACH
STA. 352+20-353+31 = 1 EACH

TYPE II (WHITE/RED) @ (36'O.C.)
STA. 125+82-129+27 = 10 EACH

TYPE II (YELLOW/YELLOW) @ (40'O.C.)
STA. 119+95-121+95 = 5 EACH
STA. 122+44-123+60 = 3 EACH
STA. 124+09-131+88 = 20 EACH
STA. 132+25-150+08 = 45 EACH
STA. 150+58-170+78 = 51 EACH
STA. 175+50-216+35 = 102 EACH
STA. 207+90-214+12 = 16 EACH
STA. 217+35-225+55 = 21 EACH
STA. 219+56-299+22 = 199 EACH
STA. 292+26-299+22 = 17 EACH
STA. 369+89-375+00 = 26 EACH

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12



10/1/2012

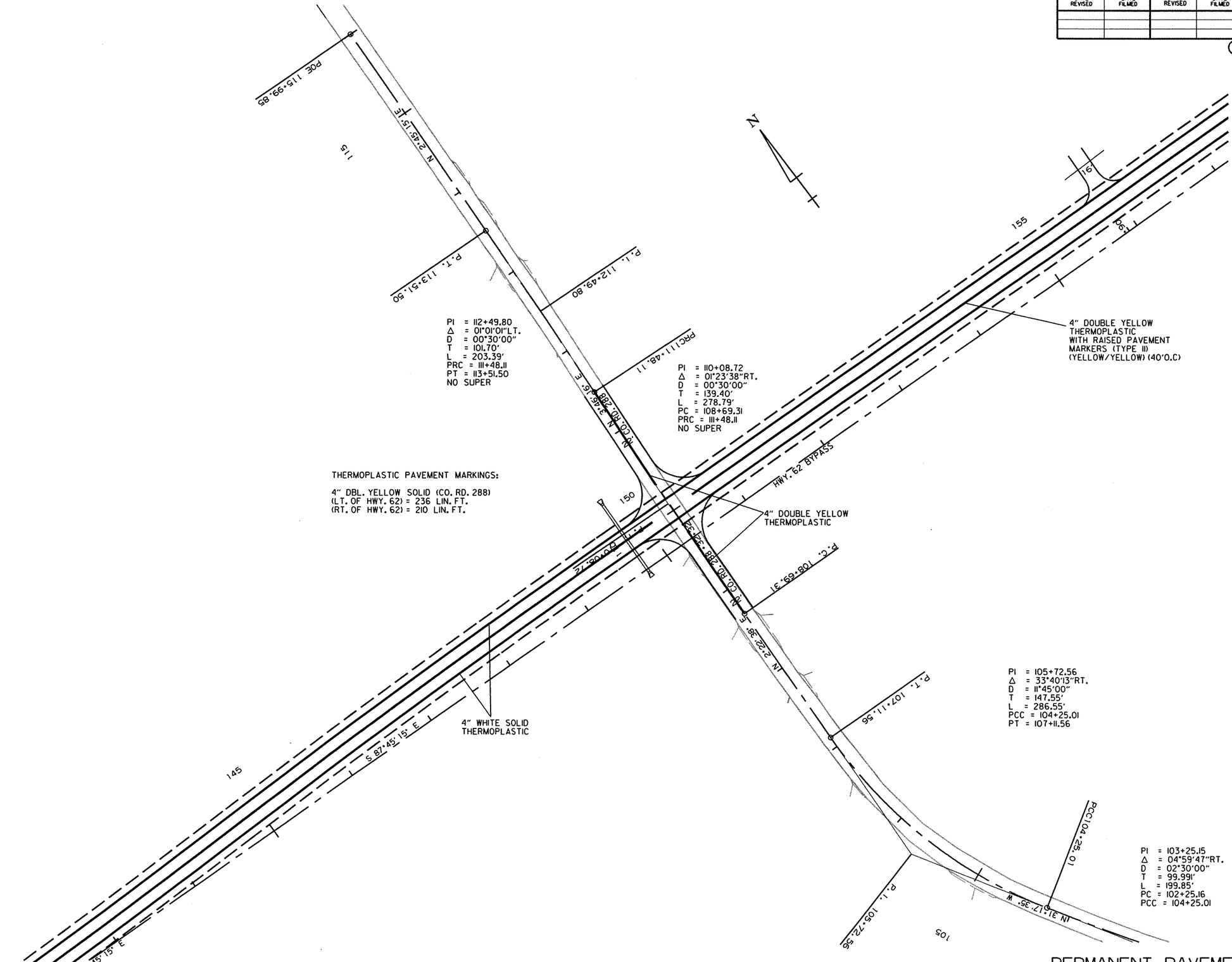
R040521.DGN

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.		040521	61	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



10/1/2012

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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.		040521	62	239

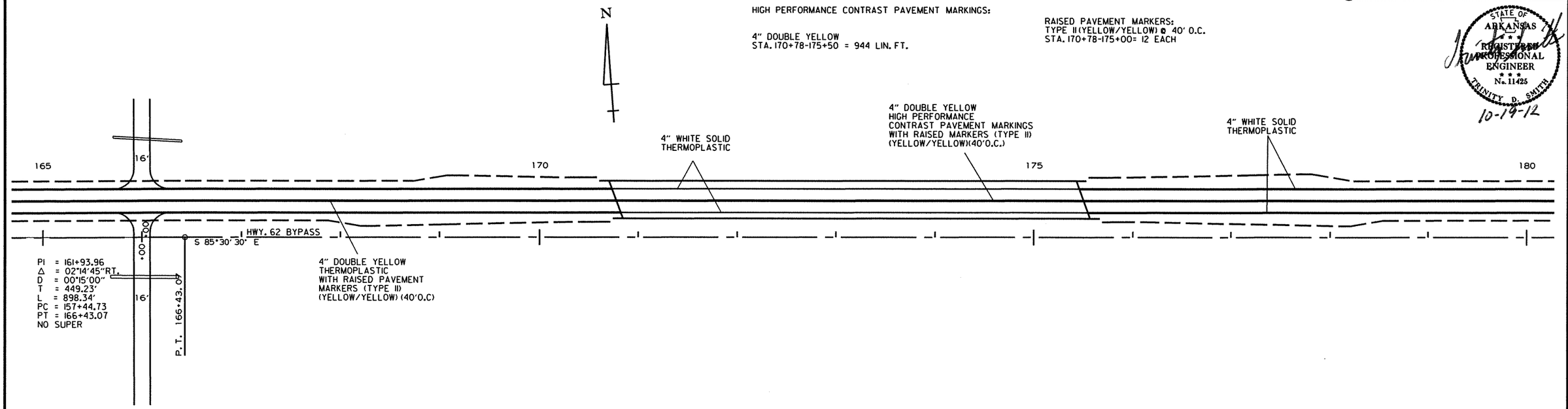
(2) PERMANENT PAVEMENT MARKING DETAILS

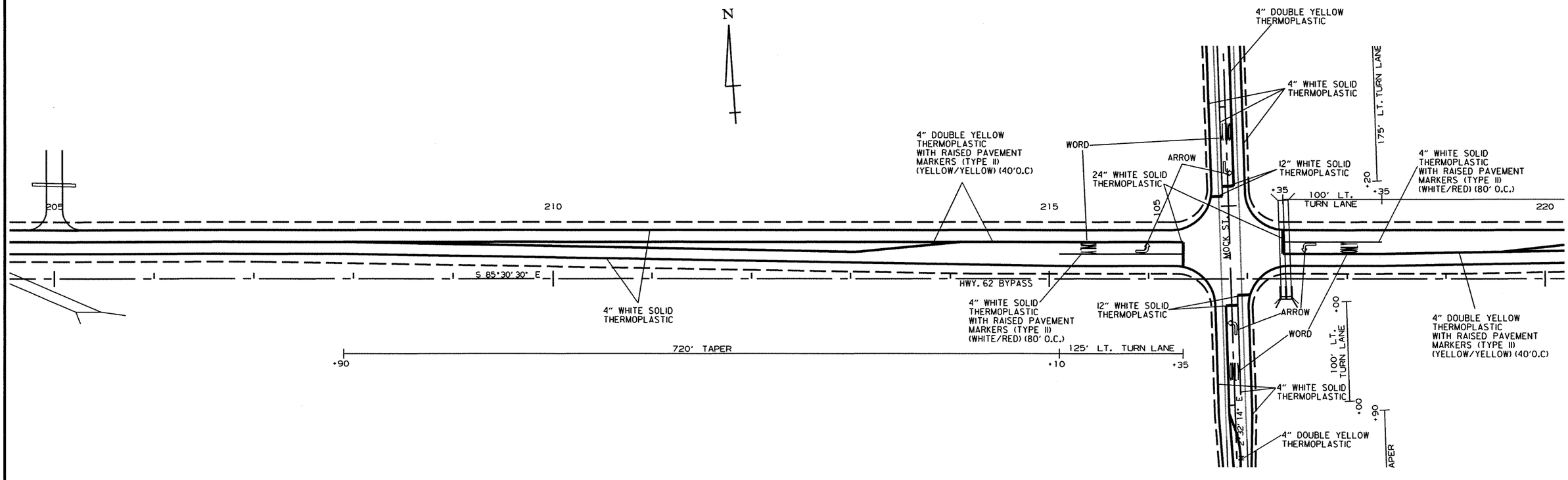
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

HIGH PERFORMANCE CONTRAST PAVEMENT MARKINGS:

4" DOUBLE YELLOW
STA. 170+78-175+50 = 944 LIN. FT.

RAISED PAVEMENT MARKERS:
TYPE II (YELLOW/YELLOW) @ 40' O.C.
STA. 170+78-175+00= 12 EACH





PERMANENT PAVEMENT MARKING DETAILS

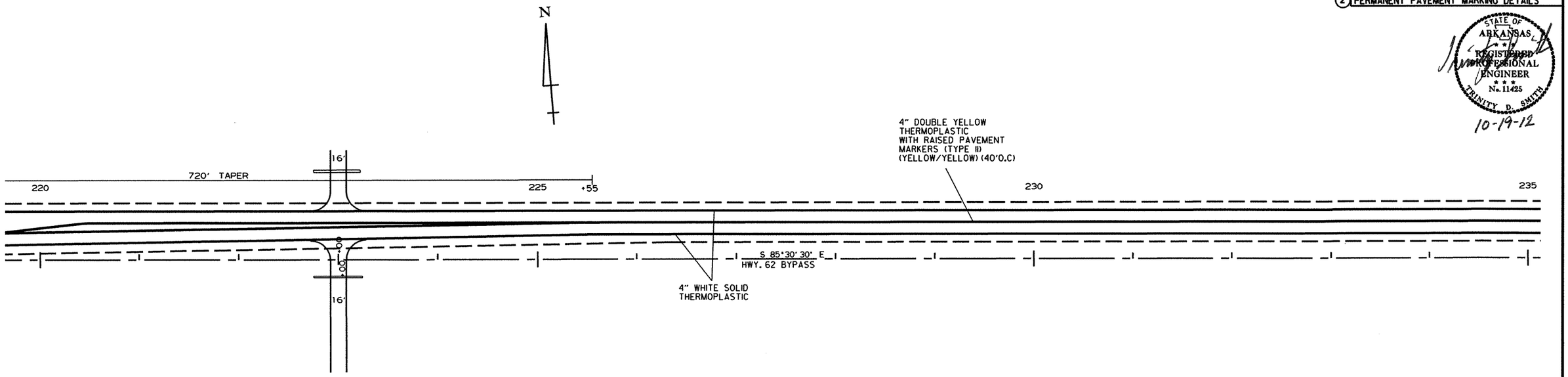
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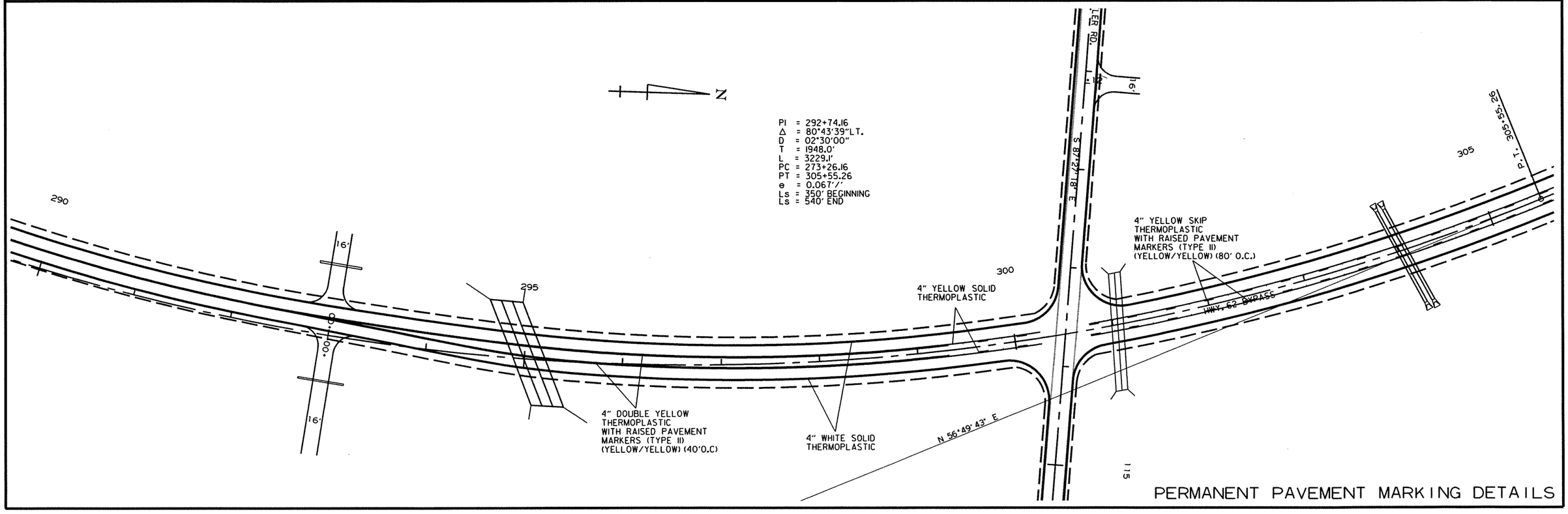
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	63	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
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PERMANENT PAVEMENT MARKING DETAILS

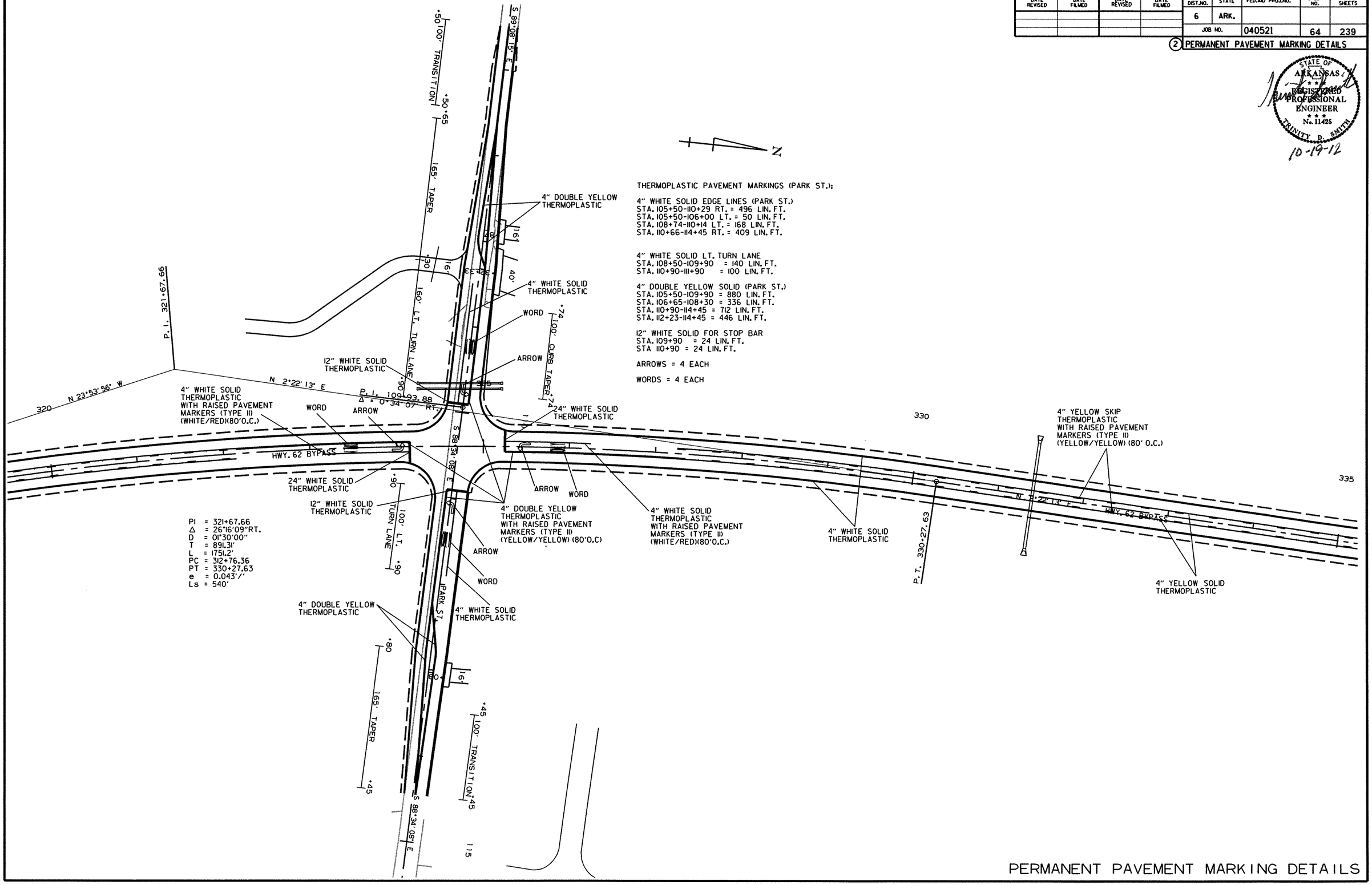
10/1/2012

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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.		040521	64	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-19-12



THERMOPLASTIC PAVEMENT MARKINGS (PARK ST.):

4" WHITE SOLID EDGE LINES (PARK ST.)
STA. 105+50-110+29 RT. = 496 LIN. FT.
STA. 105+50-106+00 LT. = 50 LIN. FT.
STA. 108+74-110+14 LT. = 168 LIN. FT.
STA. 110+66-114+45 RT. = 409 LIN. FT.

4" WHITE SOLID LT. TURN LANE
STA. 108+50-109+90 = 140 LIN. FT.
STA. 110+90-111+90 = 100 LIN. FT.

4" DOUBLE YELLOW SOLID (PARK ST.)
STA. 105+50-109+90 = 880 LIN. FT.
STA. 106+65-108+30 = 336 LIN. FT.
STA. 110+90-114+45 = 712 LIN. FT.
STA. 112+23-114+45 = 446 LIN. FT.

12" WHITE SOLID FOR STOP BAR
STA. 109+90 = 24 LIN. FT.
STA 110+90 = 24 LIN. FT.

ARROWS = 4 EACH

WORDS = 4 EACH

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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.		040521	65	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH 10-24-12

THERMOPLASTIC PAVEMENT MARKINGS (EASTERN CONNECTOR):

4" WHITE SOLID EDGE LINES (EASTERN CONNECTOR)
STA. 341+50-346+54 LT. = 569 LIN. FT.
STA. 341+50-346+15 RT. = 495 LIN. FT.

4" WHITE SOLID LT. TURN LANE:
STA. 343+70-345+69 RT. = 199 LIN. FT.

4" DOUBLE YELLOW SOLID (EASTERN CONNECTOR)
STA. 341+50-345+69 = 856 LIN. FT.
STA. 341+50-343+20 = 346 LIN. FT.

12" WHITE SOLID FOR STOP BAR
STA. 345+69 = 36 LIN. FT.

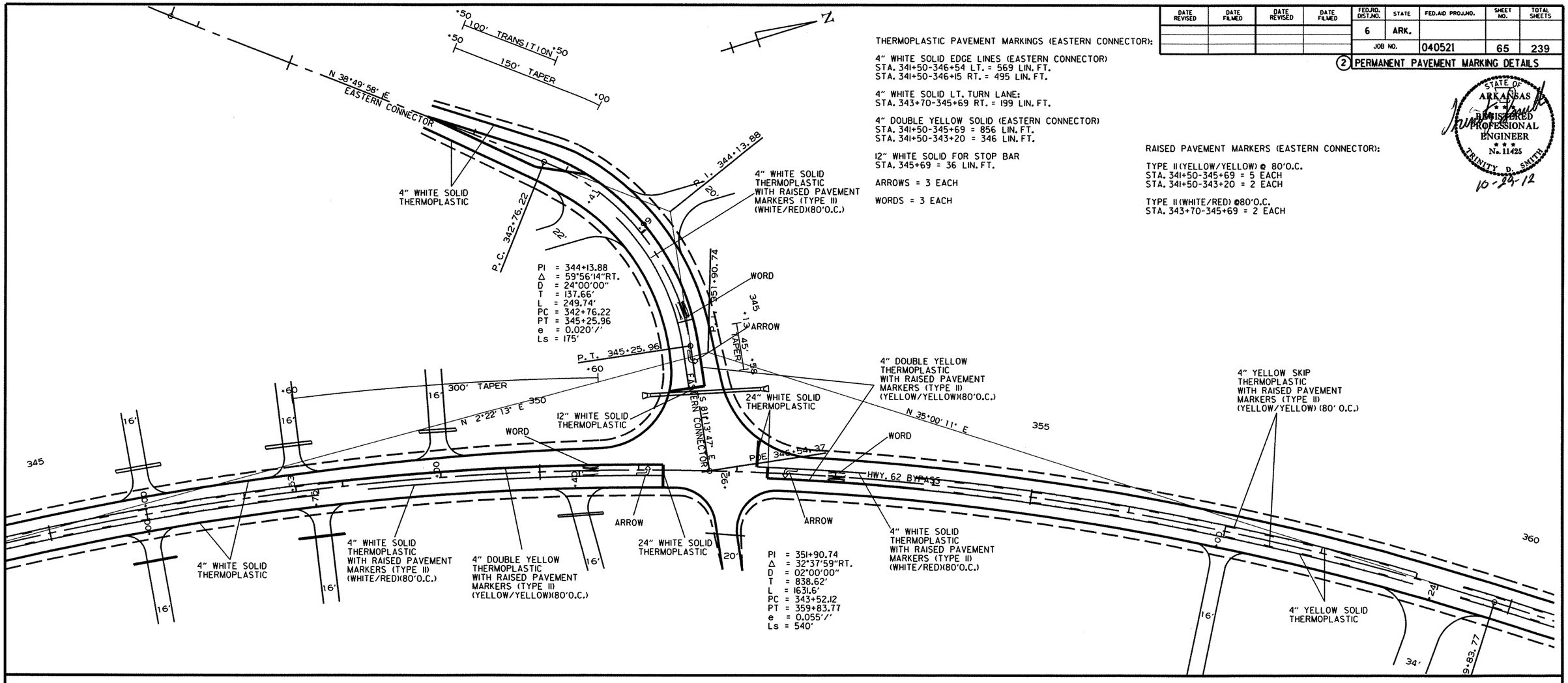
ARROWS = 3 EACH

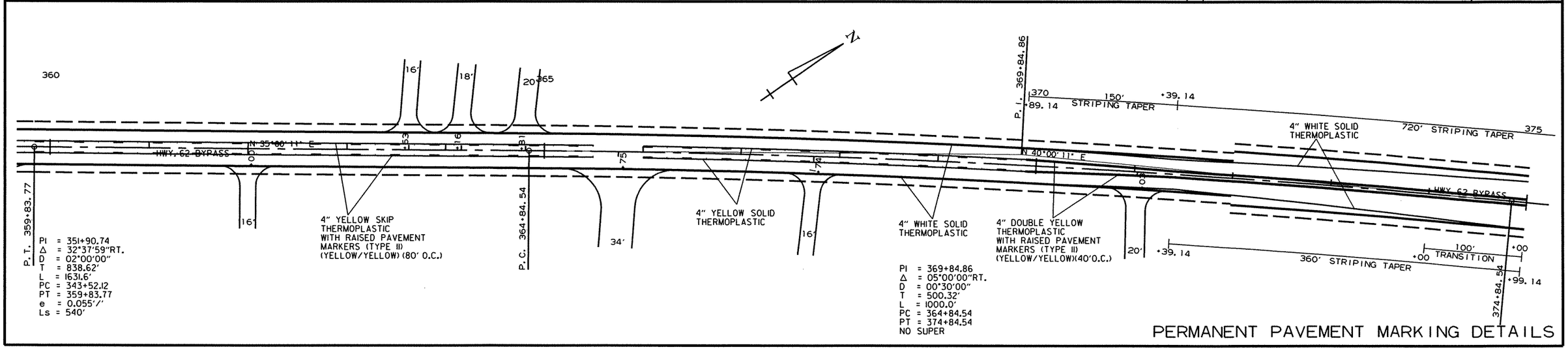
WORDS = 3 EACH

RAISED PAVEMENT MARKERS (EASTERN CONNECTOR):

TYPE II (YELLOW/YELLOW) @ 80'O.C.
STA. 341+50-345+69 = 5 EACH
STA. 341+50-343+20 = 2 EACH

TYPE II (WHITE/RED) @80'O.C.
STA. 343+70-345+69 = 2 EACH





PERMANENT PAVEMENT MARKING DETAILS

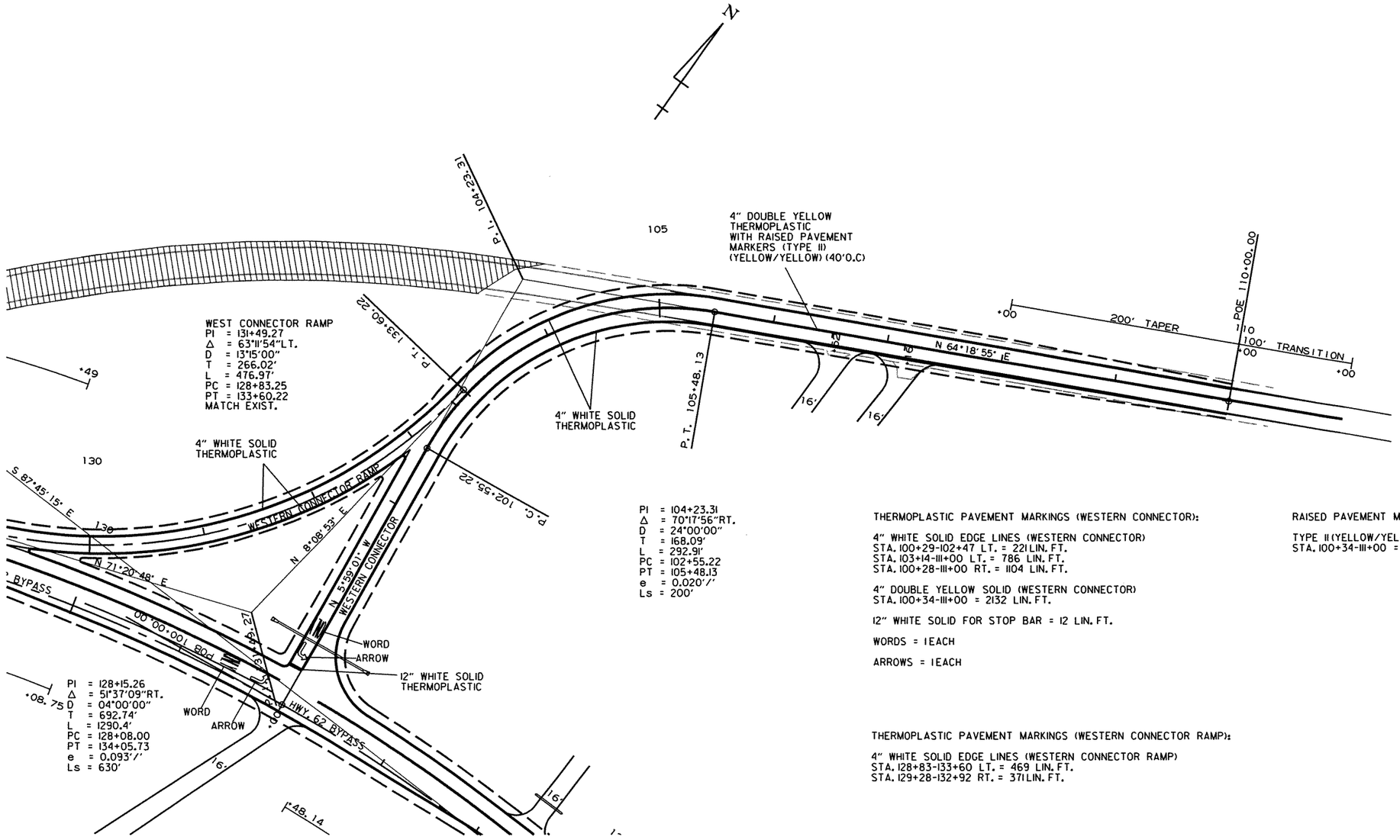
10/1/2012

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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.		040521	66	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



THERMOPLASTIC PAVEMENT MARKINGS (WESTERN CONNECTOR):

4" WHITE SOLID EDGE LINES (WESTERN CONNECTOR)
STA. 100+29-102+47 LT. = 221 LIN. FT.
STA. 103+14-111+00 LT. = 786 LIN. FT.
STA. 100+28-111+00 RT. = 1104 LIN. FT.

4" DOUBLE YELLOW SOLID (WESTERN CONNECTOR)
STA. 100+34-111+00 = 2132 LIN. FT.

12" WHITE SOLID FOR STOP BAR = 12 LIN. FT.

WORDS = 1 EACH

ARROWS = 1 EACH

RAISED PAVEMENT MARKERS (WESTERN CONNECTOR RAMP):

TYPE II (YELLOW/YELLOW) @ 40' O.C.
STA. 100+34-111+00 = 27 EACH

THERMOPLASTIC PAVEMENT MARKINGS (WESTERN CONNECTOR RAMP):

4" WHITE SOLID EDGE LINES (WESTERN CONNECTOR RAMP)
STA. 128+83-133+60 LT. = 469 LIN. FT.
STA. 129+28-132+92 RT. = 371 LIN. FT.

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WESTERN CONNECTOR
PERMANENT PAVEMENT MARKING DETAILS

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				6	ARK.			
				JOB NO.		040521	67	239

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

THERMOPLASTIC PAVEMENT MARKINGS (MOCK ST.):

4" WHITE SOLID EDGE LINES (MOCK ST.)
STA. 101+00-104+38 RT. = 362 LIN. FT.
STA. 101+00-104+41 LT. = 363 LIN. FT.
STA. 104+74-109+50 RT. = 498 LIN. FT.
STA. 104+78-109+50 LT. = 497 LIN. FT.

4" WHITE SOLID LEFT TURN LANE (MOCK ST.)
STA. 103+10-104+10 = 100 LIN. FT.
STA. 105+10-106+85 = 175 LIN. FT.

THERMOPLASTIC PAVEMENT MARKINGS (MOCK ST.):

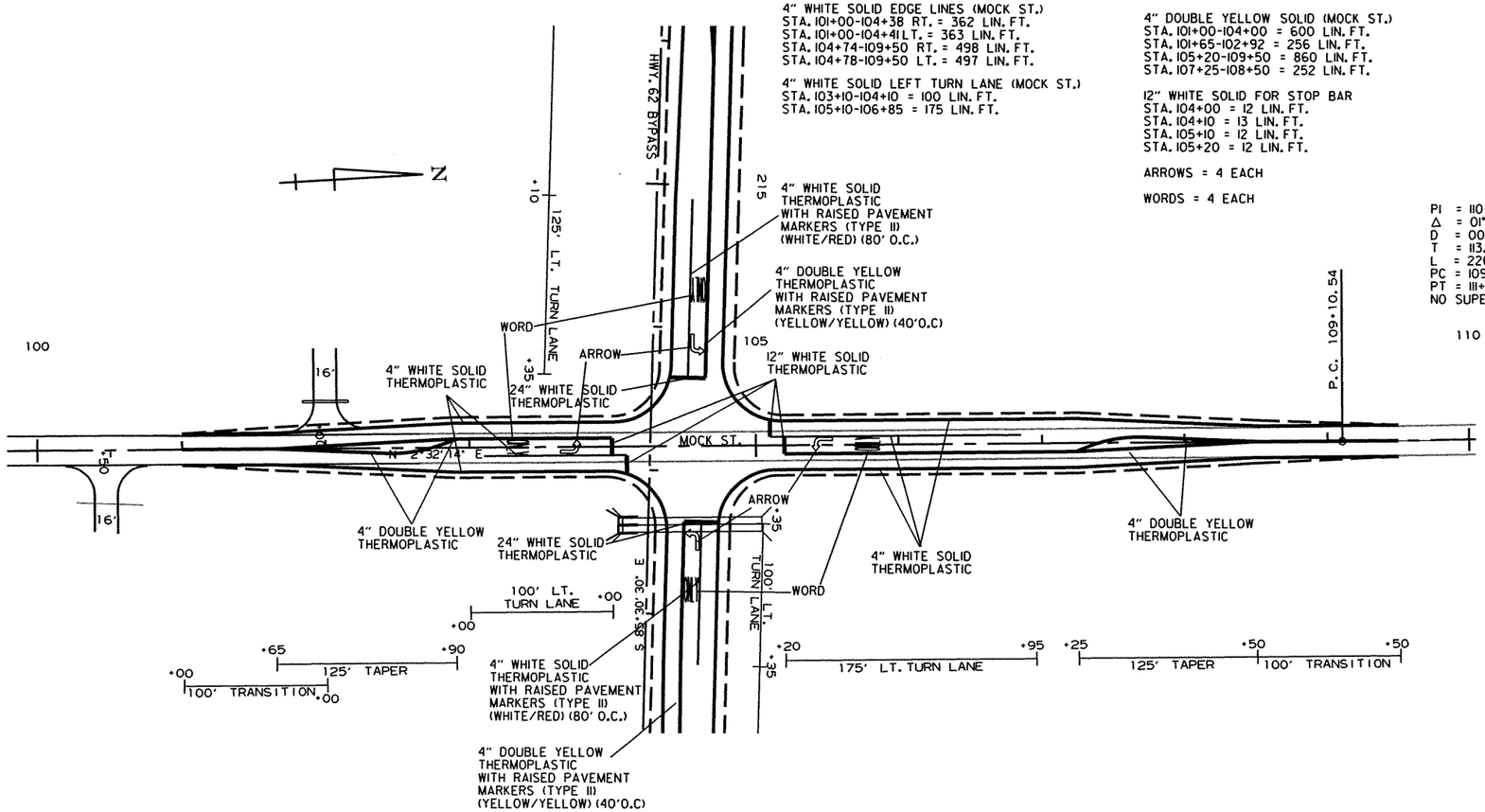
4" DOUBLE YELLOW SOLID (MOCK ST.)
STA. 101+00-104+00 = 600 LIN. FT.
STA. 101+65-102+92 = 256 LIN. FT.
STA. 105+20-109+50 = 860 LIN. FT.
STA. 107+25-108+50 = 252 LIN. FT.

12" WHITE SOLID FOR STOP BAR
STA. 104+00 = 12 LIN. FT.
STA. 104+10 = 13 LIN. FT.
STA. 105+10 = 12 LIN. FT.
STA. 105+20 = 12 LIN. FT.

ARROWS = 4 EACH

WORDS = 4 EACH

PI = 110+23.89
Δ = 01°08'01"LT.
D = 00°30'00"
T = 113.36'
L = 226.70'
PC = 109+10.54
PT = 111+37.24
NO SUPER



MOCK STREET
PERMANENT PAVEMENT MARKING DETAILS

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				6	ARK.			
				JOB NO.		040521	68	239

(2) QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11425 TRINITY D. SMITH
10-29-12

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	STAGE 3	STAGE 4	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	BARRICADES (TYPE III)		FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)
								NO.	SQ. FT.			RIGHT	LEFT				
			LIN. FT. - EACH							EACH				LIN. FT.		EACH	
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	4	64.0								
W20-1	ROAD WORK 1000 FT.	48"x48"	4	4	4	4	4	4	64.0								
W20-1	ROAD WORK 500 FT.	48"x48"	4	4	4	4	4	4	64.0								
W20-1	ROAD WORK AHEAD	48"x48"	16	16	16	16	16	16	256.0								
G20-2	END ROAD WORK	48"x24"	20	20	20	20	20	20	160.0								
G20-1	ROAD WORK NEXT xx MILES	60"x24"				2	2	2	20.0								
W1-4R	REVERSE CURVE RT.	48"x48"		5	1		5	5	80.0								
W1-4L	REVERSE CURVE LT.	48"x48"		5	1		5	5	80.0								
W13-1	SPEED LIMIT (ADVISORY)	24"x24"		10	2		10	10	40.0								
R11-2	ROAD CLOSED	48"x30"	2	6	2	6	6	6	60.0								
OM-3L	OBJECT MARKER	12"x36"		3		3	3	3	9.0								
OM-3R	OBJECT MARKER	12"x36"		4		4	4	4	12.0								
W1-6	LARGE ARROW	48"x24"		4	2	4	4	4	32.0								
W1-8	CHEVRONS	18"x24"		16			16	16	48.0								
R4-1	DO NOT PASS	24"x30"	4	4	4	4	4	4	20.0								
RSP-1	SHOULDER CLOSED	48"x30"	8	8	8	8	8	8	80.0								
W8-9	LOW SHOULDER	36"X36"	8	8	8	8	8	8	72.0								
	VERTICAL PANELS		100	55	18	20	100			100							
	TRAFFIC DRUMS		268	232	88	533	533				533						
	TYPE III BARRICADE-RT. (16')		2	2	1	1	2					32					
	TYPE III BARRICADE-LT. (16')		2	2	1		2						32				
	TYPE III BARRICADE-RT. (24')			2		3	3					72					
	TYPE III BARRICADE-LT. (24')			2		2	2						48				
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER			113			113							113			
	RELOCATING PRECAST CONCRETE BARRIER					93	93								93		
	TEMPORARY IMPACT ATTENUATION BARRIER			1		1	2									2	
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)			1		1	2										2
TOTALS:								1161.0		100	533	104	80	113	93	2	2

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

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	STAGE 3	STAGE 4	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS		THERMOPLASTIC PAVEMENT MARKINGS						HIGH PERFORMANCE CONTRAST PAVEMENT MARKING
									TYPE II (WHITE/RED)	TYPE II (YEL/YEL)	4" WHITE	4" YELLOW	12" WHITE	24" WHITE	WORDS	ARROWS	4" YELLOW
	LIN. FT. - EACH					LIN. FT.		LIN. FT.	EACH		LIN. FT.				EACH		LIN. FT.
REMOVAL OF PERMANENT PAVEMENT MARKINGS		4359		1264		5623											
CONSTRUCTION PAVEMENT MARKINGS	9520	17128	3288	105412			135348										
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS			2756	8612				11368									
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)					24				24								
RAISED PAVEMENT MARKERS TYPE II (YEL/YEL)					707					707							
THERMOPLASTIC PAVEMENT MARKINGS WHITE (4")					58160						58160						
THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4")					64743							64743					
THERMOPLASTIC PAVEMENT MARKINGS WHITE (12")					145								145				
THERMOPLASTIC PAVEMENT MARKINGS WHITE (24")					160									160			
THERMOPLASTIC PAVEMENT MARKINGS WORDS					13										13		
THERMOPLASTIC PAVEMENT MARKINGS ARROWS					13											13	
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4")					944												944
TOTALS:						5623	135348	11368	24	707	58160	64743	145	160	13	13	944

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

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				6	ARK.			
				JOB NO.		040521	69	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
120+00	127+00	HWY. 62 BYPASS	7	7
351+00	352+00	HWY. 62 BYPASS	1	1
365+00	366+00	HWY. 62 BYPASS	1	1
101+00	109+00	MOCK ST.	8	8
106+00	107+00	PARK ST.	1	1
108+00	109+00	PARK ST.	1	1
112+00	115+00	PARK ST.	3	3
341+00	347+00	EASTERN CONNECTOR	6	6
TOTALS:			28	28

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
120+69	HWY. 62 BYPASS LT. - 12" X 40' PIPE	1	
122+55	HWY. 62 BYPASS LT. - 12" X 44' PIPE	1	
125+29	HWY. 62 BYPASS LT. - 18" X 54' R.C. PIPE	1	
223+00	HWY. 62 BYPASS RT. - 18" X 44' PIPE	1	
351+89	HWY. 62 BYPASS RT. - 28" X 20" X 40' PIPE	1	
364+85	HWY. 62 BYPASS LT. - 24" X 356' R.C. PIPE	1	
365+75	HWY. 62 BYPASS RT. - 18" X 62' R.C. PIPE	1	
367+74	HWY. 62 BYPASS RT. - 18" X 62' C.M. PIPE	1	
106+52	WESTERN CONNECTOR RT. - 18" X 25' C.M. PIPE	1	
107+04	WESTERN CONNECTOR - 18" X 48' R.C. PIPE	1	
109+58	BUTLER RD. RT. - 24" X 20' C.M. PIPE	1	
111+12	BUTLER RD. LT. - 24" X 20' C.M. PIPE	1	
107+87	PARK ST. LT. - 24" X 20' C.M. PIPE	1	
108+32	PARK ST. LT. - 24" X 48' C.M. PIPE	1	
108+78	PARK ST. LT. - DROP INLET WITH 18" X 35' R.C. PIPE	1	1
109+05	PARK ST. RT. - 18" X 49' C.M. PIPE	1	
343+45	EASTERN CONNECTOR - 24" X 59' R.C. PIPE	1	
TOTALS:		17	1

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

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
217+38	HWY. 62 BYPASS ON RT.	1
TOTAL:		1

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

MAILBOXES

LOCATION	MAILBOXES	MAILBOX SUPPORTS (SINGLE)
	EACH	
ENTIRE PROJECT	6	6
TOTALS:	6	6

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE
			LIN. FT.
120+00	122+78	HWY. 62 BYPASS	337
122+61		HWY. 62 BYPASS LT.	143
149+50	149+50	HWY. 62 BYPASS LT. & RT.	227
151+00	151+00	HWY. 62 BYPASS LT. & RT.	191
216+10	216+25	HWY. 62 BYPASS LT. & RT.	192
217+60	217+70	HWY. 62 BYPASS LT. & RT.	223
299+35	300+10	HWY. 62 BYPASS LT. & RT.	220
301+20	301+45	HWY. 62 BYPASS LT. & RT.	230
323+80	324+00	HWY. 62 BYPASS LT. & RT.	200
325+15	325+30	HWY. 62 BYPASS LT. & RT.	185
342+75	342+75	HWY. 62 BYPASS LT. & RT.	215
103+28		WESTERN CONNECTOR	187
108+00		CO. RD. 288 RT.	54
110+54	112+81	CO. RD. 288 RT.	227
112+25	112+90	CO. RD. 288 RT.	131
112+80		CO. RD. 288 LT.	31
112+95	113+39	CO. RD. 288 RT.	44
112+95		CO. RD. 288 RT.	27
113+39		CO. RD. 288 RT.	18
115+56	115+95	CO. RD. 288 RT.	39
115+56		CO. RD. 288 RT.	28
99+00	103+25	MOCK ST. LT.	435
103+25		MOCK ST. LT.	46
105+25		MOCK ST. LT.	39
105+25	109+50	MOCK ST. LT.	425
105+35		MOCK ST. RT.	60
105+35	109+50	MOCK ST. RT.	415
102+00	109+50	BUTLER RD. RT.	750
109+00	112+60	BUTLER RD. LT.	360
109+50		BUTLER RD. RT.	82
115+73	121+31	BUTLER RD. LT.	558
105+50	109+40	PARK ST. RT.	390
109+40		PARK ST. RT.	228
111+30		PARK ST. RT.	48
111+30	114+40	PARK ST. RT.	310
114+40		PARK ST. RT.	42
TOTAL:			7337

SUBGRADE PREPARATION

STATION	STATION	LOCATION	STATION
126+25	150+00	HWY. 62 BYPASS	23.75
151+00	170+77.85	HWY. 62 BYPASS	19.78
175+50.15	216+00	HWY. 62 BYPASS	40.50
217+25	299+75	HWY. 62 BYPASS	82.50
301+00	324+00	HWY. 62 BYPASS	23.00
325+00	351+00	HWY. 62 BYPASS	26.00
352+50	358+00	HWY. 62 BYPASS	5.50
100+34.40	103+00	WESTERN CONNECTOR	2.66
128+83.25	133+60.22	WESTERN CONNECTOR RAMP	4.77
TOTAL:			228.46

NOTES:
1. THE REMOVAL AND DISPOSAL OF EXISTING GRASS AND/OR OTHER ORGANIC MATERIALS FROM THE SUBGRADE AND SUBSEQUENT REPLACEMENT OF SUBGRADE MATERIAL WILL NOT BE PAID FOR DIRECTLY BUT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "SUBGRADE PREPARATION".
2. PAYMENT FOR SUBGRADE PREPARATION FOR ACCEL. LANES, TAPERS, AND TURNOUTS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR "SUBGRADE PREPARATION".
3. THE PROFILE GRADE SHOWN ON THE PLAN AND PROFILE SHEETS IS 20" ABOVE THE SUBGRADE. USE 1:1200 FOR TRANSITIONS IN SUBGRADE TO MEET BRIDGE ENDS AND CROSSING ROADS. PAYMENT FOR TRANSITIONS IN SUBGRADE ON MAIN LANES TO BE INCLUDED IN PAYMENT MADE FOR "SUBGRADE PREPARATION".

REFER TO SPECIAL PROVISION "SUBGRADE PREPARATION".

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	CURB AND GUTTER	CONCRETE PAVEMENT	CONCRETE DRIVEWAYS	BARRICADES	CONCRETE DITCH PAVING	SIGNS
			LIN. FT.	SQ. YD.	SQ. YD.	EACH	SQ. YD.	EACH
358+72	359+90	HWY. 62 BYPASS-CONC. CO.RD. ON RT.	217	676				
364+06	364+31	HWY. 62 BYPASS-CONC. DRIVE ON LT.			68			
364+68	364+98	HWY. 62 BYPASS-CONC. DRIVE ON LT.			78			
365+11	366+50	HWY. 62 BYPASS-CONC. CO.RD. ON RT.	147	530				
108+75	114+45	PARK ST.-CURB & GUTTER ON LT.	570					
342+84	343+02	EASTERN CONNECTOR-CONC. DITCH PAVING ON RT.					14	
343+29	343+71	EASTERN CONNECTOR-CONC. DITCH PAVING ON LT.					35	
ENTIRE	PROJECT	BARRICADES AND SIGNS LEFT IN PLACE BY JOB 040524				68		34
TOTALS:			934	1206	146	68	49	34

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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.		040521	70	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
170+30	35	57	51.20	94	20	2.70	C.L.	0-5	A-4(0)	20	5	BROWN
195+00	35	57	50.20	94	19	32.30	40' LT. OF C.L.	0-5	A-6(8)	29	11	BROWN
217+00	35	57	49.00	94	19	5.60	C.L.	0-5	A-6(9)	40	23	BROWN
300+25	35	59	5.60	94	17	56.40	C.L.	0-5	A-6(7)	28	11	BROWN
371+00	35	59	22.50	94	17	44.10	31' RT. OF C.L.	0-5	A-6(11)	32	14	BROWN
125+00	35	57	49.20	94	20	56.50	40' RT. OF C.L.	0-2.5Z	A-4(3)	26	9	BR/GR
129+00	35	57	51.50	94	20	52.60	40' LT. OF C.L.	0-5	A-4(0)	20	4	BROWN
134+00	35	57	51.70	94	20	46.50	40' RT. OF C.L.	0-5	A-4(3)	26	10	BROWN
139+00	35	57	52.20	94	20	40.40	40' LT. OF C.L.	0-2.5Z	A-7-6(38)	59	41	BR/GR
143+00	35	57	51.60	94	20	35.50	40' RT. OF C.L.	0-4.0Z	A-7-6(24)	44	26	BR/GR
147+00	35	57	52.10	94	20	30.60	40' LT. OF C.L.	0-3.5Z	A-6(14)	39	22	BR/GR
155+00	35	57	52.10	94	20	20.90	10' LT. OF C.L.	0-5	A-7-6(57)	75	56	BROWN
159+00	35	57	51.20	94	20	16.10	40' RT. OF C.L.	0-5	A-7-6(23)	41	23	BROWN
163+00	35	57	51.90	94	20	11.20	40' LT. OF C.L.	0-5	A-6(11)	31	14	BROWN
167+00	35	57	50.90	94	20	6.40	40' RT. OF C.L.	0-5	A-4(2)	24	7	BR/GR
179+00	35	57	51.10	94	19	51.70	40' LT. OF C.L.	0-5	A-4(1)	23	7	BROWN
183+00	35	57	50.30	94	19	46.90	40' RT. OF C.L.	0-5	A-7-6(25)	51	34	BROWN
187+00	35	57	50.60	94	19	42.00	40' LT. OF C.L.	0-5	A-7-6(31)	50	31	BROWN
191+00	35	57	49.60	94	19	37.30	40' RT. OF C.L.	0-5	A-7-6(39)	55	40	BROWN
195+00	35	57	50.20	94	19	32.30	40' LT. OF C.L.	0-5	A-6(8)	28	11	BROWN
199+00	35	57	49.20	94	19	27.50	40' RT. OF C.L.	0-1.0Z	A-7-6(22)	41	25	BROWN
203+00	35	57	49.80	94	19	22.60	40' LT. OF C.L.	0-5	A-6(13)	35	17	BROWN
207+00	35	57	48.89	94	19	17.80	40' RT. OF C.L.	0-5	A-6(17)	36	20	BROWN
211+00	35	57	49.30	94	19	12.90	40' LT. OF C.L.	0-5	A-6(7)	26	11	BROWN
215+00	35	57	48.30	94	19	8.10	40' RT. OF C.L.	0-5	A-6(14)	34	19	BROWN
219+00	35	57	48.90	94	19	3.10	40' LT. OF C.L.	0-5	A-6(15)	33	18	BROWN
223+00	35	57	47.90	94	18	58.30	40' RT. OF C.L.	0-5	A-7-6(31)	45	30	BROWN
227+00	35	57	48.50	94	18	53.40	40' LT. OF C.L.	0-5	A-7-6(36)	55	37	BROWN
231+00	35	57	47.50	94	18	48.60	40' RT. OF C.L.	0-5	A-6(16)	36	20	BROWN
235+00	35	57	48.00	94	18	43.70	40' LT. OF C.L.	0-3.8Z	A-4(6)	26	10	BROWN
239+00	35	57	47.00	94	18	38.90	40' RT. OF C.L.	0-5	A-6(14)	34	16	BROWN
243+00	35	57	47.60	94	18	34.00	40' LT. OF C.L.	0-5	A-7-6(22)	44	27	BR/GR
247+00	35	57	46.60	94	18	29.20	40' RT. OF C.L.	0-5	A-6(10)	30	14	BROWN
251+00	35	57	47.20	94	18	24.30	40' LT. OF C.L.	0-5	A-6(20)	40	22	BROWN
255+00	35	57	46.20	94	18	19.40	40' RT. OF C.L.	0-5	A-6(18)	38	19	BROWN
259+00	35	57	47.40	94	18	14.70	40' LT. OF C.L.	0-5	A-7-6(34)	53	34	BR/GR
263+00	35	57	47.90	94	18	9.80	40' RT. OF C.L.	0-4.0Z	A-6(1)	31	13	BROWN
267+00	35	57	50.50	94	18	6.10	40' LT. OF C.L.	0-5	A-6(11)	31	14	BR/GR
271+00	35	57	52.10	94	18	1.50	40' RT. OF C.L.	0-5	A-4(0)	23	8	BR/GR
275+00	35	57	55.10	94	17	58.10	40' RT. OF C.L.	0-5	A-7-6(31)	50	33	BR/RD
279+00	35	57	57.20	94	17	54.00	40' RT. OF C.L.	0-5	A-6(6)	28	11	BR/RD
283+00	35	58	0.90	94	17	51.90	40' LT. OF C.L.	0-5	A-6(11)	34	14	BR/GR
287+00	35	58	4.10	94	17	48.90	40' RT. OF C.L.	0-5	A-7-6(39)	53	38	BROWN
291+00	35	58	8.10	94	17	48.30	40' LT. OF C.L.	0-2.5Z	A-2-6(0)	34	18	BROWN
295+00	35	58	11.90	94	17	47.20	40' RT. OF C.L.	0-2.5Z	A-6(16)	37	20	BROWN
299+00	35	58	15.90	94	17	48.00	40' LT. OF C.L.	0-2.0Z	A-7-6(36)	55	37	BROWN
303+00	35	58	19.80	94	17	48.70	40' RT. OF C.L.	0-5	A-7-6(31)	50	32	BROWN
307+00	35	58	23.30	94	17	51.10	40' LT. OF C.L.	0-5	A-6(17)	36	20	BROWN
311+00	35	58	27.00	94	17	52.70	40' RT. OF C.L.	0-1.3Z	A-4(4)	27	7	BROWN
315+00	35	58	30.50	94	17	55.20	40' LT. OF C.L.	0-5	A-6(7)	28	11	BROWN
319+00	35	58	34.10	94	17	56.30	40' RT. OF C.L.	0-5	A-6(6)	26	9	BROWN
323+00	35	58	38.10	94	17	57.80	40' LT. OF C.L.	0-5	A-6(8)	28	12	BROWN
327+00	35	58	42.10	94	17	57.90	40' RT. OF C.L.	0-2.5Z	A-4(4)	25	10	BROWN
331+00	35	58	46.00	94	17	58.50	40' LT. OF C.L.	0-2.5Z	A-4(2)	23	7	BROWN
335+00	35	58	50.00	94	17	57.90	40' RT. OF C.L.	0-5	A-6(8)	32	14	BROWN
339+00	35	58	53.90	94	17	58.30	40' LT. OF C.L.	0-5	A-6(10)	29	15	BROWN
343+00	35	58	57.90	94	17	57.70	40' RT. OF C.L.	0-5	A-6(10)	39	14	BROWN
347+00	35	59	1.80	94	17	57.90	40' LT. OF C.L.	0-4.0Z	A-4(4)	25	7	BROWN
351+00	35	59	5.60	94	17	56.40	40' LT. OF C.L.	0-5	A-4(4)	28	10	BROWN
355+00	35	59	9.50	94	17	55.20	40' LT. OF C.L.	0-5	A-4(3)	23	6	BROWN
359+00	35	59	12.80	94	17	52.50	40' RT. OF C.L.	0-5	A-6(9)	29	13	BROWN
363+00	35	59	16.30	94	17	50.20	40' LT. OF C.L.	0-5	A-7-6(29)	51	34	BR/GR
371+00	35	59	22.70	94	17	44.50	12' RT. OF C.L.	0-5	A-4(0)	ND	NP	BROWN
371+00	35	59	22.50	94	17	44.10	30' RT. OF C.L.	0-5	A-6(5)	34	18	BROWN
371+00	35	59	22.50	94	17	44.10	31' RT. OF C.L.	0-5	A-6(11)	33	16	BROWN

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

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	* SOIL STABILIZATION
			CU. YD.		TON
ENTIRE	PROJECT	STAGE 1-HWY. 62 BYPASS	12975	12104	
ENTIRE	PROJECT	STAGE 2-HWY. 62 BYPASS	1272	3743	
ENTIRE	PROJECT	STAGE 3-HWY. 62 BYPASS	722	407	
ENTIRE	PROJECT	STAGE 4-HWY. 62 BYPASS	2055	1207	
ENTIRE	PROJECT	STAGE 1-WESTERN CONNECTOR	195	69	
ENTIRE	PROJECT	STAGE 2-WESTERN CONNECTOR	1169	2762	
ENTIRE	PROJECT	STAGE 4-WESTERN CONNECTOR	725	641	
ENTIRE	PROJECT	STAGE 1-MOCK ST.	373	97	
ENTIRE	PROJECT	STAGE 2-MOCK ST.	774	794	
ENTIRE	PROJECT	STAGE 3-MOCK ST.	1191	408	
ENTIRE	PROJECT	STAGE 1-BUTLER RD. DETOUR	4	9131	
ENTIRE	PROJECT	STAGE 2-BUTLER RD.	2218	16387	
ENTIRE	PROJECT	STAGE 3-BUTLER RD. DETOUR REMOVAL	10248		
ENTIRE	PROJECT	STAGE 1-PARK ST.	181	792	
ENTIRE	PROJECT	STAGE 2-PARK ST.	1079	1019	
ENTIRE	PROJECT	STAGE 1-EASTERN CONNECTOR	123	53	
ENTIRE	PROJECT	STAGE 2-EASTERN CONNECTOR	915	2549	
ENTIRE	PROJECT	STAGE 4-EASTERN CONNECTOR	136	1297	
ENTIRE	PROJECT	APPROACHES	60	2750	
124+36	131+85	REMOVAL OF EXIST. HWY. 62 PAVEMENT	1039		
351+57	358+77	REMOVAL OF EXIST. HWY. 62 PAVEMENT	893		
* ENTIRE	PROJECT	TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			100
TOTALS:			38347	56210	100

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

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE A)	WIRE FENCE (TYPE C)	WIRE FENCE (TYPE D-1)	WIRE FENCE (TYPE D-2)	WATER GATE	* 16'-0" GATES
			LIN. FT.				EACH	EACH
124+40	126+59	HWY. 62 BYPASS	233					
103+17	104+00	WESTERN CONNECTOR	116					
111+50	113+45	CO. RD. 288 ON RT.			196			1
115+54	115+95	CO. RD. 288 ON RT.		57				
99+00	103+30	MOCK ST. ON LT.			433		1	1
105+32	109+50	MOCK ST. ON LT.			420			
105+37	109+50	MOCK ST. ON RT.			416			
102+00	109+51	BUTLER RD. ON RT.			829			2
109+00	112+55	BUTLER RD. ON LT.				364		2
114+64	123+00	BUTLER RD. ON LT.				849		
105+50	109+51	PARK RD. ON RT.				425		2
111+39	114+39	PARK RD. ON RT.				299		
TOTALS:			349	57	2294	1937	1	8

* DENOTES ALTERNATE BID ITEM.

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				6	ARK.			
				JOB NO.		040521	71	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

CONCRETE DITCH PAVING

	STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
				LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE	1000.00	9	1000.00	444.44	5.60
			DIRECTED BY THE ENGINEER					
TOTALS:						1000.00	444.44	5.60

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

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

DUMPED RIPRAP AND FILTER BLANKET

	STATION	LOCATION	DUMPED RIPRAP	FILTER BLANKET
			CU. YDS.	SQ. YDS.
	109+50	OUTLET OF PIPE CULVERT ON PARK ST.	7	13
*		TO BE USED IF AND WHERE	25	50
		DIRECTED BY THE ENGINEER		
TOTALS:			32	63

*NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

NOTE: FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

EROSION CONTROL MATTING

	STATION	STATION	LOCATION	LENGTH	CLASS 3
				LIN. FT.	SQ. YD.
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE	1125.0	1000.0
			DIRECTED BY THE ENGINEER		
TOTAL:					1000.0

NOTE: AVERAGE WIDTH = 8'-0"

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

4" PIPE UNDERDRAIN

STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
132+00	144+00	HWY. 62 BYPASS ON LT.	1390	6
132+00	144+00	HWY. 62 BYPASS ON RT.	1380	6
169+00	170+78	HWY. 62 BYPASS ON LT.	218	2
169+00	170+78	HWY. 62 BYPASS ON RT.	222	2
175+50	179+00	HWY. 62 BYPASS ON LT.	438	3
175+50	179+00	HWY. 62 BYPASS ON RT.	430	3
287+00	302+00	HWY. 62 BYPASS ON LT.	1788	7
287+00	302+00	HWY. 62 BYPASS ON RT.	1680	7
370+00	375+00	HWY. 62 BYPASS ON LT.	528	3
370+00	375+00	HWY. 62 BYPASS ON RT.	528	3
342+00	344+50	EASTERN CONNECTOR ON LT.	276	2
342+00	344+50	EASTERN CONNECTOR ON RT.	282	2
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			2600	10
TOTALS:			11760	56

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

EROSION CONTROL

			PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL									
STATION	STATION	LOCATION	SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	TEMPORARY SEEDING	MULCH COVER	WATER	SAND BAG DITCH CHECKS (E-5)	ROCK DITCH CHECKS (E-6)	DROP INLET SILT FENCE (E-7)	SILT FENCE (E-11)	SEDIMENT BASIN (E-14)	OBLITERATION OF SEDIMENT BASIN	*SEDIMENT REMOVAL & DISPOSAL
			ACRE	TON	ACRE	M.GAL.	ACRE	ACRE	ACRE	M.GAL.	BAG	CU.YD.	LIN. FT.	LIN. FT.	CU.YD.	CU.YD.	CU. YD.
ENTIRE	PROJECT	STAGE 1										108	75	334			51
ENTIRE	PROJECT	STAGE 2										156		85			55
ENTIRE	PROJECT	STAGE 3										30					10
ENTIRE	PROJECT	STAGE 4										51		88			
ENTIRE	PROJECT	COMPLETED SLOPES	8.60	17.20	8.60	877.2	8.60										17
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			2.00	4.00	2.00	204.0	2.00	149.07	149.07	3041.0	660	90	25	200	10000	10000	10068
TOTALS:			10.60	21.20	10.60	1081.2	10.60	149.07	149.07	3041.0	660	435	100	707	10000	10000	10201

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

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

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

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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.		040521	72	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF	
AND WHERE DIRECTED BY THE	100
ENGINEER	
TOTAL:	100

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

PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

STATION	LOCATION	WIDTH	LENGTH	TON
		FEET		
106+94	WESTERN CONNECTOR	18.00	24	32
343+43	EASTERN CONNECTOR	7.53	40	22
TOTAL:				54

AVG. DEPTH = 12"

ACHM PATCHING OF EXISTING ROADWAY

DESCRIPTION	TON
ENTIRE PROJECT - TO BE USED IF AND WHERE	50
DIRECTED BY THE ENGINEER	
TOTAL:	50

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

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
168+31.62	170+75.37	RT. SIDE OF HWY. 62 BYPASS	175	1	1
169+17.78	170+61.53	LT. SIDE OF HWY. 62 BYPASS	75	1	1
175+52.63	177+71.38	LT. SIDE OF HWY. 62 BYPASS	150	1	1
175+66.47	178+10.22	RT. SIDE OF HWY. 62 BYPASS	175	1	1
TOTALS:			575	4	4

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
119+95	120+95	HWY. 62 BYPASS	24	266.67
374+00	375+00	HWY. 62 BYPASS	51	566.67
110+00	111+00	WESTERN CONNECTOR	24	266.67
101+00	102+00	MOCK ST.	22	244.44
108+50	109+50	MOCK ST.	22	244.44
109+00	110+00	BUTLER RD.	20	222.22
122+00	123+00	BUTLER RD.	20	222.22
105+50	106+50	PARK RD.	20	222.22
113+45	114+45	PARK RD.	26	288.89
341+50	342+50	EASTERN CONNECTOR	24	266.67
TOTAL:				2811.11

NOTE: AVERAGE MILLING DEPTH 1".

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
106+00	109+74	LT. ON PARK ST.	376
110+90	114+45	LT. ON PARK ST.	357
TOTAL:			733

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	36"	44"X27"	(CLASS IV) 24"	SIDE DRAIN 12"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	44"X27"	TEMPORARY PIPE CULVERTS 18"	DROP INLETS TYPE MO	YARD DRAIN	SPAN	HEIGHT	LENGTH	CLASS S CONCRETE ROADWAY	REINF. STEEL-ROADWAY (GRADE 60)	UNCL.EXC. FOR STR.-ROADWAY	SOLID SODDING	WATER	STD. DWG. NOS.
		LIN. FT.					EACH				LIN. FT.	EACH		LIN. FT.			CU.YD.	POUND	CU.YD.	SQ.YD.	M.GAL	
HWY. 62 BYPASS																						
217+38	EXTEND DBL. 5'X3' R.C. BOX CULV'T 13' RT.													5	3	13	14.34	2114	9	7	0.09	W-X003-1, R-200X-0, RCB-1, RCB-2, RCB-3
WESTERN CONNECTOR																						
106+94	CONSTRUCT 24" R.C. PIPE CULVERT ON 15° L.F.S.				82			2												16	0.20	FES-1, FES-2, PCC-1
BUTLER ROAD DETOUR																						
113+44	INSTALL 18" TEMP. PIPE CULVERT										48											PCC-1, PCM-1, PCP-1, PCP-2
120+71	INSTALL 18" TEMP. PIPE CULVERT										136											PCC-1, PCM-1, PCP-1, PCP-2
PARK ROAD																						
107+50	CONSTRUCT YARD DRAIN W/ 12" PIPE CULV'T					52							1									FPC-9, PCC-1, PCM-1, PCP-1, PCP-2
108+05	CONSTRUCT YARD DRAIN W/ 12" PIPE CULV'T					142							1									FPC-9, PCC-1, PCM-1, PCP-1, PCP-2
109+50	CONST. DROP INLET W/ 18" R.C. PIPE CULV'T	12					1					1								5	0.06	FES-1, FES-2, FPC-9M, PCC-1
EASTERN CONNECTOR																						
343+43	CONSTRUCT 44"X27" R.C. ARCH PIPE CULVERT			128						2										34	0.43	FES-1, FES-2, PCC-1
345+75	EXTEND 36" PIPE CULVERT 12' LT. AND 18' RT.		38						2											34	0.43	FES-1, FES-2, PCC-1
TOTALS:		12	38	128	82	194	1	2	2	2	184	1	2				14.34	2114	9	96	1.21	

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

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

10/1/2012

R040521.DGN

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		PORTLAND CEMENT CONCRETE DRIVEWAY	ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS				STANDARD DRAWINGS
										18"	24"	30"	28"X20"	
			FEET	STATION	STATION	SQ. YD.	SQ. YD.	TON	TON	LIN. FT.				
120+69	LT.	HWY. 62 BYPASS	30				182.6	20.1	74.6	40				PCC-1, PCM-1, PCP-1, PCP-2
122+13	RT.	HWY. 62 BYPASS	20				173.0	19.0	70.6	62				PCC-1, PCM-1, PCP-1, PCP-2
122+52	LT.	HWY. 62 BYPASS	35				218.1	24.0	89.1	52				PCC-1, PCM-1, PCP-1, PCP-2
123+81	LT.	HWY. 62 BYPASS	22				207.7	22.8	84.8					
132+00	RT.	HWY. 62 BYPASS	16				318.1	35.0	129.9					
134+35	LT.	HWY. 62 BYPASS	16				123.6	13.6	50.5					
135+00	RT.	HWY. 62 BYPASS	16				246.6	27.1	100.7					
141+00	RT.	HWY. 62 BYPASS	16				275.3	30.3	112.4					
141+00	LT.	HWY. 62 BYPASS	16				131.4	14.5	53.7					
150+32	RT.	HWY. 62 BYPASS	22				310.7	34.2	126.9					
150+32	LT.	HWY. 62 BYPASS	22				346.0	38.1	141.3					
155+90	LT.	HWY. 62 BYPASS	16				80.7	8.9	33.0					
158+00	RT.	HWY. 62 BYPASS	16				255.7	28.1	104.4					
161+00	RT.	HWY. 62 BYPASS	16				344.7	37.9	140.8					
161+00	LT.	HWY. 62 BYPASS	16				150.9	16.6	61.6					
166+00	RT.	HWY. 62 BYPASS	16				335.8	36.9	137.1					
166+00	LT.	HWY. 62 BYPASS	16				151.0	16.6	61.7					
198+50	RT.	HWY. 62 BYPASS	16				255.8	28.1	104.5					
198+50	LT.	HWY. 62 BYPASS	16				183.9	20.2	75.1					
205+00	LT.	HWY. 62 BYPASS	16				133.1	14.6	54.3					
223+00	RT.	HWY. 62 BYPASS	16				225.7	24.8	92.2	38				PCC-1, PCM-1, PCP-1, PCP-2
223+00	LT.	HWY. 62 BYPASS	16				98.1	10.8	40.1					
235+60	RT.	HWY. 62 BYPASS	16				252.4	27.8	103.1					
237+20	LT.	HWY. 62 BYPASS	16				118.3	13.0	48.3					
252+00	RT.	HWY. 62 BYPASS	30				475.8	52.3	194.3					
253+00	LT.	HWY. 62 BYPASS	30				193.3	21.3	78.9					
262+00	LT.	HWY. 62 BYPASS	16				107.0	11.8	43.7					
269+85	RT.	HWY. 62 BYPASS	16				250.0	27.5	102.1					
269+85	LT.	HWY. 62 BYPASS	30				231.5	25.5	94.5					
276+00	RT.	HWY. 62 BYPASS	16				253.8	27.9	103.6					
276+00	LT.	HWY. 62 BYPASS	16				107.6	11.8	43.9					
293+00	RT.	HWY. 62 BYPASS	16				213.7	23.5	87.3					
293+00	LT.	HWY. 62 BYPASS	16				123.9	13.6	50.6					
315+23	LT.	HWY. 62 BYPASS	16				165.6	18.2	67.6					
315+40	RT.	HWY. 62 BYPASS	16				142.4	15.7	58.1					
338+00	RT.	HWY. 62 BYPASS	16				113.8	12.5	46.5					
339+85	LT.	HWY. 62 BYPASS	16				135.8	14.9	55.5					
340+32	RT.	HWY. 62 BYPASS	24			207.80								
343+00	RT.	HWY. 62 BYPASS	16				125.3	13.8	51.2					
343+00	LT.	HWY. 62 BYPASS	16				136.7	15.0	55.8					
346+00	RT.	HWY. 62 BYPASS	16				156.7	17.2	64.0					
346+00	LT.	HWY. 62 BYPASS	16				146.0	16.1	59.6					
347+53	LT.	HWY. 62 BYPASS	16				156.8	17.2	64.0					
347+75	RT.	HWY. 62 BYPASS	16				163.2	18.0	66.6					
349+00	LT.	HWY. 62 BYPASS	16				150.1	16.5	61.3					
350+40	RT.	HWY. 62 BYPASS	16				139.0	15.3	56.8					
351+92	RT.	HWY. 62 BYPASS	20				217.9	24.0	89.0				50	PCC-1, PCM-1, PCP-1, PCP-2
357+00	RT.	HWY. 62 BYPASS	16				324.8	35.7	132.6					
359+24	RT.	HWY. 62 BYPASS	34			277.50								
362+00	RT.	HWY. 62 BYPASS	16				100.9	11.1	41.2	40				PCC-1, PCM-1, PCP-1, PCP-2
363+63	LT.	HWY. 62 BYPASS	16				119.9	13.2	49.0			36		PCC-1, PCM-1, PCP-1, PCP-2
364+16	LT.	HWY. 62 BYPASS	18			127.50						34		PCC-1, PCM-1, PCP-1, PCP-2
364+81	LT.	HWY. 62 BYPASS	20			138.70						40		PCC-1, PCM-1, PCP-1, PCP-2
365+75	RT.	HWY. 62 BYPASS	34			303.70				54				PCC-1, PCM-1, PCP-1, PCP-2
367+74	RT.	HWY. 62 BYPASS	16				135.9	14.9	55.5	40				PCC-1, PCM-1, PCP-1, PCP-2
371+03	RT.	HWY. 62 BYPASS	20				140.3	15.4	57.3					
106+52	RT.	WESTERN CONNECTOR	16				103.0	11.3	42.1	36				PCC-1, PCM-1, PCP-1, PCP-2
107+16	RT.	WESTERN CONNECTOR	16				107.2	11.8	43.8					
100+50	RT.	MOCK ST.	16				99.7	11.0	40.7					
102+00	LT.	MOCK ST.	16				103.3	11.4	42.2	32				PCC-1, PCM-1, PCP-1, PCP-2
109+58	RT.	BUTLER RD.	16				60.8	6.7	24.8				28	PCC-1, PCM-1, PCP-1, PCP-2
111+12	LT.	BUTLER RD.	16				81.9	9.0	33.4		32			PCC-1, PCM-1, PCP-1, PCP-2
107+87	LT.	PARK ST.	16	107+65	108+09	24.90	29.9	3.3	12.2					
108+32	LT.	PARK ST.	40	107+98	108+66	46.20	81.2	8.9	33.2					
108+33	RT.	PARK ST.	16				491.4	54.1	200.7	40				PCC-1, PCM-1, PCP-1, PCP-2
113+03	LT.	PARK ST.	16	112+81	113+25	24.90	39.0	4.3	15.9					
343+41	RT.	EASTERN CONNECTOR	22				182.4	20.1	74.5					
343+99	LT.	EASTERN CONNECTOR	20				341.7	37.6	139.5					
* ENTIRE PROJECT TEMPORARY DRIVES									680.0					
TOTALS:						**1151.20**	**11568.4**	**1272.4**	**5404.2**	**434**	**32**	**110**	**78**	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

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

** FOR INFORMATION ONLY

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

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

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

NOTE: QUANTITIES ARE ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.
BASIS OF ESTIMATE:
ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC...25 TON/MILE
TACK COAT FOR MAINTENANCE OF TRAFFIC.....50 GAL./MILE

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN ASPHALT SHOULDERS
			LIN.FT.
120+95	170+41	LT. OF HWY. 62 BYPASS	3382
120+95	170+55	RT. OF HWY. 62 BYPASS	3474
175+73	375+00	LT. OF HWY. 62 BYPASS	14964
175+87	375+00	RT. OF HWY. 62 BYPASS	14631
TOTAL:			**36451**

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

STATE OF ARKANSAS TIMOTHY D. SMITH REGISTERED PROFESSIONAL ENGINEER No. 11485
10-19-12

QUANTITIES

DATE REVISED | DATE FILED | DATE REVISED | DATE FILED | FED.AID DIST.NO.
2 QUANTITIES | JOB NO. 040521 | 6 | ARK. | STATE | FED.AID PROJ.NO. | SHEET NO. 73 | TOTAL SHEETS 239

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	74	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

BASE AND SURFACING (MOCK ST., BUTLER RD., & PARK ST.)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 64-22
			FEET			FEET				FEET			TON	FEET			TON
MOCK STREET																	
101+00	102+00	TRANSITION	100.0			22.0	244.4	0.10	24.4					22.0	244.4	220.0	26.9
101+65	102+90	NOTCH & WIDENING TAPER	125.0	96.25	120.3	28.1	390.3	0.03	11.7					48.1	668.1	220.0	73.5
102+90	103+98	NOTCH & WIDEN	108.0	124.00	133.9	34.3	411.6	0.03	12.3					54.3	651.6	220.0	71.7
102+75	103+98	FULL DEPTH	123.0	222.75	274.0	34.3	468.8	0.03	14.1					76.3	1042.8	220.0	114.7
103+98	104+41	FULL DEPTH TURNOUT - RT. OF MAIN LANES	43.0	VAR.	133.1	VAR.	235.9	0.03	7.1					VAR.	519.1	220.0	57.1
104+74	105+17	FULL DEPTH TURNOUT - LT. OF MAIN LANES	43.0	VAR.	133.1	VAR.	235.9	0.03	7.1					VAR.	519.1	220.0	57.1
105+17	105+25	FULL DEPTH	8.0	222.75	17.8	34.3	30.5	0.03	0.9					76.3	67.8	220.0	7.5
105+25	107+25	NOTCH & WIDEN	200.0	124.00	248.0	34.3	762.2	0.03	22.9					54.3	1206.7	220.0	132.7
107+25	108+50	NOTCH & WIDENING TAPER	125.0	96.25	120.3	28.1	390.3	0.03	11.7					48.1	668.1	220.0	73.5
108+50	109+50	TRANSITION	100.0			22.0	244.4	0.10	24.4					22.0	244.4	220.0	26.9
MOCK STREET - ADDITIONAL FOR LEVELING & GRADE RAISE																	
102+00	103+98	LEVELING	198.0			20.0	440.0	0.10	44.0					20.0	440.0	220.0	48.4
105+25	108+50	LEVELING	325.0			20.0	722.2	0.10	72.2					20.0	722.2	220.0	79.4
102+00	103+00	GRADE RAISE	100.0			VAR.	132.7	0.03	4.0	VAR.	132.7	330.0	21.9				
105+00	109+50	GRADE RAISE	450.0			VAR.	528.5	0.03	15.9	VAR.	528.5	330.0	87.2				
MOCK STREET - ADDITIONAL FOR STAGE CONSTRUCTION																	
100+96	107+85	WIDEN EXISTING ROAD FOR STAGE 1	689.0	VAR.	527.8									VAR.	1170.2	220.0	128.7
BUTLER ROAD																	
109+00	110+00	TRANSITION	100.0	29.25	29.3	20.0	222.2	0.10	22.2					25.0	277.8	220.0	30.6
110+00	111+00	NOTCH & WIDEN	100.0	58.50	58.5									30.0	333.3	220.0	36.7
111+00	112+95	FULL DEPTH	195.0	149.25	291.0									30.0	650.0	220.0	71.5
112+95	113+59	FULL DEPTH TURNOUT - RT. OF MAIN LANES	64.0	VAR.	117.2									VAR.	273.1	220.0	30.0
113+75	114+38	FULL DEPTH TURNOUT - LT. OF MAIN LANES	63.0	VAR.	115.3									VAR.	268.8	220.0	29.6
114+38	121+00	FULL DEPTH	662.0	149.25	988.0									30.0	2206.7	220.0	242.7
121+00	122+00	NOTCH & WIDEN	100.0	58.50	58.5									30.0	333.3	220.0	36.7
122+00	123+00	TRANSITION	100.0	29.25	29.3	20.0	222.2	0.10	22.2					25.0	277.8	220.0	30.6
BUTLER ROAD - ADDITIONAL FOR LEVELING & GRADE RAISE																	
110+00	111+00	LEVELING	100.0			20.0	222.2	0.10	22.2					20.0	222.2	220.0	24.4
121+00	122+00	LEVELING	100.0			20.0	222.2	0.10	22.2					20.0	222.2	220.0	24.4
109+00	111+00	GRADE RAISE	200.0			VAR.	188.5	0.03	5.7	VAR.	188.5	330.0	31.1				
121+00	121+50	GRADE RAISE	50.0			VAR.	98.8	0.03	3.0	VAR.	98.8	330.0	16.3				
BUTLER ROAD DETOUR																	
105+17	107+21	NOTCH & WIDEN	204.0	VAR.	71.0									VAR.	177.7	220.0	19.5
107+21	121+13	FULL DEPTH	1392.0	123.50	1719.1									24.0	3712.0	220.0	408.3
121+13	122+97	NOTCH & WIDEN	184.0	VAR.	66.7									VAR.	169.8	220.0	18.7
BUTLER ROAD DETOUR - ADDITIONAL FOR SUPERELEVATION																	
109+44.09	111+44.09	SUPER TRANSITION (N.C. TO 0.025'/')	200.0	0.88	1.8												
111+44.09	112+39.91	MAX SUPER (0.025'/')	95.8	1.75	1.7												
112+39.91	114+39.91	SUPER TRANSITION (0.025'/' TO N.C.)	200.0	0.88	1.8												
114+50.62	116+50.62	SUPER TRANSITION (N.C. TO 0.058'/')	200.0	2.00	4.0												
116+50.62	118+93.77	MAX SUPER (0.058'/')	243.2	4.00	9.7												
118+93.77	120+93.77	SUPER TRANSITION (0.058'/' TO N.C.)	200.0	2.00	4.0												
PARK STREET																	
105+50	106+50	TRANSITION	100.0	34.25	34.3	20.0	222.2	0.10	22.2					24.0	266.7	220.0	29.3
106+50	106+65	OVERLAY AND BUILD SHOULDER ON RT.	15.0	42.25	6.3	20.0	33.3	0.03	1.0					44.1	73.5	220.0	8.1
106+65	107+00	NOTCH & WIDEN - TAPER	35.0	VAR.	17.4	VAR.	84.4	0.03	2.5					VAR.	106.3	220.0	11.7
107+00	108+30	FULL DEPTH WITH GRADE RAISE - TAPER	130.0	VAR.	108.6	VAR.	429.0	0.03	12.9					VAR.	618.3	220.0	68.0
108+30	108+74	FULL DEPTH WITH GRADE RAISE	44.0	VAR.	50.2	36.1	176.5	0.03	5.3					76.1	372.0	220.0	40.9
108+74	109+74	FULL DEPTH WITH GRADE RAISE - CURB & GUTTER TAPER ON LT.	100.0	VAR.	98.7	37.6	417.8	0.03	12.5					79.1	878.9	220.0	96.7
109+74	110+29	FULL DEPTH WITH GRADE RAISE TURNOUT - LT. OF MAIN LANES	55.0	VAR.	102.3	VAR.	270.4	0.03	8.1					VAR.	595.5	220.0	65.5
110+50	111+05	FULL DEPTH WITH GRADE RAISE TURNOUT - RT. OF MAIN LANES	55.0	VAR.	99.4	VAR.	270.3	0.03	8.1					VAR.	587.7	220.0	64.6
111+05	112+80	FULL DEPTH WITH GRADE RAISE	175.0	57.00	99.8	36.1	701.9	0.03	21.1					76.1	1479.7	220.0	162.8
112+80	113+25	FULL DEPTH WITH GRADE RAISE - TAPER	45.0	VAR.	37.1	34.8	174.0	0.03	5.2					73.4	367.0	220.0	40.4
113+25	113+45	NOTCH & WIDEN - TAPER	20.0	VAR.	14.9	32.7	72.7	0.03	2.2					VAR.	99.4	220.0	10.9
113+45	114+45	TRANSITION	100.0	VAR.	57.5	VAR.	37.3	0.03	1.1					VAR.	402.0	220.0	44.2
PARK STREET - ADDITIONAL FOR LEVELING & GRADE RAISE																	
106+50	107+00	LEVELING	50.0			20.0	111.1	0.10	11.1					20.0	111.1	220.0	12.2
113+25	113+45	LEVELING	20.0			26.0	57.8	0.10	5.8					26.0	57.8	220.0	6.4
113+45	114+45	TRANSITION	100.0			26.0	288.9	0.10	28.9								
106+00	110+29	GRADE RAISE	429.0			VAR.	6154.6	0.03	184.6	VAR.	3077.3	660.0	1015.5				
110+50	114+45	GRADE RAISE	395.0			VAR.	6476.4	0.03	194.3	VAR.	3238.2	660.0	1068.6				
TOTALS:					**6001.7**		**22392.4**		**897.1**		**7264.0**		**2240.6**		**23305.1**		**2563.5**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.0% MIN. AGGR.....5.0% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	75	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

BASE AND SURFACING (WESTERN CONNECTOR AND EASTERN CONNECTOR)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
			FEET	TON / STATION	TON	TOTAL WID. FEET	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON	AVG. WID. FEET	SQ.YD.	POUND / SQ.YD.	PG 70-22 TON
WESTERN CONNECTOR																					
100+29	100+88	TURNOUT - FULL DEPTH	59.0	VAR.	263.2	VAR.	720.1	0.03	21.6	VAR.	242.1	440.0	53.3	VAR.	239.8	330.0	39.6	VAR.	579.3	220.0	63.7
100+88	102+12	FULL DEPTH	124.0	348.00	431.5	85.5	1178.0	0.03	35.3	28.8	396.8	440.0	87.3	28.5	392.7	330.0	64.8	68.3	941.0	220.0	103.5
102+12	103+14	FULL DEPTH WITH GORE	102.0	VAR.	396.5	VAR.	1165.4	0.03	35.0	VAR.	392.5	440.0	86.4	VAR.	388.1	330.0	64.0	VAR.	962.1	220.0	105.8
103+14	103+28	FULL DEPTH	14.0	348.00	48.7	85.5	133.0	0.03	4.0	28.8	44.8	440.0	9.9	28.5	44.3	330.0	7.3	68.3	106.2	220.0	11.7
103+28	105+25	FULL DEPTH WITH FULL DEPTH SHOULDER ON RT.	197.0	324.50	639.3	103.5	2265.5	0.03	68.0	34.8	761.7	440.0	167.6	34.5	755.2	330.0	124.6	74.3	1626.3	220.0	178.9
105+25	106+00	FULL DEPTH WITH FULL DEPTH SHOULDER ON RT. - GRADE RAISE	75.0	VAR.	158.8	103.5	862.5	0.03	25.9	34.8	290.0	440.0	63.8	34.5	287.5	330.0	47.4	74.3	619.2	220.0	68.1
106+00	106+15	NOTCH & WIDEN WITH FULL DEPTH SHOULDER ON RT.	15.0	224.50	33.7	59.6	99.3	0.03	3.0	12.8	21.3	440.0	4.7	12.5	20.8	330.0	3.4	52.3	87.2	220.0	9.6
106+15	108+00	NOTCH & WIDEN	185.0	248.00	458.8	41.6	855.1	0.03	25.7	6.8	139.8	440.0	30.8	6.5	133.6	330.0	22.0	46.3	951.7	220.0	104.7
108+00	110+00	NOTCH & WIDEN TAPER	200.0	234.50	469.0	31.8	706.7	0.03	21.2	3.4	75.6	440.0	16.6	3.3	73.3	330.0	12.1	43.1	957.8	220.0	105.4
110+00	111+00	TRANSITION	100.0			34.0	377.8	0.10	37.8									34.0	377.8	220.0	41.6
WESTERN CONNECTOR - ADDITIONAL FOR LEVELING & GRADE RAISE																					
106+00	110+00	LEVELING	400.0			22.0	977.8	0.10	97.8									22.0	977.8	220.0	107.6
105+25	106+00	GRADE RAISE	75.0			VAR.	550.5	0.03	16.5	VAR.	183.5	1540.0	141.3								
WESTERN CONNECTOR - ADDITIONAL FOR STAGE CONSTRUCTION																					
132+50	138+16	WIDEN EXISTING ROAD FOR STAGE 1	566.0	VAR.	614.5	VAR.	850.6	0.03	25.5					VAR.	850.6	440.0	187.1	VAR.	840.1	220.0	92.4
WESTERN CONNECTOR RAMP																					
129+98	132+50	FULL DEPTH	252.0	272.50	686.7	46.5	1302.0	0.03	39.1	15.8	442.4	440.0	97.3	15.5	434.0	330.0	71.6	40.3	1128.4	220.0	124.1
EASTERN CONNECTOR																					
341+50	342+50	TRANSITION	100.0			24.0	266.7	0.10	26.7												
341+50	343+00	NOTCH & WIDEN - TAPER	150.0	238.38	357.6	45.7	761.7	0.03	22.9	15.4	256.7	440.0	56.5	15.2	253.3	330.0	41.8	63.1	1051.7	220.0	115.7
343+00	343+25	FULL DEPTH WITH GRADE RAISE	25.0	VAR.	71.6	163.5	454.2	0.03	13.6	54.8	152.2	440.0	33.5	54.5	151.4	330.0	25.0	114.3	317.5	220.0	34.9
343+25	345+13	FULL DEPTH	188.0	415.25	780.7	163.5	3415.3	0.03	102.5	54.8	1144.7	440.0	251.8	54.5	1138.4	330.0	187.8	114.3	2387.6	220.0	262.6
345+13	346+57	FULL DEPTH TURNOUT	144.0	VAR.	748.2	VAR.	3421.1	0.03	102.6	VAR.	1145.1	440.0	251.9	VAR.	1139.9	330.0	188.1	VAR.	2383.0	220.0	262.1
EASTERN CONNECTOR - ADDITIONAL FOR LEVELING & GRADE RAISE																					
342+50	343+00	LEVELING	50.0			24.0	133.3	0.10	13.3									24.0	133.3	220.0	14.7
341+50	343+25	GRADE RAISE	175.0			VAR.	763.8	0.03	22.9	VAR.	490.5	550.0	134.9	VAR.	273.3	330.0	45.1				
EASTERN CONNECTOR - ADDITIONAL FOR STAGE CONSTRUCTION																					
341+40	344+92	WIDEN EXISTING ROAD FOR STAGE 1	352.0	VAR.	244.1	VAR.	292.4	0.03	8.8					VAR.	292.4	440.0	64.3	VAR.	285.8	220.0	31.4
TOTALS:					**6402.9**		**21552.8**		**769.7**		**6179.7**		**1487.6**		**6868.6**		**1196.0**		**16713.8**		**1838.5**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.0% MIN. AGGR.....5.0% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22

10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	76	239

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12

BASE AND SURFACING (HWY.62 BYPASS)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				ACHM BASE COURSE (1 1/2")				ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")			
				TON / STATION	TON	TOTAL WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 70-22
			FEET			FEET				FEET			TON	FEET			TON	FEET			TON
HWY. 62 BYPASS																					
119+95	120+95	TRANSITION	100.0			38.0	422.2	0.10	42.2									38.0	422.2	220.0	46.4
120+95	121+15	NOTCH & WIDEN - 2 LANES	20.0	215.50	43.1	88.2	196.0	0.03	5.9	10.8	24.0	440.0	5.3	10.5	23.3	330.0	3.8	50.3	111.8	220.0	12.3
121+15	122+16	NOTCH & WIDEN VARIABLE - 2 LANES	101.0	VAR.	220.5	VAR.	699.0	0.03	21.0	VAR.	123.0	440.0	27.1	VAR.	121.4	330.0	20.0	VAR.	569.1	220.0	62.6
122+16	123+80	NOTCH & WIDEN VARIABLE - 2 LANES & ACCEL. LANE TAPER	164.0	VAR.	261.3	VAR.	1212.7	0.03	36.4	VAR.	406.6	440.0	89.5	VAR.	404.0	330.0	66.7	VAR.	1174.4	220.0	129.2
123+80	123+99	FULL DEPTH - 2 LANES & ACCEL. LANE TAPER - GRADE RAISE	19.0	VAR.	42.5	130.0	274.4	0.03	8.2	43.6	92.0	440.0	20.2	43.3	91.4	330.0	15.1	91.1	192.3	220.0	21.2
123+99	124+29	FULL DEPTH - 2 LANES & ACCEL. LANE - GRADE RAISE	30.0	VAR.	74.0	133.5	445.0	0.03	13.4	44.8	149.3	440.0	32.8	44.5	148.3	330.0	24.5	94.3	314.3	220.0	34.6
124+29	126+77	FULL DEPTH - 2 LANES & ACCEL. LANE	248.0	369.75	917.0	133.5	3678.7	0.03	110.4	44.8	1234.5	440.0	271.6	44.5	1226.2	330.0	202.3	94.3	2598.5	220.0	285.8
126+77	128+83	FULL DEPTH - 2 LANES & ACCEL. LANE & TAPER ON RT.	206.0	VAR.	788.2	VAR.	3247.9	0.03	97.4	VAR.	1088.8	440.0	239.5	VAR.	1082.0	330.0	178.5	VAR.	2290.1	220.0	251.9
128+83	129+93	FULL DEPTH - 2 LANES & ACCEL. LANE GORE & TAPER ON RT.	110.0	VAR.	498.3	VAR.	2131.8	0.03	64.0	VAR.	715.3	440.0	157.4	VAR.	710.1	330.0	117.2	VAR.	1532.4	220.0	168.6
129+93	130+09	FULL DEPTH - 2 LANES & TAPER ON RT.	16.0	378.75	60.6	139.3	247.6	0.03	7.4	46.7	83.0	440.0	18.3	46.4	82.5	330.0	13.6	98.2	174.6	220.0	19.2
130+09	132+48	FULL DEPTH - 3 LANES (36')	239.0	379.00	905.8	139.5	3704.5	0.03	111.1	46.8	1242.8	440.0	273.4	46.5	1234.8	330.0	203.7	98.3	2610.4	220.0	287.1
132+48	134+91	FULL DEPTH - 2 LANES & TAPER ON RT.	243.0	351.75	854.8	121.6	3283.2	0.03	98.5	40.8	1101.6	440.0	242.4	40.5	1093.5	330.0	180.4	86.3	2330.1	220.0	256.3
134+91	140+00	FULL DEPTH - 2 LANES	509.0	324.50	1651.7	103.5	5853.5	0.03	175.6	34.8	1968.1	440.0	433.0	34.5	1951.2	330.0	321.9	74.3	4202.1	220.0	462.2
140+00	170+78	FULL DEPTH - DIVIDED LT. LANES ONLY	3078.0	348.00	10711.4	85.5	29241.0	0.03	877.2	28.8	9849.6	440.0	2166.9	28.5	9747.0	330.0	1608.3	68.3	23358.6	220.0	2569.4
175+50	207+90	FULL DEPTH - DIVIDED LT. LANES ONLY	3240.0	348.00	11275.2	85.5	30780.0	0.03	923.4	28.8	10368.0	440.0	2281.0	28.5	10260.0	330.0	1692.9	68.3	24588.0	220.0	2704.7
207+90	215+10	FULL DEPTH - DIVIDED LT. LANES ONLY & TAPER IN MEDIAN	720.0	375.25	2701.8	103.5	8280.0	0.03	248.4	34.8	2784.0	440.0	612.5	34.5	2760.0	330.0	455.4	80.3	6424.0	220.0	706.6
215+10	218+35	FULL DEPTH - DIVIDED LT. LANES ONLY & LT. TURN LANE	325.0	402.50	1308.1	121.5	4387.5	0.03	131.6	40.8	1473.3	440.0	324.1	40.5	1462.5	330.0	241.3	92.3	3333.1	220.0	366.6
218+35	225+55	FULL DEPTH - DIVIDED LT. LANES ONLY & TAPER IN MEDIAN	720.0	375.25	2701.8	103.5	8280.0	0.03	248.4	34.8	2784.0	440.0	612.5	34.5	2760.0	330.0	455.4	80.3	6424.0	220.0	706.6
225+55	290+25	FULL DEPTH - DIVIDED LT. LANES ONLY	6470.0	348.00	22515.6	85.5	61465.0	0.03	1844.0	28.8	20704.0	440.0	4554.9	28.5	20488.3	330.0	3380.6	68.3	49100.1	220.0	5401.0
290+25	293+35	FULL DEPTH - TRANS. FROM DIVIDED TO UNDIVIDED - F.D. SHLD. ON RT.	310.0	VAR.	979.8	VAR.	3370.6	0.03	101.1	VAR.	1132.6	440.0	249.2	VAR.	1122.6	330.0	185.2	VAR.	2493.8	220.0	274.3
293+35	299+22	FULL DEPTH - TRANS. FROM DIVIDED TO UNDIVIDED - F.D. SHLD. BOTH SIDES	587.0	VAR.	2024.4	VAR.	9814.2	0.03	294.4	VAR.	3288.6	440.0	723.5	VAR.	3269.6	330.0	539.5	VAR.	6495.8	220.0	714.5
299+22	364+95	FULL DEPTH - 3 LANES (35')	6573.0	351.00	23071.2	154.5	112836.5	0.03	3385.1	51.8	37831.3	440.0	8322.9	51.5	37612.2	330.0	6206.0	102.3	74713.1	220.0	8218.4
364+95	368+50	NOTCH & WIDEN VARIABLE - 3 LANES (35')	355.0	VAR.	710.2	VAR.	4874.5	0.03	146.2	VAR.	1238.5	440.0	272.5	VAR.	1232.7	330.0	203.4	VAR.	3240.3	220.0	356.4
368+50	372+00	FULL DEPTH - 3 LANES (35') - GRADE RAISE	350.0	VAR.	489.6	154.5	6008.3	0.03	180.2	51.8	2014.4	440.0	443.2	51.5	2002.8	330.0	330.5	102.3	3978.3	220.0	437.6
372+00	374+00	OVERLAY - 3 LANES (35')	200.0			70.0	1555.6	0.03	46.7									70.0	1555.6	220.0	171.1
374+00	375+00	TRANSITION	100.0			70.0	777.8	0.10	77.8									70.0	777.8	220.0	85.6
ADDITIONAL FOR LEVELING & GRADE RAISE																					
120+95	122+66	LEVELING	171.0			24.0	456.0	0.10	45.6									24.0	456.0	220.0	50.2
122+66	123+80	LEVELING	114.0			VAR.	231.2	0.10	23.1									VAR.	231.2	220.0	25.4
364+95	368+50	LEVELING	355.0			VAR.	1030.3	0.10	103.0									VAR.	1030.3	220.0	113.3
372+00	374+00	LEVELING	200.0			70.0	1555.6	0.10	155.6									70.0	1555.6	220.0	171.1
119+95	124+29	GRADE RAISE	434.0			VAR.	1602.8	0.03	48.1	VAR.	847.7	440.0	186.5	VAR.	571.5	330.0	94.3	VAR.	183.6	220.0	20.2
364+95	373+00	GRADE RAISE	805.0			VAR.	5684.9	0.03	170.5	VAR.	4039.4	1540.0	3110.3	VAR.	1645.5	330.0	271.5				
ADDITIONAL FOR SUPERELEVATION																					
119+95.00	126+25.00	SUPER TRANSITION (N.C. TO 0.093'/')	630.0	75.50	475.7																
126+25.00	132+48.23	MAX SUPER (0.093'/')	623.2	151.00	941.0																
132+48.23	138+78.23	SUPER TRANSITION (0.093'/' TO N.C.)	630.0	75.50	475.7																
251+28.03	254+78.03	SUPER TRANSITION (0.020'/' TO 0.077'/')	350.0	65.13	228.0																
254+78.03	265+58.47	MAX SUPER (0.077'/')	1080.4	130.25	1407.2																
265+58.47	269+08.47	SUPER TRANSITION (0.077'/' TO 0.020'/')	350.0	65.13	228.0																
270+63.66	274+13.66	SUPER TRANSITION (0.020'/' TO 0.067'/')	350.0	55.63	194.7																
274+13.66	290+25.00	MAX SUPER (0.067'/') - SHLDS. NOT FULL DEPTH	1611.3	111.25	1792.6																
290+25.00	293+35.00	MAX SUPER (0.067'/') - RT. SHLD. FULL DEPTH	310.0	87.50	271.3																
293+35.00	303+75.81	MAX SUPER (0.067'/') - BOTH SHLDS. FULL DEPTH	1040.8	76.00	791.0																
303+75.81	309+15.80	SUPER TRANSITION (0.067'/' TO N.C.)	540.0	38.00	205.2																
309+15.81	314+55.81	SUPER TRANSITION (N.C. TO 0.043'/')	540.0	22.50	121.5																
314+55.81	328+92.63	MAX SUPER (0.043'/')	1436.8	45.00	646.6																
328+92.63	334+32.63	SUPER TRANSITION (0.043'/' TO N.C.)	540.0	22.50	121.5																
339+47.12	344+87.12	SUPER TRANSITION (N.C. TO 0.055'/')	540.0	29.88	161.4																
344+87.12	358+48.77	MAX SUPER (0.055'/')	1361.6	59.75	813.6																
358+48.77	363+88.77	SUPER TRANSITION (0.055'/' TO N.C.)	540.0	29.88	161.4																
ADDITIONAL FOR GUARDRAIL WIDENING																					
167+87.76	168+20.76	6:1 TAPER ON RT. (0' TO 5.5' EXTRA WIDENING)	33.0	20.88	6.9													2.8	10.3	220.0	1.1
168+20.76	168+30.76	5.5' EXTRA WIDENING ON RT.	10.0	41.75	4.2													5.5	6.1	220.0	0.7
168+30.76	170+30.76	50:1 TAPER ON RT. (5.5' TO 1.5' EXTRA WIDENING)	200.0	26.63	53.3													3.5	77.8	220.0	8.6
170+30.76	170+75.37	1.5' EXTRA WIDENING ON RT.	44.6	11.50	5.1													1.5	7.4	220.0	0.8
168+73.94	169+06.94	6:1 TAPER ON LT. (0' TO 5.5' EXTRA WIDENING)	33.0	20.88	6.9													2.8	10.3	220.0	1.1
169+06.94	169+16.94	5.5' EXTRA WIDENING ON LT.	10.0	41.75	4.2													5.5	6.1	220.0	0.7
169+16.94	170+16.93	50:1 TAPER ON LT. (5.5' TO 3.5' EXTRA WIDENING)	100.0	34.25	34.3													4.5	50.0	220.0	5.5
170+16.93	170+61.53	3.5' EXTRA WIDENING ON LT.	44.6	26.75	11.9													3.5	17.3	220.0	1.9
175+52.63	175+96.65	3.5' EXTRA WIDENING ON LT.	44.0	26.75	11.8													3.5	17.1	220.0	1.9
175+96.65	177+71.65	50:1 TAPER ON LT. (3.5' TO 7' EXTRA WIDENING)	175.0	39.50	69.1													5.3	103.1	220.0	11.3
177+71.65	177+81.65	7' EXTRA WIDENING ON LT.	10.0	52.25	5.2													7.0	7.8	220.0	0.9
177+81.65	178+23.65	6:1 TAPER ON LT. (7' TO 0' EXTRA WIDENING)	42.0	50.25	21.1													3.5	16.3	220.0	1.8
175+66.47	176+10.48	1.5' EXTRA WIDENING ON RT.	44.0	11.50	5.1													1.5	7.3	220.0	0.8
176+10.48	178+10.48	50:1 TAPER ON RT. (1.5' TO 5.5' EXTRA WIDENING)	200.0	26.63	53.3													3.5	77.8	220.0	8.6
178+10.48	178+20.48	5.5' EXTRA WIDENING ON RT.	10.0	41.75	4.2													5.5	6.1	220.0	0.7
178+20.48	178+53.48	6:1 TAPER ON RT. (5.5' TO 0' EXTRA WIDENING)	33.0	20.88	6.9													2.8	10.3	220.0	1.1
TOTALS:					**94146.8**		**317628.3**		**9841.9**		**106584.4**		**25670.5**		**103103.4**		**17012.0**		**228892.6**		**25177.9**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.0% MIN. AGGR.....6.0% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.0% MIN. AGGR.....5.0% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....95.5% MIN. AGGR.....4.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 160 FOR PG 70-22

10/1/2012

R040521.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	77	239

(2) SUMMARY OF QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-24-12

SUMMARY OF QUANTITIES (BOX 1 OF 2)

	ITEM NUMBER	ITEM	QUANTITY	UNIT
	201	CLEARING	28	STATION
	201	GRUBBING	28	STATION
	202	REMOVAL AND DISPOSAL OF CURB AND GUTTER	934	LIN. FT.
	202	REMOVAL AND DISPOSAL OF FENCE	7337	LIN. FT.
	202	REMOVAL AND DISPOSAL OF CONCRETE PAVEMENT	1206	SQ. YD.
	202	REMOVAL AND DISPOSAL OF CONCRETE DRIVEWAYS	146	SQ. YD.
	202	REMOVAL AND DISPOSAL OF BARRICADES	68	EACH
	202	REMOVAL AND DISPOSAL OF DROP INLETS	1	EACH
	202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	17	EACH
	202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	49	SQ. YD.
	202	REMOVAL AND DISPOSAL OF SIGNS	34	EACH
	210	UNCLASSIFIED EXCAVATION	38347	CU. YD.
	210	COMPACTED EMBANKMENT	56210	CU. YD.
	SP & 210	SOIL STABILIZATION	100	TON
	SP & 214	SUBGRADE PREPARATION	228.46	STATION
	SS & 303	AGGREGATE BASE COURSE (CLASS 7)	111956	TON
	401	TACK COAT	11559	GAL.
	SP, SS, & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	25936	TON
	SP, SS, & 405	ASPHALT BINDER (PG 70-22) IN ACHM BASE COURSE (1 1/2")	1222	TON
	SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	19427	TON
	SP, SS, & 406	ASPHALT BINDER (PG 64-22) IN ACHM BINDER COURSE (1")	112	TON
	SP, SS, & 406	ASPHALT BINDER (PG 70-22) IN ACHM BINDER COURSE (1")	910	TON
	SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	29001	TON
	SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	230	TON
	SP, SS, & 407	ASPHALT BINDER (PG 70-22) IN ACHM SURFACE COURSE (1/2")	1621	TON
	412	COLD MILLING ASPHALT PAVEMENT	2811	SQ. YD.
	SP, SS, & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	25	TON
	SP, SS, & 415	ACHM PATCHING OF EXISTING ROADWAY	50	TON
	505	PORTLAND CEMENT CONCRETE DRIVEWAY	1151.20	SQ. YD.
	601	MOBILIZATION	1.00	LUMP SUM
	SP & 602	FURNISHING FIELD OFFICE	1	EACH
	SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
	603	18" TEMPORARY CULVERT	184	LIN. FT.
	SS & 604	SIGNS	1161	SQ. FT.
	SS & 604	BARRICADES	184	LIN. FT.
	SS & 604	TRAFFIC DRUMS	533	EACH
	SS & 604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	113	LIN. FT.
	SS & 604	RELOCATING PRECAST CONCRETE BARRIER	93	LIN. FT.
	SS & 604	CONSTRUCTION PAVEMENT MARKINGS	135348	LIN. FT.
	604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	11368	LIN. FT.
	604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	5623	LIN. FT.
	SS & 604	VERTICAL PANELS	100	EACH
	605	CONCRETE DITCH PAVING (TYPE B)	1000	SQ. YD.
	SS & 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	12	LIN. FT.
	SS & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	82	LIN. FT.
	SS & 606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	38	LIN. FT.
	SS & 606	44" X 27" REINFORCED CONCRETE ARCH PIPE CULVERTS (CLASS III)	128	LIN. FT.
	SS & 606	12" SIDE DRAIN	194	LIN. FT.
	SP, SS, & 606	18" SIDE DRAIN	434	LIN. FT.
	SP, SS, & 606	24" SIDE DRAIN	32	LIN. FT.
	SP, SS, & 606	30" SIDE DRAIN	110	LIN. FT.
	SS & 606	28" X 20" SIDE DRAIN	78	LIN. FT.
	606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
	606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
	606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
	606	44" X 27" FLARED END SECTIONS FOR REINFORCED CONCRETE ARCH PIPE CULVERTS	2	EACH
	606	SELECTED PIPE BEDDING	100	CU. YD.
	609	DROP INLETS (TYPE MO)	1	EACH
	609	YARD DRAINS	2	EACH
	611	UNDERDRAIN OUTLET PROTECTORS	56	EACH
	611	4" PIPE UNDERDRAINS	11760	LIN. FT.
	615	PAVEMENT REPAIR OVER CULVERTS (ASPHALT)	54	TON
	SS & 617	GUARDRAIL (TYPE A)	575	LIN. FT.
	SS & 617	GUARDRAIL TERMINAL (TYPE 2)	4	EACH
	SS & 617	THRIE BEAM GUARDRAIL TERMINAL	4	EACH
	619	WIRE FENCE (TYPE A)	349	LIN. FT.
	619	WIRE FENCE (TYPE C)	57	LIN. FT.
	619	WIRE FENCE (TYPE D-1)	2294	LIN. FT.
	619	WIRE FENCE (TYPE D-2)	1937	LIN. FT.
*	619	16' STEEL GATES (ALTERNATE NO. 1)	8	EACH
*	619	16' ALUMINUM GATES (ALTERNATE NO. 2)	8	EACH
	620	LIME	21	TON
	620	SEEDING	10.60	ACRE
	620	MULCH COVER	159.67	ACRE
	SS & 620	WATER	4129.0	M.GAL.

* DENOTES ALTERNATE BID ITEMS

10/1/2012

R040521.DGN

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
621	TEMPORARY SEEDING		149.07	ACRE
621	SILT FENCE		707	LIN. FT.
621	SAND BAG DITCH CHECKS		660	BAG
621	DROP INLET SILT FENCE		100	LIN. FT.
621	SEDIMENT BASIN		10000	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN		10000	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL		10201	CU. YD.
621	ROCK DITCH CHECKS		435	CU. YD.
623	SECOND SEEDING APPLICATION		10.60	ACRE
624	SOLID SODDING		540	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)		1000	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")		733	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL		1.00	LUMP SUM
637	MAILBOXES		6	EACH
637	MAILBOX SUPPORTS (SINGLE)		6	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS		36451	LIN. FT.
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)		3	EACH
SP & 701	ON-STREET MASTER CONTROLLER		1	EACH
704	FEEDER WIRE		7048	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)		30	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)		8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)		2325	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)		709	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)		252	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)		1688	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")		117	LIN. FT.
710	NON-METALLIC CONDUIT (1")		3155	LIN. FT.
710	NON-METALLIC CONDUIT (2")		52	LIN. FT.
710	NON-METALLIC CONDUIT (3")		1427	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)		17	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)		17	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')		1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')		4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')		2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')		1	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (4")		58160	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")		145	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING WHITE (24")		160	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING YELLOW (4")		64743	LIN. FT.
SS & 719	THERMOPLASTIC PAVEMENT MARKING (WORDS)		13	EACH
SS & 719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)		13	EACH
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING YELLOW (4")	(ALTERNATE NO. 1)	944	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE YELLOW (4")	(ALTERNATE NO. 2)	944	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		731	EACH
SP & 733	VIDEO DETECTOR (CLR)		13	EACH
733	VIDEO CABLE		2905	LIN. FT.
733	VIDEO MONITOR (CLR)		3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)		9	EACH
SP & 733	VIDEO EDGE CARD EXTENDER		3	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)		3	EACH
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY		9	CU. YD.
802	CLASS S CONCRETE-ROADWAY		14.34	CU. YD.
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)		2114	POUND
816	FILTER BLANKET		63	SQ. YD.
816	DUMPED RIPRAP		32	CU. YD.
SP	WATER GATE		1	EACH
SP	SYSTEM SOFTWARE UPGRADE		1	EACH
SP	MASTER RADIO (E-NET 5.8) WITH ANTENNA		1	EACH
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)		1	EACH
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA		2	EACH
SP	EMERGENCY BACKUP LOCAL RADIO UNIT		1	EACH
SP	LOOP WIRING CLASS III (2)		1579	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)		1800	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)		912	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)		129	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES		2810	LIN. FT.
SP	LUMINAIRE ASSEMBLY		12	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)		3	EACH
SP	18" STREET NAME SIGN		12	EACH
SP	TEMPORARY IMPACT ATTENUATION BARRIER		2	EACH
SP	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		2	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
				6	ARK.			
				JOB NO.		040521	78	239

(2) SUMMARY OF QUANTITIES AND REVISIONS

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

10-29-12

REVISIONS

DATE	REVISION	SHEET NUMBER

10/1/2012

R040521.DGN

SURVEY CONTROL COORDINATES

Coordinate System: ARKANSAS STATE PLANE - NORTH/SOUTH ZONE BASED ON GPS CONTROL.
PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	600471.2050	614578.1370	1207.44	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
2	600423.6271	615209.7982	1214.91	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
3	600537.3200	615946.7244	1199.03	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
4	601122.9413	616639.0293	1189.31	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
5	601697.3835	617064.9110	1180.62	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
6	602321.3456	617653.0247	1181.46	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
7	602766.3747	618482.3713	1156.26	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
8	603407.0619	619824.7538	1137.26	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
9	602316.8641	618582.9335	1166.45	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
10	602228.5175	618950.5672	1173.52	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
11	602308.1238	619797.0413	1160.88	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
12	601879.8279	619769.4791	1177.50	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
13	602098.7298	620584.0231	1159.28	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
14	601999.4993	621323.1752	1138.45	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
15	601960.7315	621698.5439	1138.36	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
16	601917.2534	621872.2534	1126.03	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
17	601867.6384	622240.8569	1124.59	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
18	601941.3743	623164.1031	1130.60	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
19	601857.6292	624050.1842	1136.73	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
20	601814.7289	624607.2961	1140.54	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
21	601795.5509	624960.4521	1143.76	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
22	601797.3462	625787.2619	1159.26	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
23	602682.2791	626449.1398	1179.11	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
24	601762.2360	626393.8299	1163.07	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
25	600978.7628	626358.0009	1154.87	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
26	601778.9845	627251.3106	1162.35	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
27	601680.2295	628133.4333	1175.59	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
28	601670.6671	628606.1549	1169.14	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
29	601976.3909	628986.5940	1165.52	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
30	601606.5144	629311.3221	1160.85	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
31	601589.2176	630141.5838	1153.86	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
32	601892.7055	630888.1683	1148.16	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
33	602357.1382	631572.3546	1144.92	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
34	602695.0083	631867.0581	1143.98	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
35	603456.5834	632250.3623	1141.35	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
36	603955.3314	632396.4359	1142.50	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
37	604280.4322	631767.3654	1151.74	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
38	604284.0164	632594.8504	1143.63	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
39	604249.1675	633404.5750	1136.52	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
40	605020.6513	632450.5431	1151.58	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
41	605540.8922	632158.6776	1167.40	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
42	605940.6645	632559.8435	1164.16	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
43	606526.0857	631238.1272	1238.47	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
44	606558.4485	632064.8069	1194.49	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
45	606511.1125	632533.9272	1173.19	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
46	606529.8303	633238.5294	1154.13	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
47	607186.7956	632124.7726	1201.06	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
48	607659.8500	632144.5471	1199.08	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
49	608181.7448	632125.4514	1190.45	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
50	608660.1076	631975.4127	1189.24	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
51	608293.3575	631790.5070	1200.72	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
52	608274.7140	631183.1100	1217.44	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
53	608354.6386	630520.2803	1237.69	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
54	608429.1621	631195.9276	1210.75	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
55	608652.3131	631534.0170	1192.46	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
56	609275.7189	631998.6913	1159.75	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
57	609889.0041	632564.8961	1143.25	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
58	610275.9231	632806.0470	1139.83	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
59	610943.6101	633427.2523	1108.81	CTL	5/8" REBAR W/ 2" ALUMINUM CAP
100	600494.5550	615080.1628	1217.31	GPS	AHTD GPS 720010
101	600580.3374	612831.4163	1192.96	GPS	AHTD GPS 720010A
102	610246.3714	632880.9439	1142.02	GPS	AHTD GPS 720022
103	608941.5989	631712.5294	1176.47	GPS	AHTD GPS 720022A
104	600122.4900	626360.7315	1162.57	GPS	AHTD GPS 720030
105	598260.8362	626234.4447	1145.38	GPS	AHTD GPS 720030A
900	605914.3557	627865.9194	1181.02	BM	SQUARE CUT SOUTHEAST CORNER OF CATCH BASIN
901	605884.3384	626762.0928	1165.08	BM	SQUARE CUT IN SW SOUTH OF CENTERLINE
902	605486.0860	624475.7224	1143.53	BM	SQUARE CUT IN CENTER OF HEADWALL
903	604460.8502	622195.1481	1134.17	BM	CPS IN COMBINATION POLE
904	603343.8016	619667.0149	1139.57	BM	CPS IN COMBINATION POLE NORTH OF CENTERLINE
905	601895.1285	617237.9432	1180.26	BM	SQUARE CUT REINFORCED CONCRETE PIPE
906	602968.4266	626493.7495	1181.92	BM	CPS CP LT CENTERLINE
907	601161.5154	626365.0192	1155.16	BM	SQUARE CUT NORTH END HEADWALL
908	606630.6814	638907.1893	1133.41	BM	SQUARE CUT IN HEADWALL
909	606695.3164	637848.5933	1147.46	BM	CPS IN COMBINATION POLE
910	606850.7935	635080.6384	1130.38	BM	SQUARE CUT HEADWALL SOUTH OF CENTERLINE
911	607845.7904	633373.7510	1174.98	BM	BOLT IN FIRE HYDRANT
912	606086.8164	641133.3290	1144.89	BM	USGS BENCH MARK 1146 FS
916	600462.0213	614682.2381	1208.87	TBM	SQUARE CUT IN EAST END OF
917	600519.1318	615921.7061	1196.72	TBM	SQUARE CUT WEST END OF
918	601468.8403	616883.2400	1184.37	TBM	SQUARE CUT WEST END OF NORTH HEADWALL
919	602570.8655	618191.2971	1165.00	TBM	SQUARE CUT IN EAST END OF S HEADWALL
920	602354.5375	619811.5348	1158.71	TBM	CPS IN A POWER POLE
921	601866.8678	621995.3984	1125.05	BM	CPS IN ROOT OF 18" OAK
922	601751.1575	626379.1965	1163.84	TBM	CPS IN BASE OF POWER POLE
923	601806.0394	628569.9550	1175.71	TBM	CPS BASE 22" HACKBERRY TREE
924	602048.8501	630882.6585	1149.31	TBM	CPS IN BASE HIGH VOLT POWER POLE
925	604299.3500	632317.5193	1145.65	BM	CPS IN BASE OF POWER POLE
926	606696.5148	631932.8722	1206.67	BM	CPS BASE OF COMBINATION POLE
927	608291.7886	631792.6317	1201.40	BM	CPS BASE OF LIGHT POLE
928	610534.9932	633137.4673	1118.27	BM	CPS IN BASE OF POWER POLE
950	601174.4062	587068.7390	1397.68	BM	NGS D 50 BRASS DISK IN CONCRETE (SECOND ORDER CLASS 0)
951	633819.9227	670011.0242	1284.00	BM	NGS POINT H 27 (FIRST ORDER CLASS II)

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" ALUMINUM Cap stamped
(AHTD 040411 T-), or as indicated
(other markings indicated in the point description of the individual point).
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT
A PROJECT CAF OF 0.9999032490 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME 040411GI.CTL
HORIZONTAL DATUM: NAD 83 (1997)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE
AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0301-NORTH ZONE or 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 720010 - 720010A ,720022 - 720022A, 720030 - 720030A
CONVERGENCE ANGLE: 1-20-32.3 RIGHT AT LAT. N 35.580900841 LON. W094.182437027
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

PROPOSED C.L. HWY. 62

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	95+00.00	600469.8333	614802.3447
8001	PC	100+00.00	600438.3828	615301.3595
8003	PT	113+24.49	600935.2669	616478.5954
8004	PC	121+15.26	601535.4340	616993.4863
8006	PT	134+05.73	602034.0544	618136.7532
8007	PC	157+44.73	601942.3995	620473.9538
8009	PT	166+43.07	601889.6158	621370.6872
8010	PC	253+90.53	601204.5766	630091.2817
8012	PT	266+45.97	601509.9483	631285.8221
8013	PC	273+26.16	601882.1160	631855.1718
8015	PT	305+55.26	604728.9407	632696.5359
8016	PC	312+76.36	605388.2099	632404.4023
8018	PT	330+27.63	607093.6398	632080.1723
8019	PC	343+52.12	608416.9981	632134.9470
8021	PT	359+83.77	609941.8259	632650.6761
8022	PC	364+84.54	610352.0178	632937.9285
8024	PT	374+84.54	611145.0869	633546.5398
8025	POE	376+64.98	611283.3017	633662.5285

C.L. WEST CONNECTOR

POINT NO.	TYPE	STATION	NORTHING	EASTING
8026	POB	100+00.00	602027.3507	617931.3101
8027	PC	102+55.22	602281.1832	617904.7051
8029	PT	105+48.13	602521.2132	618038.6660
8030	POE	110+00.00	602717.0597	618445.8837

C.L. PARK ST.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8031	POB	100+00.00	606553.4571	631058.6955
8032	PI	109+93.88	606538.4969	632052.4668
8033	POE	120+81.55	606511.3325	633139.7895

C.L. MOCK ST.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8034	POB	95+00.00	600569.3186	626354.4822
8035	PC	109+10.54	601978.4738	626416.9259
8037	PT	111+37.24	602205.0390	626424.7210
8038	POE	113+90.16	602457.8841	626430.9171

C.L. EAST CONNECTOR

POINT NO.	TYPE	STATION	NORTHING	EASTING
8051	PC	332+60.14	608466.0208	631202.7934
8053	PT	338+70.70	608837.7852	631681.2983
8054	PC	342+76.22	609153.6734	631935.5777
8056	PT	345+25.96	609239.9170	632157.9451
8057	POE	346+54.37	609220.3378	632284.8555

C.L. BUTLER RD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8058	POB	100+00.00	604310.1183	631482.6282
8059	PI	124+00.00	604203.5434	633880.2607
8060	PI	127+51.42	604192.1182	634231.4942
8061	POE	130+55.66	604178.8322	634535.4455

C.L. BUTLER RD. DETOUR

POINT NO.	TYPE	STATION	NORTHING	EASTING
8058	POB	100+00.00	604310.1183	631482.6282
8074	PC	105+16.68	604287.1747	631998.7943
8076	PT	106+82.90	604265.4133	632163.3795
8077	PC	110+94.09	604176.2847	632564.7902
8079	PT	112+89.91	604143.7043	632757.7988
8080	PC	116+00.62	604107.7550	633066.4222
8082	PT	119+43.77	604149.6579	633403.7054
8083	PC	119+63.81	604156.7752	633422.4339
8085	PT	122+97.42	604209.3537	633749.5454
8059	POE	124+28.27	604203.5434	633880.2607

C.L. WEST CONNECTOR RAMP

POINT NO.	TYPE	STATION	NORTHING	EASTING
8071	PC	128+83.25	601992.1258	617611.6109
8073	PT	133+60.22	602340.5434	617901.3599

WESTERN CONNECTOR STAGE 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8086	POB	132+00.00	602335.9815	617701.9930
8087	PI	132+68.48	602375.1973	617758.1342
8088	PC	134+52.29	602477.5675	617910.7979
8090	PT	136+68.49	602568.3155	618106.0637
8091	PC	136+77.95	602570.9261	618115.1630
8093	PT	138+16.19	602620.0628	618244.2000
8094	POE	139+00.00	602656.3871	618319.7269

MOCK STREET STAGE 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8095	POB	100+00.00	601068.8284	626376.6169
8096	PC	100+95.82	601164.5656	626380.7082
8098	PT	101+18.18	601186.9117	626380.5836
8099	PI	103+00.92	601369.3829	626370.7465
8100	PI	103+51.09	601419.5180	626368.8041
8101	PC	103+82.88	601451.3052	626368.2106
8103	PT	104+19.39	601487.7306	626370.1435
8104	PI	105+01.45	601569.1536	626380.3497
8105	PC	107+69.10	601835.1736	626409.8189
8107	PT	107+85.46	601851.4835	626411.0970
8108	POE	108+98.07	601963.9783	626416.2836

EASTERN CONNECTOR STAGE 2

POINT NO.	TYPE	STATION	NORTHING	EASTING
8109	POB	341+00.00	609016.4033	631825.0799
8110	PC	341+40.28	609047.7814	631850.3382
8112	PT	341+95.79	609092.3639	631883.3796
8113	PC	342+65.94	609150.3527	631922.8682
8115	PT	343+89.67	609245.8933	632001.2273
8116	PC	344+23.17	609269.7996	632024.6881
8118	PT	344+92.49	609321.6146	632070.6943
8119	POE	345+00.00	609327.4732	632075.3950

WESTERN CONNECTOR STAGE 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8120	POB	1+00.00	602353.3289	617908.1290
8121	PC	1+12.64	602365.4960	617911.5468
8123	PT	2+88.29	602501.6632	618015.7567
8124	PI	3+01.82	602508.5982	618027.3736
8125	PC	3+63.76	602540.3316	618080.5658
8127	PT	3+84.54	602550.1657	618098.8701
8128	PI	4+62.35	602583.8787	618168.9988
8129	POE	4+69.22	602586.8689	618175.1820

EASTERN CONNECTOR STAGE 4

POINT NO.	TYPE	STATION	NORTHING	EASTING
8130	POB	1+00.00	608933.0165	631797.9563
8131	PI	1+01.96	608934.5463	631759.1874
8132	PC	2+91.25	609081.9985	631877.8812
8134	PT	3+31.64	609111.0966	631905.8152
8135	PI	4+30.16	609175.9567	631979.9792
8136	POE	4+47.23	609187.5494	631992.4976

C.L. COUNTY RD. 288

POINT NO.	TYPE	STATION	NORTHING	EASTING
8139	POB	100+01.00	601091.7303	620068.1865
8140	PC	102+25.15	601273.2142	619934.9250
8142	PCC	104+25.01	601439.2545	619823.8076
8144	PT	107+11.56	601716.6983	619750.8940
8145	PC	108+69.31	601874.3099	619757.4368
8147	PRC	111+48.11	602152.6952	619772.3874
8149	PT	113+51.50	602355.7536	619783.9628
8150	POE	115+99.85	602603.8242	619795.8964

MOCK STREET STAGE 3

POINT NO.	TYPE	STATION	NORTHING	EASTING
8095	POB	100+00.00	601068.8284	626376.6169
8151	PC	100+96.97	601165.6989	626380.9095
8153	PT	101+08.42	601177.1215	626381.6905
8154	PC	102+84.68	601352.6354	626397.9272
8156	PT	102+96.13	601364.0580	626398.7082
8157	PC	107+19.29	601786.8068	626417.4414
8159	PT	107+30.74	601798.2537	626417.6738
8160	PC	109+07.01	601974.5186	626417.0253
8162	PT	109+18.46	601985.9658	626417.2578
8163	POE	110+24.32	602091.7179	626421.9441

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	040521	79	239

JOB NO.

2 SURVEY CONTROL DETAILS

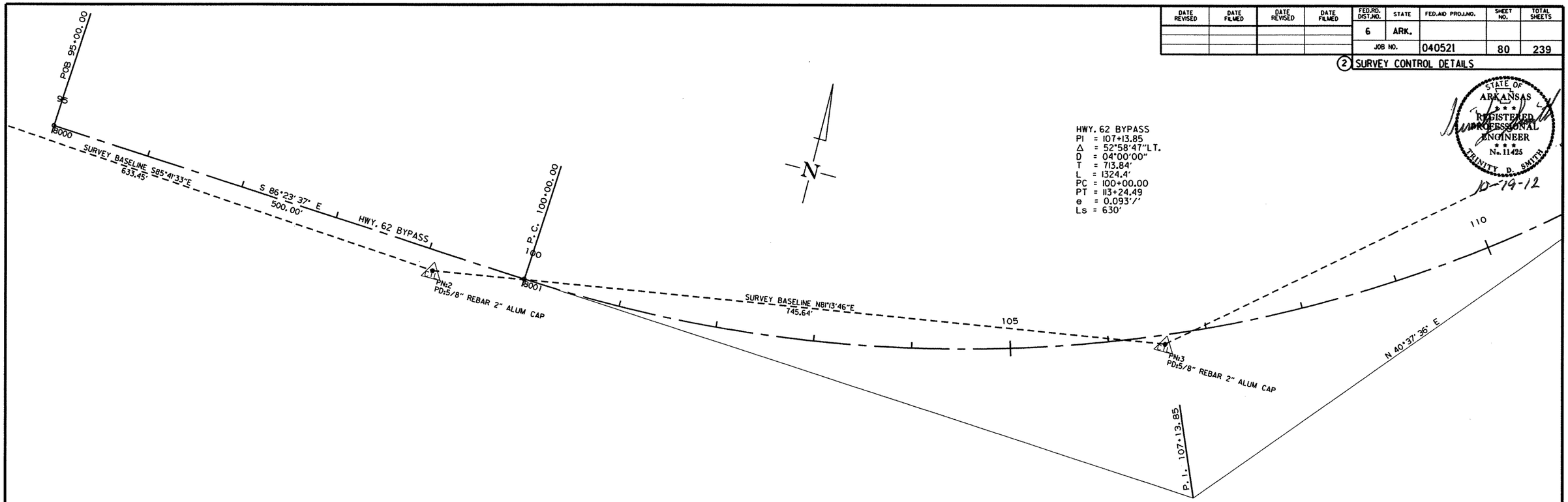
STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11485 TIMOTHY R. SMITH

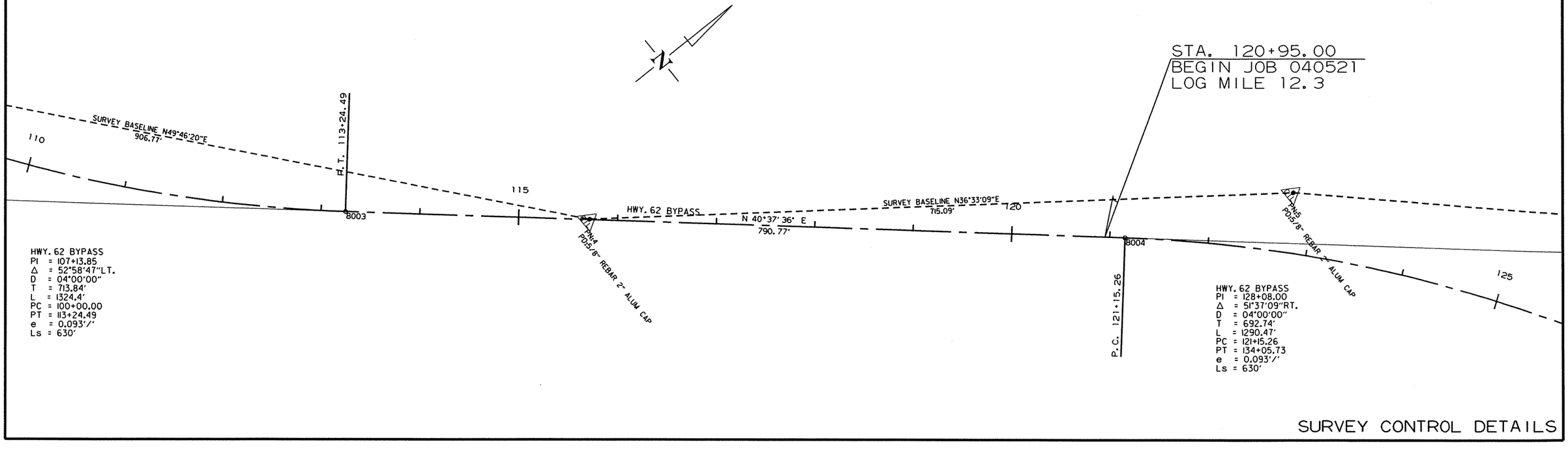
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	80	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12





10/1/2012

R040521.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	81	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

WEST CONNECTOR STAGE 2
PI = 137+47.24
Δ = 09°40'37"LT.
D = 07°00'00"
T = 69.28'
L = 138.24'
PC = 136+77.95
PT = 138+16.19
NO SUPER

WEST CONNECTOR STAGE 4
PI = 3+74.16
Δ = 05°08'40"RT.
D = 24°45'00"
T = 10.40'
L = 20.79'
PC = 3+63.74
PT = 3+84.54
NO SUPER

WEST CONNECTOR RAMP
PI = 131+49.27
Δ = 63°11'54"LT.
D = 13°15'00"
T = 266.02'
L = 476.97'
PC = 128+83.25
PT = 133+60.22
MATCH EXIST.

WEST CONNECTOR STAGE 2
PI = 135+61.27
Δ = 17°50'10"RT.
D = 08°15'00"
T = 108.98'
L = 216.19'
PC = 134+52.29
PT = 136+68.49
NO SUPER

WEST CONNECTOR STAGE 4
PI = 2+04.93
Δ = 43°28'25"RT.
D = 24°45'00"
T = 92.30'
L = 175.65'
PC = 1+12.64
PT = 2+88.29
NO SUPER

WEST CONNECTOR
PI = 104+23.31
Δ = 70°17'56"RT.
D = 24°00'00"
T = 168.09'
L = 292.91'
PC = 102+55.22
PT = 105+48.13
e = 0.020'/'
Ls = 200'

HWY. 62 BYPASS
PI = 128+08.00
Δ = 51°37'09"RT.
D = 04°00'00"
T = 692.74'
L = 1290.47'
PC = 121+15.26
PT = 134+05.73
e = 0.093'/'
Ls = 630'

STA. 132+00.00 HWY 62 =
STA. 100+00.00 HWY 62 WEST CONNECTOR
Δ = 90°00'00"

SURVEY BASELINE N61°46'55"E 941.20'
WEST CONNECTOR N 64°18'55" E 451.87'
SURVEY BASELINE N43°18'21"E 857.44'
SURVEY BASELINE S76°29'15"E 378.10'
SURVEY BASELINE S 2°36'37" E 2609.62'
S 87°45'15" E 2339.00'
N 40°37'36" E
N 5°59'01" W 295.22'
N 73°59'31" E 9.47'
N 56°09'21" E 183.81'
N 55°03'54" E 68.48'
N 59°10'50" E 61.94'
N 59°09'50" E 13.53'
N 15°41'25" E 12.64'
N64°11'28"E 6.87'
N64°19'30"E 77.81'
N 64°18'54" E 83.81'

PN:6 PD:2" ALUM CAP 5/8" REBAR
PN:7 PD:2" ALUM CAP 5/8" REBAR
PN:9 PD:2" ALUM CAP 5/8" REBAR

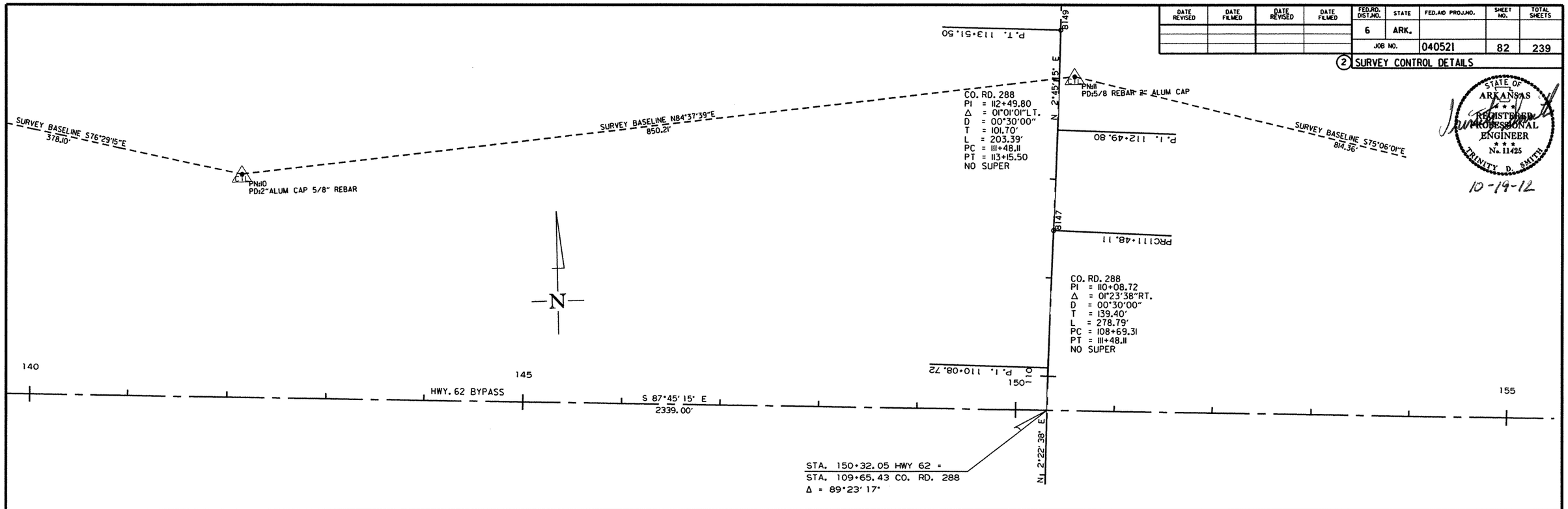
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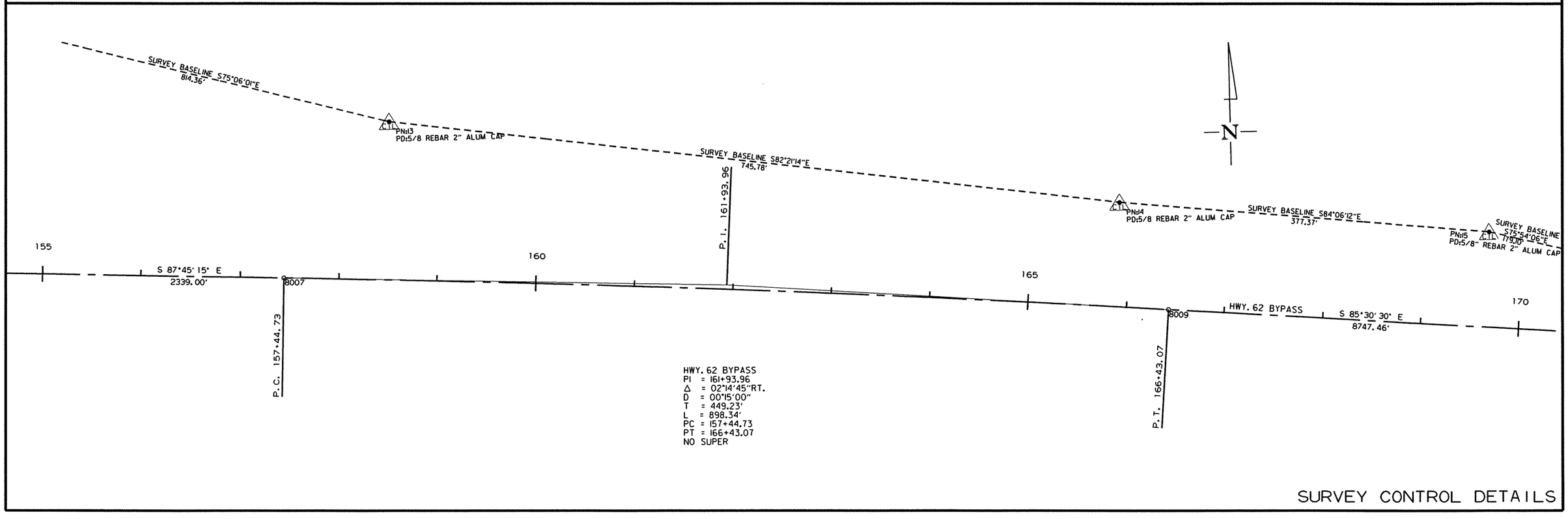
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	82	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12





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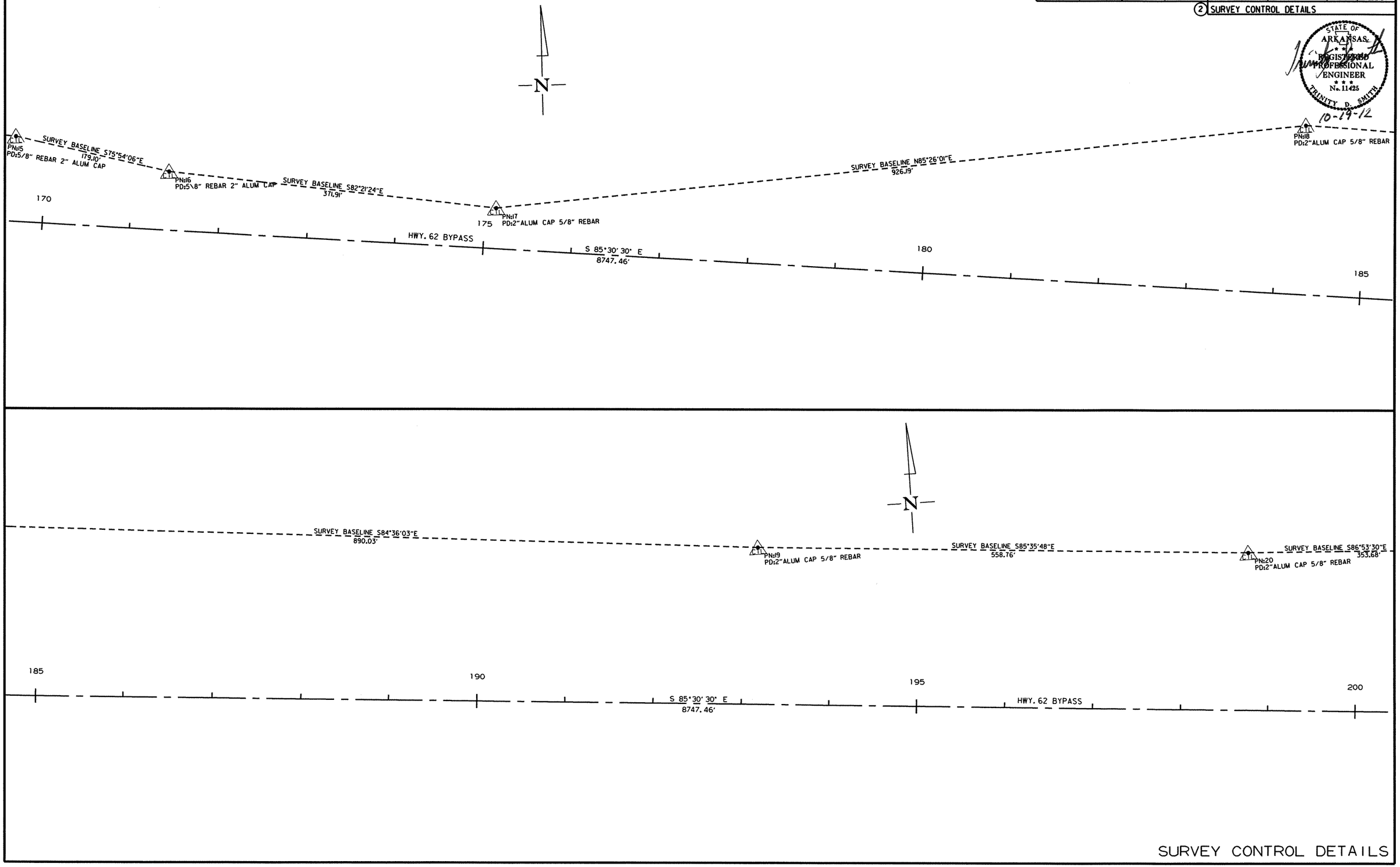
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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	83	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



10/1/2012

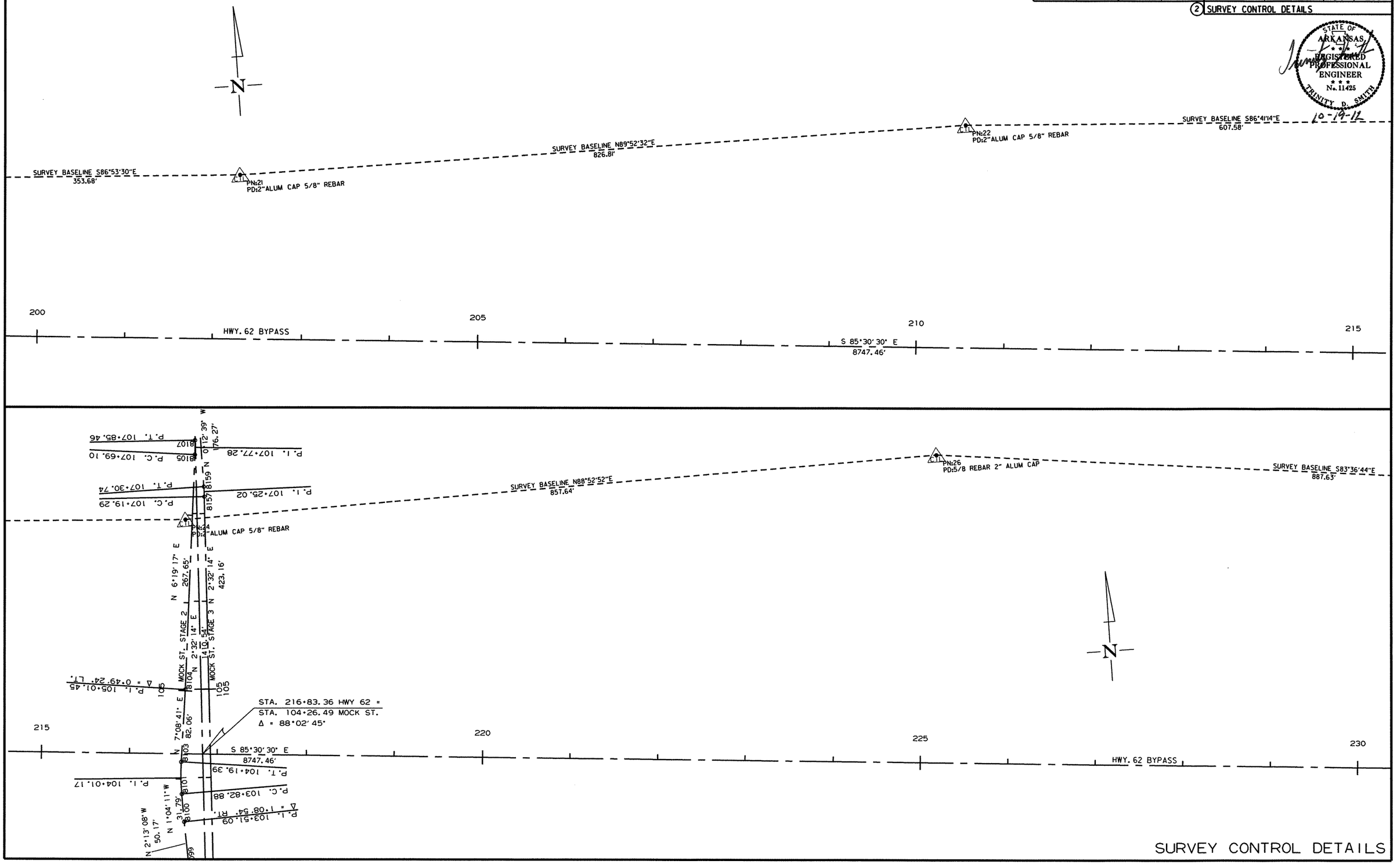
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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	84	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



10/1/2012

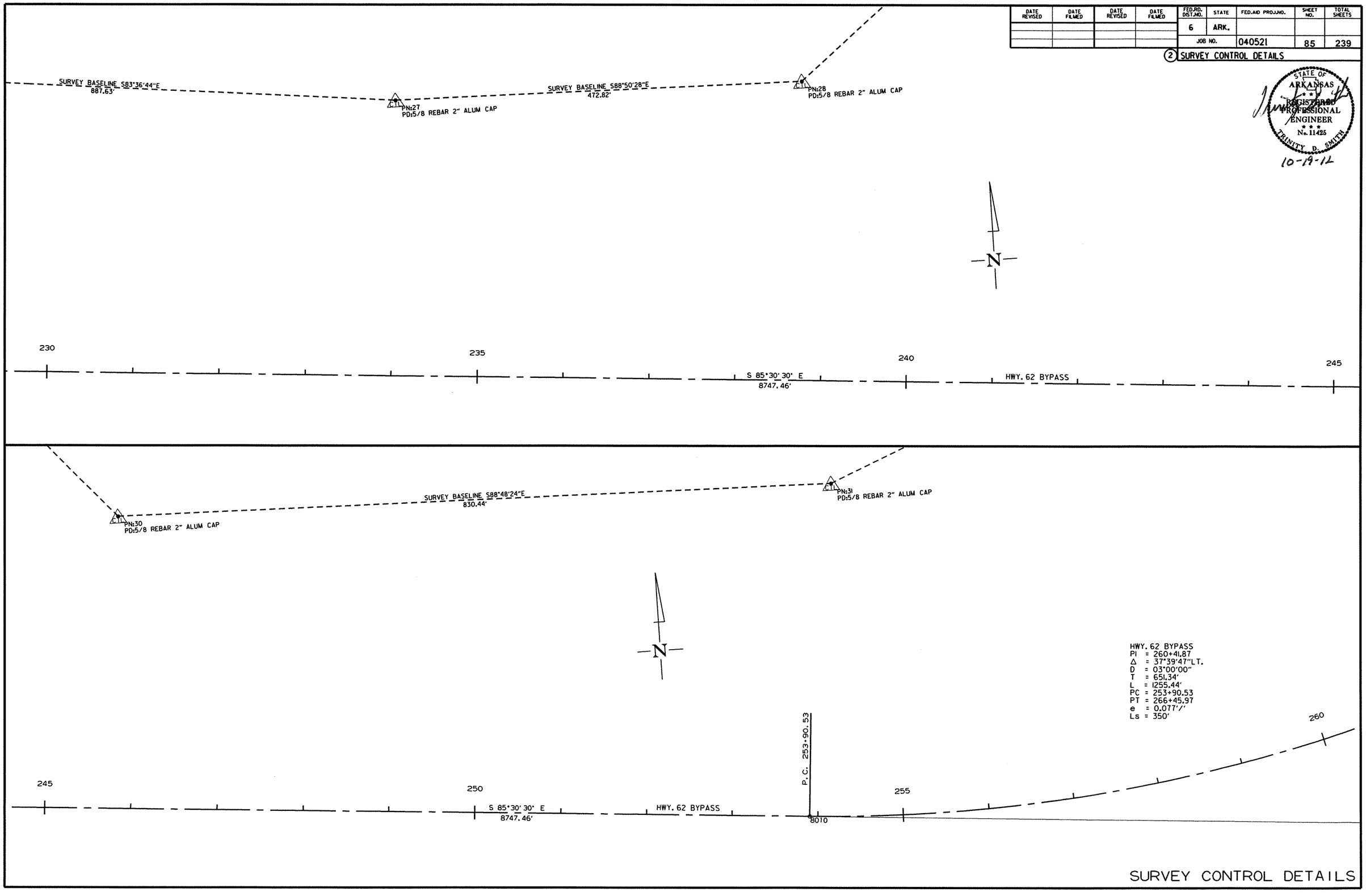
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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	85	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



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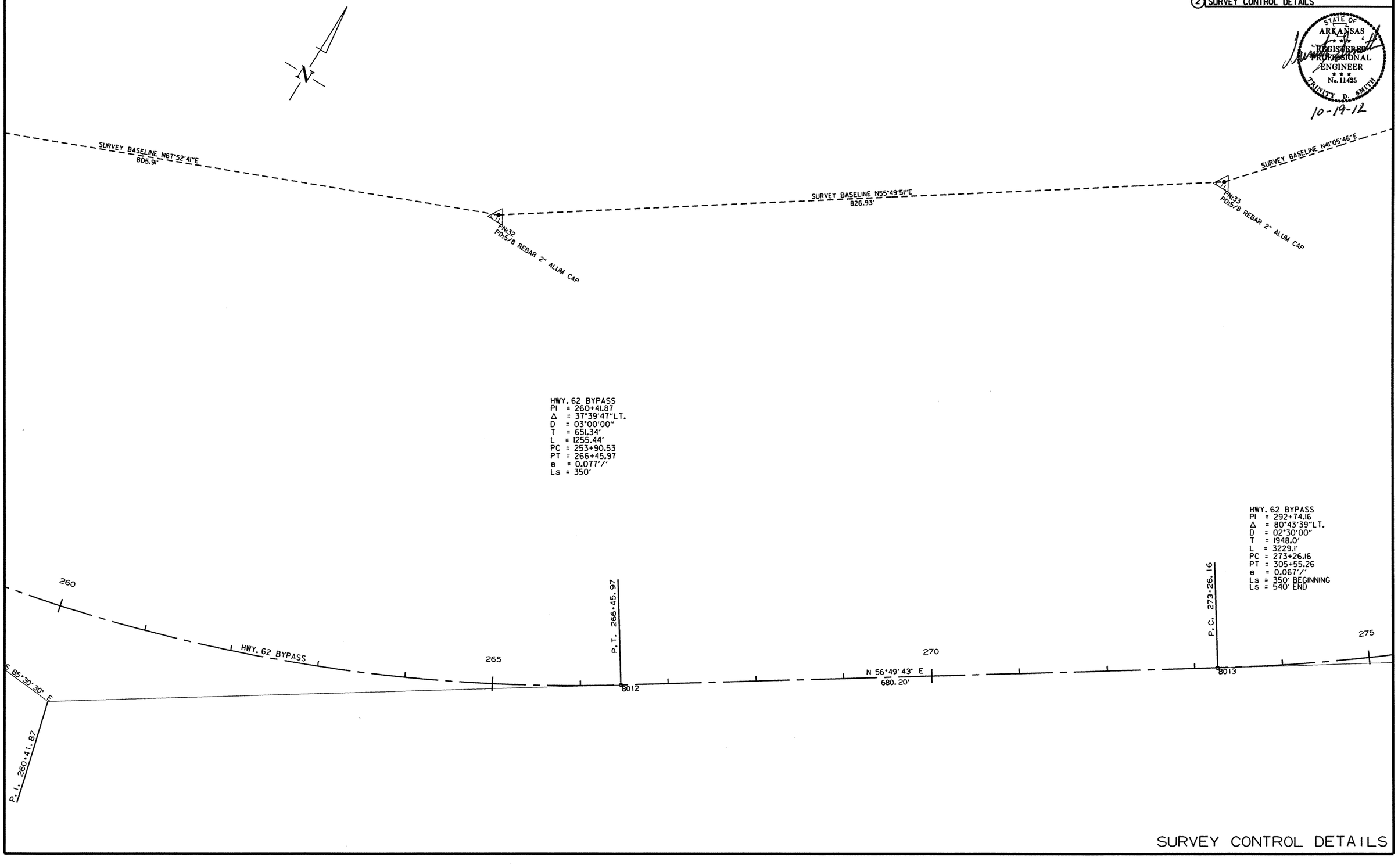
SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	86	239

(2) SURVEY CONTROL DETAILS

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

10-19-12



10/1/2012

R040521.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	87	239

(2) SURVEY CONTROL DETAILS

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

10-19-12

PI#33
PD5/8 REBAR 2" ALUM CAP

SURVEY BASELINE N41°05'46"E
448.34'

PI#34
PD5/8 REBAR 2" ALUM CAP

SURVEY BASELINE N26°42'59"E
852.60'

PI#35
PD5/8 REBAR 2" ALUM CAP

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

275

HWY. 62 BYPASS

280

285

290

N 56°49'43" E

10/1/2012

R040521.DGN

SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	88	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-14-12

PN35 PD5/8 REBAR 2" ALUM CAP

SURVEY BASELINE N16°19'27"E 519.70'

PN36 PD5/8 REBAR 2" ALUM CAP

SURVEY BASELINE N3°07'04"E 383.93'

BUTLER RD. DETOUR S 77°28'52" E 411.19'

110

BUTLER RD.

110

SURVEY BASELINE N1°05'02"W 750.64'

807

P.C. 110+94.09

PN38 PD5/8 REBAR 2" ALUM CAP

P.I. 111+92.09

BUTLER RD. DETOUR
PI = 111+92.09
Δ = 05°52'29"LT.
D = 03°00'00"
T = 98.00'
L = 195.82'
PC = 110+94.09
PT = 112+89.91
e = 0.025'/'
Ls = 200'

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

P.T. 305+55.26

305

8015

STA. 300+51.16 HWY 62 =
STA. 113+67.35 BUTLER RD.
Δ = 76°09'31"

P.T. 112+89.91

807

S 87°27'18" E 2400.00'

HWY. 62 BYPASS

290

295

300

S 83°21'22" E 310.71'

115

115

N 23°53'56" W

S 83°21'22" E 310.71'

8080

P.C. 116+00.62

BUTLER RD. DETOUR
PI = 117+75.56
Δ = 27°27'07"LT.
D = 08°00'00"
T = 174.93'
L = 343.15'
PC = 116+00.62
PT = 119+43.77
e = 0.058'/'
Ls = 200'

N

SURVEY CONTROL DETAILS

10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	89	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

SURVEY BASELINE N11°05'02"W
750.64'

PK-NAIL
PDS7/8 REBAR 2" ALUM CAP

SURVEY BASELINE N29°17'36"W
596.52'

PK-NAIL
PDS7/8 REBAR 2" ALUM CAP

305

P. T. 305+55.26

8015

N 28°53'56" W
721.10'

310

8016

315

HWY. 62 BYPASS

320

P. C. 312+76.36

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°16'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.2'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

SURVEY BASELINE N21°08'41"E
1040.26'

P. I. 321+67.66

N 23°53'56" W

P. I. 109+93.88
Δ = 0° 34' 07" RT.

S 89°08'15" E
993.88'

8032

110

325

PK-NAIL
PDS7/8 REBAR 2" ALUM CAP

N 2°22'13" E

HWY. 62 BYPASS

330

8018

P. T. 330+27.63

N 2°22'13" E
1324.49'

335

PK-NAIL
PDS7/8 REBAR 2" ALUM CAP

SURVEY BASELINE N02°23'37"E
473.47'

STA. 324+70.59 HWY. 62 =
STA. 110+39.16 PARK ST.
Δ = 82°44'55"

HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°16'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.2'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

S 88°34'08" E
1087.66'

SURVEY BASELINE N31°11'48"W
789.91'

SURVEY BASELINE N21°08'41"E
1040.26'

10/1/2012

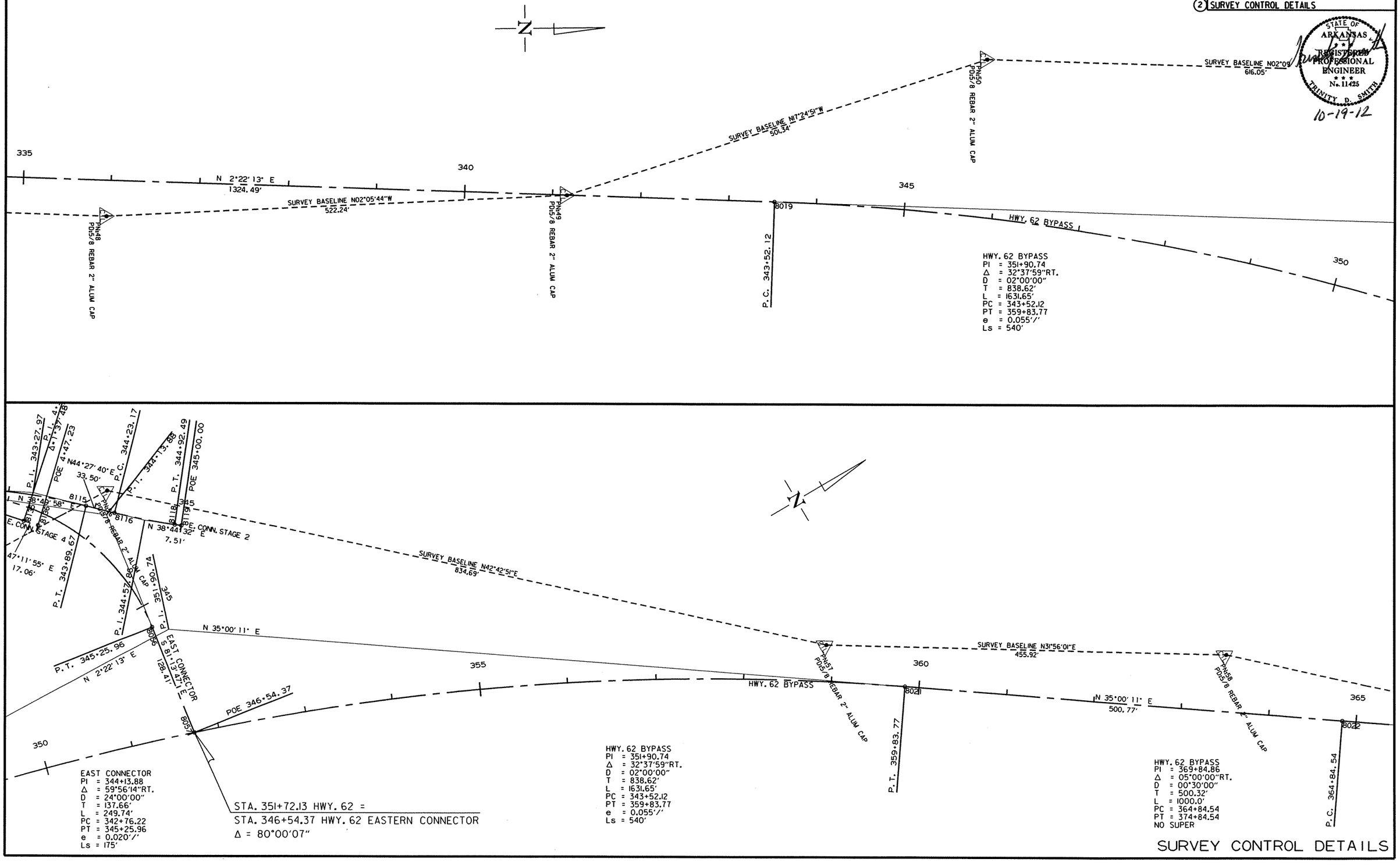
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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	90	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



SURVEY CONTROL DETAILS

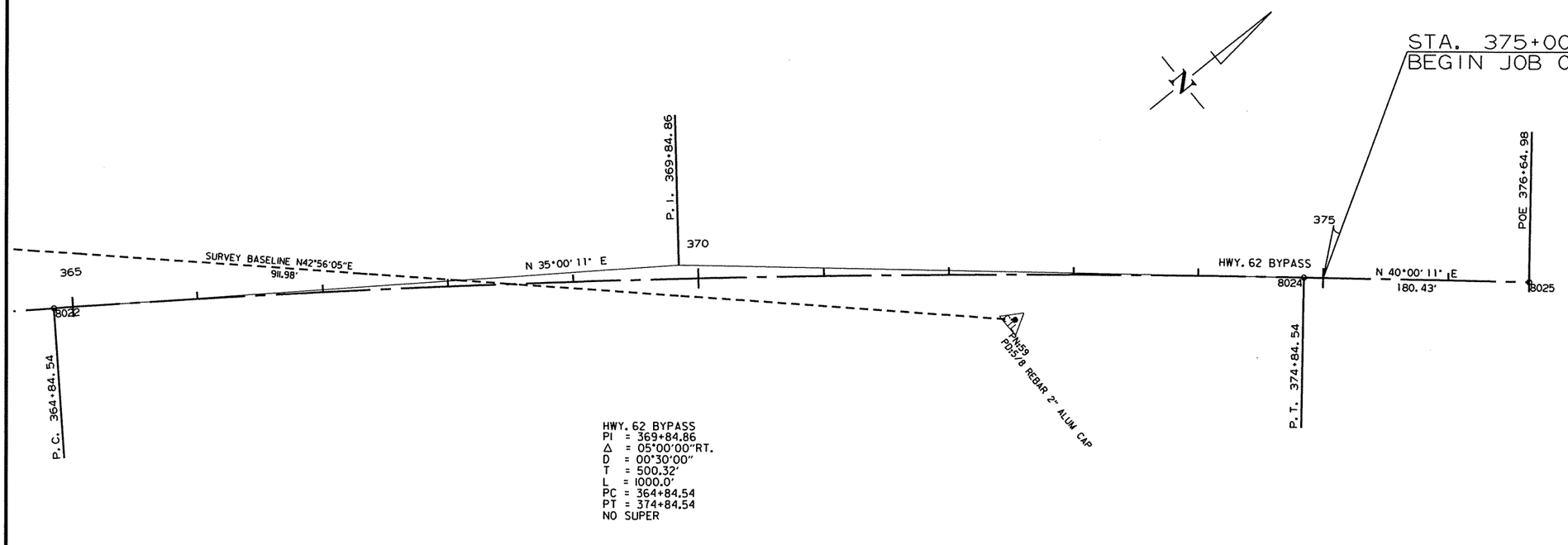
10/1/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	91	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12



HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER

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SURVEY CONTROL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	92	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
10-19-12

S 87°45' 15" E
2339.00'

SURVEY BASELINE NB4°37'39"E
8502'

STA. 150+32.05 HWY 62 =
STA. 109+65.43 CO. RD. 288
Δ = 89°23' 17"

P.I. 105+72.56

105

N 2°22' 38" E
157.75'

8144

8145

P.I. 110+08.72

150

110

CO. RD. 288
PI = 112+49.80
Δ = 01°01'01"LT.
D = 00°30'00"
T = 101.70'
L = 203.39'
PC = 111+48.11
PT = 113+15.50
NO SUPER

8147

N 2°45' 15" E

P.T. 113+51.50

8149

115

N 2°45' 15" E
248.36'

POE 115+99.85

8150

P.I. 103+25.15

8142

P.C. 104+25.01

CO. RD. 288
PI = 105+72.56
Δ = 33°40'13"RT.
D = 11°45'00"
T = 147.55'
L = 286.55'
PC = 104+25.01
PT = 107+11.56
e = 0.099'/'
Ls = 250' BEGINNING
Ls = 300' END

P.T. 107+11.56

PRC 108+69.31

PNH 5/8" REBAR W/ ALUM CAP

CO. RD. 288
PI = 110+08.72
Δ = 01°23'38"RT.
D = 00°30'00"
T = 139.40'
L = 278.79'
PC = 108+69.31
PT = 111+48.11
NO SUPER

PRC 111+48.11

P.I. 112+49.80

PNH 5/8 REBAR W/ ALUM CAP

SURVEY BASELINE S75°06'01"E
8436'

N

P.I. 103+25.15

P.C. 102+25.16

CO. RD. 288
PI = 103+25.15
Δ = 04°59'46"RT.
D = 02°30'00"
T = 99.99'
L = 199.85'
PC = 102+25.16
PT = 104+25.01
e = 0.034'/'
Ls = 200'

N 36°17' 22" W
225.16'

100

8139

POB 100+00.00

155

CO. RD. 288
SURVEY CONTROL DETAILS

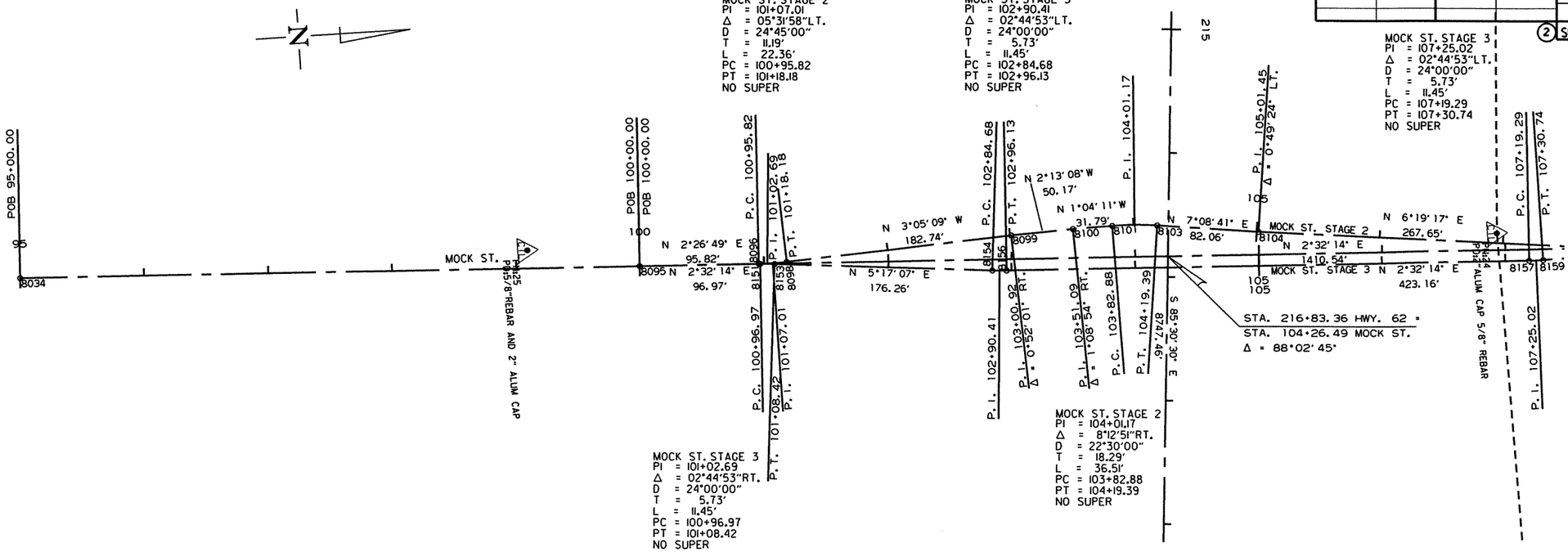
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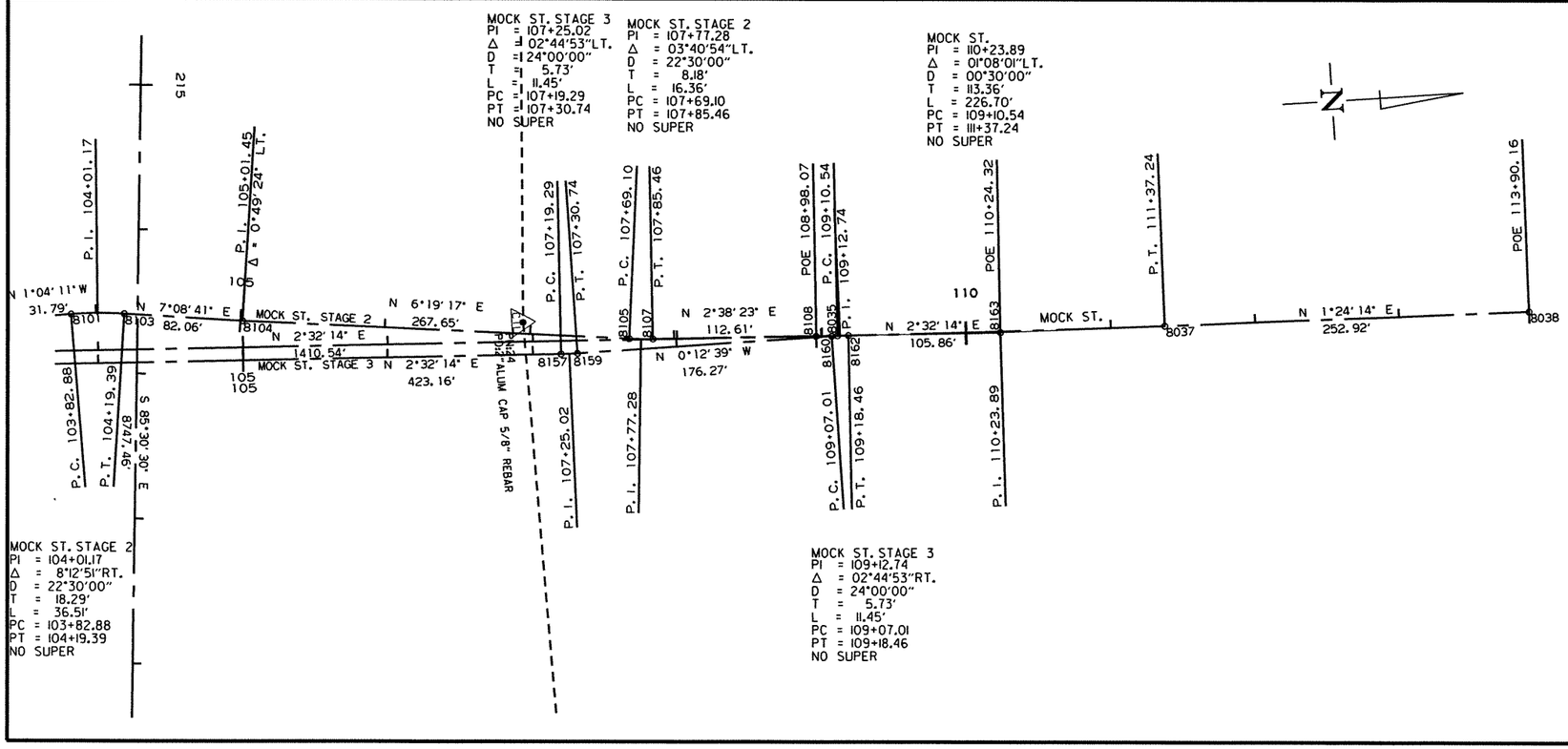
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				6	ARK.			
				JOB NO.		040521	93	239

2 SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
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MOCK ST.
SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040521	94	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
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POB 100+00.00

P.I. 100+00.00

100

8058

BUTLER RD. DETOUR
S 87°27' 18" E
516.68'

C.T.
PN:37
PD:5/8 REBAR 2" ALUM CAP

105

8074

P.I. 106+00.00

P.C. 105+16.68

BUTLER RD. DETOUR
PI = 106+00.00
Δ = 09°58'25"RT.
D = 06°00'00"
T = 83.32'
L = 166.23'
PC = 105+16.68
PT = 106+82.90
NO SUPER

P.T. 106+82.90

8076

BUTLER RD. DETOUR
S 77°28' 52" E
411.19'

110

P.C. 110+94.09

8077

BUTLER RD.

C.T.
PN:38
PD:5/8 REBAR 2" ALUM CAP

S 87°27' 18" E
2400.00'

BUTLER RD. DETOUR
PI = 111+92.09
Δ = 05°52'29"LT.
D = 03°00'00"
T = 98.00'
L = 195.82'
PC = 110+94.09
PT = 112+89.91
e = 0.025'/'
Ls = 200'

STA. 300+51.16 HWY. 62 =
STA. 113+67.35 BUTLER RD.
Δ = 76°09' 31"

HWY. 62 BYPASS

115

P.T. 112+89.91

8079

S 83°21' 22" E
310.71'

300

SURVEY BASELINE N27°07'04"E
383.93'

P.I. 111+92.09

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

N 23°53'56" W

115

S 87°27' 18" E
2400.00'

C.T.
PN:39
PD:5/8 REBAR 2" ALUM CAP

120

P.I. 121+32.96

P.I. 124+00.00
Δ = 0° 40' 55" LT.

125

S 88°08' 13" E
351.42'

130

BUTLER RD.
S 87°29' 50" E
304.24'

8061

P.C. 116+00.62

BUTLER RD. DETOUR
PI = 117+75.56
Δ = 27°27'07"LT.
D = 08°00'00"
T = 174.93'
L = 343.15'
PC = 116+00.62
PT = 119+43.77
e = 0.058'/'
Ls = 200'

P.T. 119+43.77

N 69°32' 11" E
200.00'

P.C. 119+63.81

BUTLER RD. DETOUR
PI = 121+32.96
Δ = 23°21'11"RT.
D = 07°00'00"
T = 169.16'
L = 333.61'
PC = 119+63.81
PT = 122+97.42
NO SUPER

P.T. 122+97.42

8085

S 87°27' 18" E
130.84'

8059

POE 124+28.27

P.I. 127+51.42
Δ = 0° 38' 23" RT.

8060

POE 130+55.66

115

S 83°21' 22" E
310.71'

8080

P.I. 117+75.56

N 23°53'56" W

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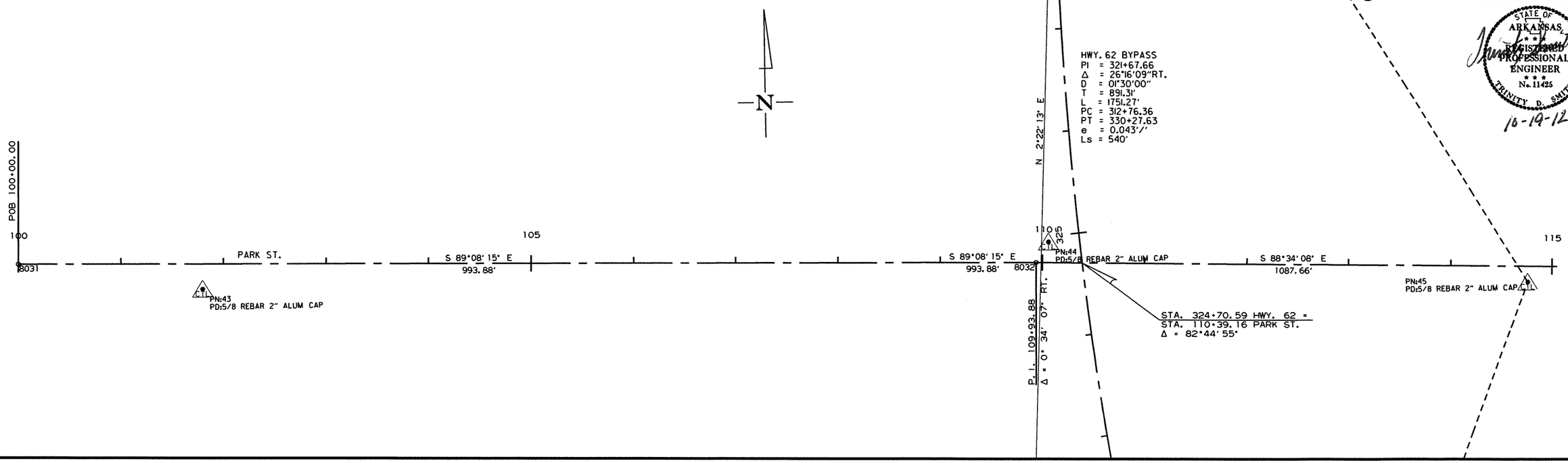
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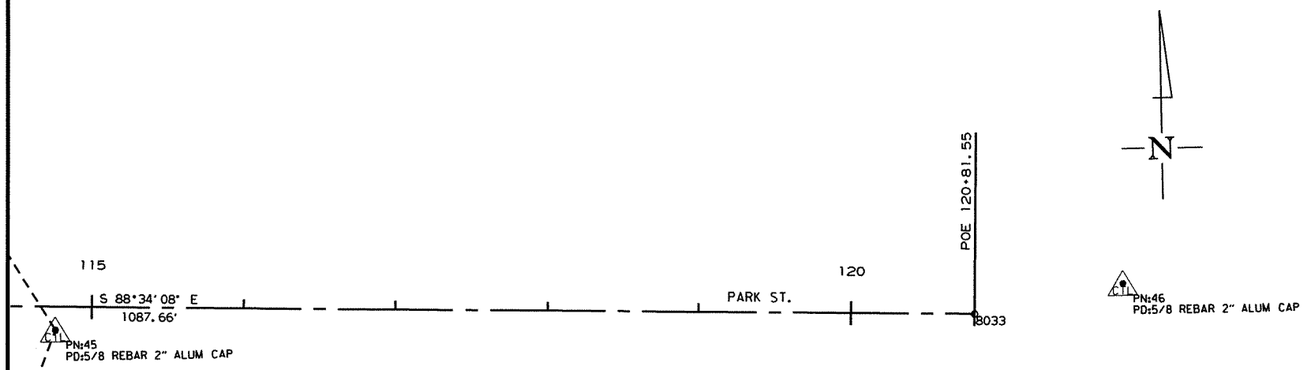
BUTLER RD.
SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040521	95	239

(2) SURVEY CONTROL DETAILS

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PARK ST.
SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040521	96	239

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

EAST CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

EAST CONNECTOR STAGE 2
PI = 341+68.05
Δ = 04°34'45"LT.
D = 08°15'00"
T = 27.77'
L = 55.51'
PC = 341+40.28
PT = 341+95.79

EAST CONNECTOR STAGE 2
PI = 344+57.86
Δ = 05°43'08"LT.
D = 08°15'00"
T = 34.69'
L = 69.32'
PC = 344+23.17
PT = 344+92.49

EAST CONNECTOR STAGE 4
PI = 3+11.50
Δ = 09°59'45"RT.
D = 24°45'00"
T = 20.25'
L = 40.39'
PC = 2+91.25
PT = 3+31.64

EAST CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

EAST CONNECTOR STAGE 2
PI = 343+27.97
Δ = 10°12'27"RT.
D = 08°15'00"
T = 62.03'
L = 123.73'
PC = 342+65.94
PT = 343+89.67

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

STA. 351+72.13 HWY. 62 =
STA. 346+54.37 HWY. 62 EASTERN CONNECTOR
Δ = 80°00'07"

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EAST CONNECTOR
SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		040521	97	239

2 PLAN AND PROFILE SHEETS

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
120+00	122+78	MAIN LANES	337
122+61		MAIN LANES LT.	143

FENCING

STA.	STA.	LOCATION	TYPE	LIN. FT.
124+40	126+59	HWY. 62 BYPASS LT.	A	233

STA. 120+69 IN PLACE
12' x 40' PIPE CULV'T.
LT. SIDE DRAIN
REMOVE & INSTALL
18" x 40' PIPE CULV'T.
LT. SIDE DRAIN
CONSTRUCT APPROACH = 90 CU. YDS.

STA. 122+55 IN PLACE
12' x 44' PIPE CULV'T.
LT. SIDE DRAIN
REMOVE & INSTALL @ +52
18" x 52' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 150 CU. YDS.

STA. 123+81 CONSTRUCT
APPROACH ON LT. = 200 CU. YDS.

WEST CONNECTOR RAMP
PI = 131+49.27
Δ = 63°11'54"LT.
D = 13°15'00"
T = 266.02'
L = 476.97'
PC = 128+83.25
PT = 133+60.22
MATCH EXIST.

STA. 119+94 IN PLACE
4' X 4' X 44' R.C. BOX CULVERT
WITH WINGS LT. & RT.
RETAIN

STA. 125+29 IN PLACE 85' LT. C.L.
18" x 54' R.C. PIPE CULV'T.
W/ HEADWALLS
REMOVE

OBLITERATION OF EXIST. PAVEMENT

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STA. 120+95.00
BEGIN JOB 040521
LOG MILE 12.3

STA. 122+13 INSTALL
18' X 62' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 125 CU. YDS.
UNCLASS. EXCAVATION = 60 CU. YDS.

HWY. 62 BYPASS
PI = 128+08.00
Δ = 51°37'09"RT.
D = 04°00'00"
T = 692.74'
L = 1290.47'
PC = 121+15.26
PT = 134+05.73
e = 0.093'/'
Ls = 630'

HWY. 62 BYPASS

STA. 119+95.00 BEGIN SUPERELEVATION (N.C.)
STA. 126+25.00 MAX. SUPERELEVATION (0.093'/')
STA. 132+48.23 MAX. SUPERELEVATION (0.093'/')
STA. 138+78.23 END SUPERELEVATION (N.C.)

P.V.I. 120+00.00
ELEV. 1186.55
-1.28%
P.V.I. 121+00.00
ELEV. 1185.28
-1.39%
LT. DITCH GRADE -0.50%
K 506.32
VC=400'
e=0.40'
+0.60%
LT. DITCH GRADE 1.06%
121+00.00 LT. 1181.00
123+00.00 LT. 1180.00
P.V.I. 123+28.82 ELEV. 1182.10
125+37.00 LT. 1178.76
126+25.00 LT. 1179.69

BM: 905 SQ CUT RCP
110.44 LT. OF STA. 125+21.93
ELEVATION = 1180.26

1240 1230 1220 1210 1200 1190 1180 1170 1160 1150

115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00

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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

CAP 5/8" REBAR

EXIST. R/W. CofA. & FENCE

WEST CONNECTOR RAMP
PI = 131+49.27
Δ = 63°11'54"LT.
D = 13°15'00"
T = 266.02'
L = 476.97'
PC = 128+83.25
PT = 133+60.22
MATCH EXIST.

N 8°08'53" E

N 5°59'01" W
WESTERN CONNECTOR

P.C. 102+55.22

STA 132+00 IN PLACE
18" x74' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING) WITH
FES LT. & RT.
Q50=3CFS D.A. =0.66 ACRES
RETAIN

STA 134+35 IN PLACE
18" X 44' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

CANOPY CABLE SPLICE BOX

PN: 1105
PD: 8" SPIKE

PN: 9
PD: 2" ALUM CAP 5/8" REBAR

PN: 1100
PD: 8" SPIKE

STA. 141+00 IN PLACE
18" X 40' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

PN: 10
PD: 2" ALUM CAP 5/8" REBAR

EXIST. R/W. CofA. & FENCE

N 71°20'48" E 12.48'

HWY. 62 BYPASS

P08 100+00.00

HWY. 62 BYPASS
PI = 128+08.00
Δ = 51°37'09"RT.
D = 04°00'00"
T = 692.74'
L = 1290.47'
PC = 121+15.26
PT = 134+05.73
e = 0.093'/'
Ls = 630'

+48.14 242.77' TAPER +90.91

P.T. 134+05.73

STA. 132+00.00 HWY. 62 =
STA. 100+00.00 HWY. 62 WEST CONNECTOR
Δ = 90°00'00"

S 87°45'15" E

STA. 132+00 IN PLACE
24" X 28' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 135+00 IN PLACE
24" X 42' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 138+37 IN PLACE
DBL. 6' X 4' X 136' R.C. BOX CULVERT
(15° LT. FWD. SKEW)
Q50=290CFS D.A. =75ACRES
RETAIN

STA. 141+00 IN PLACE
24" X 34' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS

STA. 119+95.00 BEGIN SUPERELEVATION (N.C.)
STA. 126+25.00 MAX. SUPERELEVATION (0.093'/')
STA. 132+48.23 MAX. SUPERELEVATION (0.093'/')
STA. 138+78.23 END SUPERELEVATION (N.C.)

-0.60%

K 1038.83
VC=1400'
e=2.36'

EXIST. F.I. INLET 1165.95
EXIST. F.I. OUTLET 1164.60

P.V.I. 138+55.20
ELEV. 1172.98

1220 1210 1200 1190 1180 1170 1160 1150 1140 1130

130+00 131+00 132+00 133+00 134+00 135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00

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				6	ARK.			
				JOB NO.		040521	99	239

(2) PLAN AND PROFILE SHEETS

CO. RD. 288
PI = 112+49.80
Δ = 01°01'01" LT.
D = 00°30'00"
T = 101.70'
L = 203.39'
PRC = 111+48.11
PT = 113+51.50
NO SUPER

PN: 1113
PD: 8" SPIKE & SPK

OW STATES NAT GAS WELL

CONCRETE

STA. 149+75 IN PLACE
30" X 84' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
Q50=39 CFS D.A. =10 ACRES
RETAIN

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN.FT.
149+50	149+50	MAIN LANES LT.& RT.	227
151+00	151+00	MAIN LANES LT.& RT.	191

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN.FT.
108+00		CO. RD. 288 RT.	54
110+54	112+81	CO. RD. 288 RT.	227
112+25	112+90	CO. RD. 288 RT.	131
112+80		CO. RD. 288 LT.	31
112+95		CO. RD. 288 RT.	27
112+95	113+39	CO. RD. 288 RT.	44
113+39		CO. RD. 288 RT.	18
115+56		CO. RD. 288 RT.	28
115+56	115+95	CO. RD. 288 RT.	39

CO. RD. 288
PI = 110+08.72
Δ = 01°23'38"RT.
D = 00°30'00"
T = 139.40'
L = 278.79'
PC = 108+69.31
PRC = 111+48.11
NO SUPER

STA. 150+32 CONSTRUCT
APPROACH ON LT. = 120 CU. YDS.

STA. 155+90 LT.
RETAIN AND PAVE

STATE OF ARKANSAS
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10-19-12

PN: 13
PD: 5/8 REBAR 2"

EXIST. R/W, CofA, & FENCE

CONST. LIMITS

HWY. 62 BYPASS

S 87°45'15" E

STA. 150+32.05 HWY. 62 =
STA. 109+65.43 CO. RD. 288
Δ = 89°23'17"

STA. 150+32 CONSTRUCT
APPROACH ON RT. = 160 CU. YDS.

FENCING

STA.	STA.	LOCATION	TYPE	LIN.FT.	16' GATES EACH
111+50	113+45	CO. RD. 288 RT.	D-1	196	1
115+54	115+95	CO. RD. 288 RT.	C	57	

PN: 12
PD: 2" ALUM CAP 5/8" REBAR

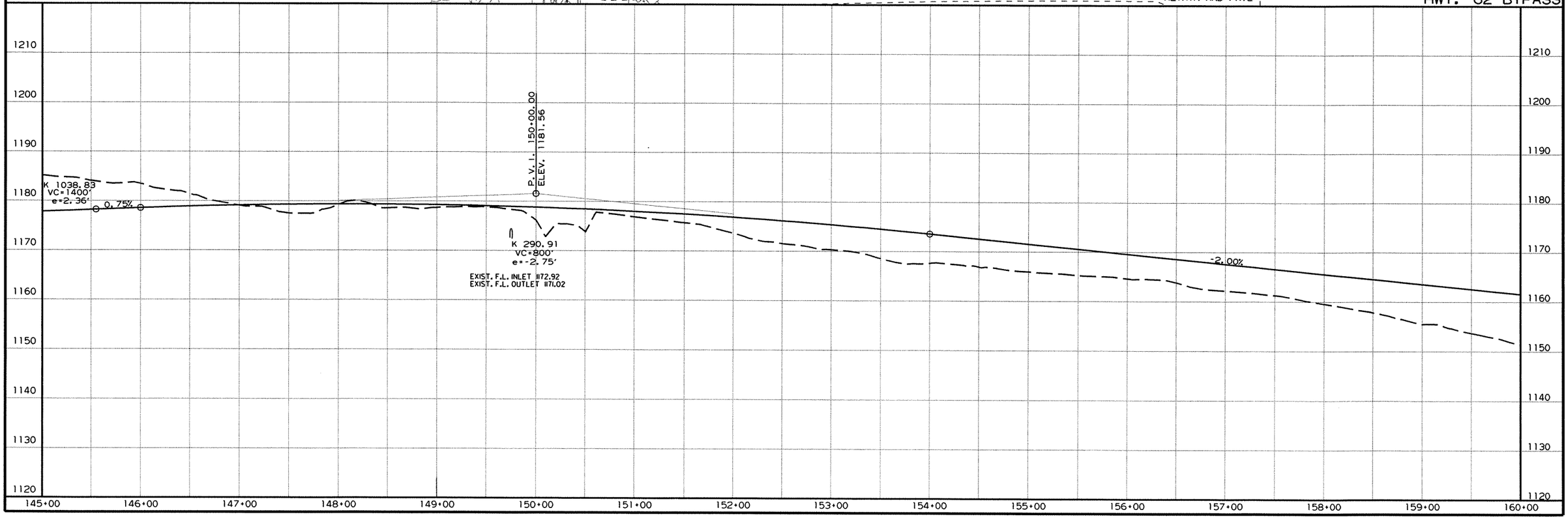
CANOPY

SHED

HWY. 62 BYPASS
PI = 161+93.96
Δ = 02°14'45"RT.
D = 00°15'00"
T = 449.23'
L = 898.34'
PC = 157+44.73
PT = 166+43.07
NO SUPER

STA. 158+00 IN PLACE
24" X 62' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS



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				6	ARK.			
				JOB NO.	040521		100	239

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

STA. 161+00 IN PLACE
18" X 40' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 166+00 IN PLACE
24" X 42' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 170+77.85 BR. END
470'-0" CONTINUOUS COMP. W-BEAM
38'-0" CLEAR ROADWAY
BR. NO. 07178
STA. 175+50.15 BR. END
RETAIN

STA. 161+00 IN PLACE
30" X 70' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 166+00 IN PLACE
36" X 76' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS
PI = 161+93.96
Δ = 02°14'45" RT.
D = 00°15'00"
T = 449.23'
L = 898.34'
PC = 157+44.73
PT = 166+43.07
NO SUPER

STA.	STA.	LOCATION	GUARDRAIL (TYPE A) LIN. FT.	THRIE BEAM GUARDRAIL TERMINAL EACH	GUARDRAIL TERMINAL (TYPE 2) EACH
168+31.62	170+75.37	RT. SIDE	175	1	1
169+17.78	170+61.53	LT. SIDE	75	1	1

BRIDGE END
STA. 170+77.85

SPECIAL FLOOD HAZARD AREA LIMITS
STA. 168+00-187+00

HWY. 62 BYPASS

STA. 167+00.00 BEGIN SUPERELEVATION (N.C.)
STA. 170+00.00 MAX. SUPERELEVATION (0.020'/')
STA. 176+00.00 MAX. SUPERELEVATION (0.020'/')
STA. 179+00.00 END SUPERELEVATION (N.C.)

-2.00%

K 384.62
VC=1000'
e=3.25'

P.V.I. 172+50.00
ELEV. 1136.56

BM: 921 CPS IN ROOT OF 18" OAK
26.24 LT. OF STA. 172+67.64
ELEVATION = 1125.05

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				6	ARK.			
				JOB NO.	040521		101	239

(2) PLAN AND PROFILE SHEETS

STA.	STA.	LOCATION	GUARDRAIL (TYPE A) LIN. FT.	THRIE BEAM GUARDRAIL TERMINAL EACH	GUARDRAIL TERMINAL (TYPE 2) EACH
175+52.63	177+71.38	LT. SIDE	150	1	1
175+66.47	178+10.22	RT. SIDE	175	1	1

STATE OF ARKANSAS
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TRINITY D. SMITH
10-19-12

EXIST. R/W
+00 125'
EXIST. R/W, CofA, & FENCE
END CofA +35
+30 121.36'
+45 150' C.
+70 150'
+85 121.08'
BEGIN CofA +85
PN:18 PD:2" ALUM CAP 5/8" REBAR
END CofA +75
BEGIN
175
180
185
190
PN:17 PD:2" ALUM CAP 5/8" REBAR
HWY. 62 BYPASS
S 85°30'30" E
BRIDGE END
STA. 175+50.15
EXIST. R/W
EXIST. R/W, CofA, & FENCE
END CofA +30
+30 145.61'
+45 160'
T.C.E.
+70 160'
+80 144.42'
BEGIN CofA +80
END CofA +75
BEGIN CofA +25

SPECIAL FLOOD HAZARD
AREA LIMITS
STA. 168+00-187+00

HWY. 62 BYPASS

STA. 167+00.00 BEGIN SUPERELEVATION (N.C.)
STA. 170+00.00 MAX. SUPERELEVATION (0.020'/')
STA. 176+00.00 MAX. SUPERELEVATION (0.020'/')
STA. 179+00.00 END SUPERELEVATION (N.C.)

K 384.62
VC=1000'
e=3.25'
0.60%

1180
1170
1160
1150
1140
1130
1120
1110
1100
1090

175+00 176+00 177+00 178+00 179+00 180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00

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(2) PLAN AND PROFILE SHEETS

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STA. 198+50 IN PLACE
30" X 44" PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 204+56 IN PLACE
10' X 5' X 310' R.C. BOX CULVERT
(66° 52' RT. FWD. SKEW)
Q50 = 470 CFS D.A. = 205 ACRES
RETAIN

STA. 205+00 IN PLACE
36" X 34' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

PN: 19
PD: 2" ALUM CAP 5/8" REBAR

PN: 20
PD: 2" ALUM CAP 5/8" REBAR

PN: 21
PD: 2" ALUM CAP 5/8" REBAR

EXIST. R/W, CofA, & FENCE

END CofA +75

BEGIN CofA +25

HWY. 62 BYPASS

S 85°30'30" E

16'

STA. 198+50 IN PLACE
42" X 76' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

EXIST. R/W, CofA, & FENCE

+00 125

+00 100'

+00 140'

+00 95

HWY. 62 BYPASS

0.60%

EXIST. F.L. INLET 1143.35
EXIST. F.L. OUTLET 1140.62

1190 1180 1170 1160 1150 1140 1130 1120 1110 1100

190+00 191+00 192+00 193+00 194+00 195+00 196+00 197+00 198+00 199+00 200+00 201+00 202+00 203+00 204+00 205+00

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				6	ARK.			
				JOB NO.		040521	103	239

2 PLAN AND PROFILE SHEETS

PN: 22
PD: 2" ALUM CAP 5/8" REBAR

STA. 217+38 IN PLACE
DBL. 5' x 3' x 96' R.C. BOX CULV'T.
(2° RT. FWD. SKEW)
WITH 3:1 WINGS LT. & RT.
RETAIN & EXTEND 13' RT.
TO A COMPLETED LENGTH OF 109'
Q50=160cfs, D.A.=67Ac.

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
216+10	216+25	MAIN LANES LT.& RT.	192
217+60	217+70	MAIN LANES LT.& RT.	223

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EXIST. R/W, CofA, & FENCE
CONST. LIMITS
S 85°30'30" E
HWY. 62 BYPASS
STA. 216+83.36 HWY. 62
STA. 104+26.49 MOCK ST.
Δ = 88°02'45"
720' TAPER
125' LT. TURN LANE
100' LT. TURN LANE
175' LT. TURN LANE
MOCK ST.
N 2°32'14" E
TEMP. CONST. LIMITS
TAPER
HWY. 62 BYPASS

0.60%
K 3499.26
VC=3500'
e=-4.38'
RT. DITCH GRADE 0.56%
F.L. INLET 1156.54
F.L. OUTLET 1153.75
217+38.00 RT.
1153.75

BM: 907 SQ CUT NORTH END HDWL
334.74 RT. OF STA. 216+79.08
ELEVATION = 1155.16

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				6	ARK.			
				JOB NO.		040521	104	239

(2) PLAN AND PROFILE SHEETS

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10-19-12

STA. 223+00 IN PLACE
30" X 28' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

EXIST. R/W, CofA, & FENCE

720' TAPER

CONST. LIMITS

S 85°30' 30" E
HWY. 62 BYPASS

STA. 223+00 IN PLACE
18" X 44' PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 38" PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 85 CU. YD.

HWY. 62 BYPASS

RT. DITCH GRADE 0.56%

225+00.00 RT.
1158.00

P.V.I. 231+00.00
ELEV. 1171.66

K 3499.26
VC=3500'
e=-4.38'

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				6	ARK.			
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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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No. 11425
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10-19-12

STA. 237+20 IN PLACE
18" X 42' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

POND

END CofA +95
BEGIN CofA +45
+00 105'
EXIST. R/W, CofA, & FENCE
+00 120'
END CofA +45
BEGIN CofA +95
+00 105'
16'

235 240 245 250

N

N 20°

+60

16'

S 85°30'30" E
HWY. 62 BYPASS

END CofA +25
BEGIN CofA +85
+00 120'
+00 150'
EXIST. R/W, CofA, & FENCE
END CofA +00
BEGIN CofA +50
+00 120'

STA. 235+60 IN PLACE
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS

STA. 248+28.03 BEGIN SUPERELEVATION (N.C.)
STA. 251+28.03 BEGIN SUPERELEVATION (0.020'/')
STA. 254+78.03 MAX. SUPERELEVATION (0.077'/')
STA. 265+58.47 MAX. SUPERELEVATION (0.077'/')
STA. 269+08.47 END SUPERELEVATION (0.020'/')

1220 1210 1200 1190 1180 1170 1160 1150 1140 1130

K 3499.26
VC=3500'
e=-4.38'

-0.40%

235+00 236+00 237+00 238+00 239+00 240+00 241+00 242+00 243+00 244+00 245+00 246+00 247+00 248+00 249+00 250+00

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				6	ARK.			
				JOB NO.		040521	106	239

(2) PLAN AND PROFILE SHEETS

HWY. 62 BYPASS
PI = 260+41.87
Δ = 37°39'47"LT.
D = 03°00'00"
T = 651.34'
L = 1255.44'
PC = 253+90.53
PT = 266+45.97
e = 0.077'/'
Ls = 350'

STA. 253+00
24" PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 262+00 IN PLACE
30" PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 252+00 IN PLACE
DBL. 42"
RT. SIDE DRAIN
RETAIN AND PAVE

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HWY. 62 BYPASS
S 85°30'30" E
N 56°49'43" E
P.C. 253+90.53
P.I. 260+41.87
EXIST. R/W, CofA, & FENCE
END CofA +75
BEGIN CofA +25
30'
16'

STA. 248+28.03 BEGIN SUPERELEVATION (N.C.)
STA. 251+28.03 BEGIN SUPERELEVATION (0.020'/')
STA. 254+78.03 MAX. SUPERELEVATION (0.077'/')
STA. 265+58.47 MAX. SUPERELEVATION (0.077'/')
STA. 269+08.47 END SUPERELEVATION (0.020'/')

-0.40%

1210 1200 1190 1180 1170 1160 1150 1140 1130 1120

250+00 251+00 252+00 253+00 254+00 255+00 256+00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00

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				6	ARK.			
				JOB NO.		040521	107	239

(2) PLAN AND PROFILE SHEETS

HWY. 62 BYPASS
PI = 260+41.87
Δ = 37°39'47"LT.
D = 03°00'00"
T = 651.34'
L = 1255.44'
PC = 253+90.53
PT = 266+45.97
e = 0.077'/'
Ls = 350'

STA. 269+85 IN PLACE
30" X 46' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 271+47 IN PLACE
TRI. 10' X 5' X 110' R.C. BOX CULVERT
(35° 00' LT. FWD. SKEW)
Q50=1100 CFS D.A.=602 ACRES
RETAIN

STA. 276+00 IN PLACE
18" X 40' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

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EXIST. R/W, CofA, & FENCE

P.C. 266+45.97

P.C. 273+26.16

N 56°49'43" E

HWY. 62 BYPASS

STA. 269+85 IN PLACE
TRI. 48" X 58' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 276+00 IN PLACE
24" X 66' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

LEVEE

TN-1122
70.6-58

HWY. 62 BYPASS

STA. 248+28.03 BEGIN SUPERELEVATION (N.C.)
STA. 251+28.03 BEGIN SUPERELEVATION (0.020'/')
STA. 254+78.03 MAX. SUPERELEVATION (0.077'/')
STA. 265+58.47 MAX. SUPERELEVATION (0.077'/')
STA. 269+08.47 END SUPERELEVATION (0.020'/')

STA. 270+63.66 BEGIN SUPERELEVATION (0.020'/')
STA. 274+13.66 MAX. SUPERELEVATION (0.067'/')
STA. 303+75.81 MAX. SUPERELEVATION (0.067'/')
STA. 309+15.80 END SUPERELEVATION (N.C.)

-0.40%

EXIST. F.L. INLET 1144.66
EXIST. F.L. OUTLET 1143.35

1200 1190 1180 1170 1160 1150 1140 1130 1120 1110

265+00 266+00 267+00 268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00 276+00 277+00 278+00 279+00 280+00

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(2) PLAN AND PROFILE SHEETS

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

STA. 293+00 IN PLACE
24' X 44' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

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STA. 293+00 IN PLACE
42' X 74' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

HWY. 62 BYPASS

STA. 270+63.66 BEGIN SUPERELEVATION (0.020'/')
STA. 274+13.66 MAX. SUPERELEVATION (0.067'/')
STA. 303+75.81 MAX. SUPERELEVATION (0.067'/')
STA. 309+15.80 END SUPERELEVATION (N.C.)

-0.40%

K 833.27
VC=2500'
e=9.38'

LT. DITCH
GRADE 0.74%

294+60.00 LT.
1135.60

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(2) PLAN AND PROFILE SHEETS

STA. 295+05 IN PLACE
TRI. 10' X 6' X 116' R.C. BOX CULVERT
(26° 00' RT. FWD. SKEW)
Q50=1420 CFS D.A.=825 ACRES
RETAIN

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
299+35	300+10	MAIN LANES LT.& RT.	220
301+20	301+45	MAIN LANES LT.& RT.	230

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

STA. 300+51.16 HWY. 62 =
STA. 113+67.35 BUTLER RD.
Δ = 76°09'31"

STA. 301+05 IN PLACE
DBL. 6' X 3' X 118' R.C. BOX CULVERT
(6° 53' LT. FWD. SKEW)
Q50 = 235 CFS D.A. = 80 ACRES
RETAIN

BUTLER RD. DETOUR
PI = 111+92.09
Δ = 05°52'29"LT.
D = 03°00'00"
T = 98.00'
L = 195.82'
PC = 110+94.09
PT = 112+89.91
e = 0.025'/'
Ls = 200'

STA. 304+04 IN PLACE
DBL. 36" x 104' R.C. PIPE CULVERT
(10° 44' RT. FWD. SKEW)
(CLASS III) (TYPE 3 BEDDING)
FES LT. & RT.
Q50=105CFS D.A. =35ACRES
RETAIN

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HWY. 62 BYPASS

STA. 270+63.66 BEGIN SUPERELEVATION (0.020'/')
STA. 274+13.66 MAX. SUPERELEVATION (0.067'/')
STA. 303+75.81 MAX. SUPERELEVATION (0.067'/')
STA. 309+15.80 END SUPERELEVATION (N.C.)

STA. 309+15.81 BEGIN SUPERELEVATION (N.C.)
STA. 314+55.81 MAX. SUPERELEVATION (0.043'/')
STA. 328+92.63 MAX. SUPERELEVATION (0.043'/')
STA. 334+32.63 END SUPERELEVATION (N.C.)

K 833.27
VC=2500'
e=9.38'

LT. DITCH GRADE 0.74%

EXIST. F.L. INLET 1135.60
EXIST. F.L. OUTLET 1135.05

300+28.00 LT.
1139.79

EXIST. F.L. INLET 1139.48
EXIST. F.L. OUTLET 1138.33

EXIST. F.L. INLET 1142.19
EXIST. F.L. OUTLET 1141.97

304+48.80
P.V.I.
ELEV. 1142.25

BM: 925 CPS IN BASE OF PP
504.48 LT. OF STA. 302+47.61
ELEVATION = 1145.65

1190 1180 1170 1160 1150 1140 1130 1120 1110 1100

295+00 296+00 297+00 298+00 299+00 300+00 301+00 302+00 303+00 304+00 305+00 306+00 307+00 308+00 309+00 310+00

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(2) PLAN AND PROFILE SHEETS

STA. 315+23 IN PLACE
18" X 40' PIPE CULVERTS
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 316+50 IN PLACE
54" X 98' R.C. PIPE CULVERT
(20° 00' RT. FWD. SKEW)
(CLASS III) (TYPE 3 BEDDING)
FES LT. & RT.
Q50=110 CFS D.A.=29 ACRES
RETAIN

STA. 324+73 IN PLACE 70' LT.
DBL. 29" X 18" X 92' R.C. ARCH
PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
FES LT. & RT.
Q50=38 CFS D.A.=10 ACRES
RETAIN

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EXIST. R/W, CofA, & FENCE

HWY. 62 BYPASS

N 23°53'56" W

N 2°22'13" E

P.C. 312+76.36

P.I. 321+67.66

HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°16'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.2'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

STA. 324+70.59 HWY. 62 =
STA. 110+39.16 PARK ST.
Δ = 82°44'55"

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
323+80	324+00	MAIN LANES LT. & RT.	200

STA. 315+40 RT.
RETAIN AND PAVE

PARK ST.

CONST. LIMITS

HWY. 62 BYPASS

STA. 309+15.81 BEGIN SUPERELEVATION (N.C.)
STA. 314+55.81 MAX. SUPERELEVATION (0.043'/')
STA. 328+92.63 MAX. SUPERELEVATION (0.043'/')
STA. 334+32.63 END SUPERELEVATION (N.C.)

K 833.27
VC=2500'
e=9.38'

2.60%

RT. DITCH GRADE 3.25%

LT. DITCH GRADE 2.51%

EXIST. F.L. INLET 1167.75
EXIST. F.L. OUTLET 1165.35

318+00.00 RT.
1167.02

323+00.00 LT.
1187.22

324+10.00 RT.
1186.85

1210 1200 1190 1180 1170 1160 1150 1140 1130 1120

310+00 311+00 312+00 313+00 314+00 315+00 316+00 317+00 318+00 319+00 320+00 321+00 322+00 323+00 324+00 325+00

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(2) PLAN AND PROFILE SHEETS

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REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LTH. FT.
325+15	325+30	MAIN LANES LT. & RT.	185

STA. 326+79 IN PLACE
DROP INLET 67'-9" RT. CENTERLINE
4'-0" X 3'-0" X H = 6'-7"
RETAIN

HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°10'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.2'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

STA. 331+40 IN PLACE
36" X 90' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
FES LT. & RT.
Q50=39 CFS D.A. =10 ACRES
RETAIN

STA. 336+70 IN PLACE
TYPE 'RM' DROP INLET 67' RT. CENTERLINE
4'-0" X 3'-0" X H = 6'-2"
RETAIN

STA. 336+85 IN PLACE
36" X 130' R.C. PIPE CULVERT
(12° 00' LT. FWD. SKEW)
(CLASS III) (TYPE 3 BEDDING)
FES LT.
Q50=47 CFS D.A. =12 ACRES
RETAIN

STA. 339+85 IN PLACE
24" X 38' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 338+00 DRIVE ON RT.
RETAIN AND PAVE

HWY. 62 BYPASS

STA. 309+15.81 BEGIN SUPERELEVATION (N.C.)
STA. 314+55.81 MAX. SUPERELEVATION (0.043'/')
STA. 328+92.63 MAX. SUPERELEVATION (0.043'/')
STA. 334+32.63 END SUPERELEVATION (N.C.)

STA. 339+47.12 BEGIN SUPERELEVATION (N.C.)
STA. 344+87.12 MAX. SUPERELEVATION (0.055'/')
STA. 358+48.77 MAX. SUPERELEVATION (0.055'/')
STA. 363+88.77 END SUPERELEVATION (N.C.)

2.60%
LT. DITCH GRADE 2.51%
-2.55%
P.V.I. 331+75.00
ELEV. 1213.13
K 233.01
VC=1200'
e=-7.73'
327+00.00 LT.
1197.28
EXIST. F.L. INLET 1198.90
EXIST. F.L. OUTLET 1197.04
EXIST. F.L. INLET 1191.75
EXIST. F.L. OUTLET 1187.11

BM: 926 CPS BASE OF CP
151.24 LT. OF STA. 326+39.43
ELEVATION = 1206.67

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R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	112	239

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

STA. 343+00 IN PLACE
36" X 36' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 346+00 IN PLACE
36" X 28' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 347+53 IN PLACE
36" X 40' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

STA. 349+00 IN PLACE
36" X 36' PIPE CULVERT
LT. SIDE DRAIN
RETAIN AND PAVE

EAST CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN.FT.
342+75	342+75	MAIN LANES LT.& RT.	215

EXIST. R/W, CofA, & FENCE

OBLITERATION OF EXIST. PAVEMENT

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

STA. 340+32 IN PLACE
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 343+00 IN PLACE
18" X 34' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 346+00 IN PLACE
18" X 44' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 347+75 IN PLACE
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 350+40 IN PLACE
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
RETAIN AND PAVE

STA. 351+89 IN PLACE
28" X 20" X 40' ARCH PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL @ +92
28" X 20" X 50' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 50 CU. YD.

STA. 351+72.13 HWY. 62 =
STA. 346+54.37 HWY. 62 EASTERN CONNECTOR
Δ = 80°00'07"

HWY. 62 BYPASS

STA. 339+47.12 BEGIN SUPERELEVATION (N.C.)
STA. 344+87.12 MAX. SUPERELEVATION (0.055'/')
STA. 358+48.77 MAX. SUPERELEVATION (0.055'/')
STA. 363+88.77 END SUPERELEVATION (N.C.)

-2.55%

-1.50%

LT. DITCH GRADE -4.77%

K 380.95
VC=400'
e=0.53'

349+00.00 LT.
1168.31

P.V.I.
351+77.38
ELEV. 1162.07

352+50.00 LT.
1151.63

BM: 927 CPS BASE OF LP
336.84 LT. OF STA. 342+12.86
ELEVATION = 1201.40

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				6	ARK.			
				JOB NO.		040521	113	239

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-17-12

OBLITERATION OF EXIST. PAVEMENT

STA. 363+63 INSTALL
30" x 36' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 100 CU. YD.

STA. 364+16 INSTALL
30" x 34' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 95 CU. YD.

STA. 364+81 INSTALL
30" x 40' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 110 CU. YD.

STA. 364+85 IN PLACE
24" x 356' R.C. PIPE CULVERT
LT. SIDE DRAIN
REMOVE

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.6'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

STA. 357+00 DRIVE ON RT.
RETAIN & PAVE

STA. 359+24 CONSTRUCT
APPROACH ON RT. = 205 CU. YDS.

STA. 362+00 INSTALL
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 80 CU YD

STA. 365+75 IN PLACE
18" X 62' R.C. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 54' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 95 CU. YDS.

STA. 367+74 IN PLACE
18" x 62' C.M. PIPE CULV'T.
RT. SIDE DRAIN
REMOVE & INSTALL
18" x 40' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 115 CU. YD.

HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER

HWY. 62 BYPASS

STA. 339+47.12 BEGIN SUPERELEVATION (N.C.)
STA. 344+87.12 MAX. SUPERELEVATION (D.055'/')
STA. 358+48.77 MAX. SUPERELEVATION (D.055'/')
STA. 363+88.77 END SUPERELEVATION (N.C.)

-1.50%
LT. DITCH GRADE -0.64%
RT. DITCH GRADE -0.85%
LT. DITCH GRADE -0.54%
-4.97%
RT. DITCH GRADE -8.50%

356+00.00 LT. 1141.13
360+00.00 RT. 1140.00
363+08.00 LT. 1136.57
364+00.00 RT. 1136.62
364+19.00 LT. 1135.97
367+00.00 RT. 1121.50
369+00.00 RT. 1104.50

P.V.I. 363+75.00
ELEV. 1144.11

K 158.60
VC=550'
e=2.38'

K 138.73
VC=800'
e=5.77'

BM: 928 CPS IN BASE OF PP
55.42 RT. OF STA. 367+50.19
ELEVATION = 1118.27

1170 1160 1150 1140 1130 1120 1110 1100 1090 1080

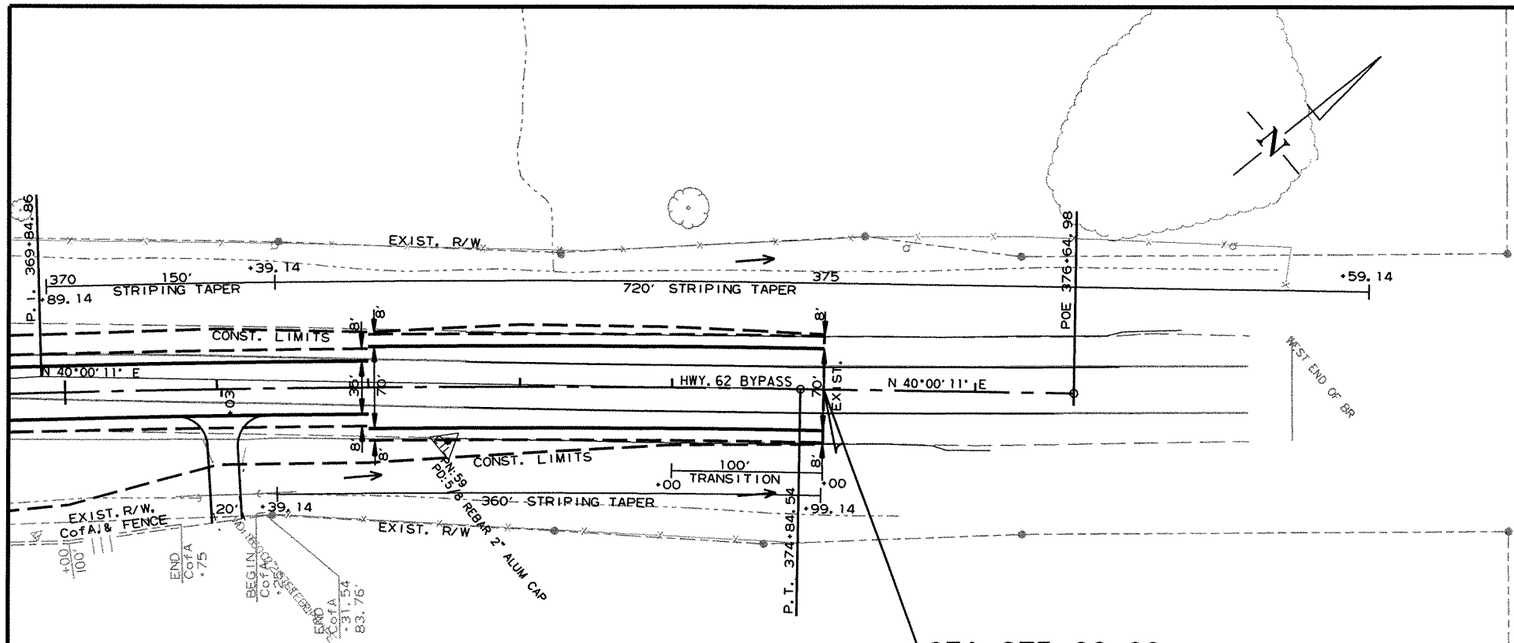
355+00 356+00 357+00 358+00 359+00 360+00 361+00 362+00 363+00 364+00 365+00 366+00 367+00 368+00 369+00 370+00

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				6	ARK.			
				JOB NO.		040521	114	239

(2) PLAN AND PROFILE SHEETS

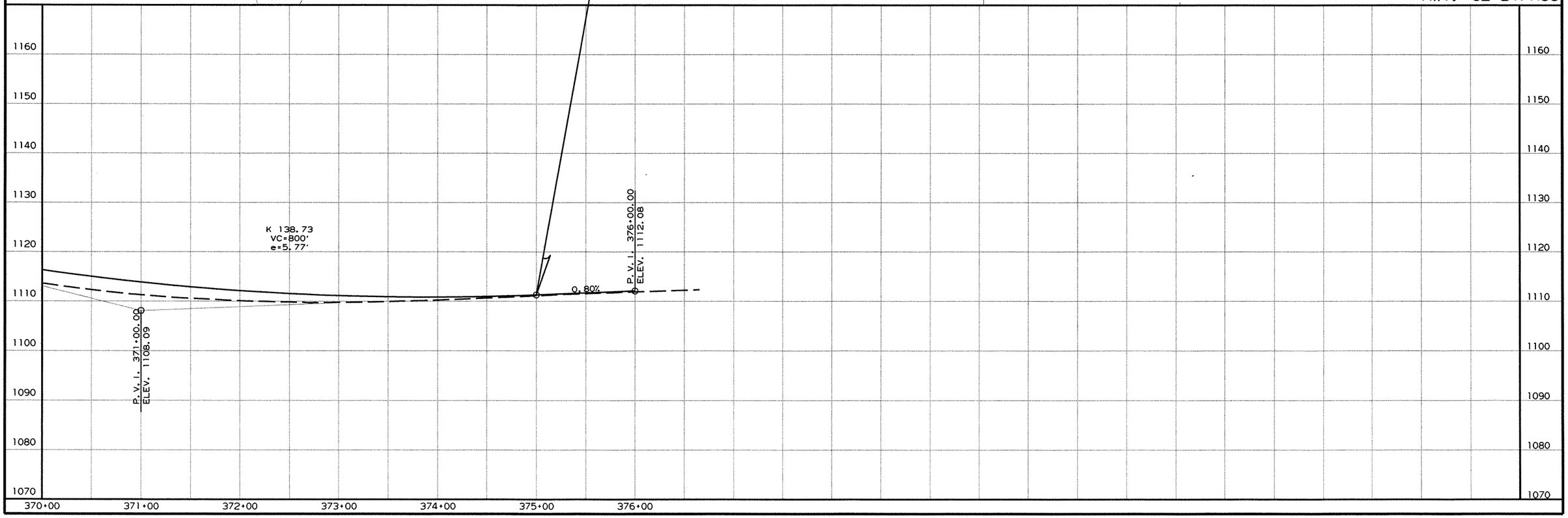
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-29-12



HWY. 62 BYPASS
PI = 369+84.86
Δ = 05°00'00"RT.
D = 00°30'00"
T = 500.32'
L = 1000.0'
PC = 364+84.54
PT = 374+84.54
NO SUPER

STA. 371+03 IN PLACE
18" X 41' CM PIPE CULVERT
RT. SIDE DRAIN
RETAIN
CONST APPR = 65 CU. YD.

HWY. 62 BYPASS



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				6	ARK.			
				JOB NO.		040521	115	239

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

EXIST. R/W
OBLITERATION OF EXIST. PAVEMENT
EXIST. R/W
ALUM. CAP 5/8" REBAR
EXIST. R/W. CofA. & FENCE
S 87°45'15" E
130
WEST CONNECTOR RAMP
PI = 131+49.27
Δ = 63°11'54" LT.
D = 13°15'00"
T = 266.02'
L = 476.97'
PC = 128+83.25
PT = 133+60.22
MATCH EXIST.
WESTERN CONNECTOR RAMP
N 71°20'48" E
N 8°08'53" E
N 5°59'01" W
WESTERN CONNECTOR
HWY. 62 BYPASS
PI = 128+08.00
Δ = 51°37'09" RT.
D = 04°00'00"
T = 692.74'
L = 1290.47'
PC = 121+15.26
PT = 134+05.73
e = 0.093'/'
Ls = 630'
HWY. 62 BYPASS
STA. 103+14.11 4.50' LT. OF HWY. 62 WEST CONNECTOR =
STA. 133+60.22 RAMP
Δ = 0°00'00"
TEMP. CONST. LIMITS
STA. 106+94 CONSTRUCT
24" x 82' R.C. PIPE CULVERT
ON A 15° LT. FWD. SKEW
(CLASS IV) (TYPE 3 BEDDING) WITH
FES LT. & RT.
Q50 = 12.9 CFS D.A. = 2.9 ACRES
STA. 107+04 IN PLACE
18" X 48' R.C. PIPE CULVERT
WITH HDWLS. LT. & RT.
REMOVE
REMOVAL & DISPOSAL OF FENCE

STA.	LOCATION	LIN. FT.
103+28	WESTERN CONNECTOR	187

FENCING

STA.	STA.	LOCATION	TYPE	LIN. FT.
103+17	104+00	WESTERN CONNECTOR LT.	A	116

CONST. LIMITS
EXIST. R/W
P.T. 105+48.13
P.C. 102+55.22
N 64°18'55" E
200' TAPER
POE 110+00.00
100' TRANSITION
STA. 132+00.00 HWY. 62 =
STA. 100+00.00 HWY. 62 WEST CONNECTOR
Δ = 90°00'00"
STA. 100+61 IN PLACE
18" X 84' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
FES LT. & RT.
Q50 = 3 CFS D.A. = 0.5 ACRE
RETAIN
WEST CONNECTOR
PI = 104+23.31
Δ = 70°17'56" RT.
D = 24°00'00"
T = 168.09'
L = 292.91'
PC = 102+55.22
PT = 105+48.13
e = 0.020'/'
Ls = 200'
STA. 106+52 IN PLACE
18" X 25' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
18" X 36' PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 70 CU YDS
STA. 107+16
CONST. APPR. ON RT. = 75 CU YDS
R/C
PARKING
LIFE VISION WORSHIP CENTER
PAVED
PAVED PARKING
LINE LIQUOR
ALUM. CAP 5/8" REBAR
EXIST. HWY. 62 WESTERN CONNECTOR

STA. 101+05.22 BEGIN SUPERELEVATION (N.C.)
STA. 103+05.22 MAX. SUPERELEVATION (0.020'/')
STA. 104+98.13 MAX. SUPERELEVATION (0.020'/')
STA. 107+35.63 END SUPERELEVATION (N.C.)

P.V.I. 100+29.50
ELEV. 1181.95
P.V.I. 101+98.43
ELEV. 1189.72
-4.50%
K 30.12
VC=300'
e=3.73'
F.L. INLET 1179.00
F.L. OUTLET 1178.51
-5.36%
RT. DITCH GRADE -2.50%
102+50.00 RT.
1175.16
105+00.00 RT.
1168.91
K 59.47
VC=200'
e=0.84'
P.V.I. 106+00.00
ELEV. 1168.20
F.L. INLET RT. 1162.39
F.L. OUTLET LT. 1161.83
-2.00%
P.V.I. 110+00.00
ELEV. 1160.22

1200 1190 1180 1170 1160 1150 1140 1130 1120 1110
100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00

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				6	ARK.			
				JOB NO.		040521	116	239

(2) PLAN AND PROFILE SHEETS

FENCING

STA.	STA.	LOCATION	TYPE	LIN. FT.	16' GATES EACH	WATER GATE EACH
99+00	103+30	LT.	D-1	433	1	
105+32	109+50	LT.	D-1	420		
105+37	109+50	RT.	D-1	416		

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
99+00	130+25	LT.	435
103+25		LT.	46
105+25		LT.	39
105+25	109+50	LT.	425
105+35		RT.	60
105+35	109+50	RT.	415

STA. 100+90 IN PLACE
4' X 4' X 30' R.C. BOX CULVERT
WITH WINGS LT. & RT.
RETAIN

STA. 102+00 INSTALL
18" X 32' PIPE CULVERT
LT. SIDE DRAIN
CONST APPR = 55 CU YDS

STA. 100+50 IN PLACE
18" X 38' PIPE CULVERT
RT. SIDE DRAIN
RETAIN & PAVE

STA. 216+83.36 HWY. 62 =
STA. 104+26.49 MOCK ST.
Δ = 88°02'45"

MOCK ST.
PI = 110+23.89
Δ = 01°08'01"LT.
D = 00°30'00"
T = 113.36'
L = 226.70'
PC = 109+10.54
PT = 111+37.24
NO SUPER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-14-12

MOCK ST. N 2°32'14" E

MOCK ST. N 1°24'14" E

CONST. LIMITS

TEMP. CONST. LIMITS

EXIST. R/W. Cof A. & FENCE

HWY. 62 BYPASS

100' LT. TURN LANE

175' LT. TURN LANE

125' TAPER

100' TRANSITION

P.C.E.

P.I. 110+23.89

P.C. 109+10.54

P.T. 111+37.24

1/2" REBAR AND 2" ALUM CAP

1/2" REBAR AND 2" ALUM CAP 5/8" REBAR

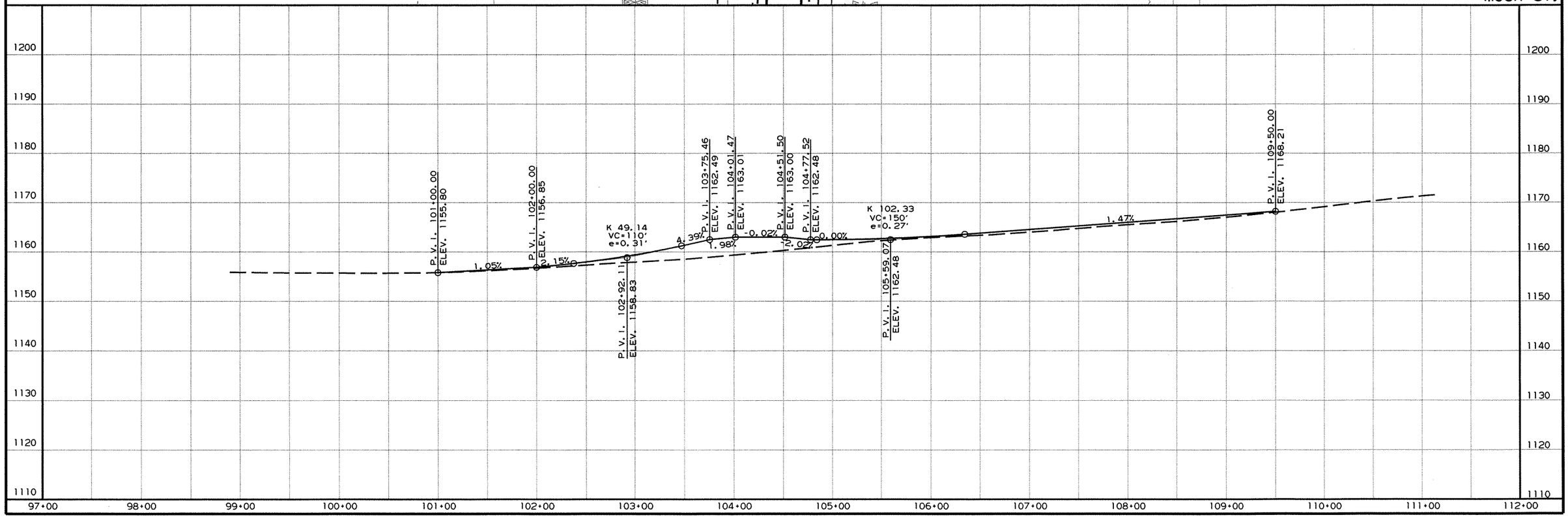
12" METAL PANEL

CUT NORTH END HDWL.

EDGE OF GRAVEL

EDGE OF GRAVEL BRINK

GATE



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				6	ARK.			
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(2) PLAN AND PLOT SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-14-12

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
102+00	109+50	RT.	750
109+00	112+60	LT.	360
109+50		RT.	82

FENCING

STA.	STA.	LOCATION	TYPE	LIN. FT.	16' GATES EACH
102+00	109+51	RT.	D-1	829	2
109+00	112+55	LT.	D-2	364	2

STA. 111+12 IN PLACE
24' X 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE & INSTALL
24' X 32' PIPE CULVERT
LT. SIDE DRAIN
CONST. APPR. = 45 CU. YDS.

HWY. 62 BYPASS
PI = 292+74.16
Δ = 80°43'39"LT.
D = 02°30'00"
T = 1948.0'
L = 3229.1'
PC = 273+26.16
PT = 305+55.26
e = 0.067'/'
Ls = 350' BEGINNING
Ls = 540' END

STA. 300+51.16 HWY. 62 =
STA. 113+67.35 BUTLER RD.
Δ = 76°09'31"

BUTLER RD. DETOUR
PI = 111+92.09
Δ = 05°52'29"LT.
D = 03°00'00"
T = 98.00'
L = 195.82'
PC = 110+94.09
PT = 112+89.91
e = 0.025'/'
Ls = 200'

BUTLER RD. DETOUR
PI = 106+00.00
Δ = 09°58'25"RT.
D = 06°00'00"
T = 83.32'
L = 166.23'
PC = 105+16.68
PT = 106+82.90
NO SUPER

STA. 109+58 IN PLACE
24' X 20' C.M. PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL
28' X 20' X 28' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 20 CU. YDS.

BUTLER RD. DETOUR
STA. 113+44 INSTALL
18" X 48' TEMPORARY PIPE CULVERT
ON A 15° RT. FWD. SKEW
IN THE DITCH OF THE HWY. 62 BYPASS

BUTLER RD. DETOUR
STA. 109+44.09 BEGIN SUPERELEVATION (N.C.)
STA. 111+44.09 MAX. SUPERELEVATION (0.025'/')
STA. 112+39.91 MAX. SUPERELEVATION (0.025'/')
STA. 114+39.91 END SUPERELEVATION (N.C.)

BUTLER DETOUR
STA. 114+50.62 BEGIN SUPERELEVATION (N.C.)
STA. 116+50.62 MAX. SUPERELEVATION (0.058'/')
STA. 118+93.77 MAX. SUPERELEVATION (0.058'/')
STA. 120+93.77 END SUPERELEVATION (N.C.)

P.V.I. 109+00.00 ELEV. 1146.06
-0.72%
K 58.02 VC=190' e=0.78'
P.V.I. 112+36.44 ELEV. 1143.63
112+50.00 RT. 1139.80
112+50.00 LT. 1139.75
RT. DT. GR. -0.02%
LT. DT. GR. -0.50%
113+00.00 RT. 1139.79
113+00.00 LT. 1139.50
P.V.I. 113+34.90 ELEV. 1146.14
6.36%
2.55%
P.V.I. 113+99.78 ELEV. 1150.27
3.00%
K 50.00 VC=400' e=-4.00'
114+21.00 LT. 1138.33
114+75.00 RT. 1138.48
RT. DT. GR. -0.79%
LT. DT. GR. -0.75%

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				6	ARK.			
				JOB NO.		040521	118	239

(2) PLAN AND PROFILE SHEETS

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
115+73	121+31	LT.	558

FENCING

STA.	STA.	LOCATION	TYPE	LIN. FT.
114+64	123+00	LT.	D-2	849

BUTLER RD. DETOUR
PI = 117+75.56
Δ = 27°27'07"LT.
D = 08°00'00"
T = 174.93'
L = 343.15'
PC = 116+00.62
PT = 119+43.77
e = 0.058'/'
Ls = 200'

BUTLER RD. DETOUR
PI = 121+32.96
Δ = 23°21'11"RT.
D = 07°00'00"
T = 169.16'
L = 333.61'
PC = 119+63.81
PT = 122+97.42
NO SUPER

BUTLER RD. DETOUR
STA. 120+71 INSTALL
18" X 136" TEMPORARY PIPE CULVERT
IN THE DITCH OF BUTLER ROAD

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

BUTLER RD.

BUTLER DETOUR
STA. 114+50.62 BEGIN SUPERELEVATION (N.C.)
STA. 116+50.62 MAX. SUPERELEVATION (0.058'/')
STA. 118+93.77 MAX. SUPERELEVATION (0.058'/')
STA. 120+93.77 END SUPERELEVATION (N.C.)

P.V.I. 116+18.51
ELEV. 1156.83

K 50.00
VC=400'
e=-4.00'

-5.90%

K 79.08
VC=350'
e=1.94'

-0.57%

RT. DITCH GRADE -0.79%
LT. DITCH GRADE -0.75%

P.V.I. 119+99.28
ELEV. 1137.79

120+50.00 LT.
1133.61

120+75.00 RT.
1133.76

P.V.I. 123+00.00
ELEV. 1136.06

1190 1180 1170 1160 1150 1140 1130 1120 1110 1100

115+00 116+00 117+00 118+00 119+00 120+00 121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00

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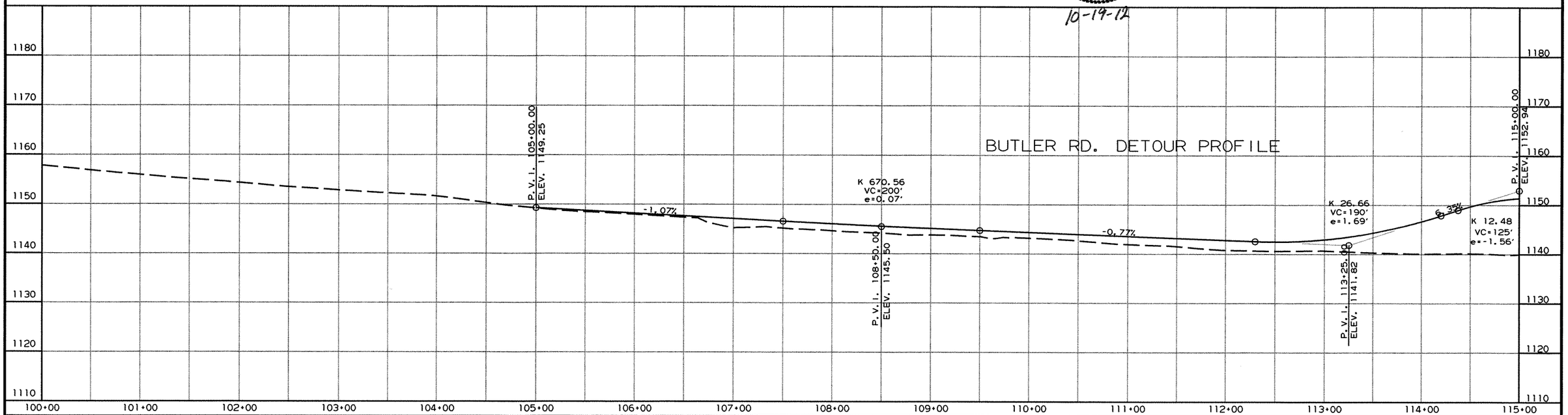
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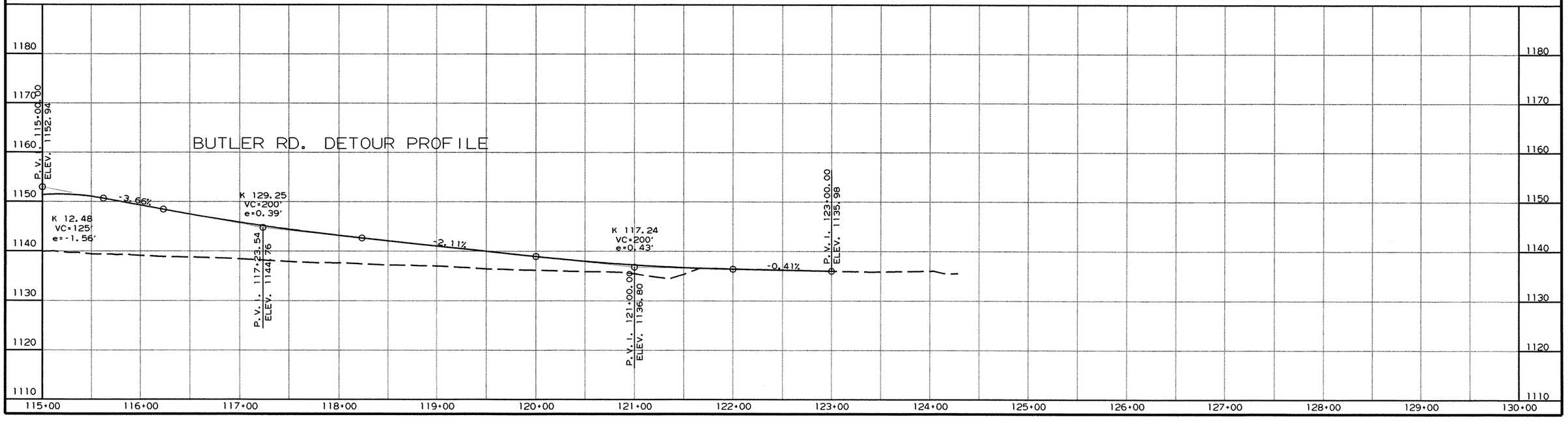
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	119	239

(2) PLAN AND PROFILE SHEETS

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

10-19-12





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				6	ARK.			
				JOB NO.		040521	120	239

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

STA. 107+50 CONSTRUCT
YARD DRAIN ON LT. H=2'-1"
WITH 12" X 52'
LT. SIDE DRAIN
TO YARD DRAIN @ 108+05 ON LT.

STA. 107+87 IN PLACE
24" X 20' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE
CONST. APPR. = 10 CU. YD.

STA. 108+05 CONSTRUCT
YARD DRAIN ON LT. H=2'-1"
WITH 12" X 142'
LT. SIDE DRAIN
TO DROP INLET @ 109+50 ON LT.

STA. 108+32 IN PLACE
24" X 48' C.M. PIPE CULVERT
LT. SIDE DRAIN
REMOVE
CONST. APPR. = 20 CU. YD.

STA. 108+78 IN PLACE
DROP INLET ON LT.
REMOVE

STA. 108+78 IN PLACE
18" X 35' R.C. PIPE CULVERT
WITH FES ON RT.
REMOVE

STA. 109+50 CONSTRUCT
DROP INLET ON LT. H=3'-0"
WITH 18" X 12'
R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING)
WITH FES
TYPE MO DROP INLET = 4' DIA.
TYPE C DROP INLET = 4' X 4'

STA. 109+69 PARK =
STA. 324+71 IN PLACE 70' LT.
DBL. 29" X 18" X 92' R.C. ARCH
PIPE CULV'T (CL. III)
F.E.S. ON LT. & RT.
Q50 = 38cfs, D.A. =10Ac.
RETAIN

STA. 108+33 INSTALL
18" X 40' PIPE CULVERT
RT. SIDE DRAIN
CONSTRUCT APPROACH = 225 CU. YDS.

STA. 109+05 IN PLACE
18" X 49' CM PIPE CULVERT
RT. SIDE DRAIN
REMOVE

STA. 113+03
CONST APPR ON LT. = 10 CU YDS

STA. 324+70.59 HWY. 62
STA. 110+39.16 PARK ST.
Δ = 82°44'55"

STA. 112+58 IN PLACE
24" x 58' C.M. PIPE CULV'T.
ABANDONED

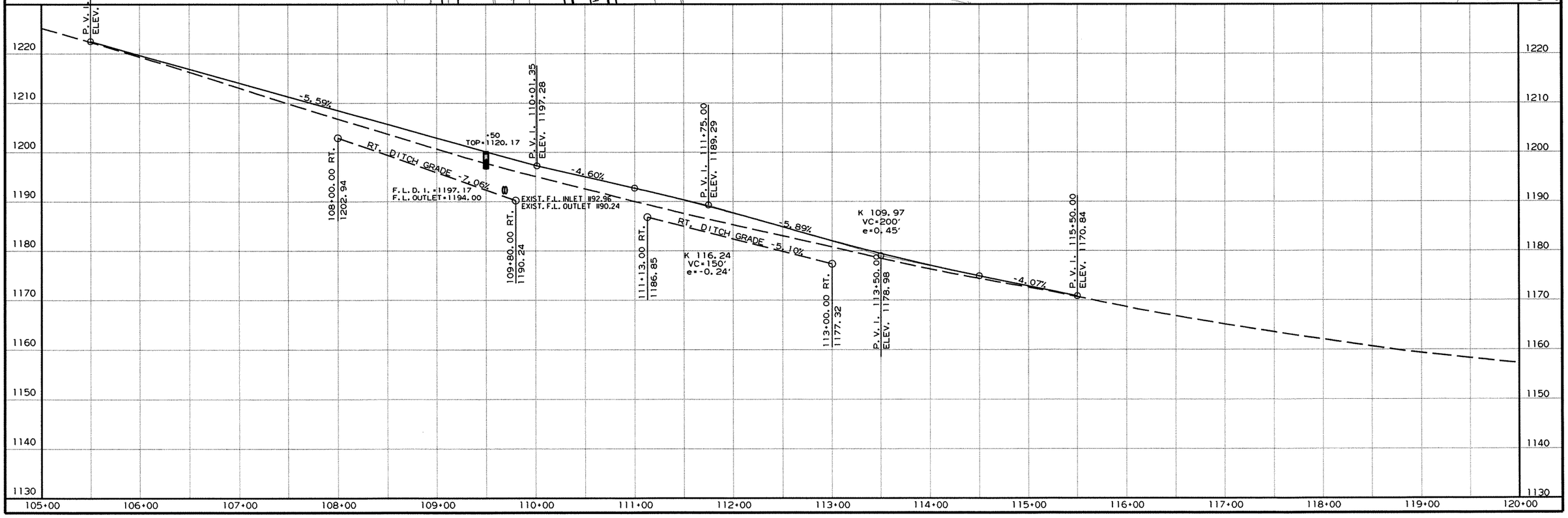
HWY. 62 BYPASS
PI = 321+67.66
Δ = 26°10'09"RT.
D = 01°30'00"
T = 891.31'
L = 1751.27'
PC = 312+76.36
PT = 330+27.63
e = 0.043'/'
Ls = 540'

REMOVAL & DISPOSAL OF FENCE

STA.	STA.	LOCATION	LIN. FT.
105+50	109+40	RT.	390
109+40		RT.	228
111+30		RT.	48
111+30	114+40	RT.	310
114+40		RT.	42

STA.	STA.	LOCATION	TYPE	LIN. FT.	16' GATES EACH
105+50	109+51	RT.	D-2	425	2
111+39	114+39	RT.	D-2	299	

PARK ST.



10/16/2012

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	121	239

2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-19-12

EAST CONNECTOR
PI = 335+70.13
Δ = 24°25'21"LT.
D = 04°00'00"
T = 309.99'
L = 610.56'
PC = 332+60.14
PT = 338+70.70

STA. 343+43 CONSTRUCT
44" X 27" X 128' R.C. ARCH PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING) WITH
FES LT. & RT.
Q50= 51 CFS D.A. = 11 ACRES

STA. 343+45 IN PLACE
24" X 59' R.C. PIPE CULVERT
REMOVE

STA. 343+99
CONST. APPR. ON LT. = 295 CU. YDS.

OBLITERATION OF EXIST. PAVEMENT

STA. 345+75 IN PLACE
36" X 114' R.C. PIPE CULVERT
WITH FES LT. & RT.
REMOVAL FES LT. & RT. AND EXTEND R.C. PIPE
12' LT. AND 18' RT.
TO A COMPLETED LENGTH OF 144'
(CLASS III) (TYPE 3 BEDDING) WITH
FES LT. & RT.
Q50= 51 CFS D.A. = 13 ACRES
36" R.C. PIPE = 38 LIN.FT.
36" FES = 2 EACH

STA. 351+72.13 HWY. 62 =
STA. 346+54.37 HWY. 62 EASTERN CONNECTOR
Δ = 80°00'07"

HWY. 62 BYPASS
PI = 351+90.74
Δ = 32°37'59"RT.
D = 02°00'00"
T = 838.62'
L = 1631.65'
PC = 343+52.12
PT = 359+83.77
e = 0.055'/'
Ls = 540'

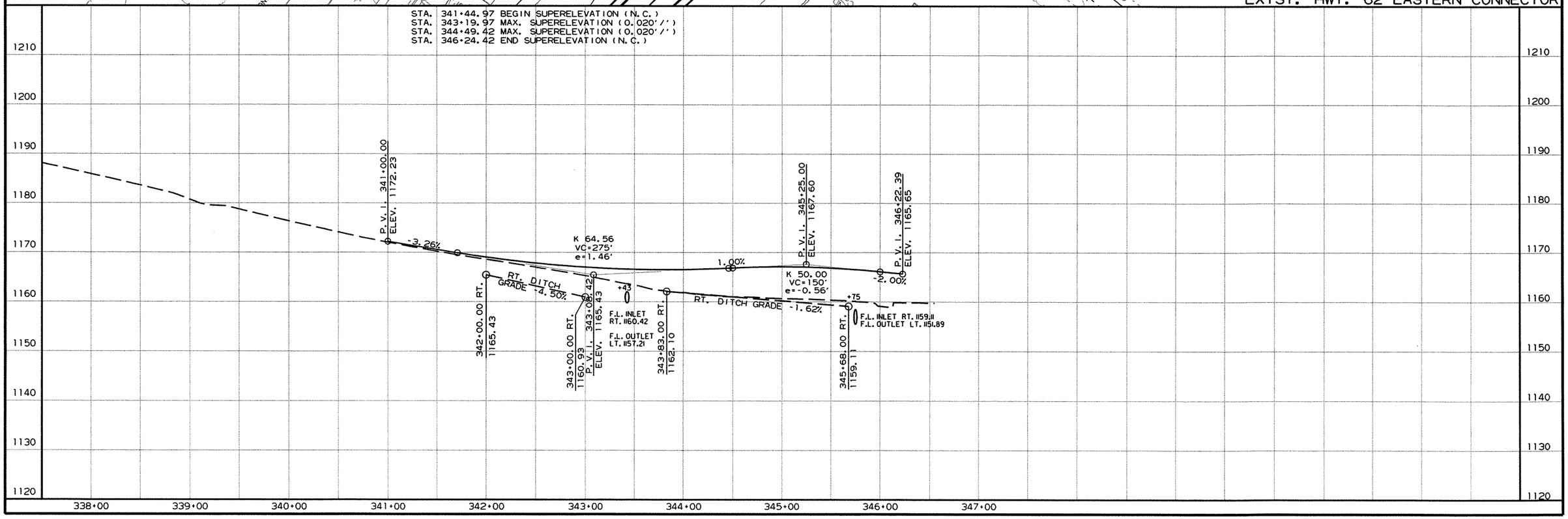
EAST CONNECTOR
PI = 344+13.88
Δ = 59°56'14"RT.
D = 24°00'00"
T = 137.66'
L = 249.74'
PC = 342+76.22
PT = 345+25.96
e = 0.020'/'
Ls = 175'

STA. 342+97 IN PLACE
21" X 15" X 48" ARCH PIPE CULVERT
RT. SIDE DRAIN
RETAIN

STA. 343+41
CONST. APPR. ON RT. = 75 CU. YDS.

EXIST. HWY. 62 EASTERN CONNECTOR

STA. 341+44.97 BEGIN SUPERELEVATION (N.C.)
STA. 343+19.97 MAX. SUPERELEVATION (0.020'/')
STA. 344+49.42 MAX. SUPERELEVATION (0.020'/')
STA. 346+24.42 END SUPERELEVATION (N.C.)



10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	122	239

(2) SUMMARY OF TRAFFIC SIGNAL QUANTITIES & NOTES

TRAFFIC SIGNAL NOTES

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2002) NATIONAL ELECTRICAL CODE, NFPA 101 (2000) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.

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

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

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

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

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

7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH AASHTO, THE ARKANSAS HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.

8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE DETAILS MAY BE USED.

9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.

10. 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.

11. ALL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE 3" DIAMETER UNLESS SPECIFIED ON PLANS.

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

13. 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.

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

15. 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.

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

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

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

19. 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.

20. 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.

21. 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.

22. CONTRACTOR SHALL PROVIDE CONTROLLER AND LOCAL RADIO TO THE DEPARTMENT'S TRAFFIC ENGINEERING STAFF AT THE MAINTENANCE DIVISION, FOR SETUP AND TIMING BEFORE IT IS PLACED INTO OPERATION.

SUMMARY OF TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	QUANTITY				UNIT
		HWY. 62 BYPASS & MOCK ST.	HWY. 62 BYPASS & PARK ST.	HWY. 62 BYPASS & EASTERN CONNECTOR	TOTAL	
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	1	1	3	EACH
SP & 701	ON-STREET MASTER CONTROLLER	-	-	1	1	EACH
704	FEEDER WIRE	2369	2388	2291	7048	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	10	10	30	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	4	2	8	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	801	748	776	2325	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	187	341	181	709	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	-	-	252	252	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	627	719	342	1688	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	39	39	39	117	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1072	1055	1028	3155	LIN. FT.
710	NON-METALLIC CONDUIT (2")	18	17	17	52	LIN. FT.
710	NON-METALLIC CONDUIT (3")	448	511	468	1427	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	6	5	6	17	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	5	6	6	17	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	-	-	1	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	-	1	-	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	-	-	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	-	1	1	2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	2	1	4	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	-	1	2	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	-	-	1	EACH
733	VIDEO CABLE	957	1026	922	2905	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	5**	4	4	13	EACH
733	VIDEO MONITOR (CLR)	1	1	1	3	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	1	1	3	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4**	3	2	9	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	1	1	1	3	EACH
SP	18" STREET NAME SIGN	4	4	4	12	EACH
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)	-	1	-	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	577	610	613	1800	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	304	304	304	912	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	43	43	43	129	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	917	1009	884	2810	LIN. FT.
SP	EMERGENCY BACKUP LOCAL RADIO UNIT	-	-	1	1	EACH
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	1	-	2	EACH
SP	LOOP WIRING CLASS III (2)	527	525	527	1579	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	4	4	12	EACH
SP	MASTER RADIO (E-NET 5.8) WITH ANTENNA	-	-	1	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	1	1	3	EACH
SP	SYSTEM SOFTWARE UPGRADE	-	-	1	1	EACH

** ONE SPARE VIDEO PROCESSOR AND VIDEO DETECTOR PROVIDED TO CITY.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14511
PAUL ROBBINS
10-16-12

LOCATION: HWY. 62 BYPASS SIGNALS
CITY: PRAIRIE GROVE
COUNTY: WASHINGTON
DISTRICT: 4
DRAWN BY: F&H

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PHASING DIAGRAM

LEGEND

- TYPE I PULL BOX
- TYPE I HD PULL BOX
- TYPE 2 PULL BOX
- TYPE 2 HD PULL BOX
- CONTROL CABINET
- SIGNAL HEAD
- N.M.C.-NON-METALLIC CONDUIT
- VIDEO DETECTOR

LED SIGNAL FACES

12" LENSES

*1&6

*2,3,4,5,7,8,9,10,11&12

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	123	239

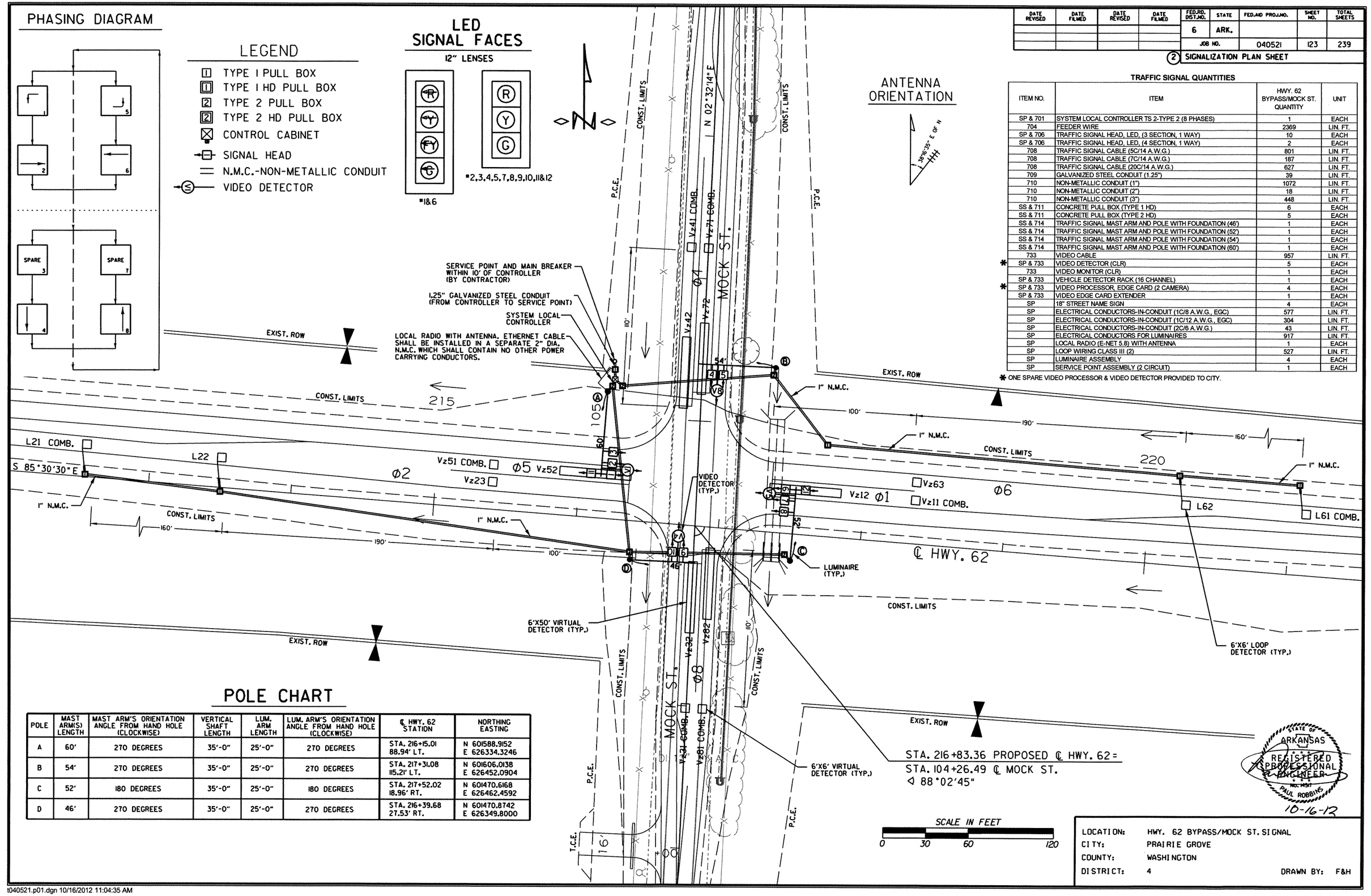
(2) SIGNALIZATION PLAN SHEET

TRAFFIC SIGNAL QUANTITIES

	ITEM NO.	ITEM	HWY. 62 BYPASS/MOCK ST. QUANTITY	UNIT
	SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
	704	FEEDER WIRE	2369	LIN. FT.
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
	SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
	708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	801	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	187	LIN. FT.
	708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	627	LIN. FT.
	709	GALVANIZED STEEL CONDUIT (1.25")	39	LIN. FT.
	710	NON-METALLIC CONDUIT (1")	1072	LIN. FT.
	710	NON-METALLIC CONDUIT (2")	18	LIN. FT.
	710	NON-METALLIC CONDUIT (3")	448	LIN. FT.
	SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	6	EACH
	SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	5	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
	SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (60')	1	EACH
	733	VIDEO CABLE	957	LIN. FT.
*	SP & 733	VIDEO DETECTOR (CLR)	5	EACH
	733	VIDEO MONITOR (CLR)	1	EACH
	SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
*	SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	4	EACH
	SP & 733	VIDEO EDGE CARD EXTENDER	1	EACH
	SP	18" STREET NAME SIGN	4	EACH
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	577	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	304	LIN. FT.
	SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	43	LIN. FT.
	SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	917	LIN. FT.
	SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
	SP	LOOP WIRING CLASS III (2)	527	LIN. FT.
	SP	LUMINAIRE ASSEMBLY	4	EACH
	SP	SERVICE POINT ASSEMBLY (2 CIRCUIT)	1	EACH

* ONE SPARE VIDEO PROCESSOR & VIDEO DETECTOR PROVIDED TO CITY.

ANTENNA ORIENTATION



POLE CHART

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)	℄ HWY. 62 STATION	NORTHING EASTING
A	60'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 216+15.01 88.94' LT.	N 601588.9152 E 626334.3246
B	54'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 217+31.08 115.21' LT.	N 601606.0138 E 626452.0904
C	52'	180 DEGREES	35'-0"	25'-0"	180 DEGREES	STA. 217+52.02 18.96' RT.	N 601470.6168 E 626462.4592
D	46'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 216+39.68 27.53' RT.	N 601470.8742 E 626349.8000

STA. 216+83.36 PROPOSED ℄ HWY. 62 =
STA. 104+26.49 ℄ MOCK ST.
◁ 88°02'45"

SCALE IN FEET
0 30 60 120

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 14511
PAUL ROBBINS
10-16-12

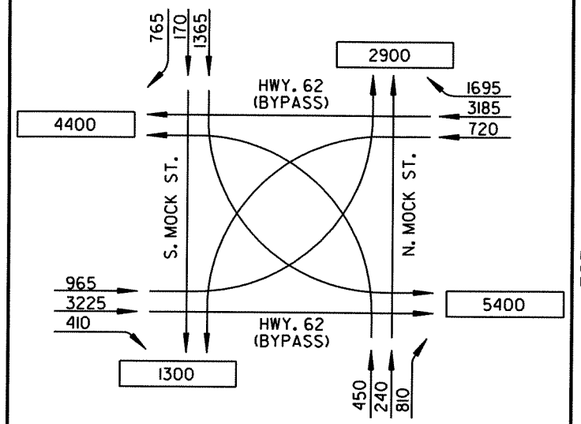
LOCATION:	HWY. 62 BYPASS/MOCK ST. SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4
DRAWN BY:	F&H

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		040521	124	239

(2) SIGNALIZATION PLAN SHEET

TRAFFIC FLOW DIAGRAM



(2010) AVERAGE DAILY TRAFFIC VOLUMES

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH NORTH & SOUTH APPROACH (MOCK ST.)
60 MPH WEST & EAST APPROACH (HWY. 62)
NO RAILROAD TRACKS WITHIN 500 FT. OF THE INTERSECTION
NO BUS STOPS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING DETAILS. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE:
20 FT MIN CLEAR ZONE (MOCK ST.)
30 FT MIN CLEAR ZONE (HWY. 62)

SERVICE POINT AND MAIN BREAKER WITHIN 10' OF CONTROLLER (BY CONTRACTOR)

1.25" GALVANIZED STEEL CONDUIT (FROM CONTROLLER TO SERVICE POINT)

SYSTEM LOCAL CONTROLLER

2-3" N.M.C.

LOCAL RADIO WITH ANTENNA, ETHERNET CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. N.M.C. WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS.

LUMINAIRE (TYP.)

VIDEO DETECTOR (TYP.)

1" N.M.C.

6'X6' VIRTUAL DETECTOR (TYP.)

6'X50' VIRTUAL DETECTOR (TYP.)

STA. 216+83.36 PROPOSED ℄ HWY. 62 =
STA. 104+26.49 ℄ MOCK ST.
◁ 88°02'45"



SCALE IN FEET
0 15 30 60

LOCATION:	HWY. 62 BYPASS/MOCK ST. SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4

DRAWN BY: F&H

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				JOB NO.		040521	125	239

(2) SIGNALIZATION PLAN SHEET

DETECTOR CHART

DETECTOR I.D. NUMBER	DIRECTION & LOCATION	TYPE	DET. NUM.	HARDWARE INPUTS: CAB. TER. NUM.	HARDWARE INPUTS: AMP. CHN. NUM.	HARDWARE INPUTS: CON. INP. NUM.	PROGRAM ASSIGNMENTS: LOCAL PHS.	PROGRAM ASSIGNMENTS: LOCAL SYS. DET.	PROGRAM ASSIGNMENTS: MSTR. SYS. DET.	COMMENT	TUBE LENGTH
Vzll	WB LT ADV	COMB.		-	1	V9	1	1	-	VIDEO 1	23'
Vzl2	WB LT PRES	LOCAL		-	2	V1	1		-	VIDEO 1	23'
L2l	EB ADV	COMB.		-		V10	2	2	-	LOOP	-
L22	EB ADV	LOCAL		-		V2	2		-	LOOP	-
Vz23	EB NEAR	LOCAL		-	5	P1	2		-	VIDEO 5	23'
Vz3l	NB LT ADV	COMB.		-	13	V11	8	3	-	VIDEO 8	23'
Vz32	NB LT PRES	LOCAL		-	14	V3	8		-	VIDEO 8	23'
Vz4l	SB ADV	COMB.		-	9	V12	4	4	-	VIDEO 4	23'
Vz42	SB PRES	LOCAL		-	10	V4	4		-	VIDEO 4	23'
Vz5l	EB LT ADV	COMB.		-	3	V13	5	5	-	VIDEO 5	23'
Vz52	EB LT PRES	LOCAL		-	4	V5	5		-	VIDEO 5	23'
L6l	WB ADV	COMB.		-		V14	6	6	-	LOOP	-
L62	WB ADV	LOCAL		-		V6	6		-	LOOP	-
Vz63	WB NEAR	LOCAL		-	6	P3	6		-	VIDEO 1	23'
Vz7l	SB LT ADV	COMB.		-	11	V15	4	7	-	VIDEO 4	23'
Vz72	SB LT PRES	LOCAL		-	12	V7	4		-	VIDEO 4	23'
Vz8l	NB ADV	COMB.		-	15	V16	8	8	-	VIDEO 8	23'
Vz82	NB PRES	LOCAL		-	16	V8	8		-	VIDEO 8	23'

CONTROLLER INPUT ABBREVIATIONS:
V1 - V8 = VEHICLE INPUT
V9 - V16 = SYSTEM OR AUXILIARY INPUT
P1 - P8 = PEDESTRIAN INPUT

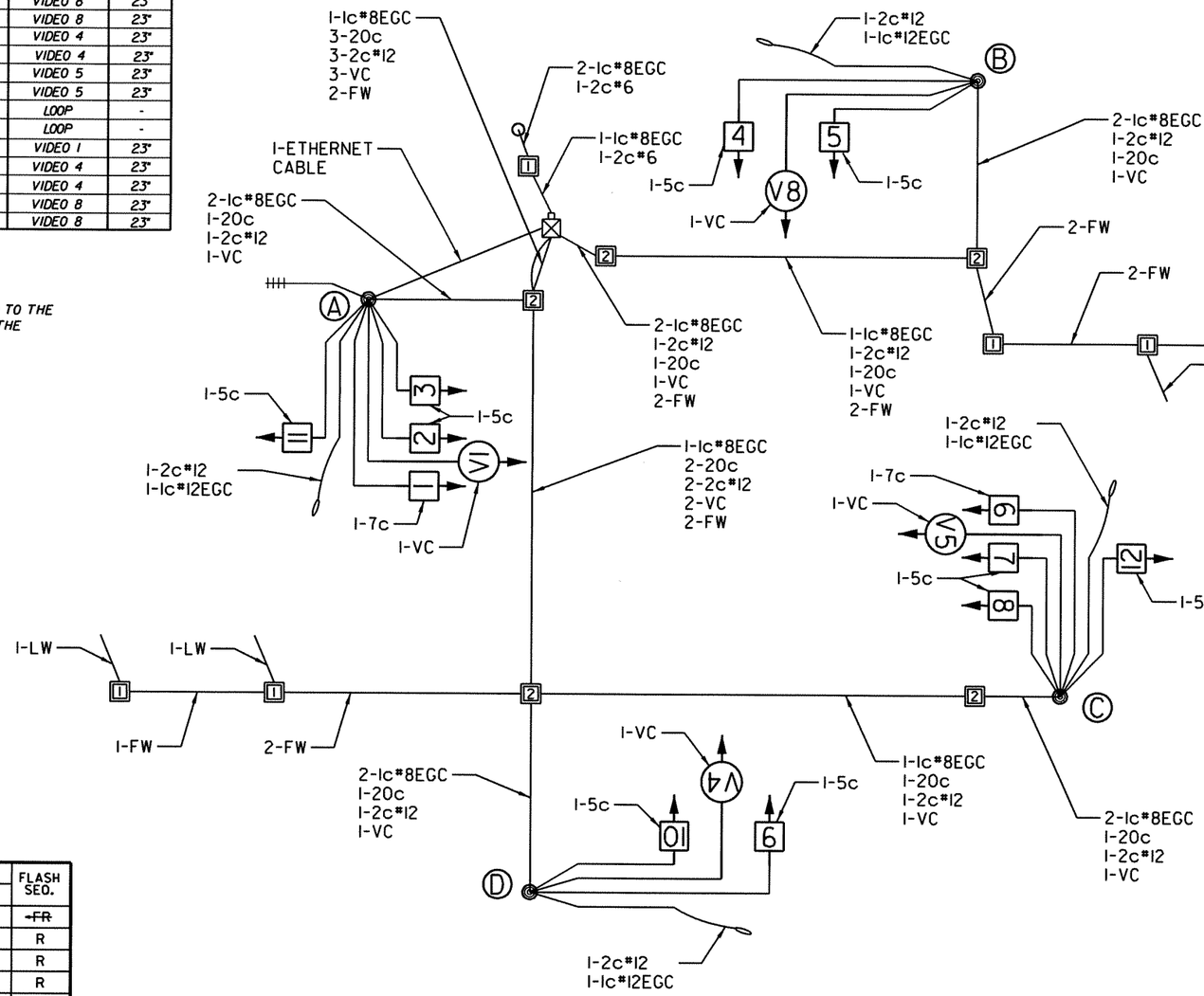
AMP.CHN.NUM.NOT USED: 7,8

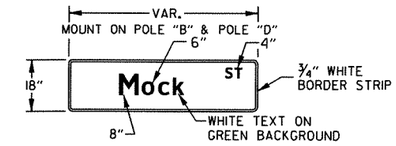
NOTE: "AMP.CHN." REFERS TO THE DETECTOR RACK OUTPUT POSITION AND IS WIRED TO THE CONTROLLER INPUT DETECTOR NUMBER THAT IS PROGRAMMED TO ACTIVATE THE DESIGNATED PHASE.

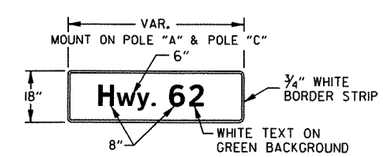
NOTES:

1. A SEPARATE 5c/#14 AWG SHALL BE PROVIDED FROM EACH 3 SECTION HEAD TO THE BASE OF POLE.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

WIRING DIAGRAM







NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

INTERVAL CHART

SIGNAL FACES	INTERVALS: 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.		FLASH SEQ.
1	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~R~~	~~R~~		~~FR~~
2	R	R	G	**	R	R	G	**	R	R		R
3	R	R	G	**	R	R	G	**	R	R		R
4	R	R	R	R	R	R	R	R	G	Y		R
5	R	R	R	R	R	R	R	R	G	Y		R
6	~~G~~	*	~~FY~~	***	~~G~~	*	~~FY~~	***	~~R~~	~~R~~		~~FR~~
7	R	R	R	R	G	**	G	**	R	R		R
8	R	R	R	R	G	**	G	**	R	R		R
9	R	R	R	R	R	R	R	R	G	Y		R
10	R	R	R	R	R	R	R	R	G	Y		R
11	R	R	R	R	G	**	G	**	R	R		R
12	R	R	G	**	R	R	G	**	R	R		R

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

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14517
PAUL ROBBINS
10-16-12

LOCATION:	HWY. 62 BYPASS/MOCK ST. SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4
DRAWN BY:	F&H

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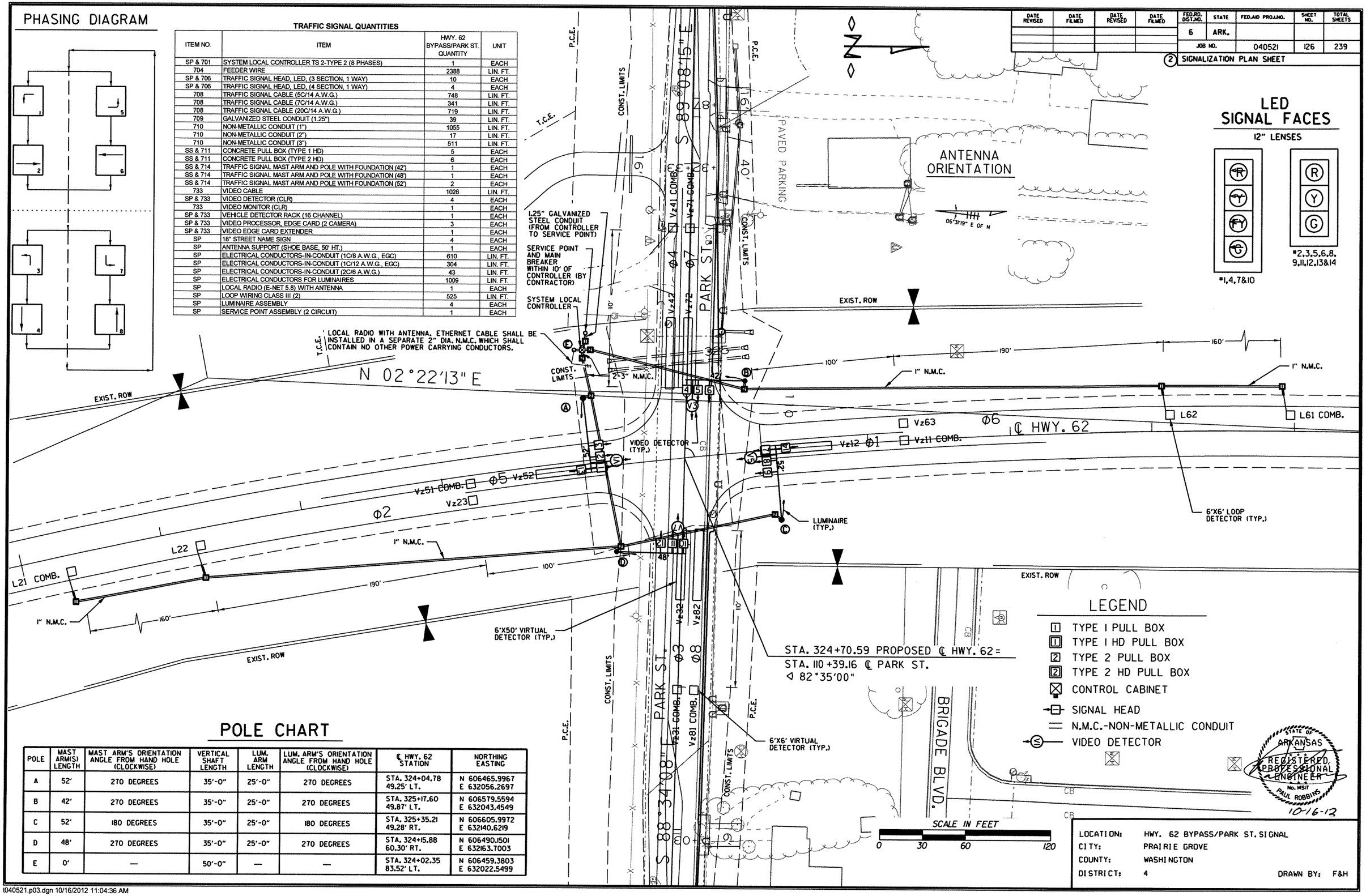
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	126	239

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	HWY. 62 BYPASS/PARK ST. QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
704	FEEDER WIRE	2388	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	4	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	748	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	341	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	719	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	39	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1055	LIN. FT.
710	NON-METALLIC CONDUIT (2")	17	LIN. FT.
710	NON-METALLIC CONDUIT (3")	511	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	5	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (42')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	2	EACH
733	VIDEO CABLE	1026	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	4	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	3	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	1	EACH
SP	18" STREET NAME SIGN	4	EACH
SP	ANTENNA SUPPORT (SHOE BASE, 50' HT.)	1	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	610	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	304	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	43	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	1009	LIN. FT.
SP	LOCAL RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP	LOOP WIRING CLASS III (2)	525	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUIT)	1	EACH



LED SIGNAL FACES

12" LENSES

*1,4,7&10

*2,3,5,6,8, 9,11,12,13&14

LEGEND

- TYPE I PULL BOX
- TYPE I HD PULL BOX
- TYPE 2 PULL BOX
- TYPE 2 HD PULL BOX
- CONTROL CABINET
- SIGNAL HEAD
- N.M.C.-NON-METALLIC CONDUIT
- VIDEO DETECTOR

POLE CHART

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)	℄ HWY. 62 STATION	NORTHING EASTING
A	52'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 324+04.78 49.25' LT.	N 606465.9967 E 632056.2697
B	42'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 325+17.60 49.87' LT.	N 606579.5594 E 632043.4549
C	52'	180 DEGREES	35'-0"	25'-0"	180 DEGREES	STA. 325+35.21 49.28' RT.	N 606605.9972 E 632140.6219
D	48'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 324+15.88 60.30' RT.	N 606490.1501 E 632163.7003
E	0'	—	50'-0"	—	—	STA. 324+02.35 83.52' LT.	N 606459.3803 E 632022.5499

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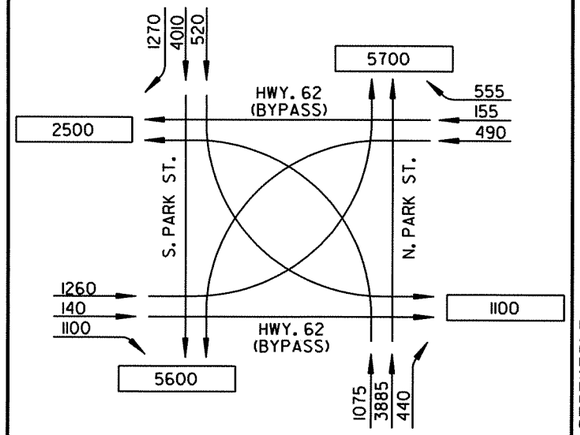
LOCATION: HWY. 62 BYPASS/PARK ST. SIGNAL
CITY: PRAIRIE GROVE
COUNTY: WASHINGTON
DISTRICT: 4
DRAWN BY: F&H

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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.		040521	127	239

(2) SIGNALIZATION PLAN SHEET

TRAFFIC FLOW DIAGRAM



(2010) AVERAGE DAILY TRAFFIC VOLUMES

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH NORTH & SOUTH APPROACH (PARK ST.)
60 MPH WEST & EAST APPROACH (HWY. 62)
NO RAILROAD TRACKS WITHIN 500 FT. OF THE INTERSECTION
NO BUS STOPS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING DETAILS. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE:
2 FT MIN CLEAR ZONE FOR CURB SECTIONS
20 FT MIN CLEAR ZONE (PARK ST.)
30 FT MIN CLEAR ZONE (HWY. 62)

PROP. CURB & GUTTER
SERVICE POINT AND MAIN BREAKER WITHIN 10' OF CONTROLLER (BY CONTRACTOR)
1.25" GALVANIZED STEEL CONDUIT (FROM CONTROLLER TO SERVICE POINT)
LOCAL RADIO WITH ANTENNA, ETHERNET CABLE SHALL BE INSTALLED IN A SEPARATE 2" DIA. N.M.C. WHICH SHALL CONTAIN NO OTHER POWER CARRYING CONDUCTORS.
SYSTEM LOCAL CONTROLLER
2-3" N.M.C.
1" N.M.C.
VIDEO DETECTOR (TYP.)
LUMINAIRE (TYP.)
6'X6' VIRTUAL DETECTOR (TYP.)
6'X50' VIRTUAL DETECTOR (TYP.)
CONST. LIMITS
P.C.E.
EXIST. ROW
PARK ST.
BRIGADE BLVD.
S 89°08'15" E
S 88°34'08" E
N 02°22'13" E
Vz42
Vz72
Vz63
Vz12
Vz11 COMB.
Vz51 COMB.
Vz52
Vz23
Vz32
Vz82
Ø1
Ø2
Ø3
Ø4
Ø5
Ø6
Ø7
Ø8
110'
100'
190'
42'
48'
52'
325'
STA. 324+70.59 PROPOSED ℄ HWY. 62 =
STA. 110+39.16 ℄ PARK ST.
◁ 82°35'00"

SCALE IN FEET
0 15 30 60

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				6	ARK.			
				JOB NO.		040521	128	239

(2) SIGNALIZATION PLAN SHEET

DETECTOR CHART

DETECTOR I.D. NUMBER	DIRECTION & LOCATION	TYPE	DET. NUM.	HARDWARE INPUTS: CAB. TER. NUM.	HARDWARE INPUTS: AMP. CHN. NUM.	HARDWARE INPUTS: CON. INP. NUM.	PROGRAM ASSIGNMENTS: LOCAL PHS.	LOCAL SYS. DET.	MSTR. SYS. DET.	COMMENT	TUBE LENGTH
Vzll	WB LT ADV	COMB.		-	1	V9	1	1	-	VIDEO 1	23'
Vzl2	WB LT PRES	LOCAL		-	2	V1	1		-	VIDEO 1	23'
L2l	EB ADV	COMB.		-		V10	2	2	-	LOOP	-
L22	EB ADV	LOCAL		-		V2	2		-	LOOP	-
Vz23	EB NEAR	LOCAL		-	5	P1	2		-	VIDEO 5	23'
Vz3l	NB LT ADV	COMB.		-	13	V11	3	3	-	VIDEO 3	23'
Vz32	NB LT PRES	LOCAL		-	14	V3	3		-	VIDEO 3	23'
Vz4l	SB ADV	COMB.		-	9	V12	4	4	-	VIDEO 7	23'
Vz42	SB PRES	LOCAL		-	10	V4	4		-	VIDEO 7	23'
Vz5l	EB LT ADV	COMB.		-	3	V13	5	5	-	VIDEO 5	23'
Vz52	EB LT PRES	LOCAL		-	4	V5	5		-	VIDEO 5	23'
L6l	WB ADV	COMB.		-		V14	6	6	-	LOOP	-
L62	WB ADV	LOCAL		-		V6	6		-	LOOP	-
Vz63	WB NEAR	LOCAL		-	6	P3	6		-	VIDEO 1	23'
Vz7l	SB LT ADV	COMB.		-	11	V15	7	7	-	VIDEO 7	23'
Vz72	SB LT PRES	LOCAL		-	12	V7	7		-	VIDEO 7	23'
Vz8l	NB ADV	COMB.		-	15	V16	8	8	-	VIDEO 3	23'
Vz82	NB PRES	LOCAL		-	16	V8	8		-	VIDEO 3	23'

CONTROLLER INPUT ABBREVIATIONS:
V1 - V8 • VEHICLE INPUT
V9 - V16 • SYSTEM OR AUXILIARY INPUT
P1 - P8 • PEDESTRIAN INPUT

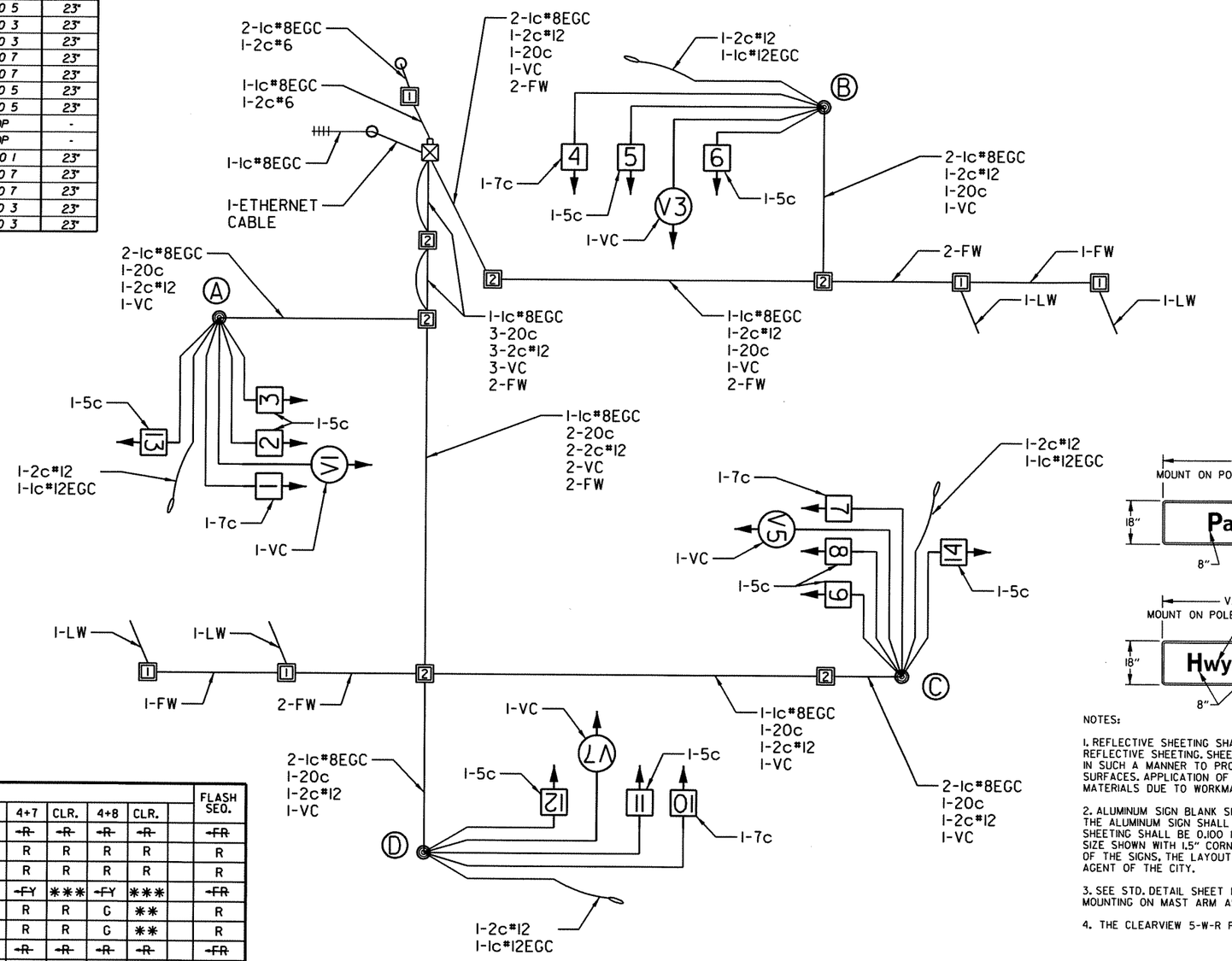
AMP.CHN.NUM.NOT USED: 7,8

NOTE: "AMP.CHN." REFERS TO THE DETECTOR RACK OUTPUT POSITION AND IS WIRED TO THE CONTROLLER INPUT DETECTOR NUMBER THAT IS PROGRAMMED TO ACTIVATE THE DESIGNATED PHASE.

NOTES:

1. A SEPARATE 5c/#14 AWG SHALL BE PROVIDED FROM EACH 3 SECTION HEAD TO THE BASE OF POLE.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

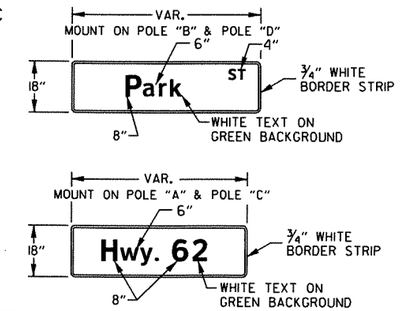
WIRING DIAGRAM



INTERVAL CHART

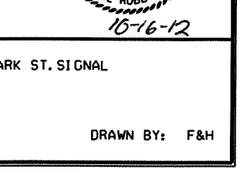
SIGNAL FACES	INTERVALS 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	FLASH SEQ.
1	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~FR~~
2	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
3	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
4	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~G~~	*	~~FY~~	***	~~FY~~	***	~~FR~~
5	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
6	R	R	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
7	~~G~~	*	~~FY~~	***	~~G~~	*	~~FY~~	***	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~FR~~
8	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
9	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
10	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~	~~G~~	*	~~FY~~	**	~~G~~	*	~~FY~~	***	~~FR~~
11	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
12	R	R	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
13	R	R	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
14	R	R	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R

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



NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
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3. SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.



LOCATION:	HWY. 62 BYPASS/PARK ST. SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4
DRAWN BY:	F&H

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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.		040521	129	239

(2) SIGNALIZATION PLAN SHEET

PHASING DIAGRAM

LEGEND

- TYPE I PULL BOX
- TYPE I HD PULL BOX
- TYPE 2 PULL BOX
- TYPE 2 HD PULL BOX
- CONTROL CABINET
- SIGNAL HEAD
- N.M.C.-NON-METALLIC CONDUIT
- VIDEO DETECTOR

LED SIGNAL FACES

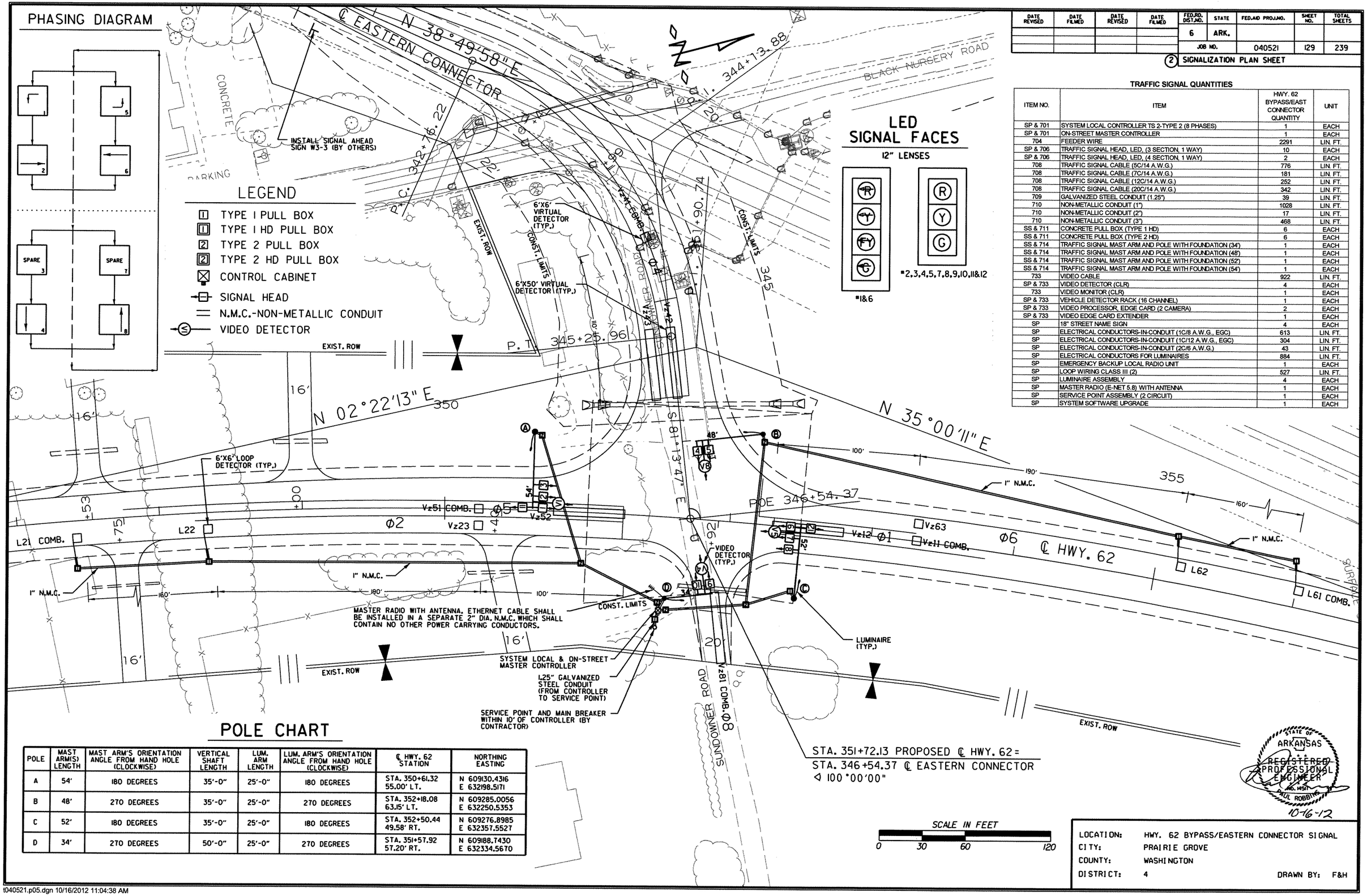
12" LENSES

*1&6

*2,3,4,5,7,8,9,10,11&12

TRAFFIC SIGNAL QUANTITIES

ITEM NO.	ITEM	HWY. 62 BYPASS/EAST CONNECTOR QUANTITY	UNIT
SP & 701	SYSTEM LOCAL CONTROLLER TS 2-TYPE 2 (8 PHASES)	1	EACH
SP & 701	ON-STREET MASTER CONTROLLER	1	EACH
704	FEEDER WIRE	2291	LIN. FT.
SP & 706	TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)	10	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	2	EACH
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	776	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	181	LIN. FT.
708	TRAFFIC SIGNAL CABLE (12C/14 A.W.G.)	252	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	342	LIN. FT.
709	GALVANIZED STEEL CONDUIT (1.25")	39	LIN. FT.
710	NON-METALLIC CONDUIT (1")	1028	LIN. FT.
710	NON-METALLIC CONDUIT (2")	17	LIN. FT.
710	NON-METALLIC CONDUIT (3")	468	LIN. FT.
SS & 711	CONCRETE PULL BOX (TYPE 1 HD)	6	EACH
SS & 711	CONCRETE PULL BOX (TYPE 2 HD)	6	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (48')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (52')	1	EACH
SS & 714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54')	1	EACH
733	VIDEO CABLE	922	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	4	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP & 733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP & 733	VIDEO PROCESSOR, EDGE CARD (2 CAMERA)	2	EACH
SP & 733	VIDEO EDGE CARD EXTENDER	1	EACH
SP	18" STREET NAME SIGN	4	EACH
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., EGC)	613	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., EGC)	304	LIN. FT.
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G.)	43	LIN. FT.
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	884	LIN. FT.
SP	EMERGENCY BACKUP LOCAL RADIO UNIT	1	EACH
SP	LOOP WIRING CLASS III (2)	527	LIN. FT.
SP	LUMINAIRE ASSEMBLY	4	EACH
SP	MASTER RADIO (E-NET 5.8) WITH ANTENNA	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUIT)	1	EACH
SP	SYSTEM SOFTWARE UPGRADE	1	EACH



POLE CHART

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)	℄ HWY. 62 STATION	NORTHING EASTING
A	54'	180 DEGREES	35'-0"	25'-0"	180 DEGREES	STA. 350+61.32 55.00' LT.	N 609130.4316 E 632198.5171
B	48'	270 DEGREES	35'-0"	25'-0"	270 DEGREES	STA. 352+18.08 63.15' LT.	N 609285.0056 E 632250.5353
C	52'	180 DEGREES	35'-0"	25'-0"	180 DEGREES	STA. 352+50.44 49.58' RT.	N 609276.8985 E 632357.5527
D	34'	270 DEGREES	50'-0"	25'-0"	270 DEGREES	STA. 351+57.92 57.20' RT.	N 609188.7430 E 632334.5670

SCALE IN FEET

0 30 60 120

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
NO. 14511
PAUL ROBBINS
10-16-12

LOCATION:	HWY. 62 BYPASS/EASTERN CONNECTOR SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4
DRAWN BY:	F&H

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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	130	239

(2) SIGNALIZATION PLAN SHEET

TRAFFIC FLOW DIAGRAM

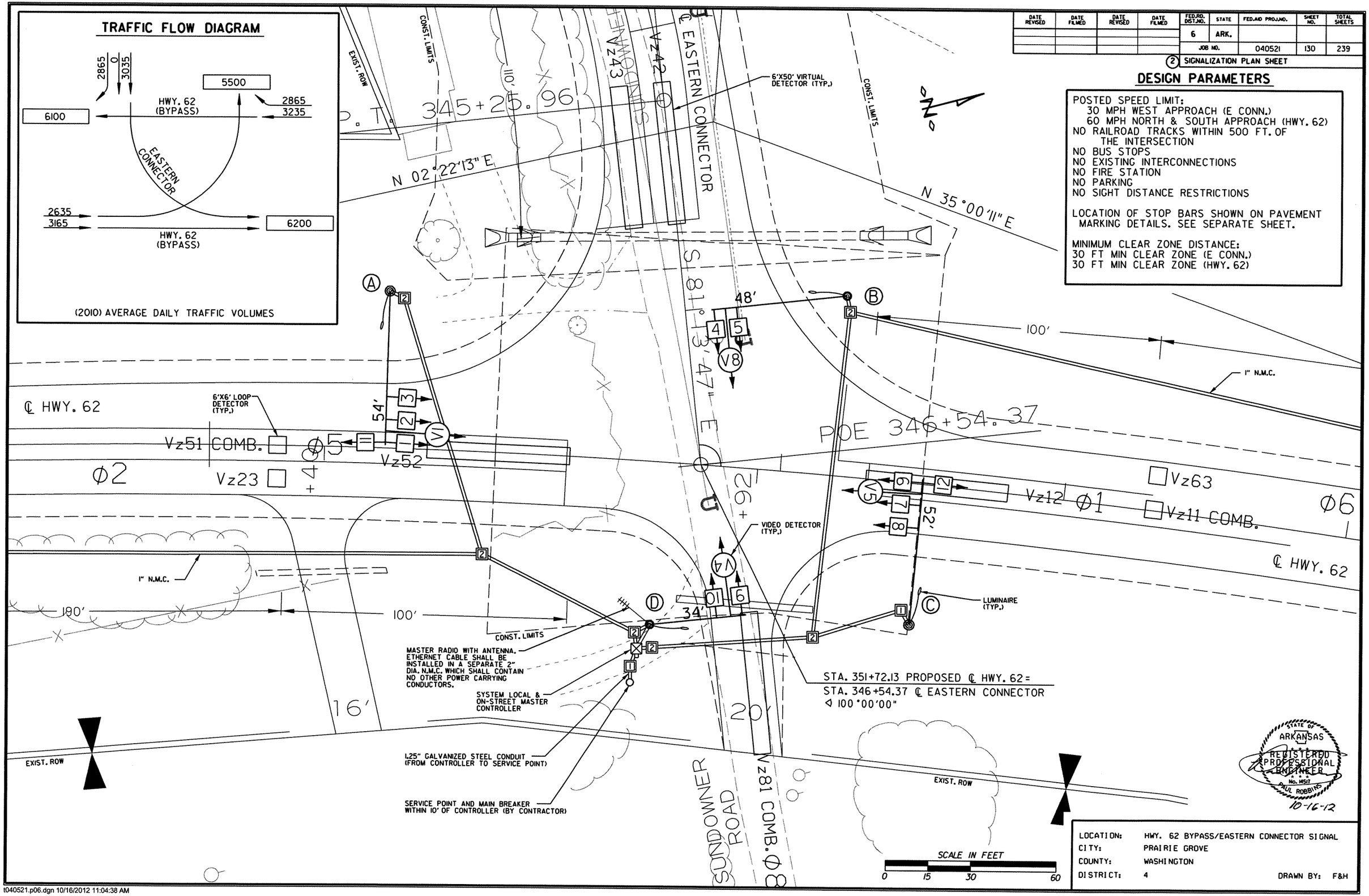
(2010) AVERAGE DAILY TRAFFIC VOLUMES

DESIGN PARAMETERS

POSTED SPEED LIMIT:
30 MPH WEST APPROACH (E CONN.)
60 MPH NORTH & SOUTH APPROACH (HWY. 62)
NO RAILROAD TRACKS WITHIN 500 FT. OF THE INTERSECTION
NO BUS STOPS
NO EXISTING INTERCONNECTIONS
NO FIRE STATION
NO PARKING
NO SIGHT DISTANCE RESTRICTIONS

LOCATION OF STOP BARS SHOWN ON PAVEMENT MARKING DETAILS. SEE SEPARATE SHEET.

MINIMUM CLEAR ZONE DISTANCE:
30 FT MIN CLEAR ZONE (E CONN.)
30 FT MIN CLEAR ZONE (HWY. 62)



STATE OF ARKANSAS
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				6	ARK.			
				JOB NO.		040521	131	239

(2) SIGNALIZATION PLAN SHEET

DETECTOR CHART

DETECTOR I.D. NUMBER	DIRECTION & LOCATION	TYPE	DET. NUM.	HARDWARE INPUTS: CAB. TER. NUM.	HARDWARE INPUTS: AMP. CHN. NUM.	HARDWARE INPUTS: CON. INP. NUM.	PROGRAM ASSIGNMENTS: LOCAL PHS.	PROGRAM ASSIGNMENTS: LOCAL SYS. DET.	PROGRAM ASSIGNMENTS: MSTR. SYS. DET.	COMMENT	TUBE LENGTH
Vzll	WB LT ADV	COMB.		-	1	V9	1	1	-	VIDEO 1	23'
Vzl2	WB LT PRES	LOCAL		-	2	V1	1		-	VIDEO 1	23'
L21	EB ADV	COMB.		-		V10	2	2	-	LOOP	-
L22	EB ADV	LOCAL		-		V2	2		-	LOOP	-
Vz23	EB NEAR	LOCAL		-	5	V3	2		-	VIDEO 5	23'
Vz4l	SB ADV	COMB.		-	9	V12	4	4	-	VIDEO 4	23'
Vz42	SB PRES	LOCAL		-	10	V4	4		-	VIDEO 4	23'
Vz43	SB PRES	LOCAL		-	11	P1	4		-	VIDEO 4	23'
Vz5l	EB LT ADV	COMB.		-	3	V13	5	5	-	VIDEO 5	23'
Vz52	EB LT PRES	LOCAL		-	4	V5	5		-	VIDEO 5	23'
L6l	WB ADV	COMB.		-		V14	6	6	-	LOOP	-
L62	WB ADV	LOCAL		-		V6	6		-	LOOP	-
Vz63	WB NEAR	LOCAL		-	6	V7	6		-	VIDEO 1	23'
Vz8l	NB PRES	COMB.		-	12	V16	8	8	-	VIDEO 8	23'

CONTROLLER INPUT ABBREVIATIONS:
V1 - V8 • VEHICLE INPUT
V9 - V16 • SYSTEM OR AUXILIARY INPUT
P1 - P8 • PEDESTRIAN INPUT

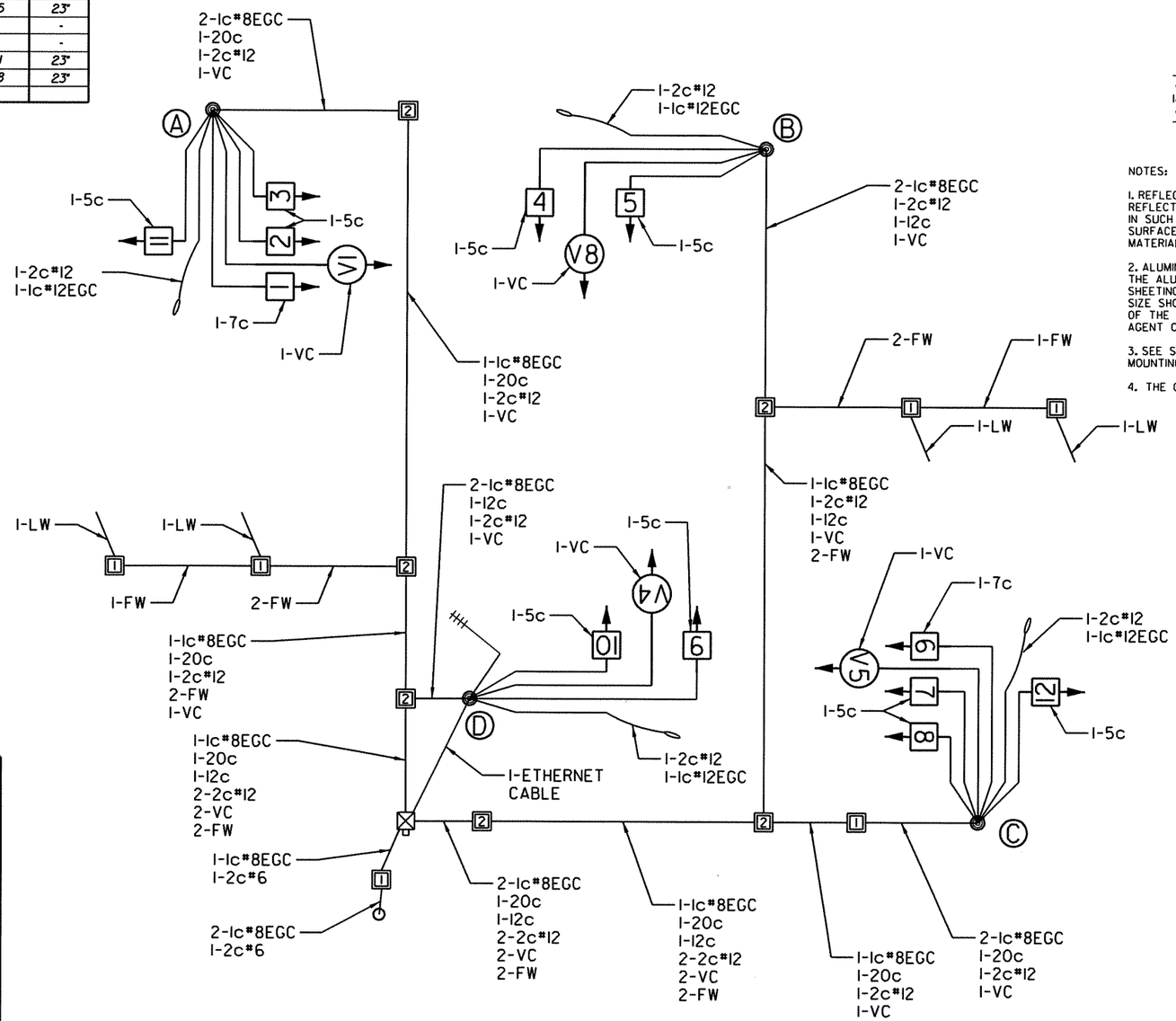
AMP.CHN.NUM.NOT USED: 7,8

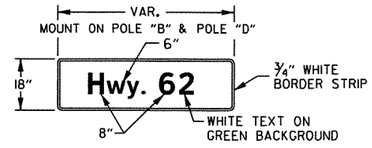
NOTE: "AMP.CHN." REFERS TO THE DETECTOR RACK OUTPUT POSITION AND IS WIRED TO THE CONTROLLER INPUT DETECTOR NUMBER THAT IS PROGRAMMED TO ACTIVATE THE DESIGNATED PHASE.

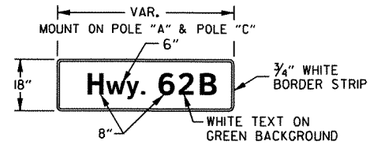
NOTES:

1. A SEPARATE 5c/#14 AWG SHALL BE PROVIDED FROM EACH 3 SECTION HEAD TO THE BASE OF POLE.
2. ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA ON CABINET.
3. THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

WIRING DIAGRAM







NOTES:

1. REFLECTIVE SHEETING SHALL COMPLY WITH ASTM 4956 TYPE 9 REFLECTIVE SHEETING. SHEETING AND LEGEND SHALL BE APPLIED IN SUCH A MANNER TO PROVIDE WRINKLE AND BUBBLE FREE SURFACES. APPLICATION OF SHEETING IS CAUSE FOR REJECTION OF MATERIALS DUE TO WORKMANSHIP.
2. ALUMINUM SIGN BLANK SHALL BE ALLOY 6061-T6 OR 5052-H38. THE ALUMINUM SIGN SHALL ALSO BE ANODIZED. THE ALUMINUM SHEETING SHALL BE 0.100 INCH NOMINAL THICKNESS AND OF THE SIZE SHOWN WITH 1.5" CORNER RADII. PRIOR TO FABRICATION OF THE SIGNS, THE LAYOUT SHALL FIRST BE APPROVED BY AN AGENT OF THE CITY.
3. SEE STD. DETAIL SHEET FOR MORE INFORMATION FOR MOUNTING ON MAST ARM ASSEMBLY.
4. THE CLEARVIEW 5-W-R FONT SHALL BE USED FOR ALL LETTERS.

INTERVAL CHART

SIGNAL FACES	INTERVALS: 1+5	CLR.	1+6	CLR.	2+5	CLR.	2+6	CLR.	4+8	CLR.		FLASH SEQ.
1	~~G~~	*	~~G~~	*	~~FY~~	**	~~FY~~	***	~~R~~	~~R~~		~~FR~~
2	R	R	G	**	R	R	G	**	R	R		R
3	R	R	G	**	R	R	G	**	R	R		R
4	R	R	R	R	R	R	R	R	G	Y		R
5	R	R	R	R	R	R	R	R	G	Y		R
6	~~G~~	*	~~FY~~	**	~~G~~	*	~~FY~~	***	~~R~~	~~R~~		~~FR~~
7	R	R	R	R	G	**	G	**	R	R		R
8	R	R	R	R	G	**	G	**	R	R		R
9	R	R	R	R	R	R	R	R	G	Y		R
10	R	R	R	R	R	R	R	R	G	Y		R
11	R	R	R	R	G	**	G	**	R	R		R
12	R	R	G	**	R	R	G	**	R	R		R

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

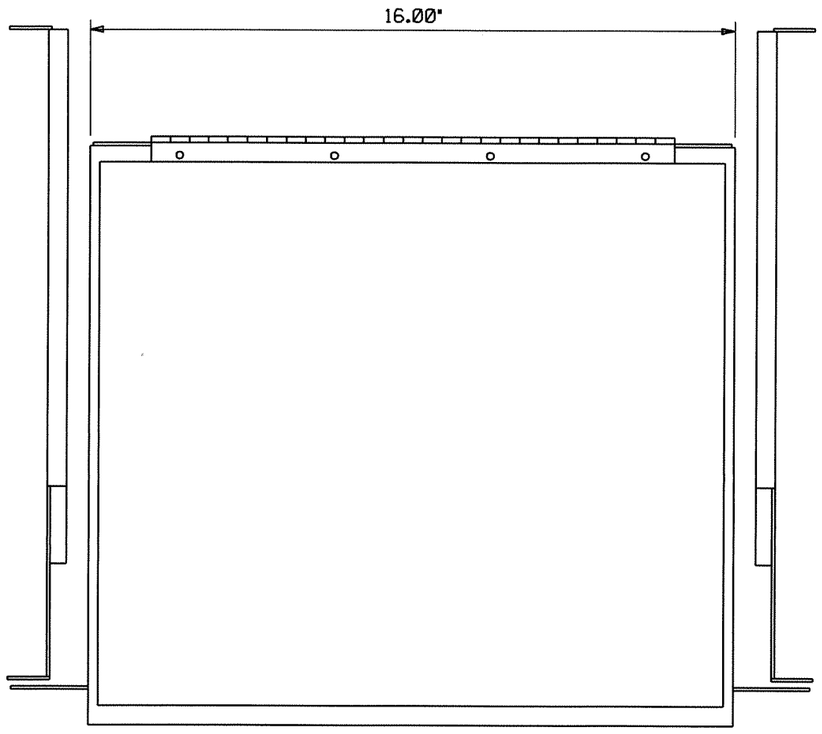
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14517
PAUL ROBBINS
10-16-12

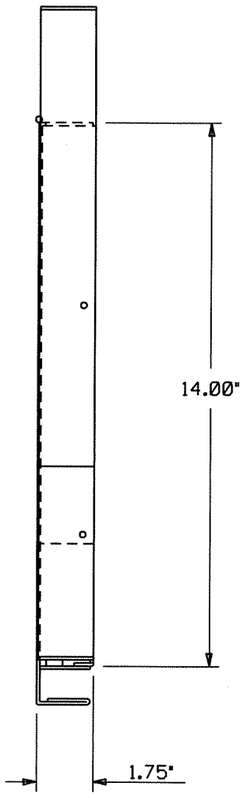
LOCATION:	HWY. 62 BYPASS/EASTERN CONNECTOR SIGNAL
CITY:	PRAIRIE GROVE
COUNTY:	WASHINGTON
DISTRICT:	4
DRAWN BY:	F&H

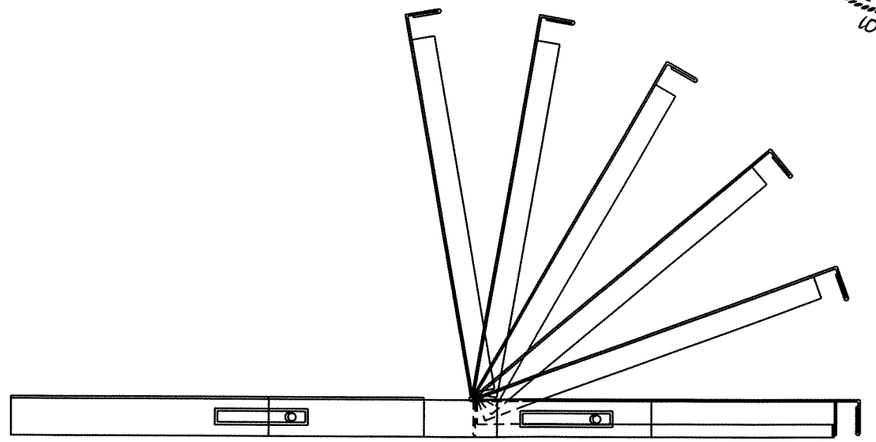
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	132	239
				(2)	SIGNALIZATION DETAILS			

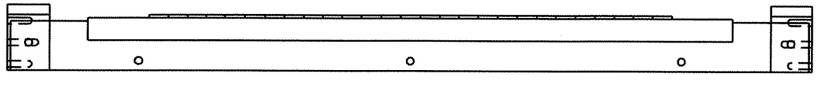
DRAWER PLAN VIEW



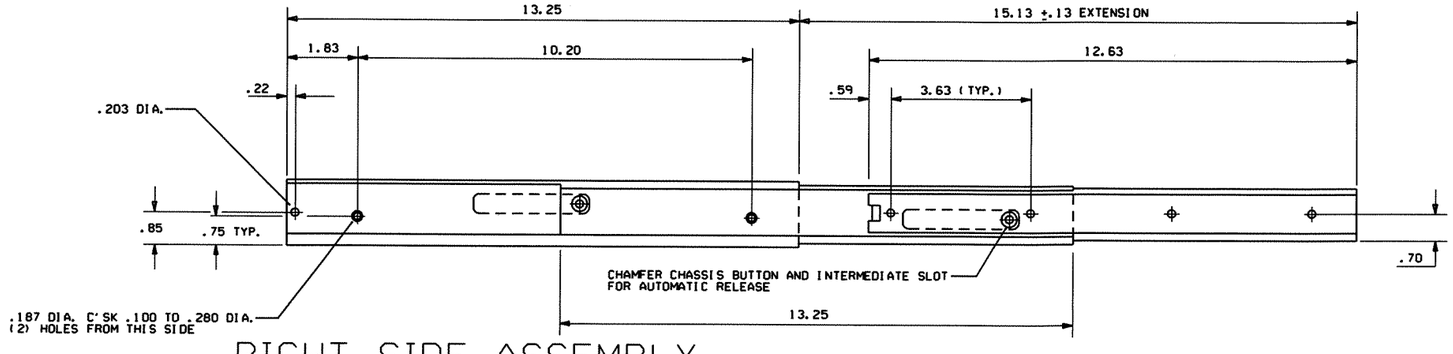




NOTES:
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



FRONT VIEW



RIGHT SIDE ASSEMBLY

A.H.T.D. STANDARD DETAILS

6-15-05	ISSUED	
DATE	REVISION	DATE FILM

ARKANSAS STATE HIGHWAY COMMISSION

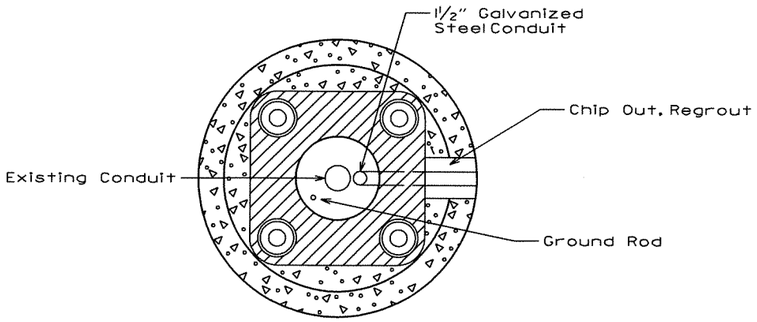
SIGNALIZATION DETAIL
(Controller Cabinet Utility Drawer)

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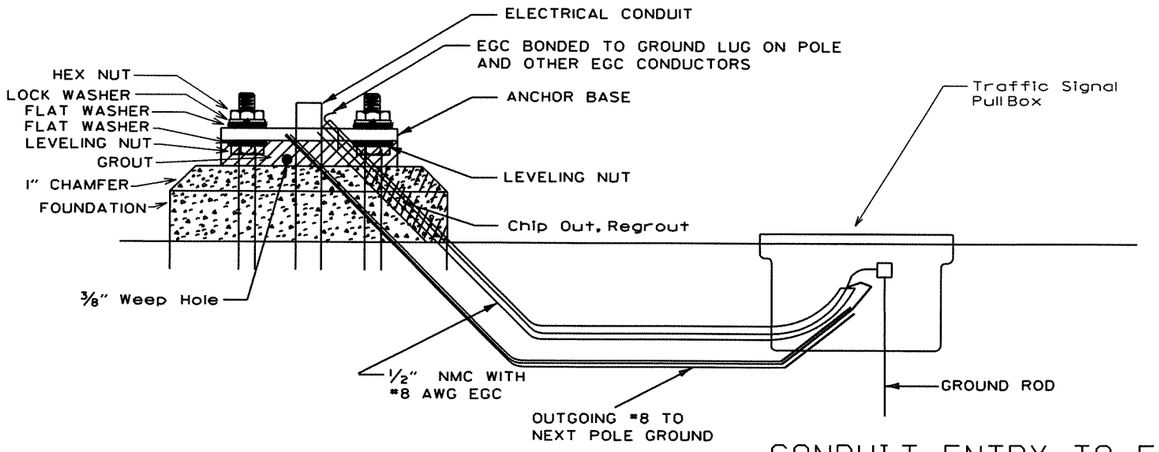
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				6	ARK.			
				JOB NO.		040521	133	239

(2) SIGNALIZATION DETAILS

CONDUIT ENTRY TO EXISTING POLE BASE

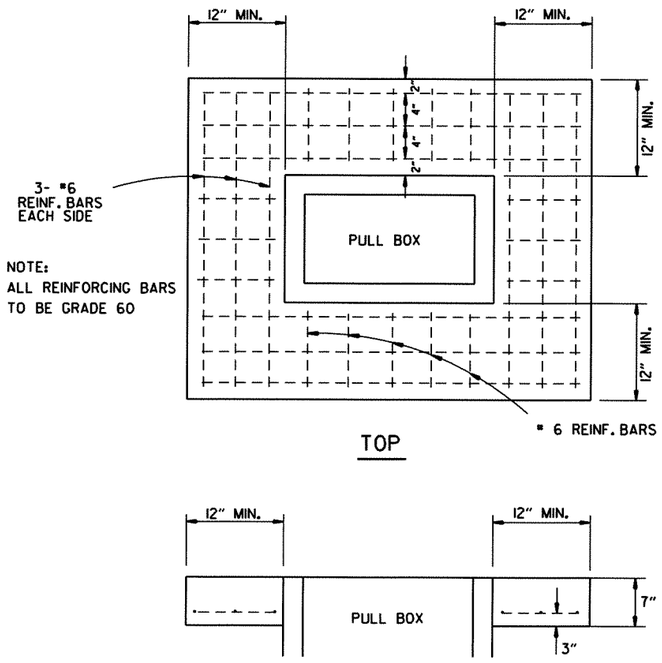


ANCHOR BASE



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER NO. 14517 PAUL ROBBINS
10-16-12

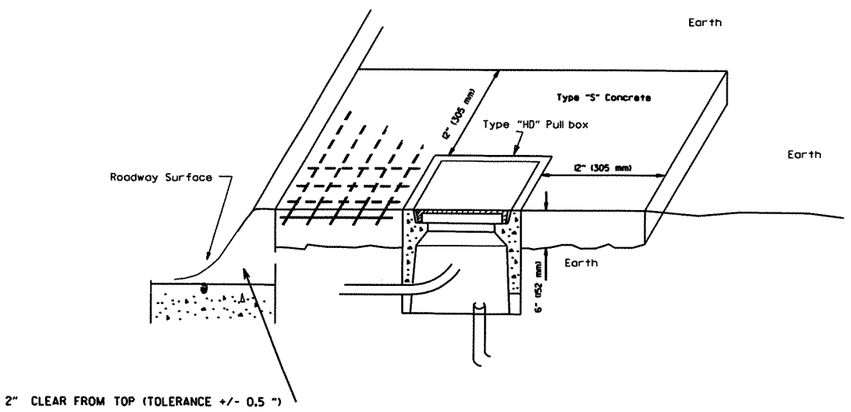
CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



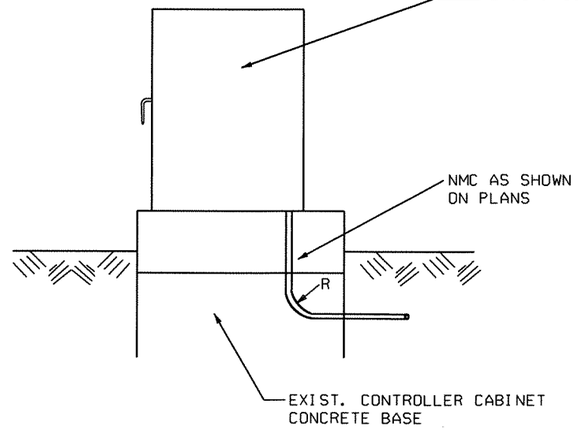
TOP

ELEVATION

Type "HD" Concrete Pull Box Detail



Note: All Type 1 and Type 2 HD pull boxes are installed with an apron of concrete 12" (305 mm) wide and 6" (152 mm) in depth. All payment shall be included in the price of the Type HD pull box. Pull box shall be installed flush to surrounding grade unless otherwise instructed by the engineer. The concrete shall be Class "S." Three #6 reinforcing bars in the apron on all sides of the pull box is required in concrete.



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

DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

A.H.T.D. STANDARD DETAILS

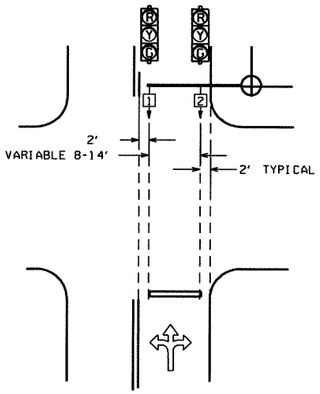
ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Heavy Duty Pull Box)

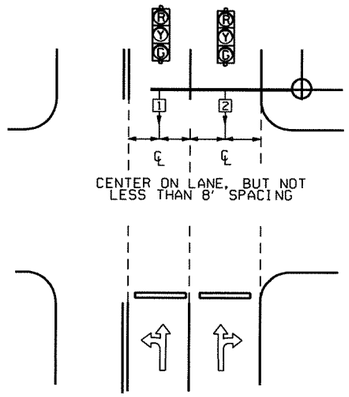
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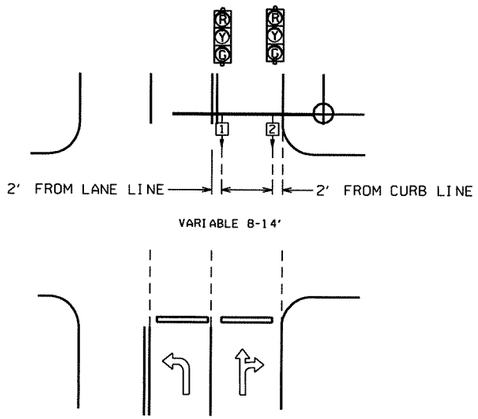
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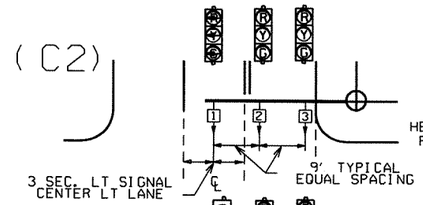
(B)



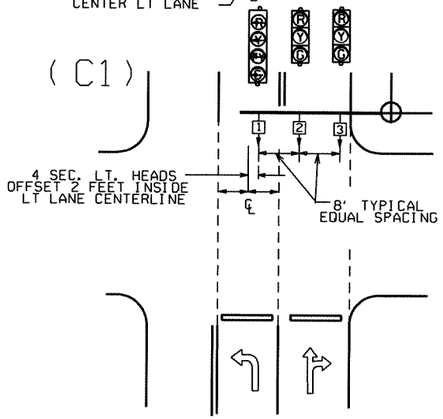
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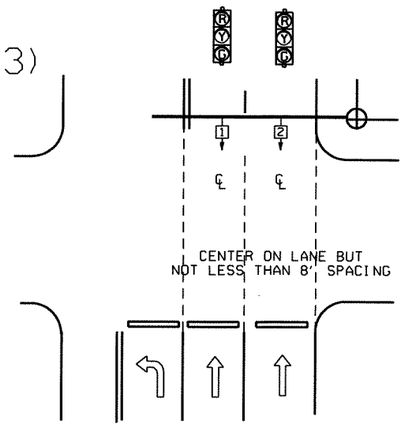
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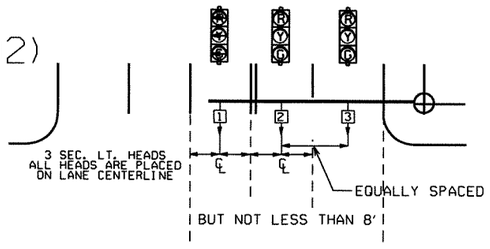
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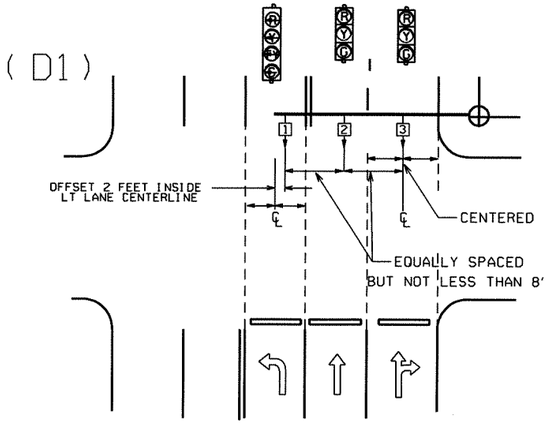
(C3)



(D2)

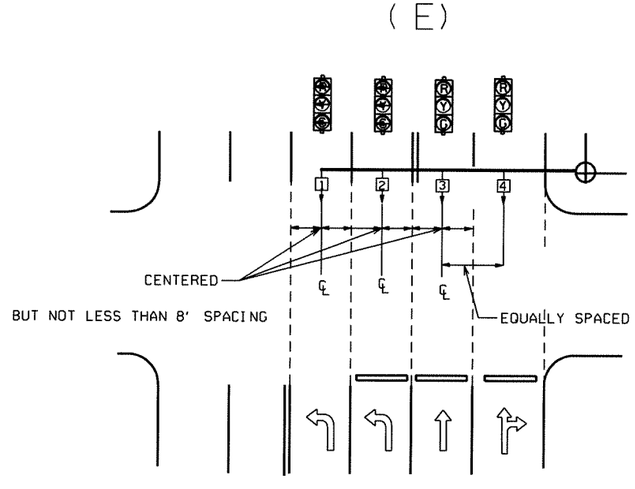


(D1)



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

(E)



℄ = CENTER OF LANE FROM APPROACH SIDE

GENERAL NOTES:

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

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

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

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

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

6. MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-1 OF 2009 MUTCD.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 14617
PAUL ROBBINS
10-16-12

A.H.T.D. STANDARD DETAILS

			ARKANSAS STATE HIGHWAY COMMISSION
			SIGNALIZATION DETAIL (Signal Head Placement)
3-11-10	2009 MUTCD		
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	

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

EACH ITEM "TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)" TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12' TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGN FACES SHALL BE CONSTRUCTED OF HIGH INTENSITY SHEETING (TYPE III) WITH SILKSCREEN LEGEND AND BORDER.

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

GENERAL NOTES:
1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF 4 FT. BEHIND CURB OR SHOULDER.

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

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

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

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

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

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN LOAD CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNAL HEADS TO BE ONE WAY, 12 INCH, AND HAVE 5 IN. BACK PLATES:

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL * 2' X 0" X 2' * 6"; 20 LB. REMAINING HEADS SPACED A 8 FT. * 3 SEC., 56 LB., TWO 5 SEC);
14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING
2 HEADS FOR ARMS 10 TO 16 FT.
2 HEADS FOR ARMS 10 TO 16 FT., INCLUDING LB.
3 HEADS FOR 18 TO 24 FT. ARMS;
4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", 36 LB., MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) * VARIABLE ARM LENGTH (MAX.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE.
POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

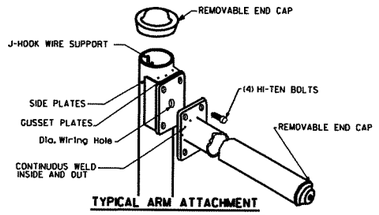
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

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

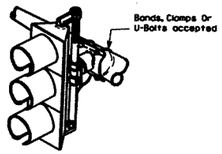
6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

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

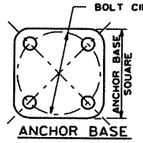
7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.



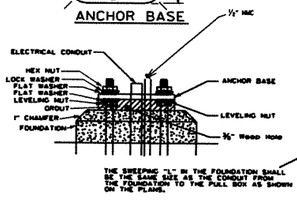
TYPICAL ARM ATTACHMENT

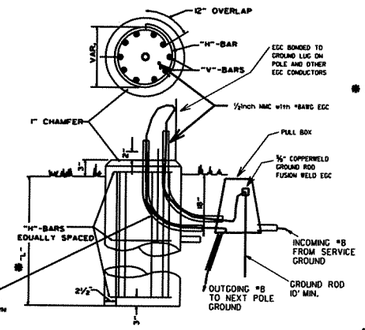


NOTE: THE SIGNAL SHALL BE CONNECTED TO THE MAST ARM BY BRACKETING AS DIRECTED BY THE ENGINEER.



ANCHOR BASE



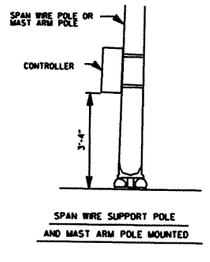


THE GROUND ROD SHALL BE FUSION WELDED TO A 1C/#8 A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

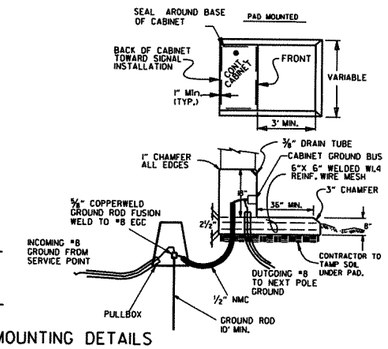
TYPICAL FOUNDATION DETAILS

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

ARM LENGTH	FDN. DIAMETER	DEPTH "L" **	STEEL VERT.	STEEL HORZ.	STEEL D/C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44"
2' to 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42"
over 12' to 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66"
over 20' to 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88"
over 35' to 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56"
over 50' to 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74"
Twins to 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76"
Twins over 20' to 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76"
Twins over 44' to 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76"
Twins over 50' to 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64"



SPAN WIRE SUPPORT POLE AND MAST ARM POLE MOUNTED



CONTROLLER CABINET MOUNTING DETAILS

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

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

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX. NUT. PERIMETER OF ANCHOR BASE SHALL BE GROUTED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS "S" OR GREATER.

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

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

SIGNAL OPERATION NOTES:

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

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

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	135	239

(2) SIGNALIZATION DETAILS

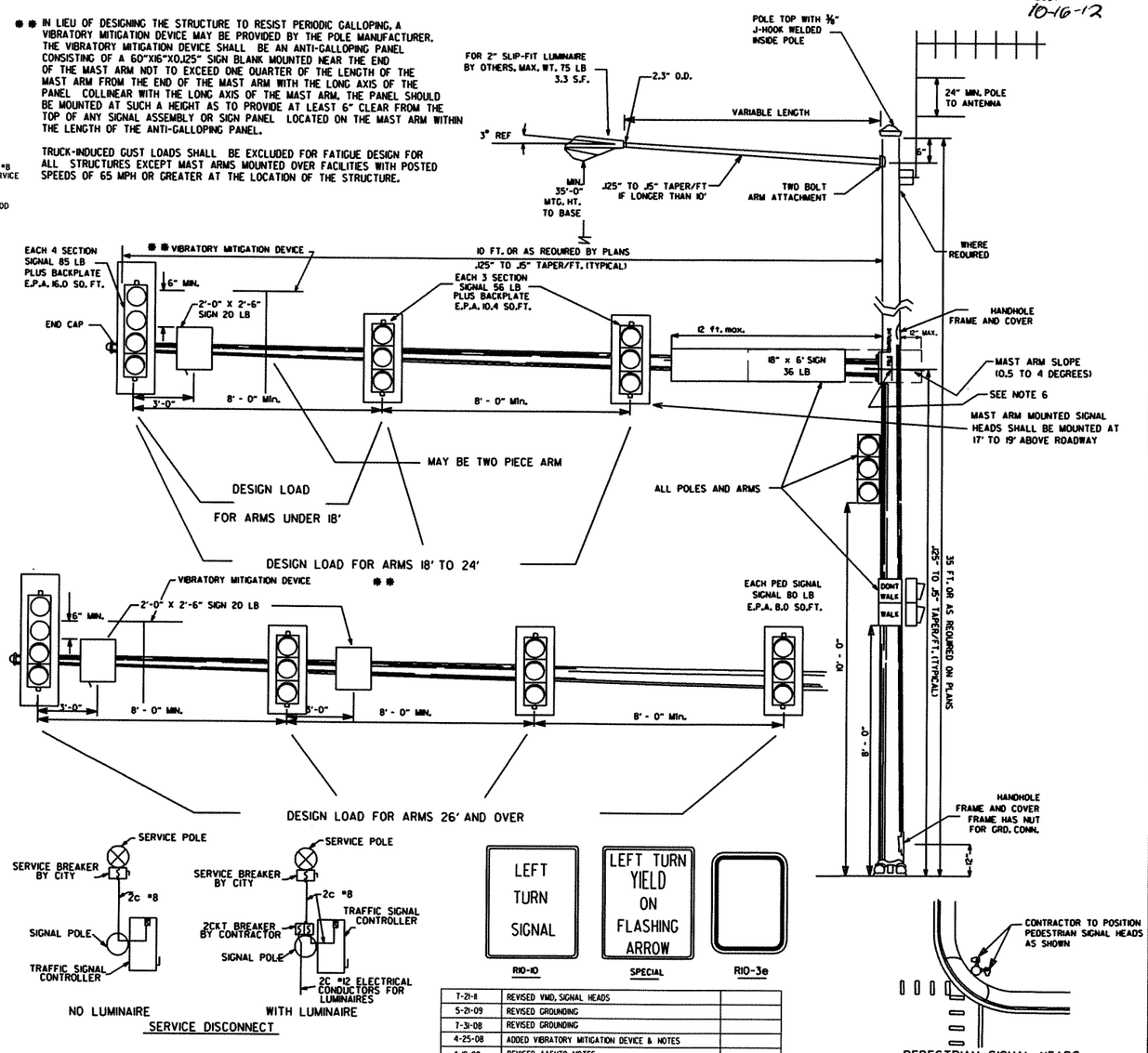
SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14917 PAUL ROBBINS 10-16-12

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

** IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

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



A.H.T.D. STANDARD DETAILS

DATE	REVISION	DATE FILM
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-4-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-8-01	REV. NOTES & POLE MAST ARM SLOPE	
4-8-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
8-22-99	REVISED FOUNDATION DETAILS	
8-17-98	REVISED DETAILS AND NOTES	
8-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAILS (Steel Pole With Mast Arm)

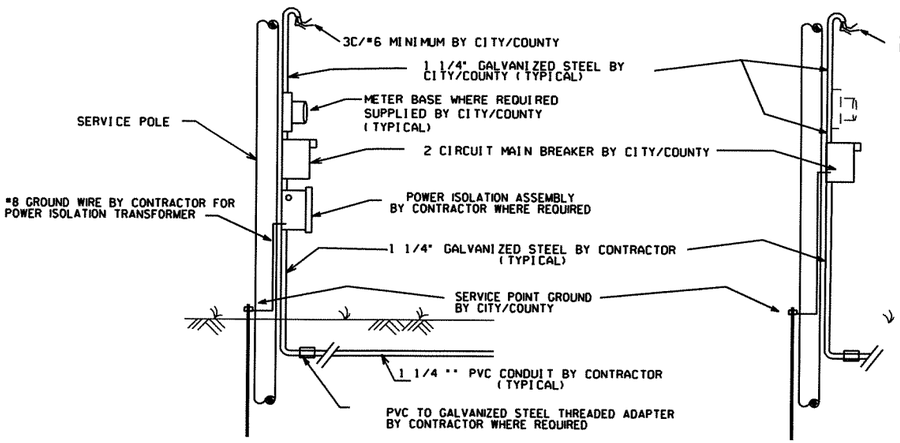
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
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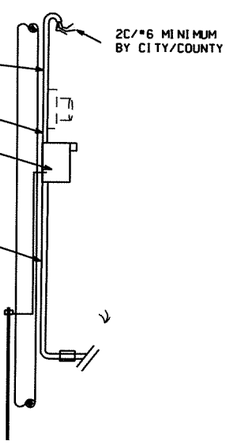
(2) SIGNALIZATION DETAILS

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

WITH POWER ISOLATION ASSEMBLY

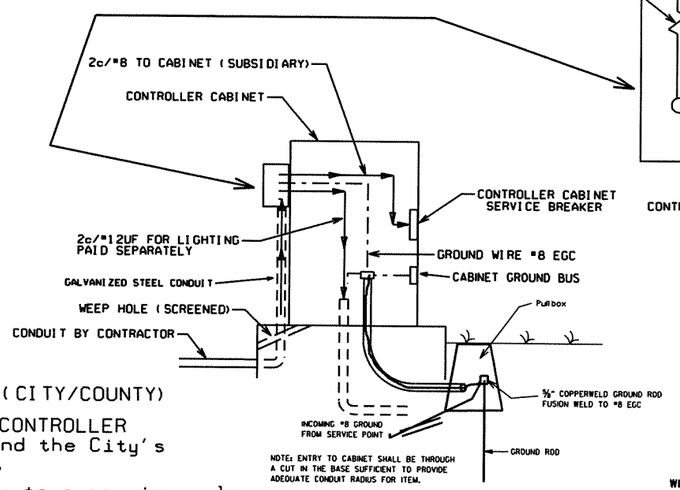


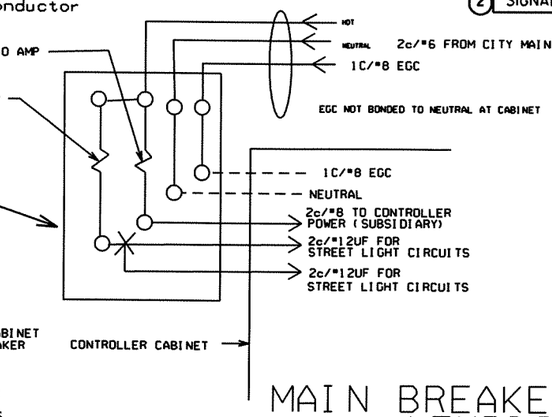
WITHOUT POWER ISOLATION ASSEMBLY



Ground Rod-A 10' x ⅝" ground rod shall be installed in the pull box for each pole and the controller. Payment for the ground rod and ½" NMC shall be included in Item 701. The pull box and conductor box shall be paid for separately.

SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)





STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14517 PAUL ROBBINS 10-16-12

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 raintight breaker (MAIN BREAKER) at a mutually acceptable point within the right-of-way. Service point includes galvanized steel conduit to a point 18" below ground line, two circuit main breaker, power isolation assembly where required, meter loop if required by local utility, electrical conductors and weatherhead. Where street lighting is included as part of signal installation, street lighting circuit (2c/#12 awg UF rated, typical) shall be kept separate from the circuit serving traffic signal. Service wire and wiring from the controller to main breaker is provided by the Contractor as a part of this contract. Wire and wiring from main breaker, and connection to the utility is the responsibility of the City/County.

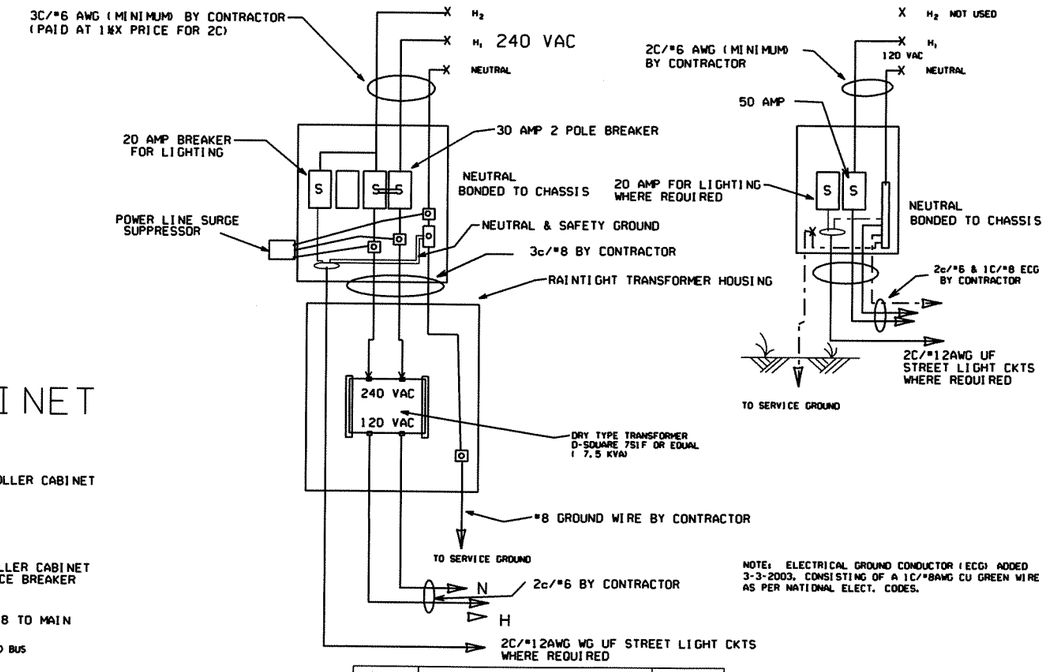
2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: The Main Breaker assembly, galvanized steel conduit, weatherhead and wire above Main Breaker and connection to the utility shall be provided by City/County. Contractor shall provide as part of contract Secondary Breaker, conduit, wire and wiring to the Main Breaker.

3. MAIN BREAKER NEAR CONTROLLER CABINET: All components of the service point with the exception of the wire and wiring above the Main Breaker is furnished and installed by the Contractor. Wiring from Main Breaker including connection to the utility, is the responsibility of the City/County. If meter loop is required, meter base and hardware is provided by the City/County and installed by the contractor.

Service Ground is typically tied to neutral at the Main Breaker. As such, controller ground IS NOT tied to Neutral at secondary Breaker or in controller cabinet.

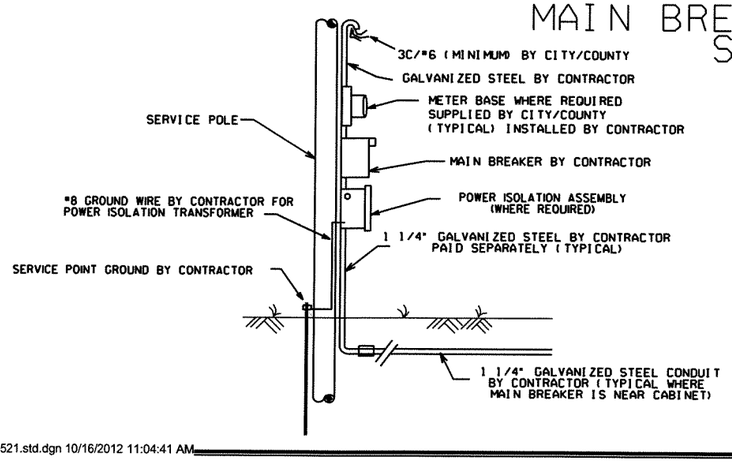
WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

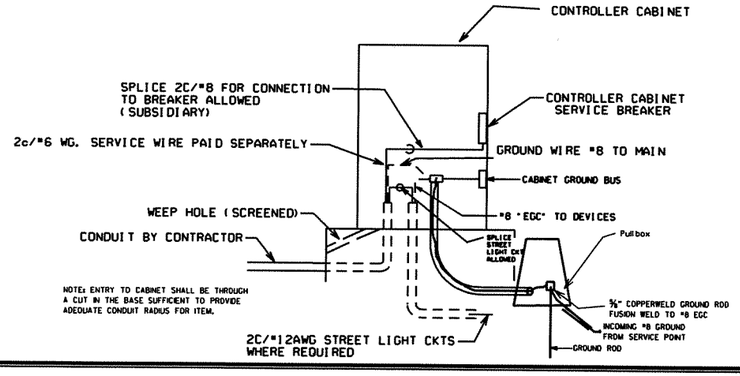
WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER



NOTE: ELECTRICAL GROUND CONDUCTOR (EGG) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED





DATE	REVISION	DATE FILM
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

A.H.T.D. STANDARD DETAILS

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL (Service Point)

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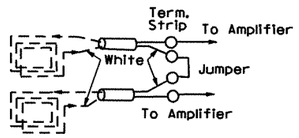
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	137	239
				(2)	SIGNALIZATION DETAILS			

LOOP DETECTOR INSTALLATION AND TESTING

NOTES:

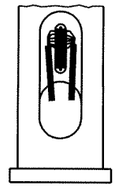
1. Loops with a perimeter greater than 40' shall have two turns. Loops with a perimeter less than or equal to 40' shall have three turns, unless otherwise noted on the plans. Quadrupole loops shall be two turns (2-4-2 configuration) unless otherwise noted.
2. Loop and feeder wire shall be continuous 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"Ø) 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

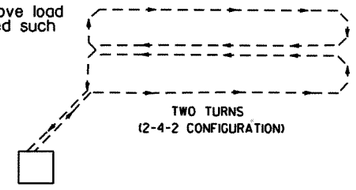


Wind loops counterclockwise; tag wire exiting slot and tie to white lead of feeder wire; when loops are tied to same vehicle detector, series connect in cabinet as shown.

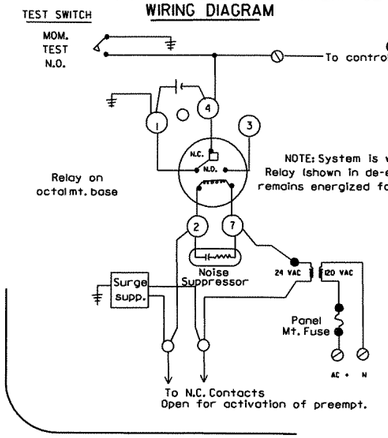
HANDHOLE TERMINAL



QUADRUPOLE LOOP

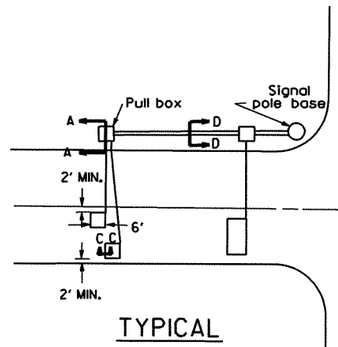


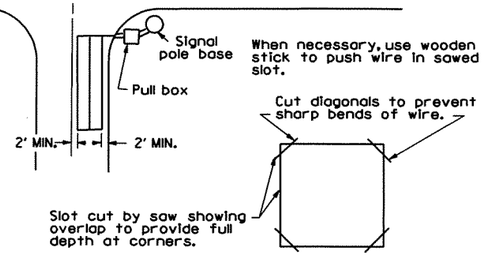
TRAFFIC SIGNAL PRE-EMPTION INTERFACE WIRING DIAGRAM



STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 14547 PAUL ROBBINS 10-16-12

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.

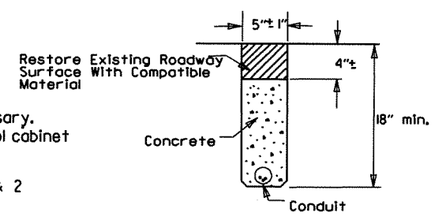
(3) Open splice (do not break connection) repeat test 1& 2
If test 3 is bad, go to test 4

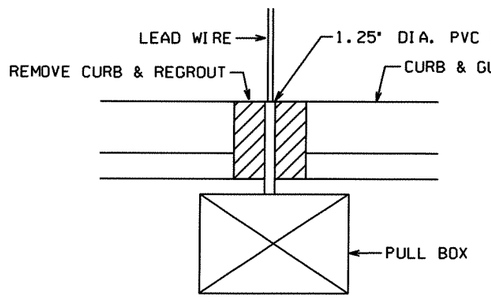
(4) Break splice, install jumper in cabinet, repeat tests 1& 2 separately for feeder and for loop

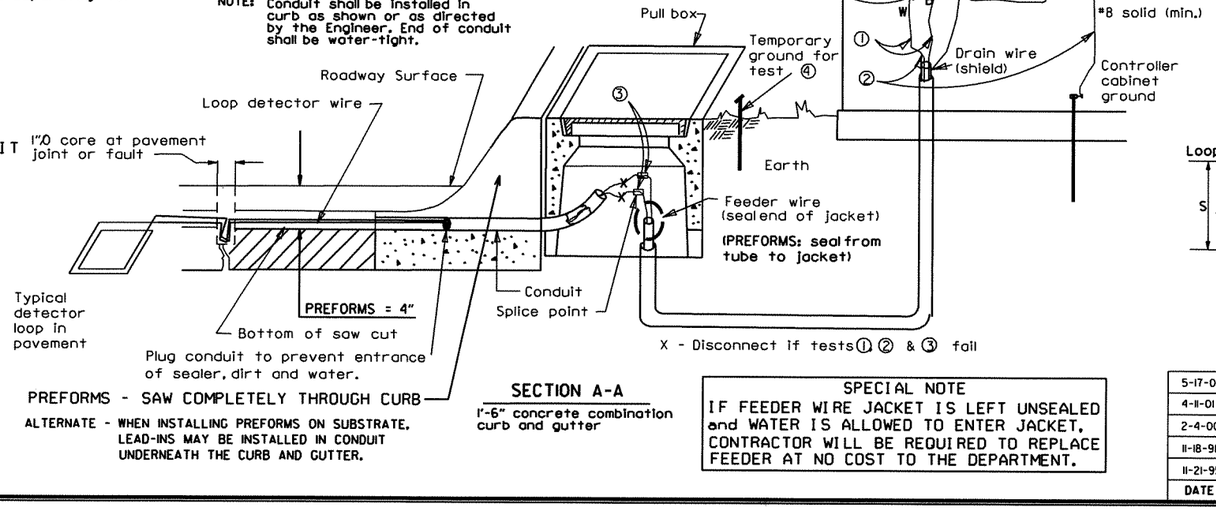
Failures typically result from broken wire in pavement, faulty insulation of loop or feeder wire, or poorly insulated splice connection.

TRENCHING DETAIL

(FOR SAW CUT TRENCH IN ROADWAY)





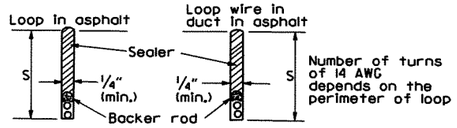


SECTION A-A

1'-6" concrete combination curb and gutter

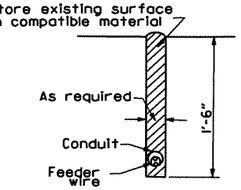
SPECIAL NOTE
IF FEEDER WIRE JACKET IS LEFT UNSEALED and WATER IS ALLOWED TO ENTER JACKET, CONTRACTOR WILL BE REQUIRED TO REPLACE FEEDER AT NO COST TO THE DEPARTMENT.

TYPICAL SECTIONS FOR PULSE AND PRESENCE LOOP DETECTORS



SECTION C-C

S=2½" in asphalt
S=1½" in concrete



SECTION D-D

A.H.T.D. STANDARD DETAILS

DATE	REVISION	DATE FILM
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	

ARKANSAS STATE HIGHWAY COMMISSION

SIGNALIZATION DETAIL
(Loop Detector Installation)

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	1 38	239
				① 07178		Layout		49899

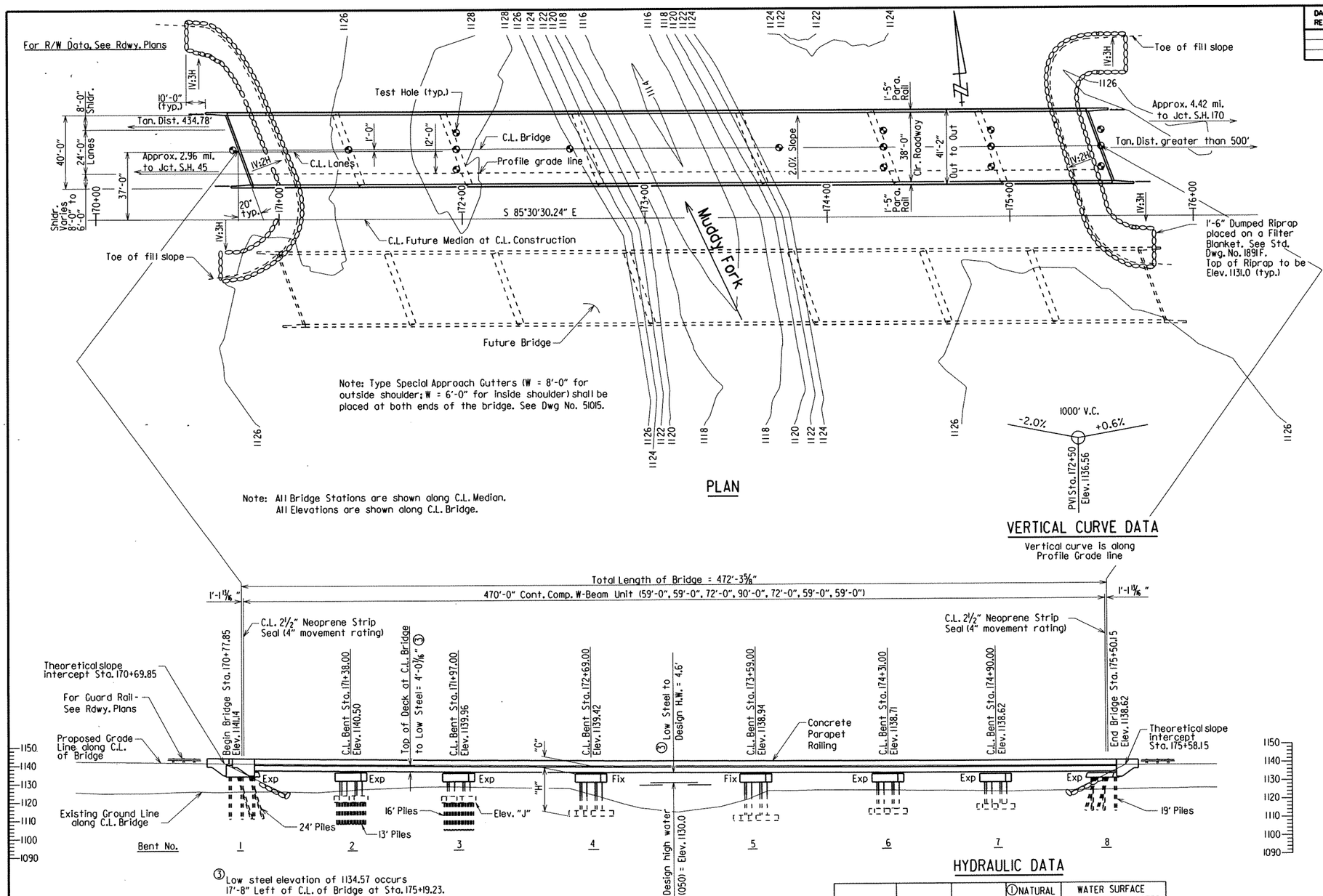


TABLE OF VARIABLES

Bent No.	C.L. Deck @ C.L. Bent to Low Seat of Cap	Low Seat of Cap to Bott. of Ftg.	Bottom of Ftg. Elevation
	"C"	"H"	"J"
2	4'-5¼"	16'-0"	1120.06
3	4'-4⅝"	16'-0"	1119.60
4	4'-4⅛"	23'-0"	1112.02
5	4'-5"	25'-6"	1109.02
6	4'-4⅛"	22'-0"	1112.31
7	4'-6"	19'-6"	1114.62

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	①NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER	
				PLAN	②FUTURE
	YEARS	CFS	FEET	FEET	FEET
Design	050	12,920	1130.0	1130.7	1130.9
Base	0100	15,850	1130.6	1131.5	1131.7
Extreme	0500	19,050	1131.3	1132.3	1132.6
Overtopping	>0500	–	–	–	–

① Unconstricted water surface without structures or roadway approaches

② Includes the future bridge of the same length and waterway opening

Drainage area = 19.2 square miles

GENERAL NOTES

BENCH MARK: Cotton picker spindle in root of 18" oak, 26.24' left of Sta. 172+67.64, Elev. 1125.05

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2003 Edition) with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications (Fourth Edition) with 2009 Interim Revisions.

LIVE LOADING: HL93 SEISMIC PERFORMANCE ZONE: 1

MATERIALS AND STRENGTHS:

Class S(AE) Concrete (superstructure)	f'c = 4,000 psi
Class S Concrete (substructure)	f'c = 3,500 psi
Reinforcing Steel (AASHTO M31 or M53, Gr. 60)	fy = 60,000 psi
Structural Steel (AASHTO M270, Gr. 50W)	Fy = 50,000 psi
Structural Steel (AASHTO M270, Gr. 36)	Fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Programs and Contracts Division.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in subsection 802.19 for Class 5 Tined Roadway Surface Finish.

EXPLORATORY HOLES: The Contractor shall drill exploratory holes at Bents 2 and 3 in accordance with Job 040524 SP "Exploratory Holes". The quantities of exploratory holes shown are for bidding purposes only. The actual locations, number, and depths of exploratory holes are to be determined in the field by the Engineer.

STEEL PILING: All piling shall be HP 12X53 (Gr. 50) and shall be driven with an approved air, steam, or diesel hammer into material designated as limestone on the boring legend. All piling shall be driven to a minimum safe bearing capacity of 95 tons per pile. Piles in end bents shall be driven after embankment to bottom of cap is in place. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with Section 805. Actual lengths are to be determined in the field. The Contractor shall use approved steel H-pile driving points on all piles.

Minimum penetration for piling in end bents shall be 9' below natural ground. Minimum penetration for piling in interior bents shall be 9' below bottom of footing.

PREBORING: Preboring is required for all piling in Bents 2 and 3 if exploratory holes indicate that the depth to rock is less than 9'. Preboring shall be to a minimum 3' depth into material designated as limestone on the boring legend. Quantities of preboring shown are for bidding purposes only. The actual size and depths of preboring are to be determined in the field by the Engineer. The Contractor shall be responsible for keeping prebored holes free from debris prior to backfilling which may require casings or other methods. After driving is completed, the prebored hole shall be backfilled with Class S Concrete to completely fill voids. The backfill and any required casings will not be paid for directly, but shall be considered subsidiary to the item "Preboring".

FOOTINGS: The top of the footings at Bents 2 and 3 shall be set a minimum of 2'-0" below natural ground or at the elevations shown on the plans, whichever is lower. Footings at Bents 4 thru 7 shall be set a minimum of 2'-0" into material designated as limestone on the boring legend and shall have a 2'-0" minimum cover above the top of footing. Foundations for footings shall be prepared in accordance with subsection 801.04. Excavations shall be backfilled and compacted to the level of the existing ground in accordance with subsection 801.08.

Rock excavations shall be made to neat lines of the concrete footings. Care should be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DETAIL DRAWINGS	DRAWING NOS.
End Bents	51001 & 51002
Intermediate Bents	51003 - 51006
Elastomeric Bearings	51007 & 51008
470'-0" Continuous W-Beam Unit	51009 - 51014
Steel Piling	14995A
Type Special Approach Gutters	51015

FOR INFORMATION ONLY

SHEET 1 OF 3

LAYOUT OF BRIDGE OVER MUDDY FORK HWY. 62 BYPASS (GR. & STRS.) (PRAIRIE GROVE) (S) WASHINGTON COUNTY

ROUTE 62 SEC. 1

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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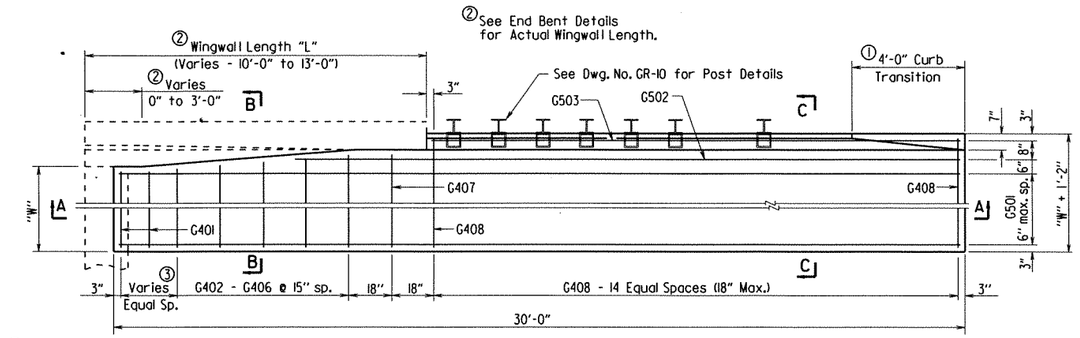
CHECKED BY: DATE: SCALE: 1" = 30'

DESIGNED BY: DATE:

BRIDGE NO. 07178 DRAWING NO. 49899

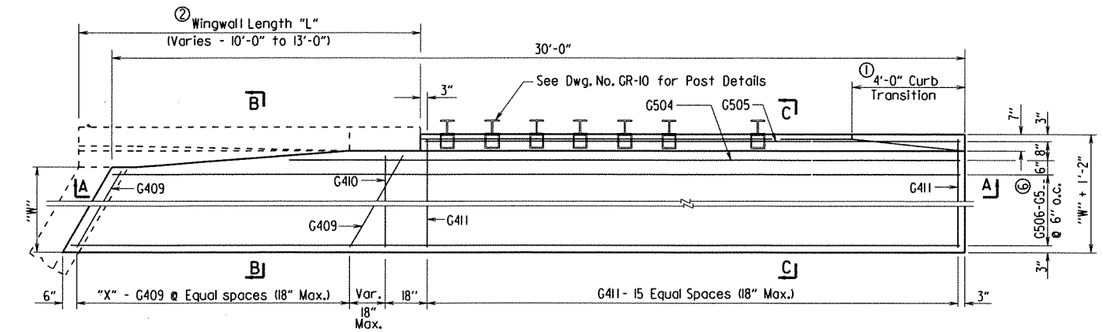
BRIDGE ENGINEER

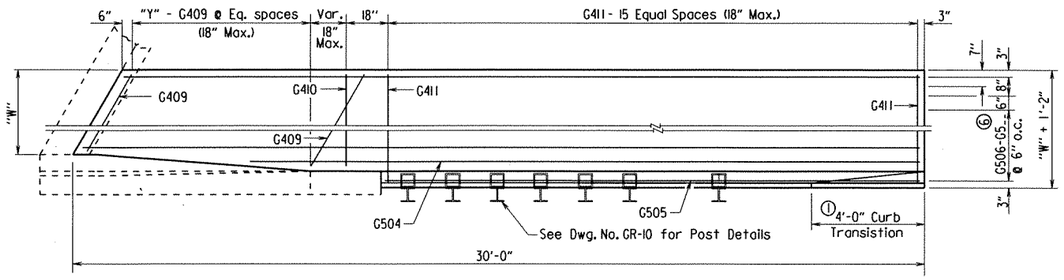
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	139	239
				①	07178	TYPE SPECIAL GUTTERS		49900



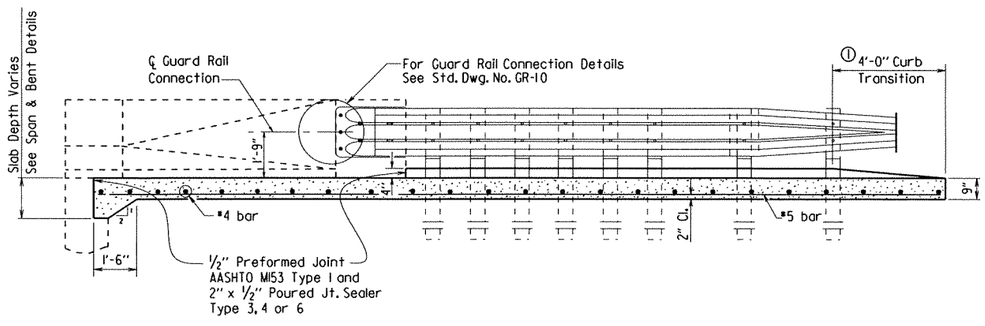
③ Number of G401 bars vary with wingwall length - See Bar List

HALF PLAN OF APPROACH GUTTERS FOR SQUARE BRIDGE





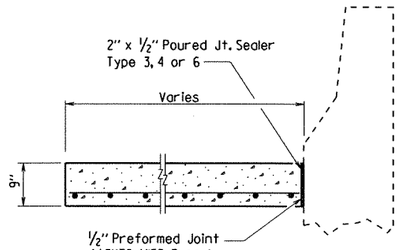
PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE



SECTION A - A

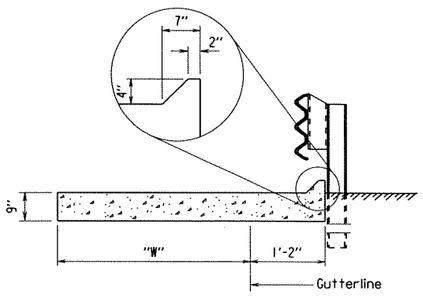
① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.

Construct gutter curb full height (no height-transition) if drop inlet is placed at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



SECTION B - B

N.T.S.



SECTION C - C

N.T.S.

TABLE OF VARIABLES (SKEWED BRIDGES ONLY)

"W" Width	Bridge Skew	"X" No. Req'd.	"Y" No. Req'd.
3 ft.	< 45°	8	8
	≥ 45°	10	
4 ft.	< 45°	9	8
	≥ 45°	11	
6 ft.	< 45°	10	8
	≥ 45°	13	
8 ft.	< 45°	12	8
	≥ 45°	16	

BAR LIST FOR ONE TYPE SPECIAL GUTTER

	Mark	No. Req'd. for Width "W" 3'-0"	4'-0"	6'-0"	8'-0"	Length
Square Bridge	G401	④	④	④	④	"W"- 3"
	G402-G406	1 each	1 each	1 each	1 each	"W"-2" to "W"+3"
	G407	1	1	1	1	"W"+3"
	G408	15	15	15	15	"W"+ 10"
	G501	6	8	12	16	29'-8"
	G502	1	1	1	1	(35'-5") - "L"
	G503	1	1	1	1	30'-8"-"L"
Skewed Bridge	G409	⑥	⑥	⑥	⑥	⑤
	G410	1	1	1	1	"W"+3"
	G411	16	16	16	16	"W"+ 10"
	G504	1	1	1	1	⑤
	G505	1	1	1	1	⑤
	G506 - G5...⑦	1 each	1 each	1 each	1 each	⑤

④ 0 for "L" = 10'
1 for "L" = 11'
2 for "L" = 12'
3 for "L" = 13'

⑦ G511 for "W" = 3'
G513 for "W" = 4'
G517 for "W" = 6'
G521 for "W" = 8'

⑤ Bar Lengths vary with Skew and Wingwall Length.

⑥ See Table of Variables

QUANTITIES FOR ONE SQUARE APPROACH GUTTER

(Based on "L" = 10'-0")

"W" Width (ft.)	Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
3	285	3.38
4	360	4.21
6	512	5.88
8	664	7.55

GENERAL NOTES

Concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcement Steel shall conform to AASHTO M 31 or M 53, Grade 60 (fy = 60,000 psi).

Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

FOR INFORMATION ONLY

BRIDGE ENGINEER

DETAILS OF TYPE SPECIAL APPROACH GUTTERS

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

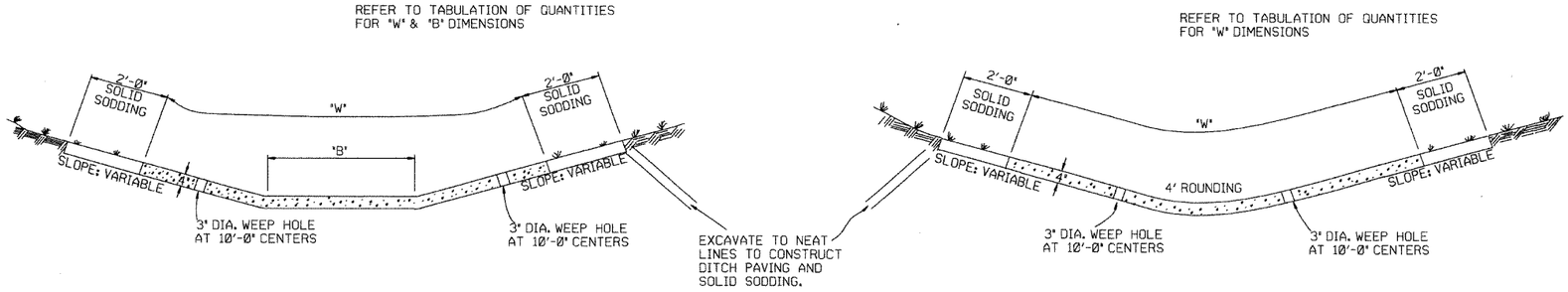
LITTLE ROCK, ARK.

DRAWN BY: A.M.S. DATE: 2/06/07 FILENAME: b040521_ag.dgn

CHECKED BY: DATE: SCALE: 3/8" = 1'-0"

DESIGNED BY: STD. DATE:

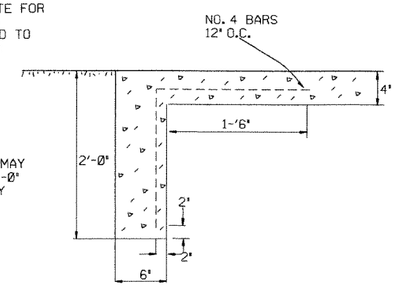
BRIDGE NO. 07178 DRAWING NO. 49900



TYPE A

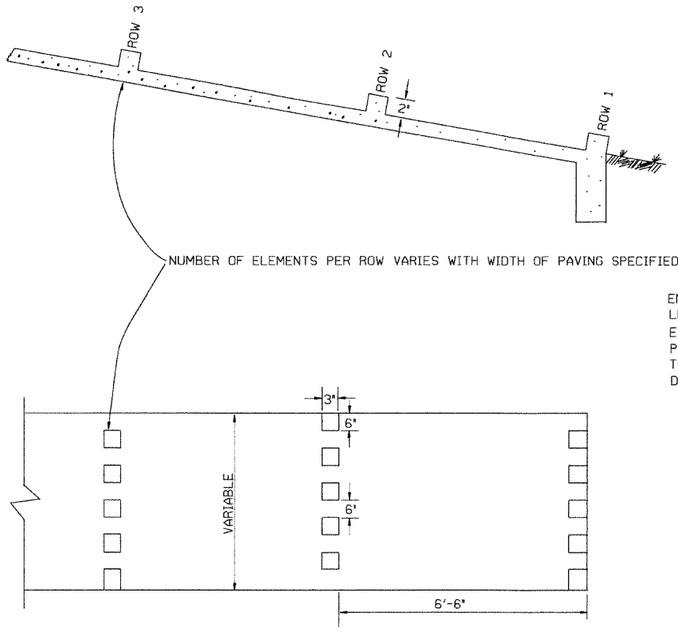
TYPE B

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR "CONCRETE DITCH PAVING."



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

TOE WALL DETAIL FOR CONCRETE DITCH PAVING



ENERGY DISSIPATORS

(NO SCALE)

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

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

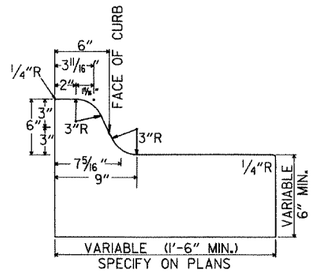
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

DATE	REVISION	DATE FILM'D
11-17-10	ADDED GENERAL NOTE	
6-2-94	ADDED GENERAL NOTE ABOUT SOLID SODDING	
11-30-8	ELIMINATED MIN. ROWS OF ELEMENTS	111-30-89
7-15-88	REVISED DISSIPATOR NOTE	653-7-15-88
4-3-87	REVISED ENERGY DISSIPATOR	671-4-3-87
1-9-87	MODIFIED NOTE ON ENERGY DISS.	532-1-9-87
11-3-86	ADDED NOTE TO ENERGY DISS.	599-12-1-86
11-1-84	ENERGY DISSIPATOR DETAILS ADDED	508-11-1-84
11-1-84	EXCAVATION DETAILS ADDED TYPED A & B	
10-2-72	REVISED AND REDRAWN	508-10-2-72

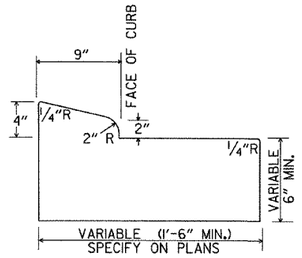
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

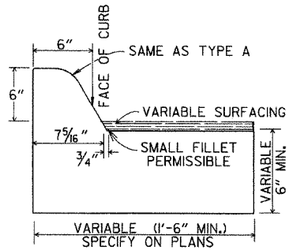
STANDARD DRAWING CDP-1



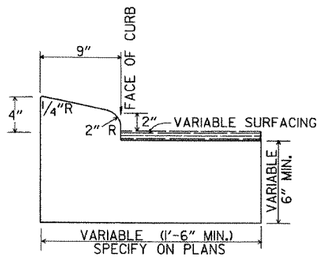
TYPE A



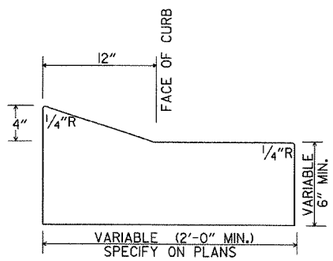
TYPE B-1



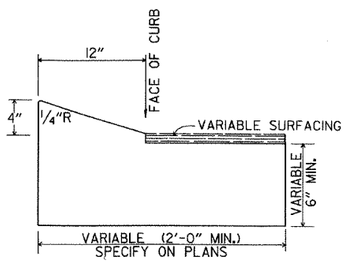
TYPE C



TYPE B-2

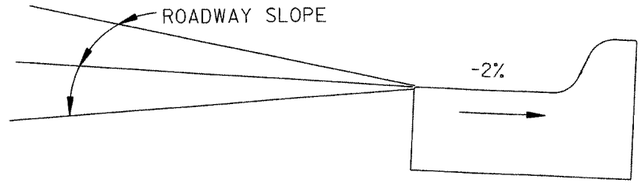


TYPE E-1



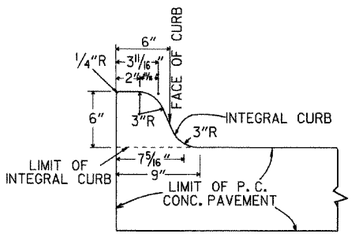
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

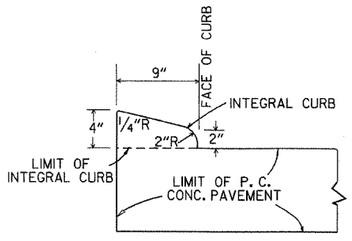


DETAIL OF GUTTER SLOPE

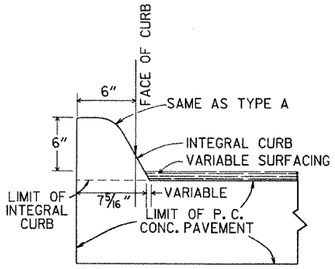
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

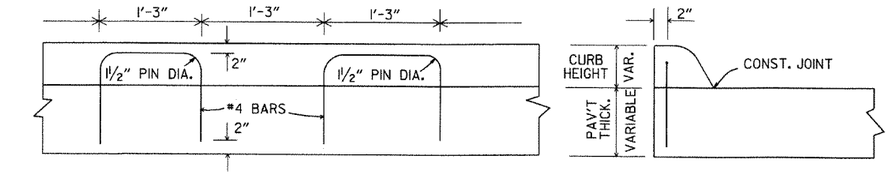


TYPE B

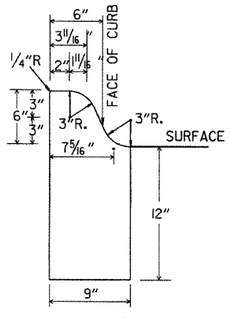


TYPE C

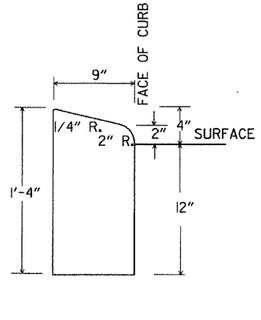
INTEGRAL CURB



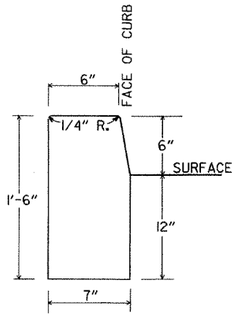
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



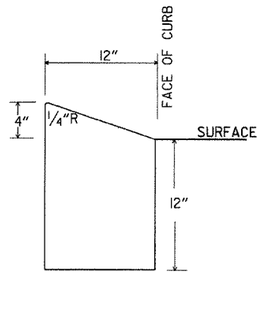
TYPE A



TYPE B

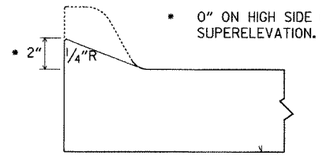


TYPE D



TYPE E

CONCRETE CURB



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

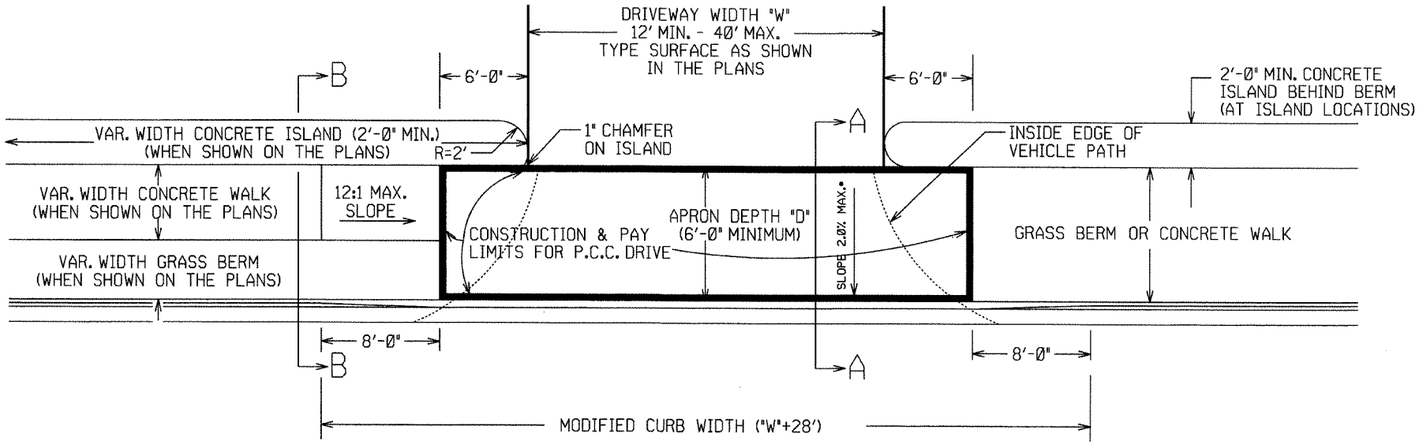
DETAILS OF MODIFIED CURB

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

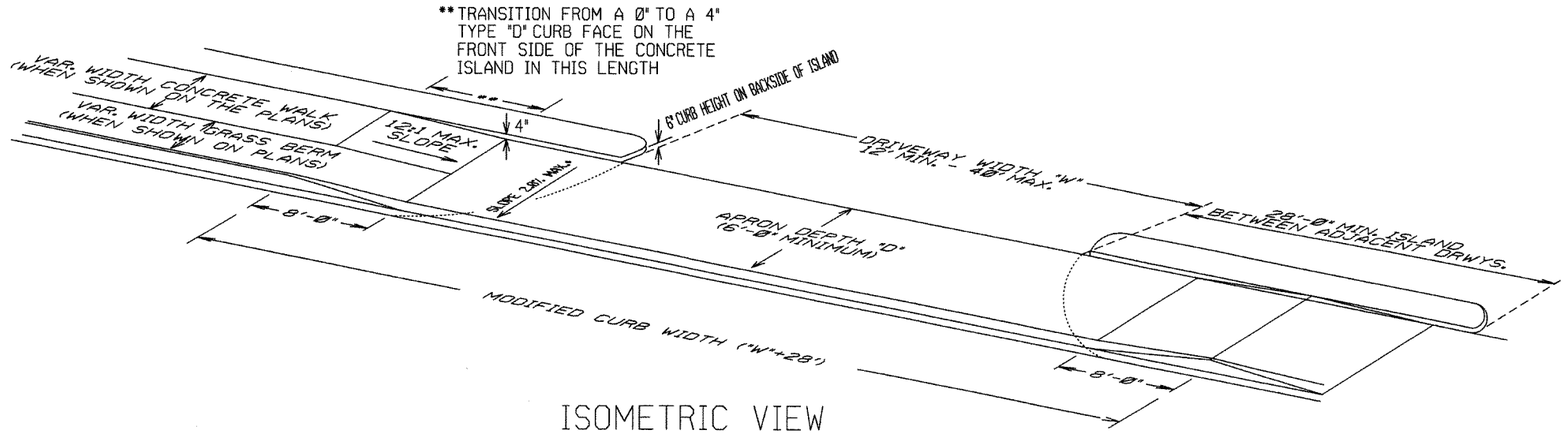
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

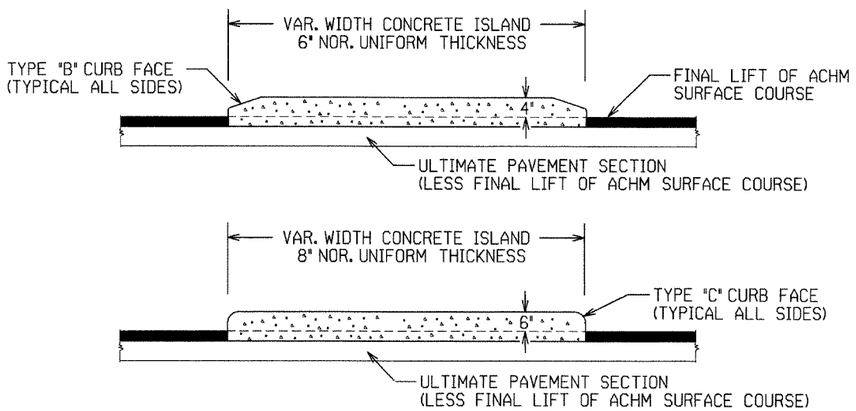
STANDARD DRAWING CG-1



PLAN VIEW

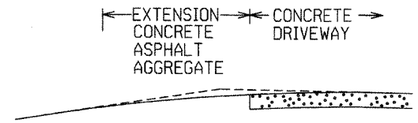


ISOMETRIC VIEW



CURBED ISLANDS FOR CHANNELIZATION

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



EXTENSION TYPICAL SECTIONS

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

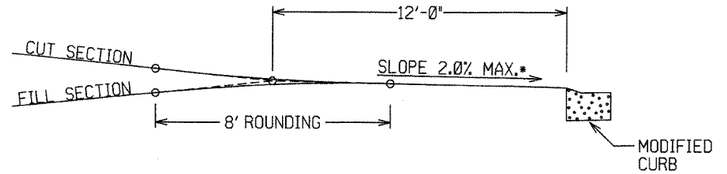
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

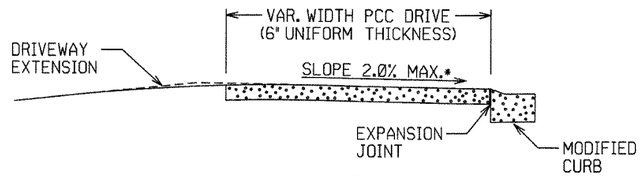
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

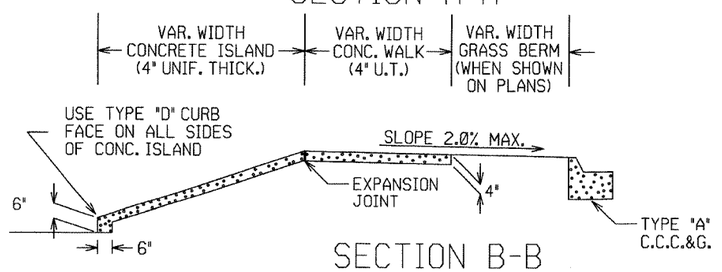


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



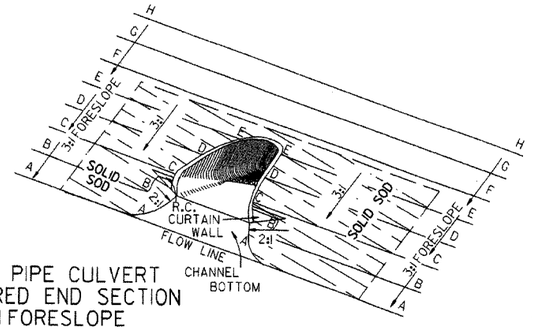
SECTION A-A



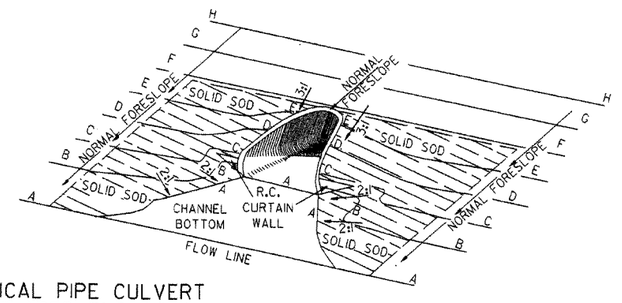
SECTION B-B
CURBED ISLAND BEHIND WALK

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

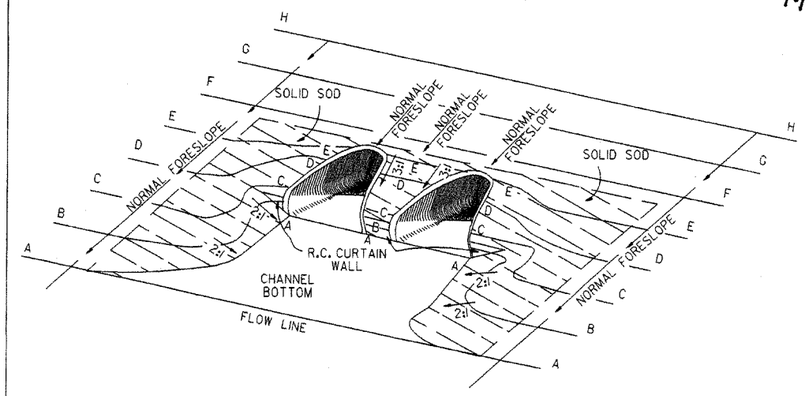
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



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



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

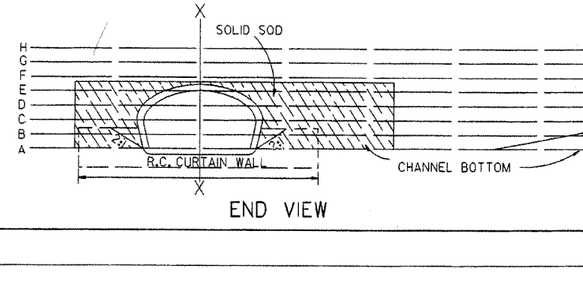
PIPE DIA.	H_1	L_1	L	L (DBL.) / 2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0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

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

REINFORCING STEEL SCHEDULE

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

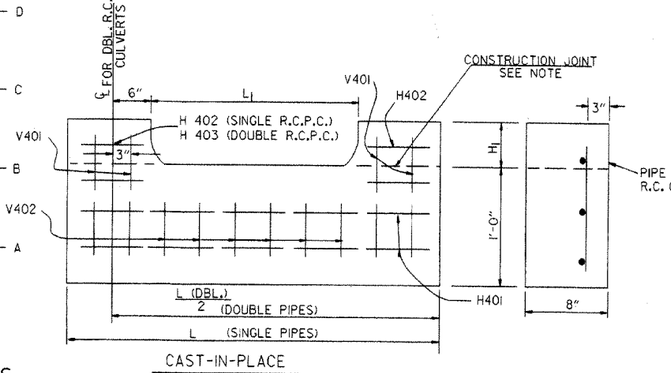
ALL REINFORCING STEEL #4 BARS @ 6" O.C.



PLAN VIEW
3:1 FORESLOPES

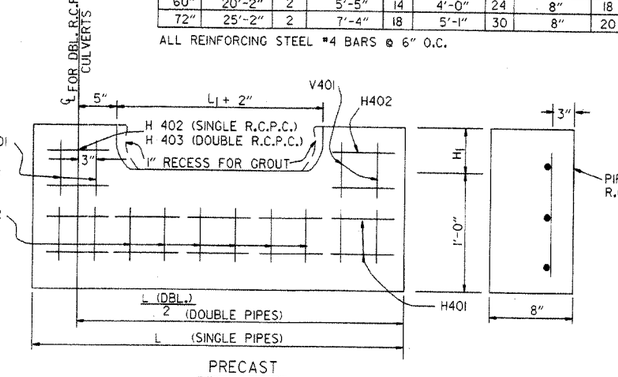
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES



CAST-IN-PLACE

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



PRECAST

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

R.C. CURTAIN WALL DETAILS

SOLID SODDING

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

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

GENERAL NOTES

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

END VIEW

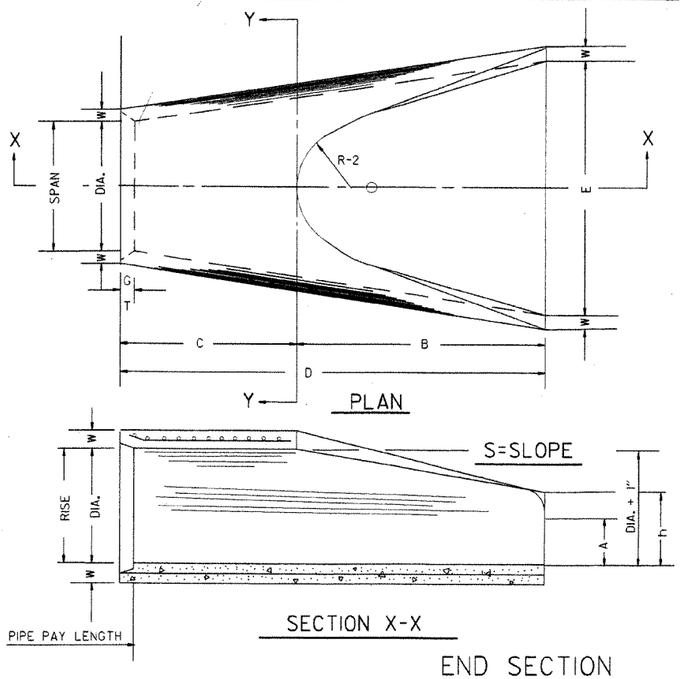
SECTIONAL VIEW "X-X"

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

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

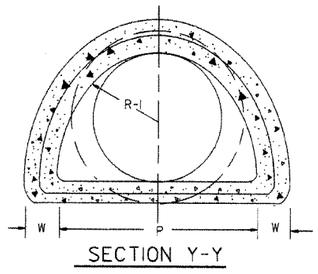
STANDARD DRAWING FES-1



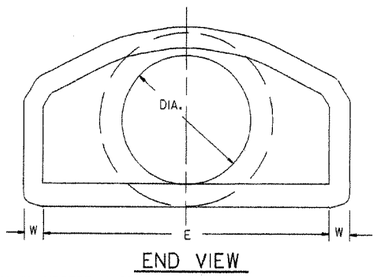
END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. + 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33 3/16"	16 13/16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4 5/8"
36"	4"	1'-3"	5'-3"	2'-10 1/4"	8'-1 3/4"	6'-0"	3:1	37"	47 1/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 1/8"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33 1/8"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 1/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 1/16"	38 5/16"	24"	5"	13250	4'-6"



SECTION Y-Y



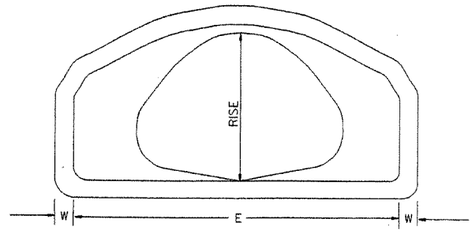
END VIEW

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

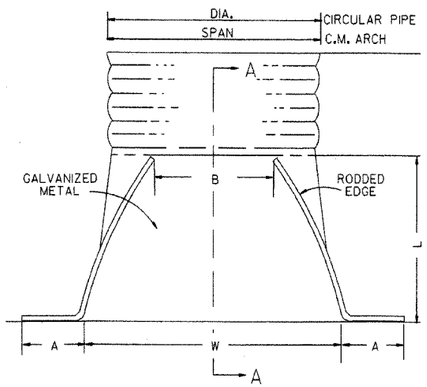
ARCH PIPE

EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½±1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½±1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½±1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 11/16"	15"	2½"	2½±1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 1/16"	20"	3"	2½±1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½±1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½±1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70 5/16"	24"	4¼"	2½±1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2½±1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 1/16"	24"	5"	2½±1

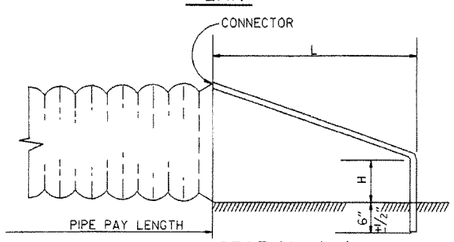
• THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PER CENT FROM THE VALUES SPECIFIED BY AASHTO M 206.



END VIEW
CONCRETE ARCH PIPE

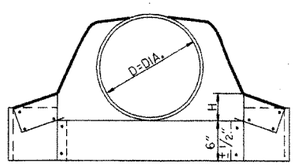


PLAN



SECTION A-A

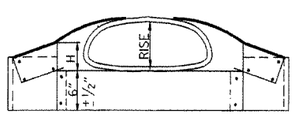
NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.



CIRCULAR PIPE

CIRCULAR PIPE

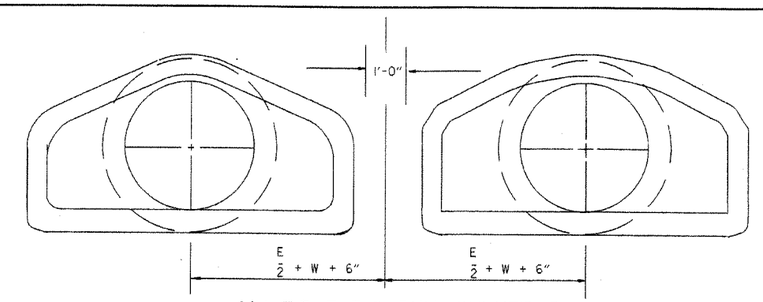
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½±1
15	16	7	8	6	26	30	2½±1
18	16	8	10	6	31	36	2½±1
21	16	9	12	6	36	42	2½±1
24	16	10	13	6	41	48	2½±1
30	14	12	16	8	51	60	2½±1
36	14	14	19	9	60	72	2½±1
42	12	16	22	11	69	84	2½±1
48	12	18	27	12	78	90	2½±1
54	12	18	30	12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



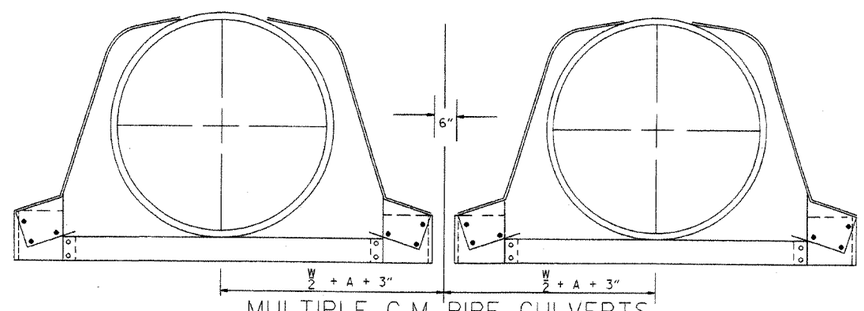
C.M. ARCH PIPE

C.M. ARCH PIPE

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



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

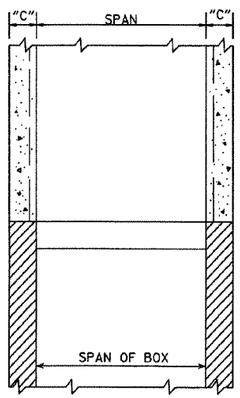
DATE	REVISION	BY
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74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

ARKANSAS STATE HIGHWAY COMMISION

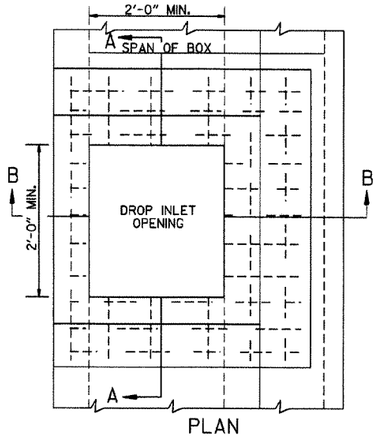
FLARED END SECTION

STANDARD DRAWING FES-2

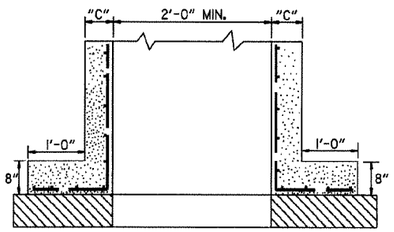
stdfes2.dgn



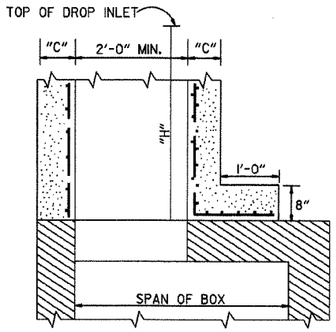
SECTION B-B



PLAN

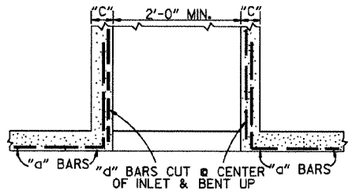


SECTION A-A

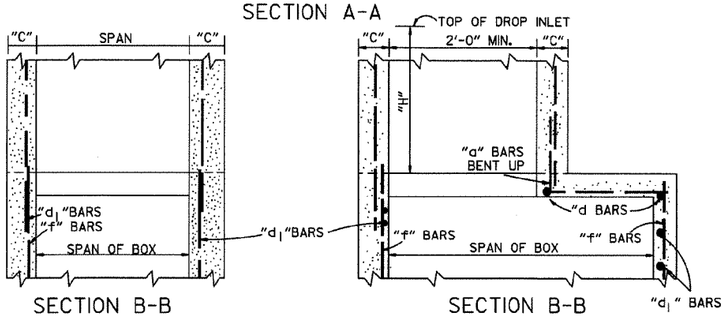


SECTION B-B

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



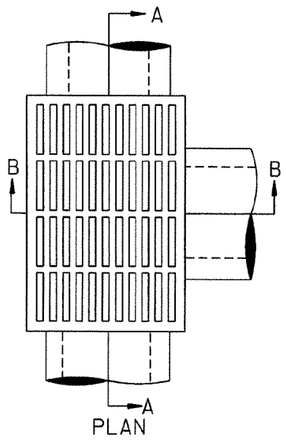
SECTION A-A



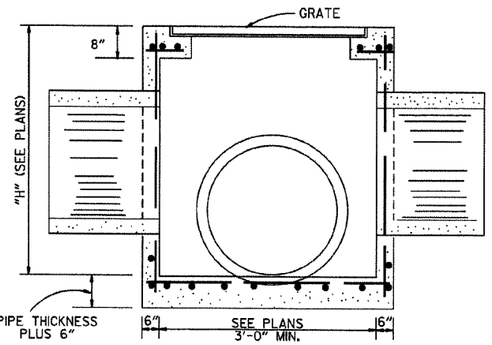
SECTION B-B SECTION B-B

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

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

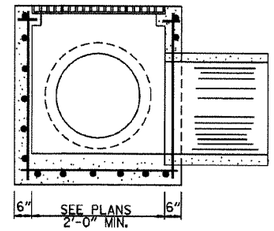


PLAN



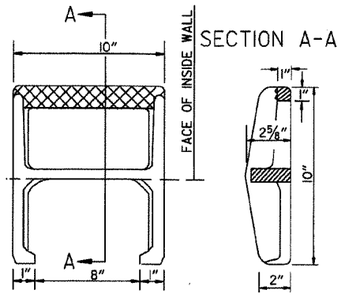
SECTION A-A

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



SECTION B-B

DROP INLET (TYPE E)

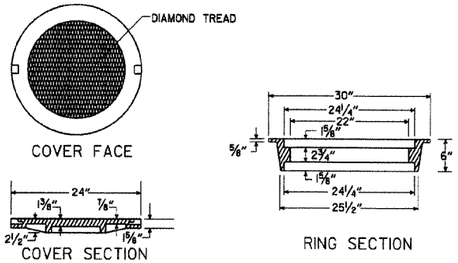


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

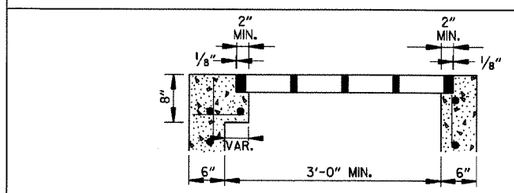
NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

DETAIL OF STEP FOR DROP INLET

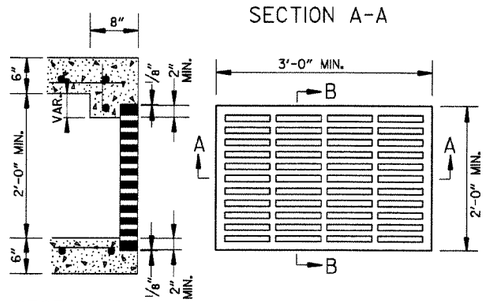


APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



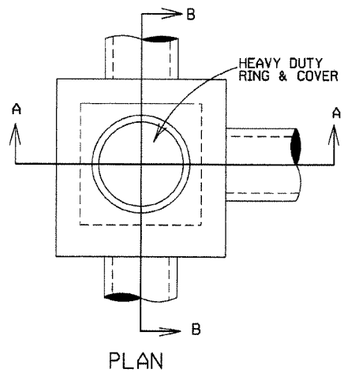
SECTION A-A



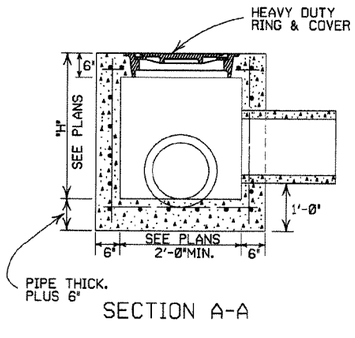
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

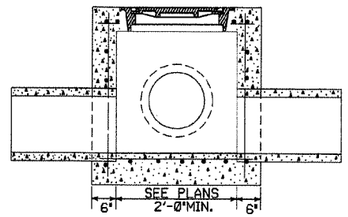


PLAN



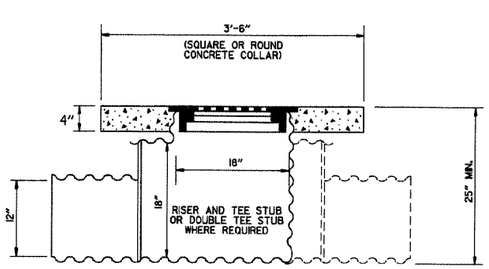
SECTION A-A

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

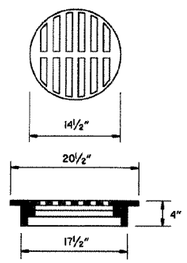


SECTION B-B

JUNCTION BOX (TYPE E)



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



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

DETAIL OF YARD DRAIN

GENERAL NOTES:

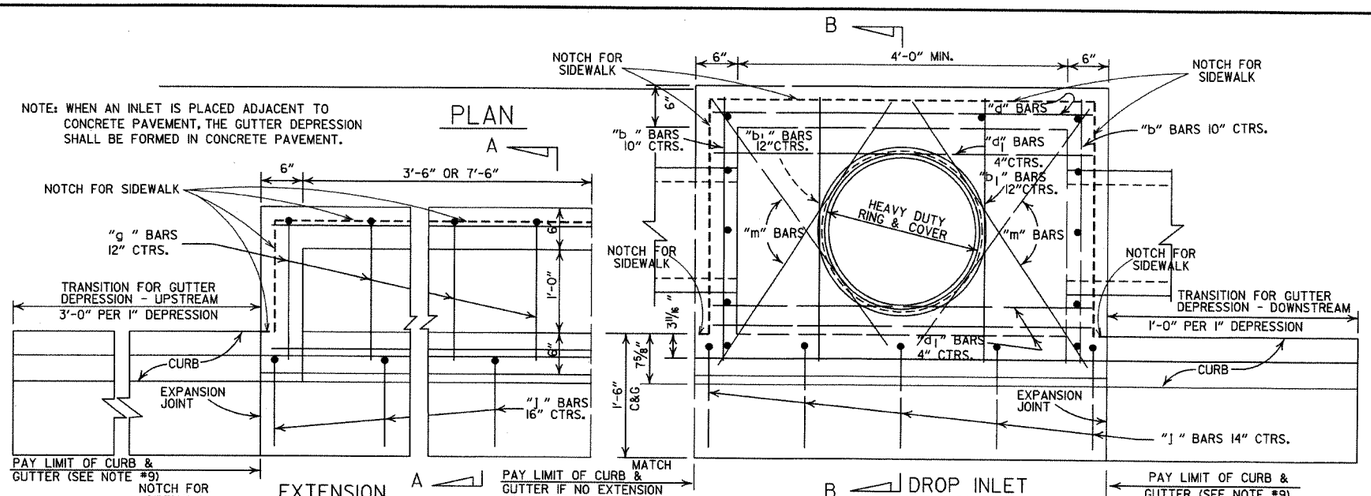
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS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

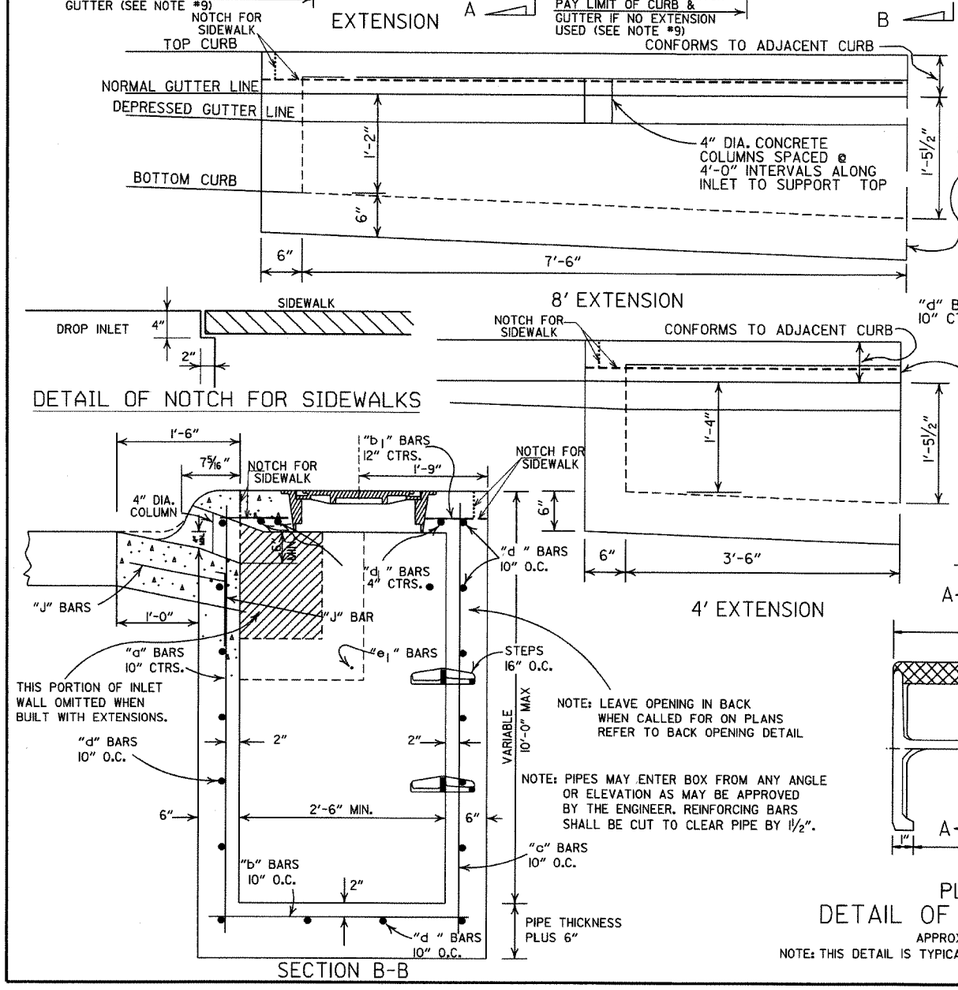
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9





4'-0" LENGTH DROP INLET

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

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

DROP INLET EXTENSION

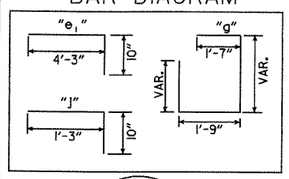
4'-0" CLASS A CONC.	4'-0" REINF. STEEL	8'-0" CLASS A CONC.	8'-0" REINF. STEEL
CU. YDS.	POUNDS	CU. YDS.	POUNDS
0.58	38	0.87	72

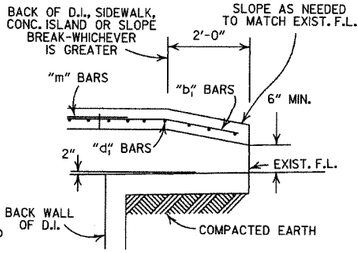
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.

0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET		
INSIDE DIA. PIPE	CLASS A CONC.	REINF. STEEL
INCHES	CU. YDS.	POUNDS
18	0.05	2
24	0.09	3
30	0.13	4
42	0.24	8

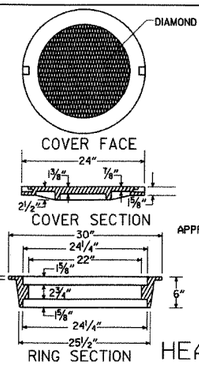
BAR DIAGRAM





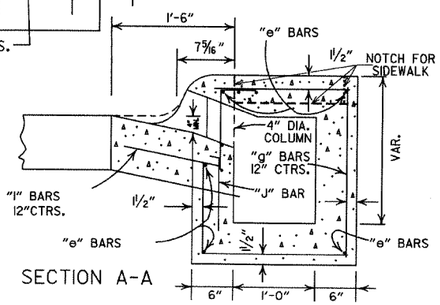
BACK OPENING

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



APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



GENERAL NOTES:
1. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
2. STEPS SHALL BE INSTALLED IN ALL INLETS 4'-0" HIGH AND OVER OF AS APPROVED BY THE ENGINEER.
3. ALL REINF. BARS SHALL BE #4 AND HAVE 1½" COVER.
4. DROP INLETS AND EXTENSION ON CURVED SECTIONS SHALL CONFORM TO THE CURVATURE OF THE CURB.
5. THIS DROP INLET MAY BE CONSTRUCTED ON NEW OR EXISTING R.C. BOX CULVERT AS SHOWN ON F.P.C.-9.
6. WHEN PLANS CALL FOR DROP INLET OVER 10'-0" HIGH, FLOOR AND WALLS SHALL BE CONSTRUCTED AS SHOWN FOR TYPE "RM" DROP INLET (F.P.C.-9D).
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. DURING CONSTRUCTION OF THE ROADWAY THE CONTRACTOR SHALL MAINTAIN DRAINAGE INTO OR AROUND THE DROP INLET AS APPROVED BY THE ENGINEER.
9. PAYMENT FOR CURB AND/OR CURB AND GUTTER WITHIN THE LIMITS OF DROP INLETS AND DROP INLET EXTENSIONS SHALL BE CONSIDERED INCLUDED IN PAYMENT MADE FOR DROP INLETS AND/OR DROP INLET EXTENSIONS.
10. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
11. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
12. 4"x2" NOTCH SHALL BE FORMED IN ALL DROP INLETS TO SUPPORT SIDEWALK CONSTRUCTION. REFER TO DETAIL OF NOTCH FOR SIDEWALKS.
13. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

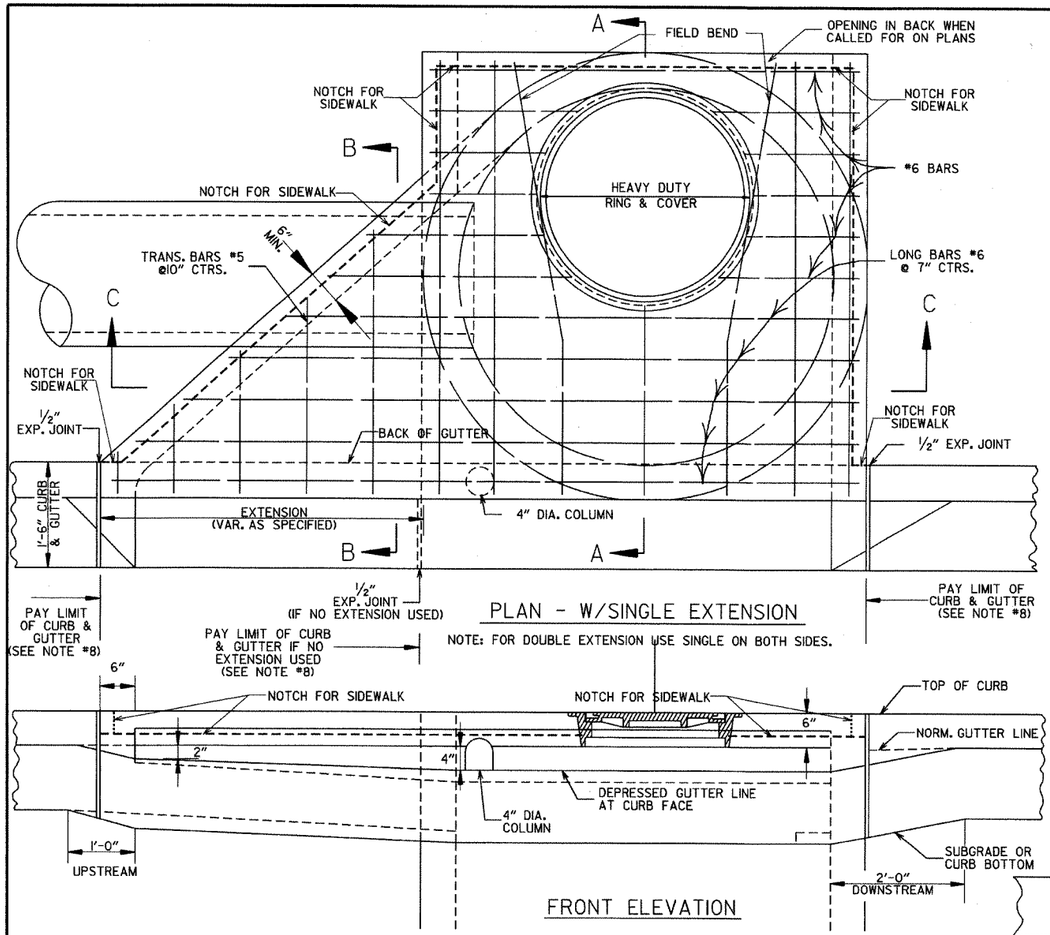
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER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

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

(TYPE C)

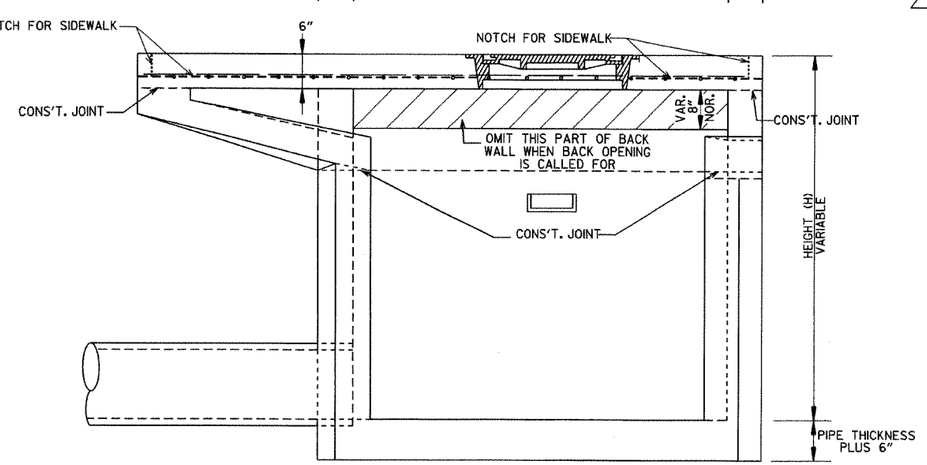
STANDARD DRAWING FPC-9E



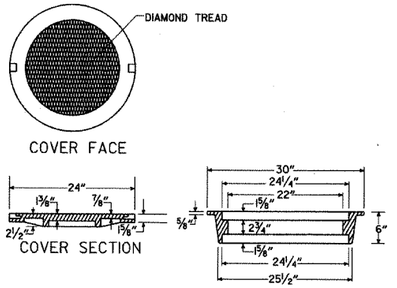
PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION



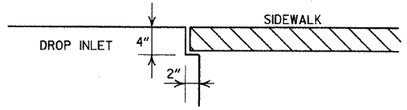
SECTION C-C



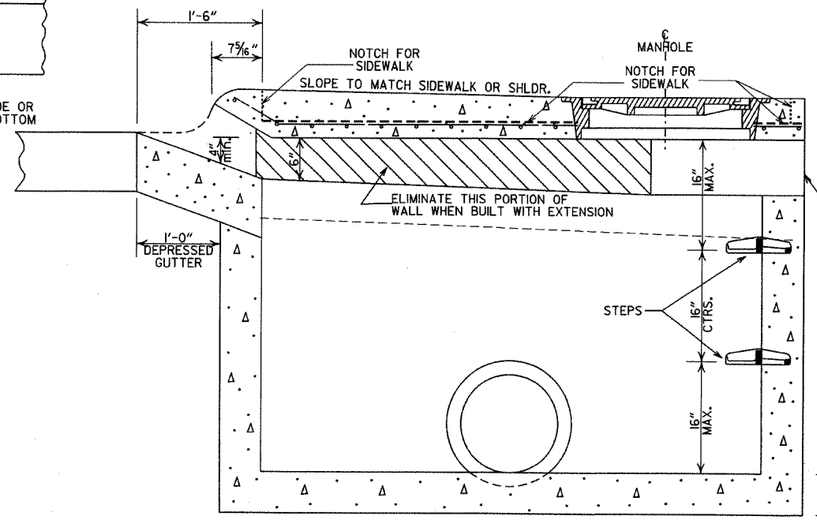
APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER

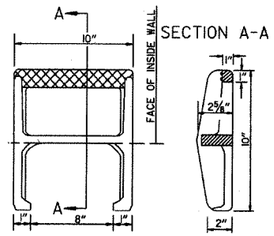
1. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
2. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
3. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON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



DETAIL OF NOTCH FOR SIDEWALKS



SECTION A-A

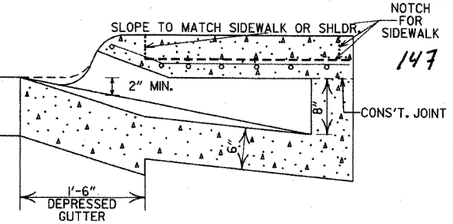


APPROX. WEIGHT = 11 LBS. (CAST IRON)

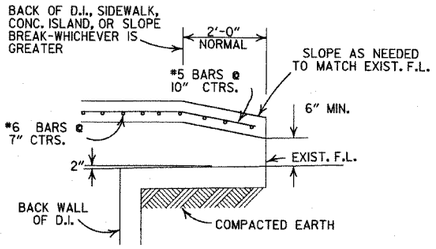
PLAN

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

DETAIL OF STEP FOR DROP INLET



SECTION B-B



BACK OPENING

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

GENERAL NOTES:

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

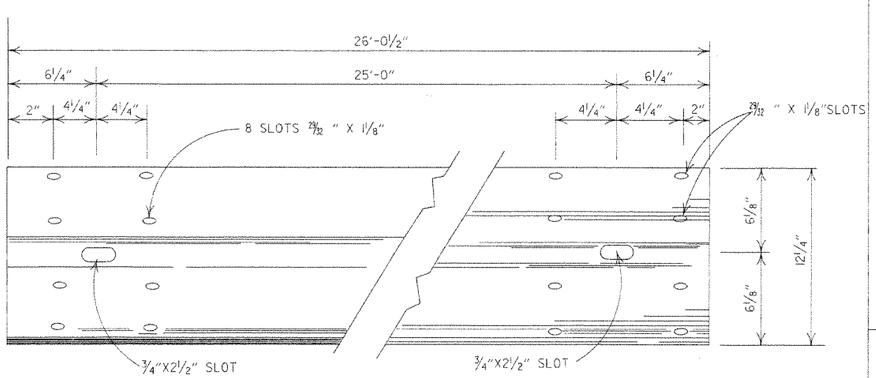
DIA. OF D.I.	DIA. OF OUTLET PIPE	MINIMUM WALL THICKNESS	
		CAST IN PLACE	PRECAST
4' I.D.	12" THRU 27"	6"	5"
5' I.D.	30" THRU 42"	8"	6"
6' I.D.	48" THRU 54"	8"	7"

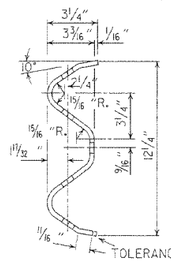
DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-96	ADDED NOTE 11 & ADJ. OPENING DIMENSION	
10-12-95	CORRECTED *6 BAR SPACING	
7-20-95	CORRECTED DIAMETER OF R.I. IN BOX	
7-7-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
9-1-93	REV. BACK OPEN DETAIL & NOTE	9-1-93
8-15-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO.12	11-30-89
5-23-89	ADDED NOTE 8 MINIMUM WALL THICKNESS	5-23-89
7-15-88	ADDED EXTEND NOTE TO SECTION A-A	6355-7-15-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	4-6-12-87

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

STANDARD DRAWING FPC-9M

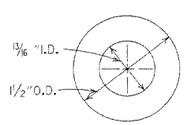




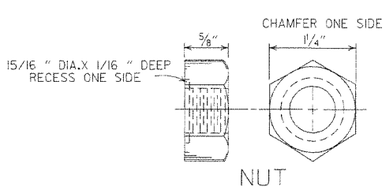
DETAILS OF W-BEAM GUARD RAIL

RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.

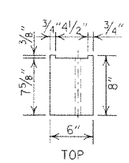
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



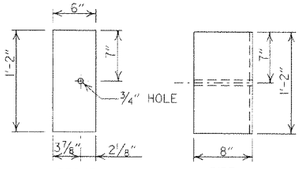
CUT STEEL WASHER



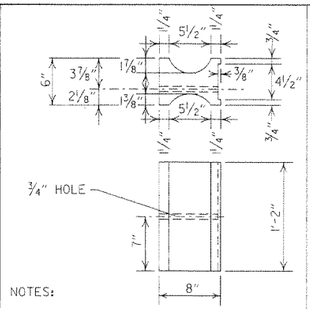
NUT



WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"x1'-2" WITH NO NOTCH REQUIRED.

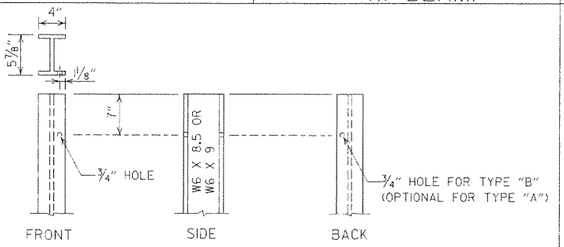


WOOD BLOCKOUT (W-BEAM)

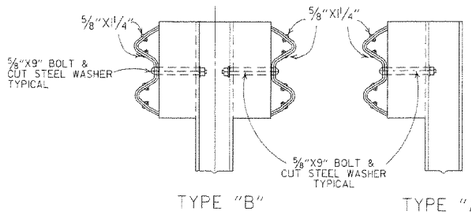


NOTES:
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)



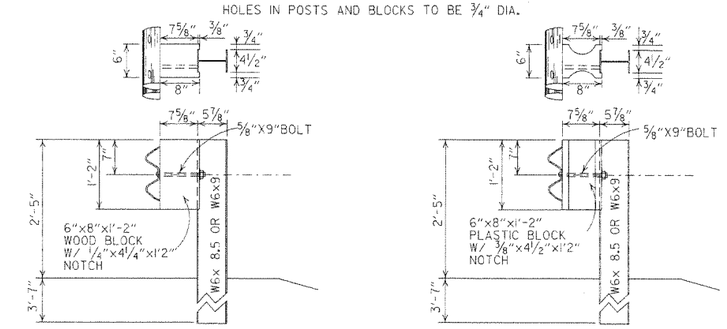
STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

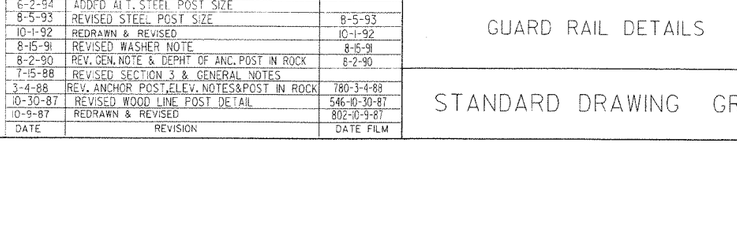
HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.



WOOD BLOCKOUT CONNECTIONS — PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE 3/4" DIA.



POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - 1/4".

WOOD BLOCKOUT CONNECTIONS — PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF WOOD 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 3/4" 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 9.7# (1400 f) OR NO.1 1350 f SOUTHERN PINE.

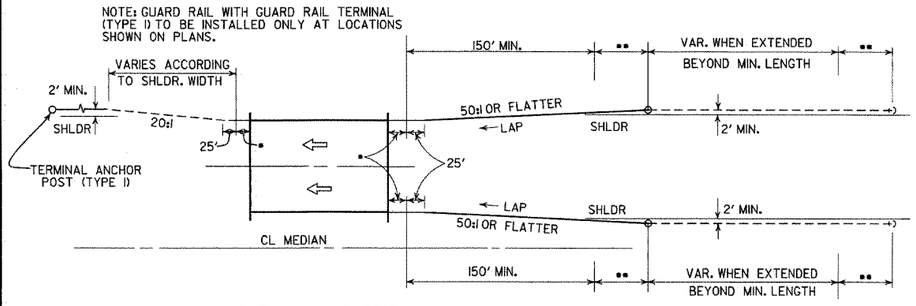
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
10-15-09	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	
1-12-00	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 & DEPHT 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
10-9-87	REDRAWN & REVISED	802-10-9-87

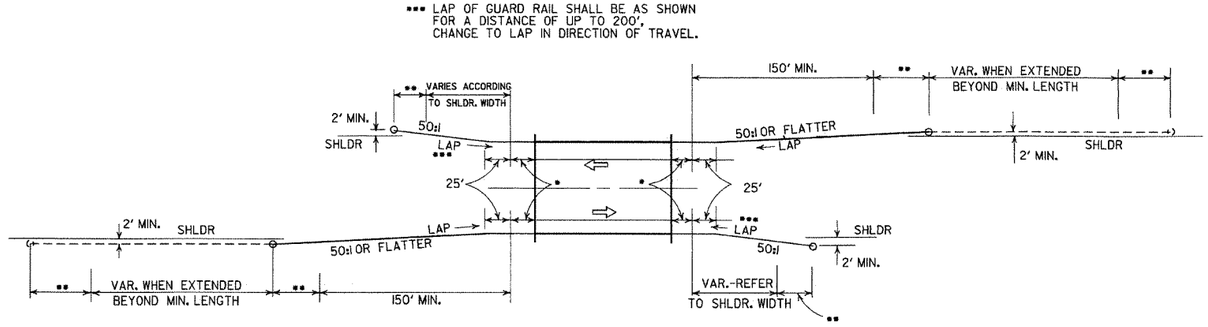
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8



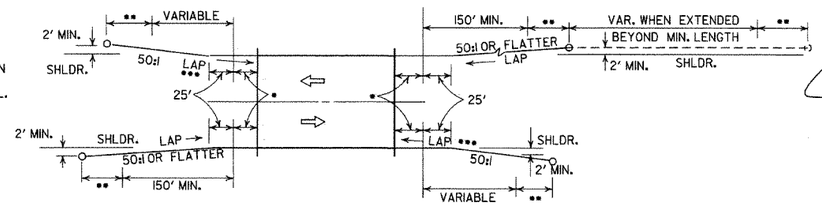
ONE-WAY TRAFFIC



TWO-WAY TRAFFIC

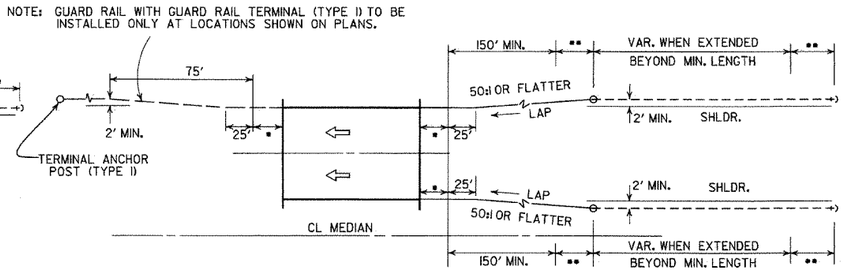
METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

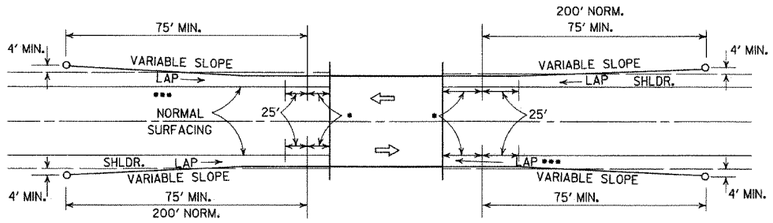
NOTE: GUARD RAIL WITH GUARD RAIL TERMINAL (TYPE I) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

METHOD OF INSTALLATION OF GUARD RAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

••• LAP OF GUARD RAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200', CHANGE TO LAP IN DIRECTION OF TRAVEL.



METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

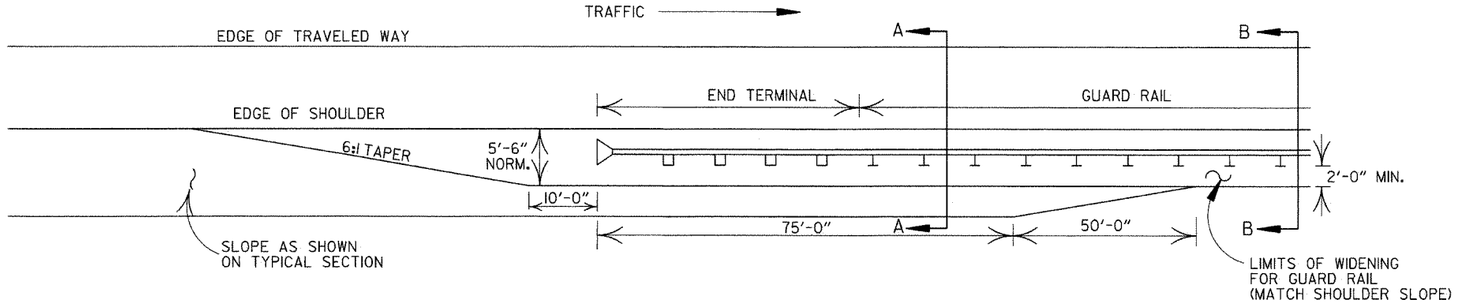
- ▪ THRIE BEAM GUARD RAIL TERMINAL
- ▪▪ GUARD RAIL TERMINAL (TYPE 2)

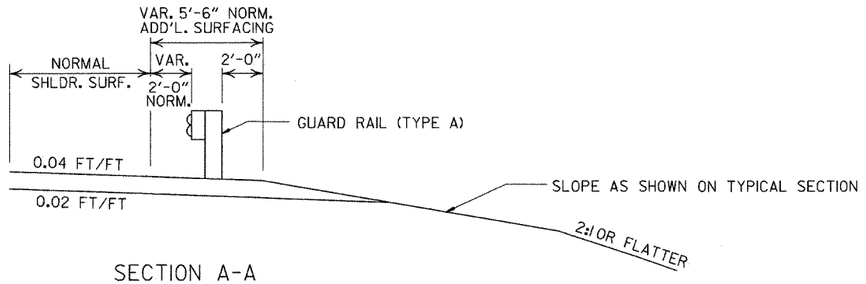
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

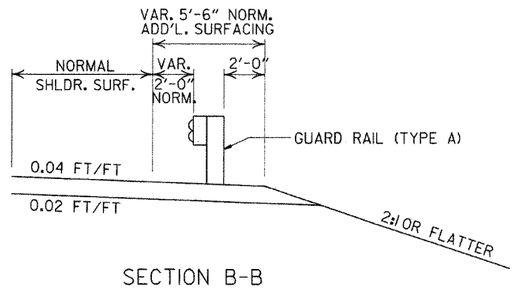
GUARD RAIL DETAILS

STANDARD DRAWING GR-9





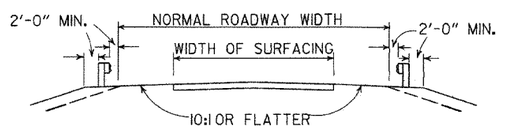
SECTION A-A



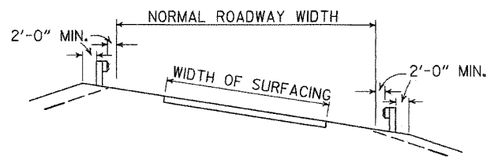
SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

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

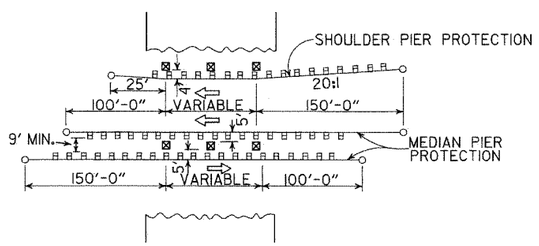


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



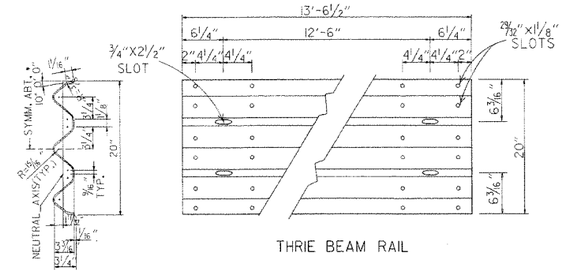
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

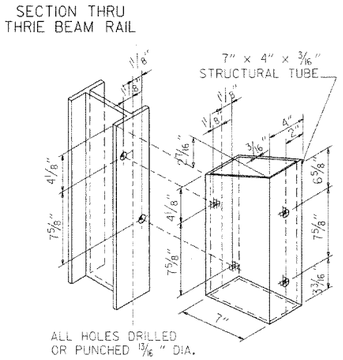
ARKANSAS STATE HIGHWAY COMMISSION

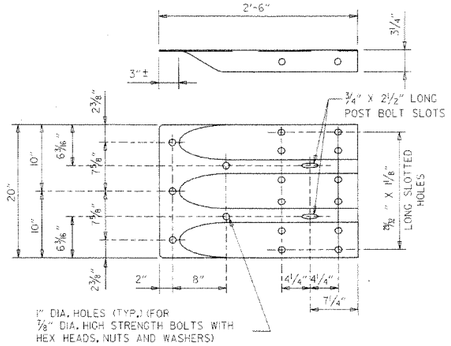
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A



THRIE BEAM RAIL

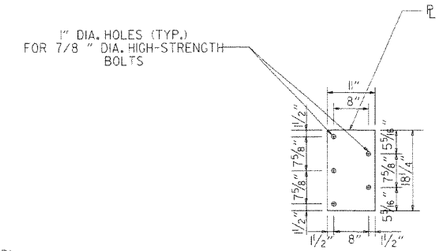




SPECIAL END SHOE

ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.

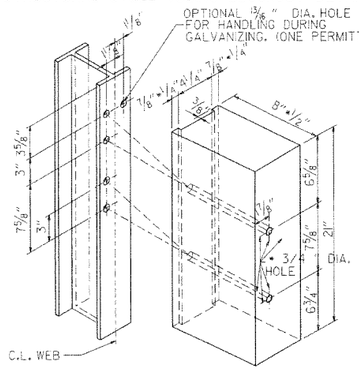
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



CONNECTOR PLATE

NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.

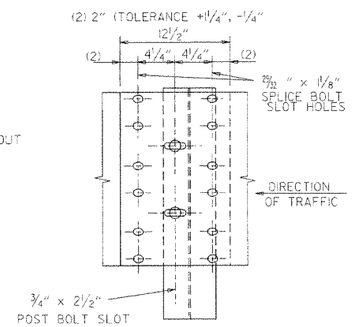
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



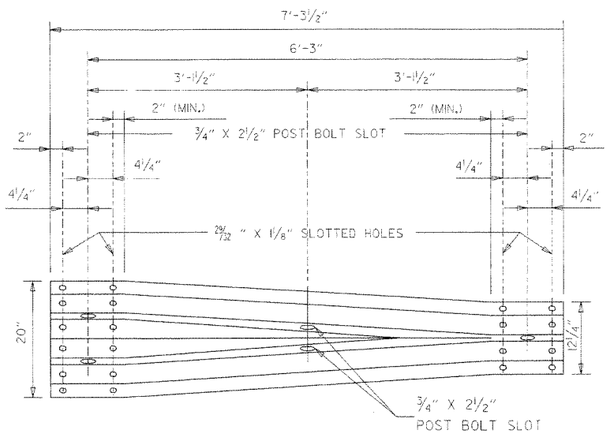
ALL HOLES 1⅛" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD
OR PLASTIC BLOCKOUTS

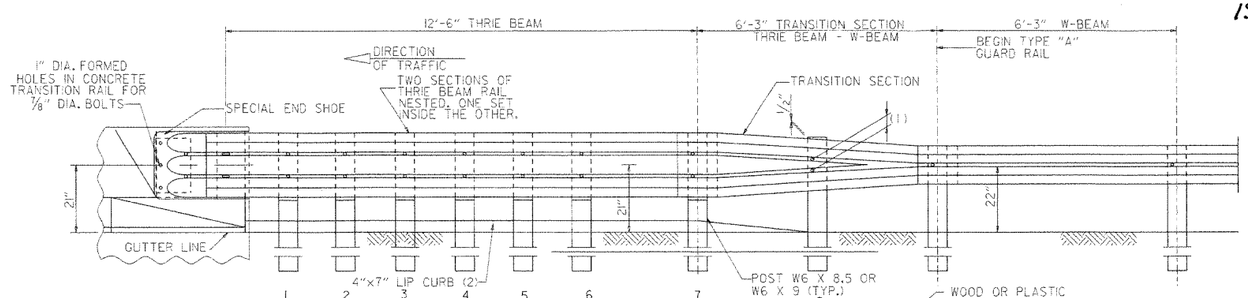
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



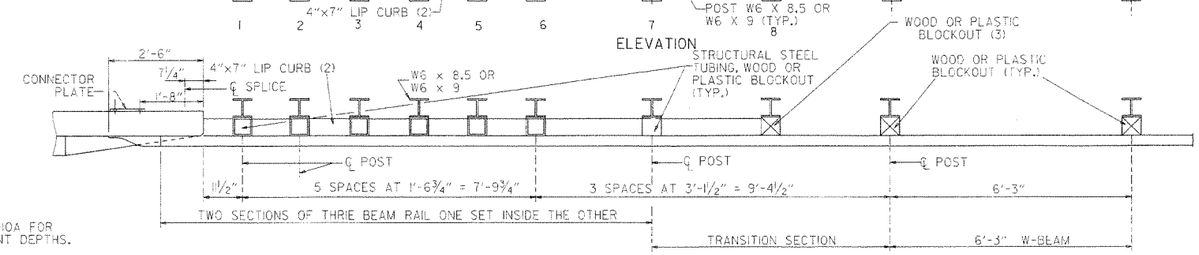
THRIE BEAM RAIL
SPLICE AT POST



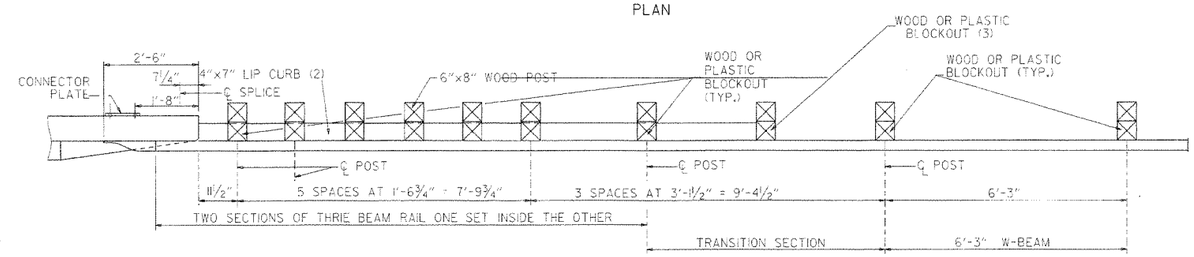
TRANSITION SECTION



ELEVATION



PLAN



PLAN

(1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
(2) REFER TO APPROACH GUTTER DETAILS.
(3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-11.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7# (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

REFER TO STD. DRWG. GR-10A FOR POST DETAILS.

USE THRIE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

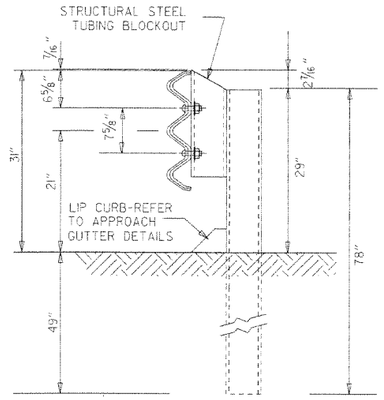
THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
4-10-03	REVISED GENERAL NOTES	
8-22-02	REVISED NOTE (2)	
6-29-00	MOVED DIMENSION LINES	
5-18-00	ADDED NOTE	
3-30-00	DRAWN & ISSUED	

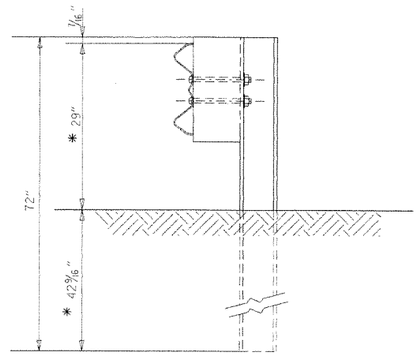
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

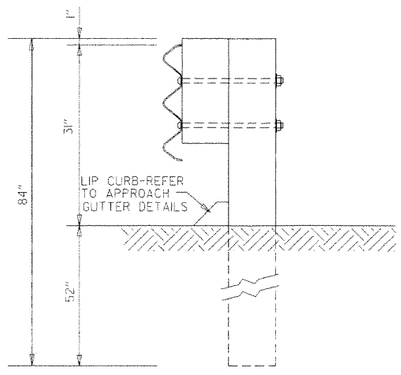


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

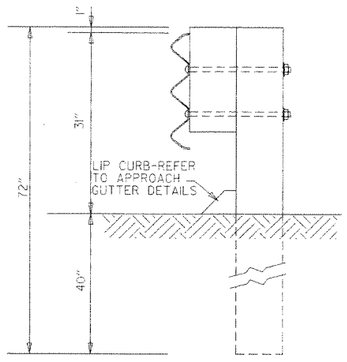


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

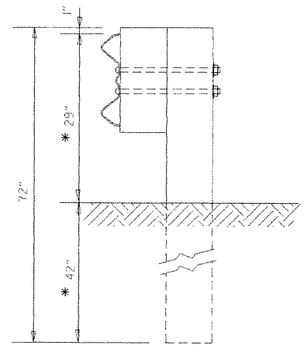
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUT & WOOD POST
POST 7



W-BEAM TO THRIE BEAM
TRANSITION RAIL WITH WOOD OR
PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

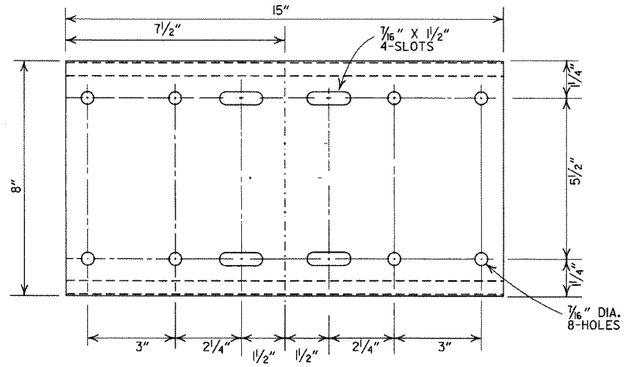
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	DATE FILM
7-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
8-22-02	REVISED LIP CURB NOTE	
3-30-00	DRAWN & ISSUED	

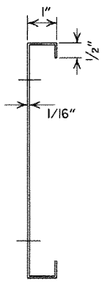
ARKANSAS STATE HIGHWAY COMMISSION

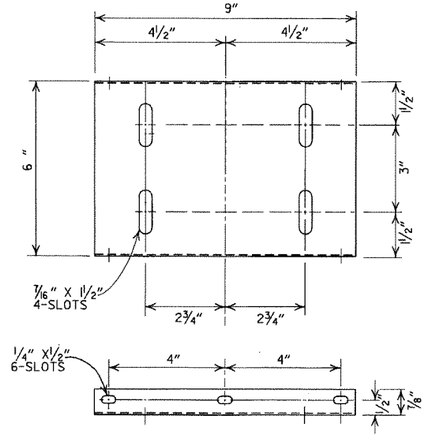
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A

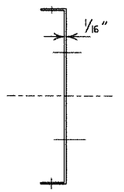


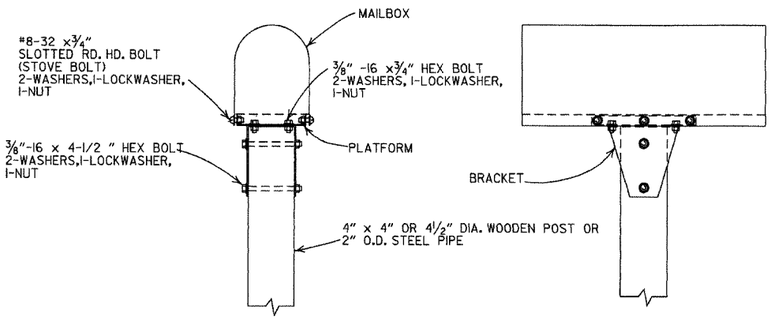
SHELF



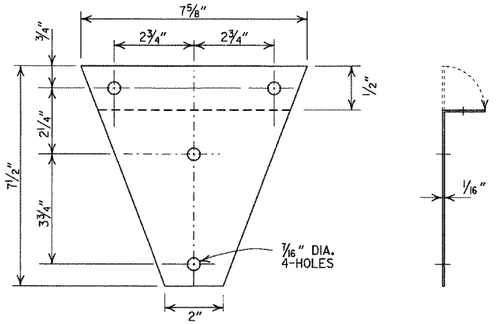


PLATFORM





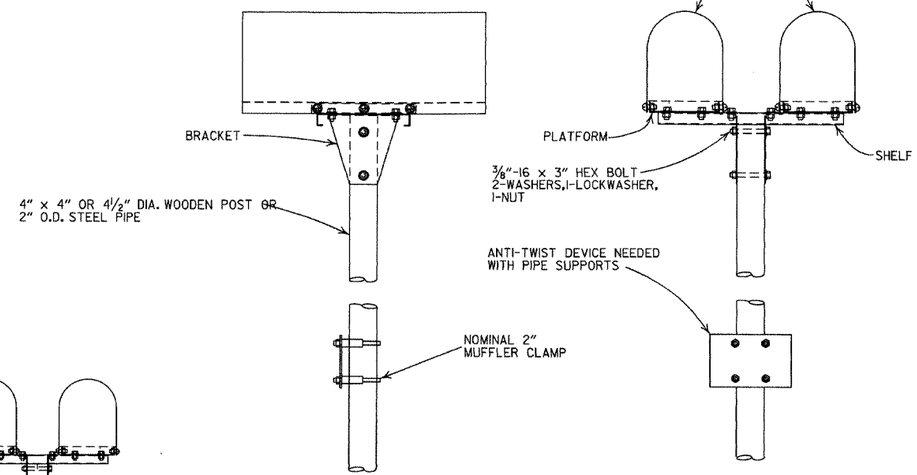
SINGLE INSTALLATION



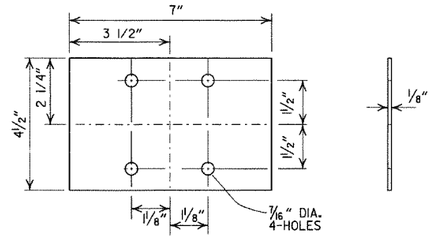
BRACKET

GENERAL NOTES

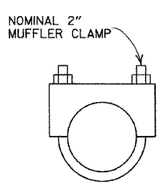
1. MAILBOX POSTS MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 637.02 OF THE STANDARD SPECIFICATIONS.
2. ANTI-TWIST PLATES SHALL BE USED ONLY ON METAL POSTS.
3. MAILBOX SHELF, BRACKET & PLATFORM SHALL BE GALVANIZED OR PAINTED STEEL, HOWEVER TREATED WOOD MAY BE USED WITH WOODEN POSTS. THE WOODEN SHELF, BRACKET & PLATFORM SHALL BE A MINIMUM OF ¾" THICK AND SHALL BE ASSEMBLED WITH BOLTS OF THE APPROPRIATE LENGTH WITH SIX 8 X 2½" 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.



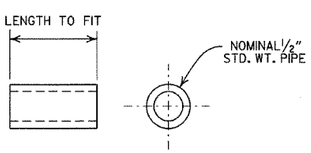
DOUBLE INSTALLATION



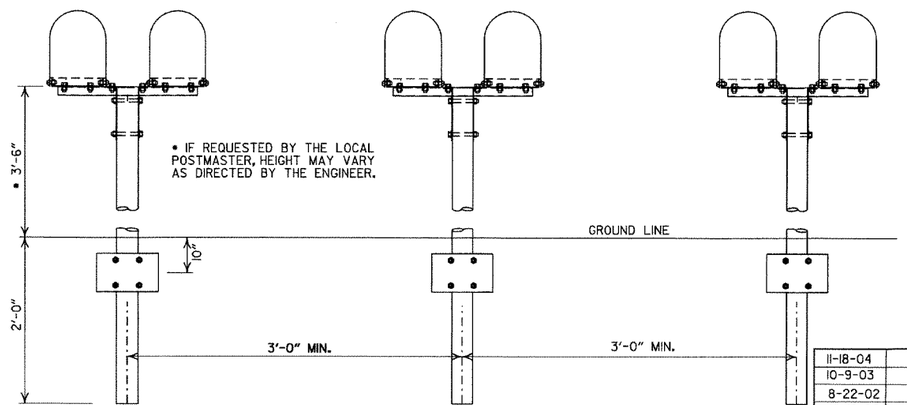
ANTI-TWIST PLATE



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	20-7-15-88	ISSUED

ARKANSAS STATE HIGHWAY COMMISSION

MAILBOX DETAILS

STANDARD DRAWING MB-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	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

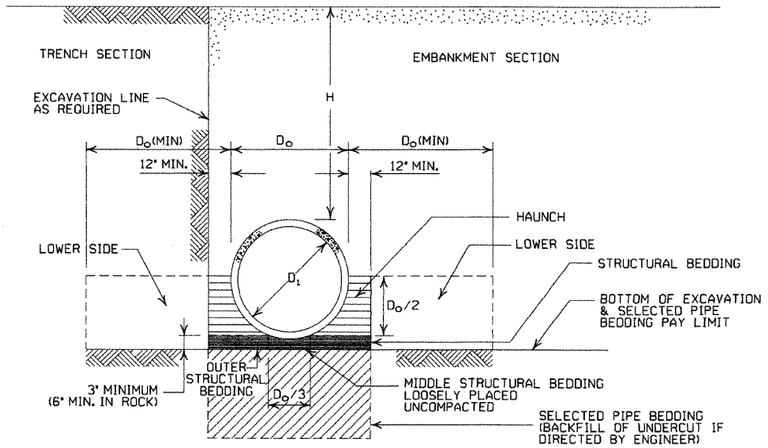
- LEGEND -

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

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

* SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. CONCRETE PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. ALL PIPE SHALL CONFORM TO SECTION 606. CIRCULAR R.C. PIPE CULVERTS SHALL CONFORM TO AASHTO M170, R.C. ARCH PIPE CULVERTS SHALL CONFORM TO AASHTO M206 AND HORIZONTAL ELLIPTICAL PIPE CULVERTS SHALL CONFORM TO AASHTO M207.
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. NOT MORE THAN ONE LIFTING HOLE MAY BE PROVIDED IN CONCRETE PIPE TO FACILITATE HANDLING. HOLE MAY BE CAST IN PLACE, CUT INTO THE FRESH CONCRETE AFTER FORMS ARE REMOVED, OR DRILLED. THE HOLE SHALL NOT BE MORE THAN TWO INCHES IN DIAMETER OR TWO INCHES SQUARE. CUTTING OR DISPLACEMENT OF REINFORCEMENT WILL NOT BE PERMITTED. SPALLED AREAS AROUND THE HOLE SHALL BE REPAIRED IN A WORKMANLIKE MANNER. LIFTING HOLE SHALL BE FILLED WITH MORTAR, CONCRETE, OR OTHER METHOD AS APPROVED BY THE ENGINEER.
9. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS THE HAUNCH), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CORRUGATED METAL PIPE ARCHES

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

CONSTRUCTION SEQUENCE

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

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

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

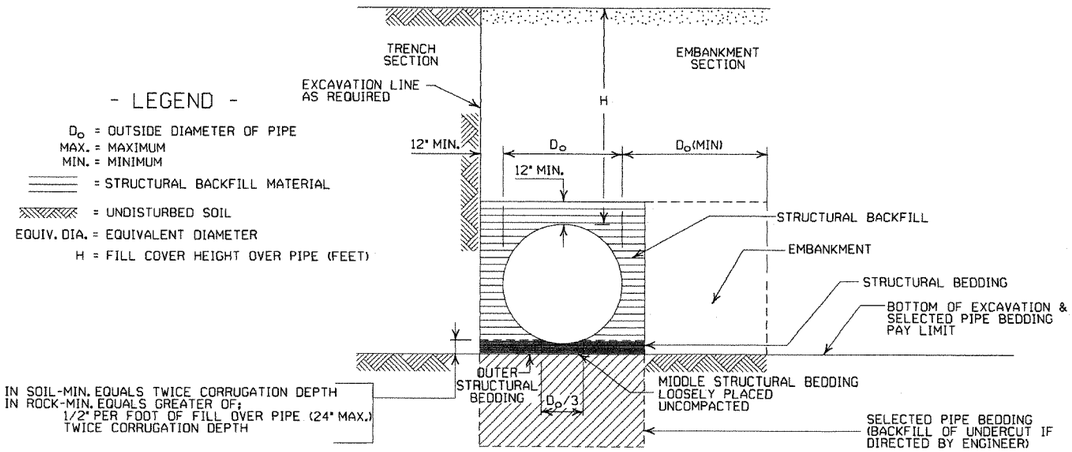
③ SM-3 WILL NOT BE ALLOWED.

EQUIVALENT METAL THICKNESSES AND GAUGES

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

- LEGEND -

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

1. METAL PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2003 EDITION), WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS. UNLESS OTHERWISE NOTED IN THE PLANS, SECTION AND SUBSECTION REFER TO THE STANDARD CONSTRUCTION SPECIFICATIONS.
2. METAL PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. METAL PIPE CULVERT MATERIALS AND INSTALLATIONS SHALL CONFORM TO SECTION 606 AND JOB SPECIAL PROVISION "METAL PIPE".
4. ALL PIPE SHALL BE PROTECTED DURING CONSTRUCTION BY A COVER SUFFICIENT TO PREVENT DAMAGE FROM PASSAGE OF EQUIPMENT.
5. THE MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 24 INCHES. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PRACTICABLE FOR WORKING CONDITIONS.
6. MULTIPLE PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 24 INCHES BETWEEN STRINGS OF PIPE. REFER TO STD. DWG. FES-2 FOR MINIMUM CLEARANCE WHERE FLARED END SECTIONS ARE USED.
7. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
8. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
9. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."

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

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

DATE	REVISION	DATE FILMED
12-15-11	REVISED FOR LRFD DESIGN SPECS	
3-30-00	REVISED INSTALLATIONS	
11-06-97	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCM-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

PIPE DIAMETER	TRENCH WIDTH (FEET) "H" < 10'-0"	TRENCH WIDTH (FEET) "H" >OR= 10'-0"
18"	4'-6"	4'-6"
24"	5'-0"	6'-0"
30"	5'-6"	7'-6"
36"	6'-0"	9'-0"
42"	7'-0"	10'-6"
48"	8'-0"	12'-0"

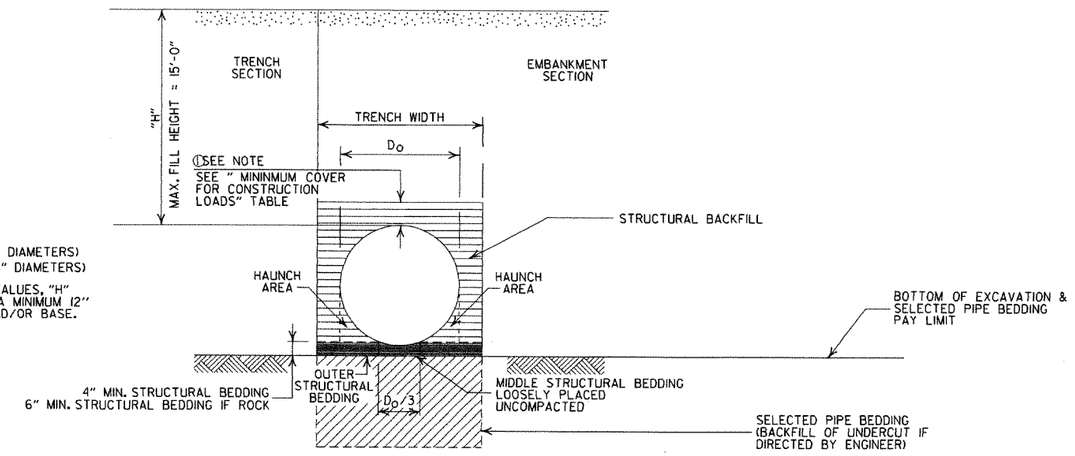
①NOTE:
18" MIN. (18" - 30" DIAMETERS)
24" MIN. (36" - 48" DIAMETERS)

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS 18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
36" OR LESS	2'-0"	2'-6"	3'-0"	3'-0"
42" OR GREATER	3'-0"	3'-0"	3'-6"	4'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO AASHTO M294, TYPE S. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. HIGH DENSITY POLYETHYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR HDPE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
Ø = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
12-15-11	REVISED GENERAL NOTES & MINIMUM COVER NOTE	
11-17-10	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (HIGH DENSITY POLYETHYLENE)

STANDARD DRAWING PCP-1

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

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

SM3 WILL NOT BE ALLOWED.

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

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

MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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

MULTIPLE INSTALLATION OF PVC PIPES

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

MAXIMUM FILL HEIGHT BASED ON STRUCTURAL BACKFILL

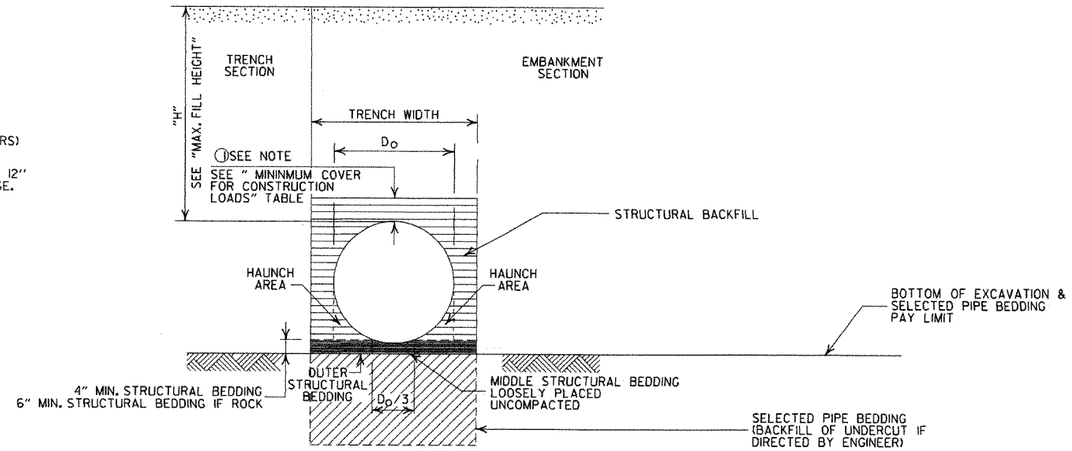
PIPE DIAMETER	"H"
18"	45'-0"
24"	45'-0"
30"	40'-0"
36"	40'-0"

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

MINIMUM COVER FOR CONSTRUCTION LOADS

PIPE DIAMETER	② MIN. COVER (FEET) FOR INDICATED CONSTRUCTION LOADS			
	18.0-50.0 (KIPS)	50.0-75.0 (KIPS)	75.0-110.0 (KIPS)	110.0-175.0 (KIPS)
18" THRU 36"	2'-0"	2'-6"	3'-0"	3'-0"

②MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE. THE SURFACE SHALL BE MAINTAINED.



TYPE 2 EMBANKMENT AND TRENCH INSTALLATIONS

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

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

GENERAL NOTES

1. PIPE SHALL CONFORM TO ASTM F949, CELL CLASS 12454. INSTALLATION SHALL CONFROM TO JOB SPECIAL PROVISION "PLASTIC PIPE" AND SECTION 606 OF THE STANDARD SPECIFICIATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (2010) WITH 2010 INTERIMS.
3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.
4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BEDDING. THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."
6. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE FOR BACKFILLING THE PIPE (ABOVE THE AREA IDENTIFIED ABOVE AS STRUCTURAL BACKFILL), BORROW MATERIAL OR MATERIAL FROM THE ROADWAY EXCAVATION WILL BE USED TO BACKFILL THE PIPE. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL."
7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.
8. PVC PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.
9. JOINTS FOR PVC PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN AASHTO SECTION 26.4.2.4 AND 30.4.2 "AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS." JOINTS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

- LEGEND -

H = FILL HEIGHT (FT.)
D_O = OUTSIDE DIAMETER OF PIPE
MAX. = MAXIMUM
MIN. = MINIMUM

= STRUCTURAL BACKFILL MATERIAL

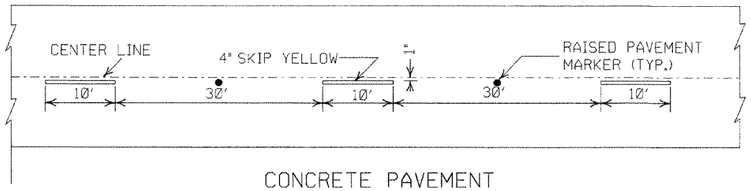
= UNDISTURBED SOIL

DATE	REVISION	DATE FILMED
12-15-11	REV GENERAL NOTES & MINIMUM COVER NOTE; DELETED SM3 MATERIAL	
11-17-10	ISSUED	

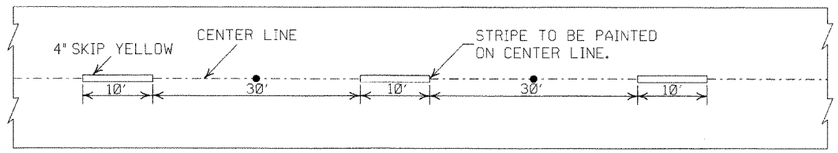
ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT (PVC F949)

STANDARD DRAWING PCP-2

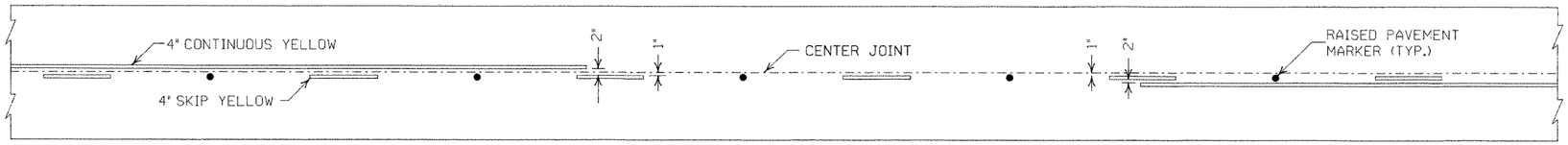


CONCRETE PAVEMENT

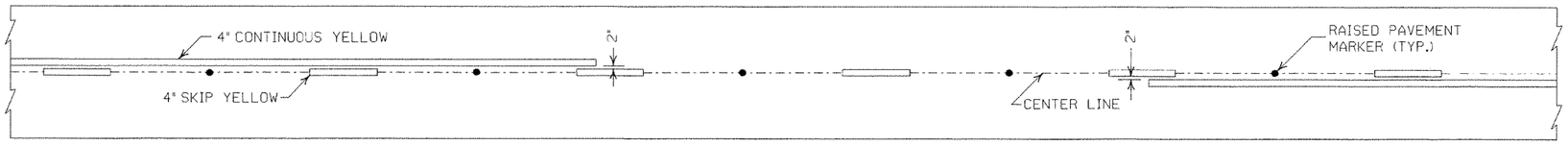


ASPHALT PAVEMENT

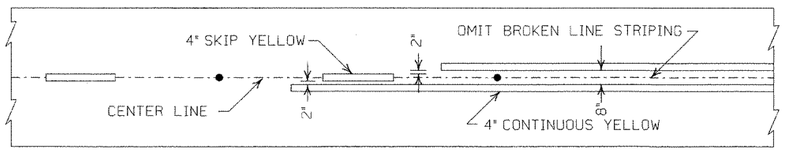
BROKEN LINE STRIPING



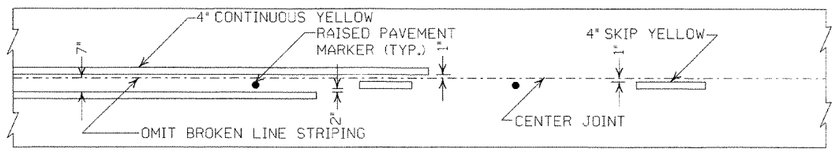
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

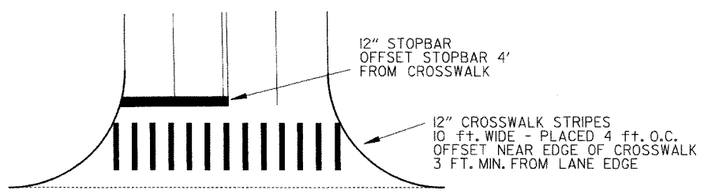


ASPHALT PAVEMENT



CONCRETE PAVEMENT

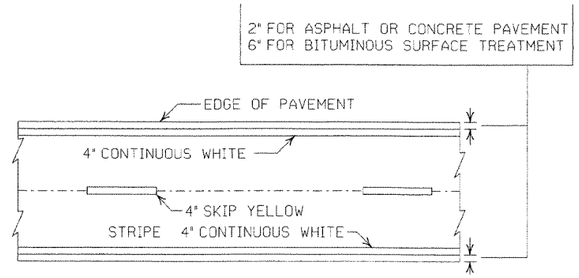
STRIPING AT ADJACENT NO PASSING LANES



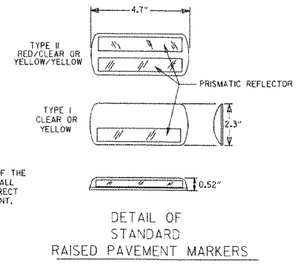
CROSSWALK AND STOPBAR DETAILS

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.



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.

DATE	REVISION	FILMED
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80

ARKANSAS STATE HIGHWAY COMMISSION

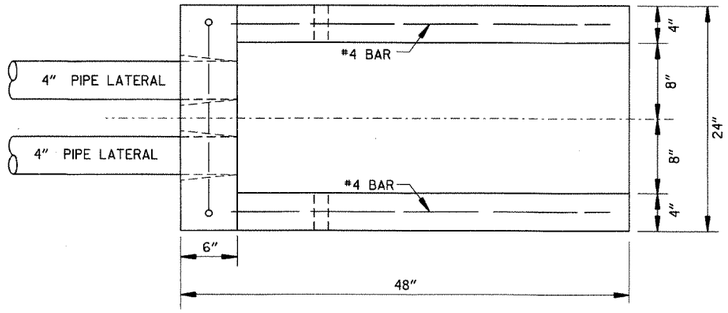
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

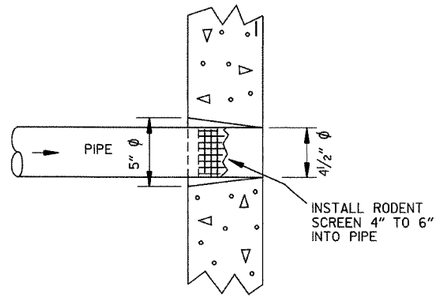
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

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

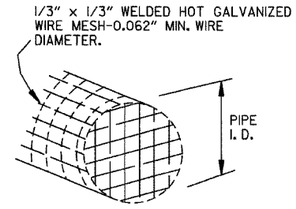
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



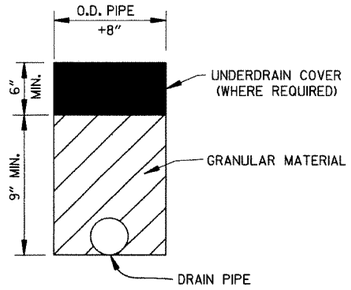
PLAN VIEW

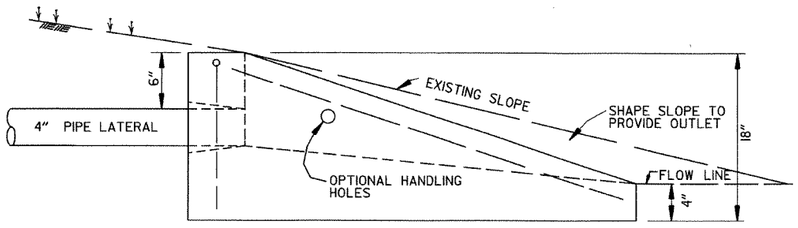


DETAIL OF HOLE FOR 4" PIPE

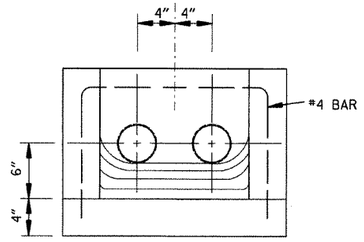


DETAIL OF RODENT SCREEN

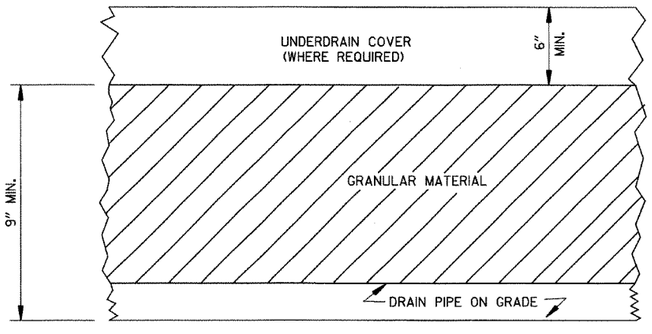




SIDE VIEW

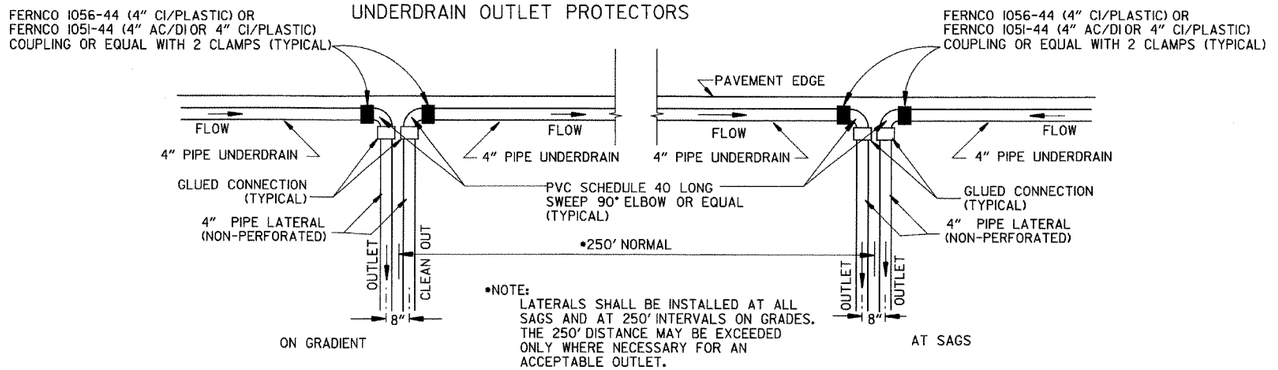


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

DATE	REVISION	DATE FILMED
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

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DETAILS OF PIPE UNDERDRAIN

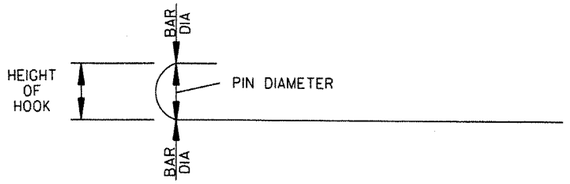
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

STEEL FABRICATION: REINFORCING STEEL FABRICATION SHALL CONFORM TO THE DIMENSIONS LISTED IN THE TABLE BELOW:

BAR SIZE	PIN DIAMETER	HOOK EXTENSION "K"
3	2¼"	4"
4	3 "	4½"
5	3¾"	5"
6	4½"	6"
7	5¼"	7"
8	6"	8"

IF THE OVERALL HEIGHT OF THE HOOK (SEE DIAGRAM BELOW) FOR A "b", "b1", "b2" or "b3" BENT BAR IS GREATER THAN THE CORRESPONDING TOP OR BOTTOM SLAB THICKNESS, LESS 2¾ INCHES, EACH BENT BAR SHALL BE REPLACED WITH ONE HOOKED BAR AND ONE STRAIGHT BAR, USING LENGTHS AS SHOWN IN THE TABLE BELOW. THE TWO BARS SHALL BE THE SAME DIAMETER AS, AND PLACED AT THE SAME SPACING AS, THE "b", "b1", "b2" OR "b3" BENT BARS THEY REPLACE.



NOTE: DIMENSIONS OF BARS ARE MEASURED OUT TO OUT OF BARS.

OVERALL HEIGHT OF HOOKED BAR DIAGRAM

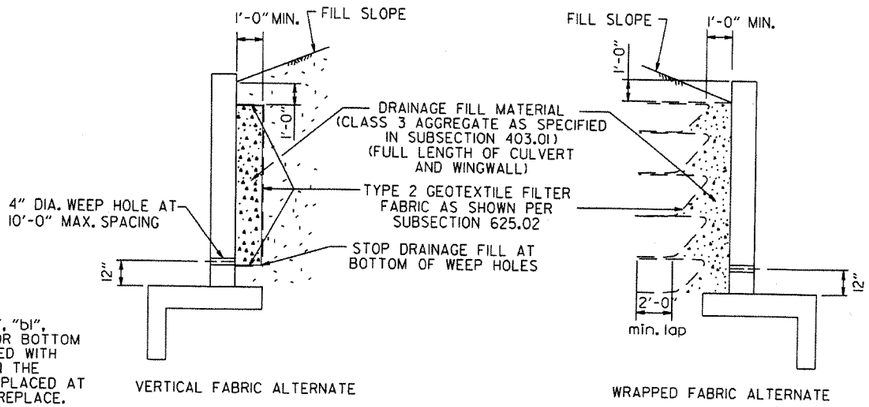
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

FOR SKEWED CULVERTS, THE REPLACEMENT STRAIGHT BAR MAY HAVE TO BE CUT IN FIELD TO FIT.

REPLACEMENT BAR LENGTHS TABLE

BAR SIZE: "b", "b1", "b2" OR "b3"	LENGTH OF HOOKED BAR	LENGTH OF STRAIGHT BAR
#4	L + 1' - 0"	SEE "c" BAR LENGTH
#5	L + 1' - 2"	SEE "c" BAR LENGTH
#6	L + 1' - 4"	SEE "c" BAR LENGTH
#7	L + 1' - 8"	SEE "c" BAR LENGTH
#8	L + 1' - 10"	SEE "c" BAR LENGTH
#9	L + 2' - 6"	SEE "c" BAR LENGTH

L = "OW" - 3 INCHES



WINGWALL & 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.

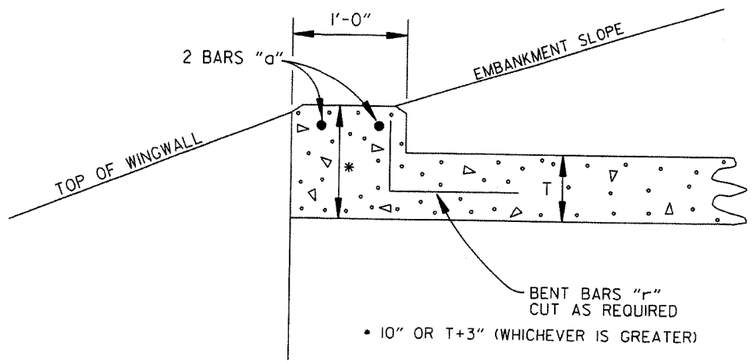
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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 ½ 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.

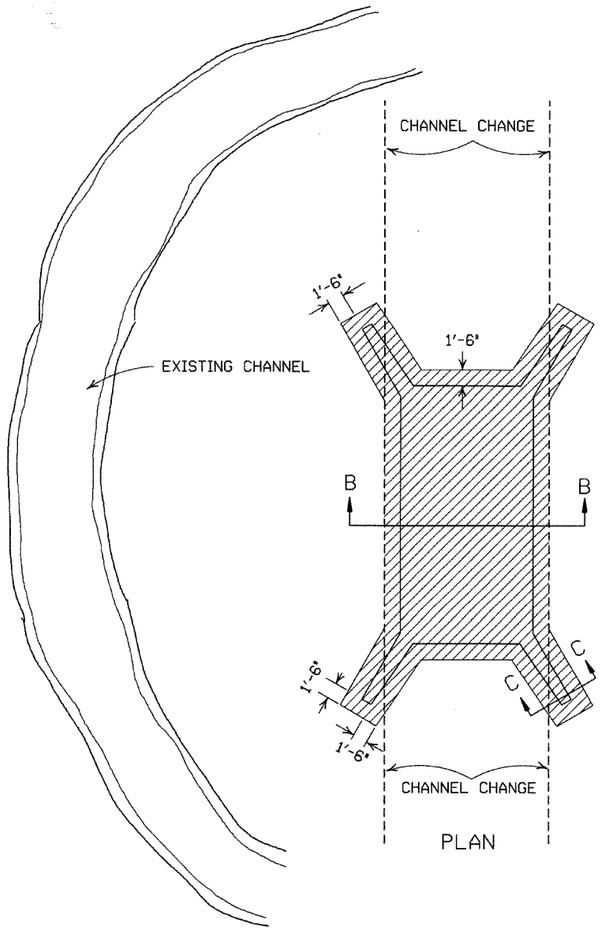
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

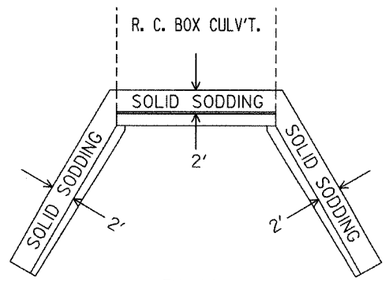
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

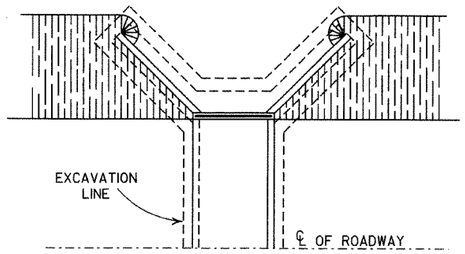
SOLID SODDING



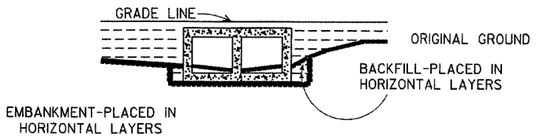
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

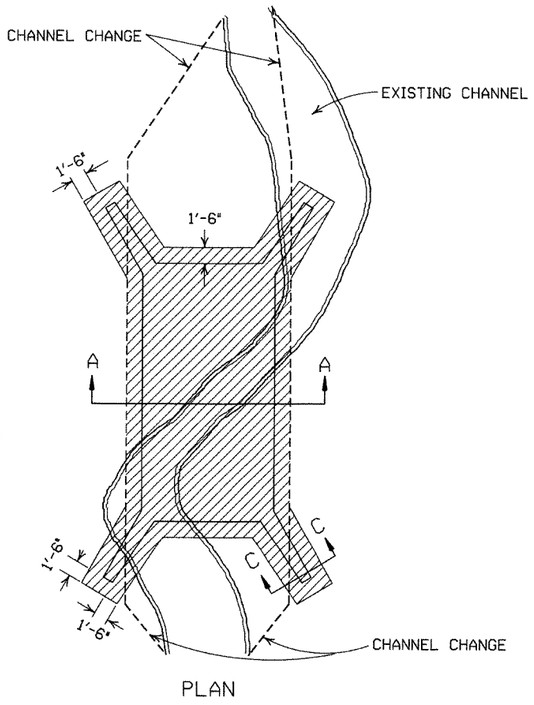


PLAN

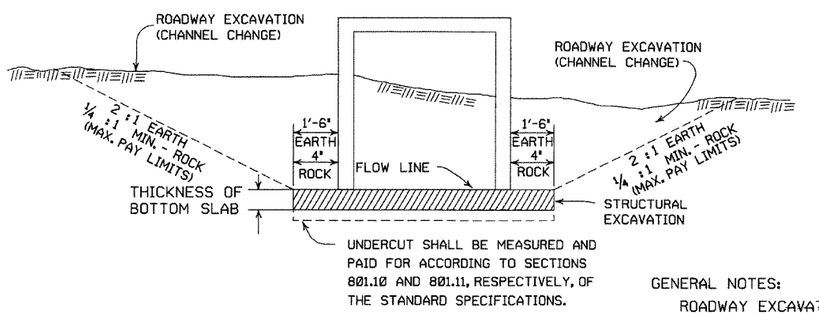


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

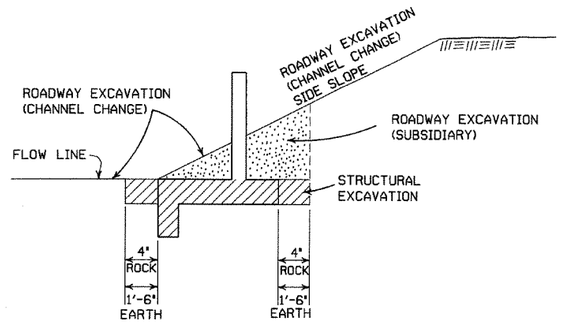


PLAN

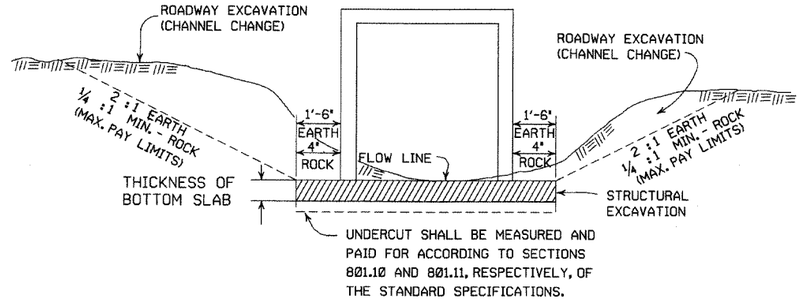


SECTION B-B

DETAILS FOR NEW CHANNELS



SECTION C-C



SECTION A-A

DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONFINED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE.

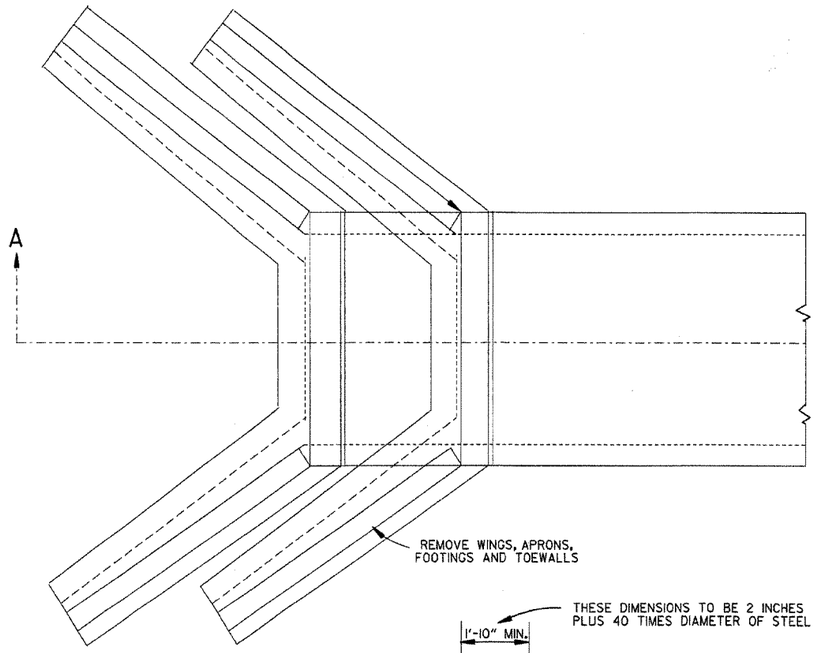
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

DATE	REVISION	FILMED
11-20-03	REVISED SECTION A-A NOTE	
8-22-02	REVISED SECTION B-B NOTE	
10-12-95	COMBINED 1891B AND 1888A	
1-4-83	REVISED GENERAL NOTES	674-1-4-83
	AND ADDED MAXIMUM PAY	
	LIMIT NOTES.	
2-2-76	EXCAV. PAY LIMITS	917-2-2-76
10-2-72	REVISED AND REDRAWN	564-10-16-72

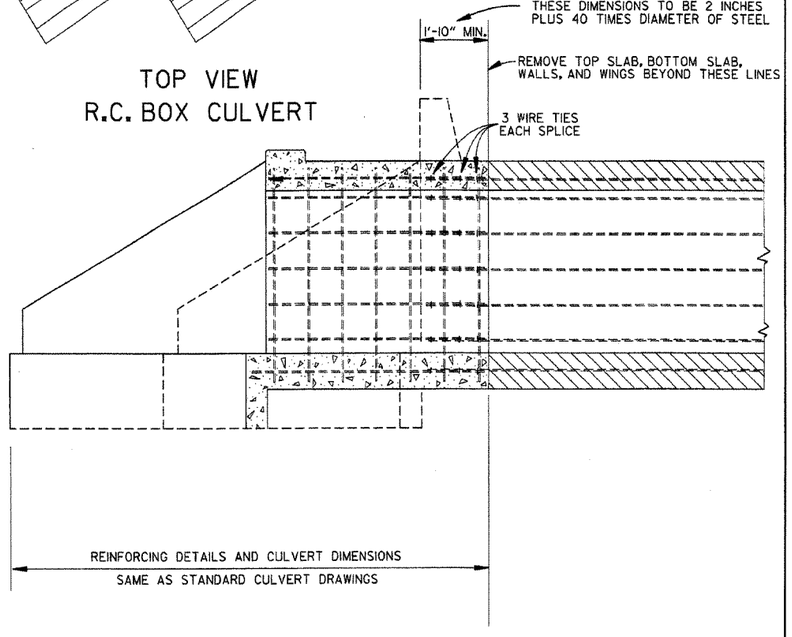
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

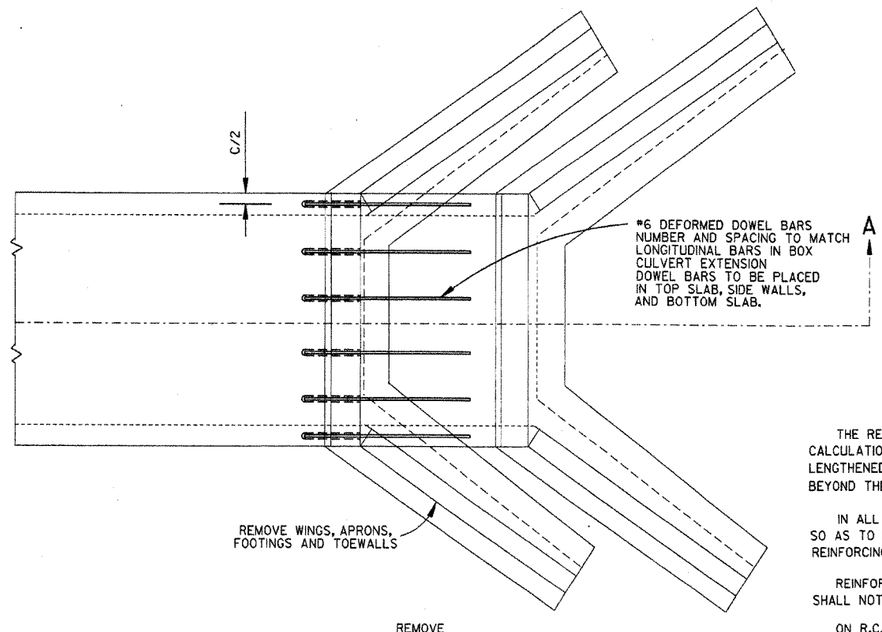


TOP VIEW
R.C. BOX CULVERT

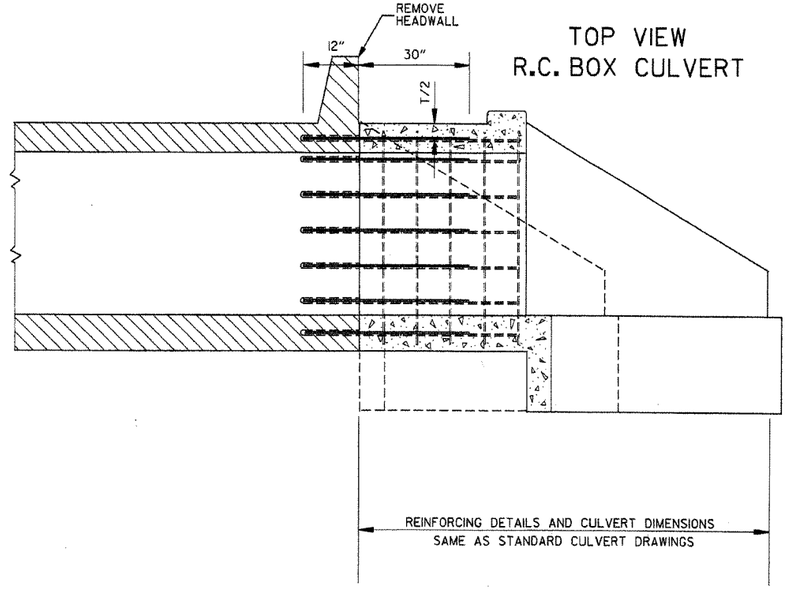


SECTION A-A

METHOD 1



TOP VIEW
R.C. BOX CULVERT



SECTION A-A

METHOD 2

GENERAL NOTES

	USE FOR METHOD
THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.	1
IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.	1
REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.	1&2
ON R.C. BOX CULVERTS THAT HAVE AN EXISTING CONCRETE APRON; THE CONCRETE APRON SHALL BE REMOVED WITH THE WINGS. THE COST OF REMOVING ALL OLD CONCRETE WILL BE INCLUDED IN THE PRICE BID PER CUBIC YARD FOR NEW CONCRETE OF THE CLASS SPECIFIED AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.	1&2
MATERIALS FOR SECURING DOWEL BARS SHALL MEET THE REQUIREMENTS OF SECTION 507.02 OF THE STANDARD SPECIFICATIONS.	2
DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE FILLING SYSTEM SHALL BE APPROVED BY THE ENGINEER, AND SHALL BE AN INJECTION-TYPE SYSTEM WHICH WILL INSURE THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY SURROUNDS THE BARS AND FILLS THE HOLES.	2
THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 OR METHOD 2, REGARDLESS OF WHICH METHOD IS USED, PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1.	1&2

NOTE:
NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION.

SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

DATE	REVISION	DATE FILM
10-12-95	CHANGED DRAWING # FROM 144-A	
4-1-93	ADDED GENERAL NOTE	
10-1-92	ADDED ALT. METHOD OF EXTENSION	
11-30-89	REDRAWN	
1-4-83	ELIMINATED CONCRETE CLASS	
12-20-56	RETRACED	

ARKANSAS STATE HIGHWAY COMMISSION

METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS

STANDARD DRAWING RCB-3

SUPERELEVATION TABLE FOR ONE - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	65 MPH e	65 MPH Ls (FT) MINIMUM	65 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N. C.			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.			R. C.			0.022			0.023			0.025			0.028		
1° 00′	N. C.			N. C.			0.021			0.026			0.030			0.033	250	350	0.037	275	350
1° 15′	N. C.			R. C.			0.026			0.032			0.037	250	350	0.041			0.046		
1° 30′	N. C.			0.021			0.031	200		0.037	225	350	0.043			0.048			0.054		
1° 45′	N. C.			0.025	175		0.036		300	0.043			0.049			0.055			0.062		
2° 00′	R. C.			0.028			0.040			0.048			0.055			0.062			0.070		
2° 15′	R. C.			0.031			0.045			0.053			0.061			0.069	265		0.078	300	
2° 30′	0.021			0.034			0.049			0.058			0.067			0.075	280	400	0.085	315	400
2° 45′	0.023			0.037		250	0.053			0.063			0.072			0.081	300		0.091	335	
3° 00′	0.025	150		0.040			0.057			0.067	230		0.077	260		0.087	315		0.096	350	
3° 15′	0.027			0.043			0.061			0.072	245		0.082	275		0.090	325		0.098	360	450
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285		0.095	340	400	0.100	360	
3° 45′	0.031		250	0.048			0.069	215		0.080	265		0.090	295	400	0.097	345				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305		0.099	350				
4° 30′	0.037			0.056			0.078	240		0.087	280	400	0.096	315							
5° 00′	0.040			0.061			0.083	250		0.091	295		0.098	320							
5° 30′	0.043			0.066	185		0.088	260		0.094	300										
6° 00′	0.046			0.070	190		0.092	270		0.096	305										
6° 30′	0.050			0.074	200		0.095	280	350	0.100	315										
7° 00′	0.053			0.078	210		0.098	285													
7° 30′	0.056			0.081	215		0.099	290													
8° 00′	0.058			0.084	220	300	0.100	290													
8° 30′	0.061			0.087	225																
9° 00′	0.063			0.089	230																
10° 00′	0.068	160		0.094	245																
11° 00′	0.072	170		0.097	250																
12° 00′	0.076	175		0.099	250																
13° 00′	0.080	180		0.100	250																
14° 00′	0.083	190																			
15° 00′	0.086	195																			
16° 00′	0.089	200																			
17° 00′	0.091	200																			
18° 00′	0.093	205																			
19° 00′	0.095	210																			
20° 00′	0.097	215	300																		
21° 00′	0.098	215																			
22° 00′	0.099	215																			
23° 00′	0.099	215																			
24° 00′	0.100	220																			
	D MAX = 24° 45′			D MAX = 13° 15′			D MAX = 8° 15′			D MAX = 6° 30′			D MAX = 5° 15′			D MAX = 4° 15′			D MAX = 3° 30′		

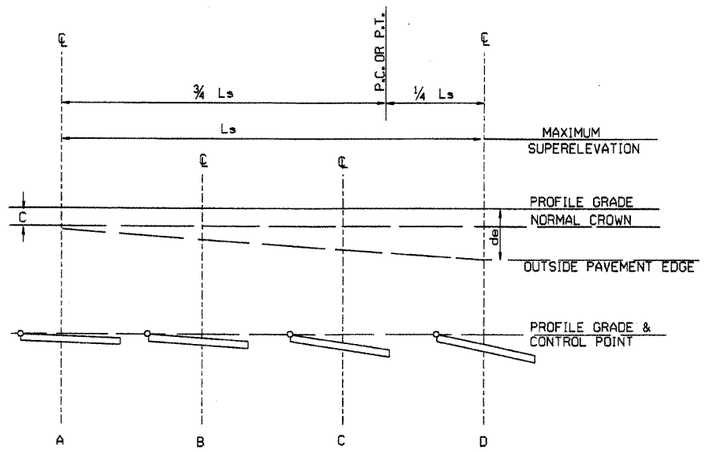
GENERAL NOTES

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 L_s MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM L_s VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%

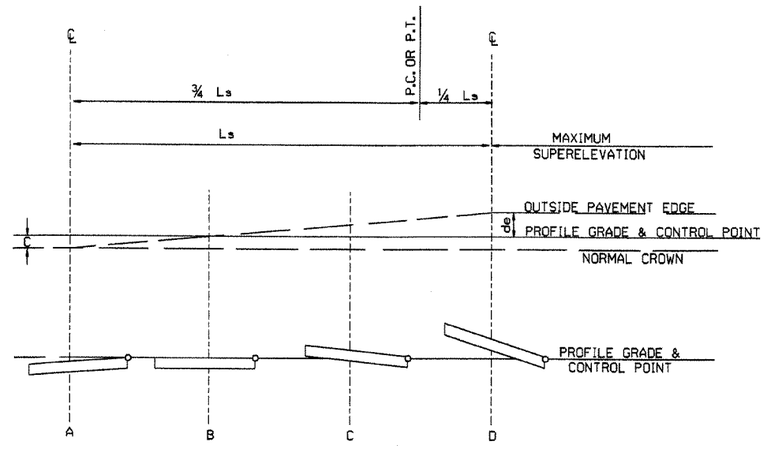
ABBREVIATIONS

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.)
L_s - LENGTH OF SUPERELEVATION TRANSITION (FT.)
C - NORMAL CROWN (FT.)



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{L_s} - C$



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{L_s} - C$

DATE	REVISION	DATE FILMED
01-09-87	ISSUED	578-1-15-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

STANDARD DRAWING SE-1

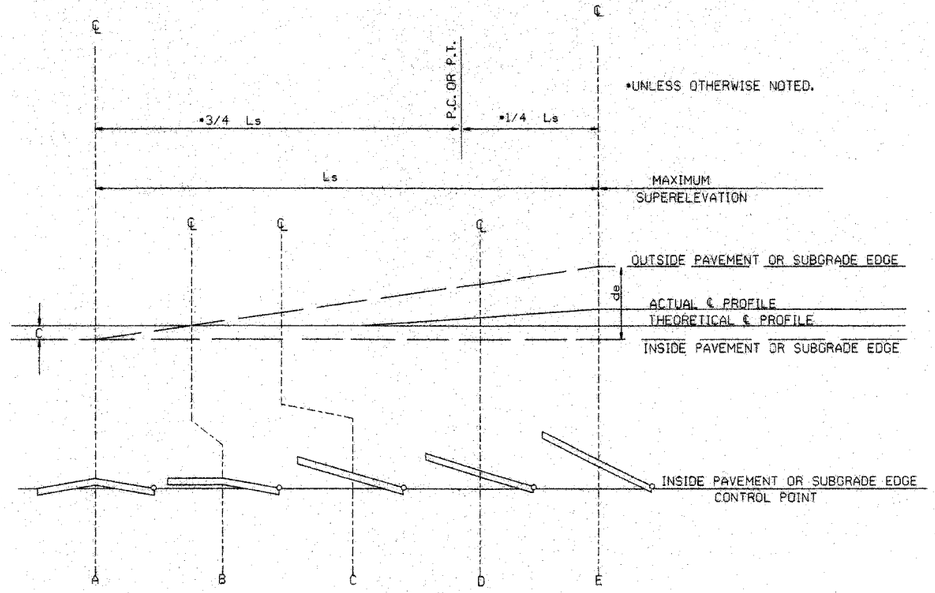
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30′	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45′	N.C.			N.C.			R.C.			0.022			0.023			0.028		
1° 00′	N.C.			N.C.			0.021			0.026			0.030			0.037	275	300
1° 15′	N.C.			R.C.			0.026			0.032			0.037			0.046		
1° 30′	N.C.			0.021			0.031	200		0.037	225		0.043	250		0.054		
1° 45′	N.C.			0.025			0.036			0.043		300	0.049		300	0.062		
2° 00′	R.C.			0.028	175		0.040			0.048			0.055			0.070		
2° 15′	R.C.			0.031			0.045		250	0.053			0.061			0.078	300	350
2° 30′	0.021			0.034			0.049			0.058			0.067			0.085	315	
2° 45′	0.023			0.037		200	0.053			0.064			0.072			0.091	335	
3° 00′	0.025			0.040			0.057			0.067	230		0.077	260		0.096	360	400
3° 15′	0.027	150		0.043			0.061			0.072	245		0.082	275		0.098	360	
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285	350	0.100	360	
3° 45′	0.031		200	0.049			0.069	215		0.080	265		0.090	295				
4° 00′	0.033			0.051			0.072	225		0.083	270		0.093	305				
4° 30′	0.037			0.056			0.078	240		0.087	280		0.096	315				
5° 00′	0.040			0.061			0.083	250		0.091	295	350	0.098	320				
5° 30′	0.043			0.066	185		0.088	260		0.094	300							
6° 00′	0.046			0.070	190		0.092	270		0.096	305							
6° 30′	0.050			0.074	200		0.095	280	300	0.100	315							
7° 00′	0.053			0.078	210		0.098	285										
7° 30′	0.056			0.081	215		0.099	290										
8° 00′	0.058			0.084	220		0.100	290										
8° 30′	0.061			0.087	225	250												
9° 00′	0.063			0.089	230													
10° 00′	0.068	160		0.094	235													
11° 00′	0.072	170		0.097	250													
12° 00′	0.076	175		0.099	250													
13° 00′	0.080	180		0.100	250													
14° 00′	0.083	190																
15° 00′	0.086	195																
16° 00′	0.089	200																
17° 00′	0.091	200																
18° 00′	0.093	205																
19° 00′	0.095	210																
20° 00′	0.097	215	250															
21° 00′	0.098	215																
22° 00′	0.099	215																
23° 00′	0.099	215																
24° 00′	0.100	220																

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 3° 30′

ABBREVIATIONS

NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
e - RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT (FT.) OR WIDTH OF SUBGRADE (FT.)
C - NORMAL CROWN (FT.)



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND INNER SUBGRADE POINT OR INNER PAVEMENT EDGE

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

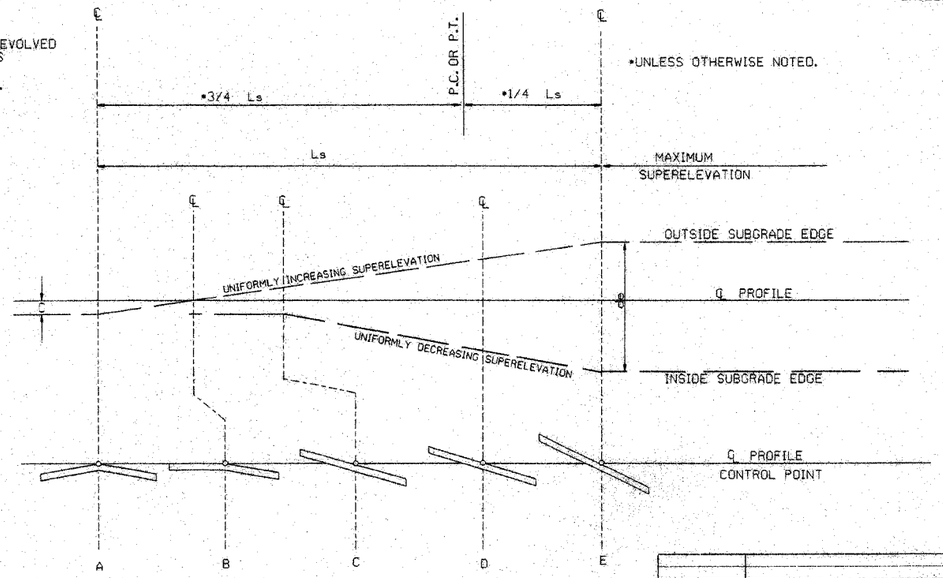
GENERAL NOTES

1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED TO OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR L MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. PAVEMENTS WIDER THAN 2 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLLOWS:

3 LANE UNDIVIDED - - - - - +20%
4 LANE UNDIVIDED - - - - - +50%
5 LANE UNDIVIDED - - - - - +80%
6 LANE UNDIVIDED - - - - - +100%

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

RATE OF SUPERELEVATION SHALL BE COMPUTED ON STRAIGHT LINE METHOD USING APPLICABLE Ls.



STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

SUPERELEVATION FORMULA = $\frac{Lde}{Ls}$

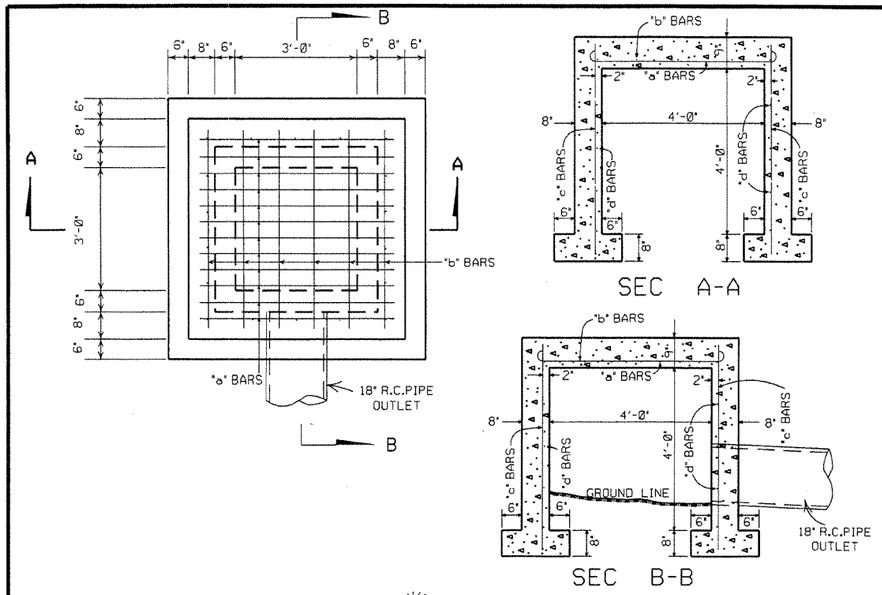
DATE	REVISION	DATE FILMED
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

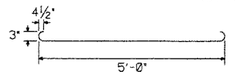
FILE STDSE2.DGN



STEEL SCHEDULE

BARS	NUMBER	LENGTH	SPACING
"a"	11	6'-0"	5"
"b"	6	6'-0"	10"
"c"	16	5'-1"	12"
"d"	16	5'-0"	12"

ALL STEEL TO BE #4 BARS



"a" & "b" BARS

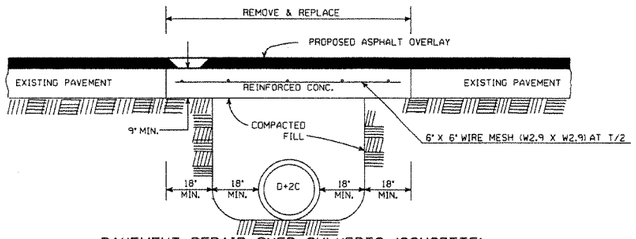
QUANTITIES

CONCRETE 3.40 CU. YDS.
REINFORCING STEEL 176 LB.

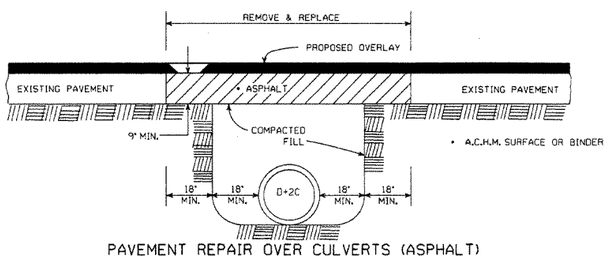
GENERAL NOTE:

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

REINFORCED CONCRETE SPRING BOX



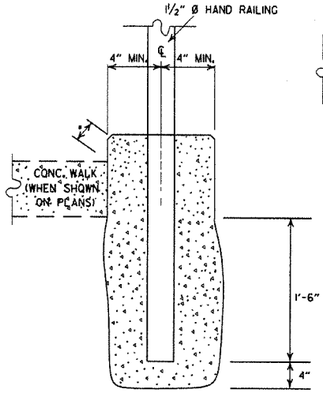
PAVEMENT REPAIR OVER CULVERTS (CONCRETE)



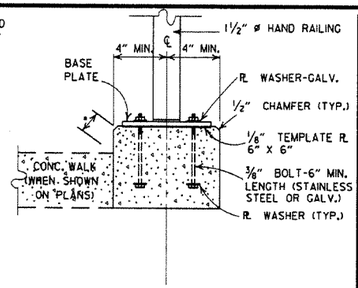
PAVEMENT REPAIR OVER CULVERTS (ASPHALT)

DETAIL SHOWING REPAIR OF EXISTING PAVEMENT AT CULVERT INSTALLATIONS

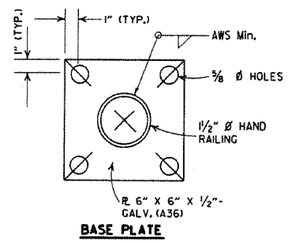
• A 2" MIN. HIGH CURB IS REQUIRED WHEN CONCRETE WALK IS ADJACENT TO THE HAND RAILING. PAYMENT FOR CURB SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR CONCRETE WALKS.



DETAIL OF HAND RAILING SET IN CONCRETE

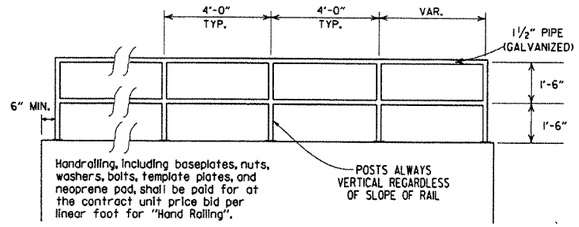


POST CONNECTION TO WALL

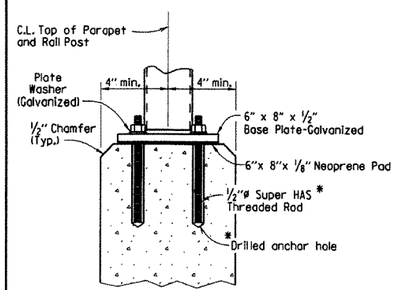


BASE PLATE

POST CONNECTION DETAILS



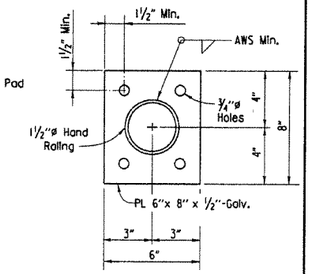
Hand railing shall conform to Section 633.



*HILTI HIT RE 500 Epoxy Adhesive Anchor System with 4½" embedment or approved equal.

The Adhesive Anchor System shall be installed in accordance with Manufacturer's recommendations.

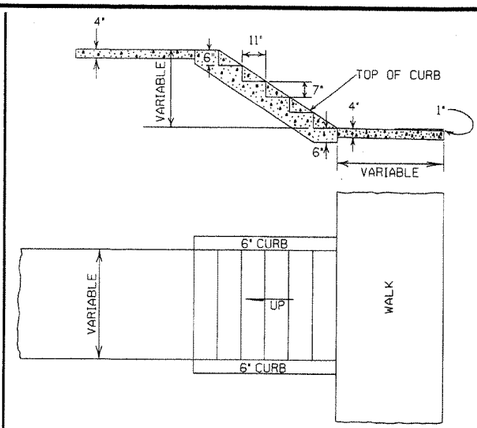
POST CONNECTION TO WALL



BASE PLATE

DETAILS OF ALTERNATE POST ANCHOR SYSTEM
(EPOXY ADHESIVE ANCHORS)

HAND RAILING DETAILS



GENERAL NOTES

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

DETAILS OF CONCRETE STEPS & WALKS

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
	ADDED HDWL. MODS, DEL. PIPE UNDERDRAINS	
11-1-84	REV. TRENCH FOR PIPE UNDERDRAIN	510-11-1-84
1-4-83	ELIMINATED CONC. CLASS & ADDED CHAMFER NOTE	682-1-4-83
3-2-81	SPELLING OF 'UNDERDRAIN'	721-3-2-81
4-20-79	REV. UNDERDRAIN DET.& PAVEMENT REPAIR	674-4-20-79
2-2-76	12"MIN. GRAN. MAT'L. OVER PIPE	919-2-2-76
4-10-75	REM. SPECS. FOR GRAN. MAT'L.	568-4-10-75-853
5-22-74	GRANULAR MAT'L. TO BE SB-3	567-5-22-74-740
10-2-72	REVISED AND REDRAWN	564-10-16-72
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPECIAL ITEMS

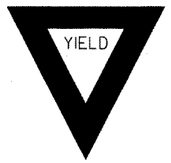
STANDARD DRAWING SI - 1

R1-1



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

R1-2



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

R2-1



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

R2-5A



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

R2-5C



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

R4-1



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

R4-2



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

R5-1



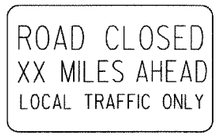
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



48"X30"

R11-3A



60"X30"

R11-4



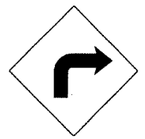
60"X30"

RSP-1



48"X30"

W1-1



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

W1-2



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

W1-3



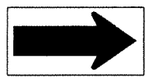
STD. 48"X48"

W1-4



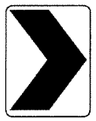
STD. 48"X48"

W1-6



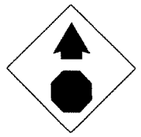
STD. 48"X24"
SPECIAL 60"X30"

W1-8



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

W3-1



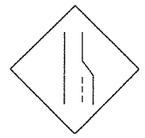
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



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

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



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

W9-2



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

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



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

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

R56-1



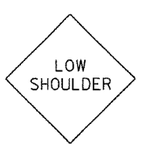
STD. 18"X18"

W8-11



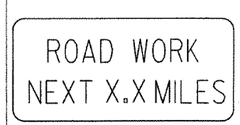
STD. 36"X36"
FWY. 48"X48"

W8-9



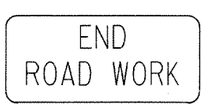
STD. 36"X36"
FWY. 48"X48"

G20-1



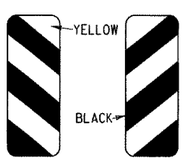
60"X24"

G20-2



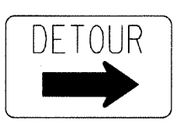
48"X24"

OM-3L OM-3R



12"X36"

M4-9



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

M4-10



48"X18"

R55-1

FINES DOUBLE IN WORK ZONES *
WHEN WORKERS ARE PRESENT **

36"X60"

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

ADVANCE DISTANCES
(XXXX)

500 FT	1/2 MILE
1000 FT	3/4 MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

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

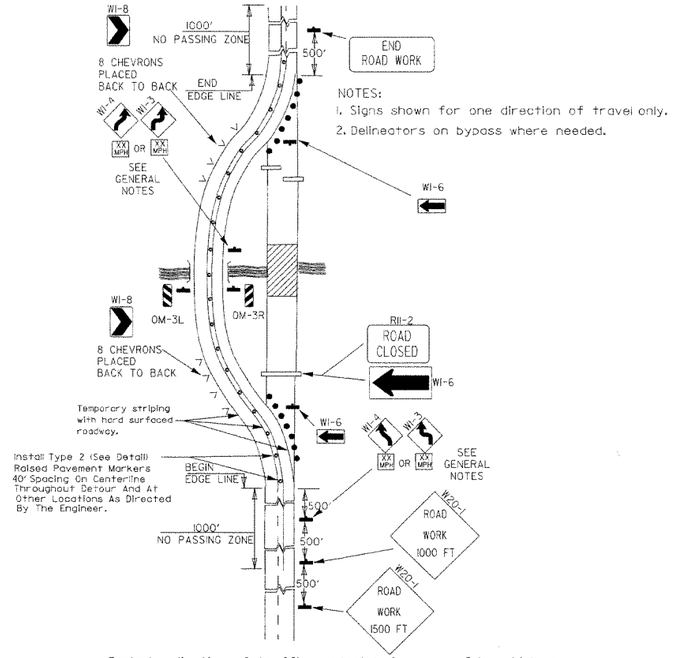
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY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

DATE	REVISION	FILMED
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
1-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

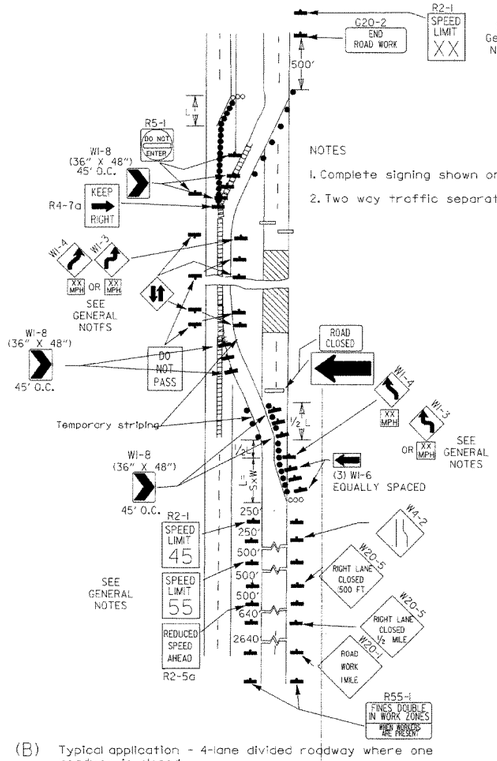
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



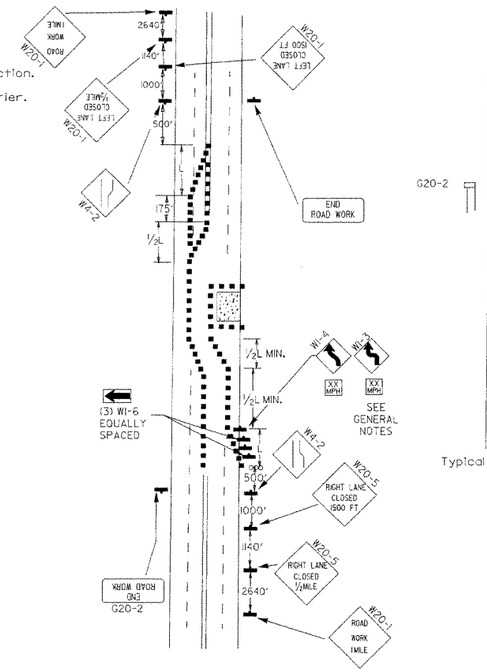
NOTES:
1. Signs shown for one direction of travel only.
2. Delineators on bypass where needed.

(A) Typical application of traffic control devices on a 2-lane highway where the entire roadway is closed and a bypass detour is provided.

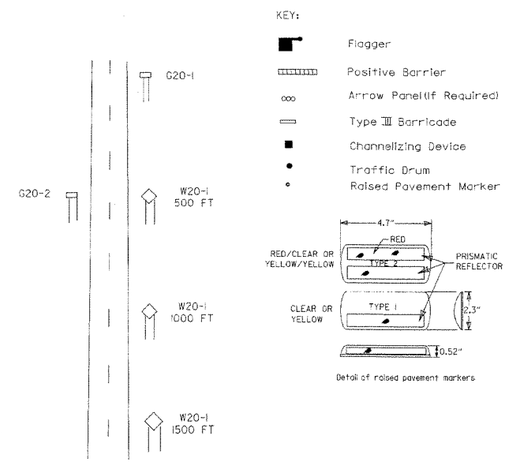


NOTES
1. Complete signing shown only in crossover direction.
2. Two way traffic separated with positive barrier.

(B) Typical application - 4-lane divided roadway where one roadway is closed.



(C) Typical application - 4-lane undivided roadway where half of the roadway is closed.



Typical advance warning sign placement

Taper formulae:

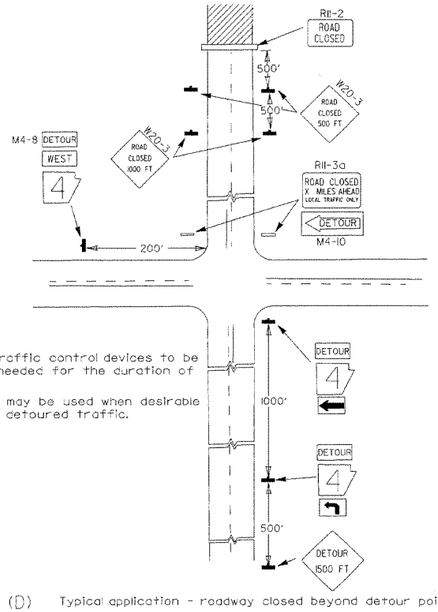
L=SxW for speeds of 45mph or more.

$L = \frac{WS^2}{60}$ for speeds of 40mph or less.

Where:
L= Minimum length of taper.
S= Numerical value of posted speed limit prior to work or 85th percentile speed.
W= Width of offset.

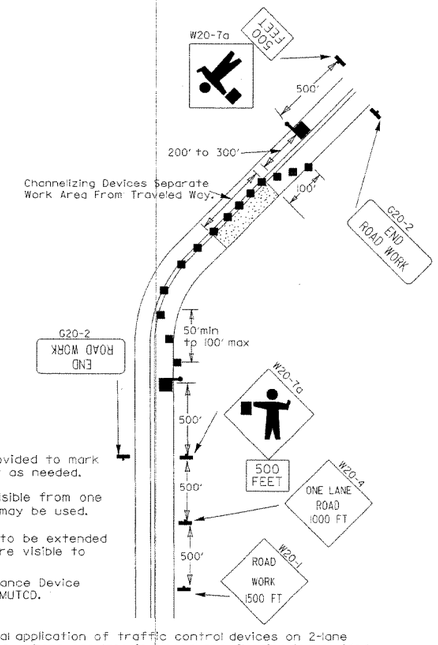
GENERAL NOTES:

1. Advisory speed posted on WI-3 or WI-4 curve warning signs to be determined at site. Use WI-4 when speed is greater than 30mph and WI-3 when 30mph or less.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(xx) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit, or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



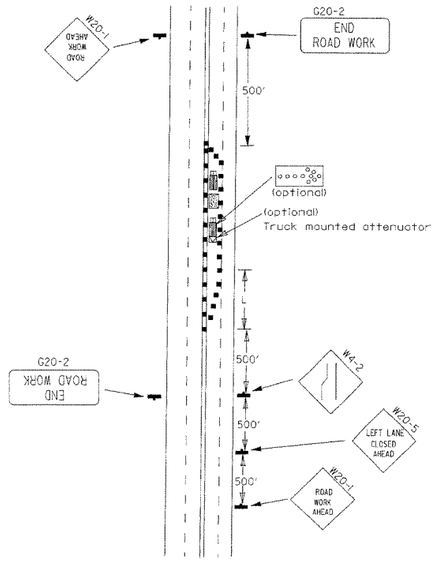
NOTES:
1. Regulatory traffic control devices to be modified as needed for the duration of the detour.
2. Street names may be used when desirable for directing detoured traffic.

(D) Typical application - roadway closed beyond detour point.



NOTES:
1. Flood lights should be provided to mark flagger stations at night as needed.
2. If entire work area is visible from one station, a single flagger may be used.
3. Channelizing devices are to be extended to a point where they are visible to approaching traffic.
4. Automated Flagger Assistance Device (AFAD) optional. Refer to MUTCD.

(E) Typical application of traffic control devices on 2-lane highway where one lane is closed and flagging is provided.



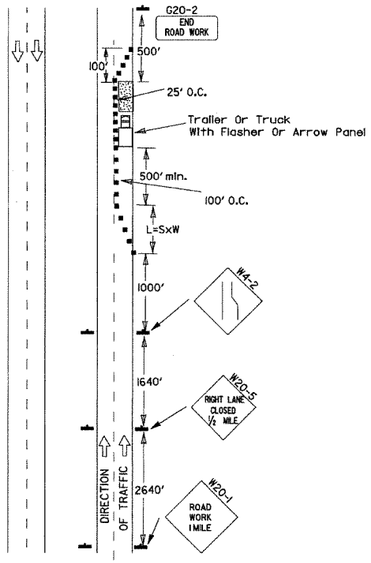
(F) Typical application - 4-lane undivided roadway with inside lane closed.

DATE	REVISION	FILMED
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON WI-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

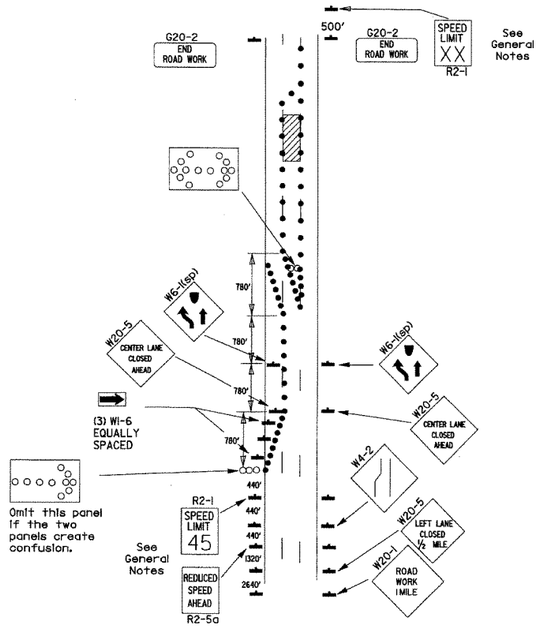
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

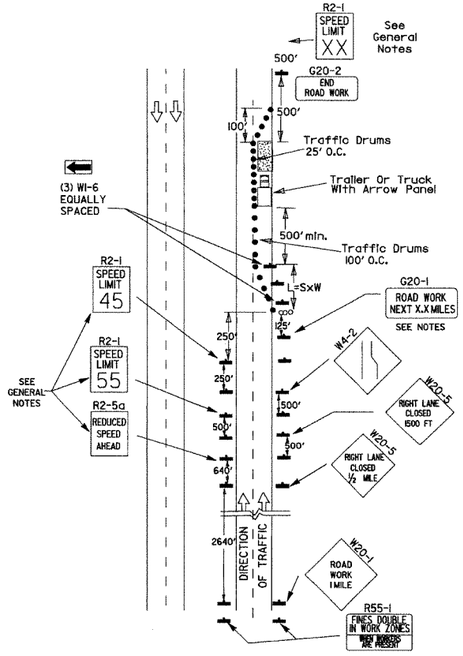
STANDARD DRAWING TC-2



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



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



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

KEY:

ooo Arrow Panel (If Required)

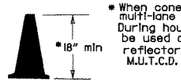
■ Channelizing Device

● Traffic drum

GENERAL NOTES:

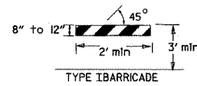
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional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

Channelizing devices



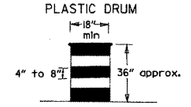
* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

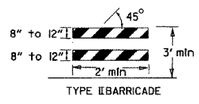
CONES



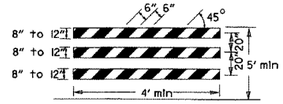
TYPE I BARRICADE

PLASTIC DRUM



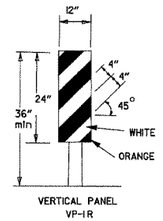


TYPE II BARRICADE



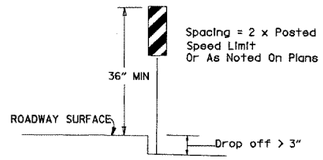
TYPE III BARRICADE

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



VERTICAL PANEL
VP-1R

VERTICAL PANEL PLACEMENT



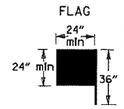
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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

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

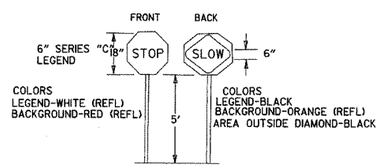
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

FLAG

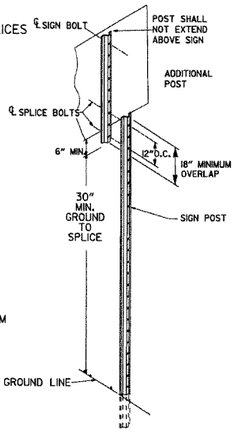


Flag shall be of good grade red material

STOP SLOW PADDLE



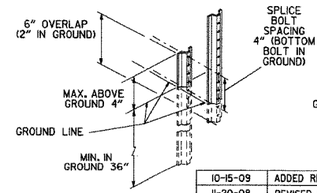
DETAIL OF SPLICES

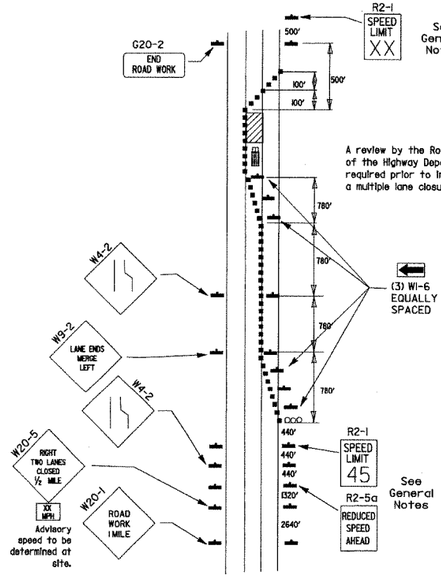


NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)

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

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





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

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

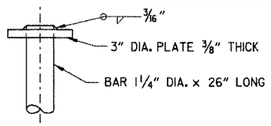
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

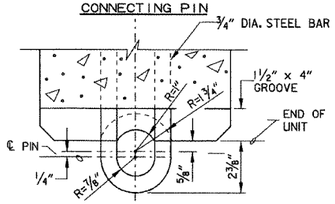
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", LIFTING HOLE, 90°, 3 3/8" R
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9"; 2 3/16" R; 12°; 2'-1 3/8"; 4 3/8"; 9 1/2"

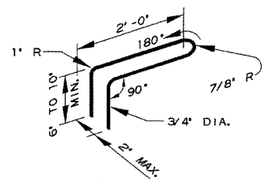


CONNECTING PIN

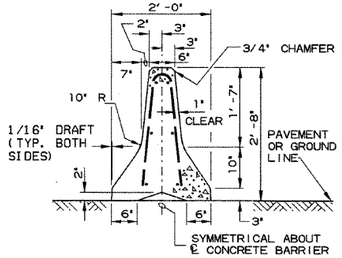


SECTION E-E

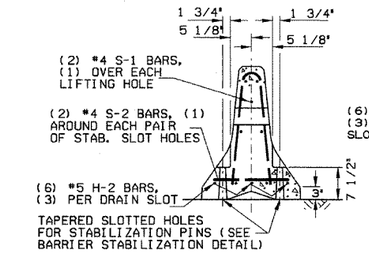
CONNECTION DETAILS



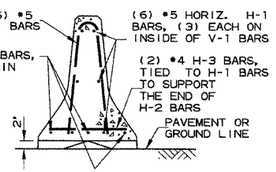
CONNECTION LOOP



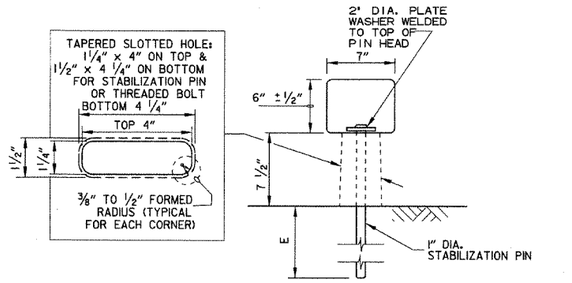
SECTION A-A



SECTION B-B



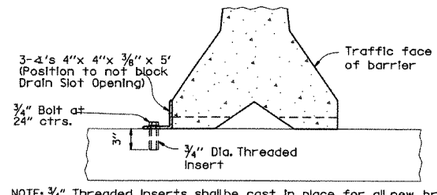
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

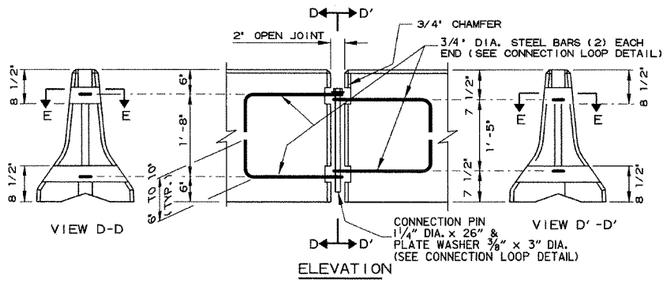
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



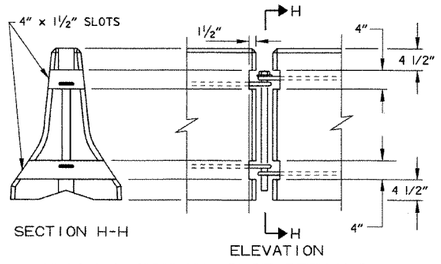
NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks to be retained. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the Inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

BRIDGE DECKS



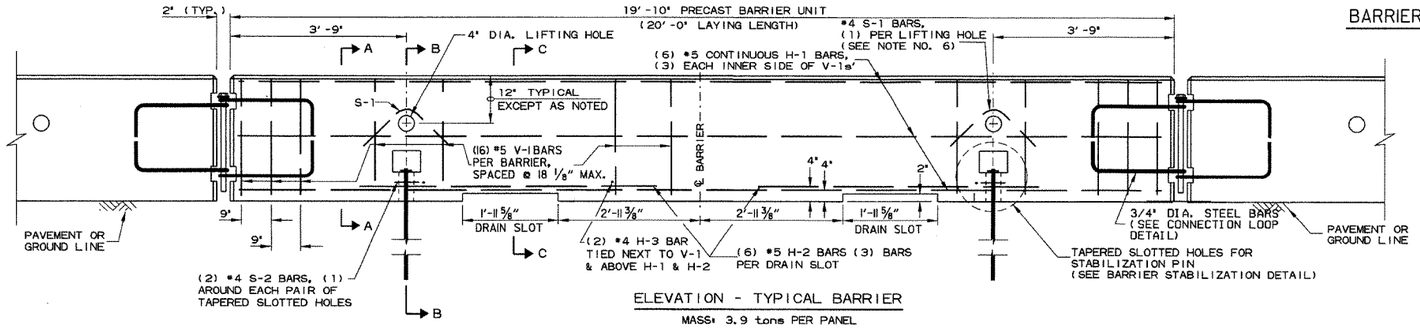
ELEVATION



SECTION H-H

ELEVATION

BARRIER REMOVAL SLOT DETAILS



ELEVATION - TYPICAL BARRIER

MASS: 3.9 tons PER PANEL

General Notes

(1) The contractor shall furnish the Precast Concrete Barrier Units and shall be responsible for the manufacture, shipment, storage, placement and removal. At the completion of the project, the precast units will remain the property of the contractor.

(2) Materials shall meet the following minimum requirements:
Concrete: 2500 psi compressive strength at 28 days.
Reinforcing Steel: AASHTO M 31 or M 53, Grade 60
Structural Steel: AASHTO-M270 Grade 36 shall be used for the Connection Pin, Connection Loops, and Stabilization Pins. A One Piece Pin with a 3" rounded top may be used in place of the detailed Connection Pin.
Delineators: Delineators shall be mounted at 10' spacing on top of precast barrier.

In applications where barrier 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.

(3) Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

(4) Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

(5) Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

(6) A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

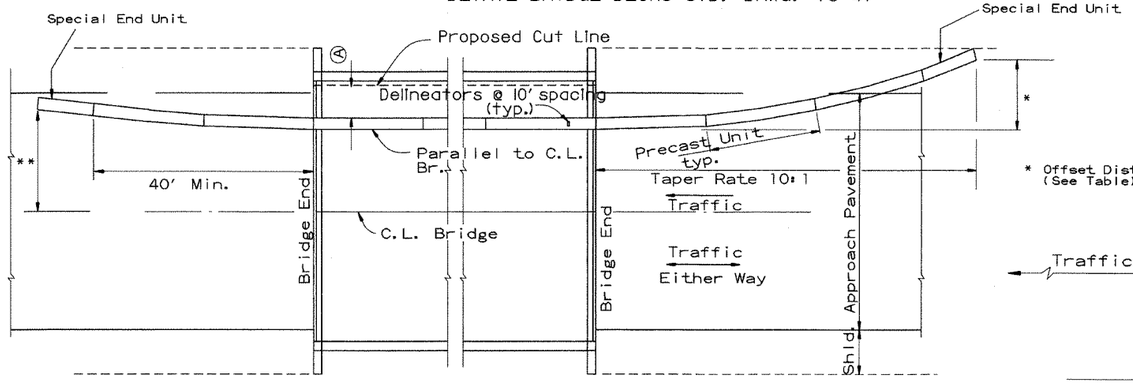
DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

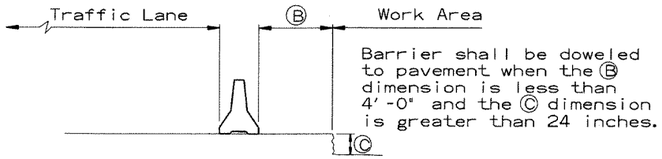
STANDARD DRAWING TC-4

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



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

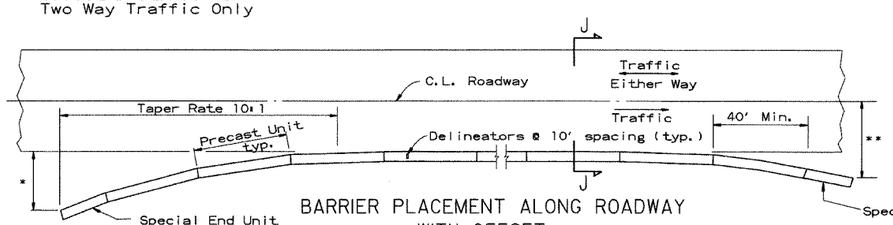


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

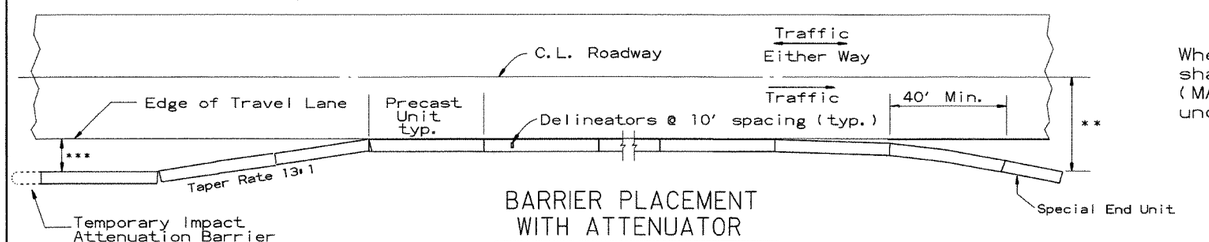
** Offset Distance For Two Way Traffic Only

* 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.

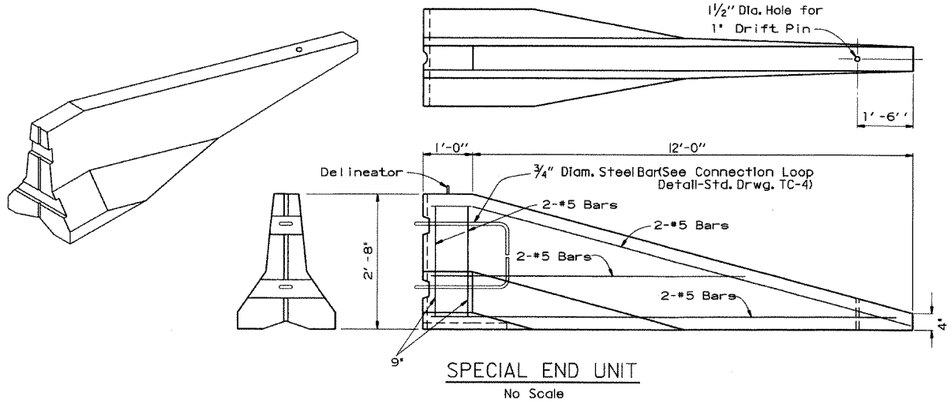


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

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



SPECIAL END UNIT

No Scale

General Notes

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

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

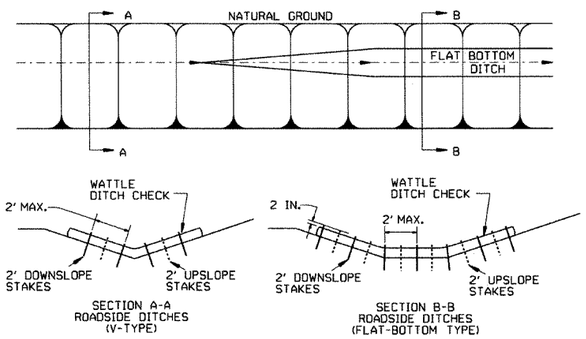
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

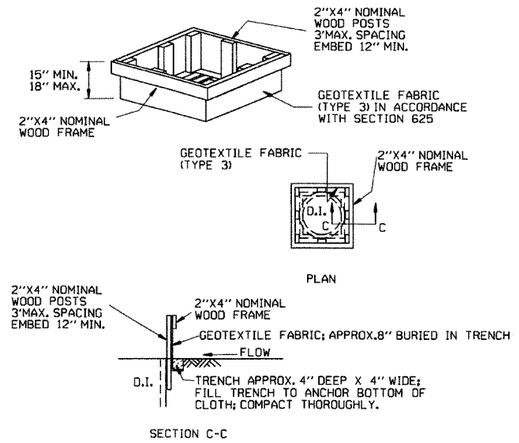
STANDARD DRAWING TC-5

GENERAL NOTES

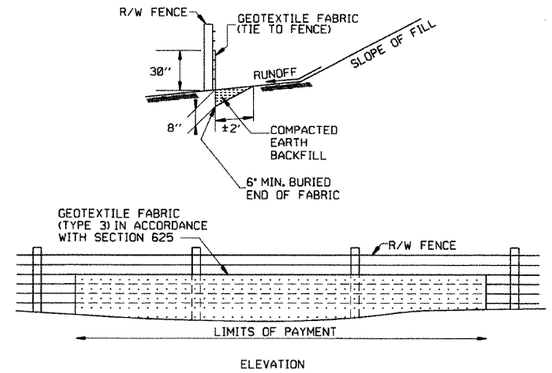
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



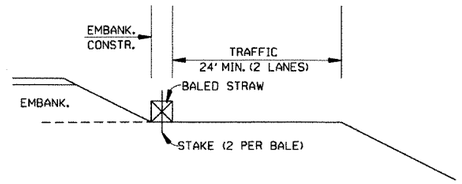
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

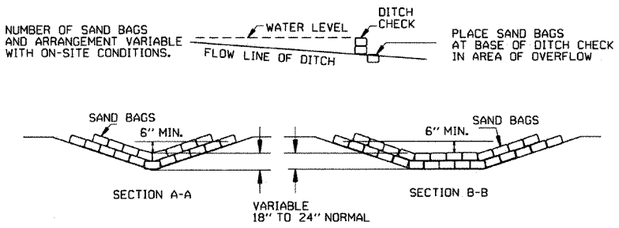
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

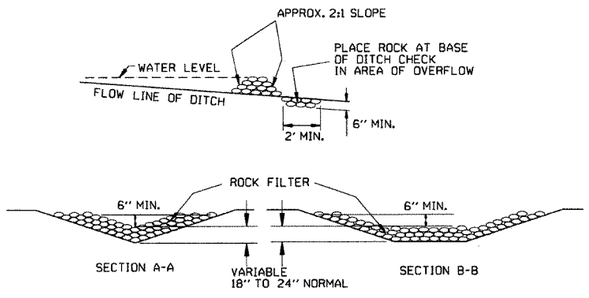
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



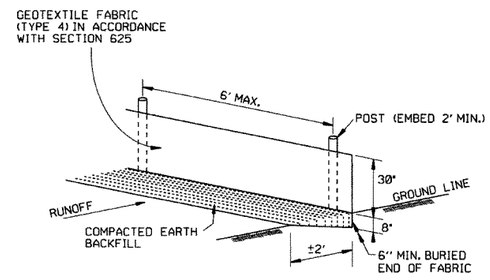
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

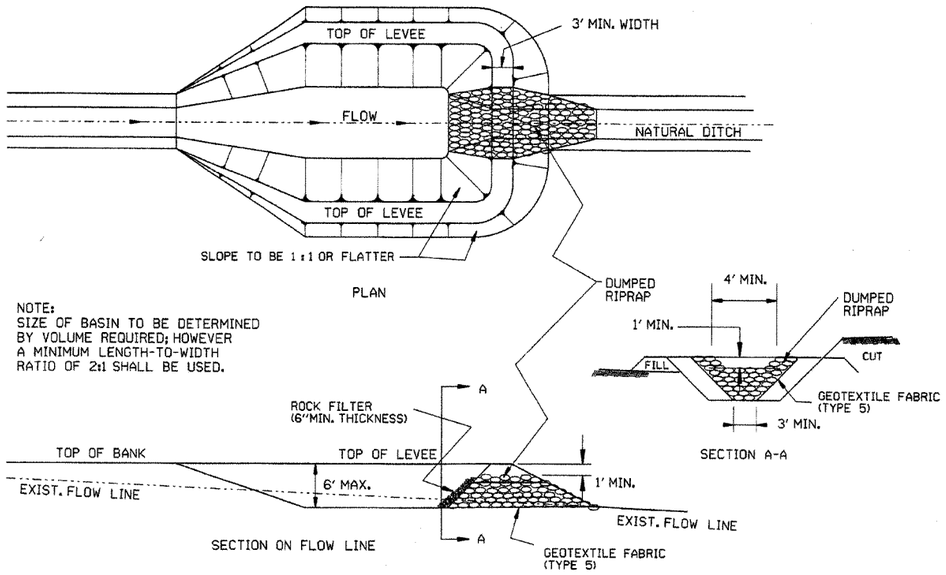
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

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

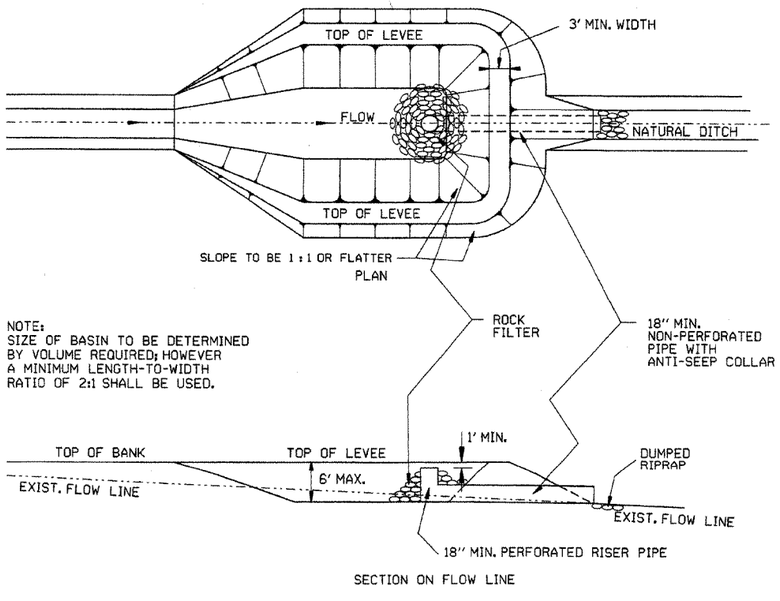
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

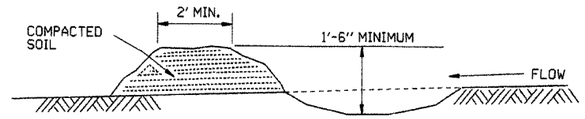
STANDARD DRAWING TEC-1



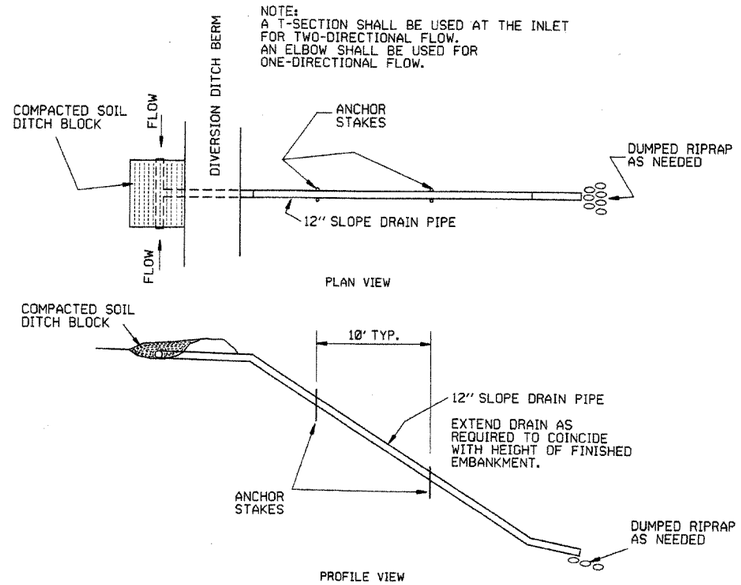
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



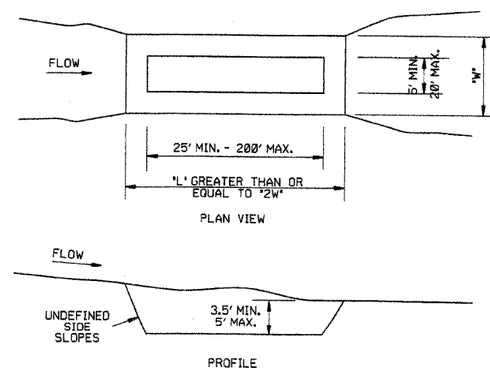
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



DIVERSION DITCH (E-8)



SLOPE DRAIN (E-12)



SEDIMENT BASIN (E-14)

DATE	REVISION	FILMED
6-2-94	Revised E-8 & E-12; Added E-14 & Deleted E-13	
4-1-93	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

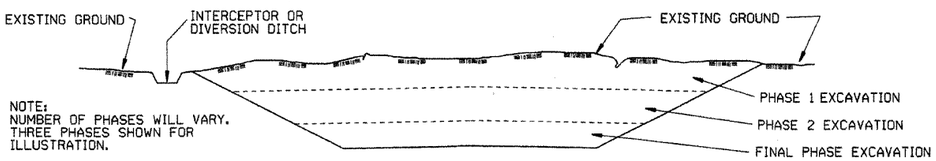
STANDARD DRAWING TEC-2

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

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

EXCAVATION



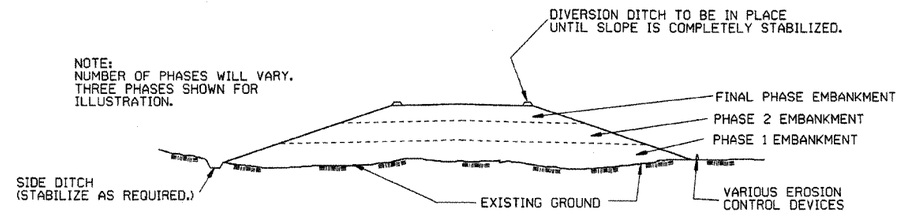
GENERAL NOTE

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

CONSTRUCTION SEQUENCE

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

EMBANKMENT



GENERAL NOTE

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

CONSTRUCTION SEQUENCE

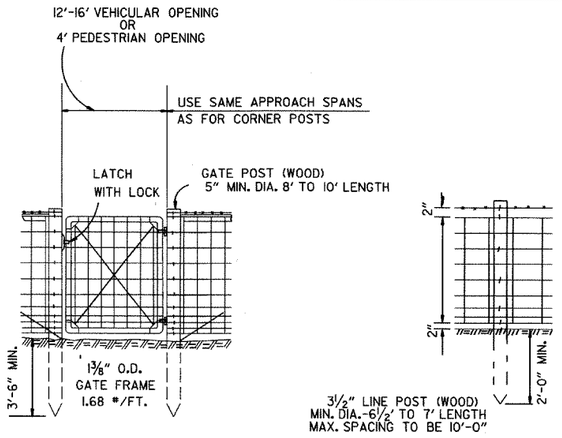
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD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

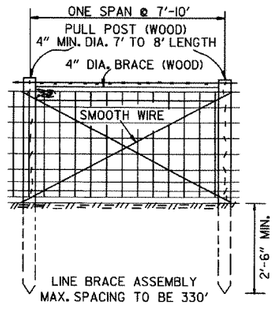
DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

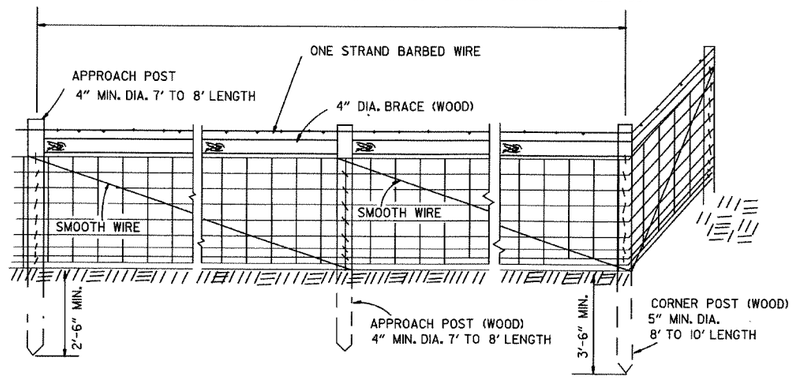
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3

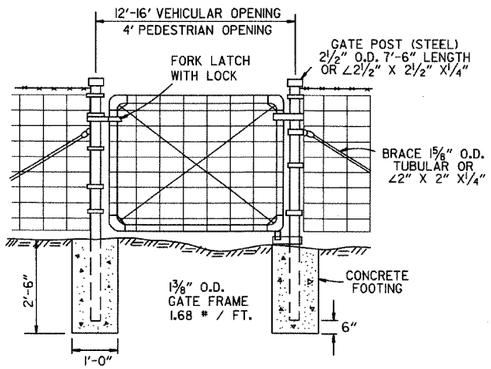


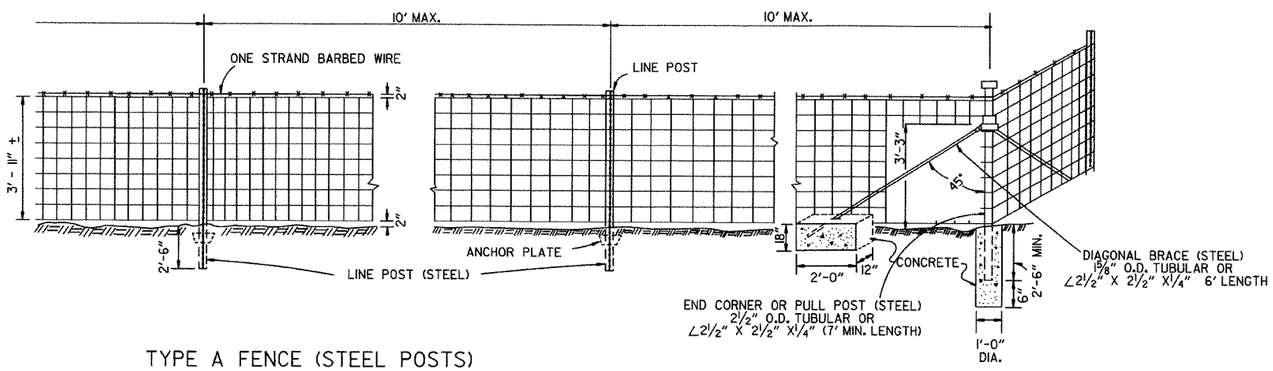




NOTE: STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE A FENCE (WOOD POSTS)





TYPE A FENCE (STEEL POSTS)

GENERAL NOTES:

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

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

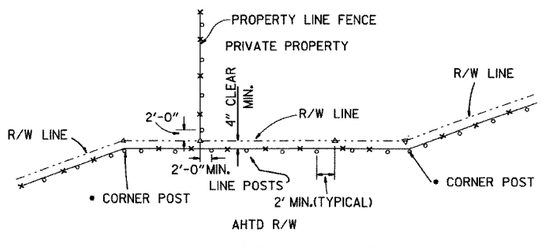
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

GATE HINGES AND LATCHES WITH LOCKS TO BE OF A TYPE APPROVED BY THE ENGINEER. DRIVEWAY GATES, EITHER SINGLE 12' OR 16' OR DOUBLE 6' TO 8' OPENINGS OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE FOR USE BY MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON THE PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF BANK TO THE BRIDGE STRUCTURE, A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFIEICNT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO THE BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

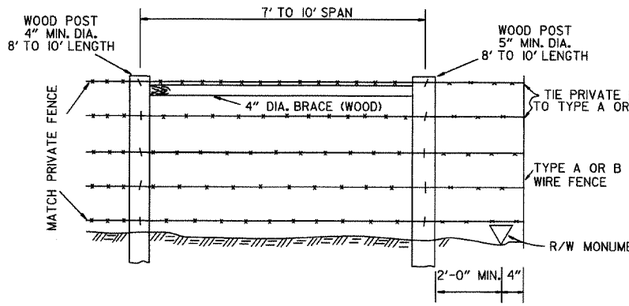
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD": AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF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



•NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

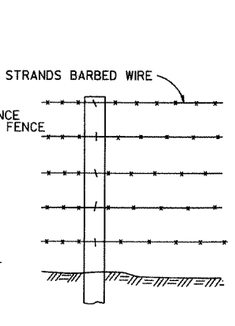
△ - R/W MONUMENTS
○ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



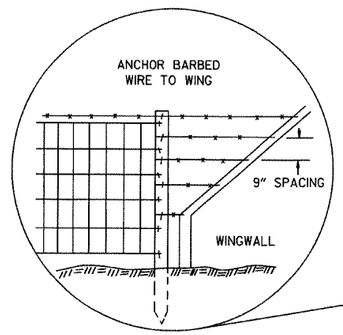
WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

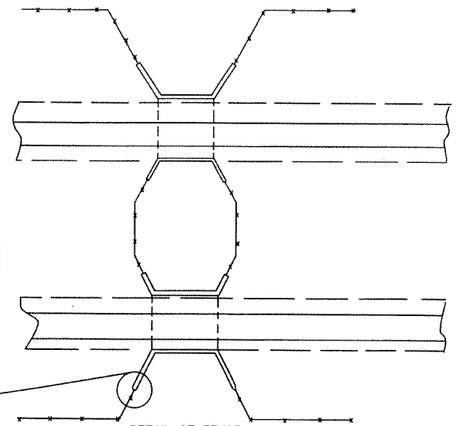
PRIVATE FENCE TERMINAL INSTALLATION



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

TYPE B FENCE





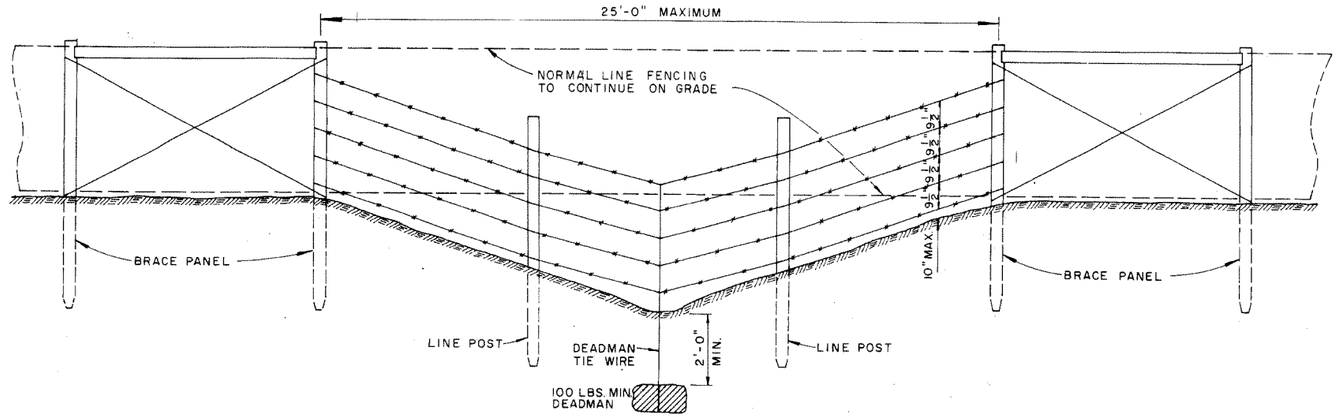
DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

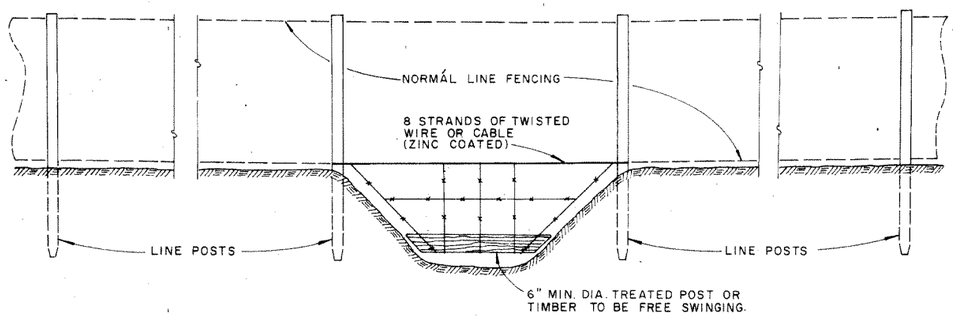
DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.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

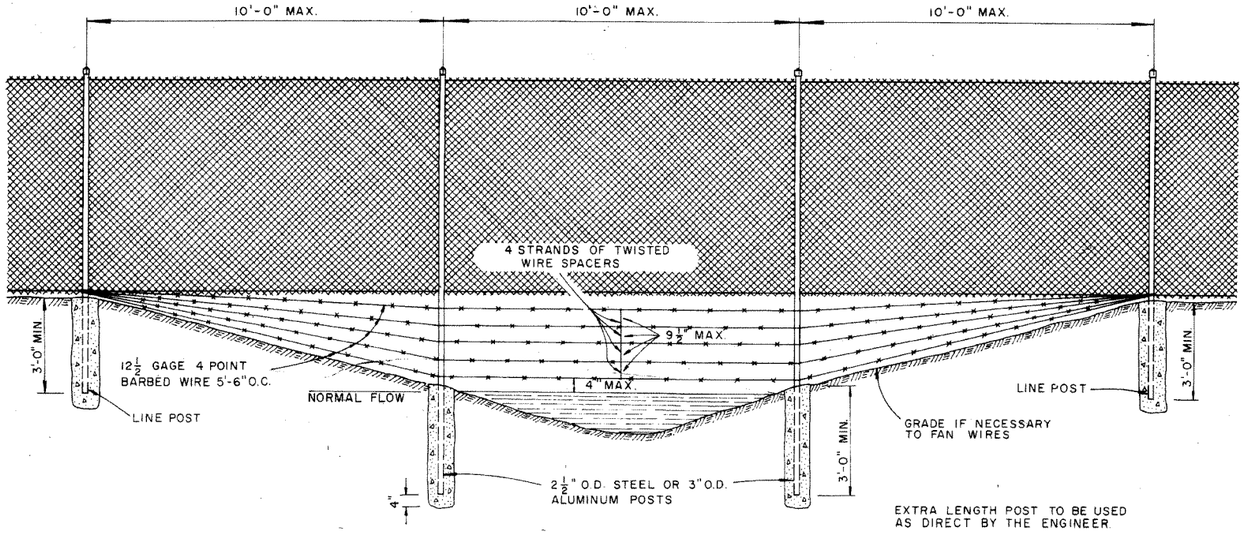
ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE
TYPE A AND B

STANDARD DRAWING WF-1







GENERAL NOTES:

THESE INSTALLATIONS TO BE USED WHERE NORMAL FENCING INSTALLATION WOULD CAUSE THE COLLECTING OF DRIFT IN THE CHANNEL OR THE DEPRESSION WILL NOT PERMIT NORMAL INSTALLATION. INSTALLATIONS WILL BE MADE ONLY WHERE DIRECTED BY THE ENGINEER.

WHEN A FENCE LINE APPROACHES A DITCH, GULLY OR DEPRESSION, THE LAST POST ON LEVEL GROUND SHALL BE PLACED CLOSE ENOUGH TO THE EDGE OF THE DROP OFF THAT THE FENCE MAY BE STRUNG TO THE POST IN THE DEPRESSION WITHOUT TOUCHING THE GROUND.

IN TERRAIN OF SUCH EXTREME IRREGULARITY THAT MINOR GRADING WILL NOT BE FEASIBLE, THE NORMAL FENCE SHALL CONTINUE ON GRADE AND THE GULLIES OR DEPRESSIONS TREATED BY AUXILIARY FENCES AS SHOWN.

PAYMENT FOR THE TYPE INSTALLATION USED WILL NOT BE MADE DIRECTLY BUT WILL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR WIRE FENCE OR CHAIN LINK FENCE.

DATE	REVISION	DATE FILM'D.
4-20-79	REVISED TOP RAIL & TENSION WIRE	676-4-20-79
10-2-72	REVISED & REDRAWN	529 10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

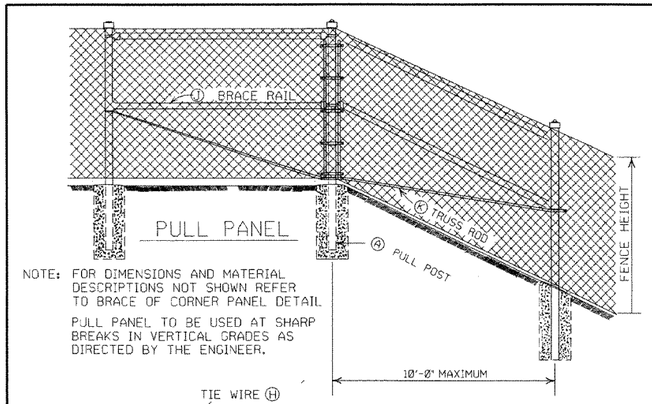
WIRE FENCE WATER GAPS

STANDARD DRAWING

WF-2

73

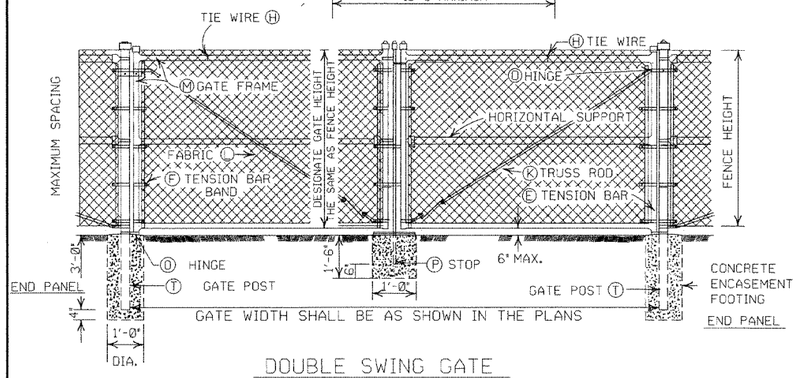
1M—11-72—6700—PP&SCo



PULL PANEL

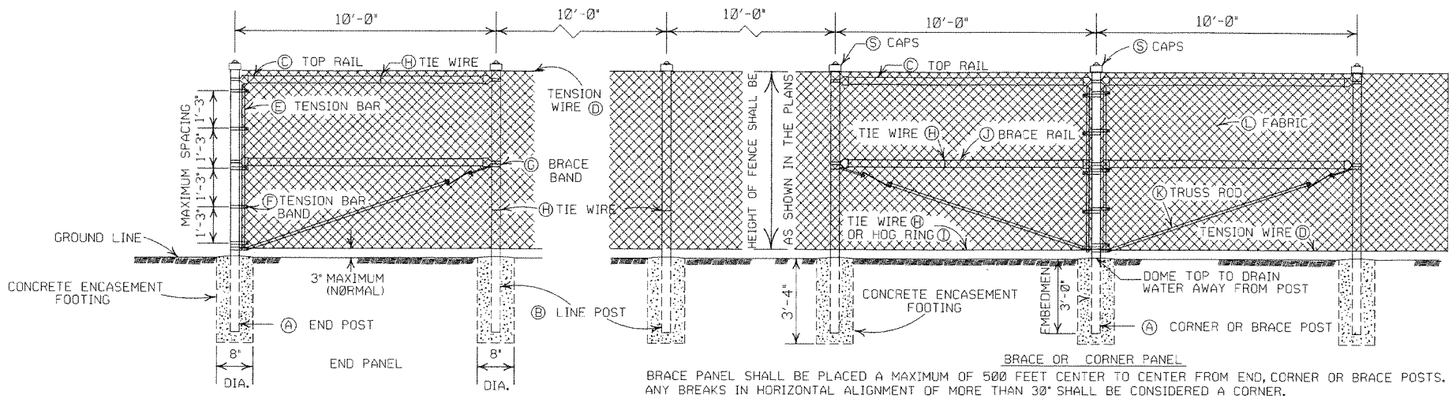
NOTE: FOR DIMENSIONS AND MATERIAL DESCRIPTIONS NOT SHOWN REFER TO BRACE OF CORNER PANEL DETAIL.

PULL PANEL TO BE USED AT SHARP BREAKS IN VERTICAL GRADES AS DIRECTED BY THE ENGINEER.



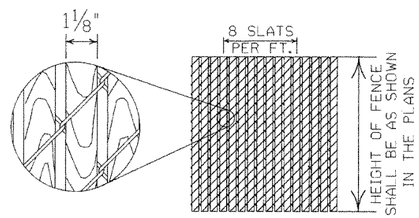
DOUBLE SWING GATE

POST SPACING DETAIL



BRACE OR CORNER PANEL

BRACE PANEL SHALL BE PLACED A MAXIMUM OF 500 FEET CENTER TO CENTER FROM END, CORNER OR BRACE POSTS. ANY BREAKS IN HORIZONTAL ALIGNMENT OF MORE THAN 30° SHALL BE CONSIDERED A CORNER.



1⅛" X ¼" REDWOOD SLATS(LENGTH TO MATCH HEIGHT OF FENCE)

DETAIL OF REDWOOD SLAT INSTALLATION

(WHERE APPLICABLE)

GENERAL NOTES:

(C) CHAIN LINK FENCE BEING PLACED ON PRIVATE PROPERTY SHALL INCLUDE A TOP RAIL. ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LIN. FT. OF CHAIN LINK FENCE.

(D) TENSION WIRE: SHALL BE SECURED TO ALL TERMINAL, PULL, BRACE OR CORNER POSTS WITH TENSION BAR BANDS.

(J) BRACE RAIL: BRACE RAILS SHALL BE PROVIDED AT ALL TERMINAL, PULL, BRACE OR CORNER POSTS HALFWAY BETWEEN THE TOP RAIL AND GROUND LEVEL WHEN TOPRAIL IS SPECIFIED AND TWELVE INCHES (12") DOWN FROM TOP OF FABRIC WHEN TOP TENSION WIRE IS SPECIFIED. BRACE RAIL SHALL EXTEND FROM SUCH POST TO THE FIRST ADJACENT LINE POST.

(L) FABRIC: SHALL CONFORM TO THE SPECIFICATIONS.

(M) GATE FRAMES: SHALL BE CONSTRUCTED OF TUBULAR MEMBERS ASSEMBLED BY USE OF HEAVY PRESSED STEEL, MALLEABLE FITTINGS OR BY WELDING. ALL GATES SHALL HAVE ONE HORIZONTAL SUPPORT EXTENDING THE WIDTH OF THE GATE AT THE MIDPOINTS OF VERTICAL FRAME MEMBERS. THE COMPLETE FRAME SHALL BE RIGID AND HAVE AMPLE STRENGTH TO BE FREE FROM SAG AND TWIST.

(O) HINGES: SHALL BE OF HEAVY PATTERN, OF ADEQUATE STRENGTH FOR GATE, AND WITH LARGE BEARING SURFACES FOR CLAMPING IN POSITION. THE HINGE SHALL BE OF THE PROPER TYPE TO ALLOW FOR THE DESIGNATED DEGREE OF SWING. THE HINGE SHALL NOT TWIST OR TURN UNDER THE ACTION OF THE GATE. THE GATES SHALL BE CAPABLE OF BEING OPENED AND CLOSED EASILY BY ONE PERSON.

(P) LATCHES AND STOPS: SHALL BE PROVIDED FOR ALL GATES. GATES SHALL HAVE A DROP BAR LATCH. LATCHES SHALL BE ARRANGED FOR LOCKING. THE STOP FOR DROP BAR LATCHES SHALL BE SET IN CONCRETE AND ENGAGE THE PLUNGER OF THE BAR LATCH.

(S) CAPS: ALL POSTS, EXCEPT ROLL FORMED POSTS AND "T" POSTS SHALL BE CAPPED OVER THE EXTERIOR OF THE POST, AND SHALL CONFORM TO ASTM F626.

CONCRETE REQUIRED FOR THE EMBEDMENT OF ALL POSTS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR CHAIN LINK FENCE.

POSTS SHALL BE SPACED EQUIDISTANT ON A MAXIMUM OF 10' CENTERS.

EXCAVATION FOR POSTS: IN OTHER THAN ROCK SHALL BE OF THE DIMENSIONS INDICATED. IF ROCK IS ENCOUNTERED BEFORE REACHING THE REQUIRED DEPTH, THE EXCAVATION SHALL BE CONTINUED TO THE DEPTH INDICATED OR 1'-6" INTO THE ROCK, WHICHEVER IS LESS, AND SHALL BE A MINIMUM OF 8 INCHES IN DIAMETER.

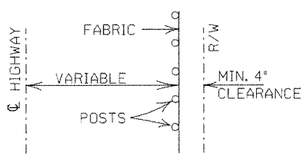
HEIGHT OF FENCE FABRIC	(A) END, PULL CORNER OR BRACE POST	(B) LINE POSTS SIZE	(B) LINE POSTS TIE SPACING	(C) TOP RAIL SIZE	(C) TOP RAIL TIE SPACING	(C) TOP RAIL MIN. LENGTH	(D) TENSION WIRE SIZE	(D) TENSION WIRE TIE SPACING	(E) TENSION BAR SIZE	(E) TENSION BAR LENGTH	(F) TENSION BAR BAND SIZE	(F) TENSION BAR BAND BOLT SIZE	(F) TENSION BAR BAND SPACING	(G) BRACE BAND SIZE	(G) BRACE BAND BOLT SIZE
6' AND LESS	2½" O.D.	2" O.D.	1 TIE EVERY 1'-2" OF FABRIC HEIGHT	1⅝" O.D.	1 TIE EVERY 2'-0"	10'-0"	7 GAUGE COIL SPRING WIRE	1 TIE EVERY 1'-0"	MIN. OF ⅜" X ¾"	MIN. OF 2" LESS THAN FABRIC HEIGHT	MIN. OF ¾" X 0.074	⅝" X 1¼"	1 BAND AT TOP AND BOTTOM 15" MAX. INTERVAL BETWEEN BANDS	MIN. OF ¾" X 0.105	⅝" X 1¼"
OVER 6' TO 12' INCL.	3 " O.D.	2½" O.D.													

HEIGHT OF FENCE FABRIC	(H) TIE WIRE	(I) HOG RING	(J) BRACE RAIL SIZE	(J) BRACE RAIL TIE SPACING	(K) TRUSS ROD	(L) FABRIC SIZE	(L) FABRIC MESH	(L) FABRIC SELVAGE	(M) GATE FRAME SIZE	(M) GATE FRAME TIE SPACING	(N) HORIZONTAL SUPPORT SIZE	(N) HORIZONTAL SUPPORT TIE SPACING	(O) HINGE TYPE 180° SWING	(T) GATE POST GATE WIDTH 12' AND LESS	(T) GATE POST GATE WIDTH OVER 12' TO 24' INCL.
6' AND LESS	MIN. OF 12 GA. STEEL OR 9 GA. ALUM.	SAME GAUGE AS FABRIC	1⅝" O.D.	1 TIE EVERY 2'-0"	MIN. OF ⅝" ROUND WITH TIGHTNERS AND FITTINGS	9 GA.	2"	KNUCK -ING AND/OR TWIST -ING	2" O.D.	1 TIE EVERY 1'-0"	2" O.D.	1 TIE EVERY 1'-0"	OFFSET	3" O.D.	4" O.D.
OVER 6' TO 12' INCL.														4" O.D.	

NOTE: POST SIZES SHOWN ARE FOR STEEL. WHERE ALUMINUM IS PROVIDED, LINE POSTS SHALL HAVE AN OUT SIDE DIAMETER OF 2½" FOR FENCE HEIGHT OF 6' AND LESS, AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' TO 12'. END, PULL, CORNER OR BRACE POSTS SHALL HAVE AN OUTSIDE DIAMETER OF 3" FOR FENCE HEIGHT OF 6' AND LESS; AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHTS OF 6' TO 12'. GATE POSTS WHERE GATE WIDTH IS 12' AND LESS SHALL HAVE AN OUTSIDE DIAMETER OF 3½" FOR FENCE HEIGHT OF 6' AND LESS. ALUMINUM TENSION WIRE SHALL BE 0.192" IN DIAMETER. MINIMUM THICKNESS OF MATERIAL FROM WHICH EXPANSION SLEEVES SHALL BE MADE WILL BE 0.078". POSTS AND RAILS MAY HAVE ANY CROSS-SECTIONAL SHAPE THAT WILL MEET THE SPECIFICATIONS.

OTHER DETAILS APPLY TO BOTH STEEL AND ALUMINUM FENCE.

ALL MISCELLANEOUS FITTINGS AND HARDWARE SHALL MEET THE REQUIREMENTS AND PRODUCTION TOLERANCES AS SET FORTH IN THE SPECIFICATIONS.
9 GAUGE ALUMINUM WIRE SHALL BE ACCEPTABLE FOR TIEING FABRIC TO TUBULAR AND ROLL FORMED MEMBERS OF STEEL FENCE.



INSTALLATION MAY BE MODIFIED AS SHOWN IN THE PLANS

TYPICAL INSTALLATION DIAGRAM

POSTS AND RAILS

SIZE O.D.	GRADE 1 AND ALUMINUM ALLOY O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT. STEEL	LBS. PER LINEAR FT. ALUMINUM	GRADE 2 O.D. INCHES	WALL THICKNESS	LBS. PER LINEAR FT.
1⅝	1.660	0.140	2.27	0.786	1.660	0.111	1.84
2	1.900	0.145	2.72	0.940	1.900	0.120	2.28
2½	2.375	0.154	3.65	1.264	2.375	0.130	3.11
3	2.875	0.203	5.79	2.004	2.875	0.160	4.64
3½	3.500	0.216	7.58	2.621	3.500	0.160	5.71
4	4.000	0.226	9.11	3.151	4.000	0.160	6.56

TOLERANCES ON DIMENSIONS AND WEIGHTS ACCORDING TO AASHTO M 181

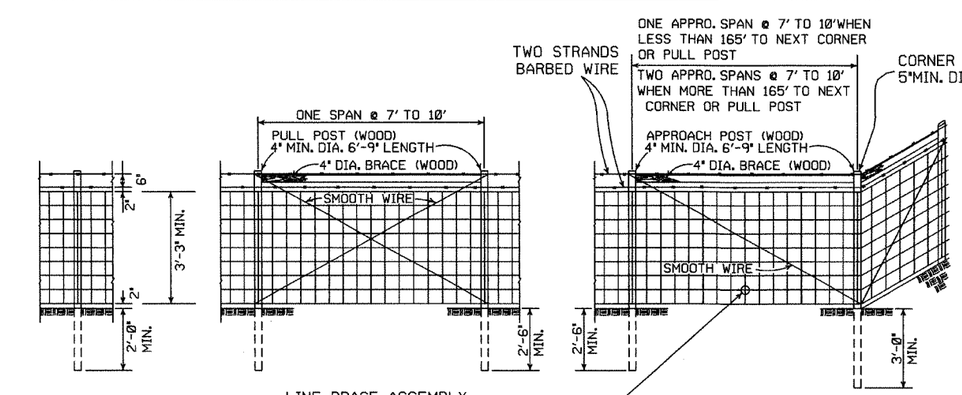
DATE	REVISION	FILMED
11-17-10	REVISED TRUSS ROD	
12-10-09	REVISED POSTS & RAILS TABLE	
5-21-09	ADDED TABLE & GEN. NOTE (C)	
8-22-02	REVISED NOTES. REMOVED TABLE. & REMOVED FENCE ALTERNATE	
4-3-97	REVISED BRACE RAIL NOTE	
10-18-96	REVISED AASHTO & ASTM REF.	
11-3-94	REVISED NOTE (L)	
10-1-92	DELETED ALTERNATE POST	10-1-92
8-15-91	DELETED ROLL FORMED POST DETAIL & ADDED NOTE	8-15-91 8-15-91
11-30-89	DELETED CLASS CONCRETE	11-30-89
11-17-88	REVISED O.D. SIZES	668-11-17-88
10-30-87	GENERAL REVISIONS	548-10-30-87
4-20-79	REVISED TOP RAIL & TENSION WIRE	695-4-20-79
10-2-72	REVISED AND REDRAWN	530-10-2-72

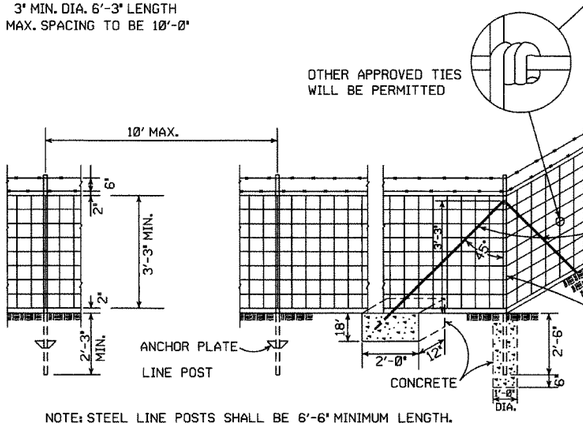
ARKANSAS STATE HIGHWAY COMMISSION

CHAIN LINK FENCE

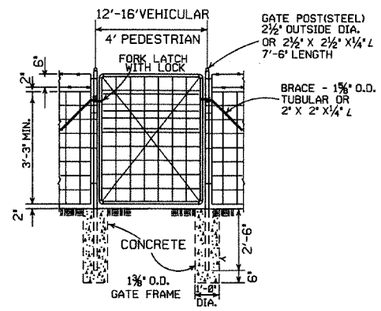
STANDARD DRAWING WF-3

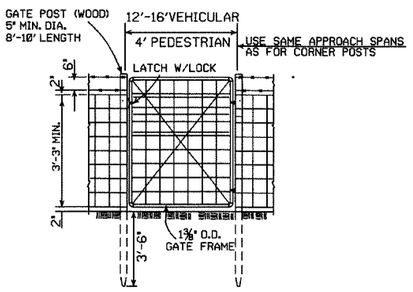
TYPE C FENCE (WOOD POSTS)

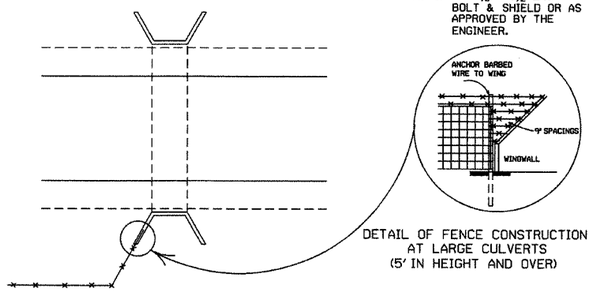




NOTE: STEEL LINE POSTS SHALL BE 6'-6" MINIMUM LENGTH.







OTHER APPROVED TIES WILL BE PERMITTED

GENERAL NOTES:

STEEL LINE POSTS SHALL BE PAINTED OR GALVANIZED.
TUBULAR END, CORNER, PULL, OR DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING WF-3 (CHAIN LINK). APPROVED ALTERNATES ARE ACCEPTABLE.
AN ACCEPTABLE TOLERANCE IN LENGTH OF TUBULAR OR WOODEN POSTS SHALL BE - 1" TO +2".
TUBULAR POSTS MUST BE PAINTED OR GALVANIZED.

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

DRIVEWAY GATES, EITHER SINGLE 12' TO 16' OR DOUBLE 6' TO 8' OPENING OF THE SAME TYPE AS THE PEDESTRIAN GATE, SHALL BE INSTALLED ON THE RIGHT SIDE OF EACH THROUGH LANE ROAD AT LARGE CULVERTS OR BRIDGE CROSS FENCE, FOR USE OF MAINTENANCE EQUIPMENT. LOCATION OF GATES TO BE SHOWN ON PLANS OR AS DESIGNATED BY THE ENGINEER.

AT STREAM CROSSINGS, THE FENCE SHALL NOT BE CONSTRUCTED ACROSS LARGE STREAMS. WHERE CLEARANCE IS SUFFICIENT FROM THE TOP OF THE BANK TO THE BRIDGE STRUCTURE A CROSS CONNECTION SHALL BE CONSTRUCTED BETWEEN THE FENCE ON EACH SIDE OF THE ROAD. WHERE THE CLEARANCE IS NOT SUFFICIENT, THE FENCE SHALL BE TERMINATED WITH CROSS CONNECTIONS AND END POSTS ADJACENT TO BRIDGE ABUTMENTS OR CULVERT WINGWALLS.

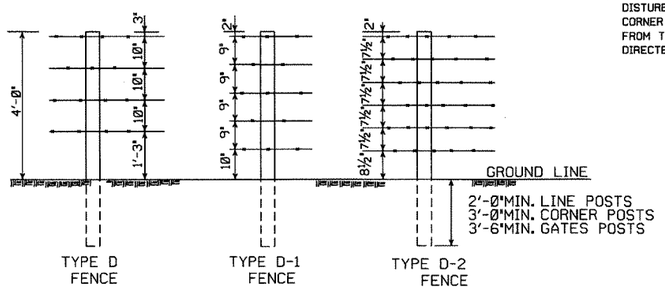
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD" AS DESCRIBED AS FOLLOWS:
THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRES A MINIMUM OF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

SPLICE FOR WOVEN WIRE BETWEEN PULL POST SHALL BE BY THE "WESTERN UNION METHOD" AS DESCRIBED AS FOLLOWS: THE VERTICAL WIRES FOR EACH END OF THE FENCE FABRIC SHALL BE PLACED SIDE BY SIDE AND THE PROJECTING HORIZONTAL WIRES SHALL BE WRAPPED A MINIMUM OF 4 TIMES AROUND THE HORIZONTAL WIRES OF THE FIRST WEB.

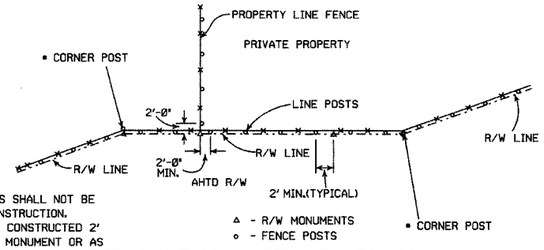
STAPLE AT LEAST TOP, BOTTOM AND ALTERNATE WIRES OF WOVEN FABRIC FOR WOOD LINE POSTS.

TYPE C FENCE (STEEL POSTS)

4 STRANDS BARBED WIRE (D)
5 STRANDS BARBED WIRE (D-1)
6 STRANDS BARBED WIRE (D-2)

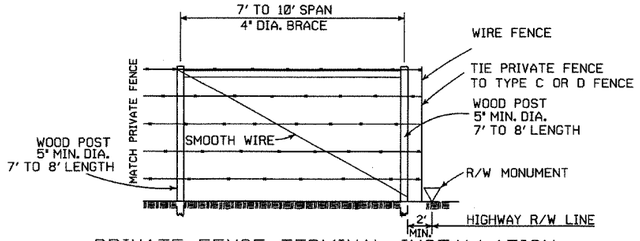


NOTE: SPACING AND SIZE (EXCEPT LENGTH) OF POSTS, APPROACH SPANS, PULL POST ASSEMBLIES, AND CORNER BRACING FOR TYPE D FENCE SHALL CONFORM TO TYPE C FENCE. USE GALVANIZED STAPLES ON WOOD POSTS AND APPROVED FASTENERS ON STEEL POSTS.



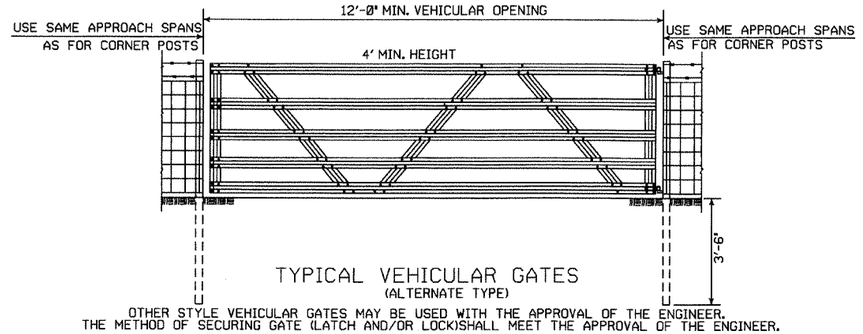
• NOTE: RIGHT-OF-WAY MONUMENTS SHALL NOT BE DISTURBED BY FENCE CONSTRUCTION. CORNER POSTS SHALL BE CONSTRUCTED 2' FROM THE RIGHT-OF-WAY MONUMENT OR AS DIRECTED BY THE ENGINEER.

RIGHT-OF-WAY FENCE LOCATION



PRIVATE FENCE TERMINAL INSTALLATION

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



TYPICAL VEHICULAR GATES
(ALTERNATE TYPE)

OTHER STYLE VEHICULAR GATES MAY BE USED WITH THE APPROVAL OF THE ENGINEER.
THE METHOD OF SECURING GATE (LATCH AND/OR LOCK) SHALL MEET THE APPROVAL OF THE ENGINEER.

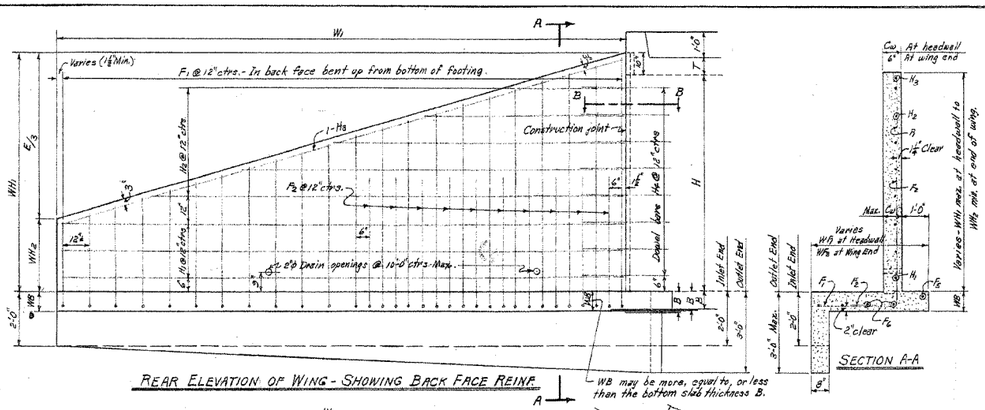
DATE	REVISION	FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	REVISED BARB WIRE AND ADDED CORNER POST NOTES	6-2-94
8-5-93	REVISED R/W INSTALLATION FENCE	8-5-93
10-1-92	ADDED STAPLE NOTE	10-1-92
8-15-91	ADDED TYPE D-2 FENCE	8-15-91
11-30-89	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

ARKANSAS STATE HIGHWAY COMMISSION

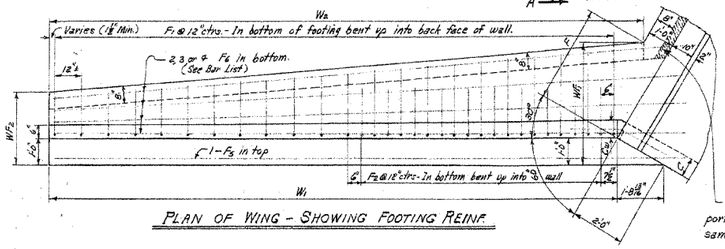
WIRE FENCE TYPE C AND D

STANDARD DRAWING WF-4

PROJ. BOARD NO.	STATE	FED. AID PROJECT	SHEET NO.	SHEET NO.	TOTAL SHEETS
0	ARK.			178	
JOB NO.					



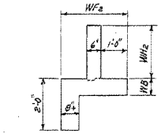
REAR ELEVATION OF WING - SHOWING BACK FACE REINF.



PLAN OF WING - SHOWING FOOTING REINF.

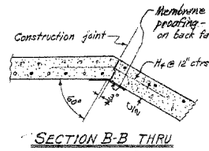
SECTION A-A

WB may be more, equal to, or less than the bottom slab thickness B.

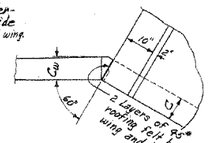


END VIEW OF WING

When B is more than WB, the shaded portion of the apron shall be made the same thickness as the barrel base B.



SECTION B-B THRU CONSTRUCTION JOINT



DETAIL AT TOP OF WING

Note:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

WING DIMENSIONS

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WING AT HEADWALL = C	WINGWALL HEIGHTS		WIDTHS OF WING FOOTINGS		PERPENDICULAR FOOTING DIMENSION	PERPENDICULAR DIST. FROM HDWL. TO END OF WING	LENGTH OF WINGWALLS	INSIDE FOOTING DIMENSION	* QUANTITY PER WING CLASS S CONCRETE	
			AT HEADWALL	AT END OF WING	AT HEADWALL	AT END OF WING					INLET END	OUTLET END
H	WB	C_W	WH_1	WH_2	W_{F1}	W_{F2}	F	E	W_1	W_2	CU.YD.	CU.YD.
2'	7"	6"	2'-10"	0'-8"	2'-9"	2'-0"	0'-11⅜"	6'-6"	7'-6"	7'-1⅝"	0.889	0.986
3'	7"	6"	3'-10"	1'-0"	3'-0"	2'-1⅛"	1'-0⅜"	8'-6"	9'-0⅜"	9'-7⅛"	1.338	1.466
4'	7"	6"	4'-10"	1'-4"	3'-0"	2'-3"	1'-0"	10'-6"	12'-1⅝"	12'-1⅝"	1.866	2.027
5'	7"	6"	5'-10"	1'-8"	3'-6"	2'-4⅝"	2'-1⅜"	12'-6"	14'-5⅛"	14'-7⅝"	2.978	2.668
		7"	5'-11"	1'-8"	3'-6"	2'-5⅛"	2'-1⅜"	12'-6"	14'-5⅛"	14'-7⅝"	2.582	2.772
6'	8"	7"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.940	3.661
		7⅝"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.811	3.732
		8"	6'-10"	2'-0"	3'-8"	2'-6"	2'-6⅛"	14'-6"	16'-9"	17'-1⅝"	3.588	3.803
7'	8½"	7½"	7'-10"	2'-8"	4'-2"	2'-7½"	3'-1¼"	16'-6"	19'-10½"	19'-8⅛"	4.505	4.758
		8"	7'-10"	2'-8"	4'-2"	2'-7½"	3'-1¼"	16'-6"	19'-10½"	19'-8⅛"	4.597	4.851
8'	9"	8"	8'-10"	2'-8"	4'-8"	2'-9"	3'-3"	18'-6"	21'-6½"	22'-0"	5.761	6.049

* Quantity per wing does not include headwall or that portion of apron or toewall for the length W_3.

APRON DIMENSION W_3

$W_3 = (OW - 2F)$

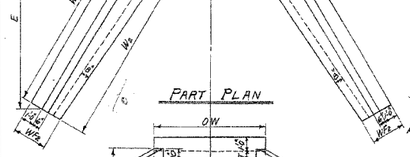
CLEAR SPAN	CLEAR HEIGHT	FOOTING DIMENSION	SINGLE BARREL CULVERT		DOUBLE BARREL CULVERT		TRIPLE BARREL CULVERT		QUADRUPLE BARREL CULVERT		QUINTUPLE BARREL CULVERT	
S	H	2F	OW	W_3	OW	W_3	OW	W_3	OW	W_3	OW	W_3
4'	2'	1'-11⅛"	5'-0"	3'-0⅛"	9'-8"	7'-8⅛"	14'-4"	12'-4⅛"	19'-0"	17'-0⅛"	23'-8"	21'-8⅛"
	3'	2'-0⅜"	5'-0"	2'-3⅜"	9'-8"	6'-11⅜"	14'-4"	11'-7⅜"	19'-0"	16'-3⅜"	23'-8"	20'-11⅜"
	4'	2'-1⅝"	5'-0"	1'-6"	9'-8"	6'-2"	14'-4"	10'-10"	19'-0"	15'-6"	23'-8"	20'-2"
	5'	4'-3⅜"	5'-2"	0'-8⅝"	9'-8"	5'-6⅝"	14'-4"	10'-0⅝"	19'-0"	14'-6⅝"	23'-8"	19'-9⅝"
	6'	5'-0⅜"	5'-2"	0'-1⅛"	9'-11"	4'-10⅝"	14'-8"	9'-7⅛"	19'-5"	14'-1⅝"	24'-2"	19'-1⅝"
5'	3'	2'-0⅜"	6'-0"	3'-3⅜"	11'-8"	8'-11⅜"	17'-4"	14'-7⅜"	23'-0"	20'-3⅜"	28'-8"	25'-11⅜"
	4'	3'-6"	6'-0"	2'-6"	11'-8"	8'-1"	17'-4"	13'-10"	23'-0"	19'-6"	28'-8"	25'-2"
	5'	4'-3⅜"	6'-0"	1'-8⅝"	11'-8"	7'-6⅝"	17'-4"	13'-0⅝"	23'-0"	18'-6⅝"	28'-8"	24'-9⅝"
	6'	5'-0⅜"	6'-2"	1'-1⅛"	11'-11"	6'-10⅝"	17'-8"	12'-7⅛"	23'-5"	18'-1⅝"	29'-2"	24'-1⅝"
	7'	6'-2⅝"	6'-3"	0'-0⅝"	12'-1"	5'-10⅝"	17'-11"	11'-8⅝"	23'-9"	17'-4⅝"	29'-7"	23'-9⅝"
6'	3'	2'-0⅜"	7'-0"	4'-3⅜"	13'-8"	10'-11⅜"	20'-4"	17'-7⅜"	27'-0"	24'-3⅜"	33'-8"	30'-11⅜"
	4'	3'-6"	7'-0"	3'-6"	13'-8"	10'-2"	20'-4"	16'-10"	27'-0"	23'-6"	33'-8"	30'-2"
	5'	4'-3⅜"	7'-0"	2'-8⅝"	13'-8"	9'-6⅝"	20'-4"	16'-0⅝"	27'-0"	22'-6⅝"	33'-8"	29'-9⅝"
	6'	5'-0⅜"	7'-2"	2'-1⅛"	13'-11"	8'-10⅝"	20'-8"	15'-7⅛"	27'-5"	22'-1⅝"	34'-2"	29'-1⅝"
	7'	6'-2⅝"	7'-3"	1'-0⅝"	14'-1"	7'-10⅝"	20'-11"	14'-8⅝"	27'-9"	21'-4⅝"	34'-7"	28'-9⅝"
	8'	7'-1"	7'-4"	0'-0"	14'-2"	6'-10"	21'-0"	13'-8"	27'-11"	20'-6"	34'-8"	27'-10"
7'	4'	3'-6"	8'-0"	4'-6"	15'-8"	12'-2"	23'-4"	19'-10"	31'-0"	27'-6"	38'-8"	35'-2"
	5'	4'-3⅜"	8'-0"	3'-8⅝"	15'-8"	11'-6⅝"	23'-4"	19'-0⅝"	31'-0"	26'-8⅝"	38'-8"	34'-9⅝"
	6'	5'-0⅜"	8'-2"	3'-1⅛"	15'-11"	10'-10⅝"	23'-8"	18'-7⅛"	31'-5"	26'-1⅝"	39'-2"	34'-1⅝"
	7'	6'-2⅝"	8'-3"	2'-0⅝"	16'-1"	9'-10⅝"	23'-11"	17'-8⅝"	31'-9"	25'-4⅝"	39'-7"	33'-9⅝"
	8'	7'-1"	8'-4"	1'-0"	16'-2"	8'-10"	24'-0"	16'-8"	31'-11"	24'-6"	39'-8"	32'-10"
9'	5'	4'-3⅜"	9'-0"	5'-6"	17'-8"	14'-2"	26'-4"	22'-10"	35'-0"	31'-6"	43'-8"	40'-2"
	6'	5'-0⅜"	9'-2"	4'-11⅛"	17'-11"	13'-7⅜"	26'-8"	21'-9⅛"	35'-5"	30'-7⅛"	44'-2"	39'-11⅛"
	7'	6'-2⅝"	9'-3"	3'-10⅝"	18'-1"	11'-10⅝"	26'-11"	20'-8⅝"	35'-9"	29'-4⅝"	44'-7"	38'-9⅝"
	8'	7'-1"	9'-4"	2'-10"	18'-2"	10'-10"	27'-0"	19'-8"	35'-10"	28'-6"	44'-8"	37'-10"
10'	5'	4'-3⅜"	10'-2"	5'-10⅜"	19'-11"	15'-7⅜"	29'-8"	25'-0⅜"	39'-5"	35'-1⅜"	49'-2"	44'-10⅜"
	6'	5'-0⅜"	10'-3"	5'-2⅛"	20'-1"	15'-0⅛"	29'-11"	24'-10⅛"	39'-9"	34'-3⅛"	49'-7"	44'-6⅛"
	7'	6'-2⅝"	10'-3"	4'-1⅝"	20'-1"	13'-10⅝"	29'-11"	23'-8⅝"	39'-9"	33'-0⅝"	49'-7"	43'-6⅝"
	8'	7'-1"	10'-4"	3'-0"	20'-2"	12'-10"	30'-0"	22'-8"	39'-10"	32'-6"	49'-8"	42'-8"
11'	5'	4'-3⅜"	11'-2"	6'-10⅜"	21'-11"	17'-7⅜"	32'-8"	28'-4⅜"	43'-5"	39'-1⅜"	54'-2"	49'-10⅜"
	6'	5'-0⅜"	11'-3"	6'-2⅛"	22'-1"	17'-0⅛"	32'-11"	27'-10⅛"	43'-9"	38'-3⅛"	54'-7"	49'-6⅛"
	7'	6'-2⅝"	11'-3"	5'-1⅝"	22'-1"	15'-10⅝"	32'-11"	26'-8⅝"	43'-9"	37'-4⅝"	54'-7"	48'-9⅝"
	8'	7'-1"	11'-4"	4'-0"	22'-2"	14'-10"	33'-0"	25'-8"	43'-10"	36'-6"	54'-8"	47'-10"
12'	6'	5'-0⅜"	12'-3"	7'-3⅛"	24'-2"	19'-1⅛"	36'-0"	30'-11⅛"	47'-10"	42'-5⅛"		
	7'	6'-2⅝"	12'-4"	6'-1⅝"	24'-2"	17'-11⅝"	36'-0"	29'-9⅝"	47'-10"	41'-2⅝"		
	8'	7'-1"	12'-5"	5'-0"	24'-3"	16'-10"	36'-0"	28'-8"	47'-11"	40'-6"		
13'	6'	5'-0⅜"	13'-4"	8'-3⅜"	26'-2"	21'-1⅜"	39'-0"	33'-11⅜"	51'-10"	46'-9⅜"		
	7'	6'-2⅝"	13'-5"	7'-1⅝"	26'-2"	19'-11⅝"	39'-0"	32'-9⅝"	51'-10"	45'-5⅝"		
	8'	7'-1"	13'-6"	6'-0"	26'-2"	18'-10"	39'-0"	31'-8"	51'-10"	44'-6"		

QUANTITIES

CLASS S CONCRETE - 4 WINGS

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WINGS AT HEADWALL	THICKNESS OF WING FOOTING	REINFORCING STEEL - * FOR 4 WINGS	HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS					
					SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT	
S	H	C_W	WB	LB.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	CU.YD.	
4'	2'	6"	7"	108.0	4.50	5.46	6.42	7.38	8.34	
	3'	6"	7"	169.9	6.26	7.21	8.17	9.13	10.09	
	4'	6"	7"	259.6	8.33	9.28	10.24	11.20	12.16	
	5'	6"	7"	352.8	10.72	11.68	12.64	13.60	14.56	
	6'	7"	8"	583.1	14.55	15.53	16.52	17.51	18.49	
5'	3'	6"	7"	164.9	6.47	7.63	8.79	9.96	11.12	
	4'	6"	7"	259.6	8.54	9.70	10.87	10.03	12.20	
	5'	6"	7"	352.8	10.94	12.10	13.26	1493	15.59	
	6'	7"	8"	583.1	14.77	15.96	17.15	18.34	19.54	
	7'	7⅞"	8⅝"	1134.6	18.99	20.15	21.37	22.59	23.80	
6'	3'	6"	7"	164.9	6.68	8.06	9.42	10.80	12.18	
	4'	6"	7"	259.6	8.75	10.14	11.89	12.87	14.25	
	5'	6"	7"	352.8	11.15	12.53	13.89	15.27	16.65	
	6'	7"	8"	583.1	14.98	16.39	17.78	19.18	20.59	
	7'	7⅞"	8⅝"	1134.6	19.15	20.58	22.00	23.43	24.86	
	8'	8"	9"	1425.6	24.09	25.53	26.96	28.39	29.83	
7'	4'	6"	7"	259.6	8.97	10.58	12.15	13.76	15.35	
	5'	6"	7"	352.8	11.36	12.97	14.58	16.15	17.75	
	6'	7"	8"	583.1	15.20	16.82	18.42	20.04	21.66	
	7'	7⅞"	8⅝"	1134.6	19.38	21.02	22.69	24.28	25.92	
	8'	8"	9"	1425.6	24.32	25.97	27.60	29.25	30.89	
8'	4'	6"	7"	259.6	9.19	11.03	12.82	14.65	16.45	
	5'	7"	7"	352.8	12.03	13.89	15.70	17.55	19.36	
	6'	7"	8"	583.1	15.92	17.27	19.09	20.93	22.75	
	7'	7⅞"	8⅝"	1134.6	19.59	21.46	23.30	25.16	26.93	
	8'	8"	9"	1425.6	24.54	26.41	28.24	30.11	31.96	
9'	5'	7"	7"	352.8	12.26	1483	16.87	18.95	20.97	
	6'	7⅞"	8"	583.1	15.94	18.04	20.02	22.13	24.23	
	7'	7⅞"	8⅝"	1134.6	19.81	21.91	23.96	26.06	28.10	
	8'	8"	9"	1425.6	24.76	26.86	28.91	31.00	33.05	
10'	5'	7"	7"	352.8	12.49	14.80	17.05	19.26	21.52	
	6'	7⅞"	8"	583.1	16.17	18.50	20.77	22.98	25.28	
	7'	7⅞"	8⅝"	1134.6	20.05	22.37	24.68	26.87	29.15	
	8'	8"	9"	1425.6	24.98	27.31	29.58	31.81	34.10	
11'	6'	8"	8"	583.1	16.69	19.27	21.76	24.23		
	7'	8"	8⅝"	1134.6	20.64	23.22	25.71	28.18		
	8'	8"	9"	1425.6	25.19	27.77	30.27	32.74		
12'	6'	8"	8"	583.1	16.92	19.75	22.45	25.18		
	7'	8"	8⅝"	1134.6	20.87	23.69	26.40	29.13		
	8'	8"	9"	1425.6	25.42	28.25	30.96	33.69		

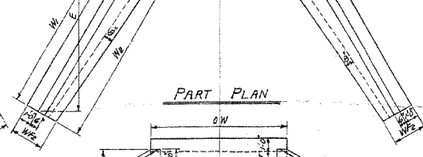
* For reinforcing steel in Headwalls and Aprons, See Details of Standard Barrel Sections for R.C. Box Culverts for the desired Span and Height.



PART PLAN

END ELEVATION

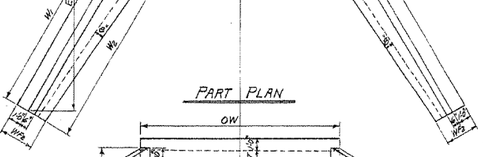
SINGLE BARREL CULVERT



PART PLAN

END ELEVATION

DOUBLE BARREL CULVERT

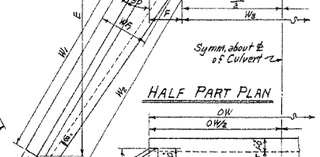


PART PLAN

END ELEVATION

TRIPLE BARREL CULVERT

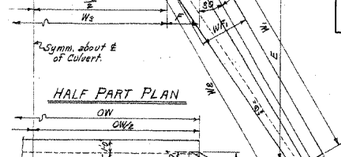
NOTE:- Plans and Elevations are not to scale.



HALF PART PLAN

HALF END ELEVATION

QUADRUPLE BARREL CULVERT



HALF PART PLAN

HALF END ELEVATION

QUINTUPLE BARREL CULVERT

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three mopings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

BAR LIST FOR ONE WING - 4 REQUIRED

CLEAR HEIGHT	F_1 Bent: In bottom of footing, bent up into back face of wing. One bar of each length.							F_2 Bent: In bottom of footing, bent up into back face of wing. Alt. with F_1 bars.					F_3 Straight: Longitudinal in top of wing footing heel.			F_4 Straight: Longitudinal in bottom of wing footing toe.			H_1 Straight: Horizontal in back face of wing.				H_2 Straight: Horizontal in back face of wing. One bar of each length.					H_3 Straight: In back face of wing at top - on slope.			H_4 Bent: Dowels thru construction joint at headwall.					QUANTITY REINFORCING STEEL PER WING	BAR BENDING DIAGRAMS
				LENGTHS VARY																																		
H	SIZE	SPACING	NO. REQ'D	MIN.	MAX.	MIN.	MAX.	SIZE	SPACING	NO. REQ'D	LENGTH	X	Y	SIZE	NO. REQ'D	LENGTH	SIZE	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTHS VARY MAX.	LENGTHS VARY MIN.	SIZE	NO. REQ'D	LENGTH	SIZE	SPACING	NO. REQ'D	LENGTH	X	LB.	
2'	#3	12"	8	1'-6"	3'-10"	0'-8"	1'-0"	#3	12"	1	6'-11"	2'-11"		#3	1	9'-8"	#3	2	8'-6"	#3	12"	1	7'-2"	#3	12"	1	——	6'-0"	#3	1	7'-4"	#3	12"	1	2'-8"	1'-4"	27.0	
3'	#3	12"	10	2'-2"	5'-2"	0'-10"	1'-3"	#3	12"	1	8'-7"	3'-11"		#3	1	12'-0"	#3	2	11'-0"	#3	12"	1	9'-6"	#3	12"	2	7'-6"	4'-0"	#3	1	9'-9"	#3	12"	2	2'-8"	1'-8"	41.1	
4'	#3	12"	13	2'-9"	6'-6"	0'-11"	1'-7"	#3	12"	1	10'-4"	4'-10"		#3	1	14'-9"	#3	3	13'-6"	#3	12"	1	11'-10"	#3	12"	3	10'-11"	4'-6"	#3	1	12'-2"	#3	12"	4	2'-8"	1'-8"	63.7	
5'	#3	12"	15	2'-11"	7'-10"	1'-1"	1'-11"	#3	12"	4	5'-6"	1'-1"	2'-6"	#3	1	16'-8"	#3	3	16'-0"	#3	12"	2	14'-2"	#3	12"	3	10'-11"	4'-6"	#3	1	14'-7"	#3	12"	5	2'-8"	1'-8"	89.5	
6'	#3	12"	17	3'-6"	9'-3"	1'-2"	2'-3"	#3	12"	6	6'-4"	1'-6"	3'-2"	#3	1	19'-0"	#3	3	18'-6"	#3	12"	2	16'-6"	#3	12"	4	14'-5"	4'-6"	#3	1	17'-0"	#3	12"	6	2'-8"	1'-8"	145.8	
7'	#4	12"	20	3'-9"	10'-9"	1'-3"	2'-8"	#3	12"	7	5'-6"	1'-7"	4'-0"	#4	1	21'-6"	#4	4	21'-0"	#4	12"	2	18'-9"	#4	12"	5	17'-9"	4'-6"	#4	1	19'-5"	#4	12"	7	3'-6"	1'-9"	283.7	
8'	#4	12"	22	4'-6"	12'-3"	1'-5"	3'-2"	#3	12"	10	6'-6"	1'-10"	4'-9"	#4	1	23'-8"	#4	4	23'-3"	#4	12"	3	21'-1"	#4	12"	5	17'-9"	4'-6"	#4	1	21'-10"	#4	12"	8	3'-6"	1'-9"	356.4	

NOTE:- Dimensions are to bar centers.

Designed By:- W.C.H. 6-20-62. Checked By:- RMS - 1-9-63
Drawn By:- W.C.H. 12-4-62. Checked By:- RMS - 1-31-63
Quantities By:- W.C.H. 12-17-62. Rechecked By:- RMS - 2-27-63

REVISIONS:- Membrane added. 5-10-66 W.C.H.

GENERAL NOTES:-

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.

REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.

CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.

SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable Special Provisions.

UNIT STRESSES:-

Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:- This drawing to be used in conjunction with Standard Barrel Sections, Drawing Nos. as listed below.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-100X-0	R-200X-0	R-300X-0	R-400X-0	R-500X-0
R-100X-X1	R-200X-X1	R-300X-X1	R-400X-X1	R-500X-X1
R-100X-X2	R-200X-X2	R-300X-X2	R-400X-X2	
	R-200X-X3	R-300X-X3		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES — ALL DEPTHS OF COVER FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X003-1

RESHOT 3-5-93

157

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			179	
JOB No.					

BAR LIST FOR BARREL SECTION 60'0" IN LENGTH

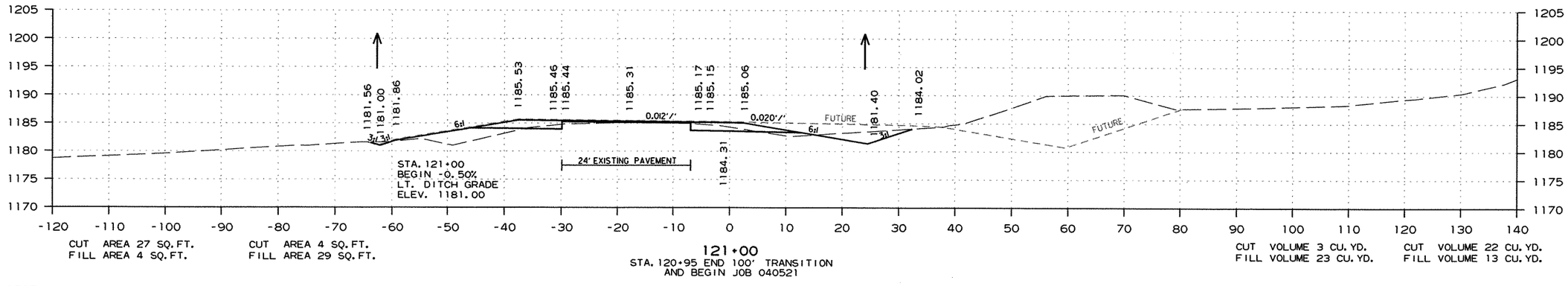
| DEPTH OF COVER D | CLEAR SPAN S | CLEAR HEIGHT H | "a" bars STRAIGHT In Top and Bottom Slab of Barrel. 2 Add'l in Apron and Headwall-Each. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | "b" bars BENT - See Diagram below. In Bottom of Top Slab bent up over Division Wall - hooked. Alternate with "a" and "c" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | X | Y | Z | "b2" bars BENT - See Diagram below. In Top of Bottom Slab bent down under Division Wall - hooked. Alternate with "a" and "c" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | X | Y | Z | "c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "b" and "b2" bars. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH | "j" bars Longitudinal in Top Slab of Barrel SIZE | SPACING | NO. REQ'D | LENGTH | "d1" bars STRAIGHT Longitudinal in Sidewalls and Division Walls SIZE | SPACING | NO. REQ'D | LENGTH | "e" bars Longitudinal in Bottom Slab of Barrel. SIZE | SPACING | NO. REQ'D | LENGTH | "f" bars STRAIGHT Vertical in Sidewalls and Division Walls. SIZE | SPACING | NUMBER REQ'D 3:1 | NUMBER REQ'D 4:1 | LENGTH |
|---|---|---|---|---|---

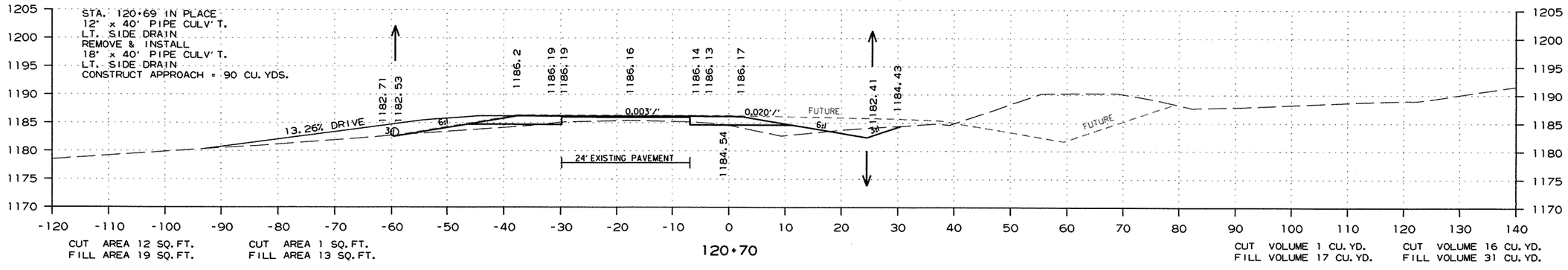
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	180	239

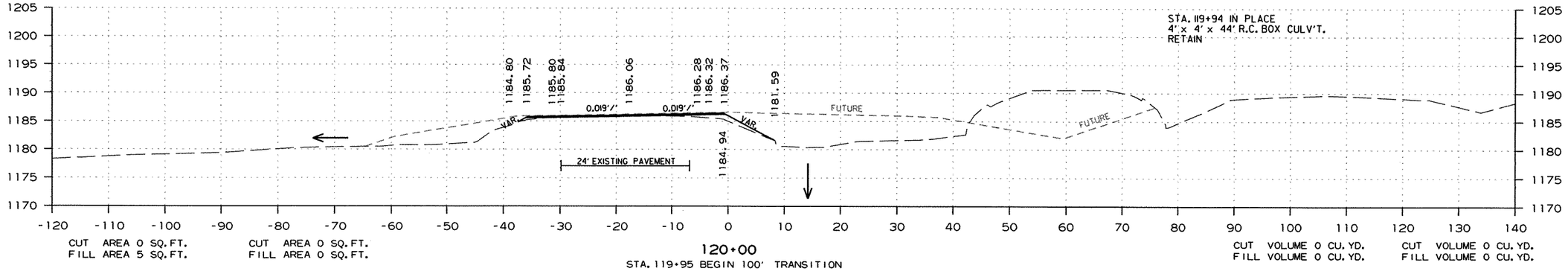
(2) CROSS SECTIONS

STAGE 1 STAGE 4

STAGE 4 STAGE 1







10/16/2012

R040521.DGN

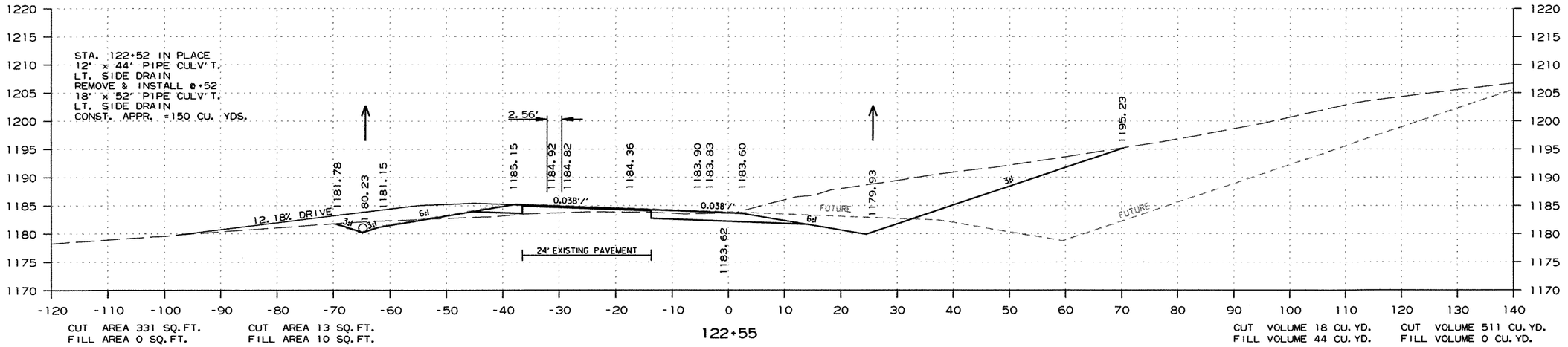
HWY. 62 BYPASS
STA. 120+00 TO STA. 121+00

STAGE 1 STAGE 4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	181	239

(2) CROSS SECTIONS

STAGE 4 STAGE 1



10/16/2012

R040521.DGN

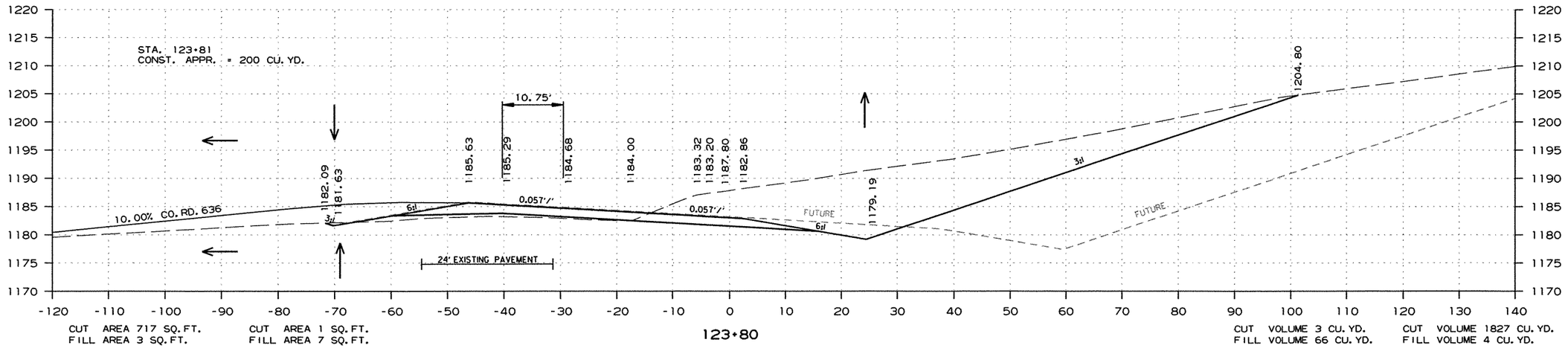
HWY. 62 BYPASS
STA. 122+00 TO STA. 122+55

STAGE 1 STAGE 4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	182	239

(2) CROSS SECTIONS

STAGE 4 STAGE 1



10/16/2012

R040521.DGN

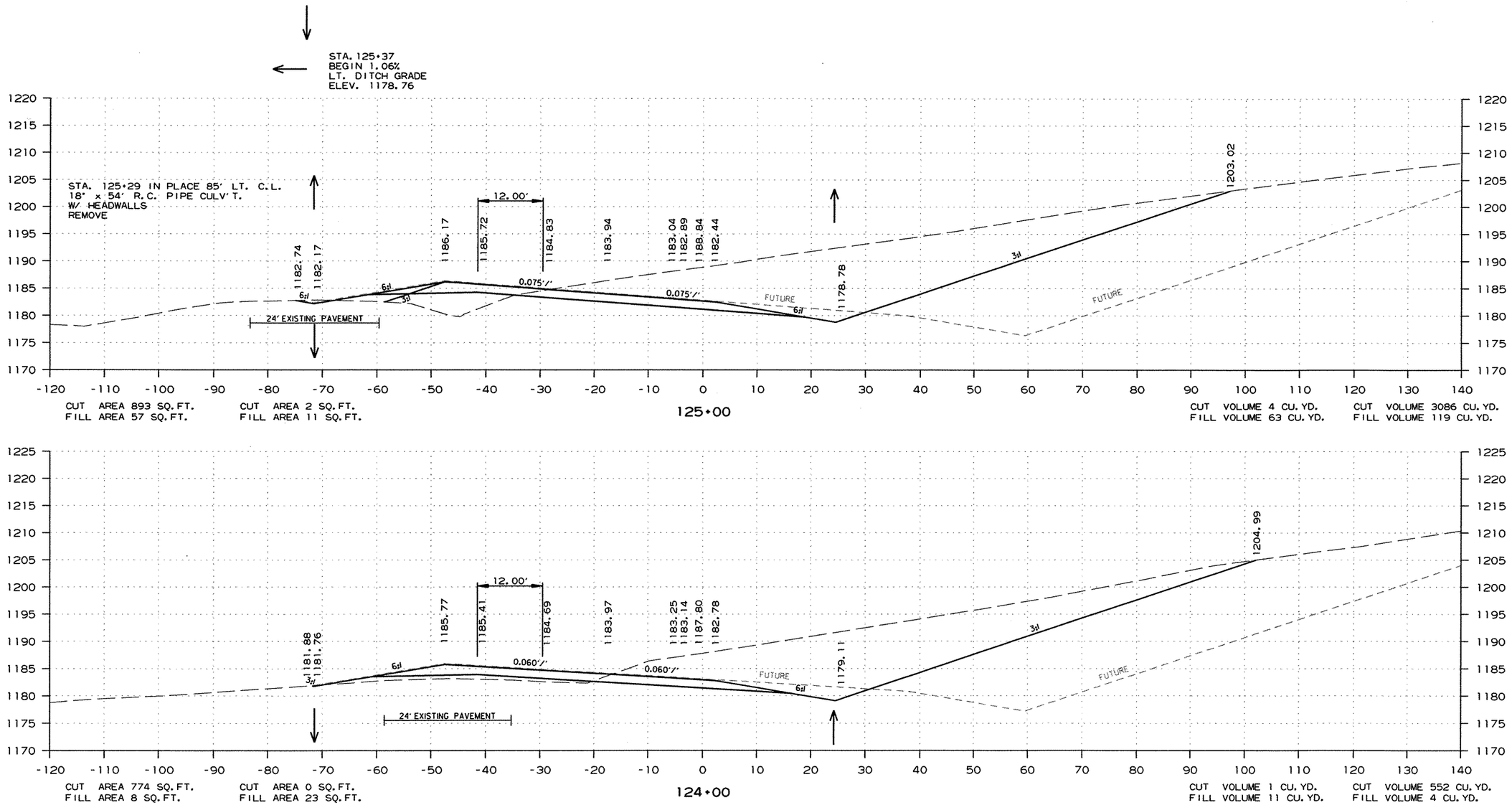
HWY. 62 BYPASS
STA. 123+00 TO STA. 123+80

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	183	239

(2) CROSS SECTIONS

STAGE 1 STAGE 4

STAGE 4 STAGE 1



10/16/2012

R040521.DGN

HWY. 62 BYPASS
STA. 124+00 TO STA. 125+00

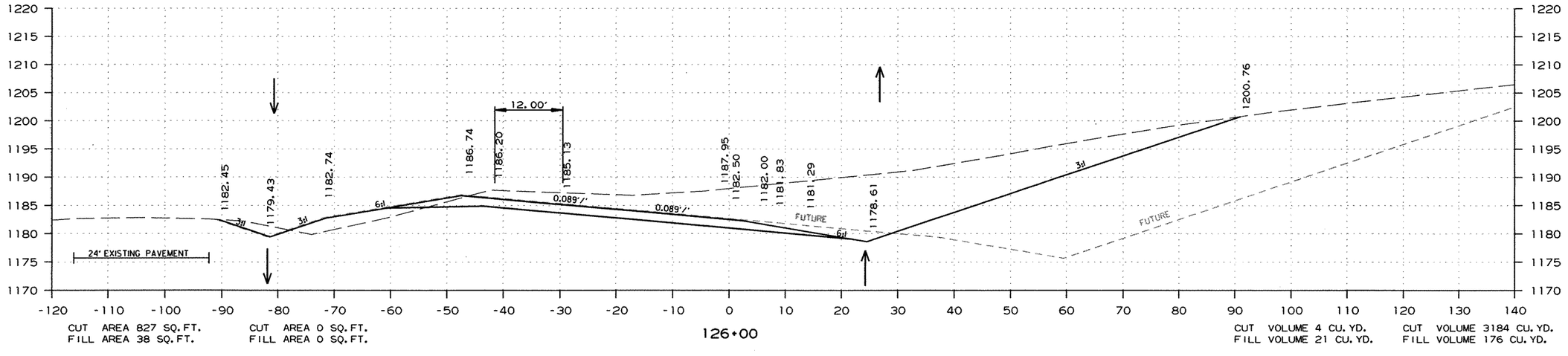
STAGE 1 STAGE 4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	184	239

(2) CROSS SECTIONS

STAGE 4 STAGE 1

STA. 126+25
END 1.06%
LT. DITCH GRADE
ELEV. 1179.69



CUT AREA 827 SQ.FT.
FILL AREA 38 SQ.FT.

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

126+00

CUT VOLUME 4 CU.YD.
FILL VOLUME 21 CU.YD.

CUT VOLUME 3184 CU.YD.
FILL VOLUME 176 CU.YD.

HWY. 62 BYPASS
STA. 126+00

10/16/2012

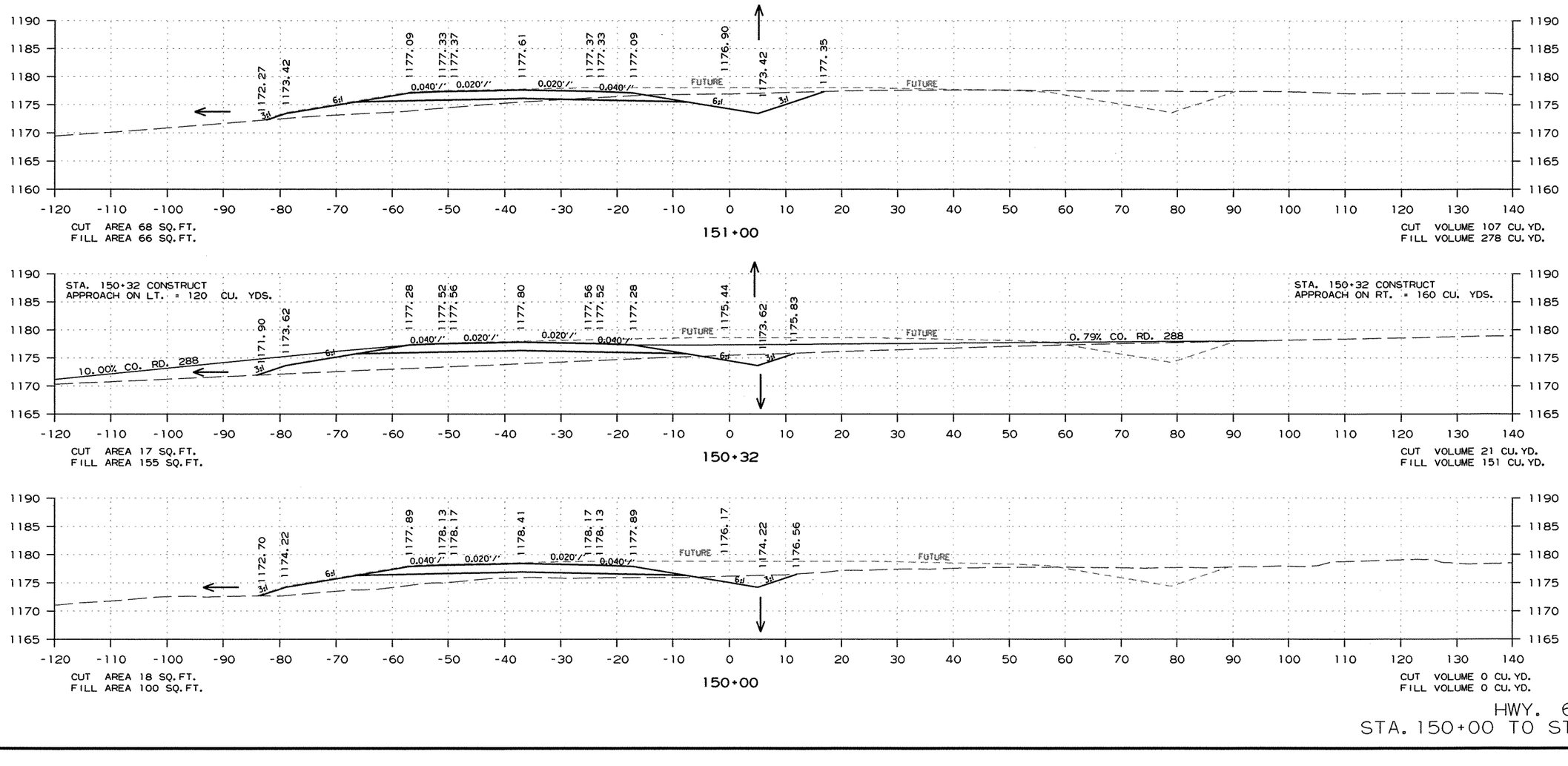
R040521.DGN

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.		040521	185	239

(2) CROSS SECTIONS

STAGE 1



10/16/2012

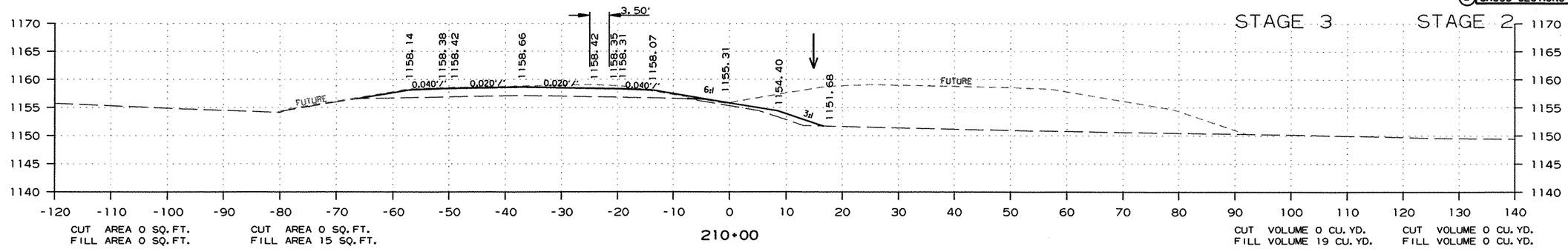
R040521.DGN

HWY. 62 BYPASS
STA. 150+00 TO STA. 151+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	186	239

(2) CROSS SECTIONS

STAGE 2 STAGE 3



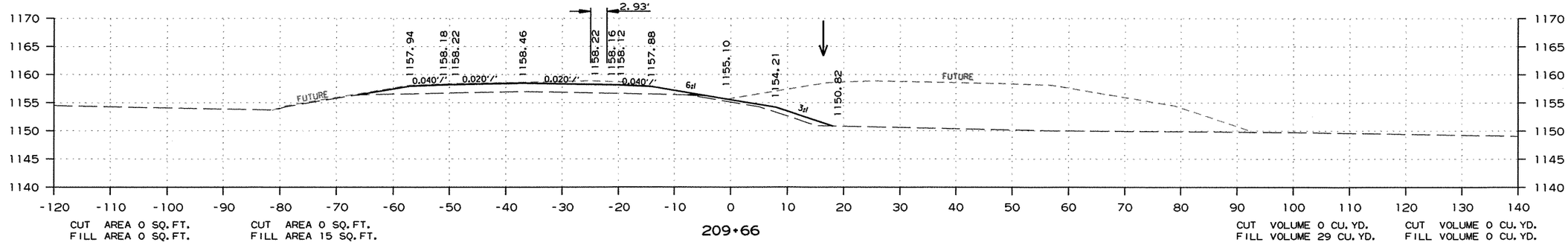
CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

CUT AREA 0 SQ.FT. FILL AREA 15 SQ.FT.

210+00

CUT VOLUME 0 CU.YD. FILL VOLUME 19 CU.YD.

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.



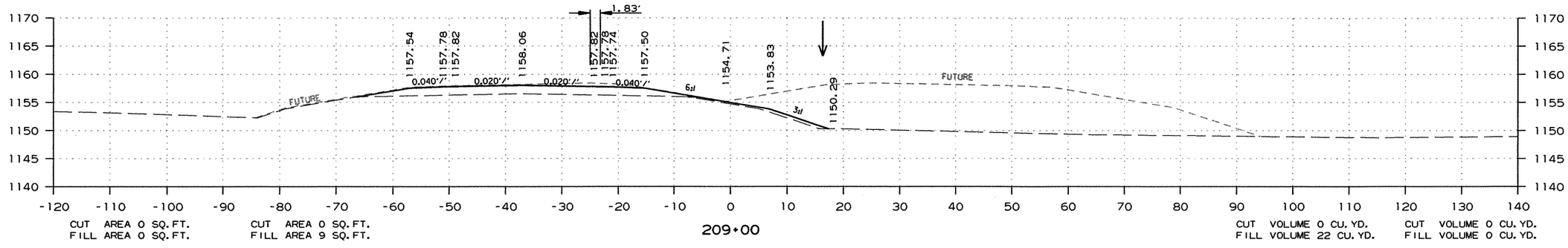
CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

CUT AREA 0 SQ.FT. FILL AREA 15 SQ.FT.

209+66

CUT VOLUME 0 CU.YD. FILL VOLUME 29 CU.YD.

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.



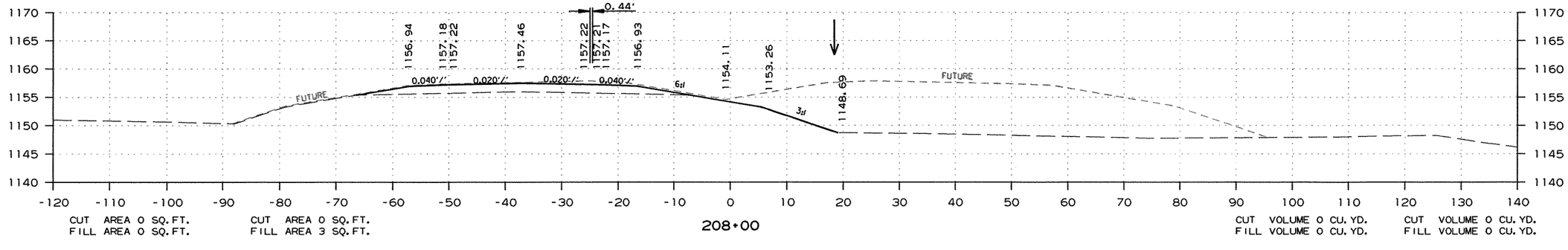
CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

CUT AREA 0 SQ.FT. FILL AREA 9 SQ.FT.

209+00

CUT VOLUME 0 CU.YD. FILL VOLUME 22 CU.YD.

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.



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

CUT AREA 0 SQ.FT. FILL AREA 3 SQ.FT.

208+00

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.

STA. 207+90.00 BEGIN
720' TAPER

HWY. 62 BYPASS
STA. 208+00 TO STA. 210+00

10/16/2012

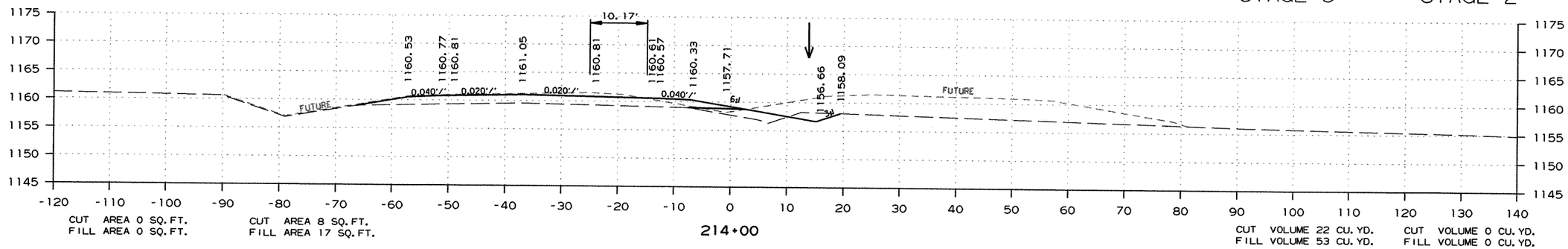
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.	040521		187	239

(2) CROSS SECTIONS

STAGE 2 STAGE 3

STAGE 3 STAGE 2



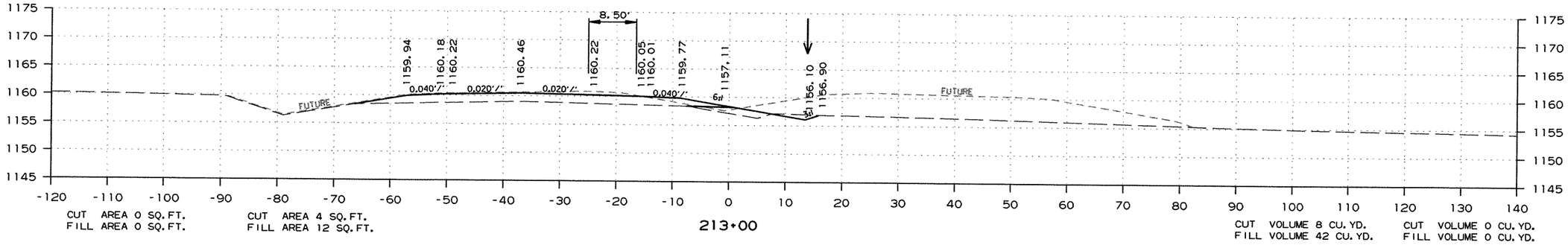
CUT AREA 0 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 8 SQ.FT.
FILL AREA 17 SQ.FT.

214+00

CUT VOLUME 22 CU.YD.
FILL VOLUME 53 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



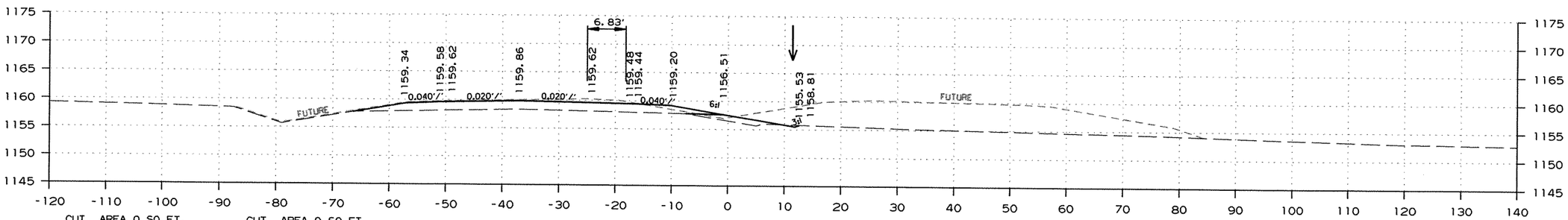
CUT AREA 0 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 4 SQ.FT.
FILL AREA 12 SQ.FT.

213+00

CUT VOLUME 8 CU.YD.
FILL VOLUME 42 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



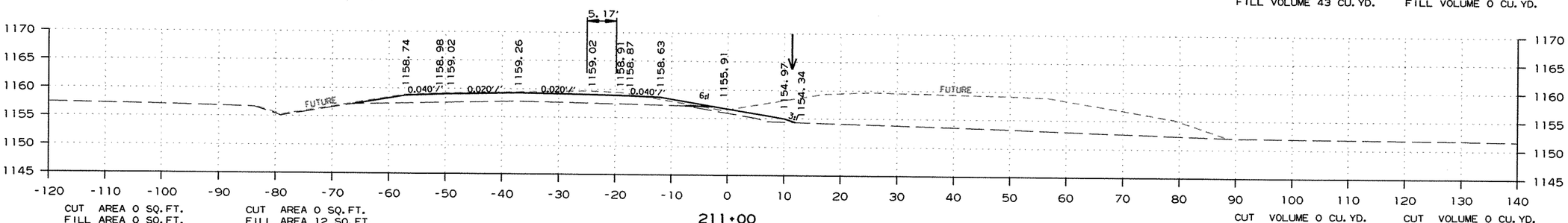
CUT AREA 0 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 0 SQ.FT.
FILL AREA 11 SQ.FT.

212+00

CUT VOLUME 1 CU.YD.
FILL VOLUME 43 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT AREA 0 SQ.FT.
FILL AREA 12 SQ.FT.

211+00

CUT VOLUME 0 CU.YD.
FILL VOLUME 51 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

HWY. 62 BYPASS
STA. 211+00 TO STA. 214+00

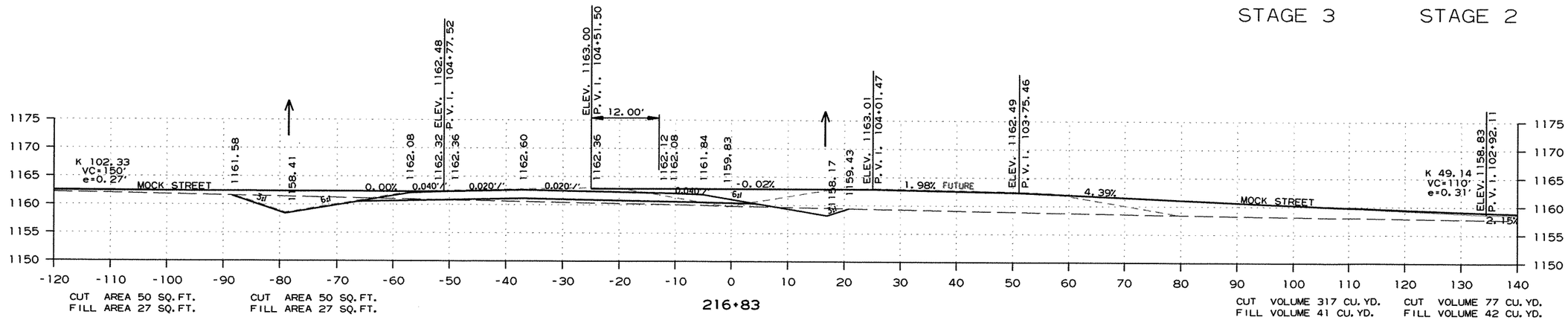
10/16/2012

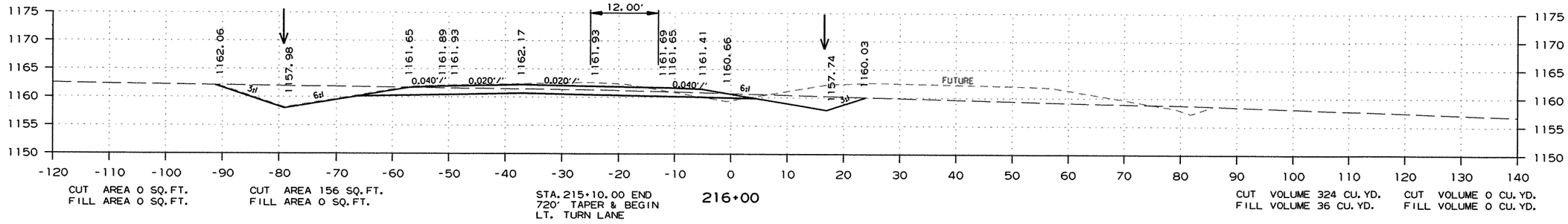
R040521.DGN

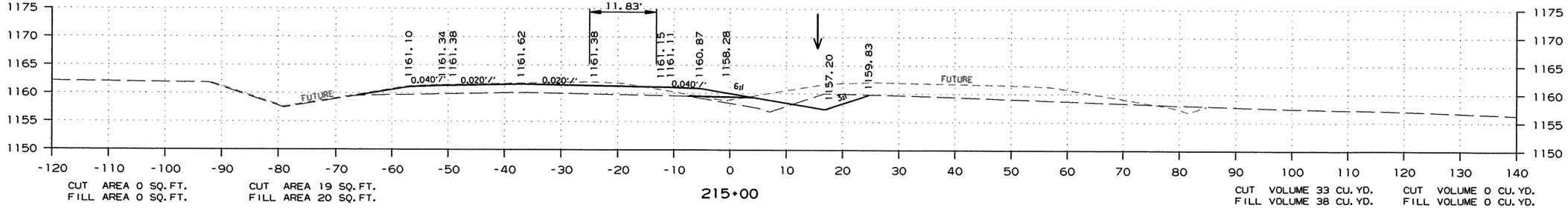
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	188	239

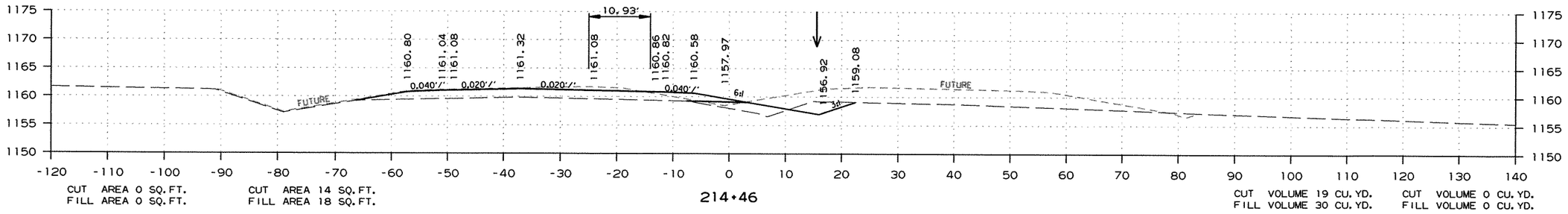
(2) CROSS SECTIONS

STAGE 2 STAGE 3 STAGE 3 STAGE 2









HWY. 62 BYPASS
STA. 214+46 TO STA. 216+83

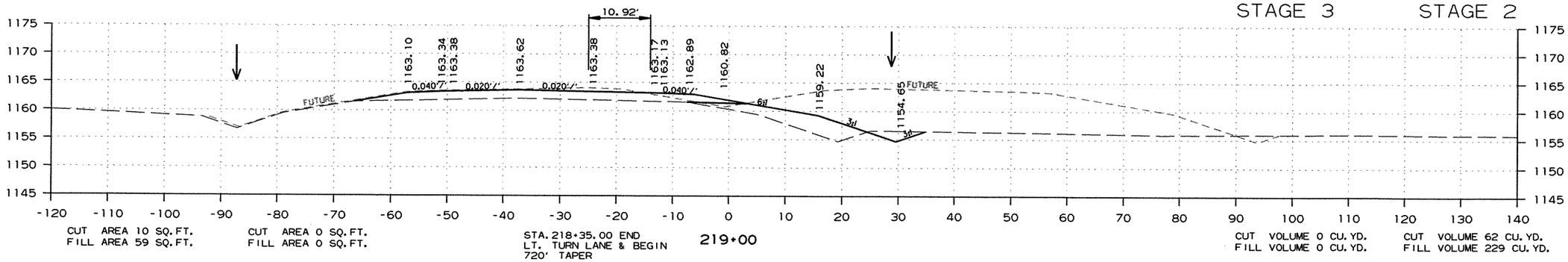
10/16/2012

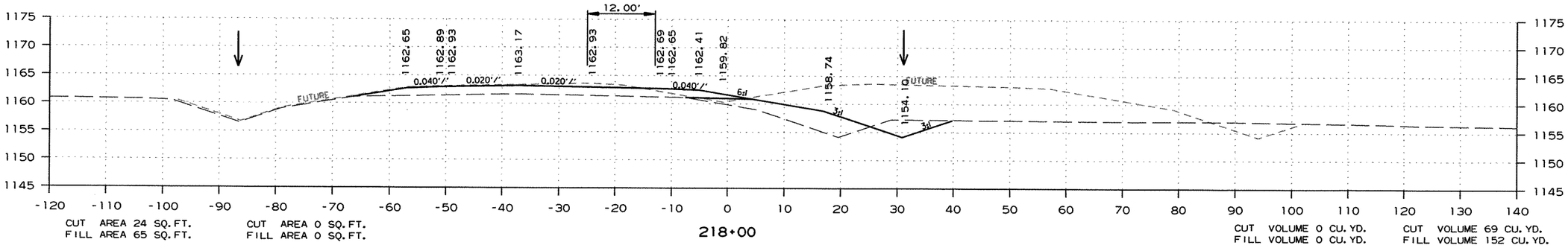
R040521.DGN

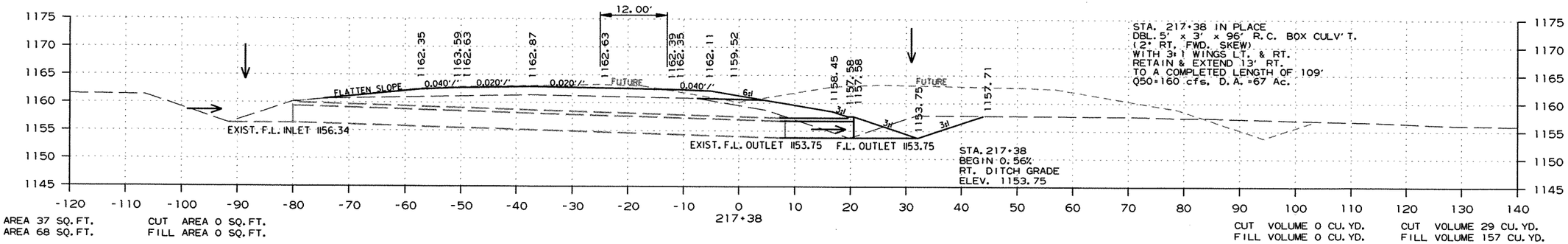
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	189	239

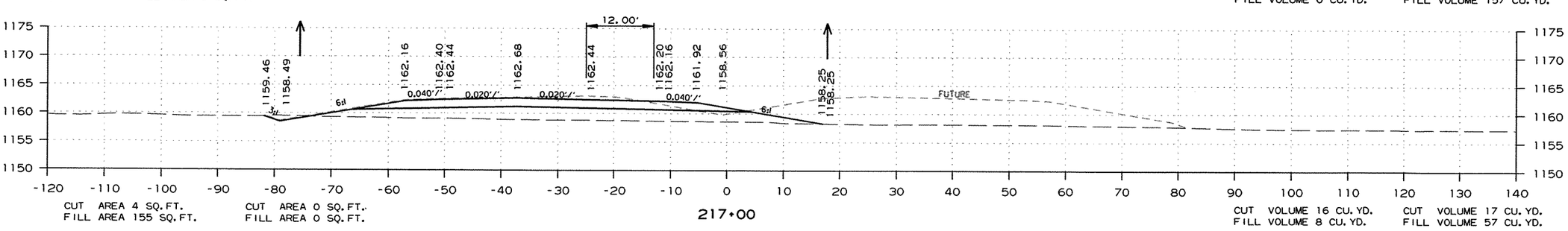
(2) CROSS SECTIONS

STAGE 2 STAGE 3









HWY. 62 BYPASS
STA. 217+00 TO STA. 219+00

10/16/2012

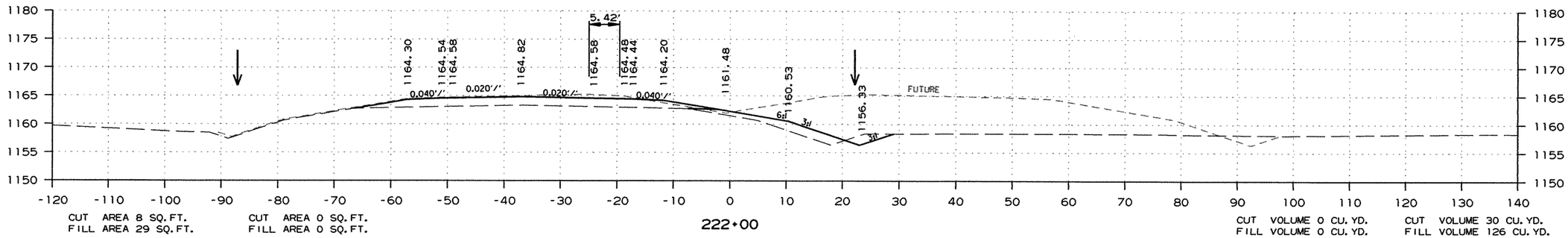
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	190	239

(2) CROSS SECTIONS

STAGE 2 STAGE 3

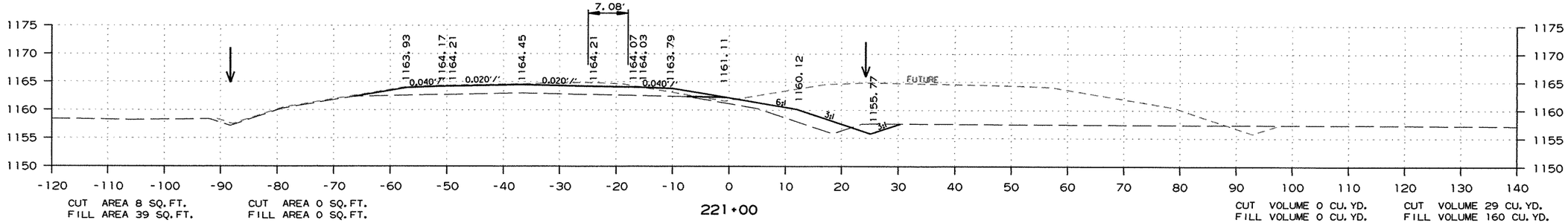
STAGE 3 STAGE 2



CUT AREA 8 SQ.FT. FILL AREA 29 SQ.FT. CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

222+00

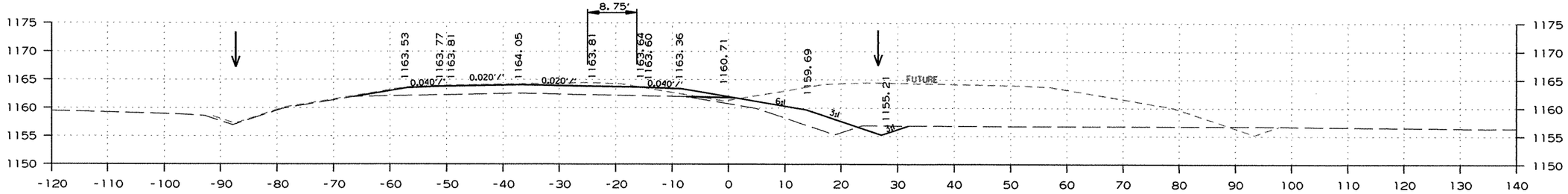
CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD. CUT VOLUME 30 CU.YD. FILL VOLUME 126 CU.YD.



CUT AREA 8 SQ.FT. FILL AREA 39 SQ.FT. CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

221+00

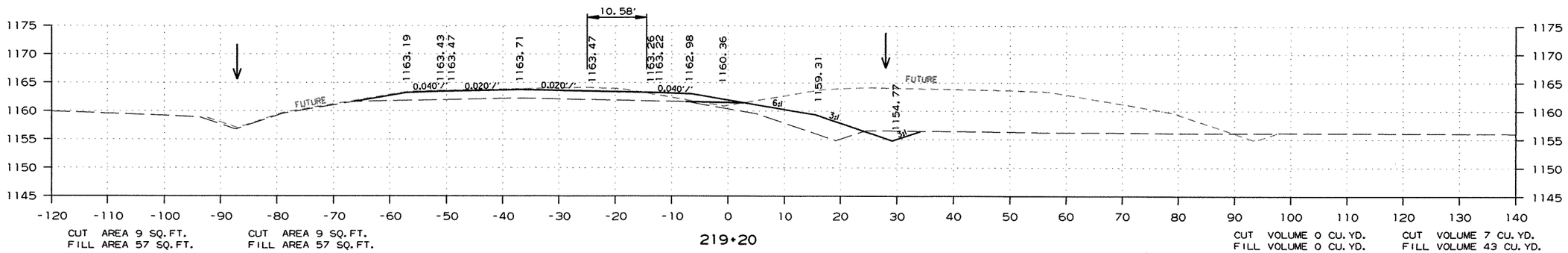
CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD. CUT VOLUME 29 CU.YD. FILL VOLUME 160 CU.YD.



CUT AREA 8 SQ.FT. FILL AREA 48 SQ.FT. CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.

220+00

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD. CUT VOLUME 24 CU.YD. FILL VOLUME 156 CU.YD.



CUT AREA 9 SQ.FT. FILL AREA 57 SQ.FT. CUT AREA 9 SQ.FT. FILL AREA 57 SQ.FT.

219+20

CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD. CUT VOLUME 7 CU.YD. FILL VOLUME 43 CU.YD.

HWY. 62 BYPASS
STA. 219+20 TO STA. 222+00

10/16/2012

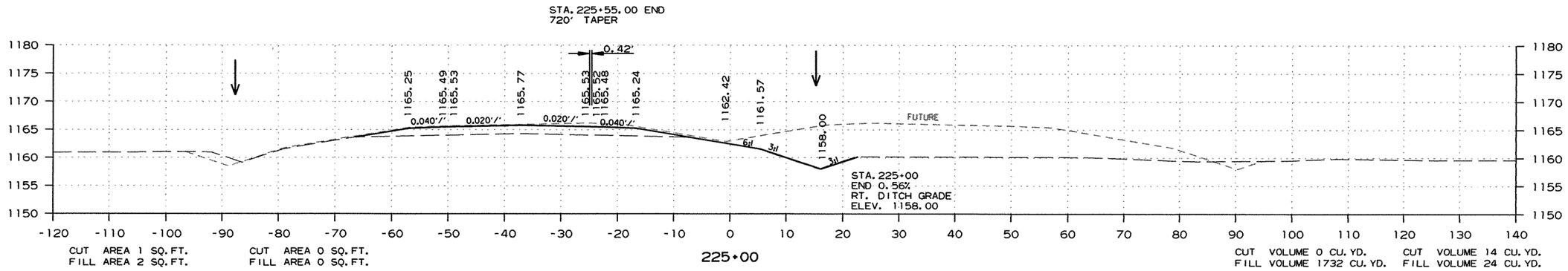
R040521.DGN

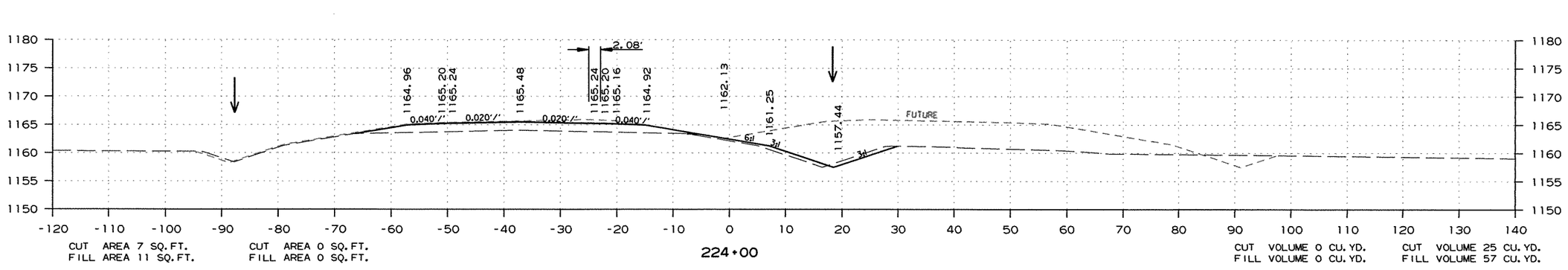
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	191	239

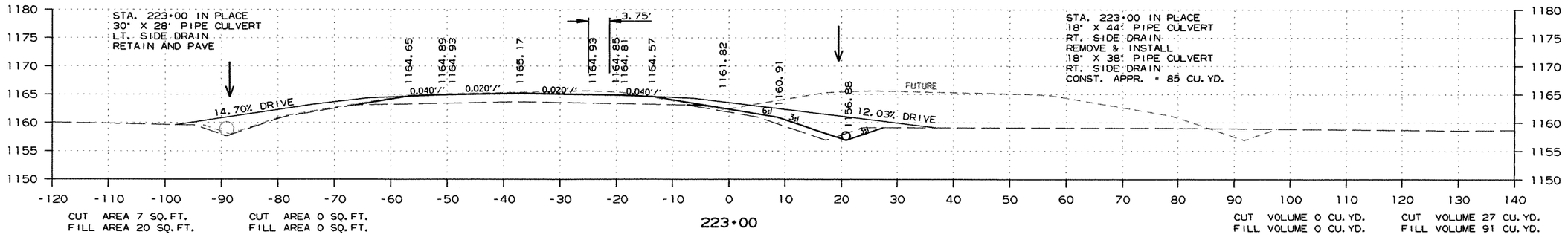
(2) CROSS SECTIONS

STAGE 2 STAGE 3

STAGE 3 STAGE 2







HWY. 62 BYPASS
STA. 223+00 TO STA. 225+00

10/16/2012

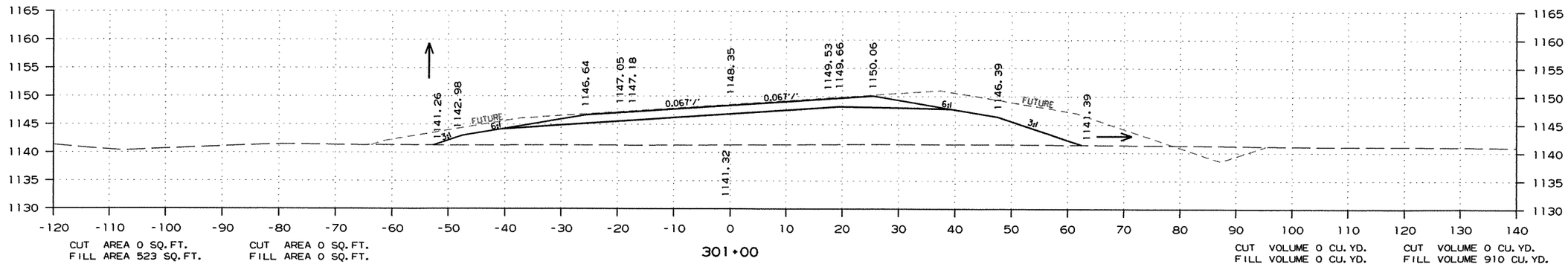
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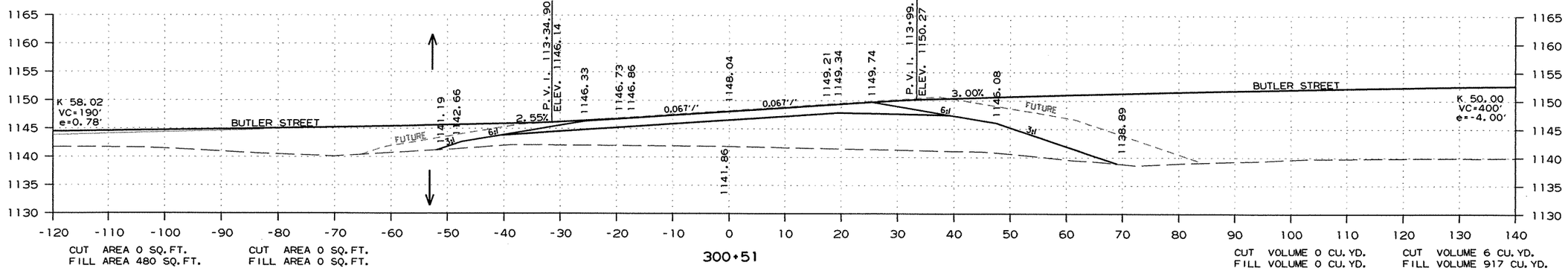
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	192	239

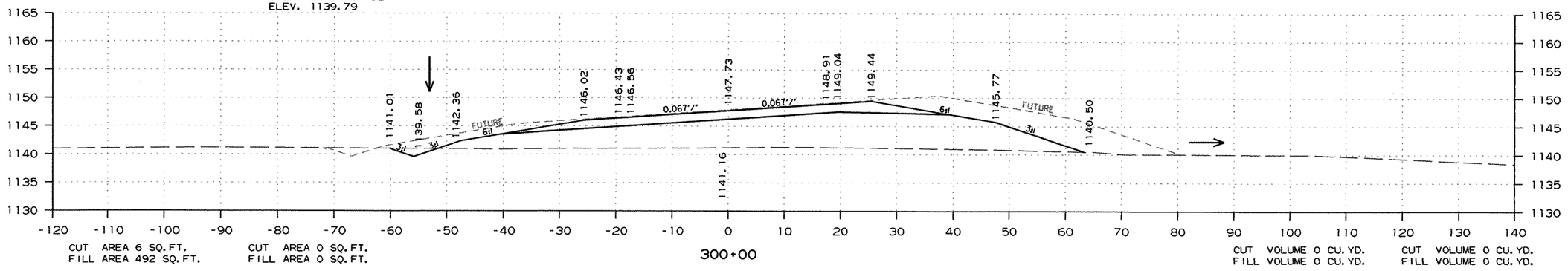
(2) CROSS SECTIONS

STAGE 2 STAGE 4

STAGE 4 STAGE 2







HWY. 62 BYPASS
STA. 300+00 TO STA. 301+00

10/16/2012

R040521.DGN

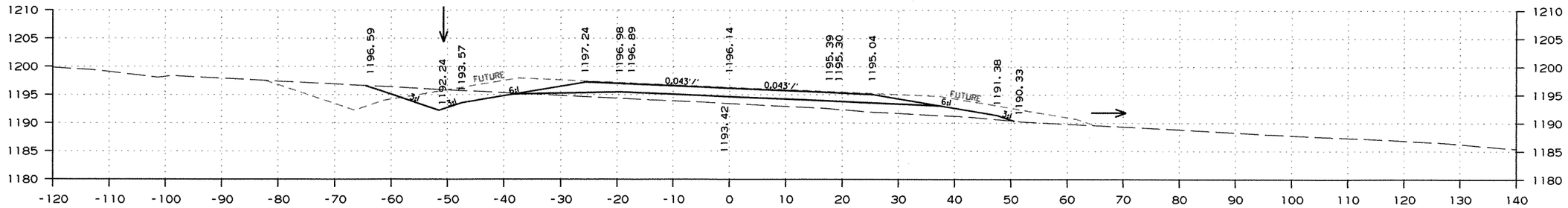
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	193	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 2 STAGE 1

STA. 327+00 END
2.51% LT. DITCH GRADE
ELEV. 1197.28



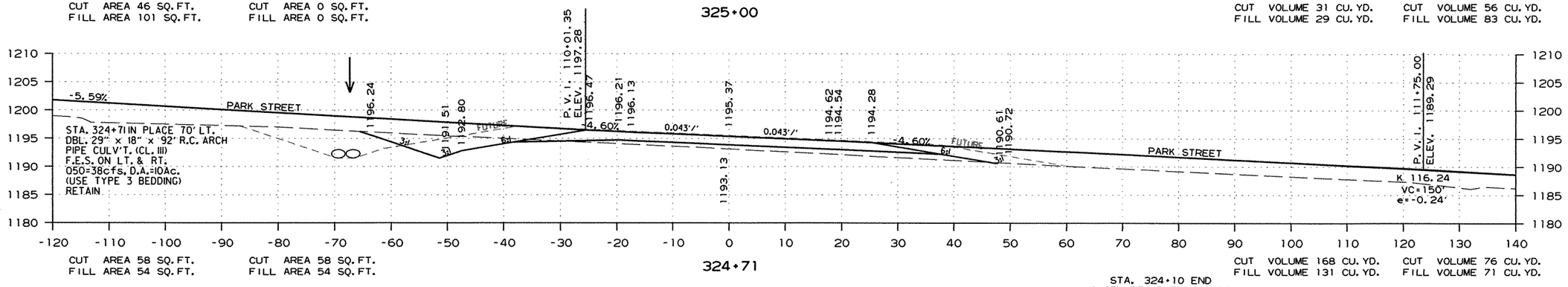
CUT AREA 46 SQ.FT.
FILL AREA 101 SQ.FT.

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

325+00

CUT VOLUME 31 CU.YD.
FILL VOLUME 29 CU.YD.

CUT VOLUME 56 CU.YD.
FILL VOLUME 83 CU.YD.



CUT AREA 58 SQ.FT.
FILL AREA 54 SQ.FT.

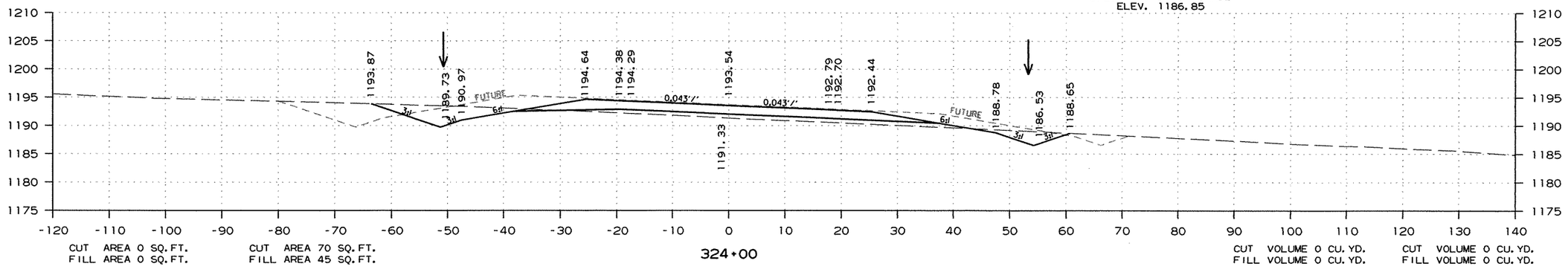
CUT AREA 58 SQ.FT.
FILL AREA 54 SQ.FT.

324+71

CUT VOLUME 168 CU.YD.
FILL VOLUME 131 CU.YD.

CUT VOLUME 76 CU.YD.
FILL VOLUME 71 CU.YD.

STA. 324+10 END
3.25% RT. DITCH GRADE
ELEV. 1186.85



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

CUT AREA 70 SQ.FT.
FILL AREA 45 SQ.FT.

324+00

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 323+00 BEGIN
2.51% LT. DITCH GRADE
ELEV. 1187.22

STA. 318+00 BEGIN
3.25% RT. DITCH GRADE
ELEV. 1167.02

HWY. 62 BYPASS
STA. 324+00 TO STA. 325+00

10/16/2012

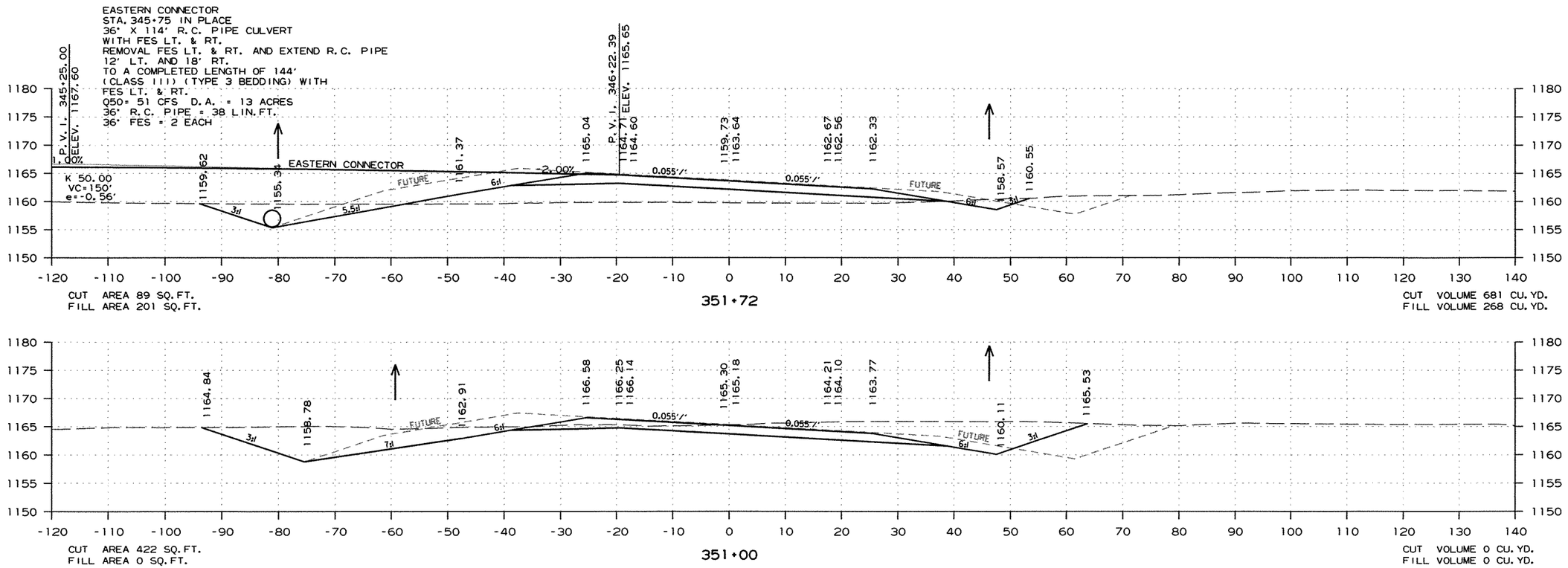
R040521.DGN

STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	194	239

(2) CROSS SECTIONS

STAGE 2



STA. 349+00 BEGIN
-4.77% LT. DITCH GRADE
ELEV. 1168.31

HWY. 62 BYPASS
STA. 351+00 TO STA. 351+72

10/16/2012

R040521.DGN

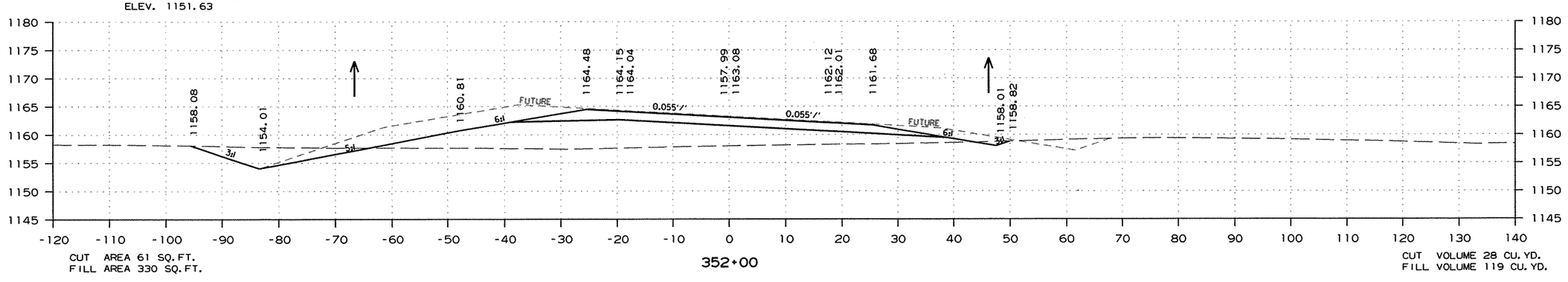
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	195	239

(2) CROSS SECTIONS

STAGE 2

STAGE 2

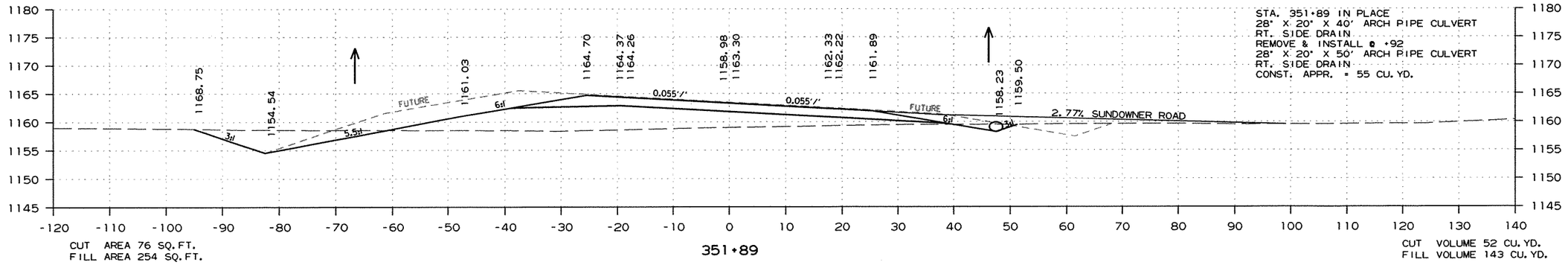
STA. 352+50 END
-4.77% LT. DITCH GRADE
ELEV. 1151.63



CUT AREA 61 SQ.FT.
FILL AREA 330 SQ.FT.

352+00

CUT VOLUME 28 CU.YD.
FILL VOLUME 119 CU.YD.



STA. 351+89 IN PLACE
28" X 20" X 40' ARCH PIPE CULVERT
RT. SIDE DRAIN
REMOVE & INSTALL @ +92
28" X 20" X 50' ARCH PIPE CULVERT
RT. SIDE DRAIN
CONST. APPR. = 55 CU.YD.

CUT AREA 76 SQ.FT.
FILL AREA 254 SQ.FT.

351+89

CUT VOLUME 52 CU.YD.
FILL VOLUME 143 CU.YD.

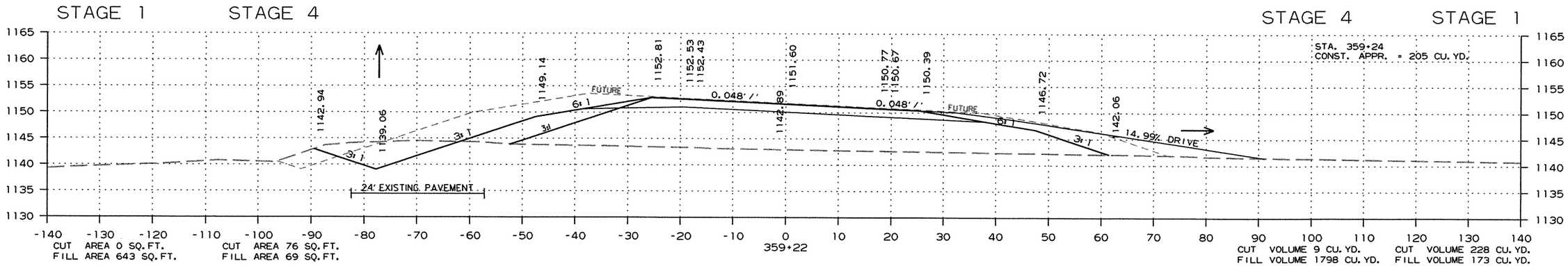
10/16/2012

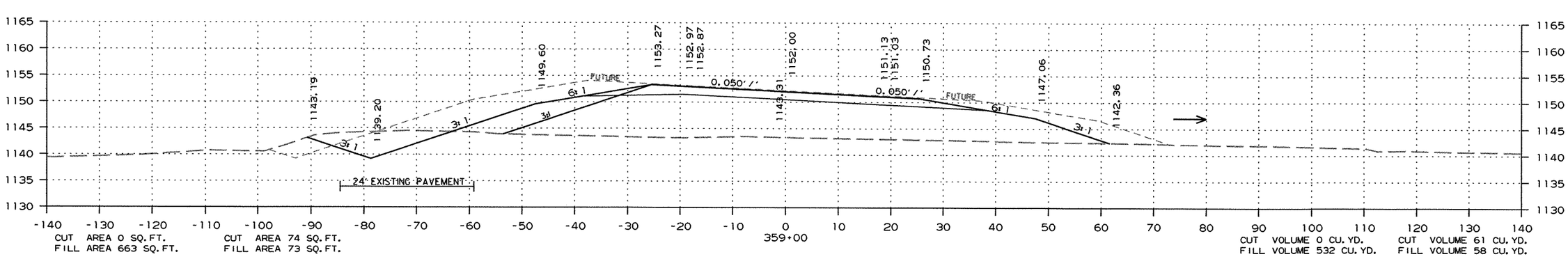
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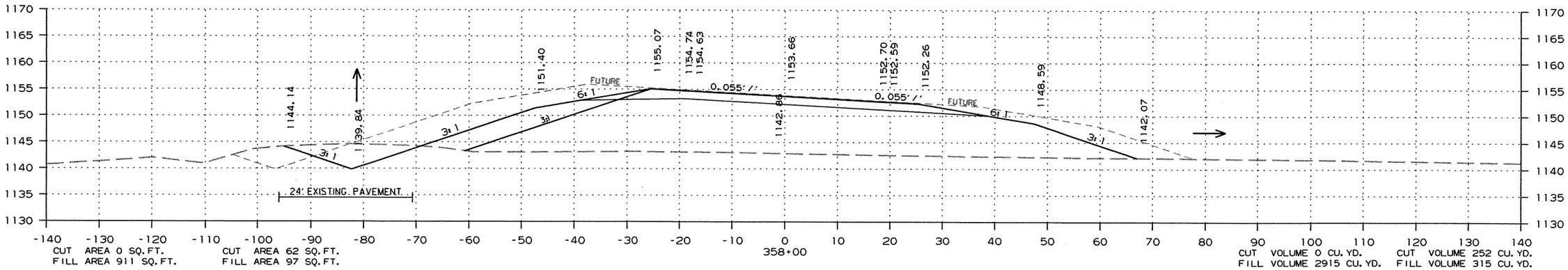
HWY. 62 BYPASS
STA. 351+89 TO STA. 352+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	196	239

(2) CROSS SECTIONS







STA. 356+00 BEGIN
-0.64% LT. DITCH GRADE
ELEV. 1141.13

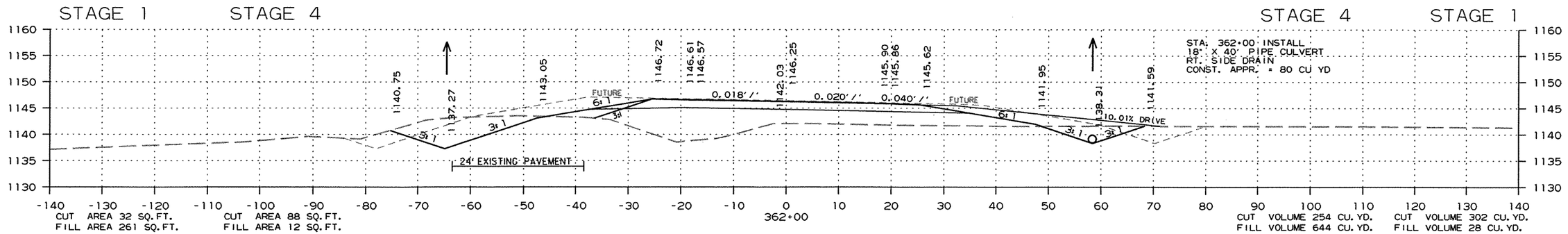
HWY. 62 BYPASS
STA. 358+00 TO STA. 359+22

10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	197	239

(2) CROSS SECTIONS



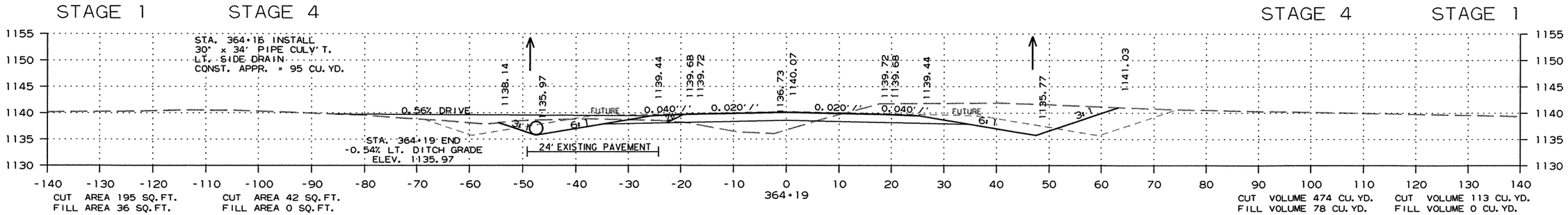
HWY. 62 BYPASS
STA. 360+00 TO STA. 362+00

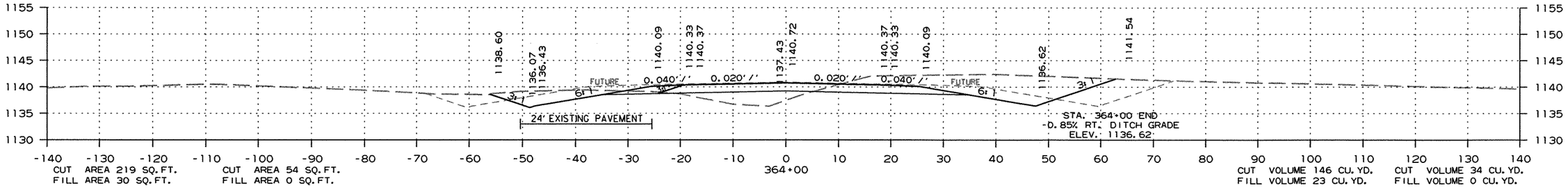
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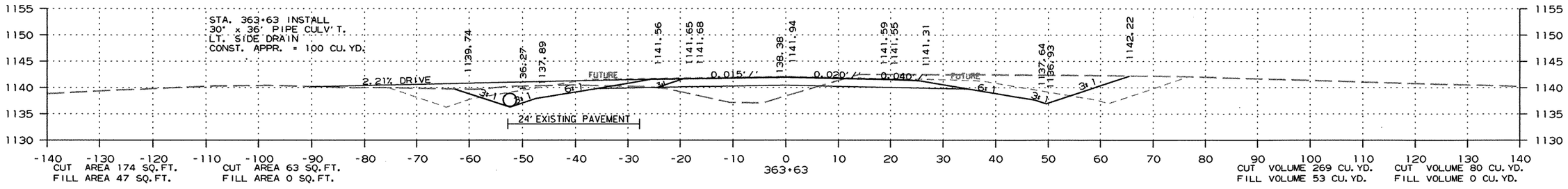
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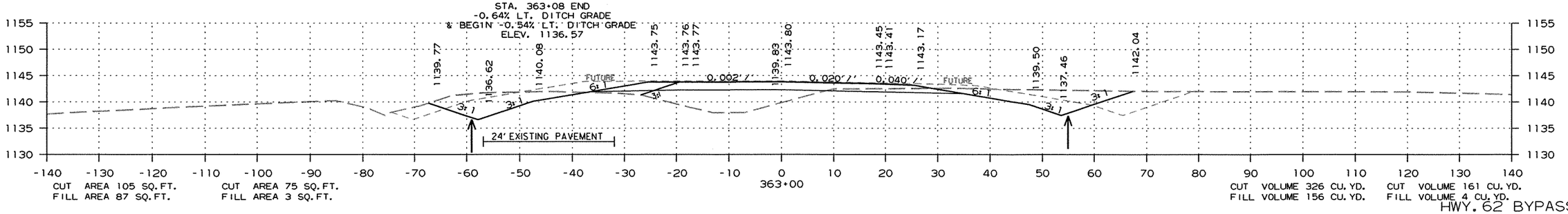
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	198	239

(2) CROSS SECTIONS









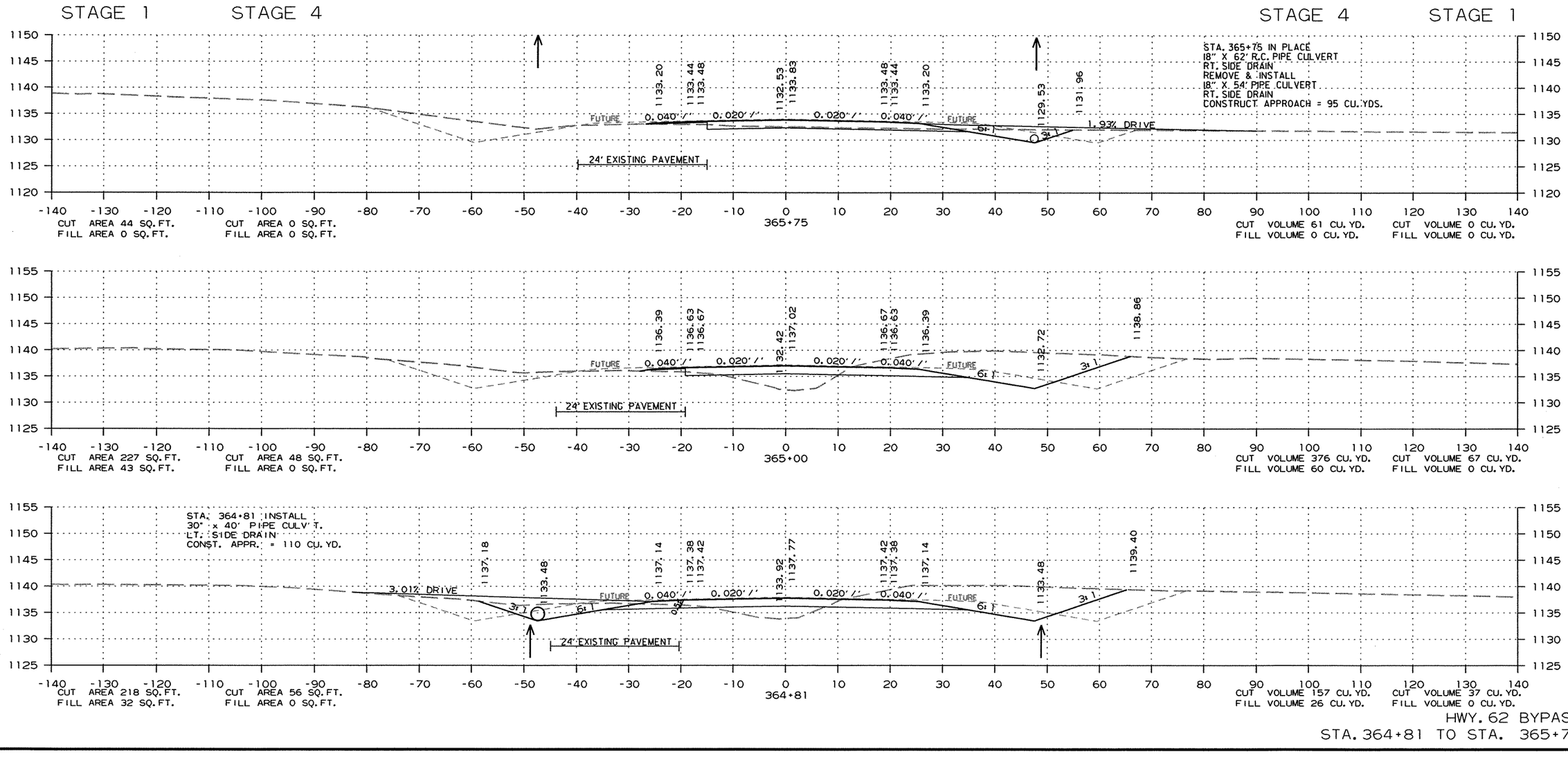
10/16/2012

R040521.DGN

HWY. 62 BYPASS
STA. 363+00 TO STA. 364+19

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	199	239

(2) CROSS SECTIONS



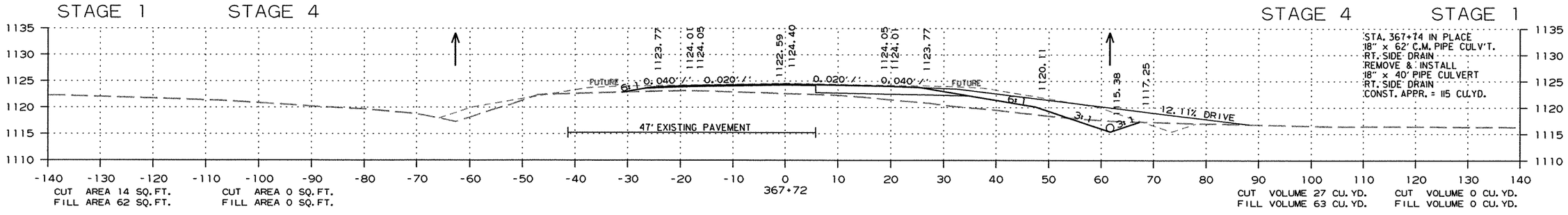
HWY. 62 BYPASS
STA. 364+81 TO STA. 365+75

10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	200	239

(2) CROSS SECTIONS



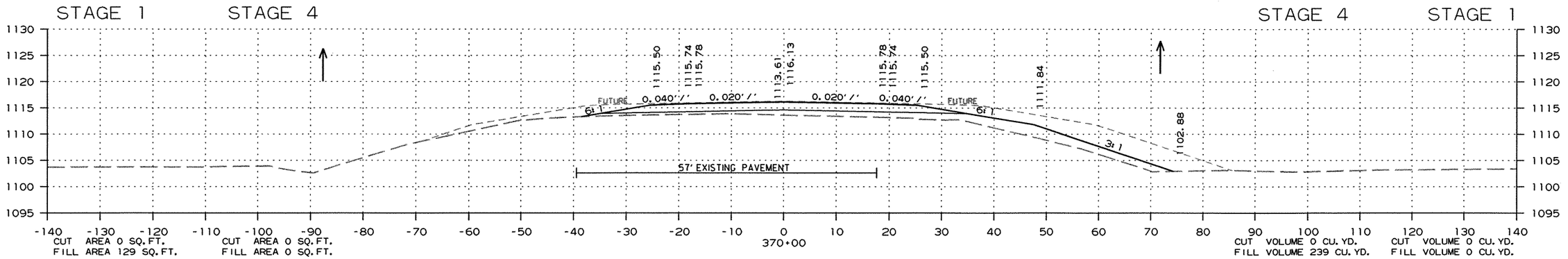
HWY. 62 BYPASS
STA. 366+00 TO STA. 367+72

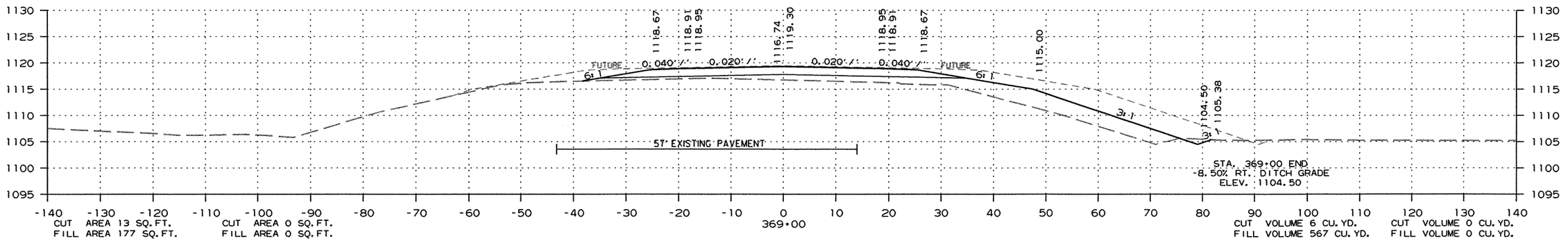
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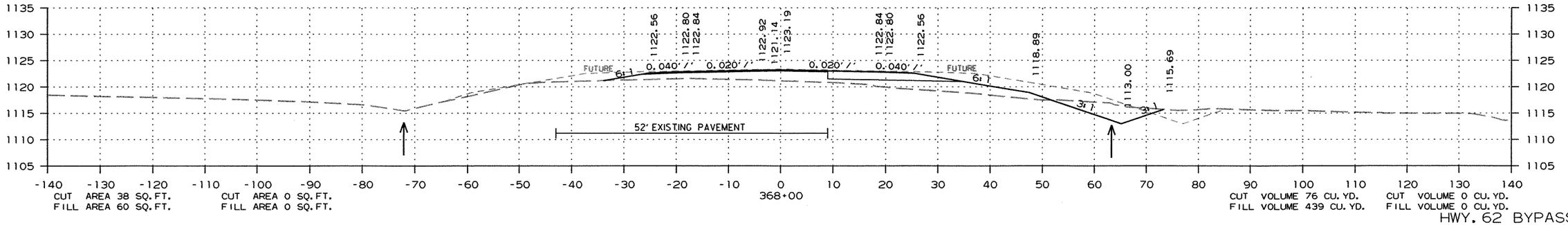
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	201	239

(2) CROSS SECTIONS







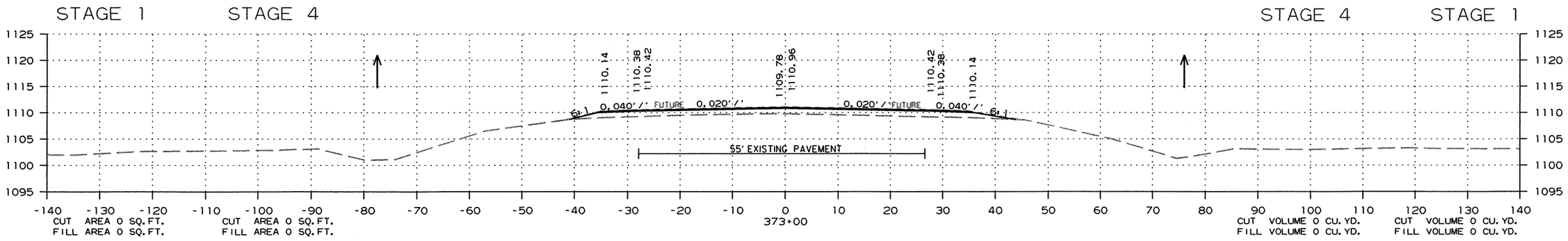
HWY. 62 BYPASS
STA. 368+00 TO STA. 370+00

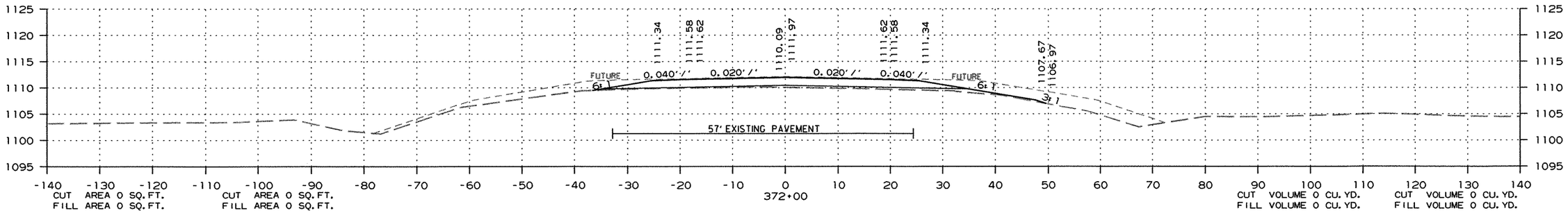
10/16/2012

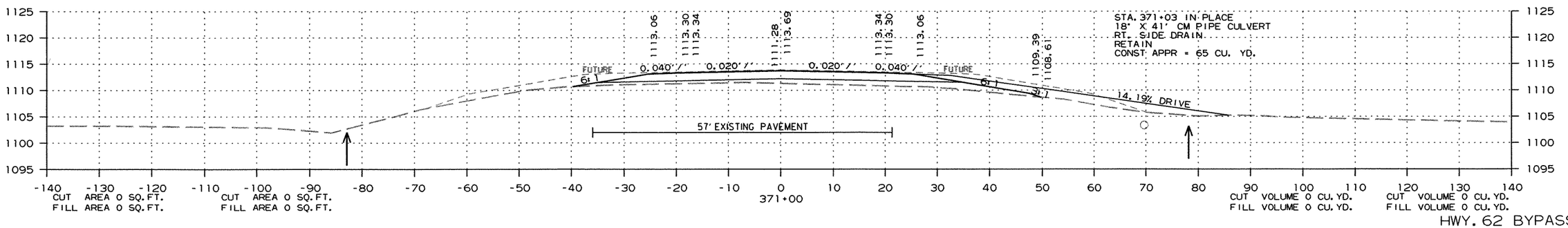
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	202	239

(2) CROSS SECTIONS







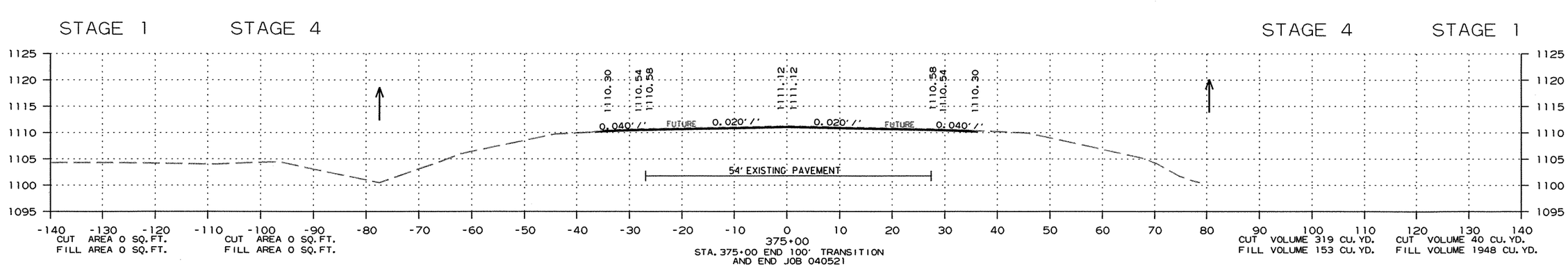
HWY. 62 BYPASS
STA. 371+00 TO STA. 373+00

10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	203	239

(2) CROSS SECTIONS



HWY. 62 BYPASS
STA. 374+00 TO STA. 375+00

10/16/2012

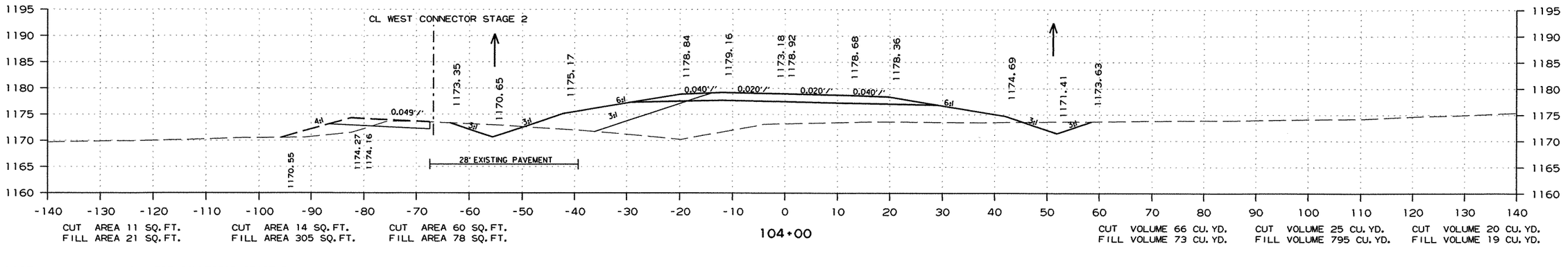
R040521.DGN

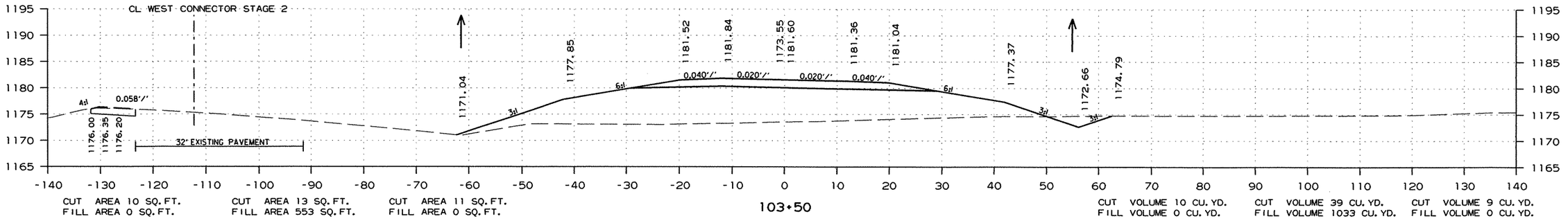
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	204	239

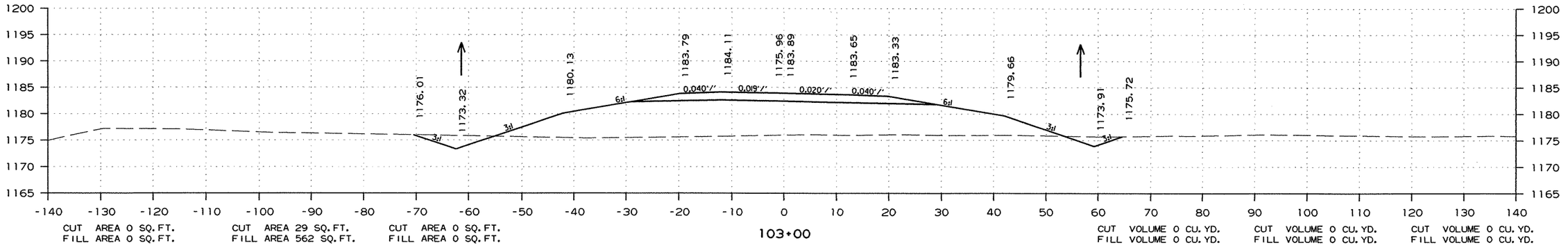
(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

STAGE 4 STAGE 2 STAGE 1







10/16/2012

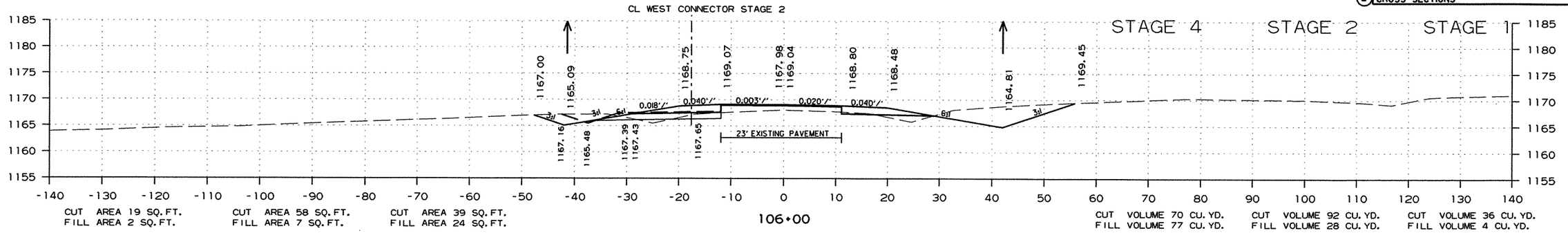
R040521.DGN

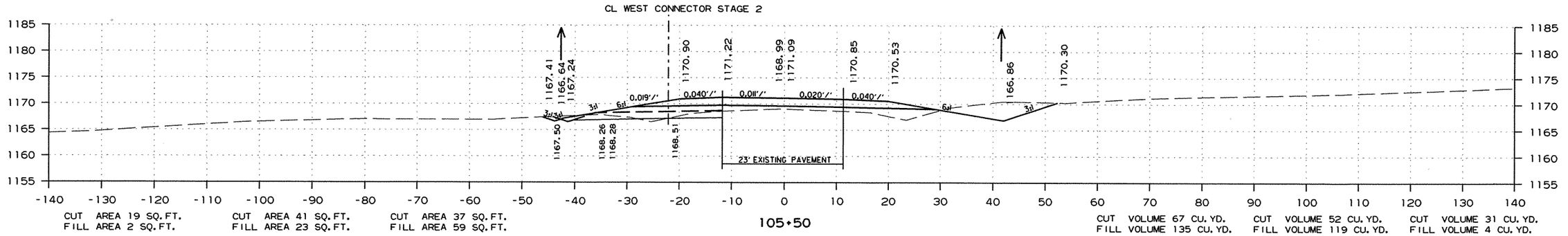
WESTERN CONNECTOR
STA. 103+00 TO STA. 104+00

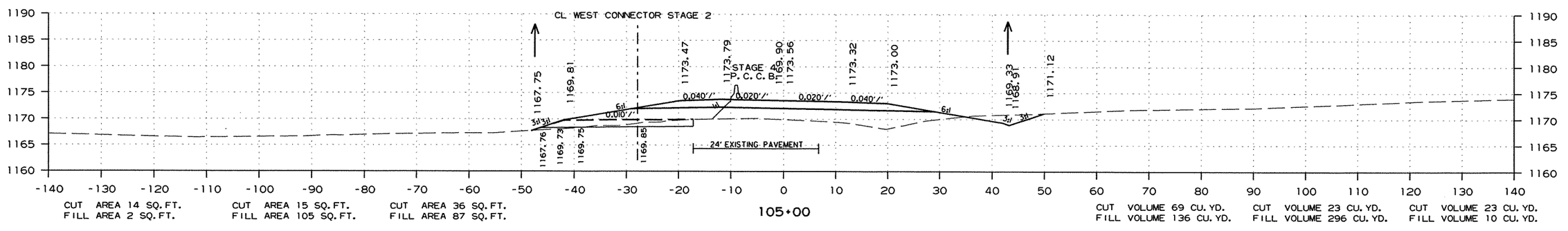
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	205	239

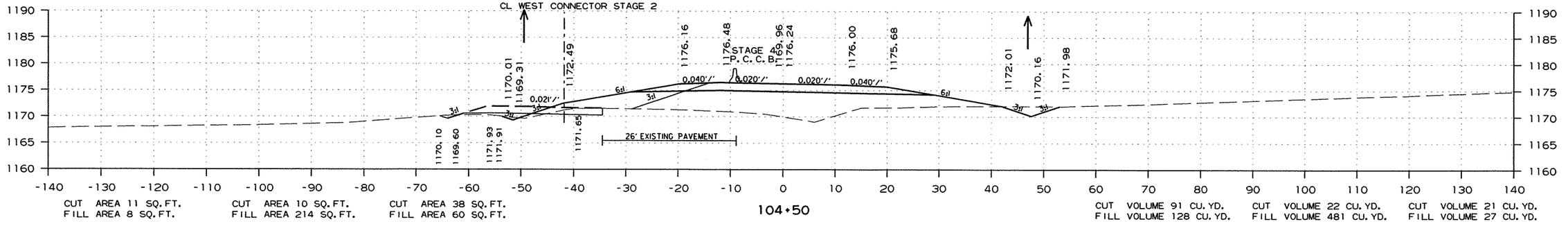
(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4









WESTERN CONNECTOR
STA. 104+50 TO STA. 106+00

10/16/2012

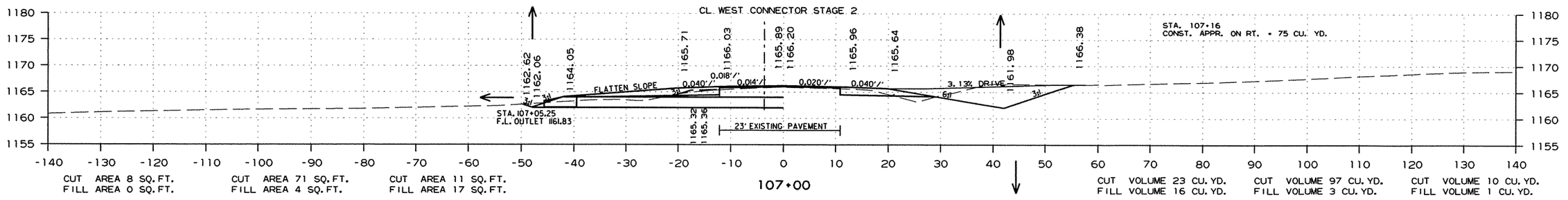
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	206	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

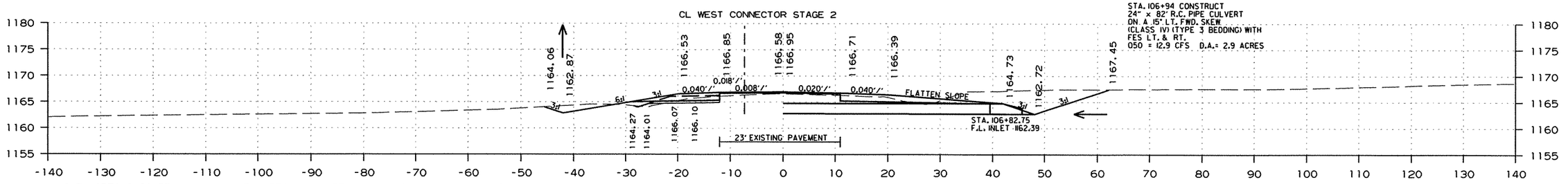
STAGE 4 STAGE 2 STAGE 1



CUT AREA 8 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 71 SQ.FT. FILL AREA 4 SQ.FT.
CUT AREA 11 SQ.FT. FILL AREA 17 SQ.FT.

107+00

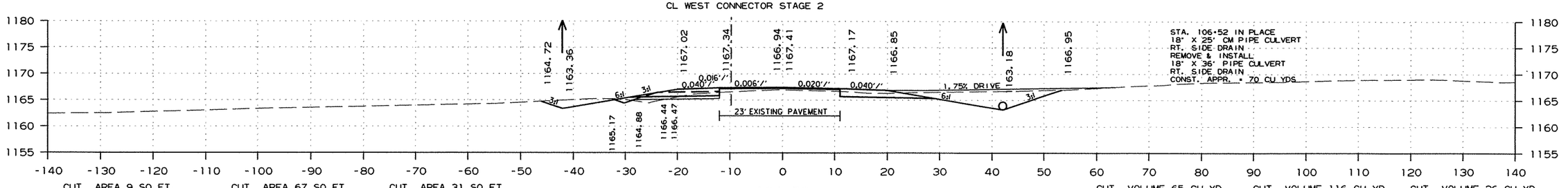
CUT VOLUME 23 CU. YD. FILL VOLUME 16 CU. YD.
CUT VOLUME 97 CU. YD. FILL VOLUME 3 CU. YD.
CUT VOLUME 10 CU. YD. FILL VOLUME 1 CU. YD.



CUT AREA 8 SQ.FT. FILL AREA 2 SQ.FT.
CUT AREA 88 SQ.FT. FILL AREA 1 SQ.FT.
CUT AREA 26 SQ.FT. FILL AREA 9 SQ.FT.

106+67

CUT VOLUME 18 CU. YD. FILL VOLUME 6 CU. YD.
CUT VOLUME 49 CU. YD. FILL VOLUME 0 CU. YD.
CUT VOLUME 5 CU. YD. FILL VOLUME 1 CU. YD.



CUT AREA 9 SQ.FT. FILL AREA 2 SQ.FT.
CUT AREA 67 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 31 SQ.FT. FILL AREA 11 SQ.FT.

106+50

CUT VOLUME 65 CU. YD. FILL VOLUME 32 CU. YD.
CUT VOLUME 116 CU. YD. FILL VOLUME 7 CU. YD.
CUT VOLUME 26 CU. YD. FILL VOLUME 4 CU. YD.

10/16/2012

R040521.DGN

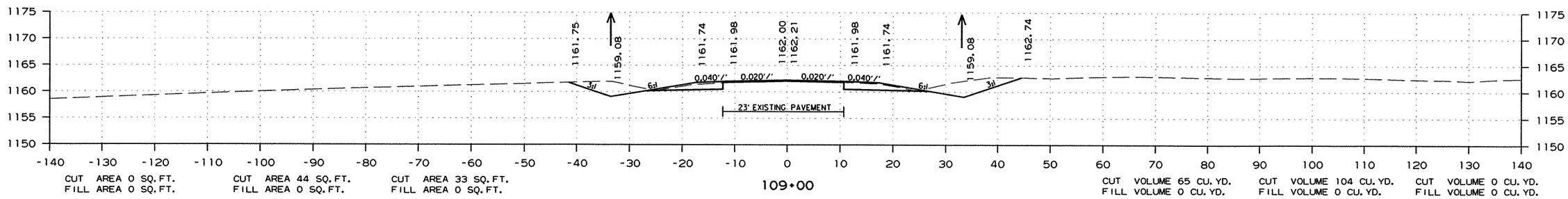
WESTERN CONNECTOR
STA. 106+50 TO STA. 107+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	207	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

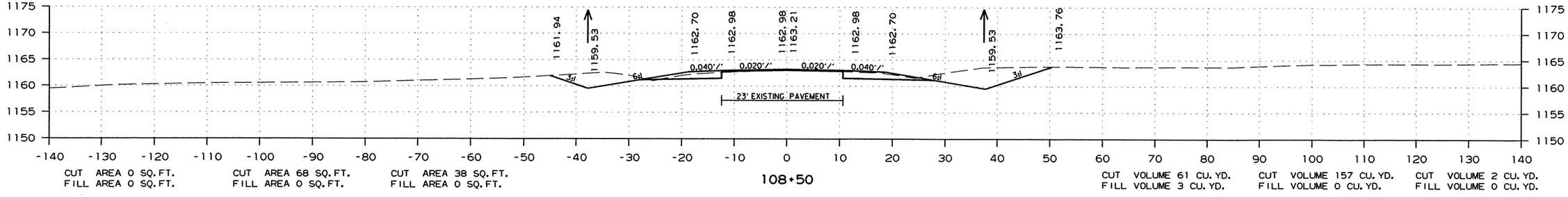
STAGE 4 STAGE 2 STAGE 1



CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 44 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 33 SQ.FT. FILL AREA 0 SQ.FT.

109+00

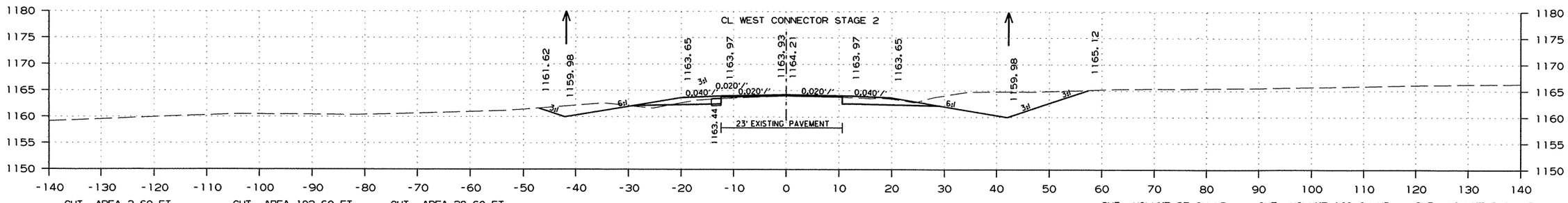
CUT VOLUME 65 CU.YD. FILL VOLUME 0 CU.YD.
CUT VOLUME 104 CU.YD. FILL VOLUME 0 CU.YD.
CUT VOLUME 0 CU.YD. FILL VOLUME 0 CU.YD.



CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 68 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 38 SQ.FT. FILL AREA 0 SQ.FT.

108+50

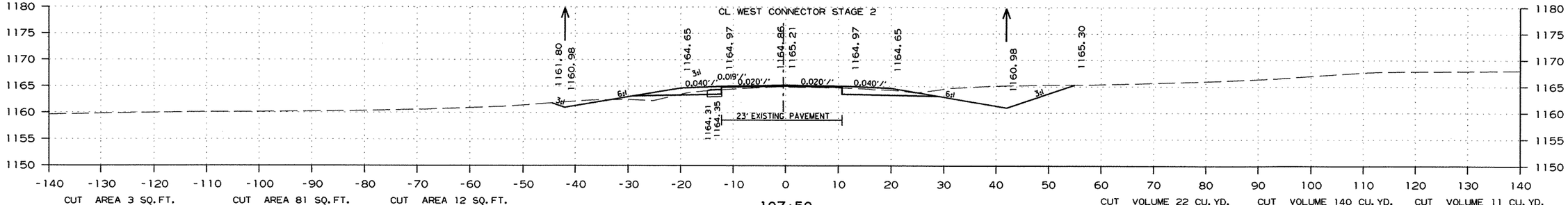
CUT VOLUME 61 CU.YD. FILL VOLUME 3 CU.YD.
CUT VOLUME 157 CU.YD. FILL VOLUME 0 CU.YD.
CUT VOLUME 2 CU.YD. FILL VOLUME 0 CU.YD.



CUT AREA 2 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 102 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 28 SQ.FT. FILL AREA 3 SQ.FT.

108+00
STA. 108+00 BEGIN 200' TAPER

CUT VOLUME 37 CU.YD. FILL VOLUME 10 CU.YD.
CUT VOLUME 169 CU.YD. FILL VOLUME 0 CU.YD.
CUT VOLUME 5 CU.YD. FILL VOLUME 0 CU.YD.



CUT AREA 3 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 81 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 12 SQ.FT. FILL AREA 8 SQ.FT.

107+50

CUT VOLUME 22 CU.YD. FILL VOLUME 24 CU.YD.
CUT VOLUME 140 CU.YD. FILL VOLUME 4 CU.YD.
CUT VOLUME 11 CU.YD. FILL VOLUME 0 CU.YD.

10/16/2012

R040521.DGN

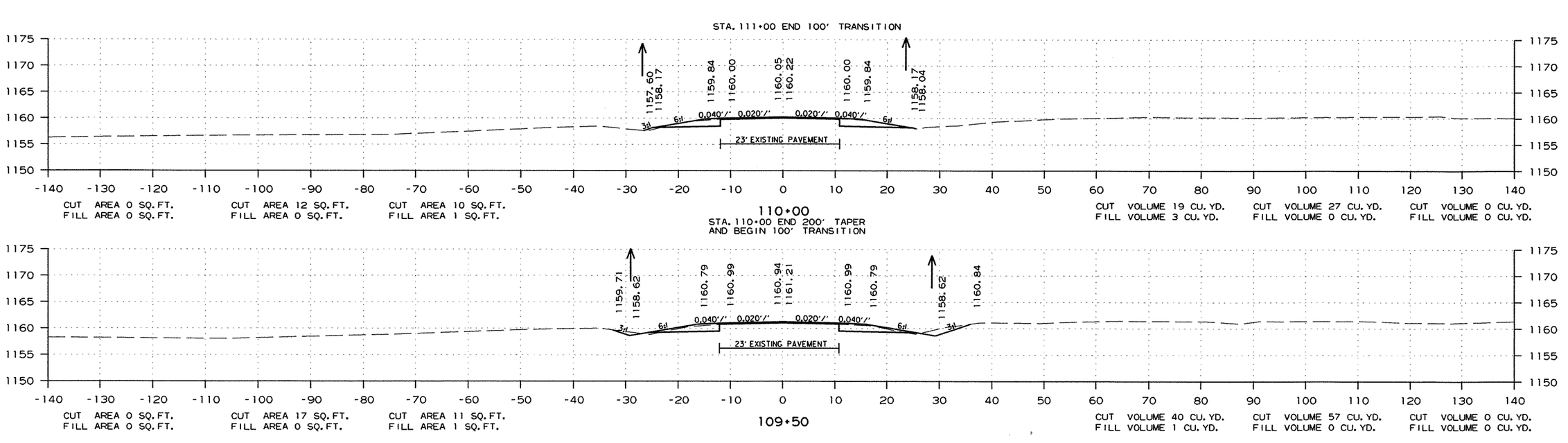
WESTERN CONNECTOR
STA. 107+50 TO STA. 109+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	208	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

STAGE 4 STAGE 2 STAGE 1



10/16/2012

R040521.DGN

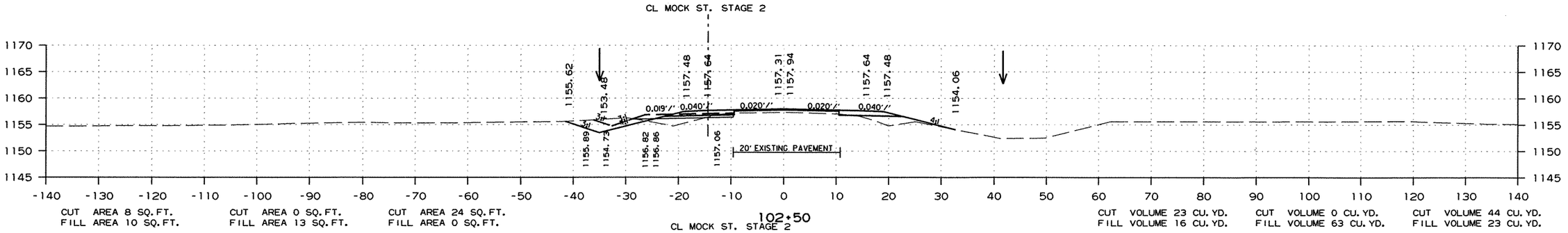
WESTERN CONNECTOR
STA. 109+50 TO STA. 110+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	209	239

(2) CROSS SECTIONS

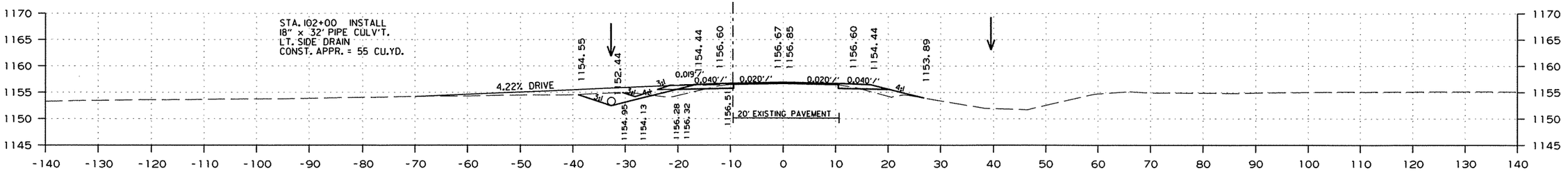
STAGE 1 STAGE 2 STAGE 3

STAGE 3 STAGE 2 STAGE 1



CUT AREA 8 SQ.FT. FILL AREA 10 SQ.FT.
CUT AREA 0 SQ.FT. FILL AREA 13 SQ.FT.
CUT AREA 24 SQ.FT. FILL AREA 0 SQ.FT.
CUT VOLUME 23 CU.YD. FILL VOLUME 16 CU.YD.
CUT VOLUME 0 CU.YD. FILL VOLUME 63 CU.YD.
CUT VOLUME 44 CU.YD. FILL VOLUME 23 CU.YD.

102+50

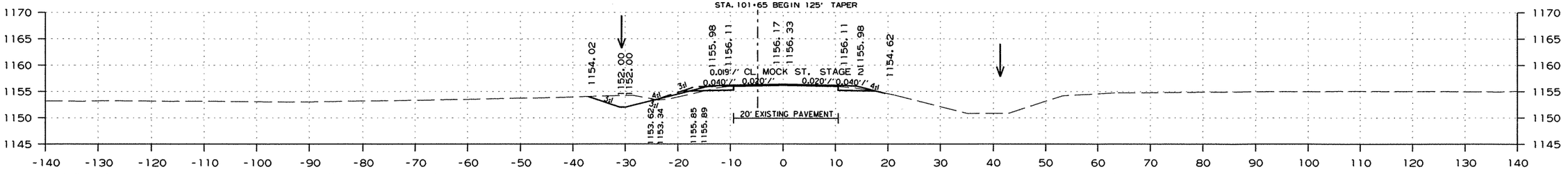


CUT AREA 4 SQ.FT. FILL AREA 10 SQ.FT.
CUT AREA 2 SQ.FT. FILL AREA 7 SQ.FT.
CUT AREA 30 SQ.FT. FILL AREA 0 SQ.FT.
CUT VOLUME 11 CU.YD. FILL VOLUME 19 CU.YD.
CUT VOLUME 2 CU.YD. FILL VOLUME 19 CU.YD.
CUT VOLUME 50 CU.YD. FILL VOLUME 0 CU.YD.

102+00

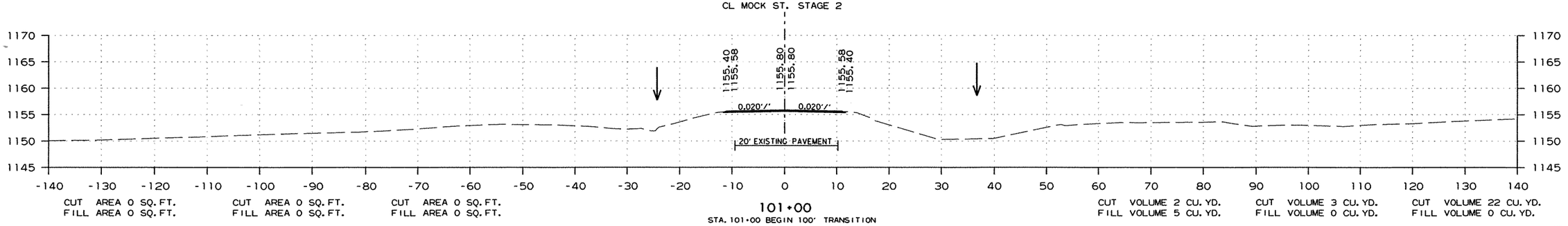
STA. 102+00 END 100' TRANSITION

STA. 101+65 BEGIN 125' TAPER



CUT AREA 3 SQ.FT. FILL AREA 5 SQ.FT.
CUT AREA 3 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 24 SQ.FT. FILL AREA 0 SQ.FT.
CUT VOLUME 6 CU.YD. FILL VOLUME 14 CU.YD.
CUT VOLUME 4 CU.YD. FILL VOLUME 6 CU.YD.
CUT VOLUME 6 CU.YD. FILL VOLUME 50 CU.YD.

101+50



CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.
CUT AREA 0 SQ.FT. FILL AREA 0 SQ.FT.
CUT VOLUME 2 CU.YD. FILL VOLUME 5 CU.YD.
CUT VOLUME 3 CU.YD. FILL VOLUME 0 CU.YD.
CUT VOLUME 22 CU.YD. FILL VOLUME 0 CU.YD.

101+00

STA. 101+00 BEGIN 100' TRANSITION

MOCK ST.
STA. 101+00 TO STA. 102+50

10/16/2012

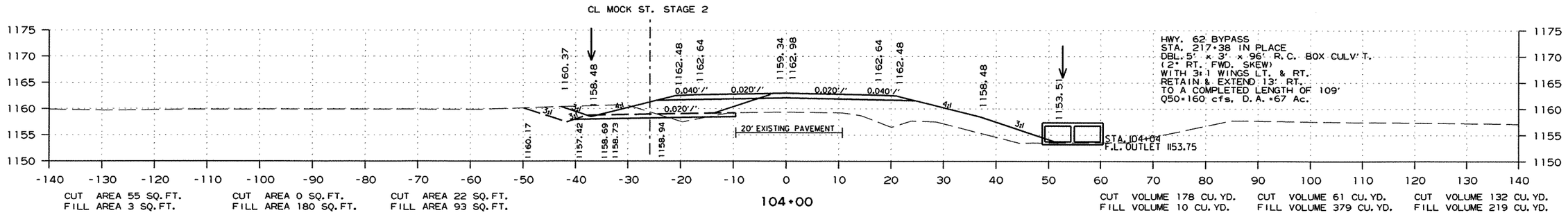
R040521.DGN

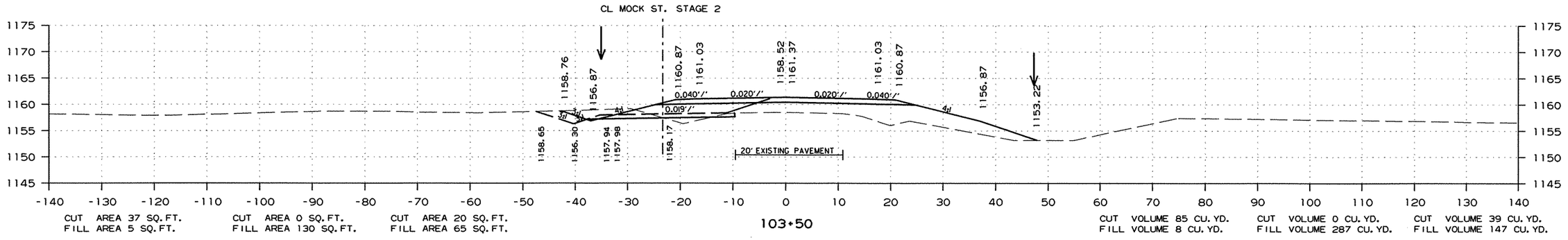
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	210	239

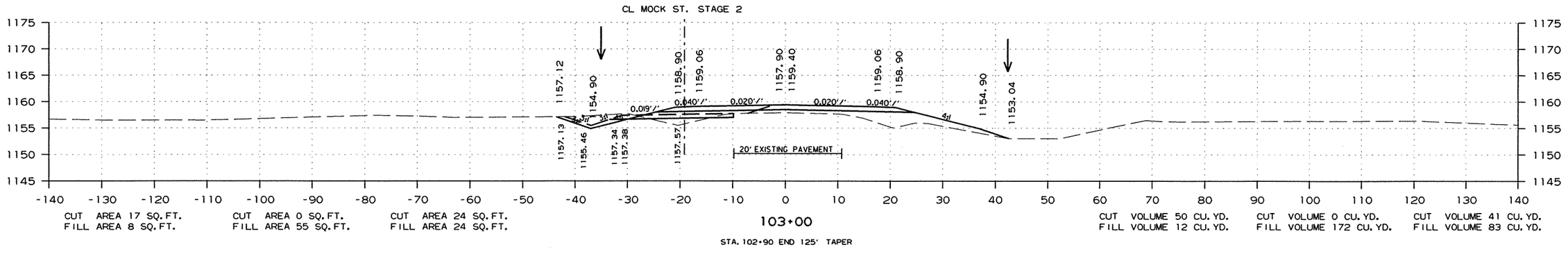
(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 3

STAGE 3 STAGE 2 STAGE 1







STA. 102+90 END 125' TAPER

MOCK ST.
STA. 103+00 TO STA. 104+00

10/16/2012

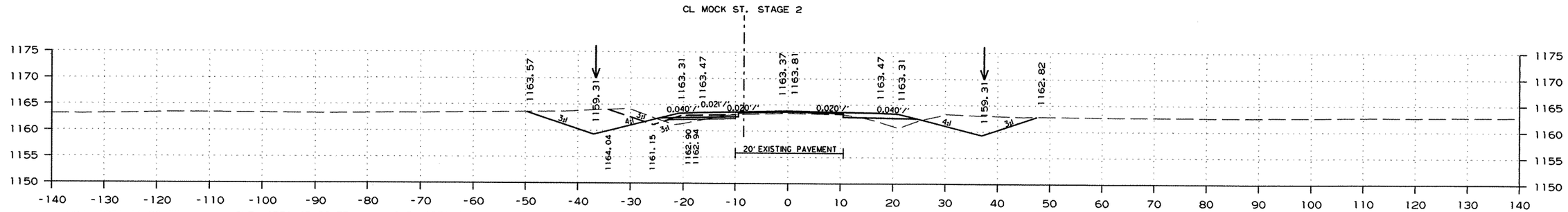
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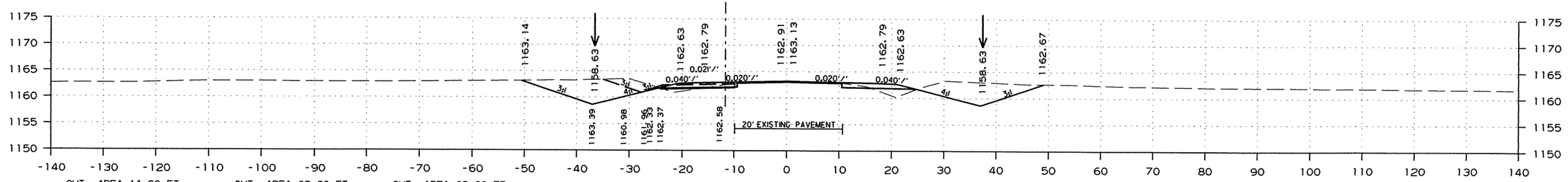
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	211	239

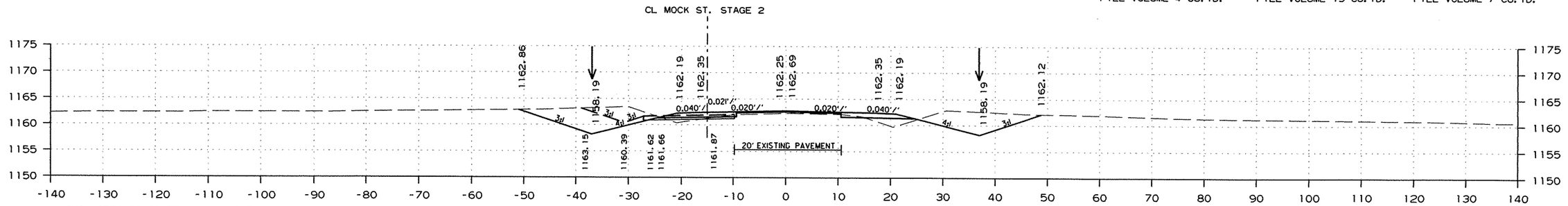
(2) CROSS SECTIONS

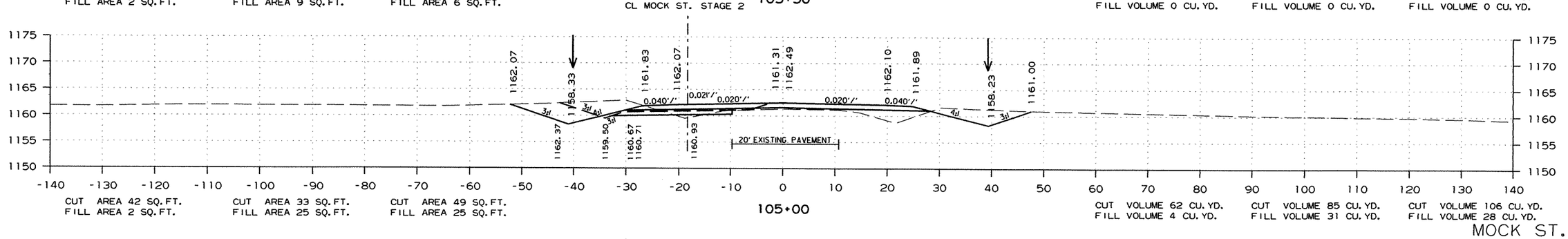
STAGE 1 STAGE 2 STAGE 3

STAGE 3 STAGE 2 STAGE 1









MOCK ST.
STA. 105+00 TO STA. 106+50

10/16/2012

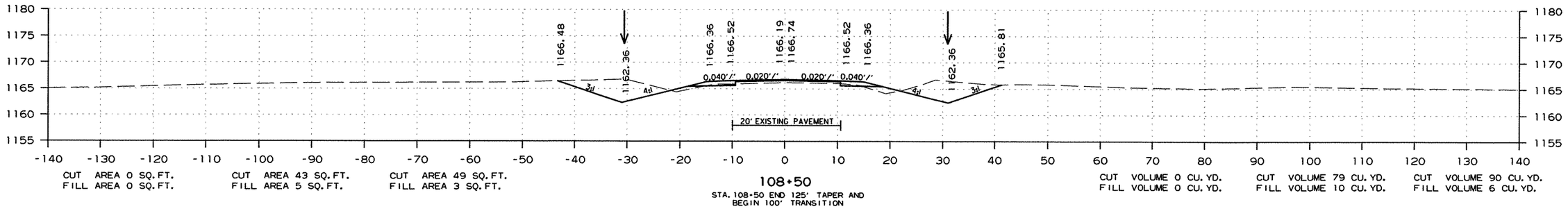
R040521.DGN

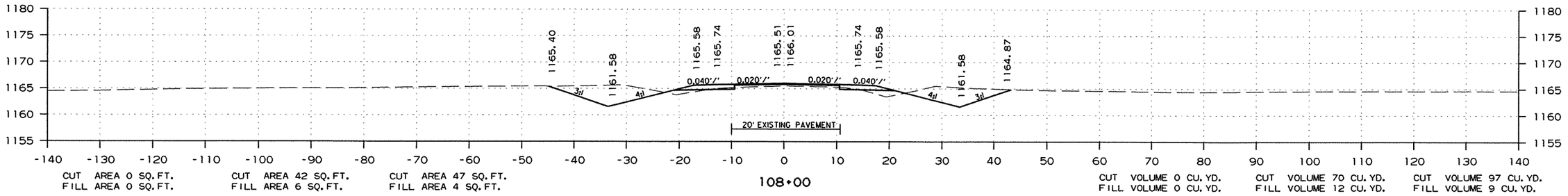
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	212	239

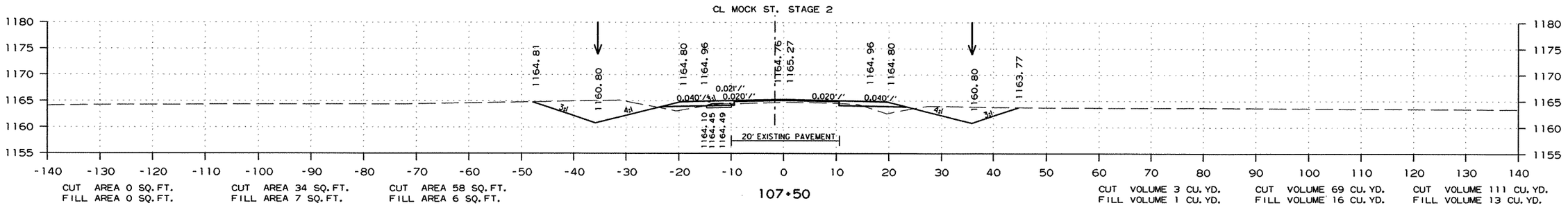
(2) CROSS SECTIONS

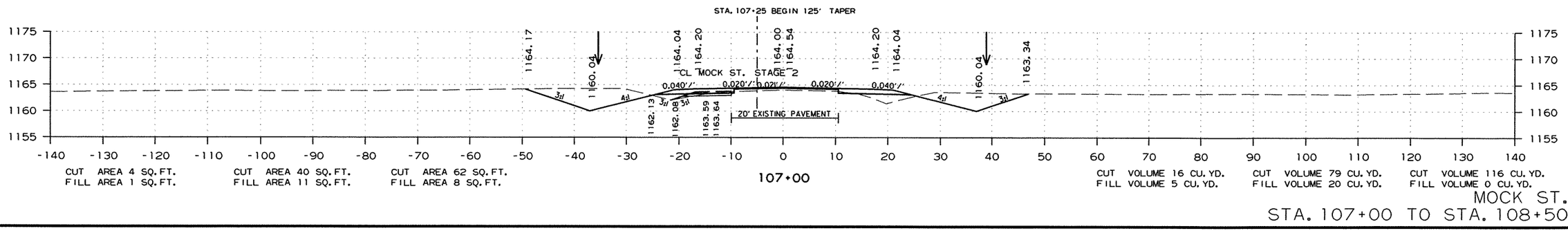
STAGE 1 STAGE 2 STAGE 3

STAGE 3 STAGE 2 STAGE 1









MOCK ST.
STA. 107+00 TO STA. 108+50

10/16/2012

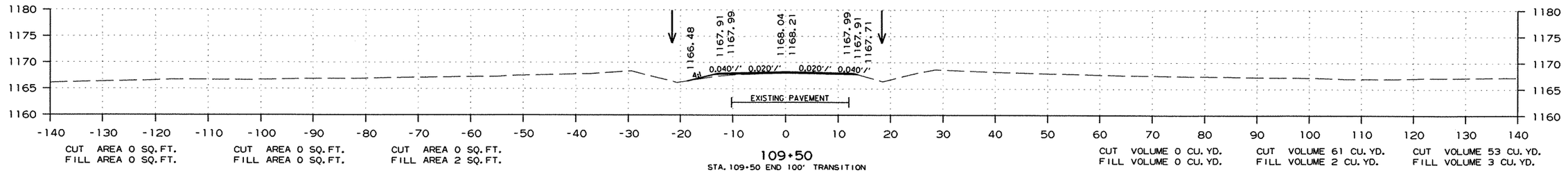
R040521.DGN

STAGE 1 STAGE 2 STAGE 3

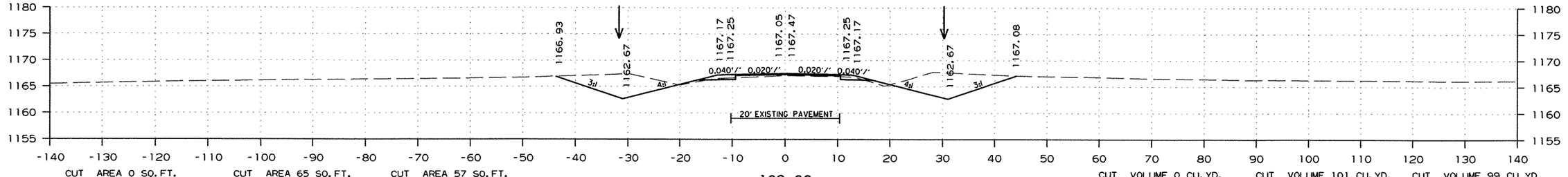
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	213	239

(2) CROSS SECTIONS

STAGE 3 STAGE 2 STAGE 1



109+50
STA. 109+50 END 100' TRANSITION



109+00

MOCK ST.
STA. 109+00 TO STA. 109+50

10/16/2012

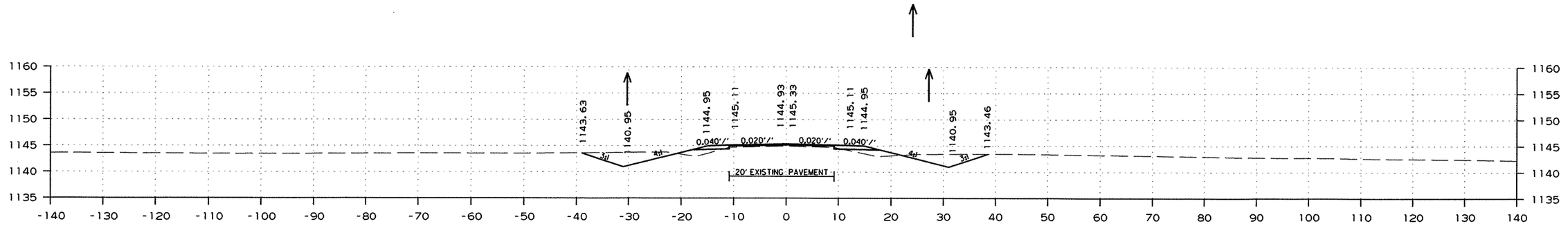
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	214	239

(2) CROSS SECTIONS

STAGE 2

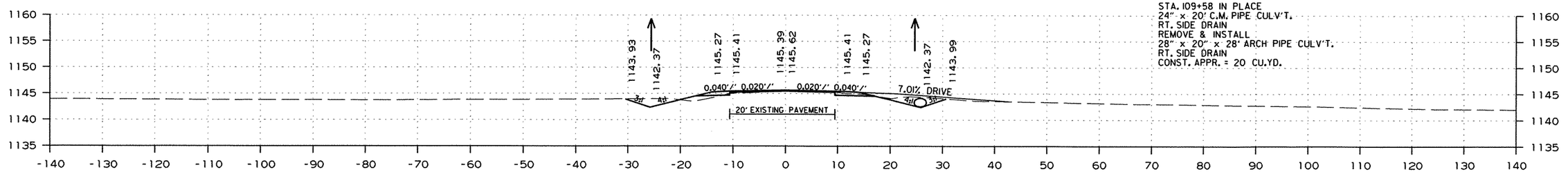
STAGE 2



CUT AREA 48 SQ.FT.
FILL AREA 13 SQ.FT.

110+00
STA. 110+00 END 100' TRANSITION

CUT VOLUME 55 CU.YD.
FILL VOLUME 13 CU.YD.

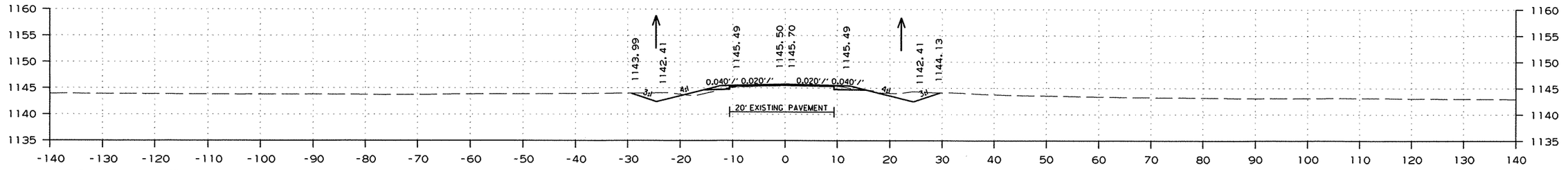


STA. 109+58 IN PLACE
24" x 20' C.M. PIPE CULV'T.
RT. SIDE DRAIN
REMOVE & INSTALL
28" x 20" x 28' ARCH PIPE CULV'T.
RT. SIDE DRAIN
CONST. APPR. = 20 CU.YD.

CUT AREA 27 SQ.FT.
FILL AREA 4 SQ.FT.

109+60

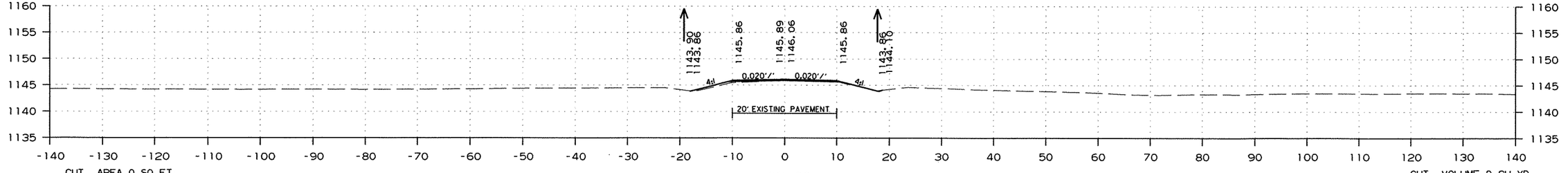
CUT VOLUME 9 CU.YD.
FILL VOLUME 1 CU.YD.



CUT AREA 22 SQ.FT.
FILL AREA 3 SQ.FT.

109+50

CUT VOLUME 20 CU.YD.
FILL VOLUME 6 CU.YD.



CUT AREA 0 SQ.FT.
FILL AREA 3 SQ.FT.

109+00
STA. 109+00 BEGIN 100' TRANSITION

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

10/16/2012

R040521.DGN

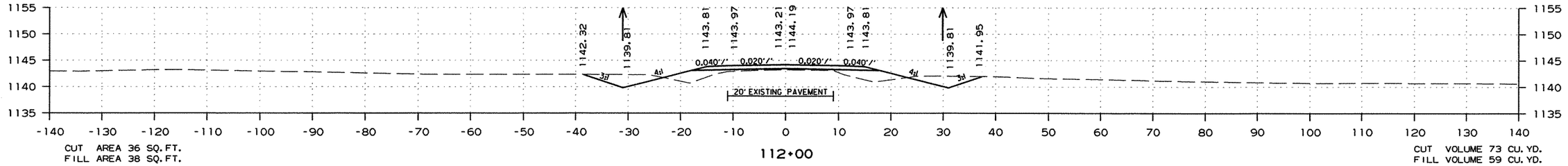
BUTLER RD.
STA. 109+00 TO STA. 110+00

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	215	239

(2) CROSS SECTIONS

STAGE 2

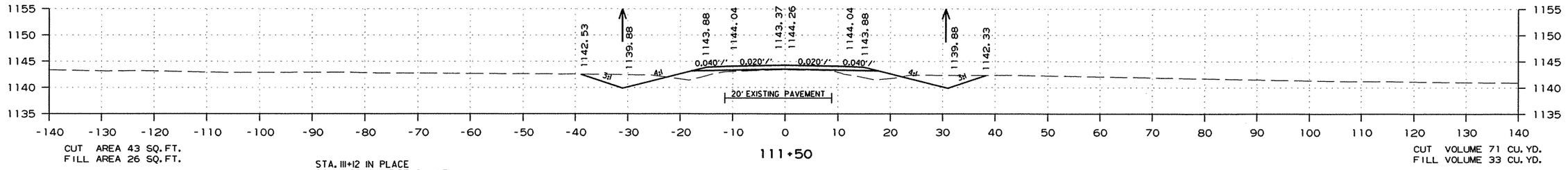
STAGE 2



CUT AREA 36 SQ.FT.
FILL AREA 38 SQ.FT.

112+00

CUT VOLUME 73 CU.YD.
FILL VOLUME 59 CU.YD.

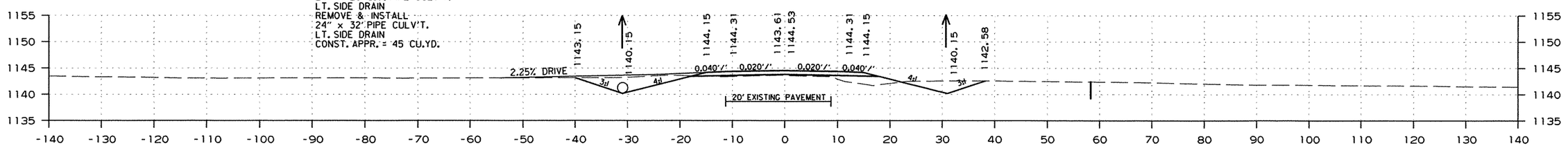


CUT AREA 43 SQ.FT.
FILL AREA 26 SQ.FT.

111+50

CUT VOLUME 71 CU.YD.
FILL VOLUME 33 CU.YD.

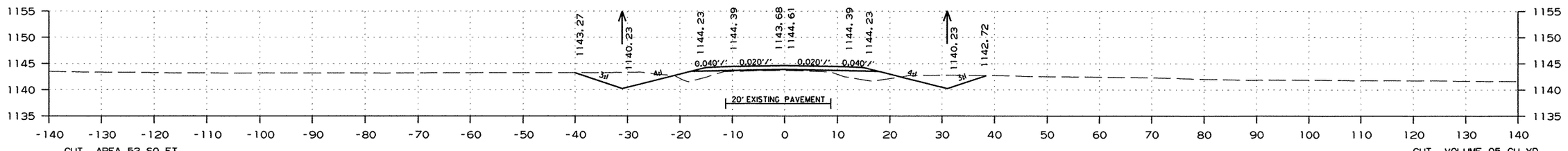
STA. 111+12 IN PLACE
24" x 20' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE & INSTALL
24" x 32' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 45 CU.YD.



CUT AREA 55 SQ.FT.
FILL AREA 19 SQ.FT.

111+11

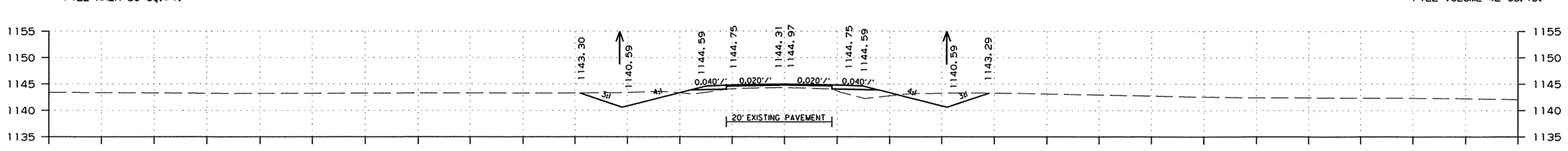
CUT VOLUME 22 CU.YD.
FILL VOLUME 10 CU.YD.



CUT AREA 52 SQ.FT.
FILL AREA 30 SQ.FT.

111+00

CUT VOLUME 95 CU.YD.
FILL VOLUME 42 CU.YD.



CUT AREA 16 SQ.FT.
FILL AREA 51 SQ.FT.

110+50

CUT VOLUME 92 CU.YD.
FILL VOLUME 27 CU.YD.

BUTLER RD.
STA. 110+50 TO STA. 112+00

10/16/2012

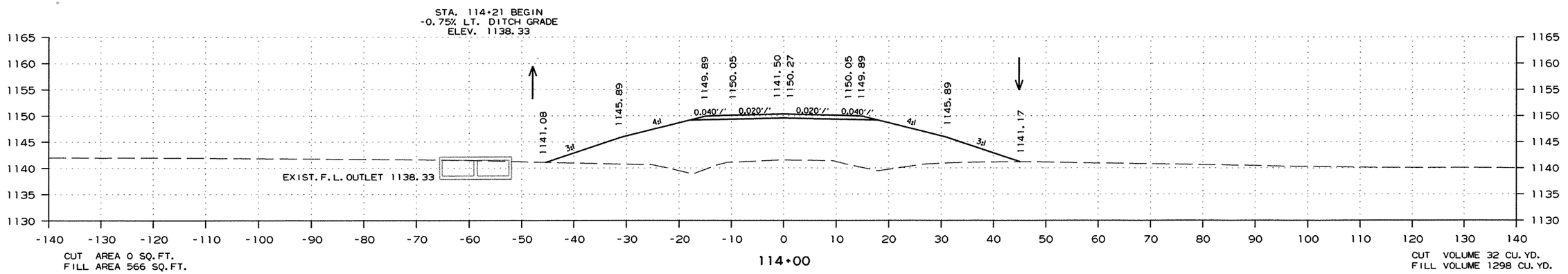
R040521.DGN

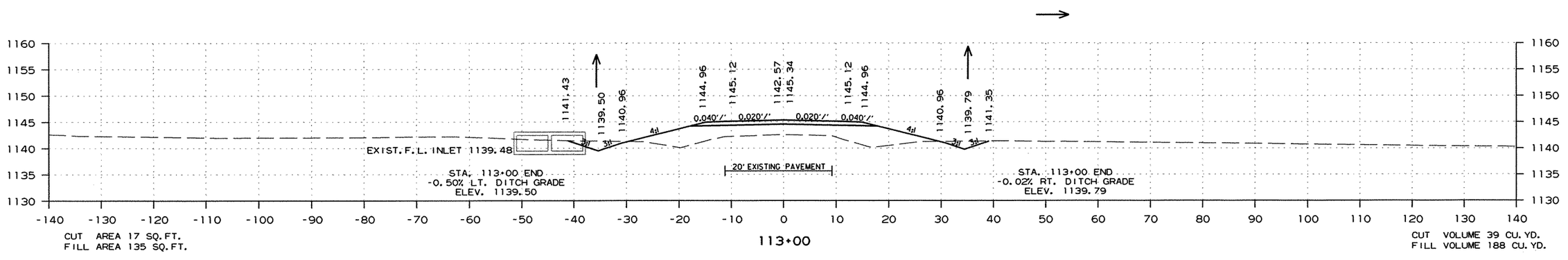
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	216	239

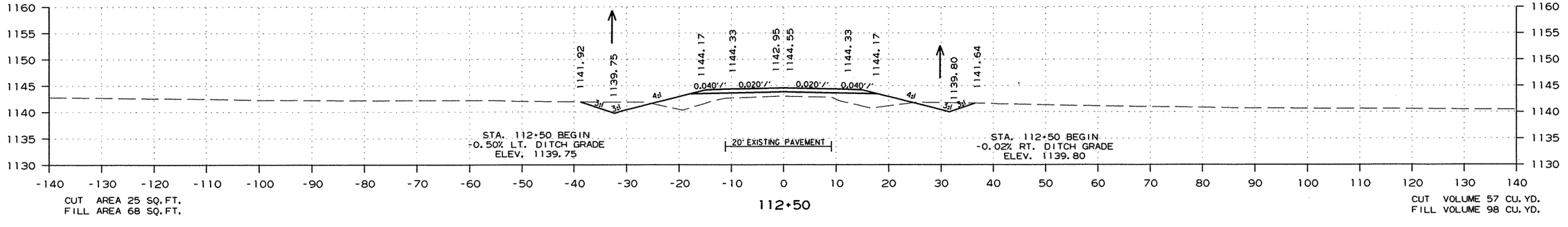
(2) CROSS SECTIONS

STAGE 2

STAGE 2







BUTLER RD.
STA. 112+50 TO STA. 114+00

10/16/2012

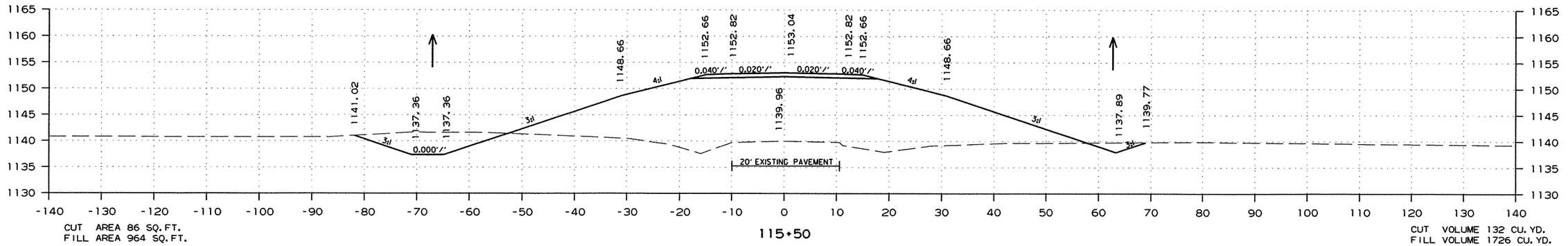
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	217	239

(2) CROSS SECTIONS

STAGE 2

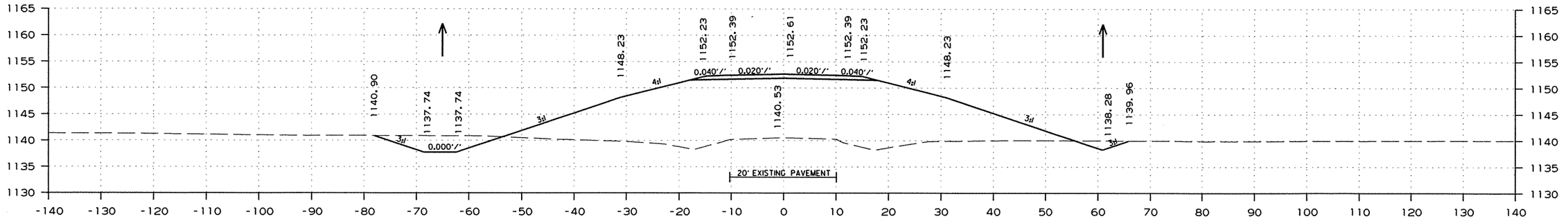
STAGE 2



CUT AREA 86 SQ. FT.
FILL AREA 964 SQ. FT.

115+50

CUT VOLUME 132 CU. YD.
FILL VOLUME 1726 CU. YD.

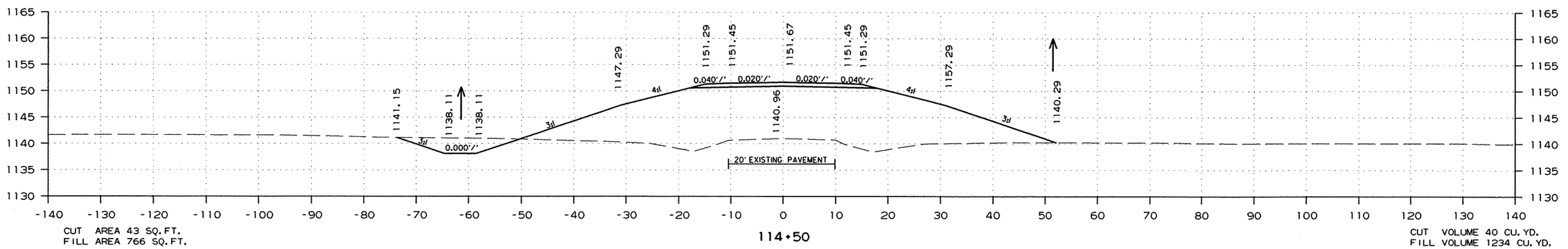


CUT AREA 56 SQ. FT.
FILL AREA 899 SQ. FT.

115+00

STA. 114+75 BEGIN
-0.79% RT. DITCH GRADE
ELEV. 1138.48

CUT VOLUME 92 CU. YD.
FILL VOLUME 1542 CU. YD.



CUT AREA 43 SQ. FT.
FILL AREA 766 SQ. FT.

114+50

CUT VOLUME 40 CU. YD.
FILL VOLUME 1234 CU. YD.

10/16/2012

R040521.DGN

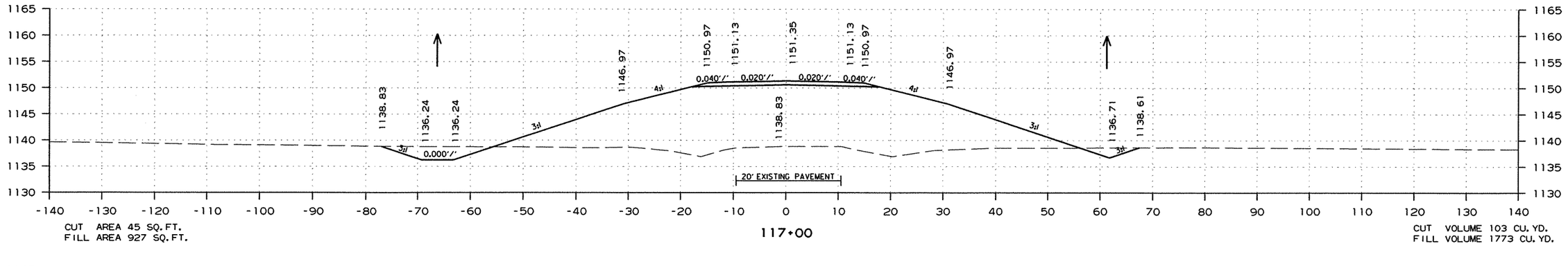
BUTLER RD.
STA. 114+50 TO STA. 115+50

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.		040521	218	239

(2) CROSS SECTIONS

STAGE 2

STAGE 2



CUT AREA 45 SQ.FT.
FILL AREA 927 SQ.FT.

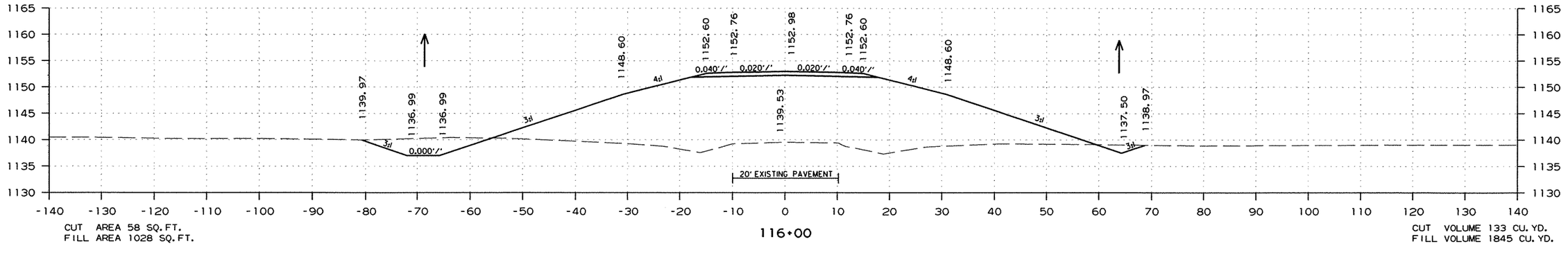
117+00

CUT VOLUME 103 CU.YD.
FILL VOLUME 1773 CU.YD.

CUT AREA 67 SQ.FT.
FILL AREA 988 SQ.FT.

116+50

CUT VOLUME 115 CU.YD.
FILL VOLUME 1867 CU.YD.



CUT AREA 58 SQ.FT.
FILL AREA 1028 SQ.FT.

116+00

CUT VOLUME 133 CU.YD.
FILL VOLUME 1845 CU.YD.

BUTLER RD.
STA. 116+00 TO STA. 117+00

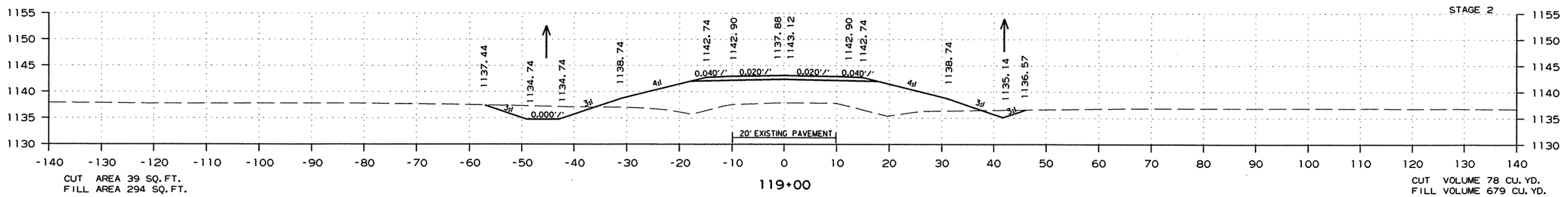
10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	219	239

(2) CROSS SECTIONS

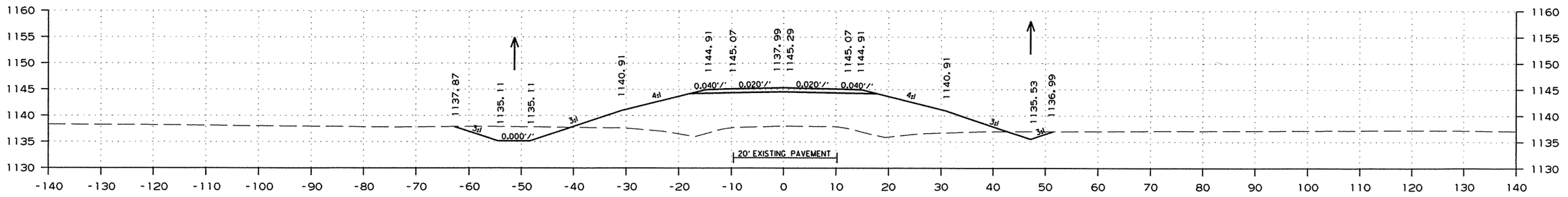
STAGE 2



CUT AREA 39 SQ.FT.
FILL AREA 294 SQ.FT.

119+00

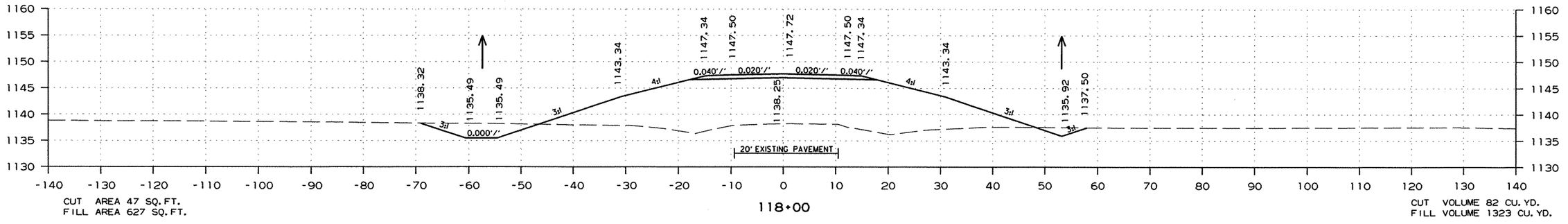
CUT VOLUME 78 CU.YD.
FILL VOLUME 679 CU.YD.



CUT AREA 45 SQ.FT.
FILL AREA 440 SQ.FT.

118+50

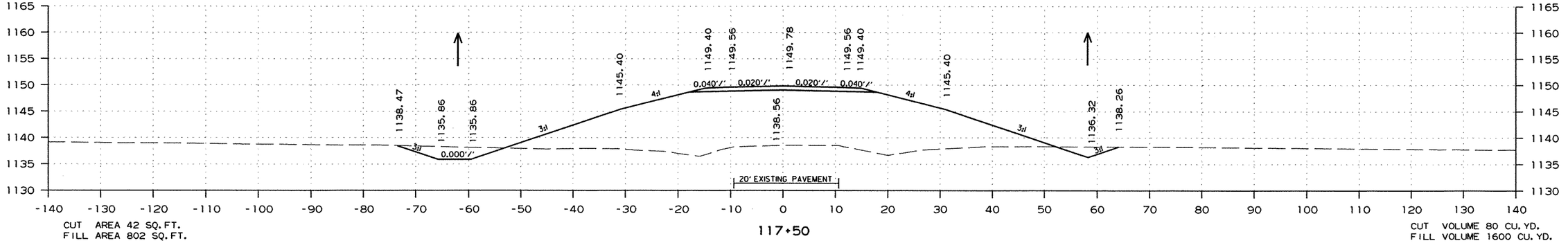
CUT VOLUME 85 CU.YD.
FILL VOLUME 987 CU.YD.



CUT AREA 47 SQ.FT.
FILL AREA 627 SQ.FT.

118+00

CUT VOLUME 82 CU.YD.
FILL VOLUME 1323 CU.YD.



CUT AREA 42 SQ.FT.
FILL AREA 802 SQ.FT.

117+50

CUT VOLUME 80 CU.YD.
FILL VOLUME 1600 CU.YD.

BUTLER RD.
STA. 117+50 TO STA. 119+00

10/16/2012

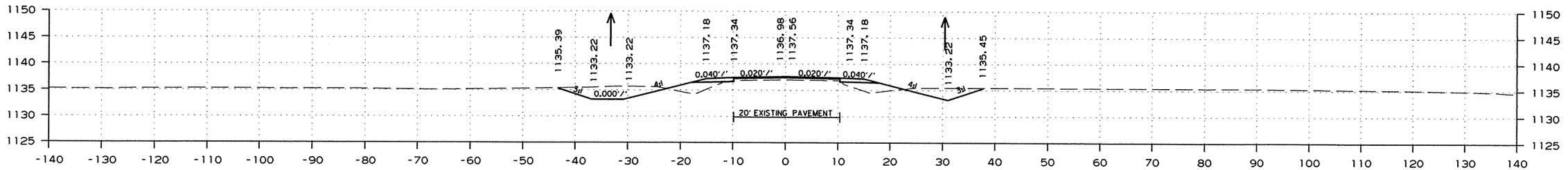
R040521.DGN

STAGE 2

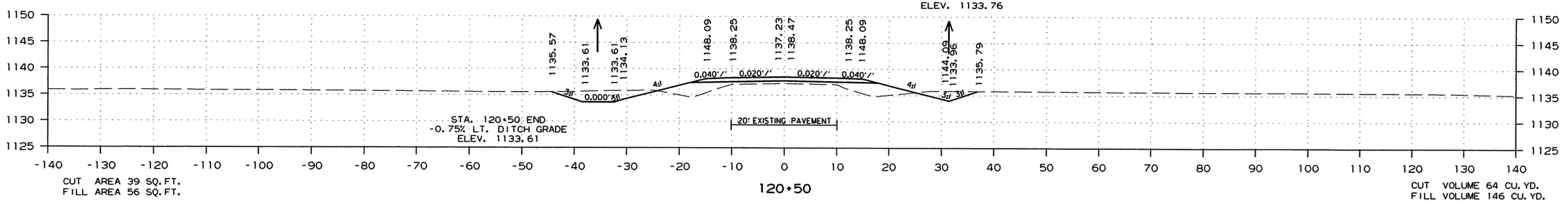
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	220	239

(2) CROSS SECTIONS

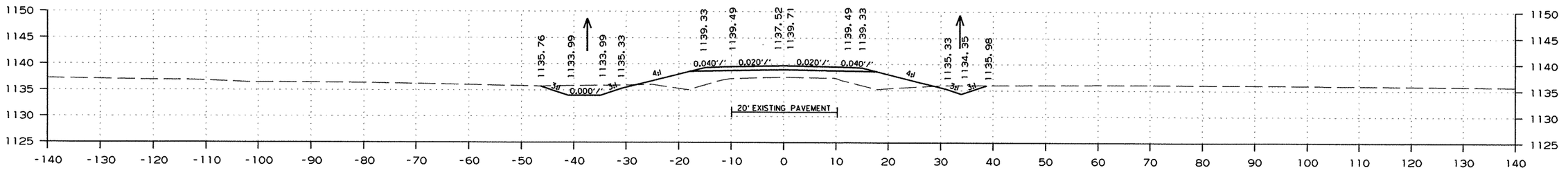
STAGE 2

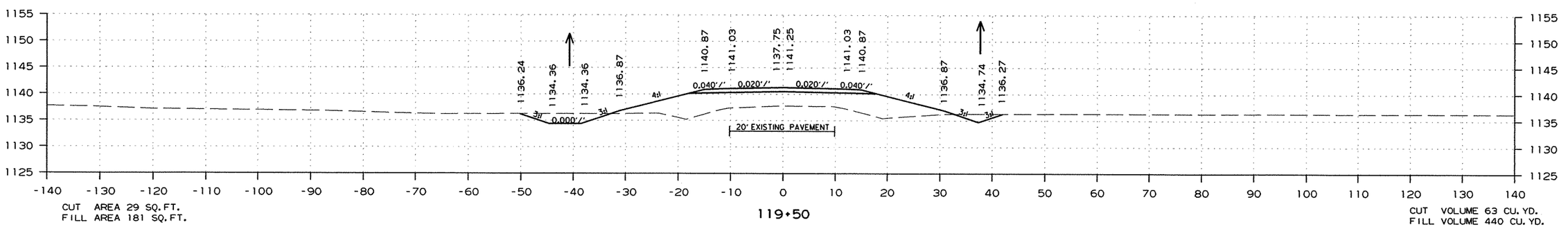


STA. 120+75 END
-0.79% RT. DITCH GRADE
ELEV. 1133.76



STA. 120+50 END
-0.75% LT. DITCH GRADE
ELEV. 1133.61





10/16/2012

R040521.DGN

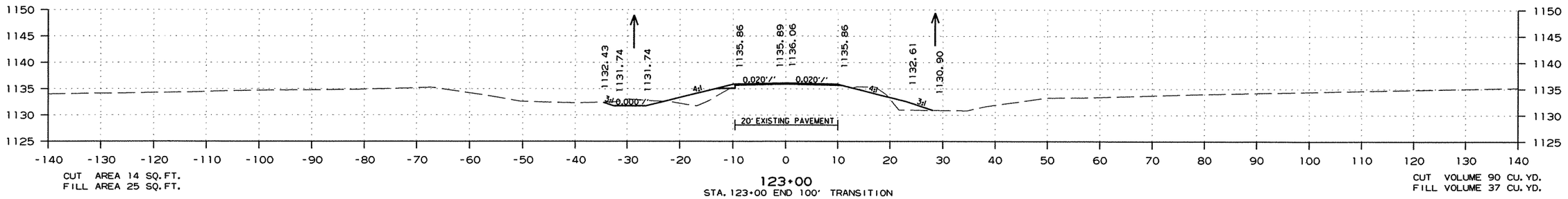
BUTLER RD.
STA. 119+50 TO STA. 121+00

STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	221	239

(2) CROSS SECTIONS

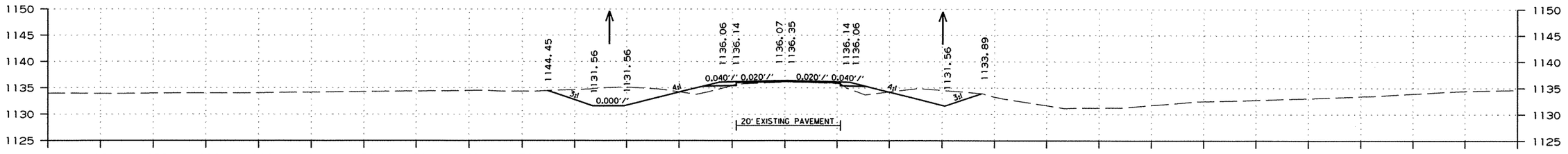
STAGE 2



CUT AREA 14 SQ. FT.
FILL AREA 25 SQ. FT.

123+00
STA. 123+00 END 100' TRANSITION

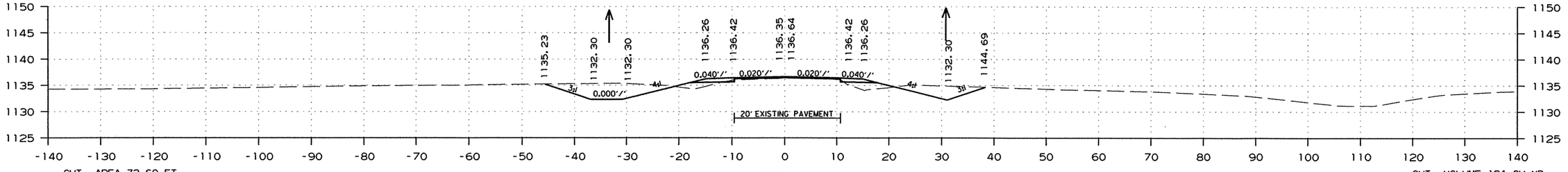
CUT VOLUME 90 CU. YD.
FILL VOLUME 37 CU. YD.



CUT AREA 83 SQ. FT.
FILL AREA 15 SQ. FT.

122+50

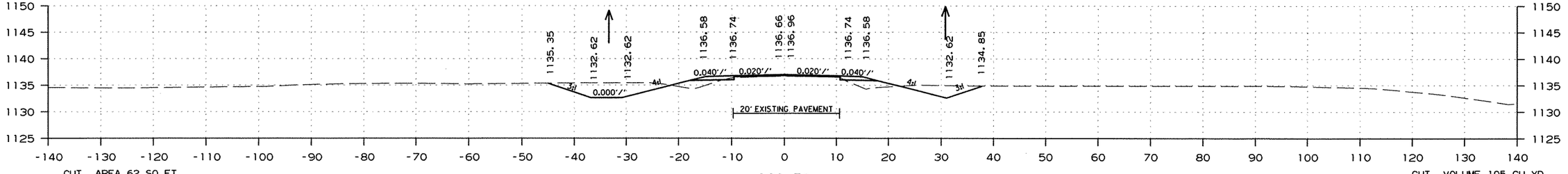
CUT VOLUME 143 CU. YD.
FILL VOLUME 28 CU. YD.



CUT AREA 72 SQ. FT.
FILL AREA 15 SQ. FT.

122+00
STA. 122+00 BEGIN 100' TRANSITION

CUT VOLUME 124 CU. YD.
FILL VOLUME 30 CU. YD.



CUT AREA 62 SQ. FT.
FILL AREA 17 SQ. FT.

121+50

CUT VOLUME 105 CU. YD.
FILL VOLUME 41 CU. YD.

BUTLER RD.
STA. 121+50 TO STA. 123+00

10/16/2012

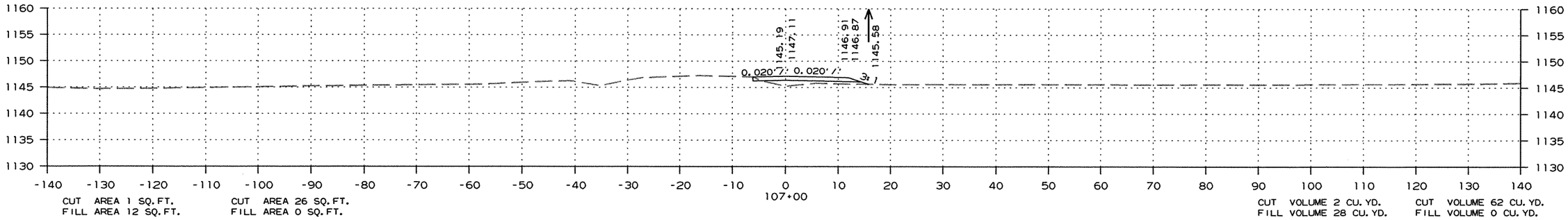
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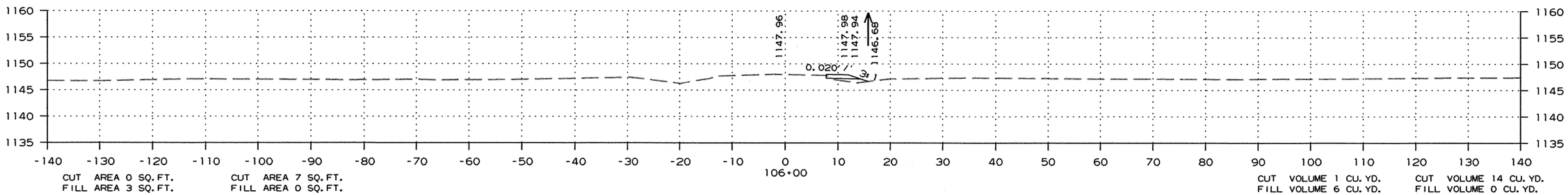
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	222	239

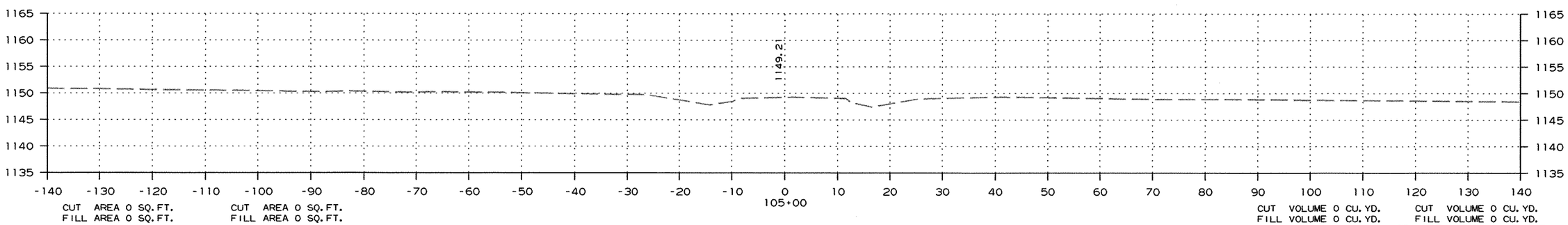
(2) CROSS SECTIONS

STAGE 1 STAGE 3

STAGE 3 STAGE 1







BUTLER RD. DETOUR
STA. 105+00 TO STA. 107+00

10/16/2012

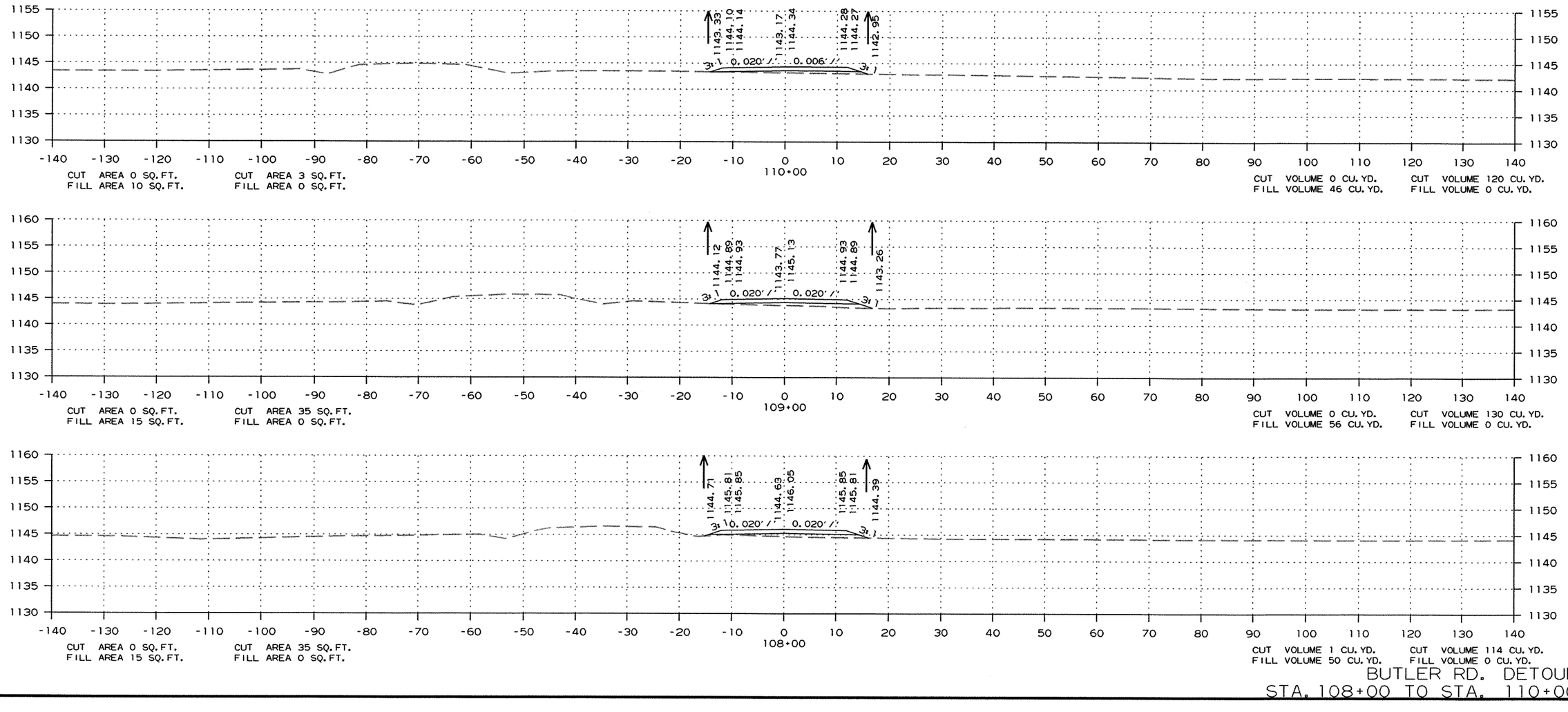
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	223	239

(2) CROSS SECTIONS

STAGE 1 STAGE 3

STAGE 3 STAGE 1



BUTLER RD. DETOUR
STA. 108+00 TO STA. 110+00

10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	224	239

(2) CROSS SECTIONS

STAGE 1 STAGE 3

STAGE 3 STAGE 1

BUTLER RD. DETOUR
STA. 111+00 TO STA. 113+00

10/16/2012

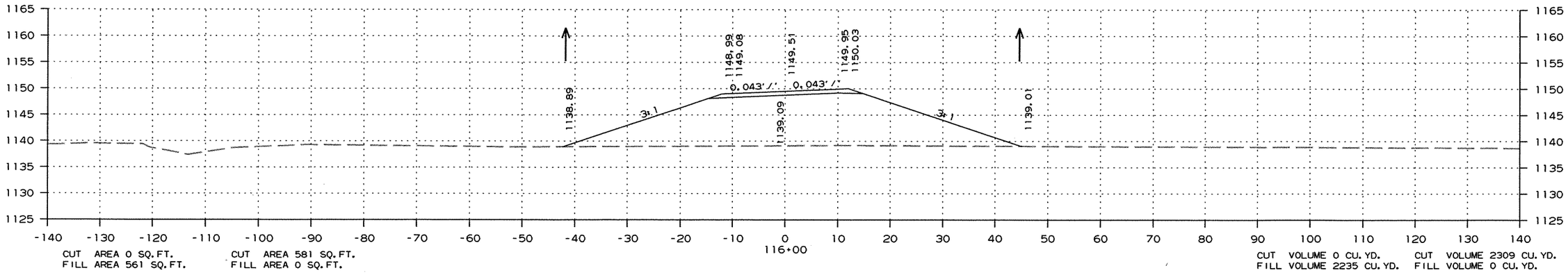
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	225	239

(2) CROSS SECTIONS

STAGE 1 STAGE 3

STAGE 3 STAGE 1

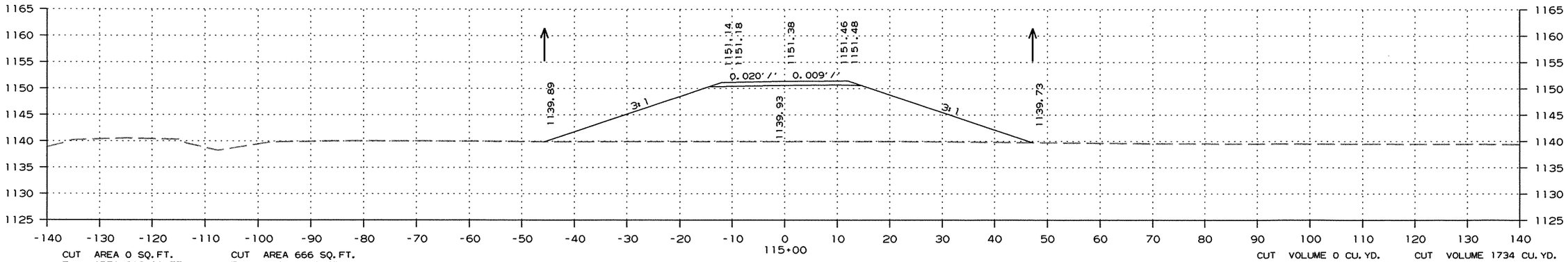


CUT AREA 0 SQ.FT. FILL AREA 561 SQ.FT.

CUT AREA 581 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 2235 CU.YD.

CUT VOLUME 2309 CU.YD. FILL VOLUME 0 CU.YD.

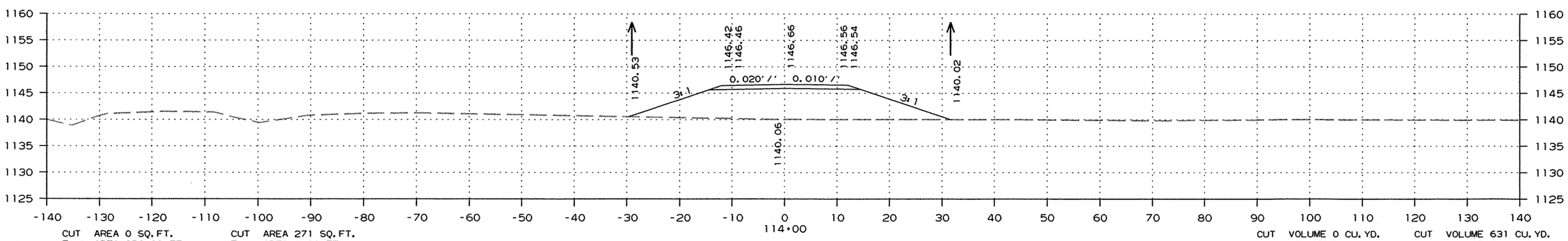


CUT AREA 0 SQ.FT. FILL AREA 646 SQ.FT.

CUT AREA 666 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 1666 CU.YD.

CUT VOLUME 1734 CU.YD. FILL VOLUME 0 CU.YD.



CUT AREA 0 SQ.FT. FILL AREA 254 SQ.FT.

CUT AREA 271 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 563 CU.YD.

CUT VOLUME 631 CU.YD. FILL VOLUME 0 CU.YD.

BUTLER RD. DETOUR
STA. 114+00 TO STA. 116+00

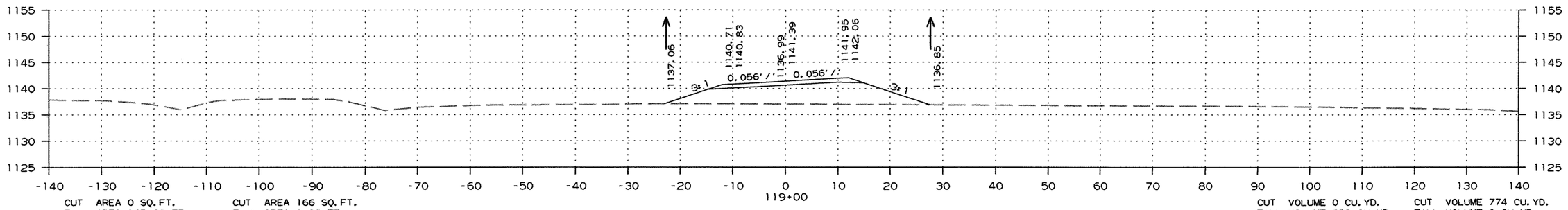
10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	226	239

(2) CROSS SECTIONS

STAGE 1 STAGE 3



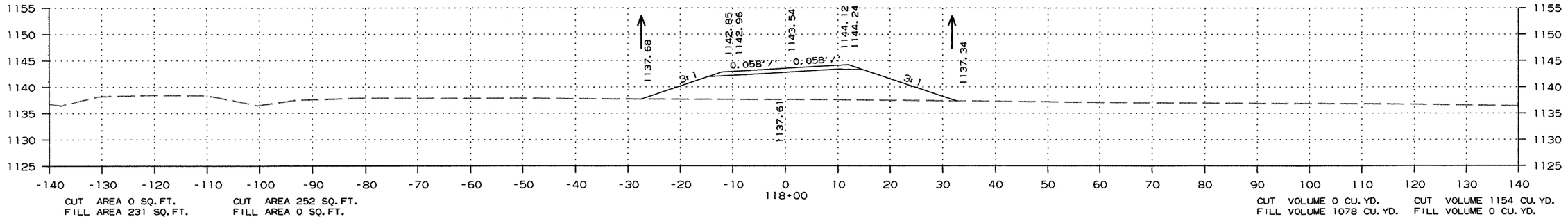
CUT AREA 0 SQ.FT. FILL AREA 145 SQ.FT.

CUT AREA 166 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 698 CU.YD.

CUT VOLUME 774 CU.YD. FILL VOLUME 0 CU.YD.

STAGE 3 STAGE 1

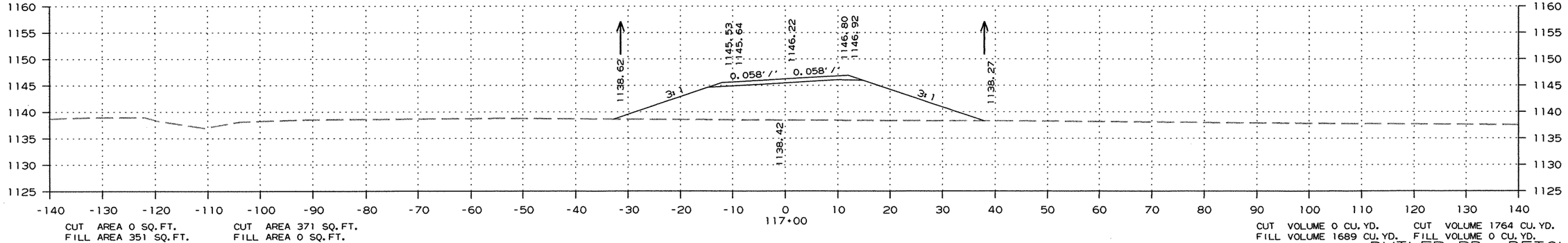


CUT AREA 0 SQ.FT. FILL AREA 231 SQ.FT.

CUT AREA 252 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 1078 CU.YD.

CUT VOLUME 1154 CU.YD. FILL VOLUME 0 CU.YD.



CUT AREA 0 SQ.FT. FILL AREA 351 SQ.FT.

CUT AREA 371 SQ.FT. FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD. FILL VOLUME 1689 CU.YD.

CUT VOLUME 1764 CU.YD. FILL VOLUME 0 CU.YD.

BUTLER RD. DETOUR
STA. 117+00 TO STA. 119+00

10/16/2012

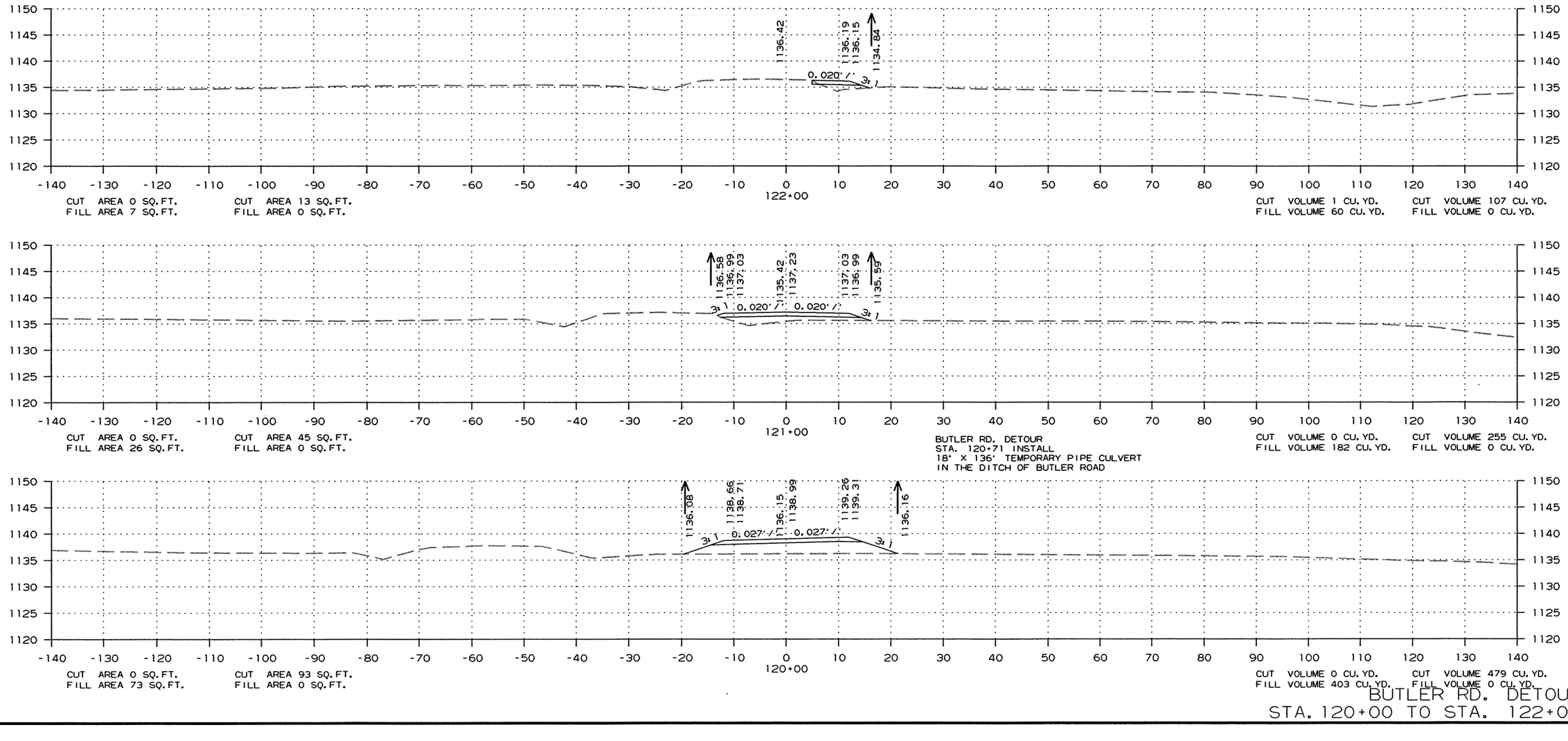
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	227	239

(2) CROSS SECTIONS

STAGE 1 STAGE 3

STAGE 3 STAGE 1



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R040521.DGN

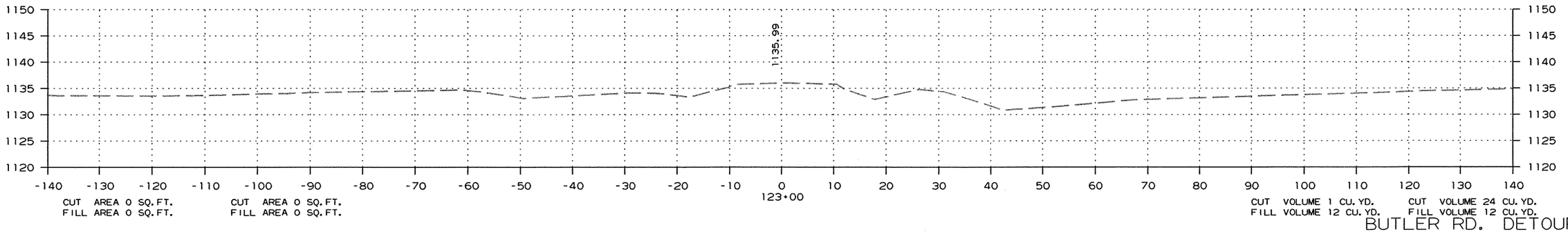
BUTLER RD. DETOUR
STA. 120+00 TO STA. 122+00

STAGE 1 STAGE 3

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	228	239

(2) CROSS SECTIONS

STAGE 3 STAGE 1



BUTLER RD. DETOUR
STA. 123+00 TO STA. 123+00

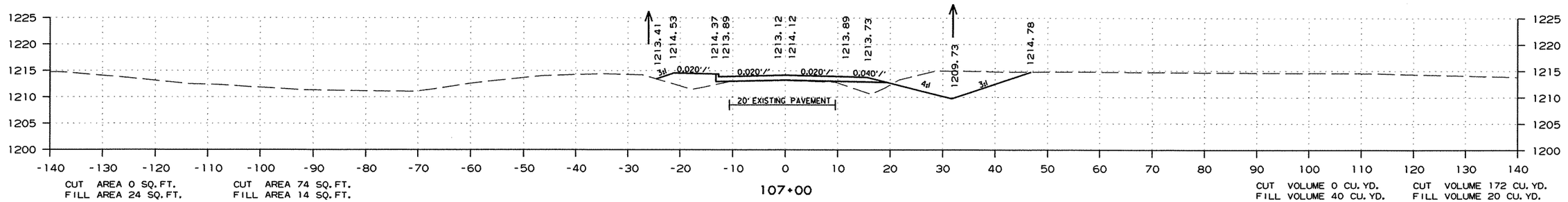
10/16/2012

R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	229	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2



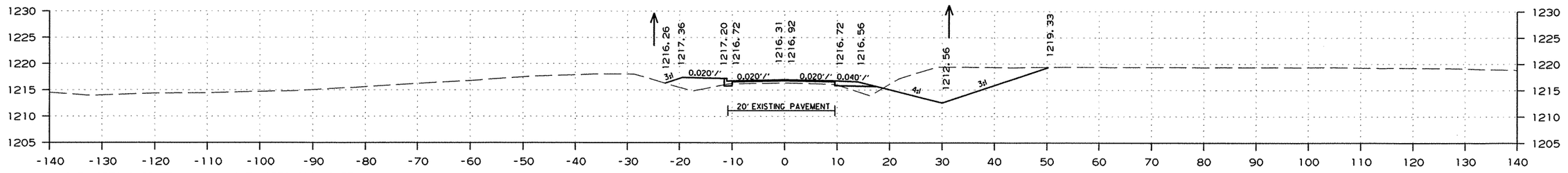
CUT AREA 0 SQ.FT.
FILL AREA 24 SQ.FT.

CUT AREA 74 SQ.FT.
FILL AREA 14 SQ.FT.

107+00

CUT VOLUME 0 CU.YD.
FILL VOLUME 40 CU.YD.

CUT VOLUME 172 CU.YD.
FILL VOLUME 20 CU.YD.



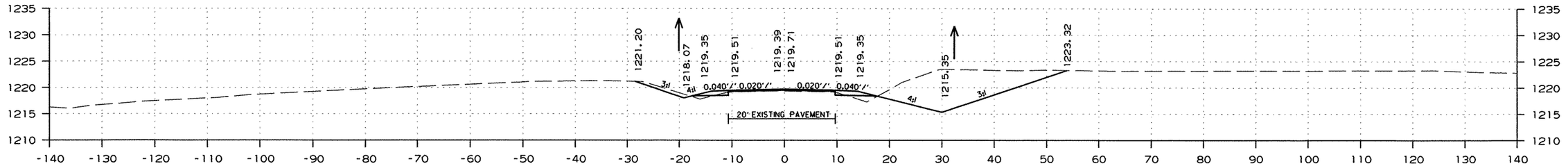
CUT AREA 1 SQ.FT.
FILL AREA 19 SQ.FT.

CUT AREA 112 SQ.FT.
FILL AREA 8 SQ.FT.

106+50
STA. 106+50 END 100' TRANSITION

CUT VOLUME 6 CU.YD.
FILL VOLUME 19 CU.YD.

CUT VOLUME 243 CU.YD.
FILL VOLUME 10 CU.YD.



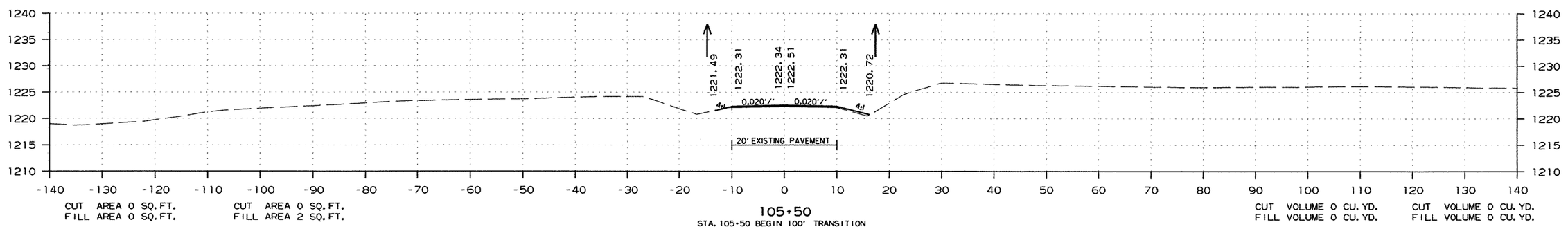
CUT AREA 6 SQ.FT.
FILL AREA 1 SQ.FT.

CUT AREA 151 SQ.FT.
FILL AREA 4 SQ.FT.

106+00

CUT VOLUME 6 CU.YD.
FILL VOLUME 1 CU.YD.

CUT VOLUME 140 CU.YD.
FILL VOLUME 5 CU.YD.



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

CUT AREA 0 SQ.FT.
FILL AREA 2 SQ.FT.

105+50
STA. 105+50 BEGIN 100' TRANSITION

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

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R040521.DGN

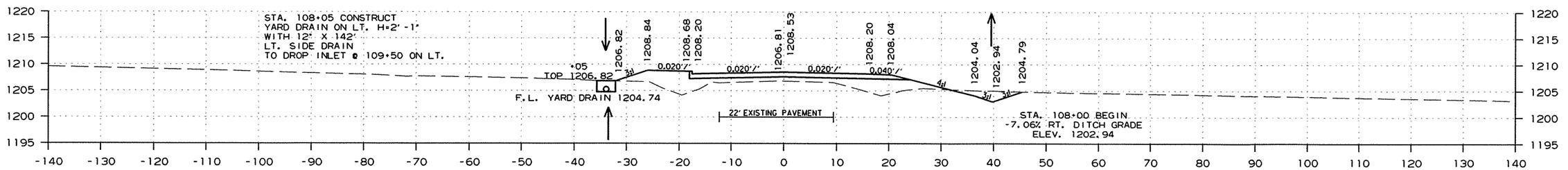
PARK ST.
STA. 105+50 TO STA. 107+00

STAGE 1 STAGE 2

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	230	239

(2) CROSS SECTIONS

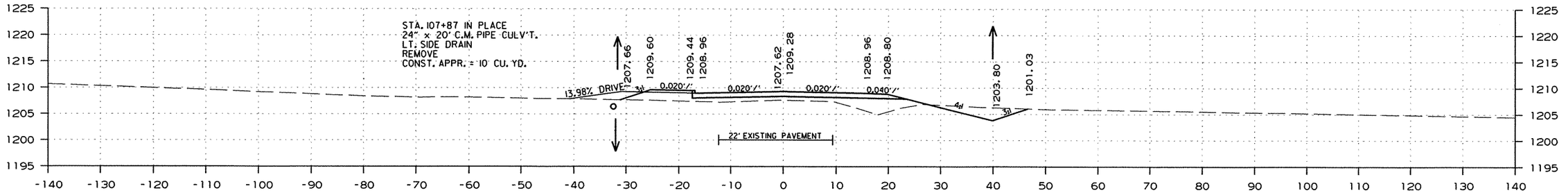
STAGE 1 STAGE 2



CUT AREA 0 SQ.FT. FILL AREA 44 SQ.FT.
CUT AREA 13 SQ.FT. FILL AREA 39 SQ.FT.

108+00

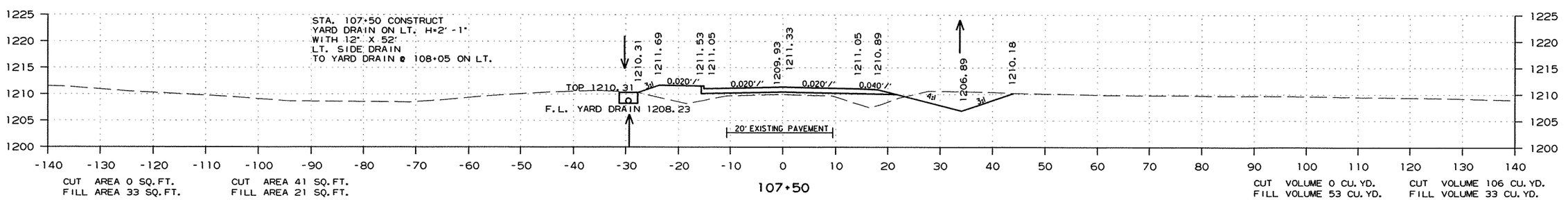
CUT VOLUME 0 CU.YD. FILL VOLUME 17 CU.YD.
CUT VOLUME 9 CU.YD. FILL VOLUME 17 CU.YD.



CUT AREA 0 SQ.FT. FILL AREA 26 SQ.FT.
CUT AREA 23 SQ.FT. FILL AREA 32 SQ.FT.

107+87

CUT VOLUME 0 CU.YD. FILL VOLUME 40 CU.YD.
CUT VOLUME 44 CU.YD. FILL VOLUME 37 CU.YD.



CUT AREA 0 SQ.FT. FILL AREA 33 SQ.FT.
CUT AREA 41 SQ.FT. FILL AREA 21 SQ.FT.

107+50

CUT VOLUME 0 CU.YD. FILL VOLUME 53 CU.YD.
CUT VOLUME 106 CU.YD. FILL VOLUME 33 CU.YD.

PARK ST.
STA. 107+50 TO STA. 108+00

10/16/2012

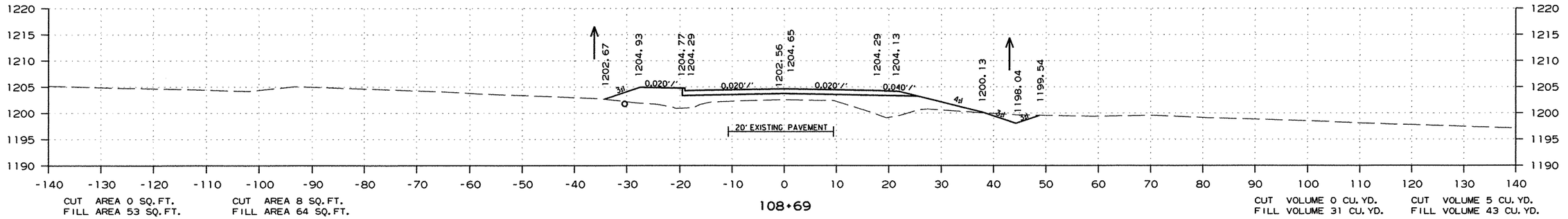
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	231	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



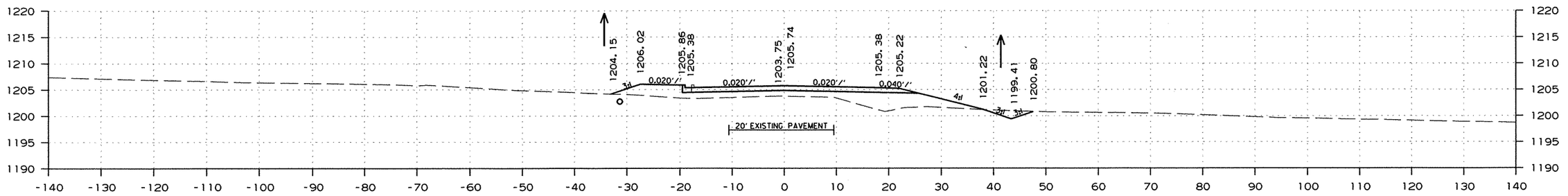
CUT AREA 0 SQ.FT.
FILL AREA 53 SQ.FT.

CUT AREA 8 SQ.FT.
FILL AREA 64 SQ.FT.

108+69

CUT VOLUME 0 CU.YD.
FILL VOLUME 31 CU.YD.

CUT VOLUME 5 CU.YD.
FILL VOLUME 43 CU.YD.



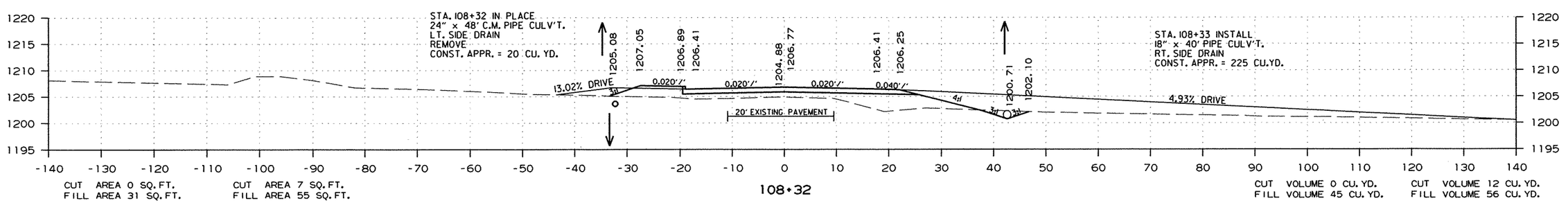
CUT AREA 0 SQ.FT.
FILL AREA 34 SQ.FT.

CUT AREA 7 SQ.FT.
FILL AREA 58 SQ.FT.

108+50

CUT VOLUME 0 CU.YD.
FILL VOLUME 22 CU.YD.

CUT VOLUME 5 CU.YD.
FILL VOLUME 38 CU.YD.



CUT AREA 0 SQ.FT.
FILL AREA 31 SQ.FT.

CUT AREA 7 SQ.FT.
FILL AREA 55 SQ.FT.

108+32

CUT VOLUME 0 CU.YD.
FILL VOLUME 45 CU.YD.

CUT VOLUME 12 CU.YD.
FILL VOLUME 56 CU.YD.

PARK ST.
STA. 108+32 TO STA. 108+69

10/16/2012

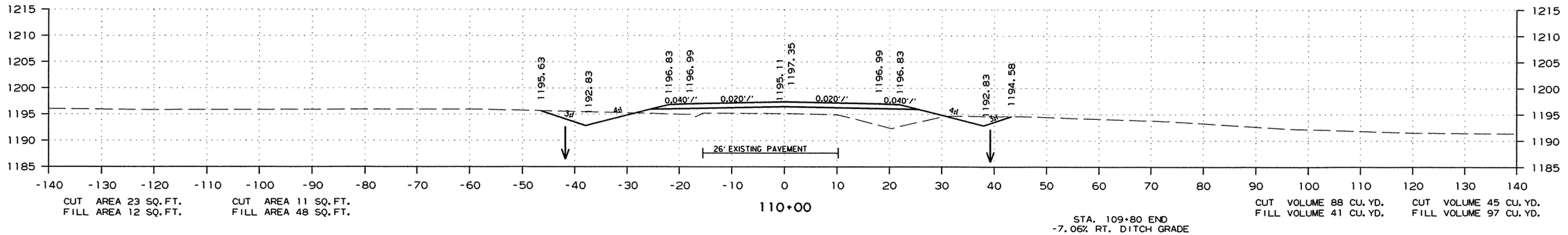
R040521.DGN

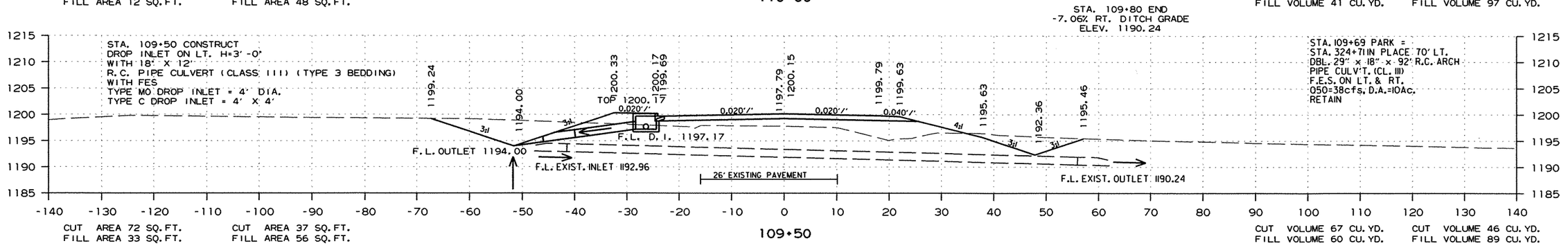
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	232	239

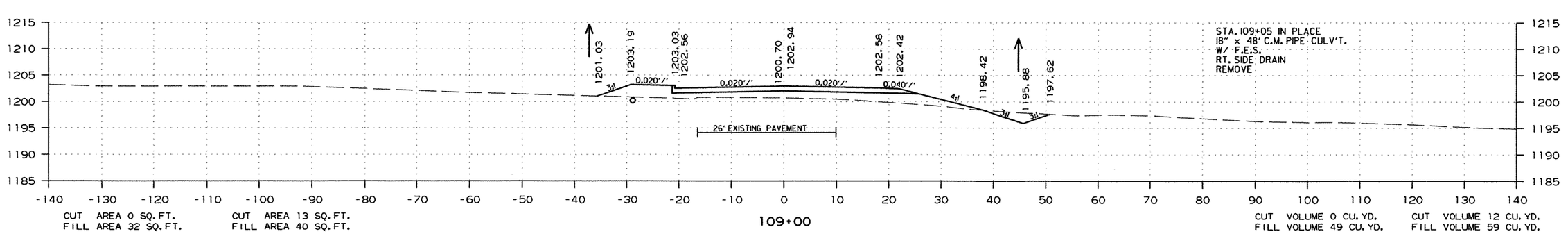
(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2







PARK ST.
STA. 109+00 TO STA. 110+00

10/16/2012

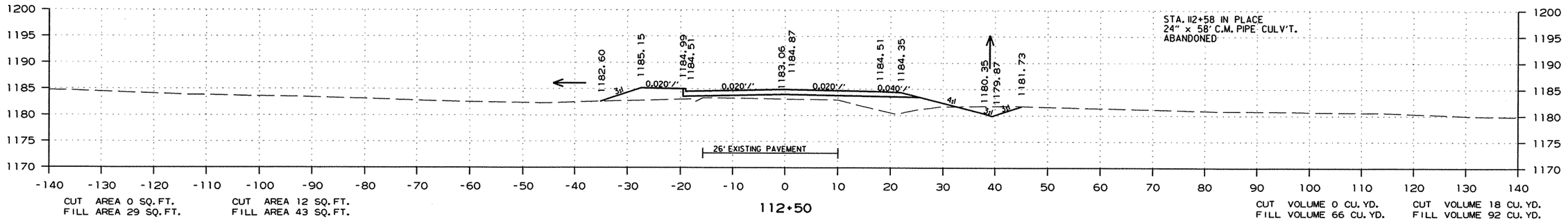
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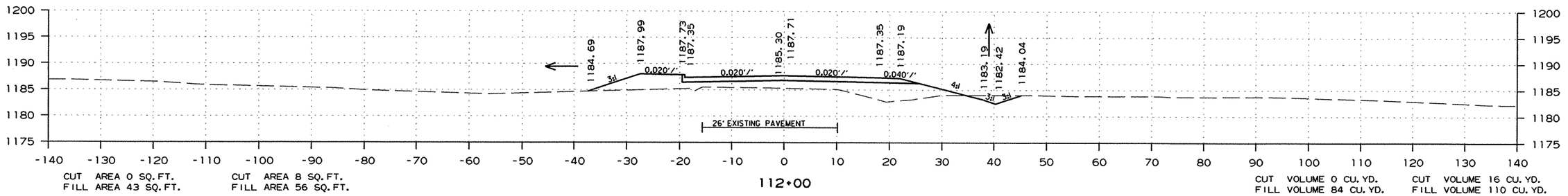
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	233	239

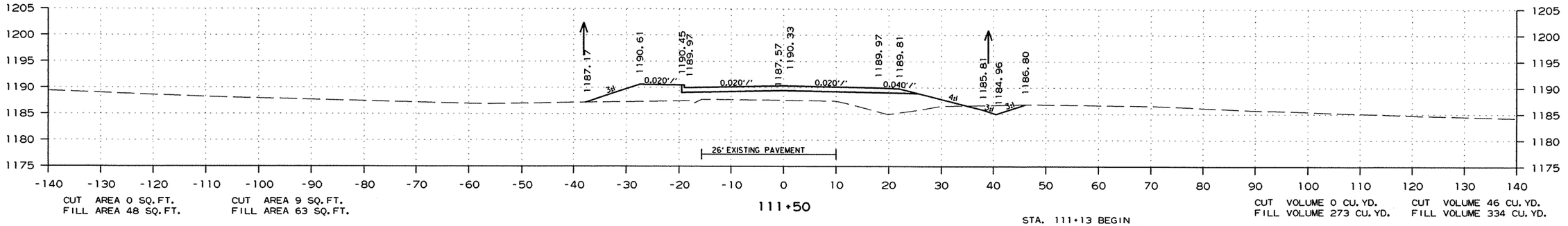
(2) CROSS SECTIONS

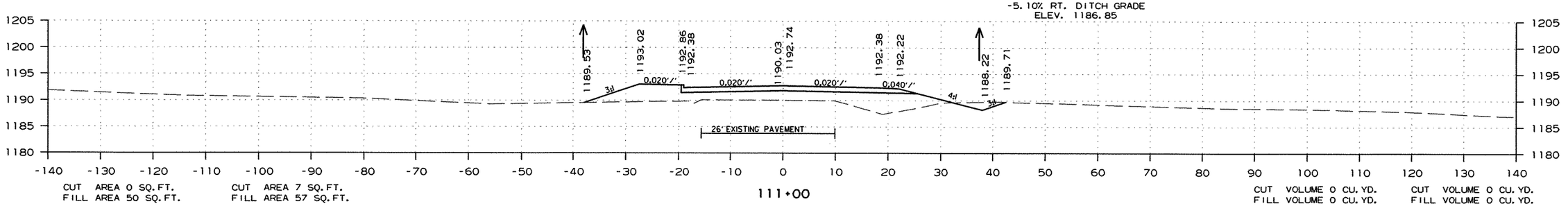
STAGE 1 STAGE 2

STAGE 1 STAGE 2









PARK ST.
STA. 111+00 TO STA. 112+50

10/16/2012

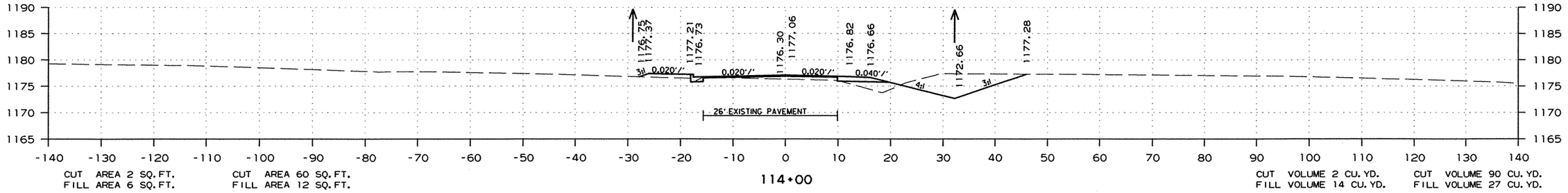
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	234	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2

STAGE 1 STAGE 2



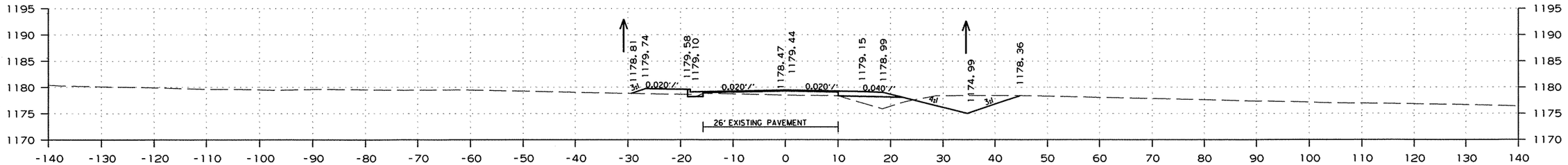
CUT AREA 2 SQ.FT.
FILL AREA 6 SQ.FT.

CUT AREA 60 SQ.FT.
FILL AREA 12 SQ.FT.

114+00

CUT VOLUME 2 CU.YD.
FILL VOLUME 14 CU.YD.

CUT VOLUME 90 CU.YD.
FILL VOLUME 27 CU.YD.



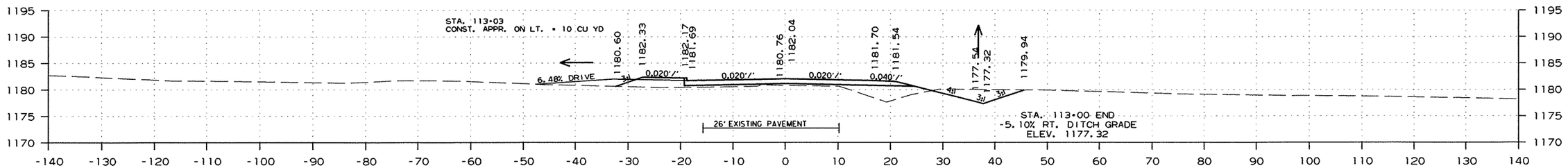
CUT AREA 1 SQ.FT.
FILL AREA 9 SQ.FT.

CUT AREA 37 SQ.FT.
FILL AREA 17 SQ.FT.

113+50

CUT VOLUME 1 CU.YD.
FILL VOLUME 28 CU.YD.

CUT VOLUME 57 CU.YD.
FILL VOLUME 43 CU.YD.



CUT AREA 0 SQ.FT.
FILL AREA 21 SQ.FT.

CUT AREA 25 SQ.FT.
FILL AREA 30 SQ.FT.

113+00

CUT VOLUME 0 CU.YD.
FILL VOLUME 46 CU.YD.

CUT VOLUME 33 CU.YD.
FILL VOLUME 68 CU.YD.

PARK ST.
STA. 113+00 TO STA. 114+00

10/16/2012

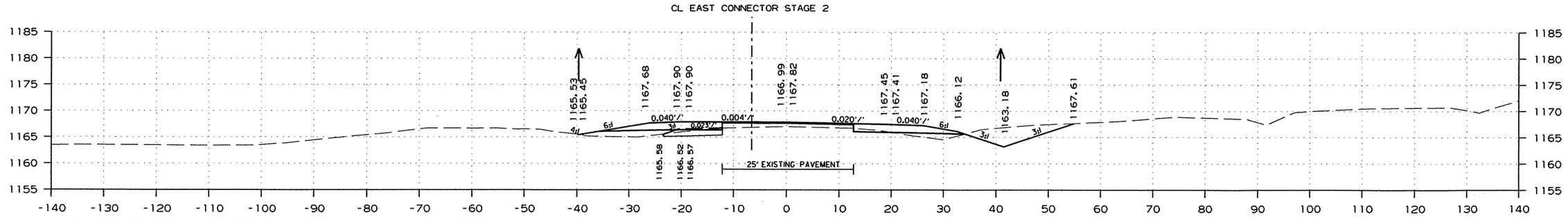
R040521.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	235	239

(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

STAGE 4 STAGE 2 STAGE 1



CUT AREA 11 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 43 SQ.FT.
FILL AREA 9 SQ.FT.

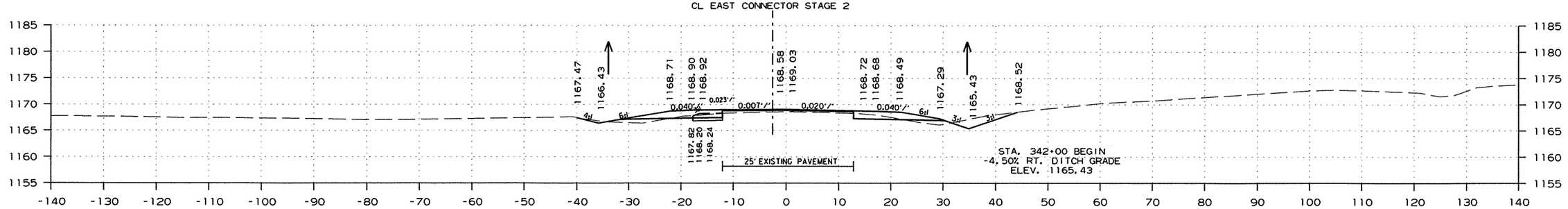
CUT AREA 14 SQ.FT.
FILL AREA 28 SQ.FT.

342+50
STA. 342+50 END 100' TRANSITION

CUT VOLUME 16 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 56 CU.YD.
FILL VOLUME 12 CU.YD.

CUT VOLUME 22 CU.YD.
FILL VOLUME 34 CU.YD.



CUT AREA 7 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 18 SQ.FT.
FILL AREA 5 SQ.FT.

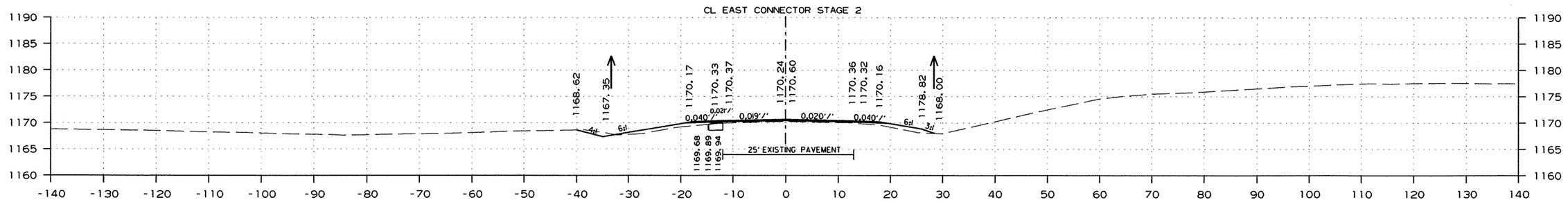
CUT AREA 10 SQ.FT.
FILL AREA 9 SQ.FT.

342+00

CUT VOLUME 9 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 16 CU.YD.
FILL VOLUME 10 CU.YD.

CUT VOLUME 12 CU.YD.
FILL VOLUME 18 CU.YD.



CUT AREA 3 SQ.FT.
FILL AREA 0 SQ.FT.

CUT AREA 0 SQ.FT.
FILL AREA 6 SQ.FT.

CUT AREA 3 SQ.FT.
FILL AREA 11 SQ.FT.

341+50
STA. 341+50 BEGIN 100' TRANSITION & 150' TAPER

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

10/16/2012

R040521.DGN

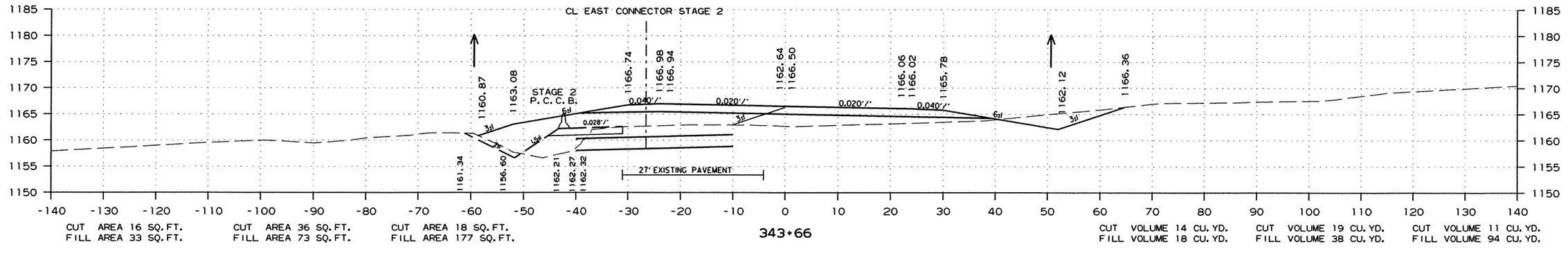
EASTERN CONNECTOR
STA. 341+50 TO STA. 342+50

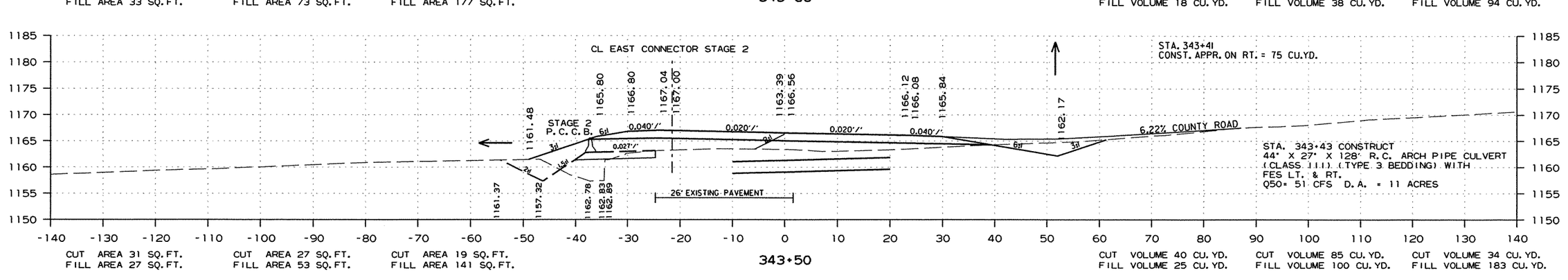
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	236	239

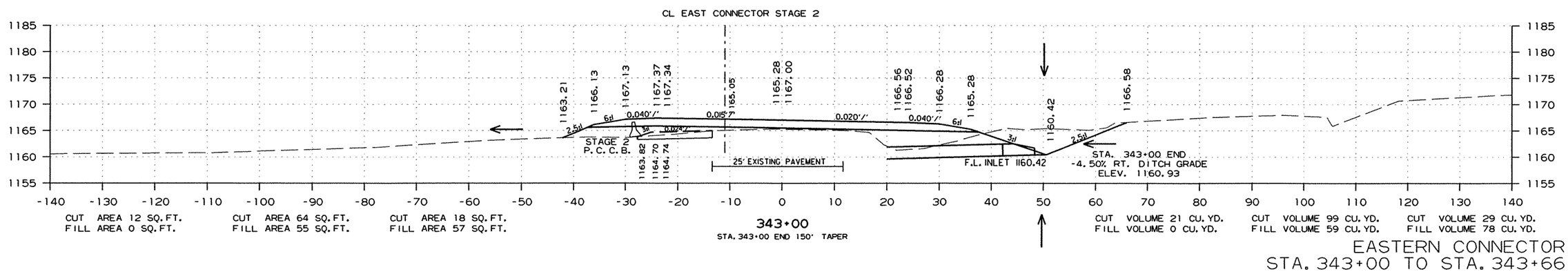
(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

STAGE 4 STAGE 2 STAGE 1







EASTERN CONNECTOR
STA. 343+00 TO STA. 343+66

10/16/2012

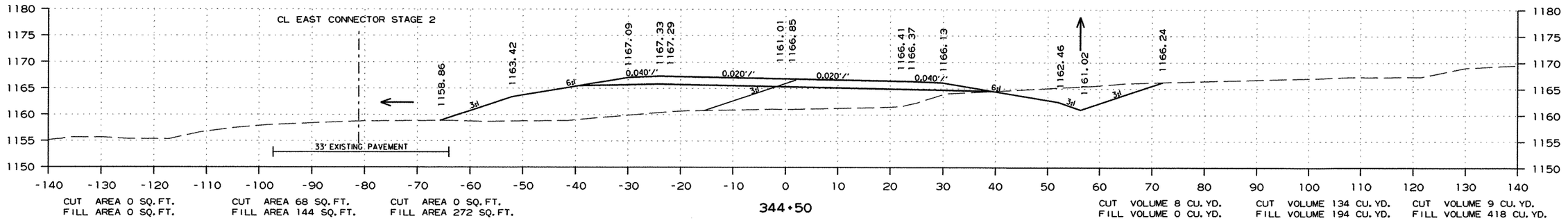
R040521.DGN

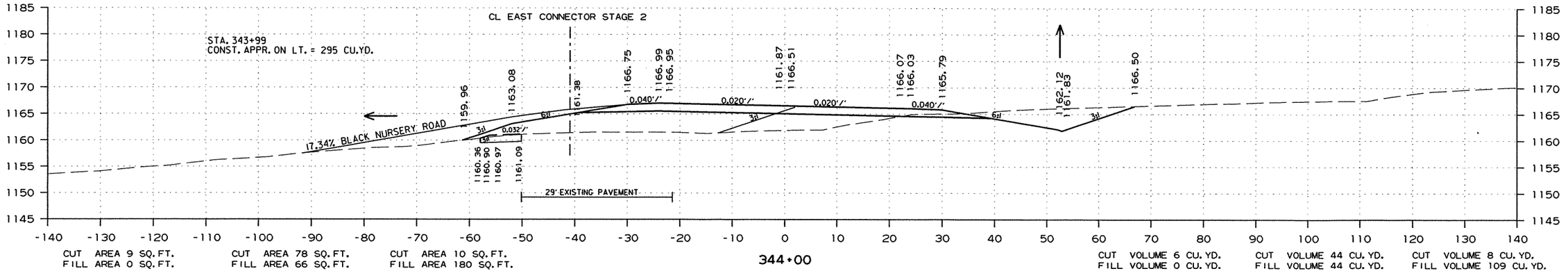
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	237	239

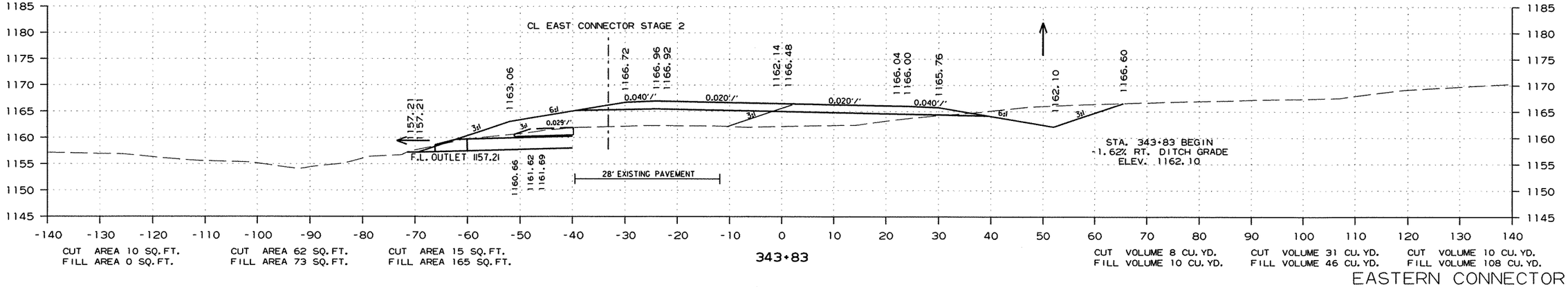
(2) CROSS SECTIONS

STAGE 1 STAGE 2 STAGE 4

STAGE 4 STAGE 2 STAGE 1







EASTERN CONNECTOR
STA. 343+83 TO STA. 344+50

10/16/2012

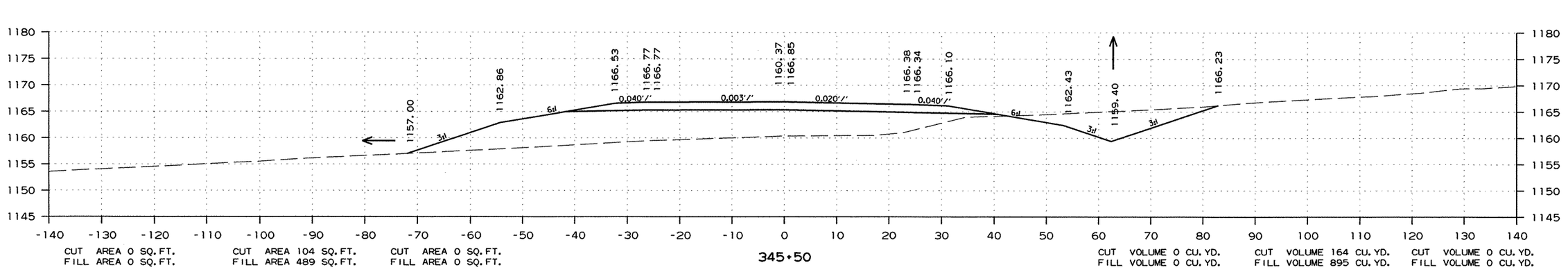
R040521.DGN

STAGE 1 STAGE 2 STAGE 4

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

STAGE 4 STAGE 2 STAGE 1



10/16/2012

R040521.DGN

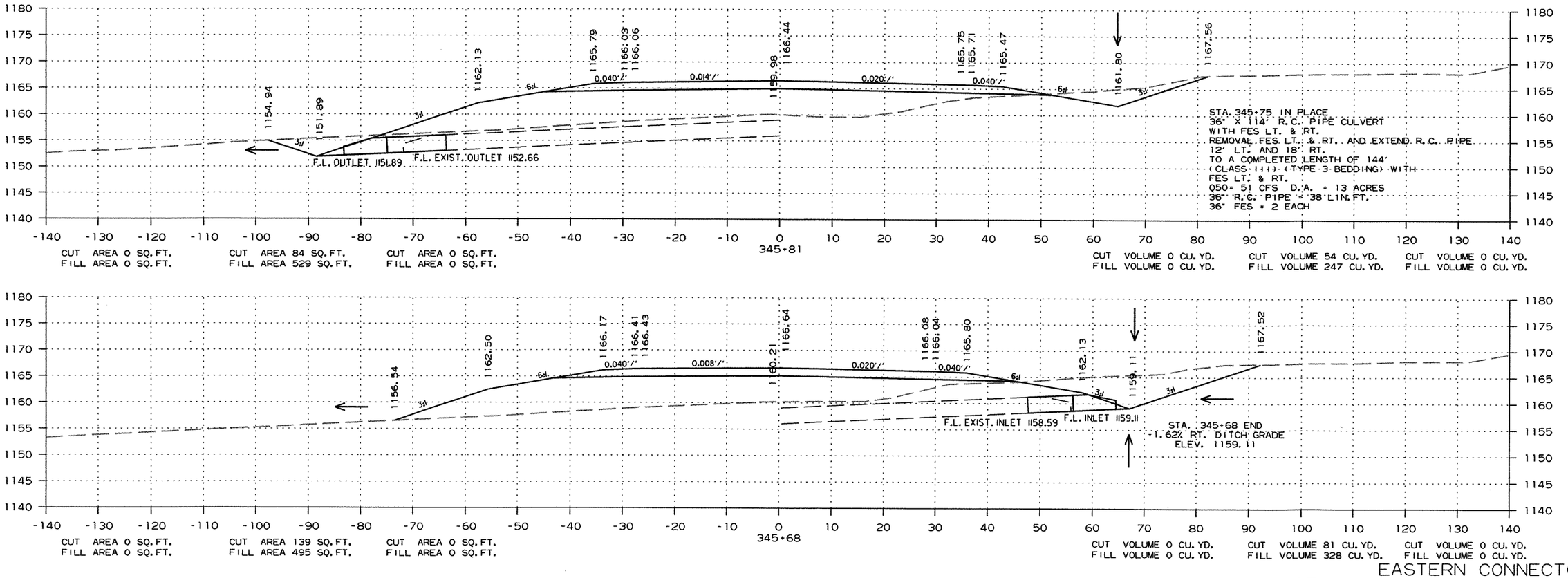
EASTERN CONNECTOR
STA. 345+00 TO STA. 345+50

STAGE 1 STAGE 2 STAGE 4

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		040521	239	239

(2) CROSS SECTIONS

STAGE 4 STAGE 2 STAGE 1



EASTERN CONNECTOR
STA. 345+68 TO STA. 345+81

10/16/2012

R040521.DGN