DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	1	372
				(2)	I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH.II) (S)			

"A FULLY CONTROLLED ACCESS FACILITY"

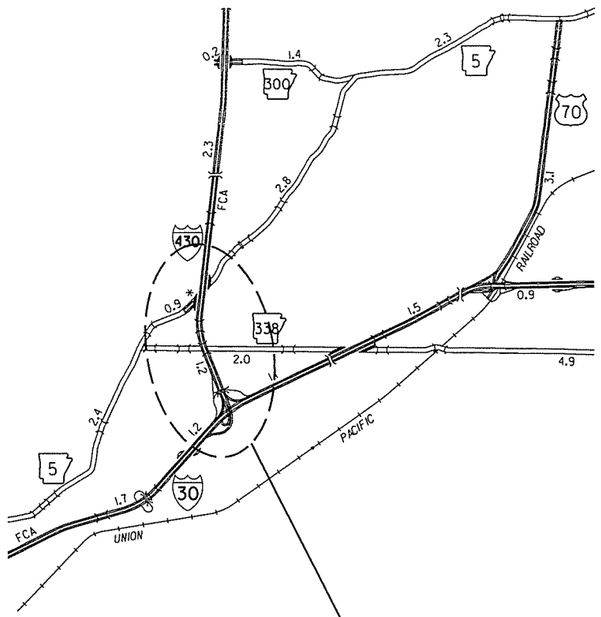
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

I-30 / I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)

PULASKI COUNTY
ROUTE 30 SECTION 23 &
ROUTE 430 SECTION 21

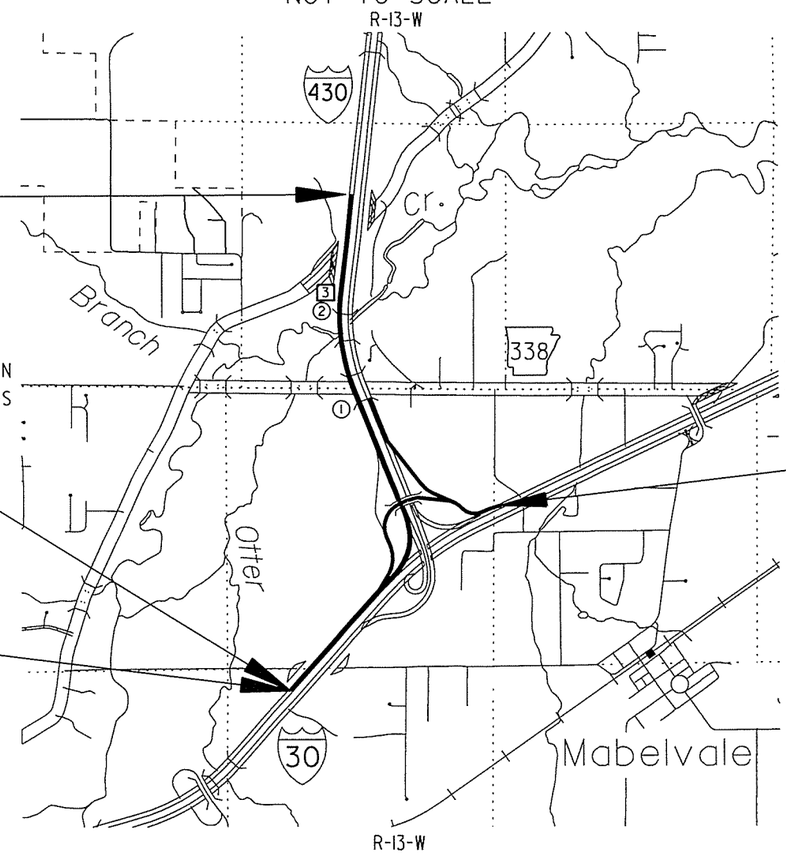
FEDERAL AID PROJ. CMF-EBS-NHPP-430-2(268)0

JOB 061437



VICINITY MAP — PROJECT LOCATION

NOT TO SCALE



STA. 167+68.88
END JOB 06437
I-430 SB.
(LOG MILE 1.33)

STA. 154+73.57
BEGIN JOB 061437
I-30
(LOG MILE 128.37)

STA. 86+68.22
BEGIN FRONTAGE ROAD
(LOG MILE 128.37)

STA. 158+49.05
END FRONTAGE ROAD

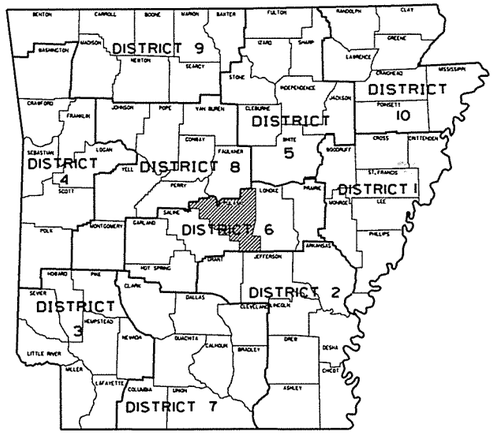
BRIDGE DATA

① BRIDGE OVER S.H. 338
207'-5 11/16" BRIDGE LENGTH
STA. 133+45.32 BR. END
59'-6" CLEAR ROADWAY
205'-10 1/2" CONT. COMP. PLATE GIRDER UNIT (56'-0", 93'-8 7/16", 55'-4 15/16")
BR. NO. B5306
STA. 135+52.79 BR. END

② BRIDGE OVER FOURCHE CREEK
377'-8 1/2" BRIDGE LENGTH
STA. 145+31.65 BR. END
59'-6" CLEAR ROADWAY
335'-0" 5 - COMPOSITE W-BEAM SPANS (67'-0", 67'-0", 67'-0", 67'-0", 67'-0")
BR. NO. B5307
STA. 148+69.35 BR. END

STRUCTURES OVER 20'-0" SPAN

[3] STA. 157+86 - IN PLACE
TRI. 6' X 4' X 186' R.C. BOX CULV'T.
(15° LT. FWD. SKEW)
RETAIN AND EXTEND
20' LT. TO A COMPLETED LENGTH OF 206'
SPAN = 20'-4"
050 = 520 C.F.S. D.A. = 164 ACRES



ARK. HWY. DIST. NO. 6

DESIGN TRAFFIC DATA

	I-430	I-30 N. FRONTAGE RD.
DESIGN YEAR	2035	2035
2015 ADT	63,000	5,700
2035 ADT	85,500	7,800
2035 DHV	9405	858
DIRECTIONAL DISTRIBUTION	0.60	0.60
TRUCKS	7%	11%
DESIGN SPEED	70 MPH	40 MPH

BEGIN PROJECT	MID-POINT OF PROJECT	END PROJECT
LATITUDE = N 34°39'10" LONGITUDE = W 92°24'47"	LATITUDE = N 34°39'55" LONGITUDE = W 92°24'14"	LATITUDE = N 34°40'48" LONGITUDE = W 92°24'23"

NO LENGTH INVOLVED

GROSS LENGTH OF	PROJECT	0000.00	FEET OR	0.000	MILES
NET "	" ROADWAY	0000.00	"	0.000	"
NET "	" BRIDGES	0000.00	"	0.000	"
NET "	" PROJECT	0000.00	"	0.000	"

P.E. 060657
NON-PART.

APPROVED

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7836
M.E. BANKS

9-31-15

DEPUTY DIRECTOR
AND CHIEF ENGINEER

8/28/2015

R061437.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-21-15				6	ARK.			
				JOB NO.		061437	2	372

(2) INDEX OF SHEETS

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-27-15

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

10/7/2015

R061437.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
10-21-15				6	ARK.			
				JOB NO.		061437	3	372

(2) GOVERNING SPECS. AND GENERAL NOTES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
10-27-15

GOVERNING SPECIFICATIONS

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

NUMBER	TITLE
ERRATA____	ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__	REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__	SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__	SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__	SUPPLEMENT - TRAINING PROGRAM - JOB 061437
FHWA-1273__	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__	SUPPLEMENT - WAGE RATE DETERMINATION
108-1_____	LIQUIDATED DAMAGES
400-1_____	TACK COATS
410-1_____	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1_____	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
606-1_____	PIPE CULVERTS FOR SIDE DRAINS
620-1_____	MULCH COVER
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JOB 061437__	AUTOMATED WORK ZONE INFORMATION SYSTEM
JOB 061437__	BIDDING REQUIREMENTS AND CONDITIONS
JOB 061437__	BRIDGE DECK SURFACE FINISH
JOB 061437__	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 061437__	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB 061437__	CLEANING AND PAINTING EXISTING BEARINGS
JOB 061437__	CONCRETE DITCH PAVING
JOB 061437__	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB 061437__	CONTAINMENT SYSTEM
JOB 061437__	CONTRACTOR CERTIFICATION
JOB 061437__	COORDINATION OF WORK
JOB 061437__	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB 061437__	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB 061437__	DRILLED SHAFT FOUNDATIONS
JOB 061437__	EXTENSION FOR PIPE CULVERTS
JOB 061437__	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 061437__	HIGH PERFORMANCE PAVEMENT MARKING
JOB 061437__	MAINTENANCE OF TRAFFIC
JOB 061437__	MANDATORY ELECTRONIC CONTRACT
JOB 061437__	NESTING SITES OF MIGRATORY BIRDS
JOB 061437__	NONDESTRUCTIVE TESTING OF DRILLED SHAFTS
JOB 061437__	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORT
JOB 061437__	PARTNERING REQUIREMENTS
JOB 061437__	PAINT CONTRACTOR LABEL
JOB 061437__	PIPE CULVERTS
JOB 061437__	PLASTIC PIPE
JOB 061437__	PROSECUTION AND PROGRESS - CALENDAR DAY CONTRACT WITH CPM
JOB 061437__	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE
JOB 061437__	RESTRAINING CONDITION
JOB 061437__	SECTION 404 NATIONWIDE 14 PERMIT REQUIREMENTS
JOB 061437__	SHORING
JOB 061437__	SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT
JOB 061437__	SPECIAL SAFETY REQUIREMENTS FOR BRIDGES
JOB 061437__	SPECIAL SAFETY REQUIREMENTS FOR OVERHEAD SIGNS
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JOB 061437__	STORM WATER POLLUTION PREVENTION PLAN
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JOB 061437__	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB 061437__	UTILITY ADJUSTMENTS
JOB 061437__	VALUE ENGINEERING
JOB 061437__	VERY EARLY STRENGTH CONCRETE
JOB 061437__	WARM MIX ASPHALT
JOB 061437__	WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
5. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
6. 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.
7. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
8. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

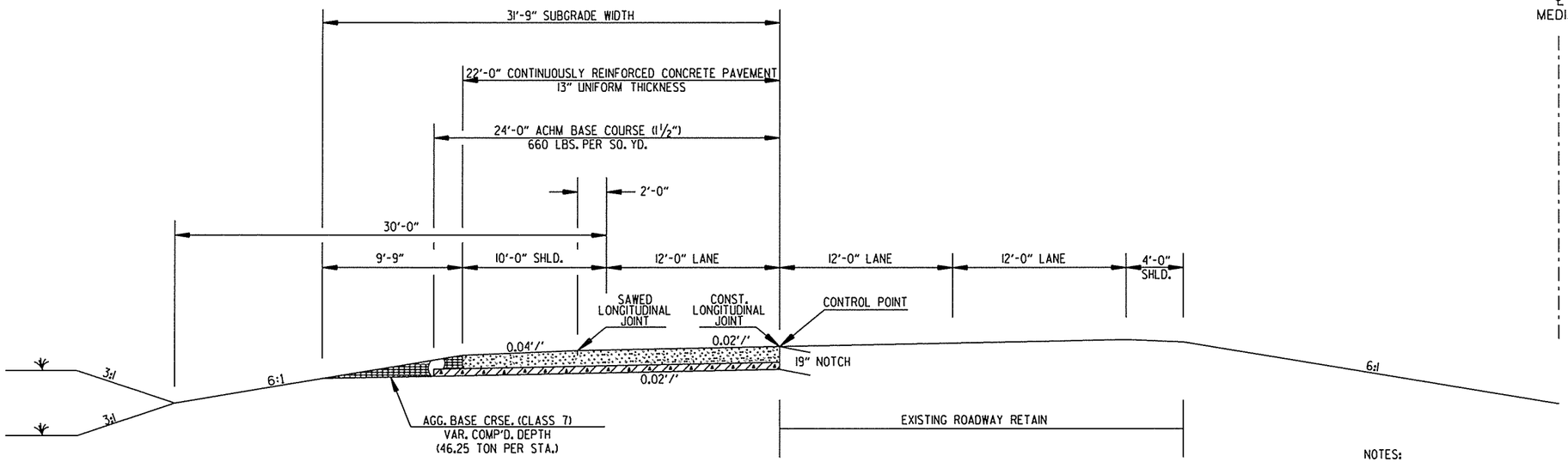
10/7/2015

R061437.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.		061437	4	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

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

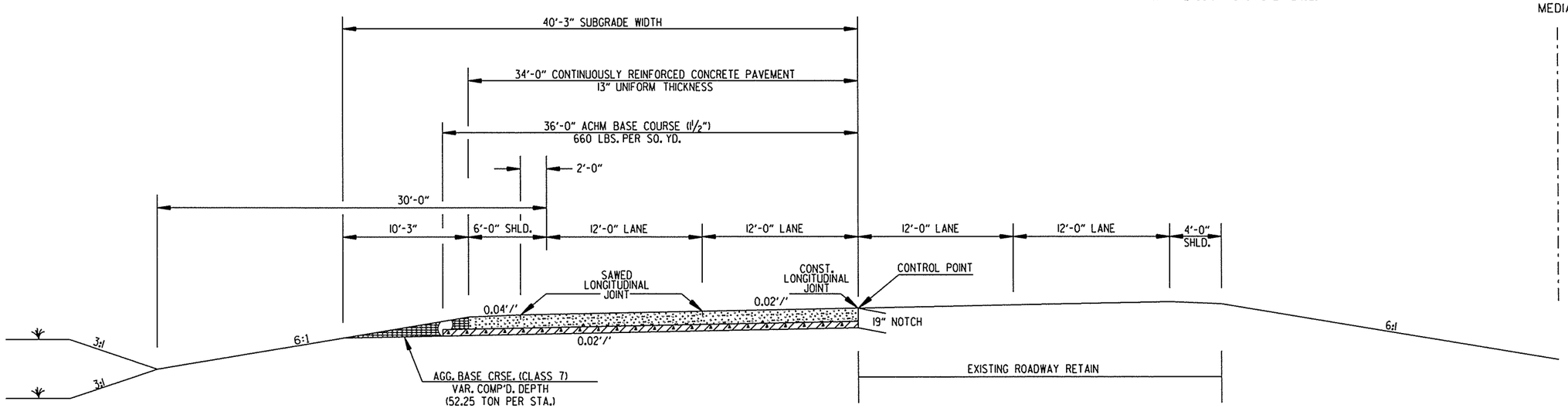


I-430 SOUTHBOUND LANES
STA. 107+68.67 TO STA. 118+40.76
STA. 151+42.48 TO STA. 164+86.88

NOTES:

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I-430 AUXILIARY SOUTHBOUND LANES
STA. 127+00.00 TO STA. 133+23.31
STA. 135+95.91 TO STA. 144+70.30
STA. 148+73.62 TO STA. 151+42.48

TYPICAL SECTIONS OF IMPROVEMENT

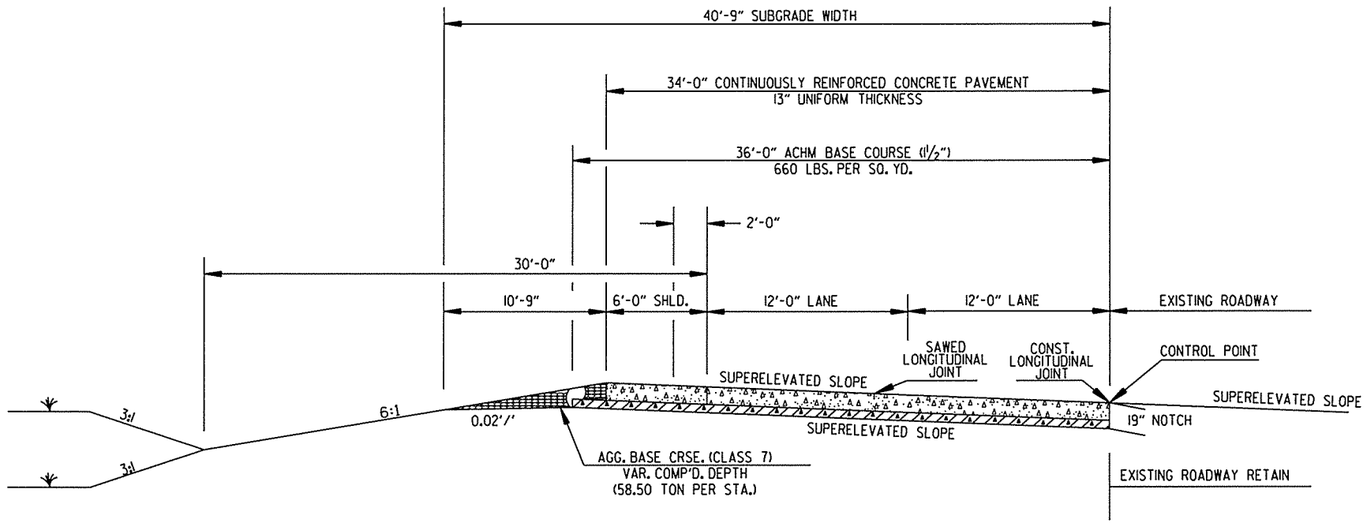
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R061437.DGN

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.		061437	5	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

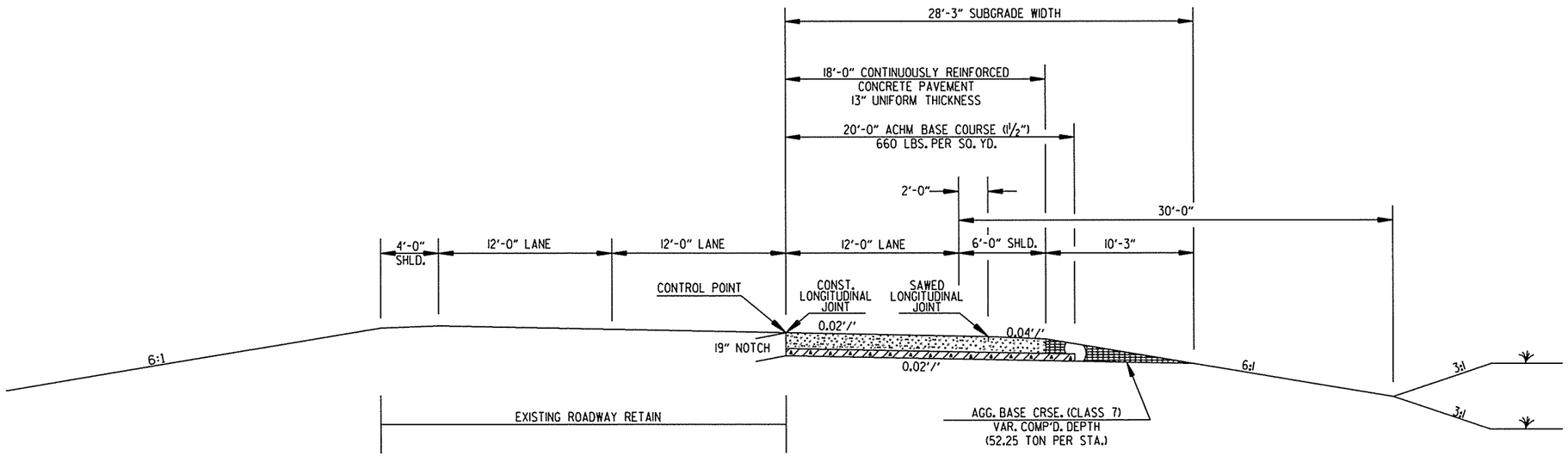


I-430 AUXILIARY SOUTHBOUND LANES
SUPERELEVATION

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I-430 NORTHBOUND LANES (ACCEL. LANE)
STA. 122+41.34 TO STA. 132+41.34

3/2/2015

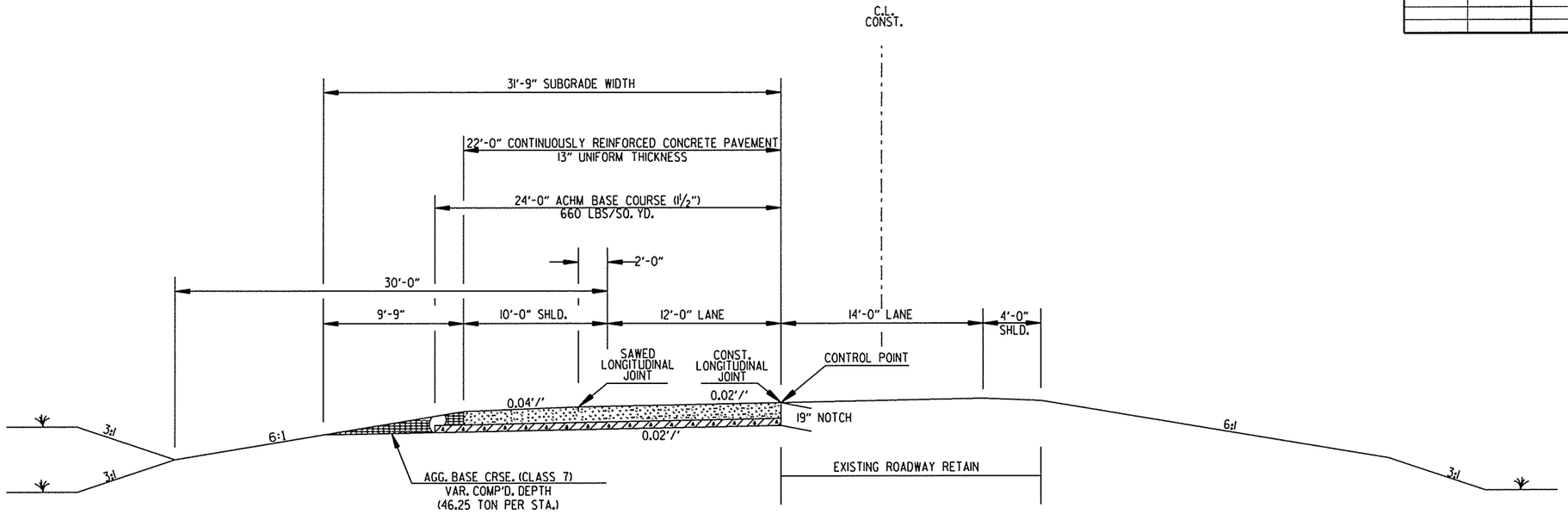
R061437.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.		061437	6	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

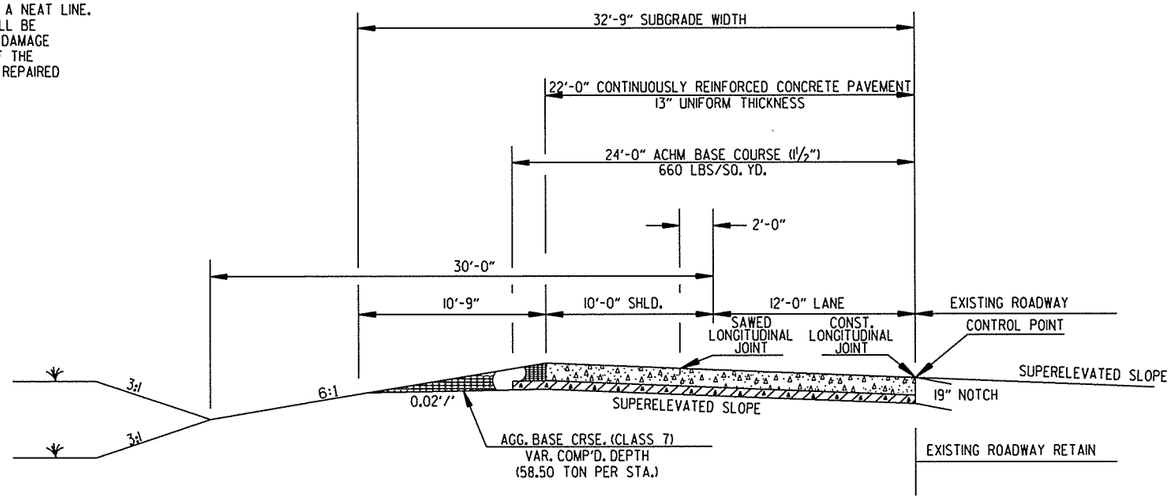


I-430 SOUTHBOUND TO I-30 WESTBOUND EXIT RAMP
STA. 93+86.87 TO STA. 107+68.67

NOTES:

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I-430 SOUTHBOUND TO I-30 WESTBOUND EXIT RAMP
SUPERELEVATION

TYPICAL SECTIONS OF IMPROVEMENT

3/2/2015

R061437.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11-19-15				6	ARK.			
				JOB NO.		061437	7	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
11-19-15

NOTES:

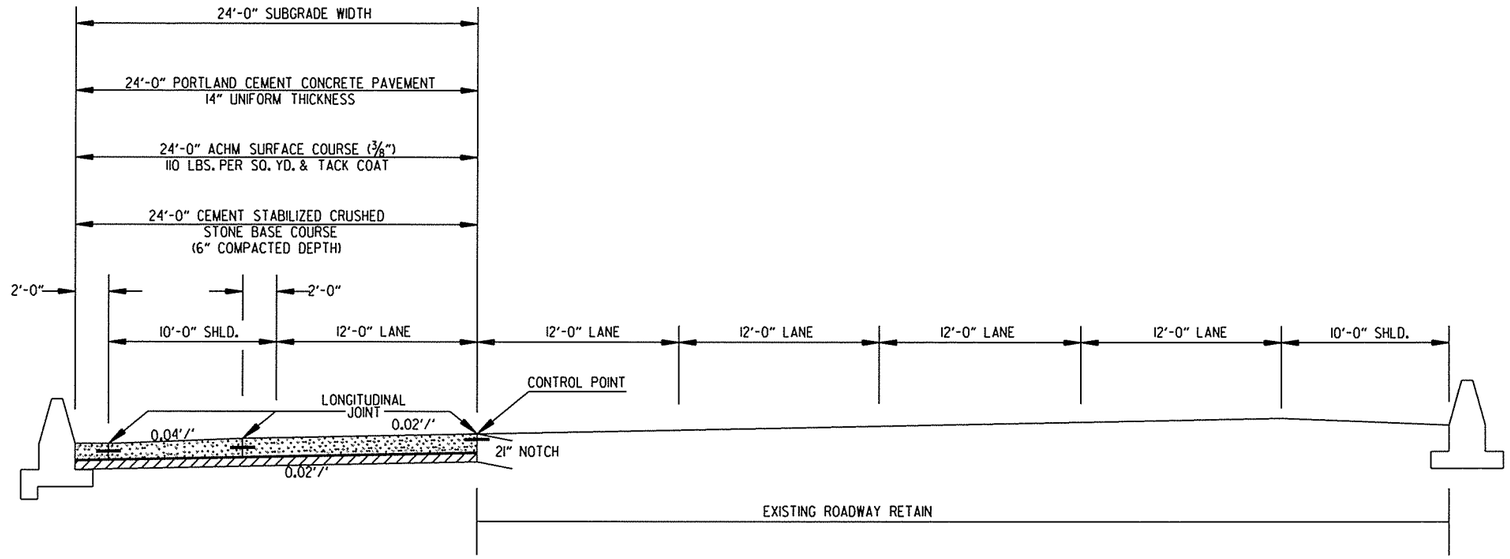
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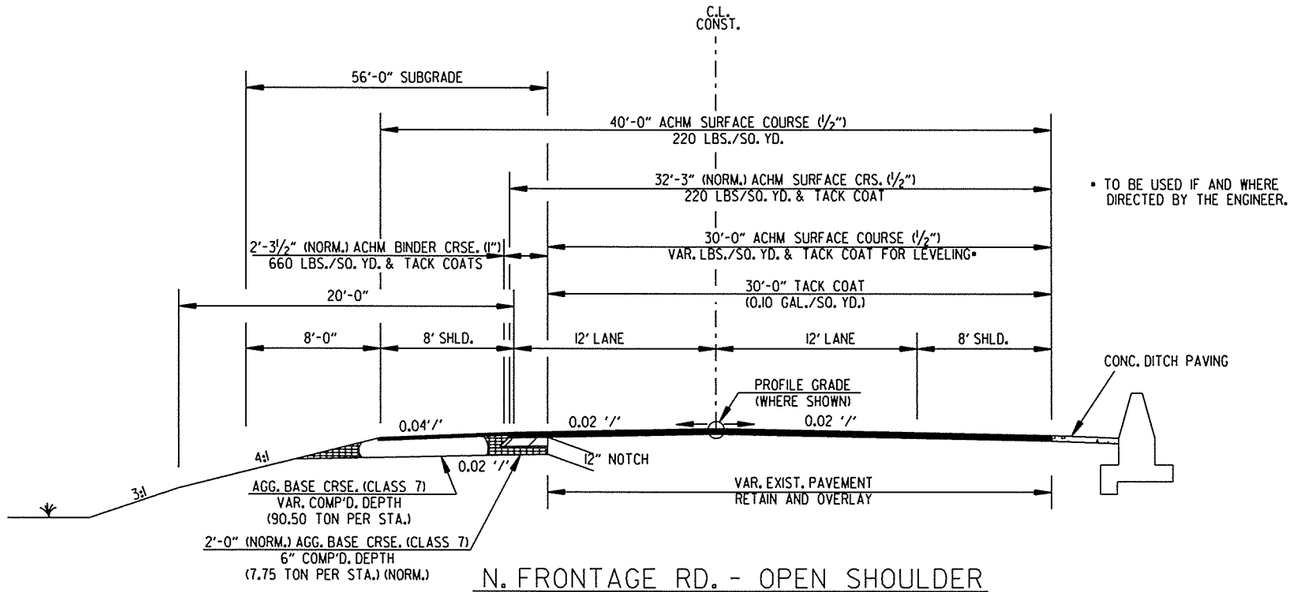
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I-30 WESTBOUND LANES (ACCEL. LANES)
STA. 154+73.42 TO STA. 192+25.15



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

N. FRONTAGE RD. - OPEN SHOULDER
STA. 86+68.22 TO STA. 95+98.33
STA. 96+72.24 TO STA. 97+59.06

11/13/2015

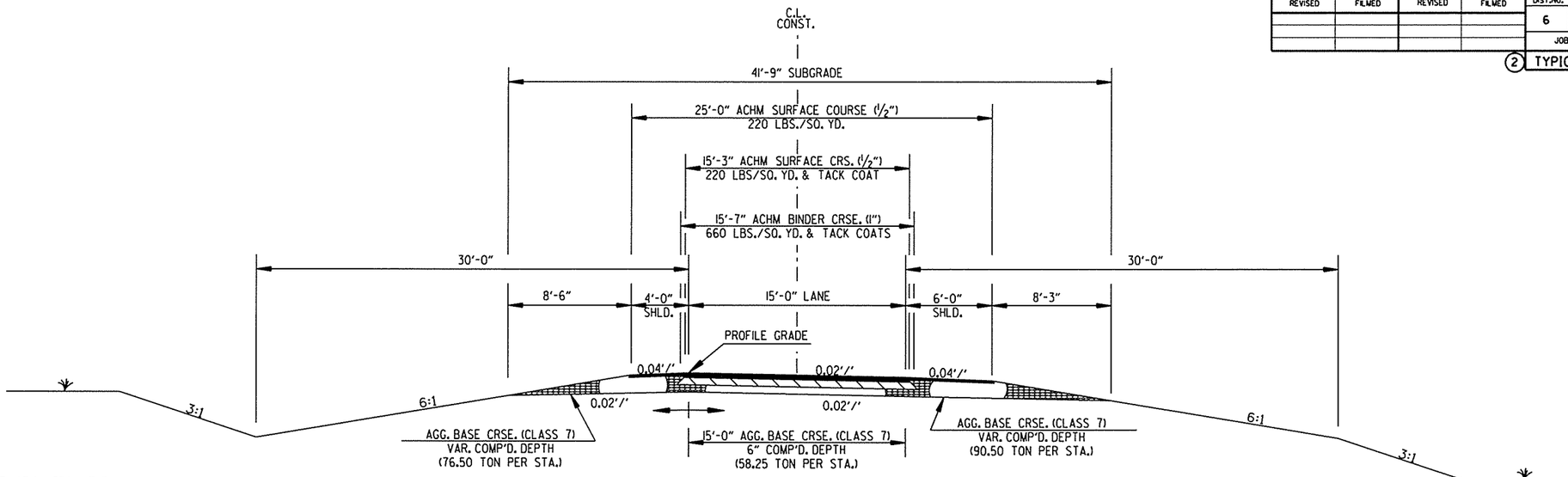
R061437.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
				JOB NO.		061437	8	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



I-430 S.B. ENTRANCE RAMP
I-430 N.B. ENTRANCE RAMP
(SHOWN IN THE DIRECTION OF TRAFFIC)

NOTES:

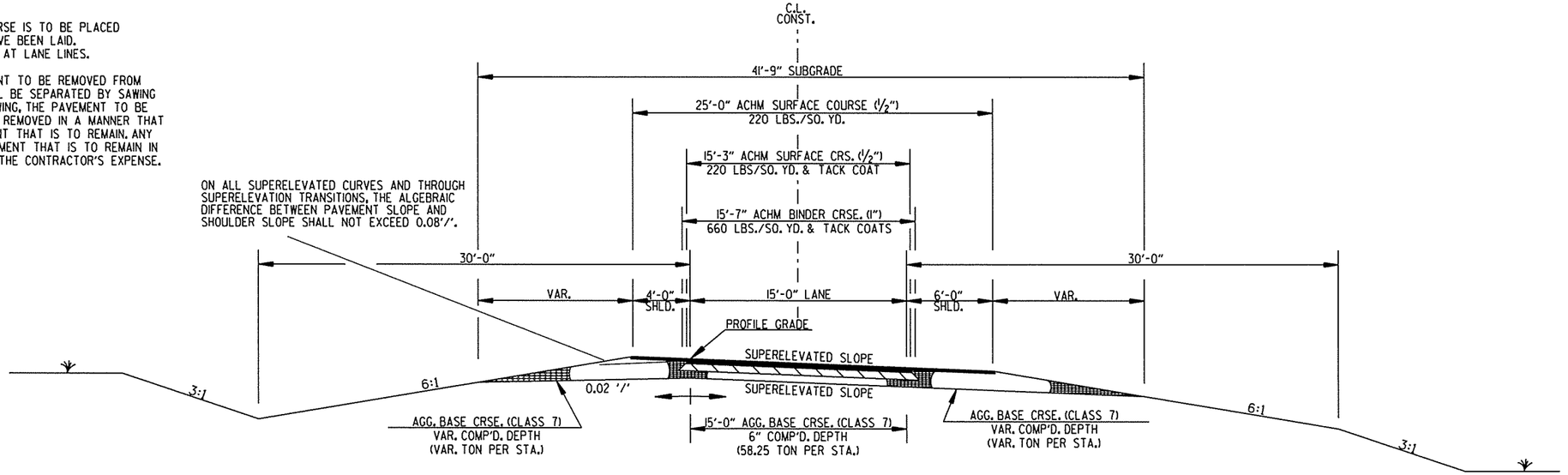
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I-430 S.B. ENTRANCE RAMP
I-430 N.B. ENTRANCE RAMP
SUPERELEVATION
(SHOWN IN THE DIRECTION OF TRAFFIC)

3/2/2015

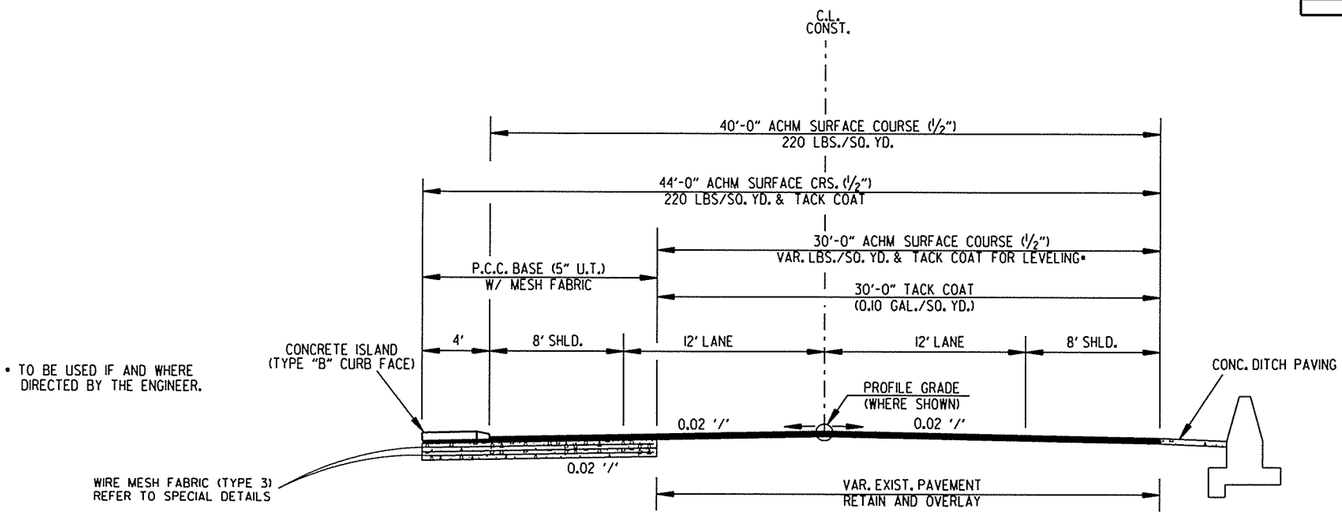
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TYPICAL SECTIONS OF IMPROVEMENT

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11-19-15				6	ARK.			
				JOB NO.		061437	9	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
11-19-15



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

N. FRONTAGE RD. - OTTER CREEK TURNOUT
STA. 95+98.33 TO STA. 96+72.24

NOTES:

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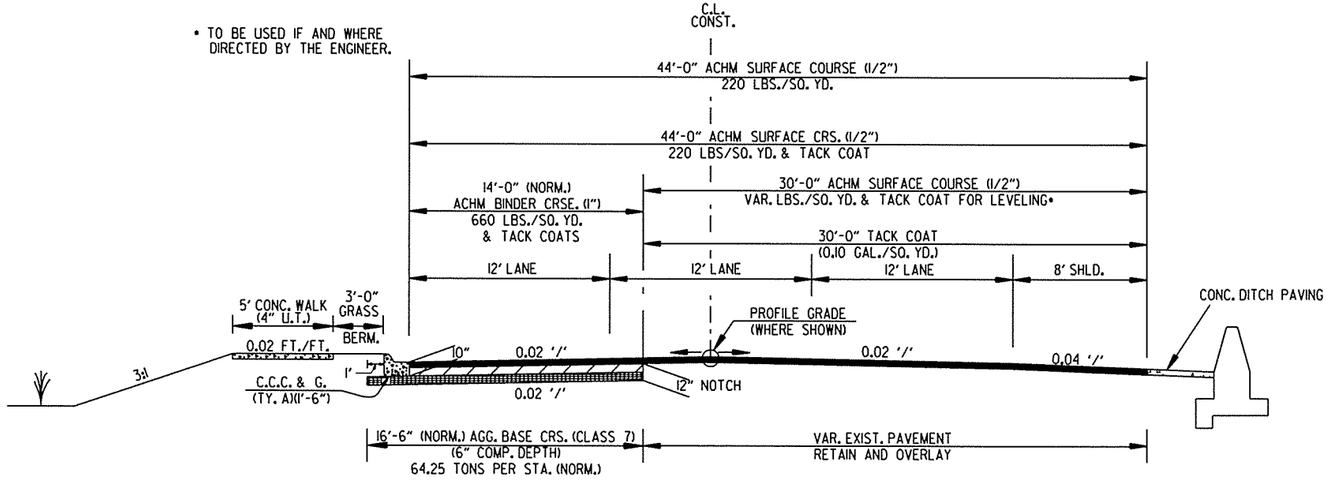
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TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE WALKS AT 45' INTERVALS.



N. FRONTAGE RD. - CURB & GUTTER
STA. 97+59.06 TO STA. 102+00

11/13/2015

R061437.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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11-19-15				6	ARK.			
				JOB NO.		061437	10	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
11-19-15

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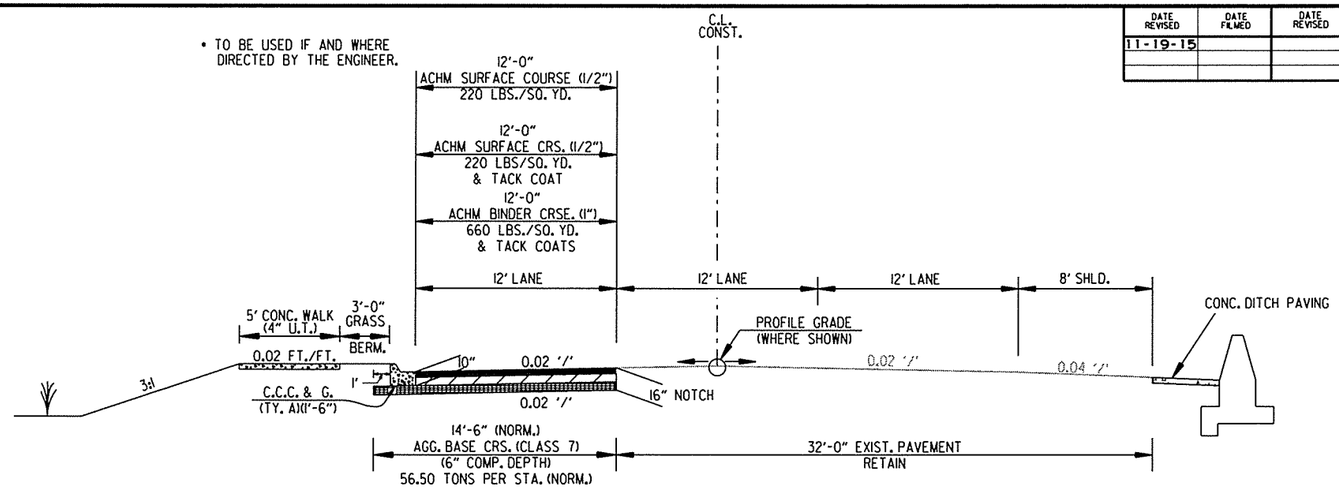
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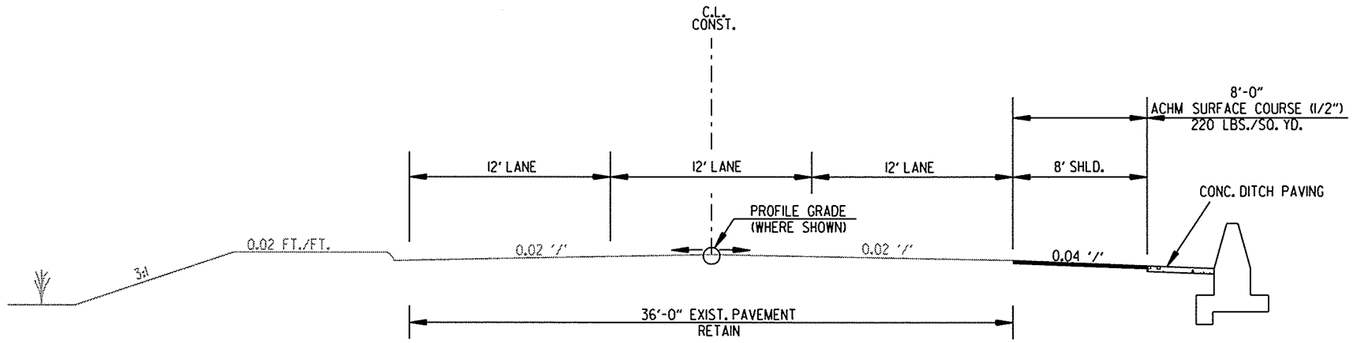
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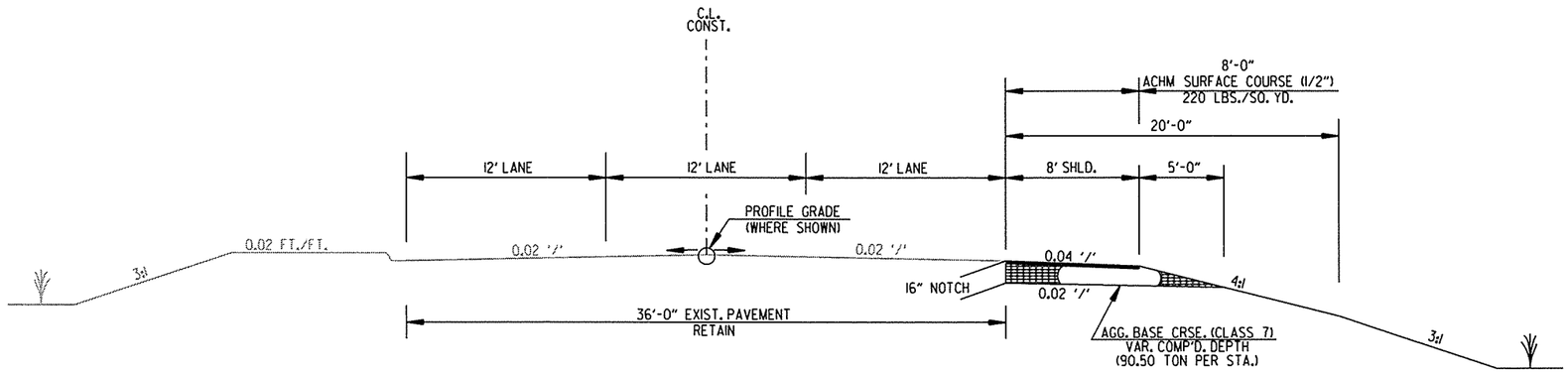


N. FRONTAGE RD. - CURB & GUTTER
STA. 102+00 TO STA. 111+00



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

N. FRONTAGE RD. - RT. SIDE
STA. 111+00 TO STA. 124+30.00



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

N. FRONTAGE RD. - CURB & GUTTER
STA. 124+30.00 TO STA. 133+03.48

11/13/2015

R061437.DGN

TYPICAL SECTIONS OF IMPROVEMENT

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(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

NOTES:

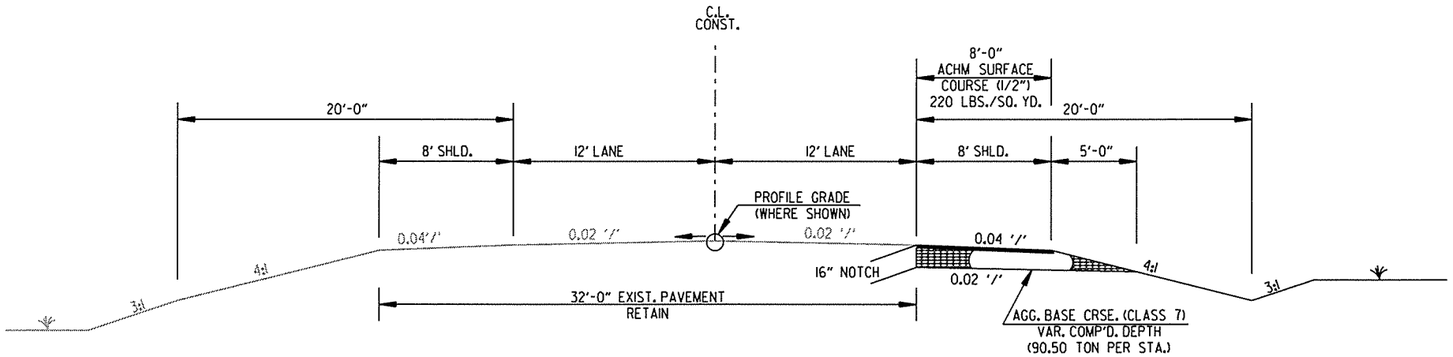
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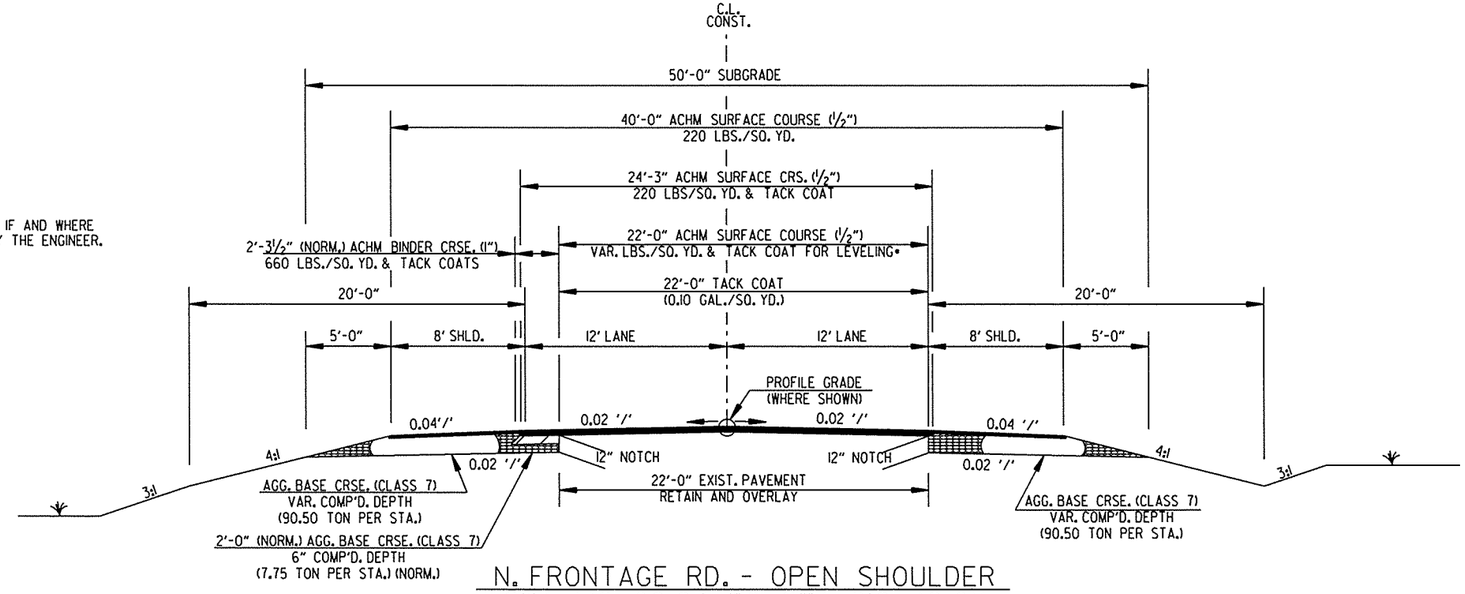
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N. FRONTAGE RD. - OPEN SHOULDER
STA. 133+03.48 TO STA. 134+34.56



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

N. FRONTAGE RD. - OPEN SHOULDER
STA. 142+08.83 TO STA. 158+49.05

3/2/2015

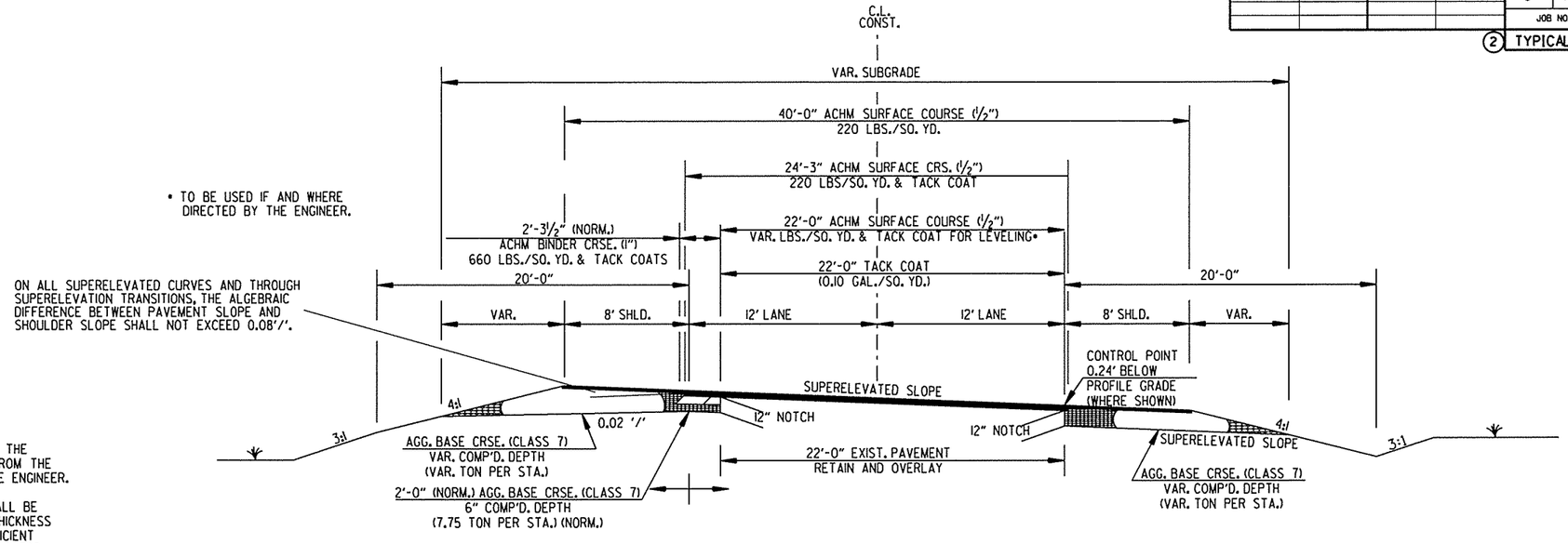
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				JOB NO.		061437	12	372

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



N. FRONTAGE RD. - OPEN SHOULDER SUPERELEVATION

NOTES:

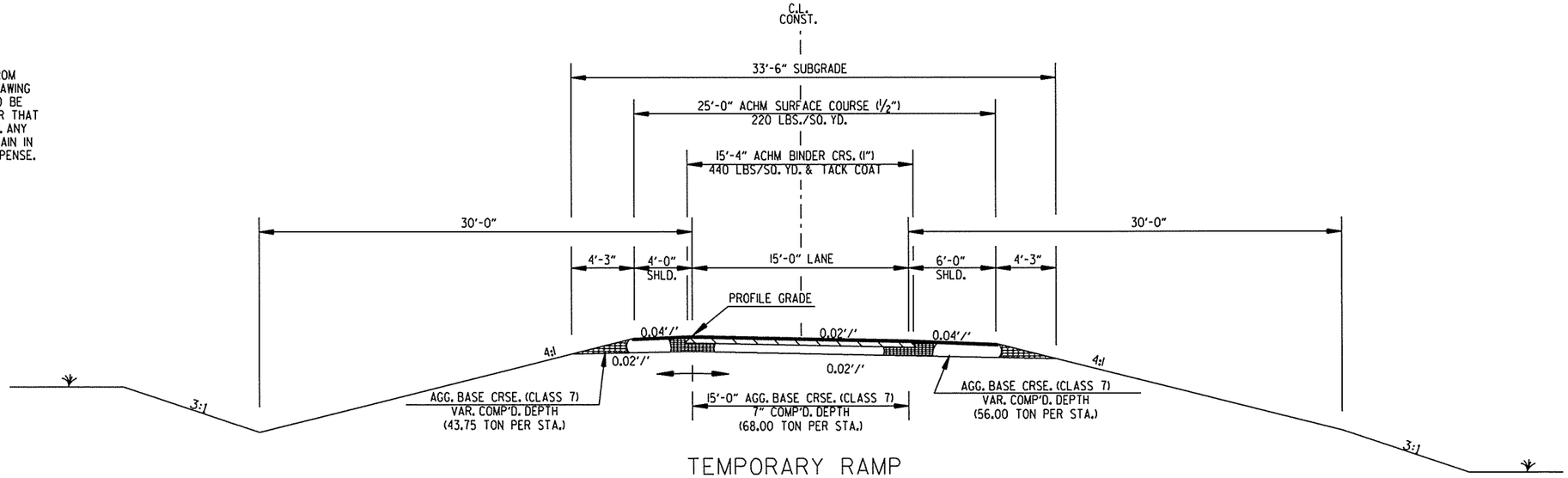
REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

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

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

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.



TEMPORARY RAMP
TYPICAL SECTION OF IMPROVEMENT
(SHOWN IN THE DIRECTION OF TRAFFIC)

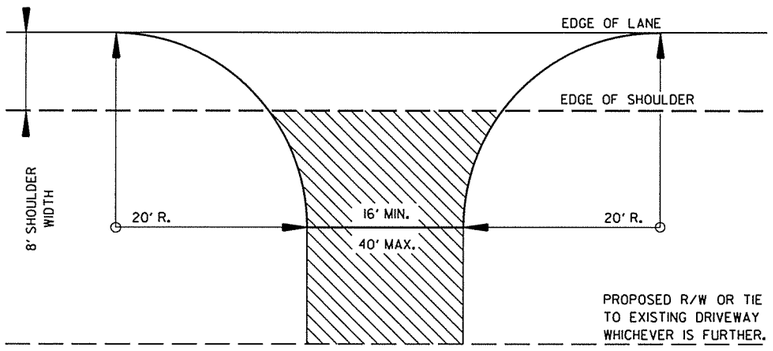
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TYPICAL SECTIONS OF IMPROVEMENT

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				6	ARK.			
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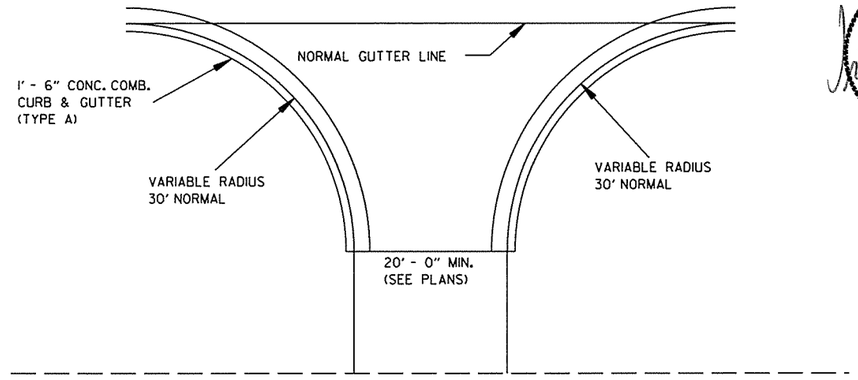
(2) SPECIAL DETAILS



ASPHALT CONCRETE HOT MIX SURFACE COURSE (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH IF ASPHALT DRIVE EXIST OR
6" CONCRETE IF CONCRETE DRIVE EXIST.

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

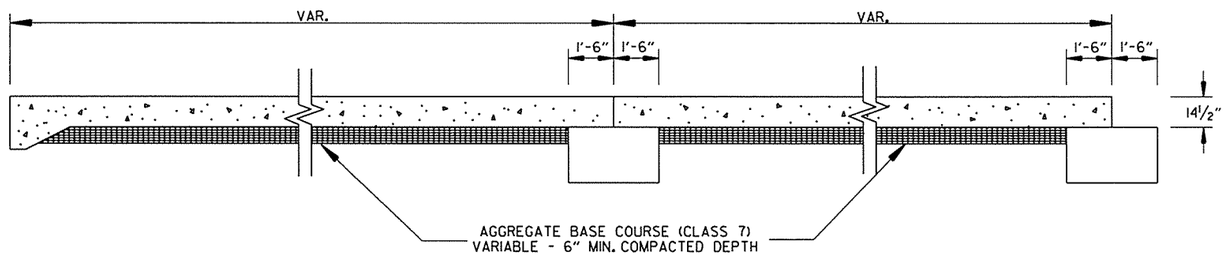
DETAIL FOR DRIVEWAY TURNOUTS



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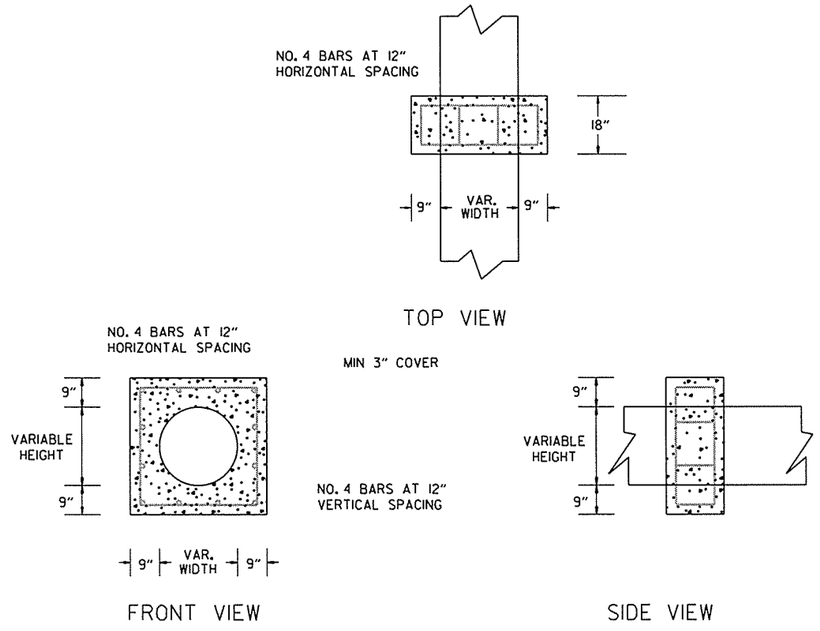
DETAIL FOR STREET TURNOUTS ASPHALT

NOTE:
PAVEMENT STRUCTURE TO BE SAME AS MAIN LANES.



DETAIL OF APPROACH SLAB

NOTE: REFER TO BRIDGE DRAWING 55855 FOR ADDITIONAL INFORMATION.



PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL

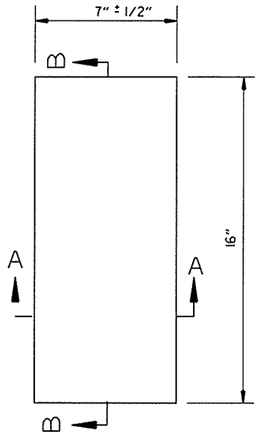
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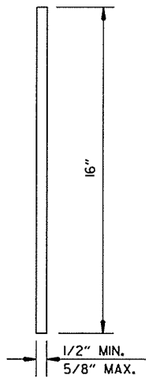
SPECIAL DETAILS

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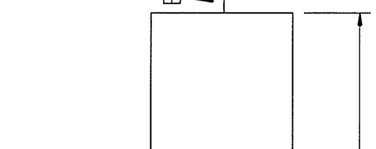
(2) SPECIAL DETAILS



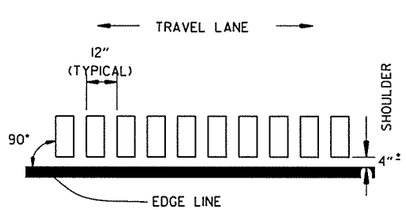
PLAN



SECTION B-B

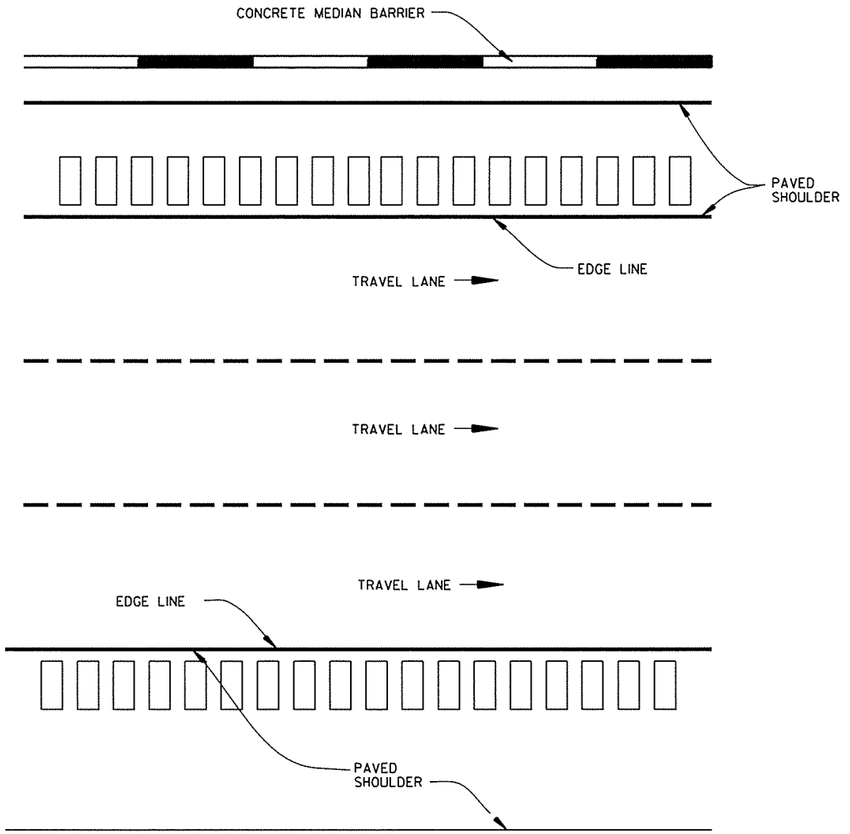


SECTION A-A



LOCATION PLAN OF RUMBLE STRIPS

LEFT SHOULDER



PLAN VIEW

DETAILS OF RUMBLE STRIPS

NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4" FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE AS WELL AS TO AVOID EXISTING LONGITUDINAL JOINTS.
2. THE 1/2" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.
3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLABS, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

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SPECIAL DETAILS

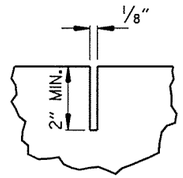
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(2) SPECIAL DETAILS

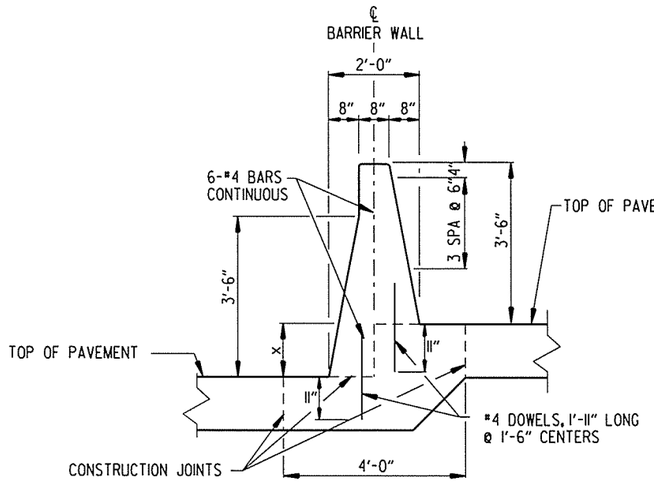
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GENERAL NOTES FOR CONCRETE BARRIER WALLS

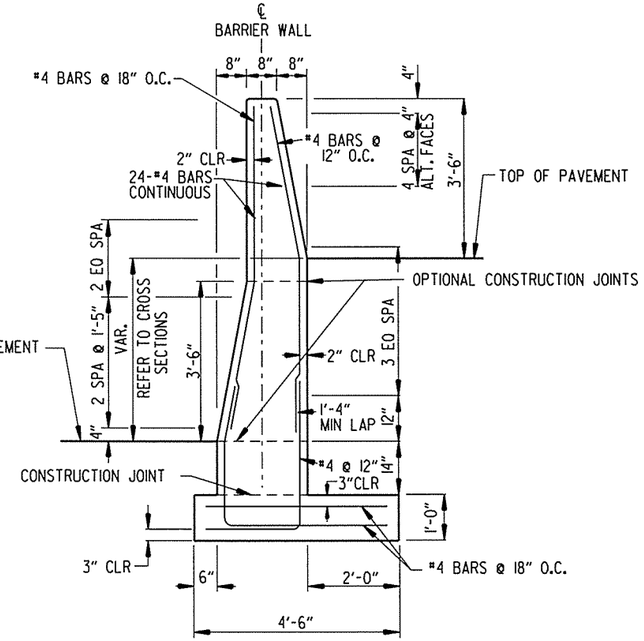
1. ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2014 EDITION.
2. CONTRACTION JOINTS REQUIRED @ 15'-0" MAXIMUM SPACING FOR BARRIER TYPES SIDE B. A 30'-0" MAXIMUM SPACING IS REQUIRED FOR TYPE SIDE C.
3. ALL CONTRACTION JOINTS TO BE FORMED IN FRESH CONCRETE ON TOP AND IN SIDES OF BARRIER WALL.
4. DOWEL BARS FOR BARRIER TYPES MEDIAN A & B WILL NOT BE REQUIRED IF BARRIER AND MINIMUM 4' WIDE BASE ARE CAST AS A COMPLETE UNIT.
5. ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A " CHAMFER.
6. THE DESIGN OF BARRIER WALL TYPES MEDIAN C IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF ONE TON PER SQUARE FOOT. UNSTABLE FOUNDATION MATERIAL SHALL BE REMOVED AND REPLACED TO PROVIDE A FIRM FOUNDATION AS DIRECTED BY THE ENGINEER.
7. SPACING BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 400 FT FOR BARRIER TYPES SIDE B OR 120 FT FOR BARRIER TYPES SIDE C. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. CONTINUOUS REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
8. DRAINAGE OPENINGS TO BE CONSTRUCTED EVERY 100' O.C. AND AT SAGS AND ADJACENT TO DROP INLETS. DOWEL BARS SHALL NOT BE PLACED WITHIN 3" OF DRAINAGE OPENINGS.



CONTRACTION JOINT DETAIL



CONCRETE BARRIER WALL
(MEDIAN TYPE B)
x = 0'-0" to 1'-0" MAX



CONCRETE BARRIER WALL
(MEDIAN TYPE C)

3/2/2015

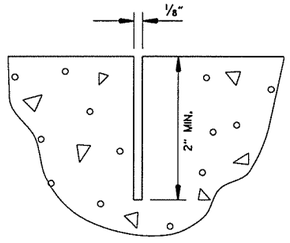
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SPECIAL DETAILS

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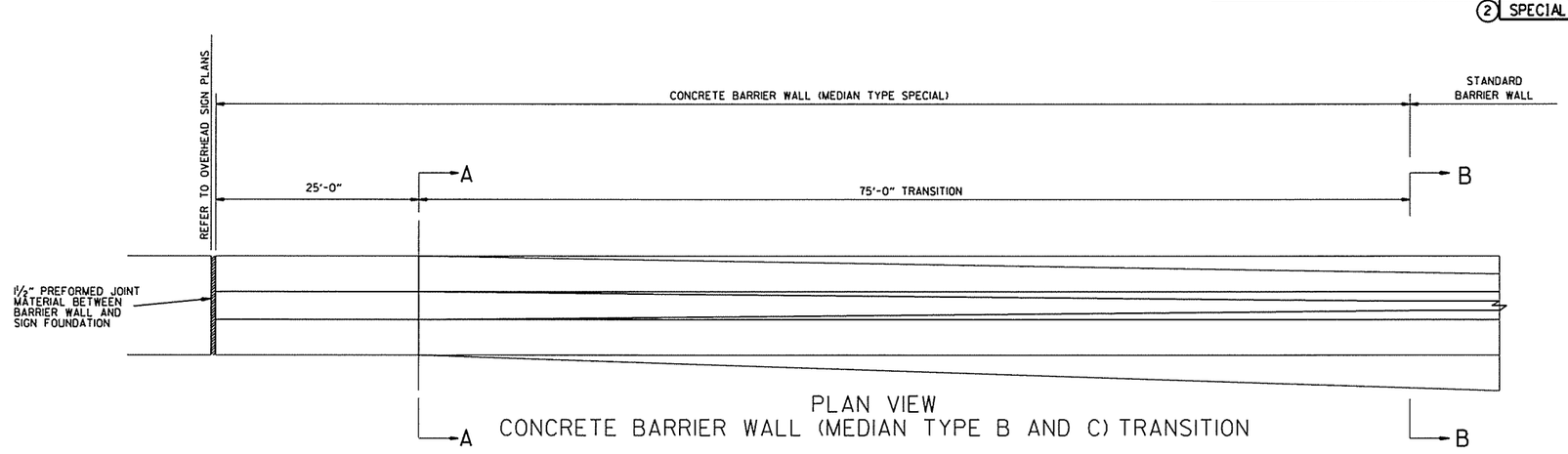
(2) SPECIAL DETAILS



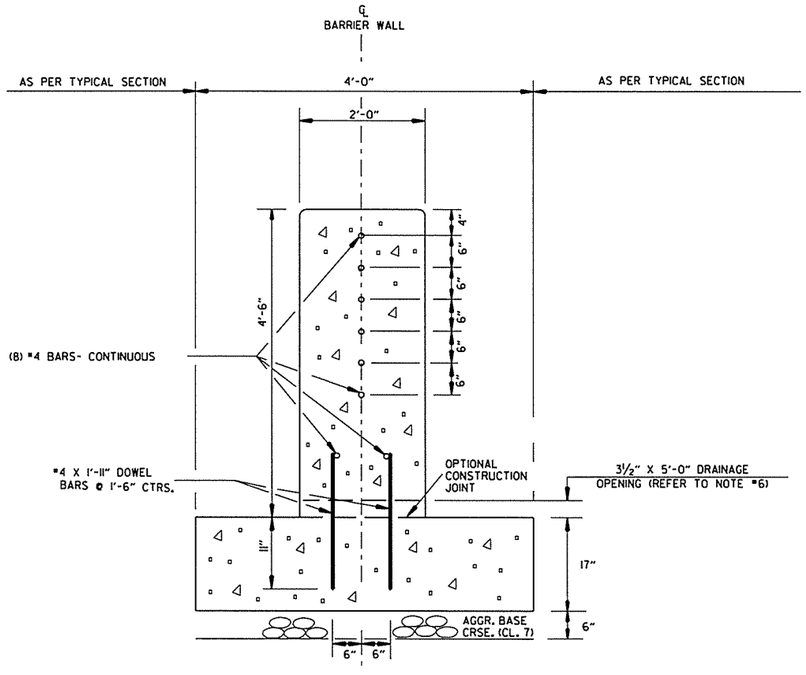


CONTRACTION JOINT DETAIL

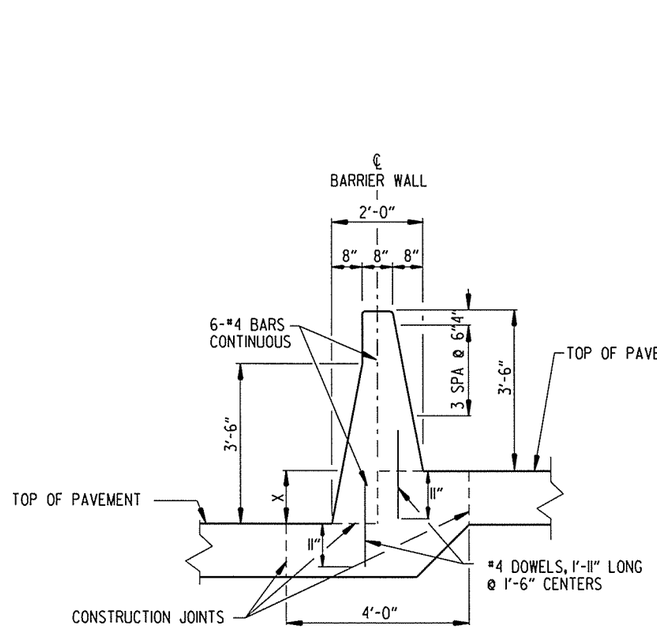
NOTES FOR MEDIAN BARRIER:
1. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
2. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
3. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
4. ALL REINFORCING BARS SHALL HAVE 2" MINIMUM COVER.
5. DOWEL BARS WILL NOT BE REQUIRED IF BARRIER AND BASE ARE CAST AS A COMPLETE UNIT.
6. DRAINAGE OPENINGS TO BE CONSTRUCTED ADJACENT TO DROP INLETS. DOWEL BARS SHALL NOT BE PLACED WITHIN 3" OF DRAINAGE OPENINGS.



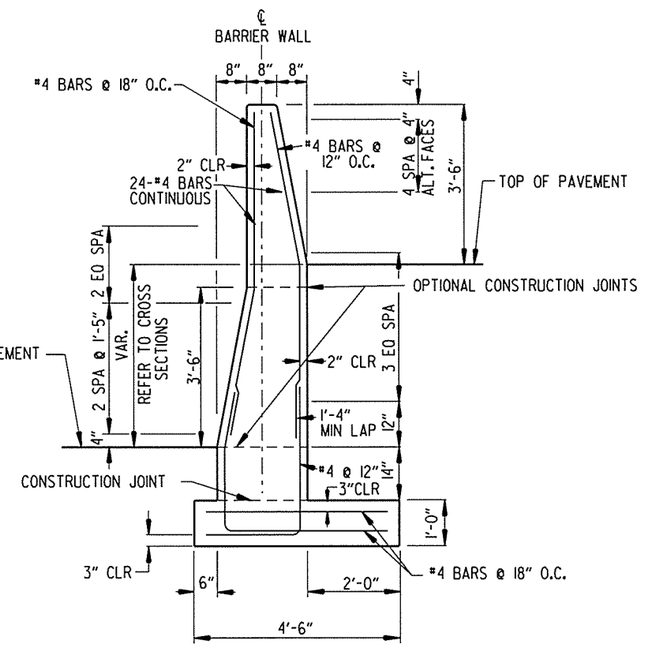
PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE B AND C) TRANSITION



CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)
(SECTION A-A)



CONCRETE BARRIER WALL
(MEDIAN TYPE B)
x = 0'-0" to 1'-0" MAX



CONCRETE BARRIER WALL
(MEDIAN TYPE C)

CONCRETE BARRIER WALL (MEDIAN TYPE C) TRANSITION
FOR OVERHEAD SIGN STRUCTURE

3/2/2015

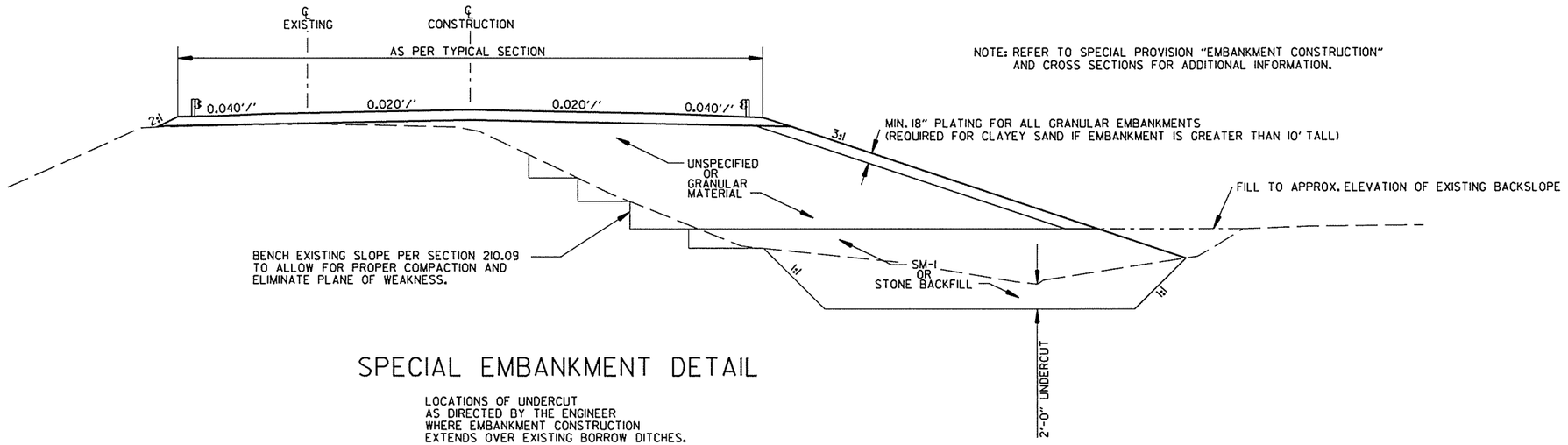
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SPECIAL DETAILS

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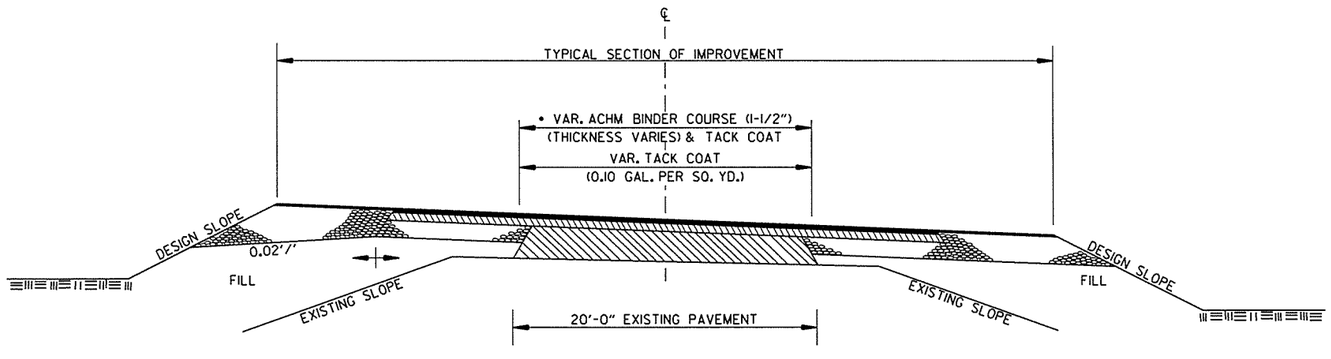
(2) SPECIAL DETAILS

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SPECIAL EMBANKMENT DETAIL

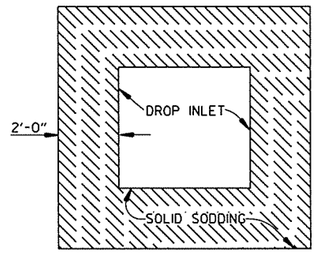
LOCATIONS OF UNDERCUT
AS DIRECTED BY THE ENGINEER
WHERE EMBANKMENT CONSTRUCTION
EXTENDS OVER EXISTING BORROW DITCHES.



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

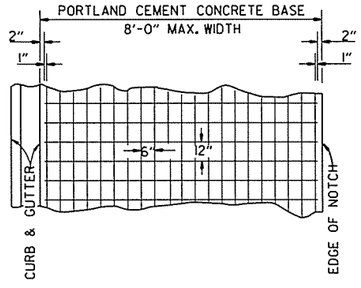
METHOD OF RAISING GRADE

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 2014.



PLAN

DETAIL OF SOLID SODDING AROUND DROP INLET



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

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

NOTES:

1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12".
3. MESH FABRIC (TYPE 3) WILL NOT BE PAID FOR DIRECTLY, BUT FULL COMPENSATION THEREFORE WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE BID PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (6" U.T.) & PORTLAND CEMENT CONCRETE BASE (6½" U.T.).

3/2/2015

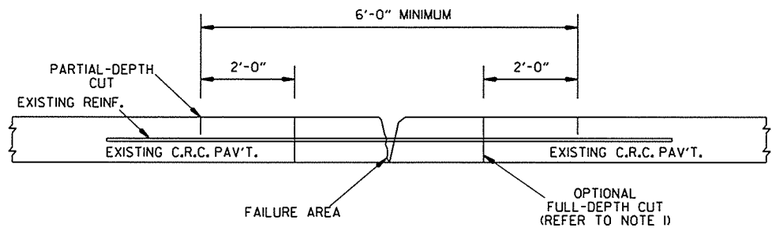
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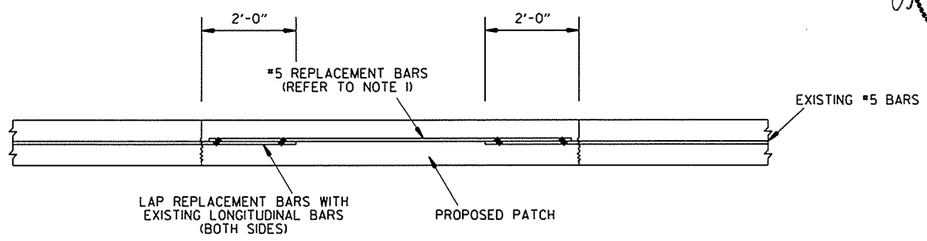
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				JOB NO.		061437	18	372

(2) SPECIAL DETAILS

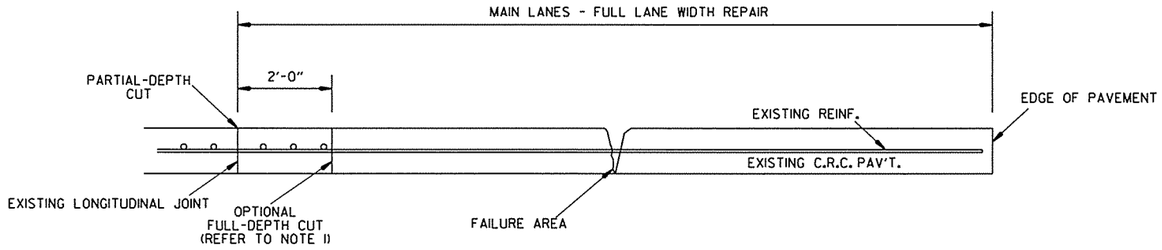
STATE OF ARKANSAS
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3-10-15



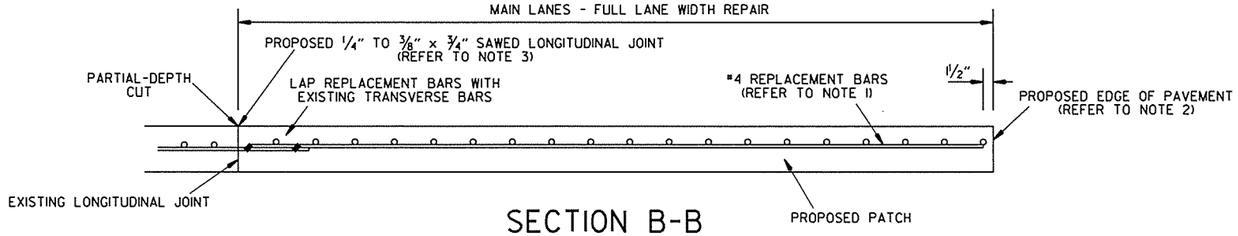
SECTION A-A
DETAIL SHOWING REMOVAL OF
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT FOR PATCHING



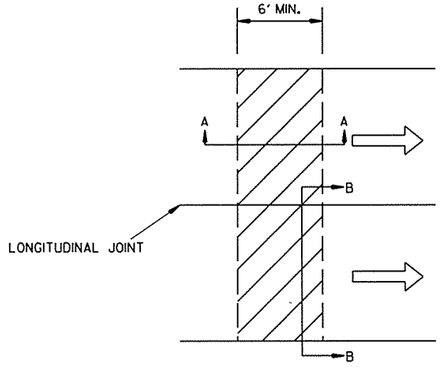
SECTION A-A
DETAIL SHOWING STEEL IN CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT PATCHING



SECTION B-B
DETAIL SHOWING REMOVAL OF
CONTINUOUSLY REINFORCED CONCRETE PAVEMENT FOR PATCHING



SECTION B-B
DETAIL SHOWING STEEL IN CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT PATCHING



PLAN OF PAVEMENT REPAIR
MAIN LANES

DETAILS OF CONTINUOUSLY REINFORCED
CONCRETE PAVEMENT PATCHING

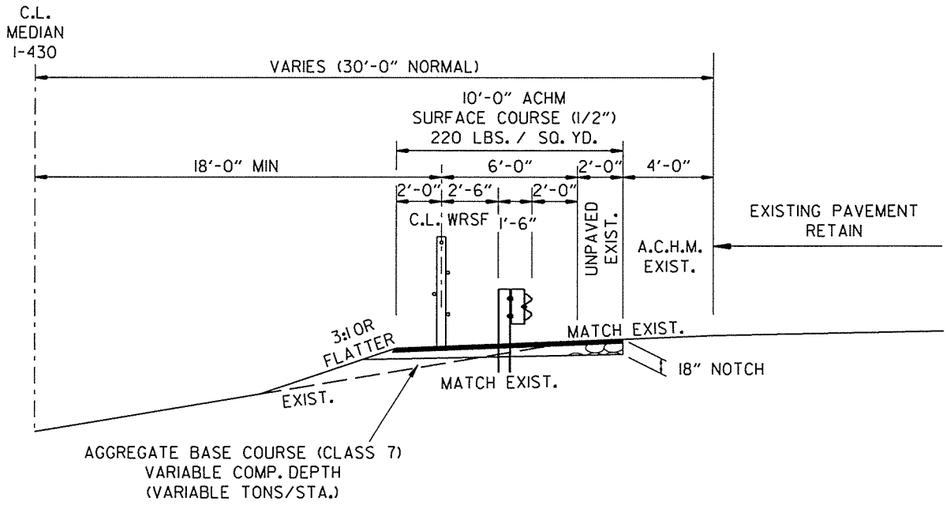
NOTE:
1. THE CONTRACTOR SHALL HAVE THE OPTION: (1) TO CONSTRUCT A FULL-DEPTH CUT 2'-0" INSIDE THE BOUNDARY OF THE PATCH AND PROVIDE REPLACEMENT BARS, (2) CONSTRUCT A PARTIAL CUT AND UTILIZE THE EXISTING REINFORCEMENT, OR (3) CONSTRUCT A FULL-DEPTH CUT AT THE BOUNDARY OF THE PATCH AND INSTALL #5 X 32" TIE BARS, EMBEDDED 8" IN THE EXISTING PAVEMENT AND EPOXIED ACCORDING TO SECTION 507 OF THE STANDARD SPECIFICATIONS. THESE TIE BARS SHALL BE LAPPED WITH THE REPLACEMENT BARS AS SHOWN IN SECTION A-A. OPTION 3 MAY BE USED ONLY IF THE ENGINEER DETERMINES THAT THIS METHOD IS ACHIEVING ACCEPTABLE RESULTS.
2. ANY DAMAGE TO, OR LOSS OF, EXISTING SHOULDER MATERIAL DURING PAVEMENT PATCHING SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE PRIOR TO REOPENING THE PATCHED LANE TO TRAFFIC.
3. SPACING OF EXISTING REINFORCEMENT IS NOMINAL 30" FOR TRANSVERSE BARS AND 6" FOR LONGITUDINAL BARS. SPACING OF ADDITIONAL REINFORCEMENT SHALL BE ADJUSTED AS NECESSARY TO MATCH LOCATION OF EXISTING REINFORCEMENT.

3/2/2015

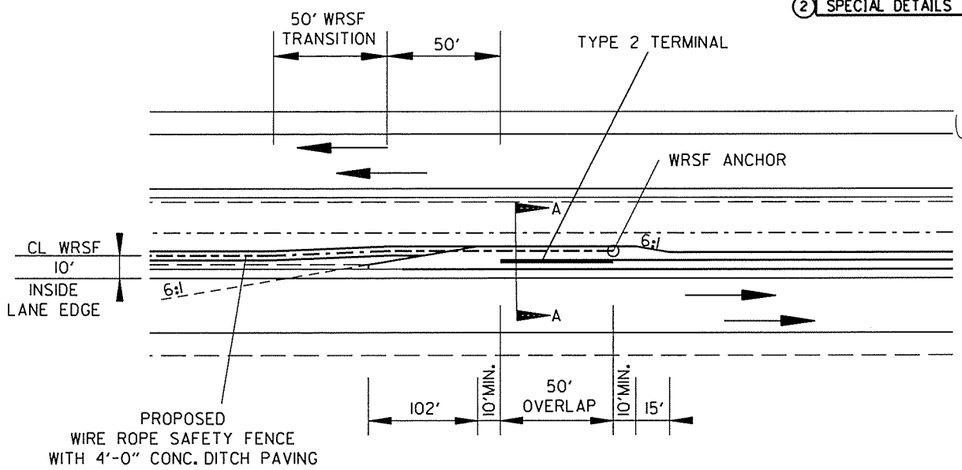
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(2) SPECIAL DETAILS

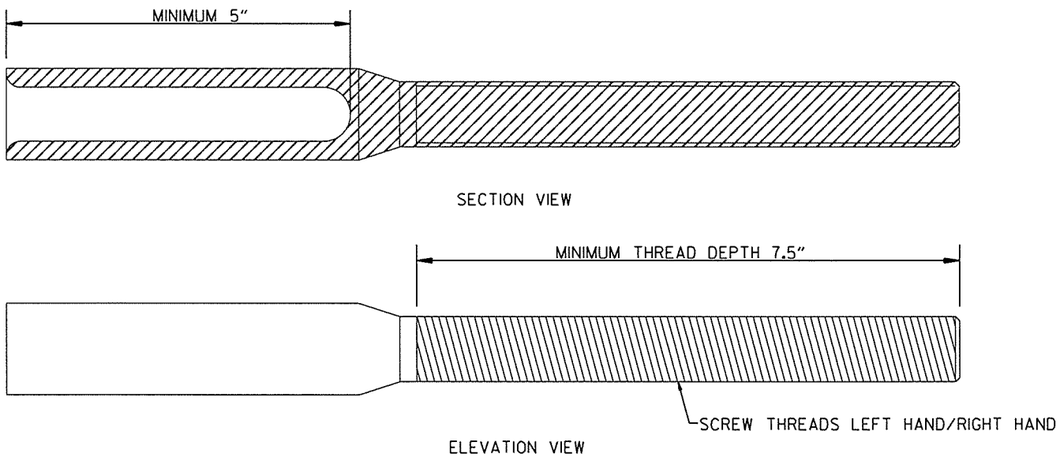


SECTION A-A



WRSF AND GUARDRAIL APPROACH
FOR OVERPASS

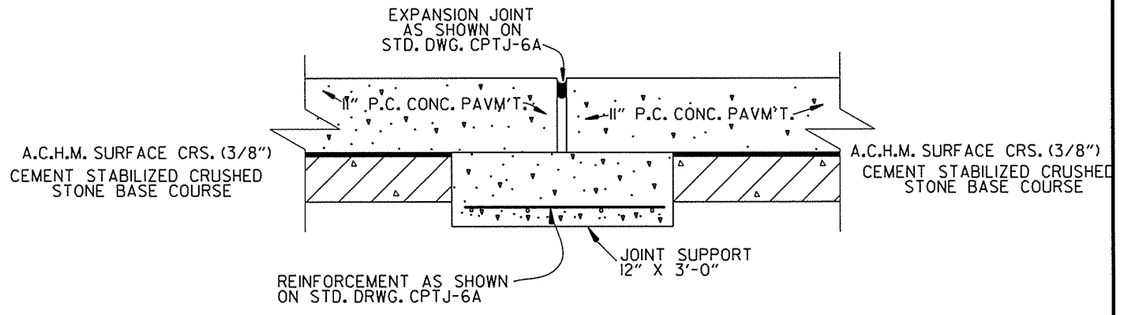
DETAILS OF SHOULDER WIDENING FOR GUARDRAIL AND OVERLAPS WITH ENDS OF WIRE ROPE SAFETY FENCE



NOTE:

REFER TO "WIRE ROPE SAFETY FENCE (WRSF) SPECIFICATIONS" SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

THREADED TERMINAL DETAIL



DETAILS OF JOINT SUPPORT

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No. 11425
TRINITY D. SMITH
3-10-15

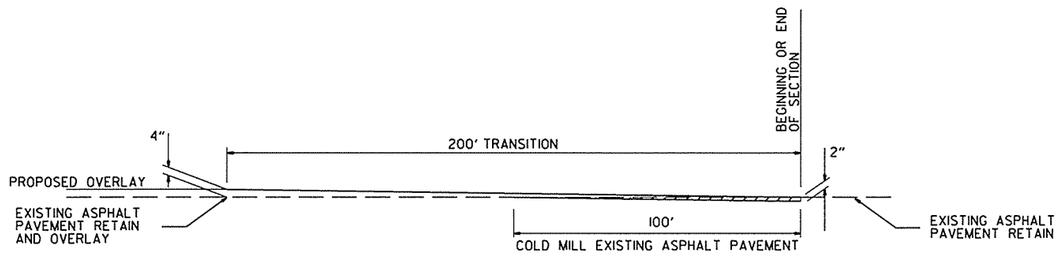
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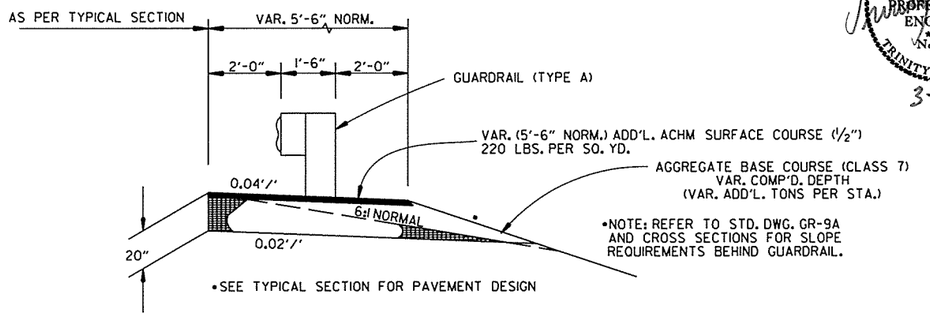
SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	20	372

(2) SPECIAL DETAILS

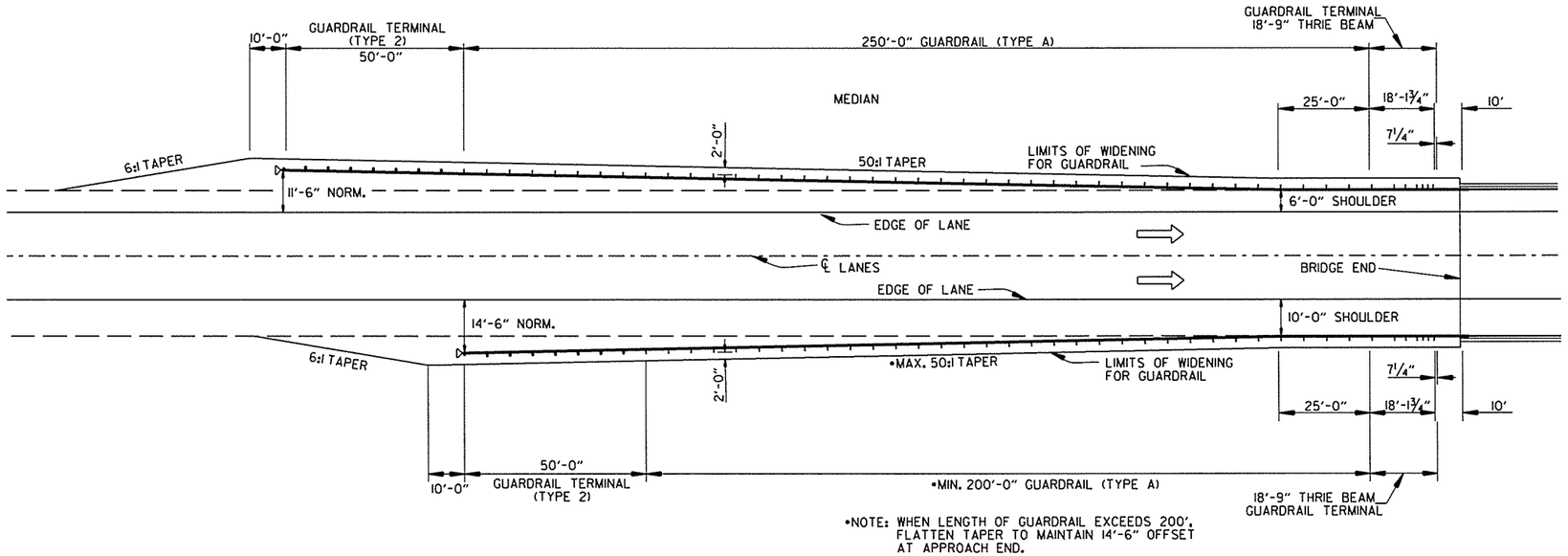


DETAIL FOR TRANSITIONS



WIDENING FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS, GR-8, GR-8A, GR-9, GR-9A, GR-10 & GR-10A FOR ADDITIONAL INFORMATION.



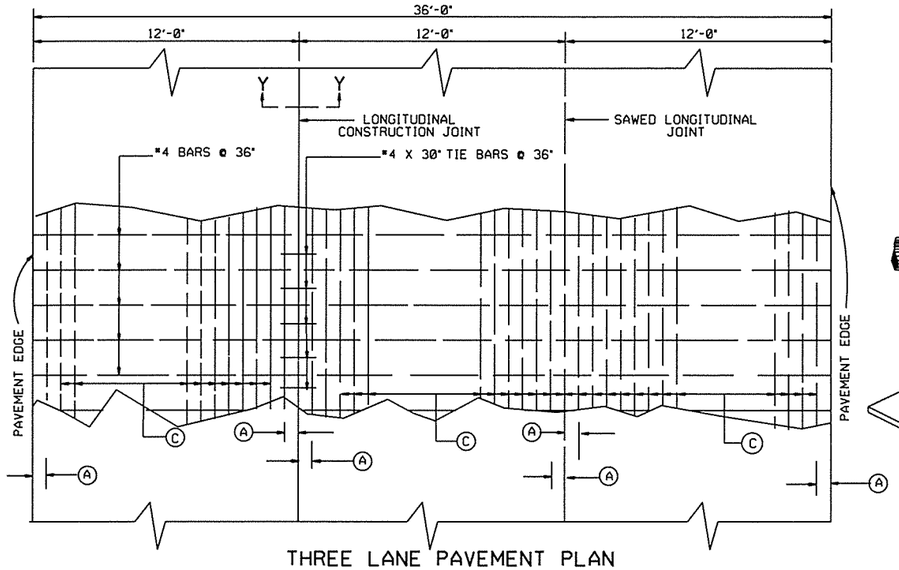
TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS

3/2/2015

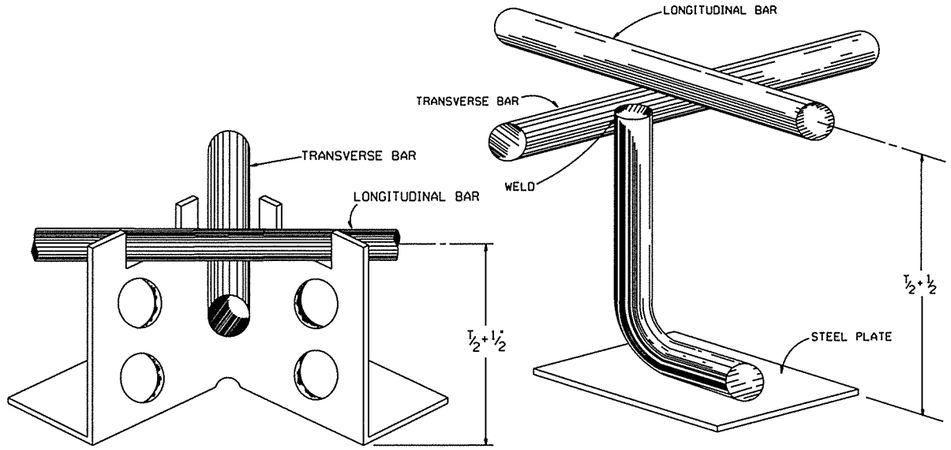
R061437.DGN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
5-22-14				6	ARK.			
				JOB NO.		061437	21	372

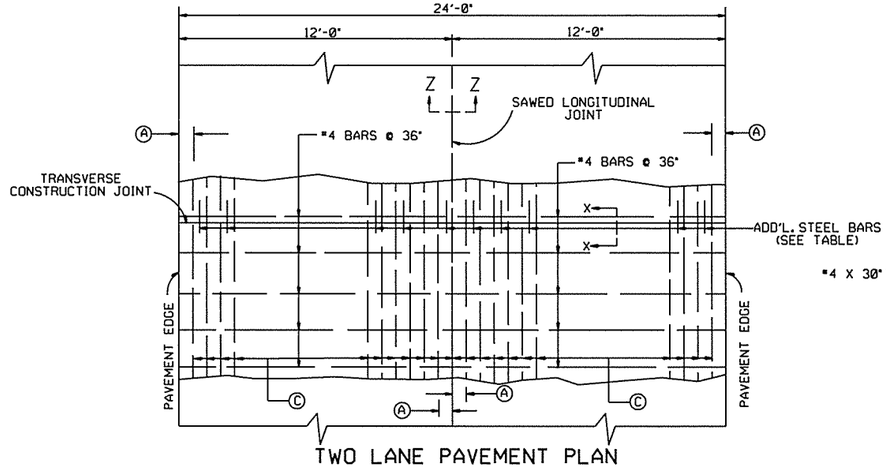
(2) SPECIAL DETAILS



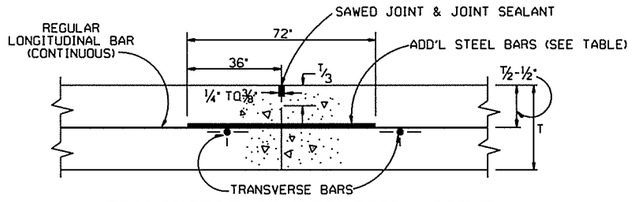
THREE LANE PAVEMENT PLAN
(12 FT. AND 24 FT. PLACEMENT) •



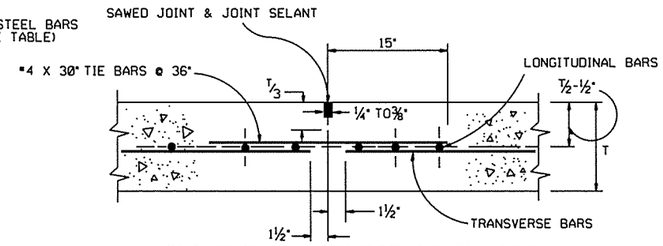
SUGGESTED CHAIR DETAILS



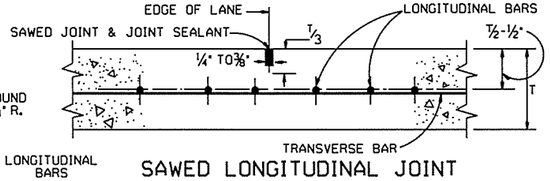
TWO LANE PAVEMENT PLAN
(24 FT. PLACEMENT) •



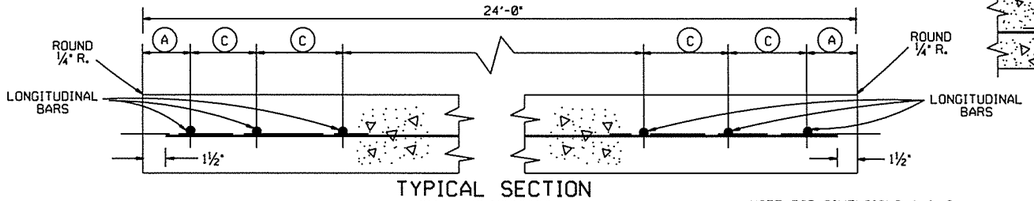
TRANSVERSE CONSTRUCTION JOINT
SECTION X-X



LONGITUDINAL CONSTRUCTION JOINT
SECTION Y-Y



SAWED LONGITUDINAL JOINT
SECTION Z-Z



TYPICAL SECTION
(24 FT. PLACEMENT) •

• LANE WIDTHS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE USED IF IN CONFLICT WITH TYPICAL CROSS SECTIONS SHOWN ELSEWHERE IN THE PLANS.

NOTE: FOR DIMENSIONS A & C SEE TABLE ON RT.

JOINT DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

• GENERAL NOTES•

SAWED JOINT AND JOINT SEALANT FOR TRANSVERSE CONSTRUCTION JOINT, LONGITUDINAL CONSTRUCTION JOINT AND SAWED LONGITUDINAL JOINT SHALL CONFORM TO THE DETAILS SHOWN FOR SAWED LONGITUDINAL JOINT ON STANDARD DRAWING CPTJ-6A.

NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURE ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.

FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT REFER TO THE GOVERNING SPECIFICATIONS FOR "CONTINUOUSLY REINFORCED CONCRETE PAVEMENT."

FOR DETAILS OF PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE REFER TO TYPICAL SECTIONS.

WITHIN ANY AREA BOUNDED BY TWO FEET PAVEMENT LENGTH, MEASURED PARALLEL TO THE CENTERLINE: AND TWELVE FEET OF PAVEMENT WIDTH, MEASURED PERPENDICULAR TO THE PAVEMENT CENTERLINE, NOT OVER 33⅓ OF THE REGULAR LONGITUDINAL STEEL SHALL BE SPLICED.

MNINMUM SPLICE REQUIREMENT: 25 TIMES THE NOMINAL DIAMETER OF THE BAR OR 16 INCHES WHICHEVER IS LONGER.

AT TRANSVERSE CONSTRUCTION JOINTS THE REGULAR LONGITUDINAL BARS SHALL EXTEND EITHER SIDE OF THE JOINT SUCH THAT THE BAR SPLICES FOR THE REGULAR LONGITUDINAL BARS SHALL BE A MINIMUM OF FOUR FEET FROM THE CONSTRUCTION JOINT. AT LONGITUDINAL CONSTRUCTION JOINT, IF THE CONTRACTOR ELECTS TO CONTINUE THE REGULAR TRANSVERSE STEEL THROUGH THE JOINTS, THE #4 TIE BARS SHOWN HEREON MAY BE DELETED.

CHAIR DETAILS SHOWN HEREON ARE EXAMPLES ONLY; OTHER APPROVED TYPES WHICH WILL SATISFY THE REQUIREMENTS NOTED HEREIN, WILL BE PERMITTED. CHAIR SPACINGS SHALL NOT BE GREATER THAN 36" C-C (LONGITUDINAL) AND 48" C-C (TRANSVERSE). ADDITIONAL CHAIRS SHALL BE USED IF NECESSARY TO MEET PLACEMENT REQUIREMENTS.

AT ALL LAP SPLICES OCCURRING WITHIN 8 FEET BEYOND THE CONSTRUCTION JOINTS, IN THE DIRECTION OF PAVING AND 4 FEET BACK OF THE CONSTRUCTION JOINTS, THE LENGTH OF LAP SHALL BE DOUBLE THAT NORMALLY SPECIFIED OR EACH SPLICE SHALL BE STRENGTHENED BY SPLICING IN, SYMMETRICALLY WITH THE LAP, A 6 FOOT LENGTH OF DEFORMED BAR OF THE SAME NOMINAL SIZE AS THE LONGITUDINAL REINFORCEMENT.

TABLE OF EQUIVALENT LONGITUDINAL REINFORCEMENT

PAVEM'T. THICKNESS	BAR SIZE	24'-0" PLACEMENT WIDTH				12'-0" PLACEMENT WIDTH				ADD'L STEEL@ TRANS. CONSTR. JOINT			
		SPACING (C-C)		BARS PER PLACE--MENT	STEEL ①	SPACING (C-C)		BARS PER PLACE--MENT	STEEL ①	SIZE	AVG. SPACING	NO. PER LANE ②	WEIGHT
		A	C		LBS./ SQ. YD.	A	C		LBS./ SQ. YD.				LBS. PER FOOT
INCHES		INCHES				INCHES					INCHES		
6	#5	5½	7	40	18.28	5½	7	20	18.26	⅝" X 72"	14	10	5.22
8	#6	4½	7½	38	24.55	4½	7½	19	24.41	¾" X 72"	15	10	7.51
9	#6	3¾	6½	44	27.98	3¾	6½	22	27.95	¾" X 72"	13	11	8.26
10	#7	4	8½	34	29.53	4	8½	17	29.51	⅞" X 72"	17	8	8.18
11	#7	4½	7½	38	32.78	4½	7½	19	32.75	⅞" X 72"	15	10	10.22
12	#7	5½	7	40	34.39	5½	7	20	34.37	⅞" X 72"	14	10	10.22
13	#7	3¾	6½	44	37.65	3¾	6½	22	37.62	⅞" X 72"	13	11	11.24

NOTE: WHERE THE PROPOSED PLACEMENT WIDTHS VARY FROM THE BASIC DESIGN WIDTH SHOWN, THE SPACING "A" AND THE ADJACENT SPACING "C" SHALL BE ADJUSTED TO ACCOMODATE A REINFORCEMENT ARRANGEMENT EQUAL TO OR SLIGHTLY HEAVIER THAN THAT SHOWN AS DIRECTED BY THE ENGINEER.

① INCLUDES BOTH REGULAR LONGITUDINAL AND TRANSVERSE BARS. BASED UPON 1 FOOT PAVEMENT FOR THE WIDTH INDICATED. ALL TRANSVERSE STEEL IS #4 BARS AT 36" CENTERS. FOR ESTIMATING PURPOSES IT IS ASSUMED THAT LONGITUDINAL BARS ARE SPLICED AT 32' INTERVALS.

② THIS SHALL BE THE MINIMUM NUMBER OF ADDITIONAL STEEL BARS TO BE PLACED PER LANE. THE SPACING OF THE ADDITIONAL STEEL BARS SHALL BE VARIED AS DIRECTED IN ORDER TO PROVIDE A MINIMUM CLEARANCE OF 2½" FROM EACH REGULAR LONGITUDINAL REINFORCING BAR.

3/4/2015

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SPECIAL DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	22	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

P.C. 132+27.99
P.C. 104+56.10
N. FRONTAGE RD.
I-430-SB EXIT-TO N.-FRONTAGE RD.-
P.T. 101+01.81
N 6°15' E
PROPOSED ROW & C/A
285.00
300.00
420.00
EARTHWORK
P.C. 114+47.71
285.00
PROPOSED ROW & C/A
215.00
P.I. 118+46.85
P.T. 138+67.22
P.C. 138+72.62
N 61°04'33" E
P.T. 108+62.91
N 20°42'11" W
N 3°29'49" W
P.I. 140+39.52
I-430
N 19°59'30" W
P.I. 116+74.96
P.I. 106+18.97
P.I. 109+80.58
P.T. 142+03.86
P.C. 142+45.86
N 35°27'27.87" E
N 35°29'10" W
P.I. 110+72.91
P.I. 143+25.51
N. FRONTAGE RD. TO I-430 NB
P.I. 113+01.58
PROPOSED ROW & C/A
275.00
268.09
PROPOSED ROW & C/A
260.00
215.00
P.C. 118+46.19
PROPOSE
E-11

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

3/2/2015

R061437.DGN

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

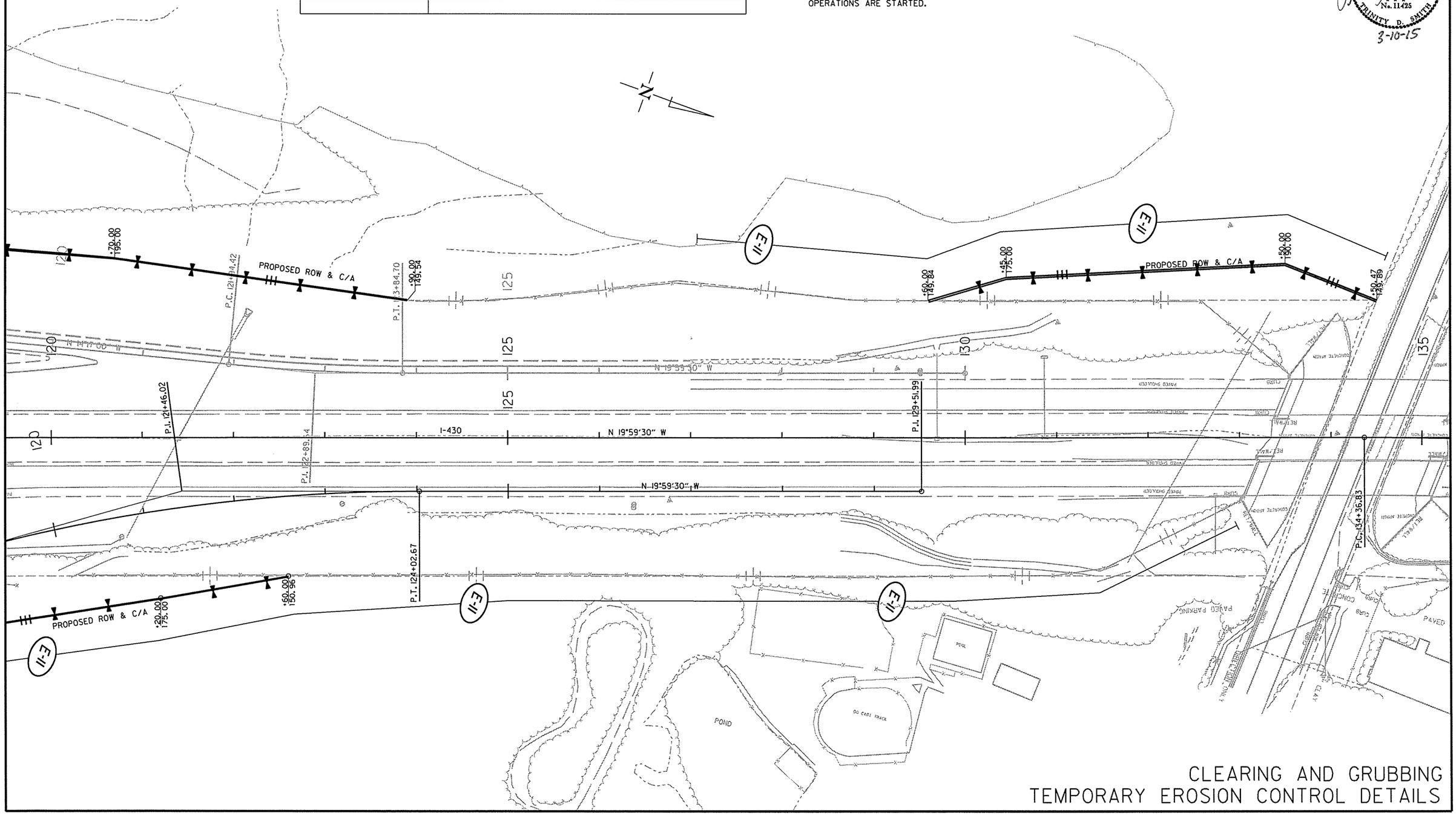
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	23	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.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.		061437	24	372

(2) TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

N

E-11

PROPOSED ROW & C/A

20+00.00

20+50.00

19+00.00

00+00.00

P.I. 143+89.55

N 19°59'30" W

N 8°01'07" E

135

140

145

150

I-430

RET/WALL

PAVED SHOULDER

CONCRETE

P.C. 164+36.85

PAVED PARKING

OPEN STORAGE

CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.DGN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

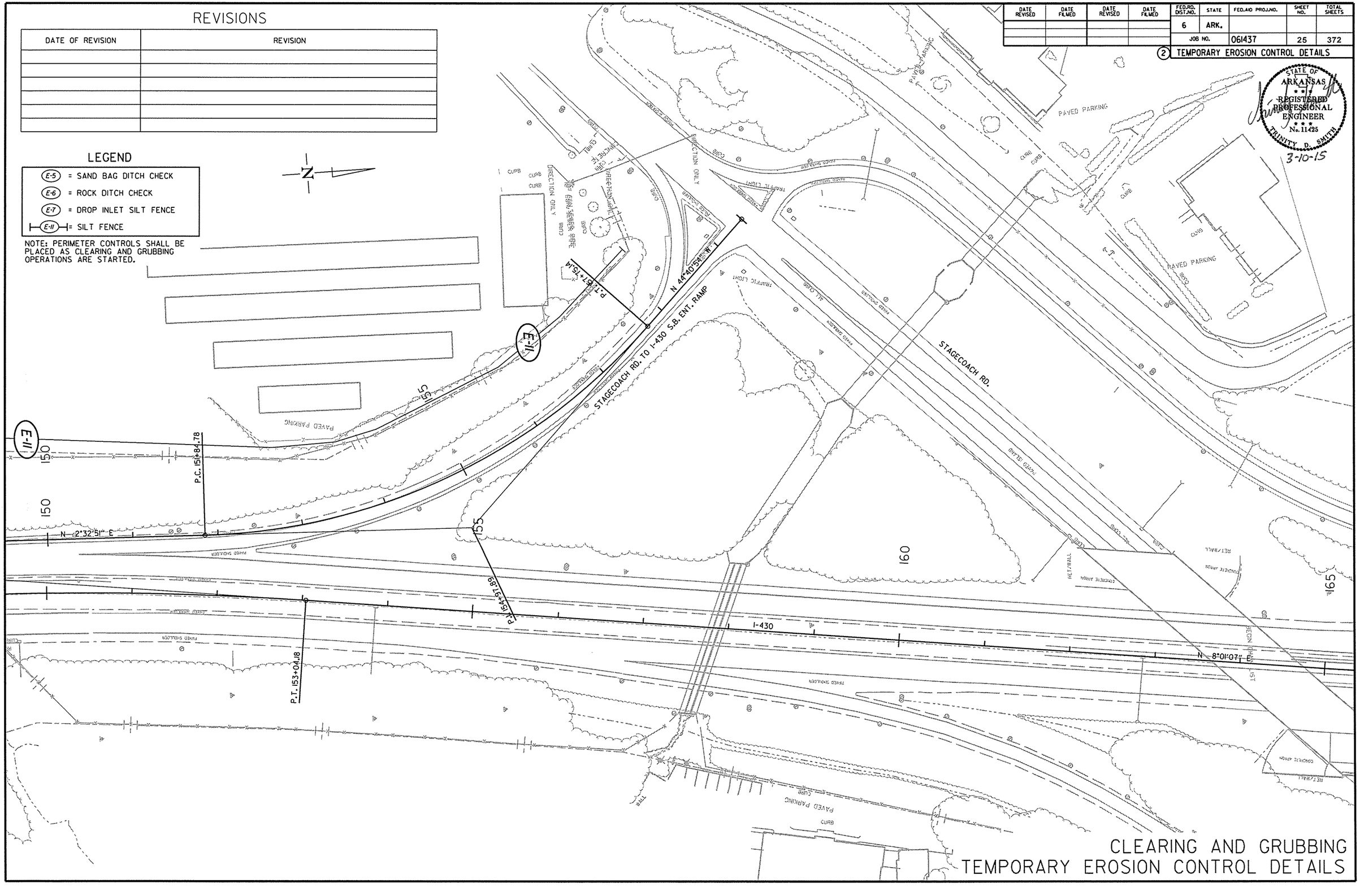
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	25	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.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.		061437	26	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

P.T. 142+03.86
P.C. 142+45.86
S 38°12'28" E
P.I. 109+80.58
P.I. 140+39.52
140
I-430
P.T. 144+03.46
S 81°02'49" E
P.I. 143+25.91
111
P.I. 110+72.91
P.C. 148+34.96
105
103
145
N. FRONTAGE ROAD
S 81°02'49" E
N 63°29'55" W
N. FRONTAGE RD. TO I-430 NB
115
P.T. 150+97.20
S 46°57'21" E
P.C. 151+62.67
EXIST. ROW & PROPOSED C/A
E-11
P.I. 149+70.09
165.00
675.00
PROPOSED ROW & C/A
P.C. 108+34.71
273.00
450.00
185.00
490.00
190.00
460.00
P.T. 113+01.58
E-11
PROPOSED ROW & C/A
CEMETERY

REVISIONS

DATE OF REVISION	REVISION

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3/2/2015

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CLEARING AND GRUBBING
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.		061437	27	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

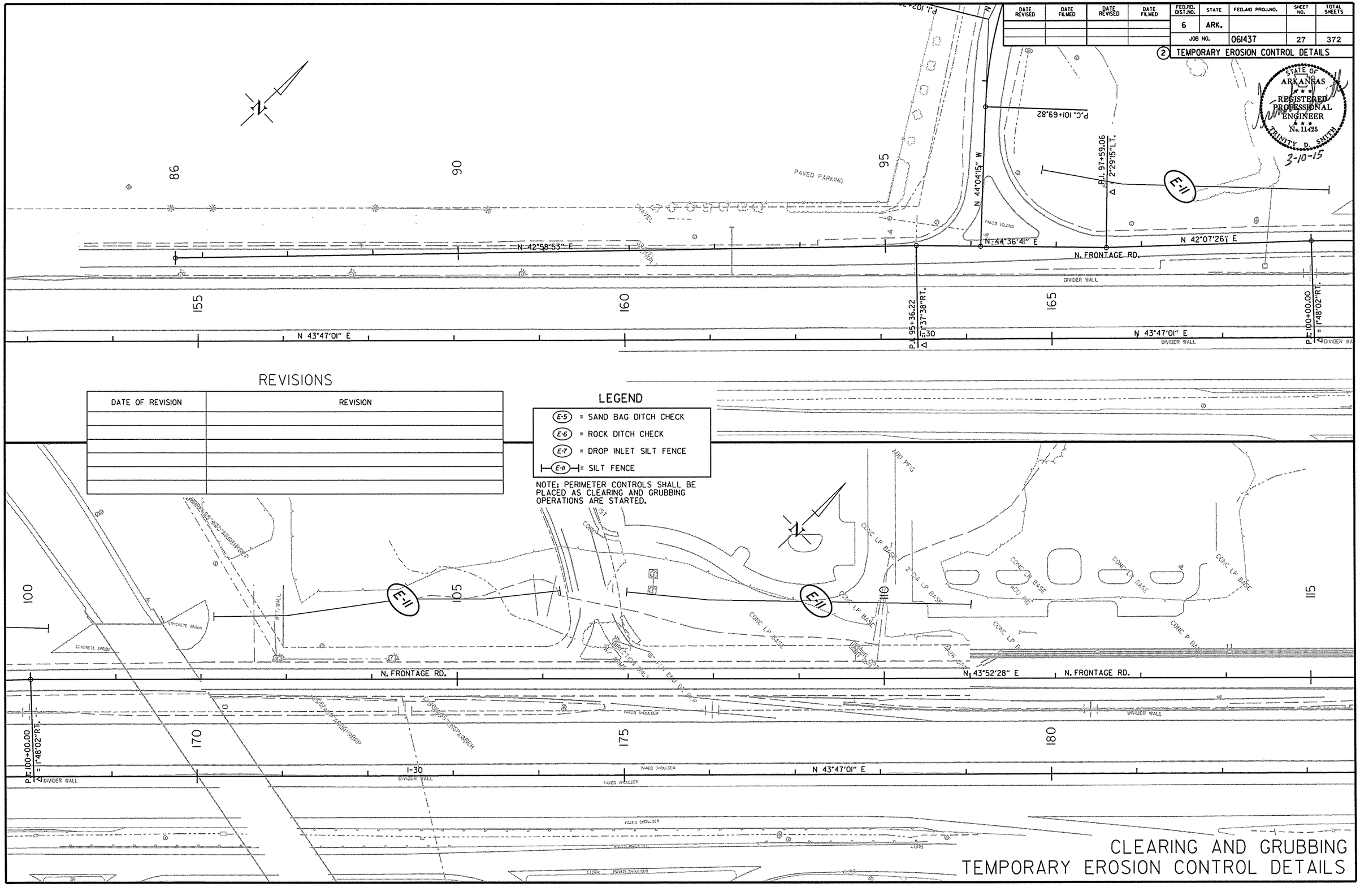
REVISIONS

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CLEARING AND GRUBBING
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				6	ARK.			
				JOB NO.		061437	28	372
				(2) TEMPORARY EROSION CONTROL DETAILS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

3/2/2015

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CLEARING AND GRUBBING
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

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				6	ARK.			
				JOB NO.		061437	29	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

PROPOSED ROW & C/A
PROPOSED CONST. LIMITS
P.C. 121+94.42
P.I. 123+84.70
P.I. 121+46.02
P.I. 122+89.04
P.I. 129+51.99
P.T. 124+02.67
P.C. 134+36.83
I-430
N 19°59'30" W
POND
RR CARS TRACK
PAVED PARKING
PAVED

STAGE I
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.DGN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

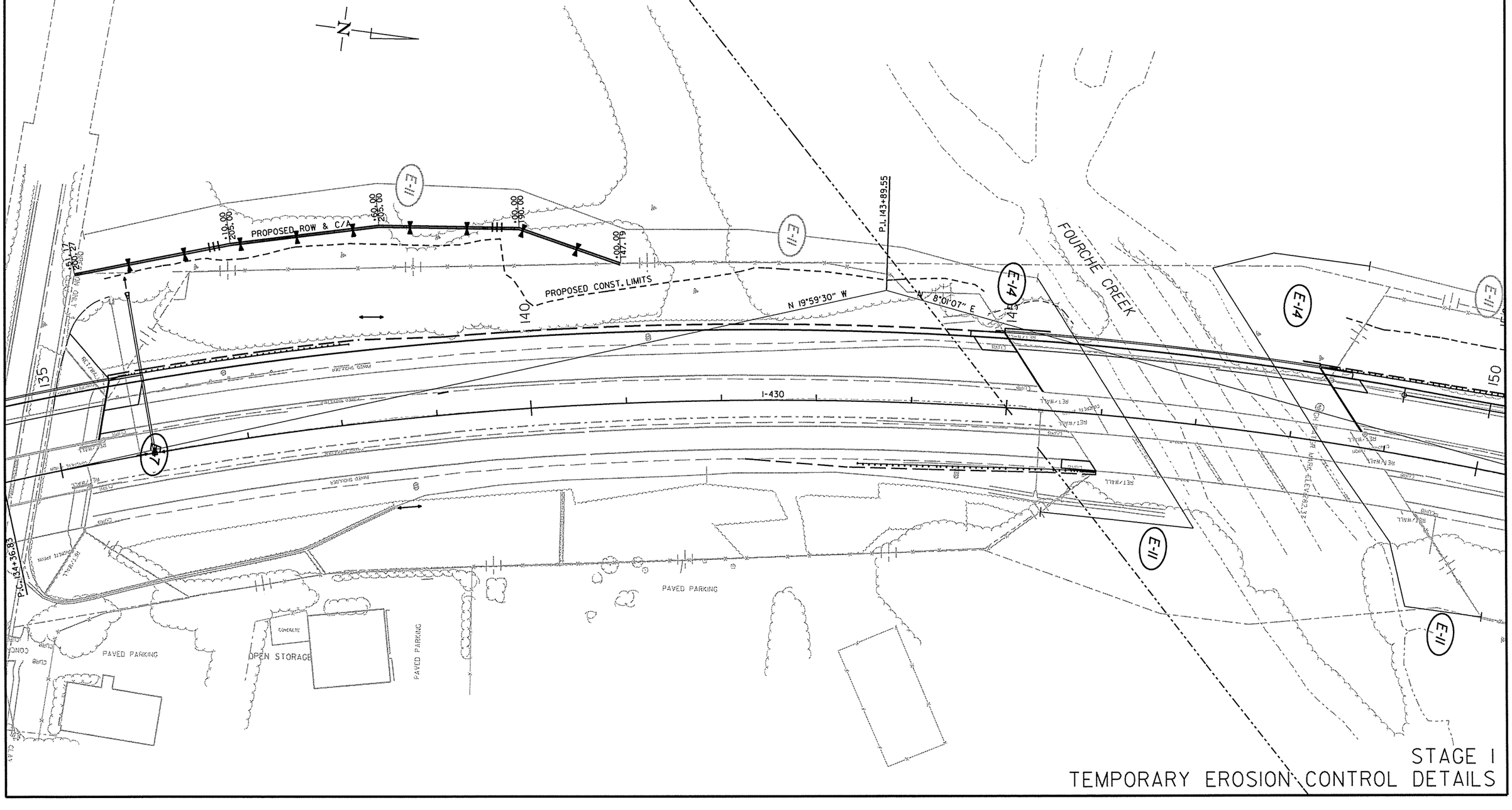
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(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



STAGE I
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.DGN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

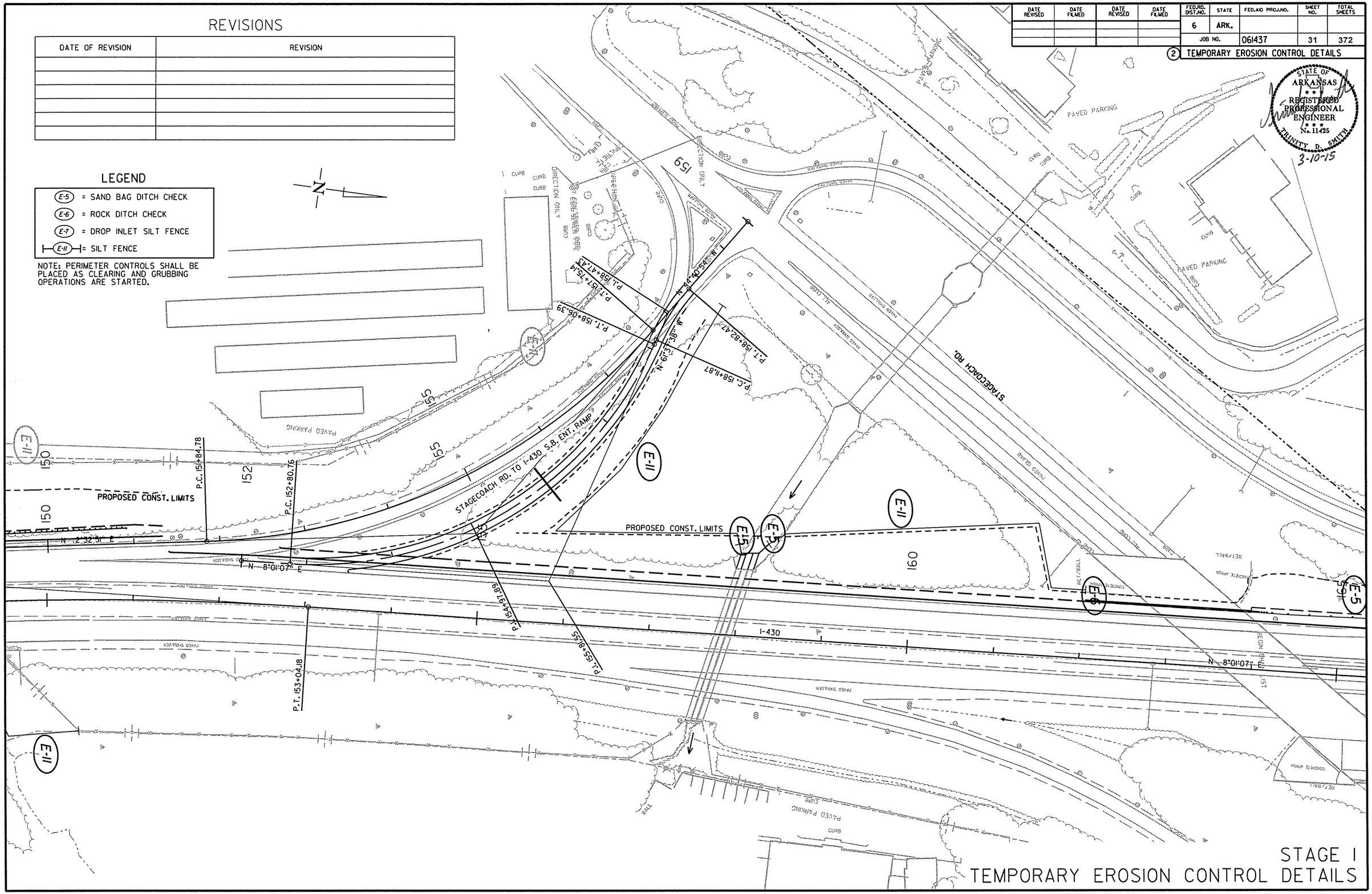
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				6	ARK.			
				JOB NO.		061437	31	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
3-10-15



3/2/2015

R061437.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

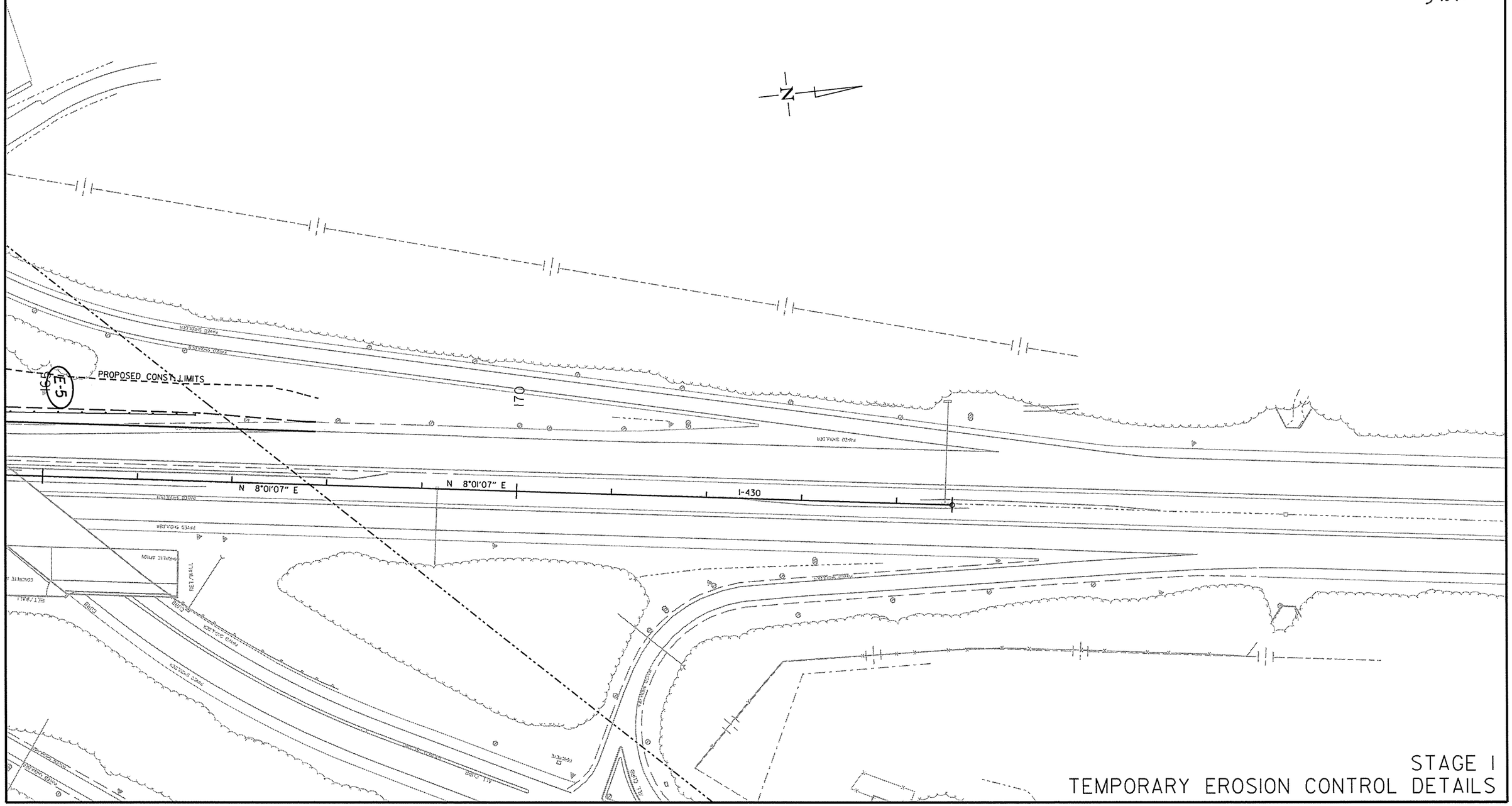
(E-5) = SAND BAG DITCH CHECK
(E-6) = ROCK DITCH CHECK
(E-7) = DROP INLET SILT FENCE
(E-11) = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	32	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



3/2/2015

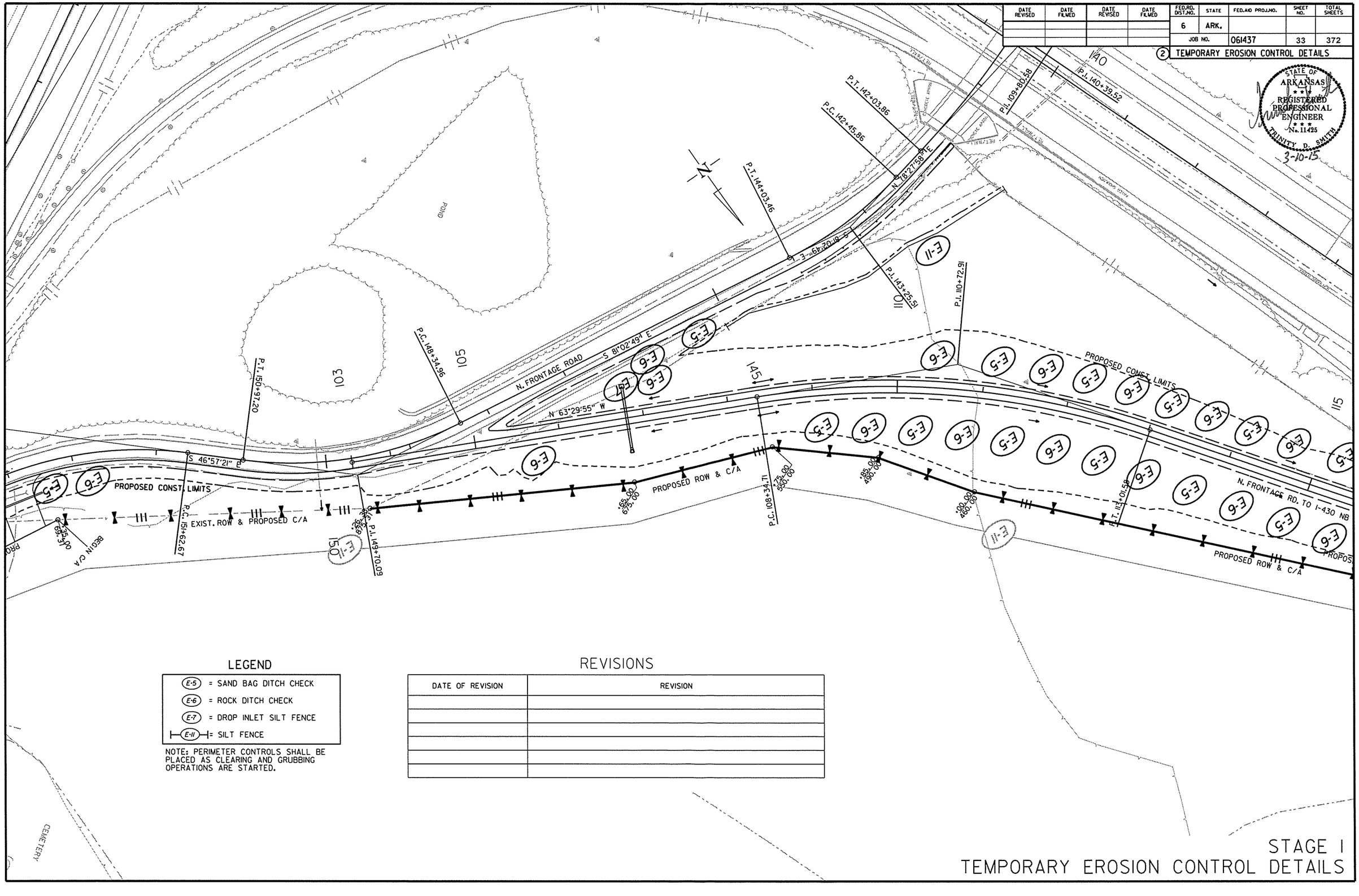
R061437.DGN

STAGE I
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.		061437	33	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

3/2/2015

R061437.DGN

STAGE I
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.		061437	34	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

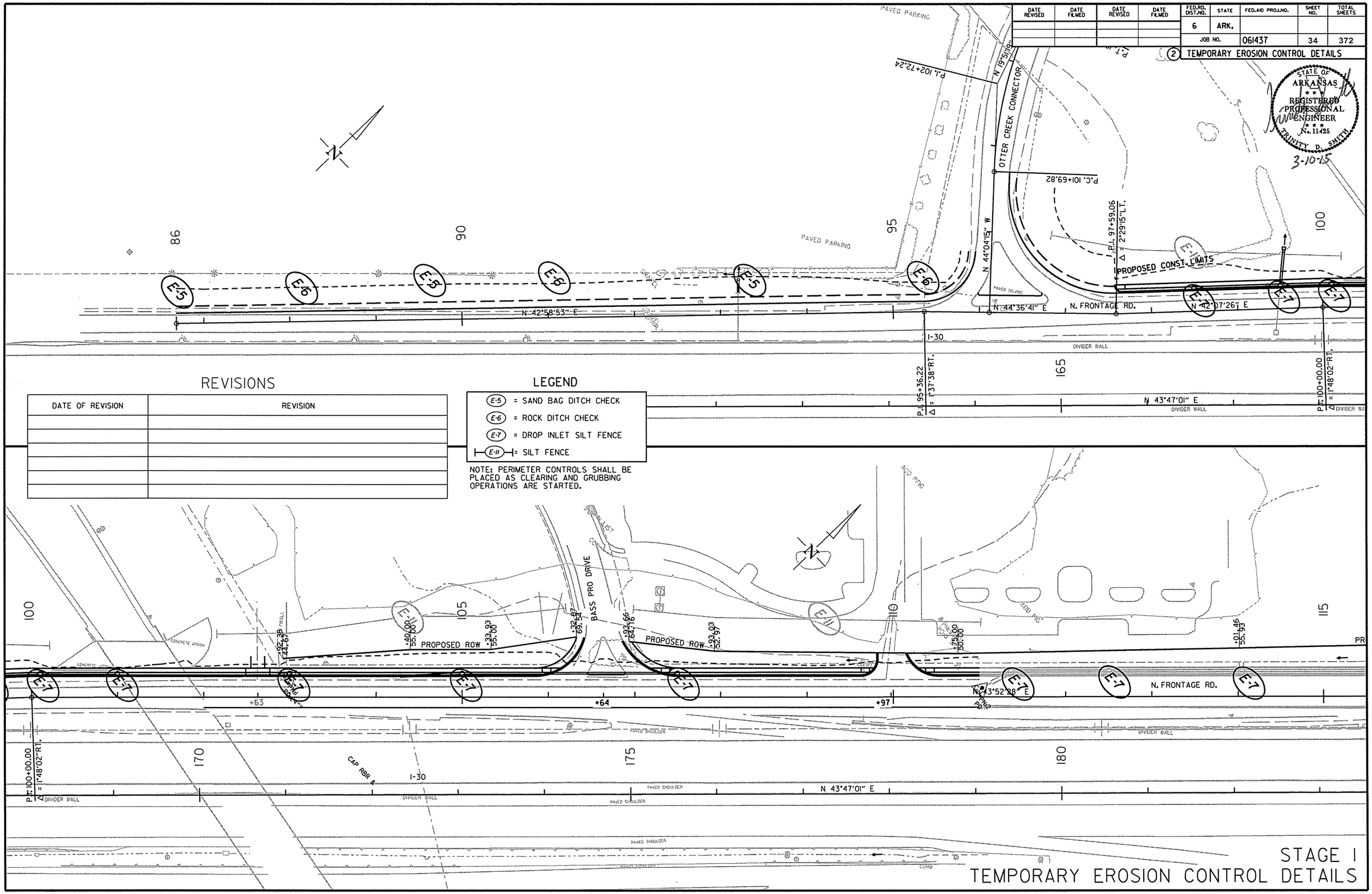
REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.



3/2/2015

R061437.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

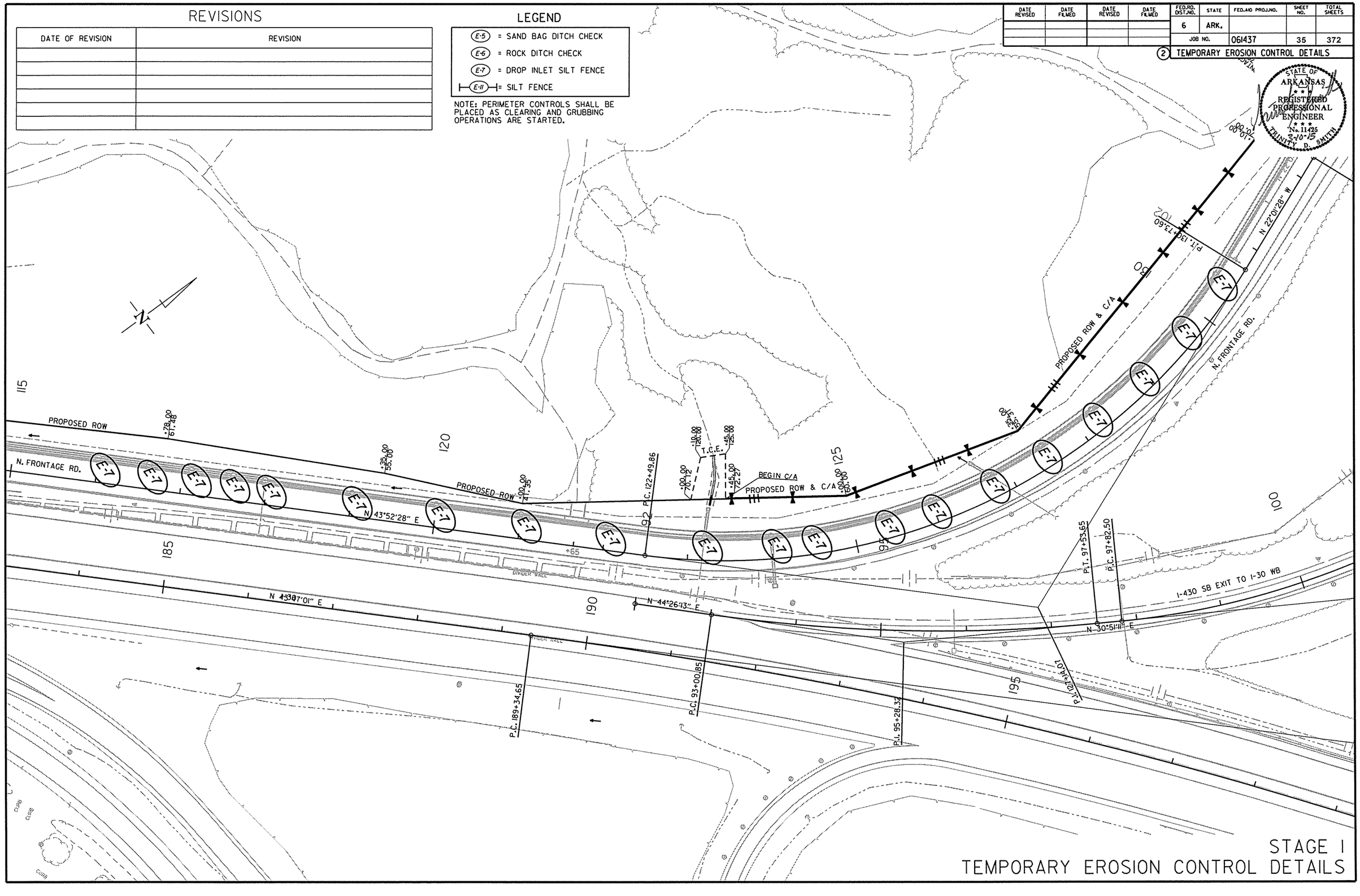
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- (E-7) = DROP INLET SILT FENCE
- (E-11) = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	35	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
3-10-15
TRINITY D. SMITH



STAGE I
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.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.		061437	36	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

I-430 SB EXIT TO N. FRONTAGE RD.
PROPOSED ROW & C/A
N. FRONTAGE RD.
I-430 N.B. EXIT TO N. FRONTAGE RD.
I-430 S.B. EXIT TO I-30 W.B.
I-430
P.I. 101+01.81
P.C. 104+95.18
N 61°04'33" E
P.I. 140+
P.T. 138+67.22
P.C. 138+72.62
P.I. 108+62.98
N 20°42'
P.I. 108+80.58
N 22°01'22" W
N 22°01'28" W
P.C. 132+21.59
P.I. 130+73.60
P.T. 142+03.86
P.C. 142
P.I. 103+55.00
N 31°29'49" W
P.I. 106+18.97
P.I. 100+77.64
P.I. 206+76.92
E-5 = SAND BAG DITCH CHECK
E-6 = ROCK DITCH CHECK
E-7 = DROP INLET SILT FENCE
E-11 = SILT FENCE

LEGEND

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

PROPOSED CONST. LIMITS
N. FRONTAGE RD. TO I-430 NB
P.I. 143+10.11
P.I. 140+39.52
P.I. 109+60.42
S 81°02'49" E
N 78°27'58" E
P.I. 142+03.86
P.C. 142+45.86
P.T. 144+03.46
P.I. 106+18.97

3/2/2015

R061437.DGN

STAGE I
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

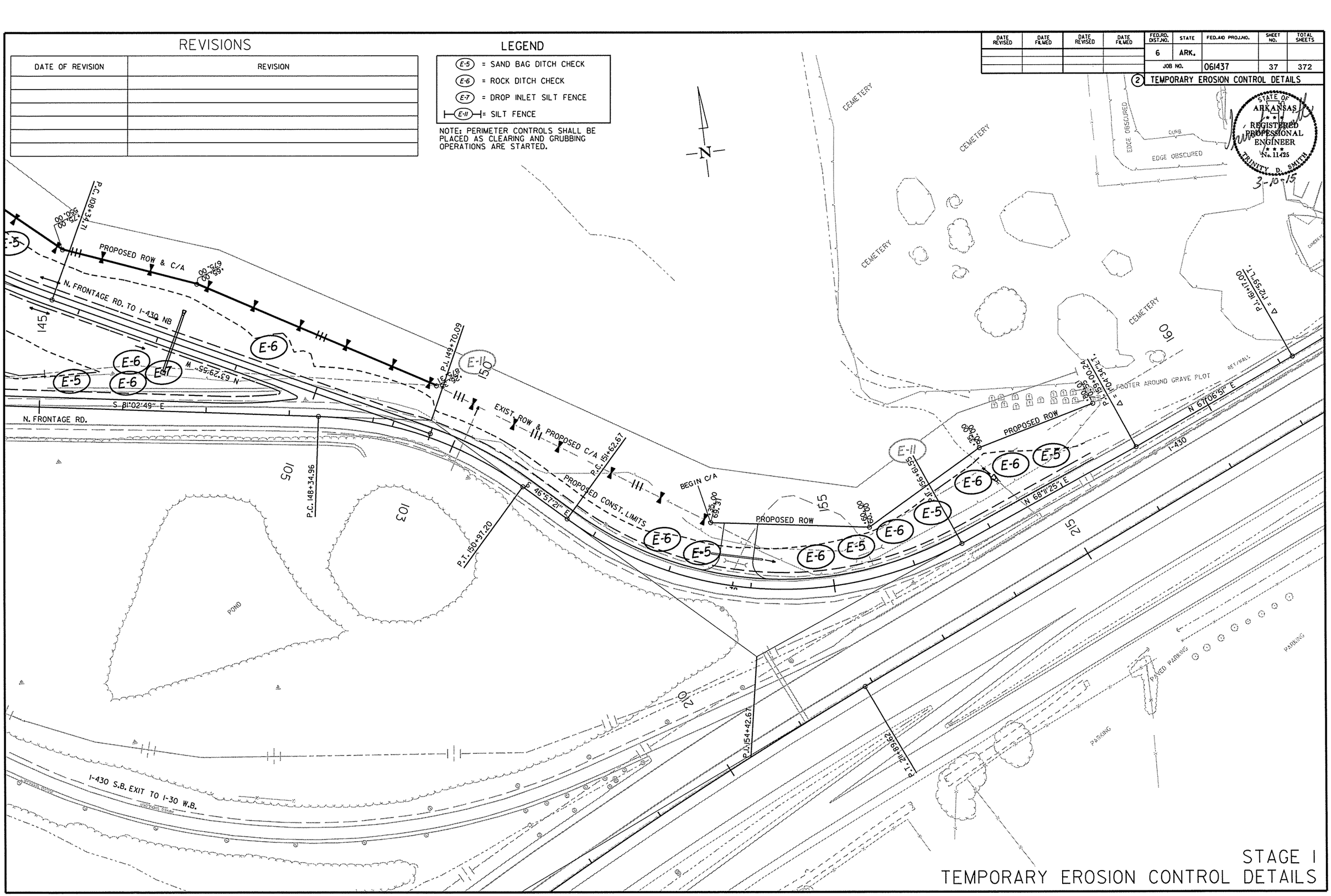
E-5 = SAND BAG DITCH CHECK
E-6 = ROCK DITCH CHECK
E-7 = DROP INLET SILT FENCE
E-11 = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	37	372

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



STAGE I
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.DGN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	38	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

P.C. 132+27.99
P.C. 134+99.16
P.T. 110+01.81
I-430 SB EXIT TO N. FRONTAGE RD.
P.C. 114+66.67
PROPOSED ROW & C/A
P.T. 118+15.85
N. FRONTAGE RD.
N 61°04'33" E
PROPOSED CONST. LIMITS
P.T. 138+67.22
P.C. 138+72.62
P.T. 138+62.91
N 20°42'41" W
P.I. 140+39.52
I-430
N 19°59'30" W
P.I. 106+18.97
P.I. 109+80.58
P.T. 142+03.86
P.C. 142+45.86
N 18°27'58" E
S 18°02'49" E
P.I. 143+25.51
P.I. 110+72.91
N. FRONTAGE RD. TO I-430 NB
N 35°29'10" W
P.C. 118+56.19
P.T. 113+01.58
PROPOSED ROW & C/A
PROPOSED CONST. LIMITS

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

3/2/2015
R061437.DGN

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	39	372

TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

PROPOSED ROW & C/A
PROPOSED CONST. LIMITS
BEGIN C/A
I-430 SB EXIT TO I-30 WB
I-30
P.C. 122+49.86
P.C. 189+34.65
P.C. 93+00.85
P.I. 95+28.32
P.T. 97+53.65
P.C. 97+82.50
P.T. 102+14.07
P.I. 130+73.60
P.I. 100+77.64
N 43°52'28" E
N 43°47'01" E
N 44°26'13" E
N 30°51'11" E
PROPOSED
EXISTING
RETAINING WALL
CONCRETE APRON
PAVED PARKING
CURB
DIVERSION SWALE
PINK24 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK25 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK23 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK26 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK27 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK28 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK29 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK30 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK31 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK32 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK33 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK34 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK35 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK36 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK37 PDS24-XS7/8"-REBA2.0"-ALUM CAP
PINK38 PDS24-XS7/8"-REBA2.0"-ALUM CAP

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	40	372

2 TEMPORARY EROSION CONTROL DETAILS

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

PROPOSED CONST. LIMITS
I-430 SB EXIT TO N. FRONTAGE RD.
N. FRONTAGE RD.
I-430
P.I. 100+77.64
P.T. 103+55.00
P.C. 103+71.30
N 31°29'39" W
P.I. 106+18.97
P.I. 700+76.92
P.T. 138+67.22
P.C. 138+72.62
P.T. 138+62.96
N 61°04'33" E
N 20°42'[illegible]" W
P.I. 140+39.52
P.I. 109+80.58
P.T. 142+03.86
P.C. 142+45.86
N 27°58'53" E
P.I. 143+25.51
S 81°02'49" E
P.T. 144+03.46
S 81°02'49" E
P.I. 110+72.91
P.T. 113+01.68
P.C. 108+34.71
POND
PROPOSED ROW & CA

REVISIONS

DATE OF REVISION	REVISION

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.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.	061437		41	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

3/2/2015

R061437.DGN

STAGE 2
TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

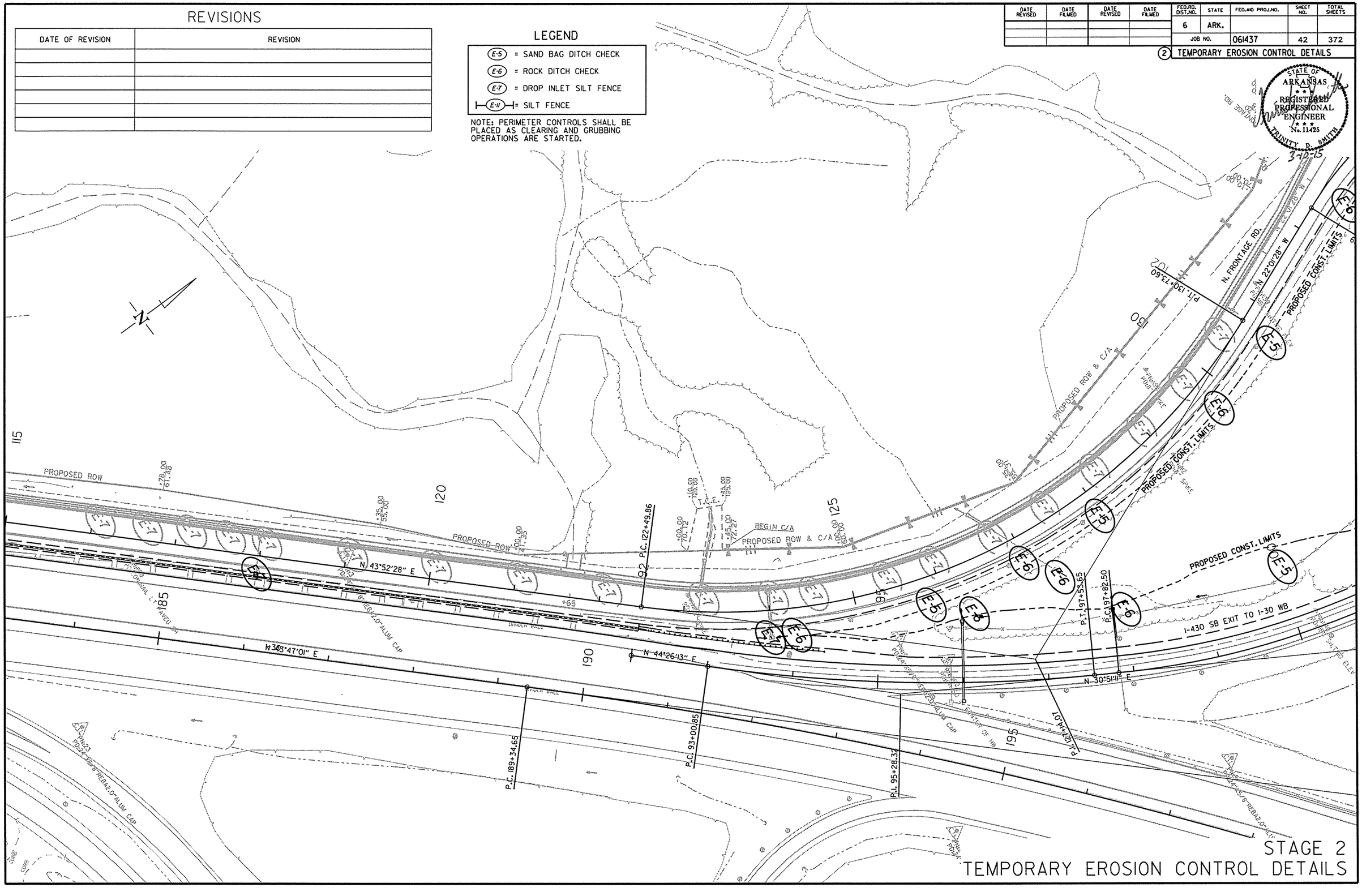
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	42	372

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



STAGE 2
TEMPORARY EROSION CONTROL DETAILS

3/2/2015

R061437.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.		061437	43	372

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

I-430 SB EXIT TO N. FRONTAGE RD.

PROPOSED ROW & C/A

N. FRONTAGE RD.

PROPOSED CONST. LIMITS

N 61°04'33" E

N 22°01'28" W

N 20°42'32" W

N 78°27'58" E

S 81°02'49" E

P.I. 136+18.61

P.I. 138+67.22

P.C. 138+72.62

P.I. 140+39.52

P.I. 143+25.51

P.I. 106+18.97

P.C. 102+21.99

P.C. 103+55.00

P.I. 103+71.50

P.I. 105+73.13

P.I. 110+01.81

P.I. 115+01.58

P.I. 110+72.91

P.T. 142+03.86

P.C. 142+45.86

P.T. 144+03.46

E-5 = SAND BAG DITCH CHECK

E-6 = ROCK DITCH CHECK

E-7 = DROP INLET SILT FENCE

E-11 = SILT FENCE

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

REVISIONS

DATE OF REVISION	REVISION

3/2/2015

R061437.DGN

STAGE 2

TEMPORARY EROSION CONTROL DETAILS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	44	372

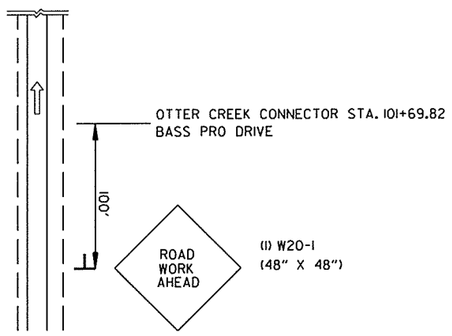
(2) TEMPORARY EROSION CONTROL DETAILS

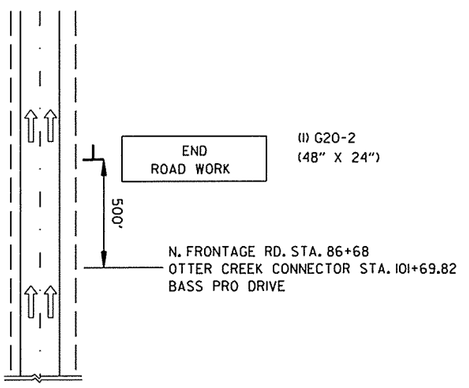
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

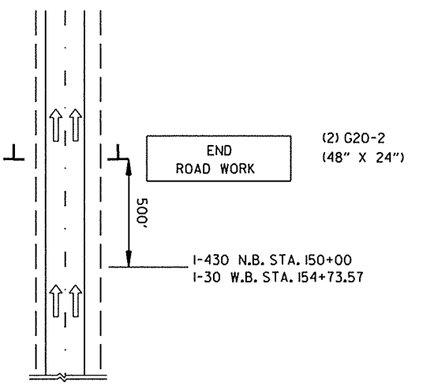
PROPOSED ROW & C/A
N. FRONTAGE RD. I-430 NB
S 81°02'49" E
N. FRONTAGE RD.
N 63°29'55" W
EXIST. ROW & PROPOSED C/A
P.I. 149+70.09
P.C. 151+62.67
BEGIN C/A
S 46°57'21" E
PROPOSED CONST. LIMITS
P.C. 148+34.96
P.T. 150+97.20
P.I. 154+42.67
PROPOSED ROW
N 68°11'25" E
P.I. 156+19.55
P.I. 161+17.00
P.I. 159+39.30
P.I. 159+00.24
FOOTER AROUND GRAVE PLOT
RETAINING WALL
EDGE OBSCURED
POND
I-30
I-430 S.B. EXIT TO I-30 W.B.
PARKING
GATE
PAVED PARKING
PN#190 PD:8" SPIKE IN CONC BASE OF
PN#191 PD:8" SPIKE WOODS
PN#192 PD:8" SPIKE WOODS & SPIKE WOODS
PN#193 PD:8" SPIKE WOODS
PN#194 PD:8" SPIKE WOODS
PN#195 PD:8" SPIKE

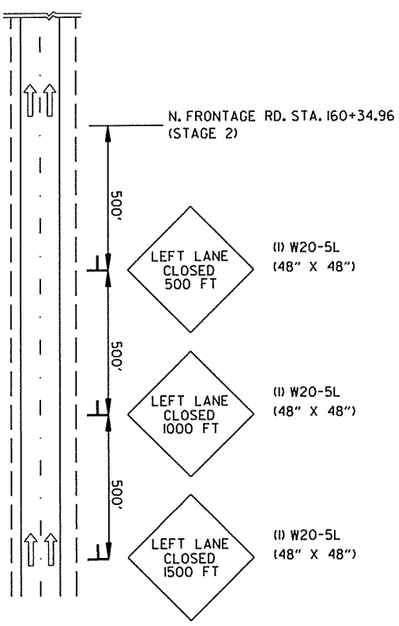
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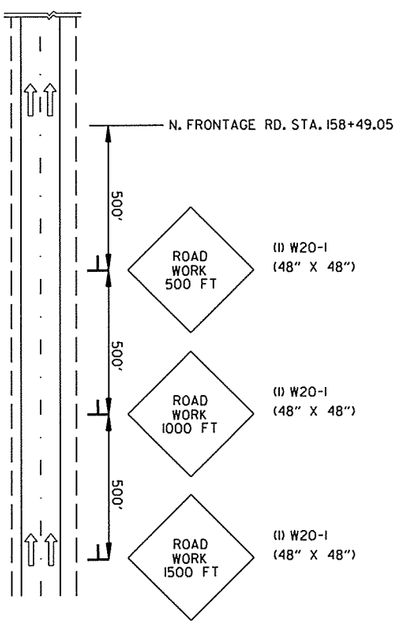
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

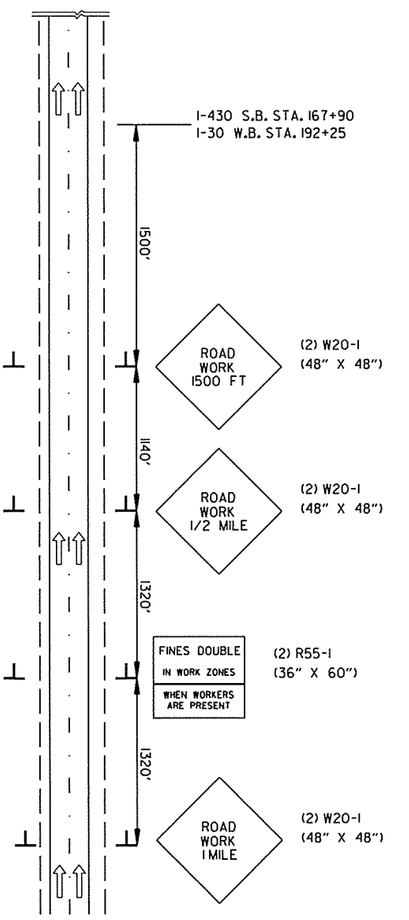












⊥ PORTABLE CHANGEABLE MESSAGE SIGN PLACED AS DIRECTED BY THE ENGINEER

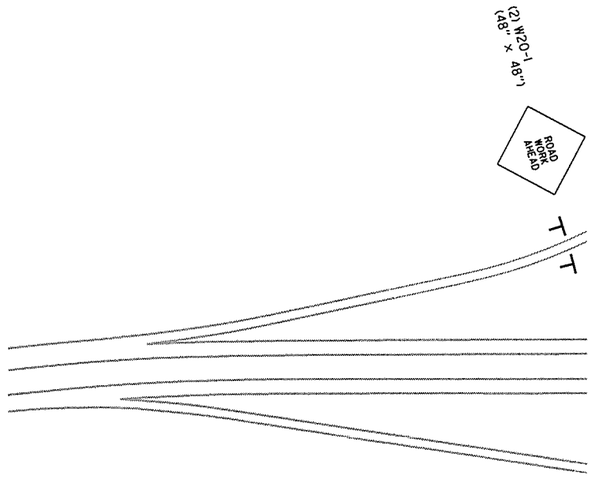
ADVANCE WARNING MAINTENANCE OF TRAFFIC DETAILS

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		45	372

(2) MAINTENANCE OF TRAFFIC DETAILS — JOB NO. 061437

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
KEITH D. KELLY
No. 11435
3-10-15

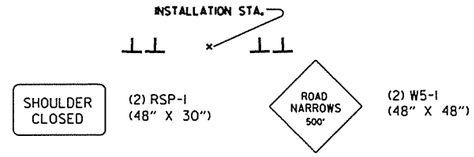
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	46	372
				(2) MAINTENANCE OF TRAFFIC DETAILS				



DETAIL OF ENTRANCE AND EXIT RAMPS
(ALL STAGES)
ENTRANCE RAMP STAGECOACH RD.
I-30 W.B. TO I-430 N.B. RAMP

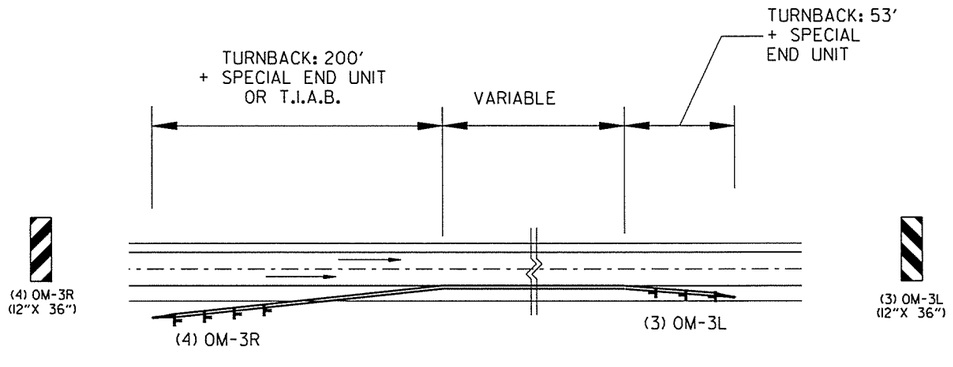
BUMP (2) W8-1 (30" X 30")

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



ADVANCE WARNING SIGNS

STAGE 1	STAGE 2
I-430 N.B - STA. 113+80.07	I-430 S.B. - STA. 125+48.76
I-430 N.B. - STA. 138+48.93	I-430 N.B. - STA. 125+78.24
I-430 S.B. - STA. 158+50.97	I-430 S.B. - STA. 142+87.84
I-430 S.B. - STA. 174+96.65	I-430 N.B. - STA. 138+10.95
ENT. RAMP STAGECOACH RD.	I-430 S.B. - STA. 156+37.63



REFER ALSO TO STANDARD DRAWING TC-5 FOR DETAILS OF PLACEMENT OF PCCB TURNBACKS.

NOTE: OM-3L & OM-3R SIGNS SHALL BE EQUALLY SPACED ALONG P.C.C.B. TURNBACK.

DETAIL OF OBJECT MARKERS
AT PRECAST CONCRETE BARRIER TURNBACKS

CONSTRUCTION SEQUENCE

STAGE 1:

INSTALL ADVANCE WARNING SIGNS AT THE LOCATIONS LISTED ON THE ADVANCE WARNING DETAIL. INSTALL END ROAD WORK SIGNS AT THE END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAIL. INSTALL ROAD WORK AHEAD (W20-1) SIGN AND ON RAMPS AS SHOWN ON THE ADVANCE WARNING DETAIL.

INSTALL SHOULDER CLOSED (RSP-1) AND ROAD NARROWS 500' (W5-1) AS SHOWN IN THE MAINTENANCE OF TRAFFIC DETAILS.

INSTALL CONSTRUCTION PAVEMENT MARKINGS, PRECAST CONCRETE BARRIERS, AND TRAFFIC DRUMS AND OPEN THE I-430 S.B. EXIT RAMP TO N. FRONTAGE RD. AND I-30 W.B. EXIT RAMP TO TRAFFIC AS SHOWN IN THE STAGE I MAINTENANCE OF TRAFFIC DETAILS.

CONSTRUCT I-430 S.B. WIDENING, N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP, STAGECOACH RD. TO I-430 S.B. TEMPORARY ENTRANCE RAMP, AND WIDEN LT. OF N. FRONTAGE RD. AS SHOWN IN THE STAGE I MAINTENANCE OF TRAFFIC DETAILS.

STAGE 2:

INSTALL CONSTRUCTION PAVEMENT MARKINGS, PRECAST CONCRETE BARRIERS, AND TRAFFIC DRUMS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

REMOVE EXISTING I-30 W.B. TO N. FRONTAGE RD. EXIT RAMP AND CONSTRUCT I-430 S.B. TO I-30 W.B. RAMP WIDENING, I-30 W.B. ACCELERATION LANE AND BARRIER WALL, WIDEN RT. OF N. FRONTAGE RD, AND STAGECOACH RD. TO I-430 S.B. ENT. RAMP AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC DETAILS.

SHIFT TRAFFIC ONTO STAGECOACH RD. TO I-430 S.B. ENT. RAMP AND REMOVE STAGECOACH RD. TO I-430 TEMP ENT. RAMP AND TEMP. PIPE CULVERT.

END OF JOB:

REMOVE PRECAST CONCRETE BARRIER WALL, PLACE FINAL 2" LIFT OF N. FRONTAGE RD. A.C.H.M., AND PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

STATE OF ARKANSAS
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TRINITY D. SMITH
3-10-15

ADVANCE WARNING
MAINTENANCE OF TRAFFIC DETAILS

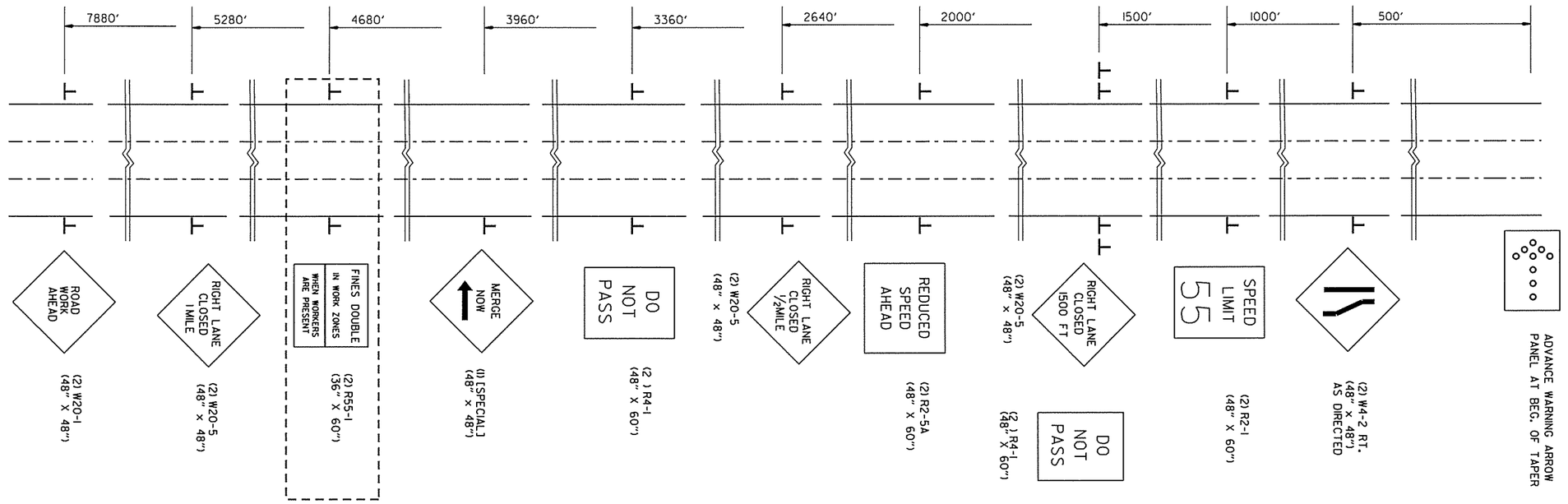
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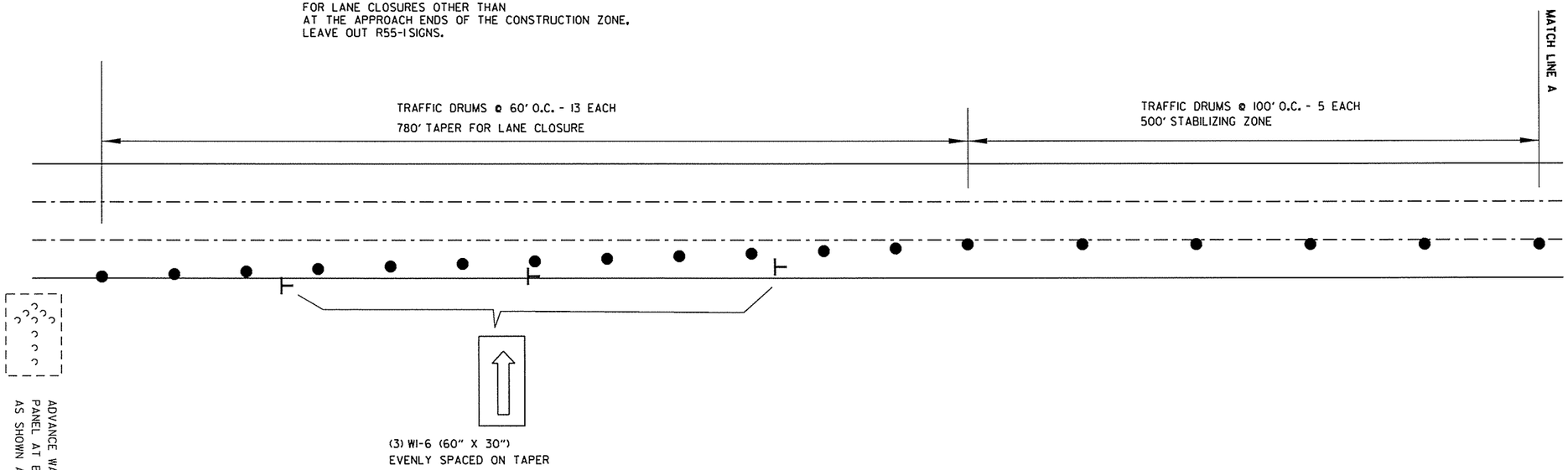
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	47	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



NOTE:
FOR LANE CLOSURES OTHER THAN AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE, LEAVE OUT R55-1 SIGNS.



ADVANCE WARNING SIGNS & TYPICAL TRAFFIC DRUM PLACEMENT FOR OUTSIDE LANE CLOSURE

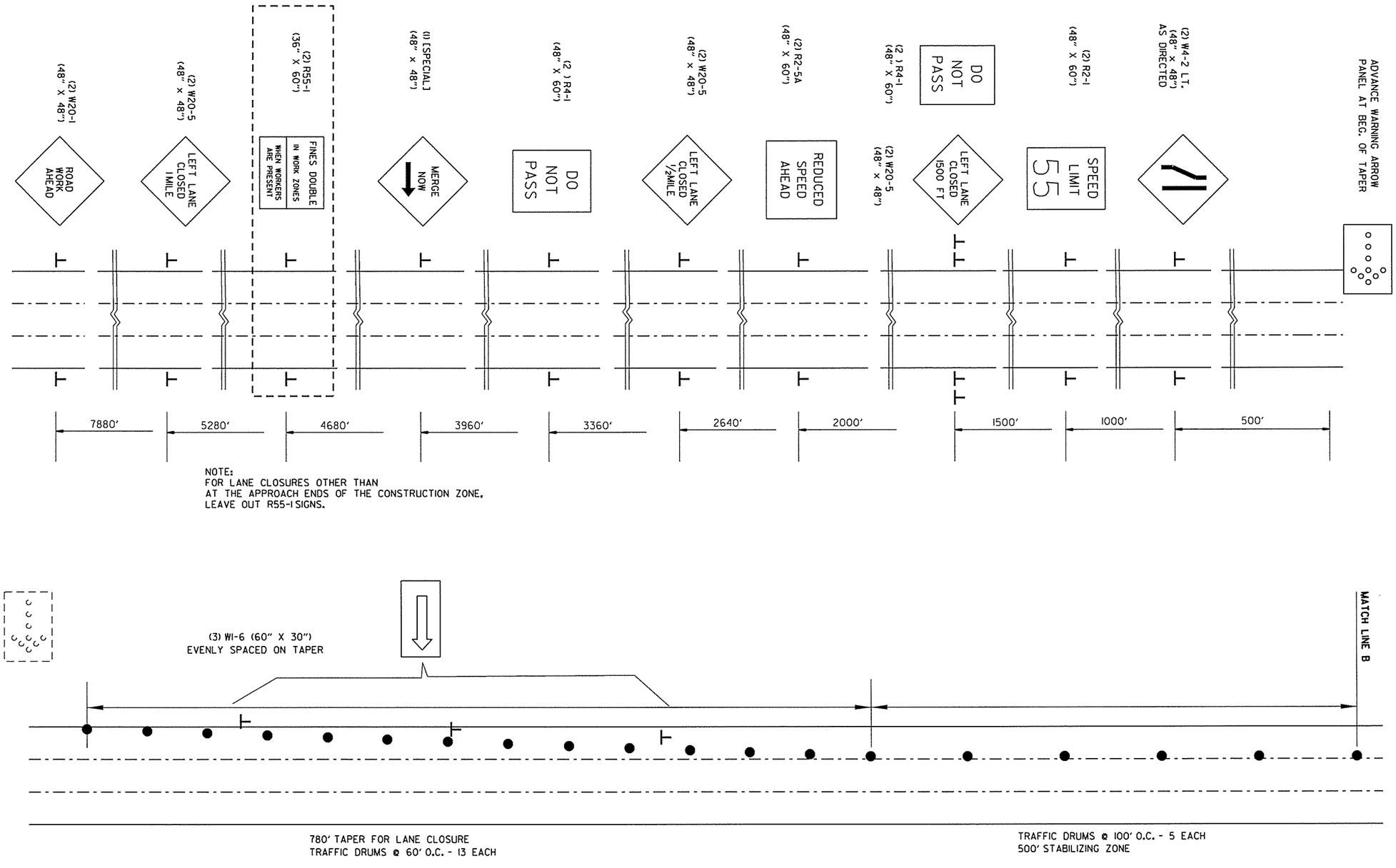
LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

R061437.DGN 3/2/2015

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.		061437	48	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



NOTE:
FOR LANE CLOSURES OTHER THAN
AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE,
LEAVE OUT R55-1 SIGNS.

ADVANCE WARNING SIGNS & TYPICAL TRAFFIC DRUM LAYOUT FOR INSIDE LANE CLOSURES

LANE CLOSURE MAINTENANCE OF TRAFFIC DETAILS

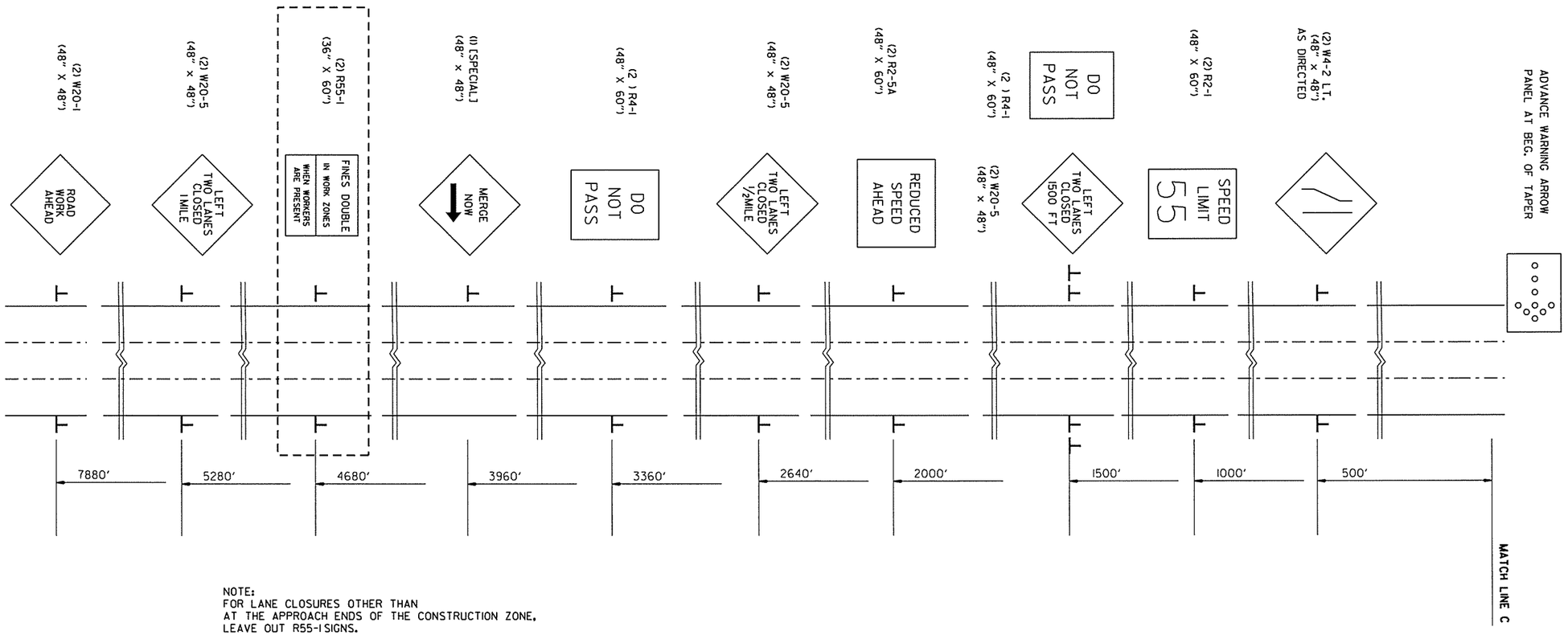
3/2/2015

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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.		061437	49	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



NOTE:
FOR LANE CLOSURES OTHER THAN
AT THE APPROACH ENDS OF THE CONSTRUCTION ZONE,
LEAVE OUT R55-1 SIGNS.

ADVANCE WARNING SIGNS
FOR INSIDE & MIDDLE LANE CLOSURES

3/2/2015

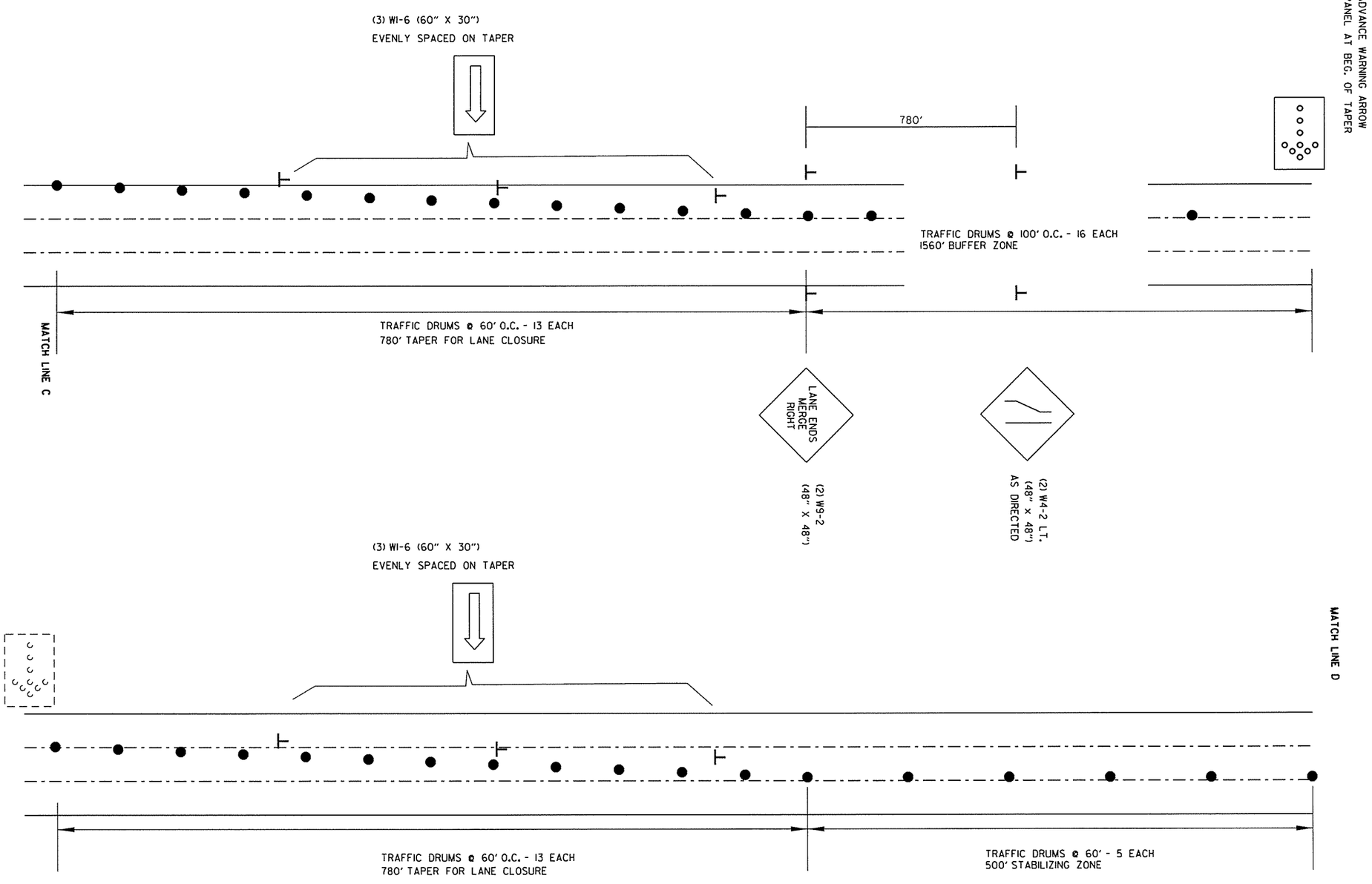
R061437.DGN

LANE CLOSURE
MAINTENANCE OF TRAFFIC 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.		061437	50	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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3-10-15



ADVANCE WARNING SIGNS & TYPICAL TRAFFIC DRUM LAYOUT
FOR INSIDE & MIDDLE LANE CLOSURES

3/2/2015

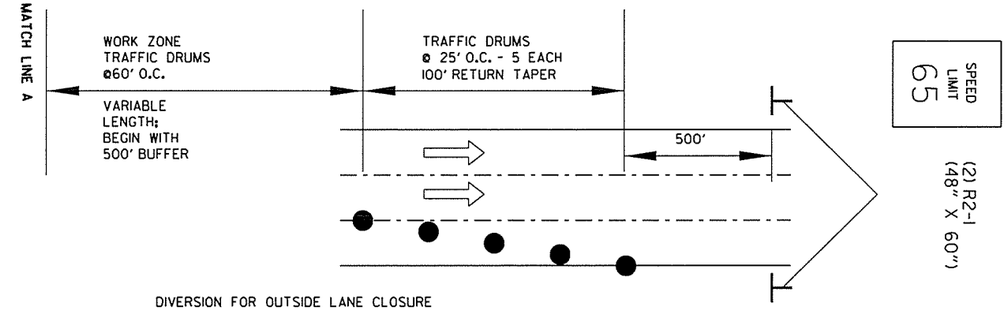
R061437.DGN

LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

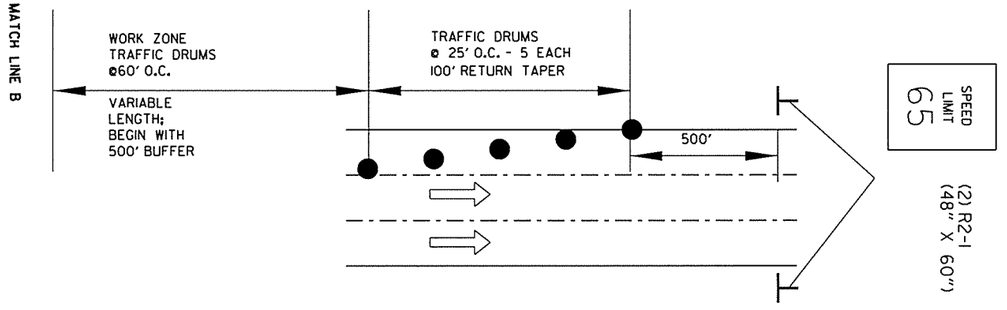
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	51	372

(2) MAINTENANCE OF TRAFFIC DETAILS

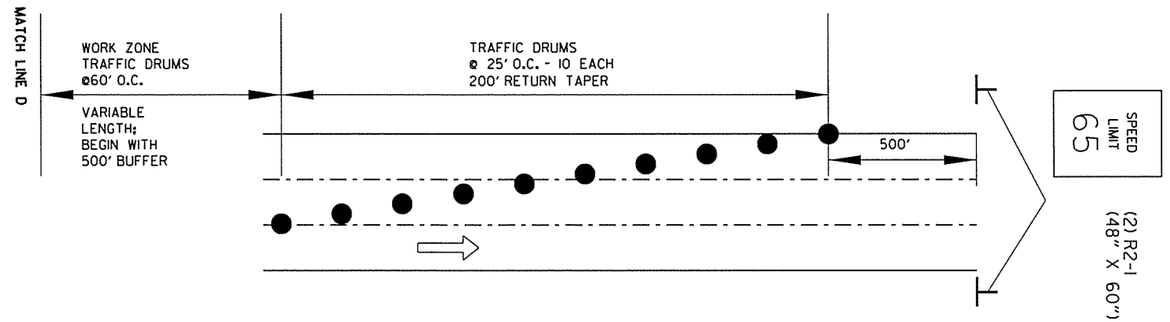
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



DIVERSION FOR OUTSIDE LANE CLOSURE



DIVERSION FOR INSIDE LANE CLOSURE



DIVERSION FOR INSIDE AND MIDDLE LANE CLOSURES

TYPICAL TRAFFIC DRUM LAYOUT FOR DIVERSION OF LANE CLOSURES

3/2/2015

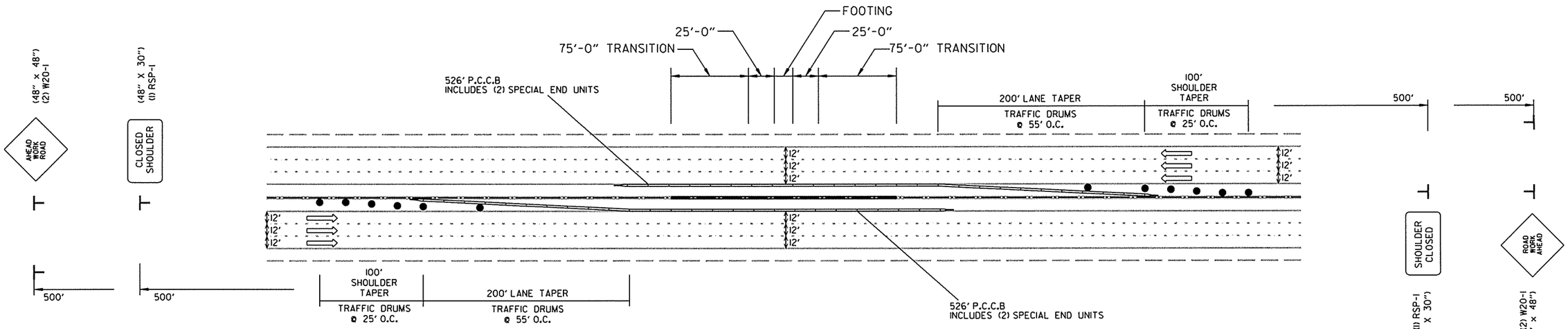
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LANE CLOSURE
MAINTENANCE OF TRAFFIC DETAILS

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.		061437	52	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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DETAIL FOR CONSTRUCTION OF OVERHEAD SIGN STRUCTURE
MEDIAN FOOTING IN CONCRETE MEDIAN BARRIER WALL

NOTE: REFER TO SPECIAL DETAILS FOR ADDITIONAL INFORMATION.

3/4/2015

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MAINTENANCE OF TRAFFIC DETAILS

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.		061437	53	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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3-10-15

P.C. 132+27.99
P.C. 104+98.16
P.T. 110+01.81
PROPOSED ROW & C/A
I-430 SB EXIT TO N. FRONTAGE RD.
N. FRONTAGE RD.
N 60°04'33" E
P.T. 138+67.22
P.C. 138+72.62
P.T. 108+62.91
I-430 SB EXIT TO I-30 EB
N 20°42'58" W
P.I. 140+39.52
P.I. 106+18.97
P.I. 109+80.58
I-430
N 19°59'30" W
P.T. 142+03.86
P.C. 142+45.86
I-30 WB EXIT TO I-430 NB
N 78°27'58" E
P.T. 144+03.46
P.I. 143+25.51
S 11°07'58" E
P.I. 110+72.91
P.I. 113+01.58
PROPOSED CONST. LIMITS
N 35°23'10" W
N. FRONTAGE RD. TO I-430 NB
PROPOSED ROW & C/A
P.C. 114+47.31
P.I. 116+14.96
P.T. 118+45.85
EARTHWORK
4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
PCCB = 1566 LIN. FT. WITH 2 SPECIAL END UNITS
P.C. 118+56.19
100' SHOULDER TAPER
200' LANE TAPER
TRAFFIC DRUMS @ 25' O.C.
TRAFFIC DRUMS @ 55' O.C.
12'
12'

3/2/2015

R061437.DGN

STAGE I
MAINTENANCE OF TRAFFIC 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.		061437	54	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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TRINITY D. SMITH
3-10-15

N

+20.00 195.00

PROPOSED ROW & C/A

P.C. 121+84.42

P.T. 123+84.70

+30.00 149.54

+96.20

100' LANE TAPER

+96.20

PROPOSED CONST. LIMITS

PCCB = 2746 LIN. FT. WITH 2 SPECIAL END UNITS

+60.00 149.84

+45.00 175.00

PROPOSED ROW & C/A

+50.00 190.00

+50.67 143.89

P.I. 121+46.02

I-430

N 19°59'30" W

P.I. 122+89.14

P.I. 129+51.89

12'
12'
11'
11'

PCCB = 1466 LIN. FT. WITH 2 SPECIAL END UNITS

PROPOSED CONST. LIMITS

P.T. 124+02.67

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

P.C. 134+36.83

100' LANE TAPER

+20.00 149.49

+20.00 175.00

PROPOSED ROW & C/A

+60.00 150.96

200' LANE TAPER

TRAFFIC DRUMS @ 55' O.C.

08+

POND

PAVED PARKING

PAVED

3/2/2015

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STAGE I
MAINTENANCE OF TRAFFIC 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.		061437	55	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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TRINITY D. SMITH
3-10-15

N

PROPOSED ROW & C/A

19.00
205.00

60.00
205.00

100.00
190.00

100.00
147.19

51.17
200.27

PROPOSED CONST. LIMITS

PCCB = 2746 LIN. FT.
WITH 2 SPECIAL END UNITS

(3) WI-8
(18" X 24")

P.I. 143+89.55

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

N 19°59'30" W

S 81°01'07" E

FOURCHE CREEK

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

135

140

145

150

I-430

11'
11'
5.19

11'
11'
2.52

12'
12'

11'
11'

12'
12'

PCCB = 346 LIN. FT.
WITH 2 SPECIAL END UNITS

100' SHOULDER TAPER

TRAFFIC DRUMS @ 25' O.C.

200' LANE TAPER

TRAFFIC DRUMS @ 55' O.C.

100' LANE TAPER

+48.93
+48.93
+48.93
+3.76
+3.76

P.C. 134+36.83

69.70

PAVED PARKING

OPEN STORAGE

CONCRETE

PAVED PARKING

PAVED PARKING

3/2/2015

R061437.DGN

STAGE I
MAINTENANCE OF TRAFFIC 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.		061437	56	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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No. 11425
TRINITY D. SMITH
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N

STA. 156+00 INSTALL 12" X 48' TEMPORARY PIPE CULVERT

P.T. 157+76.49

P.T. 158+06.39

P.T. 158+47.43

N 54°40'54" W

TRAFFIC DRUMS @ 50' O.C.

P.T. 158+82.47

N 16°37'38" W

P.C. 158+11.87

+50.97

200' LANE TAPER

TRAFFIC DRUMS @ 55' O.C.

+50.97

100' SHOULDER TAPER

TRAFFIC DRUMS @ 25' O.C.

+50.97

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

STAGECOACH RD. TO I-430 S.B. ENT. RAMP

ROAD CLOSED

16' BARR. TYP. III RT.

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

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

P.C. 151+84.78

P.C. 152+80.76

PROPOSED CONST. LIMITS

PCCB = 2746 LIN. FT. WITH 2 SPECIAL END UNITS

N 2°32'51" E

PROPOSED CONST. LIMITS

PCCB = 1766 LIN. FT. WITH 2 SPECIAL END UNITS

P.T. 153+04.18

P.T. 154+57.38

P.T. 155+81.55

I-430

N 8°01'07" E

11'

11'

STAGECOACH RD.

PAVED PARKING

CURB

CONCRETE ARMOR

RET. WALL

PAVED SHOULDER

PAVED ISLAND

CURB & GUTTER

FRONTAGE ROAD

DIRECTION ONLY

CONCRETE FLUME

FRONTAGE ROAD

CURB

CURB

CURB

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	57	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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3-10-15

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

PROPOSED CONST. LIMITS

PCCB = 1766 LIN. FT. WITH 2 SPECIAL END UNITS

200' LANE TAPER

TRAFFIC DRUMS @ 55' O.C.

100' SHOULDER TAPER

TRAFFIC DRUMS @ 25' O.C.

96.65

12'
11'
11'
12'
12'
12'

N 8°01'07" E

I-430

I-430

PAVED PARKING

PARKING

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015

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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.		061437	58	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
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3-10-15

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

P.T. 142+03.86
P.C. 142+45.86
P.I. 109+80.58
P.I. 140+39.52
P.I. 143+25.51
P.I. 110+72.91
P.T. 144+03.46
P.C. 148+34.96
P.T. 150+97.20
P.C. 151+62.67
P.I. 149+70.09
P.C. 108+34.71
P.T. 113+01.58

TRAFFIC DRUMS @ 50' O.C.

N. FRONTAGE ROAD
PROPOSED CONST. LIMITS
N. FRONTAGE RD. TO I-430 NB
PROPOSED ROW & C/A
EXIST. ROW & PROPOSED C/A
BEGIN C/A
I-430
N 63°29'55" W
S 46°57'21" E

ROAD CLOSED
(1) R11-2 (48" X 30")
16' BARR. TYP. III R1.

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015
R061437.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.		061437	59	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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PAVED PARKING
P.I. 102+12.24
N 19°51'19" E
OTTER CREEK CONNECTOR
P.C. 101+69.82
TRAFFIC DRUMS @ 50' O.C.
10 EACH
P.I. 97+59.06
Δ = 2°29'15" LT.
4" WHITE CONSTRUCTION PAVEMENT MARKING
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
PROPOSED CONST. LIMITS
N 44°04'15" W
N 44°36'41" E
N 42°07'26" E
N 2°58'53" E
12'
12'
I-30
DIVIDER WALL
P.I. 95+36.22
Δ = 1°37'38" RT.
P.I. 100+00.00
Δ = 1°48'02" RT.
4" YELLOW CONSTRUCTION PAVEMENT MARKING
N 43°47'01" E
86
90
95
100
155
160
165

4" WHITE CONSTRUCTION PAVEMENT MARKING
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
4" YELLOW CONSTRUCTION PAVEMENT MARKING
BASS PRO DRIVE
PROPOSED ROW
TRAFFIC DRUMS @ 50' O.C.
CONC. LP BASE
ADD PVMT
N 3°52'28" E
+63
+64
+97
I-30
CAP RBR &
PAVED SHOULDER
DIVIDER WALL
N 43°47'01" E
100
105
110
115
170
175
180

3/2/2015

R061437.DGN

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

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				6	ARK.			
				JOB NO.		061437	60	372

(2) MAINTENANCE OF TRAFFIC DETAILS

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3-10-15

PROPOSED ROW
PROPOSED ROW & C/A
BEGIN C/A
T.C.E.
I-30
N 43°52'28" E
N 43°47'01" E
N 44°26'43" E
N 22°01'28" W
N 30°51'11" E
P.C. 122+49.86
P.C. 189+34.65
P.C. 93+00.85
P.I. 95+28.32
P.T. 97+53.65
P.C. 97+82.50
P.I. 130+73.60
P.I. 102+10.80
P.I. 97+14.01
DRIVER RAIL
115
120
125
185
190
195
100
95
92
80
60
65

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015
R061437.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.		061437	61	372

2 MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

I-430 SB EXIT TO N. FRONTAGE RD.

PROPOSED ROW & C/A

P.I. 136+18.61

P.T. 101+01.81

P.I. 101+13.60

P.C. 104+58.10

N 22°01'28" W

P.C. 132+27.99

N 61°04'33" E

P.T. 138+61.22

P.C. 138+72.62

P.I. 108+62.58

N 20°42'20" W

P.I. 140+39.52

P.I. 140+

P.C. 103+55.00

P.I. 103+71.30

N 68°56'29" W

P.I. 106+18.97

I-430 S.B. EXIT TO I-30 W.B.

FRONTAGE RD.

I-30 952.48

I-430 952.48

PROPOSED CONST. LIMITS

N. FRONTAGE RD. TO I-430 N.B.

460.00

490.00

485.00

P.I. 110+12.16

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

4" WHITE CONSTRUCTION PAVEMENT MARKING

P.I. 143+25.51

N. FRONTAGE RD.

S 81°02'40" E

N 78°27'58" E

P.T. 142+03.86

P.C. 142+45.86

P.T. 144+03.46

TRAFFIC DRUMS @ 50' O.C.

4" YELLOW CONSTRUCTION PAVEMENT MARKING

N

P.I. 108+62.91

P.I. 106+18.97

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015

R061437.DGN

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.		061437	62	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

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

TRAFFIC DRUMS @ 50' O.C.

4" WHITE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

4" YELLOW CONSTRUCTION PAVEMENT MARKING

P.C. 108+34.71
P.I. 149+70.09
P.C. 148+34.96
P.C. 151+62.67
BEGIN C/A
P.I. 150+97.20
P.I. 154+42.67
P.I. 156+61.55
P.I. 159+00.24
P.I. 161+17.00

PROPOSED ROW & C/A
EXIST. ROW & PROPOSED C/A
PROPOSED CONST. LIMITS
PROPOSED ROW
N. FRONTAGE RD. TO I-430 N.B.
N. FRONTAGE RD.
I-430 S.B. EXIT TO I-30 W.B.
I-30
FOOTER AROUND GRAVE PLOT
CEMETERY
POND
EDGE OBSCURED
CURB
RET. WALL
PAVED PARKING
PARKING

S 81°02'49" E
N 63°29'55" W
N 46°51'21" E
N 67°06'51" E
N 68°11'25" E

STAGE I
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015
R061437.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.		061437	63	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

P.C. 132+27.99
P.C. 104+90.16
N. FRONTAGE RD.
PROPOSED WOODS, TWO ELEV
I-430 SB EXIT TO N. FRONTAGE RD.
P.T. 110+01.81
PROPOSED ROW & C/A
585.00
420.00
295.00
295.00
420.00
PROPOSED ROW & C/A
+48.76
200' LANE TAPER
TRAFFIC DRUMS @ 55' O.C.
4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
P.T. 118+15.85
PROPOSED CONST. LIMITS
P.T. 138+67.22
P.C. 138+72.62
N 61°04'33" E
PCCB = 6506 LIN. FT. WITH 2 SPECIAL END UNITS
PROPOSED CONST. LIMITS
P.T. 108+62.91
N 20°42'18" W
P.I. 140+39.52
I-430
N 19°59'30" W
P.I. 106+18.97
P.I. 109+80.58
4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
P.T. 142+03.86
P.C. 142+45.86
N 78°27'58" E
P.I. 110+72.91
PROPOSED CONST. LIMITS
N 35°29'10" W
N. FRONTAGE RD. TO I-430 NB
PROPOSED CONST. LIMITS
PROPOSED ROW & C/A
P.T. 144+03.46
N 02°49'02" E
P.I. 143+25.51
P.T. 113+01.58
PROPOSED ROW & C/A
P.C. 118+46.19
PROPOSE

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015
R061437.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.		061437	64	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

TAPER
DRUMS O.C.
+48.76
100' SHOULDER TAPER
TRAFFIC DRUMS @ 25' O.C.
+48.76
+70.00 195.00
PROPOSED ROW & C/A
P.C. 121+14.42
P.T. 123+84.70
+90.00 149.54
4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
PROPOSED CONST. LIMITS
+60.00 149.84
+45.00 175.00
PROPOSED ROW & C/A
+50.00 190.00
PCCB = 366 LIN. FT. WITH 2 SPECIAL END UNITS
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING
+50.87 139.89
+8.78
100' LANE TAPER
+8.78
I-430 SB EXIT TO N. FRONTAGE RD.
N 14°11'00" W
P.I. 121+46.00
P.I. 122+89.54
I-430
N 19°59'30" W
P.I. 129+51.99
12'
11'
+08
N. FRONTAGE RD. TO I-430 NB
PROPOSED CONST. LIMITS
P.T. 124+02.67
+60.00 150.96
+20.00 175.00
PROPOSED ROW & C/A
4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
+78.24
100' SHOULDER TAPER
TRAFFIC DRUMS @ 25' O.C.
200' LANE TAPER
TRAFFIC DRUMS @ 55' O.C.
PCCB = 346 LIN. FT. WITH 2 SPECIAL END UNITS
100' LANE TAPER
P.C. 134+36.83
+57.79
POND
GO CART TRACK
POOL

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015

R061437.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.		061437	65	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

PROPOSED ROW & C/A
PROPOSED CONST. LIMITS
I-430
FOURCHE CREEK
P.I. 143+89.55
N 19°59'30" W
N 8°01'07" E
P.C. 134+36.83
P.T. 137+57.19

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" DOTTED WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING

100' SHOULDER TAPER
200' LANE TAPER
100' LANE TAPER
TAPER
TRAFFIC DRUMS @ 25' O.C.
TRAFFIC DRUMS @ 55' O.C.
PCCB = 366 LIN. FT. WITH 2 SPECIAL END UNITS

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015
R061437.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.		061437	66	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

200' LANE TAPER
TRAFFIC DRUMS @ 55' O.C.
4" DOTTED WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
100' SHOULDER TAPER
TRAFFIC DRUMS @ 25' O.C.
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING
TRAFFIC DRUMS @ 50' O.C.
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING
PROPOSED CONST. LIMITS
STAGECOACH RD. TO I-430 S.B. ENT. RAMP
PCCB = 466 LIN. FT. WITH 2 SPECIAL END UNITS
16' BARR. TYP. WRT.
(1) Wi-6 (48" X 24")
(1) Rail-2 (48" X 30")
ROAD CLOSED
PROPOSED CONST. LIMITS
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING
PCCB = 366 LIN. FT. WITH 2 SPECIAL END UNITS
4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
STAGECOACH RD.
I-430
N 2°32'51" E
N 8°01'07" E
N 41°40'54" W
N 61°37'38" W
P.C. 151+84.78
P.C. 152+80.76
P.T. 153+04.18
P.I. 154+51.39
P.I. 155+85.55
P.T. 157+15.14
P.I. 158+06.39
P.I. 158+41.43
P.C. 158+82.87
P.C. 158+11.87
150
152
159
160
165
12'
12'
50
55
STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015

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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.		061437	67	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

PROPOSED CONST. LIMITS

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

591

170

12'
12'

N 8°01'07" E

I-430

PAVED SHOULDER

PAVED ISLAND

ACAP/RSR-1 (10)

3/2/2015

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STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	68	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

PCCB = 6506 LIN. FT.
WITH 2 SPECIAL END UNITS

PROPOSED CONST. LIMITS

I-430 SB EXIT TO I-30 WB

PROPOSED ROW & C/A

N. FRONTAGE RD.

TRAFFIC DRUMS @ 50' O.C.

BEGIN C/A

PROPOSED ROW & C/A

T.C.E.

P.C. 122+49.86

P.T. 97+53.65

P.C. 97+82.50

P.T. 130+73.60

P.I. 127+14.07

P.I. 100+71.64

P.C. 93+00.85

P.C. 189+34.65

P.I. 95+28.32

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

I-30

N 43°52'28" E

N 43°47'01" E

N 44°26'13" E

N 30°51'11" E

+34.54 12' 12' 11'

+34.54 12' 12' 12'

PROPOSED

EXISTING

FENCE

CONCRETE APRON

CURB

3/2/2015

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STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	69	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

PROPOSED CONST. LIMITS

I-430 SB EXIT TO I-30 WB

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

PCCB = 6506 LIN. FT.
WITH 2 SPECIAL END UNITS

P.C. 132

P.T. 103+55.00

P.C. 103+71.30

N 38°39'19" W

P.I. 100+77.64

P.I. 200+74.92

P.I. 106+18.97

P.T. 138+67.22

P.C. 138+72.62

P.T. 108+62.91

N 6°04'33" E

N 39°20'42" W

P.I. 140+39.52

P.I. 109+80.58

I-430

P.T. 142+03.86

P.C. 142+45.86

N 2°27'58" E

S 81°02'29" E

P.I. 143+25.51

P.T. 144+03.46

P.I. 110+72.91

P.T. 113+01.58

PROPOSED CONST. LIMITS

PROPOSED RO

S 81°02'29" E

P.C. 108+34.71

205

145

140

135

130

125

120

115

110

105

100

POND

R061437.DGN 3/2/2015

STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	70	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

TRAFFIC DRUMS @ 50' O.C.

4" WHITE CONSTRUCTION PAVEMENT MARKING

4" YELLOW CONSTRUCTION PAVEMENT MARKING

4" WHITE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

PCCB = 6506 LIN. FT.
WITH 2 SPECIAL END UNITS

PROPOSED ROW

PROPOSED CONST. LIMIT

OTTER CREEK CONNECTOR

BASS PRO DRIVE

I-30

N 42°58'53" E

N 44°36'41" E

N 42°07'26" E

N 43°47'01" E

N 43°52'28" E

P.I. 102+12.24

N 19°51'19" E

N 44°04'15" W

P.C. 101+69.82

P.I. 97+59.06
Δ = 2°29'15" LT.

P.I. 95+36.22
Δ = 1°37'38" RT.

P.I. 100+00.00
Δ = 1°48'02" RT.

P.T. 100+00.00
Δ = 1°48'02" RT.

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STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	71	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-10-15

4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS @ 50' O.C.

PROPOSED ROW

PROPOSED ROW & C/A

BEGIN C/A

T.C.E.

PROPOSED CONST. LIMITS

PCCB = 6506 LIN. FT. WITH 2 SPECIAL END UNITS

I-30

N 43°52'28" E

N 43°47'01" E

N 44°26'13" E

N 22°01'28" W

N 30°51'11" E

N. FRONTAGE RD.

P.C. 122+49.86

P.C. 189+34.65

P.C. 93+00.85

P.I. 95+28.32

P.T. 130+73.60

P.T. 197+53.65

P.C. 197+82.50

P.T. 202+41.07

+34.54

12'

11'

PDH23 PDH24 5/8"REBAR 2.0"ALUM CAP

3/2/2015

R061437.DGN

STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	72	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING

TRAFFIC DRUMS @ 50' O.C.

4" YELLOW REMOVABLE CONSTRUCTION PAVEMENT MARKING

PCCB = 6506 LIN. FT. WITH 2 SPECIAL END UNITS

I-430 SB EXIT TO N. FRONTAGE RD.

I-430 S.B. EXIT TO I-30 W.B.

PROPOSED CONST. LIMITS

4" WHITE CONSTRUCTION PAVEMENT MARKING

4" YELLOW CONSTRUCTION PAVEMENT MARKING

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS

3/2/2015

R061437.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.		061437	73	372

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
5/10/15
TRINITY D. SMITH

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

PROPOSED ROW & C/A
P.C. 108+34.71
550.00
675.00
N 63°29'55" W
S 81°02'49" E
N. FRONTAGE RD.
P.I. 149+70.09
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
EXIST. ROW & PROPOSED C/A
P.C. 151+62.67
BEGIN C/A
PROPOSED CONST. LIMITS
S 46°57'21" E
P.C. 148+34.96
P.T. 150+91.20
PROPOSED CONST. LIMITS
TRAFFIC DRUMS @ 50' O.C.
32 EACH
4" WHITE CONSTRUCTION PAVEMENT MARKING
4" YELLOW CONSTRUCTION PAVEMENT MARKING
PROPOSED ROW
P.I. 154+42.67
P.T. 154+89.65
P.I. 161+17.00
N 67°06'51" E
12'
FOOTER AROUND GRAVE PLOT
P.I. 159+10.24
P.I. 156+61.55
P.T. 156+81.25
12' IN 68°11'25" E
I-30
320' LANE TAPER
GATE
CURB
PNail97 PDx8 SPK
PNail94 PDx8" SPIKE WOODS
PNail95 PDx8" SPIKE
PNail96 PDx8" SPIKE
PNail93 PDx8" SPIKE WOODS
PNail91 PDx8" SPIKE WOODS
PNail92 PDx8" SPIKE WOODS & SPIKE WOODS
PN#98 PDx24 30" IN CONC BASE OF
POND
I-30 W.B. EXIT TO I-430 N.B.
145
150
155
160
101
103
210
215

3/2/2015

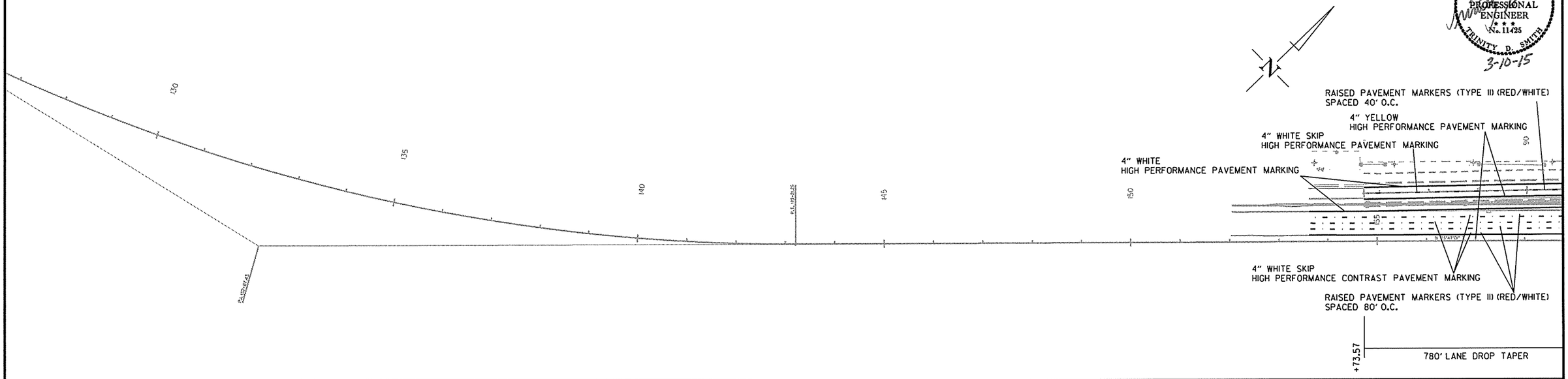
R061437.DGN

STAGE 2
MAINTENANCE OF TRAFFIC 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.		061437	74	372

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



PERMANENT PAVEMENT MARKING DETAILS

3/2/2015

R061437.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.		061437	75	372

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

8" WHITE DOTTED
HIGH PERFORMANCE PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE SKIP
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE SKIP
HIGH PERFORMANCE PAVEMENT MARKING

RAISED PAVEMENT MARKERS (TYPE II) (RED/WHITE)
SPACED 40' O.C.

4" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

RAISED PAVEMENT MARKERS (TYPE II) (RED/WHITE)
SPACED 40' O.C.

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

RAISED PAVEMENT MARKERS (TYPE II) (RED/WHITE)
SPACED 80' O.C.

4" WHITE SKIP
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

3/2/2015

R061437.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.		061437	76	372

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE DOTTED
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE SKIP
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

700' ACCELERATION LANE

300' TAPER

RAISED PAVEMENT MARKERS (TYPE II) (RED/WHITE)
SPACED 80' O.C.

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE DOTTED
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE DOTTED
HIGH PERFORMANCE PAVEMENT MARKING

8" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

4" WHITE
HIGH PERFORMANCE PAVEMENT MARKING

FOURCHE CREEK

4" YELLOW
HIGH PERFORMANCE PAVEMENT MARKING

RAISED PAVEMENT MARKERS (TYPE II) (RED/WHITE)
SPACED 80' O.C.

4" WHITE SKIP
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING

PERMANENT PAVEMENT MARKING DETAILS

3/2/2015

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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
9-29-15				6	ARK.			
				JOB NO.		061437	77	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
9-29-15

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	STAGE 1	STAGE 2	END OF JOB	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	THERMOPLASTIC PAVEMENT MARKINGS		HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	HIGH PERFORMANCE PAVEMENT MARKING			
							TYPE II (WHITE/RED)	WORDS	ARROWS	4" WHITE	WHITE	4" WHITE (SKIP LINE)	YELLOW	8" WHITE
	LIN. FT. - EACH			LIN. FT.		LIN. FT.	EACH	EACH		LIN. FT.	LIN. FT.			
REMOVAL OF PERMANENT PAVEMENT MARKINGS	11640	7845		19485										
CONSTRUCTION PAVEMENT MARKINGS	18435	10587			29022									
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	12640	32684				45324								
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			756				756							
THERMOPLASTIC PAVEMENT MARKINGS WORDS			2					2						
THERMOPLASTIC PAVEMENT MARKINGS ARROWS			2						2					
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING WHITE (4")			7198							7198				
HIGH PERFORMANCE PAVEMENT MARKING WHITE (4")			21266								21266			
HIGH PERFORMANCE PAVEMENT MARKING (SKIP LINE) WHITE (4")			1861									1861		
HIGH PERFORMANCE PAVEMENT MARKING YELLOW (4")			20989										20989	
HIGH PERFORMANCE PAVEMENT MARKING WHITE (8")			5982											5982
TOTALS:				19485	29022	45324	756	2	2	7198	21266	1861	20989	5982

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

NOTE: NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED UNTIL A MINIMUM OF 3 DAYS AFTER ALL MAIN LANE PAVING HAS BEEN COMPLETED. IN ADDITION, NO PERMANENT PAVEMENT MARKINGS SHALL BE PLACED DURING THE TIME PERIOD FROM DECEMBER 21 TO MARCH 15, INCLUSIVE.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	LANE CLOSURE	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	BARRICADES (TYPE III)	FURNISHING & INSTALLING PRECAST CONC. BARRIER	RELOCATING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN.BARR. (REPAIR)	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN
										RIGHT						
			LIN. FT. - EACH				NO.	SQ. FT.	EACH	LIN. FT.			EACH		DAY	WEEK
W20-1	ROAD WORK 1500 FT.	48"x48"	1	1		1	1	16.0								
W20-1	ROAD WORK 1000 FT.	48"x48"	1	1		1	1	16.0								
W20-1	ROAD WORK 500 FT.	48"x48"	1	1		1	1	16.0								
W20-1	ROAD WORK AHEAD	48"x48"	4	16		16	16	256.0								
W-5-1	ROAD NARROWS 500'	48"x48"	8	10		10	10	160.0								
R11-2	ROAD CLOSED	48"x30"	2	2		2	2	20.0								
OM-3L	OBJECT MARKER	12"x36"	12	24		24	24	72.0								
OM-3R	OBJECT MARKER	12"x36"	16	32		32	32	96.0								
W1-8	CHEVRONS	18"x24"	3			3	3	9.0								
W8-1	BUMP	30"x30"		2		2	2	12.5								
W20-1	ROAD WORK 1 MILE	48"x48"	4	4	4	4	4	64.0								
W20-1	ROAD WORK 1/2 MILE	48"x48"	4	4	4	4	4	64.0								
W20-1	ROAD WORK 1500 FT.	48"x48"	4	4	4	4	4	64.0								
W20-5	RIGHT LANE CLOSED 1 MILE	48"x48"			4	4	4	64.0								
W20-5	RIGHT LANE CLOSED 1/2 MILE	48"x48"			4	4	4	64.0								
W20-5	RIGHT LANE CLOSED 1500 FT.	48"x48"			4	4	4	64.0								
W20-5	LEFT LANE CLOSED 1 MILE	48"x48"			2	2	2	32.0								
W20-5	LEFT LANE CLOSED 1/2 MILE	48"x48"			2	2	2	32.0								
W20-5	LEFT LANE CLOSED 1500 FT	48"x48"		1	2	3	3	48.0								
W20-1	ROAD WORK 1000 FT.	48"x48"		1		1	1	16.0								
W20-1	ROAD WORK 500 FT.	48"x48"		1		1	1	16.0								
W20-5	LEFT TWO LANES CLOSED 1 MILE	48"x48"			2	2	2	32.0								
W20-5	LEFT TWO LANES CLOSED 1/2 MILE	48"x48"			2	2	2	32.0								
W20-5	LEFT TWO LANES CLOSED 1500 FT.	48"x48"			2	2	2	32.0								
W9-2	LANE ENDS MERGE RIGHT	48"x48"			2	2	2	32.0								
W20-1	ROAD WORK AHEAD	48"x48"		6	4	6	6	96.0								
G20-2	END ROAD WORK	48"x24"	11	11		11	11	88.0								
R2-5A	REDUCED SPEED AHEAD	48"x60"			2	2	2	40.0								
W1-6	LARGE ARROW	60"x30"		1	6	6	6	75.0								
SPECIAL	MERGE NOW W/ARROW GRAPHIC (RIGHT)	48"x48"			1	1	1	16.0								
SPECIAL	MERGE NOW W/ARROW GRAPHIC (LEFT)	48"x48"			1	1	1	16.0								
R4-1	DO NOT PASS	48"x60"			4	4	4	80.0								
W4-2 RT	RIGHT LANE ENDS GRAPHIC	48"x48"			2	2	2	32.0								
W4-2 LT	LEFT LANE ENDS GRAPHIC	48"x48"			4	4	4	64.0								
R55-1	FINES DOUBLE IN WORK ZONES	36"x60"	4	4	4	4	4	60.0								
RSP-1	SHOULDER CLOSED	48"x30"	10	10	2	10	10	100.0								
R2-1	SPEED LIMIT 55	48"x60"			2	2	2	40.0								
R2-1	SPEED LIMIT 65	48"x60"			2	2	2	40.0								
	TRAFFIC DRUMS		243	251	227	478			478							
	TYPE III BARRICADE-RT. (16')		2	2		2				32						
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		7456	1000		8456					8456					
	RELOCATING PRECAST CONCRETE BARRIER			7456		7456						7456				
	TEMPORARY IMPACT ATTENUATION BARRIER		1			1							1			
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1			1								1		
	ADVANCE WARNING ARROW PANEL				2	2									330	
	PORTABLE CHANGEABLE MESSAGE SIGN		2	2		2										168
TOTALS:							2076.5		478	32	8456	7456	1	1	330	168

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

9/2/2015

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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.		061437	78	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

AUTOMATED WORK ZONE INFORMATION SYSTEM

LOCATION	FURNISH AND INSTALL VEHICLE DETECTION SYSTEM	FURNISH AND INSTALL VARIABLE MESSAGE SIGN	FURNISH AND INSTALL PUBLIC NOTIFICATION SYSTEM	FURNISH AND INSTALL CLOSED CIRCUIT TELEVISION SYSTEM	*AWIS OPERATION	AWIS MOBILIZATION	*DEVICE RELOCATION
	EACH	EACH	EACH	EACH	MONTHS	LUMP SUM	EACH
1 MILE SPACING ON I-30 W.B. AND I-430 S.B. APPROACHING THE WORK ZONE	6						
1/2 MILE SPACING WITHIN WORK ZONE	6						
I-430 S.B. - IN ADVANCE OF EXITS: COL. GLENN RD., STAGECOACH RD., AND OTTER CREEK RD. I-30 W.B. - IN ADVANCE OF EXITS: UNIVERSITY AVE., MCDANIEL DR., BASELINE RD. AND OTTER CREEK RD.		7					
I-430 S.B. - COL. GLENN RD. I-30 W.B. - UNIVERSITY AVE.			2				
I-430 S.B. - STAGECOACH RD. AND I-30				2			
					18	1.00	
* ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER							10
TOTALS:	**12**	**7**	**2**	**2**	**18**	**1.00**	**10**

* QUANTITIES ESTIMATED.
REFER TO SECTION 104.03 OF THE STD. SPECS.

REMOVAL AND DISPOSAL ITEMS

STATION	STATION	LOCATION	W.R.S.F.	CONCRETE DITCH PAVING	CONCRETE MEDIAN BARRIER	APPROACH GUTTER	CONCRETE ISLANDS	SIGN FOUNDATIONS	GUARDRAIL	LUMINAIRE POLES	SIGNS	POST
			LIN. FT.	SQ. YD.	LIN. FT.	EACH	SQ. YD.	EACH	LIN. FT.	EACH	EACH	EACH
120+62		RT. SIDE OF N.B. I-430						2			1	
129+03	129+53	LT. SIDE OF N.B. I-430	50	22								
131+00	133+01	RT. SIDE OF N.B. I-430							200			
133+04		RT. SIDE OF N.B. I-430				1						
133+20		LT. SIDE OF N.B. I-430				1						
135+45		RT. SIDE OF S.B. I-430				1						
135+59	137+59	LT. SIDE OF S.B. I-430							200			
141+91	145+52	RT. SIDE OF N.B. I-430	361	160								
145+69		LT. SIDE OF N.B. I-430				1						
145+99		RT. SIDE OF N.B. I-430				1						
148+33	150+33	LT. SIDE OF S.B. I-430							200			
149+11		RT. SIDE OF S.B. I-430				1						
157+30		RT. SIDE OF N.B. I-430								1		
157+48		RT. SIDE OF N.B. I-430						1			1	
157+64		RT. SIDE OF N.B. I-430								1		
154+74	166+80	LT. SIDE OF W.B. I-30			1206							
177+57	190+26	LT. SIDE OF W.B. I-30			1269							
177+98	179+48	LT. SIDE OF W.B. I-30							150			
190+28	191+53	LT. SIDE OF W.B. I-30							125			
235+57	237+82	LT. SIDE OF W.B. I-30							225			
237+82	240+00	LT. SIDE OF W.B. I-30			218							
95+91	96+80	LT. SIDE OF N. FRONTAGE RD.					154					
103+54		LT. SIDE OF N. FRONTAGE RD.								1		
103+82	108+10	N. FRONTAGE RD.					240					
104+85		LT. SIDE OF N. FRONTAGE RD.								1		
107+00		LT. SIDE OF N. FRONTAGE RD.									2	
110+40		LT. SIDE OF N. FRONTAGE RD.						12			1	
110+40		LT. SIDE OF N. FRONTAGE RD.						2			1	
141+75	143+75	LT. SIDE OF N. FRONTAGE RD.				1			200			
148+52	150+27	LT. SIDE OF N. FRONTAGE RD.							175			
155+60		LT. SIDE OF N. FRONTAGE RD.										1
156+62		LT. SIDE OF N. FRONTAGE RD.						2			1	
TOTALS:			411	182	2693	7	394	19	1475	4	7	1

REMOVAL AND DISPOSAL OF CULVERTS AND DROP INLETS

STATION	DESCRIPTION	PIPE CULVERTS	DROP INLETS
		EACH	EACH
153+78	N. FRONT. RD. - 18" x 23' C.M. PIPE CULV'T.	1	
161+25	I-30 W.B. ACCELERATION LANE - D.I.		1
156+00	STAGECOACH RD. TO I-430 S.B. TEMP. RAMP - TEMP. PIPE CULVERT	1	
TOTALS:		2	1

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

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	FENCE	GATES
			LIN. FT.	EACH
95+82	109+03	LEFT OF I-430 SOUTHBOUND EXIT TO I-30 WESTBOUND	1240	
109+48	122+60	RIGHT OF I-430	1312	
129+60	133+54	LEFT OF I-430	424	
136+46	141+00	LEFT OF I-430	496	
121+62		LEFT OF N. FRONTAGE RD.		1
TOTALS:			3472	1

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QUANTITIES

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				6	ARK.			
				JOB NO.		061437	79	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

CLEARING AND GRUBBING

STATION	STATION	LOCATION	CLEARING	GRUBBING
			STATION	
125+00	135+00	RIGHT OF N. FRONTAGE ROAD	10	10
141+00	145+00	LEFT OF N. FRONTAGE ROAD	4	4
145+00	152+00	LEFT AND RIGHT OF N. FRONTAGE ROAD	7	7
152+00	154+00	RIGHT OF N. FRONTAGE ROAD	2	2
154+00	159+00	LEFT OF N. FRONTAGE ROAD	5	5
95+00	110+00	LEFT OF I-430 SOUTHBOUND EXIT TO I-30 WESTBOUND	15	15
105+00	109+00	RIGHT OF I-430 SOUTHBOUND EXIT TO N. FRONTAGE ROAD	4	4
109+00	111+00	LEFT AND RIGHT OF I-430 SOUTHBOUND EXIT TO N. FRONTAGE ROAD	2	2
112+00	113+00	RIGHT OF I-430 SOUTHBOUND EXIT TO N. FRONTAGE ROAD	1	1
113+00	114+00	LEFT AND RIGHT OF I-430 SOUTHBOUND EXIT TO N. FRONTAGE ROAD	1	1
114+00	117+00	LEFT OF I-430 SOUTHBOUND EXIT TO N. FRONTAGE ROAD	3	3
110+00	111+00	LEFT AND RIGHT OF N. FRONTAGE ROAD TO I-430 NORTHBOUND	1	1
111+00	112+00	RIGHT OF N. FRONTAGE ROAD TO I-430 NORTHBOUND	1	1
117+00	118+00	LEFT OF N. FRONTAGE ROAD TO I-430 NORTHBOUND	1	1
118+00	119+00	LEFT AND RIGHT OF N. FRONTAGE ROAD TO I-430 NORTHBOUND	1	1
119+00	123+00	RIGHT OF N. FRONTAGE ROAD TO I-430 NORTHBOUND	4	4
110+00	119+00	LEFT OF I-430	9	9
123+00	127+00	RIGHT OF I-430	4	4
127+00	133+00	LEFT AND RIGHT OF I-430	6	6
133+00	145+00	LEFT OF I-430	12	12
148+00	152+00	LEFT OF I-430	4	4
154+00	162+00	LEFT OF I-430	8	8
164+00	166+00	LEFT OF I-430	2	2
151+00	158+00	LEFT OF STAGECOACH TO I-430 SOUTHBOUND	7	7
TOTALS:			114	114

EROSION CONTROL MATTING

STATION	STATION	LOCATION	LENGTH	CLASS 3
			LIN. FT.	SQ. YD.
* ENTIRE	PROJECT	TO BE USED IF AND WHERE	1000.0	888.9
		DIRECTED BY THE ENGINEER		
TOTAL:				888.9

NOTE: AVERAGE WIDTH = 8'-0"
*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

CONCRETE COMBINATION CURB AND GUTTER

STATION	STATION	LOCATION	TYPE A (1' 6")
			LIN. FT.
97+57.40	106+42.60	LT. OF N. FRONTAGE ROAD	910
106+84.99	109+82.40	LT. OF N. FRONTAGE ROAD	332
110+14.71	111+00.00	LT. OF N. FRONTAGE ROAD	97
TOTAL:			1339

EARTHWORK

STATION	STATION	LOCATION / DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	SELECTED MATERIAL (CLASS SM-3)
			CU. YD.		
ENTIRE	PROJECT	I-430	22666.88	26997.47	
ENTIRE	PROJECT	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP	23209.51	11237.75	
ENTIRE	PROJECT	I-430 S.B. TO I-30 W.B. RAMP	3964.43	5462.76	
ENTIRE	PROJECT	I-30 W.B. ACCELERATION LANE	3196.00	945.00	
ENTIRE	PROJECT	N. FRONTAGE RD.	6150.20	4561.00	
ENTIRE	PROJECT	STAGECOACH ENTRANCE RAMP	3702.30	1098.00	
ENTIRE	PROJECT	TEMPORARY STAGECOACH ENTRANCE RAMP	349.00	1895.00	
ENTIRE	PROJECT	APPROACHES		585.00	
ENTIRE	PROJECT	TEMPORARY APPROACHES			
114+00.00	122+41.34	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP - UNDERCUT FOR UNSUITABLE EXISTING MATERIAL	8390.00		8390.00
TOTALS:			71628.32	52781.98	8390.00

EROSION CONTROL

STATION	STATION	LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL									
			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	CLEARING AND GRUBBING												7596			281
ENTIRE	PROJECT	STAGE 1						14.94	14.94	304.8	616	93	704	6864	1000	1000	1339
ENTIRE	PROJECT	STAGE 2						7.43	7.43	151.6	308	51	198	1472			93
ENTIRE	PROJECT	PERMANENT SEEDING	15.08	30.16	15.08	1538.2	15.08										
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.								5.59	5.59	114.0	242	36	220	2084	133	133	241
TOTALS:			15.08	30.16	15.08	1538.2	15.08	27.96	27.96	570.4	1166	180	1122	18016	1133	1133	1954

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 ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

3/2/2015

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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.		061437	80	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

WIRE ROPE SAFETY FENCE

STATION	STATION	LOCATION	WIRE ROPE SAFETY FENCE	*W.R.S.F. ANCHOR
			LIN. FT.	EACH
129+03	131+19	LT. OF I-430 N.B.	216	1
141+91	143+66	LT. OF I-430 N.B.	175	1
TOTALS:			391	2

*SHOWN FOR INFORMATION ONLY.

4" PIPE UNDERDRAIN

	STATION	STATION	LOCATIONS	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
				LIN. FT.	EACH
*	ENTIRE PROJECT TO BE USED IF AND			1000	5
	WHERE DIRECTED BY THE ENGINEER				
	TOTALS:			1000	5

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

CONCRETE DITCH PAVING

	STATION	STATION	LOCATION	LENGTH	"W"	CONC. DITCH PAVING (TYPE B)	SOLID SODDING	WATER
				LIN. FT.	FEET	SQ. YD.	SQ. YD.	M. GAL.
	86+75	122+50	RT. OF N. FRONTAGE RD.	3575.00	4	1598.47	1588.89	20.02
	129+03	130+59	LT. SIDE OF I-430 N.B.	156.00	4	61.19	141.18	1.78
	141+91	143+07	LT. SIDE OF I-430 N.B.	116.00	4	42.94	104.10	1.31
*	ENTIRE	PROJECT	TO BE USED IF AND WHERE	1000.00	6	666.67	444.44	5.60
			DIRECTED BY THE ENGINEER					
	TOTALS:					2369.27	2278.61	28.71

BASIS OF ESTIMATE:
WATER.....12.6 GAL. / SQ. YD. OF SOLID SODDING.
*QUANTITIES ESTIMATED.
SEE SECTION 104.03 OF THE STD. SPECS.

CONCRETE ISLAND

STATION	STATION	LOCATION	CURB FACE TYPE	CONCRETE ISLAND
				SQ.YD.
96+00.00	96+69.00	N. FRONTAGE RD.	B	25
TOTAL:				25

GUARDRAIL

STATION	STATION	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
			LIN. FT.	EACH	
109+56.86	111+75.61	LT. SIDE OF S.B. I-430	150	1	1
130+55.54	132+99.29	RT. SIDE OF N.B. I-430	175	1	1
130+69.53	133+13.28	LT. SIDE OF N.B. I-430	175	1	1
135+53.51	137+97.26	RT. SIDE OF S.B. I-430	175	1	1
135+74.83	138+18.58	LT. SIDE OF S.B. I-430	175	1	1
143+17.93	145+61.68	LT. SIDE OF N.B. I-430	175	1	1
143+48.62	145+92.37	RT. SIDE OF N.B. I-430	175	1	1
148+29.51	150+98.26	LT. SIDE OF S.B. I-430	200	1	1
148+82.29	151+26.04	RT. SIDE OF S.B. I-430	175	1	1
163+95.52	166+64.27	LT. SIDE OF S.B. I-430	200	1	1
92+14.20	94+32.95	LT. SIDE OF I-430 S.B. TO I-30 W.B. RAMP	150	1	1
141+80.54	143+99.29	LT. SIDE OF N. FRONTAGE RD.	150	1	1
TOTALS:			2075	12	12

FENCING

STATION	STATION	LOCATION	WIRE FENCE (TYPE A)
			LIN. FT.
149+59	153+35	LEFT OF N. FRONTAGE ROAD	367
129+60	134+50	LEFT OF I-430	501
135+51	141+00	LEFT OF I-430	586
106+26	122+60	RIGHT OF I-430	1832
TOTAL:			3286

ACHM PATCHING OF EXISTING ROADWAY

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

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

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTER (TYPE AT)	APPROACH GUTTER (TYPE SPECIAL I)	APPROACH SLABS	REINFORCING STEEL-RDWY. (GR 60)	AGGREGATE BASE CRS. (CLASS 7)
			CU.YD.	CU.YD.	CU.YD.	POUND	TON
132+67.55	133+04.05	RT. SIDE OF I-430 N.B.	18.78			1573	
132+83.68	133+20.18	LT. SIDE OF I-430 N.B.	12.06			1091	
133+18.46	133+54.96	I-430 S.B.			49.15	5860	68.25
133+26.85	133+63.35	LT. SIDE OF I-430 S.B.		11.55		630	
135+44.96	135+81.46	RT. SIDE OF I-430 S.B.	12.06			1091	
135+59.41	135+95.91	I-430 S.B.			49.15	5860	68.25
135+65.43	136+01.93	LT. SIDE OF I-430 S.B.		11.55		630	
144+58.57	144+95.07	LT. SIDE OF I-430 S.B.		11.55		630	
144+70.30	145+06.80	I-430 S.B.			24.58	2890	34.00
145+32.18	145+68.68	LT. SIDE OF I-430 N.B.	12.06			1091	
145+62.30	145+98.80	RT. SIDE OF I-430 N.B.	18.78			1573	
148+18.99	148+55.49	LT. SIDE OF I-430 S.B.		11.55		630	
148+31.80	148+68.30	I-430 S.B.			24.58	2890	34.00
148+74.43	149+10.93	RT. SIDE OF I-430 S.B.	12.06			1091	
141+73.77	142+10.27	LT. SIDE OF N. FRONTAGE RD.	12.06			1091	
TOTALS:			97.86	46.20	147.46	28621	204.50

NOTE: USE T =20" FOR 6' SHOULDER.

CONCRETE BARRIER WALL

STATION	STATION	LOCATION	PIER PROTECTION TYPE A	MEDIAN TYPE B	MEDIAN TYPE C	MEDIAN TYPE SP-1
			LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.
109+12.12	109+57.44	LT. SIDE OF I-430 S.B.	45.32			
162+02.84	163+96.12	LT. SIDE OF I-430 S.B.	193.28			
154+73.57	177+15.00	LT. SIDE OF I-30 W.B.		2241.43		
177+15.00	183+91.00	LT. SIDE OF I-30 W.B.			676.00	
183+91.00	184+91.00	LT. SIDE OF I-30 W.B.				100.00
185+09.00	186+09.00	LT. SIDE OF I-30 W.B.				100.00
186+09.00	190+53.21	LT. SIDE OF I-30 W.B.			444.21	
183+91.00	184+91.00	MEDIAN I-30				100.00
185+09.00	186+09.00	MEDIAN I-30				100.00
155+50.00	158+49.05	RT. SIDE OF N. FRONTAGE RD.			299.05	
TOTALS:			238.60	2241.43	1419.26	400.00

3/2/2015

R061437.DGN

QUANTITIES

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
11-13-15				6	ARK.			
				JOB NO.		061437	81	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
11-17-15

RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS

STATION	STATION	LOCATION	* RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS
			LIN.FT.
107+69	118+41	LT. SIDE OF I-430 S.B.	1072
122+41	132+68	RT. SIDE OF I-430 N.B.	1027
127+00	133+27	LT. SIDE OF I-430 S.B.	627
136+01	144+59	LT. SIDE OF I-430 S.B.	858
148+56	167+87	LT. SIDE OF I-430 S.B.	1931
154+74	192+25	LT. SIDE OF I-30 W.B.	3751
TOTAL:			9266

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

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
			FEET	SQ. YD.
84+68.32	85+68.32	N. FRONTAGE RD.	22	244.44
142+08.83	143+08.83	N. FRONTAGE RD.	22	244.44
159+49.05	160+49.05	N. FRONTAGE RD.	22	244.44
157+75.00	158+75.00	STAGECOACH RD. TO I-430 S.B. ENT. RAMP	VAR.	265.19
TOTAL:				998.51

NOTE: AVERAGE MILLING DEPTH 1".

CONCRETE WALKS

STATION	STATION	LOCATION	LENGTH	CONCRETE WALKS
			LIN. FT.	SQ.YD.
97+69.75	105+93.04	LT. OF N. FRONTAGE RD.	823	457
107+41.01	109+62.50	LT. OF N. FRONTAGE RD.	221	123
110+47.51	111+00.00	LT. OF N. FRONTAGE RD.	52	29
TOTAL:				609

WHEELCHAIR RAMPS

STATION	LOCATION	TYPE 3
		SQ.YD.
97+69.75	LT. OF N. FRONTAGE RD.	6.2
105+93.04	LT. OF N. FRONTAGE RD.	8.9
107+41.01	LT. OF N. FRONTAGE RD.	9.4
109+62.50	LT. OF N. FRONTAGE RD.	7.2
110+47.51	LT. OF N. FRONTAGE RD.	8.2
TOTAL:		39.9

STRUCTURES

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT (CLASS III) 18"	24"	36"	48"	(CLASS V) 24"	PIPE CULVERT STORM DRAIN ALTERNATES 1 & 2 18"	FLARED END SECTIONS FOR R.C. PIPE CULVERTS 18"	24"	36"	48"	TEMPORARY CULVERTS 12"	DROP INLETS TYPE MO	RM	ST	MODIFYING DROP INLETS	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	
113+86	I-430 - CONST. DROP INLET WITH PIPE OUTLET		10						1														5	0.06	PCC-1, FES-1, FES-2
121+40	I-430 - EXTEND PIPE INLET				28						1												31	0.39	PCC-1, FES-1, FES-2
129+70	I-430 - EXTEND PIPE OUTLET		32						1														5	0.06	PCC-1, FES-1, FES-2
132+55	I-430 - EXTEND PIPE OUTLET				26						1												29	0.37	PCC-1, FES-1, FES-2
136+00	I-430 - CONST. DROP INLET WITH PIPE OUTLET					176			1					1									5	0.06	PCC-1, FES-1, FES-2, FPC-9D
106+80	N. FRONT. RD. TO I-430 N.B. ENTRANCE RAMP - CONST. DROP INLET WITH PIPE OUTLET		72						1					1									5	0.06	PCC-1, FES-1, FES-2, FPC-9D
117+30	N. FRONT. RD. TO I-430 N.B. ENTRANCE RAMP - CONST. R.C. PIPE CULV'T.		90						2														9	0.11	PCC-1, FES-1, FES-2
96+00	I-430 S.B. TO I-30 W.B. EXIT RAMP - CONST. DROP INLET WITH PIPE OUTLET					70			1					1									5	0.06	PCC-1, FES-1, FES-2, FPC-9D
97+84	I-430 S.B. TO I-30 W.B. EXIT RAMP - EXTEND PIPE OUTLET		22						1														5	0.06	PCC-1, FES-1, FES-2
154+80	I-30 W.B. ACCEL. LANE - MODIFY DROP INLET															1									FPC-9S
156+80	I-30 W.B. ACCEL. LANE - MODIFY DROP INLET															1									FPC-9S
158+80	I-30 W.B. ACCEL. LANE - MODIFY DROP INLET															1									FPC-9S
161+25	I-30 W.B. ACCEL. LANE - CONST. DROP INLET AND EXTEND PIPE OUTLET	16						1							1										PCC-1, FES-2, FES-2, FPC-9S
167+50	I-30 W.B. ACCEL. LANE - MODIFY DROP INLET															1									FPC-9S
170+33	I-30 W.B. ACCEL. LANE - MODIFY DROP INLET															1									FPC-9S
98+50	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						97						1												PCC-1, FPC-9E, FPC-9M
99+51	N. FRONT. RD. - CONST. DROP INLET WITH R.C. STUB OUTLET		36						1				1										5	0.06	PCC-1, FES-1, FES-2, FPC-9E, FPC-9M
100+10	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						56						1												PCC-1, FPC-9E, FPC-9M
101+00	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						86						1												PCC-1, FPC-9E, FPC-9M
103+00	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						8						1												PCC-1, FPC-9E, FPC-9M
105+00	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						72						1												PCC-1, FPC-9E, FPC-9M
107+50	N. FRONT. RD. - CONST. DROP INLET WITH PIPE OUTLET						246						1												PCC-1, FPC-9E, FPC-9M
117+98	N. FRONT. RD. - MODIFY DROP INLET															1									
150+10	N. FRONT. RD. - RETAIN AND EXTEND R.C. PIPE CULV'T.		4						1														5	0.06	PCC-1, FES-1, FES-2
157+50	N. FRONT. RD. - RETAIN AND EXTEND R.C. PIPE CULV'T. & MODIFY D.I.			4						1						1							13	0.16	PCC-1, FES-1, FES-2, FPC-9S
156+00	STAGECOACH RD. TO I-430 S.B. TEMP. ENT. RAMP - TEMP. CULVERT											48													
SUBTOTALS:		16	266	4	54	246	565	1	10	1	2	48	7	3	1	7							122	1.51	
	STRUCTURES OVER 20' - 0" SPAN																								
157+86	I-430 - EXTEND TRI. 6' X 4' R.C. BOX CULV'T.																6	4	20	33.49	5998	17	10	0.13	W-X15, W-X153-1, R-315X-0, R-315X-1, RCB-1, RCB-2, RCB-3
SUBTOTALS:																				33.49	5998	17	10	0.13	
TOTALS:		16	266	4	54	246	565	1	10	1	2	48	7	3	1	7				33.49	5998	17	132	1.64	

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.

11/13/2015

R061437.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.		061437	82	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

BENCH MARKS

STATION	LOCATION	BENCH MARKS
		EACH
133+46	BRIDGE END	1
145+25	BRIDGE END	1
TOTAL:		2

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

DRIVEWAYS & TURNOUTS

STATION	SIDE	LOCATION	WIDTH	**MODIFIED CURB		ACHM SURFACE COURSE (1/2") 220 LBS. PER SQ. YD. (PG 64-22)		AGGREGATE BASE COURSE (CLASS 7)	SIDE DRAINS	STANDARD DRAWINGS
									18"	
			FEET	STATION	STATION	SQ. YD.	TON	TON	LIN. FT.	
102+63	LT.	N. FRONTAGE RD.	16	102+41	102+85	49.40	5.43	20.17		
106+64	LT.	N. FRONTAGE RD.	40			472.60	51.99	192.98		
109+43	LT.	N. FRONTAGE RD.	30			140.80	15.49	57.49		
153+78	LT.	N. FRONTAGE RD.	16			97.80	10.76	39.94	58	PCC-1, PCM-1, PCP-1, PCP-2
* ENTIRE PROJECT TEMPORARY DRIVES								30.00		
TOTALS:						760.60	83.67	340.58	58	

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% 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.

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.

CONCRETE PAVEMENT

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM BASE COURSE (1 1/2") 660 LBS. PER SQ. YD.			CEMENT STABILIZED CRUSHED STONE BASE COURSE (6" COMP'D. DEPTH)				ACHM SURFACE COURSE (3/8") 110 LBS. PER SQ. YD.			TACK COAT 0.03 GAL. PER SQ. YD.			CONTINUOUSLY REINFORCED CONCRETE PAVEMENT		REINFORCING STEEL FOR PAVEMENT (BARS)	PORTLAND CEMENT CONCRETE PAVEMENT		*PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (8" U.T.)
				TON / STATION	TON	AVG. WID.	SQ. YD.	TON	AVG. WID.	PROCESSING	CEMENT	AGGREGATE	AVG. WID.	SQ. YD.	TON	AVG. WID.	SQ. YD.	GAL.	AVG. WID.	13" U.T.		AVG. WID.	14" U.T.	
			FEET			FEET			FEET	SQ. YD.	TON	TON	FEET			FEET			FEET	SQ. YD.	POUND	FEET	SQ. YD.	SQ. YD.
107+68.57	118+40.76	I-430 S.B.	1072.19	46.25	495.89	24.00	2859.17	943.53											22.00	2620.91	98599			
127+00.00	133+23.31	I-430 S.B.	623.31	52.25	325.68	36.00	2493.24	822.77											34.00	2354.73	88585			
135+95.91	144+70.30	I-430 S.B.	874.39	52.25	456.87	36.00	3497.56	1154.19											34.00	3303.25	124268			
148+73.62	151+42.48	I-430 S.B.	268.86	52.25	140.48	VAR.	1054.88	348.11											VAR.	994.04	37396			
151+42.48	164+68.88	I-430 S.B.	1326.40	46.25	613.46	24.00	3537.07	1167.23											22.00	3242.31	121976			
164+68.88	167+68.88	I-430 S.B. - TAPER	300.00	46.25	138.75	18.00	600.00	198.00											16.00	533.33	20064			
122+41.34	129+41.34	I-430 N.B. ACCEL. LANE	700.00	52.25	365.75	20.00	1555.56	513.33											18.00	1100.00	41382			
129+41.34	132+41.34	I-430 N.B. ACCEL. LANE - TAPER	300.00	52.25	156.75	15.00	500.00	165.00											14.00	233.33	8778			
93+86.87	107+68.57	I-430 S.B. TO I-30 W.B. RAMP	1381.70	46.25	639.04	24.00	3684.53	1215.89											22.00	3377.49	127061			
154+73.57	162+53.57	I-30 W.B. ACCEL. LANE	780.00						18.00	1560.00	32.76	513.24	18.00	1560.00	85.80	18.00	1560.00	46.80				18.00	1560.00	
162+53.57	192+24.98	I-30 W.B. ACCEL. LANE	2971.41						VAR.	7923.76	166.40	2606.92	VAR.	7923.76	435.81	VAR.	7923.76	237.71				VAR.	7923.76	
133+38.88	133+44.88	I-430 S.B. BRIDGE END																						48.00
135+51.32	135+57.32	I-430 S.B. BRIDGE END																						48.00
145+18.98	145+24.98	I-430 S.B. BRIDGE END																						72.00
148+59.66	148+65.66	I-430 S.B. BRIDGE END																						72.00
TOTALS:					3332.67		19782.01	6528.05		9483.76	199.16	3120.16		9483.76	521.61		9483.76	284.51		17759.39	668109		9483.76	240.00

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (3/8").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
ACHM BASE COURSE (1 1/2").....96.1% MIN. AGGR.....3.9% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
CEMENT STABILIZED CRUSHED STONE BASE COURSE = 94.0% AGGR. 6.0% CEMENT
* REFER TO "VERY EARLY STRENGTH CONCRETE" SPECIAL PROVISION.

3/2/2015

R061437.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.		061437	83	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				PORTLAND CEMENT CONCRETE BASE 6" UNIFORM THICKNESS		ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")							
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ. YD.	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 76-22
			FEET			FEET				FEET		FEET			TON	FEET			TON	FEET			TON
MAIN LANES																							
151+42.41	152+21.69	STAGECOACH TO I-430 S.B. ENTRANCE RAMP	79.28	VAR.	117.93	46.42	408.91	0.03	12.27			15.58	137.24	660.00	45.29	15.25	134.34	220.00	14.78	21.00	184.99	220.00	20.35	35.13
152+21.69	152+48.31	STAGECOACH TO I-430 S.B. ENTRANCE RAMP	26.62	VAR.	49.78	46.42	137.30	0.03	4.12			15.58	46.08	660.00	15.21	15.25	45.11	220.00	4.96	25.00	73.94	220.00	8.13	13.09
152+48.31	157+75.14	STAGECOACH TO I-430 S.B. ENTRANCE RAMP	526.83	225.25	1186.68	46.42	2717.27	0.03	81.52			15.58	912.00	660.00	300.96	15.25	892.68	220.00	98.19	25.00	1463.42	220.00	160.98	259.17
157+75.14	158+75.14	PAVING TRANSITION	100.00																	25.00	277.78	220.00	30.56	30.56
105+55.85	121+45.41	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP	1589.56	225.25	3580.48	46.42	8198.60	0.03	245.96			15.58	2751.70	660.00	908.06	15.25	2693.42	220.00	296.28	25.00	4415.44	220.00	485.70	781.98
121+45.41	121+75.85	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP	30.44	VAR.	56.92	46.42	157.00	0.03	4.71			15.58	52.70	660.00	17.39	15.25	51.58	220.00	5.67	25.00	84.56	220.00	9.30	14.97
121+75.85	122+39.51	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP	63.66	VAR.	94.69	46.42	328.34	0.03	9.85			15.58	110.20	660.00	36.37	15.25	107.87	220.00	11.87	21.00	148.54	220.00	16.34	28.21
84+68.22	86+68.22	PAVING TRANSITION	200.00																	40.00	888.89	220.00	97.78	97.78
86+68.22	95+36.22	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER	868.00	VAR.	1056.03	VAR.	4703.55	0.03	141.11			VAR.	800.95	660.00	264.31	VAR.	3101.65	220.00	341.18	40.00	3857.78	220.00	424.36	765.54
95+36.22	95+98.33	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER, OTTER CREEK TURNOUT	62.11	VAR.	58.60	VAR.	596.98	0.03	17.91			VAR.	27.50	660.00	9.08	VAR.	541.98	220.00	59.62	VAR.	412.25	220.00	45.35	104.97
95+98.33	96+72.24	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER, OTTER CREEK TURNOUT	73.91			VAR.	361.34	0.03	10.84	VAR.	308.81					44.00	361.34	220.00	39.75	40.00	328.49	220.00	36.13	75.88
96+72.24	97+59.06	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER, OTTER CREEK TURNOUT	86.82	VAR.	132.61	VAR.	1080.21	0.03	32.41			VAR.	144.12	660.00	47.56	VAR.	791.97	220.00	87.12	VAR.	978.15	9435.89	220.00	1037.95	1125.07
97+59.06	102+00.00	N. FRONTAGE RD. - NOTCH AND WIDEN, C.C.&G ON LT., OVERLAY ON RT.	440.94	VAR.	248.89	VAR.	3332.97	0.03	99.99			VAR.	588.63	660.00	194.25	44.00	2155.71	220.00	237.13	44.00	2155.71	220.00	237.13	474.26
102+00.00	111+00.00	N. FRONTAGE RD. - NOTCH AND WIDEN, C.C.&G ON LT.	900.00	56.50	508.50	36.00	3600.00	0.03	108.00			12.00	1200.00	660.00	396.00	12.00	1200.00	220.00	132.00	12.00	1200.00	220.00	132.00	264.00
111+00.00	124+30.00	N. FRONTAGE RD. - NOTCH AND WIDEN, RT. SIDE	1330.00																	8.00	1182.22	220.00	130.04	130.04
124+30.00	133+03.48	N. FRONTAGE RD. - NOTCH AND WIDEN, C.C.&G ON LT., OPEN SHOULDER ON RT.	873.48	90.50	790.50															8.00	776.43	220.00	85.41	85.41
133+03.48	134+34.56	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER	131.08	VAR.	328.26	VAR.	881.73	0.03	26.45			VAR.	264.27	660.00	87.21	24.25	353.19	220.00	38.85	40.00	582.58	220.00	64.08	102.93
142+08.83	144+08.83	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER, PAVING TRANSITION	200.00	VAR.	240.22	VAR.	890.27	0.03	26.71			VAR.	175.69	660.00	57.98	24.25	538.89	220.00	59.28	40.00	888.89	220.00	97.78	157.06
144+08.83	147+12.86	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER	304.03	VAR.	651.01	VAR.	1403.15	0.03	42.09			VAR.	291.98	660.00	96.35	24.25	819.19	220.00	90.11	40.00	1351.24	220.00	148.64	238.75
147+12.86	149+69.94	N. FRONTAGE RD. - NOTCH AND WIDEN, EXIT RAMP, OPEN SHOULDER	257.08	VAR.	588.09	VAR.	1884.96	0.03	56.55			VAR.	359.12	660.00	118.51	VAR.	1166.72	220.00	128.34	VAR.	1426.09	220.00	156.87	285.21
149+69.94	158+49.05	N. FRONTAGE RD. - NOTCH AND WIDEN, OPEN SHOULDER	879.11	VAR.	1657.50	VAR.	2804.63	0.03	84.14			VAR.	217.96	660.00	71.93	24.25	2368.71	220.00	260.56	40.00	3907.16	220.00	429.79	690.35
158+49.05	160+49.05	PAVING TRANSITION	200.00																	40.00	888.89	220.00	97.78	97.78
ADDITIONAL FOR LEVELING																							
ENTIRE	PROJECT	N. FRONTAGE RD.	3172.00			22.00	7753.78	0.10	775.38											24.00	8458.67	VAR.	2908.82	2908.82
ADDITIONAL FOR GUARDRAIL WIDENING																							
92+14.11	95+32.95	LT. SIDE OF I-430 S.B. TO I-30 W.B. RAMP	318.84	VAR.	269.17															VAR.	289.06	220.0	31.80	31.80
109+57.46	112+93.61	LT. SIDE OF S.B. I-430	336.15	VAR.	269.17															VAR.	289.06	220.0	31.80	31.80
129+37.54	133+04.05	RT. SIDE OF N.B. I-430	366.51	VAR.	296.36															VAR.	321.70	220.0	35.39	35.39
129+57.53	133+20.19	LT. SIDE OF N.B. I-430	362.66	VAR.	280.94															VAR.	301.70	220.0	33.19	33.19
135+43.86	139+15.26	RT. SIDE OF S.B. I-430	371.40	VAR.	250.86															VAR.	263.70	220.0	29.01	29.01
135+65.55	139+18.58	LT. SIDE OF S.B. I-430	353.03	VAR.	296.36															VAR.	321.70	220.0	35.39	35.39
142+05.93	145+68.60	LT. SIDE OF N.B. I-430	362.67	VAR.	280.94															VAR.	301.70	220.0	33.19	33.19
142+30.62	145+99.42	RT. SIDE OF N.B. I-430	368.80	VAR.	296.36															VAR.	321.70	220.0	35.39	35.39
148+21.04	152+16.26	LT. SIDE OF S.B. I-430	395.22	VAR.	323.54															VAR.	354.34	220.0	38.98	38.98
148+72.91	152+26.04	RT. SIDE OF S.B. I-430	353.13	VAR.	250.86															VAR.	263.70	220.0	29.01	29.01
163+96.12	167+82.27	LT. SIDE OF S.B. I-430	386.15	VAR.	323.54															VAR.	354.34	220.0	38.98	38.98
141+73.84	144+25.79	LT. SIDE OF N. FRONTAGE RD.	251.95	55.00	138.57															5.50	153.97	220.00	16.94	16.94
SUBTOTALS (BOX 1 OF 2)					14623.36		41240.99		1780.01		308.81		8080.14		2666.46		17324.35		1905.69		47926.52		7250.34	9156.03

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

3/2/2015

R061437.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.		061437	84	372

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

BASE AND SURFACING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		TACK COAT				PORTLAND CEMENT CONCRETE BASE 6" UNIFORM THICKNESS		ACHM BINDER COURSE (1")				ACHM SURFACE COURSE (1/2")								
				TON / STATION	TON	AVG. WID.	SQ.YD.	GALLONS / SQ.YD.	GALLON	AVG. WID.	SQ. YD.	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22
			FEET			FEET				FEET		FEET			TON	FEET			TON	FEET			TON	TON
ADDITIONAL FOR SUPERELEVATION																								
131+74.33	135+24.33	I-430 S.B. SUPERELEVATION TRANSITION	350.00	12.75	44.63																			
135+24.33	152+16.68	I-430 S.B. MAXIMUM SUPERELEVATION	1692.35	12.75	215.77																			
152+16.68	155+66.68	I-430 S.B. SUPERELEVATION TRANSITION	350.00	12.75	44.63																			
105+72.21	109+22.21	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	350.00	53.75	188.13																			
109+22.21	112+14.08	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP MAXIMUM SUPERELEVATION	291.87	107.50	313.76																			
112+14.08	115+64.08	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	350.00	53.75	188.13																			
116+61.19	119+61.19	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	300.00	31.50	94.50																			
119+61.19	123+27.67	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP MAXIMUM SUPERELEVATION	366.48	63.00	230.88																			
123+27.67	126+27.67	N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	300.00	31.50	94.50																			
95+20.00	98+70.00	I-430 S.B. TO I-30 W.B. RAMP SUPERELEVATION TRANSITION	350.00	12.75	44.63																			
98+70.00	102+67.50	I-430 S.B. TO I-30 W.B. RAMP MAXIMUM SUPERELEVATION	397.50	12.75	50.68																			
102+67.50	106+17.50	I-430 S.B. TO I-30 W.B. RAMP SUPERELEVATION TRANSITION	350.00	12.75	44.63																			
150+43.36	154+18.36	STAGECOACH TO I-430 S.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	375.00	47.50	178.13																			
154+18.36	154+79.96	STAGECOACH TO I-430 S.B. ENTRANCE RAMP MAXIMUM SUPERELEVATION	61.60	95.00	58.52																			
154+79.96	157+75.14	STAGECOACH TO I-430 S.B. ENTRANCE RAMP SUPERELEVATION TRANSITION	295.18	47.50	140.21																			
120+62.36	123+12.36	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	250.00	66.13	165.33																			
123+12.36	129+00.79	N. FRONTAGE ROAD MAXIMUM SUPERELEVATION	588.43	132.25	778.20																			
129+00.79	131+50.79	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	250.00	66.13	165.33																			
131+50.79	134+00.79	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	250.00	118.63	296.58																			
134+00.79	137+79.53	N. FRONTAGE ROAD MAXIMUM SUPERELEVATION	378.74	237.25	898.56																			
137+79.53	139+04.53	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	125.00	118.63	148.29																			
141+74.28	142+99.28	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	125.00	118.63	148.29																			
142+99.28	143+40.95	N. FRONTAGE ROAD MAXIMUM SUPERELEVATION	41.67	237.25	98.86																			
143+40.95	145+40.95	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	200.00	118.63	237.26																			
147+62.07	148+75.93	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	113.86	81.25	92.51																			
148+75.93	149+66.08	N. FRONTAGE ROAD MAXIMUM SUPERELEVATION	90.15	162.50	146.49																			
149+66.08	151+29.94	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	163.86	81.25	133.14																			
151+29.94	153+79.94	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	250.00	118.63	296.58																			
153+79.94	155+99.05	N. FRONTAGE ROAD MAXIMUM SUPERELEVATION	219.11	237.25	519.84																			
155+99.05	158+49.05	N. FRONTAGE ROAD SUPERELEVATION TRANSITION	250.00	118.63	296.58																			
SUBTOTALS (BOX 1 OF 2)					14623.36		41240.99		1780.01		308.81		8080.14		2666.46		17324.35		1905.69		47926.52		7250.34	9156.03
SUBTOTALS (BOX 2 OF 2)					6353.57																			
TOTALS:					20976.93		41240.99		1780.01		308.81		8080.14		2666.46		17324.35		1905.69		47926.52		7250.34	9156.03

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2").....94.9% MIN. AGGR.....5.1% ASPHALT BINDER
ACHM BINDER COURSE (1").....95.6% MIN. AGGR.....4.4% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

3/2/2015

R061437.DGN

QUANTITIES

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.		061437	85	372

(1) A&B5306, A&B5307 QUANTITIES 55811

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 061437

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	ITEM NO.	801	802	802	803	804	805	SP & 807	SP & 807	807	809	812	816	816	816
			ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE-BRIDGE	CLASS S (AE) CONCRETE-BRIDGE	CLASS 1 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL-BRIDGE (GRADE 60)	STEEL (1) PILING (HP 12X53)	STRUCTURAL STEEL IN BEAM SPANS (M 270 GRADE 50W)	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M 270 GRADE 50)	PAINTING STRUCTURAL STEEL	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	FILTER BLANKET	DUMPED RIPRAP	CONCRETE RIPRAP
		UNIT OF STRUCTURE	UNIT	CU. YD.	CU. YD.	CU. YD.	GAL.	LB.	LIN. FT.	LB.	LB.	TON	LIN. FT.	EACH	SQ. YD.	CU. YD.	CU. YD.
A5306	X271		EXIST. BR. NO. A5306														
			TOTALS FOR BRIDGE NO. A5306														
B5306	X271	STATE HWY. 338 BASELINE ROAD	BENT 1	24	18.37		0.1	2,003	93		595	0.3					61
			BENT 2		17.01			3,498									
			BENT 3		18.10			3,678									
			BENT 4	30	17.82		0.1	2,021	117		605	0.3					51
			205'-1⅜" CONT. COMP. PLATE GIRDER UNIT			148.90	13.0	45,850			101,910	51.0	135	1			
			EXIST. BR. NO. B5306														
			TOTALS FOR BRIDGE NO. B5306	54	71.30	148.90	13.2	57,050	210		103,110	51.6	135	1			112
A5307	X071		EXIST. BR. NO. A5307														
			TOTALS FOR BRIDGE NO. A5307														
B5307	X071	FOURCHE CREEK	BENT 1	33	20.16		0.1	1,875		437					80	40	15
			BENT 2		8.99			2,953									
			BENT 3		8.48			2,804									
			BENT 4		7.96			2,656									
			BENT 5		7.45			2,508									
			BENT 6	17	12.06		0.1	1,465	52	469					110	55	5
			5 - 67'-0" SIMPLE COMP. W-BEAM UNITS			178.30	15.0	48,519		118,024			487	1			
			EXIST. BR. NO. B5307														
			TOTALS FOR BRIDGE NO. B5307	50	65.10	178.30	15.2	62,780	52	118,930			487	1	190	95	20
			TOTALS FOR JOB NO. 061437	(2) 104	136.40	327.20	28.4	119,830	262	118,930	103,110	51.6	622	2	190	95	132

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	ITEM NO.	SP & 820	821	SP JOB 061437	SP JOB 061437	SP JOB 061437	SP JOB 061437
			ITEM	CLEANING & PAINTING EXISTING STRUCTURAL STEEL (TYPE 11)	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO.)	DRILLED SHAFT (72" DIA.)	PERMANENT STEEL CASING (72" DIA.) (4)	CROSSHOLE SONIC LOGGING (72" DIA.) (3)	CORING (3) DRILLED SHAFT
		UNIT OF STRUCTURE	UNIT	TON	LUMP SUM	LIN. FT.	LIN. FT.	EACH	LIN. FT.
A5306	X271		EXIST. BR. NO. A5306	94.3					
			TOTALS FOR BRIDGE NO. A5306	94.3					
B5306	X271	STATE HWY. 338 BASELINE ROAD	BENT 1						
			BENT 2			54	20	1	27
			BENT 3			54	20		
			BENT 4						
			205'-1⅜" CONT. COMP. PLATE GIRDER UNIT						
			EXIST. BR. NO. B5306	94.3	1				
			TOTALS FOR BRIDGE NO. B5306	94.3	1	108	40	1	27
A5307	X071		EXIST. BR. NO. A5307	6.0					
			TOTALS FOR BRIDGE NO. A5307	6.0					
B5307	X071	FOURCHE CREEK	BENT 1						
			BENT 2			31	14	1	31
			BENT 3			31	14		
			BENT 4			31	14		
			BENT 5			31	14		
			BENT 6						
			5 - 67'-0" SIMPLE COMP. W-BEAM UNITS						
			EXIST. BR. NO. B5307	6.0	1				
			TOTALS FOR BRIDGE NO. B5307	6.0	1	124	56	1	31
			TOTALS FOR JOB NO. 061437	200.6	2	232	96	2	58

(1) All steel piling are required to have approved driving points which will not be paid for directly, but will be considered subsidiary to the item "Steel Piling (HP 12 x 53)".

(2) Includes approx. 33 cu. yds. of rock excavation.

(3) Quantity shown for estimating purposes only. location is to be determined in the field. Crosshole sonic logging pipes are to be installed in all drilled shafts.

(4) Quantity shown is for estimating purposes only. Actual quantity will be determined in the field.

STEWART LINZ
DESIGN SECTION SUPERVISOR

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-17-15
CHARLES R. ELLIS

BRIDGE ENGINEER

SCHEDULE OF BRIDGE QUANTITIES
I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)
PULASKI COUNTY

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 3/20/14 FILENAME: b061437_ql.dgn
CHECKED BY: DHP DATE: 3-17-15 SCALE:
DESIGNED BY: DATE:

BRIDGE NO. A&B5306, A&B5307 DRAWING NO. 55811

PRINT DATE: 3/17/2015

SUMMARY OF QUANTITIES (BOX 1 OF 2)

ITEM NUMBER	ITEM	QUANTITY	UNIT
201	CLEARING	114	STATION
201	GRUBBING	114	STATION
SP & 202	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE	411	LIN. FT.
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	182	SQ. YD.
202	REMOVAL AND DISPOSAL OF FENCE	3472	LIN. FT.
202	REMOVAL AND DISPOSAL OF GATES	1	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE MEDIAN BARRIER	2693	LIN. FT.
202	REMOVAL AND DISPOSAL OF APPROACH GUTTERS	7	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE ISLANDS	394	SQ. YD.
202	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE	3	EACH
202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	1	EACH
202	REMOVAL AND DISPOSAL OF SIGN FOUNDATIONS	19	EACH
202	REMOVAL AND DISPOSAL OF DROP INLETS	1	EACH
202	REMOVAL AND DISPOSAL OF PIPE CULVERTS	2	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	1475	LIN. FT.
202	REMOVAL AND DISPOSAL OF LUMINAIRE POLES	4	EACH
202	REMOVAL AND DISPOSAL OF SIGNS	7	EACH
202	REMOVAL AND DISPOSAL OF POSTS	1	EACH
210	UNCLASSIFIED EXCAVATION	71628	CU. YD.
210	COMPACTED EMBANKMENT	52782	CU. YD.
302	SELECTED MATERIAL (CLASS SM-3)	8390	CU. YD.
303	AGGREGATE BASE COURSE (CLASS 7)	25555	TON
308	AGGREGATE IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	3120	TON
308	CEMENT IN CEMENT STABILIZED CRUSHED STONE BASE COURSE	199	TON
308	PROCESSING CEMENT STABILIZED CRUSHED STONE BASE COURSE	9484	SQ. YD.
309	PORTLAND CEMENT CONCRETE BASE (6" UNIFORM THICKNESS)	309	SQ. YD.
SS & 401	TACK COAT	2065	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	6273	TON
SP & 405	ASPHALT BINDER (PG 64-22) IN ACHM BASE COURSE (1 1/2")	255	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	2549	TON
SP, SS, & 406	ASPHALT BINDER (PG 76-22) IN ACHM BINDER COURSE (1")	117	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")	495	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8")	27	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	8930	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	4	TON
SP, SS, & 407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	476	TON
412	COLD MILLING ASPHALT PAVEMENT	999	SQ. YD.
SP & 415	ACHM PATCHING OF EXISTING ROADWAY	50	TON
501	PORTLAND CEMENT CONCRETE PAVEMENT (14" UNIFORM THICKNESS)	9484	SQ. YD.
502	REINFORCING STEEL FOR PAVEMENT (BARS)	668109	POUND
503	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT (13" UNIFORM THICKNESS)	17759	SQ. YD.
504	APPROACH SLABS	147.46	CU. YD.
504	APPROACH GUTTERS	144.06	CU. YD.
SP & 507	PORTLAND CEMENT CONCRETE PAVEMENT PATCHING (8" UNIFORM THICKNESS)	240	SQ. YD.
601	MOBILIZATION	1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1	EACH
SP & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
603	TRAFFIC CONTROL SUPERVISOR	1.00	LUMP SUM
603	12" TEMPORARY CULVERT	48	LIN. FT.
SS & 604	SIGNS	2077	SQ. FT.
SS & 604	BARRICADES	32	LIN. FT.
SS & 604	TRAFFIC DRUMS	478	EACH
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	8456	LIN. FT.
604	RELOCATING PRECAST CONCRETE BARRIER	7456	LIN. FT.
604	CONSTRUCTION PAVEMENT MARKINGS	29022	LIN. FT.
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	45324	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	19485	LIN. FT.
604	ADVANCE WARNING ARROW PANEL	330	DAY
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	168	WEEK
SP & 605	CONCRETE DITCH PAVING (TYPE B)	2369	SQ. YD.
606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	16	LIN. FT.
* 606	18" REINFORCED CONCRETE PIPE CULVERTS (CLASS III) (ALTERNATE NO. 1)	565	LIN. FT.
* 606	18" SMOOTH LINED POLYMER PRECOATED METALLIC COATED CORRUGATED STEEL PIPE (ALTERNATE NO. 2)	565	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	266	LIN. FT.
SP & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	246	LIN. FT.
606	36" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	4	LIN. FT.
606	48" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	54	LIN. FT.
SP, SS, & 606	18" SIDE DRAIN	58	LIN. FT.
606	18" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	10	EACH
606	36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1	EACH
606	48" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	2	EACH
606	SELECTED PIPE BEDDING	100	CU. YD.
609	DROP INLETS (TYPE MO)	7	EACH
609	DROP INLETS (TYPE RM)	3	EACH
609	DROP INLETS (TYPE ST)	1	EACH
611	UNDERDRAIN OUTLET PROTECTORS	5	EACH
611	4" PIPE UNDERDRAINS	1000	LIN. FT.
617	GUARDRAIL (TYPE A)	3825	LIN. FT.
617	GUARDRAIL TERMINAL (TYPE 2)	22	EACH
617	THRIE BEAM GUARDRAIL TERMINAL	12	EACH
617	TERMINAL ANCHOR POSTS (TYPE 1)	10	EACH
619	WIRE FENCE (TYPE A)	3286	LIN. FT.
620	LIME	30	TON
620	SEEDING	15.08	ACRE
SS & 620	MULCH COVER	43.04	ACRE
620	WATER	2139.0	M.GAL.
621	TEMPORARY SEEDING	27.96	ACRE
621	SILT FENCE	18016	LIN. FT.
621	SAND BAG DITCH CHECKS	1166	BAG
621	DROP INLET SILT FENCE	1122	LIN. FT.
621	SEDIMENT BASIN	1133	CU. YD.
621	OBLITERATION OF SEDIMENT BASIN	1133	CU. YD.
621	SEDIMENT REMOVAL AND DISPOSAL	1954	CU. YD.
621	ROCK DITCH CHECKS	180	CU. YD.
623	SECOND SEEDING APPLICATION	15.08	ACRE
624	SOLID SODDING	2411	SQ. YD.
626	EROSION CONTROL MATTING (CLASS 3)	889	SQ. YD.
631	CONCRETE BARRIER WALL (MEDIAN TYPE B)	2241	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE C)	1419	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)	400	LIN. FT.
631	CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)	239	LIN. FT.
632	CONCRETE ISLAND	25	SQ. YD.
633	CONCRETE WALKS	609	SQ. YD.
634	CONCRETE COMBINATION CURB AND GUTTER (TYPE A) (1' 6")	1339	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS.

SUMMARY OF QUANTITIES

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER KELLY D. SMITH No. 11435
11-12-15

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED
10-21-15			
11-13-15			

(2) SUMMARY OF QUANTITIES

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	061437	86	372

JOB NO.

SUMMARY OF QUANTITIES (BOX 2 OF 2)

ITEM NUMBER	ITEM		QUANTITY	UNIT
640	MODIFYING DROP INLETS		7	EACH
641	WHEELCHAIR RAMPS (TYPE 3)		40	SQ. YD.
642	RUMBLE STRIPS IN PORTLAND CEMENT CONCRETE SHOULDERS		9266	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (WORDS)		2	EACH
719	THERMOPLASTIC PAVEMENT MARKING (ARROWS)		2	EACH
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)	21266	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)	21266	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (4")	(ALTERNATE NO. 1)	1861	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE (SKIP LINE) WHITE (4")	(ALTERNATE NO. 2)	1861	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8")	(ALTERNATE NO. 1)	5982	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (8")	(ALTERNATE NO. 2)	5982	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4")	(ALTERNATE NO. 1)	20989	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4")	(ALTERNATE NO. 2)	20989	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4")	(ALTERNATE NO. 1)	7198	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4")	(ALTERNATE NO. 2)	7198	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)		756	EACH
725	GUIDE SIGN-ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)		989	SQ. FT.
725	GUIDE SIGN-OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)		4784	SQ. FT.
726	STANDARD SIGN		1349	SQ. FT.
727	EXIT NUMBER PANEL (TYPE A)		371	SQ. FT.
727	EXIT NUMBER PANEL (TYPE B)		221	SQ. FT.
727	EXIT NUMBER PANEL (TYPE C)		35	SQ. FT.
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)		4523	POUND
731	TEMPORARY IMPACT ATTENUATION BARRIER		1	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		1	EACH
804	REINFORCING STEEL-ROADWAY (GRADE 60)		28621	POUND
SP	AWIS MOBILIZATION		1.00	LUMP SUM
SP	AWIS OPERATION		18	MNTH
SP	DEVICE RELOCATION		10	EACH
SP	FURNISH AND INSTALL CLOSED CIRCUIT TELEVISION SYSTEM		2	EACH
SP	FURNISH AND INSTALL PUBLIC NOTIFICATION SYSTEM		2	EACH
SP	FURNISH AND INSTALL VARIABLE MESSAGE SIGN		7	EACH
SP	FURNISH AND INSTALL VEHICLE DETECTION SYSTEM		12	EACH
SP	WIRE ROPE SAFETY FENCE		391	LIN. FT.
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-40)		1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-41)		1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-42)		1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-43)		1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-60-62)		1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-44)		1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-34)		1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-27)		1	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-030-60-28)		2	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-030-60-47)		1	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-430-60-45)		1	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)		15	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)		7	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)		34	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-2)		8	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)		2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-4)		2	EACH
	STRUCTURES OVER 20' SPAN			
636	BRIDGE CONSTRUCTION CONTROL		1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-ROADWAY		17	CU. YD.
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE		104	CU. YD.
802	CLASS S CONCRETE-ROADWAY		33.49	CU. YD.
802	CLASS S CONCRETE-BRIDGE		136.40	CU. YD.
802	CLASS S(AE) CONCRETE-BRIDGE		327.20	CU. YD.
803	CLASS 1 PROTECTIVE SURFACE TREATMENT		28.4	GAL.
804	REINFORCING STEEL-ROADWAY (GRADE 60)		5998	POUND
804	REINFORCING STEEL-BRIDGE (GRADE 60)		119830	POUND
805	STEEL PILING (HP 12X53)		262	LIN. FT.
SP & 807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR50W)		118930	POUND
SP & 807	STRUCTURAL STEEL IN PLATE GIRDER SPANS (M270-GR50)		103110	POUND
807	PAINTING STRUCTURAL STEEL		51.6	TON
809	SILICONE JOINT SEALANT		622	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)		2	EACH
816	FILTER BLANKET		190	SQ. YD.
816	DUMPED RIPRAP		95	CU. YD.
816	CONCRETE RIPRAP		132	CU. YD.
SP & 820	CLEANING AND PAINTING EXISTING STRUCTURAL STEEL (TYPE II)		200.6	TON
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. B5306)		1.00	LUMP SUM
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. B5307)		1.00	LUMP SUM
SP	DRILLED SHAFT (72" DIAMETER)		232	LIN. FT.
SP	PERMANENT STEEL CASING (72" DIAMETER)		96	LIN. FT.
SP	CROSSHOLE SONIC LOGGING (72" DIAMETER)		2	EACH
SP	CORING DRILLED SHAFT		58	LIN. FT.

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER
9/29/2015	ADDED NOTE TO CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS QUANTITY BOX.	77, 87
10/7/2015	REVISED "NONDESTRUCTIVE TESTING OF DRILLED SHAFTS" SPECIAL PROVISION.	87
10/21/2015	REVISED STANDARD DRAWING "STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURB WIDTH & TYPE A RAILING)". ADDED SUPPLEMENTAL SPECIFICATION "400-1 TACK COATS". REVISED "SITE USE (A+C METHOD) - CALENDAR DAY CONTRACT" SPECIAL PROVISION.	2, 3, 86, 87, 221
11/13/2015	DELETED "30" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS" QUANTITY. ADDED "36" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS" QUANTITY.	81, 86, 87
11/19/2015	REVISED CONCRETE BARRIER WALL SHOWN ON TYPICAL SECTIONS	7, 9, 10, 87

SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS REGISTERED PROFESSIONAL ENGINEER No. 11435 TIMOTHY R. SMITH 11-19-15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
9-29-15		11-13-15	
10-7-15		11-19-15	
10-21-15			

(2) SUMMARY OF QUANTITIES AND REVISIONS

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		87	372

JOB NO. 061437

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	88	372

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TIMOTHY D. SMITH
3-10-15

SURVEY CONTROL COORDINATES

Date: 5/25/2012
Coordinate System: ARKANSAS STATE PLANE - SOUTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Units: U.S. SURVEY FOOT

Point Name	Northing	Easting	Elev	Feature	Description
1	2036702.2987	1189170.1909	314.155	CTL	24"X5/8"REBAR2.0"ALUM CAP, 8' NORTH OF STORM SEWER MANHOLE, 6' WEST OF OTTER CREEK ACCESS SHOULDER, 44' EAST OF POWER POLE
2	2037269.8322	1189736.2485	316.348	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' WEST OF OTTER SPR. ACCESS SHOULDER, 17' SOUTHEAST OF STORM MANHOLE 46' NORTHEAST OF OTTER CREEK REALTY SIGN
3	2037848.5891	1190286.7396	316.527	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' WEST OF OTTER SPR. ACCESS, 23' EAST OF POWER POLE, 6' NORTH OF SPEED LIMIT SIGN
4	2038314.8102	1190745.3886	337.476	CTL	24"X5/8"REBAR2.0"ALUM CAP, 35' EAST OF OTTER SPRING ACCESS ROAD SHOULDER, 53' SOUTH OF 15" PINE, 42' WEST OF SHOULDER OF 30 WEST
5	2038540.4436	1191089.0548	343.310	CTL	24"X5/8"REBAR2.0"ALUM CAP, 20' NORTH OF GR 30 WEST 109', SOUTH OF 430 OFF RAMP TO 30 WEST
6	2038858.8512	1191571.0733	336.172	CTL	24"X5/8"REBAR2.0"ALUM CAP, 6' NORTH OF SHOULDER OF 30 WEST, 200' EAST OF EAST END OF GR
7	2038735.1862	1191269.0051	362.155	CTL	24"X5/8"REBAR2.0"ALUM CAP, 56' SOUTHEAST OF HIGHWAY, 9' NORTH OF NORTHWEST BRIDGE CORNER, 27' SOUTH OF DROP INLET
8	2039260.5498	1191180.0510	350.836	CTL	24"X5/8"REBAR2.0"ALUM CAP, 3' EAST OF SHOULDER OF 430, 80' WEST OF 30/430 RAMP 72' SOUTH OF BLUE SIGN
9	2040122.7314	1190879.8788	323.852	CTL	24"X5/8"REBAR2.0"ALUM CAP, 2' EAST OF SHOULDER 430, 13' NORTH OF HIGHWAY, 16' WEST OF CONCRETE DITCH
10	2040841.2166	1190607.7473	309.674	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' EAST OF SHOULDER 430, 82' WEST OF CHAIN LINK FENCE
11	2041505.6004	1190365.8225	303.333	CTL	24"X5/8"REBAR2.0"ALUM CAP, 5' EAST OF SHOULDER 430, 45' WEST OF 24" PINE, 31' WEST OF CONCRETE DITCH
12	2042128.5723	1190137.5391	308.550	CTL	24"X5/8"REBAR2.0"ALUM CAP, 1' EAST OF SHOULDER 430, 69' NORTH OF NORTHEAST BRIDGE END, 69' NORTH OF FENCE CORNER
13	2042786.6300	1189988.0425	305.546	CTL	24"X5/8"REBAR2.0"ALUM CAP, 1' EAST OF SHOULDER 430, 121' SOUTH OF SOUTHEAST GR
14	2043420.6552	1189910.2646	291.131	CTL	24"X5/8"REBAR2.0"ALUM CAP, 9' NORTH OF NORTHWEST BRIDGE END, 49' NORTHEAST OF NORTHEAST BRIDGE END
15	2044525.2016	1190093.2200	284.998	CTL	24"X5/8"REBAR2.0"ALUM CAP, 2' EAST OF SHOULDER 430, 20' WEST OF STAGECOACH OFF RAMP
16	2043908.6128	1189854.8693	285.697	CTL	24"X5/8"REBAR2.0"ALUM CAP, 98' SOUTH OF SWEET GUM 5", 12' EAST OF STAGECOACH ON RAMP, 36' WEST OF SHOULDER 430
17	2042451.6710	1189917.5178	311.643	CTL	24"X5/8"REBAR2.0"ALUM CAP, 3' WEST OF SHOULDER 430, 198' NORTH OF NORTHWEST GR END 51' EAST OF 18" OAK
18	2041753.7344	1190129.7449	304.843	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' WEST OF SHOULDER 430, 125' SOUTH OF END CHAIN LINK FENCE, 145' N OF SIGN POST
19	2041094.8916	1190371.6586	306.354	CTL	24"X5/8"REBAR2.0"ALUM CAP, 2' WEST OF SHOULDER 430, 28' EAST OF 5" PINE
20	2040439.3040	1190610.4704	314.385	CTL	24"X5/8"REBAR2.0"ALUM CAP, 3' WEST OF SHOULDER 430, 25' EAST OF 4" PINE
21	2039704.7534	1190877.3047	335.653	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' WEST OF SHOULDER OF 430, 102' NORTH OF NORTH BRIDGE PIER, 82' WEST OF CHAIN LINK FENCE
22	2039071.1723	1191079.6736	355.243	CTL	24"X5/8"REBAR2.0"ALUM CAP, 4' EAST OF SHOULDER OF 430, OFF RAMP TO 30 WEST 60' W OF 430 OFF RAMP TO 30 E
23	2037479.3372	1190263.8011	317.869	CTL	24"X5/8"REBAR2.0"ALUM CAP, RTK ELEVATION 55' SOUTH OF SHOULDER 30 EAST, 26' NORTH OF 430 ON RAMP
24	2038231.2102	1190966.5149	335.589	CTL	24"X5/8"REBAR2.0"ALUM CAP, RTK ELEVATION 10' SOUTH OF SHOULDER 30 EAST, 236' WEST OF WEST END OF GR
25	2038503.9687	1191399.5622	364.427	CTL	24"X5/8"REBAR2.0"ALUM CAP, RTK ELEVATION 3' EAST OF SOUTHEAST END OF BRIDGE 9' SOUTHEAST OF BRIDGE WR
100	2050484.6579	1190861.0103	319.736	GPS	AHTD GPS 600053A
101	2042711.1292	1196797.8922	290.354	GPS	AHTD GPS LR 2
900	2040194.2900	1194501.9249	285.180	BM	NGS BM R 320
901	2039263.0148	1192258.1337	317.298	TBM	CH SQ IN CONCRETE BASE OF 430 NORTH ON RAMP SIGN, 107' SOUTHWEST OF WEST END OF GR, 65' SOUTH OF OTTER CREEK ACCESS ROAD
902	2038342.7719	1190800.0109	337.526	TBM	CH SQ IN CENTER OF HIGHWAY, 16' WEST OF SHOULDER 30 WEST, 37' EAST OF CHAIN LINK FENCE CORN
903	2037457.5737	1189979.7933	315.524	TBM	CH SQ IN CONCRETE NEXT TO WR OF 30 WEST, 5' EAST OF OTTER SPR. ACCESS SHOULDER, 1' WEST OF WR ON 30 WEST
904	2036708.1308	1189156.8915	314.717	TBM	CH SQ IN EAST END HIGHWAY, 15' WEST OF MANHOLE, 19' WEST OF OTTER CREEK SHOULDER, 10' SOUTH OF UNDERGROUND ELECTRIC BOX
905	2040728.1189	1190663.5226	302.317	TBM	CH SQ IN CENTER HIGHWAY 45' EAST OF SHOULDER 430, 41' WEST OF CHAIN LINK FENCE, 15' WEST OF CONCRETE DITCH
906	2041866.5361	1190232.7993	306.530	BM	NGS BM U 320
907	2043043.6862	1189884.9230	301.196	BM	PAGIS 2058 AZ
908	2044245.9299	1190095.0240	279.404	TBM	CH SQ IN CENTER HIGHWAY 30' EAST OF SHOULDER 430

*Note - Rebar and Cap - Standard - 5/8" Rebar with 2" Aluminum Cap stamped
*(standard markings common to all caps), or as indicated
(other markings indicated in the point description of the individual point).
ALL DISTANCES ARE GROUND.
USE CAF = 1.0 FOR STAKEOUT FOR THIS PROJECT.
A PROJECT CAF OF 0.9999761086 HAS BEEN USED TO COMPUTE THE GROUND COORDINATES LISTED ABOVE.
THIS CAF IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.
GRID DISTANCE = GROUND DISTANCE X CAF.
GRID COORDINATES ARE STORED UNDER FILE NAME s061332gi.ctl
HORIZONTAL DATUM: NAD 83 (19XX)
VERTICAL DATUM: NAVD 88 POSITIONAL ACCURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.

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

BASIS OF BEARING:
ARKANSAS STATE PLANE GRID BEARINGS - 0302-SOUTH ZONE
DETERMINED FROM GPS CONTROL POINTS: 600053A - AHTD LR 2
CONVERGENCE ANGLE: 00-13-37.0 LEFT AT LT: 34-40-06.7 LG: 092-24-20.5
GRID AZIMUTH = ASTRONOMICAL AZIMUTH - CONVERGENCE ANGLE.

NORTH FRONTAGE RD.

POINT NO.	TYPE	STATION	NORTHING	EASTING
8061	POB	86+68.22	2035495.1833	1188069.3851
8062	PI	95+36.22	2036130.1906	1188661.1511
8063	PI	97+59.06	2036288.8247	1188817.6484
8064	PI	100+00.00	2036467.5349	1188979.2609
8065	PC	122+49.86	2038089.3661	1190538.5943
8067	PT	130+73.60	2038854.3238	1190686.2489
8068	PC	132+27.99	2038997.4484	1190628.3519
8070	PT	138+67.22	2039548.4843	1190823.7617
8071	PC	138+72.62	2039551.0953	1190828.4867
8073	PT	142+03.86	2039665.1921	1191138.1066
8074	PC	142+45.86	2039673.5906	1191179.2614
8076	PT	144+03.46	2039677.1208	1191335.9766
8077	PC	148+34.96	2039609.9673	1191762.2245
8079	PT	150+97.20	2039496.7027	1191994.4649
8080	PC	151+62.67	2039452.0139	1192042.3137
8082	PT	156+61.55	2039364.9261	1192506.8894
8083	PI	159+00.24	2039453.6061	1192728.4958
8084	PI	161+17.00	2039537.9013	1192928.1883
8085	POE	162+92.84	2039609.7106	1193088.7027

I-430 SB. TO I-30 WB. RAMP

POINT NO.	TYPE	STATION	NORTHING	EASTING
8023	POB	92+10.20	2038046.3646	1190577.1085
8024	PC	93+00.85	2038111.0864	1190640.5708
8026	PT	97+53.65	2038468.7819	1190916.4811
8027	PC	97+82.50	2038493.5488	1190931.2761
8029	PT	103+55.00	2039041.5165	1191064.6336
8030	PC	103+71.30	2039057.7911	1191063.6391
8032	PT	108+62.91	2039536.6689	1190960.9769
8033	PI	109+80.58	2039646.7387	1190919.3784

NORTH FRONTAGE RD. TO I-430 NB. RAMP

POINT NO.	TYPE	STATION	NORTHING	EASTING
8052	POB	103+54.05	2039573.0529	1191892.3084
8053	PC	108+34.71	2039787.5310	1191462.1602
8055	PT	113+01.58	2040087.7755	1191110.7139
8056	PC	118+86.19	2040563.7967	1190771.3437
8058	PT	124+02.67	2041019.5350	1190531.6805
8059	PI	129+51.99	2041535.7557	1190343.8766

I-430 SB. TO NORTH FRONTAGE RD. (FOR INFORMATION ONLY)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8036	POB	102+22.61	2038851.3804	1190669.6406
8037	PC	104+98.10	2039106.7631	1190566.3328
8039	PT	110+01.81	2039601.0357	1190506.4051
8040	PC	114+47.21	2040041.8852	1190569.9192
8042	PT	118+96.85	2040488.0093	1190546.2069
8043	PC	121+94.42	2040776.3836	1190477.7905
8045	PT	123+84.70	2040958.1379	1190416.7454
8046	POE	129+99.98	2041536.3469	1190206.3898

I-430 B (BRIDGE STRUCTURE)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8047	POB	132+36.43	2041768.6242	1190153.8431
8048	PC	134+23.41	2041944.0488	1190089.1294
8050	PT	152+89.95	2043781.0689	1189887.9459
8051	POE	153+19.33	2043810.2020	1189891.9076

I-430

POINT NO.	TYPE	STATION	NORTHING	EASTING
8000	POB	100+00.00	2038741.2225	1191298.2917
8001	PC	134+36.83	2041970.9589	1190123.2962
8003	PT	153+04.18	2043809.6800	1189930.4742
8004	POE	174+58.80	2045943.2374	1190231.0284

I-30 WB EXIT (FOR INFORMATION ONLY)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8013	POB	219+12.48	2039571.7997	1193003.9609
8085	PI	220+05.32	2039609.7106	1193088.7027
8014	PI	221+42.63	2039669.4606	1193212.3365
8015	PI	222+45.23	2039714.9079	1193304.3182
8016	PI	223+04.84	2039740.5382	1193358.1422
8017	PI	225+48.77	2039840.1913	1193580.7828
8018	PC	226+01.24	2039861.6294	1193628.6788
8020	PT	228+06.40	2039935.2351	1193820.0709
8021	PC	230+07.67	2039997.2922	1194011.5359
8061	PT	231+97.95	2040064.8723	1194189.3240
8103	PI	233+99.84	2040145.9155	1194374.2371
8104	PI	235+17.33	2040193.0748	1194481.8386
8105	POE	240+34.85	2040400.8177	1194955.8372

OTTER CREEK CONNECTOR

POINT NO.	TYPE	STATION	NORTHING	EASTING
8086	POB	100+06.42	2036183.7537	1188713.9927
8087	PC	101+69.82	2036301.1501	1188600.3432
8089	PT	103+71.61	2036471.0802	1188494.3108
8090	POE	105+20.08	2036610.7180	1188443.8855

I-30

POINT NO.	TYPE	STATION	NORTHING	EASTING
8005	POB	100+00.00	2032993.5633	1183403.2698
8006	PC	121+97.13	2033538.2833	1185531.8046
8008	PT	143+21.25	2034595.7507	1187342.4889
8009	PC	189+34.65	2037926.4343	1190534.6593
8011	PT	211+89.62	2039209.6326	1192371.2360
8012	POE	259+00.93	2041100.8310	1196686.3074

STAGECOACH TO I-430 SB. RAMP

POINT NO.	TYPE	STATION	NORTHING	EASTING
8099	POB	149+08.10	2043421.1356	1189833.6847
8100	PC	151+84.78	2043697.5358	1189845.9827
8102	PT	157+75.14	2044232.9759	1189639.7282
8098	POE	159+41.88	2044351.5310	1189522.4837

STAGECOACH TO I-430 SB. RAMP (M.O.T.)

POINT NO.	TYPE	STATION	NORTHING	EASTING
8091	POB	152+23.88	2043736.0550	1189871.1235
8092	PC	152+80.76	2043792.3802	1189879.0580
8094	PT	158+06.39	2044233.1755	1189656.3546
8095	PC	158+11.87	2044235.7792	1189651.5337
8097	PT	158+82.47	2044277.9651	1189595.2363
8098	POE	159+85.94	2044351.5310	1189522.4837

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SURVEY CONTROL DETAILS

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.		061437	89	372

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

I-430 SB. EXIT RAMP
PI = 116+74.96
Δ = 22°28'54"LT.
D = 5°00'00"
T = 227.75'
L = 449.63'
PC = 114+47.21
PT = 118+96.85
Ls = 300'
eMAX = 0.083'/'

I-430 SB. EXIT RAMP
PI = 122+89.64
D = 5°42'30"LT.
D = 3°00'00"
T = 95.22'
L = 190.28'
PC = 121+94.42
PT = 123+84.70
NO SUPER

I-430
PI = 143+89.55
Δ = 28°00'37"RT.
D = 1°30'00"
T = 952.72'
L = 1867.34'
PC = 134+36.83
PT = 153+04.18
MATCH EXISTING

I-430 NB. ENTRANCE RAMP
PI = 121+46.02
Δ = 15°29'40"RT.
D = 3°00'00"
T = 259.83'
L = 516.49'
PC = 118+86.19
PT = 124+02.67
Ls = 300'
eMAX = 0.057'/'

STAGECOACH ENT. RAMP
PI = 154+97.89
Δ = 47°13'45"LT.
D = 8°00'00"
T = 313.11'
L = 590.36'
PC = 151+84.78
PT = 157+75.14
Ls = 350'
eMAX = 0.100'/'

STAGECOACH TEMP. ENT. RAMP
PI = 158+47.43
Δ = 16°56'44"RT.
D = 24°00'00"
T = 35.56'
L = 70.61'
PC = 158+11.87
PT = 158+82.47

STAGECOACH TEMP. ENT. RAMP
PI = 155+81.55
Δ = 69°38'44"LT.
D = 13°15'00"
T = 300.80'
L = 525.63'
PC = 152+80.76
PT = 158+06.39

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

I-430 B (BRIDGE STRUCTURE)

SURVEY BASELINE

SURVEY BASELINE S20°00'55"E 697.73'

N 20°01'25" W 12.32'

N 19°59'30" W 3436.83'

SURVEY BASELINE N20°44'40"W 768.29'

SURVEY BASELINE

N 35°29'10" W 584.61'

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

N 14°17'00" W 297.57'

N 19°59'30" W 615.28'

C.L. I-430
N 19°59'30" W 549.32'

SURVEY BASELINE N20°00'30"W 707.06'

SURVEY BASELINE N20°07'30"W 663.48'

SURVEY BASELINE S20°09'44"E 701.85'

N 20°14'56" W 186.98'

SURVEY BASELINE S16°54'48"E 729.49'

SURVEY BASELINE N12°47'57"W 674.83'

SURVEY BASELINE N06°59'37"W 638.78'

STA. 122+41.34
END I-430 N.B. ENT. RAMP CONST.

STA. 157+75.14
END STAGECOACH ENT. RAMP CONST.

C.L. STAGECOACH RD. TO I-430 S.B. TEMP. ENT. RAMP

C.L. STAGECOACH RD. TO I-430 S.B. ENT. RAMP

STA. 151+40.51
BEGIN STAGECOACH ENT. RAMP CONST.

N 8°01'07" E 56.88'

N 6°37'38" W 300.80'

N 6°37'38" W 5.48'

N 44°40'54" W 35.56'

N 44°40'54" W 103.46'

N 6°37'38" W 35.56'

8°01'07" E 300.80'

N 2°32'51" E 276.67'

N 7°44'07" E 29.38'

SURVEY BASELINE S02°27'44"E 1458.29'

SURVEY BASELINE N09°24'18"E 119.60'

SURVEY BASELINE N06°59'37"W 638.78'

SURVEY BASELINE S21°08'05"W 661.05'

N 8°01'07" E 2154.62'

C.L. I-430

STA. 167+68.88
END I-430 CONST.

SURVEY CONTROL DETAILS

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				6	ARK.			
				JOB NO.		061437	90	372

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STA. 86+68.22
BEGIN N. FRONTAGE RD. CONST.

C.L. N. FRONTAGE RD.

N 42°58'53" E
868.00'

P.I. 132+87.43

P.T. 143+21.25
8008

C.L. I-30

STA. 154+73.57
BEGIN I-30 W.B. ACCEL. CONST.

OTTER CREEK CONNECTOR
PI = 102+72.24
Δ = 24°12'56"RT.
D = 12°00'00"
T = 102.43'
L = 201.80'
PC = 101+69.82
PT = 103+71.61

C.L. OTTER CREEK CONNECTOR

N 19°51'19" W
48.46'

8089

P.I. 103+71.61

P.I. 102+12.24

8090

8087

P.C. 101+69.82

N 44°04'15" W
169.82'

8086

STA. 96+11.46 ON N. FRONTAGE RD. =
STA. 100+06.42 ON OTTER CREEK CONNECTOR
& 88°40'57"

N 42°58'53" E
868.00'

2908

N 44°36'41" E
219.84'

8063

N 42°07'26" E
240.94'

2908

N 43°47'01" E
4613.39'

P.I. 95+36.22
Δ = 1°37'38"RT.

P.I. 97+59.06
Δ = 2°29'15"LT.

P.I. 100+00.00
Δ = 1°48'02"RT.

C.L. N. FRONTAGE RD.

SURVEY BASELINE

PN-SPCR
PD24" SQ. IN E END WR

PN1
PD24"X5/8"REBA2.0"ALUM CAP

SURVEY BASELINE N44°55'31"E
801.57'

PN2
PD24"X5/8"REBA2.0"ALUM CAP

N 43°52'28" E
2249.86'

PN-SPCR
PD24" SQ. IN CONC NEXT TO WR

PN3
PD24"X5/8"REBA2.0"ALUM CAP

SURVEY BASELINE N43°33'58"E
798.75'

PN23
PD24"X5/8"REBA2.0"ALUM CAP

SURVEY BASELINE N43°03'52"E
1029.14'

C.L. I-30

3/2/2015

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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.		061437	91	372

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

NORTH FRONTAGE RD.
PI = 140+39.52
Δ = 17°23'25"RT.
D = 5°15'00"
T = 166.91'
L = 331.24'
PC = 138+72.62
PT = 142+03.86
MATCH EXISTING

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

I-430 NB. ENTRANCE RAMP
PI = 110+72.91
Δ = 28°00'44"RT.
D = 6°00'00"
T = 238.20'
L = 466.87'
PC = 108+34.71
PT = 113+01.58
Ls = 350'
eMAX = 0.092'/'

I-430 SB. EXIT RAMP
PI = 107+55.96
Δ = 30°13'22"RT.
D = 6°00'00"
T = 257.86'
L = 503.71'
PC = 104+98.10
PT = 110+01.81
Ls = 350'
eMAX = 0.092'/'

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

NORTH FRONTAGE RD.
PI = 136+18.61
Δ = 83°06'00"RT.
D = 13°00'00"
T = 390.62'
L = 639.23'
PC = 132+27.99
PT = 138+67.22
Ls = 250'
eMAX = 0.100'/'

STA. 107+68.57
END I-430 S.B. TO I-30 W.B. RAMP CONST.

STA. 107+68.57
BEGIN I-430 CONST.

STA. 105+55.85
BEGIN I-430 N.B. ENT. RAMP CONST.

NORTH FRONTAGE RD.
PI = 149+70.09
Δ = 34°05'28"RT.
D = 13°00'00"
T = 135.13'
L = 262.24'
PC = 148+34.96
PT = 150+97.20
Ls = 250'
eMAX = 0.100'/'

NORTH FRONTAGE RD.
PI = 127+14.07
Δ = 65°53'56"LT.
D = 8°00'00"
T = 464.21'
L = 823.74'
PC = 122+49.86
PT = 130+73.60
Ls = 250'
eMAX = 0.084'/'

I-430 SB. TO I-30 WB. RAMP
PI = 106+18.97
Δ = 17°12'22"LT.
D = 3°30'00"
T = 247.67'
L = 491.60'
PC = 103+71.30
PT = 108+62.91
MATCH EXISTING

NORTH FRONTAGE RD.
PI = 143+25.51
Δ = 20°29'14"RT.
D = 13°00'00"
T = 79.65'
L = 157.59'
PC = 142+45.86
PT = 144+03.46
Ls = 250'
eMAX = 0.100'/'

NORTH FRONTAGE RD.
PI = 154+42.67
Δ = 64°51'14"LT.
D = 13°00'00"
T = 279.99'
L = 498.88'
PC = 151+62.67
PT = 156+61.55
Ls = 250'
eMAX = 0.100'/'

STA. 158+49.05
END N. FRONTAGE RD. CONST.

STA. 93+86.87
BEGIN I-430 S.B. TO I-30 W.B. RAMP CONST.

I-430 SB. TO I-30 WB. RAMP
PI = 95+28.32
Δ = 13°35'03"LT.
D = 3°00'00"
T = 227.47'
L = 452.80'
PC = 93+00.85
PT = 97+53.65
MATCH EXISTING

I-430 SB. TO I-30 WB. RAMP
PI = 100+77.64
Δ = 34°20'59"LT.
D = 6°00'00"
T = 295.14'
L = 572.50'
PC = 97+82.50
PT = 103+55.00
MATCH EXISTING

STA. 192+24.98
END I-30 W.B. ACCEL. CONST.

SURVEY CONTROL DETAILS

3/2/2015

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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.		061437	92	372

(2) SOIL LOG

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

SOIL LOG

STATION	LATITUDE			LONGITUDE			LOCATION	DEPTH	LIQUID LIMIT	PLASTICITY INDEX	AASHTO CLASSIFICATION	COLOR
	DEG	MIN	SEC	DEG	MIN	SEC		FEET				
102+00	34	39	45.20	92	24	12.40	27LT(A)	0-5	22	6	A-4(0)	BROWN
102+00	34	39	45.20	91	24	12.30	10LT(A)	0-5	26	8	A-4(0)	BROWN
103+00	34	39	51.10	92	24	0.50	32LT(B)	0-5	47	24	A-7-6(16)	BROWN
103+00	34	39	51.00	92	24	0.60	16LT(B)	0-5	52	29	A-7-6(20)	BR/GR
103+00	34	39	50.90	92	24	0.70	5LT(B)	0-5	52	29	A-7-6(20)	BR/GR
110+00	34	39	28.20	92	24	28.60	CL(C)	0-5	23	7	A-4(2)	BR/GR
110+00	34	39	28.30	92	24	28.80	25LT(C)	0-5	35	15	A-6(10)	BR/GR
110+00	34	39	28.20	92	24	28.70	8LT(C)	0-5	ND	NP	A-4(0)	GRAY
111+00	34	39	55.70	92	24	9.30	CL(F)	0-5	38	19	A-6(7)	BR/GR
111+00	34	39	52.50	92	24	14.30	91LT(E)	0-5	25	10	A-4(1)	BR/GR
111+00	34	39	52.60	92	24	14.10	65LT(E)	0-5	32	14	A-6(4)	BR/GR
112+00	34	39	54.00	92	24	18.40	CL(B)	0-1.5Z	ND	NP	A-1-B(0)	BR/GR
115+00	34	39	57.30	92	24	16.50	89LT(E)	0-5	22	7	A-4(1)	BR/GR
115+00	34	39	57.30	92	24	16.20	65LT(E)	0-4Z	23	6	A-4(1)	BR/GR
115+00	34	39	57.30	92	24	16.50	89LT	0-5	23	6	A-4(1)	BR/GR
118+00	34	39	33.90	92	24	22.40	25LT(C)	0-5	26	10	A-4(4)	BR/GR
118+00	34	39	33.80	92	24	22.30	12LT(C)	0-5	27	10	A-4(3)	BR/GR
118+00	34	39	33.70	92	24	22.20	5LT(C)	0-5	25	9	A-4(2)	BR/GR
120+00	34	4	2.10	92	24	18.30	110LT(E)	0-3.5Z	24	5	A-4(0)	BR/GR
122+00	34	40	4.20	92	24	17.40	90RT(E)	0-5	24	7	A-4(0)	BR/GR
122+00	34	40	4.10	92	24	17.70	60RT(E)	0-5	23	6	A-4(0)	BR/GR
125+00	34	40	6.60	92	24	20.40	65LT(E)	0-3.5Z	28	7	A-4(2)	BR/GR
125+00	34	40	6.60	92	24	20.50	85LT(E)	0-1.5Z	21	5	A-2-4(0)	BR/GR
126+00	34	39	40.20	92	24	16.60	27LT(C)	0-5	23	3	A-4(0)	BR/GR
126+00	34	39	40.10	92	24	16.40	16LT(C)	0-5	25	5	A-2-4(0)	BR/GR
126+00	34	39	40.10	92	24	16.30	5LT(C)	0-5	21	3	A-4(0)	BR/GR
130+00	34	40	11.30	92	24	22.60	84LT(E)	0-4.0Z	ND	NP	A-4(0)	BR/GR
130+00	34	40	11.30	92	24	22.40	65LT(E)	0-5	20	4	A-4(0)	BR/GR
130+00	34	40	11.80	92	24	21.00	78RT(E)	0-5	21	3	A-4(0)	BR/GR
130+00	34	40	11.70	92	24	21.10	60RT(E)	0-5	19	2	A-4(0)	BR/GR
133+00	34	39	46.90	92	24	17.60	5LT(C)	0-2.0Z	ND	NP	A-2-4(0)	BR/GR
133+00	34	39	46.80	92	24	17.90	31LT(C)	0-5	21	3	A-4(0)	BR/GR
133+00	34	39	46.80	92	24	17.70	16LT(C)	0-2.0Z	20	2	A-4(0)	BR/GR
229+00	34	39	55.70	92	23	38.10	CL(D)	0-5	ND	NP	A-4(0)	BR/GR
229+00	34	39	56.00	92	23	38.30	25RT(D)	0-5	18	2	A-4(0)	BR/GR
229+00	34	39	55.60	92	23	38.00	10LT(D)	0-5	17	4	A-4(0)	BR/GR

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

NOTE: A=I-430 S.B. EXIT RAMP, B=I-430 N.B. ENTRANCE RAMP, C= N. FRONTAGE ROAD, D=I-30 W.B. EXIT RAMP, F=I-430 S.B. TO N. FRONTAGE ROAD EXIT RAMP.

3/2/2015

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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.		061437	93	372

(2) INTERCHANGE LAYOUT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

C.L. I-430

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

C.L. I-430 S.B. EXIT TO I-30 W.B.

C.L. N. FRONTAGE RD.

C.L. I-30

INTERCHANGE LAYOUT - I-430 & I-30

3/10/2015

R061437.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.		061437	94	372

(2) INTERCHANGE LAYOUT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

N 44°40'54" W

P.I. 157+75.14

C.L. STAGECOACH RD. TO I-430 S.B. ENT. RAMP

PROPOSED CONST. LIMITS

160

N 89°09'07" E

FOUND PK24-45/8"REBAR2.0"ALUM CAP

SURVEY BASELINE S27°08'09"W 661.05'

155

P.I. 154+97.89

FOUND PK24-5/8"REBAR2.0"ALUM CAP

SURVEY BASELINE N89°24'8"E 1183.40'

P.C. 151+84.78

PROPOSED CONST. LIMITS

150

P.I. 153+04.18

C.L. I-430

PAVED PARKING

PAVED PARKING

PAVED PARKING

3/2/2015

R061437.DGN

INTERCHANGE LAYOUT - I-430 & STAGECOACH RD.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	95	372

(2) PLAN AND PROFILE SHEETS

STA. 154+80 - IN PLACE
D.I. ON LT.
MODIFY D.I. AND ADJUST TO GRADE
USING TYPE ST D.I. 75.07' LT.

STA. 156+80 - IN PLACE
D.I. ON LT.
MODIFY D.I. AND ADJUST TO GRADE
USING TYPE ST D.I. 76.17' LT.

STA. 158+80 - IN PLACE
D.I. ON LT.
MODIFY D.I. AND ADJUST TO GRADE
USING TYPE ST D.I. 79.24' LT.

STA. 161+25 - IN PLACE
D.I. ON LT. W./ 18" x 60' PIPE OUTLET
REMOVE DROP INLET AND HEADWALL
CONSTRUCT
TYPE ST D.I. 83' LT.
DROP INLET 3'-0" X 3'-0" X H=5'-4"
USE 3 VANE GRATES
AND EXTEND R.C. PIPE 10' LT. WITH F.E.S.
WITH CONCRETE COLLARS
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 16 LIN. FT.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

N 42°58'53" E

N 44°36'41" E

P.I. 95+36.22
Δ = 1°37'38"RT.

N 43°47'01" E

STA.	STA.	SIDE	MEDIAN TYPE B
154+73.57	177+15.00	LT.	2241.43'

STA. 154+73.57
BEGIN I-30 W.B. ACCEL. CONST.

I-30 WB. ACCEL. LANE

STA. 161+25
TOP ELEV.=314.95
F.L. ELEV.=309.64

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

150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00

370 360 350 340 330 320 310 300 290 280

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2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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STA. 167+50 - IN PLACE
D.I. ON LT.
MODIFY D.I. AND ADJUST TO GRADE
USING TYPE ST D.I. 85.00' LT.

STA. 170+33 - IN PLACE
D.I. ON LT.
MODIFY D.I. AND ADJUST TO GRADE
USING TYPE ST D.I. 85.00' LT.

P.C. 101+69.82

P.I. 97+59.06
Δ = 2°29'15" LT.

PROPOSED CONST. LIMITS

PROPOSED ROW

PROPOSED ROW

C.L. N. FRONTAGE RD.

BASS PRO DRIVE

N 42°07'26" E

N 43°47'01" E

N 43°52'28" E

P.T. 100+00.00
Δ = 1°48'02" RT.

+63 +64 +97

DIVIDER WALL

PAVED SHOULDER

CONCRETE APRON

C.L. I-30

STA.	STA.	SIDE	MEDIAN TYPE B	MEDIAN TYPE C
154+73.57	177+15.00	LT.	2241.43'	
177+15.00	183+91.00	LT.		676.00'

I-30 WB. ACCEL. LANE

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

165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00

370 360 350 340 330 320 310 300 290 280

3/2/2015

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				JOB NO.		061437	97	372

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

C.L. N. FRONTAGE RD.

PROPOSED ROW

PROPOSED ROW

BEGIN C/A

PROPOSED ROW & C/A

P.C. 122+49.86

T.C.E.

N 43°52'28" E

N 44°26'43" E

N 43°47'01" E

DIVIDER WALL

C.L. I-30

C.L. I-430 S.B. EXIT TO I-30 W.B.

P.C. 189+34.65

P.C. 93+00.85

P.I. 95+28.33

NOSE 95+15 50.28'

STA. 192+24.98
END I-30 W.B. ACCEL. CONST.

I-30
PI = 200+76.92
Δ = 22°32'59"RT.
D = 1°00'00"
T = 1142.27'
L = 2254.97'
PC = 189+34.65
PT = 211+89.62

I-30 WB. ACCEL. LANE

STA.	STA.	SIDE	MEDIAN TYPE C	MEDIAN TYPE SP-1
177+15.00	183+91.00	LT.	676.00'	
183+91.00	184+91.00	LT.		100.00'
185+09.00	186+09.00	LT.		100.00'
186+09.00	190+53.21	LT.	444.21'	

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

380 370 360 350 340 330 320 310 300 290

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00

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(2) PLAN AND PROFILE SHEETS

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No. 11425
TRINITY D. SMITH
3-10-15

STA. 86+68.22
BEGIN N. FRONTAGE RD. CONST.

+68.22 200' TRANSITION +68.22

C.L. N. FRONTAGE RD.

STA. 96+11.46 ON N. FRONTAGE RD. =
STA. 100+06.42 ON OTTER CREEK CONNECTOR
Δ 88°40'57"

OTTER CREEK CONNECTOR

P.I. 102+72.24
N 19°51'09" W
P.I. 103+71.91

STA. 98+50 - CONSTRUCT
D.I. ON LT. W./ 18" x 97' PIPE OUTLET
CONNECT TO D.I. @ STA. 99+51
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5'-2"

STA. 99+51 - CONSTRUCT
D.I. ON LT. W./ 24" x 36' R.C. STUB OUTLET
W./ F.E.S. LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 8'-6"

P.C. 101+69.82

STA. 97+70.31 TO STA. 105+93.04 - CONSTRUCT
CONCRETE WALKS = 457 SQ. YD.

STA. 97+70.31 - CONSTRUCT
TYPE 3 WHEELCHAIR RAMP = 6.2 SQ. YD.

P.I. 97+59.06
Δ = 2°29'15" LT.

PROPOSED CONST. LIMITS

N 44°04'15" W
N 44°36'41" E
N 42°07'26" E
N 42°58'53" E

PAVED PARKING
PAVED PARKING
PAVED ISLAND
CURB
DIVIDER WALL
DIVIDER WALL

P.I. 95+36.22
Δ = 1°37'38" RT.
P.T. 100+00.00
Δ = 1°48'02" RT.
N 43°47'01" E
N 43°47'01" E
DIVIDER WALL
DIVIDER W

N. FRONTAGE RD.

96+00.00
316.26
-2.13%
97+25.00
316.43
K=170.70
VC=200'
e=-0.29'
STA. 98+50
TOP ELEV.=315.15
F.L. ELEV.=310.00
-1.04%
K=173.24
VC=300'
e=0.65'
STA. 99+51
TOP ELEV.=314.40
F.L. ELEV.=305.92
18"x 97' @ 4.12%
8.05%
18"x 56' @
100+00.00
313.58

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

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				6	ARK.			
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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STA. 97+69.75 TO STA. 105+93.04 - CONSTRUCT CONCRETE WALKS = 457 SQ. YD.

STA. 100+10 - CONSTRUCT D.I. ON LT. W./ 18" x 56' PIPE OUTLET CONNECT TO D.I. @ STA. 99+51 TY C = 4' x 4' TY MO = 4' I.D. H = 3'-9"

STA. 101+00 - CONSTRUCT D.I. ON LT. W./ 18" x 86' PIPE OUTLET CONNECT TO D.I. @ STA. 100+10 TY C = 4' x 4' TY MO = 4' I.D. H = 3'-5"

STA. 102+90 - IN PLACE JUNCTION BOX, TYPE E WITH PIPE OUTLET RETAIN

STA. 102+63 - CONSTRUCT APPR. ON LT. = 25 CU.YD.

STA. 103+00 - CONSTRUCT D.I. ON LT. W./ 18" x 8' PIPE OUTLET CONNECT TO JUNCT. BOX @ STA. 102+90 TY C = 4' x 4' TY MO = 4' I.D. H = 3'-8"

STA. 104+25 - IN PLACE JUNCTION BOX, TYPE E WITH PIPE OUTLET RETAIN

STA. 105+00 - CONSTRUCT D.I. ON LT. W./ 18" x 72' PIPE OUTLET CONNECT TO EXIST. JUNCT. BOX @ STA. 104+25 TY C = 4' x 4' TY MO = 4' I.D. H = 3'-8"

STA. 107+50 - CONSTRUCT D.I. ON LT. W./ 18" x 246' PIPE OUTLET CONNECT TO D.I. @ STA. 105+00 TY C = 4' x 4' TY MO = 4' I.D. H = 3'-8"

STA. 105+93.04 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 8.9 SQ. YD.

STA. 106+64 - CONSTRUCT APPR. ON LT. = 460 CU.YD.

STA. 107+41.01 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 9.4 SQ. YD.

STA. 109+97 - CONSTRUCT APPR. ON LT. = 45 CU.YD.

STA. 111+36 - IN PLACE D.I. ON LT. W./ 48" x 108' PIPE OUTLET CONNECTED TO D.I. @ STA. 112+50 RETAIN

STA. 112+50 - IN PLACE D.I. ON LT. W./ 48" x 148' PIPE OUTLET CONNECT TO D.I. @ STA. 114+04 RETAIN

STA. 114+04 - IN PLACE D.I. ON LT. W./ 48" x 8' PIPE OUTLET CONNECTED TO D.I. @ STA. 114+04 RETAIN

STA. 107+41.01 TO STA. 109+62.50 - CONSTRUCT CONCRETE WALKS = 123 SQ. YD.

STA. 109+62.50 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 7.2 SQ. YD.

STA. 110+47.51 TO STA. 111+00.00 - CONSTRUCT CONCRETE WALKS = 52 SQ. YD.

STA. 110+47.51 - CONSTRUCT TYPE 3 WHEELCHAIR RAMP = 8.2 SQ. YD.

C.L. N. FRONTAGE RD.

BASS PRO DRIVE

PROPOSED ROW

R=75' R=75' R=20' R=40'

40' 30'

CONC LP BASE

N 43°52'28" E

N 43°47'01" E

P.I. 100+00.00
Δ = 1°48'02"RT.

DIVIDER WALL

PAVED SHOULDER

N. FRONTAGE RD.

K=173.24
VC=300'
e=0.65'

STA. 101+00
TOP ELEV.=314.36
F.L. ELEV.=310.94

STA. 103+00
TOP ELEV.=315.69
F.L. ELEV.=312.02

STA. 105+00
TOP ELEV.=317.08
F.L. ELEV.=313.41

STA. 107+50
TOP ELEV.=318.75
F.L. ELEV.=315.08

108+40.00
319.42

K=270.35
VC=300'
e=-0.42'

STA. 111+36
TOP ELEV.=318.21
F.L. ELEV.=309.40

STA. 112+50
TOP ELEV.=317.74
F.L. ELEV.=307.82

STA. 114+04
TOP ELEV.=317.10
F.L. ELEV.=305.50

0.69%

-0.41%

18"x 86' @ 0.52%

18"x 56' @ 8.05%

18"x 8' @ 5.00%

18"x 72' @ 5.00%

18"x 246' @ 0.68%

42"x 23' @ 0.40%

48"x 108' @ 1.42%

48"x 148' @ 1.57%

48"x 190' @ 1.21%

100+00.00
313.58

STA. 100+10
TOP ELEV.=314.23
F.L. ELEV.=310.49

EXIST.
STA. 102+90
TOP ELEV.=314.51
F.L. ELEV.=304.51

EXIST.
STA. 102+90
TOP ELEV.=313.56
F.L. ELEV.=306.13

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

350 340 330 320 310 300 290 280

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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(2) PLAN AND PLOT SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
2-10-15

STA. 116+00 - IN PLACE
D.I. ON LT. W./ 48" x 190' PIPE OUTLET
CONNECTED TO D.I. @ STA. 114+04
RETAIN

STA. 116+60 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 54' PIPE OUTLET
CONNECTED TO D.I. @ STA. 116+00
RETAIN

STA. 117+10 - IN PLACE
D.I. ON LT. W./ 8' EXTENSION
& 48" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 116+60
RETAIN

STA. 117+60 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+10
RETAIN

STA. 117+97 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 31' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+60
RETAIN

STA. 117+98 - IN PLACE
TYPE 'R' DROP INLET ON RT.
W/ 36" X 189' R.C. PIPE INLET &
36" X 49' R.C. PIPE OUTLET
W/ F.E.S. LT. & RT.
MODIFY DROP INLET AND ADJUST TO GRADE
USING TYPE ST AND
CONNECT TO D.I. @ STA. 117+97

STA. 119+00 - IN PLACE
D.I. ON LT. W./ 18" x 98' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+97
RETAIN

STA. 120+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 119+00
RETAIN

STA. 121+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 120+00
RETAIN

STA. 122+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 121+00
RETAIN

STA. 123+17 - IN PLACE
24" X 232' R.C. PIPE CULV'T.
W/ F.E.S. RT.
CONNECTED TO D.I. @ STA. 123+17
RETAIN

STA. 123+19 - IN PLACE
D.I. ON LT. W./ 24" x 26' R.C. STUB OUTLET
W./ F.E.S. LT.
RETAIN

STA. 121+65 - IN PLACE
APPR. ON LT.
RETAIN

STA. 124+00 - IN PLACE
TYPE 'RM' DROP INLET 30' RT.
W/ 24" X 56' R.C. PIPE OUTLET (CL. III)
CONNECTED TO D.I. @ STA. 124+00 LT.
RETAIN

STA. 124+00 - IN PLACE
D.I. ON LT. W./ 24" x 73' PIPE OUTLET
CONNECTED TO D.I. @ STA. 123+19
RETAIN

STA. 124+50 - IN PLACE
D.I. ON LT. W./ 24" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 124+00
RETAIN

STA. 125+40 - IN PLACE
D.I. ON LT. W./ 24" x 83' PIPE OUTLET
CONNECTED TO D.I. @ STA. 124+50
RETAIN

STA. 126+00 - IN PLACE
D.I. ON LT. W./ 24" x 54' PIPE OUTLET
CONNECTED TO D.I. @ STA. 125+40
RETAIN

NORTH FRONTAGE RD.
PI = 127+14.07
Δ = 65°53'56"LT.
D = 8°00'00"
T = 464.21'
L = 823.74'
PC = 122+49.86
PT = 130+73.60
Ls = 250'
eMAX = 0.084'/'

STA. 126+77 - IN PLACE
D.I. ON LT. W./ 24" x 18' R.C. STUB OUTLET
W./ F.E.S. LT.
RETAIN

STA. 126+93 - IN PLACE
24" X 100' R.C. PIPE CULV'T.
ON 30° RT. FWD. SKEW
W/ F.E.S. RT.
CONNECTED TO D.I. @ STA. 126+77 LT.
RETAIN

STA. 127+50 - IN PLACE
D.I. ON LT. W./ 18" x 66' PIPE OUTLET
CONNECTED TO D.I. @ STA. 126+77
RETAIN

STA. 128+25 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 127+50
RETAIN

STA. 129+00 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 128+25
RETAIN

STA. 129+75 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 129+00
RETAIN

PROPOSED ROW
C.L. N. FRONTAGE RD.
PROPOSED ROW & C/A
BEGIN C/A
PROPOSED ROW & C/A
PROPOSED CONST. LIMITS
PROPOSED CONST. LIMITS
T.C.E.
P.C. 122+49.86
P.I. 130+73.60
P.I. 127+40.06
P.T. 131+50.79
P.T. 127+53.65
P.C. 127+82.50
N 43°52'28" E
N 43°52'28" E
N 43°47'01" E
N 44°26'43" E
N 22°01'28" W
N. FRONTAGE RD.
PRE CAST CONC. MONUMENT
ALUM CAP
DIVIDER WALK
115
120
125
185
190
95
100
105

STA. 120+62.36 BEGIN SUPERELEVATION (N.C.)
STA. 123+12.36 MAX SUPERELEVATION (0.084'/')
STA. 129+00.79 MAX SUPERELEVATION (0.084'/')
STA. 131+50.79 END SUPERELEVATION (N.C.)

STA. 116+00
TOP ELEV.=316.29
F.L. ELEV.=307.79
-0.41%
48"x 190' @ 1.21%

STA. 116+60
TOP ELEV.=316.04
F.L. ELEV.=308.02
48"x 54' @ 0.43%

STA. 117+10
TOP ELEV.=315.91
F.L. ELEV.=308.16
48"x 44' @ 0.32%

STA. 117+60
TOP ELEV.=316.06
F.L. ELEV.=308.31
48"x 44' @ 0.34%

STA. 117+97
TOP ELEV.=316.39
F.L. ELEV.=308.47
48"x 31' @ 0.51%

K=82.56
VC=300'
e=1.36'

118+25.00
315.33

STA. 119+00
TOP ELEV.=318.11
F.L. ELEV.=313.44
18"x 68' @ 5.09%

STA. 120+00
TOP ELEV.=320.99
F.L. ELEV.=316.32
18"x 96' @ 3.00%

3.22%

STA. 121+00
TOP ELEV.=324.21
F.L. ELEV.=319.54
18"x 96' @ 1.36%

STA. 122+00
TOP ELEV.=327.36
F.L. ELEV.=322.69
18"x 96' @ 3.28%

STA. 123+19
TOP ELEV.=330.60
F.L. ELEV.=321.13

123+45.00
332.07

K=251.42
VC=400'
e=-0.80'

STA. 124+00 (LT.)
TOP ELEV.=332.57
F.L. ELEV.=327.65

STA. 124+00 (RT.)
TOP ELEV.=333.29
F.L. ELEV.=330.29

STA. 124+50
TOP ELEV.=333.62
F.L. ELEV.=329.95
24"x 83' @ 1.99%
24"x 13' @ 8.92%
24"x 44' @ 5.22%

STA. 125+40
TOP ELEV.=335.26
F.L. ELEV.=331.59
1.63%
24"x 54' @ 1.83%

STA. 126+00
TOP ELEV.=336.24
F.L. ELEV.=332.57
24"x 18' @ 4.28%

STA. 126+77
TOP ELEV.=337.51
F.L. ELEV.=330.80
18"x 66' @ 6.79%

STA. 127+50
TOP ELEV.=338.97
F.L. ELEV.=335.30
18"x 68' @ 2.28%

127+35.00
338.42

K=470.66
VC=300'
e=-0.24'

STA. 128+25
TOP ELEV.=340.52
F.L. ELEV.=336.85
18"x 68' @ 2.44%

STA. 129+00
TOP ELEV.=342.18
F.L. ELEV.=338.51
18"x 68' @ 2.47%

2.27%

STA. 129+75
TOP ELEV.=343.86
F.L. ELEV.=340.19
18"x 68' @ 2.39%

130+00.00
344.42

K=1089.21
VC=200'
e=-0.05'

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

360 350 340 330 320 310 300 290

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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				JOB NO.		061437	101	372

2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

STA. 132+90.97 - IN PLACE
TYPE 3 WHEELCHAIR RAMP
RETAIN

P.I. 136+18.61

C.L. N. FRONTAGE RD.

STA. 137+90 - IN PLACE
24" X 268' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
Q50 = 11cfs; D.A. = 7 Ac.
RETAIN

PROPOSED ROW & C/A

FRONTAGE RD.

N 22°01'28" W

P.C. 132+21.99

P.I. 138+67.22
P.C. 138+72.62

N 61°04'33" E

N 20°42'58" W

N 78°27'58" E

P.I. 140+39.52

P.C. 140+73.60

P.I. 140+39.52

P.I. 140+73.60

P.I. 143+25.51

S 81°02'49" E

P.I. 140+39.52

P.I. 109+80.58

N 61°04'33" E

P.I. 109+80.58

P.T. 142+03.86

P.C. 142+45.86

P.T. 144+03.46

P.I. 109+80.58

P.T. 142+03.86

P.C. 142+45.86

NORTH FRONTAGE RD.
PI = 136+18.61
Δ = 83°06'00"RT.
D = 13°00'00"
T = 390.62'
L = 639.23'
PC = 132+27.99
PT = 138+67.22
Ls = 250'
eMAX = 0.100'/'

NORTH FRONTAGE RD.
PI = 140+39.52
Δ = 17°23'25"RT.
D = 5°15'00"
T = 166.91'
L = 331.24'
PC = 138+72.62
PT = 142+03.86
MATCH EXISTING

NORTH FRONTAGE RD.
PI = 143+25.51
Δ = 20°29'14"RT.
D = 13°00'00"
T = 79.65'
L = 157.59'
PC = 142+45.86
PT = 144+03.46
Ls = 250'
eMAX = 0.100'/'

STA. 130+50 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 129+75
RETAIN

PROPOSED CONST. LIMITS

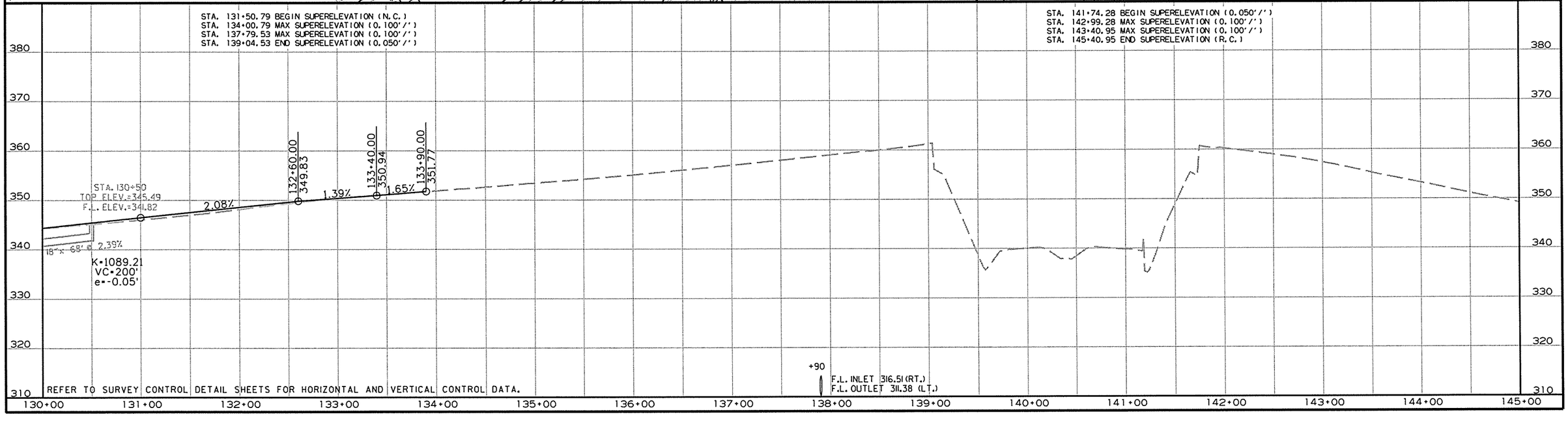
STA. 141+73.77 - IN PLACE
APPROACH GUTTER ON LT. OF N. FRONTAGE RD.
REMOVE AND CONSTRUCT
TYPE "AT" APPROACH GUTTER

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
141+80.54	143+99.29	LT.	150'	1	1

N. FRONTAGE RD.

STA. 131+50.79 BEGIN SUPERELEVATION (N.C.)
STA. 134+00.79 MAX SUPERELEVATION (0.100'/')
STA. 137+79.53 MAX SUPERELEVATION (0.100'/')
STA. 139+04.53 END SUPERELEVATION (0.050'/')

STA. 141+74.28 BEGIN SUPERELEVATION (0.050'/')
STA. 142+99.28 MAX SUPERELEVATION (0.100'/')
STA. 143+40.95 MAX SUPERELEVATION (0.100'/')
STA. 145+40.95 END SUPERELEVATION (R.C.)



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

3/2/2015

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				6	ARK.			
				JOB NO.		061437	102	372

(2) PLAN AND PROFILE SHEETS

NORTH FRONTAGE RD.
PI = 149+70.09
Δ = 34°05'28"RT.
D = 13°00'00"
T = 135.13'
L = 262.24'
PC = 148+34.96
PT = 150+97.20
Ls = 250'
eMAX = 0.100'/'

NORTH FRONTAGE RD.
PI = 154+42.67
Δ = 64°51'14"LT.
D = 13°00'00"
T = 279.99'
L = 498.88'
PC = 151+62.67
PT = 156+61.55
Ls = 250'
eMAX = 0.100'/'

STA. 150+10 - IN PLACE
24" X 68' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
RETAIN AND EXTEND 2' RT.
TO A COMPLETED LENGTH OF 70'
W/ F.E.S. RT. (USE TYPE 3 BEDDING)
USE 4' R.C. PIPE CULV'T. (CL. III)
USE AS LAKE SPILLWAY

STA. 153+78 - IN PLACE
18" X 23' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND INSTALL
18" X 58' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 80 CU.YD.

STA. 157+50 - IN PLACE
TYPE 'R' DROP INLET ON RT.
W/ 36" X 62' R.C. PIPE OUTLET
ON 30° LT. FWD. SKEW
W/ F.E.S. LT.
MODIFY DROP INLET AND ADJUST TO GRADE
USING TYPE ST AND
EXTEND R.C. PIPE CULV'T. 4' LT.
TO A COMPLETED LENGTH OF 66'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 4' R.C. PIPE CULV'T. (CL. III)

STATE OF ARKANSAS
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STA. 158+49.05
END N. FRONTAGE RD. CONST.

PROPOSED ROW & C/A
C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP
EXIST. ROW & PROPOSED C/A
PROPOSED CONST. LIMITS
C.L. N. FRONTAGE RD.
BEGIN C/A
PROPOSED ROW
200' TRANSITION
CEMETERY
FOOTER AROUND GRAVE PLOT
POND
PAVED PARKING
PARKING
FINISH SO IN CONC. BASE OF
P.I. 149+70.09
P.C. 148+34.96
P.T. 150+97.20
P.C. 151+62.67
P.I. 154+42.67
P.I. 156+61.55
N 63°29'55" W
S 81°02'49" E
S 46°57'21" E
N 68°11'25" E
N 67°06'51" E
N 67°04'34" E
PN#187 PD:8" SPK
PN#194 PD:8" SPIKE WOODS
PN#193 PD:8" SPIKE WOODS
PN#191 PD:8" SPIKE WOODS
PN#190 PD:8" SPIKE

STA.	STA.	SIDE	MEDIAN TYPE C
155+50.00	158+49.05	LT.	299.05'

STA. 147+62.07 BEGIN SUPERELEVATION (R.C.)
STA. 148+75.93 MAX SUPERELEVATION (0.066'/')
STA. 149+66.08 MAX SUPERELEVATION (0.066'/')
STA. 151+29.94 END SUPERELEVATION (N.C.)

STA. 151+29.94 BEGIN SUPERELEVATION (N.C.)
STA. 153+79.94 MAX SUPERELEVATION (0.100'/')
STA. 155+99.05 MAX SUPERELEVATION (0.100'/')
STA. 158+49.05 END SUPERELEVATION (N.C.)

F.L. INLET 326.44 (RT.)
F.L. INLET 297.9 (LT.)

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

340 330 320 310 300 290 280 270

145+00 146+00 147+00 148+00 149+00 150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00

N. FRONTAGE RD.

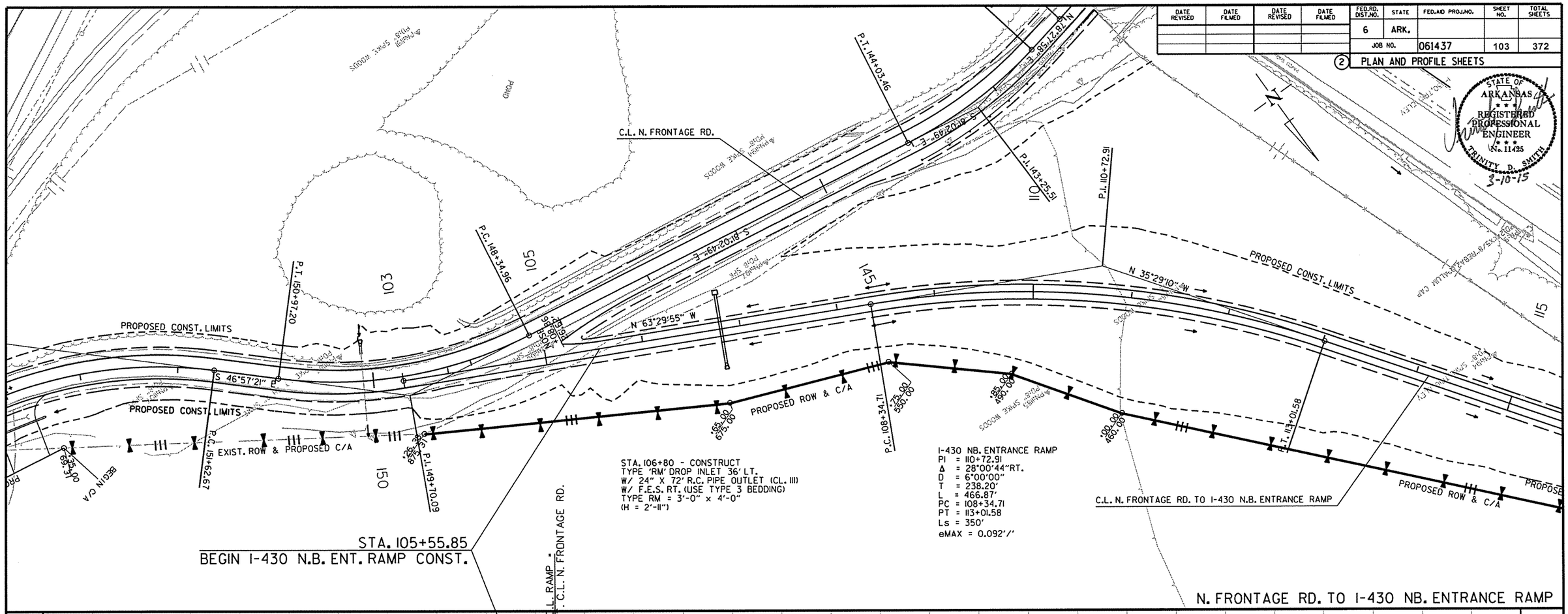
3/2/2015

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				6	ARK.			
				JOB NO.		061437	103	372

(2) PLAN AND PLOFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15



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

3/2/2015

R061437.DGN

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				6	ARK.			
				JOB NO.		061437	104	372

(2) PLAN AND PLOT SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

PROPOSED ROW & C/A

P.C. 121+14.42

P.T. 3+84.70
+90.00
149.54

PROPOSED CONST. LIMITS

N 19°59'30" W

P.I. 121+46.02

NOSE +50.78
83.80'

NOSE +41.34
51.84'

P.I. 122+89.74

P.I. 129+51.99

N 35°29'10" W

PROPOSED CONST. LIMITS

PROPOSED ROW & C/A

+75.00
268.09

+60.00
215.00

P.C. 118+86.19

PROPOSED ROW & C/A

+30.00
175.00

+60.00
150.96

+41.34

P.T. 124+02.67

700' ACCELERATION LANE

PROPOSED CONST. LIMITS

300' LANE TAPER

C.L. I-430

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

STA. 117+30 - CONSTRUCT
24" X 90' R.C. PIPE CULV'T. (CL. III)
W/ F.E.S. LT. & RT.
(USE TYPE 3 BEDDING)
Q50 = 5 cfs; D.A. = 3 Ac.

I-430 NB. ENTRANCE RAMP
PI = 121+46.02
Δ = 15°29'40"RT.
D = 3°00'00"
T = 259.83'
L = 516.49'
PC = 118+86.19
PT = 124+02.67
Ls = 300'
eMAX = 0.057'/'

STA. 122+41.34
END I-430 N.B. ENT. RAMP CONST.

N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP

STA. 116+61.19 BEGIN SUPERELEVATION (N.C.)
STA. 119+61.19 MAX SUPERELEVATION (0.057'/')
STA. 123+27.67 MAX SUPERELEVATION (0.057'/')
STA. 126+27.67 END SUPERELEVATION (N.C.)

STA. 122+41.34 7.5' LT. C.L. RAMP
STA. 122+41.34 57.84' RT. C.L. I-430
309.91

K=227.52
VC=650'
e=2.32'

120+48.00
312.12

117+23.00
315.82

-1.14%

-3.45% RT.DT.GR.

-4.68% LT.DT.GR.

0.92% LT.DT.GR.

3.04% RT.DT.GR.

-1.80% RT.DT.GR.

3.37% RT.DT.GR.

+00.00 LT.DT.GR.
LT. ELEV. 314.28

+30.00 LT.DT.GR.
+30.00 RT.DT.GR.
RT. ELEV. 308.21
LT. ELEV. 308.21

+30

F.L. INLET 308.21(L.T.)
F.L. OUTLET 307.46 (RT.)

+30.00 RT.DT.GR.
RT.ELEV. 304.42

+50.00 LT.DT.GR.
LT. ELEV. 309.31

+00.00 RT.DT.GR.
RT.ELEV. 301.87

+00.00 RT.DT.GR.
RT.ELEV. 290.27

+41.34 RT.DT.GR.
RT.ELEV. 303.04

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

340 330 320 310 300 290 280 270

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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				6	ARK.			
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PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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No. 11425
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C.L. N. FRONTAGE RD.

STA. 109+12.12 TO STA. 109+57.44 - CONSTRUCT PIER PROTECTION = 45.32 LIN. FT.

STA. 113+86 - IN PLACE
TYPE 'R' DROP INLET IN MEDIAN
W/ 24" X 102' R.C. PIPE OUTLET LT.
W/ F.E.S. LT.
RETAIN AND EXTEND 6' LT.
TO A COMPLETED LENGTH OF 108'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 10' R.C. PIPE CULV'T. (CL. III)

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

C.L. I-430 S.B. EXIT TO I-30 W.B.

PROPOSED CONST. LIMITS

P.T. 138+67.22
P.C. 138+72.62
P.T. 108+62.91
N 6°08'33" E

N 20°42'11" W

P.I. 140+39.52

NOSE +66.57
40.86'

P.I. 106+18.97

P.I. 109+80.58

N 19°59'30" W

P.I. 116+14.16

C.L. I-430

P.T. 142+03.86
P.C. 142+45.86
N 18°27'58" E

STA. 107+68.57
BEGIN I-430 CONST.

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

N 35°29'10" W

P.I. 110+72.91

P.C. 118+60.19

+75.00
268.09

+60.00
215.00

PROPOSED ROW & C/A

I-430

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
109+56.86	111+75.61	LT. S.B.	150'	1	1

+86
EXIST. TOP D.I. 322.50

EXIST. F.L. D.I. 317.80
F.L. OUTLET 315.41 (LT.)

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

360 350 340 330 320 310 300 290

105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00

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				6	ARK.			
				JOB NO.		061437	106	372

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
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3-10-15

STA. 121+40 - IN PLACE
TYPE 'R' DROP INLET IN MEDIAN
W/ 48" X 124' R.C. PIPE INLET ON RT. &
48" X 156' R.C. PIPE OUTLET ON LT.
W/ F.E.S. LT. & RT.
ON 30° LT. FWD. SKEW
RETAIN AND EXTEND
28' RT.
TO A COMPLETED LENGTH OF 184'
W/ F.E.S. RT. (USE TYPE 3 BEDDING)
USE 28' R.C. PIPE CULV'T. (CL. III)
Q50= 18 cfs; D.A.= 12 Ac.

STA. 129+70 - IN PLACE
TYPE 'R' DROP INLET ON LT.
W/ 24" X 92' R.C. PIPE OUTLET
W/ F.E.S. LT.
RETAIN AND EXTEND 28' LT.
TO A COMPLETED LENGTH OF 120'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 32' R.C. PIPE CULV'T. (CL. III)

STA. 132+55 - IN PLACE
48" X 314' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
ON 30° LT. FWD. SKEW
RETAIN AND EXTEND
22' LT. TO A COMPLETED LENGTH OF 338'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 26' R.C. PIPE CULV'T. (CL. III)
Q50= 40 cfs; D.A.= 29 Ac.

C.L. I-430 S.B. EXIT TO N. FRONTAGE RD.

PROPOSED ROW & C/A

PROPOSED CONST. LIMITS

C.L. I-430

N 19°59'30" W

700' ACCELERATION LANE

300' LANE TAPER

C.L. N. FRONTAGE RD. TO I-430 N.B. ENTRANCE RAMP

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
130+55.54	132+94.29	RT. N.B.	175'	1	1
130+69.53	133+13.28	LT. N.B.	175'	1	1

STA. 129+03 TO STA. 129+53 - IN PLACE
W.R.S.F. IN MEDIAN
REMOVE

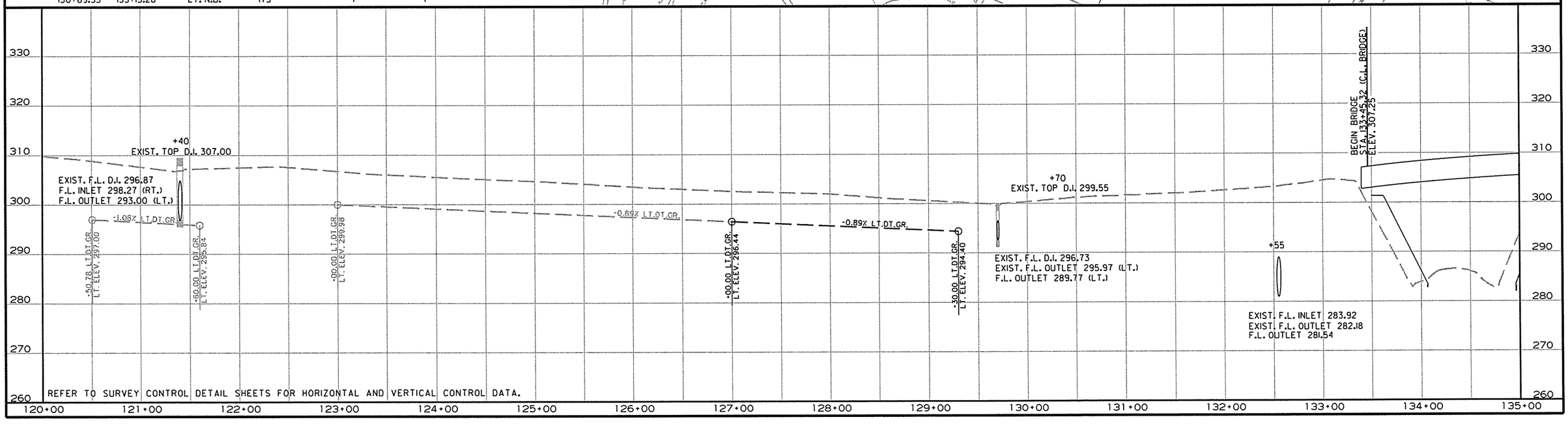
STA. 129+03 TO STA. 131+19 - INSTALL
W.R.S.F. IN MEDIAN = 216 LIN. FT.
WITH END TERMINAL = 1EACH

STA. 133+04.05 - IN PLACE
APPROACH GUTTER ON RT. OF I-430 N.B.
REMOVE AND CONSTRUCT
TYPE "AT" APPROACH GUTTER

STA. 133+20.18 - IN PLACE
APPROACH GUTTER ON LT. OF I-430 N.B.
REMOVE AND CONSTRUCT
TYPE "AT" APPROACH GUTTER

STA. 132+73 - IN PLACE
TYPE 'R' DROP INLET ON RT.
W/ 12" X 64' R.C. PIPE OUTLET ON RT.
RETAIN

I-430
PI = 143+89.55
Δ = 28°00'37"RT.
D = 1°30'00"
T = 952.72'
L = 1867.34'
PC = 134+36.83
PT = 153+04.18
MATCH EXISTING



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

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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
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3-10-15

STA. 135+84 - IN PLACE
TYPE 'R' DROP INLET IN MEDIAN
W/ 18" X 160' C.M. PIPE OUTLET
W/ SPILLWAY OUTLET LT.
FILL AND ABANDON C.M. PIPE &
COVER AND ABANDON DROP INLET

STA. 136+00 - CONSTRUCT
TYPE 'RM' DROP INLET IN MEDIAN
4'-0" X 3'-0" X H = 2'-11"
W/ 24" X 176' R.C. PIPE OUTLET ON LT. (CL. V)
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
INSTALL BY METHODS IN SPECIAL PROVISION "PIPE CULVERTS"

STA. 145+00 TO STA. 167+68.88
SPECIAL FLOOD HAZARD AREA

SPECIAL FLOOD HAZARD AREA

PROPOSED ROW & C/A

PROPOSED CONST. LIMITS

P.I. 143+89.55

N 19°59'30" W

N 8°01'07" E

FOURCHE CREEK

C.L. STAGECOACH RD. TO I-430 S.B. ENT. RAMP

C.L. I-430

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
135+53.51	137+97.26	RT. S.B.	175'	1	1
135+74.83	138+18.58	LT. S.B.	175'	1	1
143+17.93	145+61.68	LT. N.B.	175'	1	1
143+48.62	145+92.37	RT. N.B.	175'	1	1
148+29.51	150+98.26	LT. S.B.	200'	1	1
148+82.29	151+26.04	RT. S.B.	175'	1	1

STA. 141+91 TO STA. 145+52 - IN PLACE
W.R.S.F. IN MEDIAN
REMOVE?

STA. 141+91 TO STA. 143+66 - INSTALL
W.R.S.F. IN MEDIAN = 175 LIN. FT.
WITH END TERMINAL = 1 EACH

I-430
PI = 143+89.55
Δ = 28°00'37"RT.
D = 1°30'00"
T = 952.72'
L = 1867.34'
PC = 134+36.83
PT = 153+04.18
MATCH EXISTING

STA. 145+68.68 - IN PLACE
APPROACH GUTTER ON LT. OF I-430 N.B.
REMOVE AND CONSTRUCT
TYPE "AT" APPROACH GUTTER

STA. 145+98.80 - IN PLACE
APPROACH GUTTER ON RT. OF I-430 N.B.
REMOVE AND CONSTRUCT.
TYPE "AT" APPROACH GUTTER

STA. 145+37 - IN PLACE
TYPE 'R' DROP INLET IN MEDIAN
W/ 24" x 82' R.C. PIPE OUTLET
& F.E.S. ON RT.
RETAIN

STA. 149+67 - IN PLACE
DROP INLET ON RT.
W/ 12" x 42' R.C. PIPE OUTLET
& F.E.S. ON RT.
RETAIN

I-430

PAVED PARKING

OPEN STORAGE

CONCRETE

PAVED PARKING

END BRIDGE
STA. 135+52.79 (C.L. BRIDGE)
ELEV. 310.36

+00
TOP D.I. 306.45

F.L. D.I. 303.53
F.L. OUTLET 280.60 (LT.)

BEGIN BRIDGE
STA. 145+31.65 (C.L. BRIDGE)
ELEV. 301.95

BEGIN BRIDGE
STA. 149+69.35 (C.L. BRIDGE)
ELEV. 292.18

050 DESIGN H.W.
ELEV. = 285.23 FT.

NOTE: FOR ALL THE CONSTRUCTION OF TEMPORARY WORK RAMPS OR HAUL ROADS, THIS STREAM IS CLASSIFIED AS A PERENNIAL STREAM. THE STREAMBANK ELEVATION IS 287 FT. M.L.S.

310 300 290 280 270 260 250 240

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

135+00 136+00 137+00 138+00 139+00 140+00 141+00 142+00 143+00 144+00 145+00 146+00 147+00 148+00 149+00 150+00

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				6	ARK.			
				JOB NO.		061437	108	372

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STA. 145+00 TO STA. 167+68.88
SPECIAL FLOOD HAZARD AREA

C.L. STAGECOACH RD. TO I-430 S.B. ENT. RAMP

P.C. 150+84.78

PROPOSED CONST. LIMITS

N 2°32'51" E

159.90'

P.T. 154+97.89

P.T. 153+04.18

C.L. I-430

I-430
PI = 143+89.55
Δ = 28°00'37"RT.
D = 1°30'00"
T = 952.72'
L = 1867.34'
PC = 134+36.83
PT = 153+04.18
MATCH EXISTING

N 44°40'54" E

P.T. 157+75.14

STA. 157+86 - IN PLACE
TRI. 6' X 4' X 186' R.C. BOX CULV'T.
(15° LT. FWD. SKEW)
RETAIN AND EXTEND
20' LT. TO A COMPLETED LENGTH OF 206'
050 = 520 C.F.S. D.A. = 164 ACRES

PROPOSED CONST. LIMITS

SPECIAL FLOOD HAZARD AREA

STA. 162+02.84 TO STA. 163+96.12 - CONSTRUCT
PIER PROTECTION = 193.28 LIN. FT.

N 8°01'07" E

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
163+95.52	166+64.27	LT. S.B.	200'		

+86
EXIST. TOP D.I. 282.13

F.L. INLET 274.66 (LT.)
EXIST. F.L. INLET 274.59 (LT.)
EXIST. F.L. OUTLET 274.02 (RT.)

0.25% LT.DT.GR.

-00.00 LT.DT.GR.
LT. ELEV. 281.82

I-430

330 320 310 300 290 280 270 260

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

150+00 151+00 152+00 153+00 154+00 155+00 156+00 157+00 158+00 159+00 160+00 161+00 162+00 163+00 164+00 165+00

3/2/2015

R061437.DGN

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				6	ARK.			
				JOB NO.		061437	109	372
				(2) PLAN AND PROFILE SHEETS				

STA. 145+00 TO STA. 167+68.88
SPECIAL FLOOD HAZARD AREA

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STA. 167+68.88
END I-430 CONST.

PROPOSED CONST. LIMITS

N 8°01'07" E

C.L. I-430

SPECIAL FLOOD HAZARD AREA

I-430

0.25% LT.OT.GR.

86.88 LT.OT.GR.
LT. ELEV. 282.80

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

330 320 310 300 290 280 270 260

165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00

R061437.DGN 3/2/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061437	110	372

2 PLAN AND PROFILE SHEETS

STA. 95+85 - IN PLACE
DROP INLET 24' RT.
W/ 16" X 47' R.C. PIPE OUTLET
W/ F.E.S. LT.
PLUG AND ABANDON

STA. 96+00 - CONSTRUCT
TYPE 'RM' DROP INLET 23.82' RT.
W/ 24" X 70' R.C. PIPE OUTLET (CL. V)
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
INSTALL BY METHODS IN SPECIAL PROVISION "PIPE CULVERTS"

STA. 97+84 - IN PLACE
24" X 82' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
RETAIN AND EXTEND 18' LT.
TO A COMPLETED LENGTH OF 100'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 22' R.C. PIPE CULV'T. (CL. III)
Q50 = 3 cfs; D.A. = 2 Ac.

I-430 SB. TO I-30 WB. RAMP
PI = 95+28.32
Δ = 13°35'03"LT.
D = 3°00'00"
T = 227.47'
L = 452.80'
PC = 93+00.85
PT = 97+53.65
MATCH EXISTING

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

C.L. N. FRONTAGE RD.
C.L. I-30
C.L. I-430 S.B. EXIT TO I-30 W.B.
PROPOSED ROW
PROPOSED CONST. LIMITS
BEGIN C/A
PROPOSED ROW & C/A
T.C.E.
P.C. 122+49.86
P.C. 93+00.85
P.C. 189+34.65
P.T. 97+53.65
P.C. 97+82.50
P.I. 95+28.32
P.I. 100+77.64
N 43°52'28" E
N 43°47'01" E
N 44°26'43" E
N 30°51'11" E
N 3°29'49" W
NOSE +25.15 50.28'
SHOULDER GORE
DIVIDER WALL
SHOULDER TIE
SLOPE PAVING
SWITCH ELEV.

I-430 SB. TO I-30 WB. RAMP
PI = 100+77.64
Δ = 34°20'59"LT.
D = 6°00'00"
T = 295.14'
L = 572.50'
PC = 97+82.50
PT = 103+55.00
MATCH EXISTING

STA.	STA.	SIDE	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)
92+14.20	94+32.95	LT.	150'	1	1

STA. 93+86.87
BEGIN I-430 S.B. TO I-30 W.B. RAMP CONST.

I-430 S.B. EXIT TO I-30 W.B.

+00
TOP D.I. 339.60
-0.07% LT.DT.GR.
F.L. D.I. 336.68
F.L. OUTLET 335.90 (LT.)
+00.00 LT.DT.GR.
LT. ELEV. 335.97

+84
1.01% LT.DT.GR.
EXIST. F.L. INLET 340.40 (RT.)
F.L. OUTLET 335.76 (LT.)
+84.00 LT.DT.GR.
LT. ELEV. 335.76

370 360 350 340 330 320 310 300

86+00 87+00 88+00 89+00 90+00 91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00

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

3/2/2015

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				6	ARK.			
				JOB NO.		061437	111	372
				(2)	PLAN AND PROFILE SHEETS			

I-430 SB. TO I-30 WB. RAMP
PI = 100+77.64
Δ = 34°20'59"LT.
D = 6°00'00"
T = 295.14'
L = 572.50'
PC = 97+82.50
PT = 103+55.00
MATCH EXISTING

I-430 SB. TO I-30 WB. RAMP
PI = 106+18.97
Δ = 17°12'22"LT.
D = 3°30'00"
T = 247.67'
L = 491.60'
PC = 103+71.30
PT = 108+62.91
MATCH EXISTING

STA. 107+68.57
END I-430 S.B. TO I-30 W.B. RAMP CONST.

C.L. N. FRONTAGE RD.

C.L. I-430 S.B. EXIT TO I-30 W.B.

C.L. I-430

PROPOSED CONST. LIMITS

P.T. 103+55.00
P.C. 103+71.30
P.T. 138+67.22
P.C. 138+72.62
P.T. 108+62.91
P.I. 100+77.64
P.I. 140+39.52
P.I. 109+80.58
P.I. 106+18.97
P.I. 200+79.92
P.T. 142+03.86
P.C. 142+45.86

N 30°51'11" E
N 32°29'39" W
N 61°08'33" E
N 12°20'42" W
N 78°27'58" E

NOSE +66.67
40.86

PAVED SHOULDER
CABLE
GUARDRAIL
CONCRETE APRON
ASPHALT PAVING
CONCRETE PAVING
CONCRETE HEADWALL
CONCRETE SLOPE PAVING
CONCRETE SLOPE PROTECTION
CONCRETE BOX CULVERT
CONCRETE PIPE CULVERT
CONCRETE CAP
ASPHALT PAVING
ASPHALT PATCHING
ASPHALT SLOPE PAVING
ASPHALT SLOPE PROTECTION
ASPHALT PIPE CULVERT
ASPHALT CAP
ASPHALT HEADWALL
ASPHALT SPILLWAY
ASPHALT SPILLWAY PAD
ASPHALT SPILLWAY CAP
ASPHALT SPILLWAY HEADWALL
ASPHALT SPILLWAY SLOPE PAVING
ASPHALT SPILLWAY SLOPE PROTECTION
ASPHALT SPILLWAY PIPE CULVERT

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STAGECOACH ENT. RAMP
PI = 154+97.89
Δ = 47°13'45"LT.
D = 8°00'00"
T = 313.11'
L = 590.36'
PC = 151+84.78
PT = 157+75.14
Ls = 350'
eMAX = 0.100'/'

STA. 157+75.14
END STAGECOACH ENT. RAMP CONST.

STA. 151+40.51
BEGIN STAGECOACH ENT. RAMP CONST.

C.L. STAGECOACH RD. TO I-430 S.B. ENT. RAMP

FOURCHE CREEK

PROPOSED CONST. LIMITS

P.C. 151+84.78

N 2°32'51" E

NOSE +40.51 59.90'

PNH4 PD24"X5/8"REBAR2.0"ALUM. CAP

C.L. I-430

P.T. 153+04.18

P.T. 154+91.89

PNH5 PD24"X5/8"REBAR2.0"ALUM CAP

N 44°40'54"W

P.T. 157+75.14

PROPOSED CONST. LIMITS

STAGECOACH RD. TO I-430 SB. ENT. RAMP

STA. 150+43.36 BEGIN SUPERELEVATION (0.040'/')
STA. 154+18.36 MAX SUPERELEVATION (-0.084'/')
STA. 154+79.96 MAX SUPERELEVATION (-0.084'/')
STA. 157+75.14 END SUPERELEVATION (-0.020'/')

STA. 151+40.51
BEGIN STAGECOACH ENT. RAMP CONST.

STA. 151+40.51 7.5' RT. C.L. RAMP
STA. 151+40.51 59.90' LT. C.L. I-430
288.07

151+85.00
287.72

-0.79%

K=253.49
VC=200'
e=0.20

152+85.00
286.93

153+85.00
286.93

-0.00%

STA. 157+75.14
END STAGECOACH ENT. RAMP CONST.

157+75.14
286.93

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

3/2/2015

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				6	ARK.			
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(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11425
TRINITY D. SMITH
3-10-15

STAGECOACH TEMP. ENT. RAMP
PI = 155+81.55
Δ = 69°38'44"LT.
D = 13°15'00"
T = 300.80'
L = 525.63'
PC = 152+80.76
PT = 158+06.39

STA. 156+00 INSTALL
12" X 48' TEMPORARY CULVERT

STAGECOACH TEMP. ENT. RAMP
PI = 158+47.43
Δ = 16°56'44"RT.
D = 24°00'00"
T = 35.56'
L = 70.61'
PC = 158+11.87
PT = 158+82.47

FOURCHE CREEK

PROPOSED CONST. LIMITS

P.C. 151+84.78

P.C. 152+80.76

N 2°32'51" E

N 8°01'07" E

C.L. I-430

NOSE +47.38 46.27'

P.T. 153+04.18

P.T. 155+81.55

P.T. 158+06.39

P.T. 158+41.43

P.T. 157+52.54

N 44°40'54" W

N 61°33'38" W

P.T. 158+82.47

P.C. 158+11.87

PROPOSED CONST. LIMITS

STAGECOACH RD. TO I-430 SB. TEMP. ENT. RAMP

| | | | |

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) SIGNING SUMMARY OF QUANTITIES

SIGNING SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	TOTAL	UNIT
202	REMOVAL AND DISPOSAL OF IMPACT ATTENUATION BARRIER	1	EACH
202	REMOVAL AND DISPOSAL OF OVERHEAD SIGN STRUCTURE	3	EACH
303	AGGREGATE BASE COURSE (CLASS 7)	700	TON
SP, SS &407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	161	TON
SP, SS &407	ASPHALT BINDER (PG 76-22) IN ACHM SURFACE COURSE (1/2")	9	TON
617	GUARDRAIL (TYPE A)	1750	LIN. FT.
617	TERMINAL ANCHOR POSTS (TYPE 1)	10	EACH
617	GUARDRAIL TERMINAL (TYPE 2)	10	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-40)	1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-41)	1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-42)	1	EACH
SP	STEEL CANTILEVER SIGN STRUCTURE (OC-430-60-43)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-030-60-62)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-44)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-34)	1	EACH
SP	STEEL OVERHEAD SIGN STRUCTURE (OH-430-60-27)	1	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-030-60-28)	2	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-030-60-47)	1	EACH
SP	STEEL BRIDGE MOUNTED SIGN STRUCTURE (BM-430-60-45)	1	EACH
725	GUIDE SIGN - ROADSIDE MOUNTED (DEMOUNTABLE LEGEND)	989	SQ. FT.
725	GUIDE SIGN - OVERHEAD MOUNTED (DEMOUNTABLE LEGEND)	4784	SQ. FT.
726	STANDARD SIGNS	1349	SQ. FT.
727	EXIT NUMBER PANEL (TYPE A)	371	SQ. FT.
727	EXIT NUMBER PANEL (TYPE B)	221	SQ. FT.
727	EXIT NUMBER PANEL (TYPE C)	35	SQ. FT.
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-1)	15	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G-2)	7	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-1)	34	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-2)	8	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-3)	2	EACH
SP	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS (TYPE G2-4)	2	EACH
730	BREAKAWAY SIGN SUPPORT (TYPE G-2)	4523	POUND

NOTES:

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

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

EXISTING LOGOS WILL BE RELOCATED TO THE NEW LOGO SIGN BY THE CONTRACTOR. THE LOGO INSTALLATION SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS IN THE CONTRACT.

NOTE:
BREAKAWAY SIGN SUPPORT TOTAL IS CALCULATED BY TAKING THE LENGTH OF H1, H2, H3 AND THE STUB POST AND MULTIPLYING BY THE BEAM WEIGHT (LBS).

BASIS OF ESTIMATE:
NMAX = 205
MINERAL AGGREGATE 94.9%
ASPHALT BINDER (PG 76 – 22) 5.1%

REMOVAL AND DISPOSAL		
LOCATION	GUARDRAIL EACH	IMPACT ATTENUATION BARRIERS EACH
STA 124+35		1.00
TOTAL:		1.00

MAIN LANES ROADSIDE MOUNTED SIGNING QUANTITIES

SIGN NO./ LOCATION	I-BEAM STRUCTURE TYPE			GUIDE SIGN DEMOUNTABLE LEGEND			I-BEAM BREAKAWAY SIGN SUPPORT											EXIT NUMBER PANEL			
							STEEL SECT. A-572		SIGN POST LENGTH			STUB POST			FOOTINGS			SIGN POST AND STUB	LEGEND	TYPE		
				LENGTH	HEIGHT				H - 1	H - 2	H - 3	H - 1	H - 2	H - 3	DIA.	DEPTH	EMBED.			A	B	C
	G1	G2	G3	LIN. FT.		SQ. FT.	BEAM	LBS	LIN FT			LIN FT			LIN FT			POUND		SQ. FT.		
ML-430-LM10.893SB		1		13.00	5.00	65.00	W6	9.00	12.00	13.00		2.50	2.50		2.00	3.50	2.00	270.00				
ML-430-LM4.452NB		1		10.00	7.00	70.00	W6	9.00	14.00	15.00		2.50	2.50		2.00	3.50	2.00	306.00				
ML-430-LM10.820SB		1		8.00	4.00	32.00	W6	9.00	11.00	12.00		2.50	2.50		2.00	3.50	2.00	252.00				
ML-430-LM9.687SB		1		19.00	14.50	275.50	W8	21.00	21.50	22.50		4.00	4.00		3.00	5.50	5.00	1092.00				
ML-430-LM8.223NB		1		19.00	14.50	275.50	W8	21.00	21.50	22.50		4.00	4.00		3.00	5.50	5.00	1092.00				
ML-430-STA154+70NB		1		11.00	9.50	104.50	W8	18.00	16.50	17.50		3.99	3.99		2.50	5.50	3.66	755.64	1	17.50		
ML-430-STA119+00NB		1		14.50	11.50	166.75	W8	18.00	16.50	17.50		3.99	3.99		2.50	5.50	3.66	755.64	1	17.50		
TOTALS:		7				989.25												4523.28		35.00		

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
3/6/15
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	115	372
				(2)	SIGNING QUANTITIES			

OVERHEAD SIGNING QUANTITIES

SIGN NO./ LOCATION	STRUCTURE TYPE: INSTALL SIGN STRUCTURE (EACH) ST	OC	OH	BM	MAINTAIN EXISTING SIGN STRUCTURE ST	OC	OH	BM	REMOVAL & DISPOSAL OF OVERHEAD SIGN STRUCTURE (EACH)	GUIDE SIGN LENGTH LIN. FT.	HEIGHT LIN. FT.	SQ. FT.	EXIT NUMBER PANEL LEGEND	TYPE A SQ. FT.	TYPE B SQ. FT.	TYPE C SQ. FT.	GUARDRAIL TYPE A LIN. FT.	TERM. ANCHOR POSTS (TYPE 1) EACH	GUARDRAIL TERM. (TYPE 2) EACH	AGG. BASE CR (CL. 7) TON	ACHM SURF. CR. 220 LBS/SY TON
OH-030-60-62			1																		
OH-030-60-185+00WB-B										18.50	10.50	194.25									
OH-030-60-185+00WB-A										14.00	7.50	105.00									
BM-030-60-47				1				1													
BM-030-60-170+80WB-A										12.50	8.00	100.00									
BM-030-60-170+80WB-B										12.00	8.00	96.00									
BM-430-60-28				2					2												
BM-430-60-109+50SB-A										16.50	11.00	181.50	129B		26.25						
BM-430-60-109+50SB-B										14.00	12.50	175.00	126A LT.		47.25						
BM-030-60-42B (SERVICE ROAD)								2													
BM-030-60-262+00WB-SR-A										11.00	9.50	104.50									
BM-030-60-262+00WB-SR-B										MAINTAIN											
BM-430-60-45				1																	
BM-430-60-227+50NB										13.00	12.00	156.00	4	17.50							
BM-430-60-07								1													
BM-430-60-LM6.683NB										19.00	7.50	142.50	8	17.50							
OC-430-60-14						1															
OC-430-60-LM9.844SB										14.50	9.50	137.75	9	17.50							
OC-430-60-15						1															
OC-430-60-LM9.515SB										14.50	10.50	152.25	9	17.50							
OC-430-60-43		1															175	1	1	70	17
OC-430-60-LM8.606SB										19.00	7.50	142.50	8	17.50							
OC-430-60-40		1															175	1	1	70	17
OC-430-60-272+00NB										13.00	13.00	169.00	4	17.50							
OC-430-60-01						1															
OC-430-60-LM4.126NB										19.00	7.50	142.50	5	17.50							
OC-430-60-41		1															175	1	1	70	17
OC-430-60-LM3.914NB										13.00	13.00	169.00	4	17.50							
OC-430-60-42		1															175	1	1	70	17
OC-430-60-LM4.530SB										12.50	11.50	143.75	4	17.50							
OH-430-60-08							1														
OH-430-60-LM6.908NB-A										23.00	8.50	195.50	8	17.50							
OH-430-60-LM6.908NB-B										14.50	4.00	58.00									
OH-430-60-09							1														
OH-430-60-LM7.32NB-A										23.00	8.50	195.50	8	17.50							
OH-430-60-LM7.320NB-B										14.50	9.50	137.75	9	17.50							
OH-430-60-44			1														350	2	2	140	34
OH-430-60-LM5.039NB-A										19.00	9.00	171.00	5	17.50							
OH-430-60-LM5.039NB-B										21.00	12.50	262.50	6A	20.00							
OH-430-60-26							1														
OH-430-60-174+40SB-A										15.00	12.50	187.50	1	17.50							
OH-430-60-174+40SB-B										18.50	8.00	148.00	128	23.57							
OH-430-60-174+40SB-C										14.00	12.50	175.00	129A-B			35.00					
OH-430-60-34			1														350	2	2	140	34
OH-430-60-149+00SB-A										18.50	8.00	148.00	128	23.57							
OH-430-60-149+00SB-B										16.00	11.00	176.00	129B		26.25						
OH-430-60-149+00SB-C										14.00	10.50	147.00	126A LT.		47.25						
OH-430-60-27			1						1								350	2	2	140	34
OH-430--60-124+00SB-A										18.50	8.00	148.00	128	23.57							
OH-430--60-124+00SB-B										16.00	11.00	176.00	129B		26.25						
OH-430--60-124+00SB-C										14.00	10.50	147.00	126A LT.		47.25						
TOTALS:		**4**	**4**	**4**		**3**	**3**	**4**	**3**			**4784.25**		**335.71**	**220.50**	**35.00**	**1750**	**10**	**10**	**700**	**170**



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(2) SIGNING QUANTITIES

STANDARD SIGNS FLAT SHEET (BOX 1 OF 2)

SIGN NO./ LOCATION	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS TYPE												STANDARD SIGN
	G-1	G-2	G2-1	G2-2	G2-3	G2-4	G2-5	G2-6	G2-7	G2-8	G2-9	G2-10	
	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	SQ. FT.
SS-430-LM10.934SB			1										16.00
SS-430-LM8.434NB			1										16.00
SS-430-LM8.688SB			1										16.00
SS-430-LM8.434NB			1										16.00
SS-430-LM7.589SB			1										16.00
SS-430-LM7.205NB			1										16.00
SS-430-LM4.453SB			1										16.00
SS-430-LM4.022NB			1										16.00
SS-430-LM3.727SB			1										16.00
SS-430-STA270+90NB			1										16.00
SS-430-STA141+00SB			1										16.00
SS-430-STA126+00NB			1										16.00
SS-430-STA135+50NB			1										16.00
SS-430-LM7.589SB			1										16.00
SS-430-STA154+00SB			1										16.00
SS-430-STA173+00NB			1										16.00
SS-430-LM11.528SB			1										16.00
SS-430-LM8.920NB			1										16.00
SS-430-LM7.781NB			1										16.00
SS-430-LM3.763NB			1										16.00
SS-430-STA280+50SB			1										16.00
SS-430-STA103+50NB			1										16.00
SS-430-LM11.167SB			1										20.00
SS-430-LM8.351SB			1										20.00
SS-430-LM8.149NB			1										20.00
SS-430-LM4.731SB			1										20.00
SS-430-STA256+00SB			1										20.00
SS-430-STA190+00NB			1										20.00
SS-430-STA139+00NB			1										20.00
SS-430-LM8.760NB			1										20.00
SS-430-LM7.451NB			1										20.00
SS-430-LM3.867SB			1										20.00
SS-430-STA158+30NB			1										20.00
(OC-430-60-15)													20.00
(OH-430-60-26)													20.00
SS-430-LM7.916SB			1										20.00
SS-430-LM8.514NB-B				1									20.00

STANDARD SIGNS FLAT SHEET (BOX 2 OF 2)

SIGN NO./ LOCATION	OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS TYPE												STANDARD SIGN
	G-1	G-2	G2-1	G2-2	G2-3	G2-4	G2-5	G2-6	G2-7	G2-8	G2-9	G2-10	
	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	EA.	SQ. FT.
SS-430-LM11.289SB				1									24.50
SS-430-LM8.429SB				1									24.50
SS-430-LM4.929SB				1									24.50
SS-430-STA265+00SB				1									24.50
SS-430-LM8.054NB				1									24.50
SS-430-STA184+00NB				1									24.50
SS-430-STA133+50NB				1									24.50
SS-30SR-51WB	1												9.00
SS-30SR-43WB	1												7.50
SS-30SR-44WB	1												7.50
SS-30SR-45WB	1												7.50
SS-30SR-46WB	1												7.50
SS-30SR-49WB	1												7.50
SS-30SR-42WB	1												7.50
SS-30SR-53WB	1												5.00
SS-30SR-56WB	1												5.00
SS-30SR-60WB	1												5.00
SS-30SR-57WB	1												17.00
SS-30SR-55WB					1								17.00
SS-30SR-59WB					1								17.00
SS-30SR-52WB	1												4.00
SS-30SR-41WB	1												9.00
SS-30SR-40WB	1												13.00
SS-30SR-01WB- B	SIGN SUPPORTS INSTALL BY JOB 061332												11.00
SS-30SR-12WB	SIGN SUPPORTS INSTALL BY JOB 061332												9.19
SS-30SR-35WB	1												9.19
SS-30SR-58WB						1							58.69
SS-30SR-38WB						1							72.19
SS-30SR-09WB	SIGN SUPPORTS INSTALL BY JOB 061332												9.19
EX-430-LM9.404SB;		1											30.00
EX-430-LM7.890SB		1											30.00
EX-430-LM3.824SB		1											30.00
EX-430-STA160+00NB		1											30.00
EX-430-LM8.830NB		1											30.00
EX-430-LM7.482NB		1											30.00
EX-430-STA277+30NB		1											30.00
TOTALS:	**15**	**7**	**34**	**8**	**2**	**2**							**1348.95**

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	117	372

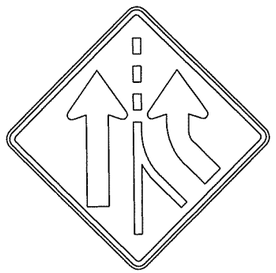
(2) SIGN LAYOUT SHEET

G2
W8-13
48" X 48"



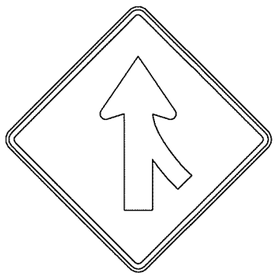
SS-430-LM10.934SB (MAIN LANES)
SS-430-LM8.434NB (MAIN LANES)
SS-430-LM8.688SB (MAIN LANES)
SS-430-LM8.434NB (MAIN LANES)
SS-430-LM7.589SB (MAIN LANES)
SS-430-LM7.205NB (MAIN LANES)
SS-430-LM4.453SB (MAIN LANES)
SS-430-LM4.022NB (MAIN LANES)
SS-430-LM3.727SB (MAIN LANES)
SS-430-STA270+90NB (MAIN LANES)
SS-430-STA141+00SB (MAIN LANES)
SS-430-STA126+00NB (MAIN LANES)
SS-430-STA135+50NB (MAIN LANES)

G2
W4-3
48" X 48"



SS-430-LM7.589SB (MAIN LANES)
SS-430-STA154+00SB (MAIN LANES)
SS-430-STA173+00NB (MAIN LANES)

G2
W4-1RT
48" X 48"



SS-430-LM11.528SB (MAIN LANES)
SS-430-LM8.920NB (MAIN LAINES)
SS-430-LM7.781NB (MAIN LANES)
SS-430-LM3.763NB (MAIN LANES)
SS-430-STA280+50SB (MAIN LANES)
SS-430-STA103+50NB (MAIN LANES)

G2
M3-3 (BLUE) 36"X18"
M1-1 (430) 60"X48"



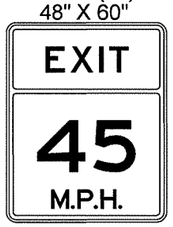
SS-430-LM11.289SB (MAIN LANES)
SS-430-LM8.429SB (MAIN LANES)
SS-430-LM4.929SB (MAIN LANES)
SS-430-STA265+00SB (MAIN LANES)

G2
R2-1(65)
48" X 60"



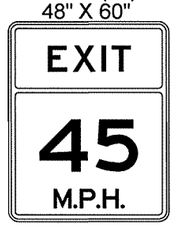
SS-430-LM11.167SB (MAIN LANES)
SS-430-LM8.351SB (MAIN LANES)
SS-430-LM8.149NB (MAIN LANES)
SS-430-LM4.731SB (MAIN LANES)
SS-430-STA256+00SB (MAIN LANES)
SS-430-STA190+00NB (MAIN LANES)
SS-430-STA139+00NB (MAIN LANES)

G2
W13-2(45)
48" X 60"



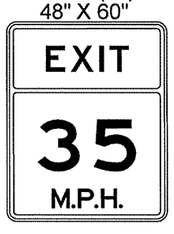
SS-430-LM8.760NB (MAIN LAINES)
SS-430-LM7.451NB (MAIN LANES)
SS-430-LM3.867SB (MAIN LANES)
SS-430-STA158+30NB (MAIN LANES)

OH
W13-2(45)
48" X 60"



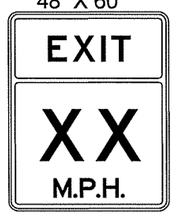
SS-430-LM9.515SB (OC-430-60-15)
SS-430-STA174+40SB (OH-430-60-26)

G2
W13-2(35)
48" X 60"



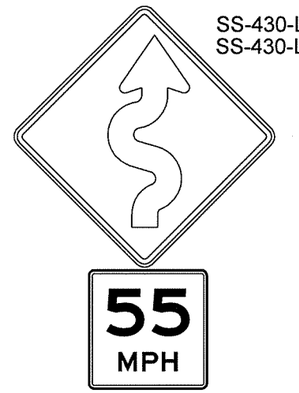
SS-430-LM7.916SB (MAIN LANES)

OH
W13-2(TBD)
48" X 60"



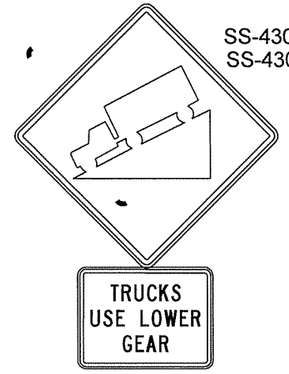
SS-430-STA124+00SB (MAIN LANES)

G2
W1-5RT 48" X 48"
W13-1(55) 24"X24"



SS-430-LM8.678NB-A (MAIN LANES)
SS-430-LM8.678NB-B (MAIN LANES)

G2
W7-1 48"X48"
W7-2bP 24"X24"



SS-430-LM8.514NB-A (MAIN LANES)
SS-430-LM8.514NB-B (MAIN LANES)

G2
M3-1 (BLUE) 36"X18"
M1-1 (430) 60"X48"



SS-430-LM8.054NB (MAIN LANES)
SS-430-STA184+00NB (MAIN LANES)
SS-430-STA133+50NB (MAIN LANES)



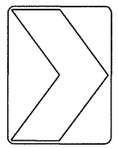
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	118	372
				(2)	SIGN LAYOUT SHEET			

G1
R5-1
36" X 36"



SS-30SR-51WB

G1
W1-8
30" X 36"



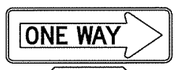
SS-30SR-43WB
SS-30SR-44WB
SS-30SR-45WB
SS-30SR-46WB
SS-30SR-49WB
SS-30SR-42WB

G1
R6-2RT
24" X 30"



SS-30SR-53WB
SS-30SR-56WB
SS-30SR-60WB

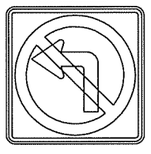
G1
SS-30SR-57WB



R6-1RT 36" X 12"

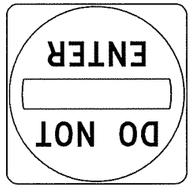


R1-1 36" X 36"



R3-2 24" X 24"

G2-3
SS-30SR-55WB
SS-30SR-59WB



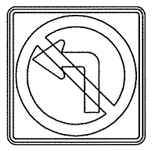
R5-1 36" X 36"

INSTALL
BACK TO BACK



R3-7RT 30" X 30"

G1
R3-2 24" X 24"



SS-30SR-52WB

G1
W8-13
36" X 36"



SS-30SR-41WB

G1
SS-30SR-40WB

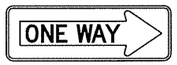


W1-1RT 36" X 36"

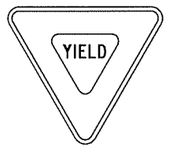


W13-1(40) 24" X 24"

G1
SS-30SR-54WB



R6-1RT 36" X 12"



R1-2 36"

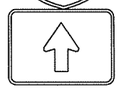
G1
SS-30SR-61WB



M3-1(BLUE) 24"X12"



M1-1 24"X24"



M6-3 (BLUE) 21" X 15"

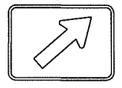
G1
SS-30SR-39WB



M3-1(BLUE) 24"X12"



M1-1 30"X24"



M6-2RT (BLUE) 21"X 15"

G2-1
MAINTAIN
SS-30SR-01WB- A
SS-30SR-01WB- B



R5-1A 36"X24"

INSTALL
BACK TO BACK

MAINTAIN
M3-1(BLUE) 24"X12"





INSTALL
M3-1(BLUE) 24"X12"

MAINTAIN
M1-1 30"X24"





INSTALL
M1-1 30"X24"

MAINTAIN
R4-7B LT 24"X24"



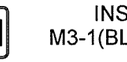


INSTALL
R4-7B RT 24"X24"

G2-1
SS-30SR-12WB

MAINTAIN
M3-1(BLUE) 24"X12"





INSTALL
M3-1(BLUE) 24"X12"

MAINTAIN
M1-1 24"X24"

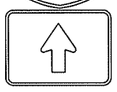




INSTALL
M1-1 30"X24"

MAINTAIN
M5-2LT (BLUE) 21" X 15"





INSTALL
M6-3 (BLUE) 21"X 15"

G1
SS-30SR-35WB



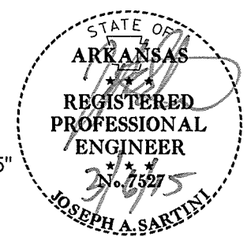
M3-1(BLUE) 24"X12"



M1-1 30"X24"



M5-2RT (BLUE) 21"X 15"

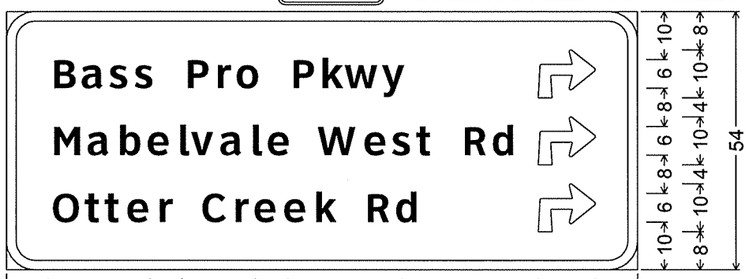


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	119	372
				(2) SIGN LAYOUT SHEET				

G2-4
SS-30SR-58WB



M3-1(BLUE) 24"X12"
M1-1 24"X24"
M6-3 (BLUE) 21" X 15"
D1-2
DIRECT APPLIED / FLAT SHEET

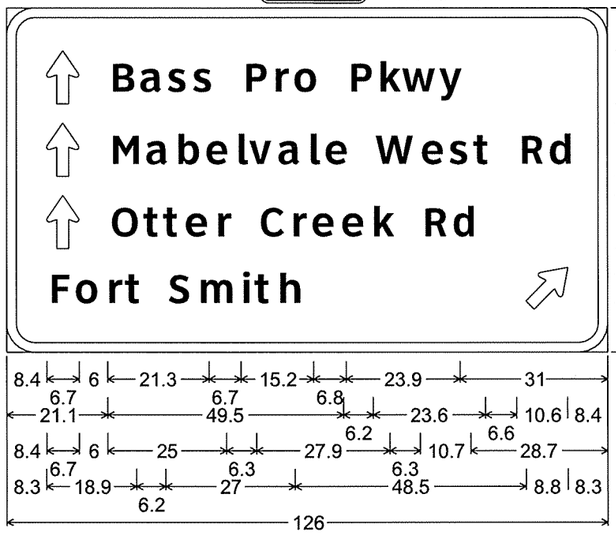


6.0" Radius, 2.0" Border, White on Green;
[Bass Pro Pkwy] ClearviewHwy-5-W;
90 Deg Advanced Turn Arrow 12.0" X 10.0";
[Mabelvale West Rd] ClearviewHwy-5-W;
90 Deg Advanced Turn Arrow 12.0" X 10.0";
[Otter Creek Rd] ClearviewHwy-5-W;
90 Deg Advanced Turn Arrow 12.0" X 10.0";

G2-4
SS-30SR-38WB



M3-1(BLUE) 24"X12"
M1-1 30"X24"
M6-2RT (BLUE) 21"X 15"
D1-3
DIRECT APPLIED / FLAT SHEET



6.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Bass Pro Pkwy] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Mabelvale West Rd] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Otter Creek Rd] ClearviewHwy-5-W;
[Fort Smith] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 45°;

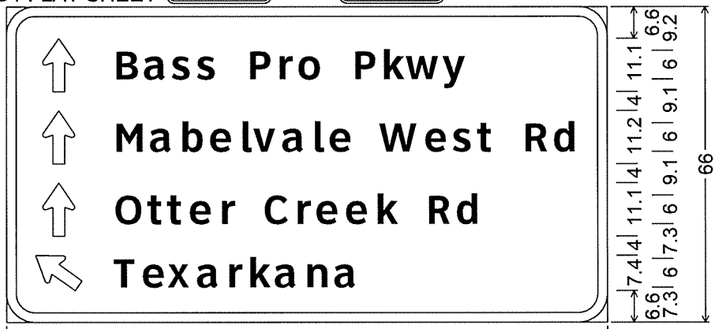
G2-5
SS-30SR-09WB

MAINTAIN
M3-1(BLUE) 24"X12"





INSTALL
M3-1(BLUE) 24"X12"
MAINTAIN
M1-1 24"X24"
INSTALL
M1-1 30"X24"
MAINTAIN
M5-2LT (BLUE) 21" X 15"
INSTALL
M7-2 (BLUE) 21" X 15"
MAINTAIN D1-4
DIRECT APPLIED / FLAT SHEET



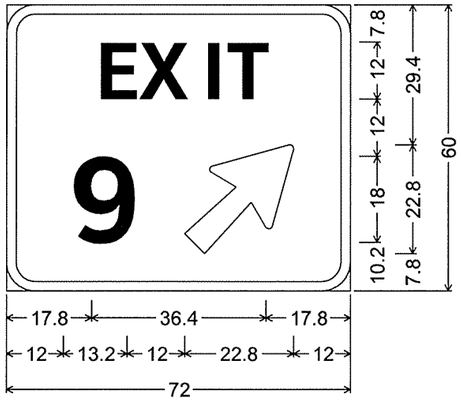
6.0" Radius, 2.0" Border, White on Green;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Bass Pro Pkwy] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Mabelvale West Rd] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 90°;
[Otter Creek Rd] ClearviewHwy-5-W;
Standard Arrow Custom 11.1" X 6.8" 145°;
[Texarkana] ClearviewHwy-5-W;



DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	120	372

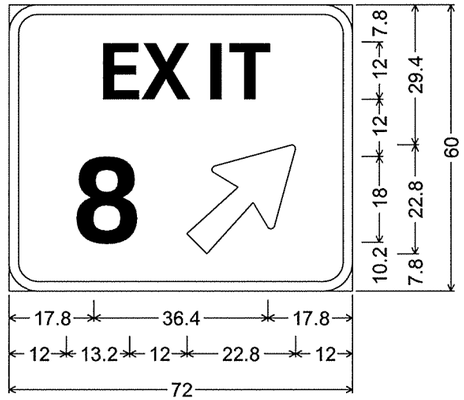
(2) SIGN LAYOUT SHEET

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



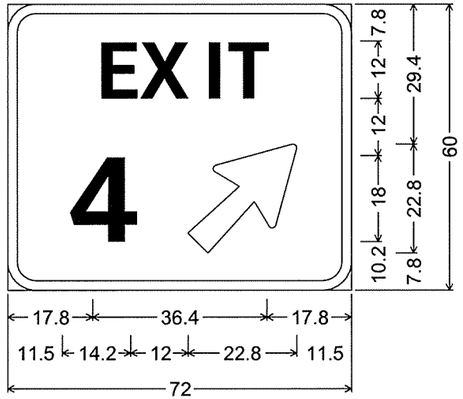
EX-430-60-277+30NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[9] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



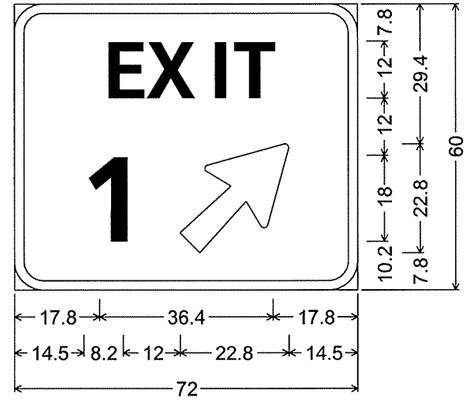
EX-430-60-LM7.482NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[8] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



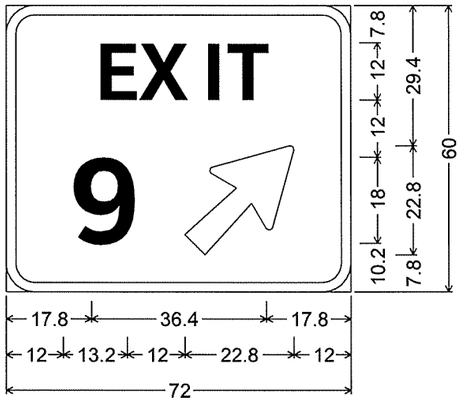
EX-430-60-LM3.824SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[4] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



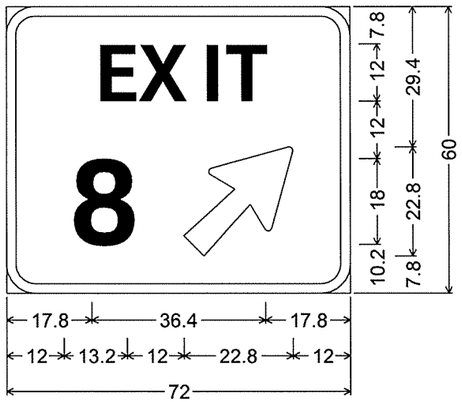
EX-430-60-STA160+00NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[1] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



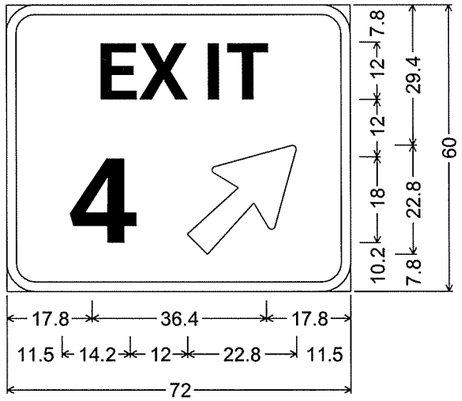
EX-430-60-LM8.830NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[9] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET



EX-430-60-LM7.890SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[8] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

G2
E5-1a
DIRECT APPLIED / FLAT SHEET

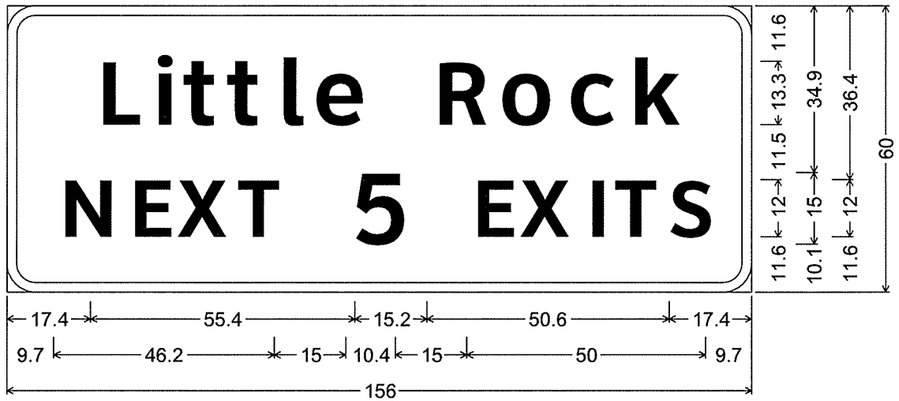


EX-430-60-STA277+30NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W-R;
[4] ClearviewHwy-5-W-R;
Arrow Custom - 29.0" 45°;

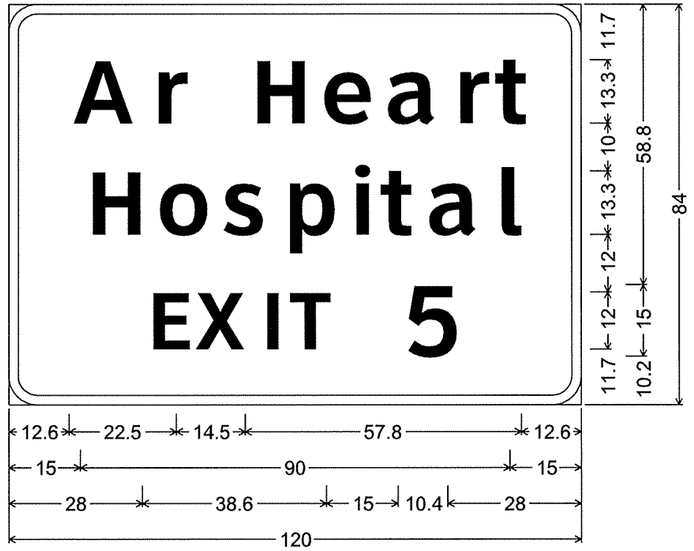


DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	121	372

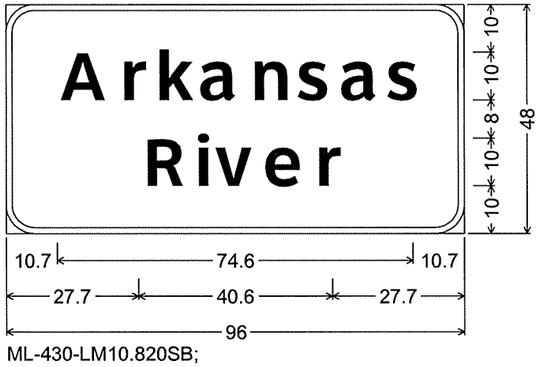
(2) SIGN LAYOUT SHEET



ML-430-LM10.893SB; 6.0" Radius, 2.0" Border, White on Green;
[Little Rock] ClearviewHwy-5-W; [NEXT] ClearviewHwy-5-W;
[5] ClearviewHwy-5-W; [EXITS] ClearviewHwy-5-W;



ML-430-LM4.452NB;
6.0" Radius, 2.0" Border, White on Green;
[Ar Heart] ClearviewHwy-5-W;
[Hospital] ClearviewHwy-5-W; [EXIT] ClearviewHwy-5-W;
[5] ClearviewHwy-5-W;

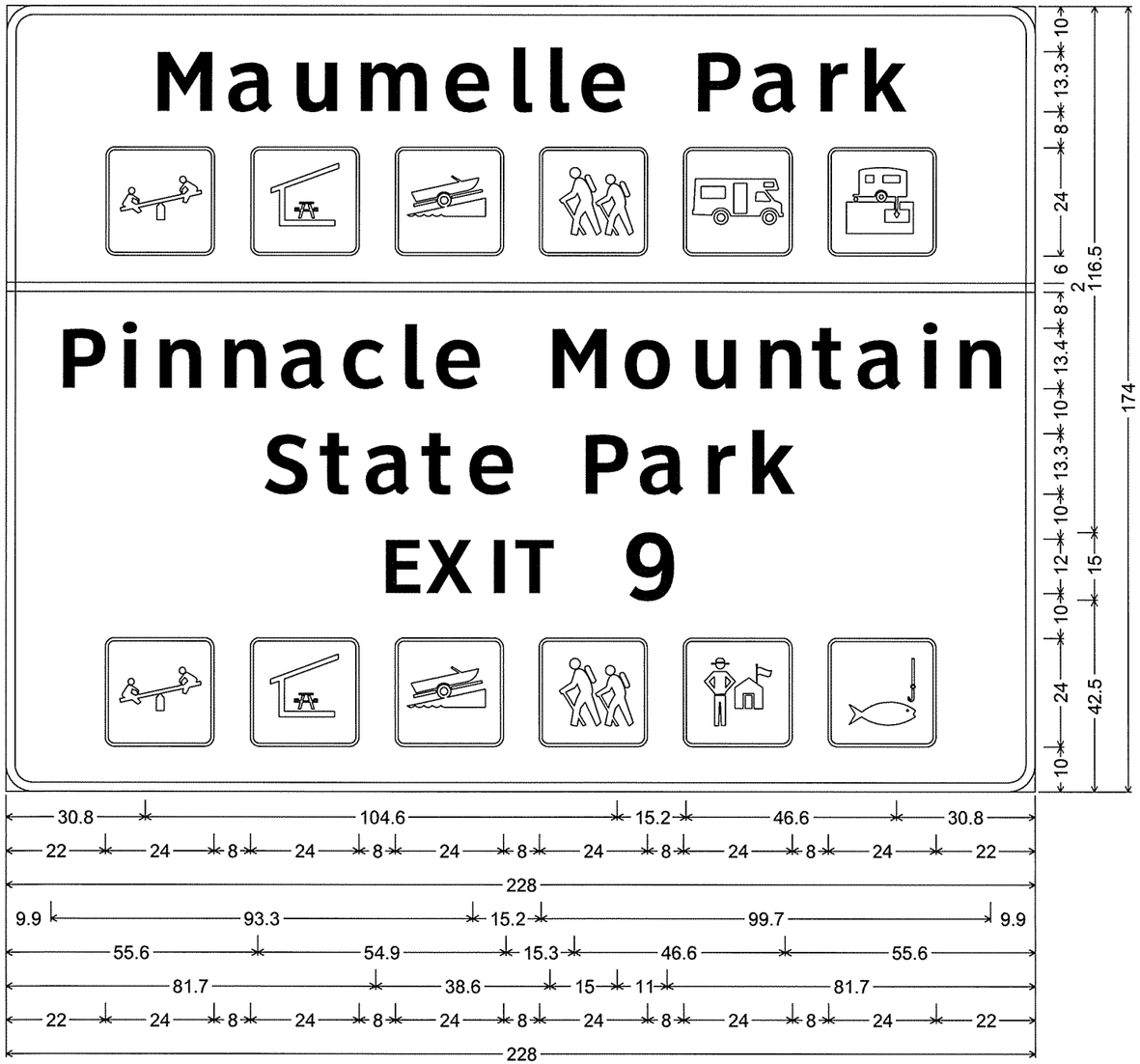


ML-430-LM10.820SB;
6.0" Radius, 1.3" Border, White on Green;
[Arkansas] ClearviewHwy-5-W;
[River] ClearviewHwy-5-W;

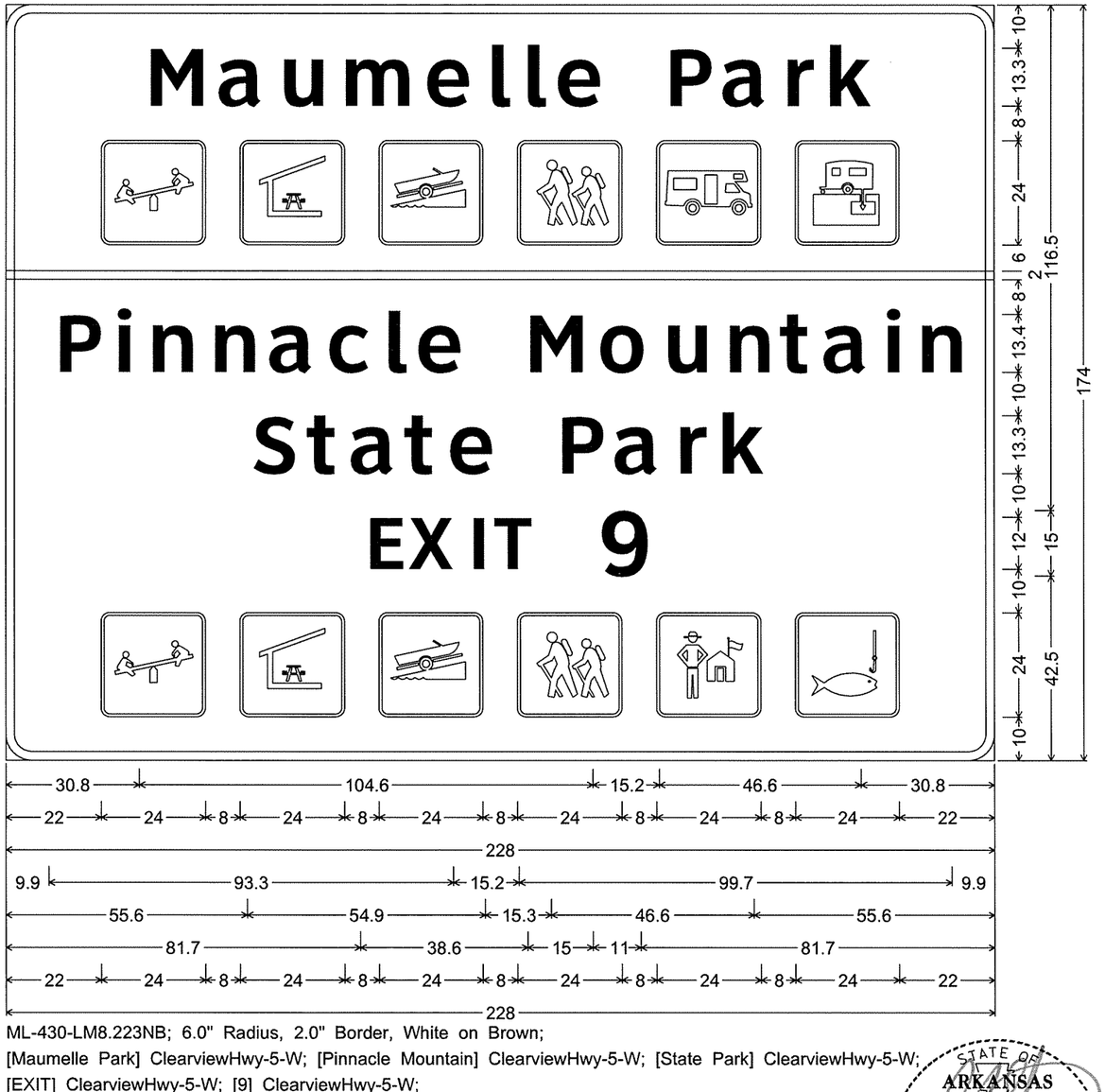
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
5/6/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	122	372

(2) SIGN LAYOUT SHEET



ML-430-LM9.687SB; 6.0" Radius, 2.0" Border, White on Brown;
[Maumelle Park] ClearviewHwy-5-W; [Pinnacle Mountain] ClearviewHwy-5-W; [State Park] ClearviewHwy-5-W;
[EXIT] ClearviewHwy-5-W; [9] ClearviewHwy-5-W;

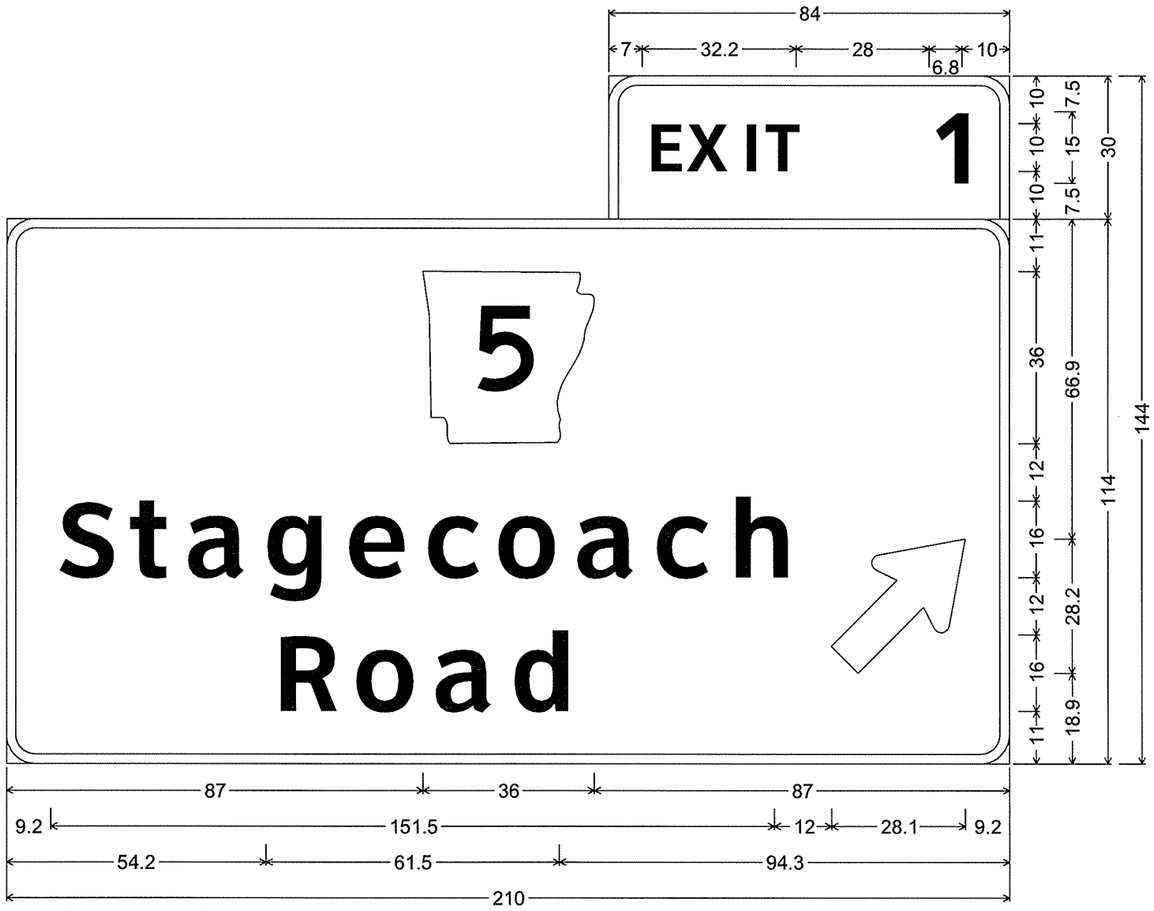


ML-430-LM8.223NB; 6.0" Radius, 2.0" Border, White on Brown;
[Maumelle Park] ClearviewHwy-5-W; [Pinnacle Mountain] ClearviewHwy-5-W; [State Park] ClearviewHwy-5-W;
[EXIT] ClearviewHwy-5-W; [9] ClearviewHwy-5-W;

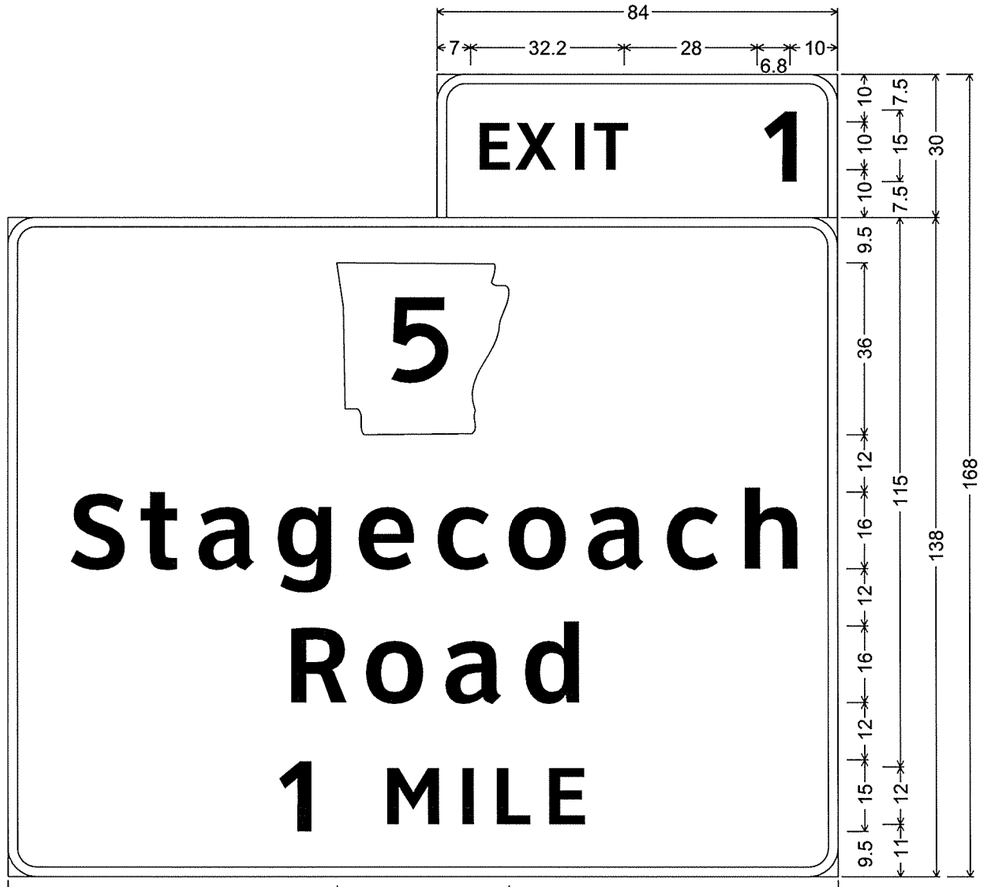
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N. 7627
JOSEPH A. SARTINI
9/9/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	123	372

(2) SIGN LAYOUT SHEET



ML-430-STA154+70NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Stagecoach] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;



ML-430-STA119+00NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Stagecoach] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

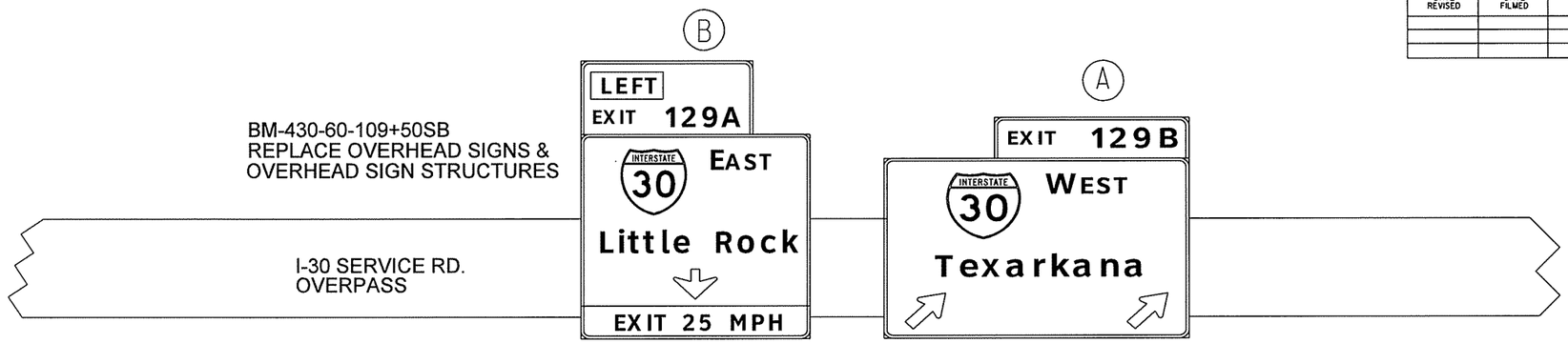
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
5/6/15

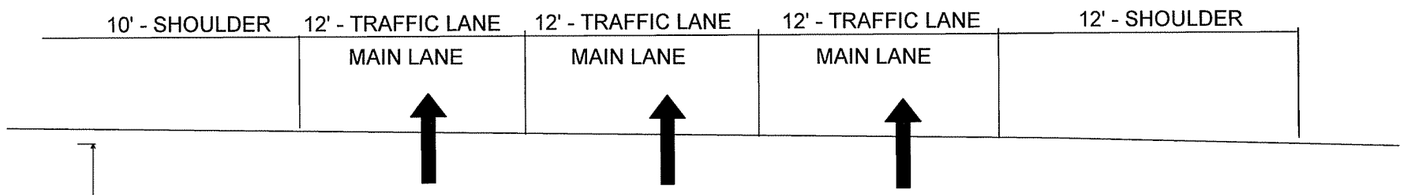
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	124	372

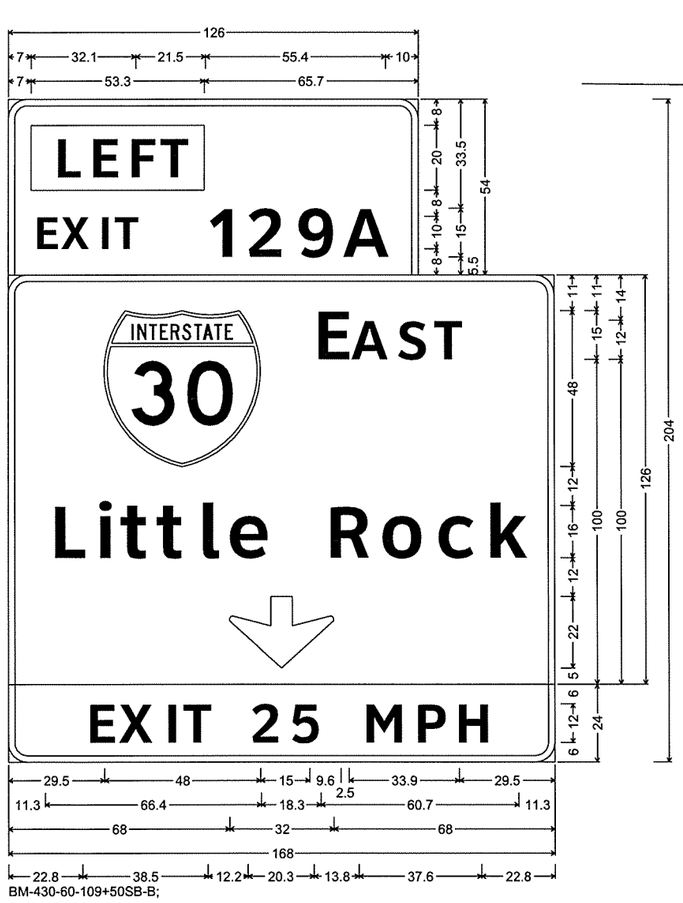
(2) SIGN LAYOUT SHEET

BM-430-60-28

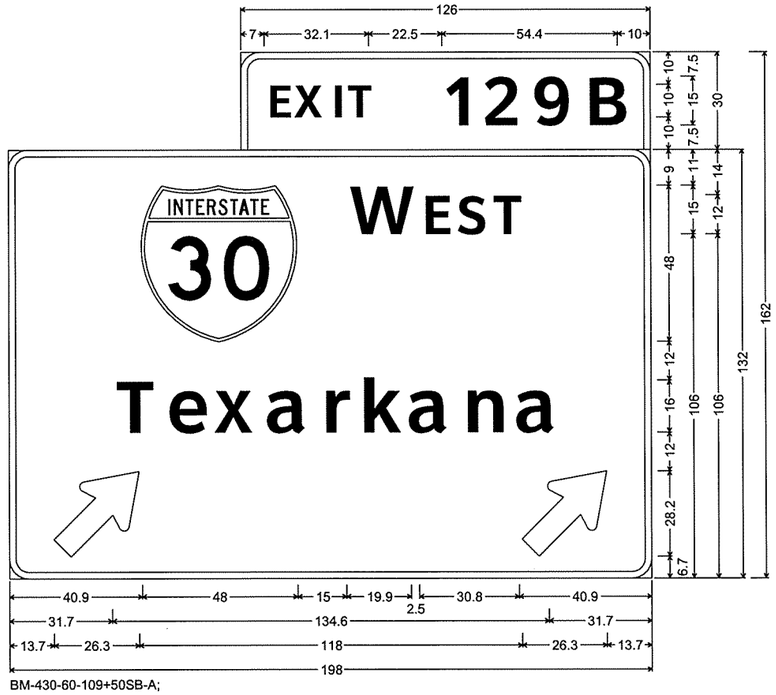
BM-430-60-109+50SB
REPLACE OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURES







BM-430-60-109+50SB-B;
6.0" Radius, 2.0" Border, White on Green;
Rectangle Yellow;
[EXIT] ClearviewHwy-5-W; [129A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W; [Little Rock] ClearviewHwy-5-W;
Down Arrow 22.0" 270°;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT 25 MPH] ClearviewHwy-5-W;



BM-430-60-109+50SB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [129B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W; [Texarkana] ClearviewHwy-5-W;
Standard Arrow Custom 33.4" X 20.3" 45°; Standard Arrow Custom 33.4" X 20.3" 45°;

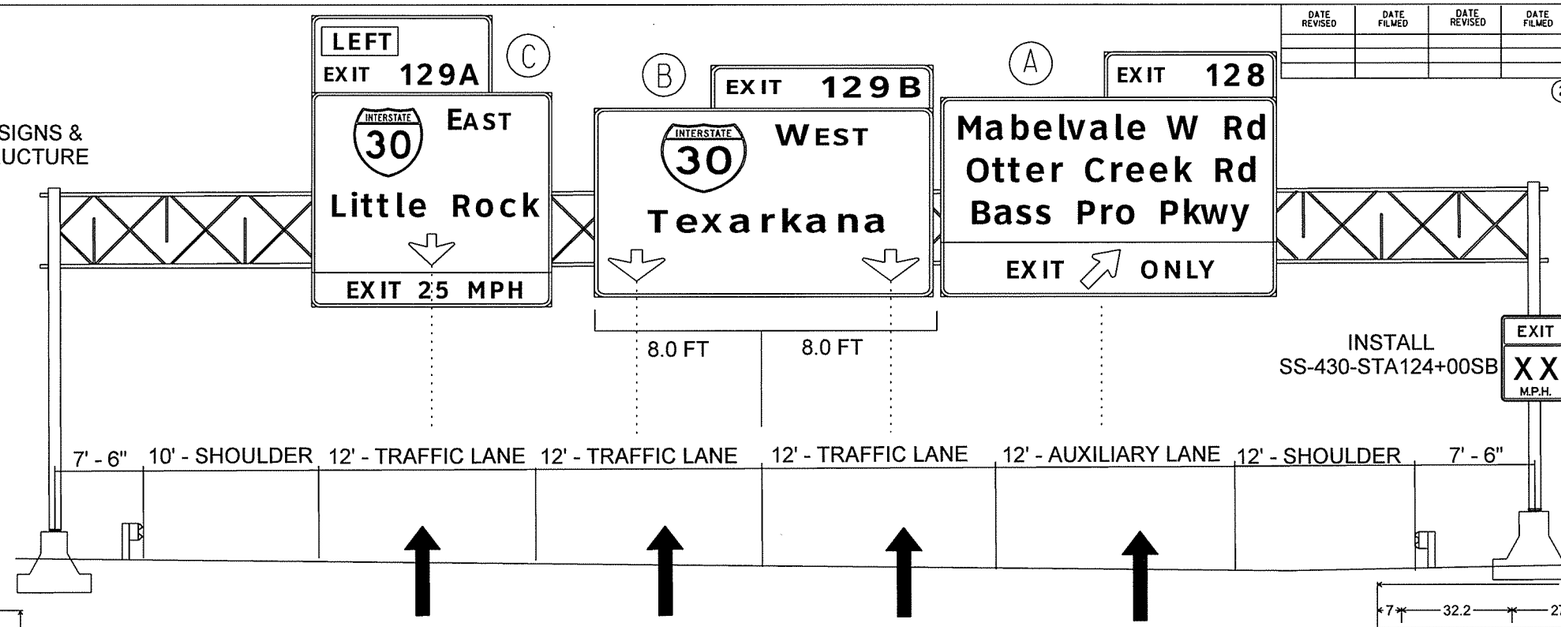
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

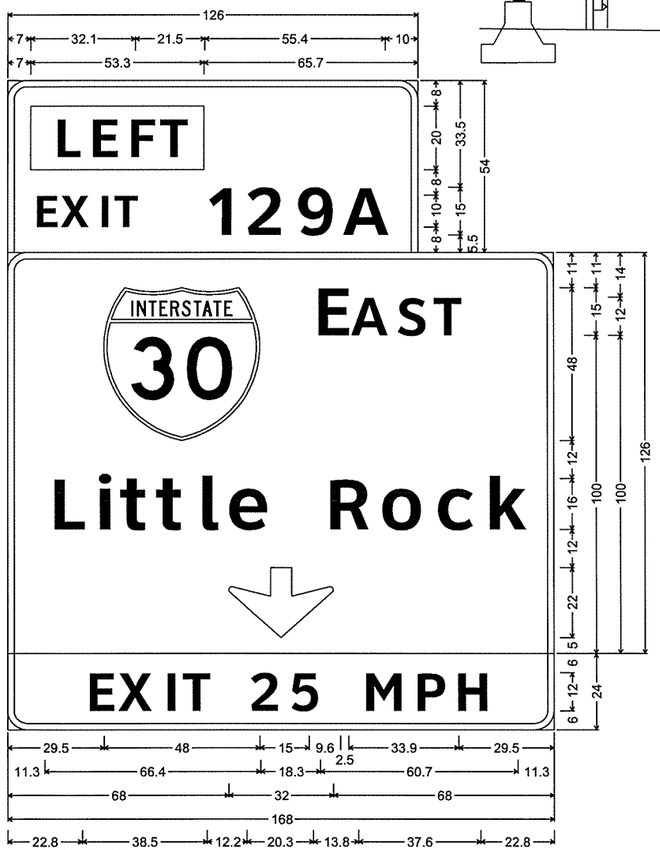
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	125	372

(2) SIGN LAYOUT SHEET

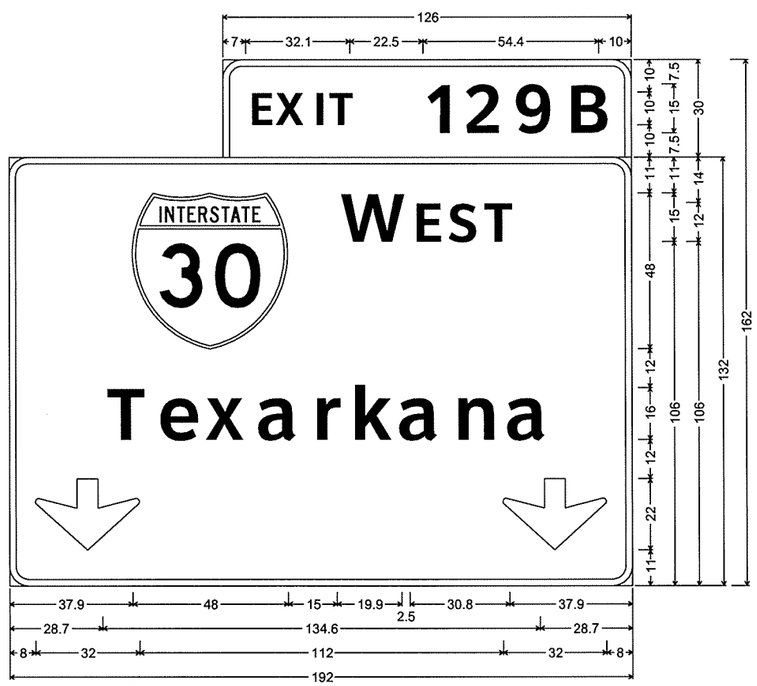
OH-430-60-27

OH-430-60-124+00SB
INSTALL OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURE

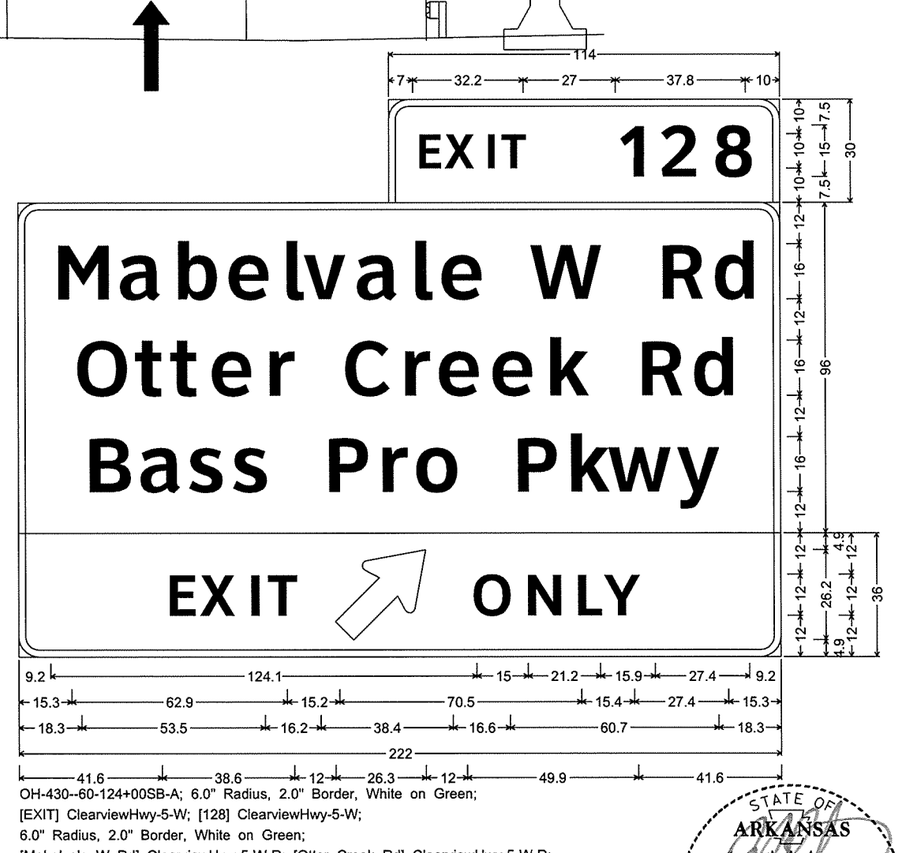




OH-430-60-124+00SB-C;
6.0" Radius, 2.0" Border, White on Green;
Rectangle Yellow;
[EXIT] ClearviewHwy-5-W; [129A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W; [Little Rock] ClearviewHwy-5-W;
Down Arrow 22.0" 270°;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT 25 MPH] ClearviewHwy-5-W;



OH-430-60-124+00SB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [129B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W; [Texarkana] ClearviewHwy-5-W;
Down Arrow 22.0" 270°; Down Arrow 22.0" 270°;



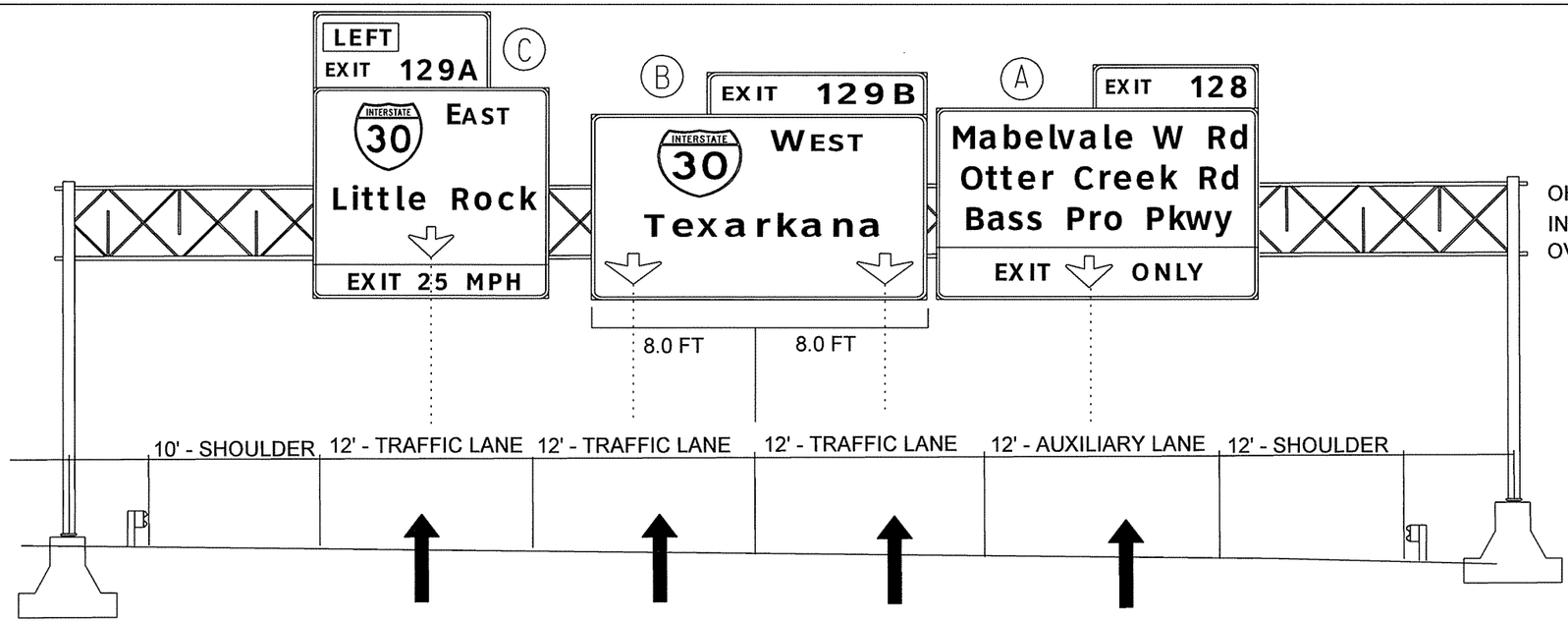
OH-430--60-124+00SB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [128] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Mabelvale W Rd] ClearviewHwy-5-W-R; [Otter Creek Rd] ClearviewHwy-5-W-R;
[Bass Pro Pkwy] ClearviewHwy-5-W-R;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] ClearviewHwy-5-W; Standard Arrow Custom 33.4" X 20.3" 45°; [ONLY] ClearviewHwy-5-W;

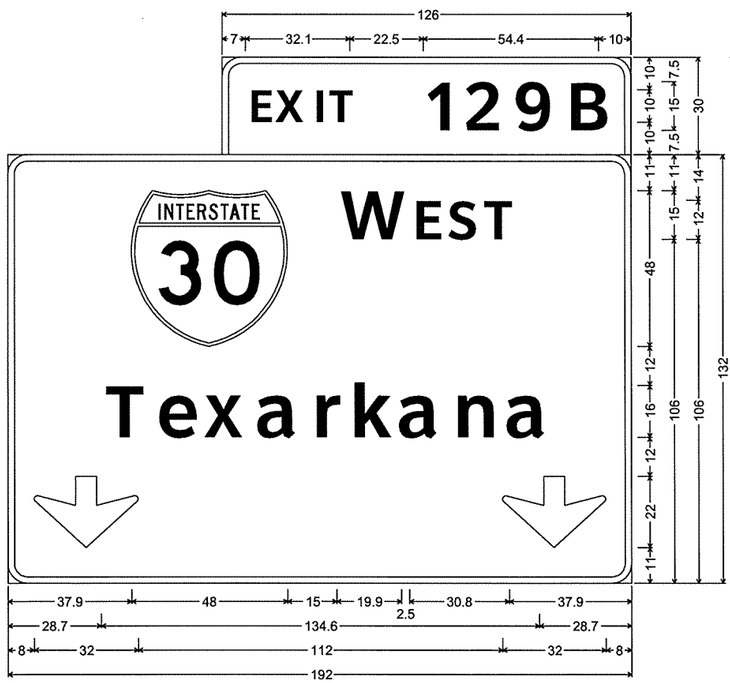
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
9/2/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	126	372
				(2)	SIGN LAYOUT SHEET			

OH-430-60-34

OH-430-60-149+00SB
INSTALL OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURE

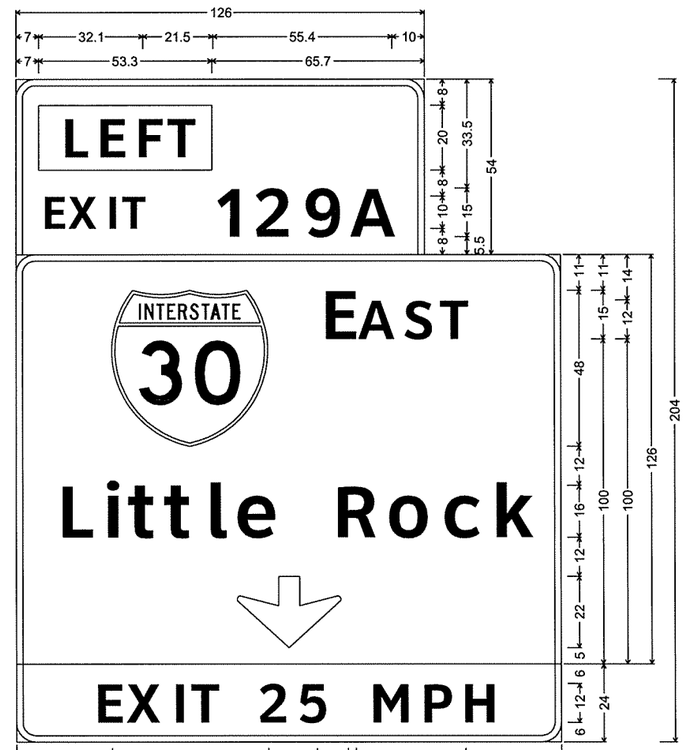




OH-430-60-149+00SB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [129B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W; [Texarkana] ClearviewHwy-5-W;
Down Arrow 22.0" 270°; Down Arrow 22.0" 270°;



OH-430-60-149+00SB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [128] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Mabelvale W Rd] ClearviewHwy-5-W-R; [Otter Creek Rd] ClearviewHwy-5-W-R;
[Bass Pro Pkwy] ClearviewHwy-5-W-R;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT] ClearviewHwy-5-W; Down Arrow 22.0" 270°; [ONLY] ClearviewHwy-5-W;



OH-430-60-149+00SB-C;
6.0" Radius, 2.0" Border, White on Green;
Rectangle Yellow;
[EXIT] ClearviewHwy-5-W; [129A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[E] ClearviewHwy-5-W; [AST] ClearviewHwy-5-W; [Little Rock] ClearviewHwy-5-W;
Down Arrow 22.0" 270°;
6.0" Radius, 2.0" Border, Black on Yellow;
[EXIT 25 MPH] ClearviewHwy-5-W;

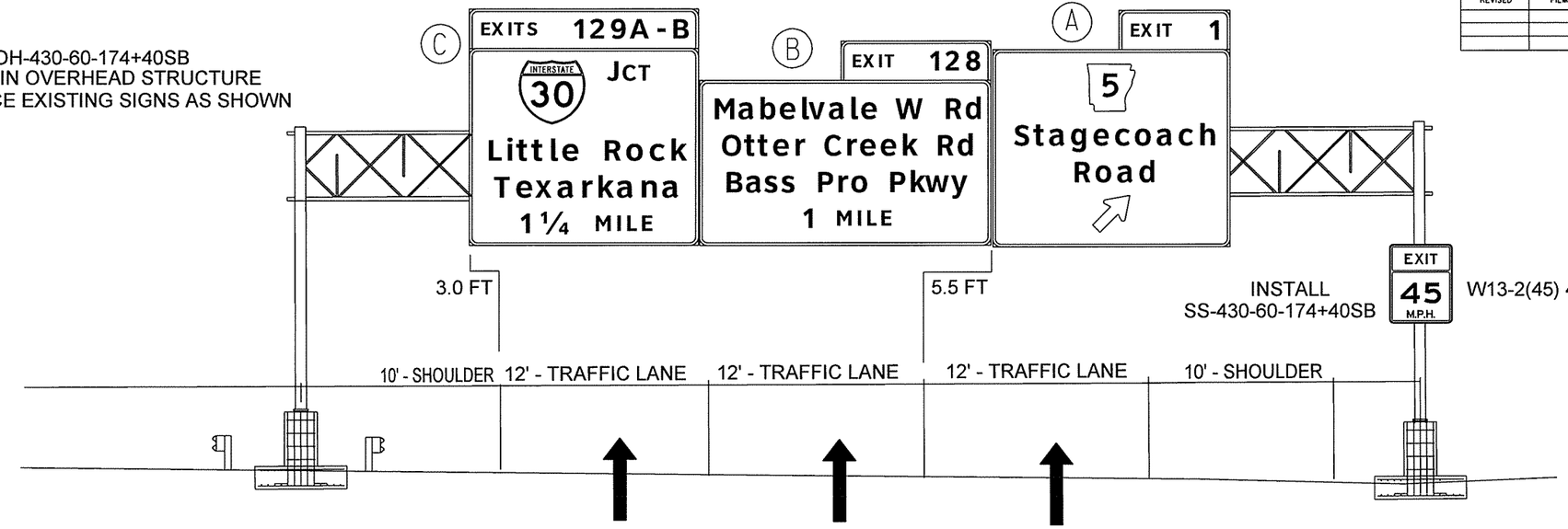
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3-6-15

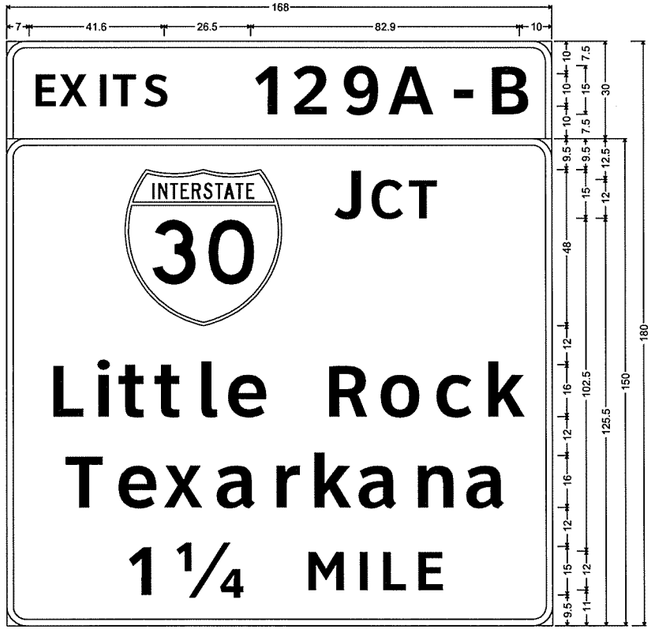
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	127	372

(2) SIGN LAYOUT SHEET

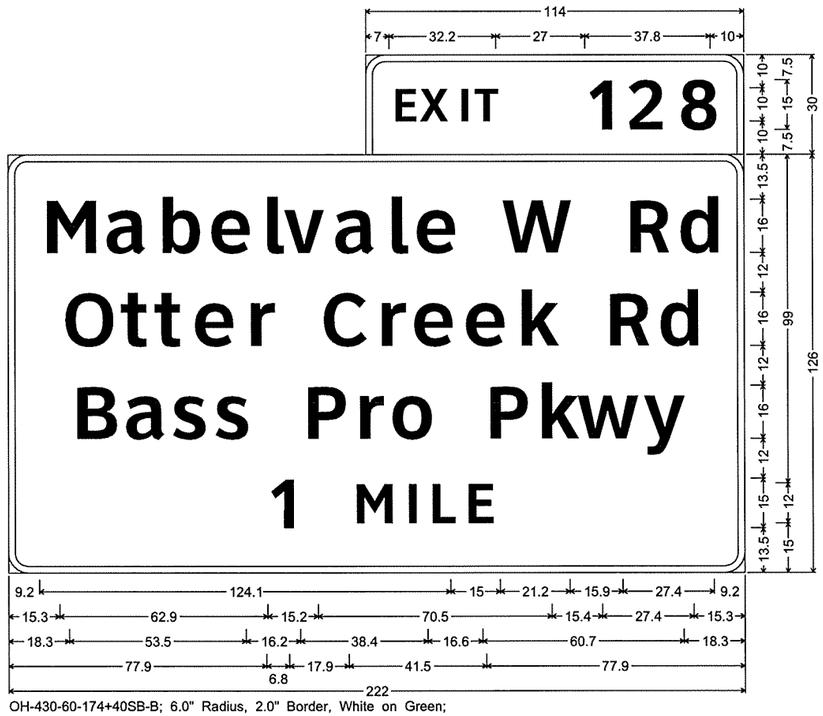
OH-430-60-26

OH-430-60-174+40SB
MAINTAIN OVERHEAD STRUCTURE
REPLACE EXISTING SIGNS AS SHOWN

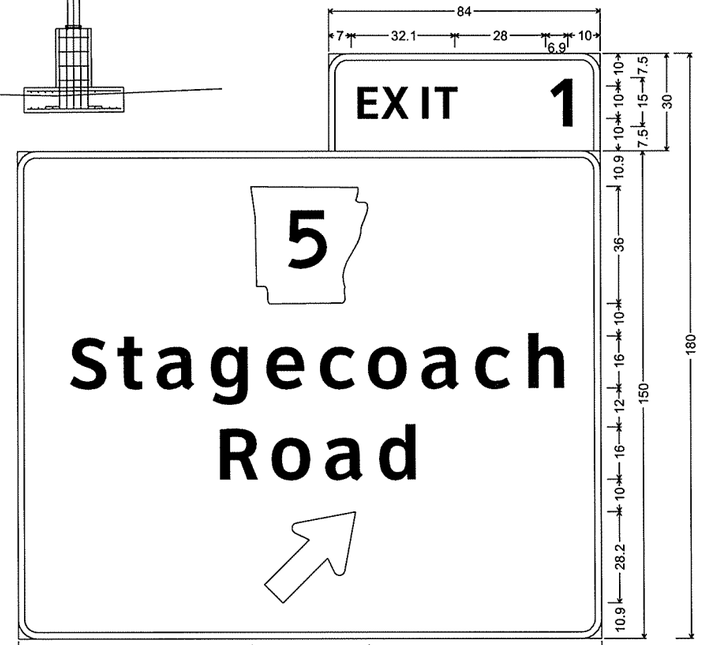




OH-430-60-174+40SB-C;
6.0" Radius, 2.0" Border, White on Green;
[EXITS] ClearviewHwy-5-W; [129A-B] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[J] ClearviewHwy-5-W; [CT] ClearviewHwy-5-W; [Little Rock] ClearviewHwy-5-W;
[Texarkana] ClearviewHwy-5-W; [1] ClearviewHwy-5-W; [¼] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;



OH-430-60-174+40SB-B; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [128] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Mabelvale W Rd] ClearviewHwy-5-W-R; [Otter Creek Rd] ClearviewHwy-5-W-R;
[Bass Pro Pkwy] ClearviewHwy-5-W-R; [1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



OH-430-60-174+40SB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Stagecoach] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;

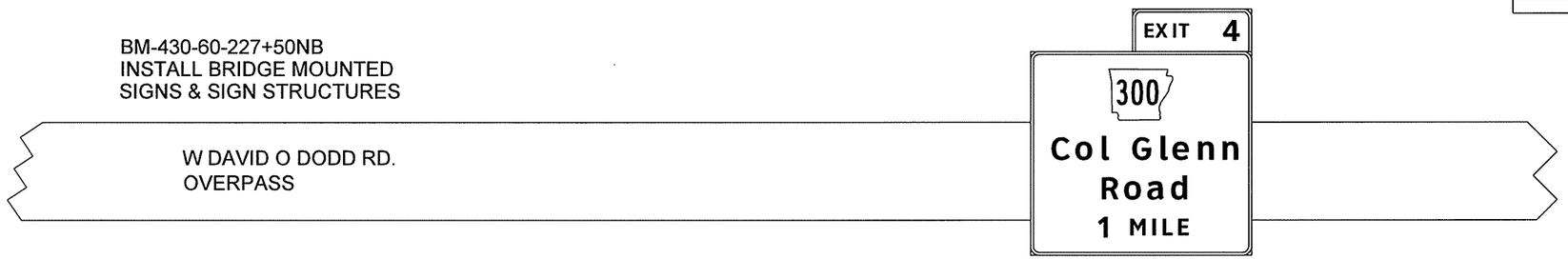
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

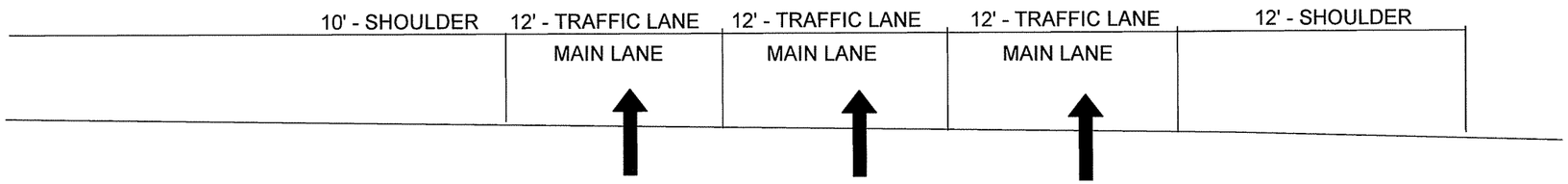
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	128	372

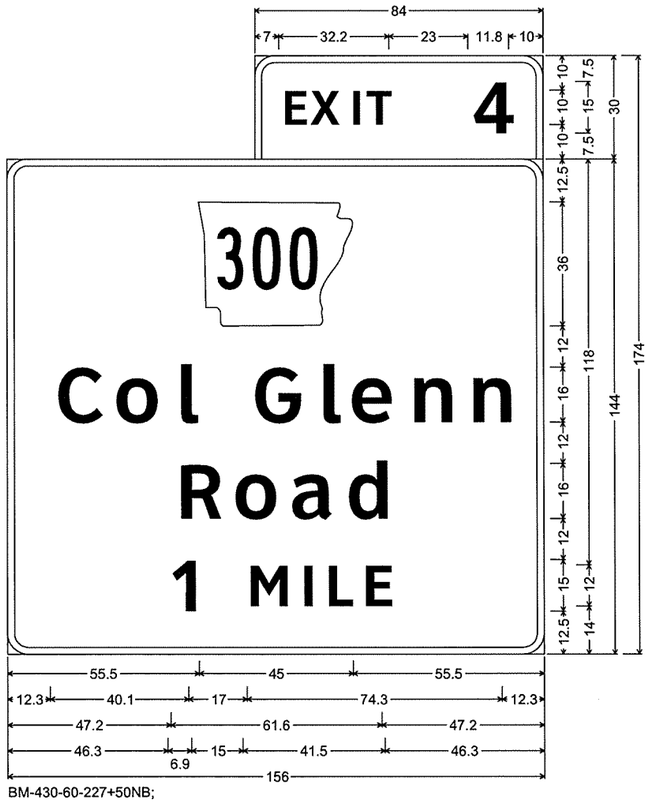
(2) SIGN LAYOUT SHEET

BM-430-60-45

BM-430-60-227+50NB
INSTALL BRIDGE MOUNTED
SIGNS & SIGN STRUCTURES





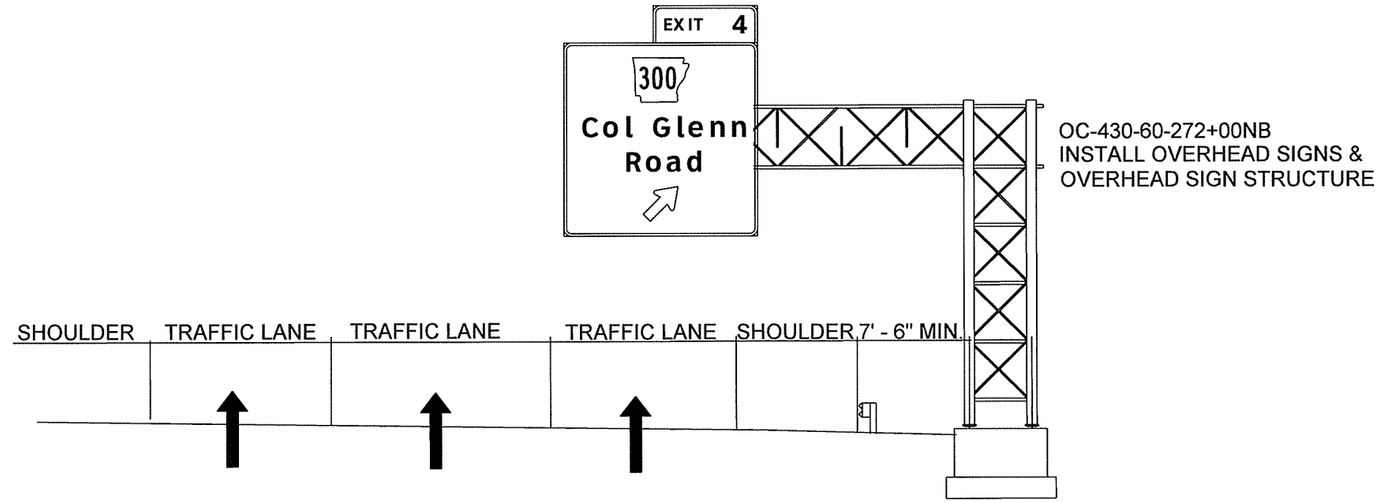


BM-430-60-227+50NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [4] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Col Glenn] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
[1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

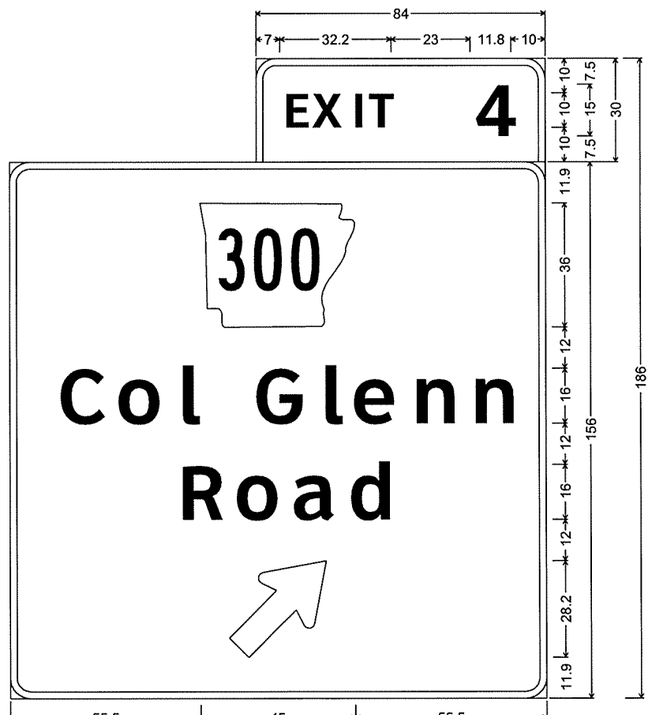
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/31/17

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	129	372
				(2)	SIGN LAYOUT SHEET			

OC-430-60-40



OC-430-60-272+00NB
INSTALL OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURE

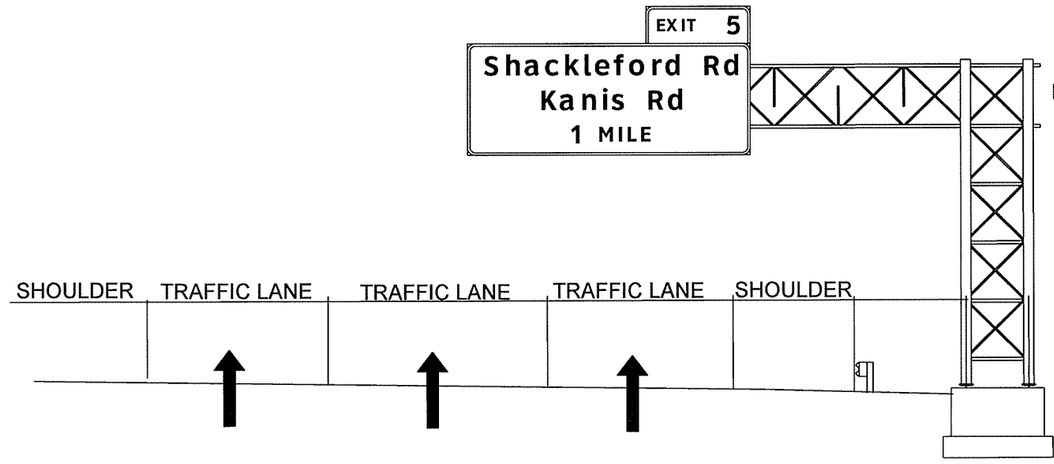


OC-430-60-272+00NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [4] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Col Glenn] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;

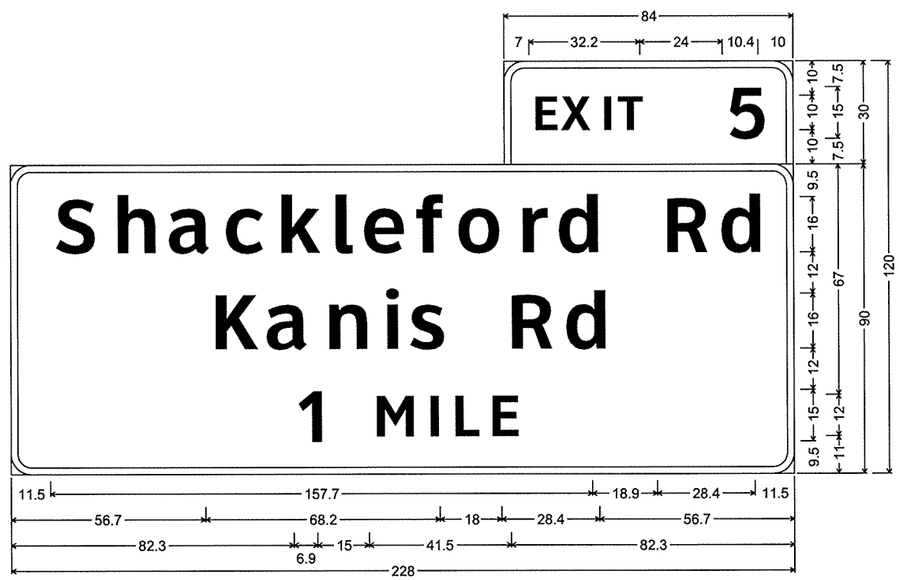
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTENI
3/6/24

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	130	372
				(2)	SIGN LAYOUT SHEET			

OC-430-60-01



OC-430-LM4.126NB
REPLACE EXISTING SIGN. MAINTAIN
OVERHEAD SIGN STRUCTURE



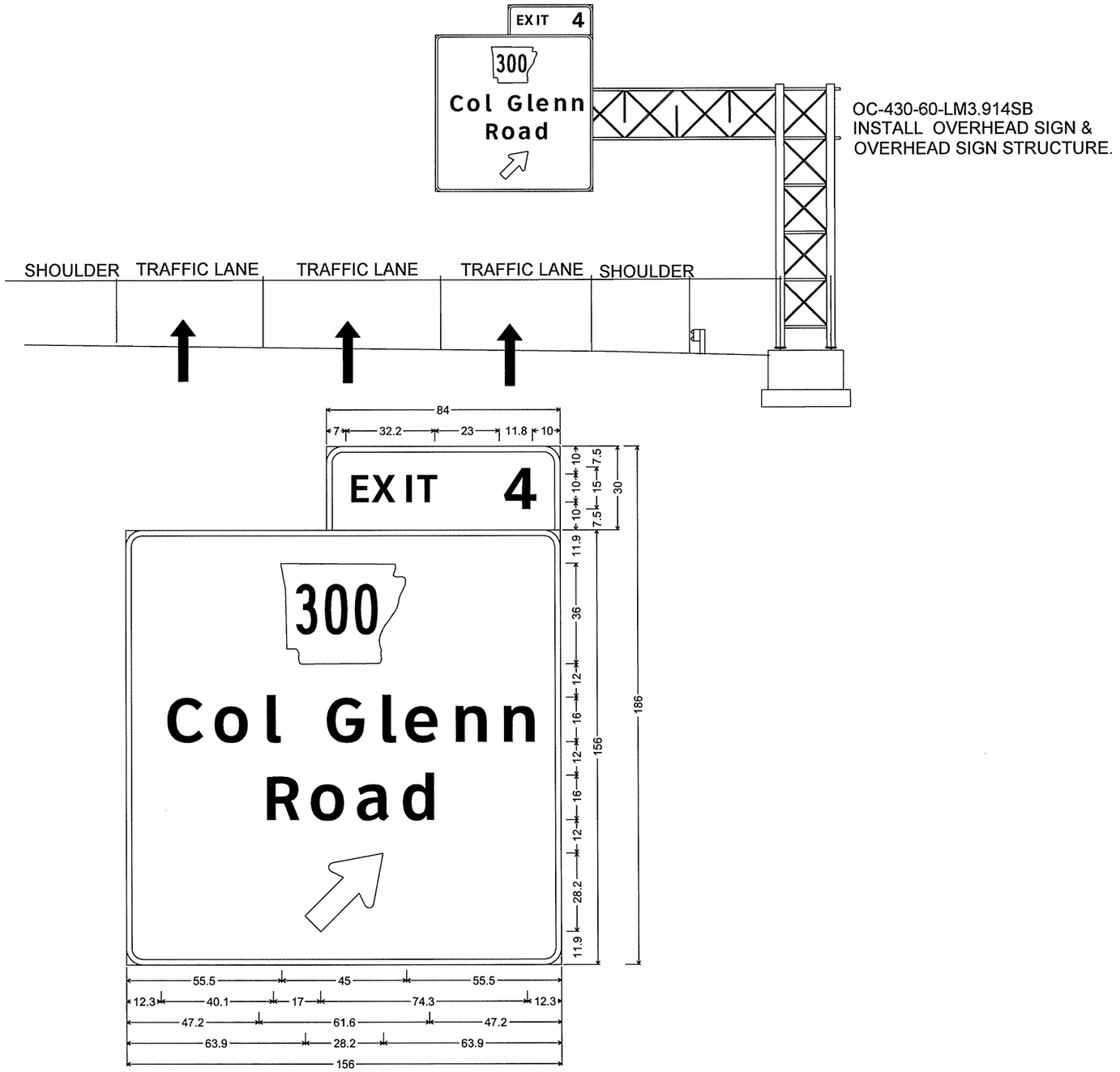
OC-430-LM4.126NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [5] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Shackleford Rd] ClearviewHwy-5-W; [Kanis Rd] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	131	372

(2) SIGN LAYOUT SHEET

OC-430-60-41



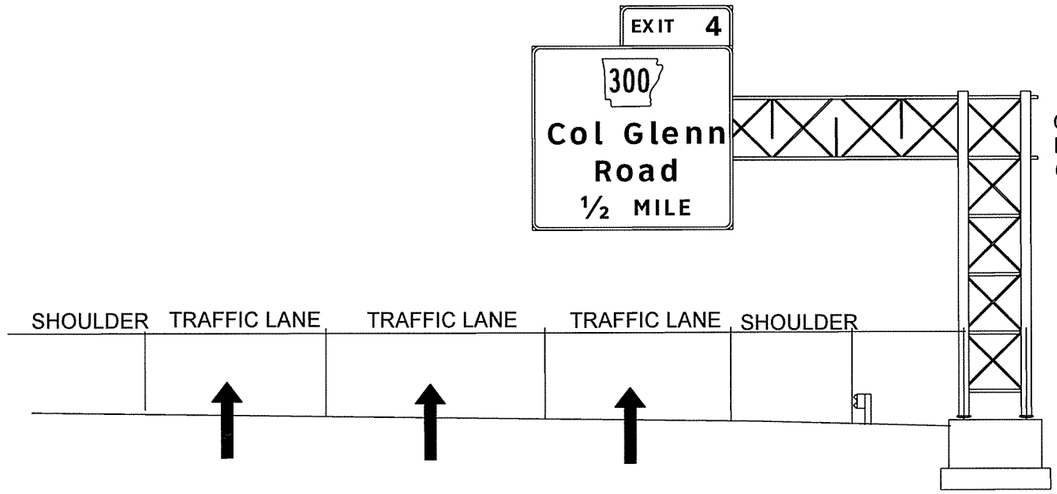
OC-430-60-LM3.914SB
INSTALL OVERHEAD SIGN &
OVERHEAD SIGN STRUCTURE.

OC-430-60-LM3.914SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [4] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Col Glenn] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
Standard Arrow Custom 35.8" X 21.6" 45°;

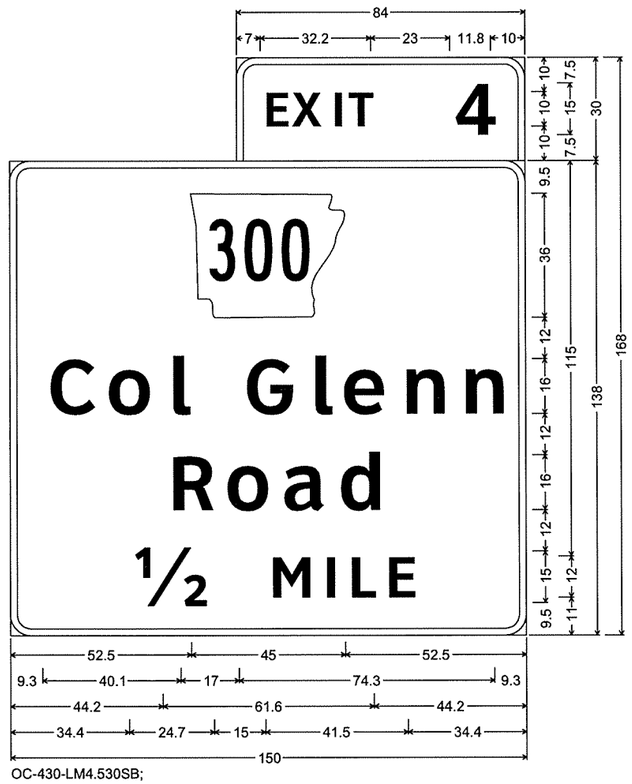
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	132	372
				(2)	SIGN LAYOUT SHEET			

OC-430-60-42



OC-430-60-LM4.530SB
INSTALL OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURE



OC-430-LM4.530SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [4] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Col Glenn] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W;
[½] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

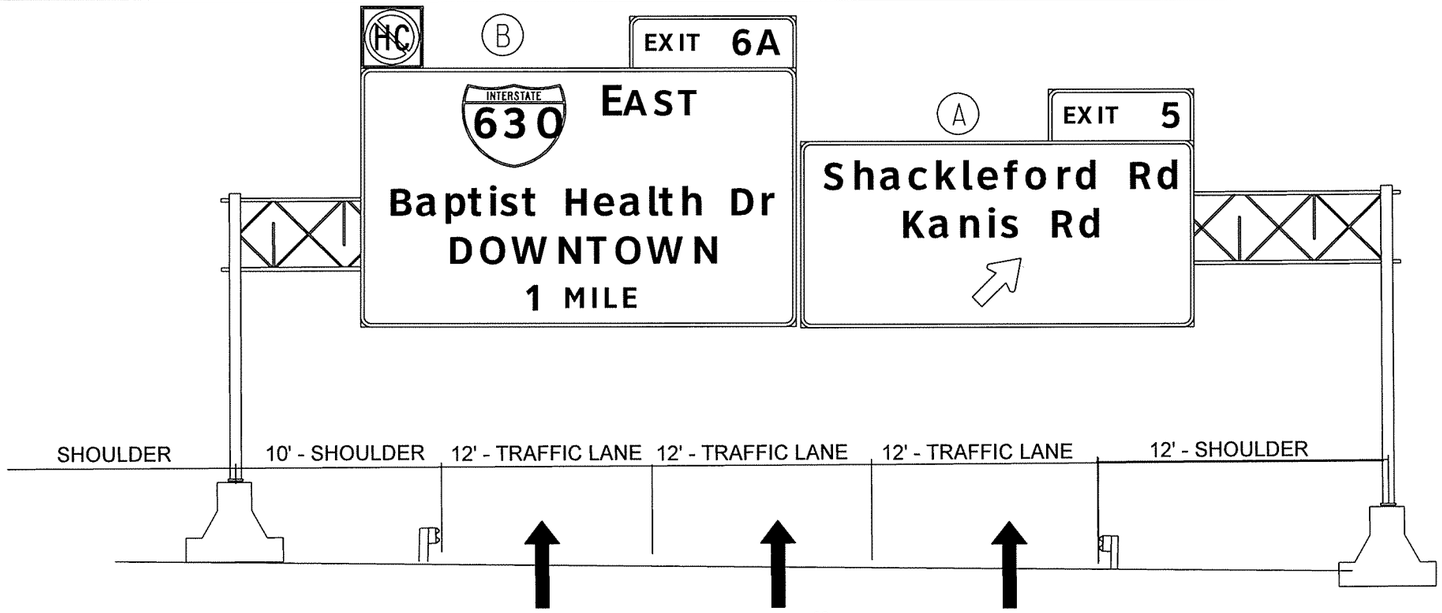
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/25

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	133	372

(2) SIGN LAYOUT SHEET

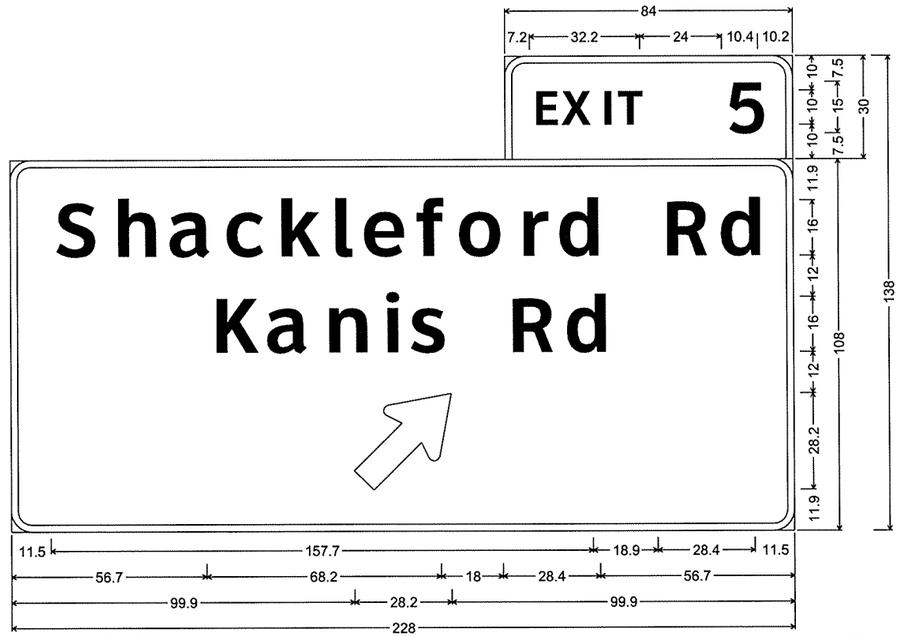
OH-430-60-44

OH-430-60-LM5.039NB
INSTALL OVERHEAD SIGNS AND
OVERHEAD SIGN STRUCTURE
LOG MILE 5.039





OH-430-60-LM5.039NB-B;
6.0" Radius, 1.8" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [6A] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
Interstate 630 M1-1 18.0" ClearviewHwy-5-W; [E AST] ClearviewHwy-5-W; [Baptist Health Dr] ClearviewHwy-5-W-R;
[DOWNTOWN] ClearviewHwy-5-W; [1] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;



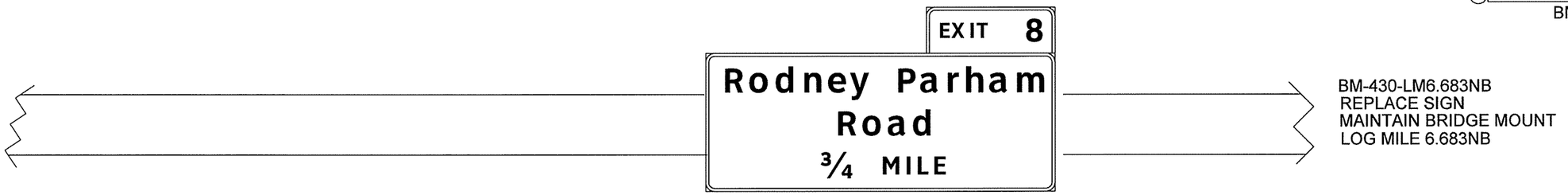
OH-430-60-LM5.039NB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [5] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Shackleford Rd] ClearviewHwy-5-W; [Kanis Rd] ClearviewHwy-5-W; Standard Arrow Custom 35.8" X 21.6" 45°;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

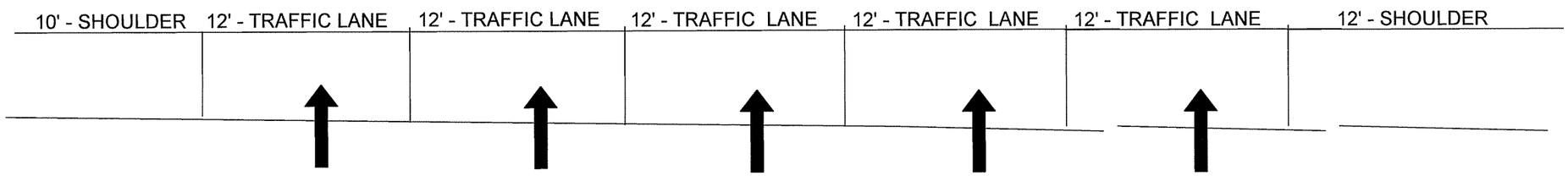
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	134	372

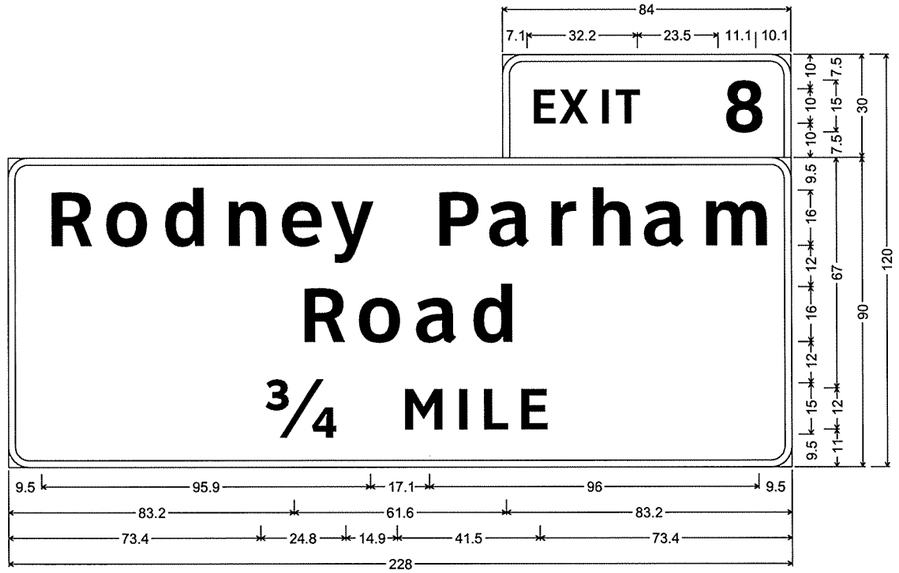
(2) SIGN LAYOUT SHEET

BM-430-60-07



BM-430-LM6.683NB
REPLACE SIGN
MAINTAIN BRIDGE MOUNT
LOG MILE 6.683NB





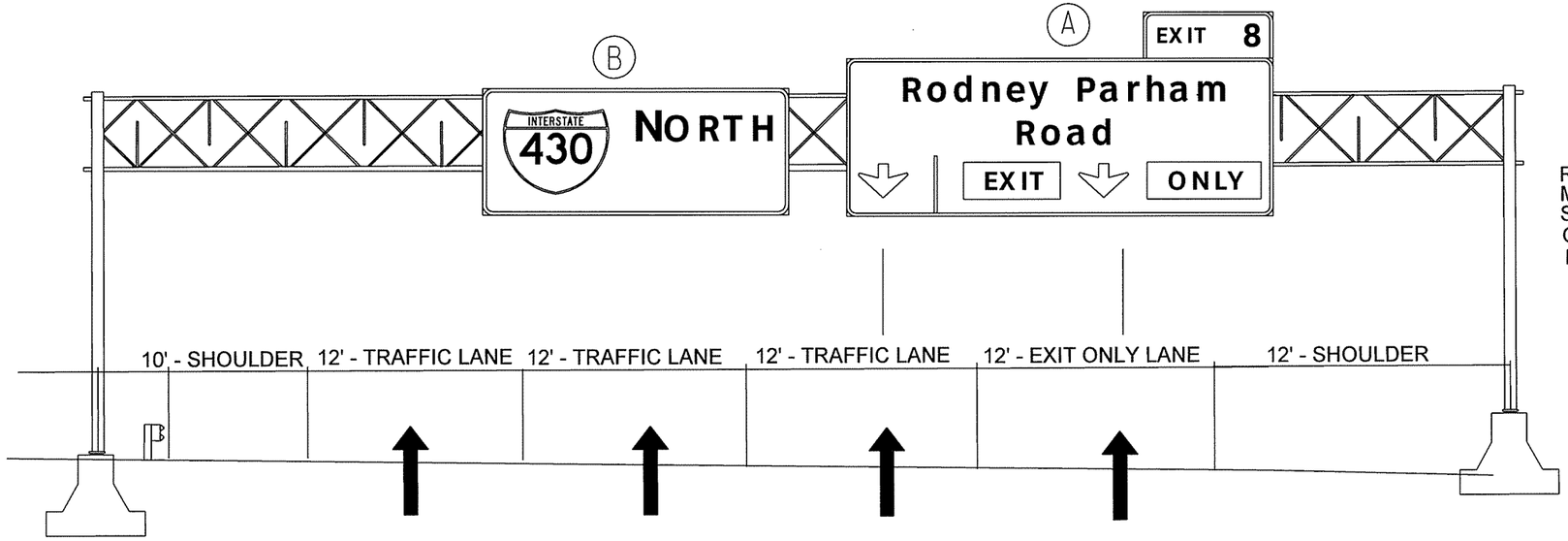
BM-430-LM6.683NB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [8] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Rodney Parham] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W; [3/4] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/19

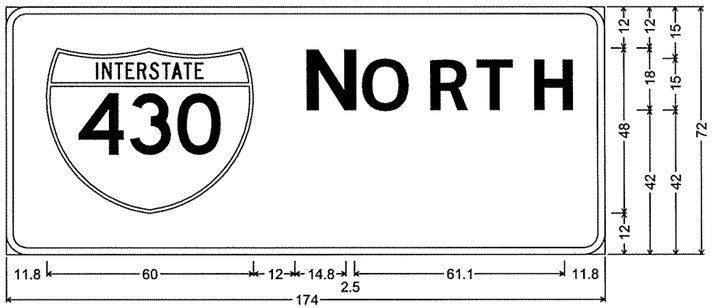
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	135	372

(2) SIGN LAYOUT SHEET

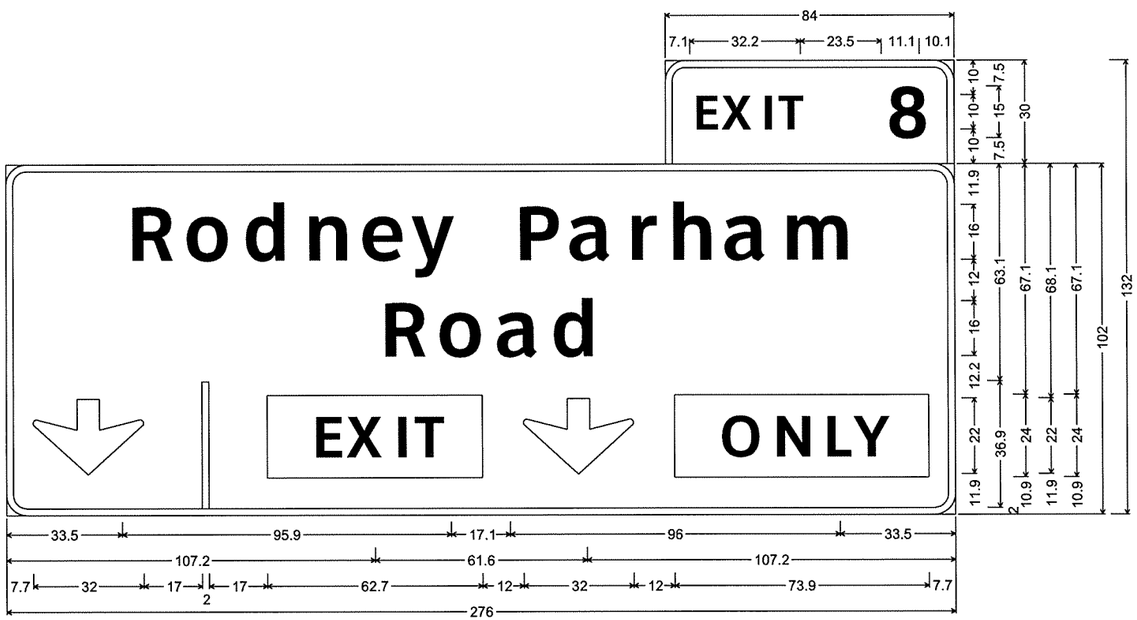
OH-430-60-08



REPLACE SIGN
MAINTAIN OVERHEAD
SIGN STRUCTURE
OH-430-LM6.908NB
LOG MILE 6.908



OH-430-LM6.908NB-B; 6.0" Radius, 2.0" Border, White on Green;
Interstate 430 M1-1 18.0" D; [N ORTH] ClearviewHwy-5-W;

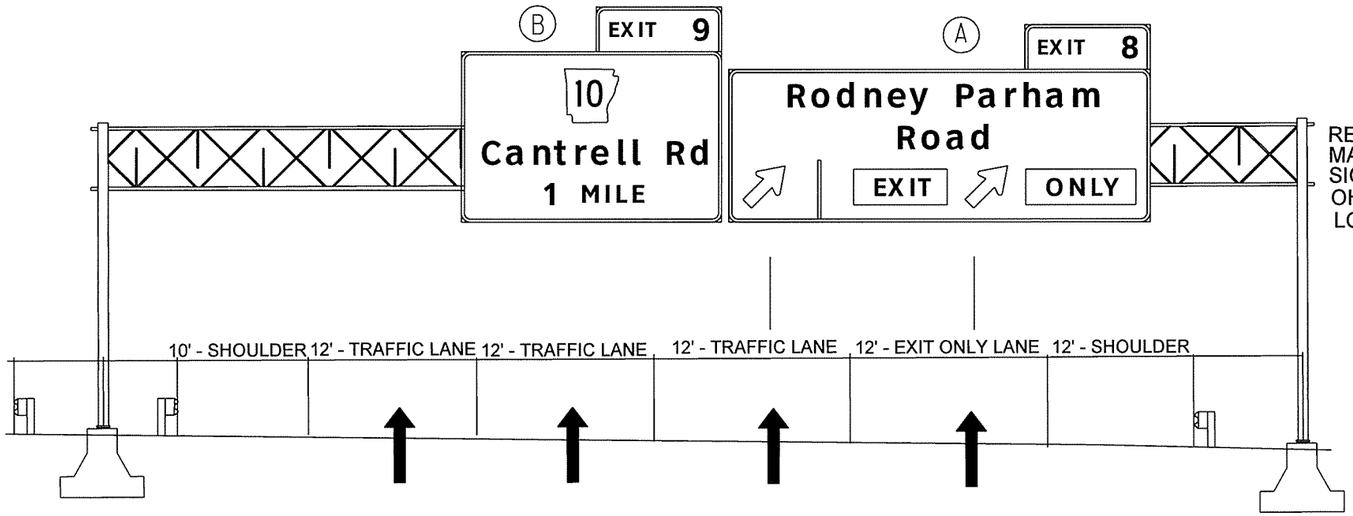


OH-430-LM6.908NB-A;
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[EXIT] ClearviewHwy-5-W; [8] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Rodney Parham] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W; Down Arrow 22.0" 270°; Rectangle Yellow;
Down Arrow 22.0" 270°; Rectangle Yellow;

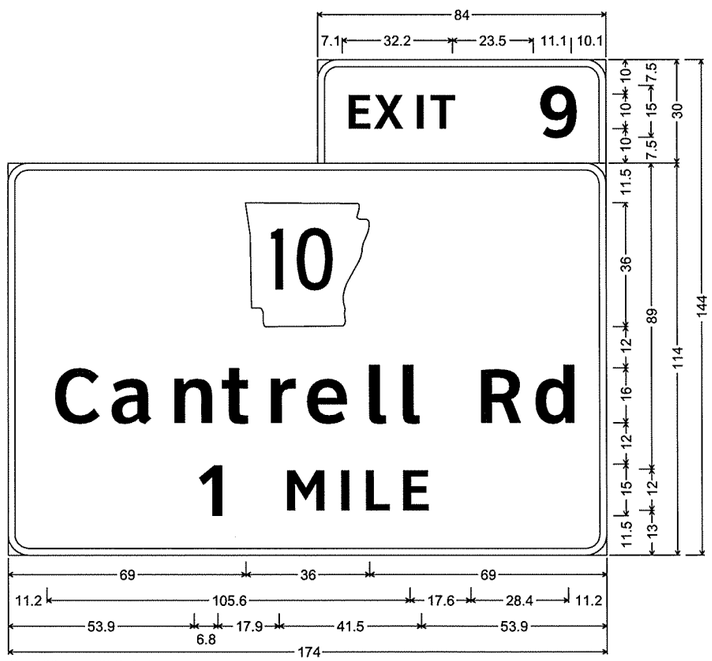
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/17

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	136	372
				(2)	SIGN LAYOUT SHEET			

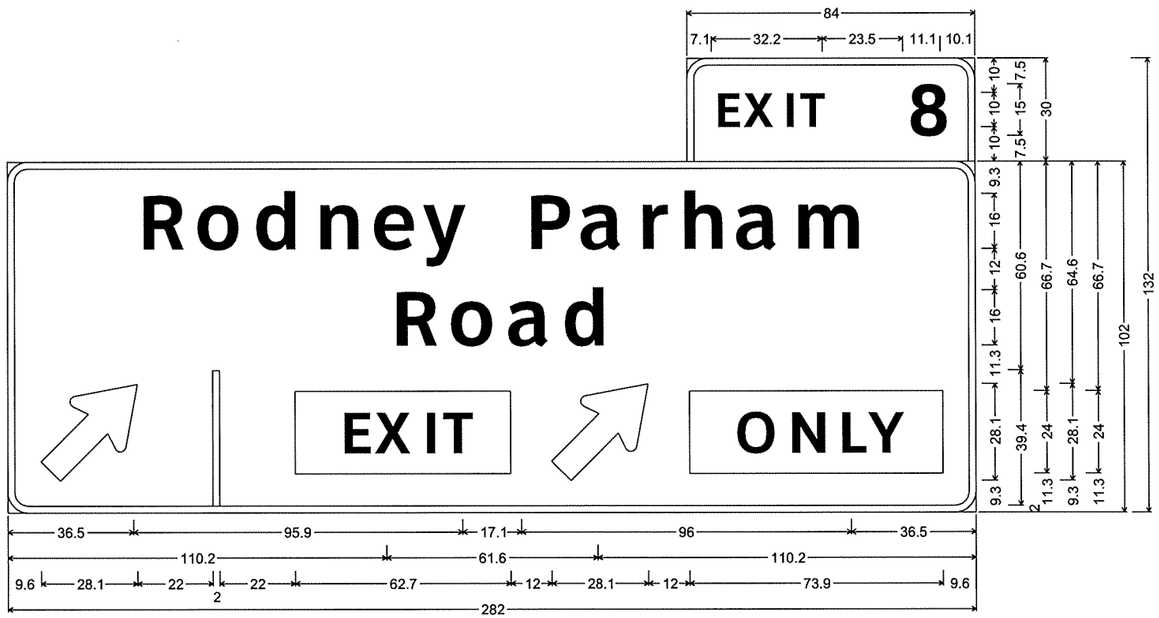
OH-430-60-09



REPLACE SIGN
MAINTAIN OVERHEAD
SIGN STRUCTURE
OH-430-LM7.320NB
LOG MILE 7.320



OH-430-LM7.320NB-B;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [9] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Cantrell Rd] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

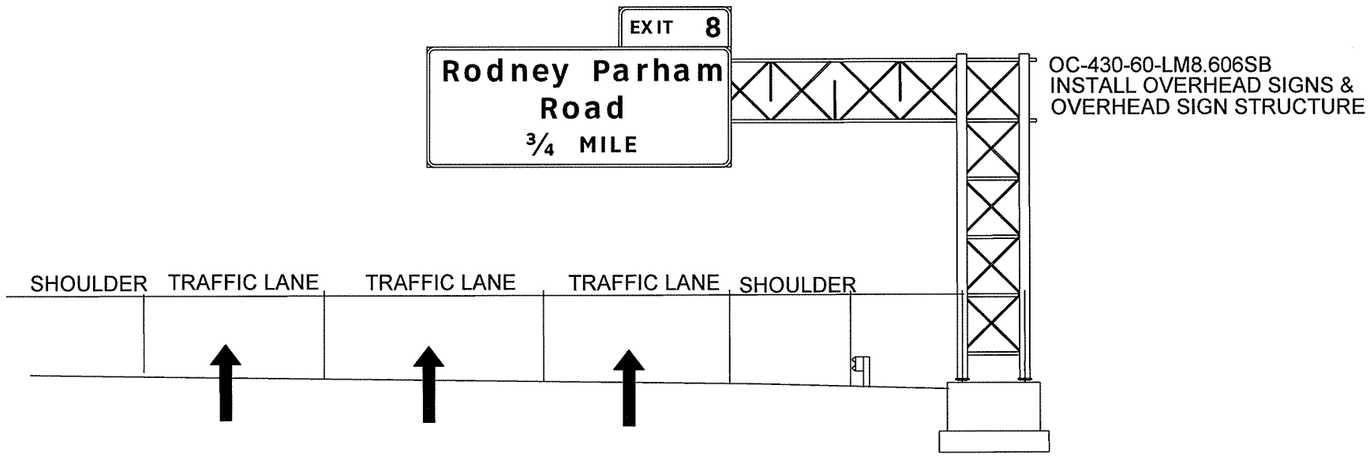


OH-430-LM7.320NB-A;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [8] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Rodney Parham] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W; Standard Arrow Custom 35.8" X 21.6" 45°; Rectangle Yellow;
Standard Arrow Custom 35.8" X 21.6" 45°; Rectangle Yellow;

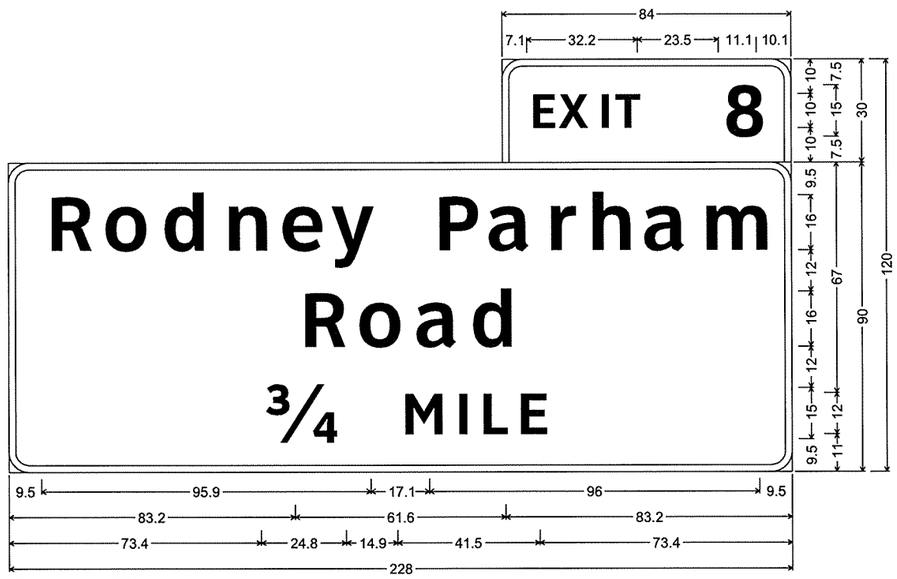
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	137	372
				(2)	SIGN LAYOUT SHEET			

OC-430-60-43



OC-430-60-LM8.606SB
INSTALL OVERHEAD SIGNS &
OVERHEAD SIGN STRUCTURE



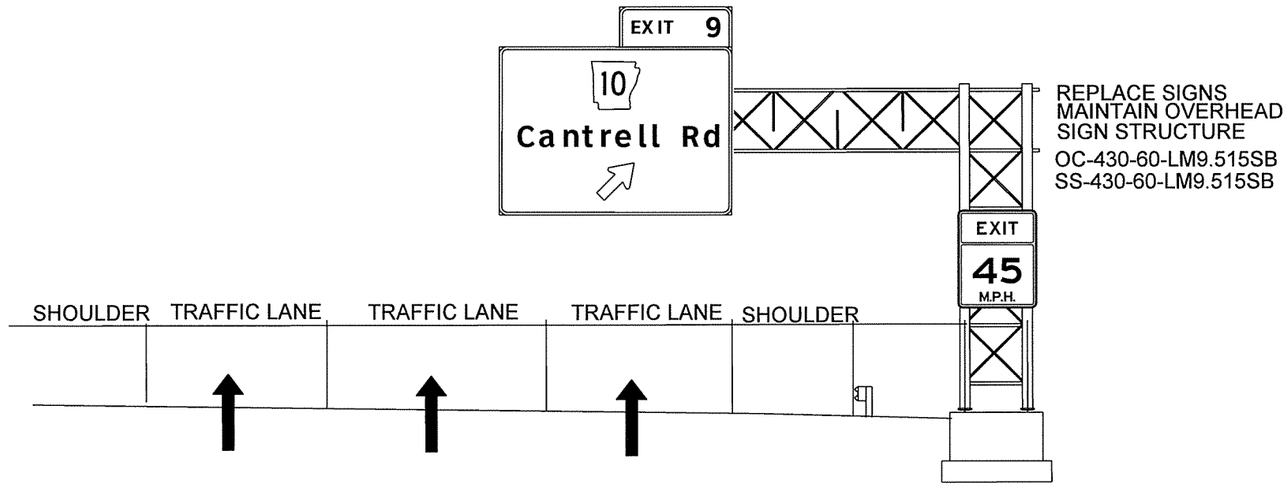
OC-430-LM8.606SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [8] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Rodney Parham] ClearviewHwy-5-W; [Road] ClearviewHwy-5-W; [3/4] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
3/6/15
JOSEPH A. SARTINI

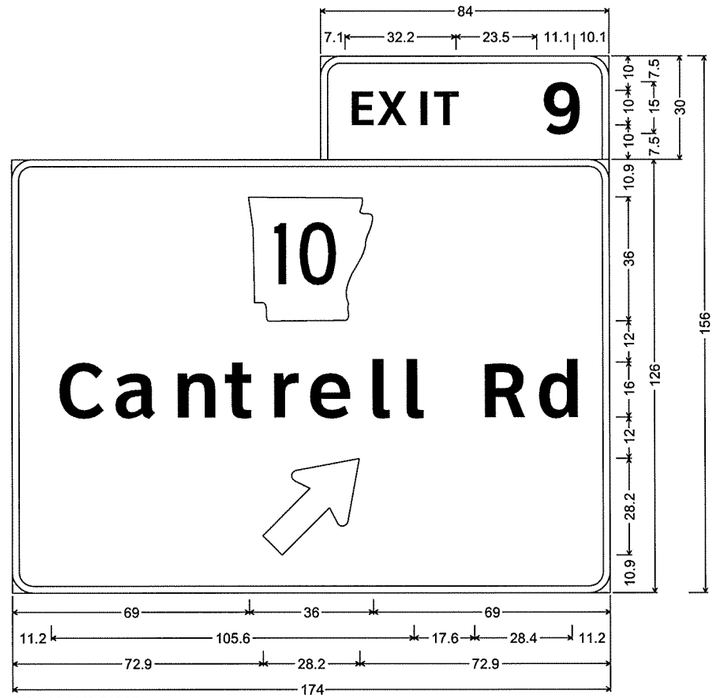
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	138	372

(2) SIGN LAYOUT SHEET

OC-430-60-15



REPLACE SIGNS
MAINTAIN OVERHEAD
SIGN STRUCTURE
OC-430-60-LM9.515SB
SS-430-60-LM9.515SB

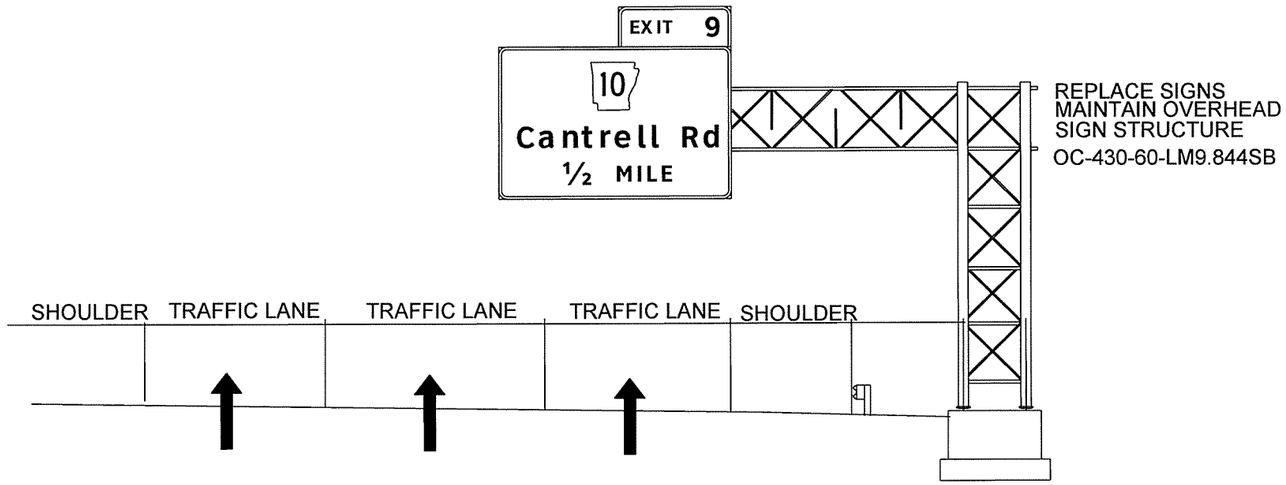


OC-430-LM9.515SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [9] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Cantrell Rd] ClearviewHwy-5-W; Standard Arrow Custom 35.8" X 21.6" 45°;

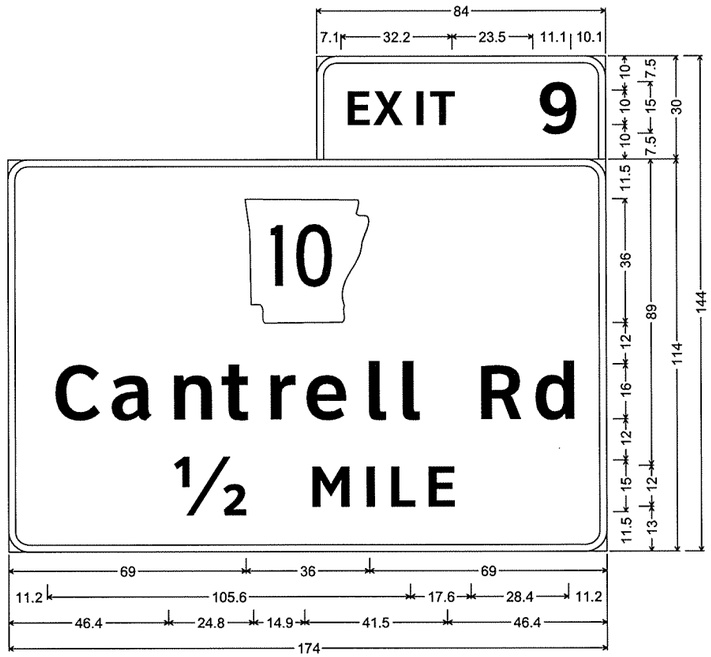
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/12

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.		061437	139	372
				(2)	SIGN LAYOUT SHEET			

OC-430-60-14



REPLACE SIGNS
MAINTAIN OVERHEAD
SIGN STRUCTURE
OC-430-60-LM9.844SB



OC-430-LM9.844SB;
6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [9] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
M1-6; [Cantrell Rd] ClearviewHwy-5-W; [½] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;

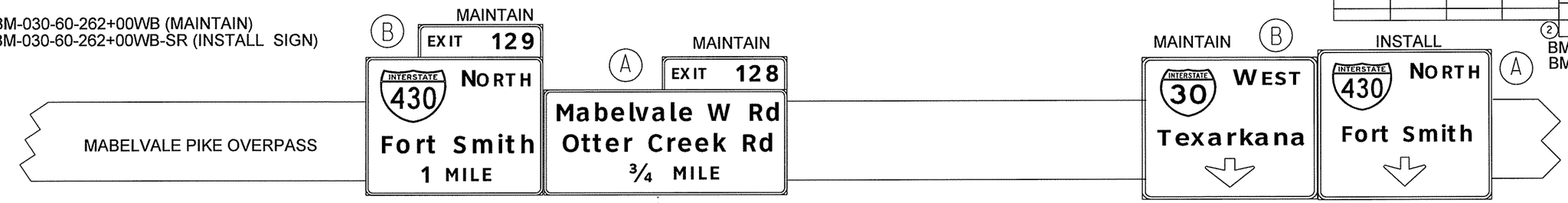
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/4/15

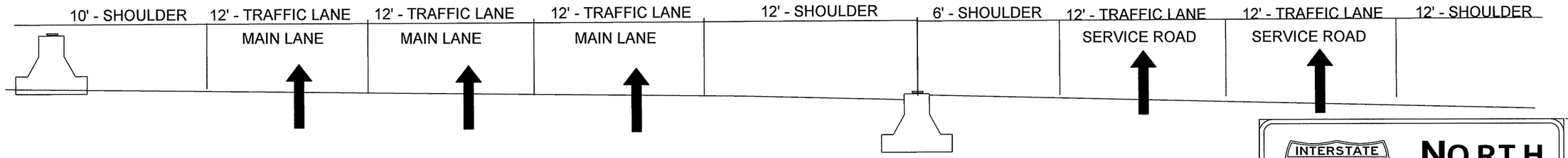
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	140	372

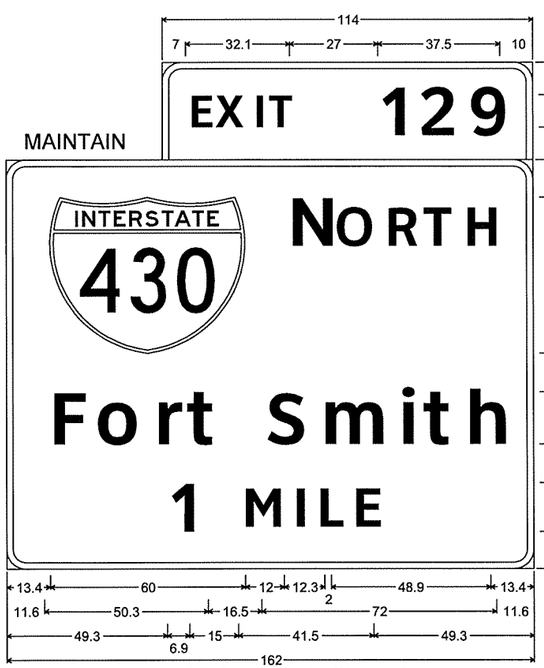
(2) SIGN LAYOUT SHEET

BM-030-60-262+00WB (MAINTAIN)
BM-030-60-262+00WB-SR (INSTALL SIGN)

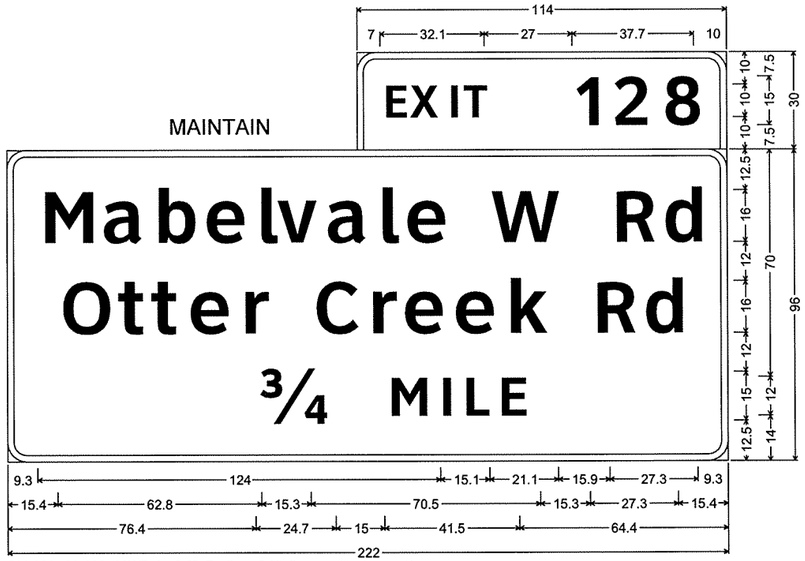
BM-030-60-42B (SERVICE ROAD)
BM-030-60-42A (MAIN LANES)



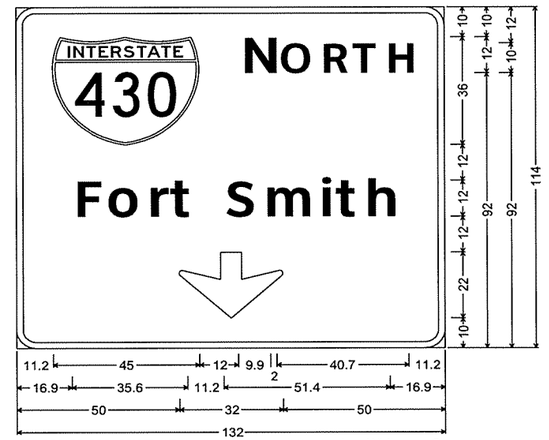




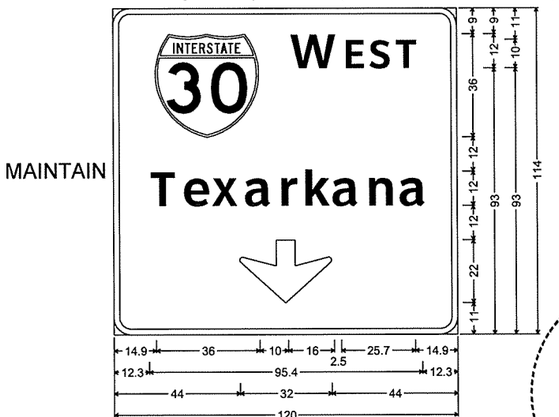
BM-030-60-262+00WB-B; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [129] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[N] ClearviewHwy-5-W; [ORTH] ClearviewHwy-5-W;
[Fort Smith] ClearviewHwy-5-W; [1] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;



BM-030--60-262+00WB-A; 6.0" Radius, 2.0" Border, White on Green;
[EXIT] ClearviewHwy-5-W; [128] ClearviewHwy-5-W;
6.0" Radius, 2.0" Border, White on Green;
[Mabelvale W Rd] ClearviewHwy-5-W-R; [Otter Creek Rd] ClearviewHwy-5-W-R; [3/4] ClearviewHwy-5-W;
[MILE] ClearviewHwy-5-W;



BM-030-60-262+00WB-SR-A; 6.0" Radius, 2.0" Border, White on Green;
[N] ClearviewHwy-5-W; [ORTH] ClearviewHwy-5-W;
[Fort Smith] ClearviewHwy-5-W-R; Down Arrow 22.0" 270°;



BM-030-60-262+00WB-SR;
6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W;
[Texarkana] ClearviewHwy-5-W-R;
Down Arrow 22.0" 270°;

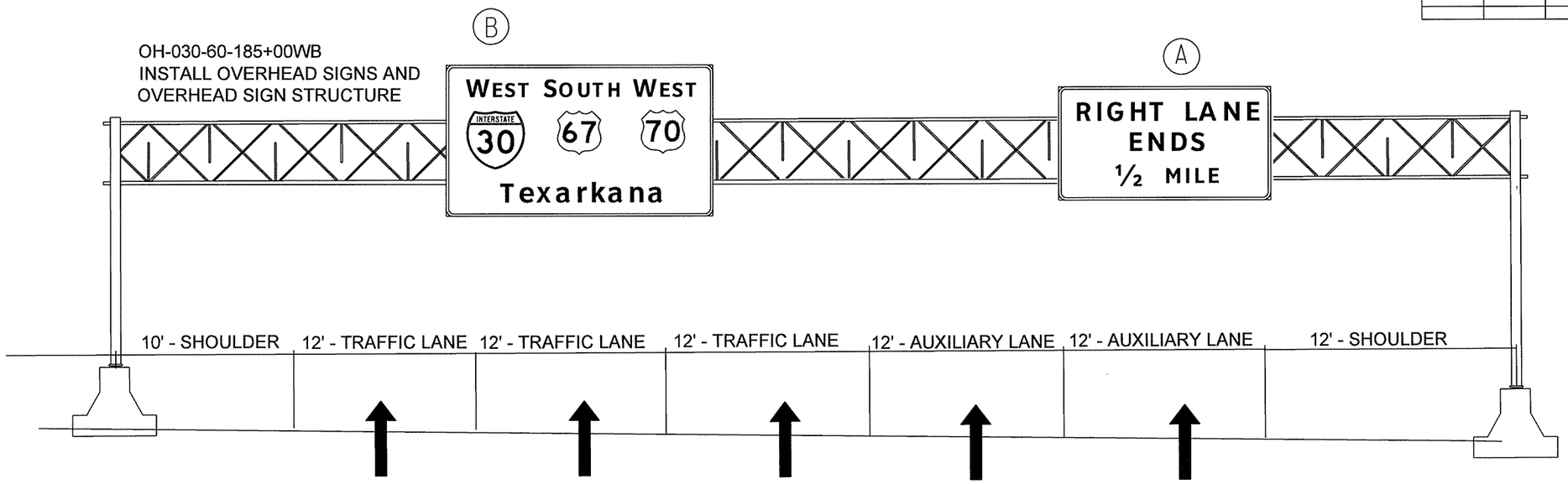
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/18

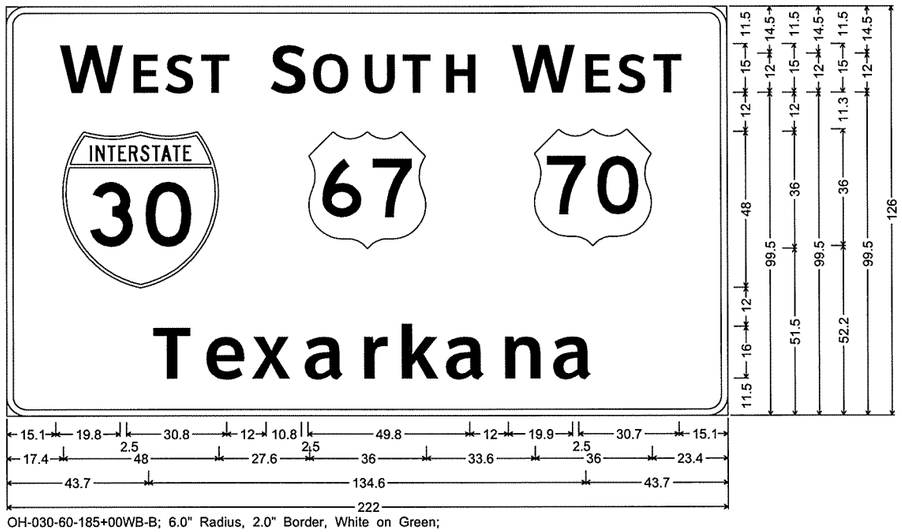
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	141	372

(2) SIGN LAYOUT SHEET

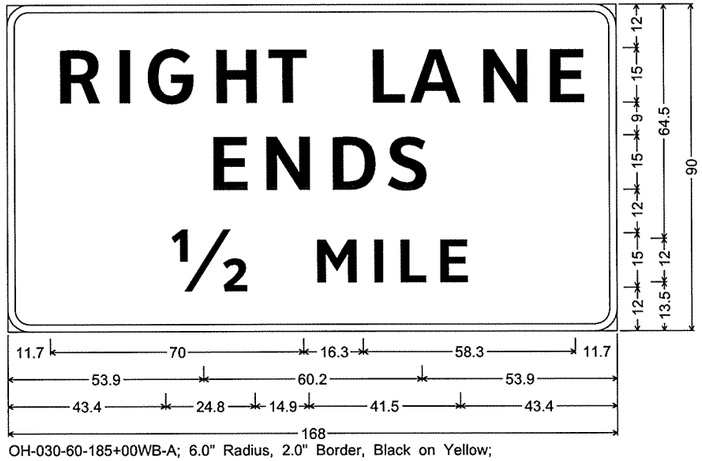
OH-030-60-62

OH-030-60-185+00WB
INSTALL OVERHEAD SIGNS AND
OVERHEAD SIGN STRUCTURE





OH-030-60-185+00WB-B; 6.0" Radius, 2.0" Border, White on Green;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W; [S] ClearviewHwy-5-W; [OUTH] ClearviewHwy-5-W;
[W] ClearviewHwy-5-W; [EST] ClearviewHwy-5-W; [Texarkana] ClearviewHwy-5-W;



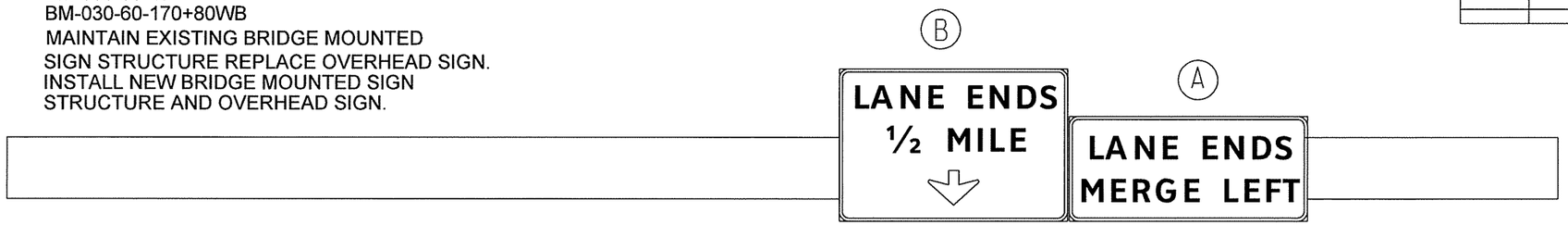
OH-030-60-185+00WB-A; 6.0" Radius, 2.0" Border, Black on Yellow;
[RIGHT LANE] ClearviewHwy-5-W; [ENDS] ClearviewHwy-5-W;
[½] ClearviewHwy-5-W; [MILE] ClearviewHwy-5-W;

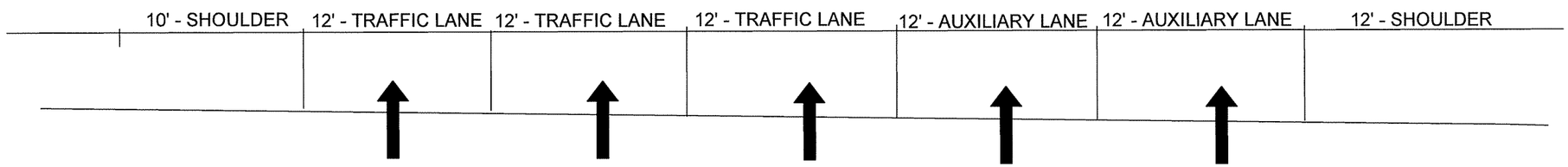
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/12

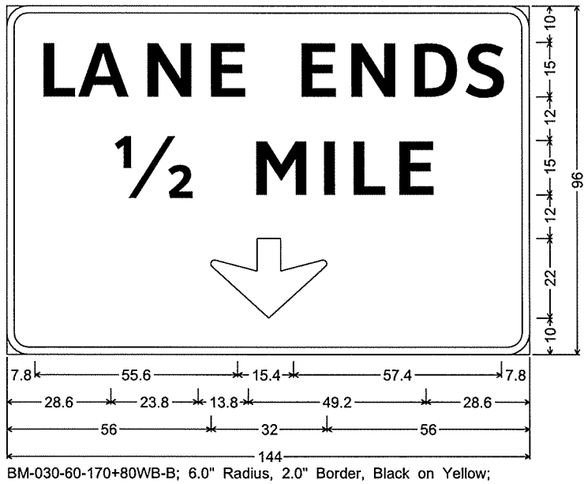
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	142	372
				(2)	SIGN LAYOUT SHEET			

BM-030-60-47

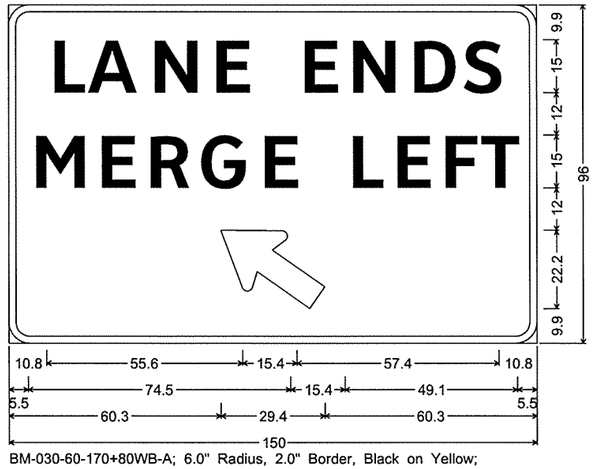
BM-030-60-47
BM-030-60-170+80WB
MAINTAIN EXISTING BRIDGE MOUNTED SIGN STRUCTURE REPLACE OVERHEAD SIGN. INSTALL NEW BRIDGE MOUNTED SIGN STRUCTURE AND OVERHEAD SIGN.







BM-030-60-170+80WB-B; 6.0" Radius, 2.0" Border, Black on Yellow;
[LANE ENDS] ClearviewHwy-5-W-R; [½ MILE] ClearviewHwy-5-W-R;
Down Arrow 22.0" 270°;



BM-030-60-170+80WB-A; 6.0" Radius, 2.0" Border, Black on Yellow;
[LANE ENDS] ClearviewHwy-5-W-R;
[MERGE LEFT] ClearviewHwy-5-W-R;
Standard Arrow Custom 33.4" X 20.3" 145°;

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/13

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	143	372

(2) SIGN PLACEMENT SHEET

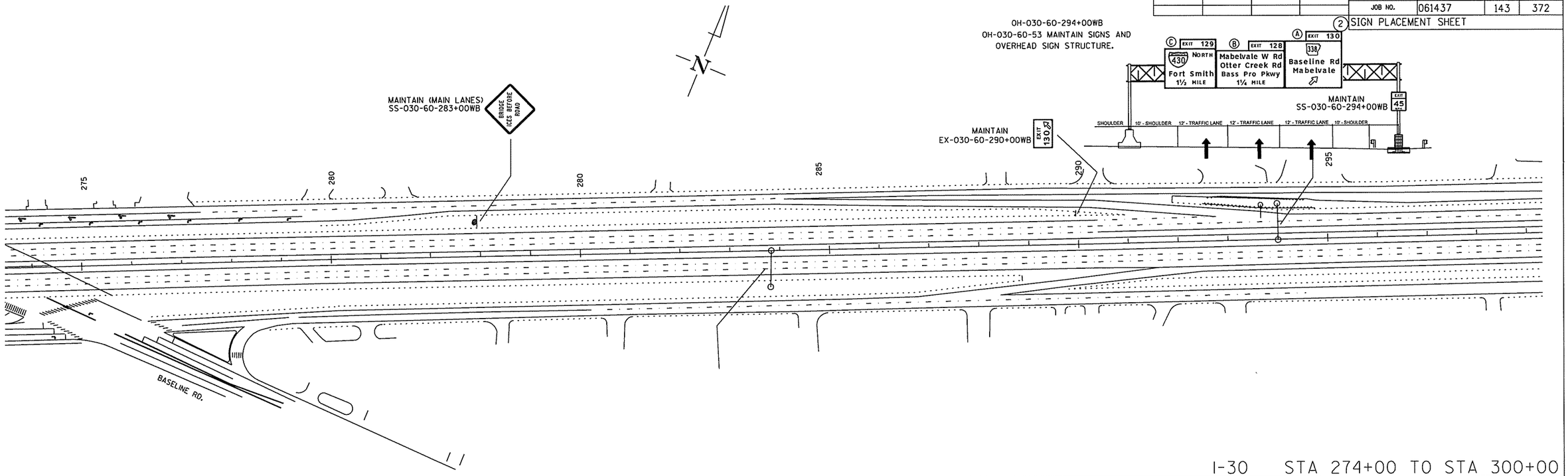
OH-030-60-294+00WB
OH-030-60-53 MAINTAIN SIGNS AND OVERHEAD SIGN STRUCTURE.

MAINTAIN (MAIN LANES)
SS-030-60-283+00WB

BRIDGE ICES BEFORE ROAD

MAINTAIN
EX-030-60-290+00WB
EXIT 130

MAINTAIN
SS-030-60-294+00WB
EXIT 45

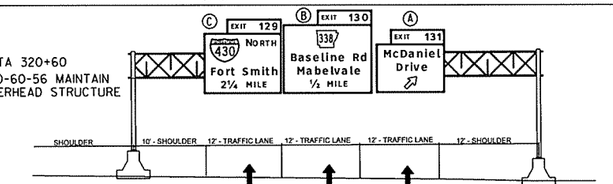


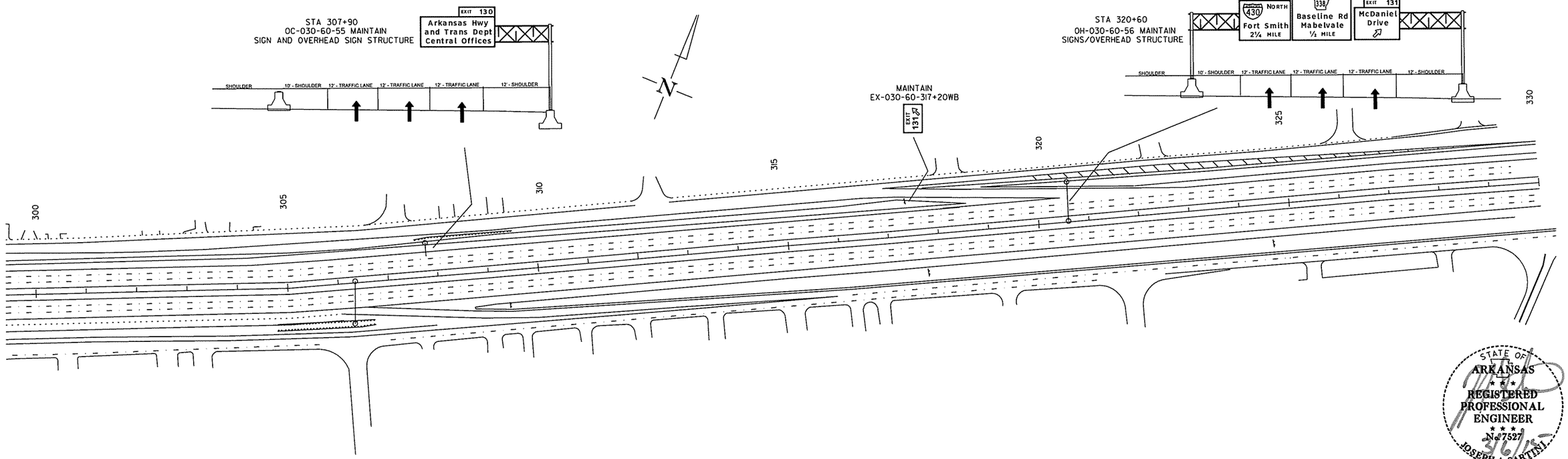
I-30 STA 274+00 TO STA 300+00

STA 307+90
OC-030-60-55 MAINTAIN
SIGN AND OVERHEAD SIGN STRUCTURE

MAINTAIN
EX-030-60-317+20WB
EXIT 131

STA 320+60
OH-030-60-56 MAINTAIN
SIGNS/OVERHEAD STRUCTURE





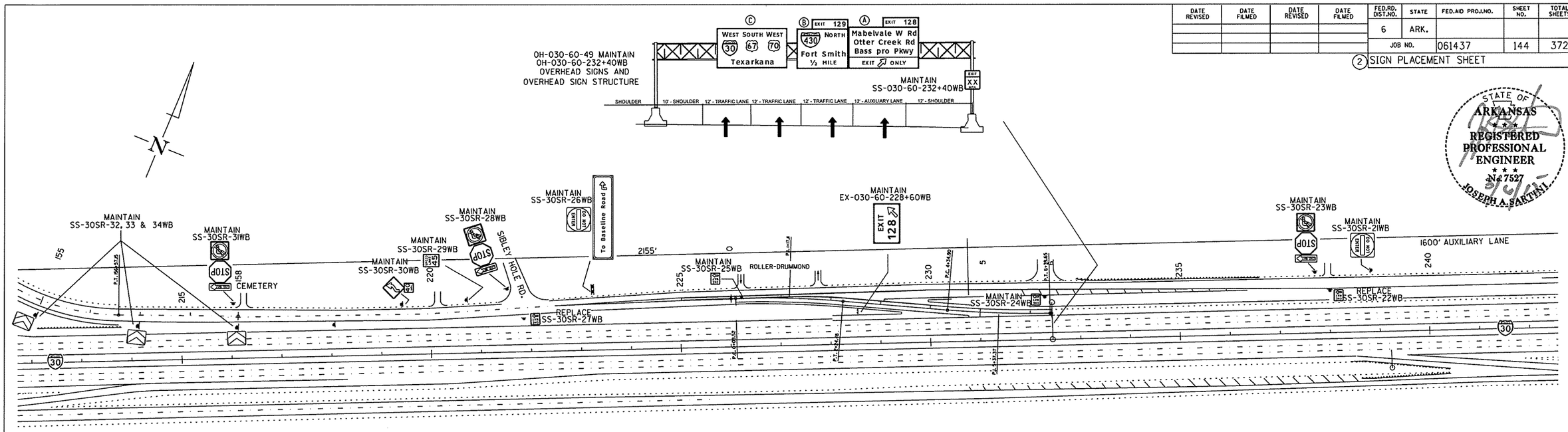
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

I-30 STA 300+00 TO STA 330+00

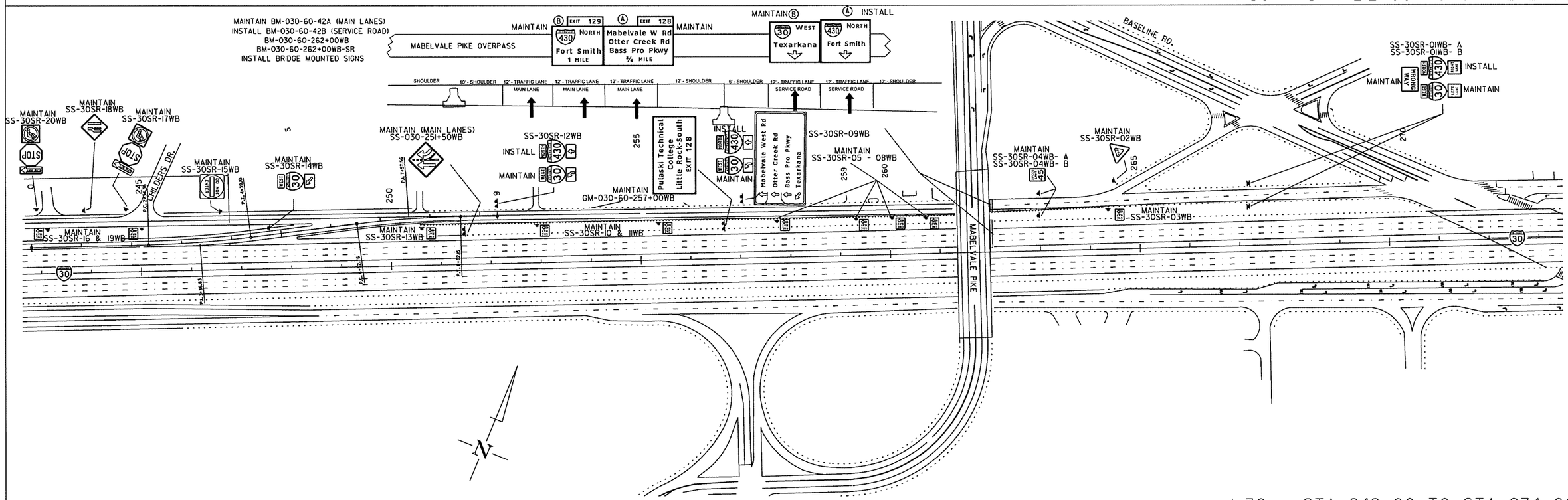
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	144	372

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI



I-30 STA 212+00 TO STA 242+00



I-30 STA 242+00 TO STA 274+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.		061437	145	372

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
N.27527
JOSEPH A. SARTINI

MAINTAIN
LOG MILE 127.33
ML-030-60-LMI27.33EB

EXIT 128
Mabelvale W Rd
Otter Creek Rd
Bass Pro Pkwy
1 MILE

MAINTAIN
LOG MILE 127.82
OH-030-60-LMI27.82EB-A
OH-030-60-LMI27.82EB-B
OVERHEAD SIGN STRUCTURE.

MAINTAIN
(B) EXIT 129
430 NORTH
Fort Smith
1 MILE

REPLACE
(A) EXIT 128
Mabelvale W Rd
Otter Creek Rd
Bass Pro Pkwy
½ MILE

SHOULDER | 10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 10' - SHOULDER

MAINTAIN
LOG MILE 128.34
OH-030-60-LMI28.34EB-A
OH-030-60-LMI28.34EB-B
VMS-030-60-LMI28.34EB-C
OVERHEAD SIGN STRUCTURE.

(C) VARIABLE MESSAGE SIGN

(B) EXIT 129
430 NORTH
Fort Smith
½ MILE

EXIT 128 (A)
Mabelvale W Rd
Otter Creek Rd
Bass Pro Pkwy

SHOULDER | 10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 10' - SHOULDER

I-30 STA. 126+00 TO STA. 156+00

(B) LANE ENDS ½ MILE
(A) LANE ENDS MERGE LEFT

BM-030-60-47
BM-030-60-170+80WB-B; MAINTAIN EXISTING BRIDGE MOUNTED SIGN STRUCTURE, REPLACE SIGN.
BM--030-60-170+80WB-A; INSTALL BRIDGE MOUNTED SIGN STRUCTURE AND SIGN.

10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - SHOULDER

INSTALL
SS-30SR-60WB

INSTALL
SS-30SR-61WB

INSTALL
SS-30SR-59WB

INSTALL
SS-30SR-58WB

INSTALL
SS-30SR-57WB

INSTALL
SS-30SR-55WB

INSTALL
SS-30SR-54WB

INSTALL
SS-30SR-52WB

INSTALL
SS-30SR-51WB

300' TAPER

1800' ACCEL. LANE

INSTALL SS-30SR-56WB

INSTALL SS-30SR-53WB

MAINTAIN
LOG MILE 128.56
SS-30SR-01EB

⇧ Otter Creek Rd
⇧ Bass Pro Pkwy
Mabelvale W Rd ⇗

MAINTAIN
LOG MILE 128.65
SS-30SR-02EB

Otter Creek Rd ⇗
Bass Pro Pkwy ⇗

INSTALL
OH-030-60-62
OH-030-60-185+00WB

(B) WEST SOUTH WEST
30 67 70
Texarkana

(A) RIGHT LANE ENDS ½ MILE

10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - AUXILLARY LANE | 12' - AUXILLARY LANE | 12' - SHOULDER

MAINTAIN
OH-030-60-44 EASTBOUND

EAST NORTH EAST
30 67 70
Little Rock

EXIT 129
430 NORTH
Fort Smith ⇗

10' - SHOULDER | 10' - SHOULDER | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - TRAFFIC LANE | 12' - SHOULDER

I-30 STA. 156+00 TO STA. 186+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.		061437	146	372

(2) SIGN PLACEMENT SHEET

P.C. 189+22.40

P.C. 122+54.41

MAINTAIN EXISTING WI-8

MAINTAIN WI-15
SS-430-60-97+80SB

MAINTAIN
SS-030-60-198+00WB

MAINTAIN
SS-430-60-102+00SB
FLASHING BEACON ASSEMBLY
SHOULDER MOUNTED MONO POLE

MAINTAIN
SS-430-60-104+00SB

MAINTAIN
EX-430-60-105+50SB

MAINTAIN
SS-30SR-50WB-A
SS-30SR-50WB-B

P.T. 130+76.64

P.C. 132+23.59

INSTALL
SS-30SR-49WB

MAINTAIN
SS-30SR-47B-WB
SS-30SR-47C-WB

P.I. 135+14.21

MAINTAIN
SS-30SR-47A-WB

INSTALL
SS-30SR-46WB

MAINTAIN
SS-30SR-48WB

INSTALL
SS-30SR-45WB

P.T. 138+62.82

INSTALL
SS-30SR-44WB

P.I. 140+35.13

P.I. 141+99.46

INSTALL
SS-30SR-43WB

P.C. 142+41.47

P.T. 143+99.06

P.I. 143+21.11

INSTALL
SS-30SR-42WB

REPLACE
SS-30SR-41WB

INSTALL
SS-30SR-40WB

REMOVE EXISTING
WI-4 / WI3-1(35)

P.C. 148+30.57

P.C. 150+30.57

INSTALL
SS-30SR-39WB

MAINTAIN
SS-30SR-36 & 37WB

MAINTAIN
EX-030-60-208+90WB

P.T. 150+92.81

P.I. 149+65.70

INSTALL
SS-30SR-38WB

P.C. 151+53.28

INSTALL
SS-30SR-35WB

P.I. 151+38.82

REPLACE
LOG MILE 0.112
SS-430-STA103+50NB

MAINTAIN
LOG MILE 0.158
LAF-430-60-106+00NB

REPLACE
LOG MILE 0.412
ML-430-STA119+00NB

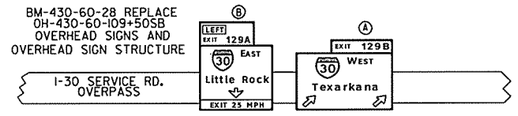
P.T. 112+19.19

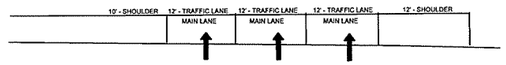
P.C. 119+89.19

P.T. 122+98.88

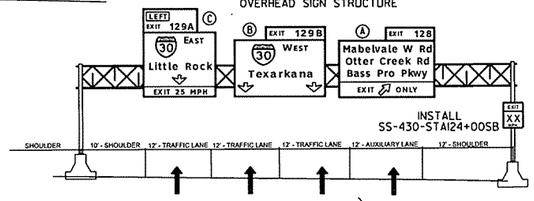
MAINTAIN
INSTALLED BY JOB 061332
EX-430-60-120+00SB

BM-430-60-28 REPLACE
OH-430-60-109+50SB
OVERHEAD SIGNS AND
OVERHEAD SIGN STRUCTURE

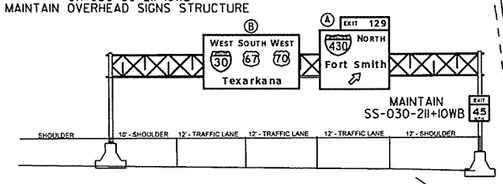


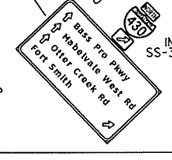


OH-430-60-27 INSTALL
OH-430-60-124+00SB
OVERHEAD SIGNS AND
OVERHEAD SIGN STRUCTURE

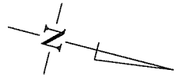


OH-030-60-43
OH-030-60-211+10WB
MAINTAIN OVERHEAD SIGNS STRUCTURE











DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	147	372

(2) SIGN PLACEMENT SHEET

REMOVE
STA 159+00SB
EXIT 128
Mabelvale W Rd
Otter Creek Rd
Bass Pro Pkwy
1 MILE

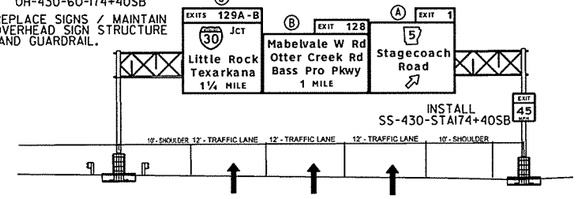
Pulaski Technical College
Little Rock-South
EXIT 128

MAINTAIN
INSTALLED BY JOB 061332
GM-430-60-166+00SB

MAINTAIN
INSTALLED BY JOB 061332
EX-430-60-172+00SB

EXIT 1

OH-430-60-26
OH-430-60-174+40SB
REPLACE SIGNS / MAINTAIN OVERHEAD SIGN STRUCTURE AND GUARDRAIL.



STATE OF ARKANSAS
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3/6/14

INSTALL
SS-430-STAI54+00SB

MAINTAIN
INSTALLED BY JOB 061332
SS-430-STAI57+00SB
BRIDGE ICES BEFORE ROAD

STAGECOACH ROAD

155 160 165 170 175 180

INTERSTATE 430

Stagecoach Road 5 EXIT 1

INSTALL
ML-430-STAI54+70NB
LOG MILE 1.088

REPLACE
SS-430-STAI58+30NB
LOG MILE 1.139
EXIT 45 MPH

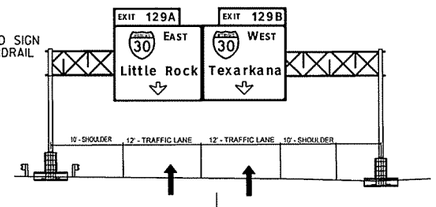
REPLACE
EX-430-STAI60+00NB
LOG MILE 1.172
EXIT 1

REPLACE
LOG MILE 1.139
SS-430-STAI73+00NB

INSTALL
SS-430-60-184+00NB
LOG MILE 1.617
INTERSTATE 430 NORTH

I-430 STA 155+00 TO STA 185+00

STA 131+00SB
OH-430-60-27
REMOVE SIGN, OVERHEAD SIGN STRUCTURE AND GUARDRAIL



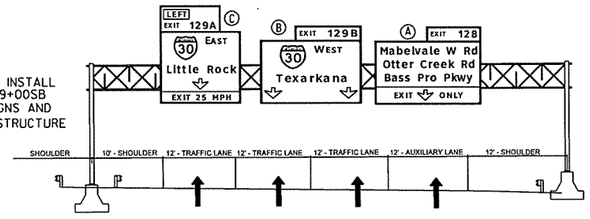
REMOVE
STA 126+00SB
EXIT 128
Mabelvale W Rd
Otter Creek Rd
Bass Pro Pkwy

HWY 338

REPLACE
SS-430-STAI41+00SB
BRIDGE ICES BEFORE ROAD

P.I. 143+89.55

OH-430-60-34 INSTALL
OH-430-60-149+00SB
OVERHEAD SIGNS AND OVERHEAD SIGN STRUCTURE



125 130 135 140 145 150 155

INTERSTATE 430

P.C. 124+36.87

300' TAPER

700' ACCEL. LANE

INSTALL
LOG MILE 0.545
SS-430-60-126+00NB
BRIDGE ICES BEFORE ROAD

INSTALL
LOG MILE 0.655
SS-430-STAI33+50NB
INTERSTATE 430 NORTH

INSTALL
LOG MILE 0.680
SS-430-60-135+50NB
BRIDGE ICES BEFORE ROAD

INSTALL
LOG MILE 0.737
SS-430-STAI39+00NB
65 SPEED LIMIT

Purple Heart Trail

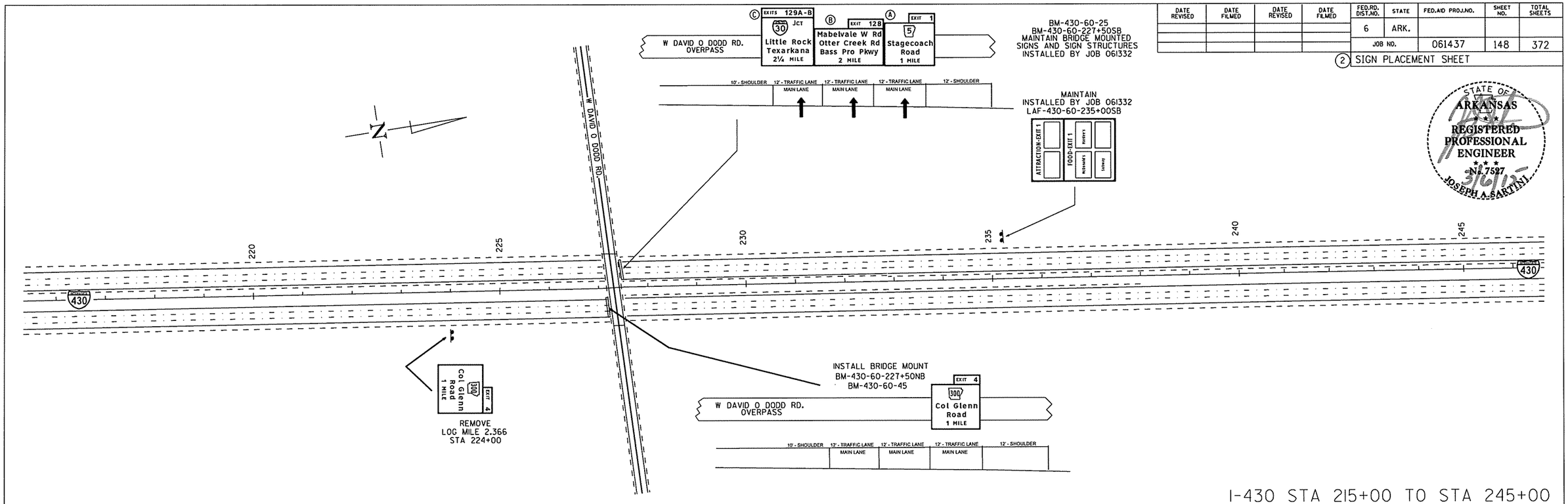
MAINTAIN
LOG MILE 0.838

P.T. 153+04.18

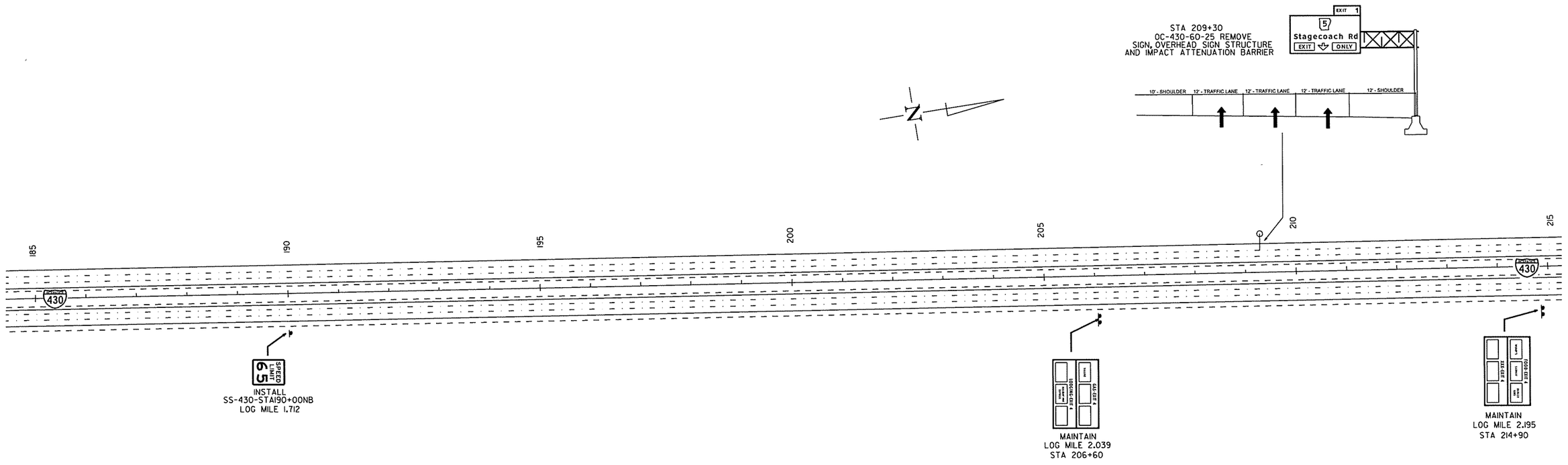
I-430 STA 125+00 TO STA 155+00

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.		061437	148	372

(2) SIGN PLACEMENT SHEET



I-430 STA 215+00 TO STA 245+00

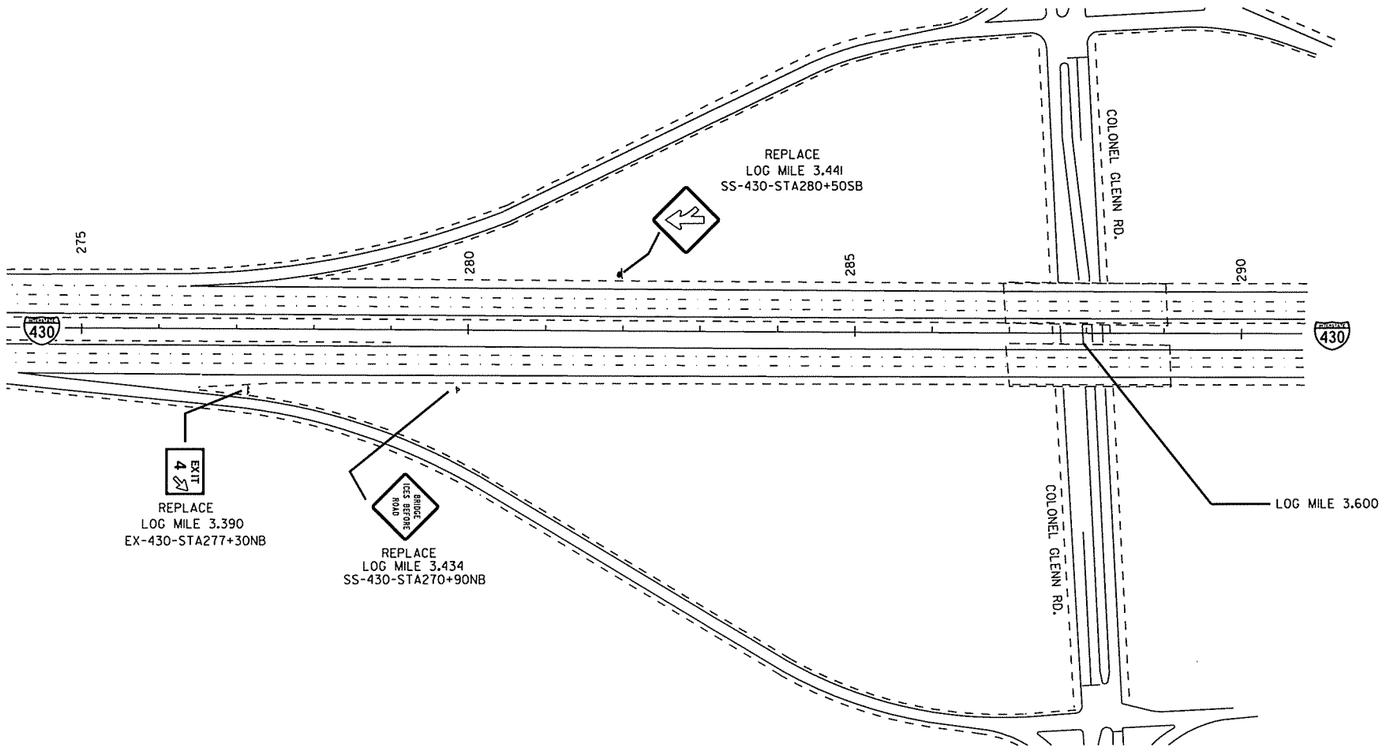


I-430 STA 185+00 TO STA 215+00

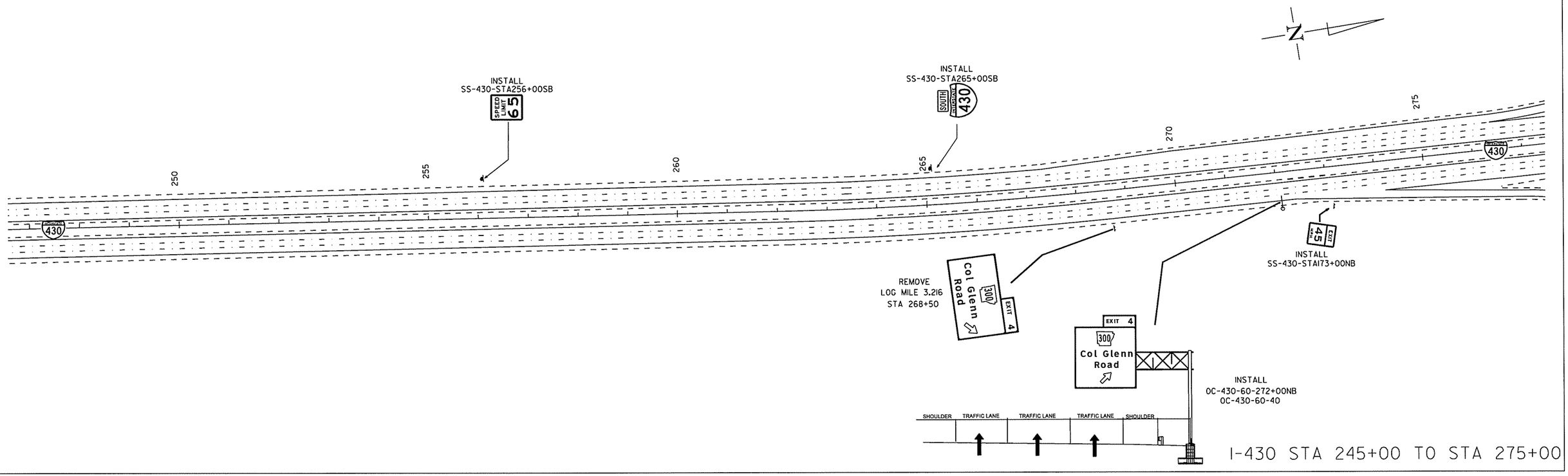
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	149	372

(2) SIGN PLACEMENT SHEET

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI



I-430 STA 275+00 TO STA 290+00



I-430 STA 245+00 TO STA 275+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.		061437	150	372
				(2)	SIGN PLACEMENT SHEET			

INSTALL
OC-430-60-41
OC-430-60-LM3.914SB
LOG MILE 3.914
REMOVE EXISTING SIGN

EXIT 4
300
Col Glenn Road

SHOULDER
TRAFFIC LANE
TRAFFIC LANE
TRAFFIC LANE
SHOULDER

MAINTAIN
VMS BACK TO BACK
WITH CAMERA
LOG MILE 3.737

VARIABLE MESSAGE SIGN
VARIABLE MESSAGE SIGN

REPLACE
LOG MILE 3.727
SS-430-LM3.727SB

REPLACE
LOG MILE 3.824
EX-430-LM3.824SB

EXIT 4

REPLACE
LOG MILE 3.867
SS-430-LM3.867SB

EXIT 45 MPH

285
96
COLONEL GLENN RD.

BRIDGE LOG
MILE 4.15NB

REPLACE
LOG MILE 3.763NB
SS-430-LM3.763NB

REPLACE
LOG MILE 4.022NB
SS-430-LM4.022NB

LOG MILE 3.600

LOG MILE 4.185

LODGING-EXIT 5
MAINTAIN
LOG MILE 4.312

SHOULDER
TRAFFIC LANE
TRAFFIC LANE
TRAFFIC LANE
SHOULDER

Shackleford Rd
Kanis Rd
1 MILE
EXIT 5

OC-430-60-01
OC-430-LM4.126NB
REPLACE SIGN MAINTAIN
OVERHEAD SIGN STRUCTURE

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 7527
JOSEPH A. SARTINI
3/6/15

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	151	372

(2) SIGN PLACEMENT SHEET

OC-430-60-42
OC-430-LM4.530SB
INSTALL OVERHEAD SIGN
AND SIGN STRUCTURE
LOG MILE 4.530

EXIT 4
Col Glenn Road
1 ¼ MILE

MAINTAIN
LOG MILE 4.731

REPLACE
SS-430-LM4.731SB
LOG MILE 4.731

MAINTAIN
LOG MILE 4.825

REPLACE
SS-430-LM4.929SB
LOG MILE 4.929

REPLACE
SS-430-LM4.453SB
LOG MILE 4.453

REPLACE
ML-430-LM4.452NB
LOG MILE 4.452

MAINTAIN
LOG MILE 4.561

MAINTAIN
LOG MILE 4.758

REMOVE
LOG MILE 4.912
OC-430-60-02

OH-430-60-44
OH-430-60-LM5.039NB

INSTALL OVERHEAD SIGNS
AND SIGN STRUCTURE
LOG MILE 5.039

MAINTAIN
(INSTALLED BY
JOB 061244)

MAINTAIN
LOG MILE 5.535
(INSTALLED BY
JOB 061244)

MAINTAIN
LOG MILE 5.645
(INSTALLED BY
JOB 061244)

MAINTAIN
(INSTALLED BY
JOB 061244)

MAINTAIN
(INSTALLED BY
JOB 061244)

MAINTAIN
(INSTALLED BY
JOB 061244)

MAINTAIN
(INSTALLED BY
JOB 061244)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	152	372

(2) SIGN PLACEMENT SHEET

MAINTAIN LOG MILE 5.930 (INSTALLED BY JOB 061244)

EXIT 5 — Shackleford Rd / Kanis Rd — EXIT ONLY

MAINTAIN (INSTALLED BY JOB 061244)

Ar Heart Hospital EXIT 5

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6A

MAINTAIN (INSTALLED BY JOB 061244)

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 30 MPH

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6B

MAINTAIN (INSTALLED BY JOB 061244)

EXIT

MAINTAIN (INSTALLED BY JOB 061244)

MAINTAIN LOG MILE 6.287 (INSTALLED BY JOB 061244)

EAST 630 — Shackleford Rd / Chenal Pkwy / Bapt Health Dr — EXIT ONLY

MAINTAIN (INSTALLED BY JOB 061244)

EXIT

MAINTAIN (INSTALLED BY JOB 061244)

EAST 630 — Shackleford Rd / Chenal Pkwy / Bapt Health Dr — EXIT ONLY

SOUTH 430

MAINTAIN LOG MILE 6.394 (INSTALLED BY JOB 061244)

Markham St / Chenal Pkwy

MAINTAIN LOG MILE 6.564 (INSTALLED BY JOB 061244)

EXIT 6B — Bapt Health Dr / Chenal Pkwy / Markham St

EXIT 5 — Shackleford Rd / Kanis Rd / 1 MILE

MAINTAIN LOG MILE 6.728 INSTALLED BY JOB 061244

EXIT 6B

MAINTAIN LOG MILE 6.782 (INSTALLED BY JOB 061244)

MARSHAM STREET

EXECUTIVE CENTER

MARSHAM CENTER

REPLACE SIGN
MAINTAIN BRIDGE MOUNT
LOG MILE 6.683NB

BM-430-60-07
BM-430-LM6.683NB

Rodney Parham Road — 3/4 MILE — EXIT 8

MAINTAIN (INSTALLED BY JOB 061244)

NORTH 430 — Financil Pkwy / Markham St / Chenal Pkwy — EXIT ONLY

MAINTAIN (INSTALLED BY JOB 061244)

EXIT

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6B

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6A

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6B

MAINTAIN (INSTALLED BY JOB 061244)

EXIT 6A

MAINTAIN (INSTALLED BY JOB 061244)

NORTH 430 — Markham St / Chenal Pkwy

EXIT 6B

MAINTAIN (INSTALLED BY JOB 061244)

EAST 630 DOWNTOWN — Baptist Health Dr

MAINTAIN (INSTALLED BY JOB 061244)

EAST 630 — Baptist Health Dr DOWNTOWN — EXIT ONLY

Markham St / Chenal Pkwy — 1/4 MILE — EXIT 6B

EXIT 6A

10' - SHOULDER
12' - TRAFFIC LANE
12' - EXIT ONLY LANE
SHOULDER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	153	372

(2) SIGN PLACEMENT SHEET

MAINTAIN
LOG MILE 6.980
(INSTALLED BY
JOB 061244)

MAINTAIN
LOG MILE 6.869
INSTALLED
BY JOB 061244

MAINTAIN
LOG MILE 7.320
(INSTALLED BY
JOB 061244)

MAINTAIN
LOG MILE 7.173
(INSTALLED BY
JOB 061244)

REPLACE
LOG MILE 7.589
SS-430-LM7.589SB

MAINTAIN
LOG MILE 7.938
(REPLACED BY
JOB 061244)

REPLACE
EX-430-LM7.890SB

MAINTAIN
LOG MILE 8.054

REPLACE
SS-430-LM7.916SB

REPLACE
LOG MILE 7.205
SS-430-LM7.205NB

REPLACE
LOG MILE 7.451
SS-430-LM7.451NB

REPLACE
LOG MILE 7.482
EX-430-LM7.482NB

REPLACE
LOG MILE 7.781
SS-430-LM7.781NB

INSTALL
LOG MILE 8.054
SS-430-LM8.054NB

REMOVE
LOG MILE 8.097

MAINTAIN
LOG MILE 7.038

MAINTAIN
LOG MILE 7.179

REPLACE SIGN
MAINTAIN OVERHEAD
SIGN STRUCTURE
LOG MILE 6.908
OH-430-60-08
OH-430-LM6.908NB

REPLACE SIGN
MAINTAIN OVERHEAD
SIGN STRUCTURE
LOG MILE 7.320
OH-430-60-09
OH-430-LM7.320NB

Rodney Parham Rd

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	154	372

(2) SIGN PLACEMENT SHEET

MAINTAIN
LOG MILE 8.206

REMOVE
LOG MILE 8.345

LOG MILE 8.606
INSTALL OVERHEAD SIGN
AND OVERHEAD SIGN STRUCTURE
OC-430-60-43
OC-430-LM8.606SB

REPLACE
LOG MILE 8.688
SS-430-LM8.688SB

MAINTAIN
BM-430-60-17
LOG MILE 9.053
(TO BE REMOVED
BY JOB 061331)

MAINTAIN
LOG MILE 8.962
(TO BE REPLACED
BY JOB 061331)

LOG MILE 9.006
MAINTAIN (REMOVED
BY JOB 061331)

LOG MILE 1.179
MAINTAIN REMOVED
IN JOB 061331

LOG MILE 9.265
MAINTAIN REMOVED
IN JOB 061331

INSTALL
LOG MILE 8.429
SS-430-LM8.429SB

REMOVE
LOG MILE 8.229

INSTALL
LOG MILE 8.351
SS-430-LM8.351SB

REPLACE
LOG MILE 8.678
SS-430-LM8.678NB-A
SS-430-LM8.678NB-B

REPLACE
LOG MILE 8.760
SS-430-LM8.760NB

REPLACE
LOG MILE 8.830
EX-430-LM8.830NB

REPLACE
LOG MILE 8.920
SS-430-LM8.920NB

REPLACE
LOG MILE 8.434
SS-430-LM8.434NB

REPLACE
LOG MILE 8.514
SS-430-LM8.514NB-A
SS-430-LM8.514NB-B

REMOVE
PINNACLE MOUNT
STATE PARK SIGN
LIOG MILE 7.680

INSTALL SPEED LIMIT
REMOVE NORTH 430
LOG MILE 8.149
SS-430-LM8.149NB

REPLACE
LOG MILE 8.223
ML-430-LM8.223NB

OC-430-60-29

MAINTAIN
(INCLUDED IN
JOB 061331)
LOG MILE 8.617

OC-430-60-31

MAINTAIN
(INCLUDED IN
JOB 061331)
LOG MILE 8.719

(2) W8-5 REMOVE
(SLIPPERY WHEN WET)

(4) W1-8 MAINTAIN
LOG MILE 9.255 TO 9.345
(INCLUDED IN JOB 061333)

STATE OF
ARKANSAS
REGISTERED
PROFESSIONAL
ENGINEER
No. 7527
JOSEPH A. SARTINI

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	155	372
				(2) SIGN PLACEMENT SHEET				

MAINTAIN
OH-430-60-16
LOG MILE 9.296
(TO BE REMOVED
BY JOB 061331)

OC-430-60-15
LOG MILE 9.515
OC-430-LM9.515SB
SS-430-LM9.515SB
REPLACE SIGN
MAINTAIN SIGN STRUCTURE

OC-430-60-14
OC-430-LM9.844SB
LOG MILE 9.844
REPLACE SIGN
MAINTAIN SIGN STRUCTURE

REPLACE
LOG MILE 9.687
ML-430-LM9.687SB

REPLACE
EX-430-LM9.404SB

MAINTAIN
LOG MILE 9.487
(INCLUDED IN JOB 061333)

REPLACE
LOG MILE 8.434
SS-430-LM8.434NB

MAINTAIN
(INCLUDED IN JOB CA0609)

(2) W1-13 MAINTAIN
LOG MILE 9.375
(INCLUDED IN JOB 061333)

(4) W1-8 MAINTAIN
LOG MILE 9.255 TO 9.345
(INCLUDED IN JOB 061333)

(8) W1-8 MAINTAIN
LOG MILE 9.439 TO 9.632
(INCLUDED IN JOB 061333)

MAINTAIN
(INCLUDED IN JOB CA0609)
OH-430-60-TBD

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTIN

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	156	372
				(2)	SIGN PLACEMENT SHEET			

MAINTAIN
LOG MILE 10.985
VMS BACK TO BACK
WITH CAMERA

VARIABLE MESSAGE SIGN

REPLACE
LOG MILE 10.893
ML-430-LM10.893SB

Little Rock NEXT 5 EXITS

REPLACE
LOG MILE 10.820
ML-430-LM10.820SB

Arkansas River

REPLACE
LOG MILE 10.934
SS-430-LM10.934SB

MAINTAIN
LOG MILE 11.078

Purple Heart Trail

REPLACE
LOG MILE 11.167
SS-430-LM11.167SB

SPEED LIMIT 65

REPLACE
LOG MILE 11.289
SS-430-LM11.289SB

430

REPLACE
LOG MILE 11.528
SS-430-LM11.528SB

MAINTAIN
(INCLUDED IN JOB CA0609)

EXIT 12

MAINTAIN
(INCLUDED IN JOB CA0609)

MAINTAIN
(INCLUDED IN JOB CA0609)

Maumelle Blvd
Crystal Hill Rd
100
EXIT 12
½ MILE

MAINTAIN
(REMOVED IN JOB CA0609)

SHOULDER
TRAFFIC LANE
TRAFFIC LANE
TRAFFIC LANE
SHOULDER

OC-430-60-TBD
MAINTAIN
(INCLUDED IN JOB CA0609)

Maumelle Blvd
Crystal Hill Rd
100
EXIT 12

12'-SHOULDER
12'-TRAFFIC LANE
12'-TRAFFIC LANE
12'-TRAFFIC LANE
12'-EXIT ONLY LANE
12'-SHOULDER

LEFT EXIT 147B
40 WEST
Fort Smith
Oklahoma City
C

EXIT 147A
40 EAST
Memphis
B

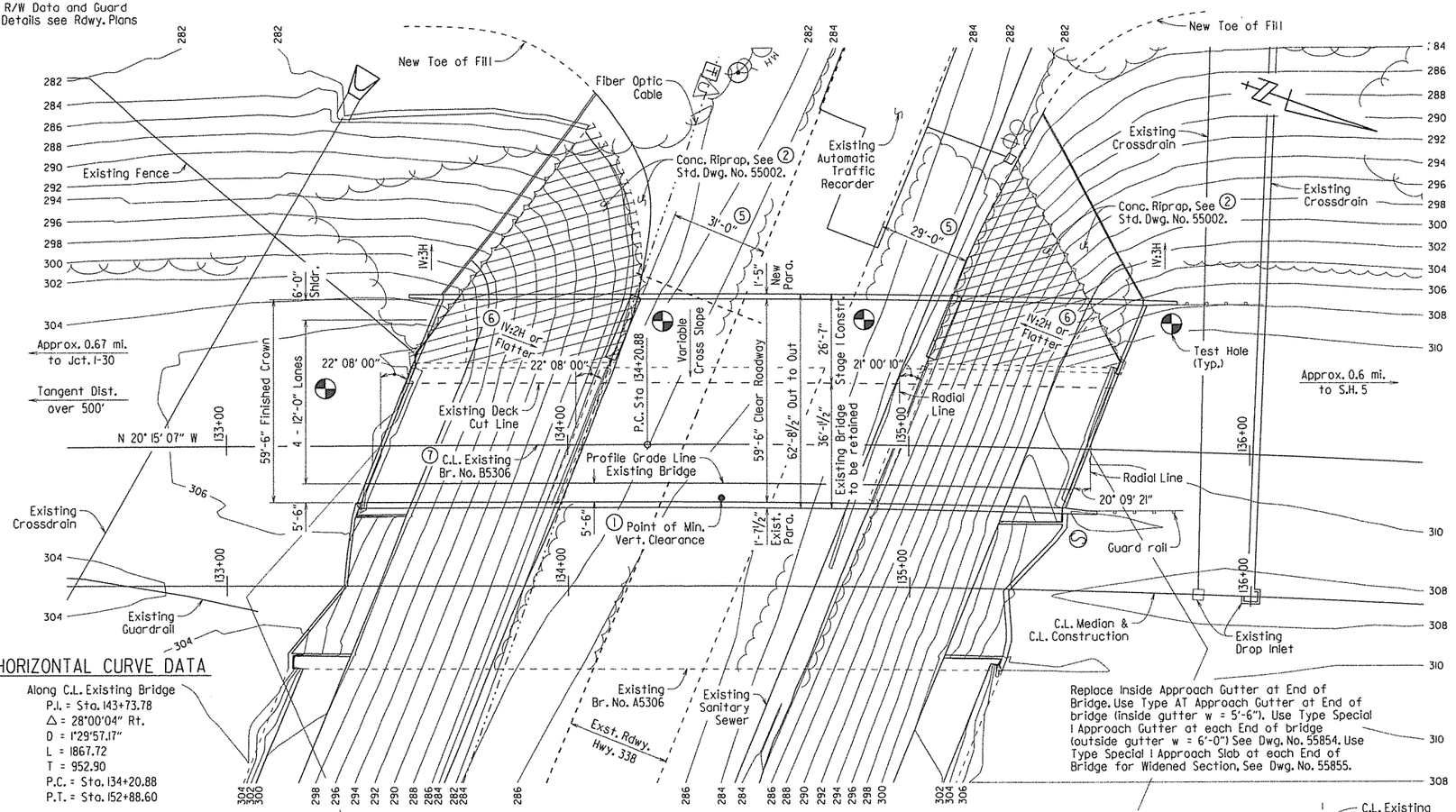
Maumelle Blvd
Crystal Hill Rd
EXIT ONLY
100
EXIT 12
A

EXIT 45

OC-430-60-TBD
MAINTAIN
(INCLUDED IN JOB CA0609)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7527
JOSEPH A. SARTIN II

For R/W Data and Guard Rail Details see Rdwy. Plans



(4) HORIZONTAL CURVE DATA

Along C.L. Existing Bridge
P.I. = Sta. 143+73.78
Δ = 28°00'04" Rt.
D = 1°29'57.17"
L = 1867.72
T = 952.90
P.C. = Sta. 134+20.88
P.T. = Sta. 152+88.60

PLAN

(1) Min Vert. Clr. shown is for Bridge No. B5306, Min Vert. Clr. for Brige No. A5306 = 15'-0".

(2) Remove Existing Concrete Riprap and Curb as shown & Replace with new Concrete Riprap. Removal of Existing Concrete Riprap shall be considered subsidiary to the pay item "Concrete Riprap".

(3) Dimensions shown are C.L. Bridge at C.L. Bent to low seat of proposed bent cap.

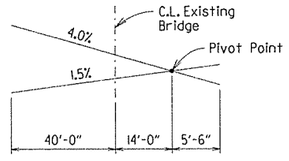
(4) Based on Existing Bridge Plans.

(5) Edge of Lane to Face of Column.

(6) Match Existing Toe of Fill.

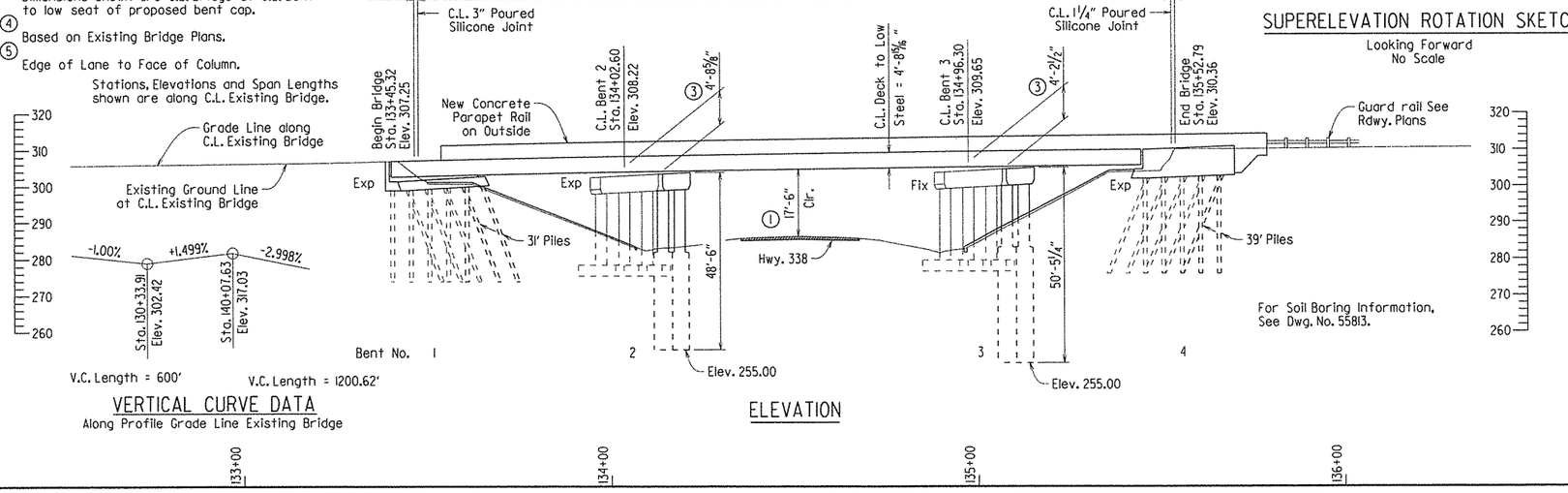
(7) C.L. Existing Bridge is on tangent to Sta. 134+20.88 and 1° 29' 57.17" curve right for remainder of bridge. Longitudinal deck and rail lines of new construction are concentric with C.L. Existing Bridge.

The Cross Slope Transtion occurs over 400' beginning at Sta. 131+54.21 with a slope of +1.5% and ending with a slope of -4.0% at Sta. 135+54.21. The pivot point is located at the Profile Grade Line of the Existing Bridge. Stations are along C.L. of Existing Bridge.



SUPERELEVATION ROTATION SKETCH

Looking Forward
No Scale



VERTICAL CURVE DATA

Along Profile Grade Line Existing Bridge

ELEVATION

For Soil Boring Information, See Dwg. No. 55813.

PRINT DATE: 3/17/2015

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.		061437	157	372
				(1) B5306	-	LAYOUT	-	55812

GENERAL NOTES

BENCH MARK: Vertical Control Data are shown on Survey Control Data Sheets.

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition), with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges 17th Edition (2002) with interim Specifications.

LIVE LOADING: HS20 DESIGN METHOD: LOAD FACTOR

SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class S (AE) Concrete (Superstructure)	f'c = 4,000 psi
Class S Concrete (Substructure)	f'c = 3,500 psi
Reinforcing Steel (Grade 60, AASHTO M31 or M322, Type A)	fy = 60,000 psi
Structural Steel (AASHTO M270, Grade 36)	Fy = 36,000 psi
Structural Steel (AASHTO M270, Grade 50)	Fy = 50,000 psi

STEEL PILING: Piling in Bents 1 and 4 shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into material designated as Shale on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles to be driven after embankment to bottom of cap is in place. On all piling, the Contractor shall use approved steel H-Pile driving points.

DRILLED SHAFTS: All drilled shafts shall be founded a minimum of 17' into material designated as Shale on the boring legend. No adjustment in plan tip elevation shall be made without prior approval of the Engineer. Methods of construction of the drilled shafts shall be in accordance with SP Job 061437 "Drilled Shaft Foundations".

PAINT: The existing structural steel on Bridge Nos. A&B5306 shall be cleaned and painted in accordance with Section 820 "Cleaning and Painting Existing Structural Steel (Type III)". All new structural steel except galvanized members, surfaces in contact with concrete and as otherwise noted shall be painted as specified in Subsection 807.75. The color of the paint shall be Brown and shall match Federal Standard 595B, Color Chip 20108. For additional information see SP Job 061437 "Containment System", "Contractor Certification" and "Paint Contractor Label".

BRIDGE DECK: The concrete bridge deck shall be given a belted finish or burlap drag finish as specified in SP Job No. 061437 "Bridge Deck Surface Finish".

SHORING: Shoring may be necessary for execution of the proposed work, see SP Job 061437, "Shoring".

DETAIL DRAWINGS:	DRAWING NUMBER
End Bents	55815, 55816 & 55820, 55821
Intermediate Bents	55817 - 55819
Span Details	55822 - 55830
Bearings	55825
Steel Piling	55020
Type AT Approach Gutter	55036
Type Special I Approach Gutter	55854
Type Special I Approach Slab	55855
Stage Construction	55814

EXISTING BRIDGE: The Existing Bridge No. B5306 is 42'-3" wide and 207'-5 11/16" long and consists of a 3 span continuous composite plate girder unit supported by three column concrete intermediate bents with spread footings and steel H-Pile end bents. Plans of the existing structure may be obtained upon request to the Programs and Contracts Division.

THE PROPOSED WORK CONSISTS OF: Widening the existing bridge, modifying the existing substructure as needed, cleaning and painting the existing structural steel, cleaning and installing new joint material at existing joints and removing and replacing portions of the concrete deck, concrete riprap, approach slabs and approach gutters as shown in the plans. For additional requirements in conducting the work, see Section 821.

VERIFICATION: Except as noted, components of the existing bridge are to be retained and joined to the proposed work. Information and dimensions shown are based on the existing bridge plans. The Contractor is to adhere strictly to the requirements for verification of the geometry of the existing bridge and its relationship to the proposed work described in subsection 821.02 and make necessary adjustments to fit the proposed work to the existing structure. Payment for this work shall be considered subsidiary to the pay item "Modification of Exisiting Bridge Structure (Br. No. B5306)".

REMOVAL AND SALVAGE: All material removed from the existing bridge under item 821 shall be disposed of according to Section 205. All material removed from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

SHEET 1 OF 2

LAYOUT OF BRIDGE OVER S.H. 338
I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)
PULASKI COUNTY

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

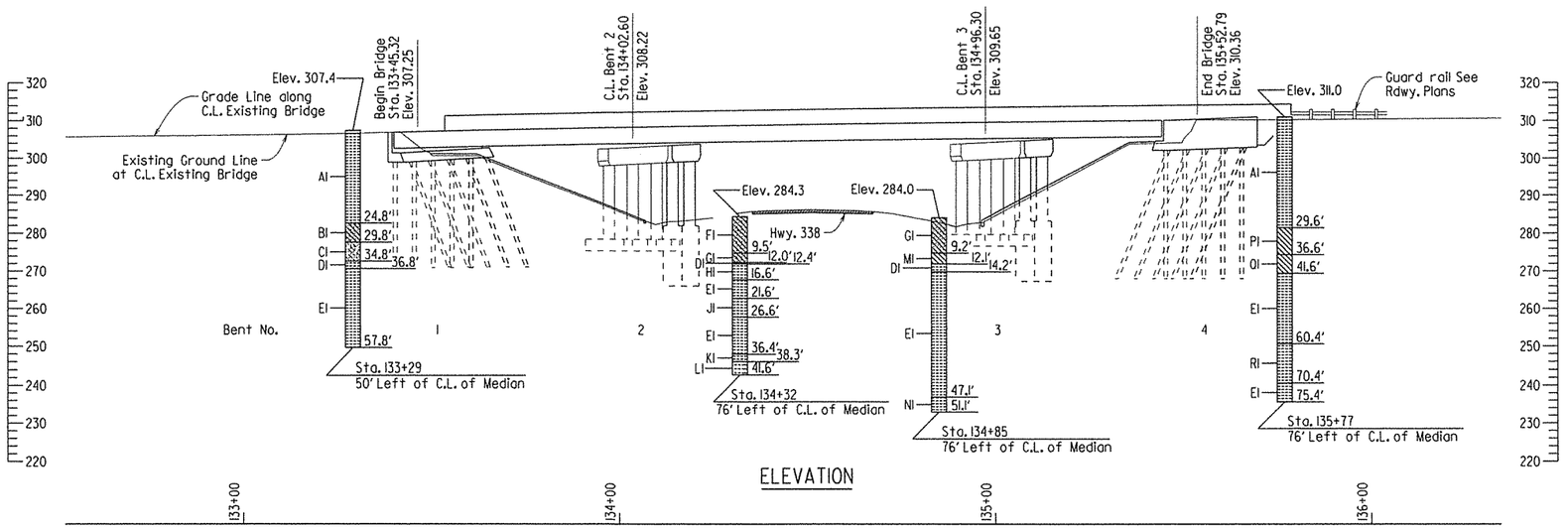
STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-17-15
CHARLES R. ELLIS

BRIDGE ENGINEER

DRAWN BY: CMW DATE: 11/18/13
CHECKED BY: DHP DATE: 3-17-15
DESIGNED BY: C&L DATE: Nov. 2013
FILENAME: b061437xl_ll.dgn
SCALE: 1"=20'-0"

BRIDGE NO. B5306 DRAWING NO. 55812

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.		061437	156	372
				(1)	B5306	- LAYOUT -	55813	



ELEVATION

BORING LEGEND

A1-Soft, Gray Weathered Shale (Fill Material)
B1-Wet, Soft, Gray Clay with Sand and some Organic Matter
C1-Moist, Very Stiff, Gray and Brown Clay with Sand
D1-SHALE - Dark Gray, Weathered, Medium Hard
E1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
F1-Wet, Very Soft, Brown Clay with some Organic Matter and Trace of Gravel
G1-Moist, Medium Stiff, Brown and Gray Clay with Sand and Iron Nodules
H1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, and Slickensides
J1-SHALE WITH WEATHERED SHALE LAYERS AND PYRITE PARTINGS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
K1-SHALE WITH OCCASIONAL GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Hard, with Moderate Dip and Slickensides
L1-SHALE WITH FREQUENT GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Hard, with Moderate Dip and Slickensides
M1-Moist, Stiff, Brown and Gray Clay with Iron Nodules
N1-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND PYRITE PARTINGS - Dark Gray, Laminated, Hard, with Moderate Dip, a Vertically Fractured Layer and Slickensides
P1-Wet, Medium Stiff, Reddish Brown and Gray Clay with some Sand
Q1-Moist, Stiff, Light Brown and Gray Clay with some Sand
R1-WEATHERED SHALE - Dark Gray, Laminated, Soft, with Moderate Dip, some Vertically Fractured Layers and Slickensides
S1-SHALE - Brown and Gray, Weathered, Medium Hard
T1-SHALE WITH WEATHERED SHALE LAYERS - Gray and Brown, Laminated, Medium Hard to Hard, with Moderate Dip, and Slickensides
U1-SHALE WITH WEATHERED SHALE AND OCCASIONAL CHERT LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip
V1-SHALE WITH WEATHERED SHALE AND FREQUENT QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
W1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Medium Hard to Hard
X1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
Y1-SHALE WITH WEATHERED SHALE AND OCCASIONAL CHERT LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip,
Z1-SHALE WITH WEATHERED SHALE LAYERS AND TRACE OF PYRITE- Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
A2-Moist, Stiff, Brown and Gray Clay with some Organic Matter (Grassroots)
B2-Moist, Medium Stiff, Brown and Gray Clay with some Organic Matter (Grassroots)
C2-SHALE - Dark Gray, Medium Hard to Hard
D2-SHALE WITH QUARTZ PARTINGS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip and Slickensides
E2-SHALE WITH FREQUENT QUARTZ SEAMS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip and Slickensides
F2-SHALE WITH FREQUENT QUARTZ SEAMS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
G2-SHALE WITH LIGHT GRAY CLAY LAYERS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
H2-SHALE WITH QUARTZ SEAMS AND PYRITE PARTINGS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
J2-Moist, Stiff, Brown Clay with Trace of Organic Matter
K2-SHALE WITH WEATHERED SHALE LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
L2-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND TRACE OF CHERT - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
M2-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND TRACE OF PYRITE - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides

"N" VALUES

Sta. 133+29 - 50' Left of Center Line of Median
5.3- 6.3, N=24
10.3- 11.3, N=17
15.3- 16.3, N=42
20.3- 21.3, N=21
25.3- 26.3, N=4
30.3- 31.3, N=17
34.8- 35.1, N=60(4")

Sta. 134+32 - 76' Left of Center Line of Median
5.0- 6.0, N=1
10.0- 11.0, N=8
12.4- 12.4, N=60(.01")

Sta. 134+85 - 76' Left of Center Line of Median
4.7- 5.7, N=7
9.7- 10.7, N=13
14.2- 14.2, N=10(.01")

Sta. 135+77 - 76' Left of Center Line of Median
5.1- 6.1, N=15
10.1- 11.1, N=19
15.1- 16.1, N=21
20.1- 21.1, N=25
25.1- 26.1, N=11
30.1- 31.1, N=6
37.1- 38.1, N=12
41.6- 41.6, N=10(.01")

STATE OF ARKANSAS
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No. 9235
8-8-14
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BRIDGE ENGINEER

SHEET 2 OF 2
LAYOUT OF BRIDGE OVER S.H. 338
I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)
PULASKI COUNTY

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

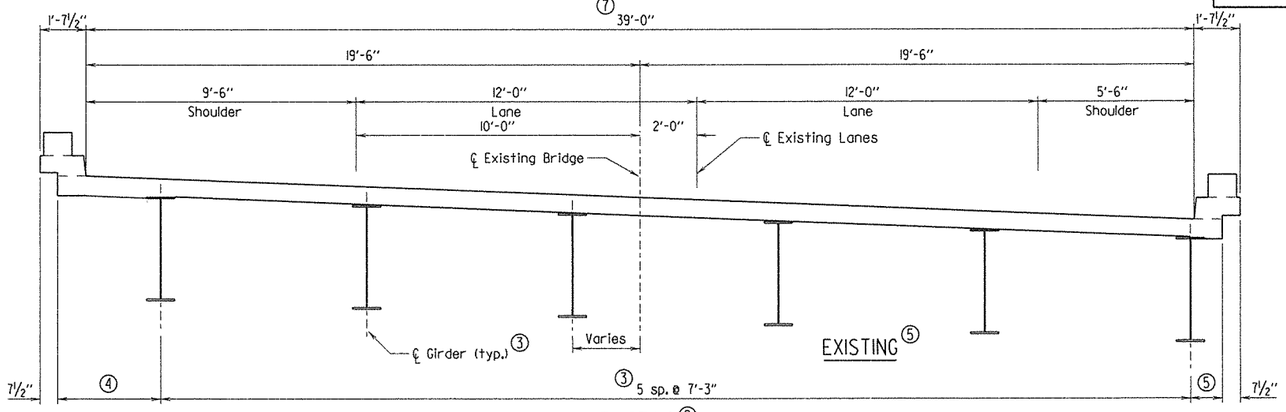
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CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: CSL DATE: Nov 2013
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BRIDGE NO. B5306 DRAWING NO. 55813

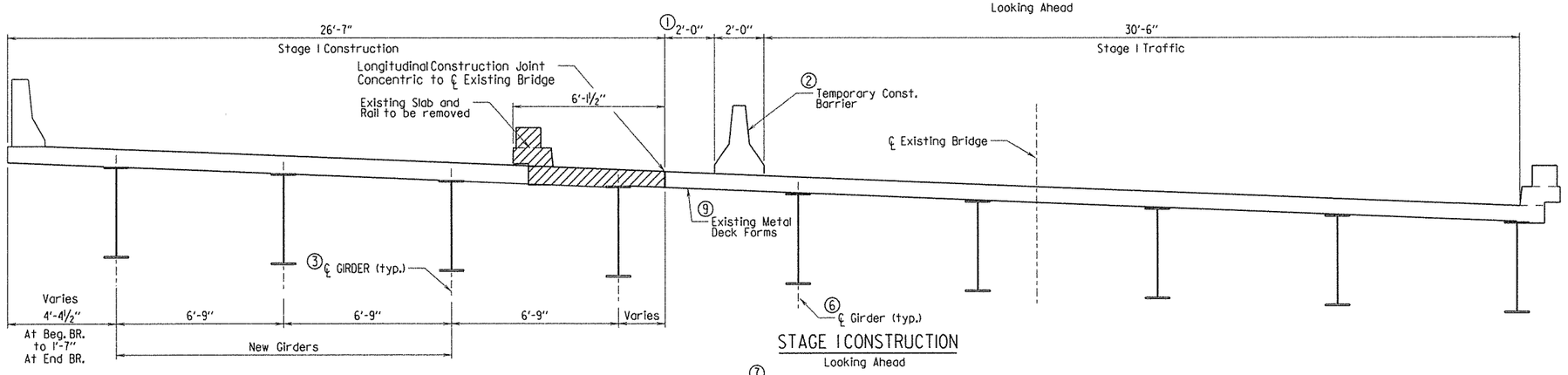
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	159	372

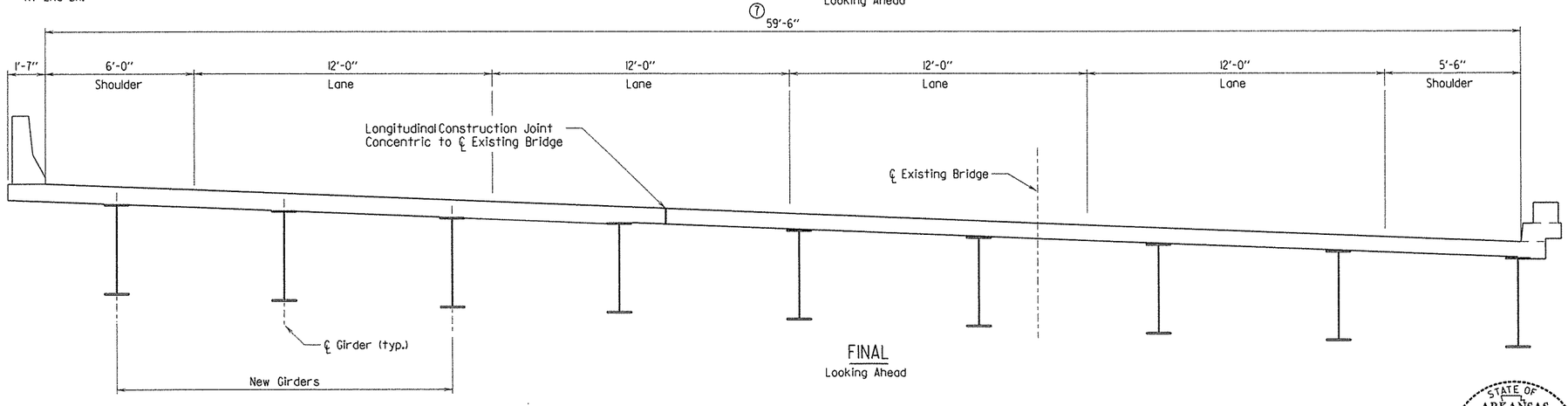
(1) B5306 - STAGE CONSTRUCTION - 55814



EXISTING (8)
Looking Ahead



STAGE I CONSTRUCTION
Looking Ahead



FINAL
Looking Ahead

(1) Construction Vehicles Shall Not Travel on this Portion of the Existing Deck.

(2) Connect Temporary Construction Barrier to Existing Deck (see Dwg. No. TC-4)

(3) Girders are Parallel to Back Tangent

(4) 3'-7½" at Tangent Section. Curve Section Varies 3'-7½" to 1'-1½" at End of Bridge

(5) 1'-1½" at Tangent Section. Curve Section Varies 1'-1½" to 3'-1⅜" at End of Bridge

(6) All Existing Girders to be retained.

(7) Measured along Radial line.

(8) Based on Existing Plans.

(9) The Contractor shall retain Existing Metal Deck Forms.

NOTES:
Details which relate to maintenance of traffic are shown on bridge plans for information only. See Roadway Plans for Maintenance of Traffic.

For details of Temporary Barrier, See Dwg. No. TC-4 and TC-5.

All sections are looking ahead.

See Layout for information not shown.

STATE OF ARKANSAS
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DETAILS OF STAGE CONSTRUCTION
I-430 OVER HWY. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

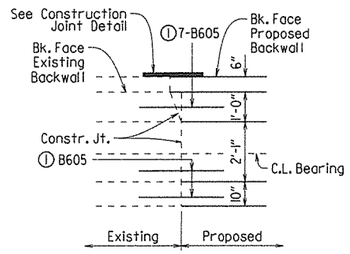
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DESIGNED BY: DATE:

BRIDGE NO. B5306 DRAWING NO. 55814

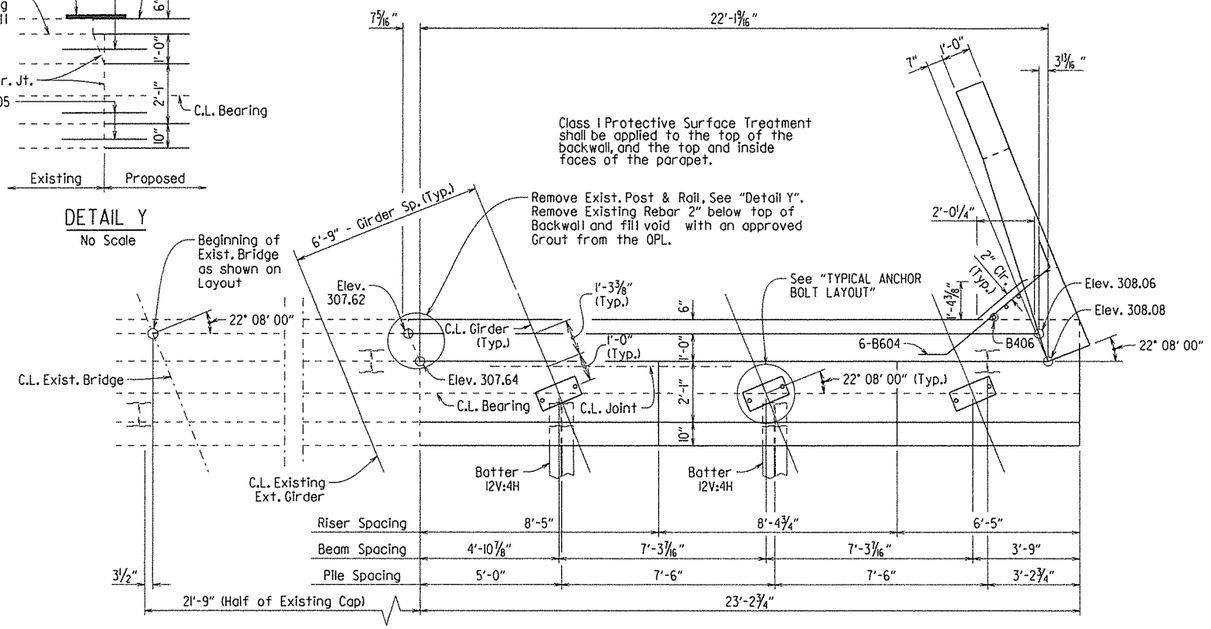
PRINT DATE: 7/31/2014

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.		061437	160	372

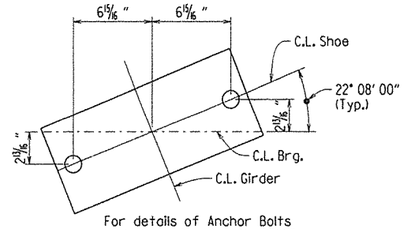
(1) B5306 DETAILS OF END BENTS 55815



DETAIL Y
No Scale

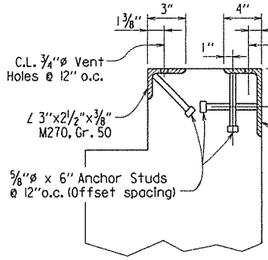


PLAN



For details of Anchor Bolts and shoes, See Dwg. No. 55825.

TYPICAL ANCHOR BOLT LAYOUT
No Scale



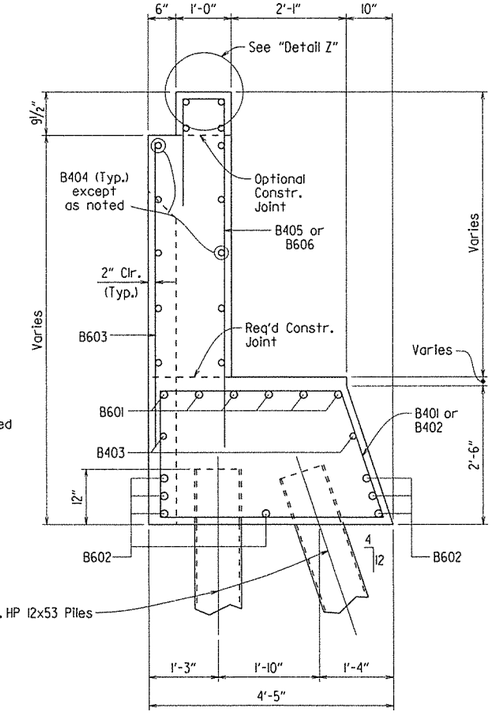
For additional joint details, see Dwg. No. 55830.

Transverse spacing between anchor studs and vent holes shall be 6".

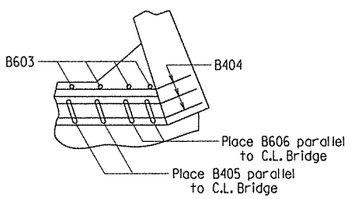
Concrete shall be hand packed under the joint armor.

Set Rdwy. angles normal to grade.

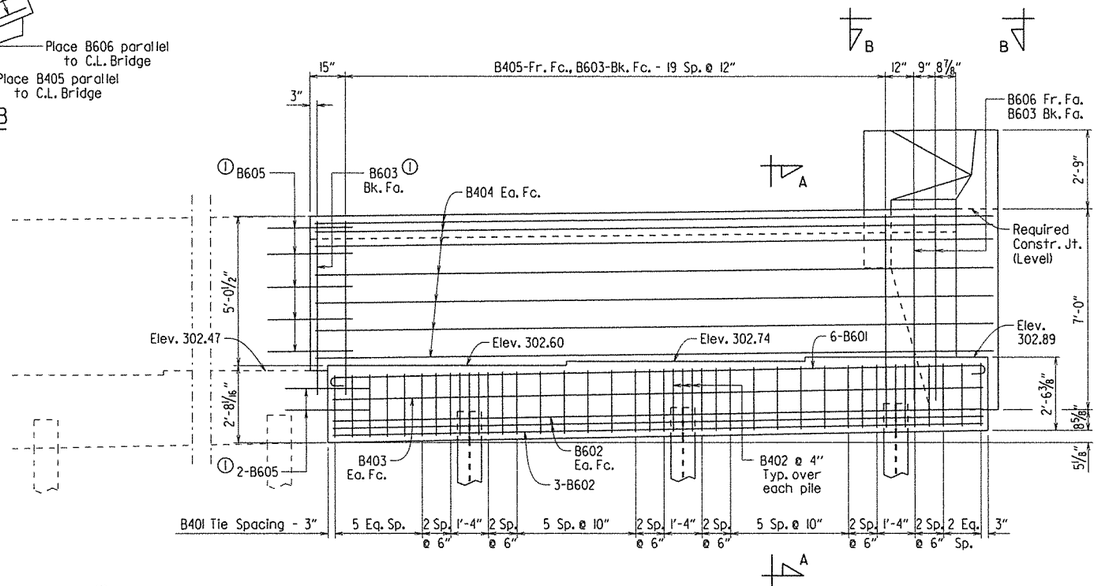
DETAIL Z
No Scale



SECTION A-A
No Scale

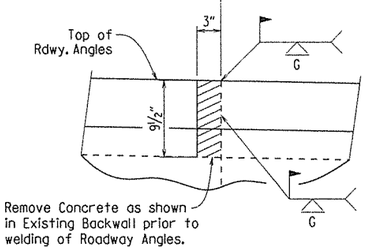


VIEW B-B
No Scale



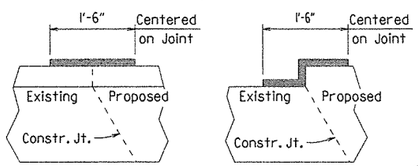
(1) Dowel into Existing Bent using an approved non-shrink grout from OPL. Minimum embedment = 18".

ELEVATION
Looking Back



DETAIL OF WELD FOR EXPANSION DEVICE
Looking Back - Bent 1
No Scale

Membrane waterproofing Type "C" or approved equal. See Section 815 of the Standard Specifications.



PLAN

Payment for membrane to be considered subsidiary to Class "S" Concrete - Bridge.

CONSTRUCTION JOINT DETAIL
No Scale

GENERAL NOTES

Work required to remove and dispose portions of the existing bridge and any required doweling will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5306)".

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

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

No portion of the backwall shall be poured until the beams are in place. Refer to "Expansion Device Installation at End Bents" note, Dwg. No. 55830 for additional info.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Plate Girder Spans (M270, Gr. 50)" and shall be cleaned and painted in accordance with section 638.

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

For additional information, see Layout.

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8-8-14
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BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT 1

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

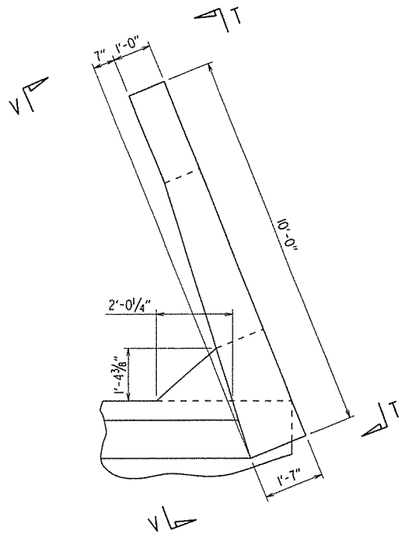
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DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55815

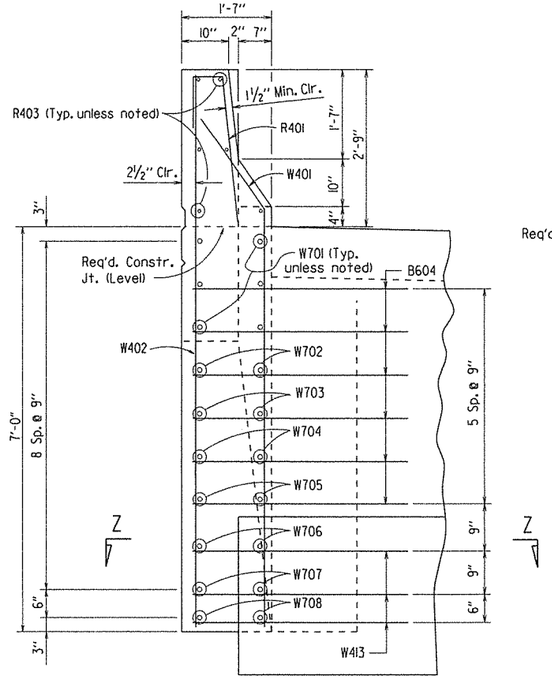
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				6	ARK.			
				JOB NO.		061437	161	372

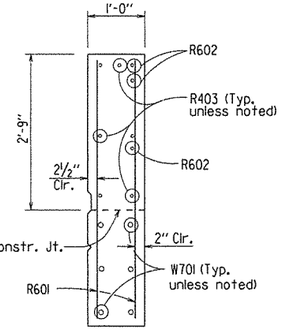
(1) B5306 - INT. BENT DETAILS - 55816



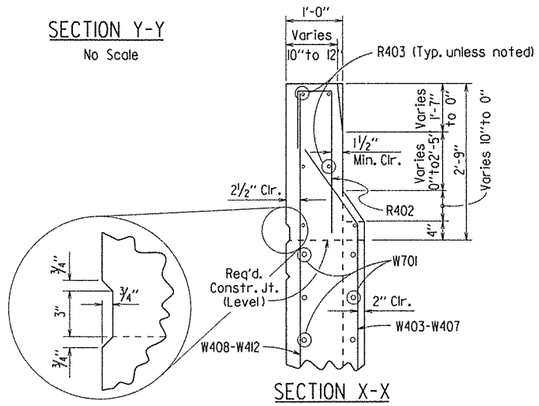
PLAN OF RAIL
No Scale



VIEW W-W
No Scale



SECTION Y-Y
No Scale

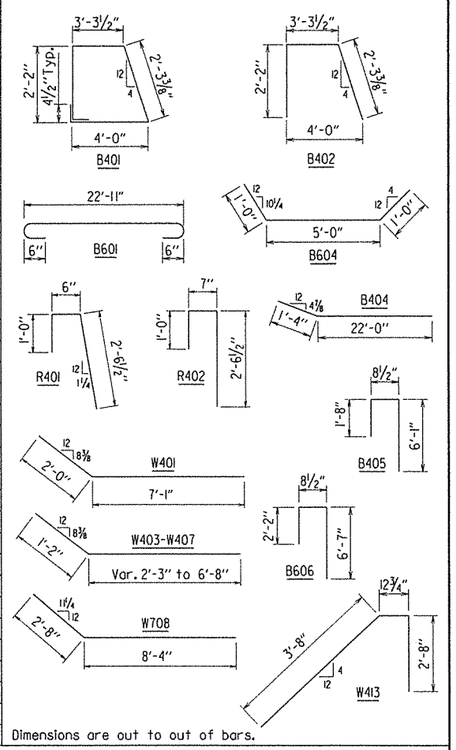


SECTION X-X
No Scale

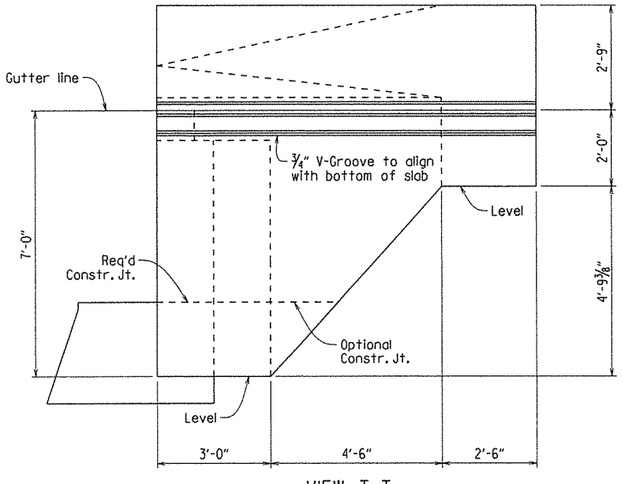
BAR LIST - BENT 1

MARK	NO. REQ'D.	LENGTH	P.D.
B401	33	12'-1"	2"
B402	9	7'-7"	2"
B403	2	22'-11"	Str.
B404	14	23'-4"	3"
B405	20	8'-4"	2"
B406	3	5'-10"	Str.
R401	4	3'-11"	2"
R402	4	4'-0"	2"
R403	6	9'-8"	Str.
W401	3	9'-1"	2"
W402	3	9'-5"	Str.
W403-W407	1 each	Var. 3'-5" to 7'-10"	2"
W408-W412	1 each	Var. 4'-7" to 8'-11"	Str.
W413	3	7'-4"	2"
B601	6	24'-3"	4½"
B602	7	22'-11"	Str.
B603	23	5'-10"	Str.
B604	6	7'-0"	4½"
B605	9	3'-0"	Str.
B606	2	9'-2"	4½"
R601	10	4'-5"	Str.
R602	3	5'-0"	Str.
W701	6	9'-8"	Str.
W702	2	6'-8"	Str.
W703	2	6'-0"	Str.
W704	2	5'-3"	Str.
W705	2	4'-7"	Str.
W706	2	3'-11"	Str.
W707	2	3'-3"	Str.
W708	2	11'-0"	5¼"

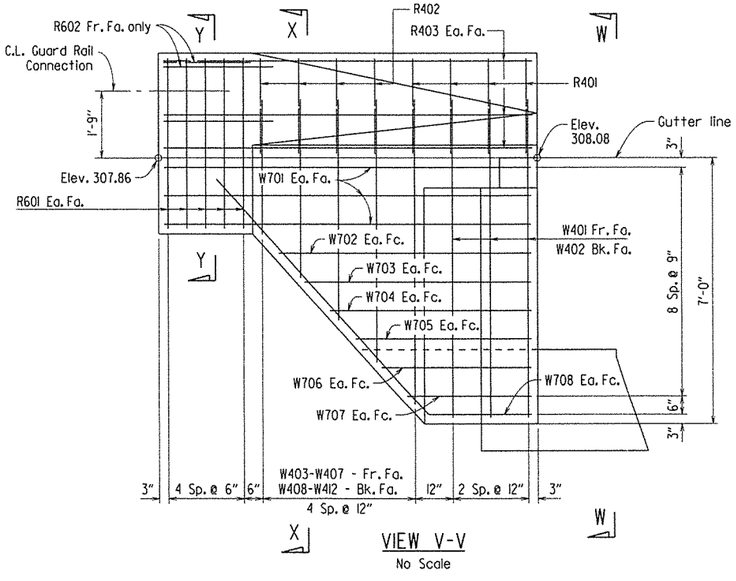
BENDING DIAGRAMS



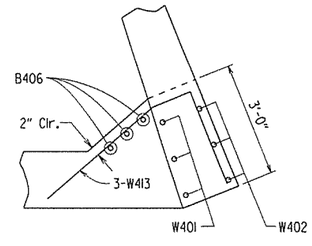
Dimensions are out to out of bars.



VIEW T-T
No Scale



VIEW V-V
No Scale



SECTION Z-Z
No Scale

STATE OF ARKANSAS
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SHEET 2 OF 2
DETAILS OF BENT 1

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

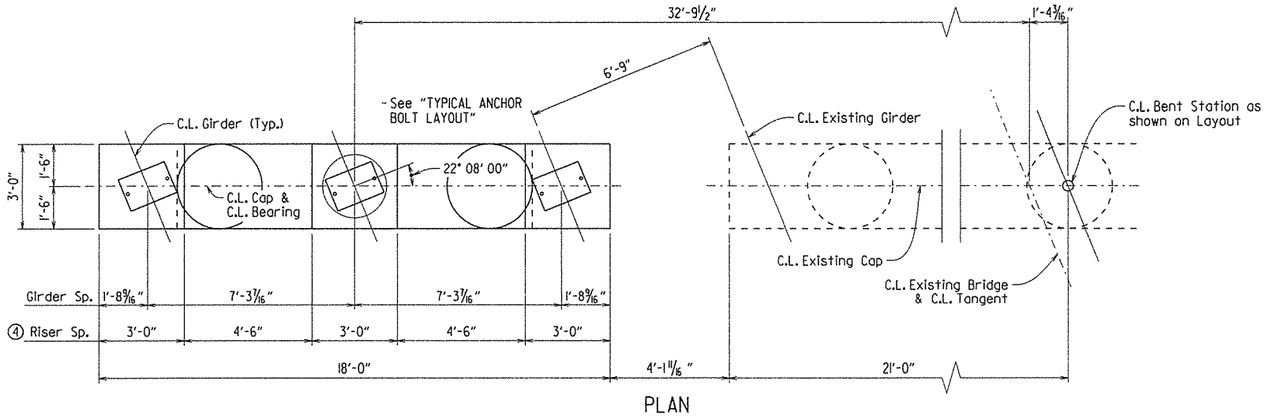
LITTLE ROCK, ARK.

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DESIGNED BY: DHP DATE: 11-13

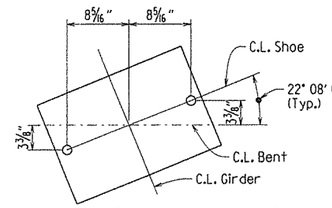
BRIDGE NO. B5306 DRAWING NO. 55816

PRINT DATE: 7/31/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	162	372
				(1) B5306 DETAILS OF INT. BENTS			55817	



PLAN
Looking Ahead



For details of Anchor Bolts and Shoes, see Dwg. No. 55825.

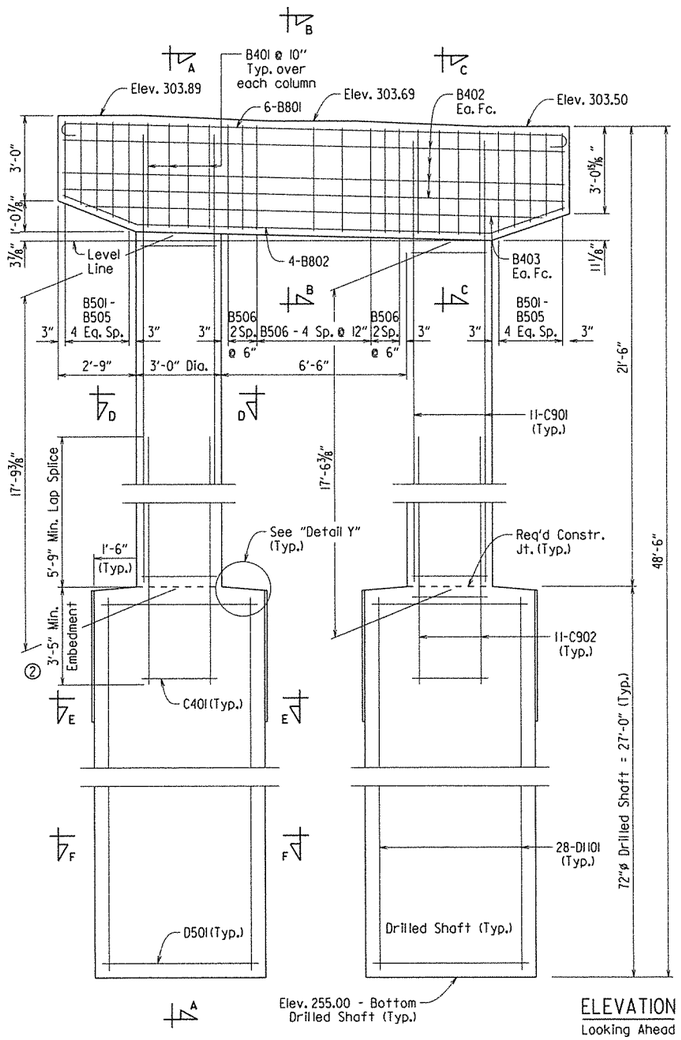
TYPICAL ANCHOR BOLT LAYOUT
No Scale

① Length of Permanent Casing shown is for estimating quantities only. Actual lengths are to be determined in the field. See Special Provision Job No. 061437 "Drilled Shaft Foundations". Permanent casing shall not extend below top of competent rock without approval from the Engineer.

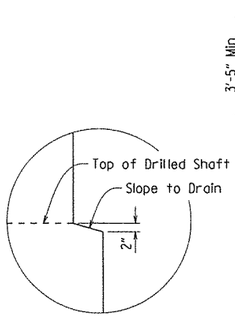
② The column reinforcing cage, consisting of bars C401 & C901, may be placed before or after concrete placement in the shaft is complete. Vibration of concrete in the top 10 feet of the shaft will be needed to ensure the consolidation of the concrete around the reinforcing steel and to insert the column reinforcing cage. The Contractor will be responsible for obtaining satisfactory results.

③ Minimum penetration into competent rock below bottom of casing shall not be less than 17 feet.

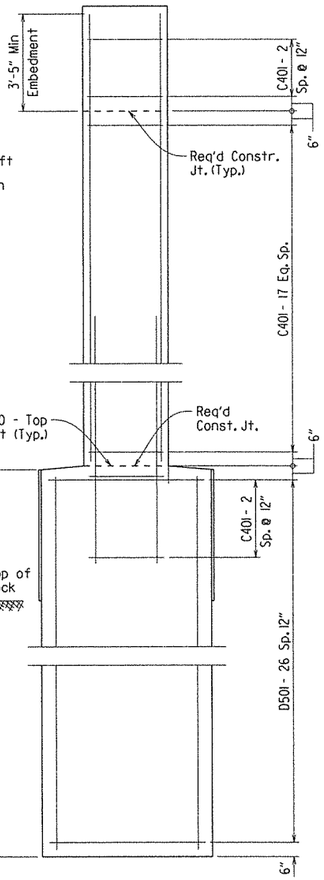
④ Risers shall be cast level at the elevations shown.

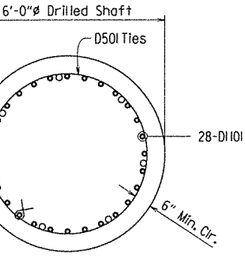


ELEVATION
Looking Ahead

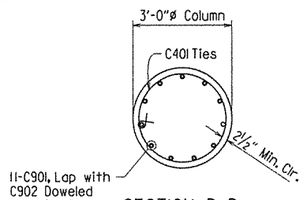


DETAIL Y
No Scale

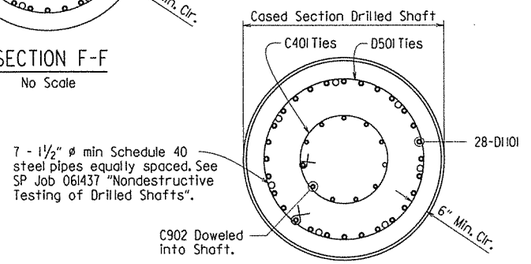




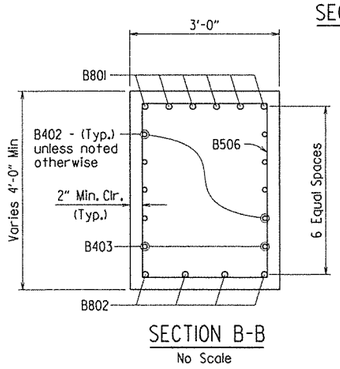
SECTION F-F
No Scale



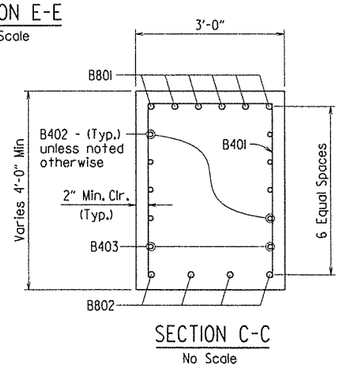
SECTION D-D
No Scale



SECTION E-E
No Scale



SECTION B-B
No Scale



SECTION C-C
No Scale

For General Notes and Bar List, See Dwg. No. 55819.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-3-14
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF BENT 2

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

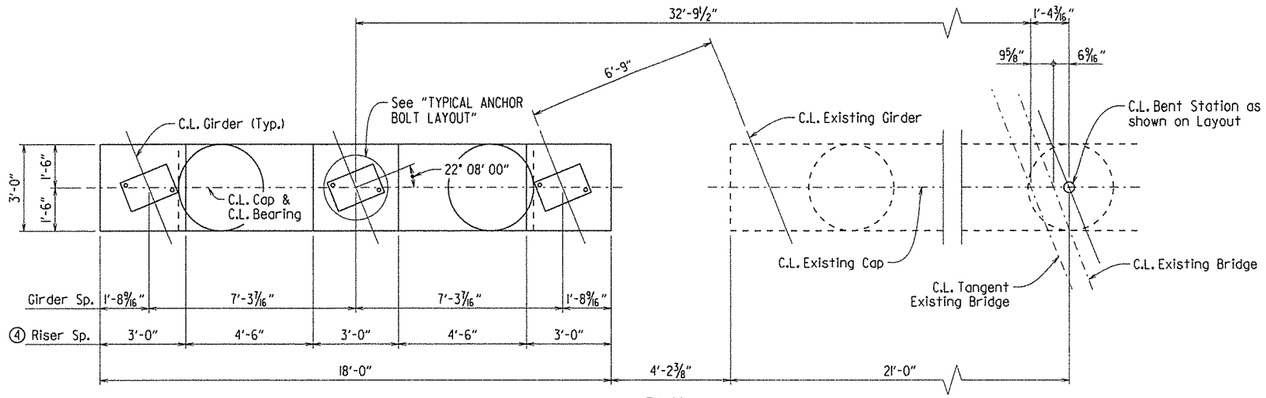
LITTLE ROCK, ARK.

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CHECKED BY: DHP DATE: 7/31/14 SCALE: ⅜" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

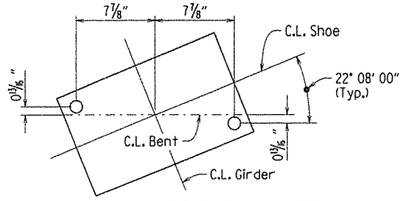
BRIDGE NO. B5306 DRAWING NO. 55817

PRINT DATE: 7/31/2014

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.		061437	163	372
				(1) B5306 DETAILS OF INT. BENTS			55818	



PLAN
Looking Ahead



For details of Anchor Bolts and Shoes, see Dwg. No. 55825.

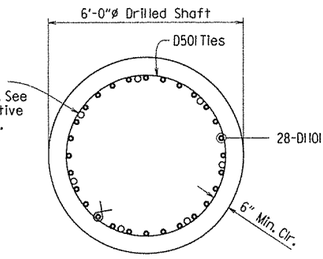
TYPICAL ANCHOR BOLT LAYOUT
No Scale

① Length of Permanent Casing shown is for estimating quantities only. Actual lengths are to be determined in the field. See Special Provision Job No. 061437 "Drilled Shaft Foundations". Permanent casing shall not extend below top of competent rock without approval from the Engineer.

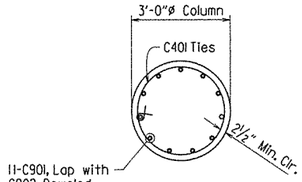
② The column reinforcing cage, consisting of bars C401 & C901, may be placed before or after concrete placement in the shaft is complete. Vibration of concrete in the top 10 feet of the shaft will be needed to ensure the consolidation of the concrete around the reinforcing steel and to insert the column reinforcing cage. The Contractor will be responsible for obtaining satisfactory results.

③ Minimum penetration into competent rock below bottom of casing shall not be less than 17 feet.

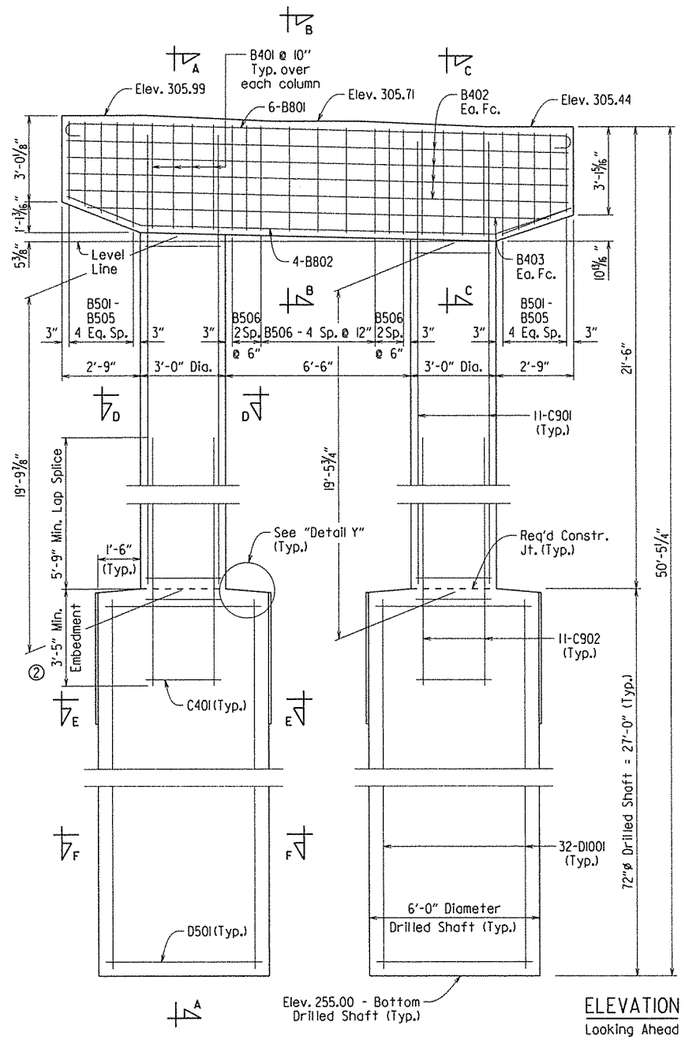
④ Risers shall be cast level at the elevations shown.



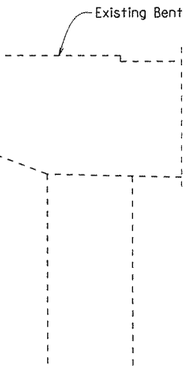
SECTION F-F
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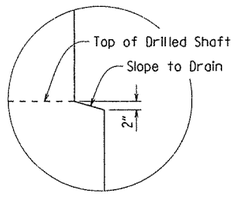


SECTION D-D
No Scale

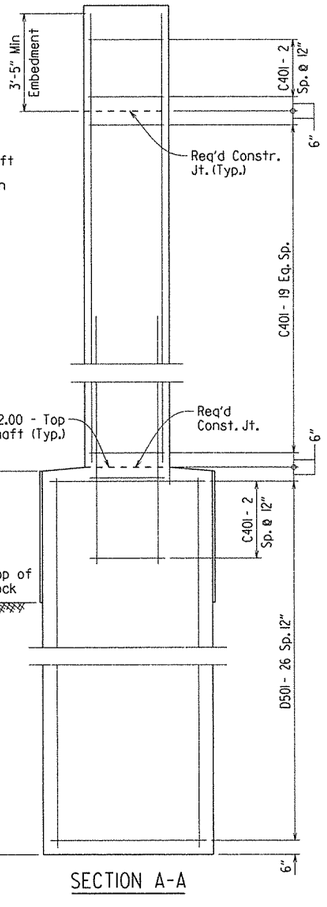


ELEVATION
Looking Ahead

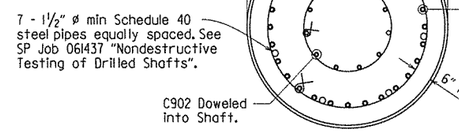




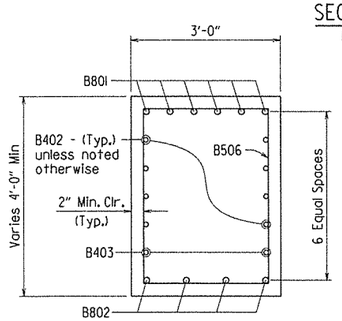
DETAIL Y
No Scale



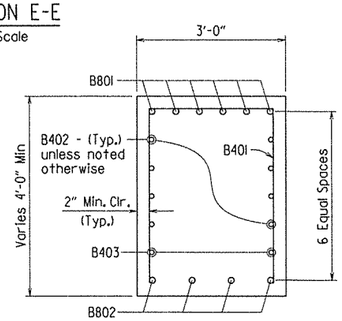
SECTION A-A



SECTION E-E
No Scale



SECTION B-B
No Scale



SECTION C-C
No Scale

For General Notes and Bar List, See Dwg. No. 55819.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF BENT 3

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 1/16/2014 FILENAME: b061437x1_b2.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: ⅜" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55818

PRINT DATE: 7/31/2014

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.		061437	164	372

① B5306 - INT. BENT DETAILS - 55819

GENERAL NOTES

Concrete in the cap and column shall be Class S with a minimum 28 day compressive strength, f'c = 3500 psi., and shall be poured in the dry. Concrete in the drilled shaft shall be Class S as modified by SP Job 061437 "Drilled Shaft Foundations". All exposed corners to be chamfered ¾" unless otherwise noted.

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

Top reinforcing bars shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For additional information see layout.

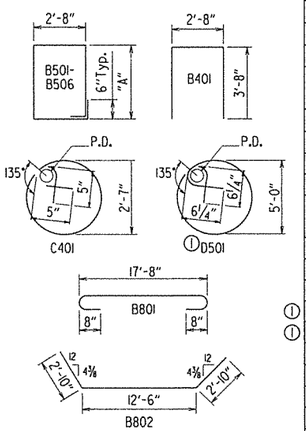
Drilled shafts shall conform to SP Job 061437 "Drilled Shaft Foundations" and shall be paid for at the unit bid price for "Drilled Shaft (72" Dia.)".

BAR LIST - BENT 2

MARK	NO. REQ'D.	LENGTH	"A"	P.D.
B401	8	9'-10"	-	2"
B402	8	17'-8"	-	Str.
B403	2	16'-3"	-	Str.
B501-B505	2 each	Var. 11'-4" to 13'-0"	Var. 2'-9" to 3'-7"	2½"
B506	9	13'-2"	3'-8"	2½"
B801	6	19'-6"	-	6"
B802	4	18'-2"	-	6"
C401	48	9'-2"	-	3"
C901	22	21'-2"	-	Str.
C902	22	9'-4"	-	Str.
① D501	54	17'-1"	-	3¾"
① D1101	56	26'-6"	-	Str.

BENDING DIAGRAMS

Dimensions are out to out of bars.



BAR LIST - BENT 3

MARK	NO. REQ'D.	LENGTH	"A"	P.D.
B401	8	9'-10"	-	2"
B402	8	17'-8"	-	Str.
B403	2	16'-3"	-	Str.
B501-B505	2 each	Var. 11'-4" to 13'-0"	Var. 2'-9" to 3'-7"	2½"
B506	9	13'-2"	3'-8"	2½"
B801	6	19'-6"	-	6"
B802	4	18'-2"	-	6"
C401	52	9'-2"	-	3"
C901	22	23'-3"	-	Str.
C902	22	9'-4"	-	Str.
① D501	54	17'-1"	-	3¾"
① D1101	56	26'-6"	-	Str.

① D501 and D1101 Bars are non-pay items and are subsidiary to SP Job 061437 "Drilled Shaft Foundations".

STATE OF ARKANSAS
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8-8-14
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BRIDGE ENGINEER

COMMON DETAILS OF BENTS 2 AND 3

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

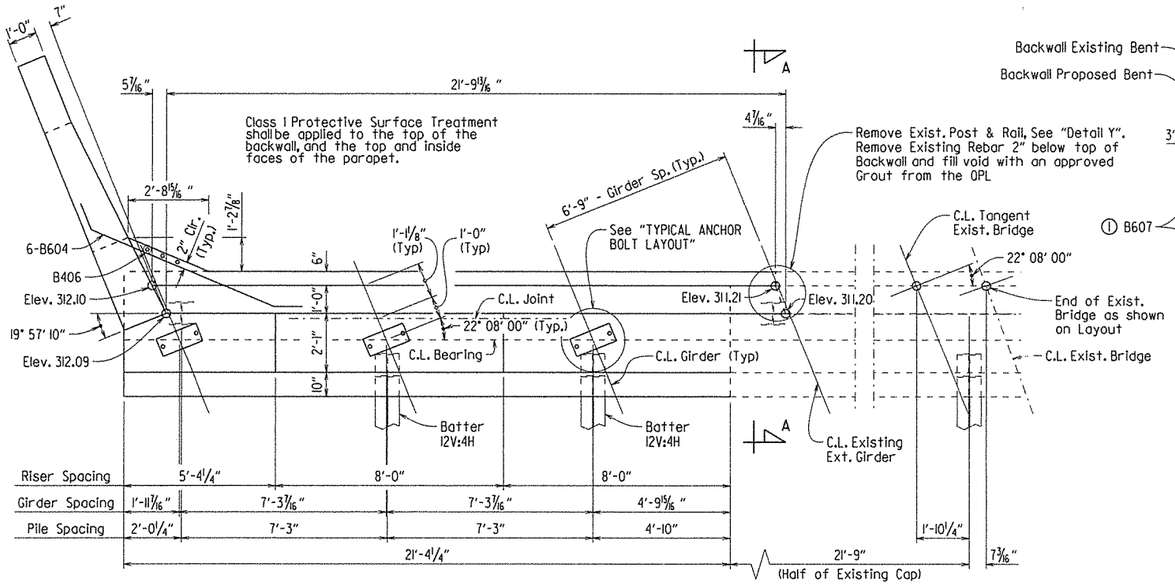
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BRIDGE NO. B5306 DRAWING NO. 55819

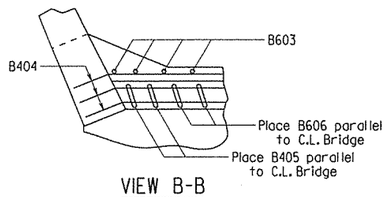
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	165	372

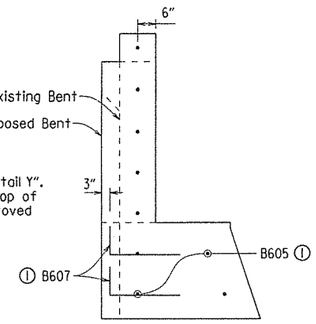
(1) B5306 DETAILS OF END BENTS 55820



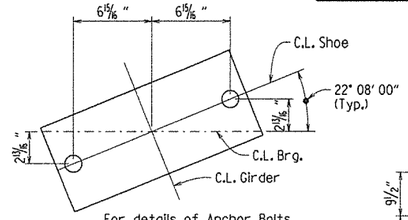
PLAN



VIEW B-B
No Scale

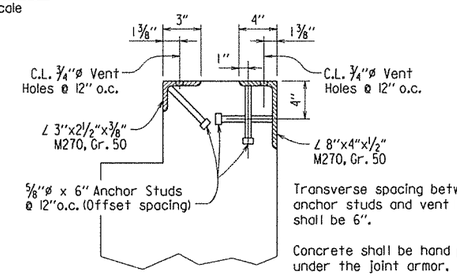


SECTION A-A
No Scale



For details of Anchor Bolts and shoes, See Dwg. No. 55825.

TYPICAL ANCHOR BOLT LAYOUT
No Scale



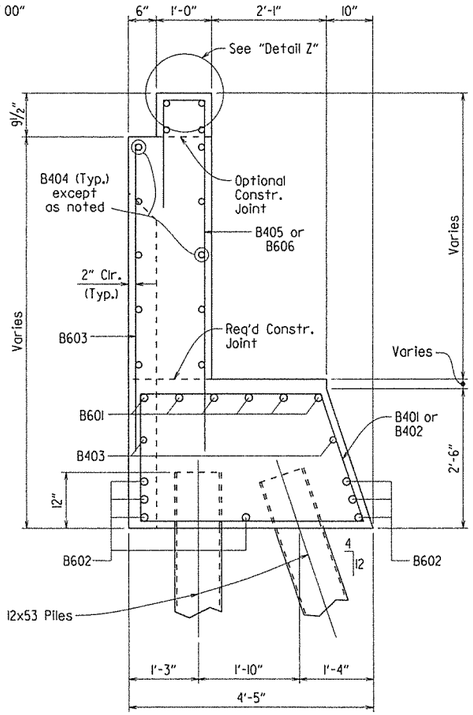
Transverse spacing between anchor studs and vent holes shall be 6".

Concrete shall be hand packed under the joint armor.

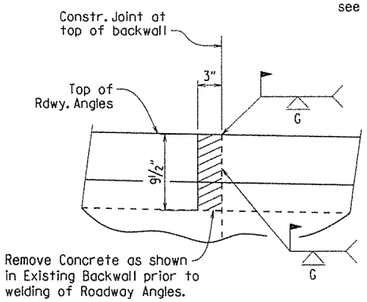
Set Rdwy. angles normal to grade.

For additional joint details, see Dwg. No. 55830.

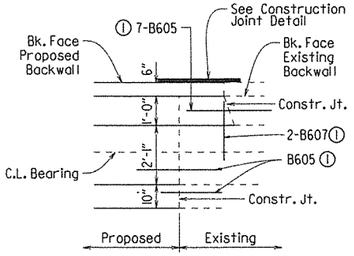
DETAIL Z
No Scale



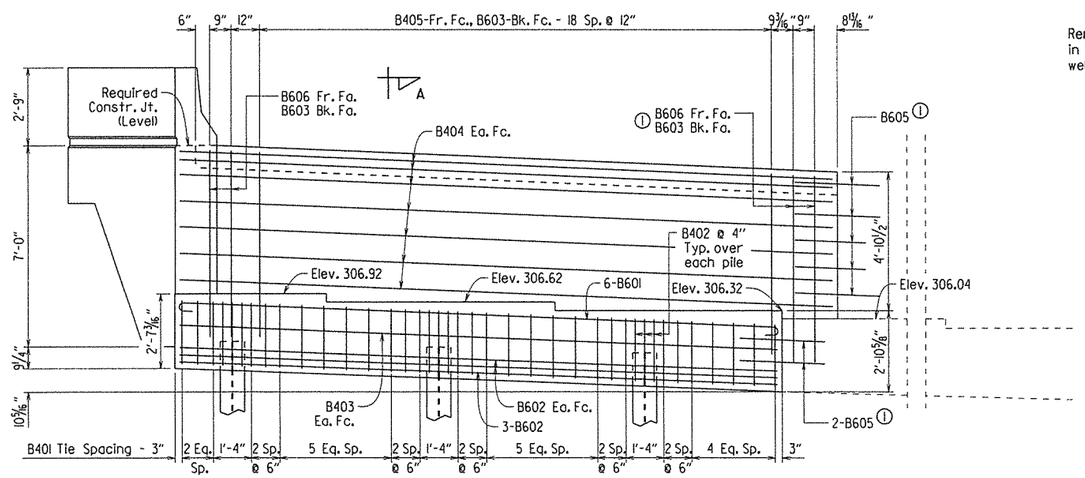
SECTION A-A
No Scale



DETAIL OF WELD FOR EXPANSION DEVICE
Looking Back - Bent 4
No Scale



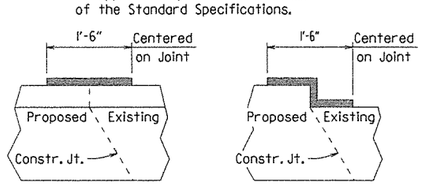
DETAIL Y
No Scale



(1) Dowel into Existing Bent using an approved non-shrink grout from OPL. Minimum embedment = 18".

ELEVATION
Looking Back

Membrane waterproofing Type "C" or approved equal. See Section 815 of the Standard Specifications.



PLAN

Payment for membrane to be considered subsidiary to Class "S" Concrete - Bridge.

CONSTRUCTION JOINT DETAIL
No Scale

GENERAL NOTES

Work required to remove and dispose portions of the existing bridge and any required doweling will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5306)".

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

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

No portion of the backwall shall be poured until the beams are in place. Refer to "Expansion Device Installation at End Bents" note, Dwg. No. 55830 for additional info.

Structural steel in end bents shall be AASHTO M270, Gr. 50 and shall be paid for as "Structural Steel in Plate Girder Spans (M270, Gr. 50)" and shall be cleaned and painted in accordance with section 638.

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

For additional information, see Layout.

STATE OF ARKANSAS
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REGISTERED PROFESSIONAL ENGINEER
No. 9235
5-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT 4

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

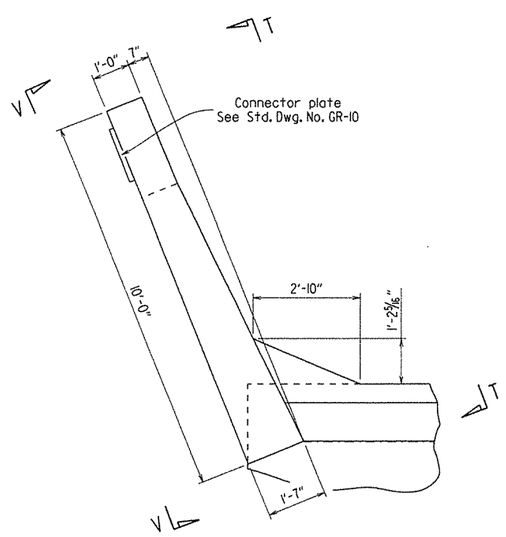
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DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55820

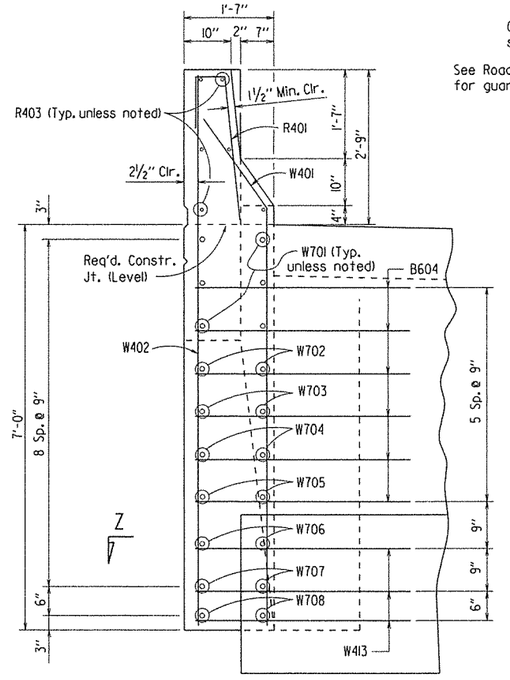
PRINT DATE: 7/31/2014

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.		061437	166	372

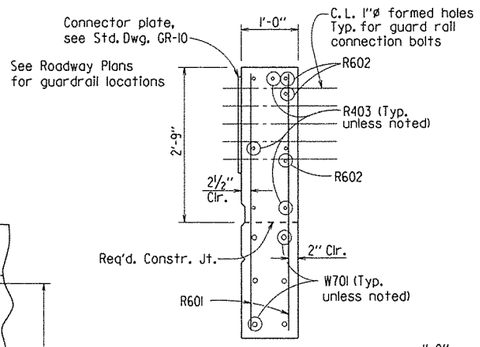
(1) B5306 - DETAILS OF END BENTS - 55821



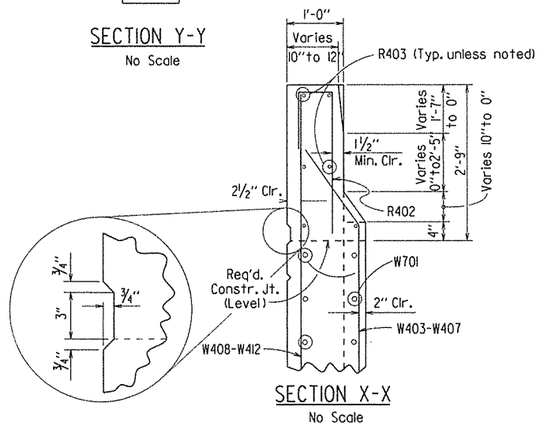
PLAN OF RAIL
No Scale



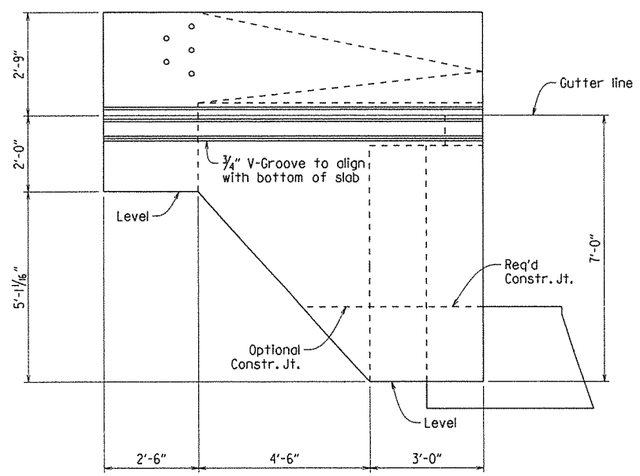
VIEW W-W
No Scale



SECTION Y-Y
No Scale

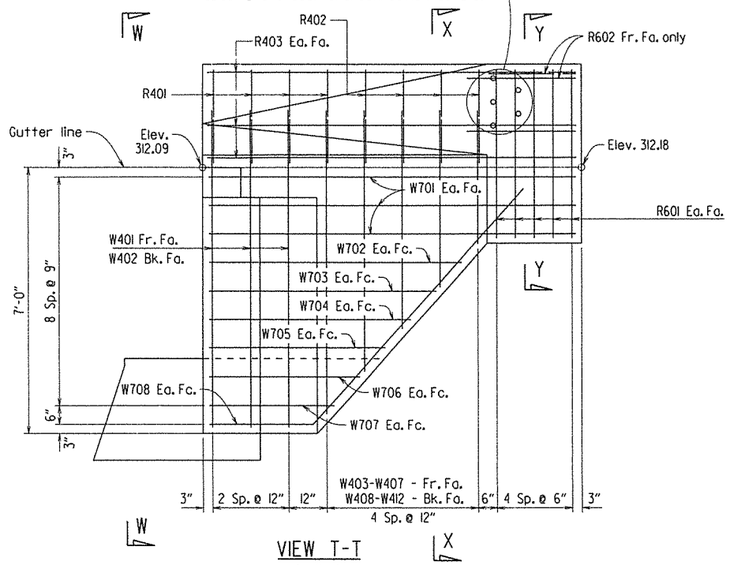


SECTION X-X
No Scale



VIEW V-V
No Scale

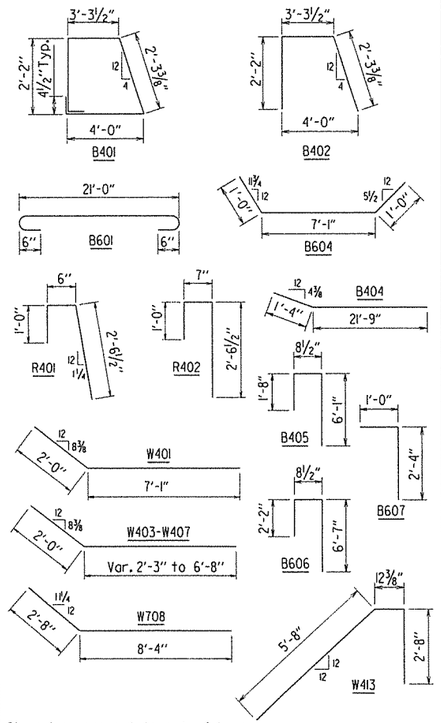
5- 1"ø formed holes for guard rail connection. See Dwg. GR-10 for bolt spacing and additional connection details.



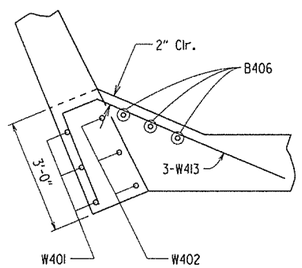
VIEW T-T
No Scale

BAR LIST - BENT 4

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
B401	30	12'-1"	2"	
B402	9	7'-7"	2"	
B403	2	21'-0"	Str.	
B404	14	23'-1"	3"	
B405	19	8'-4"	2"	
B406	3	5'-10"	Str.	
R401	4	3'-11"	2"	
R402	4	4'-0"	2"	
R403	6	9'-8"	Str.	
W401	3	9'-1"	2"	
W402	3	9'-5"	Str.	
W403-W407	1 each	Var. 3'-5" to 7'-10"	2"	
W408-W412	1 each	Var. 4'-7" to 8'-11"	Str.	
W413	3	9'-0"	2"	
B601	6	22'-4"	4½"	
B602	7	21'-0"	Str.	
B603	23	5'-10"	Str.	
B604	6	9'-1"	4½"	
B605	9	3'-0"	Str.	
B606	4	9'-2"	4½"	
B607	2	3'-3"	4½"	
R601	10	4'-5"	Str.	
R602	3	5'-0"	Str.	
W701	6	9'-8"	Str.	
W702	2	6'-8"	Str.	
W703	2	6'-0"	Str.	
W704	2	5'-3"	Str.	
W705	2	4'-7"	Str.	
W706	2	3'-11"	Str.	
W707	2	3'-3"	Str.	
W708	2	11'-0"	5¼"	



Dimensions are out to out of bars.



SECTION Z-Z
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF BENT 4

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 2/13/14
CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13

FILENAME: b061437xl_b4.dgn
SCALE: No Scale

BRIDGE NO. B5306 DRAWING NO. 55821

PRINT DATE: 7/31/2014

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.		061437	1	7
(1)	B5306 -	PL. GIR. UNIT	- 55822	

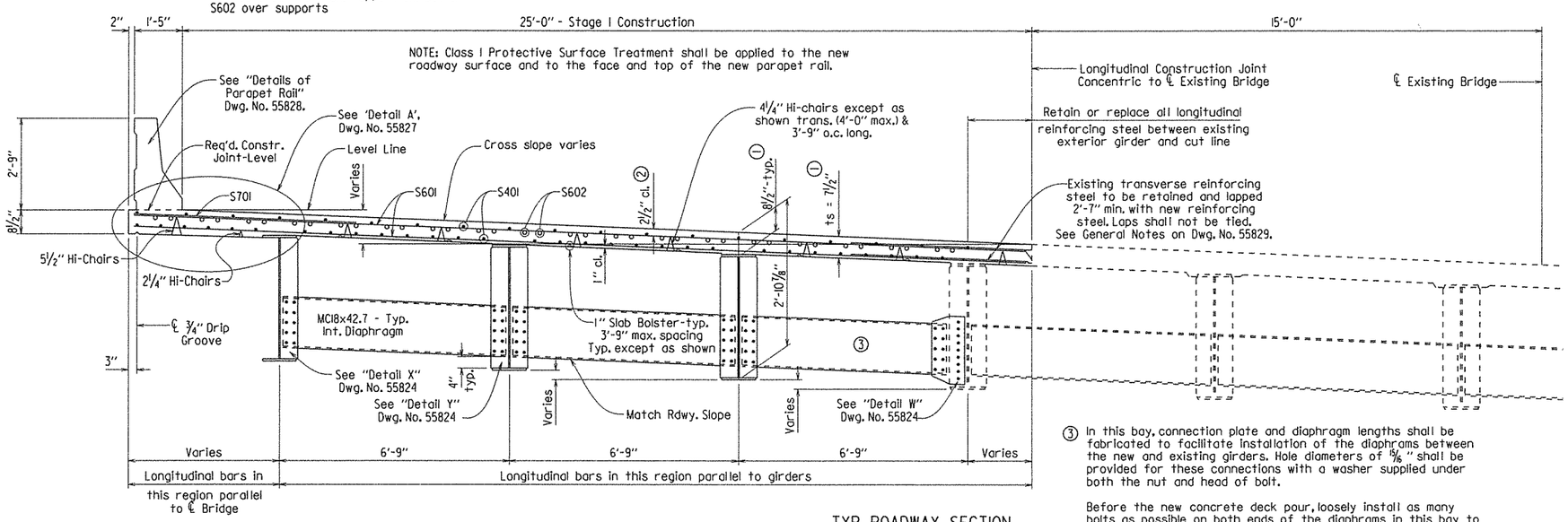
SLAB REINFORCING

Transverse:
S601 @ 7½" - Top and bottom
S701 @ 15" o.c. at gutterline (placed around ends of S601 in top
Longitudinal:
S401 as shown (18" max.-top, 9" max.-bott.)
S602 over supports

(1) See "Adjustment for Slab Thickness Tolerance".

(2) Tolerance: Minus = ¼"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".

For Stage Construction details, see Dwg. No. 55814.



TYP. ROADWAY SECTION

Looking Ahead
Scale: ½" = 1'-0"

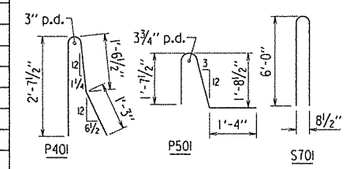
(3) In this bay, connection plate and diaphragm lengths shall be fabricated to facilitate installation of the diaphrams between the new and existing girders. Hole diameters of 15/16" shall be provided for these connections with a washer supplied under both the nut and head of bolt.

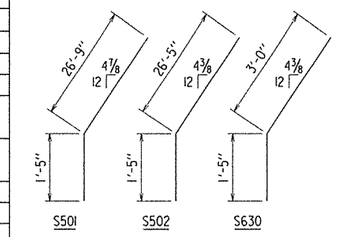
Before the new concrete deck pour, loosely install as many bolts as possible on both ends of the diaphrams in this bay to the satisfaction of the Engineer. Install remaining bolts and fully tighten all bolts as soon as practical after completion of the new concrete deck pour.

BAR LIST

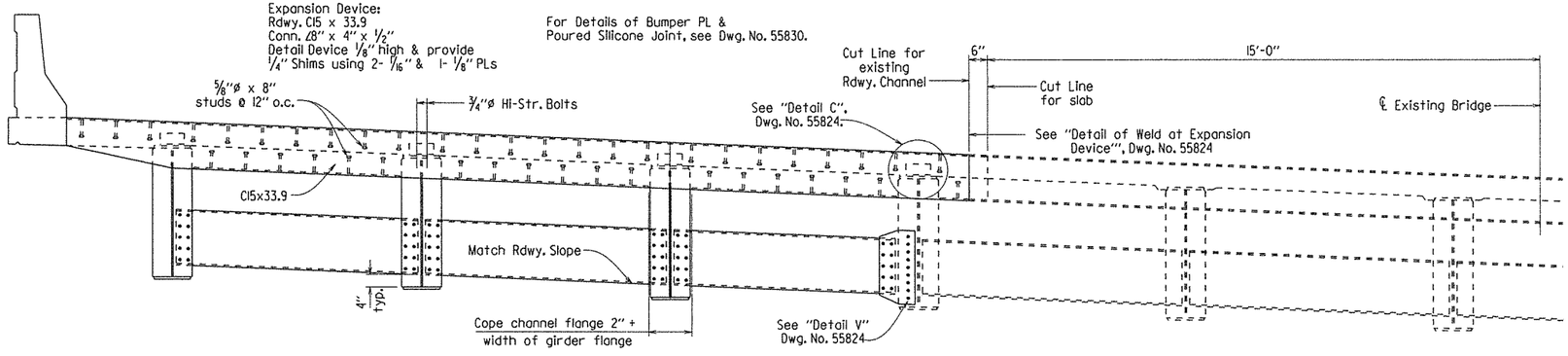
MARK	NO. REQ'D.	LENGTH	P.D.
S401	294	35'-9"	Str.
P401	411	5'-6"	3"
P402	32	5'-6"	Str.
P403	14	17'-8"	Str.
P404	14	19'-8"	Str.
P405	14	15'-8"	Str.
P406	21	20'-2"	Str.
P407	14	17'-4"	Str.
S501	2	28'-2"	3¾"
S502	2	27'-10"	3¾"
P501	411	4'-9"	3¾"
S601	622	26'-3"	Str.
S602	70	40'-0"	Str.
S603-S615	2 each	Var. 5'-11" to 24'-4"	Str.
S616-S629	2 each	Var. 5'-3" to 25'-6"	Str.
S630	8	4'-5"	4½"
S701	162	12'-4"	6¾"

BENDING DIAGRAMS



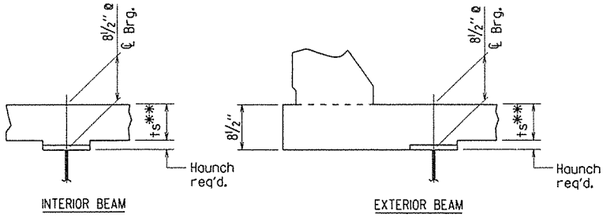


Dimensions are out to out of bars.



TYP. SECTION THRU JOINT

Looking Ahead - Bent 1
Bent 4 Similar
Scale: ½" = 1'-0"



** Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Note : ts = slab thickness as shown in " Typ. Roadway Section".

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1¾". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 7
DETAILS OF WIDENING
205'-1 3/8" CONTINUOUS COMPOSITE PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

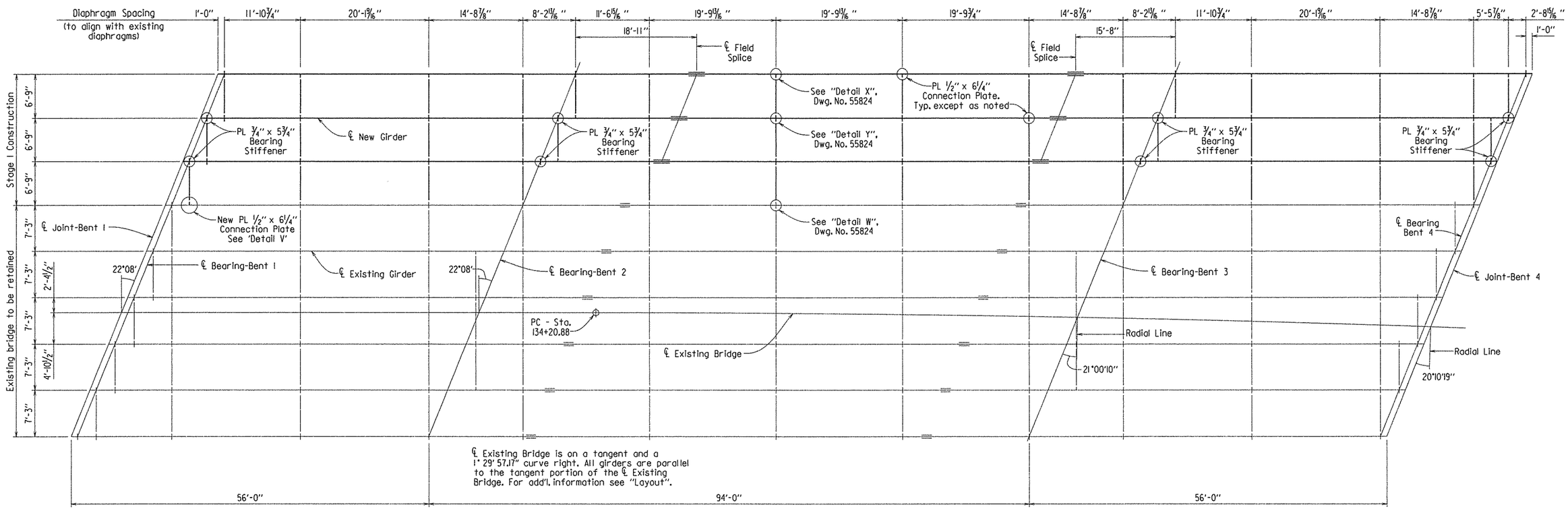
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14 FILENAME: b061437x1_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55822

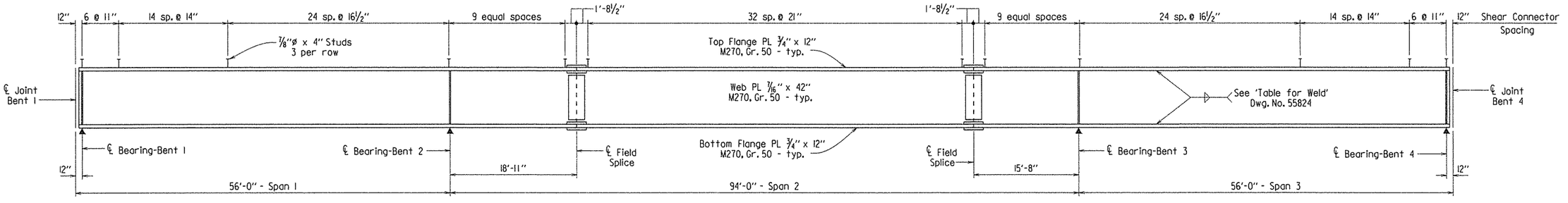
PRINT DATE: 7/31/2014

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.		061437	168	372
				(1)	B5306 -	PL. GIR. UNIT	- 55823	



FRAMING PLAN

Scale: ⅛" = 1'-0"



GIRDER ELEVATION

No Scale

Note: Bolted field splices may be eliminated or shop welded splices may be substituted with the approval of the Engineer. Payment will be made on the basis of plan quantities.

STATE OF ARKANSAS
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BRIDGE ENGINEER

SHEET 2 OF 7
DETAILS OF WIDENING
205'-1⅜" CONTINUOUS COMPOSITE PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

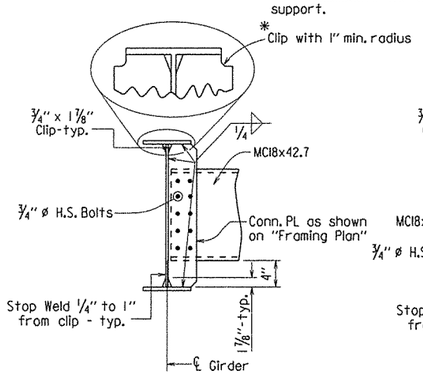
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CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55823

PRINT DATE: 7/31/2014

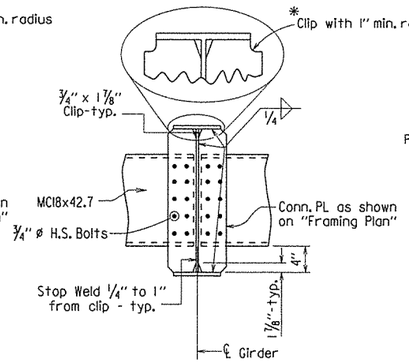
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	169	372
				(1) B5306 - PL. GIR. UNIT - 55824				

*If permanent steel bridge deck forms are used, the fabricator shall clip the plate as necessary to accommodate the deck form support.



DETAIL X

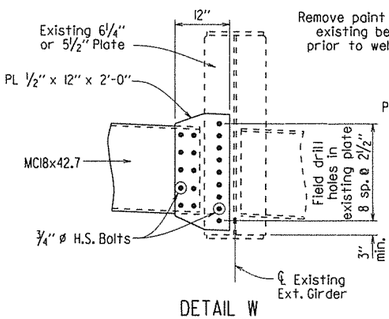
No Scale



DETAIL Y

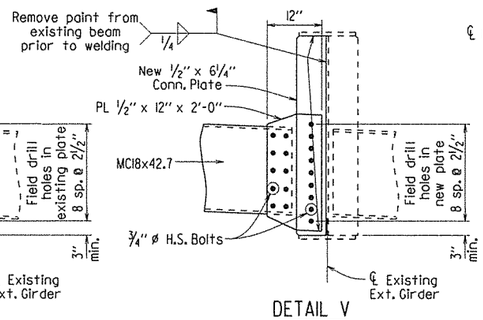
No Scale

Note: Bolts in connections shall be properly installed and tightened in accordance with Subsection 807.71.



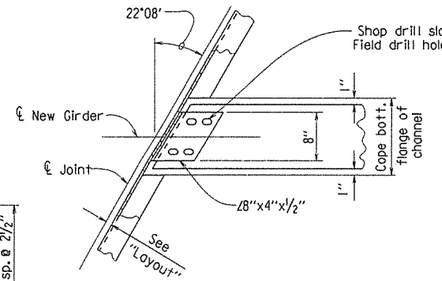
DETAIL W

No Scale



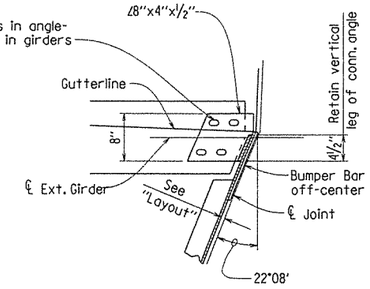
DETAIL V

No Scale



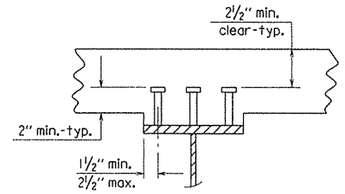
CHANNEL CONNECTION DETAIL

Typ. except where shown
No Scale



CHANNEL CONNECTION DETAIL

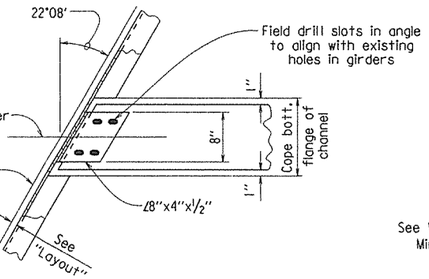
At Exterior Girder - Bent 4
No Scale



Stud Shear Connectors shown shall be 7/8"ø x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4"ø studs may be used in place of the 7/8"ø studs shown, at the ratio of 1.361 - 3/4"ø studs in place of one 7/8"ø stud. 7/8"ø studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

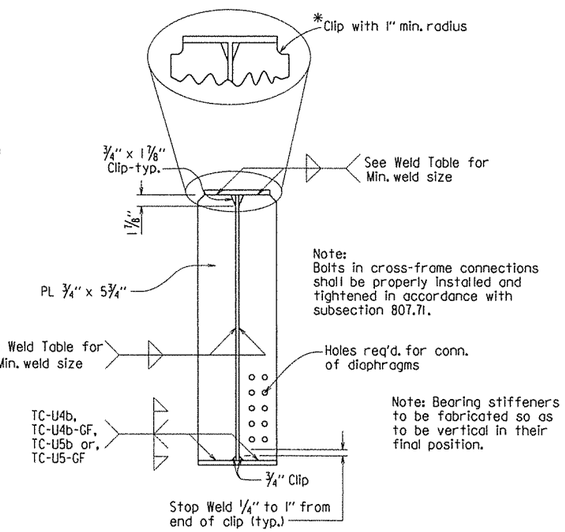
SHEAR CONNECTOR DETAIL

No Scale



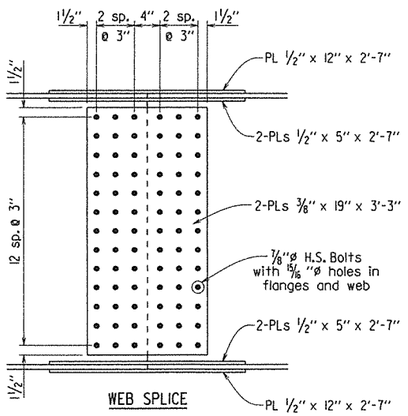
DETAIL C

Channel Connection Detail
at Existing Girder
No Scale

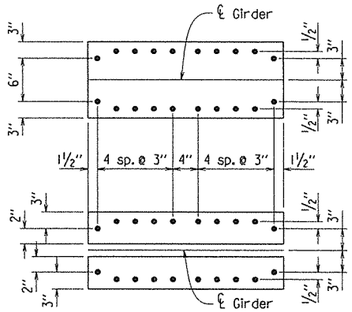


BEARING STIFFENER DETAILS

No Scale



WEB SPLICE



FLANGE SPLICE

All field splice plates shall be AASHTO M-270-50

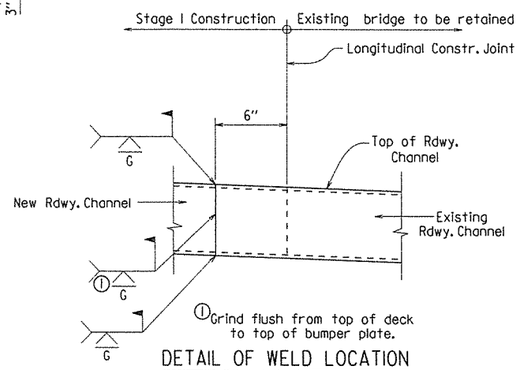
SHEAR CONNECTOR DETAIL

Scale: 1" = 1'-0"

TABLE FOR WELD

Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	
Over 3/4"	5/16"	

Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



(1) Grind flush from top of deck to top of bumper plate.

DETAIL OF WELD LOCATION FOR EXPANSION DEVICE

No Scale

STATE OF ARKANSAS
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8-8-14
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BRIDGE ENGINEER

SHEET 3 OF 7
DETAILS OF WIDENING
205'-1 3/8" CONTINUOUS COMPOSITE
PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

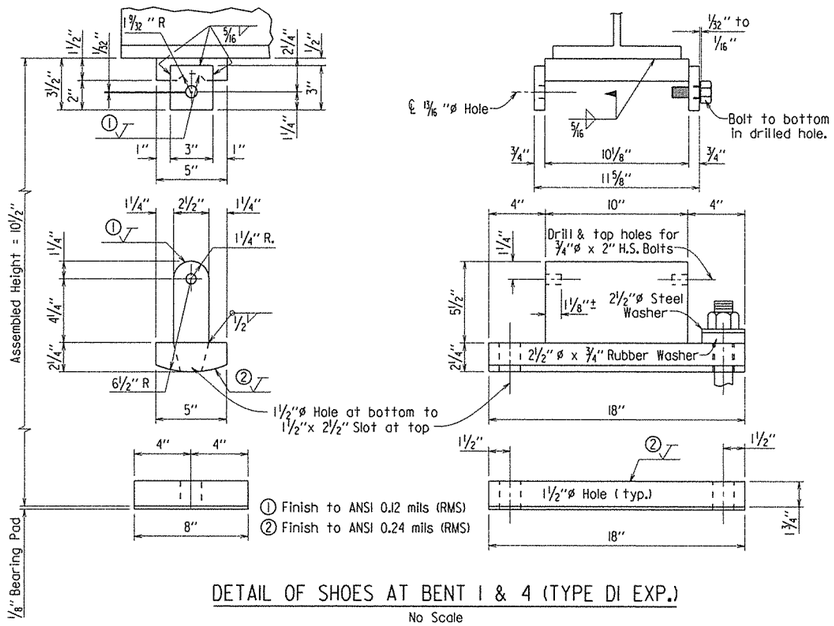
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14 FILENAME: b061437x1_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55824

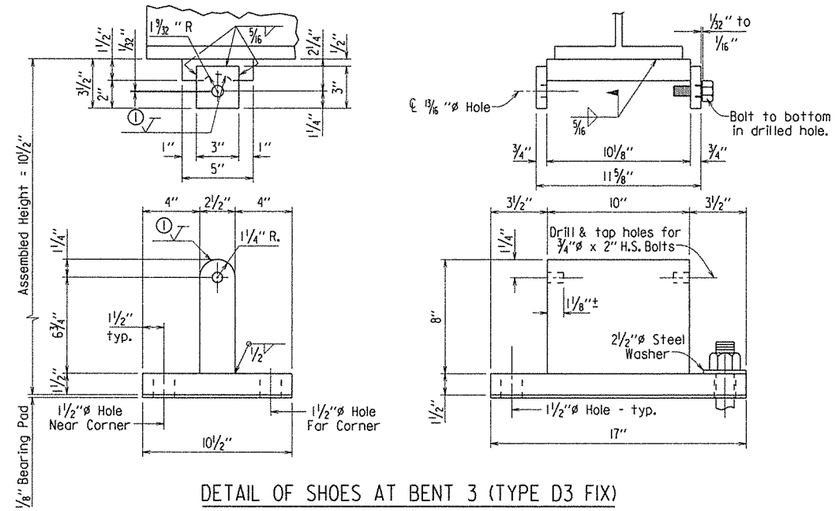
PRINT DATE: 7/31/2014

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.		061437	170	372
				(1) B5806 - PL. GIR. UNIT - 55825				



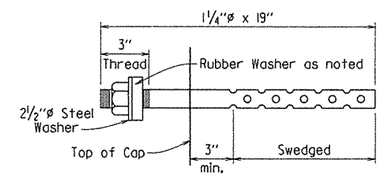
DETAIL OF SHOES AT BENT 1 & 4 (TYPE D1 EXP.)

No Scale



DETAIL OF SHOES AT BENT 3 (TYPE D3 FIX)

No Scale



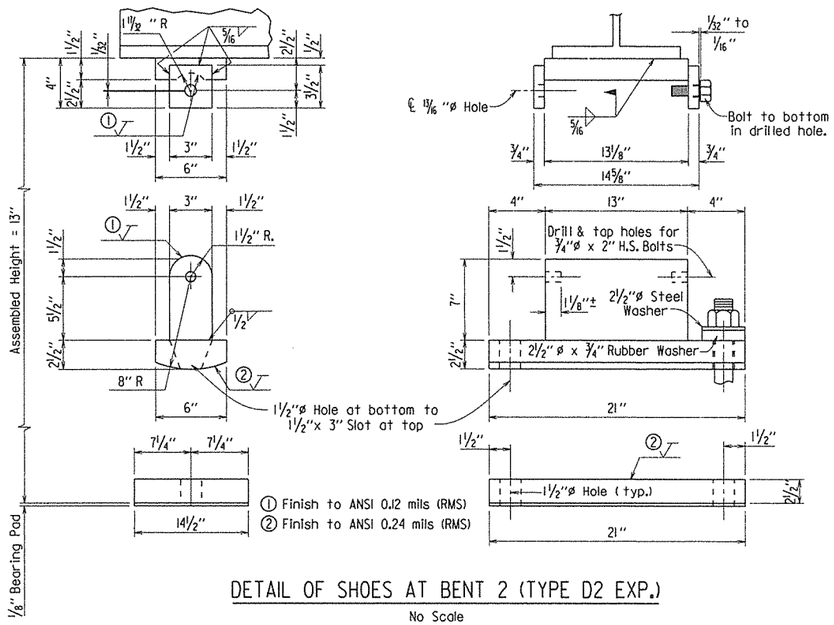
ANCHOR BOLT DETAIL

No Scale

Note: Anchor Bolt, Nut and Washer to be according to subsection 807.07. Indentations shall be circular with rounded bottoms and staggered as shown above. Rubber washer shall be closed cell expanded rubber, meeting the requirements of ASTM D1056 - 85 2B2 E2, and shall be considered subsidiary to the item of Structural Steel.

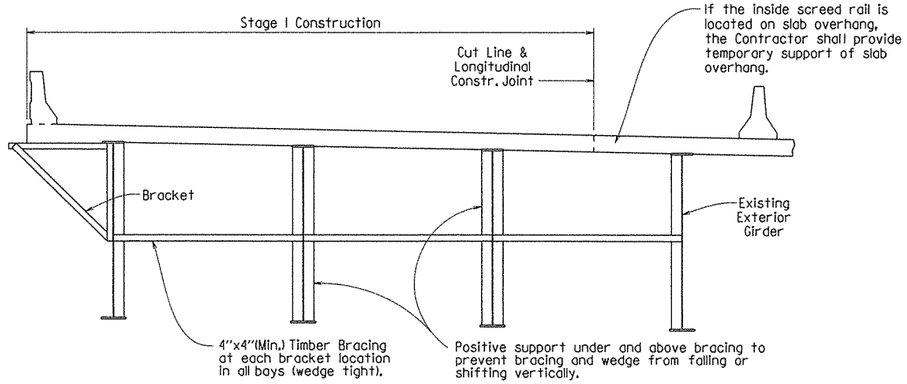
Plates for Type D shoes shall be M270, Grade 50

Note: 1/8" bearing pad shall conform to the requirements of Subsection 807.15 (a)



DETAIL OF SHOES AT BENT 2 (TYPE D2 EXP.)

No Scale



The outside rail for the transverse screed shall be supported directly over the girder, or as an alternate, the outside rail may be supported by the overhang brackets if the above strutting system is used. No direct payment will be made for brackets, timber bracing or supports. Payment shall be subsidiary to "Structural Steel in Plate Girder Spans (M270, Gr. 50)."

SCREED RAIL SUPPORT

No Scale

STATE OF ARKANSAS
Charles R. Ellis
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8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 4 OF 7
DETAILS OF WIDENING
205'-1 3/8" CONTINUOUS COMPOSITE
PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14 FILENAME: b061437x1_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
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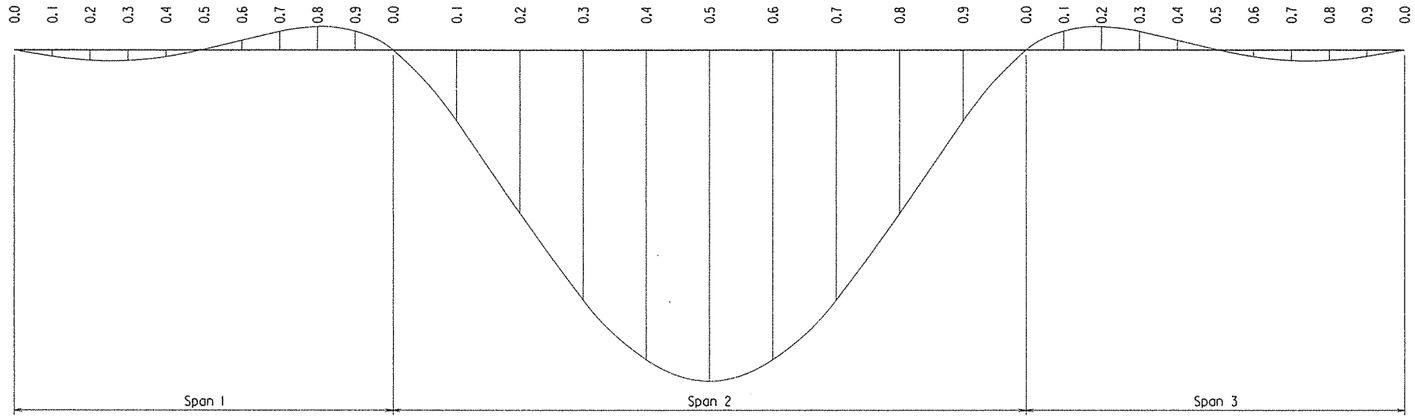
BRIDGE NO. B5306 DRAWING NO. 55825

PRINT DATE: 7/31/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061437	171	372
				(1)	B5306 -	PL. GIR. UNIT	- 55826	

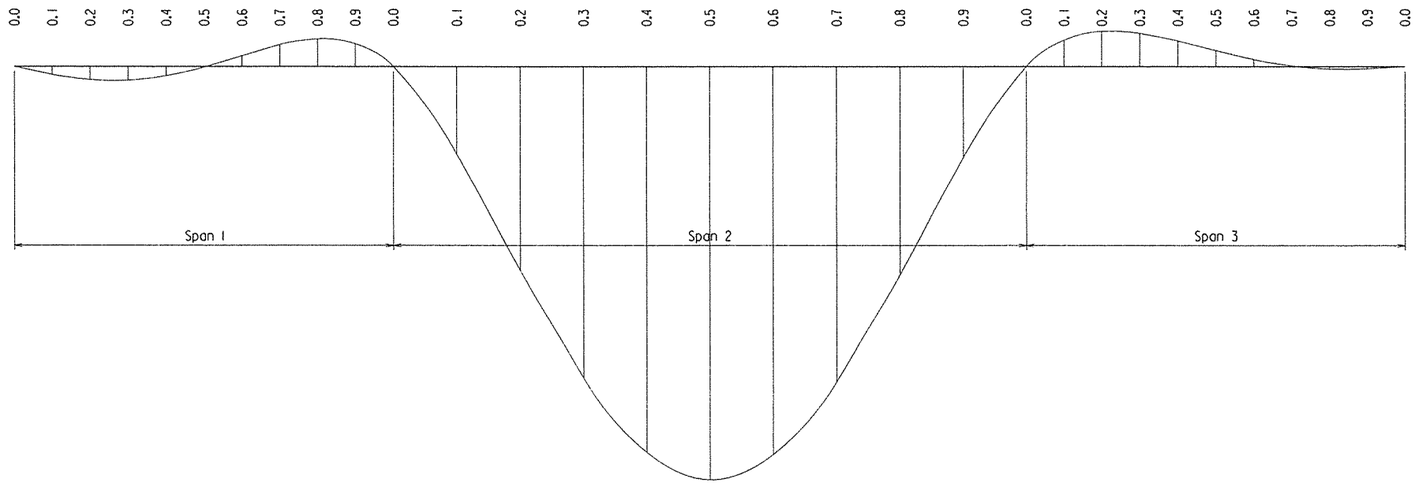
TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet	
		Int. Beams	Ext. Beam	Int. Beams	Ext. Beam	Int. Beams	Ext. Beam
1	0	0	0	0	0	0	0
	0.1	0.004	0.004	0.024	0.028	0.026	0.034
	0.2	0.007	0.007	0.039	0.046	0.042	0.055
	0.3	0.007	0.007	0.040	0.047	0.043	0.058
	0.4	0.005	0.004	0.025	0.031	0.027	0.039
	0.5	0.000	0.000	-0.004	-0.001	-0.003	0.003
	0.6	-0.006	-0.006	-0.039	-0.041	-0.040	-0.044
	0.7	-0.012	-0.012	-0.073	-0.079	-0.076	-0.090
	0.8	-0.015	-0.015	-0.09	-0.098	-0.095	-0.114
	0.9	-0.012	-0.012	-0.073	-0.080	-0.077	-0.094
2	0	0	0	0	0	0	0
	0.1	0.047	0.046	0.277	0.308	0.295	0.369
	0.2	0.109	0.107	0.644	0.719	0.684	0.859
	0.3	0.168	0.164	0.988	1.103	1.049	1.314
	0.4	0.208	0.203	1.227	1.372	1.302	1.631
	0.5	0.223	0.217	1.313	1.469	1.393	1.746
	0.6	0.208	0.203	1.227	1.378	1.302	1.638
	0.7	0.168	0.164	0.988	1.115	1.049	1.327
	0.8	0.109	0.107	0.644	0.734	0.684	0.874
	0.9	0.047	0.046	0.277	0.321	0.295	0.382
3	0	0	0	0	0	0	0
	0.1	-0.012	-0.012	-0.073	-0.095	-0.077	-0.109
	0.2	-0.015	-0.015	-0.090	-0.131	-0.095	-0.147
	0.3	-0.012	-0.012	-0.073	-0.128	-0.076	-0.138
	0.4	-0.006	-0.006	-0.039	-0.104	-0.040	-0.106
	0.5	0.000	0.000	-0.004	-0.071	-0.003	-0.066
	0.6	0.005	0.004	0.025	-0.039	0.027	-0.029
	0.7	0.007	0.007	0.040	-0.015	0.043	-0.003
	0.8	0.007	0.007	0.039	-0.001	0.042	0.010
	0.9	0.004	0.004	0.024	0.003	0.026	0.009
	0	0	0	0	0	0	0



DEAD LOAD DEFLECTIONS DIAGRAM - INT. GIRDERS

Note:
Camber for Dead Load Deflection plus Vertical curve ± 1/4" tolerance.
Deflections shown are from a chord from ℄ Bearing to ℄ Bearing.
Vertical curve corrections not included. Negative Sign (-) indicates point above chord.



DEAD LOAD DEFLECTIONS DIAGRAM - EXT. GIRDER

STATE OF ARKANSAS
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SHEET 5 OF 7
DETAILS OF WIDENING
205'-1 3/8" CONTINUOUS COMPOSITE
PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

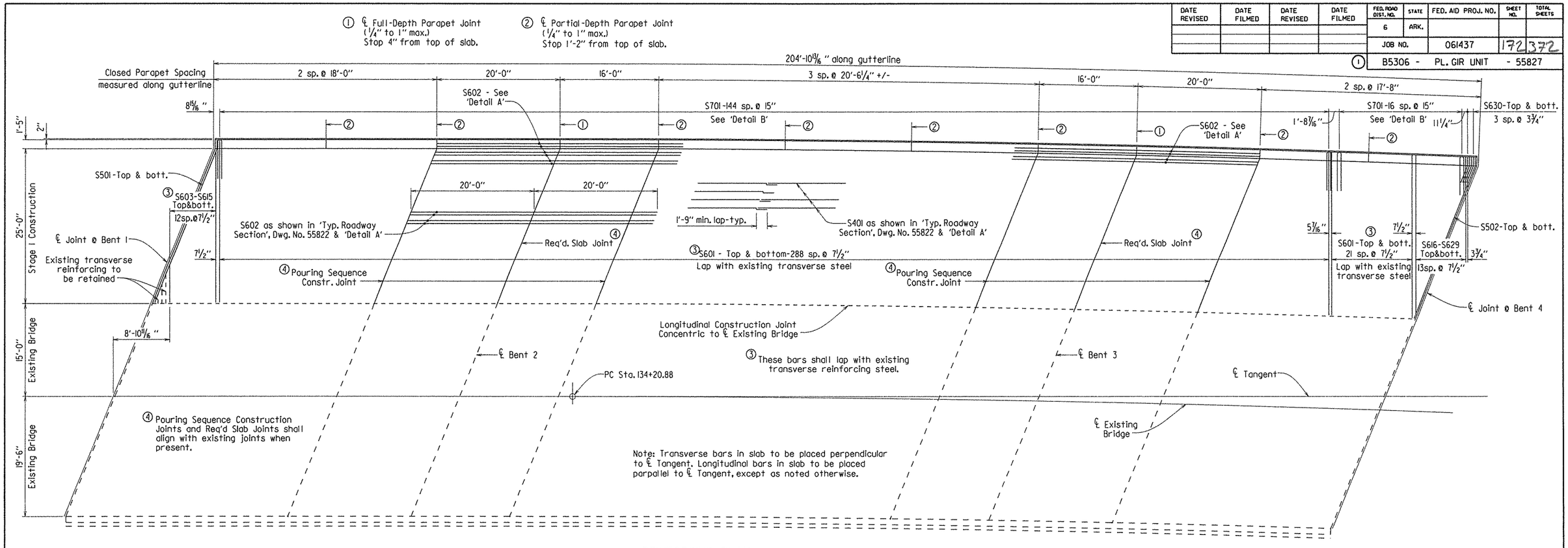
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14 FILENAME: b061437xl_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: NONE
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55826

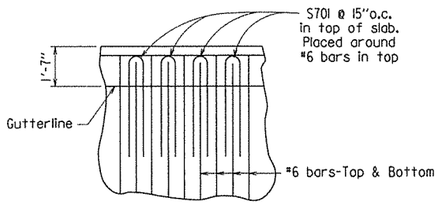
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				JOB NO.		061437	172	372
				(1)	B5306 -	PL. GIR UNIT	- 55827	



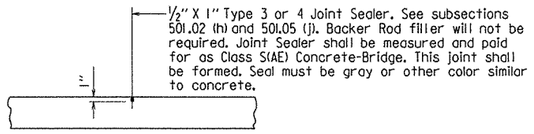
REINFORCING PLAN

Scale: ⅛" = 1'-0"



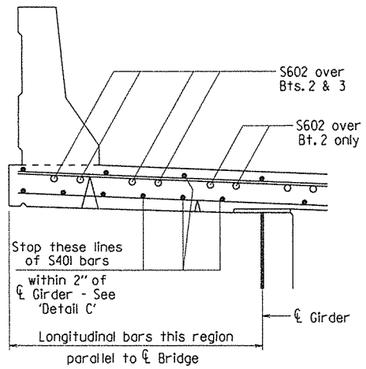
DETAIL B

No Scale



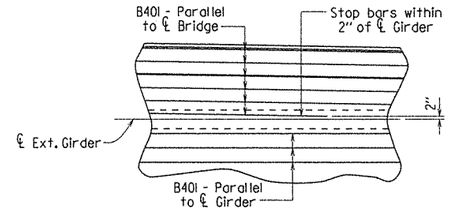
LONGITUDINAL CONSTRUCTION JOINT

No Scale



DETAIL A

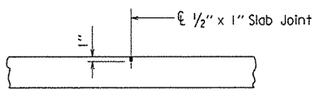
Scale: ¾" = 1'-0"



DETAIL C

Scale: ¼" = 1'-0"

Use Type 3 or 4 Joint Sealer. See subsections 501.02 (h) and 501.05 (j). Backer Rod filler will not be required. Joint Sealer shall be measured and paid for as Class S(AE) Concrete-Bridge. Slab joints shall extend to the outside edge of the deck slab. Slab joints shall be installed before the parapet railing is poured. If slab joints are to be sawed, they shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the slab. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations. The joint sealer shall extend across the deck slab (Longitudinal Constr. Joint to gutterline). Slab joints shall align with parapet open joints.



SLAB JOINT DETAIL

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 7
DETAILS OF WIDENING 205'-1 3/8" CONTINUOUS COMPOSITE PLATE GIRDER UNIT S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14 FILENAME: b061437x1_sl.dgn

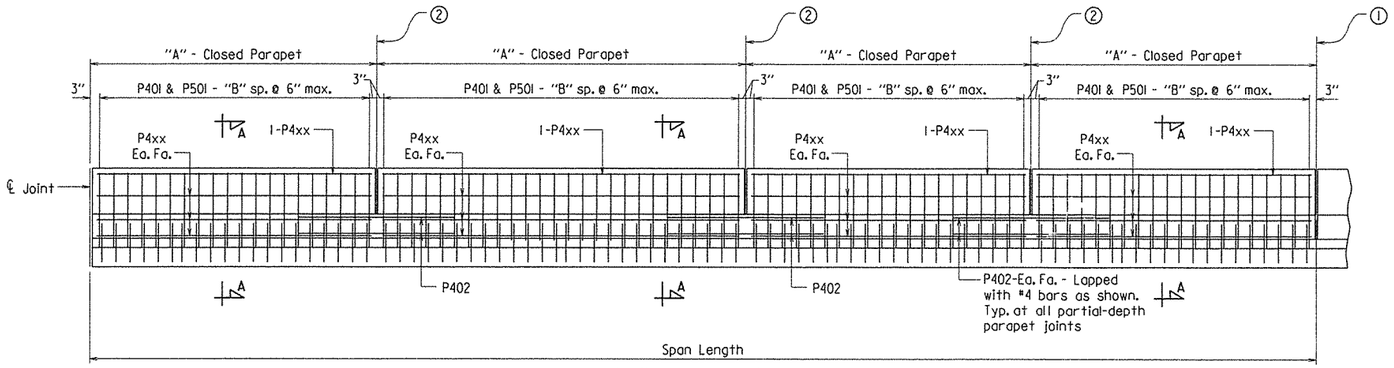
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED

DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5306 DRAWING NO. 55827

PRINT DATE: 7/31/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE		SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	173	372
				①		B5306 - PL. GIR. UNIT - 55828		

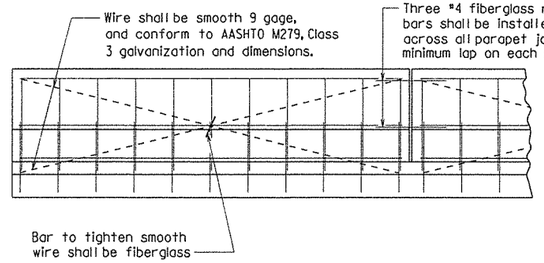


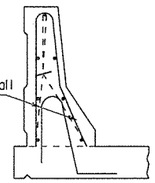
① ℄ Full-Depth Parapet Joint (1/4" to 1" max.) as shown in "Reinforcing Plan", Dwg. No. 55827. Stop 4" from top of slab.

DETAILS OF PARAPET RAIL

Scale: 3/8" = 1'-0"

② ℄ Partial-Depth Parapet Joint (1/4" to 1" max.) as shown in "Reinforcing Plan", Dwg. No. 55827. Stop 1'-2" from top of slab.





All panels shall be braced as required to prevent racking. All parapet joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

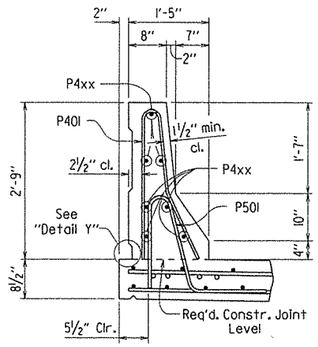
The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Exposed surface may be given a light brush finish or a Class 3, Textured Coating Finish, in place of the Class 2, Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

No Scale

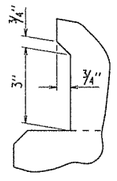
TABLE OF PARAPET RAIL VARIABLES

"A" Closed Parapet	"B"	P4xx Bar
18'-0"	35	P403
20'-0"	39	P404
16'-0"	31	P405
20'-6 1/4" +/-	40	P406
17'-8"	35	P407



SECTION A-A

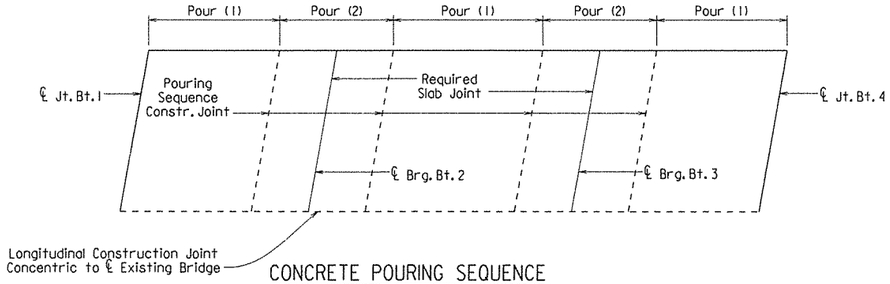
Scale: 3/4" = 1'-0"



DETAIL Y

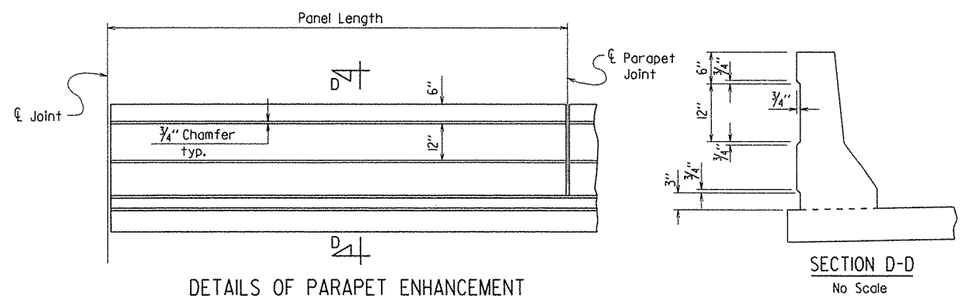
No Scale

Note: Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any railing pours made before the entire slab unit has been placed must be approved by the Engineer. The Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.



CONCRETE POURING SEQUENCE

No Scale



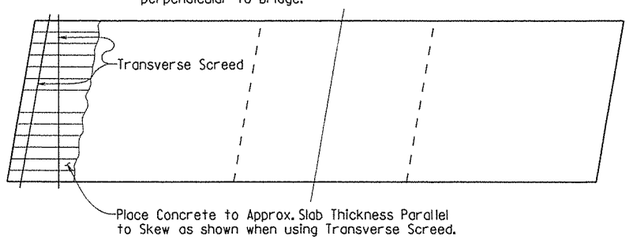
DETAILS OF PARAPET ENHANCEMENT

No Scale

SECTION D-D

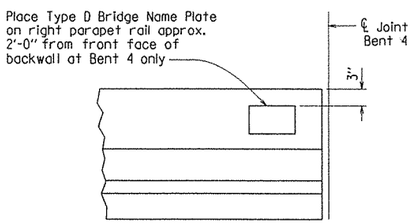
No Scale

Note: At the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to Bridge.



CONCRETE PLACEMENT PROCEDURE

No Scale



NAME PLATE DETAIL

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 7 OF 7
DETAILS OF WIDENING 205'-1 3/8" CONTINUOUS COMPOSITE PLATE GIRDER UNIT
S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-1-14
CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13

FILENAME: b061437x1_sl.dgn
SCALE: AS NOTED

BRIDGE NO. B5306 DRAWING NO. 55828

PRINT DATE: 7/31/2014

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.		061437	174	372
				(1)	B5306 -	GENERAL NOTES	- 55829	

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LFD Bridge Design Specifications 17th Edition (2002).

LIVE LOADING: HS20

MATERIALS AND STRENGTHS:
Concrete: All concrete shall be Class S(AE) with a minimum 28 day strength f'c = 4000 psi.

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

Structural Steel: Structural steel shall conform to AASHTO M270, Gr. 50 (Fy = 50,000 psi.) or AASHTO M270 Gr.36 (Fy = 36,000 psi.).

STRUCTURAL STEEL:
All new structural steel shall be AASHTO M270, Gr. 50 unless otherwise noted. All structural steel shall be paid for as "Structural Steel in Plate Girder Spans (M270, Gr. 50)". Structural Steel completely embedded in concrete may be AASHTO M270. Gr. 36 or Gr. 50. All exposed surfaces shall be cleaned in accordance with Subsection 807.84e unless noted otherwise.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

Longitudinal girder and all field splice plates are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in Subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M270, Gr.50)".

Steel plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, submitted, and approval secured before fabrication is begun.

Girder webs may be made by shop splicing with minimum lengths of 25 feet for sections. Flange plates longer than 50 feet may be made by shop splicing with minimum lengths of 25 feet for sections. Material specifications and location of shop-welded splices , if any, shall be shown on the shop drawings. No additional payment for welds for these splices will be made.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with the recommendations of the manufacturer.

All girders shall be blocked in their true position in the shop as specified in Subsection 807.54(b)(2). The camber, length of sections, distance between bearings, and opening of joints shall be measured with the girders in their true position and this information shall become part of the permanent record of this job. The component parts shall be match marked in this assembly and those marks shall be shown on the erection diagram. All girder dimensions are based on a temperature of 60 degrees F. A tolerance of $\frac{1}{4}$" (plus or minus) allowed for camber.

Field connections shall be bolted with high-strength bolts. Bolts shall be $\frac{3}{4}$"ø, except as noted, and open holes shall be $\frac{13}{16}$"ø unless otherwise noted. Holes for $\frac{3}{4}$"ø bolts may be $\frac{15}{16}$"ø if a washer is supplied for use under both the nut and the head of the bolt. Bolt spacing shall be $2\frac{1}{2}$" for $\frac{3}{4}$"ø bolts. For field splices, bolts shall be $\frac{7}{8}$"ø bolts. Open holes shall be $\frac{15}{16}$"ø. Bolt spacing shall be 3" for $\frac{7}{8}$"ø bolts. Bolts shall be placed with heads on the outside face of the exterior girder web and on the bottom of the girder flanges.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. All welding shall conform to Subsection 807.26.

Diaphragms shall be installed as girders are erected. All bolts in diaphragms and field splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the deck unless otherwise noted.

Bearings shall be seated in accordance with Subsection 807.66. This work and material will not be paid for directly but will be considered subsidiary to the item "Structural Steel in Plate Girder Spans (M270, Gr. 50)".

All new structural steel, except galvanized members, machined surfaces and surfaces in contact with concrete shall be painted as specified in Section 807. Color of paint shall be Brown and shall match Fed. Std. 595B, Color Chip 20108. See Subsection 807.75.

REINFORCING STEEL:
The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports, sufficient in size and number, to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Reinforcing Steel (Grade 60)".

CONCRETE:
All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4000 psi. Concrete shall be poured in the dry and all exposed corners to be chamfered $\frac{3}{4}$" unless otherwise noted.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck shall be given a belted or burlap drag finish as specified in Special Provision Job 061437 "Bridge Deck Surface Finish". Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. Use of a longitudinal screed is prohibited.

A minimum of 72 hours shall elapse between completion of the bridge deck slab and the pouring of the parapet railing. Any railing pours made before the entire slab has been placed and cured must be approved by the Engineer.

SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the new roadway surface and to the face and top of the new parapet rail.

JOINT: All existing preformed joint material shall be removed, and replaced with poured silicone joint sealant in accordance with Section 809 and the manufacturer's recommendations. At the Contractor's option, the existing seal support may be removed from the expansion device, or the backer rod notched to facilitate proper installation of silicone joint sealant. Payment for cleaning and modification of existing joint shall not be paid for directly, but shall be included in the item "Silicone Joint Sealant".

EXISTING STRUCTURAL STEEL:

The paint system used on the existing girders consists of a lead based paint system. The Contractor shall take all necessary steps to protect the workers modifying the existing girders.

The existing paint shall be removed in the area of the web of the existing girder where the new diaphragm connection plate will be field welded. Welding and field drilling of holes shall be done in accordance with Section 821.

Any bolt that is loosened or removed shall be replaced by a new high-strength bolt of equivalent size.

The existing structural steel for Bridge No. B5306 shall be cleaned and painted after the adjoining work has been finished. The existing structural steel for Bridge Nos. A&B5306, except for expansion devices which shall be painted in accordance with Section 638, shall be cleaned and painted in accordance with Section 820 "Cleaning and Painting Existing Structural Steel (Type II)".

REMOVAL OF EXISTING DECK:

The portion of the existing concrete deck removed shall be completely removed to the top flange of the existing girders. Care shall be exercised during the removal of the existing deck to ensure that the existing shear connectors, reinforcing steel and metal deck forms are not damaged. Any existing shear connectors, transverse and longitudinal reinforcing steel, and metal deck forms damaged during the removal of the deck shall be replaced as directed by the Engineer, at the Contractor's expense. A QPL approved Epoxy Resin System may be used to replace any damaged transverse reinforcing steel. The portions of the top flange that will be embedded in new concrete shall be cleaned and free of laitance and protected until the new deck is placed for the respective Stage of Construction. This work will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5306)".

PRINT DATE: 3/17/2015

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-17-15
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES
FOR SUPERSTRUCTURE
S.H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

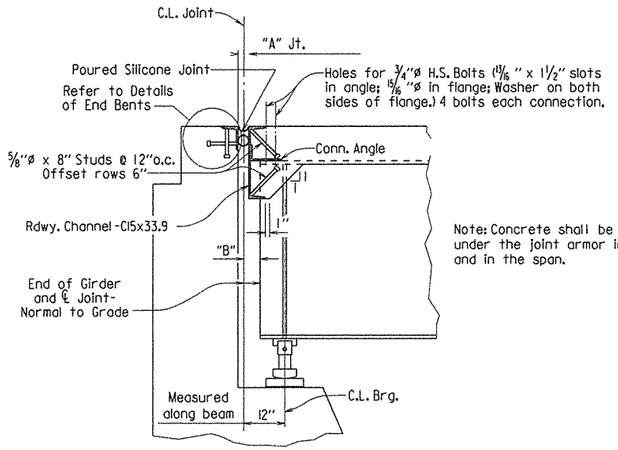
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CHECKED BY: DHP DATE: 3-17-15
DESIGNED BY: DHP DATE: 11-13

FILENAME: b061437x1_gen.dgn
SCALE:

BRIDGE NO. B5306 DRAWING NO. 55829

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.		061437	175	372

(1) B5306 - JOINT DETAILS - 55830



Note: Concrete shall be hand packed under the joint armor in the backwall and in the span.

SECTION THRU JOINT AT BENTS 1 & 4

No Scale

DETAIL OF POURED SILICONE JOINT SEAL

No Scale

JOINT SEAL PLACEMENT AT CURB

No Scale

SILICONE JOINT DATA

Bent Number	"A" Width Perpendicular to Joint	"B" Perpendicular to Joint	Bumper Plate Size	"D"
1	3"	2 3/4" ±	1/2" x 1"	4 1/2"
4	1 1/4"	2" ±	1/2" x 1"	4 1/2"

(1) Notes: The temperature limitations recommended by the sealant manufacturer shall be observed.

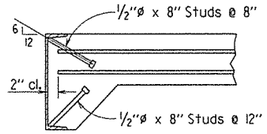
The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80°F.

(2) BACKER ROD NOTE:

Use an appropriately sized backer rod at the depth shown in the manufacturer's literature based on the joint width at the time of sealing.

Except as noted, do not install more backer rod than can be sealed in the same day.

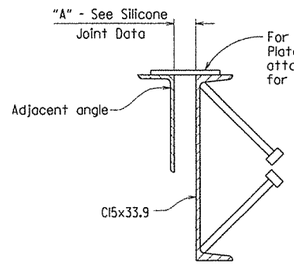
The contractor shall verify separation of the backer rod from the joint material after the joint material has set.



Note: As an alternate to 5/8"ø studs, 1/2"ø x 8" studs spaced as shown may be used. Use weight of 5/8"ø stud as basis of measurement of structural steel in anchors.

DETAILS OF ALTERNATE ANCHORS

No Scale



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator to the dimension "A" , and the blocking details shall be shown on the Shop Drawings. Blocking shall be placed within 2 feet of each end of the device and with a maximum spacing of 8 feet.

DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

No Scale

EXPANSION DEVICE INSTALLATION AT END BENTS

The Contractor may elect to install the expansion device for the end bents using one of the following two alternatives:

1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the girders erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted.

2) The backwall shall be poured to the optional construction joint after girders are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted.

Backfill shall not be placed behind the backwall until the deck concrete on the adjacent span has been placed.

STATE OF ARKANSAS
Charles R. Ellis
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DETAILS OF JOINTS S. H. 338

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-12-14 FILENAME: b061437xl_jtl.dgn

CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED

DESIGNED BY: DHP DATE: 11-13

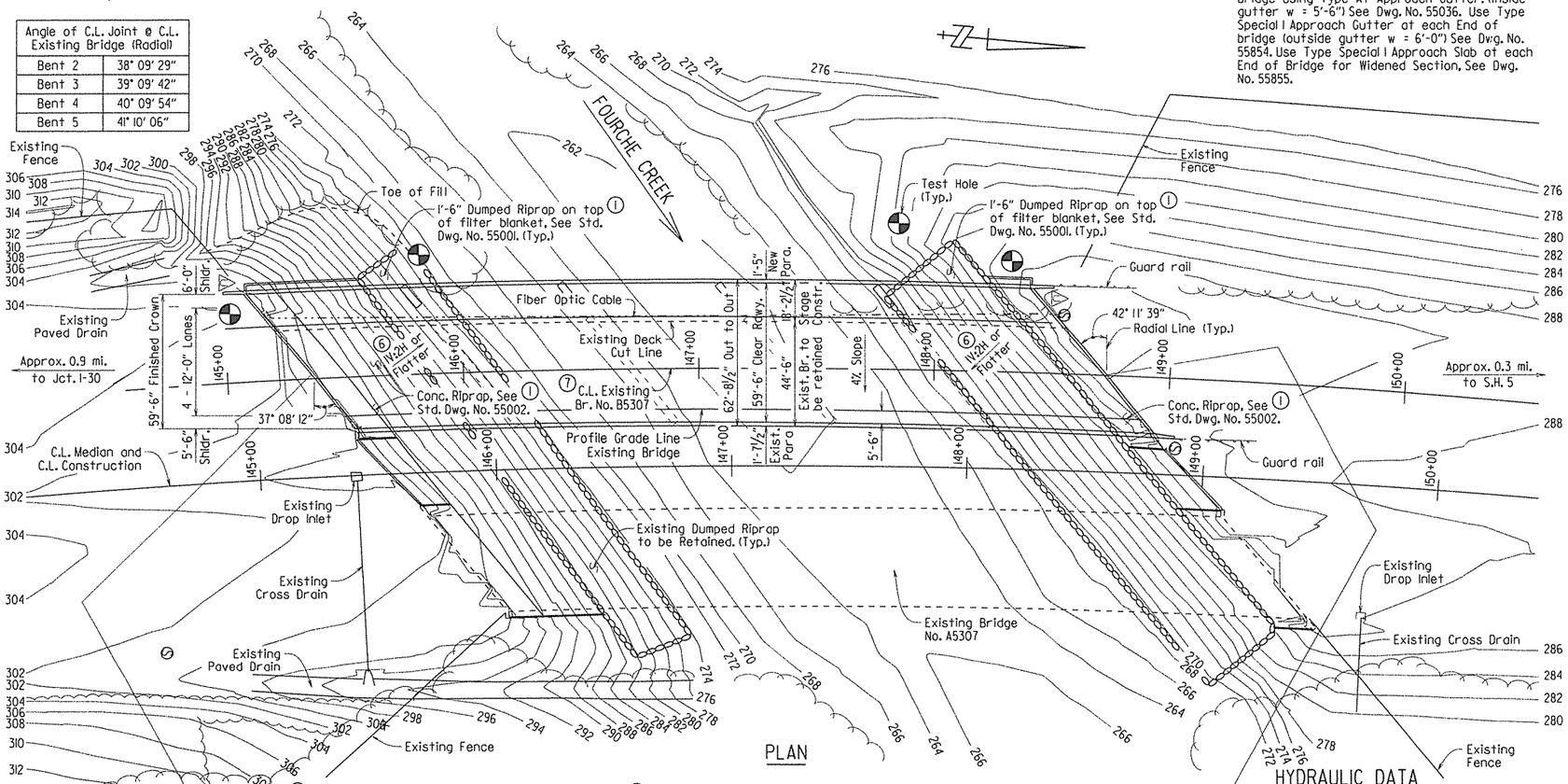
BRIDGE NO. B5306 DRAWING NO. 55830

PRINT DATE: 7/31/2014

For R/W Data and Guard Rail Details see Rdwy. Plans

Angle of C.L. Joint @ C.L. Existing Bridge (Radial)	
Bent 2	38° 09' 29"
Bent 3	39° 09' 42"
Bent 4	40° 09' 54"
Bent 5	41° 10' 06"

Replace Inside Approach Gutter at End of Bridge Using Type AT Approach Gutter. (Inside gutter w = 5'-6") See Dwg. No. 55036. Use Type Special I Approach Gutter at each End of bridge (outside gutter w = 6'-0") See Dwg. No. 55854. Use Type Special I Approach Slab at each End of Bridge for Widened Section, See Dwg. No. 55855.

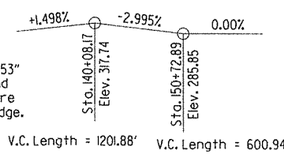


PLAN

1. Remove Existing Concrete Riprap and Curb and Dumped Riprap as needed for Bent Construction & Replace with new Riprap. Removal of Existing Riprap shall be considered subsidiary to the pay item "Concrete Riprap".
2. Dimensions shown are C.L. Existing Bridge at C.L. Joint to low seat of proposed bent cap.
3. C.L. Existing Bridge to low steel.
4. Design H.W. to low steel = 2.3'
5. Based on Existing Bridge Plans.
6. Match Existing Toe of Fill.
7. C.L. Existing Bridge is on 1° 29' 51.53" curve right. Longitudinal deck and rail lines of new construction are concentric with C.L. Existing Bridge.

⑤ HORIZONTAL CURVE DATA

Along C.L. Existing Bridge
P.I. = Sta. 143+74.78
D = 1°29'51.53" Rt.
Δ = 28°00'04"
L = 1869.67
T = 953.90
P.C. = Sta. 134+20.88
P.T. = Sta. 152+90.55



V.C. Length = 1201.88' V.C. Length = 600.94'

VERTICAL CURVE DATA

Along Center Line Existing Bridge

HYDRAULIC DATA

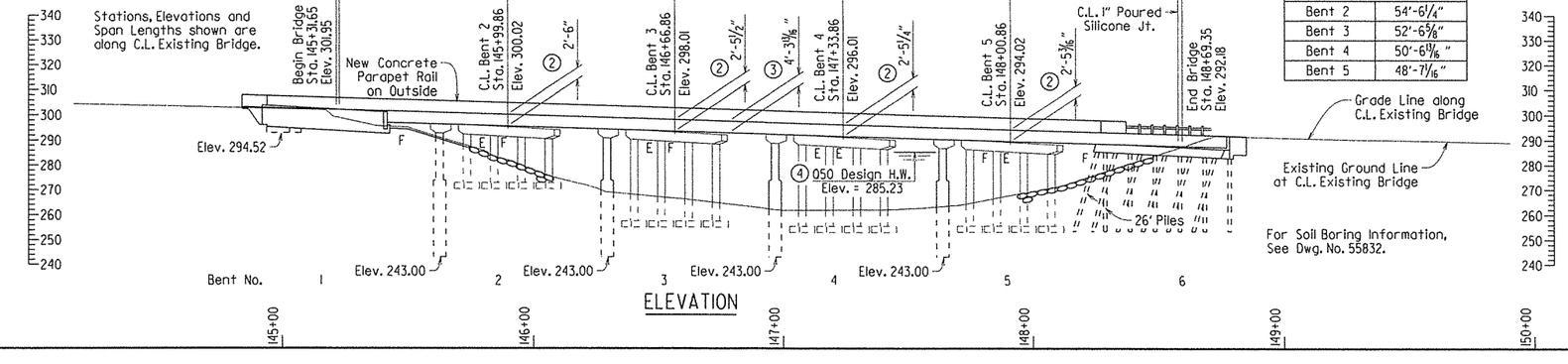
FLOOD DESCRIPTION	FREQUENCY	DISCHARGE	⑧ NATURAL WATER SURFACE ELEVATION	WATER SURFACE ELEV. WITH BACKWATER
	YEARS	CFS	FEET	FEET
Design	50	35900	285.98	286.93
Base	100	39920	286.76	287.81
Extreme	500	48930	288.64	290.00
Overtopping	>500	-	-	-

⑧ Unconstricted water surface elevation without structure and roadway approaches.

Existing Low Bridge Member Elev. Br. No. B5307 = 287.5 ft.

Historical H.W. Elev. = 282.3 ft. Drainage area = 64.7 sq. mi.

Height from low seat to bottom of Drilled Shaft	
Bent 2	54'-6¼"
Bent 3	52'-6⅝"
Bent 4	50'-6⅛"
Bent 5	48'-7⅛"



ELEVATION

For Soil Boring Information, See Dwg. No. 55832.

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.		061437	176	372
				①	B5307	- LAYOUT -		55831

GENERAL NOTES

BENCH MARK: Vertical Control Data are shown in the Survey Control Data Sheets

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 edition), with applicable supplemental specifications and special provisions. Unless otherwise noted, Section and subsection refer to the Construction Specifications.

DESIGN SPECIFICATIONS: AASHTO Standard Specifications for Highway Bridges 17th Edition (2002) with interim Specifications.

LIVE LOADING: HS20 DESIGN METHOD: LOAD FACTOR

SEISMIC PERFORMANCE CATEGORY: A

MATERIALS AND STRENGTHS:

Class S (AE) Concrete (Superstructure)	f'c = 4,000 psi
Class S Concrete (Substructure)	f'c = 3,500 psi
Reinforcing Steel (Grade 60, AASHTO M31 or M322, Type A)	fy = 60,000 psi
Structural Steel (AASHTO M270, Grade 36)	Fy = 36,000 psi
Structural Steel (AASHTO M270, Grade 50W)	Fy = 50,000 psi

STEEL PILING: Piling in Bent 6 shall be HP12x53 and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 70 tons per pile and into material designated as Shale on the boring legend. Lengths of piling shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles to be driven after embankment to bottom of cap is in place. On all piling, the Contractor shall use approved steel H-Pile driving points.

FOOTINGS: Footings for Bent 1 shall be set a minimum of 2'-0" into material designated as Shale on the boring legend. Foundations for footings shall be prepared in accordance with Section 801.04. Rock excavations shall be made to neat lines of the concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. Concrete in footings shall be poured directly against excavated surfaces of rock.

DRILLED SHAFTS: All drilled shafts shall be founded a minimum of 17' into material designated as Shale on the boring legend. No adjustment in plan tip elevation shall be made without prior approval of the Engineer. Methods of construction of the drilled shafts shall be in accordance with SP Job 061437 "Drilled Shaft Foundations".

BRIDGE DECK: The concrete bridge deck shall be given a belted or burlap drag finish as specified in SP Job No. 061437 "Bridge Deck Surface Finish".

SHORING: Shoring may be necessary for execution of the proposed work, see SP Job No. 061437, "Shoring".

DETAIL DRAWINGS:	DRAWING NUMBER
End Bents	55834, 55835 & 55841, 55842
Intermediate Bents	55836 - 55839
Span Details	55843 - 55853
Bearings	55845
Steel Piling	55020
Type AT Approach Gutter	55036
Type Special I Approach Gutter	55854
Type Special I Approach Slab	55855
Stage Construction	55833

EXISTING BRIDGE: The Existing Bridge No. B5307 is 50'-3" wide and 337'-8½" long and consists of 5 - 67' Composite I-Beam Spans supported by four column intermediate bents with spread footings with bent 1 supported by spread footings and bent 6 supported by a steel H-Piles. Plans of the existing structure may be obtained upon request to the Programs and Contracts Division.

THE PROPOSED WORK CONSISTS OF: Widening the existing bridge, modifying the existing substructure as needed, cleaning and painting existing steel bearings (see SP Job No. 061437 "Cleaning and Painting Existing Bearings"), cleaning and installing new joint material at existing joints and removing and replacing portions of the concrete deck, approach slabs and approach gutters as shown in the plans. Remove Existing Concrete Riprap and Dumped Riprap as need for Bent Construction and Replace with new Riprap. For additional requirements in conducting the work, see Section 821.

VERIFICATION: Except as noted, components of the existing bridge are to be retained and joined to the proposed work. Information and dimensions shown are based on the existing bridge plans and survey information. The Contractor is to adhere strictly to the requirements for verification of the geometry of the existing bridge and its relationship to the proposed work described in subsection 821.02 and make necessary adjustments to fit the proposed work to the existing structure. Payment for this work shall be considered subsidiary to the pay item "Modification of Exisiting Bridge Structure (Br. No. B5307)".

REMOVAL AND SALVAGE: All material removed from the existing bridge under item 821 shall be disposed of according to Section 205. All material removed from the existing bridge shall become the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.

SHEET 1 OF 2

LAYOUT OF BRIDGE OVER FOURCHE CREEK
I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)
PULASKI COUNTY

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STATE OF ARKANSAS Charles R. Ellis REGISTERED PROFESSIONAL ENGINEER No. 9235 3-17-15 CHARLES R. ELLIS

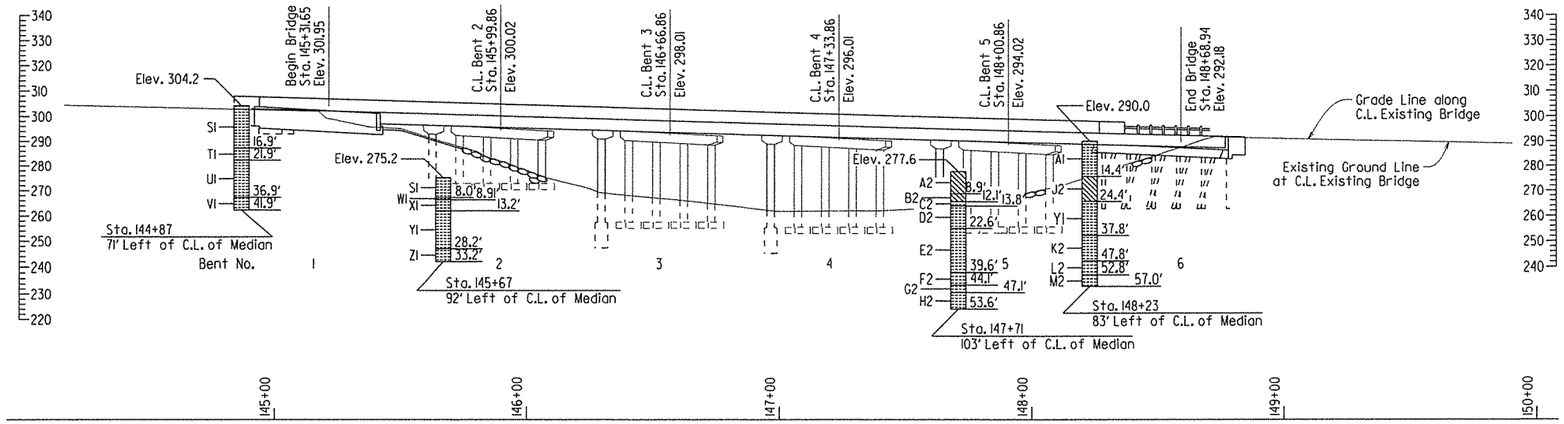
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CHECKED BY: DHP DATE: 3-17-15
DESIGNED BY: CSL DATE: Nov. 2013
FILENAME: b061437x2_11.dgn
SCALE: 1"=30'-0"

BRIDGE NO. B5307 DRAWING NO. 55831

PRINT DATE: 3/17/2015

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.		061437	177	372
				(1)	B5307	- LAYOUT	-	55832



ELEVATION

BORING LEGEND

A1-Soft, Gray Weathered Shale (Fill Material)
B1-Wet, Soft, Gray Clay with Sand and some Organic Matter
C1-Moist, Very Stiff, Gray and Brown Clay with Sand
D1-SHALE - Dark Gray, Weathered, Medium Hard
E1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
F1-Wet, Very Soft, Brown Clay with some Organic Matter and Trace of Gravel
G1-Moist, Medium Stiff, Brown and Gray Clay with Sand and Iron Nodules
H1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, and Slickensides
J1-SHALE WITH WEATHERED SHALE LAYERS AND PYRITE PARTINGS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
K1-SHALE WITH OCCASIONAL GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Hard, with Moderate Dip and Slickensides
L1-SHALE WITH FREQUENT GRAY SANDSTONE SEAMS - Dark Gray, Laminated, Hard, with Moderate Dip and Slickensides
M1-Moist, Stiff, Brown and Gray Clay with Iron Nodules
N1-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND PYRITE PARTINGS - Dark Gray, Laminated, Hard, with Moderate Dip, a Vertically Fractured Layer and Slickensides
P1-Wet, Medium Stiff, Reddish Brown and Gray Clay with some Sand
Q1-Moist, Stiff, Light Brown and Gray Clay with some Sand
R1-WEATHERED SHALE - Dark Gray, Laminated, Soft, with Moderate Dip, some Vertically Fractured Layers and Slickensides
S1-SHALE - Brown and Gray, Weathered, Medium Hard
T1-SHALE WITH WEATHERED SHALE LAYERS - Gray and Brown, Laminated, Medium Hard to Hard, with Moderate Dip, and Slickensides
U1-SHALE WITH WEATHERED SHALE AND OCCASIONAL CHERT LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip
V1-SHALE WITH WEATHERED SHALE AND FREQUENT QUARTZ LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Moderate Dip, Fractured Layers and Slickensides
W1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Medium Hard to Hard
X1-SHALE WITH WEATHERED SHALE LAYERS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
Y1-SHALE WITH WEATHERED SHALE AND OCCASIONAL CHERT LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip,
Z1-SHALE WITH WEATHERED SHALE LAYERS AND TRACE OF PYRITE- Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
A2-Moist, Stiff, Brown and Gray Clay with some Organic Matter (Grassroots)
B2-Moist, Medium Stiff, Brown and Gray Clay with some Organic Matter (Grassroots)
C2-SHALE - Dark Gray, Medium Hard to Hard
D2-SHALE WITH QUARTZ PARTINGS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip and Slickensides
E2-SHALE WITH FREQUENT QUARTZ SEAMS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip and Slickensides •
F2-SHALE WITH FREQUENT QUARTZ SEAMS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
G2-SHALE WITH LIGHT GRAY CLAY LAYERS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
H2-SHALE WITH QUARTZ SEAMS AND PYRITE PARTINGS - Dark Gray, Laminated, Slightly Weathered, Hard, with Moderate Dip, Fractured Layers and Slickensides
J2-Moist, Stiff, Brown Clay with Trace of Organic Matter
K2-SHALE WITH WEATHERED SHALE LAYERS AND QUARTZ SEAMS - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
L2-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND TRACE OF CHERT - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides
M2-SHALE WITH WEATHERED SHALE LAYERS, QUARTZ SEAMS AND TRACE OF PYRITE - Dark Gray, Laminated, Medium Hard to Hard, with Steep Dip, Fractured Layers and Slickensides

"N" VALUES

Sta. 144+87 - 71' Left of Center Line of Median
4.5- 4.8, N=60(3")
9.5- 9.7, N=28(2")
14.0- 14.2, N=60(3")

Sta. 145+67 - 92' Left of Center Line of Median
5.1- 6.1, N=24
8.9- 8.9, N=10(.01")

Sta. 147+71- 103' Left of Center Line of Median
4.4- 5.4, N=13
9.4- 10.4, N=7
13.7- 13.8, N=35(1")

Sta. 148+23 - 83' Left of Center Line of Median
4.9- 5.9, N=16
9.9- 10.9, N=28
14.9- 15.9, N=12
19.9- 20.9, N=13
24.4- 24.4, N=10(.01")

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
LAYOUT OF BRIDGE OVER FOURCHE CREEK
I-30/I-430 INTERCHANGE IMPVT. (L.R.) (PH. II) (S)
PULASKI COUNTY

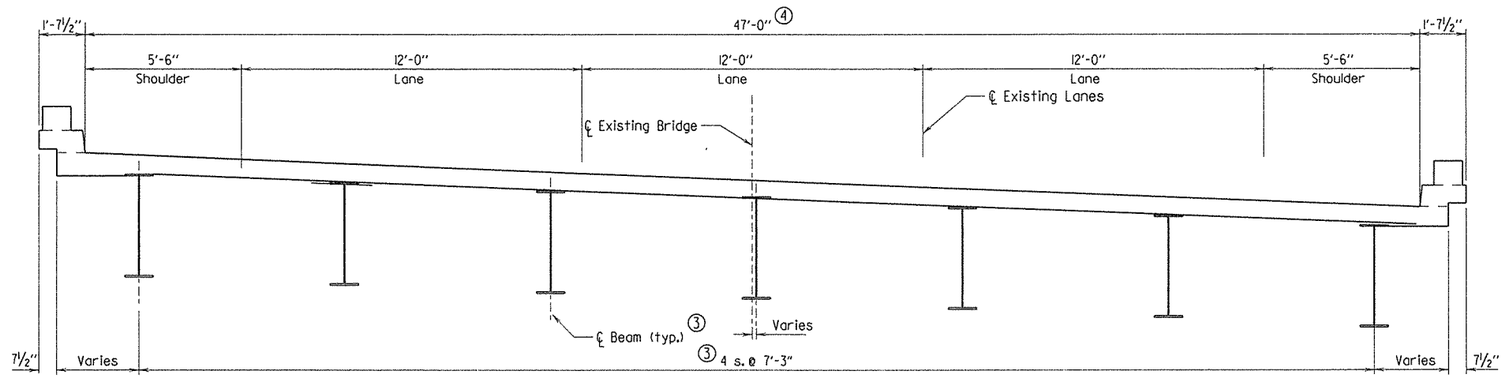
ROUTE 430 SEC. 21
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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BRIDGE NO. B5307 DRAWING NO. 55832

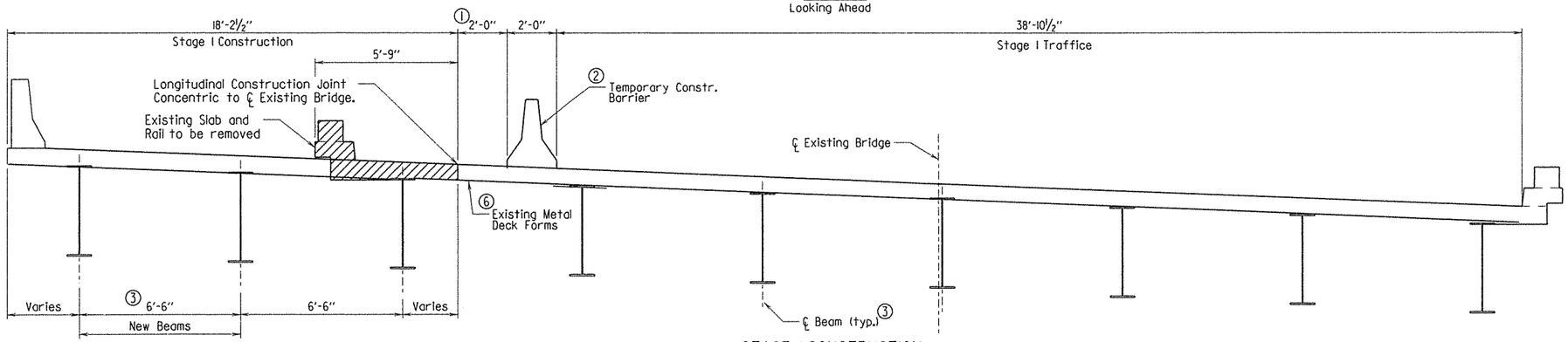
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				6	ARK.			
				JOB NO.		061437	178	372

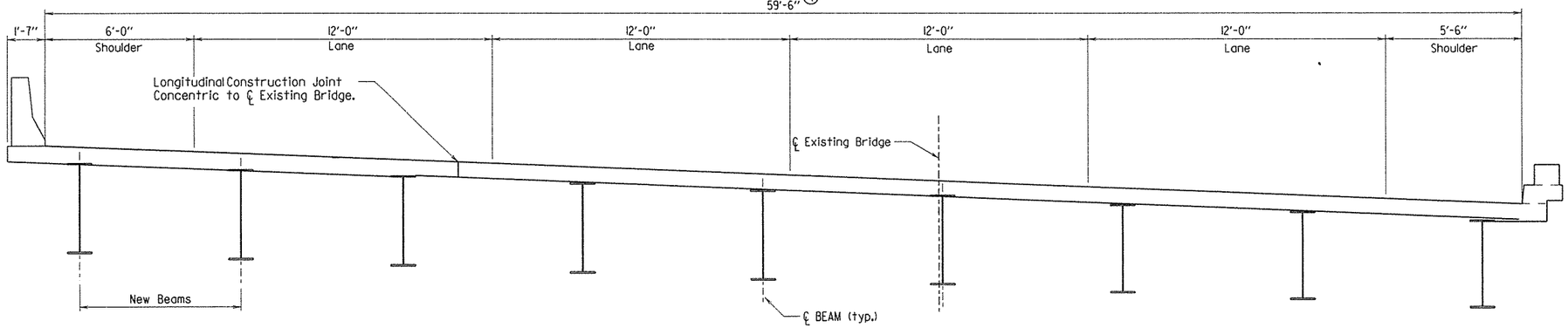
(1) B5307 - STAGE CONSTRUCTION - 55833



EXISTING ⑤
Looking Ahead



STAGE I CONSTRUCTION
Looking Ahead



FINAL
Looking Ahead

① Construction Vehicles shall not travel on this portion of the Existing Deck

② Connect Temporary Construction Barrier to Existing Deck (See Dwg. No. TC-4).

③ Beams are parallel to Chord to ℄ Existing Bridge at ℄ Joints.

④ Measured along Radial line.

⑤ Based on Existing Plans. All Existing Beams to be retained.

⑥ The Contractor shall retain Existing Metal Deck Forms.

NOTES:
Details which relate to maintenance of traffic are shown on bridge plans for information only. See Roadway Plans for Maintenance of Traffic.

For details of Temporary Barrier, See Dwg. No. TC-4 and TC-5.

All sections are looking ahead.

See Layout for information not shown.

STATE OF ARKANSAS
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DETAILS OF STAGE CONSTRUCTION I-430 OVER FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

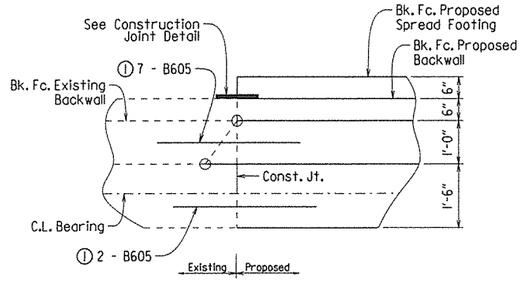
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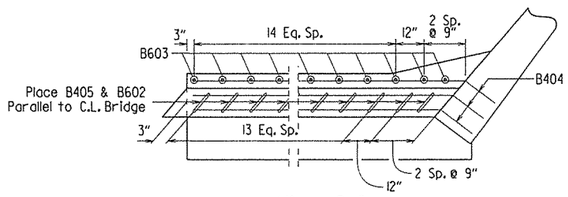
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				6	ARK.			
				JOB NO.		061437	179	372

(1) B5307 - DETAILS OF BENT 1 - 55834



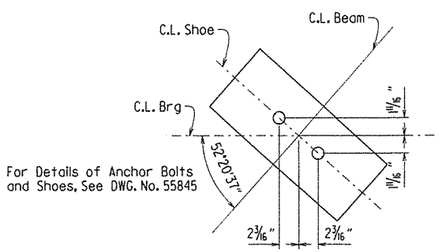
Detail Y

No Scale



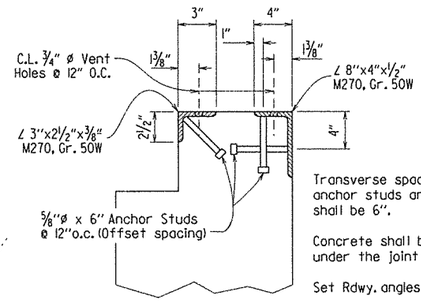
View C-C

No Scale



Typical Anchor Bolt Layout

No Scale



For additional joint details, see Dwg. No. 55853.

Transverse spacing between anchor studs and vent holes shall be 6".

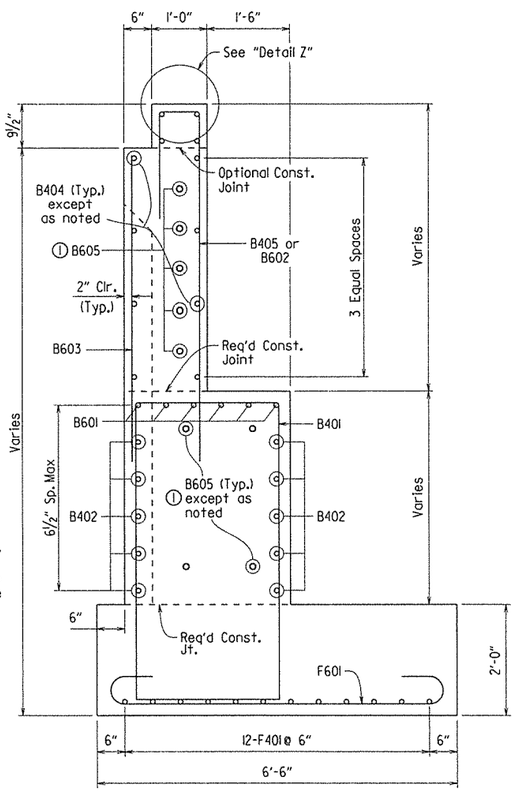
Concrete shall be hand packed under the joint armor.

Set Rdwy. angles normal to grade.

The profile of the backwall Angle shall be established based on the Vertical Curve in conjunction with the skew.

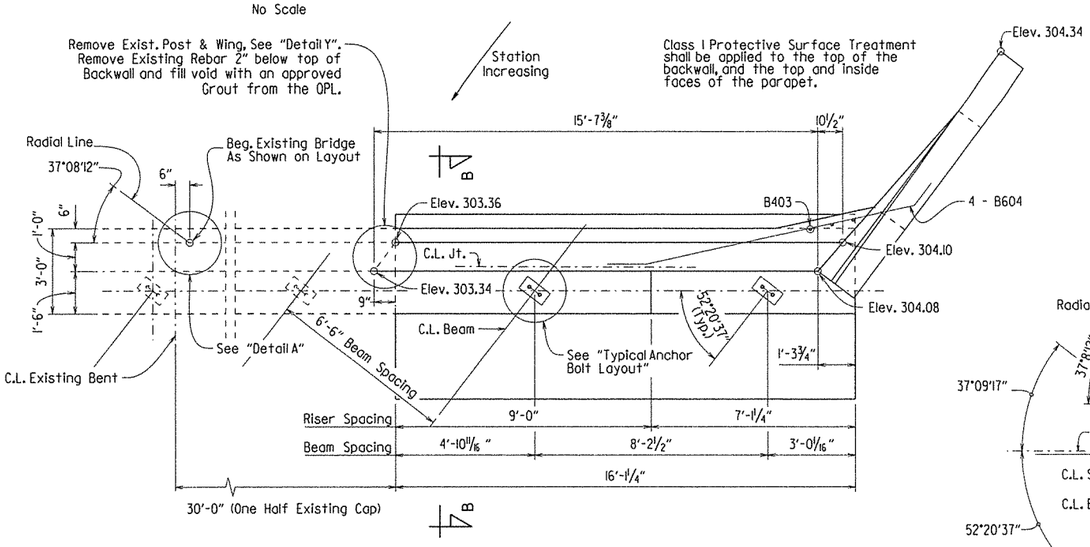
DETAIL Z

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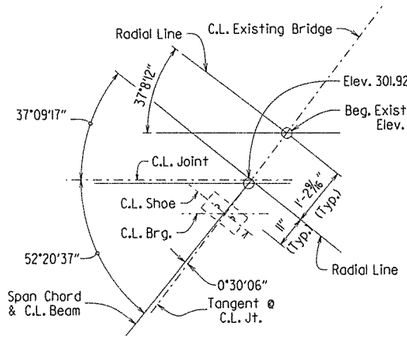


SECTION B-B

No Scale

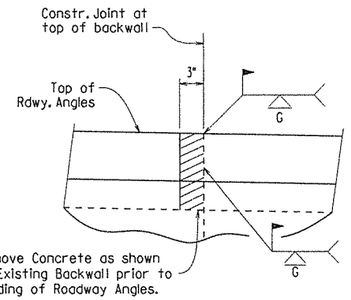


PLAN



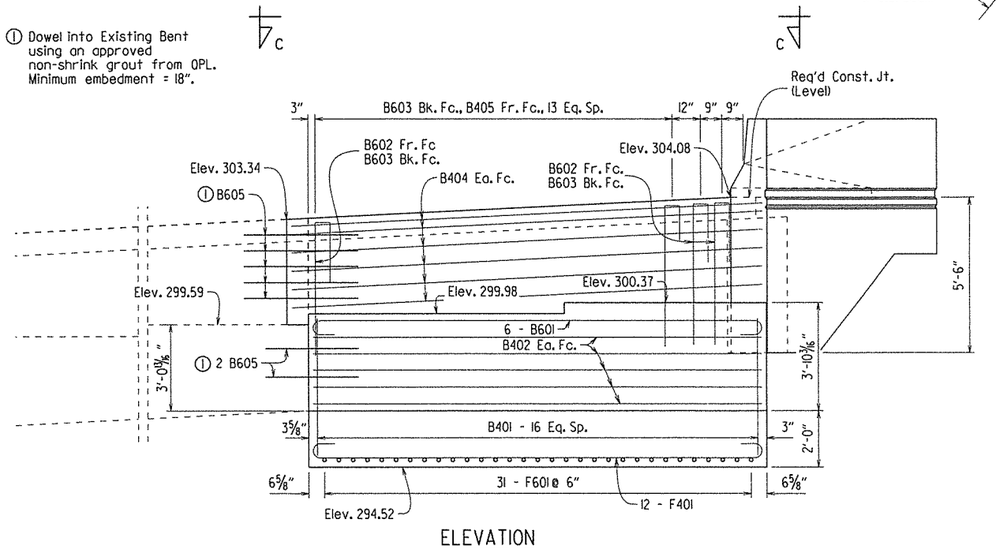
Detail A

No Scale



DETAIL OF WELD FOR EXPANSION DEVICE

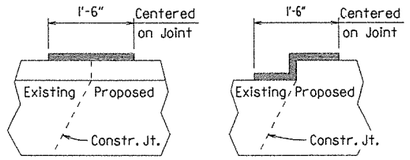
Looking Back - Bent 6
No Scale



ELEVATION

Looking Back

Membrane waterproofing Type "C" or approved equal. See Section 815 of the Standard Specifications.



PLAN

Payment for membrane to be considered subsidiary to Class "S" Concrete - Bridge.

CONSTRUCTION JOINT DETAIL

No Scale

GENERAL NOTES

Work required to remove and dispose portions of the existing bridge and any required doweling will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5307)".

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered 3/4" unless otherwise noted.

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

No portion of the backwall shall be poured until the beams are in place. Refer to "Expansion Device Installation at End Bents" note, Dwg. No. 55853 for additional info.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel In Beam Spans (M270, Gr. 50W)".

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

For additional information, see Layout.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT 1

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 2/12/2014
CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13

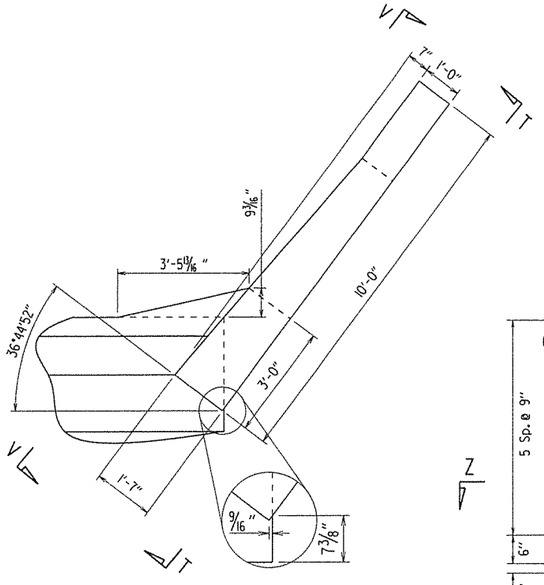
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BRIDGE NO. B5307 DRAWING NO. 55834

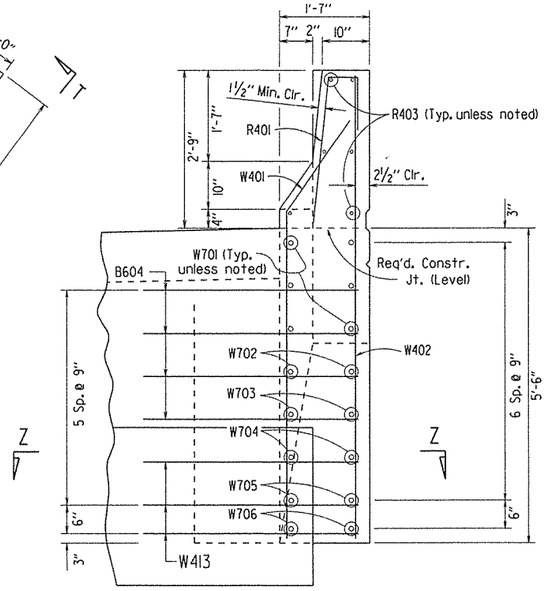
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	180	372

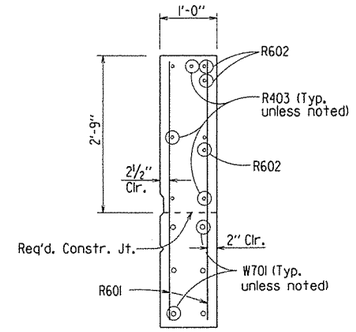
(1) B5307 - DETAILS OF BENT 1 - 55835



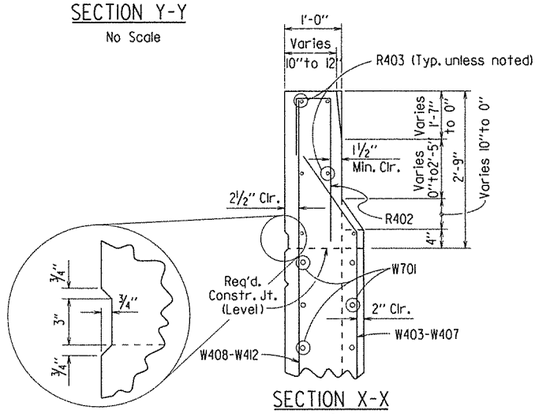
PLAN OF RAIL
No Scale



VIEW W-W
No Scale



SECTION Y-Y
No Scale

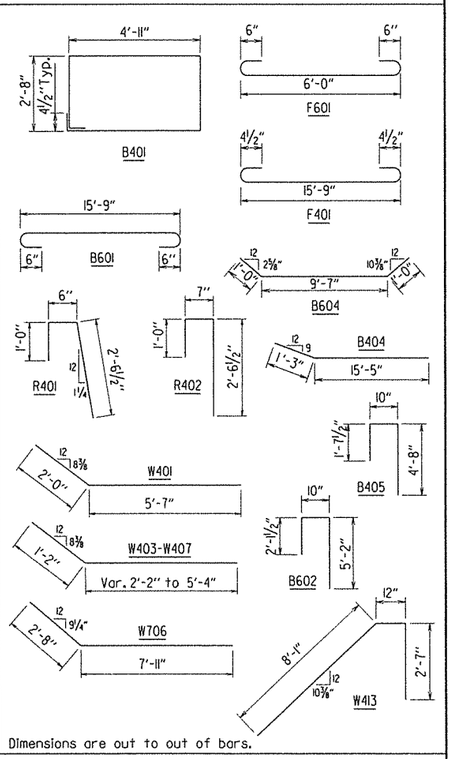


SECTION X-X
No Scale

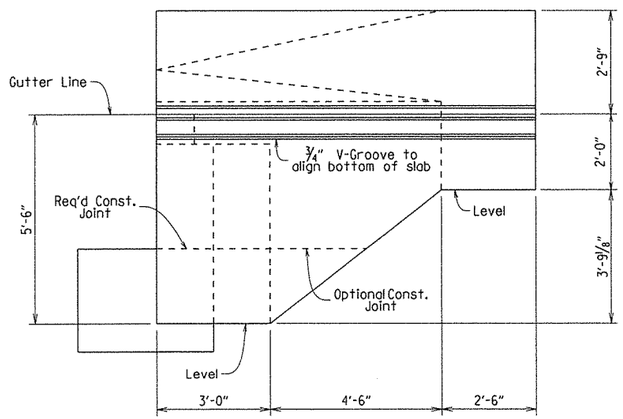
BAR LIST - BENT 1

MARK	NO. REQ'D.	LENGTH	P.D.
B401	17	15'-6"	2"
B402	10	15'-9"	Str.
B403	3	4'-4"	Str.
B404	12	16'-8"	3"
B405	13	7'-0"	2"
F401	12	16'-9"	3"
R401	4	3'-11"	2"
R402	4	4'-0"	2"
R403	6	9'-8"	Str.
W401	3	7'-7"	2"
W402	3	7'-11"	Str.
W403-W407	1 each	Var. 3'-4" to 6'-6"	2"
W408-W412	1 each	Var. 4'-6" to 7'-7"	Str.
W413	3	11'-6"	3"
B601	6	17'-1"	4½"
B602	3	7'-10"	4½"
B603	17	5'-0"	Str.
B604	4	11'-7"	4½"
B605	9	3'-5"	Str.
F601	31	7'-4"	4½"
R601	10	4'-5"	Str.
R602	3	5'-0"	Str.
W701	6	9'-8"	Str.
W702	2	6'-5"	Str.
W703	2	5'-5"	Str.
W704	2	4'-5"	Str.
W705	2	3'-6"	Str.
W706	2	10'-7"	5¼"

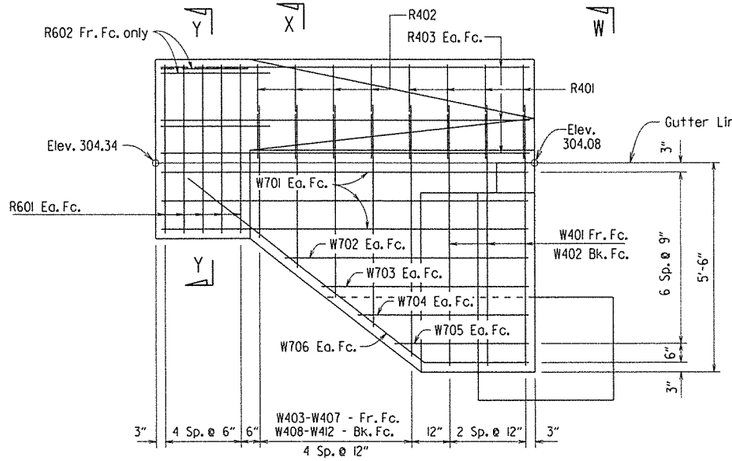
BENDING DIAGRAMS



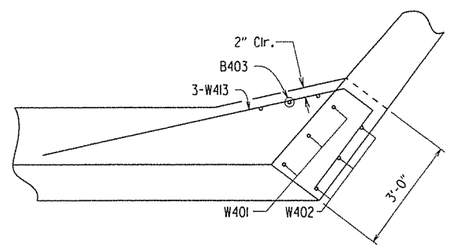
Dimensions are out to out of bars.



VIEW T-T
No Scale



VIEW V-V
No Scale



SECTION Z-Z
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
5-8-14
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 2 OF 2
DETAILS OF BENT 1

ROUTE SEC.

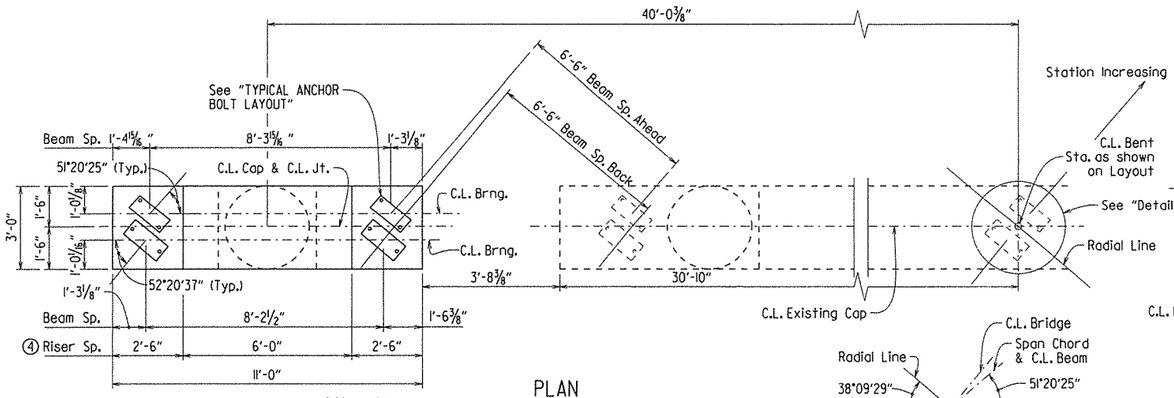
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 2/12/14
CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13
FILENAME: b061437x2_bl.dgn
SCALE: No Scale

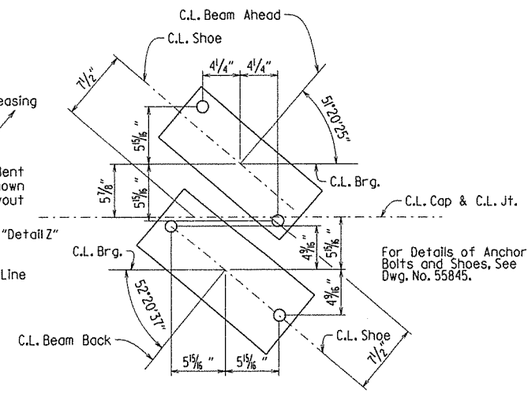
BRIDGE NO. B5307 DRAWING NO. 55835

PRINT DATE: 7/31/2014

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.		061437	181	372
				①	B5307 - INT. BENT DETAILS - 55836			

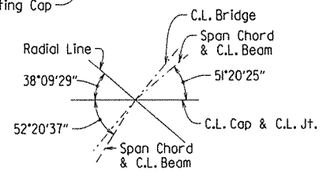


PLAN
Looking Ahead



For Details of Anchor Bolts and Shoes, See Dwg. No. 55845.

TYPICAL ANCHOR BOLT LAYOUT
No Scale



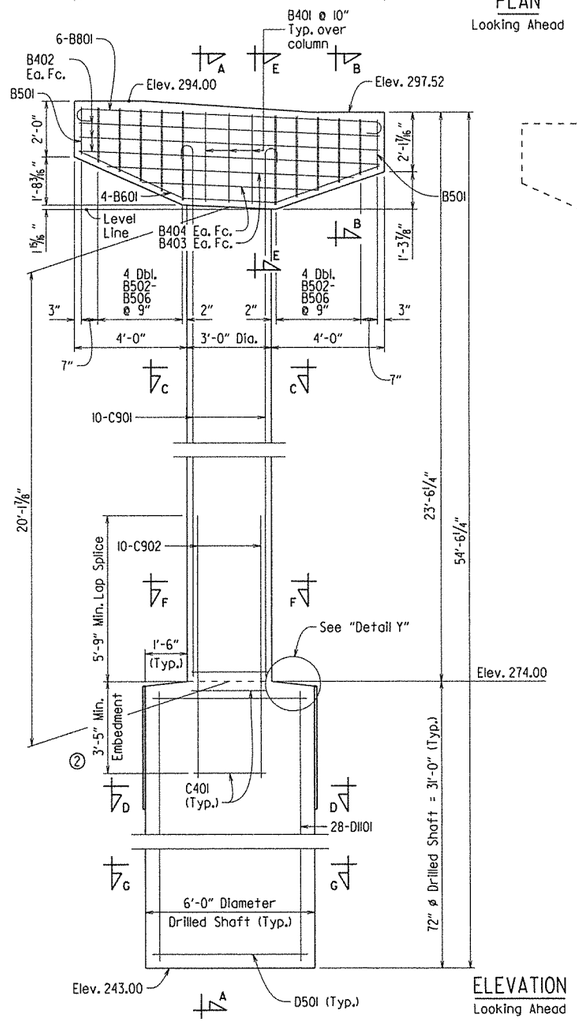
Detail Z
No Scale

① Length of Permanent Casing shown is for estimating quantities only. Actual lengths are to be determined in the field. See Special Provision Job No. 061437 "Drilled Shaft Foundations". Permanent casing shall not extend below top of competent rock without approval from the Engineer.

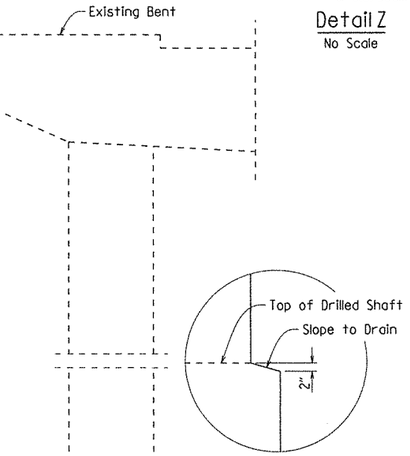
② The column reinforcing cage, consisting of bars C401 & C901, may be placed before or after concrete placement in the shaft is complete. Vibration of concrete in the top 10 feet of the shaft will be needed to ensure the consolidation of the concrete around the reinforcing steel and to insert the column reinforcing cage. The Contractor will be responsible for obtaining satisfactory results.

③ Minimum penetration into competent rock below bottom of casing shall not be less than 17 feet.

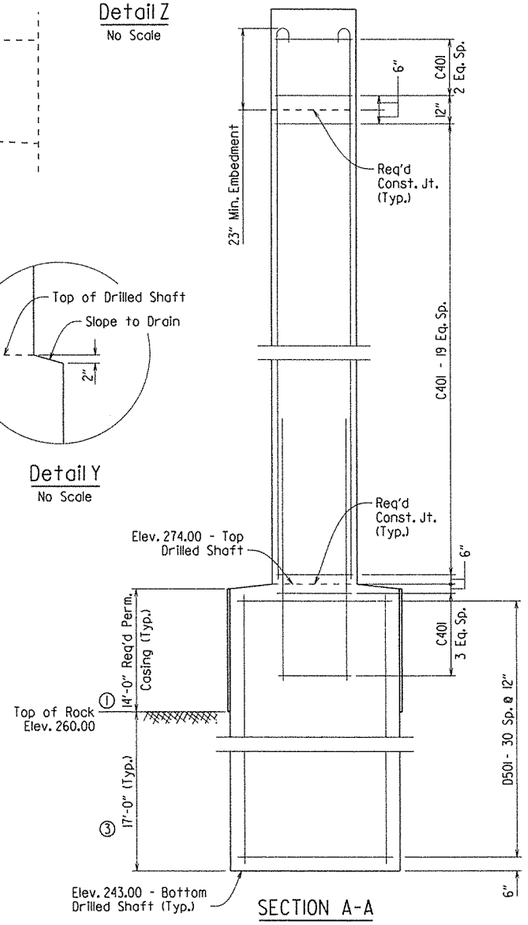
④ Risers shall be cast level at the elevations shown.



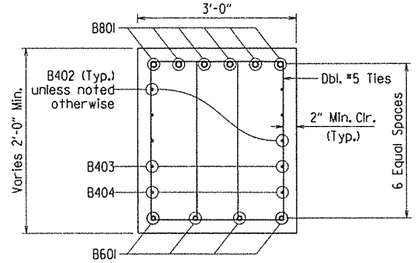
ELEVATION
Looking Ahead



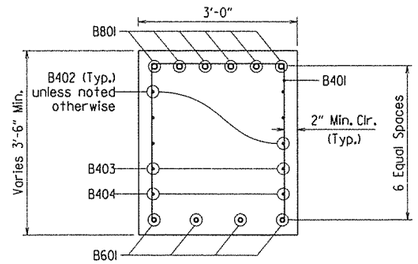
Detail Y
No Scale



SECTION A-A
No Scale



SECTION B-B
No Scale



SECTION E-E
No Scale

For General Notes, Sections C-C, D-D, F-F, G-G and Bar List, See DWG. No. 55840.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF BENT 2

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

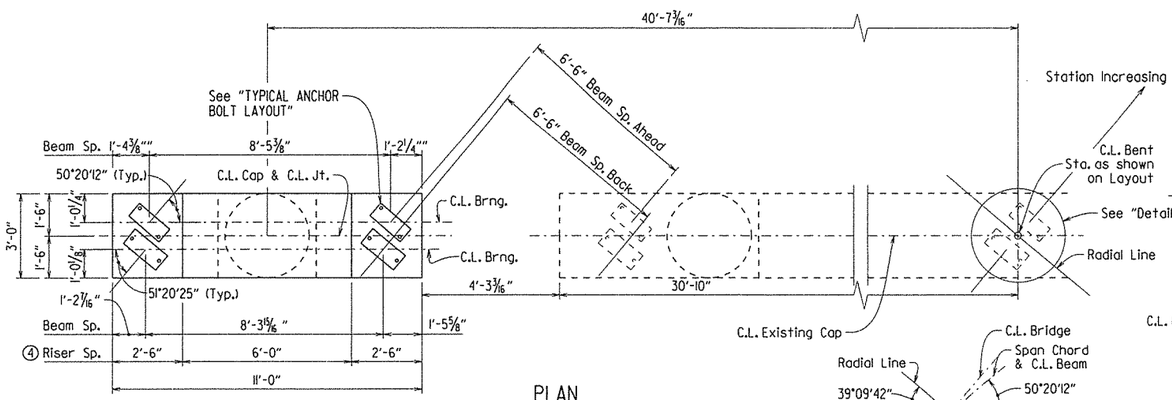
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 1/22/2014 FILENAME: b061437x2_b2.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: 3/8" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

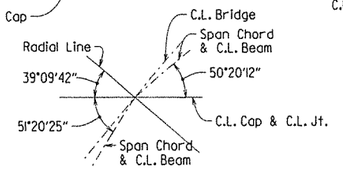
BRIDGE NO. B5307 DRAWING NO. 55836

PRINT DATE: 7/31/2014

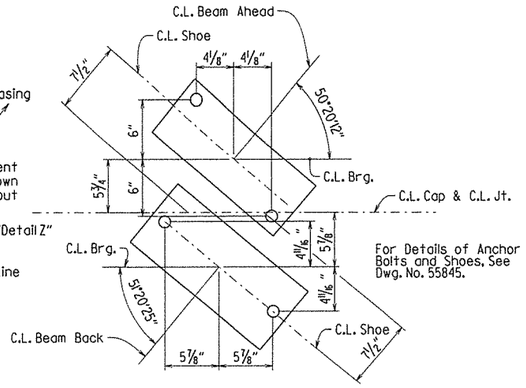
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	182	372
				(1)	B5307 -INT. BENT DETAILS - 55837			



PLAN
Looking Ahead



Detail Z
No Scale



For Details of Anchor Bolts and Shoes, See Dwg. No. 55845.

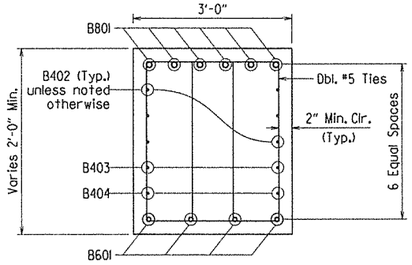
TYPICAL ANCHOR BOLT LAYOUT
No Scale

① Length of Permanent Casing shown is for estimating quantities only. Actual lengths are to be determined in the field. See Special Provision Job No. 061437 "Drilled Shaft Foundations". Permanent casing shall not extend below top of competent rock without approval from the Engineer.

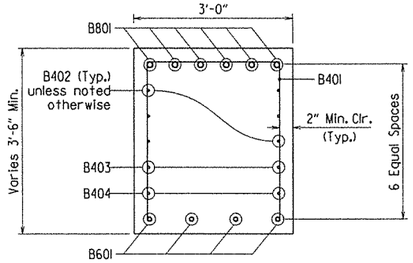
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④ Risers shall be cast level at the elevations shown.

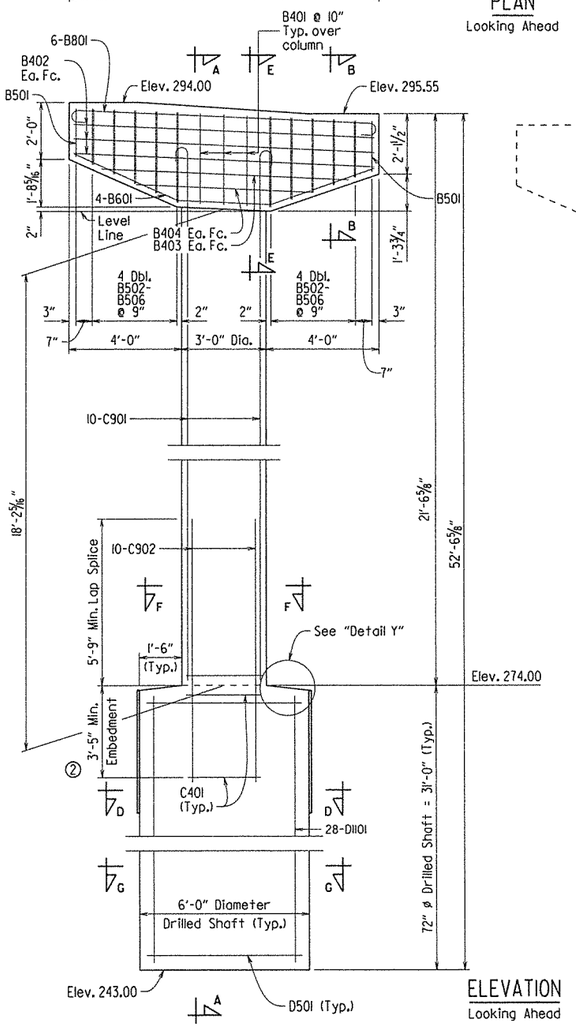


SECTION B-B
No Scale

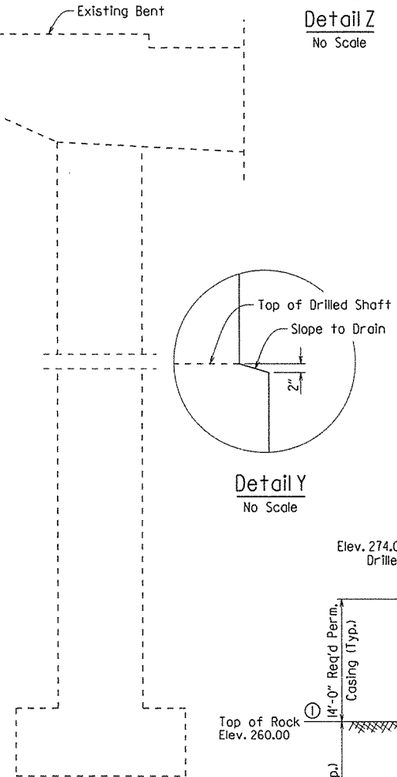


SECTION E-E
No Scale

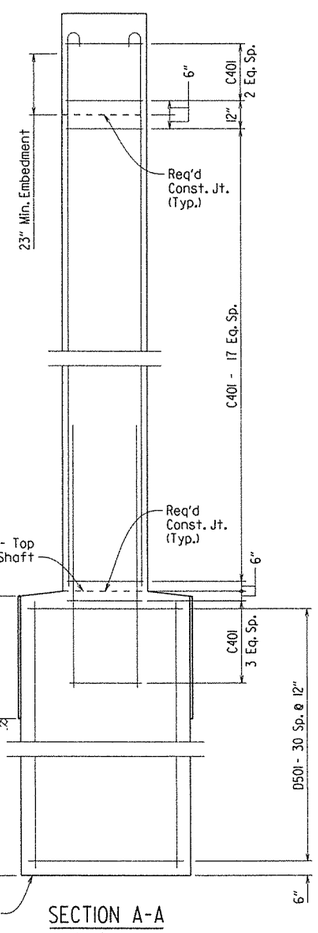
For General Notes, Sections C-C, D-D, F-F, G-G and Bar List, See DWG. No. 55840.



ELEVATION
Looking Ahead



Detail Y
No Scale



SECTION A-A
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
5-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF BENT 3

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

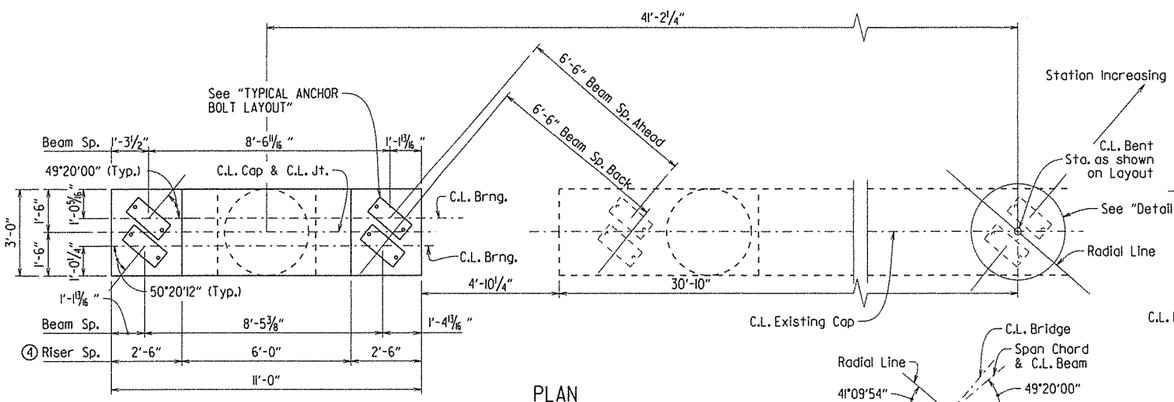
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 1/22/2014 FILENAME: b061437x2_b2.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: 1/8" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

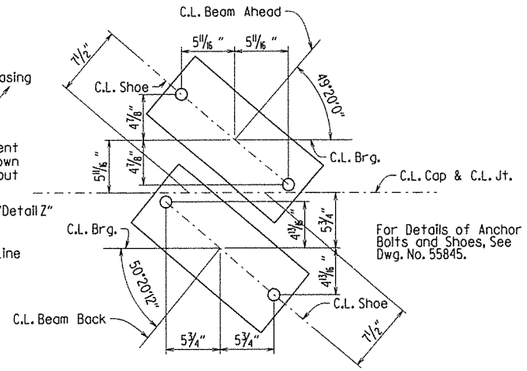
BRIDGE NO. B5307 DRAWING NO. 55837

PRINT DATE: 7/31/2014

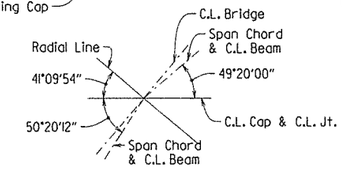
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	183	372
				①	B5307 - INT. BENT DETAILS - 55838			



PLAN
Looking Ahead



TYPICAL ANCHOR BOLT LAYOUT
No Scale



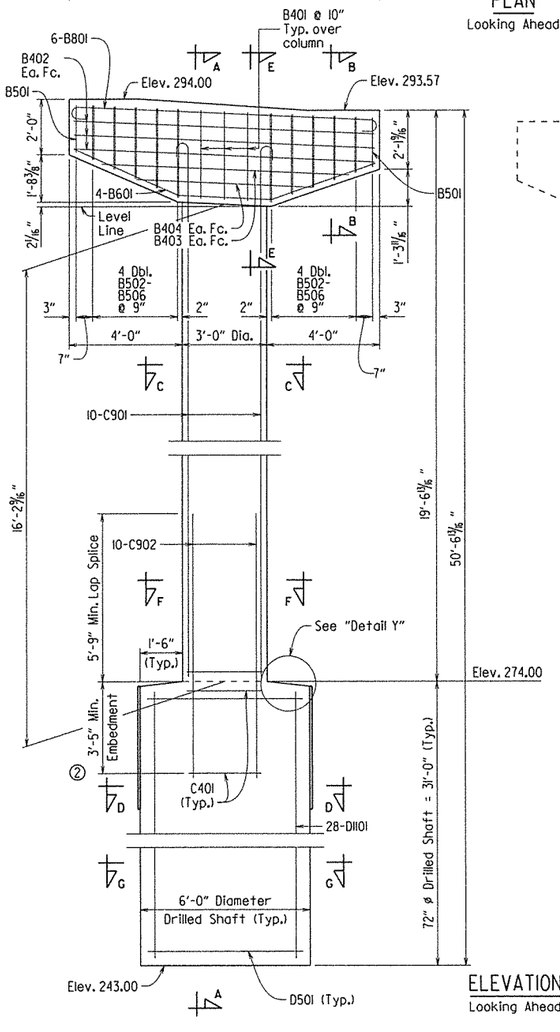
Detail Z
No Scale

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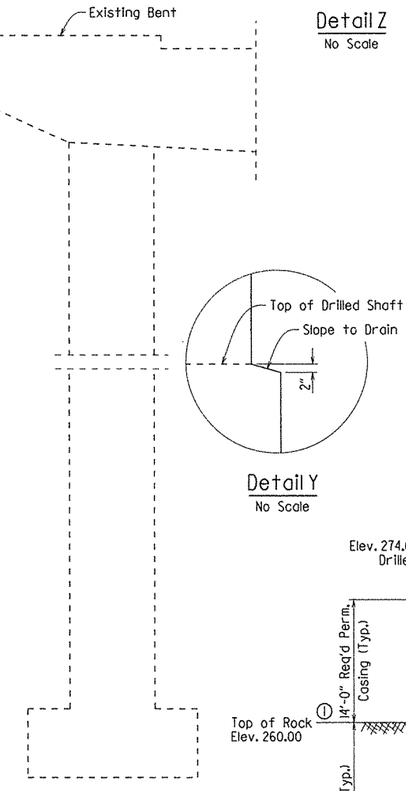
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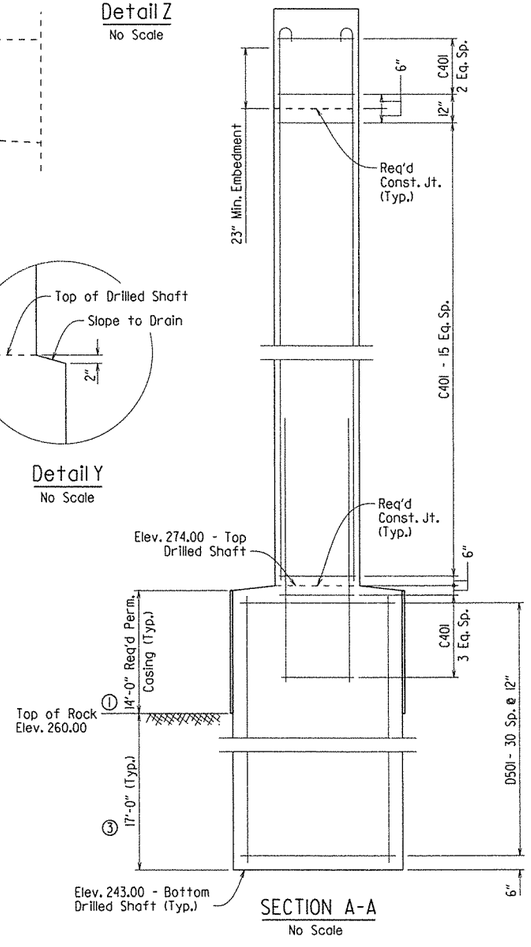
④ Risers shall be cast level at the elevations shown.



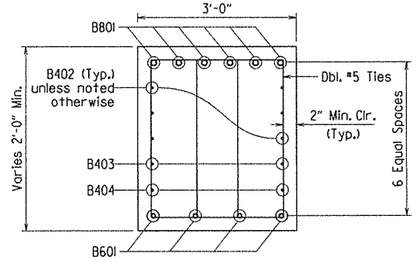
ELEVATION
Looking Ahead



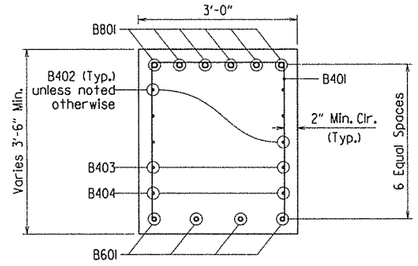
Detail Y
No Scale



SECTION A-A
No Scale



SECTION B-B
No Scale



SECTION E-E
No Scale

For General Notes, Sections C-C, D-D, F-F, G-G and Bar List, See DWG. No. 55840.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
3-8-14
CHARLES R. ELLIS
BRIDGE ENGINEER

DETAILS OF BENT 4

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

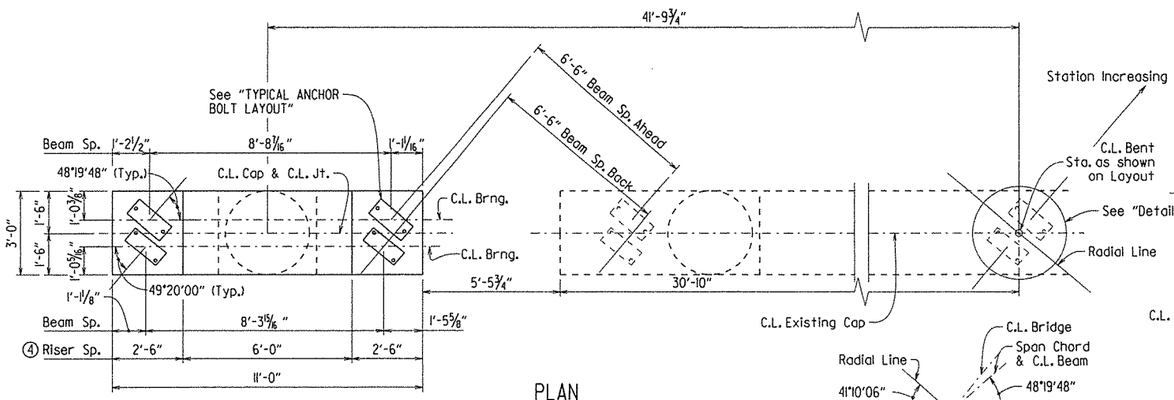
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 1/22/2014 FILENAME: b061437x2_b2.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: ⅜" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

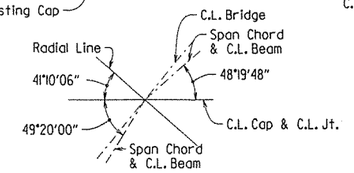
BRIDGE NO. B5307 DRAWING NO. 55838

PRINT DATE: 7/31/2014

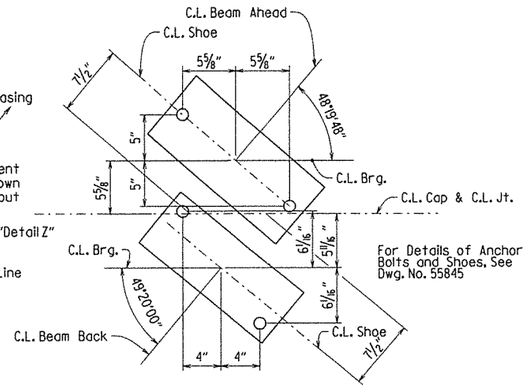
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	184	372
				(1)	B5307 - INT. BENT DETAILS - 55839			



PLAN
Looking Ahead



Detail Z
No Scale



For Details of Anchor Bolts and Shoes, See Dwg. No. 55845

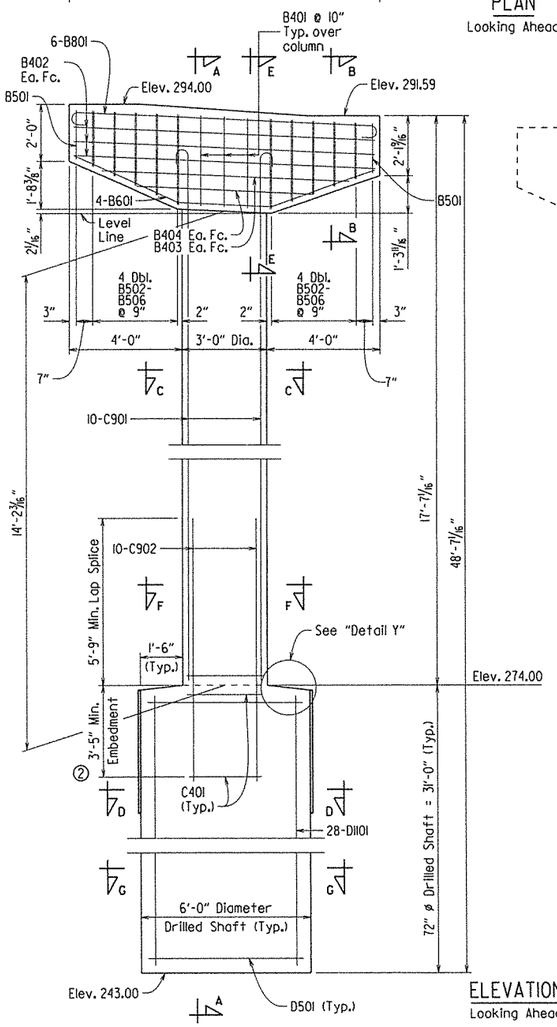
TYPICAL ANCHOR BOLT LAYOUT
No Scale

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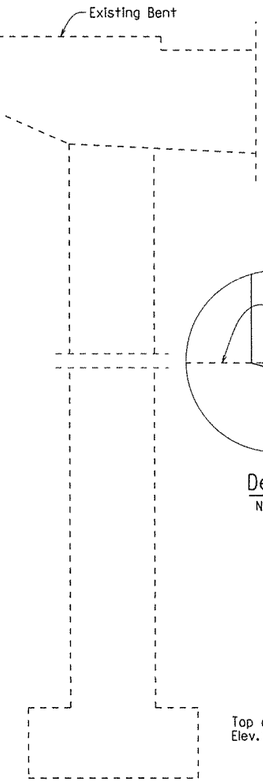
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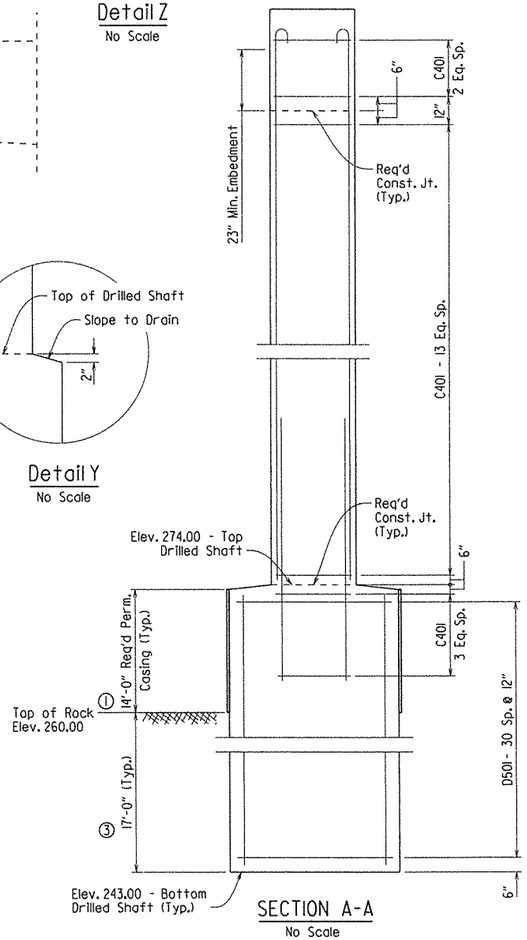
④ Risers shall be cast level at the elevations shown.



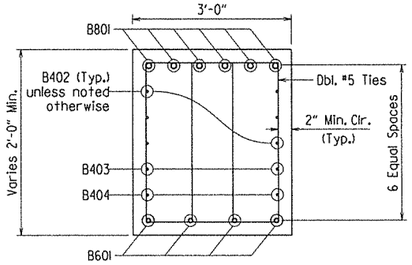
ELEVATION
Looking Ahead



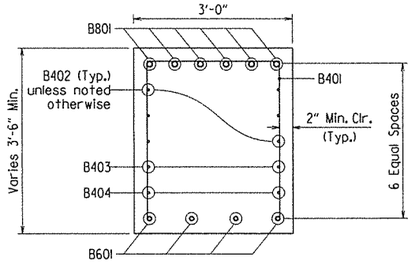
Detail Y
No Scale



SECTION A-A
No Scale



SECTION B-B
No Scale



SECTION E-E
No Scale

For General Notes, Sections C-C, D-D, F-F, G-G and Bar List, See DWG. No. 55840.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

DETAILS OF BENT 5

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 1/22/2014 FILENAME: b061437x2_b2.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: ⅜" = 1'-0" or as shown
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55839

PRINT DATE: 7/31/2014

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.		061437	185	372

① B5307 - INT. BENT DETAILS - 55840

GENERAL NOTES

Concrete in the cap and column shall be Class S with a minimum 28 day compressive strength, f'c = 3500 psi., and shall be poured in the dry. Concrete in the drilled shaft shall be Class S as modified by SP Job 061437 "Drilled Shaft Foundations". All exposed corners to be chamfered ¾" unless otherwise noted.

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

Top reinforcing bars shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For additional information see layout.

Drilled shafts shall conform to SP Job 061437 "Drilled Shaft Foundations" and shall be paid for at the unit bid price for "Drilled Shaft (72" Dia.)".

BAR LIST - PER BENT

	MARK	NO. REQ'D.	LENGTH	"A"	P.D.
	B401	3	8'-10"	-	2"
	B402	6	10'-8"	-	Str.
	B403	2	8'-9"	-	Str.
	B404	2	6'-3"	-	Str.
	B501	2	9'-4"	1'-9"	2½"
	B502 - B506	4 each	Var. 7'-10" to 10'-2"	Var. 2'-0"" to 3'-2"	2½"
	B601	4	11'-1"	-	4½"
	B801	6	12'-6"	-	6"
	C401	"D"	9'-2"	-	3"
	C901	20	"B"	-	9"
	C902	20	9'-4"	-	Str.
①	D501	31	17'-1"	-	3¾"
①	D1101	28	30'-6"	-	Str.

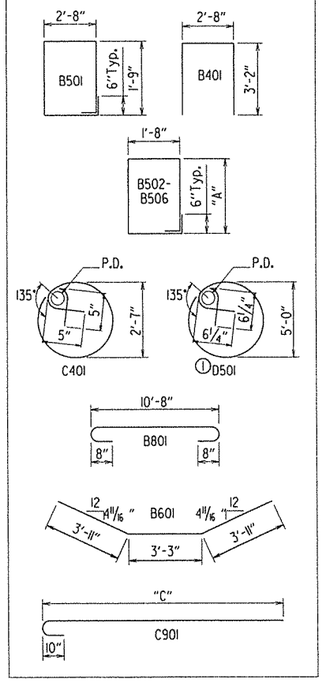
① D501 and D1101 Bars are non-pay items and are subsidiary to SP Job 061437 "Drilled Shaft Foundations".

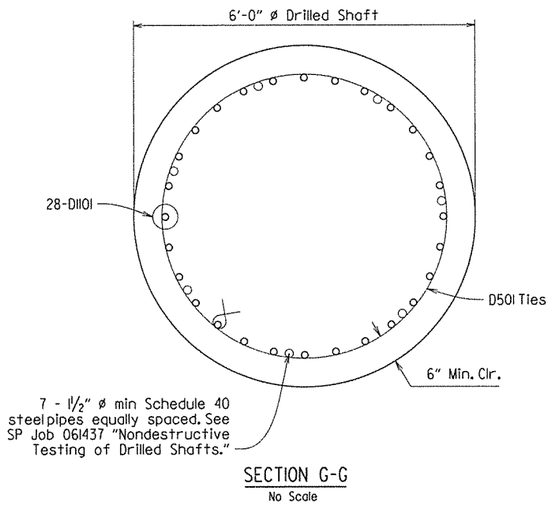
TABLE OF VARIABLES

Bent	"B"	"C"	"D"
2	23'-6"	22'-3"	27
3	21'-6"	20'-3"	25
4	19'-6"	18'-3"	23
5	17'-6"	16'-3"	21

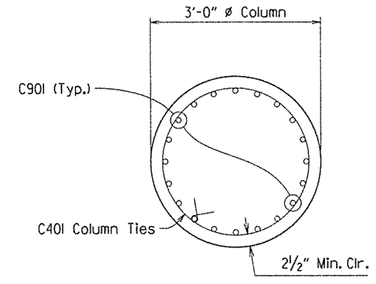
BENDING DIAGRAMS

Dimensions are out to out of bars.

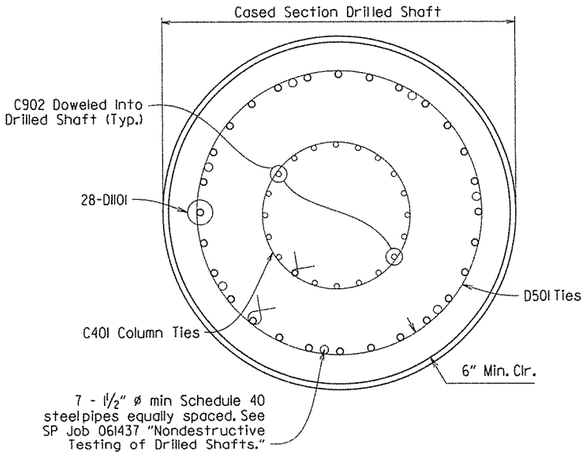




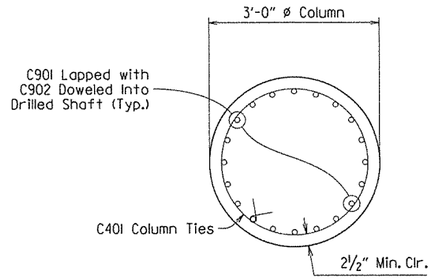
SECTION G-G
No Scale



SECTION C-C
No Scale



SECTION D-D
No Scale



SECTION F-F
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

COMMON DETAILS OF BENTS 2, 3, 4, AND 5

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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CHECKED BY: DHP DATE: 7/31/14 SCALE: No Scale

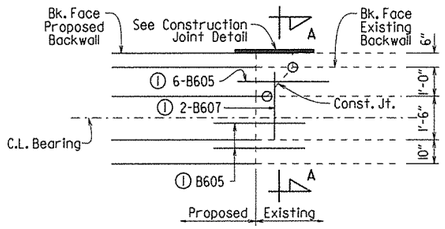
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55840

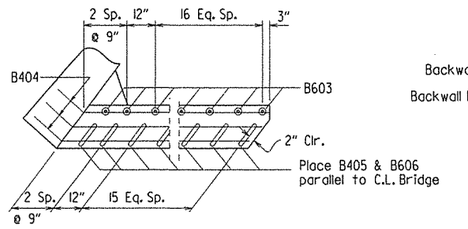
PRINT DATE: 7/31/2014

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.		061437	186	372

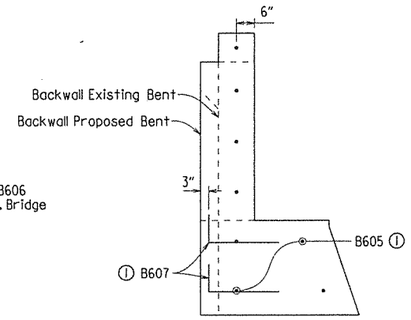
(1) B5307 - DETAILS OF BENT 6 - 55841



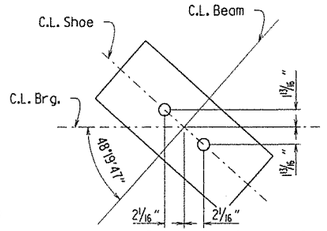
Detail Y
No Scale



View C-C
No Scale

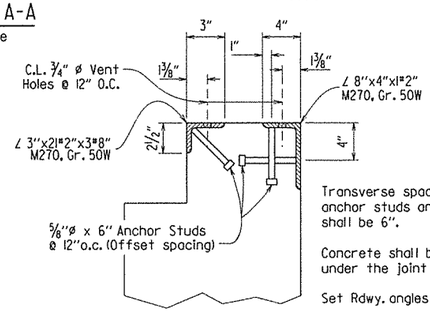


SECTION A-A
No Scale



For Details of Anchor Bolts and Shoes, See DWG. No. 55845

Typical Anchor Bolt Layout
No Scale



For additional joint details, see Dwg. No. 55853.

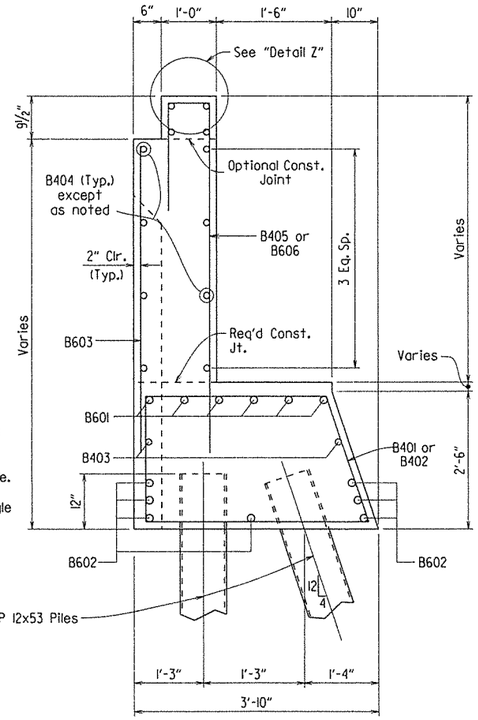
DETAIL Z
No Scale

Transverse spacing between anchor studs and vent holes shall be 6".

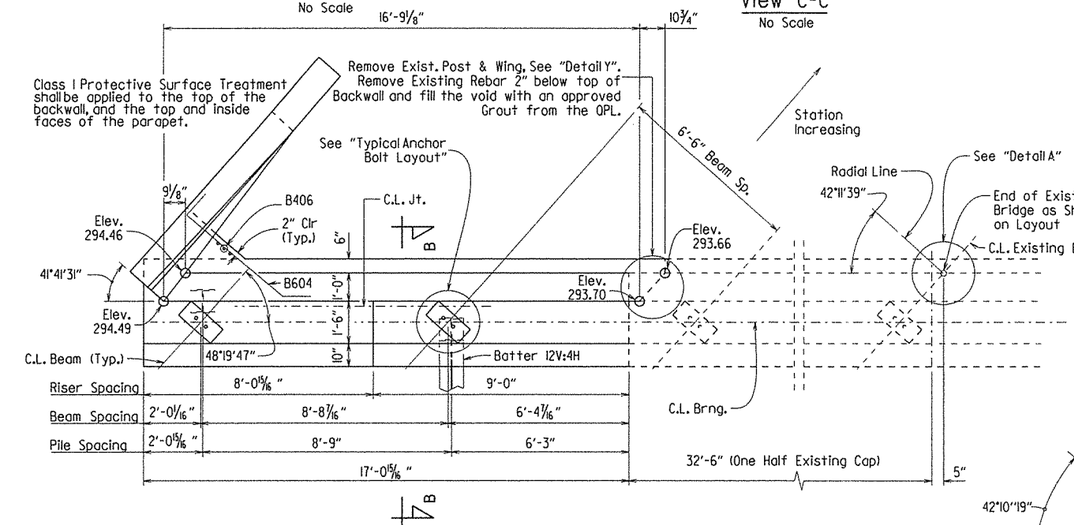
Concrete shall be hand packed under the joint armor.

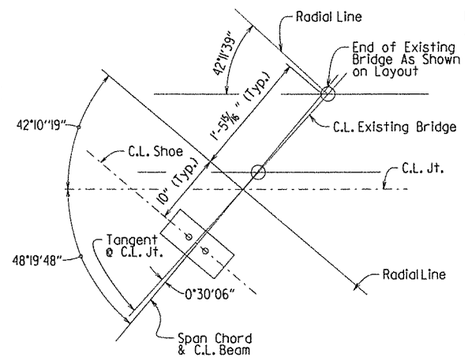
Set Rdwy. angles normal to grade.

The profile of the backwall Angle shall be established based on the Vertical Curve in conjunction with the skew.

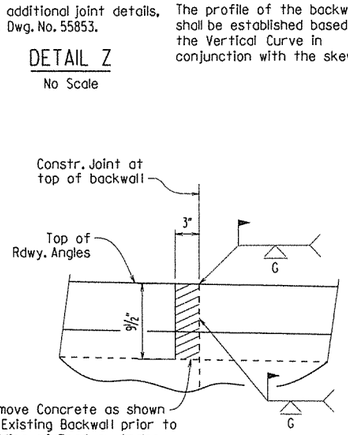


SECTION B-B
No Scale





Detail A
No Scale



DETAIL OF WELD FOR EXPANSION DEVICE
Looking Forward - Bent 6
No Scale

GENERAL NOTES

Work required to remove and dispose portions of the existing bridge and any required doweling will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5307)".

All concrete shall be Class "S" and shall be poured in the dry. All exposed corners to be chamfered ¾" unless otherwise noted.

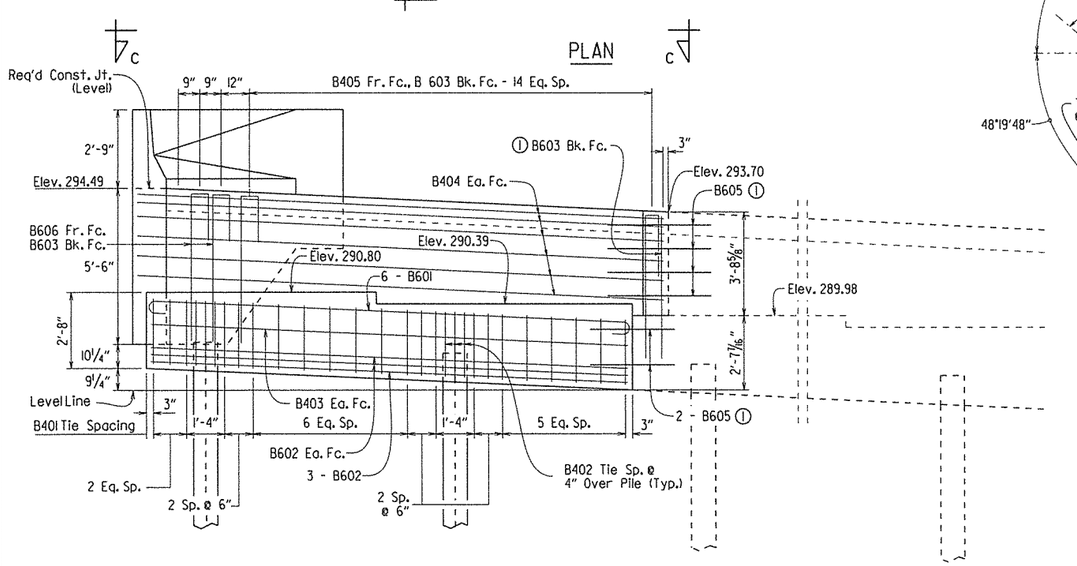
All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

No portion of the backwall shall be poured until the beams are in place. Refer to "Expansion Device Installation at End Bents" note, Dwg. No. 55853 for additional info.

Structural steel in end bents shall be AASHTO M270, Gr. 50W and shall be paid for as "Structural Steel in Beam Spans (M270, Gr. 50W)".

If anchor bolts are drilled into cap, top reinforcing bars shall be placed to avoid damage.

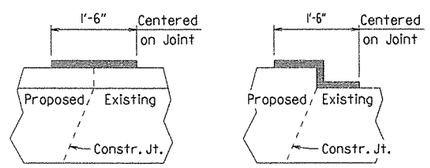
For additional information, see Layout.



(1) Dowel into Existing Bent using an approved non-shrink grout from OPL. Minimum embedment = 18".

ELEVATION
Looking Forward

Membrane waterproofing Type "C" or approved equal. See Section 815 of the Standard Specifications.



PLAN

Payment for membrane to be considered subsidiary to Class "S" Concrete - Bridge.

CONSTRUCTION JOINT DETAIL
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS
BRIDGE ENGINEER

SHEET 1 OF 2
DETAILS OF BENT 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

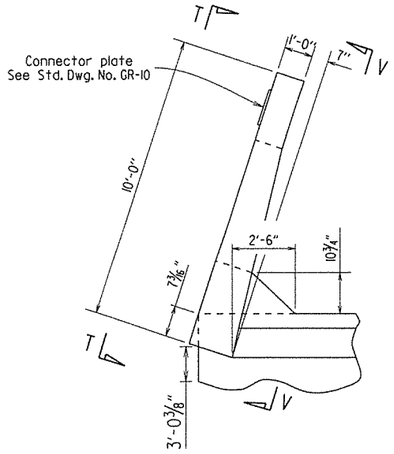
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CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13
FILENAME: b061437x2_bl.dgn
SCALE: ⅜" = 1'-0" or as shown

BRIDGE NO. B5307 DRAWING NO. 55841

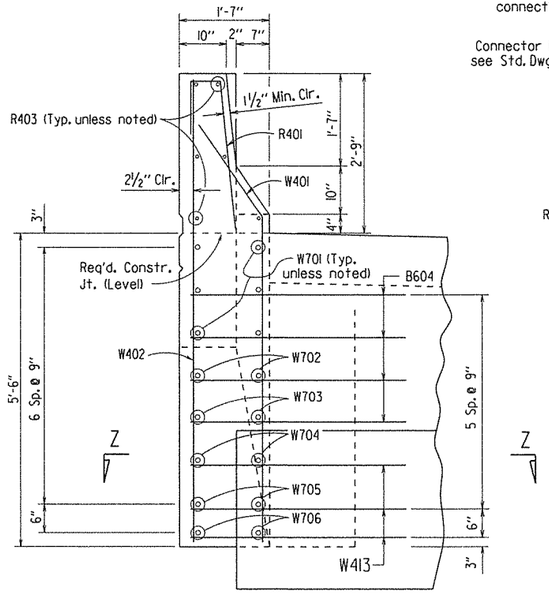
PRINT DATE: 7/31/2014

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				6	ARK.			
				JOB NO.		061437	187	372

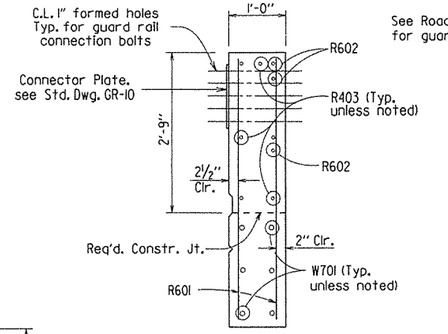
(1) B5307 - DETAILS OF BENT 6 - 55842



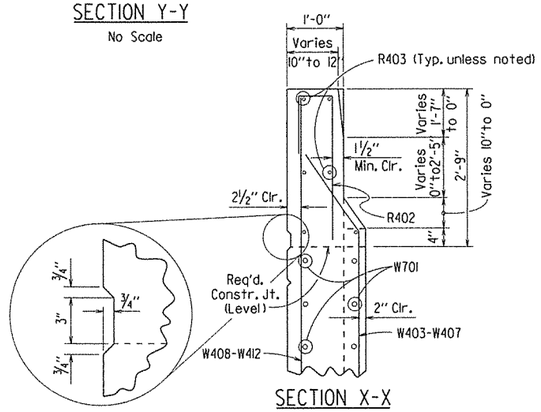
PLAN OF RAIL
No Scale



VIEW W-W
No Scale



SECTION Y-Y
No Scale

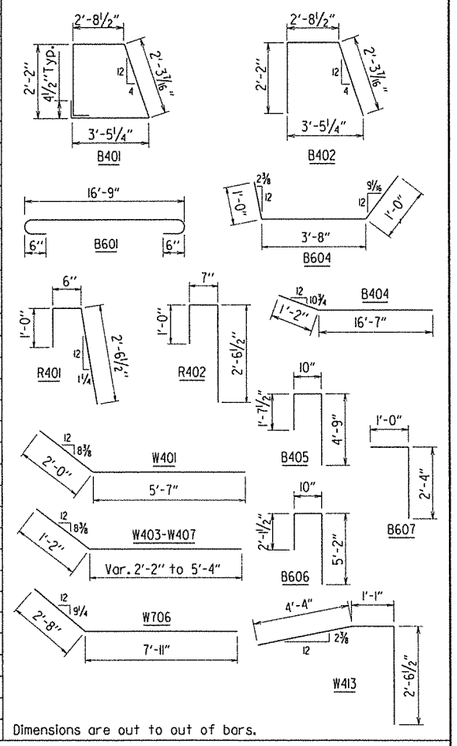


SECTION X-X
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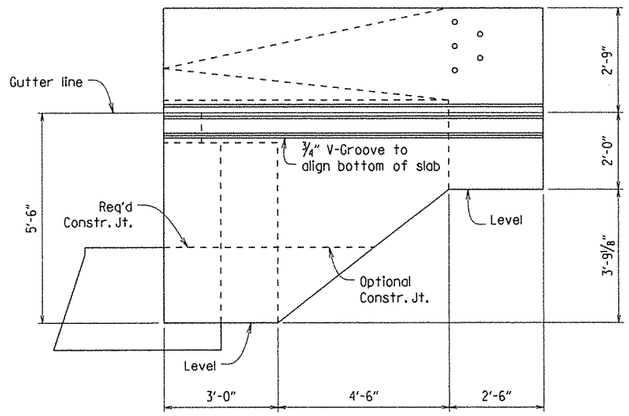
BAR LIST - BENT 6

MARK	NO. REQ'D.	LENGTH	P.D.
B401	22	11'-0"	2"
B402	6	7'-0"	2"
B403	2	16'-9"	Str.
B404	12	17'-9"	3"
B405	14	7'-0"	2"
B406	3	4'-4"	Str.
R401	4	3'-11"	2"
R402	4	4'-0"	2"
R403	6	9'-8"	Str.
W401	3	7'-7"	2"
W402	3	7'-10"	Str.
W403-W407	1 each	Var. 3'-4" to 6'-6"	2"
W408-W412	1 each	Var. 4'-6" to 7'-7"	Str.
W413	3	7'-10"	2"
B601	6	18'-1"	4½"
B602	7	16'-9"	Str.
B603	18	4'-3"	Str.
B604	4	5'-8"	4½"
B605	8	3'-0"	Str.
B606	3	7'-10"	4½"
B607	2	3'-3"	4½"
R601	10	4'-5"	Str.
R602	3	5'-0"	Str.
W701	6	9'-8"	Str.
W702	2	6'-1"	Str.
W703	2	5'-2	Str.
W704	2	4'-3	Str.
W705	2	3'-4	Str.
W706	2	10'-7"	5¼"

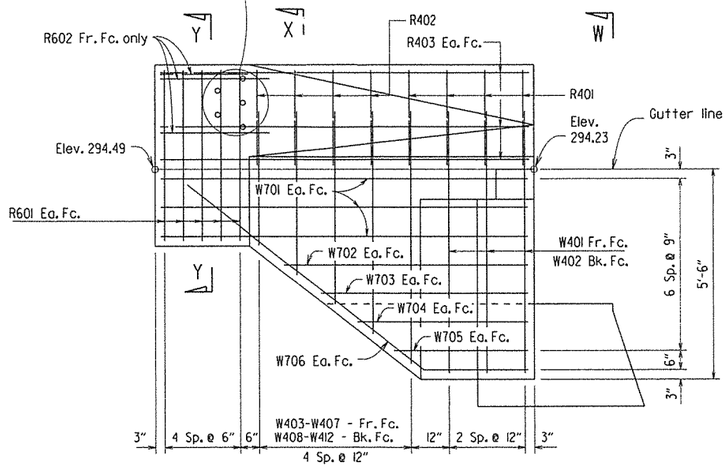
BENDING DIAGRAMS



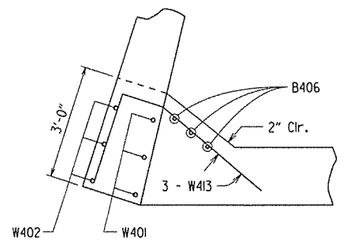
Dimensions are out to out of bars.



VIEW T-T
No Scale



VIEW V-V
No Scale



SECTION Z-Z
No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS
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SHEET 2 OF 2
DETAILS OF BENT 6

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BHS DATE: 2/12/14 FILENAME: b061437x2_bl.dgn
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DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55842

PRINT DATE: 7/31/2014

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.		061437	188372	
				(1) B5307 -		W-BEAM SPANS	- 55843	

NOTE: Class I Protective Surface Treatment shall be applied to the new roadway surface and to the face and top of the new parapet rail.

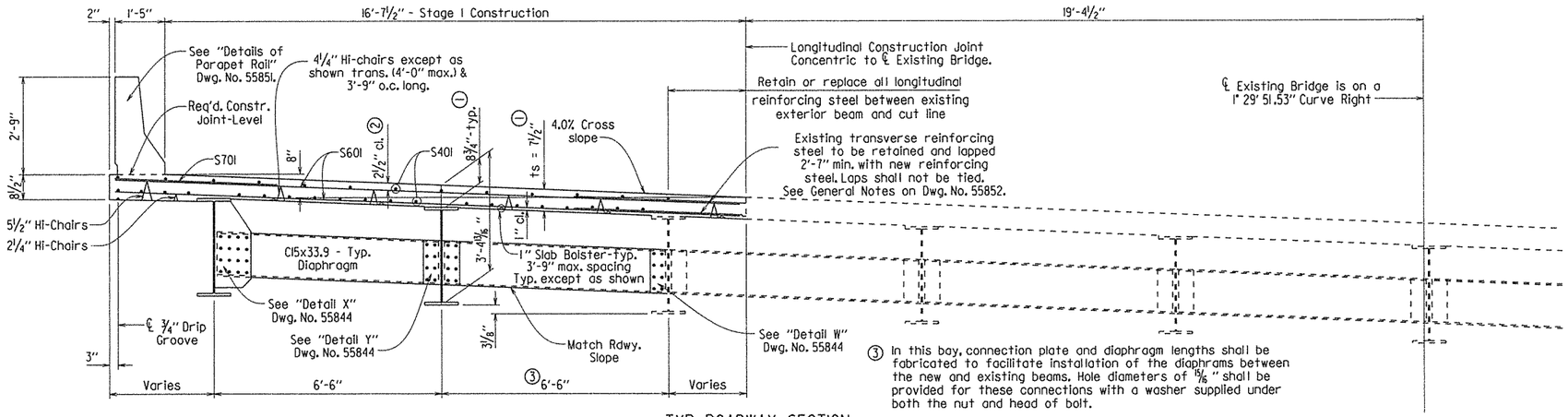
SLAB REINFORCING

Transverse:
S601 @ 7½" - Top and bottom
S701 @ 15" o.c. at gutterline (placed around ends of S601 in top
Longitudinal:
S401 as shown (18" max. top, 9" max. bott.)

① See "Adjustment for Slab Thickness Tolerance".

② Tolerance: Minus = ¼"; Plus equal to the amount of slab thickening used to meet slab thickness tolerance. See "Adjustment for Slab Thickness Tolerance".

For Stage Construction details, see Dwg. No. 55833.

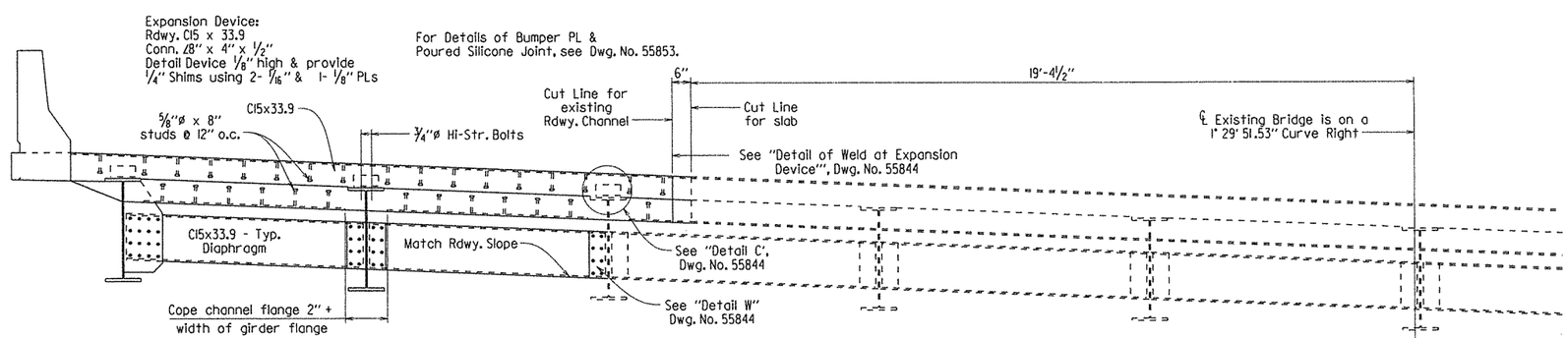


TYP. ROADWAY SECTION

Looking Ahead
Scale: ½" = 1'-0"

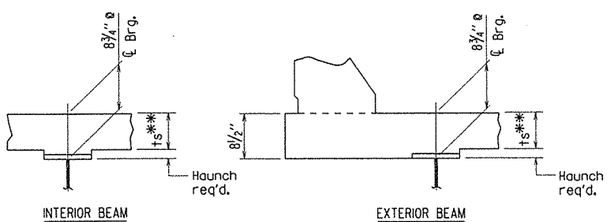
③ In this bay, connection plate and diaphragm lengths shall be fabricated to facilitate installation of the diaphrams between the new and existing beams. Hole diameters of 15/16" shall be provided for these connections with a washer supplied under both the nut and head of bolt.

Before the new concrete deck pour, loosely install as many bolts as possible on both ends of the diaphrams in this bay to the satisfaction of the Engineer. Install remaining bolts and fully tighten all bolts as soon as practical after completion of the new concrete deck pour.



TYP. SECTION THRU JOINT

Looking Ahead
Looking Back Similar
Scale: ½" = 1'-0"



** Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Note : ts = slab thickness as shown in " Typ. Roadway Section".

ADJUSTMENT FOR SLAB THICKNESS TOLERANCE

No Scale

Haunch dimension may vary within the following limits to maintain the grade and slab thickness tolerance : Minimum - occurs when top flange contacts bottom reinforcing steel; Maximum - top flange thickness plus 1¾". No increase in concrete and structural steel quantities will be made to maintain tolerances.

Tolerances shown are applicable only when removable deck forming is used. See Std. Dwg. No. 55005 for tolerances when permanent steel deck forms are used. Payment for concrete shall be based on removable deck forming.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 1 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

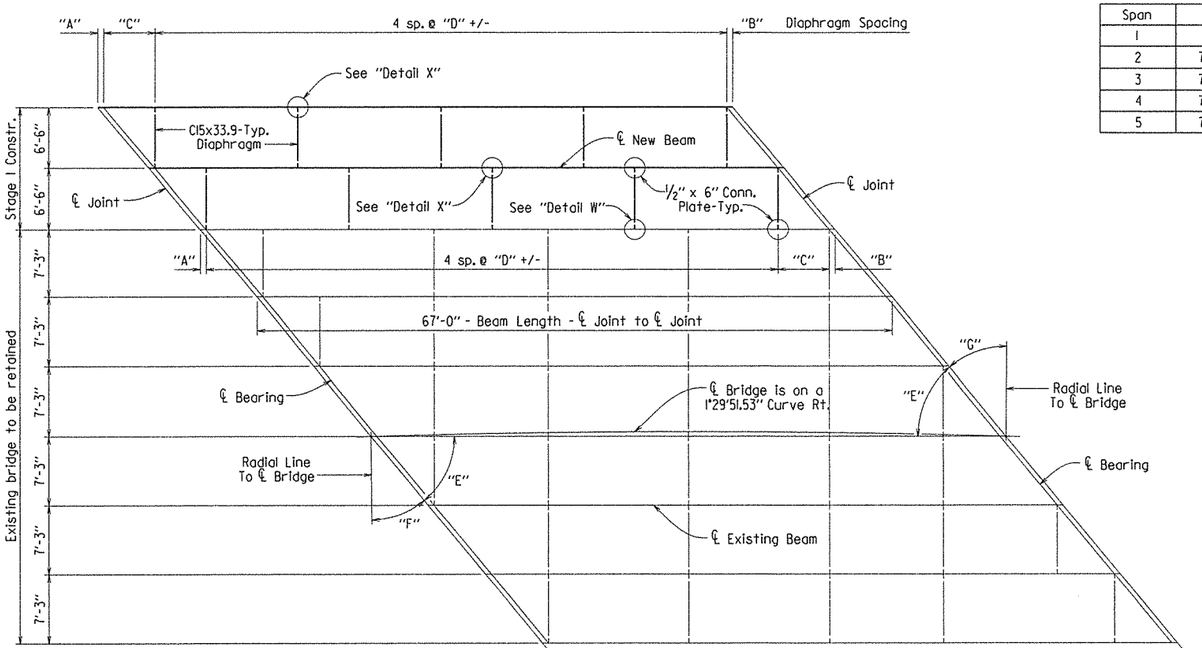
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-21-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55843

PRINT DATE: 7/31/2014

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.		061437	189	372
				(1) B5307 - W-BEAM SPANS - 55844				



FRAMING PLAN

Scale: 1/8" = 1'-0"

TABLE OF VARIABLES

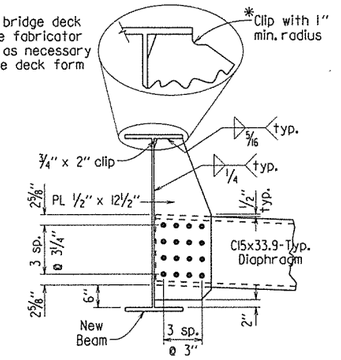
Span	"A"	"B"	"C"	"D"	"E"	"F"	"G"
1	11"	7 1/2"	5'-0 3/16"	15'-1 5/16" +/-	52°20'37"	37°09'17"	38°09'29"
2	7 1/2"	7 1/2"	5'-2 3/8"	15'-1 11/16" +/-	51°20'24"	38°09'29"	39°09'42"
3	7 1/2"	7 1/2"	5'-4 11/16"	15'-1 1/16" +/-	50°20'12"	39°09'42"	40°09'54"
4	7 1/2"	7 1/2"	5'-7"	15'-0 1/2" +/-	49°20'00"	40°09'54"	41°10'06"
5	7 1/2"	10"	5'-9 7/16"	14'-11 1/4" +/-	48°19'48"	41°10'06"	42°10'19"

TABLE OF DEAD LOAD DEFLECTIONS (INCHES)

Span	Point of Deflection	Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet	
		Interior	Exterior	Interior	Exterior	Interior	Exterior
All	0	0	0	0	0	0	0
	0.1	0.160	0.148	0.531	0.496	0.556	0.584
	0.2	0.303	0.280	1.005	0.939	1.052	1.106
	0.3	0.415	0.383	1.377	1.286	1.441	1.515
	0.4	0.486	0.449	1.613	1.507	1.688	1.775
	0.5	0.511	0.471	1.694	1.584	1.773	1.865
	0.6	0.486	0.449	1.613	1.509	1.688	1.777
	0.7	0.415	0.383	1.377	1.289	1.441	1.518
	0.8	0.303	0.280	1.005	0.941	1.052	1.108
	0.9	0.160	0.148	0.531	0.497	0.556	0.585
	0	0	0	0	0	0	0

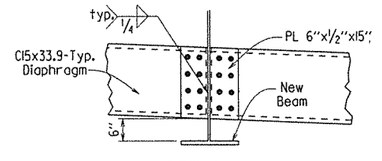
Note:
Camber for Dead Load Deflection plus Vertical curve ± 1/4" tolerance.
Deflections shown are from a chord from ℄ Bearing to ℄ Bearing.
Vertical curve corrections not included.

*If permanent steel bridge deck forms are used, the fabricator shall clip the plate as necessary to accommodate the deck form support.



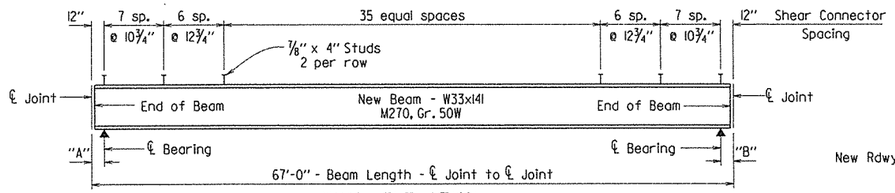
DETAIL X

No Scale



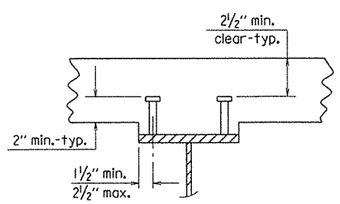
DETAIL Y

No Scale



BEAM ELEVATION

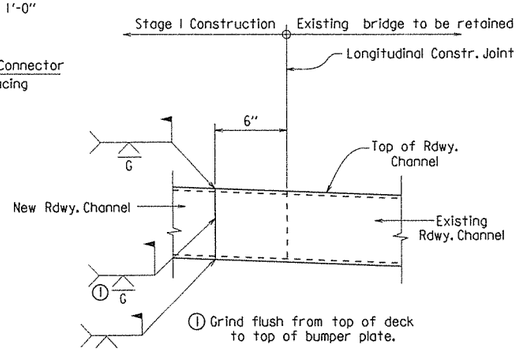
No Scale



Stud Shear Connectors shown shall be 7/8"ø x 4" long, granular flux filled, solid fluxed or equal, and automatically end welded to the beam flange in accordance with the recommendations of the Manufacturer. 3/4"ø studs may be used in place of the 7/8"ø studs shown, at the ratio of 1.361 - 3/4"ø studs in place of one 7/8"ø stud. 7/8"ø studs will be used as basis for measurement of structural steel in shear connectors. Maximum stud spacing = 24".

SHEAR CONNECTOR DETAIL

No Scale



(1) Grind flush from top of deck to top of bumper plate.

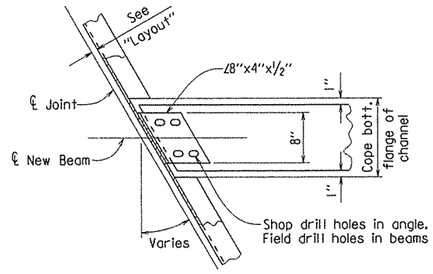
DETAIL OF WELD LOCATION FOR EXPANSION DEVICE

No Scale

TABLE FOR WELD

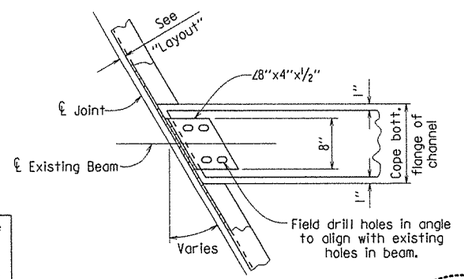
Material Thickness of Thicker Part Joined (Inches)	Minimum Size of Fillet Weld (Inches)	Single Pass Weld Must Be Used
To 3/4" Inclusive	1/4"	
Over 3/4"	5/16"	

Note: When a fillet weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of fillet weld.



CHANNEL CONNECTION DETAIL

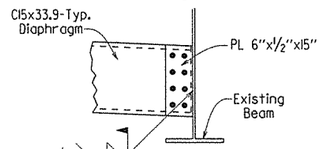
At New Beams
No Scale



DETAIL C

At Existing Beam
No Scale

Remove paint from existing beam prior to welding and paint according to Section 638 after welding plates.



DETAIL W

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 2 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

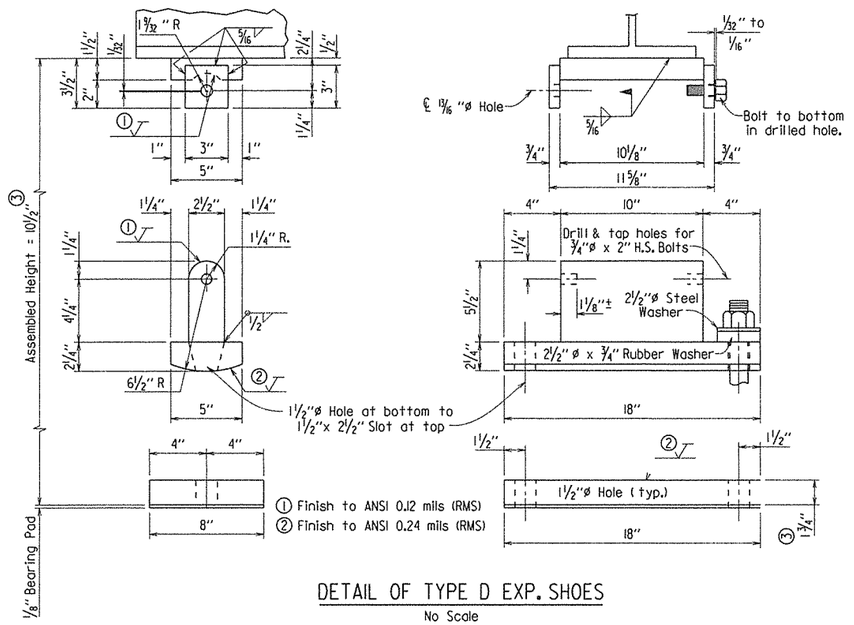
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-22-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55844

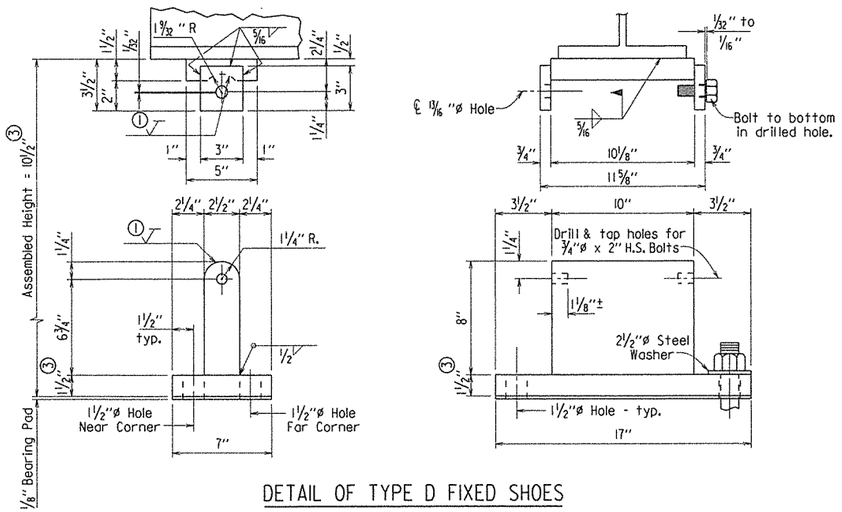
PRINT DATE: 7/31/2014

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.		061437	190	372
				(1) B5307 -		W-BEAM SPANS	- 55845	



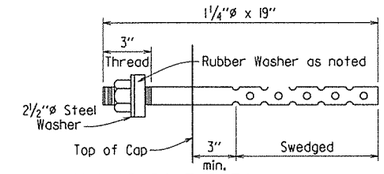
DETAIL OF TYPE D EXP. SHOES

No Scale



DETAIL OF TYPE D FIXED SHOES

No Scale



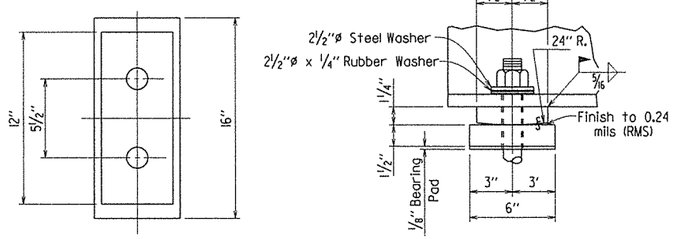
ANCHOR BOLT DETAIL

No Scale

Note: Anchor Bolt, Nut and Washer to be according to subsection 807.07. Indentations shall be circular with rounded bottoms and staggered as shown above. Rubber washer shall be closed cell expanded rubber, meeting the requirements of ASTM D1056 - 85 2B2 E2, and shall be considered subsidiary to the item of Structural Steel.

Note: 1/8" bearing pad shall conform to the requirements of Subsection 807.15 (a)

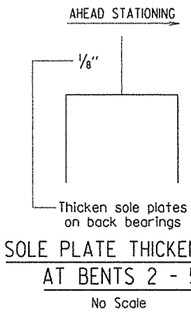
Plates for Type "B" & "D" Shoes must be M270, GR. 50W.



FIXED SHOE: 1 1/2"ø Holes in Sole Plate, Masonry Plate & Beam Flange.

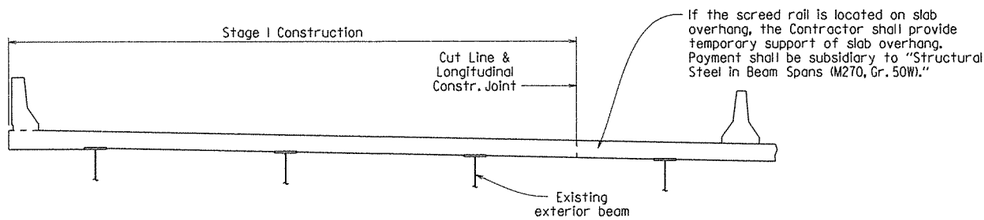
DETAIL OF TYPE B FIXED SHOES AT BENTS 1 & 6

No Scale



③ SOLE PLATE THICKENINGS AT BENTS 2 - 5

No Scale



SCREED RAIL SUPPORT

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 3 OF 9
DETAILS OF WIDENING
67' SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

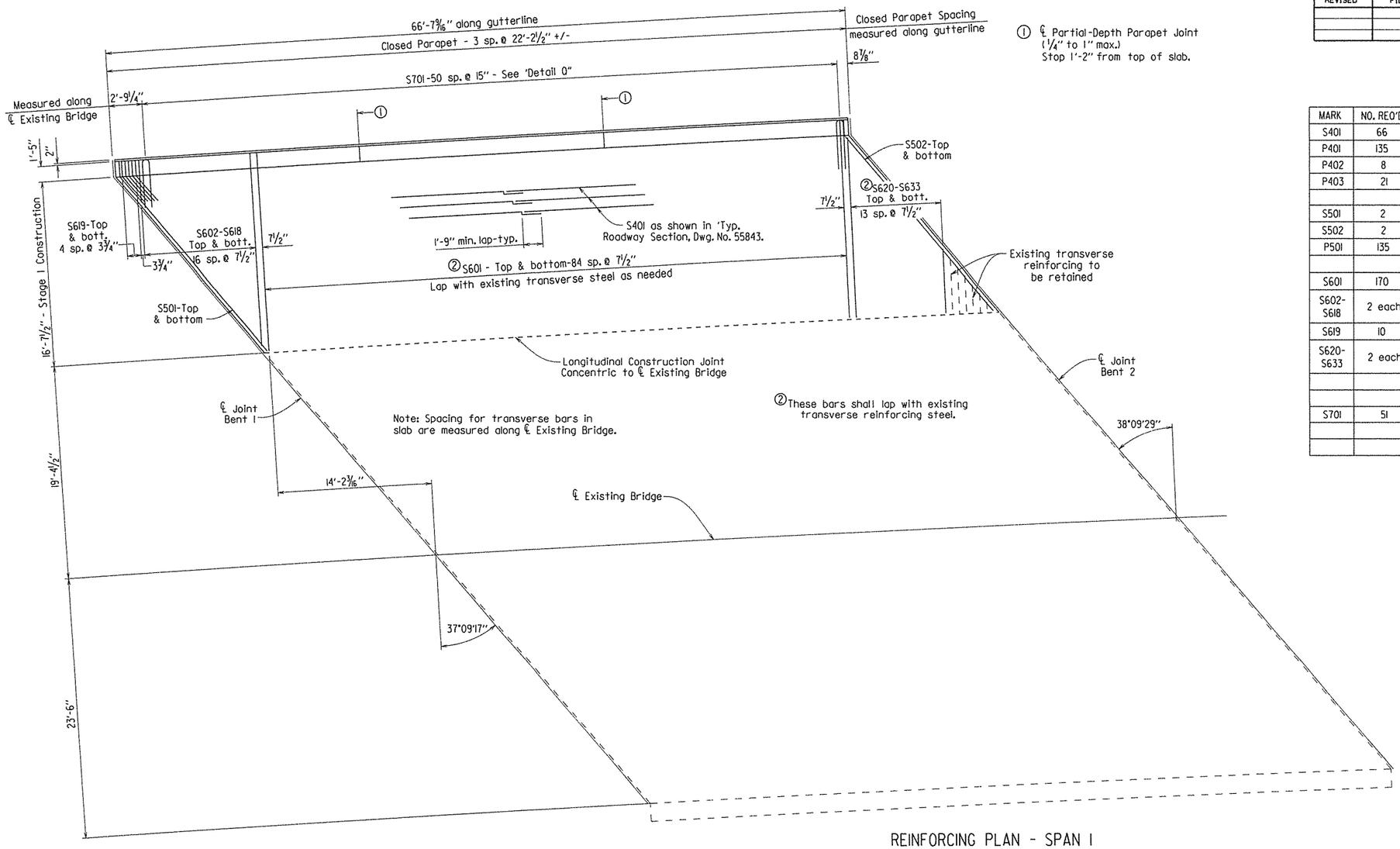
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CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55845

PRINT DATE: 7/31/2014

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.		061437	191	372

① B5307 - W-BEAM SPANS - 55846

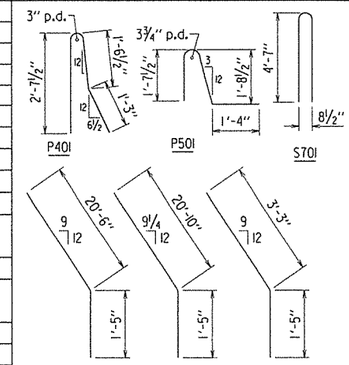


REINFORCING PLAN - SPAN I

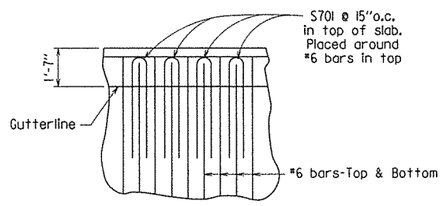
Scale: 3/16" = 1'-0"

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
S401	66	34'-3"	Str.	
P401	135	5'-6"	3"	
P402	8	5'-6"	Str.	
P403	21	21'-10"	Str.	
S501	2	21'-11"	3 3/4"	
S502	2	22'-3"	3 3/4"	
P501	135	4'-9"	3 3/4"	
S601	170	17'-10"	Str.	
S602-S618	2 each	Var. 3'-11" to 17'-4"	Str.	
S619	10	4'-8"	4 1/2"	
S620-S633	2 each	Var. 5'-8" to 16'-2"	Str.	
S701	51	9'-6"	6 3/4"	

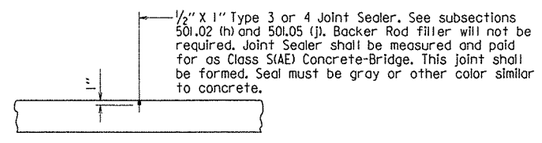


Dimensions are out to out of bars.



DETAIL Q

No Scale



LONGITUDINAL CONSTRUCTION JOINT

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
5-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 4 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

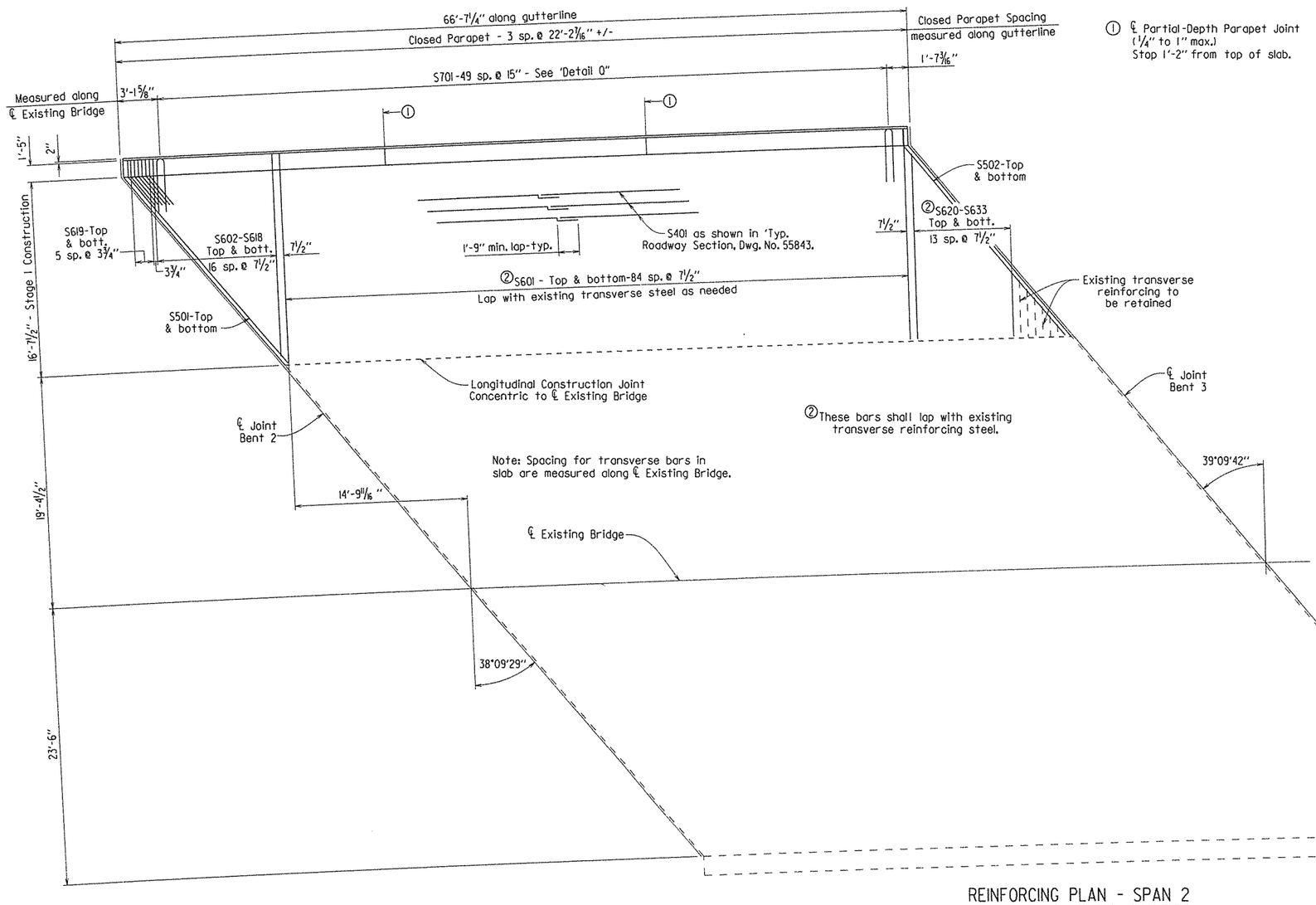
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-24-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55846

PRINT DATE: 7/31/2014

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.		061437	192	372
				①	B5307 -	W-BEAM SPANS	- 55847	

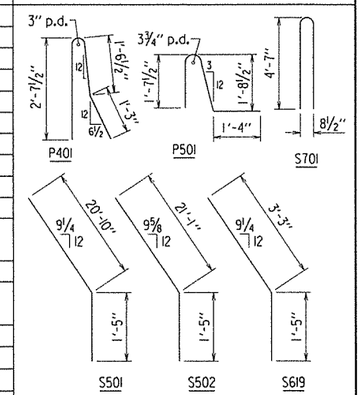


① ℄ Partial-Depth Parapet Joint (¼" to 1" max.) Stop 1'-2" from top of slab.

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401	66	34'-3"	Str.
P401	135	5'-6"	3"
P402	8	5'-6"	Str.
P403	21	21'-10"	Str.
S501	2	22'-3"	3¾"
S502	2	22'-6"	3¾"
P501	135	4'-9"	3¾"
S601	170	17'-10"	Str.
S602-S618	2 each	Var. 4'-3" to 17'-3"	Str.
S619	12	4'-8"	4½"
S620-S633	2 each	Var. 5'-6" to 15'-9"	Str.
S701	50	9'-6"	6¾"

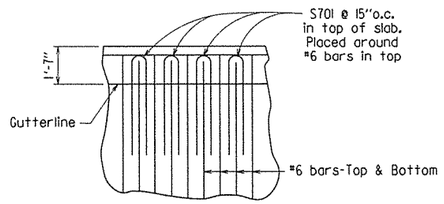
BENDING DIAGRAMS



Dimensions are out to out of bars.

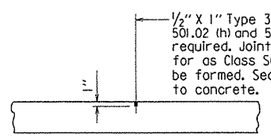
REINFORCING PLAN - SPAN 2

Scale: 3/16" = 1'-0"



DETAIL Q

No Scale



LONGITUDINAL CONSTRUCTION JOINT

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9233
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 5 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

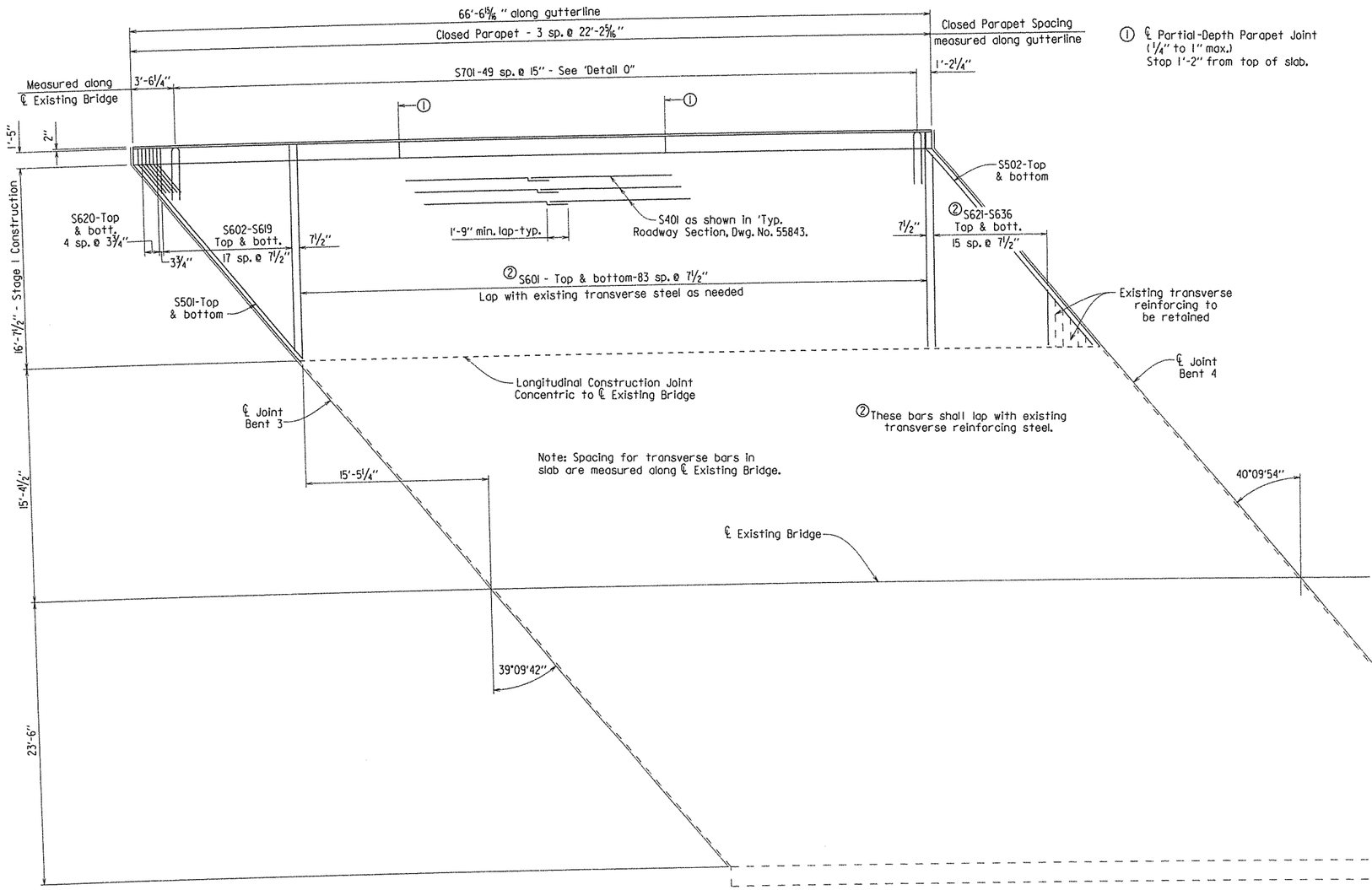
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-24-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55847

PRINT DATE: 7/31/2014

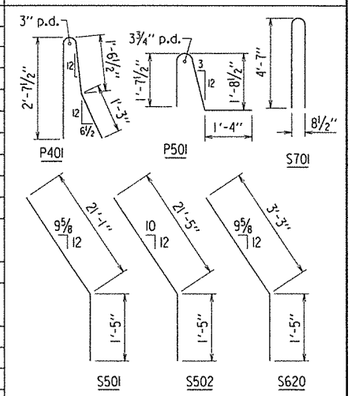
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	193	372
				①	B5307 -	W-BEAM SPANS	- 55848	



① ℄ Partial-Depth Parapet Joint (1/4" to 1" max.) Stop 1'-2" from top of slab.

BAR LIST

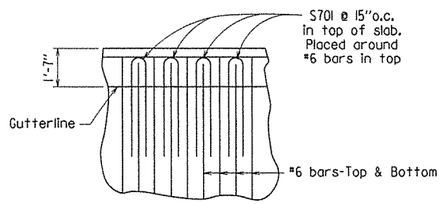
MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
S401	66	34'-3"	Str.	
P401	135	5'-6"	3"	
P402	8	5'-6"	Str.	
P403	21	21'-10"	Str.	
S501	2	22'-6"	3 3/4"	
S502	2	22'-10"	3 3/4"	
P501	135	4'-9"	3 3/4"	
S601	168	17'-10"	Str.	
S602-S619	2 each	Var. 3'-10" to 17'-2"	Str.	
S620	10	4'-8"	4 1/2"	
S621-S636	2 each	Var. 4'-6" to 15'-11"	Str.	
S701	50	9'-6"	6 3/4"	



Dimensions are out to out of bars.

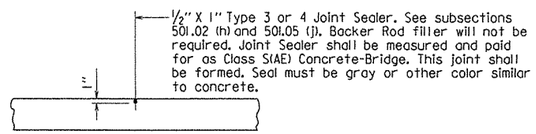
REINFORCING PLAN - SPAN 3

Scale: 3/16" = 1'-0"



DETAIL Q

No Scale



LONGITUDINAL CONSTRUCTION JOINT

No Scale

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 6 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

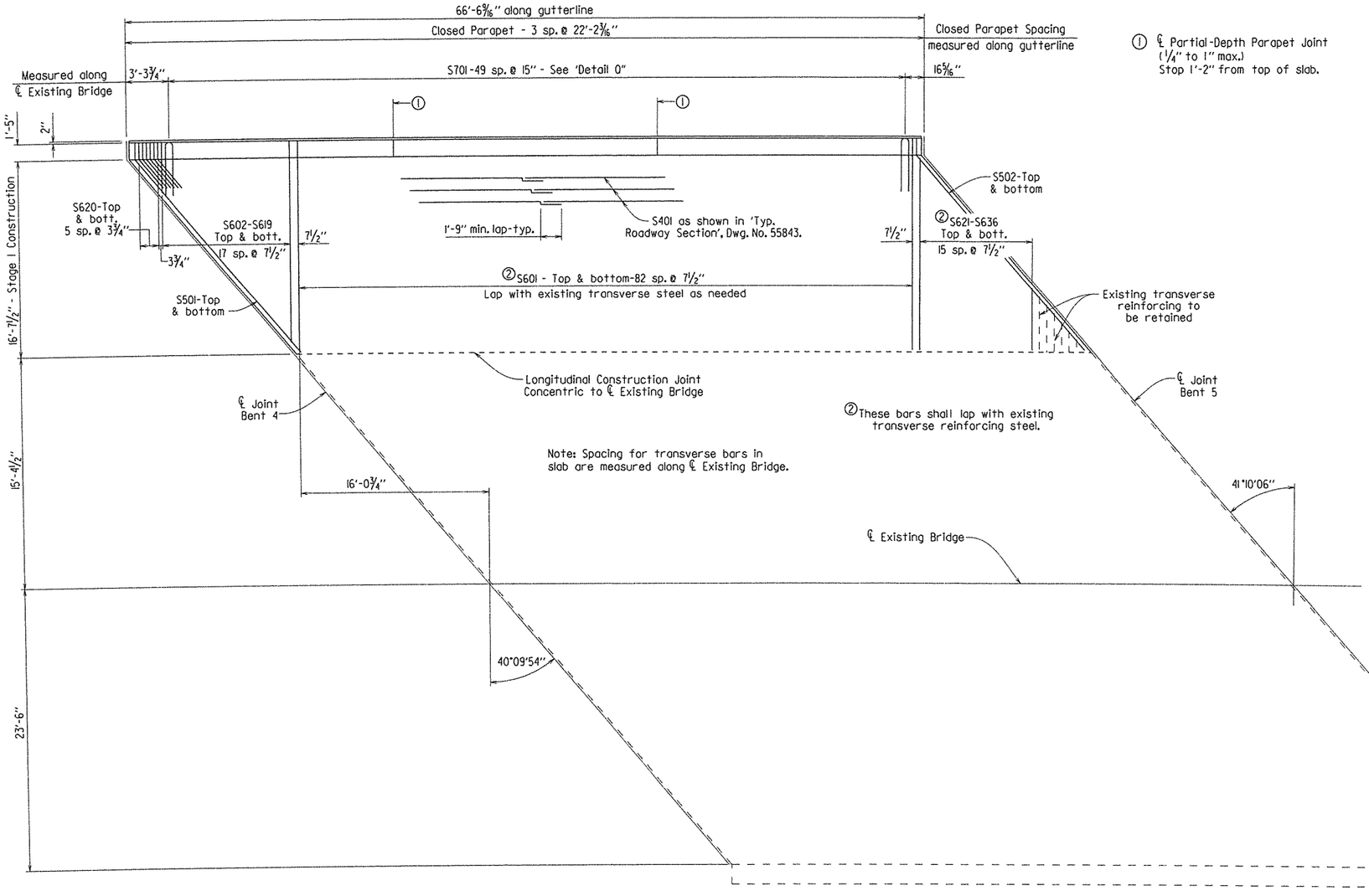
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-24-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55848

PRINT DATE: 7/31/2014

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				①	B5307 -	W-BEAM SPANS	- 55849	



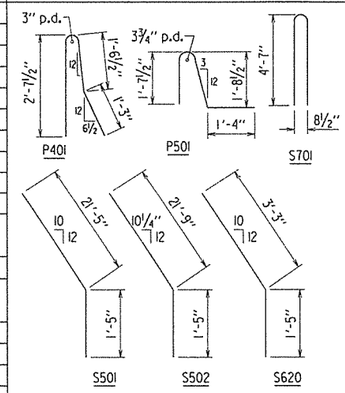
REINFORCING PLAN - SPAN 4

Scale: 3/16" = 1'-0"

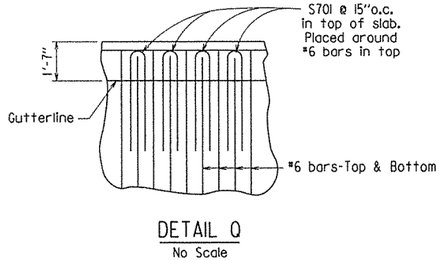
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401	66	34'-3"	Str.
P401	135	5'-6"	3"
P402	8	5'-6"	Str.
P403	21	21'-10"	Str.
S501	2	22'-10"	3 3/4"
S502	2	23'-2"	3 3/4"
P501	135	4'-9"	3 3/4"
S601	166	17'-10"	Str.
S602-S619	2 each	Var. 4'-2" to 17'-0"	Str.
S620	12	4'-8"	4 1/2"
S621-S636	2 each	Var. 5'-3" to 16'-2"	Str.
S701	50	9'-6"	6 3/4"

BENDING DIAGRAMS

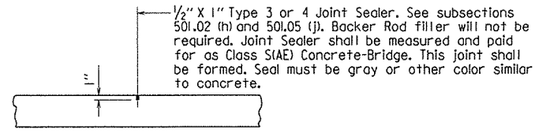


Dimensions are out to out of bars.



DETAIL Q

No Scale



LONGITUDINAL CONSTRUCTION JOINT

No Scale

STATE OF ARKANSAS
Charlie Ray Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
9-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 7 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

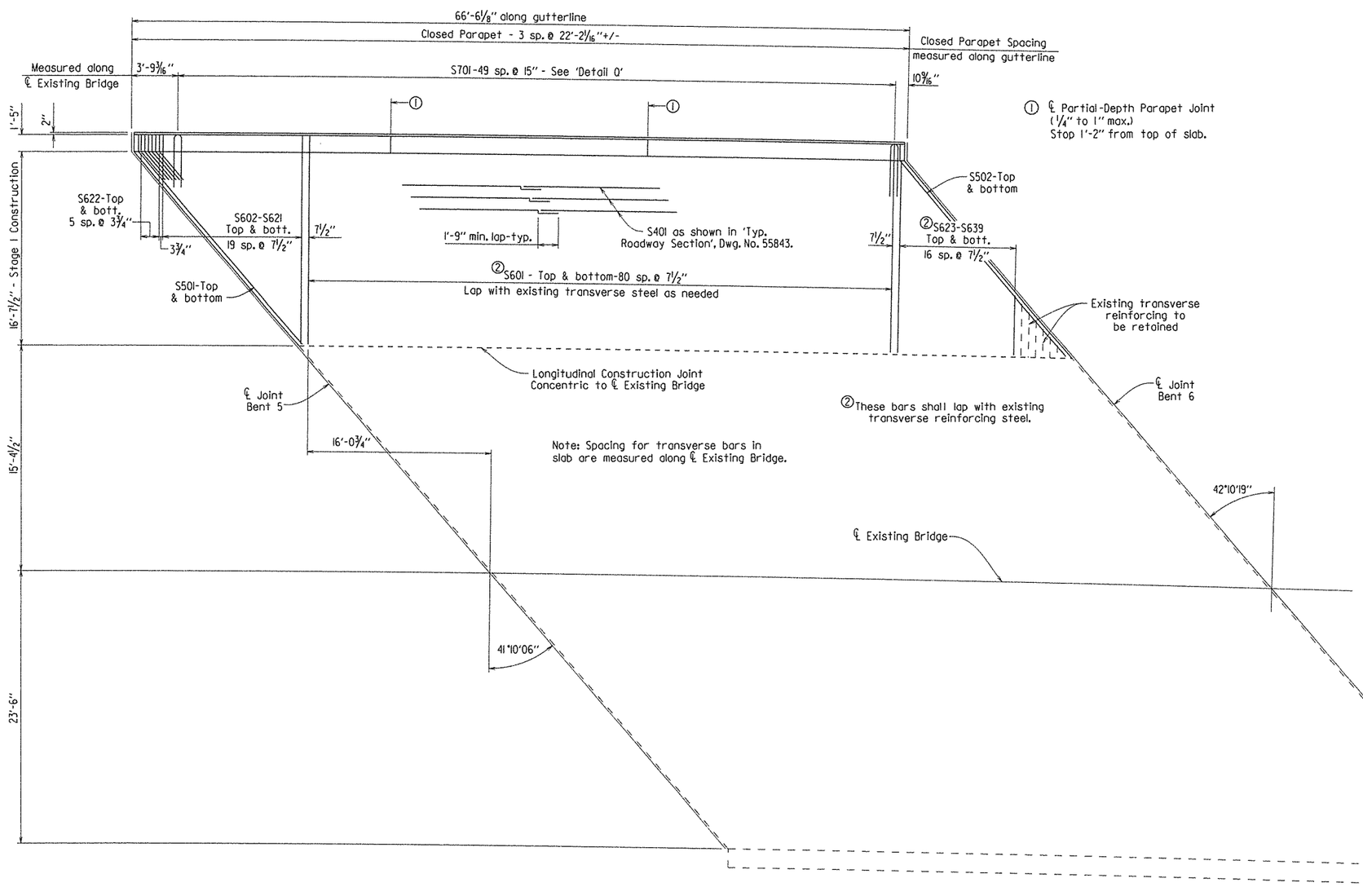
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CHECKED BY: DHP DATE: 7/31/14
DESIGNED BY: DHP DATE: 11-13

FILENAME: b061437x2_sl.dgn
SCALE: AS NOTED

BRIDGE NO. B5307 DRAWING NO. 55849

PRINT DATE: 7/31/2014

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.		061437	195	372
				(1) B5307 -		W-BEAM SPANS	- 55850	



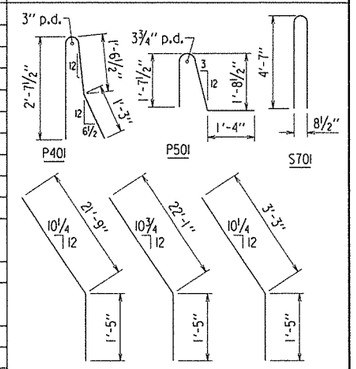
REINFORCING PLAN - SPAN 5

Scale: 3/16" = 1'-0"

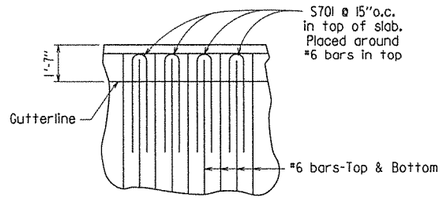
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
S401	66	34'-3"	Str.
P401	135	5'-6"	3"
P402	8	5'-6"	Str.
P403	21	21'-10"	Str.
S501	2	23'-2"	3 3/4"
S502	2	23'-6"	3 3/4"
P501	135	4'-9"	3 3/4"
S601	162	17'-10"	Str.
S602-S621	2 each	Var. 4'-0" to 17'-10"	Str.
S622	12	4'-5"	4 1/2"
S623-S639	2 each	Var. 5'-1" to 16'-5"	Str.
S701	50	9'-6"	6 3/4"

BENDING DIAGRAMS

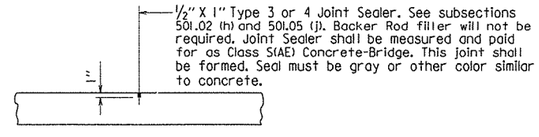


Dimensions are out to out of bars.



DETAIL Q

No Scale



LONGITUDINAL CONSTRUCTION JOINT

No Scale

STATE OF ARKANSAS
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8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

SHEET 8 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

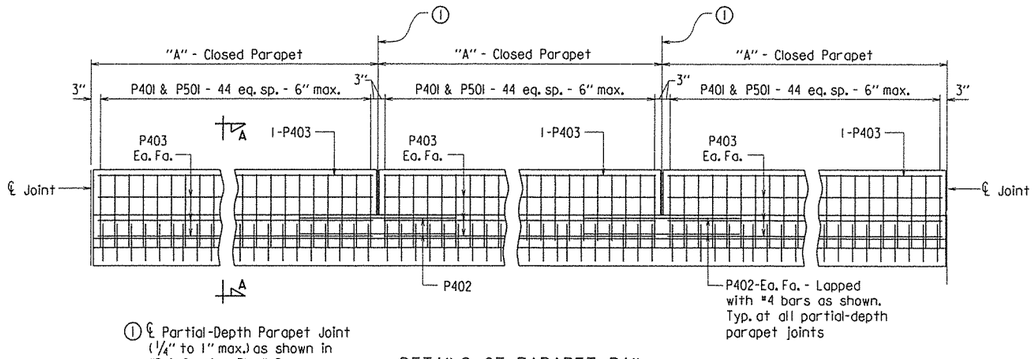
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-24-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55850

PRINT DATE: 7/31/2014

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.		061437	196	372
				①	B5307 - W-BEAM SPANS - 55851			



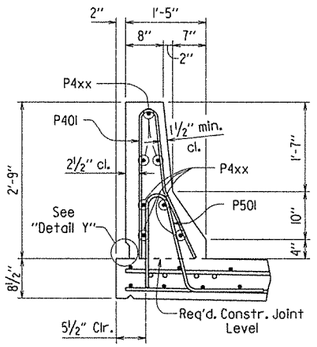
① ℄ Partial-Depth Parapet Joint (1/4" to 1" max.) as shown in "Reinforcing Plan", Dwg. Nos. 55846-55850. Stop 1'-2" from top of slab.

DETAILS OF PARAPET RAIL

Scale: 3/8" = 1'-0"

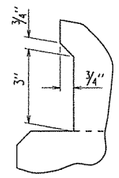
TABLE OF PARAPET RAIL VARIABLES

Span No.	"A" Closed Parapet
1	22'-2 1/2"+/-
2	22'-2 7/16"+/-
3	22'-2 5/16"
4	22'-2 5/16"
5	22'-2 1/16"+/-



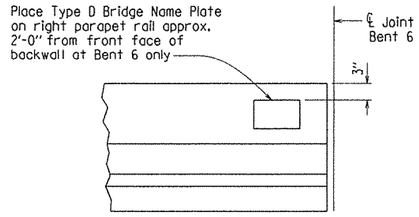
SECTION A-A

Scale: 3/4" = 1'-0"



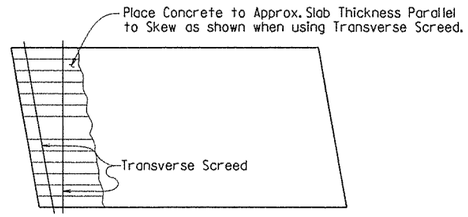
DETAIL Y

No Scale



NAME PLATE DETAIL

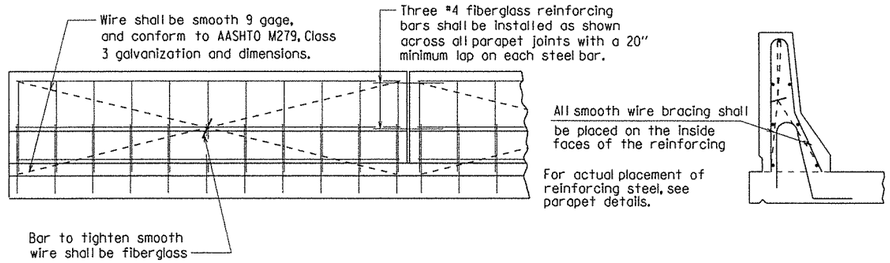
No Scale



Note: At the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to Bridge.

CONCRETE PLACEMENT PROCEDURE

No Scale



All panels shall be braced as required to prevent racking. All parapet joints shall be sawed as soon as practical to a minimum width of 1/4". To control cracking before sawing, all joints must be grooved before the concrete is set. Sawing of the joints must be controlled so it will follow the grooved joint.

The extruded parapet shall conform to the horizontal and vertical lines shown on the plans or as directed by the Engineer and shall present a smooth, uniform appearance and texture. Exposed surface may be given a light brush finish or a Class 3, Textured Coating Finish, in place of the Class 2, Rubbed Finish.

DETAILS OF OPTIONAL SLIPFORMING OF CONCRETE PARAPET RAIL

No Scale

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No. 9235
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SHEET 9 OF 9
DETAILS OF WIDENING
67'-0" SIMPLE COMPOSITE
W-BEAM SPANS
FOURCHE CREEK
ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-25-14 FILENAME: b061437x2_sl.dgn
CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55851

PRINT DATE: 7/31/2014

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.		061437	197	372
				(1) B5307 - GENERAL NOTES - 55852				

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition) with applicable supplemental specifications and special provisions.

DESIGN SPECIFICATIONS: AASHTO LFD Bridge Design Specifications 17th Edition (2002).

LIVE LOADING: HS20

MATERIALS AND STRENGTHS:
Concrete: All concrete shall be Class S(AE) with a minimum 28 day strength f'c = 4000 psi.

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

Structural Steel: Structural steel shall conform to AASHTO M270, Gr. 50W (Fy = 50,000 psi.) or AASHTO M270 Gr.36 (Fy = 36,000 psi.).

STRUCTURAL STEEL:
All new structural steel shall be AASHTO M270, Gr. 50W unless otherwise noted. All structural steel shall be paid for as "Structural Steel in Beam Spans (M270, Gr.50W)". Structural Steel completely embedded in concrete may be AASHTO M270, Gr. 36 or Gr. 50. AASHTO M270, Gr.50W Steel shall not be painted. All exposed surfaces shall be cleaned in accordance with subsection 807.84e unless noted otherwise.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and materials shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

Longitudinal beams are considered main load carrying members and shall meet the Longitudinal Charpy V-Notch Test specified in subsection 807.05. This work and material will not be paid for directly, but shall be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr.50W)".

Steel plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tensile and/or compressive stresses.

Drawings show general features of design only. Shop drawings shall be made in accordance with subsection 807.04, submitted, and approval secured before fabrication is begun.

All stud shear connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with the recommendations of the manufacturer.

All beams shall be blocked in their true position in the shop as specified in subsection 807.54(b)(2). The camber, length of sections, distance between bearings, and opening of joints shall be measured with the beams in their true position and this information shall become part of the permanent record of this job. The component parts shall be match marked in this assembly and those marks shall be shown on the erection diagram. All beam dimensions are based on a temperature of 60 degrees F. A tolerance of 1/4" (plus or minus) allowed for camber.

Field connections shall be bolted with high-strength bolts. Bolts shall be 3/4"ø, except as noted, and open holes shall be 11/16 "ø unless otherwise noted. Holes for 3/4"ø bolts may be 15/16 "ø if a washer is supplied for use under both the nut and the head of the bolt. Bolt spacing shall be 2 1/2" for 3/4"ø bolts.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval; however, additional welds used for attaching falsework support devices or screed rail supports to the structural steel that do not exceed the limitations of subsection 802.13 will not require approval prior to construction. All welding shall conform to subsection 807.26.

Diaphragms shall be installed as beams are erected. All bolts in diaphragms shall be installed and tightened in accordance with subsection 807.71 prior to pouring the deck unless otherwise noted.

Bearings shall be seated in accordance with subsection 807.66. This work and material will not be paid for directly but will be considered subsidiary to the item "Structural Steel in Beam Spans (M270, Gr. 50W)".

REINFORCING STEEL:
The reinforcing steel shall be accurately located in the forms and firmly held in place by steel wire supports, sufficient in size and number, to prevent displacement during the course of construction. The wire supports will not be paid for directly but will be considered subsidiary to the item "Reinforcing Steel (Grade 60)".

CONCRETE:
All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4000 psi. Concrete shall be poured in the dry and all exposed corners to be chamfered 3/4" unless otherwise noted.

Each span may be poured in increments with the center one-third to one-half span length poured first, after which, not less than 72 hours shall elapse before pouring the end sections. End sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours. If this method is used, the Pouring Sequence Joints shall be aligned with the parapet joints. See "Slab Joint Detail" on Dwg. No. 55827.

Concrete in bridge superstructure shall be placed, consolidated, and screeded off for the entire pour before any concrete has taken its initial set. This may require the use of a retarding agent.

The concrete deck shall be given a belted or burlap drag finish as specified in Special Provision Job 061437 "Bridge Deck Surface Finish". Movement of the finishing machine across new concrete shall be on planks placed on the surface and shall be prohibited for 72 hours after finishing the pour. Sufficient concrete must be placed ahead of the strike-off to fully load the beam. Use of a longitudinal screed is prohibited.

A minimum of 72 hours shall elapse between completion of the bridge deck slab and the pouring of the parapet railing. Any railing pours made before the entire slab has been placed and cured must be approved by the Engineer.

SURFACE TREATMENT: Class I Protective Surface Treatment shall be applied to the new roadway surface and to the face and top of the new parapet rail.

JOINT: All existing preformed joint material shall be removed, and replaced with poured silicone joint sealant in accordance with Section 809 and the manufacturer's recommendations. At the Contractor's option, the existing seal support may be removed from the expansion device, or the backer rod notched to facilitate proper installation of silicone joint sealant. Payment for cleaning and modification of existing joint shall not be paid for directly, but shall be included in the item "Silicone Joint Sealant".

EXISTING STRUCTURAL STEEL:

The paint system used on the existing beams consists of a lead based paint system. The Contractor shall take all necessary steps to protect the workers modifying the existing beams.

The existing paint shall be removed in the areas of the web of the existing beam where the new diaphragm connection plates will be field welded, and shall be cleaned and painted in accordance with Section 638 after connection plates are welded. Welding shall be done in accordance with Section 821.

Any bolt that is loosened or removed shall be replaced by a new high-strength bolt of equivalent size.

REMOVAL OF EXISTING DECK:

The portion of the existing concrete deck removed shall be completely removed to the top flange of the existing beams. Care shall be exercised during the removal of the existing deck to ensure that the existing shear connectors, reinforcing steel and metal deck forms are not damaged. Any existing shear connectors, transverse and longitudinal reinforcing steel, and metal deck forms damaged during the removal of the deck shall be replaced as directed by the Engineer, at the Contractor's expense. A OPL approved Epoxy Resin System may be used to replace any damaged transverse reinforcing steel. The portions of the top flange that will be embedded in new concrete shall be cleaned and free of laitance and protected until the new deck is placed for the respective Stage of Construction. This work will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. B5307)".

STATE OF ARKANSAS
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GENERAL NOTES FOR SUPERSTRUCTURE FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

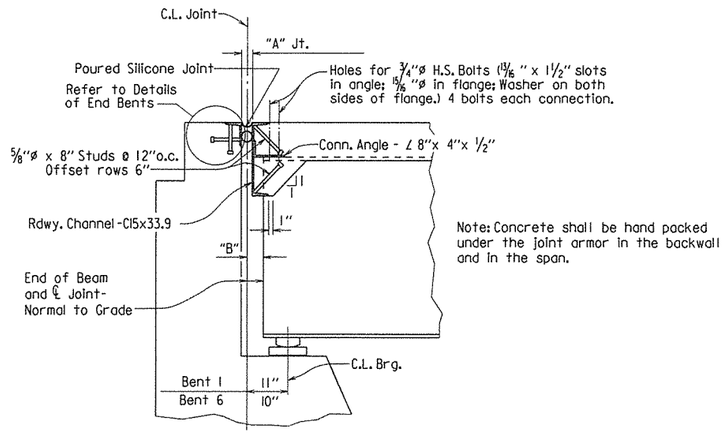
LITTLE ROCK, ARK.

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CHECKED BY: DHP DATE: 7/31/14 SCALE:
DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55852

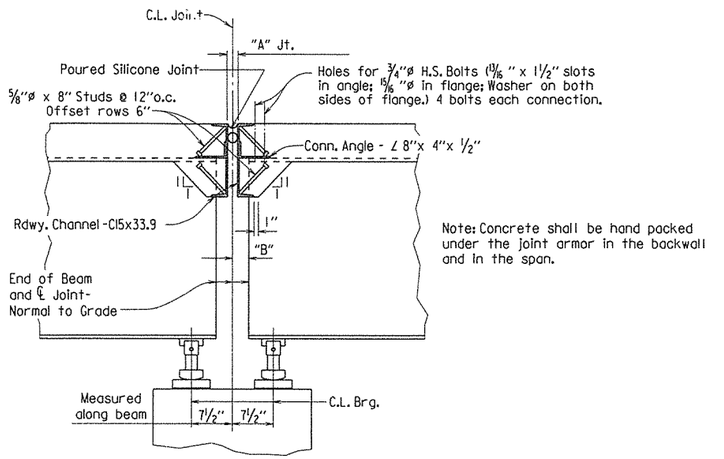
PRINT DATE: 7/31/2014

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.		061437	198	372
				(1) B5307 -		JOINT DETAILS	- 55853	



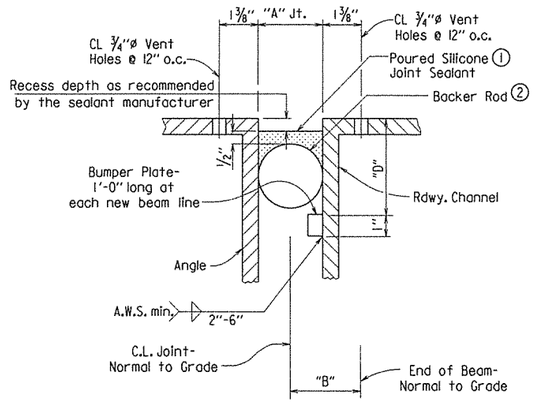
SECTION THRU JOINT AT END BENTS

No Scale



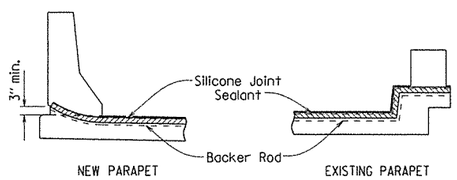
SECTION THRU JOINT AT INT. BENTS

No Scale



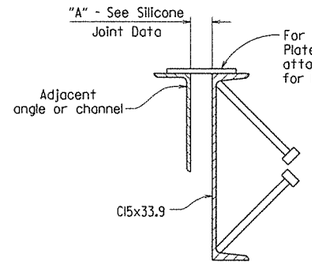
DETAIL OF POURED SILICONE JOINT SEAL

No Scale



JOINT SEAL PLACEMENT AT CURB

No Scale



DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

No Scale

EXPANSION DEVICE INSTALLATION AT END BENTS

The Contractor may elect to install the expansion device for the end bents using one of the following two alternatives:

1) The concrete span pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the beams erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, the opening adjusted.

2) The backwall shall be poured to the optional construction joint after beams are erected. The blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted.

Backfill shall not be placed behind the backwall until the deck concrete on the adjacent span has been placed.

SILICONE JOINT DATA

Bent Number	"A" Width Perpendicular to Joint	"B" Perpendicular to Joint	Bumper Plate Size	"D"
1 & 6	1"	1¾"±	-	-
2, 3 & 5	1½"	2"±	½" x 1"	4½"
4	3"	2¾"±	½" x 1"	4½"

(1) Notes: The temperature limitations recommended by the sealant manufacturer shall be observed.

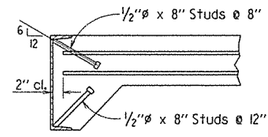
The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80°F.

(2) BACKER ROD NOTE:

Use an appropriately sized backer rod at the depth shown in the manufacturer's literature based on the joint width at the time of sealing.

Except as noted, do not install more backer rod than can be sealed in the same day.

The contractor shall verify separation of the backer rod from the joint material after the joint material has set.



Note: As an alternate to 5/8"ø studs, ½"ø x 8" studs spaced as shown may be used. Use weight of 5/8"ø stud as basis of measurement of structural steel in anchors.

DETAILS OF ALTERNATE ANCHORS

No Scale

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DETAILS OF JOINTS FOURCHE CREEK

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-12-14 FILENAME: b061437x2_jtl.dgn

CHECKED BY: DHP DATE: 7/31/14 SCALE: AS NOTED

DESIGNED BY: DHP DATE: 11-13

BRIDGE NO. B5307 DRAWING NO. 55853

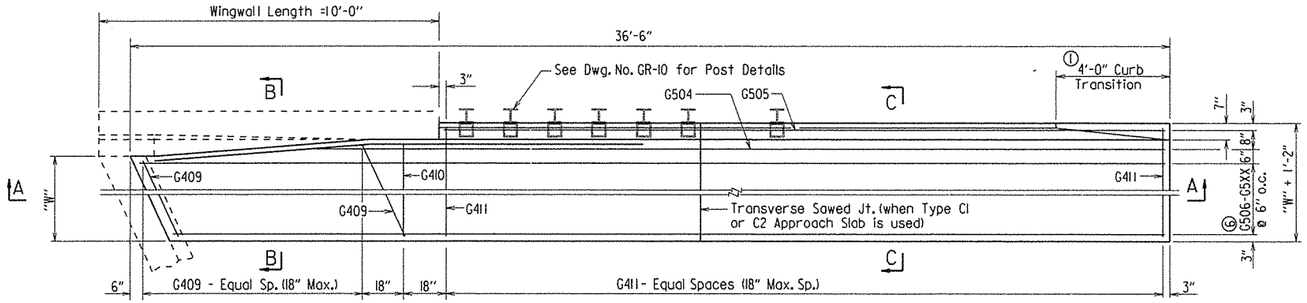
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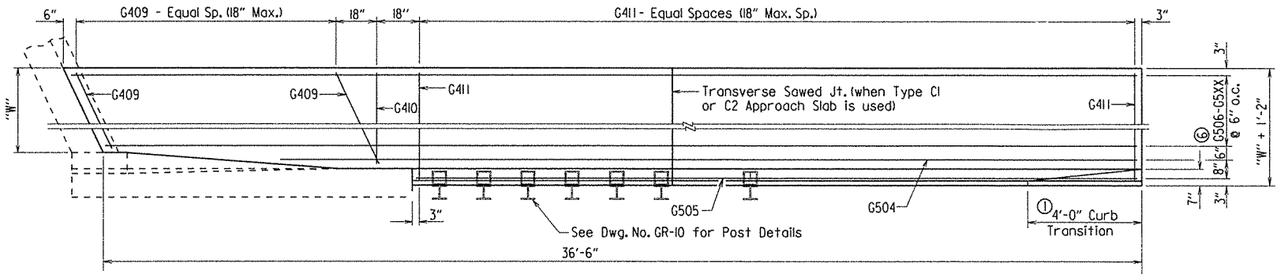
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	199	372

① B5306, B5307-TYPE SPECIAL I GUTTERS-55854

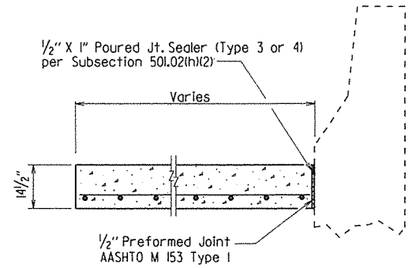
① Construct gutter curb with height-transition as shown if drop inlet is not placed at end of gutter.

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.





PLAN OF APPROACH GUTTERS FOR SKEWED BRIDGE



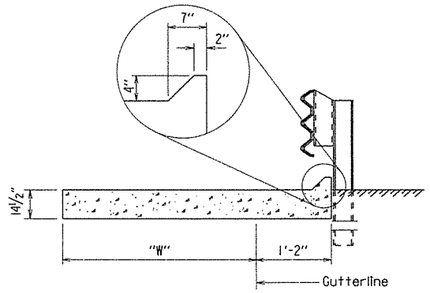
SECTION B-B
N.T.S.

BAR LIST FOR ONE TYPE SPECIAL I GUTTER

	Mark	No. Req'd. 6'-0"	Length
Square Bridge	G401	④	5'-8"
	G402-G406	1 each	5'-9" to 6'-2"
	G407	1	6'-3"
	G408	④	6'-10"
	G501	12	36'-2"
	G502	1	31'-11"
	G503	1	27'-2"
Skewed Bridge	G409	④	⑤
	G410	1	6'-3"
	G411	④	6'-10"
	G504	1	⑤
	G505	1	⑤
	G506 - G517	1 each	⑤

④ No. Req'd. varies with Skew and Wingwall Length.

⑤ Bar Lengths vary with Skew and Wingwall Length.

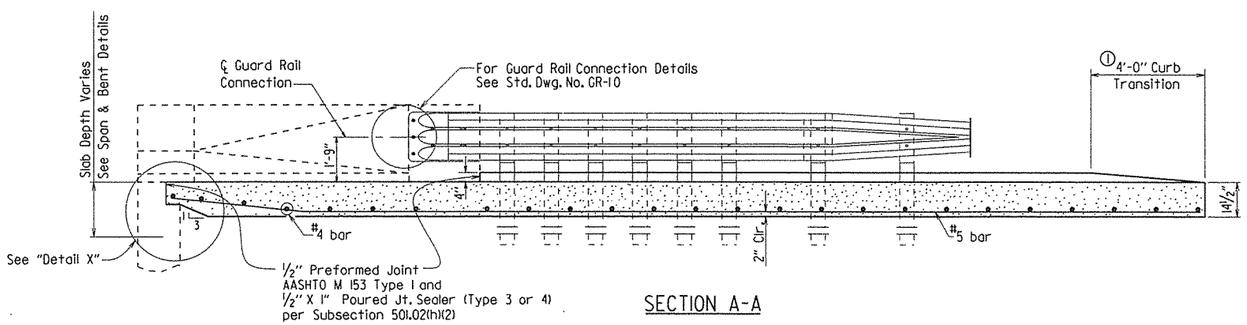


SECTION C-C
N.T.S.

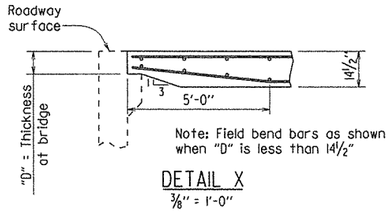
QUANTITIES FOR ONE SQUARE APPROACH GUTTER
(FOR INFORMATION ONLY)

"W" Width (ft.)	Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
6	630	11.55

Note:
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.



SECTION A-A



DETAIL X
⅜" = 1'-0"

GENERAL NOTES

All concrete shall be Class S or Class S(AE) or mixture used for Portland Cement Concrete Pavement and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Gutters will be measured and paid for in accordance with Section 504.

STATE OF ARKANSAS
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DETAILS FOR TYPE SPECIAL I APPROACH GUTTERS

ARKANSAS STATE HIGHWAY COMMISSION

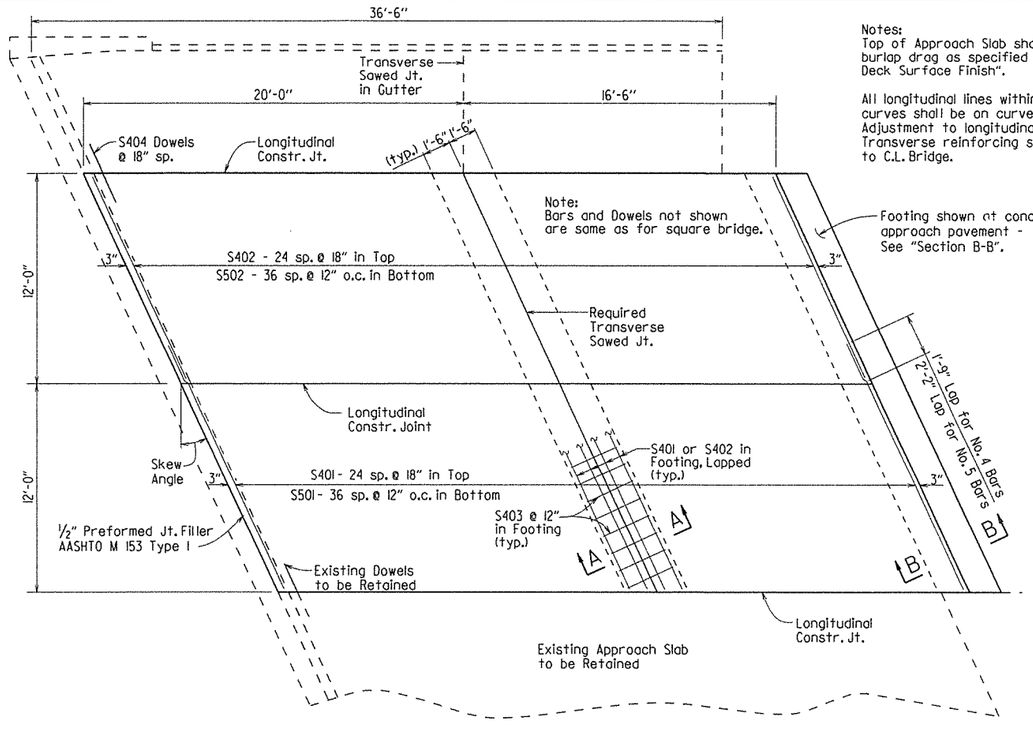
LITTLE ROCK, ARK.

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CHECKED BY: D.H.P. DATE: 7/31/14 SCALE: ⅜" = 1'-0" or As Shown
DESIGNED BY: STD. DATE:

BRIDGE NOS. B5306, B5307 DRAWING NO. 55854

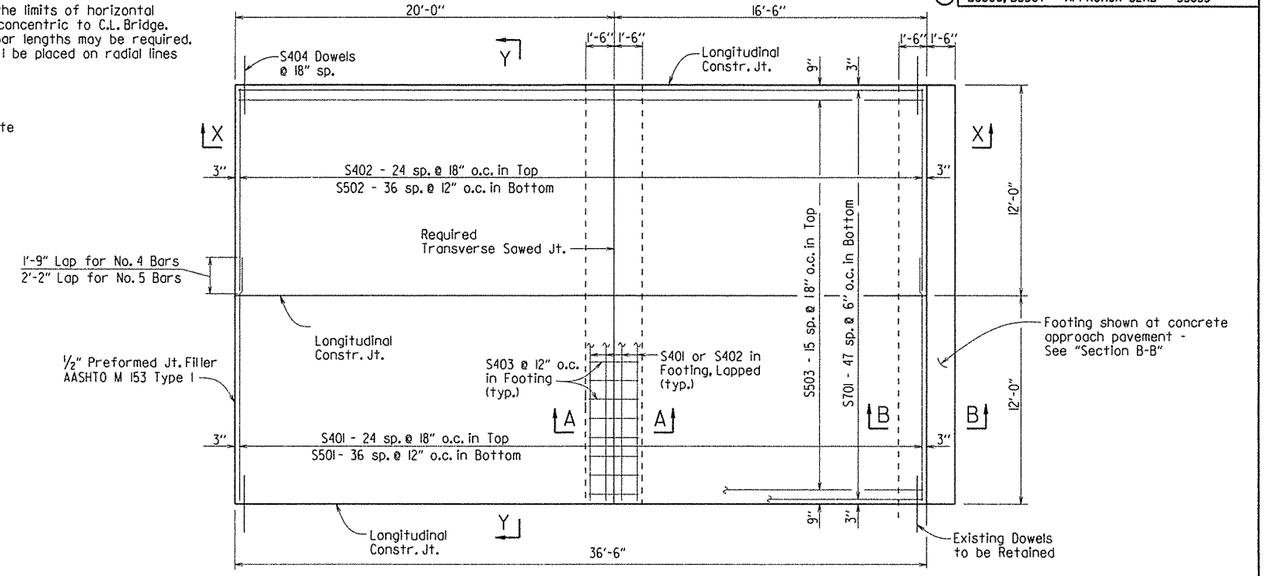
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				6	ARK.			
				JOB NO.		061437	260	372

(1) B5306, B5307 - APPROACH SLAB - 55855



Notes:
Top of Approach Slab shall be given a belt or burlap drag as specified in SP Job 061437 "Bridge Deck Surface Finish".

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

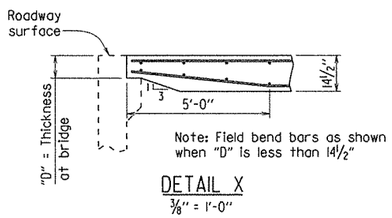


PLAN - SQUARE APPROACH SLAB

¼" = 1'-0"

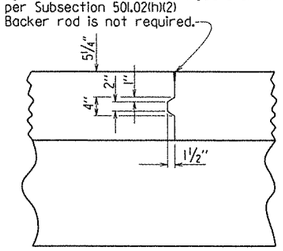
PLAN - SKEWED APPROACH SLAB

¼" = 1'-0"



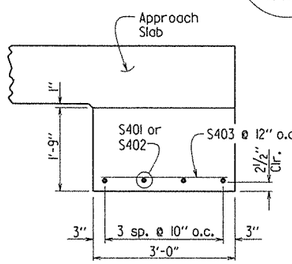
DETAIL X

⅜" = 1'-0"



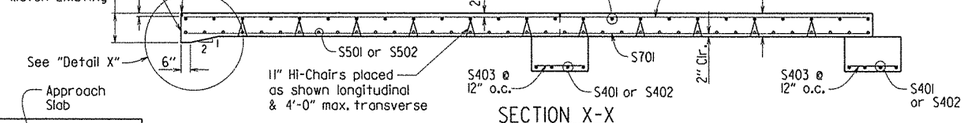
DETAILS OF LONGITUDINAL CONSTRUCTION JOINT

¾" = 1'-0"



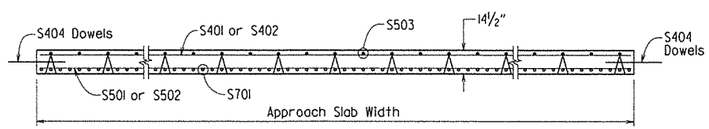
SECTION B-B

AT ASPHALT APPROACH PAVEMENT
N.T.S.



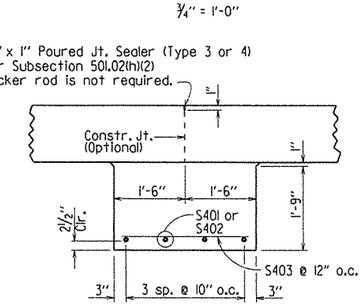
SECTION X-X

¼" = 1'-0"



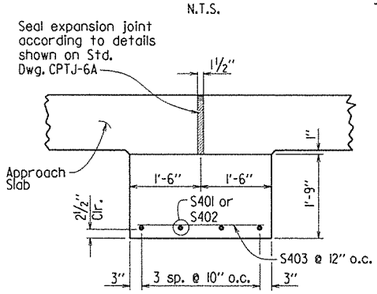
SECTION Y-Y

N.T.S.



SECTION A-A

N.T.S.



SECTION B-B

AT CONCRETE APPROACH PAVEMENT
N.T.S.

BAR LIST

(Square & Skewed Approach Slabs)

	Mark	Square No. Req'd.	Square Length	Skewed No. Req'd.	Skewed Length
12'-0" Slab Width	S402	33	11'-10"	33	11.8'/(cos skew angle)
	S403	24	2'-8"	*	2'-8"
	S404	25	3'-0"	25	3'-0"
	S502	37	11'-10"	37	11.8'/(cos skew angle)
	S503	8	36'-2"	8	36'-2"
	S701	24	36'-2"	24	36'-2"
24'-0" Slab Width	S401	33	13'-8"	33	11.8'/(cos skew angle) + 1.7'
	S402	33	11'-10"	33	11.8'/(cos skew angle)
	S403	48	2'-8"	*	2'-8"
	S404	25	3'-0"	25	3'-0"
	S501	37	14'-3"	37	11.8'/(cos skew angle) + 2.3'
	S502	37	11'-10"	37	11.8'/(cos skew angle)
	S503	16	36'-2"	16	36'-2"
	S701	48	36'-2"	48	36'-2"

*Varies with skew angle

TABLE OF QUANTITIES FOR ONE SQUARE APPROACH SLAB

(FOR INFORMATION ONLY)

Slab Width	Reinforcing Steel (Lbs.)	Concrete (Cu. Yds.)
12'-0"	2890	24.58
24'-0"	5860	49.15

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
8-8-14
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES

All concrete shall be Class S (AE) with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports.

Approach Slabs will be measured and paid for in accordance with Section 504.

DETAILS FOR TYPE SPECIAL I APPROACH SLAB

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

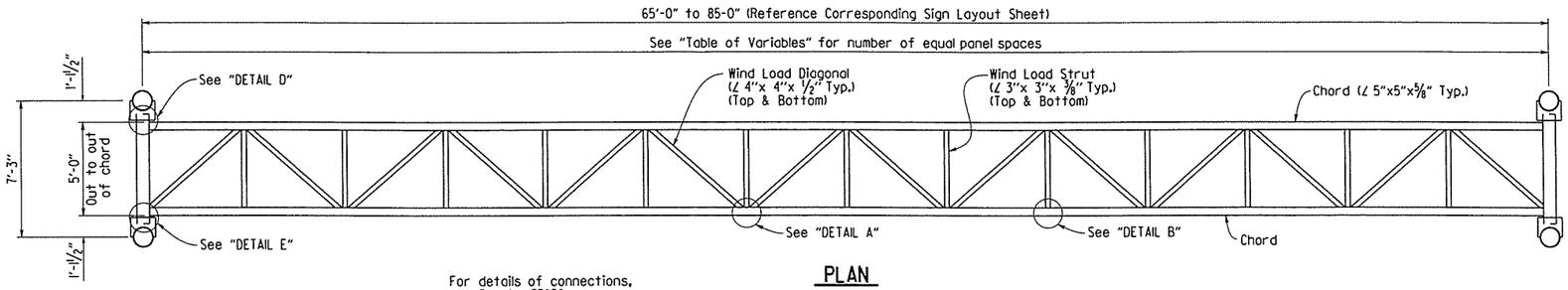
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DESIGNED BY: STD. DATE:

BRIDGE NOS. B5306, B5307 DRAWING NO. 55855

PRINT DATE: 7/31/2014

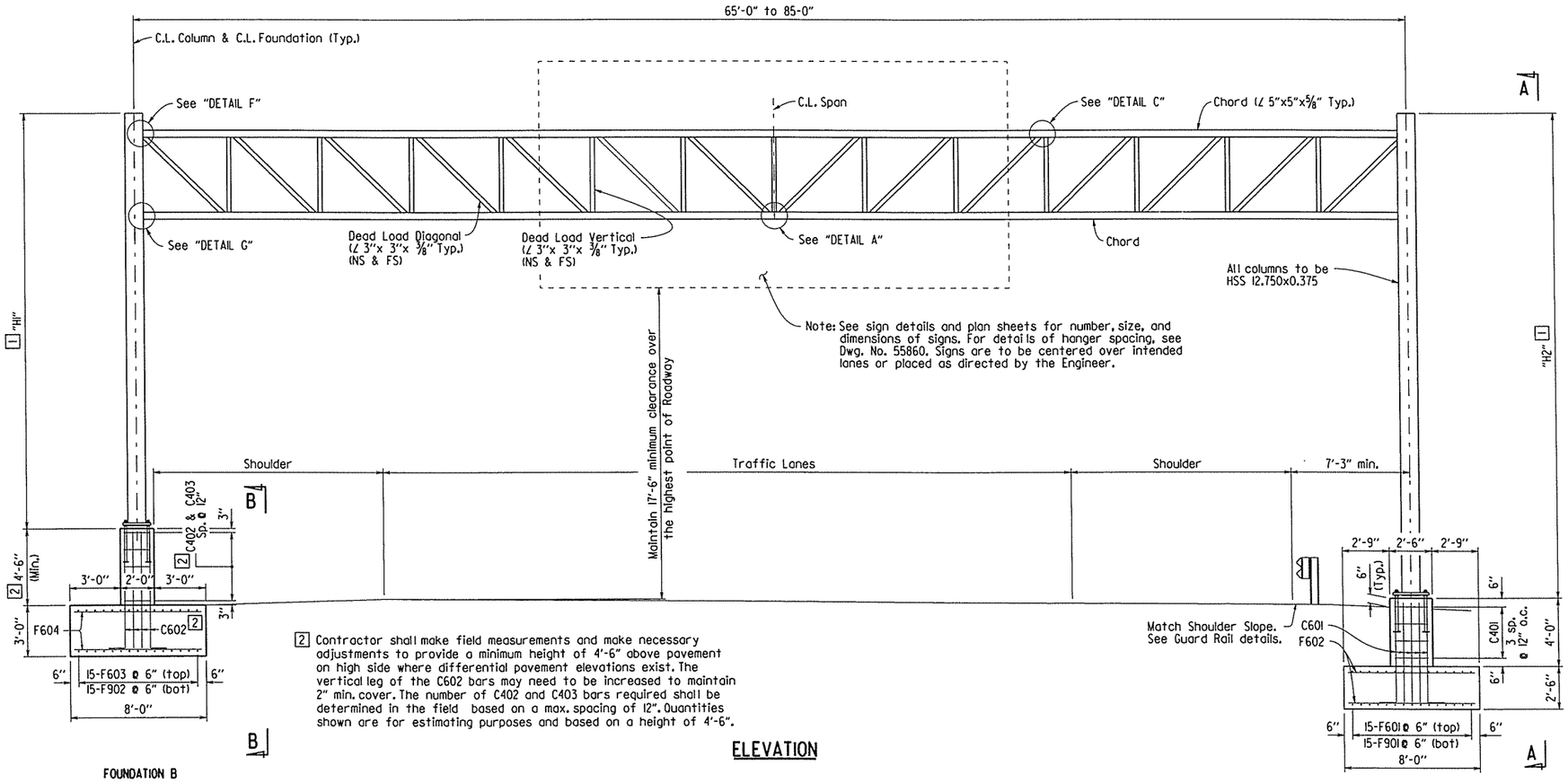
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				6	ARK.			
				JOB NO.		061437	201	372
				① OH-430-60-27		SIGN STRUCTURE		55856

OH-430-60-34 & 44
OH-030-60-62



For details of connections, see Dwg. No. 55858.

PLAN



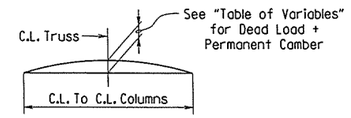
2 Contractor shall make field measurements and make necessary adjustments to provide a minimum height of 4'-6" above pavement on high side where differential pavement elevations exist. The vertical leg of the C602 bars may need to be increased to maintain 2" min. cover. The number of C402 and C403 bars required shall be determined in the field based on a max. spacing of 12". Quantities shown are for estimating purposes and based on a height of 4'-6".

ELEVATION

FOUNDATION B

FOUNDATION A

1 The Contractor shall make field measurements to determine the Column heights "H1" and "H2" that are required to maintain the minimum vertical clearance with the centerline of the sign located at the centerline of the truss. These column heights shall be shown on the shop drawings with a note stating that the Contractor has made the required field measurements. If the structure height ("H1" or "H2") exceeds 30'-0" contact the Engineer. The Contractor shall also verify that the variable span length (65'-0" to 85'-0") is sufficient to meet the minimum clearances and to fit the new structure to the existing and/or proposed conditions.



TRUSS CAMBER DIAGRAM

TABLE OF VARIABLES

Span (ft)	No. of Equal Panel Spaces	Dead Load + Permanent Camber
65' thru 75'	14	1"
76' thru 85'	16	1¼"

APPROXIMATE QUANTITIES FOR FOUNDATION (FOR INFORMATION ONLY)

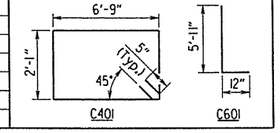
FOUNDATION	CLASS S CONCRETE (Cu. Yds.)	REINFORCING STEEL (Lbs.)	EXCAVATION (Cu. Yds.)
A	17.2	2659	51
B	22.0	3137	26

TABLE OF FOUNDATIONS

FOUNDATION		SIGN STRUCTURE
MEDIAN	OUTSIDE SHOULDER	
A	A	OH-430-60-27, OH-430-60-34 & OH-430-60-44
B	B	OH-030-60-62

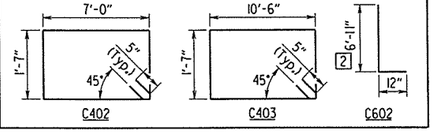
BAR LIST-FOUNDATION 'A'

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
				Dimensions are out to out of bars.
C401	8	18'-2"	3"	
C601	48	6'-9"	4½"	
F601	15	17'-6"	Str.	
F602	70	7'-6"	Str.	
F901	15	17'-6"	Str.	



BAR LIST-FOUNDATION 'B'

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
				Dimensions are out to out of bars.
C402	2 10	17'-8"	3"	
C403	2 5	24'-8"	3"	
C602	74	2 7'-9"	4½"	
F603	15	17'-6"	Str.	
F604	70	7'-6"	Str.	
F902	15	17'-6"	Str.	



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS FOR 65' TO 85'
STEEL OVERHEAD SIGN STRUCTURES

ROUTE 30 SEC. 23
ROUTE 430 SEC. 21

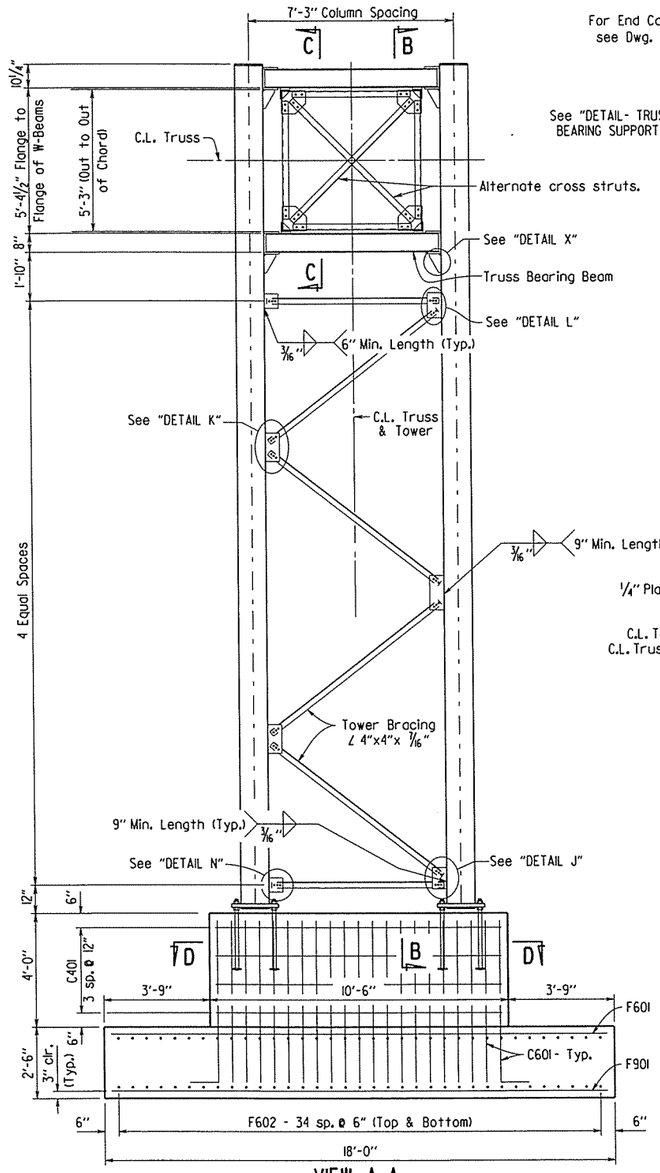
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: CWY DATE:
STR. NO. OH-430-60-27, 34 & 44 OH-030-60-62 DRAWING NO. 55856

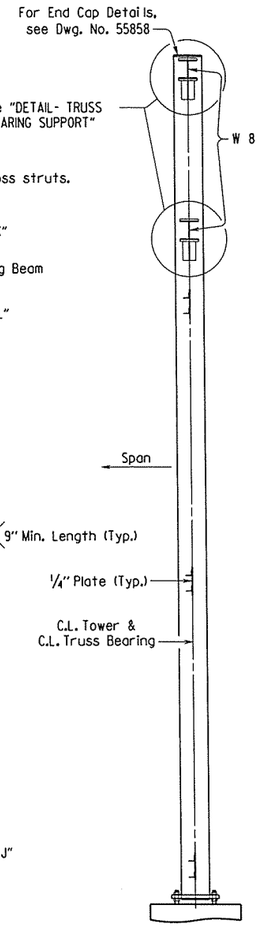
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				(1) OH-430-60-27		SIGN STRUCTURE		55857

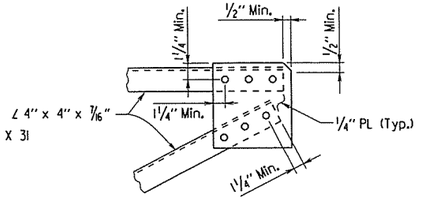
OH-430-60-34 & 44
OH-030-60-62



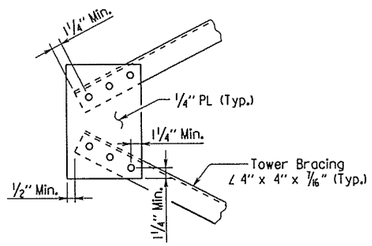
VIEW A-A



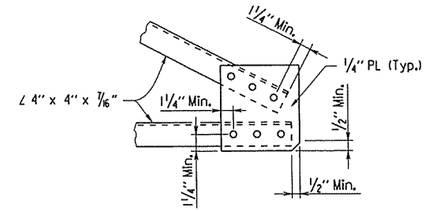
SECTION B-B



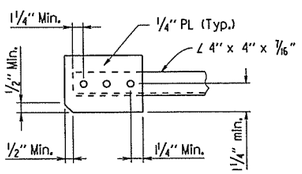
DETAIL L



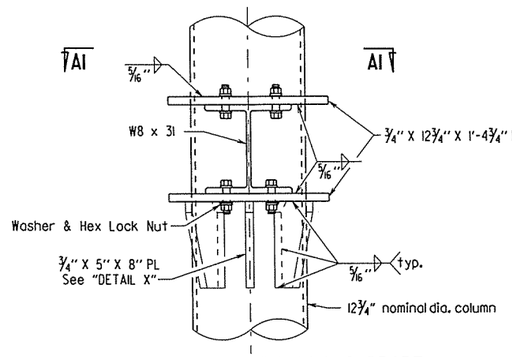
DETAIL K



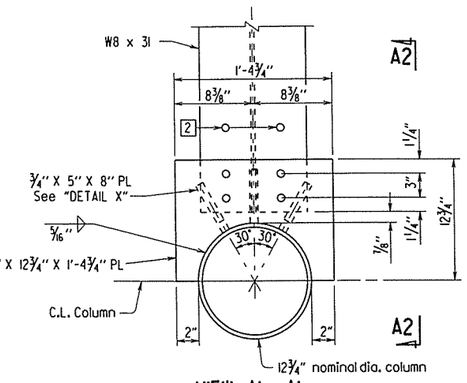
DETAIL J



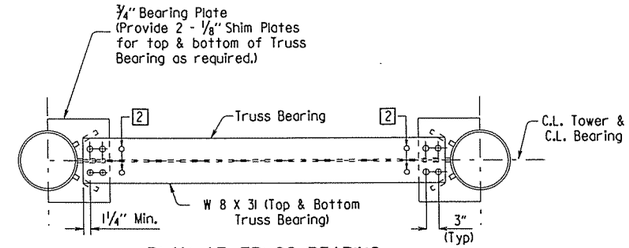
DETAIL N



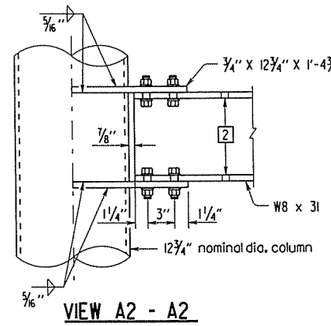
DETAIL - TRUSS BEARING SUPPORT



VIEW A1- A1

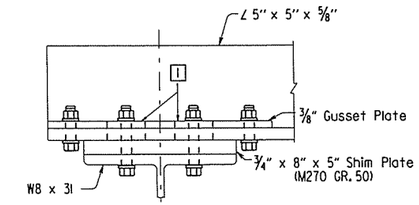


PLAN AT TRUSS BEARING



VIEW A2 - A2

¾" X 5" X 8" Plate not shown for clarity

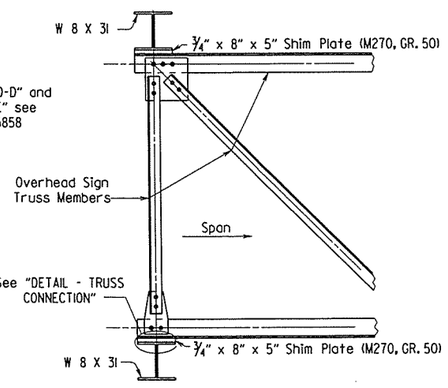


DETAIL - TRUSS CONNECTION

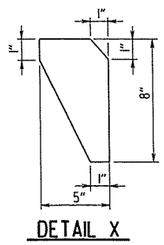
Shown for bottom connection, top connection similar.

[1] Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in ¾" shim plate and beam flange.

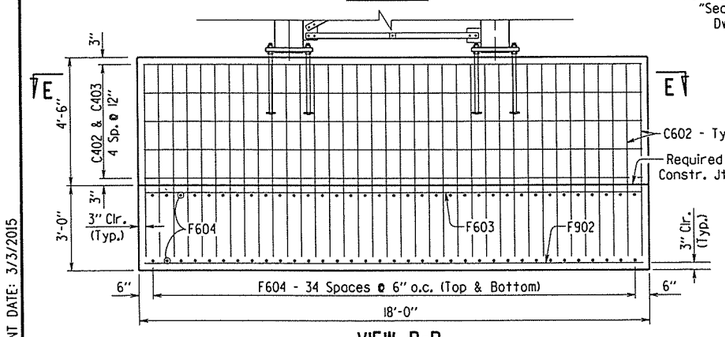
[2] 11/16" Dia. holes at top or bottom flanges as required.



SECTION C-C



DETAIL X



VIEW B-B

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
3-3-15
BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS FOR 65' TO 85' STEEL OVERHEAD SIGN STRUCTURES

ROUTE 30 SEC. 23
ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CWW DATE: 03/10/14 FILENAME: b061437_t1.dgn
CHECKED BY: CWW DATE: 3/3/15 SCALE: NOT TO SCALE
DESIGNED BY: Std. DATE:

STR. NO. OH-430-60-27, 34 & 44 OH-030-60-62 DRAWING NO. 55857

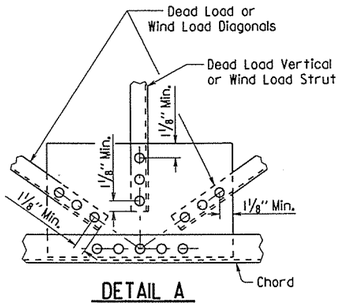
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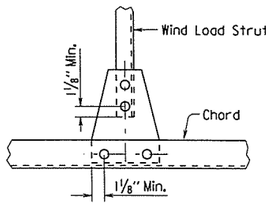
OH-430-60-34 & 44
OH-030-60-62

Note: All Gusset Plate thicknesses shall be 3/8".

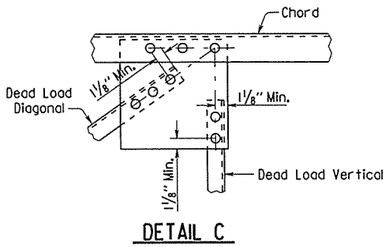
[1] Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in 3/4" shim plate and beam flange.



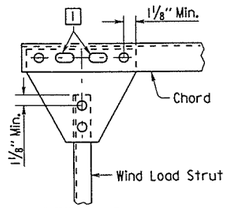
DETAIL A



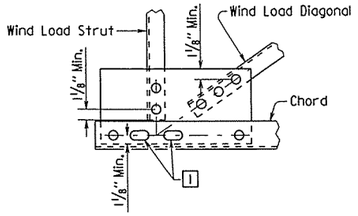
DETAIL B



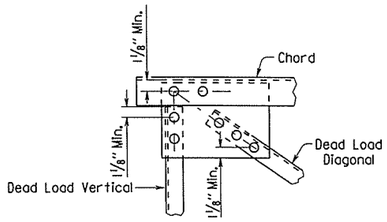
DETAIL C



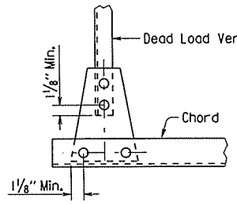
DETAIL D



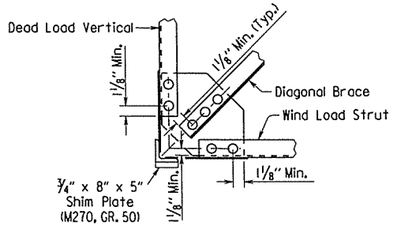
DETAIL E



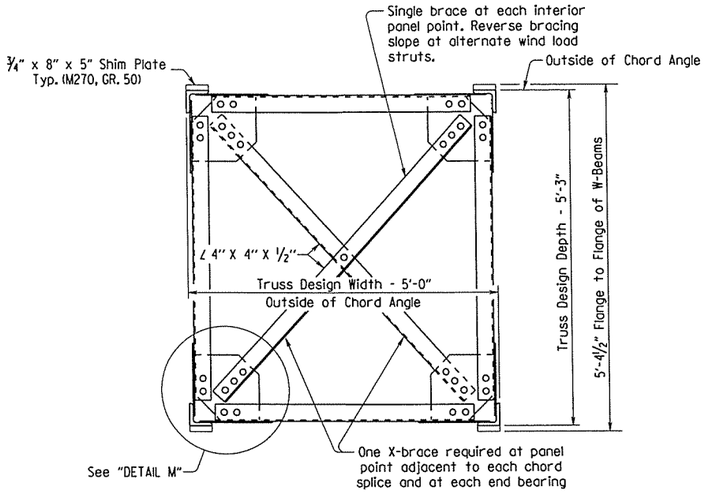
DETAIL F



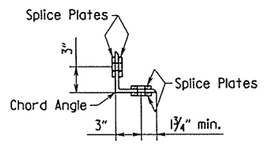
DETAIL G



DETAIL M

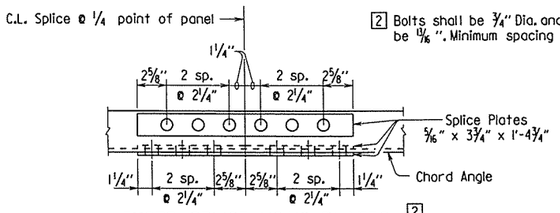


TRUSS SECTION

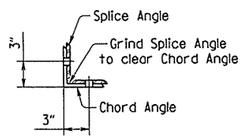


SECTION ON C.L. SPLICE

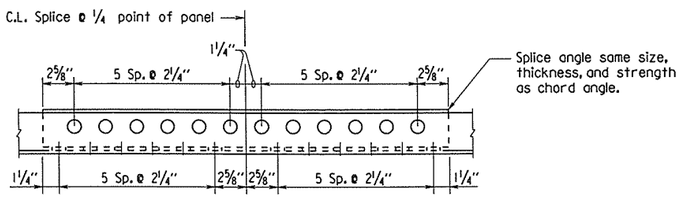
[2] Bolts shall be ¾" Dia. and holes shall be 11/16". Minimum spacing shall be 2¼".



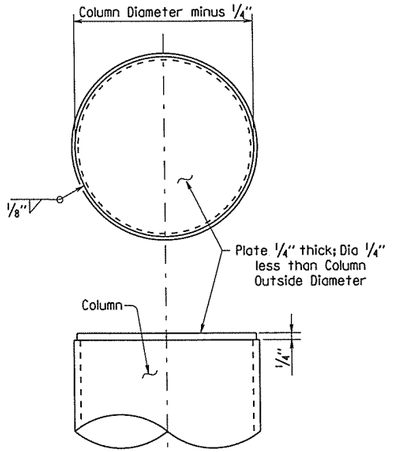
CHORD SPLICE USING PLATES [2]



SECTION ON C.L. SPLICE

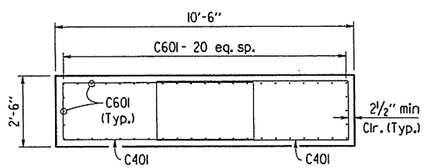


OPTIONAL CHORD SPLICE USING ANGLES [2]
Place Splice Angle on inside of Truss

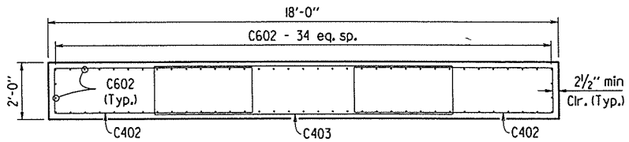


END CAP DETAILS

Note: Chord angles may be spliced in convenient lengths for galvanizing and sign placement.



SECTION D-D
Foundation A



SECTION E-E
Foundation B

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS FOR 65' TO 85'
STEEL OVERHEAD SIGN STRUCTURES

ROUTE 30 SEC. 23
ROUTE 430 SEC. 21

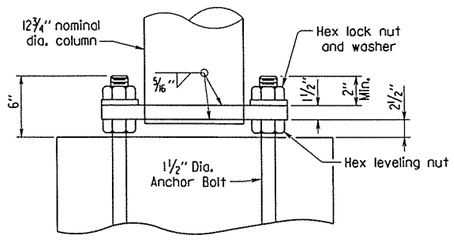
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CWW DATE: 03/10/14 FILENAME: b061437_tl.dgn
CHECKED BY: KWY DATE: 2/26/15 SCALE: NOT TO SCALE
DESIGNED BY: [illegible] DATE: —
STR. NO. OH-430-60-27, 34 & 44 OH-030-60-62 DRAWING NO. 55858

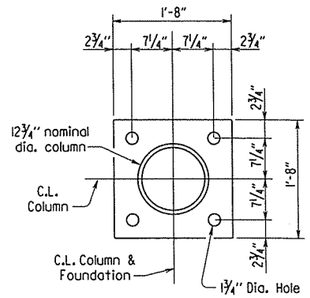
PRINT DATE: 2/26/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061437	264372	
				(1) OH-430-60-27		SIGN STRUCTURE		55859

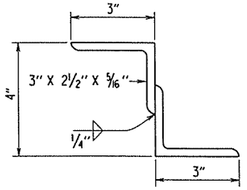
OH-430-60-34 & 44
OH-030-60-62



ELEVATION - COLUMN BASE

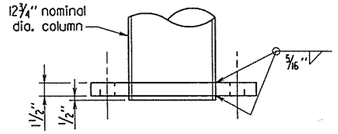


PLAN - COLUMN BASE



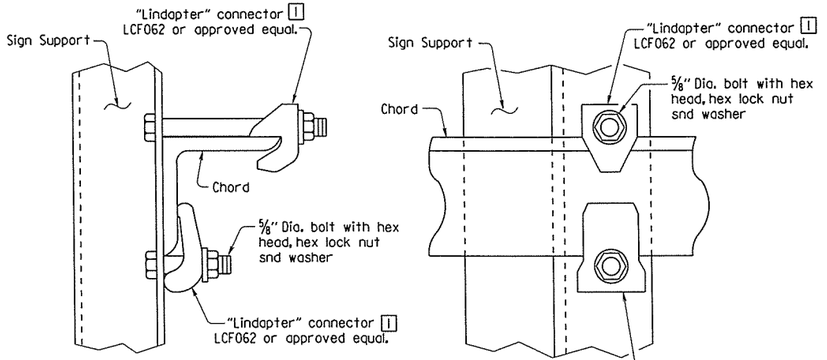
NOTE: Structural Z support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SUPPORT

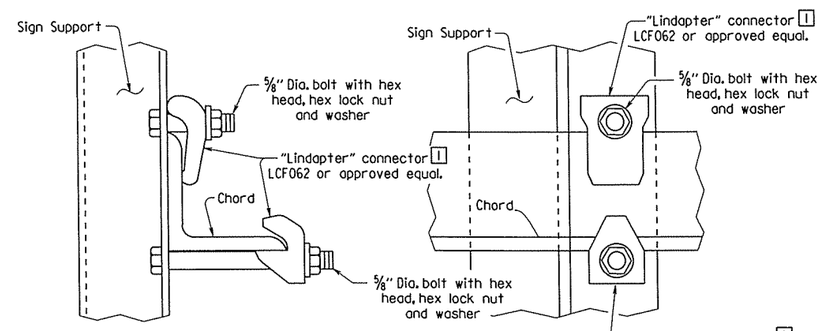


Note: Diameter of hole in base plate to be ⅛" larger than column diameter.

DETAIL OF COLUMN CONNECTION TO BASE PLATE



TOP CHORD

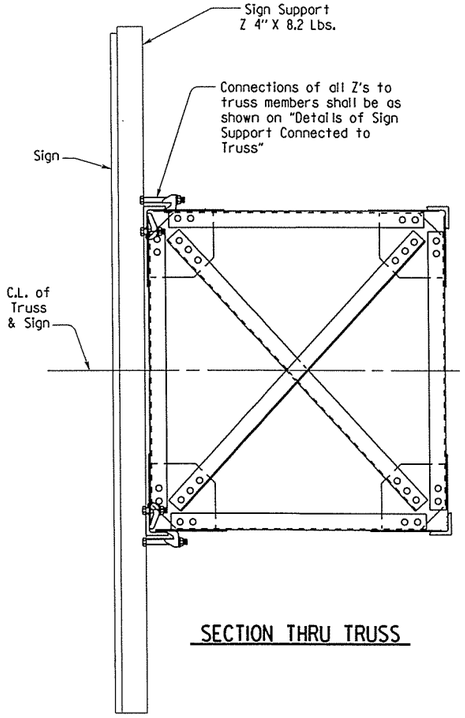


BOTTOM CHORD

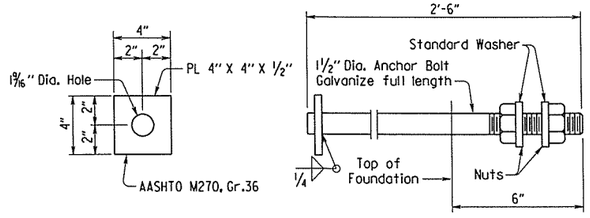
[1] Note: All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

Note: Install all support connectors clear of the gusset plates and splice locations.

DETAIL OF SIGN SUPPORT CONNECTED TO TRUSS



SECTION THRU TRUSS



Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement S1, and galvanized according to Section 807.07. Nuts for bolts shall be as specified in Section 807.07.

ANCHOR BOLT DETAIL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS FOR 65' TO 85'
STEEL OVERHEAD SIGN STRUCTURES

ROUTE 30 SEC. 23
ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 03/10/14 FILENAME: b061437_t1.dgn
CHECKED BY: DATE: 2/26/15 SCALE: NOT TO SCALE
DESIGNED BY: DATE:

STR. NO. OH-430-60-27, 34 & 44 OH-030-60-62 DRAWING NO. 55859

PRINT DATE: 2/26/2015

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.		061437	205	372
				(1) OH-430-60-27		SIGN STRUCTURE		55860

OH-430-60-34 & 44
OH-030-60-62

GENERAL NOTES:
Construction Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 2014, with applicable Special Provisions and Supplemental Specifications.

Design Specifications: Standard Specifications for Structural supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 2013 (Sixth Edition) with current interim revisions.

Basic Wind Speed = 90 m.p.h.

Fatigue Category I

This structure is approved for a sign area equivalent to 75% of the span at 15' tall. Use of additional sign area must be approved by the Engineer. If the structure height ('H1' or 'H2') exceeds 30'-0" contact the engineer.

FOUNDATION MATERIALS AND STRENGTHS:
Class S Concrete f'c = 3,500 psi
Reinforcing Steel (Grade 60, AASHTO M31 or M322, Type A) fy = 60,000 psi

Structural steel sign support members shall comply with the following specifications:

Angles:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
[1] Plate, W-Section, WT-Section:	AASHTO M270, Grade 50 (Fy = 50,000 psi).
Pipe:	ASTM A139 Grade C, straight-seam welded (Fy = 42,000 psi).
	ASTM A500 Grade B (Fy = 42,000 psi).
	ASTM A501 Grade B (Fy = 50,000 psi).
	ASTM A714 Class 2, Grade II, Type E or S (Fy = 50,000 psi).

All grades of pipe require Heat traceability back to the original melting mill

Z-Shapes:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
Shim Plates:	ASTM A1011, SS, Grade 36, Type 2, or Grade 40.
Bolts:	ASTM A325, Type 1
Locknuts - Approved Type:	Meeting or exceeding AASHTO M292
Washers:	ASTM F436
Nuts:	ASTM A563 or AASHTO M292, Grade 2H or Grade DH (Grade 1OS)

All steel shall be Galvanized according to Subsection 807.19. Steel completely encased in concrete may not be Galvanized.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, submitted, and approval secured before fabrication is begun.

No circumferential butt welds will be allowed in any pipe sections.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Shapes and materials shown in the plans will be the basis of payment and no additional compensation will be made for any adjustments due to substitutions.

Connections shall be bolted with high-strength bolts. Unless noted otherwise, bolts shall be 5/8" diameter and open holes shall be 11/16". Bolt spacing shall be 2 1/4" for 5/8" diameter bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of all members.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether temporary or permanent, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to Subsection 807.26.

Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement SI, and galvanized according to Subsection 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with Subsection 807.07. Anchor bolts shall be pretensioned in accordance with Special Provision Job 061437 "STEEL SIGN STRUCTURES".

All truss frame bolts shall comply with ASTM A325 Type I, galvanized according to Subsection 807.06, Nuts and washers for ASTM A325 Type I bolts shall be furnished and galvanized in accordance with Subsection 807.06.

Field splices shall be located In order to avoid sign panel connections, There shall be a maximum of two field splices and they shall be spaced a minimum of 15 ft. apart.

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-notch test specified for Zone I minimum service temperature. This work and materials shall be paid for in accordance with Special Provision Job 061437 "STEEL SIGN STRUCTURES".

All fillet welds of critical members shall be tested according to AWS D1.1 Structural Welding Code - Steel, using the magnetic particle method, Critical welds shall include: column to base plate and truss bottom support to column.

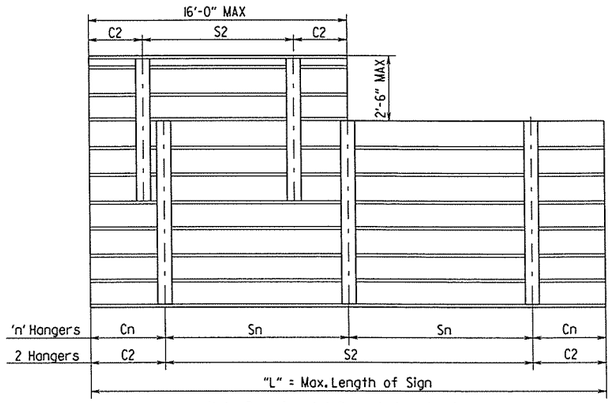
Truss field sections shall be shop assembled. Entire truss shall be fully assembled and lifted into place as one unit on to tower supports. All truss member connections shall be bolted connections.

Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Lock nuts to be installed according to manufacturer's recommendations.

The excavations for the footings shall be back-filled before the structure is attached to the foundations.

Galvanized Coating damaged during transport, handling, or erection shall be field repaired in accordance with Subsection 807.88.

The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and to fit the new structures to the existing conditions.



Note: See sign details and plan sheets for number, size and dimensions of signs.

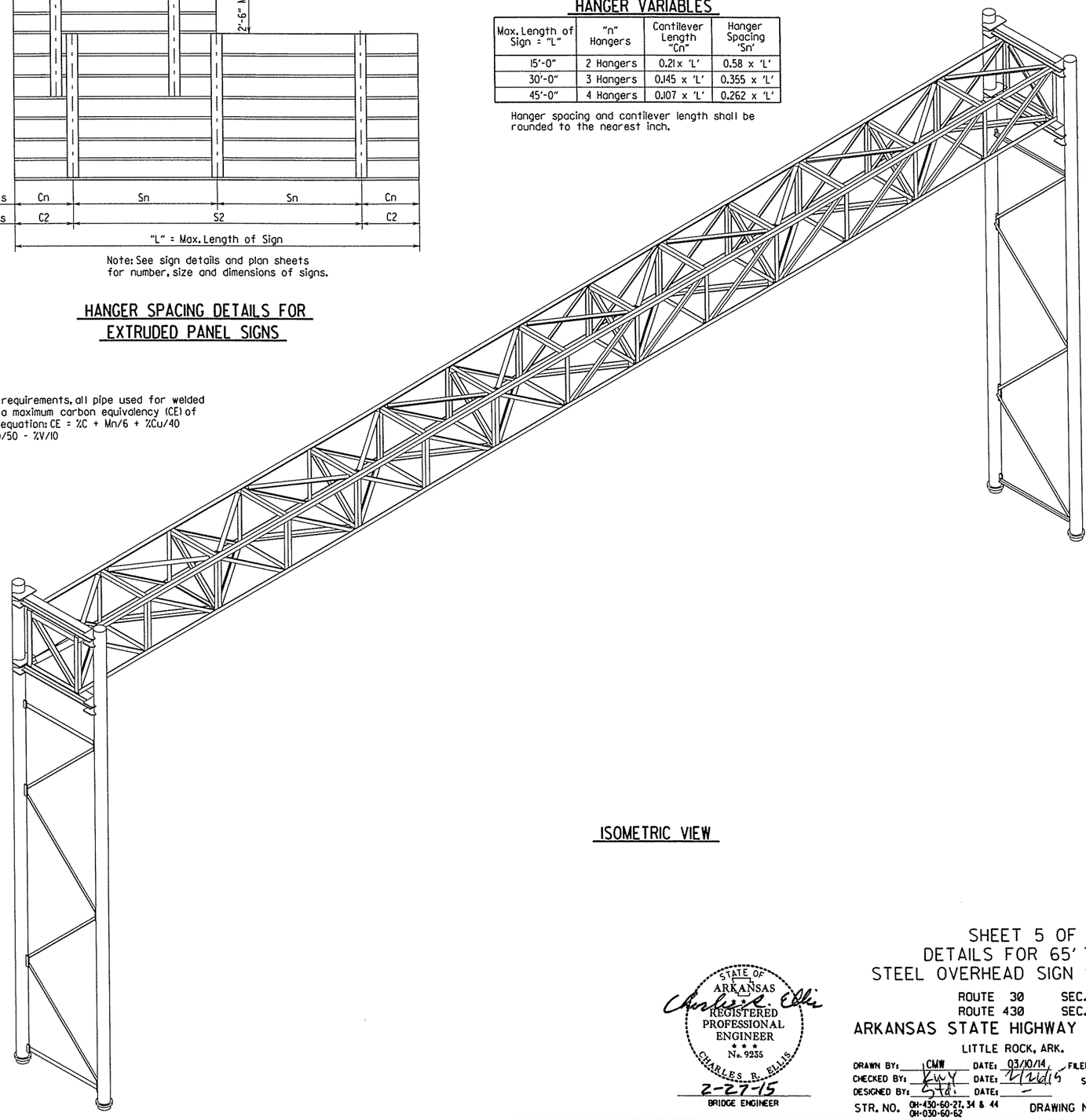
HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

[1] In addition to material requirements, all pipe used for welded applications shall have a maximum carbon equivalency (CE) of 0.4 using the following equation: CE = %C + Mn/6 + %Cu/40 + %Ni/20 + %Cr/10 - %Mo/50 - %V/10

HANGER VARIABLES

Max. Length of Sign = "L"	"n" Hangers	Cantilever Length "Cn"	Hanger Spacing 'Sn'
15'-0"	2 Hangers	0.21 x 'L'	0.58 x 'L'
30'-0"	3 Hangers	0.145 x 'L'	0.355 x 'L'
45'-0"	4 Hangers	0.107 x 'L'	0.262 x 'L'

Hanger spacing and cantilever length shall be rounded to the nearest inch.



ISOMETRIC VIEW

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS FOR 65' TO 85'
STEEL OVERHEAD SIGN STRUCTURES

ROUTE 30 SEC. 23
ROUTE 430 SEC. 21

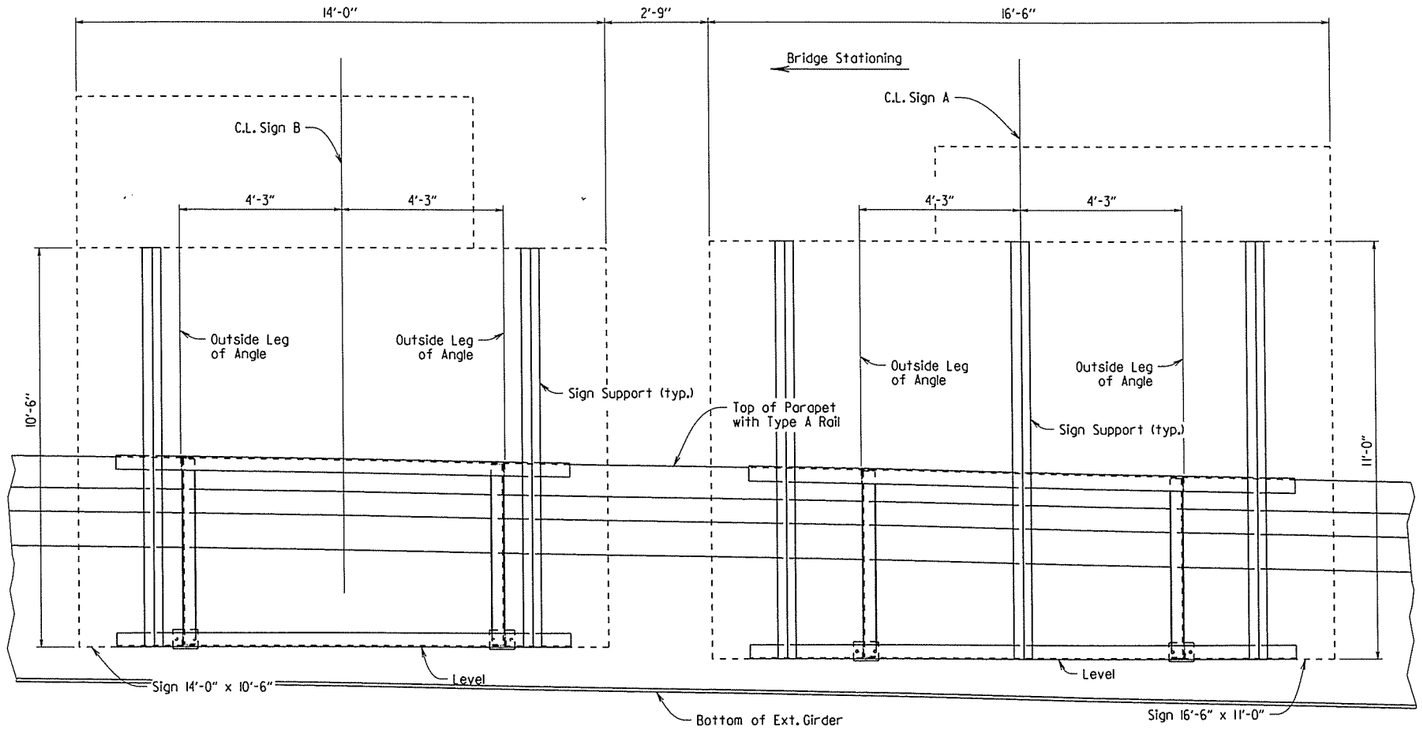
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 03/10/14 FILENAME: b061437_t1.dgn
CHECKED BY: KWY DATE: 2/12/15 SCALE: NOT TO SCALE
DESIGNED BY: STE DATE: —

STR. NO. OH-430-60-27, 34 & 44 OH-030-60-62 DRAWING NO. 55860

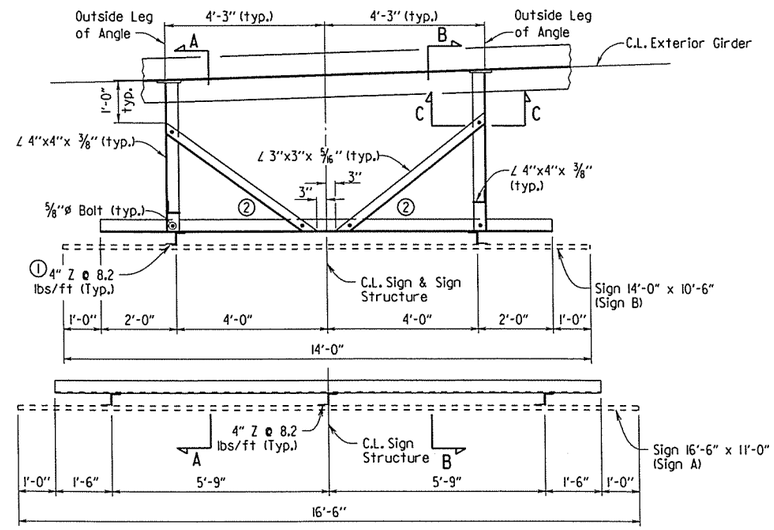
PRINT DATE: 2/26/2015

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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				JOB NO.		061437	26	372
				(1) BM-430-60-28 - SIGN STR. - 55861				

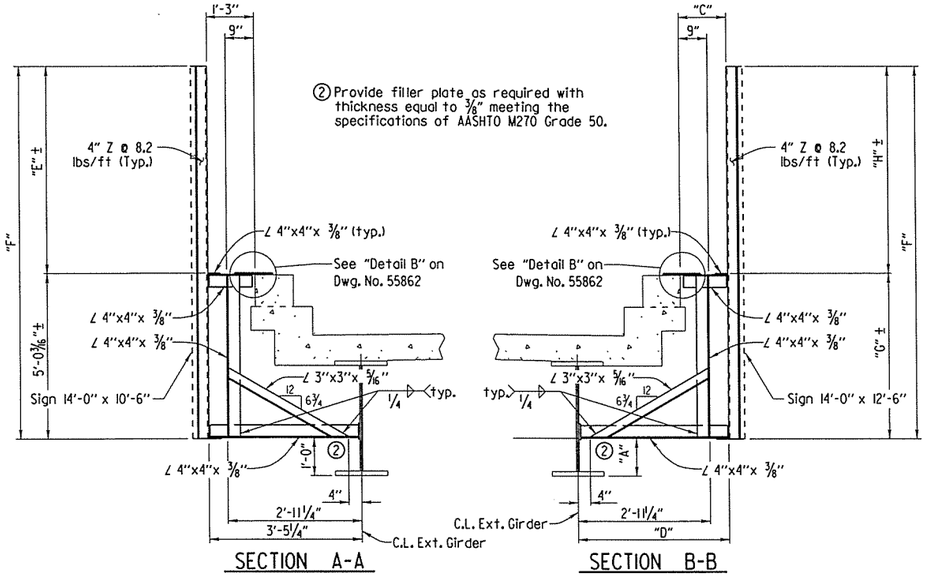


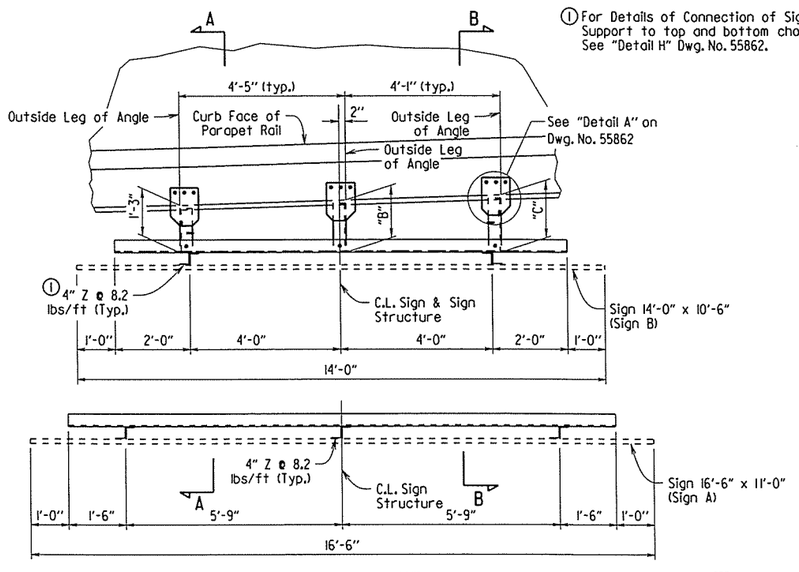
VIEW E-E (NORMAL TO SIGN PANELS)
No Scale

For "Section C-C", see Dwg. No. 55862



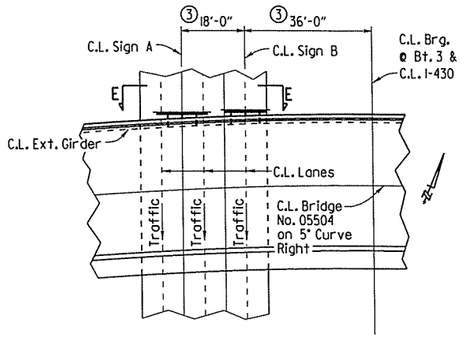
LOWER BRACING DETAIL
No Scale





UPPER BRACING DETAIL
No Scale

(1) For Details of Connection of Sign Support to top and bottom chords, See "Detail H" Dwg. No. 55862.



LOCATION SKETCH
No Scale

(3) Measured normal to C.L. I-430.

Sign	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"
A	1'-0 3/8"	1'-5 3/8"	1'-7 1/4"	3'-10"	5'-11 13/16"	11'-0"	4'-11 13/16"	6'-0 3/16"
B	1'-0 3/4"	1'-4 9/16"	1'-6 1/8"	3'-8 3/8"	5'-5 11/16"	10'-6"	4'-11 13/16"	5'-6 9/16"

STATE OF ARKANSAS
CHARLES R. ELLIS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
2-27-15
BRIDGE ENGINEER

DETAILS OF SIGN STRUCTURE BM-430-60-28

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 3/21/14 FILENAME: b061437_t2.dgn
CHECKED BY: CWW DATE: 2/27/15 SCALE: No Scale
DESIGNED BY: CRE DATE: —

STR. NO. BM-430-60-28 DRAWING NO. 55861

PRINT DATE: 2/27/2015

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.		061437	207	372

① BM-430-60-28 - SIGN STR. - 55862
BM-430-60-45
BM-030-60-47

GENERAL NOTES:
Construction Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 2014, with applicable Special Provisions and Supplemental Specifications.

Design Specifications: Standard Specifications for Structural supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 2013 (Sixth Edition) with current interim revisions.

Basic Wind Speed = 90 m.p.h.

Fatigue Category I

Structural steel sign support members shall comply with the following specifications:

Angles:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
Plate:	AASHTO M270, Grade 50 (Fy = 50,000 psi).
Z-Shapes:	AASHTO M270, Grade 36 (Fy = 36,000 psi).
Bolts:	ASTM A325.
Locknuts - Approved Type:	Meeting or exceeding AASHTO M292
Washers:	ASTM F436.
Nuts:	ASTM A563 or AASHTO M292, Grade 2H or Grade DH (Grade IOS).

All steel shall be Galvanized according to Subsection 807.19. Steel completely encased in concrete may not be Galvanized.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, submitted, and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Shapes and materials shown in the plans will be the basis of payment and no additional compensation will be made for any adjustments due to substitutions.

All welding that is to be done during fabriaction of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether temporary or permanent, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to Subsection 807.26

Connections shall be bolted with high-strength bolts. Unless noted otherwise, bolts shall be 5/8" diameter and open holes shall be 11/16". Bolt spacing shall be 2 1/4" for 5/8" diameter bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of all members.

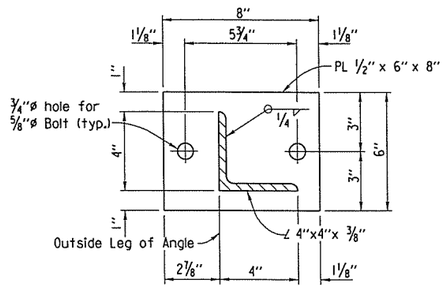
All frame bolts shall comply with ASTM A325 Type 1, galvanized according to Subsection 807.06, Nuts and washers for ASTM A325 Type 1 bolts shall be furnished and galvanized in accordance with Subsection 807.06.

Lock nuts to be equipped with nylon locking inserts or other approved type locking system. Lock nuts to be installed according to manufacturer's recommendations.

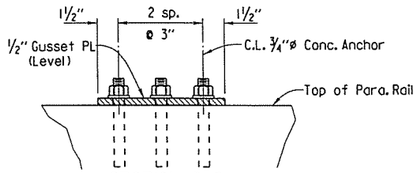
Galvanized Coating damaged during transport, handling, or erection shall be field repaired in accordance with Subsection 807.88.

Surfaces of plates in contact with concrete or beam web shall be coated with a thick layer of asphaltic paint and allowed to dry before erection. Preformed pads 1/8" conforming to Section 808 of the Standard Specifications may be used in lieu of asphaltic paint coating for steel plates in contact with beam web or concrete parapet.

Dimensions shown are based on existing Bridge plans, the Contractor shall make check measurements in the field and make any adjustments necessary to fit the structures to the existing conditions and avoid any diaphragm, parapet joints or hand rail supports on the bridge. This may include shifting the sign structures with approval from the Engineer.



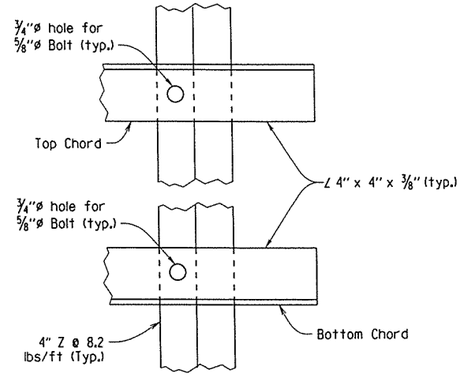
SECTION C-C
No Scale



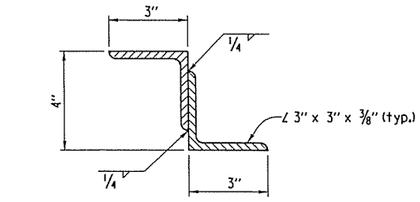
SECTION D-D
No Scale

The Concrete anchors shall be drilled and grouted into place, the anchors shall be set and fixed using a DPL approved epoxy grout system in accordance with manufacturers recommendations and shall have the following ultimate capacitites:

Shear 10,000 lbs.
Tension 9,000 lbs.

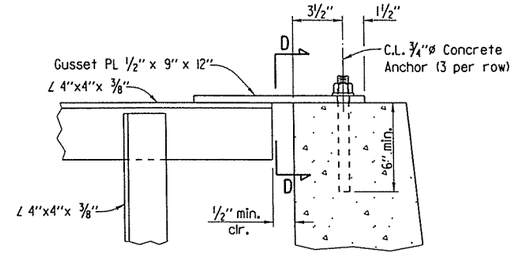


DETAIL H
No Scale

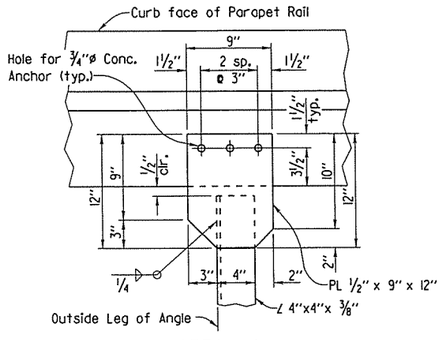


Structural Z Sign Support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SIGN SUPPORT
No Scale



DETAIL B
No Scale



DETAIL A
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

COMMON DETAILS OF BRIDGE MOUNTED SIGN STRUCTURES

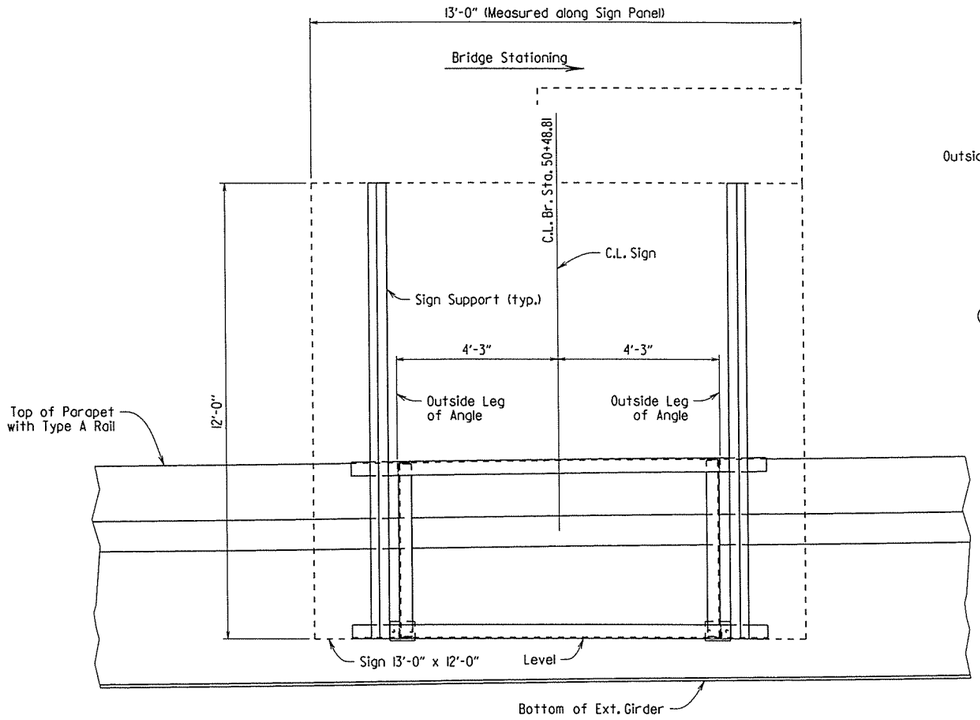
ROUTE 030 SEC. 23
ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

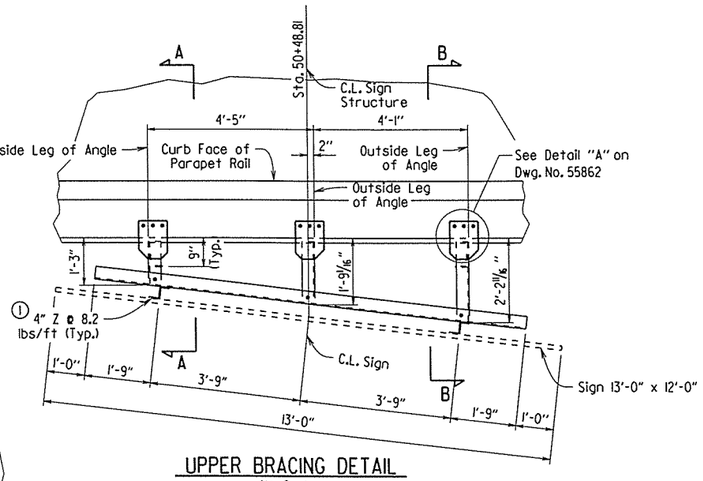
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CHECKED BY: DATE: 2/26/15 SCALE: No Scale
DESIGNED BY: DATE:
STR. NOS. BM-430-60-28 & 45 BM-030-60-47 DRAWING NO. 55862

PRINT DATE: 2/26/2015

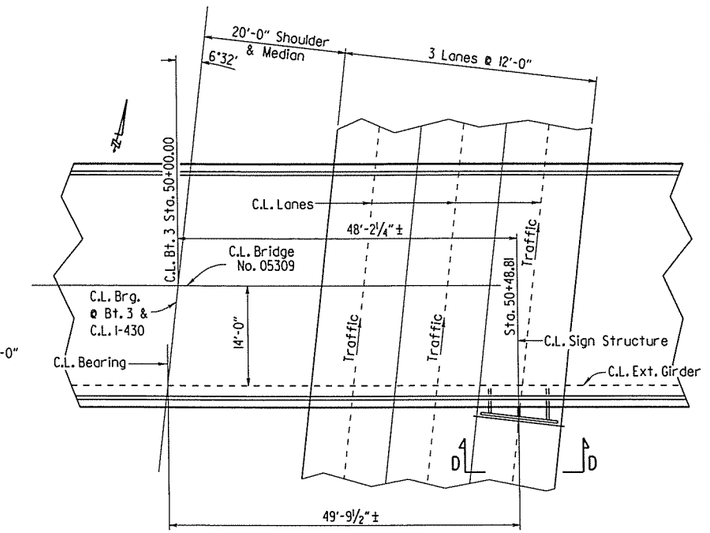
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				6	ARK.			
				JOB NO.		061437	26	372
				① BM-430-60-45 - SIGN STR. - 55863				



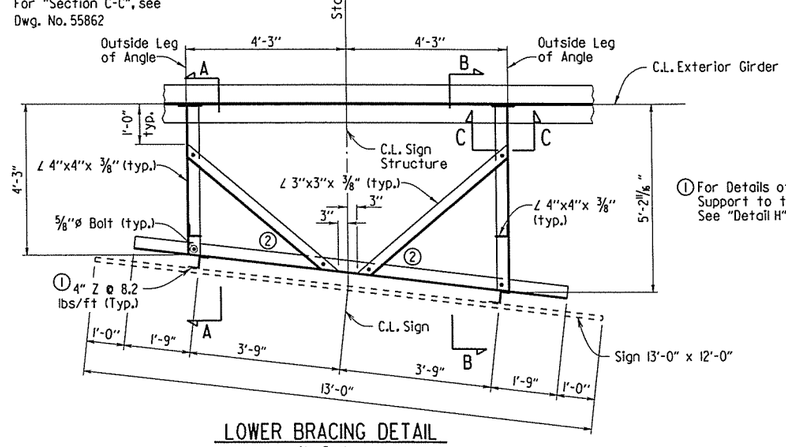
VIEW D-D (NORMAL TO BRIDGE)
No Scale



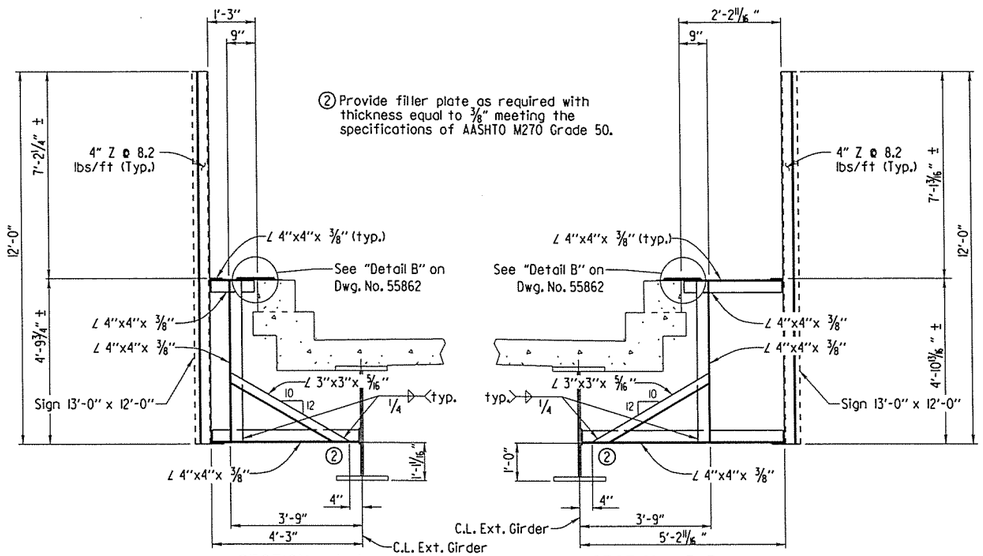
UPPER BRACING DETAIL
No Scale



LOCATION SKETCH
No Scale



LOWER BRACING DETAIL
No Scale



STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

DETAILS OF SIGN STRUCTURE BM-430-60-45

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 3/21/14 FILENAME: b061437_t2.dgn
CHECKED BY: KWY DATE: 2/27/15 SCALE: No Scale
DESIGNED BY: CMW DATE:

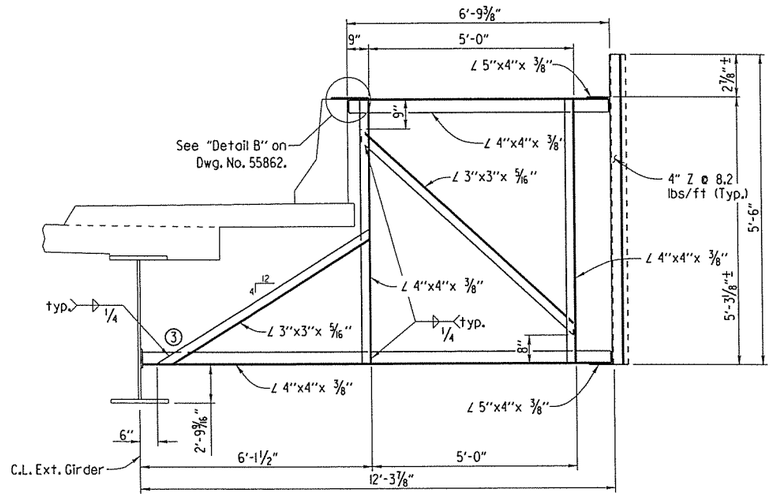
STR. NO. BM-430-60-45 DRAWING NO. 55863

PRINT DATE: 2/27/2015

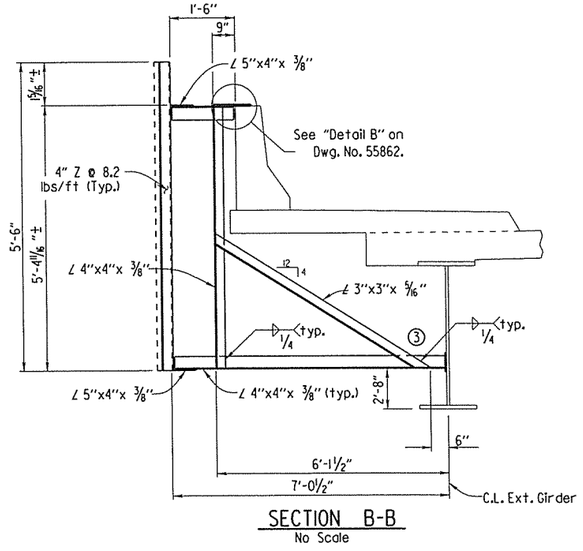
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		061437	209	372

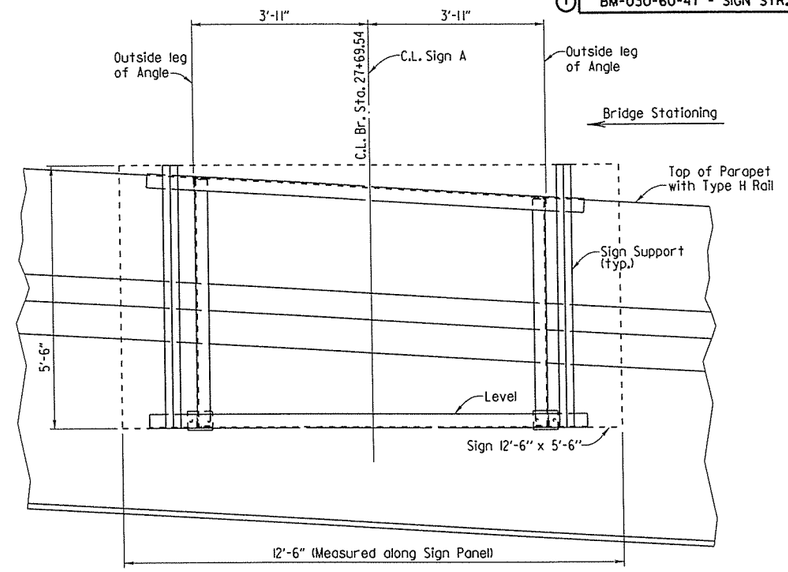
(1) BM-030-60-47 - SIGN STR. - 55864



SECTION A-A
No Scale

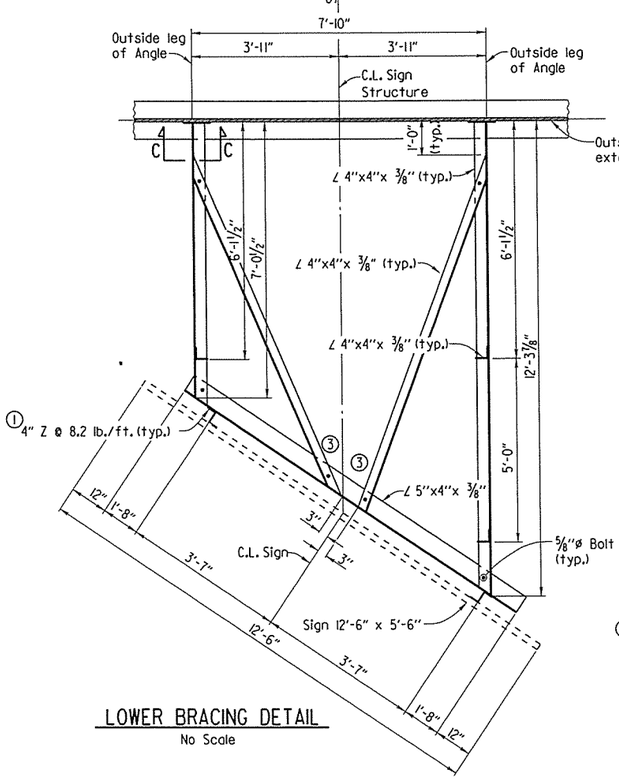


SECTION B-B
No Scale

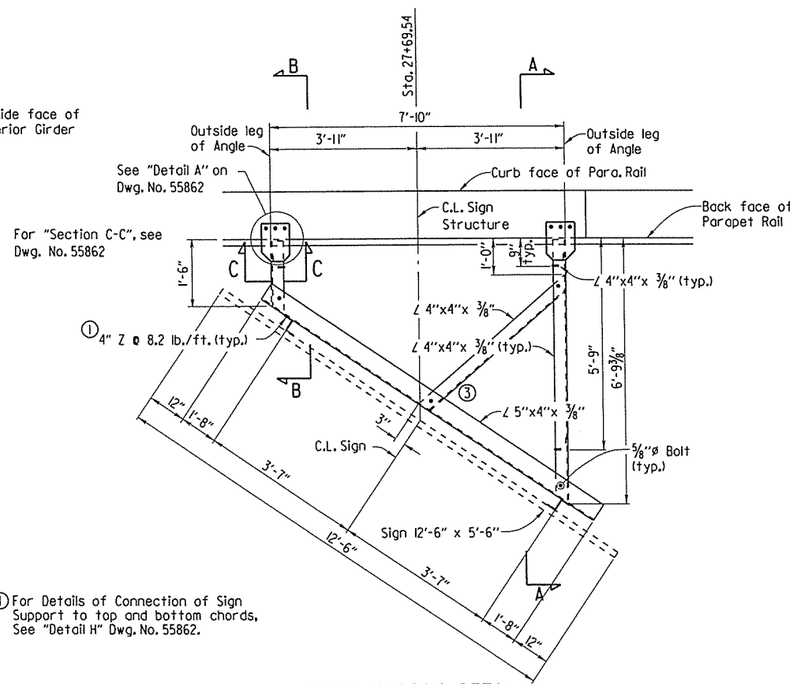


VIEW E-E (NORMAL TO BRIDGE)
NOT TO SCALE

③ Provide filler plate as required with thickness equal to ⅜" meeting the specifications of AASHTO M270 Grade 50.

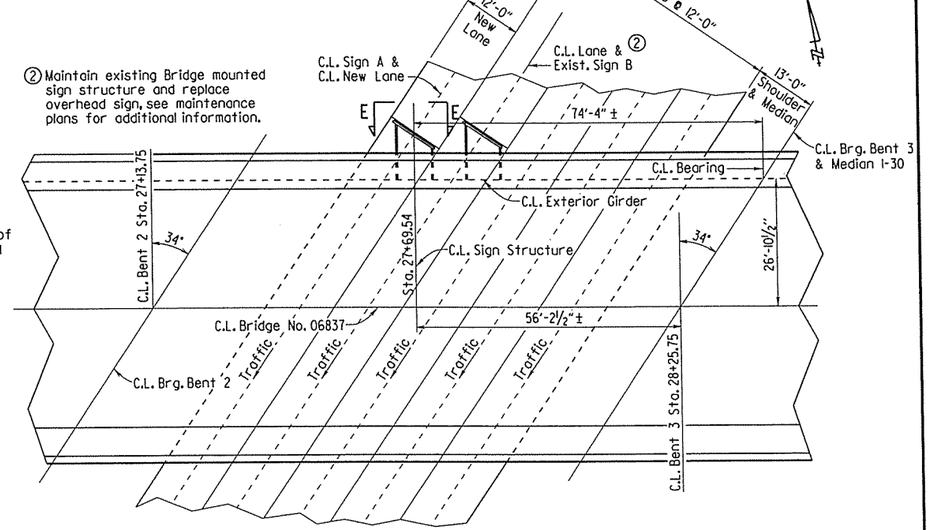


LOWER BRACING DETAIL
No Scale



UPPER BRACING DETAIL
No Scale

① For Details of Connection of Sign Support to top and bottom chords, See "Detail H" Dwg. No. 55862.



LOCATION SKETCH
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
3-4-15
BRIDGE ENGINEER

DETAILS OF SIGN STRUCTURE BM-030-60-47

ROUTE 30 SEC. 23

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 3/21/14
CHECKED BY: CWY DATE: 3/4/15
DESIGNED BY: Std. DATE:
FILENAME: b061437_t2.dgn
SCALE: No Scale

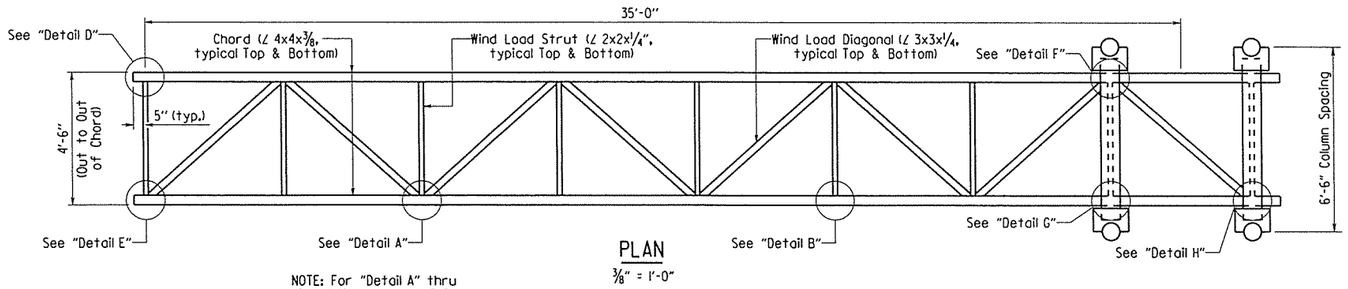
STR. NO. BM-030-60-47 DRAWING NO. 55864

PRINT DATE: 3/4/2015

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.		061437	210	372

(1) OC-430-60-40 - SIGN STR. - 55865

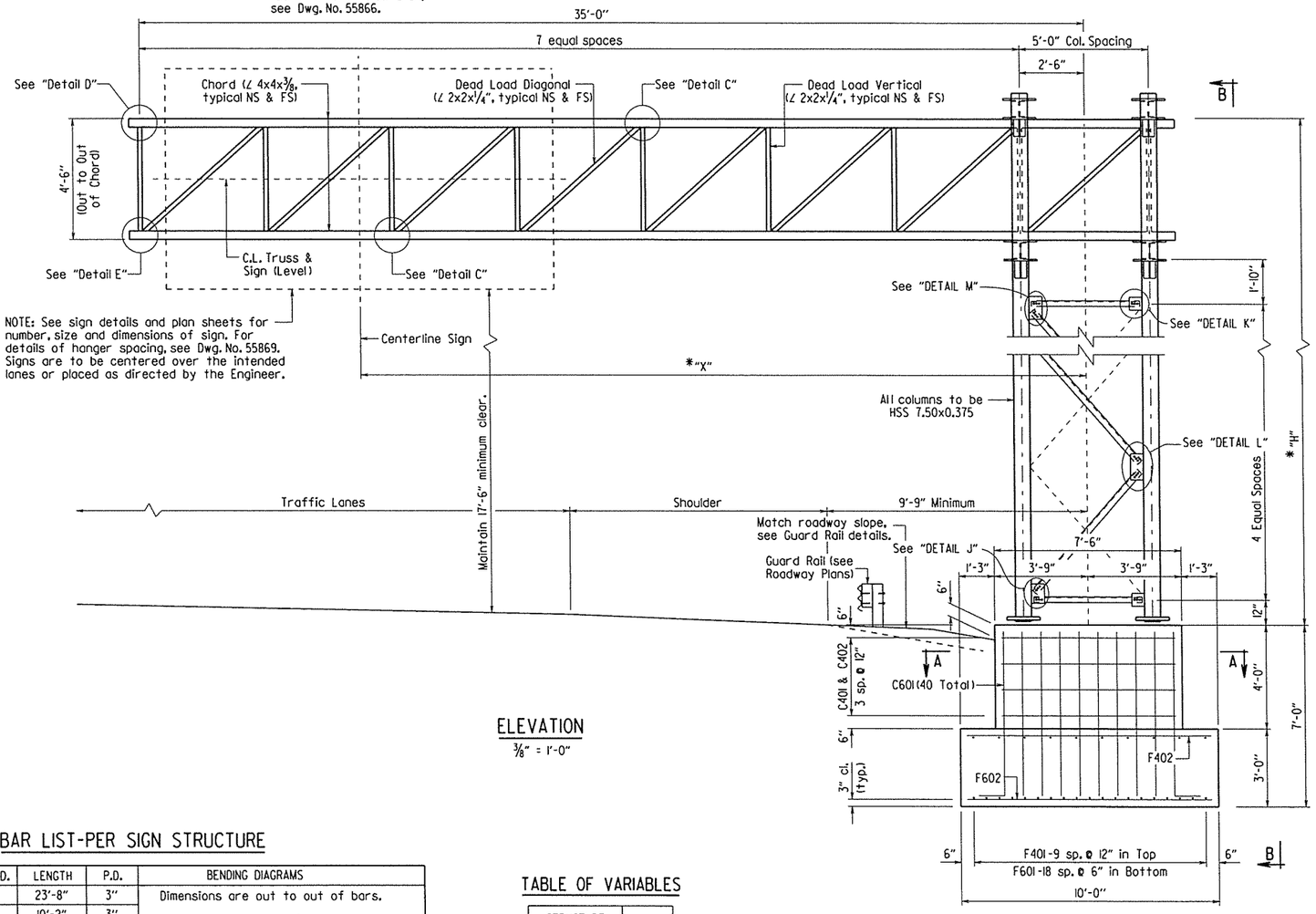
OC-430-60-41, 42 & 43



PLAN

3/8" = 1'-0"

NOTE: For "Detail A" thru "Detail M" and "View B-B", see Dwg. No. 55866.



ELEVATION

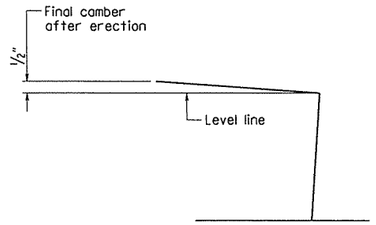
3/8" = 1'-0"

*NOTE: The Contractor shall make field measurements to determine the following:

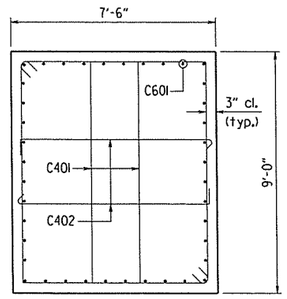
1) To verify that dimension "X" is sufficient to center the sign over the intended lane while maintaining minimum horizontal clearances.

2) To determine the column height "H" required to maintain the minimum vertical clearance with the centerline of the sign located at the C.L. of the truss. If the structure height "H" exceeds 30'-0" contact the Engineer.

These verifications and measurements are required prior to submittal of the shop drawings. The column height "H" shall be shown on the shop drawings with a note stating that the Contractor has made the required field measurements.



TRUSS CAMBER DIAGRAM



SECTION A-A

1/2" = 1'-0"

BAR LIST-PER SIGN STRUCTURE

MARK	NO. REQ'D.	LENGTH	P.D.	BENDING DIAGRAMS
C401	8	23'-8"	3"	Dimensions are out to out of bars.
C402	8	10'-2"	3"	
C601	40	7'-2"	4½"	
F401	10	14'-6"	Str.	
F402	15	9'-6"	Str.	
F601	19	14'-6"	Str.	
F602	29	9'-6"	Str.	

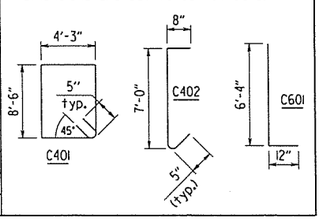


TABLE OF VARIABLES

STRUCTURE NUMBER	"X"
OC-430-60-40	28'-1"
OC-430-60-41	28'-1"
OC-430-60-42	28'-1"
OC-430-60-43	26'-6"

APPROXIMATE QUANTITIES (FOR INFORMATION ONLY)

STRUCTURE NUMBER	CLASS S CONCRETE (cu. yd.)	REINFORCING STEEL (pounds)	EXCAVATION (cu. yd.)
EACH STRUCTURE	26.67	1,630	56

STATE OF ARKANSAS
CHARLES R. ELLIS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
6-16-15
BRIDGE ENGINEER

SHEET 1 OF 5
DETAILS OF 35' STEEL CANTILEVER SIGN STRUCTURE

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

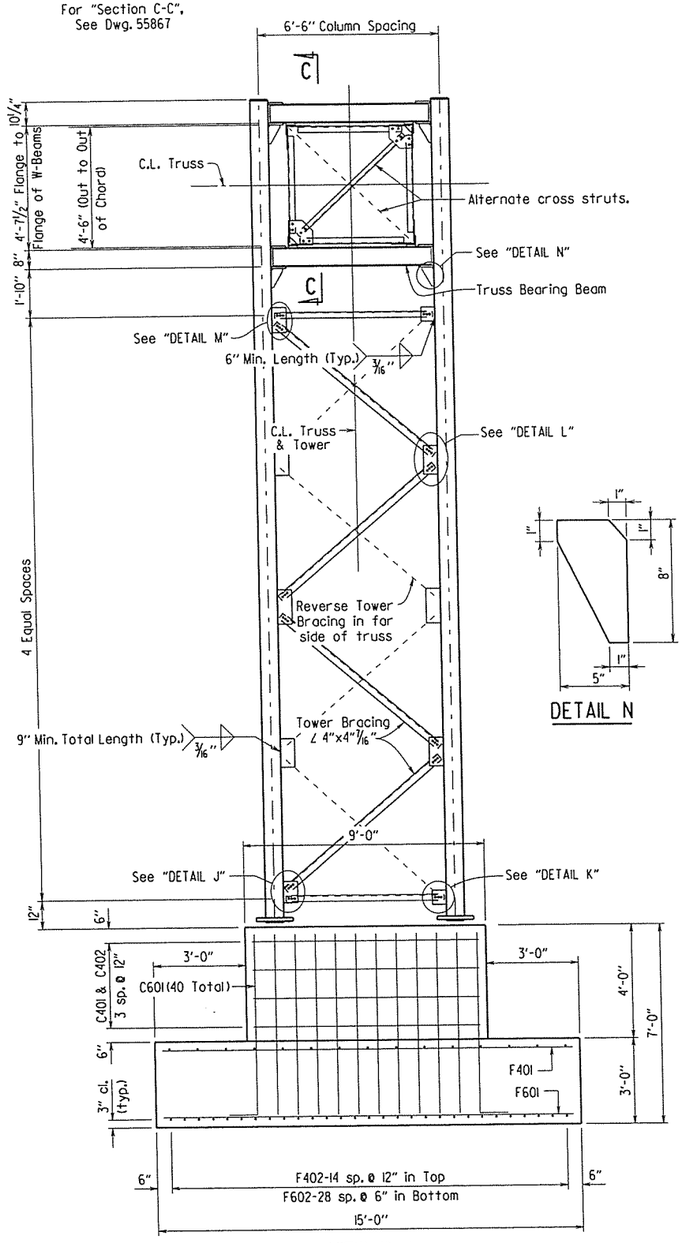
LITTLE ROCK, ARK.

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CHECKED BY: KWY DATE: 6/10/15 SCALE: as noted
DESIGNED BY: Std. DATE:
STR. NO. OC-430-60-40, 41, 42 & 43 DRAWING NO. 55865

PRINT DATE: 6/16/2015

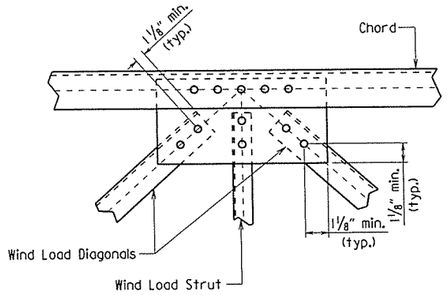
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				6	ARK.			
				JOB NO.		061437	211	372
				(1) OC-430-60-40 - SIGN STR. - 55866				
				OC-430-60-41, 42 & 43				

NOTE: All gussets shall be 3/8" thick Unless otherwise shown

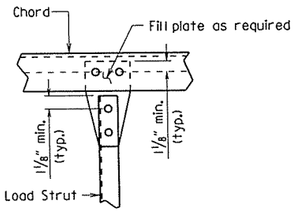


VIEW B-B
3/8" = 1'-0"

DETAIL N

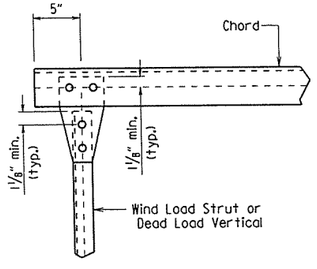


DETAIL A
1½" = 1'-0"

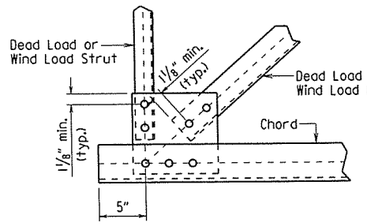


DETAIL B
1½" = 1'-0"

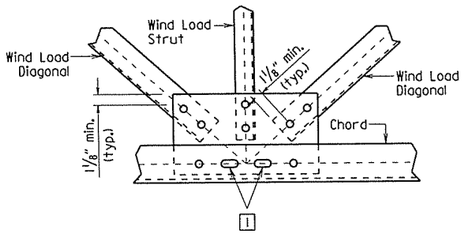
DETAIL C
1½" = 1'-0"



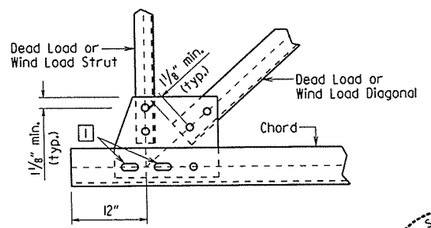
DETAIL D
1½" = 1'-0"



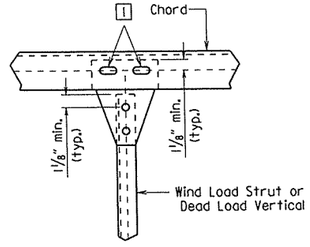
DETAIL E
1½" = 1'-0"



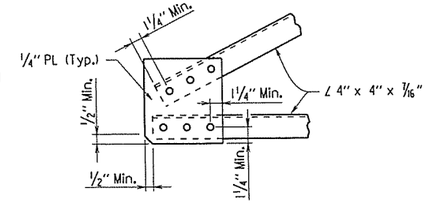
DETAIL F
1½" = 1'-0"



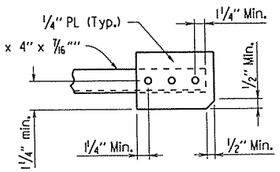
DETAIL H
1½" = 1'-0"



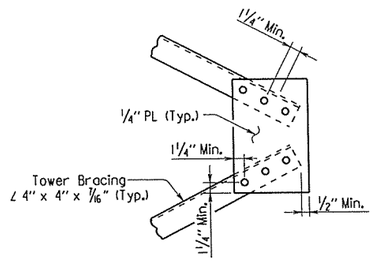
DETAIL G
1½" = 1'-0"



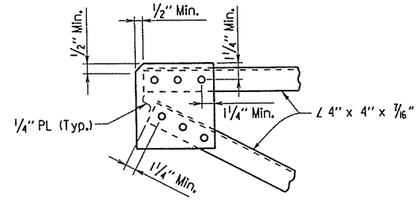
DETAIL J



DETAIL K



DETAIL L



DETAIL M

[1] Slotted Hole in Gusset Plate and Chord Angle 11/16" X 2". Use plate washer on Gusset plate side. 11/16" ø holes in 3/4" shim plate and beam flange.

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
8-25-15
BRIDGE ENGINEER

SHEET 2 OF 5
DETAILS OF 35' STEEL CANTILEVER SIGN STRUCTURE

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

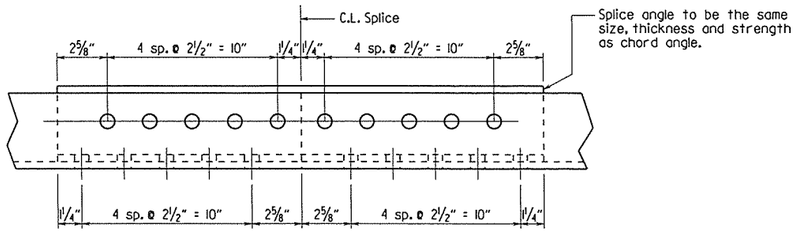
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CHECKED BY: CMW DATE: 8/25/15 SCALE: as noted
DESIGNED BY: DATE:
STR. NO. OC-430-60-40, 41, 42 & 43 DRAWING NO. 55866

PRINT DATE: 8/25/2015

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.		061437	212	372

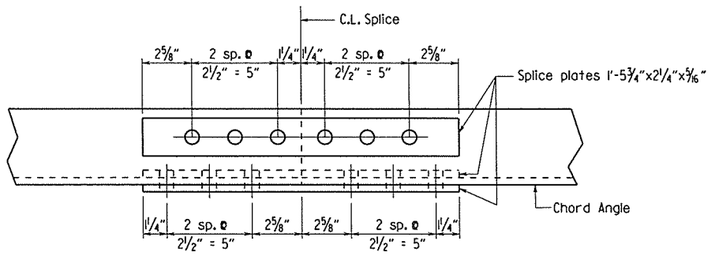
(1) OC-430-60-40 - SIGN STR. - 55867

OC-430-60-41, 42 & 43



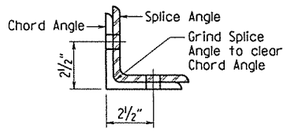
NOTE: Place splice angles on inside of truss. Bolts shall be ¾" ø and open holes shall be 13/16" ø. Minimum center to center of bolt spacing shall be 2½".

OPTIONAL CHORD SPLICE USING ANGLES

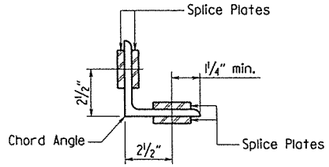


NOTE: Bolts shall be ¾" ø and open holes shall be 13/16" ø. Minimum center to center of bolt spacing shall be 2½".

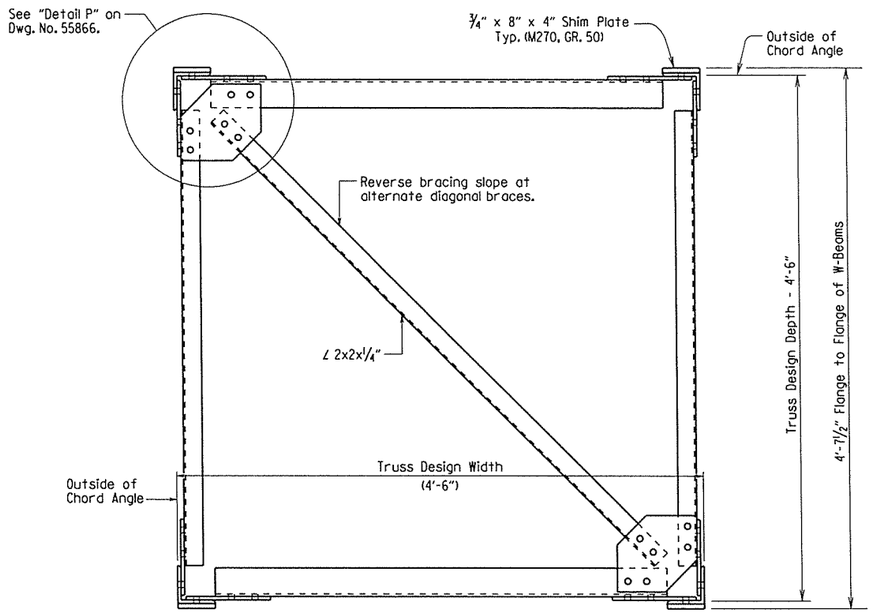
OPTIONAL CHORD SPLICE USING PLATES



SECTION AT C.L. SPLICE



SECTION AT C.L. SPLICE



TRUSS SECTION

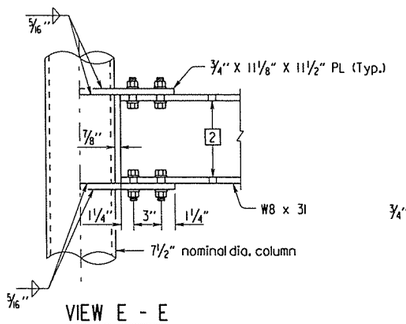
1½" = 1'-0"

SPLICE DETAILS

No Scale

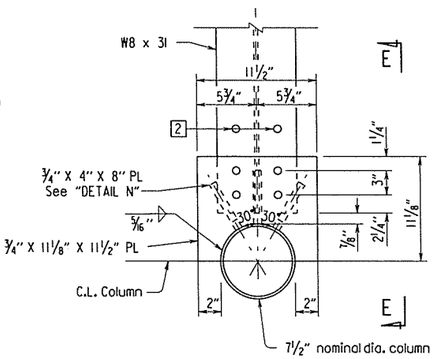
[1] Slotted Hole in Gusset Plate and Chord Angle 13/16" X 2". Use plate washer on Gusset plate side. 13/16" ø holes in ¾" shim plate and beam flange.

[2] 13/16" Dia. holes at top or bottom flanges as required.

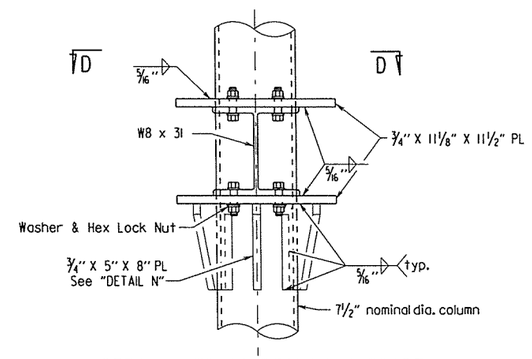


VIEW E - E

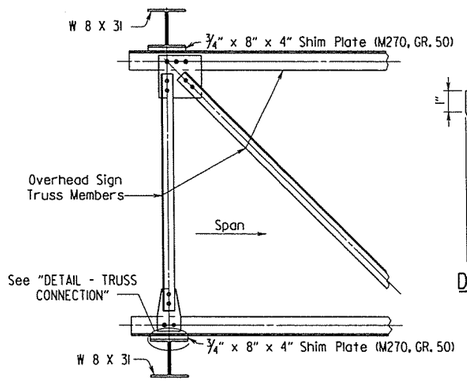
¾" X 5" X 8" Plate not shown for clarity



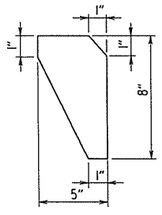
VIEW D - D



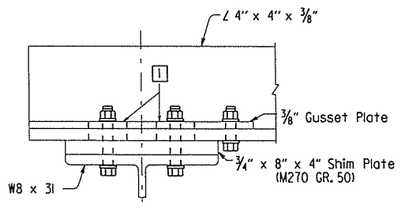
DETAIL - TRUSS BEARING SUPPORT



SECTION C-C

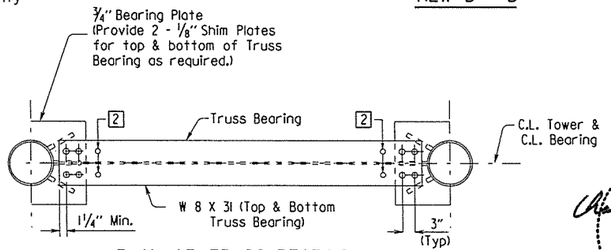


DETAIL N



DETAIL - TRUSS CONNECTION

Shown for bottom connection, top connection similar.



PLAN AT TRUSS BEARING

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
5-12-15
BRIDGE ENGINEER

SHEET 3 OF 5
DETAILS OF 35' STEEL CANTILEVER SIGN STRUCTURE

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

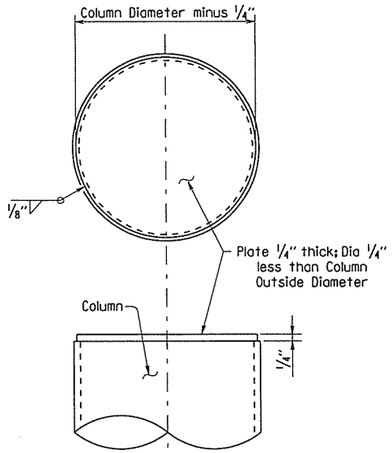
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CHECKED BY: EWY DATE: 5/12/15 SCALE: as noted
DESIGNED BY: STD DATE:
STR. NO. OC-430-60-40, 41, 42 & 43 DRAWING NO. 55867

PRINT DATE: 5/11/2015

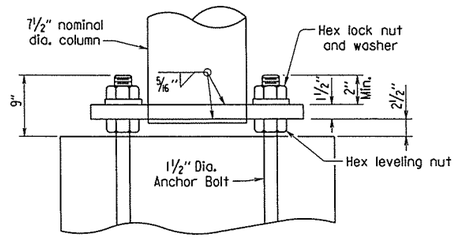
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				6	ARK.			
				JOB NO.		061437	213	372

(1) OC-430-60-40 - SIGN STR. - 55868

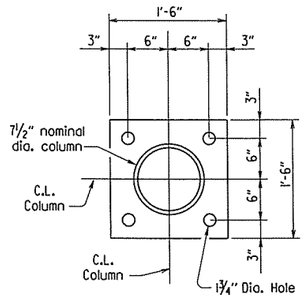
OC-430-60-41, 42 & 43



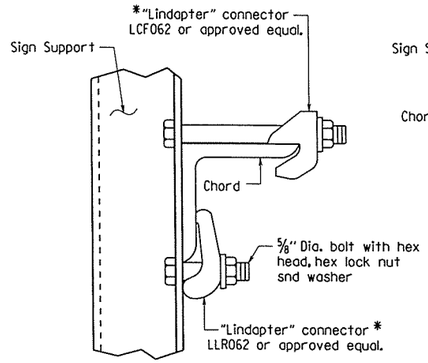
END CAP DETAILS

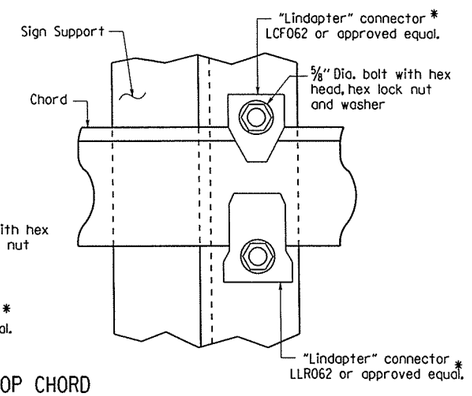


ELEVATION - COLUMN BASE

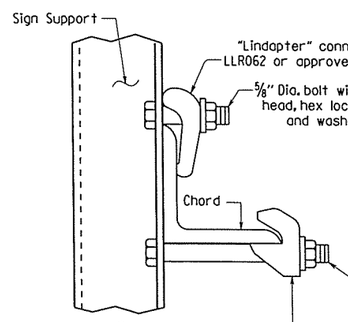


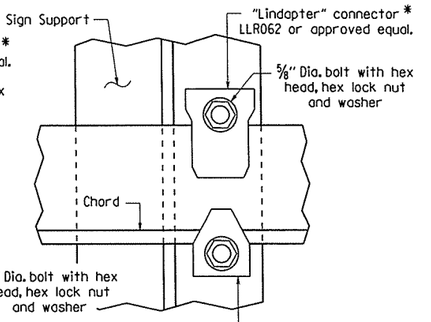
PLAN - COLUMN BASE





TOP CHORD





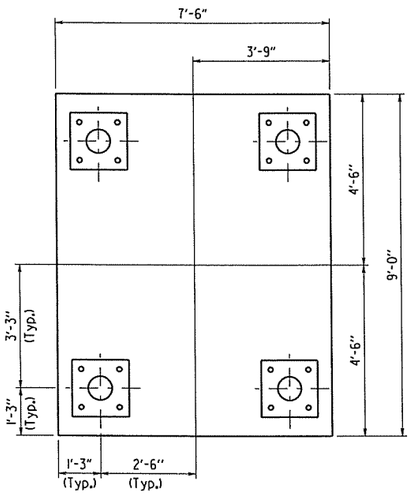
BOTTOM CHORD

*All "Lindapter" connectors or approved equal shall be installed according to manufacturer's recommendations. All connectors, bolts, nuts and washers shall be galvanized.

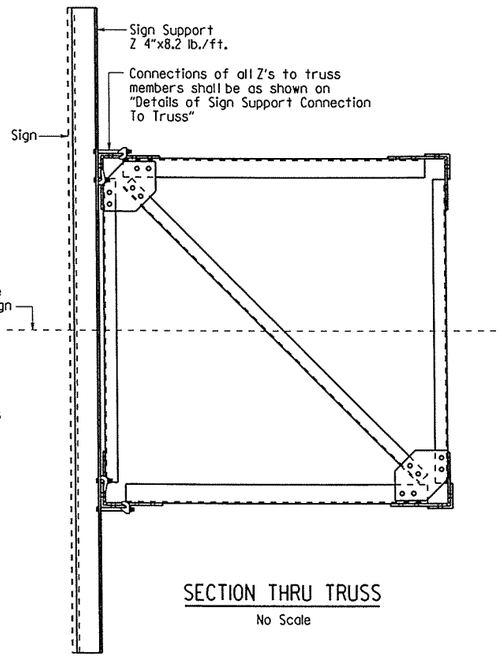
NOTE: Install all support connectors clear of the gusset plates and splice locations.

DETAILS OF SIGN SUPPORT CONNECTION TO TRUSS

No Scale

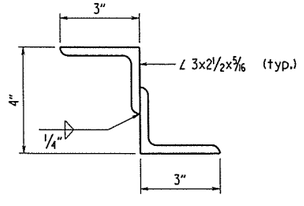


PLAN - TOWER BASE



SECTION THRU TRUSS

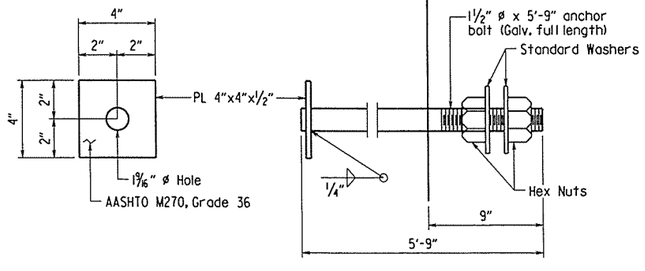
No Scale



NOTE: Structural Z support may be fabricated from angles as shown.

DETAILS OF ALTERNATE Z SUPPORT

No Scale



Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement S1, and galvanized according to subsection 807.07. Nuts and washers for bolts shall be as specified in subsection 807.07.

ANCHOR BOLT DETAIL

No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
2-27-15
BRIDGE ENGINEER

SHEET 4 OF 5
DETAILS OF 35' STEEL CANTILEVER SIGN STRUCTURE

ROUTE 430 SEC. 21

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 2/10/2015 FILENAME: b061437_t3.dgn

CHECKED BY: KWW DATE: 2/26/15 SCALE: as noted

DESIGNED BY: CRE DATE: —

STR. NO. OC-430-60-40, 41, 42 & 43 DRAWING NO. 55868

PRINT DATE: 2/26/2015

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.		061437	214	372

① OC-430-60-40 - SIGN STR. - 55869
OC-430-60-41, 42 & 43

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS:

Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, 2014 edition, with applicable supplemental specifications and Special Provisions. Section and Subsection refer to the Standard Construction Specifications unless otherwise noted in the plans.

DESIGN SPECIFICATIONS:

Standard Specifications for Structural Supports for Highway Signs, Luminaries and Traffic Signals, AASHTO 2013 (Sixth Edition) with current interim Revisions.

Basic Wind Speed = 90 m.p.h.

Fatigue Category: I

This structure is approved for 235 square feet of sign area. Use of additional area must be approved by the Engineer.

If the structure height ("H") exceeds 30'-0" contact the Engineer.

FOUNDATION MATERIALS AND STRENGTHS:

Class S Concrete	f'c = 3,500 psi
Reinforcing Steel (Grade 60, AASHTO M 31 or M 322, Type A)	fy = 60,000 psi

Structural steel sign support members shall comply with the following specifications:

Angles:	AASHTO M270, Grade 36 (Fy = 36,000 psi)
Plate:	AASHTO M270, Grade 50 (Fy = 50,000 psi)
*Pipe:	ASTM A139, Grade C (Fy = 42,000 psi), ASTM A500, Grade B (Fy = 42,000 psi), ASTM A501, Grade B (Fy = 50,000 psi) or ASTM A714, Class 2, Grade II, Type E or S (Fy = 50,000 psi)
Z-shapes:	AASHTO M270, Grade 36 (Fy = 36,000 psi)
Bolts:	ASTM A325, Type 1
Locknuts:	Approved Type - Meeting or exceeding AASHTO M292
Washers:	ASTM F436
Nuts:	ASTM A563 or AASHTO M 292, Grade DH or Grade 2H

All steel shall be galvanized according to Subsection 807.19. Steel completely encased in concrete may not be galvanized.

Drawings show general features of design only. Shop drawings shall be made in accordance with Subsection 807.04, submitted and approval secured before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted by the Contractor to the Engineer for approval. Steels of equal or greater strengths will be accepted only when shown on the approved shop drawings. Shapes and materials shown in the plans will be the basis of payment and no additional compensation will be made for any adjustments due to substitutions.

Connections shall be bolted with high-strength bolts. Unless noted otherwise, bolts shall be ⅝" ø and open holes shall be 11/16 " ø. Bolt spacing shall be 2¼" for ⅝" ø bolts unless otherwise noted. Bolts shall be placed with heads on the outside face of all members.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed on the shop drawings and submitted for approval. If additional welds are required, whether temporary or permanent, a formal request with detailed drawings shall be submitted to the Engineer for approval. All welding shall conform to Subsection 807.26.

Anchor bolts shall comply with AASHTO M314, Grade 55, with Supplementary Requirement S1, and galvanized according to Subsection 807.07. Nuts and washers for anchor bolts shall be furnished and galvanized in accordance with Subsection 807.07.

All truss frame bolts shall comply with ASTM A325, Type 1, and galvanized according to Subsection 807.06. Nuts and washers for ASTM A325, Type 1, bolts shall be furnished and galvanized in accordance with Subsection 807.06.

Field splices shall be located in order to avoid sign panel connections. Only one chord splice is permitted with a minimum section length of 15 feet.

All main load carrying tension members greater than ½" in thickness shall conform to the requirements of the Longitudinal Charpy V-notch test specified for Zone 1 minimum service temperature. This work and materials shall be paid for in accordance with Special Provision Job 061437 "Steel Sign Structures".

All fillet welds of critical members shall be tested according to AWS D1.1 Structural Welding Code-Steel, using the magnetic particle method. Critical welds shall include: column to truss connection plate welds.

Truss field sections shall be shop assembled. Entire truss shall be fully assembled and lifted into place as one unit onto the support. All truss member connections shall be bolted connections.

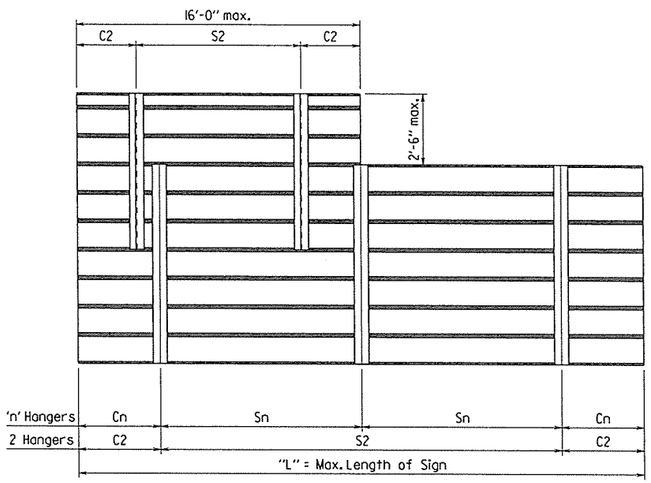
All truss member connections shall be bolted.

Locknuts to be equipped with nylon locking inserts or other approved type locking system. Locknuts to be installed according to manufacturer's recommendations.

Shoring may be required to protect existing shoulders during excavation. Any shoring required shall not be paid for directly, but shall be considered incidental to the item "Steel Cantilever Sign Structure". The excavations for the footings shall be backfilled before the structure is attached to the foundation.

Galvanized coating damaged during transport, handling or erection shall be field repaired in accordance with Subsection 807.88.

The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and to fit the new structures to the existing conditions.



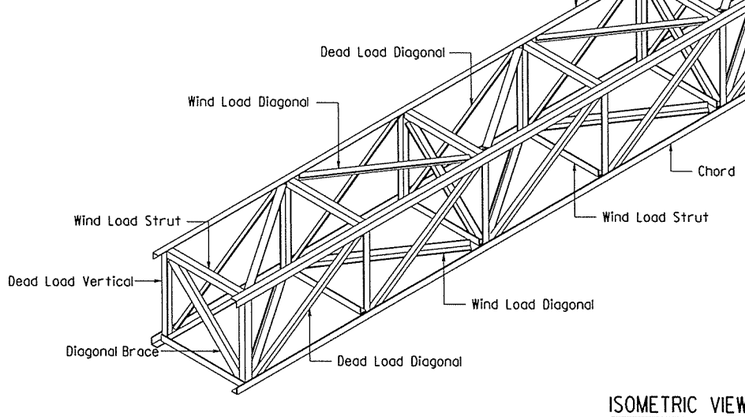
NOTE: See sign details and plan sheets for number, size and dimensions of signs.

HANGER SPACING DETAILS FOR EXTRUDED PANEL SIGNS

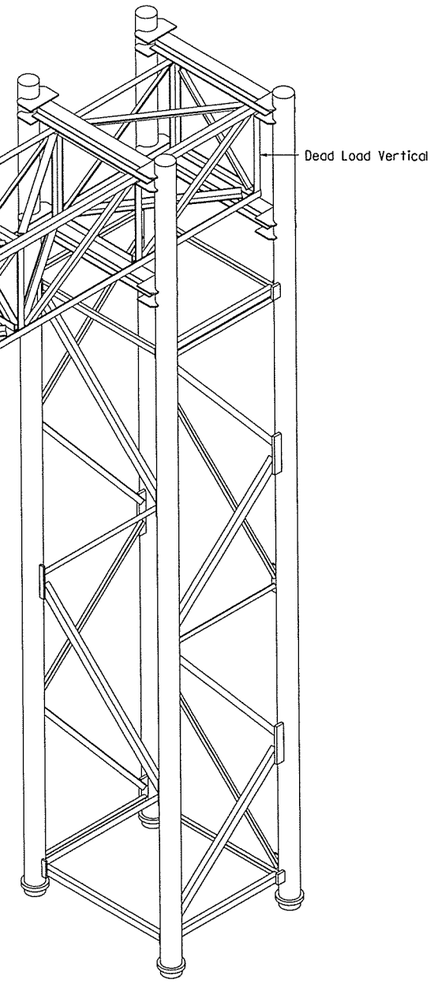
HANGER VARIABLES

Max. Length of Sign = "L"	"n" Hangers	Cantilever Length "Cn"	Hanger Spacing "Sn"
15'-0"	2 Hangers	0.21 x "L"	0.58 x "L"
30'-0"	3 Hangers	0.145 x "L"	0.355 x "L"

Hanger spacing and cantilever length shall be rounded to the nearest inch.



ISOMETRIC VIEW
No Scale



*In addition to material requirements, all pipe used for welding applications shall have a maximum carbon equivalency (CE) of 0.4 using the following equation:
CE = %C + %Mn/6 + %Cu/40 + %Ni/20 + %Cr/10 - %Mo/50 - %V/10

STATE OF ARKANSAS
Charles R. Ellis
REGISTERED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS
5-12-15
BRIDGE ENGINEER

SHEET 5 OF 5
DETAILS OF 35' STEEL CANTILEVER SIGN STRUCTURE

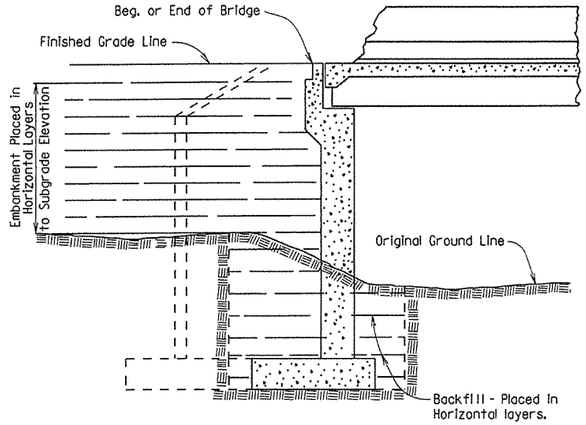
ROUTE 430 SEC. 21
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: CMW DATE: 2/10/2015 FILENAME: b061437_t3.dgn
CHECKED BY: KWY DATE: 5/12/15 SCALE: as noted
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STR. NO. OC-430-60-40, 41, 42 & 43 DRAWING NO. 55869

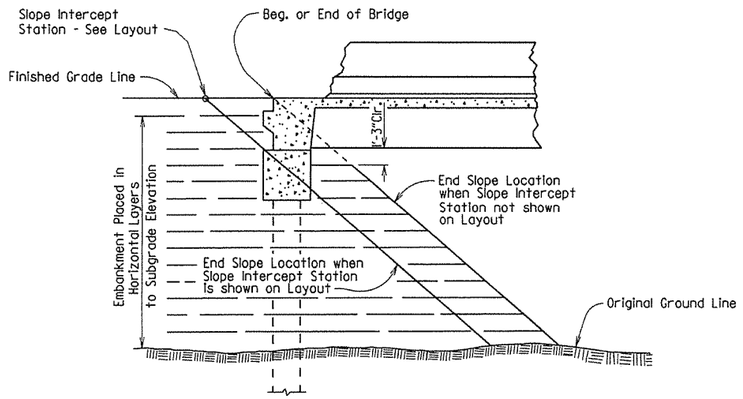
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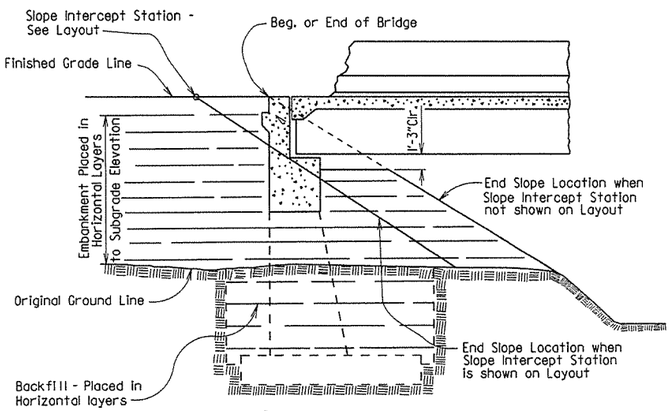
(1) EMBANKMENT & BACKFILL 55000



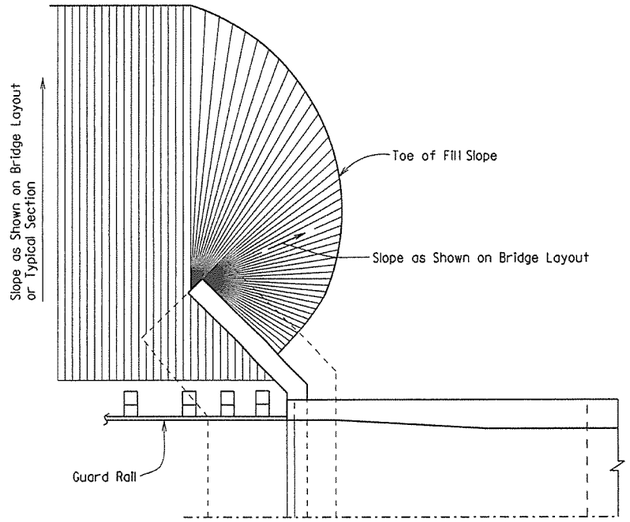
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



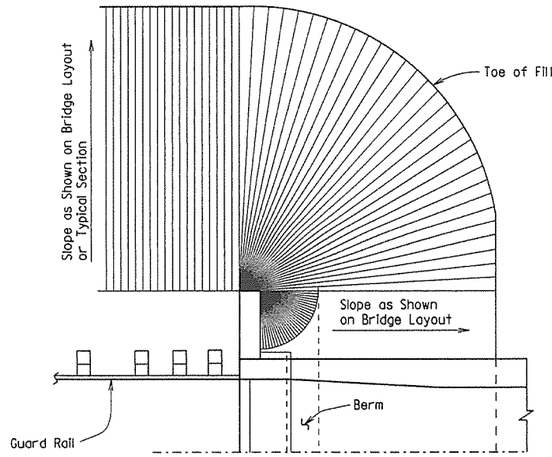
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



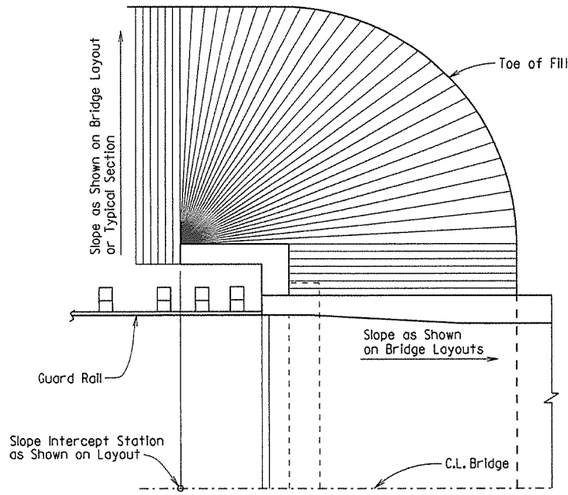
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



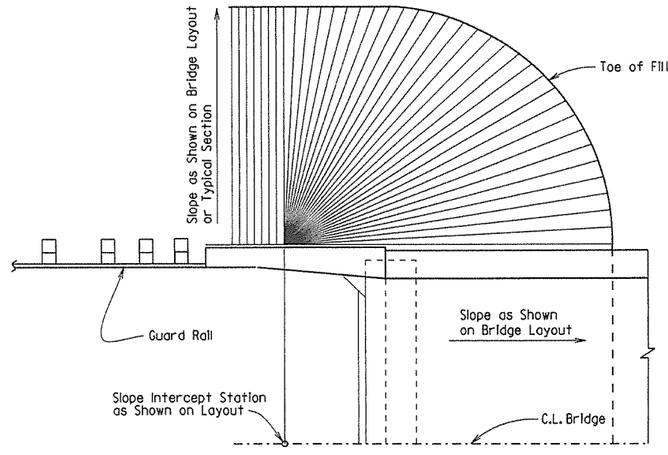
VERTICAL WALL ABUTMENTS



SPILL-THROUGH END BENTS WITH STUB WING



SPILL-THROUGH END BENTS WITH TURNBACK WING



SPILL-THROUGH END BENTS WITH TRANSITION WING

METHOD OF DETERMINING FILL SLOPE LOCATION AT BRIDGE ENDS

GENERAL NOTES

The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal layers (loose measure) and compacted by the use of mechanical equipment to the satisfaction of the Engineer. Refer to Subsections 210.09, 210.10 and 801.08 for construction requirements.

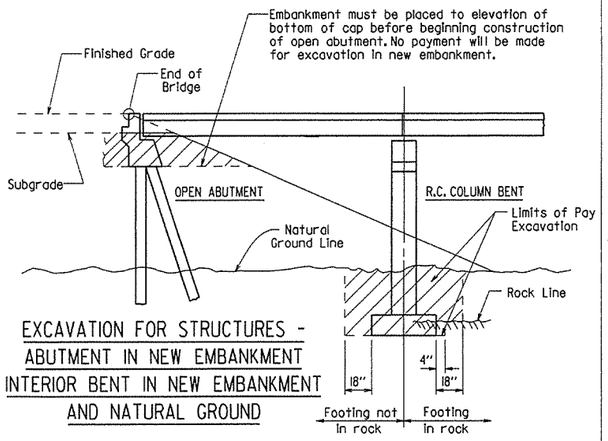
STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

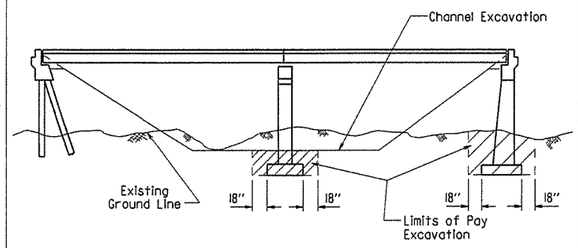
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DESIGNED BY: STD. DATE: -

DRAWING NO. 55000

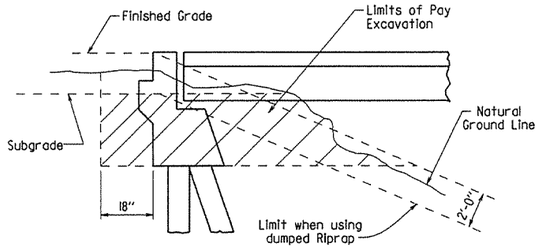
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				1	RIPRAP & EXCAV. 55001			



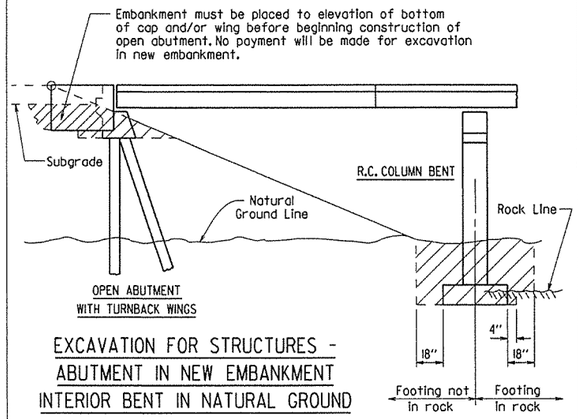
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



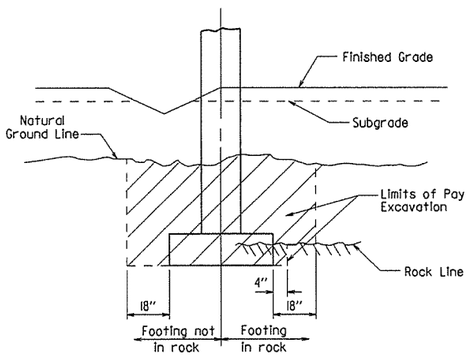
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



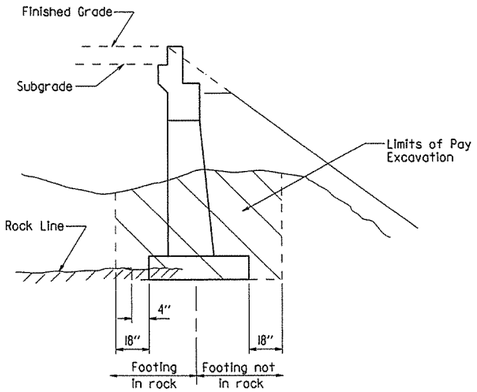
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



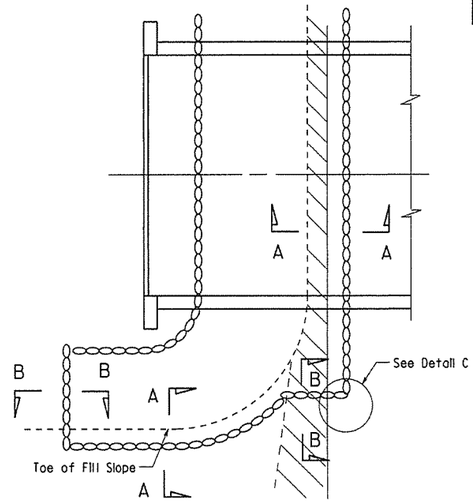
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



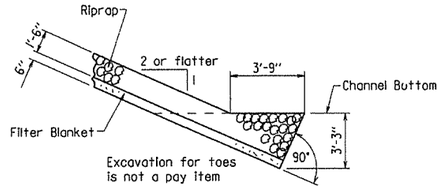
EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

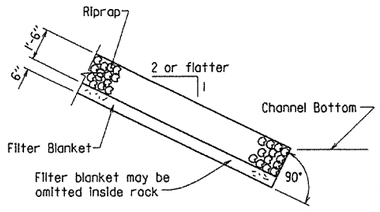


PLAN OF DUMPED RIPRAP



SECTION A-A

(Toe Excavation in Soil)



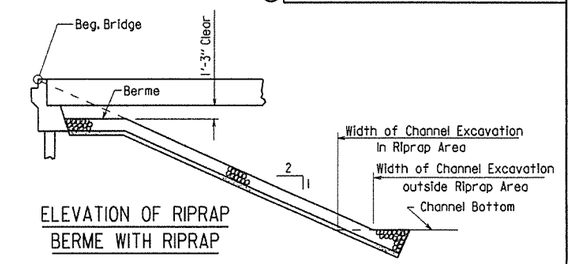
SECTION A-A

(Toe Excavation in Rock)

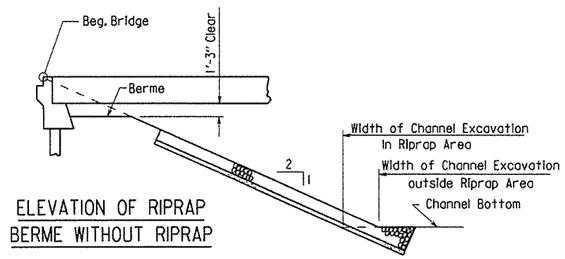
Note : Use this type of toe when rock is encountered which is in a stable condition.

Note : In lieu of an aggregate filter blanket, a synthetic fiber geotextile fabric complying with the requirements of Subsection 816.02(e) may be used.

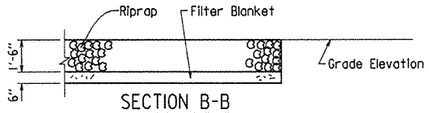
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



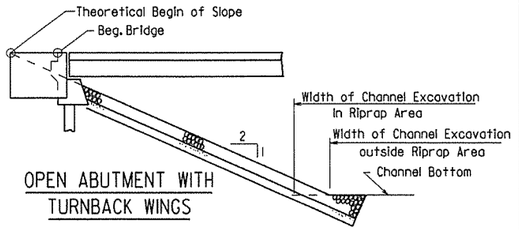
ELEVATION OF RIPRAP BERME WITH RIPRAP



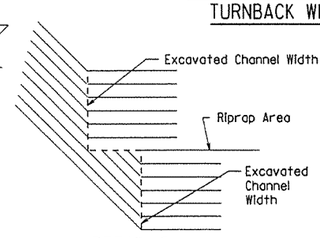
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



DETAIL C

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b5500l.dgn

CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE

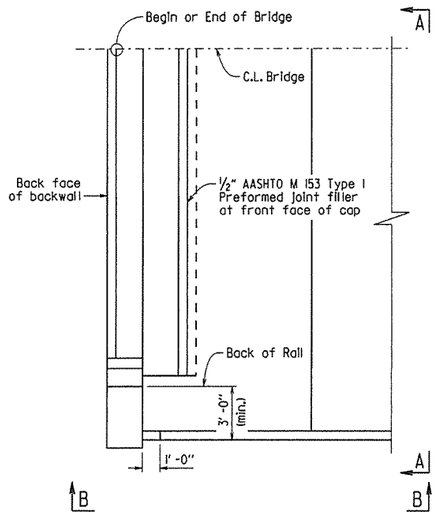
DESIGNED BY: STD. DATE:

DRAWING NO. 55001

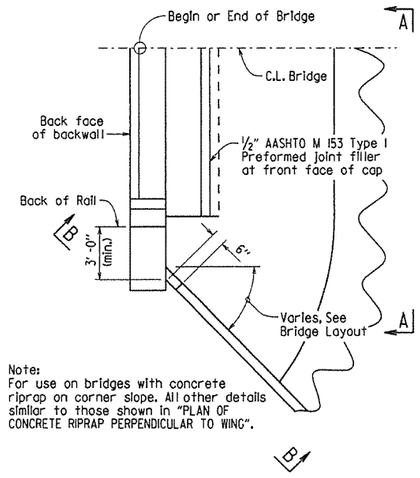
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		217	
				JOB NO.				

(1) CONCRETE RIPRAP 55002

Note:
Sloped surfaces of concrete riprap to be marked off into blocks (construction joints optional) with an approved grooving tool, spacing the grooved lines about 5' apart.



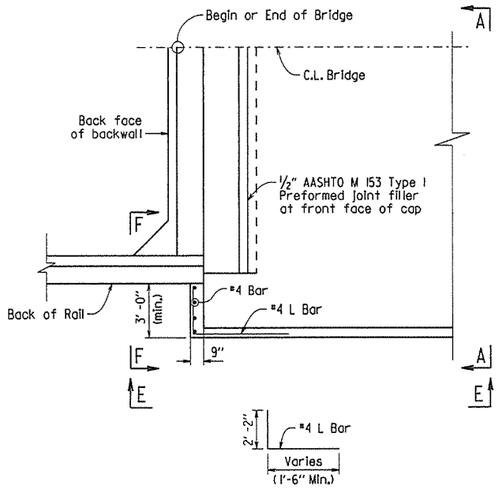
PLAN OF CONCRETE RIPRAP
PERPENDICULAR TO WING
¼" = 1'-0"



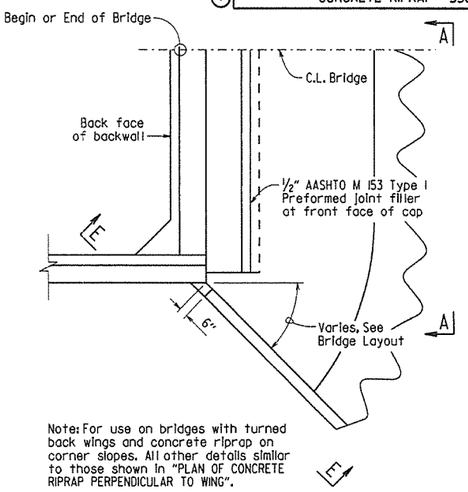
Note:
For use on bridges with concrete riprap on corner slope. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

PLAN OF CONCRETE RIPRAP
AT ANGLE TO WING
¼" = 1'-0"

Note:
For use on bridges with turned back wings. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".



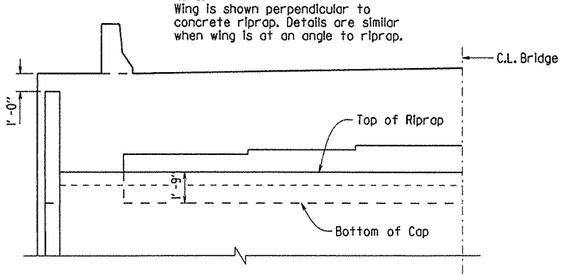
PLAN OF CONCRETE RIPRAP
PERPENDICULAR TO TURNED BACK WING
¼" = 1'-0"



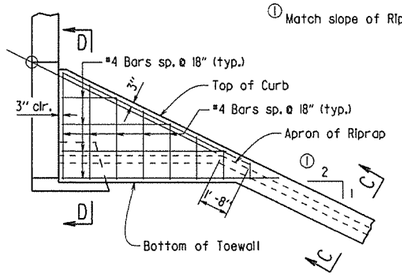
Note: For use on bridges with turned back wings and concrete riprap on corner slopes. All other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

PLAN OF CONCRETE RIPRAP
AT ANGLE FROM TURNED BACK WING
¼" = 1'-0"

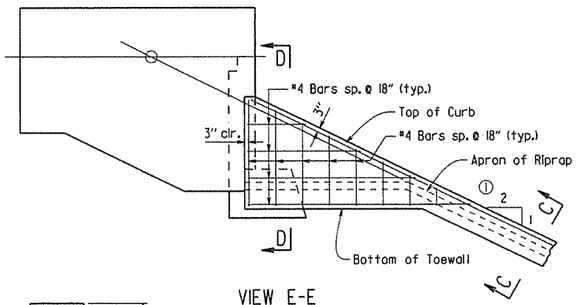
Note:
Wing is shown perpendicular to concrete riprap. Details are similar when wing is at an angle to riprap.



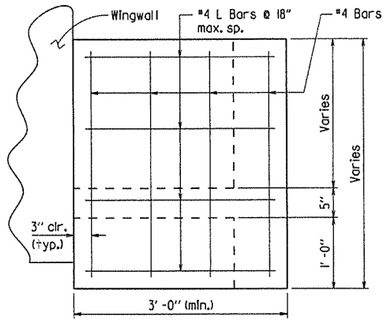
VIEW A-A
¼" = 1'-0"



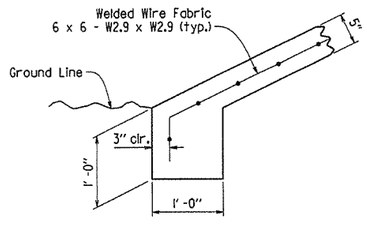
VIEW B-B
¼" = 1'-0"



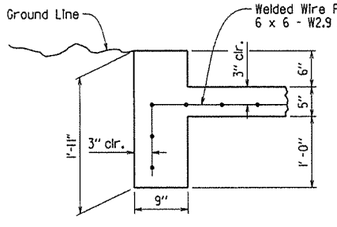
VIEW E-E
¼" = 1'-0"



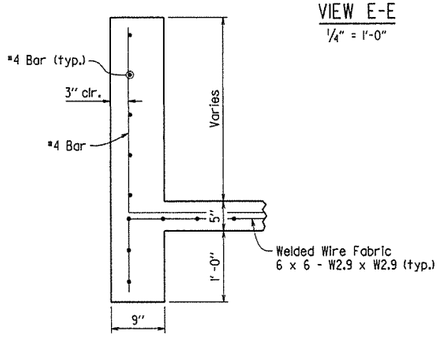
VIEW F-F
1" = 1'-0"



TOE OF CONCRETE RIPRAP
1" = 1'-0"



SECTION C-C
1" = 1'-0"



SECTION D-D
1" = 1'-0"

GENERAL NOTES

All concrete shall be Class A with a minimum compressive strength, f'c = 2,100 psi.

Welded wire fabric shall conform to AASHTO M55 or M221.

STANDARD DETAILS FOR CONCRETE RIPRAP

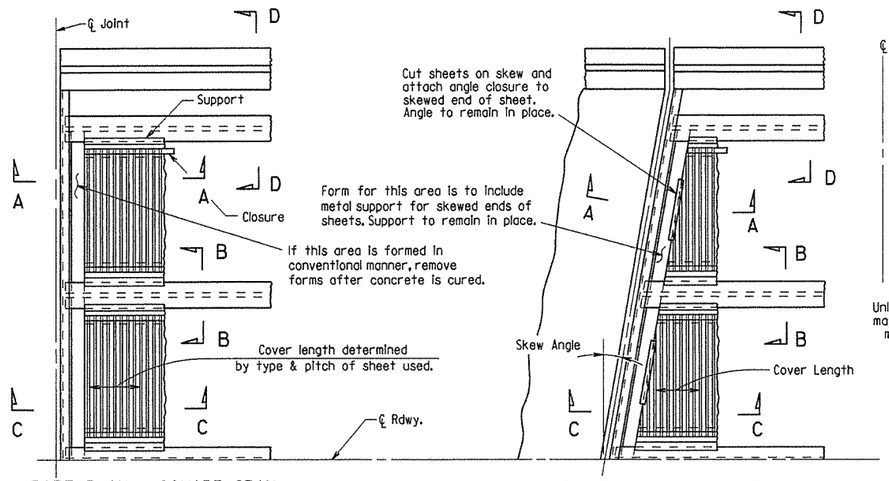
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: ACP DATE: 2/27/2014 FILENAME: b55002.dgn
CHECKED BY: BEF DATE: 2/27/2014 SCALE: AS SHOWN
DESIGNED BY: Std. DATE: ---

DRAWING NO. 55002

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		218	
				JOB NO.				
				①	BRIDGE DECK FORMS		55005	

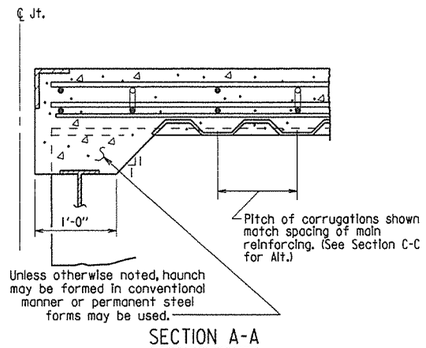


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

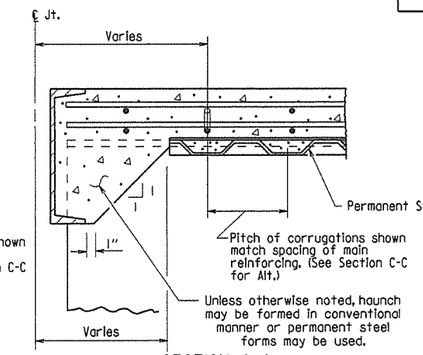
PART PLAN - SKEWED SPAN

3/8" = 1'-0"



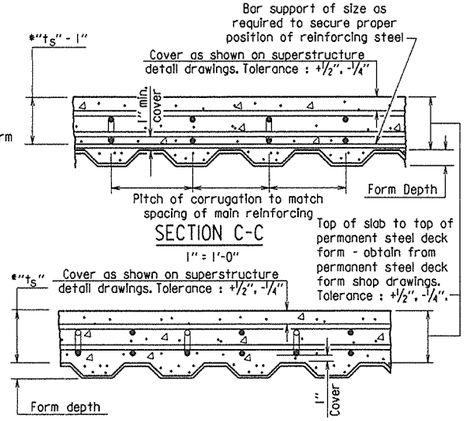
SECTION A-A

N.T.S.
(Angle at end of span)



SECTION A-A

N.T.S.
(Channel at end of span)

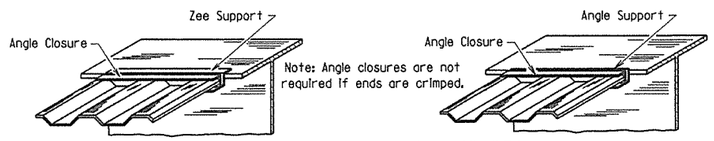


SECTION C-C

1" = 1'-0"

SECTION C-C - ALTERNATE

1" = 1'-0"
(Applicable when corrugations do not match spacing of main reinforcement)



SKETCH OF PERMISSIBLE SUPPORTS

N.T.S.

*t_s = slab thickness as shown on superstructure detail drawings.

GENERAL NOTES

Permanent steel deck forms may be used at the Contractor's option and shall be at no additional cost to the Department. Such use may result in changes to the dead load deflection of the girder. Any cost for adjustments due to a change in the dead load deflection will be borne by the Contractor. Payment for deck concrete and structural steel will not be increased due to use of permanent steel deck forms.

Permanent steel deck forms shall conform to Subsection 802.14(b). Detailed plans, including detailed calculations and manufacturer's technical brochure, shall be submitted to and approved by the Engineer before work of forming the bridge deck is started.

Welding of form supports to the tension flange of steel girders will be permitted only in areas where shear connectors are used. When welding is not allowed, the method of fastening Z or ∠ supports to the flange must be approved by the Engineer.

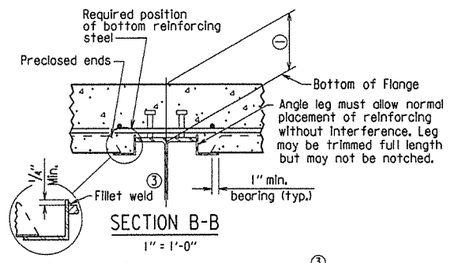
Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

When the pitch of form corrugations match the reinforcing spacing, transversely align form sheets across the bridge to maintain the correct orientation of continuous reinforcing bars in the corrugations.

Bar support rods, when used, shall be sized and spaced to adequately support the bottom reinforcing mat at the required position.

High chairs shall be sized to support the top mat of reinforcing at the proper position. High chairs shall be placed at locations shown on the detail drawings.

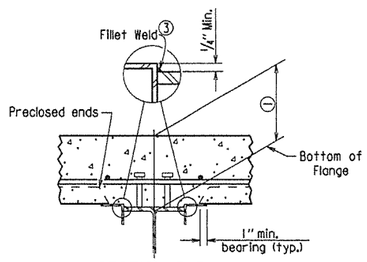
Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014 Edition), with applicable Supplemental Specifications and Special Provisions.



SECTION B-B

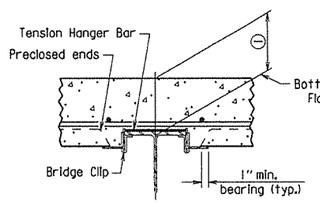
1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

③ Minimum weld: 1/8" x 1' @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)



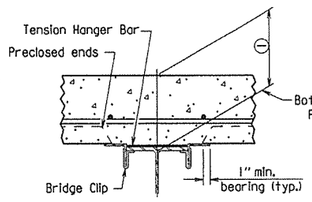
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



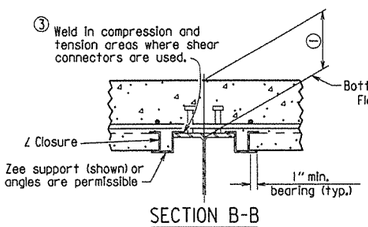
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



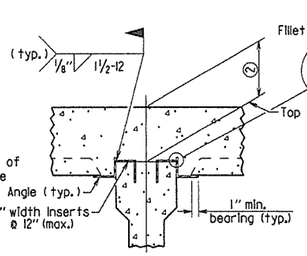
SECTION B-B

1" = 1'-0"
(Showing permissible support for tension flange where shear connectors are not used)



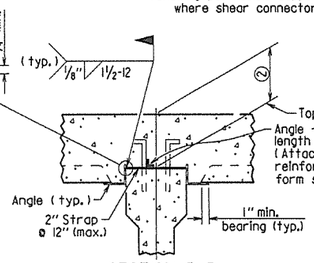
SECTION B-B

1" = 1'-0"
(Showing ∠ Closure)



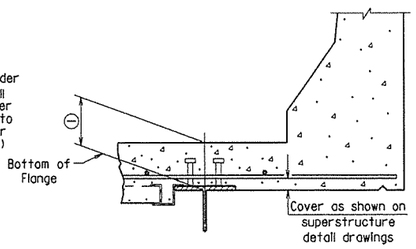
SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by insert cast in girder)



SECTION B-B (FOR CONCRETE GIRDERS)

1" = 1'-0"
(Showing support by Strap)



SECTION D-D

1" = 1'-0"
Note: Only Bottom Reinforcing is shown.

① Distance from top of slab to bottom of top flange as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top flange or the support angle leg contacts the bottom reinforcing steel; Maximum = t_s + 1 3/4" + flange thickness. See Section C-C for slab thickness tolerance between adjacent girder flanges.

② Distance from top of slab to top of girder as measured at centerline girder and as shown on superstructure detail drawings. This dimension may vary within the following limits to maintain the grade and slab thickness tolerances : Minimum - occurs when either the top of girder or the support angle leg contacts the bottom reinforcing steel; Maximum - value shown on the superstructure detail drawings when removable forms are used. See Section C-C for slab thickness tolerance between adjacent girder flanges.

STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55005.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NONE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55005

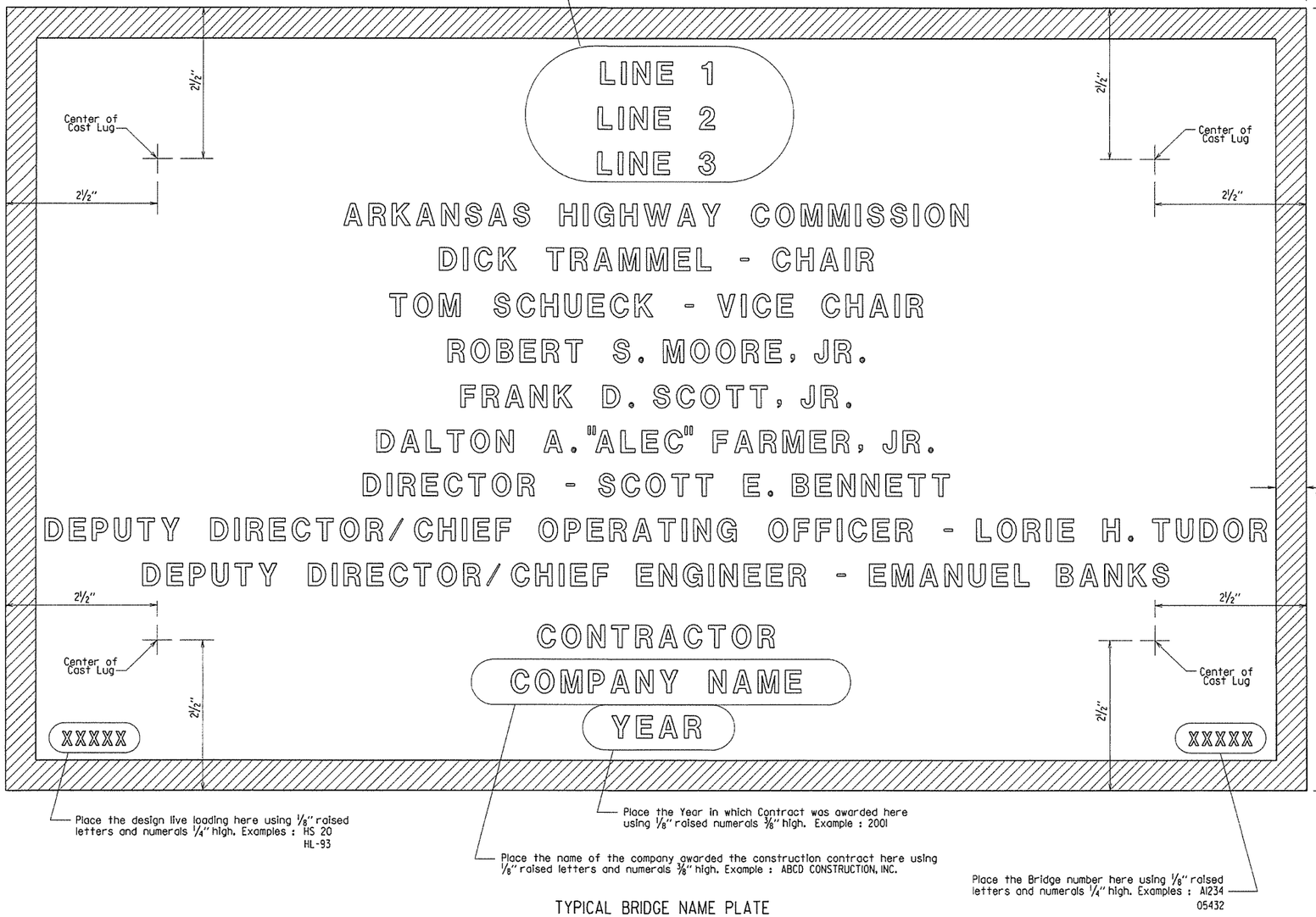
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-1-14			
1-14-15			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		2A	
JOB NO.				

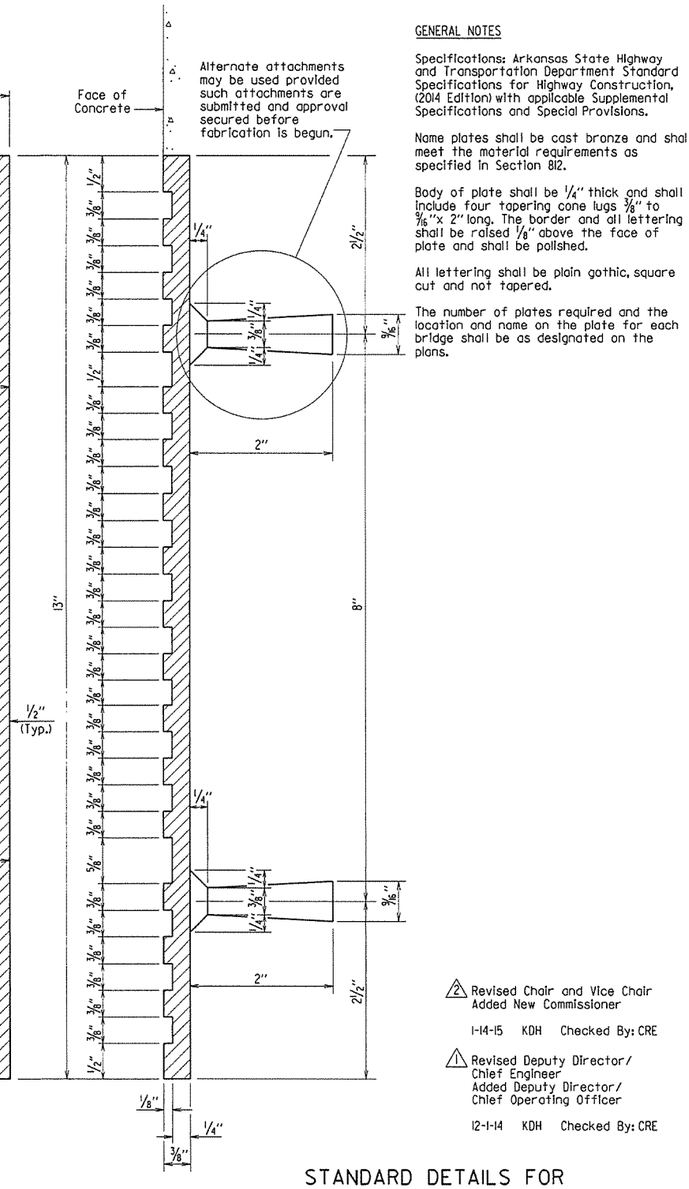
① TYPE D NAME PLATE 55010

The name of the bridge as shown on the plans shall be placed on Lines 1 - 3 using 1/8" raised letters and numerals 3/8" high.

	Example 1	Example 2	Example 3	Example 4
Line 1	Red River	Southern	Saline	
Line 2	Relief	Railroad	River	Highway 5
Line 3		Overpass	Relief	



TYPICAL BRIDGE NAME PLATE



GENERAL NOTES

Specifications: Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (2014 Edition) with applicable Supplemental Specifications and Special Provisions.

Name plates shall be cast bronze and shall meet the material requirements as specified in Section 812.

Body of plate shall be 1/4" thick and shall include four tapering cone lugs 3/8" to 9/16"x 2" long. The border and all lettering shall be raised 1/8" above the face of plate and shall be polished.

All lettering shall be plain gothic, square cut and not tapered.

The number of plates required and the location and name on the plate for each bridge shall be as designated on the plans.

2. Revised Chair and Vice Chair Added New Commissioner
1-14-15 KDH Checked By: CRE

1. Revised Deputy Director/ Chief Engineer Added Deputy Director/ Chief Operating Officer
12-1-14 KDH Checked By: CRE

STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55010.dgn
CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: —

DRAWING NO. 55010

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		22	
				JOB NO.				
				①	STEEL H-PILES		55020	

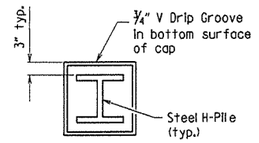
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

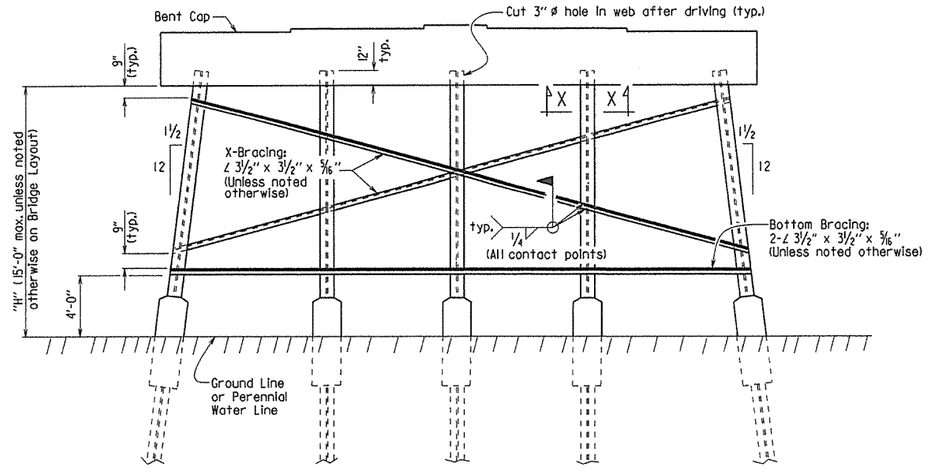
See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 805.02.

Brackets, lugs, cap plates, pile tips, driving points, pile painting, splicing and welding shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



VIEW X-X



Notes:
All bracing shall be cut and welded in the field. Each brace shall be furnished in one piece. Payment shall be made under Item 807.

Unless noted otherwise, omit X-Bracing when "H" is less than 8 feet.

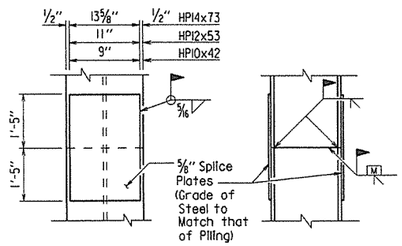
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

When required on the Bridge Layout sheet, pile encasements shall be constructed. See Notes and Details for H-Pile Encasements.

Omit all bracing (and V-groove in cap) when pile encasement is extended to bottom of bent cap.

TYPICAL DETAILS OF H-PILE TRESTLE INTERMEDIATE BENT

(Shown with Partial Height Encasement)

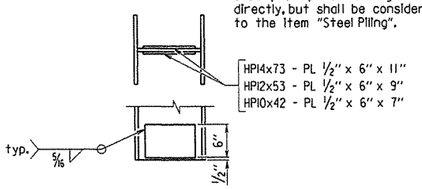


Note:
The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

TYPICAL SPLICE DETAILS

Notes:
Steel pile tip reinforcing not required when approved H-Pile driving points are used.

Steel pile tip reinforcing shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling".



REINFORCING DETAIL FOR STEEL H-PILE TIP

GENERAL NOTES FOR H-PILE ENCASEMENTS:

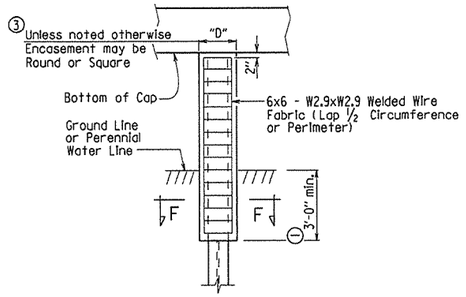
See Bridge Layout for additional notes and required location of pile encasements.

All concrete shall be Class S with a minimum 28-day compressive strength, f'c = 3,500 psi. If concrete cannot be placed in the dry, Seal Concrete may be used from top to bottom of encasement.

Reinforcing steel shall be Grade 60 conforming to AASHTO M 31 or M 322, Type A.

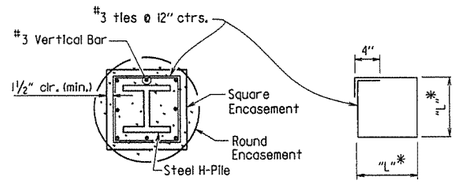
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

Concrete, welded wire fabric or reinforcing steel and galvanized pipe shall not be paid for directly, but shall be considered subsidiary to the item "Pile Encasement".



PILE ENCASEMENT DETAIL FOR STEEL H-PILES

④ (Shown with Encasement to Bottom of Cap)

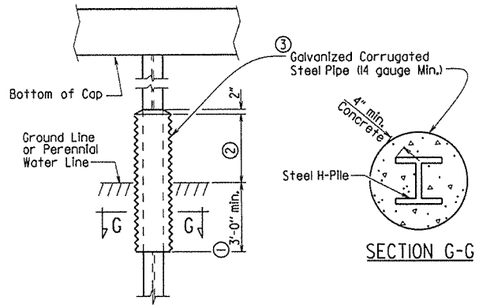


SECTION F-F

*Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D" Square Encsmt.	"D" Round Encsmt.	"L"*
HPI0x42	1'-7"	2'-0"	1'-4"
HPI2x53	1'-8"	2'-2"	1'-5"
HPI4x73	1'-11"	2'-6"	1'-8"



SECTION G-G

⑤ ALTERNATE PILE ENCASEMENT DETAIL FOR STEEL H-PILES

(Shown with Partial Height Encasement)

① Unless otherwise noted on Bridge Layout.

② 3'-0" minimum or as shown on Bridge Layout.

③ Encasement dimensions shall be sized to maintain a minimum concrete cover of 4" from the H-Pile. Reinforcement shall be sized to provide a minimum concrete cover of 1½" and a minimum clearance of 1¼" from the pile.

④ Alternate pile encasement, when not extended to bottom of cap, shall have 2" concrete taper for water runoff as shown in the Partial Height Encasement detail.

⑤ Alternate pile encasement may not be allowed. See Bridge Layout.

This document was originally issued and sealed by Carl J. Fuselier, PE No. 7510, on February 27, 2014. This copy is not a signed and sealed document.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL J. FUSELIER

BRIDGE ENGINEER

STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

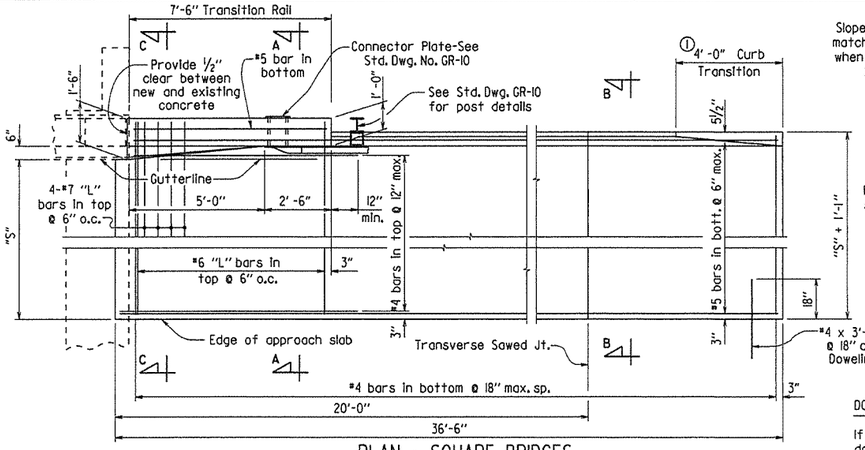
DRAWN BY: A.M.S. DATE: 2/27/2014 FILENAME: b55020.dgn

CHECKED BY: B.E.F. DATE: 2/27/2014 SCALE: NO SCALE

DESIGNED BY: STD. DATE: —

DRAWING NO. 55020

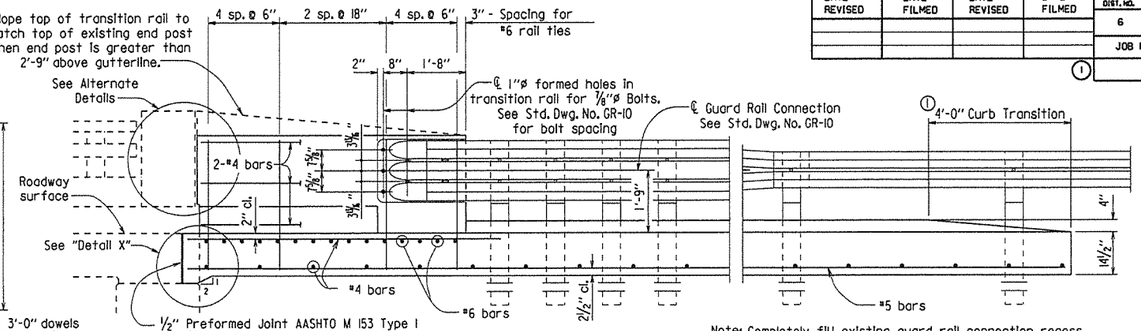
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		221	
				JOB NO.				
				①	TYPE AT GUTTERS			55036



PLAN - SQUARE BRIDGES

⅜" = 1'-0"

"S" = Distance from gutterline to edge of approach slab.



① Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

Note: Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to "Approach Gutters".

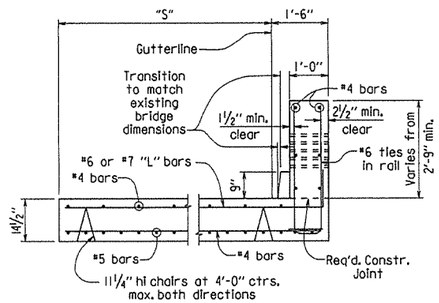
DOWELING NOTE

If new approach slab is used, place dowels into approach slab using 18" embedment.

If existing approach slab is retained, dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to "Approach Gutters".

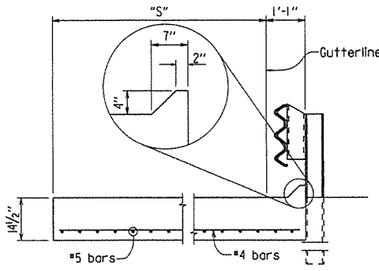
LONGITUDINAL SECTION THRU GUTTER

½" = 1'-0"



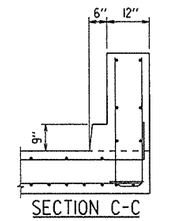
SECTION A-A

½" = 1'-0"



SECTION B-B

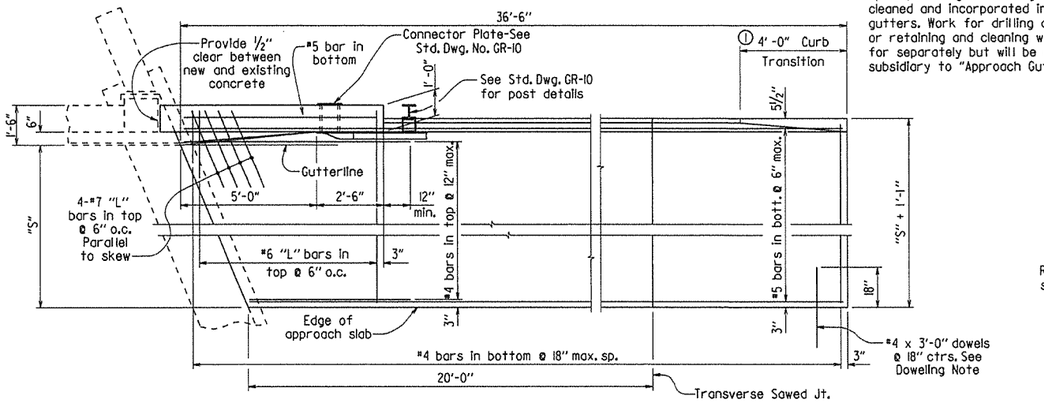
½" = 1'-0"

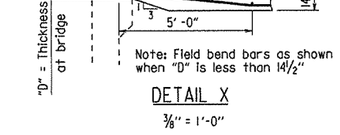


SECTION C-C

At end of Transition Rail

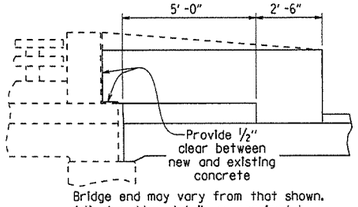
½" = 1'-0"





DETAIL X

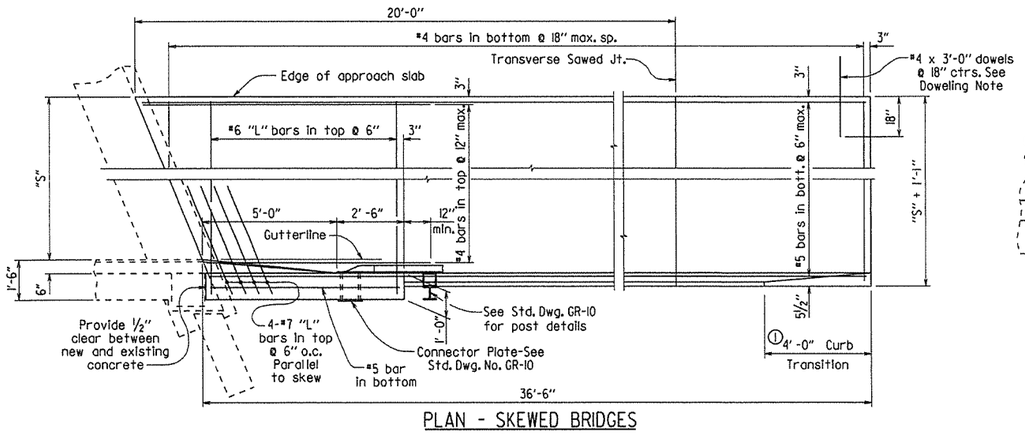
⅜" = 1'-0"



Bridge end may vary from that shown. Adjust gutter details as required to provide similar railing transition.

ALTERNATE DETAILS

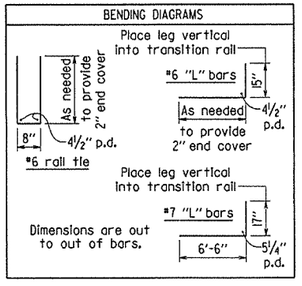
N.T.S.



PLAN - SKEWED BRIDGES

⅜" = 1'-0"

BENDING DIAGRAMS



QUANTITIES FOR ONE SQUARE APPROACH GUTTER

(FOR INFORMATION ONLY)

"S"	Concrete	Reinforcing Steel
5'-6"	12.06 cu.yd.	1091 lb.
9'-6"	18.78 cu.yd.	1573 lb.

GENERAL NOTES

All concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement and shall be poured in the dry.

All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

This document was originally issued and sealed by Carl J. Fuselier, PE No. 7510, on February 27, 2014. This copy is not a signed and sealed document.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 7510
CARL J. FUSELIER

BRIDGE ENGINEER

STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURB WIDTH & TYPE A RAILING)

ARKANSAS STATE HIGHWAY COMMISSION

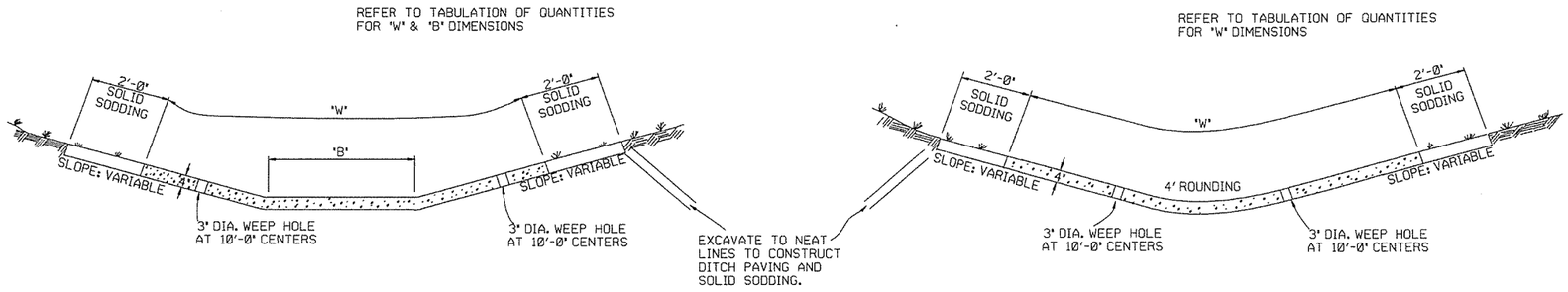
LITTLE ROCK, ARK.

DRAWN BY: KDH DATE: 2/27/2014 FILENAME: b55036.dgn

CHECKED BY: KWY DATE: 2/27/2014 SCALE: AS SHOWN

DESIGNED BY: STD. DATE:

DRAWING NO. 55036

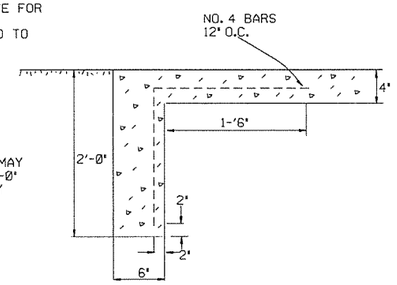


TYPE A

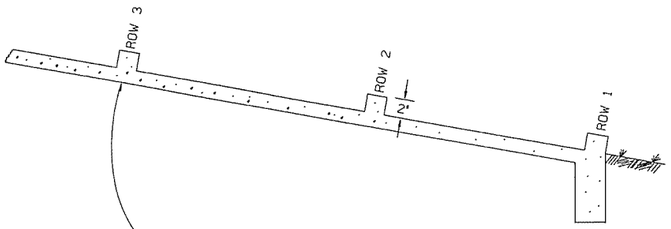
TYPE B

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.'

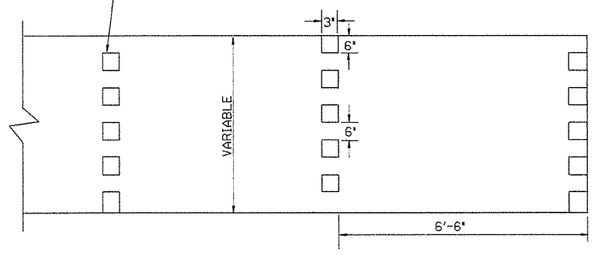
TOE WALL DEPTH MAY BE ALTERED TO 1'-0" WHEN DIRECTED BY THE ENGINEER IN ROCK EXCAVATION



TOE WALL DETAIL FOR CONCRETE DITCH PAVING



NUMBER OF ELEMENTS PER ROW VARIES WITH WIDTH OF PAVING SPECIFIED



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.

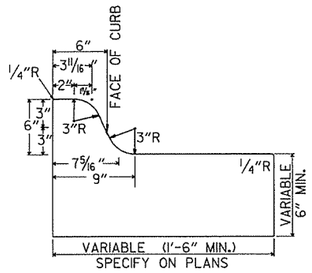
1" WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M213.

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

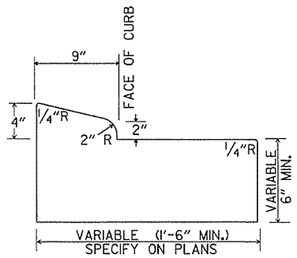
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

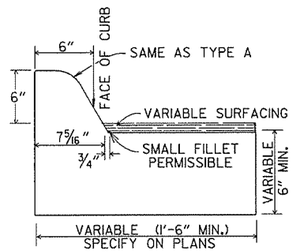
STANDARD DRAWING CDP-1



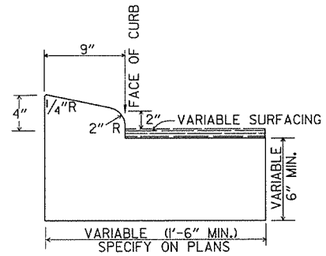
TYPE A



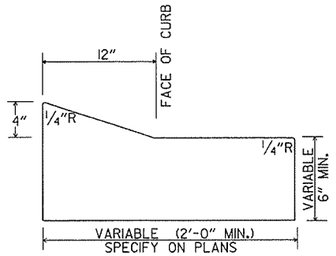
TYPE B-1



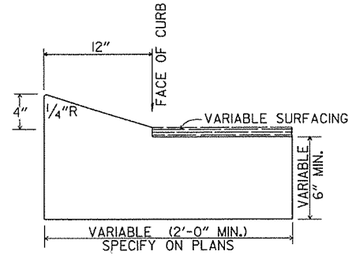
TYPE C



TYPE B-2

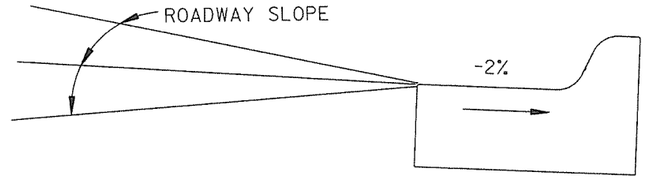


TYPE E-1



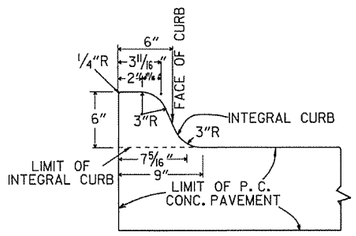
TYPE E-2

CONCRETE COMBINATION CURB AND GUTTER

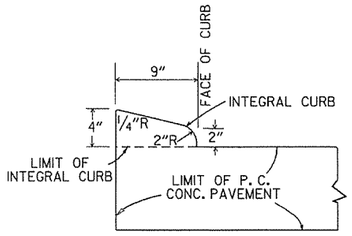


DETAIL OF GUTTER SLOPE

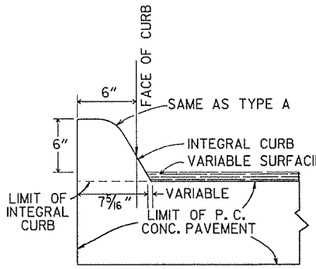
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.



TYPE A

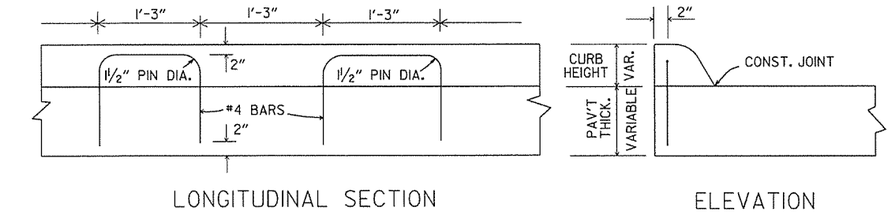


TYPE B



TYPE C

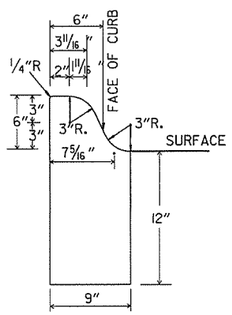
INTEGRAL CURB



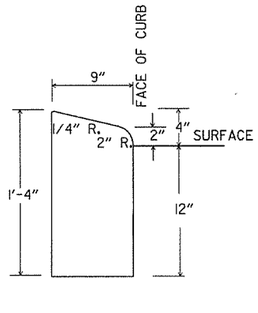
LONGITUDINAL SECTION

ELEVATION

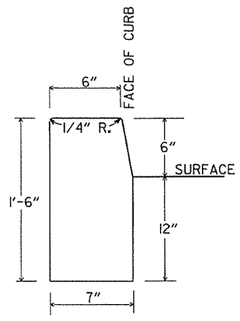
ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB



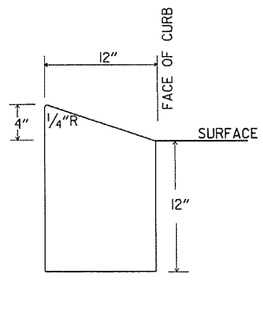
TYPE A



TYPE B

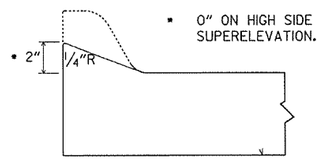


TYPE D



TYPE E

CONCRETE CURB



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

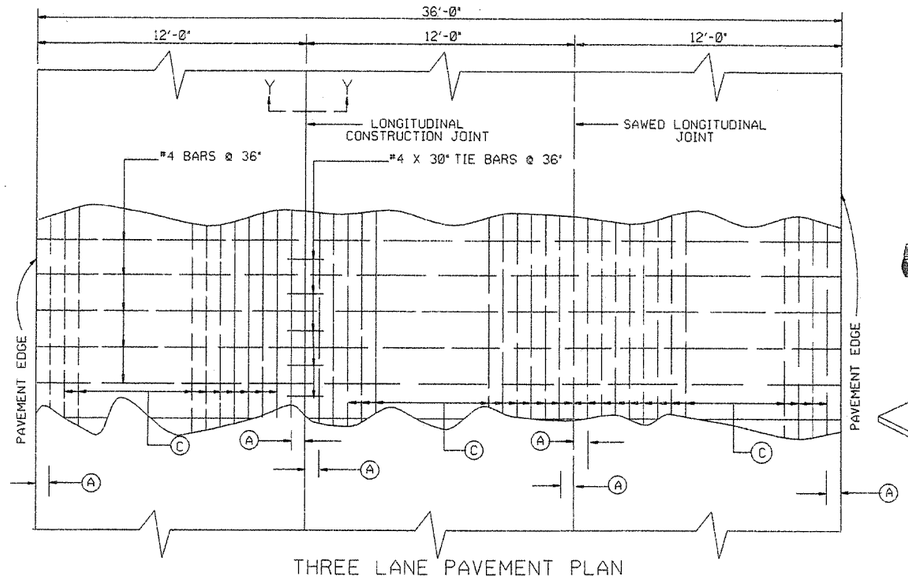
DETAILS OF MODIFIED CURB

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

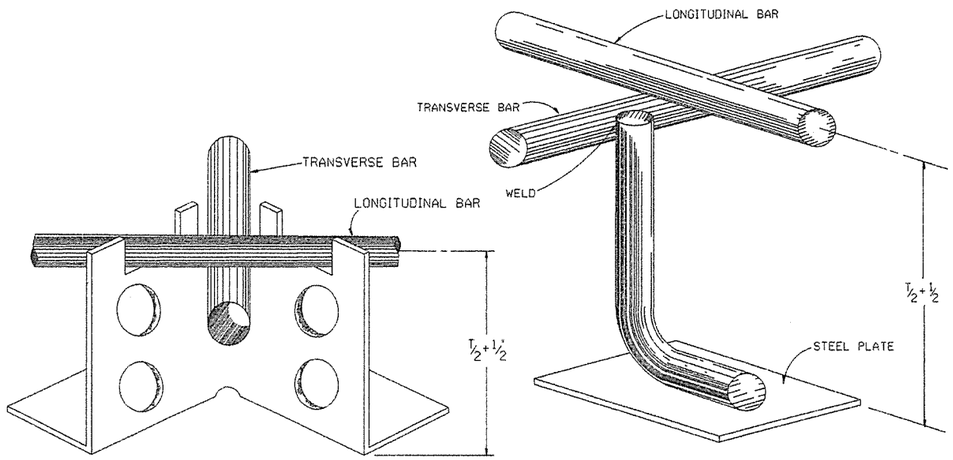
ARKANSAS STATE HIGHWAY COMMISSION

CURBING DETAILS

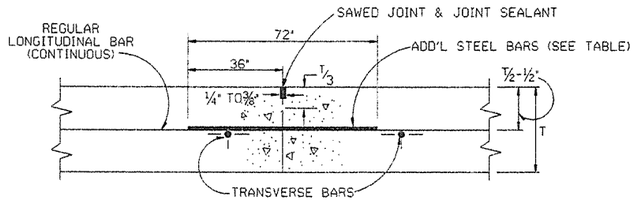
STANDARD DRAWING CG-1



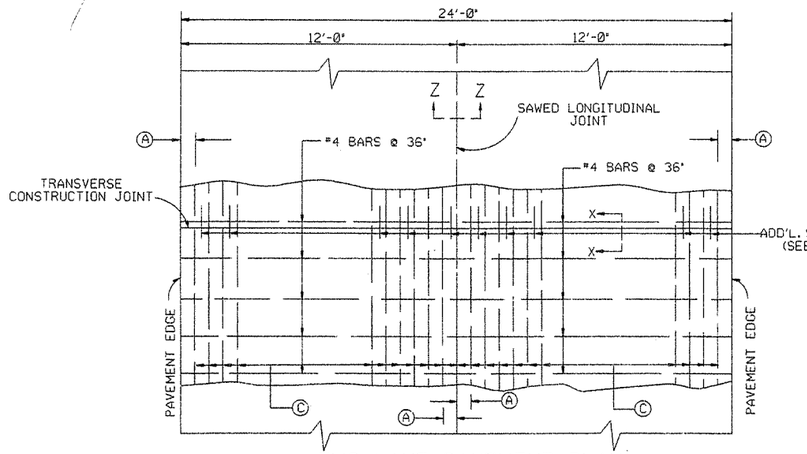
THREE LANE PAVEMENT PLAN
(12 FT. AND 24 FT. PLACEMENT) *



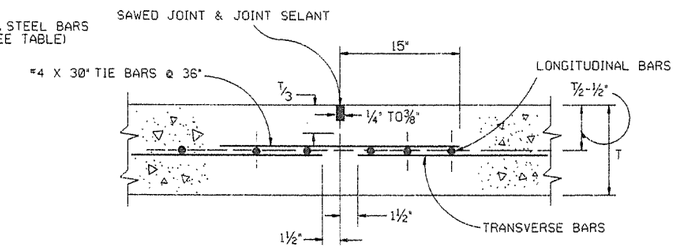
SUGGESTED CHAIR DETAILS



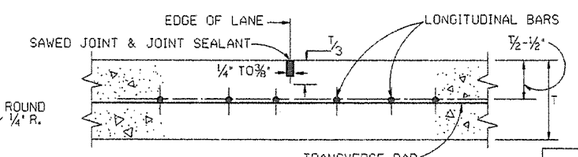
TRANSVERSE CONSTRUCTION JOINT
SECTION X-X



TWO LANE PAVEMENT PLAN
(24 FT. PLACEMENT) *

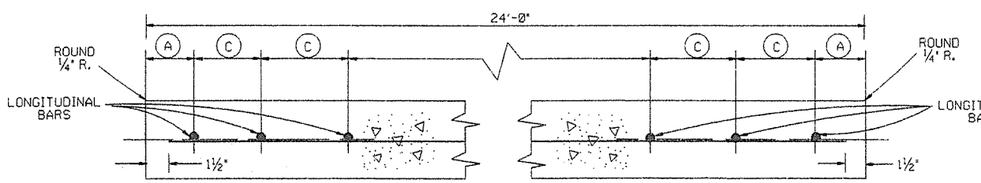


LONGITUDINAL CONSTRUCTION JOINT
SECTION Y-Y



SAWED LONGITUDINAL JOINT
SECTION Z-Z

JOINT DETAILS



TYPICAL SECTION
(24 FT. PLACEMENT) *

* LANE WIDTHS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND SHOULD NOT BE USED IF IN CONFLICT WITH TYPICAL CROSS SECTIONS SHOWN ELSEWHERE IN THE PLANS.

NOTE: FOR DIMENSIONS A & C SEE TABLE ON RT.

* GENERAL NOTES *

SAWED JOINT AND JOINT SEALANT FOR TRANSVERSE CONSTRUCTION JOINT, LONGITUDINAL CONSTRUCTION JOINT AND SAWED LONGITUDINAL JOINT SHALL CONFORM TO THE DETAILS SHOWN FOR SAWED LONGITUDINAL JOINT ON STANDARD DRAWING CPTJ-6A.

NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURE ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.

FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND REINFORCEMENT REFER TO THE GOVERNING SPECIFICATIONS FOR 'CONTINUOUSLY REINFORCED CONCRETE PAVEMENT.'

FOR DETAILS OF PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE REFER TO TYPICAL SECTIONS.

WITHIN ANY AREA BOUNDED BY TWO FEET PAVEMENT LENGTH, MEASURED PARALLEL TO THE CENTERLINE: AND TWELVE FEET OF PAVEMENT WIDTH, MEASURED PERPENDICULAR TO THE PAVEMENT CENTERLINE, NOT OVER 33⅓ OF THE REGULAR LONGITUDINAL STEEL SHALL BE SPLICED.

MNINMUM SPLICE REQUIREMENT: 25 TIMES THE NOMINAL DIAMETER OF THE BAR OR 16 INCHES WHICHEVER IS LONGER.

AT TRANSVERSE CONSTRUCTION JOINTS THE REGULAR LONGITUDINAL BARS SHALL EXTEND EITHER SIDE OF THE JOINT SUCH THAT THE BAR SPLICES FOR THE REGULAR LONGITUDINAL BARS SHALL BE A MINIMUM OF FOUR FEET FROM THE CONSTRUCTION JOINT. AT LONGITUDINAL CONSTRUCTION JOINT, IF THE CONTRACTOR ELECTS TO CONTINUE THE REGULAR TRANSVERSE STEEL THROUGH THE JOINTS, THE #4 TIE BARS SHOWN HEREON MAY BE DELETED.

CHAIR DETAILS SHOWN HEREON ARE EXAMPLES ONLY; OTHER APPROVED TYPES WHICH WILL SATISFY THE REQUIREMENTS NOTED HEREIN, WILL BE PERMITTED. CHAIR SPACINGS SHALL NOT BE GREATER THAN 36" C-C (LONGITUDINAL) AND 48" C-C (TRANSVERSE). ADDITIONAL CHAIRS SHALL BE USED IF NECESSARY TO MEET PLACEMENT REQUIREMENTS.

AT ALL LAP SPLICES OCCURRING WITHIN 8 FEET BEYOND THE CONSTRUCTION JOINTS, IN THE DIRECTION OF PAVING AND 4 FEET BACK OF THE CONSTRUCTION JOINTS, THE LENGTH OF LAP SHALL BE DOUBLE THAT NORMALLY SPECIFIED OR EACH SPLICE SHALL BE STRENGTHENED BY SPLICING IN, SYMMETRICALLY WITH THE LAP, A 6 FOOT LENGTH OF DEFORMED BAR OF THE SAME NOMINAL SIZE AS THE LONGITUDINAL REINFORCEMENT.

TABLE OF EQUIVALENT LONGITUDINAL REINFORCEMENT

PAVEMT. THICKNESS	BAR SIZE	24'-0" PLACEMENT WIDTH				12'-0" PLACEMENT WIDTH				ADD'L STEEL@ TRANS. CONSTR. JOINT			
		SPACING (C-C)		BARS PER PLACE--MENT	STEEL ①	SPACING (C-C)		BARS PER PLACE--MENT	STEEL ①	SIZE	AVG. SPACING	② NO. PER LANE	WEIGHT
		A	C		LBS./ SQ. YD.	A	C		LBS./ SQ. YD.				LBS. PER FOOT
INCHES		INCHES				INCHES					INCHES		
6	#5	5½	7	40	18.28	5½	7	20	18.26	⅝" X 72"	14	10	5.22
8	#6	4½	7½	38	24.55	4½	7½	19	24.41	¾" X 72"	15	10	7.51
9	#6	3¾	6½	44	27.98	3¾	6½	22	27.95	¾" X 72"	13	11	8.26
10	#7	4	8½	34	29.53	4	8½	17	29.51	⅞" X 72"	17	8	8.18
11	#7	4½	7½	38	32.78	4½	7½	19	32.75	⅞" X 72"	15	10	10.22
12	#7	5½	7	40	34.39	5½	7	20	34.37	⅞" X 72"	14	10	10.22

NOTE: WHERE THE PROPOSED PLACEMENT WIDTHS VARY FROM THE BASIC DESIGN WIDTH SHOWN, THE SPACING 'A' AND THE ADJACENT SPACING 'C' SHALL BE ADJUSTED TO ACCOMODATE A REINFORCEMENT ARRANGEMENT EQUAL TO OR SLIGHTLY HEAVIER THAN THAT SHOWN AS DIRECTED BY THE ENGINEER.

① INCLUDES BOTH REGULAR LONGITUDINAL AND TRANSVERSE BARS. BASED UPON 1 FOOT PAVEMENT FOR THE WIDTH INDICATED. ALL TRANSVERSE STEEL IS #4 BARS AT 36" CENTERS. FOR ESTIMATING PURPOSES IT IS ASSUMED THAT LONGITUDINAL BARS ARE SPLICED AT 32' INTERVALS.

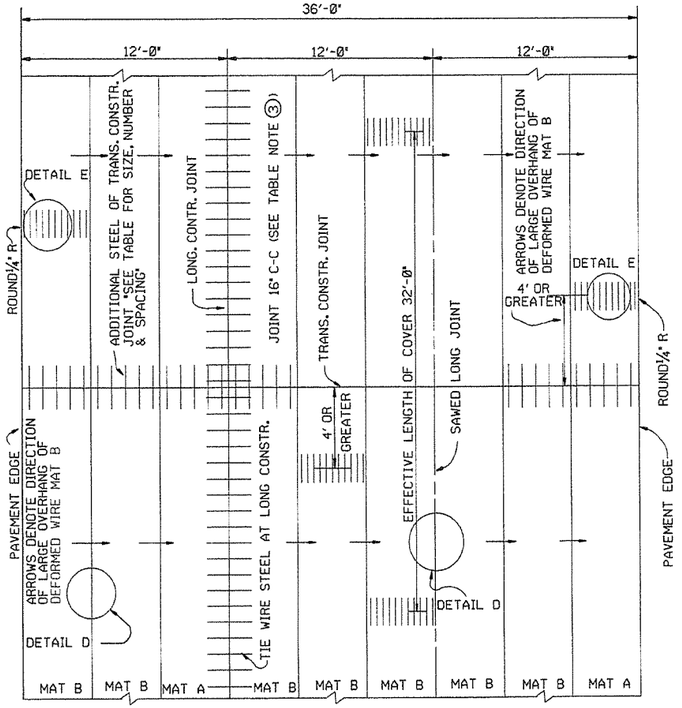
② THIS SHALL BE THE MINIMUM NUMBER OF ADDITIONAL STEEL BARS TO BE PLACED PER LANE. THE SPACING OF THE ADDITIONAL STEEL BARS SHALL BE VARIED AS DIRECTED IN ORDER TO PROVIDE A MINIMUM CLEARANCE OF 2½" FROM EACH REGULAR LONGITUDINAL REINFORCING BAR.

DATE	REVISION	DATE FILMED
10-18-96	CORRECTED SPELLING	10-18-96
10-1-92	REVISED REINFORCING	
8-15-91	REV. A SPACING FOR 24' PAV'T.	
3-23-89	ALTERED SAWED JOINT & ADDED GEN. NOTES	
11-3-86	DIMEN'S. OF LONG. JTS.	
1-4-83	DEPTH OF SAWED TRANSVERSE CONST. JOINT	
9-15-78	53 TO 52 #4 BARS (24' PL.)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISION

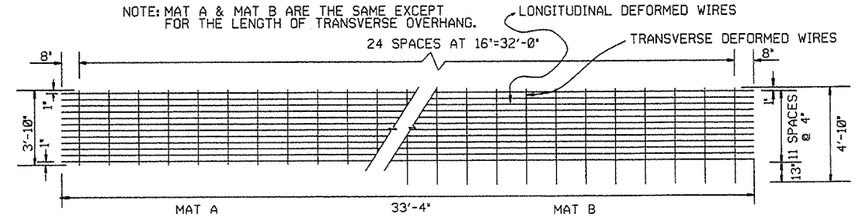
CONCRETE PAVEMENT DETAILS CONTINUOUSLY REINFORCED

STANDARD DRAWING CPCR-1

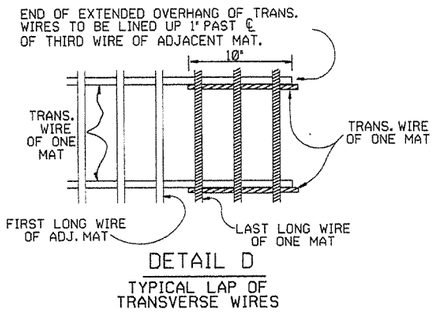


THREE LANE PAVEMENT PLAN

(12' AND 24' PLACEMENT)

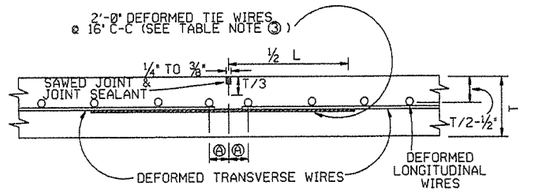


PREFABRICATED DEFORMED WIRE MATS

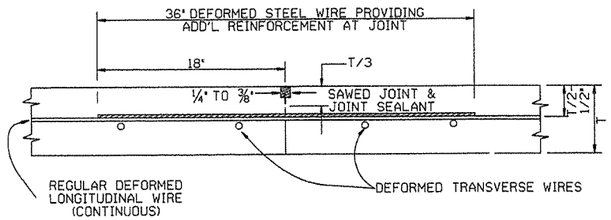


DETAIL D

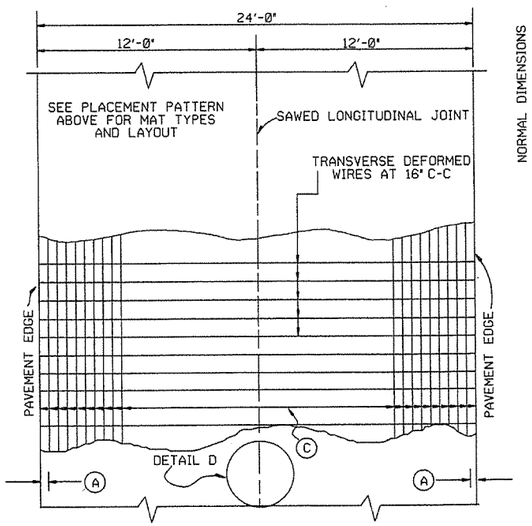
TYPICAL LAP OF TRANSVERSE WIRES



LONGITUDINAL CONSTRUCTION JOINT

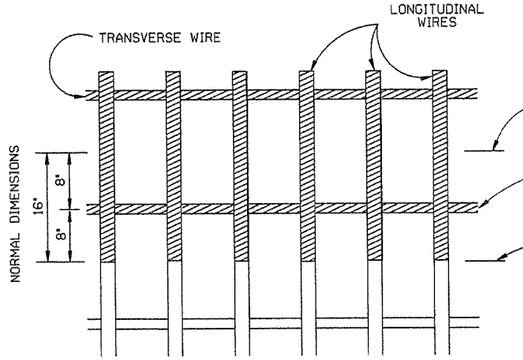


TRANSVERSE CONSTRUCTION JOINT

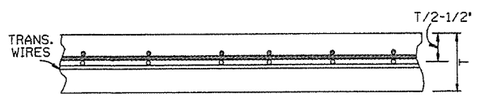


TWO LANE PAVEMENT PLAN

(24' PLACEMENT)



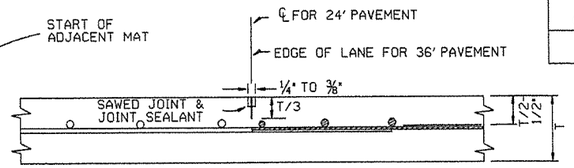
PLAN



SECTION

DETAIL E

TYPICAL LAP OF LONGITUDINAL WIRES



SAWED LONGITUDINAL JOINT

GENERAL NOTES

NO EXPANSION JOINTS WILL BE USED EXCEPT AT STRUCTURAL ENDS OR FIXED OBJECTS AS SHOWN ELSEWHERE IN THE PLANS.

JOINT AND JOINT SEAL DETAILS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.

CONSTRUCTION JOINTS MAY BE FORMED BY THE USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE NOMINAL DEPTH OF THE PAVEMENT, OR BY THE OTHER MEANS WHICH HAVE BEEN APPROVED BY THE ENGINEER PRIOR TO THIER USE.

REFER TO TYPICAL SECTION FOR PAVEMENT WIDTH, THICKNESS AND CROWN.

IT IS THE INTENT OF THIS DESIGN THAT THE LONGITUDINAL STEEL BE AT THE CENTER OF THE SLAB. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ALL NECESSARY PRECAUTIONS TO INSURE THAT THE FINAL POSITION OF THE STEEL IS NOT BELOW THE CENTER OF THE SLAB.

WITHIN ANY AREA BOUNDED BY TWO FEET OF PAVEMENT LENGTH MEASURED PARALLEL TO THE CENTERLINE, AND TWELVE FEET OF PAVEMENT WIDTH MEASURED PERPENDICULAR TO THE PAVEMENT CENTERLINE, NOT OVER 33% OF THE REGULAR LONGITUDINAL STEEL SHALL BE SPLICED.

ALL SPLICES SHALL BE A MINIMUM OF 16' FOR LONGITUDINAL STEEL AND 10' FOR TRANSVERSE STEEL.

AT TRANSVERSE CONSTRUCTION JOINTS THE REGULAR LONGITUDINAL STEEL SHALL EXTEND A MINIMUM OF FOUR FEET ON EITHER SIDE OF THE JOINT.

IF WIDTHS GREATER THAN TYPICAL WIDTHS OCCUR, INDIVIDUAL WIRES MAY BE ADDED TO OBTAIN ADDITIONAL WIDTH, PROVIDED THE C-C SPACING IS NOT EXCEEDED AND LAP REQUIREMENTS ARE MET.

AT ALL LAP SPLICES OCCURRING WITHIN EIGHT FEET BEYOND THE CONSTRUCTION JOINT, IN THE DIRECTION OF PAVING AND FOUR FEET BACK OF THE CONSTRUCTION JOINT, THE LENGTH OF LAP SHALL BE DOUBLE THAT NORMALLY SPECIFIED OR EACH SPLICE SHALL BE STRENGTHENED BY SPLICING IN, SYMMETRICALLY WITH THE LAP, A SIX-FOOT LENGTH OF DEFORMED BAR OF THE SAME NOMINAL SIZE AS THE LONGITUDINAL REINFORCEMENT.

SAWED JOINT AND JOINT SEALANT FOR TRANSVERSE CONSRTUCTION JOINT, LONGITUDINAL CONSTRUCTION JOINT AND SAWED LONGITUDINAL JOINT SHALL CONFORM TO THE DETAILS SHOWN FOR SAWED LONGITUDINAL JOINT ON STANDARD DRAWING CPTJ-6A.

PAVEMENT THICKNESS (T) IN.	LONGITUDINAL REINFORCEMENT											TRANS. REINF. FOR LONG. CONSTR. JOINT	
	WIRE SIZE	24' PLACEMENT			12' PLACEMENT			ADDITIONAL STEEL TRANS. CONSTR. JOINT				WIRE SIZE	TIE WIRES ③
		SPACING C-C		① STEEL LB/SY	SPACING C-C		① STEEL LB/SY	WIRE SIZE	LENGTH IN.	② NO. PER LANE	WEIGHT LB./FT OF WIDTH		WEIGHT LB./FT. OF LENGTH
		Ⓐ IN.	Ⓒ IN.		Ⓐ IN.	Ⓒ IN.							
8	D-19.2	2	4	20.59	2	4	20.51	D-19.2	36	16	2.61	D-8	.408
6	D-14.4	2	4	14.90	2	4	14.86	D-14.4	36	16	1.96	D-4	.204

TABLE NOTE

① INCLUDES BOTH LONGITUDINAL AND TRANSVERSE WIRES BASED ON THE WIDTH INDICATED AND AN EFFECTIVE COVER LENGTH OF 32 FEET. (ESTIMATING QUANTITIES INCLUDE SPLICES)

② THIS SHALL BE THE MINIMUM NUMBER OF ADDITIONAL STEEL WIRES TO BE PLACED PER LANE. THE ADDITIONAL STEEL WIRES SHALL BE PLACED EQUIDISTANT BETWEEN TWO REGULAR LONGITUDINAL REINFORCING WIRES AT AS NEAR A UNIFORM SPACING ACROSS THE LANE AS POSSIBLE.

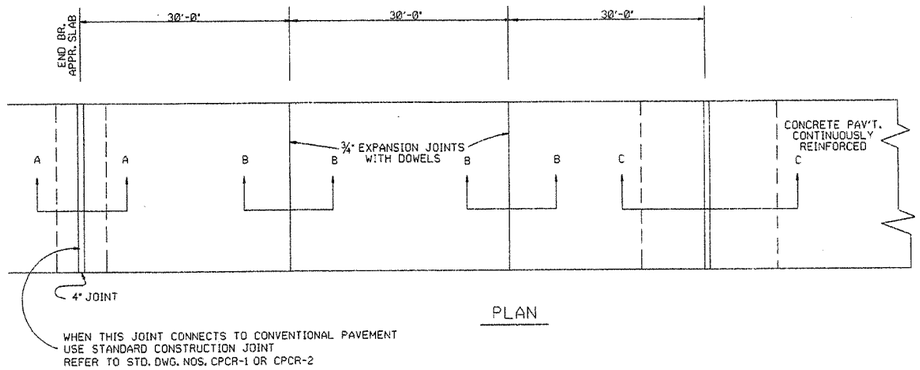
③ AT THE OPTION OF THE CONTRACTOR, #4 BARS X 30 IN. AT 30 IN. C-C MAY BE USED IN LIEU OF THE DEFORMED TIE WIRES AT 16 IN. C-C SHOWN, PROVIDED WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE ENGINEER.

DATE	REVISION	DATE FILMED
3-23-89	ALTERED SAWED JOINT & ADDED NOTE	509-3-23-89
11-3-86	DIMEN'S. OF LONG. JTS.	651-11-3-86
1-4-83	DEPTH OF SAWED TRANSVERSE CONST. JOINT	676-1-4-83
10-2-72	REVISED AND REDRAWN	505-10-2-72

ARKANSAS HIGHWAY COMMISION

CONCRETE PAVEMENT DETAILS CONTINUOUSLY REINFORCED DEFORMED WIRE MAT

STANDARD DRAWING CPCR-2



PLAN

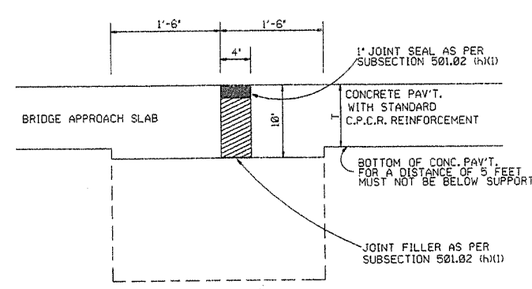
GENERAL NOTES

OTHER TYPES OF EXPANSION JOINTS MAY BE CONSTRUCTED AT THE OPTION OF THE CONTRACTOR AFTER APPROVAL BY THE ENGINEER.

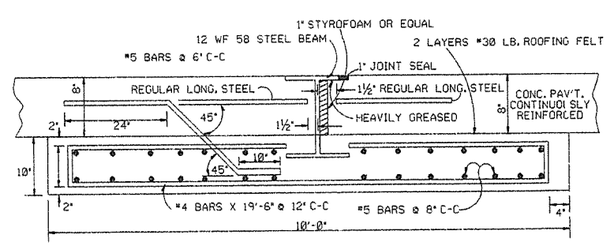
LOAD TRANSMISSION UNITS AND DOWELS SHALL BE SECURED PARALLEL TO THE PAVEMENT SURFACE AND CENTERLINE.

ALL EXPANSION JOINTS, INCLUDING ALL MATERIALS, DEVICES, AND WORK REQUIRED SHALL BE CONSIDERED AS SUBSIDIARY WORK AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR PORTLAND CEMENT CONCRETE PAVEMENT. NO DIRECT PAYMENT WILL BE MADE FOR ANY MATERIAL, BAR CHAIR, STEEL OR ANY OTHER DEVICE SHOWN NOR FOR ITS INSTALLATION.

'T' DENOTES THICKNESS OF SLAB.



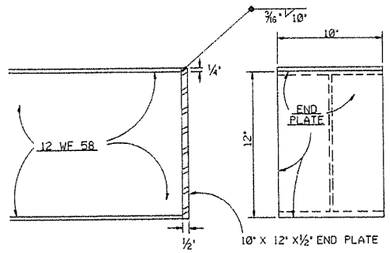
SECTION A-A



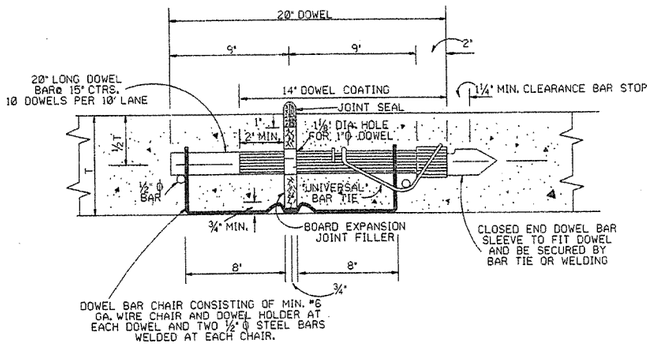
SECTION C-C

DETAIL OF WIDE FLANGE BEAM & JOINT SUPPORT

NOTE: WELD 12" X 10" X½" STEEL PLATE TO ENDS OF BEAM AFTER PLACEMENT OF CONCRETE PAVEMENT.

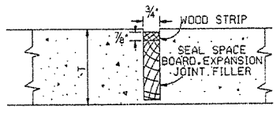


DETAIL OF END PLATE ATTACHMENT TO WIDE FLANGE BEAM



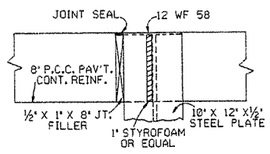
SECTION B-B
DETAIL OF EXPANSION JOINT

STRUCTURAL EXCAVATION	CLASS A CONCRETE	REINFORCING STEEL	STRUCTURAL STEEL
CU. YD.		LB.	
0.31	0.31	46.2	58.0

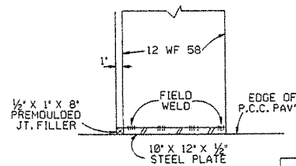


SEAL SPACE FOR EXPANSION JOINT

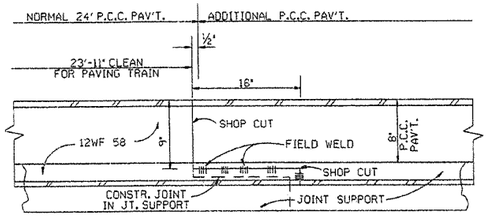
NOTE: BOARD JOINT FILLER OF SPECIFIED TYPE SHALL BE SECURED ON SUBGRADE IN EXACT POSITION AND LINE AS ILLUSTRATED OR BY OTHER APPROVED DEVICE.
JOINT ASSEMBLY SHALL BE SECURELY FASTENED INTO PLACE PRIOR TO PLACING CONCRETE.
AFTER SECOND PASSAGE OF FINISHING MACHINE REMOVE CONCRETE TO 1" BELOW TOP OF BOARD AND NAIL ¾" X ⅞" WOOD STRIP TO TOP OF BOARD FILLER TO FORM JOINT SEAL SPACE.
REPLACE CONCRETE AND FINISH WITH LONGITUDINAL FLOAT.
THE WOOD STRIP SHALL NOT BE REMOVED UNTIL IMMEDIATELY PRIOR TO POURING JOINT SEAL.



ELEVATION



PLAN



TRANSVERSE SECTION THROUGH WF BEAM AND JOINT SUPPORT

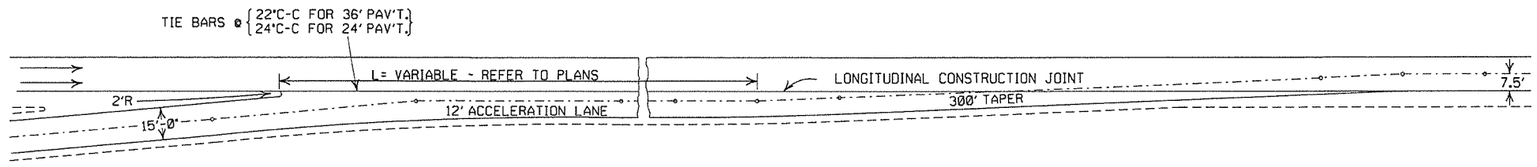
DATE	REVISION	DATE FILM'D
10-18-96	CORRECTED SUBSECTION AND SPELLING	10-19-96
4-26-96	DELETE DOWEL BAR NOTE	
7-15-88	SUB-SECT. 501.03 (f)(1)TO 501.03 (h)(1)	
8-22-75	REVISED 4" EXP. JOINT MAT'L	
11-1-73	REVISED JOINT SEAL A-A	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISION

DETAILS OF TERMINAL JOINTS FOR CONCRETE PAVEMENT

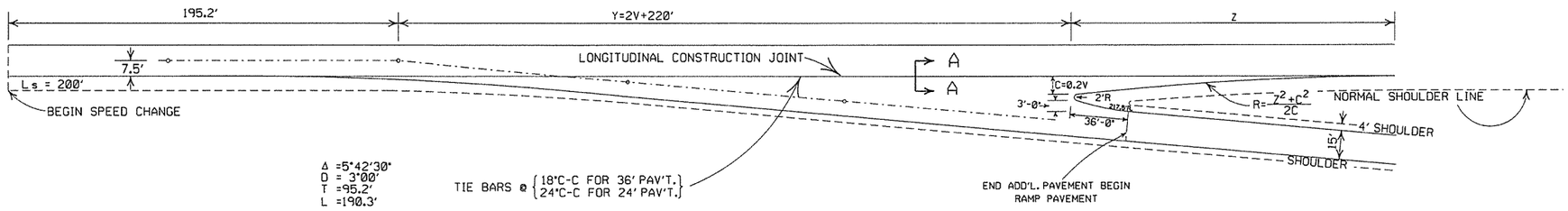
CONTINUOUSLY REINFORCED

STANDARD DRAWING CPCR-3



RETURN CURVES
Δ =2°17'30"
D = 3°00'
T =38.2'
L =76.4'

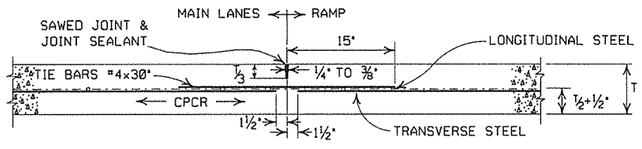
ENTRANCE RAMP



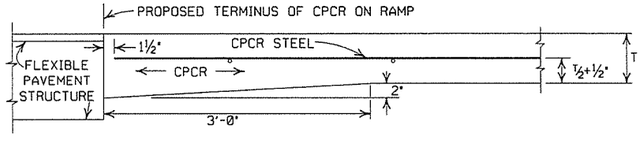
EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADD'L. SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27

NOTE: ON GRADES IN EXCESS OF 4%, THE LENGTHS "Y" & "L" MAY BE VARIED TO FIT THE CASE IN THE RATION OF $\frac{1 \pm \%GRADE}{2}$ (LENGTH AS SHOWN).



LONGITUDINAL CONSTRUCTION JOINT
SECTION A - A



DETAIL FOR JUNCTION WITH
FLEXIBLE TYPE PAVEMENT STRUCTURE

GENERAL NOTES

THE SEQUENCE OF OPERATION ON PLACING THE RAMP SHALL BE AS DIRECTED BY THE ENGINEER. THE LONGITUDINAL STEEL SHALL BE PLACED IN A DIRECTION APPROXIMATELY PARALLEL TO THE DIRECTION OF THE RAMP.

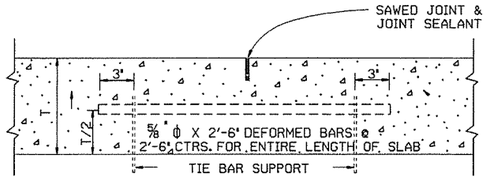
SAWED JOINT AND JOINT SEALANT FOR LONGITUDINAL CONSTRUCTION JOINT SHALL CONFORM TO THE DETAILS SHOWN FOR SAWED LONGITUDINAL JOINT ON STANDARD DRAWING CPTJ-6A.

DATE	REVISION	DATE FILMED
2-27-14	CORRECTED SPELLING	
3-23-89	ALTERED SAWED JOINT & ADDED NOTE	510-3-23-89
11-3-86	DIMEN'S. OF LONG. JTS.	652-11-1-86
10-2-72	REVISED AND REDRAWN	507-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

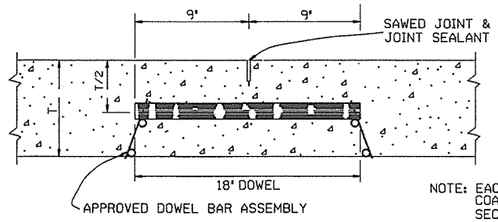
DETAILS OF ENTRANCE & EXIT RAMPS FOR CONCRETE PAVEMENT CONTINUOUSLY REINFORCED

STANDARD DRAWING CPCR-4



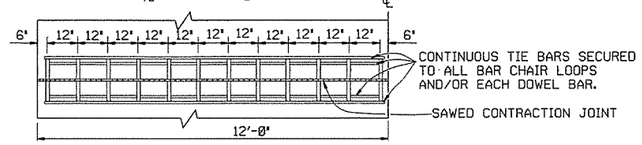
LONGITUDINAL JOINT

NOTE: THE TIE BAR SUPPORT SHOWN ABOVE MAY BE ELIMINATED IF OTHER APPROVED METHODS FOR PLACING AND SUPPORTING THE TIE BARS ARE PROVIDED.
TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.



NOTE: EACH DOWEL TO BE COATED ACCORDING TO SECTION 502 OF THE STANDARD SPECIFICATIONS.

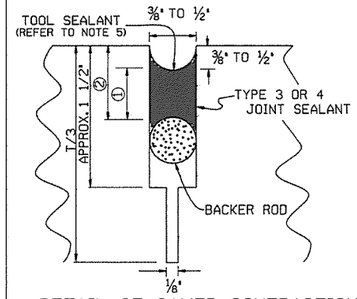
ROUND STEEL BAR DOWEL
1¼" DIA. WHEN T<10"
1½" DIA. WHEN T≥10"



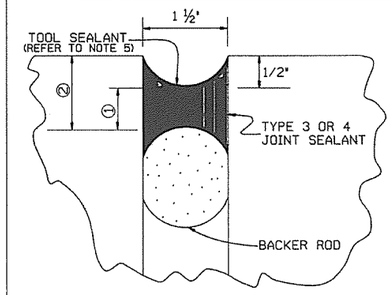
ONE-HALF 24' PAVEMENT
12 DOWELS
PLAN

NOTE: FOR 20' PAVEMENT USE 20 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR 15' PAVEMENT USE 15 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR 26' PAVEMENT USE 26 DOWELS @ 12" CTRS. WITH 6" SPACING FROM C.L. AND EDGE OF SLAB TO FIRST BAR.
FOR PAVEMENT WIDTHS OTHER THAN THOSE SHOWN ABOVE, USE DOWELS AT 12" CTRS. WITH 6" MAX. SPACING FROM C.L. TO FIRST BAR. DISTANCE FROM EDGE OF SLAB TO FIRST BAR SHALL BE ADJUSTED TO MAINTAIN 12" DOWEL BAR SPACING

CONTRACTION JOINT DETAILS



DETAIL OF SAWED CONTRACTION JOINT



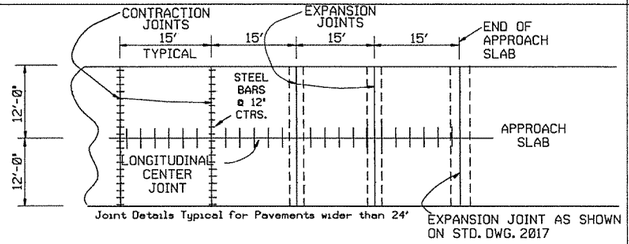
DETAIL OF EXPANSION JOINT

JOINT CONFIGURATION FOR TYPE 3 OR 4 JOINT SEALANT

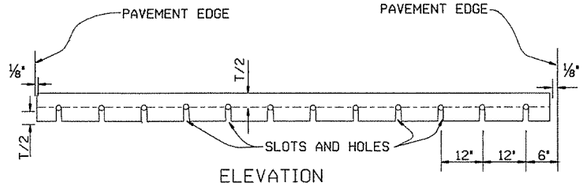
JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	¼	⅜	½
⅜	¼	½	½
½	¼	⅝	½
⅝	⅜	¾	9/16
¾	⅜	⅞	⅞
1 ½	¾	2	1 ¼

JOINT CONFIGURATION FOR TYPE 5 JOINT SEALANT

JOINT WIDTH	SEALANT THICKNESS ①	BACKER ROD DIAMETER	BACKER ROD PLACEMENT DEPTH ②
INCHES			
¼	½	⅜	¾
⅜	¾	½	1

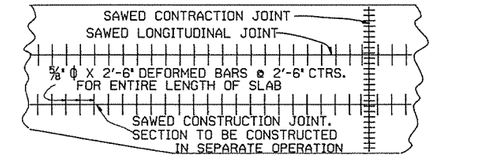


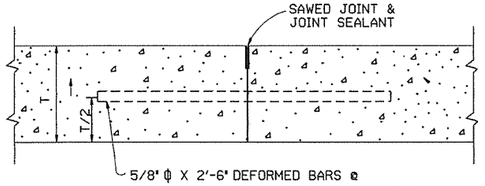
PLAN SHOWING EXPANSION JOINTS AT BRIDGE APPROACH SLABS



ELEVATION

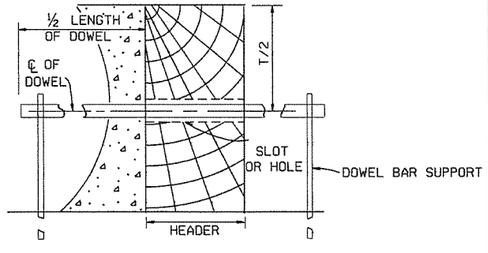
NOTE: ALL DOWEL BARS SHALL CONFORM TO THE DETAILS FOR CONTRACTION JOINTS.





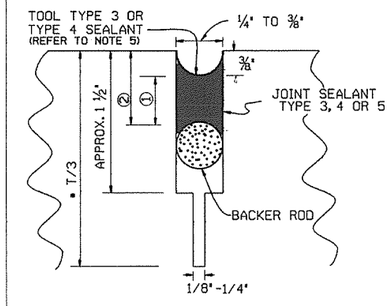
NOTE: TIE BARS SHALL BE 15' FROM TRANSVERSE JOINTS.

LONGITUDINAL CONSTRUCTION JOINT



SECTION

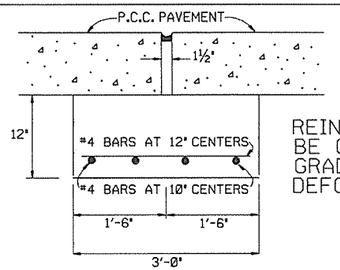
TRANSVERSE CONSTRUCTION JOINT



*NOTE: T/3 SAW CUT NOT REQUIRED FOR LONGITUDINAL CONSTRUCTION JOINT.

DETAIL OF SAWED LONGITUDINAL JOINT AND LONGITUDINAL CONSTRUCTION JOINT

DATE	REVISION	DATE FILMED
5-25-06	ADDED GENERAL NOTE 7	
10-9-03	REMOVED TIE BAR COATING & REVISED GENERAL NOTES	
11-16-01	ADDED TOOL SEALANT AND NOTE 5; REVISED NOTE 3	
4-26-96	REVISED CONTRACTION JOINT NOTE	
11- 3-94	ADDED NOTE RE: REINF. BARS	
4- 1-93	REVISED DOWEL BARS & GEN. NOTES	4- 1-93
10- 1-92	REVISED DOWEL SPACING	10- 1-92
8- 15-91	ADDED SPAC FOR CONTR JTS & DEL KEYWAY	
05-24-90	REVISED TIE BAR, DOWEL & JOINT SIZE	
01-25-90	ADDED EXPANSION JOINT	01-25-90
11-30-89	CHANGED T/4+1 TO T/3+1	11-30-89
03-23-89	ALTERED SAWED JOINT & ADDED NOTE	512-03-23-89
07-15-88	REVISED AND REDRAWN	632-07-15-88



DETAIL OF JOINT SUPPORT FOR EXPANSION JOINTS

REINFORCING SHALL BE GRADE 40 OR GRADE 60 DEFORMED BARS.

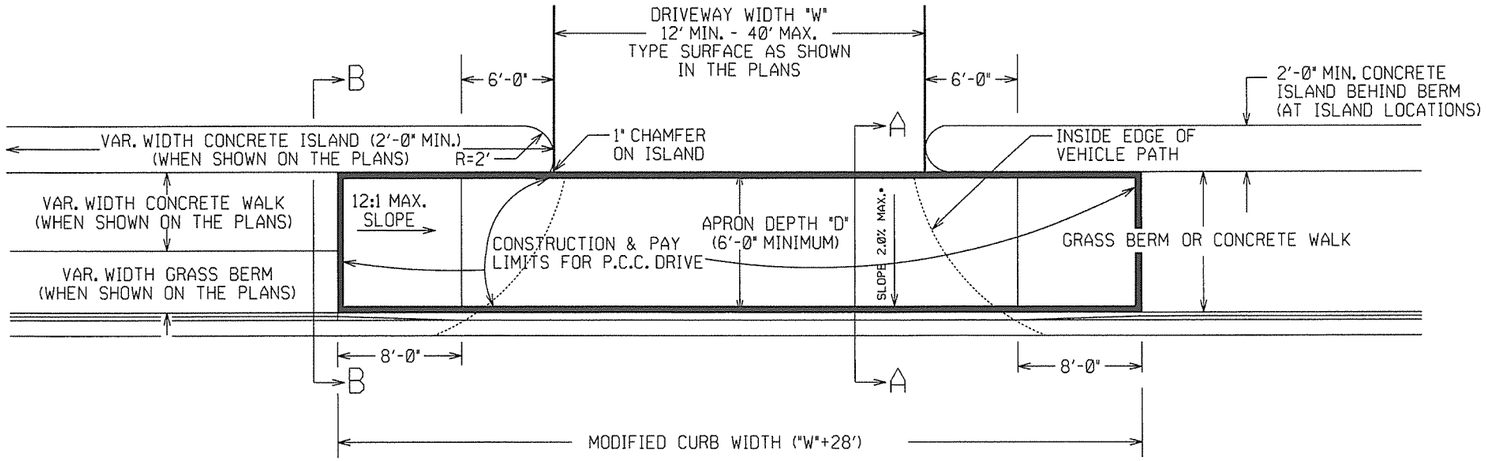
GENERAL NOTES

1. 'T' DENOTES THICKNESS OF SLAB.
2. DOWEL BARS SHALL BE PLACED IN ACCORDANCE WITH THE DIMENSIONS SHOWN. A TOLERANCE OF PLUS OR MINUS ONE INCH WILL BE ALLOWED FOR THE VERTICAL AND LATERAL PLACEMENT AND A TOLERANCE OF PLUS OR MINUS ¼" WILL BE ALLOWED FOR THE TILT AND SKEW. DOWEL BARS SHALL BE FIELD COATED FOR A MINIMUM DISTANCE OF 2" GREATER THAN HALF THE LENGTH OF THE BAR WITH AN APPROVED GREASE AS A BOND BREAKER JUST PRIOR TO PLACEMENT OF CONCRETE.
3. THE EXPANSION JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS 'A', 'S' OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE SPECIFIED IN THE PLANS. PAYMENT FOR ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.
4. CONTRACTION JOINTS SHALL BE CONSTRUCTED ON 15' CENTERS.
5. TOOLING NOT REQUIRED FOR SELF-LEVELING SILICONE.
6. UNLESS OTHERWISE SPECIFIED IN THE PLANS, CONCRETE SHOULDERS SHALL BE CONSTRUCTED ACCORDING TO THE DETAILS SHOWN HEREON. CONTRACTION JOINTS SHALL MATCH CONTRACTION JOINTS IN THE LANES.
7. TIE WIRES IN DOWEL BAR ASSEMBLIES SHALL NOT BE CUT PRIOR TO PLACEMENT OF PAVING CONCRETE.

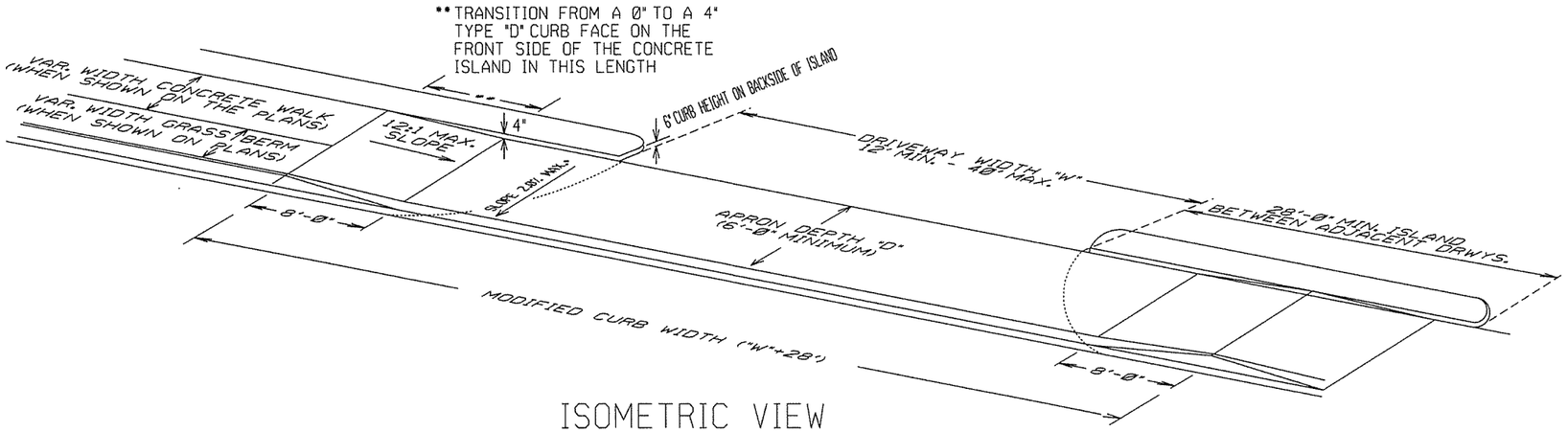
ARKANSAS STATE HIGHWAY COMMISSION

TRANSVERSE & LONGITUDINAL JOINTS FOR CONCRETE PAVEMENT (NON-REINFORCED)

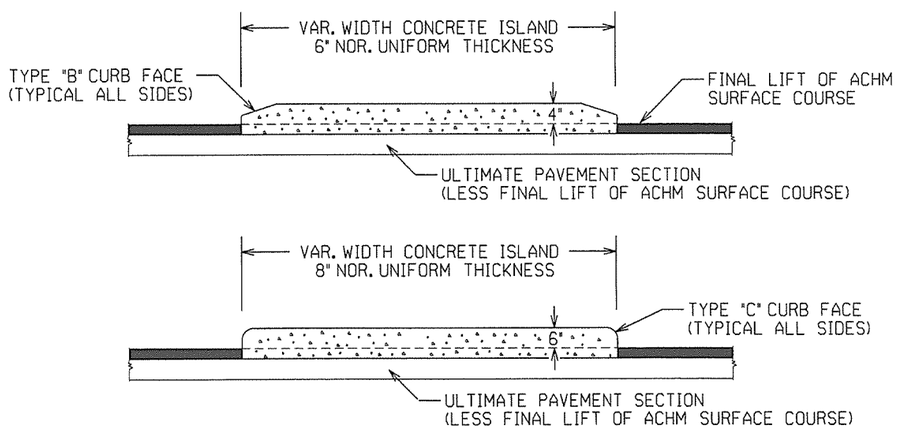
STANDARD DRAWING CPTJ - 6A



PLAN VIEW

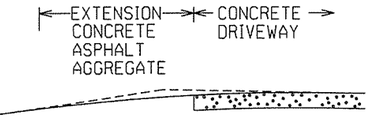


ISOMETRIC VIEW



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

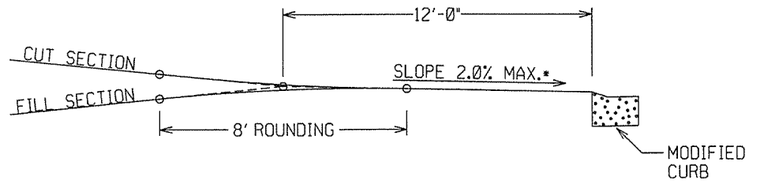
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE.(1") OR
4" ACHM BASE COURSE (1-1/2")

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

4: AGGREGATE - 6" AGGREGATE BASE COURSE

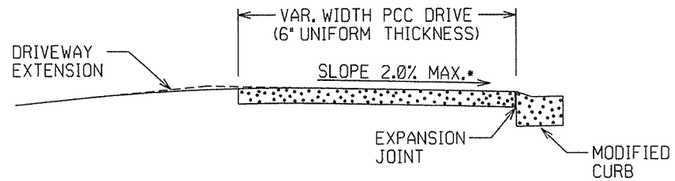
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

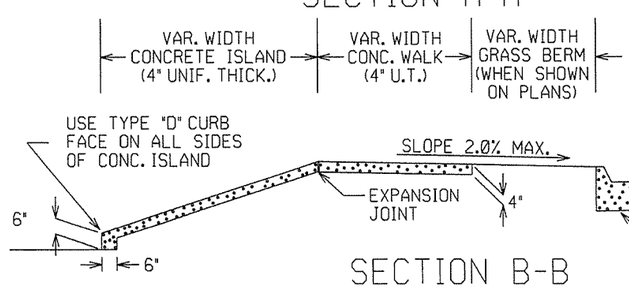


DRIVEWAY VERTICAL ALIGNMENT DETAILS

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



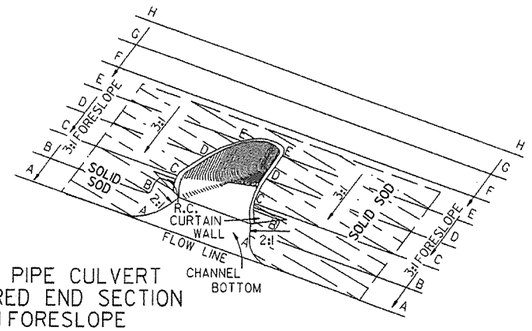
SECTION A-A



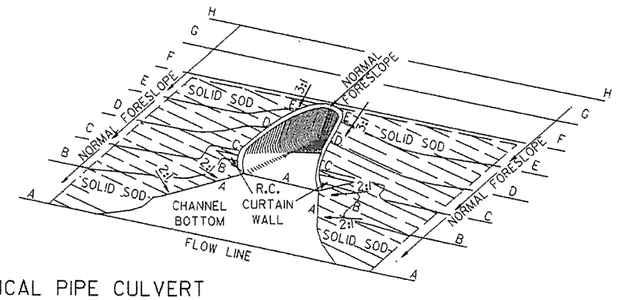
SECTION B-B
CURBED ISLAND BEHIND WALK

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

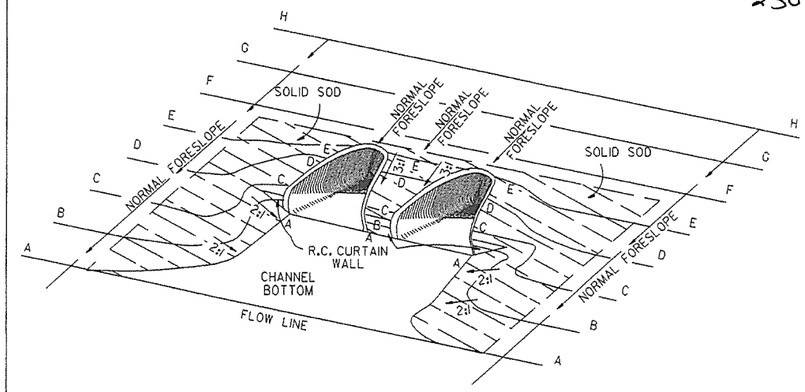
ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF DRIVEWAYS & ISLANDS
STANDARD DRAWING DR-1



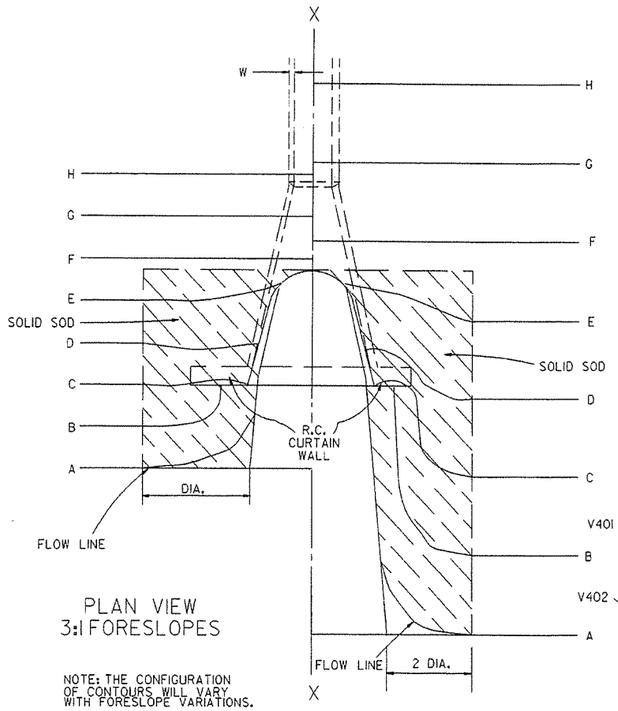
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



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



PLAN VIEW
3:1 FORESLOPES

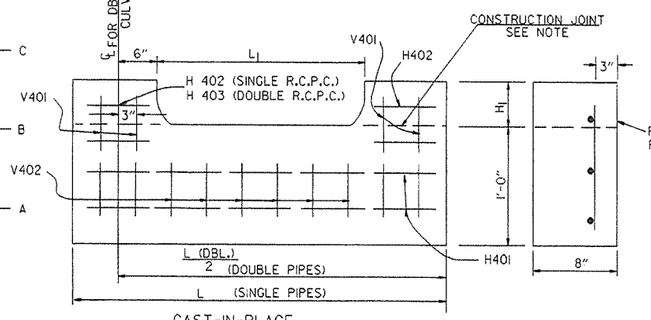
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

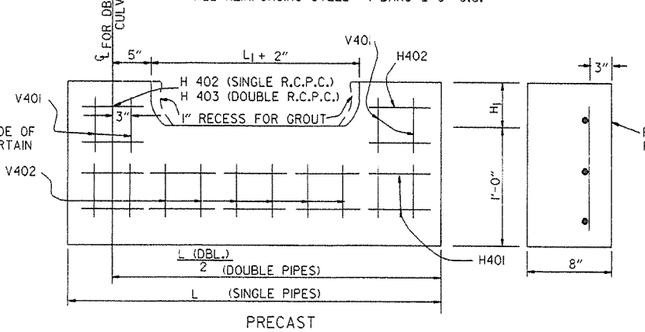
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	1'-11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"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

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



CAST-IN-PLACE

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



PRECAST

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

R.C. CURTAIN WALL DETAILS

REINFORCING STEEL SCHEDULE

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

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

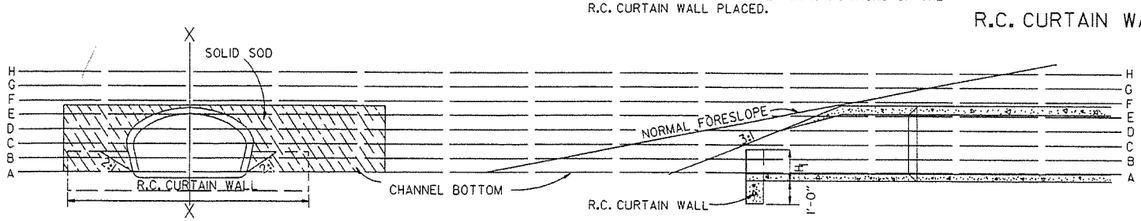
SOLID SODDING

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

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

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE: FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W/10 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

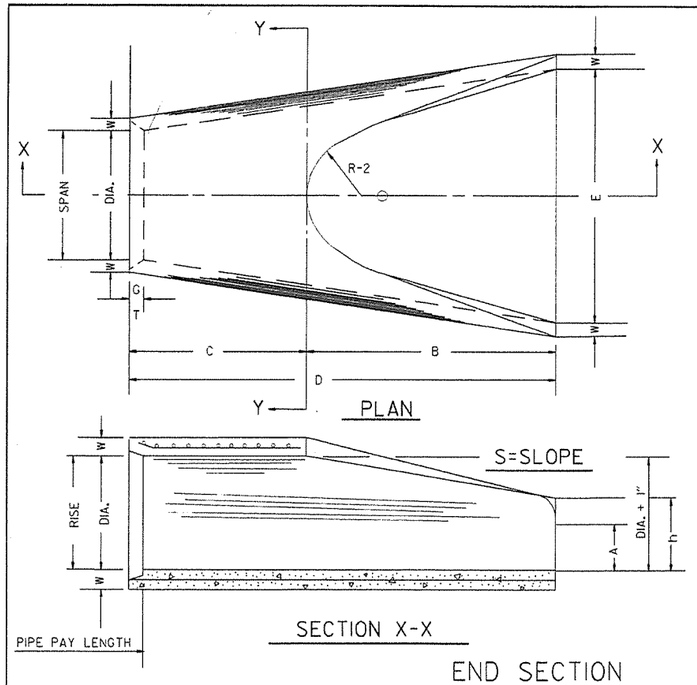
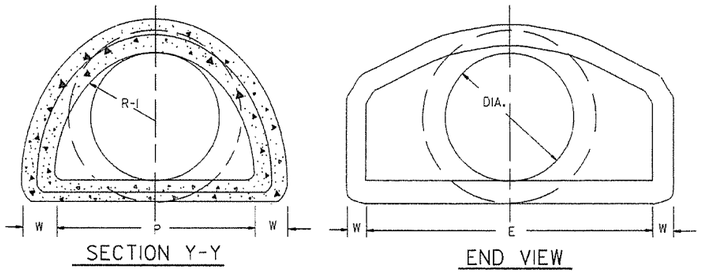


TABLE OF DIMENSIONS

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'-11½"	4'-0"	3:1	25"	33 3/16"	16 11/16"	14"	2½"	1600	1'-11½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅝"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47 13/16"	24 5/16"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53 7/16"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36 11/16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77 13/16"	38 13/16"	24"	5"	13250	4'-6"



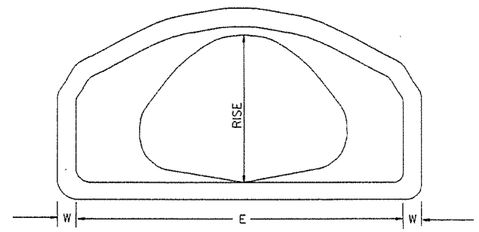
NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

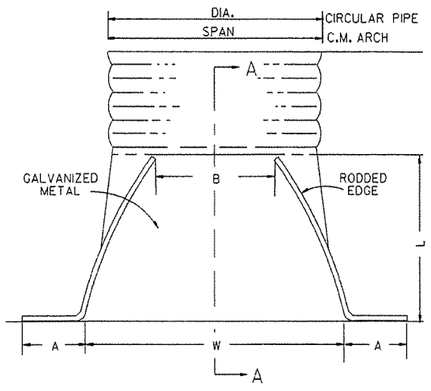
ARCH PIPE

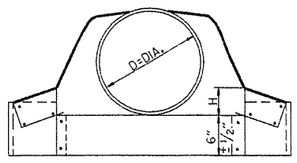
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36 13/16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47 13/16"	20"	3"	2½:1
36	43¾	44	26⅜	27	4"	10½"	4'-0"	2'-11½"	6'-1½"	6'-6"	54 5/16"	22"	3½"	2½:1
42	51⅛	51	31 5/16	31	4½"	11½"	4'-7"	1-10¼"	6'-5¼"	7'-2"	59½"	23"	3¾"	2½:1
48	58½	59	36	36	5"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	7'-10"	70⅝"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72 1/16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77 13/16"	24"	5"	2¼:1

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



END VIEW
CONCRETE ARCH PIPE

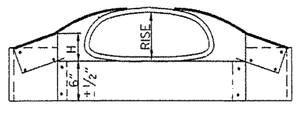




CIRCULAR PIPE

CIRCULAR PIPE

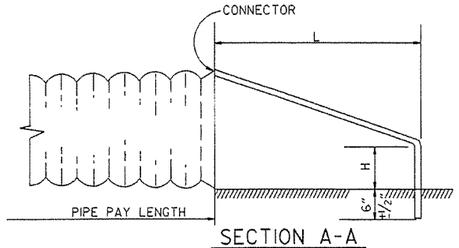
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12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

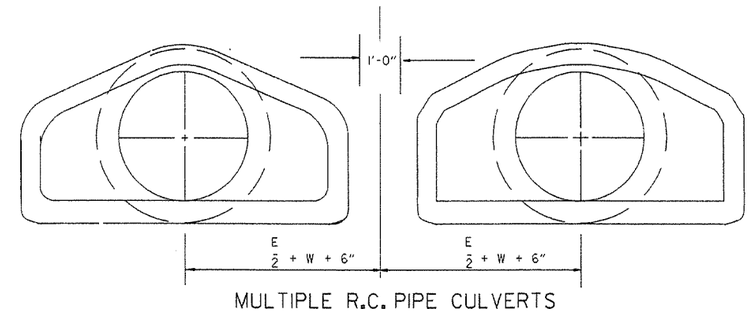
C.M. ARCH PIPE

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

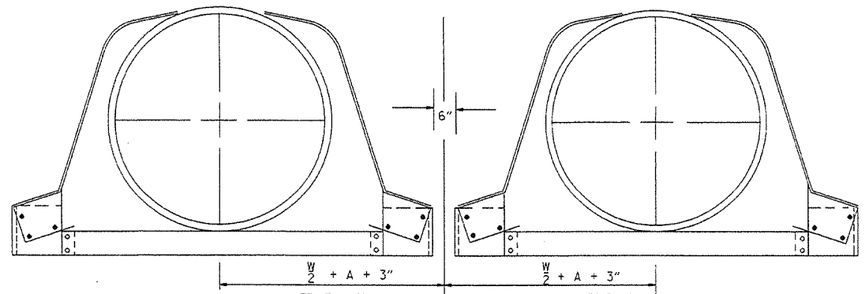


NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

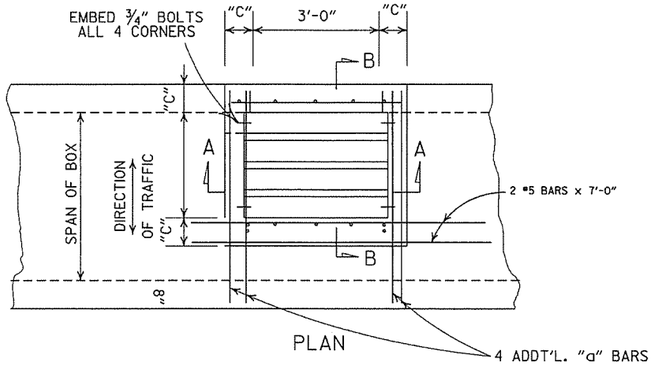
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	16-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	864-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74
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

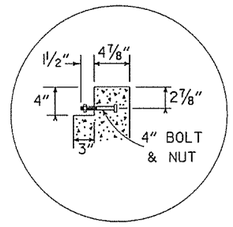
FLARED END SECTION

STANDARD DRAWING FES-2

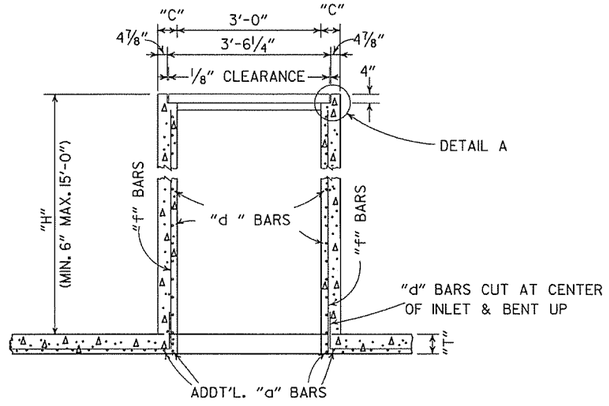
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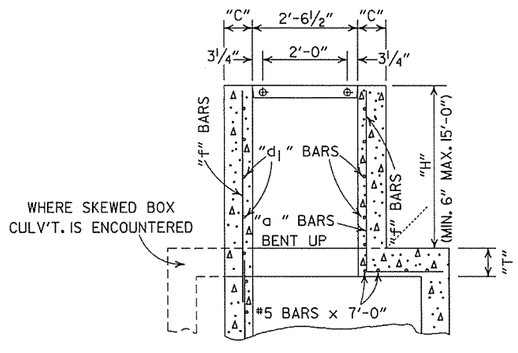
PLAN



DETAIL A



SECTION A-A

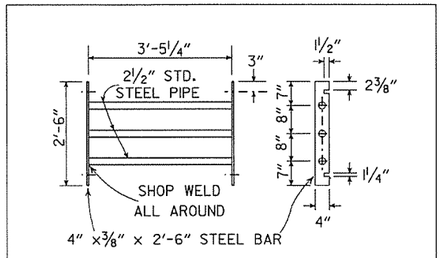


SECTION B-B

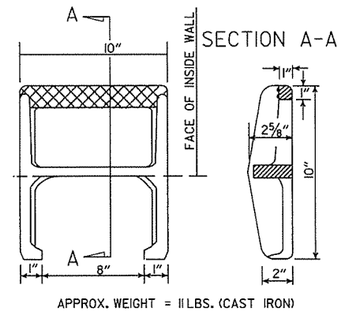
NOTE: ADDT'L.REINF. STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.I.

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

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



GRATE DETAIL



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

GENERAL NOTES:

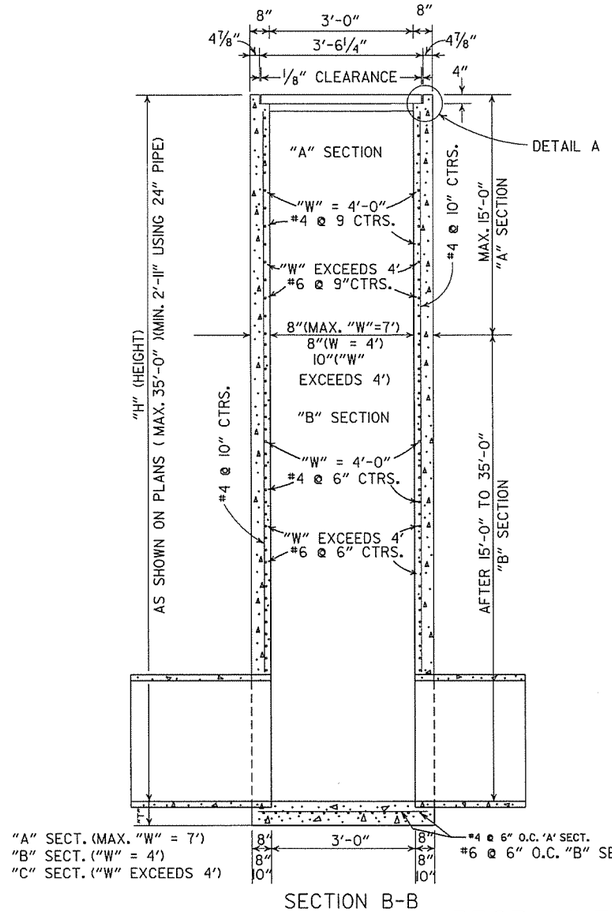
1. STEEL PIPE FOR GRATES AND BOLTS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 807. BOLTS SHALL CONFORM TO ONE OF THE FOLLOWING: ASTM A193, GRADE B8 CLASS 1OR 2, ASTM A307 OR AASHTO M 164.
2. STEEL PIPE FOR GRATES SHALL BE "STANDARD WEIGHT" PIPE CONFORMING TO ASTM A53 NATIONAL STANDARD PIPE.
3. BOLTS, NUTS, WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232 OR AASHTO M 298, CLASS 40 OR 50.
4. ALL EXPOSED CORNERS TO HAVE ¾" CHAMFER.
5. ALL #4 AND #5 REINFORCING BARS TO HAVE 1½" COVER. LARGER SIZES TO HAVE 2" COVER.
6. THE COMPLETE PIPE GRATE SHALL BE PAINTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

TABLE OF "W" DIMENSIONS

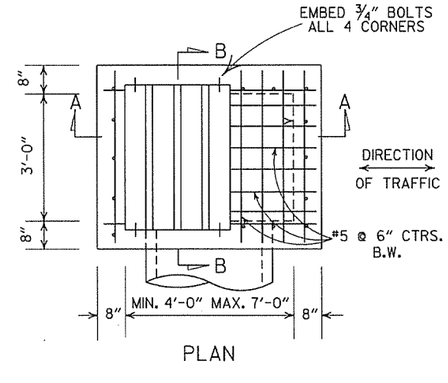
232

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

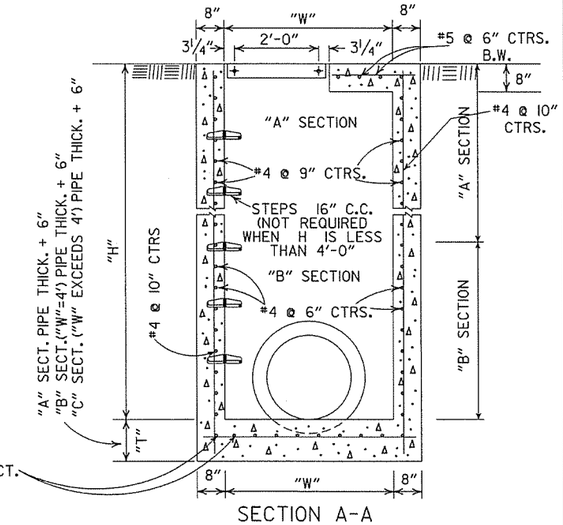
NOTE: DIMENSIONS SHOWN ABOVE ARE FOR PIPES INTERSECTING DROP INLET ON ONE SIDE ONLY. FOR SKEWED PIPES INTERSECTING BOTH SIDES OF DROP INLET, "W" WILL NEED TO BE INCREASED OR AXIS OF INTERSECTING PIPES WILL NEED TO BE SHIFTED.



SECTION B-B



PLAN



SECTION A-A

DROP INLET(TYPE RM)

8-22-02	ADDED & REVISED DIMENSION TO SECTION A-A	
1-12-00	CORRECTED DIMENSION ON SECTION B-B	
11-06-97	ADDED DIMENSION TO SECTION A-A	
10-18-96	REVISED ASTM REF. TO AASHTO AND ADDED NOTE TO TABLE OF "W" DIMENSIONS	
10-1-92	ADDED DIRECTION OF TRAFFIC	10-1-92
8-15-91	ADDED NOTE ABOUT PAINTING OF GRATE	8-15-91
11-30-89	ALTERED DETAIL A	11-30-89
7-15-88	REVISED STEP DETAIL,TM & RM D.I. & GRATE DETAIL	719-7-15-88
10-2-72	REVISED AND REDRAWN	542-10-2-72
REVISED		DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS

STANDARD DRAWING FPC-9D

4'-0" LENGTH DROP INLET

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

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

DROP INLET EXTENSION

4'-0" CLASS A CONC. CU. YDS.	4'-0" REINF. STEEL POUNDS	8'-0" CLASS A CONC. CU. YDS.	8'-0" REINF. STEEL POUNDS
0.58	38	0.87	72

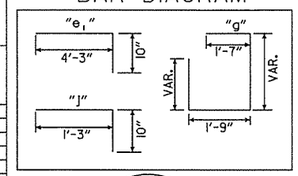
DEDUCT FROM QUANTITY COMPUTED FOR EACH EXTENSION ADDED.

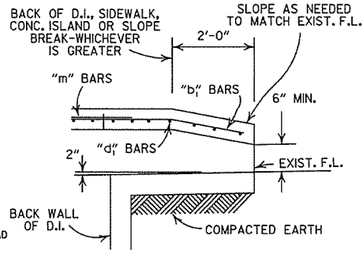
0.04	3		

DEDUCT FROM QUANTITY COMPUTED FOR EACH PIPE ENTERING INLET

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

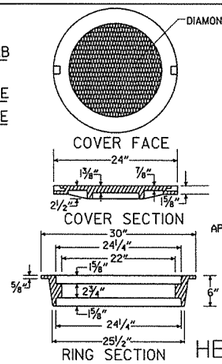
BAR DIAGRAM





BACK OPENING

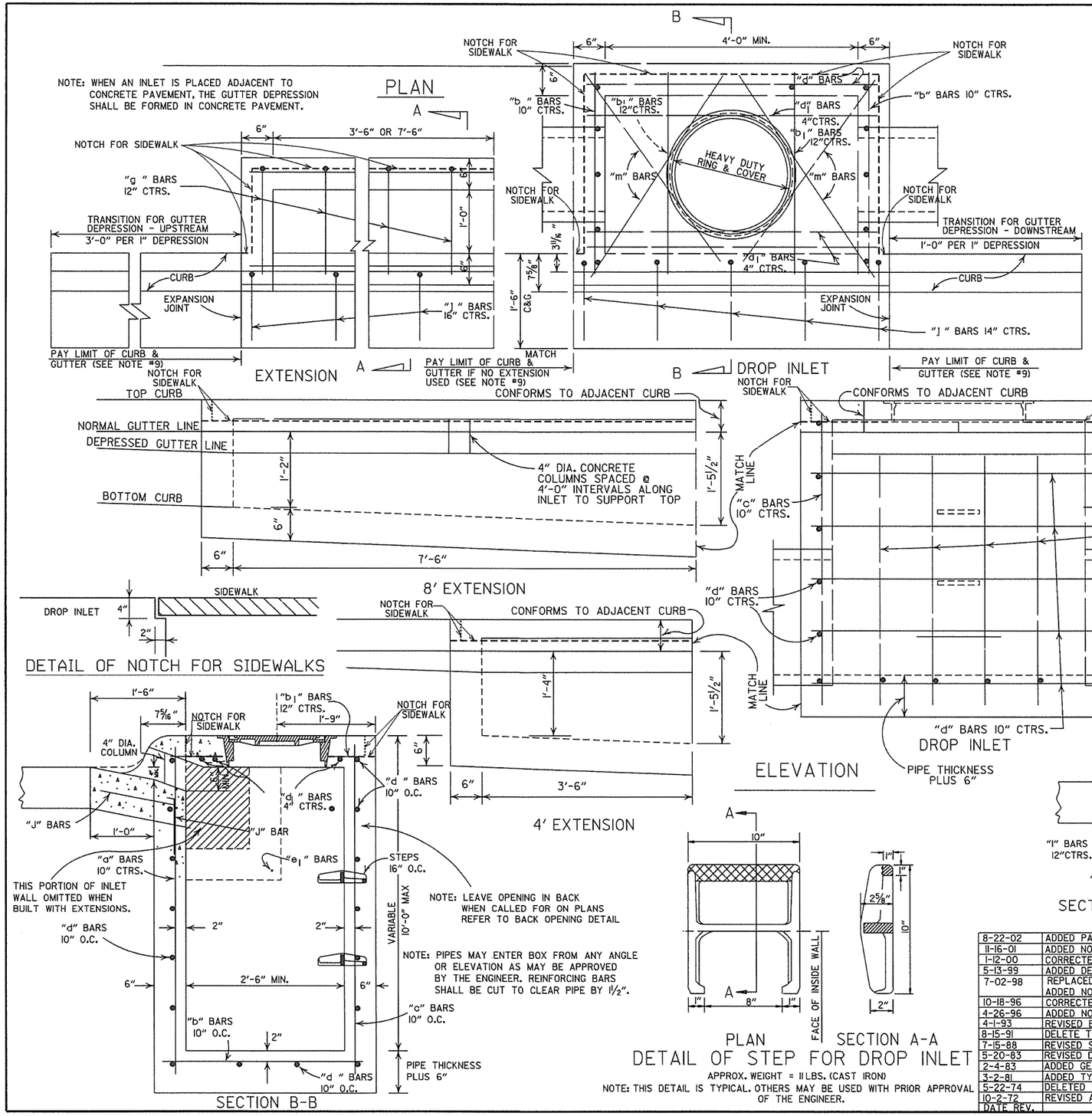
WHEN OPENING IN BACK IS CALLED FOR ON PLANS EXTEND OPENING AS SHOWN IN DETAIL. PAYMENT TO BE INCLUDED IN PRICE BID FOR DROP INLET (TYPE C).



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.



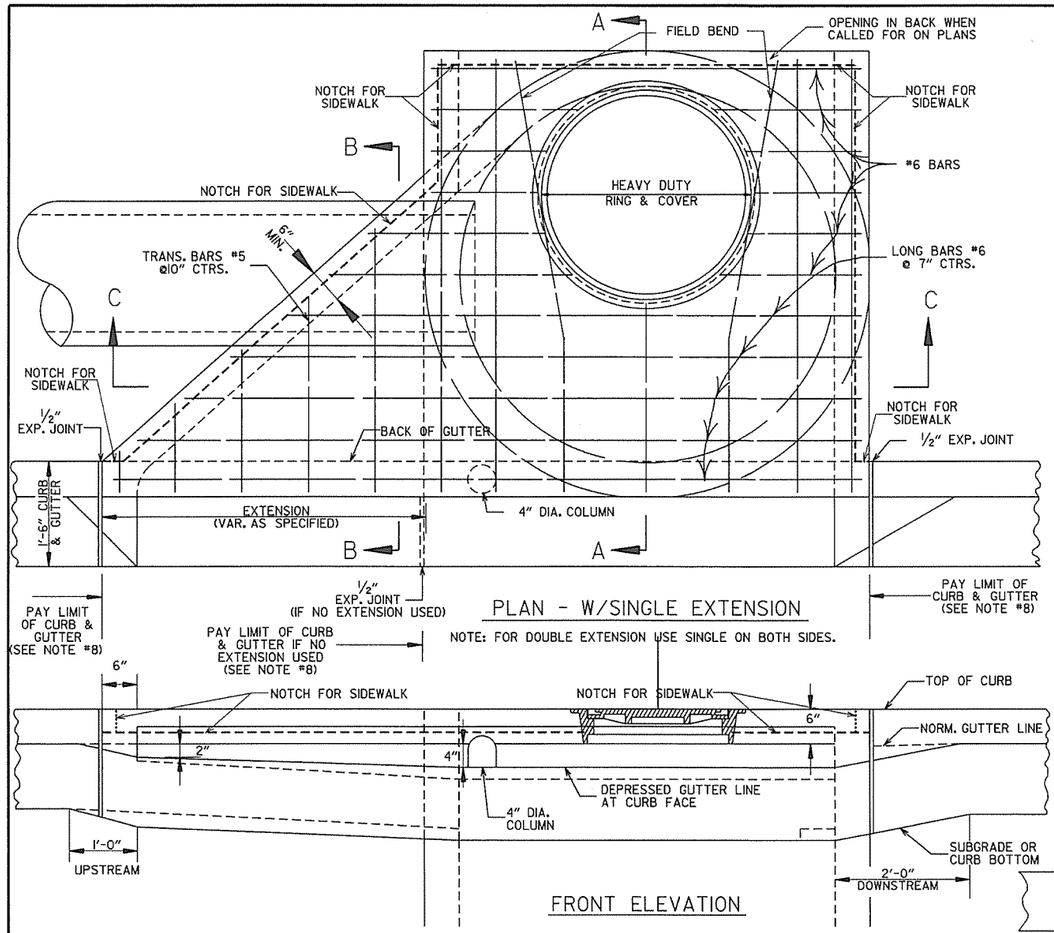
DATE REV.	REVISION	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13; REVISED SECTION B-B	
1-12-00	CORRECTED DIMENSION ON SECTION B-B & REVISED RING & COVER	
5-13-99	ADDED DETAIL OF NOTCH FOR SIDEWALKS	
7-02-98	REPLACED RING & COVER W/HEAVY DUTY RING & COVER 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)

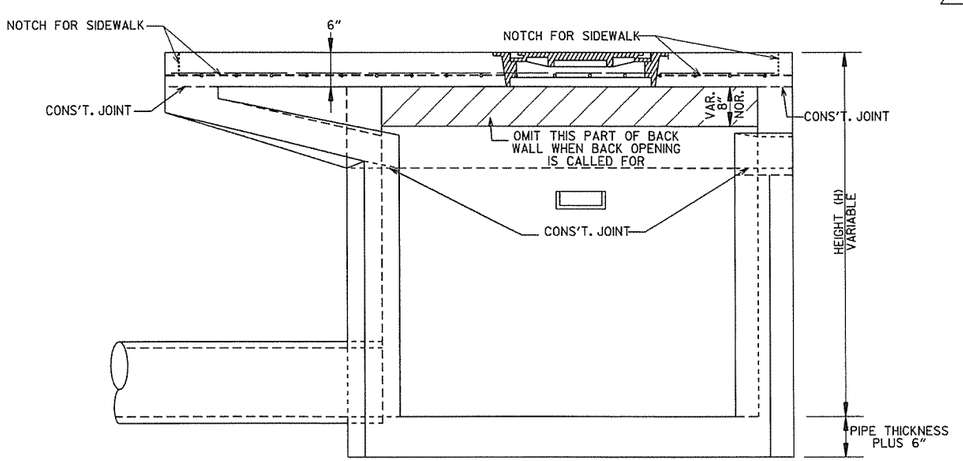
STANDARD DRAWING FPC-9E



PLAN - W/SINGLE EXTENSION

NOTE: FOR DOUBLE EXTENSION USE SINGLE ON BOTH SIDES.

FRONT ELEVATION

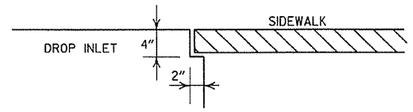


SECTION C-C

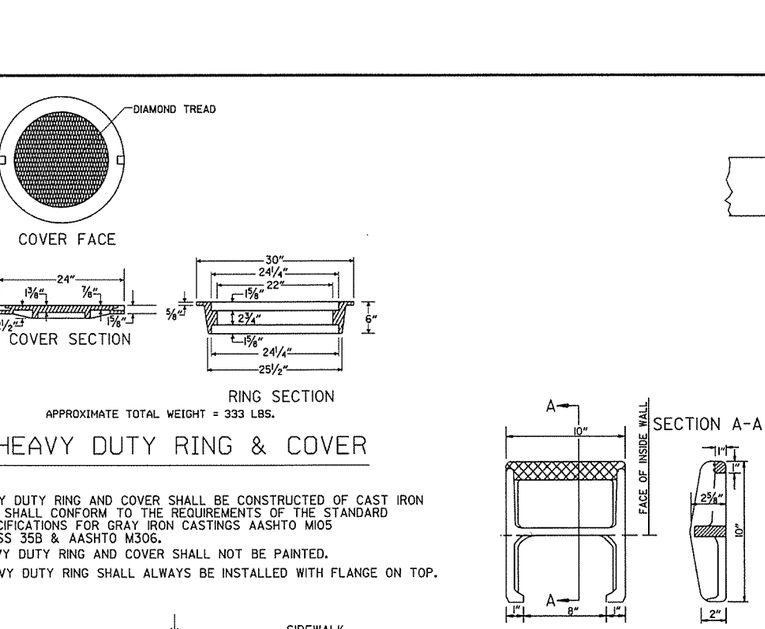
APPROXIMATE TOTAL WEIGHT = 333 LBS.

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



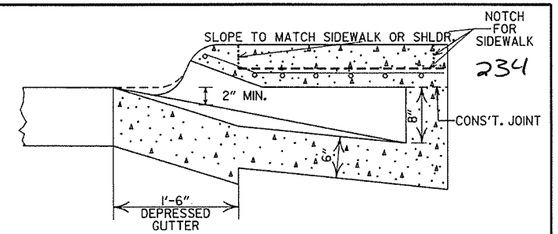
SECTION A-A

APPROX. WEIGHT = 11 LBS. (CAST IRON)

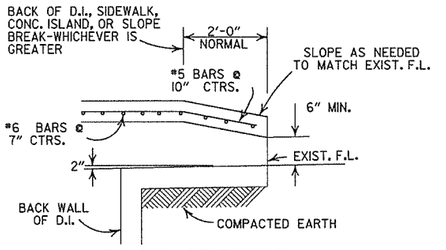
PLAN

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.

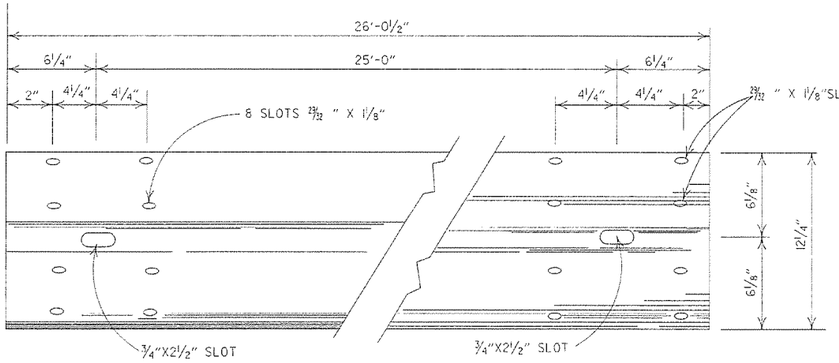
	MINIMUM WALL THICKNESS	
DIA. OF D.I. / DIA. OF OUTLET PIPE	CAST IN PLACE	PRECAST
4' I.D. / 12" THRU 27"	6"	5"
5' I.D. / 30" THRU 42"	8"	6"
6' I.D. / 48" THRU 54"	8"	7"

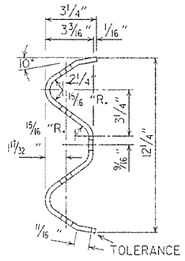
DATE	REVISIONS	DATE FILMED
8-22-02	ADDED PAY LIMIT CURB NOTES TO SECTIONS A-A & B-B	
11-16-01	ADDED NOTE 13	
1-12-00	REVISED HEAVY DUTY RING & COVER	
5-13-99	ADDED NOTCH DETAIL FOR SIDEWALKS	
7-02-98	REP. NOTE 8, REM. PLAN DET., REV. PICTURE FOR NEW RING & COVER, ADDED HEAVY DUTY RING & COVER AND DETAIL OF STEP FOR DROP INLET	
4-26-95	ADDED NOTE 11 ADJ. OPENING DIMENSION	
10-12-95	CORRECTED #6 BAR SPACING	
1-20-95	CORRECTED DIAMETER OF D.I. IN BOX	
2-2-95	TYPE C TO MO (OPEN BACK DETAIL)	
11-3-94	REVISED GENERAL NOTES	11-3-94
4-1-93	REV. BACK OPEN. DETAIL & NOTE	4-1-93
8-15-91	REVISED NOTES 11,12 & ADDED BK.OPEN DETAIL	8-15-91
11-30-89	ADDED NOTE NO. 12	11-30-89
5-23-89	ADDED NOTE & MINIMUM WALL THICKNESS	513-5-23-89
7-19-88	ADDED EXTEND NOTE TO SECTION A-A	649-7-19-88
1-14-87	MODIFIED WALL THICKNESS	783-1-14-87
6-12-87	ISSUED	456-12-87

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLET (TYPE MO)

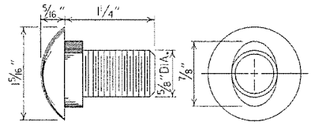
STANDARD DRAWING FPC-9M



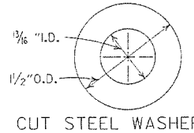


DETAILS OF W-BEAM GUARD RAIL

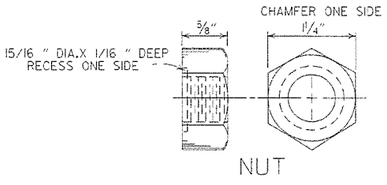
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



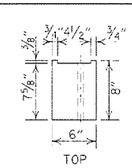
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH

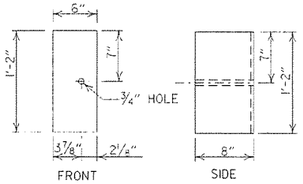


CUT STEEL WASHER

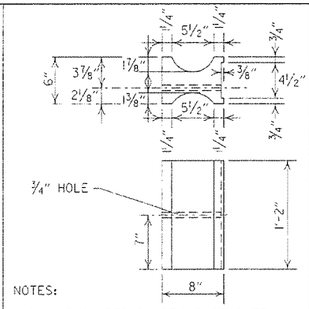


NUT





WOOD BLOCKOUT (W-BEAM)

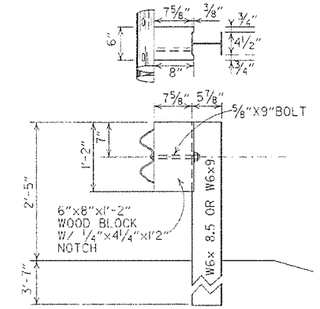


NOTES:

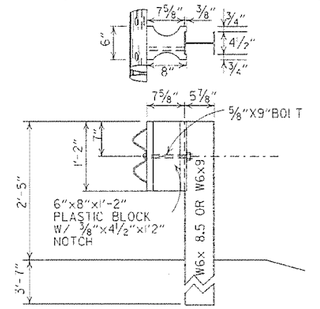
1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

PLASTIC BLOCKOUT (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.

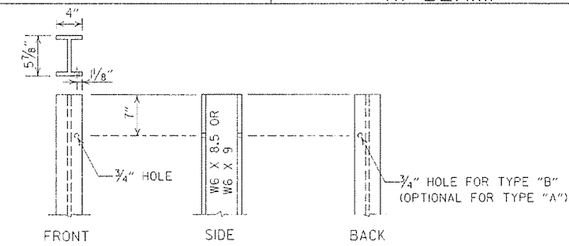


WOOD BLOCKOUT CONNECTIONS

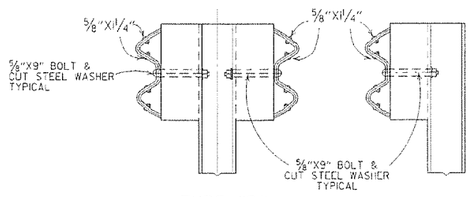


PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



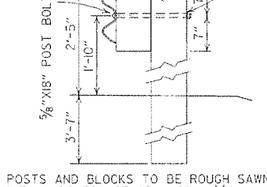
STEEL POST



TYPE "B" TYPE "A"

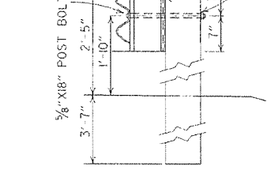
DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

HOLES IN POSTS AND BLOCKS TO BE ¾" DIA.



POSTS AND BLOCKS TO BE ROUGH SAWN 6"X8" WITH A TOLERANCE OF + OR - ¼".

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 ¾" 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.

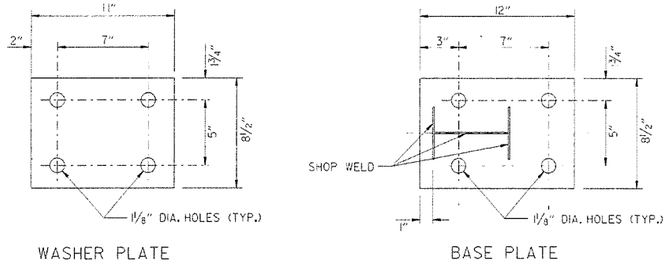
CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARD RAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS NCHRP-350 TEST LEVEL 3 SPECIFICATIONS OR REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARD RAIL.

DATE	REVISION	DATE FILM
7-4-10	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 & DEPTH OF ANC. POST IN ROCK	8-2-90
7-15-88	REVISED SECTION 3 & GENERAL NOTES	
3-4-88	REV. ANCHOR POST, ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-9-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

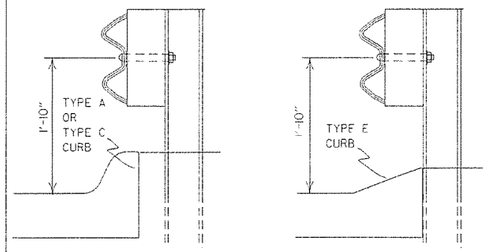
GUARD RAIL DETAILS

STANDARD DRAWING GR-8



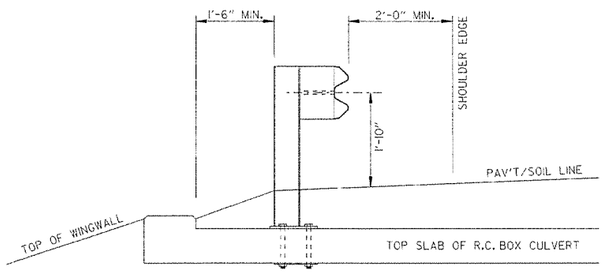
WASHER PLATE BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

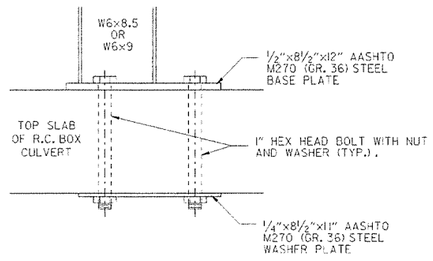


DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB (W-BEAM)

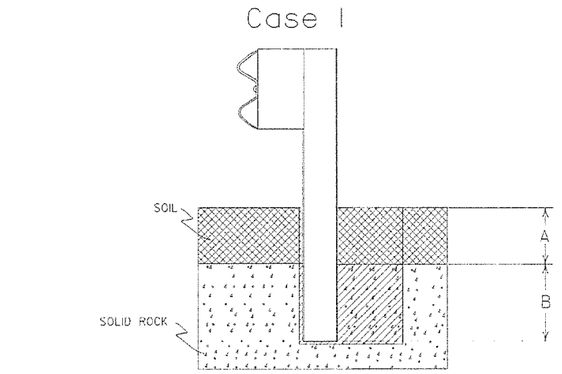
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.

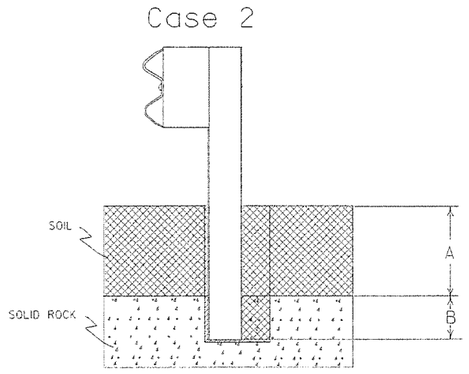


SECTION A-A

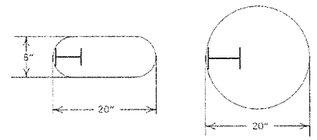


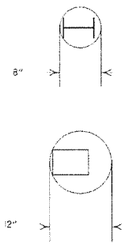
DETAIL OF CONNECTION



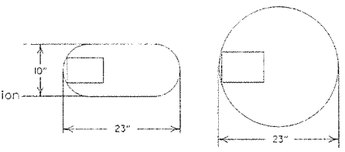


Plan View Steel Posts
Either hole configuration acceptable





Plan View Wood Posts
Either hole configuration acceptable



Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

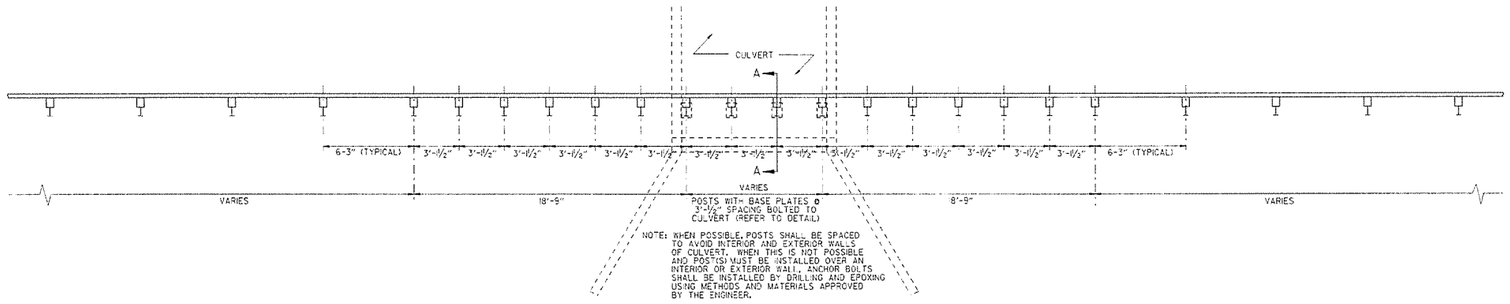
Zone A:
Backfill according to Section 617.03(a).

Zone B:
Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B:
Backfill according to Section 617.03(a).

DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



PLAN LAYOUT OF TYPE A GUARD RAIL AT LOW-FILL CULVERTS

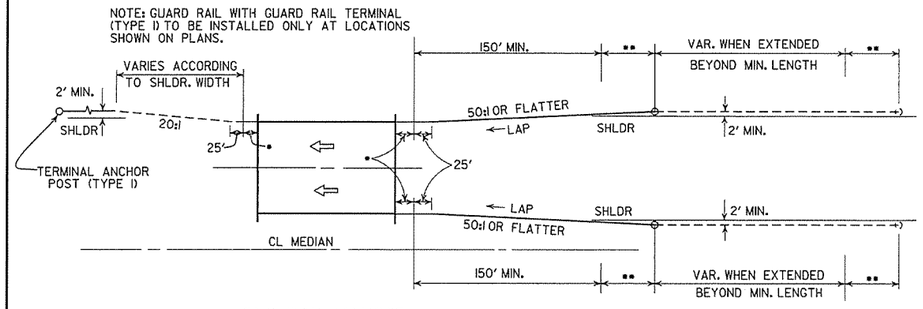
NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARD RAIL POSTS AS SHOWN ON STD. DRG. GR-8.

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
4-12-07	REVISED DETAIL OF GUARD RAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARD RAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
4-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARD RAIL PLACEMENT AT LOW-FILL CULVERTS	
3-30-00	REMOVED CONCRETE INSERT ANCHOR	
9-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADD. DET. OF GUARD RAIL CONNECTION TO R.C. BOX CULV'T. DELETED DET. OF STEEL LINE POST CONN.& ADDED DET. OF GUARD RAIL PLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK	
4-3-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
6-2-94	REVISED ALTERNATE POST SIZE	
8-5-93	REVISED STEEL POST SIZE	
10-1-92	REDRAWN & REVISED	10-1-92
8-2-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
7-15-88	CONFORMED TO 1988 SPECS	
3-4-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-9-87	REDRAWN & REVISED	803-10-9-87

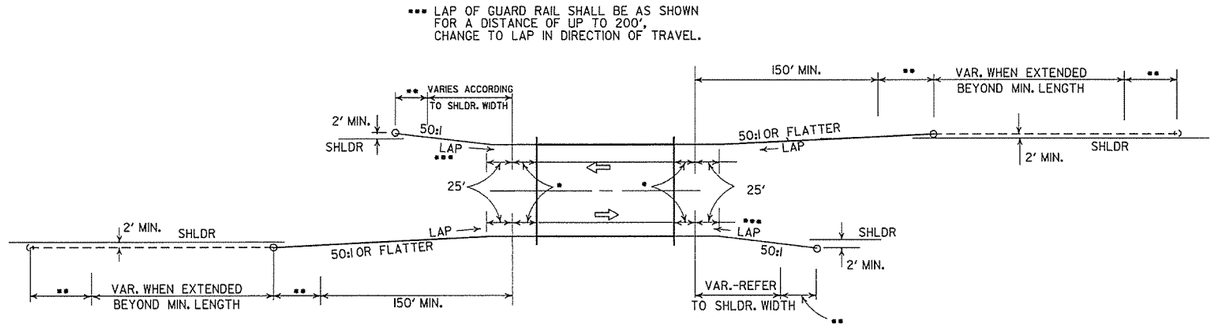
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-8A

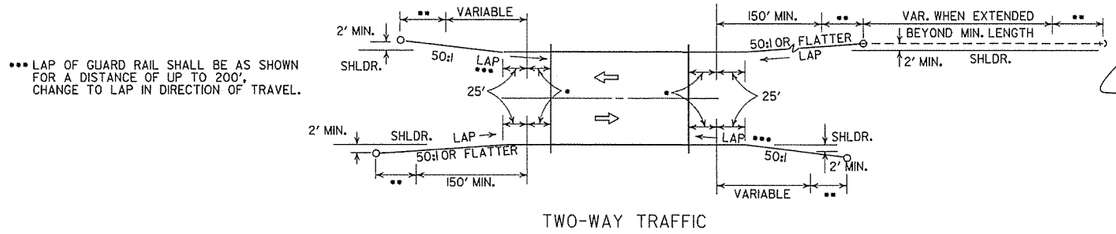


ONE-WAY TRAFFIC

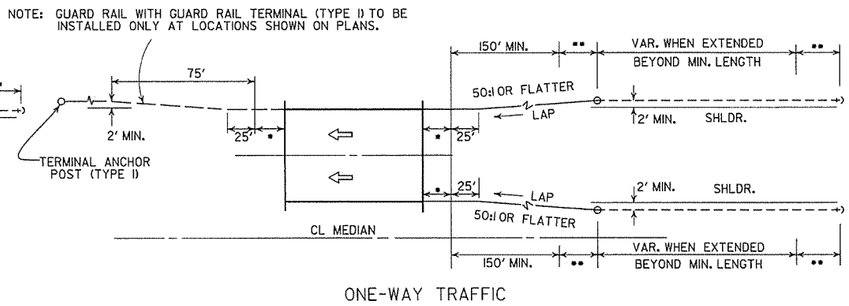


TWO-WAY TRAFFIC

METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)



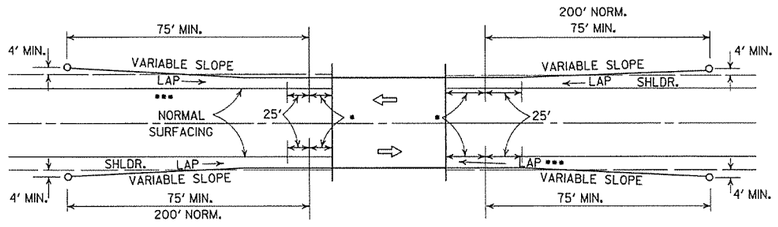
TWO-WAY TRAFFIC



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.



LEGEND

- ▪ THRIE BEAM GUARD RAIL TERMINAL
- ▪▪ GUARD RAIL TERMINAL (TYPE 2)

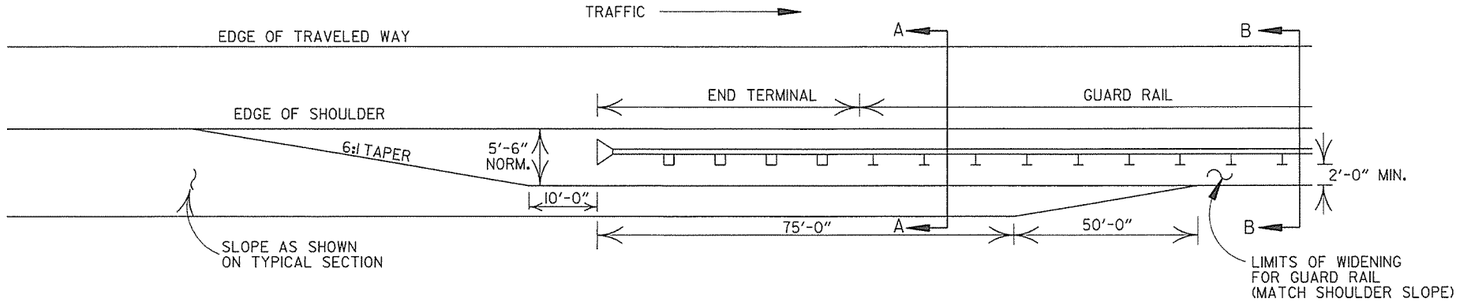
METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERMINAL (TYPE I) (FULL SHOULDER WIDTH OR LESS BRIDGES)

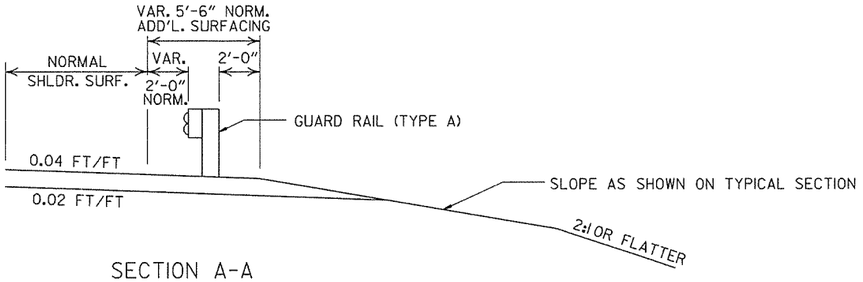
DATE	REVISION	DATE FILM
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARD RAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARD RAIL USING GUARD RAIL TERM. (TY. I)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

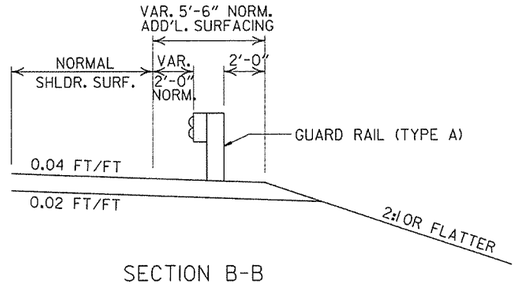
GUARD RAIL DETAILS

STANDARD DRAWING GR-9





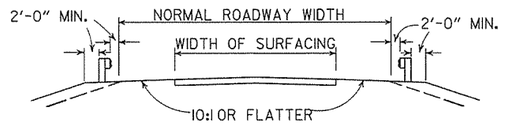
SECTION A-A



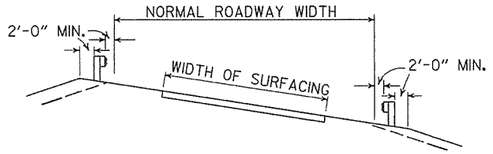
SECTION B-B

DETAILS OF WIDENING FOR GUARD RAIL

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

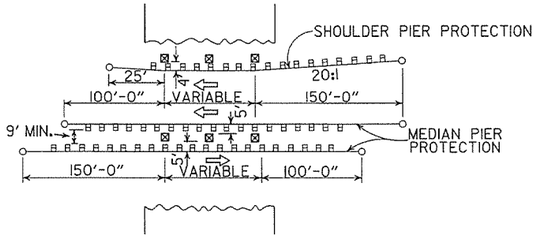


SECTION ON TANGENT



SECTION ON CURVE

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY



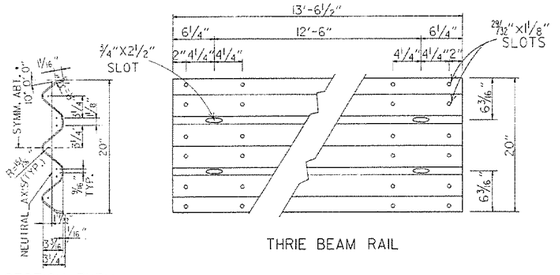
METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

DATE	REVISION	DATE FILM
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

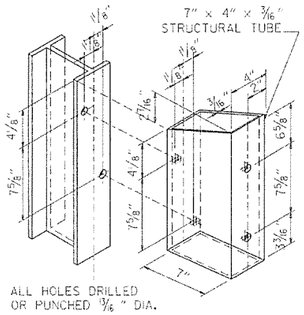
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A



THRIE BEAM RAIL

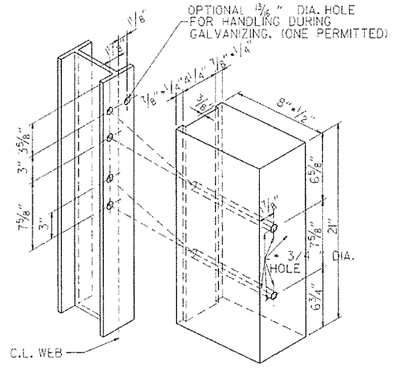
SECTION THRU
THRIE BEAM RAIL



ALL HOLES DRILLED
OR PUNCHED ⅜" DIA.

STRUCTURAL STEEL TUBING BLOCKOUT DETAIL

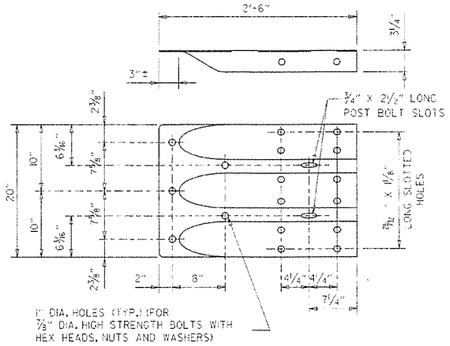
ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

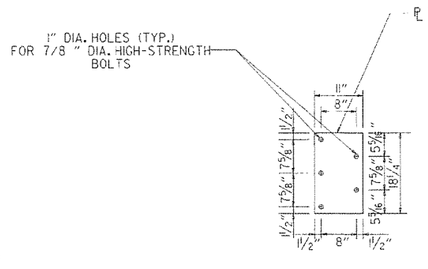
HOLE PUNCHING DETAIL
FOR STEEL POST & WOOD
OR PLASTIC BLOCKOUTS

NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



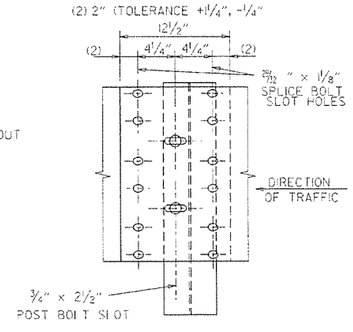
1" DIA. HOLES (TYP.) (FOR ⅞" DIA. HIGH STRENGTH BOLTS WITH HEX HEADS, NUTS AND WASHERS)

SPECIAL END SHOE

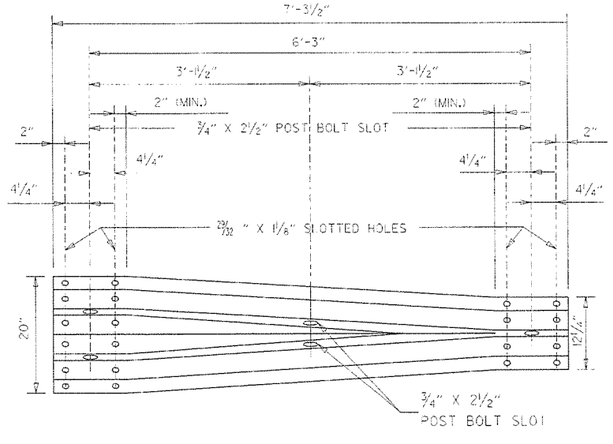


CONNECTOR PLATE

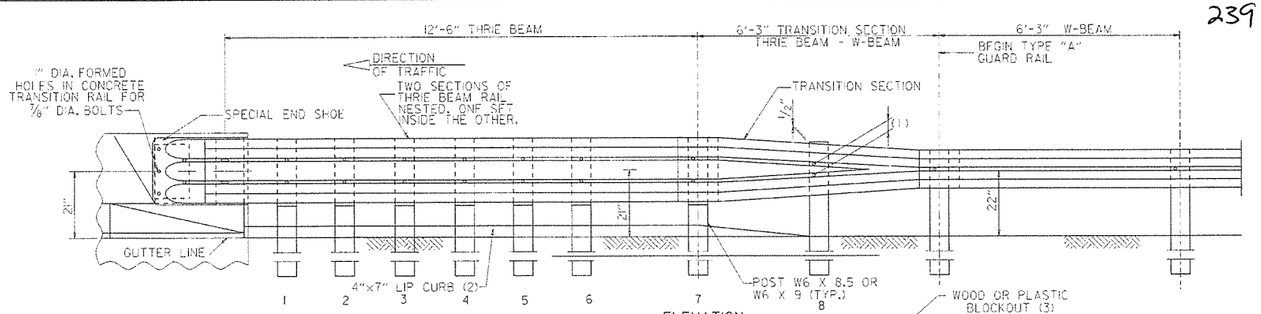
CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



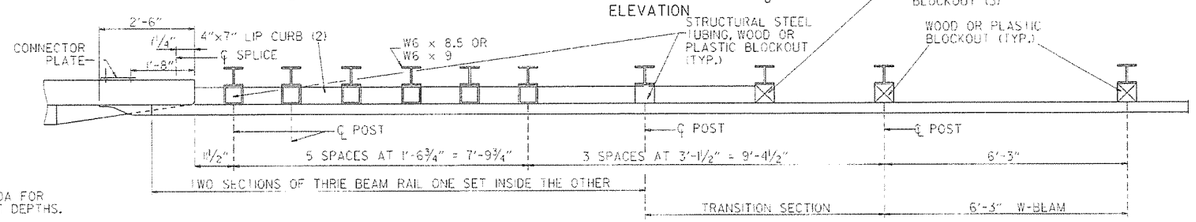
THRIE BEAM RAIL
SPLICE AT POST



TRANSITION SECTION

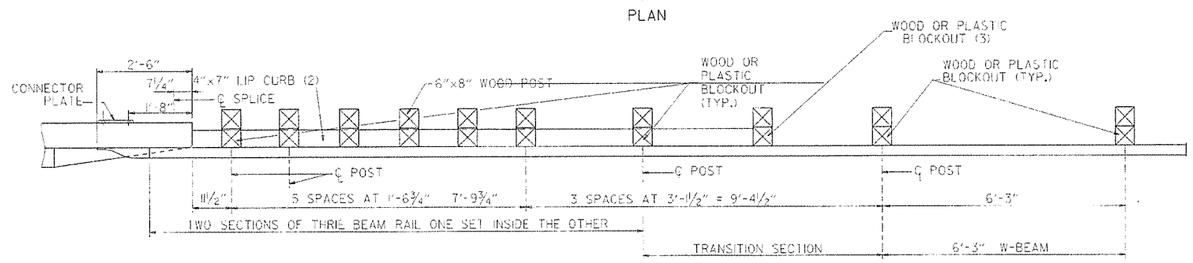


ELEVATION



PLAN

NOTE:
SEE STANDARD DRAWING GR-10A FOR GUARD RAIL POST EMBEDMENT DEPTHS.



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# (M00 #) 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.

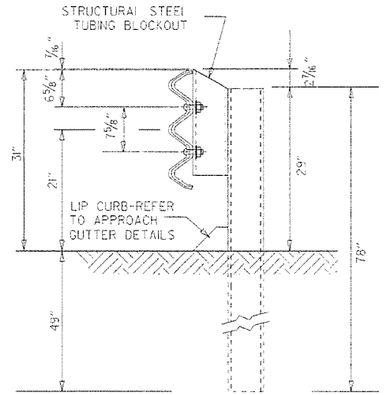
THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W BEAM POSTS FOR ENTIRE JOB.

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	

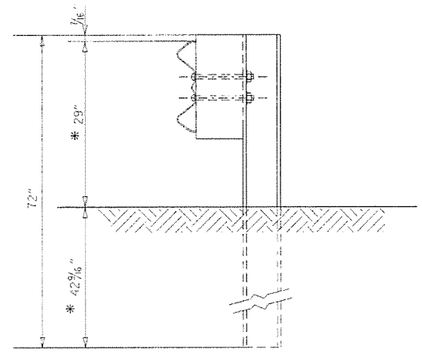
ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10

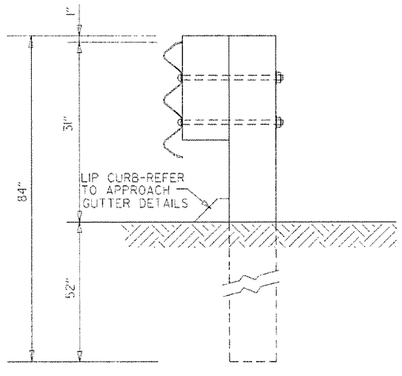


THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7

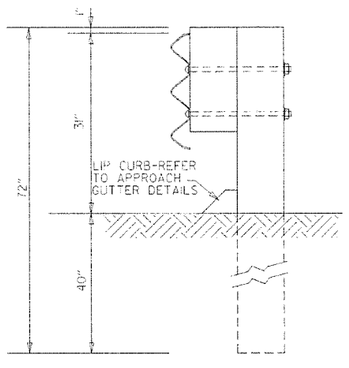


W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8

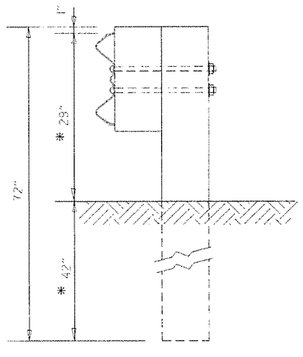
* NOTE:
THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 21" MID POINT OF THRIE BEAM TO 22" MID POINT OF W-BEAM.



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.

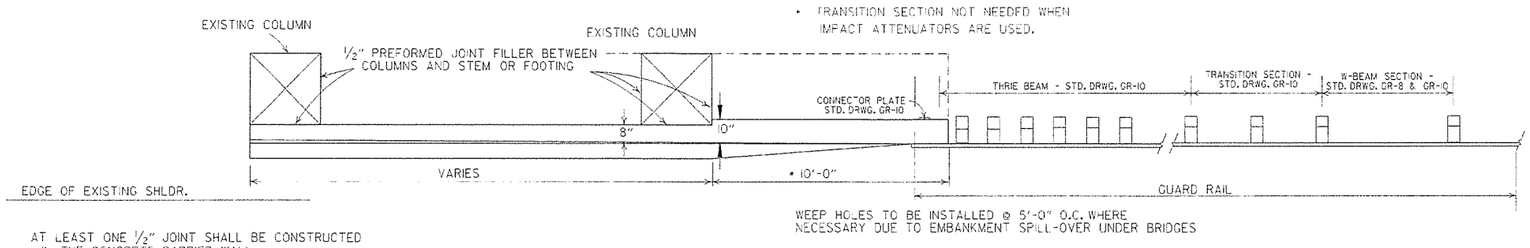
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 (1350 f SOUTHERN PINE.

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

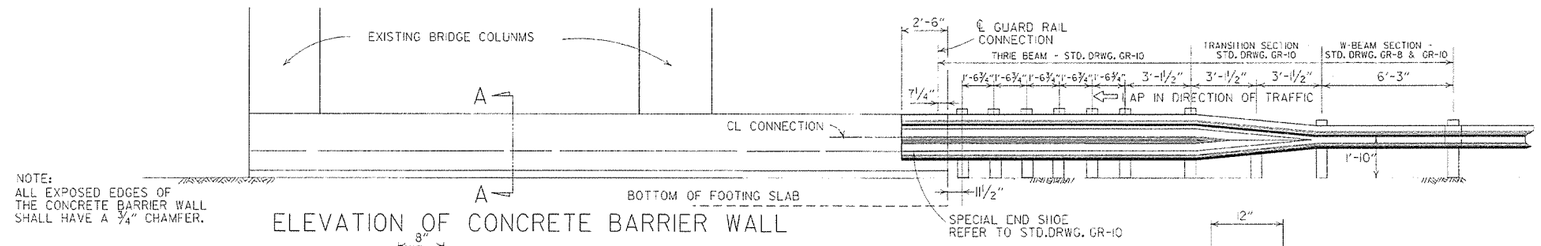
GUARD RAIL DETAILS

STANDARD DRAWING GR-10A



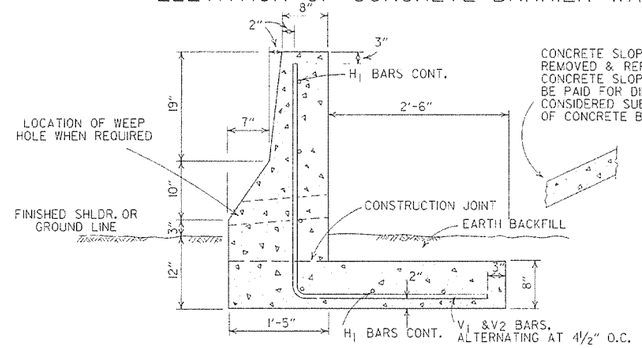
PLAN OF CONCRETE BARRIER WALL

AT LEAST ONE ½" JOINT SHALL BE CONSTRUCTED IN THE CONCRETE BARRIER WALL. JOINTS SHALL BE EQUALLY SPACED AT A MAXIMUM OF 25'-0" O.C. FILL JOINT WITH PREFORMED JOINT FILLER.

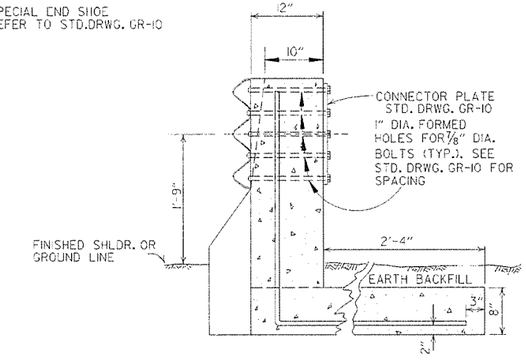


NOTE:
ALL EXPOSED EDGES OF THE CONCRETE BARRIER WALL SHALL HAVE A ¾" CHAMFER.

ELEVATION OF CONCRETE BARRIER WALL

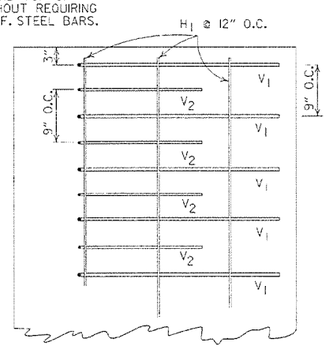


SECTION A-A



SECTION THRU CONNECTION

IF FOR ANY REASON IT IS NECESSARY TO CONSTRUCT THE FOOTING AT A LOWER ELEVATION THAN IS SHOWN, THE STEM MAY BE LENGTHENED 1'-0" BETWEEN FIN. SHLDR. AND TOP OF FOOTING WITHOUT REQUIRING HEAVIER REINF. STEEL BARS.

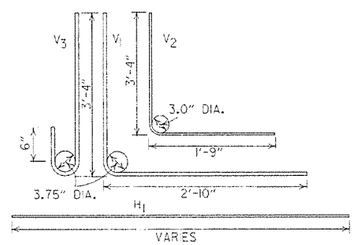


PLAN OF REINFORCING STEEL IN FOOTING

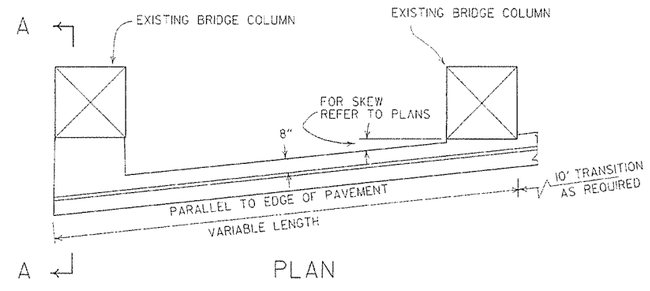
BAR LIST

MARK	NO.	SIZE	LENGTH
V1		#5	6'-2½"
V2		#4	5'-1"
V3		#5	4'-1⅛"
H1	6	4	VAR.

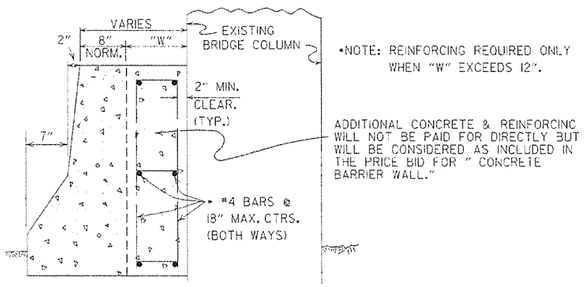
THE V3 BARS SHALL BE USED IN PLACE OF THE V1 & V2 BARS IN FRONT OF PIERS.



BEND DIAGRAMS



PLAN



*NOTE: REINFORCING REQUIRED ONLY WHEN "W" EXCEEDS 12".

SECTION A-A

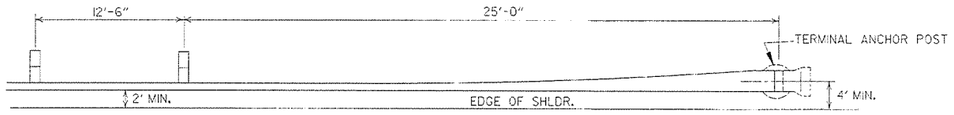
DETAILS OF CONCRETE BARRIER WALL WHEN PIERS ARE SKEWED TO ROADWAY

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF W-BEAM 1"	
8-22-02	REV. SECTION A-A OF DETAILS OF CONCRETE BARRIER WALL	
6-29-00	MOVED DIMENSION LINE	
5-18-00	ADDED NOTE	
3-30-00	REVISED TO INCLUDE THRIE BEAM	
6-2-94	ADDED TRANSITION SECTION NOTE	
10-1-92	REDRAWN & REVISED	10-1-92
8-15-91	REVISED DRAWING PLAN CONC. BARR.	8-15-91
2-16-89	ADDED SKEWED DETAILS	594-2-16-89
7-14-88	CHANGED TITLE	
10-9-87	REDRAWN & REVISED	

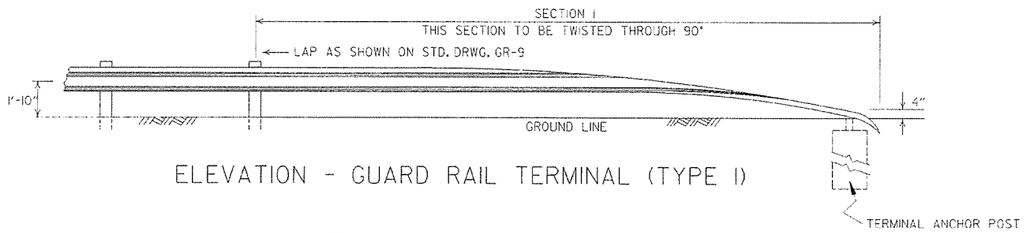
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE BARRIER WALL (PIER PROTECTION TYPE A)

STANDARD DRAWING GR-11

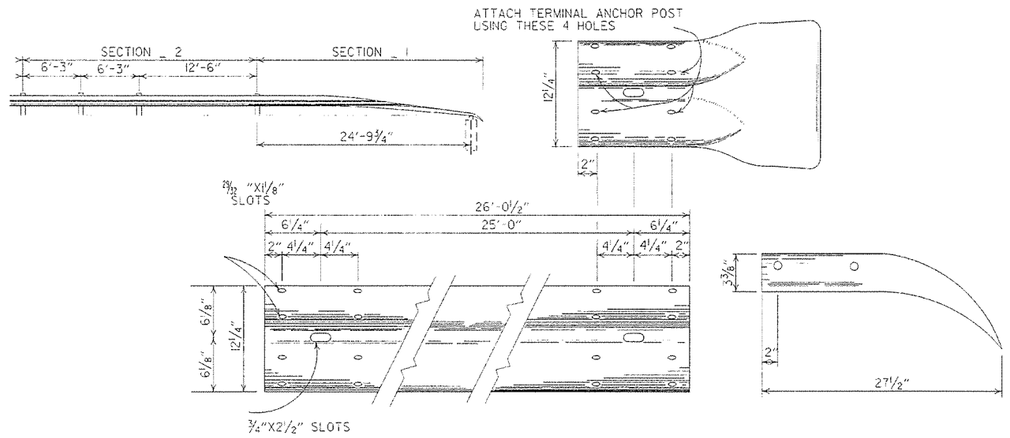


PLAN - GUARD RAIL TERMINAL (TYPE I)



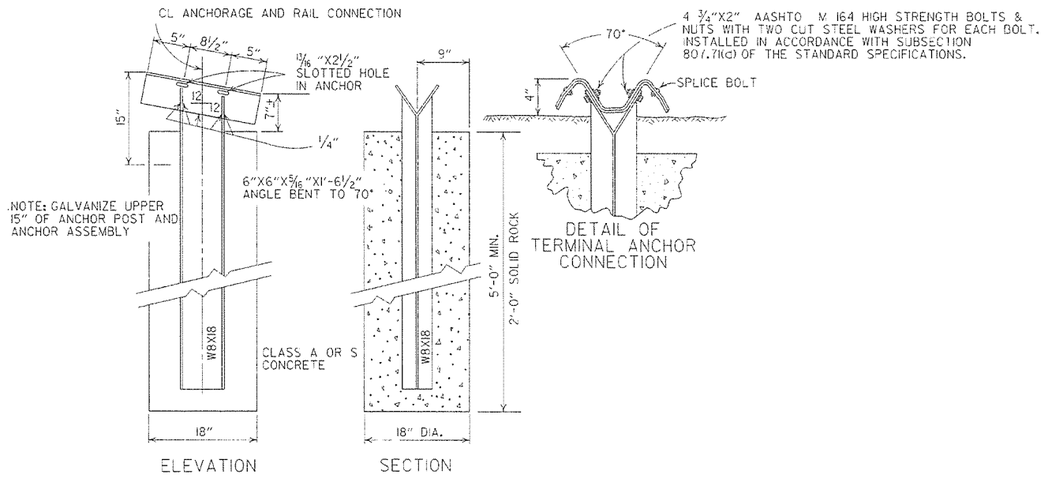
ELEVATION - GUARD RAIL TERMINAL (TYPE I)

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



SECTION 1

TERMINAL SECTION



NOTE: RAIL MEMBERS MAY BE BOLTED TO ANGLE AT TERMINAL ANCHOR AND THE TWO ASSEMBLIES POSITIONED TO PROPER ALIGNMENT PRIOR TO PLACING CONCRETE AROUND 8 WF 17 POST IF CONTRACTOR SO DESIRES.

DETAIL OF TERMINAL ANCHOR POST (TYPE I)

DATE	REVISION	DATE FILM
7-14-10	RAISED HEIGHT OF GUARD RAIL 1"	
6-26-97	REVISED LAP NOTE	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-3-94	DIMENSION TERMINAL DETAIL	
11-11-92	ADDED NOTE FOR PAYMENT	11-11-92
10-1-92	DRAWN & ISSUED	10-1-92

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GRT-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	31 5/16	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

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

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

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

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

CONSTRUCTION SEQUENCE

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

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

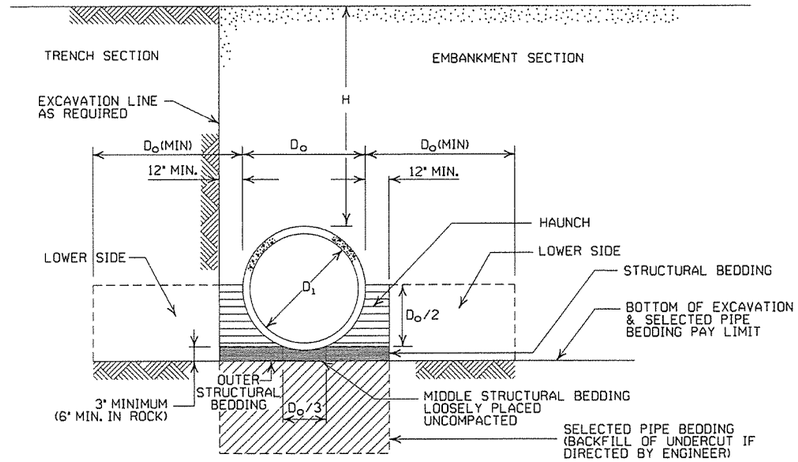
- LEGEND -

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

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

*SM-3 WILL NOT BE ALLOWED.

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



EMBANKMENT AND TRENCH INSTALLATIONS

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

CORRUGATED STEEL PIPE (ROUND)

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

CORRUGATED ALUMINUM PIPE (ROUND)

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

CORRUGATED METAL PIPE ARCHES

EQUIV. DIA. (INCHES)	PIPE DIMENSION SPAN X RISE (INCHES)	MINUMUM CORNER RADIUS (INCHES)	STEEL				ALUMINUM			
			MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1		MIN. THICKNESS REQUIRED INCHES	① MIN. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	MAX. HEIGHT OF FILL, "H" (FT.) INSTALLATION TYPE 1	
			2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM				2 ⅔ INCH BY ½ INCH CORRUGATION RIVETED OR HELICAL LOCK-SEAM			
15	17x13	3	0.064	2	15		0.060	2	15	
18	21x15	3	0.064	2	15		0.060	2	15	
21	24x18	3	0.064	2.25	15		0.060	2.25	15	
24	28x20	3	0.064	2.5	15		0.075	2.5	15	
30	35x24	3	0.079	3	12		0.075	3	12	
36	42x29	3½	0.079	3	12		0.105	3	12	
42	49x33	4	0.079	3	12		0.105	3	12	
48	57x38	5	0.109	3	13		0.135	3	13	
54	64x43	6	0.109	3	14		0.135	3	14	
60	71x47	7	0.138	3	15		0.164	3	15	
66	77x52	8	0.168	3	15					
72	83x57	9	0.168	3	15					
			② 3 INCH BY 1 INCH OR 5 INCH BY 1 INCH CORRUGATION RIVETED, WELDED, OR HELICAL LOCK-SEAM							
				INSTALLATION TYPE 2	INSTALLATION TYPE 1	INSTALLATION TYPE 2	INSTALLATION 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.

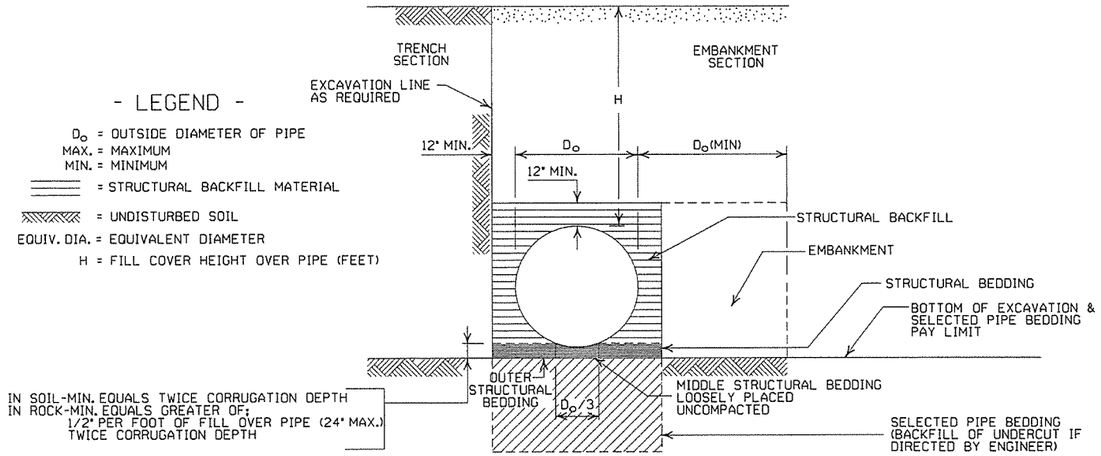
NOTE: STRUCTURAL BACKFILL AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF METAL PIPE.

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



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

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

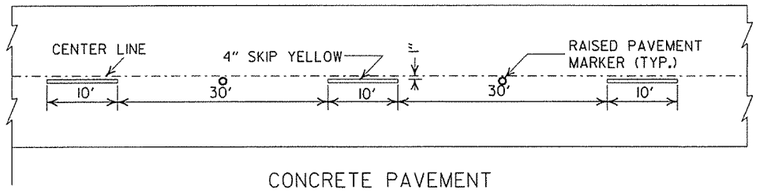
ARKANSAS STATE HIGHWAY COMMISSION

METAL PIPE CULVERT FILL HEIGHTS & BEDDING

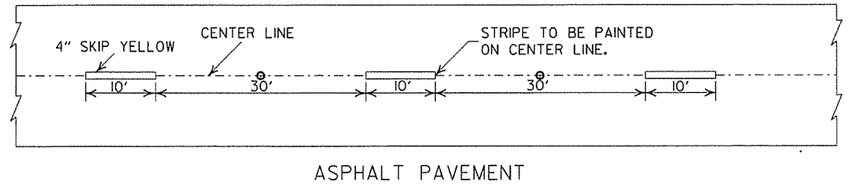
STANDARD DRAWING PCM-1

NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

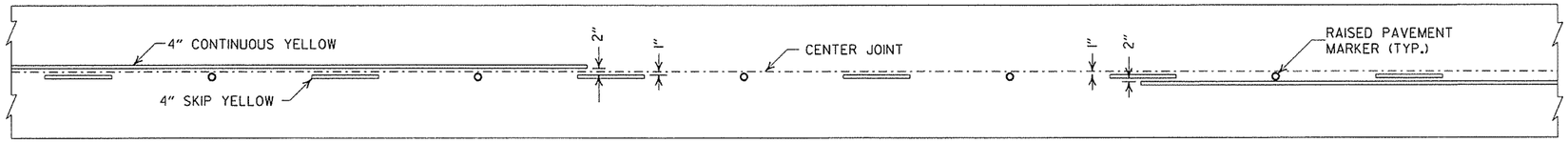


CONCRETE PAVEMENT

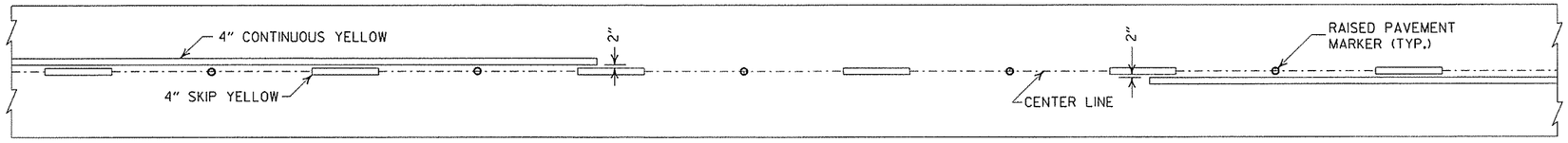


ASPHALT PAVEMENT

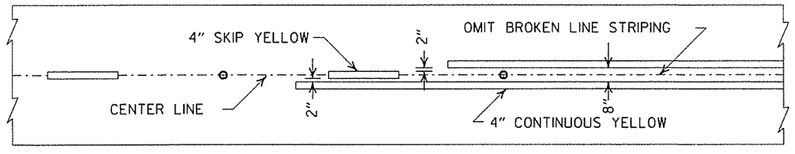
BROKEN LINE STRIPING



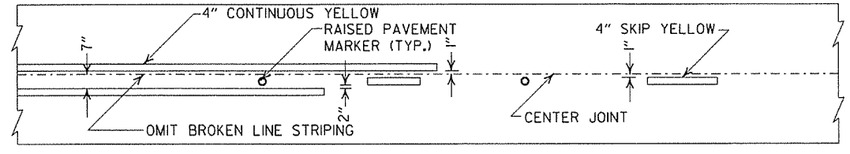
SOLID LINE STRIPING ON CONCRETE PAVEMENT



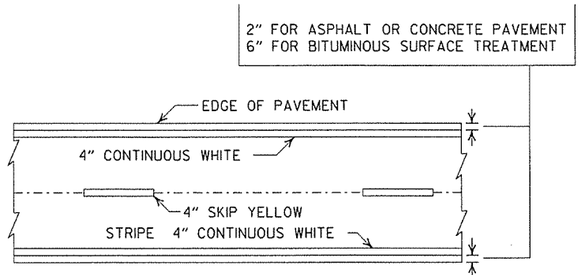
SOLID LINE STRIPING ON ASPHALT PAVEMENT



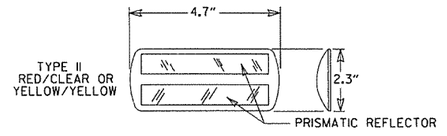
ASPHALT PAVEMENT



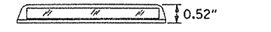
CONCRETE PAVEMENT



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

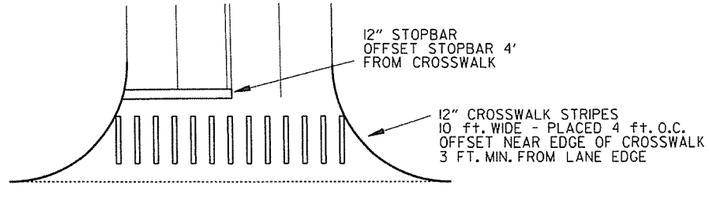
GENERAL NOTES:

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.

STRIPING AT ADJACENT NO PASSING LANES



CROSSWALK AND STOPBAR DETAILS

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

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

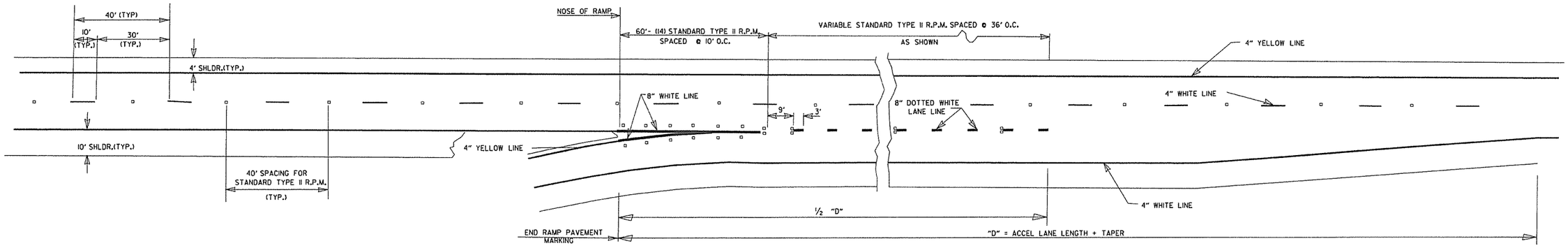
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

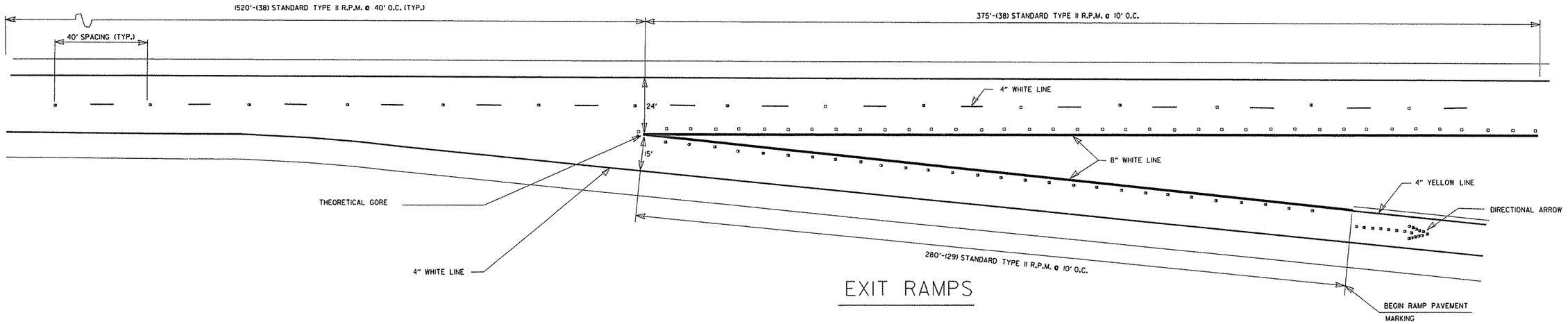
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

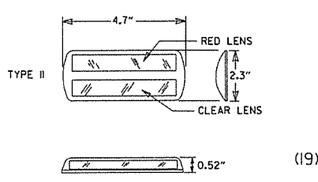
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

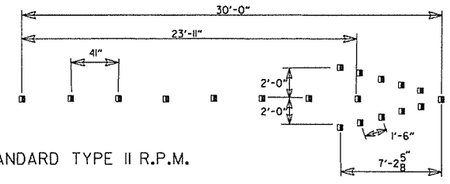


EXIT RAMPS



DETAIL OF
STANDARD
RAISED PAVEMENT MARKERS

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



(19) STANDARD TYPE II R.P.M.

DIRECTIONAL ARROWS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

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

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
7-26-12	REVISED RPM NOTATION	
12-15-11	REVISED RPMs ACCORDING TO LATEST POLICY	
11-17-10	REMOVED PLOWABLE PAVEMENT MARKERS	
6-3-10	REVISED PER 2009 MUTCD	
11-18-04	REVISED NOTES	
8-22-02	ADDED & REVISED NOTES; REV. ENTRANCE & EXIT RAMPS	
5-18-00	REMOVED HASHMARKS	
7-02-98	CHANGED TYPES TO ROMAN NUMERALS	
4-26-96	ADDED DIMENSIONS & QUANTITIES; REVISED LANE WIDTH ON EXIT RAMP	
2-2-95	PLACED IN USE	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

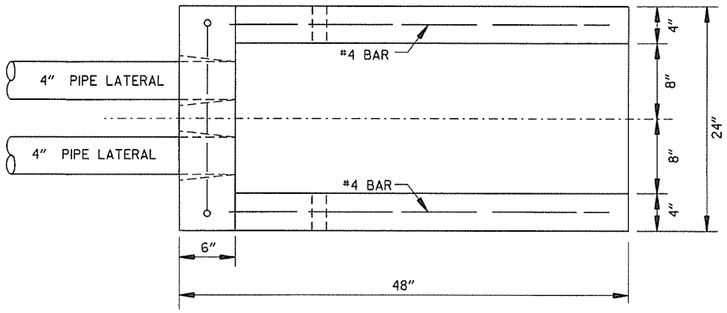
PERMANENT PAVEMENT MARKING
ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

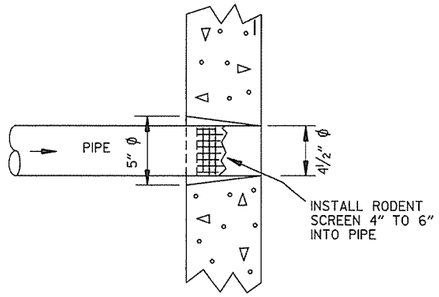
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

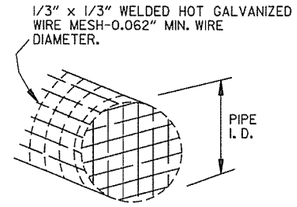
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



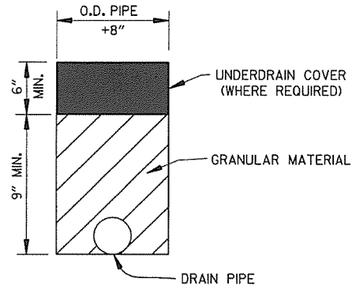
PLAN VIEW

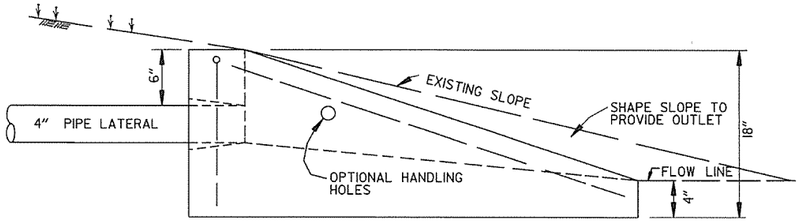


DETAIL OF HOLE FOR 4" PIPE

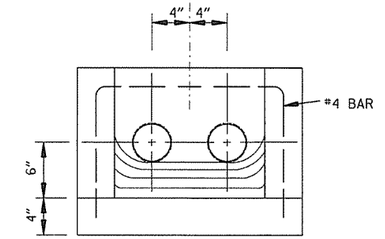


DETAIL OF RODENT SCREEN

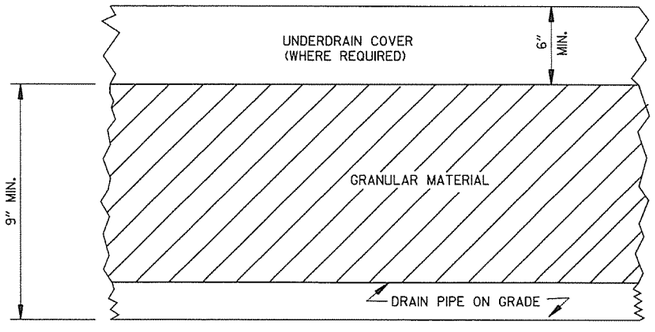




SIDE VIEW

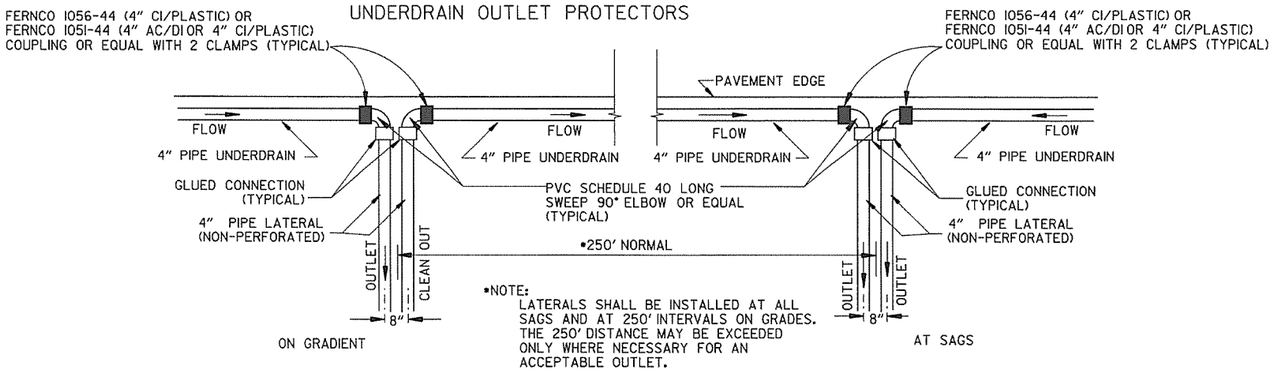


FRONT VIEW



DETAILS OF PIPE UNDERDRAIN

UNDERDRAIN OUTLET PROTECTORS



DETAIL OF PIPE UNDERDRAIN LATERALS WHEN PLACED ALONG PAVEMENT EDGE

NOTE: PVC PIPE FOR LATERALS SHALL MEET THE REQUIREMENTS OF ASTM D 1785 (LATEST REVISION) FOR SCHEDULE 40 PIPE.

DATE	REVISION	DATE FILMED
4-10-03	REVISED NOTE 3	
1-12-00	REVISED DETAIL OF UNDERDRAIN LATERALS	
11-18-98	REVISED NOTE	
10-18-96	REVISED MIN. DEPTH & GEOTEXTILE FABRIC	
4-26-96	ADDED LATERAL NOTE; 5½" TO 5"	
11-22-95	REVISED LATERALS	
7-20-95	REVISED LATERALS & ADDED NOTE	
11- 3-94	REVISED FOR DUAL LATERALS	11- 3-94
10- 1-92	SUBSTITUTED GEOTEXTILE	10- 1-92
8-15-91	ADDED POLYEDTHYLENE PIPE	8-15-91
11- 8-90	DELETED ALTERNATE NOTE	11- 8-90
1-25-90	ADDED 4" SNAP ADAPTER	1-25-90
11-30-89	DEL. (SUBGRADE); ADDED (WHERE REQUIRED)	11-30-89
7-15-88	ISSUED P.L.M.	647-7-15-88

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF PIPE UNDERDRAIN

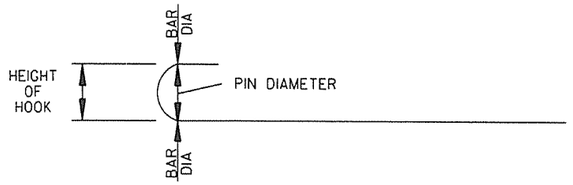
STANDARD DRAWING PU-1

7-20-95 INSTD.PUI

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

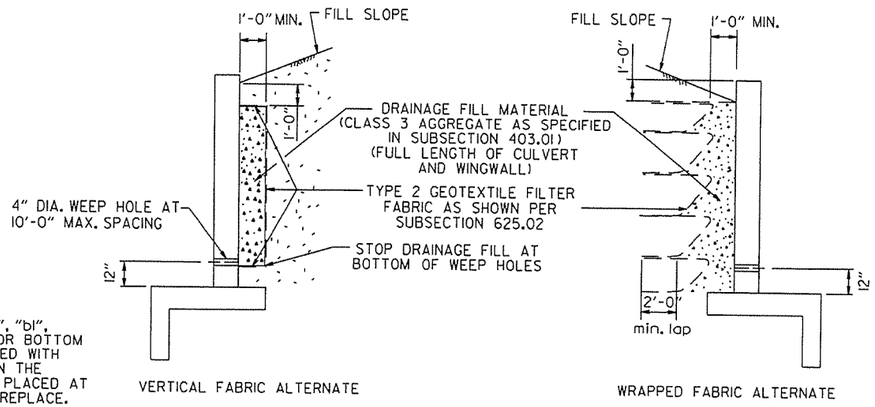
THE HOOKED BARS SHALL BE PLACED IN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOTTOM SLAB. THE STRAIGHT BARS SHALL BE PLACED IN THE TOP OF THE TOP SLAB AND THE BOTTOM OF THE BOTTOM SLAB. SEE TABLE BELOW FOR LENGTHS OF REPLACEMENT HOOKED AND STRAIGHT BARS.

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.

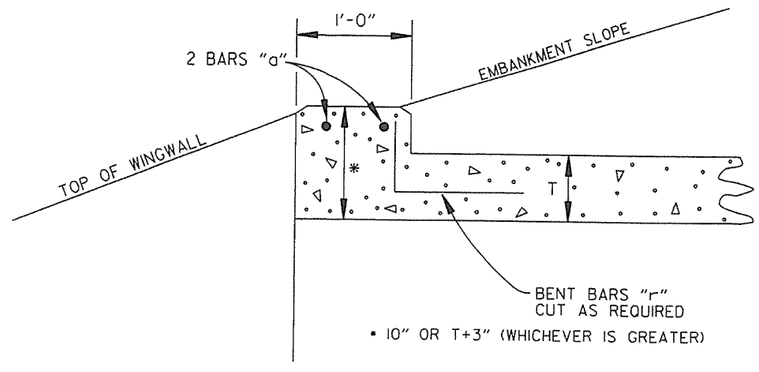
MEMBRANE WATERPROOFING SHALL BE APPLIED TO ALL CONSTRUCTION JOINTS IN THE TOP SLAB AND THE SIDEWALLS OF R.C. BOX CULVERTS AS DIRECTED BY THE ENGINEER. NO PAYMENT SHALL BE MADE FOR THIS ITEM, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS BID FOR THE R.C. BOX CULVERT.

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.

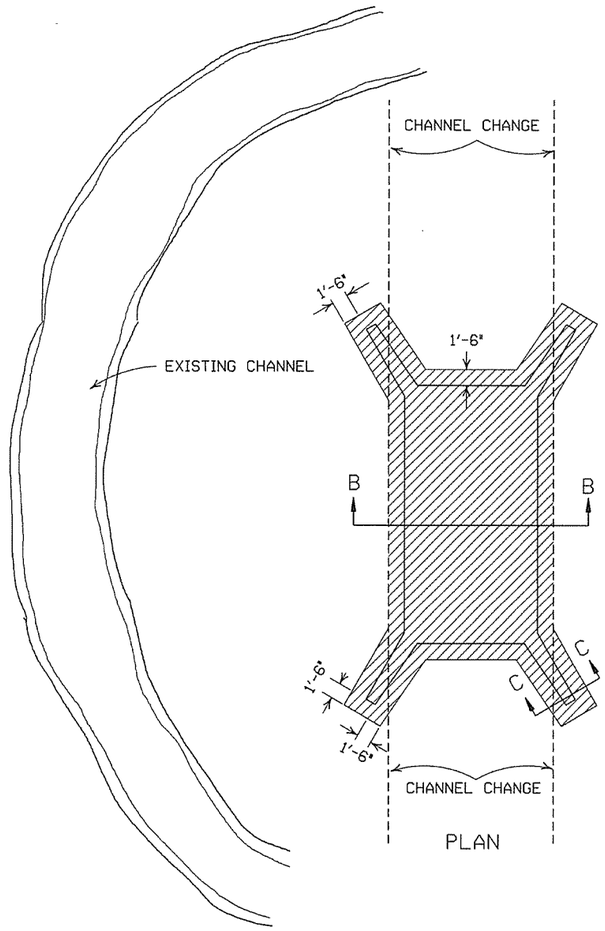
R.C. BOX CULVERT HEADWALL MODIFICATIONS

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

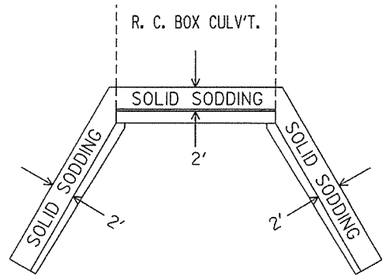
REINFORCED CONCRETE BOX CULVERT DETAILS

STANDARD DRAWING RCB-1



PLAN

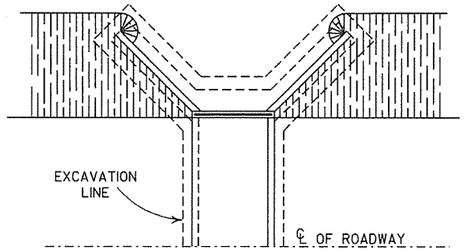
SOLID SODDING



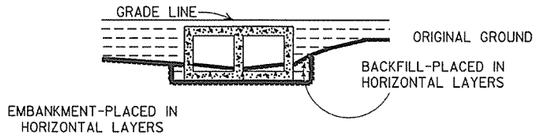
PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE: LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

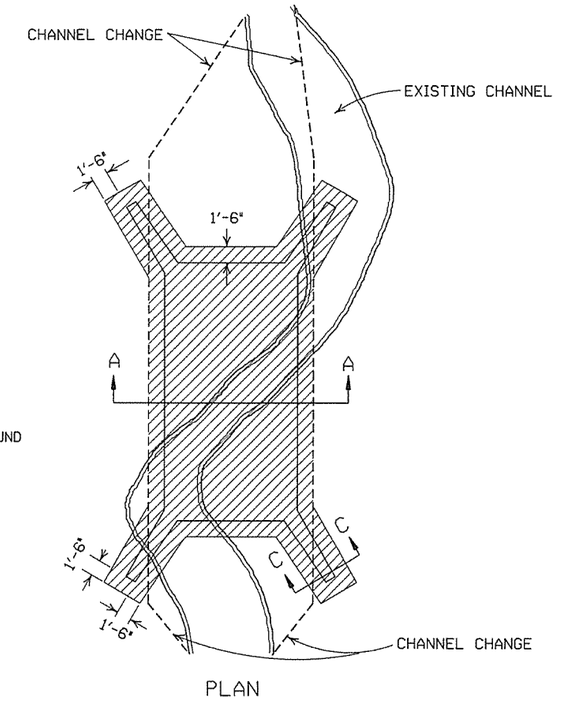


PLAN

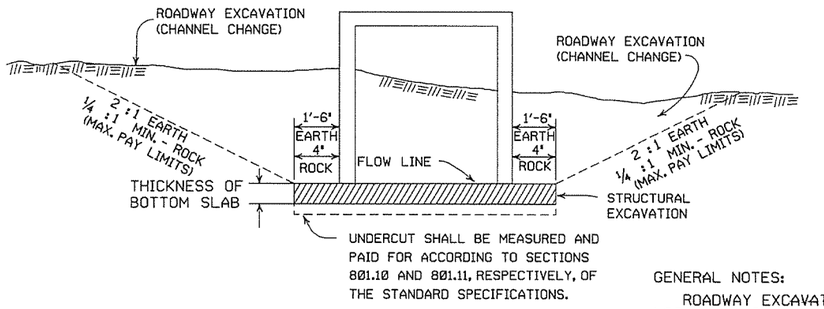


LONGITUDINAL SECTION

BACKFILL DETAILS FOR BOX CULVERT

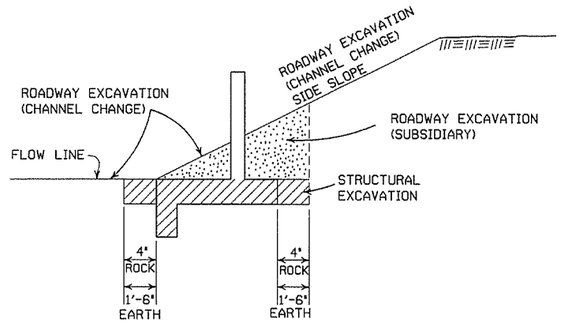


PLAN

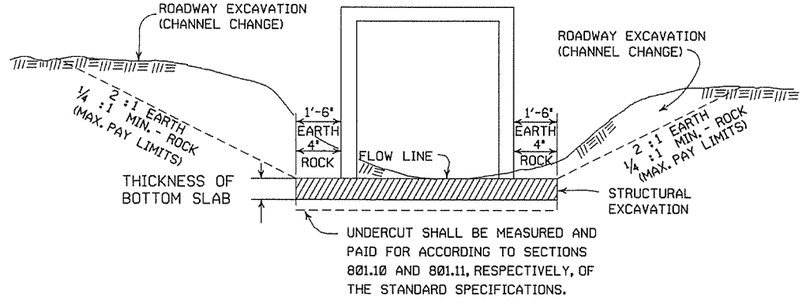


SECTION B-B

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.

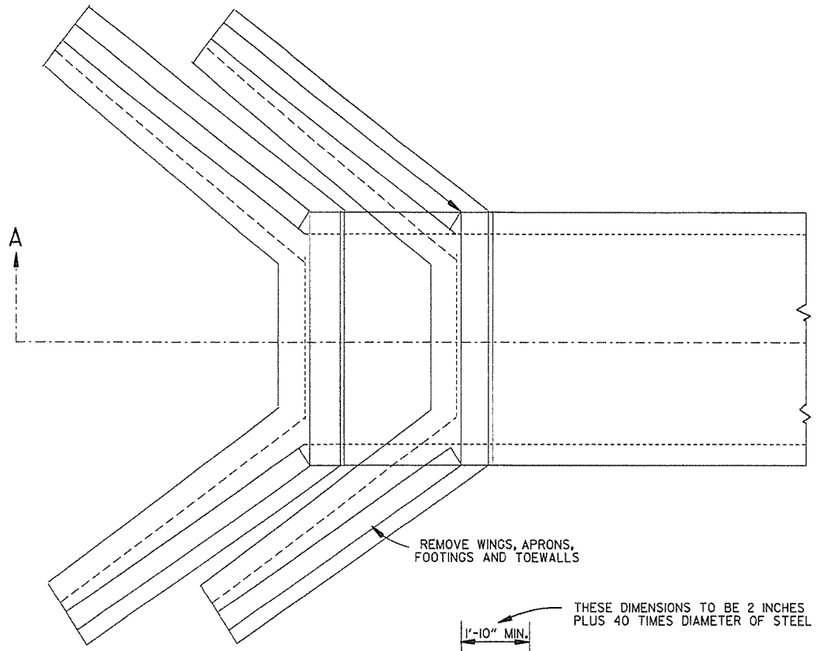
ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

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

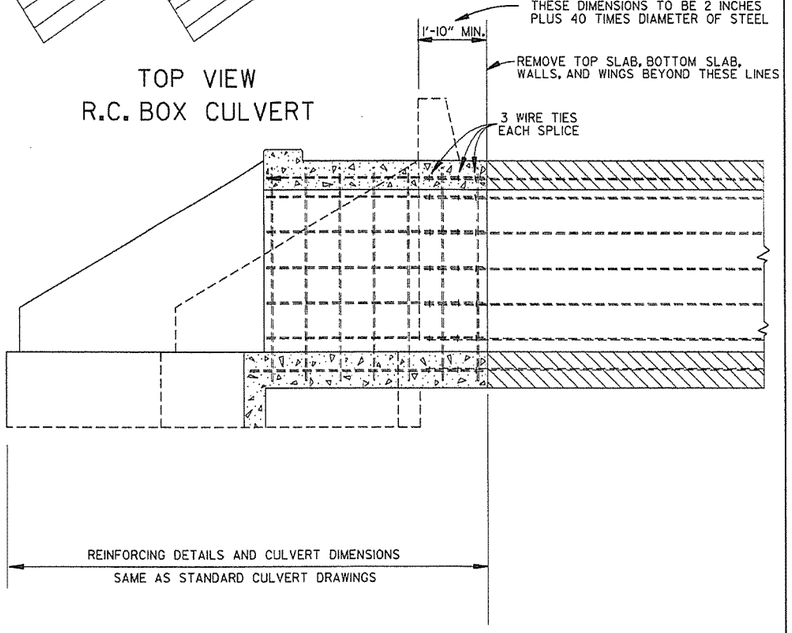
ARKANSAS STATE HIGHWAY COMMISSION

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

STANDARD DRAWING RCB-2

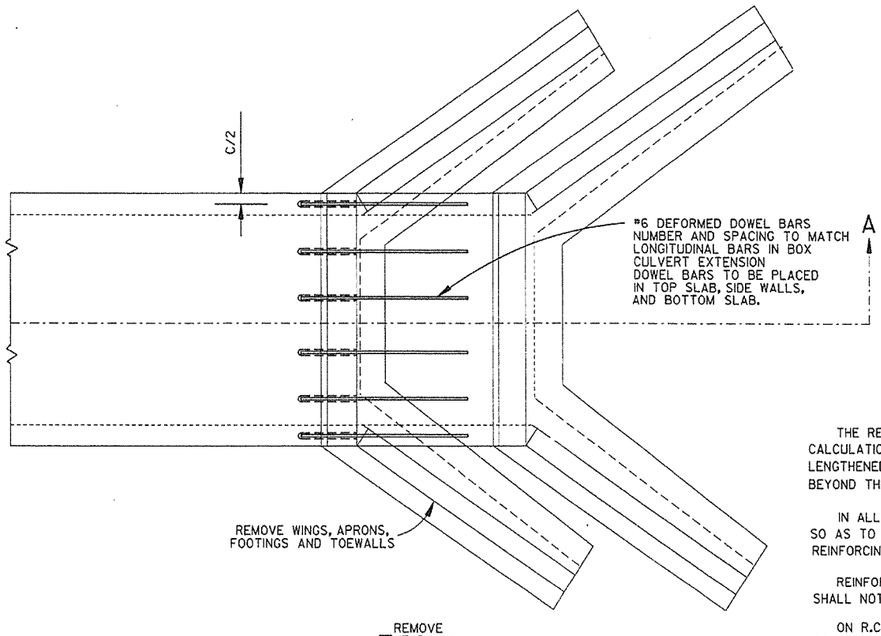


TOP VIEW
R.C. BOX CULVERT

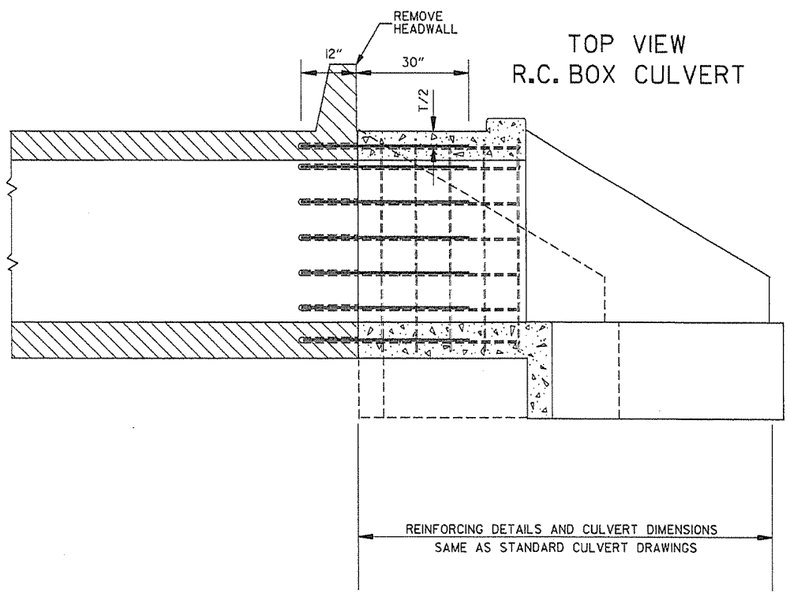


SECTION A-A

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

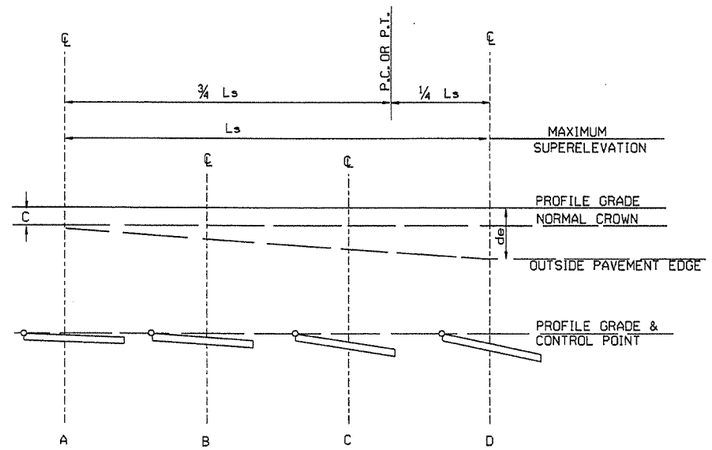
METHOD OF EXTENDING
EXISTING R.C. BOX CULVERTS

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			0.037		
1° 15′	N. C.			R. C.			0.026			0.032			0.037			0.041			0.046		
1° 30′	N. C.			0.021			0.031	200		0.037	225		0.043	250		0.048	250		0.054	275	
1° 45′	N. C.			0.025	175		0.036			0.043			0.049			0.055			0.062		
2° 00′	R. C.			0.028			0.040			0.048			0.055			0.062			0.070		
2° 15′	R. C.			0.031			0.045		300	0.053		350	0.061		350	0.069	265		0.078	300	
2° 30′	0.021			0.034			0.049			0.058			0.067	230		0.075	280		0.085	315	400
2° 45′	0.023			0.037			0.053			0.063			0.072			0.081	300		0.091	335	
3° 00′	0.025			0.040		250	0.057			0.067	230		0.077	260		0.087	315		0.096	350	
3° 15′	0.027	150		0.043			0.061			0.072	245		0.082	275		0.090	325	400	0.098	360	450
3° 30′	0.029			0.046			0.065	205		0.076	255		0.086	285		0.095	340		0.100	360	
3° 45′	0.031			0.049			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		0.096	315							
5° 00′	0.040			0.061			0.083	250		0.091	295	400	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		0.100	290													
8° 30′	0.061			0.087	225	300															
9° 00′	0.063			0.089	230																
10° 00′	0.068	160		0.094	235																
11° 00′	0.072	170		0.097	250																
12° 00′	0.076	175		0.099	250																
13° 00′	0.080	180		0.100	250																
14° 00′	0.083	190																			
15° 00′	0.086	195																			
16° 00′	0.089	200																			
17° 00′	0.091	200																			
18° 00′	0.093	205																			
19° 00′	0.095	210																			
20° 00′	0.097	215	300																		
21° 00′	0.098	215																			
22° 00′	0.099	215																			
23° 00′	0.099	215																			
24° 00′	0.100	220																			

D MAX = 24° 45′ | D MAX = 13° 15′ | D MAX = 8° 15′ | D MAX = 6° 30′ | D MAX = 5° 15′ | D MAX = 4° 15′ | D MAX = 3° 30′



ONE-WAY TRAFFIC
INSIDE LANE

SUPERELEVATION FORMULA = $S = -\frac{L(de-C)}{Ls} - C$

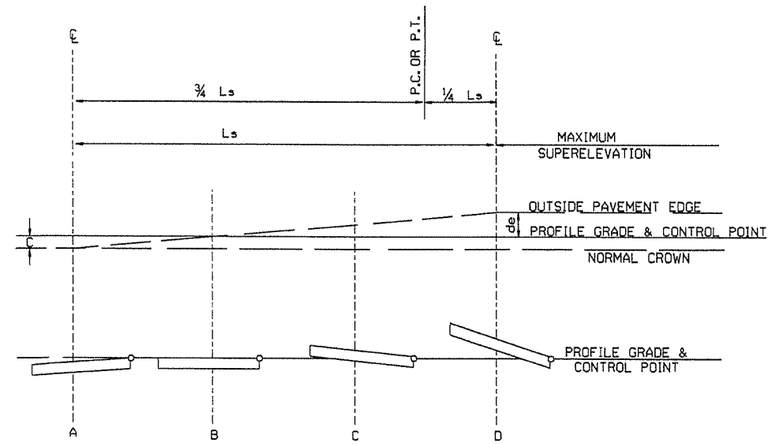
ABBREVIATIONS

NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
S - SUPERELEVATION
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT
e - MAXIMUM RATE OF SUPERELEVATION (FT. PER FT.)
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
C - NORMAL CROWN (FT.)

GENERAL NOTES

1. ON PAVEMENT WITH ONE-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE PROFILE GRADE POINT.
2. SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES (+) OR (-) TO BE ADDED OR SUBTRACTED FROM THE POINT OF CONTROL.
3. LENGTHS FOR Ls MAY BE ROUNDED IN MULTIPLES OF 25 FT. OR 50 FT. TO PERMIT SIMPLER CALCULATIONS.
4. MINIMUM Ls VALUES MAY BE USED FOR RAMPS; DESIRABLE VALUES SHALL APPLY TO MAIN LANES.
5. DIVIDED PAVEMENTS WIDER THAN 4 LANES SHALL HAVE ADDITIONAL TRANSITION LENGTHS AS FOLOWS:

6 LANE DIVIDED---------+20%
8 LANE DIVIDED---------+50%



ONE-WAY TRAFFIC
OUTSIDE LANE

SUPERELEVATION FORMULA = $S = +\frac{L(de+C)}{Ls} - C$

01-09-87	ISSUED	578-1-15-87
DATE	REVISION	DATE FILMED

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR ONE-WAY TRAFFIC

STANDARD DRAWING SE-1

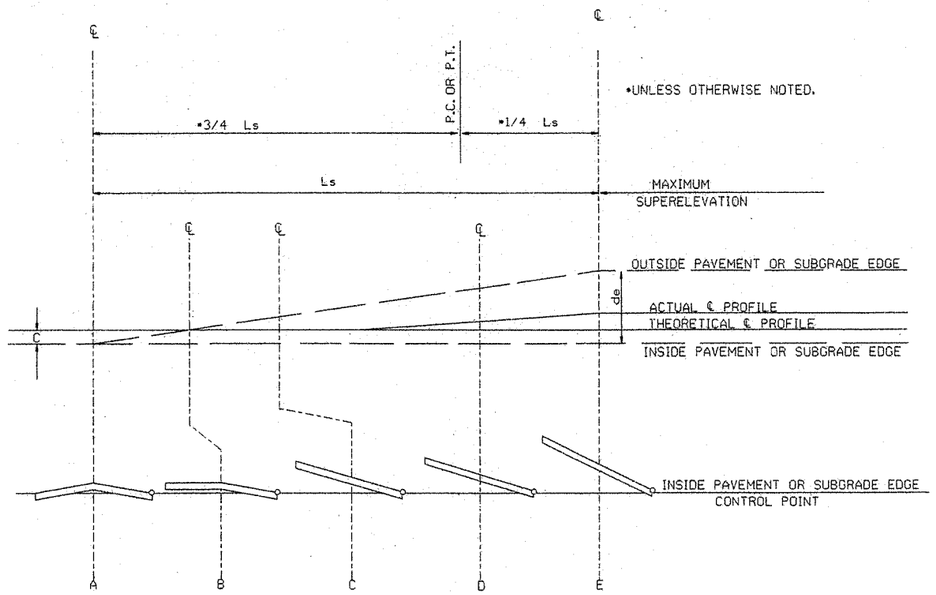
SUPERELEVATION TABLE FOR TWO - WAY TRAFFIC

DEGREE OF CURVE	30 MPH e	30 MPH Ls (FT) MINIMUM	30 MPH Ls (FT) DESIRABLE	40 MPH e	40 MPH Ls (FT) MINIMUM	40 MPH Ls (FT) DESIRABLE	50 MPH e	50 MPH Ls (FT) MINIMUM	50 MPH Ls (FT) DESIRABLE	55 MPH e	55 MPH Ls (FT) MINIMUM	55 MPH Ls (FT) DESIRABLE	60 MPH e	60 MPH Ls (FT) MINIMUM	60 MPH Ls (FT) DESIRABLE	70 MPH e	70 MPH Ls (FT) MINIMUM	70 MPH Ls (FT) DESIRABLE
0° 15'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 30'	N.C.			N.C.			N.C.			N.C.			N.C.			N.C.		
0° 45'	N.C.			N.C.			R.C.			0.022			0.023			0.028		
1° 00'	N.C.			N.C.			0.021			0.026			0.030			0.037	275	300
1° 15'	N.C.			R.C.			0.026			0.032			0.037	250	300	0.046		
1° 30'	N.C.			0.021			0.031	200		0.037	225		0.043			0.054		
1° 45'	N.C.			0.025	175		0.036			0.043		300	0.049			0.062		
2° 00'	R.C.			0.028			0.040			0.048			0.055			0.070		
2° 15'	R.C.			0.031			0.045		250	0.053			0.061			0.078	300	350
2° 30'	0.021			0.034			0.049			0.058			0.067			0.085	315	
2° 45'	0.023			0.037		200	0.053			0.063			0.072			0.091	335	
3° 00'	0.025			0.040			0.057			0.067	230		0.077	260		0.096	350	
3° 15'	0.027	150		0.043			0.061			0.072	245		0.082	275		0.098	360	400
3° 30'	0.029			0.046			0.065	205		0.076	255		0.086	285		0.100	360	
3° 45'	0.031		200	0.049			0.069	215		0.080	265		0.090	295	350			
4° 00'	0.033			0.051			0.072	225		0.083	270		0.093	305				
4° 30'	0.037			0.056			0.078	240		0.087	280	350	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	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	250	0.100	290										
8° 30'	0.061			0.087	225													
9° 00'	0.063			0.089	230													
10° 00'	0.068	160		0.094	235													
11° 00'	0.072	170		0.097	250													
12° 00'	0.076	175		0.099	250													
13° 00'	0.080	180		0.100	250													
14° 00'	0.083	190																
15° 00'	0.086	195																
16° 00'	0.089	200																
17° 00'	0.091	200																
18° 00'	0.093	205																
19° 00'	0.095	210																
20° 00'	0.097	215	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.

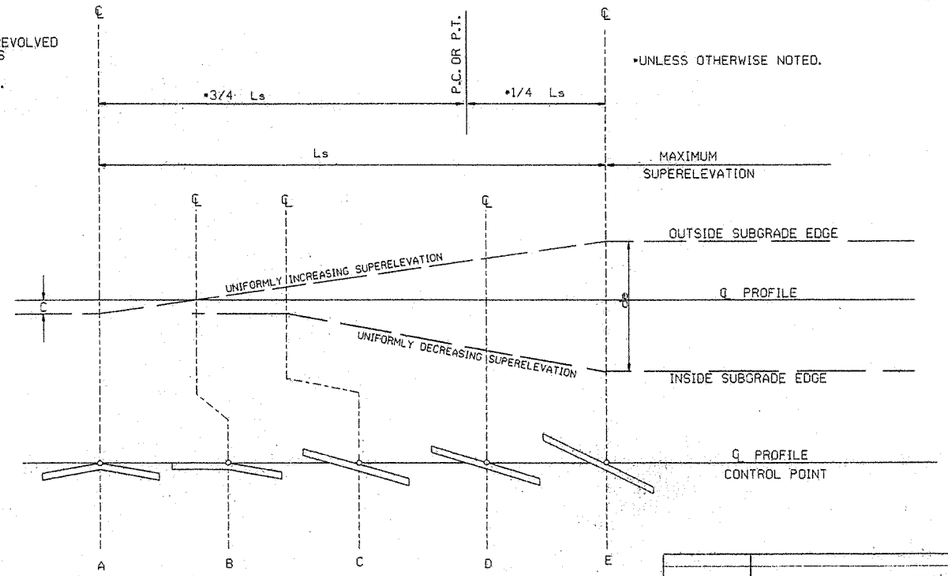
GENERAL NOTES

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 = $\frac{Lde}{Ls}$

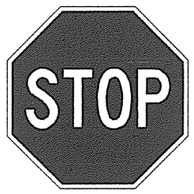
DATE	REVISION	DATE FILMED
10-18-96	ADDED FORMULA	10-18-96
01-09-87	ISSUED	534-1-9-87

ARKANSAS STATE HIGHWAY COMMISSION

TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC

STANDARD DRAWING SE-2

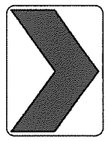
FILE STDSE2.DGN



R1-1
30"X30"



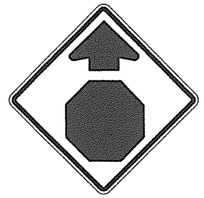
W1-3
30"X30"
(LT. OR RT.)



W1-8
18"X24"



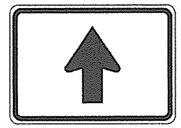
W2-5
30"X30"



W3-1
36"X36"



W5-1
36"X36"



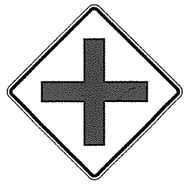
M6-3
21"X15"



R1-2
36"X36"X36"



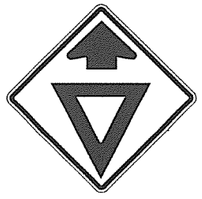
W1-4
30"X30"
(LT. or RT.)



W2-1
30"X30"



S1-1
36"X36"

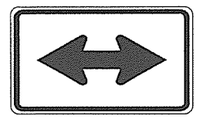


W3-2
36"X36"

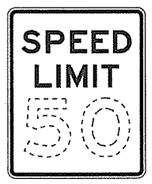


County
Route Marker
M1-6
24"X24"

NOTE: REFLECTORIZED YELLOW LEGEND (COUNTY NAME, ROUTE LETTER & NUMBER) & BORDER ON A BLUE BACKGROUND.



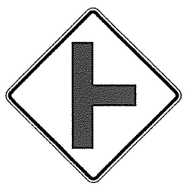
M6-4
21"X15"



R2-1
24"X30"



W1-5
30"X30"
(LT. or RT.)



W2-2
30"X30"



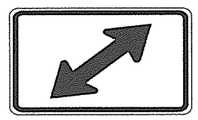
W5-2
36"X36"



W8-3
36"X36"



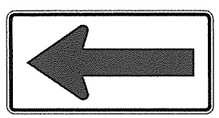
R1-3P
18"X6"



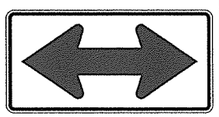
M6-5
21"X15"



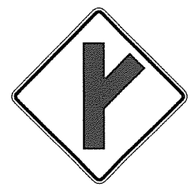
W1-1
30"X30"
(LT. or RT.)



W1-6
48"X24"



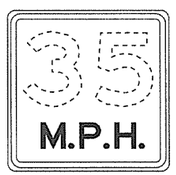
W1-7
48"X24"



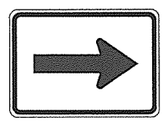
W2-3
30"X30"
(LT. or RT.)



W5-3
36"X36"

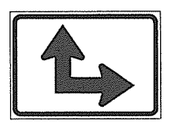


W13-1P
18"X18"

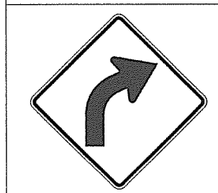


M6-1
21"X15"

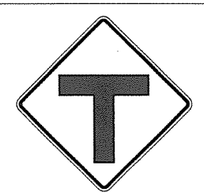
NOTE: ALL M6 SIGNS TO BE MADE WITH REFLECTORIZED YELLOW ARROW & BORDER WITH BLUE BACKGROUND.



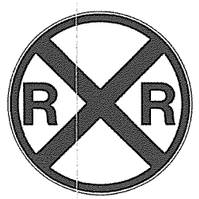
M6-6
21"X15"



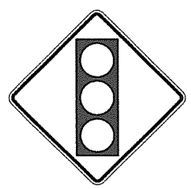
W1-2
30"X30"
(LT. or RT.)



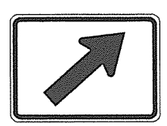
W2-4
30"X30"



W10-1
36" DIAMETER



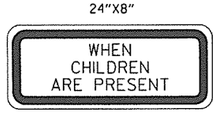
W3-3
36"X36"



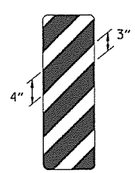
M6-2
21"X15"



S4-3P
24"X8"



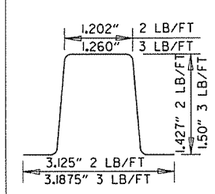
S4-2P
24"X10"



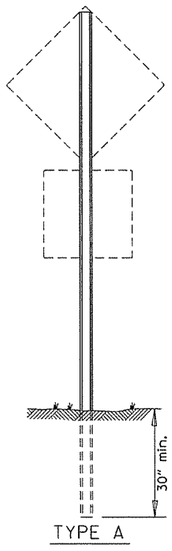
OM-3
12"X36"
(LT. or RT.)

MINIMUM DIMENSIONS SHOWN

SUPPORT SECTION

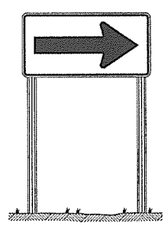


(U-CHANNEL)
STANDARD SUPPORT
ASSEMBLIES

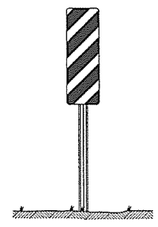


TYPE A

NOTE: LENGTH OF SIGN POSTS SHALL BE DETERMINED SO AS TO PROVIDE FOR MINIMUM VERTICAL CLEARANCES AS CALLED FOR IN THE SPECIFICATIONS PLUS A MINIMUM VERTICAL PENETRATION OF 30" IN THE SOIL.



TYPE B



TYPE C

MINIMUM WEIGHT

TYPE A & B = 3 LBS./FT.
TYPE C = 2 LBS./FT.

SUPPORT ASSEMBLIES

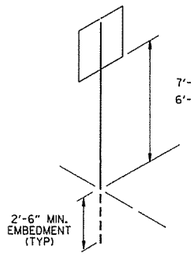
STANDARD HIGHWAY SIGNS

DATE	REVISION	DATE FILMED
9-12-13	DELETED JOB NO. BLOCK; REVISED R1-3 TO R1-3P	
4-17-08	REVISED SIGN DESIGNATION - W3-1& W3-2	
4-10-03	REVISED W5-2, W8-3, OM-3; ADDED W1-8	
1-5-81	REDRAWN	960-1-15-81
9-15-78	ADDED W14-3	877-9-15-78
9-2-76	POST WT.	623-9-3-76
5-3-76	STEEL POST WT. FROM 2#-3#; ADDED S4-2 & S4-3	504-5-3-76
8-12-74	REV. HT. TYPE "C" ASSEMBLY	500-8-21-74
12-21-72	ADDED M6-2,3,4,5,6	500-12-21-72
12-1-72	ISSUED	562-12-1-72

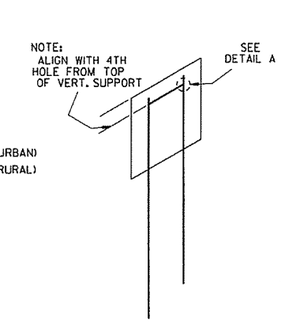
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD HIGHWAY SIGNS AND SUPPORT ASSEMBLIES

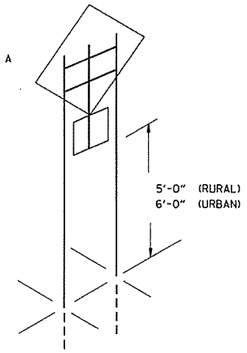
STANDARD DRAWING SHS-1



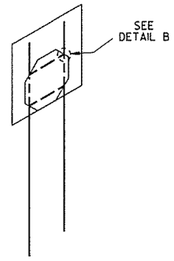
U-1



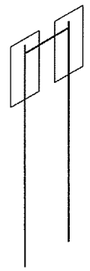
U-2



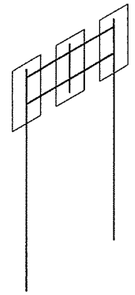
U-2 (A)



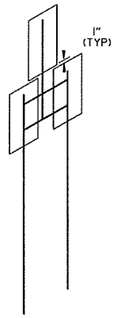
U-2 (B)



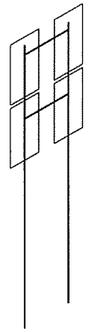
U-2 (1)



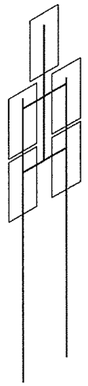
U-2 (2)



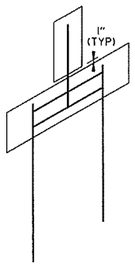
U-2 (3)



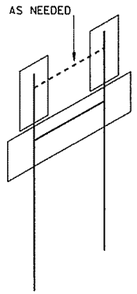
U-2 (4)



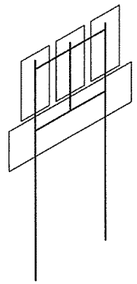
U-2 (5)



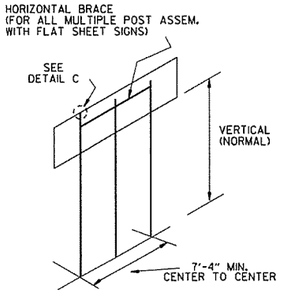
U-2 (6)



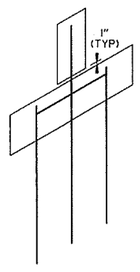
U-2 (7)



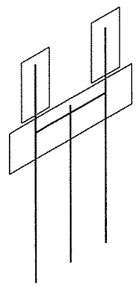
U-2 (8)



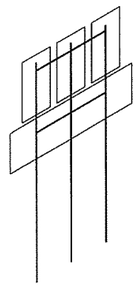
U-3



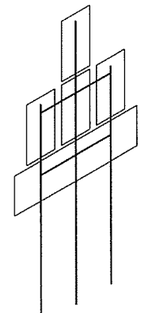
U-3 (1)



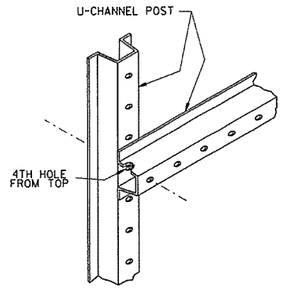
U-3 (2)



U-3 (3)

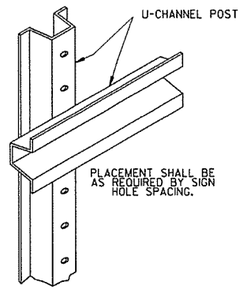


U-3 (4)



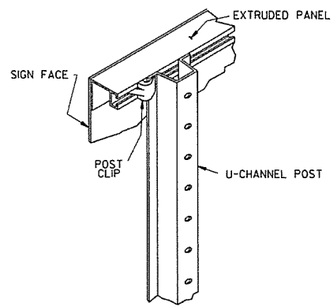
DETAIL A

SHOWING HORIZONTAL BRACE



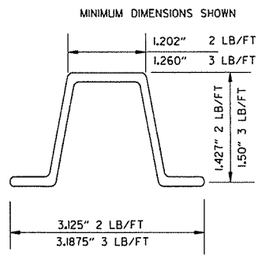
DETAIL B

SHOWING BACK-TO-BACK INSTALLATION



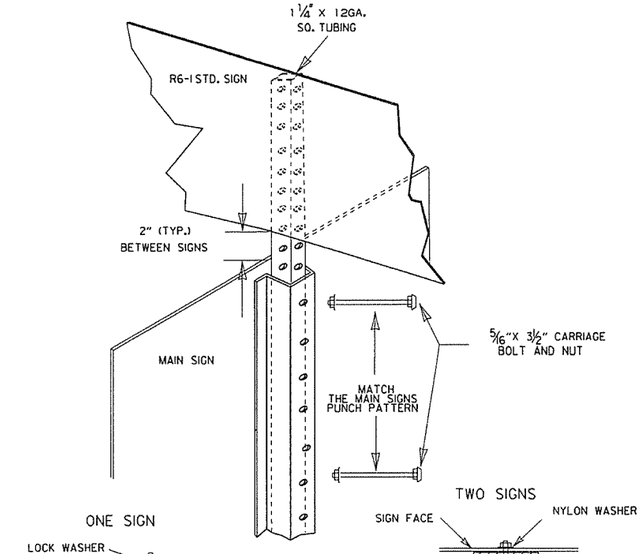
DETAIL C

SHOWING GUIDE SIGN MOUNTING WITH EXTRUDED PANELS



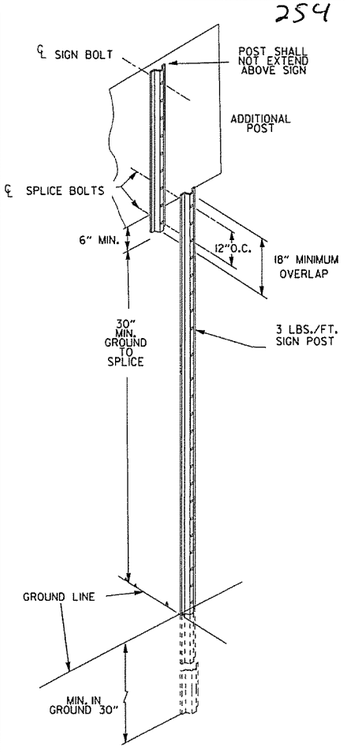
DETAIL C

U-CHANNEL POST



DETAIL E

R6-1 EXTENSION FOR U-CHANNEL POST



DETAIL F

DETAIL OF SPLICES

NOTES:

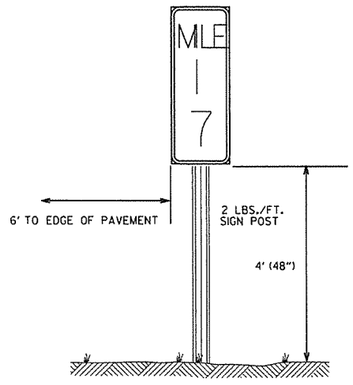
SIGNS AT LEAST 8' IN LENGTH MAY BE INSTALLED ON THREE 3 LB. POST. IN NO CASE SHALL THERE BE MORE THAN TWO 3 LB. POSTS WITHIN A 7' PATH.

SPLICES NECESSARY TO ATTAIN PROPER MOUNTING HEIGHT SHALL BE AS SHOWN IN DETAIL (F).

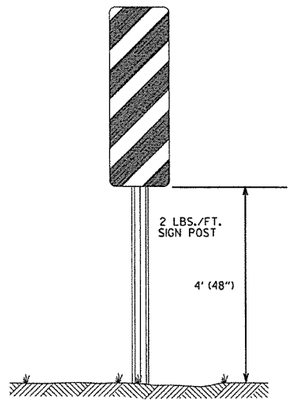
NORMAL INSTALLATIONS WILL REQUIRE $\frac{5}{16}$ " DIA. CARRIAGE BOLTS TO MOUNT SIGNS TO POST AND TO ASSEMBLE THE VARIOUS POST SUPPORTS.

ALL SIGN POSTS SHALL BE PLUMB.

THE POST FOR "TYPE U" SUPPORTS SHALL BE HOT DIP GALVANIZED.



TYPICAL MILE MARKER INSTALLATION



TYPICAL OM-3 INSTALLATION AT EDGE OF OBSTRUCTION

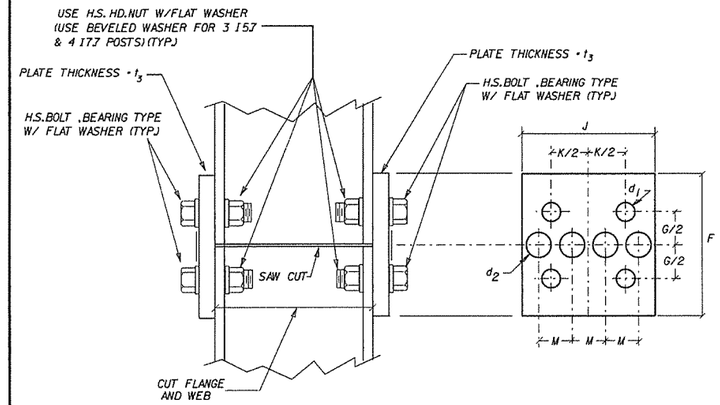
DATE	REVISION	FILMED
9-12-13	REVISED U-2(3), U-2(6), U-3(1), DETAIL D; ADDED DETAILS E & F; ADDED TYPICAL MARKERS	
10-9-03	REMOVED ROUND POST & REVISED SPACING	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL	6-8-95
2-2-95	REDRAWN	2-2-95

ARKANSAS STATE HIGHWAY COMMISSION

U-CHANNEL POST ASSEMBLIES

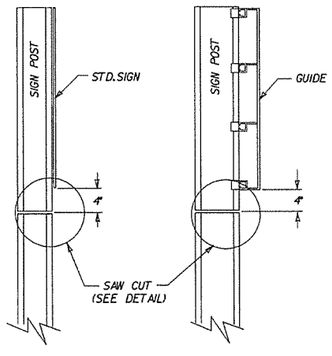
STANDARD DRAWING SHS-2

POST SIZE	BASE CONNECTION DATA											FUSE PLATE DATA									WT. OF EACH FUSE PLATE LBS.
	BOLT SIZE	BOLT TORQUE (INCH/LBS)	A	B	C	D	E	t_1	t_2	W	R	F	G		J	K	M	d_1	d_2	t_3	BOLT SIZE
W 6X9												4¼"	2"		4"	2¼"	1"	9/16"	¾"	¼"	½" x 1½"	1.01
W 6X12	⅝" x 2¾"	450"-680"	5"	2"	1¼"	2¾"	1⅛"	¾"	½"	¼"	11/32"										
W 6X15												5"	2½"		6"	3½"	1½"	11/16"	1¼"	⅜"	⅝" x 2¼"	2.51
W 8X18												5"	2½"		5¼"	2¾"	1¼"	13/16"	1 13/16"	⅜"	¾" x 2¼"	2.26
W 8X21												5½"	2½"		5¼"	2¾"	1¼"	13/16"	1"	½"	¾" x 2¼"	3.35
W 10X22	¾" x 3½"	750"-1050"	6"	2¼"	1⅜"	3½"	1¼"	1"	¾"	5/16"	13/32"	6"	3"		5¾"	2¾"	1⅜"	1⅛"	1⅛"	½"	¾" x 2¼"	4.03
W 10X26																					
W 12X26												6"	3"		6½"	3½"	1⅝"	1⅛"	1⅝"	½"	¾" x 2¼"	4.47



NOTE: USE H.S. HEX HEAD BOLTS, HEX HEAD NUTS AND BEVEL OR FLAT WASHERS (WHERE REQ.) UNDER NUTS. ALL HOLES SHALL BE DRILLED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS, HOWEVER FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM-A36, ASTM-A441, ASTM-572 GRADE 50, OR ASTM-A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

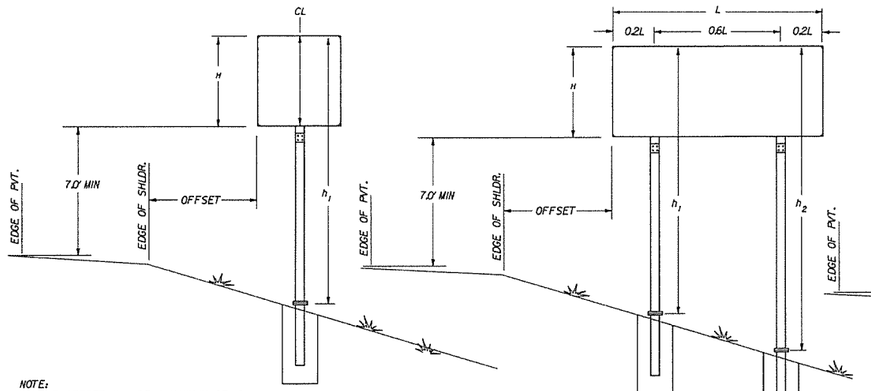
NOTE: BOLT HOLES, USED IN THE MOUNTING OF STANDARD SIGNS SHALL BE LOCATED IN THE FLANGE ADJACENT TO THE NEAR EDGE OF PAVEMENT FOR SINGLE POST ASSEMBLIES AND IN THE OUTSIDE FLANGES FOR MULTIPLE POST ASSEMBLIES.



NOTE: POST SHALL BE SAW CUT AFTER GALVANIZING AND THE CUT SURFACE TREATED, AFTER PLATE IS INSTALLED AND ALL BOLTS FULLY TIGHTENED, WITH AN APPROVED ZINC SOLDER MEETING THE FEDERAL SPEC. O-G-93 (STICK ONLY).

STANDARD SIGNS GUIDE SIGNS

FUSE PLATE DETAILS

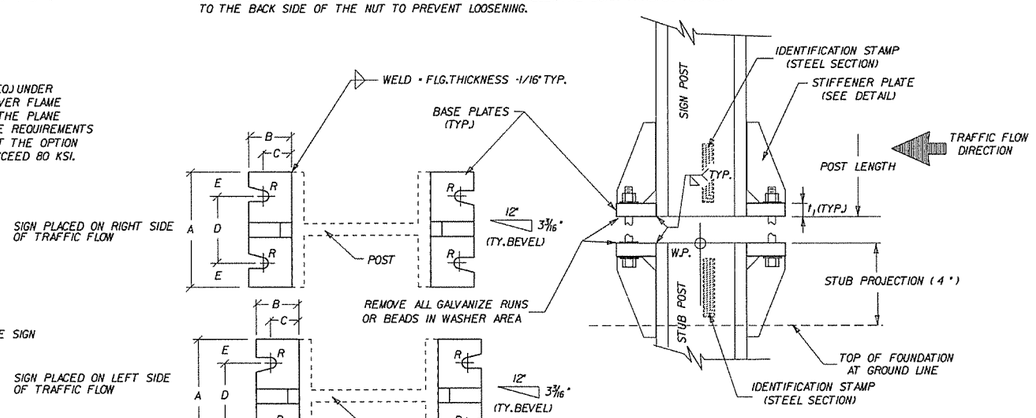


NOTE: THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER

G-1 G-2 G-3

NOTE: SECTIONS SHOWN ARE FOR INSTALLATION ON THE RIGHT SHOULDER AND IN THE GORE. BOLT HOLES IN BASE PLATE ARE SLOTTED AND BEVELED AS SHOWN. USE H.S. BOLTS WITH HEX HD., HEX NUT AND THREE FLAT WASHERS FOR EACH BOLT. SEE TABLE FOR BOLT DIA. AND TORQUE.

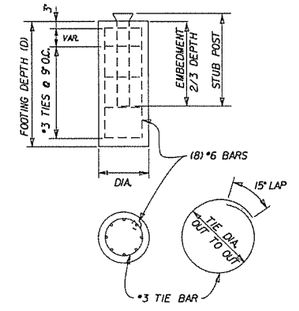
NOTE: ASSEMBLE SIGN POST TO STUB POST USING THE BOLTS SPEC. IN THE TABLE AND AS SHOWN IN THE ELEVATION DETAILS. THERE SHALL BE THREE FLAT WASHERS ON EACH BOLT LOCATED AS SHOWN IN THE ELEVATIONS. USE A SHIM TO PLUMB THE SIGN POST, THEN TIGHTEN THE BOLTS USING A 12" TO 15" WRENCH UNTIL THE WASHERS AND SHIMS ARE SEATED AND THE BOLT THREADS ARE CLEAR, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE (SEE TABLE), THE BURR THREADS ADJACENT TO THE BACK SIDE OF THE NUT TO PREVENT LOOSENING.



STEEL SCHEDULE

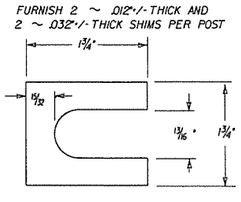
FOOTING DIAMETER	#3 TIE BARS		
	DIAMETER	BAR LENGTH	POUNDS
INCHES	INCHES	FEET	
18	12	4.39	1.65
24	18	5.96	2.24
30	24	7.53	2.83
36	30	9.1	3.42

FOOTINIG DEPTH	#6 STRAIGHT BARS		
	BAR LENGTH	NUMBER REQ'D.	POUNDS
FEET	FEET		
2.50	2.00	8	24.03
3.00	2.50	8	30.04
3.50	3.00	8	36.05
4.00	3.50	8	42.06
4.50	4.00	8	48.06
5.00	4.50	8	54.07
5.50	5.00	8	60.08
6.00	5.50	8	66.09
6.50	6.00	8	72.10
7.00	6.50	8	78.10
7.50	7.00	8	84.11
8.00	7.50	8	90.12

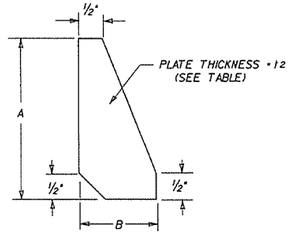


FOOTING QUANTITIES

FOOTINIG DEPTH	NUMBER TIE BARS REQ'D	18" DIAMETER		24" DIAMETER		30" DIAMETER		36" DIAMETER	
		CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL	CLASS S CONCRETE	REINF STEEL
FEET		CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)	CU. YD.	(GRADE 60)
2.50	4	0.16	31						
3.00	4	0.20	37						
3.50	5	0.23	44						
4.00	6	0.26	52	0.47	56				
4.50	6	0.29	58	0.52	62				
5.00	7	0.33	66	0.58	70	0.91	74		
5.50	8			0.64	78	1.00	83		
6.00	8			0.70	84	1.09	89	1.57	93
6.50	9					1.18	98	1.70	103
7.00	10					1.27	106	1.83	112
7.50	10							1.96	118
8.00	11							2.09	128



SHIM DETAIL



STIFFENER PLATE DETAIL

GENERAL NOTES

TIGHTEN THE HIGH STRENGTH BOLTS IN THE BASE CONNECTION ONLY TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

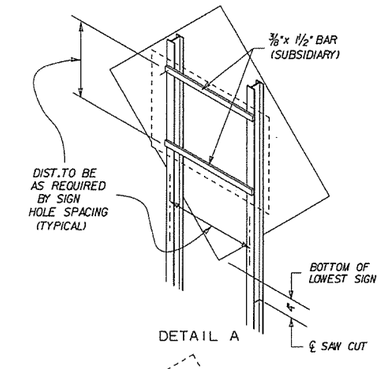
BASE PLATES AND STIFFENER PLATES SHALL BE OF THE SAME MATERIAL AS THE PRIMARY SUPPORT POSTS WHICH THEY ARE WELDED.

REFER TO THE PLANS FOR FOOTING DIMENSIONS.

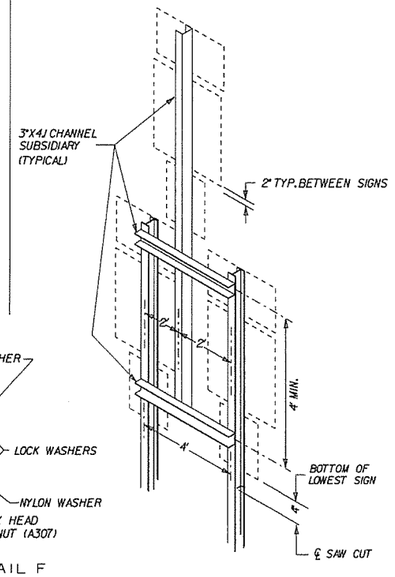
EACH STUB POST AND SIGN POST SHALL HAVE A PERMANENT IDENTIFYING STAMP WHICH SPECIFIES THE STEEL SECTION USED. IF THE CONTRACTOR ELECTS TO SHIP THE STUB POST SEPARATE FROM THE SIGN POST A MATCH MARK SYSTEM WILL BE REQUIRED.

SIGN POST AND STUB POST

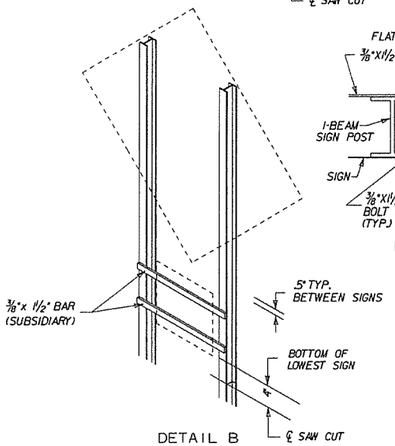
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF BREAKAWAY SIGN SUPPORTS FOR GUIDE SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-3
DATE	REVISION	FILMED	



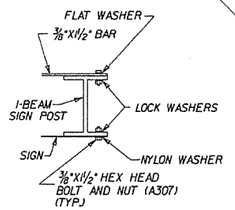
DETAIL A



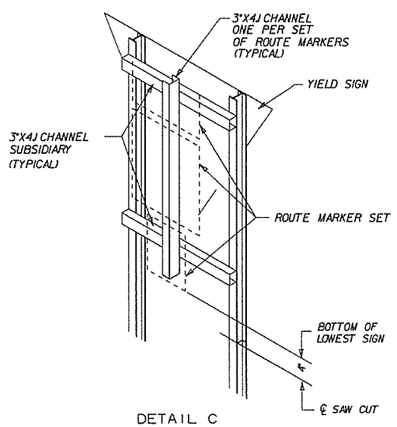
DETAIL D



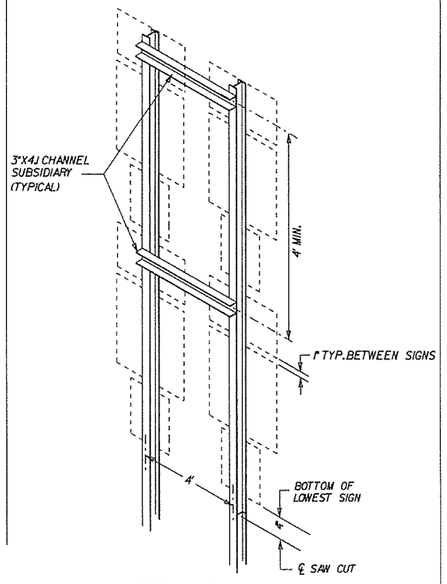
DETAIL B



DETAIL F



DETAIL C



DETAIL E

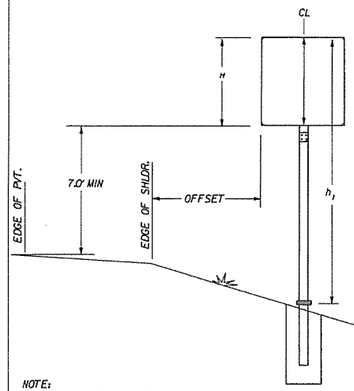
NOTE

ALL ADDITIONAL MOUNTING HARDWARE, BOLTS, NUTS, CHANNELS AND BAR STRAPS REQUIRED TO MOUNT SECONDARY SIGNS WILL BE CONSIDERED TO BE SUPPLEMENTAL TO THE MAIN SIGN SUPPORT SPECIFIED. PAYMENT WILL BE CONSIDERED SUBSIDIARY TO THE MAIN SUPPORT.

THE GALVANIZED STEEL CHANNEL AND BAR SUPPORTS MAY BE ASTM A-36.

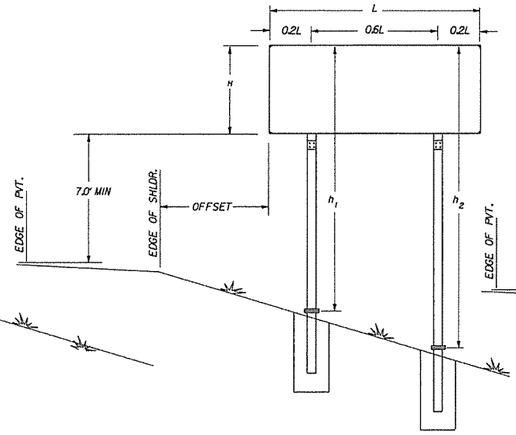
REFER TO THE P.C. RUTLEDGE FORMULA ON PAGE 58 OF THE AASHTO PUBLICATION "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS.

ALL BOLT HOLES SHALL BE 1/8" DIA. UNLESS OTHERWISE SHOWN.

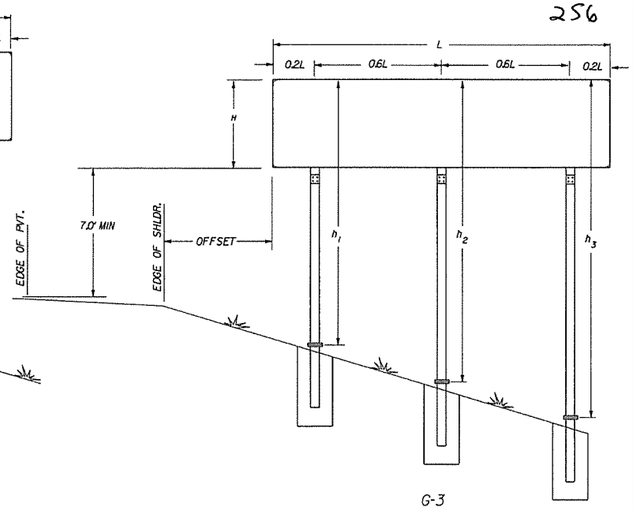


G-1

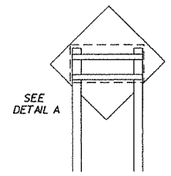
NOTE:
THE OFFSET WILL BE A MINIMUM OF 10' FROM THE EDGE OF PAVED SURFACE OR AS DIRECTED BY THE ENGINEER.



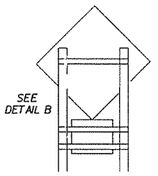
G-2



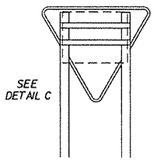
G-3



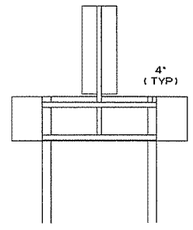
G2-1



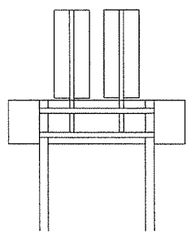
G2-2



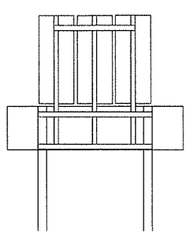
G2-3



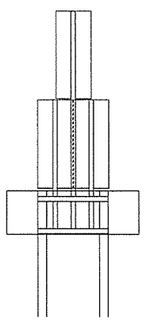
G2-4



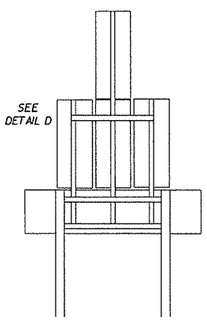
G2-5



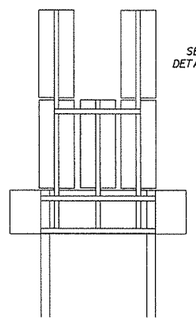
G2-6



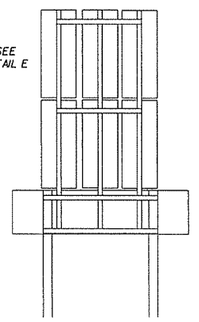
G2-7



G2-8



G2-9



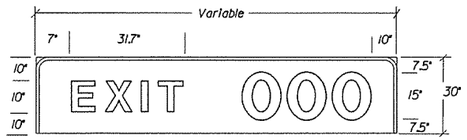
G2-10

			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF BREAKAWAY SIGN SUPPORTS FOR STANDARD SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-4
DATE	REVISION	FILMED	



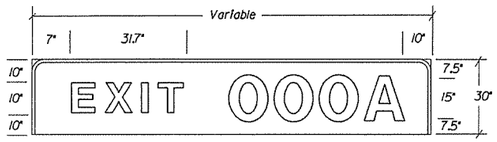
TYPICAL DETAIL

TYPE A



EXIT WITH 1 DIGIT 84"X30"=17.50 SF
EXIT WITH 2 DIGITS 96"X30"=20.0 SF
EXIT WITH 3 DIGITS 114"X30"=23.57 SF

TYPE B

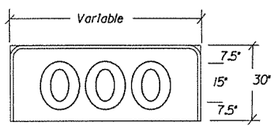


EXIT WITH 1 DIGIT PLUS "A"OR"B" 96"X30"=20.0 SF
EXIT WITH 2 DIGITS PLUS "A"OR"B" 114"X30"=23.57 SF
EXIT WITH 3 DIGITS PLUS "A"OR"B" 126"X30"=26.25 SF

TYPE C

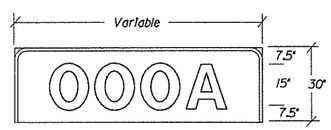
EXITS WITH 1 DIGIT PLUS "A"&"B" 132"X30"=27.50 SF
EXITS WITH 2 DIGITS PLUS "A"&"B" 150"X30"=31.25 SF
EXITS WITH 3 DIGITS PLUS "A"&"B" 168"X30"=35.00 SF

TYPE D



1 DIGIT 24"X30"=5.0 SF
2 DIGITS 42"X30"=8.75 SF
3 DIGITS 60"X30"=12.50 SF

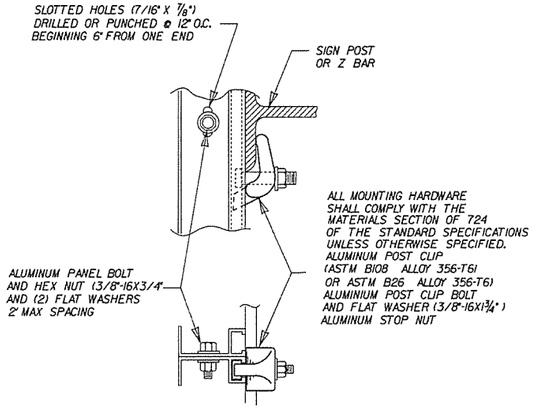
TYPE E

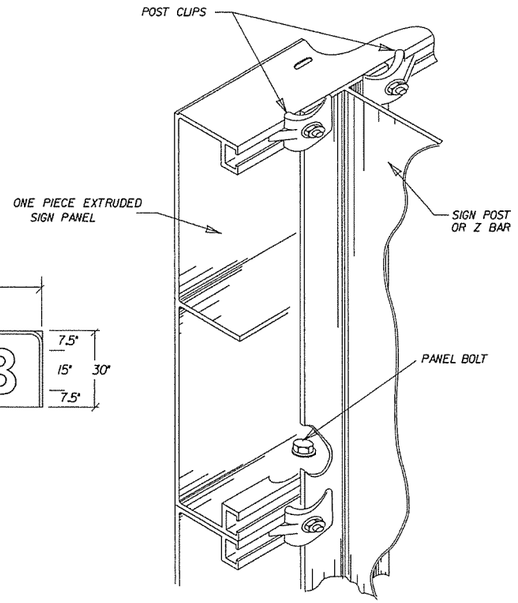


1 DIGIT PLUS "A"OR"B" 42"X30"=8.75 SF
2 DIGITS PLUS "A"OR"B" 60"X30"=12.50 SF
3 DIGITS PLUS "A"OR"B" 78"X30"=16.25 SF

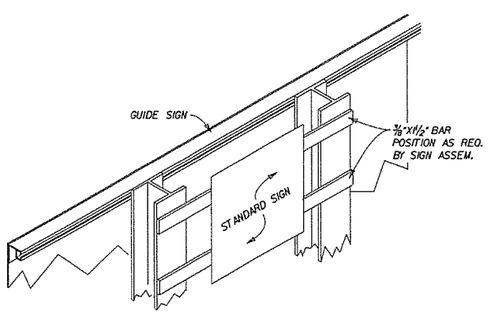
EXIT PANEL DETAILS

NOTE: EXIT NUMBER PANELS SHALL HAVE WHITE LEGENDS AND BORDERS. THE BACK GROUND COLOR WILL BE AS USE SPECIFIES. SHEETING TYPE WILL BE THE SAME AS THE GUIDE SIGN WHICH THE EXIT PANEL IS ATTACHED OR AS SPECIFIED IN THE PLANS. PAYMENT FOR ALL POST CLIPS, BOLTS, AND ANGLES SHALL BE SUBSIDIARY TO THE ITEM "EXIT NUMBER PANEL".

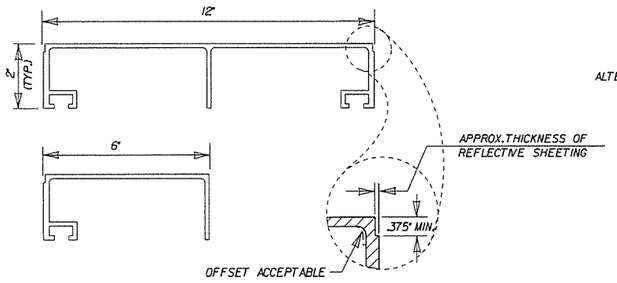




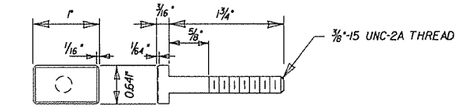
MOUNTING HARDWARE



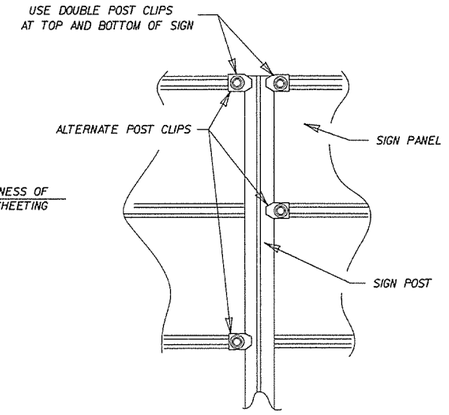
SECONDARY SIGN INSTALLATION ON BACKSIDE OF GUIDE SIGN



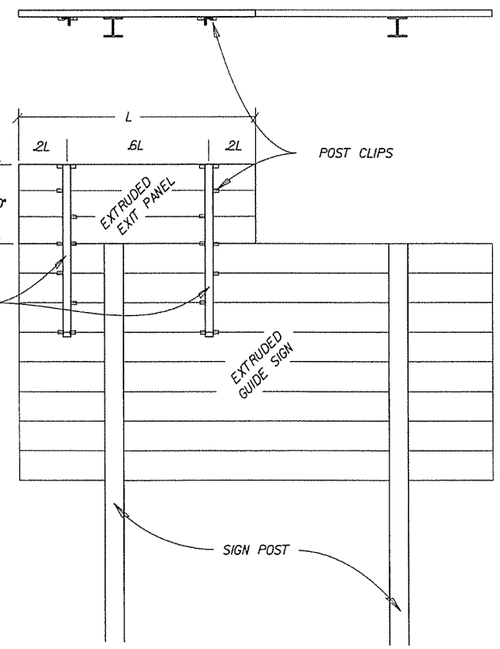
ONE PIECE EXTRUDED SIGN PANELS



POST CLIP BOLT



POST CLIP PLACEMENT

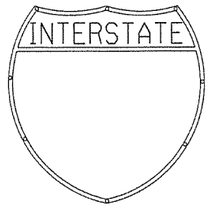


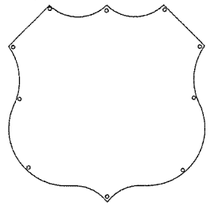
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAILS OF GUIDE SIGN PANELS
9-12-13	ISSUED		STANDARD DRAWING SHS-5
DATE	REVISION	FILMED	

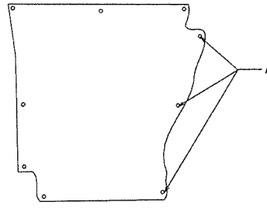
THE CONTRACTOR SHALL DRILL AND POP-RIVET LEGEND, SHIELDS, ARROWS, OR OTHER COPY AS SHOWN.

MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS

DIRECT APPLIED BORDER







DIRECT APPLIED BORDER

AD-68 RIVETS

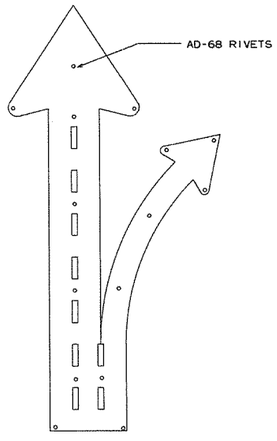
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

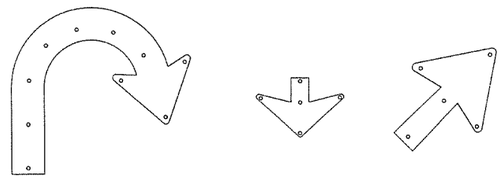
AD-68 RIVETS

a b c d e f g h i j k l m n o p q r s t u v w x y z

AD-68 RIVETS

0 1 2 3 4 5 6 7 8 9 1/4 1/2 3/4





NOTES:

LEGEND ON GUIDE SIGNS ON THE MAIN LANES SHALL BE DEMOUNTABLE LEGEND. LEGEND ON GUIDE SIGNS ON CROSS ROADS AND RAMPS SHALL BE DIRECT APPLIED. THE DEMOUNTABLE AND DIRECT APPLIED LEGENDS SHALL BE TYPE IX SHEETING.

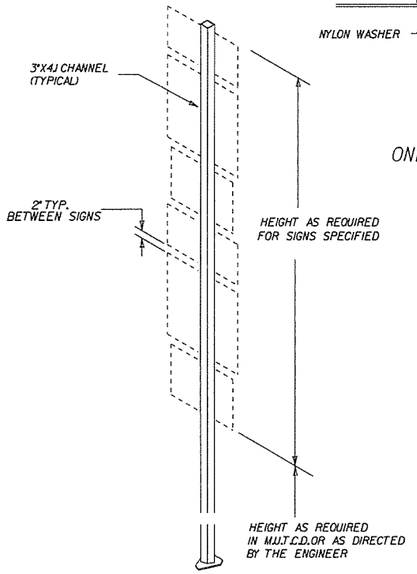
THE BACKGROUND ON ALL GUIDE SIGNS AND STANDARD SIGNS SHALL BE CONSTRUCTED USING TYPE III SHEETING.

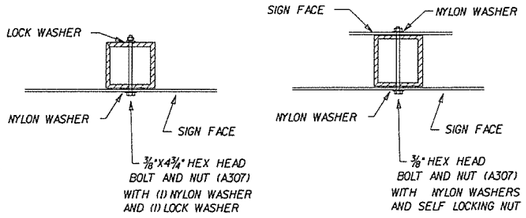
TYPE IX SHEETING FOR BORDER, LEGEND, SHIELDS, ARROWS, OR OTHER COPY SHALL BE ORIENTED VERTICALLY AS PER MANUFACTURERS' DATUM MARKS, ORIENTATION MARKS, OR OTHER RECOMMENDATIONS.

SIGN LEGEND, SHIELDS, ARROWS OR OTHER COPY SHALL BE APPLIED WITH RIVETS ONLY.

NO OTHER METHOD OF APPLYING CHARACTERS IS ALLOWED.

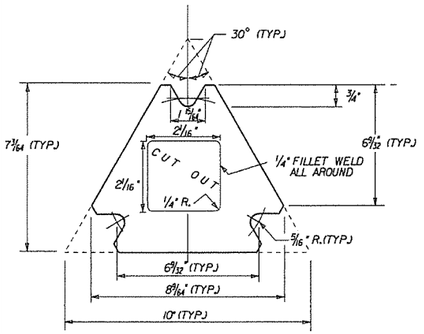
			ARKANSAS STATE HIGHWAY COMMISSION
			MOUNTING DETAILS FOR DEMOUNTABLE LEGEND ON GUIDE SIGNS
9-12-13	ISSUED		STANDARD DRAWING SHS-6
DATE	REVISION	FILMED	



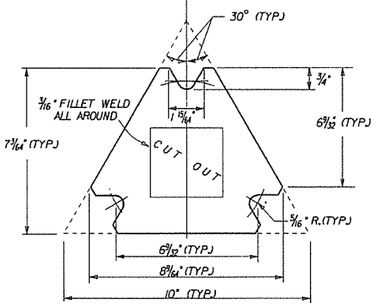


CHANNEL SHALL BE FULL LENGTH OF RECTANGULAR AND SQUARE SIGNS AND SHALL EXTEND 1/2" BEYOND BOLT HOLES ON DIAMOND OR IRREGULAR SHAPED SIGNS.

MOUNTING HARDWARE



TOP PLATE



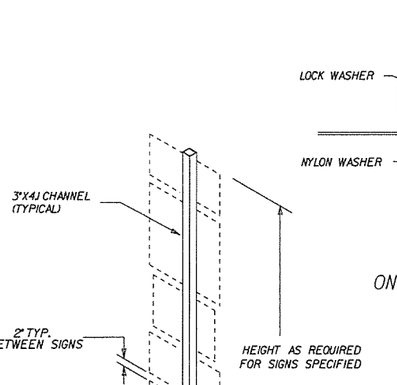
BOTTOM PLATE

GENERAL NOTES:

THE TOP PLATE OF TRIANGULAR SLIP BASES SHALL HAVE THE SAME EXTERIOR DIMENSIONS AS THE BOTTOM PLATE.

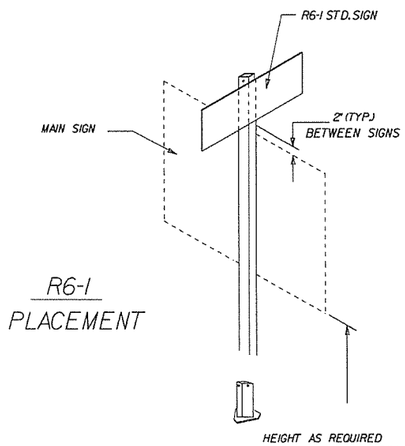
INSIDE DIAMETER OF THE SIGN POST SHALL BE CUT THROUGH THE CENTER OF THE TOP PLATE WITH THE HOLE EDGE BEVELED AS SHOWN. THE BEVEL END SHALL BE TANGENT TO THE BOLT HOLE. ANY MISALIGNMENT SHALL BE REMOVED BY GRINDING. FACE OF BEVEL SHALL BE FINISHED TO A MINIMUM SMOOTHNESS OF f=500.

OTHER MASH COMPLIANT BREAKAWAY SIGN SUPPORTS THAT HAVE THE SAME TOP PLATE DIMENSIONS AND SUPPORT 2" X 2" SQUARE TUBE SIGN POSTS MAY BE SUBSTITUTED AS APPROVED BY THE ENGINEER.

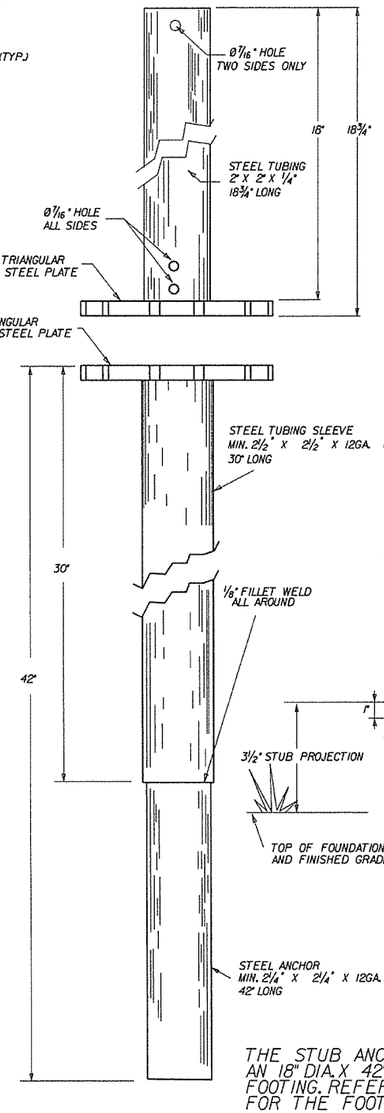


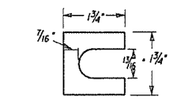
TYPE-1

BASIS OF ESTIMATE
APPROX. 100 lbs STEEL



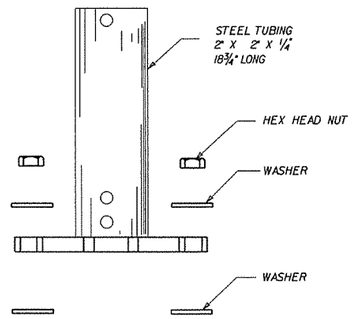
R6-1 PLACEMENT

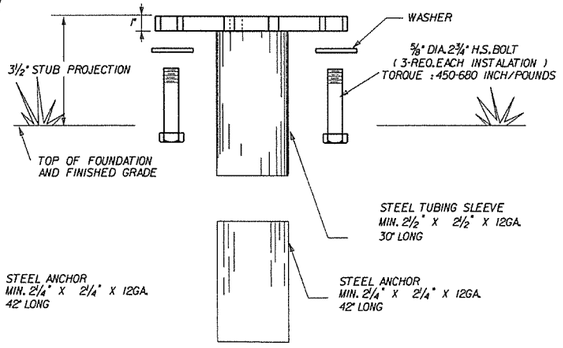




FURNISH (2) .012" THICK AND (2) .032" THICK SHIMS PER POST

SHIM DETAIL





THE STUB ANCHOR SHALL BE SET IN AN 18" DIA. X 42" DEEP CONCRETE FOOTING. REFER TO STD. DRWG. SHS-3 FOR THE FOOTING DETAILS.

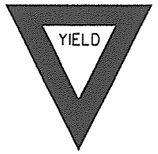
			ARKANSAS STATE HIGHWAY COMMISSION
			DETAIL OF OMNI-DIRECTIONAL BREAKAWAY SIGN SUPPORTS
9-12-13 DATE	ISSUED REVISION	FILMED	STANDARD DRAWING SHS-7

R1-1



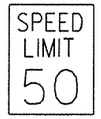
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



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

R2-1



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

W3-5



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

W3-5a



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

R4-1



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

R4-2



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

R5-1



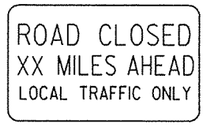
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



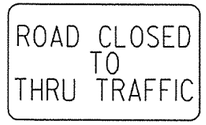
48"X30"

RII-3A



60"X30"

RII-4



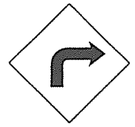
60"X30"

RSP-1



48"X30"

WI-1



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

WI-2



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

WI-3



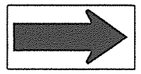
STD. 48"X48"

WI-4



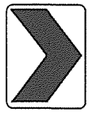
STD. 48"X48"

WI-6



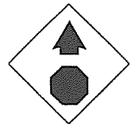
STD. 48"X24"
SPECIAL 60"X30"

WI-8



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

W3-1



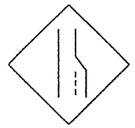
STD. 36"X36"
SPECIAL 48"X48"

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"

WI3-1



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"

WI-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



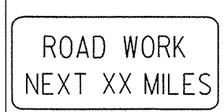
STD. 36"X36"
FWY. 48"X48"

W8-9



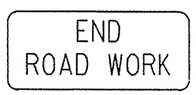
STD. 36"X36"
FWY. 48"X48"

G20-1



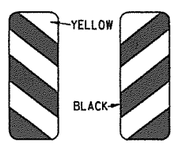
60"X24"

G20-2



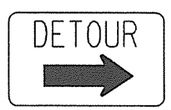
48"X24"

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	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE AHEAD

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.
2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.
3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.
- 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.
- 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.
6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.
7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.
8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT, HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.
10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

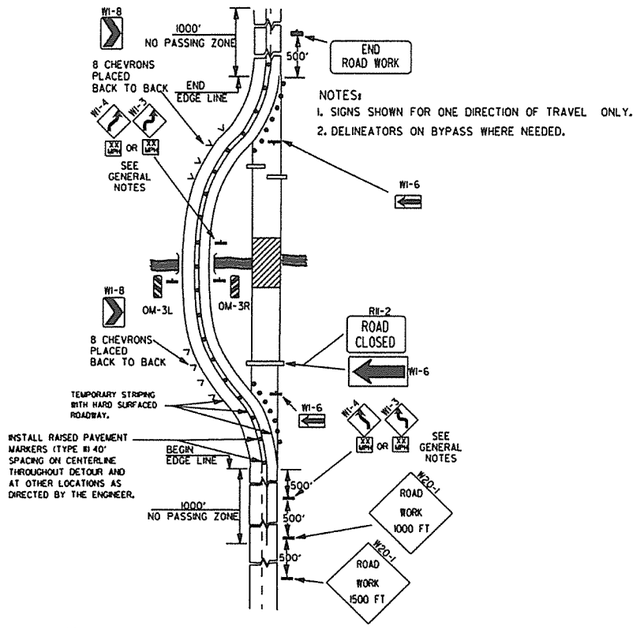
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
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	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
1-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

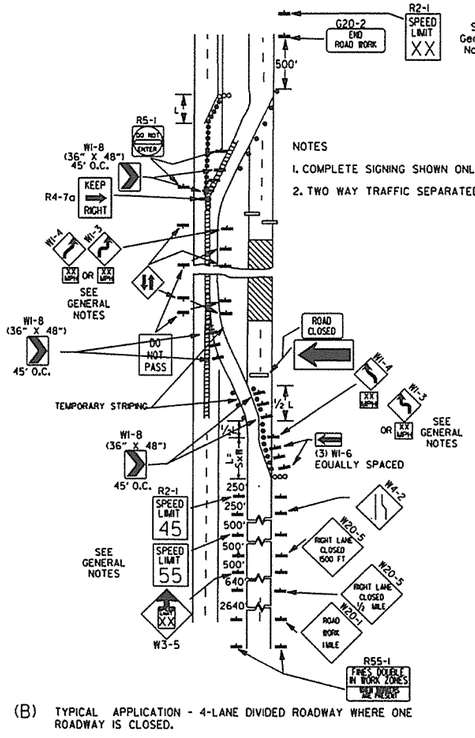
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



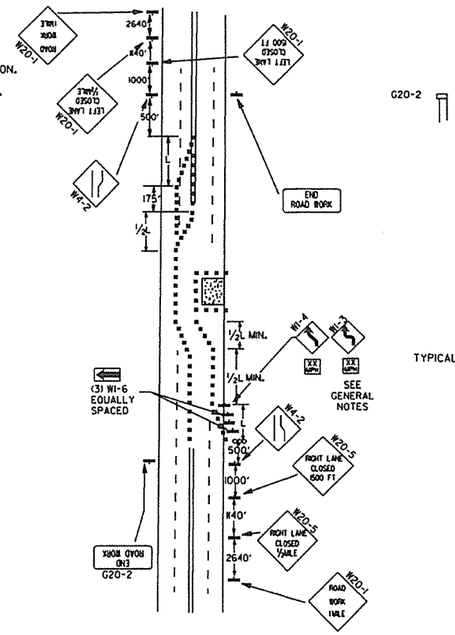
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

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

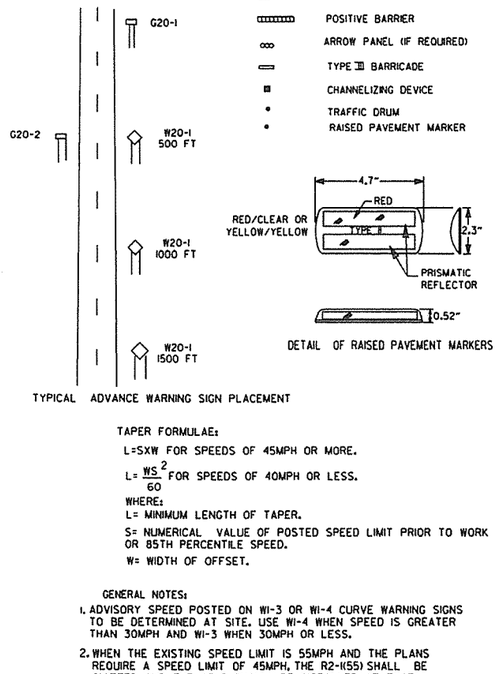


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

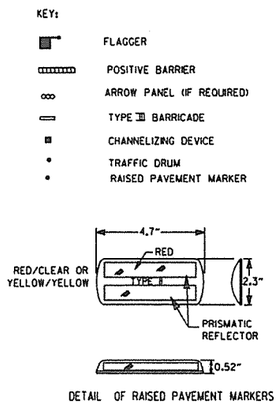
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



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



TYPICAL ADVANCE WARNING SIGN PLACEMENT



DETAIL OF RAISED PAVEMENT MARKERS

TAPER FORMULAE:

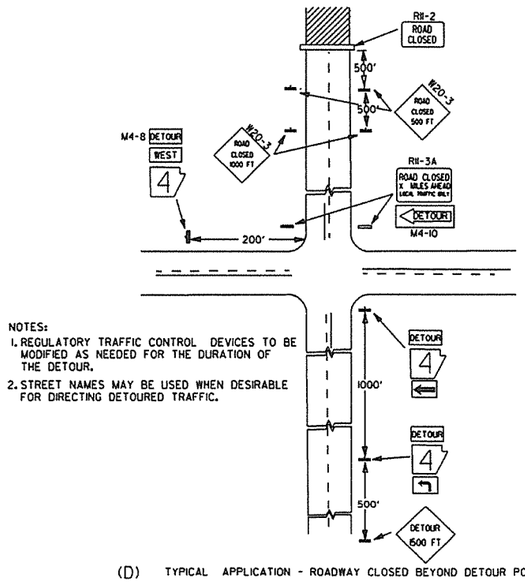
L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ 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.

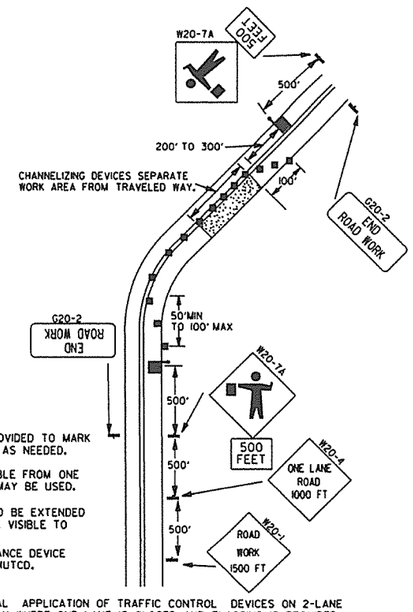
GENERAL NOTES:

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



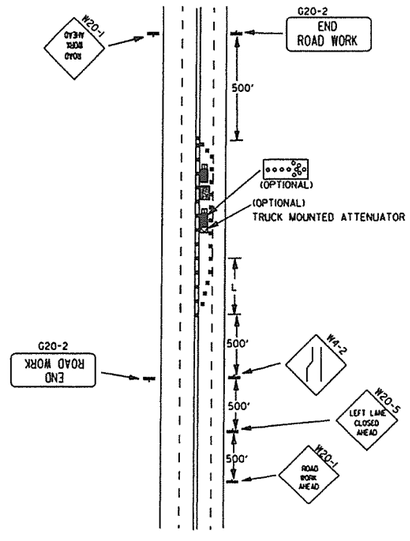
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(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.



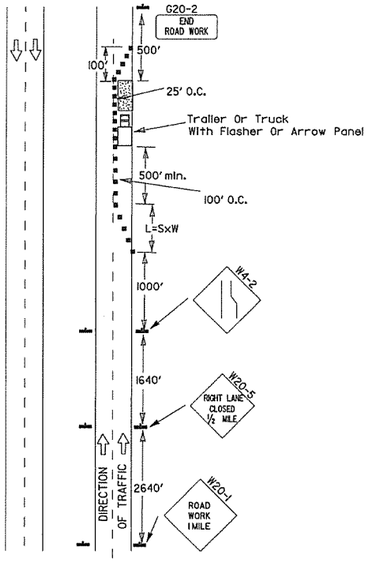
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH R5-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
8-20-08	REVISED SIGN DESIGNATIONS	
8-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (G) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

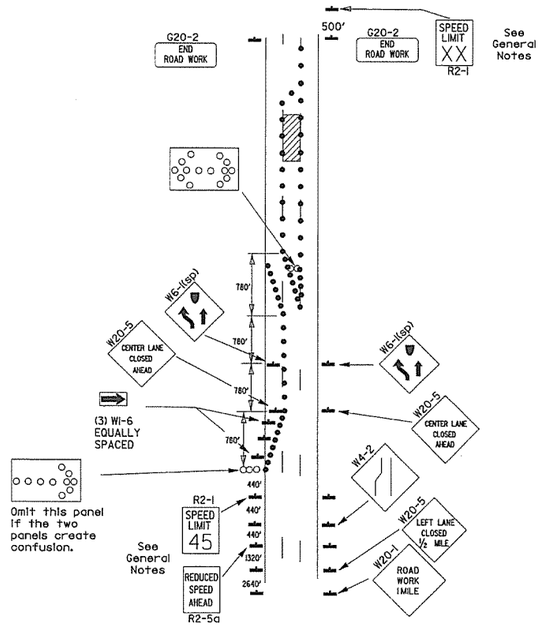
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

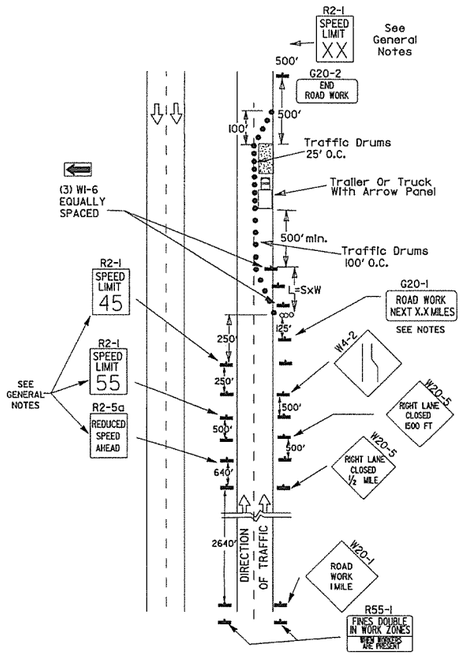
STANDARD DRAWING TC-2



(A) Typical application - daytime maintenance operations of short duration on a 4-lane divided roadway where half of the roadway is closed.



(B) Typical application - 3-lane oneway roadway where center lane is closed.



(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

KEY:

ooo Arrow Panel (if Required)

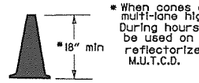
■ Channelizing Device

● Traffic drum

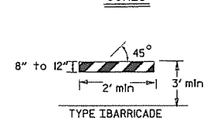
GENERAL NOTES:

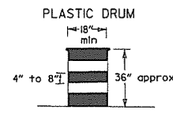
1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1 mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.

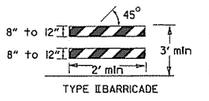
Channelizing devices

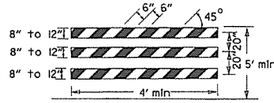


* When cones are used on freeways and multi-lane highways, they shall be 28" min. During hours of darkness, 28" cones shall be used on all roadways, and shall be reflectorized in accordance with the M.U.T.C.D.

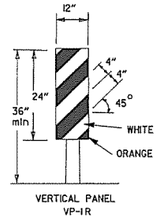




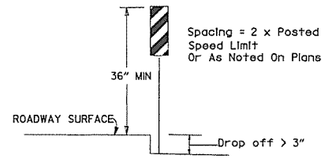




NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.



VERTICAL PANEL PLACEMENT



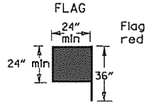
TRAFFIC CONTROL DEVICES
FOR
VERTICAL PAVEMENT DIFFERENTIALS

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.

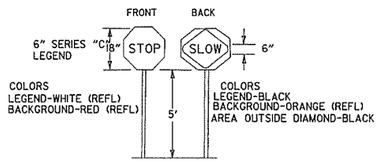
When the shoulder area is used as part of the traveled lane and there is insufficient width to place drums on the remaining shoulder width, then vertical panels shall be used.

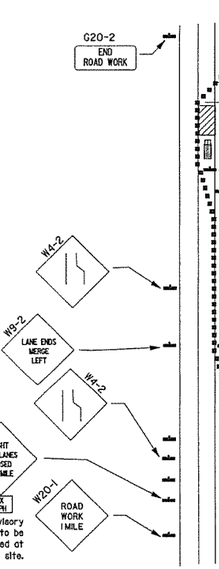
FLAG



Flag shall be of good grade red material

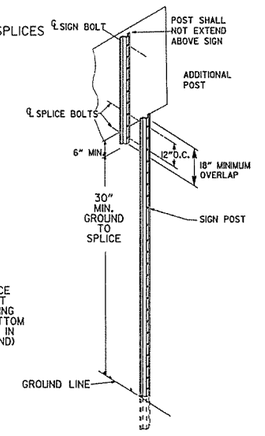
STOP SLOW PADDLE





(D) Typical application - closing multiple lanes of a multilane highway.

DETAIL OF SPLICES



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

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

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

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1 & REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

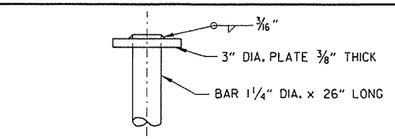
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

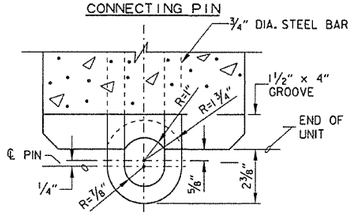
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2. TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 9 1/2", 2'-1 3/8", 4 3/8"

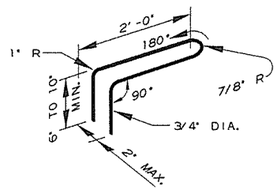


CONNECTING PIN

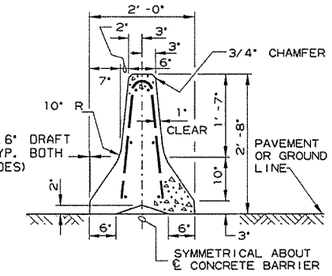


SECTION E-E

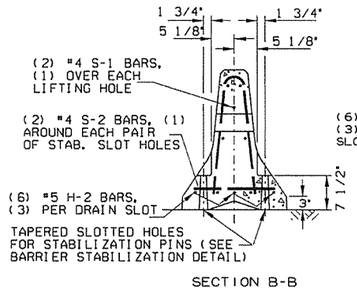
CONNECTION DETAILS



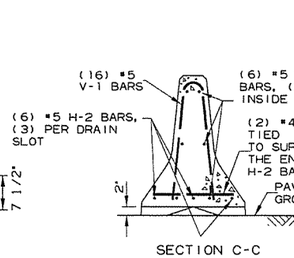
CONNECTION LOOP



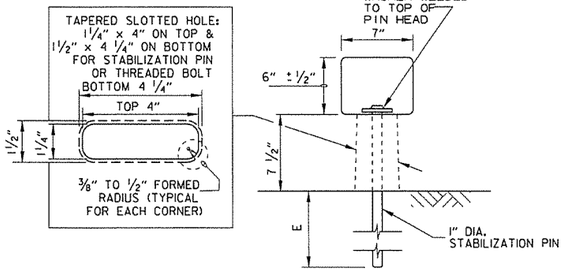
SECTION A-A



SECTION B-B



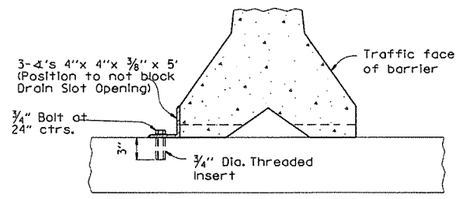
SECTION C-C



BARRIER STABILIZATION DETAIL

ROADWAY SECTION

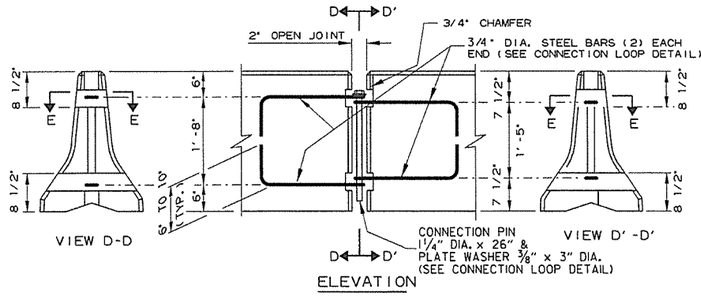
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. 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

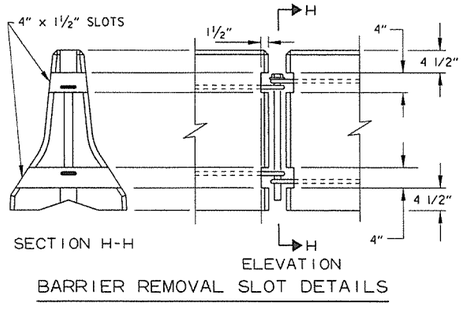
BRIDGE DECKS



VIEW D-D

VIEW D'-D'

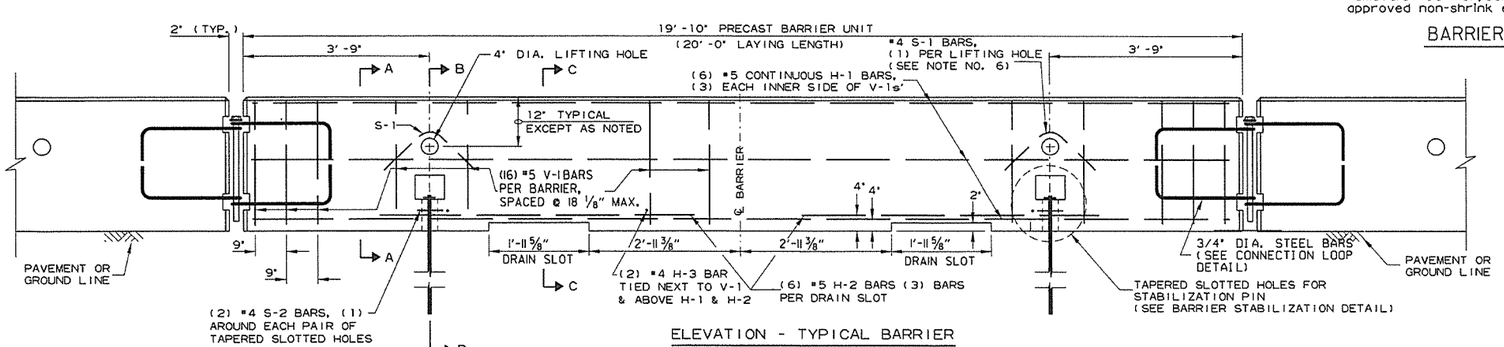
ELEVATION



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 wall is within 6 feet of a traffic lane, additional delineators shall be placed on the barrier at 10' spacing approximately one (1) foot from the top of the barrier. Delineators shall be on the AHTD Qualified Products List for Construction Concrete Barrier Markers.
Delineator color shall be in accordance with the Manual on Uniform Traffic Control Devices.
Payment for delineators shall be considered included in the price bid per Lin. Ft. for "Furnishing and Installing Precast Concrete Barrier". The contractor shall certify to the Engineer that the material and the design used in the precast barrier units meets the requirements as shown on this standard drawing.

(3) Other Precast Concrete Barriers that have been crash tested and approved by the Federal Highway Administration to meet the requirements of NCHRP-350 test level 3 or Manual For Assessing Safety Hardware (MASH) will be accepted in lieu of the barrier shown. Drain slots shall be provided as needed or as directed by the Engineer. The Contractor shall furnish a certification of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) compliance for any other types of precast barrier to be used. The certification shall state that the precast concrete barrier meets the requirements of NCHRP Report 350 or Manual For Assessing Safety Hardware (MASH) and include a copy of the Federal Highway Administration's (FHWA) approval letter with all attachments. Precast concrete barrier units shall be fabricated and installed in accordance with crash testing and documentation provided in the FHWA approval letter. Mixing of shapes will not be allowed in a continuous line of units.

(4) Dowel holes in pavement or bridge slabs that are to remain in place shall be filled. Holes in concrete pavement and bridge slabs shall be filled with an approved non-shrink epoxy grout. Holes in asphalt pavement shall be filled with an approved asphalt joint filler. Payment for drilling and filling holes to be included in the price for various barrier items.

(5) Attach Units To Roadway Surface with Stabilization Pins and to Deck Slabs using bolts when required.

(6) A 4" White PVC Sleeve may be used to form the Lifting Hole and if used the Sleeve is to be left in place.

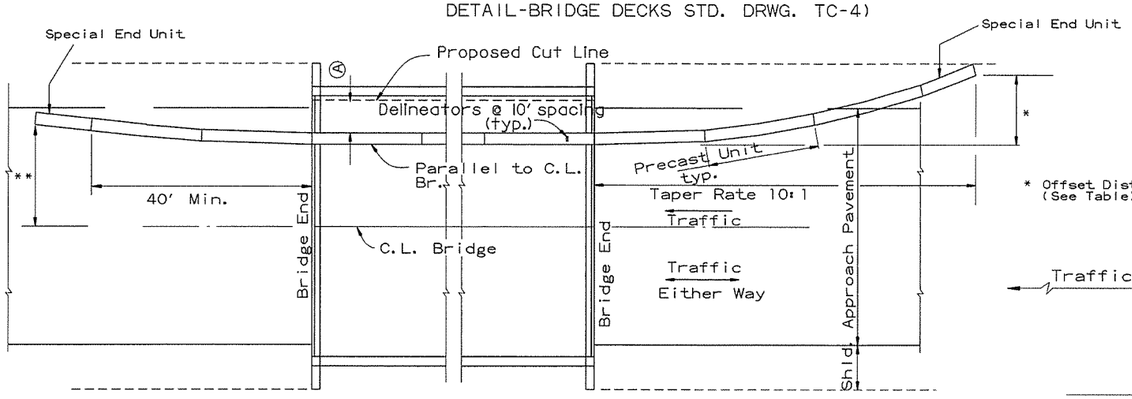
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	ISSUED NEW DRAWING	

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-4

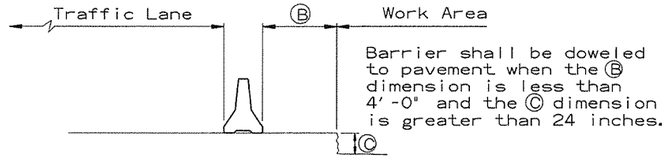
Ⓐ 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)



BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

* Offset Distance (See Table)

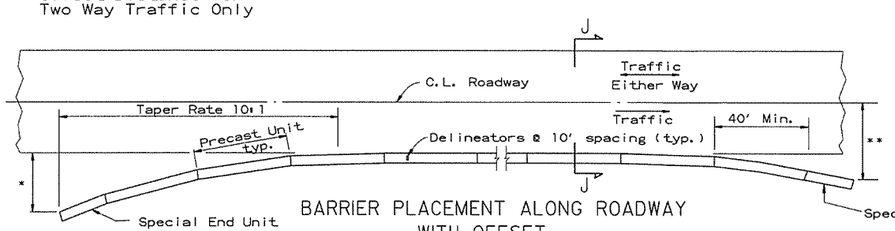


Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale

** Offset Distance for Two Way Traffic Only



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

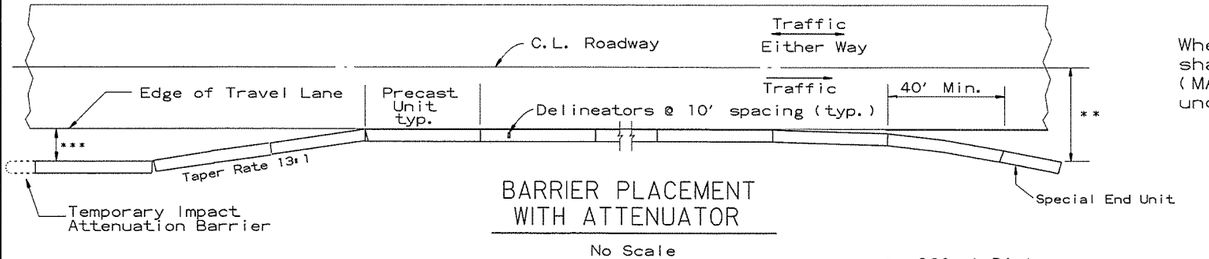
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see "Barrier Placement With Attenuator" Detail shown below.

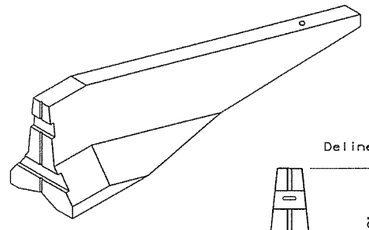


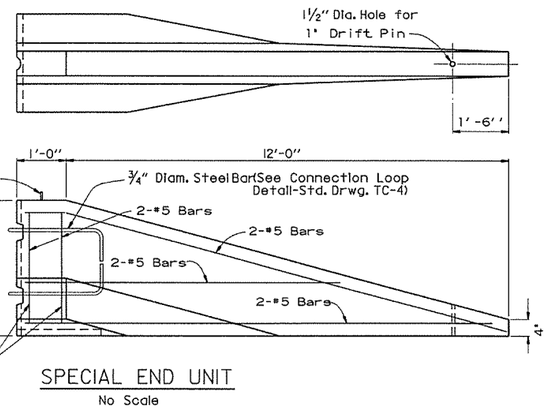
BARRIER PLACEMENT WITH ATTENUATOR

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	

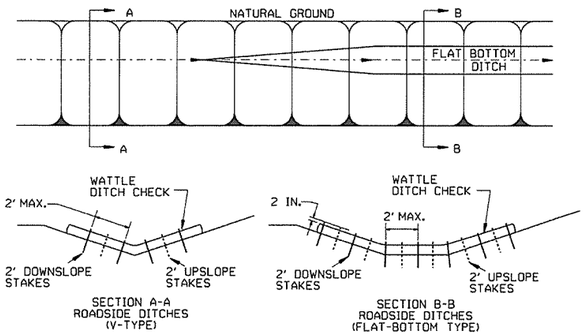
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

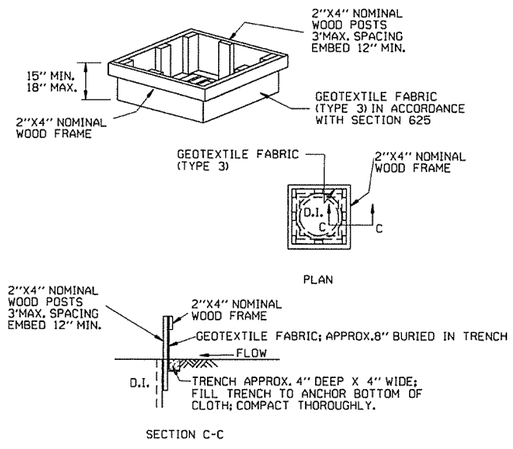
STANDARD DRAWING TC-5

GENERAL NOTES

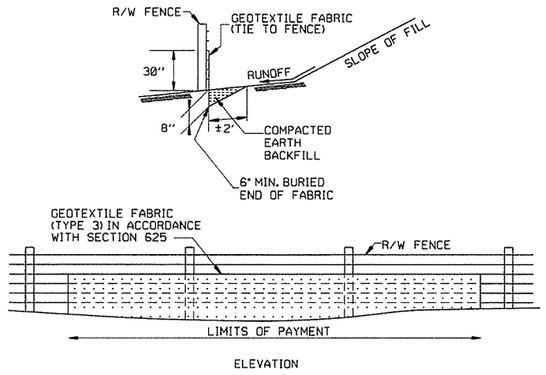
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



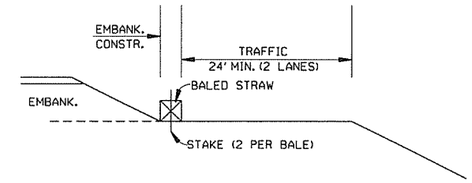
SILT FENCE ON R/W FENCE (E-4)

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.

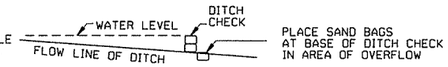
GENERAL NOTES

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.

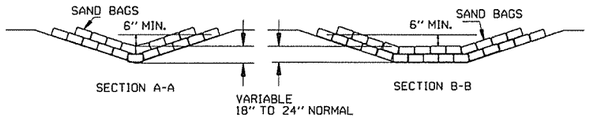


BALED STRAW FILTER BARRIER (E-2)

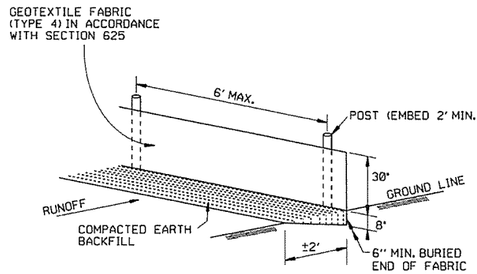
NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS.



PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW



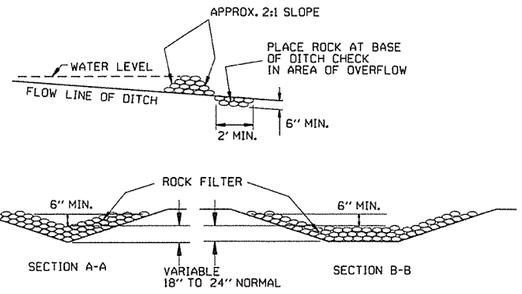
SAND BAG DITCH CHECK (E-5)



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.



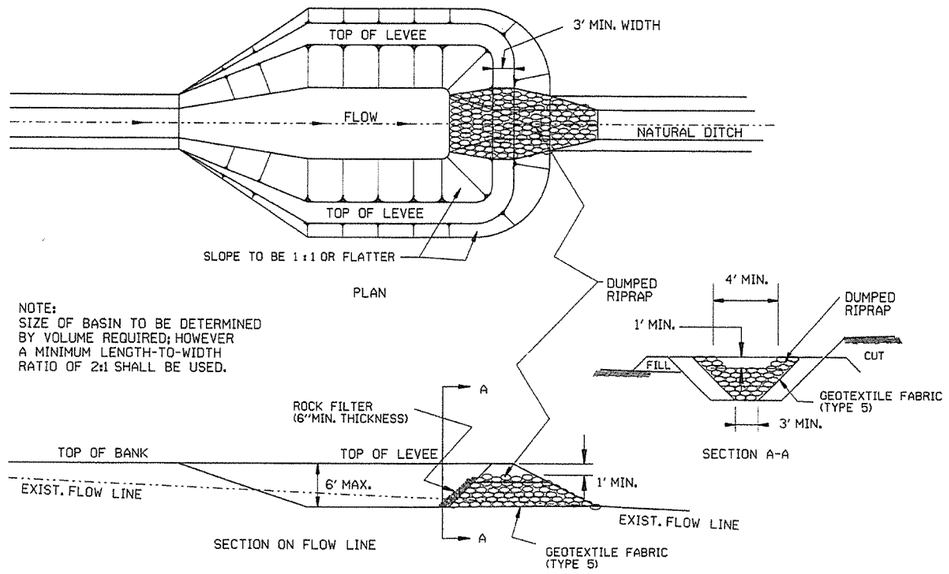
ROCK DITCH CHECK (E-6)

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

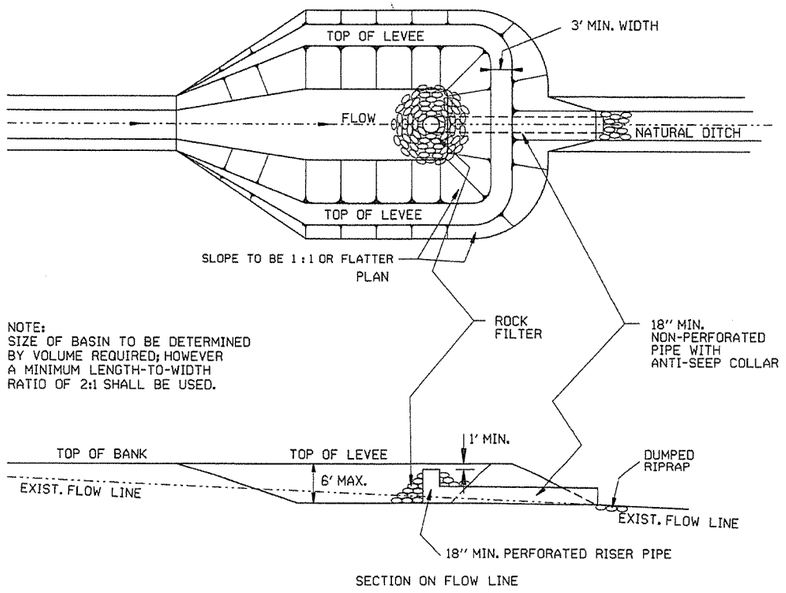
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

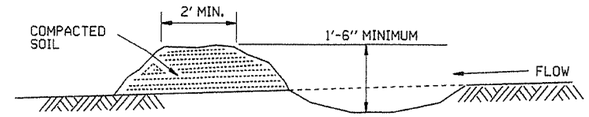
STANDARD DRAWING TEC-1



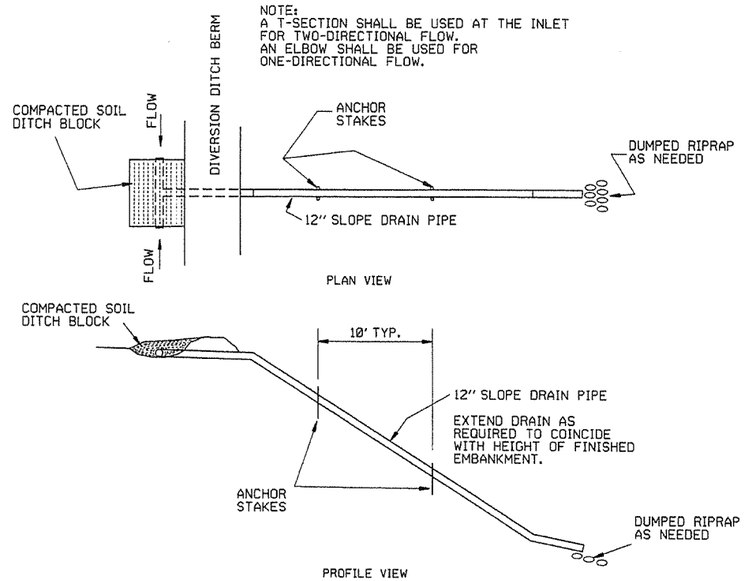
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)



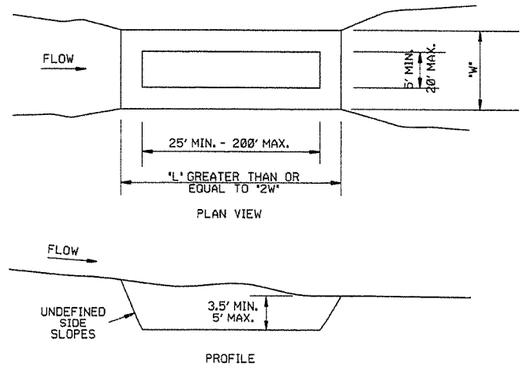
SEDIMENT BASIN WITH PIPE OUTLET (E-10)



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

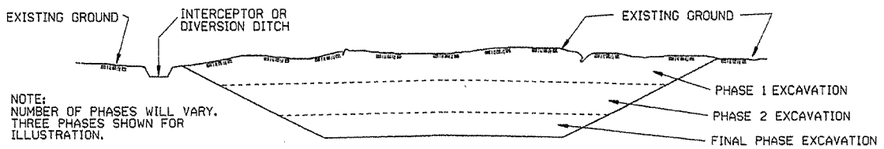
STANDARD DRAWING TEC-2

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



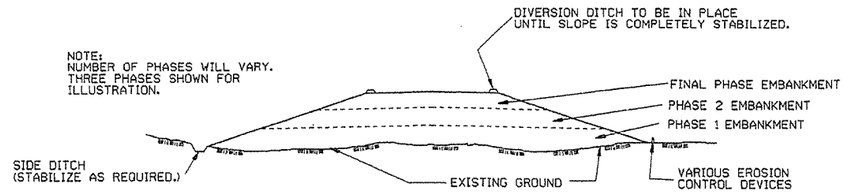
GENERAL NOTE

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

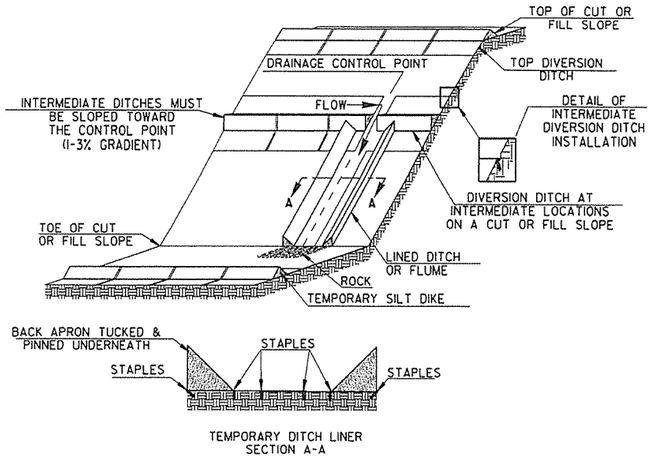
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD 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

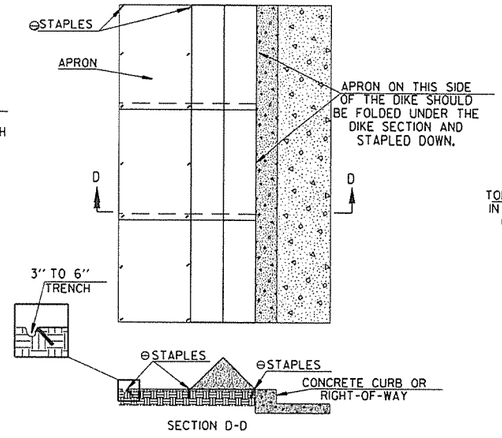
ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

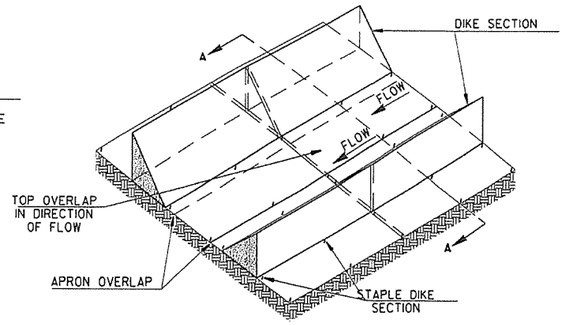
STANDARD DRAWING TEC-3



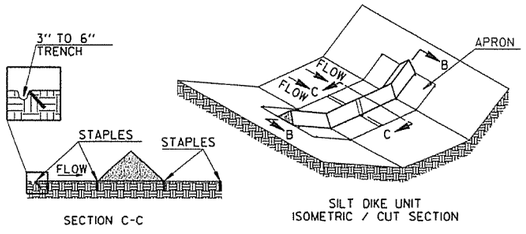
TRIANGULAR SILT DIKE INSTALLATION
FOR
DIVERSION DITCH AND/OR DITCH LINER

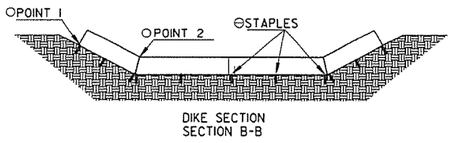


TRIANGULAR SILT DIKE INSTALLATION
FOR
CONTINUOUS BARRIER



TRIANGULAR SILT DIKE INSTALLATION
FOR
TEMPORARY DITCH LINER

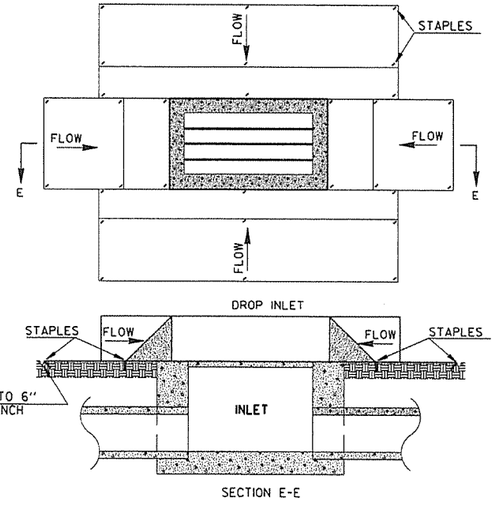




TRIANGULAR SILT DIKE INSTALLATION
FOR
ROADWAY DITCH OR DRAINAGE DITCH

○ POINT "1" MUST BE HIGHER THAN POINT "2" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

⊖ STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE UNIT AS SHOWN ON THE DIAGRAM.



TRIANGULAR SILT DIKE INSTALLATION
FOR
DROP INLETS

SYMBOLOGY
SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS

NOTE: SILT DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS.

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR SILT DIKE. THE DIKES SHALL BE USED AS A CONTINUOUS LINE BARRIER AT THE TOE OF SLOPE OR ACROSS THE ROADWAY DITCH TO CONTAIN SEDIMENT AND MINIMIZE EROSION, OR AS DIRECTED BY THE ENGINEER. THESE DIKES SHALL BE INSTALLED AND LOCATED AS SOON AS CONSTRUCTION WILL ALLOW OR AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKE SHALL BE TRIANGULAR SHAPED HAVING A HEIGHT OF AT LEAST 8" TO 10" IN THE CENTER WITH EQUAL SIDES AND A 16" TO 20" BASE. THE TRIANGULAR SHAPED INNER MATERIAL SHALL BE URETHANE FOAM. THE OUTER COVER SHALL BE A WOVEN GEOTEXTILE FABRIC PLACED AROUND THE INNER MATERIAL & ALLOWED TO EXTEND BEYOND BOTH SIDES OF THE TRIANGLE 24" TO 36". THIS FABRIC SHOULD BE MILDEW RESISTANT, ROT-PROOF AND RESISTANT TO HEAT AND ULTRAVIOLET RADIATION MEETING REQUIREMENTS FOR SEDIMENT CONTROL IN AASHTO M288. THE DIKES SHALL BE ATTACHED TO THE GROUND WITH WIRE STAPLES. THE STAPLES SHALL BE NO. 11 GAUGE WIRE AND BE AT LEAST 6" TO 8" LONG. STAPLES SHALL BE PLACED AS SHOWN ON THESE DETAILS.

   THE CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATER. ANY DEFICIENCIES OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. ACCUMULATED SILT OR DEBRIS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER. IF THE DIKES ARE DAMAGED OR INADVERTENTLY MOVED DURING THE SILT REMOVAL PROCESS, THE CONTRACTOR SHALL IMMEDIATELY REPLACE AFTER DAMAGE OCCURS.

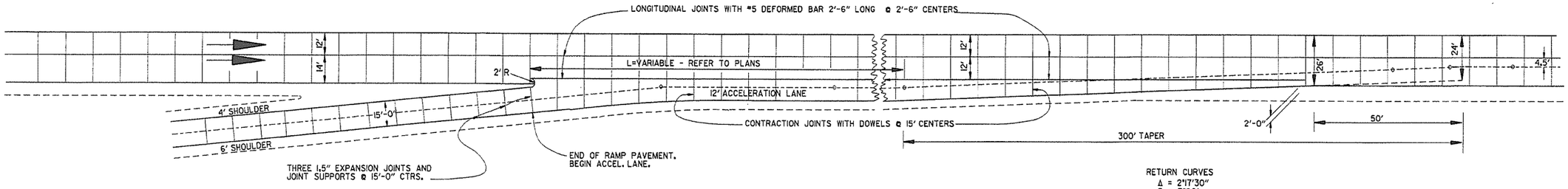
3. ACCEPTED TRIANGULAR SILT DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR TRIANGULAR SILT DIKE. PRICE BID WILL INCLUDE THE COST OF FURNISHING THE DIKES, INSTALLING, MAINTAINING AND REMOVAL WHEN DIRECTED BY THE ENGINEER.

DATE	REVISION	FILMED
7-26-12	REVISED GENERAL NOTE 2.	
12-15-11	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

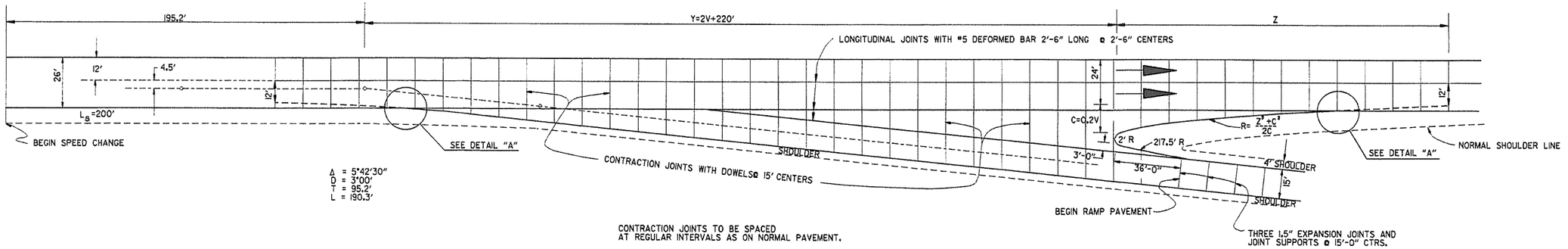
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4



ENTRANCE RAMP

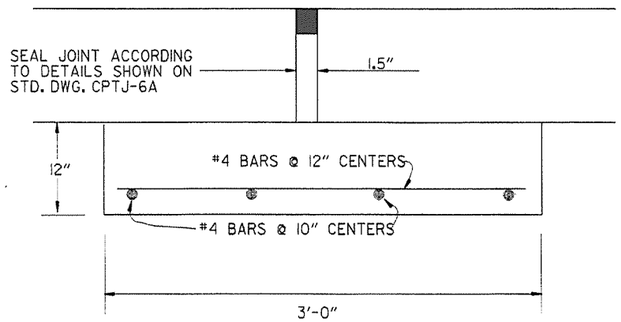
RETURN CURVES
Δ = 2°17'30"
D = 3°00'
T = 38.2'
L = 76.4'



Δ = 5°42'30"
D = 3°00'
T = 95.2'
L = 190.3'

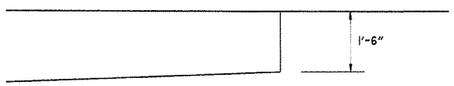
CONTRACTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

EXIT RAMP



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS).
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE SUBSIDIARY TO THE ABOVE ITEMS.



DETAIL "A"

EXIT RAMP

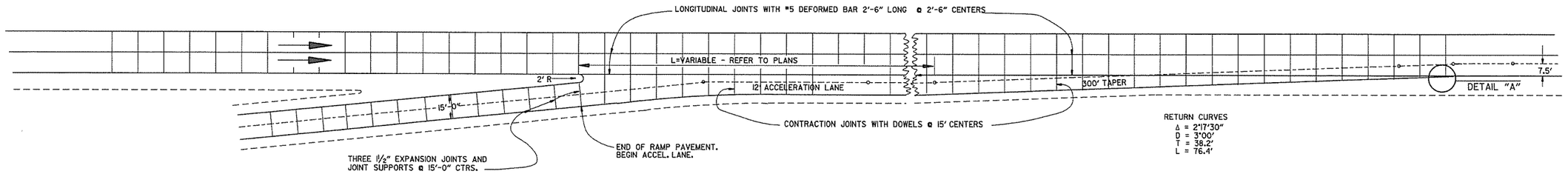
DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R
40	300.0	8.0	96.0	580.0
50	320.0	10.0	120.0	725.0
60	340.0	12.0	168.0	1182.0
70	360.0	14.0	210.0	1582.0

DATE	REVISION	DATE FILM'D
1-12-00	REDRAWN & REISSUED	1-12-00

ARKANSAS STATE HIGHWAY COMMISSION

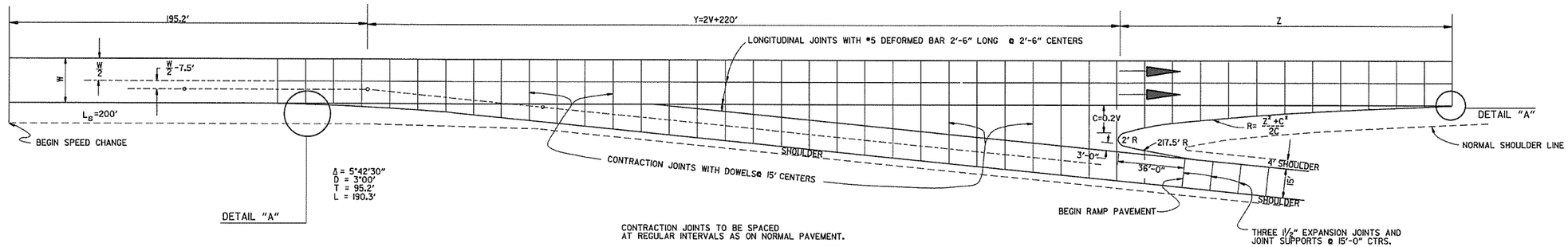
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS

STANDARD DRAWING TR-1



ENTRANCE RAMP

NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO THESE JOINT LAYOUTS. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.

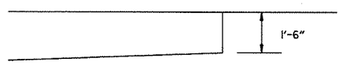


CONTRACTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

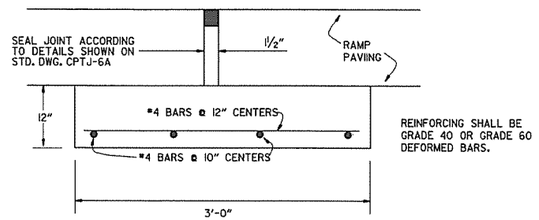
EXIT RAMP

EXIT RAMP

DESIGN SPEED V	Y	NOSE OFFSET C	LENGTH NOSE TAPER Z	RETURN RADIUS R	ADDITIONAL SURFACING SQ. YDS.
40	300.0	8.0	96.0	580.0	602.43
50	320.0	10.0	120.0	725.0	687.29
60	340.0	12.0	168.0	1182.0	790.55
70	360.0	14.0	210.0	1582.0	902.27



DETAIL "A"



DETAIL OF EXPANSION JOINT & JOINT SUPPORT

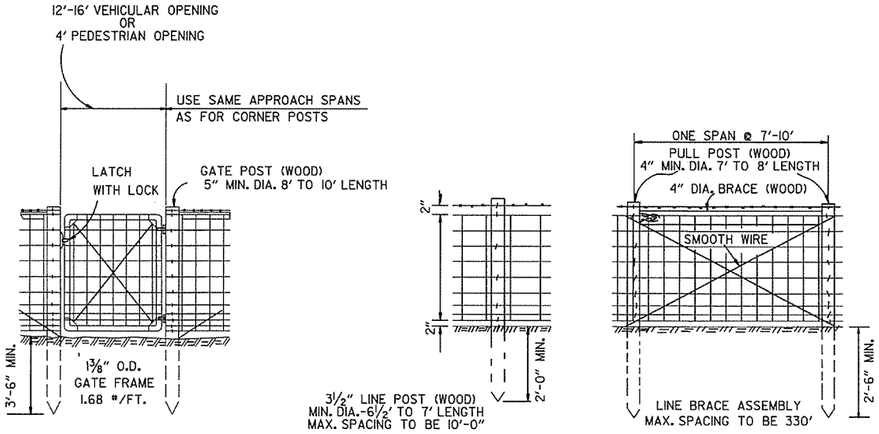
NOTE: THE EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS P.C.C. PAVEMENT (RAMP THICKNESS). WHEN RAMP PAVING IS ASPHALT, EXPANSION JOINT IS NOT REQUIRED.
THE JOINT SUPPORT MAY BE CONSTRUCTED WITH CLASS "A", "S", OR PAVING CONCRETE. PAYMENT FOR THE JOINT SUPPORT SHALL BE FOR THE CONTRACT UNIT PRICE BID FOR THE CLASS OF CONCRETE USED. ALL OTHER WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE JOINT SUPPORT SHALL BE INCLUDED IN THE PRICE BID FOR THE ABOVE ITEMS.

DATE	REVISION	DATE FILM'D
8-22-02	DELETED NOTE	
11-16-01	CORRECTED SPELLING ON ENTRANCE RAMP NOTE	
5-13-99	ADDED, EDITED AND DELETED NOTES	
11-03-94	ADDED NOTE RE: REINF. BARS	
10-1-92	ADDED DETAIL A & OTHER MINOR CHANGES	10-1-92
1-25-90	REVISED EXPANSION JOINT	1-25-90
7-15-88	CONFORM'D TO 1988 SPECIFICATIONS	65C-7-15-88
3-2-81	ISSUED	511-10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

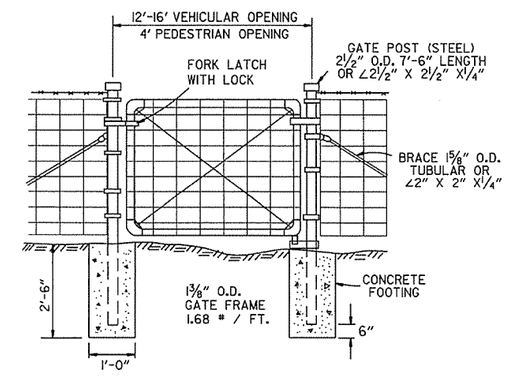
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

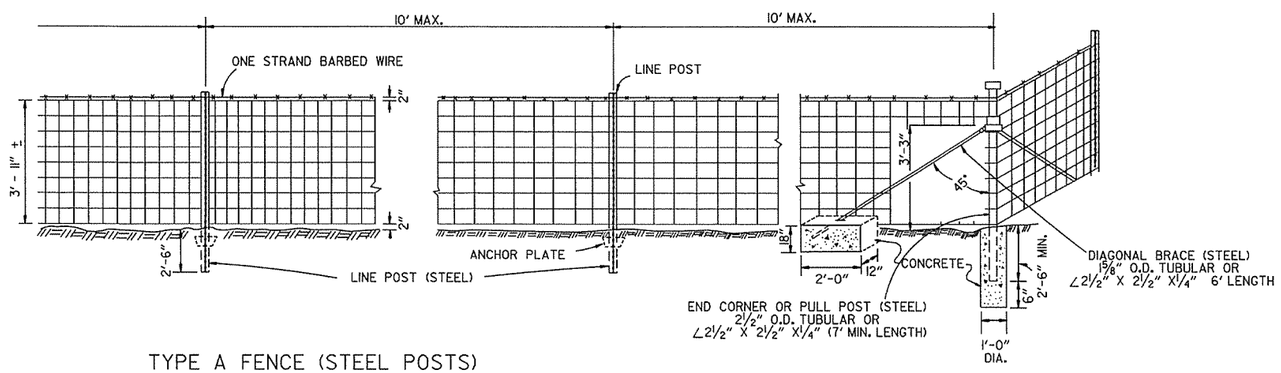
STANDARD DRAWING TR-1A



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).

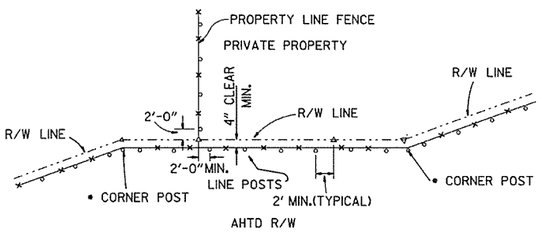
THE CONTRACTOR SHALL FURNISH AT LEAST 25% OF WOOD LINE POSTS OF 7' LENGTHS IN ORDER TO PROVIDE SUFFICIENT SET IN SOFT GROUND OR SMALL DEPRESSIONS.

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.

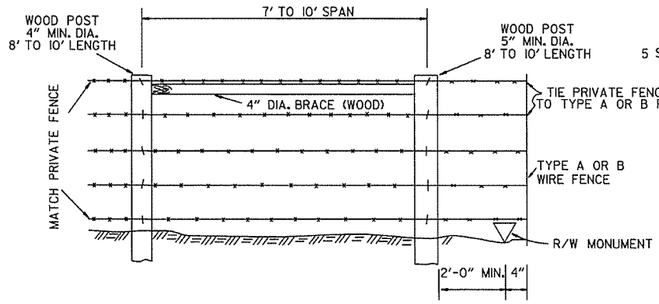
SPLICE FOR BARBED WIRE BETWEEN PULL POST ASSEMBLY SHALL BE BY THE "EYE METHOD": AS DESCRIBED AS FOLLOWS: THE ENDS OF THE BARBED WIRE SHALL BE BENT TO FORM A LOOP. THE LOOPS SHALL BE CONNECTED. AFTER THE LOOPS ARE CONNECTED THE ENDS OF THE WIRE SHALL BE WRAPPED AROUND THE PROJECTING WIRE A MINIMUM OF 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.

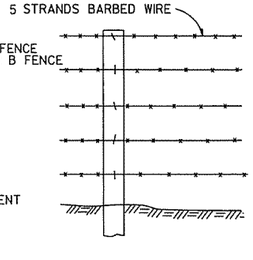
△ - R/W MONUMENTS
○ - FENCE POSTS

RIGHT-OF-WAY FENCE LOCATION



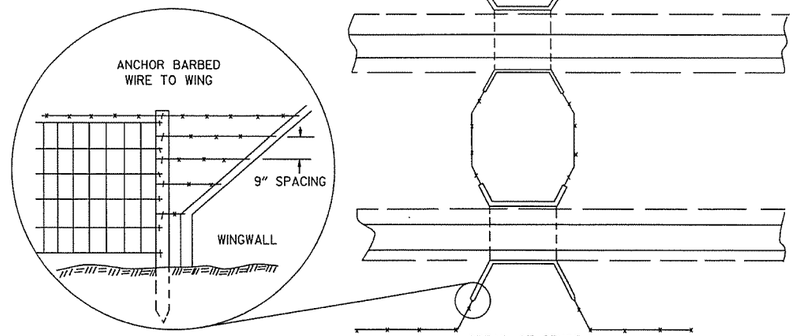
WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS, USE END POST ASSEMBLY AS SHOWN WITH TYPE A FENCE OR OTHER END POST ASSEMBLY AS APPROVED BY THE ENGINEER.

PRIVATE FENCE TERMINAL INSTALLATION



SPACING AND SIZE OF POSTS FOR TYPE B FENCE SHALL BE THE SAME AS TYPE A FENCE.

TYPE B FENCE



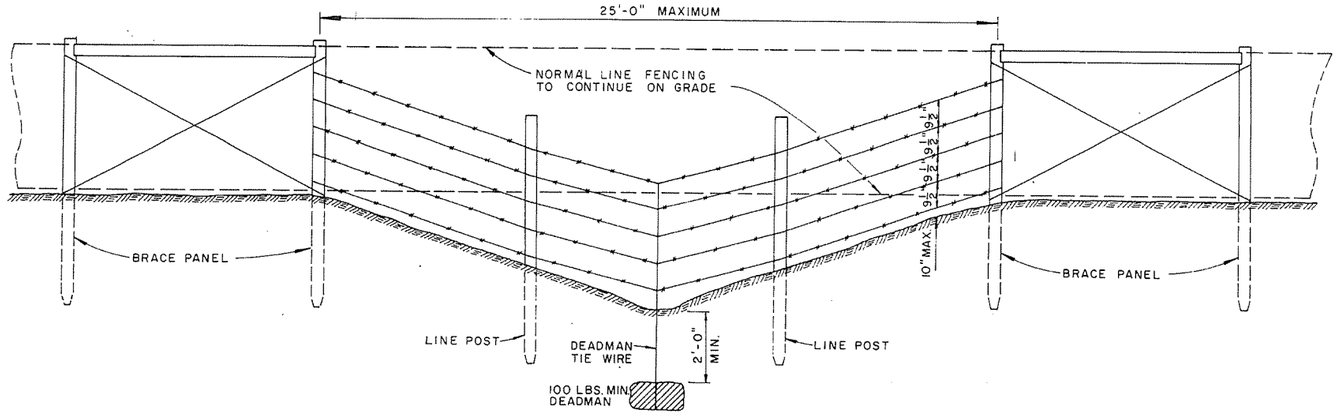
DETAIL OF FENCE CONSTRUCTION AT LARGE CULVERTS (5' IN HEIGHT AND OVER)

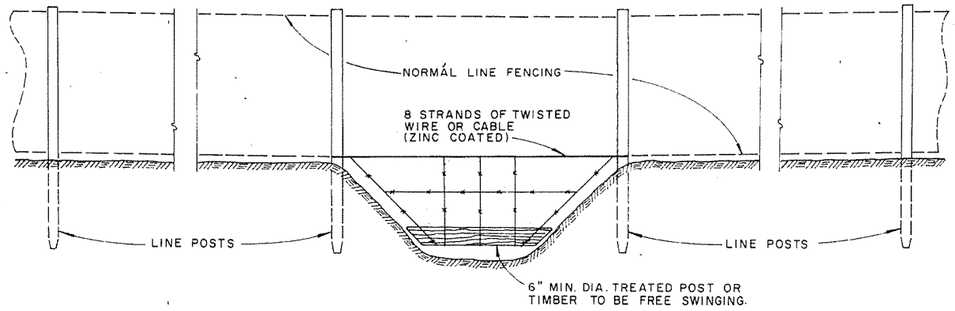
DATE	REVISION	DATE FILMED
8-22-02	REVISED GENERAL NOTES	
10-18-96	REVISED ASTM REF. TO AASHTO	
11-22-95	REVISED R-O-W LOCATION DETAIL	
6-2-94	ADDED CORNER POST NOTE	6-2-94
8-5-93	REVISED R-O-W LOCATION DETAIL	8-5-93
10-1-92	ADDED STAPLE NOTE	
8-2-90	REV'D PULL POST LENGTH	
11-30-89	DELETED CLASS CONC.	
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	

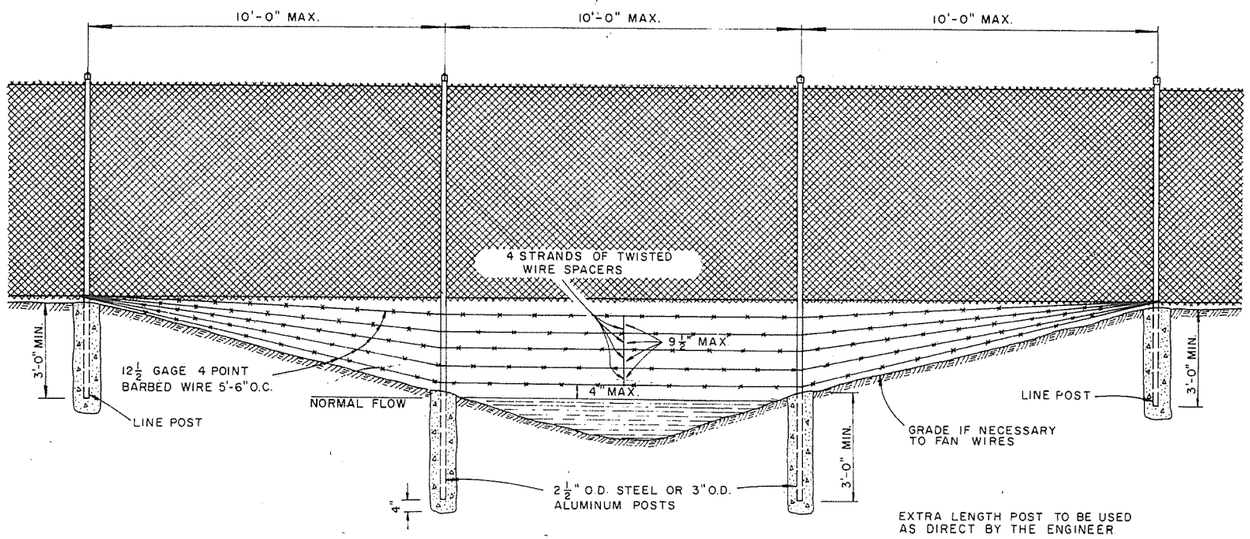
ARKANSAS STATE HIGHWAY COMMISSION

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	696-4-20-79
10-2-72	REVISED & REDRAWN	529 10-2-72

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING

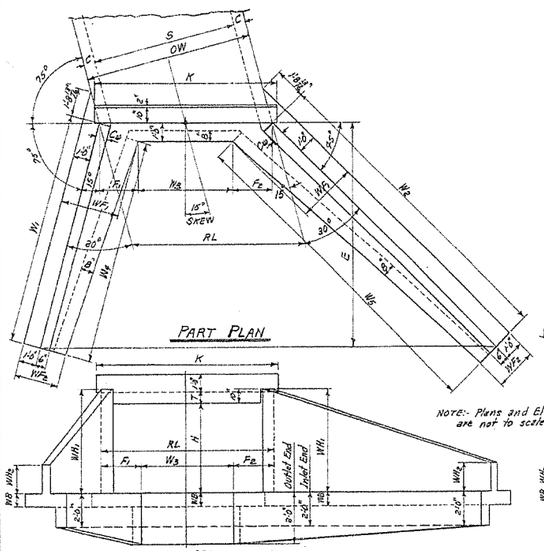
WF-2

1M—11-71—67001—PPASC

Reshot 3-5-93

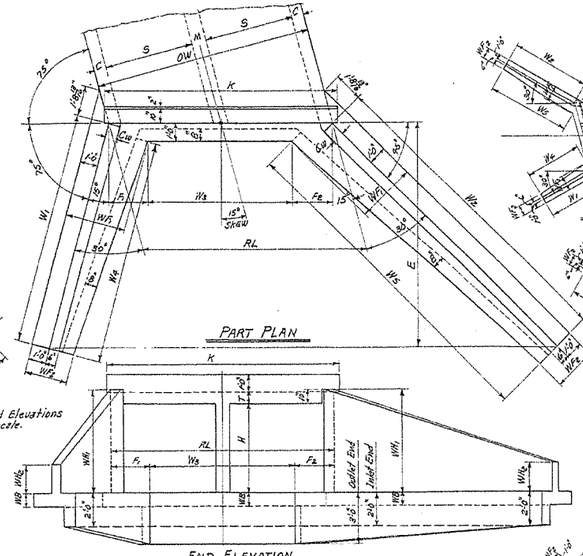
172

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			273	
JOB No.					



SINGLE BARREL CULVERT - 15° SKEW RIGHT FORWARD

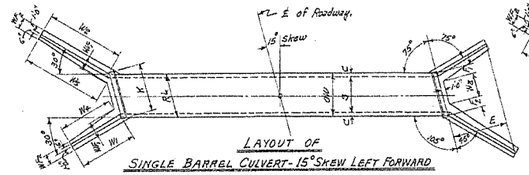
Details of Culvert with 15° Skew Left Forward is reversed, see Layout below.



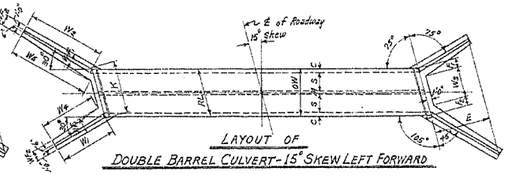
DOUBLE BARREL CULVERT - 15° SKEW RIGHT FORWARD

Details of Culvert with 15° Skew Left Forward is reversed, see Layout below.

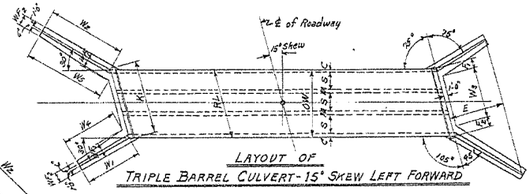
NOTE:- Plans and Elevations are not to scale.



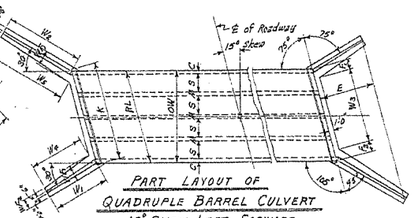
LAYOUT OF SINGLE BARREL CULVERT - 15° SKEW LEFT FORWARD



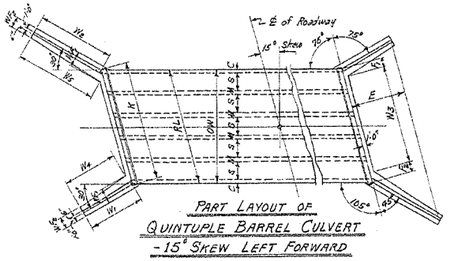
LAYOUT OF DOUBLE BARREL CULVERT - 15° SKEW LEFT FORWARD



LAYOUT OF TRIPLE BARREL CULVERT - 15° SKEW LEFT FORWARD

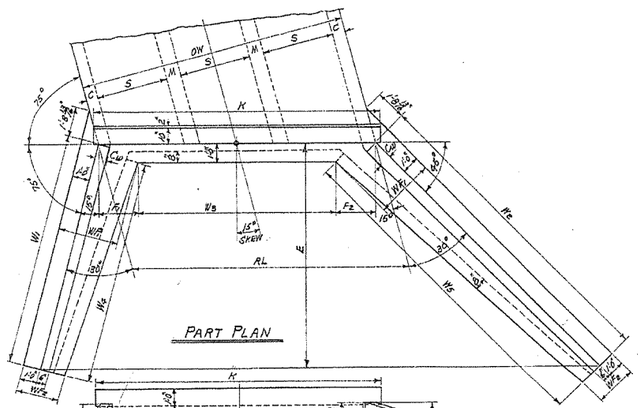


PART LAYOUT OF QUADRUPLE BARREL CULVERT - 15° SKEW LEFT FORWARD



PART LAYOUT OF QUINTUPLE BARREL CULVERT - 15° SKEW LEFT FORWARD

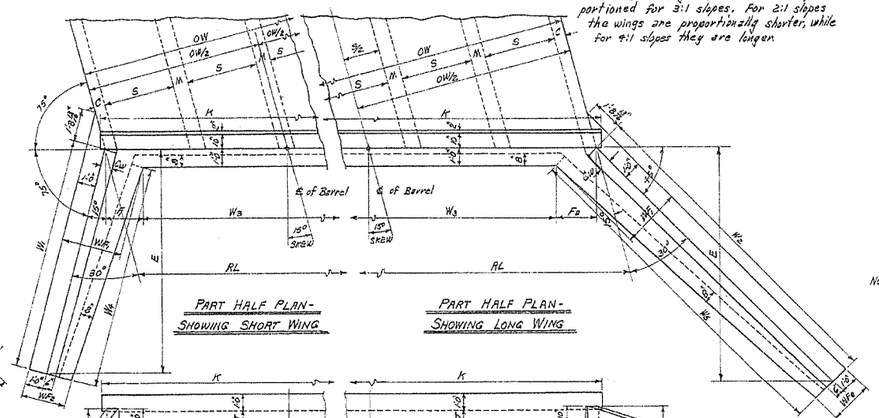
NOTE:- The length of the wings for the Plans, Elevations, and Layouts, as drawn, are proportioned for 3:1 slopes. For 2:1 slopes the wings are proportionally shorter, while for 4:1 slopes they are longer.



TRIPLE BARREL CULVERT - 15° SKEW RIGHT FORWARD

Details of Culvert with 15° Skew Left Forward is reversed, see Layout at top center of sheet.

NOTE:- Plans and Elevations are not to scale.



QUADRUPLE BARREL CULVERT - 15° SKEW RT. FWD.

Details of Culvert with 15° Skew Left Forward is reversed, see Layout at above center.

QUINTUPLE BARREL CULVERT - 15° SKEW RT. FWD.

Details of Culvert with 15° Skew Left Forward is reversed, see Layout above.

ROADWAY LENGTH RL — HEADWALL LENGTH K — APRON DIMENSION W_3

RL = OW x 1.035276 — K = RL + (6½") — $W_3 = RL - (F_1 + F_2)$

USE WITH DRAWING No.	CLEAR SPAN S	CLEAR HEIGHT H	SUM OF DIMENSIONS $F_1 \& F_2$	SINGLE BARREL CULVERT OW	SINGLE BARREL CULVERT RL	SINGLE BARREL CULVERT K	SINGLE BARREL CULVERT W_3	DOUBLE BARREL CULVERT OW	DOUBLE BARREL CULVERT RL	DOUBLE BARREL CULVERT K	DOUBLE BARREL CULVERT W_3	TRIPLE BARREL CULVERT OW	TRIPLE BARREL CULVERT RL	TRIPLE BARREL CULVERT K	TRIPLE BARREL CULVERT W_3	QUADRUPLE BARREL CULVERT OW	QUADRUPLE BARREL CULVERT RL	QUADRUPLE BARREL CULVERT K	QUADRUPLE BARREL CULVERT W_3	QUINTUPLE BARREL CULVERT OW	QUINTUPLE BARREL CULVERT RL	QUINTUPLE BARREL CULVERT K	QUINTUPLE BARREL CULVERT W_3
W-X152-1, W-X153-1 OR W-X154-1. (FOR H=8'0" OR LESS)	4'	2'	2'-0"	5'-0"	5'-2½"	5'-8⅝"	3'-2⅝"	9'-6"	10'-0"	10'-6⅝"	8'-0"	14'-6"	14'-10"	15'-4½"	12'-10"	19'-0"	19'-6"	20'-2⅝"	17'-8"	23'-8"	24'-6"	25'-0⅝"	22'-6"
		3'	2'-9⅜"	5'-0"	"	"	2'-9⅜"	9'-6"	"	"	7'-2⅝"	14'-2"	"	"	12'-0⅝"	19'-0"	"	"	16'-10⅜"	23'-8"	"	"	21'-2⅜"
		4'	3'-7⅞"	5'-0"	"	"	1'-6⅛"	9'-6"	"	"	6'-4½"	14'-2"	"	"	11'-2⅝"	19'-0"	"	"	16'-0⅝"	23'-8"	"	"	20'-10⅞"
		5'	4'-5⅜"	5'-0"	"	"	0'-10⅝"	9'-6"	"	"	5'-6⅝"	14'-2"	"	"	10'-4⅜"	19'-0"	"	"	15'-2⅝"	23'-8"	"	"	20'-0⅜"
		6'	5'-3⅞"	5'-2½"	5'-10⅝"	0'-1"		9'-11"	10'-3½"	10'-9⅝"	5'-0"	14'-8"	15'-2¾"	15'-8⅝"	9'-11"	19'-5"	20'-1⅝"	20'-7⅝"	14'-10"	24'-2"	25'-0⅛"	25'-5⅛"	19'-8"
	5'	3'	2'-9⅜"	6'-0"	6'-2½"	6'-9"	3'-6⅝"	11'-6"	12'-1"	12'-7½"	9'-3⅛"	17'-6"	17'-10⅜"	18'-5⅛"	15'-1⅛"	23'-0"	23'-5⅝"	24'-1⅝"	21'-0"	28'-8"	29'-0⅞"	30'-2⅛"	26'-10⅛"
		4'	3'-7⅞"	6'-0"	"	"	2'-7"	11'-6"	"	"	8'-5⅜"	17'-6"	"	"	14'-3⅝"	23'-0"	"	"	20'-2⅜"	28'-8"	"	"	26'-0⅛"
		5'	4'-5⅜"	6'-0"	"	"	1'-9⅛"	11'-6"	"	"	7'-7⅛"	17'-6"	"	"	13'-6"	23'-0"	"	"	19'-4⅛"	28'-8"	"	"	25'-2⅜"
		6'	5'-3⅜"	6'-2"	6'-6½"	6'-11⅜"	1'-1¼"	11'-11"	12'-5"	12'-10½"	7'-0⅞"	17'-8"	18'-3½"	18'-10"	13'-0⅝"	23'-5"	24'-0⅛"	24'-7⅝"	18'-1⅜"	28'-2"	29'-0⅛"	30'-2⅝"	24'-11⅛"
		7'	6'-5⅜"	6'-5"	6'-9⅝"	7'-0⅜"	Ⓐ 0"	12'-1"	12'-6⅝"	13'-0⅛"	6'-0⅝"	17'-11"	18'-6⅝"	19'-1"	12'-0⅜"	23'-9"	24'-1"	25'-1⅛"	16'-1⅝"	29'-2"	30'-1⅝"	31'-2"	26'-1⅝"
	6'	3'	2'-9⅜"	7'-0"	7'-3"	7'-9⅝"	4'-3⅝"	13'-8"	14'-1⅝"	14'-8⅝"	11'-6"	20'-2"	21'-0⅝"	21'-7"	18'-2⅝"	27'-0"	27'-6⅛"	28'-5⅝"	25'-1⅜"	33'-8"	34'-6⅛"	35'-4⅝"	32'-10¾"
		4'	3'-7⅞"	7'-0"	"	"	3'-1⅞"	13'-8"	"	"	10'-4⅝"	20'-2"	"	"	17'-1"	27'-0"	"	"	23'-6"	33'-8"	"	"	30'-4⅝"
		5'	4'-5⅜"	7'-0"	"	"	2'-0⅝"	13'-8"	"	"	9'-1⅞"	20'-2"	"	"	15'-7⅞"	27'-0"	"	"	22'-0⅝"	33'-8"	"	"	28'-6⅛"
		6'	5'-3⅜"	7'-2"	7'-7½"	7'-11⅝"	2'-1⅞"	13'-11"	14'-5"	14'-11⅛"	9'-11⅞"	20'-8"	21'-4⅜"	21'-11⅛"	16'-11"	27'-5"	28'-0⅝"	28'-11"	23'-1⅛"	34'-2"	35'-0⅝"	35'-11"	30'-1⅛"
		7'	6'-5⅜"	7'-3"	7'-7½"	8'-0⅛"	1'-0⅝"	14'-1"	14'-7"	15'-1⅛"	8'-1⅛"	20'-11"	21'-7⅜"	22'-2⅝"	15'-2"	27'-9"	28'-5⅜"	29'-3⅛"	22'-3"	34'-7"	35'-6⅜"	36'-5"	29'-3⅜"
		8'	7'-5⅜"	7'-4"	7'-7½"	8'-1⅜"	Ⓐ 0"	14'-2"	14'-8"	15'-2⅝"	6'-11⅞"	21'-0"	21'-8⅝"	22'-3⅝"	14'-0⅝"	27'-10"	28'-5⅝"	29'-4⅝"	21'-1⅛"	34'-8"	35'-6⅝"	36'-5"	28'-8"
	7'	4'	3'-7⅞"	8'-0"	8'-3⅜"	8'-9⅝"	4'-7⅝"	15'-8"	16'-2⅝"	16'-9"	12'-7"	23'-6"	24'-1⅛"	24'-8⅝"	20'-6⅝"	31'-0"	32'-1⅛"	32'-7⅝"	26'-3⅝"	38'-8"	40'-0⅝"	40'-0⅝"	36'-4⅝"
		5'	4'-5⅜"	8'-0"	"	"	3'-10"	15'-8"	"	"	11'-3⅝"	23'-6"	"	"	19'-1⅝"	31'-0"	"	"	27'-7⅝"	38'-8"	"	"	35'-7"
		6'	5'-3⅜"	8'-2"	8'-6½"	9'-0"	3'-2⅝"	15'-11"	16'-5⅝"	17'-0⅛"	11'-2⅝"	23'-8"	24'-6"	25'-0⅛"	19'-2⅝"	31'-5"	32'-6⅝"	33'-0⅛"	27'-3"	39'-2"	40'-6⅜"	41'-1"	35'-3⅝"
		7'	6'-5⅜"	8'-3"	8'-7½"	9'-1"	2'-0⅜"	16'-1"	16'-7⅝"	17'-2⅝"	10'-2"	23'-11"	24'-9⅜"	25'-5⅜"	18'-3⅝"	31'-9"	32'-10⅜"	33'-5"	26'-5⅝"	39'-7"	40'-11⅞"	41'-6"	35'-2⅝"
		8'	7'-5⅜"	8'-4"	8'-7½"	9'-2"	0'-11"	16'-2"	16'-8⅝"	17'-3⅝"	9'-0⅝"	24'-1"	25'-0"	25'-6½"	17'-1⅛"	31'-10"	32'-11⅝"	33'-6"	25'-4"	39'-8"	41'-0⅜"	41'-7½"	33'-11½"
	9'	4'	3'-7⅞"	9'-0"	9'-3⅜"	9'-10½"	5'-5⅝"	17'-8"	18'-2⅝"	18'-10"	14'-5"	26'-4"	27'-3⅛"	27'-10⅝"	23'-7⅛"	35'-0"	36'-0⅜"	36'-9⅛"	32'-1⅝"	43'-8"	45'-2⅝"	45'-9"	41'-7"
		5'	4'-5⅜"	9'-2"	9'-5⅝"	10'-0⅝"	5'-0⅝"	17'-11"	18'-5⅝"	19'-1"	14'-1½"	26'-8"	27'-7⅛"	28'-1⅝"	23'-2"	35'-5"	36'-6"	37'-2⅝"	32'-0⅜"	43'-8"	45'-3⅝"	46'-0⅝"	41'-3⅛"
		6'	5'-3⅜"	9'-3"	"	"	4'-10⅜"	17'-11"	"	"	13'-8½"	26'-8"	"	"	22'-6"	36'-5"	"	"	31'-9⅛"	43'-8"	"	"	40'-5⅝"
		7'	6'-5⅜"	9'-3"	9'-7"	10'-1⅛"	3'-1"	18'-1"	18'-8⅜"	19'-3"	12'-10⅝"	27'-0"	27'-11⅜"	28'-5⅝"	21'-11⅝"	36'-10"	37'-10⅝"	38'-5⅝"	30'-6½"	44'-3"	45'-9⅜"	46'-6⅜"	39'-10"
		8'	7'-5⅜"	9'-4"	9'-7"	10'-2"	1'-11⅝"	18'-2"	18'-9⅛"	19'-3⅝"	11'-7⅝"	27'-0"	27'-11⅜"	28'-5⅝"	20'-11"	36'-11"	37'-11⅛"	38'-6⅛"	29'-6⅝"	44'-4"	45'-10⅜"	46'-6⅜"	38'-10⅝"
	9'	5'	4'-5⅜"	10'-2"	10'-6⅝"	11'-0⅝"	6'-1"	19'-11"	20'-7½"	21'-2"	16'-2"	29'-8"	30'-8½"	31'-3⅛"	26'-3⅝"	39'-5"	40'-6⅝"	41'-0⅝"	36'-4½"	49'-2"	50'-10⅝"	51'-5⅝"	46'-5⅝"
		6'	5'-3⅜"	10'-3"	10'-7⅝"	11'-1⅝"	5'-10⅜"	20'-1"	20'-8½"	21'-3"	15'-6⅝"	29'-11"	30'-11⅝"	31'-6"	25'-6⅝"	39'-10"	41'-1⅞"	41'-8⅝"	35'-10⅝"	49'-7"	51'-4"	51'-10⅝"	46'-10⅝"
		7'	6'-5⅜"	10'-3"	"	"	4'-7⅝"	20'-1"	"	"	14'-9⅝"	29'-11"	"	"	24'-5⅝"	39'-10"	"	"	34'-8"	49'-7"	"	"	44'-4"
		8'	7'-5⅜"	10'-4"	10'-8⅜"	11'-2⅝"	3'-11⅝"	20'-2"	20'-10⅛"	21'-5"	13'-5"	30'-0"	31'-0⅝"	31'-7⅛"	23'-4⅝"	39'-10"	41'-3⅛"	41'-10⅛"	33'-6⅛"	49'-8"	51'-5"	52'-1⅛"	43'-3⅝"
	10'	5'	4'-5⅜"	11'-2"	11'-6⅝"	12'-1⅛"	7'-1⅝"	21'-11"	22'-8⅝"	23'-3⅝"	18'-3"	32'-8"	33'-9⅝"	34'-4⅝"	29'-4⅛"	43'-5"	44'-6⅛"	45'-1⅛"	39'-6"	54'-2"	56'-1"	56'-7½"	51'-7½"
		6'	5'-3⅜"	11'-3"	11'-7⅝"	12'-2⅛"	6'-0⅝"	22'-1"	22'-10⅜"	23'-5⅝"	17'-2⅝"	32'-11"	34'-1"	34'-7½"	28'-3⅝"	43'-9"	44'-10⅝"	45'-5⅛"	39'-0"	54'-7"	56'-6"	57'-0⅝"	51'-7"
		7'	6'-5⅜"	11'-3"	"	"	5'-1⅜"	22'-1"	"	"	16'-0⅝"	32'-11"	"	"	27'-7"	43'-9"	"	"	38'-5⅝"	54'-7"	"	"	50'-0⅝"
		8'	7'-5⅜"	11'-4"	11'-8⅜"	12'-3"	4'-10⅝"	22'-2"	22'-11⅛"	23'-5⅝"	15'-2⅝"	33'-0"	34'-2"	34'-8½"	26'-8½"	43'-10"	45'-0⅛"	45'-11"	37'-8"	54'-8"	56'-7⅛"	57'-1⅛"	48'-10⅝"
	11'	6'	5'-3⅜"	12'-4"	12'-8⅝"	13'-2⅝"	7'-6"	24'-2"	25'-0⅛"	25'-6⅝"	19'-3"	36'-0"	37'-3⅜"	37'-9⅝"	32'-0"	47'-11"	49'-1⅛"	49'-8"	42'-3"	59'-8"	61'-8"	62'-3"	56'-3"
		7'	6'-5⅜"	12'-5"	"	"	6'-3⅝"	24'-2"	"	"	18'-6⅝"	36'-0"	"	"	30'-9⅝"	47'-11"	"	"	41'-9"	59'-8"	"	"	55'-8"
		8'	7'-5⅜"	12'-6"	"	"	5'-0⅝"	24'-2"	"	"	17'-5⅜"	36'-0"	"	"	29'-4⅝"	47'-11"	"	"	40'-4⅜"	59'-8"	"	"	54'-4"
	12'	6'	5'-3⅜"	13'-9"	14'-1⅜"	14'-7⅝"	9'-0"	26'-4"	27'-1"	27'-7⅝"	21'-10"	39'-0"	40'-0⅝"	40'-6"	35'-1⅝"	51'-10"	53'-0"	53'-7½"	46'-7"	64'-7"	66'-7"	67'-2"	61'-2"
		7'	6'-5⅜"	13'-9"	"	"	7'-9⅜"	26'-5"	"	"	20'-7⅝"	39'-0"	"	"	33'-10⅝"	51'-10"	"	"	44'-8"	64'-7"	"	"	59'-8"
		8'	7'-5⅜"	13'-10"	"	"	6'-7"	26'-5"	"	"	19'-9⅝"	39'-0"	"	"	32'-5"	51'-10"	"	"	43'-5½"	64'-7"	"	"	58'-4"
W-X152-2, W-X153-2 OR W-X154-2. (FOR H=9'0" & OVER)	7'	9'	8'-11⅝"	8'-6"	8'-10⅜"	9'-6"	Ⓐ 0"	16'-5"	17'-0"	17'-6½"	8'-0⅝"	24'-6"	25'-5½"	26'-0⅛"	16'-3"	32'-8"	33'-6⅝"	33'-11"	24'-5⅝"	40'-8"	41'-7"	42'-1½"	32'-7⅝"
	8'	9'	8'-11⅝"	9'-6"	9'-10"	10'-9⅝"	0'-10⅝"	18'-5"	19'-0⅝"	19'-7⅝"	10'-1½"	27'-6"	28'-5⅜"	28'-10"	19'-9⅝"	36'-8"	37'-6⅝"	38'-0⅝"	28'-7"	45'-2"	46'-3⅜"	47'-0⅝"	37'-3⅝"
		10'	10'-2"	9'-8"	10'-0⅝"	10'-9⅝"	Ⓐ 0"	18'-8"	19'-3⅝"	19'-10⅝"	9'-2"	27'-8"	28'-7⅝"	29'-2⅛"	19'-5⅝"	36'-8"	37'-11⅛"	38'-6"	27'-9⅝"	45'-8"	46'-9⅜"	47'-6⅜"	37'-1⅝"
	9'	9'	8'-11⅝"	10'-6"	10'-10⅝"	11'-5"	1'-11⅝"	20'-5"	21'-1⅝"	21'-8⅛"	12'-2⅝"	30'-4"	31'-4⅝"	31'-11⅝"	22'-5½"	40'-8"	41'-9"	42'-3⅛"	31'-11½"	50'-8"	51'-11⅝"	52'-5⅝"	42'-3½"
		10'	10'-2"	10'-8"	11'-0⅝"	11'-5"	0'-10⅝"	20'-8"	21'-4⅜"	21'-11⅝"	11'-2⅝"	30'-8"	31'-8"	32'-3⅛"	21'-7"	40'-8"	42'-1⅛"	42'-7½"	31'-1½"	50'-8"	52'-2⅝"	53'-0"	42'-3½"
		11'	11'-5⅝"	10'-10"	11'-2⅝"	11'-9"	Ⓐ 0"	20'-11"	21'-7⅝"	22'-2⅝"	11'-2⅝"	30'-11"	31'-11"	32'-5⅝"	20'-10⅛"	40'-11"	42'-3⅛"	42'-10"	30'-10⅝"	50'-10"	52'-3⅝"	53'-3"	42'-1⅝"
	10'	9'	8'-11⅝"	11'-6"	11'-10⅜"	12'-5⅛"	2'-11⅝"	22'-5"	23'-1⅜"	23'-9"	18'-3⅜"	33'-4"	34'-4⅛"	35'-0"	25'-0⅝"	44'-3"	45'-5⅜"	46'-0"	36'-1⅝"	55'-2"	57'-1⅞"	57'-7½"	48'-2"
		10'	10'-2"	11'-8"	12'-1"	12'-7½"	1'-11"	22'-8"	23'-5⅛"	24'-0"	18'-9⅜"	33'-8"	34'-10⅛"	35'-5⅜"	25'-6⅝"	44'-8"	46'-0⅝"	46'-7½"	36'-7"	55'-8"	57'-7⅝"	58'-2"	47'-10⅝"
		11'	11'-5⅝"	11'-10"	12'-3"	12'-9⅝"	0'-10⅜"	22'-10"	23'-7⅞"	24'-2"	12'-3"	33'-11"	35'-0⅝"	35'-6⅝"	23'-7⅜"	44'-10"	46'-1⅝"	46'-7⅛"	35'-6"	55'-10"	57'-9⅝"	58'-4"	46'-5"
		12'	12'-7⅝"	12'-0"	12'-5⅛"	12'-11⅝"	Ⓐ 0"	23'-0"	23'-9⅝"	24'-4⅝"	11'-2⅝"	34'-0"	35'-2⅜"	35'-8⅜"	22'-7"	45'-0"	46'-3"	47'-1⅛"	33'-11⅝"	56'-0"	57'-11⅝"	58'-6"	45'-6⅛"
	11'	9'	8'-11⅝"	12'-6"	12'-11⅛"	13'-5⅝"	4'-0"	24'-5"	25'-3⅜"	25'-9⅝"	16'-9"	36'-4"	37'-7⅝"	38'-1⅝"	28'-8"	48'-3"	49'-5⅞"	50'-0⅝"	40'-0⅛"	—	—	—	—
		10'	10'-2"	12'-8"	13'-1⅜"	13'-7⅞"	2'-11⅝"	24'-8"	25'-6⅛"	26'-1"	15'-9⅜"	36'-8"	37'-11⅝"	38'-6"	27'-9⅝"	48'-8"	50'-0⅝"	50'-11"	39'-2⅝"	—	—	—	—
		11'	11'-5⅝"	12'-10"	13'-3⅝"	13'-10⅝"	1'-10⅝"	24'-10"	25'-8⅝"	26'-3⅝"	14'-8⅝"	36'-10"	38'-1⅝"	38'-8"	26'-9"	48'-10"	50'-2⅝"	51'-1"	38'-3½"	—	—	—	—
		12'	12'-7⅝"	13'-0"	13'-5⅝"	13'-10"	0'-10⅝"	25'-0"	25'-10⅝"	26'-5"	13'-8⅜"	37'-0"	38'-3⅝"	38'-10"	25'-8⅜"	49'-0"	50'-3⅝"	51'-3⅝"	38'-1⅜"	—	—	—	—
	12'	9'	8'-11⅝"	13'-6"	13'-11⅜"	14'-5⅝"	5'-1⅝"	26'-5"	27'-3⅛"	27'-10⅛"	18'-5"	39'-6"	40'-8⅝"	41'-3"	31'-3½"	52'-3"	53'-6⅛"	54'-1⅛"	43'-7¼"	—	—	—	—
		10'	10'-2"	13'-8"	14'-1⅝"	14'-8⅜"	3'-11⅝"	26'-8"	27'-6⅜"	28'-1⅜"	17'-5⅝"	39'-8"	40'-10⅜"	41'-5"	30'-10⅜"	52'-8"	54'-0⅝"	54'-6⅝"	43'-1⅝"	—	—	—	—
		11'	11'-5⅝"	13'-10"	14'-3⅜"	14'-10⅛"	2'-11⅛"	26'-10"	27'-9⅝"	28'-5⅜"	16'-6⅝"	39'-10"	41'-0⅜"	41'-7⅛"	29'-10⅛"	52'-10"	54'-3⅛"	54'-10⅛"	42'-7⅛"	—	—	—	—
		12'	12'-7⅝"	14'-0"	14'-5⅜"	15'-0⅝"	1'-10⅝"	27'-0"	27'-11⅜"	28'-6"	15'-4"	40'-0"	41'-2⅜"	41'-11⅛"	28'-9⅜"	53'-0"	54'-5⅜"	55'-0⅝"	42'-1"	—	—	—	—

Ⓐ Special case for these boxes. See Detail "A" and Table "A" for revised values of F_1, F_2, W_3 and W_5, when apron width is more than 1'-0 and $W_3 = 0$. For Details "A" and Tables "A" for each slope, see Drawing Nos. W-X152-1, W-X152-2, or W-X153-1, W-X153-2, or W-X154-1, W-X154-2.

NOTE:- This drawing to be used in conjunction with Standard Wing Drawings for 15° Skews for each slope as listed below.

2:1 Slopes	3:1 Slopes	4:1 Slopes
W-X152-1 or W-X152-2	W-X153-1 or W-X153-2	W-X154-1 or W-X154-2.

This drawing to be used in conjunction with Std. Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-115X-0	R-215X-0	R-315X-0	R-415X-0	R-515X-0
R-115X-1	R-215X-1	R-315X-1	R-415X-1	R-515X-1
	R-215X-2	R-315X-2		

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD WINGS FOR REINFORCED CONCRETE BOX CULVERTS 15° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 2:1, 3:1 & 4:1 SLOPES

SINGLES, DOUBLES, TRIPLES, QUADRUPLES & QUINTUPLES. — ALL DEPTHS OF COVER H=2', 3', 4', 5', 6', 7', 8', 9', 10', 11' & 12'.

STANDARD DRAWING NO. W-X15

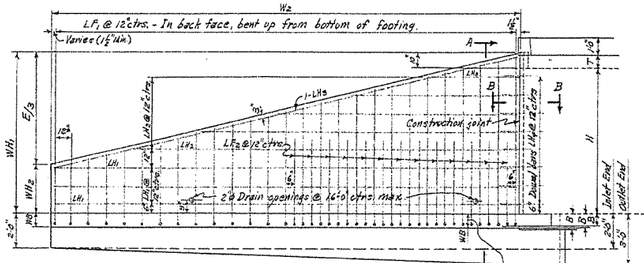
Designed by:- W.C.H. 5-22-63. Checked by:- Checked by:- J.E.M. 6-20-63
Traced by:- W.C.H. 6-19-63 Checked by:- Quantities by:-

(31)

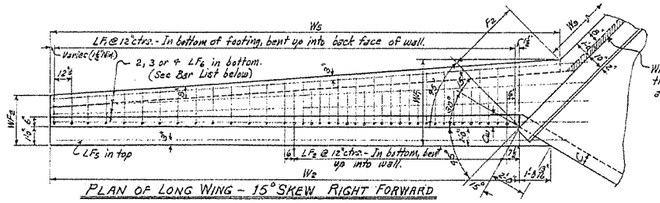
RESHOT 3-8-93

175 3

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK.			274	
JOB No.					



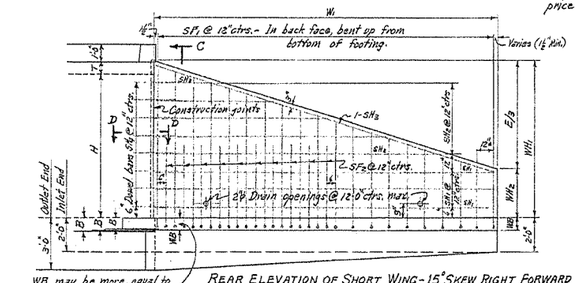
REAR ELEVATION OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING



PLAN OF LONG WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING.

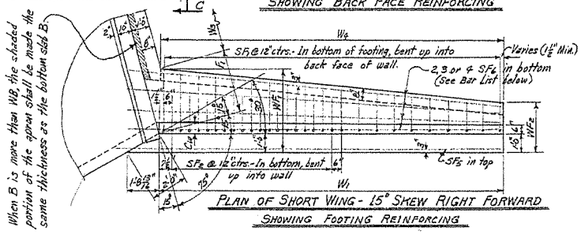
When B is more than WB, the shaded portion of the apron shall be made the same thickness as the bottom slab B.

NOTE:- Payment for membrane waterproofing and roofing felt to be included in the price bid for Class S Concrete.

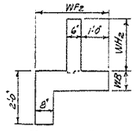


REAR ELEVATION OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING BACK FACE REINFORCING

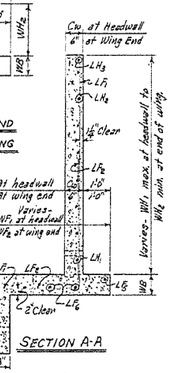
When B is more than WB the shaded portion of the apron shall be made the same thickness as the bottom slab B.



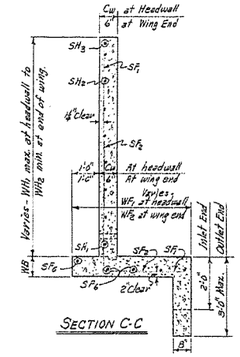
PLAN OF SHORT WING - 15° SKEW RIGHT FORWARD
SHOWING FOOTING REINFORCING



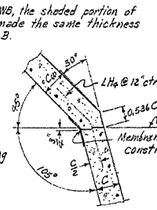
TYPICAL END VIEW OF WING



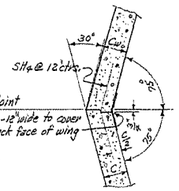
SECTION A-A



SECTION C-C

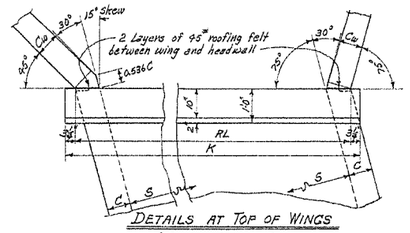


SECTION B-B

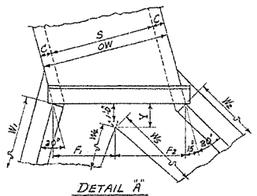


SECTION D-D

SECTIONS THRU CONSTRUCTION JOINTS



DETAILS AT TOP OF WINGS
15° SKEW RIGHT FORWARD



DETAIL "A"

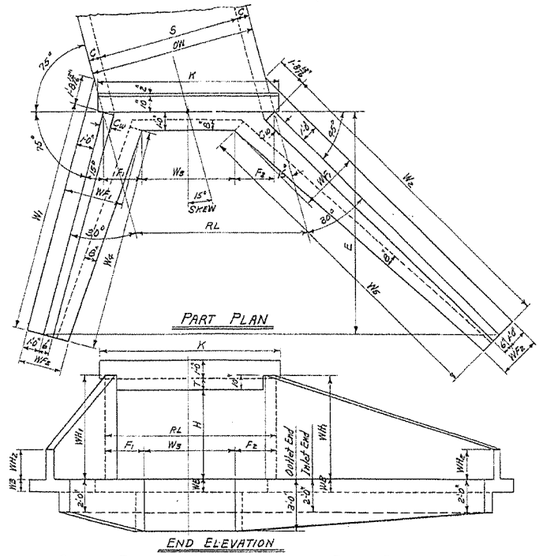
TABLE "A" - DIMENSIONS FOR DETAIL "A"

S	H	F_1	F_2	W_4	W_5	W_3	Y
5'	7'	3'0"	3'5⅝"	16'10⅝"	25'0⅜"	0"	1'0⅛"
6'	8'	3'6"	4'1⅛"	19'0⅛"	28'3⅞"	0"	1'1"

REGULAR WING DIMENSIONS - 3:1 SLOPES

CLEAR HEIGHT OF BOX	THICKNESS OF WING FOOTING	THICKNESS OF WINGS AT HEAD'L & C	WINGWALL HEIGHTS AT HEADWALL	WINGWALL HEIGHTS AT END OF WING	WIDTHS OF WING FOOTINGS AT HEADWALL	WIDTHS OF WING FOOTINGS AT END OF WING	FOOTING DIMENSION PARALLEL WITH HEADWALL SHORT WING	FOOTING DIMENSION PARALLEL WITH HEADWALL LONG WING	PERPENDICULAR DIST. FROM HEAD TO END OF WING	LENGTHS OF WINGWALLS SHORT WING	LENGTHS OF WINGWALLS LONG WING	INSIDE FOOTING DIMENSIONS SHORT WING	INSIDE FOOTING DIMENSIONS LONG WING	* QUANTITY PER WING CLASS S CONCRETE INLET END SHORT WING	* QUANTITY PER WING CLASS S CONCRETE INLET END LONG WING	* QUANTITY PER WING CLASS S CONCRETE OUTLET END SHORT WING	* QUANTITY PER WING CLASS S CONCRETE OUTLET END LONG WING
H	WB	C_W	WH_1	WH_2	WF_1	WF_2	F_1	F_2	E	W_1	W_2	W_4	W_5	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
2'	7"	6"	2'10"	0'6"	2'-4"	2'0"	1'-1⅜"	0'-10⅝"	6'-6"	6'-6⅝"	9'2⅝"	6'0½"	9'-1½"	0.789	1.094	0.876	1.212
3'	7"	6"	3'10"	1'0"	2'8"	2'-1⅝"	1'-5⅝"	1'-4⅛"	8'-6"	8'-3½"	12'0½"	8'-2½"	12'3½"	1.186	1.650	1.300	1.808
4'	7"	6"	4'10"	1'-4"	3'0"	2'-3"	1'-9⅜"	1'-10"	10'-6"	10'-10⅜"	14'10⅛"	10'-4⅝"	15'-5⅛"	1.656	2.305	1.797	2.502
5'	7"	6"	5'10"	1'-8"	3'-4"	2'-6½"	2'-3⅜"	2'-3⅝"	12'-6"	12'-11⅛"	17'-8½"	12'-6⅝"	18'-7½"	2.196	3.059	2.363	3.295
		7"	5'10"	1'-8"	3'-4"	2'-6⅝"	2'-3⅝"	2'-3⅝"	12'-6"	12'-11⅛"	17'-8½"	12'-6⅝"	18'-7½"	2.287	3.188	2.455	3.428
6'	8"	7"	6'10"	2'0"	3'-8"	2'-6"	2'-5⅝"	2'-5⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-8"	3.052	4.252	3.296	4.517
		7⅞"	6'10"	2'0"	3'-8"	2'-6"	2'-5⅝"	2'-5⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-8"	3.114	4.329	3.309	4.605
		8"	6'10"	2'0"	3'-8"	2'-6"	2'-5⅝"	2'-5⅝"	14'-6"	15'-0⅝"	20'-6"	14'-8⅝"	21'-8"	3.177	4.417	3.371	4.693
* 7'	8⅝"	7⅛"	7'10"	2'-8"	4'-2"	2'-10⅝"	3'-0⅛"	3'-0⅝"	16'-6"	17'-1"	23'-4"	16'-10⅜"	25'-1"	3.998	5.560	4.220	5.877
		8"	7'10"	2'-8"	4'-2"	2'-10⅝"	3'-0⅛"	3'-0⅝"	16'-6"	17'-1"	23'-4"	16'-10⅜"	25'-1"	4.079	5.675	4.301	5.991
* 8'	9"	8"	8'10"	2'-8"	4'-8"	2'-9"	3'-6⅝"	4'-2⅛"	18'-6"	19'-1⅝"	26'-2"	19'-1⅛"	28'-5"	5.111	7.111	5.360	7.470

* Quantity per wing does not include headwall or that portion of apron or footwall for the length W_3.
◎ See Table "A" for special values of F_1 & F_2 and W_4 & W_5 for Single 5'x7' and 6'x8' Box Culverts.



PART PLAN

END ELEVATION

SINGLE BARREL CULVERT - 15° SKEW RIGHT FORWARD
Details of Culvert with 15° Skew Left Forward is reversed, see Drwg. No. W-X15

TYPICAL WING DETAILS

Note:- For remainder of General Plans and Elevations of Single, Double, Triple, Quadruple and Quintuple Span Culverts, see Std. Drawing No. W-X15. For values of H, K, and W_6 for each box, see the above Std. also.

MEMBRANE:- A membrane waterproofing 12" wide, consisting of three moppings of waterproofing asphalt and two alternate layers of treated cotton fabric shall be applied to the back face of wing to cover the construction joints in wings.

QUANTITIES

CLEAR SPAN	CLEAR HEIGHT	THICKNESS OF WINGS AT HEADWALL	THICKNESS OF WING FOOTING	◎ STEEL - REINFORCING PER 4 WINGS	CLASS S CONCRETE - 4 WINGS HEADWALLS, WINGWALLS, FOOTINGS, TOEWALLS AND APRONS SINGLE BARREL CULVERT	DOUBLE BARREL CULVERT	TRIPLE BARREL CULVERT	QUADRUPLE BARREL CULVERT	QUINTUPLE BARREL CULVERT
S	H	C_W	WB	LB.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.	Cu.Yd.
4'	2'	6"	7"	117	4.73	5.78	6.77	7.77	8.76
	3'	6"	7"	176	6.65	7.69	8.63	9.63	10.62
	4'	6"	7"	267	8.85	9.86	10.84	11.83	12.82
	5'	6"	7"	379	11.90	12.38	13.38	14.37	15.36
	6'	7"	8"	626	15.95	16.95	17.98	18.51	19.53
5'	3'	6"	7"	176	6.87	8.07	9.28	10.48	11.69
	4'	6"	7"	267	9.08	10.28	11.49	12.69	13.90
	5'	6"	7"	379	11.41	12.81	14.02	15.23	16.44
	6'	7"	8"	626	15.67	16.90	18.16	19.38	20.61
	7'	7⅞"	8⅝"	1210	20.11	21.36	22.62	23.88	25.14
6'	3'	6"	7"	176	7.09	8.52	9.92	11.34	12.78
	4'	6"	7"	267	9.29	10.73	12.13	13.56	14.98
	5'	6"	7"	379	11.83	13.26	14.67	16.10	17.53
	6'	7"	8"	626	15.89	17.35	18.79	20.25	21.70
	7'	7⅞"	8⅝"	1210	20.33	21.81	23.28	24.76	26.24
	8'	8"	9"	1533	25.56	27.05	28.53	30.02	31.50
7'	4'	6"	7"	267	9.52	11.18	12.81	14.47	16.09
	5'	6"	7"	379	12.05	13.72	15.35	17.01	18.63
	6'	7"	8"	626	16.12	17.80	19.45	21.13	22.78
	7'	7⅞"	8⅝"	1210	20.56	22.26	23.94	25.64	27.33
	8'	8"	9"	1533	25.80	27.50	29.20	30.90	32.60
8'	4'	6"	7"	267	9.75	11.65	13.51	15.41	17.23
	5'	7"	7"	379	12.74	14.69	16.55	18.47	20.31
	6'	7"	8"	626	16.39	18.26	20.14	22.04	23.90
	7'	7⅞"	8⅝"	1210	20.78	22.72	24.62	26.55	28.42
	8'	8"	9"	1533	26.03	27.96	29.86	31.80	33.71
9'	5'	7"	7"	379	12.99	15.15	17.25	19.40	21.45
	6'	7⅞"	8"	626	16.89	19.07	21.19	23.36	25.42
	7'	7⅞"	8⅝"	1210	21.01	23.19	25.31	27.48	29.54
	8'	8"	9"	1533	26.25	28.42	30.55	32.72	34.78
10'	5'	7"	7"	379	13.23	15.42	17.05	20.24	22.59
	6'	7⅞"	8"	626	17.13	19.54	21.89	24.20	26.56
	7'	7⅞"	8⅝"	1210	21.44	23.66	26.01	28.32	30.66
	8'	8"	9"	1533	26.48	28.89	31.25	33.56	35.92
11'	6'	8"	8"	626	17.47	20.34	22.92	25.48	———
	7'	8"	8⅝"	1210	21.88	24.55	27.13	29.69	———
	8'	8"	9"	1533	26.70	29.37	31.94	34.52	———
12'	6'	8"	8"	626	17.91	20.84	23.69	26.46	———
	7'	8"	8⅝"	1210	22.11	25.04	27.85	30.67	———
	8'	8"	9"	1533	26.93	29.86	32.67	35.49	———

◎ For reinforcing steel in Headwalls and Aprons, see Drawings listed below.

GENERAL NOTES:-
CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾ chamfers.
REINFORCING STEEL:- Reinforcing steel to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwall, footings and sidewalls shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for Highway Construction and applicable special provisions
UNIT STRESSES:-
Class S Concrete (n=10) 1200 #/□"
Reinforcing Steel 20,000 #/□"

NOTE:-
This drawing to be used in conjunction with Std. Barrel Sections, Drawing Nos.

SINGLES	DOUBLES	TRIPLES	QUADRUPLES	QUINTUPLES
R-115X-0	R-215X-0	R-315X-0	R-415X-0	R-515X-0
R-115X-1	R-215X-1	R-315X-1	R-415X-1	R-515X-1
	R-215X-2	R-315X-2		

BAR LIST FOR ONE SHORT AND ONE LONG WING - 2 EACH REQUIRED

CLEAR HEIGHT	WING LOCATION	SF1 & LF1 BENT In bottom of footing, bent up into back face of wing. One bar of each length. SIZE	SPACING	NO./FOOT	LENGTHS VARY MIN.	LENGTHS VARY MAX.	X MIN.	X MAX.	Y MIN.	Y MAX.	SF2 & LF2 BENT In bottom of footing, bent up into back face of wing. Alt. with F1 bars. SIZE	SPACING	NO./FOOT	LENGTH	X	Y	SF3 & LF3 STRAIGHT Longitudinal in top of wing footing heel. SIZE	NO./FOOT	LENGTH	SF4 & LF4 STRAIGHT Longitudinal in bottom of wing footing toe. SIZE	NO./FOOT	LENGTH	SH1 & LH1 STRAIGHT Horizontal in back face of wing. SIZE	SPACING	NO./FOOT	LENGTH	SH2 & LH2 STRAIGHT Horizontal in back face of wing. One bar of each length. SIZE	SPACING	LENGTHS VARY MAX.	LENGTHS VARY MIN.	SH3 & LH3 STRAIGHT In back face of wing at top - on slope. SIZE	NO./FOOT	LENGTH	SH4 & LH4 STRAIGHT Dowels thru construction joint at headwall. SIZE	SPACING	NO./FOOT	LENGTH	X
H	SHORT & LONG																																									
2'	Short	#3	12"	7	1'-7"	3'-11"	0'-8"	1'-0"	1'-0"	3'-0"	—	—	—	—	—	—	#3	1	9'-2"	#3	2	7'-10"	#3	12"	1	6'-5"	#3	12"	1	—	3'-6"	#3	1	6'-10"	#3	12"	2	2'-8"	1'-6"
	Long	#3	12"	10	1'-7"	3'-11"	0'-8"	1'-0"	0'-10"	3'-0"	—	—	—	—	—	—	#3	1	11'-8"	#3	2	10'-10"	#3	12"	1	8'-11"	#3	12"	1	—	4'-8"	#3	1	9'-1"	#3	12"	2	"	"
3'	Short	#3	12"	9	2'-2"	5'-8"	0'-10"	1'-4"	1'-5"	4'-6"	—	—	—	—	—	—	#3	1	11'-8"	#3	2	10'-0"	#3	12"	1	8'-6"	#3	12"	2	6'-7"	3'-6"	#3	1	9'-0"	#3	12"	3	"	"
	Long	#3	12"	13	1'-11"	5'-2"	0'-10"	1'-3"	1'-2"	4'-6"	—	—	—	—	—	—	#3	1	13'-6"	#3	2	12'-10"	#3	12"	1	11'-9"	#3	12"	2	8'-11"	4'-8"	#3	1	12'-0"	#3	12"	3	"	"
4'	Short	#3	12"	11	2'-7"	6'-7"	0'-11"	1'-8"	1'-9"	5'-0"	—	—	—	—	—	—	#3	1	13'-8"	#3	3	12'-2"	#3	12"	1	10'-7"	#3	12"	2	8'-11"	4'-8"	#3	1	11'-2"	#3	12"	4	"	"
	Long	#3	12"	15	2'-6"	6'-6"	0'-11"	1'-7"	1'-8"	5'-0"	—	—	—	—	—	—	#3	1	15'-8"	#3	3	14'-2"	#3	12"	1	13'-5"	#3	12"	2	10'-3"	5'-4"	#3	1	14'-0"	#3	12"	4	"	"
5'	Short	#3	12"	13	3'-1"	7'-11"	1'-1"	2'-0"	2'-1"	5'-6"	#3	12"	4	3'-6"	1'-1"	2'-6"	#3	1	15'-5"	#3	3	14'-6"	#3	12"	2	12'-8"	#3	12"	3	9'-8"	5'-4"	#3	1	13'-5"	#3	12"	5	"	"
	Long	#3	12"	18	3'-0"	7'-10"	1'-1"	1'-11"	2'-0"	5'-6"	#3	12"	5	3'-6"	1'-1"	2'-6"	#3	1	17'-8"	#3	3	16'-10"	#3	12"	2	15'-5"	#3	12"	3	11'-5"	5'-4"	#3	1	15'-10"	#3	12"	5	"	"
6'	Short	#4	12"	16	3'-6"	9'-4"	1'-2"	2'-4"	2'-5"	7'-1"	#3	12"	4	4'-6"	1'-5"	3'-3"	#3	1	17'-6"	#3	3	16'-6"	#3	12"	2	14'-9"	#3	12"	3	12'-9"	5'-4"	#3	1	15'-6"	#3	12"	6	"	"
	Long	#4	12"	21	3'-5"	9'-3"	1'-2"	2'-3"	2'-4"	7'-1"	#3	12"	5	4'-6"	1'-4"	3'-3"	#3	1	23'-0"	#3	3	22'-4"	#3	12"	2	20'-3"	#3	12"	4	17'-5"	6'-8"	#3	1	20'-9"	#3	12"	6	2'-8"	1'-4"
7'	Short	#4	12"	18	3'-9"	10'-0"	1'-3"	2'-10"	2'-7"	8'-1"	#4	12"	7	5'-4"	1'-7"	4'-0"	#4	1	19'-7"	#4	4	18'-9"	#4	12"	2	16'-10"	#4	12"	3	14'-5"	6'-8"	#4	1	17'-8"	#4	12"	7	3'-6"	1'-9"
	Long	#4	12"	24	3'-10"	10'-8"	1'-3"	2'-10"	2'-8"	8'-1"	#4	12"	9	5'-4"	1'-7"	4'-0"	#4	1	25'-10"	#4	4	24'-11"	#4	12"	2	23'-1"	#4	12"	5	21'-8"	6'-8"	#4	1	22'-8"	#4	12"	7	"	"
8'	Short	#4	12"	20	4'-2"	10'-5"	1'-5"	3'-4"	3'-0"	9'-2"	#4	12"	10	6'-6"	1'-10"	4'-9"	#4	1	21'-8"	#4	4	21'-0"	#4	12"	3	18'-11"	#4	12"	4	15'-10"	6'-8"	#4	1	15'-10"	#4	12"	8	"	"
	Long	#4	12"	27	4'-4"	12'-8"	1'-5"	3'-2"	3'-0"	9'-2"	#4	12"	13	6'-6"	1'-10"	4'-9"	#4	1	28'-3"	#4	4	27'-5"	#4	12"	3	25'-11"	#4	12"	5	21'-8"	6'-8"	#4	1	26'-3"	#4	12"	8	3'-6"	1'-9"

BAR BENDING DIAGRAM
SF1 & SF2 LF3 & LF2
3" Rn
SH4 & LH4
Note:- Dimensions are to bar centers.

QUANTITY REINFORCING STEEL PER WING - LBS. SHORT WING	LONG WING
24.9	33.4
37.7	50.3
57.3	76.4
81.1	108.4
134.8	178.1
259.5	345.2
328.0	438.3

Note:- Bars for short wing shall be marked with prefix letter 'S', while those for long wing shall be marked with letter 'L'.

CLASS S CONCRETE

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD WINGS
FOR
REINFORCED CONCRETE BOX CULVERTS
15° SKEW

4', 5', 6', 7', 8', 9', 10', 11' & 12' SPANS — 3:1 SLOPES
SINGLES, DOUBLES, TRIPLES, — ALL DEPTHS OF COVER
QUADRUPLES & QUINTUPLES — FOR H = 8'-0" OR LESS

STANDARD DRAWING NO. W-X153-1

REVISIONS:- Membrane Added. 5-10-66 W.C.H.

Designed By:- W.C.H. 5-13-63 Checked By:- BWS - 8-7-63
Drawn By:- W.C.H. 6-20-63 Checked By:- Checked By:-
Quantities By:- W.C.H. 9-23-63 Checked By:-

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			275	
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: SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	3 @ 4'-0"	2'	#5	12"	120	14'-9"
		3'			120	14'-7"
		4'			120	14'-7"
		5'			120	14'-7"
		6'			120	14'-11"
	3 @ 5'-0"	3'	#6	12"	120	17'-8"
		4'			120	17'-8"
		5'			120	17'-8"
		6'			120	18'-0"
		7'			120	18'-3"
	3 @ 6'-0"	3'	#5	11"	132	20'-9"
		4'			132	20'-9"
		5'			132	20'-9"
		6'			132	21'-1"
		7'			132	21'-5"
		8'			132	21'-5"
	3 @ 7'-0"	4'	#6	12"	120	23'-11"
		5'			120	23'-11"
		6'			120	24'-3"
		7'			120	24'-6"
		8'			120	24'-7"
		9'			120	24'-11"
	3 @ 8'-0"	4'	#6	11"	132	27'-0"
		5'			132	27'-4"
		6'			132	27'-8"
		7'			132	27'-7"
		8'			132	27'-11"
		9'			132	28'-2"
		10'			132	28'-6"
	3 @ 9'-0"	5'	#6	11"	132	30'-5"
		6'			132	30'-8"
		7'			132	30'-8"
		8'			132	30'-9"
		9'			132	31'-1"
		10'			132	31'-6"
		11'			132	31'-8"
	3 @ 10'-0"	6'	#6	12"	120	33'-7"
		7'			120	33'-10"
		8'			120	33'-10"
		9'			120	33'-11"
		10'			120	34'-3"
		11'			120	34'-7"
		12'			120	34'-11"
	3 @ 11'-0"	6'	#7	12"	132	37'-0"
		7'			132	37'-0"
		8'			132	37'-0"
		9'			132	37'-4"
		10'			132	37'-8"
		11'			132	37'-10"
		12'			132	38'-0"
	3 @ 12'-0"	6'	⊕		132	40'-1"
		7'			132	40'-1"
		8'			132	40'-1"
		9'	#7	11"	132	40'-5"
		10'			132	40'-9"
		11'			132	40'-11"
		12'			132	41'-1"

DEPTH OF COVER D	"b" bars STRAIGHT In Bottom of Top Slab bent up over Division Walls-hooked. BENT – See Diagram below. Alternate with "a" and "c" bars. SIZE	SPACING	No. Reqd	LENGTH	W	X	Y	Z
0'-0" TO 5'-0" MAXIMUM	#5	12"	59	15'-10"	2'-1"	0'-3"	2'-3"	3'-5 5/8"
			59	15'-10"	2'-1"	"	2'-3"	3'-5 5/8"
			59	15'-10"	2'-1"	"	2'-3"	3'-5 5/8"
			59	16'-2"	2'-1"	0'-3"	2'-6"	3'-6 1/2"
	#6	12"	59	17'-8"	2'-1"	0'-3 5/8"	2'-9"	4'-3"
			59	18'-0"	2'-7"	"	2'-8"	4'-3"
			59	18'-3"	2'-7"	"	2'-8"	4'-3"
			59	18'-7"	2'-7"	0'-3 5/8"	2'-10"	4'-4 1/2"
	#6	11"	65	20'-9"	3'-1 1/2"	0'-4"	3'-1 1/2"	5'-0"
			65	20'-9"	3'-1 1/2"	"	3'-1 1/2"	5'-0"
			65	20'-9"	3'-1 1/2"	"	3'-1 1/2"	5'-0"
			65	21'-1"	3'-1 1/2"	"	3'-2 1/2"	5'-1"
			65	21'-5"	3'-1 1/2"	"	3'-3 1/2"	5'-1 1/2"
			65	21'-5"	3'-1 1/2"	0'-5"	3'-3 1/2"	5'-2"
	#6	12"	59	23'-11"	3'-7 1/2"	0'-4"	3'-7 1/2"	5'-9"
			59	23'-11"	3'-7 1/2"	"	3'-7"	5'-9"
			59	24'-3"	3'-7 1/2"	"	3'-8"	5'-10"
			59	24'-6"	3'-7 1/2"	"	3'-8 1/2"	5'-10 1/2"
			59	24'-7"	3'-7 1/2"	"	3'-9"	5'-11"
			59	24'-11"	3'-7 1/2"	0'-4 1/2"	3'-10"	6'-0"
	#6	11"	65	27'-0"	4'-1 1/2"	0'-5"	4'-0"	6'-4"
			65	27'-4"	4'-1 1/2"	"	4'-0"	6'-5"
			65	27'-8"	4'-1 1/2"	"	4'-1"	6'-5"
			65	27'-7"	4'-1 1/2"	"	4'-1"	6'-5"
			65	27'-11"	4'-1 1/2"	"	4'-2"	6'-6"
			65	28'-2"	4'-1 1/2"	"	4'-2"	6'-6 1/2"
			65	28'-6"	4'-1 1/2"	"	4'-3"	6'-7"
			65	30'-1"	4'-1 1/2"	0'-5"	4'-4"	6'-11"
	#6	12"	59	30'-5"	4'-8"	0'-5 1/2"	4'-6"	7'-5"
			59	30'-8"	4'-8"	"	4'-7"	7'-5 1/2"
			59	30'-8"	4'-8"	"	4'-7"	7'-5 1/2"
	#6	11"	65	30'-9"	4'-8"	"	4'-7"	7'-6"
			65	31'-1"	4'-8"	"	4'-8"	7'-7"
			65	31'-6"	4'-8"	"	4'-9"	7'-8"
			65	31'-8"	4'-8"	0'-5 1/2"	4'-9"	7'-9"
	#6	12"	59	33'-7"	5'-2"	0'-6"	4'-11"	8'-3"
			59	33'-10"	5'-2"	"	5'-0"	8'-3 1/2"
			59	33'-10"	5'-2"	"	5'-0"	8'-3 1/2"
	#6	11"	59	33'-11"	5'-2"	"	5'-0"	8'-4"
			59	34'-3"	5'-2"	"	5'-1"	8'-5"
			59	34'-7"	5'-2"	"	5'-2"	8'-6"
			59	34'-11"	5'-2"	"	5'-2"	8'-7"
			59	35'-0"	5'-2"	0'-6"	5'-2"	8'-8"
	#7	12"	65	37'-0"	5'-8"	0'-6 1/2"	5'-5 1/2"	9'-1"
			65	37'-0"	5'-8"	"	5'-5 1/2"	9'-1"
			65	37'-0"	5'-8"	"	5'-5 1/2"	9'-1"
	#7	11"	65	37'-4"	5'-8"	"	5'-6 1/2"	9'-2"
			65	37'-8"	5'-8"	"	5'-7 1/2"	9'-3"
			65	37'-10"	5'-8"	"	5'-7 1/2"	9'-4"
			65	38'-0"	5'-8"	0'-6 1/2"	5'-7 1/2"	9'-5"
	⊕		65	40'-1"	6'-3"	0'-7"	6'-0 1/2"	9'-10"
			65	40'-1"	6'-3"	"	5'-10 1/2"	9'-10"
			65	40'-1"	6'-3"	"	5'-10 1/2"	9'-10"
	#7	11"	65	40'-5"	6'-3"	"	5'-11 1/2"	9'-11"
			65	40'-9"	6'-3"	"	6'-0"	10'-0"
			65	40'-11"	6'-3"	"	6'-0"	10'-1"
			65	41'-1"	6'-3"	0'-7"	6'-0 1/2"	10'-2"

DEPTH OF COVER D	"b2" bars BENT – See Diagram below. In Top of Bottom Slab bent down under Division Walls-hooked. Alternate with "a" and "c" bars. SIZE	SPACING	No. Reqd	LENGTH	W	X	Y	Z
0'-0" TO 5'-0" MAXIMUM	#5	12"	59	15'-9"	2'-1"	0'-3 5/8"	2'-9"	3'-5 5/8"
			59	15'-9"	2'-1"	"	2'-9"	3'-5 5/8"
			59	15'-9"	2'-1"	"	2'-9"	3'-5 5/8"
			59	16'-1"	2'-1"	0'-3 5/8"	2'-9"	3'-6 1/2"
	#6	12"	59	18'-1"	2'-7"	0'-3 5/8"	2'-9"	4'-3"
			59	18'-11"	2'-7"	"	2'-9"	4'-3"
			59	19'-1"	2'-7"	"	2'-9"	4'-3"
			59	19'-5"	2'-7"	"	2'-10"	4'-3 1/2"
	#6	11"	65	22'-1"	3'-1 5/8"	0'-4"	3'-2 5/8"	5'-0"
			65	22'-1"	3'-1 5/8"	"	3'-2 5/8"	5'-0"
			65	22'-1"	3'-1 5/8"	"	3'-2 5/8"	5'-0"
			65	22'-5"	3'-1 5/8"	"	3'-3 5/8"	5'-1"
			65	22'-9"	3'-1 5/8"	"	3'-3 5/8"	5'-1 1/2"
			65	22'-10"	3'-1 5/8"	0'-5"	3'-3 5/8"	5'-2"
	#6	12"	59	25'-6"	3'-7 1/2"	0'-4 1/2"	3'-7 1/2"	5'-9"
			59	25'-6"	3'-7 1/2"	"	3'-7 1/2"	5'-9"
			59	25'-10"	3'-7 1/2"	"	3'-8 1/2"	5'-10"
			59	26'-1"	3'-7 1/2"	"	3'-9 1/2"	5'-10 1/2"
			59	26'-2"	3'-7 1/2"	"	3'-9 1/2"	5'-11"
			59	26'-6"	3'-7 1/2"	0'-4 1/2"	3'-10 1/2"	6'-0"
	#6	11"	65	28'-9"	4'-1 1/2"	0'-5"	4'-0"	6'-7"
			65	29'-1"	4'-1 1/2"	"	4'-1"	6'-8"
			65	29'-1"	4'-1 1/2"	"	4'-1"	6'-8"
			65	29'-5"	4'-1 1/2"	"	4'-2"	6'-8 1/2"
			65	29'-9"	4'-1 1/2"	"	4'-3"	6'-9"
			65	29'-10"	4'-1 1/2"	"	4'-3"	6'-9 1/2"
			65	30'-1"	4'-1 1/2"	0'-5"	4'-4"	6'-11"
	#6	12"	59	32'-5"	4'-8"	0'-5 1/2"	4'-6"	7'-5"
			59	32'-5"	4'-8"	"	4'-7"	7'-5 1/2"
			59	32'-5"	4'-8"	"	4'-7"	7'-5 1/2"
	#6	11"	65	32'-6"	4'-8"	"	4'-7"	7'-6"
			65	32'-10"	4'-8"	"	4'-8"	7'-7"
			65	33'-2"	4'-8"	"	4'-8"	7'-8"
			65	33'-4"	4'-8"	0'-5 1/2"	4'-9"	7'-9"
	#6	12"	59	35'-5"	5'-2"	0'-6"	4'-11"	8'-3"
			59	35'-5"	5'-2"	"	5'-0"	8'-3 1/2"
			59	35'-6"	5'-2"	"	5'-0"	8'-3 1/2"
	#6	11"	59	35'-9"	5'-2"	"	5'-0"	8'-4"
			59	36'-1"	5'-2"	"	5'-1"	8'-5"
			59	36'-5"	5'-2"	"	5'-2"	8'-6"
			59	36'-7"	5'-2"	"	5'-2"	8'-7"
			59	36'-9"	5'-2"	0'-6"	5'-2"	8'-8"
	#7	12"	65	38'-11"	5'-8"	0'-6 1/2"	5'-5 1/2"	9'-1"
			65	38'-11"	5'-8"	"	5'-5 1/2"	9'-1"
			65	38'-11"	5'-8"	"	5'-5 1/2"	9'-1"
	#7	11"	65	39'-3"	5'-8"	"	5'-6 1/2"	9'-2"
			65	39'-7"	5'-8"	"	5'-7 1/2"	9'-3"
			65	39'-9"	5'-8"	"	5'-7 1/2"	9'-4"
			65	39'-11"	5'-8"	0'-6 1/2"	5'-7 1/2"	9'-5"
	⊕		65	42'-1"	6'-3"	0'-7"	6'-0 1/2"	9'-10"
			65	42'-1"	6'-3"	"	5'-10 1/2"	9'-10"
			65	42'-1"	6'-3"	"	5'-10 1/2"	9'-10"
	#7	11"	65	42'-5"	6'-3"	"	5'-11 1/2"	9'-11"
			65	42'-9"	6'-3"	"	6'-0"	10'-0"
			65	42'-11"	6'-3"	"	6'-0"	10'-1"
			65	43'-1"	6'-3"	0'-7"	6'-0 1/2"	10'-2"

DEPTH OF COVER D	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b" and "b2" bars. SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#5	12"	120	9'-8"
			120	9'-8"
			120	9'-8"
			120	9'-10"
	#6	12"	120	11'-8"
			120	11'-9"
			120	11'-9"
			120	11'-11"
	#6	11"	132	13'-6"
			132	13'-10"
			132	13'-10"
			132	14'-0"
			132	14'-2"
			132	14'-5"
	#6	12"	120	15'-6"
			120	15'-10"
			120	16'-0"
			120	16'-2"
			120	16'-6"
			120	16'-6"
	#6	11"	132	17'-11"
			132	18'-1"
			132	18'-1"
			132	18'-3"
			132	18'-7"
			132	18'-7"
	#6	12"	120	20'-2"
			120	20'-4"
			120	20'-4"
			120	20'-6"
			120	20'-8"
			120	20'-8"
	#7	12"	120	22'-3"
			120	22'-5"
			120	22'-5"
			120	22'-7"
			120	22'-9"
			120	22'-9"
	#7	11"	132	24'-6"
			132	24'-6"
			132	24'-8"
			132	24'-10"
			132	24'-10"
			132	24'-10"
	⊕		132	24'-7"
			132	24'-9"
			132	25'-1"
			132	25'-5"
			132	25'-5"
			132	25'-5"
	#7	11"	132	26'-11"
			132	26'-11"
			132	26'-11"
			132	26'-11"
			132	26'-11"
			132	26'-11"

DEPTH OF COVER D	"d" bars STRAIGHT Longitudinal in Top Slabs of Barrel. SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#5	12"	22	
			22	
			22	
			22	
	#6	12"	26	
			26	
			26	
			26	
	#6	11"	30	
			30	
			30	
			30	
			30	
			30	
	#6	12"	32	
			32	
			32	
			32	
			32	
			32	
	#6	11"	36	
			36	
			36	
			36	
			36	
			36	
	#6	12"	41	
			41	
			41	
			41	
			41	
			41	
	#7	12"	44	
			44	
			44	
			44	
			44	
			44	
	#7	11"	48	
			48	
			48	
			48	
			48	
			48	
	⊕		51	
			51	
			51	
			51	
			51	
			51	

DEPTH OF COVER D	"d1" bars STRAIGHT Longitudinal in Sidewalls and Division Walls. SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#5	12"	12	
			24	
			30	
			36	
	#6	12"	18	
			24	
			30	
			36	
	#6	11"	18	
			24	
			30	
			36	
			42	
			48	
	#6	12"	24	
			30	
			36	
			42	
			48	
			54	
	#6	11"	26	
			30	
			35	
			42	
			48	
			54	
	#6	12"	30	
			36	
			42	
			48	
			54	
			60	
	#7	12"	36	
			42	
			48	
			54	
			60	
			66	
	⊕		72	
			36	
			42	
			48	
			54	
			60	
			66	

DEPTH OF COVER D	"e" bars Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#4	12"	22	
			22	
			22	
			22	
	#5	12"	25	
			25	
			25	
			25	
	#6	12"	28	
			28	
			28	
			28	
			28	
			28	
	#6	11"	31	
			31	
			31	
			31	
			31	
			31	
	#6	12"	35	
			35	
			35	
			35	
			35	
			35	
	#7	12"	40	
			40	
			40	
			40	
			40	
			40	
	#7	11"	43	
			43	
			43	
			43	
			43	
			43	
	⊕		46	
			46	
			46	
			46	
			46	
			46	

DEPTH OF COVER D	"f" bars STRAIGHT Verticals in Sidewalls and Division Walls. SIZE	SPACING	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#5	12"	360	2'-10"
			360	3'-10"
			360	4'-10"
			360	5'-10"
			360	6'-10"
	#6	12"	360	5'-11"
			360	6'-11"
			360	7'-11"
			360	8'-11"
			360	9'-11"
			360	10'-11"
	#6	11"	360	5'-2"
			360	6'-2"
			360	7'-2"
			360	8'-2"
			360	9'-2"
			360	10'-2"
			360	11'-2"
	#6	12"	360	6'-3"
			360	7'-3"
			360	8'-3"
			360	9'-3"
			360	10'-3"
			360	11'-3"
	#7	12"	360	7'-5"
			360	8'-5"
			360	9'-5"
			360	10'-5"
			360	11'-5"
			360	12'-5"
	#7	11"	360	7'-8"
			360	8'-8"
			360	9'-8"
			360	10'-8"
			360	11'-8"
			360	12'-8"
	⊕		360	8'-0"
			360	9'-0"
			360	10'-0"
			360	11'-0"
			360	12'-0"

DEPTH OF COVER D	"k" bars STRAIGHT 2 in Top of Headwalls and Aprons-Each SIZE	No. Reqd	LENGTH
0'-0" TO 5'-0" MAXIMUM	#5	8	15'-1"
		8	15'-1"
		8	15'-1"
		8	15'-1"
		8	15'-5"
	#6	8	18'-2"
		8	18'-2"
		8	18'-2"
		8	18'-7"
		8	19'-0"
	#6	8	21'-4"
		8	21'-4"
		8	21'-4"
		8	21'-11"
		8	22'-0"
	#6	8	24'-5"
		8	24'-5"
		8	24'-9"
		8	25'-0"
		8	25'-5"
	#6	8	27'-6"
		8	27'-10"
		8	28'-1"
		8	28'-5"
		8	28'-9"
	#6	8	31'-0"
		8	31'-3"
		8	31'-3"
		8	31'-6"
		8	31'-8"
		8	32'-0"
		8	32'-2"
	#7	8	34'-1"
		8	34'-9"
		8	35'-1"
		8	35'-5"
		8	35'-9"
	#7	8	37'-6"
		8	37'-6"
		8	37'-6"
		8	37'-10"
		8	38'-3"
		8	38'-7"
	⊕	8	40'-8"
		8	40'-8"
		8	40'-8"
		8	41'-0"
		8	41'-4"
		8	41'-8"

NOTE:- The "a", "b", "b2" and "c" bars are to be placed parallel with the headwalls, ⊕ These bars may be spliced at ℄ of one division wall. (2'-4" and 2'-8" laps.)

DIMENSIONS — BARREL DIMENSIONS

MAX. DESIGN DEPTH OF COVER D	CLEAR SPAN S	CLEAR HEIGHT H	Sq. Ft. OPENING A	OVERALL WIDTH OW	THICKNESS OF TOP SLAB T	THICKNESS OF SIDEWALLS C	THICKNESS OF DIVISION WALLS M	THICKNESS OF BOTTOM SLAB B	OVERALL HEIGHT OH	ROADWAY LENGTH RL	LENGTH OF HEADWALL K
5'-0"	3 @ 4'-0"	2'	24	14'-4"	6 1/2"	6"	8"	6"	3'-0 1/2"	14'-10"	15'-4 1/2"
		3'	36	14'-4"		6"	8"		4'-0 1/2"	"	"
		4'	48	14'-4"		6"	8"		5'-0 1/2"	"	"
		5'	60	14'-4"		6"	8"		6'-0 1/2"	"	"
		6'	72	14'-8"		7"	9"		7'-0 1/2"	15'-2 1/2"	15'-8 1/2"
	3 @ 5'-0"	3'	45	17'-0"		6"	8"	6 1/2"	4'-1 1/2"	17'-11 1/2"	18'-5 1/2"
		4'	60	17'-0"		6"	8"		5'-1 1/2"	"	"
		5'	75	17'-0"	7"	6"	8"		6'-1 1/2"	"	"
		6'	90	17'-8"		7"	9"		7'-1 1/2"	18'-3 1/2"	18'-10"
		7'	105	17'-11"		7 1/2"	10"		8'-1 1/2"	18'-6 1/2"	19'-1"
	3 @ 6'-0"	3'	54	20'-4"		6"	8"		4'-2 1/2"	21'-0 1/2"	21'-7"
		4'	72	20'-4"		6"	8"		5'-2 1/2"	"	"
		5'	90	20'-4"	9 1/2"	6"	8"	7"	6'-2 1/2"	"	"
		6'	108	20'-8"		7"	9"		7'-2 1/2"	21'-4 1/2"	21'-11 1/2"
		7'	126	20'-11"		7 1/2"	10"		8'-2 1/2"	21'-7 1/2"	22'-2 1/2"
		8'	144	21'-0"		8"	10"		9'-2 1/2"	21'-8 1/2"	22'-3 1/2"
	3 @ 7'-0"	4'	84	23'-8"		6"	8"		5'-3 1/2"	24'-1 1/2"	24'-8 1/2"
		5'	105	23'-8"		6"	8"		6'-3 1/2"	"	"
		6'	126	23'-8"		7"	9"		7'-3 1/2"	24'-6"	25'-0 1/2"
		7'	147	23'-11"		7 1/2"	10"		8'-3 1/2"	24'-9 1/2"	25'-3 1/2"
		8'	168	24'-0"	8"	8"	10"	7 1/2"	9'-3 1/2"	24'-10 1/2"	25'-5 1/2"
		9'	189	24'-3"		9"	11"		10'-3 1/2"	25'-0 1/2"	25'-9 1/2"
	3 @ 8'-0"	4'	96	26'-4"		6"	8"		5'-5"	27'-3 1/2"	27'-10 1/2"
		5'	120	26'-8"		7"	9"		6'-5"	27'-7 1/2"	28'-1 1/2"
		6'	144	26'-11"		7"	9"		7'-5"	27'-7 1/2"	"
		7'	168	26'-11"	8 1/2"	7 1/2"	10"	8 1/2"	8'-5"	27'-10 1/2"	28'-4 1/2"
		8'	192	27'-0"		8"	10"		9'-5"	27'-11 1/2"	28'-5 1/2"
		9'	216	27'-4"		9"	11"		10'-5"	28'-3 1/2"	28'-10"
		10'	240	27'-8"		10"	12"		11'-5"	28'-7 1/2"	29'-2 1/2"
	3 @ 9'-0"	5'	135	29'-8"		7"	9"		6'-6"	30'-5 1/2"	31'-0"
		6'	162	29'-11"		7"	9"		7'-6"	30'-11 1/2"	31'-6"
		7'	189	29'-11"		7 1/2"	10"		8'-6"	"	"
		8'	216	30'-0"	9"	8"	10"	9"	9'-6"	31'-0 1/2"	31'-7 1/2"
		9'	243	30'-4"		9"	11"		10'-6"	31'-0 1/2"	31'-11 1/2"
		10'	270	30'-8"		10"	12"		11'-6"	31'-1 1/2"	32'-3 1/2"
		11'	297	30'-10"		11"	12"		12'-6"	31'-1 1/2"	32'-5 1/2"
	3 @ 10'-0"	5'	150	32'-8"		7"	9"		6'-7"	33'-5 1/2"	34'-0 1/2"
		6'	180	32'-11"		7 1/2"	10"		7'-7"	34'-1"	34'-7 1/2"
		7'	210	32'-11"		7 1/2"	10"		8'-7"	"	"
		8'	240	33'-0"	9 1/2"	8"	10"	9 1/2"	9'-7"	34'-2"	34'-8 1/2"
		9'	270	33'-4"		9"	11"		10'-7"	34'-6 1/2"	35'-0 1/2"
		10'	300	33'-8"		10"	12"		11'-7"	34'-10 1/2"	35'-4 1/2"
		11'	330	33'-10"		11"	12"		12'-7"	35'-0 1/2"	35'-6 1/2"
		12'	360	34'-0"		12"	12"		13'-7"	35'-2 1/2"	35'-8 1/2"
	3 @ 11'-0"	6'	198	36'-0"		8"	10"		7'-8"	37'-3 1/2"	37'-9 1/2"
		7'	231	36'-0"		8"	10"		8'-8"	"	"
		8'	264	36'-0"		8"	10"		9'-8"	"	"
		9'	297	36'-4"	10"	9"	11"	10"	10'-8"	37'-7 1/2"	38'-1 1/2"
		10'	330	36'-8"		10"	12"		11'-8"	37'-11 1/2"	38'-6"
		11'	363	36'-10"		11"	12"		12'-8"	38'-1 1/2"	38'-7 1/2"
		12'	396	37'-0"		12"	12"		13'-8"	38'-3 1/2"	38'-10"
	3 @ 12'-0"	6'	216	39'-0"		8"	10"		7'-9"	40'-9 1/2"	40'-11"
		7'	252	39'-0"		8"	10"		8'-9"	"	"
		8'	288	39'-0"		8"	10"		9'-9"	"	"
		9'	324	39'-4"	10 1/2"	9"	11"	10 1/2"	10'-9"	40'-8 1/2"	41'-3"
		10'	360	39'-8"		10"	12"		11'-9"	41'-0 1/2"	41'-7 1/2"
		11'	396	39'-10"		11"	12"		12'-9"	41'-2 1/2"	41'-9"
		12'	432	40'-0"		12"	12"		13'-9"	41'-4 1/2"	41'-11"

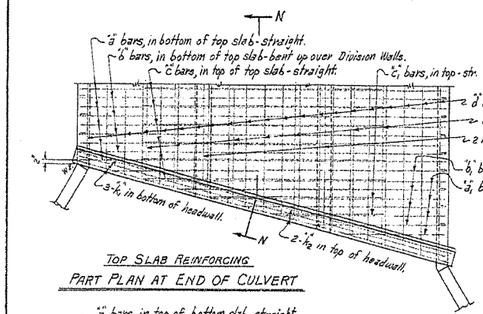
QUANTITIES — UNIT QUANTITIES

CLASS S CONC. PER LIN. FT. OF BARREL	REINFORCING STEEL PER LIN. FT. OF BARREL	REINFORCING STEEL ADDITIONAL PER LAP	REINFORCING STEEL ADDITIONAL TWO HEADWALLS & APRONS
CU.YD.	LB.	LB.	LB.
0.726	190.54	66.63	203.66
0.812	198.64	71.64	209.68
0.899	156.57	76.65	209.68
0.985	169.59	81.66	209.68
1.158	174.39	86.67	206.96
0.981	199.46	81.10	311.81
1.068	207.97	86.11	311.81
1.154	215.49	91.12	311.81
1.328	225.70	96.13	316.82
1.503	235.93	101.14	319.82
1.329	233.82	115.61	376.24
1.480	286.50	101.55	920.31
1.566	294.52	106.56	920.31
1.743	305.06	111.57	926.32
1.919	315.04	116.58	927.32
2.056	333.85	121.59	928.32
2.294

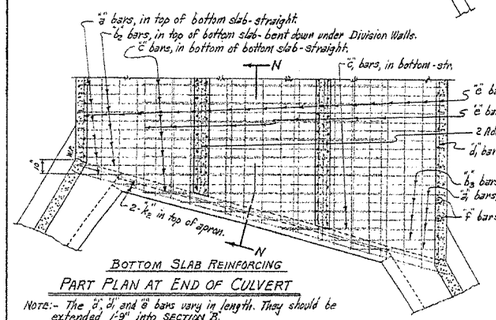
RESHOT 3-8-93 444 ~~45~~

FED. ROAD No.	STATE	FED. AID PROJECT	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	ARK.			276	
JOB No.					

NOTE:- For Details of Standard Wings and Bar lists, see Drawing No. W-X.152-1 or W-X.152-2; W-X.153-1 or W-X.153-2, and W-X154-1 or W-X154-2. Also W-X.15.



TOP SLAB REINFORCING
PART PLAN AT END OF CULVERT



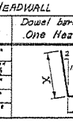
BOTTOM SLAB REINFORCING
PART PLAN AT END OF CULVERT

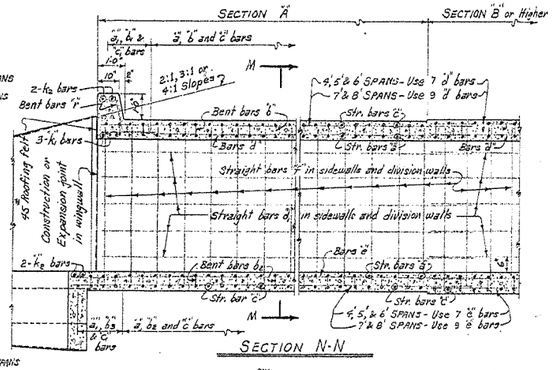
NOTE:- The "a", "a1" and "e" bars vary in length. They should be extended 1'-9" into section 'B'.

DOWEL BARS FOR ONE HEADWALL

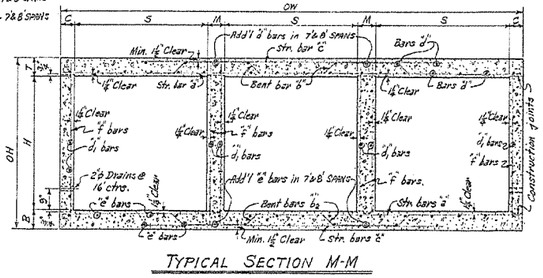
SPAN	SIZE	SPACING	No. REQ'D	LENGTH	X
4'	#4	12"	15	2'-4"	1'-2"
5'	#4	12"	18	2'-5"	1'-2½"
6'	#4	12"	21	2'-6"	1'-3"
7'	#4	12"	25	2'-8"	1'-4"
8'	#4	12"	27	2'-9"	1'-5"

Dowel bars "f" in One Headwall.



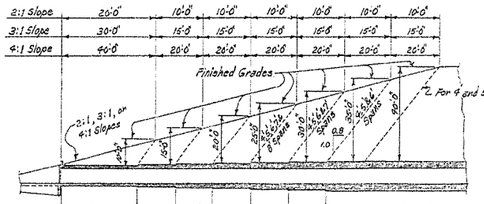


SECTION N-N



TYPICAL SECTION M-M

	20'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
2:1 Slope	20'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"	10'-0"
3:1 Slope	30'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
4:1 Slope	40'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"	20'-0"

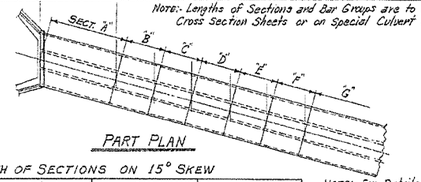


		A	B	C	D	E	F	G
2:1 Slope =	Sections	A=12'-6"	B=6'-6"	C=6'-0"	D=6'-0"	E=6'-0"	F=6'-0"	MID-SECTION G-Varies
	Bar Group	A	B	C	D	E	F	G
3:1 Slope =	Sections	A=22'-6"	B=8'-6"	C=11'-0"	D=11'-0"	E=11'-0"	F=11'-0"	MID-SECTION G-Varies
	Bar Group	A	B	C	D	E	F	G
4:1 Slope =	Sections	A=32'-6"	B=16'-6"	C=16'-0"	D=16'-0"	E=16'-0"	F=16'-0"	MID-SECTION G-Varies
	Bar Group	A	B	C	D	E	F	G

These lengths are perpendicular to ℄ of roadway. See Table of Skew Lengths below.

TYPICAL LONGITUDINAL SECTION - SHOWING SECTIONS AND BAR GROUPS FOR VARIOUS DEPTHS OF COVER

Note:- Lengths of Sections and Bar Groups are to be shown on Cross Section Sheets or on Special Culvert Layout Sheet.



PART PLAN

LENGTH OF SECTIONS ON 15° SKEW

SLOPE	2:1		3:1		4:1	
SECTIONS	A	B, C, D, E, F	A	B, C, D, E, F	A	B, C, D, E, F
LENGTHS	12'-5"	6'-2½"	22'-9⅛"	11'-4⅝"	33'-1⅝"	16'-6⅝"

NOTE:- For Details and Bar Lists for Sections B thru G, see Barrel Drawing Nos. R-300X-X.1, R-300X-X.2, or R-300X-X.3.

SECTIONS AND BAR GROUPS TO BE USED FOR VARIOUS DEPTHS OF COVER

DEPTHS OF COVER	SECTIONS & BAR GROUPS FOR END SECTIONS						MID-SECTION AND BAR GROUP
	A	B	C	D	E	F	
5.0' to 9.5'	A						A
10.0' to 14.5'	A						B
15.0' to 19.5'	A	B					C
20.0' to 24.5'	A	B	C				D
25.0' to 29.5'	A	B	C	D			E
30.0' to 39.5'	A	B	C	D	E		F
350 to 90.0'	A	B	C	D	E	F	G

OR ALT.

DEPTHS OF COVER	SECTIONS & BAR GROUPS FOR END SECTIONS						MID-SECTION AND BAR GROUP
	A	B	C	D	E	F	
5.0' to 9.5'	A						A
10.0 to 14.5'	A						B
15.0 to 19.5'	A	B					C
20.0 to 24.5	A	2@C					D
25.0' to 29.5	A	B	2@D				E
30.0' to 34.5	A	2@C		2@E			F
350 to 90.0	A	B	2@D		2@F		G

BAR LIST FOR SECTION "A" ON 15° SKEW - ONE END ONLY.

SECTION & BAR GROUP	LENGTH OF SECTION	DEPTH OF COVER	CLEAR SPAN	CLEAR HEIGHT	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. SIZE	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. SPACING	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. NUMBER REQ'D 2:1	3:1	4:1	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. LENGTH
SECTION "A" & BAR GROUP "A"	4:1 = 39'-11"	5.0' TO 11'-6" MAXIMUM	4'@	H	#4	12"	23	93	65	9'-4"
							23	93	65	"
							23	93	65	"
							23	93	65	"
							23	93	65	"
			5'@				23	97	69	11'-4"
							23	97	69	"
							23	97	69	"
							23	97	69	"
			6'@				23	95	67	13'-11"
							23	95	67	"
							23	95	67	"
							23	95	67	"
			7'@				21	91	61	16'-6"
							21	91	61	"
							21	91	61	"
							21	91	61	"
			8'@				19	91	61	19'-1"
							19	91	61	"
							19	91	61	"
							19	91	61	"

SECTION & BAR GROUP	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. (Two of each Length) SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH Max.	Min.
SECTION "A" & BAR GROUP "A"	#4	12"	4	10'-4"	6'-7"		
			4	"	"		
			4	"	"		
			4	10'-8"	6'-11"		
			8	13'-8"	8'-5"		
			8	"	"		
			8	14'-0"	8'-9"		
			8	14'-3"	9'-0"		
			8	14'-8"	9'-5"		
			8	16'-6"	9'-5"		
			8	"	"		
			8	17'-0"	10'-9"		
			8	17'-3"	11'-0"		
			8	17'-9"	11'-1"		
			8	19'-3"	12'-4"		
			8	"	"		
			8	19'-9"	12'-7"		
			8	20'-0"	12'-8"		
			8	20'-3"	12'-11"		
			8	21'-9"	13'-10"		
			8	"	"		
			8	22'-3"	14'-1"		
			8	22'-6"	14'-4"		
			8	22'-9"	14'-5"		

SECTION & BAR GROUP	"a" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b" & "b2" bars. (Two of each Length) SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	"a1" bars STRAIGHT In Top and Bottom Slab of Barrel. (Two of each Length) SIZE	SPACING	NUMBER REQ'D	LENGTH
SECTION "A" & BAR GROUP "A"	#4	12"	4	8'-0"	4'-3"		#4	12"	12	
			4	"	"				18	
			4	"	"				24	
			4	"	"				30	
			4	8'-3"	4'-6"				36	
			4	8'-6"	4'-9"				42	
	#5	11"	6	10'-8"	6'-0"		#5	12"	18	
			6	"	"				24	
			6	"	"				30	
			6	11'-1"	6'-3"				36	
			6	11'-3"	6'-5"				42	
	#5	11"	6	9'-11"	5'-1"		#5	12"	18	
			6	"	"				24	
			6	"	"				30	
			6	10'-0"	5'-6"				36	
			6	10'-2"	5'-7"				42	
	#5	11"	6	11'-9"	6'-3"		#5	12"	24	
			6	"	"				30	
			6	12'-0"	6'-6"				36	
			6	12'-3"	6'-8"				42	
			6	12'-6"	6'-10"				48	
			6	12'-6"	5'-10"				54	
			8	14'-5"	8'-0"				36	
			8	14'-7"	8'-2"				42	
			8	14'-10"	8'-3"				48	
			8	15'-0"	8'-5"				54	
			8	15'-3"	8'-6"				60	

SECTION & BAR GROUP	"b" bars BENT - See Diagrams below. Alternate with "a" and "c" bars. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	X	Y	Z
SECTION "A" & BAR GROUP "A"	#4	12"	10	21	31	15'-3"	0'-8½"	2'-2½"	3'-4½"
			10	21	31	"	"	"	"
			10	21	31	"	"	"	"
			10	21	31	15'-7"	0'-2½"	2'-3½"	3'-5½"
			3	13'-3"	5'-6"	12'-6"	5'-0"		
			3	"	"	"	"		
			3	"	"	"	"		
			3	13'-7"	5'-6"	12'-10"	5'-0"		
			4	16'-2"	5'-8"	15'-4"	5'-1"		
			4	"	"	"	"		
			4	"	"	"	"		
			4	16'-6"	6'-0"	15'-8"	5'-5"		
			4	16'-9"	6'-3"	15'-11"	5'-8"		
	#4	11"	11	22	33	18'-5"	0'-3½"	2'-7½"	4'-11½"
			11	22	33	"	"	"	"
			11	22	33	"	"	"	"
			11	22	33	18'-8"	0'-3½"	2'-8½"	4'-12½"
			11	22	33	18'-11"	0'-3½"	2'-9½"	5'-0½"
	#5	11"	5	19'-8"	5'-4"	18'-0"	4'-8"		
			5	"	"	"	"		
			5	"	"	"	"		
			5	19'-10"	5'-5"	18'-2"	4'-9"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
	#5	11"	10	21	31	26'-6"	0'-4½"	3'-5"	5'-7"
			10	21	31	"	"	"	"
			10	21	31	26'-0"	"	3'-6"	5'-8"
			10	21	31	25'-1"	"	3'-7"	5'-10½"
			10	21	31	25'-2"	"	3'-7"	5'-9"
			10	21	31	25'-6"	0'-4½"	3'-8"	5'-10"
			10	20	30	27'-0"	0'-5½"	3'-9"	6'-1"
			10	20	30	28'-1"	"	3'-10"	6'-3"
			10	20	30	28'-5"	"	3'-11"	6'-5"
			10	20	30	28'-6"	"	3'-11"	6'-5½"
			10	20	30	28'-6"	"	3'-11"	6'-6"
			10	20	30	28'-10"	"	4'-0"	6'-7"
			10	20	30	29'-0"	0'-5½"	4'-1"	6'-8"

SECTION & BAR GROUP	"b1" bars BENT - See Diagrams below. Alternate with "a" and "c" bars. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	X	Y	Z
SECTION "A" & BAR GROUP "A"	#4	12"	3	12'-11"	5'-2"	12'-2"	4'-8"		
			3	"	"	"	"		
			3	"	"	"	"		
			3	13'-3"	5'-6"	12'-6"	5'-0"		
			4	16'-2"	5'-8"	15'-4"	5'-1"		
			4	"	"	"	"		
			4	"	"	"	"		
			4	16'-6"	6'-0"	15'-8"	5'-5"		
			4	16'-9"	6'-3"	15'-11"	5'-8"		
	#4	11"	11	22	33	18'-5"	0'-3½"	2'-7½"	4'-11½"
			11	22	33	"	"	"	"
			11	22	33	"	"	"	"
			11	22	33	18'-8"	0'-3½"	2'-8½"	4'-12½"
			11	22	33	18'-11"	0'-3½"	2'-9½"	5'-0½"
	#5	11"	5	19'-8"	5'-4"	18'-0"	4'-8"		
			5	"	"	"	"		
			5	"	"	"	"		
			5	19'-10"	5'-5"	18'-2"	4'-9"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
			5	19'-11"	5'-10"	19'-0"	5'-0"		
	#5	11"	10	21	31	26'-6"	0'-4½"	3'-5"	5'-7"
			10	21	31	"	"	"	"
			10	21	31	26'-0"	"	3'-6"	5'-8"
			10	21	31	25'-1"	"	3'-7"	5'-10½"
			10	21	31	25'-2"	"	3'-7"	5'-9"
			10	21	31	25'-6"	0'-4½"	3'-8"	5'-10"
			10	20	30	27'-0"	0'-5½"	3'-9"	6'-1"
			10	20	30	28'-1"	"	3'-10"	6'-3"
			10	20	30	28'-5"	"	3'-11"	6'-5"
			10	20	30	28'-6"	"	3'-11"	6'-5½"
			10	20	30	28'-6"	"	3'-11"	6'-6"
			10	20	30	28'-10"	"	4'-0"	6'-7"
			10	20	30	29'-0"	0'-5½"	4'-1"	6'-8"

SECTION & BAR GROUP	"b2" bars BENT - See Diagrams below. Alternate with "a" and "c" bars. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	X	Y	Z
SECTION "A" & BAR GROUP "A"	#4	12"	11	22	32	16'-3"	0'-8½"	2'-2½"	3'-4½"
			11	22	32	"	"	"	"
			11	22	32	"	"	"	"
			11	22	32	15'-7"	0'-2½"	2'-3½"	3'-5½"
			3	12'-11"	5'-2"	12'-2"	4'-8"		
			3	"	"	"	"		
			3	"	"	"	"		
			3	12'-11"	5'-6"	12'-6"	5'-0"		
			4	16'-2"	5'-8"	15'-4"	5'-1"		
			4	"	"	"	"		
			4	"	"	"	"		
			4	16'-6"	6'-0"	15'-8"	5'-5"		
			4	16'-9"	6'-3"	15'-11"	5'-8"		
	#4	11"	11	22	32	18'-1"	0'-3½"	2'-7½"	4'-11½"
			11	22	32	"	"	"	"
			11	22	32	"	"	"	"
			11	22	32	18'-4"	0'-3½"	2'-8½"	4'-12½"
			11	22	32	18'-7"	0'-3½"	2'-9½"	5'-0½"
	#5	11"	5	19'-3"	5'-3"	17'-8"	4'-8"		
			5	"	"	"	"		
			5	"	"	"	"		
			5	19'-5"	5'-4"	17'-10"	4'-9"		
			5	19'-6"	5'-9"	18'-9"	5'-0"		
			5	19'-6"	5'-9"	18'-9"	5'-0"		
			5	19'-6"	5'-9"	18'-9"	5'-0"		
	#5	11"	10	21	31	26'-1"	0'-4½"	3'-5"	5'-7"
			10	21	31	"	"	"	"
			10	21	31	25'-7"	"	3'-6"	5'-8"
			10	21	31	24'-8"	"	3'-7"	5'-10½"
			10	21	31	25'-2"	"	3'-7"	5'-9"
			10	20	30	25'-6"	0'-4½"	3'-8"	5'-10"
			10	20	30	26'-7"	0'-5½"	3'-9"	6'-1"
			10	20	30	26'-8"	"	3'-10"	6'-3"
			10	20	30	27'-0"	"	3'-11"	6'-5"
			10	20	30	27'-1"	"	3'-11"	6'-5½"
			10	20	30	27'-5"	"	4'-0"	6'-6"
			10	20	30	27'-6"	0'-5½"	4'-1"	6'-7"

SECTION & BAR GROUP	"b3" bars BENT - See Diagrams below. Alternate with "a" and "c" bars. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	X	Y	Z
SECTION "A" & BAR GROUP "A"	#4	12"	6	25'-4"	6'-0"	24'-2"	5'-5"		
			6	25'-8"	6'-4"	24'-6"	5'-9"		
			6	25'-8"	6'-4"	24'-6"	5'-9"		
			6	26'-0"	6'-5"	24'-9"	5'-10"		
			6	26'-0"	6'-7"	25'-0"	6'-0"		
			6	26'-0"	6'-8"	25'-0"	6'-0"		
			6	26'-1"	6'-8"	25'-1"	6'-0"		
			6	26'-5"	7'-0"	25'-5"	6'-3"		
			6	26'-5"	7'-0"	25'-5"	6'-3"		
			6	26'-6"	7'-1"	25'-6"	6'-4"		
			6	26'-6"	7'-1"	25'-6"	6'-4"		
	#5	11"	10	30	45	28'-8"	6'-10"		
			10	30	45	"	"		
			10	30	45	"	"		
			10	30	45	28'-9"	6'-10"		
			10	30	45	28'-10"	6'-11"		
			10	30	45	28'-10"	6'-11"		
			10	30	45	28'-10"	6'-11"		
			10	30	45	29'-0"	7'-0"		
			10	30	45	29'-0"	7'-0"		
			10	30	45	29'-1"	7'-0"		
			10	30	45	29'-1"	7'-0"		

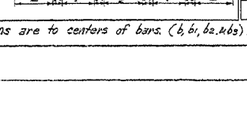
SECTION & BAR GROUP	"c" bars STRAIGHT In Top and Bottom Slab of Barrel. Alternate with "b" and "b2" bars. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	"c1" bars STRAIGHT In Top and Bottom Slab of Barrel. Alt. with "b" & "b2" bars. (Two of each Length) SIZE	SPACING	NUMBER REQ'D	LENGTH
SECTION "A" & BAR GROUP "A"	#4	12"	23	93	65	9'-4"	#4	12"	4	8'-0"
			23	93	65	"			4	"
			23	93	65	"			4	"
			23	93	65	"			4	"
			23	93	65	"			4	"
			23	97	69	11'-4"			6	10'-8"
			23	97	69	"			6	"
			23	97	69	"			6	"
			23	97	69	11'-8"			6	11'-0"
			23	97	69	11'-8"			6	11'-3"
			25	97	71	12'-8"			6	9'-11"
			25	97	71	"			6	"
			25	97	71	"			6	"
			25	97	71	13'-0"			6	10'-0"
			25	97	71	13'-0"			6	10'-0"
			25	97	71	13'-0"			6	10'-0"
			23	93	63	15'-6"			6	11'-9"
			23	93	63	"			6	"
			23	93	63	15'-6"			6	12'-0"
			23	93	63	15'-8"			6	12'-3"
			23	93	63	15'-8"			6	12'-6"
			23	93	63	15'-10"			6	12'-6"
			23	91	61	17'-6"			8	14'-5"
			23	91	61	17'-6"			8	14'-7"
			23	91	61	"			8	"
			23	91	61	17'-8"			8	14'-10"
			23	91	61	17'-8"			8	15'-0"
			23	91	61	18'-0"			8	15'-3"

SECTION & BAR GROUP	"d" bars Longitudinal in Top Slab of Barrel. SIZE	SPACING	NUMBER REQ'D	LENGTH	"d1" bars Longitudinal in Sidewalls and Division Walls. SIZE	SPACING	NUMBER REQ'D	LENGTH	"e" bars Longitudinal in Bottom Slab of Barrel. SIZE	SPACING	NUMBER REQ'D	LENGTH
SECTION "A" & BAR GROUP "A"					#4	12"	12		#4	12"	22	
							18				22	
							24				22	
							30				22	
							36				22	
							18				25	
							24				25	
							30				25	
							36				25	
							42				25	
							18				28	
							24				28	
							30				28	
							36				28	
							42				28	
							24				33	
							30				33	
							36				33	
							42				33	
							48				33	
							24				36	
							30				36	
							36				36	
							42				36	
							48				36	
							54				36	
							60				36	

SECTION & BAR GROUP	"f" bars STRAIGHT Verticals in Sidewalls and Division Walls. SIZE	SPACING	NUMBER REQ'D 2:1	3:1	4:1	LENGTH	"k" bars STRAIGHT In Bottom of Headwall SIZE	NUMBER REQ'D	LENGTH	"k2" bars STRAIGHT In Top of Headwall and Apron. (2 Each) SIZE	NUMBER REQ'D	LENGTH
SECTION "A" & BAR GROUP "A"	#4	12"	78	138	201	2'-9"	#5	3	14'-7"	#4	4	15'-1"
			78	138	201	3'-9"		3	"		4	"
			78	138	201	4'-9"		3	"		4	"
			78	138	201	5'-9"		3	"		4	"
			78	138	201	6'-9"		3	14'-11"		4	15'-5"
	#4	12"	78	138	201	3'-10"	#5	3	17'-6"	#4	4	18'-0"
			78	138	201	4'-10"		3	"		4	"
			78	138	201	5'-10"		3	"		4	"
			78	138	201	6'-10"		3	18'-0"		4	18'-7"
	#5	12"	78	138	201	7'-10"		3	18'-5"		4	18'-10"
			78	138	201	3'-11"		3	19'-9"		4	21'-4"
			78	138	201	4'-11"		3	"		4	"
			78	138	201	5'-11"		3	"		4	"
			78	138	201	6'-11"		3	21'-1"		4	21'-8"
	#4	12"	78	138	201	7'-11"		3	21'-5"		4	21'-11"
		11"	84	150	219	8'-11"		3	21'-6"		4	22'-6"
		12"	78	138	201	8'-11"		3	23'-11"		4	24'-5"
			78	138	201	4'-1"		3	"		4	"
			78	138	201	5'-1"		3	26'-3"		4	26'-9"
	#4	12"	78	138	201	6'-1"		3	26'-6"		4	25'-0"
		11"	84	150	219	7'-1"		3	24'-7"		4	25'-1"
		12"	78	138	201	7'-1"		3	24'-11"		4	25'-5"
	#5	11"	84	150	219	8'-1"		3	27'-6"		4	28'-4"
		12"	78	138	201	8'-1"		3	27'-9"		4	27'-10"
			78	138	201	9'-1"		3	"		4	"
			78	138	201	10'-1"		3	27'-7"		4	28'11"
	#4	12"	78	138	201	5'-2"		3	27'-9"		4	28'-8"
		11"	90	165	240	6'-2"		3	27'-11"		4	28'-10"
		12"	78	138	201	6'-2"		3	27'-9"		4	28'-8"
	#5	11"	90	165	240	8'-2"		3	27'-11"		4	28'-10"
		12"	78	138	201	9'-2"		3	28'-0"		4	28'-11"
	#6	12"	78	198	201	11'-2"		3	28'-1"		4	28'-11"

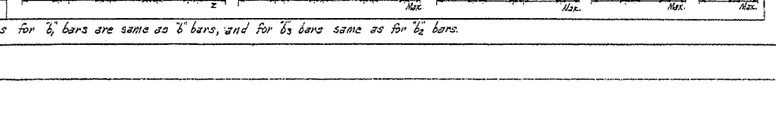
BAR SIZE	PIN DIAM.	K	ADD FOR 2 HOOKS
#4	2"	4"	0'-10½"
#5	2½"	4½"	0'-11½"
#6	3"	5"	1'-2"

BENDING DIAGRAM FOR BARS "b" AND "b2"



BAR SIZE	PIN DIAM.	K	ADD FOR 1 HOOK
#4	2"	4"	0'-5½"
#5	2½"	4½"	0'-5⅞"
#6	3"	5"	0'-7"

BENDING DIAGRAM FOR BARS "b1" AND "b3"



NOTE:- Dimensions are to centers of bars. (b, b1, b2, b3). The X, Y & Z values for "b1" bars are same as "b" bars, and for "b3" bars same as for "b2" bars.

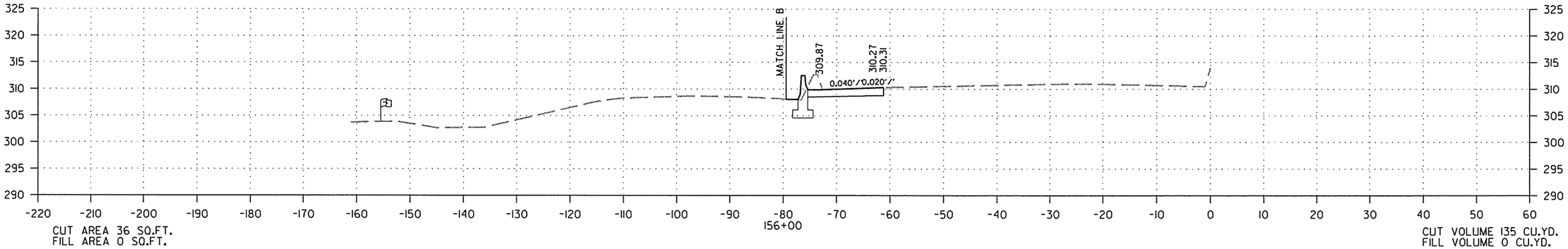
These bars are in the skewed portion of barrel only. The length of "a" and "c" bars and overall length L of "b" and "b2" bars vary by 3'-9" for 12" spacing and 3'-6" for 11" spacing.

GENERAL NOTES

CONCRETE:- All concrete to be Class S, and shall be poured in the dry. All exposed corners to have ¾" chamfers.
REINFORCING STEEL:- Reinforcing to be deformed bars of intermediate or hard grade.
CONSTRUCTION JOINTS:- Construction joints between wingwalls, sidewalls, division walls and slabs shall be only where shown on plans.
SPECIFICATIONS:- Arkansas State Highway Commission Standard Specifications for High

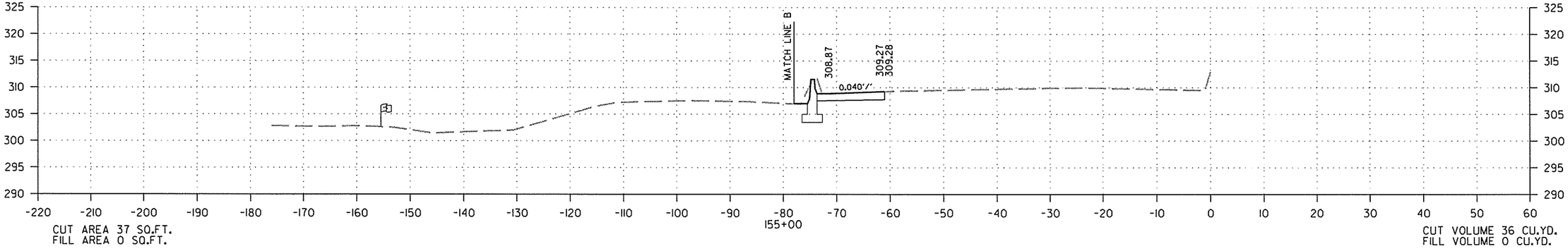
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				6	ARK.			
				JOB NO.		061437	277	372

(2) CROSS SECTIONS



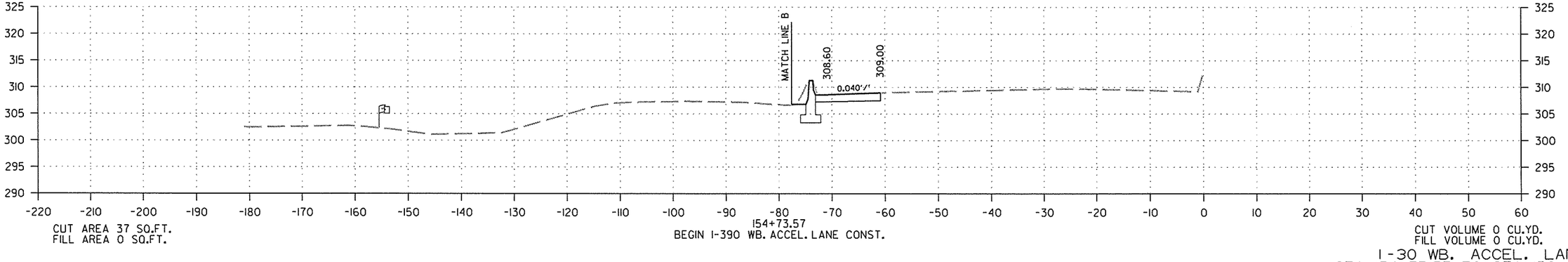
CUT AREA 36 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 135 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 36 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

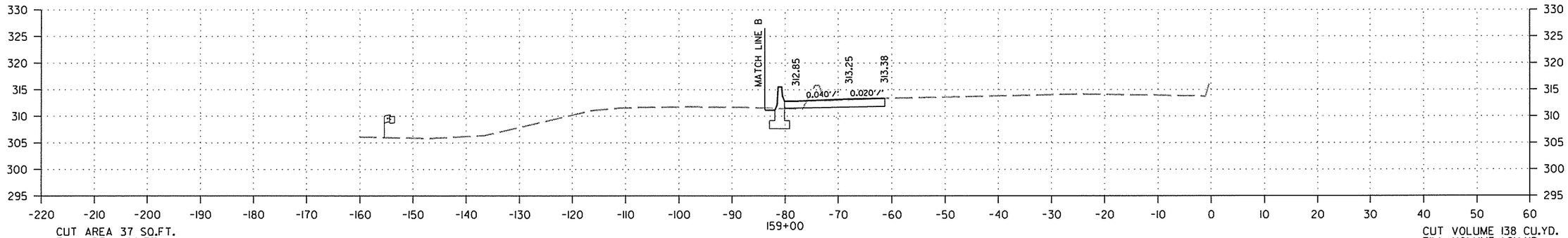
I-30 WB. ACCEL. LANE
STA. 154+73.57 TO STA. 156+00

3/2/2015

R061437.DGN

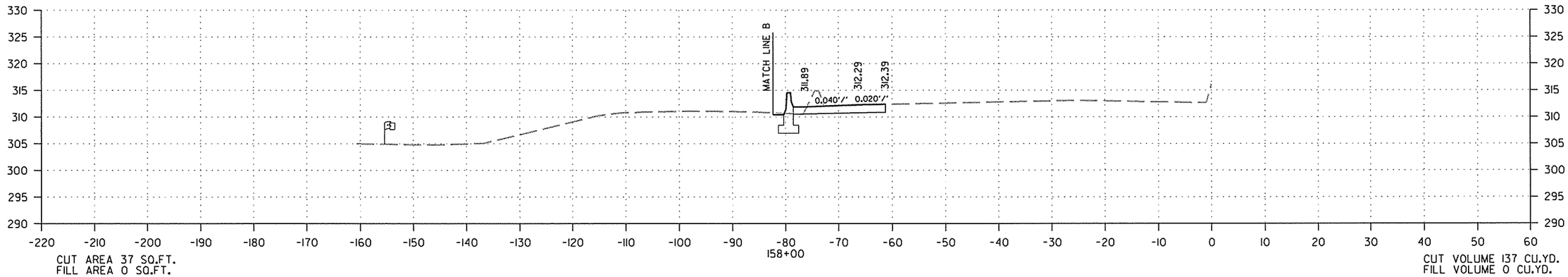
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	278	372

(2) CROSS SECTIONS



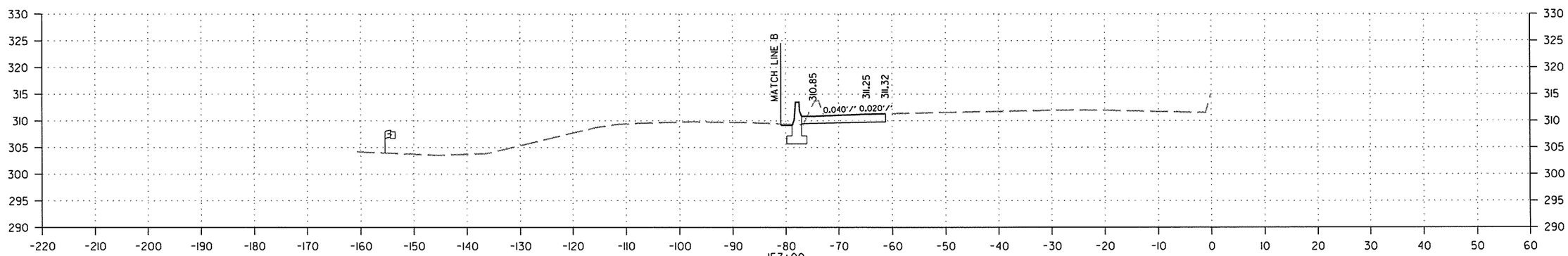
CUT AREA 37 SQ.FT.
FILL AREA 1 SQ.FT.

CUT VOLUME 138 CU.YD.
FILL VOLUME 1 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 137 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 134 CU.YD.
FILL VOLUME 0 CU.YD.

I-30 WB. ACCEL. LANE
STA. 157+00 TO STA. 159+00

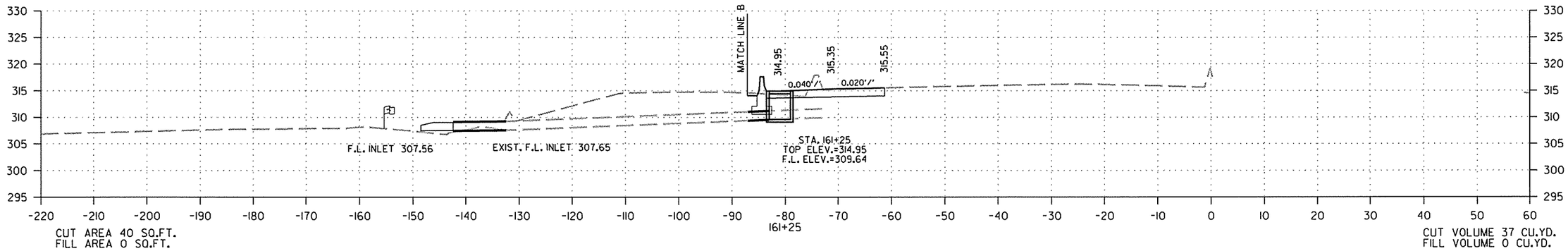
3/2/2015

R061437.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.		061437	279	372

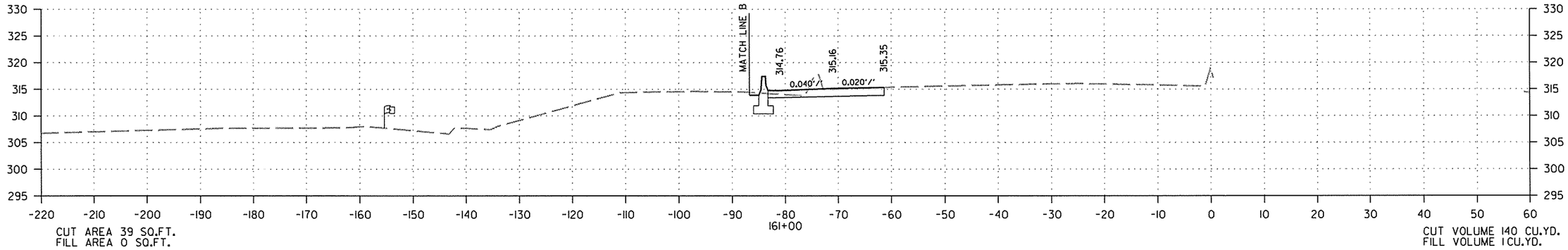
(2) CROSS SECTIONS

STA. 161+25 - IN PLACE
D.I. ON LT. W./ 18" x 60' PIPE OUTLET
REMOVE DROP INLET AND HEADWALL
CONSTRUCT
TYPE ST D.I. 83' LT.
AND EXTEND R.C. PIPE 10' LT. WITH F.E.S.
WITH CONCRETE COLLARS
USE 3 VANE GRATES
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 16 LIN. FT.



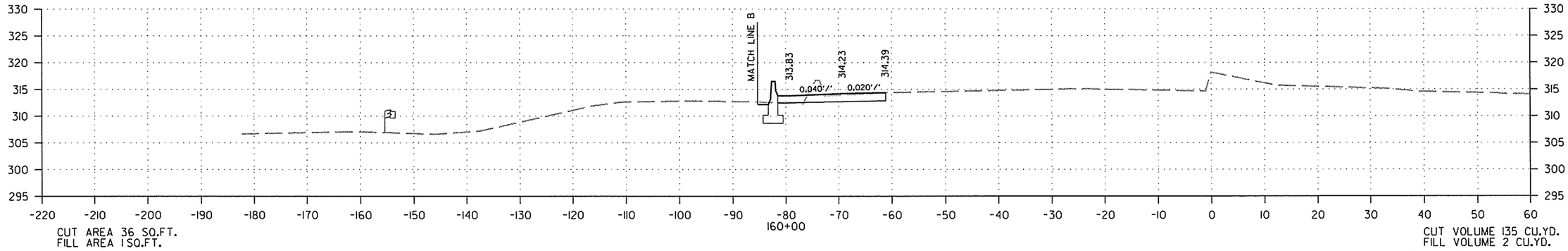
CUT AREA 40 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 37 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 39 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 140 CU.YD.
FILL VOLUME 1 CU.YD.



CUT AREA 36 SQ.FT.
FILL AREA 1 SQ.FT.

CUT VOLUME 135 CU.YD.
FILL VOLUME 2 CU.YD.

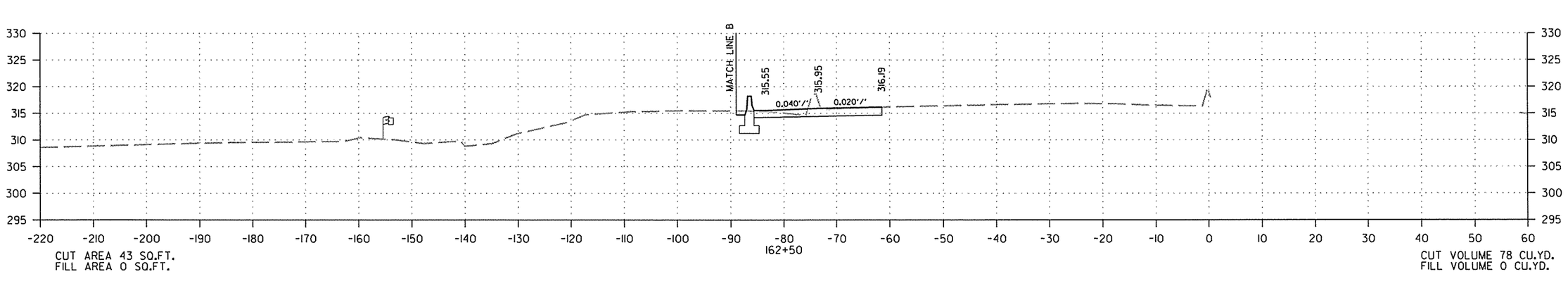
I-30 WB. ACCEL. LANE
STA. 160+00 TO STA. 161+25

3/2/2015

R061437.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.		061437	280	372

(2) CROSS SECTIONS



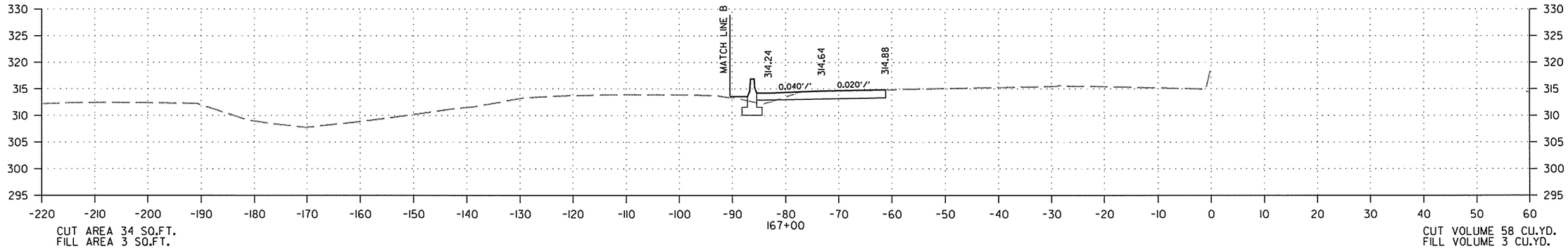
I-30 WB. ACCEL. LANE
STA. 162+00 TO STA. 162+50

3/2/2015

R061437.DGN

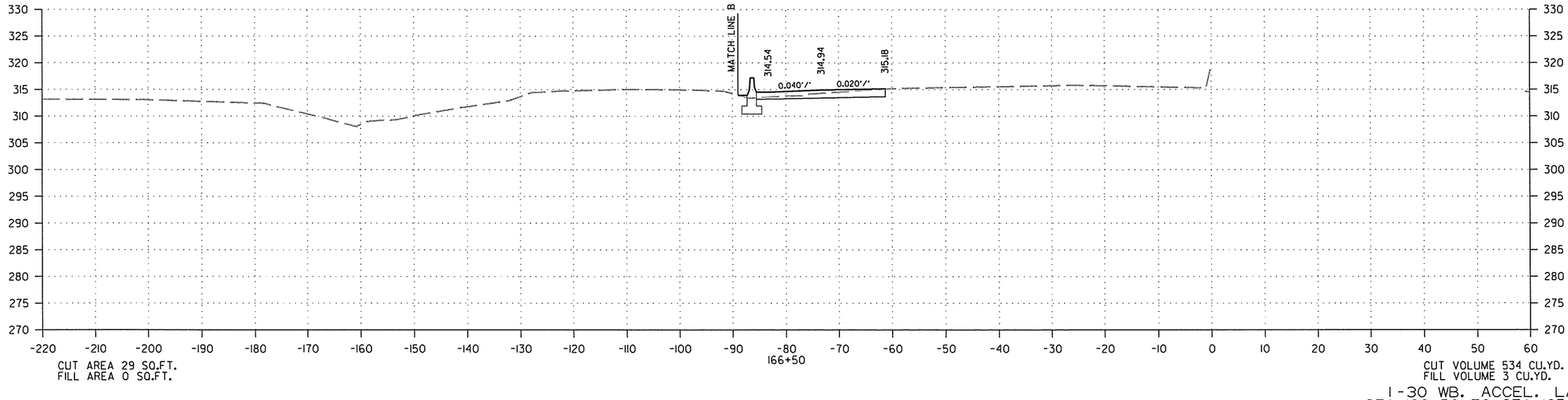
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	281	372

(2) CROSS SECTIONS



CUT AREA 34 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 58 CU.YD.
FILL VOLUME 3 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 534 CU.YD.
FILL VOLUME 3 CU.YD.

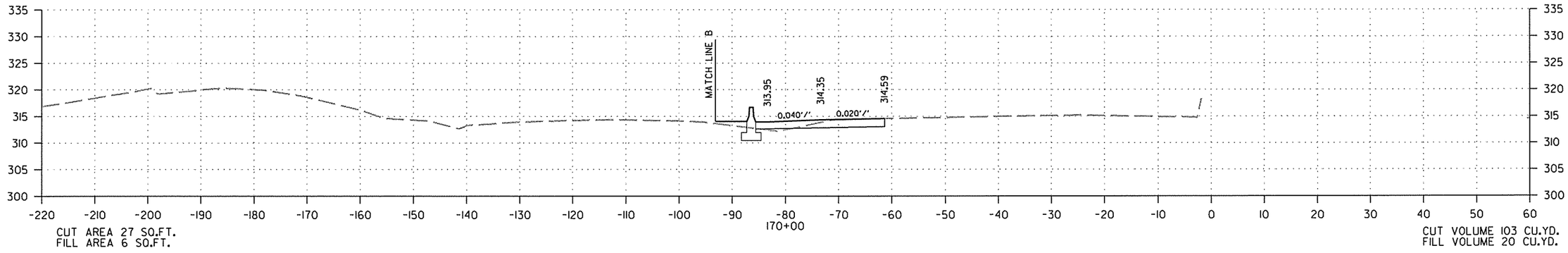
I-30 WB. ACCEL. LANE
STA. 166+50 TO STA. 167+00

3/2/2015

R061437.DGN

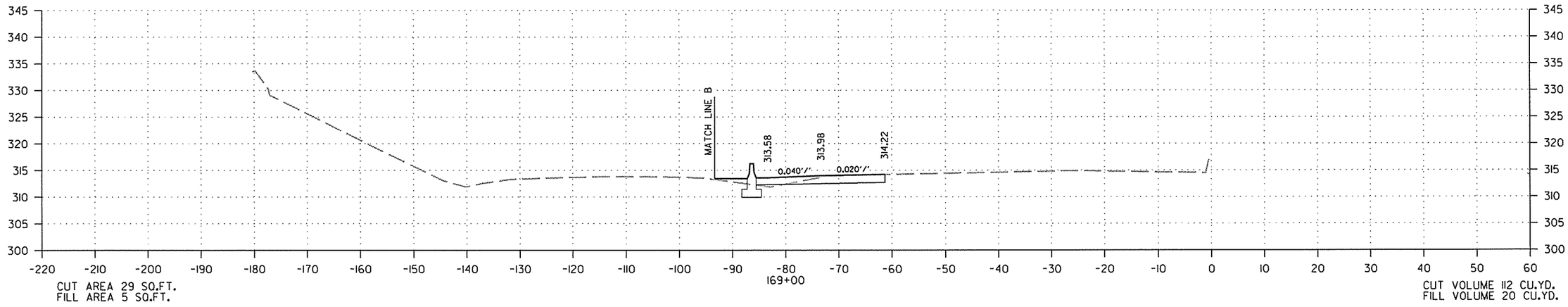
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	282	372

(2) CROSS SECTIONS



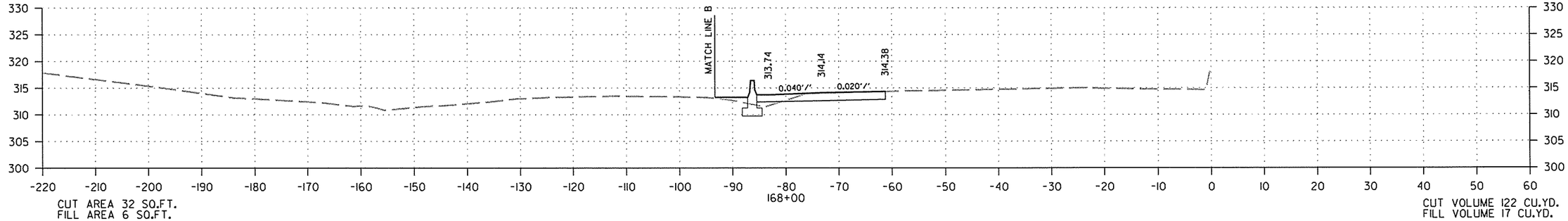
CUT AREA 27 SQ.FT.
FILL AREA 6 SQ.FT.

CUT VOLUME 103 CU.YD.
FILL VOLUME 20 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 5 SQ.FT.

CUT VOLUME 112 CU.YD.
FILL VOLUME 20 CU.YD.



CUT AREA 32 SQ.FT.
FILL AREA 6 SQ.FT.

CUT VOLUME 122 CU.YD.
FILL VOLUME 17 CU.YD.

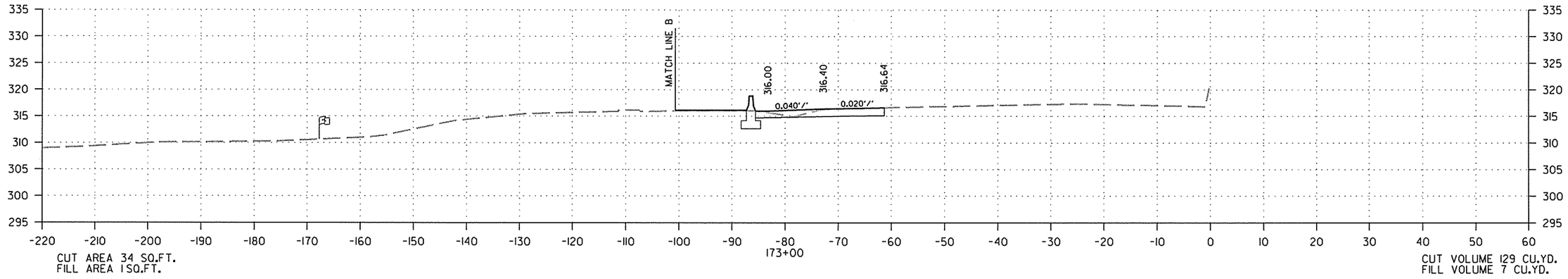
I-30 WB. ACCEL. LANE
STA. 168+00 TO STA. 170+00

3/2/2015

R061437.DGN

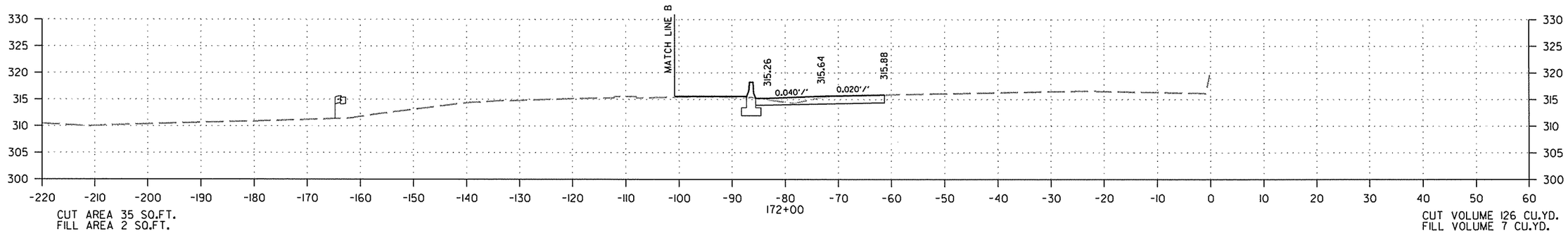
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	283	372

(2) CROSS SECTIONS



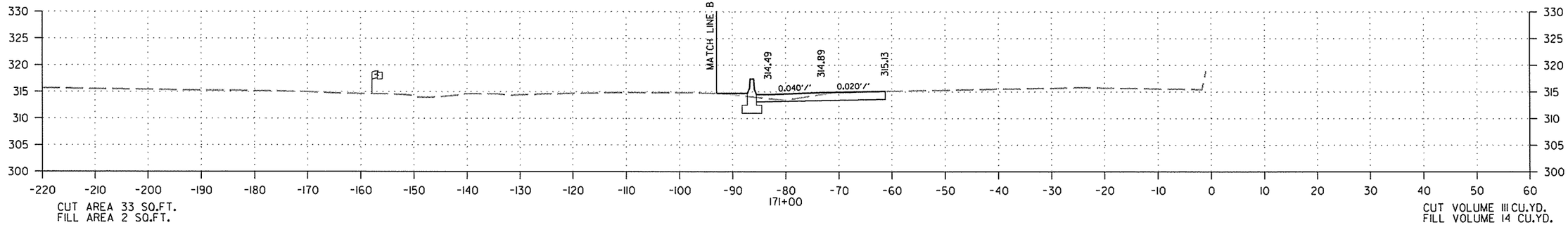
CUT AREA 34 SQ.FT.
FILL AREA 1 SQ.FT.

CUT VOLUME 129 CU.YD.
FILL VOLUME 7 CU.YD.



CUT AREA 35 SQ.FT.
FILL AREA 2 SQ.FT.

CUT VOLUME 126 CU.YD.
FILL VOLUME 7 CU.YD.



CUT AREA 33 SQ.FT.
FILL AREA 2 SQ.FT.

CUT VOLUME 111 CU.YD.
FILL VOLUME 14 CU.YD.

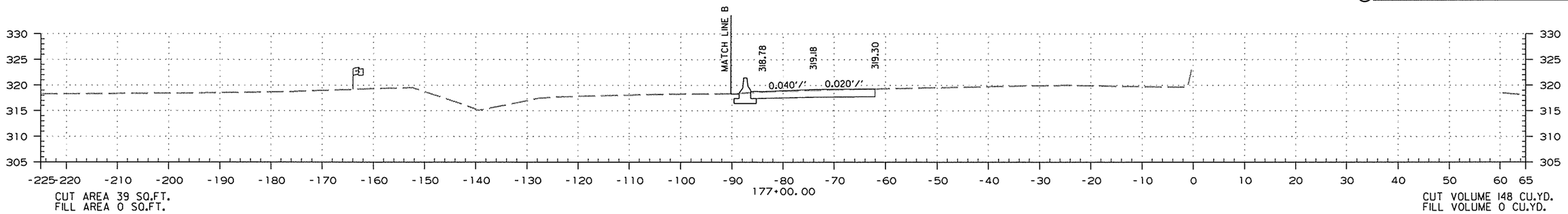
I-30 WB. ACCEL. LANE
STA. 171+00 TO STA. 173+00

3/2/2015

R061437.DGN

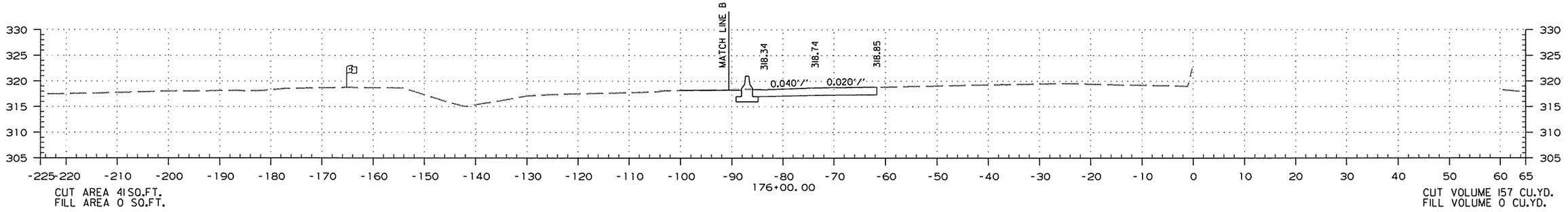
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	284	372

(2) CROSS SECTIONS



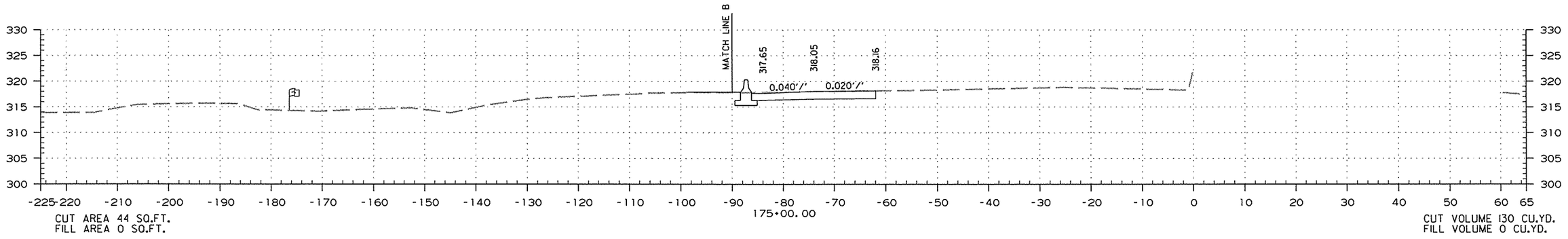
CUT AREA 39 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 148 CU.YD.
FILL VOLUME 0 CU.YD.



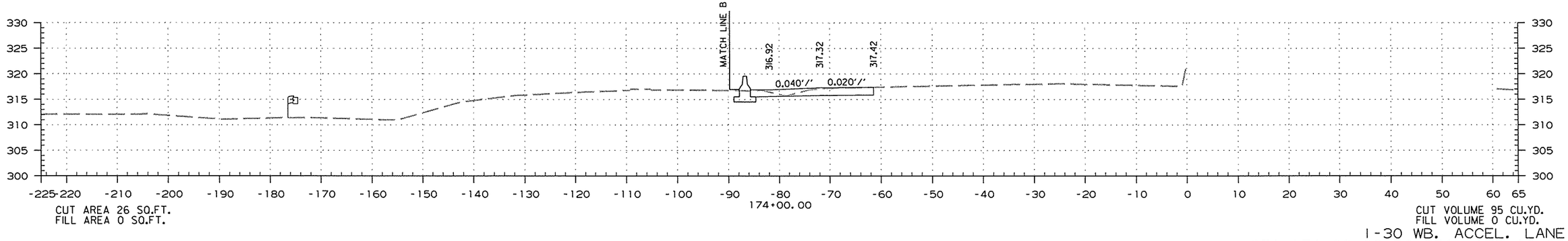
CUT AREA 41 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 157 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 44 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 130 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 26 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 95 CU.YD.
FILL VOLUME 0 CU.YD.

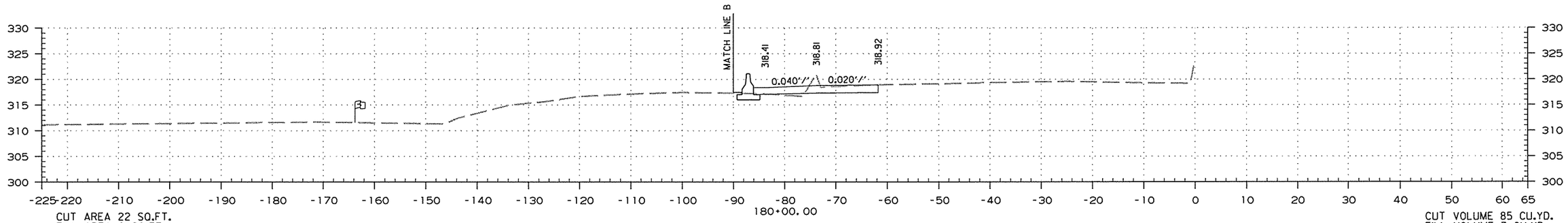
I-30 WB. ACCEL. LANE
STA. 174+00.00 TO STA. 177+00.00

3/2/2015

R061437.DGN

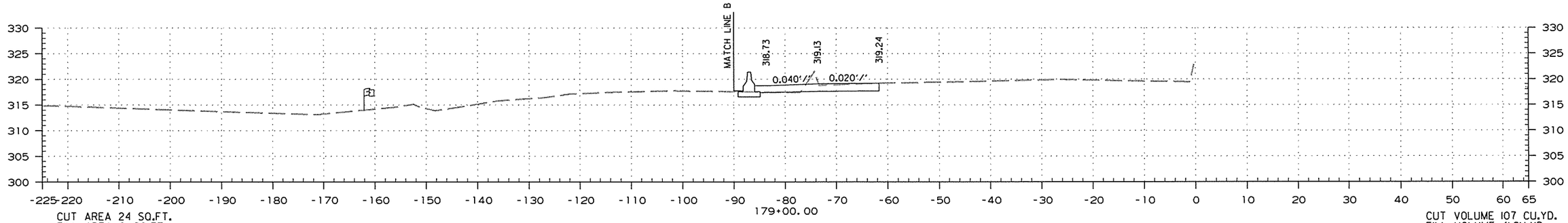
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	285	372

(2) CROSS SECTIONS



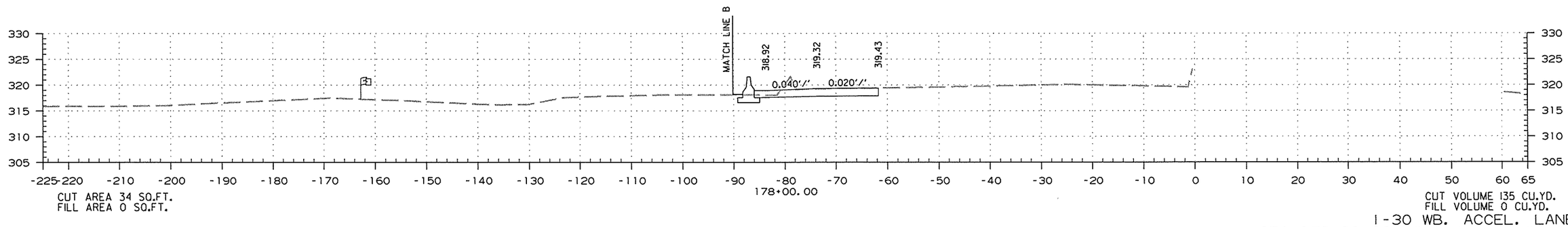
CUT AREA 22 SQ.FT.
FILL AREA 2 SQ.FT.

CUT VOLUME 85 CU.YD.
FILL VOLUME 7 CU.YD.



CUT AREA 24 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 107 CU.YD.
FILL VOLUME 41 CU.YD.



CUT AREA 34 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 135 CU.YD.
FILL VOLUME 0 CU.YD.

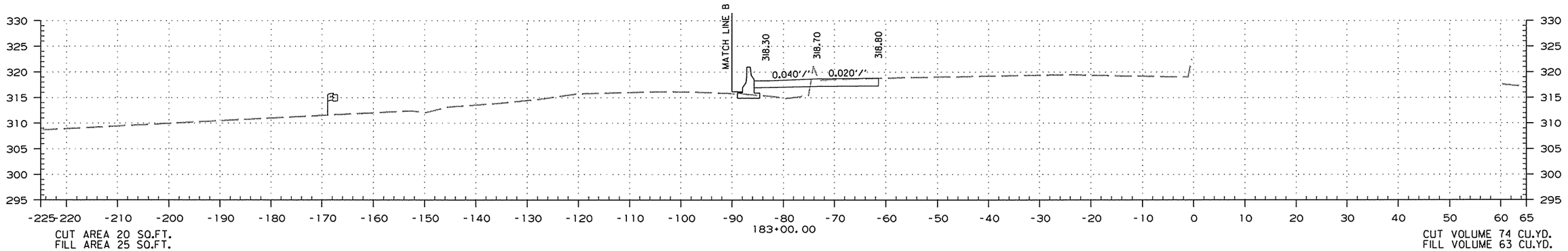
I-30 WB. ACCEL. LANE
STA. 178+00.00 TO STA. 180+00.00

3/2/2015

R061437.DGN

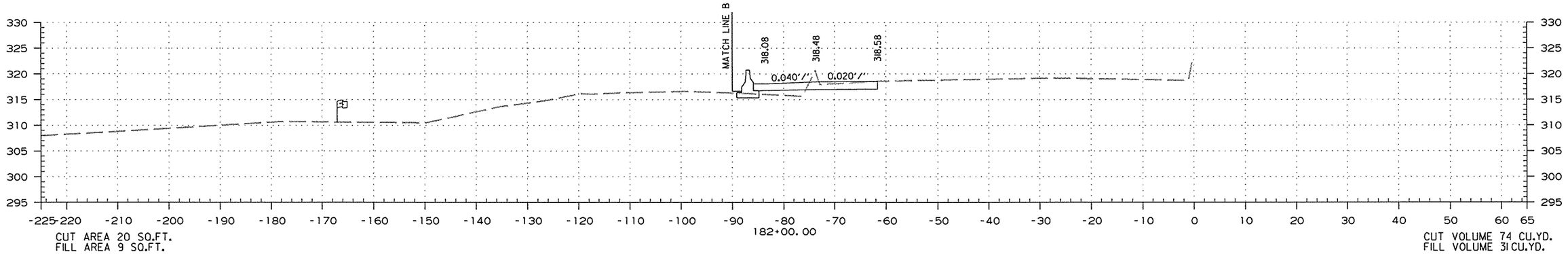
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	286	372

(2) CROSS SECTIONS



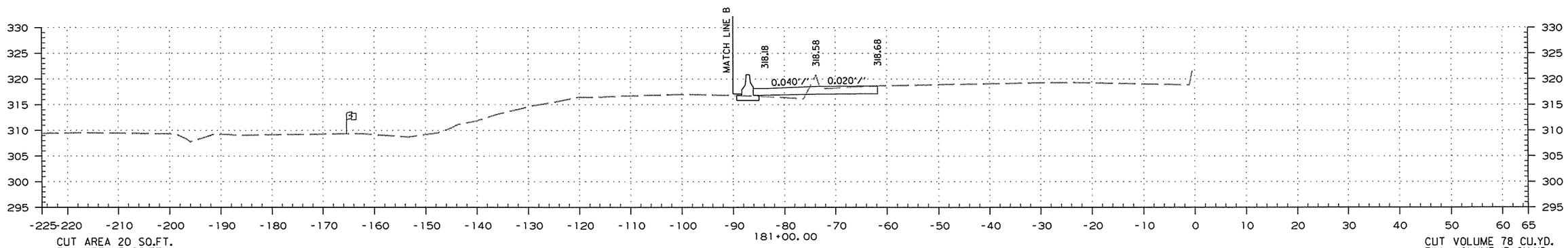
CUT AREA 20 SQ.FT.
FILL AREA 25 SQ.FT.

CUT VOLUME 74 CU.YD.
FILL VOLUME 63 CU.YD.



CUT AREA 20 SQ.FT.
FILL AREA 9 SQ.FT.

CUT VOLUME 74 CU.YD.
FILL VOLUME 31 CU.YD.



CUT AREA 20 SQ.FT.
FILL AREA 5 SQ.FT.

CUT VOLUME 78 CU.YD.
FILL VOLUME 13 CU.YD.

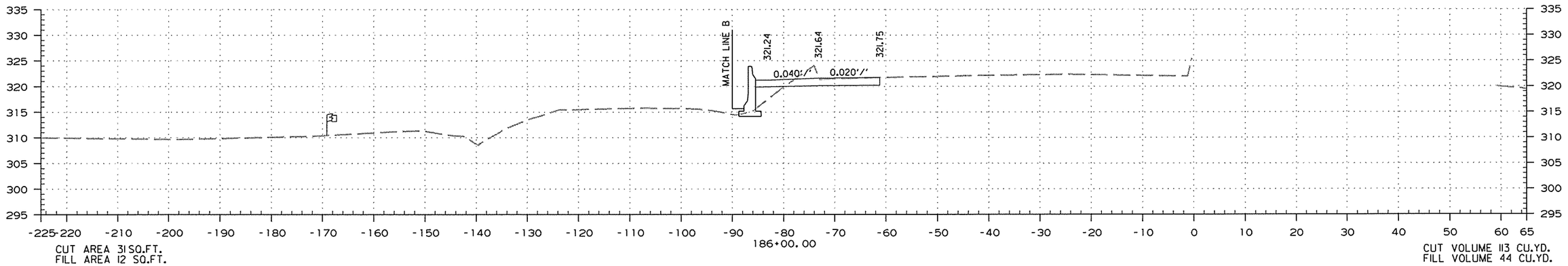
I-30 WB. ACCEL. LANE
STA. 181+00.00 TO STA. 183+00.00

3/2/2015

R061437.DGN

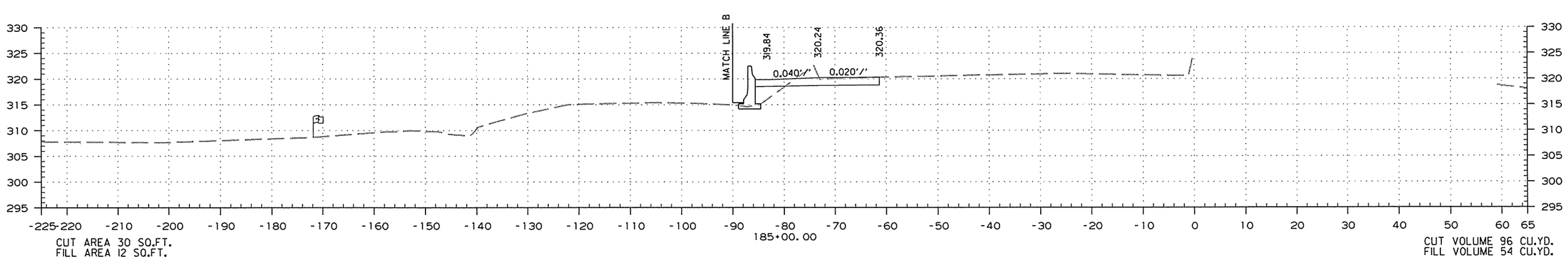
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	287	372

(2) CROSS SECTIONS



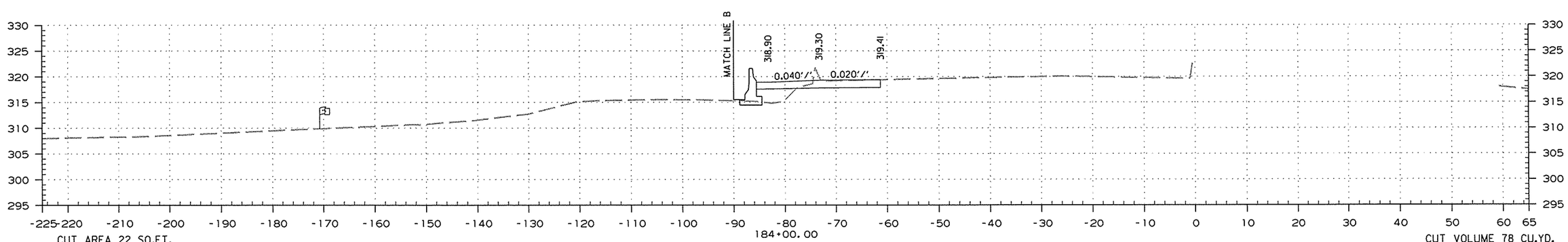
CUT AREA 315 SQ.FT.
FILL AREA 12 SQ.FT.

CUT VOLUME 113 CU.YD.
FILL VOLUME 44 CU.YD.



CUT AREA 30 SQ.FT.
FILL AREA 12 SQ.FT.

CUT VOLUME 96 CU.YD.
FILL VOLUME 54 CU.YD.



CUT AREA 22 SQ.FT.
FILL AREA 17 SQ.FT.

CUT VOLUME 78 CU.YD.
FILL VOLUME 78 CU.YD.

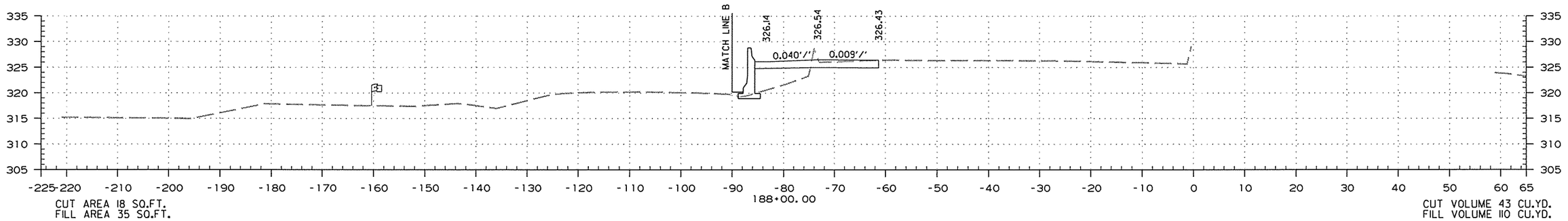
I-30 WB. ACCEL. LANE
STA. 184+00.00 TO STA. 186+00.00

3/2/2015

R061437.DGN

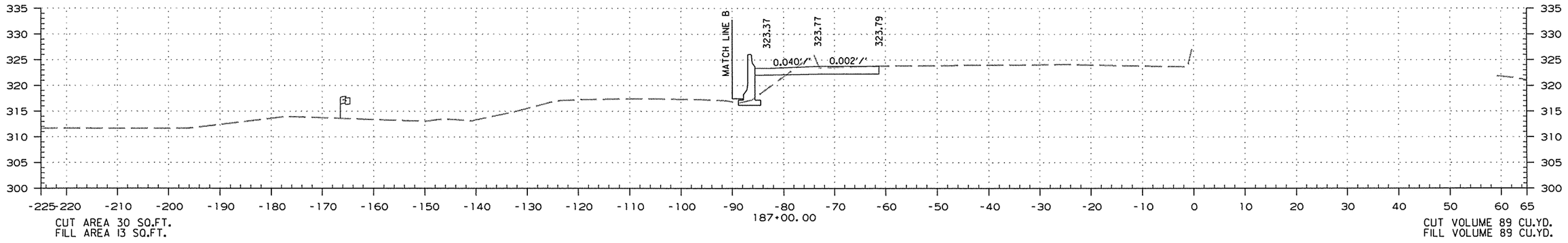
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	288	372

(2) CROSS SECTIONS



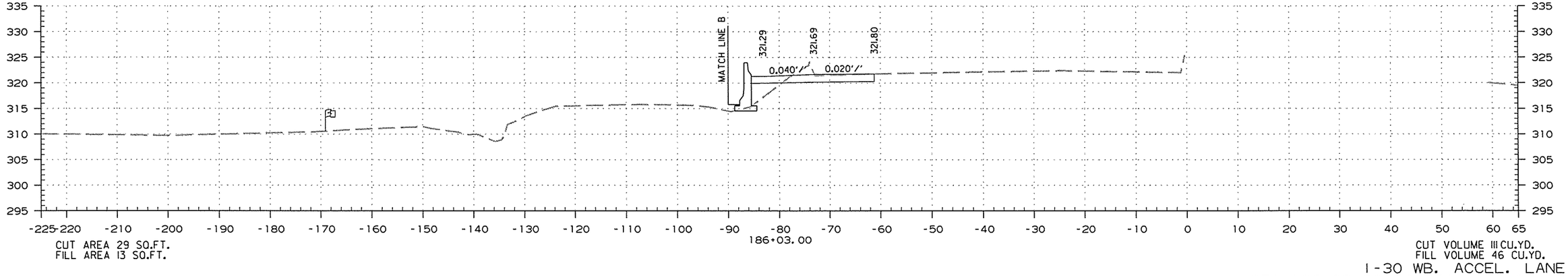
CUT AREA 18 SQ.FT.
FILL AREA 35 SQ.FT.

CUT VOLUME 43 CU.YD.
FILL VOLUME 110 CU.YD.



CUT AREA 30 SQ.FT.
FILL AREA 13 SQ.FT.

CUT VOLUME 89 CU.YD.
FILL VOLUME 89 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 13 SQ.FT.

CUT VOLUME 111 CU.YD.
FILL VOLUME 46 CU.YD.

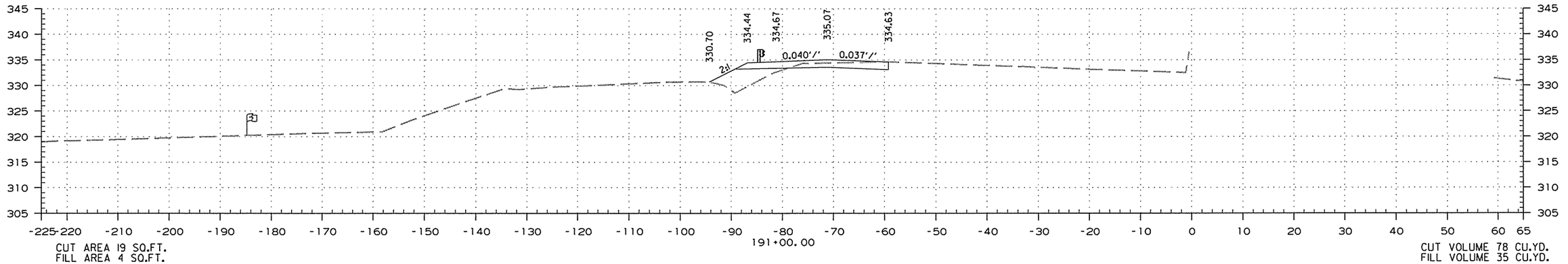
I-30 WB. ACCEL. LANE
STA. 186+03.00 TO STA. 188+00.00

3/2/2015

R061437.DGN

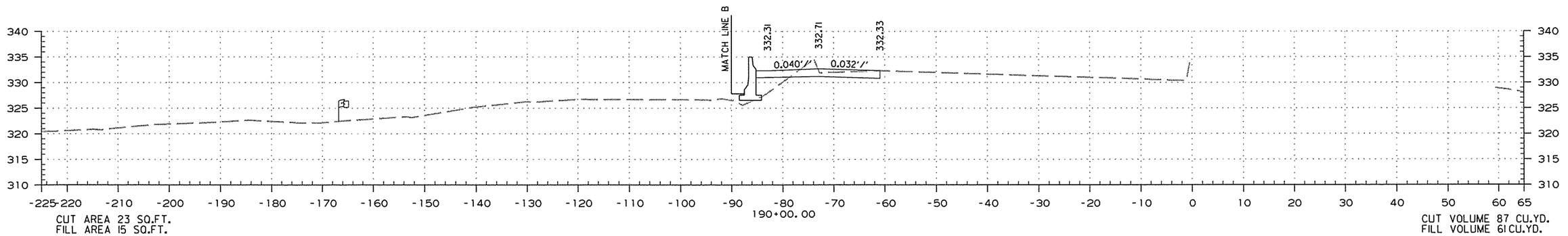
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	289	372

(2) CROSS SECTIONS



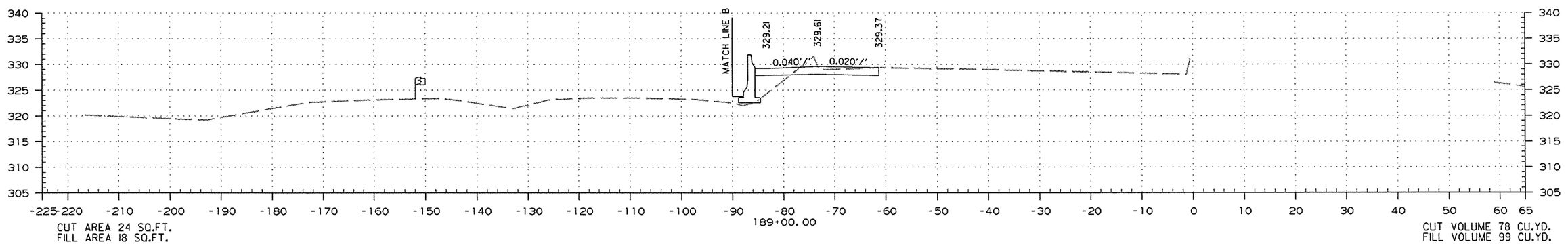
CUT AREA 19 SQ.FT.
FILL AREA 4 SQ.FT.

CUT VOLUME 78 CU.YD.
FILL VOLUME 35 CU.YD.



CUT AREA 23 SQ.FT.
FILL AREA 15 SQ.FT.

CUT VOLUME 87 CU.YD.
FILL VOLUME 61 CU.YD.



CUT AREA 24 SQ.FT.
FILL AREA 18 SQ.FT.

CUT VOLUME 78 CU.YD.
FILL VOLUME 99 CU.YD.

I-30 WB. ACCEL. LANE
STA. 189+00.00 TO STA. 191+00.00

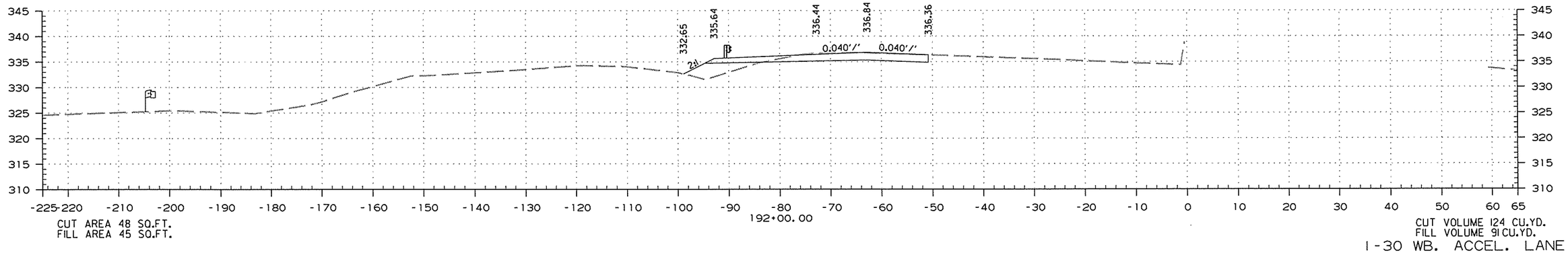
3/2/2015

R061437.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.		061437	290	372

(2) CROSS SECTIONS

192+24.98
END I-30 WB. ACCEL. LANE CONST.



CUT AREA 48 SQ.FT.
FILL AREA 45 SQ.FT.

CUT VOLUME 124 CU.YD.
FILL VOLUME 91 CU.YD.

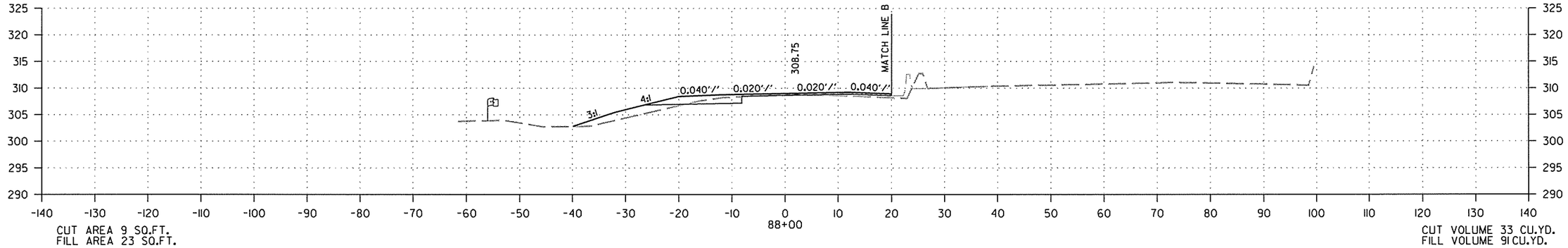
I-30 WB. ACCEL. LANE
STA. 192+00.00

3/2/2015

R061437.DGN

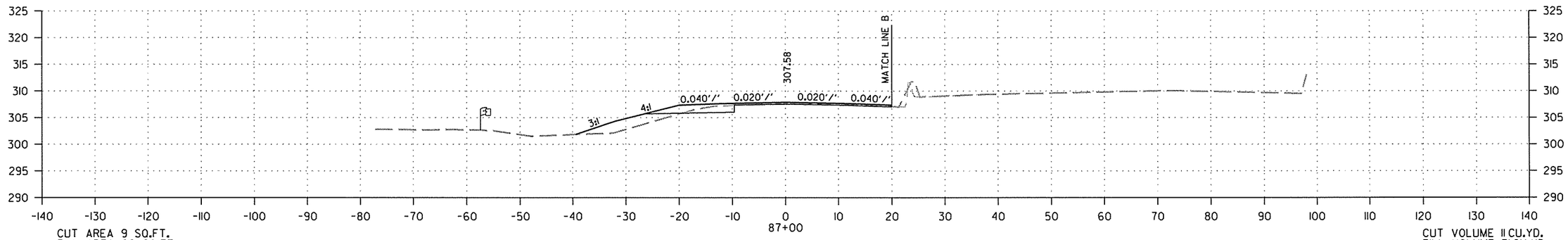
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	291	372

(2) CROSS SECTIONS



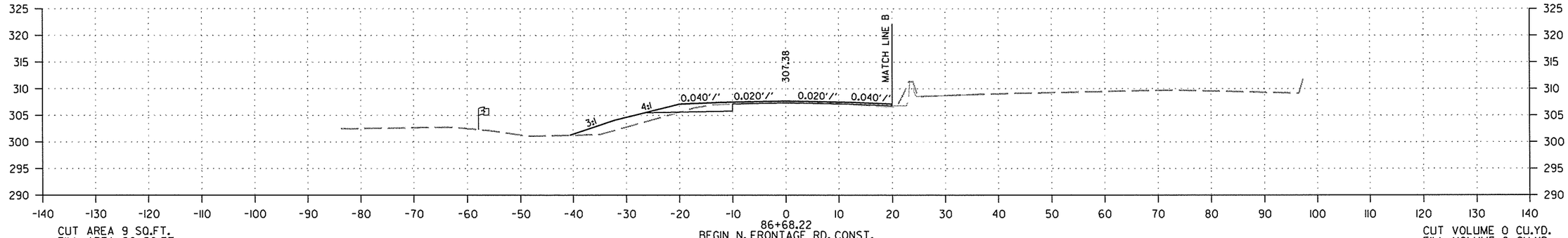
CUT AREA 9 SQ.FT.
FILL AREA 23 SQ.FT.

CUT VOLUME 33 CU.YD.
FILL VOLUME 91 CU.YD.



CUT AREA 9 SQ.FT.
FILL AREA 26 SQ.FT.

CUT VOLUME 11 CU.YD.
FILL VOLUME 31 CU.YD.



CUT AREA 9 SQ.FT.
FILL AREA 26 SQ.FT.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

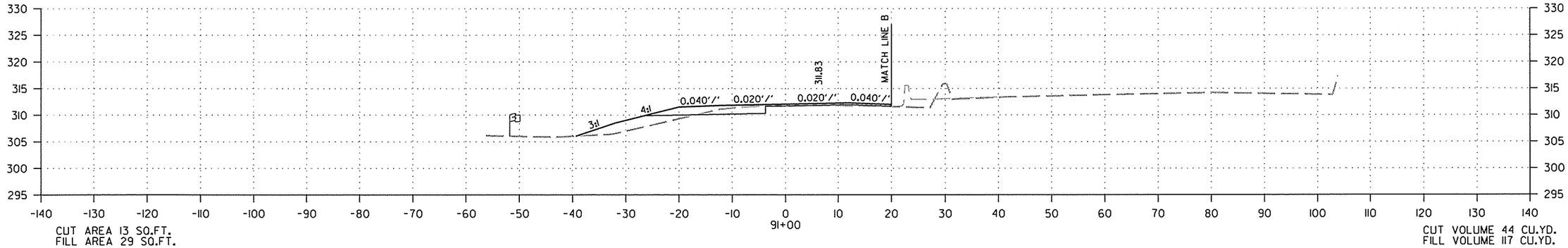
N. FRONTAGE RD.
CROSS SECTION STA.86+68.22 TO STA. 88+00

3/2/2015

R061437.DGN

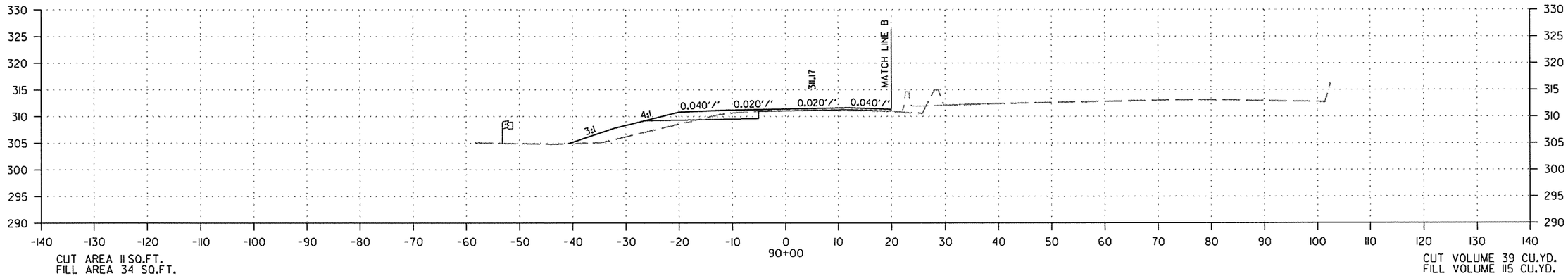
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	292	372

(2) CROSS SECTIONS



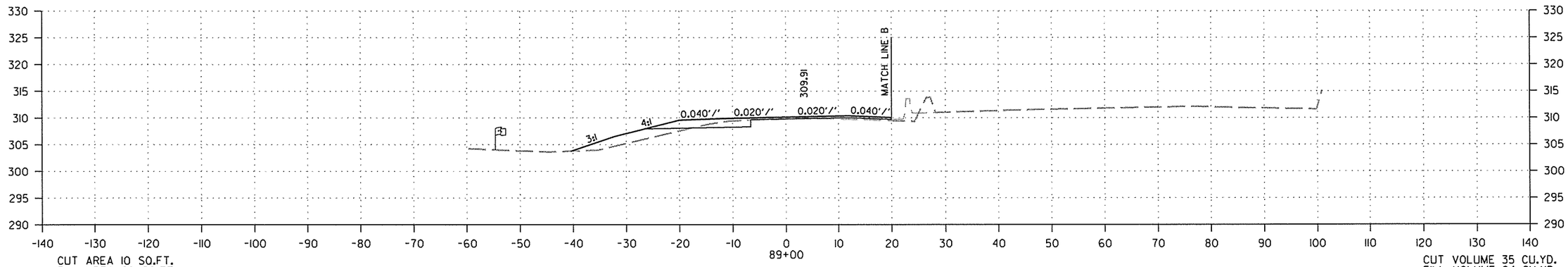
CUT AREA 13 SQ.FT.
FILL AREA 29 SQ.FT.

CUT VOLUME 44 CU.YD.
FILL VOLUME 117 CU.YD.



CUT AREA 11 SQ.FT.
FILL AREA 34 SQ.FT.

CUT VOLUME 39 CU.YD.
FILL VOLUME 115 CU.YD.



CUT AREA 10 SQ.FT.
FILL AREA 28 SQ.FT.

CUT VOLUME 35 CU.YD.
FILL VOLUME 94 CU.YD.

N. FRONTAGE RD.
CROSS SECTION STA.89+00 TO STA. 91+00

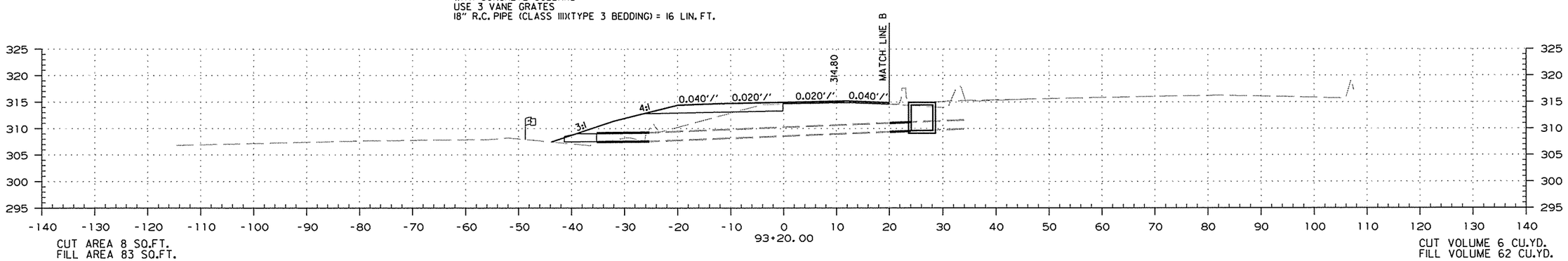
3/2/2015

R061437.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.		061437	293	372

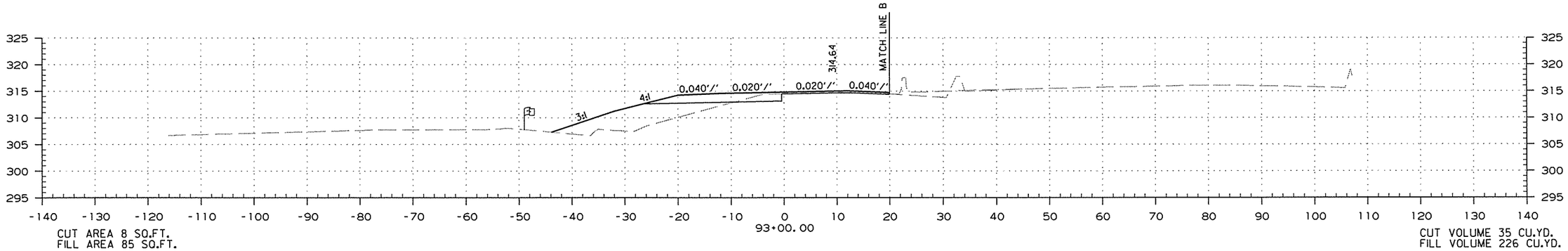
(2) CROSS SECTIONS

STA. 161+25 - IN PLACE
D.I. ON LT. W./ 18" x 60' PIPE OUTLET
REMOVE DROP INLET AND HEADWALL
CONSTRUCT
TYPE ST D.I. 83' LT.
AND EXTEND R.C. PIPE 10' LT. WITH F.E.S.
WITH CONCRETE COLLARS
USE 3 VANE GRATES
18" R.C. PIPE (CLASS III)(TYPE 3 BEDDING) = 16 LIN. FT.



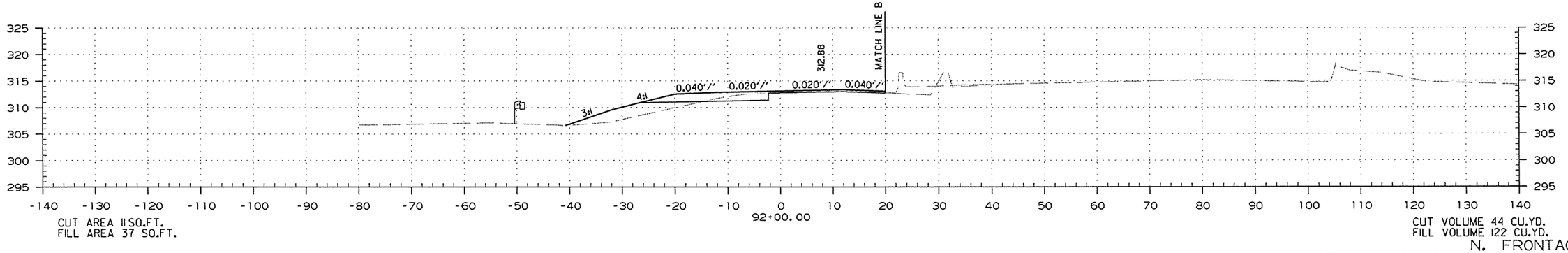
CUT AREA 8 SQ.FT.
FILL AREA 83 SQ.FT.

CUT VOLUME 6 CU.YD.
FILL VOLUME 62 CU.YD.



CUT AREA 8 SQ.FT.
FILL AREA 85 SQ.FT.

CUT VOLUME 35 CU.YD.
FILL VOLUME 226 CU.YD.



CUT AREA 11 SQ.FT.
FILL AREA 37 SQ.FT.

CUT VOLUME 44 CU.YD.
FILL VOLUME 122 CU.YD.

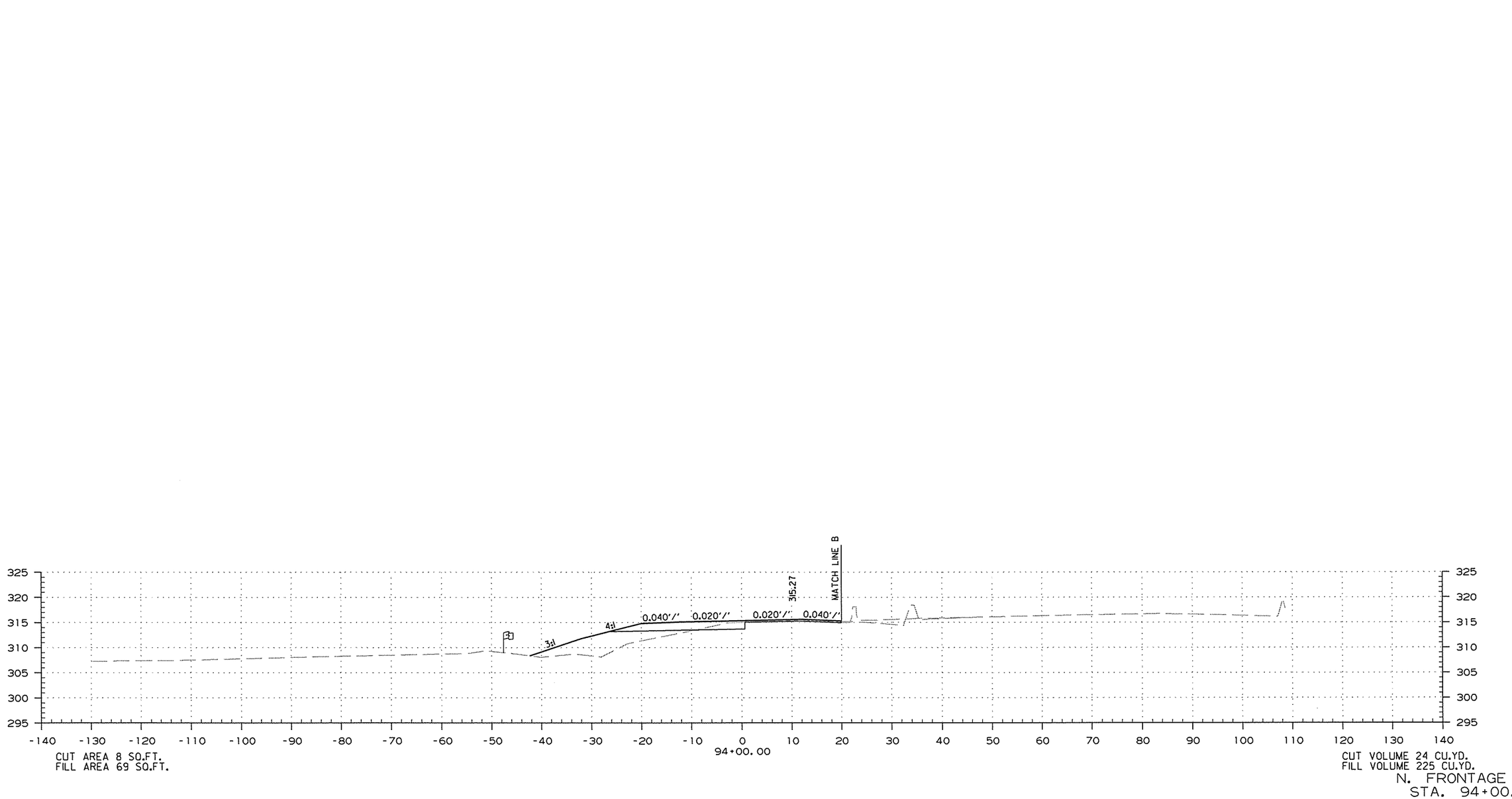
N. FRONTAGE RD.
STA. 92+00.00 TO STA. 93+20.00

3/2/2015

R061437.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.		061437	294	372

(2) CROSS SECTIONS



N. FRONTAGE RD.
STA. 94+00.00

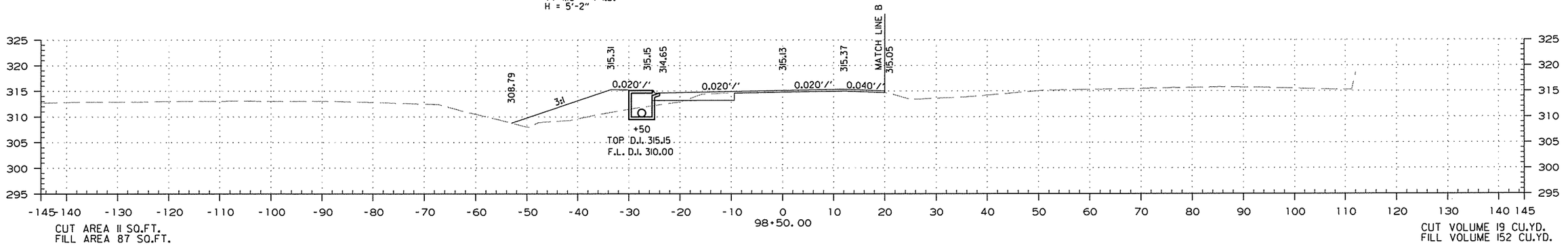
3/2/2015

R061437.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.		061437	295	372

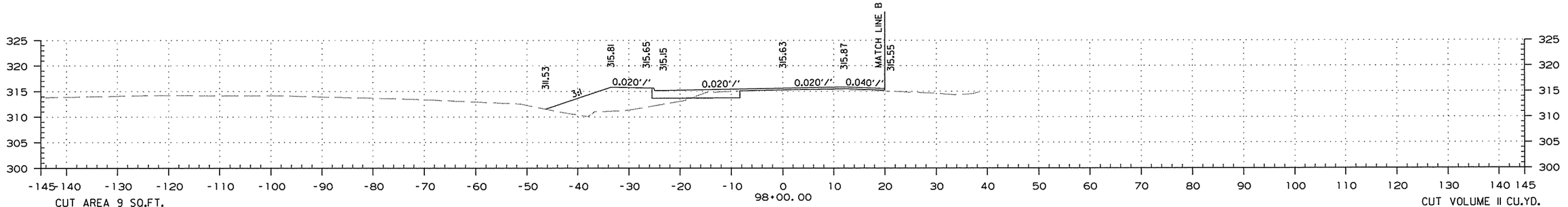
(2) CROSS SECTIONS

STA. 98+50 - CONSTRUCT
D.I. ON LT. W./ 18" x 97' PIPE OUTLET
CONNECT TO D.I. @ STA. 99+51
TY C = 4' x 4'
TY MO = 4' I.D.
H = 5'-2"



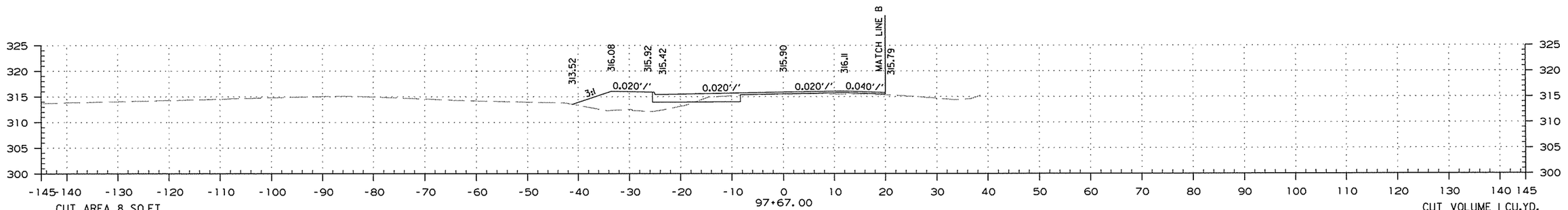
CUT AREA 11 SQ.FT.
FILL AREA 87 SQ.FT.

CUT VOLUME 19 CU.YD.
FILL VOLUME 152 CU.YD.



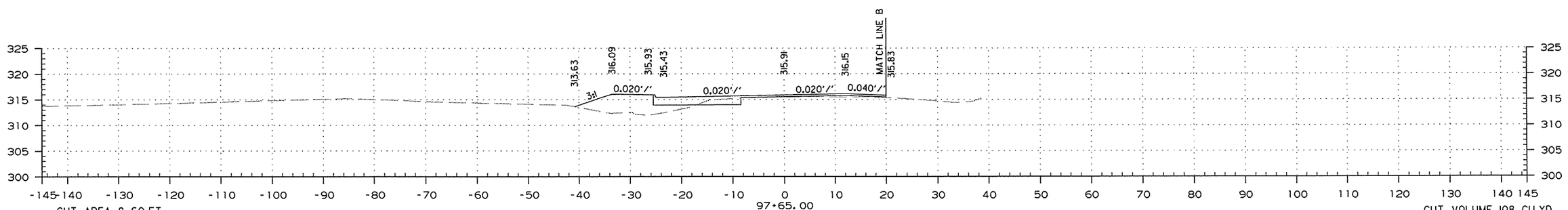
CUT AREA 9 SQ.FT.
FILL AREA 77 SQ.FT.

CUT VOLUME 11 CU.YD.
FILL VOLUME 80 CU.YD.



CUT AREA 8 SQ.FT.
FILL AREA 53 SQ.FT.

CUT VOLUME 1 CU.YD.
FILL VOLUME 4 CU.YD.



CUT AREA 8 SQ.FT.
FILL AREA 52 SQ.FT.

CUT VOLUME 108 CU.YD.
FILL VOLUME 818 CU.YD.

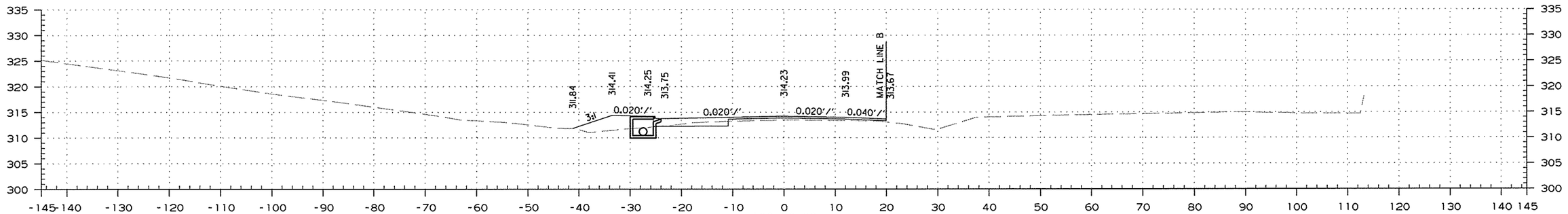
N. FRONTAGE RD.
STA. 97+65.00 TO STA. 98+50.00

3/2/2015

R061437.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.		061437	296	372

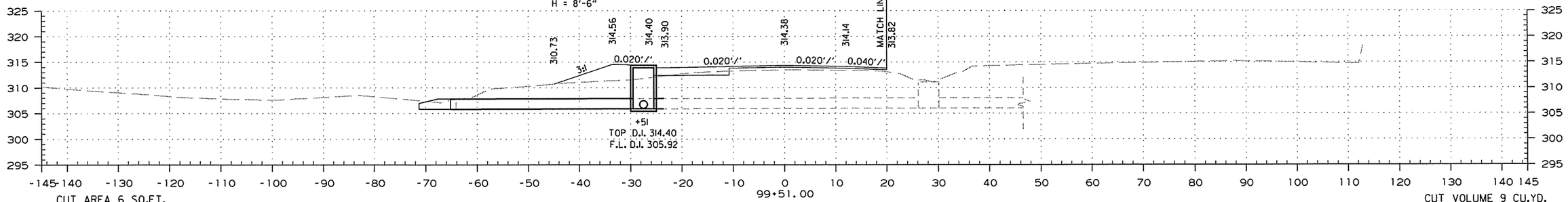
(2) CROSS SECTIONS



CUT AREA 8 SQ.FT.
FILL AREA 34 SQ.FT.

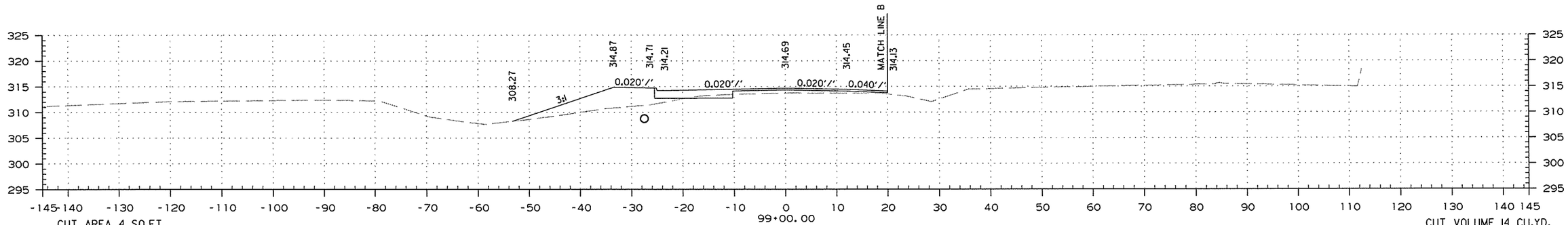
CUT VOLUME 12 CU.YD.
FILL VOLUME 68 CU.YD.

STA. 99+51 - CONSTRUCT
D.I. ON LT. W./ 24" x 36' R.C. STUB OUTLET
W./ F.E.S. LT.
TY C = 4' x 4'
TY MO = 4' I.D.
H = 8'-6"



CUT AREA 6 SQ.FT.
FILL AREA 41 SQ.FT.

CUT VOLUME 9 CU.YD.
FILL VOLUME 107 CU.YD.



CUT AREA 4 SQ.FT.
FILL AREA 72 SQ.FT.

CUT VOLUME 14 CU.YD.
FILL VOLUME 147 CU.YD.

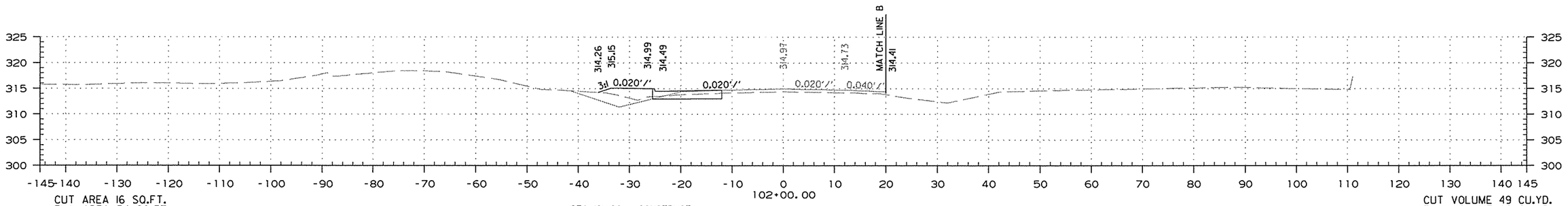
N. FRONTAGE RD.
STA. 99+00.00 TO STA. 100+00.00

3/2/2015

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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.		061437	297	372

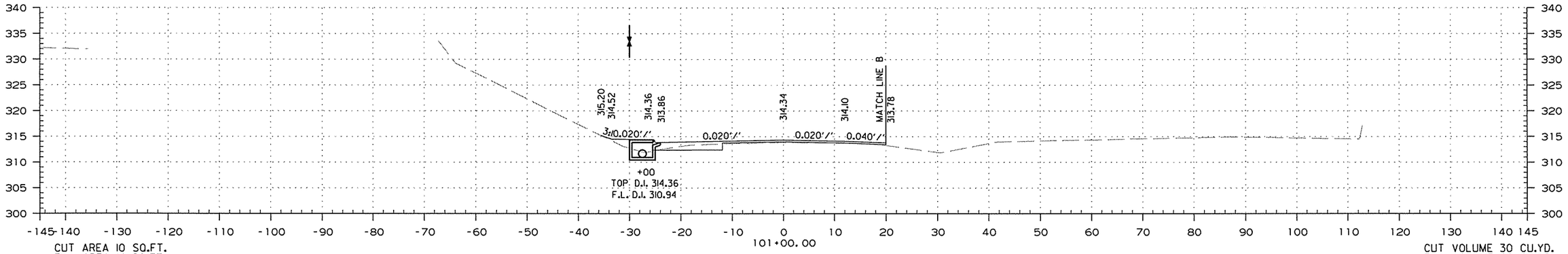
(2) CROSS SECTIONS



CUT AREA 16 SQ.FT.
FILL AREA 34 SQ.FT.

STA. 101+00 - CONSTRUCT
D.I. ON LT. W./ 18" x 86' PIPE OUTLET
CONNECT TO D.I. @ STA. 100+10
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3'-5"

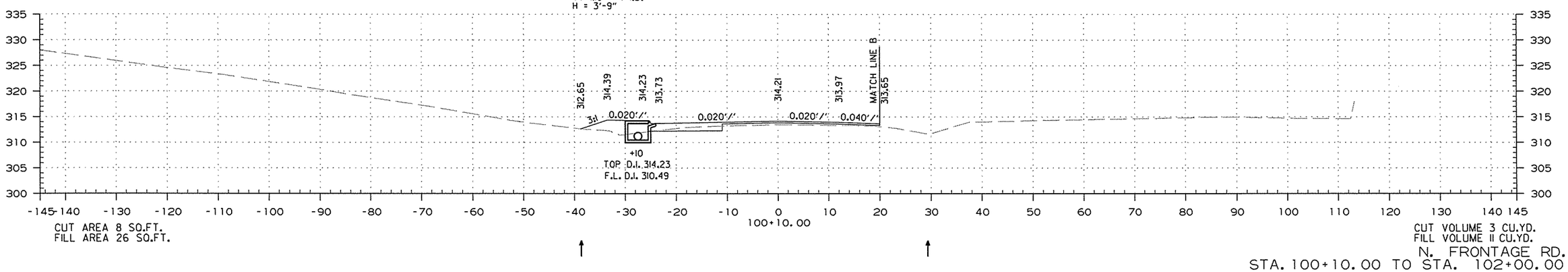
CUT VOLUME 49 CU.YD.
FILL VOLUME 89 CU.YD.



CUT AREA 10 SQ.FT.
FILL AREA 14 SQ.FT.

STA. 100+10 - CONSTRUCT
D.I. ON LT. W./ 18" x 56' PIPE OUTLET
CONNECT TO D.I. @ STA. 99+51
TY C = 4' x 4'
TY MO = 4' I.D.
H = 3'-9"

CUT VOLUME 30 CU.YD.
FILL VOLUME 66 CU.YD.



CUT AREA 8 SQ.FT.
FILL AREA 26 SQ.FT.

CUT VOLUME 3 CU.YD.
FILL VOLUME 11 CU.YD.

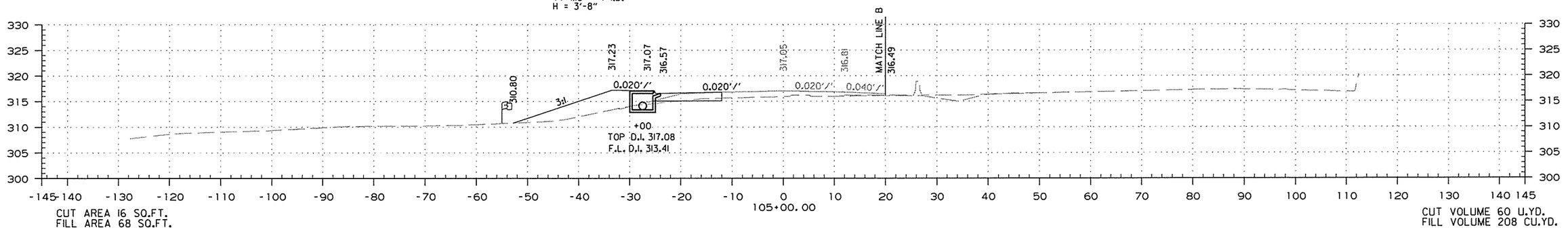
N. FRONTAGE RD.
STA. 100+10.00 TO STA. 102+00.00

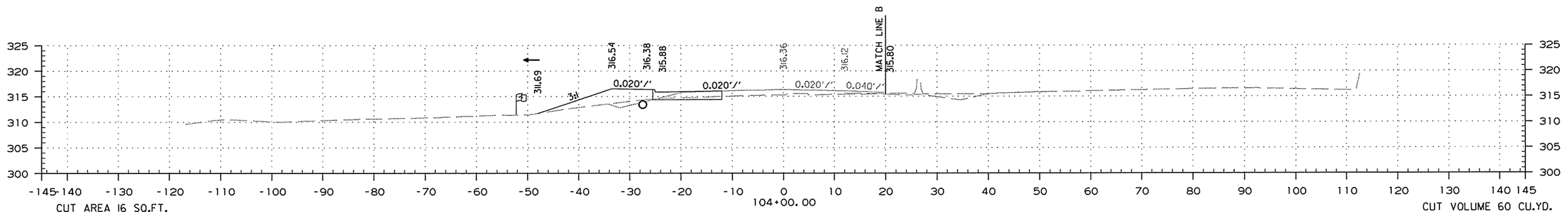
3/2/2015

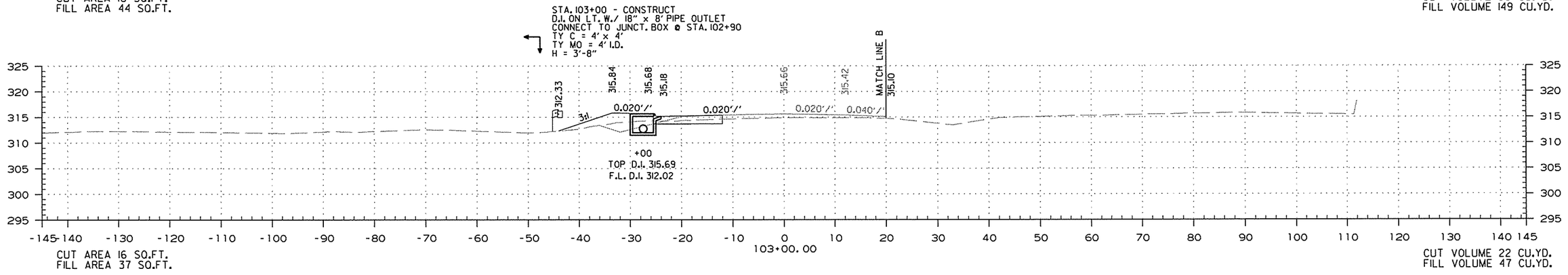
R061437.DGN

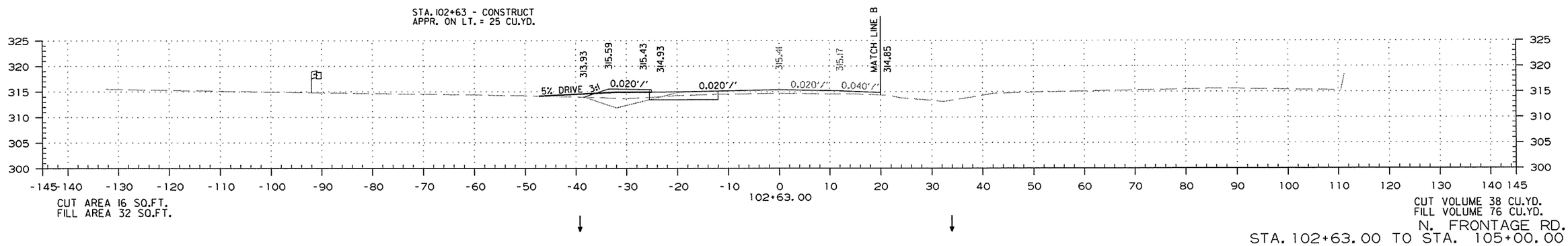
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	298	372

(2) CROSS SECTIONS









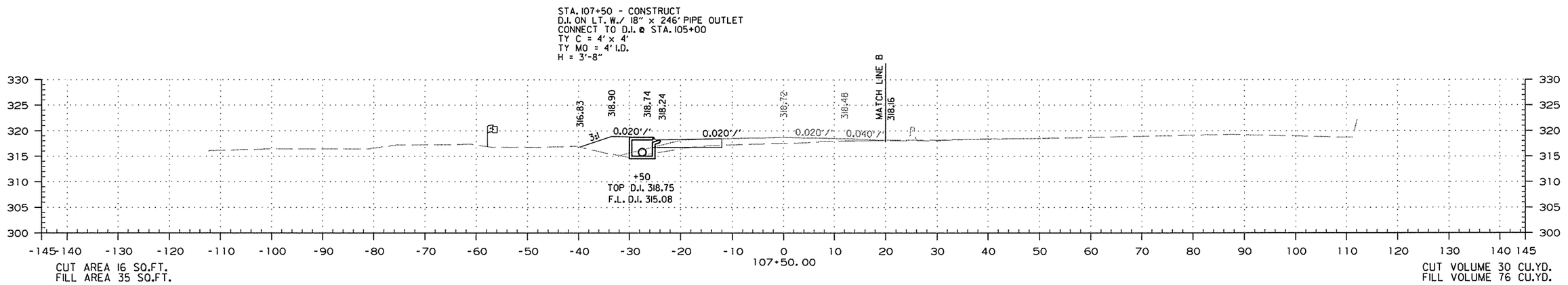
N. FRONTAGE RD.
STA. 102+63.00 TO STA. 105+00.00

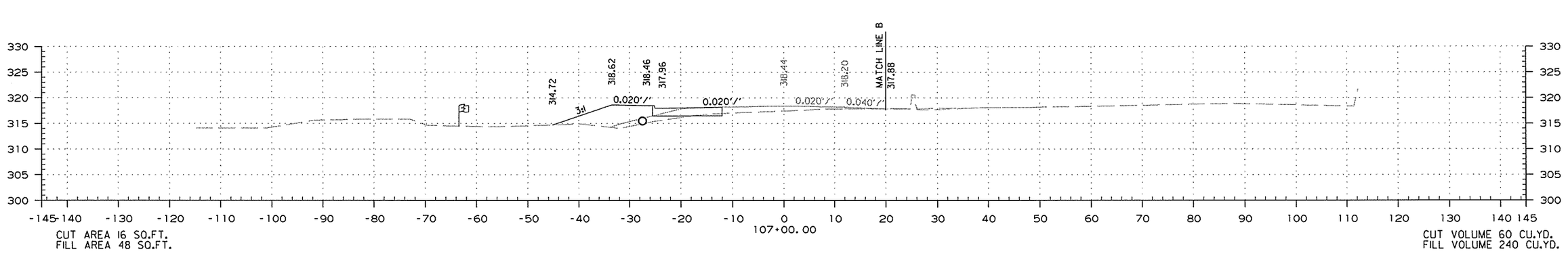
3/2/2015

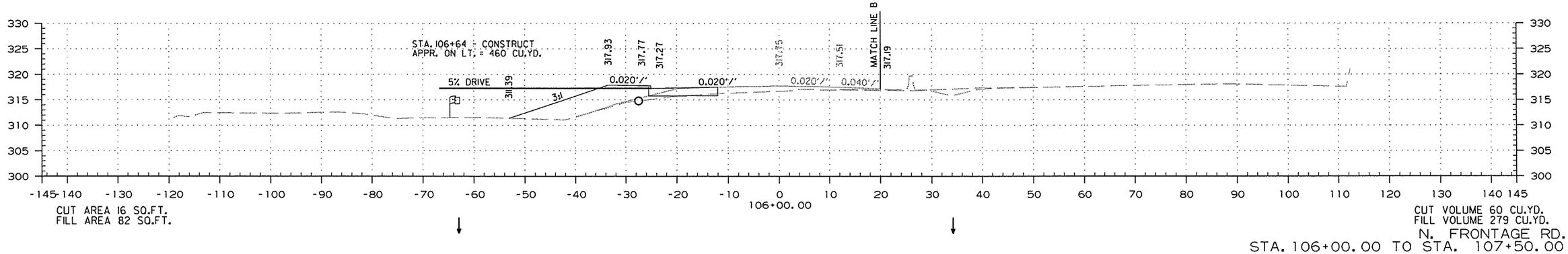
R061437.DGN

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.		061437	299	372

(2) CROSS SECTIONS







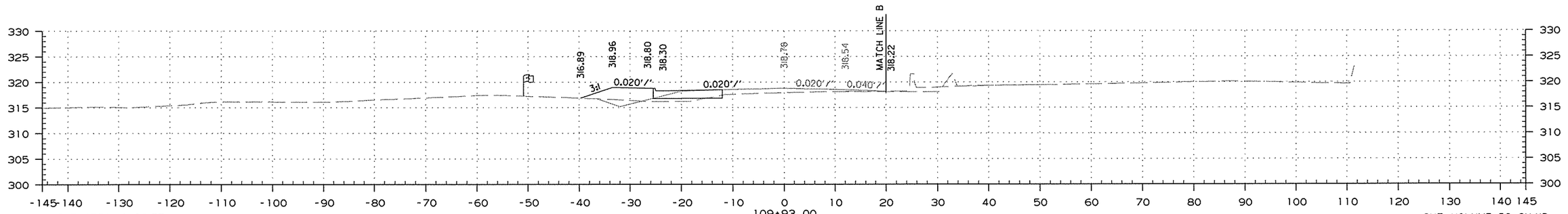
N. FRONTAGE RD.
STA. 106+00.00 TO STA. 107+50.00

3/2/2015

R061437.DGN

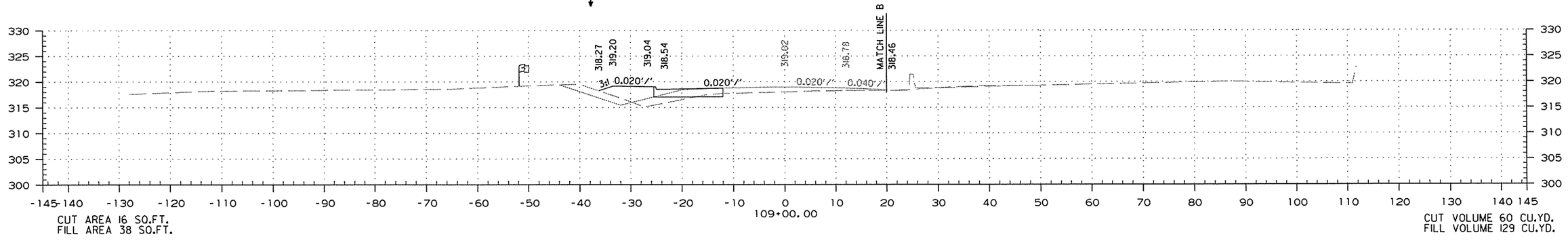
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	300	372

(2) CROSS SECTIONS



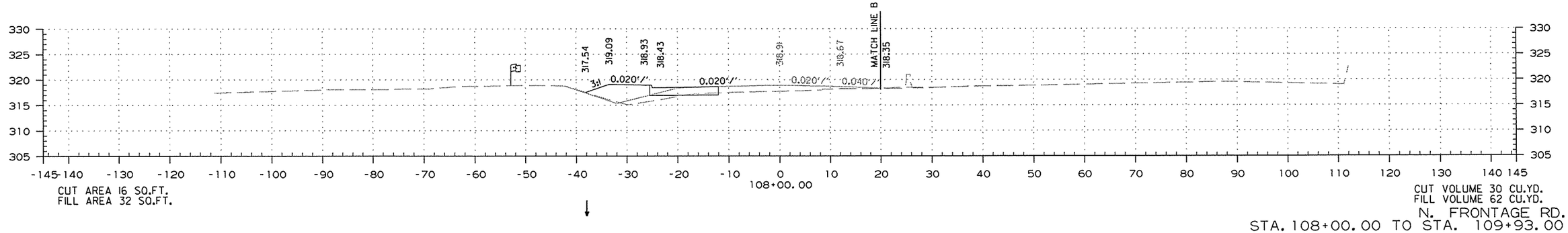
CUT AREA 16 SQ.FT.
FILL AREA 32 SQ.FT.

CUT VOLUME 56 CU.YD.
FILL VOLUME 121 CU.YD.



CUT AREA 16 SQ.FT.
FILL AREA 38 SQ.FT.

CUT VOLUME 60 CU.YD.
FILL VOLUME 129 CU.YD.



CUT AREA 16 SQ.FT.
FILL AREA 32 SQ.FT.

CUT VOLUME 30 CU.YD.
FILL VOLUME 62 CU.YD.

N. FRONTAGE RD.
STA. 108+00.00 TO STA. 109+93.00

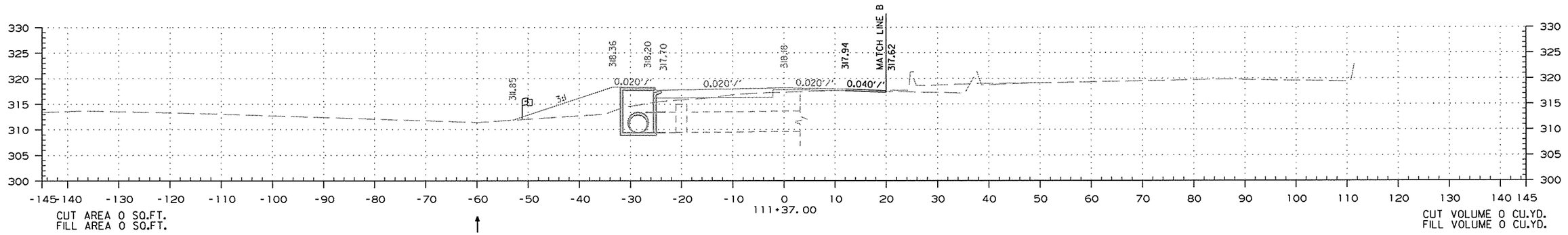
3/2/2015

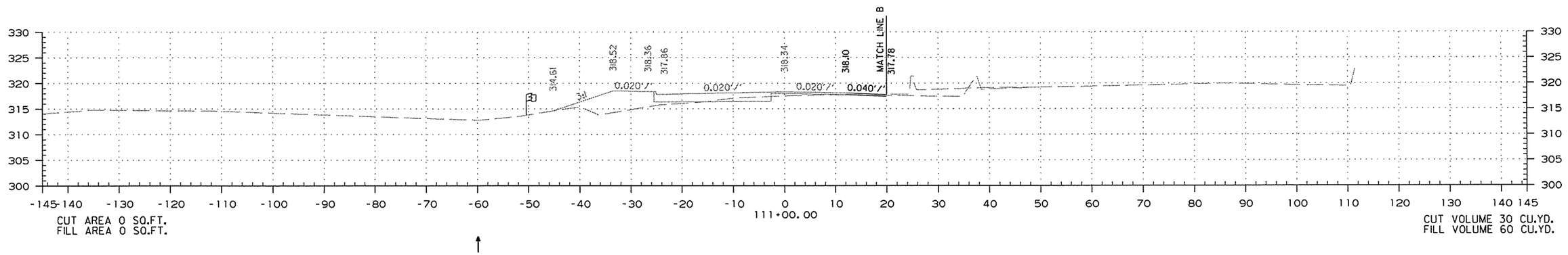
R061437.DGN

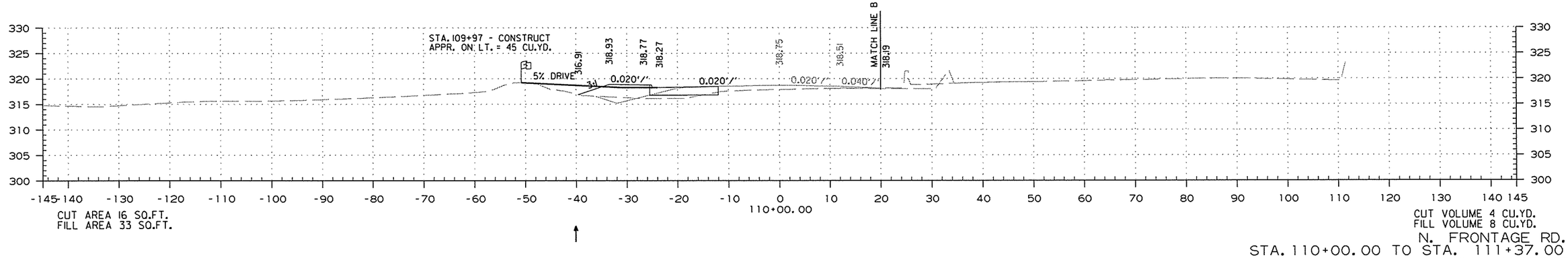
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	301	372

(2) CROSS SECTIONS

STA. 111+36 - IN PLACE
D.I. ON LT. W./ 48" x 108' PIPE OUTLET
CONNECTED TO D.I. @ STA. 112+50
RETAIN







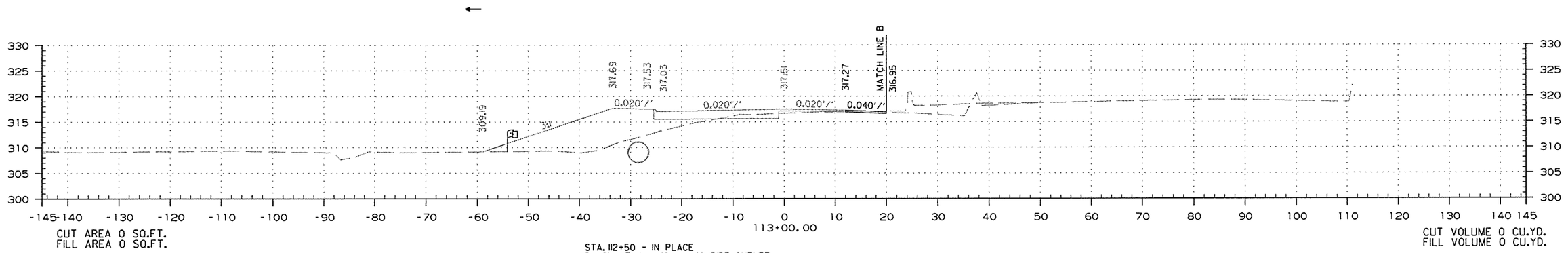
N. FRONTAGE RD.
STA. 110+00.00 TO STA. 111+37.00

3/2/2015

R061437.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.		061437	302	372

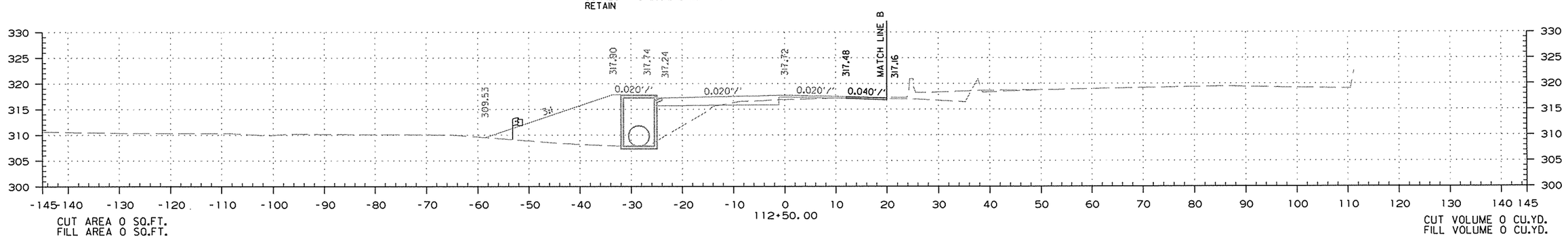
(2) CROSS SECTIONS



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

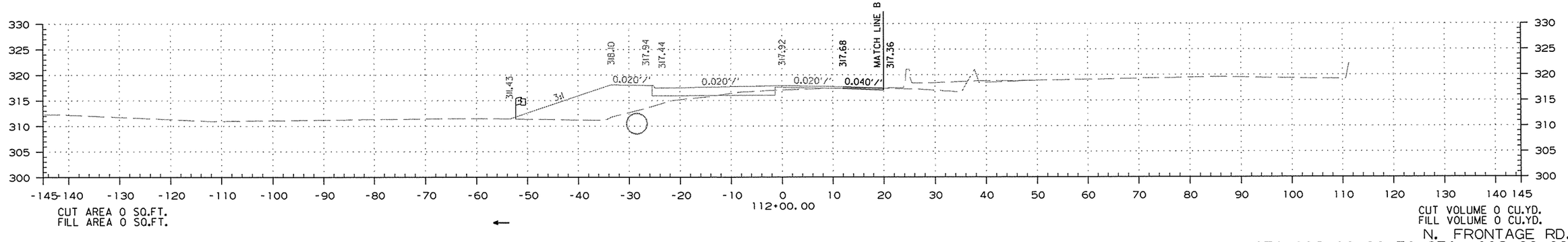
CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 112+50 - IN PLACE
D.I. ON LT. W./ 48" x 148' PIPE OUTLET
CONNECT TO D.I. @ STA. 114+04
RETAIN



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

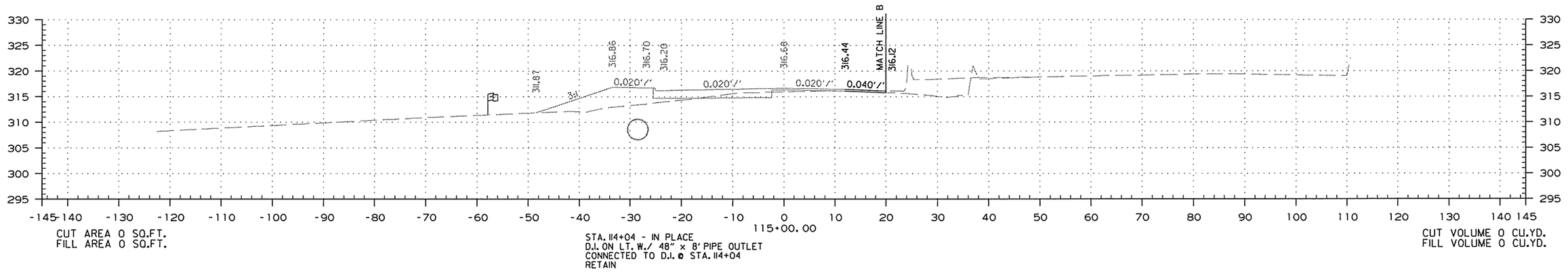
N. FRONTAGE RD.
STA. 112+00.00 TO STA. 113+00.00

3/2/2015

R061437.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.		061437	303	372

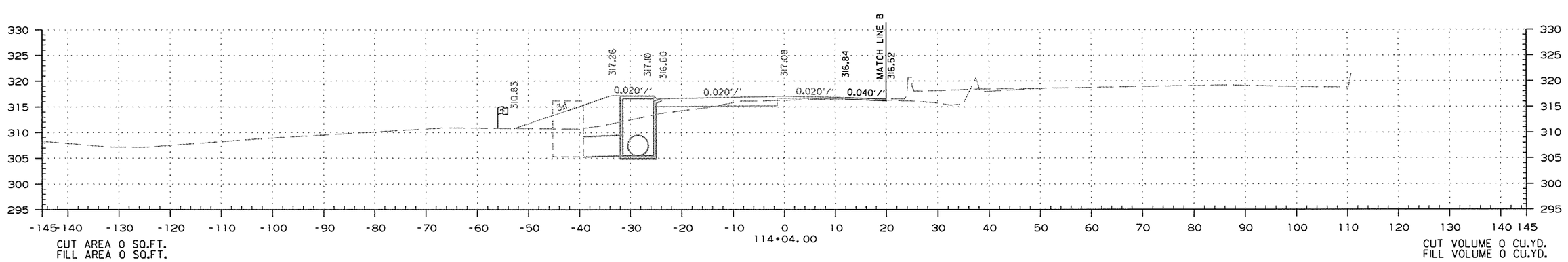
(2) CROSS SECTIONS



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

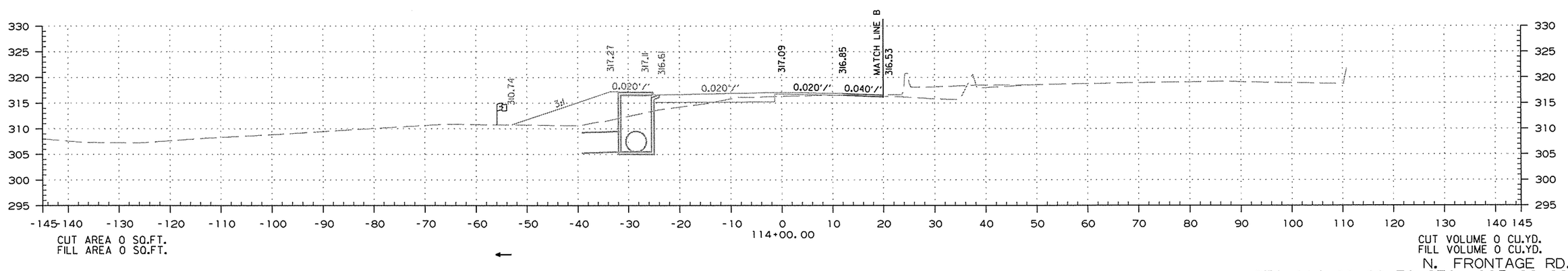
STA. 114+04 - IN PLACE
D.I. ON LT. W./ 48" x 8' PIPE OUTLET
CONNECTED TO D.I. @ STA. 114+04
RETAIN

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

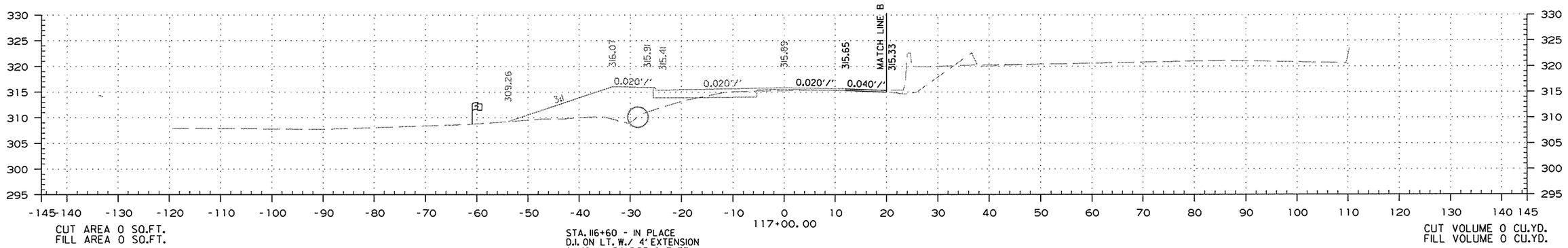
N. FRONTAGE RD.
STA. 114+00.00 TO STA. 115+00.00

3/2/2015

R061437.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.		061437	304	372

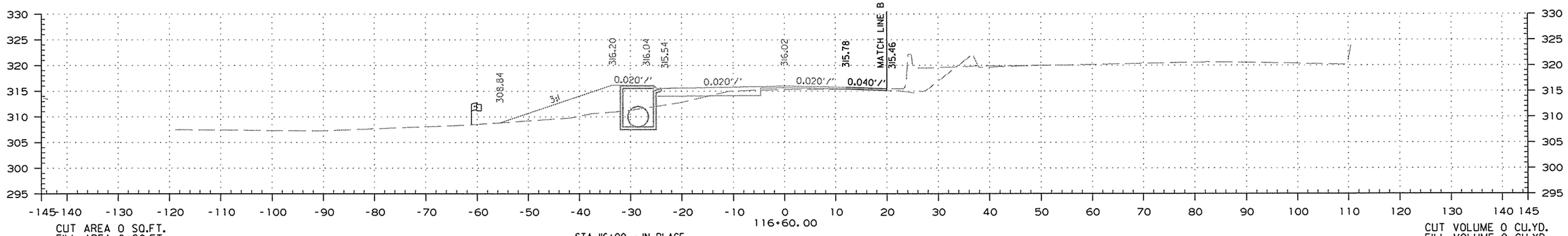
(2) CROSS SECTIONS



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

STA. 116+60 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 54' PIPE OUTLET
CONNECTED TO D.I. @ STA. 116+00
RETAIN

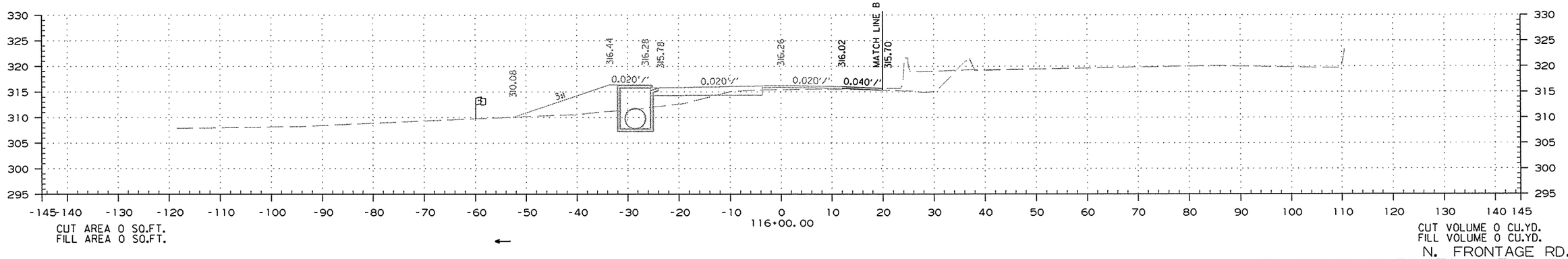
CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

STA. 116+00 - IN PLACE
D.I. ON LT. W./ 48" x 190' PIPE OUTLET
CONNECTED TO D.I. @ STA. 114+04
RETAIN

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

N. FRONTAGE RD.
STA. 116+00.00 TO STA. 117+00.00

3/2/2015

R061437.DGN

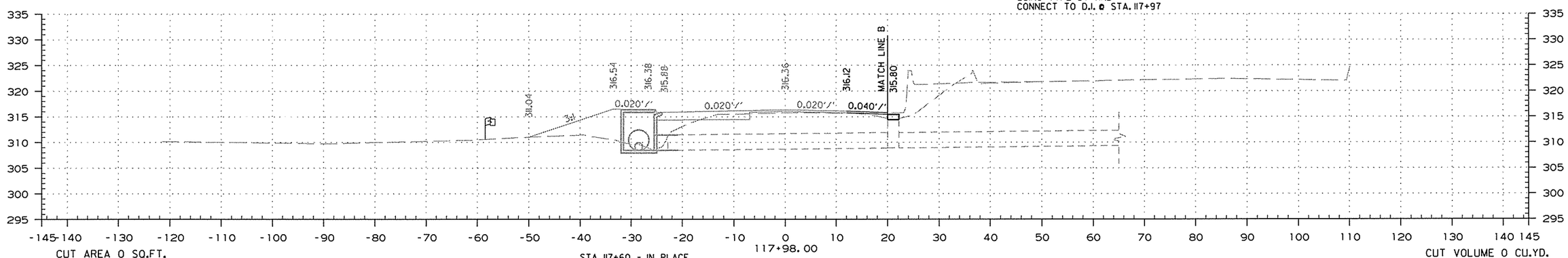
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	305	372

(2) CROSS SECTIONS

←

STA. 117+97 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 31' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+60
RETAIN

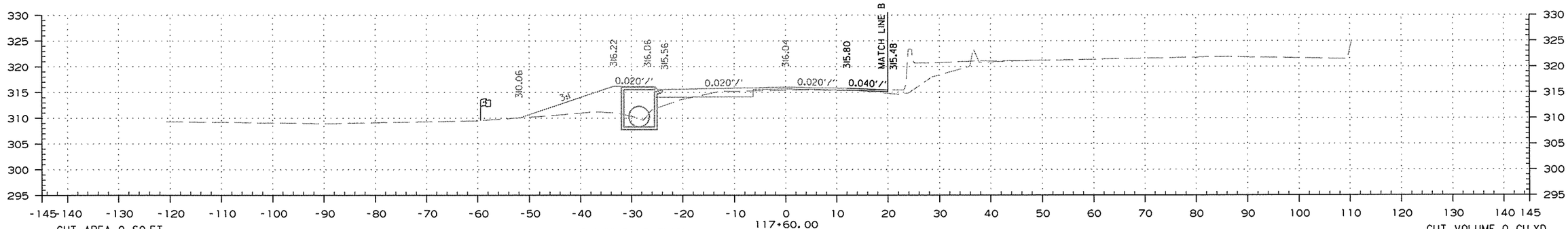
STA. 117+98 - IN PLACE
TYPE 'R' DROP INLET ON RT.
W/ 36" X 189' R.C. PIPE INLET &
36" X 49' R.C. PIPE OUTLET
W/ F.E.S. LT. & RT.
MODIFY DROP INLET AND ADJUST TO GRADE
USING TYPE ST AND
CONNECT TO D.I. @ STA. 117+97



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

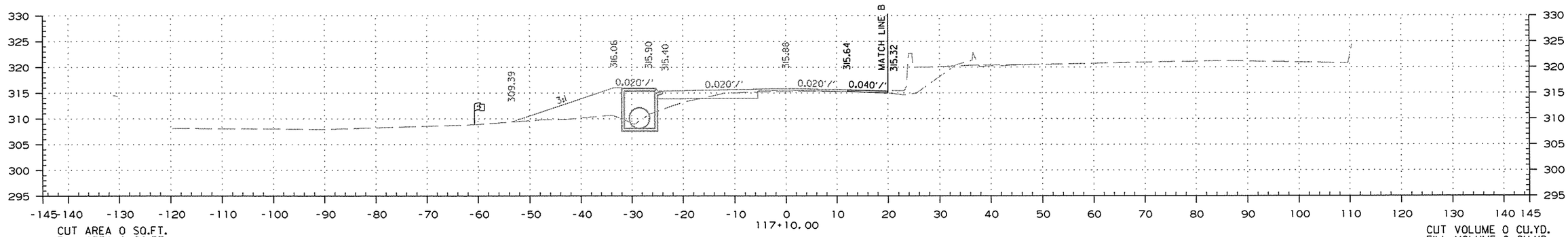
STA. 117+60 - IN PLACE
D.I. ON LT. W./ 4' EXTENSION
& 48" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+10
RETAIN



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 117+10 - IN PLACE
D.I. ON LT. W./ 8' EXTENSION
& 48" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 116+60
RETAIN



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

←

N. FRONTAGE RD.
STA. 117+10.00 TO STA. 117+98.00

3/2/2015

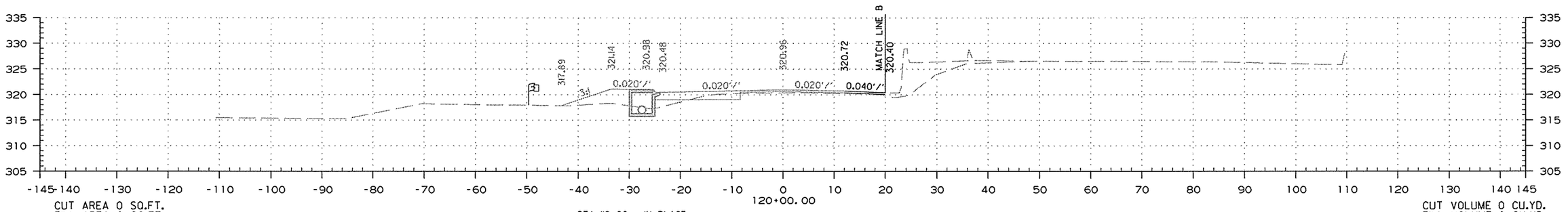
R061437.DGN

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.		061437	306	372

(2) CROSS SECTIONS

←

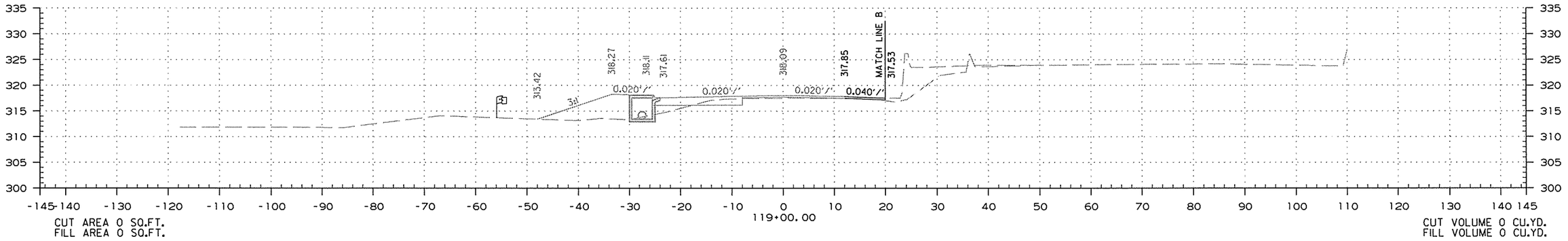
STA. 120+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 119+00
RETAIN



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

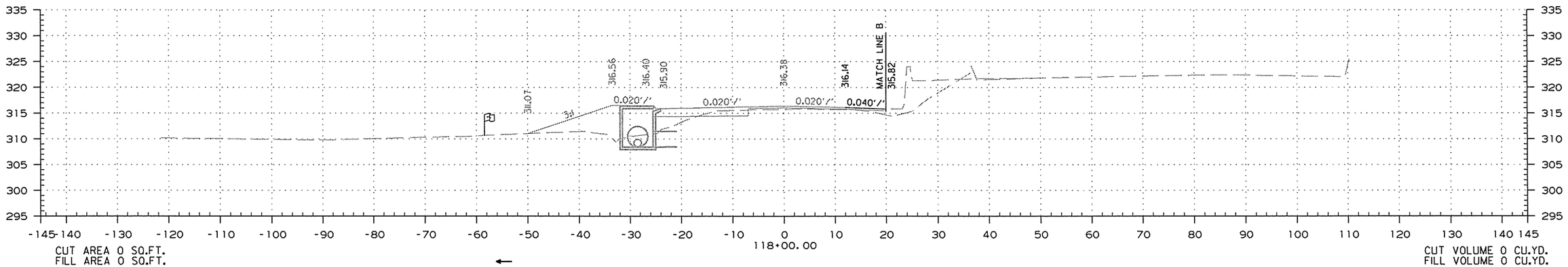
CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 119+00 - IN PLACE
D.I. ON LT. W./ 18" x 98' PIPE OUTLET
CONNECTED TO D.I. @ STA. 117+97
RETAIN



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

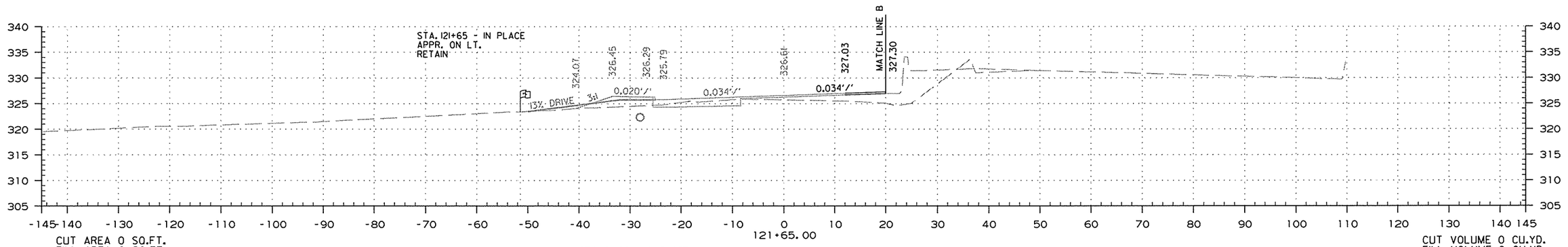
N. FRONTAGE RD.
STA. 118+00.00 TO STA. 120+00.00

3/2/2015

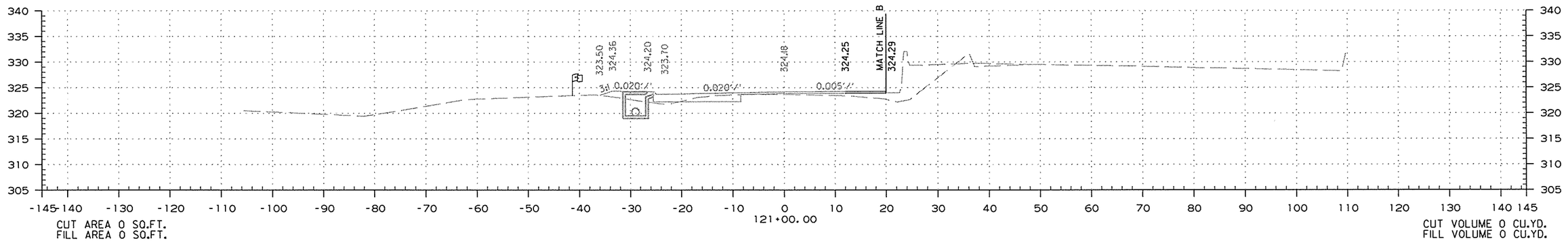
R061437.DGN

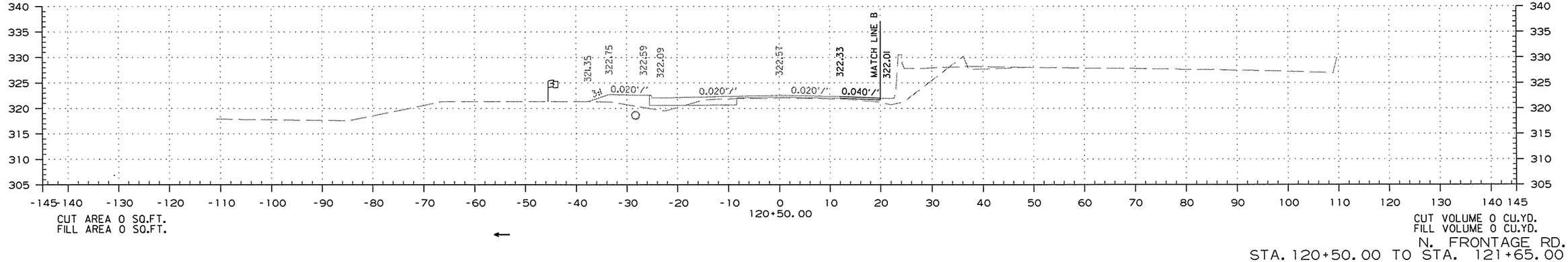
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	307	372

(2) CROSS SECTIONS



STA. 121+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 120+00
RETAIN





N. FRONTAGE RD.
STA. 120+50.00 TO STA. 121+65.00

3/2/2015

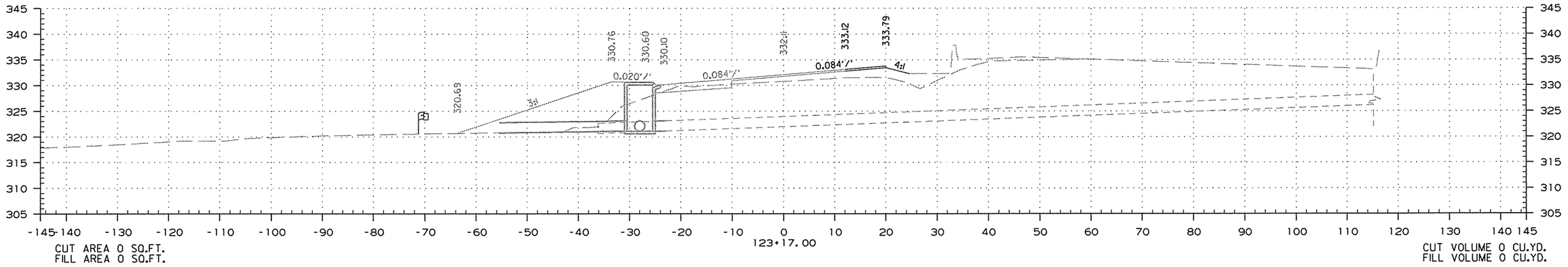
R061437.DGN

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.		061437	308	372

(2) CROSS SECTIONS

←

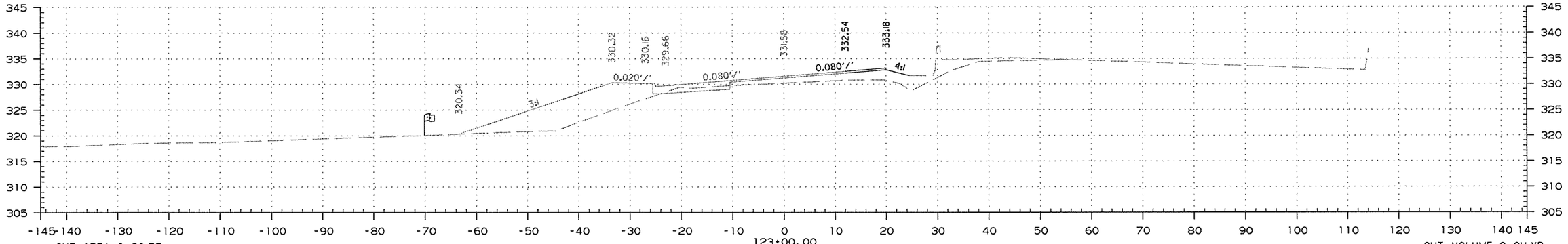
STA. 123+19 - IN PLACE
D.I. ON LT. W./ 24" x 26' R.C. STUB OUTLET
W./ F.E.S. LT.
RETAIN



123+17.00

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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

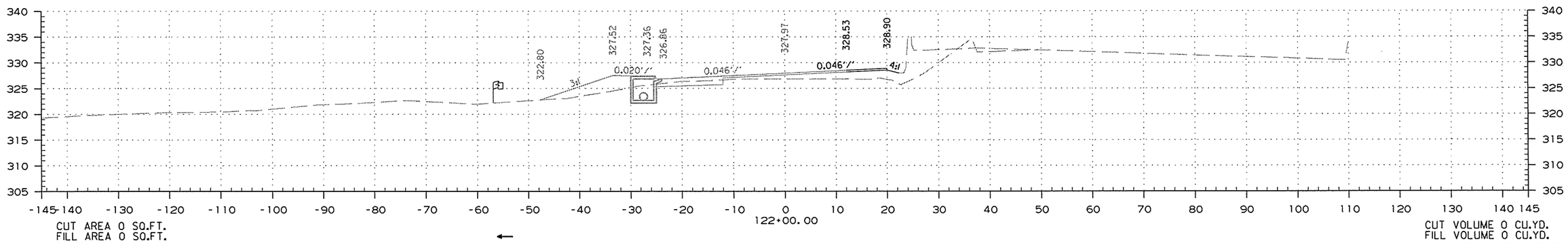


123+00.00

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

STA. 122+00 - IN PLACE
D.I. ON LT. W./ 18" x 96' PIPE OUTLET
CONNECTED TO D.I. @ STA. 121+00
RETAIN

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



122+00.00

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

←

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

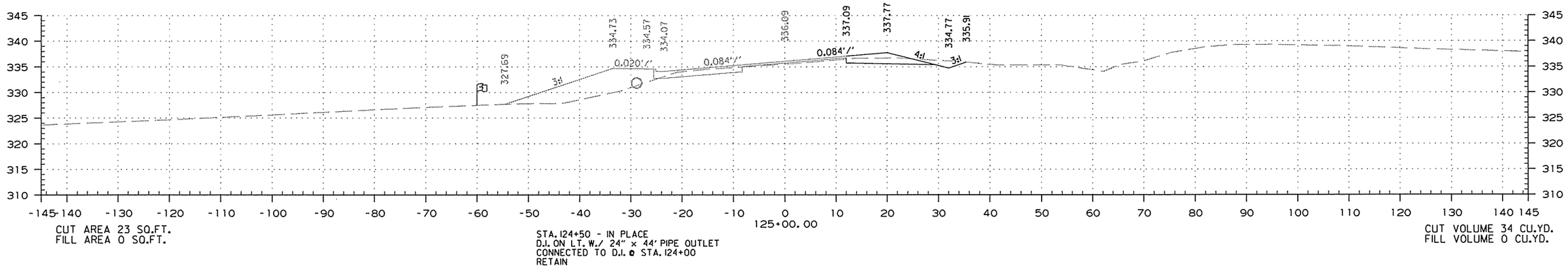
N. FRONTAGE RD.
STA. 122+00.00 TO STA. 123+17.00

3/2/2015

R061437.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.		061437	309	372

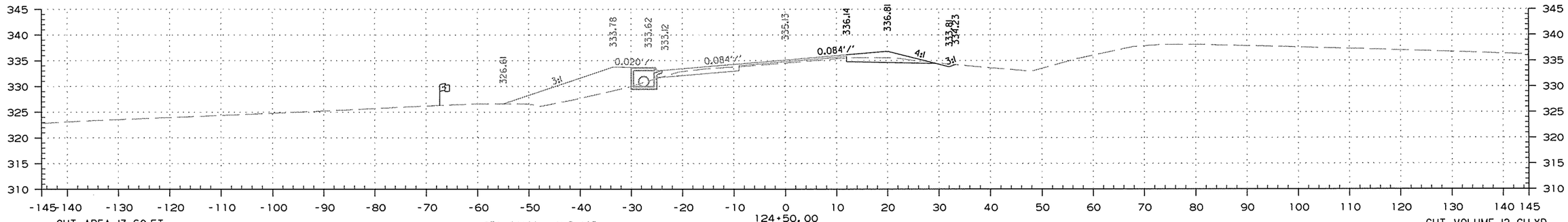
(2) CROSS SECTIONS



CUT AREA 23 SQ.FT.
FILL AREA 0 SQ.FT.

STA. 124+50 - IN PLACE
D.I. ON LT. W./ 24" x 44' PIPE OUTLET
CONNECTED TO D.I. @ STA. 124+00
RETAIN

CUT VOLUME 34 CU.YD.
FILL VOLUME 0 CU.YD.

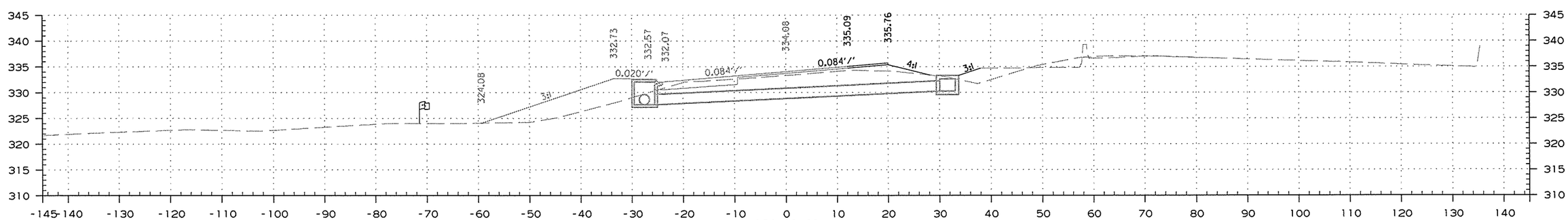


CUT AREA 13 SQ.FT.
FILL AREA 0 SQ.FT.

STA. 124+00 - IN PLACE
D.I. ON LT. W./ 24" x 73' PIPE OUTLET
CONNECTED TO D.I. @ STA. 123+19
RETAIN

STA. 124+00 - IN PLACE
TYPE 'RM' DROP INLET 30' RT.
W/ 24" X 56' R.C. PIPE OUTLET (CL. III)
CONNECTED TO D.I. @ STA. 124+00 LT.
RETAIN

CUT VOLUME 12 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

N. FRONTAGE RD.
STA. 124+00.00 TO STA. 125+00.00

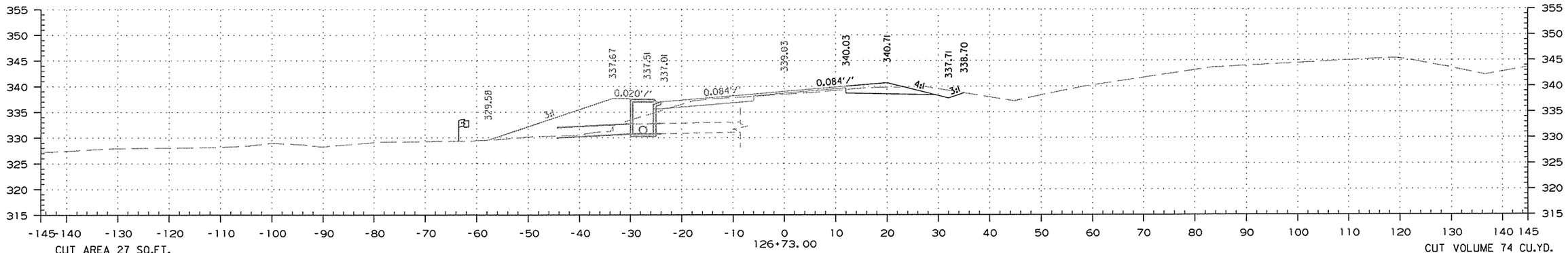
3/2/2015

R061437.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.		061437	310	372

(2) CROSS SECTIONS

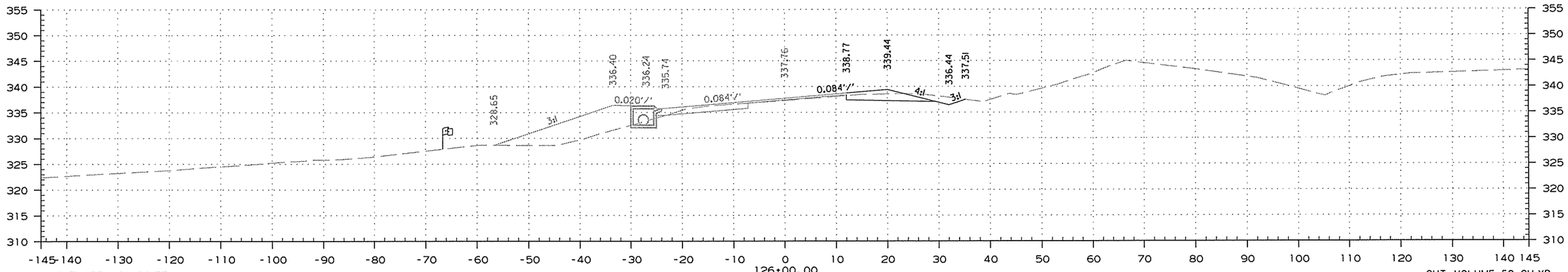
STA. 126+77 - IN PLACE
D.I. ON LT. W./ 24" x 18' R.C. STUB OUTLET
W./ F.E.S. LT.
RETAIN



CUT AREA 27 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 74 CU.YD.
FILL VOLUME 0 CU.YD.

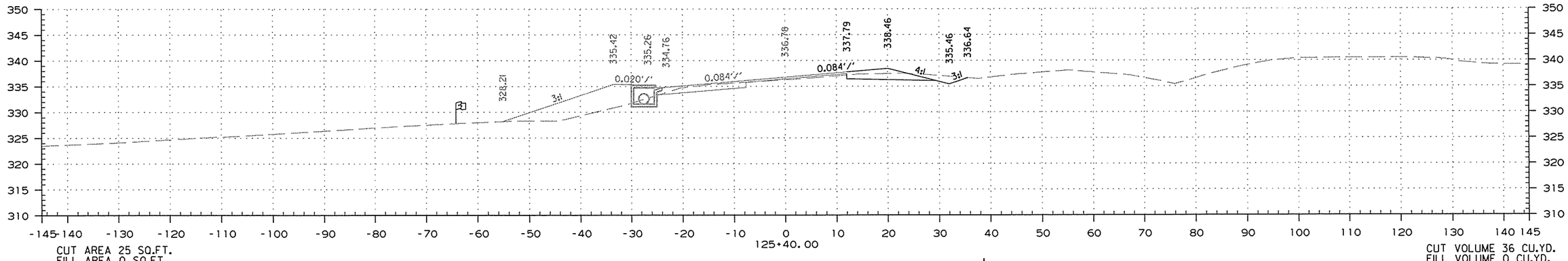
STA. 126+00 - IN PLACE
D.I. ON LT. W./ 24" x 54' PIPE OUTLET
CONNECTED TO D.I. @ STA. 125+40
RETAIN



CUT AREA 28 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 59 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 125+40 - IN PLACE
D.I. ON LT. W./ 24" x 83' PIPE OUTLET
CONNECTED TO D.I. @ STA. 124+50
RETAIN



CUT AREA 25 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 36 CU.YD.
FILL VOLUME 0 CU.YD.

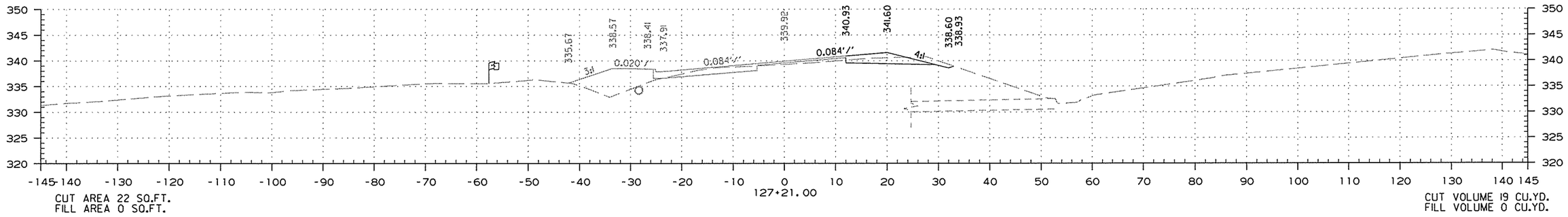
N. FRONTAGE RD.
STA. 125+40.00 TO STA. 126+73.00

3/2/2015

R061437.DGN

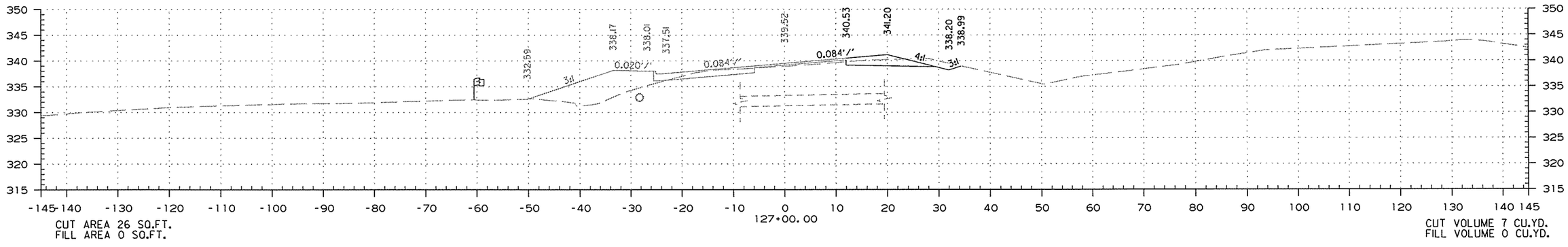
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	311	372

(2) CROSS SECTIONS



CUT AREA 22 SQ.FT.
FILL AREA 0 SQ.FT.

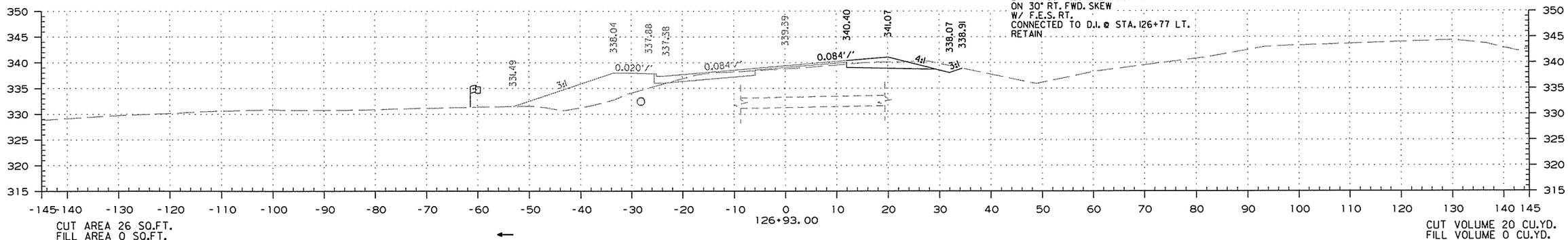
CUT VOLUME 19 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 26 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 7 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 126+93 - IN PLACE
24" X 100' R.C. PIPE CULV'T.
ON 30° RT. FWD. SKEW
W/ F.E.S. RT.
CONNECTED TO D.I. @ STA. 126+77 LT.
RETAIN



CUT AREA 26 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 20 CU.YD.
FILL VOLUME 0 CU.YD.

N. FRONTAGE RD.
STA. 126+93.00 TO STA. 127+21.00

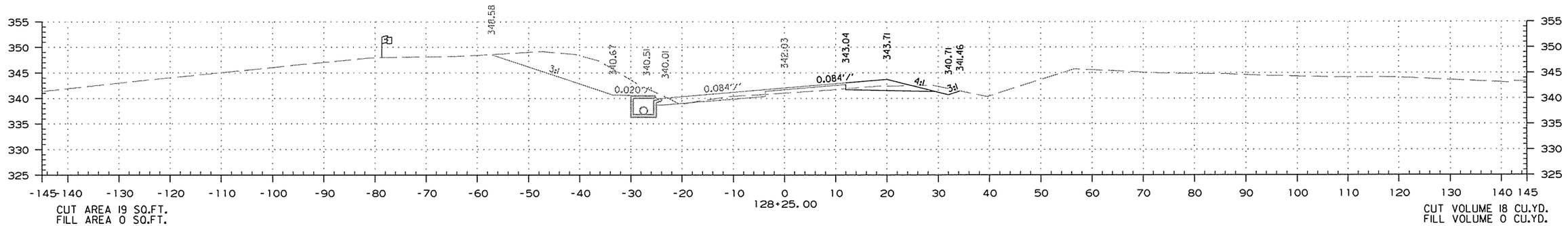
3/2/2015

R061437.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.		061437	312	372

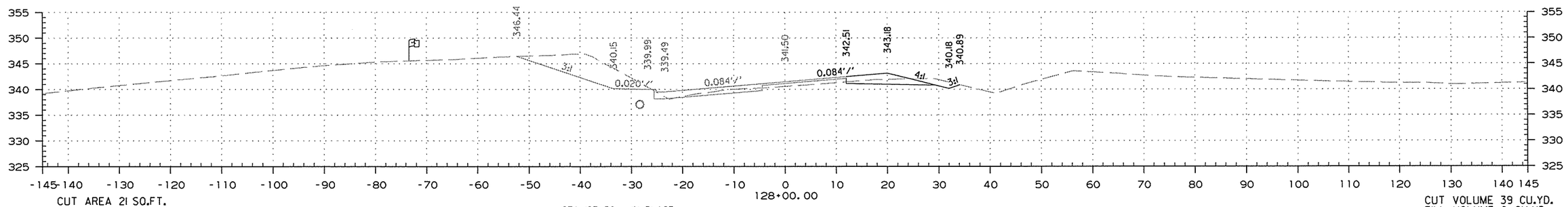
(2) CROSS SECTIONS

STA. 128+25 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 127+50
REATIN



CUT AREA 19 SQ.FT.
FILL AREA 0 SQ.FT.

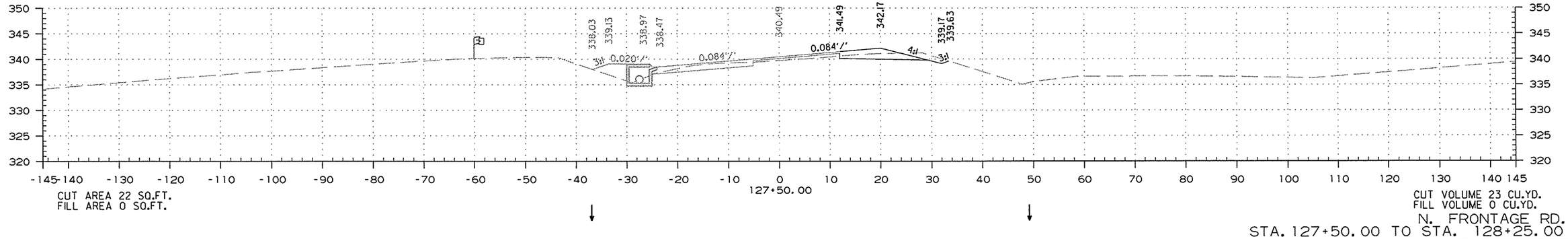
CUT VOLUME 18 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 21 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 39 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 127+50 - IN PLACE
D.I. ON LT. W./ 18" x 66' PIPE OUTLET
CONNECTED TO D.I. @ STA. 126+77
REATIN



CUT AREA 22 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 23 CU.YD.
FILL VOLUME 0 CU.YD.

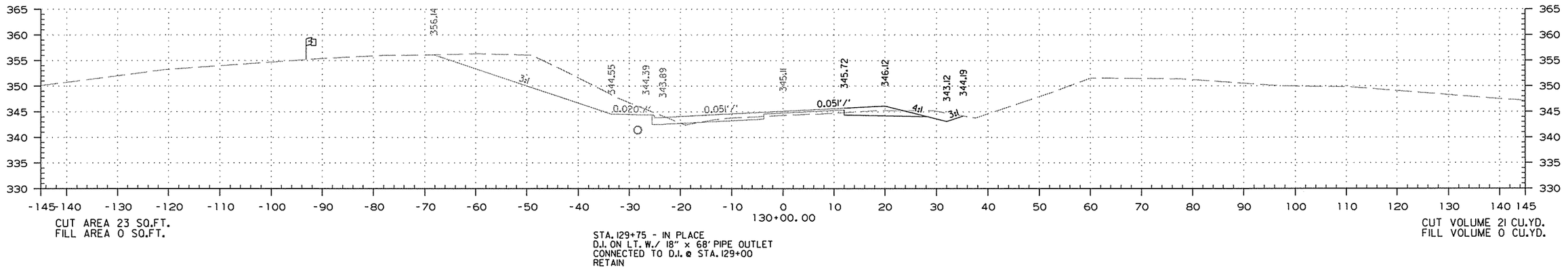
N. FRONTAGE RD.
STA. 127+50.00 TO STA. 128+25.00

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R061437.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.		061437	313	372

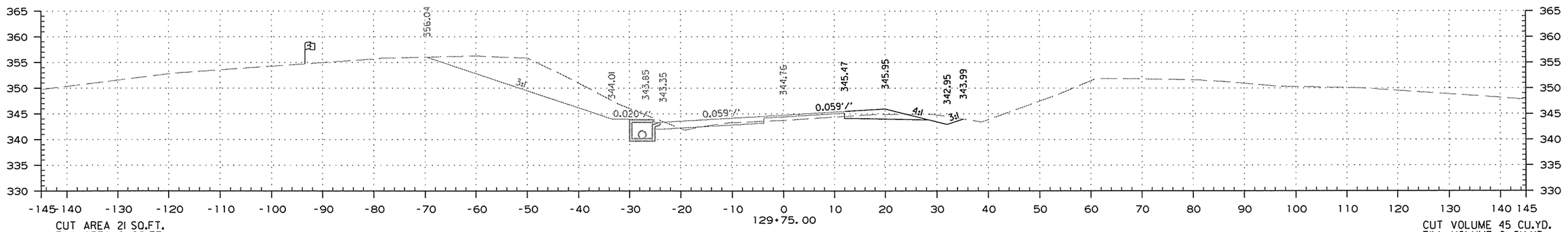
(2) CROSS SECTIONS



CUT AREA 23 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 21 CU.YD.
FILL VOLUME 0 CU.YD.

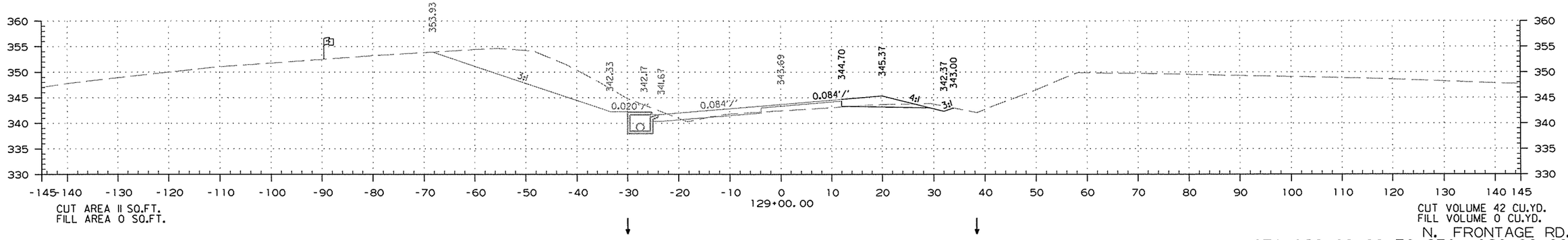
STA. 129+75 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 129+00
RETAIN



CUT AREA 21 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 45 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 129+00 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 128+25
RETAIN



CUT AREA 11 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 42 CU.YD.
FILL VOLUME 0 CU.YD.

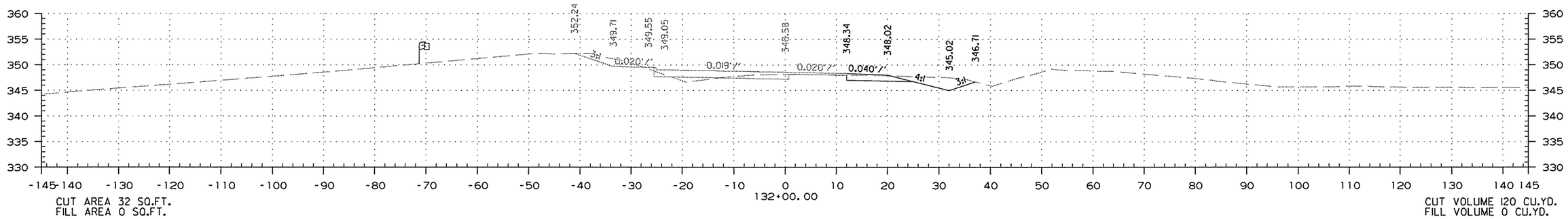
N. FRONTAGE RD.
STA. 129+00.00 TO STA. 130+00.00

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R061437.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.		061437	314	372

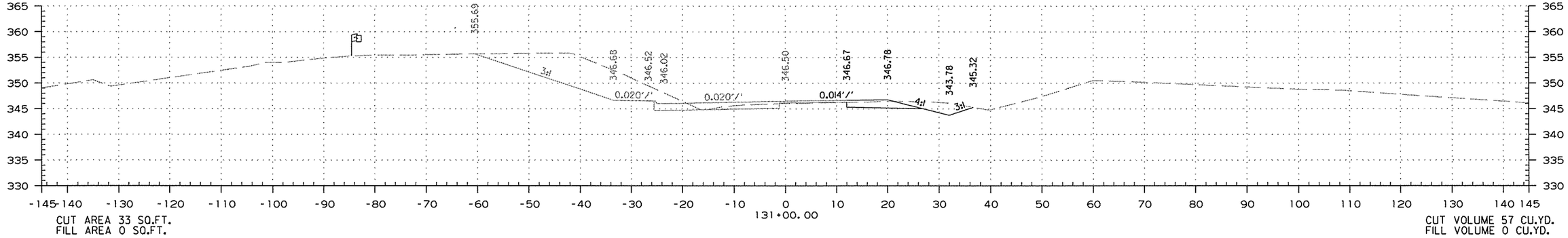
(2) CROSS SECTIONS



CUT AREA 32 SQ.FT.
FILL AREA 0 SQ.FT.

132+00.00

CUT VOLUME 120 CU.YD.
FILL VOLUME 0 CU.YD.

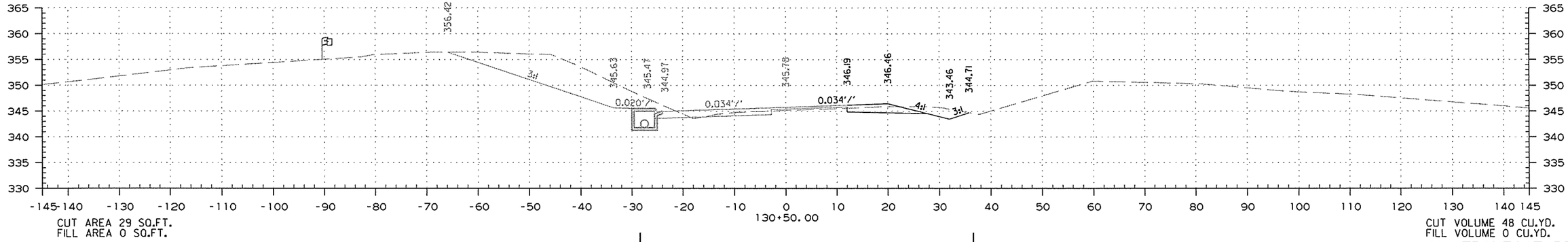


CUT AREA 33 SQ.FT.
FILL AREA 0 SQ.FT.

131+00.00

CUT VOLUME 57 CU.YD.
FILL VOLUME 0 CU.YD.

STA. 130+50 - IN PLACE
D.I. ON LT. W./ 18" x 68' PIPE OUTLET
CONNECTED TO D.I. @ STA. 129+75
RETAIN



CUT AREA 29 SQ.FT.
FILL AREA 0 SQ.FT.

130+50.00

CUT VOLUME 48 CU.YD.
FILL VOLUME 0 CU.YD.

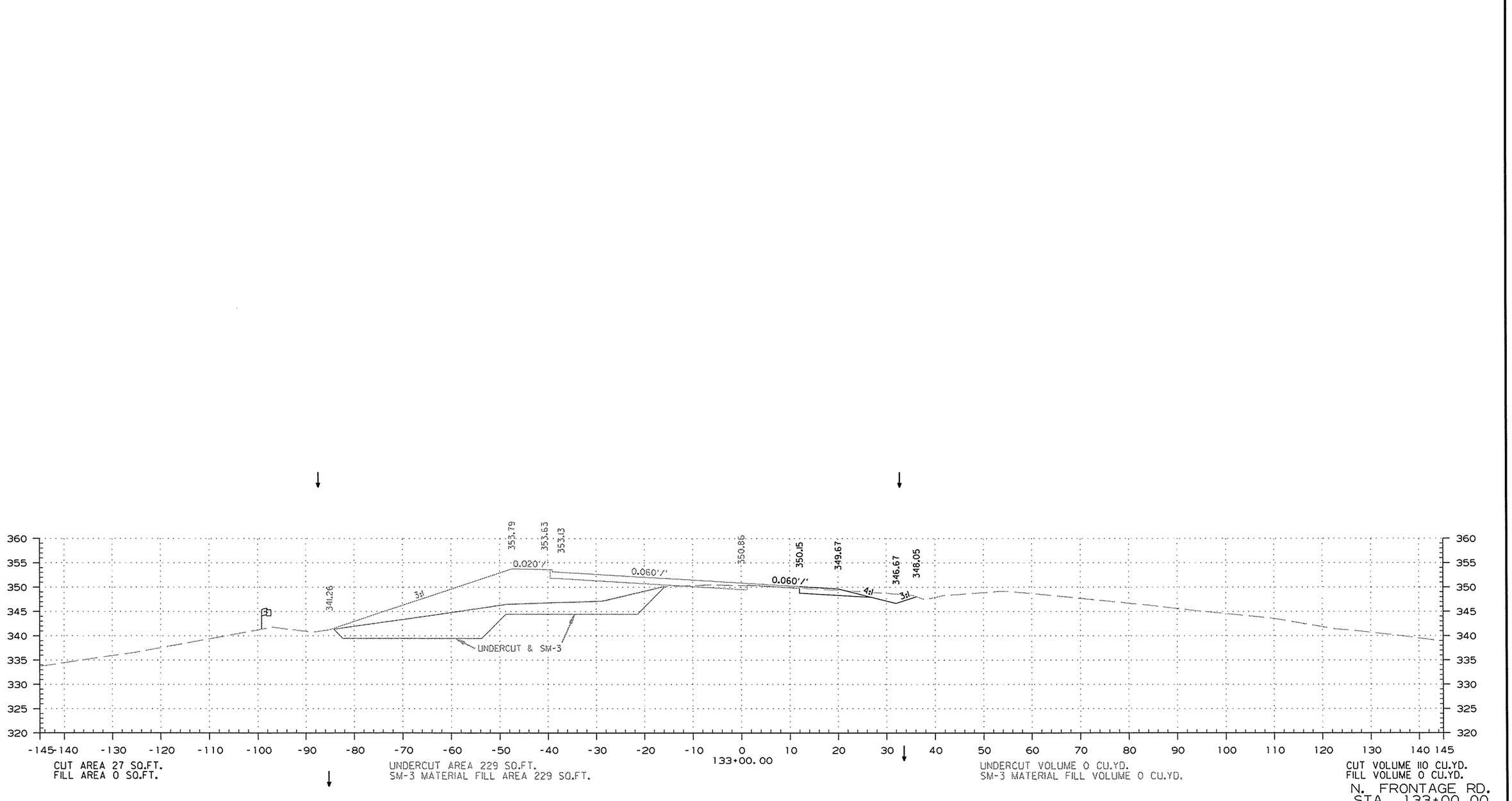
N. FRONTAGE RD.
STA. 130+50.00 TO STA. 132+00.00

3/2/2015

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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.		061437	315	372

(2) CROSS SECTIONS



CUT AREA 27 SQ.FT.
FILL AREA 0 SQ.FT.

UNDERCUT AREA 229 SQ.FT.
SM-3 MATERIAL FILL AREA 229 SQ.FT.

UNDERCUT VOLUME 0 CU.YD.
SM-3 MATERIAL FILL VOLUME 0 CU.YD.

CUT VOLUME 110 CU.YD.
FILL VOLUME 0 CU.YD.

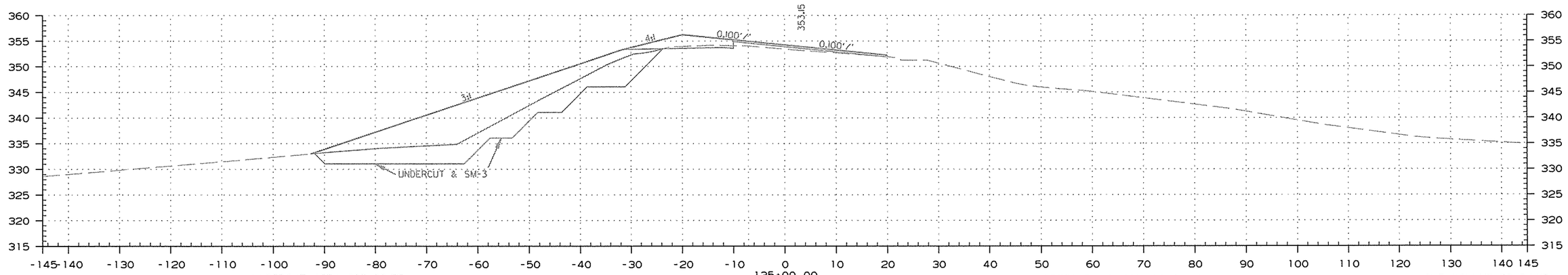
N. FRONTAGE RD.
STA. 133+00.00

3/2/2015

R061437.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.		061437	316	372

(2) CROSS SECTIONS

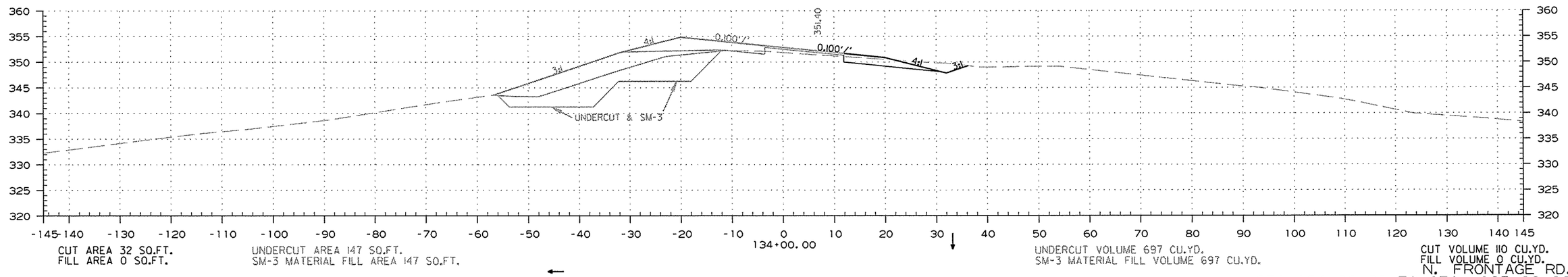


CUT AREA 0 SQ.FT.
FILL AREA 0 SQ.FT.

UNDERCUT AREA 223 SQ.FT.
SM-3 MATERIAL FILL AREA 223 SQ.FT.

UNDERCUT VOLUME 686 CU.YD.
SM-3 MATERIAL FILL VOLUME 686 CU.YD.

CUT VOLUME 59 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 32 SQ.FT.
FILL AREA 0 SQ.FT.

UNDERCUT AREA 147 SQ.FT.
SM-3 MATERIAL FILL AREA 147 SQ.FT.

UNDERCUT VOLUME 697 CU.YD.
SM-3 MATERIAL FILL VOLUME 697 CU.YD.

CUT VOLUME 110 CU.YD.
FILL VOLUME 0 CU.YD.

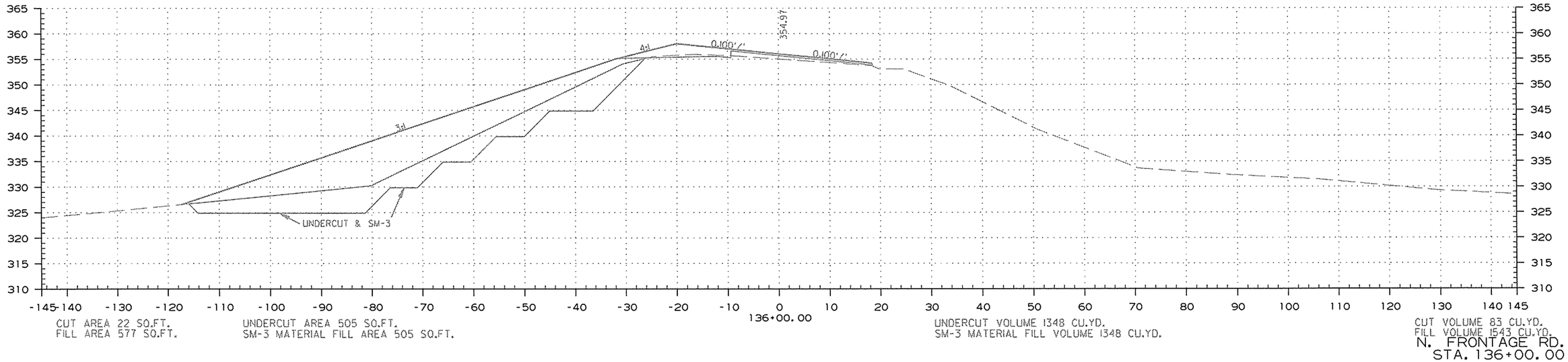
N. FRONTAGE RD.
STA. 134+00.00 TO STA. 135+00.00

3/2/2015

R061437.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.		061437	317	372

(2) CROSS SECTIONS



CUT AREA 22 SQ.FT.
FILL AREA 577 SQ.FT.

UNDERCUT AREA 505 SQ.FT.
SM-3 MATERIAL FILL AREA 505 SQ.FT.

UNDERCUT VOLUME 1348 CU.YD.
SM-3 MATERIAL FILL VOLUME 1348 CU.YD.

CUT VOLUME 83 CU.YD.
FILL VOLUME 1543 CU.YD.

N. FRONTAGE RD.
STA. 136+00.00

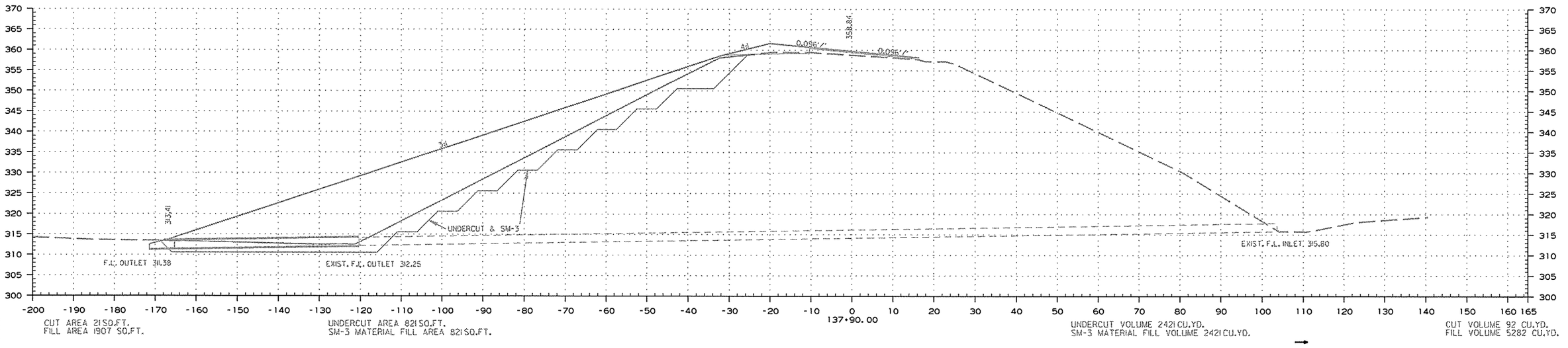
3/2/2015

R061437.DGN

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				JOB NO.		061437	318	372

(2) CROSS SECTIONS

STA. 137+90 - IN PLACE
24" X 268' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
Q50 = 11cfs; D.A. = 7 Ac.
RETAIN

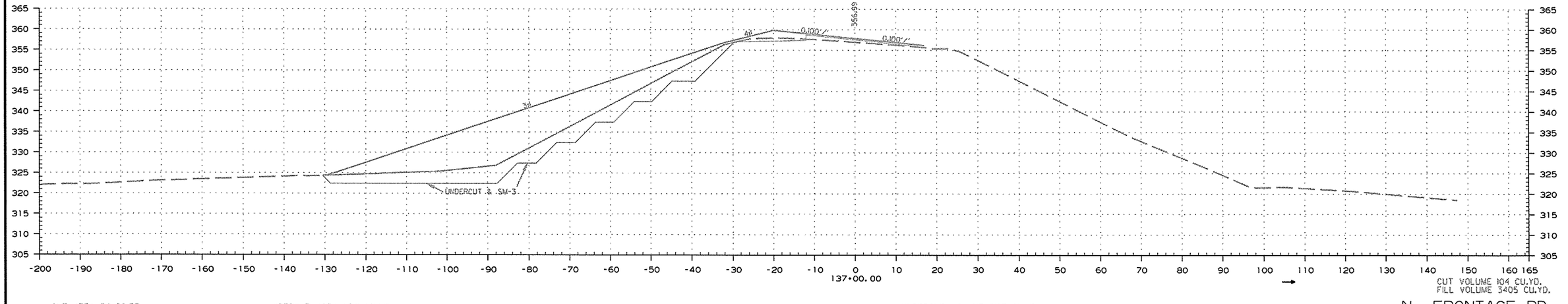


CUT AREA 2150 SQ.FT.
FILL AREA 1907 SQ.FT.

UNDERCUT AREA 8215 SQ.FT.
SM-3 MATERIAL FILL AREA 8215 SQ.FT.

UNDERCUT VOLUME 2421 CU.YD.
SM-3 MATERIAL FILL VOLUME 2421 CU.YD.

CUT VOLUME 92 CU.YD.
FILL VOLUME 5282 CU.YD.



CUT AREA 34 SQ.FT.
FILL AREA 1263 SQ.FT.

UNDERCUT AREA 632 SQ.FT.
SM-3 MATERIAL FILL AREA 632 SQ.FT.

UNDERCUT VOLUME 2105 CU.YD.
SM-3 MATERIAL FILL VOLUME 2105 CU.YD.

CUT VOLUME 104 CU.YD.
FILL VOLUME 3405 CU.YD.

N. FRONTAGE RD.
STA. 137+00.00 TO STA. 137+90.00

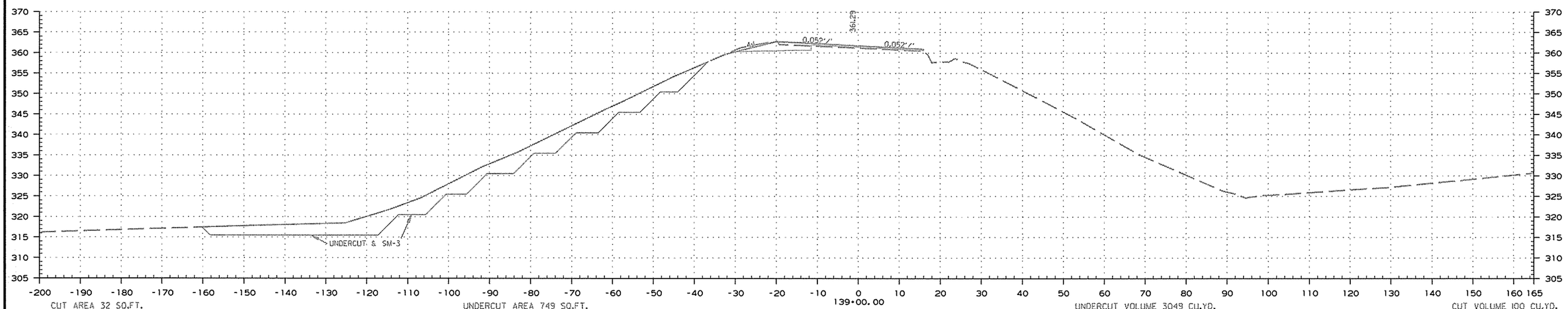
3/2/2015

R061437.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.		061437	319	372

(2) CROSS SECTIONS

←



CUT AREA 32 SQ.FT.
FILL AREA 730 SQ.FT.

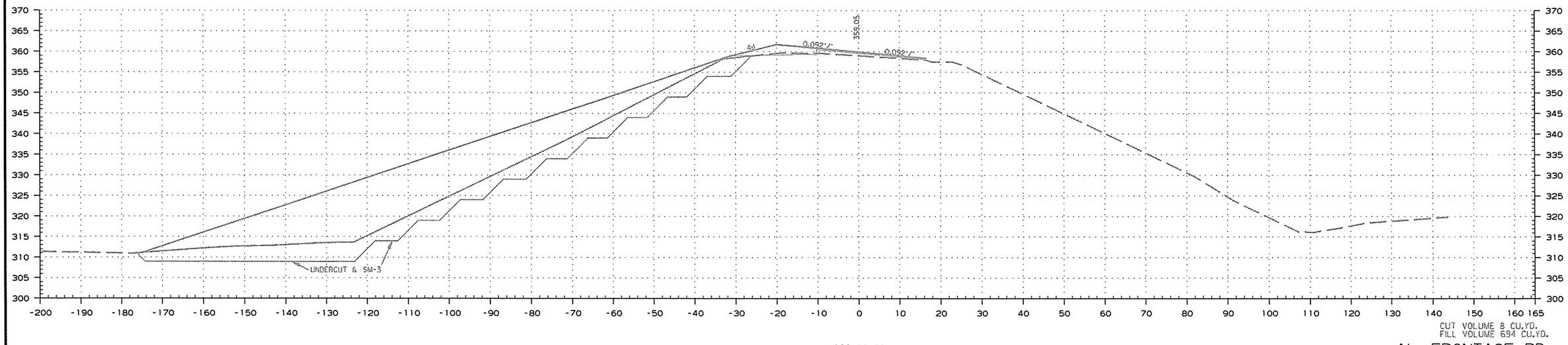
UNDERCUT AREA 749 SQ.FT.
SM-3 MATERIAL FILL AREA 749 SQ.FT.

139+00.00

UNDERCUT VOLUME 3049 CU.YD.
SM-3 MATERIAL FILL VOLUME 3049 CU.YD.

CUT VOLUME 100 CU.YD.
FILL VOLUME 4756 CU.YD.

↑



CUT AREA 22 SQ.FT.
FILL AREA 1838 SQ.FT.

←

UNDERCUT AREA 897 SQ.FT.
SM-3 MATERIAL FILL AREA 897 SQ.FT.

138+00.00

UNDERCUT VOLUME 318 CU.YD.
SM-3 MATERIAL FILL VOLUME 318 CU.YD.

CUT VOLUME 8 CU.YD.
FILL VOLUME 694 CU.YD.

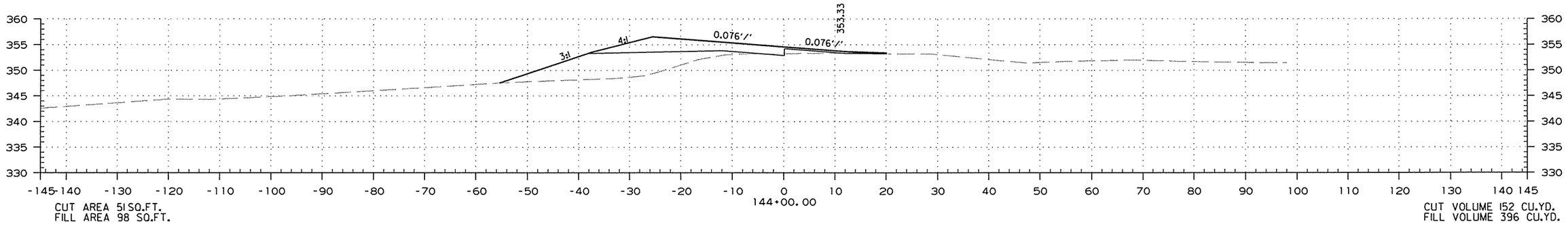
N. FRONTAGE RD.
STA. 138+00.00 TO STA. 139+00.00

3/2/2015

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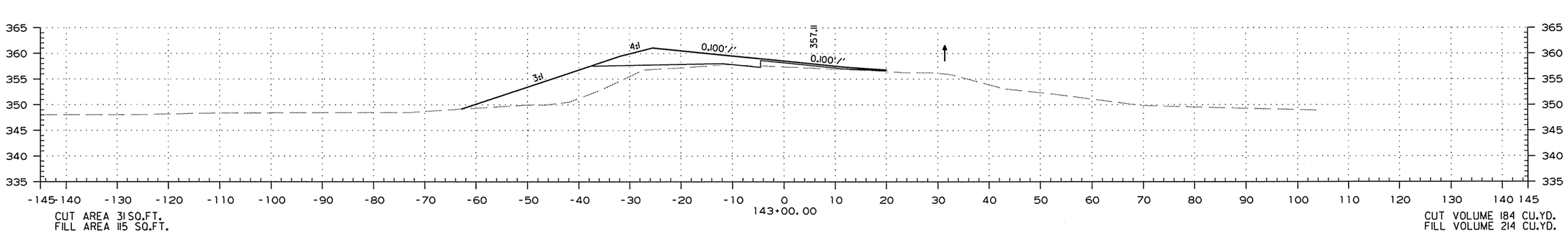
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	320	372

(2) CROSS SECTIONS



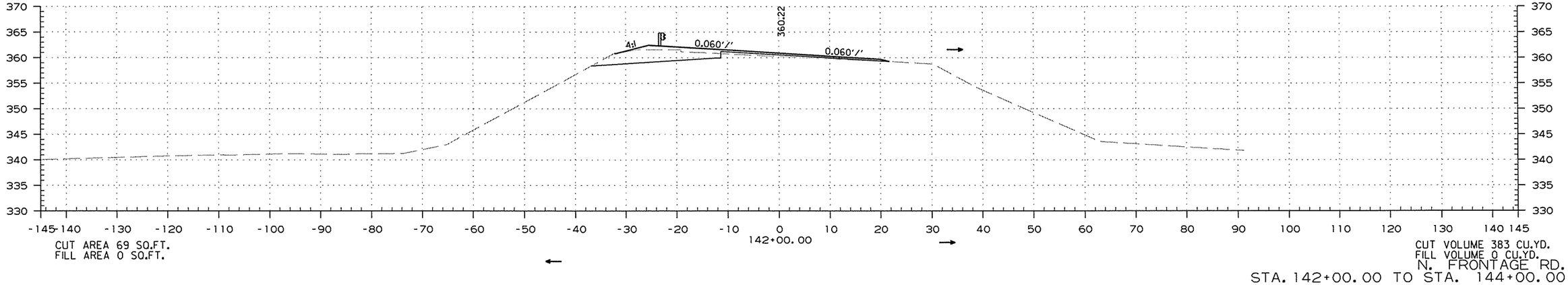
CUT AREA 51 SQ.FT.
FILL AREA 98 SQ.FT.

CUT VOLUME 152 CU.YD.
FILL VOLUME 396 CU.YD.



CUT AREA 31 SQ.FT.
FILL AREA 115 SQ.FT.

CUT VOLUME 184 CU.YD.
FILL VOLUME 214 CU.YD.



CUT AREA 69 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 383 CU.YD.
FILL VOLUME 0 CU.YD.

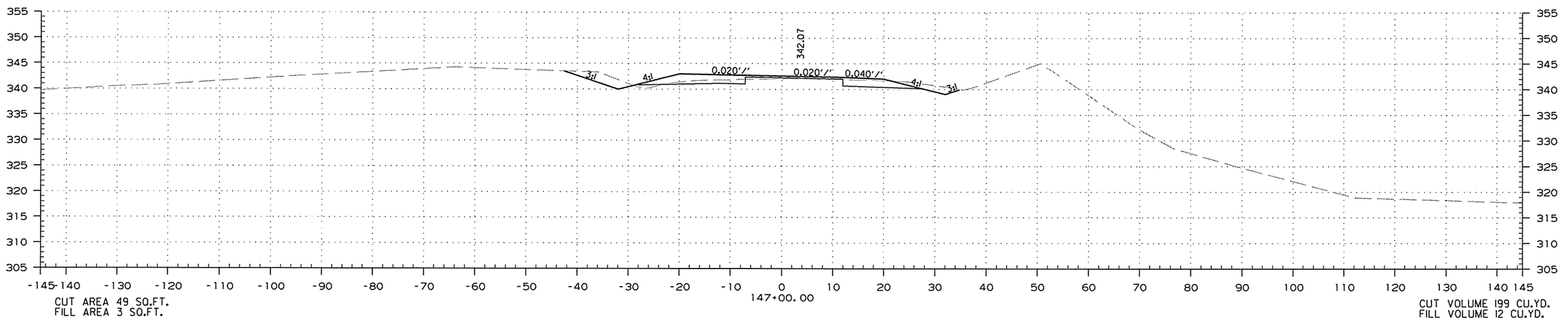
N. FRONTAGE RD.
STA. 142+00.00 TO STA. 144+00.00

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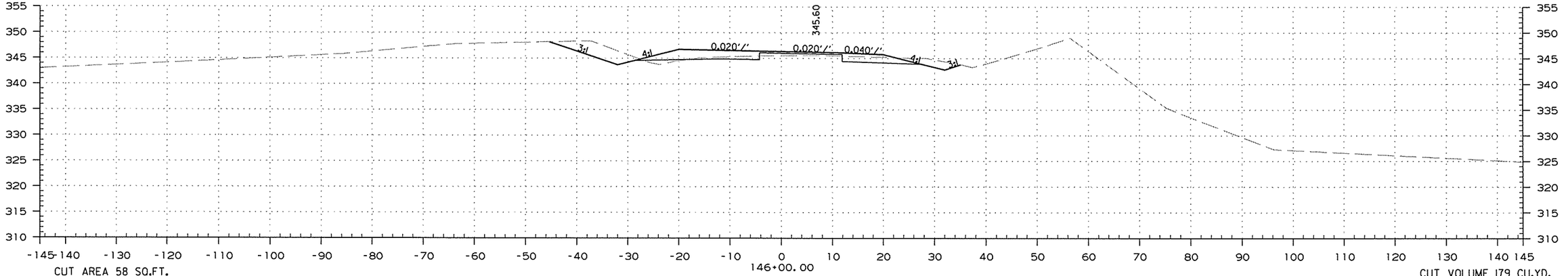
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	321	372

(2) CROSS SECTIONS



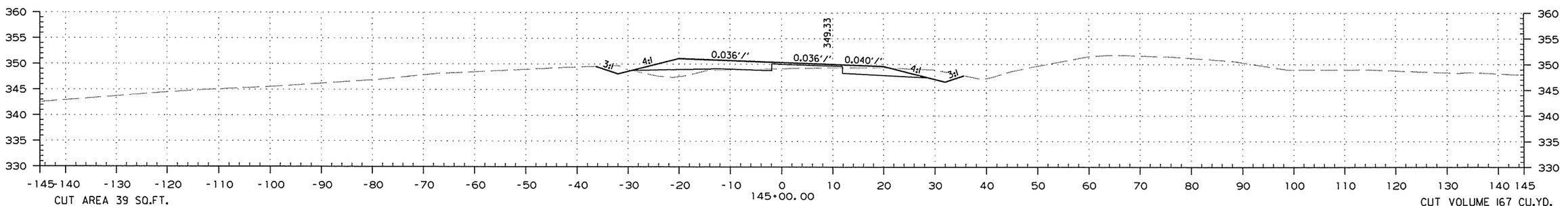
CUT AREA 49 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 199 CU.YD.
FILL VOLUME 12 CU.YD.



CUT AREA 58 SQ.FT.
FILL AREA 4 SQ.FT.

CUT VOLUME 179 CU.YD.
FILL VOLUME 35 CU.YD.



CUT AREA 39 SQ.FT.
FILL AREA 15 SQ.FT.

CUT VOLUME 167 CU.YD.
FILL VOLUME 209 CU.YD.

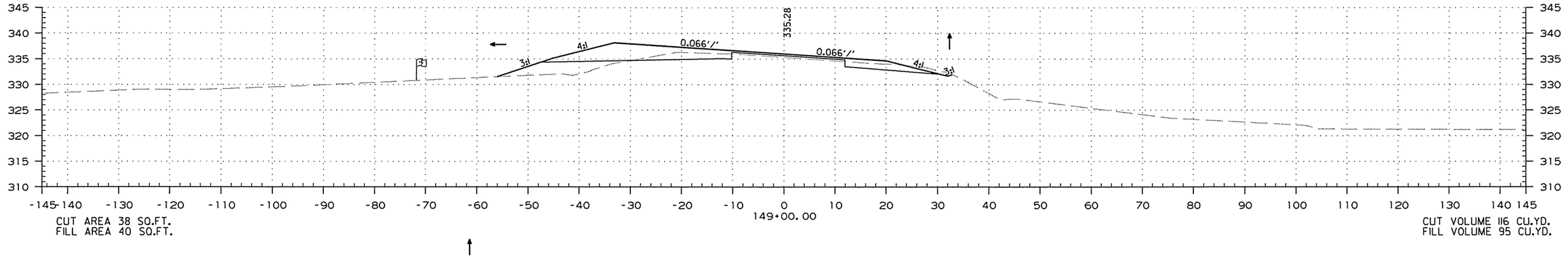
N. FRONTAGE RD.
STA. 145+00.00 TO STA. 147+00.00

3/2/2015

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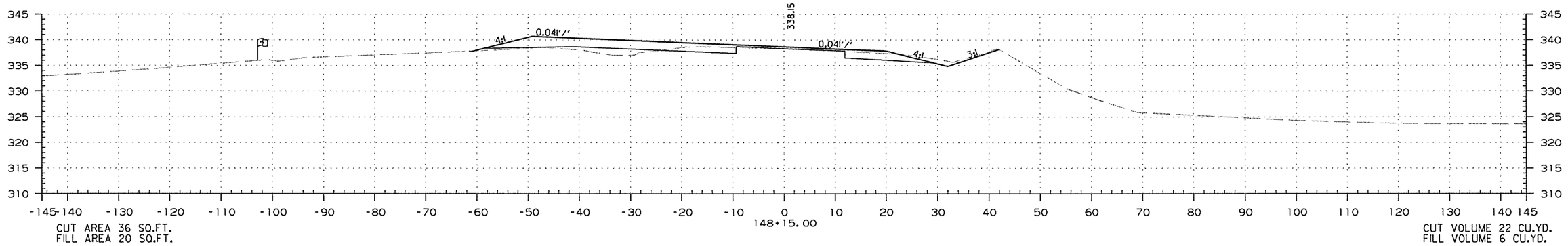
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	322	372

(2) CROSS SECTIONS



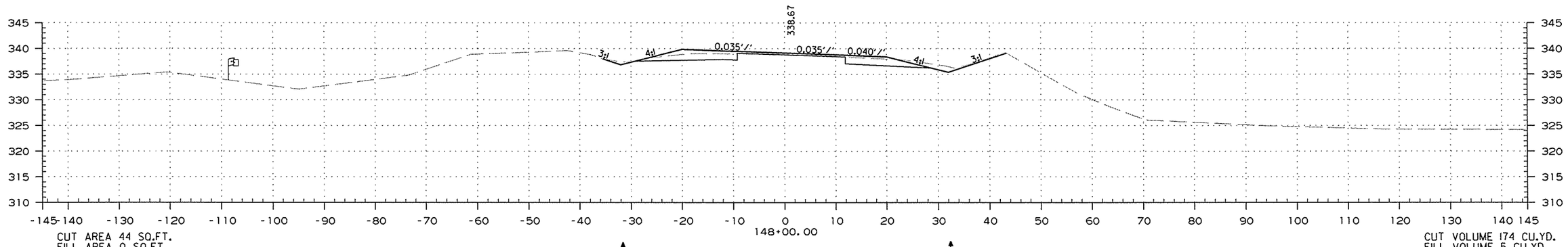
CUT AREA 38 SQ.FT.
FILL AREA 40 SQ.FT.

CUT VOLUME 116 CU.YD.
FILL VOLUME 95 CU.YD.



CUT AREA 36 SQ.FT.
FILL AREA 20 SQ.FT.

CUT VOLUME 22 CU.YD.
FILL VOLUME 6 CU.YD.



CUT AREA 44 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 174 CU.YD.
FILL VOLUME 5 CU.YD.

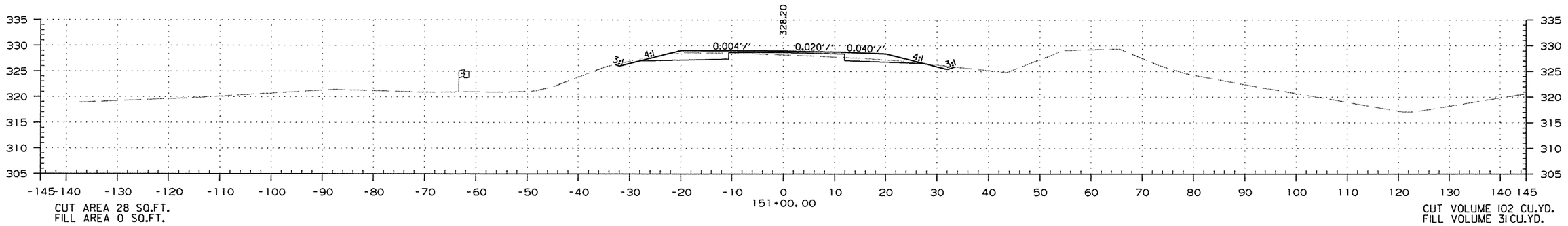
N. FRONTAGE RD.
STA. 148+00.00 TO STA. 149+00.00

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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.		061437	323	372

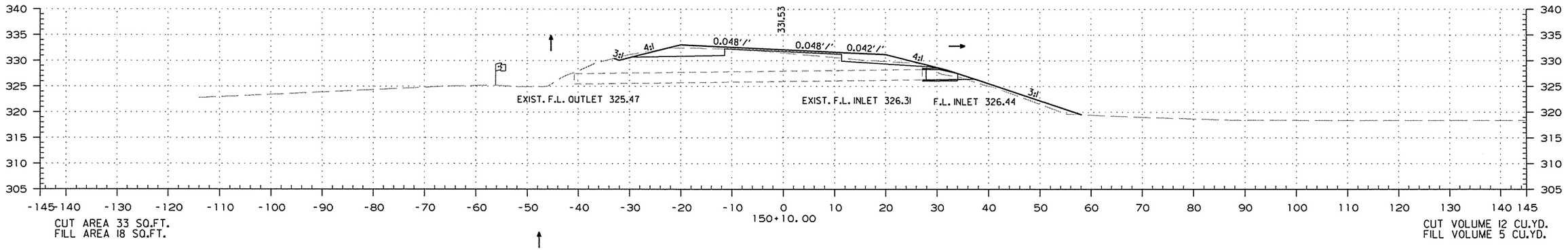
(2) CROSS SECTIONS



CUT AREA 28 SQ.FT.
FILL AREA 0 SQ.FT.

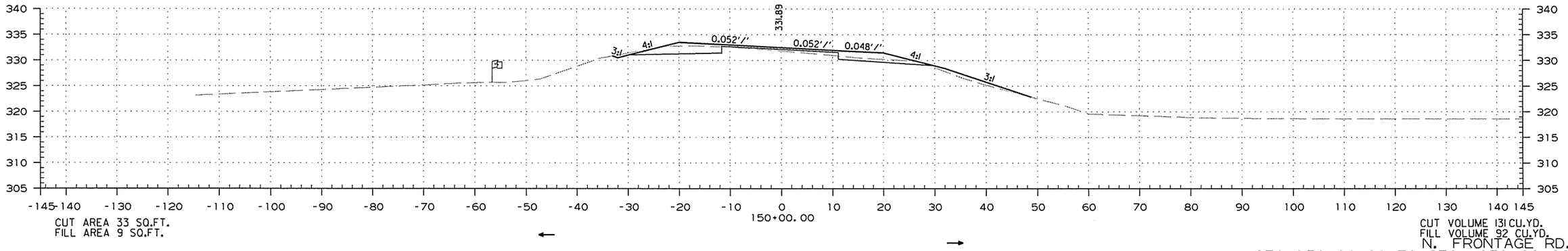
CUT VOLUME 102 CU.YD.
FILL VOLUME 31 CU.YD.

STA. 150+10 - IN PLACE
24" X 68' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
RETAIN AND EXTEND 2' RT.
TO A COMPLETED LENGTH OF 70'
W/ F.E.S. RT. (USE TYPE 3 BEDDING)
USE 4' R.C. PIPE CULV'T. (CL. III)
USE AS LAKE SPILLWAY



CUT AREA 33 SQ.FT.
FILL AREA 18 SQ.FT.

CUT VOLUME 12 CU.YD.
FILL VOLUME 5 CU.YD.



CUT AREA 33 SQ.FT.
FILL AREA 9 SQ.FT.

CUT VOLUME 131 CU.YD.
FILL VOLUME 92 CU.YD.

N. FRONTAGE RD.
STA. 150+00.00 TO STA. 151+00.00

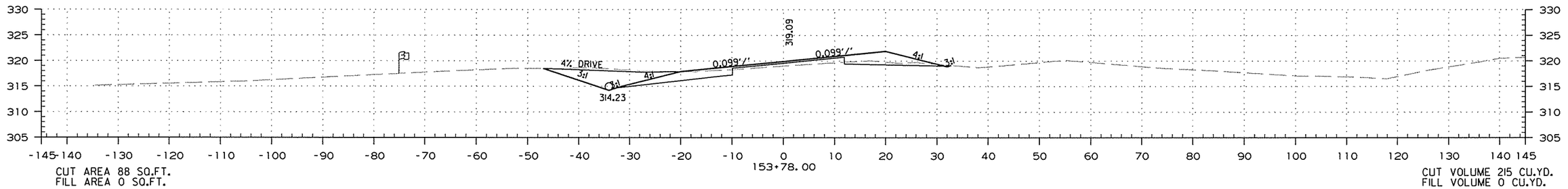
3/2/2015

R061437.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.		061437	324	372

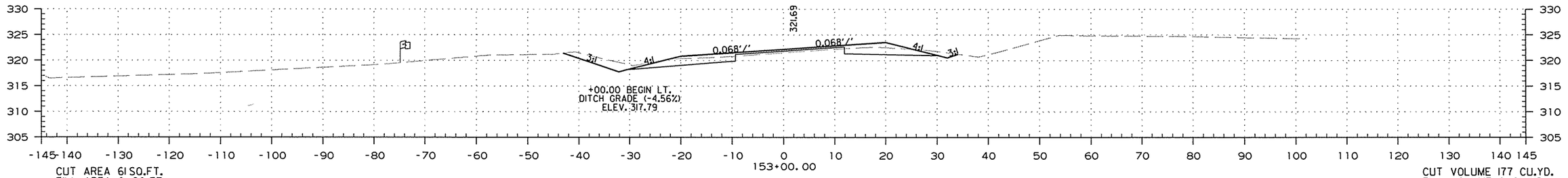
(2) CROSS SECTIONS

STA. 153+78 - IN PLACE
18" X 23' C.M. PIPE CULV'T.
LT. SIDE DRAIN
REMOVE AND INSTALL
18" X 58' PIPE CULV'T.
LT. SIDE DRAIN
CONST. APPR. = 80 CU.YD.



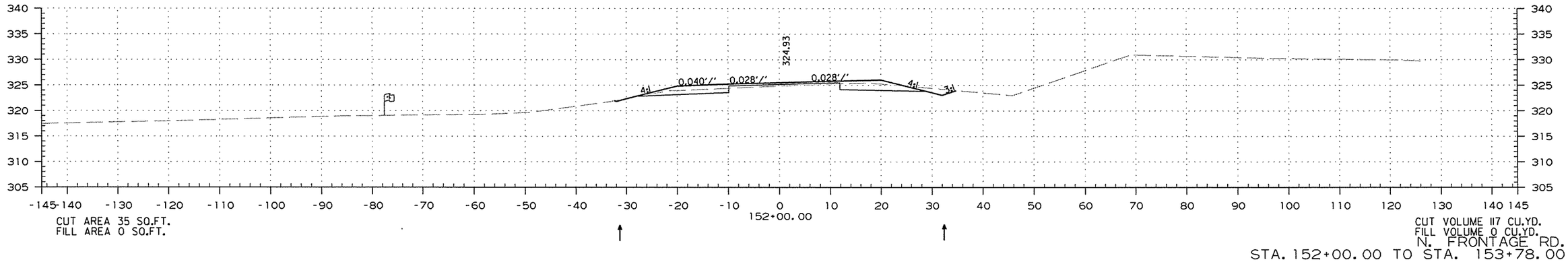
CUT AREA 88 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 215 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 61 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 177 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 35 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 117 CU.YD.
FILL VOLUME 0 CU.YD.

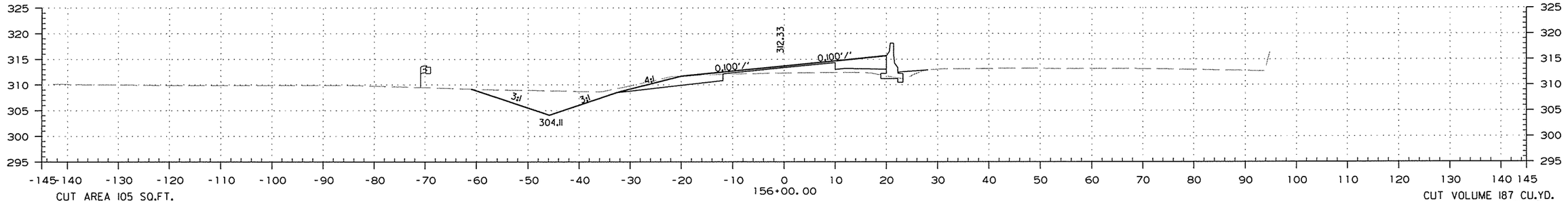
N. FRONTAGE RD.
STA. 152+00.00 TO STA. 153+78.00

3/2/2015

R061437.DGN

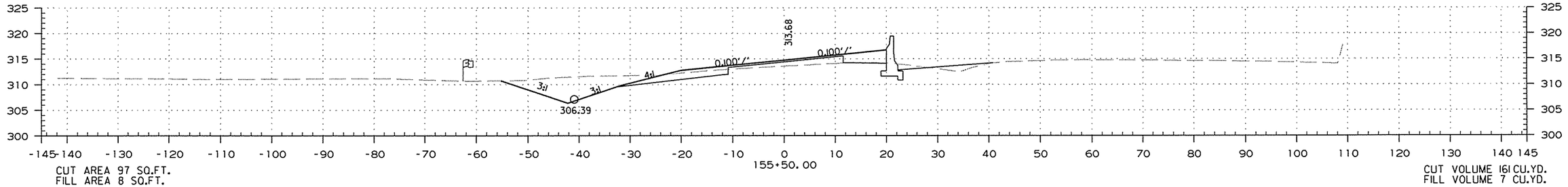
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	325	372

(2) CROSS SECTIONS



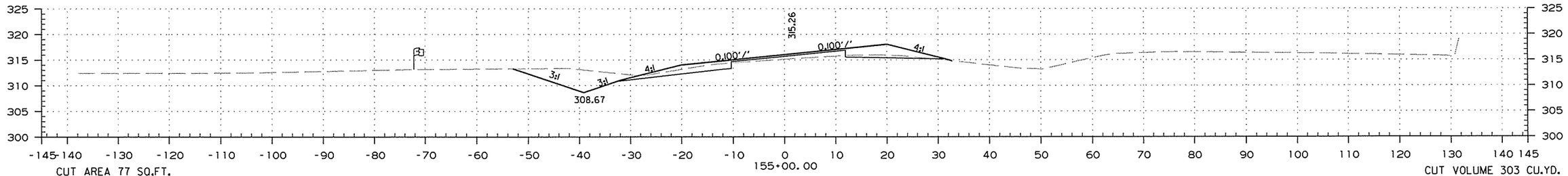
CUT AREA 105 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 187 CU.YD.
FILL VOLUME 7 CU.YD.



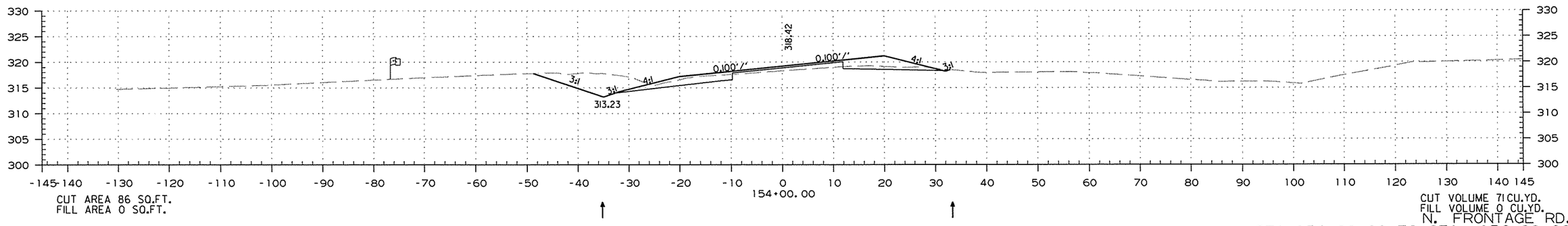
CUT AREA 97 SQ.FT.
FILL AREA 8 SQ.FT.

CUT VOLUME 161 CU.YD.
FILL VOLUME 7 CU.YD.



CUT AREA 77 SQ.FT.
FILL AREA 1SQ.FT.

CUT VOLUME 303 CU.YD.
FILL VOLUME 1CU.YD.



CUT AREA 86 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 71 CU.YD.
FILL VOLUME 0 CU.YD.

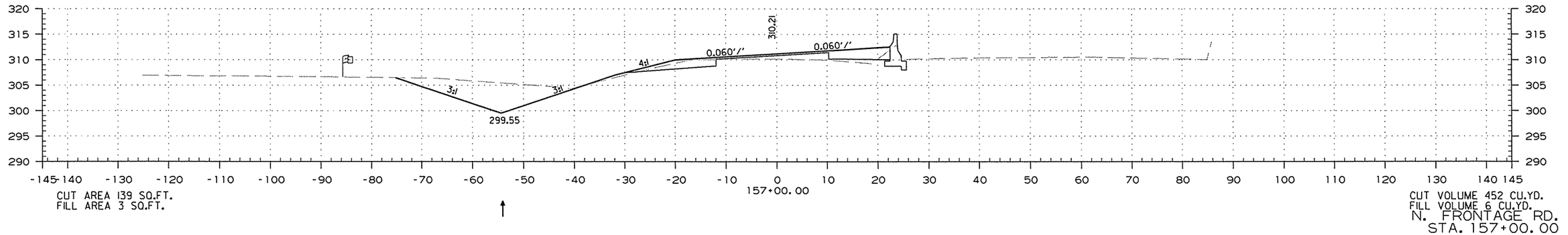
N. FRONTAGE RD.
STA. 154+00.00 TO STA. 156+00.00

3/2/2015

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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.		061437	326	372

(2) CROSS SECTIONS



CUT AREA 139 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 452 CU.YD.
FILL VOLUME 6 CU.YD.
N. FRONTAGE RD.
STA. 157+00.00

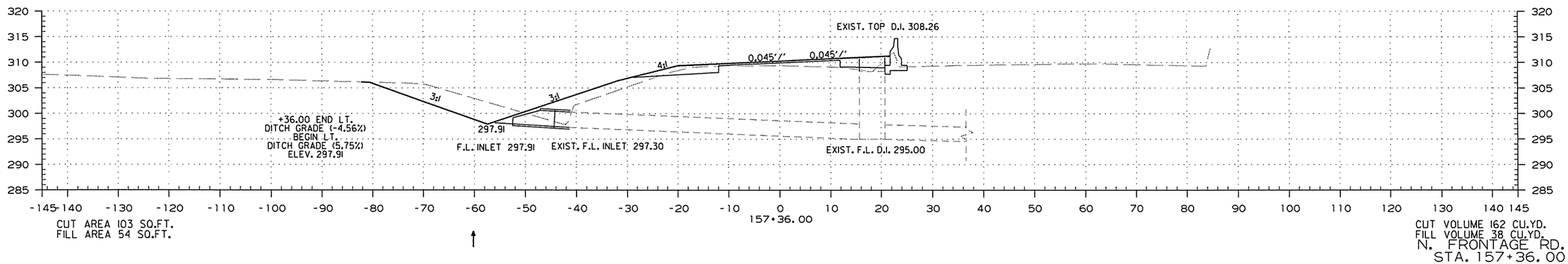
3/2/2015

R061437.DGN

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.		061437	327	372

(2) CROSS SECTIONS

STA. 157+50 - IN PLACE
TYPE 'R' DROP INLET ON RT.
W/ 36" X 62' R.C. PIPE OUTLET
ON 30° LT. FWD. SKEW
W/ F.E.S. LT.
MODIFY DROP INLET AND ADJUST TO GRADE
USING TYPE ST AND
EXTEND R.C. PIPE CULV'T. 4' LT.
TO A COMPLETED LENGTH OF 66'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 4' R.C. PIPE CULV'T. (CL. III)



CUT AREA 103 SQ.FT.
FILL AREA 54 SQ.FT.

CUT VOLUME 162 CU.YD.
FILL VOLUME 38 CU.YD.
N. FRONTAGE RD.
STA. 157+36.00

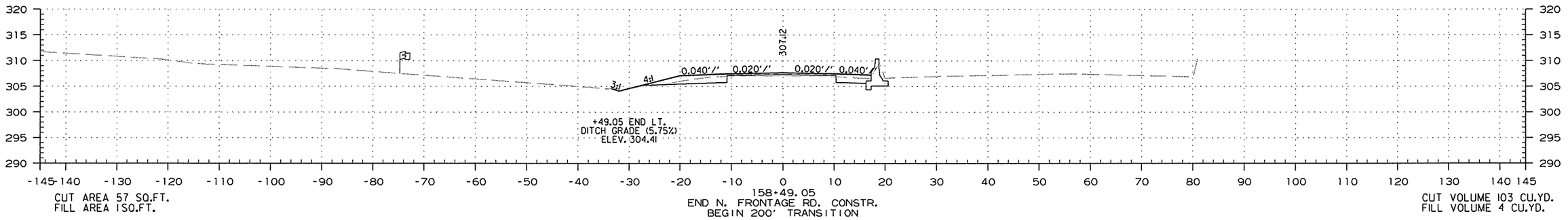
3/2/2015

R061437.DGN

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.		061437	328	372

(2) CROSS SECTIONS

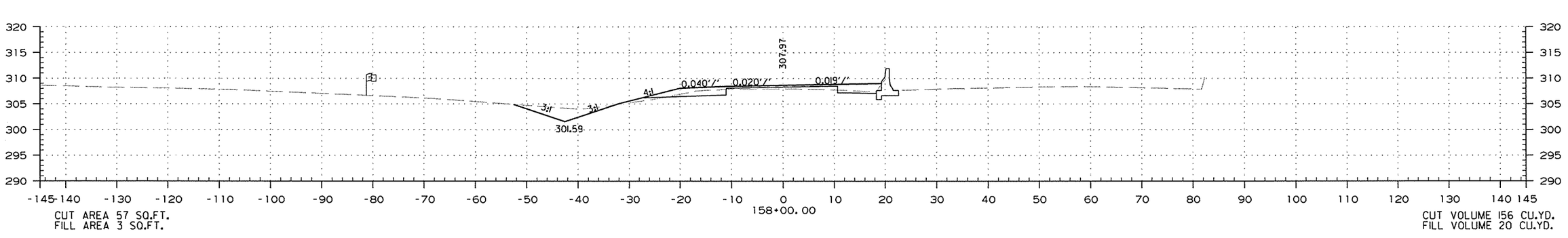
160+49.05
END 200' TRANSITION



CUT AREA 57 SQ.FT.
FILL AREA 150.FT.

158+49.05
END N. FRONTAGE RD. CONSTR.
BEGIN 200' TRANSITION

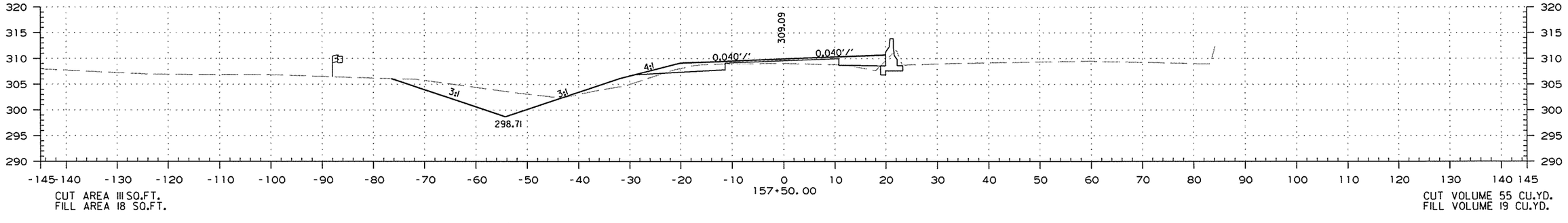
CUT VOLUME 103 CU.YD.
FILL VOLUME 4 CU.YD.



CUT AREA 57 SQ.FT.
FILL AREA 3 SQ.FT.

158+00.00

CUT VOLUME 156 CU.YD.
FILL VOLUME 20 CU.YD.



CUT AREA 111 SQ.FT.
FILL AREA 18 SQ.FT.

157+50.00

CUT VOLUME 55 CU.YD.
FILL VOLUME 19 CU.YD.

3/2/2015

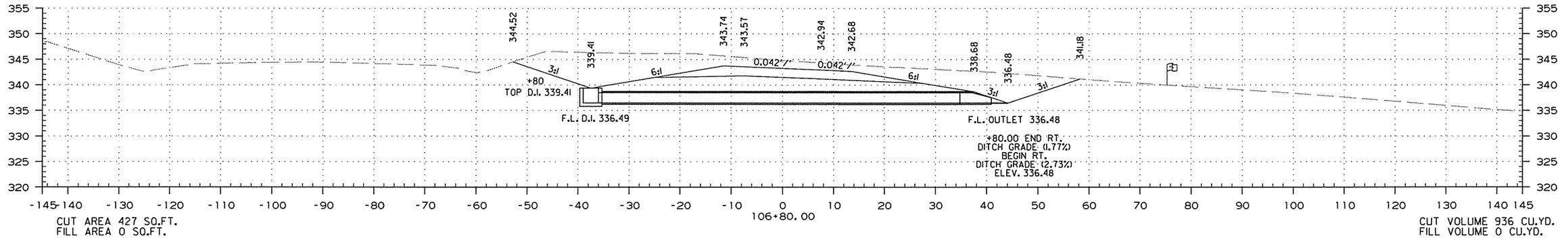
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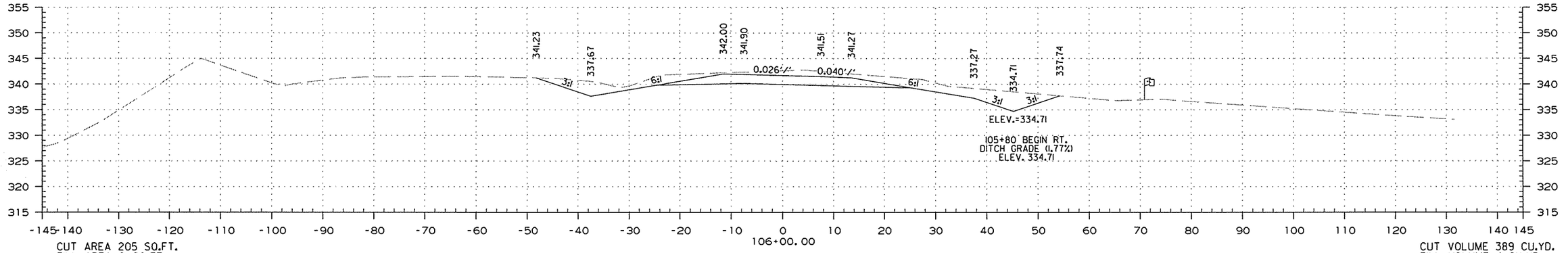
N. FRONTAGE RD.
STA. 157+50.00 TO STA. 158+49.05

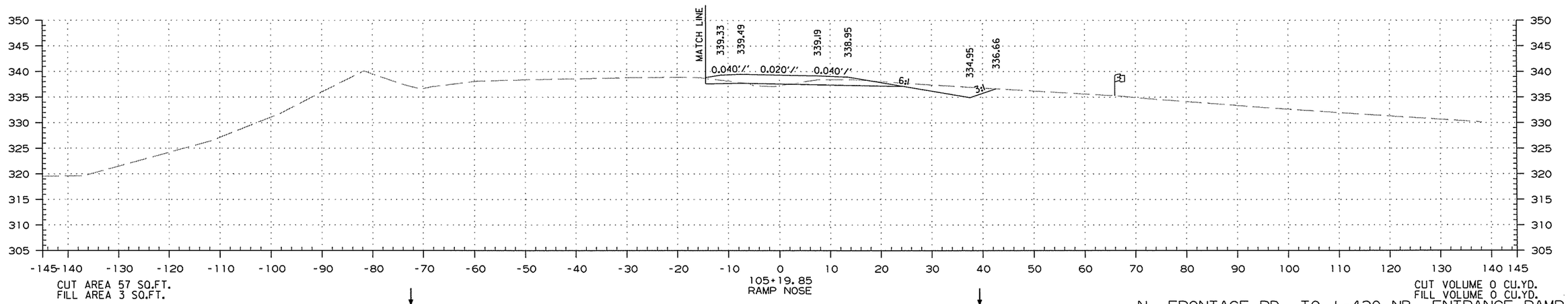
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	329	372

(2) CROSS SECTIONS

STA. 106+80 - CONSTRUCT
TYPE 'RM' DROP INLET 36' LT.
W/ 24" X 72' R.C. PIPE OUTLET (CL. III)
W/ F.E.S. RT. (USE TYPE 3 BEDDING)
TYPE RM = 3'-0" x 4'-0"
(H = 2'-11")







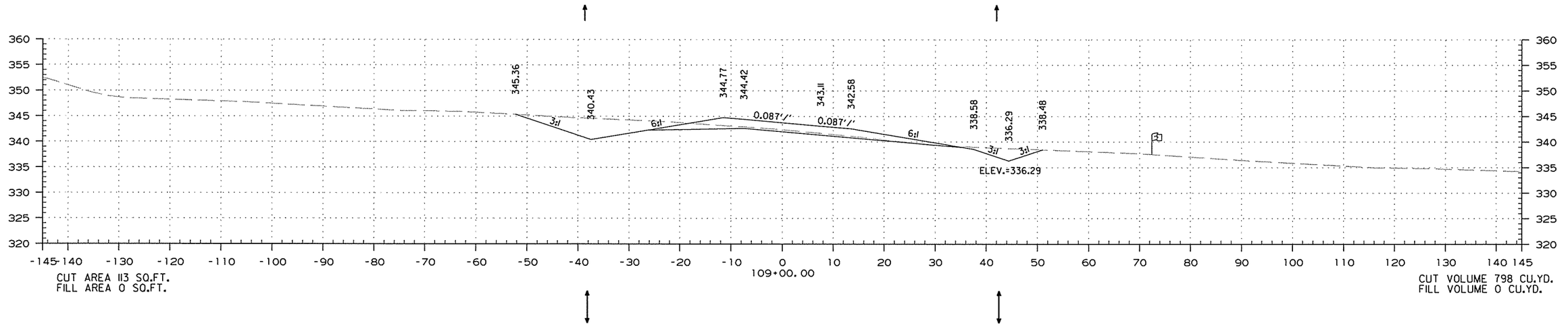
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 105+19.85 TO STA. 106+80.00

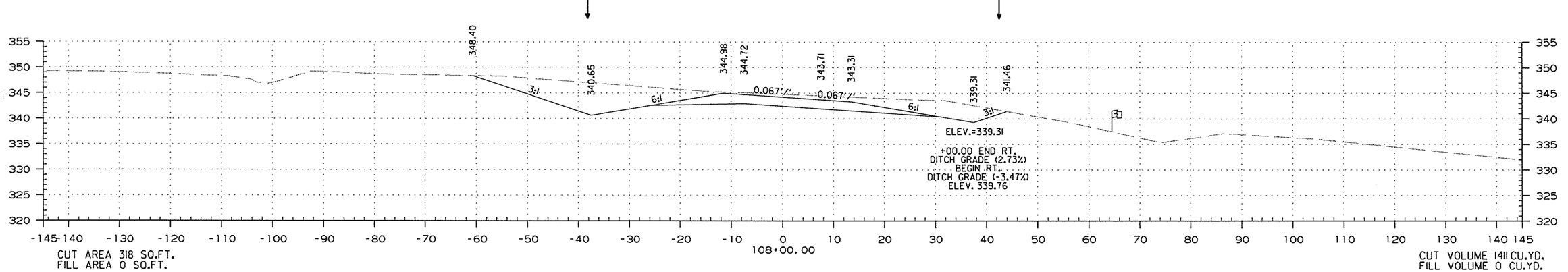
3/2/2015

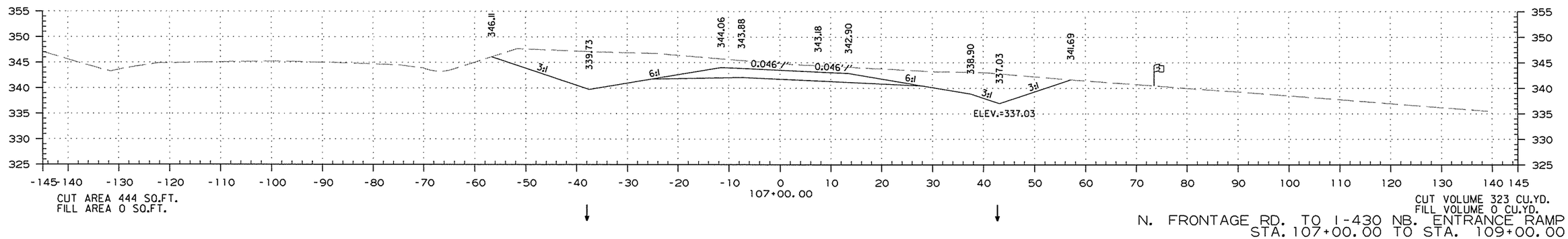
R061437.DGN

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







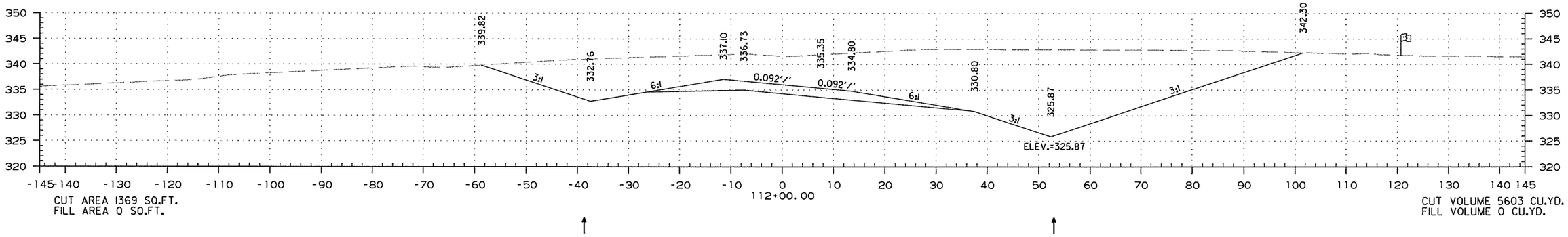
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 107+00.00 TO STA. 109+00.00

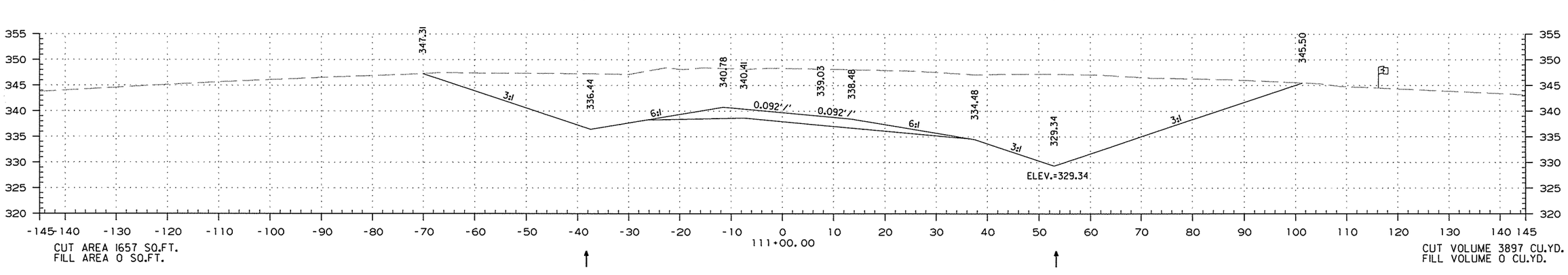
3/2/2015

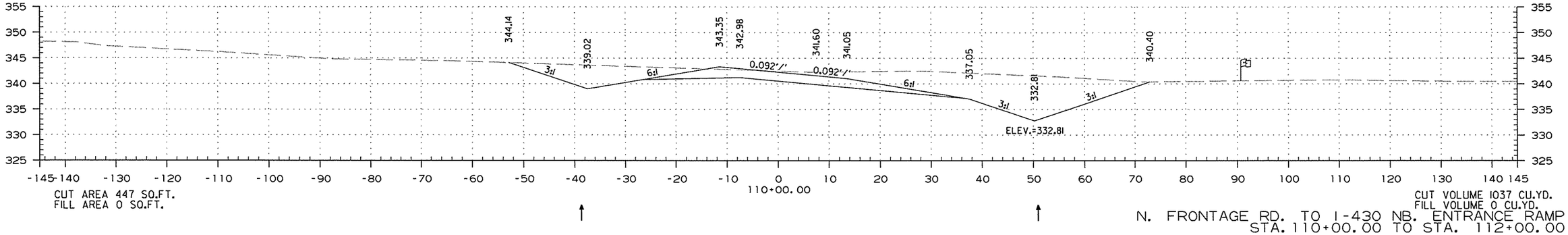
R061437.DGN

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.		061437	331	372

(2) CROSS SECTIONS







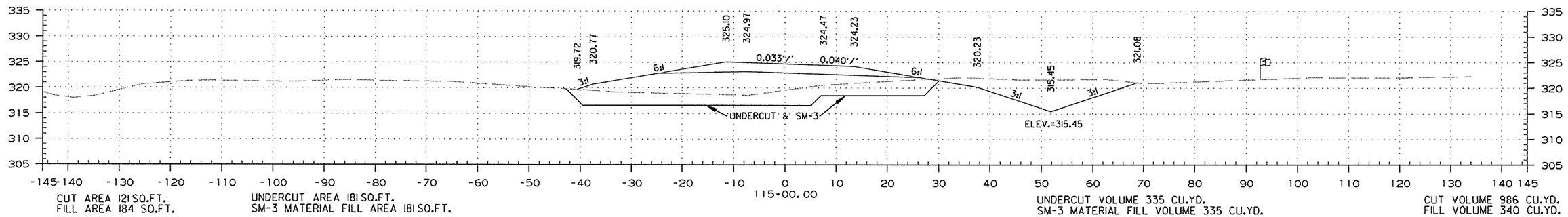
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 110+00.00 TO STA. 112+00.00

3/2/2015

R061437.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.		061437	332	372

(2) CROSS SECTIONS

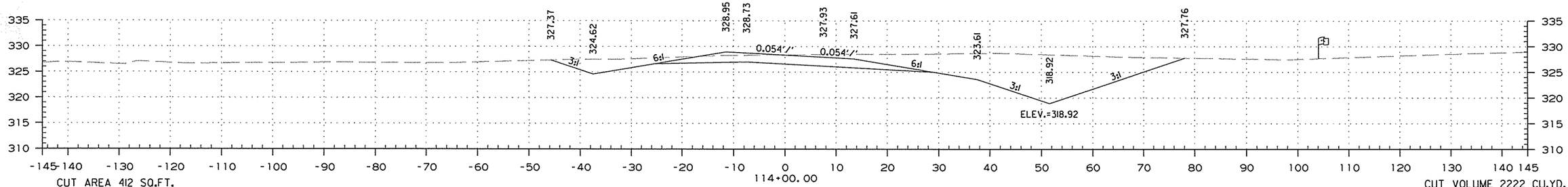


CUT AREA 121 SQ.FT.
FILL AREA 184 SQ.FT.

UNDERCUT AREA 181 SQ.FT.
SM-3 MATERIAL FILL AREA 181 SQ.FT.

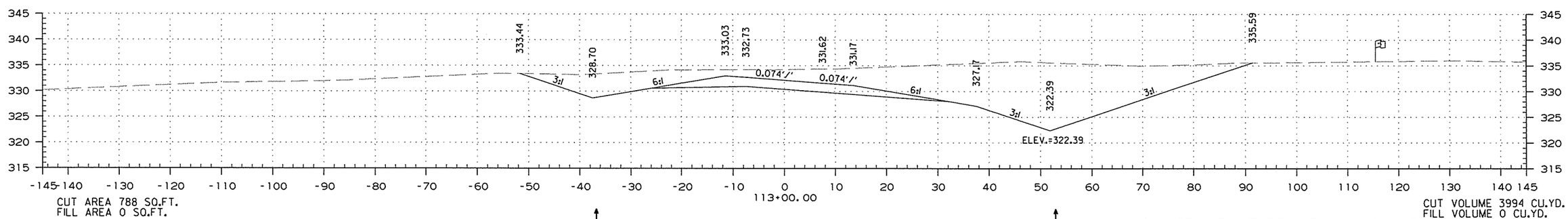
UNDERCUT VOLUME 335 CU.YD.
SM-3 MATERIAL FILL VOLUME 335 CU.YD.

CUT VOLUME 986 CU.YD.
FILL VOLUME 340 CU.YD.



CUT AREA 412 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 2222 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 788 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 3994 CU.YD.
FILL VOLUME 0 CU.YD.

N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 113+00.00 TO STA. 115+00.00

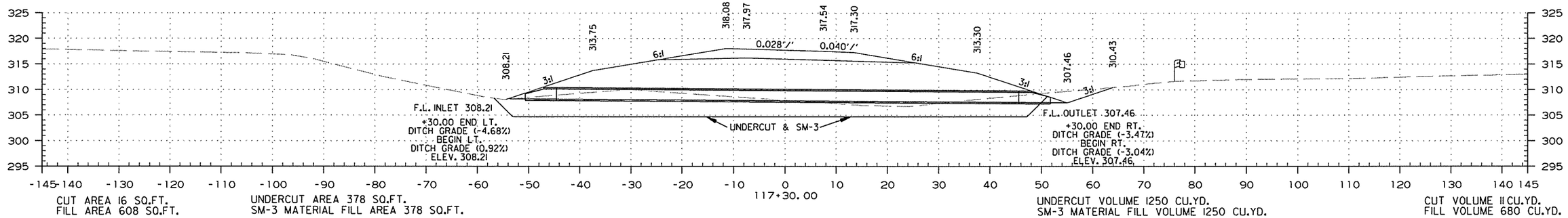
3/2/2015

R061437.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.		061437	333	372

(2) CROSS SECTIONS

STA. 117+30 - CONSTRUCT
24" X 90' R.C. PIPE CULV'T. (CL. III)
W/ F.E.S. LT. & RT.
(USE TYPE 3 BEDDING)
Q50 = 5 cfs; D.A. = 3 Ac.

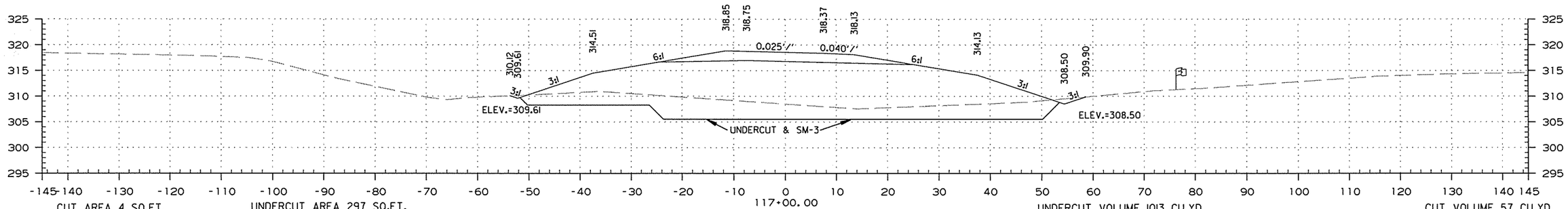


CUT AREA 16 SQ.FT.
FILL AREA 608 SQ.FT.

UNDERCUT AREA 378 SQ.FT.
SM-3 MATERIAL FILL AREA 378 SQ.FT.

UNDERCUT VOLUME 1250 CU.YD.
SM-3 MATERIAL FILL VOLUME 1250 CU.YD.

CUT VOLUME 11 CU.YD.
FILL VOLUME 680 CU.YD.

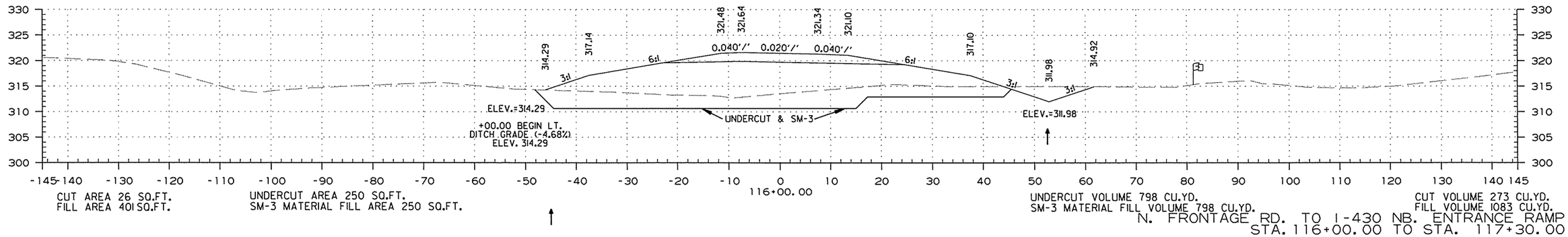


CUT AREA 4 SQ.FT.
FILL AREA 616 SQ.FT.

UNDERCUT AREA 297 SQ.FT.
SM-3 MATERIAL FILL AREA 297 SQ.FT.

UNDERCUT VOLUME 1013 CU.YD.
SM-3 MATERIAL FILL VOLUME 1013 CU.YD.

CUT VOLUME 57 CU.YD.
FILL VOLUME 1885 CU.YD.



CUT AREA 26 SQ.FT.
FILL AREA 401 SQ.FT.

UNDERCUT AREA 250 SQ.FT.
SM-3 MATERIAL FILL AREA 250 SQ.FT.

UNDERCUT VOLUME 798 CU.YD.
SM-3 MATERIAL FILL VOLUME 798 CU.YD.

CUT VOLUME 273 CU.YD.
FILL VOLUME 1083 CU.YD.

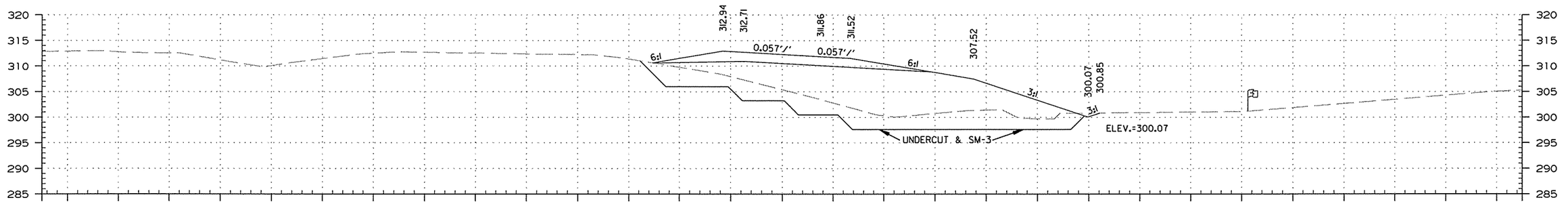
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 116+00.00 TO STA. 117+30.00

3/2/2015

R061437.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.		061437	334	372

(2) CROSS SECTIONS

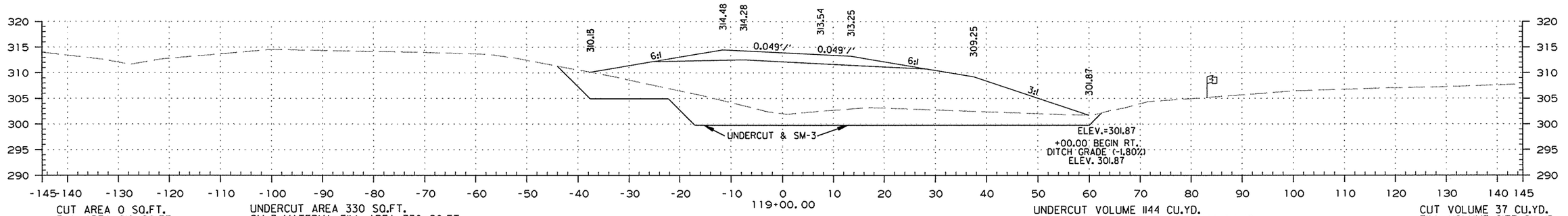


CUT AREA 45 SQ.FT.
FILL AREA 419 SQ.FT.

UNDERCUT AREA 259 SQ.FT.
SM-3 MATERIAL FILL AREA 259 SQ.FT.

UNDERCUT VOLUME 1091 CU.YD.
SM-3 MATERIAL FILL VOLUME 1091 CU.YD.

CUT VOLUME 84 CU.YD.
FILL VOLUME 1905 CU.YD.

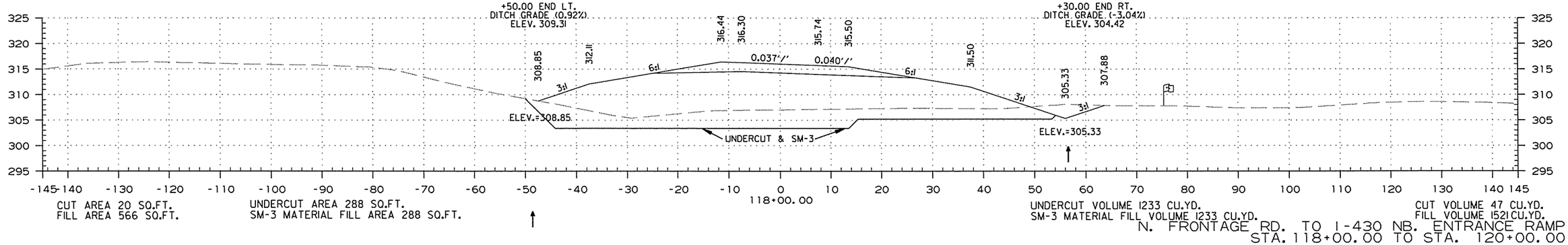


CUT AREA 0 SQ.FT.
FILL AREA 610 SQ.FT.

UNDERCUT AREA 330 SQ.FT.
SM-3 MATERIAL FILL AREA 330 SQ.FT.

UNDERCUT VOLUME 1144 CU.YD.
SM-3 MATERIAL FILL VOLUME 1144 CU.YD.

CUT VOLUME 37 CU.YD.
FILL VOLUME 2177 CU.YD.



CUT AREA 20 SQ.FT.
FILL AREA 566 SQ.FT.

UNDERCUT AREA 288 SQ.FT.
SM-3 MATERIAL FILL AREA 288 SQ.FT.

UNDERCUT VOLUME 1233 CU.YD.
SM-3 MATERIAL FILL VOLUME 1233 CU.YD.

CUT VOLUME 47 CU.YD.
FILL VOLUME 1521 CU.YD.

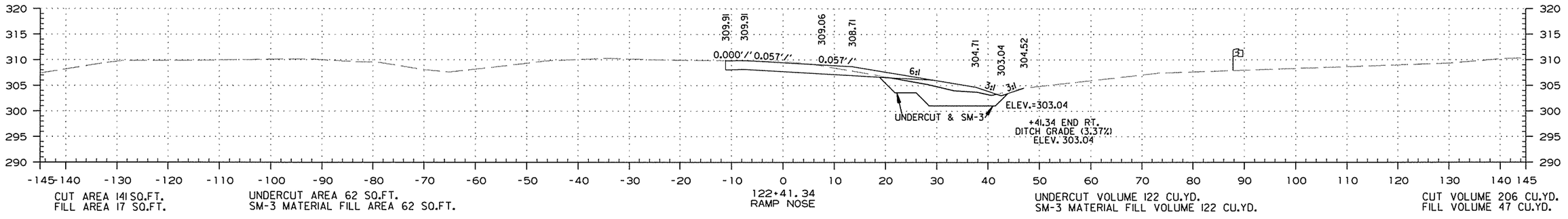
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 118+00.00 TO STA. 120+00.00

3/2/2015

R061437.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.		061437	335	372

(2) CROSS SECTIONS



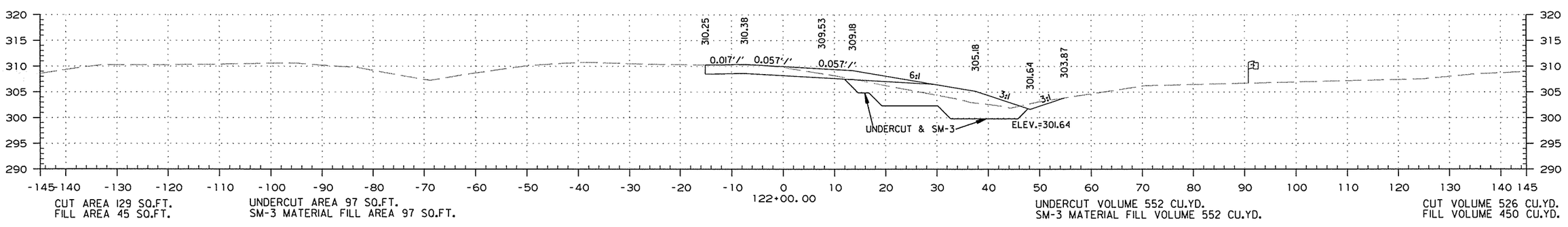
CUT AREA 141 SQ.FT.
FILL AREA 17 SQ.FT.

UNDERCUT AREA 62 SQ.FT.
SM-3 MATERIAL FILL AREA 62 SQ.FT.

122+41.34
RAMP NOSE

UNDERCUT VOLUME 122 CU.YD.
SM-3 MATERIAL FILL VOLUME 122 CU.YD.

CUT VOLUME 206 CU.YD.
FILL VOLUME 47 CU.YD.



CUT AREA 129 SQ.FT.
FILL AREA 45 SQ.FT.

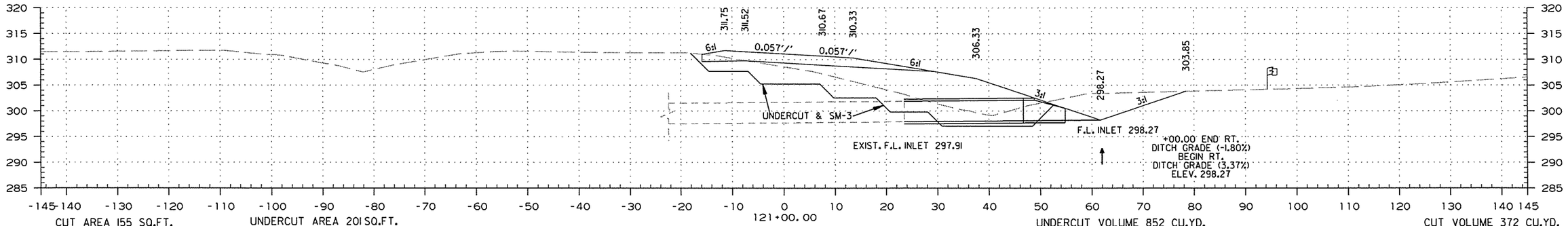
UNDERCUT AREA 97 SQ.FT.
SM-3 MATERIAL FILL AREA 97 SQ.FT.

122+00.00

UNDERCUT VOLUME 552 CU.YD.
SM-3 MATERIAL FILL VOLUME 552 CU.YD.

CUT VOLUME 526 CU.YD.
FILL VOLUME 450 CU.YD.

FOR PIPE NOTE SEE CROSS SECTIONS
AT STA. 121+40 ON I-430 CROSS SECTIONS



CUT AREA 155 SQ.FT.
FILL AREA 198 SQ.FT.

UNDERCUT AREA 201 SQ.FT.
SM-3 MATERIAL FILL AREA 201 SQ.FT.

121+00.00

UNDERCUT VOLUME 852 CU.YD.
SM-3 MATERIAL FILL VOLUME 852 CU.YD.

CUT VOLUME 372 CU.YD.
FILL VOLUME 1143 CU.YD.

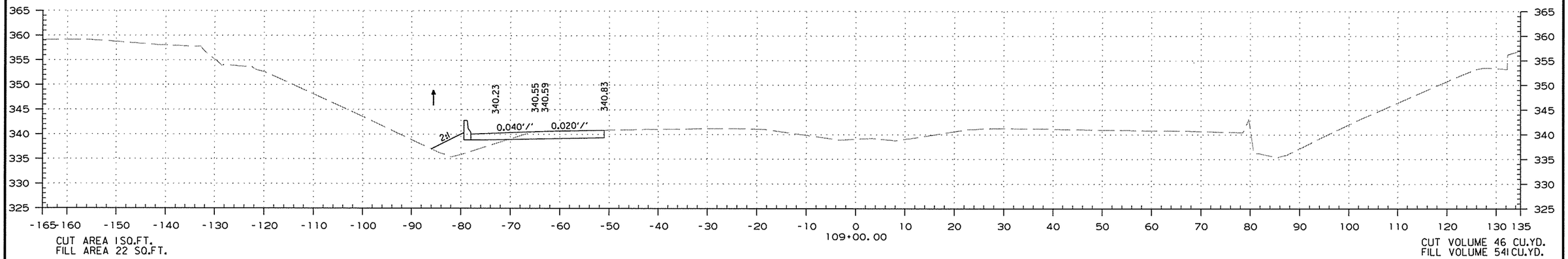
N. FRONTAGE RD. TO I-430 NB. ENTRANCE RAMP
STA. 121+00.00 TO STA. 122+41.34

3/2/2015

R061437.DGN

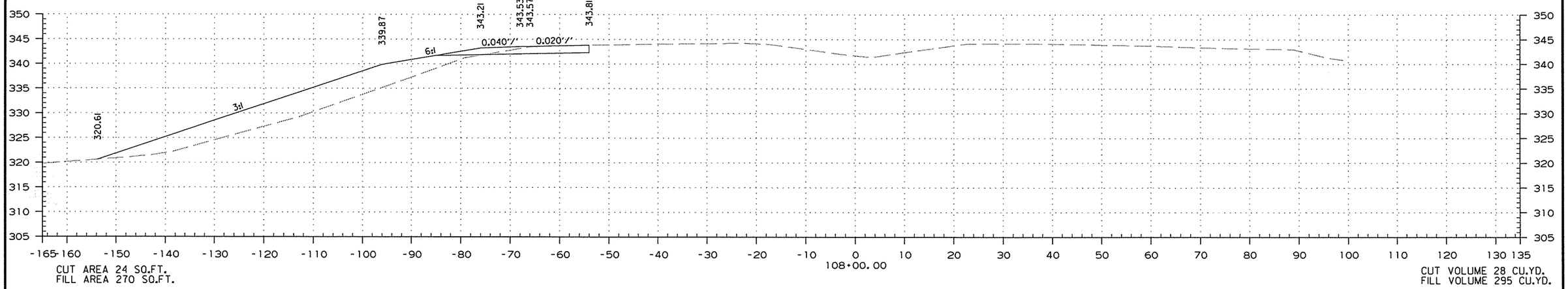
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	336	372

(2) CROSS SECTIONS



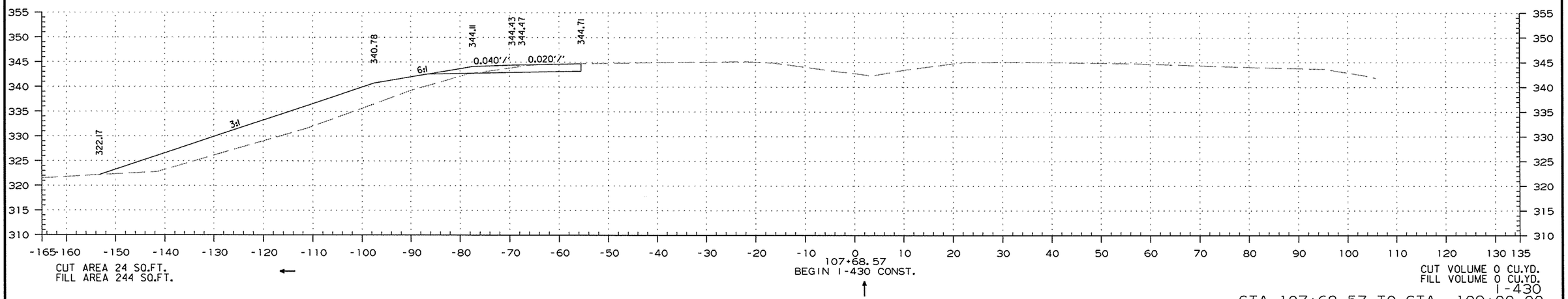
CUT AREA 150 SQ.FT.
FILL AREA 22 SQ.FT.

CUT VOLUME 46 CU.YD.
FILL VOLUME 541 CU.YD.



CUT AREA 24 SQ.FT.
FILL AREA 270 SQ.FT.

CUT VOLUME 28 CU.YD.
FILL VOLUME 295 CU.YD.



CUT AREA 24 SQ.FT.
FILL AREA 244 SQ.FT.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

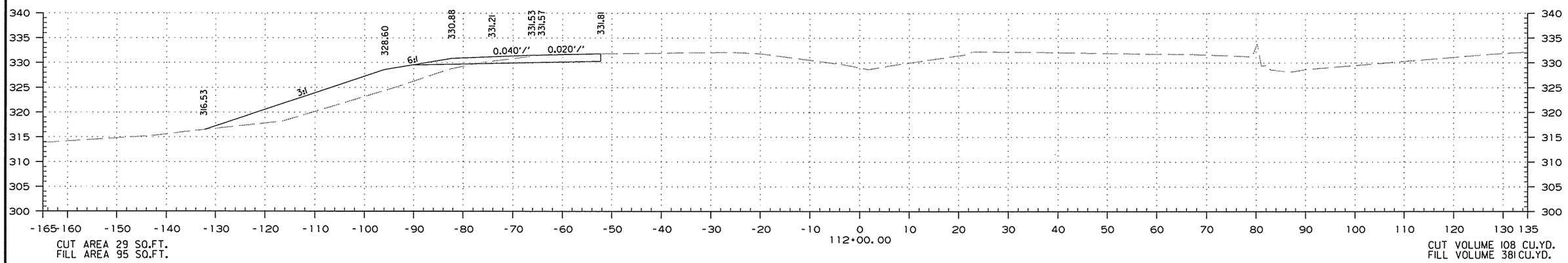
I-430
STA. 107+68.57 TO STA. 109+00.00

3/2/2015

R061437.DGN

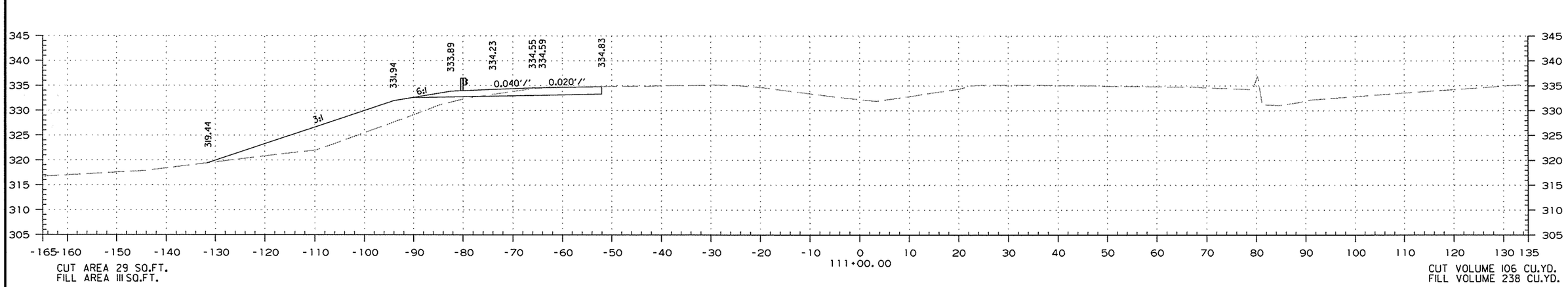
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	337	372

(2) CROSS SECTIONS



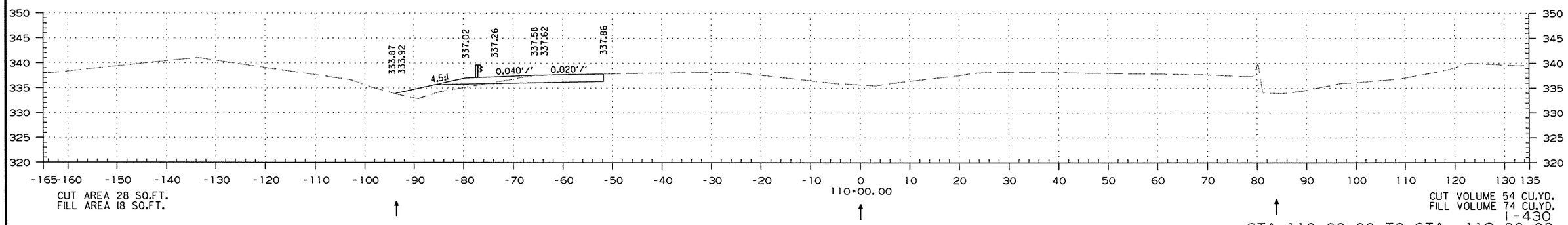
CUT AREA 29 SQ.FT.
FILL AREA 95 SQ.FT.

CUT VOLUME 108 CU.YD.
FILL VOLUME 381 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 111 SQ.FT.

CUT VOLUME 106 CU.YD.
FILL VOLUME 238 CU.YD.



CUT AREA 28 SQ.FT.
FILL AREA 18 SQ.FT.

CUT VOLUME 54 CU.YD.
FILL VOLUME 74 CU.YD.

I-430

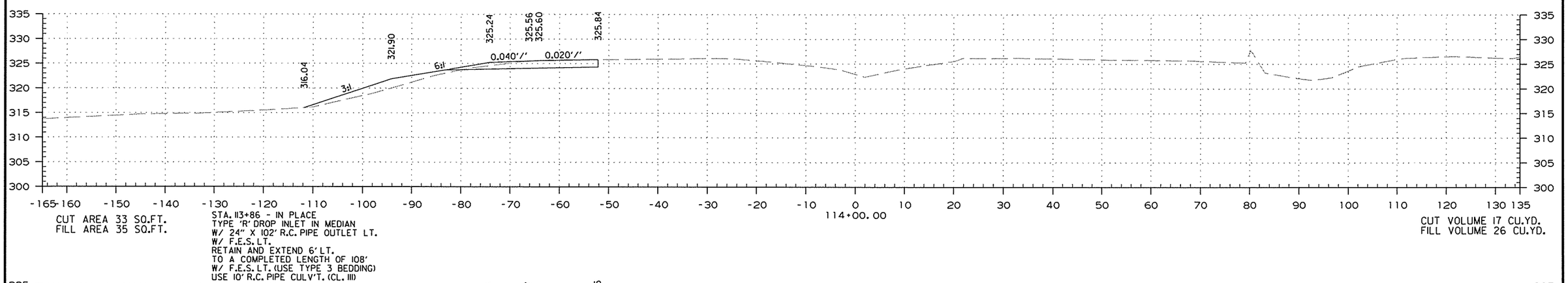
STA. 110+00.00 TO STA. 112+00.00

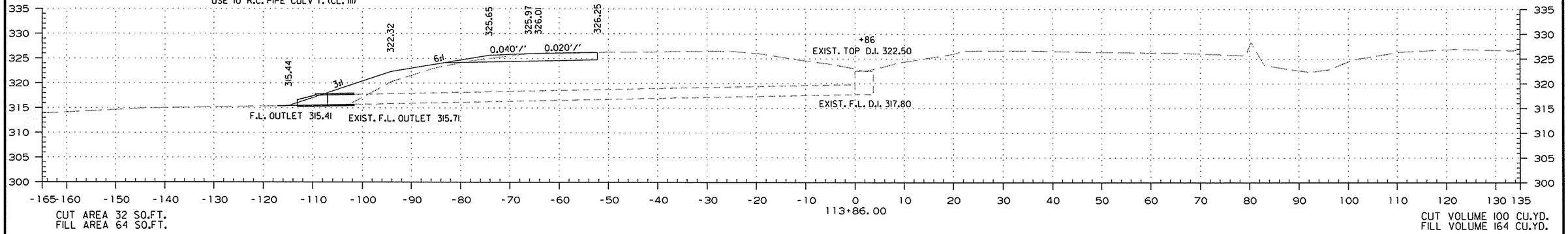
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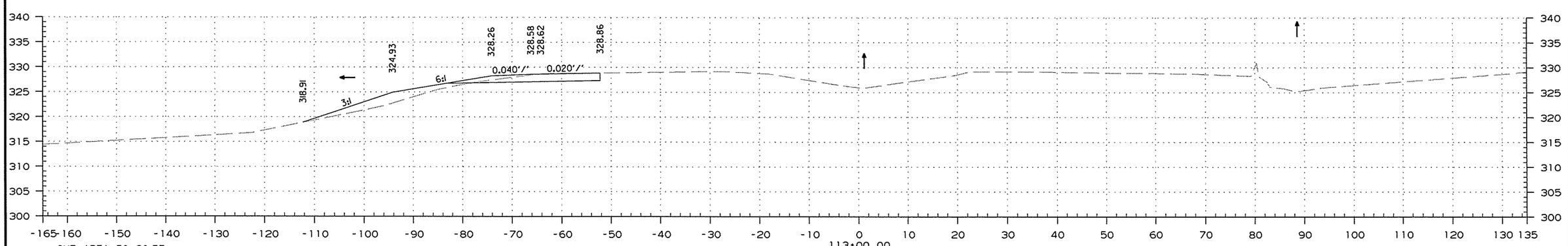
R061437.DGN

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.		061437	338	372

(2) CROSS SECTIONS







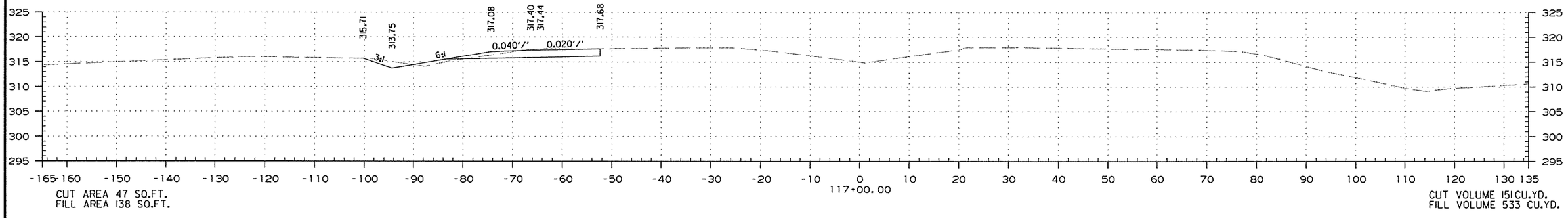
3/2/2015

R061437.DGN

STA. 113+00.00 TO STA. 114+00.00

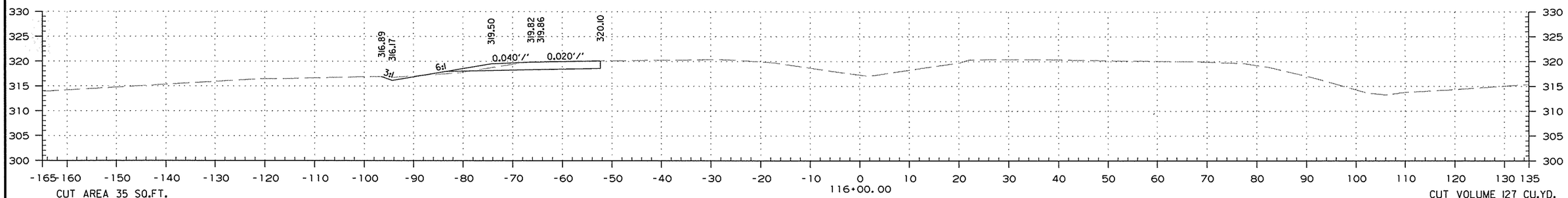
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	339	372

(2) CROSS SECTIONS



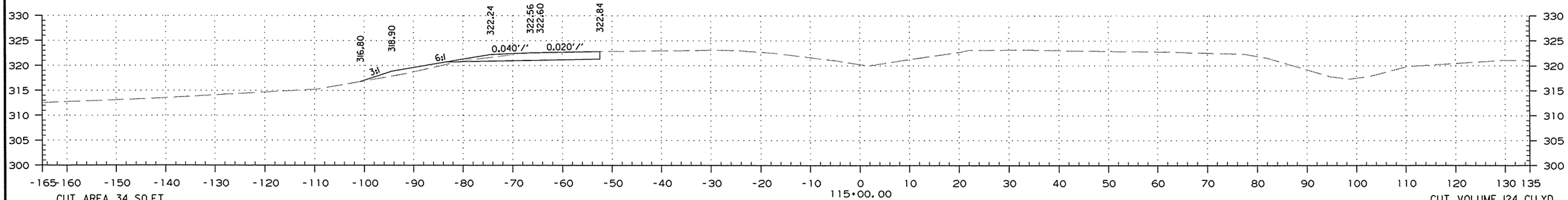
CUT AREA 47 SQ.FT.
FILL AREA 138 SQ.FT.

CUT VOLUME 151 CU.YD.
FILL VOLUME 533 CU.YD.



CUT AREA 35 SQ.FT.
FILL AREA 150 SQ.FT.

CUT VOLUME 127 CU.YD.
FILL VOLUME 340 CU.YD.



CUT AREA 34 SQ.FT.
FILL AREA 33 SQ.FT.

CUT VOLUME 124 CU.YD.
FILL VOLUME 126 CU.YD.

I-430

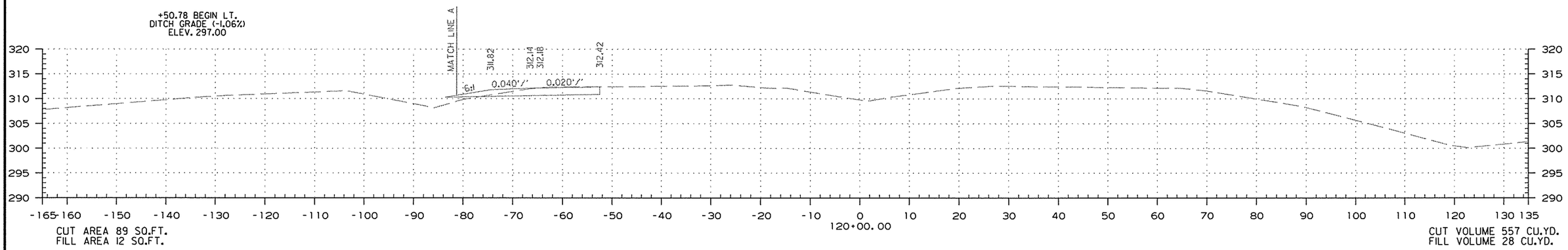
STA. 115+00.00 TO STA. 117+00.00

3/2/2015

R061437.DGN

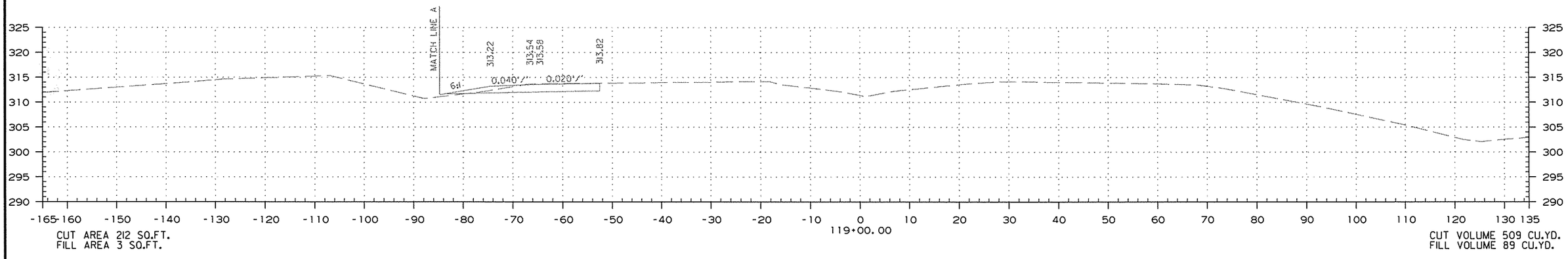
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	340	372

(2) CROSS SECTIONS



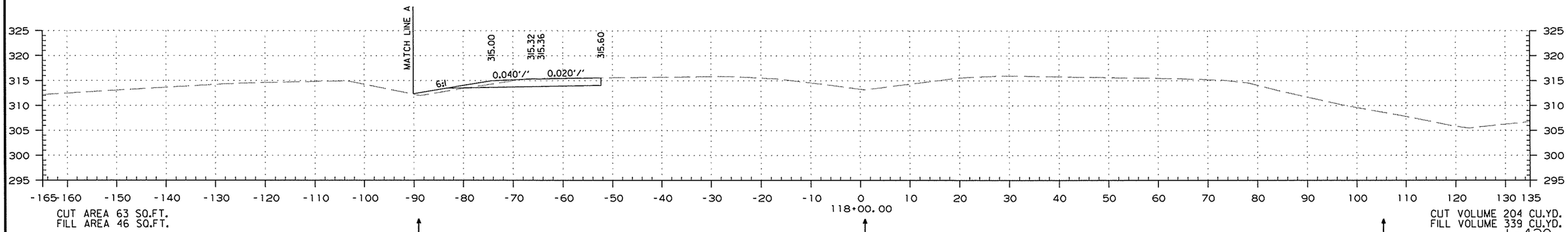
CUT AREA 89 SQ.FT.
FILL AREA 12 SQ.FT.

CUT VOLUME 557 CU.YD.
FILL VOLUME 28 CU.YD.



CUT AREA 212 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 509 CU.YD.
FILL VOLUME 89 CU.YD.



CUT AREA 63 SQ.FT.
FILL AREA 46 SQ.FT.

CUT VOLUME 204 CU.YD.
FILL VOLUME 339 CU.YD.

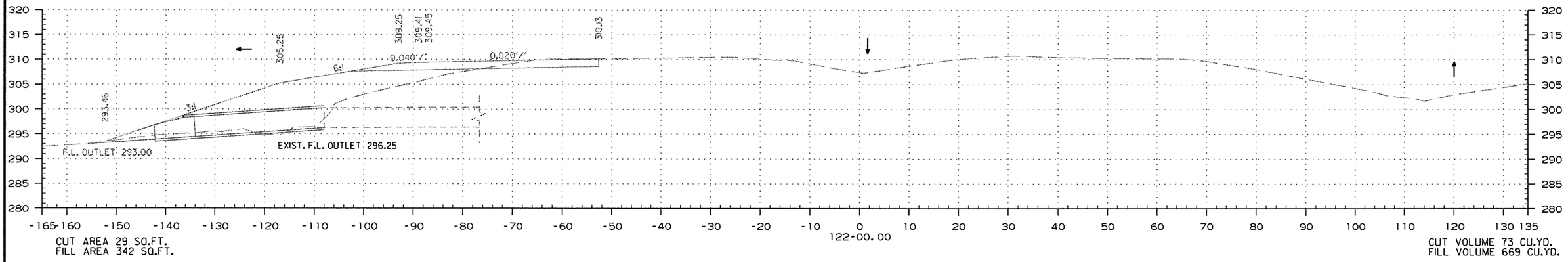
I-430
STA. 118+00.00 TO STA. 120+00.00

3/2/2015

R061437.DGN

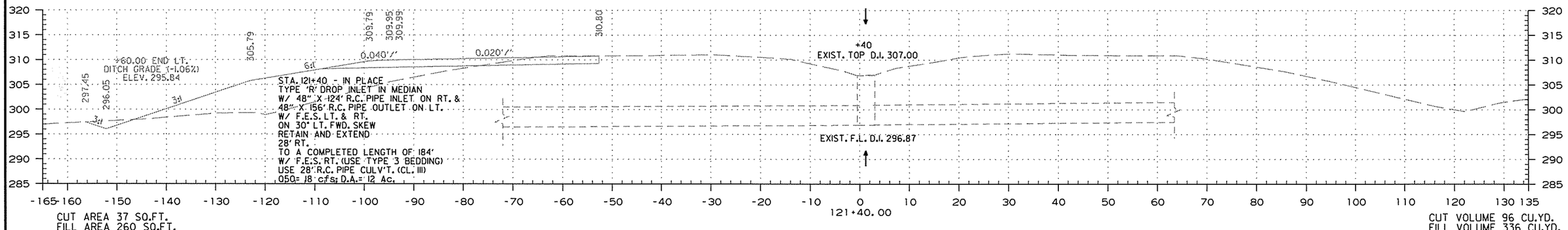
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	341	372

(2) CROSS SECTIONS



CUT AREA 29 SQ.FT.
FILL AREA 342 SQ.FT.

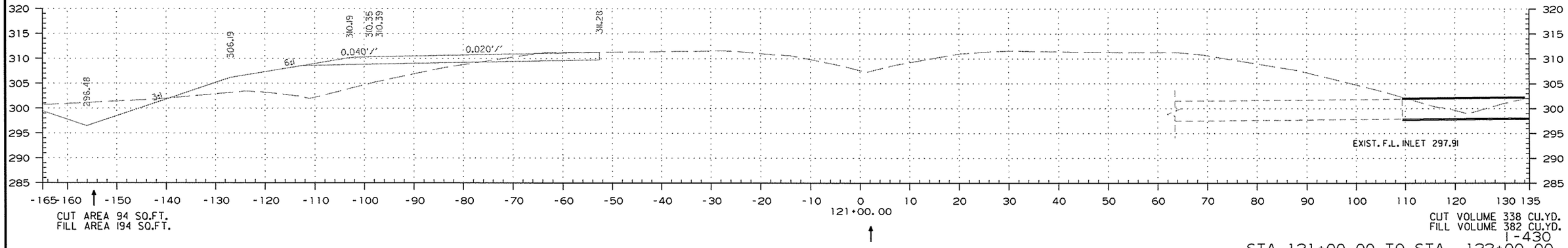
CUT VOLUME 73 CU.YD.
FILL VOLUME 669 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 260 SQ.FT.

CUT VOLUME 96 CU.YD.
FILL VOLUME 336 CU.YD.

FOR INLET DETAILS SEE CROSS SECTION
AT STA. 121+00 ON I-430 NB. ENTRANCE RAMP



CUT AREA 94 SQ.FT.
FILL AREA 194 SQ.FT.

CUT VOLUME 338 CU.YD.
FILL VOLUME 382 CU.YD.

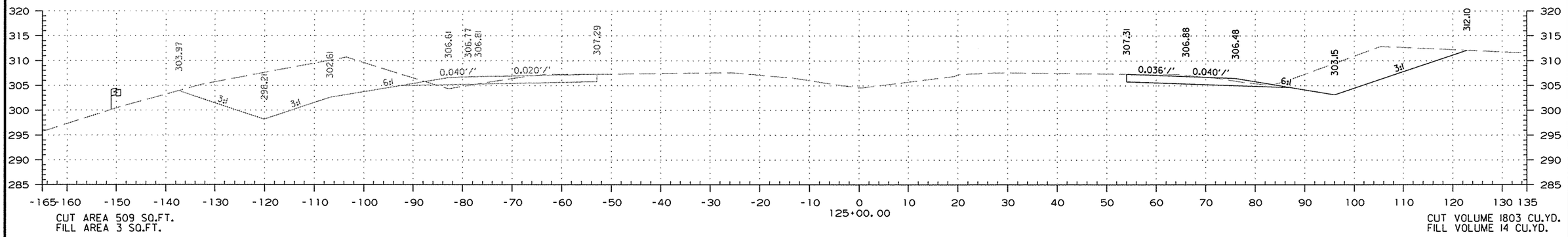
I-430
STA. 121+00.00 TO STA. 122+00.00

3/2/2015

R061437.DGN

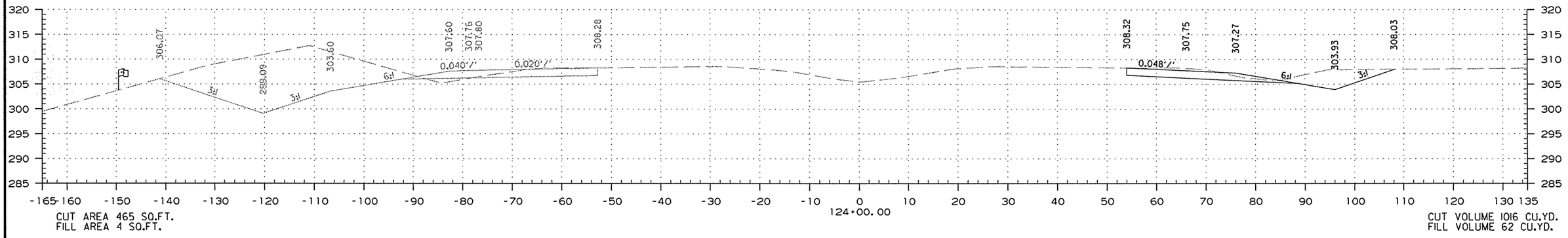
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	342	372

(2) CROSS SECTIONS



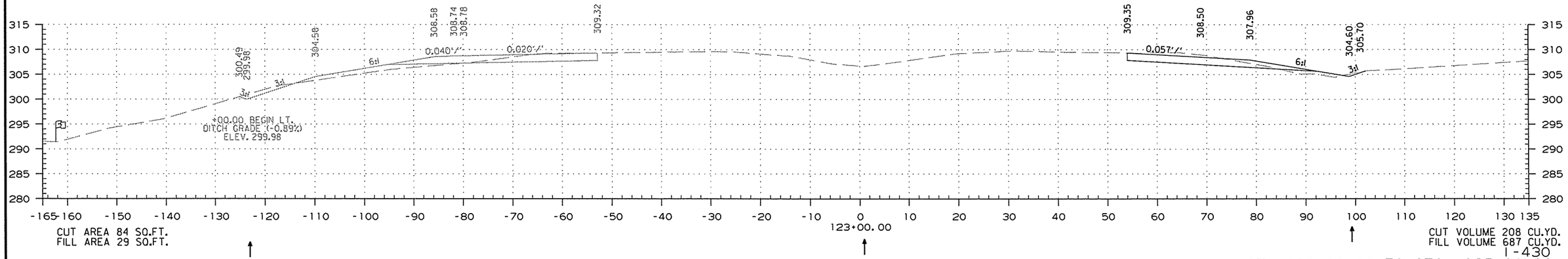
CUT AREA 509 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 1803 CU.YD.
FILL VOLUME 14 CU.YD.



CUT AREA 465 SQ.FT.
FILL AREA 4 SQ.FT.

CUT VOLUME 1016 CU.YD.
FILL VOLUME 62 CU.YD.



+00.00 BEGIN LT.
DITCH GRADE (-0.89%)
ELEV. 299.98

CUT AREA 84 SQ.FT.
FILL AREA 29 SQ.FT.

CUT VOLUME 208 CU.YD.
FILL VOLUME 687 CU.YD.

I-430

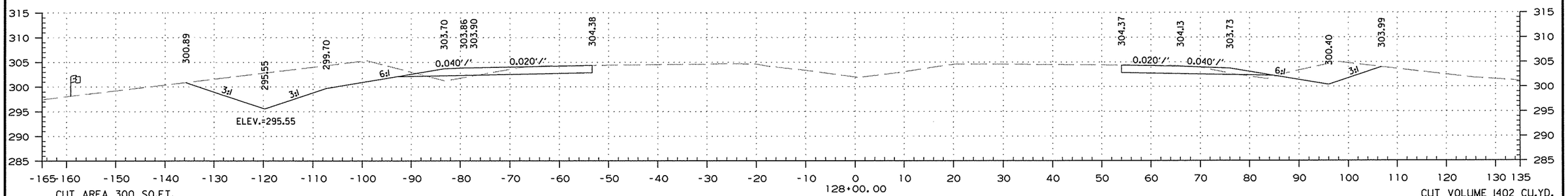
STA. 123+00.00 TO STA. 125+00.00

3/2/2015

R061437.DGN

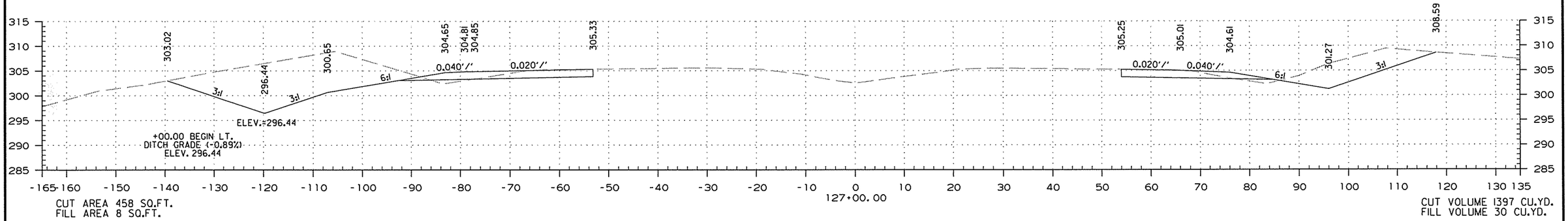
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	343	372

(2) CROSS SECTIONS



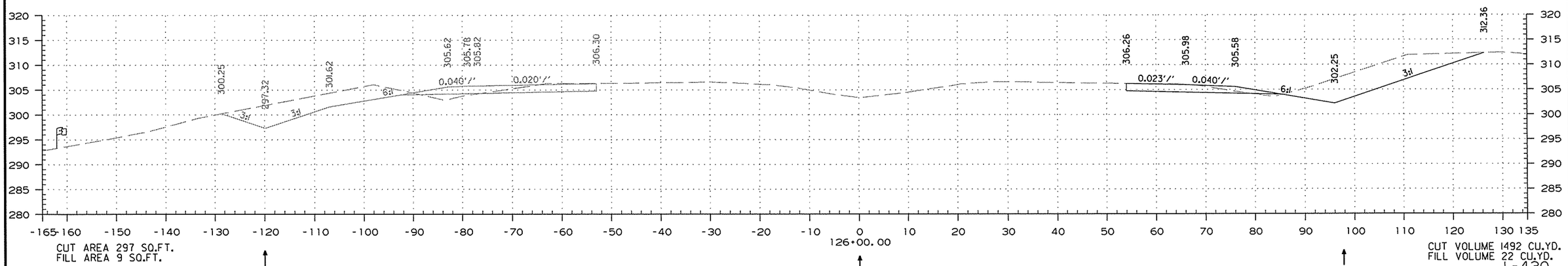
CUT AREA 300 SQ.FT.
FILL AREA 8 SQ.FT.

CUT VOLUME 1402 CU.YD.
FILL VOLUME 30 CU.YD.



CUT AREA 458 SQ.FT.
FILL AREA 8 SQ.FT.

CUT VOLUME 1397 CU.YD.
FILL VOLUME 30 CU.YD.



CUT AREA 297 SQ.FT.
FILL AREA 9 SQ.FT.

CUT VOLUME 1492 CU.YD.
FILL VOLUME 22 CU.YD.

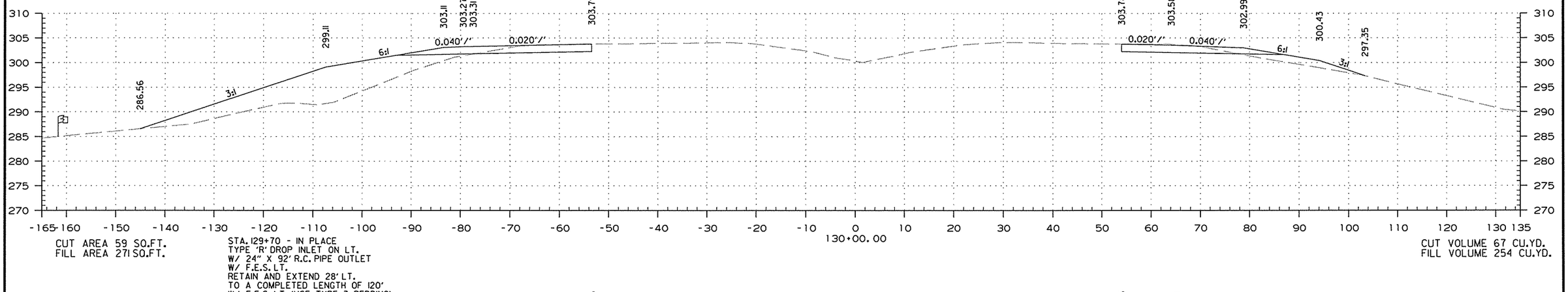
I-430
STA. 126+00.00 TO STA. 128+00.00

3/2/2015

R061437.DGN

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.		061437	344	372

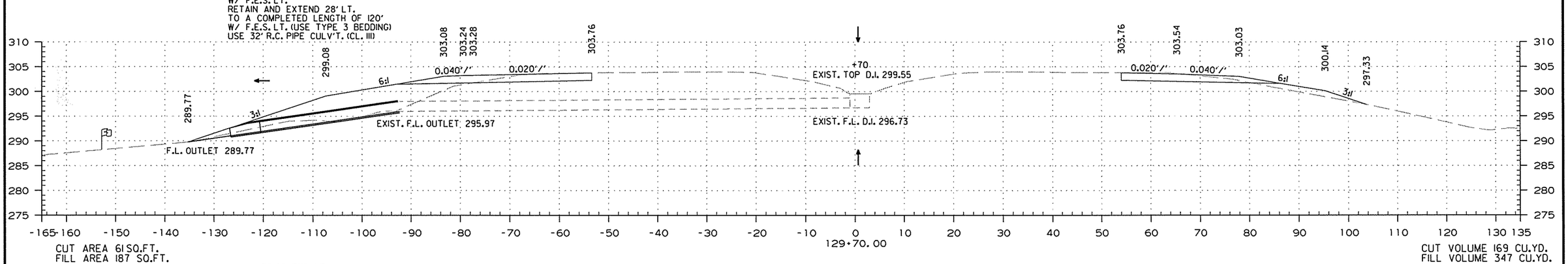
(2) CROSS SECTIONS



CUT AREA 59 SQ.FT.
FILL AREA 271 SQ.FT.

STA. 129+70 - IN PLACE
TYPE 'R' DROP INLET ON LT.
W/ 24" X 92' R.C. PIPE OUTLET
W/ F.E.S. LT.
RETAIN AND EXTEND 28' LT.
TO A COMPLETED LENGTH OF 120'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 32' R.C. PIPE CULV'T. (CL. III)

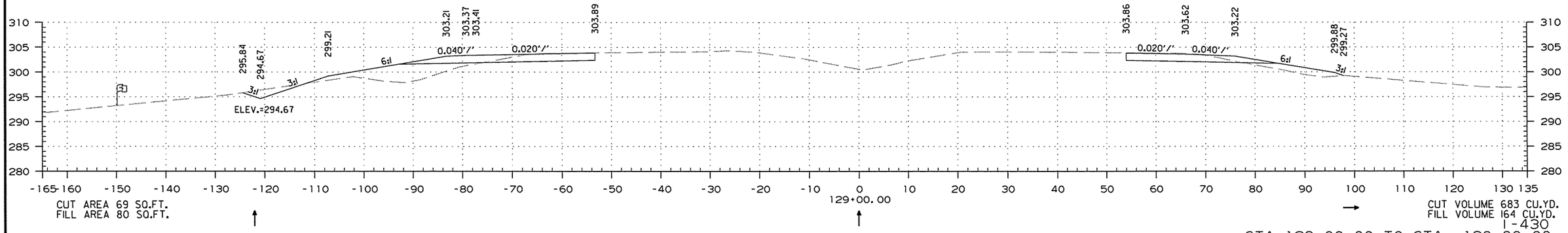
CUT VOLUME 67 CU.YD.
FILL VOLUME 254 CU.YD.



CUT AREA 61 SQ.FT.
FILL AREA 187 SQ.FT.

CUT VOLUME 169 CU.YD.
FILL VOLUME 347 CU.YD.

+30.00 END LT.
DITCH GRADE (-0.89%)
ELEV. 294.40



CUT AREA 69 SQ.FT.
FILL AREA 80 SQ.FT.

CUT VOLUME 683 CU.YD.
FILL VOLUME 164 CU.YD.

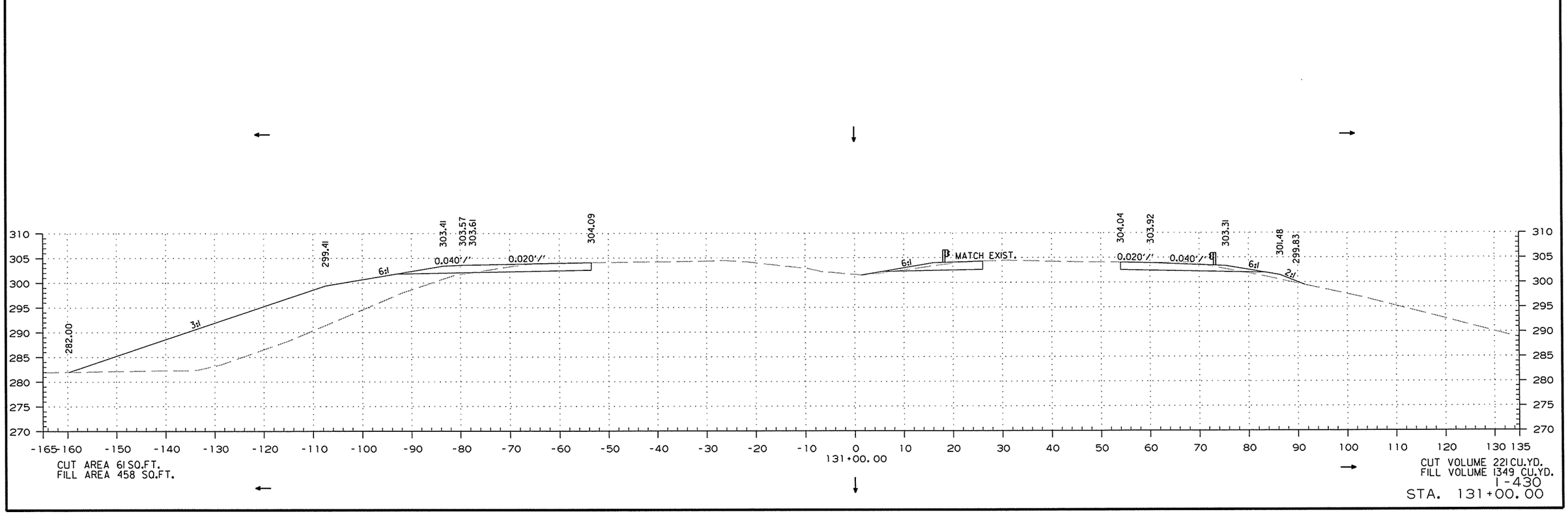
I-430
STA. 129+00.00 TO STA. 130+00.00

3/2/2015

R061437.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.		061437	345	372

(2) CROSS SECTIONS

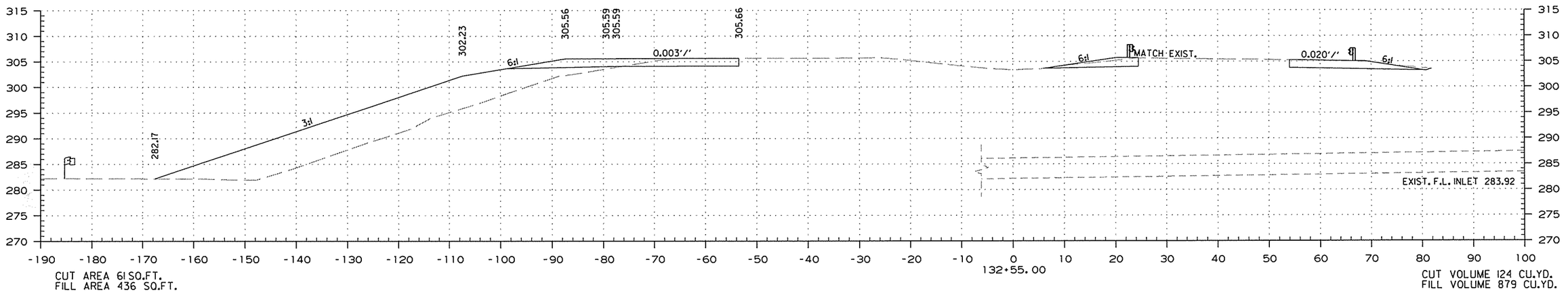


3/2/2015

R061437.DGN

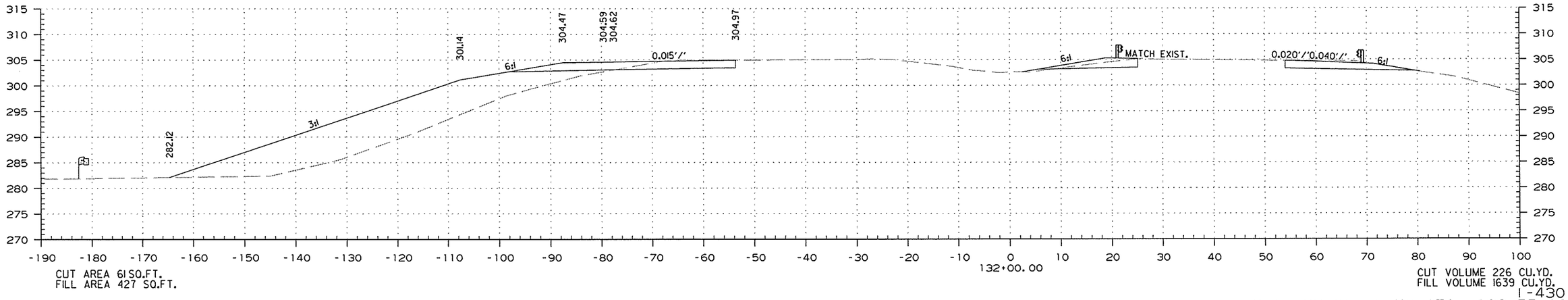
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	346	372

(2) CROSS SECTIONS



CUT AREA 61 SQ.FT.
FILL AREA 436 SQ.FT.

CUT VOLUME 124 CU.YD.
FILL VOLUME 879 CU.YD.



CUT AREA 61 SQ.FT.
FILL AREA 427 SQ.FT.

CUT VOLUME 226 CU.YD.
FILL VOLUME 1639 CU.YD.

I-430

STA. 132+00.00 TO STA. 132+55.00

3/2/2015

R061437.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.		061437	347	372

(2) CROSS SECTIONS

CUT AREA 29 SQ.FT.
FILL AREA 675 SQ.FT.

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

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

CUT AREA 64 SQ.FT.
FILL AREA 492 SQ.FT.

BRIDGE END
135+51.30

SLOPE INTERCEPT
135+02.89

SLOPE INTERCEPT
134+20.14

BRIDGE END
133+44.84

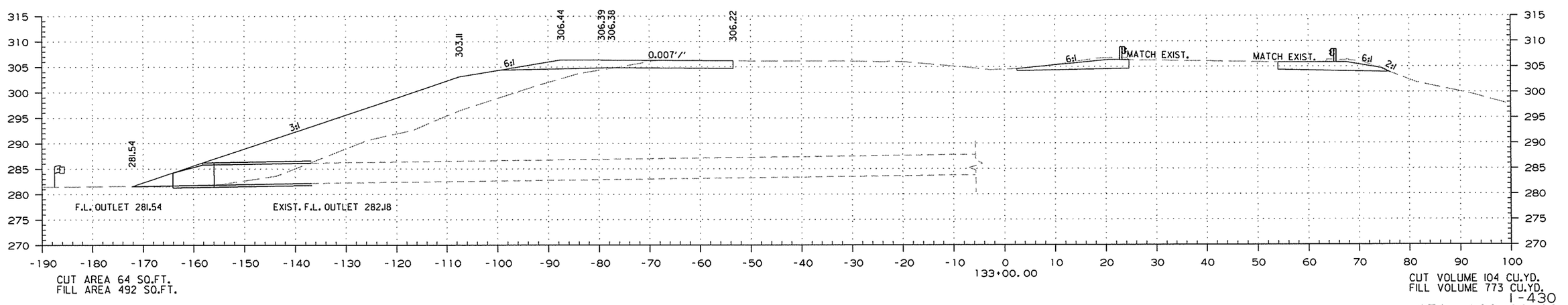
CUT VOLUME 26 CU.YD.
FILL VOLUME 605 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 89 CU.YD.
FILL VOLUME 686 CU.YD.

CUT VOLUME 106 CU.YD.
FILL VOLUME 817 CU.YD.

STA. 132+55 - IN PLACE
48" X 314' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
ON 30° LT. FWD. SKEW
RETAIN AND EXTEND
22' LT. TO A COMPLETED LENGTH OF 338'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 26' R.C. PIPE CULV'T. (CL. III)
Q50= 40 cfs; D.A.= 29 Ac.



CUT AREA 64 SQ.FT.
FILL AREA 492 SQ.FT.

CUT VOLUME 104 CU.YD.
FILL VOLUME 773 CU.YD.

I-430
STA. 133+00.00

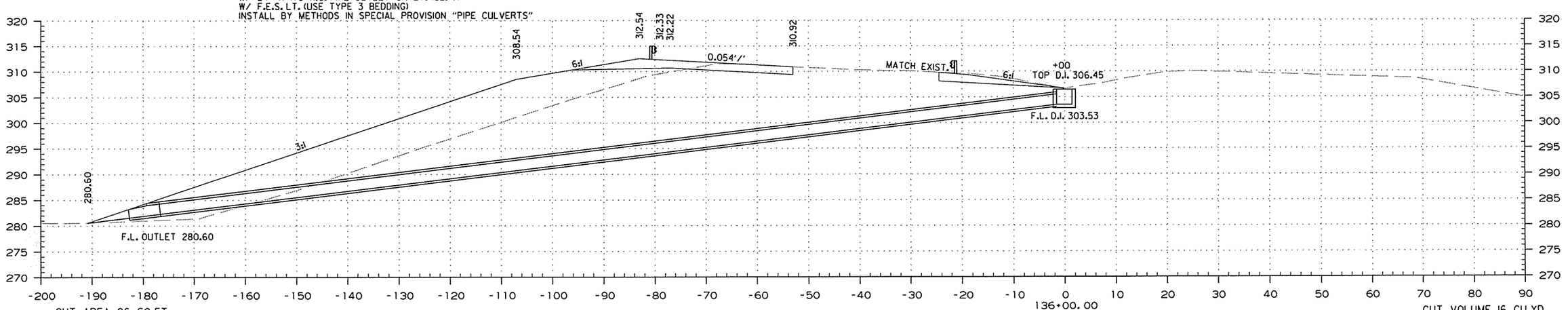
3/2/2015

R061437.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.		061437	348	372

(2) CROSS SECTIONS

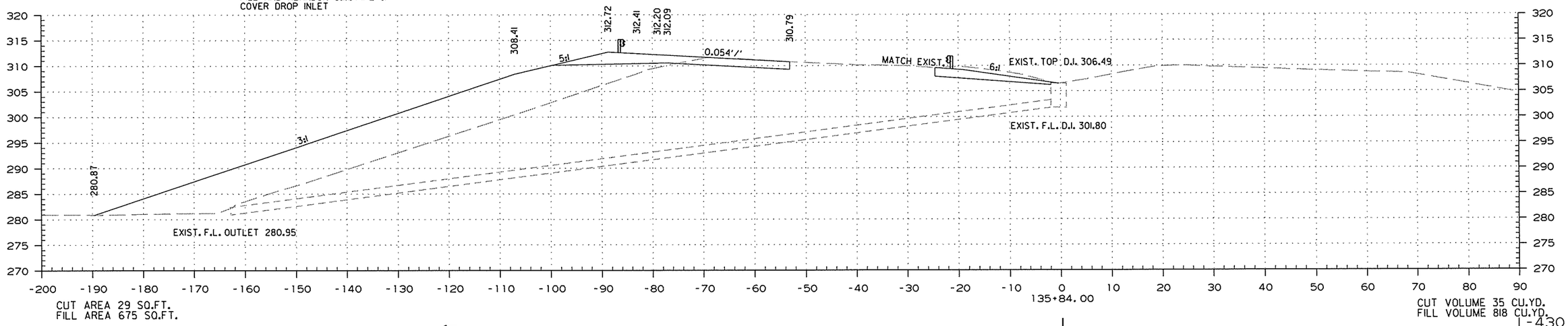
STA. 136+00 - CONSTRUCT
TYPE 'RM' DROP INLET IN MEDIAN
4'-0" X 3'-0" X H = 2'-11"
W/ 24" X 176' R.C. PIPE OUTLET ON LT. (CL. V)
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
INSTALL BY METHODS IN SPECIAL PROVISION "PIPE CULVERTS"



CUT AREA 26 SQ.FT.
FILL AREA 645 SQ.FT.

CUT VOLUME 16 CU.YD.
FILL VOLUME 391 CU.YD.

STA. 135+84 - IN PLACE
TYPE 'R' DROP INLET IN MEDIAN
W/ 18" X 160' C.M. PIPE OUTLET
W/ SPILLWAY OUTLET LT.
FILL AND ABANDON C.M. PIPE &
COVER DROP INLET



CUT AREA 29 SQ.FT.
FILL AREA 675 SQ.FT.

CUT VOLUME 35 CU.YD.
FILL VOLUME 818 CU.YD.

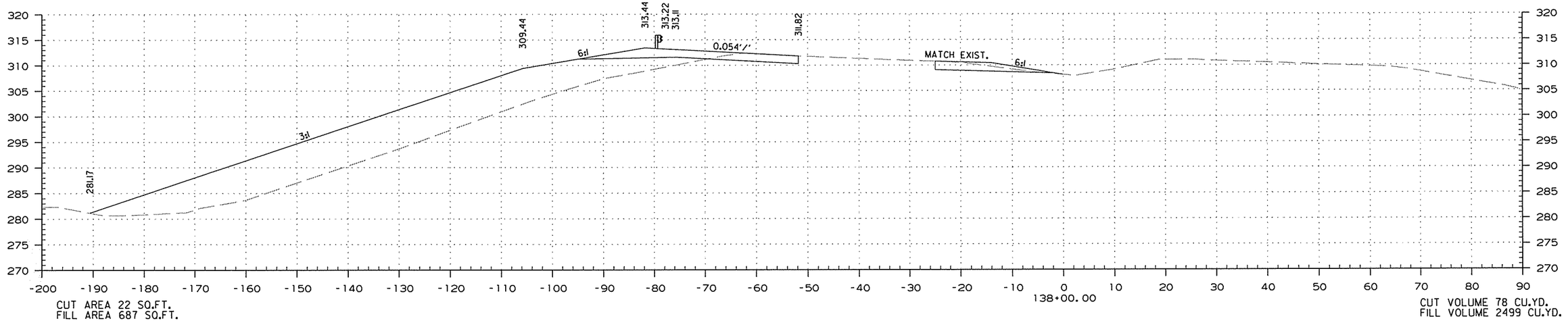
3/2/2015

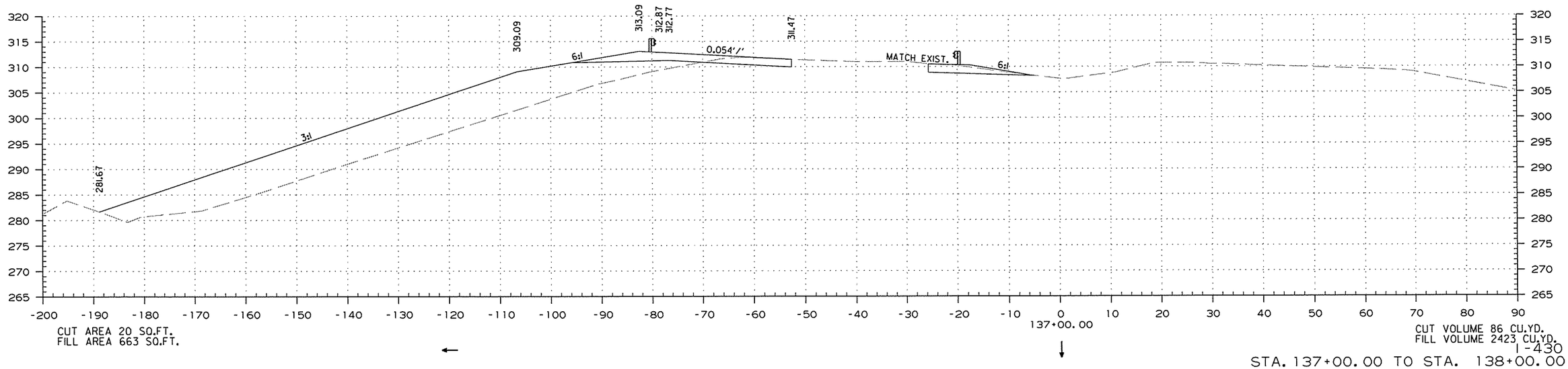
R061437.DGN

STA. 135+84.00 TO STA. 136+00.00

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.		061437	349	372

(2) CROSS SECTIONS





I-430

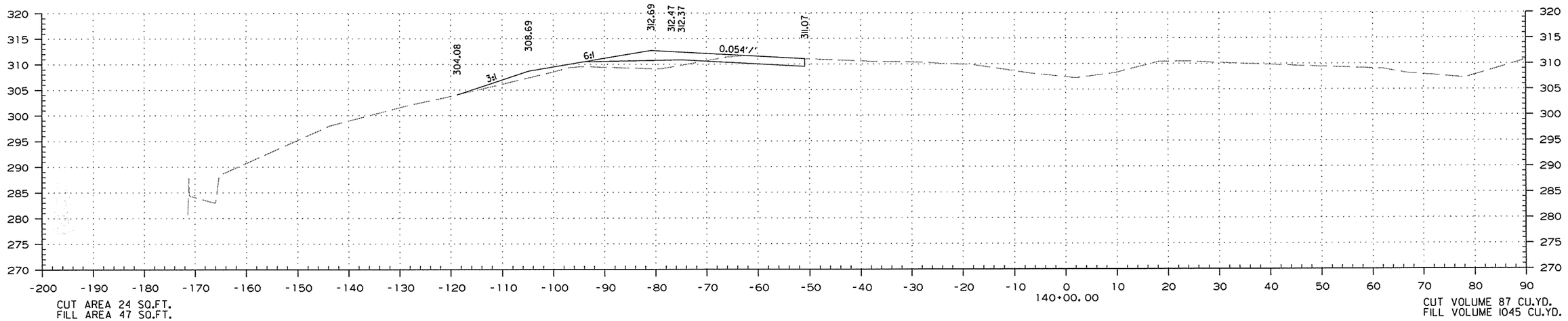
STA. 137+00.00 TO STA. 138+00.00

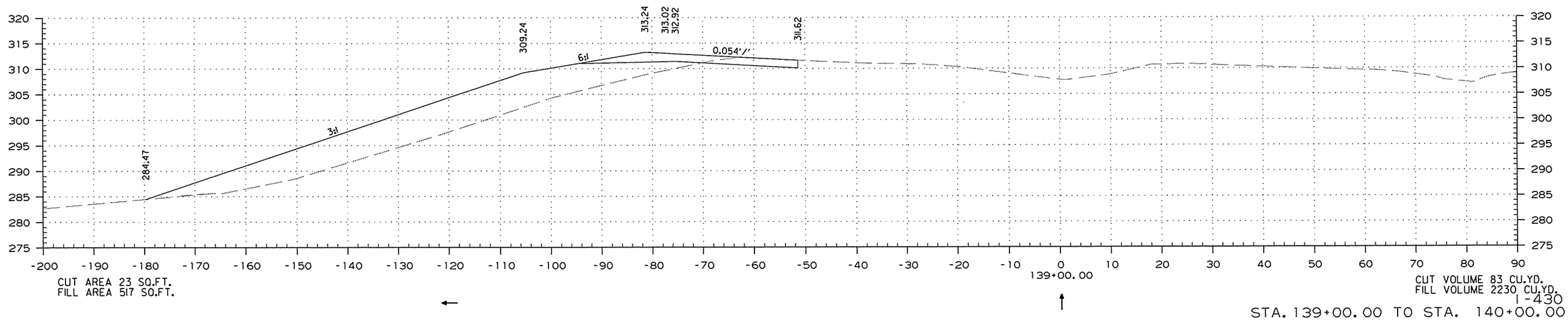
3/2/2015

R061437.DGN

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.		061437	350	372

(2) CROSS SECTIONS





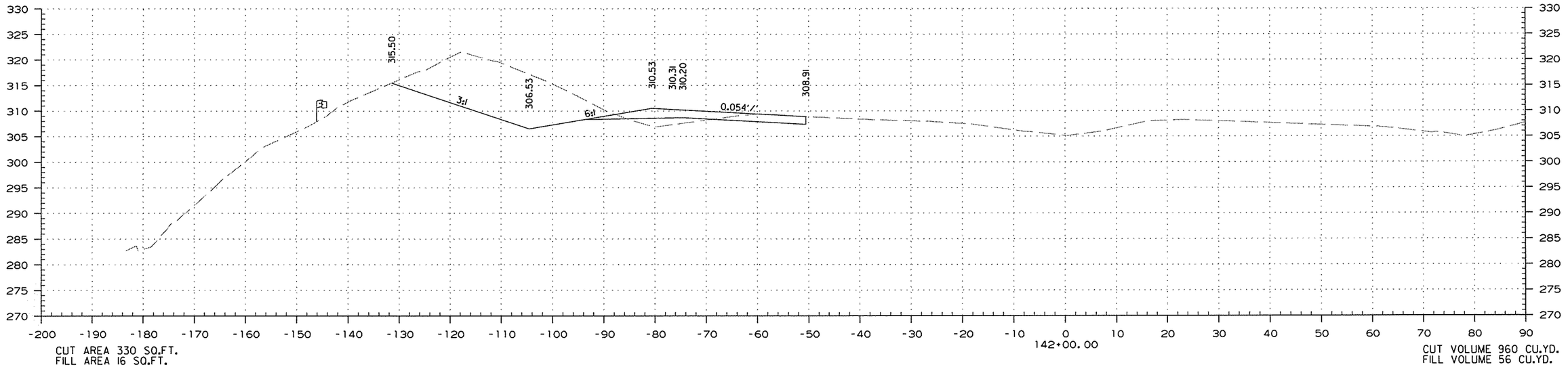
3/2/2015

R061437.DGN

STA. 139+00.00 TO STA. 140+00.00

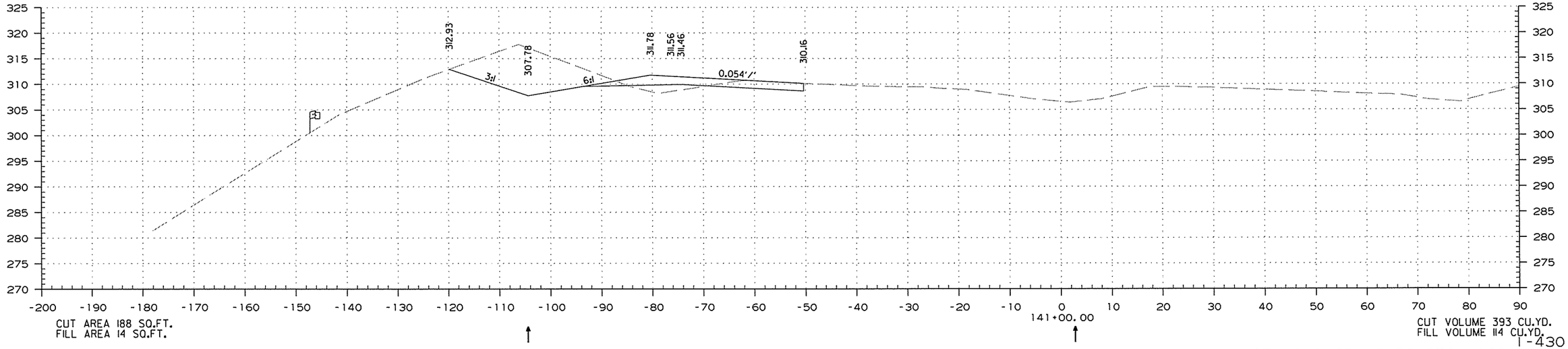
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	351	372

(2) CROSS SECTIONS



CUT AREA 330 SQ.FT.
FILL AREA 16 SQ.FT.

CUT VOLUME 960 CU.YD.
FILL VOLUME 56 CU.YD.



CUT AREA 188 SQ.FT.
FILL AREA 14 SQ.FT.

CUT VOLUME 393 CU.YD.
FILL VOLUME 114 CU.YD.

3/2/2015

R061437.DGN

STA. 141+00.00 TO STA. 142+00.00

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.		061437	352	372

(2) CROSS SECTIONS

CUT AREA 36 SQ.FT.
FILL AREA 138 SQ.FT.

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

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

CUT AREA 213 SQ.FT.
FILL AREA 21SQ.FT.

BRIDGE END
148+57.38

SLOPE INTERCEPT
147+60.41

SLOPE INTERCEPT
145+62.87

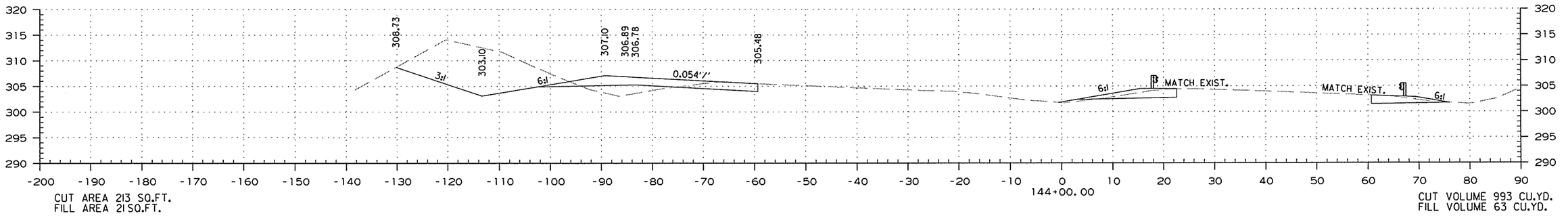
BRIDGE END
145+23.40

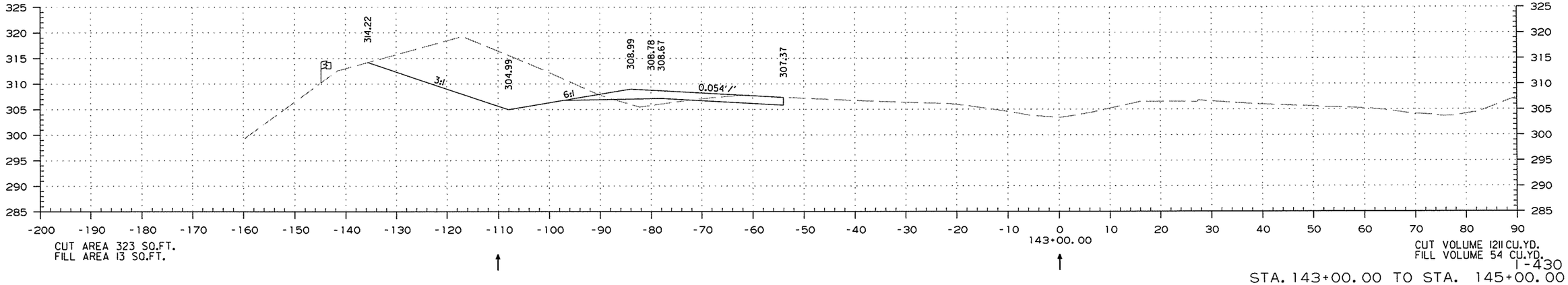
CUT VOLUME 65 CU.YD.
FILL VOLUME 248 CU.YD.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

CUT VOLUME 156 CU.YD.
FILL VOLUME 15 CU.YD.

CUT VOLUME 973 CU.YD.
FILL VOLUME 96 CU.YD.





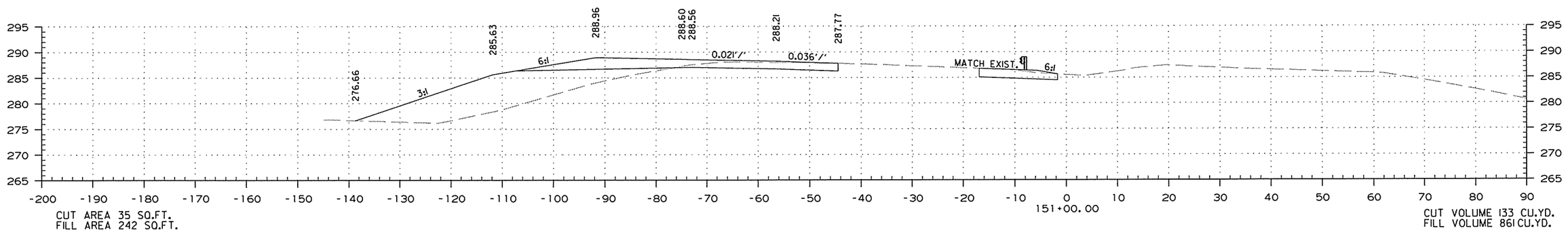
3/2/2015

R061437.DGN

STA. 143+00.00 TO STA. 145+00.00

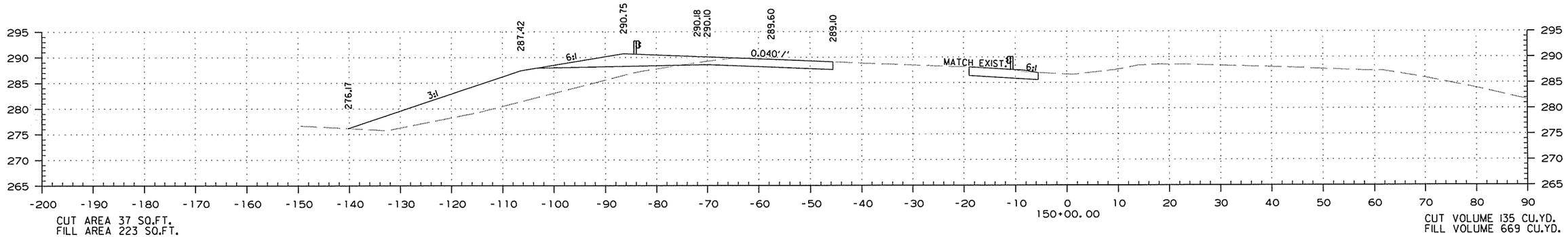
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	353	372

(2) CROSS SECTIONS



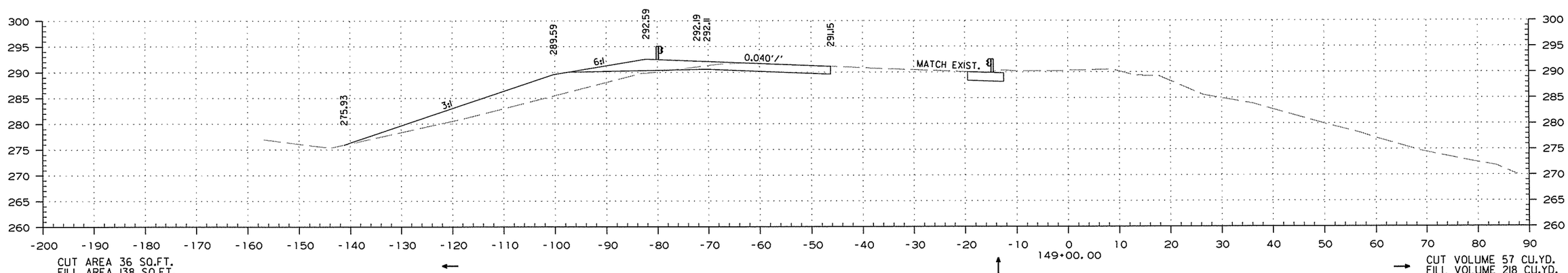
CUT AREA 35 SQ.FT.
FILL AREA 242 SQ.FT.

CUT VOLUME 133 CU.YD.
FILL VOLUME 861 CU.YD.



CUT AREA 37 SQ.FT.
FILL AREA 223 SQ.FT.

CUT VOLUME 135 CU.YD.
FILL VOLUME 669 CU.YD.



CUT AREA 36 SQ.FT.
FILL AREA 138 SQ.FT.

CUT VOLUME 57 CU.YD.
FILL VOLUME 218 CU.YD.

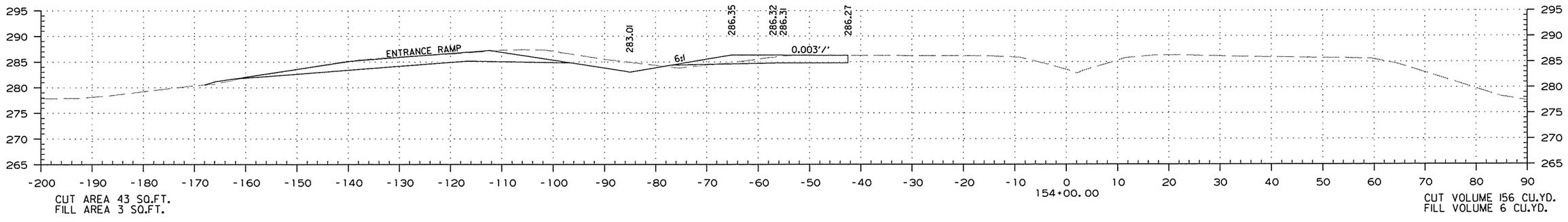
I-430
STA. 149+00.00 TO STA. 151+00.00

3/2/2015

R061437.DGN

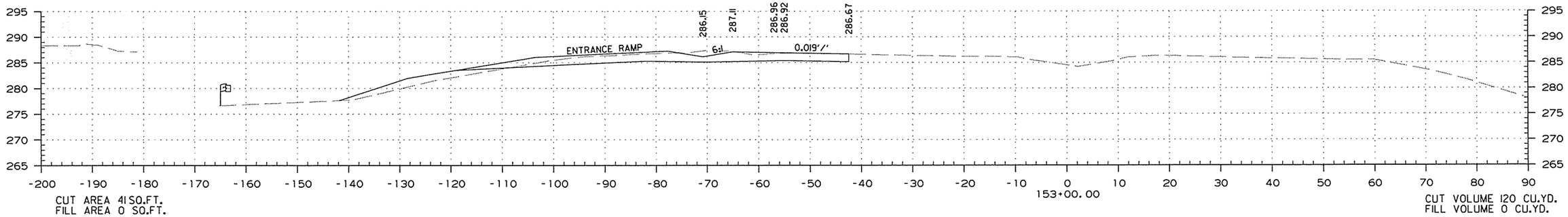
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	354	372

(2) CROSS SECTIONS



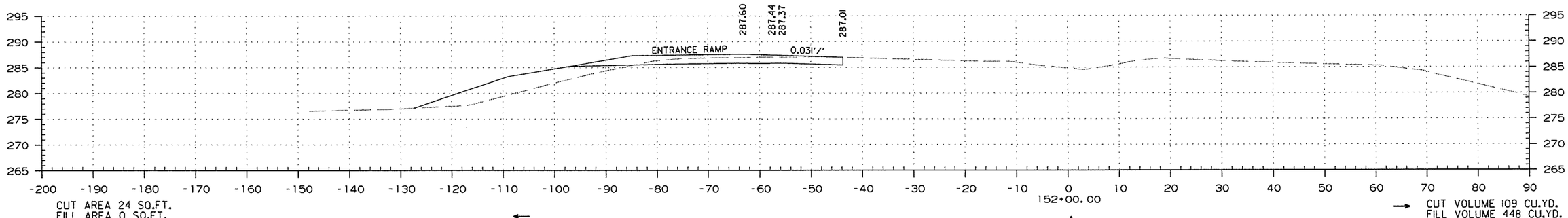
CUT AREA 43 SQ.FT.
FILL AREA 3 SQ.FT.

CUT VOLUME 156 CU.YD.
FILL VOLUME 6 CU.YD.



CUT AREA 41 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 120 CU.YD.
FILL VOLUME 0 CU.YD.



CUT AREA 24 SQ.FT.
FILL AREA 0 SQ.FT.

CUT VOLUME 109 CU.YD.
FILL VOLUME 448 CU.YD.

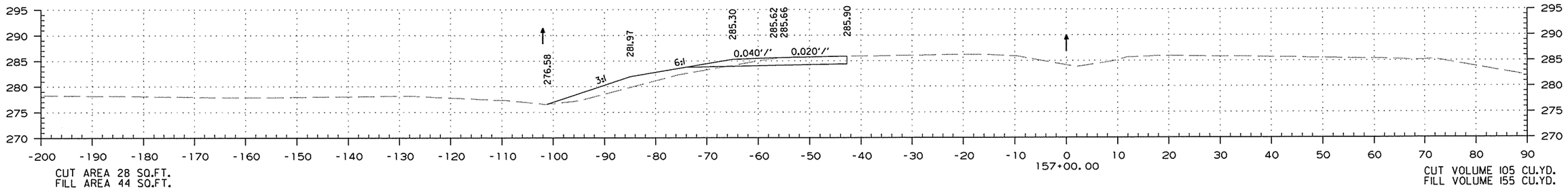
I-430
STA. 152+00.00 TO STA. 154+00.00

3/2/2015

R061437.DGN

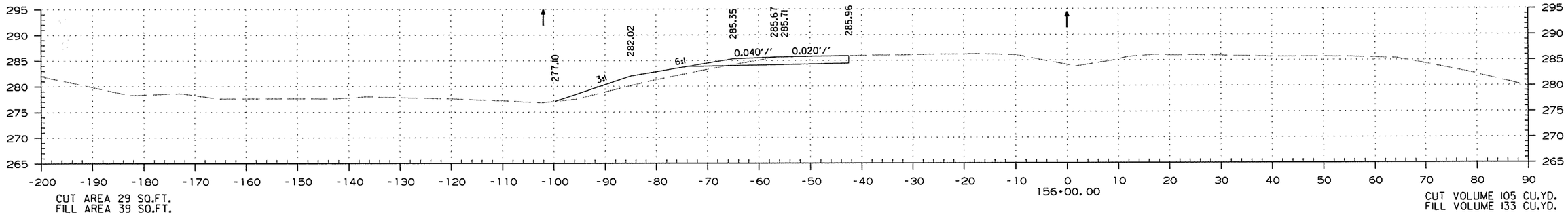
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	355	372

(2) CROSS SECTIONS



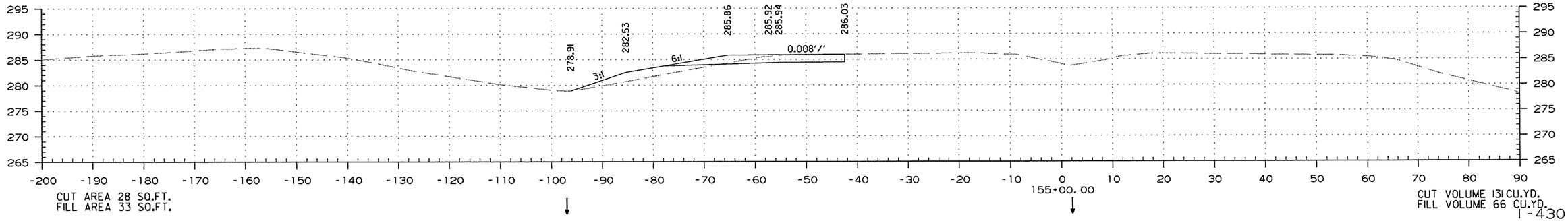
CUT AREA 28 SQ.FT.
FILL AREA 44 SQ.FT.

CUT VOLUME 105 CU.YD.
FILL VOLUME 155 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 39 SQ.FT.

CUT VOLUME 105 CU.YD.
FILL VOLUME 133 CU.YD.



CUT AREA 28 SQ.FT.
FILL AREA 33 SQ.FT.

CUT VOLUME 131 CU.YD.
FILL VOLUME 66 CU.YD.

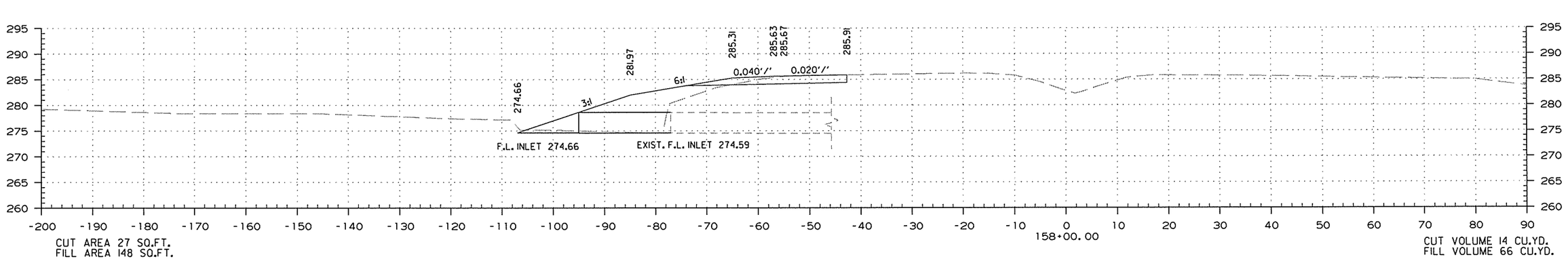
3/2/2015

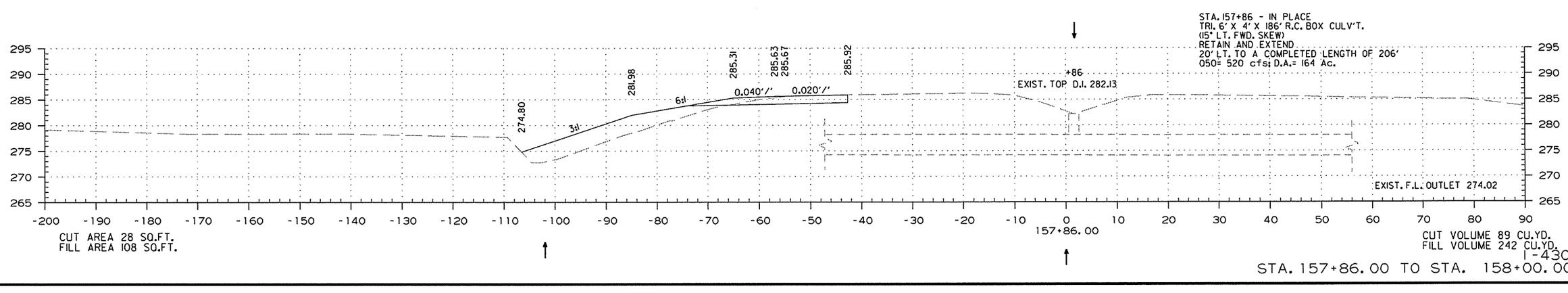
R061437.DGN

STA. 155+00.00 TO STA. 157+00.00

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.		061437	356	372

(2) CROSS SECTIONS





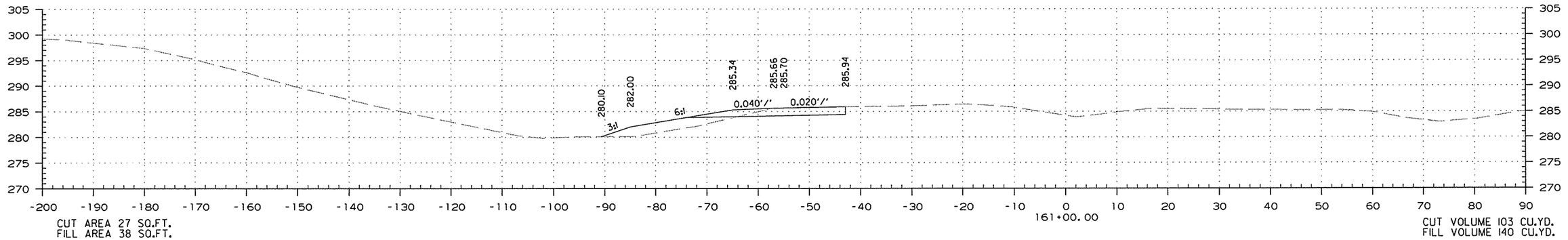
3/2/2015

R061437.DGN

STA. 157+86.00 TO STA. 158+00.00

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.		061437	357	372

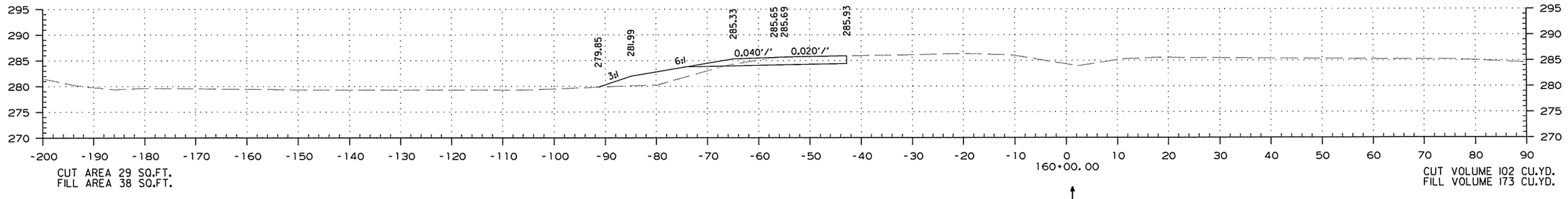
(2) CROSS SECTIONS



CUT AREA 27 SQ.FT.
FILL AREA 38 SQ.FT.

161+00.00

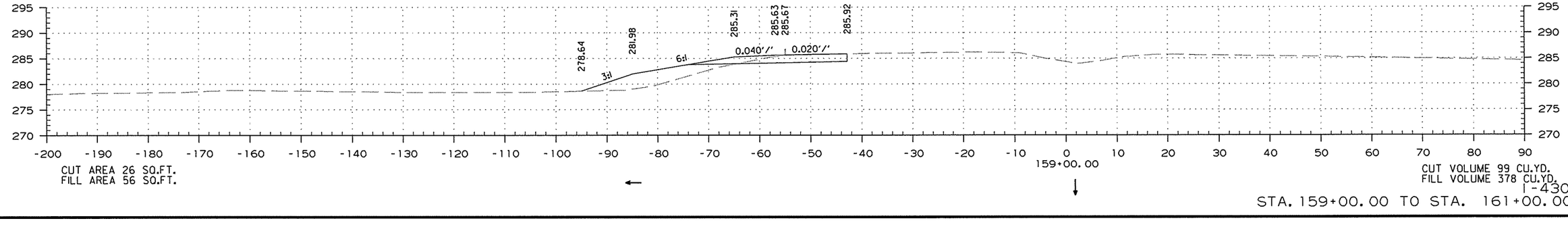
CUT VOLUME 103 CU.YD.
FILL VOLUME 140 CU.YD.



CUT AREA 29 SQ.FT.
FILL AREA 38 SQ.FT.

160+00.00

CUT VOLUME 102 CU.YD.
FILL VOLUME 173 CU.YD.



CUT AREA 26 SQ.FT.
FILL AREA 56 SQ.FT.

159+00.00

CUT VOLUME 99 CU.YD.
FILL VOLUME 378 CU.YD.

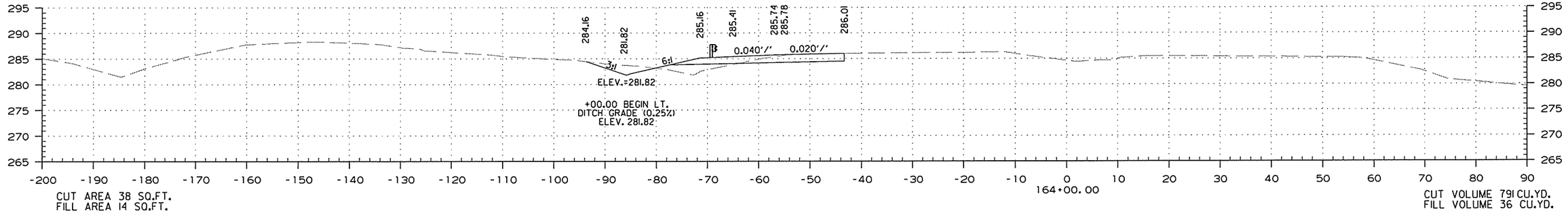
3/2/2015

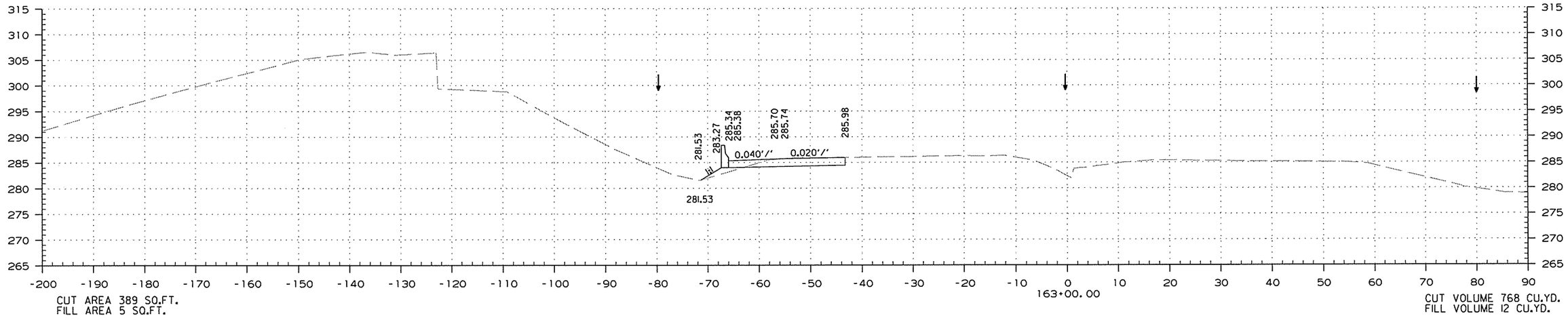
R061437.DGN

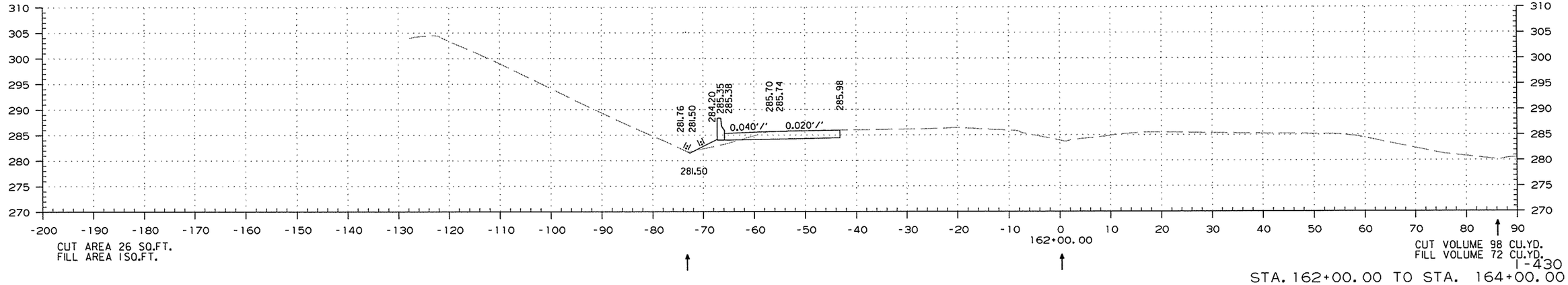
STA. 159+00.00 TO STA. 161+00.00

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.		061437	358	372

(2) CROSS SECTIONS







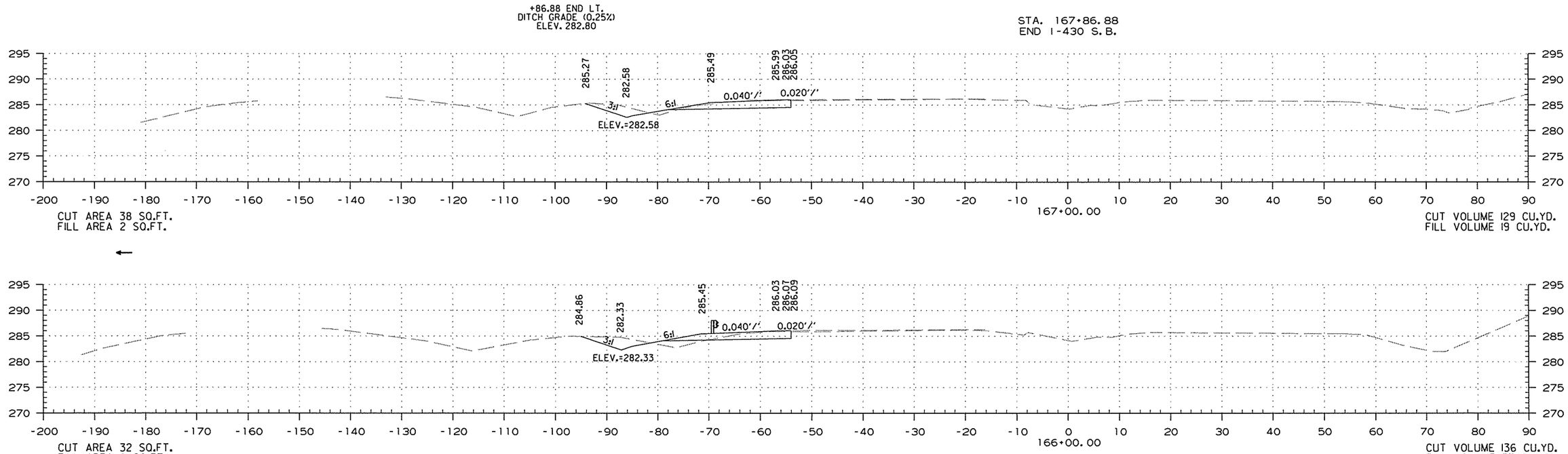
STA. 162+00.00 TO STA. 164+00.00

3/2/2015

R061437.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.		061437	359	372

(2) CROSS SECTIONS



3/2/2015

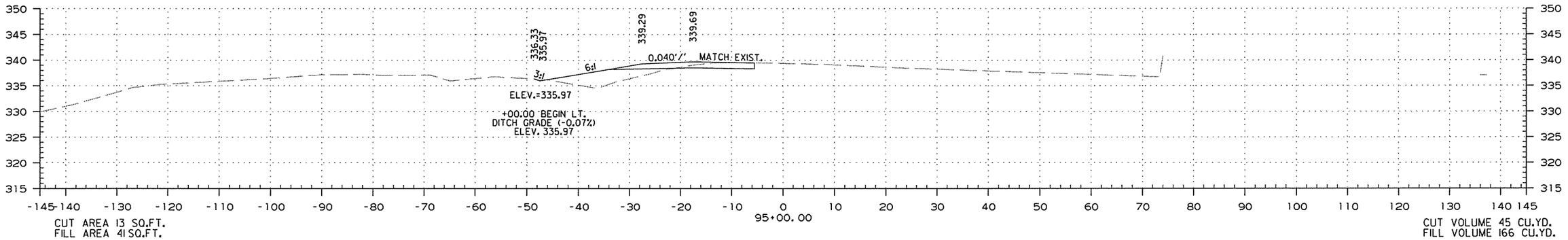
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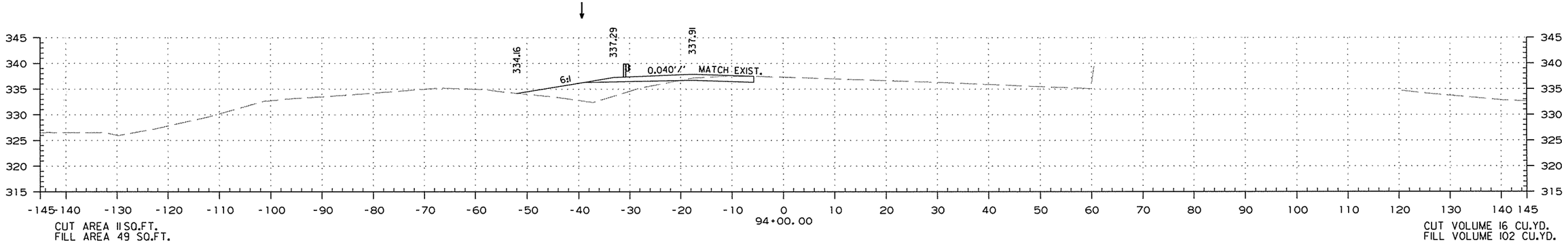
I-430

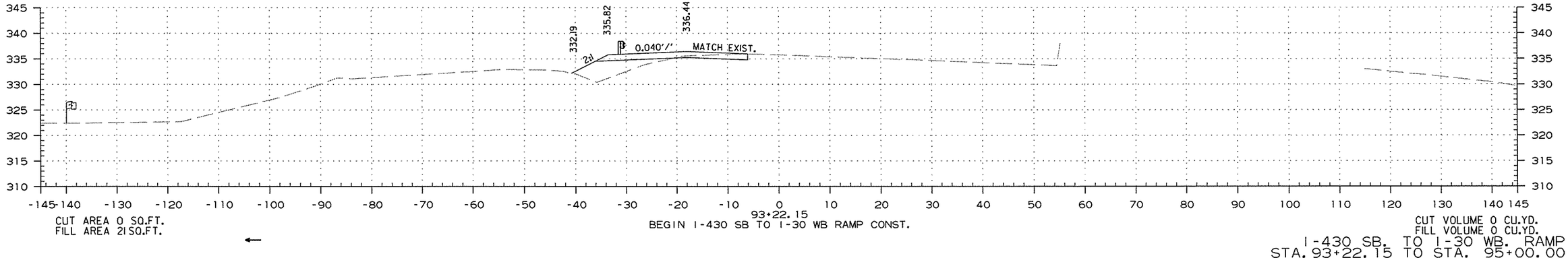
STA. 165+00.00 TO STA. 167+86.88

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	360	372

(2) CROSS SECTIONS







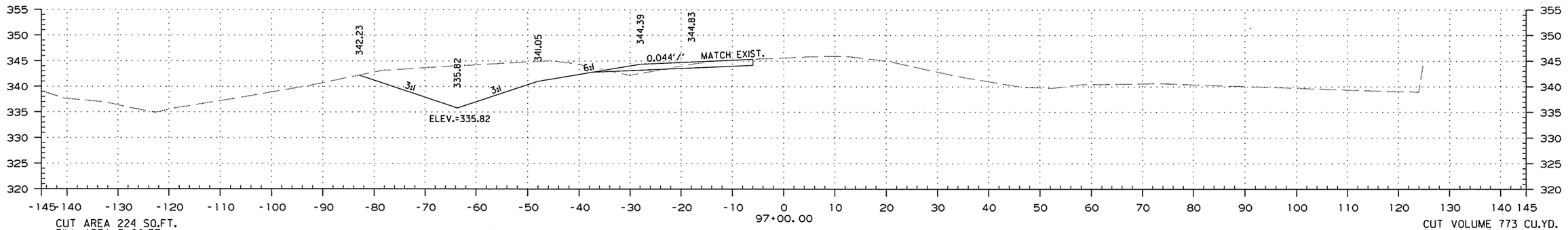
I-430 SB. TO I-30 WB. RAMP
STA. 93+22.15 TO STA. 95+00.00

3/2/2015

R061437.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.		061437	361	372

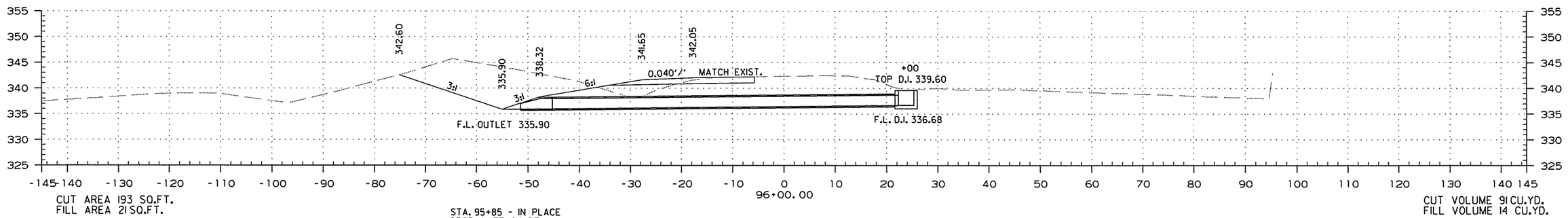
(2) CROSS SECTIONS



CUT AREA 224 SQ.FT.
FILL AREA 5 SQ.FT.

CUT VOLUME 773 CU.YD.
FILL VOLUME 49 CU.YD.

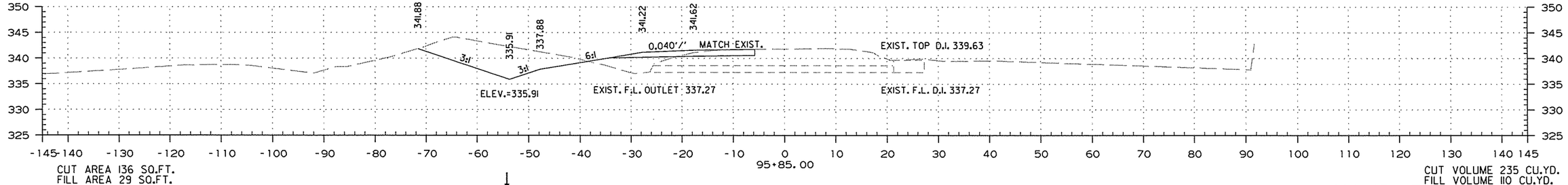
STA. 96+00 - CONSTRUCT
TYPE 'RM' DROP INLET 23.82' RT.
W/ 24" X 70' R.C. PIPE OUTLET (CL. V)
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
INSTALL BY METHODS IN SPECIAL PROVISION "PIPE CULVERTS"



CUT AREA 193 SQ.FT.
FILL AREA 21 SQ.FT.

CUT VOLUME 91 CU.YD.
FILL VOLUME 14 CU.YD.

STA. 95+85 - IN PLACE
DROP INLET 24' RT.
W/ 16" X 47' R.C. PIPE OUTLET
W/ F.E.S. LT.
PLUG AND ABANDON



CUT AREA 136 SQ.FT.
FILL AREA 29 SQ.FT.

CUT VOLUME 235 CU.YD.
FILL VOLUME 110 CU.YD.

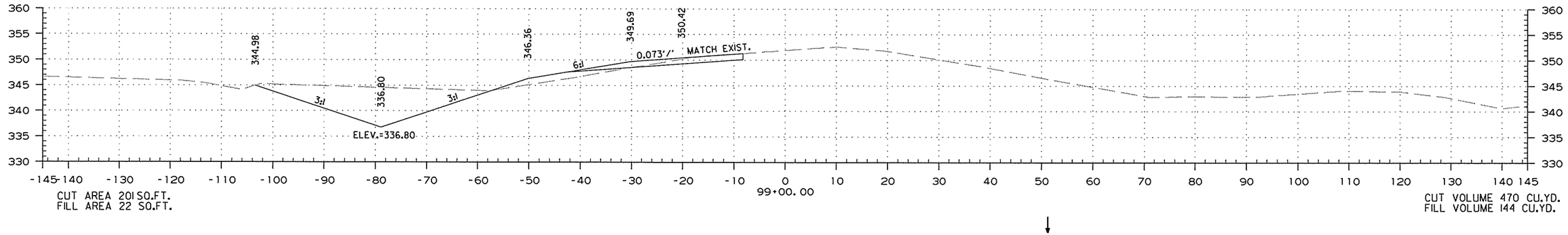
I-430 SB. TO I-30 WB. RAMP
STA. 95+85.00 TO STA. 97+00.00

3/2/2015

R061437.DGN

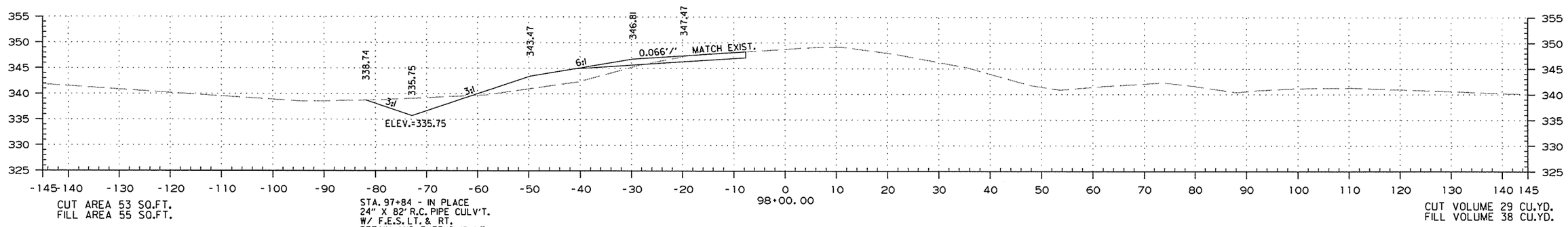
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	362	372

(2) CROSS SECTIONS



CUT AREA 201 SQ.FT.
FILL AREA 22 SQ.FT.

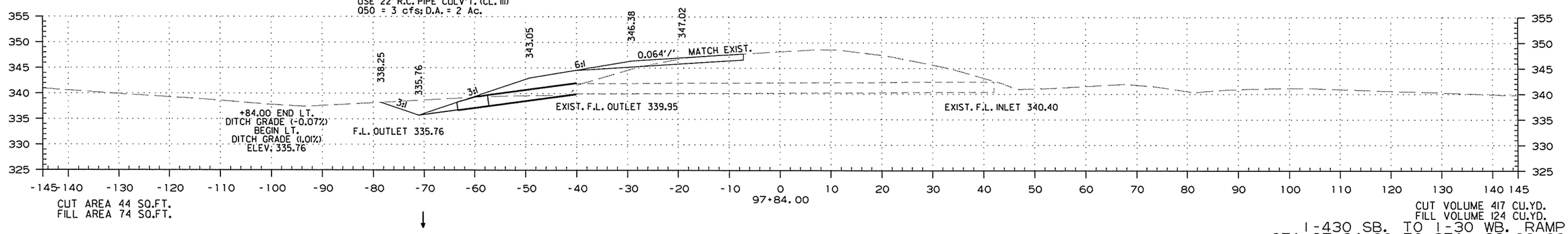
CUT VOLUME 470 CU.YD.
FILL VOLUME 144 CU.YD.



CUT AREA 53 SQ.FT.
FILL AREA 55 SQ.FT.

STA. 97+84 - IN PLACE
24" X 82' R.C. PIPE CULV'T.
W/ F.E.S. LT. & RT.
RETAIN AND EXTEND 18' LT.
TO A COMPLETED LENGTH OF 100'
W/ F.E.S. LT. (USE TYPE 3 BEDDING)
USE 22' R.C. PIPE CULV'T. (CL. III)
Q50 = 3 cfs; D.A. = 2 Ac.

CUT VOLUME 29 CU.YD.
FILL VOLUME 38 CU.YD.



+84.00 END LT.
DITCH GRADE (-0.07%)
BEGIN LT.
DITCH GRADE (1.01%)
ELEV. 335.76

F.L. OUTLET 335.76

CUT AREA 44 SQ.FT.
FILL AREA 74 SQ.FT.

CUT VOLUME 417 CU.YD.
FILL VOLUME 124 CU.YD.

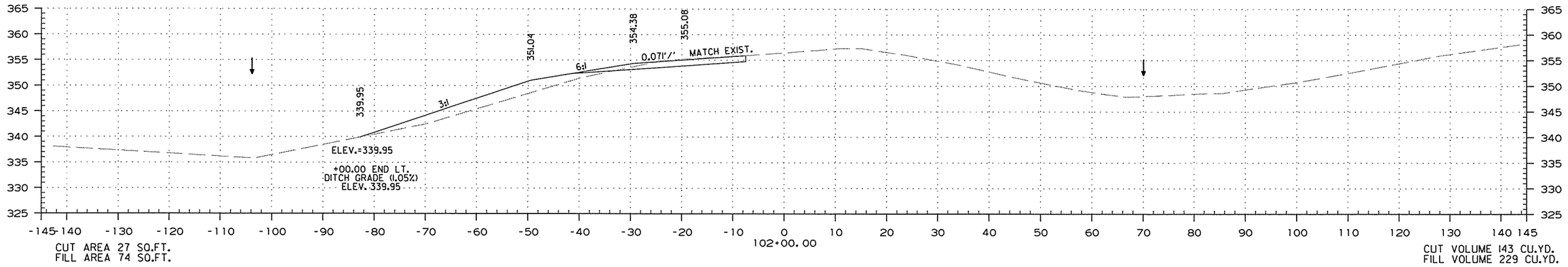
I-430 SB. TO I-30 WB. RAMP
STA. 97+84.00 TO STA. 99+00.00

3/2/2015

R061437.DGN

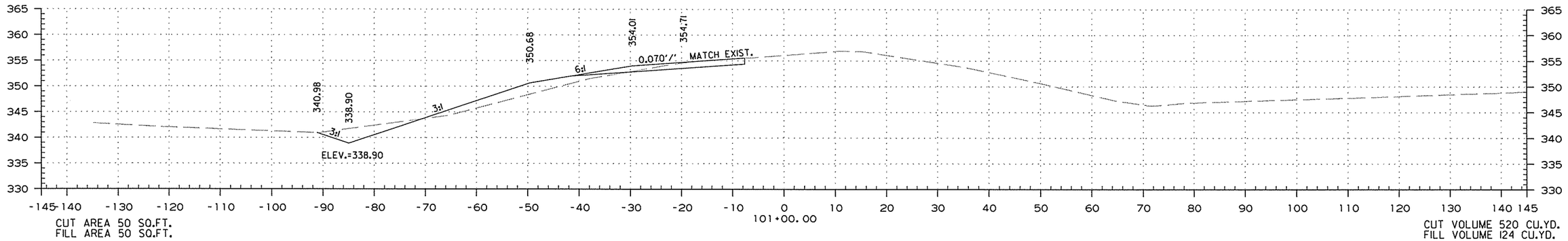
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	363	372

(2) CROSS SECTIONS



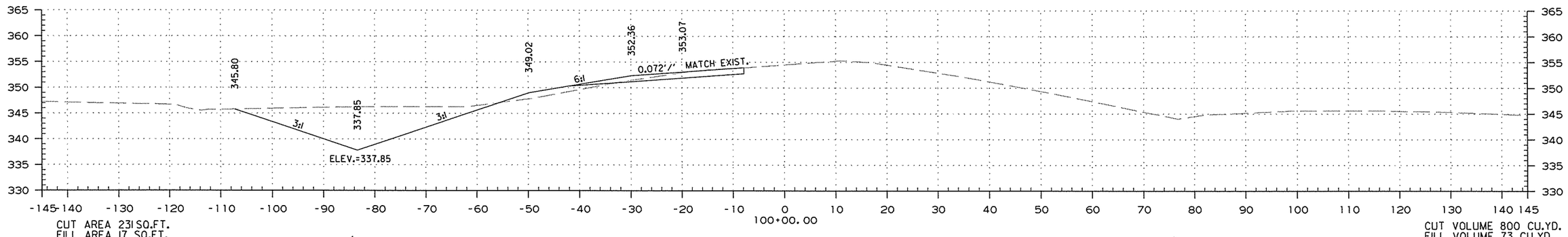
CUT AREA 27 SQ.FT.
FILL AREA 74 SQ.FT.

CUT VOLUME 143 CU.YD.
FILL VOLUME 229 CU.YD.



CUT AREA 50 SQ.FT.
FILL AREA 50 SQ.FT.

CUT VOLUME 520 CU.YD.
FILL VOLUME 124 CU.YD.



CUT AREA 231 SQ.FT.
FILL AREA 17 SQ.FT.

CUT VOLUME 800 CU.YD.
FILL VOLUME 73 CU.YD.

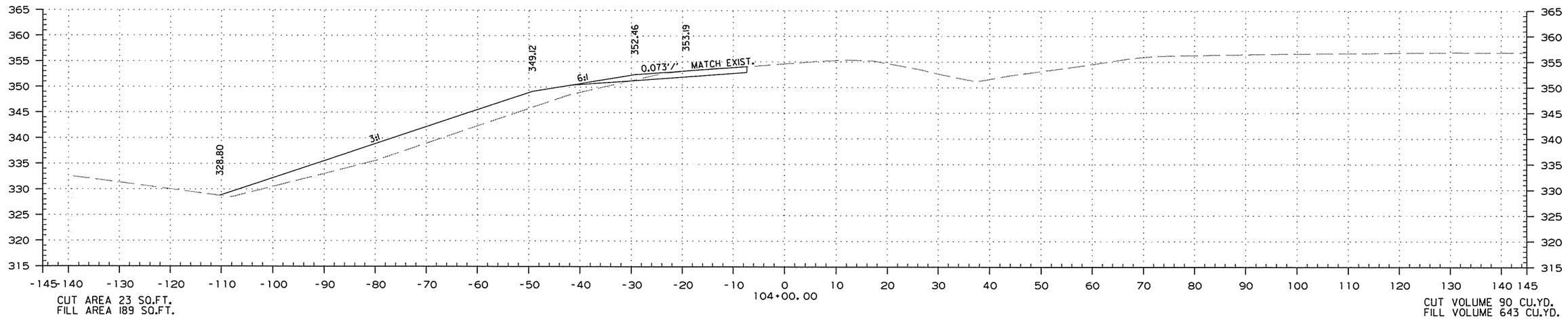
I-430 SB. TO I-30 WB. RAMP
STA. 100+00.00 TO STA. 102+00.00

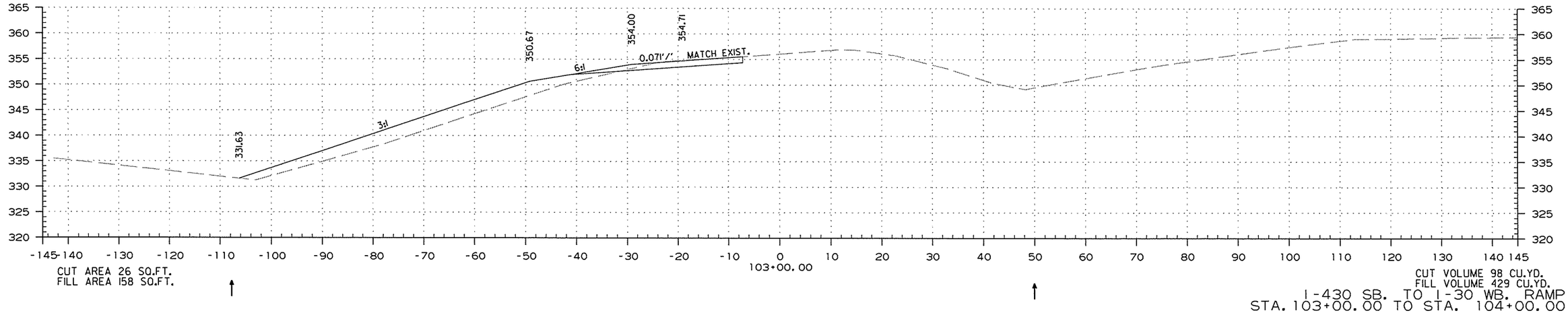
3/2/2015

R061437.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.		061437	364	372

(2) CROSS SECTIONS





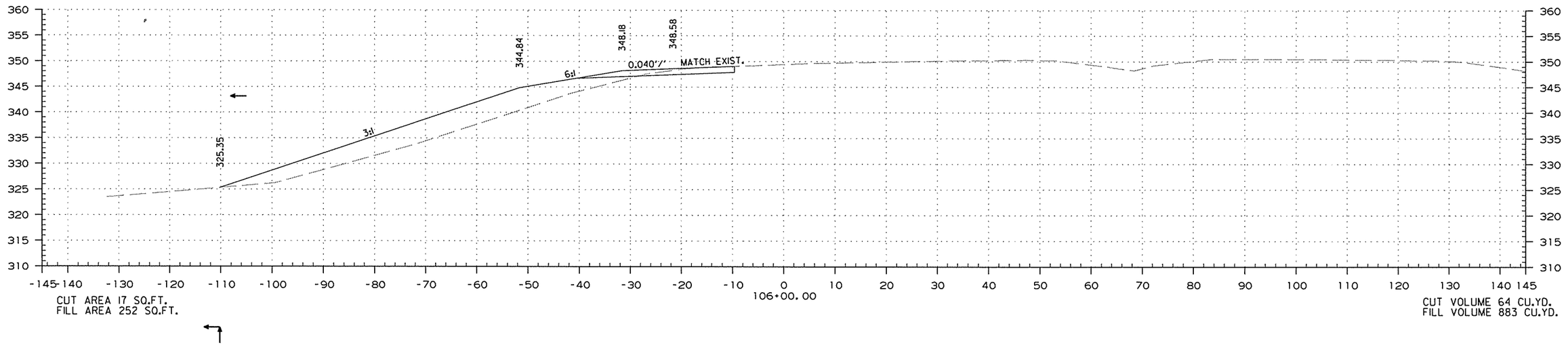
I-430 SB. TO I-30 WB. RAMP
STA. 103+00.00 TO STA. 104+00.00

3/2/2015

R061437.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.		061437	365	372

(2) CROSS SECTIONS



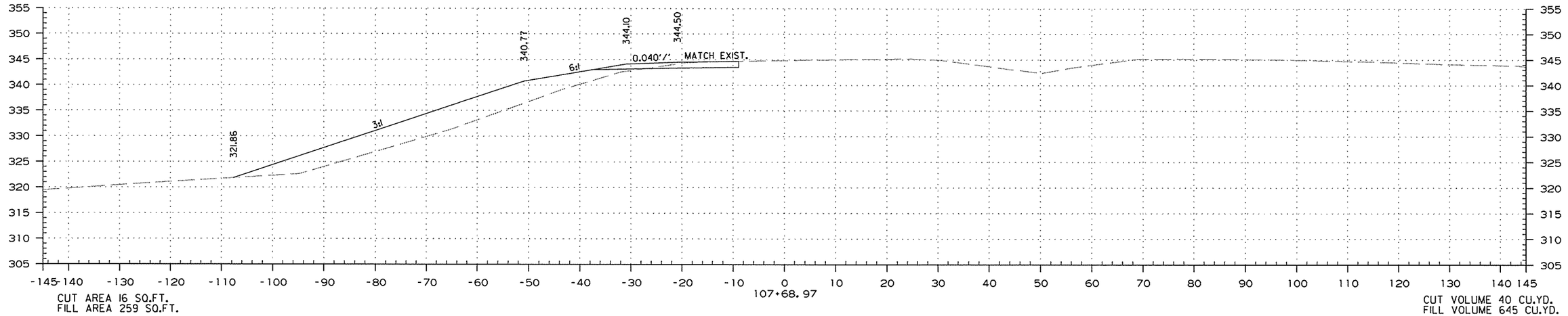
I-430 SB. TO I-30 WB. RAMP
STA. 105+00.00 TO STA. 106+00.00

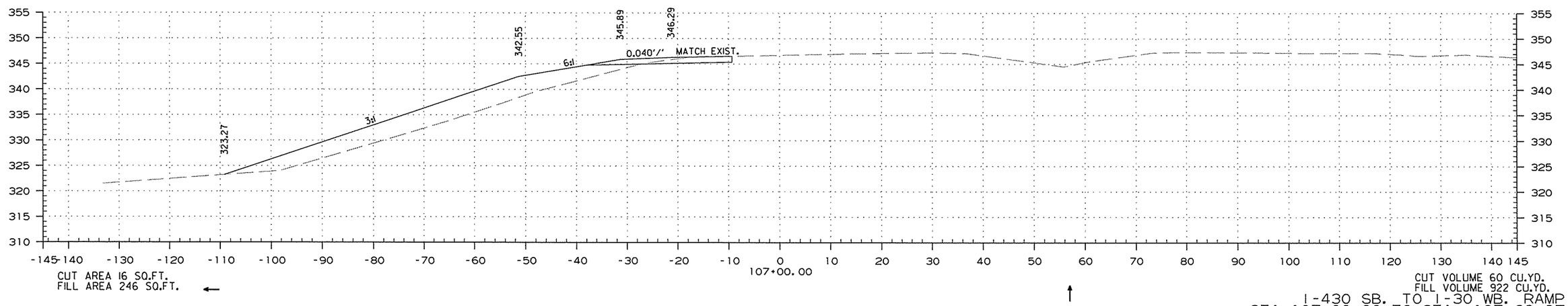
3/2/2015

R061437.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.		061437	366	372

(2) CROSS SECTIONS





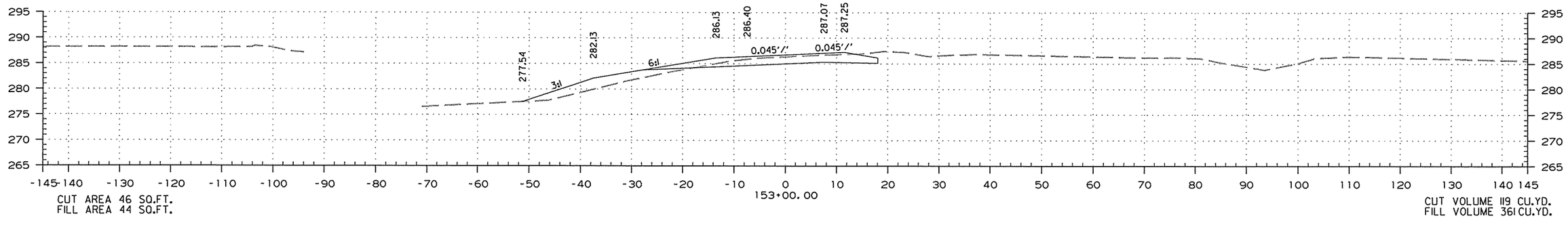
I-430 SB. TO I-30 WB. RAMP
STA. 107+00.00 TO STA. 107+68.97

3/2/2015

R061437.DGN

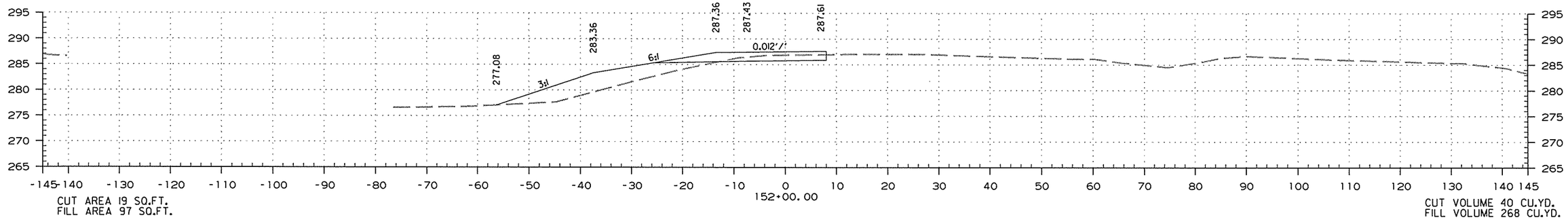
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	367	372

(2) CROSS SECTIONS



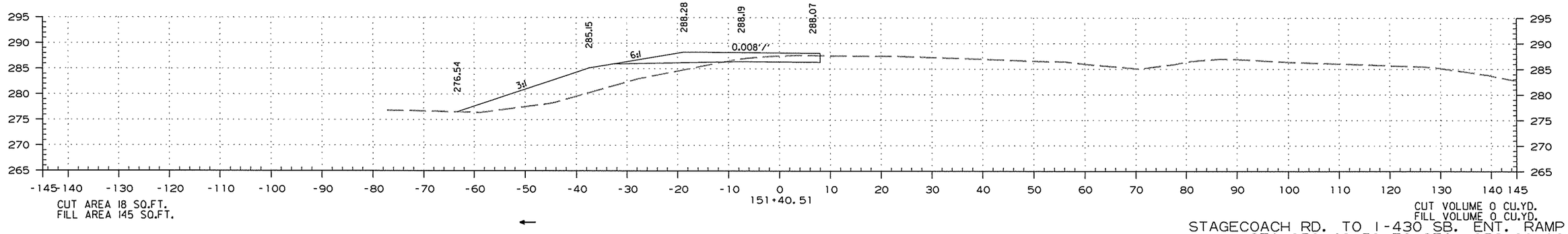
CUT AREA 46 SQ.FT.
FILL AREA 44 SQ.FT.

CUT VOLUME 119 CU.YD.
FILL VOLUME 361 CU.YD.



CUT AREA 19 SQ.FT.
FILL AREA 97 SQ.FT.

CUT VOLUME 40 CU.YD.
FILL VOLUME 268 CU.YD.



CUT AREA 18 SQ.FT.
FILL AREA 145 SQ.FT.

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

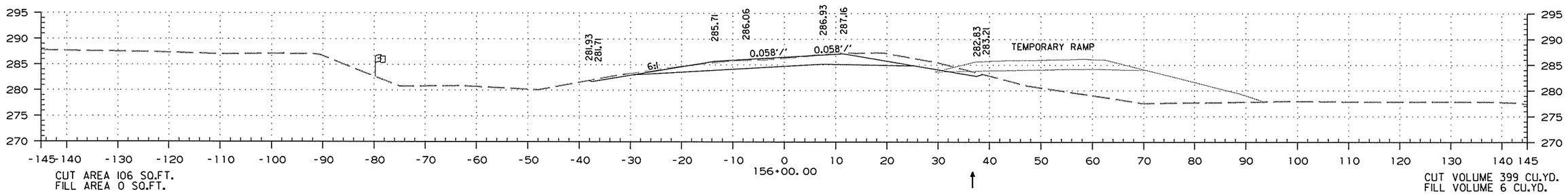
STAGECOACH RD. TO I-430 SB. ENT. RAMP
STA. 151+40.51 TO STA. 153+00.00

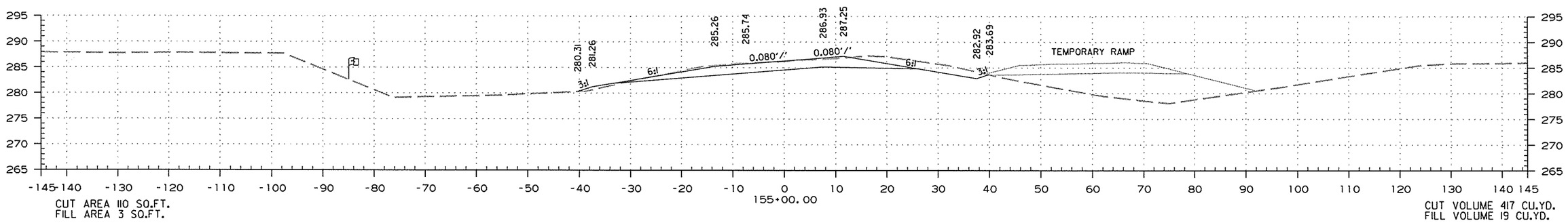
3/2/2015

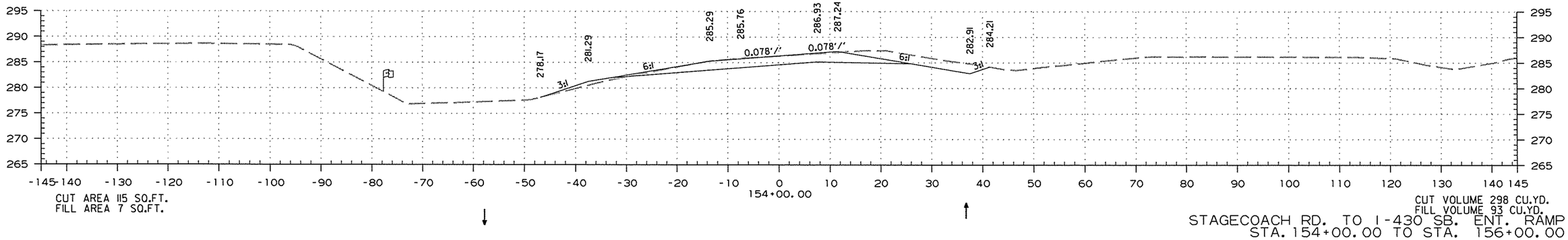
R061437.DGN

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.		061437	368	372

(2) CROSS SECTIONS







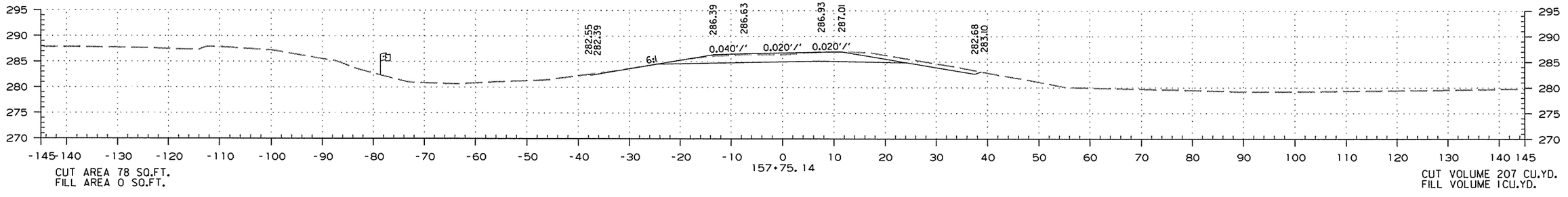
STAGECOACH RD. TO I-430 SB. ENT. RAMP
STA. 154+00.00 TO STA. 156+00.00

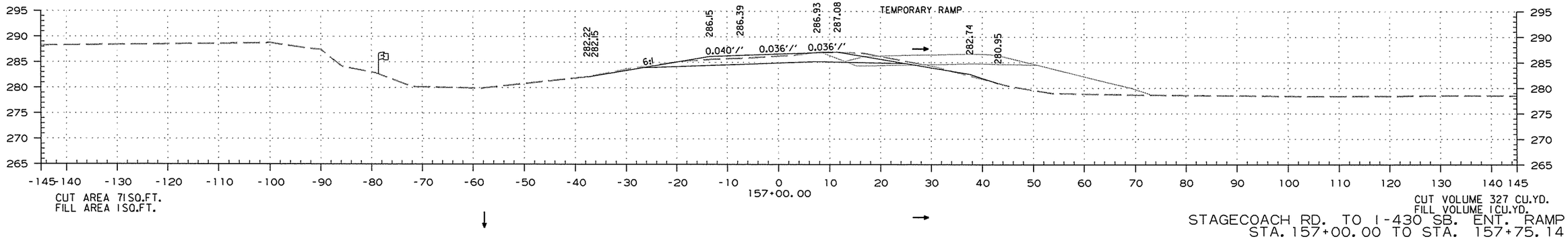
3/2/2015

R061437.DGN

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.		061437	369	372

(2) CROSS SECTIONS





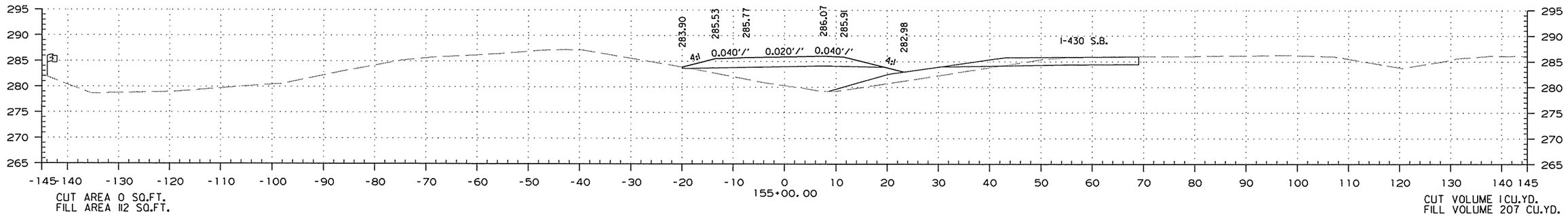
STAGECOACH RD. TO I-430 SB. ENT. RAMP
STA. 157+00.00 TO STA. 157+75.14

3/2/2015

R061437.DGN

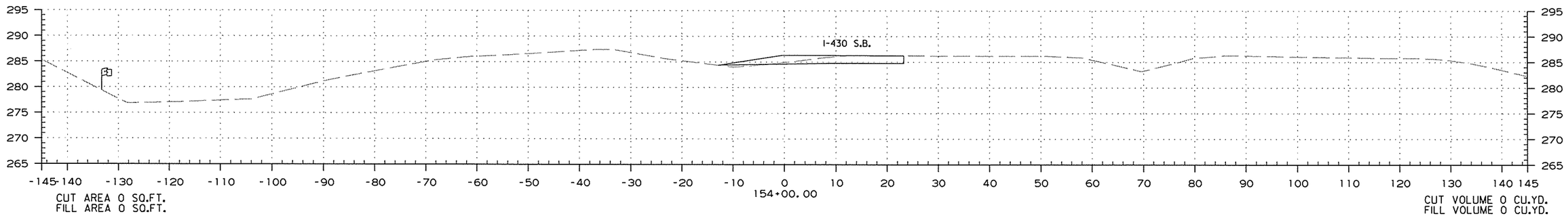
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		061437	370	372

(2) CROSS SECTIONS



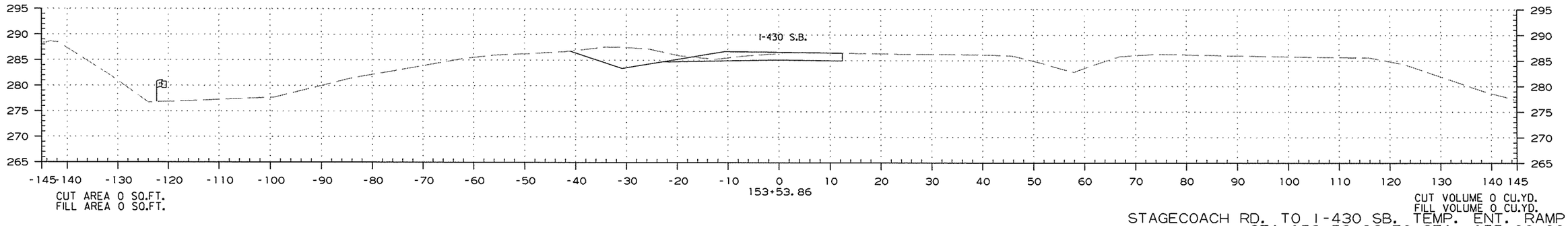
CUT AREA 0 SQ.FT.
FILL AREA 112 SQ.FT.

CUT VOLUME 1 CU.YD.
FILL VOLUME 207 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.



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

CUT VOLUME 0 CU.YD.
FILL VOLUME 0 CU.YD.

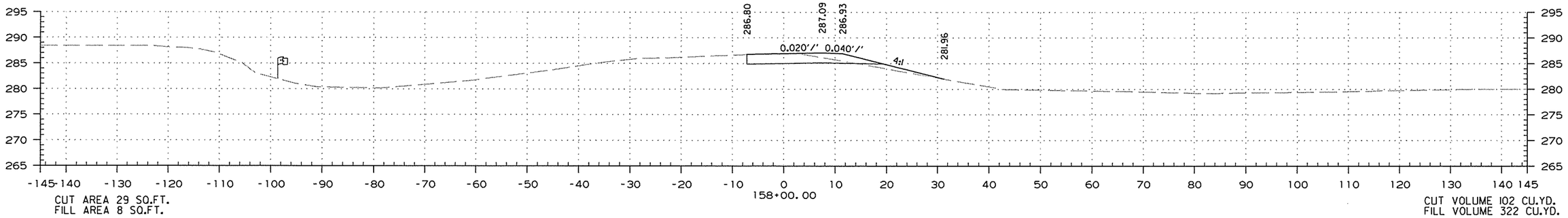
STAGECOACH RD. TO I-430 SB. TEMP. ENT. RAMP
STA. 153+53.86 TO STA. 155+00.00

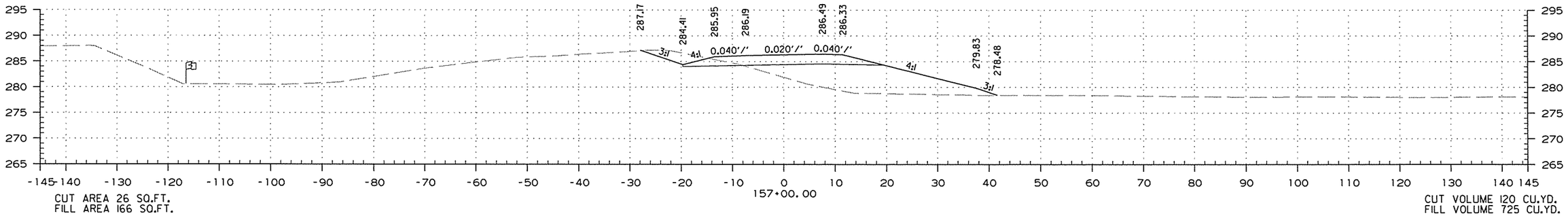
3/2/2015

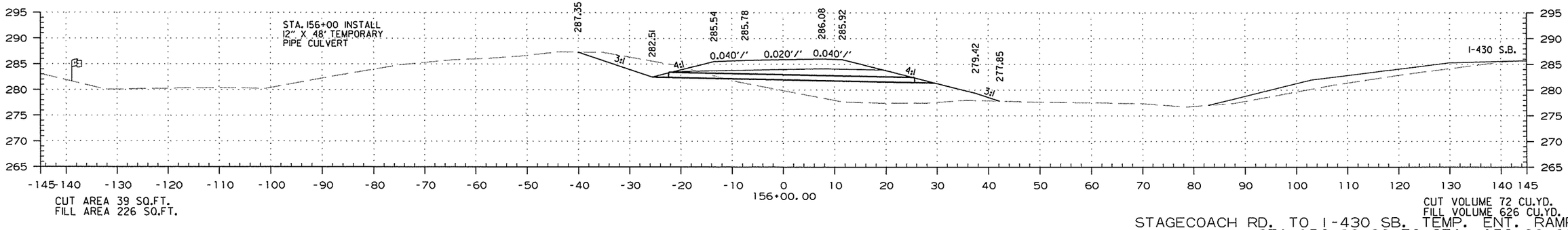
R061437.DGN

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.		061437	371	372

(2) CROSS SECTIONS







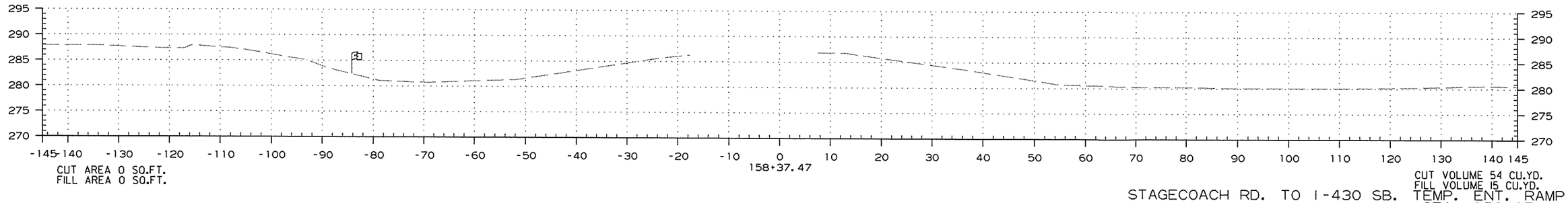
STAGECOACH RD. TO I-430 SB. TEMP. ENT. RAMP
STA. 156+00.00 TO STA. 158+00.00

3/2/2015

R061437.DGN

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.		061437	372	372

(2) CROSS SECTIONS



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

CUT VOLUME 54 CU.YD.
FILL VOLUME 15 CU.YD.

STAGECOACH RD. TO I-430 SB. TEMP. ENT. RAMP
STA. 158+37.47

3/2/2015

R061437.DGN