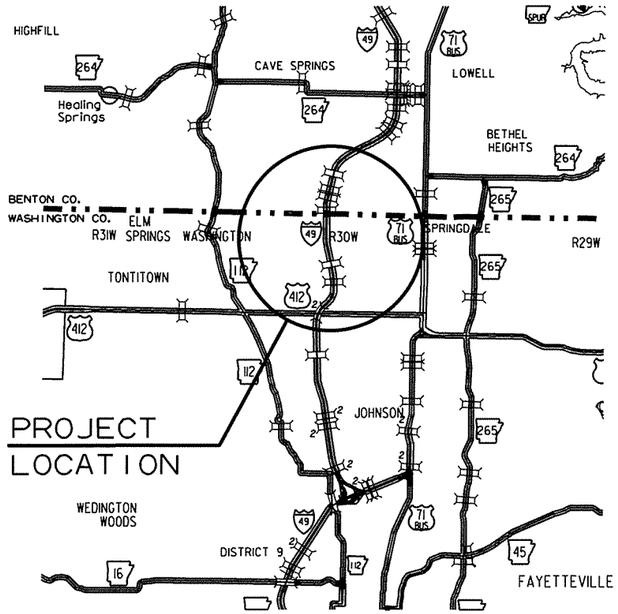


VICINITY MAP

BRIDGE DATA

④ STA. 947+00.29 - BRIDGE END
BRIDGE NO. A5946
288'-0" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
290'-4 5/16" BRIDGE LENGTH
STA. 949+90.65 - BRIDGE END

⑤ STA. 947+24.63 - BRIDGE END
BRIDGE NO. B5946
288'-0" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
290'-4 5/16" BRIDGE LENGTH
STA. 950+14.99 - BRIDGE END

STRUCTURES OVER 20'-0" SPAN
(SHOWN FOR INFORMATION ONLY)

1 STA. 824+37 IN PLACE
BRIDGE X0500
TRIPLE 12' X 7' X 240' R.C.
BOX CULVERT (SPAN 39'-0")
(30° RT. FWD. SKEW)
Q50 = 1458 CFS; D.A. = 1648.9 AC.

2 STA. 920+24 IN PLACE
BRIDGE NO. X0501
TRIPLE 10' X 7' X 408' R.C.
BOX CULVERT (SPAN 32'-11")
(45° RT. FWD. SKEW)
Q50 = 719 CFS; D.A. = 753.5 AC.

3 STA. 938+37 IN PLACE
BRIDGE NO. X0502
TRIPLE 10' X 6' X 223' R.C.
BOX CULVERT (SPAN 32'-11")
Q50 = 1143 CFS; D.A. = 1179.4 AC.

"A FULLY CONTROLLED ACCESS FACILITY"

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

CONSTRUCTION PLANS FOR STATE HIGHWAY

HWY. 412-WAGON WHEEL RD.
(WIDENING) (S)

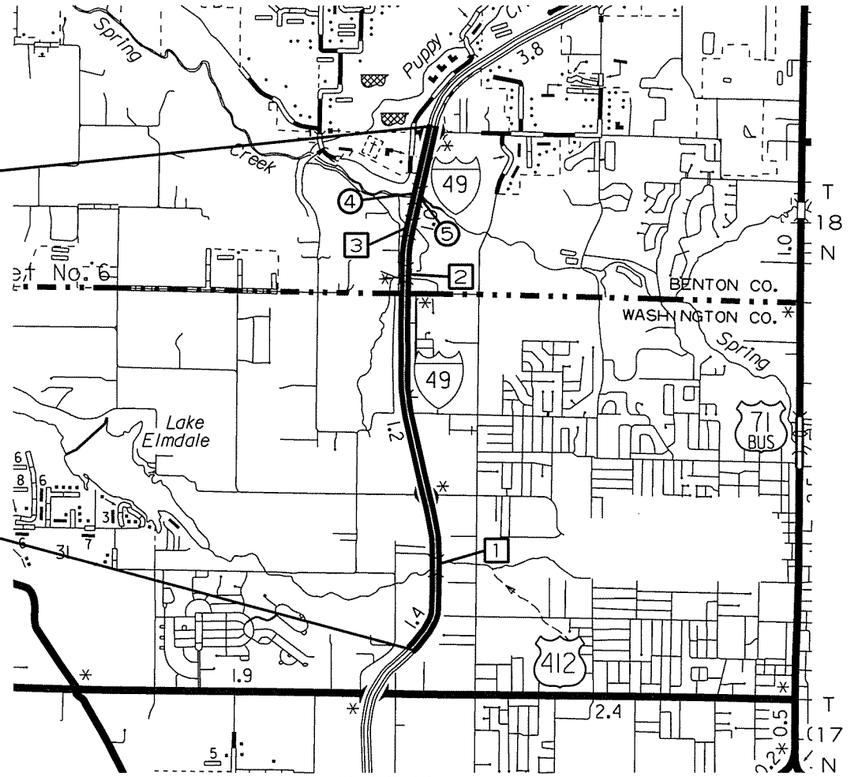
WASHINGTON & BENTON COUNTIES

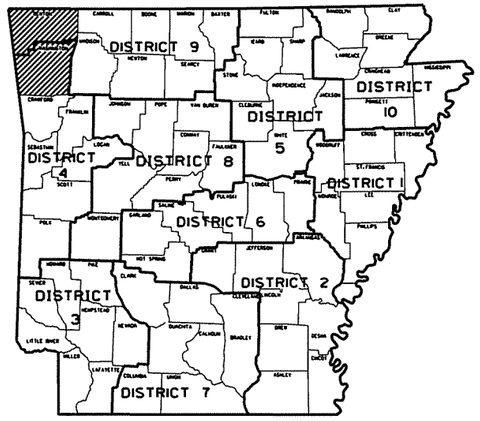
ROUTE 49 SECTIONS 28 & 29

FED. AID PROJ. BIM-B49-0(217) & NHPP-0472(7)

JOB CA1101

NOT TO SCALE





ARK. HWY. DIST. NO. 4 & 9

• DESIGN TRAFFIC DATA •

DESIGN YEAR	2035
2015 ADT	80,000
2035 ADT	125,000
2035 DHV	13,500
DIRECTIONAL DISTRIBUTION	60%
TRUCKS	11%
DESIGN SPEED	70 MPH

BEGINNING OF PROJECT
LAT. = N 36°10'43"
LONG. = W 94°10'58"

MID-POINT OF PROJECT
LAT. = N 36°12'06"
LONG. = W 94°10'55"

END OF PROJECT
LAT. = N 36°13'33"
LONG. = W 94°10'44"

LENGTH OF PROJECT CALCULATED ALONG C.L.

GROSS LENGTH OF PROJECT		17846.06	FEET	OR	3.380	MILES
NET " " ROADWAY		17555.70	"	"	3.325	"
NET " " BRIDGES		290.36	"	"	0.055	"
NET " " PROJECT		17846.06	"	"	3.380	"

CERTIFICATE OF AUTHORIZATION
CRAFTON, TULL & ASSOCIATES, INC.
No. 109
ARKANSAS ENGINEER

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 9620
7/29/15
HUBERT BURNS

P.E. CA1101
NON-PART.

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	1	234

② HWY. 412-WAGON WHEEL RD. (WIDENING) (S)

JOB CA1101

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	2	234

(2) INDEX OF SHEETS

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG.NO.	DATE
1	TITLE SHEET			
2	INDEX OF SHEETS			
3	GOVERNING SPECIFICATIONS AND GENERAL NOTES			
4-5	TYPICAL SECTIONS OF IMPROVEMENT			
6-14	SPECIAL DETAILS			
15-21	TEMPORARY EROSION CONTROL DETAILS			
22-33	MAINTENANCE OF TRAFFIC DETAILS			
34-41	PERMANENT PAVEMENT MARKING DETAILS			
42-50	QUANTITIES			
51	SCHEDULE OF BRIDGE QUANTITIES	A&B5946	56672	
52	SUMMARY OF QUANTITIES AND REVISIONS			
53-61	SURVEY CONTROL DETAILS			
62-74	PLAN AND PROFILE SHEETS			
75	LAYOUT OF BRIDGE 'A' OVER SPRING CREEK (SHEET 1 OF 3)	A5946	56673	
76	LAYOUT OF BRIDGE 'B' OVER SPRING CREEK (SHEET 2 OF 3)	B5946	56674	
77	LAYOUT OF BRIDGES 'A & B' OVER SPRING CREEK (SHEET 3 OF 3)	A&B5946	56675	
78	DETAILS OF STAGE CONSTRUCTION BRIDGE 'A' OVER SPRING CREEK (SHEET 1 OF 3)	A5946	56676	
79	DETAILS OF STAGE CONSTRUCTION BRIDGE 'B' OVER SPRING CREEK (SHEET 2 OF 3)	B5946	56677	
80	DETAILS OF STAGE CONSTRUCTION BRIDGES 'A & B' OVER SPRING CREEK (SHEET 3 OF 3)	A&B5946	56678	
81	DETAILS OF END BENT 1 (BRIDGE A)	A5946	56679	
82	DETAILS OF END BENT 1 (BRIDGE B)	B5946	56680	
83	DETAILS OF END BENTS (BRIDGES A & B)	A&B5946	56681	
84	DETAILS OF END BENT 5 (BRIDGE A)	A5946	56682	
85	DETAILS OF END BENT 5 (BRIDGE B)	B5946	56683	
86	DETAILS OF BENT 2 & 4 (BRIDGE A) (SHEET 1 OF 3)	A5946	56684	
87	DETAILS OF BENT 2 & 4 (BRIDGE B) (SHEET 2 OF 3)	B5946	56685	
88	DETAILS OF BENT 2 & 4 (BRIDGES A & B) (SHEET 3 OF 3)	A&B5946	56686	
89	DETAILS OF BENT 3 (BRIDGE A) (SHEET 1 OF 3)	A5946	56687	
90	DETAILS OF BENT 3 (BRIDGE B) (SHEET 2 OF 3)	B5946	56688	
91	DETAILS OF BENT 3 (BRIDGES A & B) (SHEET 3 OF 3)	A&B5946	56689	
92	DETAILS OF ELASTOMERIC BEARINGS	A&B5946	56690	
93	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A) (SHEET 1 OF 12)	A5946	56691	
94	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 2 OF 12)	A&B5946	56692	
95	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A) (SHEET 3 OF 12)	A5946	56693	
96	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 4 OF 12)	A&B5946	56694	
97	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A) (SHEET 5 OF 12)	A5946	56695	
98	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 6 OF 12)	A&B5946	56696	
99	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 7 OF 12)	A&B5946	56697	
100	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 8 OF 12)	A&B5946	56698	
101	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B) (SHEET 9 OF 12)	A&B5946	56699	
102	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE B) (SHEET 10 OF 12)	B5946	56700	
103	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE B) (SHEET 11 OF 12)	B5946	56701	
104	DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE B) (SHEET 12 OF 12)	B5946	56702	
105	DETAILS OF TYPE SPECIAL 1 APPROACH SLABS (SHEET 1 OF 3)	A5946	56703	
106	DETAILS OF TYPE SPECIAL 1 APPROACH SLABS (SHEET 2 OF 3)	B5946	56704	
107	DETAILS OF TYPE SPECIAL 1 APPROACH SLABS (SHEET 3 OF 3)	A&B5946	56705	
108	DETAILS OF TYPE SPECIAL 1 APPROACH GUTTERS (SHEET 1 OF 2)	A5946	56706	
109	DETAILS OF TYPE SPECIAL 1 APPROACH GUTTERS (SHEET 2 OF 2)	B5946	56707	
110	STANDARD DETAILS FOR EMBANKMENT CONSTRUCTION AND BACKFILL AT BRIDGE ENDS		55000	2-27-14
111	STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES		55001	2-27-14
112	STANDARD DETAILS FOR PERMANENT STEEL BRIDGE DECK FORMS FOR STEEL & CONCRETE GIRDER SPANS		55005	2-27-14
113	STANDARD DETAILS FOR TYPE D BRIDGE NAME PLATE		55010	1-14-15
114	STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS		55020	2-27-14
115	FLARED END SECTION		FES-1	10-18-96
116	FLARED END SECTION		FES-2	10-18-96
117	DETAILS OF DROP INLETS & JUNCTION BOXES		FPC-9	11-16-01
118	DETAILS OF DROP INLET & JUNCTION BOX (TYPE ST)		FPC-9S	7-26-12
119	IMPACT ATTENUATION BARRIER		IB-1	10-15-09
120	CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING		PCC-1	2-27-14
121	PAVEMENT MARKING DETAILS		PM-1	9-12-13
122	PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS		PM-2	9-12-13
123	DETAILS OF PIPE UNDERDRAIN		PU-1	4-10-13
124	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-1	12-15-11
125	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-2	9-12-13
126	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION		TC-3	10-15-09
127	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-4	2-27-14
128	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION-TEMPORARY PRECAST BARRIER		TC-5	10-15-09
129	TEMPORARY EROSION CONTROL DEVICES		TEC-1	12-15-11
130-234	CROSS SECTIONS			

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

STATE OF ARKANSAS
* * *
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
6-24-15

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STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
7-08-2015
JEROME PAUL DAVIS

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 CA1101
FHWA-1273	SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273	SUPPLEMENT - WAGE RATE DETERMINATION
108-1	LIQUIDATED DAMAGES
410-1	CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
604-1	RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
620-1	MIULCH COVER
JOB CA1101	AIRPORT CLEARANCE REQUIREMENTS
JOB CA1101	BIDDING REQUIREMENTS AND CONDITIONS
JOB CA1101	BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB CA1101	BROADBAND INTERNET SERVICE FOR FIELD OFFICE
JOB CA1101	CONSTRUCTION IN SPECIAL FLOOD HAZARD AREAS
JOB CA1101	COORDINATION OF WORK
JOB CA1101	DIRECT TENSION INDICATORS FOR HIGH STRENGTH BOLT ASSEMBLIES
JOB CA1101	DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES
JOB CA1101	EMPLOYMENT REPORTING
JOB CA1101	EXTENSION FOR PIPE CULVERTS
JOB CA1101	FURNISH AND OPERATION OF MOBILE SPEED NOTIFICATION SYSTEM
JOB CA1100	GOALS FOR ARKANSAS OWNED MINORITY BUSINESS ENTERPRISE
JOB CA1101	GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB CA1101	HIGH PERFORMANCE PAVEMENT MARKING
JOB CA1101	MAINTENANCE OF TRAFFIC
JOB CA1101	MANDATORY ELECTRONIC CONTRACT
JOB CA1101	NESTING SITES OF MIGRATORY BIRDS
JOB CA1101	OVERHEAD SIGN STRUCTURE FOUNDATION
JOB CA1101	PARTNERING REQUIREMENTS
JOB CA1101	PERCENT WITHIN LIMITS/PAVEMENT SMOOTHNESS
JOB CA1101	PIPE CULVERTS
JOB CA1101	PROSECUTION AND PROGRESS- CONNECTING ARKANSAS PROGRAM
JOB CA1101	REMOVAL AND DISPOSAL OF GUARDRAIL
JOB CA1101	REMOVAL AND DISPOSAL OF PLOWABLE PAVEMENT MARKER
JOB CA1101	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE
JOB CA1101	SECTION 404 NATIONWIDE 14 PERMIT REQUIREMENTS
JOB CA1101	SEQUENCE OF CONSTRUCTION
JOB CA1101	SHORING
JOB CA1101	SHORING FOR CULVERTS
JOB CA1101	SITE USE (A+C METHOD)
JOB CA1101	SOIL STABILIZATION
JOB CA1101	STORM WATER POLLUTION PREVENTION PLAN
JOB CA1101	SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB CA1101	TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
JOB CA1102	UTILITY ADJUSTMENTS
JOB CA1101	VALUE ENGINEERING
JOB CA1101	WARM MIX ASPHALT
JOB CA1101	WELLHEAD PROTECTION

GENERAL NOTES

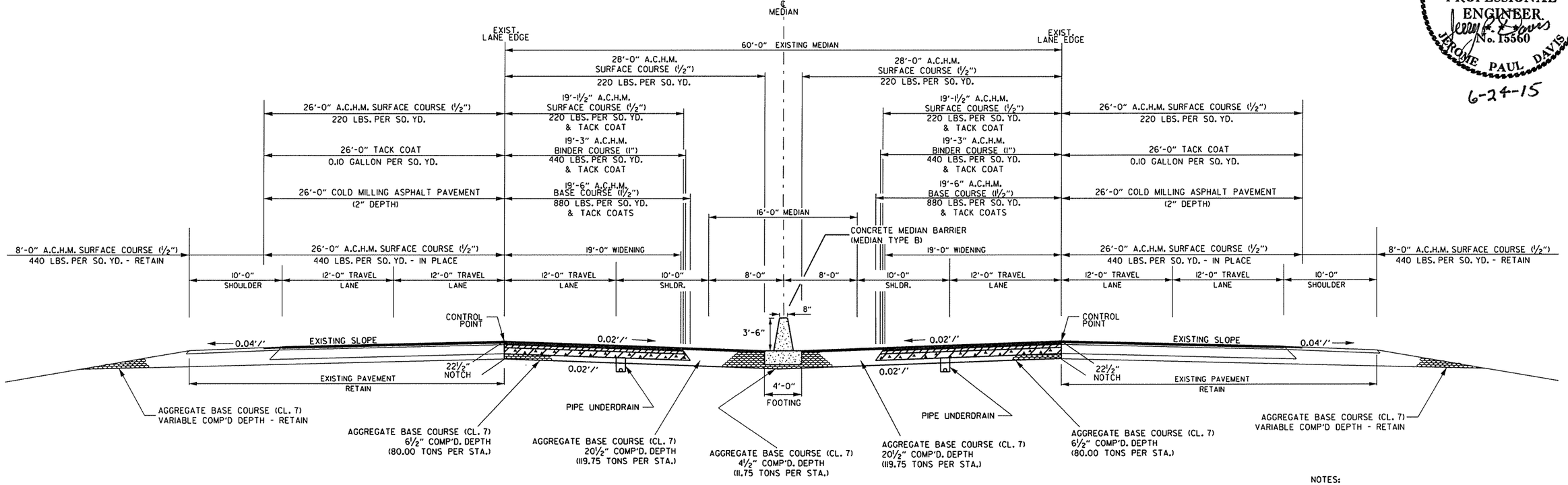
1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY 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 FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
6. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. THE AWIS QUANTITIES TO COVER THIS PROJECT ARE INCLUDED IN JOB CA0401. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE CONTRACTOR ON JOB CA0401 TO ENSURE THAT THE DEVICES ARE INSTALLED AND OPERATIONAL BEFORE ANY LANE CLOSURES OR LANE WIDTH RESTRICTIONS WILL BE ALLOWED.

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	4	234

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
* * *
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
JEROME PAUL DAVIS
6-24-15



TYPICAL SECTION OF IMPROVEMENT - I-49
NOTCH AND WIDEN INTO MEDIAN
MILL AND INLAY OF EXISTING

STA. 791+00.00 TO STA. 792+20.00
STA. 816+75.00 TO STA. 826+05.00
STA. 843+10.00 TO STA. 871+05.00
STA. 890+75.00 TO STA. 921+75.00
STA. 939+30.00 TO STA. 968+46.06

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS 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.

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.

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

UNDERDRAINS TO BE CONNECTED TO DROP INLETS.

TYPICAL SECTIONS OF IMPROVEMENT

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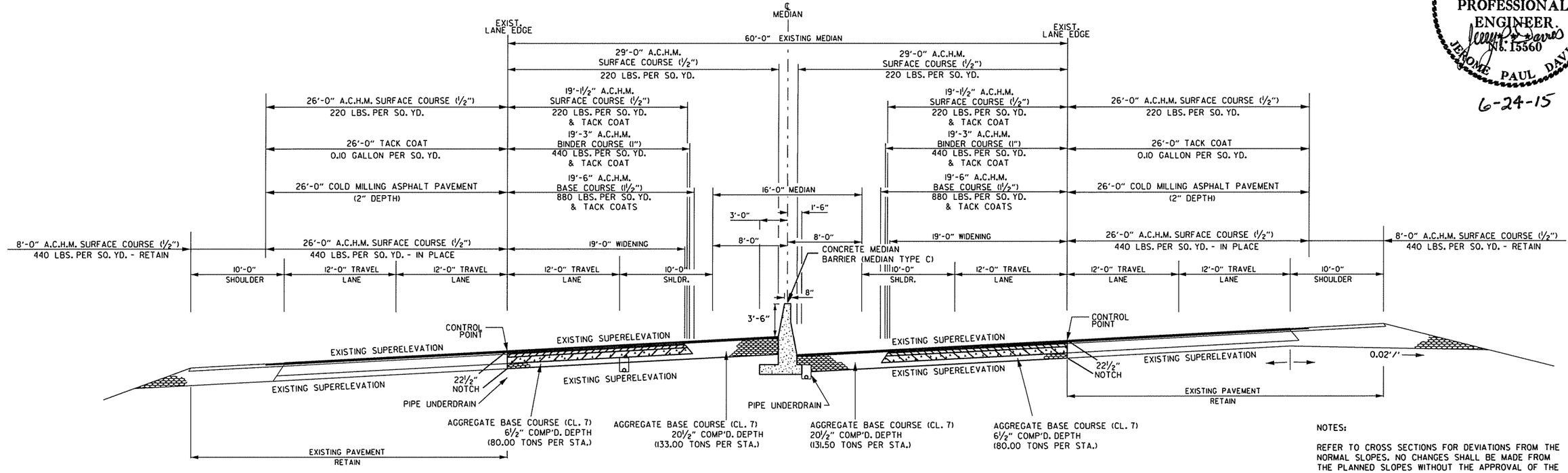
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	5	234

(2) TYPICAL SECTIONS OF IMPROVEMENT

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER.
No. 15560
JEROME PAUL DAVIS
6-24-15



TYPICAL SECTION OF IMPROVEMENT - I-49
SUPERELEVATION
NOTCH AND WIDEN INTO MEDIAN
MILL AND INLAY OF EXISTING

STA. 792+20.00 TO STA. 816+75.00
STA. 826+05.00 TO STA. 843+10.00
STA. 871+05.00 TO STA. 890+75.00
STA. 921+75.00 TO STA. 939+30.00
STA. 968+46.06 TO STA. 969+46.06

NOTES:

REFER TO CROSS SECTIONS FOR DEVIATIONS 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.

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

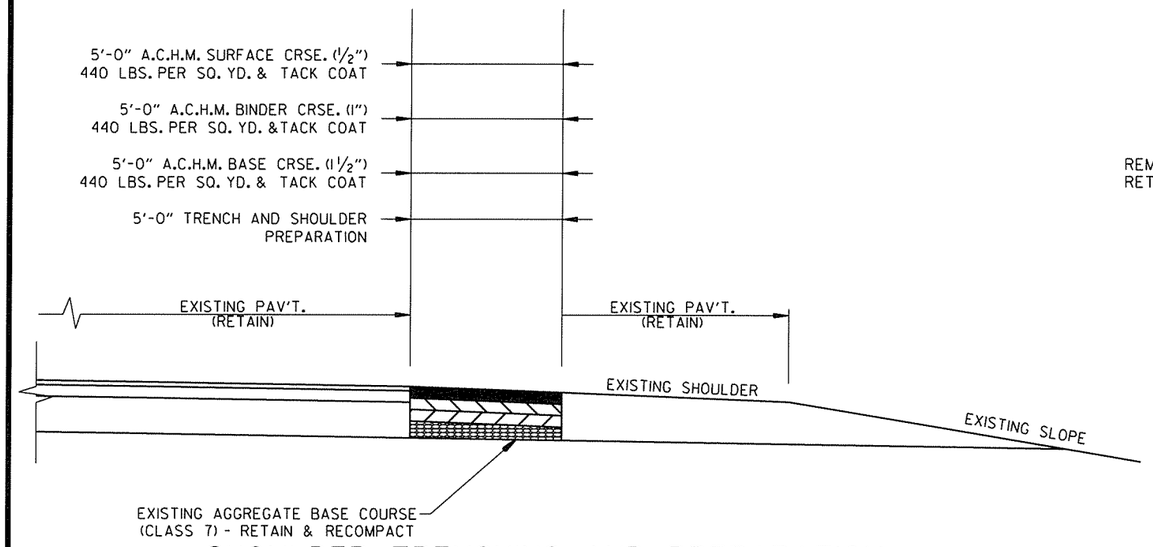
THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN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

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

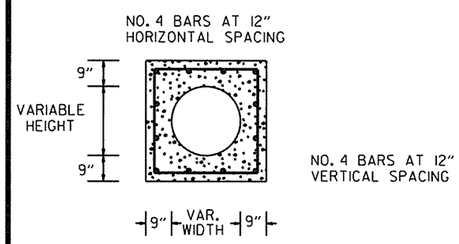
UNDERDRAINS TO BE CONNECTED TO DROP INLETS.

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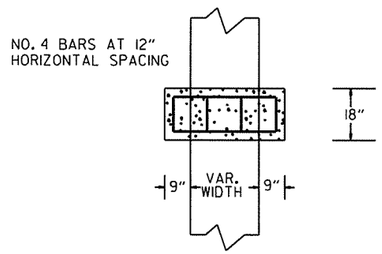
TYPICAL SECTIONS OF IMPROVEMENT



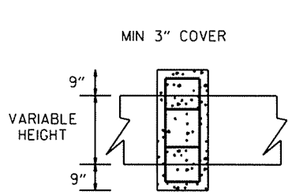
SHOULDER TRENCHING AND PREPARATION OUTSIDE SHOULDER (SHOWN IN DIRECTION OF TRAFFIC)



FRONT VIEW

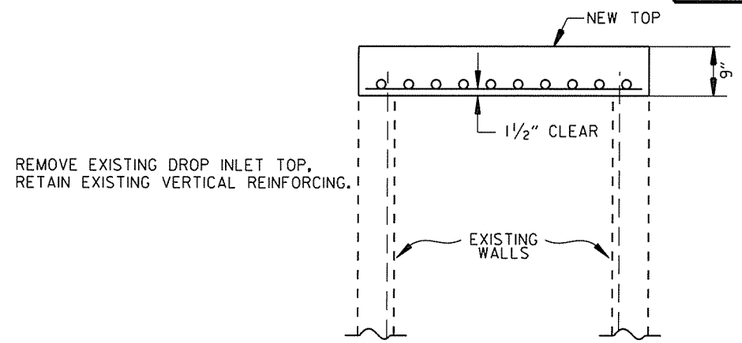


TOP VIEW

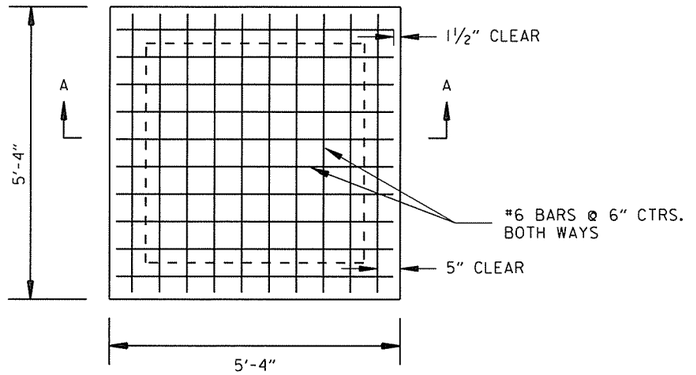


SIDE VIEW

PIPE EXTENSION REINFORCED CONCRETE COLLAR DETAIL



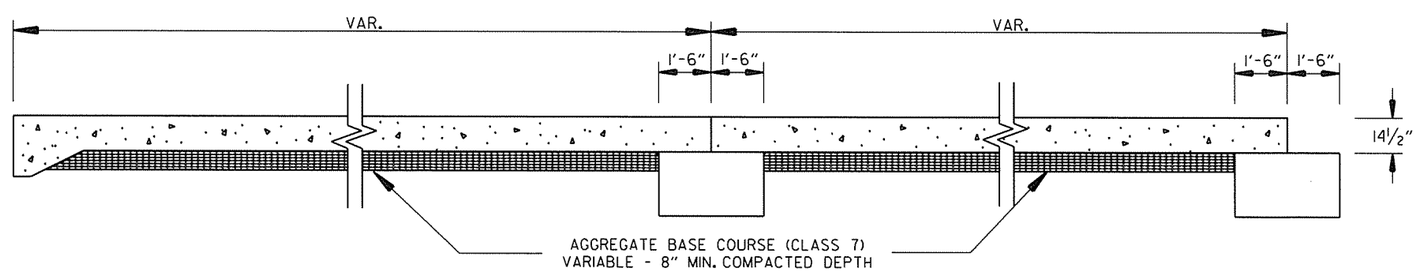
SECTION A-A



TOP VIEW

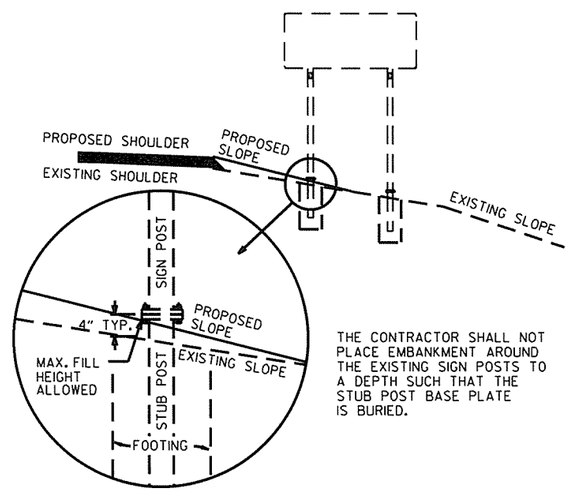
DETAILS OF MODIFIED DROP INLET

(NOT TO SCALE)



DETAIL OF APPROACH SLAB

NOTE: REFER TO BRIDGE DRAWINGS A5946 AND B5946 FOR ADDITIONAL INFORMATION.



DETAIL FOR THE MAINTENANCE OF EXISTING BREAKAWAY SIGN STRUCTURES

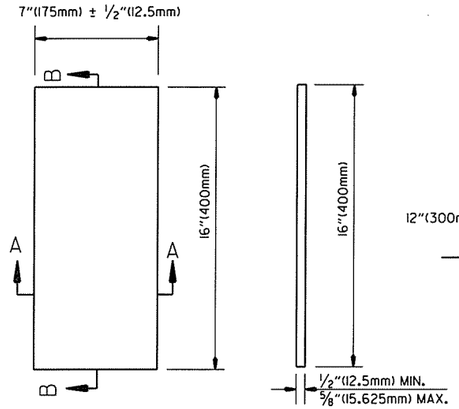
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome Paul Davis
No. 15560
4-16-15

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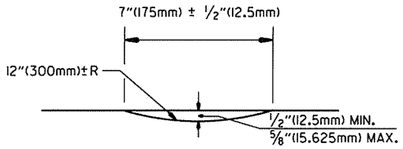
Crafton, Tull & Associates Inc.

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2 SPECIAL DETAILS

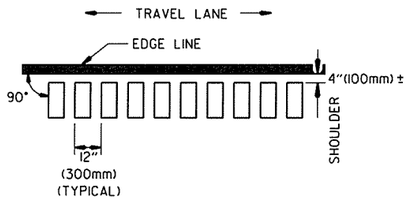


PLAN SECTION B-B

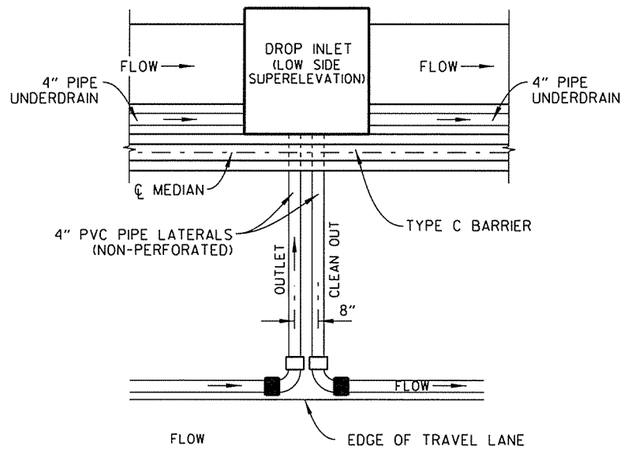


SECTION A-A

DETAILS OF RUMBLE STRIPS

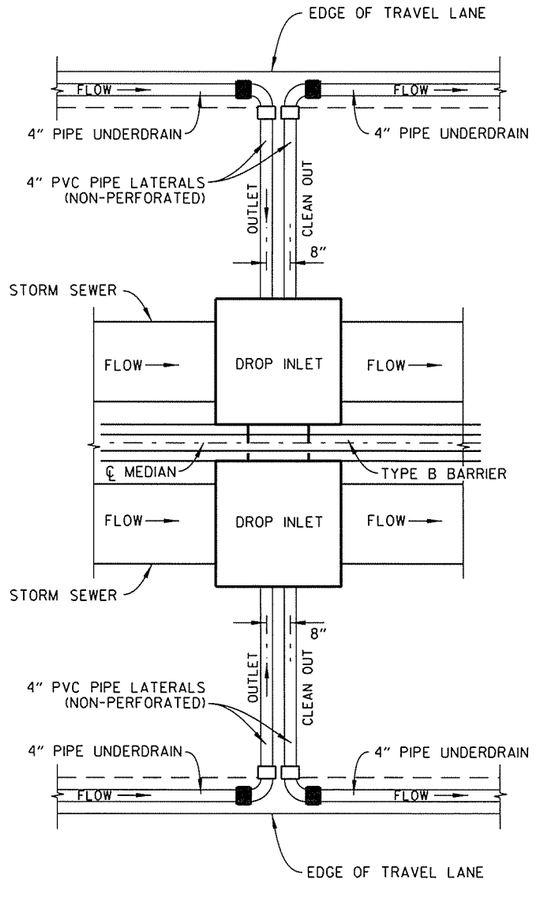


LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

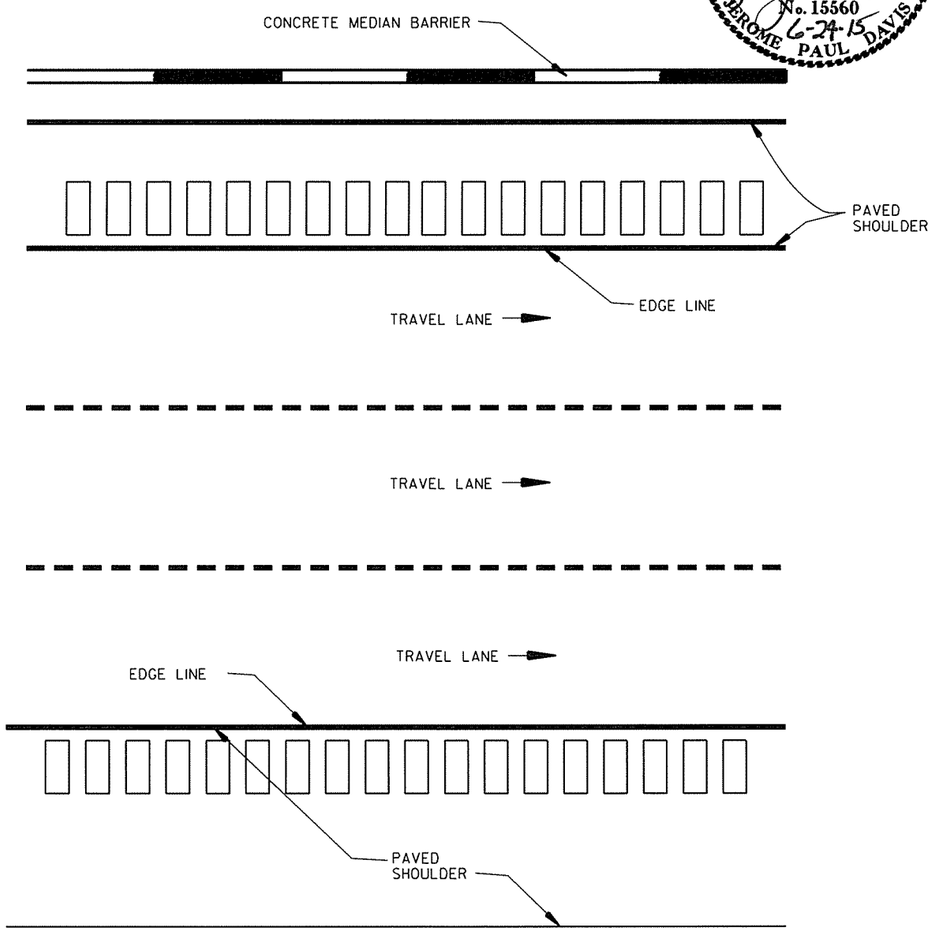


NOTES FOR PIPE UNDERDRAIN:

1. FOR MATERIAL ROUIREMENTS REFER TO STD. DWG. PU-1.
2. TYPICAL SHOWN FOR INLETS AND DRAIN ON GRADE. FOR INLETS IN SAG, BOTH LATERALS FLOW INTO INLET.
3. ANY LATERAL CROSSING ℄ MEDIAN MUST BE BELOW MEDIAN BARRIER.



PLAN DETAIL OF PIPE UNDERDRAIN LATERALS



NOTES FOR RUMBLE STRIP:

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 ½" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

PLAN VIEW DETAILS OF RUMBLE STRIPS

SPECIAL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome Paul Davis
No. 15560
6-24-15

USER: at5106
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GENERAL NOTES FOR CONCRETE BARRIER WALLS

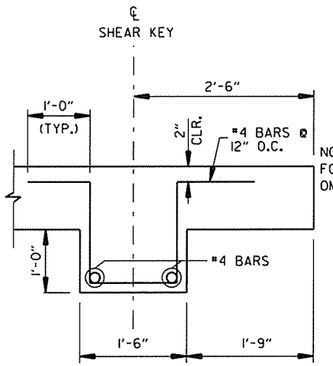
1. ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2014 EDITION.
2. CONTRACTION JOINTS REQUIRED @ 15'-0" MAXIMUM SPACING FOR MEDIAN TYPE C AND MEDIAN TYPE C SPECIAL.
3. ALL CONTRACTION JOINTS TO BE FORMED IN FRESH CONCRETE ON TOP AND IN SIDES OF BARRIER WALL.
4. DOWEL BARS FOR BARRIER MEDIAN TYPE 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 3/4" CHAMFER.
6. THE DESIGN OF BARRIER WALL MEDIAN TYPE C IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF ONE TON PER SQUARE FOOT. MEDIAN TYPE C SPECIAL IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF 1500 POUNDS 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 MEDIAN TYPE B OR 120 FT FOR BARRIER MEDIAN TYPES C AND C SPECIAL. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. CONTINUOUS REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
8. PROVIDE 1/2" EXPANSION JOINT MATERIAL BETWEEN FOOTING AND DROP INLET STRUCTURES. SHIFT REINFORCING STEEL IN FOOTINGS TO PROVIDE 3" CLR. FROM DROP INLET STRUCTURES.
9. MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT EXCEPT AS NOTED AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.

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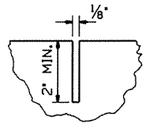
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(2) SPECIAL DETAILS

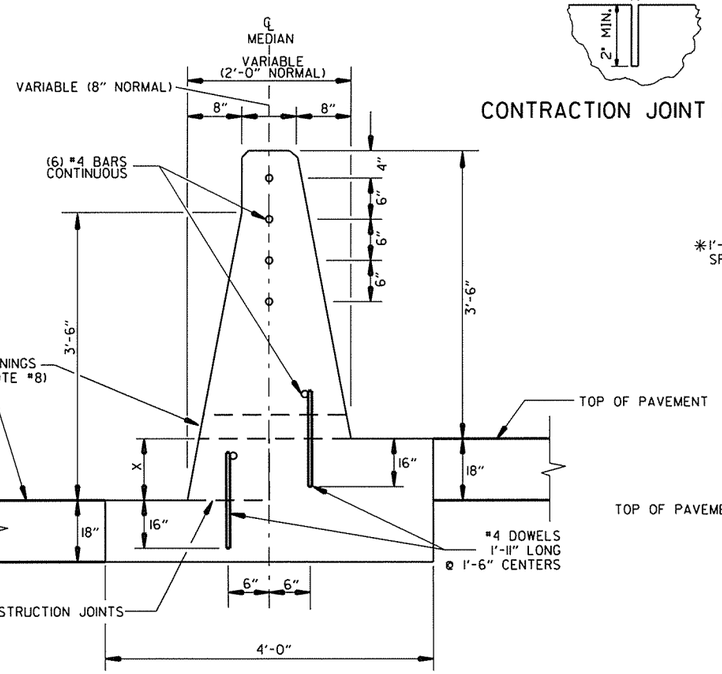
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-24-15



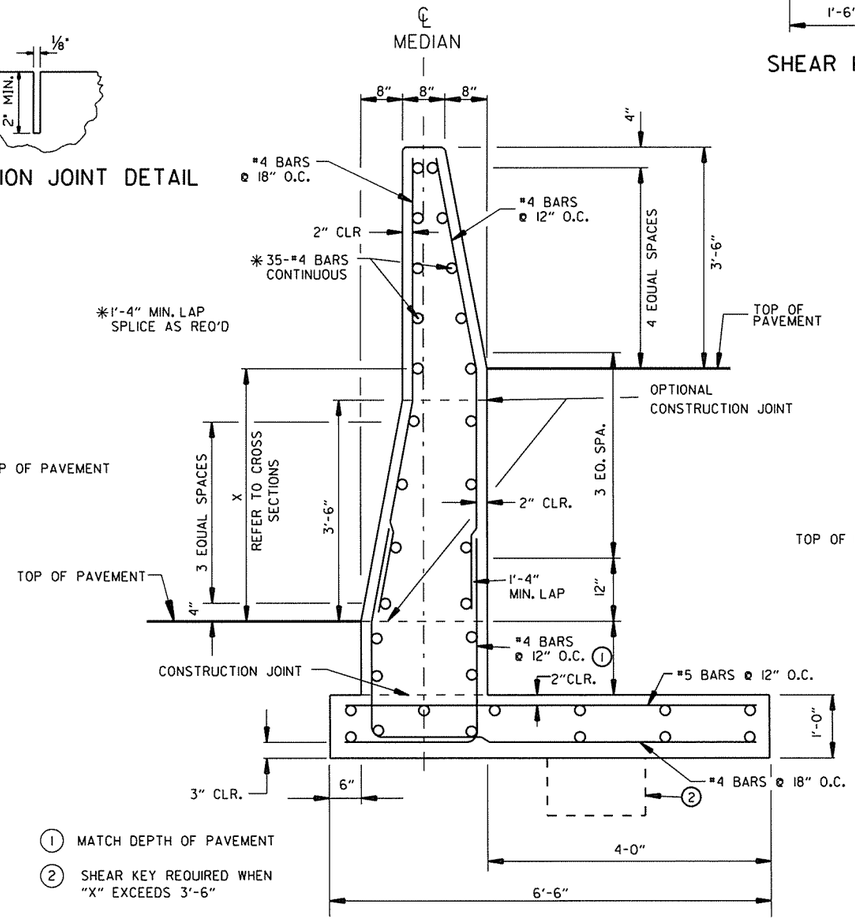
SHEAR KEY DETAIL



CONTRACTION JOINT DETAIL

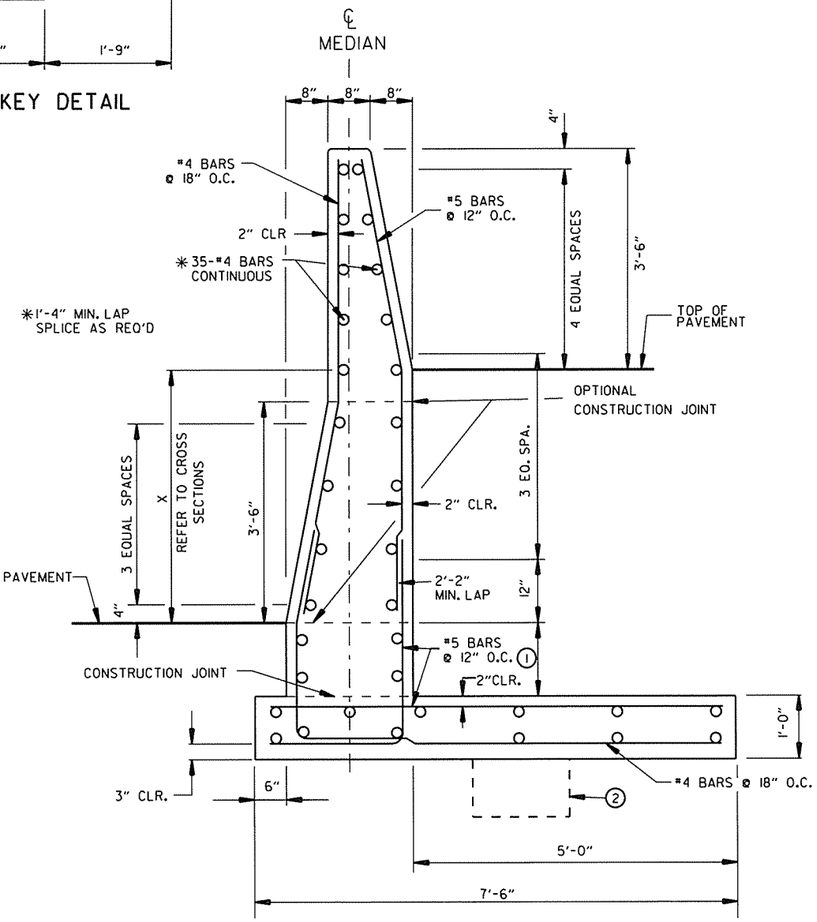


CONCRETE BARRIER WALL
(MEDIAN TYPE B)
X = 0'-0" TO 1'-0" MAX
(NOT TO SCALE)



(1) MATCH DEPTH OF PAVEMENT
(2) SHEAR KEY REQUIRED WHEN "X" EXCEEDS 3'-6"

CONCRETE BARRIER WALL
(MEDIAN TYPE C)
X = 1'-0" TO 5'-0" MAX.
(NOT TO SCALE)



CONCRETE BARRIER WALL
(MEDIAN TYPE C SPECIAL)
X = 5'-0" TO 6'-0" MAX.
(NOT TO SCALE)

SPECIAL DETAILS

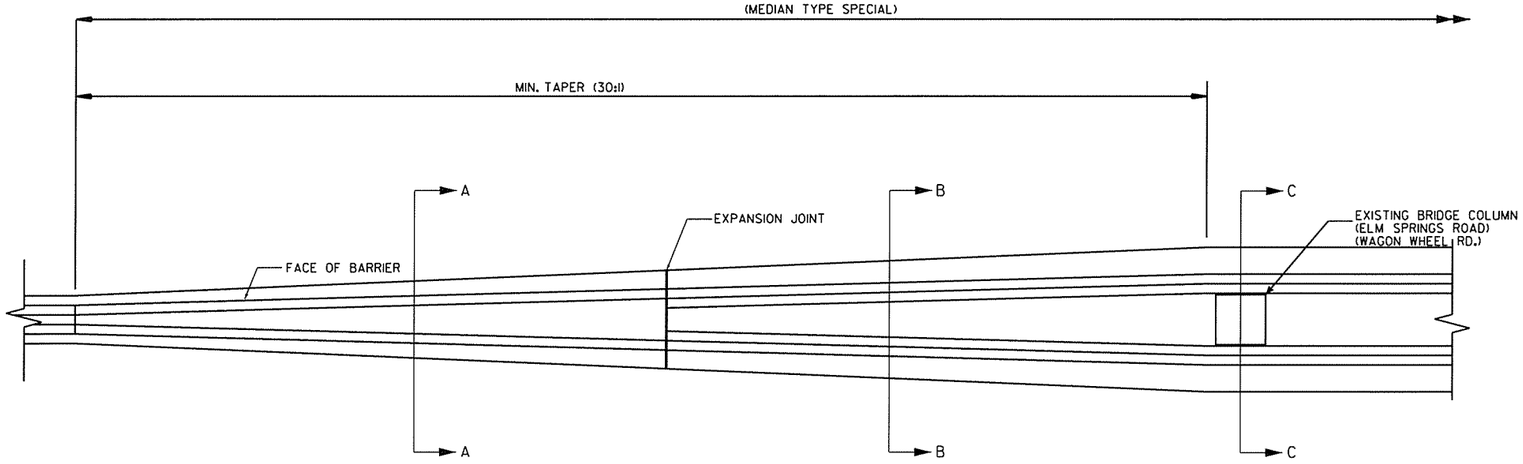
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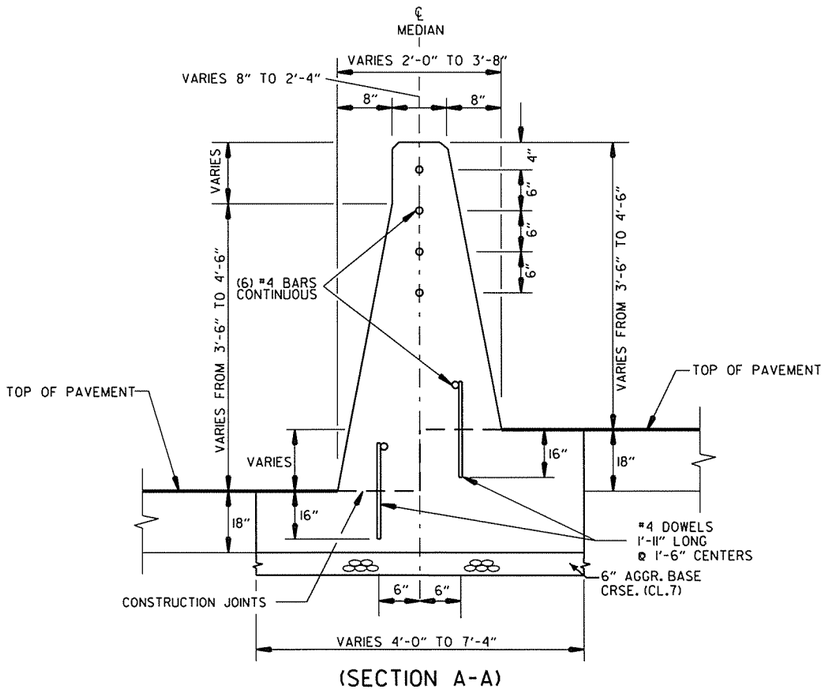
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2 SPECIAL DETAILS

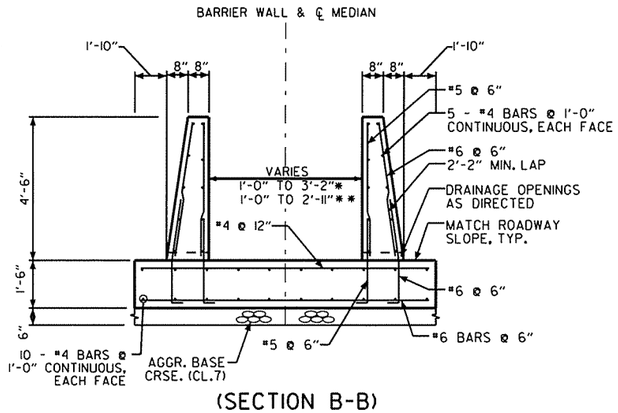


CONCRETE BARRIER WALL

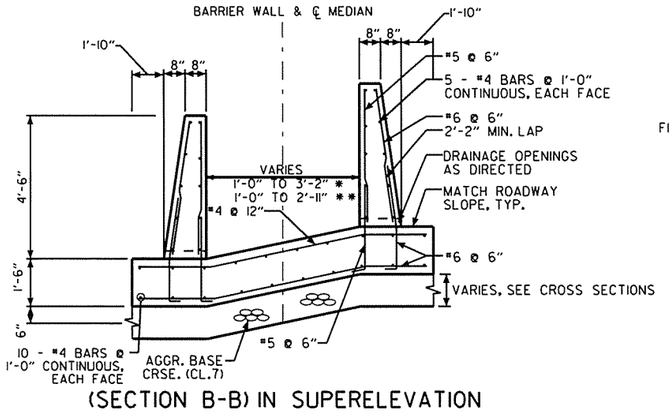
NOTE: TRANSITION FOR SOUTH SIDE SHOWN
NORTH SIDE TRANSITION IS IDENTICAL.



(SECTION A-A)



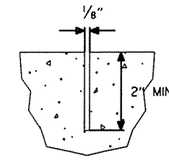
(SECTION B-B)



(SECTION B-B) IN SUPERELEVATION

DETAILS OF CONCRETE BARRIER WALL MEDIAN TYPE SPECIAL

(STA: 847+66 TO STA: 850+11)
(STA: 968+35 TO STA: 974+01.86)
(NOT TO SCALE)

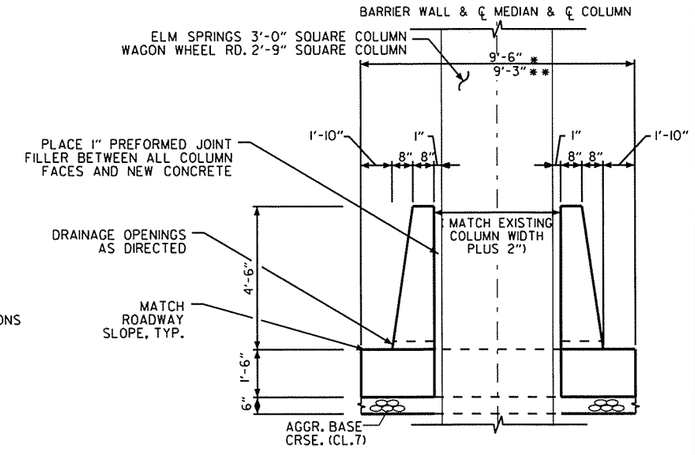


CONTRACTION JOINT DETAIL

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
6-24-15
JEROME PAUL DAVIS

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. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
3. ALL CONTRACTION JOINTS TO BE FORMED IN FRESH CONCRETE ON TOP AND IN SIDES OF BARRIER WALL.
4. THE DESIGN OF BARRIER WALL MEDIAN TYPE SPECIAL IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. UNSTABLE FOUNDATION MATERIAL SHALL BE REMOVED AND REPLACED TO PROVIDE A FIRM FOUNDATION AS DIRECTED BY THE ENGINEER.
5. ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A 3/4" CHAMFER.
6. SPACING BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 400 FT. FOR BARRIER. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. CONTINUOUS REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
7. MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.
8. FOR BARRIER SECTION C-C, SHIFT #6 BARS IN FOOTING EQUALLY TO EACH SIDE OF OPENINGS AT COLUMNS. MAINTAIN AT LEAST 3" O.C. SPACING. TRIM #4 BARS TO MAINTAIN 2" CLEARANCE.
9. CLASS 7 AGGREGATE BASE UNDER CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL) SHALL BE INSTALLED ACCORDING TO SECTION 303 OF THE STANDARD SPECIFICATIONS. SEPARATE PAYMENT WILL NOT BE MADE BUT WILL BE CONSIDERED SUBSIDIARY TO PAY ITEM "CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)."



(SECTION C-C)

SEE SECTION B-B
FOR REINFORCEMENT

* ELM SPRINGS ROAD
** WAGON WHEEL ROAD

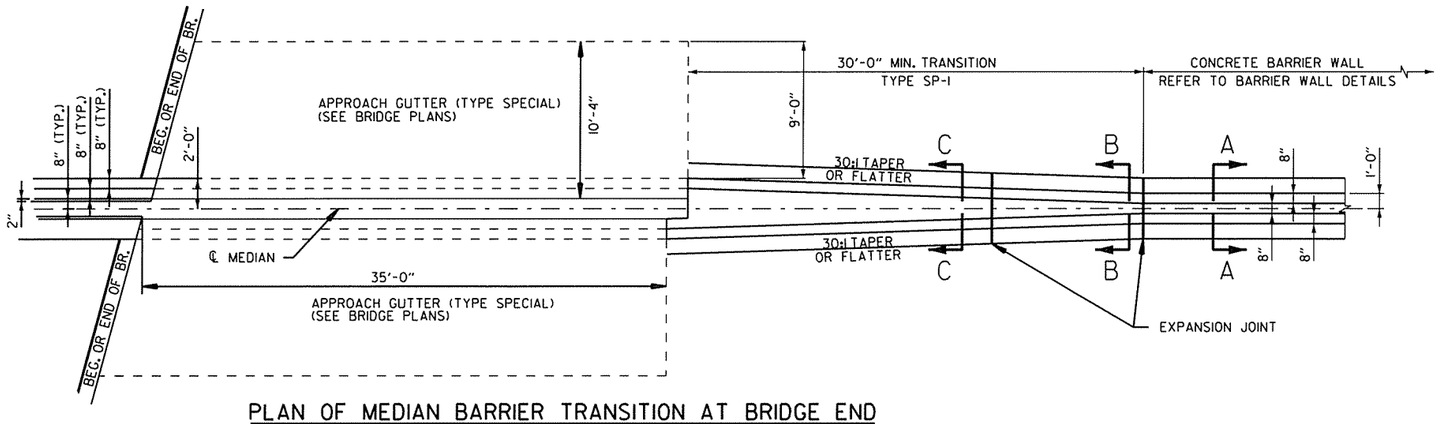
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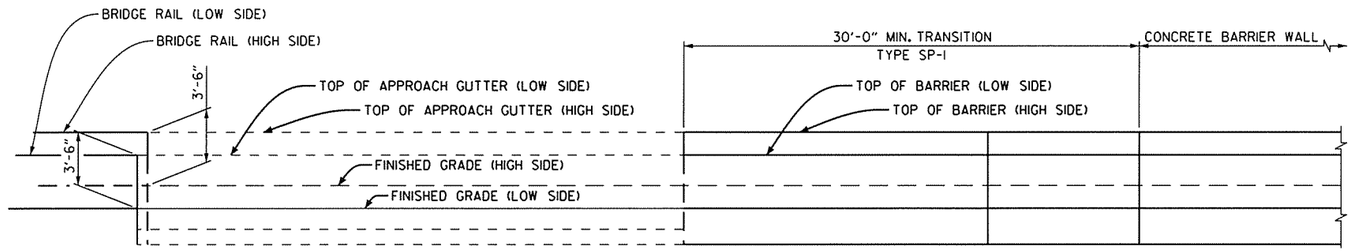
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2 SPECIAL DETAILS



PLAN OF MEDIAN BARRIER TRANSITION AT BRIDGE END

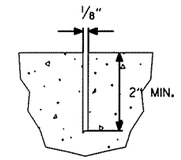


ELEVATION OF MEDIAN BARRIER TRANSITION AT BRIDGE END

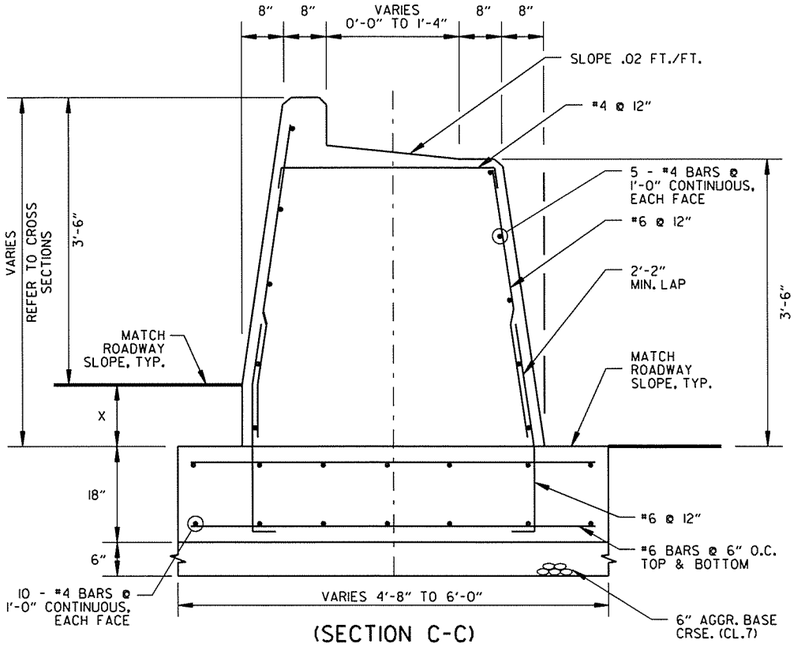
GENERAL NOTES FOR CONCRETE BARRIER WALLS

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. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
3. ALL CONTRACTION JOINTS TO BE FORMED IN FRESH CONCRETE ON TOP AND IN SIDES OF BARRIER WALL.
4. THE DESIGN OF BARRIER WALL MEDIAN TYPE SP-1 IS BASED ON A MINIMUM FOUNDATION BEARING CAPACITY OF 1500 POUNDS PER SQUARE FOOT. UNSTABLE FOUNDATION MATERIAL SHALL BE REMOVED AND REPLACED TO PROVIDE A FIRM FOUNDATION AS DIRECTED BY THE ENGINEER.
5. ALL EXPOSED EDGES OF CONCRETE BARRIER WALL SHALL HAVE A 3/4" CHAMFER.
6. SPACING BETWEEN EXPANSION JOINTS SHALL NOT EXCEED 400 FT. FOR BARRIER. EXPANSION JOINTS SHALL BE FORMED USING 1" PREFORMED JOINT FILLER. CONTINUOUS REINFORCEMENT SHALL BE CUT 2" CLEAR OF EXPANSION JOINTS.
7. MAINTAIN 3" CLEARANCE ON ALL FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.
8. FOR BARRIER SECTION C-C, SHIFT #6 BARS IN FOOTING TO EQUALLY TO EACH SIDE OF OPENINGS AT COLUMNS. MAINTAIN AT LEAST 3" MINIMUM SPACING. TRIM #4 BARS TO MAINTAIN 2" CLEARANCE.
9. CLASS 7 AGGREGATE BASE UNDER CONCRETE BARRIER WALL (MEDIAN TYPE SP-1) SHALL BE INSTALLED ACCORDING TO SECTION 303 OF THE STANDARD SPECIFICATIONS. SEPARATE PAYMENT WILL NOT BE MADE BUT WILL BE CONSIDERED SUBSIDIARY TO PAY ITEM "CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)."

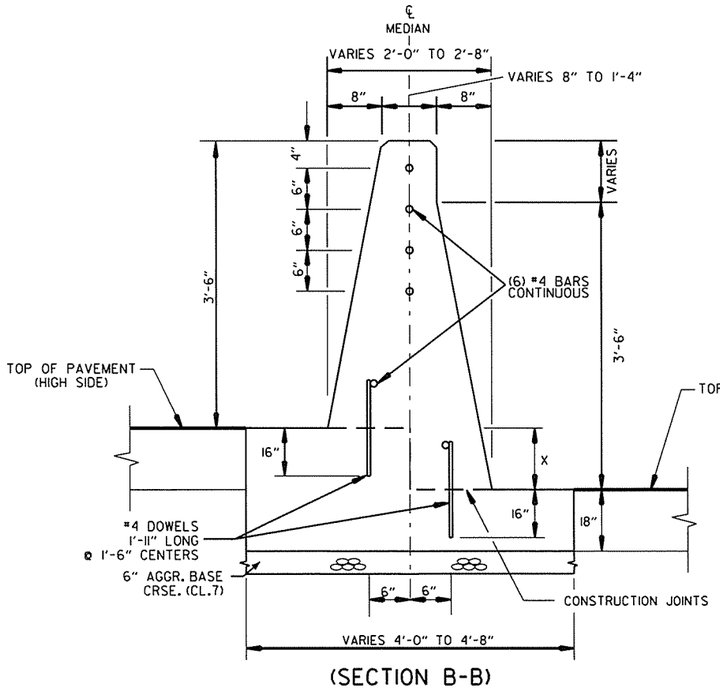
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
6-24-15



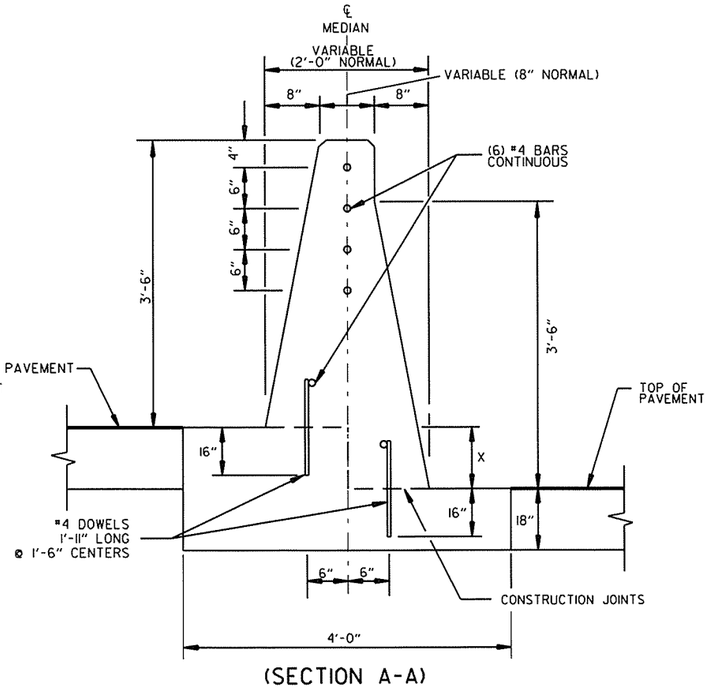
CONTRACTION JOINT DETAIL



(SECTION C-C)



(SECTION B-B)
DETAILS OF CONCRETE BARRIER WALL MEDIAN TYPE SP-1
X= 0'-0"-1'-0"
(NOT TO SCALE)



(SECTION A-A)

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. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
3. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
4. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
5. MAINTAIN 3" CLEARANCE ON FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.

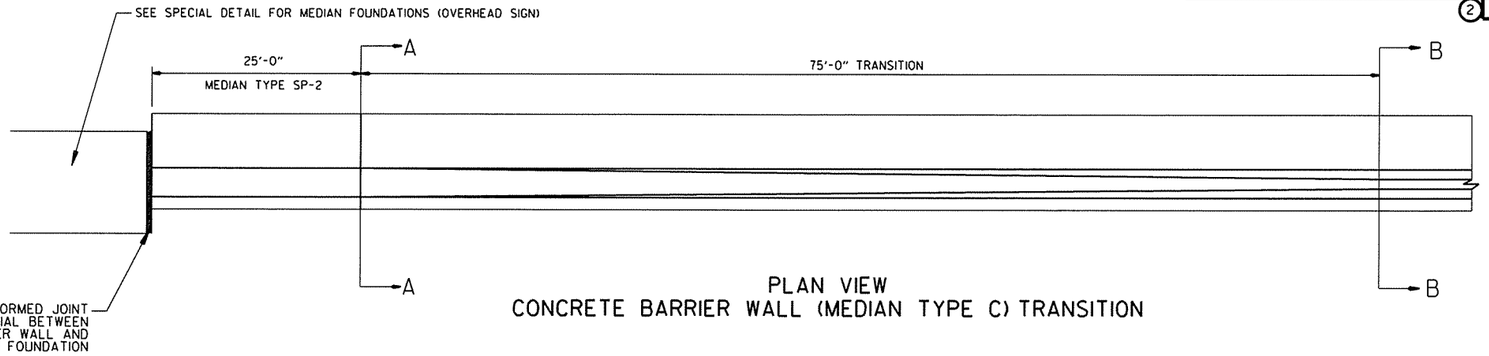
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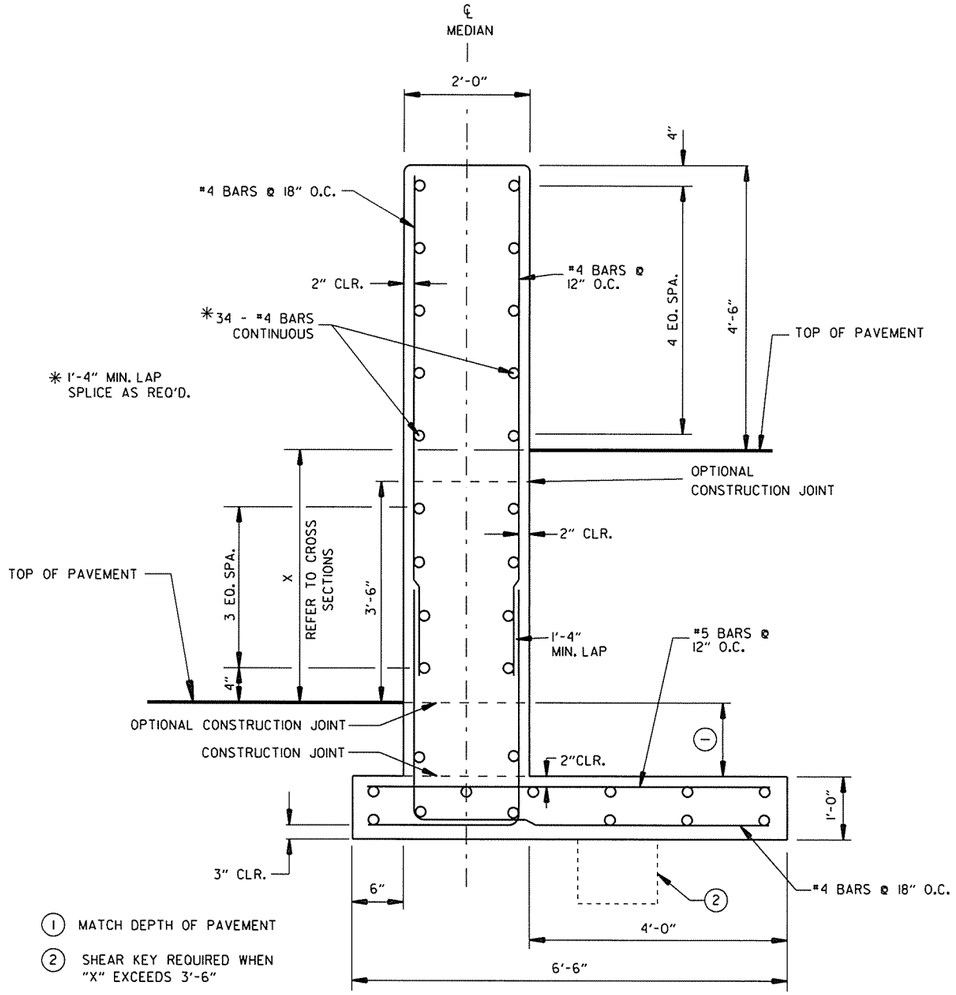
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JOB NO.		CAII0I	II	234

2 SPECIAL DETAILS

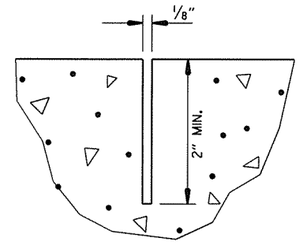
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome Davis
No. 15560
4-16-15
JEROME PAUL DAVIS



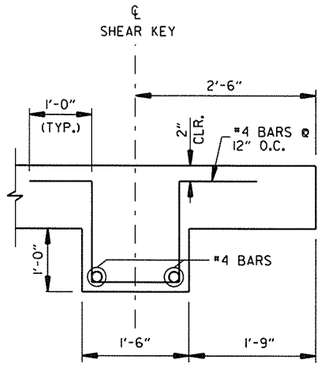
PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE C) TRANSITION



(SECTION A-A)
CONCRETE BARRIER WALL (MEDIAN TYPE SP-2)
X = 1'-0" TO 5'-0" MAX.

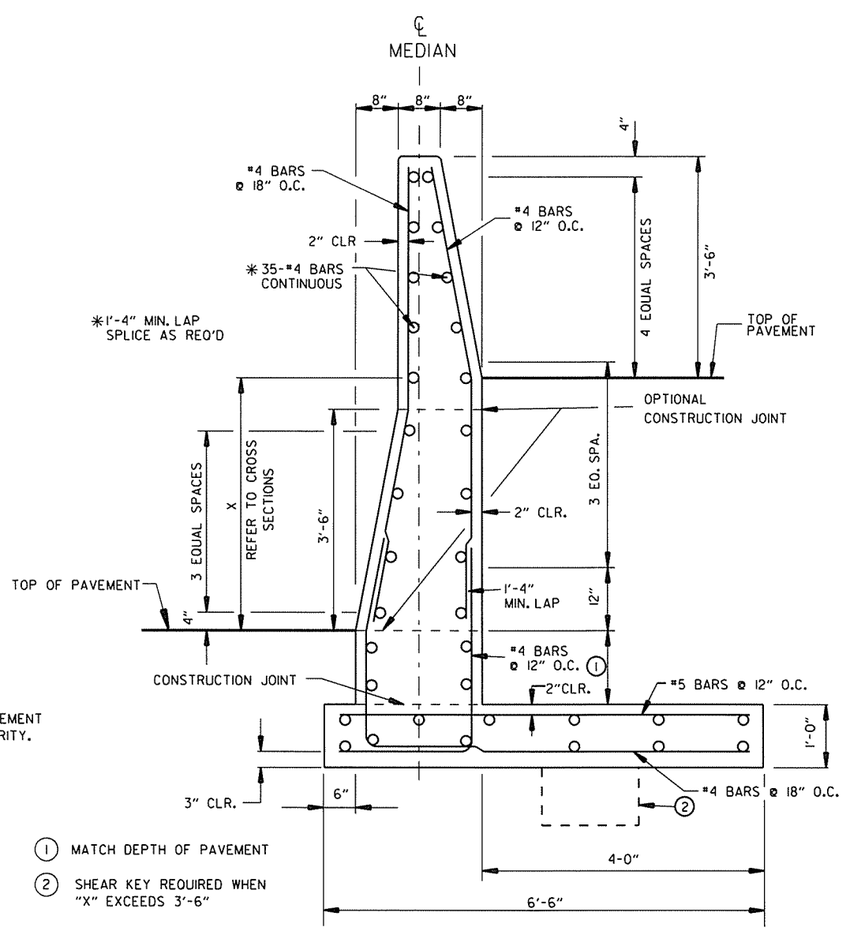


CONTRACTION JOINT DETAIL



SHEAR KEY DETAIL

NOTE:
FOOTING REINFORCEMENT OMITTED FOR CLARITY.



(SECTION B-B)
CONCRETE BARRIER WALL
(MEDIAN TYPE C)
X = 1'-0" TO 5'-0" MAX.

TRANSITION FROM CONCRETE BARRIER WALL (MEDIAN TYPE C) TO CONCRETE BARRIER WALL (MEDIAN TYPE SP-2) TO MEDIAN FOUNDATION (OVERHEAD SIGN)

(NOT TO SCALE)

SPECIAL DETAILS

USER: at5106
DESIGN FILE: G:\13106000.402\Wagon\TRANSP\dgn\special_details\CAII0ISpecialDetails.dgn MODEL: SPECIAL DETAILS
PLOTTED: 4/16/2015 08:27 SCALE: 201

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. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
3. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
4. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
5. MAINTAIN 3" CLEARANCE ON FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.

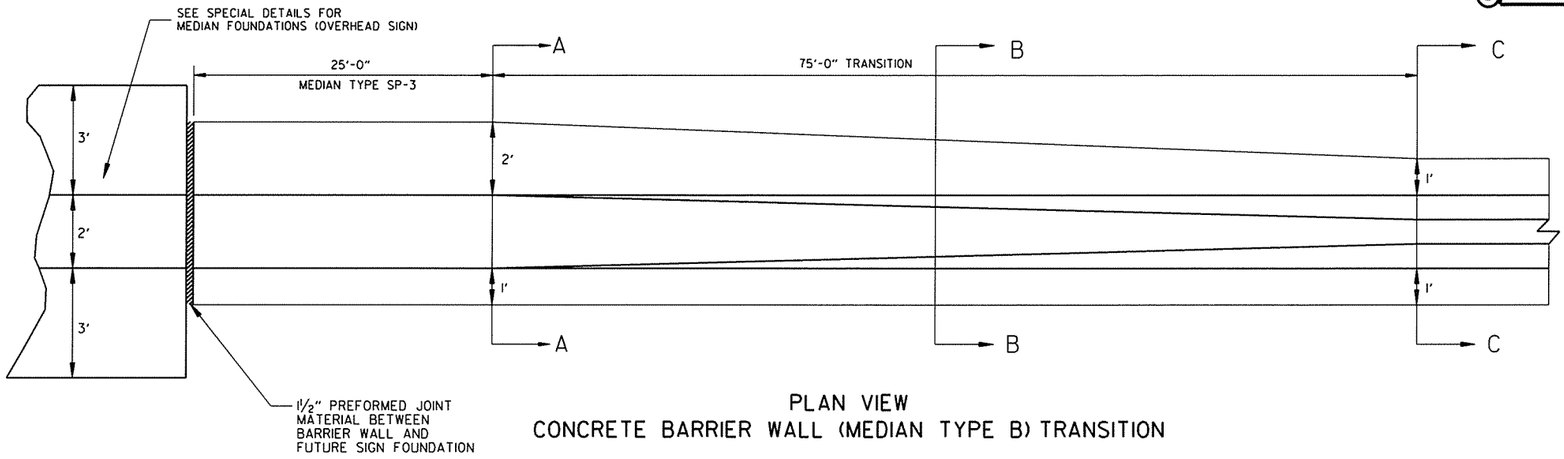
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

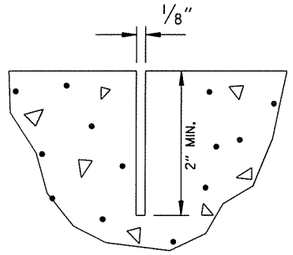
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6	ARK.			
JOB NO.		C4101	12	234

(2) SPECIAL DETAILS

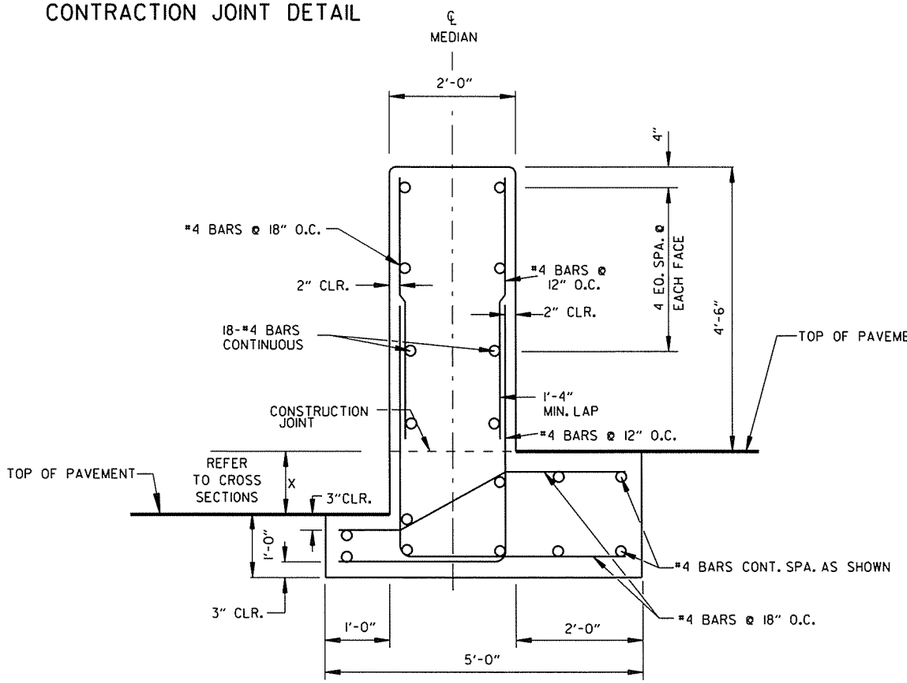
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome Paul Davis
No. 15560
6-24-15



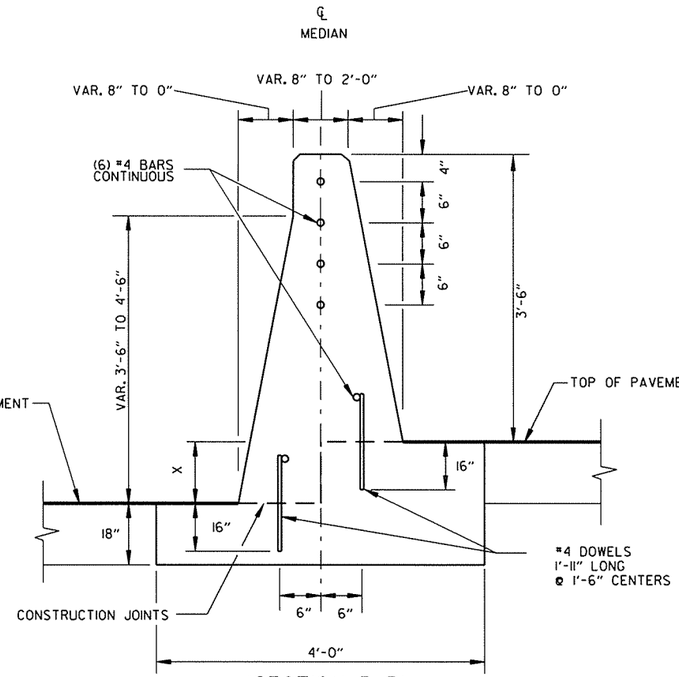
PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE B) TRANSITION



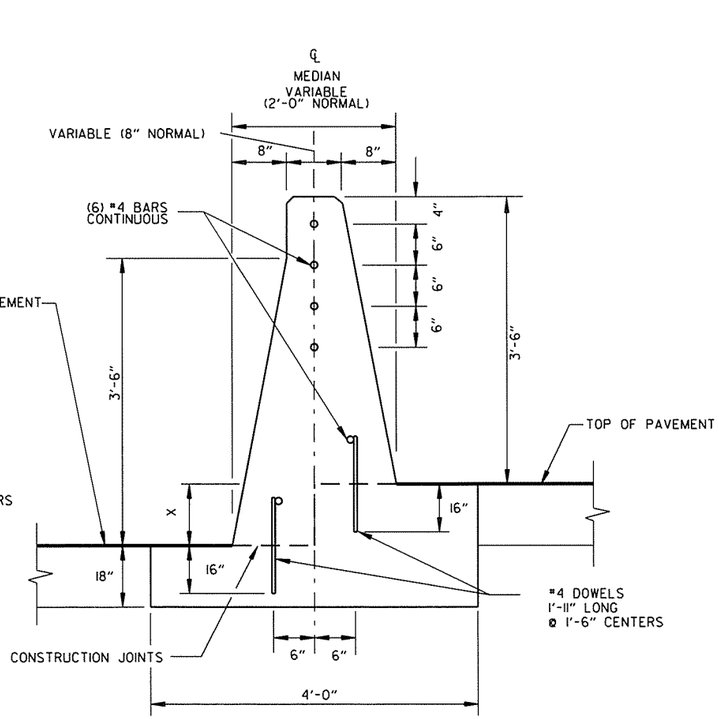
CONTRACTION JOINT DETAIL



(SECTION A-A)
CONCRETE BARRIER WALL (MEDIAN TYPE SP-3)
X = 0'-0" TO 1'-0" MAX.



(SECTION B-B)
CONCRETE BARRIER WALL
(MEDIAN TYPE B)
X = 0'-0" TO 1'-0" MAX



(SECTION C-C)
CONCRETE BARRIER WALL
(MEDIAN TYPE B)
X = 0'-0" TO 1'-0" MAX

TRANSITION FROM CONCRETE BARRIER WALL (MEDIAN TYPE B) TO CONCRETE BARRIER WALL (MEDIAN TYPE SP-3) TO MEDIAN FOUNDATION (OVERHEAD SIGN)
(NOT TO SCALE)

SPECIAL DETAILS

USER: ot5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\special_details\C4101SpecialDetails.dgn
PLOTTED: 6/23/2015 12:59 SCALE: 20:1 MODEL: SPECIAL DETAILS

GENERAL NOTES FOR MEDIAN BARRIER:

1. ALL BARRIER WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 631 OF THE STANDARD SPECIFICATIONS, 2014 EDITION.
2. ALL EXPOSED EDGES SHALL HAVE ¾" CHAMFERS.
3. CONTRACTION JOINTS SHALL BE CONSTRUCTED AT 15'-0" MAXIMUM SPACING IN TOP AND SIDES OF MEDIAN BARRIER AND SHALL BE FORMED IN FRESH CONCRETE.
4. CONTRACTION JOINTS ARE NOT PERMITTED AT THE DOWEL BAR LOCATIONS.
5. MAINTAIN 3" CLEARANCE ON FOOTING REINFORCEMENT AND 2" CLEARANCE ON ALL OTHER REINFORCEMENT.

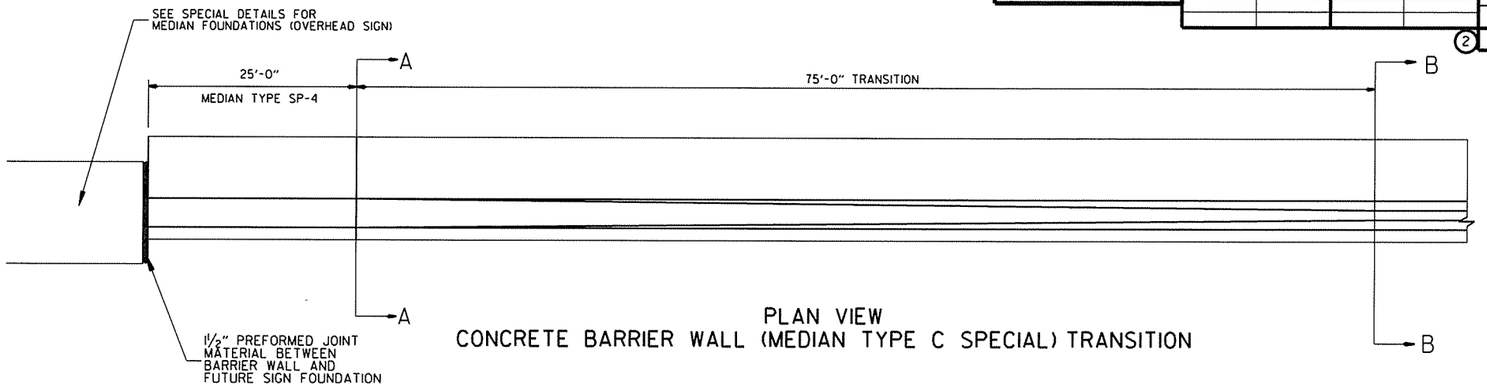
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

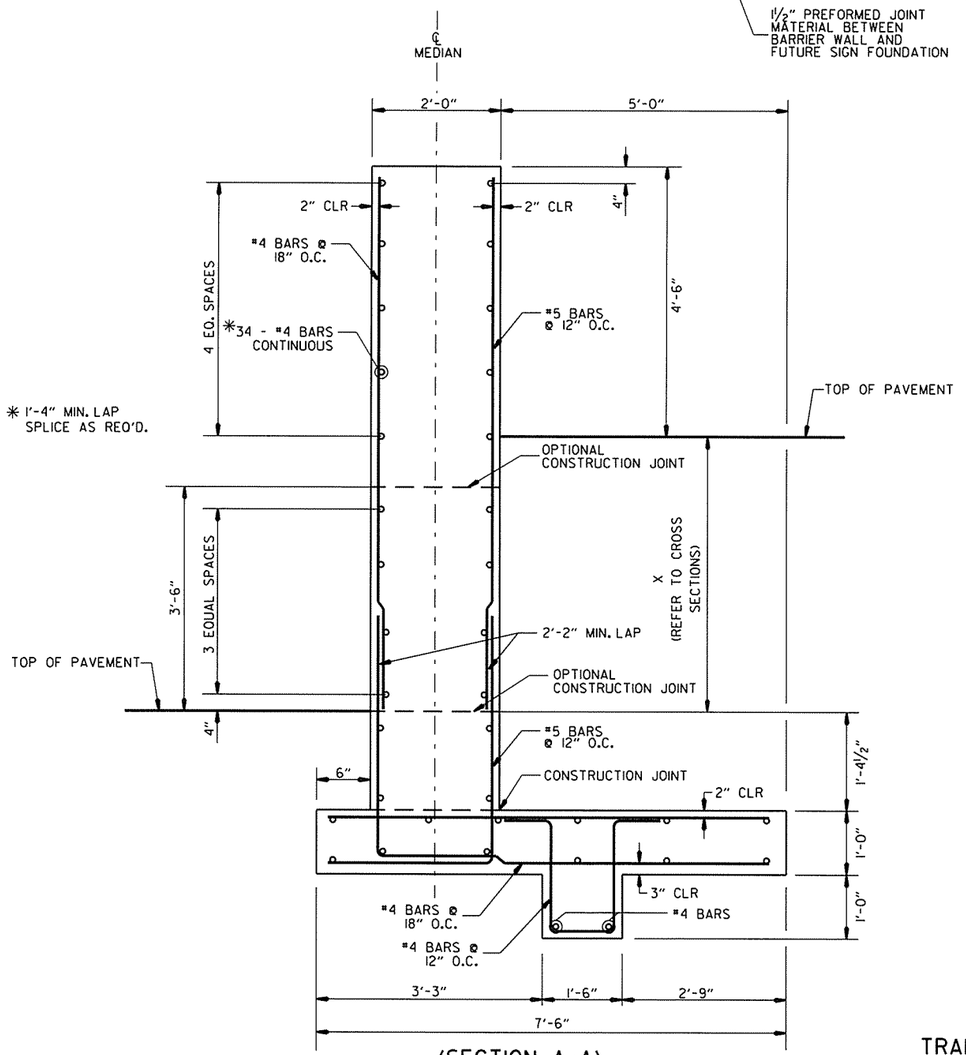
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	13	234

(2) SPECIAL DETAILS

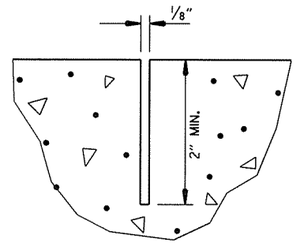
STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15



PLAN VIEW
CONCRETE BARRIER WALL (MEDIAN TYPE C SPECIAL) TRANSITION



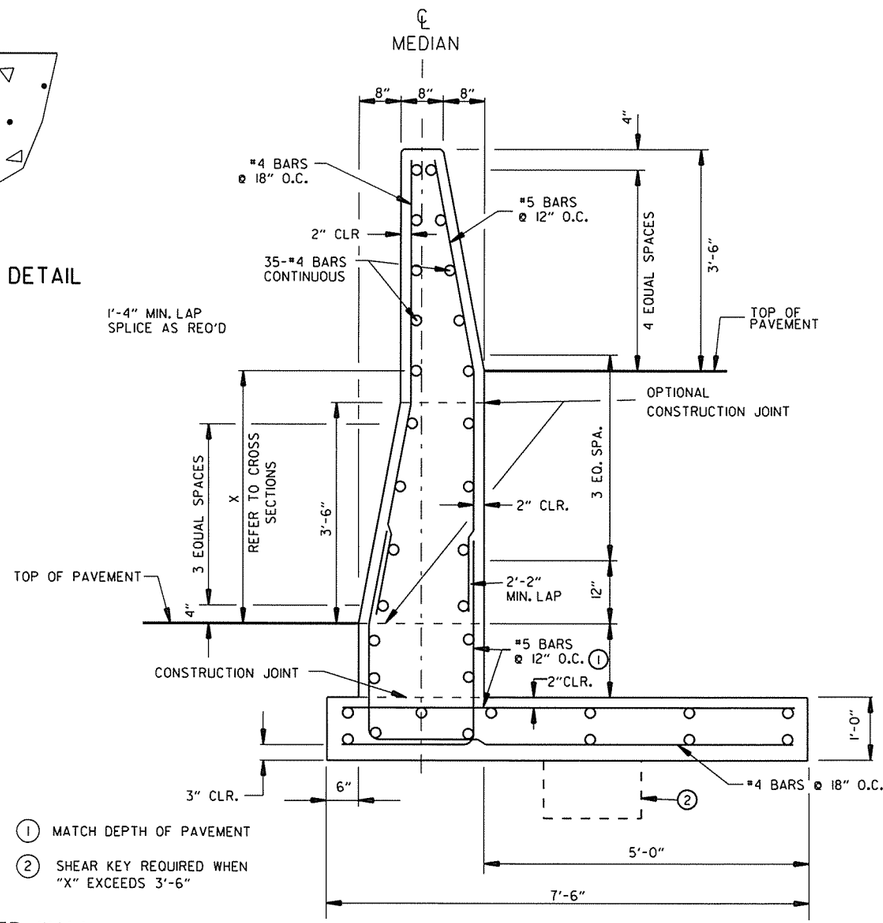
(SECTION A-A)
CONCRETE BARRIER WALL
(MEDIAN TYPE SP-4)
X = 5'-0" TO 6'-0" MAX.



CONTRACTION JOINT DETAIL

TRANSITION FROM CONCRETE BARRIER WALL
(TYPE C SPECIAL) TO CONCRETE BARRIER WALL
(MEDIAN TYPE SP-4) TO MEDIAN FOUNDATION
(OVERHEAD SIGN)

(NOT TO SCALE)



(1) MATCH DEPTH OF PAVEMENT

(2) SHEAR KEY REQUIRED WHEN "X" EXCEEDS 3'-6"

(SECTION B-B)
CONCRETE BARRIER WALL
(MEDIAN TYPE C SPECIAL)
X = 5'-0" TO 6'-0" MAX

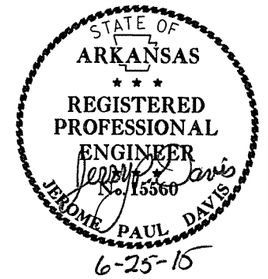
SPECIAL DETAILS

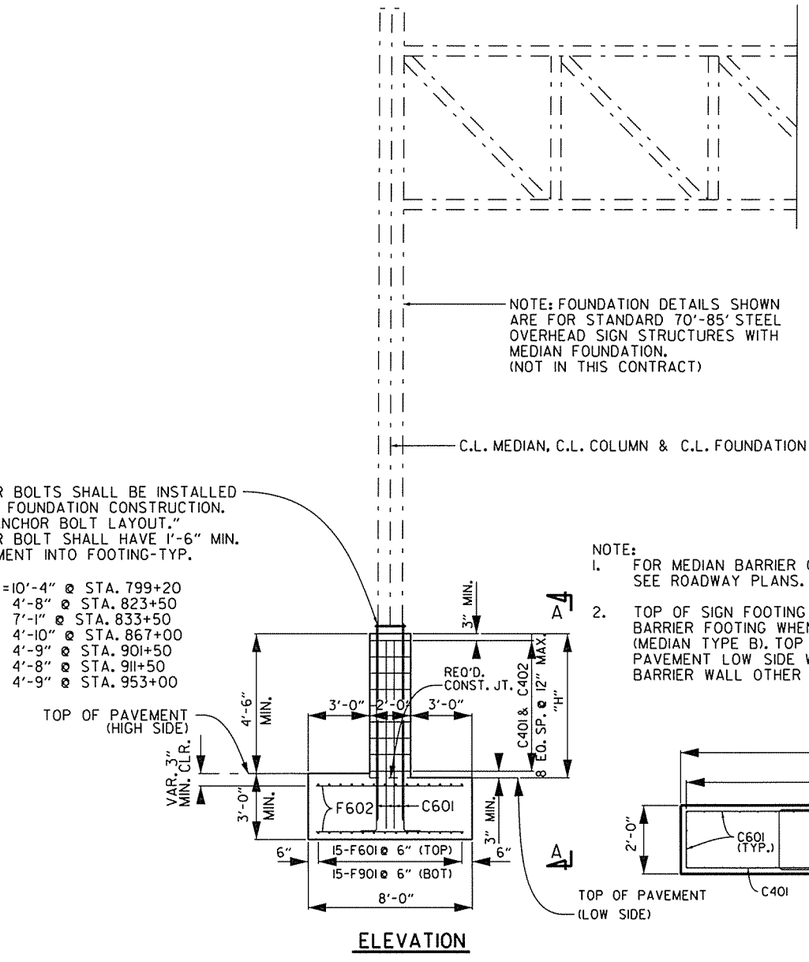
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PLOTTED: 4/16/2015 08:27 SCALE: 201

Crafton, Tull & Associates Inc.

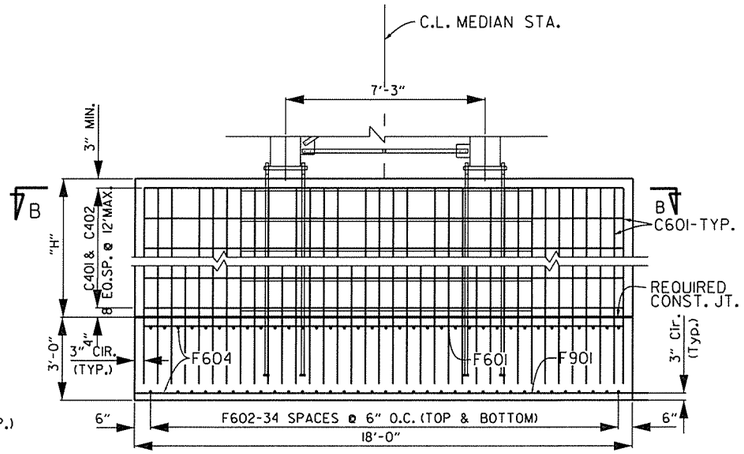
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C41101	14	234

(2) SPECIAL DETAILS



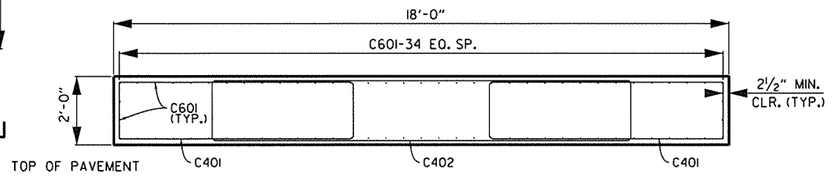


ELEVATION



VIEW A-A

NOTE:
1. FOR MEDIAN BARRIER ON EITHER SIDE OF FOUNDATION, SEE ROADWAY PLANS.
2. TOP OF SIGN FOOTING SHALL MATCH TOP OF MEDIAN BARRIER FOOTING WHEN CONNECTING TO CONCRETE BARRIER WALL (MEDIAN TYPE B). TOP OF SIGN FOOTING SHALL MATCH TOP OF PAVEMENT LOW SIDE WHEN CONNECTING TO TYPES OF CONCRETE BARRIER WALL OTHER THAN CONCRETE BARRIER WALL (MEDIAN TYPE B).



SECTION B-B

GENERAL NOTES:

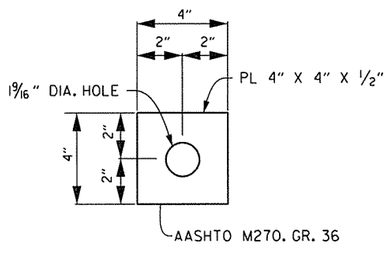
FOUNDATION MATERIALS AND STRENGTHS:

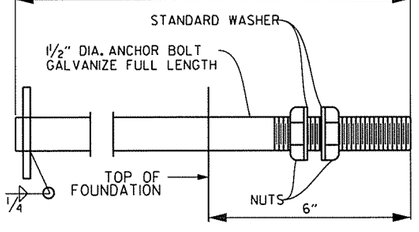
CLASS S CONCRETE F'C= 3,500 PSI
REINFORCING STEEL (GRADE 60, AASHTO M 31 OR M 322, TYPE A) FY= 60,000 PSI

ANCHOR BOLTS SHALL COMPLY WITH AASHTO M 314, GRADE 55 INCLUDING SUPPLEMENTARY REQUIREMENT S1, AND GALVANIZED ACCORDING TO SUBSECTION 807.07. NUTS FOR BOLTS SHALL BE AS SPECIFIED IN SECTION 807.07.

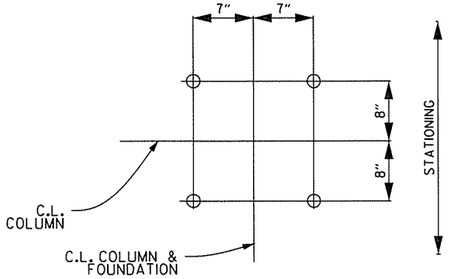
SHORING MAY BE REQUIRED TO PROTECT EXISTING SHOULDERS DURING EXCAVATION. ANY SHORING REQUIRED SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS IN THE CONTRACT.

PAYMENT FOR CLASS S CONCRETE, REINFORCING STEEL, EXCAVATION, ANCHOR BOLTS, NUTS, WASHERS, AND FOR ALL OTHER MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE CONSIDERED SUBSIDIARY TO THE PAY ITEM "OVERHEAD SIGN STRUCTURE FOUNDATION."





ANCHOR BOLT DETAIL



ANCHOR BOLT LAYOUT

MARK	NO. REQ'D	LENGTH	P.D.	BENDING DIAGRAMS
				DIMENSIONS ARE OUT TO OUT OF BARS
C401	14	17'-8"	3"	7'-0", 1'-7", 45, 5" (TYP.) — C401
C402	7	24'-8"	3"	10'-6", 1'-7", 45, 5" (TYP.) — C402
C601	74	10'-2"	4½"	
F601	15	17'-6"	Str.	
F602	70	7'-6"	Str.	
F901	15	17'-6"	Str.	
				*9'-3", 12" — C602

*APPROXIMATE QUANTITIES FOR FOUNDATION (FOR INFORMATION ONLY)

CLASS S CONCRETE (CU. YDS.)	REINFORCING STEEL (LBS.)	EXCAVATION (CU. YDS.)
25.0	3490	28.1

* NOTE: ANCHOR BOLT LENGTH, BAR LIST AND QUANTITIES BASED ON 6'-9" COLUMN HEIGHT. CONTRACTOR SHALL MAKE APPROPRIATE ADJUSTMENTS FOR OTHER COLUMN HEIGHTS.

DETAILS FOR MEDIAN FOUNDATIONS (OVERHEAD SIGN)

SPECIAL DETAILS

USER: at5106
DESIGN FILE: G:\13106000.412\toWagon\TRANSP\dgn\special_details\CA1101SpecialDetails.dgn
PLOTTED: 6/23/2015 12:59
SCALE: 201
MODEL: SPECIAL DETAILS

TEMPORARY EROSION CONTROL GENERAL NOTES:

THE QUANTITIES AND LOCATIONS OF THE TEMPORARY EROSION CONTROL DEVICES SHOWN IN THE PLANS ARE ESTIMATED AND MAY BE ALTERED IF AND WHERE DIRECTED BY THE ENGINEER TO MAXIMIZE THEIR EFFECTIVENESS. THE DEVICES ARE TO BE INSTALLED IN AN AREA ONLY WHEN THE SOIL DISTURBING ACTIVITY IN THAT AREA BEGINS.

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	15	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
6-24-15
JEROME PAUL DAVIS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

RAMP 4
RAMP 3
RAMP 2
U.S. HWY. 412
770
775
780
785
790
795
765
N00°11'39"E
N51°39'12"E
P.I. 776+54.50
℄ MEDIAN
12"
12"
12"
P.T. 788+46.90
Drop Inlet
OVERHEAD POWERLINE
STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn
PLOTTED: 6/23/2015 13:02
SCALE: 100:1
MODEL: EROSION CONTROL DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	16	234

2 TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

795 800 805 810 815 820 825

P.C. 796+34.71

P.T. 812+90.98

N51°39'12"E

N01°57'55"E

℄ MEDIAN

APPROXIMATE SPECIAL FLOOD HAZARD AREA

WEIGH STATION

OVERHEAD POWER LINE

CONCRETE DRIVE

CONCRETE DRIVE

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: a1506
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\erosion\rCAII0I_EC.dgn
PLOTTED: 4/16/2015 09:00
SCALE: 100:1
MODEL: EROSION CONTROL DETAILS

G:\13106000_412toWagon\TRANSP\dgn\erosion\rCAII0I_EC.dgn 4/16/2015 09:00

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	17	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
4-16-15
JEROME PAUL DAVIS

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

825 830 835 840 845 850 855

OVERHEAD POWERLINE

P.C. 828+37.93

P.T. 841+46.61

P.I. 834+95.13

℄ MEDIAN

NOI°57'55"E

N 11°07'18"W

RAMP 4

RAMP 1

ELM SPRINGS RD.

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000-412toWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn
PLOTTED: 4/16/2015 09:01
SCALE: 1001
MODEL: EROSION CONTROL DETAILS

G:\13106000_412toWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn 4/16/2015 09:01

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	18	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
4-16-15

RAMP 3
RAMP 2
855
860
865
870
875
880
885
OVERHEAD POWERLINE
℄ MEDIAN
N11°07'18"W
N02°02'12"E
P.I. 881+07.81
P.C. 874+46.99
DUCTILE IRON
PINNACLE WATER

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: a1506
DESIGN FILE: G:\13106000.412\oWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn
PLOTTED: 4/16/2015 09:01
MODEL: EROSION CONTROL DETAILS
SCALE: 100:1

G:\13106000.412\oWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn 4/16/2015 09:01

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	19	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15

885 890 895 900

OVERHEAD POWER LINE

STEEL GAS CONTINUES WEST ALONG

HIGH PRESSURE GAS LINE

P.T. 887+62.82

℄ MEDIAN

+00 +10 E-5 E-7 E-6 +97 N02°02'12"E +96

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

900 905 910 915

℄ MEDIAN

N02°02'12"E

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: a1506
DESIGN FILE: G:\13106000.412\eWagon\TRANSP\dgn\erosion\rCAII01_EC.dgn
PLOTTED: 4/16/2015 09:01
MODEL: EROSION CONTROL DETAILS
SCALE: 100:1

G:\13106000.412\eWagon\TRANSP\dgn\erosion\rCAII01_EC.dgn 4/16/2015 09:01

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	20	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

915 920 925 930

OVERHEAD POWERLINE

+00 E-6 +00 E-7 E-7 +00 +00 E-5 N02°02'12"E +00 +10 E-7 E-6 E-7 +00 +24 E-7 +00 E-5 +00 E-7 ℄ MEDIAN +00 E-6 +00 +10 E-7 E-5 +00 E-6 +00 E-7 +00 E-5 N02°02'12"E E-7 +96

P.C. 924+14.15

REVISIONS

DATE OF REVISION	REVISION

LEGEND

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

APPROXIMATE SPECIAL FLOOD HAZARD AREA

930 935 940 945

P.T. 930+32.50

N02°02'12"E N14°21'22"E +10 +00 E-7 E-6 +00 E-5 +00 E-7 +00 +10 E-7 E-6 +00 +10 E-7 E-5 ℄ MEDIAN +00 +10 E-7 E-6 +00 E-7 +00 +10 E-7 E-6 +72 E-7 +47 E-7 +00 +72 +00 +10 E-7 E-6 +00 N14°21'22"E +00 E-5 E-7 +96

P.T. 936+46.09

+57.36 300' LANE TAPER & SHLDR. TRENCHING & PREP.

+97.29 300' LANE TAPER & SHLDR. TRENCHING & PREP.

APPROXIMATE SPECIAL FLOOD HAZARD AREA

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: a1506
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\erosion\rCAIIOI_EC.dgn
PLOTTED: 4/16/2015 09:01
MODEL: EROSION CONTROL DETAILS
SCALE: 100:1

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	21	234

(2) TEMPORARY EROSION CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
4-16-15

APPROXIMATE SPECIAL FLOOD HAZARD AREA

SPRING CREEK

APPROXIMATE SPECIAL FLOOD HAZARD AREA

OVERHEAD POWER LINE

945 300' LANE TAPER & SHLDR. TRENCHING & PREP. +57.36

SILT FENCE= 104 LIN. FT.

950

300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP. +13.62 +13.62

+53.80

955

RAMP 4

960

℄ MEDIAN

N14°21'22"E

+20

300' LANE TAPER & SHLDR. TRENCHING & PREP. +97.29

+57.65 300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP. +57.65

RAMP 1

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

RAMP 4

960 965 970 975

N14°21'22"E

℄ MEDIAN

+97

STA. 969+46.06
END JOB CA1101
(LOG MILE 75.21)

WAGON WHEEL RD.

RAMP 1

STAGE 1
TEMPORARY EROSION CONTROL DETAILS

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\erosion\rCA1101_EC.dgn
PLOTTED: 4/16/2015 15:27
SCALE: 100:1
MODEL: EROSION CONTROL DETAILS

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	22	234

(2) MAINTENANCE OF TRAFFIC DETAILS

CONSTRUCTION SEQUENCE:

INSTALL ADVANCE WARNING SIGNS AT THE LOCATIONS LISTED ON THE ADVANCE WARNING DETAIL. INSTALL END ROAD WORK SIGNS AND SPEED LIMIT SIGNS AT THE END OF JOB AS SHOWN ON THE ADVANCE WARNING DETAIL. INSTALL ROAD WORK AHEAD (W20-1) SPEED LIMIT SIGN AND END ROAD WORK (G20-2) ON RAMPS AS SHOWN ON THE ADVANCE WARNING DETAIL.

STAGE IA:
CONSTRUCT SHOULDER TRENCHING FOR MOT TRAFFIC SHIFT AS FOLLOWING.
REFER TO SPECIAL DETAILS FOR SHOULDER TRENCHING,
FROM STA. 943+97 TO STA. 946+97 ON RML,
FROM STA. 950+58 TO STA. 953+58 ON RML,
FROM STA. 943+57 TO STA. 946+57 ON LML, AND
FROM STA. 950+14 TO STA. 953+14 ON LML.

STAGE IB:
REMOVE EXISTING PAVEMENT MARKINGS.
INSTALL CONSTRUCTION PAVEMENT MARKINGS AND PRECAST CONCRETE BARRIERS AS SHOWN IN STAGE IB MAINTENANCE OF TRAFFIC DETAILS.

TRAFFIC WILL BE MAINTAINED ON EXISTING PAVEMENT IN (2) 11'-0" LANES EXCEPT WHEN CROSSING THE EXISTING BRIDGE.
REFER TO STA. 943+97 TO STA. 953+58 ON RML.
REFER TO STA. 943+57 TO STA. 953+14 ON LML.

CONSTRUCT CONCRETE BARRIER WALL AND PAVEMENT WIDENING IN THE MEDIAN OF I-49.
CONSTRUCT THE PORTION OF BRIDGE ON BOTH LML & RML.

REMOVE PRECAST CONCRETE BARRIER WALL.

PLACE LANE CLOSURE DEVICES ON RIGHT AND LEFT MAIN LANES AS SHOWN IN THE MAINTENANCE OF TRAFFIC WORK ZONE - LANE CLOSURE DETAIL IF AND WHEN DIRECTED BY THE ENGINEER.

REFER TO "MAINTENANCE OF TRAFFIC" SPECIAL PROVISION.

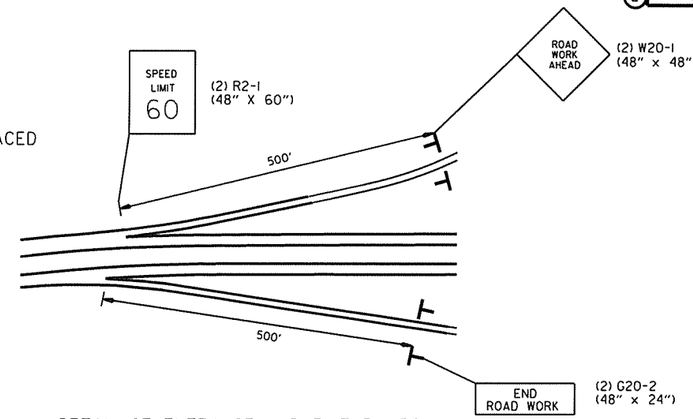
STAGE 2:
MILL AND A.C.H.M. INLAY OPERATIONS SHALL MAINTAIN A SINGLE LANE OF TRAFFIC ON THE EXISTING ROADWAY IN THE DIRECTION THE OPERATIONS ARE OCCURRING AS A MINIMUM.

A TWO (2) MILE LANE CLOSURE WILL BE PERMITTED IN THE OPPOSITE MAIN LANES FOR CONSTRUCTION OTHER THAN MILL AND INLAY OPERATIONS AS LONG AS NO OTHER LANE CLOSURE EXISTS IN THAT SET OF LANES.

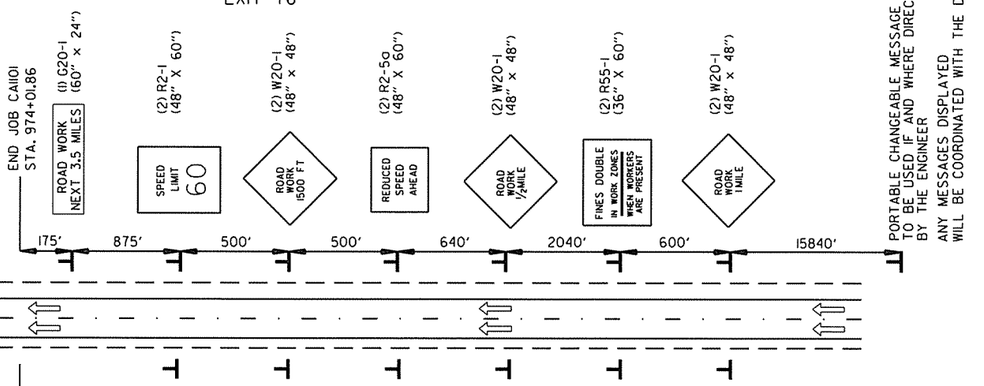
FINAL LIFT OF ASPHALT ON WIDENED PORTION OF MAIN LANES SHALL BE PLACED WITH EXISTING INSIDE MAIN LANE MILL AND INLAY OPERATIONS.

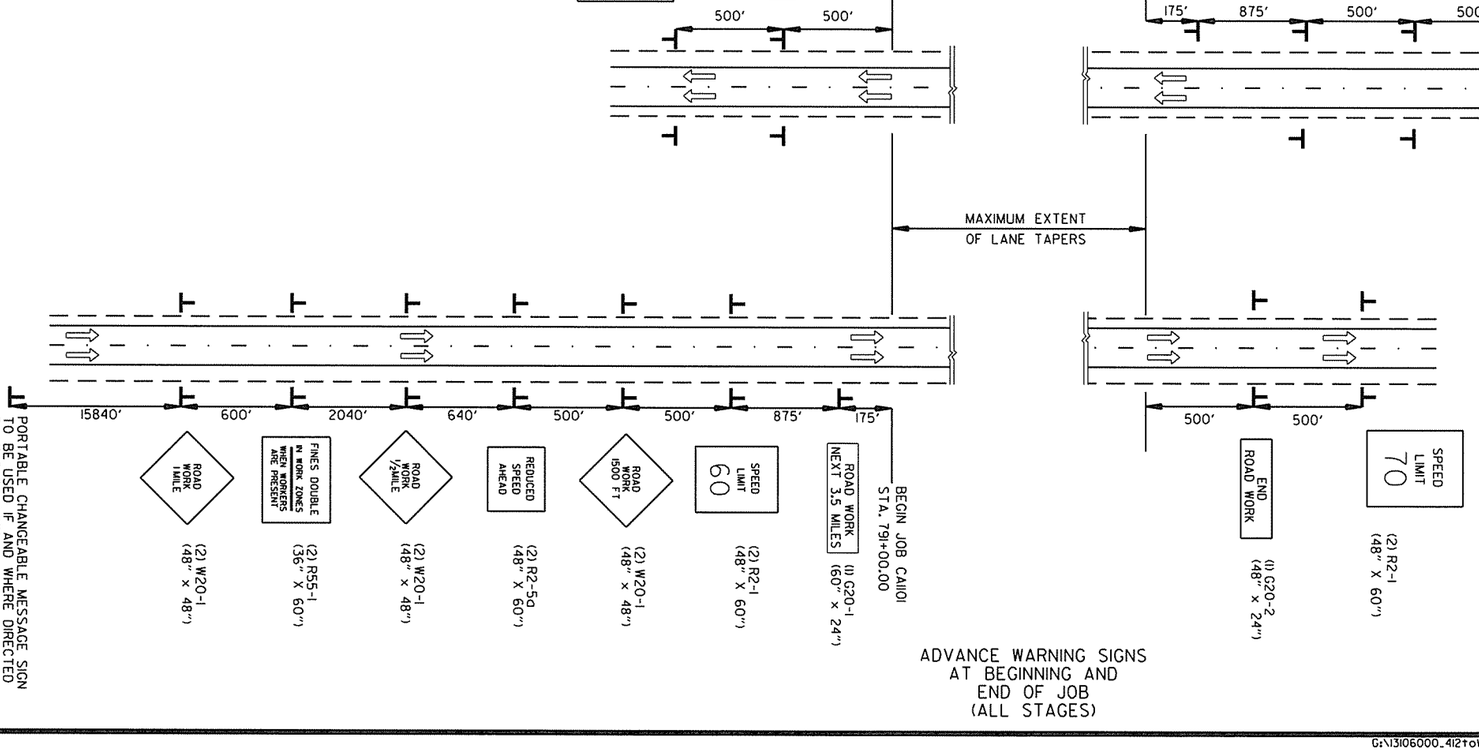
PLACE PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKING DETAILS.

REFER TO "MAINTENANCE OF TRAFFIC" SPECIAL PROVISION.



DETAIL OF ENTRANCE AND EXIT RAMPS
(ALL STAGES)
EXIT 72
EXIT 73
EXIT 76





ADVANCE WARNING SIGNS
AT BEGINNING AND
END OF JOB
(ALL STAGES)

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

MAINTENANCE OF TRAFFIC DETAILS
ADVANCE WARNING

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rCA1101_MOT.dgn
PLOTTED: 4/16/2015 14:16 SCALE: 1001 MODEL: MOT ALL STAGES DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	23	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

19 TRAFFIC DRUMS

7960′ 7880′ 5280′ 3960′ 3360′ 2640′ 2000′ 1500′ 1000′ 500′

TRAFFIC DRUMS @ 60′ O.C.
840′ TAPER FOR LANE CLOSURE

TRAFFIC DRUMS @ 100′ O.C.
500′ STABILIZING ZONE

MATCH LINE A

(2) W20-1 (48″ X 48″) — ROAD WORK AHEAD
(2) W20-5 (48″ X 48″) — RIGHT LANE CLOSED 1 MILE
(1) [SPECIAL] (48″ X 48″) — MESSAGE BOARD
(2) R4-1 (48″ X 60″) — DO NOT PASS
(2) W20-5 (48″ X 48″) — RIGHT LANE CLOSED 1/2 MILE
(2) R2-5A (48″ X 60″) — REDUCED SPEED AHEAD
(2) W20-5 (48″ X 48″) — RIGHT LANE CLOSED 1500 FT
(2) R4-1 (48″ X 60″) — DO NOT PASS
(2) R2-1 (48″ X 60″) — SPEED LIMIT 60
(2) W4-2 RT. (48″ X 48″) AS DIRECTED

ADVANCE WARNING ARROW PANEL AT BEG. OF TAPER

(3) WI-6 (60″ X 30″)
EVENLY SPACED ON TAPER

NOTE:
MAINTAIN MINIMUM 12′ LANE WIDTH
ON LANE REMAINING OPEN.

* PORTABLE CHANGEABLE MESSAGE SIGN TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

* ANY MESSAGES DISPLAYED WILL BE COORDINATED WITH THE DISTRICT.

SPEED LIMIT SIGNS ARE ALSO PROVIDED FOR PLACEMENT PAST ENTRANCE RAMPS WITHIN THE WORK ZONE.

RT. LANE CLOSURE

MATCH LINE A

WORK AREA
TRAFFIC DRUMS @ 60′ O.C. IN CLOSED LANE

TRAFFIC DRUMS @ 60′ O.C. = 22 EACH
1320′ ACCEL. LANE FOR WORK TRUCKS

SPEED LIMIT 70

(2) R2-1 (48″ X 60″)

DIVERSION FOR RT. LANE WORK ZONE

(3) WI-6 (60″ X 30″)
EVENLY SPACED ON TAPER

MATCH LINE A

TRAFFIC DRUMS @ 60′ O.C.
720′ DIRECTED LANE TO CLEAR LT. LANES WORK AREA

BUFFER MIN. 500′
TRAFFIC DRUMS @ 100′ O.C. = 5 EACH

WORK AREA
TRAFFIC DRUMS @ 60′ O.C. IN CLOSED LANE

TRAFFIC DRUMS @ 60′ O.C. = 22 EACH
1320′ ACCEL. LANE FOR WORK TRUCKS

NOTE:
MAINTAIN MINIMUM 12′ LANE WIDTH
ON LANE REMAINING OPEN.

26 TRAFFIC DRUMS

SPEED LIMIT 70

(2) R2-1 (48″ X 60″)

DIVERSION FOR LT. LANE WORK ZONE

MAINTENANCE OF TRAFFIC DETAILS
WORK ZONE - LANE CLOSURE

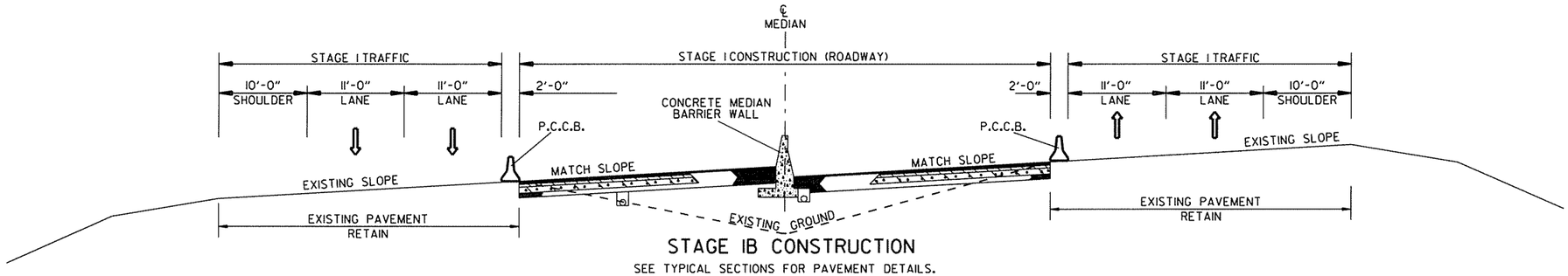
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PLOTTED: 4/16/2015 14:16
SCALE: 100:1
MODEL: MOT ALL STAGES DETAILS

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				6	ARK.			
				JOB NO.		CAIIOI	24	234

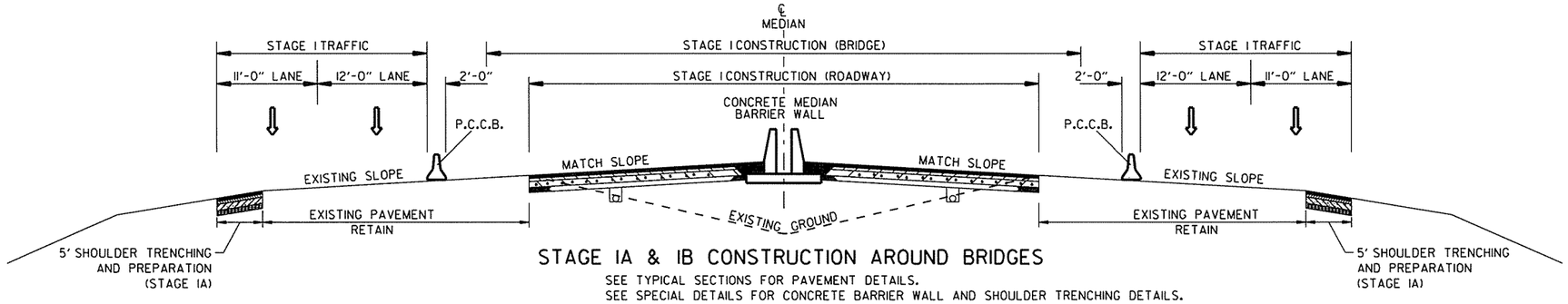
(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
6-24-15



STAGE IB CONSTRUCTION

SEE TYPICAL SECTIONS FOR PAVEMENT DETAILS.
SEE SPECIAL DETAILS FOR CONCRETE BARRIER WALL DETAILS.
SEE BRIDGE PLANS FOR ADDITIONAL INFORMATION.



STAGE IA & IB CONSTRUCTION AROUND BRIDGES

SEE TYPICAL SECTIONS FOR PAVEMENT DETAILS.
SEE SPECIAL DETAILS FOR CONCRETE BARRIER WALL AND SHOULDER TRENCHING DETAILS.
SEE BRIDGE PLANS FOR ADDITIONAL INFORMATION.

STAGE 1A & 1B CONSTRUCTION MAINTENANCE OF TRAFFIC DETAILS

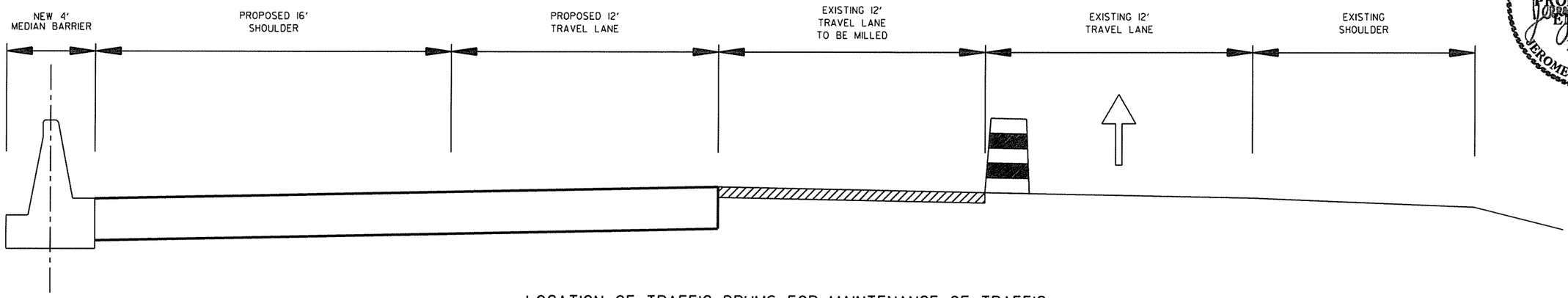
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Crafton, Tull & Associates Inc.

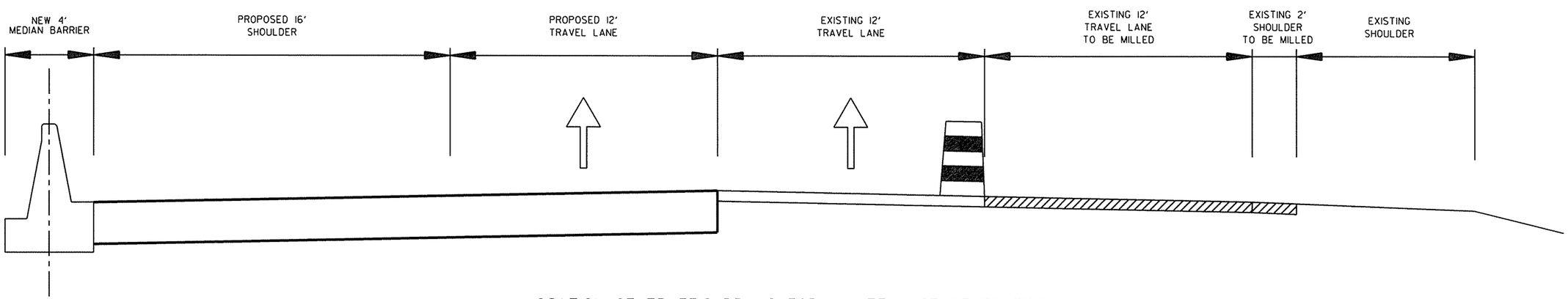
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				6	ARK.			
				JOB NO.		CA1101	25	234

2 MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS



LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
INSIDE LANE CLOSED FOR MILL AND OVERLAY
(SHOWN IN DIRECTION OF TRAFFIC)



LOCATION OF TRAFFIC DRUMS FOR MAINTENANCE OF TRAFFIC
OUTSIDE LANE CLOSED FOR MILL AND OVERLAY
(SHOWN IN DIRECTION OF TRAFFIC)

STAGE 2 CONSTRUCTION
MAINTENANCE OF TRAFFIC DETAILS

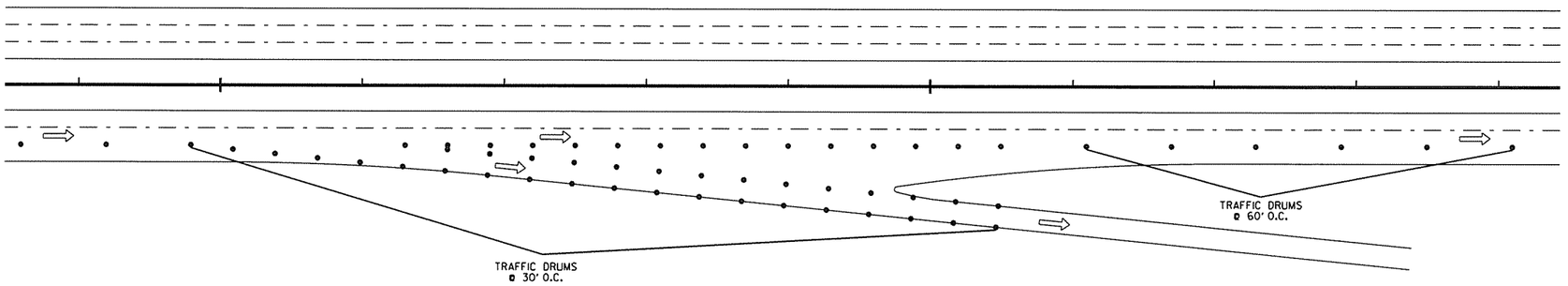
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SCALE: 100:1
MODEL: MOT ALL STAGES DETAILS

Crafton, Tull & Associates Inc.

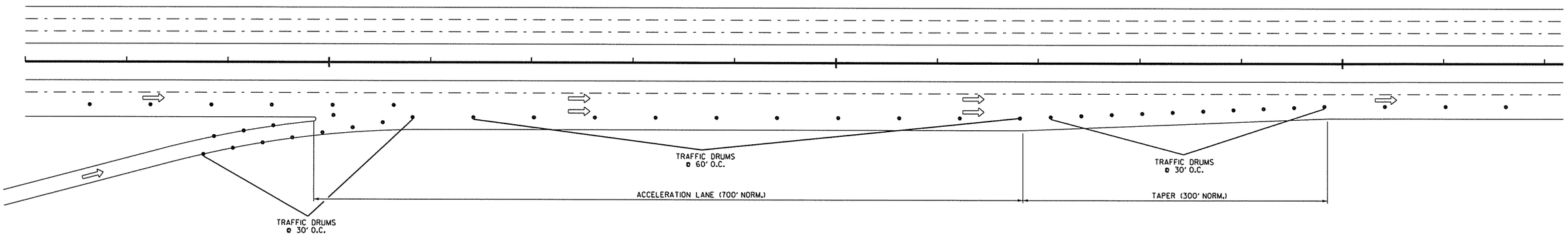
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				6	ARK.			
				JOB NO.		CAIIOI	26	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15



EXIT RAMP - TYPICAL TRAFFIC DRUM LAYOUT
OUTSIDE LANE CLOSURE



ENTRANCE RAMP - TYPICAL TRAFFIC DRUM LAYOUT
ACCELERATION LANE CLOSURE

EXIT 73:
NORTHBOUND EXIT = 40 TRAFFIC DRUMS
NORTHBOUND ENTRANCE = 17 TRAFFIC DRUMS

SOUTHBOUND EXIT = 40 TRAFFIC DRUMS
SOUTHBOUND ENTRANCE = 17 TRAFFIC DRUMS

EXIT 76:
NORTHBOUND EXIT = 40 TRAFFIC DRUMS

SOUTHBOUND ENTRANCE = 17 TRAFFIC DRUMS

STAGE 2 CONSTRUCTION
MAINTENANCE OF TRAFFIC
DETAIL OF RAMPS WITH LANE CLOSURE

USER: at5106
DESIGN FILE: G:\3106000_412toWagon\TRANSP\dgn\maint_of_traffic\rCAIIOI_MOT.dgn
PLOTTED: 4/16/2015 14:16 SCALE: 100:1 MODEL: MOT ALL STAGES 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.		CA1101	27	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

RAMP 4
U.S. HWY. 412
765
770
775
780
℄ MEDIAN

RAMP 3
785
790
795
+20
130' LANE TAPER
+50
53' P.C.C.B. TAPER
+97
17,271' P.C.C.B.
4" YELLOW CONSTRUCTION PAVEMENT MARKING
11'
11'
2'
N51°39'12"E
℄ MEDIAN
12'
12'
12'
2'
11'
11'
12'
TEMPORARY IMPACT ATTENUATION BARRIER
+90
+10
40' P.C.C.B. TAPER
60' P.C.C.B.
17,308' P.C.C.B.
100' SHOULDER TAPER
+20
TRAFFIC DRUMS @ 25' O.C.
+20
130' LANE TAPER
TRAFFIC DRUMS @ 60' O.C.
+50
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
12" TYP. STEEL
12" TYP. PLASTIC
RAMP 2
STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rCA1101_MOT.dgn
PLOTTED: 4/16/2015 09:32
SCALE: 100:1
MODEL: MOT STAGE 1DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	28	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

795 800 805 810

11' 11' 2' 2' 11' 11' 12'

P.C.C.B.

P.C.C.B.

4" YELLOW CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

℄ MEDIAN

2' 11' 11'

N51°39'12"E

N01°57'55"E

6" HIGH PRESSURE

810 815 820 825

11' 11' 2'

P.C.C.B.

4" YELLOW CONSTRUCTION PAVEMENT MARKING

℄ MEDIAN

N01°57'55"E

2' 11' 11'

P.C.C.B.

2' 11' 11' 12'

WEIGH STATION

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rCAIIOI_MOT.dgn
PLOTTED: 4/16/2015 09:32
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MODEL: MOT STAGE 1DETAILS

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	29	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15

825 830 835 840

4" YELLOW CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

℄ MEDIAN

2' 11' 11' 12'

N01°57'55"E

12' 11' 11' 2'

11' 11' 2'

RAMP 4

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

N01°57'55"E

N 11°07'18"W

2' 11' 11'

P.I. 834+95.13

N 45TH ST

RAMP 1

840 845 850 855

4" YELLOW CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

℄ MEDIAN

N11°07'18"W

11' 11' 2'

2' 11' 11'

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

ELM SPRINGS RD.

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: at5106
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MODEL: MOT STAGE 1DETAILS

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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.		C4110I	30	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 13560
4-16-15
JEROME PAUL DAVIS

855 860 865 870

RAMP 3

RAMP 2

℄ MEDIAN

N11°07'18"W

P.C.C.B.

4" YELLOW CONSTRUCTION PAVEMENT MARKING

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

11' 11' 12' 2'

870 875 880 885

6" DUCTILE IRON

SPRINDALE WATER

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rC4110I_MOT.dgn
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MODEL: MOT STAGE 1DETAILS

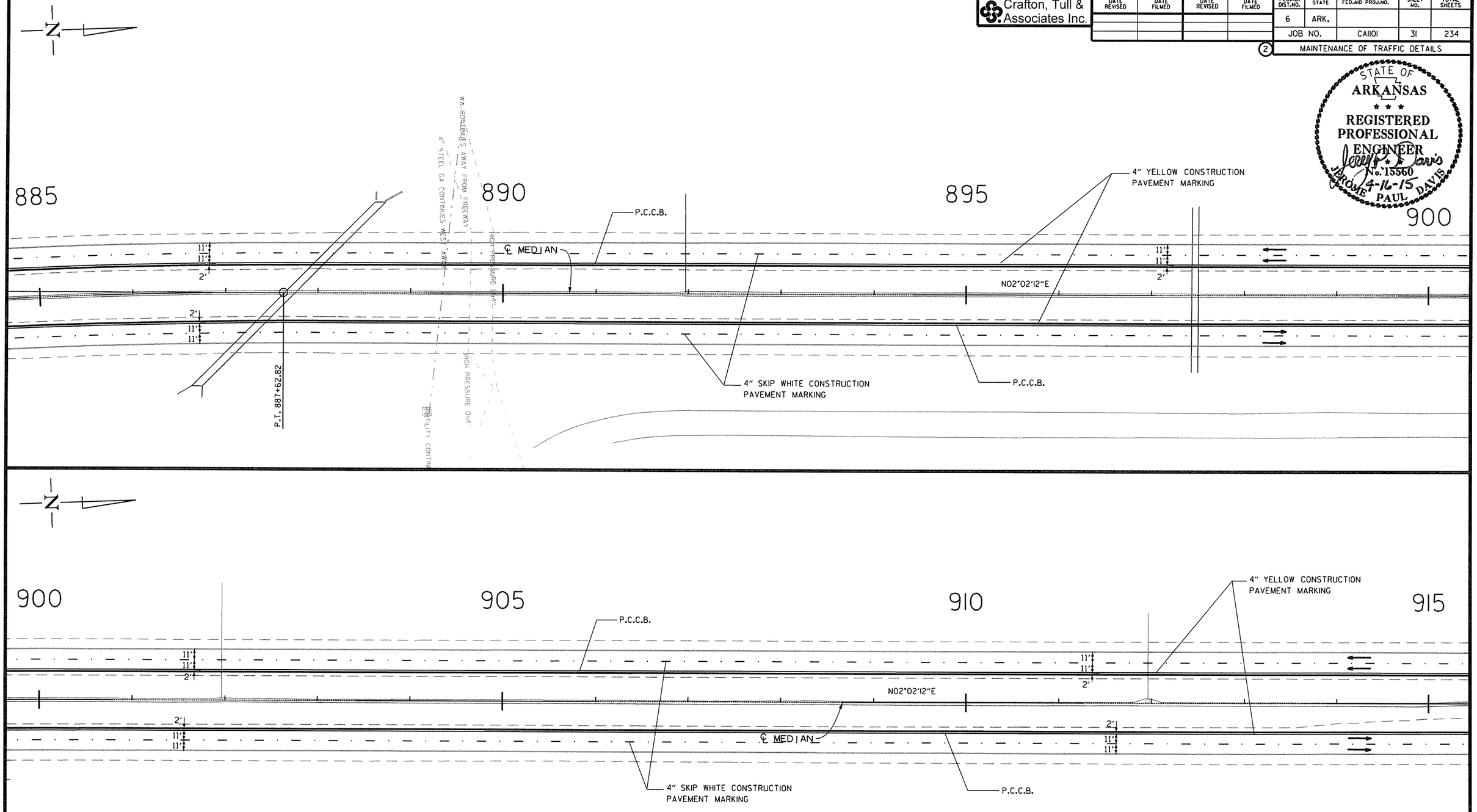
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C4110I	31	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
* * *
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 13560
4-16-15
JEROME PAUL DAVIS



STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rC4110I_MOT.dgn
PLOTTED: 4/16/2015 09:33
SCALE: 100:1
MODEL: MOT STAGE 1DETAILS

G:\13106000_412toWagon\TRANSP\dgn\maint_of_traffic\rC4110I_MOT.dgn 4/16/2015 09:33

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	32	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER.
JEROME PAUL DAVIS
No. 15560
6-24-15

915 920 925 930

4" YELLOWCONSTRUCTION PAVEMENT MARKING

P.C.C.B.

℄ MEDIAN

N02°02'12"E

11' 11' 2' 2' 11' 11' 2' 2' 11' 11'

P.C.C.B.

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

930 935 940 945

4" YELLOW CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

℄ MEDIAN

11' 11' 2' 2' 11' 11' 2' 2' 11' 11'

4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

P.C.C.B.

24" T.Y.S.STEEL

300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*

+57.36

N14°21'22"E

+97.29

300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*

* REFER TO SPECIAL DETAILS FOR SHOULDER TRENCHING CONSTRUCTED IN STAGE IA.

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

USER: a15106
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PLOTTED: 6/23/2015 13:04
SCALE: 100:1
MODEL: MOT STAGE 1DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	33	234

(2) MAINTENANCE OF TRAFFIC DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
6-24-15
JEROME PAUL DAVIS

945
300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*
+57.36
11'
12'
2'
4" YELLOW CONSTRUCTION PAVEMENT MARKING
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
950
+13.62
300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*
+13.62
+63.80
8" DOTTED WHITE CONSTRUCTION PAVEMENT MARKING
4" YELLOW CONSTRUCTION PAVEMENT MARKING
955
P.C.C.B.
RAMP 4
12'
11'
11'
N14°21'22"E
℄ MEDIAN
2'
12'
11'
300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*
+57.29
4" WHITE CONSTRUCTION PAVEMENT MARKING
4" WHITE REMOVABLE CONSTRUCTION PAVEMENT MARKING
4" WHITE CONSTRUCTION PAVEMENT MARKING
+57.65
300' LANE TAPER & OUTSIDE SHLDR. TRENCHING & PREP.*
+57.65
P.C.C.B.
RAMP 1
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING

* REFER TO SPECIAL DETAILS FOR SHOULDER TRENCHING CONSTRUCTED IN STAGE IA.

960
RAMP 4
17,271' P.C.C.B.
965
4" YELLOW CONSTRUCTION PAVEMENT MARKING
+46
130' LANE TAPER
TRAFFIC DRUMS @ 60' O.C.
60' P.C.C.B.
40' P.C.C.B. TAPER
+86
+26
100' SHOULDER TAPER
TRAFFIC DRUMS @ 25' O.C.
+26
970
TEMPORARY IMPACT ATTENUATION BARRIER
975
11'
11'
2'
17,308' P.C.C.B.
℄ MEDIAN
2'
11'
11'
12'
12'
12'
4" SKIP WHITE CONSTRUCTION PAVEMENT MARKING
STA. 969+46.06
END JOB CA1101
(LOG MILE 75.21)
53' P.C.C.B. TAPER
+49
180' LANE TAPER
+76
96+
WAGON WHEEL RD.
RAMP 1

STAGE 1B
MAINTENANCE OF TRAFFIC DETAILS

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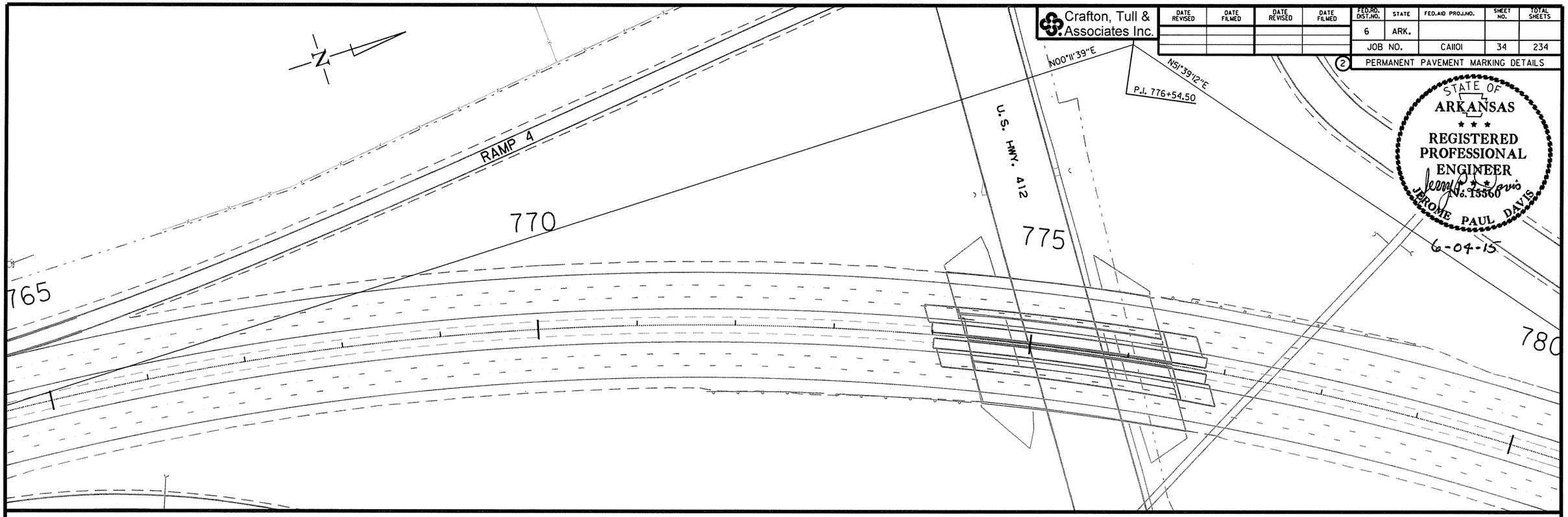
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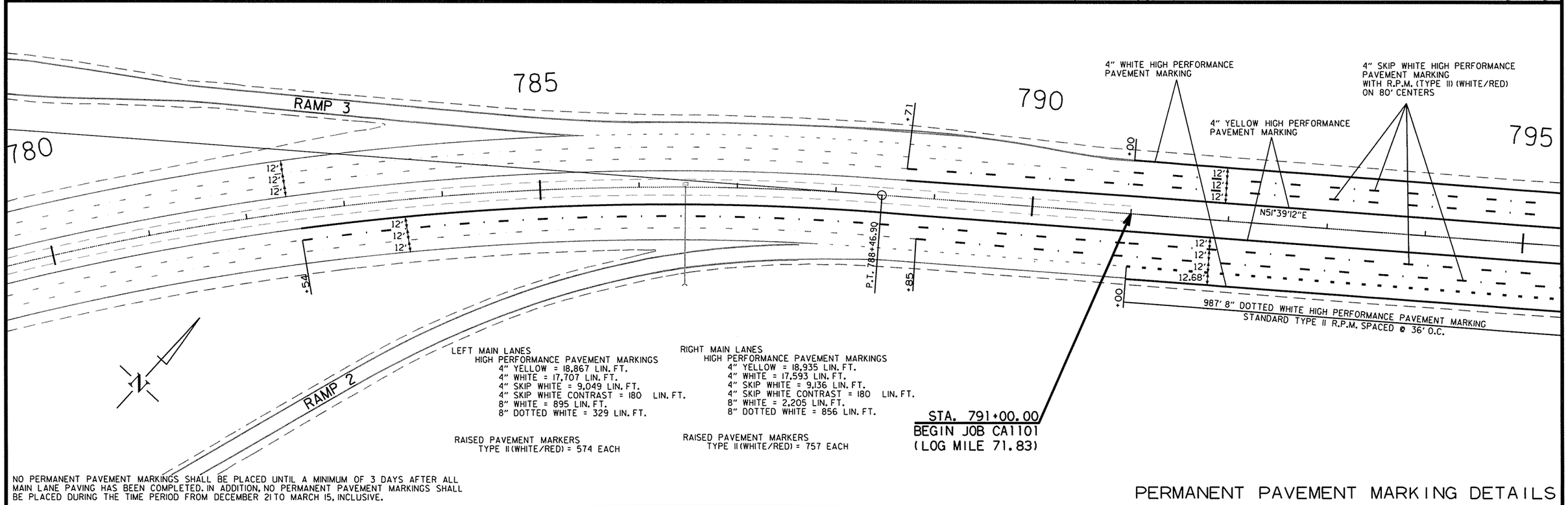
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.	CA1101		34	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15360
JEROME PAUL DAVIS
6-04-15





LEFT MAIN LANES
HIGH PERFORMANCE PAVEMENT MARKINGS
4" YELLOW = 18,867 LIN. FT.
4" WHITE = 17,707 LIN. FT.
4" SKIP WHITE = 9,049 LIN. FT.
4" SKIP WHITE CONTRAST = 180 LIN. FT.
8" WHITE = 895 LIN. FT.
8" DOTTED WHITE = 329 LIN. FT.

RAISED PAVEMENT MARKERS
TYPE II (WHITE/RED) = 574 EACH

RIGHT MAIN LANES
HIGH PERFORMANCE PAVEMENT MARKINGS
4" YELLOW = 18,935 LIN. FT.
4" WHITE = 17,593 LIN. FT.
4" SKIP WHITE = 9,136 LIN. FT.
4" SKIP WHITE CONTRAST = 180 LIN. FT.
8" WHITE = 2,205 LIN. FT.
8" DOTTED WHITE = 856 LIN. FT.

RAISED PAVEMENT MARKERS
TYPE II (WHITE/RED) = 757 EACH

STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)

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.

PERMANENT PAVEMENT MARKING DETAILS

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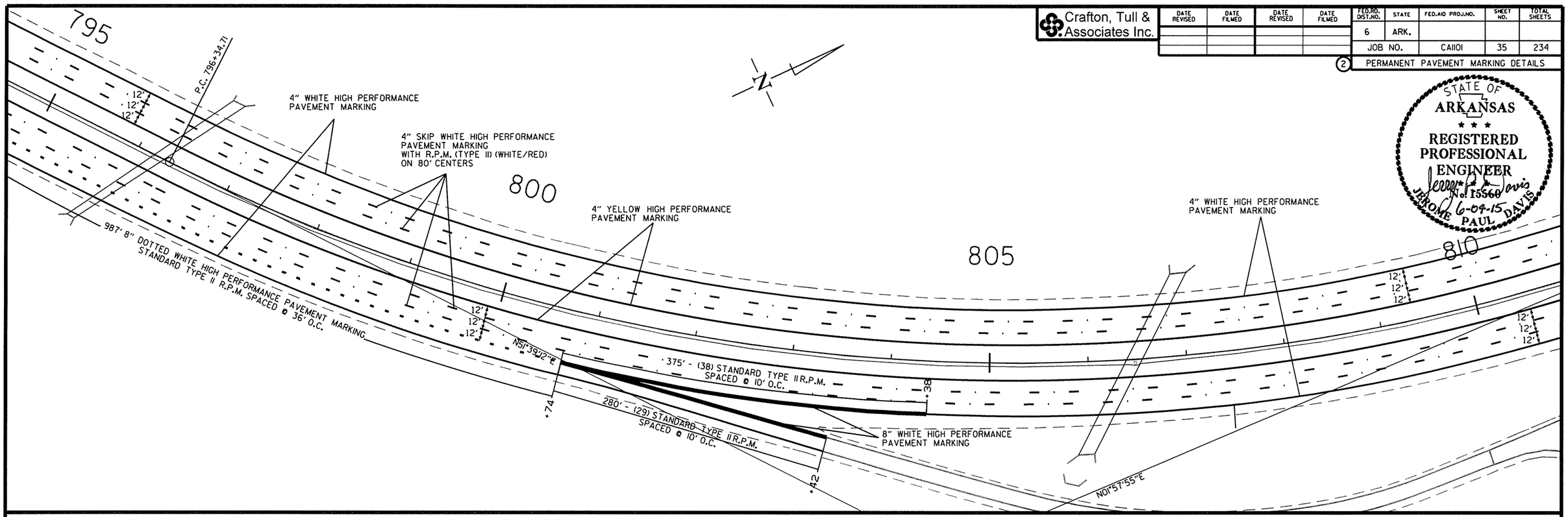
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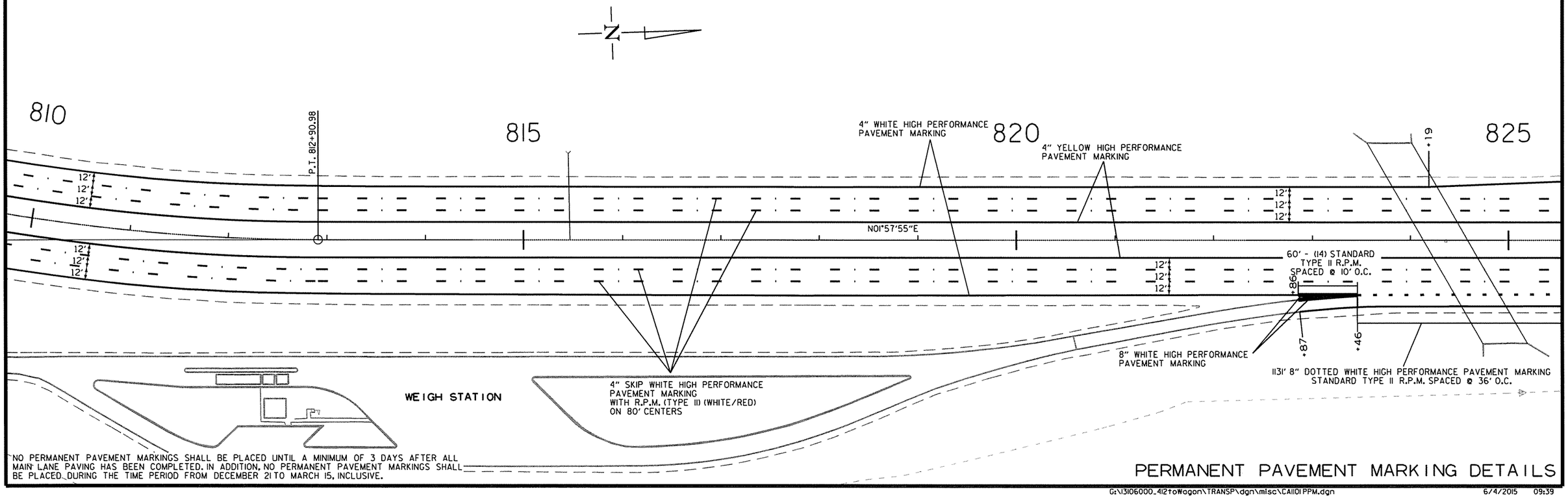
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	35	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
6-04-15
JEROME PAUL DAVIS





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.

PERMANENT PAVEMENT MARKING DETAILS

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	36	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
6-04-16
JEROME PAUL DAVIS

825 830 835 840

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

4" WHITE HIGH PERFORMANCE PAVEMENT MARKING

P.C. 828+37.93

+54

N01°57'55"E

539' 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING STANDARD TYPE II R.P.M. SPACED @ 36' O.C.

1131' 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING STANDARD TYPE II R.P.M. SPACED @ 36' O.C.

4" YELLOW HIGH PERFORMANCE PAVEMENT MARKING

86+

+55

RAMP 4

8" WHITE HIGH PERFORMANCE PAVEMENT MARKING

60' - (14) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

+69

N01°57'55"E

N 11°07'18"W 375' - (38) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

8" WHITE HIGH PERFORMANCE PAVEMENT MARKING

+43

+71

P.I. 834+95.13

280' - (29) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

RAMP 1

+41

N 45TH ST

840 845 850 855

P.T. 841+46.61

4" WHITE HIGH PERFORMANCE PAVEMENT MARKING

N11°07'18"W

4" YELLOW HIGH PERFORMANCE PAVEMENT MARKING

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

ELM SPRINGS RD.

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.

PERMANENT PAVEMENT MARKING DETAILS

USER: at5106
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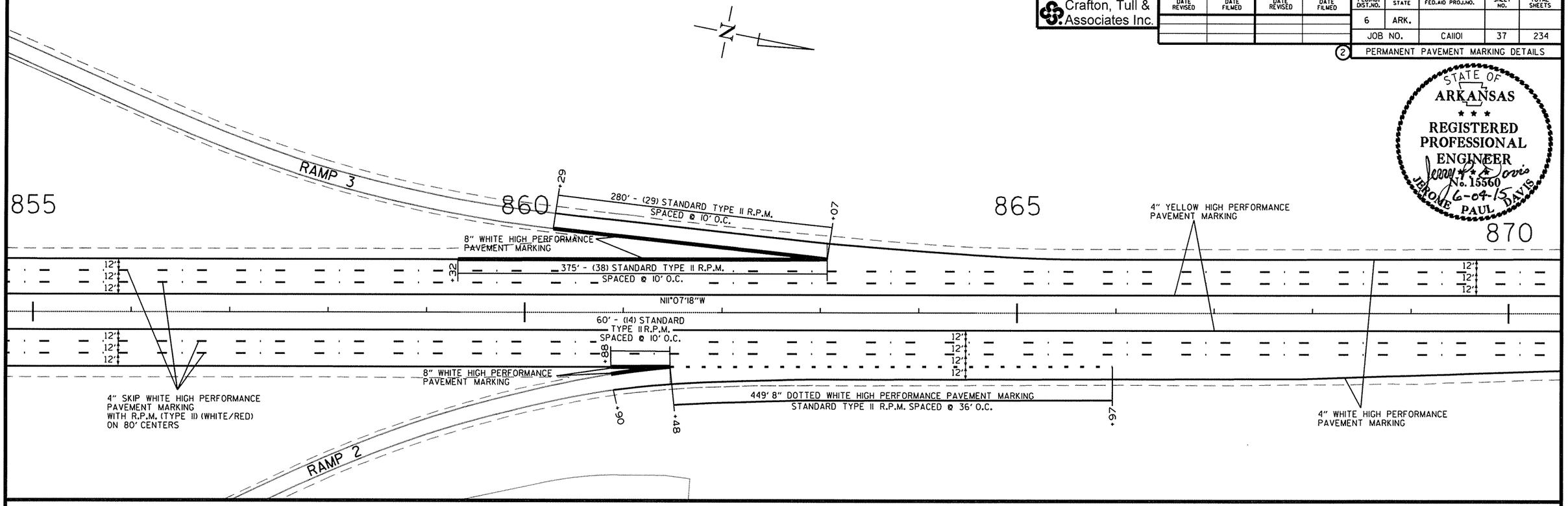
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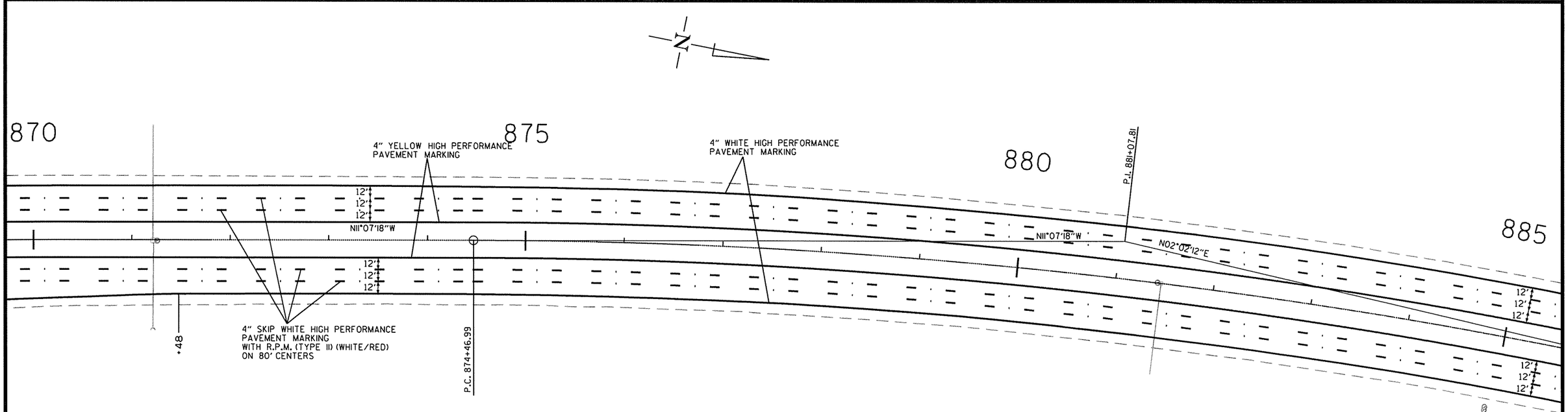
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	37	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
6-04-15
JEROME PAUL DAVIS





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.

PERMANENT PAVEMENT MARKING DETAILS

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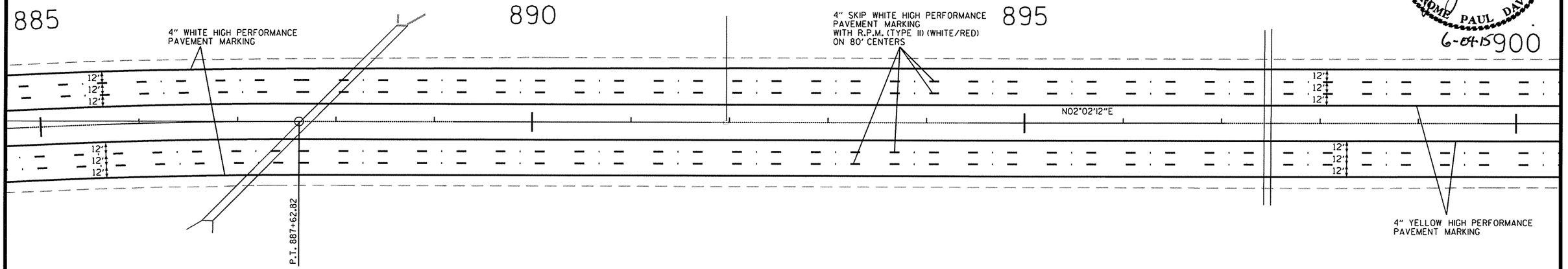
Crafton, Tull & Associates Inc.

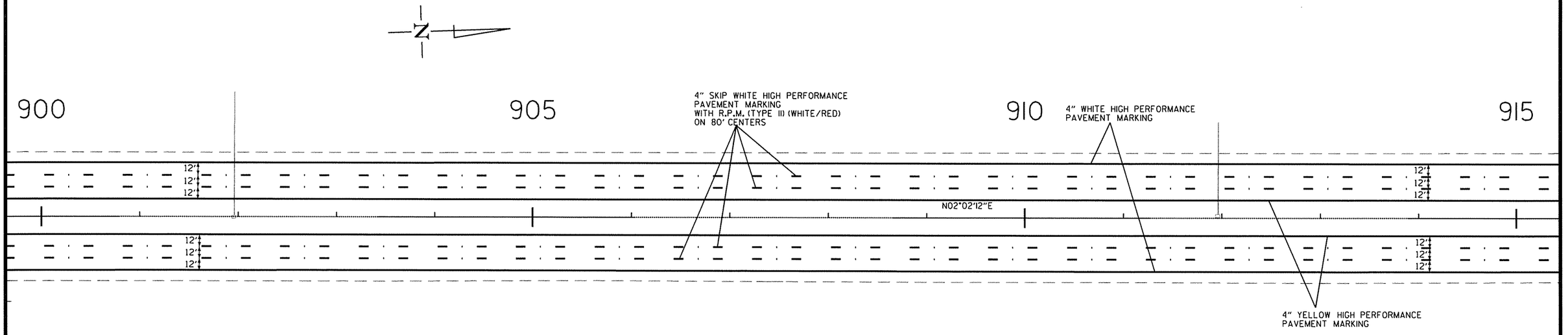
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	38	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-04-15





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.

PERMANENT PAVEMENT MARKING DETAILS

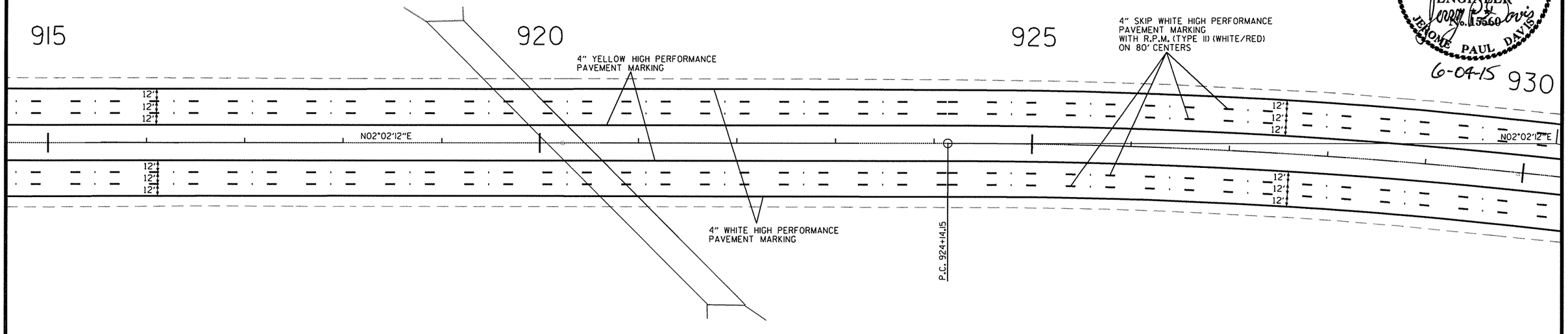
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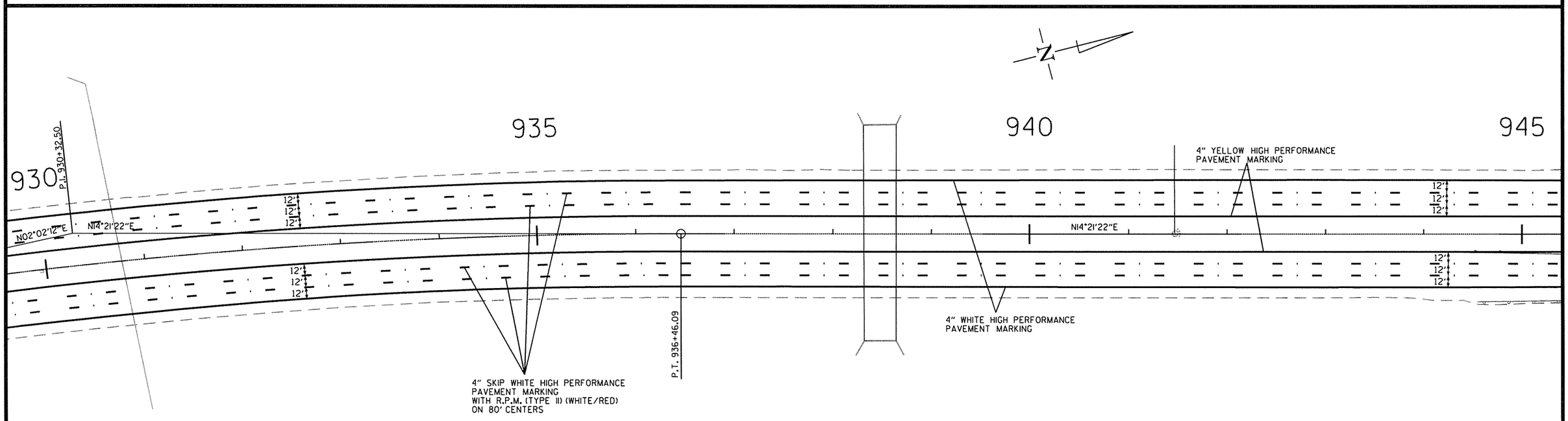
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	39	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-04-15





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.

PERMANENT PAVEMENT MARKING DETAILS

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SCALE: 1001
MODEL: PP MARKINGS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	40	234

(2) PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-04-15

945 950 955 960

+58

4" SKIP WHITE HIGH PERFORMANCE CONTRAST PAVEMENT MARKING ON CONCRETE WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

4" YELLOW HIGH PERFORMANCE PAVEMENT MARKING

+07

447' 8" DOTTED WHITE HIGH PERFORMANCE PAVEMENT MARKING STANDARD TYPE II R.P.M. SPACED @ 36' O.C.

+54

+11

RAMP 4

8" WHITE HIGH PERFORMANCE PAVEMENT MARKING

+14

60' - (14) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

12' 12' 12'

N14°21'22"E

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

4" WHITE HIGH PERFORMANCE PAVEMENT MARKING

+90

375' - (38) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

8" WHITE HIGH PERFORMANCE PAVEMENT MARKING

280' - (29) STANDARD TYPE II R.P.M. SPACED @ 10' O.C.

RAMP 1

+84

+18

960 965 970 975

RAMP 4

4" WHITE HIGH PERFORMANCE PAVEMENT MARKING

4" YELLOW HIGH PERFORMANCE PAVEMENT MARKING

+81

+46

N14°21'22"E

4" SKIP WHITE HIGH PERFORMANCE PAVEMENT MARKING WITH R.P.M. (TYPE II) (WHITE/RED) ON 80' CENTERS

STA. 969+46.06
END JOB CA1101
(LOG MILE 75.21)

WAGON WHEEL RD.

RAMP 1

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.

PERMANENT PAVEMENT MARKING DETAILS

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Crafton, Tull & Associates Inc.

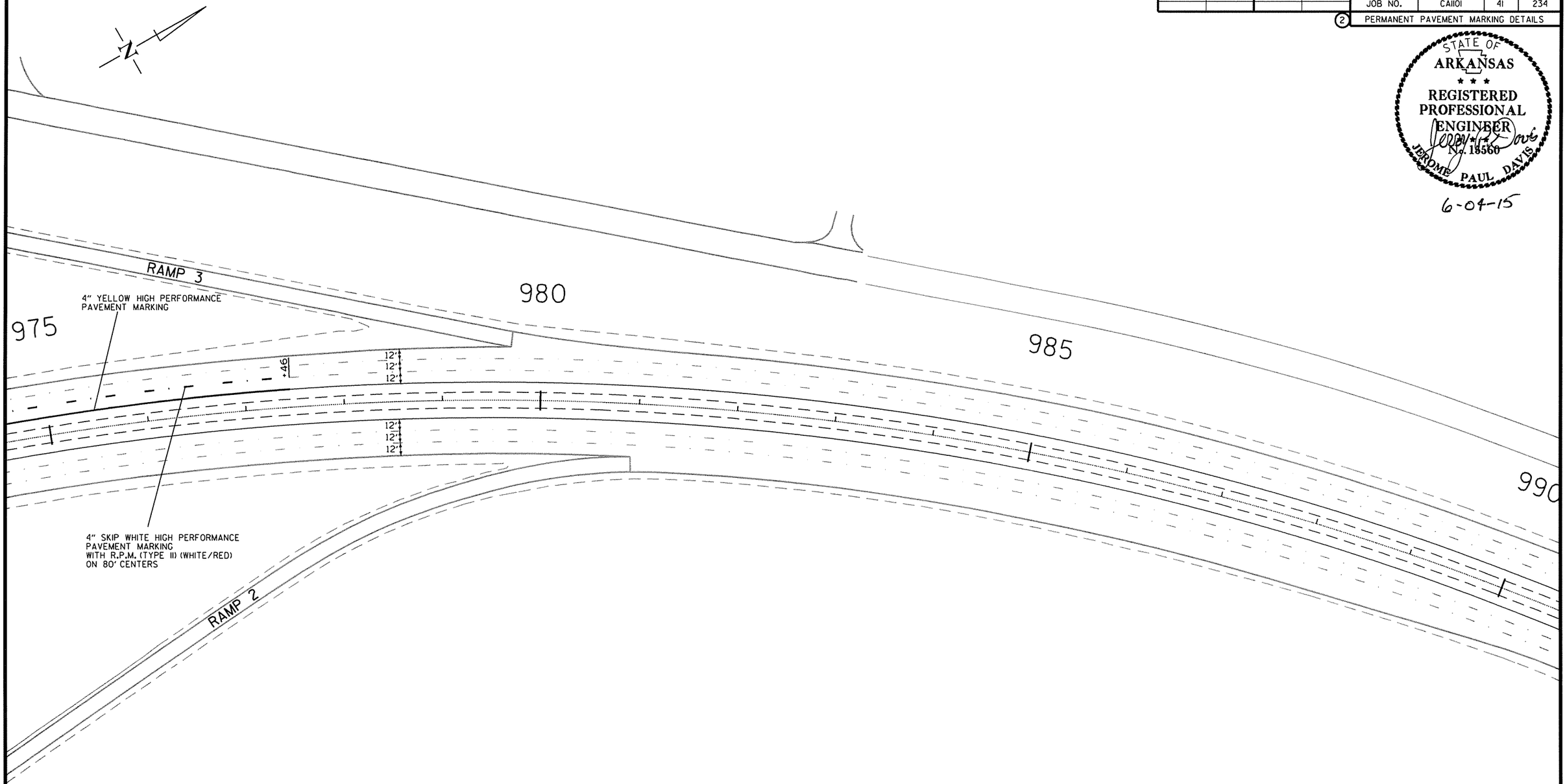
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	4I	234

2 PERMANENT PAVEMENT MARKING DETAILS

STATE OF ARKANSAS
* * *
REGISTERED PROFESSIONAL ENGINEER
No. 18560
JEROME PAUL DAVIS

6-04-15



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.

PERMANENT PAVEMENT MARKING DETAILS

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MODEL: PP MARKINGS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	42	234

(2) QUANTITIES

APPROACH GUTTERS AND SLABS

STATION	STATION	LOCATION	APPROACH GUTTERS (TYPE SPECIAL 1)	APPROACH SLABS (TYPE SPECIAL 1)	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE COURSE (CLASS 7)
			CU.YD.		POUND	TON
946+67	947+09	I-49 LML - BEG. BRIDGE A (APPR. SLAB A)		37.50	5806	34.48
949+91	950+32	I-49 LML - END BRIDGE A (APPR. SLAB B)		37.50	5810	34.48
946+78	947+13	I-49 LML - BEG. BRIDGE A (GUTTER A) - INSIDE	15.50		4473	29.74
949+97	950+36	I-49 LML - END BRIDGE A (GUTTER A) - INSIDE	17.30		4911	27.44
946+84	947+25	I-49 RML - BEG. BRIDGE B (APPR. SLAB A)		37.50	5810	34.48
950+06	950+48	I-49 RML - END BRIDGE B (APPR. SLAB B)		37.50	5806	34.48
946+80	947+19	I-49 RML - BEG. BRIDGE B (GUTTER A) - INSIDE	17.30		4911	27.43
950+03	950+38	I-49 RML - END BRIDGE B (GUTTER B) - INSIDE	15.50		4473	29.73
TOTALS:			**65.60**	**150.00**	**42000**	**252.26**

SELECTED PIPE BEDDING

LOCATION	SELECTED PIPE BEDDING
	CU.YD.
ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	600
TOTAL:	**600**

NOTE: QUANTITY ESTIMATED.
SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
07-02-15
JEROME PAUL DAVIS

CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

DESCRIPTION	REMOVAL OF PERMANENT PAVEMENT MARKINGS	CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS	HIGH PERFORMANCE CONTRAST PAVEMENT MARKING	HIGH PERFORMANCE PAVEMENT MARKING			
				4"	4"			8"
			TY. II (WHITE/RED)	WHITE	WHITE	WHITE SKIP	YELLOW	WHITE
	LIN. FT.		EACH	LIN.FT.	LIN. FT.			
REMOVAL OF PERMANENT PAVEMENT MARKINGS	10793							
CONSTRUCTION PAVEMENT MARKINGS		45706						
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)			1331					
HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4")				360				
HIGH PERFORMANCE MARKING TAPE WHITE (4")					35300			
HIGH PERFORMANCE MARKING TAPE WHITE SKIP (4")						18185		
HIGH PERFORMANCE MARKING TAPE YELLOW (4")							37802	
HIGH PERFORMANCE MARKING TAPE WHITE (8")								4285
TOTALS:	**10793**	**45706**	**1331**	**360**	**35300**	**18185**	**37802**	**4285**

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

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.

REMOVAL AND DISPOSAL OF ITEMS

STATION	STATION	LOCATION	APPROACH SLAB AND GUTTERS	GUARDRAIL	CONCRETE DITCH PAVING	WIRE ROPE SAFETY FENCE	PLOWABLE PAVEMENT MARKERS	TYPE 3 OBJECT MARKER
			*EACH	LIN.FT.	SQ.YD.	LIN.FT.	EACH	EACH
791+00	847+97	I-49 - C.L. MEDIAN			2532	5697		
844+72	850+26	I-49 - R.M.L. - LT.		554				
874+10	852+63	I-49 - L.M.L. - RT.		554				
849+38	915+71	I-49 - C.L. MEDIAN			2948	6633		
916+17	945+29	I-49 - C.L. MEDIAN			1294	2912		
944+39	947+10	I-49 - R.M.L. - LT.		271				
950+03	952+73	I-49 - L.M.L. - RT.		270				
946+52	947+00	I-49 - L.M.L.	1					
946+81	947+33	I-49 - R.M.L.	1					
949+77	950+28	I-49 - L.M.L.	1					
950+10	950+58	I-49 -R.M.L.	1					
951+86	968+95	I-49 - C.L. MEDIAN			759	1708		
968+42	969+46	I-49 - L.M.L. - RT.		104				
965+70	969+46	I-49 - R.M.L. - LT.		376				
791+00	969+46	I-49 - L.M.L. & R.M.L.					446	
ENTIRE	PROJECT	R.M.L.						9
ENTIRE	PROJECT	L.M.L.						9
TOTALS:			**4**	**2129**	**7533**	**16950**	**446**	**18**

* REMOVE APPROACH SLAB TO CUT LINE AS SHOWN IN BRIDGE PLANS.

ADVANCE WARNING SIGNS AND DEVICES

SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		TRAFFIC DRUMS	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	TEMPORARY IMPACT ATTENUATION BARRIER	TEMP. IMPACT ATTEN. BARRIER (REPAIR)	MOBILE SPEED NOTIFICATION SYSTEM	ADVANCE WARNING ARROW PANEL	PORTABLE CHANGEABLE MESSAGE SIGN
						NO.	SQ. FT.	EACH	LIN.FT.	EACH			DAY	WEEK
W20-5	RIGHT LANE CLOSED 1 MILE	48" x 48"	4		4	4	64.0							
R4-1	DO NOT PASS	48" x 60"	4		4	4	80.0							
W20-5	RIGHT LANE CLOSED 1/2 MILE	48" x 48"	4		4	4	64.0							
W20-5	RIGHT LANE CLOSED 1500 FEET	48" x 48"	4		4	4	64.0							
W20-1	ROAD WORK 1 MILE	48" x 48"	4	4	4	4	64.0							
R55-1	FINES DOUBLE IN WORK ZONES	36" x 60"	4	4	4	4	60.0							
W20-1	ROAD WORK 1/2 MILE	48" x 48"	4	4	4	4	64.0							
R2-5A	REDUCED SPEED AHEAD	48" x 60"	8	4	8	8	160.0							
W20-1	ROAD WORK 1500 FT.	48" x 48"	4	4	4	4	64.0							
R2-1	SPEED LIMIT 60 MPH	48" x 60"	11	7	11	11	220.0							
G20-1	ROAD WORK NEXT xx MILES	60" x 24"	2	2	2	2	20.0							
W20-1	ROAD WORK AHEAD	48" x 24"	6	6	6	6	48.0							
G20-2	END ROAD WORK	48" x 24"	10	10	10	10	80.0							
R2-1	SPEED LIMIT 70 MPH	48" x 60"	8	4	8	8	160.0							
SPECIAL 1	MERGE NOW + ARROW	48" x 48"	2	2	2	2	32.0							
W4-2 R	LANE ENDS	48" x 48"	4		4	4	64.0							
W1-6 L	LARGE ARROW	60" x 30"	12	2	12	12	150.0							
	TRAFFIC DRUMS		627	984	984			984						
	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER		35842		35842				35842					
	TEMPORARY IMPACT ATTENUATION BARRIER		2		2					2				
	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		2		2						2			
	*MOBILE SPEED NOTIFICATION SYSTEM				2							2		
	ADVANCE WARNING ARROW PANEL		2	2	2								800	
	PORTABLE CHANGEABLE MESSAGE SIGN		4	4	4									228
	*TEMPORARY IMPACT ATTENUATION BARRIER		4		4					4				
	*TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)		4		4						4			
TOTALS:							**1458.0**	**984**	**35842**	**6**	**6**	**2**	**800**	**228**

NOTE: THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.
* TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

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

REMOVAL AND DISPOSAL OF FENCE

STATION	STATION	LOCATION	LIN. FT.
947+05	947+22	I-49 MEDIAN	43
949+91	950+08	I-49 MEDIAN	42
TOTAL:			**85**

BENCH MARKS

STATION	DESCRIPTION	BENCH MARKS
		EACH
947+36	BRIDGE ON I-49 - RIGHT	1
TOTAL:		**1**

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

QUANTITIES

USER: at5106
DESIGN FILE: G:\3106000.412toWagon\TRANSP\dgn\quantities\CA1101Quantities Boxes.dgn
PLOTTED: 7/2/2015 09:22
SCALE: 16:1
MODEL: QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	43	234

(2) QUANTITIES

CONCRETE BARRIER WALL

STATION	STATION	LOCATION	MEDIAN TYPE							
			B	C	SP-1	SP-2	SP-3	SP-4	C SPECIAL	SPECIAL
			LIN. FT.							
791+00	792+20	I-49 - C.L. MEDIAN	120							
792+20	796+09	I-49 - C.L. MEDIAN		389						
796+09	798+86	I-49 - C.L. MEDIAN							277	
798+86	799+11	I-49 - C.L. MEDIAN						25		
799+29	799+54	I-49 - C.L. MEDIAN						25		
799+54	812+51	I-49 - C.L. MEDIAN							1297	
812+51	816+75	I-49 - C.L. MEDIAN		424						
816+75	823+16	I-49 - C.L. MEDIAN	641							
823+16	823+41	I-49 - C.L. MEDIAN					25			
823+59	823+84	I-49 - C.L. MEDIAN					25			
823+84	826+05	I-49 - C.L. MEDIAN	221							
826+05	833+16	I-49 - C.L. MEDIAN		711						
833+16	833+41	I-49 - C.L. MEDIAN				25				
833+59	833+84	I-49 - C.L. MEDIAN				25				
833+84	843+10	I-49 - C.L. MEDIAN		926						
843+10	847+66	I-49 - C.L. MEDIAN	456							
847+66	850+11	I-49 - C.L. MEDIAN								245
850+11	866+66	I-49 - C.L. MEDIAN	1655							
866+66	866+91	I-49 - C.L. MEDIAN					25			
867+09	867+34	I-49 - C.L. MEDIAN					25			
867+34	871+05	I-49 - C.L. MEDIAN	371							
871+05	890+75	I-49 - C.L. MEDIAN		1970						
890+75	901+16	I-49 - C.L. MEDIAN	1041							
901+16	901+41	I-49 - C.L. MEDIAN					25			
901+59	901+84	I-49 - C.L. MEDIAN					25			
901+84	911+16	I-49 - C.L. MEDIAN	932							
911+16	911+41	I-49 - C.L. MEDIAN					25			
911+59	911+84	I-49 - C.L. MEDIAN					25			
911+84	921+75	I-49 - C.L. MEDIAN	991							
921+75	939+30	I-49 - C.L. MEDIAN		1755						
939+30	946+47	I-49 - C.L. MEDIAN	717							
946+47	946+77	I-49 - C.L. MEDIAN			30					
950+39	950+69	I-49 - C.L. MEDIAN			30					
950+69	952+66	I-49 - C.L. MEDIAN	197							
952+66	952+91	I-49 - C.L. MEDIAN					25			
953+09	953+34	I-49 - C.L. MEDIAN					25			
953+34	968+46	I-49 - C.L. MEDIAN	1512							
968+46	969+46	I-49 - C.L. MEDIAN								100
TOTALS:			**8854**	**6175**	**60**	**50**	**250**	**50**	**1574**	**345**

RUMBLE STRIPS IN ASPHALT SHOULDERS

STATION	STATION	LOCATION	NHPP-0472(7) LIN. FT.	BIM-B49-0(217) LIN. FT.
791+00	800+19	I-49 - R.M.L. OUTSIDE SHOULDER		919
791+00	946+90	I-49 - R.M.L. INSIDE SHOULDER	15590	
801+54	822+94	I-49 - R.M.L. OUTSIDE SHOULDER		2140
824+12	832+88	I-49 - R.M.L. OUTSIDE SHOULDER		876
834+71	861+00	I-49 - R.M.L. OUTSIDE SHOULDER		2629
871+97	946+99	I-49 - R.M.L. OUTSIDE SHOULDER		7502
950+48	969+46	I-49 - R.M.L. INSIDE SHOULDER	1898	
950+57	954+28	I-49 - R.M.L. OUTSIDE SHOULDER		371
956+69	969+46	I-49 - R.M.L. OUTSIDE SHOULDER		1277
791+00	824+19	I-49 - L.M.L. OUTSIDE SHOULDER		3319
791+00	946+74	I-49 - L.M.L. INSIDE SHOULDER	15574	
836+19	862+77	I-49 - L.M.L. OUTSIDE SHOULDER		2658
865+77	946+82	I-49 - L.M.L. OUTSIDE SHOULDER		8105
950+35	969+46	I-49 - L.M.L. INSIDE SHOULDER	1911	
956+54	969+46	I-49 - L.M.L. OUTSIDE SHOULDER		1292
TOTALS:			**34973**	**31088**

EARTHWORK

STATION	STATION	LOCATION/DESCRIPTION	UNCLASSIFIED EXCAVATION	COMPACTED EMBANKMENT	SOIL STABILIZATION
			CU.YD.	CU.YD.	TON
791+00	969+46	I-49 - MEDIAN	30445	11519	
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.			600	600	150
TOTALS:			**31045**	**12119**	**150**

* QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
JEROME PAUL DAVIS
7-29-15

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 REMOVAL AND DISPOSAL
			ACRE	TON	ACRE	M. GAL.	ACRE	ACRE	ACRE	M. GAL.	BAG	CU. YD.	LIN.FT.	LIN.FT.	CU. YD.
ENTIRE	PROJECT	I-49	4.68	9	4.68	477.4	4.68	5.85	5.85	119.3	946	135	2340	104	230
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER			2.00	4	2.00	204.0	2.00	2.00	2.00	40.8	330	48	828	36	81
TOTALS:			**6.68**	**13**	**6.68**	**681.4**	**6.68**	**7.85**	**7.85**	**160.1**	**1276**	**183**	**3168**	**140**	**311**

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
DROP INLET SILT FENCE.....18 LIN.FT./LOCATION
ROCK DITCH CHECKS.....3 CU. YDS. PER DITCH

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 STANDARD SPECIFICATIONS.

QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	44	234

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 13560
6-24-15
JEROME PAUL DAVIS

STRUCTURES (BOX 1 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT				FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	DROP INLETS		WATER	SOLID SODDING	MODIFYING DROP INLETS	STD. DWG. NOS.
		CLASS III	CLASS IV	CLASS V	CLASS V JACK & BORE		TYPE ST					
		24"	24"	24"	24"	24"	4' X 4'	4' X 6'				
		LIN. FT.				EACH			M. GAL.	SQ. YD.	EACH	
791+00	CONNECT D.I. ON RT. W/ PIPE CULVERT	271										PCC-1, FPC-9S
793+75	CONST. D.I. ON RT. W/ PIPE CULVERT	293						1				PCC-1, FPC-9S
796+17	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
797+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
800+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
803+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
806+00	CONST. D.I. ON RT. W/ PIPE CULVERT	39					1					PCC-1, FPC-9S
806+48	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
809+00	CONST. D.I. ON RT. W/ PIPE CULVERT			226			1					PCC-1, FPC-9S
811+30	CONST. D.I. ON RT. W/ PIPE CULVERT		66				1					PCC-1, FPC-9S
812+00	CONST. D.I. ON RT. W/ PIPE CULVERT		47				1					PCC-1, FPC-9S
812+51	CONST. D.I. ON RT. W/ PIPE CULVERT		345				1					PCC-1, FPC-9S
815+47	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
816+00	CONST. D.I. ON RT. W/ PIPE CULVERT				89	1	1		0.1	8		PCC-1, FPC-9S, FES-1, FES-2
818+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
818+00	CONST. D.I. ON RT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
820+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
820+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
821+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
821+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
822+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
822+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
823+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
823+00	CONST. D.I. ON RT. W/ PIPE CULVERT	83						1				PCC-1, FPC-9S
823+87	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
823+87	CONST. D.I. ON RT. W/ PIPE CULVERT	44						1				PCC-1, FPC-9S
824+37	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
825+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
825+00	CONST. D.I. ON RT. W/ PIPE CULVERT	58						1				PCC-1, FPC-9S
826+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
827+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
829+00	CONST. D.I. ON RT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
830+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
833+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
833+97	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
836+00	CONST. D.I. ON RT. W/ PIPE CULVERT	199					1					PCC-1, FPC-9S
839+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
842+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
843+00	CONST. D.I. ON RT. W/ PIPE CULVERT	93					1					PCC-1, FPC-9S
843+97	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
845+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
845+00	CONST. D.I. ON RT. W/ PIPE CULVERT	99					1					PCC-1, FPC-9S
846+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
846+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					FPC-9S
847+25	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
847+25	CONST. D.I. ON RT. W/ PIPE CULVERT	121					1					PCC-1, FPC-9S
850+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
850+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
851+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
851+00	CONST. D.I. ON RT. W/ PIPE CULVERT	96					1					PCC-1, FPC-9S
852+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
852+00	CONST. D.I. ON RT. W/ PIPE CULVERT	142					1					PCC-1, FPC-9S
853+45	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
855+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
855+00	CONST. D.I. ON RT. W/ PIPE CULVERT	148						1				PCC-1, FPC-9S
858+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
858+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
861+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
861+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
864+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
864+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
866+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
866+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
869+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
869+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
871+00	CONST. D.I. ON LT. W/ PIPE CULVERT	19					1					PCC-1, FPC-9S
871+22	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
874+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
877+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
880+00	CONST. D.I. ON LT. W/ PIPE CULVERT	142					1					PCC-1, FPC-9S
881+45	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
883+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
886+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
889+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
SUBTOTALS:		**7281**	**458**	**226**	**89**	**1**	**46**	**18**	**0.1**	**8**	**9**	

BASIS OF ESTIMATE:
WATER..... 12.6 GAL./SQ.YD. SOLID SODDING
NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	45	234
(2)	QUANTITIES			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry P. Davis
No. 15560
6-2415
JEROME PAUL DAVIS

STRUCTURES (BOX 2 OF 2)

STATION	DESCRIPTION	REINFORCED CONCRETE PIPE CULVERT				FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	DROP INLETS		WATER	SOLID SODDING	MODIFYING DROP INLETS	STD. DWG. NOS.
		CLASS III	CLASS IV	CLASS V	CLASS V JACK & BORE		TYPE ST					
		24"	24"	24"	24"	24"	4' X 4'	4' X 6'				
		LIN. FT.				EACH			M. GAL.	SQ. YD.	EACH	
891+00	CONST. D.I. ON LT. W/ PIPE CULVERT	93					1					PCC-1, FPC-9S
891+97	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
893+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196					1					PCC-1, FPC-9S
893+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
895+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
895+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
898+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
898+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
901+00	CONST. D.I. ON LT. W/ PIPE CULVERT	92					1					PCC-1, FPC-9S
901+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
901+96	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
904+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
904+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
907+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
907+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
910+00	CONST. D.I. ON LT. W/ PIPE CULVERT	192					1					PCC-1, FPC-9S
910+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
911+96	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
913+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
913+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
916+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
916+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
919+00	CONST. D.I. ON LT. W/ PIPE CULVERT	120					1					PCC-1, FPC-9S
919+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2					1					PCC-1, FPC-9S
920+24	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
922+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
925+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296					1					PCC-1, FPC-9S
928+00	CONST. D.I. ON LT. W/ PIPE CULVERT	192						1				PCC-1, FPC-9S
929+96	RETAIN & MODIFY D.I. ON CL.										1	PCC-1, FPC-9S
931+00	CONST. D.I. ON LT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
934+00	CONST. D.I. ON LT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
935+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196						1				PCC-1, FPC-9S
937+00	CONST. D.I. ON LT. W/ PIPE CULVERT	196						1				PCC-1, FPC-9S
939+00	CONST. D.I. ON LT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
940+00	CONST. D.I. ON LT. W/ PIPE CULVERT	96						1				PCC-1, FPC-9S
941+00	CONST. D.I. ON LT. W/ PIPE CULVERT	42						1				PCC-1, FPC-9S
941+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
941+47	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
941+72	CONST. D.I. ON LT. W/ PIPE CULVERT	23						1				PCC-1, FPC-9S
941+72	CONST. D.I. ON RT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
943+00	CONST. D.I. ON LT. W/ PIPE CULVERT	124						1				PCC-1, FPC-9S
943+00	CONST. D.I. ON RT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
950+47	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
953+00	CONST. D.I. ON LT. W/ PIPE CULVERT	249						1				PCC-1, FPC-9S
953+20	CONST. D.I. ON RT. W/ PIPE CULVERT	19						1				PCC-1, FPC-9S
955+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
955+00	CONST. D.I. ON RT. W/ PIPE CULVERT	176						1				PCC-1, FPC-9S
958+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
958+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
959+06	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
961+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
961+00	CONST. D.I. ON RT. W/ PIPE CULVERT	190						1				PCC-1, FPC-9S
964+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
964+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
967+00	CONST. D.I. ON LT. W/ PIPE CULVERT	2						1				PCC-1, FPC-9S
967+00	CONST. D.I. ON RT. W/ PIPE CULVERT	296						1				PCC-1, FPC-9S
967+97	RETAIN & MODIFY D.I. ON CL.										1	FPC-9S
968+50	CONST. D.I. ON LT. W/ PIPE CULVERT	49						1				PCC-1, FPC-9S
969+46	RETAIN & MODIFY D.I. ON CL.	92									1	PCC-1
SUBTOTALS (BOX 1 OF 2):		7281	458	226	89	1	46	18	0.1	8	9	
SUBTOTALS (BOX 2 OF 2):		6117					23	26			10	
TOTALS:		**13398**	**458**	**226**	**89**	**1**	**69**	**44**	**0.1**	**8**	**19**	

BASIS OF ESTIMATE:
WATER..... 12.6 GAL./SQ.YD. SOLID SODDING
NOTE: FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: QUANTITIES ARE ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\quantities\CAII0IQuantities Boxes.dgn
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QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Reg. 15560
JEROME PAUL DAVIS
7-29-15

TRENCHING AND SHOULDER PREPARATION

STATION	STATION	LOCATION	STATION	NHPP-0472(7) TACK COAT 0.03 GAL. PER SQ. YD.			NHPP-0472(7) ACHM BASE COURSE (1 1/2") 440 LBS. PER SQ. YD.			NHPP-0472(7) ACHM BINDER COURSE (1") 440 LBS. PER SQ. YD.			NHPP-0472(7) ACHM SURFACE COURSE (1/2") 440 LBS. PER SQ. YD.		
				AVG. WIDTH	SQ. YD.	GALLON	AVG. WIDTH	SQ. YD.	PG 76-22	AVG. WIDTH	SQ. YD.	PG 76-22	AVG. WIDTH	SQ. YD.	PG 76-22
				FEET			FEET		TON	FEET		TON	FEET		TON
943+97.29	946+97.29	I-49 R.M.L. - OUTSIDE SHOULDER	3.00	15.00	500.00	15.00	5.00	167.00	36.70	5.00	167.00	36.70	5.00	167.00	36.70
943+57.36	946+57.36	I-49 L.M.L. - OUTSIDE SHOULDER	3.00	15.00	500.00	15.00	5.00	167.00	36.70	5.00	167.00	36.70	5.00	167.00	36.70
950+57.65	953+57.65	I-49 R.M.L. - OUTSIDE SHOULDER	3.00	15.00	500.00	15.00	5.00	167.00	36.70	5.00	167.00	36.70	5.00	167.00	36.70
950+13.62	953+13.62	I-49 L.M.L. - OUTSIDE SHOULDER	3.00	15.00	500.00	15.00	5.00	167.00	36.70	5.00	167.00	36.70	5.00	167.00	36.70
TOTALS:			12.00		2000.00	60.00		668.00	146.80		668.00	146.80		668.00	146.80

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") ..... 94.5% MIN. AGGR. . 5.5% ASPHALT BINDER
ACHM BINDER COURSE (1") ..... 95.5% MIN. AGGR. . 4.5% ASPHALT BINDER
ACHM BASE COURSE (1 1/2") ..... 95.9% MIN. AGGR. . 4.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

DUMPED RIPRAP

STATION	SIDE	DUMPED RIPRAP	*FILTER BLANKET
		CU. YD.	SQ. YD.
816+00	LT.	5	9
TOTALS:		5	9

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

OVERHEAD SIGN STRUCTURE FOUNDATION

STATION	LOCATION	EACH
799+20	I-49 MEDIAN NORTHBOUND	1
823+50	I-49 MEDIAN NORTHBOUND	1
833+50	I-49 MEDIAN NORTHBOUND	1
867+00	I-49 MEDIAN SOUTHBOUND	1
901+50	I-49 MEDIAN NORTHBOUND	1
911+50	I-49 MEDIAN SOUTHBOUND	1
953+00	I-49 MEDIAN NORTHBOUND	1
TOTAL:		7

ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

LOCATION	NHPP-0472(7) ASPHALT CONCRETE	NHPP-0472(7) TACK COAT
	TON	GALLON
ENTIRE PROJECT - TO BE USED IF AND WHERE	85	170
DIRECTED BY THE ENGINEER		
TOTALS:	85	170

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

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SCALE: 16:1
MODEL: QUANTITIES
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	47	234
				(2)	QUANTITIES			

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerry Paul Davis
No. 15560
6-24-15
JEROME PAUL DAVIS

4" PIPE UNDERDRAINS (BOX 1 OF 3)

STATION	STATION	LOCATION	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
791+00	793+75	I-49 R.M.L.	286	
791+00	793+75	I-49 L.M.L.	294	
793+75	796+17	I-49 R.M.L.	253	
793+75	796+17	I-49 L.M.L.	268	
797+00	800+00	I-49 R.M.L.	300	
797+00	800+00	I-49 L.M.L.	319	
800+00	803+00	I-49 R.M.L.	300	
800+00	803+00	I-49 L.M.L.	319	
803+00	806+00	I-49 R.M.L.	300	
803+00	806+00	I-49 L.M.L.	319	
806+00	806+48	I-49 R.M.L.	48	
806+00	806+48	I-49 L.M.L.	67	
809+00	811+30	I-49 R.M.L.	230	
809+00	811+30	I-49 L.M.L.	249	
811+30	812+00	I-49 R.M.L.	70	
811+30	812+00	I-49 L.M.L.	89	
812+00	812+51	I-49 R.M.L.	51	
812+00	812+51	I-49 L.M.L.	70	
812+51	816+00	I-49 R.M.L.	362	
812+51	816+00	I-49 L.M.L.	368	
818+00	820+00	I-49 R.M.L.	213	
818+00	820+00	I-49 L.M.L.	213	
820+00	821+00	I-49 R.M.L.	113	
820+00	821+00	I-49 L.M.L.	113	
821+00	822+00	I-49 R.M.L.	113	
821+00	822+00	I-49 L.M.L.	113	
822+00	823+00	I-49 R.M.L.	111	
822+00	823+00	I-49 L.M.L.	111	
823+00	823+87	I-49 R.M.L.	98	
823+00	823+87	I-49 L.M.L.	98	
823+87	824+37	I-49 R.M.L.	66	
823+87	824+37	I-49 L.M.L.	66	
824+37	825+00	I-49 R.M.L.	81	
824+37	825+00	I-49 L.M.L.	81	
825+00	826+00	I-49 R.M.L.	111	
825+00	826+00	I-49 L.M.L.	119	
826+00	827+00	I-49 R.M.L.	111	
826+00	827+00	I-49 L.M.L.	119	
827+00	829+00	I-49 R.M.L.	200	
827+00	829+00	I-49 L.M.L.	219	
829+00	830+00	I-49 R.M.L.	100	
829+00	830+00	I-49 L.M.L.	119	
830+00	833+00	I-49 R.M.L.	300	
830+00	833+00	I-49 L.M.L.	319	
833+97	836+00	I-49 R.M.L.	203	
833+97	836+00	I-49 L.M.L.	222	
836+00	839+00	I-49 R.M.L.	300	
836+00	839+00	I-49 L.M.L.	319	
842+00	843+00	I-49 R.M.L.	111	
842+00	843+00	I-49 L.M.L.	119	
843+00	843+97	I-49 R.M.L.	113	
843+00	843+97	I-49 L.M.L.	113	
843+97	845+00	I-49 R.M.L.	116	
843+97	845+00	I-49 L.M.L.	116	
845+00	846+00	I-49 R.M.L.	113	
845+00	846+00	I-49 L.M.L.	113	
846+00	847+25	I-49 R.M.L.	138	
846+00	847+25	I-49 L.M.L.	138	
850+00	851+00	I-49 R.M.L.	113	
850+00	851+00	I-49 L.M.L.	113	
851+00	852+00	I-49 R.M.L.	113	
851+00	852+00	I-49 L.M.L.	113	
852+00	853+45	I-49 R.M.L.	161	
852+00	853+45	I-49 L.M.L.	161	
853+45	855+00	I-49 R.M.L.	166	
853+45	855+00	I-49 L.M.L.	166	
855+00	858+00	I-49 R.M.L.	311	
855+00	858+00	I-49 L.M.L.	311	
858+00	861+00	I-49 R.M.L.	311	
858+00	861+00	I-49 L.M.L.	311	
864+00	866+00	I-49 R.M.L.	213	
SUBTOTALS:			**12666**	

4" PIPE UNDERDRAIN (BOX 2 OF 3)

STATION	STATION	LOCATION	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
864+00	866+00	I-49 L.M.L.	213	
866+00	869+00	I-49 R.M.L.	313	
866+00	869+00	I-49 L.M.L.	313	
869+00	871+00	I-49 R.M.L.	219	
869+00	871+00	I-49 L.M.L.	213	
871+00	871+22	I-49 R.M.L.	38	
871+00	871+22	I-49 L.M.L.	38	
874+00	877+00	I-49 R.M.L.	319	
874+00	877+00	I-49 L.M.L.	300	
877+00	880+00	I-49 R.M.L.	319	
877+00	880+00	I-49 L.M.L.	300	
880+00	883+00	I-49 R.M.L.	319	
880+00	883+00	I-49 L.M.L.	300	
883+00	886+00	I-49 R.M.L.	319	
883+00	886+00	I-49 L.M.L.	300	
886+00	889+00	I-49 R.M.L.	319	
886+00	889+00	I-49 L.M.L.	300	
889+00	891+00	I-49 R.M.L.	219	
889+00	891+00	I-49 L.M.L.	213	
891+00	891+97	I-49 R.M.L.	113	
891+00	891+97	I-49 L.M.L.	113	
893+00	895+00	I-49 R.M.L.	213	
893+00	895+00	I-49 L.M.L.	213	
895+00	898+00	I-49 R.M.L.	313	
895+00	898+00	I-49 L.M.L.	313	
898+00	901+00	I-49 R.M.L.	313	
898+00	901+00	I-49 L.M.L.	313	
901+00	901+96	I-49 R.M.L.	112	
901+00	901+96	I-49 L.M.L.	112	
904+00	907+00	I-49 R.M.L.	313	
904+00	907+00	I-49 L.M.L.	313	
907+00	910+00	I-49 R.M.L.	313	
907+00	910+00	I-49 L.M.L.	313	
910+00	911+96	I-49 R.M.L.	215	
910+00	911+96	I-49 L.M.L.	209	
913+00	916+00	I-49 R.M.L.	313	
913+00	916+00	I-49 L.M.L.	313	
916+00	919+00	I-49 R.M.L.	313	
916+00	919+00	I-49 L.M.L.	313	
919+00	920+24	I-49 R.M.L.	140	
919+00	920+24	I-49 L.M.L.	140	
922+00	925+00	I-49 R.M.L.	320	
922+00	925+00	I-49 L.M.L.	300	
925+00	928+00	I-49 R.M.L.	319	
925+00	928+00	I-49 L.M.L.	300	
928+00	929+96	I-49 R.M.L.	196	
928+00	929+96	I-49 L.M.L.	215	
931+00	934+00	I-49 R.M.L.	319	
931+00	934+00	I-49 L.M.L.	300	
934+00	935+00	I-49 R.M.L.	119	
934+00	935+00	I-49 L.M.L.	100	
935+00	937+00	I-49 R.M.L.	219	
935+00	937+00	I-49 L.M.L.	211	
937+00	939+00	I-49 R.M.L.	219	
937+00	939+00	I-49 L.M.L.	211	
939+00	940+00	I-49 R.M.L.	119	
939+00	940+00	I-49 L.M.L.	111	
940+00	941+00	I-49 R.M.L.	111	
940+00	941+00	I-49 L.M.L.	111	
941+00	941+47	I-49 R.M.L.	63	
941+00	941+47	I-49 L.M.L.	63	
941+47	941+72	I-49 R.M.L.	36	
941+47	941+72	I-49 L.M.L.	36	
941+72	943+00	I-49 R.M.L.	139	
941+72	943+00	I-49 L.M.L.	139	
950+47	953+00	I-49 L.M.L.	264	
950+47	953+20	I-49 R.M.L.	284	
953+00	955+00	I-49 L.M.L.	211	
953+20	955+00	I-49 R.M.L.	191	
955+00	958+00	I-49 R.M.L.	311	
SUBTOTALS:			**15747**	

4" PIPE UNDERDRAIN BOX (3 OF 3)

STATION	STATION	LOCATION	4" PIPE UNDERDRAINS	UNDERDRAIN OUTLET PROTECTORS
			LIN. FT.	EACH
955+00	958+00	I-49 L.M.L.	311	
959+06	961+00	I-49 R.M.L.	210	
959+06	961+00	I-49 L.M.L.	210	
961+00	964+00	I-49 R.M.L.	311	
961+00	964+00	I-49 L.M.L.	311	
964+00	967+00	I-49 R.M.L.	311	
964+00	967+00	I-49 L.M.L.	311	
967+97	968+50	I-49 R.M.L.	72	
967+97	968+50	I-49 L.M.L.	64	
*ENTIRE PROJECT TO BE USED IF AND			5000	10
WHERE DIRECTED BY THE ENGINEER				
SUBTOTALS:			**7111**	**10**

SUBTOTALS (BOX 1 OF 3):	12666	
SUBTOTALS (BOX 2 OF 3):	15747	
SUBTOTALS (BOX 3 OF 3):	7111	10
TOTALS:	**35524**	**10**

NOTE: QUANTITIES ESTIMATED. SEE SECTION 104.03 OF THE STANDARD SPECIFICATIONS.
UNDERDRAINS SHALL BE STUBBED INTO THE PROPOSED DROP INLET IF AND WHERE DIRECTED BY THE ENGINEER.
PAYMENT FOR THIS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE 4" PIPE UNDERDRAIN.

QUANTITIES

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\quantities\CAII01Quantities Boxes.dgn
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SCALE: 16=1
MODEL: QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	48	234

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
7-29-15

BASE AND SURFACING (BOX 1 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		NHPP-0472(7) ACHM BASE COURSE (1 1/2")				NHPP-0472(7) ACHM BINDER COURSE (1")				NHPP-0472(7) ACHM SURFACE COURSE (1/2")								NHPP-0472(7) TACK COAT			
				TON / STATION	TON	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	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22	AVG. WID.	SQ.YD.	GALLONS/ SQ.YD.	GALLONS
			FT.			FT.			TON	FT.			TON	FT.			TON	FT.			TON	TON	FT.			
FULL DEPTH WIDENING INTO MEDIAN - RIGHT																										
791+00.00	792+20.00	I-49 R.M.L. - B WALL	120.00	205.63	246.76	19.50	260.00	880.00	114.40	19.25	256.67	440.00	56.47	19.13	255.07	220.00	28.06	28.00	373.33	220.00	41.07	69.13	77.38	1031.73	0.03	30.95
792+20.00	796+09.00	I-49 R.M.L. - C WALL	389.00	211.50	822.74	19.50	842.83	880.00	370.85	19.25	832.03	440.00	183.05	19.13	826.84	220.00	90.95	28.00	1210.22	220.00	133.12	224.07	77.38	3344.54	0.03	100.34
796+09.00	798+11.00	I-49 R.M.L. - C SPECIAL WALL	202.00	196.47	396.87	19.50	437.67	880.00	192.57	19.25	432.06	440.00	95.05	19.13	429.36	220.00	47.23	27.00	606.00	220.00	66.66	113.89	77.38	1736.75	0.03	52.10
798+11.00	798+86.00	I-49 R.M.L. - BARRIER TRANS.	75.00	184.07	138.05	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	27.00	225.00	220.00	24.75	42.29	77.38	644.83	0.03	19.34
798+86.00	799+54.00	I-49 R.M.L. SP-3 WALL	68.00	184.11	125.19	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	27.00	204.00	220.00	22.44	38.34	77.38	584.65	0.03	17.54
799+54.00	800+29.00	I-49 R.M.L. - BARRIER TRANS.	75.00	184.07	138.05	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	27.00	225.00	220.00	24.75	42.29	77.38	644.83	0.03	19.34
800+29.00	812+51.00	I-49 R.M.L. - C SPECIAL WALL	1222.00	196.43	2400.37	19.50	2647.67	880.00	1164.97	19.25	2613.72	440.00	575.02	19.13	2597.43	220.00	285.72	27.00	3666.00	220.00	403.26	688.98	77.38	10506.48	0.03	315.19
812+51.00	816+75.00	I-49 R.M.L. - C WALL	424.00	211.50	896.76	19.50	918.67	880.00	404.21	19.25	906.89	440.00	199.52	19.13	901.24	220.00	99.14	28.00	1319.11	220.00	145.10	244.24	77.38	3645.46	0.03	109.36
816+75.00	822+41.00	I-49 R.M.L. - B WALL	566.00	205.63	1163.87	19.50	1226.33	880.00	539.59	19.25	1210.61	440.00	266.33	19.13	1203.06	220.00	132.34	28.00	1760.89	220.00	193.70	326.04	77.38	4866.34	0.03	145.99
822+41.00	823+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
823+16.00	823+84.00	I-49 R.M.L. - SP-2 WALL	68.00	205.11	139.47	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
823+84.00	824+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.36	150.27	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
824+59.00	826+05.00	I-49 R.M.L. - B WALL	146.00	205.63	300.22	19.50	316.33	880.00	139.19	19.25	312.28	440.00	68.70	19.13	310.33	220.00	34.14	28.00	454.22	220.00	49.96	84.10	77.38	1255.28	0.03	37.66
826+05.00	832+41.00	I-49 R.M.L. - C WALL	636.00	211.50	1345.14	19.50	1378.00	880.00	606.32	19.25	1360.33	440.00	299.27	19.13	1351.85	220.00	148.70	28.00	1978.67	220.00	217.65	366.35	77.38	5468.19	0.03	164.05
832+41.00	833+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	207.83	155.87	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
833+16.00	833+84.00	I-49 R.M.L. - SP-2 WALL	68.00	206.93	140.71	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
833+84.00	834+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	207.83	155.87	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
834+59.00	843+10.00	I-49 R.M.L. - C WALL	851.00	211.50	1799.87	19.50	1843.83	880.00	811.29	19.25	1820.19	440.00	400.44	19.13	1808.85	220.00	198.97	28.00	2647.56	220.00	291.23	490.20	77.38	7316.71	0.03	219.50
843+10.00	847+66.00	I-49 R.M.L. - B WALL	456.00	205.63	937.67	19.50	988.00	880.00	434.72	19.25	975.33	440.00	214.57	19.13	969.25	220.00	106.62	28.00	1418.67	220.00	156.05	262.67	77.38	3920.59	0.03	117.62
847+66.00	848+51.00	I-49 R.M.L. - BARRIER TRANS.	85.00	172.01	146.21	19.50	184.17	880.00	81.03	19.25	181.81	440.00	40.00	19.13	180.67	220.00	19.87	26.63	251.51	220.00	27.67	47.54	77.38	730.81	0.03	21.92
848+51.00	849+26.00	I-49 R.M.L. - SPECIAL WALL	75.00	162.64	121.98	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	25.25	210.42	220.00	23.15	40.69	77.38	644.83	0.03	19.34
849+26.00	850+11.00	I-49 R.M.L. - BARRIER TRANS.	85.00	172.09	146.28	19.50	184.17	880.00	81.03	19.25	181.81	440.00	40.00	19.13	180.67	220.00	19.87	26.63	251.51	220.00	27.67	47.54	77.38	730.81	0.03	21.92
850+11.00	865+91.00	I-49 R.M.L. - B WALL	1580.00	205.63	3248.95	19.50	3423.33	880.00	1506.27	19.25	3379.44	440.00	743.48	19.13	3358.38	220.00	369.42	28.00	4915.56	220.00	540.71	910.13	77.38	13584.49	0.03	407.53
865+91.00	866+66.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.15	151.61	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
866+66.00	867+34.00	I-49 R.M.L. - SP-2 WALL	68.00	202.15	137.46	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
867+34.00	868+09.00	I-49 R.M.L. - BARRIER TRANS.	75.00	197.37	148.03	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
868+09.00	871+05.00	I-49 R.M.L. - B WALL	296.00	205.63	608.66	19.50	641.33	880.00	282.19	19.25	633.11	440.00	139.28	19.13	629.16	220.00	69.21	28.00	920.89	220.00	101.30	170.51	77.38	2544.94	0.03	76.35
871+05.00	890+75.00	I-49 R.M.L. - C WALL	1970.00	213.00	4196.10	19.50	4268.33	880.00	1878.07	19.25	4213.61	440.00	926.99	19.13	4187.34	220.00	460.61	28.00	6128.89	220.00	674.18	1134.79	77.38	16937.62	0.03	508.13
890+75.00	900+41.00	I-49 R.M.L. - B WALL	966.00	205.63	1986.39	19.50	2093.00	880.00	920.92	19.25	2066.17	440.00	454.56	19.13	2053.29	220.00	225.86	28.00	3005.33	220.00	330.59	556.45	77.38	8305.45	0.03	249.16
900+41.00	901+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	201.61	151.21	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
901+16.00	901+84.00	I-49 R.M.L. - SP-2 WALL	68.00	205.14	139.50	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
901+84.00	902+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.91	150.68	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
902+59.00	910+41.00	I-49 R.M.L. - B WALL	782.00	205.63	1608.03	19.50	1694.33	880.00	745.51	19.25	1672.61	440.00	367.97	19.13	1662.18	220.00	182.84	28.00	2432.89	220.00	267.62	450.46	77.38	6723.46	0.03	201.70
910+41.00	911+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.98	150.74	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
911+16.00	911+84.00	I-49 R.M.L. - SP-2 WALL	68.00	204.21	138.86	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
911+84.00	912+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.59	150.44	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
912+59.00	921+75.00	I-49 R.M.L. - B WALL	916.00	205.63	1883.57	19.50	1984.67	880.00	873.25	19.25	1959.22	440.00	431.03	19.13	1947.01	220.00	214.17	28.00	2849.78	220.00	313.48	527.65	77.38	7875.56	0.03	236.27
921+75.00	939+30.00	I-49 R.M.L. - C WALL	1755.00	213.00	3738.15	19.50	3802.50	880.00	1673.10	19.25	3753.75	440.00	825.83	19.13	3730.35	220.00	410.34	28.00	5460.00	220.00	600.60	1010.94	77.38	15089.10	0.03	452.67
939+30.00	946+56.00	I-49 R.M.L. - B WALL	726.00	205.63	1492.87	19.50	1573.00	880.00	692.12	19.25	1552.83	440.00	341.62	19.13	1543.15	220.00	169.75	28.00	2258.67	220.00	248.45	418.20	77.38	6241.99	0.03	187.26
946+56.00	946+82.00	I-49 R.M.L. - SP-1 WALL	26.00	188.73	49.07	19.50	56.33	880.00	24.79	19.25	55.61	440.00	12.23	19.13	55.26	220.00	6.08	27.50	79.44	220.00	8.74	14.82	77.38	223.54	0.03	6.71
950+33.00	951+69.00	I-49 R.M.L. - SP-1 WALL	136.00	190.72	259.38	19.50	294.67	880.00	129.65	19.25	290.89	440.00	64.00	19.13	289.08	220.00	31.80	27.50	415.56	220.00	45.71	77.51	77.38	1169.30	0.03	35.08
951+69.00	951+91.00	I-49 R.M.L. - B WALL	22.00	205.63	45.24	19.50	47.67	880.00	20.97	19.25	47.06	440.00	10.35	19.13	46.76	220.00	5.14	28.00	68.44	220.00	7.53	12.67	77.38	189.15	0.03	5.67
951+91.00	952+66.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.40	150.30	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
952+66.00	953+34.00	I-49 R.M.L. - SP-2 WALL	68.00	204.25	138.89	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
953+34.00	954+09.00	I-49 R.M.L. - BARRIER TRANS.	75.00	201.22	150.92	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
954+09.00	968+46.06	I-49 R.M.L. - B WALL	1437.06	205.63	2955.03	19.50	3113.63	880.00	1370.00	19.25	3073.71	440.00	676.22	19.13	3054.55	220.00	336.00	28.00	4470.85	220.00	491.79	827.79	77.38	12355.52	0.03	370.67
968+46.06	969+46.06	I-49 R.M.L. - SPECIAL WALL	100.00	183.13	183.13	19.50	216.67	880.00	95.33	19.25	213.89	440.00	47.06	19.13	212.56	220.00	23.38	26.69	296.56	220.00	32.62	56.00	77.38	859.78	0.03	25.79
SUBTOTALS:					**36033.01**		**37905.94**		**16678.65**		**37420.01**		**8232.39**		**37186.77**		**4090.61**		**54269.63**		**5969.71**	**10060.32**		**150418.59**		**4512.47**

BASIS OF ESTIMATE:

ACHM SURFACE COURSE (1/2") ..... 94.5% MIN. AGGR ..... 5.5% ASPHALT BINDER
ACHM BINDER COURSE (1") ..... 95.5% MIN. AGGR ..... 4.5% ASPHALT BINDER
ACHM BASE COURSE (1 1/2") ..... 95.9% MIN. AGGR ..... 4.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\quantities\CAII0I Quantities Boxes.dgn
PLOTTED: 7/29/2015 13:41 SCALE: 16:1 MODEL: QUANTITIES

QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAII0I	49	234
				(2)		QUANTITIES		

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome Davis
No. 15560
7-29-15
JEROME PAUL DAVIS

BASE AND SURFACING (BOX 2 OF 2)

STATION	STATION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		NHPP-0472(7) ACHM BASE COURSE (1 1/2")				NHPP-0472(7) ACHM BINDER COURSE (1")				NHPP-0472(7) ACHM SURFACE COURSE (1/2")								NHPP-0472(7) TACK COAT			
				TON / STATION	TON	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	AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	TOTAL PG 76-22	AVG. WID.	SQ.YD.	GALLONS/ SQ.YD.	GALLONS
			FT.			FT.			TON	FT.			TON	FT.			TON	FT.			TON	TON	FT.			
FULL DEPTH WIDENING INTO MEDIAN - LEFT																										
791+00.00	792+20.00	I-49 R.M.L. - B WALL	120.00	205.63	246.76	19.50	260.00	880.00	114.40	19.25	256.67	440.00	56.47	19.13	255.07	220.00	28.06	28.00	373.33	220.00	41.07	69.13	77.38	1031.73	0.03	30.95
792+20.00	796+09.00	I-49 R.M.L. - C WALL	389.00	213.00	828.57	19.50	842.83	880.00	370.85	19.25	832.03	440.00	183.05	19.13	826.84	220.00	90.95	28.00	1210.22	220.00	133.12	224.07	77.38	3344.54	0.03	100.34
796+09.00	798+11.00	I-49 R.M.L. - C SPECIAL WALL	202.00	210.74	425.69	19.50	437.67	880.00	192.57	19.25	432.06	440.00	95.05	19.13	429.36	220.00	47.23	28.50	639.67	220.00	70.36	117.59	77.38	1736.75	0.03	52.10
798+11.00	798+86.00	I-49 R.M.L. - BARRIER TRANS.	75.00	210.67	158.00	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.75	239.58	220.00	26.35	43.89	77.38	644.83	0.03	19.34
798+86.00	799+54.00	I-49 R.M.L. SP-3 WALL	68.00	210.67	143.26	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
799+54.00	800+29.00	I-49 R.M.L. - BARRIER TRANS.	75.00	210.67	158.00	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.75	239.58	220.00	26.35	43.89	77.38	644.83	0.03	19.34
800+29.00	812+51.00	I-49 R.M.L. - C SPECIAL WALL	1222.00	210.67	2574.39	19.50	2647.67	880.00	1164.97	19.25	2613.72	440.00	575.02	19.13	2597.43	220.00	285.72	28.50	3869.67	220.00	425.66	711.38	77.38	10506.48	0.03	315.19
812+51.00	816+75.00	I-49 R.M.L. - C WALL	424.00	213.00	903.12	19.50	918.67	880.00	404.21	19.25	906.89	440.00	199.52	19.13	901.24	220.00	99.14	28.00	1319.11	220.00	145.10	244.24	77.38	3645.46	0.03	109.36
816+75.00	822+41.00	I-49 R.M.L. - B WALL	566.00	205.63	1163.87	19.50	1226.33	880.00	539.59	19.25	1210.61	440.00	266.33	19.13	1203.06	220.00	132.34	28.00	1760.89	220.00	193.70	326.04	77.38	4866.34	0.03	145.99
822+41.00	823+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	200.48	150.36	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
823+16.00	823+84.00	I-49 R.M.L. - SP-2 WALL	68.00	205.22	139.55	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
823+84.00	824+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
824+59.00	826+05.00	I-49 R.M.L. - B WALL	146.00	205.63	300.22	19.50	316.33	880.00	139.19	19.25	312.28	440.00	68.70	19.13	310.33	220.00	34.14	28.00	454.22	220.00	49.96	84.10	77.38	1255.28	0.03	37.66
826+05.00	832+41.00	I-49 R.M.L. - C WALL	636.00	213.00	1354.68	19.50	1378.00	880.00	606.32	19.25	1360.33	440.00	299.27	19.13	1351.85	220.00	148.70	28.00	1978.67	220.00	217.65	366.35	77.38	5468.19	0.03	164.05
832+41.00	833+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	210.67	158.00	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
833+16.00	833+84.00	I-49 R.M.L. - SP-2 WALL	68.00	210.67	143.26	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
833+84.00	834+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	210.67	158.00	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
834+59.00	843+10.00	I-49 R.M.L. - C WALL	851.00	213.00	1812.63	19.50	1843.83	880.00	811.29	19.25	1820.19	440.00	400.44	19.13	1808.85	220.00	198.97	28.00	2647.56	220.00	291.23	490.20	77.38	7316.71	0.03	219.50
843+10.00	847+66.00	I-49 R.M.L. - B WALL	456.00	205.63	937.67	19.50	988.00	880.00	434.72	19.25	975.33	440.00	214.57	19.13	969.25	220.00	106.62	28.00	1418.67	220.00	156.05	262.67	77.38	3920.59	0.03	117.62
847+66.00	848+51.00	I-49 R.M.L. - BARRIER TRANS.	85.00	168.24	143.00	19.50	184.17	880.00	81.03	19.25	181.81	440.00	40.00	19.13	180.67	220.00	19.87	26.63	251.51	220.00	27.67	47.54	77.38	730.81	0.03	21.92
848+51.00	849+26.00	I-49 R.M.L. - SPECIAL WALL	75.00	156.03	117.02	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	25.25	210.42	220.00	23.15	40.69	77.38	644.83	0.03	19.34
849+26.00	850+11.00	I-49 R.M.L. - BARRIER TRANS.	85.00	168.28	143.04	19.50	184.17	880.00	81.03	19.25	181.81	440.00	40.00	19.13	180.67	220.00	19.87	26.63	251.51	220.00	27.67	47.54	77.38	730.81	0.03	21.92
850+11.00	865+91.00	I-49 R.M.L. - B WALL	1580.00	205.63	3248.95	19.50	3423.33	880.00	1506.27	19.25	3379.44	440.00	743.48	19.13	3358.38	220.00	369.42	28.00	4915.56	220.00	540.71	910.13	77.38	13584.49	0.03	407.53
865+91.00	866+66.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
866+66.00	867+34.00	I-49 R.M.L. - SP-2 WALL	68.00	202.11	137.43	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
867+34.00	868+09.00	I-49 R.M.L. - BARRIER TRANS.	75.00	197.37	148.03	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
868+09.00	871+05.00	I-49 R.M.L. - B WALL	296.00	205.63	608.66	19.50	641.33	880.00	282.19	19.25	633.11	440.00	139.28	19.13	629.16	220.00	69.21	28.00	920.89	220.00	101.30	170.51	77.38	2544.94	0.03	76.35
871+05.00	890+75.00	I-49 L.M.L. - C WALL	1970.00	211.50	4166.55	19.50	4268.33	880.00	1878.07	19.25	4213.61	440.00	926.99	19.13	4187.34	220.00	460.61	28.00	6128.89	220.00	674.18	1134.79	77.38	16937.62	0.03	508.13
890+75.00	900+41.00	I-49 R.M.L. - B WALL	966.00	205.63	1986.39	19.50	2093.00	880.00	920.92	19.25	2066.17	440.00	454.56	19.13	2053.29	220.00	225.86	28.00	3005.33	220.00	330.59	556.45	77.38	8305.45	0.03	249.16
900+41.00	901+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
901+16.00	901+84.00	I-49 R.M.L. - SP-2 WALL	68.00	206.86	140.66	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
901+84.00	902+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
902+59.00	910+41.00	I-49 R.M.L. - B WALL	782.00	197.37	1543.43	19.50	1694.33	880.00	745.51	19.25	1672.61	440.00	367.97	19.13	1662.18	220.00	182.84	28.00	2432.89	220.00	267.62	450.46	77.38	6723.46	0.03	201.70
910+41.00	911+16.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
911+16.00	911+84.00	I-49 R.M.L. - SP-2 WALL	68.00	206.86	140.66	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
911+84.00	912+59.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
912+59.00	921+75.00	I-49 R.M.L. - B WALL	916.00	205.63	1883.57	19.50	1984.67	880.00	873.25	19.25	1959.22	440.00	431.03	19.13	1947.01	220.00	214.17	28.00	2849.78	220.00	313.48	527.65	77.38	7875.56	0.03	236.27
921+75.00	939+30.00	I-49 R.M.L. - C WALL	1755.00	211.50	3711.83	19.50	3802.50	880.00	1673.10	19.25	3753.75	440.00	825.83	19.13	3730.35	220.00	410.34	28.00	5460.00	220.00	600.60	1010.94	77.38	15089.10	0.03	452.67
939+30.00	946+56.00	I-49 R.M.L. - B WALL	726.00	205.63	1492.87	19.50	1573.00	880.00	692.12	19.25	1552.83	440.00	341.62	19.13	1543.15	220.00	169.75	28.00	2258.67	220.00	248.45	418.20	77.38	6241.99	0.03	187.26
946+56.00	946+82.00	I-49 R.M.L. - SP-1 WALL	26.00	188.62	49.04	19.50	56.33	880.00	24.79	19.25	55.61	440.00	12.23	19.13	55.26	220.00	6.08	27.50	79.44	220.00	8.74	14.82	77.38	223.54	0.03	6.71
950+33.00	951+69.00	I-49 R.M.L. - SP-1 WALL	136.00	190.72	259.38	19.50	294.67	880.00	129.65	19.25	290.89	440.00	64.00	19.13	289.08	220.00	31.80	27.50	415.56	220.00	45.71	77.51	77.38	1169.30	0.03	35.08
951+69.00	951+91.00	I-49 R.M.L. - B WALL	22.00	205.63	45.24	19.50	47.67	880.00	20.97	19.25	47.06	440.00	10.35	19.13	46.76	220.00	5.14	28.00	68.44	220.00	7.53	12.67	77.38	189.15	0.03	5.67
951+91.00	952+66.00	I-49 R.M.L. - BARRIER TRANS.	75.00	197.37	148.03	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
952+66.00	953+34.00	I-49 R.M.L. - SP-2 WALL	68.00	206.82	140.64	19.50	147.33	880.00	64.83	19.25	145.44	440.00	32.00	19.13	144.54	220.00	15.90	29.00	219.11	220.00	24.10	40.00	77.38	584.65	0.03	17.54
953+34.00	954+09.00	I-49 R.M.L. - BARRIER TRANS.	75.00	202.11	151.58	19.50	162.50	880.00	71.50	19.25	160.42	440.00	35.29	19.13	159.42	220.00	17.54	28.50	237.50	220.00	26.13	43.67	77.38	644.83	0.03	19.34
954+09.00	968+46.06	I-49 R.M.L. - B WALL	1437.06	205.63	2955.03	19.50	3113.63	880.00	1370.00	19.25	3073.71	440.00	676.22	19.13	3054.55	220.00	336.00	28.00	4470.85	220.00	491.79	827.79	77.38	12355.52	0.03	370.67
968+46.06	969+46.06	I-49 R.M.L. - SPECIAL WALL	100.00	184.11	184.11	19.50	216.67	880.00	95.33	19.25	213.89	440.00	47.06	19.13	212.56	220.00	23.38	26.69	296.56	220.00	32.62	56.00	77.38	859.78	0.03	25.79
SUBTOTALS (BOX 2 OF 2):					**36210.65**		**37905.94**		**16678.65**		**37420.01**		**8232.39**		**37186.77**		**4090.61**		**54551.24**		**6000.67**	**10091.28**		**150418.59**		**4512.47**
SUBTOTALS (BOX 1 OF 2):					**36033.01**		**37905.94**		**16678.65**		**37420.01**		**8232.39**		**37186.77**		**4090.61**		**54269.63**		**5969.71**	**10060.32**		**150418.59**		**4512.47**
TOTALS:					**72243.66**		**75811.88**		**33357.30**		**74840.02**		**16464.78**		**74373.54**		**8181.22**		**108820.87**		**11970.38**	**20151.60**		**300837.18**		**9024.94**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") ..... 94.5% MIN. AGGR ..... 5.5% ASPHALT BINDER
ACHM BINDER COURSE (1") ..... 95.5% MIN. AGGR ..... 4.5% ASPHALT BINDER
ACHM BASE COURSE (1 1/2") ..... 95.9% MIN. AGGR ..... 4.1% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

USER: of5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\quantities\CAII0I Quantities Boxes.dgn
PLOTTED: 7/29/2015 13:41 SCALE: 1:1 MODEL: QUANTITIES

QUANTITIES

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	50	234

(2) QUANTITIES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15

SURFACING

STATION	STATION	LOCATION	LENGTH	BIM-B49-0(217) ACHM SURFACE COURSE (1/2")				BIM-B49-0(217) TACK COAT			
				AVG. WID.	SQ.YD.	POUND / SQ.YD.	PG 76-22	AVG. WID	SQ.YD.	GALLONS/ SQ.YD.	GALLONS
			FT.	FT.			TON	FT.			
INLAY EXISTING LANES - RIGHT											
791+00.00	800+73.52	I-49 R.M.L.	973.52	36.50	3948.16	220.00	434.30	36.50	3948.16	0.10	394.82
800+73.52	823+45.80	I-49 R.M.L.	2272.28	26.00	6564.36	220.00	722.08	26.00	6564.36	0.10	656.44
823+45.80	833+53.10	I-49 R.M.L.	1007.30	36.80	4118.74	220.00	453.06	36.80	4118.74	0.10	411.87
833+53.10	834+71.17	I-49 R.M.L.	118.07	40.85	535.91	220.00	58.95	40.85	535.91	0.10	53.59
834+71.17	861+47.73	I-49 R.M.L.	2676.56	26.00	7732.28	220.00	850.55	26.00	7732.28	0.10	773.23
861+47.73	871+97.23	I-49 R.M.L.	1049.50	32.64	3806.19	220.00	418.68	32.64	3806.19	0.10	380.62
871+97.23	946+98.77	I-49 R.M.L.	7501.54	26.00	21671.12	220.00	2383.82	26.00	21671.12	0.10	2167.11
950+57.47	954+28.04	I-49 R.M.L.	370.57	26.00	1070.54	220.00	117.76	26.00	1070.54	0.10	107.05
954+28.04	956+05.79	I-49 R.M.L.	177.75	31.50	622.13	220.00	68.43	31.50	622.13	0.10	62.21
956+05.79	969+46.06	I-49 R.M.L.	1340.27	26.00	3871.89	220.00	425.91	26.00	3871.89	0.10	387.19
INLAY EXISTING LANES - LEFT											
791+00.00	824+18.76	I-49 L.M.L.	3318.76	26.00	9587.53	220.00	1054.63	26.00	9587.53	0.10	958.75
824+18.76	835+98.33	I-49 L.M.L.	1179.57	32.19	4218.93	220.00	464.08	32.19	4218.93	0.10	421.89
835+98.33	863+06.86	I-49 L.M.L.	2708.53	26.00	7824.64	220.00	860.71	26.00	7824.64	0.10	782.46
863+06.86	865+77.18	I-49 L.M.L.	270.32	32.42	973.75	220.00	107.11	32.42	973.75	0.10	97.38
865+77.18	946+57.70	I-49 L.M.L.	8080.52	26.00	23343.72	220.00	2567.81	26.00	23343.72	0.10	2334.37
950+11.99	956+53.77	I-49 L.M.L.	641.78	37.13	2647.70	220.00	291.25	37.13	2647.70	0.10	264.77
956+53.77	969+46.06	I-49 L.M.L.	1292.29	26.00	3733.28	220.00	410.66	26.00	3733.28	0.10	373.33
TOTALS:					**106270.87**		**11689.79**		**106270.87**		**10627.08**

BASIS OF ESTIMATE:
ACHM SURFACE COURSE (1/2") ..... 94.5% MIN. AGGR ..... 5.5% ASPHALT BINDER
MAXIMUM NUMBER OF GYRATIONS = 205 FOR PG 76-22

COLD MILLING ASPHALT PAVEMENT

STATION	STATION	LOCATION	AVG. WIDTH	BIM-B49-0(217) COLD MILLING ASPHALT PAVEMENT
			FEET	SQ.YD.
791+00.00	800+73.52	I-49 R.M.L.	36.50	3948.16
800+73.52	823+45.80	I-49 R.M.L.	26.00	6564.36
823+45.80	833+53.10	I-49 R.M.L.	36.80	4118.74
833+53.10	834+71.17	I-49 R.M.L.	40.85	535.91
834+71.17	861+47.73	I-49 R.M.L.	26.00	7732.28
861+47.73	871+97.23	I-49 R.M.L.	32.64	3806.19
871+97.23	946+98.77	I-49 R.M.L.	26.00	21671.12
950+57.47	954+28.04	I-49 R.M.L.	26.00	1070.54
954+28.04	956+05.79	I-49 R.M.L.	31.50	622.13
956+05.79	969+46.06	I-49 R.M.L.	26.00	3871.89
791+00.00	824+18.76	I-49 L.M.L.	26.00	9587.53
824+18.76	835+98.33	I-49 L.M.L.	32.19	4218.93
835+98.33	863+06.86	I-49 L.M.L.	26.00	7824.64
863+06.86	865+77.18	I-49 L.M.L.	32.42	973.75
865+77.18	946+57.70	I-49 L.M.L.	26.00	23343.72
950+11.99	956+53.77	I-49 L.M.L.	37.13	2647.70
956+53.77	969+46.06	I-49 L.M.L.	26.00	3733.28
TOTAL:				**106270.87**

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\quantities\CAIIOI Quantities Boxes.dgn
PLOTTED: 4/16/2015 13:34 SCALE: 16:1 MODEL: QUANTITIES
G:\13106000_412toWagon\TRANSP\dgn\quantities\CAIIOI Quantities Boxes.dgn 4/16/2015 13:34

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	51	234
				① A&B5946		BRIDGE QUANTITIES		56672

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. CA1101

BRIDGE NO.	CODE NO.	NAME PLATE TITLE	UNIT OF STRUCTURE	ITEM NO.	801	802	802	803	804	805	805	SP & 807	808	809	812	816	816	821
				ITEM	UNCLASSIFIED EXCAVATION FOR STRUCTURES-BRIDGE	CLASS S CONCRETE -BRIDGE	CLASS S (AE) CONCRETE -BRIDGE	CLASS 2 PROTECTIVE SURFACE TREATMENT	REINFORCING STEEL - BRIDGE (GRADE 60)	① STEEL PILING (HP 12X53)	PREBORING	STRUCTURAL STEEL IN BEAM SPANS (M 270, GRADE 50W)	ELASTOMERIC BEARINGS	SILICONE JOINT SEALANT	BRIDGE NAME PLATE (TYPE D)	DUMPED RIPRAP	FILTER BLANKET	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO.)
				UNIT	CU. YD.	CU. YD.	CU. YD.	SQ. YD.	LB.	LIN. FT.	LIN. FT.	LB.	CU. IN.	LIN. FT.	EACH	CU. YD.	SQ. YD.	LUMP SUM
A5946	X071	SPRING CREEK	BENT NO. 1		60	14.68		7.9	1325	120		692	1048.2			16	32	
			BENT NO. 2		171	71.34			12591				2162.3					
			BENT NO. 3		118	77.64			13557				2162.3					
			BENT NO. 4		169	68.23			12116				2162.3					
			BENT NO. 5		61	15.61		9.8	1406	36	30	692	1047.9			105	210	
			288'-0" CONT. COMP. W-BEAM UNIT				250.60	2247.3	72735			178656		148	1			
			EXIST. BRG. NO. A5946															1
			TOTALS FOR BRIDGE NO. A5946		579	247.50	250.60	2265.0	113730	156	30	180040	8583.0	148	1	121	242	1
B5946	X071	SPRING CREEK																
			BENT NO. 1		60	15.84		8.8	1409	120		692	1048.2			16	32	
			BENT NO. 2		163	70.97			12555				2162.3					
			BENT NO. 3		118	78.13			13661				2162.3					
			BENT NO. 4		135	65.20			11651				2162.3					
			BENT NO. 5		60	14.46		7.9	1323	36	30	692	1047.9			69	138	
			288'-0" CONT. COMP. W-BEAM UNIT				251.00	2119.3	64811			177536		140				
			EXIST. BRG. NO. B5946															1
			TOTALS FOR BRIDGE NO. B5946		536	244.60	251.00	2136.0	105410	156	30	178920	8583.0	140		85	170	1
			TOTALS FOR JOB CA1101		② 1115	492.10	501.60	4401.0	219140	312	60	358960	17166.0	288	1	206	412	

① Steel piling (Gr. 50) shall have special driving points which shall not be paid for directly, but shall be considered subsidiary to the item "Steel Piling (HP 12x53)."

② Includes approximately 380 cu. yds. of Rock Excavation.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/22/15

SCHEDULE OF BRIDGE QUANTITIES
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bca1101_ql.dgn
CHECKED BY: CAW DATE: 12-23-14 SCALE: NO SCALE
DESIGNED BY: KJC DATE: 12-19-14
BRIDGE NO. A&B5946 DRAWING NO. 56672

USER: kc5107
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101_ql.dgn
PLOTTED: 5/21/2015 16:55 SCALE: 2:1

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITIES			
		NHPP-0472(7)	BIM-B49-0(217)	TOTAL	UNIT
202	REMOVAL AND DISPOSAL OF APPROACH SLAB AND GUTTERS	4		4	EACH
202	REMOVAL AND DISPOSAL OF CONCRETE DITCH PAVING	7533		7533	SQ. YD.
202	REMOVAL AND DISPOSAL OF FENCE	85		85	LIN. FT.
SP & 202	REMOVAL AND DISPOSAL OF GUARDRAIL	2129		2129	LIN. FT.
202	REMOVAL AND DISPOSAL OF TYPE 3 OBJECT MARKER	18		18	EACH
SP & 202	REMOVAL AND DISPOSAL OF WIRE ROPE SAFETY FENCE	16950		16950	LIN. FT.
210	UNCLASSIFIED EXCAVATION	31045		31045	CU. YD.
210	COMPACTED EMBANKMENT	12119		12119	CU. YD.
SP & 210	SOIL STABILIZATION	150		150	TON
215	TRENCHING AND SHOULDER PREPARATION	12		12	STATION
303	AGGREGATE BASE COURSE (CLASS 7)	72496		72496	TON
401	TACK COAT	9255	10627	19882	GAL.
SP & 405	MINERAL AGGREGATE IN ACHM BASE COURSE (1 1/2")	32130		32130	TON
SP & 405	ASPHALT BINDER (PG76-22) IN ACHM BASE COURSE (1 1/2")	1374		1374	TON
SP, SS, & 406	MINERAL AGGREGATE IN ACHM BINDER COURSE (1")	15864		15864	TON
SP, SS, & 406	ASPHALT BINDER (PG76-22) IN ACHM BINDER COURSE (1")	748		748	TON
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	19182	11047	30229	TON
SP, SS, & 407	ASPHALT BINDER (PG76-22) IN ACHM SURFACE COURSE (1/2")	1116	643	1759	TON
412	COLD MILLING ASPHALT PAVEMENT		106271	106271	SQ. YD.
SP & 414	ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC	85		85	TON
504	APPROACH SLABS	150.00		150.00	CU.YD
504	APPROACH GUTTERS	65.60		65.60	CU.YD.
601	MOBILIZATION	1.00		1.00	LUMP SUM
SP & 602	FURNISHING FIELD OFFICE	1		1	EACH
603	TRAFFIC CONTROL SUPERVISOR	1.00		1.00	LUMP SUM
SP & 603	MAINTENANCE OF TRAFFIC	1.00		1.00	LUMP SUM
604	ADVANCE WARNING ARROW PANEL	800		800	DAY
604	FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER	35842		35842	LIN. FT.
SS & 604	TRAFFIC DRUMS	984		984	EACH
SP & 604	PORTABLE CHANGEABLE MESSAGE SIGN	228		228	WEEK
604	CONSTRUCTION PAVEMENT MARKINGS	45706		45706	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	10793		10793	LIN. FT.
SS & 604	SIGNS	1458		1458	SQ. FT.
606	SELECTED PIPE BEDDING	600		600	CU. YD.
606	24" FLARED END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS	1		1	EACH
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS III)	13398		13398	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS IV)	458		458	LIN. FT.
606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V)	226		226	LIN. FT.
SP & 606	24" REINFORCED CONCRETE PIPE CULVERTS (CLASS V) (JACK AND BORE)	89		89	LIN. FT.
609	DROP INLETS (TYPE ST)	113		113	EACH
611	4" PIPE UNDERDRAINS	35524		35524	LIN. FT.
611	UNDERDRAIN OUTLET PROTECTORS	10		10	EACH
620	LIME	13		13	TON
620	SEEDING	6.68		6.68	ACRE
SS & 620	MULCH COVER	14.53		14.53	ACRE
620	WATER	841.6		841.6	M. GAL.
621	TEMPORARY SEEDING	7.85		7.85	ACRE
621	SILT FENCE	140		140	LIN. FT.
621	SAND BAG DITCH CHECKS	1276		1276	BAG
621	DROP INLET SILT FENCE	3168		3168	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	311		311	CU. YD.
621	ROCK DITCH CHECKS	183		183	CU. YD.
623	SECOND SEEDING APPLICATION	6.68		6.68	ACRE
624	SOLID SODDING	8		8	SQ. YD.
631	CONCRETE BARRIER WALL (MEDIAN TYPE B)	8854		8854	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE C)	6175		6175	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE C SPECIAL)	1574		1574	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-1)	60		60	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-2)	50		50	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-3)	250		250	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SP-4)	50		50	LIN. FT.
631	CONCRETE BARRIER WALL (MEDIAN TYPE SPECIAL)	345		345	LIN. FT.
635	ROADWAY CONSTRUCTION CONTROL	1.00		1.00	LUMP SUM
640	MODIFYING DROP INLETS	19		19	EACH
642	RUMBLE STRIPS IN ASPHALT SHOULDERS	34973	31088	66061	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (4") (ALTERNATE NO. 1)		35300	35300	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (4") (ALTERNATE NO. 2)		35300	35300	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING (SKIP LINE) WHITE (4") (ALTERNATE NO. 1)	18185		18185	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE (SKIP LINE) WHITE (4") (ALTERNATE NO. 2)	18185		18185	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING WHITE (8") (ALTERNATE NO. 1)		4285	4285	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE WHITE (8") (ALTERNATE NO. 2)		4285	4285	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC PAVEMENT MARKING YELLOW (4") (ALTERNATE NO. 1)	37802		37802	LIN. FT.
* SP	HIGH PERFORMANCE MARKING TAPE YELLOW (4") (ALTERNATE NO. 2)	37802		37802	LIN. FT.
* SP & 719	INVERTED PROFILE THERMOPLASTIC CONTRAST PAVEMENT MARKING WHITE (4") (ALTERNATE NO. 1)	360		360	LIN. FT.
* SP	HIGH PERFORMANCE CONTRAST MARKING TAPE WHITE (4") (ALTERNATE NO. 2)	360		360	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	1331		1331	EACH
SP & 724	OVERHEAD SIGN STRUCTURE FOUNDATION	7		7	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER	6		6	EACH
731	TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR)	6		6	EACH
804	REINFORCING STEEL-ROADWAY (GRADE 60)	42000		42000	LB.
816	DUMPED RIPRAP	5		5	CU. YD.
816	FILTER BLANKET	9		9	SQ. YD.
SP	MOBILE SPEED NOTIFICATION SYSTEM	2		2	EACH
SP	REMOVAL AND DISPOSAL OF PLOWABLE PAVEMENT MARKER	446		446	EACH
	STRUCTURES OVER 20'-0" SPAN				
636	BRIDGE CONSTRUCTION CONTROL	1.00		1.00	LUMP SUM
801	UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE	1115		1115	CU. YD.
802	CLASS S CONCRETE-BRIDGE	492.10		492.10	CU. YD.
802	CLASS S (AE) CONCRETE-BRIDGE	501.60		501.60	CU. YD.
803	CLASS 2 PROTECTIVE SURFACE TREATMENT	4401.0		4401.0	SQ. YD.
804	REINFORCING STEEL-BRIDGE (GRADE 60)	219140		219140	LB.
805	STEEL PILING (HP 12X53)	312		312	LIN. FT.
805	PREBORING	60		60	LIN. FT.
SP & 807	STRUCTURAL STEEL IN BEAM SPANS (M270-GR 50W)	358960		358960	LB.
808	ELASTOMERIC BEARINGS	17166.0		17166.0	CU. IN.
809	SILICONE JOINT SEALANT	288		288	LIN. FT.
812	BRIDGE NAME PLATE (TYPE D)	1		1	EACH
816	DUMPED RIPRAP	206		206	CU. YD.
816	FILTER BLANKET	412		412	SQ. YD.
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. A5946)	1.00		1.00	LUMP SUM
821	MODIFICATION OF EXISTING BRIDGE STRUCTURE (BRIDGE NO. B5946)	1.00		1.00	LUMP SUM

* DENOTES ALTERNATE BID ITEMS.

REVISIONS

DATE	REVISION	SHEET NUMBER

SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEFFREY PAUL DAVIS
No. 13560
7-29-15

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

2

FED.ROD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.	CAI01	52	234

JOB NO.

SUMMARY OF QUANTITIES & REVISIONS

SURVEY CONTROL COORDINATES
Project Name: CA 1101
Date: 7/3/2014
Coordinate System: Arkansas State Plane Coordinates
Based on AHTD GPS PTS : *720018 RESET, AGRONOMY - 720032, 720034 - 720034A*
Projected to Ground Coordinates
Units: U.S. Survey Foot

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

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description	CA JOB REFERENCE
100	640169.1054	0.0050	661396.8193	0.0040	1280.75	0.011	GPS	PD:AHTD GPS 720034A	
101	642492.8042	0.0010	662000.3683	0.0010	1275.92	0.012	GPS	PD:AHTD GPS 720034	
102	653467.9567	0.0010	671555.8815	0.0010	1248.19	0.008	GPS	PD:AHTD GPS 720018 RESET	CA0401
103	633341.4840	0.0010	667878.9163	0.0010	1259.23	0.001	GPS	PD:AHTD GPS 720032	
104	649060.6371	0.0010	669973.0200	0.0010	1294.44	0.012	GPS	PD:AHTD GPS AGRONOMY	
113	651994.9512	0.0100	668593.4199	0.0080	1255.04	0.017	CTL	PD:5/8" REBAR W/ CAP	CA0401,CA1101
816	677596.9434	0.0390	667166.6304	0.0370	1343.89	0.001	TBM	PD:STANDRD AHTD DISK SOUTHEAST CORNER BRIDGE # 5922 HWY 68 OVERPASS (NOW HWY412)	CA0401,CA1101
817	678582.0153	0.0410	667888.4438	0.0380	1322.05	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA0401,CA1101
818	679286.1216	0.0290	668634.7391	0.0290	1310.16	0.000	TBM	PD:CUT SQUARE CENTER OF HEADWALL WEST END OF BOX CULVERT	CA0401,CA1101
819	679924.6949	0.0430	669323.6822	0.0390	1307.87	0.000	TBM	PD:STANDARD AHTD DISK NORTHEAST CORNER OF HEADWALL EAST END OF BOX CULVET	CA0401,CA1101
820	680885.9025	0.0290	669392.5290	0.0270	1303.88	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA0401,CA1101
821	681852.8287	0.0540	669529.0968	0.0530	1295.80	0.001	TBM	PD:CUT SQUARE SOUTH END HEADWALL EAST END BOX CULVERT	CA1101
822	682735.5684	0.0450	669429.2921	0.0430	1312.22	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
823	683723.9709	0.0410	669282.3046	0.0400	1323.41	0.000	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
824	684162.8681	0.0450	669059.8146	0.0400	1347.42	0.001	TBM	PD:STNDARD AHTD DISK SOUTHWEST CORNER OF BRIDGE # 5945 ELM SPRINGS ROAD OVERPASS	CA1101
825	684651.1496	0.0450	669100.6476	0.0420	1325.82	0.000	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
826	686397.2785	0.0400	668757.7934	0.0380	1322.49	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
827	687405.2743	0.0430	668601.8782	0.0420	1295.80	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
828	688459.0128	0.0430	668606.6750	0.0360	1268.20	0.000	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
829	689454.7757	0.0480	668641.5137	0.0450	1253.71	0.000	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
830	690456.5871	0.0430	668674.5849	0.0420	1238.53	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
831	692253.2638	0.0440	668772.7495	0.0380	1204.07	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
832	693921.4329	0.0440	669181.1496	0.0370	1207.51	0.001	TBM	PD:AHTD STANDARD DISK SOUTHWEST CORNER OF BRIDGE # 5946 SPRING CREEK	CA1101
833	695077.5816	0.0440	669455.7700	0.0380	1231.14	0.001	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
834	696085.4336	0.0450	669577.2630	0.0420	1269.53	0.000	TBM	PD:AHTD STANDARD DISK SOUTHWEST CORNER OF BRIDGE # 5947 WAGON WEEEL ROAD LOG MILE 4.33	CA1101
835	696147.7431	0.0430	669729.0929	0.0380	1249.04	0.001	TBM	PD:CUT SQUARE BASE OF CABLE ANCHOR	CA1101
836	697361.4812	0.0410	670189.6200	0.0430	1255.54	0.001	TBM	PD:CUT SQUARE BASE OF SIGN POST	CA1101
837	697873.0298	0.0450	670798.9527	0.0440	1249.67	0.000	TBM	PD:CUT SQUARE DROP INLET IN CENTER OF MEDIAN OF I-49	CA1101
843	677611.8585	0.0450	668402.7333	0.0440	1336.55	0.001	TBM	PD:SQ CUT IN CATCH BASIN SOUTH SIDE HWY 412 IN FRONT OF DOUBLETREE HOTEL	CA0401,CA1101
844	677723.2483	0.0440	667456.8014	0.0430	1320.81	0.000	TBM	PD:CUT SQUARE IN CATCH BASIN NORTH SIDE OF HWY 412	CA0401,CA1101
845	677831.8011	0.0510	665890.0752	0.0490	1311.49	0.001	TBM	PD:CUT SQUARE IN CATCH BASIN NORTHEAST CORNER HWY 412 & MATHIAS DRIVE	CA0401,CA1101
846	684085.6799	0.0450	670499.6823	0.0400	1327.90	0.001	TBM	PD:CUT SQUARE IN CATCH BASIN SOUTH SIDE OF ELM SPRINGS ROAD	CA1101
847	684300.4515	0.0510	668165.6510	0.0430	1326.99	0.001	TBM	PD:CUT SQUARE BASE OF SIGNAL POLE NWORTHWEST CORNER ELM SPRINGS RD AND 48TH STREET	CA1101
848	695954.8793	0.0440	671385.8961	0.0440	1277.72	0.000	TBM	PD:CUT X IN TOP FIRE HYDRANT 30' SOUTH OF BACK OF CURB OF WAGON WHEEL ROAD	CA1101
1021	676562.1404	0.0280	667031.0014	0.0280	1327.51	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1022	677302.6668	0.0310	667151.4325	0.0320	1339.10	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1023	678374.7823	0.0270	667780.1725	0.0280	1327.07	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1024	679488.9632	0.0300	669056.6742	0.0300	1315.59	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1025	680212.3344	0.0320	669394.6040	0.0310	1312.21	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1026	680972.0889	0.0260	669466.5725	0.0250	1305.26	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1027	681829.5051	0.0300	669502.1539	0.0290	1302.57	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1028	682685.1071	0.0320	669508.1718	0.0300	1314.96	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1029	683446.0375	0.0300	669407.4681	0.0280	1324.25	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1030	684086.8276	0.0300	669283.7225	0.0270	1325.70	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1031	684887.2617	0.0310	669126.1376	0.0290	1328.49	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1032	685737.7229	0.0300	668966.7821	0.0270	1330.26	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1033	686559.2991	0.0310	668800.7561	0.0280	1321.35	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1034	687403.3259	0.0320	668673.7495	0.0290	1297.29	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1035	688125.4877	0.0330	668664.0489	0.0300	1276.36	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1036	689063.5449	0.0310	668698.2032	0.0290	1261.49	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1037	689866.0135	0.0300	668726.0337	0.0290	1249.47	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1038	690678.3234	0.0310	668755.2629	0.0300	1235.78	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1039	691515.9389	0.0320	668784.8614	0.0300	1216.95	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1040	692309.7895	0.0310	668850.4769	0.0290	1204.61	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1041	693038.8307	0.0290	669006.2954	0.0280	1197.46	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1042	693885.5393	0.0290	669220.8458	0.0270	1205.81	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1043	694613.7071	0.0290	669409.3258	0.0270	1226.61	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1044	695415.8267	0.0310	669613.8186	0.0300	1238.66	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1045	696193.5041	0.0280	669813.8825	0.0250	1249.89	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1046	663847.1736	0.0320	668826.5892	0.0300	1164.98	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1047	664099.4386	0.0340	668220.3901	0.0350	1186.68	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1048	664422.7548	0.0320	667587.4159	0.0330	1217.37	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1049	664494.4587	0.0320	667061.0353	0.0310	1221.09	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1050	663872.8188	0.0310	667646.1646	0.0320	1202.90	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1051	664625.9869	0.0260	668198.5114	0.0300	1211.22	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1052	664868.3885	0.0310	667631.7937	0.0340	1233.11	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1053	672395.6435	0.0300	667752.2248	0.0310	1367.51	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.	CA1101		53	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
4-16-15

Point No.	Northing	SY	Easting	SX	Elevation	SZ	Feature Code	Point Description	CA JOB REFERENCE
1054	672430.2882	0.0290	667084.9902	0.0310	1377.15	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1055	672484.6845	0.0290	666624.7460	0.0300	1365.60	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1056	672517.5565	0.0300	665673.2267	0.0310	1339.48	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1057	677028.0127	0.0300	667277.7174	0.0310	1332.32	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1058	677613.7238	0.0260	668160.3457	0.0240	1337.79	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1059	677618.6711	0.0270	667592.7734	0.0250	1322.58	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1060	677669.6500	0.0330	666785.4386	0.0310	1331.13	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1061	677819.0905	0.0290	665839.0262	0.0280	1312.12	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1062	677069.6285	0.0300	666851.5159	0.0300	1334.28	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1063	678115.0853	0.0310	666896.2937	0.0290	1324.13	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1064	678314.5782	0.0300	667420.4594	0.0280	1331.82	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA0401,CA1101
1065	683495.3493	0.0330	669629.6844	0.0310	1330.82	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1066	684080.9489	0.0330	670540.8811	0.0310	1327.50	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1067	684113.0228	0.0320	669736.8921	0.0300	1334.89	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1068	684241.8008	0.0310	668727.0606	0.0300	1333.58	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1069	684308.7735	0.0320	667766.8428	0.0300	1323.96	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1070	683639.0505	0.0310	668868.2830	0.0290	1329.64	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1071	684667.9812	0.0310	669526.3772	0.0290	1332.65	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1072	685027.3095	0.0320	668854.3169	0.0320	1329.72	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1073	695353.6289	0.0310	669704.9629	0.0310	1242.56	0.001	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1074	695997.7953	0.0310	671061.4675	0.0310	1277.05	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1075	696027.3723	0.0310	670195.2037	0.0300	1269.91	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1076	696087.3095	0.0310	669187.8881	0.0300	1266.89	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1077	695539.1338	0.0340	669361.3872	0.0330	1250.33	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1078	696543.9434	0.0300	670146.2695	0.0290	1260.98	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
1079	696499.1217	0.0340	669424.9629	0.0320	1267.37	0.000	CTL	PD:REBAR & 2" ALUMINUM CAP	CA1101
7108	698318.7369	0.0090	671390.9332	0.0100	1258.77	0.063	SU	PD:STD.AHTD MON.STAMPED: 001966 / 108	CA1101
7109	698031.9205	0.0110	670898.1290	0.0120	1253.22	0.063	SU	PD:STD.AHTD MON.STAMPED: 001966 / 109	CA1101
7110	697619.2532	0.0120	670406.6135	0.0130	1253.83	0.063	SU	PD:STD.AHTD MON.STAMPED: 001966 / 110	CA1101
7111	697067.8377	0.0130	669979.6476	0.0130	1257.33	0.064	SU	PD:STD.AHTD MON.STAMPED: 001966 / 111	CA1101
9907	648594.7231	0.0030	669163.5301	0.0040	1286.92	0.012	BM	PD:SQUARE CUT ON TOP OF RCP AT 112 / KNAPP ST	CA1101

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

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

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

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

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

Positional Accuracy:	Horizontal - GPS (1.0 cm± 1PPM)	PN: 100-105
	Horizontal - Primary (2.0cm± 20PPM):	PN:109-150, 1000-1079
	Horizontal - Secondary (3 cm ± 50PPM):	PN:N/A
	Vertical - NGS 1st Order (±4mm x Vdist in km)	PN: 900, 940, 9915
	Vertical - NGS 2nd Order (±6mm x Vdist in km)	PN:N/A
	Vertical - NGS 3rd Order (±8mm x Vdist in km)	PN:N/A

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101 Survey Ctl.dgn
PLOTTED: 4/16/2015 08:54
MODEL: SURVEY CONTROL DETAILS
SCALE: 100:1

Horizontal Datum: NAD 1983 (1997) State Plane Zone: 0301-North Zone
The adjustment year is based on metadata in the SDMS Control file
A project CAF of: 0.999916840 has been used to compute the above coordinates.
The project CAF shall have a minimum precision of 9 digits right of the decimal.
This CAF is intended for use within the project limits only.
Grid Distance = Ground Distance X CAF
If Coordinates are listed as Ground:
To compute Grid Coordinates, multiply the Ground Coordinates by CAF about the origin of X=0 & Y=0
If Coordinates are listed as Grid:
To compute Ground Coordinates, divide the Grid Coordinates by CAF about the origin of X=0 & Y=0

Vertical Datum: NAVD 1988 based NGS BM:
A project Elevation Factor of: 0.999938461 has been computed and incorporated in the above CAF.
This is based on the average elevation of the project: 1286.62 Feet
3-Wire Leveling techniques have been used to establish elevations on
Points: 1-62, 100-105, 109-150, 800-848, 900-952, 1000-1079, 9907-9915
From NGS BM: 900, 940, 9915

Basis of Bearing: Grid Bearings based on AHTD GPS points: 720018 RESET, AGRONOMY - 720032, 720034 - 720034A
Convergence Angle is: 01 16 50.89 LEFT at PN: 101
LT: 36-04-42 N LG: 094-12-04 W
Grid Azimuth = Astronomical Azimuth - Convergence Angle

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	54	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15360
JEROME PAUL DAVIS
4-16-15

CA1101 CL MEDIAN - I-49

POINT NO.	Type	Station	Northing	Easting
8014	POB	755+27.47	675724.4333	666951.0482
8015	PC	762+73.95	676470.9073	666953.5780
	PI	776+54.50	677851.4475	666958.2566
8016	CC		676461.1987	669818.3505
8017	PT	788+46.90	678707.9667	668040.9790
8018	PC	796+34.71	679196.7366	668658.8310
	PI	805+18.97	679745.3489	669352.3296
8019	CC		680694.5819	667473.9167
8020	PT	812+90.98	680629.0889	669382.6527
8021	PC	828+37.93	682175.1365	669435.7010
	PI	834+95.13	682831.9472	669458.2377
8022	CC		682371.6154	663709.4929
8023	PT	841+46.61	683476.8023	669331.4699
8024	PC	874+46.99	686715.2050	668694.8539
	PI	881+07.81	687363.6148	668567.3874
8025	CC		687820.3919	674316.8309
8026	PT	887+62.82	688024.0174	668590.8725
8027	PC	924+14.15	691673.0374	668720.6383
	PI	930+32.50	692291.0000	668742.6141
8028	CC		691469.4120	674446.5967
8029	PT	936+46.09	692890.0443	668895.9330
8030	PC	971+80.50	696314.1032	669772.2839
	PI	983+82.61	697478.6710	670070.3424
8031	CC		695603.7871	672547.6157
8032	PT	994+56.86	698081.8435	671110.1693
8033	POE	1014+79.83	699096.8916	672860.0408

SURVEY CONTROL DETAILS

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101Survey Ctl.dgn
PLOTTED: 4/16/2015 08:54 SCALE: 1001 MODEL: SURVEY CONTROL DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	55	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

PN:1063
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N69°09'49"E 560.84'

PN:1064
PD:REBAR & 2" ALUMINUM CAP,I-49

785

780

SURVEY BASELINE N80°29'55"E 364.72'

PN:817
PD:CUT SQUARE,I-49,SPRINGDALE

8017

STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)

790

795

P.T. 788+46.90

℄ MEDIAN

N51°39'12"E

I-49

SURVEY BASELINE

SURVEY BASELINE N48°53'03"E 1694.36'

PN:1023
PD:REBAR & 2" ALUMINUM CAP,I-49

I-49
PI = 776+54.50
Δ = 51°27'32.5" RT.
D = 02°00'00"
T = 1380.55'
L = 2572.95'
PC = 762+73.95
PT = 788+46.90
MATCH EXISTING SUPERELEVATION

SURVEY BASELINE N13°55'12"E 776.98'

PN:1059
PD:REBAR & 2" ALUMINUM CAP,I-49

W N E S
BEARINGS ARE GRID BASED ON GPS

0 25 50 100 FEET
SCALE RATIO 1"=100'

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101Survey Ctl.dgn
PLOTTED: 4/16/2015 08:54
SCALE: 100:1
MODEL: SURVEY CONTROL DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	56	234

(2) SURVEY CONTROL DETAILS

795

P.C. 796+34.71

PN:818
PD:CUT SQUARE,I-49,SPRINGDALE

800

8018

BEARINGS ARE GRID BASED ON GPS

W N E S

0 25 50 100 FEET

SCALE RATIO 1"=100'

I-49
PI = 805+18.97
Δ = 49°41'16.9" LT.
D = 03°00'00"
T = 884.26'
L = 1656.27'
PC = 796+34.71
PT = 812+90.98
MATCH EXISTING SUPERELEVATION

805

℄ MEDIAN

I-49

SURVEY BASELINE N25°02'24"E
798.41'

SURVEY BASELINE

PN:1025
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:819
PD:STANDARD AHTD DISK,I-49,SPRINGDALE

N01°57'55"E

PN:1024
PD:REBAR & 2" ALUMINUM CAP,I-49

N51°39'12"E

P.I. 805+18.97

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

I-49
PI = 805+18.97
Δ = 49°41'16.9" LT.
D = 03°00'00"
T = 884.26'
L = 1656.27'
PC = 796+34.71
PT = 812+90.98
MATCH EXISTING SUPERELEVATION

BEARINGS ARE GRID BASED ON GPS

W N E S

0 25 50 100 FEET

SCALE RATIO 1"=100'

810

815

820

825

P.T. 812+90.98

8020

℄ MEDIAN

I-49

N01°57'55"E

PN:820
PD:CUT SQUARE,I-49,SPRINGDALE

SURVEY BASELINE N05°24'41"E
763.16'

SURVEY BASELINE

SURVEY BASELINE N02°22'35"E
858.15'

PN:1026
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1027
PD:REBAR & 2

PN:821
PD:CUT SQU

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101Survey Ctl.dgn
PLOTTED: 4/16/2015 08:33
MODEL: SURVEY CONTROL DETAILS
SCALE: 100:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	57	234

(2) SURVEY CONTROL DETAILS

BEARINGS ARE GRID BASED ON GPS

0 25 50 100 FEET
SCALE RATIO 1"=100'

I-49
PI = 834+95.13
Δ = 13°05'12.3" LT.
D = 01°00'00"
T = 657.20'
L = 1308.68'
PC = 828+37.93
PT = 841+46.61
MATCH EXISTING SUPERELEVATION

825 830 835

P.C. 828+37.93

℄ MEDIAN

I-49

N01°57'55"E

8021

PN:822
PD:CUT SQUARE,I-49,SPRINGDALE

N11°07'18"W

767.57'

SURVEY BASELINE N07°32'20"W

N01°57'55"E

SURVEY BASELINE N00°24'11"E
855.62"

SURVEY BASELINE

PN:1028
PD:REBAR & 2" ALUMINUM CAP,I-49

P.I. 834+95.13

PN:1027
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:821
PD:CUT SQUARE,I-49,SPRINGDALE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

I-49
PI = 834+95.13
Δ = 13°05'12.3" LT.
D = 01°00'00"
T = 657.20'
L = 1308.68'
PC = 828+37.93
PT = 841+46.61
MATCH EXISTING SUPERELEVATION

PN:1070
PD:REBAR & 2" ALUMINUM CAP,I-49

BEARINGS ARE GRID BASED ON GPS

0 25 50 100 FEET
SCALE RATIO 1"=100'

PN:1068
PD:REBAR & 2" ALUMINUM CAP,I-49

840 845 850 855

P.T. 841+46.61

SURVEY BASELINE N72°18'15"W
572.69'

SURVEY BASELINE N74°26'35"W
577.83'

PN:824
PD:STNDARD AHTD DISK,I-49,SPRINGDALE

℄ MEDIAN

I-49

N11°07'18"W

8023

PN:823
PD:CUT SQUARE,I-49,SPRINGDALE

PN:825
PD:CUT SQUARE,I-49,SPRINGDALE

SURVEY BASELINE N10°55'48"W
652.63'

SURVEY BASELINE N11°08'15"W
815.80'

SURVEY BASELINE

PN:1029
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1030
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE S86°41'30"W
453.93'

SURVEY BASELINE N72°18'15"W
227.62'

SURVEY BASELINE N01°16'58"W
456.37'

PN:1065
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1067
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CAII0I Survey Ctl.dgn
PLOTTED: 4/16/2015 08:33
SCALE: 100d
MODEL: SURVEY CONTROL DETAILS

G:\13106000_412toWagon\TRANSP\dgn\CAII0I Survey Ctl.dgn 4/16/2015 08:33

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	58	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15

PN:1068
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N09°12'08"E 195.75'

PN:1072
PD:REBAR & 2" ALUMINUM CAP,I-49

BEARINGS ARE GRID BASED ON GPS

W–N–E
S

0 25 50 100 FEET
SCALE RATIO 1"=100'

855 860 865 870

N11°07'18"W

I-49

℄ MEDIAN

SURVEY BASELINE N10°36'46"W 865.26'

SURVEY BASELINE N11°25'29"W 838.18'

PN:1031
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N19°16'58"W 456.37'

PN:1071
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE

PN:1032
PD:REBAR & 2" ALUMINUM CAP,I-49

BEARINGS ARE GRID BASED ON GPS

W–N–E
S

0 25 50 100 FEET
SCALE RATIO 1"=100'

I-49
PI = 881+07.81
Δ = 13°09'29.7" RT.
D = 01°00'00"
T = 660.82'
L = 1315.83'
PC = 874+46.99
PT = 887+62.82
MATCH EXISTING SUPERELEVATION

870 875 880 885

P.I. 881+07.81

N11°07'18"W

8024

N02°02'12"E

PN:826
PD:CUT SQUARE,I-49,SPRINGDALE

℄ MEDIAN

I-49

PN:827
PD:CUT SQUARE,I-49,SPRINGDALE

PN:1033
PD:REBAR & 2" ALUMINUM CAP,I-49

P.C. 874+46.99

SURVEY BASELINE N08°33'27"W 853.53'

SURVEY BASELINE

PN:1034
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N00°46'11"W 722.23'

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CAII0I Survey Ctl.dgn MODEL: SURVEY CONTROL DETAILS
PLOTTED: 4/16/2015 08:33 SCALE: 100:1

SURVEY CONTROL DETAILS

I-49
PI = 881+07.81
Δ = 13°09'29.7" RT.
D = 01°00'00"
T = 660.82'
L = 1315.83'
PC = 874+46.99
PT = 887+62.82
MATCH EXISTING SUPERELEVATION

BEARINGS ARE GRID BASED ON GPS

W – N – E – S

0 25 50 100 FEET
SCALE RATIO 1"=100'

Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.	CA1101		59	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

885 890 895 900

℄ MEDIAN

I-49

N02°02'12"E

8026

P.T. 887+62.82

SURVEY BASELINE N00°46'11"W
722.23'

PN:828
PD:CUT SQUARE TOPO REFERENCE,I-49

PN:1035
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N02°05'07"E
938.68'

SURVEY BASELINE

PN:1036
PD:REBAR & 2" ALUMINUM CAP,I-49

BEARINGS ARE GRID BASED ON GPS

W – N – E – S

0 25 50 100 FEET
SCALE RATIO 1"=100'

900 905 910 915

N02°02'12"E

I-49

PN:829
PD:CUT SQUARE,I-49,SPRINGDALE

PN:830
PD:CUT SQUARE TOPO REFERENCE,I-49

℄ MEDIAN

SURVEY BASELINE N01°59'11"E
802.95'

SURVEY BASELINE N02°03'39"E
812.84'

PN:1037
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE

PN:1038
PD:REBAR & 2" ALUMINUM CAP,I-49

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101 Survey Ctl.dgn
PLOTTED: 4/16/2015 08:33
MODEL: SURVEY CONTROL DETAILS
SCALE: 100:1

SURVEY CONTROL DETAILS

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	60	234

(2) SURVEY CONTROL DETAILS

BEARINGS ARE GRID BASED ON GPS

W — N — E — S

0 25 50 100 FEET

SCALE RATIO 1"=100'

I-49
PI = 930+32.50
Δ = 12°19'09.8" RT.
D = 01°00'00"
T = 618.35'
L = 1231.94'
PC = 924+14.15
PT = 936+46.09
MATCH EXISTING SUPERELEVATION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

915 920 925 930

P.I. 930+32.50

N02°02'12"E

℄ MEDIAN

I-49

N02°02'12"E

8027

PN:831
PD:CUT SQUARE,I-49,SPRINGDALE

SURVEY BASELINE N02°01'26"E
838.14'

SURVEY BASELINE

PN:1039
PD:REBAR & 2" ALUMINUM CAP,I-49

P.C. 924+14.15

SURVEY BASELINE N04°43'30"E
796.56'

I-49
PI = 930+32.50
Δ = 12°19'09.8" RT.
D = 01°00'00"
T = 618.35'
L = 1231.94'
PC = 924+14.15
PT = 936+46.09
MATCH EXISTING SUPERELEVATION

935 940 945

930

P.I. 930+32.50

N02°02'12"E

N14°21'22"E

℄ MEDIAN

I-49

N14°21'22"E

8029

PN:831
PD:CUT SQUARE,I-49,SPRINGDALE

SURVEY BASELINE N12°03'52"E
745.51'

PN:1040
PD:REBAR & 2" ALUMINUM CAP,I-49

P.T. 936+46.09

PN:1041
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE

SURVEY BASELINE N14°13'09"E
873.47'

BEARINGS ARE GRID BASED ON GPS

W — N — E — S

0 25 50 100 FEET

SCALE RATIO 1"=100'

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CAII0I Survey Ctl.dgn
PLOTTED: 4/16/2015 08:33
MODEL: SURVEY CONTROL DETAILS
SCALE: 100:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	61	234

(2) SURVEY CONTROL DETAILS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
JEROME PAUL DAVIS
4-16-15

945 950 955 960

BEARINGS ARE GRID BASED ON GPS

0 25 50 100 FEET
SCALE RATIO 1"=100'

I-49
N14°21'22"E
℄ MEDIAN

PN:832
PD:AHTD STANDARD DISK,I-49,SPRINGDALE

PN:833
PD:CUT SQUARE,I-49,SPRINGDALE

PN:1042
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N14°30'43"E
752.17'

SURVEY BASELINE

PN:1043
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N14°18'08"E
827.78'

960 965 970 975

PN:1077
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N63°57'56"W
280.94'

PN:1076
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1079
PD:REBAR & 2" ALUMINUM CAP,I-49

I-49
PI = 983+82.61
Δ = 45°31'37.9" RT.
D = 02°00'00"
T = 1202.11'
L = 2276.36'
PC = 971+80.50
PT = 994+56.86
MATCH EXISTING SUPERELEVATION

PN:834
PD:AHTD STANDARD DISK,I-49, SPRINGDALE

SURVEY BASELINE S80°22'19"W
634.94'

SURVEY BASELINE N66°29'08"E
722.10'

STA. 969+46.06
END JOB CA1101
(LOG MILE 75.21)

N14°21'22"E
I-49
℄ MEDIAN

PN:835
PD:CUT SQUARE,IN BASE OF CABLE ANCHOR

8030

P.C. 971+80.50

SURVEY BASELINE N14°25'37"E
803.00'

SURVEY BASELINE

PN:1044
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N55°41'24"W
110.34'

PN:1073
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1045
PD:REBAR & 2" ALUMINUM CAP,I-49

SURVEY BASELINE N66°27'31"W
415.94'

SURVEY BASELINE N43°29'08"E
483.00'

PN:1078
PD:REBAR & 2" ALUMINUM CAP,I-49

PN:1075
PD:REBAR & 2" ALUMINUM CAP,I-49

BEARINGS ARE GRID BASED ON GPS

0 25 50 100 FEET
SCALE RATIO 1"=100'

SURVEY CONTROL DETAILS

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\CA1101Survey Ct1.dgn
PLOTTED: 4/16/2015 14:27
MODEL: SURVEY CONTROL DETAILS
SCALE: 100:1

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	62	234

PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-24-15

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
791+00	792+20	B
792+20	796+09	C

STA. 788+00 - IN PLACE
TYPE ST DROP INLET
3' LT. OF C.L.
H = 7'-5" WITH
24" X 146' R.C. PIPE CULVERT
RETAIN

STA. 789+50 - IN PLACE
TYPE ST DROP INLET
3' LT. OF C.L. H = 6'-7"
WITH 24" X 131' R.C. PIPE CULVERT
RETAIN

STA. 790+85 - IN PLACE
TYPE ST DROP INLET
3' LT. OF C.L. H = 5'-9"
WITH 24" X 11' R.C. PIPE CULVERT
RETAIN

STA. 791+00 - IN PLACE
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
CONNECTED TO DROP INLET
AT STA. 791+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES
RETAIN

STA. 791+00 - IN PLACE
DROP INLET 3' RT. OF C.L. H = 5'-10"
RETAIN
CONSTRUCT 24" X 271' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 793+75 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 793+75 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-7"
WITH 24" X 293' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO R.C. BOX CULVERT
AT STA. 796+17
TYPE ST DROP INLET = 4' X 6'
3 GRATES

S 48th ST
CURB
CURB
CONCRETE
PV
785
790
795
80
RAMP 3
RAMP 2
N51°39'12"E
N51°39'12"E
C.L. MEDIAN
P.T. 788+46.90
STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)
OVERHEAD POWER LINE
PIPE "TYSTEEL"
GAS/PIPELINE MARKER

I-49
PI = 776+54.50
Δ = 51°27'33" RT.
D = 02°00'00"
T = 1380.55'
L = 2572.95'
PC = 762+73.95
PT = 788+46.90
MATCH EXISTING SUPERELEVATION

STA. 791+00 TO STA. 847+97 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

I-49

1345 1340 1335 1330 1325 1320 1315 1310 1305 1300

780+50 LT.
TOP ELEV. 1336.22
F.L. ELEV. 1331.35

24" x 293' R.C. PIPE @ 2.00%

783+50 LT.
TOP ELEV. 1330.39
F.L. ELEV. 1325.32

24" x 293' R.C. PIPE @ 2.00%

786+47 LT.
TOP ELEV. 1324.23
F.L. ELEV. 1319.07

EXISTING GROUND AT C.L. MEDIAN

STA. 788+00 LT.
TOP D.I. 1321.23
F.L. D.I. 1313.80

24" X 146' @ 1.00%

STA. 789+50 LT.
TOP D.I. 1318.85
F.L. D.I. 1312.24

24" X 131' @ 0.60%

STA. 790+85 LT.
TOP D.I. 1317.11
F.L. D.I. 1311.35

STA. 791+00 LT.
TOP D.I. 1316.98
F.L. D.I. 1311.17

24" X 3' @ 0.50%
24" X 11' @ 0.70%

STA. 791+00.00
BEGIN JOB CA1101
(LOG MILE 71.83)

STA. 791+00 RT.
TOP D.I. 1316.87
F.L. D.I. 1311.05

24" X 271' @ 0.70%

STA. 793+75 RT.
TOP D.I. 1315.67
F.L. D.I. 1309.05

24" X 293' @ 0.70%

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

780+00 781+00 782+00 783+00 784+00 785+00 786+00 787+00 788+00 789+00 790+00 791+00 792+00 793+00 794+00 795+00

USER: a1506
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\p&p\ppl.dgn
PLOTTED: 6/23/2015 13:06
SCALE: 100d
MODEL: PLAN AND PROFILE

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C.A.I.101	63	234
				(2)	PLAN AND PROFILE SHEETS			

STA. 796+17 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
DOUBLE 5' X 3' R.C. BOX
RETAIN & MODIFY

STA. 796+17 - IN PLACE
DOUBLE 5' X 3' X 208' R.C. BOX CULVERT
(30° LT. FWD. SKEW)
050=180 CFS: D.A.= 106.7 AC.
RETAIN

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
796+09	798+86	C SPECIAL
798+86	799+11	SP-4
799+29	799+54	SP-4
799+54	812+51	C-SPECIAL

I-49
PI = 805+18.97
Δ = 49°41'17" LT.
D = 03°00'00"
T = 884.26'
L = 1656.27'
PC = 796+34.71
PT = 812+90.98
MATCH EXISTING SUPERELEVATION

STA. 809+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-10"
WITH 24" X 226' R.C. PIPE CULVERT
(CLASS V) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 811+30 RT.
TYPE ST DROP INLET = 4' X 4'

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

STA. 797+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-0"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 800+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 800+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-1"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 803+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 803+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 806+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 806+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-9"
WITH 24" X 39' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO R.C. BOX CULVERT
AT STA. 806+48
TYPE ST DROP INLET = 4' X 4'

STA. 806+48 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
DOUBLE 7' X 3' R.C. BOX
RETAIN & MODIFY

STA. 806+48 - IN PLACE
DOUBLE 7' X 3' X 206' R.C. BOX CULVERT
(30° LT. FWD. SKEW)
050= 222 CFS: D.A.=114.2 AC.
RETAIN

795
800
805
810
P.C. 796+34.71
REFER TO SPECIAL DETAILS
C.L. MEDIAN
N51°39'12"E
N01°57'55"E
APPROXIMATE SPECIAL FLOOD HAZARD AREA
I-49

STA. 796+17
TOP ELEV. 1311.73
24" X 293' @ 0.70%
(MODIFY)
F.L. IN 1307.38
+17
(EXIST.)
F.L. IN 1308.40
F.L. OUT 1305.50

STA. 797+00 RT.
TOP D.I. 1312.51
F.L. D.I. 1307.55
24" X 296' @ 0.45%

STA. 800+00 RT.
TOP D.I. 1311.17
F.L. D.I. 1306.12
EXISTING GROUND AT C.L. MEDIAN
24" X 296' @ 0.43%

STA. 803+00 RT.
TOP D.I. 1309.90
F.L. D.I. 1304.75
24" X 296' @ 0.53%

STA. 806+00 RT.
TOP D.I. 1308.83
F.L. D.I. 1303.08
24" X 39' @ 0.64%

STA. 806+48
TOP ELEV. 1307.68
(MODIFY)
F.L. IN 1302.83
+48
(EXIST.)
F.L. IN 1303.22
F.L. OUT 1301.40

STA. 809+00 RT.
TOP D.I. 1307.51
F.L. D.I. 1303.65
24" X 226' @ 0.17%
CLASS V

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

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285

795+00 796+00 797+00 798+00 799+00 800+00 801+00 802+00 803+00 804+00 805+00 806+00 807+00 808+00 809+00 810+00

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\p&p\pp2.dgn
PLOTTED: 4/16/2015 13:43
MODEL: PLAN AND PROFILE
SCALE: 100:1

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CONCRETE BARRIER WALL		
STA.	STA.	MEDIAN TYPE
812+51	816+75	C
816+75	823+16	B
823+16	823+41	SP-3
823+59	823+84	SP-3
823+84	826+05	B

STA. 811+30 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-6"
WITH 24" X 66' R.C. PIPE CULVERT
(CLASS IV) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 812+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 812+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-8"
WITH 24" X 47' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 812+51 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 812+51 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-11"
WITH 24" X 345' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 816+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 815+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 88' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 816+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-6"
WITH 24" X 89' R.C. PIPE CULVERT
W/ FES (CLASS V) (TYPE 1 OR 2 BEDDING)
TYPE ST DROP INLET = 4' X 4'
5 CU. YD. DUMPED RIPRAP
(JACK AND BORE)

STA. 818+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 818+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 818+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-11"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 820+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 820+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 820+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 820+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-2"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 821+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 821+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 821+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 821+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-4"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 822+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 822+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-6"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 822+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 822+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-6"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-9"
WITH 24" X 83' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+87 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+87 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 8'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+87 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+87 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 8'-2"
WITH 24" X 44' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 824+37
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 825+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 8'-1"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 825+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 825+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-9"
WITH 24" X 58' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 824+37
TYPE ST DROP INLET = 4' X 6'
3 GRATES

REFER TO SPECIAL DETAILS

STA. 824+37 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
TRIPLE 12' X 7' R.C. BOX
RETAIN & MODIFY

STA. 824+37 - IN PLACE
TRIPLE 12' X 7' X 240' R.C. BOX CULVERT
(30° RT. FWD. SKEW)
050=1458 CFS: D.A.=1648.9 AC.
RETAIN

I-49
PI = 805+18.97
Δ = 49°41'17" LT.
D = 03°00'00"
T = 884.26'
L = 1656.27'
PC = 796+34.71
PT = 812+90.98
MATCH EXISTING SUPERELEVATION

P.T. 812+90.98

OVERHEAD POWER LINE

APPROXIMATE SPECIAL FLOOD HAZARD AREA

WEIGH STATION

N01°57'55"E

APPROXIMATE SPECIAL FLOOD HAZARD AREA

810 815 820 825

I-49

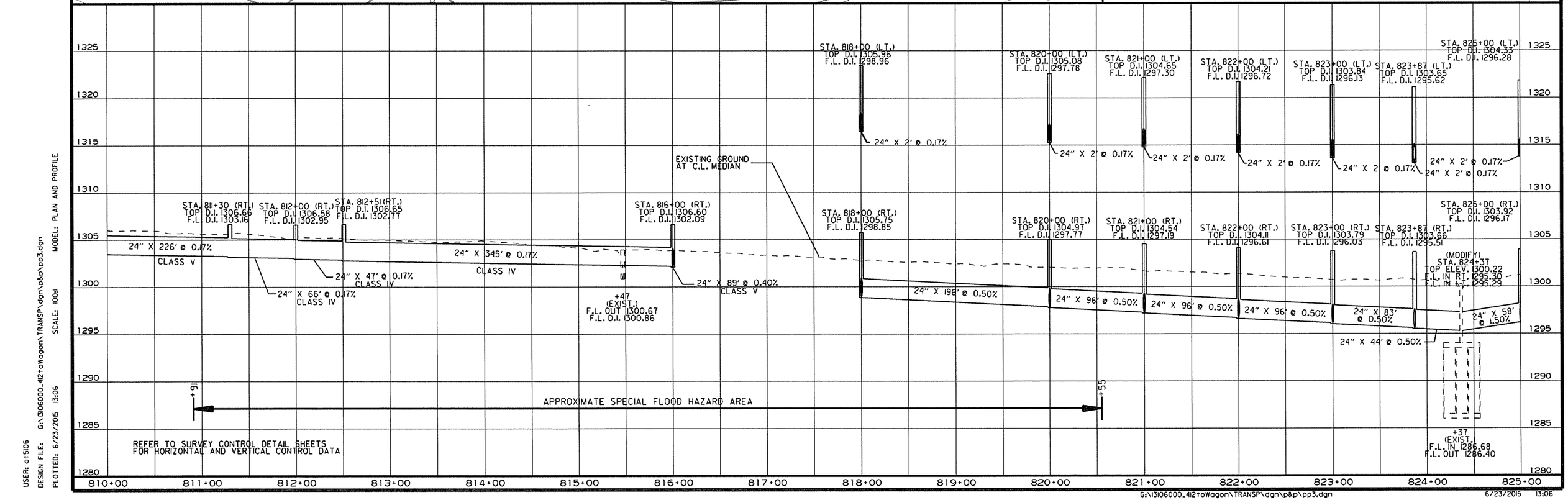
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	64	234

2 PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
6-24-15



USER: at5106
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PLOTTED: 6/23/2015 13:06
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SCALE: 100:1

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C4II0I	65	234
				(2) PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
826+05	833+16	C
833+16	833+41	SP-2
833+59	833+84	SP-2
833+84	843+10	C

STA. 826+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 825+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 827+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-7"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 826+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 829+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-8"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 827+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 830+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 8'-0"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 829+00 RT.
TYPE ST DROP INLET = 4' X 4'

I-49
PI = 834+95.13
Δ = 13°05'12" LT.
D = 01°00'00"
T = 657.20'
L = 1308.68'
PC = 828+37.93
PT = 841+46.61
MATCH EXISTING SUPERELEVATION

STA. 833+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 9'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 830+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 833+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 96' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 836+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-7"
WITH 24" X 199' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 833+97
TYPE ST DROP INLET = 4' X 4'

STA. 839+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 836+00 RT.
TYPE ST DROP INLET = 4' X 4'

825 ← 830 — REFER TO SPECIAL DETAILS — 835 — RAMP 4 → 840

P.C. 828+37.93

C.L. MEDIAN

N01°57'55"E

N 11°07'18"W

OVERHEAD POWER LINE

P.I. 834+95.13

RAMP 1

I-49

STA. 826+00 (RT.)
TOP D.I. 1304.68
F.L. D.I. 1297.23

STA. 827+00 (RT.)
TOP D.I. 1305.87
F.L. D.I. 1298.29

STA. 829+00 (RT.)
TOP D.I. 1308.04
F.L. D.I. 1300.35

STA. 830+00 (RT.)
TOP D.I. 1309.41
F.L. D.I. 1301.41

EXISTING GROUND AT C.L. MEDIAN

STA. 833+00 (RT.)
TOP D.I. 1313.65
F.L. D.I. 1304.47

(MODIFY)
STA. 833+97
TOP ELEV. 1312.95
F.L. IN 1309.70

+97 (EXIST.)
F.L. OUT 1309.29
F.L. D.I. 1309.49

STA. 836+00 (RT.)
TOP D.I. 1317.74
F.L. D.I. 1312.19

STA. 839+00 (RT.)
TOP D.I. 1321.66
F.L. D.I. 1316.01

24" X 96' @ 1.00%
24" X 96' @ 1.00%
24" X 196' @ 1.00%
24" X 96' @ 1.00%
24" X 296' @ 1.00%
24" X 199' @ 1.25%
24" X 296' @ 1.25%

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285

825+00 826+00 827+00 828+00 829+00 830+00 831+00 832+00 833+00 834+00 835+00 836+00 837+00 838+00 839+00 840+00

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

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MODEL: PLAN AND PROFILE

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CONCRETE BARRIER WALL		
STA.	STA.	MEDIAN TYPE
843+10	847+66	B
847+66	850+11	SPECIAL
850+11	866+66	B

REMOVAL AND DISPOSAL CONC. PIER PROTECTION			
STA.	STA.	SIDE	LIN. FT.
848+51	848+87	C.L. MEDIAN	72

I-49
PI = 834+95.13
Δ = 13°05'12" LT.
D = 01°00'00"
T = 657.20'
L = 1308.68'
PC = 828+37.93
PT = 841+46.61
MATCH EXISTING SUPERELEVATION

STA. 843+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 87' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 845+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 845+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 849+38 TO STA. 915+71 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

STA. 846+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 846+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 847+25 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 847+25 RT.
TYPE ST DROP INLET = 4' X 4'

ELM SPRINGS RD.

STA. 851+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 851+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 852+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 852+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 850+00 - CONSTRUCT
DROP INLET 3'-4" LT. OF C.L. H = 5'-2"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 850+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 853+45 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(5'-7" X 3'-0") OVER
48" R.C. PIPE
RETAIN & MODIFY

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
JEROME PAUL DAVIS
No. 15560
4-16-15

840 845 850 855

P.T. 841+46.61

C.L. MEDIAN

REFER TO SPECIAL DETAILS

N11°07'18"W

STA. 842+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-3"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 1OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 843+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 843+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-11"
WITH 24" X 93' R.C. PIPE CULVERT
(CLASS III) (TYPE 1OR 2 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 843+97
TYPE ST DROP INLET = 4' X 4'

STA. 845+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 99' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 843+97
TYPE ST DROP INLET = 4' X 4'

STA. 846+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-9"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 845+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 847+25 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-0"
WITH 24" X 121' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 846+00 RT.
TYPE ST DROP INLET = 4' X 4'

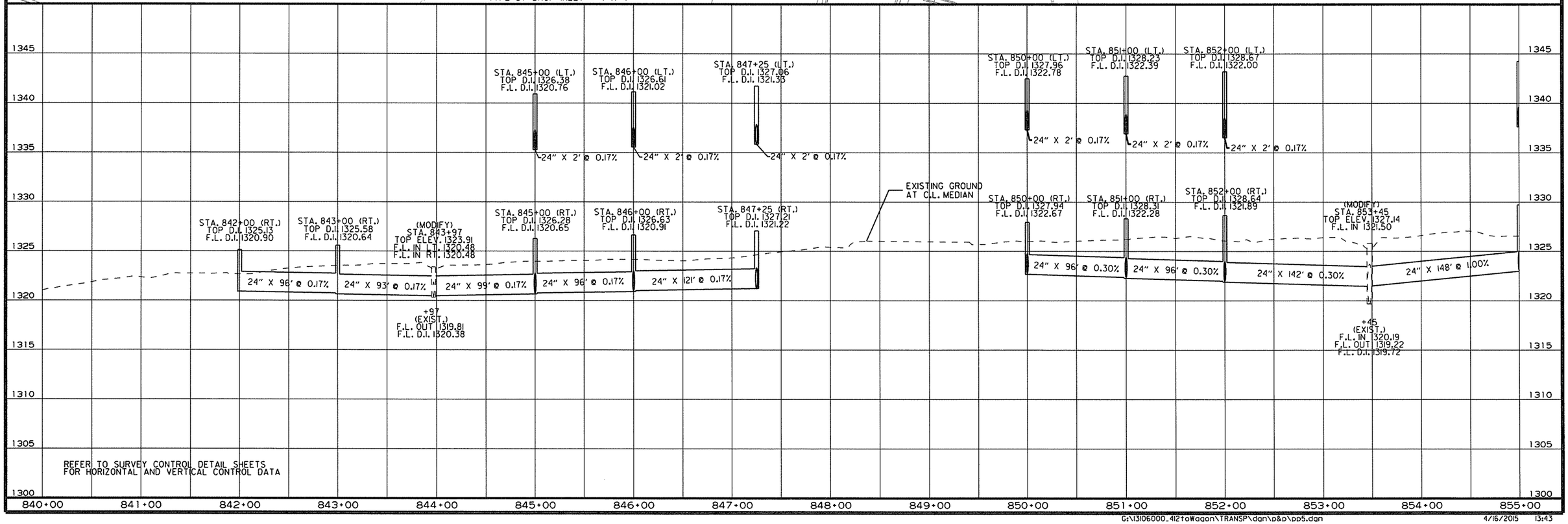
STA. 850+00 - CONSTRUCT
DROP INLET 3'-4" RT. OF C.L. H = 5'-3"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 851+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 851+00 - CONSTRUCT
DROP INLET 3'-0" RT. OF C.L. H = 6'-0"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 852+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 852+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-9"
WITH 24" X 142' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 853+45
TYPE ST DROP INLET = 4' X 4'

STA. 853+45 - IN PLACE
48" X 102.5' R.C. PIPE INLET
(30° LT. FWD. SKEW) WITH
48" X 102.5' PIPE OUTLET TO LT.
W/ FES LT. & RT.
Q50=94 CFS; D.A.=40.3 AC.
RETAIN

I-49



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

Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	66	234

(2) PLANS AND PROFILE SHEETS

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C4110I	67	234
				(2) PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

N

STA. 855+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 855+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 858+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 858+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 861+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 861+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 864+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-0"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 866+00 LT.
TYPE ST DROP INLET = 4' X 4'

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
866+66	866+91	SP-3
867+09	867+34	SP-3
867+34	871+05	B

STA. 866+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-0"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 869+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 869+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-11"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 871+00 LT.
TYPE ST DROP INLET = 4' X 4'

855 860 865 870

RAMP 3

C.L. MEDIAN

REFER TO SPECIAL DETAILS

N11°07'18"W

STA. 855+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-9"
WITH 24" X 148' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 853+45
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 858+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-11"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 855+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

RAMP 2

STA. 861+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 858+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

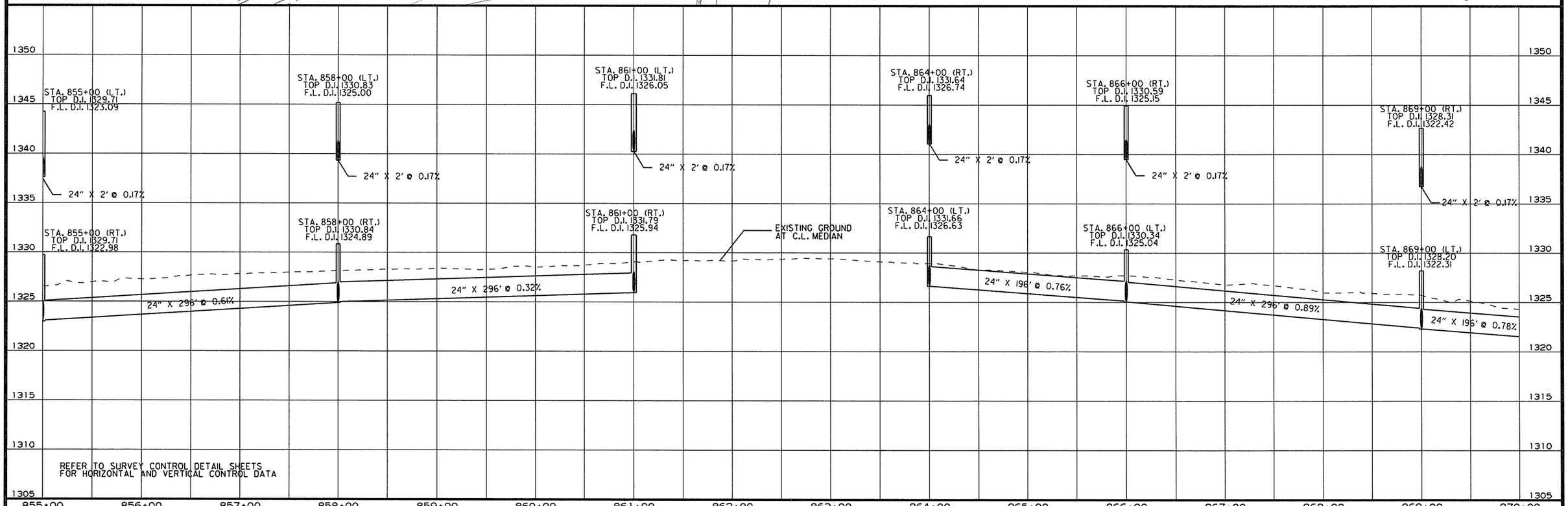
OVERHEAD POWER LINE

STA. 864+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-3"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 864+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 866+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-5"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 866+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 869+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-11"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 869+00 LT.
TYPE ST DROP INLET = 4' X 4'

I-49



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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	68	234

(2) PLAN AND PROFILE SHEETS

I-49
PI = 881+07.81
Δ = 13°09'30" RT.
D = 01°00'00"
T = 660.82'
L = 1315.83'
PC = 874+46.99
PT = 887+62.82
MATCH EXISTING SUPERELEVATION

STA. 871+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-2"
WITH 24" X 19' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 871+22
TYPE ST DROP INLET = 4' X 4'

STA. 874+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 877+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 877+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 880+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 880+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 142' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 881+45
TYPE ST DROP INLET = 4' X 4'

STA. 883+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 886+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-15-15
JEROME PAUL DAVIS

870 875 880 885

OVERHEAD POWERLINE

C.L. MEDIAN

P.I. 881+07.81

N11°07'18"W

N02°02'12"E

N11°07'18"W

P.C. 874+46.99

STA. 871+22 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
24" X 116' R.C. PIPE OUTLET TO LT. W/ FES &
24" X 86' R.C. PIPE INLET TO RT. W/ FES
Q50=11 CFS: D.A.= 4.0 AC.
RETAIN & MODIFY

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
871+05	890+75	C

STA. 881+45 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 93' R.C. PIPE OUTLET TO RT.
RETAIN & MODIFY

I-49

STA. 871+00 (LT.)
TOP D.I. 1325.85
F.L. D.I. 1320.68

(MODIFY)
STA. 871+22
TOP ELEV. 1322.80
F.L. IN 1320.58

24" X 196' @ 0.78%

24" X 19' @ 0.54%

+22
(EXIST.)
F.L. IN 1311.33
F.L. OUT 1309.72

STA. 874+00 (LT.)
TOP D.I. 1320.39
F.L. D.I. 1314.49

EXISTING GROUND AT C.L. MEDIAN

24" X 296' @ 2.75%

STA. 877+00 (LT.)
TOP D.I. 1311.90
F.L. D.I. 1306.25

24" X 296' @ 3.00%

STA. 880+00 (LT.)
TOP D.I. 1303.10
F.L. D.I. 1297.26

24" X 142' @ 3.00%

(MODIFY)
STA. 881+45
TOP ELEV. 1296.61
F.L. IN 1293.00

+45
(EXIST.)
F.L. OUT 290.71
F.L. D.I. 1291.94

STA. 883+00 (LT.)
TOP D.I. 1293.96
F.L. D.I. 1288.12

24" X 296' @ 3.00%

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

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290

1315 1310 1305 1300 1295 1290 1285 1280 1275 1270

870+00 871+00 872+00 873+00 874+00 875+00 876+00 877+00 878+00 879+00 880+00 881+00 882+00 883+00 884+00 885+00

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		C4110I	69	234
				(2) PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

STA. 887+68 - IN PLACE
6' X 4' X 281' R.C. BOX CULVERT
(45° LT. FWD. SKEW)
Q50=161 CFS: D.A.=90.5 AC.
RETAIN

I-49
PI = 881+07.81
Δ = 13°09'30" RT.
D = 01°00'00"
T = 660.82'
L = 1315.83'
PC = 874+46.99
PT = 887+62.82
MATCH EXISTING SUPERELEVATION

STA. 886+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 889+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 889+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 891+00 LT.
TYPE ST DROP INLET = 4' X 4'

CONCRETE BARRIER WALL		
STA.	STA.	MEDIAN TYPE
890+75	901+16	B

STA. 891+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 93' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 891+97
TYPE ST DROP INLET = 4' X 4'

STA. 891+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 106' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 893+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 895+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 895+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-1"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 898+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 897+43 - IN PLACE
DOUBLE 30" X 178' R.C. PIPE CULVERT
W/ FES LT. & RT.
Q50=34 CFS: D.A.=19.2 AC.
RETAIN

STA. 898+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 901+00 LT.
TYPE ST DROP INLET = 4' X 4'

885 890 895 900

C.L. MEDIAN

N02°02'12"E

P.T. 887+62.82

OVERHEAD POWER LINE

STA. 893+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-6"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 893+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 895+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 895+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 898+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 898+00 LT.
TYPE ST DROP INLET = 4' X 4'

I-49

STA. 886+00 (LT.)
TOP D.I. 1284.95
F.L. D.I. 1279.13

24" X 296' @ 3.00%

24" X 296' @ 2.50%

STA. 889+00 (LT.)
TOP D.I. 1277.14
F.L. D.I. 1271.63

24" X 196' @ 2.00%

STA. 891+00 (LT.)
TOP D.I. 1273.27
F.L. D.I. 1267.61

24" X 93' @ 2.00%

+68
(EXIST.)
F.L. IN 1268.39
F.L. OUT 1267.11

(MODIFY)
STA. 891+97
TOP ELEV. 1268.17
F.L. IN 1265.75

+97
(EXIST.)
F.L. OUT 1258.59
F.L. D.I. 1260.52

STA. 893+00 (RT.)
TOP D.I. 1270.37
F.L. D.I. 1264.99

24" X 2' @ 0.17%

STA. 893+00 (LT.)
TOP D.I. 1270.34
F.L. D.I. 1264.86

24" X 196' @ 1.50%

STA. 895+00 (RT.)
TOP D.I. 1267.28
F.L. D.I. 1261.93

24" X 2' @ 0.17%

STA. 895+00 (LT.)
TOP D.I. 1267.39
F.L. D.I. 1261.82

EXISTING GROUND AT C.L. MEDIAN

24" X 296' @ 1.30%

+43
(EXIST.)
F.L. IN 1257.03
F.L. OUT 1254.29

STA. 898+00 (RT.)
TOP D.I. 1262.87
F.L. D.I. 1257.39

24" X 2' @ 0.17%

STA. 898+00 (LT.)
TOP D.I. 1262.82
F.L. D.I. 1257.28

24" X 296' @ 1.50%

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

1295 1290 1285 1280 1275 1270 1265 1260 1255 1250

885+00 886+00 887+00 888+00 889+00 890+00 891+00 892+00 893+00 894+00 895+00 896+00 897+00 898+00 899+00 900+00

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		C4110I	70	234

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome P. Davis
No. 15560
6-05-15
JEROME PAUL DAVIS

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
901+16	901+41	SP-3
901+59	901+84	SP-3
901+84	911+16	B
911+16	911+41	SP-3
911+59	911+84	SP-3
911+84	921+75	B

STA. 901+00 - CONSTRUCT DROP INLET 3' LT. OF C.L. H = 5'-6" WITH 24" X 92' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO EXIST. DROP INLET AT STA. 901+96 TYPE ST DROP INLET = 4' X 4'

STA. 901+96 - IN PLACE TYPE R DROP INLET IN MEDIAN (4'-0" X 3'-0") WITH 18" X 126' R.C. PIPE OUTLET TO LT. RETAIN & MODIFY

STA. 904+00 - CONSTRUCT DROP INLET 3' LT. OF C.L. H = 6'-2" WITH 24" X 296' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 907+00 LT. TYPE ST DROP INLET = 4' X 4'

STA. 907+00 - CONSTRUCT DROP INLET 3' LT. OF C.L. H = 5'-5" WITH 24" X 296' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 910+00 LT. TYPE ST DROP INLET = 4' X 4'

STA. 910+00 - CONSTRUCT DROP INLET 3' LT. OF C.L. H = 5'-6" WITH 24" X 192' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO EXIST. DROP INLET AT STA. 911+96 TYPE ST DROP INLET = 4' X 4'

STA. 911+96 - IN PLACE TYPE R DROP INLET IN MEDIAN (4'-0" X 3'-0") WITH 18" X 94' R.C. PIPE OUTLET TO LT. RETAIN & MODIFY

STA. 913+00 - CONSTRUCT DROP INLET 3' LT. OF C.L. H = 6'-2" WITH 24" X 296' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 916+00 LT. TYPE ST DROP INLET = 4' X 4'

900 REFER TO SPECIAL DETAILS 905 910 REFER TO SPECIAL DETAILS 915

N02°02'12"E

C.L. MEDIAN

STA. 901+00 - CONSTRUCT DROP INLET 3' RT. OF C.L. H = 5'-7" WITH 24" X 2' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 901+00 LT. TYPE ST DROP INLET = 4' X 4'

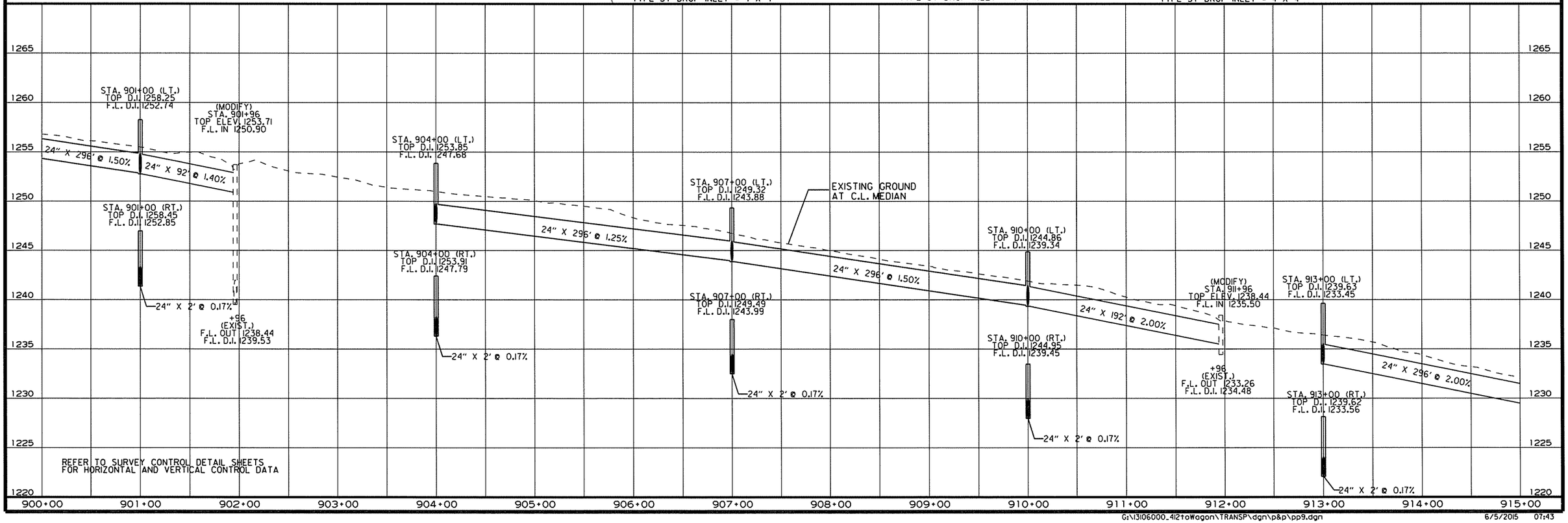
STA. 904+00 - CONSTRUCT DROP INLET 3' RT. OF C.L. H = 6'-1" WITH 24" X 2' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 904+00 LT. TYPE ST DROP INLET = 4' X 4'

STA. 907+00 - CONSTRUCT DROP INLET 3' RT. OF C.L. H = 5'-6" WITH 24" X 2' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 907+00 LT. TYPE ST DROP INLET = 4' X 4'

STA. 910+00 - CONSTRUCT DROP INLET 3' RT. OF C.L. H = 5'-6" WITH 24" X 2' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 910+00 LT. TYPE ST DROP INLET = 4' X 4'

STA. 913+00 - CONSTRUCT DROP INLET 3' RT. OF C.L. H = 6'-1" WITH 24" X 2' R.C. PIPE CULVERT (CLASS III) (TYPE 3 BEDDING) CONNECT TO DROP INLET AT STA. 913+00 LT. TYPE ST DROP INLET = 4' X 4'

I-49



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

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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.		C011001	71	234
				(2) PLAN AND PROFILE SHEETS				

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

STA. 916+17 TO STA. 945+29 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

STA. 915+54 - IN PLACE
PAVED MEDIAN CROSSING
24" X 80' CMP
REMOVE

STA. 916+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 919+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 919+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-11"
WITH 24" X 120' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 920+24
TYPE ST DROP INLET = 4' X 4'

STA. 920+24 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
TRIPLE 10' X 7' R.C. BOX CULVERT
RETAIN & MODIFY

STA. 920+24 - IN PLACE
TRIPLE 10' X 7' X 408' R.C. BOX CULVERT
(45° RT. FWD. SKEW)
Q50=719 CFS: D.A.=753.5 AC.
RETAIN

I-49
PI = 930+32.50
Δ = 12°19'10" RT.
D = 01°00'00"
T = 618.35'
L = 1231.94'
PC = 924+14.15
PT = 936+46.09
MATCH EXISTING SUPERELEVATION

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
921+75	939+30	C

STA. 922+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 925+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 925+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 928+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 928+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 192' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 929+96
TYPE ST DROP INLET = 4' X 6'
3 GRATES

915 920 925 930

PI 930+32.50

N02°02'12"E

C.L. MEDIAN

P.C. 924+14.15

STA. 916+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 916+00 LT.
TYPE ST DROP INLET = 4' X 4'

OVERHEAD POWER LINE

STA. 919+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-11"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 919+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 929+96 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
24" X 85' R.C. PIPE OUTLET TO RT.
RETAIN & MODIFY

I-49

1235 1230 1225 1220 1215 1210 1205 1200 1995 1990

STA. 916+00 (LT.)
TOP D.I. 1233.12
F.L. D.I. 1227.43

(EXIST.)
F.L. IN 1230.79
F.L. OUT 1229.10
(REMOVE)

24" X 296' @ 2.00%

STA. 916+00 (RT.)
TOP D.I. 1233.23
F.L. D.I. 1227.54

24" X 2' @ 0.17%

24" X 296' @ 2.30%

STA. 919+00 (LT.)
TOP D.I. 1226.39
F.L. D.I. 1220.52

24" X 120' @ 2.30%

STA. 919+00 (RT.)
TOP D.I. 1226.52
F.L. D.I. 1220.63

24" X 2' @ 0.17%

(MODIFY)
STA. 920+24
TOP ELEV. 1221.63
F.L. IN 1217.77

+24
(EXIST.)
F.L. IN 1202.01
F.L. OUT 1200.72

STA. 922+00 (LT.)
TOP D.I. 1219.90
F.L. D.I. 1213.73

EXISTING GROUND
AT C.L. MEDIAN

24" X 296' @ 2.00%

STA. 925+00 (LT.)
TOP D.I. 1213.47
F.L. D.I. 1207.71

24" X 296' @ 1.50%

STA. 928+00 (LT.)
TOP D.I. 1208.99
F.L. D.I. 1203.17

24" X 192' @ 1.00%

(MODIFY)
STA. 929+96
TOP ELEV. 1204.05
F.L. IN 1201.25

+96
(EXIST.)
F.L. OUT 1201.13
F.L. D.I. 1201.15

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

915+00 916+00 917+00 918+00 919+00 920+00 921+00 922+00 923+00 924+00 925+00 926+00 927+00 928+00 929+00 930+00

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	72	234

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

STA. 931+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-4"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 934+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 934+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 935+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 935+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 937+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 937+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 939+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 939+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 940+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 940+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 941+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
24" X 89' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 941+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 42' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 941+47
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 941+72 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-11"
WITH 24" X 23' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 941+47
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 943+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 124' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+72 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

930 935 940 945

P.I. 930+32.50

N02°02'12"E N14°21'22"E N14°21'22"E

C.L. MEDIAN

P.T. 936+46.09

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
939+30	946+47	B

STA. 938+37 - IN PLACE
TRIPLE 10' X 6' X 223' R.C. BOX CULVERT
050=1143 CFS: D.A.=1179.4 AC.
RETAIN

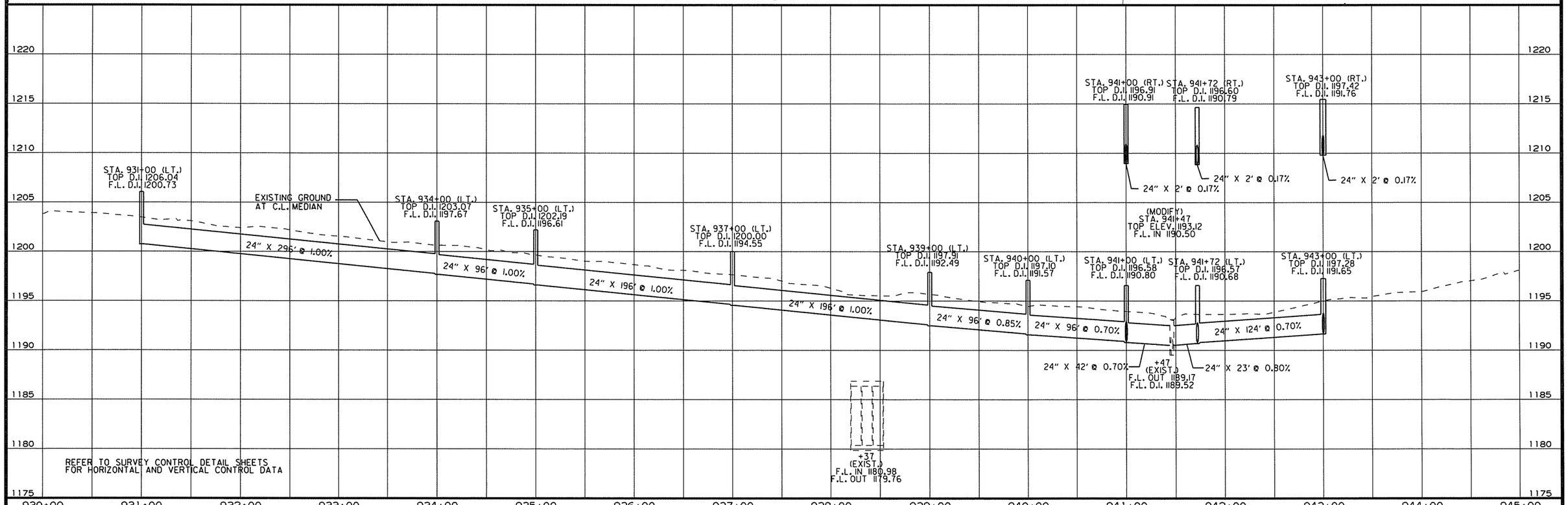
STA. 941+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

APPROXIMATE SPECIAL FLOOD HAZARD AREA

STA. 941+72 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+72 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 943+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 943+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

I-49



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

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	73	234

(2) PLAN AND PROFILE SHEETS

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
Jerome P. Davis
No. 15560
6-05-15
JEROME PAUL DAVIS

REMOVAL AND DISPOSAL GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
944+39	947+10	R.M.L. - L.T.	270
950+03	952+73	L.M.L. - R.T.	270

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
946+47	946+77	SP-1
950+39	950+69	SP-1
950+69	952+66	B
952+66	952+91	SP-3
953+09	953+34	SP-3
953+34	968+46.06	B

STA. 947+00.29 BR. END
I-49 LML BRIDGE (S.B.) IN PLACE
290'-4 5/16" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
20° (RT. FWD. SKEW)
BR. NO. A5946
STA. 949+90.65 BR. END

APPROXIMATE SPECIAL FLOOD HAZARD AREA

STA. 950+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
24" X 94' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 951+86 TO STA. 968+95 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

STA. 955+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 955+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 958+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 958+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 959+06 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(5'-6" X 3'-0") WITH
DOUBLE 36" X 234' R.C. PIPE INLET
(43° 30' RT. FWD. SKEW) TO RT. W/ FES &
DOUBLE 36" X 188' R.C. PIPE OUTLET
(43° 30' RT. FWD. SKEW) TO LT. W/ FES
Q50=86 CFS; D.A.=27.8 AC.
RETAIN & MODIFY

945 950 955 960

REFER TO SPECIAL DETAILS

C.L. MEDIAN

RAMP 4

RAMP 1

N14°21'22"E

STA. 947+24.63 BR. END
I-49 RML BRIDGE (N.B.) IN PLACE
290'-4 5/16" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
20° (RT. FWD. SKEW)
BR. NO. B5946
STA. 950+14.99 BR. END

APPROXIMATE SPECIAL FLOOD HAZARD AREA

SPRING CREEK

STA. 953+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-1"
WITH 24" X 249' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 950+47 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 953+20 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-2"
WITH 24" X 19' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 953+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 955+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 176' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 953+20 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 958+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-6"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 955+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

OVERHEAD POWER LINE

I-49

STREAM	STATION	STREAM TYPE	TOP OF CHANNEL ELEV.
SPRING CREEK	948+50	5CFS	1174.0 FT. MSL

(MODIFY)
STA. 950+47
TOP ELEV. 1212.98
F.L. IN 1210.80

+47
(EXIST.)
F.L. OUT 1208.84
F.L. D.I. 1209.95

24" X 249' @ 3.00%

EXISTING GROUND AT C.L. MEDIAN

STA. 947+00.29 BR. END
(LML BRIDGE)

STA. 947+24.63 BR. END
(RML BRIDGE)

STA. 949+90.65 BR. END
(LML BRIDGE)

STA. 950+14.99 BR. END
(RML BRIDGE)

DESIGN H.W. ELEV. 1181.63'

+51

+27

APPROXIMATE SPECIAL FLOOD HAZARD AREA

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

STA. 953+00 (LT.)
TOP D.I. 1224.34
F.L. D.I. 1218.27

STA. 953+20 (RT.)
TOP D.I. 1224.88
F.L. D.I. 1218.74

24" X 249' @ 3.00%

24" X 19' @ 2.00%

24" X 176' @ 2.25%

STA. 955+00 (RT.)
TOP D.I. 1228.43
F.L. D.I. 1222.80

STA. 955+00 (LT.)
TOP D.I. 1228.51
F.L. D.I. 1222.91

24" X 2' @ 0.17%

EXISTING GROUND AT C.L. MEDIAN

24" X 296' @ 1.60%

STA. 958+00 (RT.)
TOP D.I. 1233.15
F.L. D.I. 1227.64

STA. 958+00 (LT.)
TOP D.I. 1233.14
F.L. D.I. 1227.75

24" X 2' @ 0.17%

(MODIFY)
STA. 959+06
TOP ELEV. 1231.13
F.L. IN 1228.25

24" X 150' @ 1.50%

+06
(EXIST.)
F.L. IN 1224.44
F.L. D.I. 1215.72
F.L. OUT 1214.45

1215 1210 1205 1200 1195 1190 1185 1180 1175 1170

1235 1230 1225 1220 1215 1210 1205 1200 1195 1190

945+00 946+00 947+00 948+00 949+00 950+00 951+00 952+00 953+00 954+00 955+00 956+00 957+00 958+00 959+00 960+00

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	74	234

(2) PLAN AND PROFILE SHEETS

STA. 970+11 TO STA. 974+01.86 - IN PLACE
WIRE ROPE SAFETY FENCE
REMOVE

REMOVAL AND DISPOSAL GUARDRAIL

STA.	STA.	SIDE	LIN. FT.
965+68	970+45	R.M.L. - L.T.	477
968+42	972+30	L.M.L. - R.T.	388

CONCRETE BARRIER WALL

STA.	STA.	MEDIAN TYPE
968+46.06	969+46.06	SPECIAL

STA. 967+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 88' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

STA. 968+50 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 49' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 967+97
TYPE ST DROP INLET = 4' X 6'
3 GRATES

WAGON WHEEL RD.

I-49
PI = 983+82.61
Δ = 45°31'38" RT.
D = 02°00'00"
T = 1202.11'
L = 2276.36'
PC = 971+80.50
PT = 994+56.86
MATCH EXISTING SUPERELEVATION

STA. 969+69.06 - IN PLACE
TYPE ST DROP INLET 4.50' LT. OF C.L.
WITH 24" X 20' R.C. CULVERT
CONNECTED TO EXIST. DROP INLET
AT STA. 969+46.06 LT.
RETAIN

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 15560
4-16-15
JEROME PAUL DAVIS

960 965 970 975

RAMP 4

STA. 961+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-3"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 961+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 964+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-2"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 964+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 967+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 967+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

REFER TO SPECIAL DETAILS

C.L. MEDIAN

N14°21'22"E

STA. 969+46.06
END JOB CAII0I
(LOG MILE 75.21)

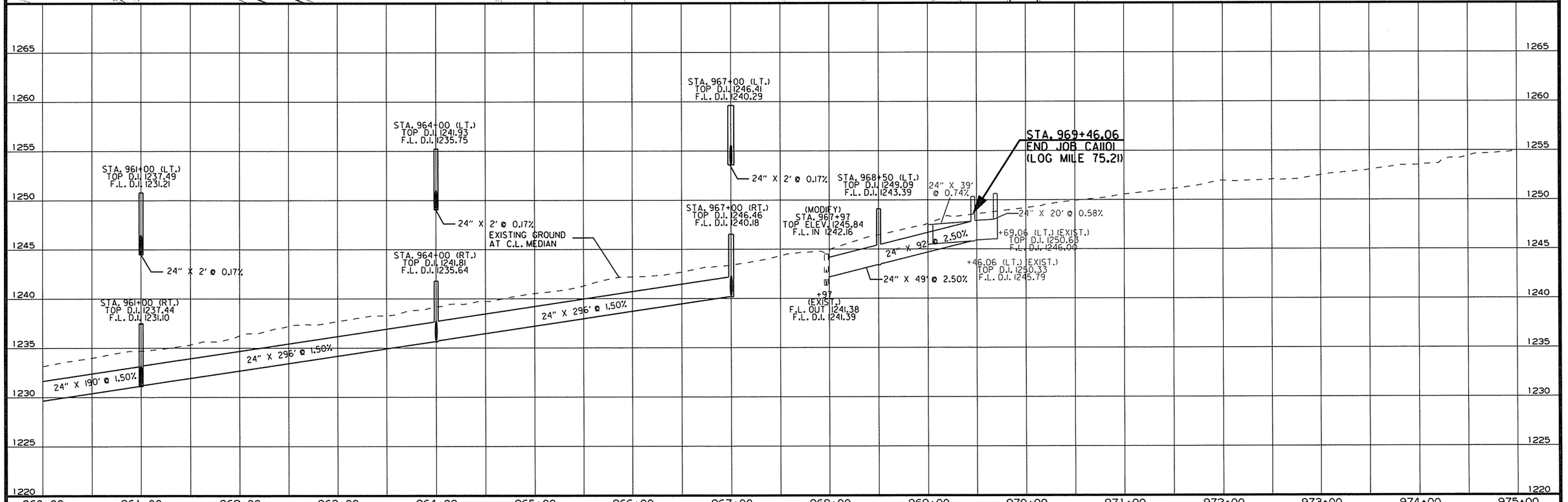
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DROP INLET 3' RT. OF C.L. H = 6'-4"
WITH 24" X 190' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 959+06
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 964+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 961+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 967+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-4"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 964+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

RAMP 1

I-49



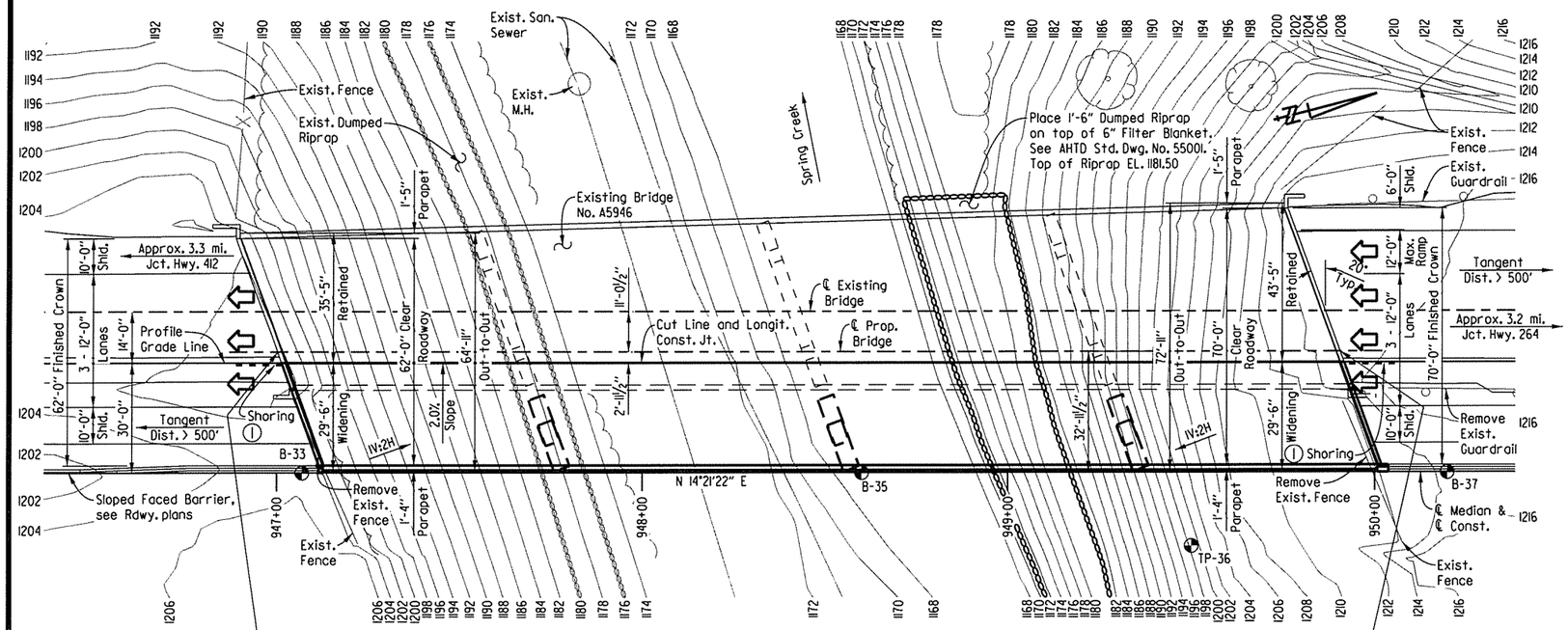
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAII0I	75	234
				(1) A5946		LAYOUT		56673

For R/W Data, See Rdwy. Plans

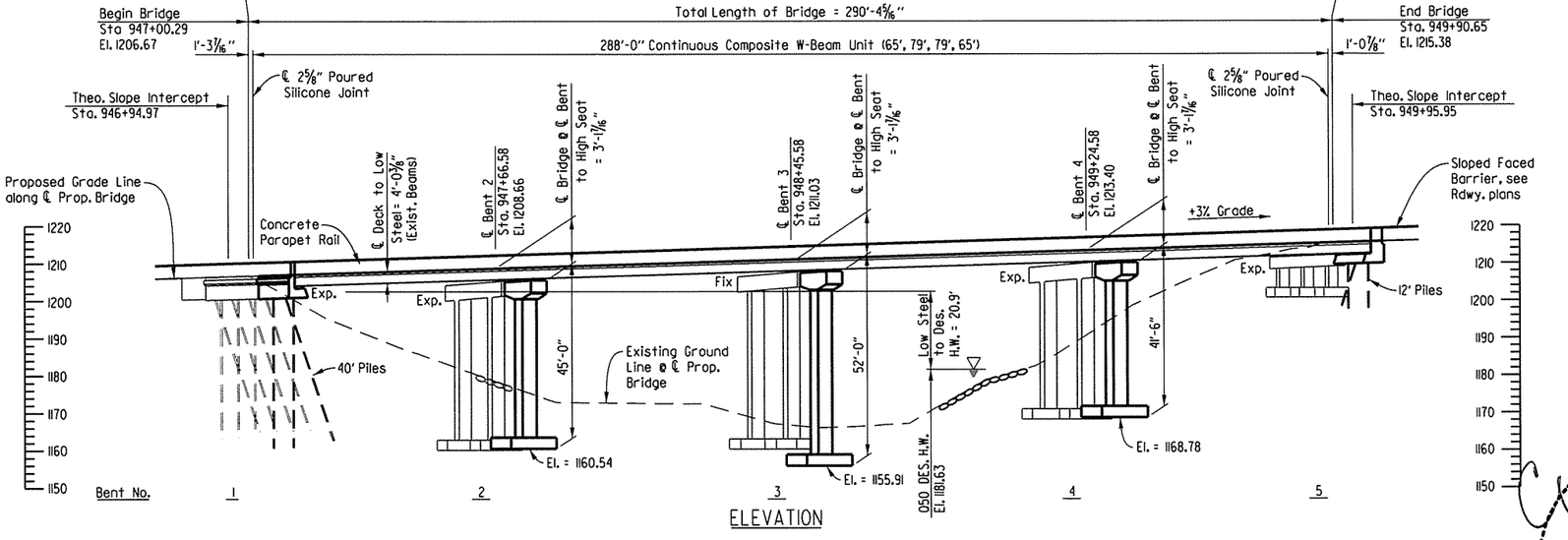


(1) Shoring may be required during construction. Payment for this work, if required, shall be considered subsidiary to the pay item "Unclassified Excavation for Structures - Bridge" and "Class S Concrete - Bridge". See SP Job No. CAII0I "Shoring".

Existing dumped riprap at intermediate bents disturbed during construction or regrading of embankment slopes shall be replaced as directed by the Engineer. This work shall be paid for at the unit price bid for "Dumped Riprap". Filter blanket disturbed shall be replaced and paid for under the item "Filter Blanket". Quantities of dumped riprap and filter blanket are estimated. Actual quantities shall be determined in the field.

Remove Existing Approach Gutters (inside gutters) at both ends of Bridge. Use Type Special I Approach Slabs at both ends of Bridge, see Dwg. Nos. 56703 & & 56705. Use Type Special I Approach Gutters (inside gutters) at both ends of Bridge, see Dwg. No. 56706.

For Bridge B5946 Layout, see Dwg. No. 56674



Note:
For Soil Boring Information, See Dwg. No. 56675
For Hydraulic Data, See Dwg. No. 56674

Note: Elevations are shown along ℄ Proposed Bridge

GENERAL NOTES

BENCH MARK: TBM832, 20.58' Rt. Centerline, Sta. 947+15.98, Elev. 1207.51.

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

DESIGN SPECIFICATIONS: AASHTO LRFD Bridge Design Specifications 6th Edition (2012) with current interim specifications. (New construction only).

LIVE LOADING: HL-93 SEISMIC PERFORMANCE ZONE: I S_{DI} :0.052 SITE CLASS: B

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 M 31 or M 322 Type A)	fy = 60,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy = 50,000 psi
Structural Steel (AASHTO M 270, Gr. 50)	Fy = 50,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy = 36,000 psi

BORING LOGS: Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL PILING: All piling shall be HP 12x53 (Gr. 50) and shall be driven with an approved air, steam, or diesel hammer to a minimum safe bearing capacity of 96 tons per pile into the material designated as Moderately Hard to Hard Limestone on the boring legend. Lengths shown are for estimating quantities and for use in determining payment for cut-off and build-up in accordance with the Standard Specifications. Piles in End Bent 1 & 5 to be driven after embankment to bottom of cap is in place. On all piles the contractor shall use approved steel H-Pile driving points.

PREBORING: Preboring will be required for all piling in Bent 5 and shall extend from bottom of cap to a minimum of 4' into rock. A preboring depth of 10' is anticipated. The quantities for preboring shown are for bidding purposes only. The actual size and depths of preboring are to be determined in the field by the Engineer. The prebored hole shall be backfilled with lean concrete to the top of rock after pile driving is complete. The remaining length of prebored hole shall be backfilled in accordance with Subsection 805.08(a) to completely fill the remaining voids. The Contractor shall be responsible for keeping prebored holes free from debris prior to back filling which may require the use of temporary casings or other methods. Pile casings and backfill will not be paid for directly but shall be considered subsidiary to the item "Preboring".

FOOTINGS: Footings shall be set a minimum of 2'-0" into material designated as Moderately Hard to Hard Limestone on the boring legend. Top of footings shall have a minimum 2' cover below the bottom of channel. Foundations for footings shall be prepared in accordance with Subsection 801.04. Rock excavations shall be made to neat lines of the concrete footings. Blasting will not be allowed. Concrete in footings shall be poured directly against excavated surfaces of rock.

BRIDGE DECK: The concrete bridge deck shall be given a tine finish as specified for final finishing in Subsection 802.19 for Class S Tined Bridge Roadway Surface Finish.

CLASS 2 PROTECTIVE SURFACE TREATMENT: Class 2 Protective Surface Treatment shall be applied to the roadway surface including the existing deck suface to be retained, and roadway face and top of parapet rail of the new construction.

PAINT: The Existing Structural Steel shall not be painted. The New Weathering Structural Steel shall not be painted. Painting of Miscellaneous Steel shall be in accordance with Section 638.

DETAIL DRAWINGS:	DRAWING NUMBER
Stage Construction	56676-56678
End Bents	56679-56683
Intermediate Bents	56684-56689
Elastomeric Bearings	56690
Widening Details	56691-56702
Type Special Approach Slab	56703-56705
Type Special Approach Gutters	56706-56707

For Vertical Grade Data & Additional General Notes see Dwg. No. 56674

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/27/15

SHEET 1 OF 3

LAYOUT OF BRIDGE 'A' OVER SPRING CREEK
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: KJC DATE: 03-21-14
BRIDGE NO. A5946 DRAWING NO. 56673

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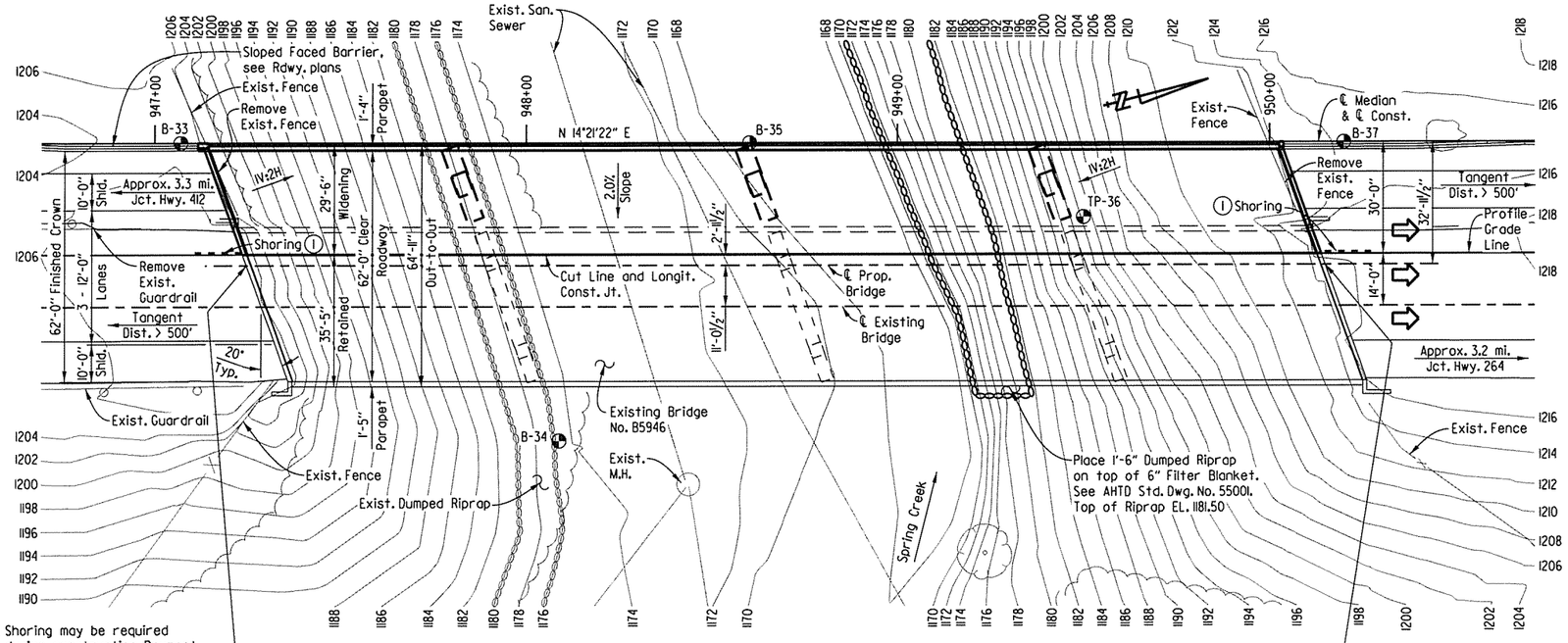
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	76	234
(1) B5946		LAYOUT		56674

For R/W Data, See Roadway Plans.



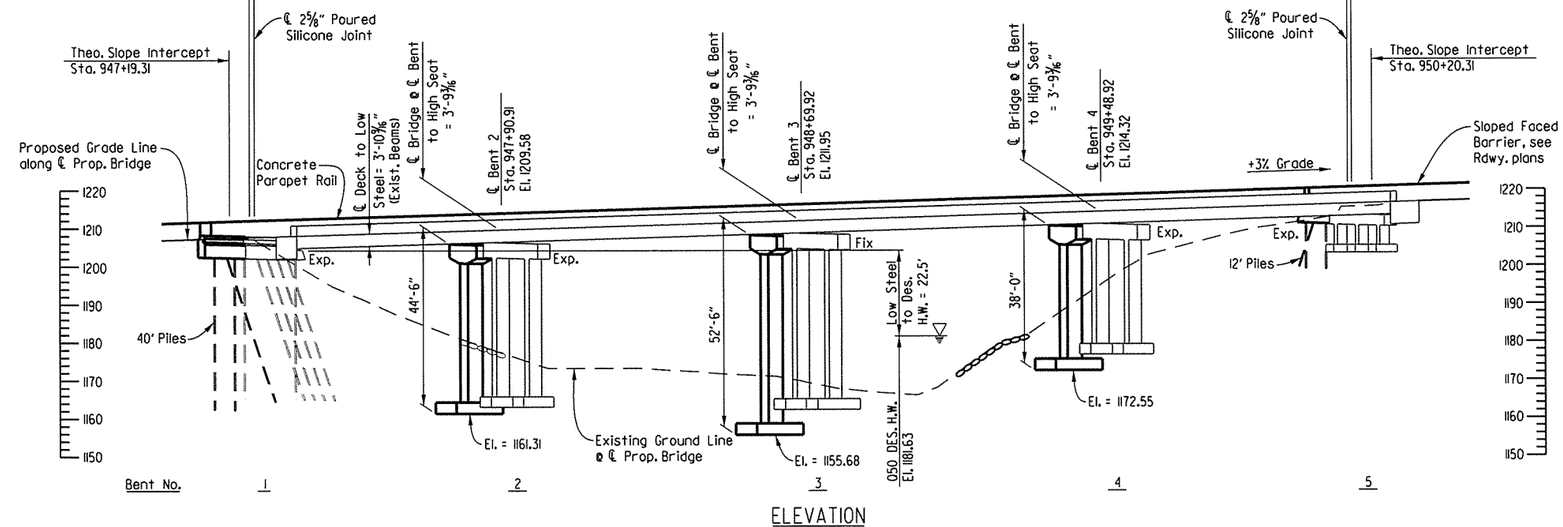
(1) Shoring may be required during construction. Payment for this work, if required, shall be considered subsidiary to the pay item "Unclassified Excavation for Structures - Bridge" and "Class S Concrete - Bridge". See SP Job No. CA1101 "Shoring".

Existing dumped riprap at intermediate bents disturbed during construction or regrading of embankment slopes shall be replaced as directed by the Engineer. This work shall be paid for at the unit price bid for "Dumped Riprap". Filter blanket disturbed shall be replaced and paid for under the item "Filter Blanket". Quantities of dumped riprap and filter blanket are estimated. Actual quantities shall be determined in the field.

PLAN

Remove Existing Approach Gutters (inside gutters) at both ends of Bridge. Use Type Special I Approach Slabs at both ends of Bridge, see Dwg. Nos. 56704 & 56705. Use Type Special I Approach Gutters (inside gutters) at both ends of Bridge, see Dwg. No. 56707.

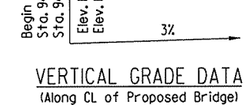
For Bridge A5946 Layout, see Dwg. No. 56673



ELEVATION

Note: Elevations are shown along ℄ Proposed Bridge

Note: For Soil Boring Information, see Dwg. No. 56675



VERTICAL GRADE DATA
(Along CL of Proposed Bridge)

General Notes (Cont'd.)

THE PROPOSED WORK CONSISTS OF: Widening the existing bridge, modifying the existing end bents, constructing new intermediate bents to the median side of existing bents, removing and replacing portions of the concrete deck, removing and replacing portions of the existing dumped riprap, and replacing the joint seals. For additional requirements in conducting the work, see Section 821.

EXISTING BRIDGE: The Existing Bridge No. A5946 is approximately 290.4' long with varying width and consists of a flared continuous composite W-beam unit, multi-column intermediate bents on spread footings, one end bent on spread footings and one steel pile end bent. The Existing Bridge No. B5946 is approximately 42.83' wide and 290.4' long and consists of a continuous composite W-beam unit, multi-column intermediate bents on spread footings, one end bent on spread footings, and one steel pile end bent. Plans of the existing structure may be obtained upon request from the Construction Contract Procurement Section of the Program Management Division.

VERIFICATION: Except as noted, components of the existing bridge are to be retained and joined to proposed work. Information and dimensions shown are based on existing bridge plans. The Contractor is to adhere strictly to 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 Existing Bridge Structure (Br. No. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".

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 and Special Provisions for more information.

For Additional General Notes, see Dwg. No. 56673.

HYDRAULIC DATA

FLOOD DESCRIPTION	FREQUENCY YEARS	DISCHARGE CFS	*NATURAL WATER SURFACE ELEV. FEET	W.S. ELEV. WITH BACKWATER FEET
DESIGN	50	8,525	1179.40	1181.63
BASE	100	10,039	1179.90	1182.56
EXTREME	500	13,150	1180.78	1184.31
OVERTOPPING	>500	N/A	N/A	N/A

*Unconstricted water surface elevation without structures or roadway approaches.
100 yr. backwater elevation for existing structures = 1182.56 feet
Low Bridge Chord Elev. = 1202.54 feet (Br. A), 1204.10 feet (Br. B)
Drainage Area = 14.37 sq. miles
Historical H.W. Elev. = Unknown

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 2 OF 3

LAYOUT OF BRIDGE 'B' OVER SPRING CREEK
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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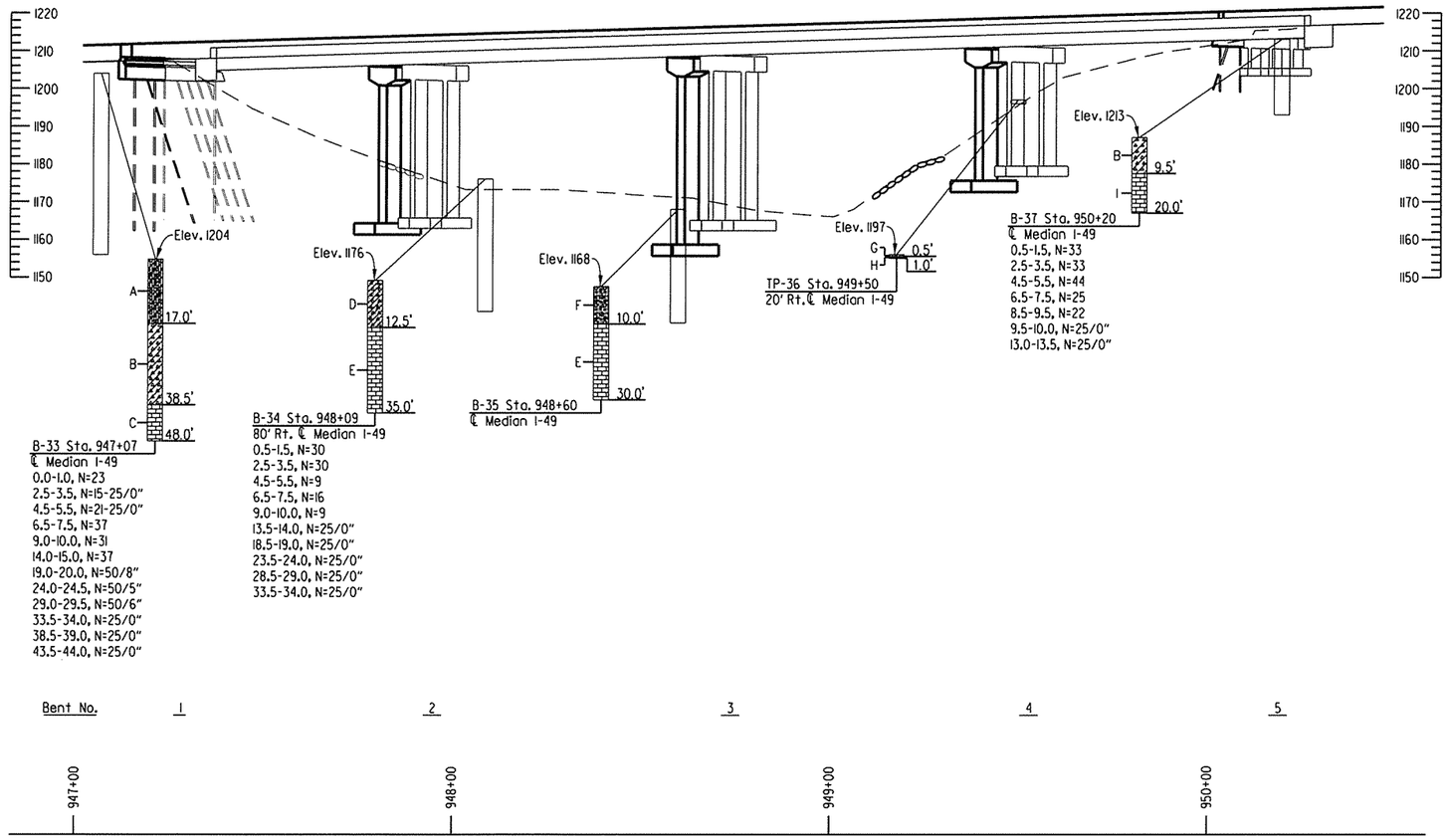
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	77	234
(1) A&B5946		LAYOUT		56675



ELEVATION
Scale: 1" = 20'

BORING LEGEND

A. Stiff tan and reddish brown silty CLAY with chert fragments - (fill)
B. Very stiff reddish brown CLAY with chert fragments
C. Hard light gray LIMESTONE
D. Very stiff brown clayey SILT, sandy with some chert fragments and occasional silty clay seams
E. Moderately hard to hard light gray LIMESTONE with chert nodules and inclusions
F. Loose tan sandy fine to coarse GRAVEL
G. Soft brown silty CLAY with numerous organics
H. Low hardness white and light gray highly weathered LIMESTONE with chert nodules
I. Moderately hard to hard light gray LIMESTONE

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPFF
04/10/15

SHEET 3 OF 3
LAYOUT OF BRIDGES 'A & B' OVER SPRING CREEK
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

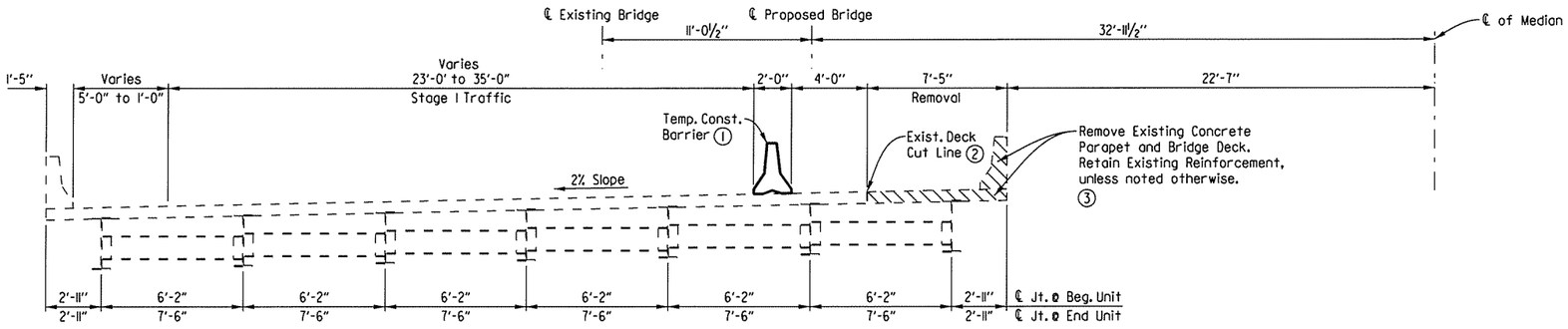
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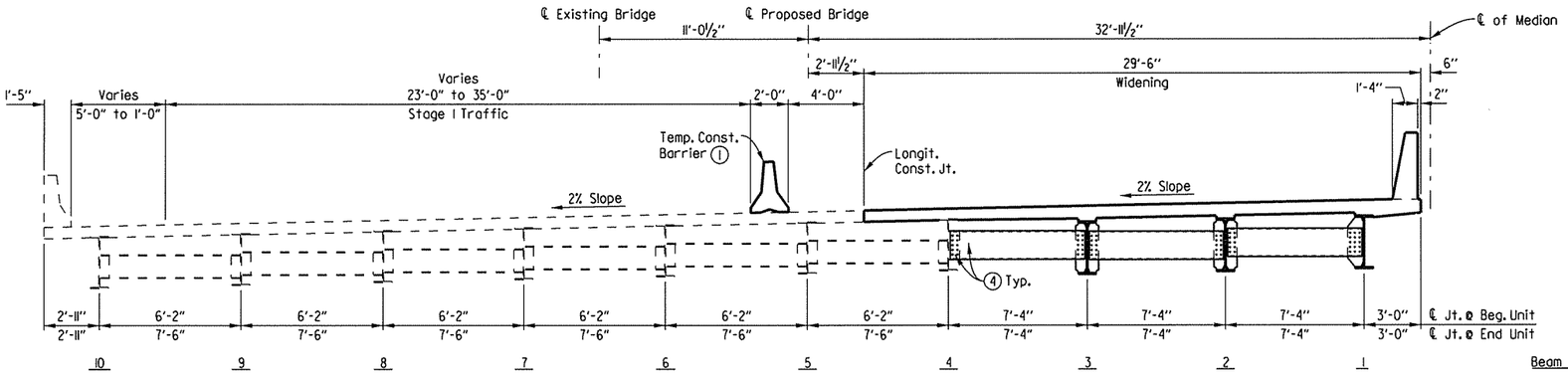
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

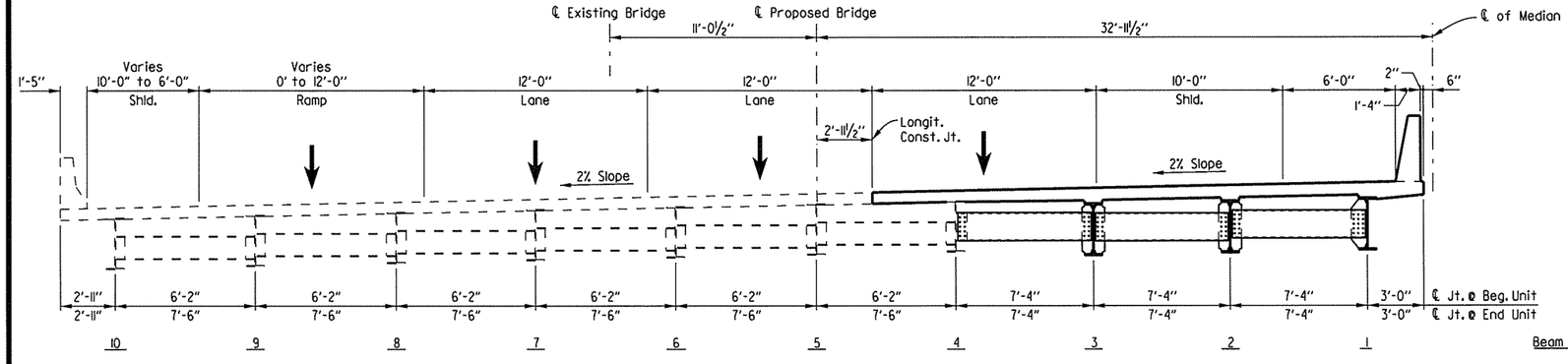
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	78	234
(1) A5946		STAGE CONST.		56676



EXISTING
(Looking Ahead)



PROPOSED WIDENING
(Looking Ahead)



CONSTRUCTION COMPLETE
(Looking Ahead)

Notes:

(1) For Details of Temporary Precast Barrier, See Std. Dwg. No. TC-4. (Do not connect to deck.)

(2) Partial Saw Cut Depth. See Section 821.

(3) Care shall be exercised during the removal of the existing deck to ensure that the beams, diaphragms, bolted connections and reinforcement are not damaged. Damaged items that are not salvageable as determined by the Engineer, shall be replaced by the Contractor at no additional payment. The interior spans of the existing deck shall be removed before the end spans are removed in order to ensure stability of the existing bridge.

(4) Install new diaphragms and connection prior to deck pour. The new connection plate shall be field welded to the existing beam. See Dwg. No. 56691 for information regarding tightening of bolts.

(5) The beam numbers have been renumbered from the original plans to provide consistency to the plan details.

The Contractor may propose a different sequence of construction to the Engineer for approval.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 1 OF 3

DETAILS OF STAGE CONSTRUCTION
BRIDGE 'A' OVER SPRING CREEK
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

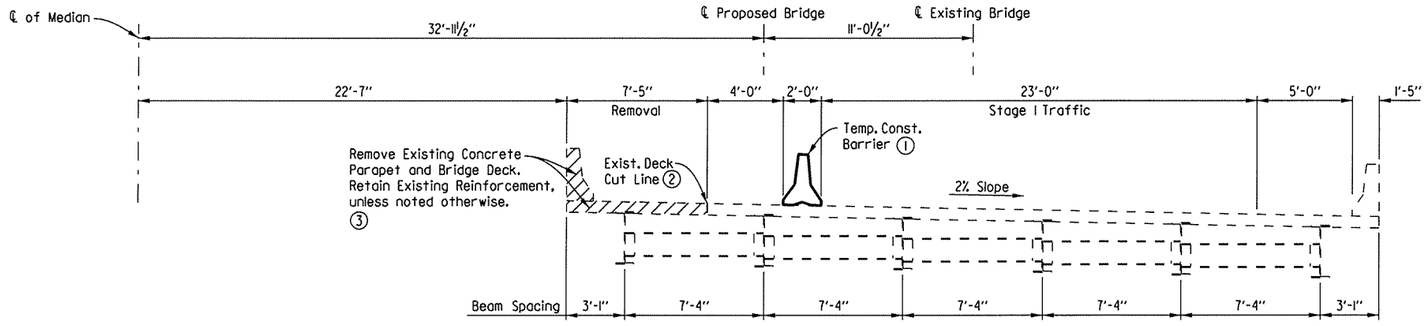
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CHECKED BY: CAW	DATE: 03-31-14	SCALE: 1/4" = 1'-0"	
DESIGNED BY: KJC	DATE: 03-21-14		

BRIDGE NO. A5946 DRAWING NO. 56676

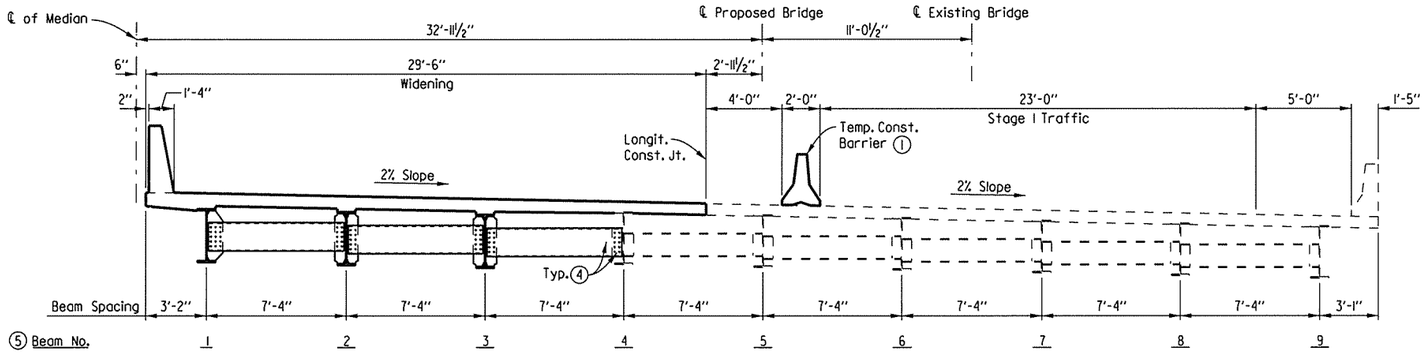
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PLOTTED: 4/17/2015 11:22
SCALE: 81

Crafton, Tull & Associates Inc.

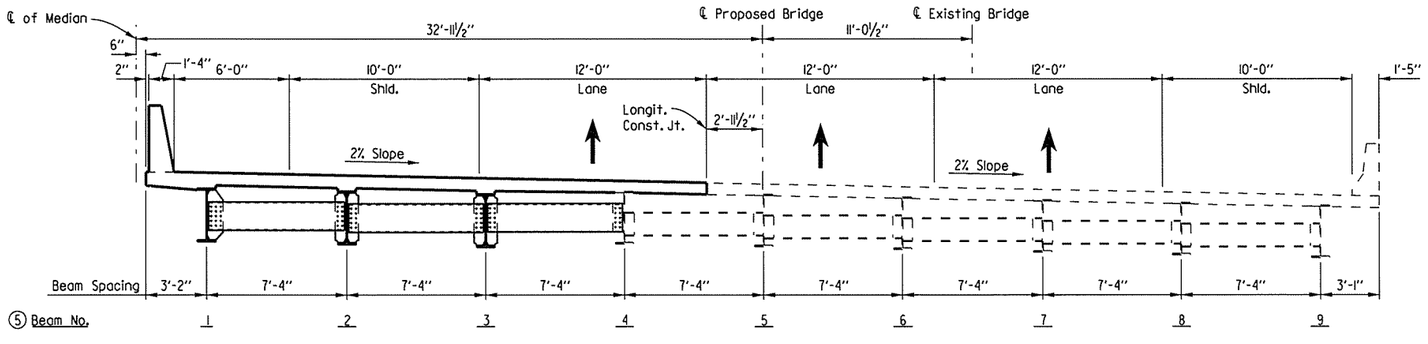
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	79	234
				(1) B5946		STAGE CONST.		56677



EXISTING
(Looking Ahead)



PROPOSED WIDENING
(Looking Ahead)



CONSTRUCTION COMPLETE
(Looking Ahead)

Notes:

(1) For Details of Temporary Precast Barrier, See Std. Dwg. No. TC-4. (Do not connect to existing deck.)

(2) Partial Saw Cut Depth. See Section 821.

(3) Care shall be exercised during the removal of the existing deck to ensure that the beams, diaphragms, bolted connections and reinforcement are not damaged. Damaged items that are not salvageable as determined by the Engineer, shall be replaced by the Contractor at no additional payment. The interior spans of the existing deck shall be removed before the end spans are removed in order to ensure stability of the existing bridge.

(4) Install new diaphragms and connection prior to deck pour. The new connection plate shall be field welded to the existing beam. See Dwg. No. 56691 for information regarding tightening of bolts.

(5) The beam numbers have been renumbered from the original plans to provide consistency to the plan details.

The Contractor may propose a different sequence of construction to the Engineer for approval.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/20/15

SHEET 2 OF 3

DETAILS OF STAGE CONSTRUCTION
BRIDGE 'B' OVER SPRING CREEK
HWY. 412 - WAGON WHEEL RD. (WIDENING) (S)
BENTON COUNTY
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

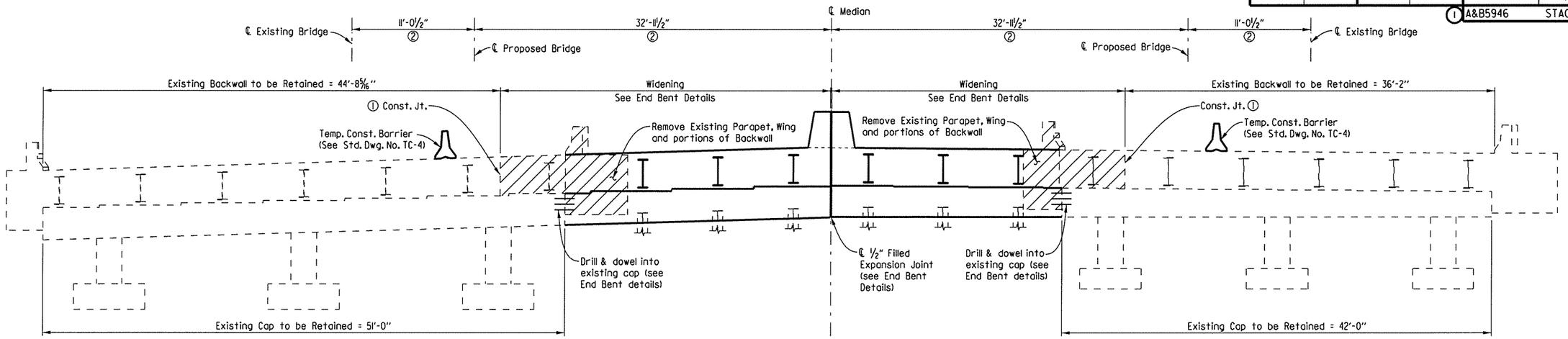
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DESIGNED BY: KJC DATE: 03-21-14
BRIDGE NO. B5946 DRAWING NO. 56677

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bcall0bl_14.dgn SCALE: 8:1
PLOTTED: 4/17/2015 11:22

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	80	234
① A&B5946		STAGE CONST.		56678



SOUTHBOUND BRIDGE A5946 BENT 5

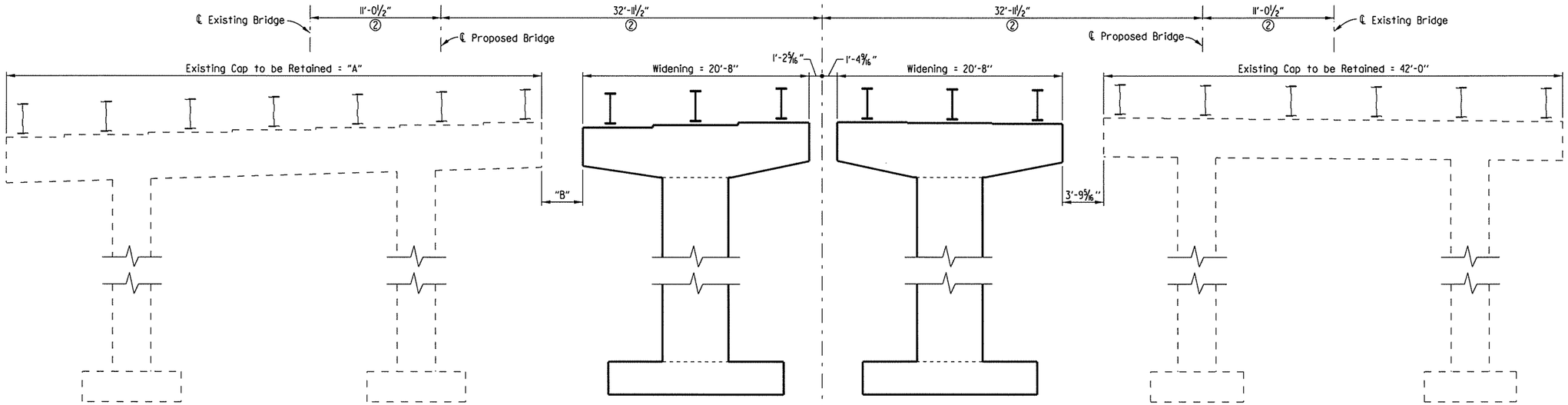
Looking Ahead
Note: Dimensions along ℄ Bent, U.N.O.
Bent 5 Shown with spread footings,
Bent 1 Similar with steel piling.

NORTHBOUND BRIDGE B5946 BENT 5

Looking Ahead
Note: Dimensions along ℄ Bent, U.N.O.
Bent 5 Shown with spread footings,
Bent 1 Similar with steel piling.

① Saw cut and remove wing and portions of existing backwall.

② Dimensions are measured perpendicular to ℄ Median.



SOUTHBOUND BRIDGE A5946 INT. BT. 4

Looking Ahead
Note: Dimensions along ℄ Bent, U.N.O.
Bent 2 & 3 Similar

NORTHBOUND BRIDGE B5946 INT. BT. 4

Looking Ahead
Note: Dimensions along ℄ Bent, U.N.O.
Bent 2 & 3 Similar

TABLE OF VARIABLES

Bent No.	A	B
2	44'-0"	3'-11"
3	47'-0"	3'-7⅞"
4	49'-0"	3'-9⅛"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 3 OF 3

DETAILS OF STAGE CONSTRUCTION BRIDGES 'A & B' OVER SPRING CREEK HWY. 412 - WAGON WHEEL RD. (WIDENING) (S) BENTON COUNTY

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 03-28-14 FILENAME: bcal101al_15.dgn
CHECKED BY: CAW DATE: 03-31-14 SCALE: NO SCALE
DESIGNED BY: KJC DATE: 03-21-14

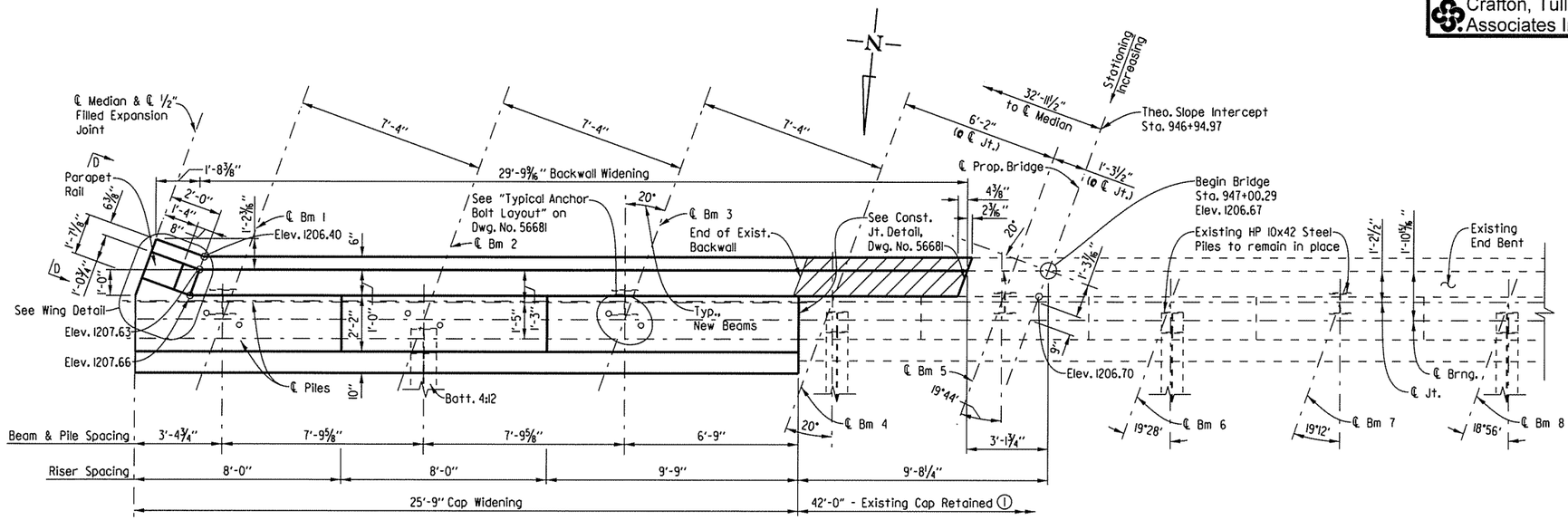
BRIDGE NO. A&B5946 DRAWING NO. 56678

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PLOTTED: 4/17/2015 11:22

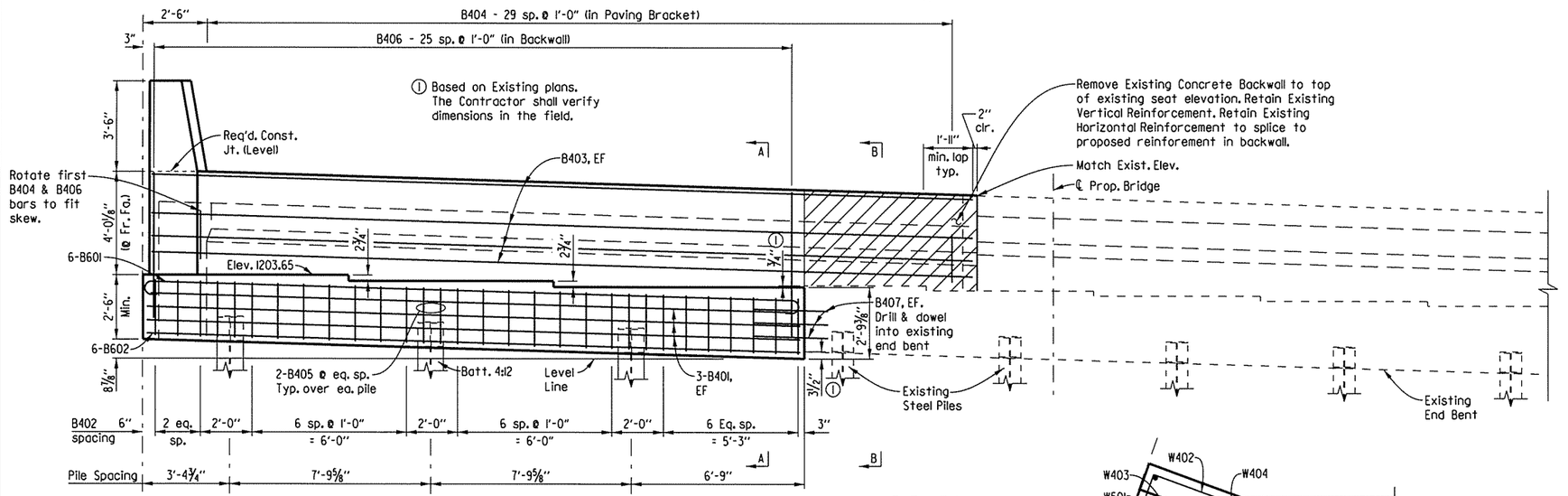
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

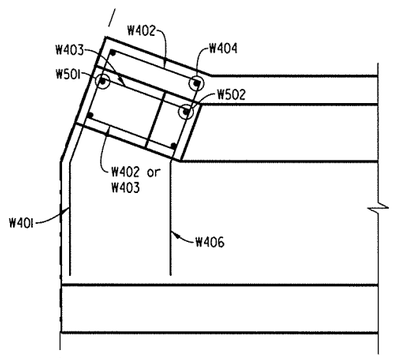
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	81	234
(1) A5946		END BENT 1		56679



PLAN
Scale: ⅜" = 1'-0"



ELEVATION
(Looking Back)
Scale: ⅜" = 1'-0"



WING DETAIL
Scale: ¾" = 1'-0"

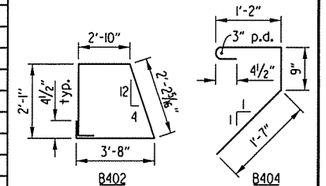
Note:
Class 2 Protective Surface Treatment shall be applied to the top of the backwall including the existing surface to be retained, and roadway face and top of parapet of the new construction.

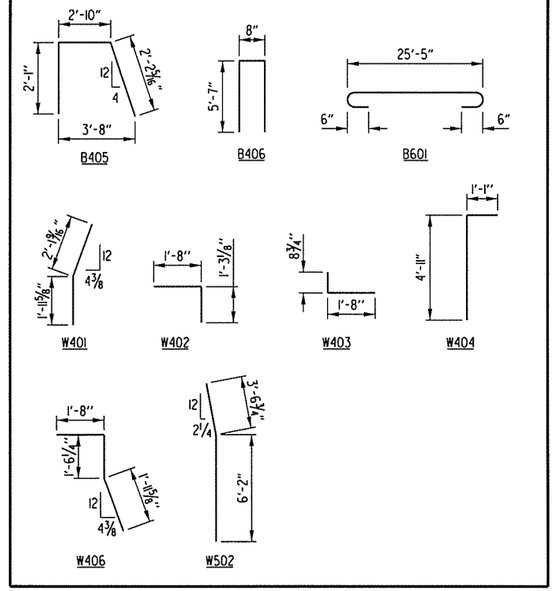
Note:
For Details of Elastomeric Bearings, See Dwg. No. 56690
For additional details and General Notes, See Dwg. No. 56681

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	25'-5"	Str.
B402	24	11'-2"	2"
B403	8	31'-5"	2"
B404	30	3'-11"	2"
B405	6	7'-0"	2"
B406	26	11'-8"	2"
B407	6	2'-11"	Str.
B601	6	26'-9"	4½"
B602	6	25'-5"	Str.
W401	3	4'-1"	2"
W402	4	2'-11"	2"
W403	4	2'-5"	2"
W404	2	5'-11"	2"
W405	10	9"	Str.
W406	3	5'-1"	2"
W501	2	9'-8"	Str.
W502	2	9'-9"	3¾"

BENDING DIAGRAMS
Dimensions are out to out of bars.





STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

DETAILS OF END BENT 1 (BRIDGE A)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC	DATE: 12-16-14	FILENAME: bcal01a1_bll.dgn	
CHECKED BY: CAW	DATE: 12-20-14	SCALE: SEE DETAILS	
DESIGNED BY: KJC	DATE: 10-30-14		

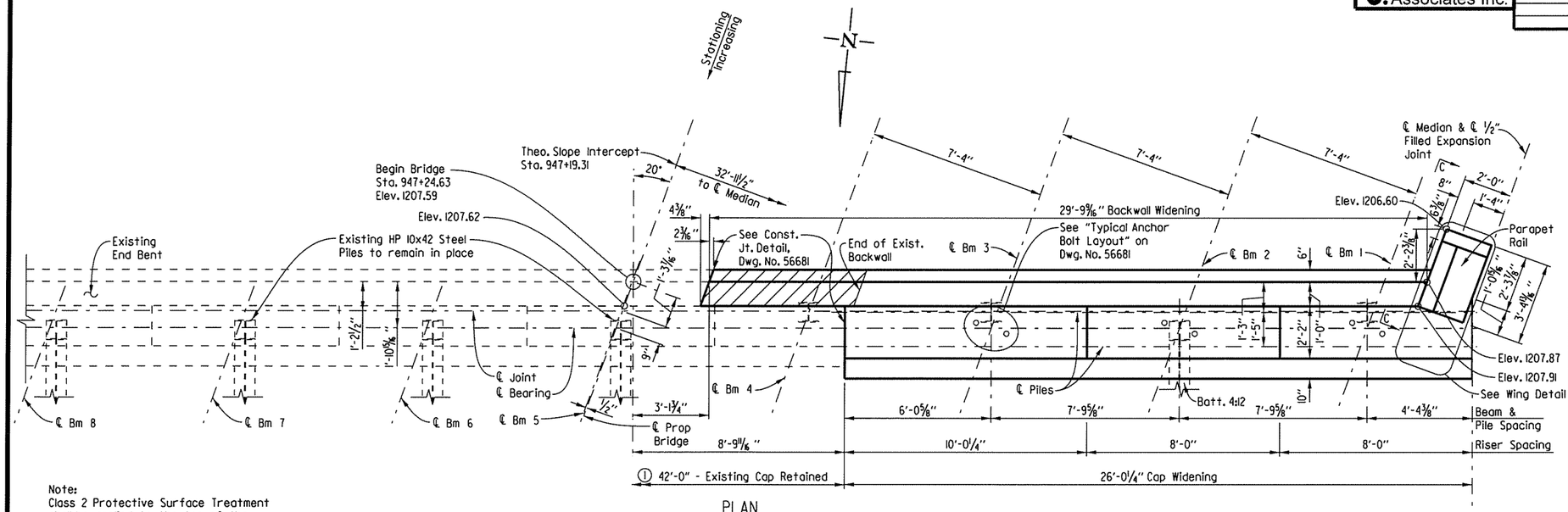
BRIDGE NO. A5946 DRAWING NO. 56679

USER: bc5100
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PLOTTED: 4/17/2015 11:22

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	82	234
(1) B5946		END BENT 1		56680

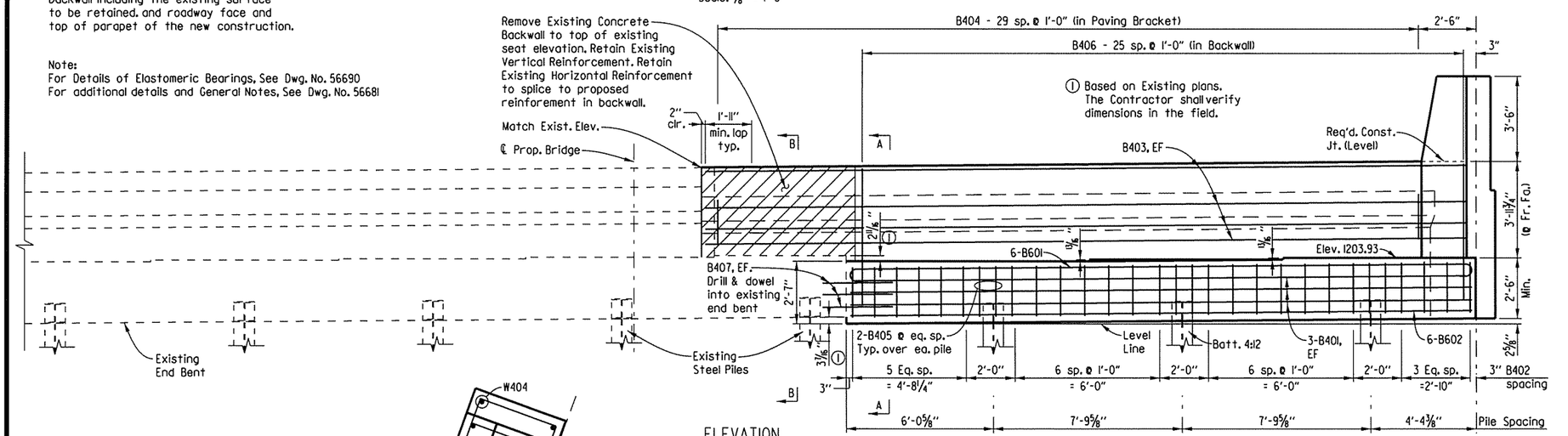


PLAN

Scale: ⅜" = 1'-0"

Note:
Class 2 Protective Surface Treatment shall be applied to the top of the backwall including the existing surface to be retained, and roadway face and top of parapet of the new construction.

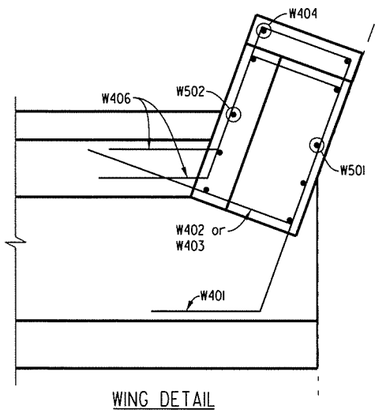
Note:
For Details of Elastomeric Bearings, See Dwg. No. 56690
For additional details and General Notes, See Dwg. No. 56681



ELEVATION

(Looking Back)

Scale: ⅜" = 1'-0"



WING DETAIL

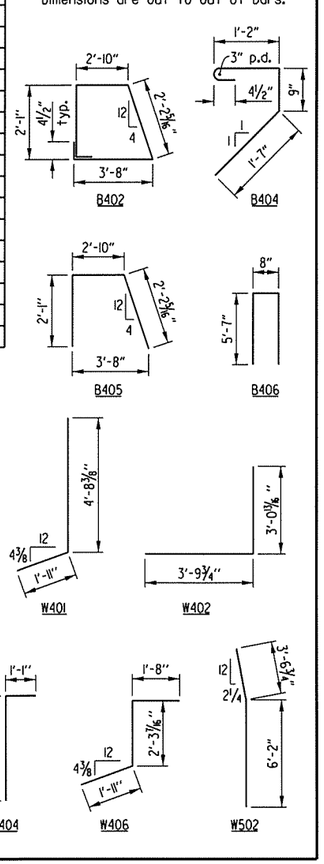
Scale: ¾" = 1'-0"

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	25'-9"	Str.
B402	24	11'-2"	2"
B403	8	31'-7"	Str.
B404	30	3'-11"	2"
B405	6	7'-0"	2"
B406	26	11'-8"	2"
B407	6	2'-11"	Str.
B601	6	27'-0"	4½"
B602	6	25'-8"	Str.
W401	3	6'-7"	2"
W402	2	6'-9"	2"
W403	2	6'-3"	2"
W404	2	5'-11"	2"
W405	10	2'-6"	Str.
W406	7	5'-9"	2"
W501	4	9'-8"	Str.
W502	4	9'-9"	3¾"

BENDING DIAGRAMS

Dimensions are out to out of bars.



STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/14/15

DETAILS OF END BENT 1 (BRIDGE B)

ROUTE 49 SEC. 29

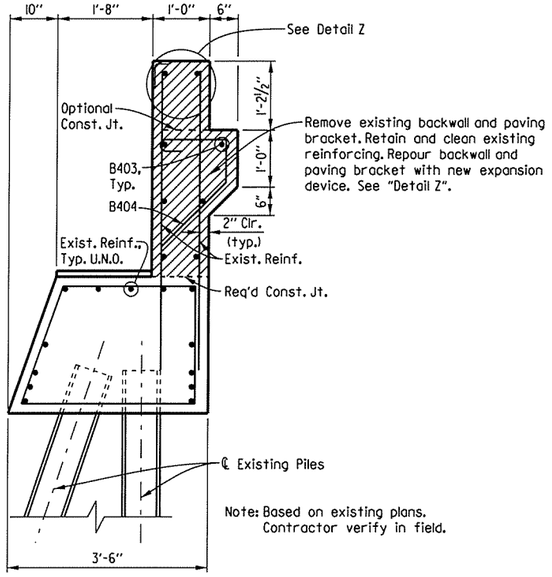
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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DESIGNED BY: KJC DATE: 10-30-14

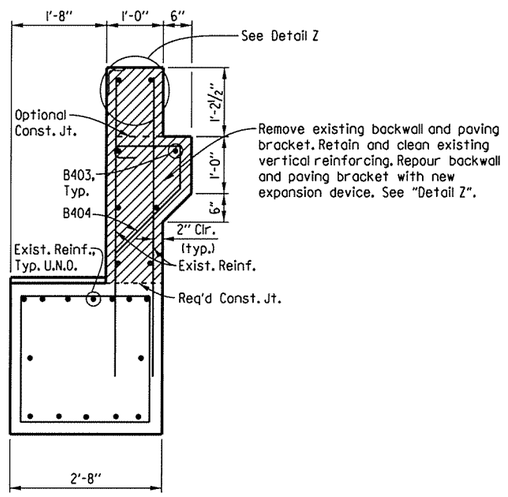
BRIDGE NO. B5946 DRAWING NO. 56680

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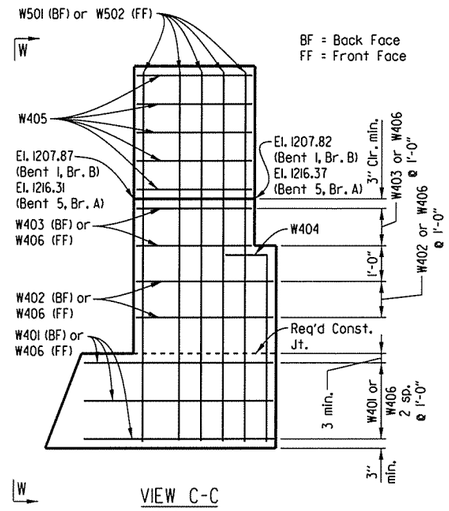
SECTION B-B
¾" = 1'-0"

Note: Based on existing plans. Contractor verify in field.

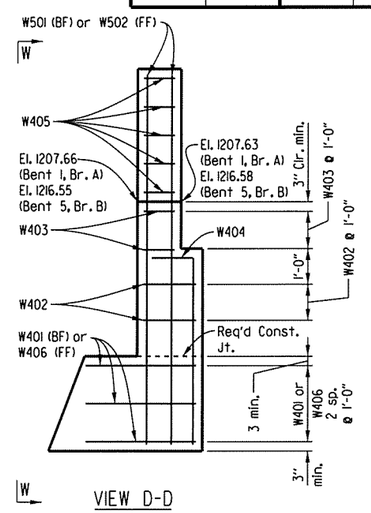


SECTION C-C
¾" = 1'-0"

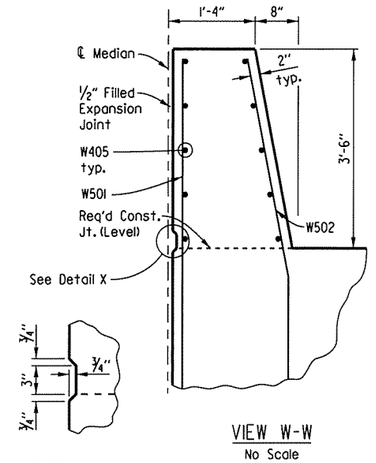
Note: Based on existing plans. Contractor verify in field.



VIEW C-C
No Scale

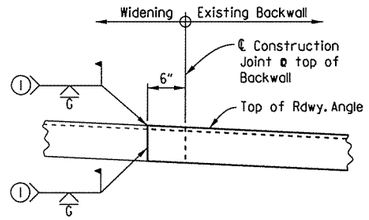


VIEW D-D
No Scale



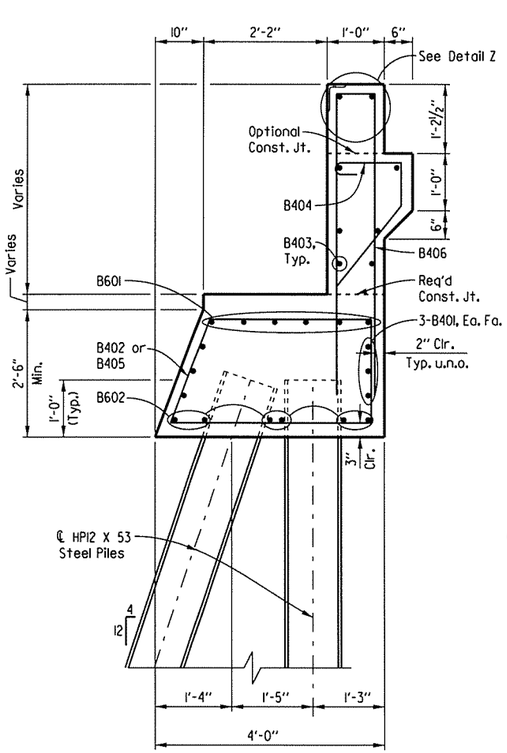
VIEW W-W
No Scale

DETAIL X
No Scale

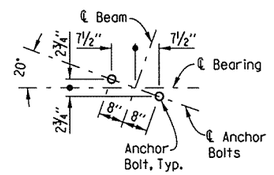


1 Grind flush from top of deck to top of Bumper Plate.

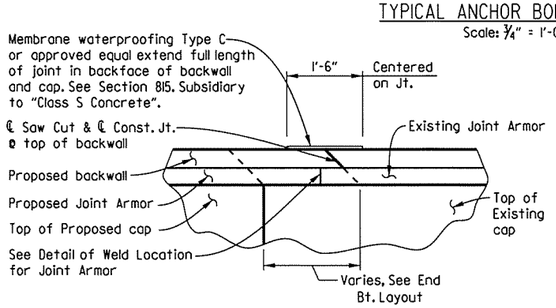
DETAIL OF WELD LOCATION FOR JOINT ARMOR
(Looking Back - Bridge A Bent 1 Shown. Others similar)
No Scale



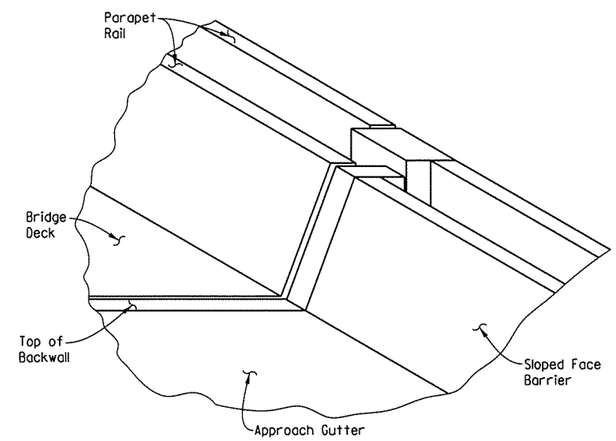
SECTION A-A
¾" = 1'-0"



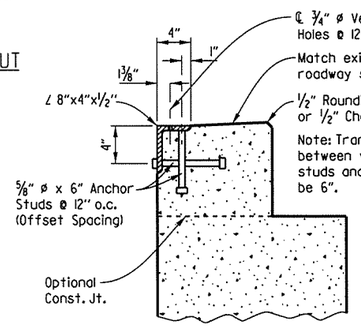
TYPICAL ANCHOR BOLT LAYOUT
Scale: ¾" = 1'-0"



CONSTRUCTION JOINT DETAIL
(Bent 1, Bridge A Shown. Others similar)
No Scale



DETAIL OF BARRIER AT BRIDGE END
No Scale



Note: For additional Joint Details, See Dwg. No. 56699

DETAIL Z
No Scale

Note: Concrete shall be hand packed under the joint armor in the backwall.

GENERAL NOTES

Concrete shall be class 'S' with a minimum 28 day compressive strength of f'c = 3,500 p.s.i. Concrete shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All Reinforcing Steel shall be Grade 60 (fy = 60,000 psi) AASHTO M 31 or M 322, Type A with mill test reports.

The backwall shall not be poured before the beams are in place. Backwall may be placed prior to placing the adjacent concrete deck only if the optional backwall construction joint is used. See Detail Z for additional information.

Structural Steel in end bents may be AASHTO M 270, Gr. 36 and shall be included in the bid item "Structural Steel in Beam Spans (M270, Gr. 50W)."

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

Drill and grout bars where shown using an approved cement or epoxy system from the QPL. Minimum embedment shall be 12" for cement based grout. Minimum embedment shall be per the manufacturer's recommendations for epoxy based grout.

Work required to remove & dispose portions of the existing bridge, retain and clean existing reinforcing steel, 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. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".

½" Filled Expansion Joint will not be paid for directly but will be considered subsidiary to item "Class S Concrete - Bridge".

For additional information, see Layout.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/14/15

DETAILS OF END BENTS (BRIDGES A & B)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14
CHECKED BY: CAW DATE: 12-20-14
DESIGNED BY: KJC DATE: 10-30-14
FILENAME: bcall0la1_bl3.dgn
SCALE: SEE DETAILS

BRIDGE NO. A&B5946 DRAWING NO. 56681

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	83	234
1 A&B5946	END BENT DETAILS			56681

USER: bc5100
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PLOTTED: 5/12/2015 11:10 SCALE: 81

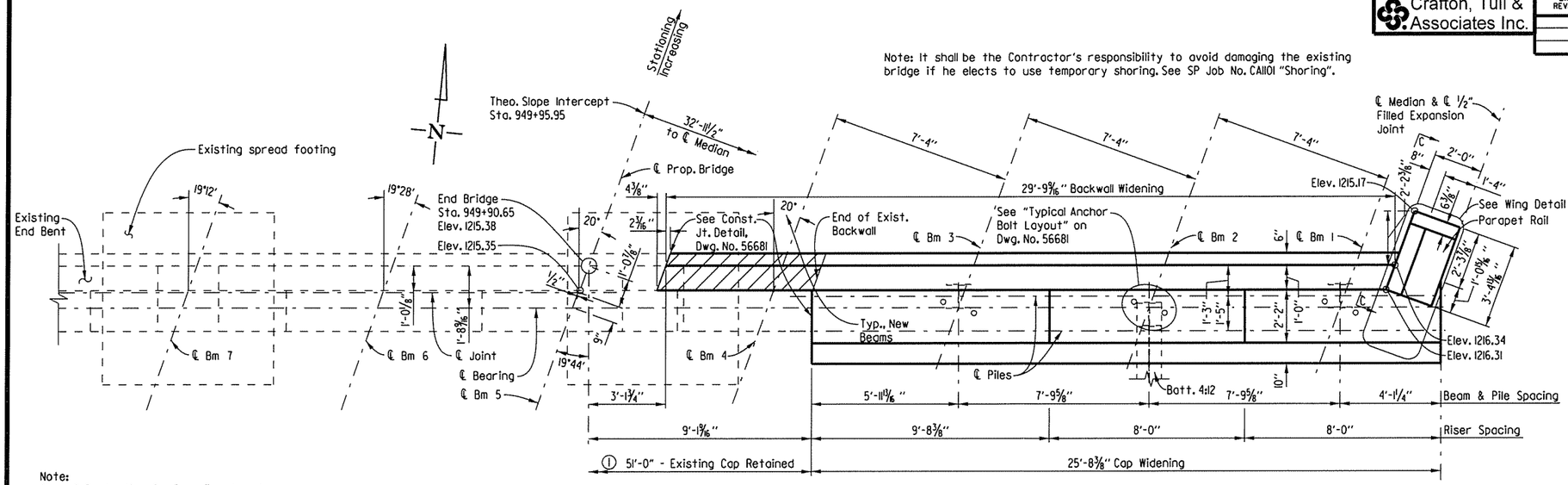
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA110I	84	234
(1) A5946		END BENT 5		56682

Note: It shall be the Contractor's responsibility to avoid damaging the existing bridge if he elects to use temporary shoring. See SP Job No. CA110I "Shoring".

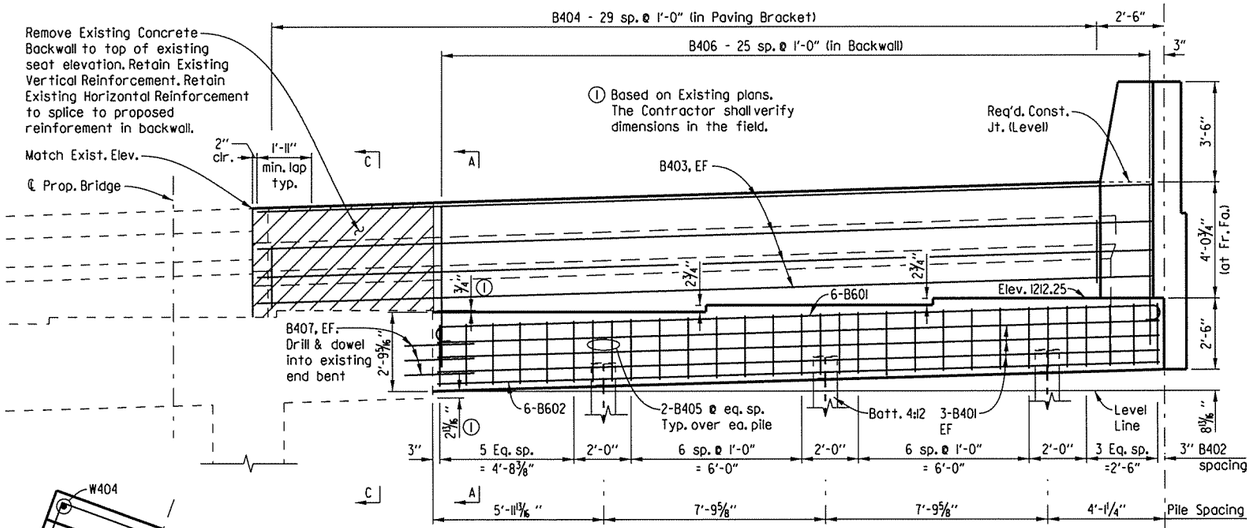


Note:
Class 2 Protective Surface Treatment shall be applied to the top of the backwall including the existing surface to be retained, and roadway face and top of parapet of the new construction.

Note:
For Details of Elastomeric Bearings, See Dwg. No. 56690
For additional details and General Notes, See Dwg. No. 56681

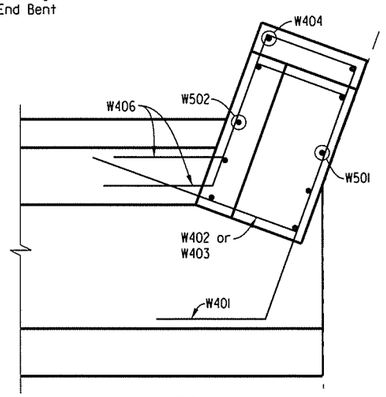
PLAN

Scale: ⅜" = 1'-0"



ELEVATION

(Looking Ahead)
Scale: ⅜" = 1'-0"



WING DETAIL

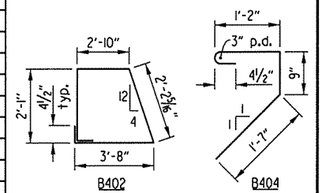
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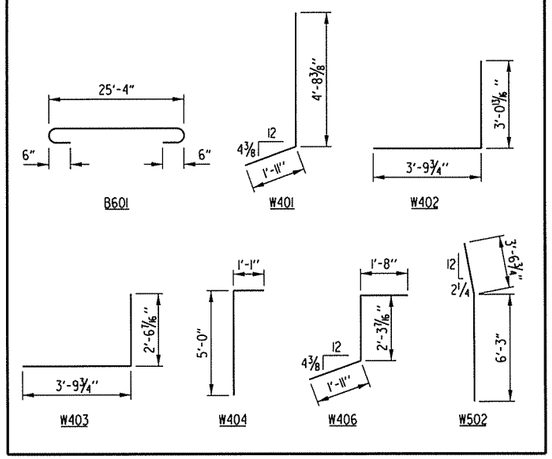
BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	25'-5"	Str.
B402	24	11'-2"	2"
B403	8	31'-7"	Str.
B404	30	3'-11"	2"
B405	6	7'-0"	2"
B406	26	11'-10"	2"
B407	6	2'-11"	Str.
B601	6	26'-8"	4½"
B602	6	25'-4"	Str.
W401	3	6'-7"	2"
W402	2	6'-9"	2"
W403	2	6'-3"	2"
W404	2	6'-0"	2"
W405	10	2'-6"	Str.
W406	7	5'-9"	2"
W501	4	9'-9"	Str.
W502	4	9'-10"	3¾"

BENDING DIAGRAMS

Dimensions are out to out of bars.





STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
09/10/15

DETAILS OF END BENT 5 (BRIDGE A)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bca110la1_b51.dgn
CHECKED BY: CAW DATE: 12-20-14 SCALE: SEE DETAILS
DESIGNED BY: KJC DATE: 10-30-14

BRIDGE NO. A5946 DRAWING NO. 56682

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca110la1_b51.dgn
PLOTTED: 4/17/2015 11:22 SCALE: 5.333333:1

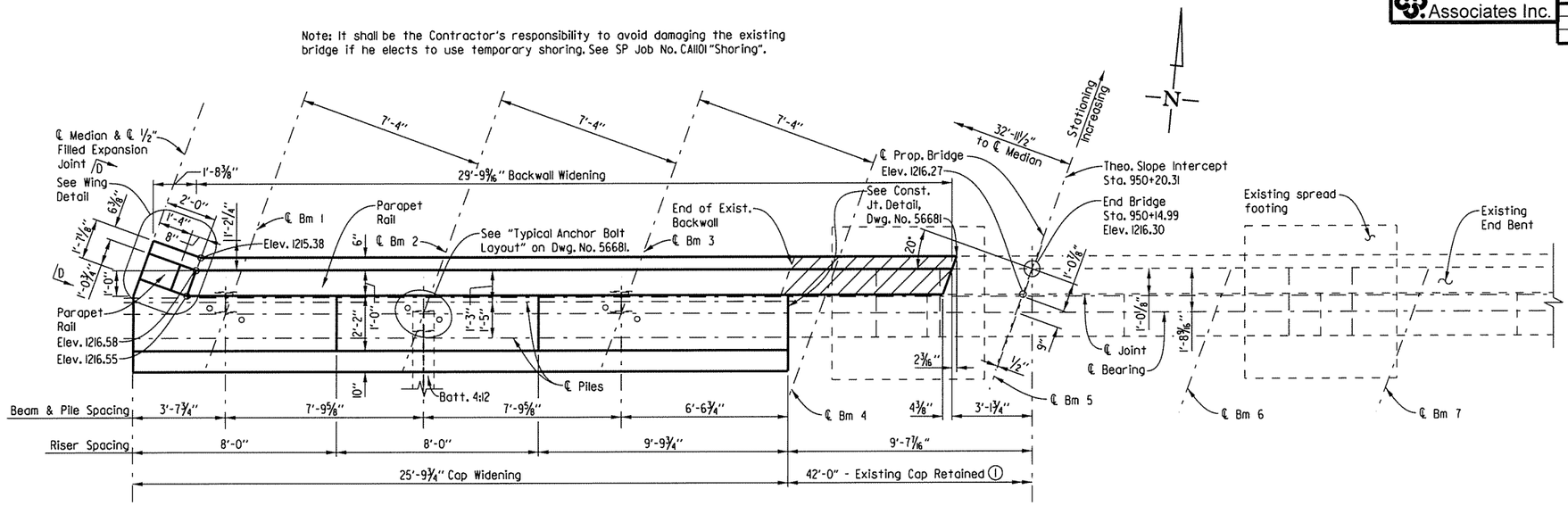
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Crafton, Tull & Associates Inc.

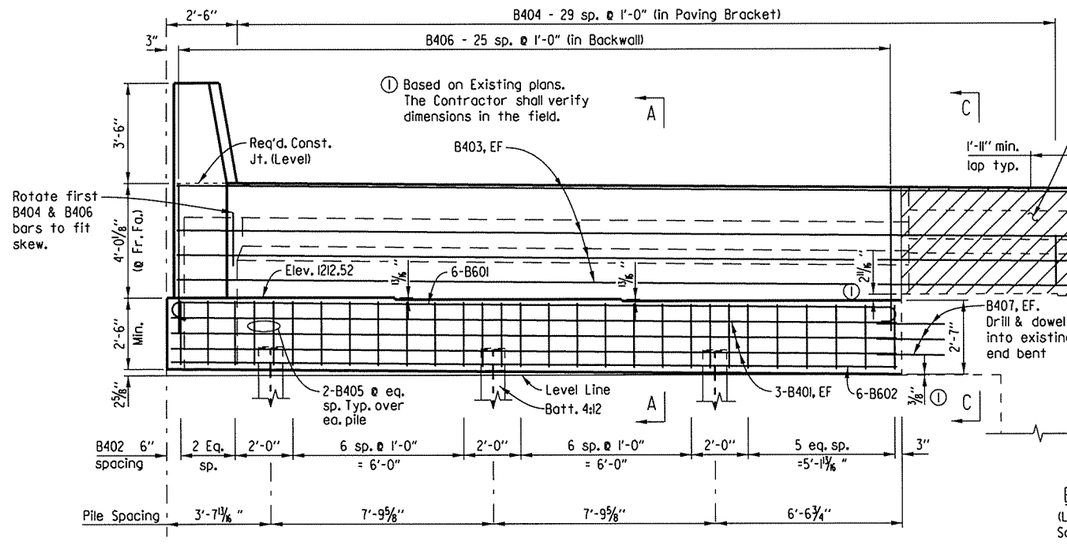
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	85	234
(1) B5946		END BENT 5		56683

Note: It shall be the Contractor's responsibility to avoid damaging the existing bridge if he elects to use temporary shoring. See SP Job No. CA1101 "Shoring".



PLAN
Scale: ⅜" = 1'-0"

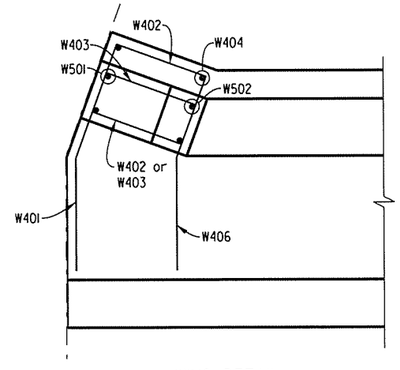


ELEVATION
(Looking Ahead)
Scale: ⅜" = 1'-0"

Remove Existing Concrete Backwall to top of existing seat elevation. Retain Existing Vertical Reinforcement. Retain Existing Horizontal Reinforcement to splice to proposed reinforement in backwall.

Note:
Class 2 Protective Surface Treatment shall be applied to the top of the backwall including the existing surface to be retained, and roadway face and top of parapet of the new construction.

Note:
For Details of Elastomeric Bearings, See Dwg. No. 56690
For additional details and General Notes, See Dwg. No. 56681

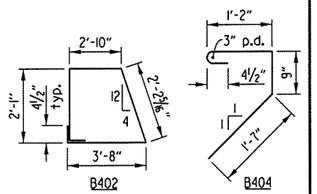


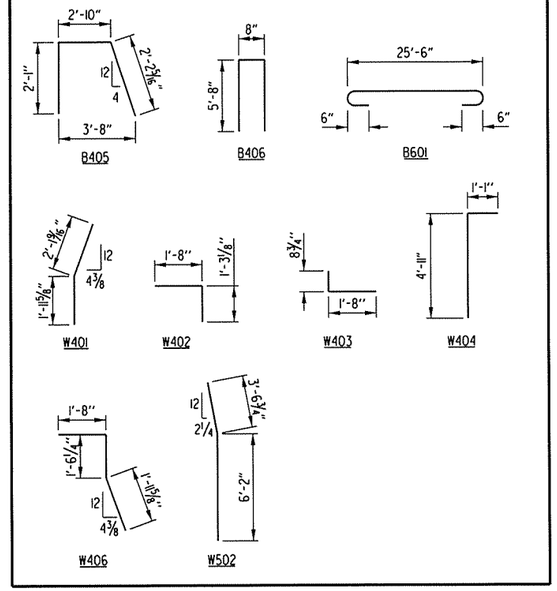
WING DETAIL
Scale: ¾" = 1'-0"

BAR LIST

MARK	NO. REQ'D.	LENGTH	P.D.
B401	6	25'-6"	Str.
B402	23	11'-2"	2"
B403	8	31'-5"	2"
B404	30	3'-11"	2"
B405	6	7'-0"	2"
B406	26	11'-10"	2"
B407	6	2'-11"	Str.
B601	6	26'-10"	4½"
B602	6	25'-6"	Str.
W401	3	4'-1"	2"
W402	4	2'-11"	2"
W403	4	2'-5"	2"
W404	2	5'-11"	2"
W405	10	9"	Str.
W406	3	5'-1"	2"
W501	2	9'-8"	Str.
W502	2	9'-9"	3¾"

BENDING DIAGRAMS
Dimensions are out to out of bars.





STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/21/15

DETAILS OF END BENT 5 (BRIDGE B)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC	DATE: 12-16-14	FILENAME: bca1101bl_b52.dgn	
CHECKED BY: CAW	DATE: 12-20-14	SCALE: SEE DETAILS	
DESIGNED BY: KJC	DATE: 10-30-14		

BRIDGE NO. B5946 DRAWING NO. 56683

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101bl_b52.dgn
PLOTTED: 4/17/2015 11:22
SCALE: 5.333333in

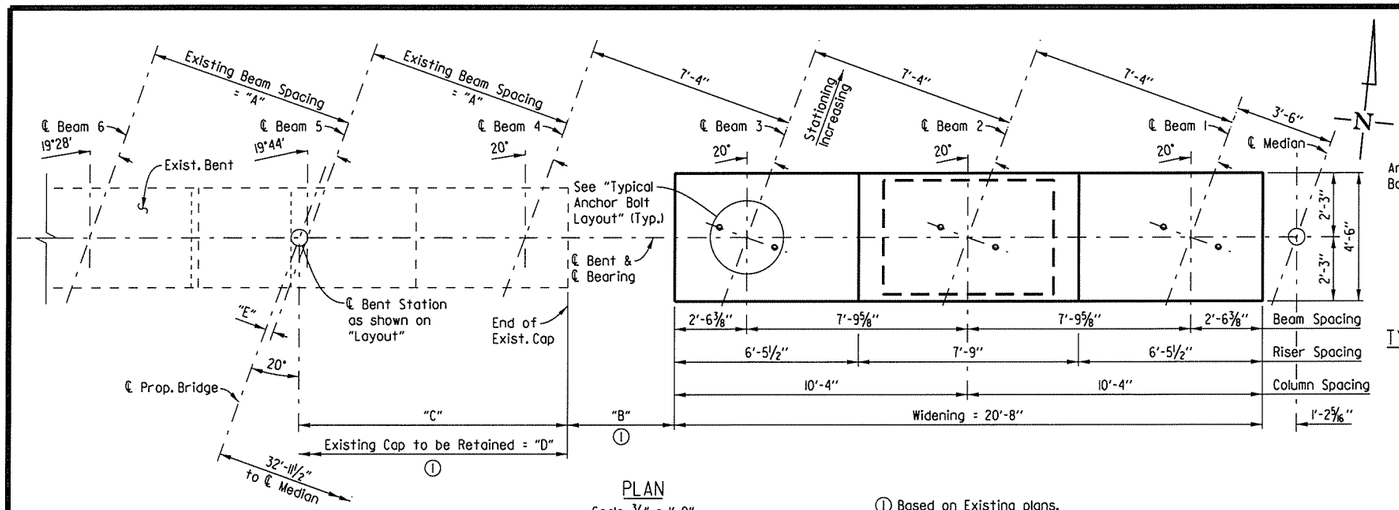
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

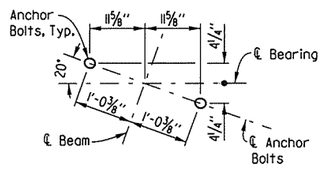
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA11101	86	234

(1) A5946 BENT 2 & 4 DETAILS 56684



PLAN
Scale: ⅜" = 1'-0"

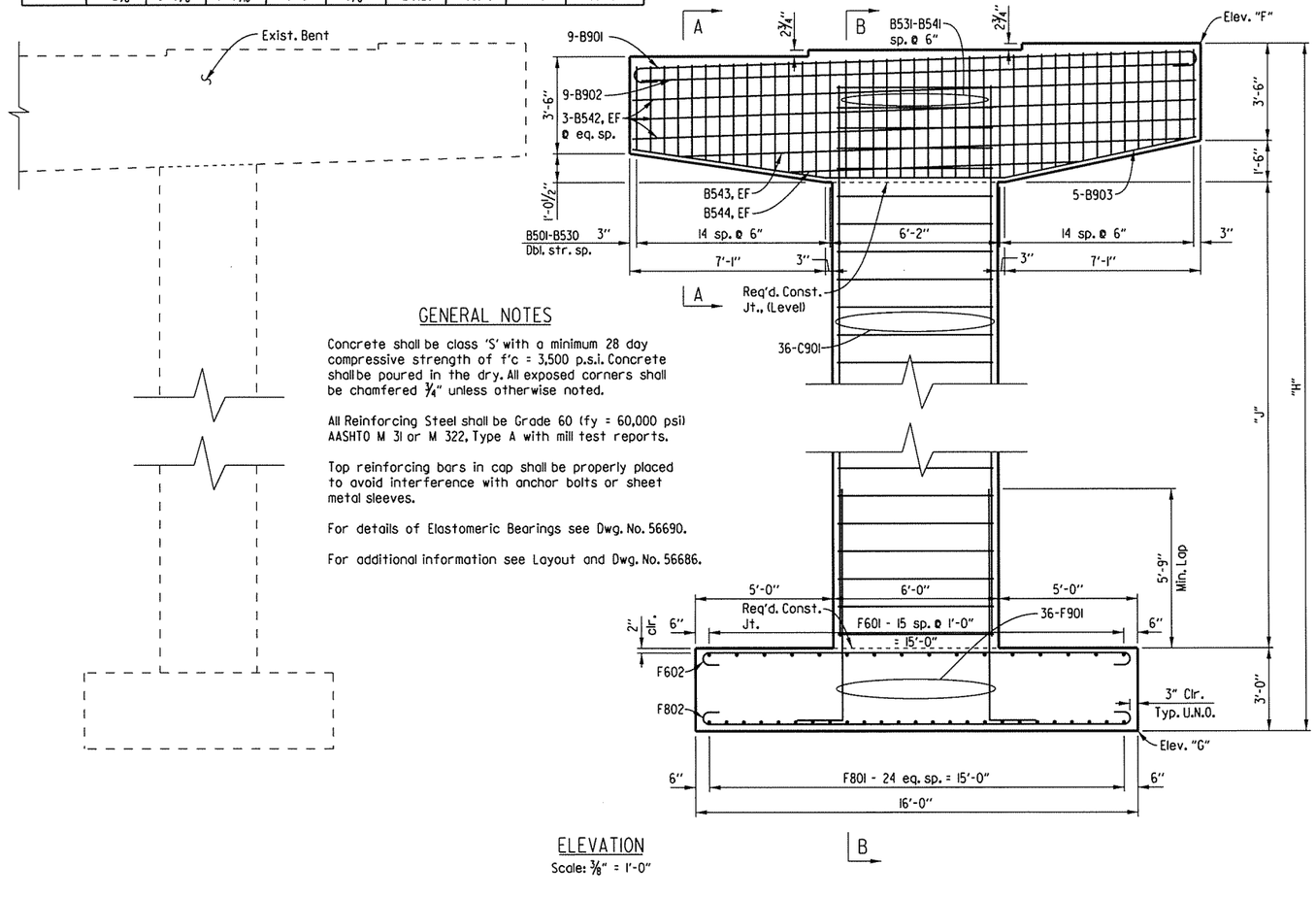
(1) Based on Existing plans. The Contractor shall verify dimensions in the field.



TYPICAL ANCHOR BOLT LAYOUT
Scale: ¾" = 1'-0"

TABLE OF VARIABLES

Bent No.	A	B	C	D	E	F	G	H	J
2	6'-5⅝"	3'-11"	9'-3½"	44'-0"	11⅞"	1205.54	1160.54	45'-0"	37'-0"
4	7'-2⅜"	3'-9⅞"	9'-5⅞"	49'-0"	3⅛"	1210.28	1168.78	41'-6"	33'-6"



ELEVATION
Scale: ⅜" = 1'-0"

GENERAL NOTES

Concrete shall be class 'S' with a minimum 28 day compressive strength of f'c = 3,500 p.s.i. Concrete shallbe poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All Reinforcing Steel shall be Grade 60 (fy = 60,000 psi) AASHTO M 31 or M 322, Type A with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

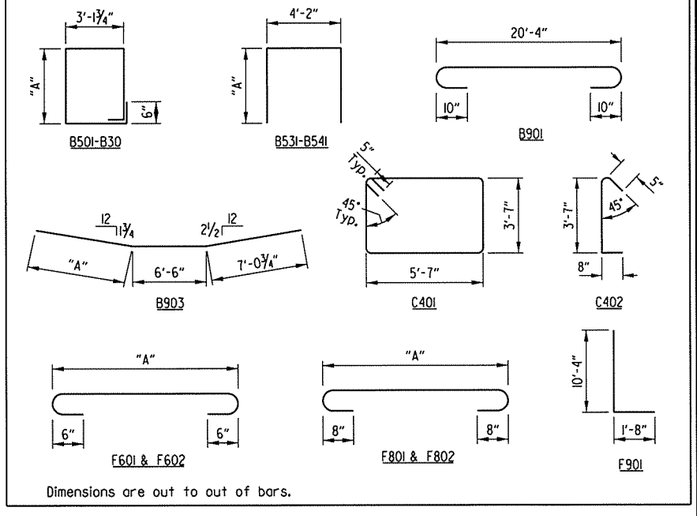
For details of Elastomeric Bearings see Dwg. No. 56690.

For additional information see Layout and Dwg. No. 56686.

BAR LIST

A5946 BENT 2 — TABLE SHOWS BAR LIST FOR ONE BENT.					A5946 BENT 4 — TABLE SHOWS BAR LIST FOR ONE BENT.				
MARK	NO. REQ'D.	LENGTH	"A"	P.D.	MARK	NO. REQ'D.	LENGTH	"A"	P.D.
B501 TO B515	2 EA.	VAR. 13'-2" TO 15'-8"	VAR. 3'-2" TO 4'-5¼"	2½"	B501 TO B515	2 EA.	VAR. 13'-2" TO 15'-8"	VAR. 3'-2" TO 4'-5¼"	2½"
B516 TO B530	2 EA.	VAR. 12'-10" TO 15'-4"	VAR. 3'-0¼" TO 4'-3"	2½"	B516 TO B530	2 EA.	VAR. 12'-10" TO 15'-4"	VAR. 3'-0¼" TO 4'-3"	2½"
B531 TO B541	1 EA.	VAR. 12'-6" TO 12'-9"	VAR. 4'-3" TO 4'-4¾"	2½"	B531 TO B541	1 EA.	VAR. 12'-6" TO 12'-9"	VAR. 4'-3" TO 4'-4¾"	2½"
B542	6	20'-4"		Str.	B542	6	20'-4"		Str.
B543	2	20'-3"		Str.	B543	2	20'-3"		Str.
B544	2	13'-9"		Str.	B544	2	13'-9"		Str.
B901	9	22'-10"		9"	B901	9	22'-10"		9"
B902	9	19'-10"		Str.	B902	9	19'-10"		Str.
B903	5	20'-7"	7'-0"	9"	B903	5	20'-7"	7'-0"	9"
C401	42	18'-10"		3"	C401	39	18'-10"		3"
C402	37	4'-8"		3"	C402	34	4'-8"		3"
C901	36	40'-6"		Str.	C901	36	37'-0"		Str.
F601	16	13'-10"	12'-6"	4½"	F601	16	13'-10"	12'-6"	4½"
F602	14	16'-10"	15'-6"	4½"	F602	14	16'-10"	15'-6"	4½"
F801	25	14'-4"	12'-6"	6"	F801	25	14'-4"	12'-6"	6"
F802	22	17'-4"	15'-6"	6"	F802	22	17'-4"	15'-6"	6"
F901	36	11'-9"		9"	F901	36	11'-9"		9"

BENDING DIAGRAMS



Dimensions are out to out of bars.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 1 OF 3

DETAILS OF BENT 2 & 4 (BRIDGE A)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14
CHECKED BY: CAW DATE: 12-22-14
DESIGNED BY: KJC DATE: 10-28-14
FILENAME: bcal101a1_b21.dgn
SCALE: SEE DETAILS

BRIDGE NO. A5946 DRAWING NO. 56684

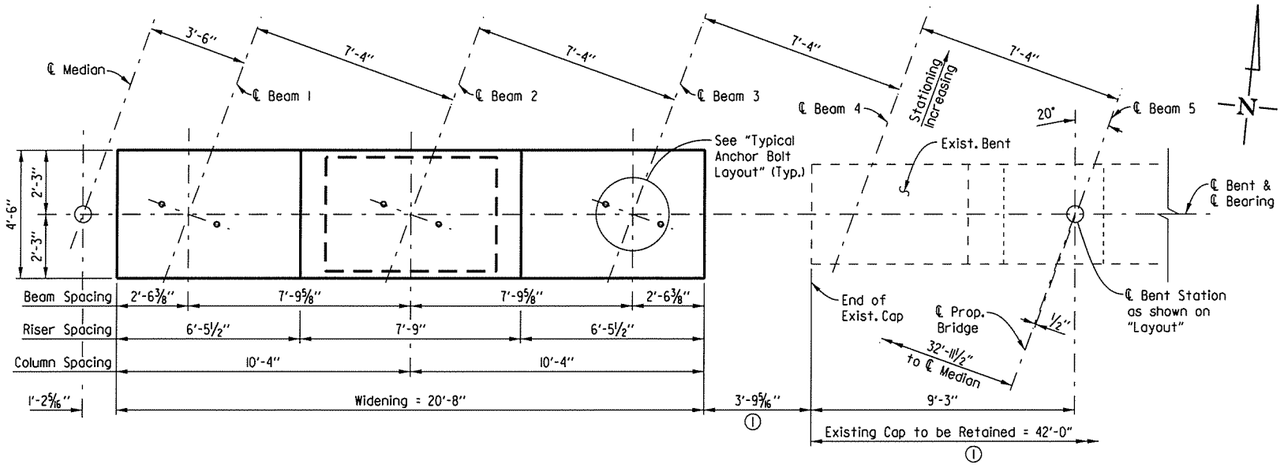
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SCALE: 5.333333:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

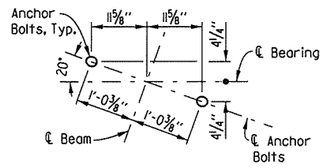
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	87	234

(1) B5946 BENT 2 & 4 DETAILS 56685

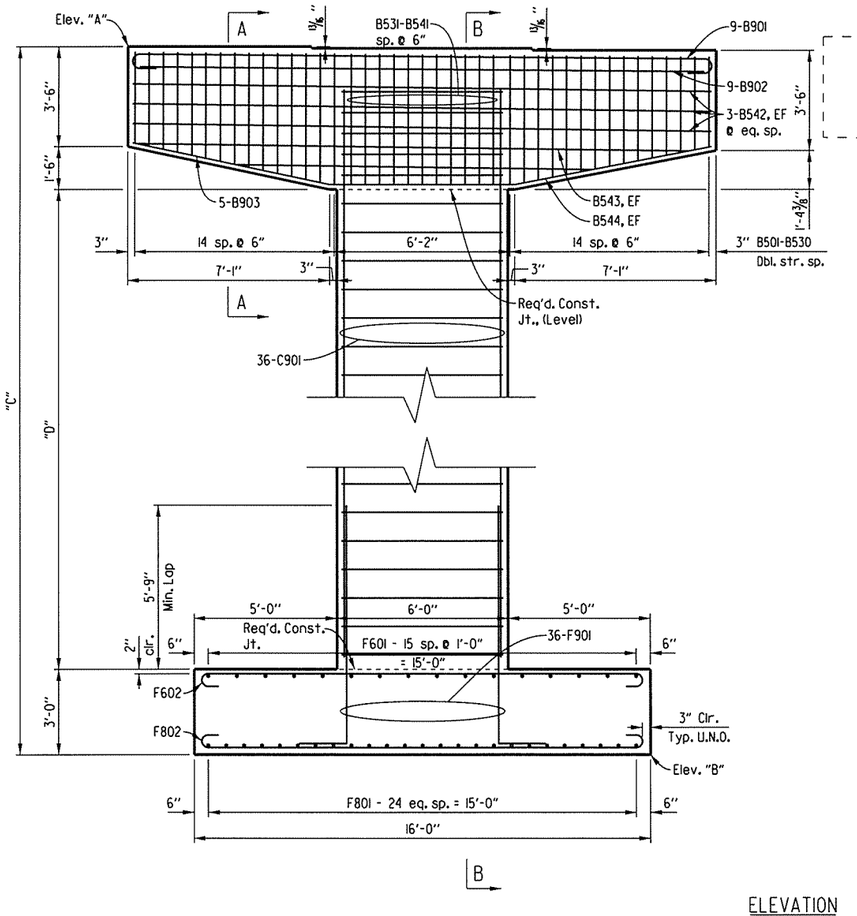


PLAN
Scale: ⅜" = 1'-0"

(1) Based on Existing plans. The Contractor shall verify dimensions in the field.



TYPICAL ANCHOR BOLT LAYOUT
Scale: ¾" = 1'-0"



ELEVATION
Scale: ⅜" = 1'-0"

GENERAL NOTES

Concrete shall be class 'S' with a minimum 28 day compressive strength of f'c = 3,500 p.s.i. Concrete shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All Reinforcing Steel shall be Grade 60 (fy = 60,000 psi) AASHTO M 31 or M 322, Type A with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For details of Elastomeric Bearings see Dwg. No. 56690.

For additional information see Layout and Dwg. No. 56686.

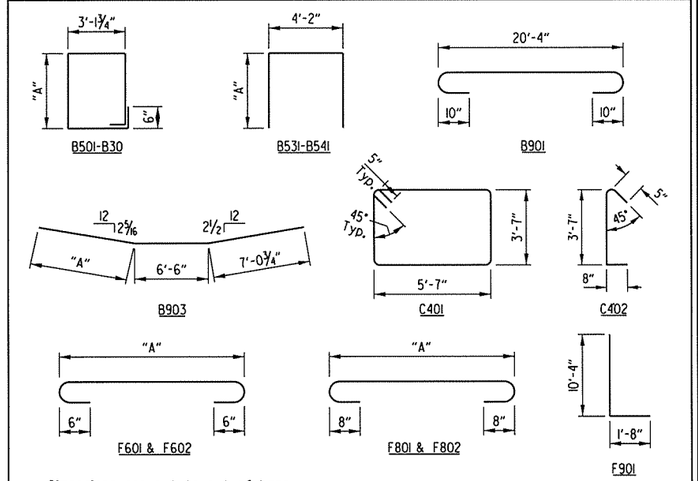
TABLE OF VARIABLES

Bent No.	A	B	C	D
2	1205.81	1161.31	44'-6"	36'-6"
4	1210.55	1172.55	38'-0"	30'-0"

BAR LIST

A5946 BENT 2 — TABLE SHOWS BAR LIST FOR ONE BENT.					A5946 BENT 4 — TABLE SHOWS BAR LIST FOR ONE BENT.				
MARK	NO. REQ'D.	LENGTH	"A"	P.D.	MARK	NO. REQ'D.	LENGTH	"A"	P.D.
B501 TO B515	2 EA.	VAR. 13'-2" TO 16'-1"	VAR. 3'-2¼" TO 4-7½"	2½"	B501 TO B515	2 EA.	VAR. 13'-2" TO 16'-1"	VAR. 3'-2¼" TO 4-7½"	2½"
B516 TO B530	2 EA.	VAR. 13'-1" TO 15'-11"	VAR. 3'-1¾" TO 4-6¾"	2½"	B516 TO B530	2 EA.	VAR. 13'-1" TO 15'-11"	VAR. 3'-1¾" TO 4-6¾"	2½"
B531 TO B541	1 EA.	VAR. 13'-1" TO 13'-2"	VAR. 4'-6½" TO 4'-7"	2½"	B531 TO B541	1 EA.	VAR. 13'-1" TO 13'-2"	VAR. 4'-6½" TO 4'-7"	2½"
B542	6	20'-4"		Str.	B542	6	20'-4"		Str.
B543	2	20'-1"		Str.	B543	2	20'-1"		Str.
B544	2	13'-3"		Str.	B544	2	13'-3"		Str.
B901	9	22'-10"		9"	B901	9	22'-10"		9"
B902	9	19'-10"		Str.	B902	9	19'-10"		Str.
B903	5	20'-8"	7'-0½"	9"	B903	5	20'-8"	7'-0½"	9"
C401	42	18'-10"		3"	C401	35	18'-10"		3"
C402	37	4'-8"		3"	C402	30	4'-8"		3"
C901	36	40'-0"		Str.	C901	36	33'-6"		Str.
F601	16	13'-10"	12'-6"	4½"	F601	16	13'-10"	12'-6"	4½"
F602	14	16'-10"	15'-6"	4½"	F602	14	16'-10"	15'-6"	4½"
F801	25	14'-4"	12'-6"	6"	F801	25	14'-4"	12'-6"	6"
F802	22	17'-4"	15'-6"	6"	F802	22	17'-4"	15'-6"	6"
F901	36	11'-9"		9"	F901	36	11'-9"		9"

BENDING DIAGRAMS



Dimensions are out to out of bars.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/10/15

SHEET 2 OF 3
DETAILS OF BENT 2 & 4 (BRIDGE B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14
CHECKED BY: CAW DATE: 12-22-14
DESIGNED BY: KJC DATE: 10-28-14
FILENAME: bcall0lbl_b22.dgn
SCALE: SEE DETAILS

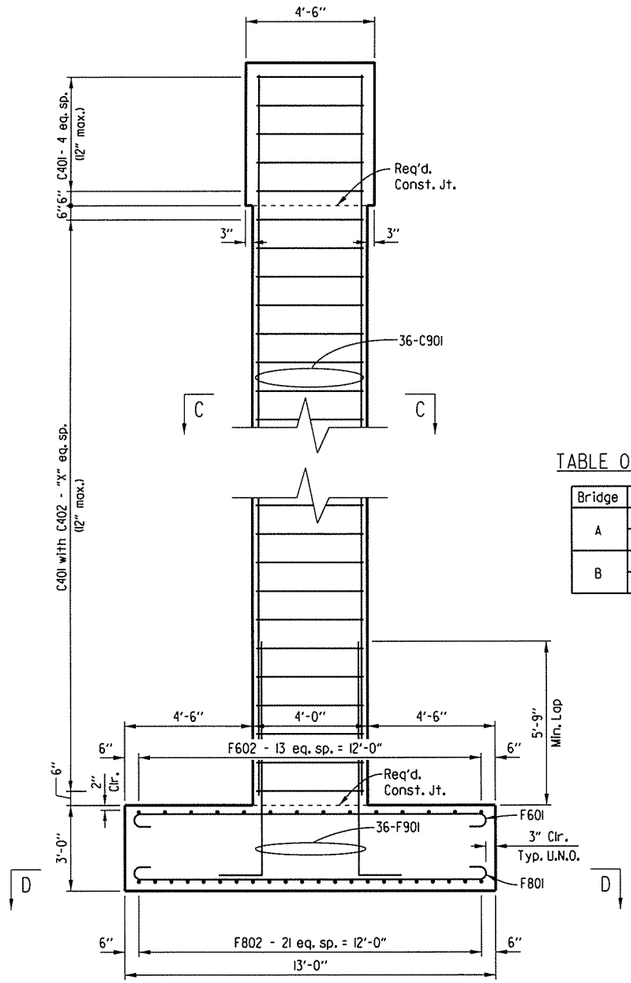
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

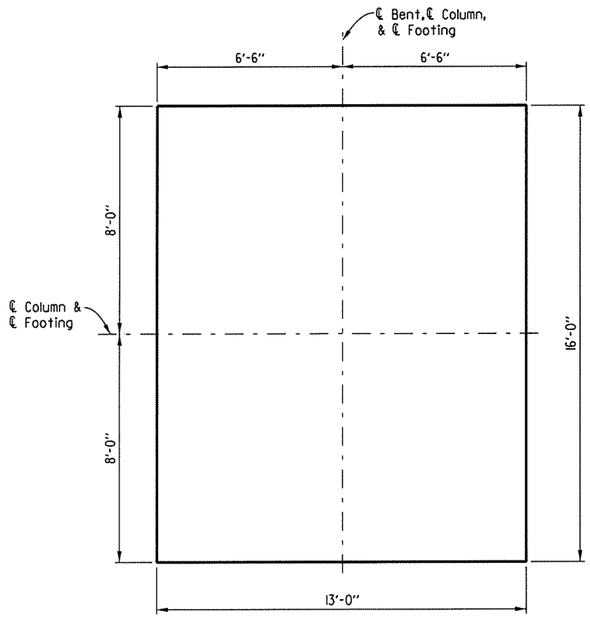
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	88	234
(1) A&B5946	BENT 2 & 4 DETAILS			56686



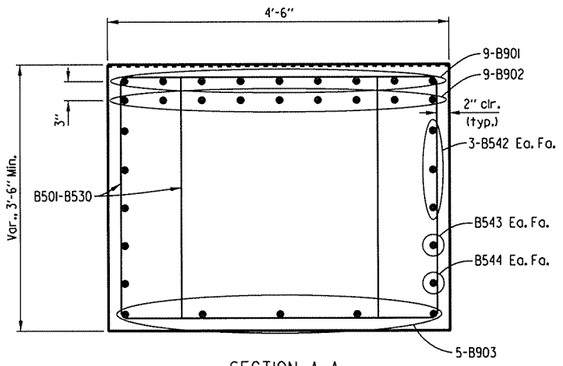
SECTION B-B
Scale: 3/8" = 1'-0"

TABLE OF VARIABLES

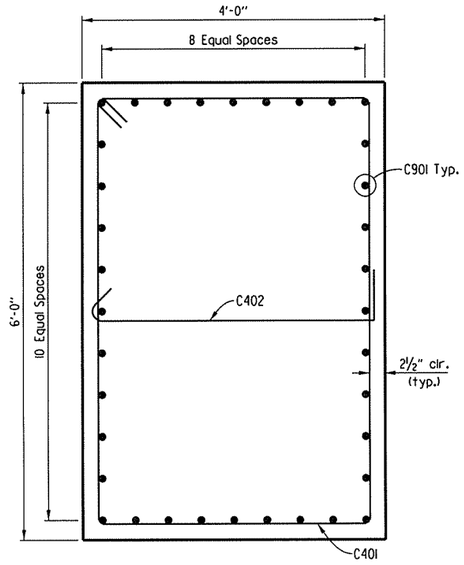
Bridge	Bent	"X"
A	2	36
	4	33
B	2	36
	4	29



SECTION D-D
Scale: 3/8" = 1'-0"



SECTION A-A
Scale: 1" = 1'-0"



SECTION C-C
Scale: 1" = 1'-0"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/21/15

SHEET 3 OF 3

DETAILS OF BENT 2 & 4 (BRIDGES A & B)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bca1101bl_b23.dgn
CHECKED BY: CAW DATE: 12-22-14 SCALE: SEE DETAILS
DESIGNED BY: KJC DATE: 10-28-14

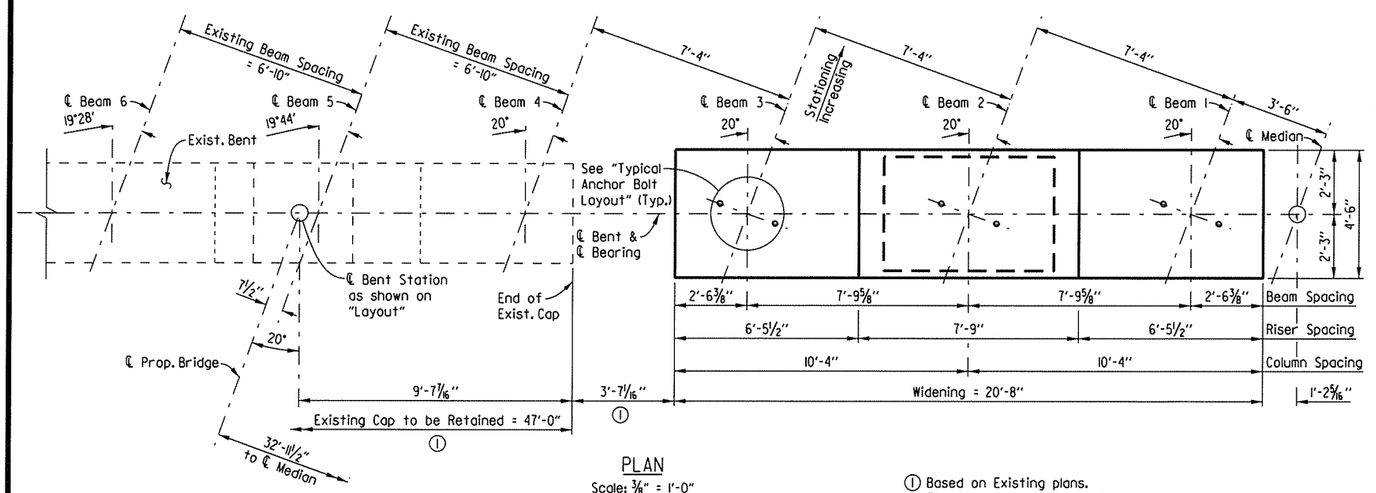
BRIDGE NO. A&B5946 DRAWING NO. 56686

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101bl_b23.dgn
PLOTTED: 4/17/2015 11:22 SCALE: 5.333333:1

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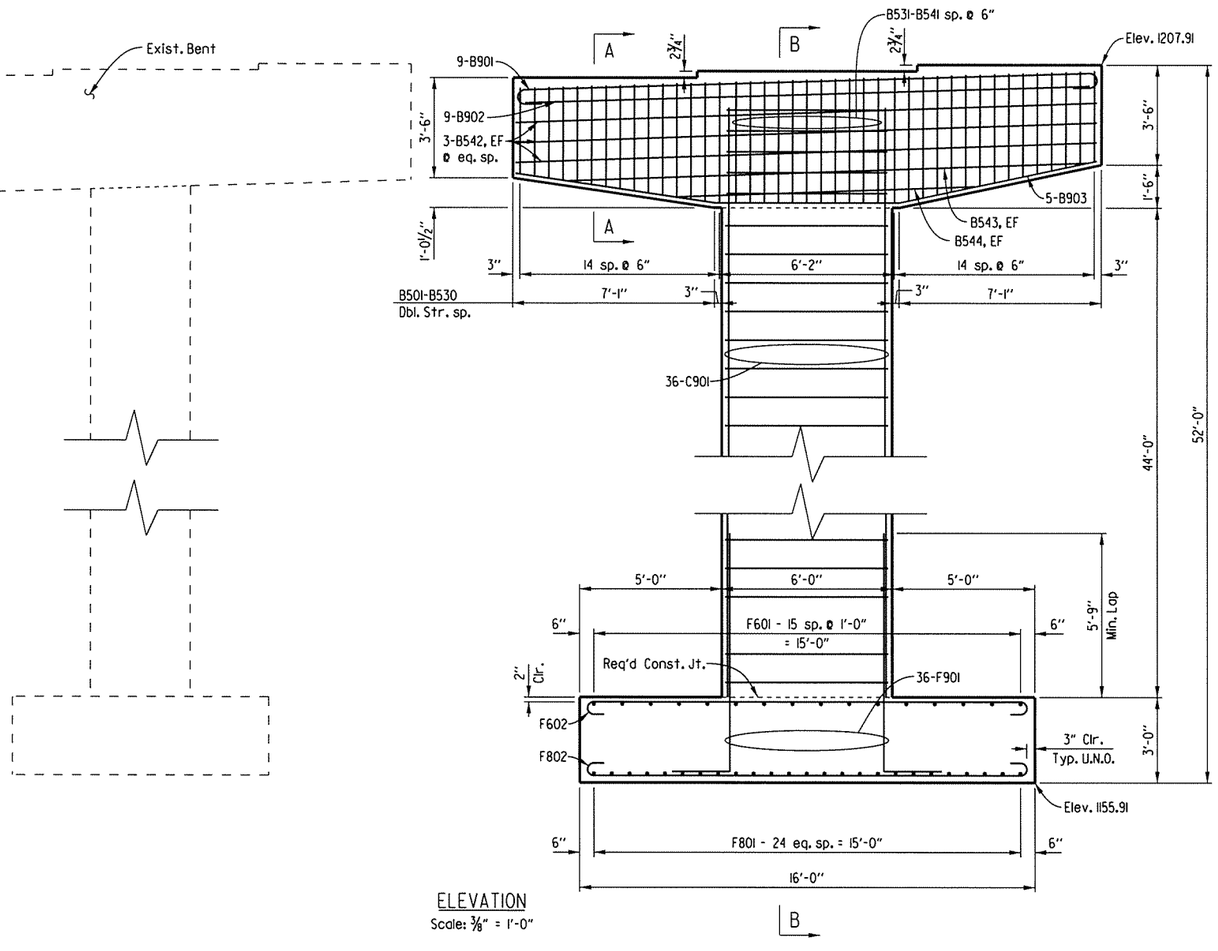
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	89	234
				(1) A5946		BENT 3 DETAILS		56687

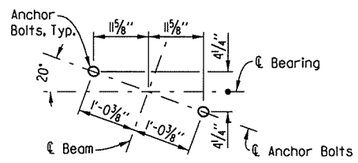


PLAN
Scale: ⅜" = 1'-0"

(1) Based on Existing plans. The Contractor shall verify dimensions in the field.



ELEVATION
Scale: ⅜" = 1'-0"

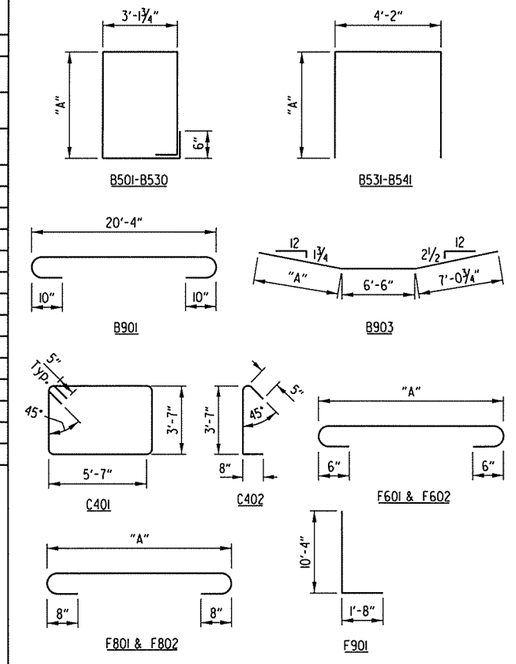


TYPICAL ANCHOR BOLT LAYOUT
Scale: ¾" = 1'-0"

BAR LIST

A5946 BENT 3 TABLE SHOWS BAR LIST FOR ONE BENT.				
MARK	NO. REQ'D.	LENGTH	"A"	Pin. Dia.
B501 to B515	2 EA.	VAR. 13'-2" TO 15'-8"	VAR. 3'-2" TO 4'-5¼"	2½"
B516 to B530	2 EA.	VAR. 12'-10" TO 15'-4"	VAR. 3'-0¼" TO 4'-3"	2½"
B531 to B541	1 EA.	VAR. 12'-6" TO 12'-9"	VAR. 4'-3" TO 4'-4¾"	2½"
B542	6	20'-4"		Str.
B543	2	20'-3"		Str.
B544	2	13'-9"		Str.
B901	9	22'-10"		9"
B902	9	19'-10"		Str.
B903	5	20'-7"	7'-0"	9"
C401	49	18'-10"		3"
C402	44	4'-8"		3"
C901	36	47'-6"		Str.
F601	16	13'-10"	12'-6"	4½"
F602	14	16'-10"	15'-6"	4½"
F801	25	14'-4"	12'-6"	6"
F802	22	17'-4"	15'-6"	6"
F901	36	11'-9"		9"

BENDING DIAGRAMS



Dimensions are out to out of bars.

GENERAL NOTES

Concrete shall be class 'S' with a minimum 28 day compressive strength of f'c = 3,500 p.s.i. Concrete shall be poured in the dry. All exposed corners shall be chamfered ¾" unless otherwise noted.

All Reinforcing Steel shall be Grade 60 (fy = 60,000 psi) AASHTO M 31 or M 322, Type A with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For details of Elastomeric Bearings see Dwg. No. 56690.

For additional information see Layout and Dwg. No. 56689.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 1 OF 3
DETAILS OF BENT 3 (BRIDGE A)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	BWC	DATE:	12-16-14	FILENAME:	bca1101a1_b3l.dgn
CHECKED BY:	CAW	DATE:	12-22-14	SCALE:	SEE DETAILS
DESIGNED BY:	KJC	DATE:	10-28-14		

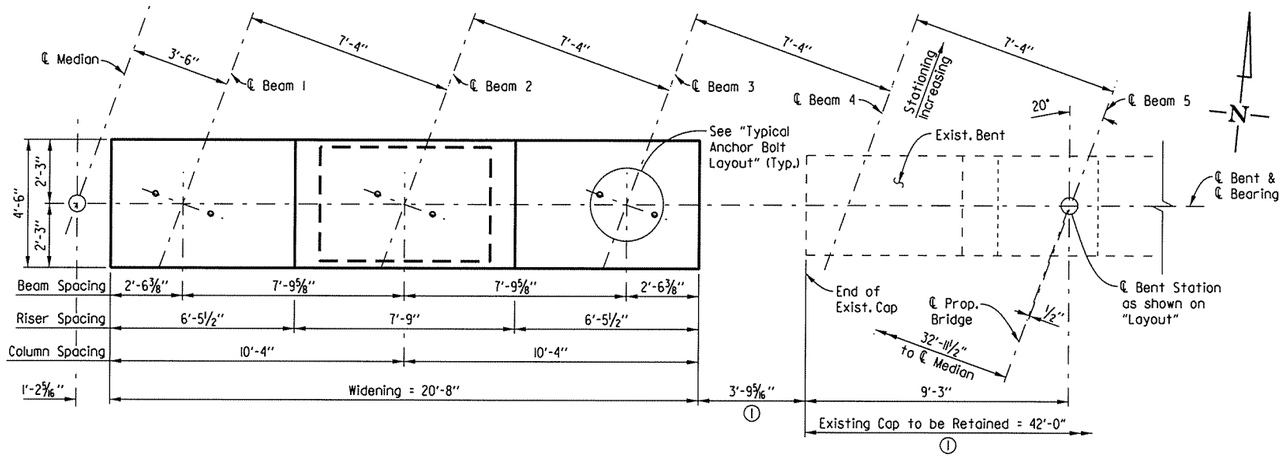
BRIDGE NO. A5946 DRAWING NO. 56687

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101a1_b3l.dgn
PLOTTED: 4/17/2015 11:22 SCALE: 5.333333:1

G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101a1_b3l.dgn 4/17/2015 11:22

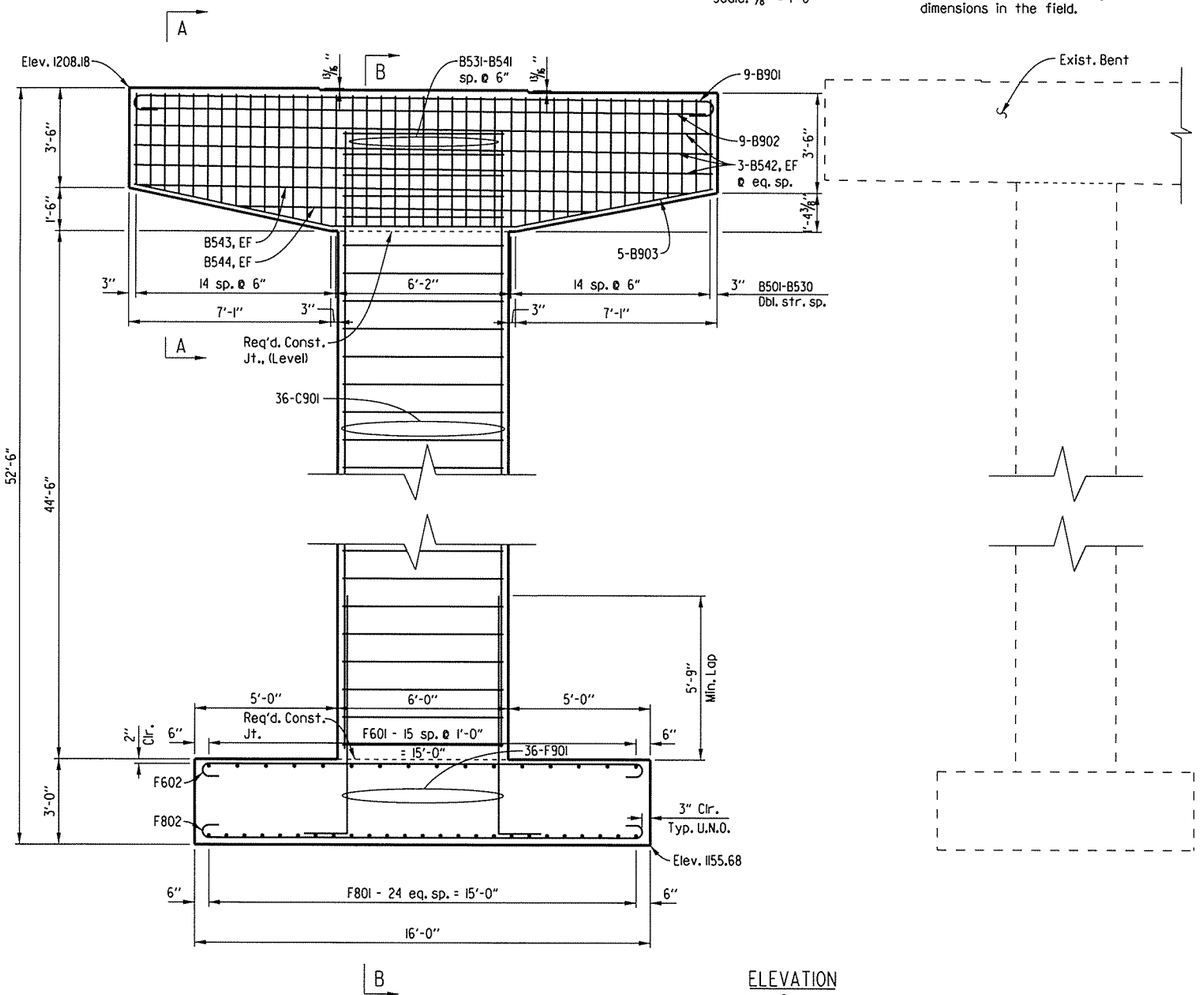
Crafton, Tull & Associates Inc.

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.		CAIIOI	90	234
				(1) B5946		BENT 3 DETAILS		56688

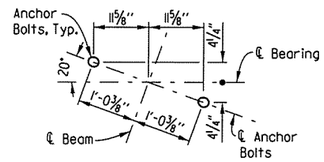


PLAN
Scale: 3/8" = 1'-0"

(1) Based on Existing plans. The Contractor shall verify dimensions in the field.



ELEVATION
Scale: 3/8" = 1'-0"

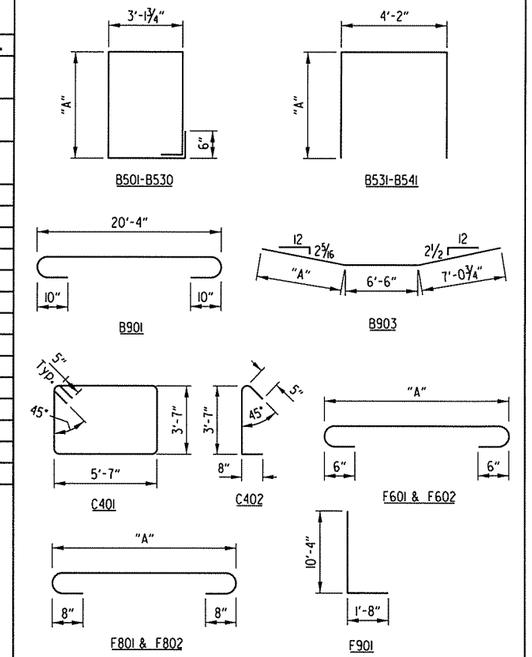


TYPICAL ANCHOR BOLT LAYOUT
Scale: 3/4" = 1'-0"

BAR LIST

B5946 BENT 3 — TABLE SHOWS BAR LIST FOR ONE BENT.				
MARK	NO. REQ'D.	LENGTH	"A"	Pin. Dia.
B501 TO B515	2 EA.	VAR. 13'-2" TO 16'-1"	VAR. 3'-2 1/4" TO 4'-7 1/2"	2 1/2"
B516 TO B530	2 EA.	VAR. 13'-1" TO 15'-11"	VAR. 3'-1 3/4" TO 4'-6 3/4"	2 1/2"
B531 TO B541	1 EA.	VAR. 13'-1" TO 13'-2"	VAR. 4'-6 1/2" TO 4'-7"	2 1/2"
B542	6	20'-4"		Str.
B543	2	20'-1"		Str.
B544	2	13'-3"		Str.
B901	9	22'-10"		9"
B902	9	19'-10"		Str.
B903	5	20'-8"	7'-0 1/2"	9"
C401	50	18'-10"		3"
C402	45	4'-8"		3"
C901	36	48'-0"		Str.
F601	16	13'-10"	12'-6"	4 1/2"
F602	14	16'-10"	15'-6"	4 1/2"
F801	25	14'-4"	12'-6"	6"
F802	22	17'-4"	15'-6"	6"
F901	36	11'-9"		9"

BENDING DIAGRAMS



Dimensions are out to out of bars.

GENERAL NOTES

Concrete shall be class 'S' with a minimum 28 day compressive strength of f'c = 3,500 p.s.i. Concrete shall be poured in the dry. All exposed corners shall be chamfered 3/4" unless otherwise noted.

All Reinforcing Steel shall be Grade 60 (fy = 60,000 psi) AASHTO M 31 or M 322, Type A with mill test reports.

Top reinforcing bars in cap shall be properly placed to avoid interference with anchor bolts or sheet metal sleeves.

For details of Elastomeric Bearings see Dwg. No. 56690.

For additional information see Layout and Dwg. No. 56689.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 2 OF 3
DETAILS OF BENT 3 (BRIDGE B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14
CHECKED BY: CAW DATE: 12-22-14
DESIGNED BY: KJC DATE: 10-28-14
FILENAME: bcall0lbl_b32.dgn
SCALE: SEE DETAILS

BRIDGE NO. B5946 DRAWING NO. 56688

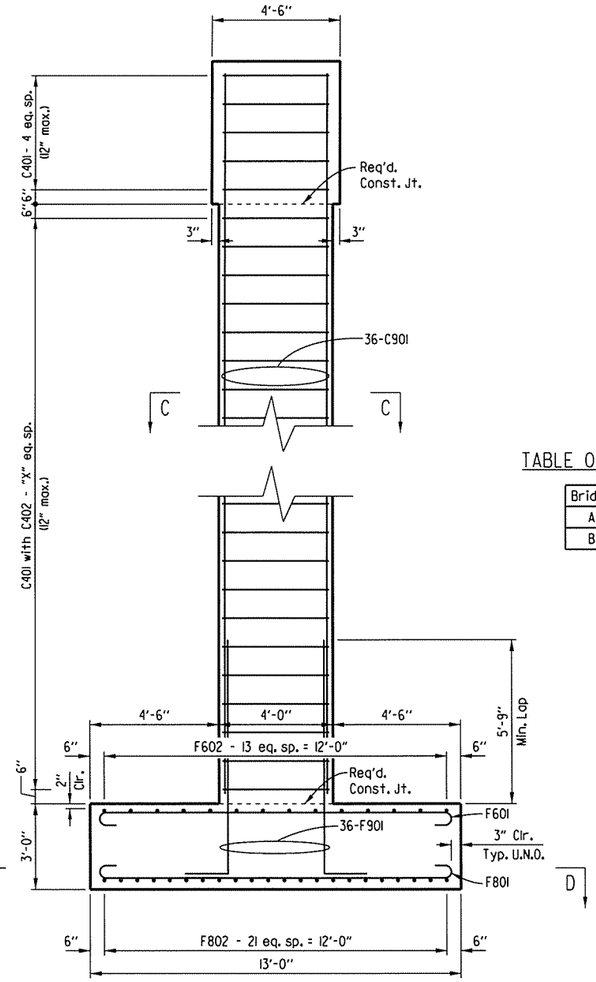
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

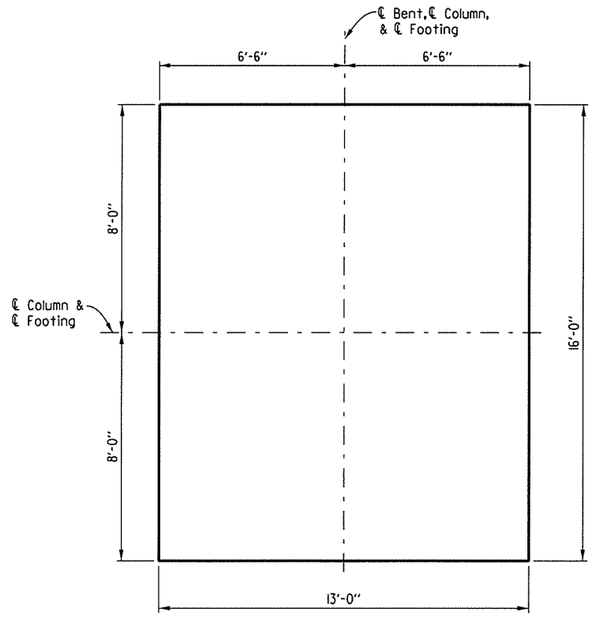
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	91	234
(1) A&B5946		BENT 3 DETAILS		56689



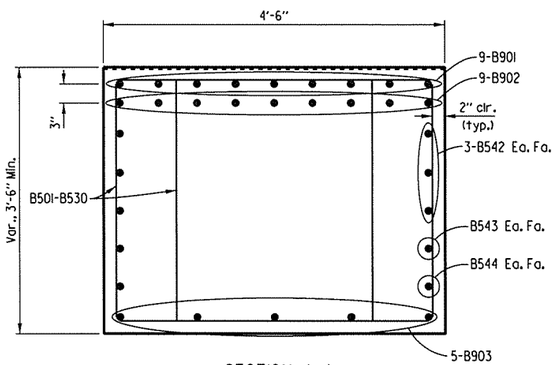
SECTION B-B
Scale: 3/8" = 1'-0"

TABLE OF VARIABLES

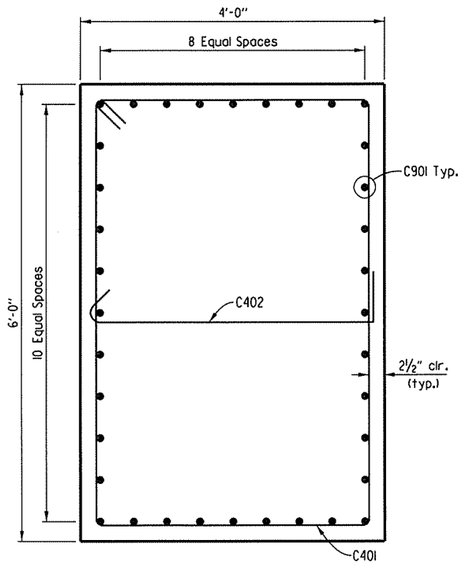
Bridge	"X"
A	43
B	44



SECTION D-D
Scale: 3/8" = 1'-0"



SECTION A-A
Scale: 1" = 1'-0"



SECTION C-C
Scale: 1" = 1'-0"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 3 OF 3
DETAILS OF BENT 3 (BRIDGES A & B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bca1101b1_b33.dgn
CHECKED BY: CAW DATE: 12-22-14 SCALE: SEE DETAILS
DESIGNED BY: KJC DATE: 10-28-14
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	92	234
				(1) A&B5946		BEARING DETAILS		56690

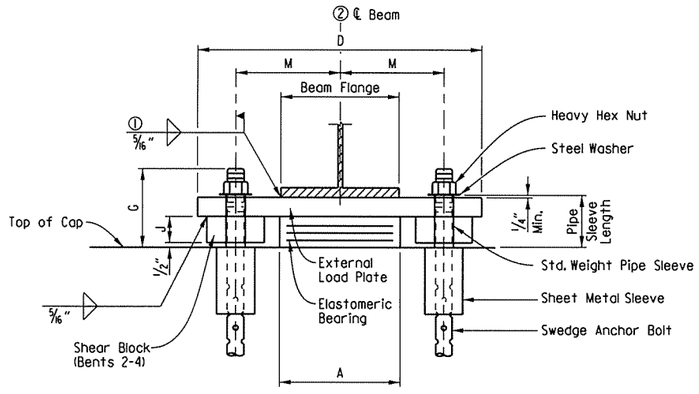
TABLE OF FABRICATOR VARIABLES

Brg. No.	Location Bent No.	Location Beam No.	Bearing Type	No. of Bearings Each Bent	• Maximum Design Load (Kips)	G	H	Elastomeric Pad A	B	N	T_i	T_e	No. & Thickness of Steel Laminae	T	External Load Plate C	D	E	F	J	K	M	Ta	Tb	Anchor Bolt: Anchor Bolt ø X L	Grade	Pipe Sleeve Size (ø X L)	Sheet Metal Sleeve Size (ø X L)	Steel Washer Size (O.D.)
A&B5946	1	1-3	Exp.	3	96	7 13/16"	5 5/16"	11 1/2"	9"	5	7/16"	1/4"	6 @ 12 Ga.	3 3/8"	10"	21"	4 5/16"	2"	---	1/2"	8"	2.15"	1.85"	1 1/4" X 22"	55	1 1/4" X 5 5/16"	3" X 7"	2 1/2"
	2	1-3	Exp.	3	204	8 5/16"	5 13/16"	15 1/2"	12"	6	7/16"	1/4"	7 @ 12 Ga.	3 7/8"	13"	33"	3 5/16"	2 1/4"	3 3/8"	1/2"	12 3/8"	2.20"	1.80"	1 1/2" X 26"	55	1 1/2" X 6 1/8"	3" X 7"	3"
	3	1-3	Fixed	3	208	8 5/16"	5 13/16"	15 1/2"	12"	6	7/16"	1/4"	7 @ 12 Ga.	3 7/8"	13"	33"	2 1/4"	2 1/4"	3 3/8"	1/2"	12 3/8"	2.20"	1.80"	1 1/2" X 26"	55	1 1/2" X 6 1/8"	3" X 7"	3"
	4	1-3	Exp.	3	204	8 5/16"	5 13/16"	15 1/2"	12"	6	7/16"	1/4"	7 @ 12 Ga.	3 7/8"	13"	33"	3 5/16"	2 1/4"	3 3/8"	1/2"	12 3/8"	2.20"	1.80"	1 1/2" X 26"	55	1 1/2" X 6 1/8"	3" X 7"	3"
	5	1-3	Exp.	3	96	7 13/16"	5 5/16"	11 1/2"	9"	5	7/16"	1/4"	6 @ 12 Ga.	3 3/8"	10"	21"	4 5/16"	2"	---	1/2"	8"	2.15"	1.85"	1 1/4" X 22"	55	1 1/4" X 5 5/16"	3" X 7"	2 1/2"

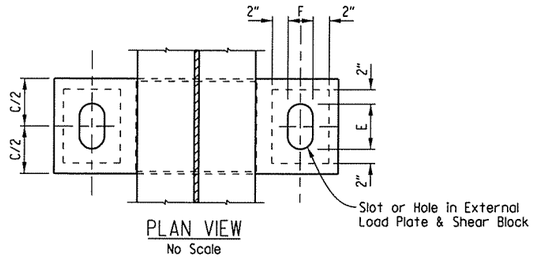
• Maximum Design Load = Service I Limit State

① Care shall be taken to ensure that the External Load plate is in full and complete contact with the Beam Flange before welding begins.

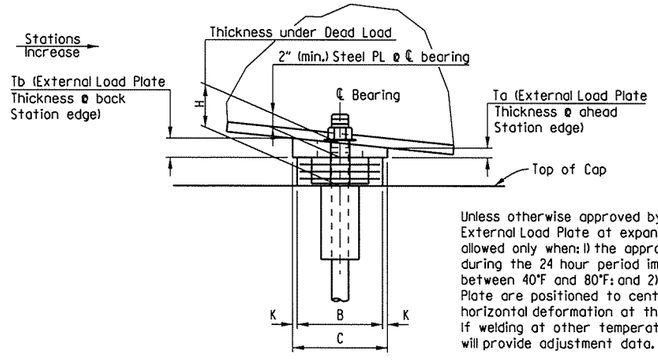
② Center line of Beam shall be aligned with center line of Elastometric pad.



FRONT VIEW
No Scale



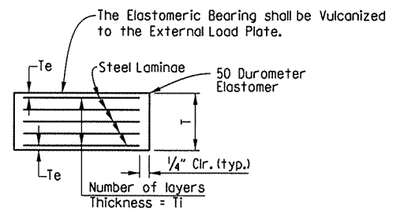
PLAN VIEW
No Scale



SIDE VIEW
No Scale

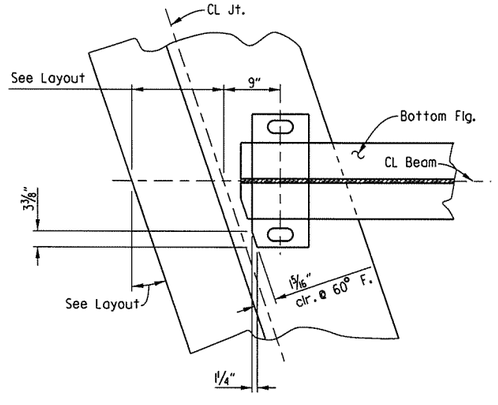
Unless otherwise approved by the Engineer, welding of the External Load Plate at expansion bearings to the Beam will be allowed only when: 1) the approximate average air temperature during the 24 hour period immediately preceding welding is between 40°F and 80°F; and 2) the slots in the External Load Plate are positioned to center on the Anchor Bolts; and 3) no horizontal deformation at the Elastomeric pad is evident. If welding at other temperature is required, the Engineer will provide adjustment data.

Note:
The direction of bevel of the external load plate may not be accurately depicted with respect to Ta and Tb values shown in TABLE OF FABRICATOR VARIABLES.

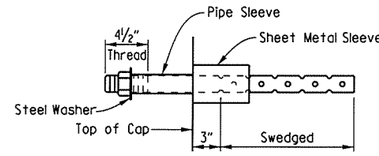


Te = thickness of Elastomer cover on top and bottom of pad
Ti = thickness of Elastomer between Steel Laminae
N = number of Elastomer layers of thickness Ti

ELASTOMERIC BEARING
No Scale



BEARING PLAN AT END BENT
No Scale



ANCHOR BOLT DETAIL
No Scale

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with styrofoam, urethane foam or approved equal prior to pouring of concrete. After pouring of the cap and prior to erection of structural steel, the dry pack shall be removed and holes for the Anchor Bolts shall be accurately drilled into the masonry. Bolts placed in drilled holes shall be accurately set and fixed using an AHTD QPL approved epoxy or non-shrink grout that completely fills the holes. Galvanized sheet metal sleeves will not be paid for directly, but will be considered subsidiary to the items "Structural Steel in Beam Spans, (M 270, Gr.50W)".

GENERAL NOTES

Elastomeric bearings shall conform to Section 808 of the Standard Specifications and shall be paid for at the unit price bid for "Elastomeric Bearings". Long-duration testing of random lot samples specified in Subsection 808.05 is required.

External load plates and shear blocks shall conform to AASHTO M 270, Grade 50W. Pipe sleeves shall be ASTM A53, Grade B, and shall be galvanized to conform to AASHTO M 232, Class C or ASTM B695, Class 50.

External load plates and shear blocks shall be completely fabricated (including bevel and bolt holes) and shall be cleaned before vulcanizing to the elastomeric bearing. Surfaces in contact with the elastomeric bearing shall be cleaned in accordance with Subsection 808.03. Other surfaces shall be blast cleaned in accordance with Subsection 807.84(e).

Anchor Bolts, Washers and Nuts shall conform to Subsection 807.07 of the Standard Specifications. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Indentations shall be circular with rounded bottoms and staggered as shown in the details.

Bearings shall be seated in accordance with Subsection 808.08.

Pipe Sleeves, Anchor Bolts, Washers, and Nuts shall be paid for at the unit price bid for "Structural Steel in Beam Spans (M270, Gr. 50W)". The cost of all other items in the bearing assembly shall be subsidiary to the price bid for "Elastomeric Bearings".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

DETAILS OF ELASTOMERIC BEARINGS

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bcal0101_el.dgn
CHECKED BY: CAW DATE: 12-22-14 SCALE: NOT TO SCALE
DESIGNED BY: KJC DATE: 07-21-14

BRIDGE NO. A&B5946 DRAWING NO. 56690

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bcal0101_el.dgn
PLOTTED: 4/17/2015 11:29 SCALE: 1:1

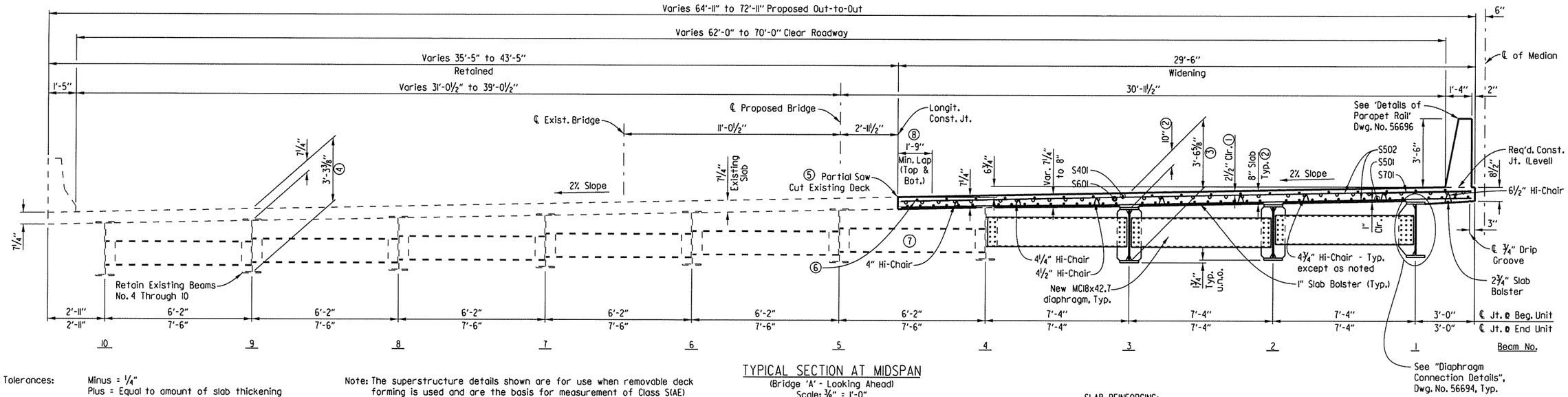
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Note: Class 2 Protective Surface Treatment shall be applied to the roadway surface, including the existing deck surface to be retained, and roadway face and top of parapet rail of the new construction.

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	93	234
(1) A5946		SPAN DETAILS		56691



TYPICAL SECTION AT MIDSPAN
(Bridge 'A' - Looking Ahead)
Scale: ⅜" = 1'-0"

① Tolerances: Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance
See "Adjustment for Slab Thickness Tolerance when Removable Deck Forming is Used."

② See "Adjustment for Slab Thickness Tolerance when Removable Deck Forming is Used."

③ Measured at ℄ Bearing and ℄ New Beams, Typ.

④ Measured at ℄ Bearing and ℄ Exist. Beams, Typ.

⑤ Care shall be exercised during the removal of the existing deck to ensure that the beams, diaphragms, bolted connections and reinforcement are not damaged. Damaged items that are not salvageable as determined by the Engineer, shall be replaced by the contractor at no additional payment. See Section 821.

⑥ Clean and Retain Existing Transverse Reinforcing. Remove and replace existing longitudinal reinforcement.

⑦ Bolts in the existing diaphragms and end struts shall be loosened to the satisfaction of Engineer at Beam Nos. 4 & 5 during deck removal. Any existing bolt that is loosened or removed shall be replaced with a new high-strength bolt. The diaphragm and end strut bolts located in the bay between Beam Nos. 4 & 5 shall be tightened after the completion of the deck pour.

⑧ New Transverse Reinforcing steel shall not be tied to existing Tranverse Reinforcing steel.

Note: The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See AHTD Std. Dwg. No. 55005 for allowable modifications and for tolerances when permanent steel bridge deck forms are used.

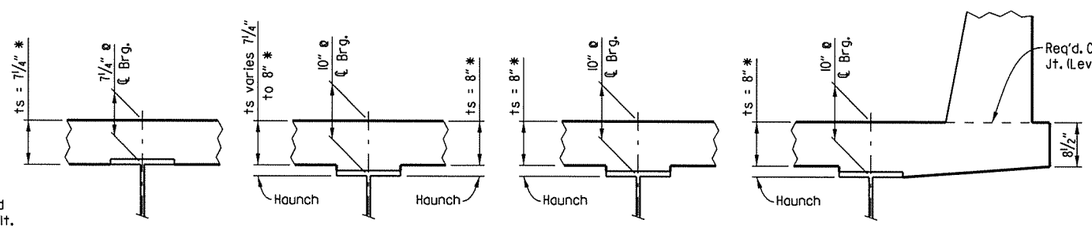
SLAB REINFORCING:

Transverse:
S502 @ 6" o.c. in top and bottom
S701 @ 6" o.c. in top

Longitudinal:
S401 as shown in top (18" max)
S501 as shown in bottom (8" max)
S601 as shown over int. supports (10" max)

#4 bars lapped @ 1'-5"
#5 bars lapped @ 1'-9" (u.n.o.)
#6 bars lapped @ 2'-1" (u.n.o.)

Note: Space Hi-Chairs as shown Trans. & 4'-0" o.c. long. Space slab bolsters 4'-0" max. sp.



INTERIOR BEAM
Beam No. 4-10

INTERIOR BEAM
Beam No. 3

INTERIOR BEAM
Beam No. 2

EXTERIOR BEAM
Beam No. 1

* 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 on superstructure detail drawings.

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 1½". 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 WHEN REMOVABLE DECK FORMING IS USED
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/10/15

SHEET 1 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC	DATE: 03-28-14	FILENAME: bcall0lal_sl.dgn	
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DESIGNED BY: KJC	DATE: 09-19-13		

BRIDGE NO. A5946 DRAWING NO. 56691

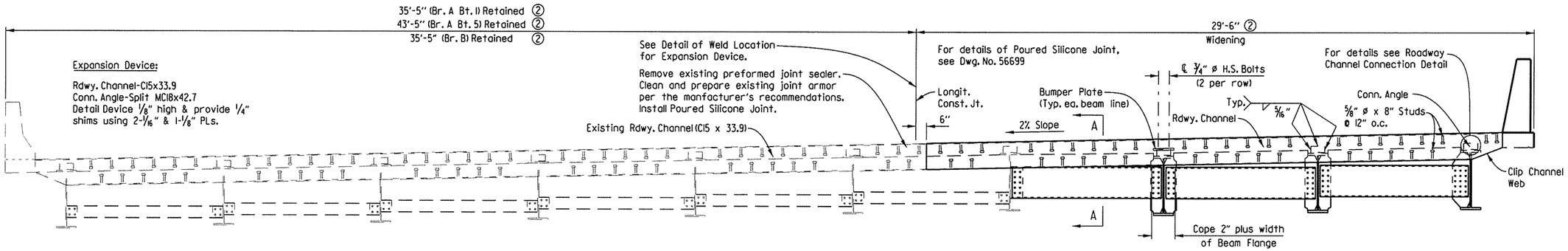
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Crafton, Tull & Associates Inc.

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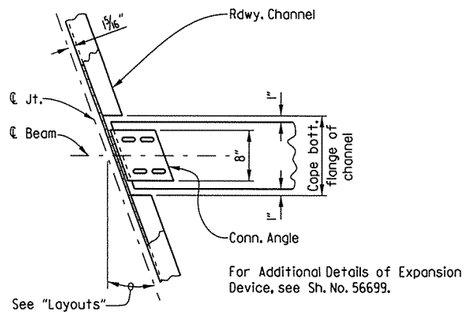
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	94	234
(1) A&B5946		SPAN DETAILS		56692

② Measured Perpendicular to ℄ Median.



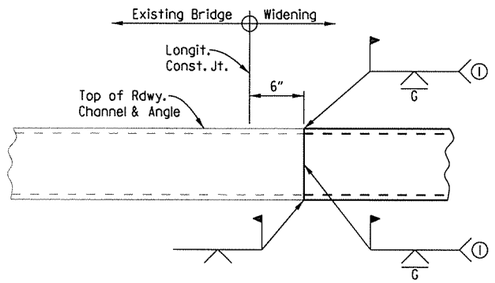
TYPICAL SECTION THROUGH JOINT

(Looking Ahead @ Bridge A, Bent 1; Bridge B, Bent 1 opposite hand)
(Looking Back @ Bridge B, Bent 5; Bridge A, Bent 5 opposite hand)
Scale: 3/8" = 1'-0"



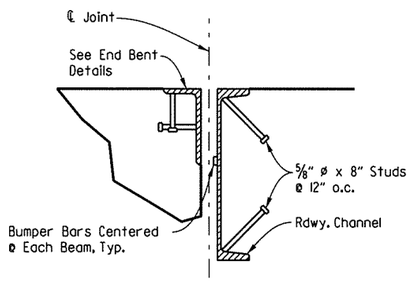
ROADWAY CHANNEL CONNECTION DETAIL

No Scale



DETAIL OF WELD LOCATION FOR EXPANSION DEVICE

No Scale



SECTION A-A

No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/10/15

SHEET 2 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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DESIGNED BY: KJC DATE: 09-19-13

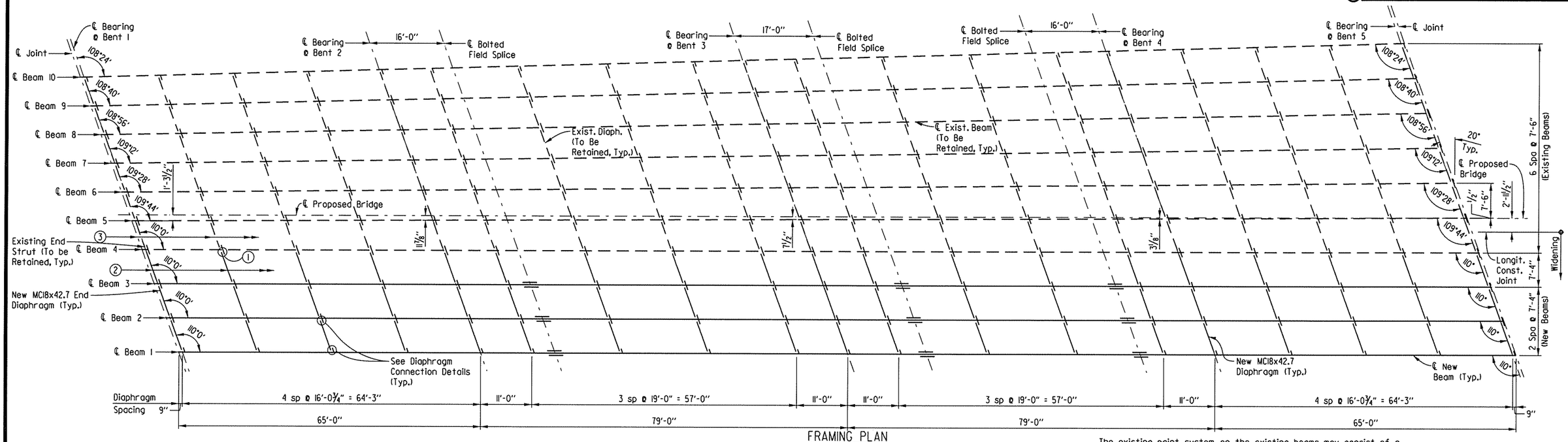
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

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6	ARK.			
JOB NO.		C011O1	95	234
(1) A5946		SPAN DETAILS		56693



FRAMING PLAN

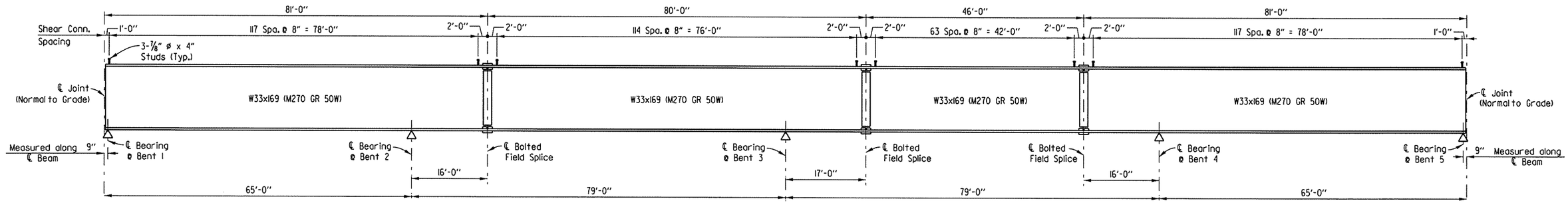
Scale: 1/12 " = 1'-0"

① Install new Connection PL's on existing Beam 4 after existing deck removal and prior to pouring new deck slab. (Typ.) See Diaphragm Connection Details.

② Install diaphragms prior to deck pour. Tighten Bolts after all deck pours are complete. (This bay only)

③ Refer to Typical Section at Midspan on Dwg. No. 56691.

The existing paint system on the existing beams may consist of a lead based paint system. The Contractor shall take all necessary steps according to state and federal regulations to protect the workers, public, and the environment when modifying the existing beams.



BEAM ELEVATION - PROPOSED BEAMS NO. 1-3

No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 3 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

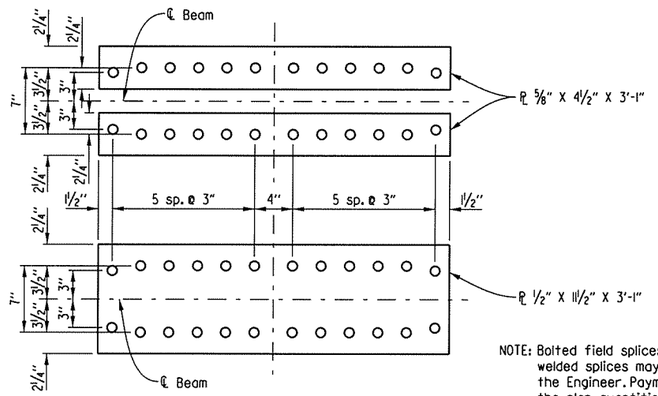
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DESIGNED BY: KJC DATE: 07-11-14

BRIDGE NO. A5946 DRAWING NO. 56693

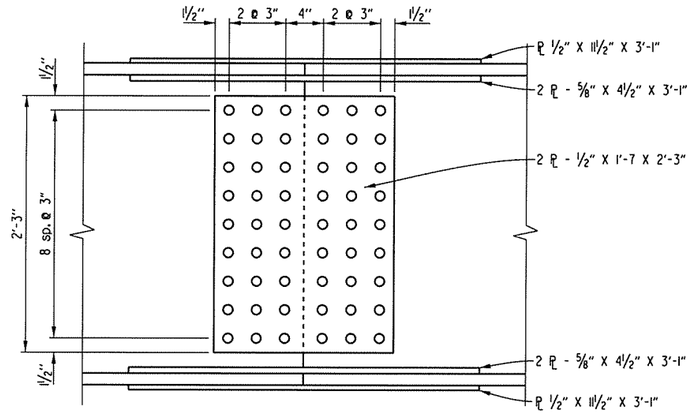
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DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	96	234
				(1) A&B5946		SPAN DETAILS		56694



FLANGE SPLICE



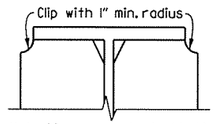
WEB SPLICE

NOTE: Bolted field splices shown may be eliminated or shop welded splices may be substituted with approval of the Engineer. Payment will be made on the basis of the plan quantities.

All field splice bolts shall be ⅞" ø Hi-str. bolts
All holes for splice bolts shall be 15/16 " ø
All field splice plates shall be AASHTO M270 Gr. 50W steel.

FIELD SPLICE DETAILS

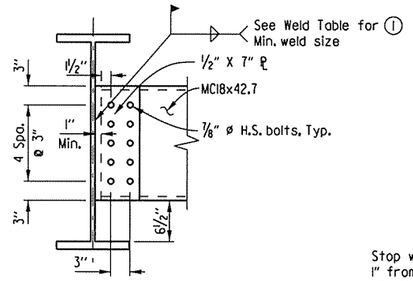
Scale: 1½" = 1'-0"



Note: if permanent steel bridge deck forms are used, the fabricator shall clip the plate as necessary to accommodate the deck form support.

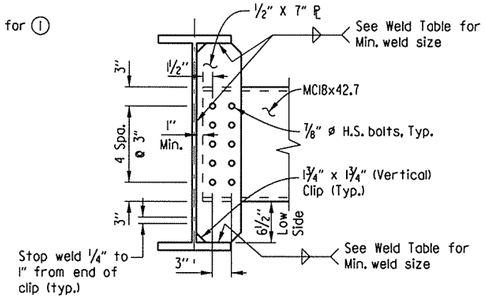
PLATE CLIP DETAIL

No Scale



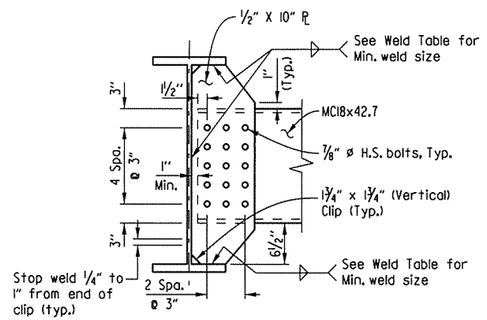
TYPICAL INTERIOR CONNECTION PLATE

Beam 4



TYPICAL INTERIOR CONNECTION PLATE

Beams 2 & 3



TYPICAL EXTERIOR CONNECTION PLATE

Beam 1

DIAPHRAGM CONNECTION DETAILS

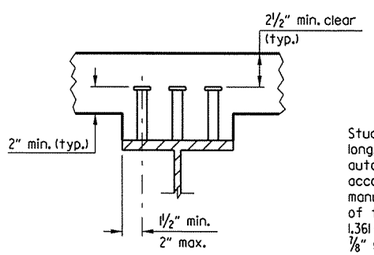
Scale: 1" = 1'-0"

(1) Field weld to existing beam No. 4 after deck removal and prior to deck pour.

TABLE FOR WELDS

Material Thickness of Thicker Part Joined (inches)	Minimum Size of Fillet Weld (inches)	Single Pass Weld Must Be Used
To ¾" Inclusive	¼"	
Over ¾"	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.



SHEAR CONNECTOR DETAIL

No Scale

Stud Shear Connectors shown shall be ⅞" 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. ¾" ø studs may be used in place of the ⅞" ø studs shown, at the ratio of 1.361 - ¾" ø studs in place of one ⅞" ø stud. ⅞" ø studs will be used as basis for measurement of structural steel in Shear Connectors. Maximum stud spacing = 24".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/15/17

SHEET 4 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGES A & B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY:	BWC	DATE:	11-11-13	FILENAME:	bcall01a1_s4.dgn
CHECKED BY:	CAW	DATE:	12-22-14	SCALE:	SEE DETAILS
DESIGNED BY:	KJC	DATE:	07-11-14		

BRIDGE NO. A&B5946 DRAWING NO. 56694

USER: bc5100
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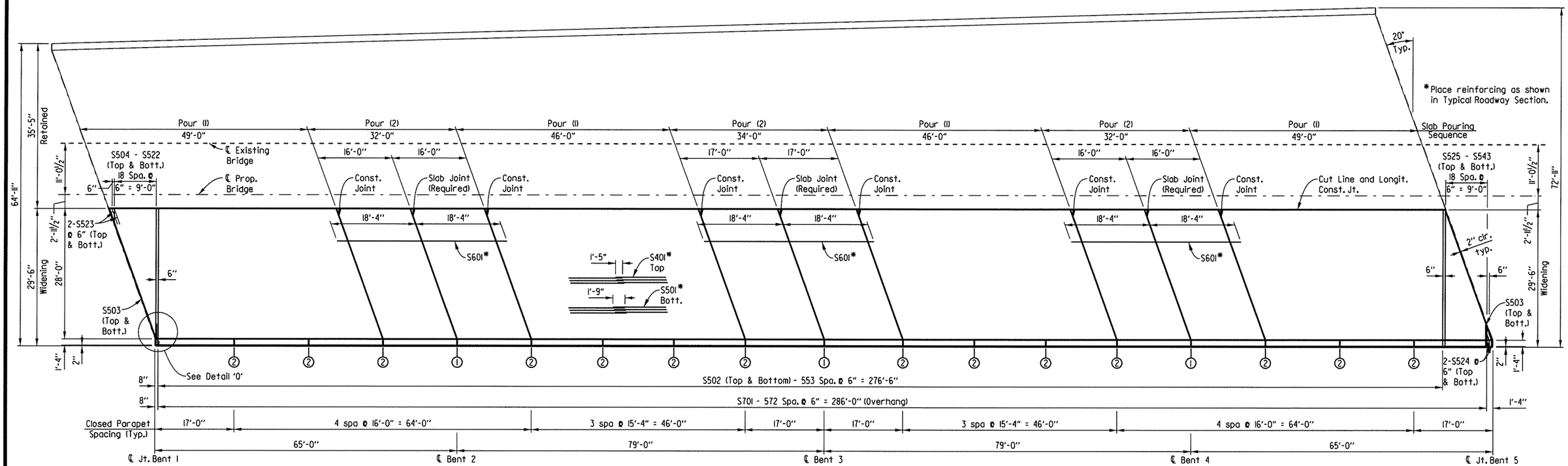
① ℄ Full-Depth Parapet Joint (1/4" to 1" max.). Stop 4" from top of slab. See Dwg. No. 56696.

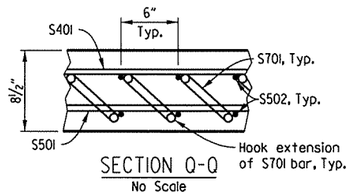
② ℄ Partial-Depth Parapet Joint (1/4" to 1" max.). Stop 1'-6" from top of slab. See Dwg. No. 56696.

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	97	234
① A5946		SPAN DETAILS		56695

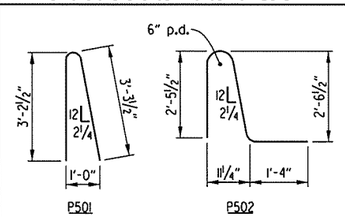


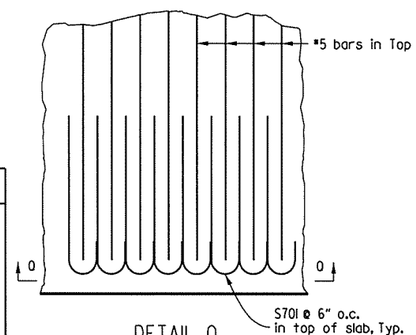


SECTION Q-Q
No Scale

BAR LIST

Mark	Number Required	Length	Pin Diameter	Bending Diagrams (Dimensions are Out to Out of Bars)
S401	152	37'-3"	Str.	
S501	240	49'-5"	Str.	
S502	1108	29'-2"	Str.	
S503	4	29'-5"	Str.	
S504-S522	2 EACH	VAR. 27'-6" TO 2'-9"	Str.	
S523	4	3'-6"	Str.	
S524	4	3'-1"	3 3/4"	
S525-S543	2 EACH	VAR. 28'-11" TO 4'-3"	Str.	
S601	96	36'-8"	Str.	
S701	573	5'-6"	5 1/4"	
P401	16	37'-3"	Str.	
P402	30	15'-0"	Str.	
P403	40	15'-8"	Str.	
P404	20	16'-8"	Str.	
P405	8	33'-1"	Str.	
P406	12	27'-2"	Str.	
P501	572	6'-8"	3 3/4"	
P502	572	6'-9"	3 3/4"	





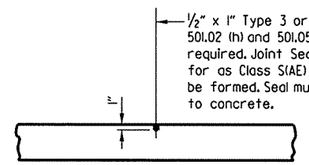
DETAIL Q
No Scale

Notes:

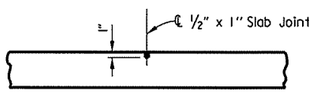
Required slab joints and Pouring Sequence Joints near intermediate bents shall align with joints in parapet rail at the gutterline.

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 in the respective stage 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.

REINFORCING PLAN
No Scale

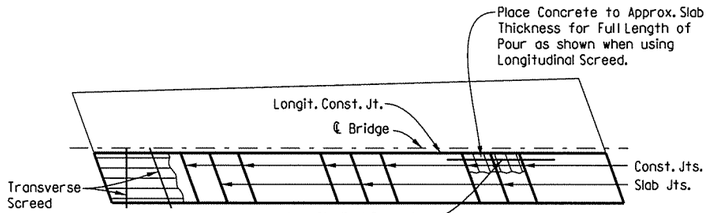


LONGITUDINAL CONSTRUCTION JOINT
No Scale



SLAB JOINT DETAIL
No Scale

Note:
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 joints without damage to the slab. Slab joints shall align with parapet joints. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations.



Note: At the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to ℄ Bridge. Place Concrete to Approx. Slab Thickness Parallel to Skew as shown.

CONCRETE PLACEMENT PROCEDURE
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
5/22/15

SHEET 5 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE A)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: BWC	DATE: 12-16-14	FILENAME: bcal0lal_s5.dgn	
CHECKED BY: CAW	DATE: 12-22-14	SCALE: NO SCALE	
DESIGNED BY: KJC	DATE: 07-17-14		

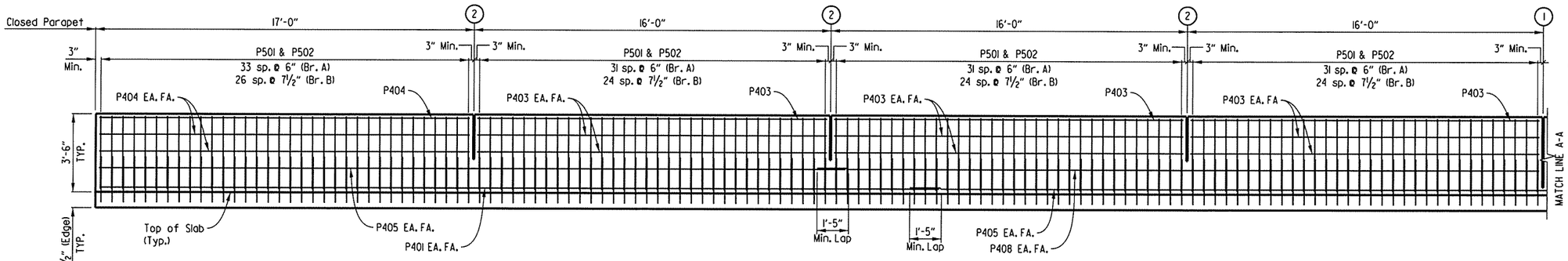
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Crafton, Tull & Associates Inc.

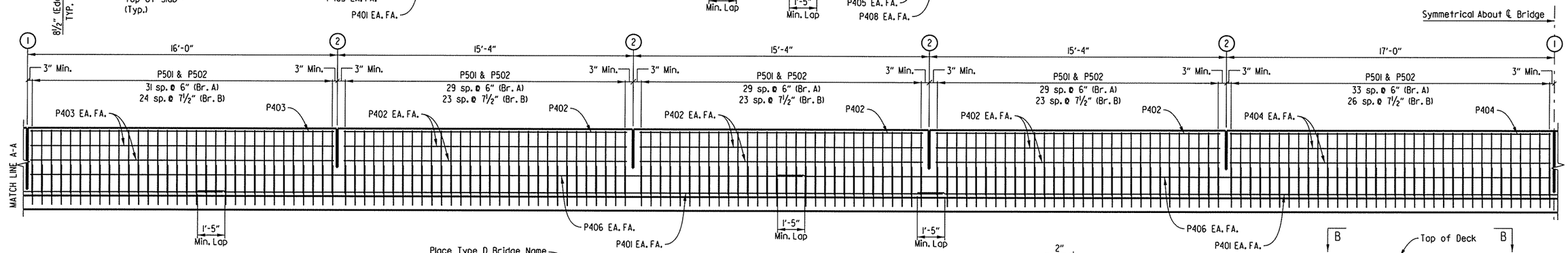
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				6	ARK.			
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				(1) A&B5946		SPAN DETAILS		56696

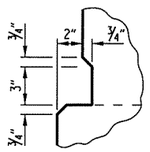


① ℄ Full-Depth Parapet Joint (¼" to 1" max.). Stop 4" from top of slab. See Dwg. No. 56695.

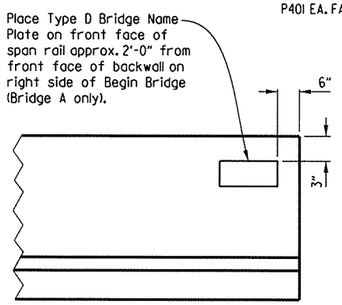
② ℄ Partial-Depth Parapet Joint (¼" to 1" max.). Stop 1'-6" from top of slab. See Dwg. No. 56695.

Symmetrical About ℄ Bridge



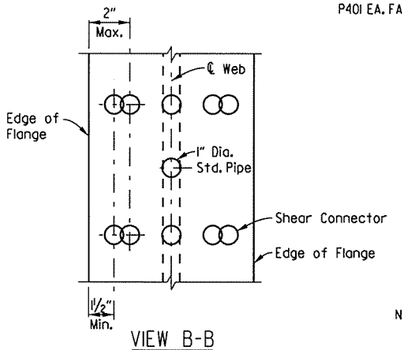


DETAIL X
Scale: 1½" = 1'-0"

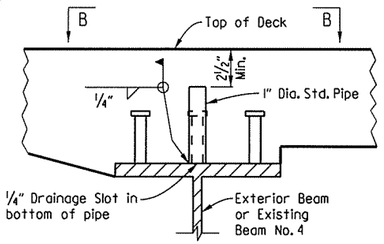


NAME PLATE DETAIL
No Scale

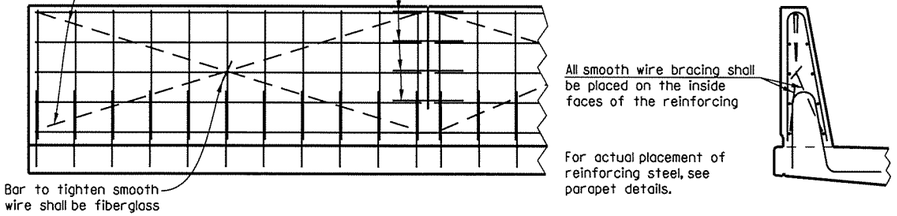
DETAILS OF CLOSED PARAPET
(Bridge A Shown, Bridge B Similiar)
Scale: ⅜" = 1'-0"



VIEW B-B
No Scale



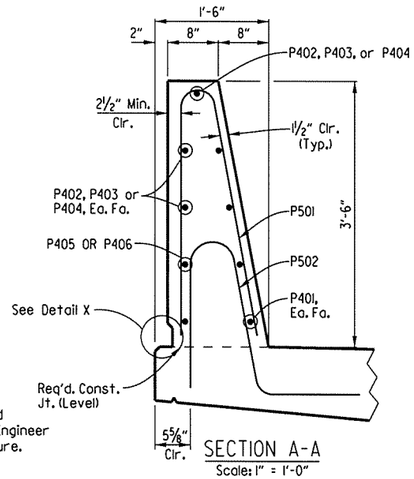
TRANSVERSE SCREED RAIL SUPPORT DETAIL
No Scale



All panels shall be braced as required to prevent racking. All open joints shall be sawed as soon as practical to a minimum width of ¼". 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.

DETAILS OF OPTIONAL SLIP FORMING OF CONCRETE PARAPET RAIL
No Scale



SECTION A-A
Scale: 1" = 1'-0"

Notes: The transverse screed rail supports shall be centered over the beam web and centered longitudinally between adjacent rows of shear connectors.

The pipe shall not interfere with proper vertical position of the deck reinforcing steel.

The pipe shall be free of dirt, grease, rust, or other foreign substance before the deck is poured.

Care shall be exercised so as air voids do not exist in the pipe after placement of the deck concrete.

All welding shall be performed by a certified welder and in accordance with Subsections 802.13 and 807.26.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/14/15

SHEET 6 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGES A & B)

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	BWC	DATE:	12-16-14	FILENAME:	bca1101a1_s6.dgn
CHECKED BY:	CAW	DATE:	12-22-14	SCALE:	SEE DETAILS
DESIGNED BY:	KJC	DATE:	09-19-13		

BRIDGE NO. A&B5946 DRAWING NO. 56696

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bca1101a1_s6.dgn
PLOTTED: 5/12/2015 11:10
SCALE: 2:1

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Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RO. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
					6	ARK.			
					JOB NO.		CAIIOI	99	234
					(1) A&B5946		SPAN DETAILS		56697

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 LRFD Bridge Design Specifications (2012 Edition) with current interim specifications.

LIVE LOADING: HL-93

MATERIALS AND STRENGTHS:

Class S(AE) Concrete	f'c = 4,000 psi
Reinforcing Steel (Grade 60 AASHTO M 31 or M 322 Type A)	fy = 60,000 psi
Structural Steel (AASHTO M 270, Gr. 50W)	Fy = 50,000 psi
Structural Steel (AASHTO M 270, Gr. 36)	Fy = 36,000 psi

CONCRETE:
Concrete shall be poured in the dry and all exposed corners to be chamfered ¾".
All concrete shall be Class S(AE) with a minimum 28 day compressive strength f'c = 4000 psi.

The Superstructure Details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) concrete. See Standard Drawing No. 55005 for allowable modifications and for tolerances when Permanent Steel Deck Forms are used.

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 Contractor must obtain approval from the Engineer for any deviations from the pouring sequence shown.

The Concrete Deck shall be given a tine finish in accordance with Subsection 802.19 for Class 5 Tined Bridge Roadway 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.

Slab joints shall align with slab joints from existing construction. Required Slab Joints shall align with the parapet open joints.

REINFORCING STEEL:
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. The Reinforcing Steel is to be accurately located in the forms and firmly held in place by steel wire supports, sufficient in number and size 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 "Reinforing Steel-Bridge (Grade 60)".

NEW STRUCTURAL STEEL:
All new Structural Steel shall be AASHTO M270, Grade 50W unless otherwise noted and shall be paid for as "Structural Steel in Beam Spans (M 270, Gr. 50W)". All exposed surfaces shall be cleaned in accordance with Subsection 807.84 unless otherwise noted. Structural Steel completely embedded in concrete may be AASHTO M 270, Grade 36.

Drawings show general features of design only. Shop drawings shall be made in accordance with the Specifications, 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.

Bolted field splices shown may be eliminated or shop welded splices may be substituted with approval of the Engineer. Payment will be made on the basis of plan quantities.

Beams and 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 as subsidiary to the item "Structural Steel in Beam Spans (M 270, Gr. 50W)"

All beams shall be blocked in their true position in the shop in groups of a minimum of three sections. Beams shall be blocked with webs horizontal and 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 positions and this information shall become part of the permanent records. 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°F. A tolerance of ¼" (plus or minus) allowed for camber.

Flange Field Splice Plates 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.

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 to the structural steel that do not exceed the limitations of Subsection 802.13 will not require approval prior to construction. Field welding of new diaphragm connection plates to the existing beams shall be as shown in the plans. All welding shall conform to Subsection 807.26.

Unless otherwise noted, Field Connections and splices shall be bolted with High-Strength Bolts and shall be ⅞" ø with 15/16 " open holes at a spacing of 3" o.c. Bolts shall be placed with heads on the outside face of the exterior Beam Webs and on the bottom of the Beam Flanges. Any existing bolt that is loosened or removed shall be replaced by a new high-strength bolts, nuts and washers.

Diaphragms shall be installed as Beams are erected. All bolts in Diaphragms and Field Splices shall be installed and tightened in accordance with Subsection 807.71 prior to pouring the Concrete Deck unless noted otherwise.

All stud connectors shall be granular flux filled, solid fluxed, or equal and shall be automatically end welded in accordance with recommendations of the manufacturer.

PAINTING STRUCTURAL STEEL:
The existing 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 area of the existing beams where new diaphragm connection plates will be field welded shall be cleaned and painted in accordance with Section 638.

REMOVAL OF EXISTING DECK:
Care shall be exercised during the removal of the existing deck to ensure that the existing paint system and the existing structural steel, including shear connectors, are not damaged. Damaged items that are not salvageable, as determined by the Engineer, shall be replaced at the Contractor's expense.

The deck removal shall progress in a manner that will ensure the stability of the existing structure. The concrete deck in the end spans shall not be removed before the deck in the interior spans has been removed.

The existing concrete deck shall be completely removed to the top flange of the existing beams. 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. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".

METHOD OF WORK:
The Contractor shall remove portions of the existing deck as shown in "Details of Stage Construction" Dwg. Nos. 56676-56678. During deck removal, the Contractor shall loosen the diaphragm and end strut bolts adjacent to Beam No. 4 & 5, as shown in the plans, to facilitate construction. This work will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".

The Contractor may submit an alternate Method of Work. The plan shall be submitted to the Engineer for information and record keeping purposed at least three weeks prior to any work being performed. The submittal shall be prepared and/or approved by an Arkansas Professional Engineer and shall include sufficient details and information to the Engineer's satisfaction. The Contractor shall be responsible for the results obtained by the use the alternate Method of Work. All work, materials, and labor required for the Contractor to develop and execute the plan will not be paid directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 7 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGES A & B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bcall0lal_s7.dgn
CHECKED BY: CAW DATE: 12-23-14 SCALE: NOT TO SCALE
DESIGNED BY: KJC DATE: 07-17-14
BRIDGE NO. A&B5946 DRAWING NO. 56697

USER: bc5100
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\bridge\bcall0lal_s7.dgn
PLOTTED: 4/17/2015 11:23 SCALE: 2.333333M

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	100	234

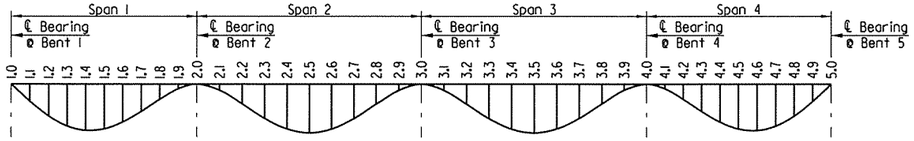
(1) A&B5946 SPAN DETAILS 56698

TABLE OF DEAD LOAD DEFLECTIONS - INCHES

	Point of Deflection	BR. NO. A5946 Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet		Slab Only	BR. NO. B5946 Structural Steel		Structural Steel + Slab		Structural Steel + Slab + Parapet		Slab Only
		Beam 1	Beam 2 & 3	Beam 1	Beam 2 & 3	Beam 1	Beam 2 & 3	Beam 4	Beam 1	Beam 2 & 3	Beam 1	Beam 2 & 3	Beam 1	Beam 2 & 3	Beam 4
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.045	0.045	0.201	0.216	0.262	0.242	0.313	0.045	0.045	0.205	0.216	0.245	0.242	0.316
	0.2	0.083	0.083	0.370	0.399	0.484	0.447	0.577	0.083	0.083	0.377	0.399	0.451	0.447	0.582
	0.3	0.110	0.110	0.487	0.525	0.636	0.588	0.757	0.110	0.110	0.496	0.525	0.593	0.588	0.765
	0.4	0.121	0.121	0.537	0.578	0.703	0.649	0.835	0.121	0.121	0.547	0.578	0.655	0.649	0.845
	0.5	0.117	0.117	0.519	0.559	0.681	0.627	0.807	0.117	0.117	0.529	0.559	0.634	0.627	0.818
	0.6	0.099	0.099	0.439	0.473	0.578	0.532	0.683	0.099	0.099	0.448	0.473	0.538	0.532	0.694
	0.7	0.071	0.071	0.316	0.340	0.417	0.383	0.491	0.071	0.071	0.322	0.340	0.388	0.383	0.502
	0.8	0.039	0.039	0.175	0.188	0.232	0.213	0.272	0.039	0.039	0.178	0.188	0.215	0.213	0.281
	0.9	0.012	0.012	0.054	0.058	0.071	0.066	0.084	0.012	0.012	0.055	0.058	0.066	0.066	0.089
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.016	0.016	0.070	0.075	0.099	0.087	0.108	0.016	0.016	0.071	0.075	0.090	0.088	0.100
	0.2	0.051	0.051	0.225	0.242	0.311	0.279	0.349	0.051	0.051	0.229	0.242	0.286	0.279	0.332
	0.3	0.088	0.088	0.390	0.420	0.533	0.481	0.606	0.088	0.088	0.397	0.420	0.491	0.481	0.579
	0.4	0.115	0.115	0.511	0.550	0.694	0.628	0.794	0.115	0.115	0.520	0.550	0.640	0.628	0.759
	0.5	0.125	0.125	0.555	0.598	0.752	0.682	0.864	0.125	0.125	0.566	0.598	0.695	0.682	0.823
	0.6	0.115	0.115	0.512	0.552	0.695	0.629	0.797	0.115	0.115	0.522	0.552	0.641	0.630	0.756
	0.7	0.088	0.088	0.392	0.423	0.534	0.483	0.611	0.088	0.088	0.400	0.423	0.493	0.484	0.574
	0.8	0.051	0.051	0.228	0.245	0.313	0.282	0.355	0.051	0.051	0.232	0.245	0.288	0.282	0.330
	0.9	0.016	0.016	0.072	0.078	0.100	0.089	0.112	0.016	0.016	0.073	0.078	0.092	0.090	0.103
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.016	0.016	0.072	0.078	0.100	0.089	0.112	0.016	0.016	0.073	0.078	0.092	0.090	0.103
	0.2	0.051	0.051	0.228	0.245	0.313	0.282	0.355	0.051	0.051	0.232	0.245	0.288	0.282	0.330
	0.3	0.088	0.088	0.392	0.423	0.534	0.483	0.611	0.088	0.088	0.400	0.423	0.493	0.484	0.574
	0.4	0.115	0.115	0.512	0.552	0.695	0.629	0.797	0.115	0.115	0.522	0.552	0.641	0.630	0.756
	0.5	0.125	0.125	0.555	0.598	0.752	0.682	0.864	0.125	0.125	0.566	0.598	0.695	0.682	0.823
	0.6	0.115	0.115	0.511	0.550	0.694	0.628	0.794	0.115	0.115	0.520	0.550	0.640	0.628	0.759
	0.7	0.088	0.088	0.390	0.420	0.533	0.481	0.606	0.088	0.088	0.397	0.420	0.491	0.481	0.579
	0.8	0.051	0.051	0.225	0.242	0.311	0.279	0.349	0.051	0.051	0.229	0.242	0.286	0.279	0.332
	0.9	0.016	0.016	0.070	0.075	0.099	0.087	0.108	0.016	0.016	0.071	0.075	0.090	0.088	0.100
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0.1	0.012	0.012	0.054	0.058	0.071	0.066	0.084	0.012	0.012	0.055	0.058	0.066	0.066	0.089
	0.2	0.039	0.039	0.175	0.188	0.232	0.213	0.272	0.039	0.039	0.178	0.188	0.215	0.213	0.281
	0.3	0.071	0.071	0.316	0.340	0.417	0.383	0.491	0.071	0.071	0.322	0.340	0.388	0.383	0.502
	0.4	0.099	0.099	0.439	0.473	0.578	0.532	0.683	0.099	0.099	0.448	0.473	0.538	0.532	0.694
	0.5	0.117	0.117	0.519	0.559	0.681	0.627	0.807	0.117	0.117	0.529	0.559	0.634	0.627	0.818
	0.6	0.121	0.121	0.537	0.578	0.703	0.649	0.835	0.121	0.121	0.547	0.578	0.655	0.649	0.845
	0.7	0.110	0.110	0.487	0.525	0.636	0.588	0.757	0.110	0.110	0.496	0.525	0.593	0.588	0.765
	0.8	0.083	0.083	0.370	0.399	0.484	0.447	0.577	0.083	0.083	0.377	0.399	0.451	0.447	0.582
	0.9	0.045	0.045	0.201	0.216	0.262	0.242	0.313	0.045	0.045	0.205	0.216	0.245	0.242	0.316
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note:
Camber for Dead Load Deflection +/- 1/4" tolerance.
Deflections shown are off a chord from ℄ Bearing to ℄ Bearing
Vertical curve corrections not included.

Dead Load Deflections based on use of removable forms.



DEAD LOAD DEFLECTION DIAGRAM
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

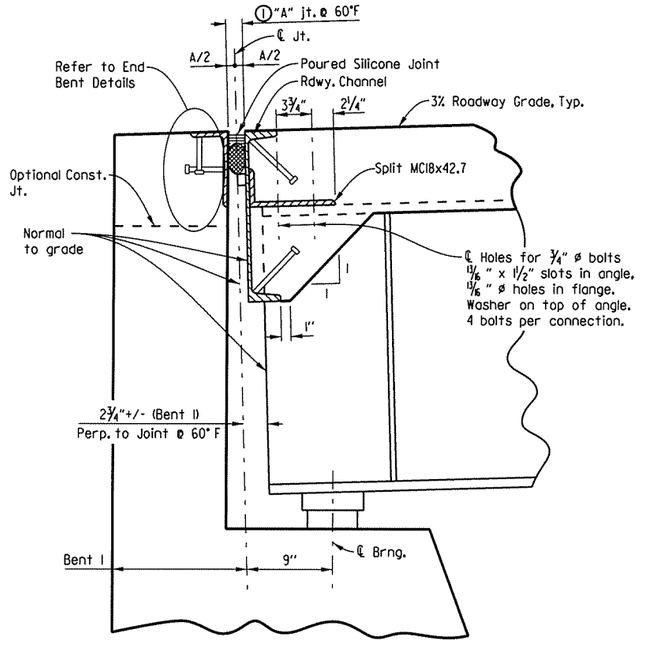
SHEET 8 OF 12
DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGES A & B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BWC DATE: 12-16-14 FILENAME: bcal101a1_s8.dgn
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DESIGNED BY: KJC DATE: 07-17-14
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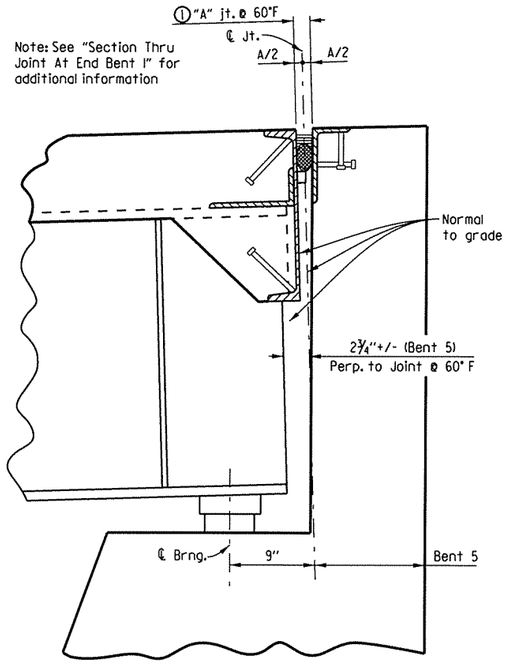
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Crafton, Tull & Associates Inc.

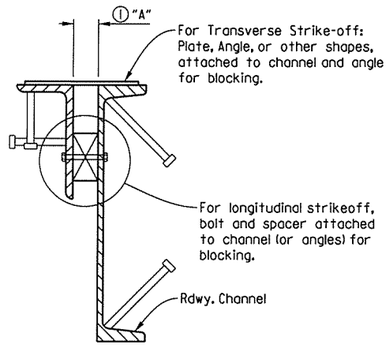
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				6	ARK.			
				JOB NO.		CAII0I	101	234
				(1) A&B5946		SPAN DETAILS		56699



SECTION THRU JOINT AT END BENT 1
(Bridge B shown, Bridge A similar)
Scale: 1½" = 1'-0"

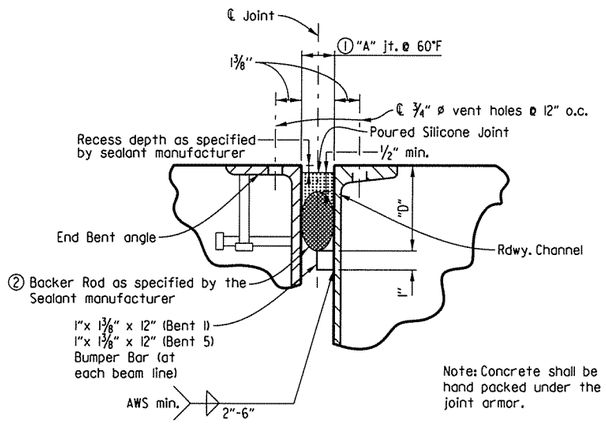


SECTION THRU JOINT AT END BENT 5
(Bridge B shown, Bridge A similar)
Scale: 1½" = 1'-0"



Note: Each expansion joint device shall be blocked in the Shop by the Fabricator 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



Note: Concrete shall be hand packed under the joint armor.

DETAIL OF POURED SILICONE JOINT SEAL
No Scale

(1) The temperature used to set the joint opening shall be the approximate average air temperature during the 24 hour period immediately before the bolts are tightened. The Engineer shall establish the temperature. Interpolation of the table may be necessary.

Notes: The temperature limitations recommended by the sealant manufacturer shall be observed.

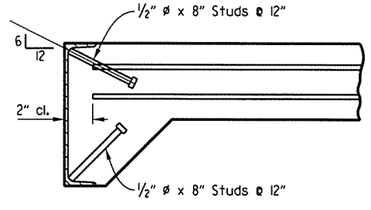
The sealant shall be installed only when the average 24 hour air temperature is between 40° and 80°F.

(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.

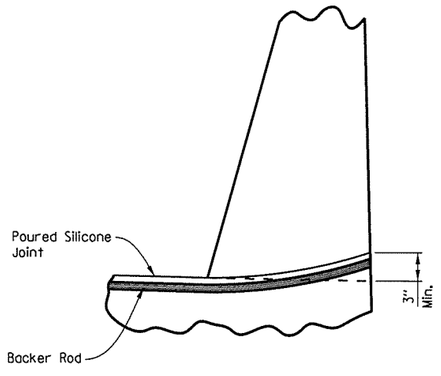
Except as noted, do not install more backer rod than that which can be sealed in the same day.

The contractor shall verify separation of the backer rod from the joint material after the material has set.



Note: As an alternate to ⅝" ø studs, ½" ø x 8" studs spaced as shown may be used. Use weight of ⅝" ø stud as basis of measurement of structure steel in anchors.

DETAILS OF ALTERNATE ANCHORS
No Scale



JOINT SEAL PLACEMENT AT PARAPET
Scale: 1½" = 1'-0"

EXPANSION DEVICE INSTALLATION

The Contractor may elect to install the expansion device 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 for temperature, and the backwall constructed.

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 for temperature. Backfill shall not be placed behind the backwall until the deck concrete on the adjacent span has been placed.

JOINT ERECTION DIMENSIONS

"A" Width perpendicular to joint at 24 hour average temperature of:				"D"
Bent No.	40° F	60° F	80° F	
1	2 13/16"	2 5/8"	2 7/16"	4 1/8"
5	2 13/16"	2 5/8"	2 7/16"	4 1/8"

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/15/15

SHEET 9 OF 12
DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGES A & B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: CAW DATE: 12-23-14
DESIGNED BY: KJC DATE: 07-17-14
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SCALE: SEE DETAILS
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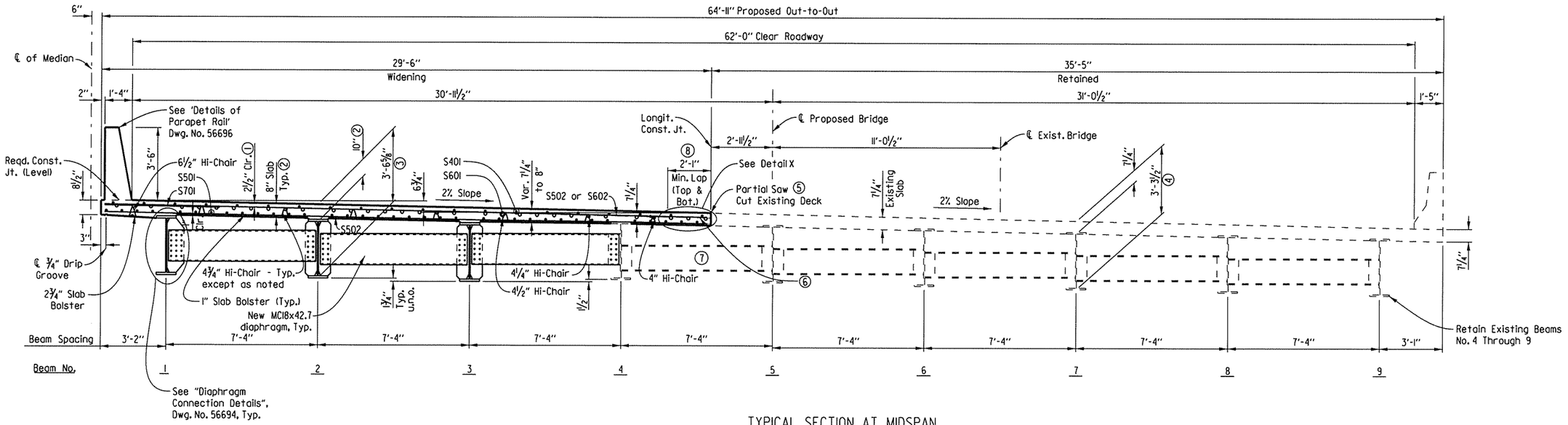
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	102	234
(1) B5946		SPAN DETAILS		56700

Note: Class 2 Protective Surface Treatment shall be applied to the roadway surface, including the existing deck surface to be retained, and roadway face and top of parapet rail of the new construction.



TYPICAL SECTION AT MIDSPAN
(Bridge 'B' - Looking Ahead)
Scale: ⅜" = 1'-0"

① Tolerances: Minus = ¼"
Plus = Equal to amount of slab thickening used to meet slab thickness tolerance
See "Adjustment for Slab Thickness Tolerance when Removable Deck Forming is Used."

② See "Adjustment for Slab Thickness Tolerance when Removable Deck Forming is Used."

③ Measured at ℄ Bearing and ℄ New Beams, Typ.

④ Measured at ℄ Bearing and ℄ Exist. Beams, Typ.

⑤ Care shall be exercised during the removal of the existing deck to ensure that the beams, diaphragms, bolted connections and reinforcement are not damaged. Damaged items that are not salvageable as determined by the Engineer, shall be replaced by the contractor at no additional payment. See Section 821.

⑥ Clean and Retain Existing Transverse Reinforcing. Remove and replace existing longitudinal reinforcement.

⑦ Bolts in the existing diaphragms and end struts may be loosened to the satisfaction of Engineer at Beam Nos. 4 & 5 during deck removal. Any existing bolt that is loosened or removed shall be replaced with a new high-strength bolt. The diaphragm and end strut bolts located in the bay between Beam Nos. 4 & 5 shall be tightened after the completion of the deck pour.

⑧ New reinforcing steel shall not be tied to existing transverse reinforcing steel.

⑨ Based on Existing Plans. The Contractor shall verify dimensions in the field.

Note: The superstructure details shown are for use when removable deck forming is used and are the basis for measurement of Class S(AE) Concrete. See AHTD Std. Dwg. No. 55005 for allowable modifications and for tolerances when permanent steel bridge deck forms are used.

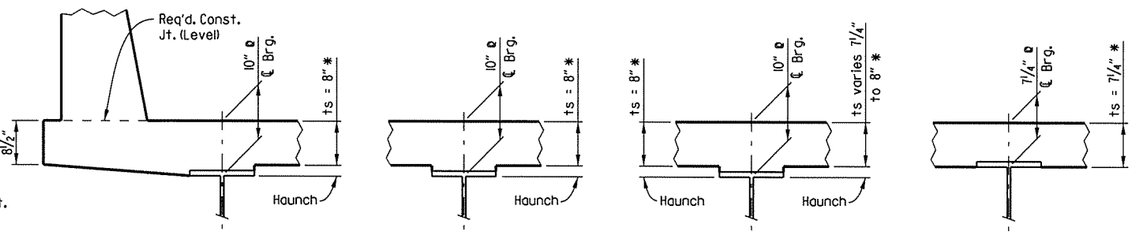
SLAB REINFORCING:

Transverse:
S502 @ 15" o.c. in top — Alternate
S602 @ 15" o.c. in top —
S502 @ 7½" o.c. in bottom
S701 @ 15" o.c. in top

Longitudinal:
S401 as shown in top (18" max)
S501 as shown in bottom (9" max)
S601 as shown over int. supports (10" max)

Note: Space Hi-Chairs as shown Trans. & 4'-0" o.c. long. Space slab bolsters 4'-0" max. sp.

S401 as shown in top (18" max)
S501 as shown in bottom (9" max)
S601 as shown over int. supports (10" max)



EXTERIOR BEAM
Beam No. 1

INTERIOR BEAM
Beam No. 2

INTERIOR BEAM
Beam No. 3

INTERIOR BEAM
Beam No. 4-9

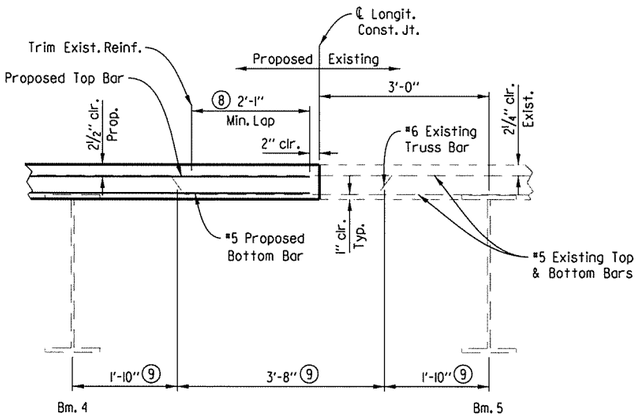
* Tolerance when removable deck forming is used is +½", -¼". Haunch forming is required and shall be adjusted to maintain slab thickness tolerance.

Note: ts = slab thickness as shown on superstructure detail drawings.

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 1½". 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 WHEN REMOVABLE DECK FORMING IS USED
No Scale



DETAIL X
Scale: ¾" = 1'-0"

Note: Longitudinal Reinforcement not shown for clarity.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 10 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGE B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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DESIGNED BY: KJC	DATE: 09-19-13		

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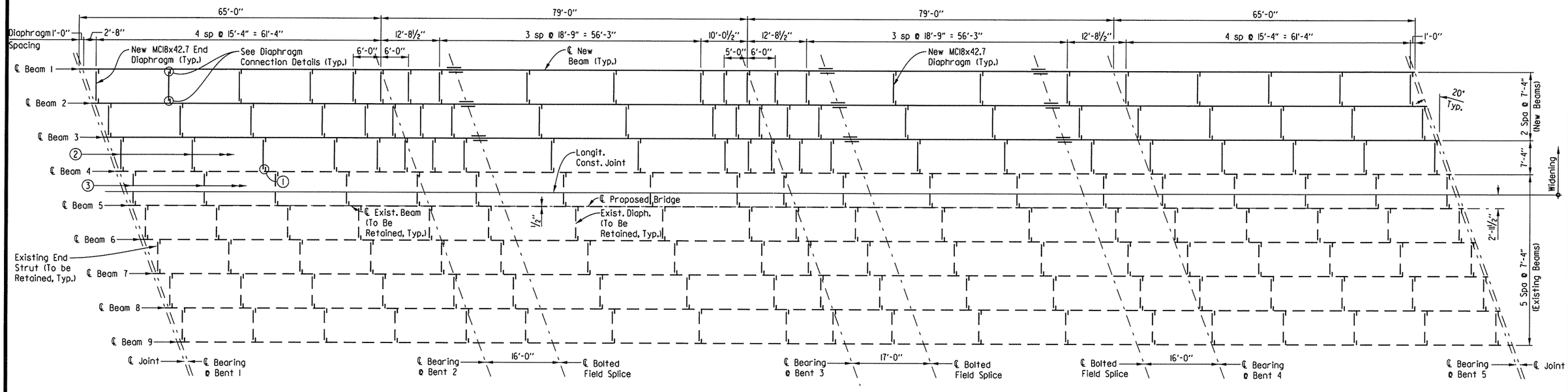
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	103	234

(1) B5946 SPAN DETAILS 56701



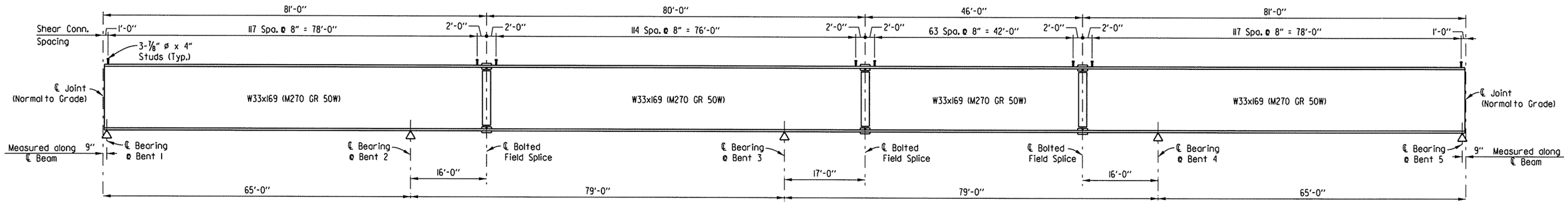
FRAMING PLAN
Scale: ⅛ " = 1'-0"

(1) Install new Connection PL's on existing Beam 4 after existing deck removal and prior to pouring new deck slab. (Typ.) See Diaphragm Connection Details.

(2) Install diaphragms prior to deck pour. Tighten Bolts after all deck pours are complete. (This bay only)

(3) Refer to Typical Section at Midspan Dwg. No. 56700

The existing paint system on the existing beams may consist of a lead based paint system. The Contractor shall take all necessary steps according to state and federal regulations to protect the workers, public, and the environment when modifying the existing beams.



BEAM ELEVATION - PROPOSED BEAMS NO. 1-3
No Scale

STATE OF ARKANSAS
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04/17/15

SHEET 11 OF 12

DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT
SPRING CREEK (BRIDGE B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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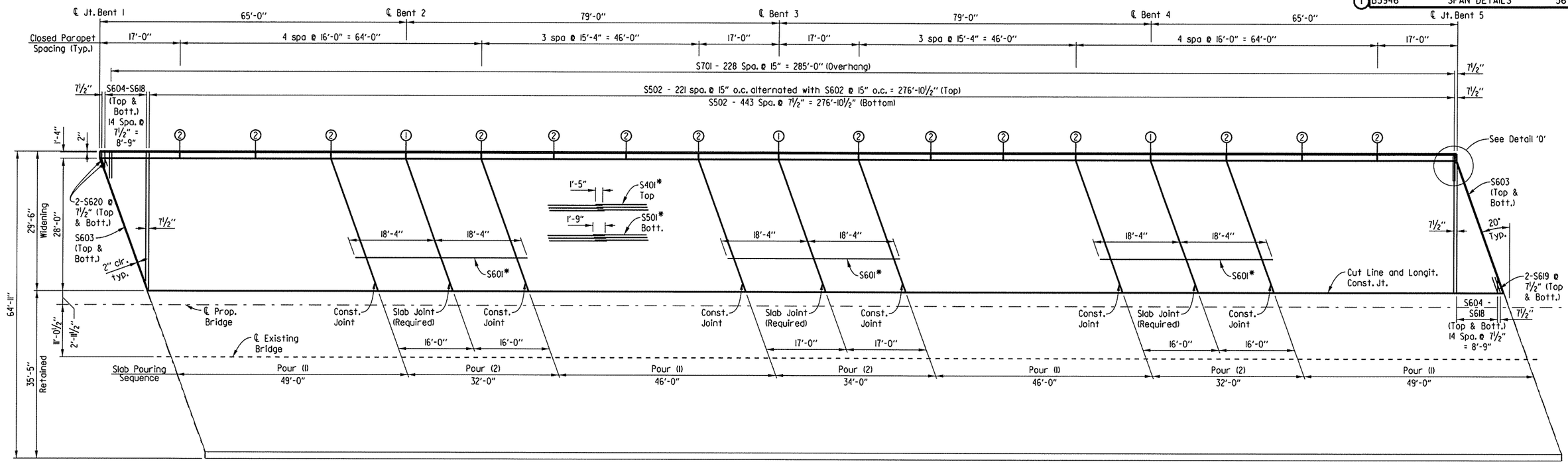
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① ℄ Full-Depth Parapet Joint 1¼" to 1" max.). Stop 4" from top of slab. See Dwg. No. 56696.

② ℄ Partial-Depth Parapet Joint 1¼" to 1" max.). Stop 1'-6" from top of slab. See Dwg. No. 56696.

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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.		CAII01	104	234
				① B5946		SPAN DETAILS		56702

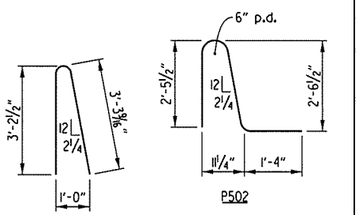


REINFORCING PLAN
No Scale

*Place reinforcing as shown in Typical Roadway Section.

BAR LIST

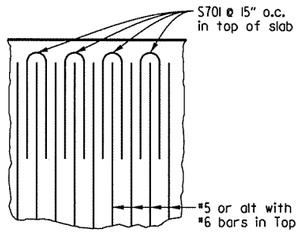
Mark	Number Required	Length	Pin Diameter	Bending Diagrams (Dimensions are Out to Out of Bars)
S401	160	37'-3"	Str.	
S501	216	49'-5"	Str.	
S502	666	29'-2"	Str.	
S601	96	36'-8"	Str.	
S602	223	29'-2"	Str.	
S603	4	29'-5"	Str.	
S604 - S618	2 EACH	VAR. 3'-4" TO 27'-0"	Str.	
S619	4	3'-6"	Str.	
S620	4	3'-6"	4½"	
S621 - S635	2 EACH	VAR. 3'-4" TO 27'-5"	Str.	
S701	229	10'-1"	5¼"	
P401	16	37'-3"	Str.	
P402	30	15'-0"	Str.	
P403	40	15'-8"	Str.	
P404	20	16'-8"	Str.	
P405	8	33'-1"	Str.	
P406	12	27'-2"	Str.	
P501	452	6'-8"	3¾"	
P502	452	6'-9"	3¾"	



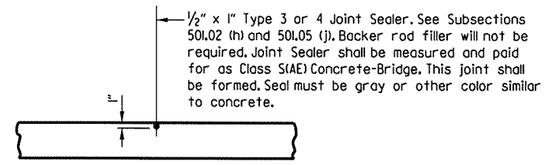
Notes:

Required slab joints and Pouring Sequence Joints near intermediate bents shall align with joints in parapet rail at the gutterline.

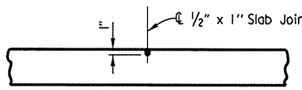
Pours with the same number may be placed simultaneously or separately. All Pours (1) must be placed before Pours (2) can be placed. 48 hours shall elapse between the end of a pour and the start of the next pour. 72 hours shall elapse between the end of a pour and the start of an adjacent pour. Any railing pours made before the entire slab in the respective stage 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.



DETAIL O
No Scale

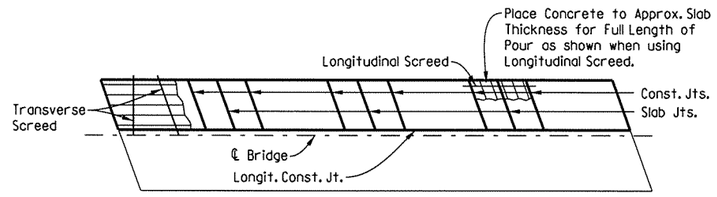


LONGITUDINAL CONSTRUCTION JOINT
No Scale



SLAB JOINT DETAIL
No Scale

Note:
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 joints without damage to the slab. Slab joints shall align with parapet joints. Slab joints shall be placed at all pouring sequence construction joints and required slab joint locations.



Note: At the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to ℄ Bridge. Place Concrete to Approx. Slab Thickness Parallel to Skew as shown.

CONCRETE PLACEMENT PROCEDURE
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 12 OF 12
DETAILS OF 288'-0" CONTINUOUS COMPOSITE W-BEAM UNIT SPRING CREEK (BRIDGE B)
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

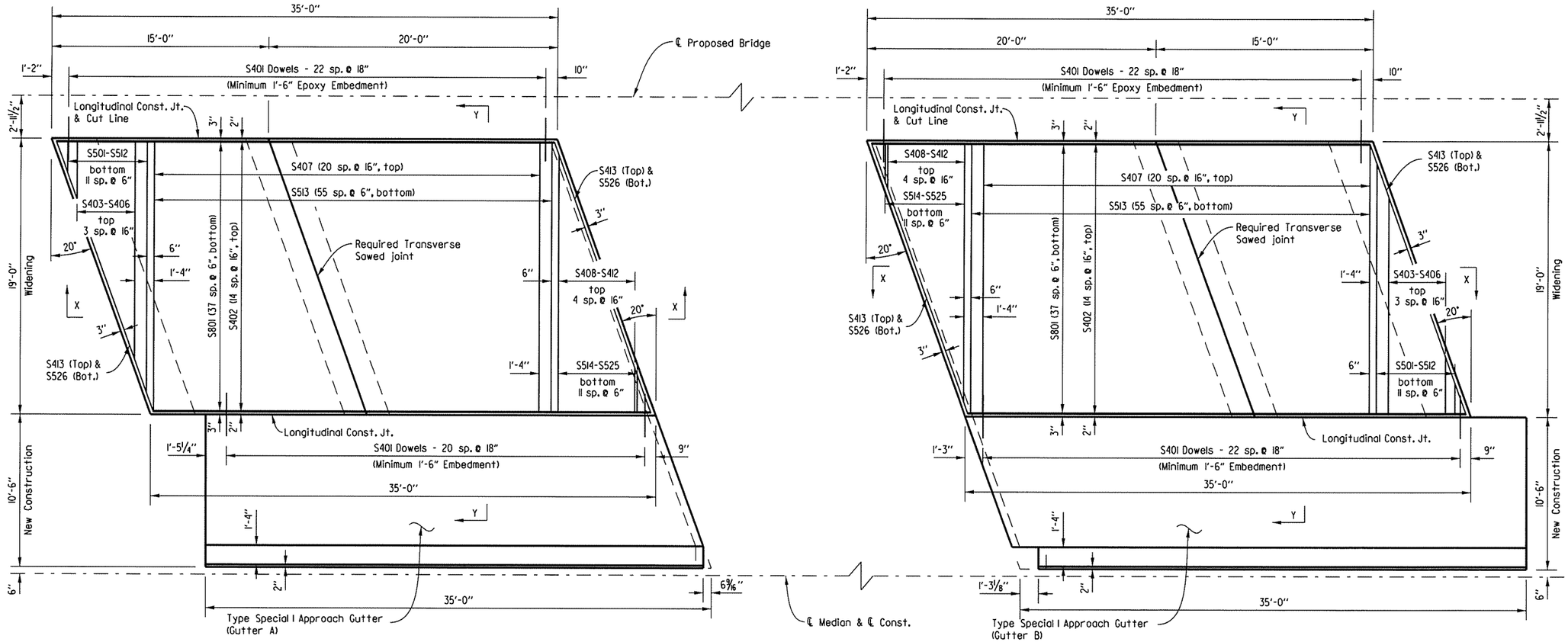
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BRIDGE NO. B5946 DRAWING NO. 56702

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	105	234
				(1) A5946		APPR. SLAB		56703



PLAN - APPROACH SLAB
(BEGIN BRIDGE A)

PLAN - APPROACH SLAB
(END BRIDGE A)

Note: Surface finish for approach slab shall match that used on bridge deck.

For General Notes, Sections, Bar List, and additional details See Dwg. No. 56705.
For details of Type Special I Approach Gutters, See Dwg. No. 56706.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/15

SHEET 1 OF 3

DETAILS OF TYPE SPECIAL I
APPROACH SLABS

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

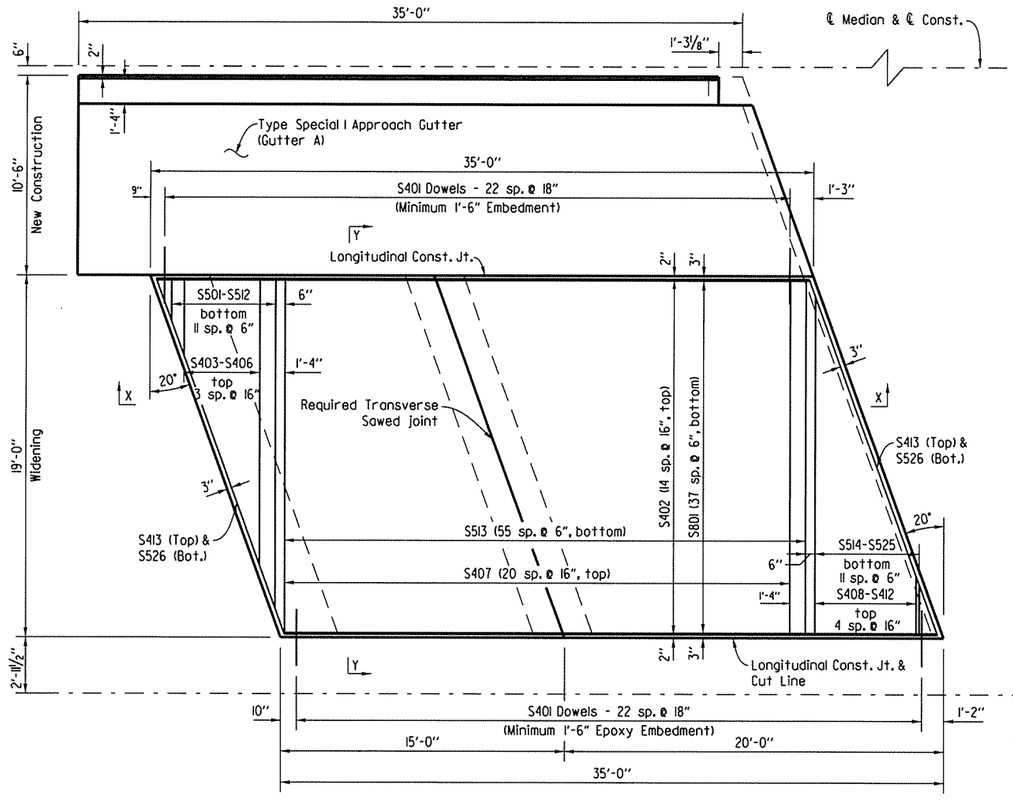
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BRIDGE NO. A5946 DRAWING NO. 56703

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	106	234
				(1) B5946		APPR. SLAB		56704



PLAN - APPROACH SLAB
(BEGIN BRIDGE B)

PLAN - APPROACH SLAB
(END BRIDGE B)

Note: Surface finish for approach slab shall match that used on bridge deck.

For General Notes, Sections, Bar List, and additional details See Dwg. No. 56705.
For details of Type Special I Approach Gutters, See Dwg. No. 56707.

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/14/15

SHEET 2 OF 3

DETAILS OF TYPE SPECIAL I
APPROACH SLABS

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

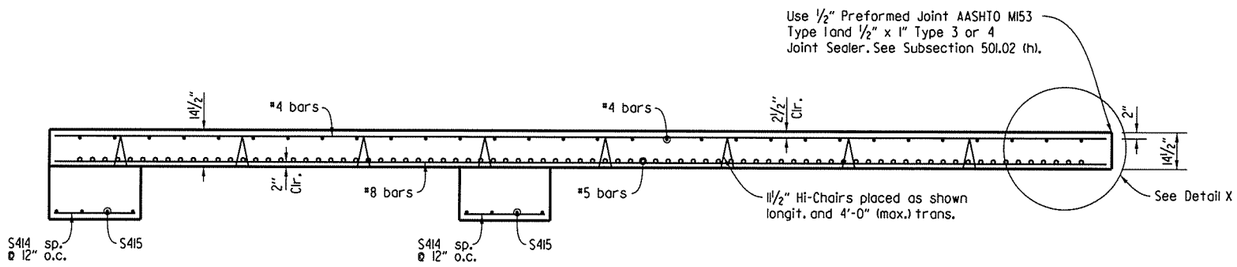
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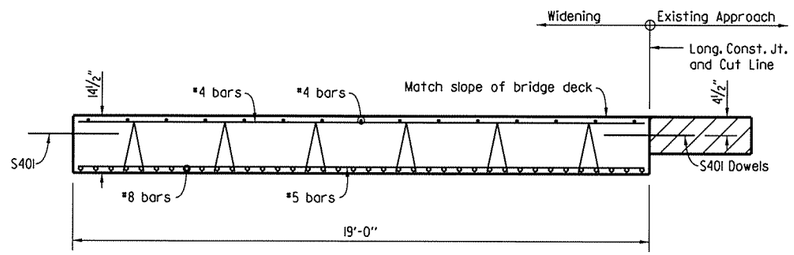
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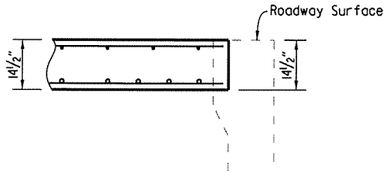
Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
					6	ARK.			
					JOB NO.		CA1101	107	234
					(1) A&B5946		APPR. SLAB		56705



SECTION X - X
No Scale



SECTION Y - Y
No Scale



DETAIL X
No Scale

BAR LIST
BRIDGE A

MARK	NO. REQ'D. Beg. Br.	NO. REQ'D. End Br.	LENGTH
S401	44	46	3'-0"
S402	15	15	34'-6"
S403-S406	4	4	4'-0" to 15'-0"
S407	21	21	18'-8"
S408-S412	5	5	3'-1" to 17'-9"
S413	2	2	19'-10"
S414	20	20	2'-8"
S415	8	8	19'-10"
S501-S512	12	12	2'-2" to 17'-3"
S513	56	56	18'-8"
S514-S525	12	12	2'-8" to 17'-9"
S526	2	2	19'-10"
S801	38	38	34'-6"

BAR LIST
BRIDGE B

MARK	NO. REQ'D. Beg. Br.	NO. REQ'D. End Br.	LENGTH
S401	46	44	3'-0"
S402	15	15	34'-6"
S403-S406	4	4	4'-0" to 15'-0"
S407	21	21	18'-8"
S408-S412	5	5	3'-1" to 17'-9"
S413	2	2	19'-10"
S414	20	20	2'-8"
S415	8	8	19'-10"
S501-S512	12	12	2'-2" to 17'-3"
S513	56	56	18'-8"
S514-S525	12	12	2'-8" to 17'-9"
S526	2	2	19'-10"
S801	38	38	34'-6"

TABLE OF QUANTITIES FOR TYPE SPECIAL I APPROACH SLABS
(for information only)

		Slab Width	Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
Bridge A	Beg. of Bridge	19'-0"	5806	37.5
	End of Bridge	19'-0"	5810	37.5
Bridge B	Beg. of Bridge	19'-0"	5810	37.5
	End of Bridge	19'-0"	5806	37.5

GENERAL NOTES

Concrete shall be Class S(AE) (f'c = 4,000 psi)

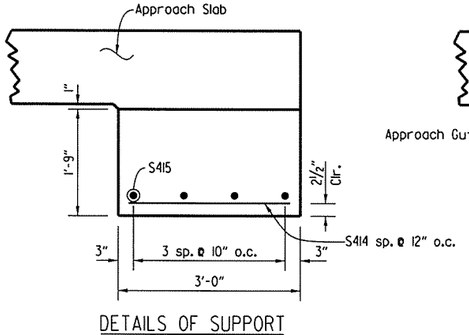
All reinforcing steel shall be Grade 60 (yield strength = 60,000 psi) conforming to AASHTO M31 or M322, Type A, with mill test reports.

Approach Slabs will be measured and paid for in accordance with Section 504.

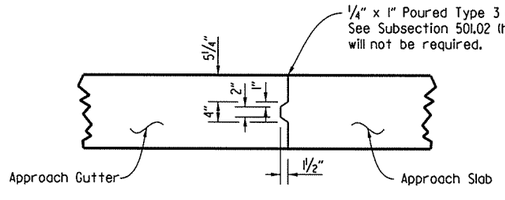
Preformed joint and joint sealer included in the pay item "Approach Slabs".

Drill and grout bars where shown using an approved cement or epoxy system from the QPL. Minimum embedment shall be 12" for cement based grout. Minimum embedment shall be per the manufacturer's recommendations for epoxy based grout.

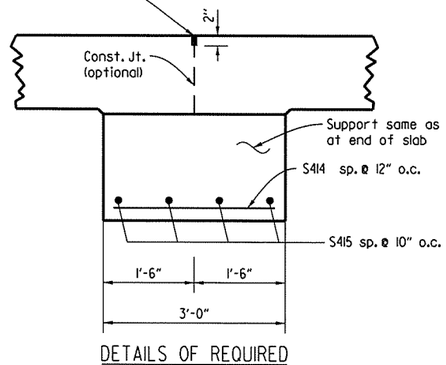
Work required to remove & dispose portions of the existing bridge, retain and clean existing reinforcing steel, and any required doweling will not be paid for directly but will be considered subsidiary to the item "Modification of Existing Bridge Structure (Br. No. A5946)" and "Modification of Existing Bridge Structure (Br. No. B5946)".



DETAILS OF SUPPORT AT END OF SLAB
No Scale



DETAILS OF LONGITUDINAL CONSTRUCTION JOINT
No Scale



DETAILS OF REQUIRED TRANS. SAWED JOINT
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
05/14/15

SHEET 3 OF 3

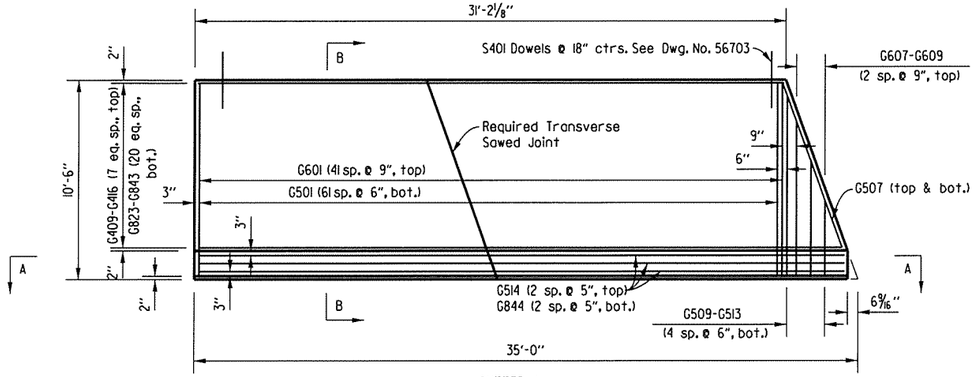
DETAILS OF TYPE SPECIAL I APPROACH SLABS
ROUTE 49 SEC. 29
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: TRM DATE: 09-16-14 FILENAME: bca1101a1_a3.dgn
CHECKED BY: JKJ DATE: 11-12-14 SCALE: NO SCALE
DESIGNED BY: LLW DATE: 09-15-14

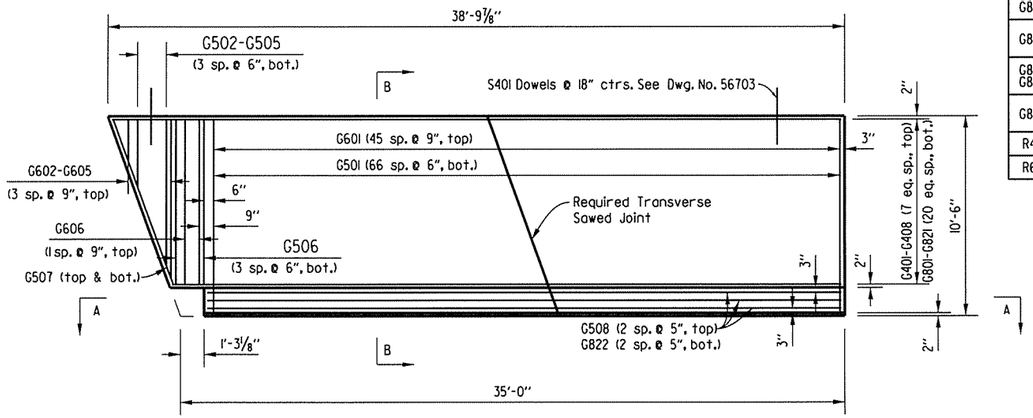
BRIDGE NO. A&B5946 DRAWING NO. 56705

USER: bc5100
DESIGN FILE: G:\13\06000.412\toWagon\TRANSP\dgn\bridge\bca1101a1_a3.dgn
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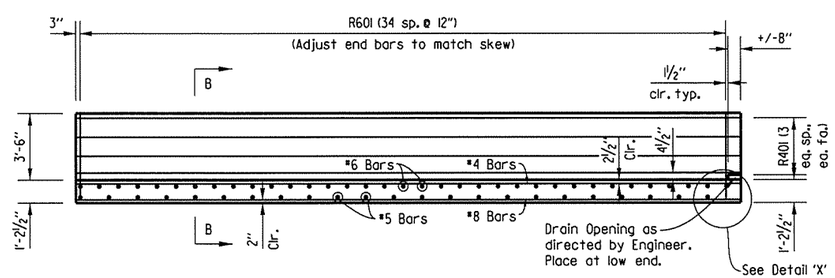
Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
					6	ARK.			
					JOB NO.		C411101	108	234
					(1) A5946		APPR. GUTTER		56706



GUTTER A
(BEGIN BRIDGE A)



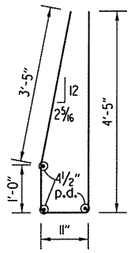
GUTTER B
(END BRIDGE A)



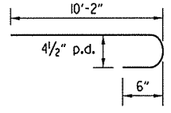
SECTION A-A
No Scale

BAR LIST

MARK	NO. REQ'D. Beg. Br.	NO. REQ'D. End Br.	LENGTH	Bending Diagram
G401-G408	---	8	35'-1" to 38'-3"	
G409-G416	8	---	30'-10" to 33'-11"	
G501	62	67	10'-2"	
G502-G505	---	4	3'-6" to 7'-7"	
G506	---	4	8'-8"	
G507	2	2	9'-2"	
G508	---	3	33'-4"	
G509-G513	5	---	3'-11" to 9'-5"	
G514	3	---	34'-0"	
G601	42	46	10'-10"	
G602-G605	---	4	2'-1" to 8'-4"	
G606	---	2	8'-8"	
G607-G609	3	---	4'-0" to 8'-1"	
G801-G821	---	21	35'-1" to 38'-3"	
G822	---	3	33'-4"	
G823-G843	21	---	30'-10" to 33'-11"	
G844	3	---	34'-0"	
R401	8	8	34'-3"	
R601	35	35	9'-5"	



R601



G601

TABLE OF QUANTITIES FOR TYPE SPECIAL I APPROACH GUTTERS

(for information only)

		Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
Bridge A	Gutter A	4473	15.5
	Gutter B	4911	17.3

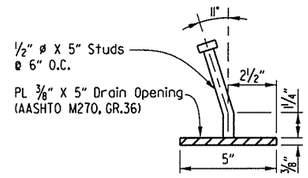
GENERAL NOTES

Concrete shall be Class S(AE) (f'c = 4,000 psi)

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

Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

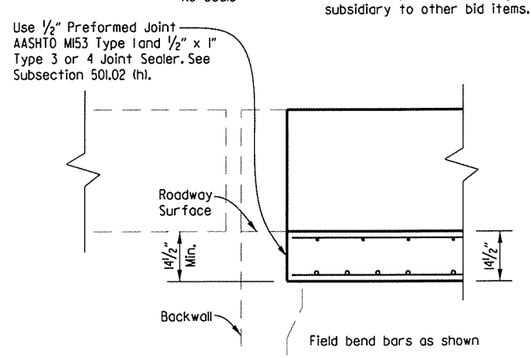
Concrete Ditch Paving shall be subsidiary to other bid items.



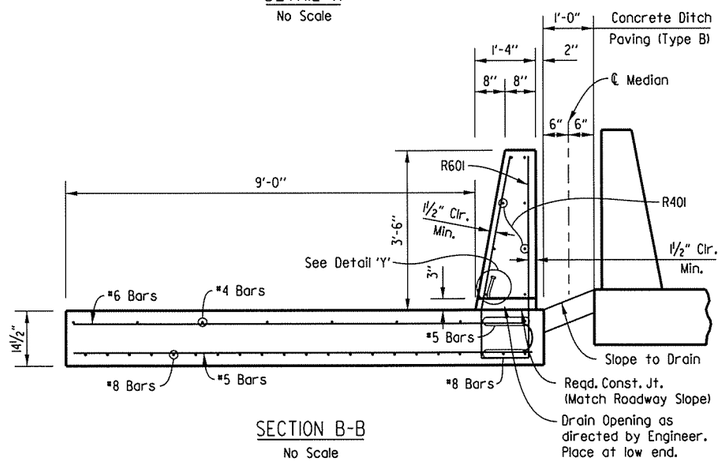
DETAIL Y
No Scale

NOTE:
Parapet studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be subsidiary to other bid items.

The surfaces of the ⅜" plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to other bid items.



DETAIL X
No Scale



SECTION B-B
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 1 OF 2

DETAILS OF TYPE SPECIAL I APPROACH GUTTERS

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TRW DATE: 09-17-14 FILENAME: bca1101a1_a4.dgn
CHECKED BY: JKJ DATE: 11-12-14 SCALE: 1/4" = 1'-0"
DESIGNED BY: LLW DATE: 09-15-14

BRIDGE NO. A5946 DRAWING NO. 56706

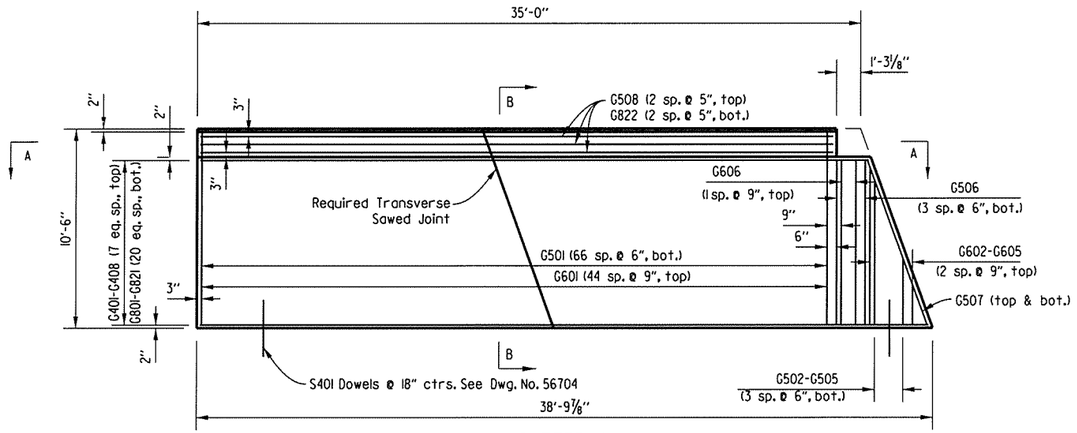
USER: bc5100
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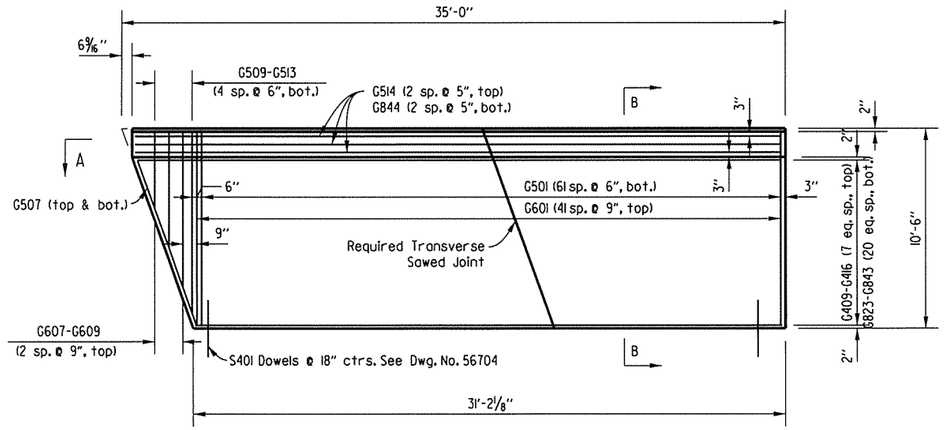
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

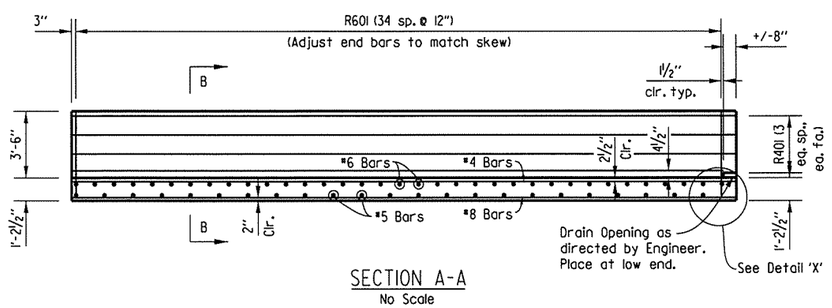
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	109	234
(1) B5946		APPR. GUTTER		56707



GUTTER A
(BEGIN BRIDGE B)



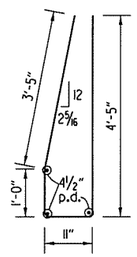
GUTTER B
(END BRIDGE B)



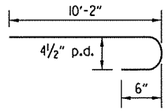
SECTION A-A
No Scale

BAR LIST

MARK	NO. REQ'D. Beg. Br.	NO. REQ'D. End Br.	LENGTH	Bending Diagram
G401-G408	8	---	35'-1" to 38'-3"	
G409-G416	---	8	30'-10" to 33'-11"	
G501	67	62	10'-2"	
G502-G505	4	---	3'-6" to 7'-7"	
G506	4	---	8'-8"	
G507	2	2	9'-2"	
G508	3	---	33'-4"	
G509-G513	---	5	3'-11" to 9'-5"	
G514	---	3	34'-0"	
G601	45	42	10'-10"	
G602-G605	4	---	2'-1" to 8'-4"	
G606	2	---	8'-8"	
G607-G609	---	3	4'-0" to 8'-1"	
G801-G821	21	---	35'-1" to 38'-3"	
G822	3	---	33'-4"	
G823-G843	---	21	30'-10" to 33'-11"	
G844	---	3	34'-0"	
R401	8	8	34'-3"	
R601	35	35	9'-5"	



R601



G601

TABLE OF QUANTITIES FOR TYPE SPECIAL 1 APPROACH GUTTERS

(for information only)

		Reinforcing Steel (lbs.)	Concrete (Cu. Yds.)
Bridge B	Gutter A	4911	17.3
	Gutter B	4473	15.5

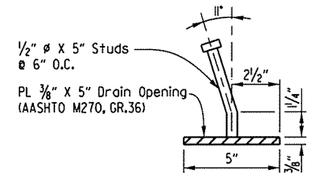
GENERAL NOTES

Concrete shall be Class S(AE) (f'c = 4,000 psi)

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

Approach Gutters will be measured and paid for in accordance with Section 504 of the Standard Specifications.

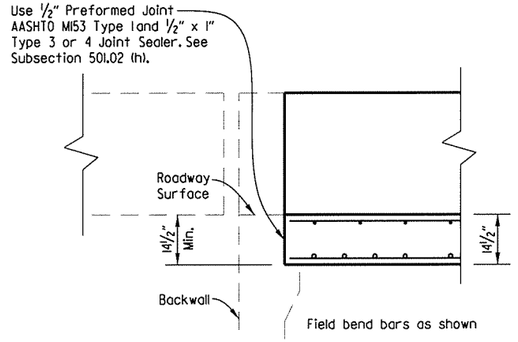
Concrete Ditch Paving shallbe subsidiary to other bid items.



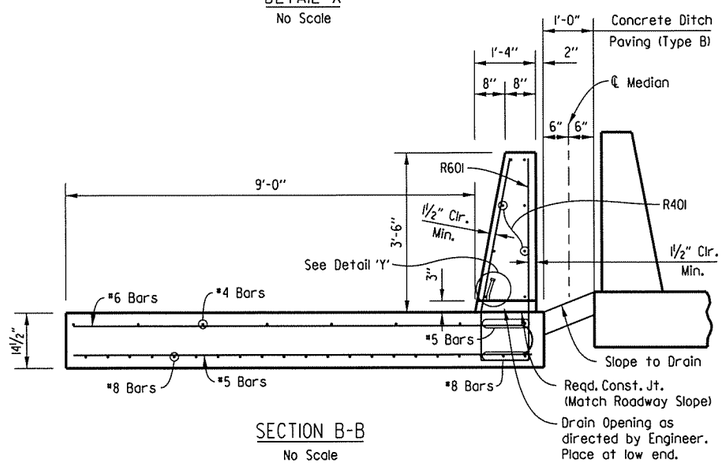
DETAIL Y
No Scale

NOTE:
Parapet studs shall be 5" long, granular flux filled, solid fluxed, or equal, and automatically end welded to the plate. Studs and plate shall meet the requirements of Section 807. Studs and plate shall be subsidiary to other bid items.

The surfaces of the ⅜" plates which will not be in contact with concrete shall be painted in accordance with Section 638, or as approved by the Engineer. Only one coat is required and shall be applied in the fabricator's shop. Painting will not be paid for directly, but will be considered subsidiary to other bid items.



DETAIL X
No Scale



SECTION B-B
No Scale

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
No. 11856
CHARLES A. WIPF
04/17/15

SHEET 2 OF 2

DETAILS OF TYPE SPECIAL 1 APPROACH GUTTERS

ROUTE 49 SEC. 29

ARKANSAS STATE HIGHWAY COMMISSION

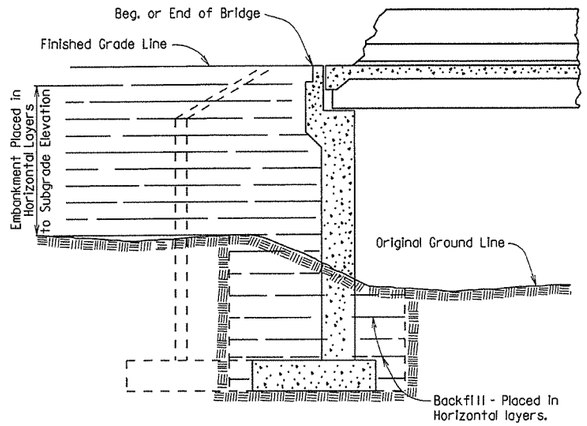
LITTLE ROCK, ARK.

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DESIGNED BY: LLW DATE: 09-15-14

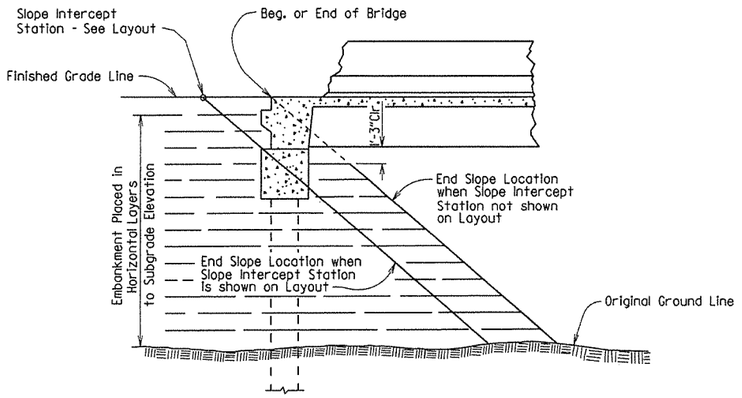
BRIDGE NO. B5946 DRAWING NO. 56707

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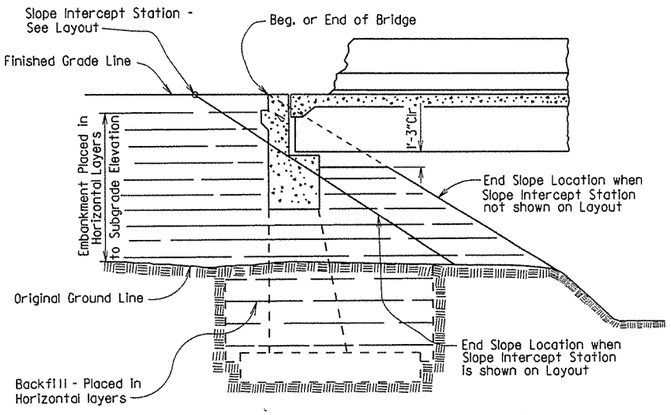
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				6	ARK.		110	
				JOB NO.				
				(1) EMBANKMENT & BACKFILL 55000				



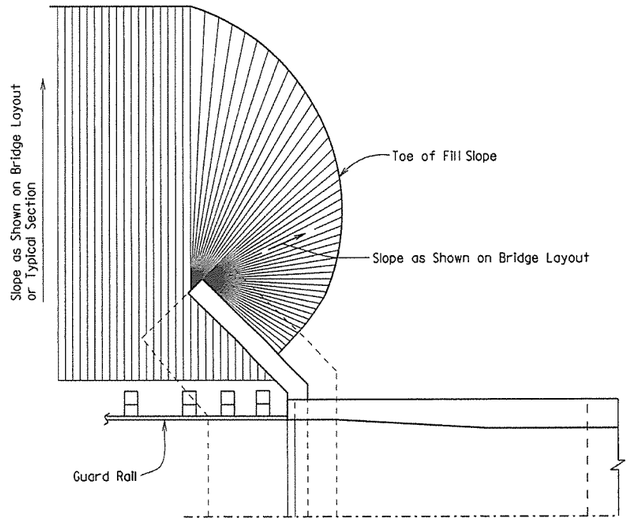
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT VERTICAL WALL ABUTMENTS



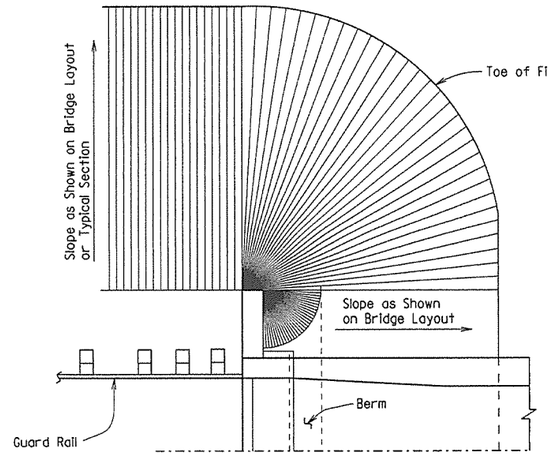
EMBANKMENT CONSTRUCTION AT SPILL-THROUGH PILE END BENTS



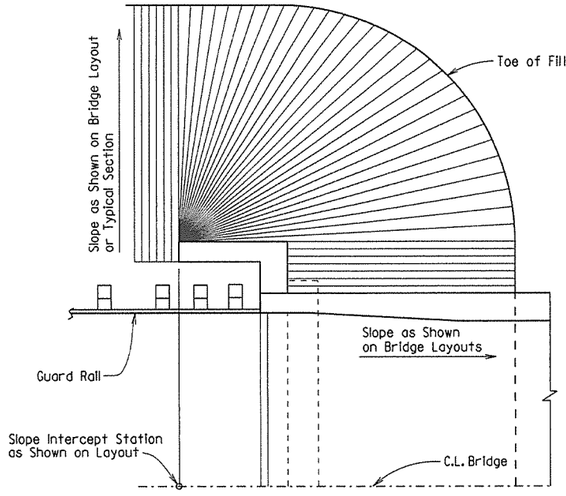
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL AT SPILL-THROUGH END BENTS



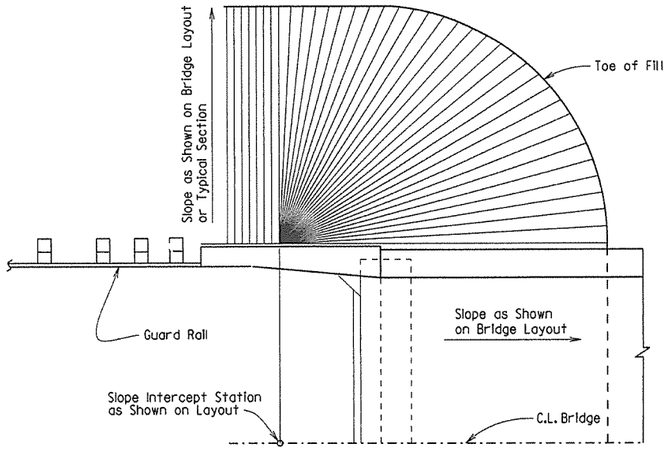
VERTICAL WALL ABUTMENTS



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

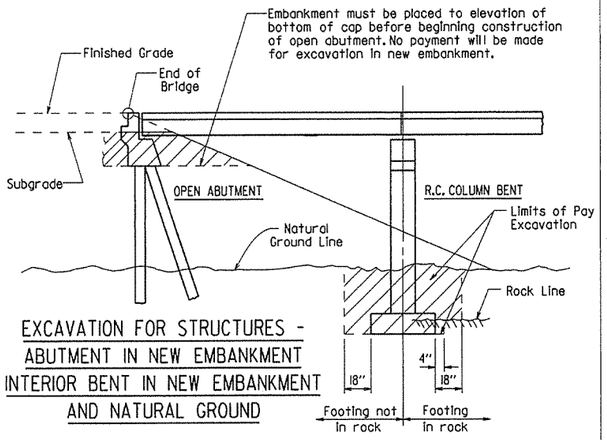
The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the side slopes and slopes under the bridge end including around the end of wingwalls. Embankment adjacent to structures shall be constructed in 6 inch horizontal 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

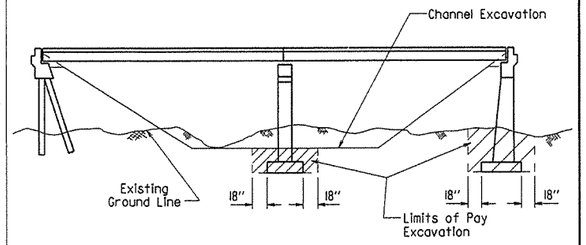
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

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CHECKED BY: BEF DATE: 2-27-2014 SCALE: NO SCALE
DESIGNED BY: STD. DATE: -

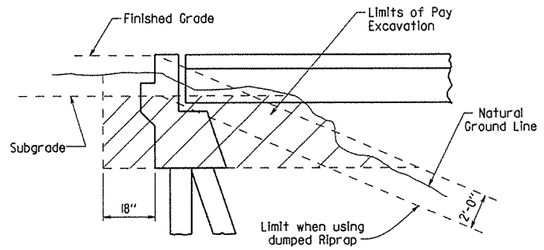
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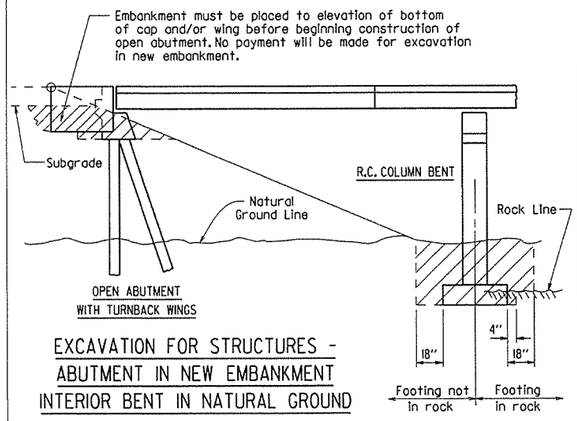
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND



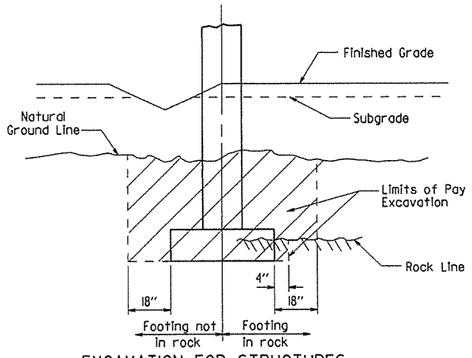
EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



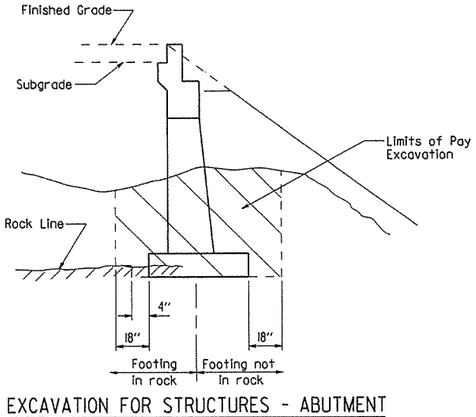
EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND



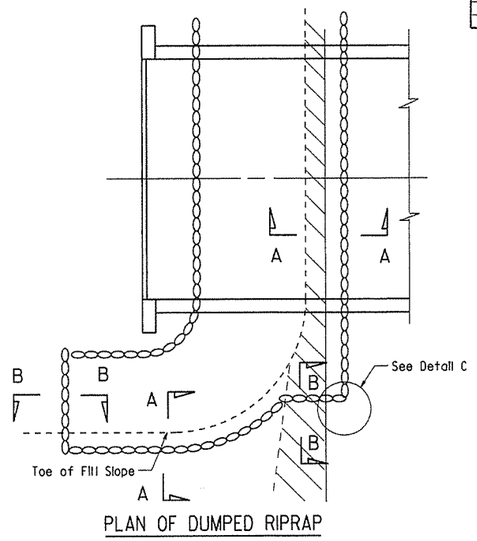
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND



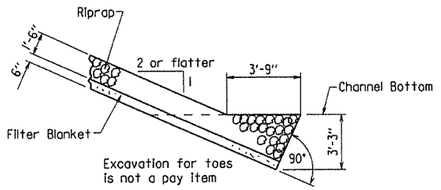
EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

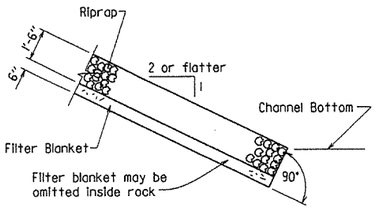


PLAN OF DUMPED RIPRAP



SECTION A-A

(Toe Excavation in Soil)



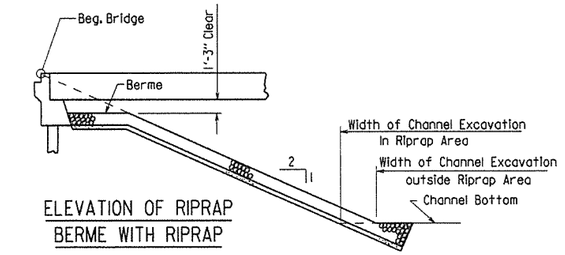
SECTION A-A

(Toe Excavation in Rock)

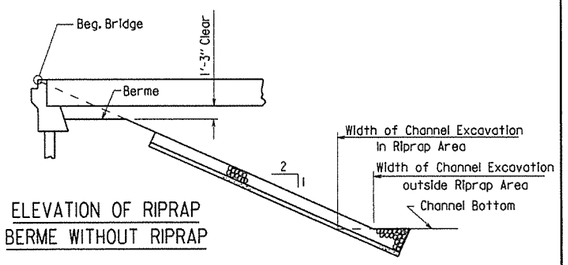
Note : Use this type of toe when rock is encountered which is in a stable condition.

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.

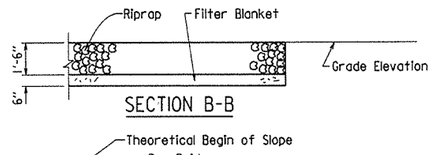
Note : Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.



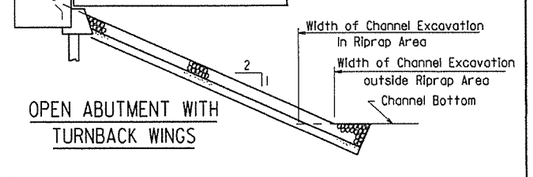
ELEVATION OF RIPRAP BERME WITH RIPRAP



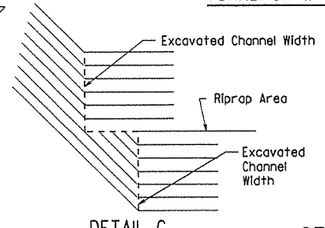
ELEVATION OF RIPRAP BERME WITHOUT RIPRAP



SECTION B-B



OPEN ABUTMENT WITH TURNBACK WINGS



DETAIL C

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.		111	
				JOB NO.				

(1) RIPRAP & EXCAV. 55001

STANDARD DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND COMPUTING EXCAVATION FOR STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

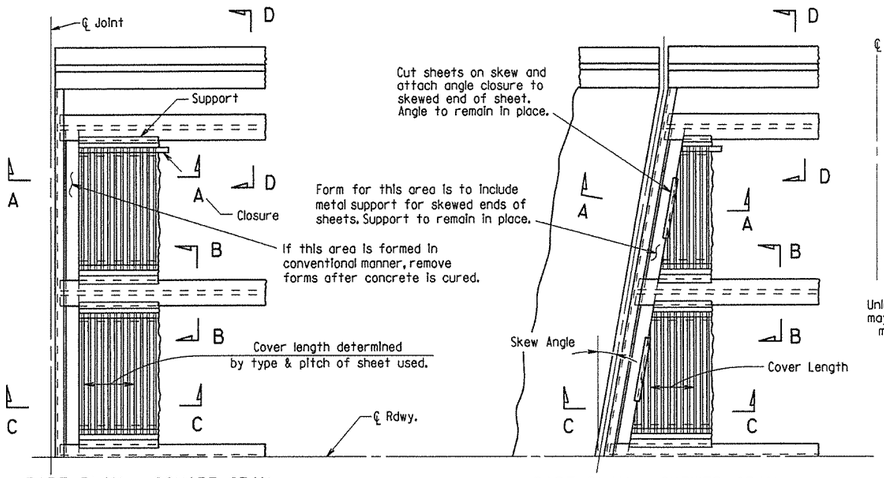
DRAWN BY: KDH DATE: 2-27-2014 FILENAME: b55001.dgn

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.		11a	
				JOB NO.				
				①	BRIDGE DECK FORMS		55005	

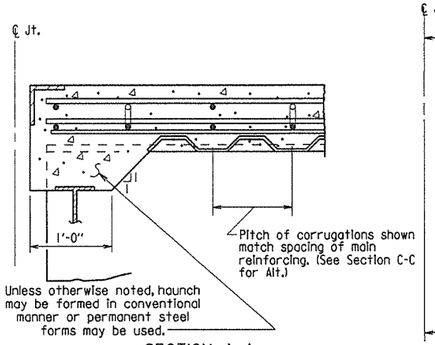


PART PLAN - SQUARE SPAN

3/8" = 1'-0"

PART PLAN - SKEWED SPAN

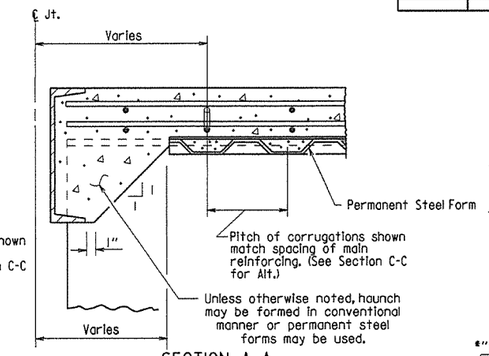
3/8" = 1'-0"



SECTION A-A

N.T.S.

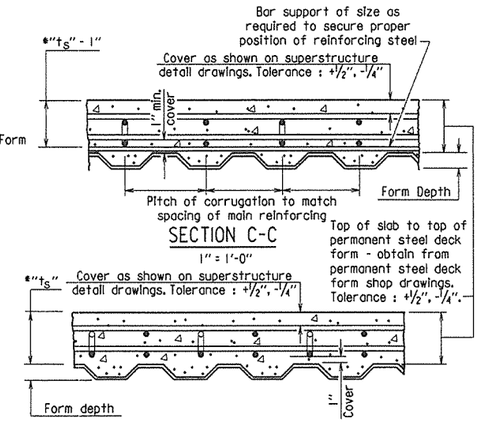
(Angle at end of span)



SECTION A-A

N.T.S.

(Channel at end of span)



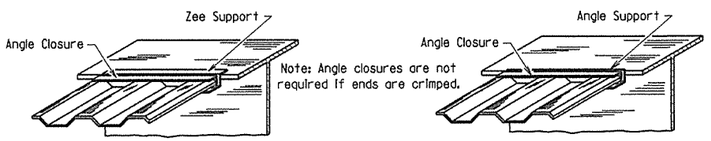
SECTION C-C

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.

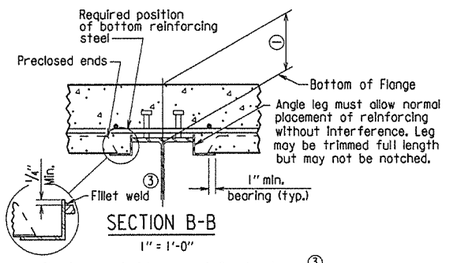
Form sheets shall be fastened to supporting members and to each other with galvanized metal screws sufficient in size and number to provide a secure attachment. Alternate methods of attachment must be approved by the Engineer.

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.

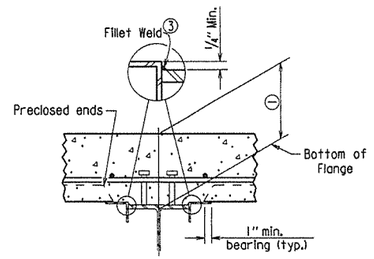


SECTION B-B

1" = 1'-0"

(Showing permissible support for tension flange where shear connectors are used, and for all compression flanges)

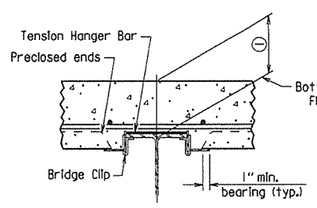
③ Minimum weld: 1/8" x 1' @ 18". More weld may be required; maximum length per weld = 1 1/2" (typ.)



SECTION B-B

1" = 1'-0"

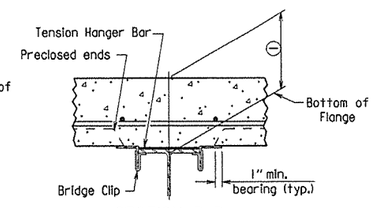
(Showing permissible support for tension flange where shear connectors are used and for all compression flanges)



SECTION B-B

1" = 1'-0"

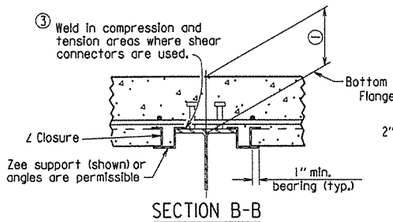
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

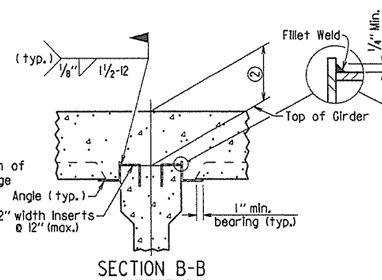
(Showing permissible support for tension flange where shear connectors are not used)



SECTION B-B

1" = 1'-0"

(Showing ∠ Closure)

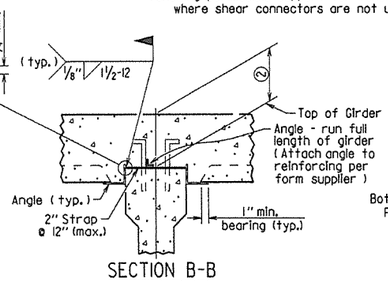


SECTION B-B

(FOR CONCRETE GIRDERS)

1" = 1'-0"

(Showing support by Insert cast in girder)

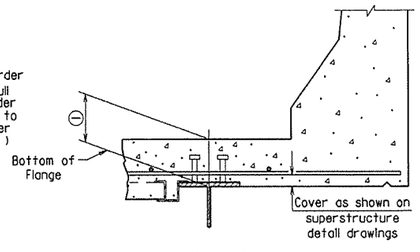


SECTION B-B

(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

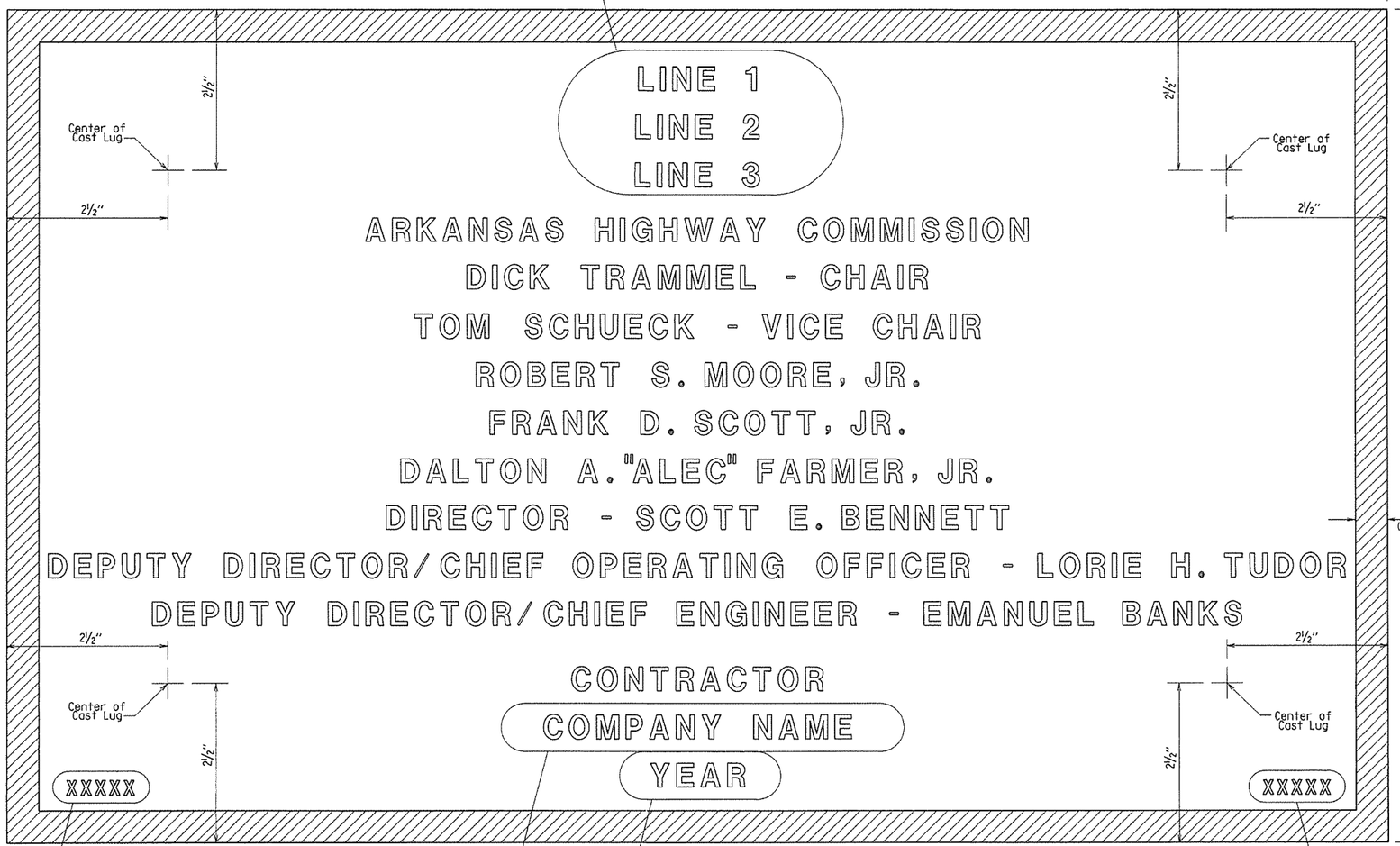
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
12-1-14			
1-14-15			

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
6	ARK.		113	
JOB NO.				

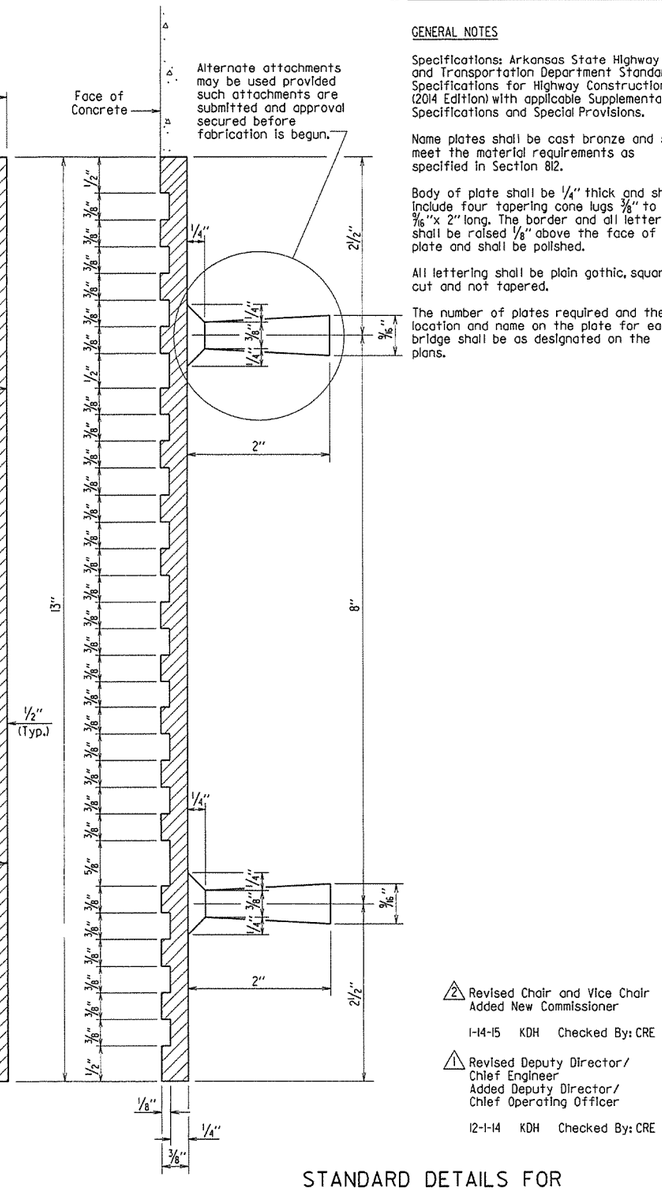
① TYPE D NAME PLATE 55010

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.		114	
				JOB NO.				
				①		STEEL H-PILES		55020

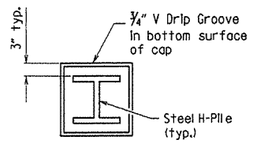
GENERAL NOTES FOR STEEL H-PILES:

Steel H-Piles shall conform to AASHTO M 270, Grade 36 or greater.

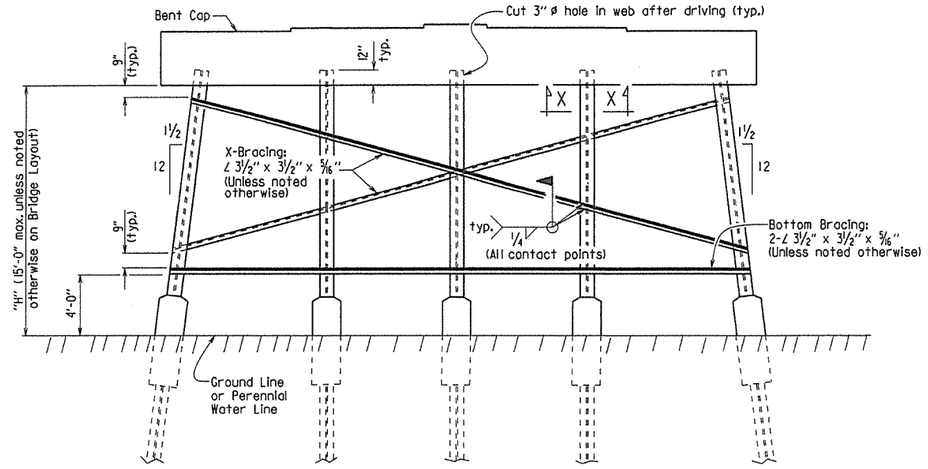
See Bridge Layout and Bent Details for pile size, estimated length, spacing, pile anchorage (if required) and for driving information.

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.

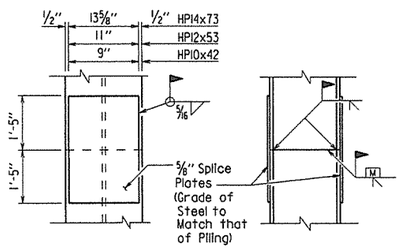
Omit X-Bracing and Bottom Bracing when "H" is 5 feet or less.

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)

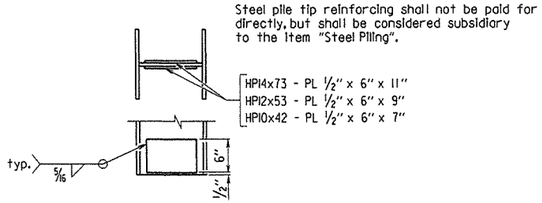


Note:
The Contractor may for his own convenience and at his own expense provide as many as three splices per pile. Minimum spacing between splices shall be 5 feet.

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:

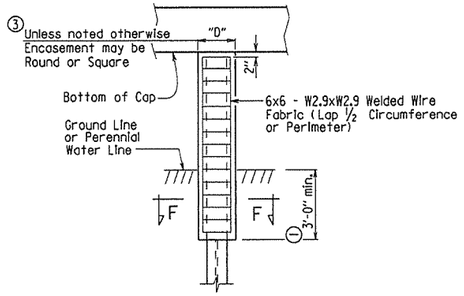
See Bridge Layout for additional notes and required location of pile encasements.

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.

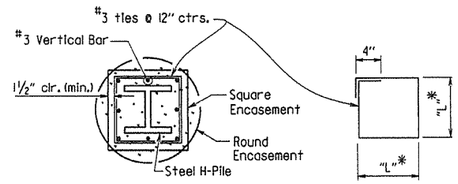
Welded Wire Fabric shall conform to AASHTO M 55 or M 221. Galvanized Corrugated Steel Pipe shall conform to AASHTO M 36 and M 218.

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)

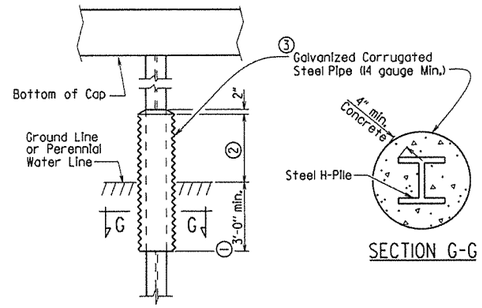


SECTION F-F

*Measured out-to-out of bar.

TABLE OF VARIABLES FOR PILE ENCASEMENT

Pile Size	"D" Square Encsmt.	"D" Round Encsmt.	"L"*
HP10x42	1'-7"	2'-0"	1'-4"
HP12x53	1'-8"	2'-2"	1'-5"
HP14x73	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 1 ½" and a minimum clearance of 1 ¼" 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

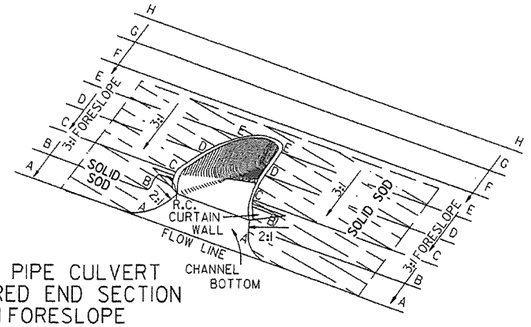
STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

ARKANSAS STATE HIGHWAY COMMISSION

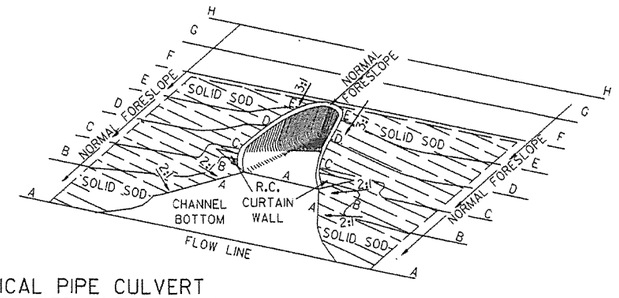
LITTLE ROCK, ARK.

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: —

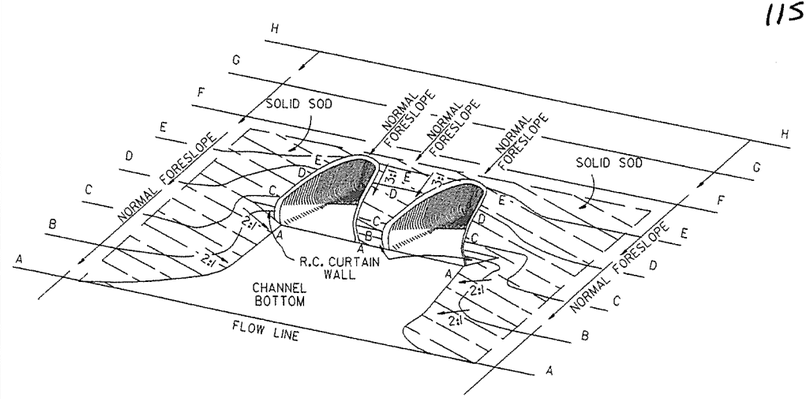
DRAWING NO. 55020



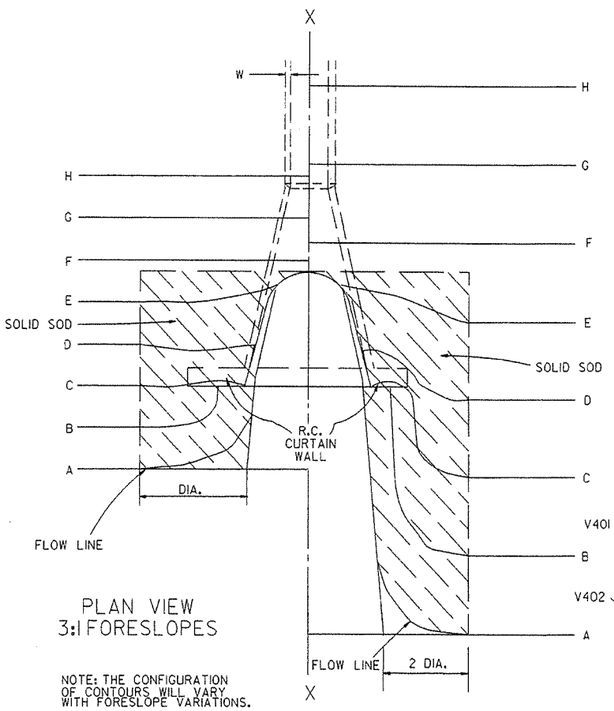
TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& 3:1 FORESLOPE



TYPICAL PIPE CULVERT
WITH FLARED END SECTION
& FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT
WITH FLARED END SECTIONS
& FLATTENED ADJACENT SLOPES



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

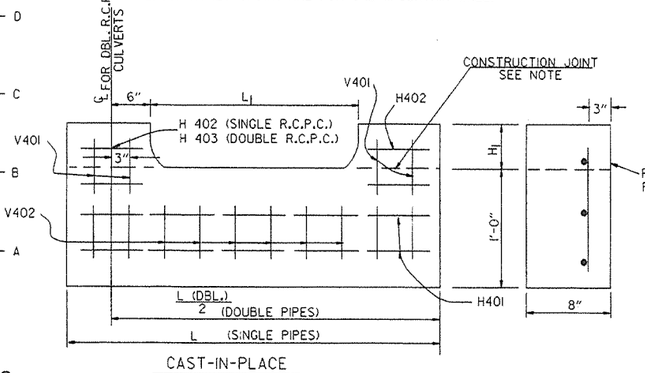
PLAN VIEW
3:1 FORESLOPES

PLAN VIEW
FLATTENED FORESLOPES

R.C. CURTAIN WALL
DIMENSIONS & QUANTITIES

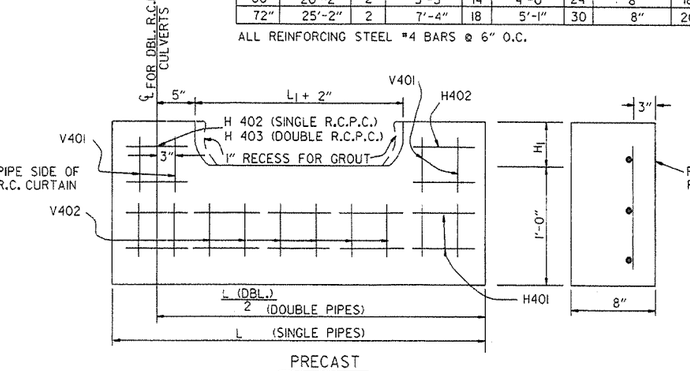
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C.		DOUBLE R.C.P.C.	
					CONC.	REINF. STEEL	CONC.	REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	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.
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.

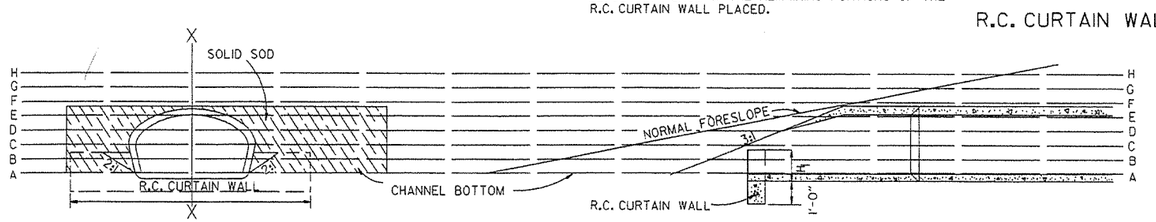
SOLID SODDING

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"	36	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

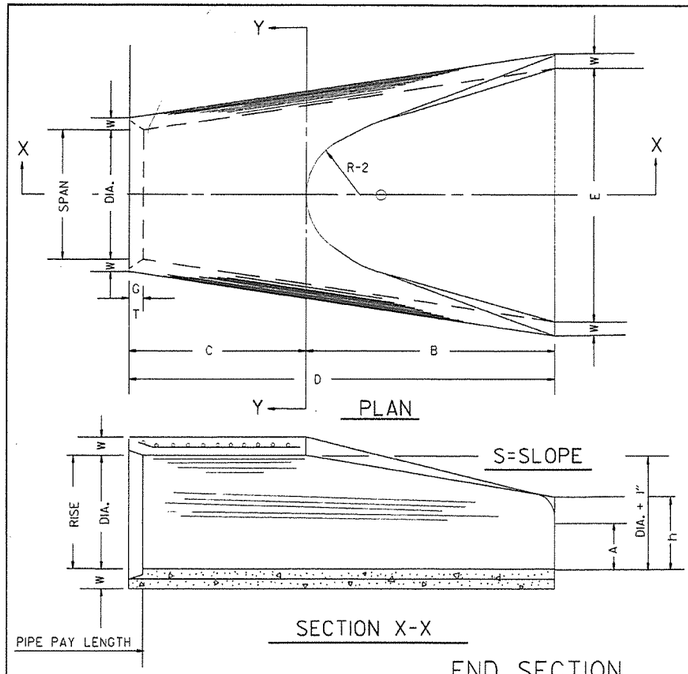
SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	10-18-96
10-12-95	CORRECTED SPELLING	
11- 3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

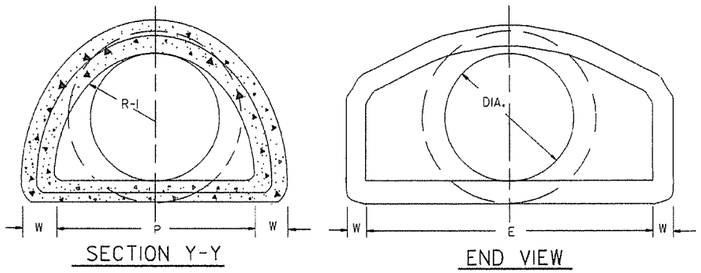
STANDARD DRAWING FES-1



END SECTION FOR REINFORCED CONCRETE PIPE CULVERTS

TABLE OF DIMENSIONS

DIA.	WALL	A	B	C	D	E	S	DIA. − 1"	P	R-1	R-2	G-T	WT.	h
18"	2½"	9"	2'-3"	3'-10"	6'-1"	3'-0"	3:1	19"	29"	15½"	12"	2"	1000	1'-0½"
24"	3"	9½"	3'-7½"	2'-6"	6'-1½"	4'-0"	3:1	25"	33¾16"	16¹⁵⁄16"	14"	2½"	1600	1'-1½"
30"	3½"	1'-0"	4'-6"	1'-7¾"	6'-1¾"	5'-0"	3:1	31"	37"	18½"	15"	3¼"	1940	1'-4⅜"
36"	4"	1'-3"	5'-3"	2'-10¾"	8'-1¾"	6'-0"	3:1	37"	47¹³⁄16"	24⅝"	20"	3½"	4100	1'-8"
42"	4½"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	3:1	43"	53⅞"	27½"	22"	3½"	5380	2'-2½"
48"	5"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	3:1	49"	56½"	28½"	22"	3½"	6550	2'-6"
54"	5½"	2'-4"	6'-6"	1'-10"	8'-4"	7'-6"	3:1	55"	65½"	33⅛"	24"	4"	8750	2'-10½"
60"	6"	2'-10"	6'-6"	1'-10"	8'-4"	8'-0"	3:1	61"	72½"	36¹⁵⁄16"	24"	4"	9270	3'-5"
72"	7"	3'-10"	6'-6"	1'-10"	8'-4"	9'-0"	3:1	73"	77¹³⁄16"	38⅝"	24"	5"	13250	4'-6"

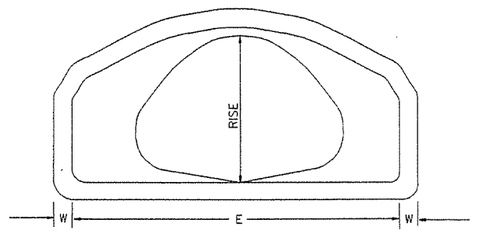


NOTE: TONGUE END ON UPSTREAM SECTION
GROOVE END ON DOWNSTREAM SECTION

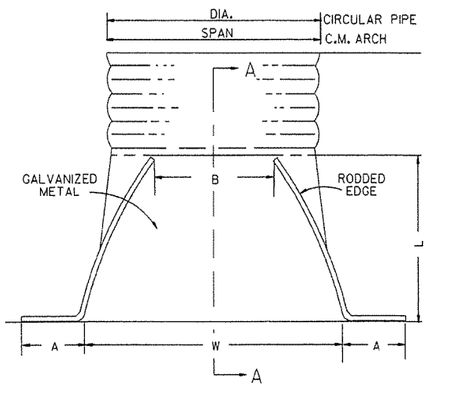
ARCH PIPE

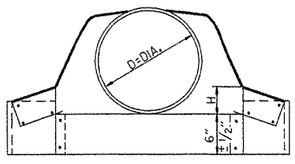
EQUIV. DIA.	• SPAN AASHTO M 206	• SPAN AHD NOMINAL	• RISE AASHTO M 206	• RISE AHD NOMINAL	W	A	B	C	D	E	P	R2	G-T	S
	INCHES													
15	18	18	11	11	2"	4"	2'-0"	4'-0"	6'-0"	3'-0"	29"	12"	1½"	2½:1
18	22	22	13½	14	2½"	5"	2'-0"	4'-1"	6'-1"	3'-6"	32⅛"	13"	2½"	2½:1
21	26	26	15½	16	2¾"	7"	2'-3"	3'-10"	6'-1"	4'-0"	34⅛"	14"	2½"	2½:1
24	28½	29	18	18	3"	9"	2'-3"	3'-10"	6'-1"	5'-0"	36¹¹⁄16"	15"	2½"	2½:1
30	36¼	36	22½	23	3½"	10"	3'-1"	3'-0½"	6'-1½"	6'-0"	47¹¹⁄16"	20"	3"	2½:1
36	43¾	44	26⅝	27	4"	10½"	4'-0"	2'-1½"	6'-1½"	6'-6"	54⅜16"	22"	3½"	2½:1
42	51⅛	51	31⅜16	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"	70⅜16"	24"	4¼"	2½:1
54	65	65	40	40	5½"	1'-7"	5'-3"	2'-11"	8'-2"	8'-6"	72¹⁄16"	24"	4¾"	2¼:1
60	73	73	45	45	6"	1'-10"	5'-6"	2'-8"	8'-2"	9'-0"	77¹³⁄16"	24"	5"	2¼:1

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

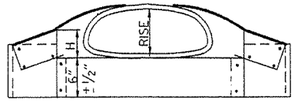


END VIEW
CONCRETE ARCH PIPE





CIRCULAR PIPE



C.M. ARCH PIPE

CIRCULAR PIPE

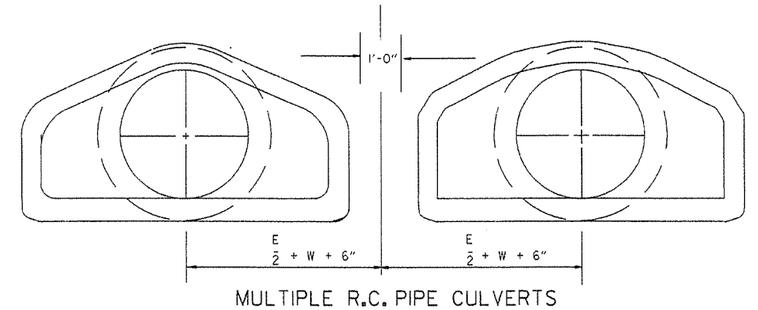
D. DIA.	GAUGE	A 1" ±	B. MAX.	H 1" ±	L 1½" ±	W 2" ±	S
		INCHES					
12	16	6	6	6	21	24	2½:1
15	16	7	8	6	26	30	2½:1
18	16	8	10	6	31	36	2½:1
21	16	9	12	6	36	42	2½:1
24	16	10	13	6	41	48	2½:1
30	14	12	16	8	51	60	2½:1
36	14	14	19	9	60	72	2½:1
42	12	16	22	11	69	84	2½:1
48	12	18	27	12	78	90	2½:1
54	12	18	30	12	84	102	2:1
60	12	18	33	12	87	114	1¾:1
66	12	18	36	12	87	120	1½:1
72	12	18	39	12	87	126	1 1/3:1

C.M. ARCH PIPE

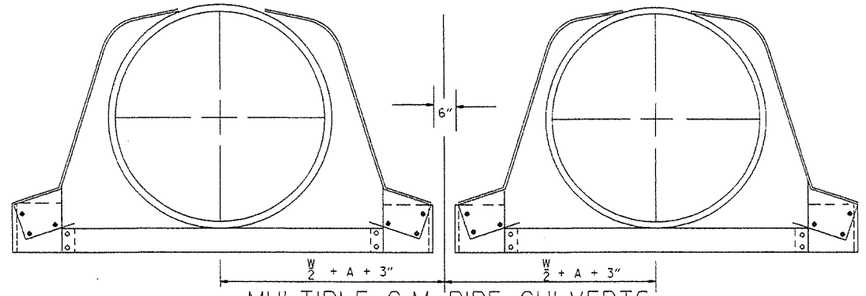
EQUIV. DIA.	SPAN	RISE	A 1" ±	B MAX.	H 1" ±	L 1½" ±	W 2" ±	S	GAUGE
	INCHES								
15"	17	13	7	9	6	19	30	2½:1	16
18"	21	15	7	10	6	23	36	2½:1	16
21"	24	18	8	12	6	28	42	2½:1	16
24"	28	20	9	14	6	32	48	2½:1	16
30"	35	24	10	16	6	39	60	2½:1	14
36"	42	29	12	18	8	46	75	2½:1	14
42"	49	33	13	21	9	53	85	2½:1	12
48"	57	38	18	26	12	63	90	2½:1	12
54"	64	43	18	30	12	70	102	2¼:1	12
60"	71	47	18	33	12	77	114	2¼:1	12

NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS, IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES, MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS



MULTIPLE R.C. PIPE CULVERTS



MULTIPLE C.M. PIPE CULVERTS

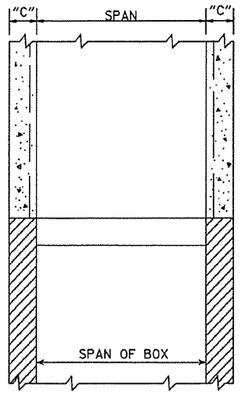
DATE	REVISION	FILMED
10-18-96	REVISED ASTM REF. TO AASHTO	10-18-96
5-15-80	REVISED DISTANCE BETWEEN MULTIPLE R.C.P. F.E.S.	664-5-15-80
7-14-78	C.M. ARCH SIZES TO CONFORM WITH AASHTO SIZES	752-7-14-78
8-22-75	ADDED MULTIPLE PIPE CULVERTS	517-8-22-75
12-5-74	REMOVED NOTE RE REINF. FOR R.C. F.E.S.	500-12-5-74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

ARKANSAS STATE HIGHWAY COMMISION

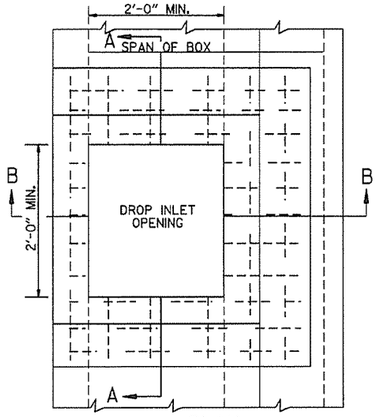
FLARED END SECTION

STANDARD DRAWING FES-2

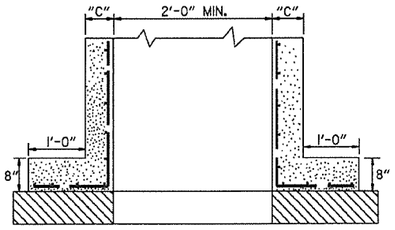
stdfes2.dgn



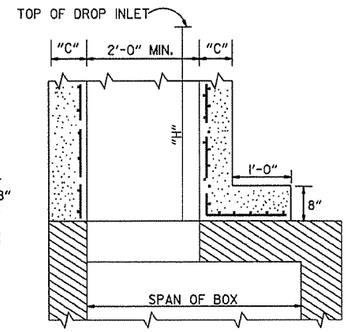
SECTION B-B



PLAN

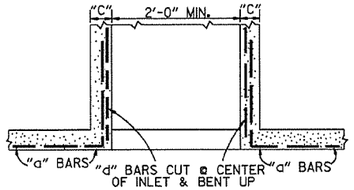


SECTION A-A

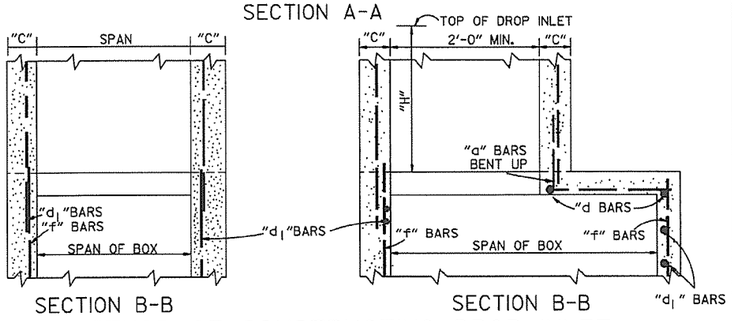


SECTION B-B

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



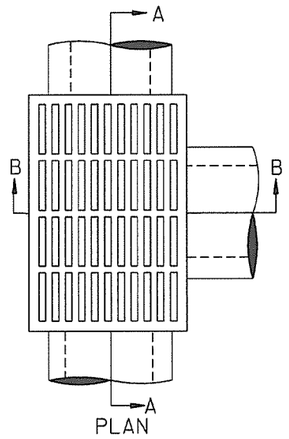
SECTION A-A



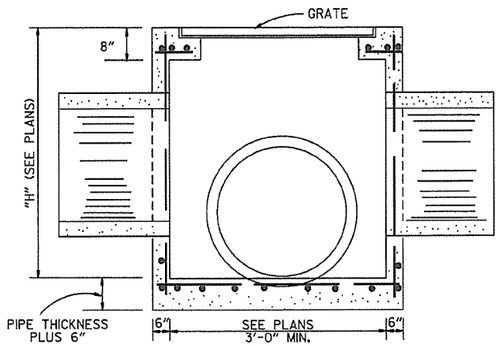
SECTION B-B SECTION B-B

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

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

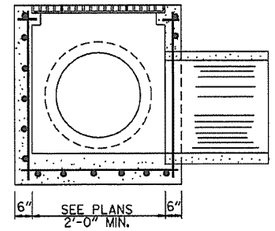


PLAN



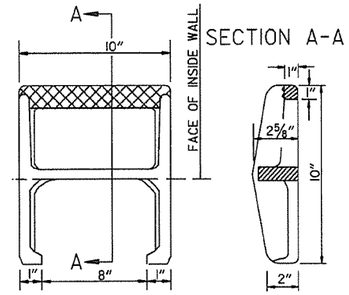
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE DROP INLET TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.



SECTION B-B

DROP INLET (TYPE E)

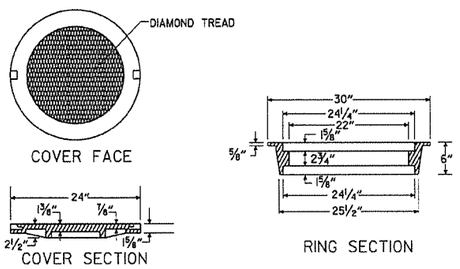


APPROX. WEIGHT = 11 LBS. (CAST IRON)

PLAN

NOTE: THIS DETAIL IS TYPICAL. OTHERS MAY BE USED WITH PRIOR APPROVAL OF THE ENGINEER.

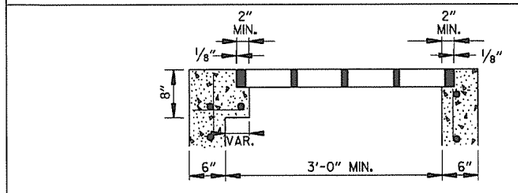
DETAIL OF STEP FOR DROP INLET



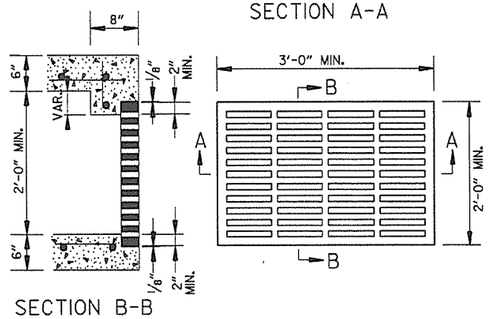
COVER SECTION

APPROXIMATE TOTAL WEIGHT = 333 LBS.

HEAVY DUTY RING & COVER



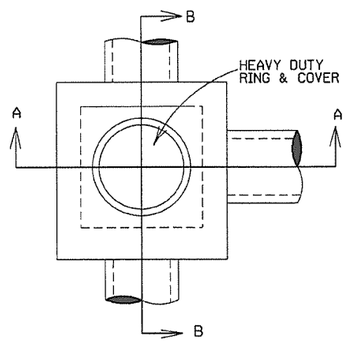
SECTION A-A



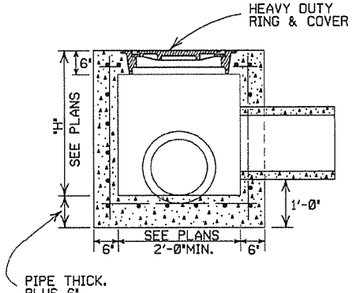
SECTION B-B

APPROXIMATE MINIMUM WATERWAY OPENING = 260 SQ. IN.

GRATE FOR TYPE E DROP INLET

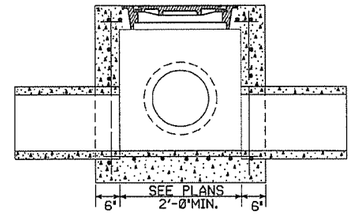


PLAN



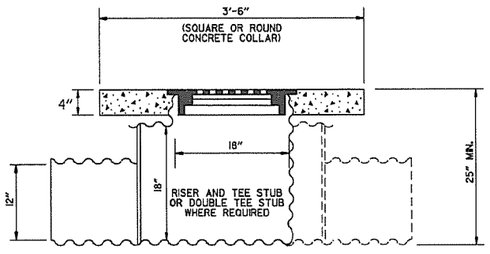
SECTION A-A

NOTE: REINF. BARS TO BE #4 BARS ON 6" CTRS. WITH 1½" MIN. COVER. THIS TYPE JUNCTION BOX TO BE USED WHERE NOT SUBJECTED TO TRAFFIC.

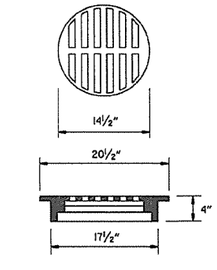


SECTION B-B

JUNCTION BOX (TYPE E)



NOTE: CONCRETE COLLAR TO BE CAST IN PLACE. 12" PIPE CULVERTS TO BE MEASURED AND PAID FOR AS " 12" SIDE DRAIN ".



USE NEENAH R-5801-C OR EQUIVALENT BICYCLE SAFE FRAME AND GRATE

DETAIL OF YARD DRAIN

GENERAL NOTES:

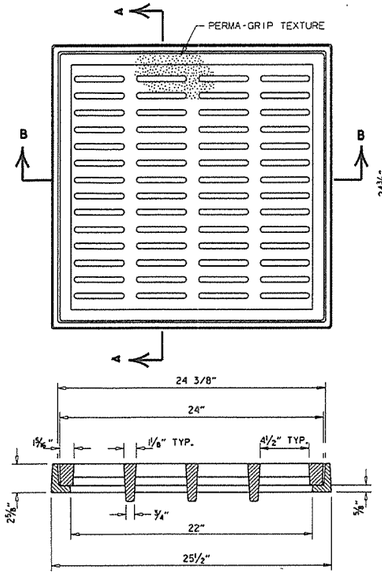
1. ALL EXPOSED CORNERS SHALL BE ¾" CHAMFERED.
2. STEPS SHALL BE INSTALLED ON 16" CENTERS ON ALL INLETS 4'-0" HIGH OR OVER, OR AS APPROVED BY THE ENGINEER.
3. EXPANSION JOINT MATERIAL SHALL BE ¾" PREFORMED FIBER.
4. GRATE OR GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105 CLASS 35B. GRATE MAY BE USED WITHOUT FRAME.
5. GRATE AND FRAME SHALL NOT BE PAINTED.
6. GRATE SHALL BE BICYCLE SAFE.
7. HEAVY DUTY RING SHALL ALWAYS BE INSTALLED WITH FLANGE ON TOP.
8. HEAVY DUTY RING AND COVER SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M105 CLASS 35B & AASHTO M306.
9. HEAVY DUTY RING AND COVER SHALL NOT BE PAINTED.
10. DIMENSIONS SHOWN FOR RING AND COVER ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR CASTINGS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR CASTING DESIGNS MAY BE MADE BY REFERRING TO PREVIOUSLY APPROVED DRAWINGS.

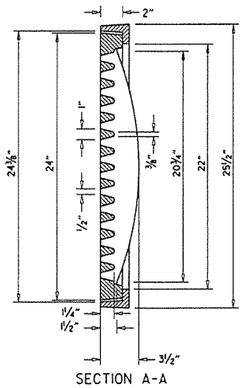
DATE REV.	REVISION	DATE FILMED
11-16-01	ADDED NOTE 10	
1-12-00	REVISED HEAVY DUTY RING & COVER	
7-02-98	CHANGED GRATE DETAIL, DELETED DI(TYPE D), REPLACED RING & COVER W/HEAVY DUTY RING & COVER, ADDED JUNCTION BOX (TYPE E)	
6-26-97	ADDED DIMENSION TO TYPE IV-A	
10-18-96	ADDED DETAIL OF YARD DRAIN	
8-15-91	DELETE TYPE IV GRATE	
7-15-88	REVISED STEP DETAIL	
5-20-83	REVISED DETAILS OF GRATES (TYPE IV & IV-A)	
2-4-83	ADDED GENERAL NOTE NO. 4	
3-2-81	ADDED TYPE IV-A GRATE	
5-22-74	DELETED INLET (TYPE F) & GRATE (TYPE III)	
10-2-72	REVISED AND REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF DROP INLETS & JUNCTION BOXES

STANDARD DRAWING FPC-9





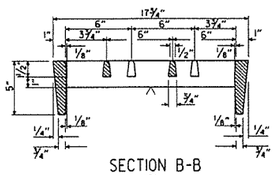
SECTION A-A

SECTION B-B

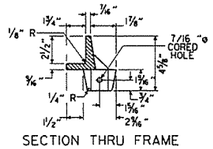
DETAILS OF PEDESTRIAN GRATE AND FRAME

GENERAL NOTES (PEDESTRIAN GRATE & FRAME)

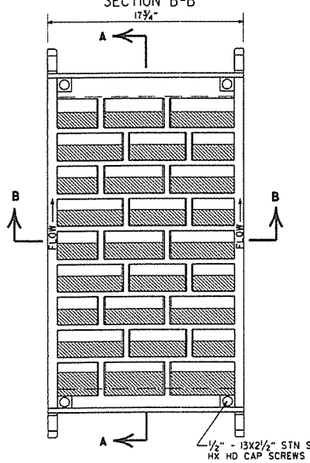
1. THE PEDESTRIAN GRATE SHALL BE ORIENTED IN THE TOP OF THE DROP INLET SO THAT THE ½" OPENINGS ARE PERPENDICULAR TO THE PATH OF PEDESTRIAN TRAVEL.
2. THE PEDESTRIAN GRATE AND FRAME SHALL BE CONSTRUCTED OF CAST IRON AND SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR GRAY IRON CASTINGS AASHTO M 105, CLASS 35B, & AASHTO M 306.
3. THE GRATE AND FRAME SHALL NOT BE PAINTED.
4. THE GRATE AND FRAME SHALL BE INSTALLED IN THE DROP INLET IN THE ASSEMBLED POSITION.
5. THE APPROXIMATE WEIGHT OF THE GRATE AND FRAME SHALL BE 211LBS.
6. THE MINIMUM WATERWAY OPENING SHALL BE 122 SQ. IN.

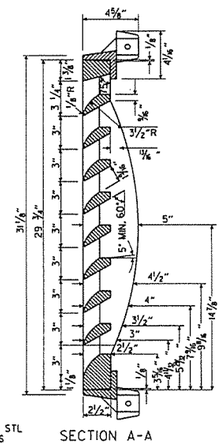


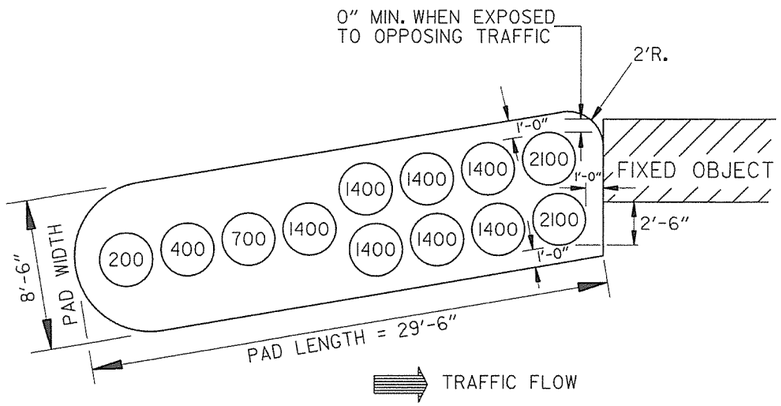
SECTION B-B



SECTION THRU FRAME

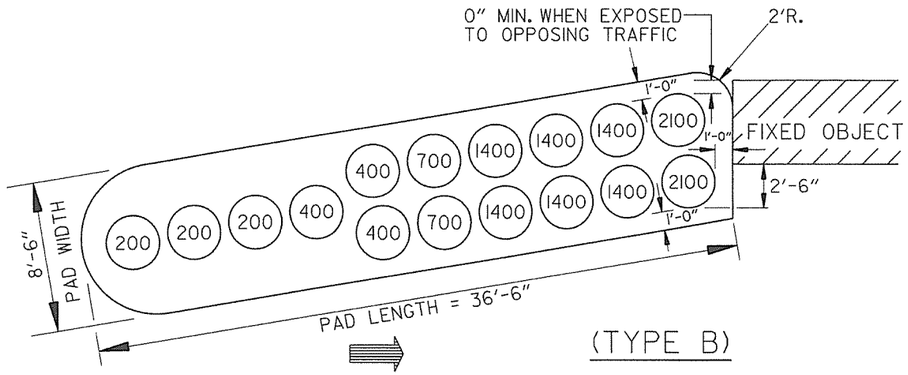



4⅝"
¼"
4⅛"
⅜"
3½" R
⅛"
3¼"
3½"
3"
3"
3



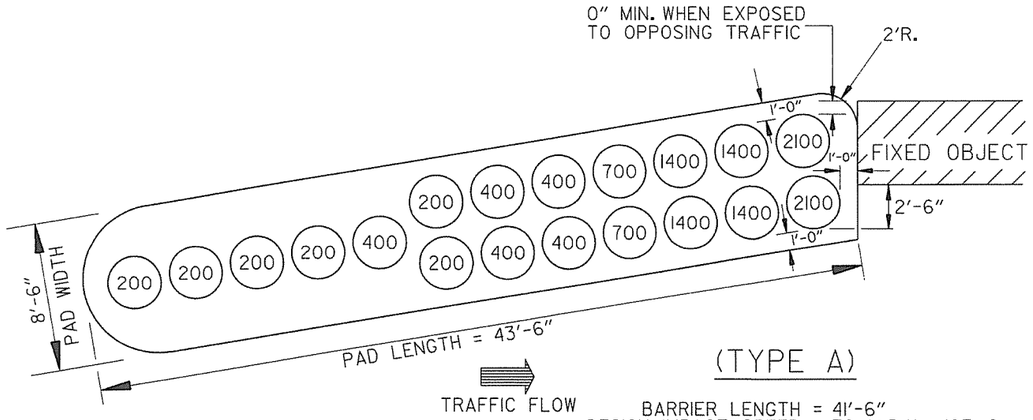
(TYPE C)

BARRIER LENGTH = 27'-6"
DESIGN IMPACT SPEED = 50 M.P.H.= 73.3 fps



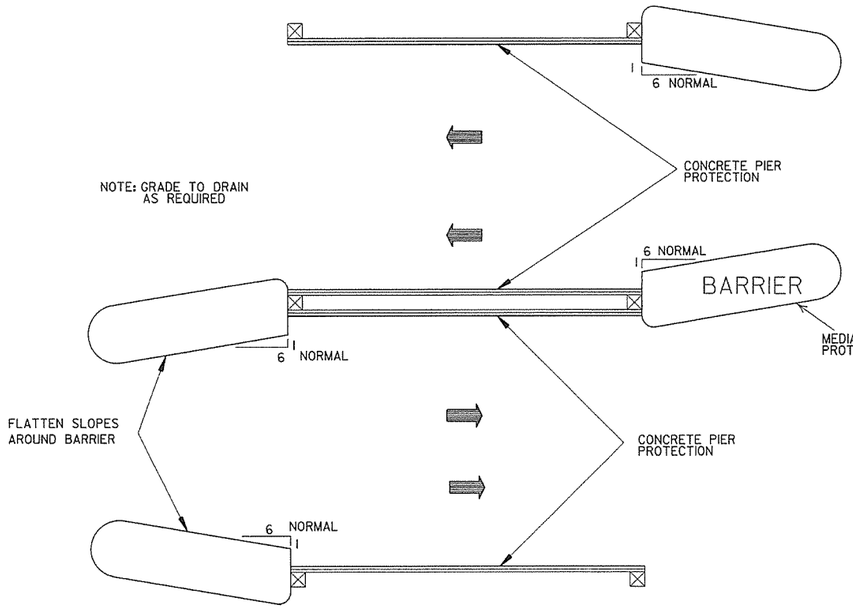
(TYPE B)

BARRIER LENGTH = 34'-6"
DESIGN IMPACT SPEED = 60 M.P.H.= 88 fps

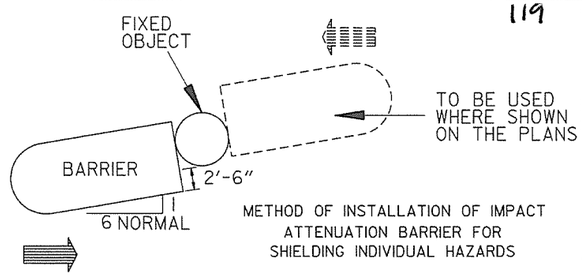


(TYPE A)

BARRIER LENGTH = 41'-6"
DESIGN IMPACT SPEED = 70 M.P.H.= 103 fps



METHOD OF INSTALLATION OF
IMPACT ATTENUATION BARRIER
FOR PIER PROTECTION



METHOD OF INSTALLATION OF IMPACT
ATTENUATION BARRIER FOR
SHIELDING INDIVIDUAL HAZARDS

APPROXIMATE QUANTITIES PER PAD

TYPE	ALTERNATE #1		ALTERNATE #2
	AGGR. BASE COURSE	A.C.H.M. SURFACE COURSE	P.C.CONC. BASE (4"U.T.)
	TONS	TONS	SQ.YDS.
A	9.7	4.6	41.6
B	8.1	3.8	34.9
C	6.6	3.1	28.3

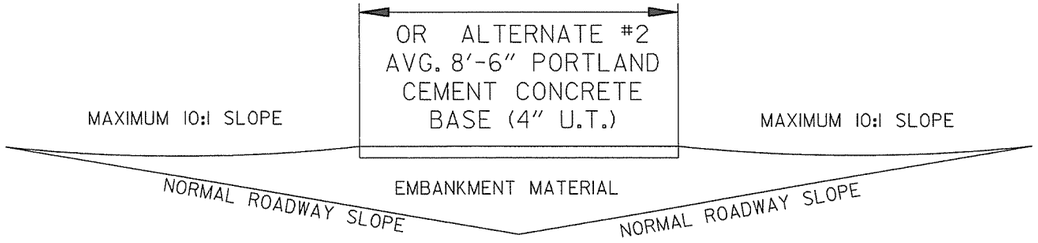
NOTE: APPROXIMATE QUANTITIES SHOWN ARE FOR INFORMATIONAL PURPOSES ONLY. PAYMENT TO BE INCLUDED IN UNIT PRICE BID FOR IMPACT ATTENUATION BARRIER.

GENERAL NOTES

1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 6" AT THE TOP.
3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

ALTERNATE #1
AVG. 8'-6" A.C.H.M. SURF. COURSE(1/2")
220 LBS. PER SQ. YD. &
AGGREGATE BASE COURSE
(4" COMPACTED DEPTH)

OR ALTERNATE #2
AVG. 8'-6" PORTLAND
CEMENT CONCRETE
BASE (4" U.T.)



DETAIL OF BARRIER PAD

NOTE: BARRIER PAD TO BE SKEWED TOWARD ONCOMING TRAFFIC
A MAXIMUM OF 6:1 WITH 6:1 BEING NORMAL

DATE	REVISION	DATE FILMED
10-15-09	ADDED REFERENCE TO MASH	
11-29-07	REVISED TY. A & TY. C ARRAYS	
11-19-98	REVISED FIXED OBJECT	
11-18-98	REV. NOTES & TYPE A MOD. WTS.	
10-18-96	REDRAWN	
7-15-88	CONFORMED TO 1988 SPECS	
7-29-87	REDRAWN	

ARKANSAS STATE HIGHWAY COMMISSION

IMPACT ATTENUATION BARRIER

STANDARD DRAWING IB-1

REINFORCED CONCRETE ARCH PIPE DIMENSIONS

EQUIV. DIA.	SPAN		RISE	
	AASHTO M 206	AHTD NOMINAL	AASHTO M 206	AHTD NOMINAL
INCHES	INCHES			
15	18	18	11	11
18	22	22	13½	14
21	26	26	15½	16
24	28½	29	18	18
30	36¼	36	22½	23
36	43⅜	44	26⅝	27
42	51⅛	51	31⅝	31
48	58½	59	36	36
54	65	65	40	40
60	73	73	45	45
72	88	88	54	54
84	102	102	62	62
90	115	115	72	72
96	122	122	77½	77
108	138	138	87⅛	87
120	154	154	96⅞	97
132	168¾	169	106½	107

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M206.

REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE DIMENSIONS

EQUIV. DIA.	AASHTO M 207	
	SPAN	RISE
INCHES	INCHES	
18	23	14
24	30	19
27	34	22
30	38	24
33	42	27
36	45	29
39	49	32
42	53	34
48	60	38
54	68	43
60	76	48
66	83	53
72	91	58
78	98	63
84	106	68

THE MEASURED SPAN AND RISE SHALL NOT VARY MORE THAN ± 2 PERCENT FROM THE VALUES SPECIFIED BY AASHTO M207.

CONSTRUCTION SEQUENCE

1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
2. INSTALL PIPE TO GRADE.
3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
4. PLACE AND COMPACT THE HAUNCH AREA UP TO THE MIDDLE OF THE PIPE.
5. COMPLETE BACKFILL ACCORDING TO SUBSECTION 606.03.(f)(1).

NOTE: HAUNCH AND STRUCTURAL BEDDING MATERIAL WILL NOT BE PAID FOR SEPARATELY, BUT COMPENSATION WILL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF CONCRETE PIPE.

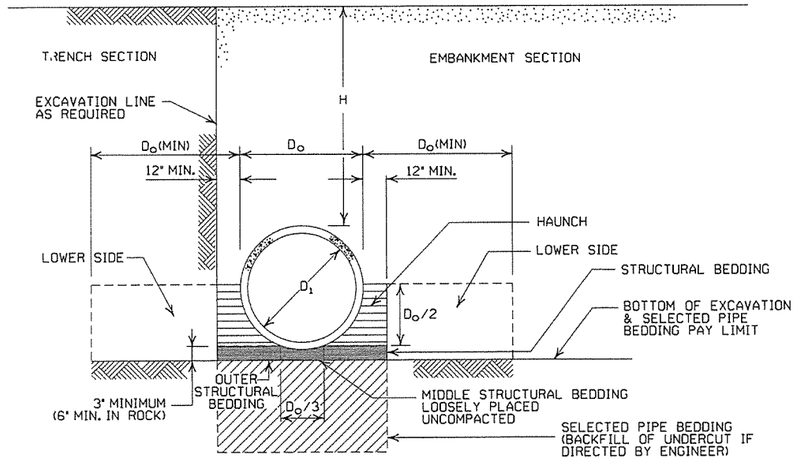
- LEGEND -

D_i = NORMAL INSIDE DIAMETER OF PIPE
D_o = OUTSIDE DIAMETER OF PIPE
H = FILL COVER HEIGHT OVER PIPE (FEET)
MIN. = MINIMUM
▨ = UNDISTURBED SOIL

INSTALLATION TYPE	MATERIAL REQUIREMENTS FOR HAUNCH AND STRUCTURAL BEDDING
TYPE 1	AGGREGATE BASE COURSE (CLASS 5 OR CLASS 7)
TYPE 2	SELECTED MATERIALS (CLASS SM-1, SM-2, OR SM-4) OR TYPE 1 INSTALLATION MATERIAL*
TYPE 3**	AASHTO CLASSIFICATION A-1 THRU A-6 SOIL OR TYPE 1 OR 2 INSTALLATION MATERIAL

* SM-3 WILL NOT BE ALLOWED.

** MATERIALS SHALL NOT INCLUDE ORGANIC MATERIALS OR STONES LARGER THAN 3 INCHES.



EMBANKMENT AND TRENCH INSTALLATIONS

1. MATERIAL IN THE HAUNCH AND OUTER STRUCTURAL BEDDING SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.
2. FOR TRENCHES WITH WALLS OF NATURAL SOIL, THE DENSITY OF THE SOIL IN THE LOWER SIDE ZONE SHALL BE AS FIRM AS THE 95% DENSITY REQUIRED FOR THE HAUNCH. IF THE EXISTING SOIL DOES NOT MEET THIS CRITERIA, IT SHALL BE REMOVED AND RECOMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OF MATERIAL USED.
3. FOR EMBANKMENTS, THE MATERIAL IN THE LOWER SIDE ZONE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

GENERAL NOTES

1. CONCRETE PIPE CULVERT CONSTRUCTION SHALL CONFORM TO ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (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

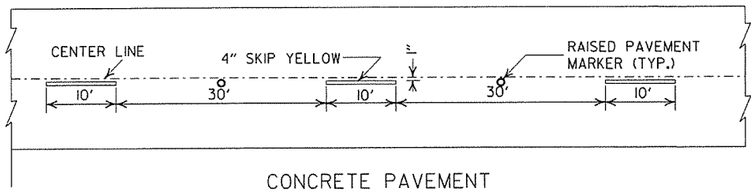
NOTE: TYPE 1 INSTALLATION WILL NOT BE ALLOWED FOR ARCH & HORIZONTAL ELLIPTICAL PIPE CULVERTS.

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	

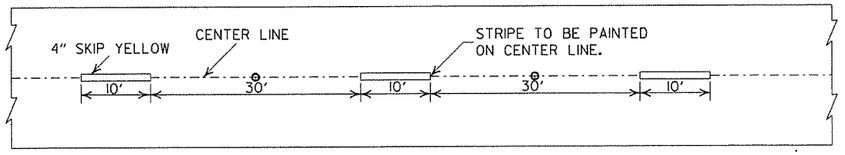
ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE PIPE CULVERT FILL HEIGHTS & BEDDING

STANDARD DRAWING PCC-1

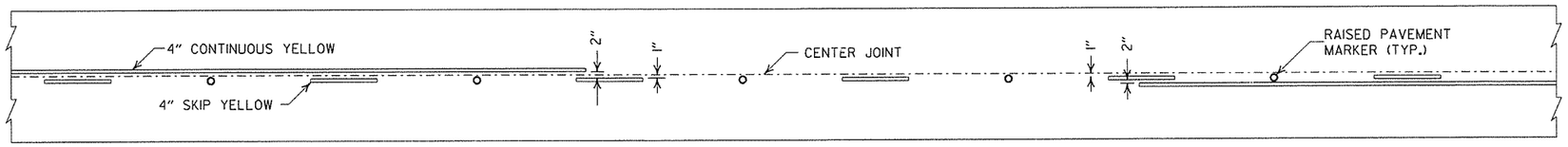


CONCRETE PAVEMENT

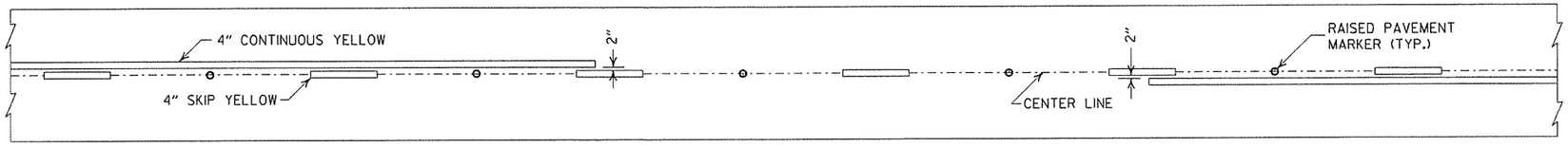


ASPHALT PAVEMENT

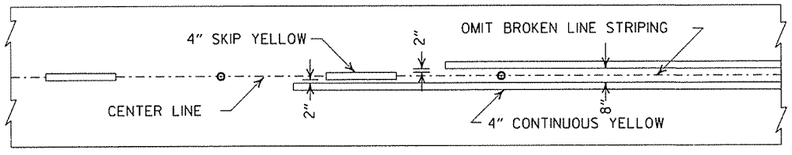
BROKEN LINE STRIPING



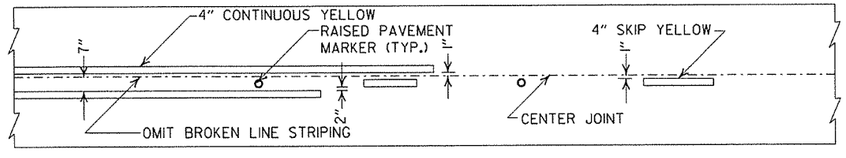
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

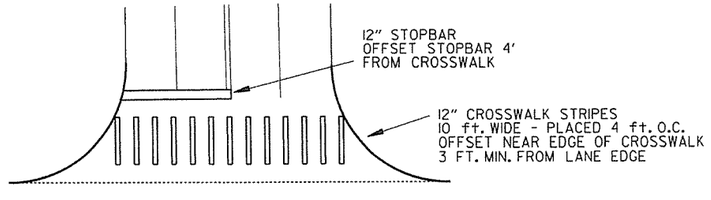


ASPHALT PAVEMENT



CONCRETE PAVEMENT

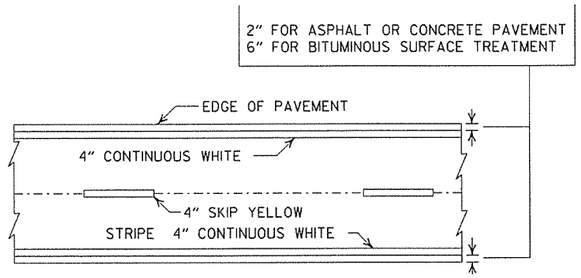
STRIPING AT ADJACENT NO PASSING LANES



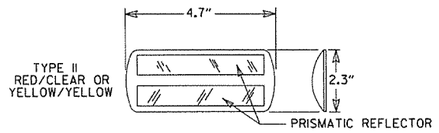
CROSSWALK AND STOPBAR DETAILS

NOTES:

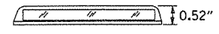
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.



PAVEMENT EDGE LINE MARKING



NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

GENERAL NOTES:

THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.

THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", LATEST REVISION.

NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.

DATE	REVISION	FILMED
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

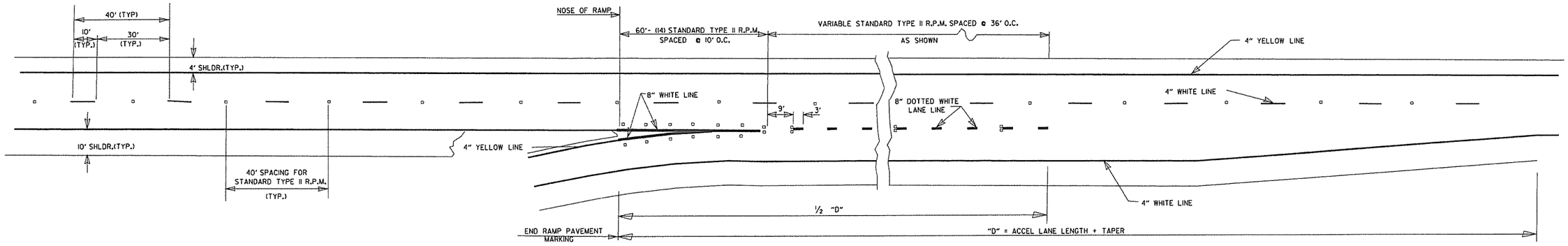
PAVEMENT MARKING QUANTITIES
(BASED ON 700' ACCEL. LANE + 300' TAPER)

ENTRANCE RAMP

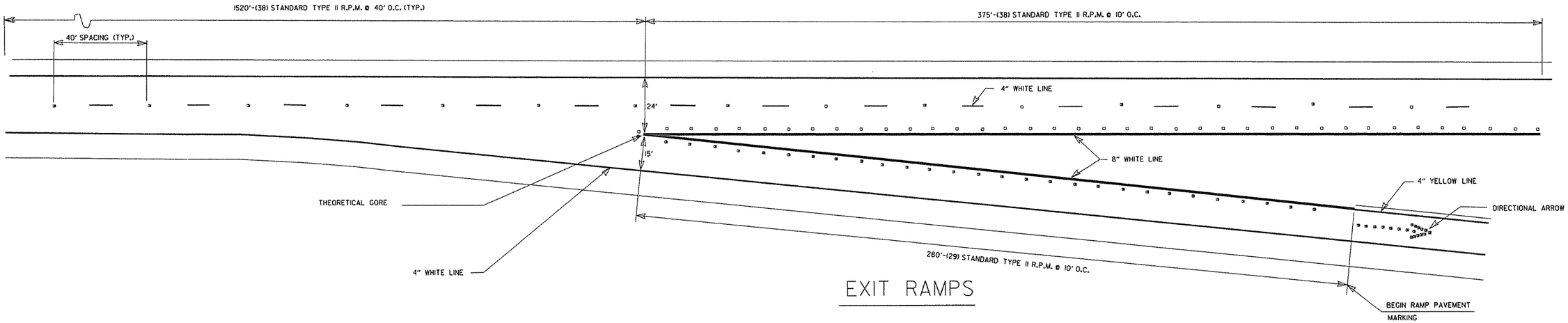
8" WHITE = 228 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH

EXIT RAMP

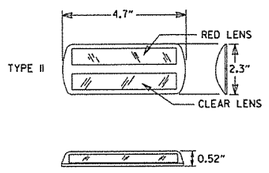
4" WHITE = 280 LIN. FT.
8" WHITE = 655 LIN. FT.
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 38 EACH



ENTRANCE RAMPS

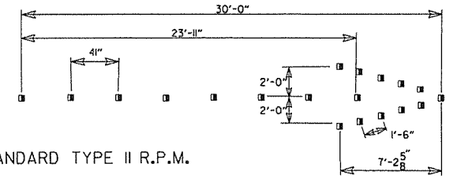


EXIT RAMPS



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

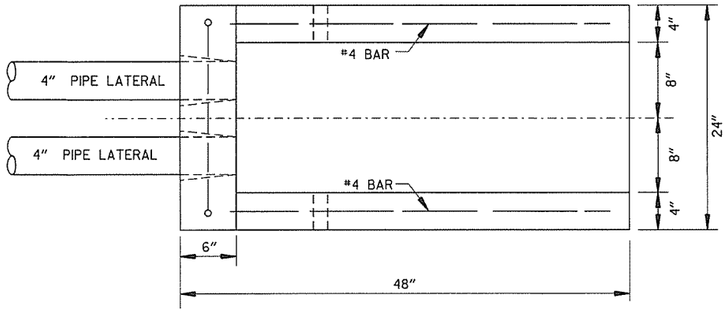
PERMANENT PAVEMENT MARKING ON ACCESS CONTROLLED ROADWAYS

STANDARD DRAWING PM-2

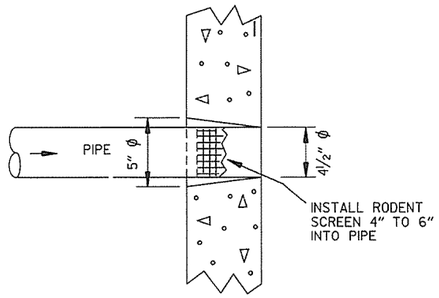
NOTE:
1. GRANULAR BACKFILL TO BE SUBSIDIARY TO PIPE UNDERDRAIN.

2. UNLESS OTHERWISE SPECIFIED ON THE PLANS, THE UNDERDRAIN COVER SHALL BE THOROUGHLY COMPACTED EARTH AND SHALL BE SUBSIDIARY TO PIPE UNDERDRAIN.

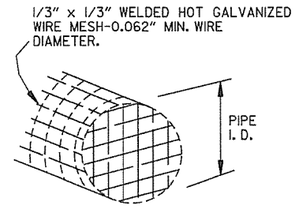
3. GRANULAR MATERIAL SHALL BE WRAPPED WITH GEOTEXTILE FABRIC. LAP FABRIC 12" OR THE WIDTH OF THE TRENCH AT THE TOP.



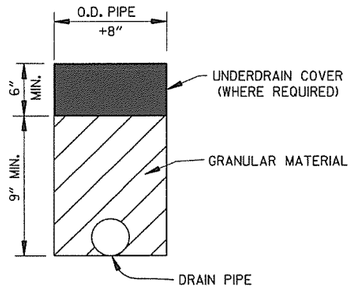
PLAN VIEW

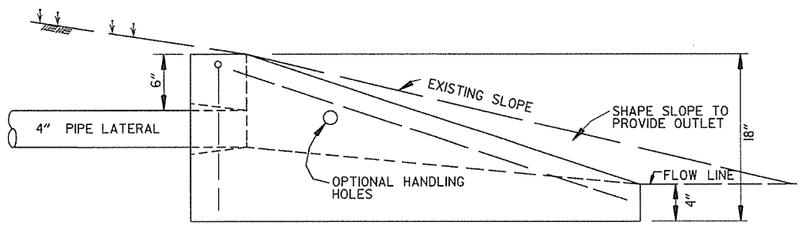


DETAIL OF HOLE FOR 4" PIPE

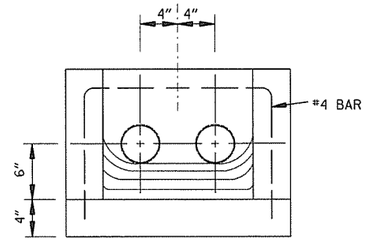


DETAIL OF RODENT SCREEN

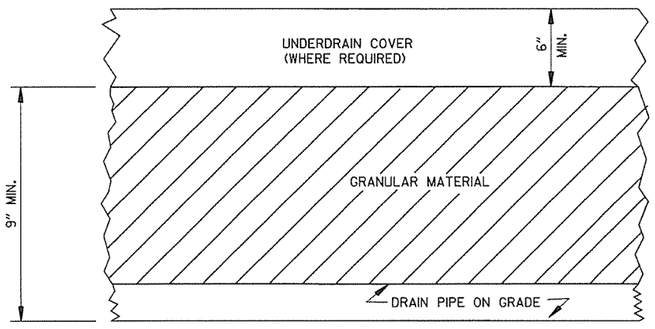




SIDE VIEW

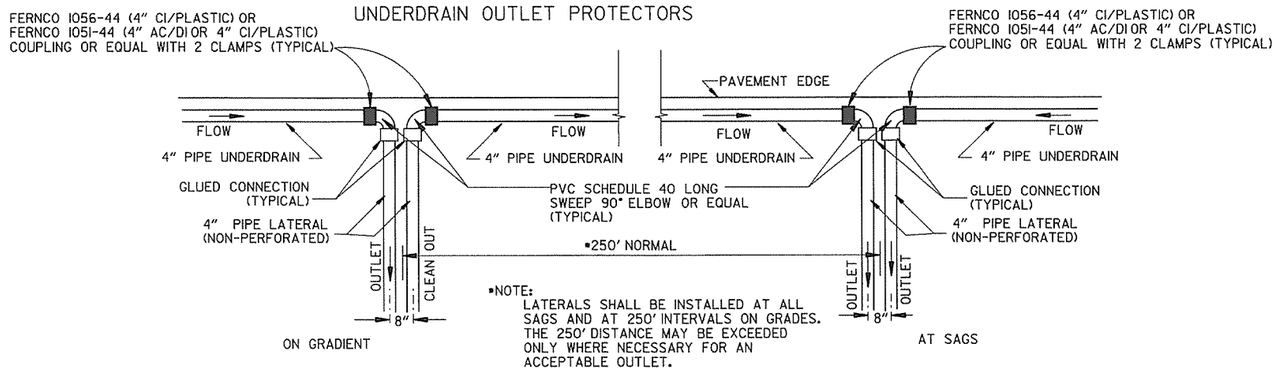


FRONT VIEW



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

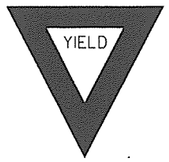
7-20-95 INSTD.PUI

R1-1



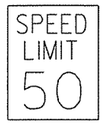
STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R2-5A



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R2-5C



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



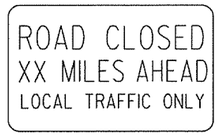
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

RII-2



48"X30"

RII-3A



60"X30"

RII-4



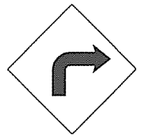
60"X30"

RSP-1



48"X30"

WI-1



STD. 36"X36"
FWY. 48"X48"

WI-2



STD. 36"X36"
FWY. 48"X48"

WI-3



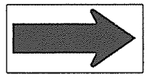
STD. 48"X48"

WI-4



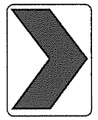
STD. 48"X48"

WI-6



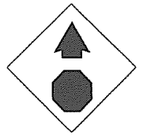
STD. 48"X24"
SPECIAL 60"X30"

WI-8



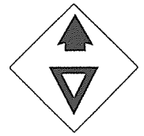
STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



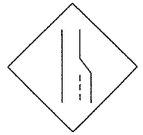
STD. 36"X36"
SPECIAL 48"X48"

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



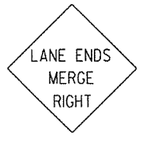
EXPWY. 36"X36"
SPECIAL 48"X48"

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



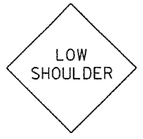
STD. 18"X18"

W8-11



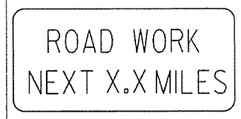
STD. 36"X36"
FWY. 48"X48"

W8-9



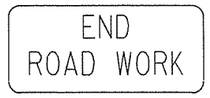
STD. 36"X36"
FWY. 48"X48"

G20-1



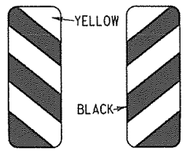
60"X24"

G20-2



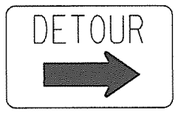
48"X24"

OM-3L OM-3R



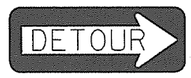
12"X36"

M4-9



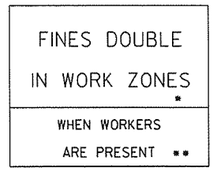
STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10



48"X18"

R55-1



36"X60"

* USE 6" C LETTERS
** USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	½ MILE
1000 FT	¾ MILE
1500 FT	1 MILE
	AHEAD

GENERAL NOTES:

1. ALL TRAFFIC CONTROL DEVICES USED ON ROAD CONSTRUCTION SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND TO THE STANDARD HIGHWAY SIGNS, LATEST EDITION, OR AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION.

2. TRAFFIC CONTROL DEVICES SHALL BE SET UP JUST BEFORE THE START OF CONSTRUCTION OPERATIONS AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SUCH CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS NEEDED AND REMOVED THEREAFTER.

3. EXISTING SIGNS AND CONSTRUCTION SIGNS SHALL BE KEPT IN PROPER POSITION, AND BE CLEAN AND LEGIBLE AT ALL TIMES. SIGNS THAT DO NOT APPLY TO EXISTING CONDITIONS SHALL BE REMOVED. SIGNS THAT ARE DAMAGED, DEFACED, OR THAT ACCUMULATE DIRT DURING CONSTRUCTION SHALL BE CLEANED, REPAIRED, OR REPLACED.

• 4. SIGNS ARE USUALLY MOUNTED ON A SINGLE POST, ALTHOUGH THOSE WIDER THAN 36" OR LARGER THAN 10 SQ. FT. SHALL BE MOUNTED ON TWO POSTS OR ABOVE A TYPE III BARRICADE.

• 5. SIGN POSTS DIRECT BURIED IN SOIL SHALL BE 2 LB. MINIMUM CHANNEL POST OR 4"x4" WOOD POSTS. CHANNEL POSTS SHALL BE PAINTED GREEN. WOOD POSTS SHALL BE PAINTED WHITE. ALL POSTS SHALL BE NEATLY CONSTRUCTED, AND SHALL BE REPLUMBED, CLEANED, OR REPAIRED AS NEEDED FOR THE DURATION OF THE JOB. THERE SHALL NOT BE MORE THAN 2 POSTS IN A 7' PATH FOR WOOD OR CHANNEL POSTS. ANY CHANNEL POST SPLICE SHALL BE IN ACCORDANCE WITH STANDARD DRAWING TC-3.

6. POST MOUNTED SIGNS IN RURAL AREAS SHALL BE CONSTRUCTED WITH THE NEAR EDGE OF THE SIGN FROM 6 TO 12 FEET FROM THE PAVEMENT EDGE. SIGNS IN URBAN AREAS AND BARRICADE MOUNTED SIGNS SHALL BE MOUNTED A MINIMUM OF 2 FEET FROM THE PAVEMENT EDGE.

7. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN URBAN AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE. ALL POST AND BARRICADE MOUNTED SIGNS MOUNTED IN RURAL AREAS SHALL BE MOUNTED A MINIMUM DISTANCE OF 7' FROM THE BOTTOM OF THE SIGN TO THE ROADWAY SURFACE, EXCEPT A MINIMUM OF 6' SHALL BE USED WHEN MOUNTING AN ADVISORY SIGN BELOW A WARNING SIGN. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR INTERMEDIATE TERM STATIONARY WORK CONDITIONS. THE SIGNS MINIMUM MOUNTING HEIGHT SHALL BE 5'. RETROREFLECTIVE DEVICES SHALL BE USED. TEMPORARY SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, AND MOBILE CONDITIONS. THEY SHALL BE NO LESS THAN ONE (1) FOOT ABOVE THE TRAVELED WAY. LONG-TERM STATIONARY SIGNS SHALL BE DIRECT BURIED IN SOIL, UNLESS CONDITIONS NECESSITATE THE USE OF PORTABLE SIGNS, OR AS APPROVED BY THE ENGINEER. CONCRETE PADS, CONCRETE OR ROCK BALLAST, OR OTHER SOLID MATERIALS SHALL NOT BE UTILIZED WITH PORTABLE SIGN SUPPORTS.

8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.

9. MOST OF THE SIGNS SHOWN ARE ORIENTED TO THE RIGHT. HOWEVER, THIS DOES NOT PRECLUDE THE USE OF MIRROR IMAGES OF THESE SIGNS WHERE THE REVERSE ORIENTATION MIGHT BETTER CONVEY TO MOTORISTS THE PROPER DIRECTION OF MOVEMENT.

10. R55-1 SIGNS SHALL BE PLACED AT LEAST 1500' BUT NOT MORE THAN 1 MILE IN ADVANCE OF THE WORK ZONE. IF A SPEED LIMIT REDUCTION IS IN EFFECT, THE SIGN SHALL BE PLACED A MINIMUM OF 500' IN ADVANCE OF THE "REDUCED SPEED AHEAD" SIGN.

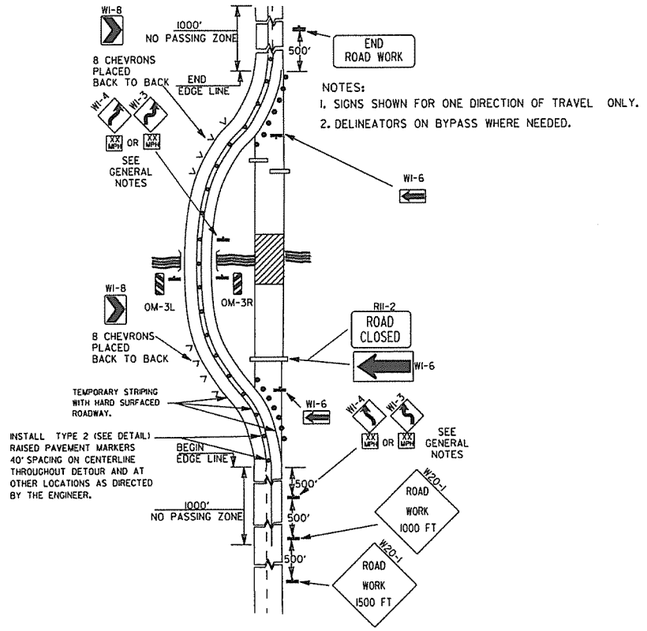
• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

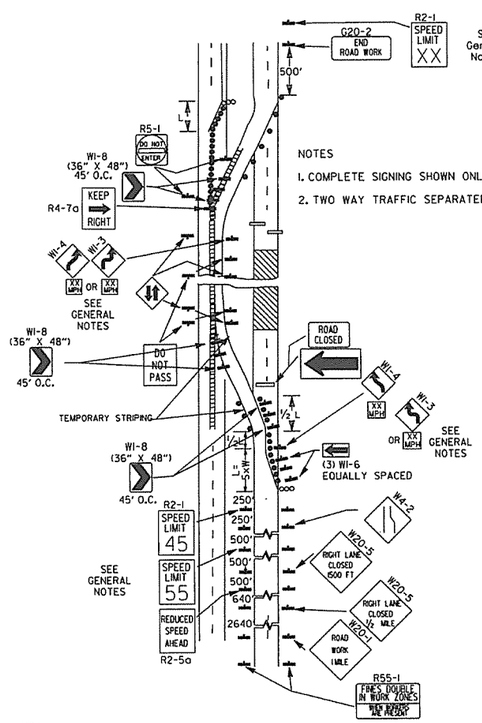
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



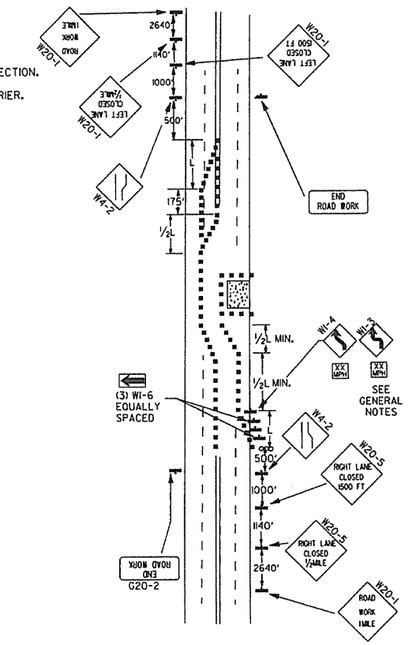
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

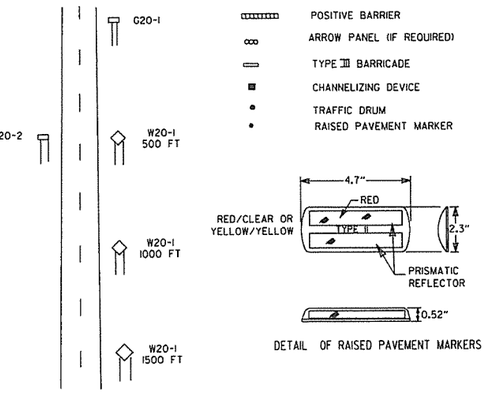


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



TYPICAL ADVANCE WARNING SIGN PLACEMENT

DETAIL OF RAISED PAVEMENT MARKERS

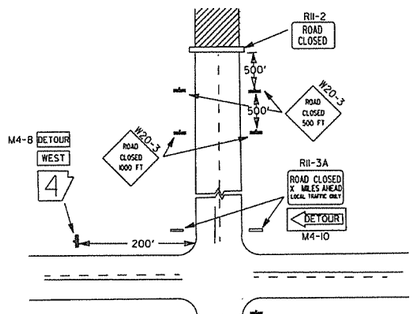
TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

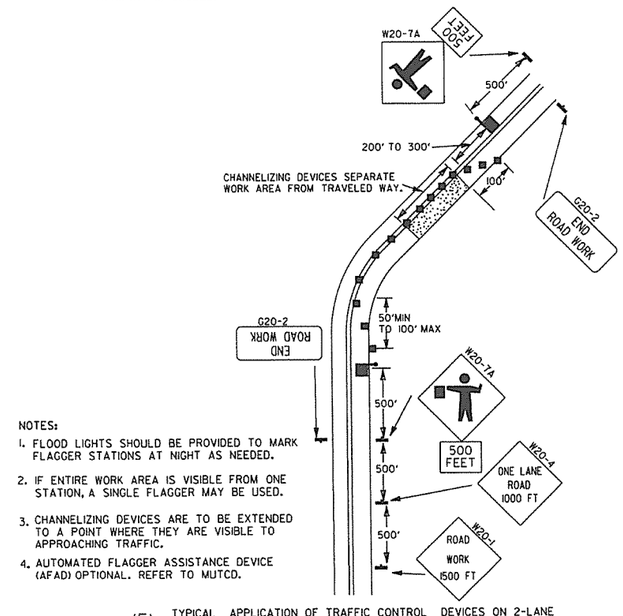
WHERE:
L= MINIMUM LENGTH OF TAPER.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.
W= WIDTH OF OFFSET.

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 R2-5A SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
3. WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(45) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.



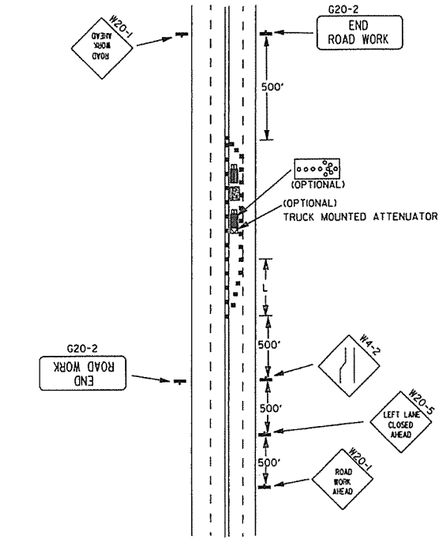
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.



NOTES:
1. FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
2. IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) OPTIONAL. REFER TO MUTCD.

(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



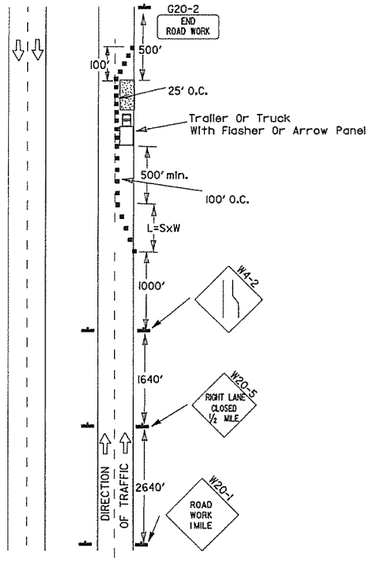
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

DATE	REVISION	FILMED
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-8-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

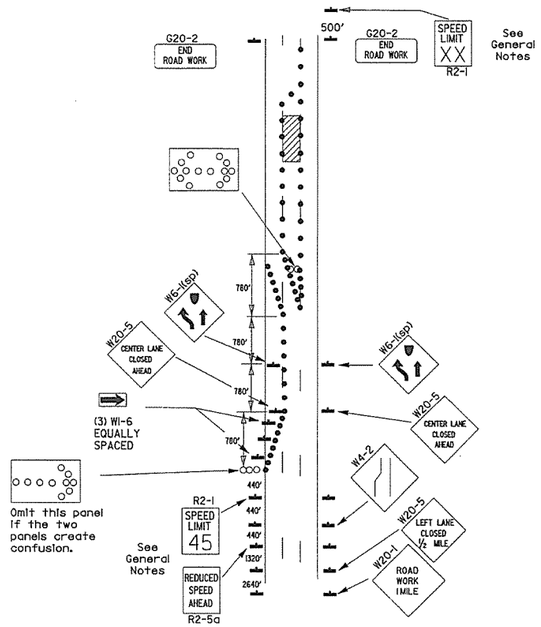
ARKANSAS STATE HIGHWAY COMMISSION

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.



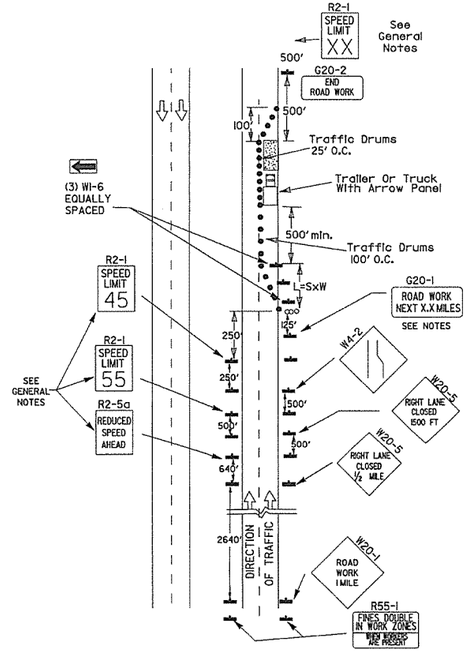
(B) Typical application - 3-lane oneway roadway where center lane is closed.

KEY:

- Arrow Panel (If Required)
- Channelizing Device
- Traffic drum

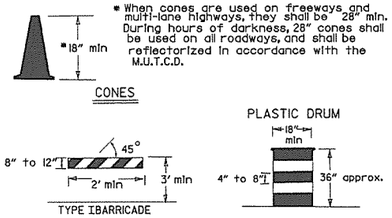
GENERAL NOTES:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the Roadway Design Division.
2. When the existing speed limit is 55mph and the plans require a speed limit of 45mph, the R2-1(55) shall be omitted and the R2-5A shall be installed at that location. Additional R2-1 45mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
3. When the existing speed limit is 65mph and the plans require a speed limit of 55mph, the R2-1(45) shall be omitted. Additional R2-1 55mph speed limit signs shall be installed at a maximum of 1mile intervals. At the end of the work area a R2-1(XX) shall be installed to match original speed limit.
4. The maximum spacing between channelizing devices in a taper should be approximately equal in feet to the speed limit. Beyond the taper, maximum spacing shall be two times the speed limit or as directed by the Engineer.
5. Warning lights and/or flags may be mounted to signs or channelizing devices at night as needed.
6. Pavement markings no longer applicable which might create confusion in the minds of vehicle operators shall be removed or obliterated as soon as practicable.
7. The G20-1 sign will be required on jobs of over two miles in length. When the lane closure is not at the beginning of the project, the G20-1 sign shall be erected 125' in advance of the job limit. Additional W20-1 (1 MILE) signs are not required in advance of lane closures that begin inside the project limits.
8. Flaggers shall use STOP/SLOW paddles for controlling traffic through work zones. Flags may be used only for emergency situations.
9. All plastic drums and cones shall meet the requirements of NCHRP-350 or Manual For Assessing Safety Hardware (MASH).
10. Trailer mounted devices such as arrow panels and portable changeable message signs shall be delineated by affixing conspicuity material in a continuous line on the face of the trailer. When placed on or adjacent to the shoulder and not behind a positive barrier, these devices shall be delineated by placing five (5) traffic drums, equally spaced along the traffic side of the device.



(C) Typical application - construction operations of intermediate to long term duration on a 4-lane divided roadway where half of the roadway is closed.

Channelizing devices



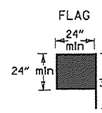
NOTE:
For all road closures, the Type III barricades shall be of sufficient length to extend across entire roadway.

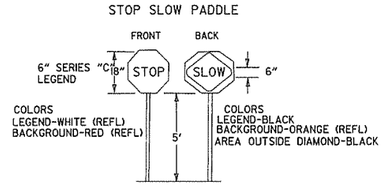
TRAFFIC CONTROL DEVICES FOR VERTICAL PAVEMENT DIFFERENTIALS

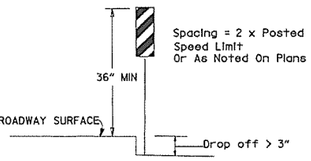
VERTICAL DIFFERENTIAL	LOCATIONS	TRAFFIC CONTROL
1" to 3"	Centerline, lane lines	W8-11
1" to 3"	Edge of shoulder	W8-9
Greater than 3"	Lane lines	Standard lane closure required
Greater than 3"	Edge of traveled lane	*RSP-1 and vertical panels, drums or concrete barrier
Greater than 3"	Edge of shoulder	*Vertical panels, drums or concrete barrier

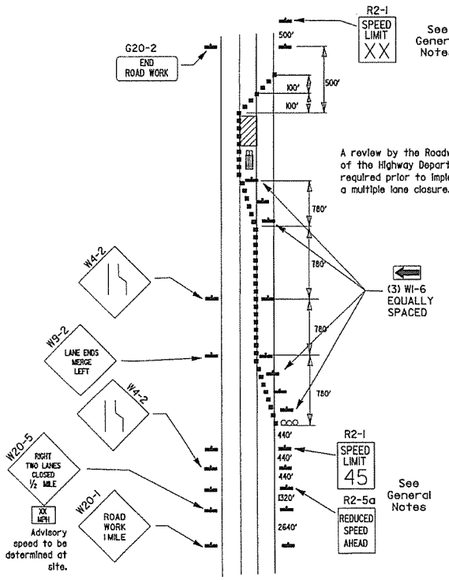
* When shown on the plans concrete barrier will be used.

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.

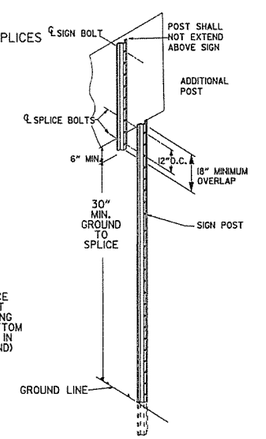








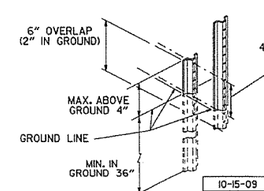
(D) Typical application - closing multiple lanes of a multilane highway.



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.



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	
DATE	REVISION	FILMED

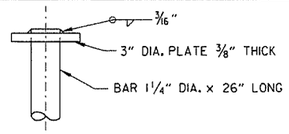
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

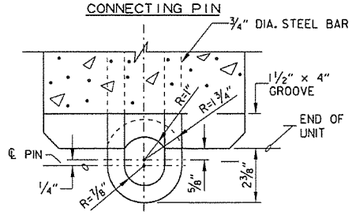
STANDARD DRAWING TC-3

REINFORCING BAR TABLE PER BARRIER UNIT

MARK	LOCATION	BAR SIZE	(NO. BARS)	SKETCH
H-1	HORIZONTAL IN BARRIER TIED INSIDE V-1 BARS	#5	(6)	19'-3"
H-2	CENTERED ABOVE DRAIN SLOTS LONG. & TRANSVERSELY	#5	(6)	6'-6"
H-3	TIED ABOVE H-1 BARS TO SUPPORT H-2, TIED TO V-1	#4	(2)	1'-6"
S-1	OVER LIFT HOLES	#4	(2)	2'-5", 90°, 3 3/8" R, LIFTING HOLE
S-2	HORIZ. AROUND SLOTS BETWEEN V-1'S @ DRAIN SLOTS	#4	(2)	1 1/2" R, SLOTS, 7", 1'-6", 1" MIN. CLEAR TO BAR; 5'-1" BAR W/(4) 1 1/2" R BENDS & MIN. 1'-0" OVERLAP
V-1	VERTICAL IN BARRIER(3) EACH END & (2) AT EACH DRAIN SLOTS	#5	(16)	TOTAL LENGTH 4'-9", 2 3/16" R, 12°, 1'-2", 9", 2'-1 3/8", 4 3/8"

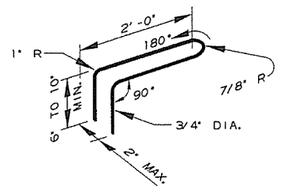


CONNECTING PIN

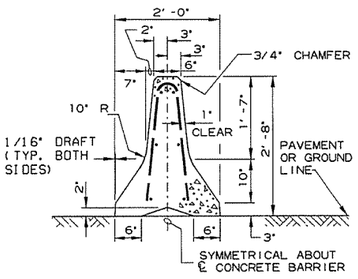


SECTION E-E

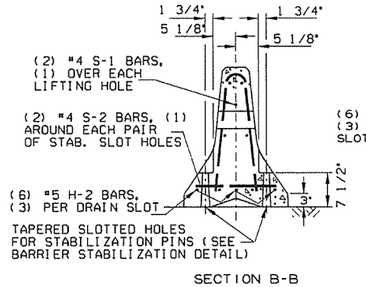
CONNECTION DETAILS



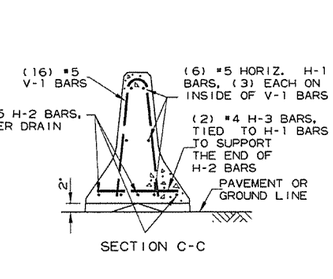
CONNECTION LOOP



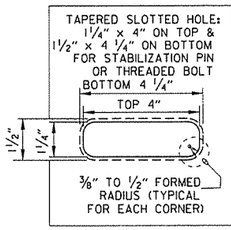
SECTION A-A

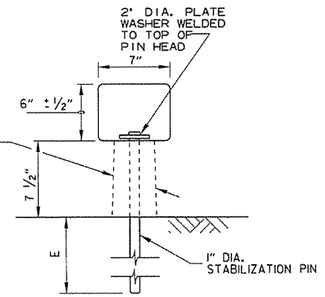


SECTION B-B



SECTION C-C

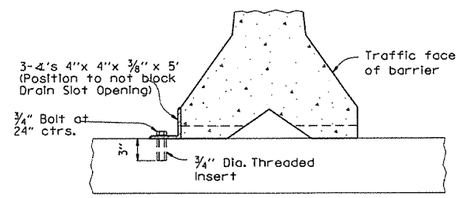




BARRIER STABILIZATION DETAIL

ROADWAY SECTION

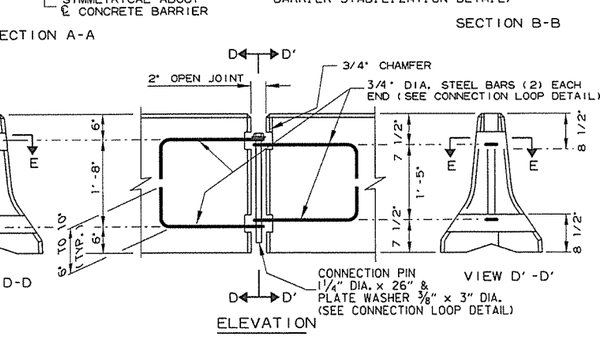
(E) 4" - Concrete Pavement
8" - Asphalt Pavement
12" - Shoulder Areas



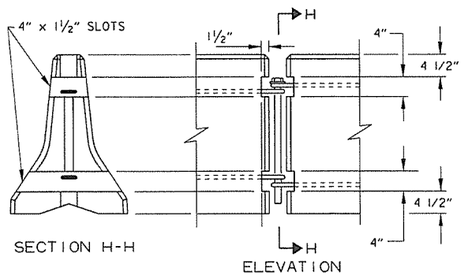
NOTE: 3/4" Threaded Inserts shall be cast in place for all new bridge decks and drilled and grouted for existing bridge decks. Inserts shall have a minimum ultimate load capacity of 8000 lbs. in tension. After removal of barrier, bolts, and angles, the Inserts shall be filled with approved non-shrink epoxy.

BARRIER STABILIZATION DETAIL

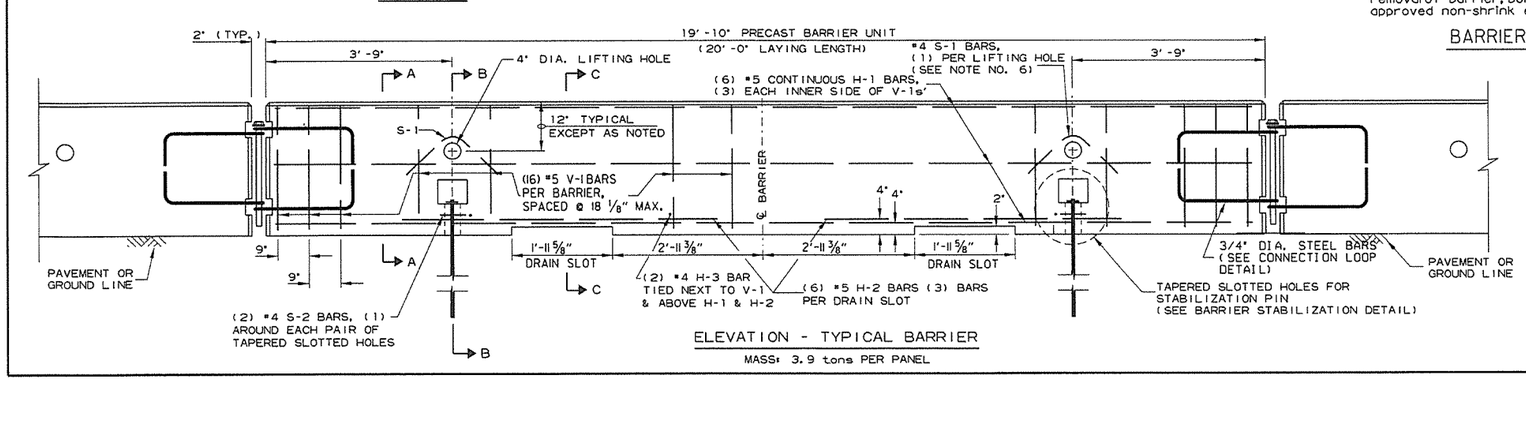
BRIDGE DECKS



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.

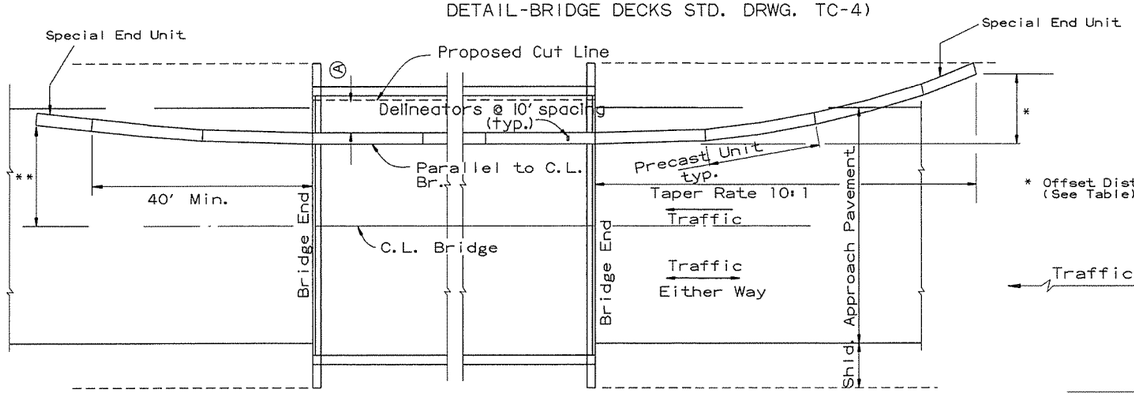
DATE	REVISION	FILMED
2-27-14	REVISED BARRIER STABILIZATION DETAIL	
10-15-09	ADDED REFERENCE TO MASH	
8-5-09	REV. NOTE 3 CONCERNING DRAIN SLOTS	
11-29-07	REVISED NOTE 3	
5-25-06	DELETED GENERAL NOTE 7	
11-18-04	REVISED BARRIER STABILIZATION DETAIL BRIDGE DECKS	
4-10-03	REVISED GENERAL NOTE 2	
8-22-02	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)

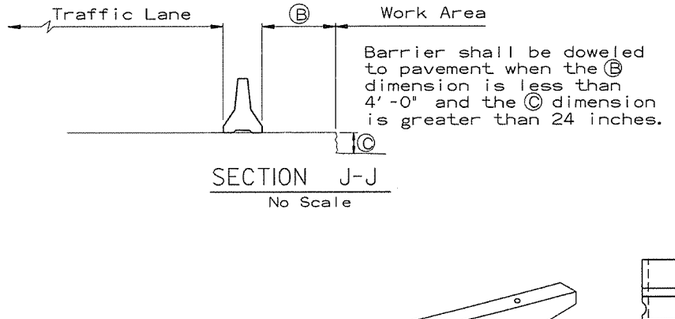


BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

No Scale

* Offset Distance (See Table)

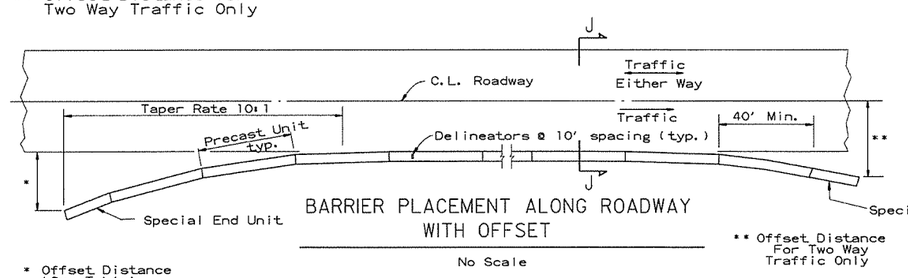
** Offset Distance for Two Way Traffic Only



Barrier shall be doweled to pavement when the Ⓑ dimension is less than 4'-0" and the Ⓒ dimension is greater than 24 inches.

SECTION J-J

No Scale



BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

No Scale

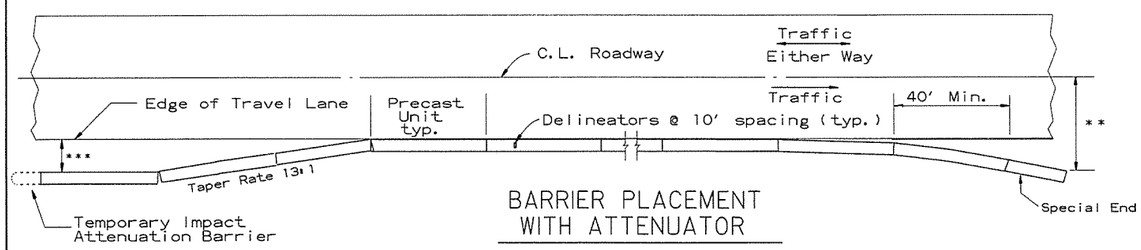
* Offset Distance (See Table)

** Offset Distance For Two Way Traffic Only

Offset Distance Table

Speed (MPH)	Offset Distance (FT.)
≤ 45	12
> 45	18

If offset distance is not attainable, then see 'Barrier Placement With Attenuator' Detail shown below.

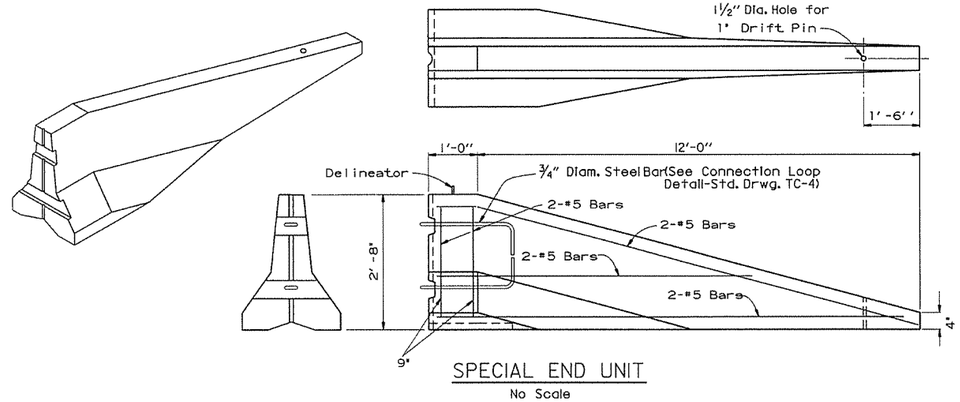


BARRIER PLACEMENT WITH ATTENUATOR

No Scale

** Offset Distance For Two Way Traffic Only

*** Min. 3'-0" From Edge of Travel Lane to Nearest Edge of Attenuator



SPECIAL END UNIT

No Scale

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

DATE	REVISION	FILMED
10-15-09	ADDED REFERENCE TO MASH	
5-25-06	REVISED BARRIER PLACEMENT	
8-22-02	ISSUED NEW DRAWING	

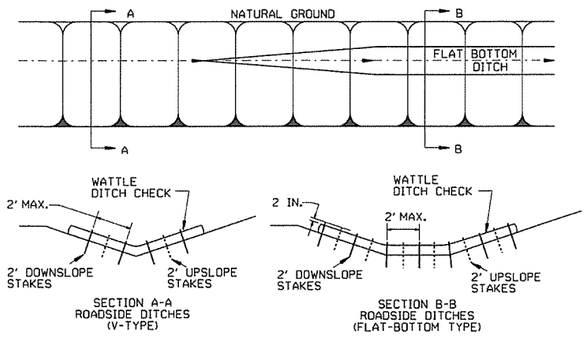
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

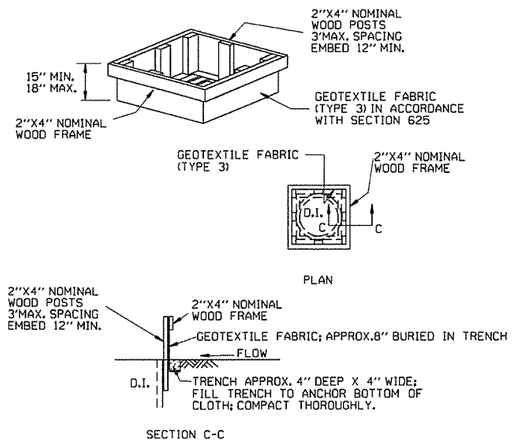
STANDARD DRAWING TC-5

GENERAL NOTES

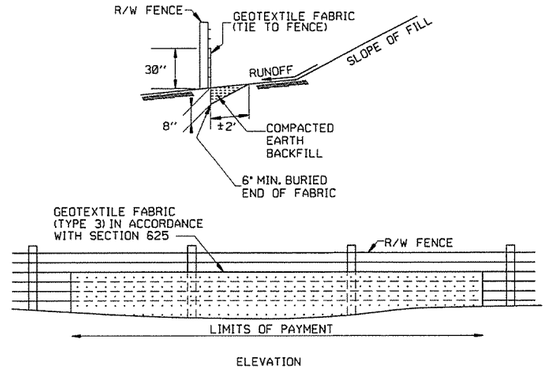
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



DROP INLET SILT FENCE (E-7)



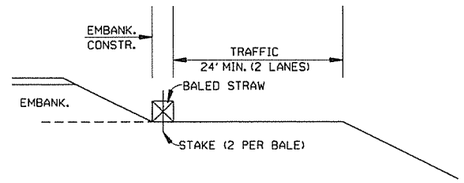
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

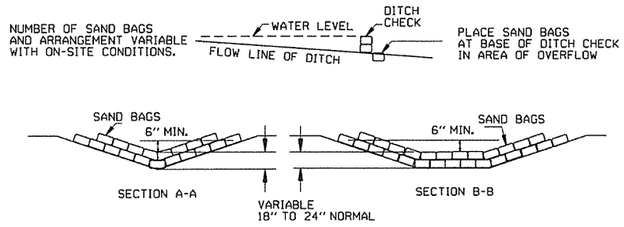
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST, OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

GENERAL NOTES

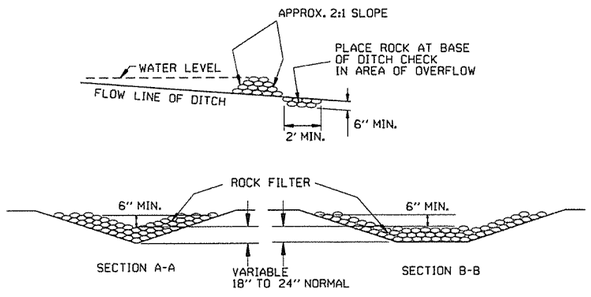
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.
2. NO GAPS SHALL BE LEFT BETWEEN BALES.
3. BALED STRAW FILTER BARRIERS COMPLETED AND ACCEPTED WILL BE MEASURED BY THE BALE IN PLACE AS AUTHORIZED BY THE ENGINEER AND WILL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER BALE FOR BALED STRAW DITCH CHECKS.



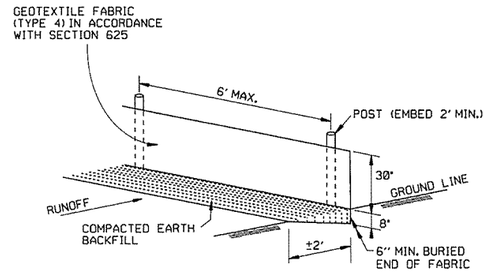
BALED STRAW FILTER BARRIER (E-2)



SAND BAG DITCH CHECK (E-5)



ROCK DITCH CHECK (E-6)



SILT FENCE (E-11)

GENERAL NOTES

GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.

DATE	REVISION	FILMED
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
7-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
7-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
7-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
6-2-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
4-1-93	REDRAWN	
10-1-92	REDRAWN	
8-2-76	ISSUED R.D.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-1

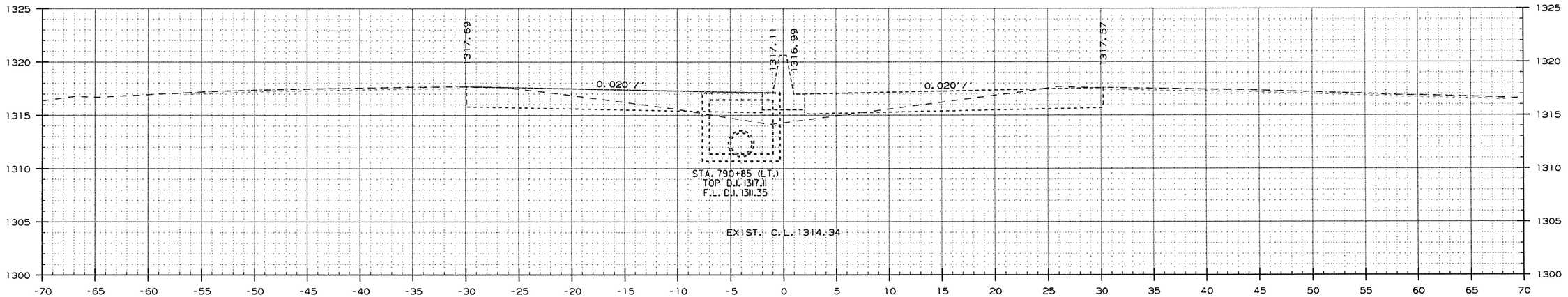
Crafton, Tull & Associates Inc.

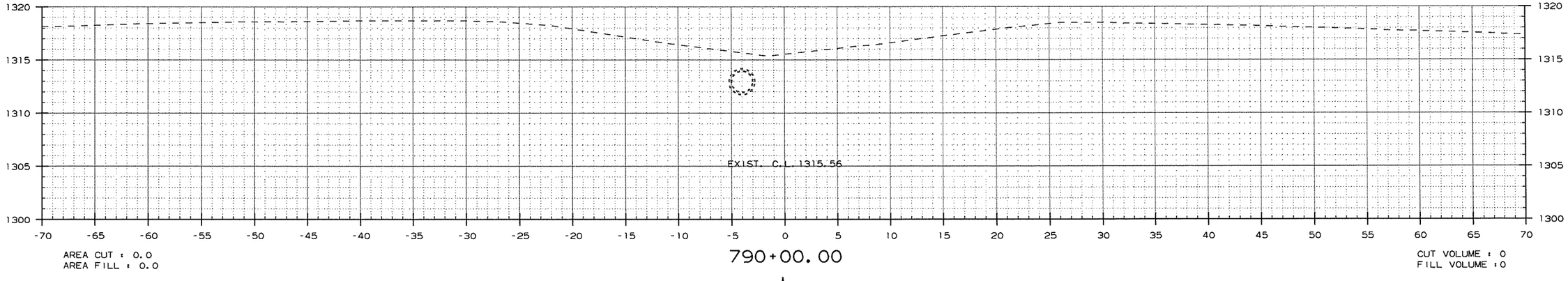
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	130	234

(2) CROSS SECTIONS

STA. 790+85 - IN PLACE
TYPE ST DROP INLET
3' LT. OF C.L. H= 5'-9"
WITH 24" X 11' R.C. PIPE CULVERT
RETAIN



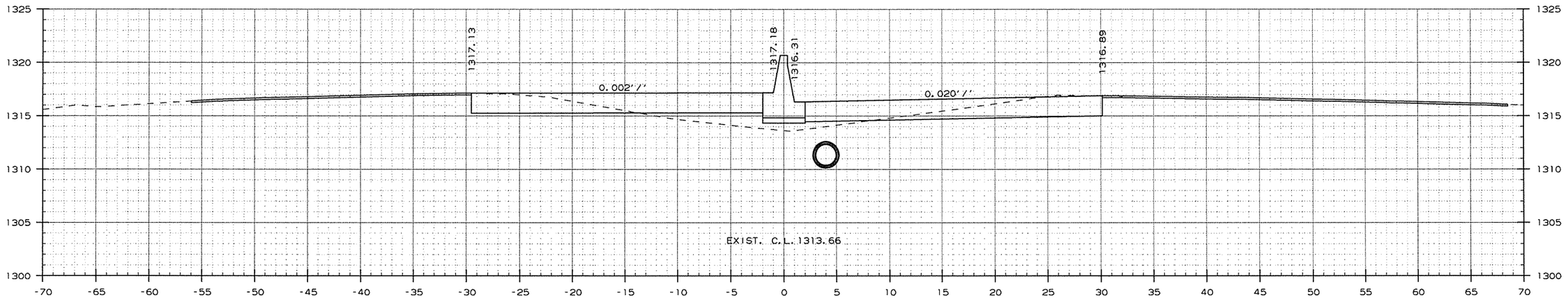


CROSS SECTION STA. 790+00 TO STA. 790+85

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PLOTTED: 4/14/2015 13:33 SCALE: 10:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	131	234
				(2)	CROSS SECTIONS			



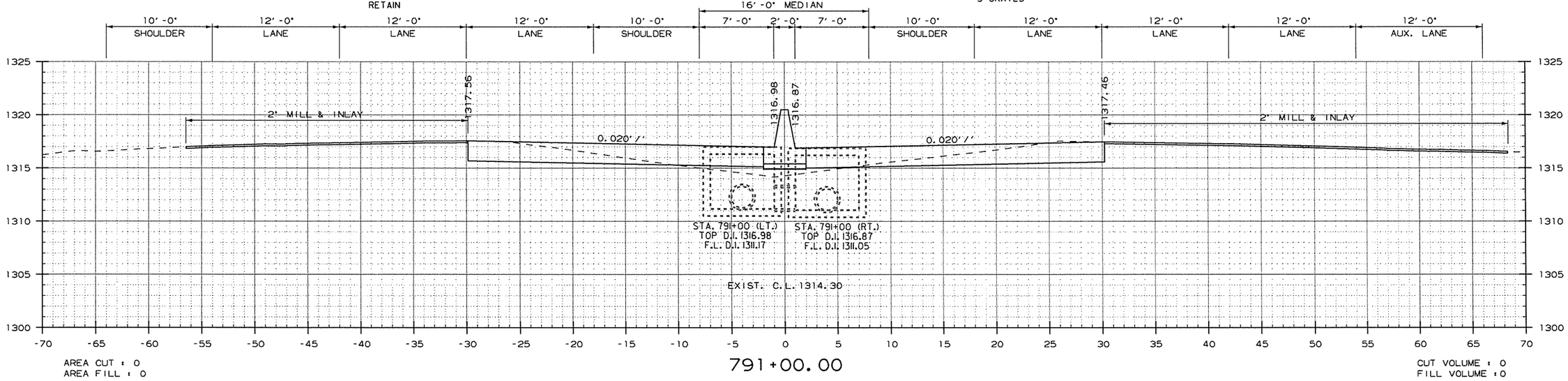
AREA CUT = 45.2
AREA FILL = 14.1

792+00.00

STA. 791+00 - IN PLACE
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
CONNECTED TO DROP INLET
AT STA. 791+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES
RETAIN

STA. 791+00 - IN PLACE
DROP INLET 3' RT. OF C.L. H = 5'-10"
RETAIN 24" X 271' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 793+75 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

CUT VOLUME = 84
FILL VOLUME = 26



AREA CUT = 0
AREA FILL = 0

791+00.00

CUT VOLUME = 0
FILL VOLUME = 0

STA. 791+00.00 - BEGIN JOB CA1101

CROSS SECTION STA. 791+00 TO STA. 792+00

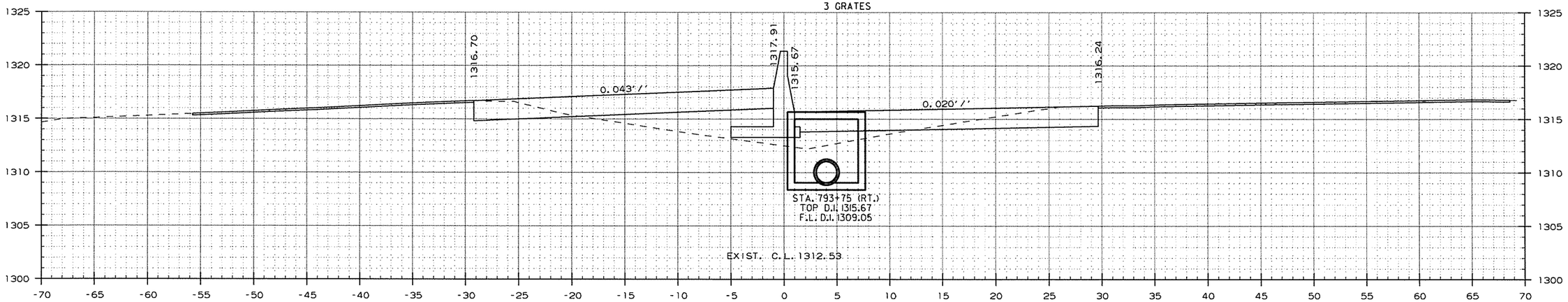
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	132	234

2 CROSS SECTIONS

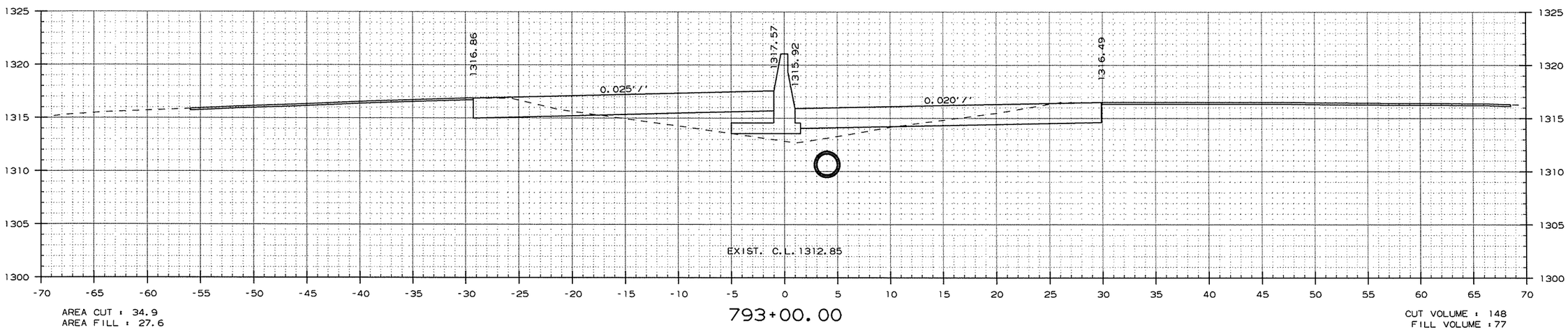
STA. 793+75 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-7"
WITH 24" X 293' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO R.C. BOX CULVERT
AT STA. 796+17
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 31.6
AREA FILL : 40.5

793+75.00

CUT VOLUME : 92
FILL VOLUME : 95



AREA CUT : 34.9
AREA FILL : 27.6

793+00.00

CUT VOLUME : 148
FILL VOLUME : 77

CROSS SECTION STA. 793+00 TO STA. 793+75

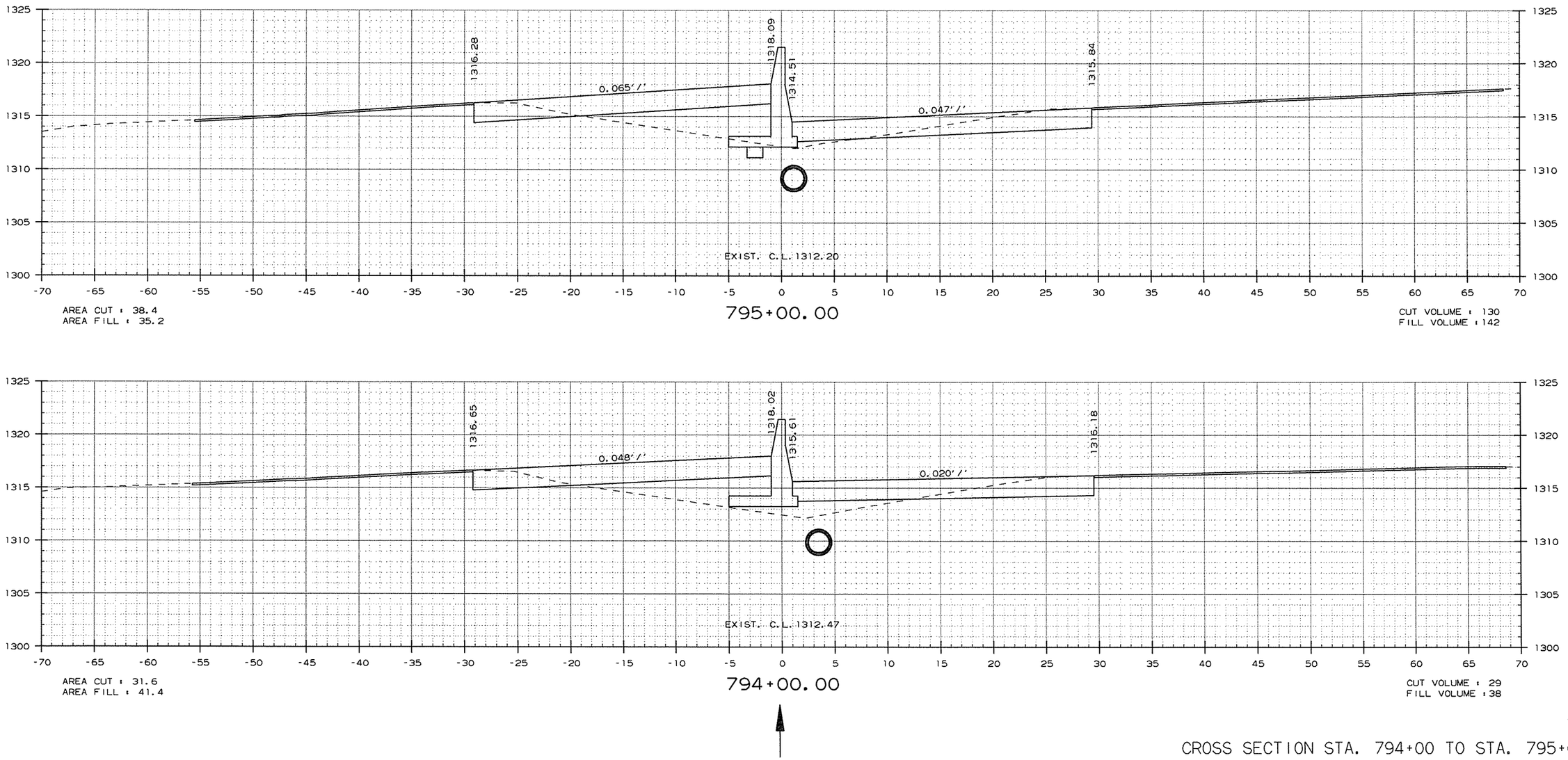
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	133	234

(2) CROSS SECTIONS



CROSS SECTION STA. 794+00 TO STA. 795+00

USER: at5106
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Crafton, Tull & Associates Inc.

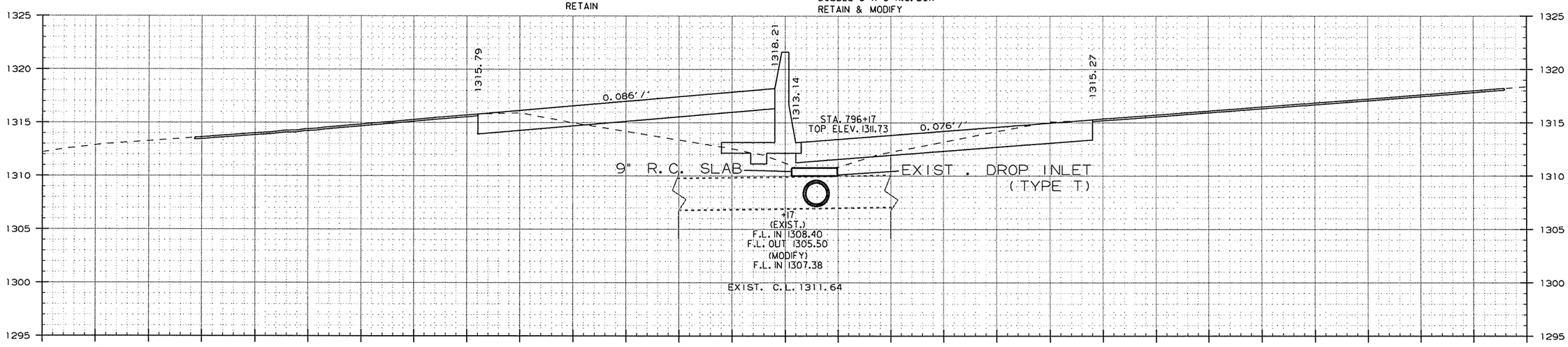
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	134	234

(2) CROSS SECTIONS

STA. 796+17 - IN PLACE
DOUBLE 5' X 3' X 208' R.C. BOX CULVERT
(30° LT. FWD. SKEW)
RETAIN

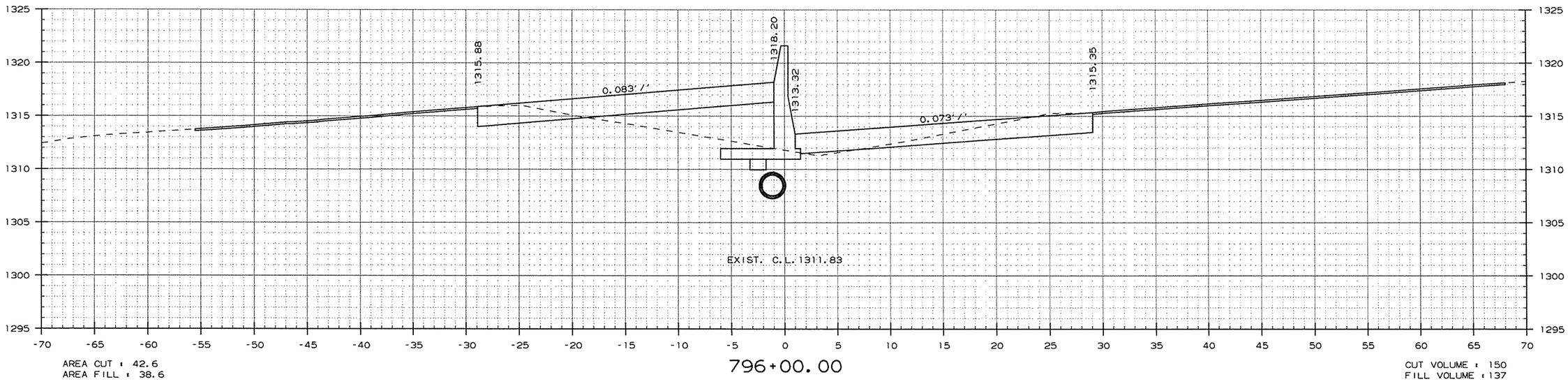
STA. 796+17 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
DOUBLE 5' X 3' R.C. BOX
RETAIN & MODIFY



AREA CUT : 39.9
AREA FILL : 42.0

796+17.00

CUT VOLUME : 26
FILL VOLUME : 25



AREA CUT : 42.6
AREA FILL : 38.6

796+00.00

CUT VOLUME : 150
FILL VOLUME : 137

CROSS SECTION STA. 796+00 TO STA. 796+17

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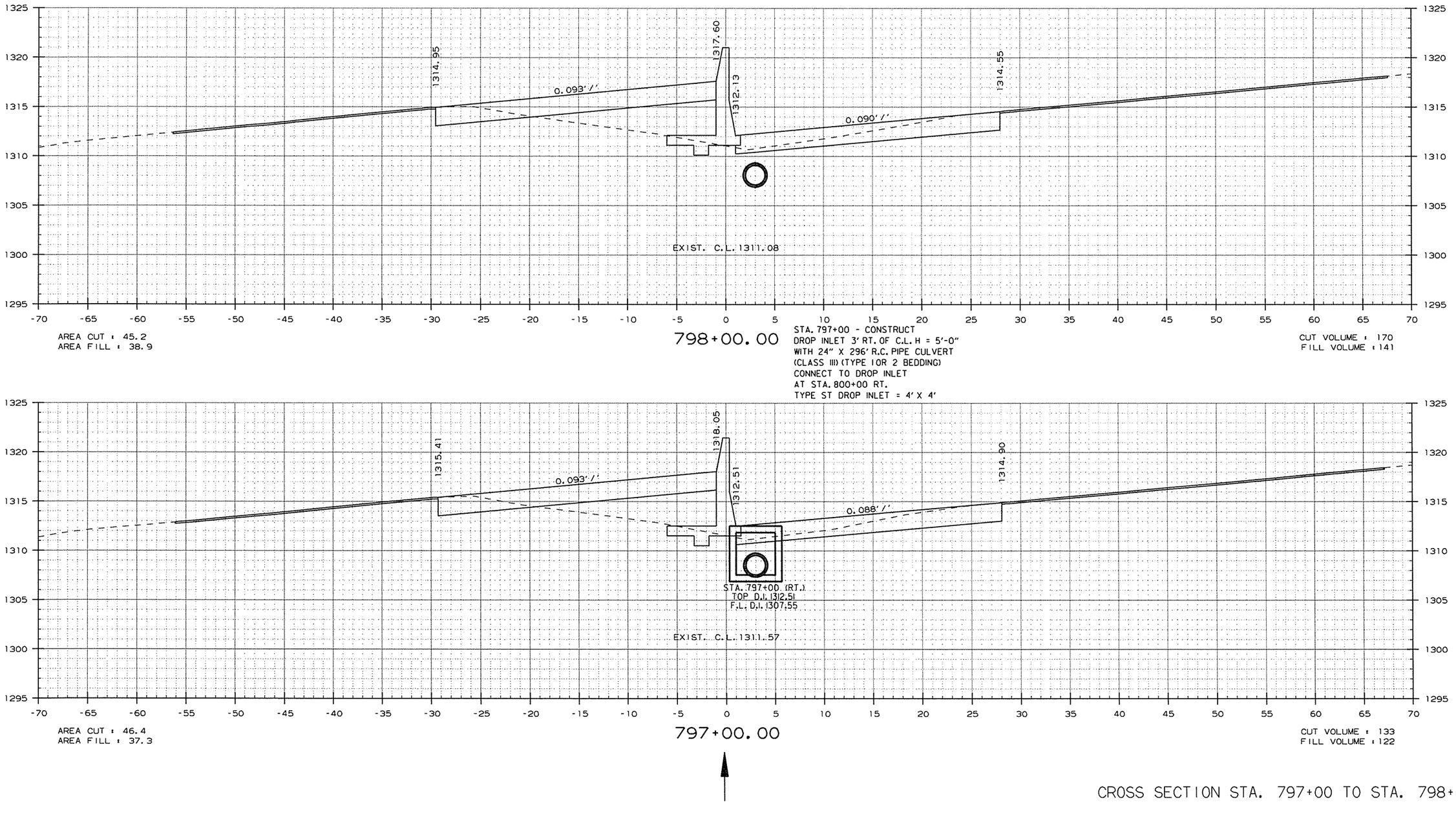
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	135	234

(2) CROSS SECTIONS



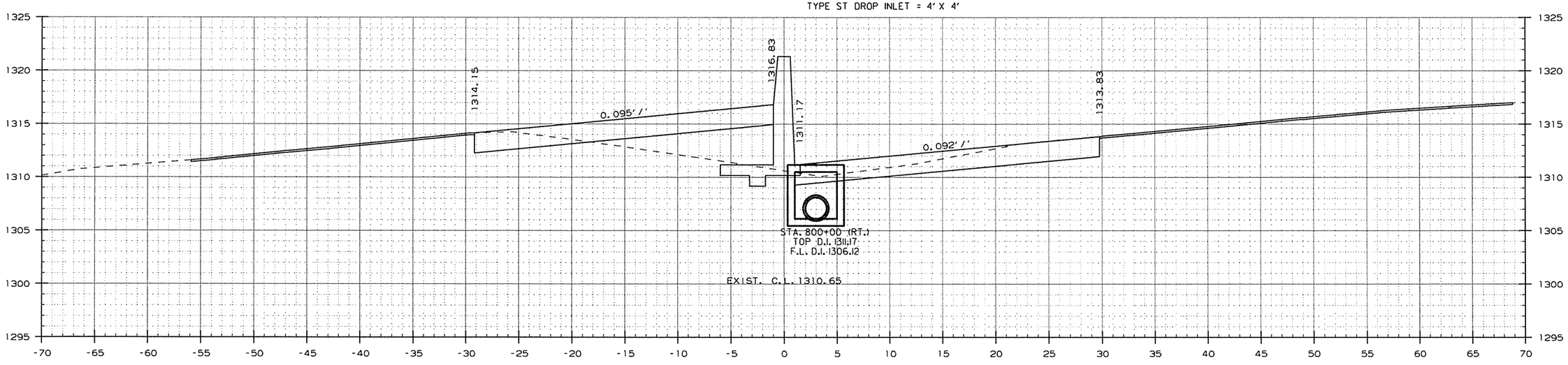
CROSS SECTION STA. 797+00 TO STA. 798+00

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SCALE: 1:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	136	234
				(2)	CROSS SECTIONS			

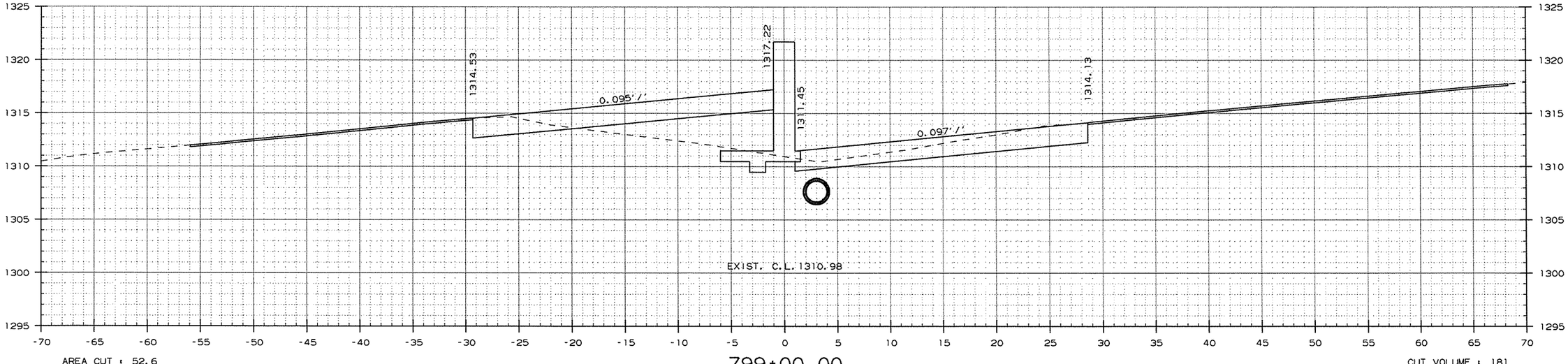
STA. 800+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-1"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 803+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT = 55.0
AREA FILL = 35.0

800+00.00

CUT VOLUME = 199
FILL VOLUME = 134



AREA CUT = 52.6
AREA FILL = 37.6

799+00.00

CUT VOLUME = 181
FILL VOLUME = 142

CROSS SECTION STA. 799+00 TO STA. 800+00

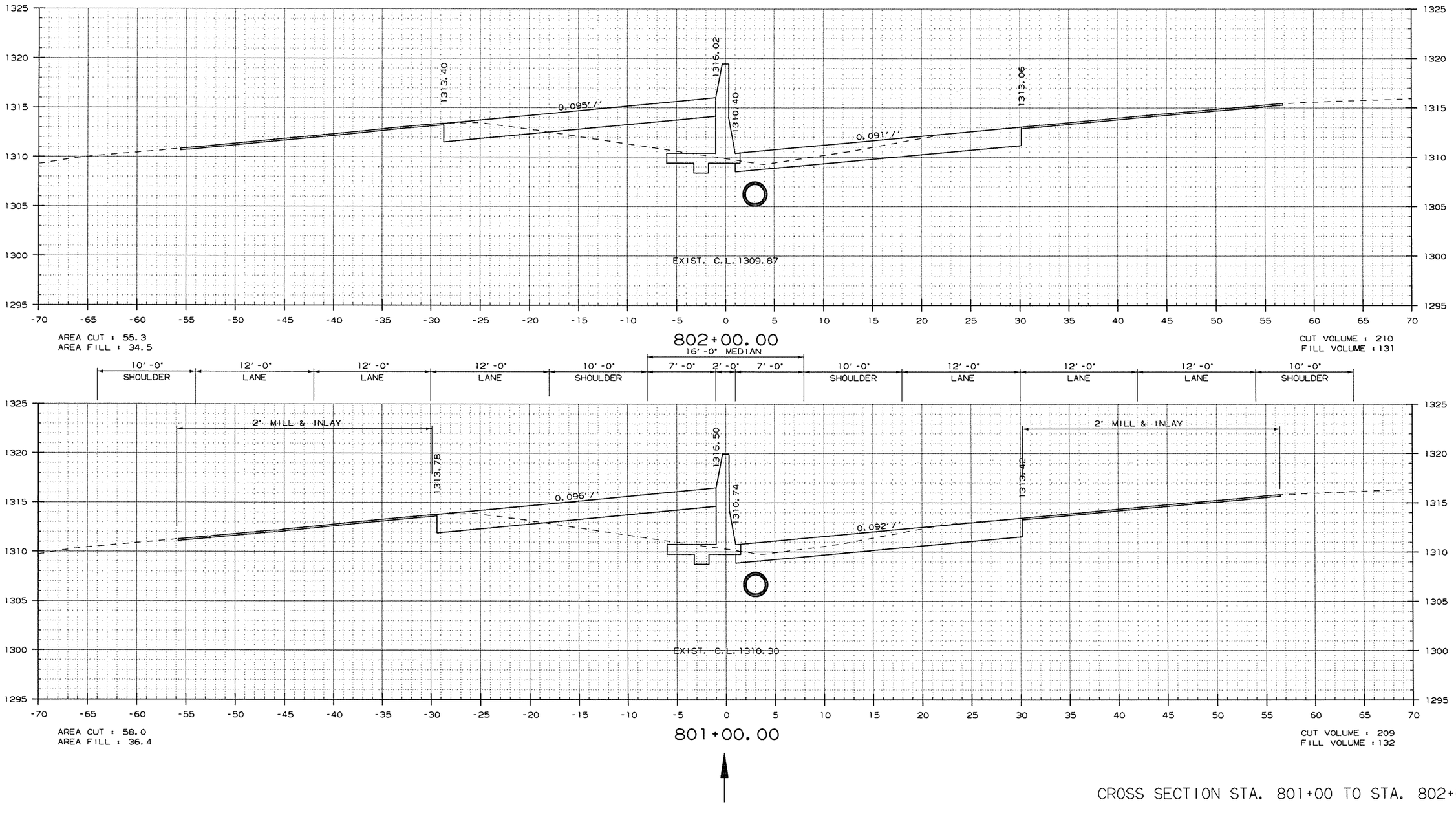
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PLOTTED: 4/14/2015 13:33
SCALE: 10:1
MODEL: X-Sections

G:\13106000.412\eWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn 4/14/2015 13:33

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	137	234

(2) CROSS SECTIONS

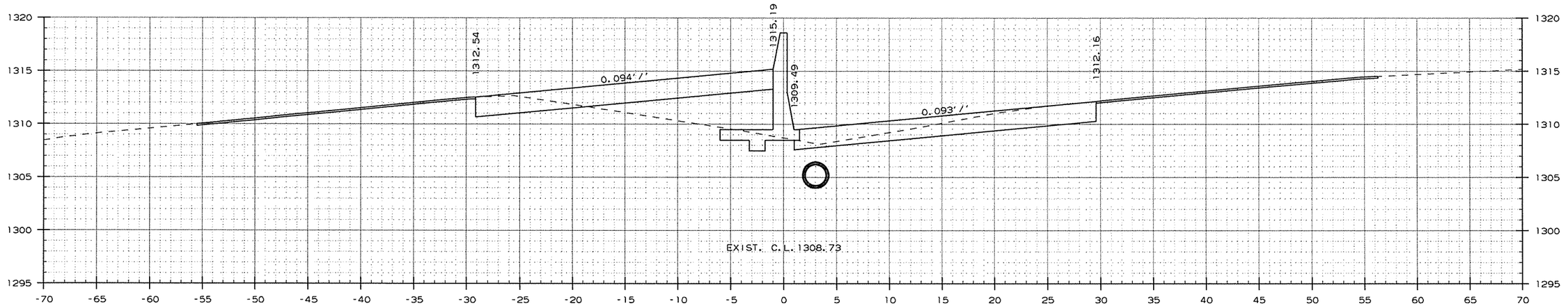


CROSS SECTION STA. 801+00 TO STA. 802+00

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PLOTTED: 4/14/2015 13:33 SCALE: 10:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	138	234
				(2)	CROSS SECTIONS			

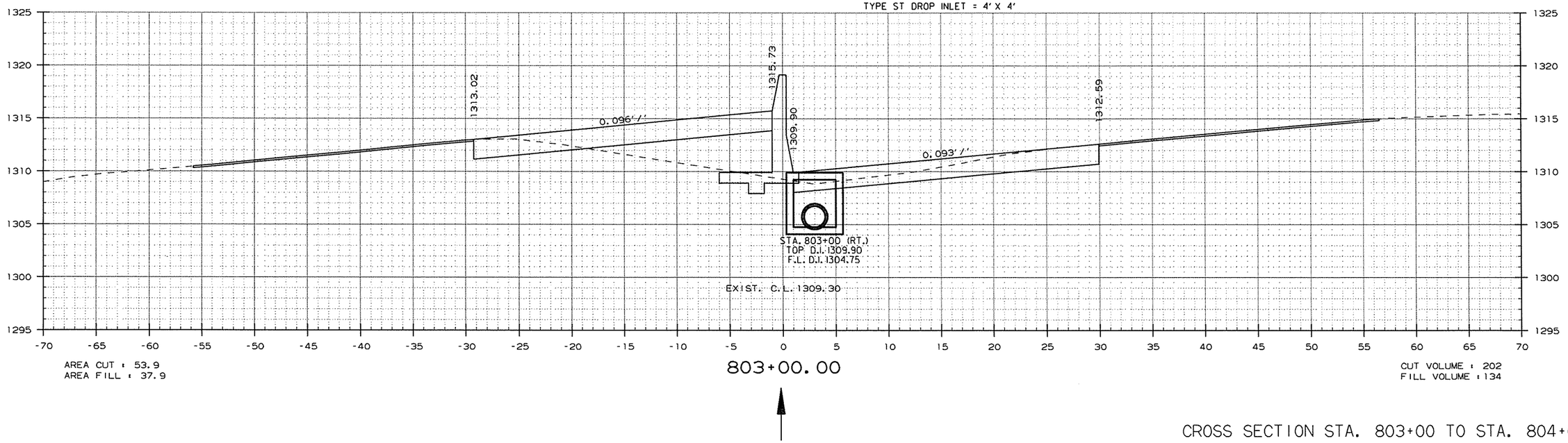


AREA CUT = 51.5
AREA FILL = 37.4

804+00.00

STA. 803+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 806+00 RT.
TYPE ST DROP INLET = 4' X 4'

CUT VOLUME = 195
FILL VOLUME = 139



AREA CUT = 53.9
AREA FILL = 37.9

803+00.00

CUT VOLUME = 202
FILL VOLUME = 134

CROSS SECTION STA. 803+00 TO STA. 804+00

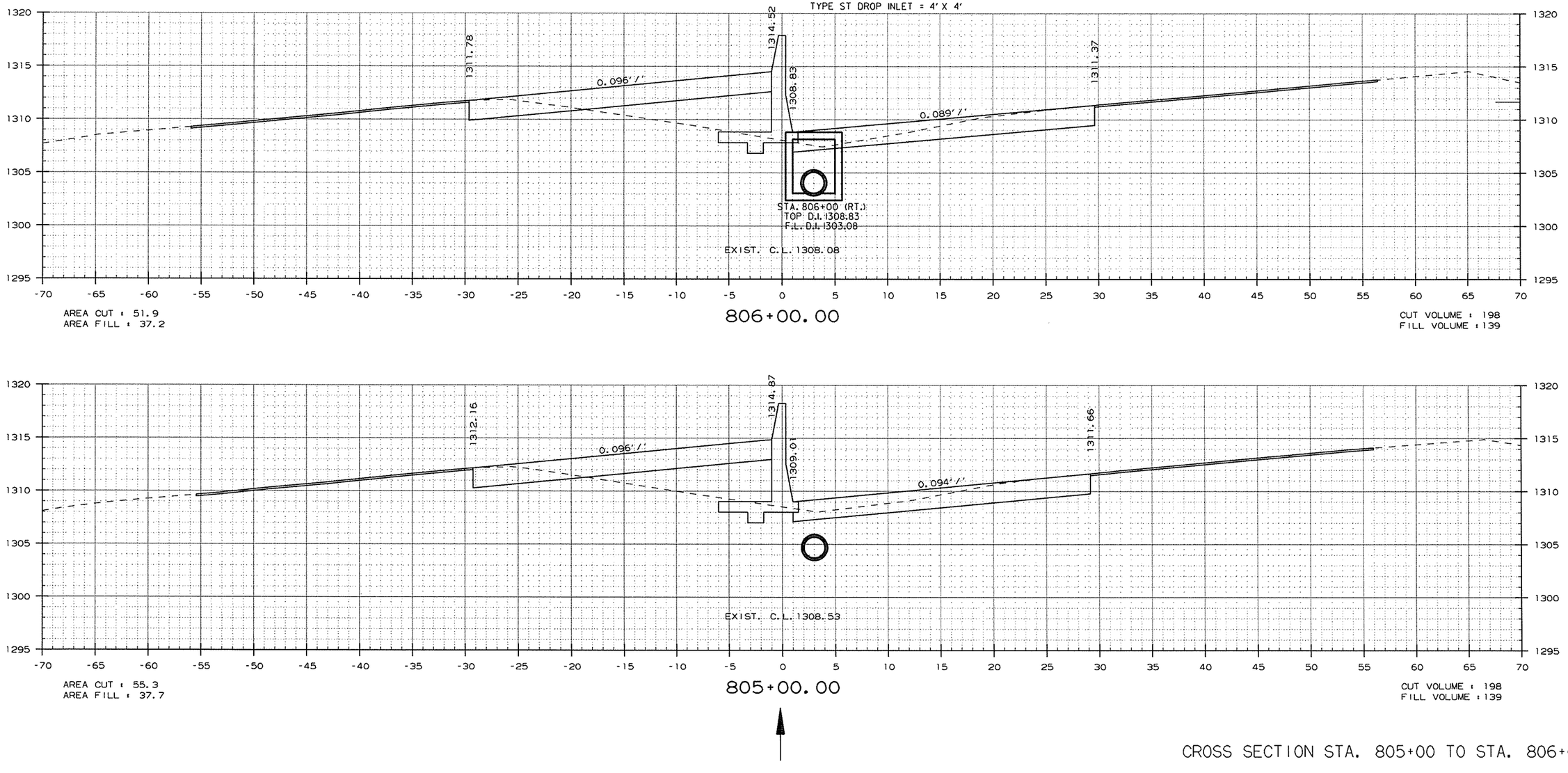
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PLOTTED: 4/14/2015 13:34
SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	139	234

(2) CROSS SECTIONS

STA. 806+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-9"
WITH 24" X 39' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO R.C. BOX CULVERT
AT STA. 806+48
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 51.9
AREA FILL : 37.2

806+00.00

CUT VOLUME : 198
FILL VOLUME : 139

AREA CUT : 55.3
AREA FILL : 37.7

805+00.00

CUT VOLUME : 198
FILL VOLUME : 139

CROSS SECTION STA. 805+00 TO STA. 806+00

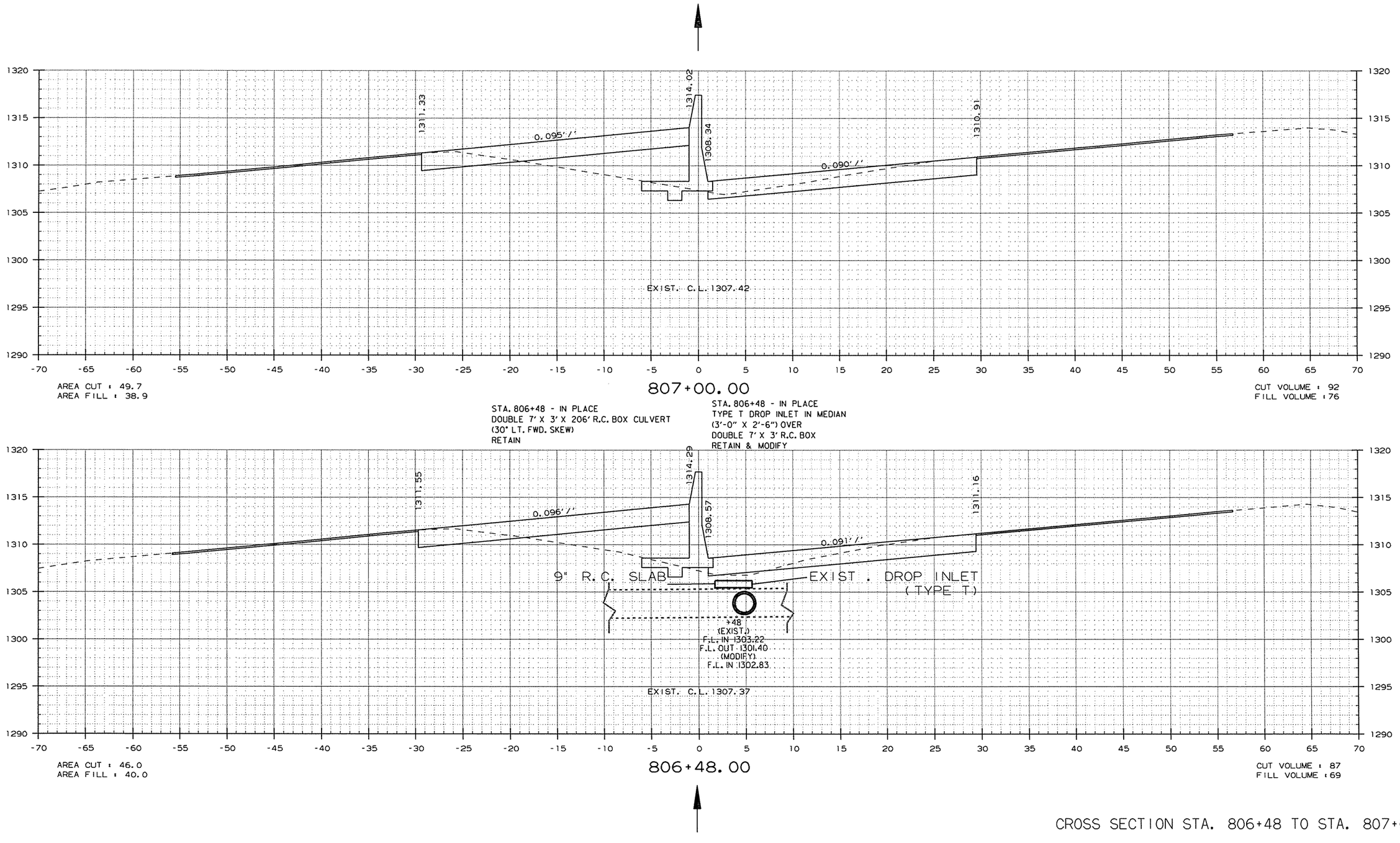
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	140	234

(2) CROSS SECTIONS



CROSS SECTION STA. 806+48 TO STA. 807+00

USER: at5106
DESIGN FILE: G:\13106000_412\roWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:34
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MODEL: X-Sections

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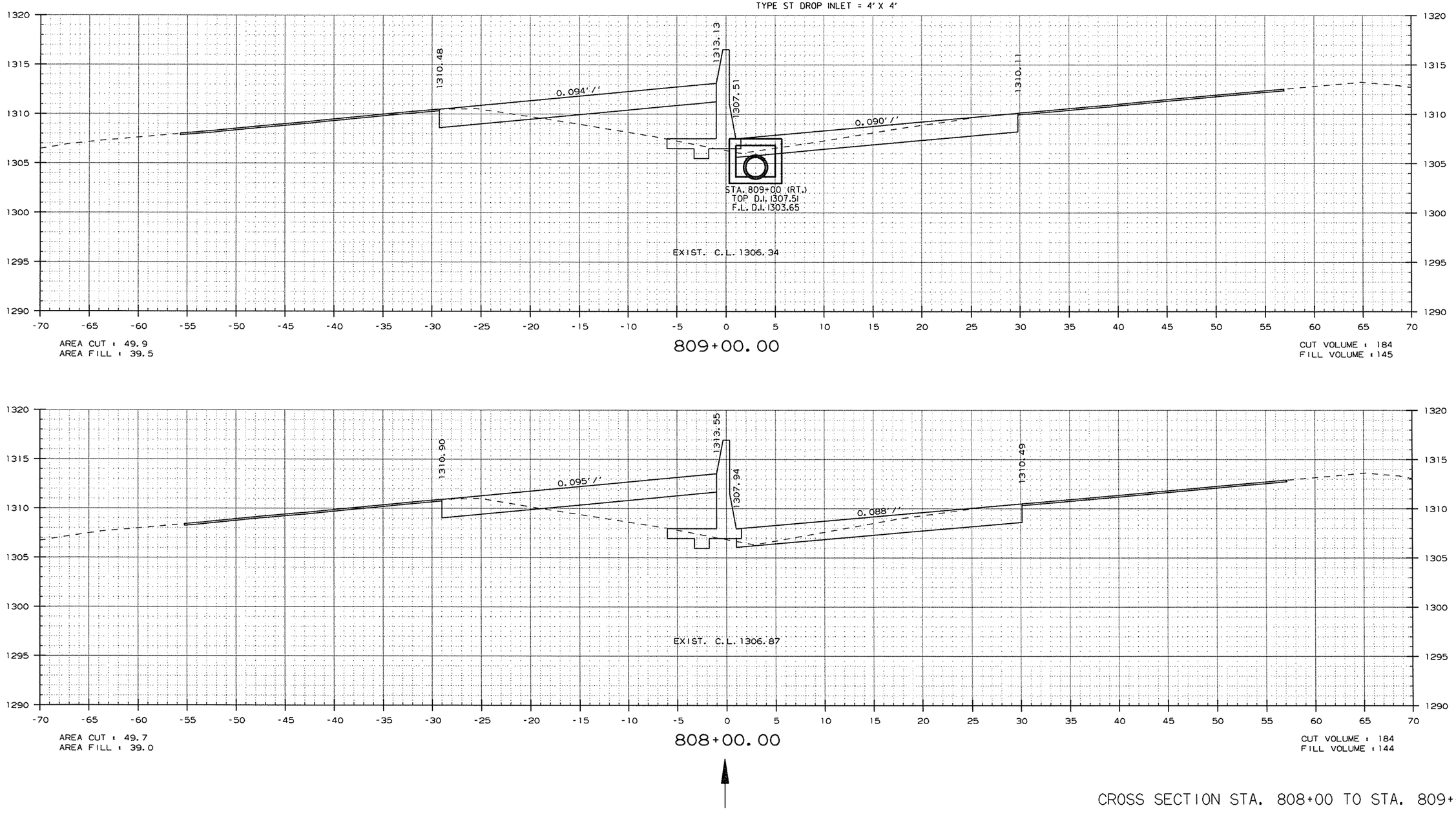
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	141	234

(2) CROSS SECTIONS

STA. 809+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-10"
WITH 24" X 226' R.C. PIPE CULVERT
(CLASS V) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 811+30 RT.
TYPE ST DROP INLET = 4' X 4'



CROSS SECTION STA. 808+00 TO STA. 809+00

USER: ot5106
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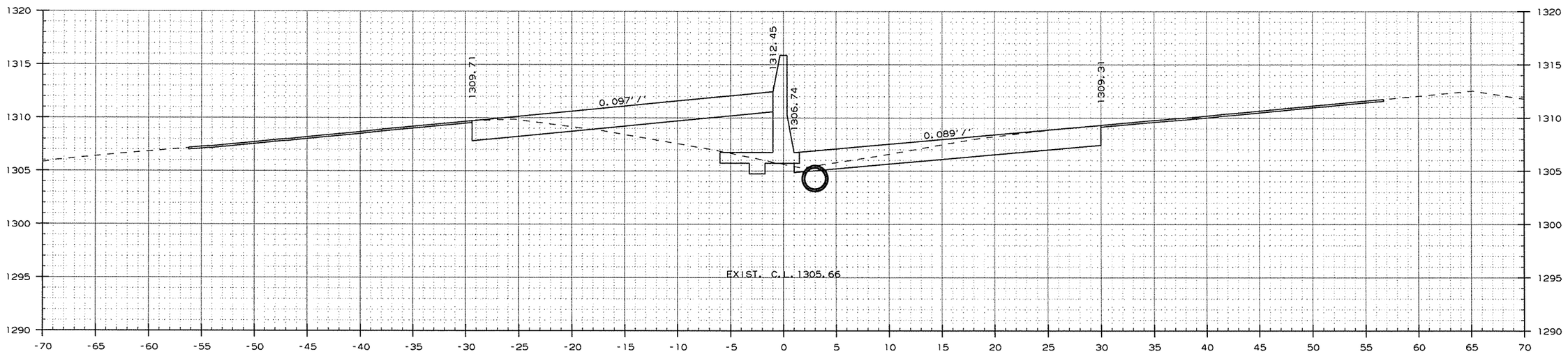
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	142	234

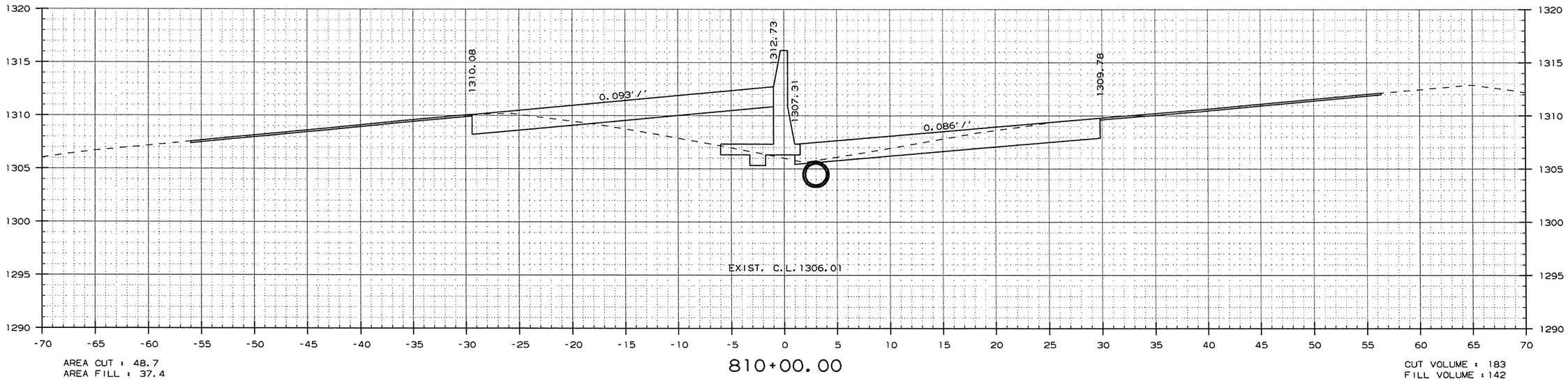
(2) CROSS SECTIONS



AREA CUT = 54.4
AREA FILL = 37.9

811+00.00

CUT VOLUME = 191
FILL VOLUME = 139



AREA CUT = 48.7
AREA FILL = 37.4

810+00.00

CUT VOLUME = 183
FILL VOLUME = 142

CROSS SECTION STA. 810+00 TO STA. 811+00

USER: a15106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\rCAII01CX.dgn
PLOTTED: 4/14/2015 13:34
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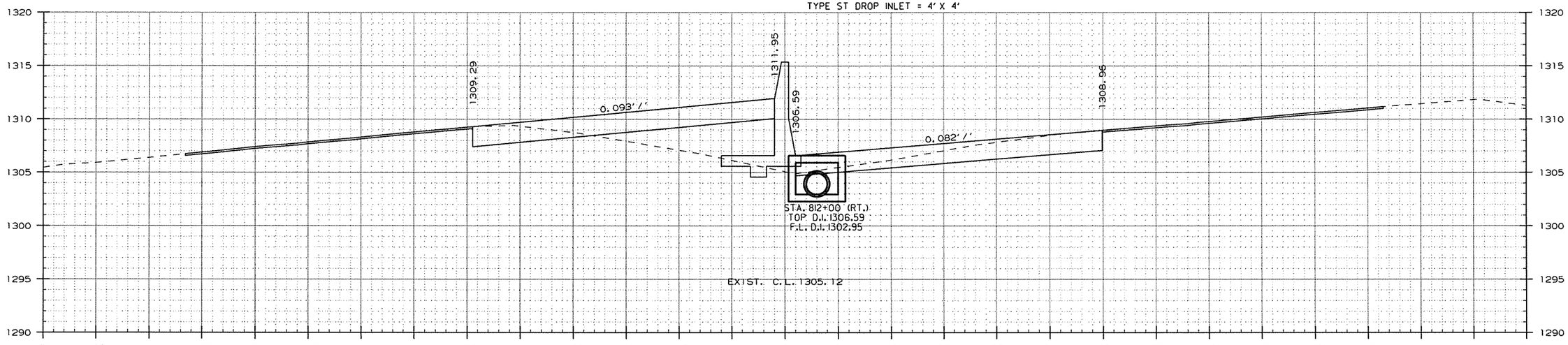
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	143	234

(2) CROSS SECTIONS

STA. 812+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-8"
WITH 24" X 47' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 812+51 RT.
TYPE ST DROP INLET = 4' X 4'

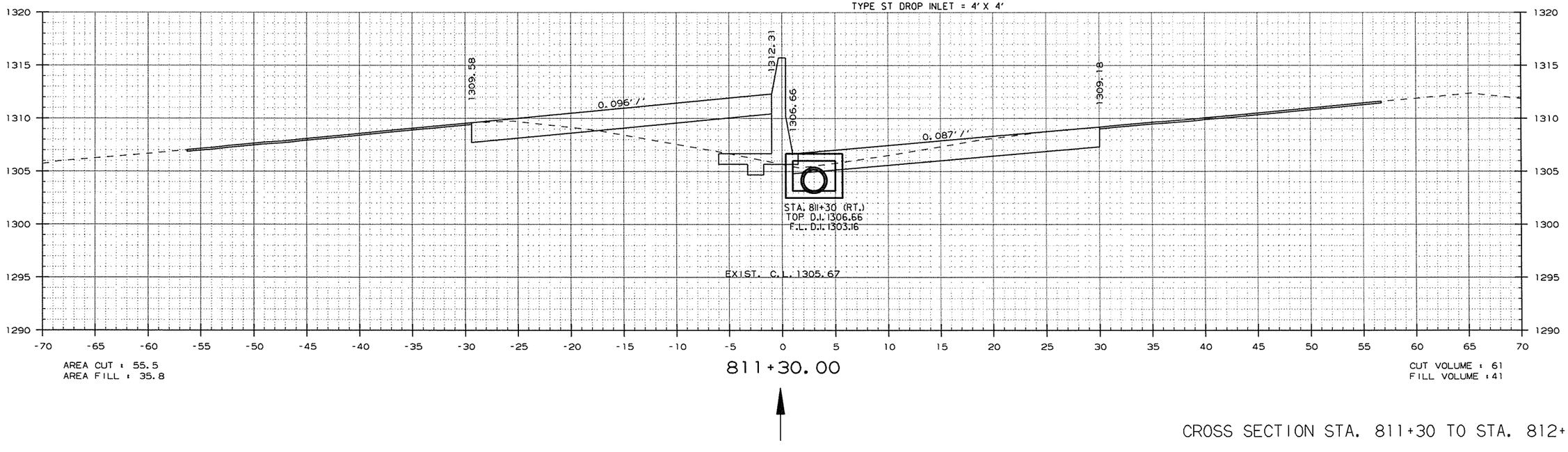


AREA CUT = 49.3
AREA FILL = 37.5

812+00.00

CUT VOLUME = 136
FILL VOLUME = 95

STA. 811+30 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-6"
WITH 24" X 66' R.C. PIPE CULVERT
(CLASS IV) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 812+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT = 55.5
AREA FILL = 35.8

811+30.00

CUT VOLUME = 61
FILL VOLUME = 41

CROSS SECTION STA. 811+30 TO STA. 812+00

USER: at5106
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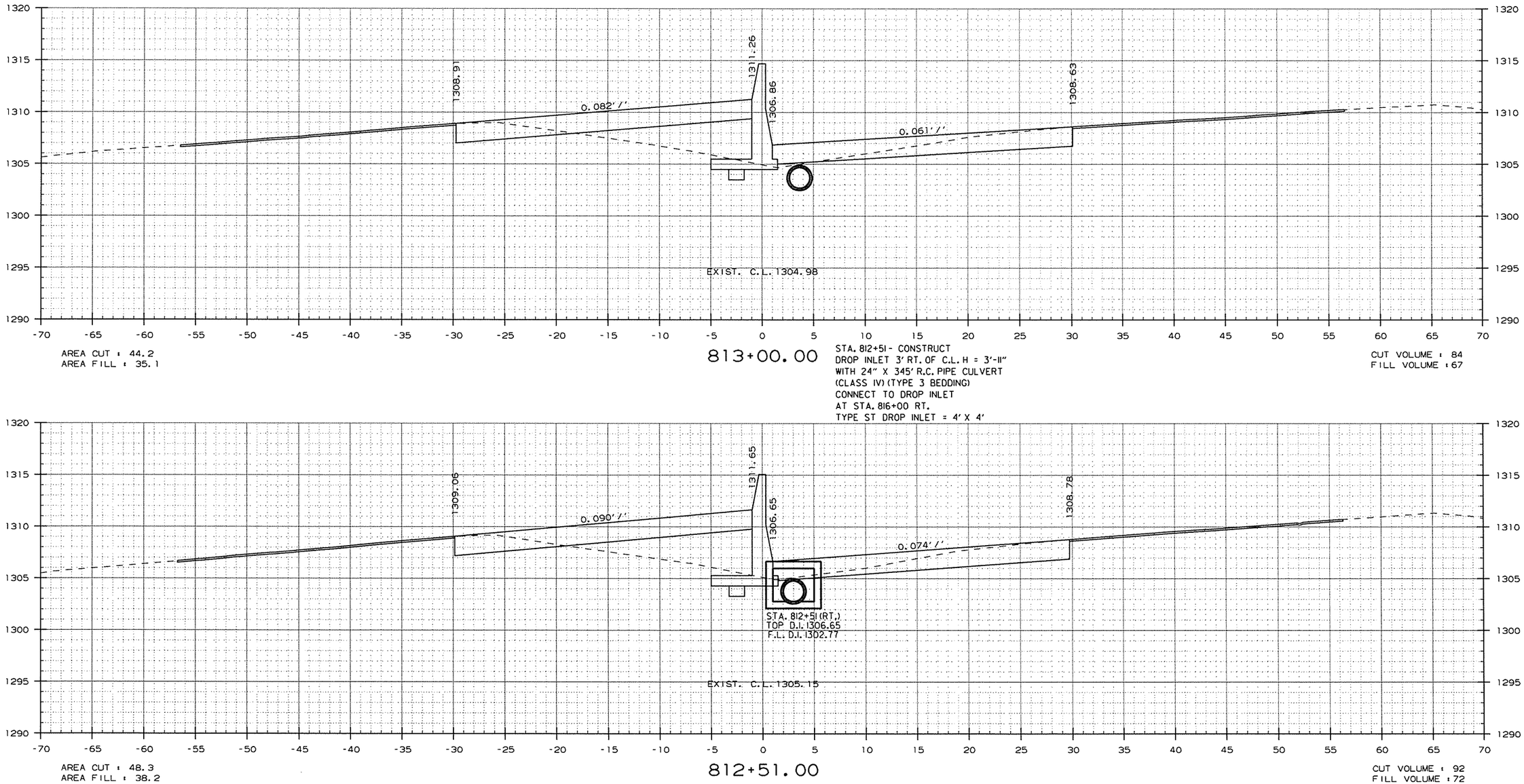
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	144	234

(2) CROSS SECTIONS



AREA CUT : 44.2
AREA FILL : 35.1

813+00.00

STA. 812+51 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 3'-11"
WITH 24" X 345' R.C. PIPE CULVERT
(CLASS IV) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 816+00 RT.
TYPE ST DROP INLET = 4' X 4'

CUT VOLUME : 84
FILL VOLUME : 67

AREA CUT : 48.3
AREA FILL : 38.2

812+51.00

CUT VOLUME : 92
FILL VOLUME : 72

CROSS SECTION STA. 812+51 TO STA. 813+00

USER: at5106
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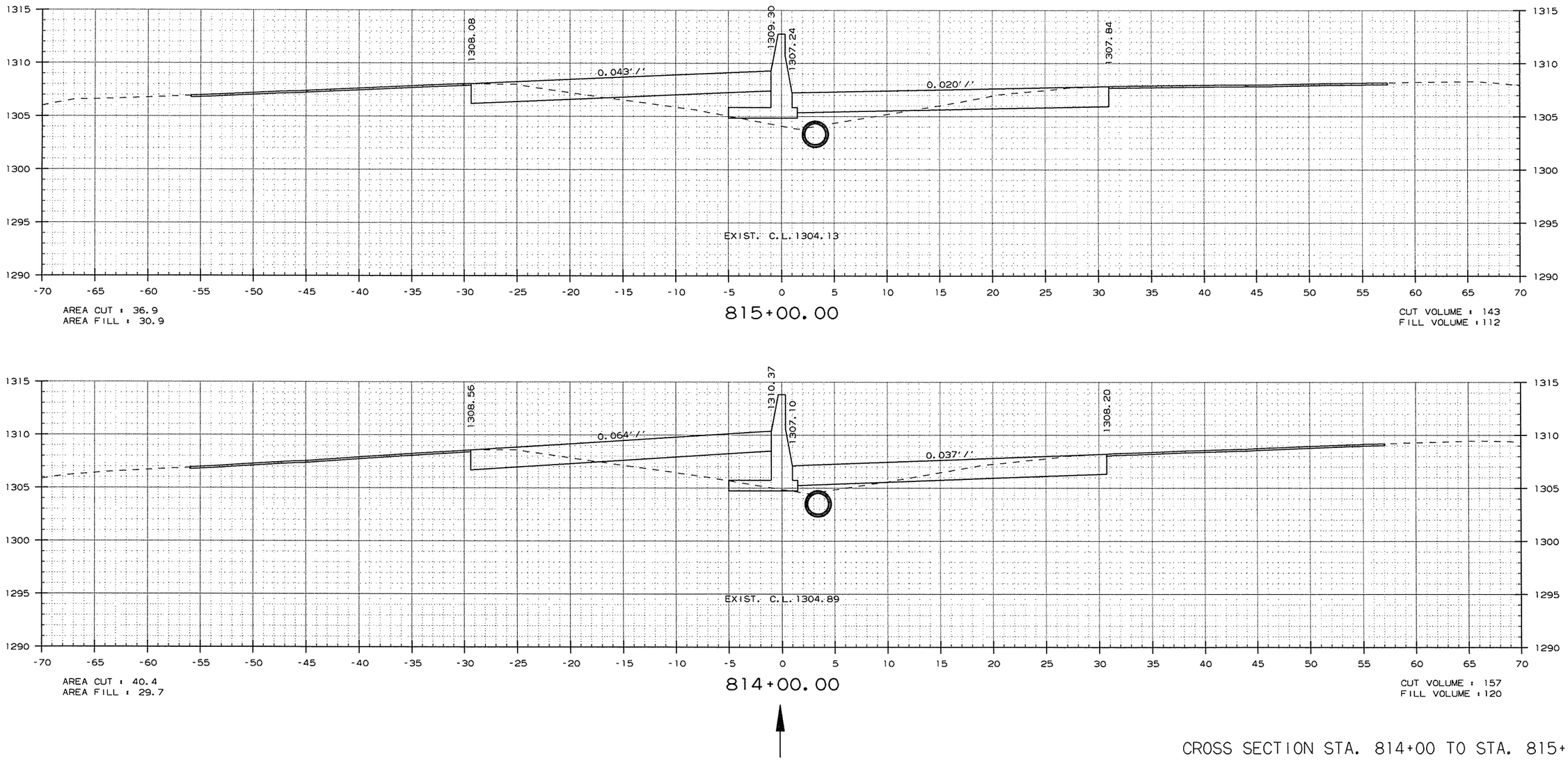
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	145	234

(2) CROSS SECTIONS



CROSS SECTION STA. 814+00 TO STA. 815+00

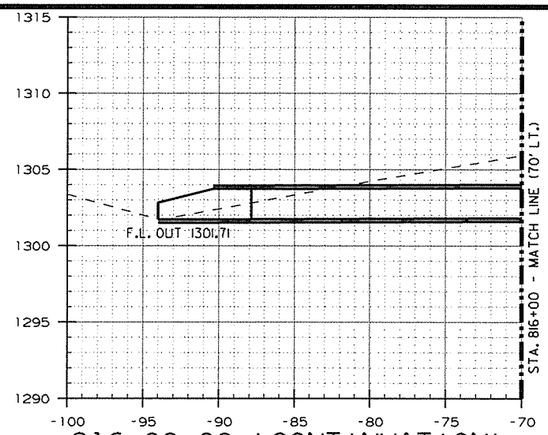
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

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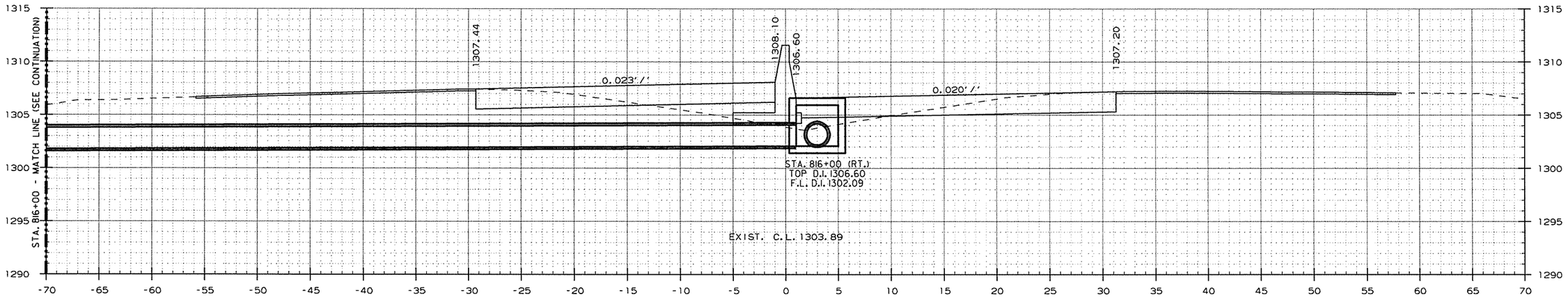
FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	146	234

(2) CROSS SECTIONS



816+00.00 (CONTINUATION)

STA. 816+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-6"
WITH 24" X 89' R.C. PIPE CULVERT
W/ FES (CLASS V) (TYPE 1 OR 2 BEDDING)
TYPE ST DROP INLET = 4' X 4'
5 CU. YD. DUMPED RIPRAP
(JACK AND BORE)

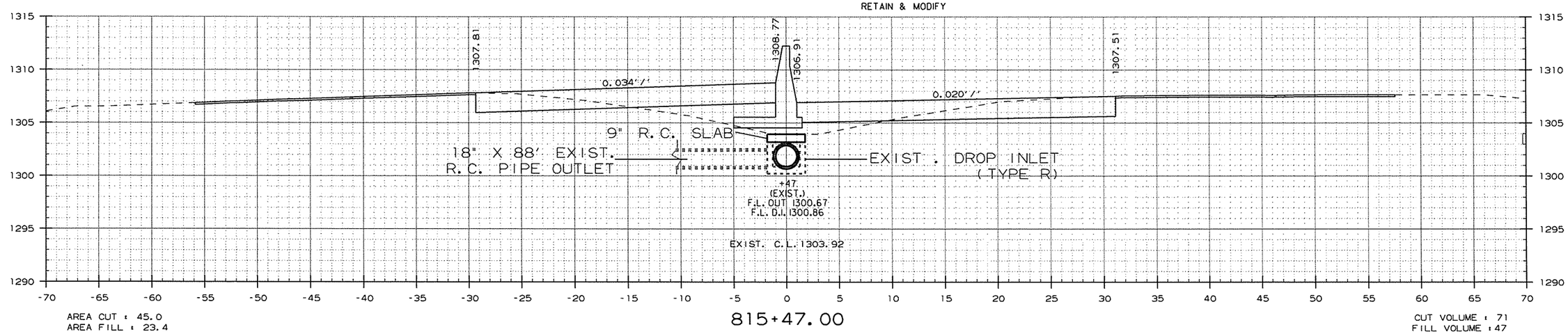


AREA CUT : 46.2
AREA FILL : 16.4

816+00.00

CUT VOLUME : 90
FILL VOLUME : 39

STA. 815+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0") WITH
18" X 88' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



AREA CUT : 45.0
AREA FILL : 23.4

815+47.00

CUT VOLUME : 71
FILL VOLUME : 47

CROSS SECTION STA. 815+47 TO STA. 816+00

USER: ct5106
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Crafton, Tull & Associates Inc.

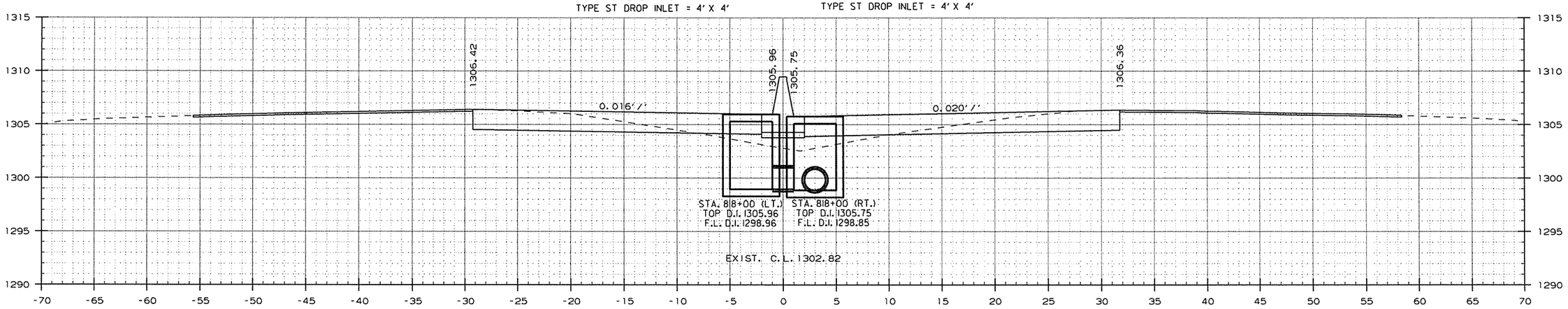
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	147	234

(2) CROSS SECTIONS

STA. 818+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 818+00 RT.
TYPE ST DROP INLET = 4' X 4'

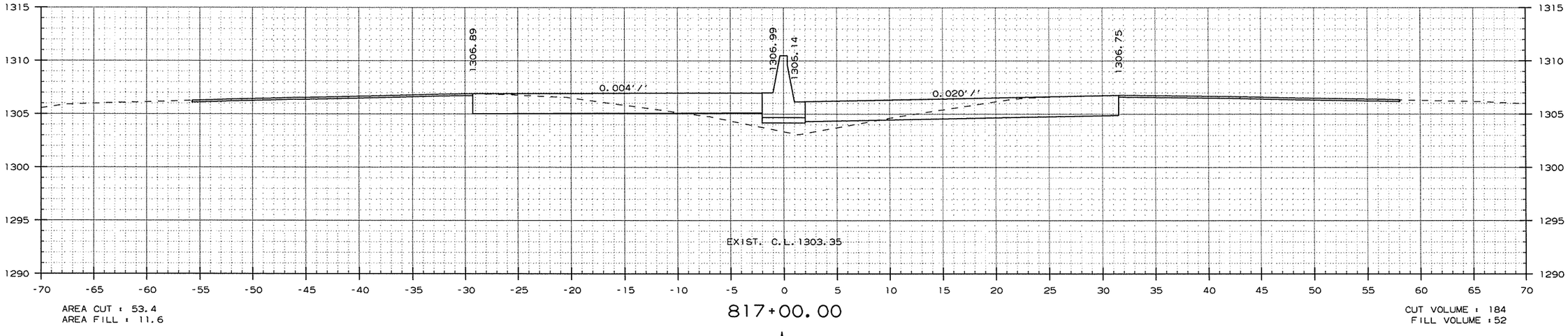
STA. 818+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-11"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 820+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 52.2
AREA FILL : 11.6

818+00.00

CUT VOLUME : 196
FILL VOLUME : 43



AREA CUT : 53.4
AREA FILL : 11.6

817+00.00

CUT VOLUME : 184
FILL VOLUME : 52

CROSS SECTION STA. 817+00 TO STA. 818+00

USER: a15106
DESIGN FILE: G:\3106000.412\toWagon\TRANSP\dgn\xsect\r-CAII01_CX.dgn
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

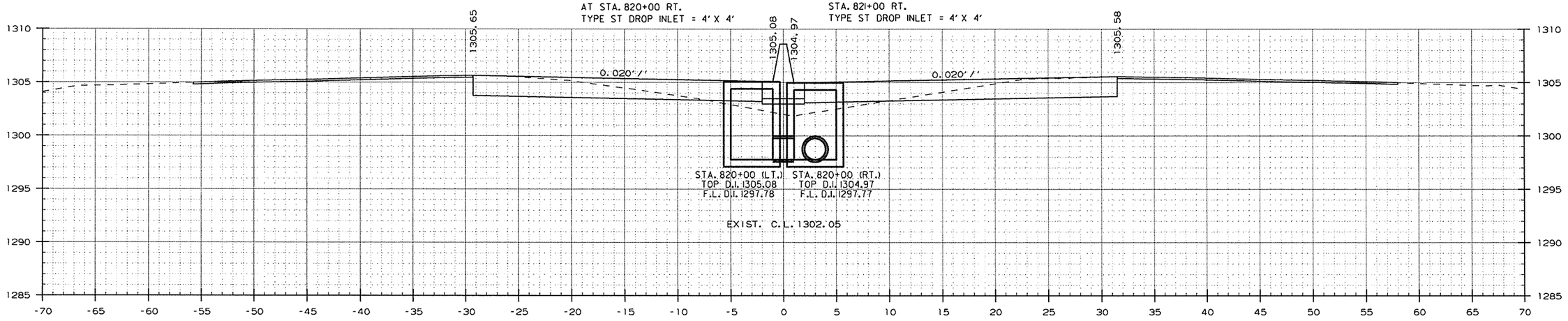
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	148	234

(2) CROSS SECTIONS

STA. 820+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 820+00 RT.
TYPE ST DROP INLET = 4' X 4'

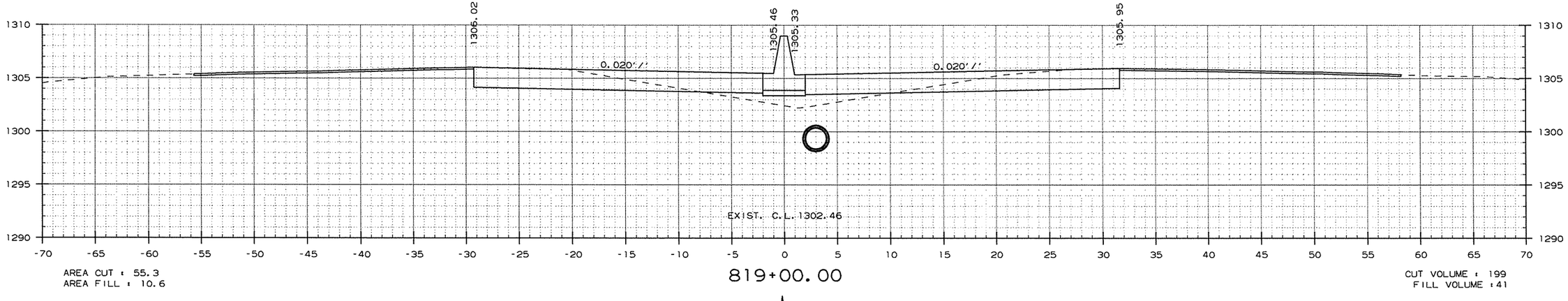
STA. 820+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-2"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 821+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 55.2
AREA FILL : 9.6

820+00.00

CUT VOLUME : 205
FILL VOLUME : 37



AREA CUT : 55.3
AREA FILL : 10.6

819+00.00

CUT VOLUME : 199
FILL VOLUME : 41

CROSS SECTION STA. 819+00 TO STA. 820+00

USER: at5106
DESIGN FILE: G:\13106000_412\roWagon\TRANSP\dgn\xsec1\rCA1101_CX.dgn
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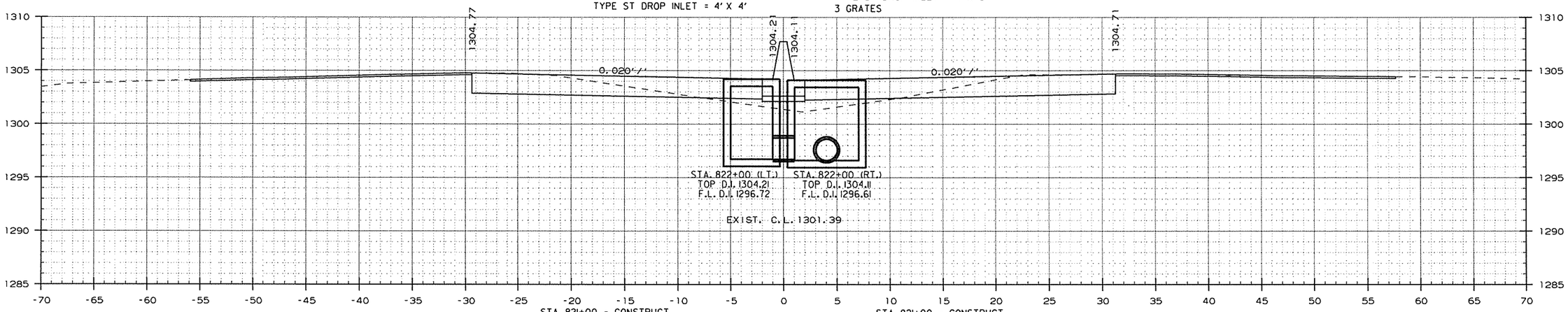
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	149	234
2	CROSS SECTIONS			

STA. 822+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-6"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 822+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 822+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-6"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



STA. 822+00 (LT.)
TOP D.I. 1304.21
F.L. D.I. 1296.72

STA. 822+00 (RT.)
TOP D.I. 1304.11
F.L. D.I. 1296.61

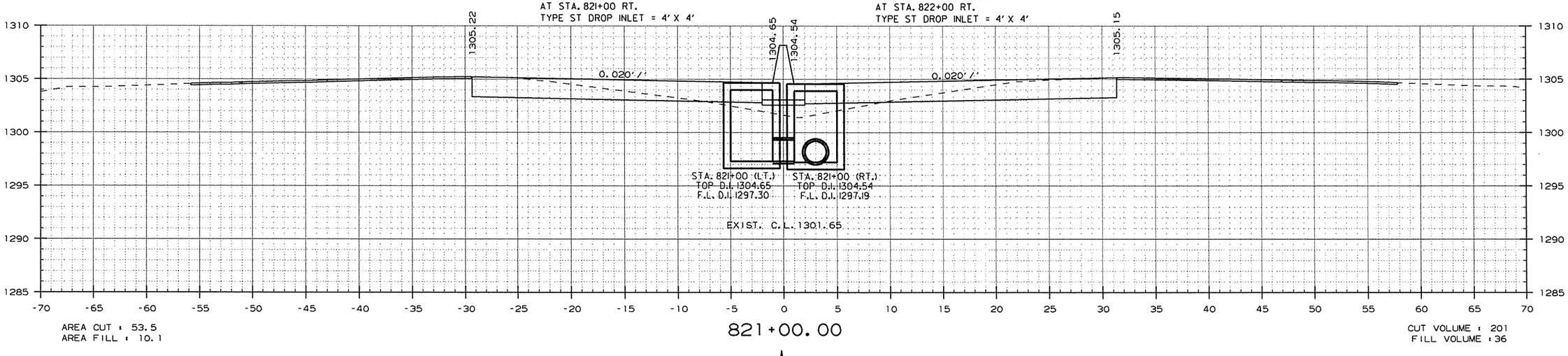
EXIST. C.L. 1301.39

AREA CUT : 55.7
AREA FILL : 9.4

CUT VOLUME : 202
FILL VOLUME : 36

STA. 821+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 821+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 821+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-4"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 822+00 RT.
TYPE ST DROP INLET = 4' X 4'



STA. 821+00 (LT.)
TOP D.I. 1304.65
F.L. D.I. 1297.30

STA. 821+00 (RT.)
TOP D.I. 1304.54
F.L. D.I. 1297.19

EXIST. C.L. 1301.65

AREA CUT : 53.5
AREA FILL : 10.1

CUT VOLUME : 201
FILL VOLUME : 36

822+00.00

821+00.00

CROSS SECTION STA. 821+00 TO STA. 822+00

USER: at5106
DESIGN FILE: G:\1306000.4\2to4wagon\TRANSP\dgn\xsect\r-CA1101_CX.dgn MODEL: X-Sections
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Crafton, Tull & Associates Inc.

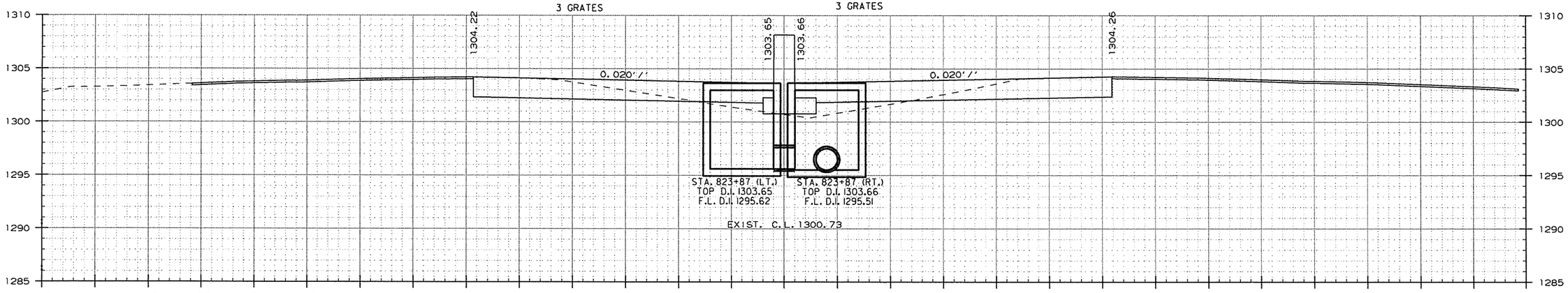
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	150	234

(2) CROSS SECTIONS

STA. 823+87 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 8'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+87 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+87 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 8'-2"
WITH 24" X 44' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 824+37
TYPE ST DROP INLET = 4' X 6'
3 GRATES



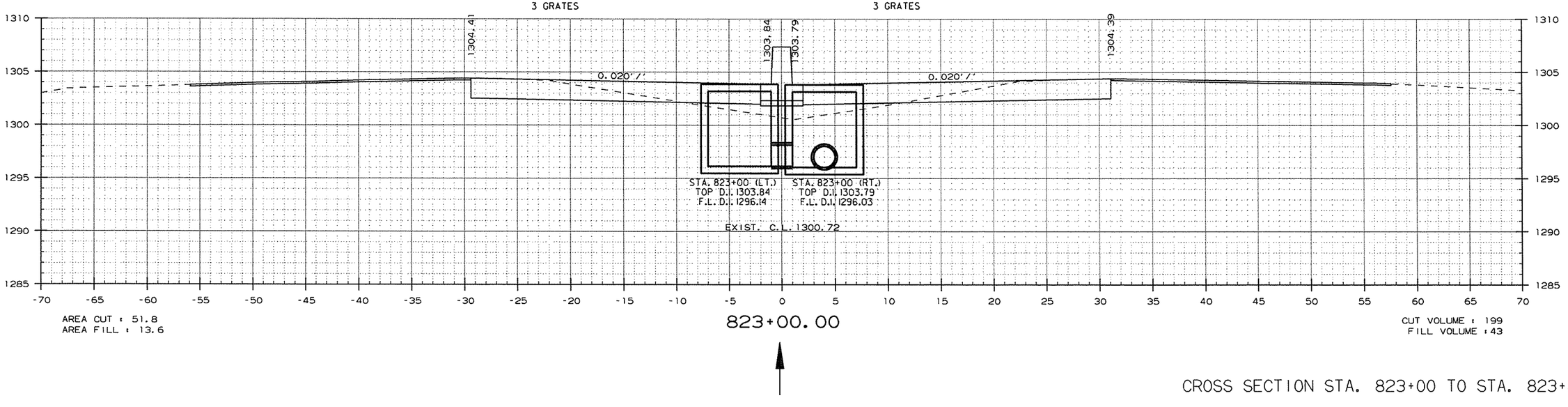
AREA CUT : 52.8
AREA FILL : 9.0

823+87.00

CUT VOLUME : 169
FILL VOLUME : 36

STA. 823+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 7'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 823+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-9"
WITH 24" X 83' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 823+87 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 51.8
AREA FILL : 13.6

823+00.00

CUT VOLUME : 199
FILL VOLUME : 43

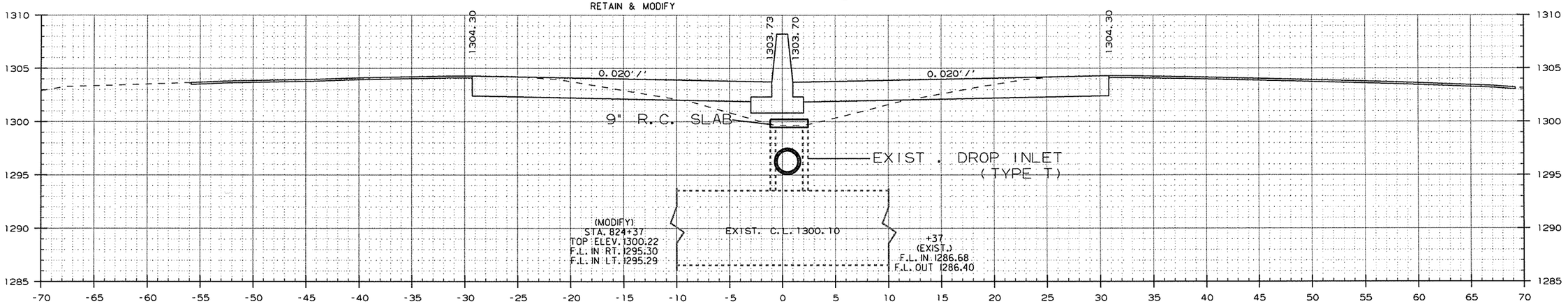
CROSS SECTION STA. 823+00 TO STA. 823+87

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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.	DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
					6	ARK.			
					JOB NO.		CAIIOI	151	234
					(2)	CROSS SECTIONS			

STA. 824+37 - IN PLACE
TYPE T DROP INLET IN MEDIAN
(3'-0" X 2'-6") OVER
TRIPLE 12' X 7' R.C. BOX
RETAIN & MODIFY

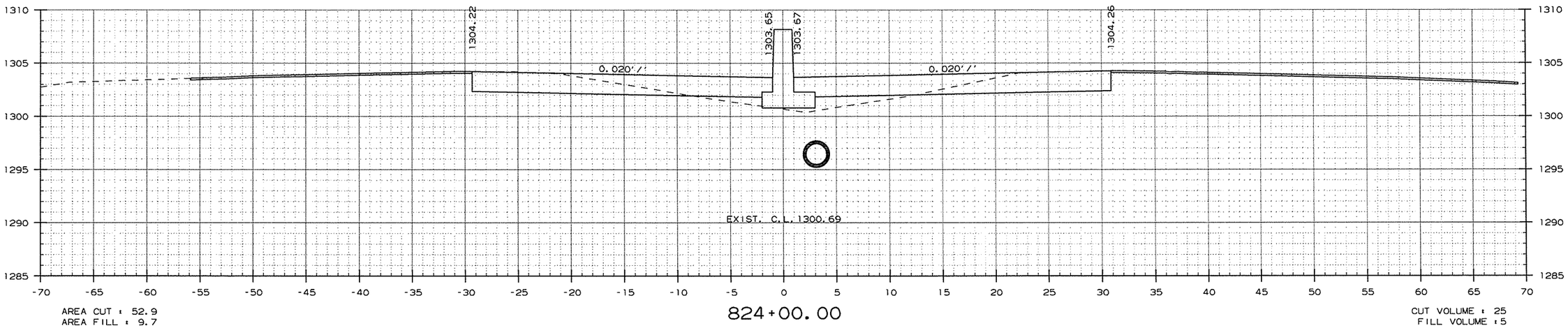
STA. 824+37 - IN PLACE
TRIPLE 12' X 7' X 240' R.C. BOX CULVERT
(30° RT. FWD. SKEW)
RETAIN



AREA CUT : 49.5
AREA FILL : 20.8

824+37.00

CUT VOLUME : 70
FILL VOLUME : 21



AREA CUT : 52.9
AREA FILL : 9.7

824+00.00

CUT VOLUME : 25
FILL VOLUME : 5

CROSS SECTION STA. 824+00 TO STA. 824+37

USER: at5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn MODEL: X-Sections
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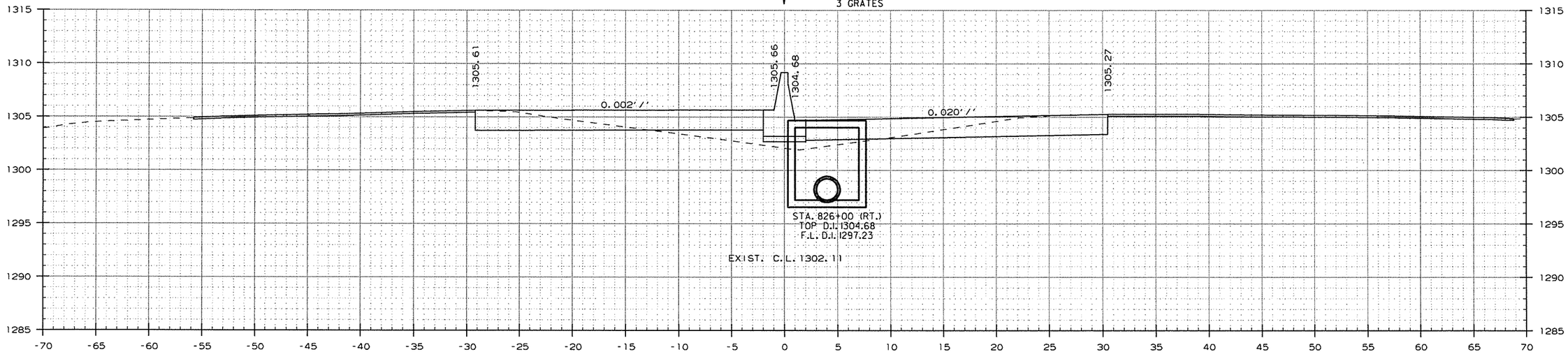
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	152	234

(2) CROSS SECTIONS

STA. 826+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 825+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



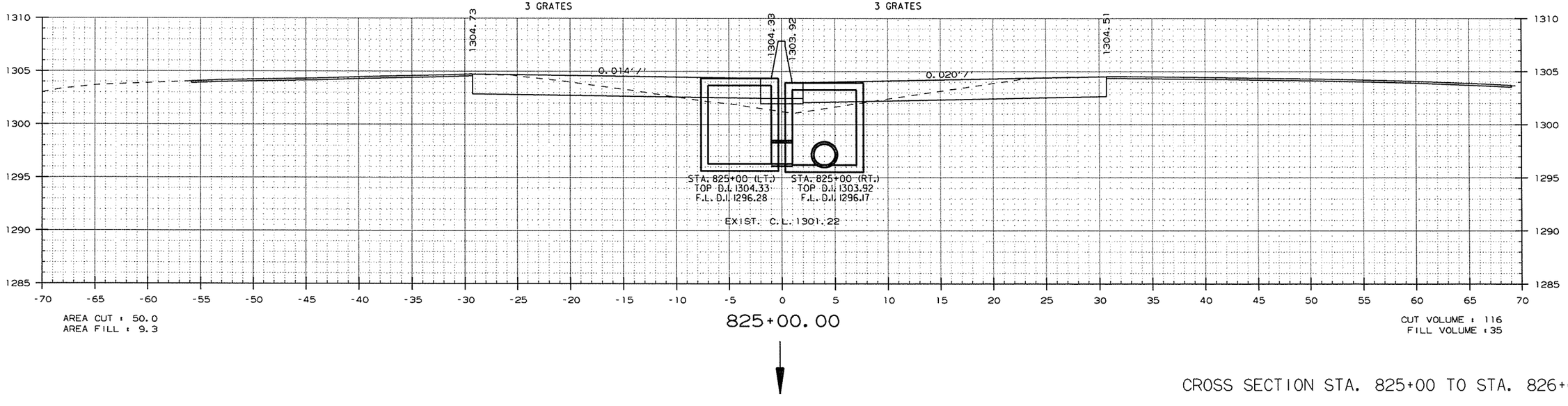
AREA CUT : 44.2
AREA FILL : 12.4

826+00.00

CUT VOLUME : 174
FILL VOLUME : 40

STA. 825+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 8'-1"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 825+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 825+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-9"
WITH 24" X 58' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 824+37
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 50.0
AREA FILL : 9.3

825+00.00

CUT VOLUME : 116
FILL VOLUME : 35

CROSS SECTION STA. 825+00 TO STA. 826+00

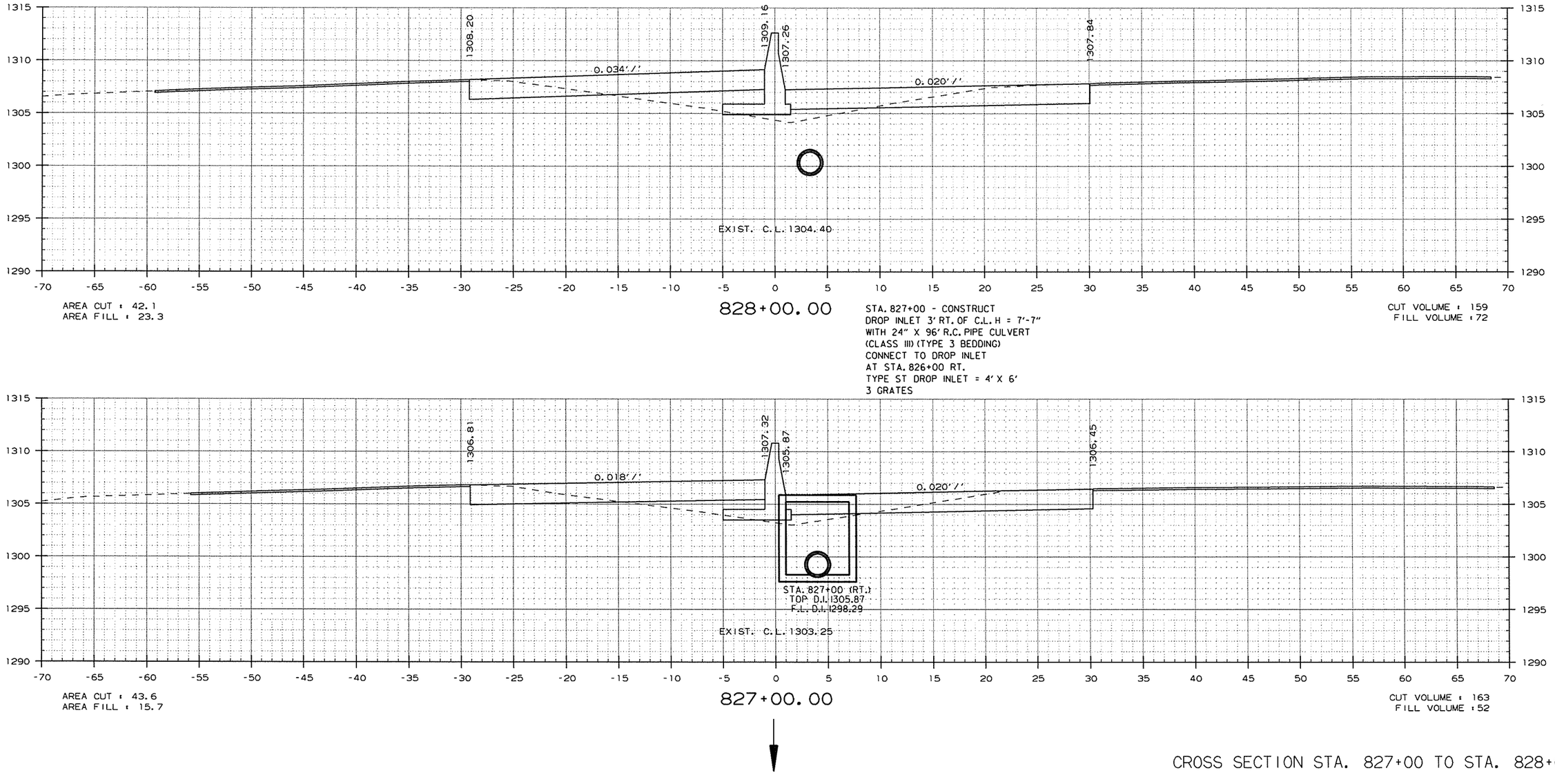
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	153	234

(2) CROSS SECTIONS



STA. 827+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-7"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 826+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

CROSS SECTION STA. 827+00 TO STA. 828+00

USER: at5106
DESIGN FILE: G:\1306000_412toWagon\TRANSP\dgn\Xsect\rCA1101_CX.dgn MODEL: X-Sections
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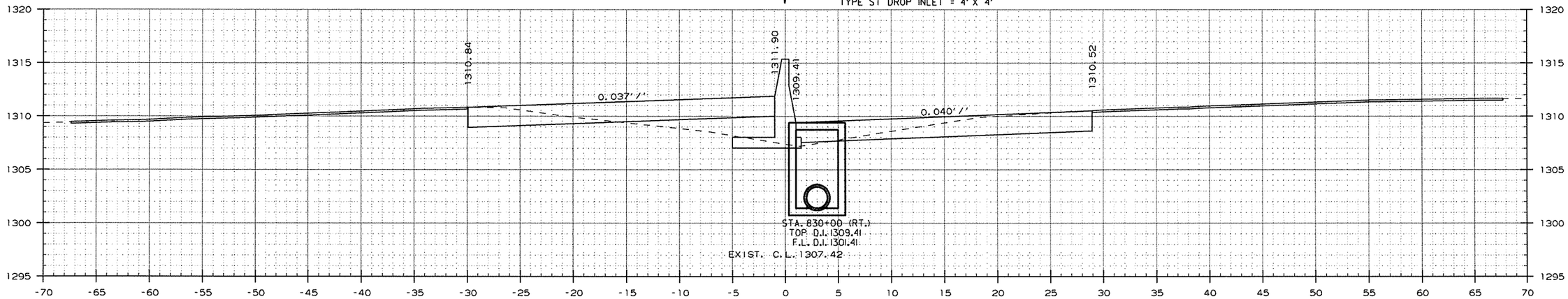
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	154	234

(2) CROSS SECTIONS

STA. 830+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 8'-0"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 829+00 RT.
TYPE ST DROP INLET = 4' X 4'

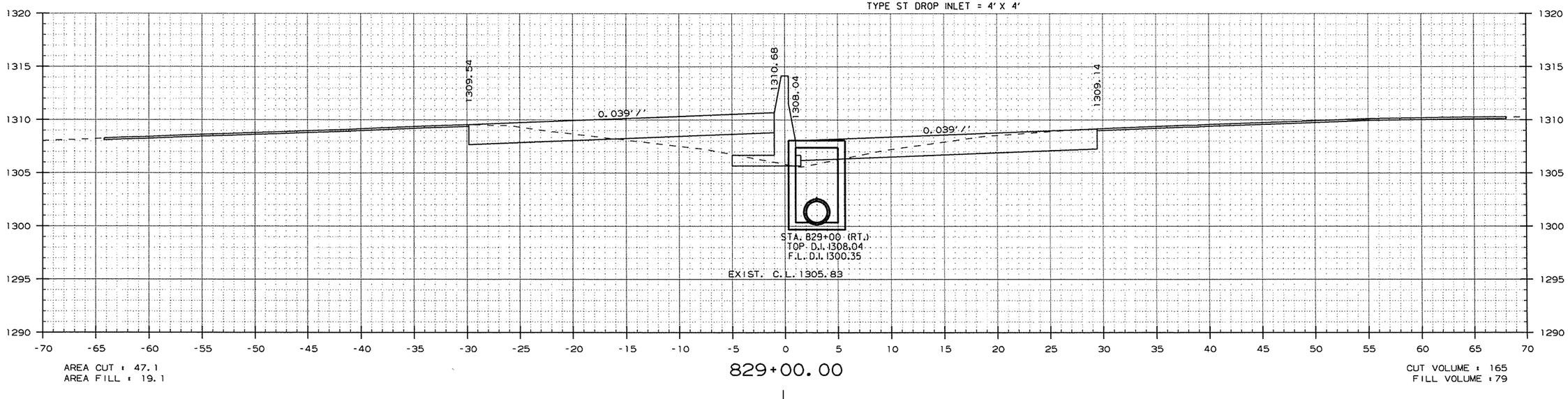


AREA CUT : 48.6
AREA FILL : 16.3

830+00.00

CUT VOLUME : 177
FILL VOLUME : 66

STA. 829+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 7'-8"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 827+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 47.1
AREA FILL : 19.1

829+00.00

CUT VOLUME : 165
FILL VOLUME : 79

CROSS SECTION STA. 829+00 TO STA. 830+00

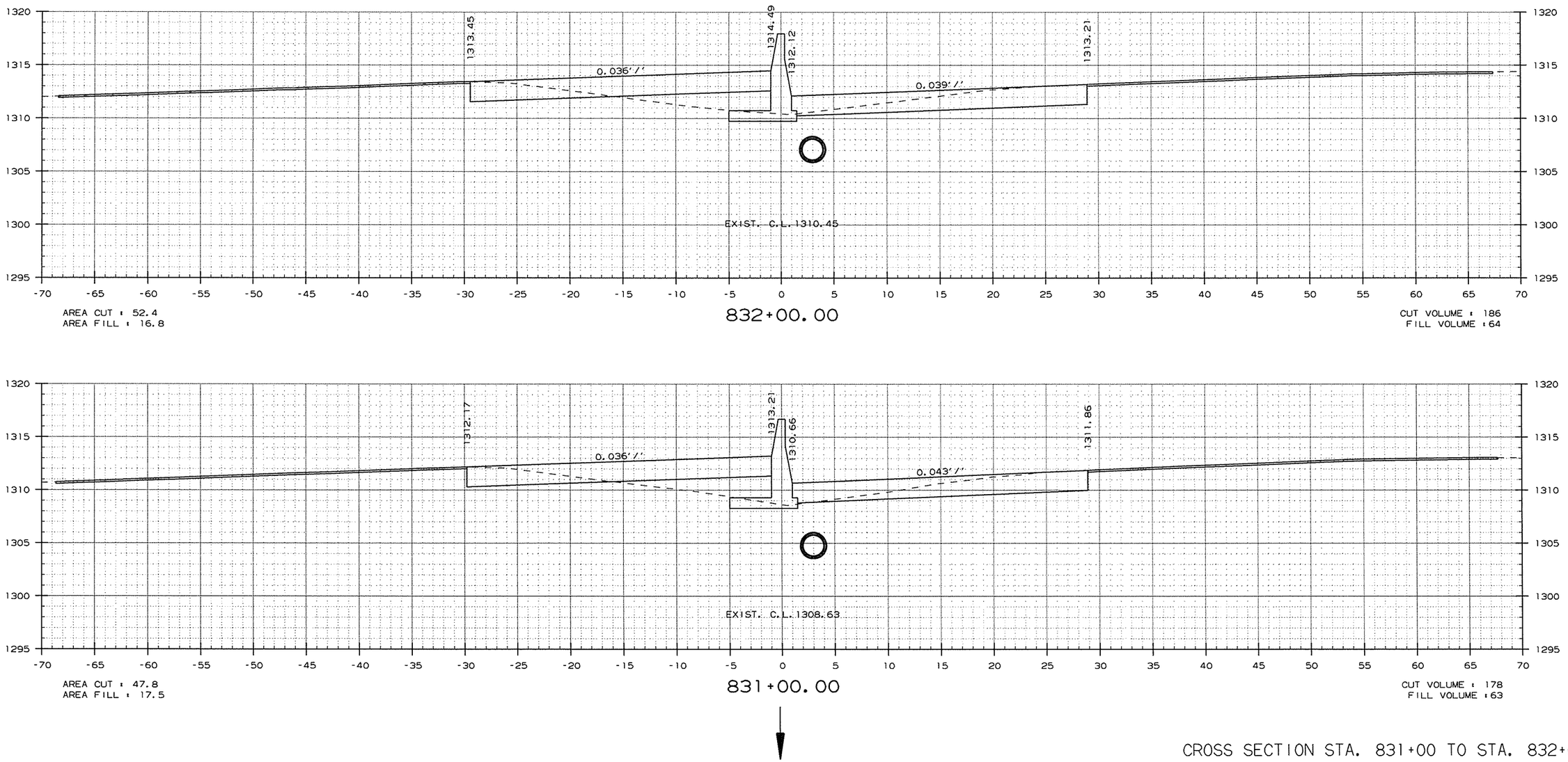
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	155	234

(2) CROSS SECTIONS



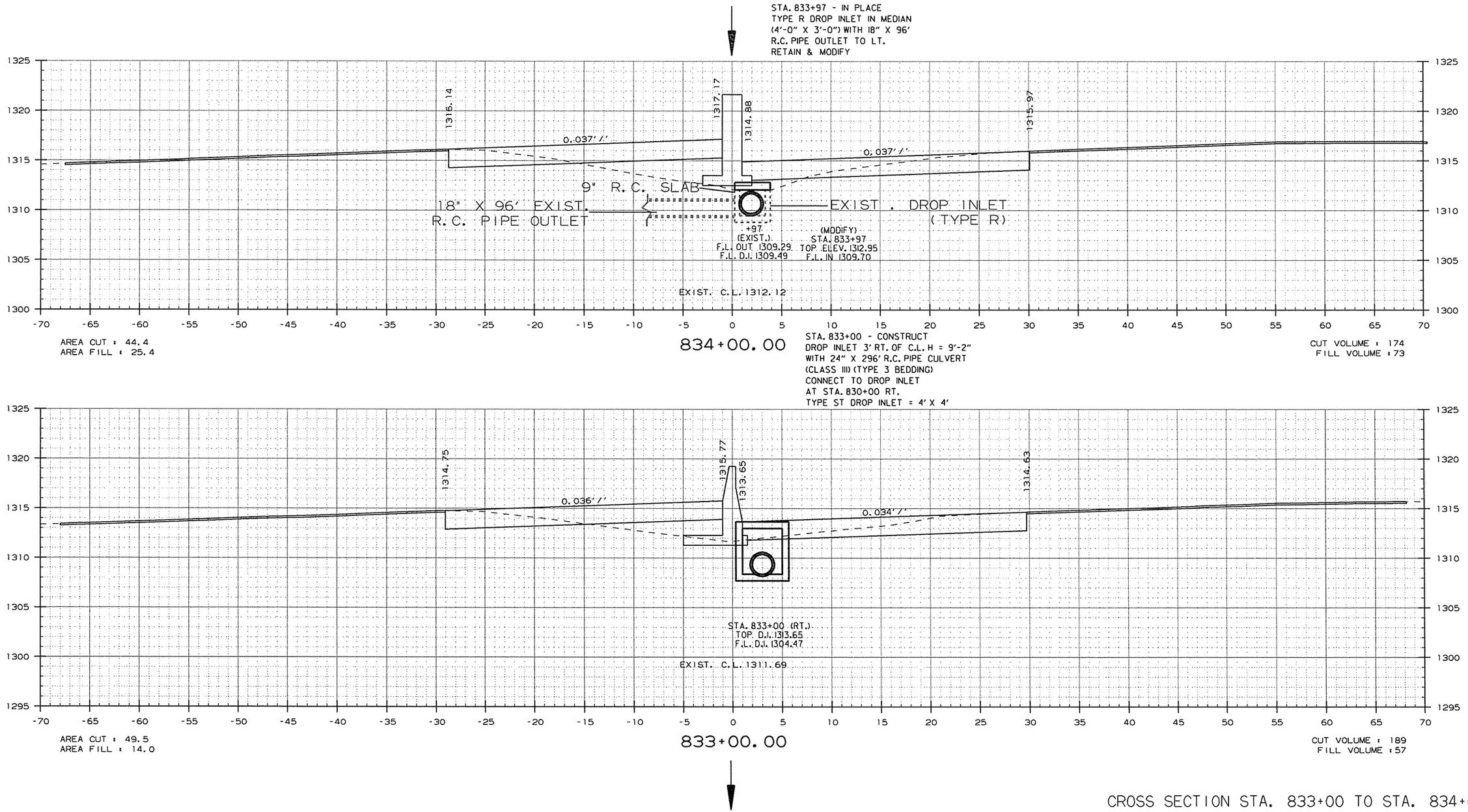
CROSS SECTION STA. 831+00 TO STA. 832+00

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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	156	234

2 CROSS SECTIONS



CROSS SECTION STA. 833+00 TO STA. 834+00

USER: at5106
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MODEL: X-Sections

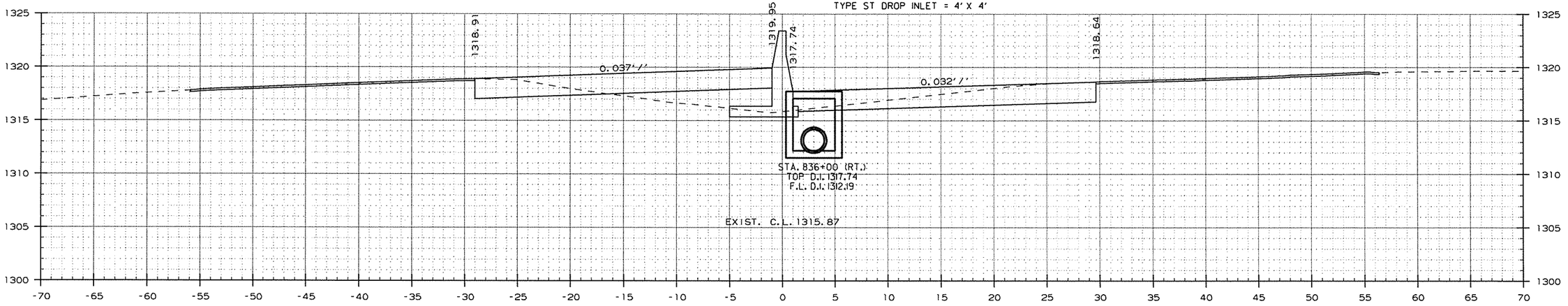
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	157	234

(2) CROSS SECTIONS

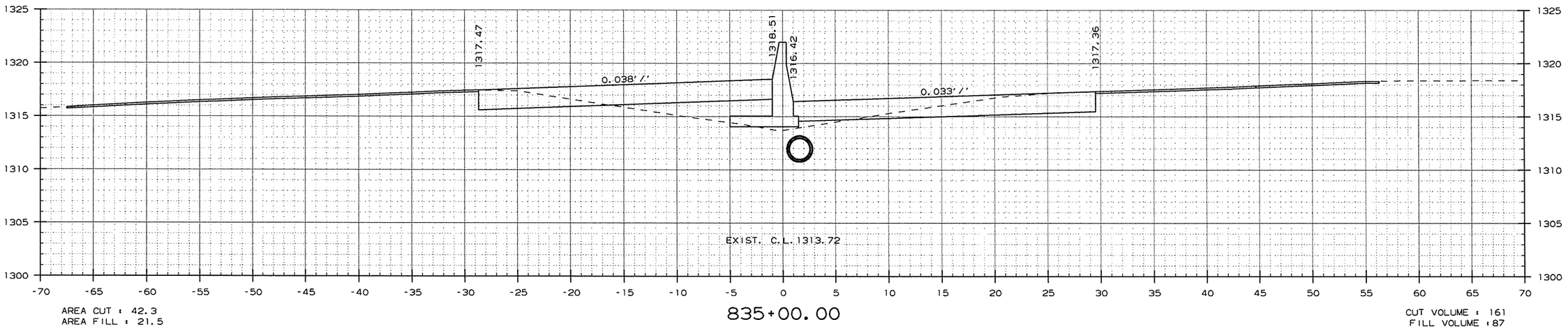
STA. 836+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-7"
WITH 24" X 199' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 833+97
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 49.4
AREA FILL : 17.5

836+00.00

CUT VOLUME : 170
FILL VOLUME : 72



AREA CUT : 42.3
AREA FILL : 21.5

835+00.00

CUT VOLUME : 161
FILL VOLUME : 87

CROSS SECTION STA. 835+00 TO STA. 836+00

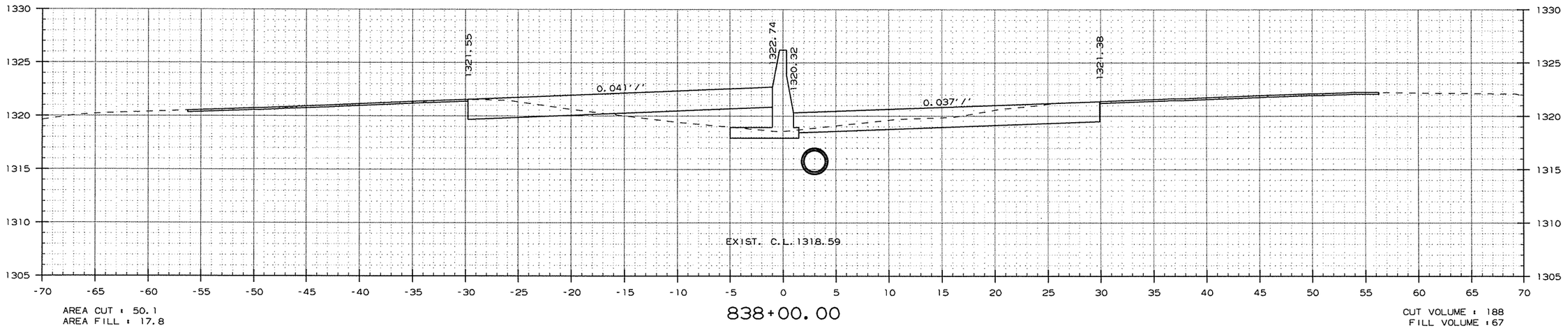
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	158	234

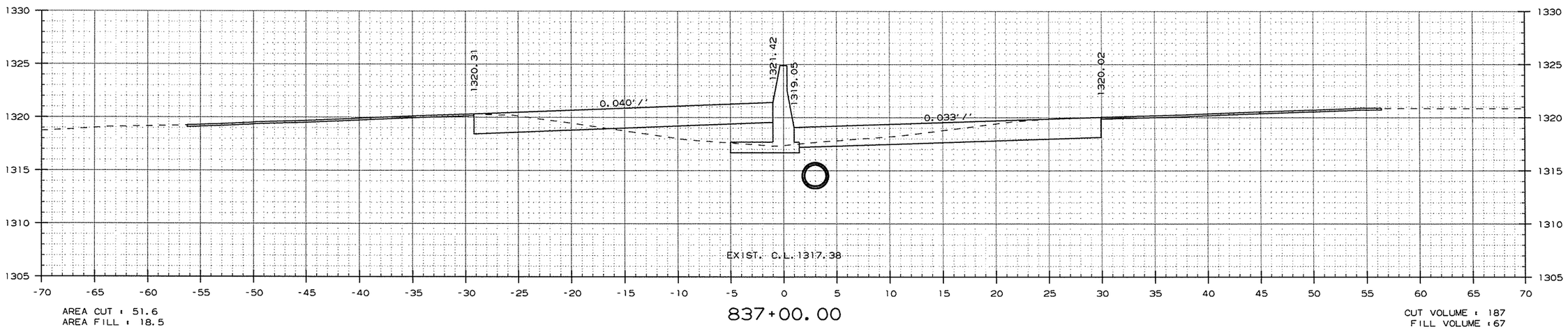
(2) CROSS SECTIONS



AREA CUT : 50.1
AREA FILL : 17.8

838+00.00

CUT VOLUME : 188
FILL VOLUME : 67



AREA CUT : 51.6
AREA FILL : 18.5

837+00.00

CUT VOLUME : 187
FILL VOLUME : 67

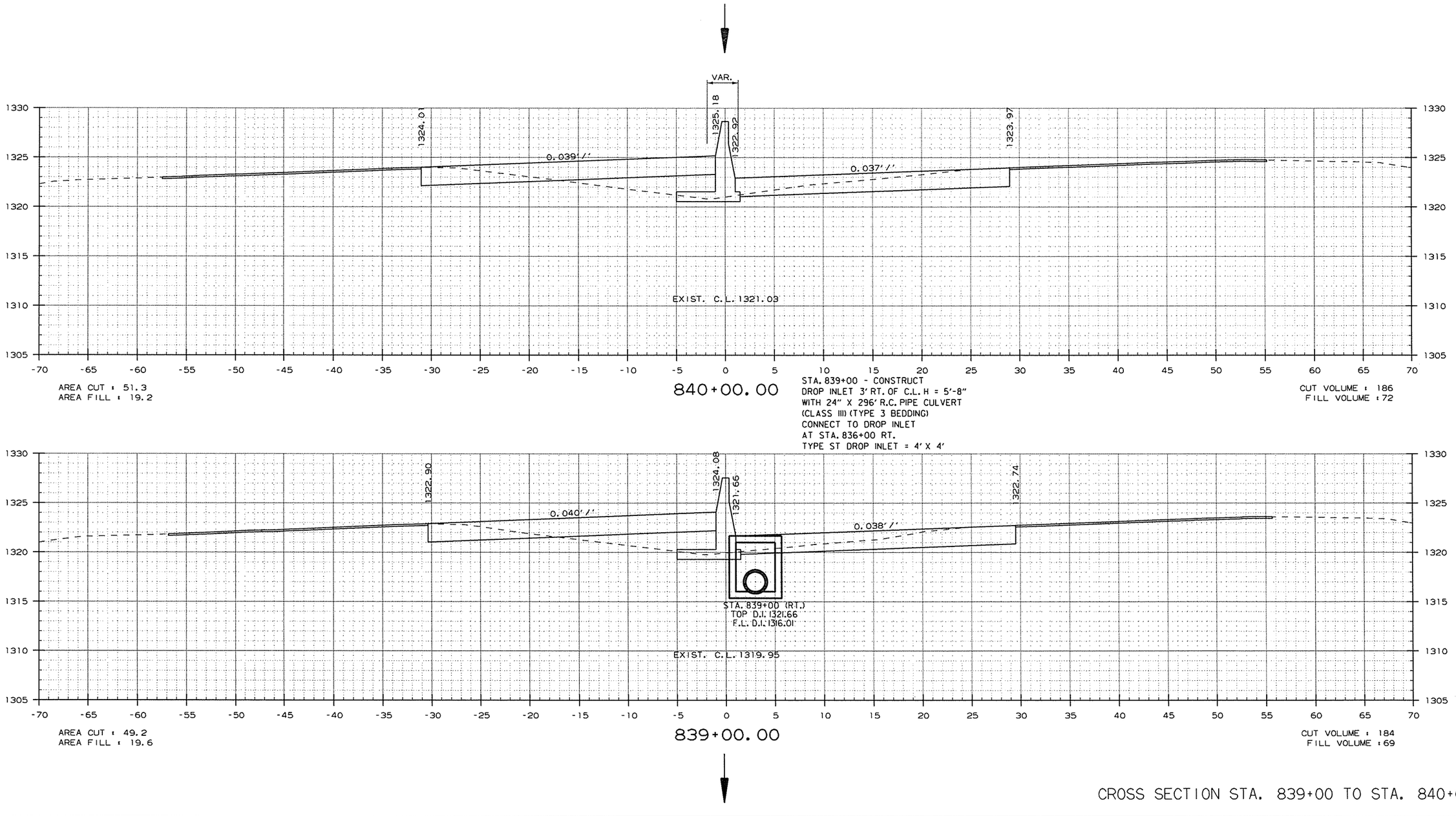
CROSS SECTION STA. 837+00 TO STA. 838+00

USER: at5106
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	159	234

(2) CROSS SECTIONS



CROSS SECTION STA. 839+00 TO STA. 840+00

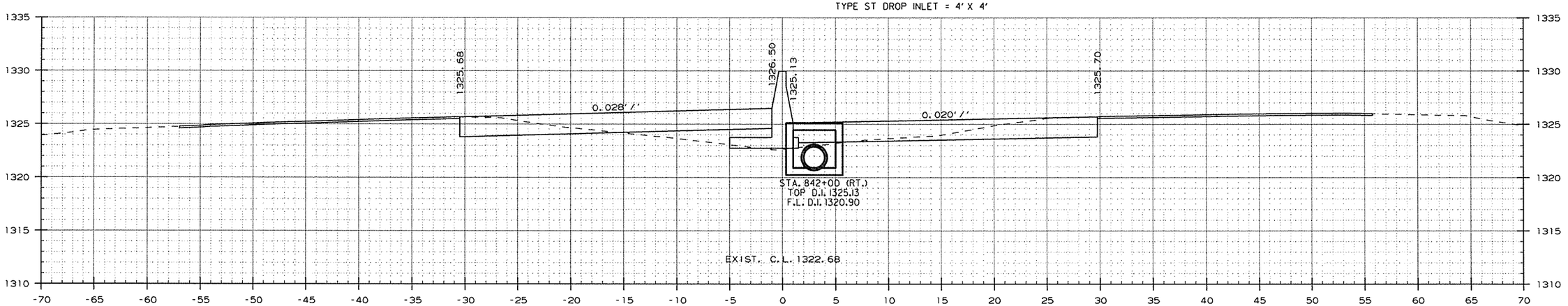
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAII0I	160	234

(2) CROSS SECTIONS

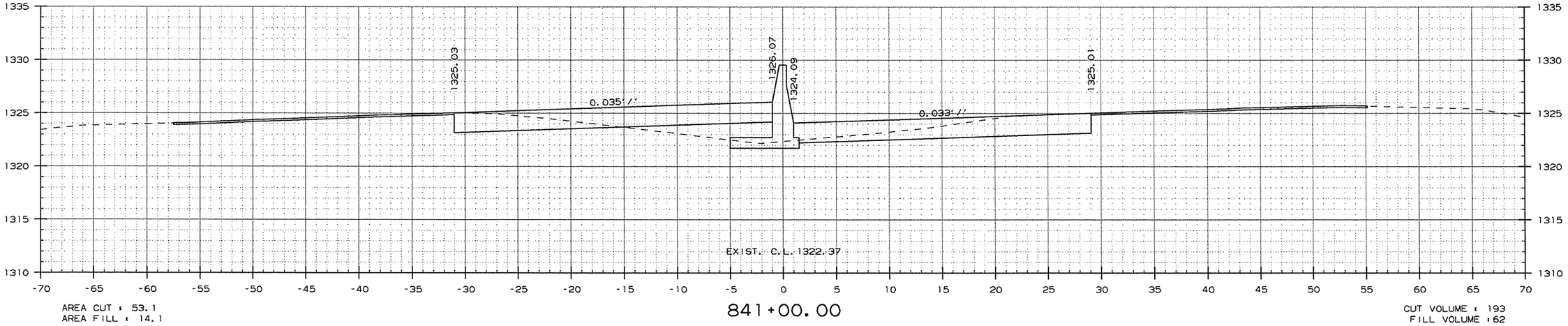
STA. 842+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-3"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 1 OR 2 BEDDING)
CONNECT TO DROP INLET
AT STA. 843+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 38.8
AREA FILL : 13.1

842+00.00

CUT VOLUME : 170
FILL VOLUME : 50



AREA CUT : 53.1
AREA FILL : 14.1

841+00.00

CUT VOLUME : 193
FILL VOLUME : 62

CROSS SECTION STA. 841+00 TO STA. 842+00

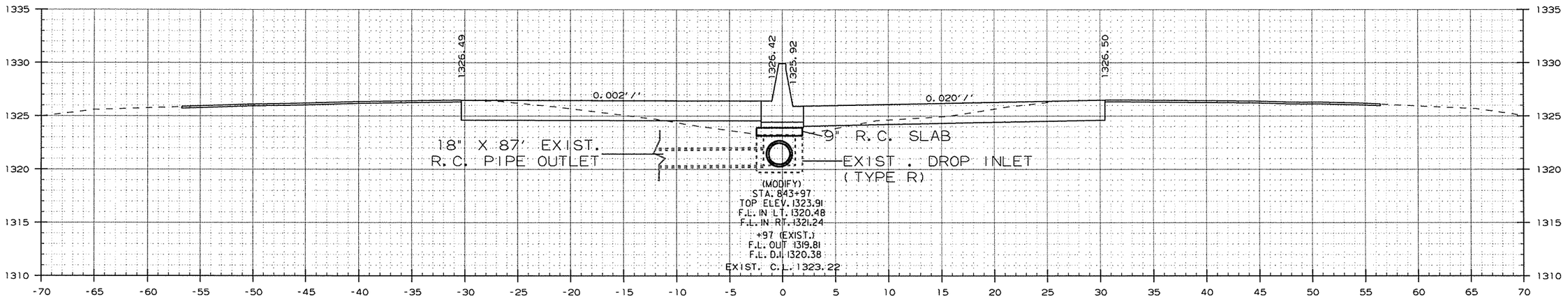
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	161	234

(2) CROSS SECTIONS

STA. 843+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 87' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY

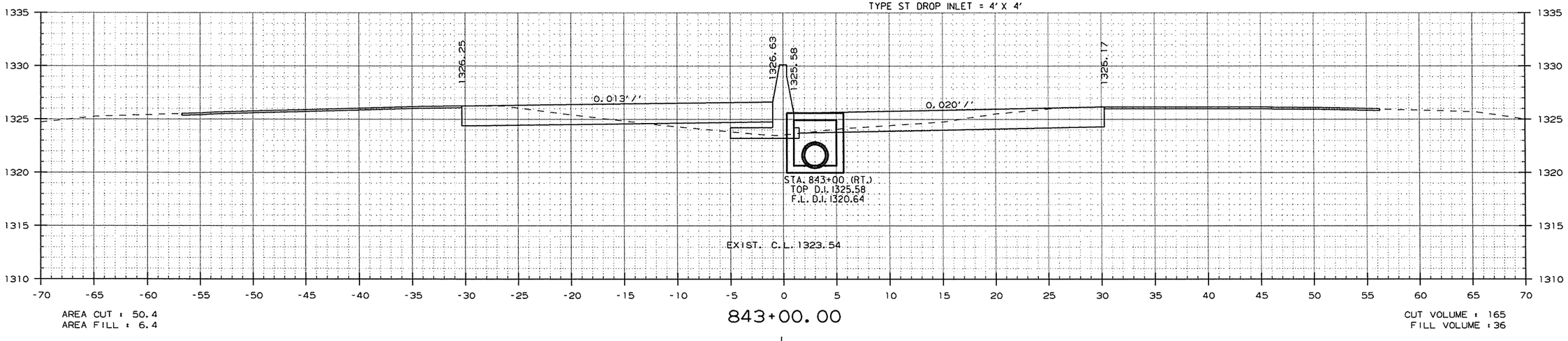


AREA CUT : 47.9
AREA FILL : 10.7

844+00.00

CUT VOLUME : 182
FILL VOLUME : 32

STA. 843+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 4'-11"
WITH 24" X 93' R.C. PIPE CULVERT
(CLASS III) (TYPE 1 OR 2 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 843+97
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 50.4
AREA FILL : 6.4

843+00.00

CUT VOLUME : 165
FILL VOLUME : 36

CROSS SECTION STA. 843+00 TO STA. 844+00

USER: a15106
DESIGN FILE: G:\13106000.412\toWagon\TRANSP\dgn\xsect\r-CA1101_CX.dgn
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MODEL: X-Sections

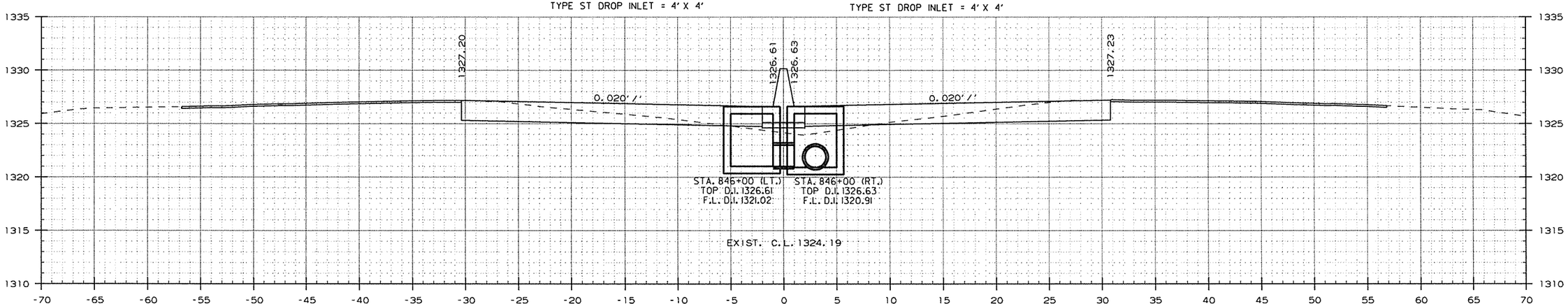
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	162	234
(2)	CROSS SECTIONS			

STA. 846+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 846+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 846+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-9"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 845+00 RT.
TYPE ST DROP INLET = 4' X 4'



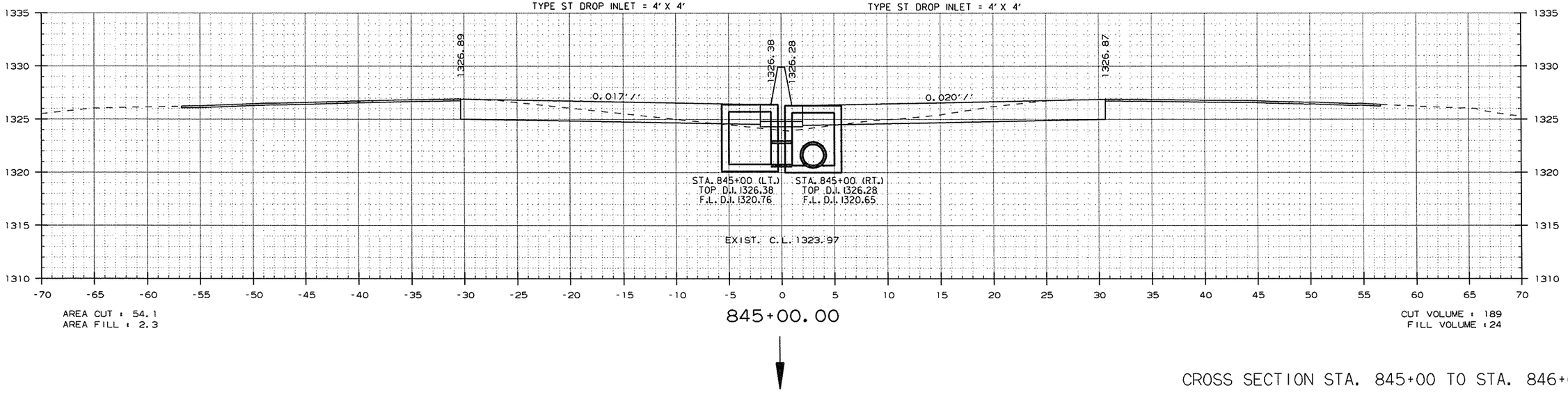
AREA CUT = 53.0
AREA FILL = 4.7

846+00.00

CUT VOLUME = 198
FILL VOLUME = 13

STA. 845+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 845+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 845+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 99' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 843+97
TYPE ST DROP INLET = 4' X 4'



AREA CUT = 54.1
AREA FILL = 2.3

845+00.00

CUT VOLUME = 189
FILL VOLUME = 24

CROSS SECTION STA. 845+00 TO STA. 846+00

USER: at5106
DESIGN FILE: G:\13106000.412\toWagon\TRANSP\dgn\xsect\rCAII01_CX.dgn
PLOTTED: 4/14/2015 13:36
SCALE: 10:1
MODEL: X-Sections

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Crafton, Tull & Associates Inc.

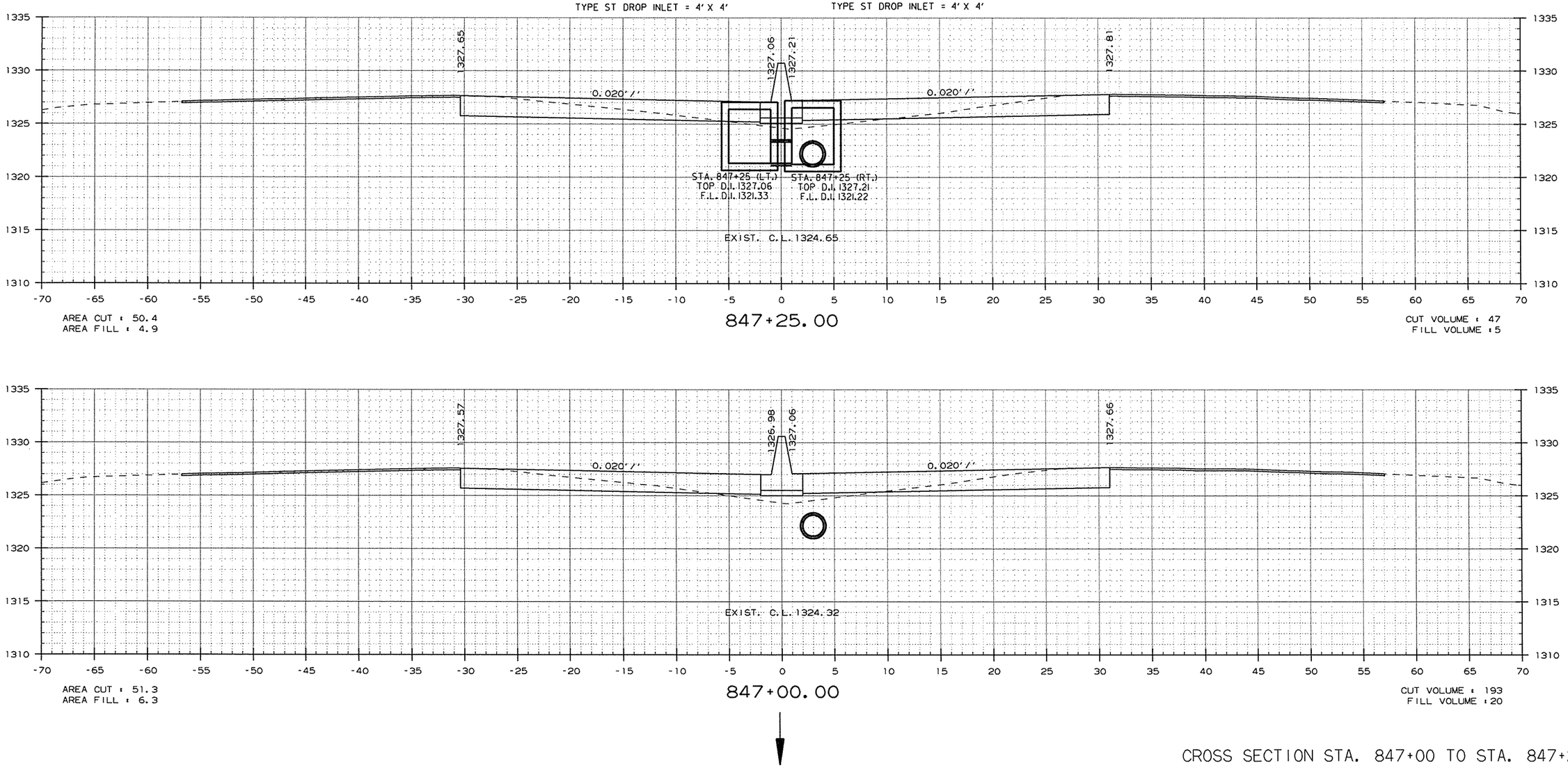
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	163	234

(2) CROSS SECTIONS

STA. 847+25 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 847+25 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 847+25 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-0"
WITH 24" X 121' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 846+00 RT.
TYPE ST DROP INLET = 4' X 4'



CROSS SECTION STA. 847+00 TO STA. 847+25

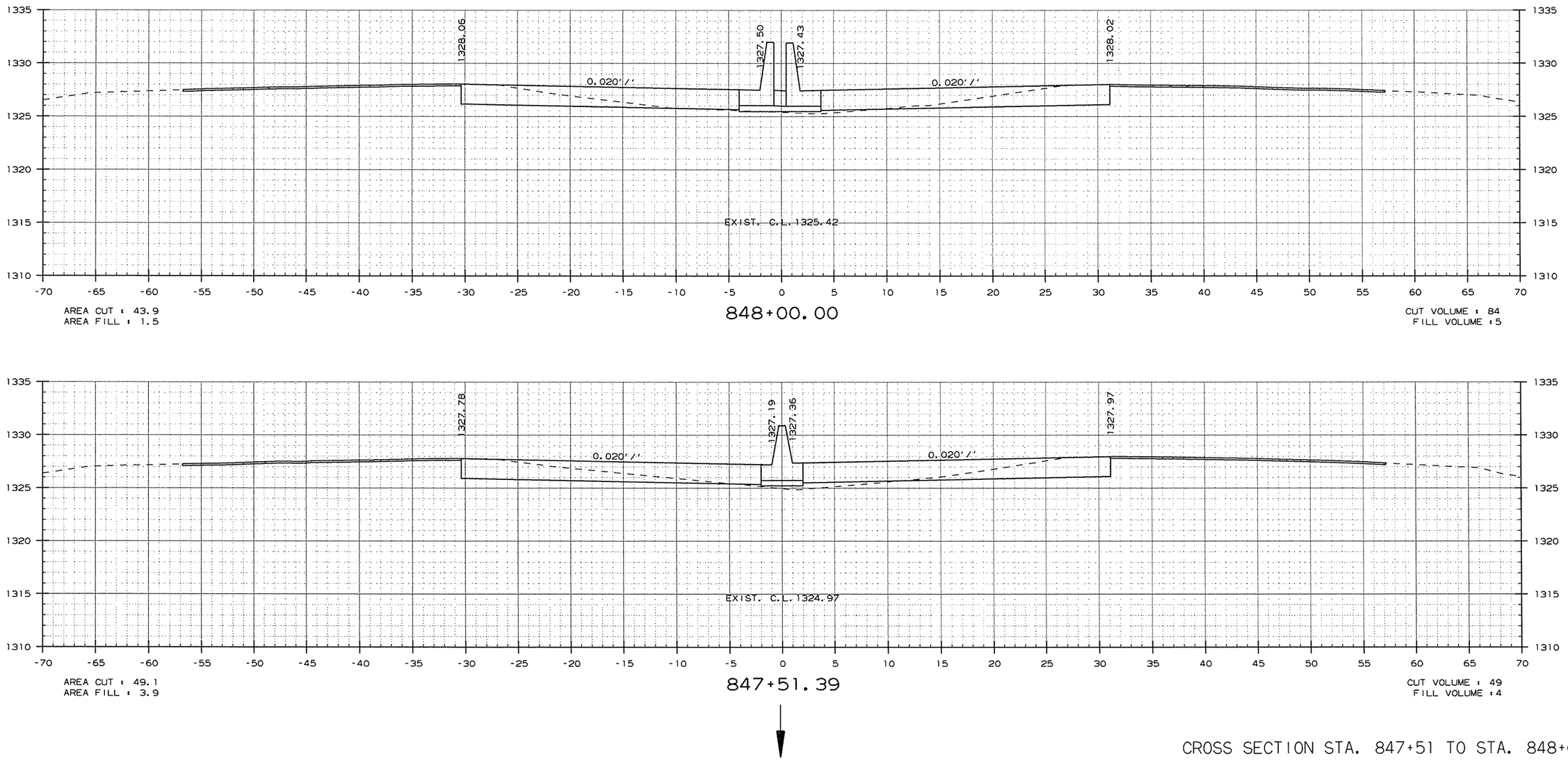
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PLOTTED: 4/14/2015 13:36 SCALE: 10:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	164	234

(2) CROSS SECTIONS



CROSS SECTION STA. 847+51 TO STA. 848+00

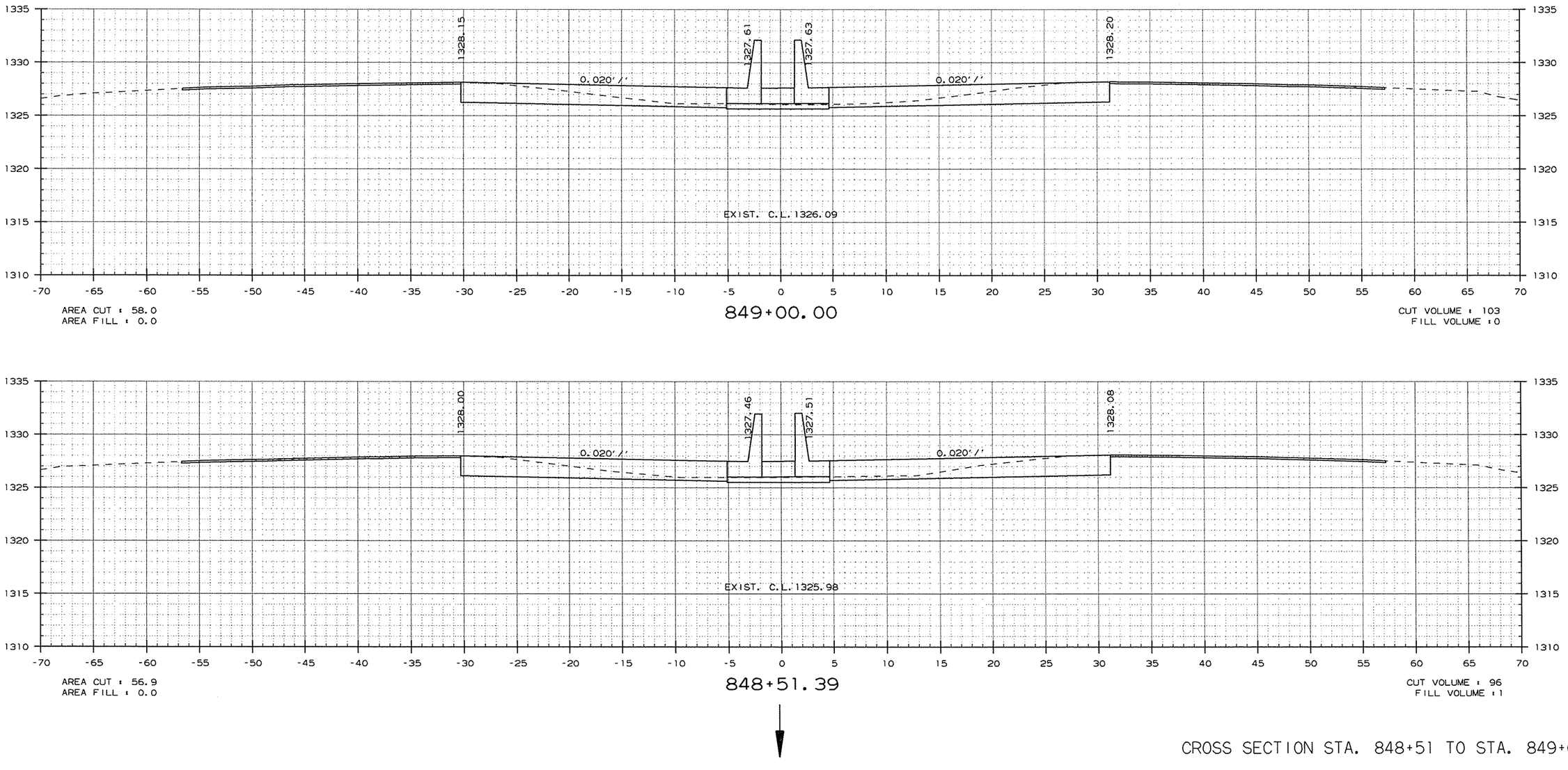
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PLOTTED: 4/14/2015 13:36
SCALE: 10:1
MODEL: X-Sections

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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	165	234

2 CROSS SECTIONS



CROSS SECTION STA. 848+51 TO STA. 849+00

USER: a+5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn MODEL: X-Sections
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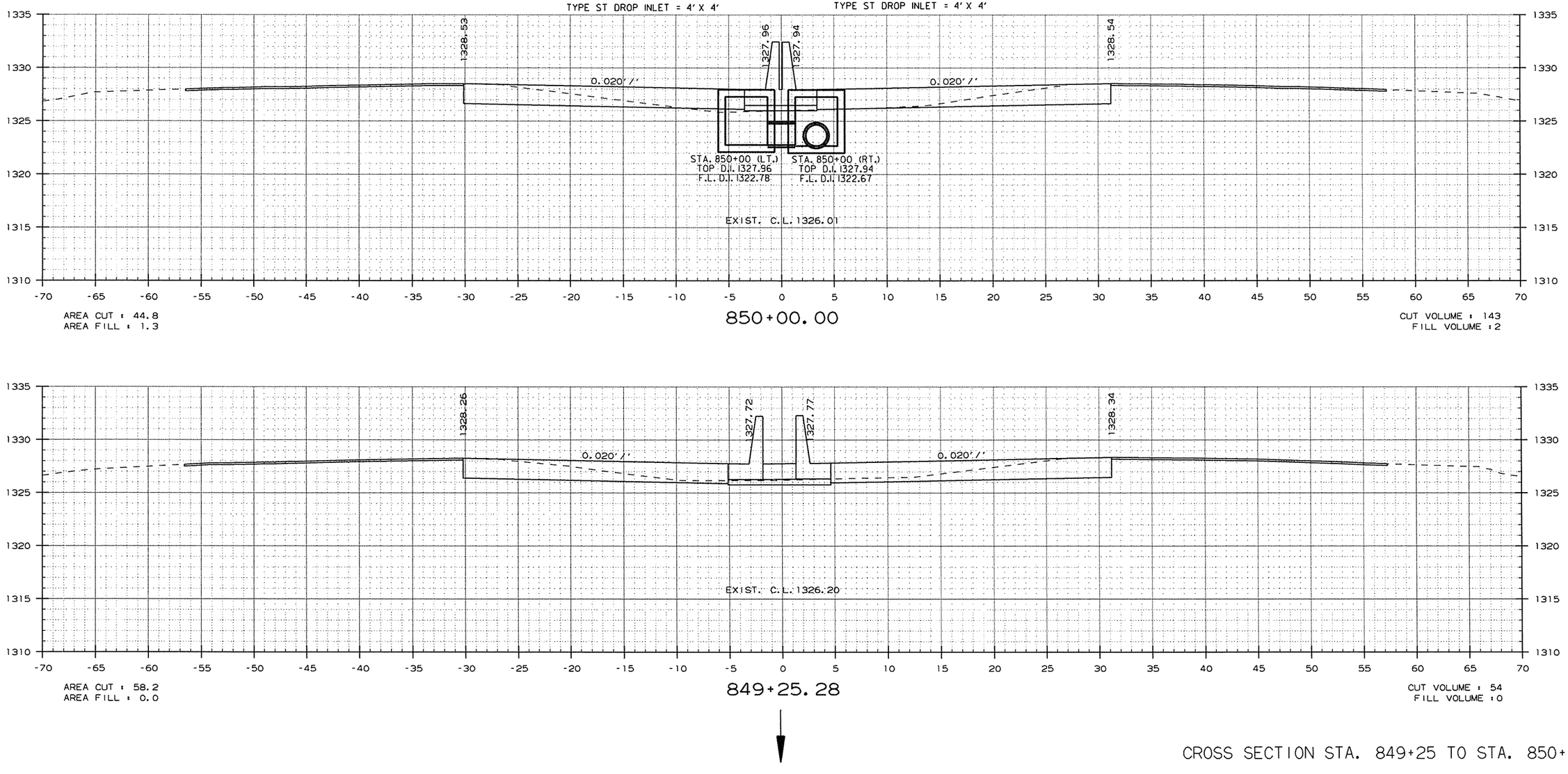
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	166	234
				(2)	CROSS SECTIONS			

STA. 850+00 - CONSTRUCT
DROP INLET 3'-4" LT. OF C.L. H = 5'-2"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 850+00 RT.
TYPE ST DROP INLET = 4' X 4'

STA. 850+00 - CONSTRUCT
DROP INLET 3'-4" RT. OF C.L. H = 5'-3"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 851+00 RT.
TYPE ST DROP INLET = 4' X 4'



CROSS SECTION STA. 849+25 TO STA. 850+00

USER: of5106
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PLOTTED: 4/14/2015 13:36 SCALE: 10:1

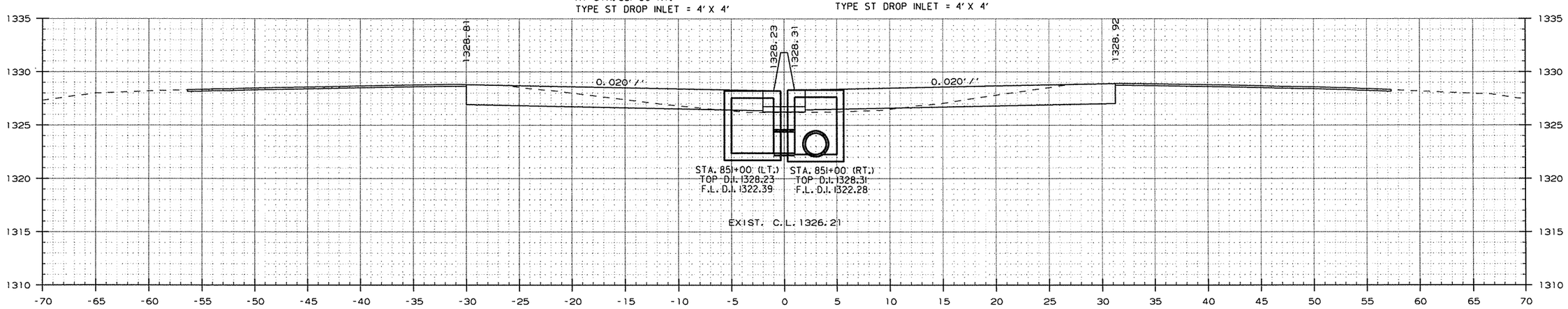
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	167	234

2 CROSS SECTIONS

STA. 851+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 851+00 RT.
TYPE ST DROP INLET = 4' X 4'

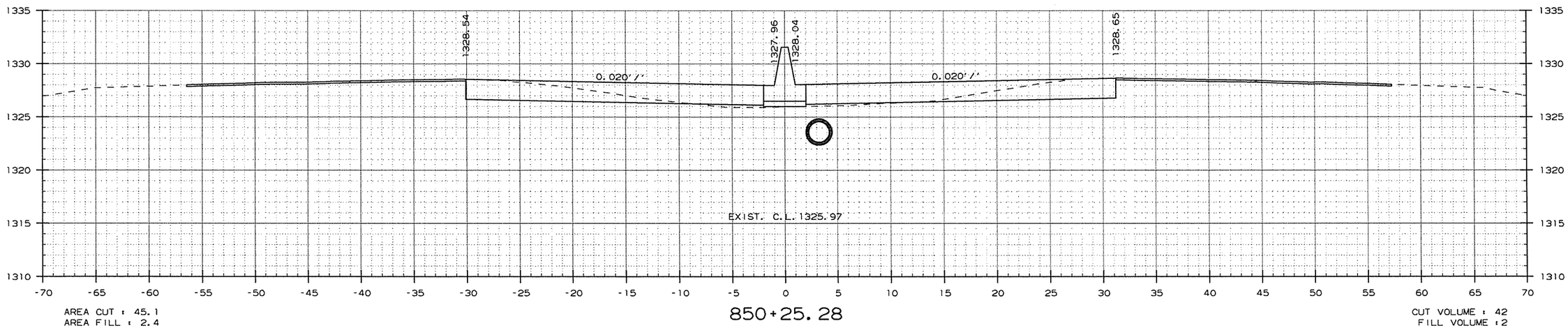
STA. 851+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-0"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 852+00 RT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 48.0
AREA FILL : 2.4

851+00.00

CUT VOLUME : 129
FILL VOLUME : 7



AREA CUT : 45.1
AREA FILL : 2.4

850+25.28

CUT VOLUME : 42
FILL VOLUME : 2

CROSS SECTION STA. 850+25 TO STA. 851+00

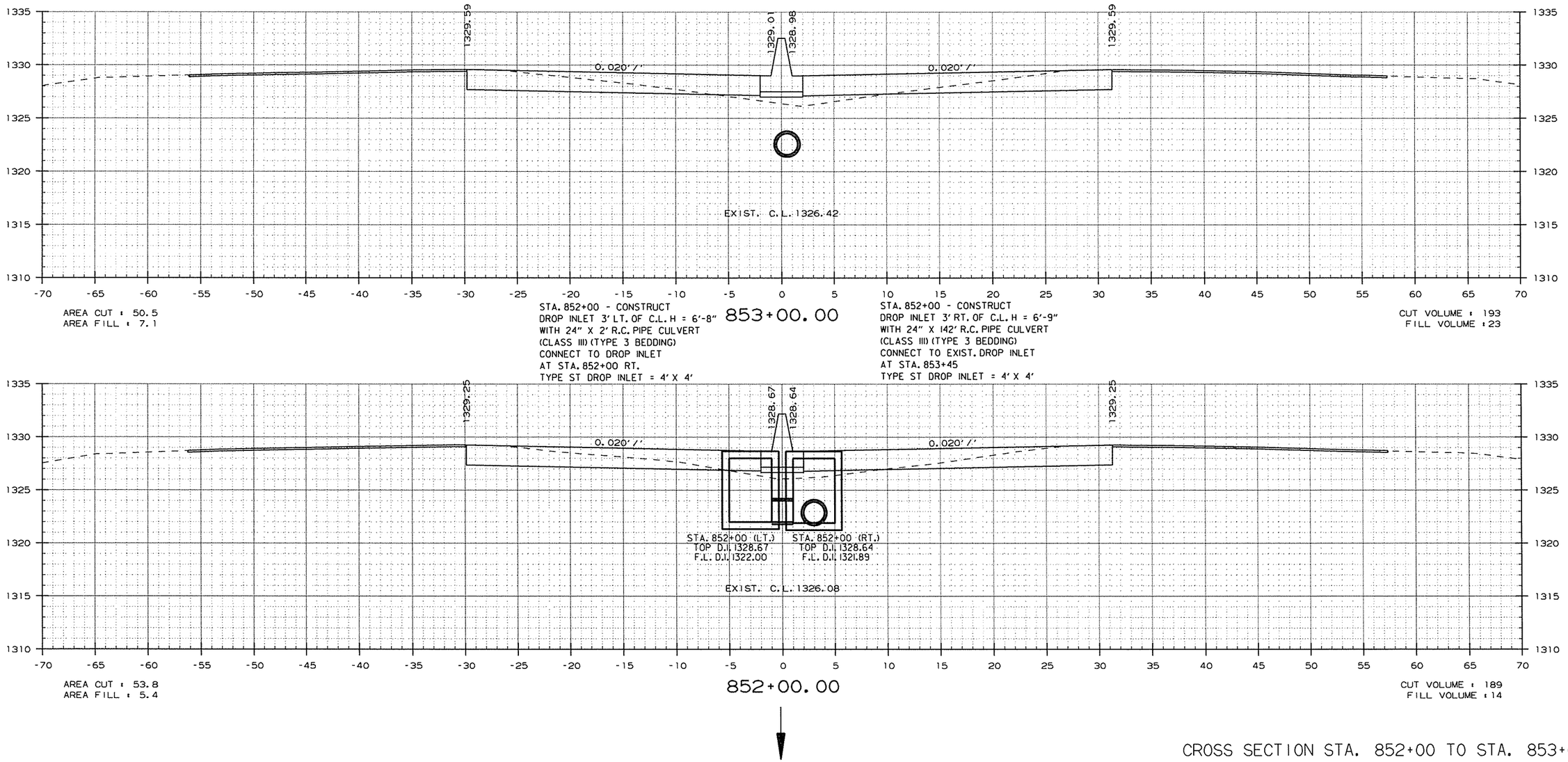
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	168	234

(2) CROSS SECTIONS



CROSS SECTION STA. 852+00 TO STA. 853+00

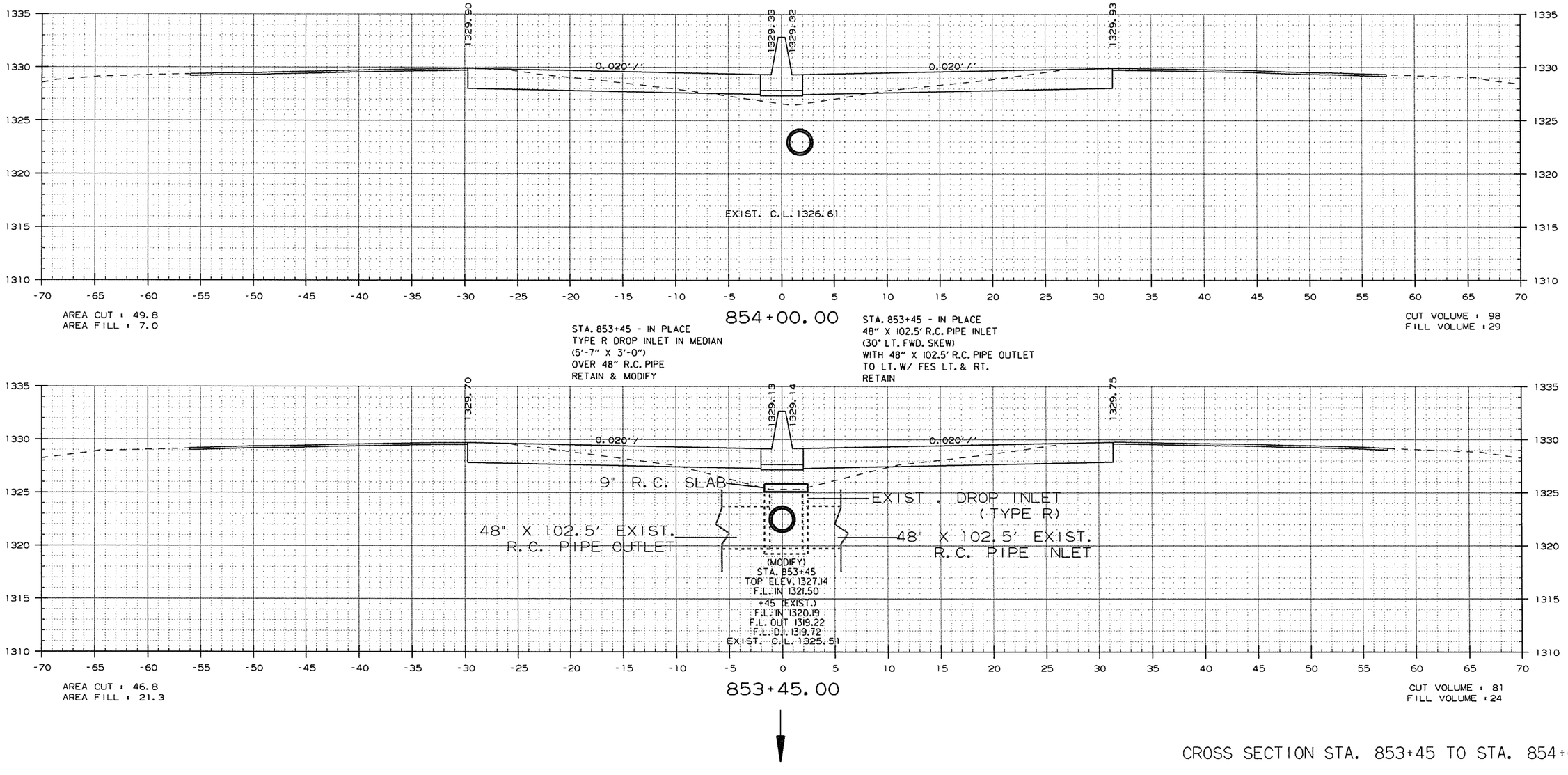
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	169	234

(2) CROSS SECTIONS



CROSS SECTION STA. 853+45 TO STA. 854+00

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\r-CAII01_CX.dgn MODEL: X-Sections
PLOTTED: 4/14/2015 13:37 SCALE: 10:1

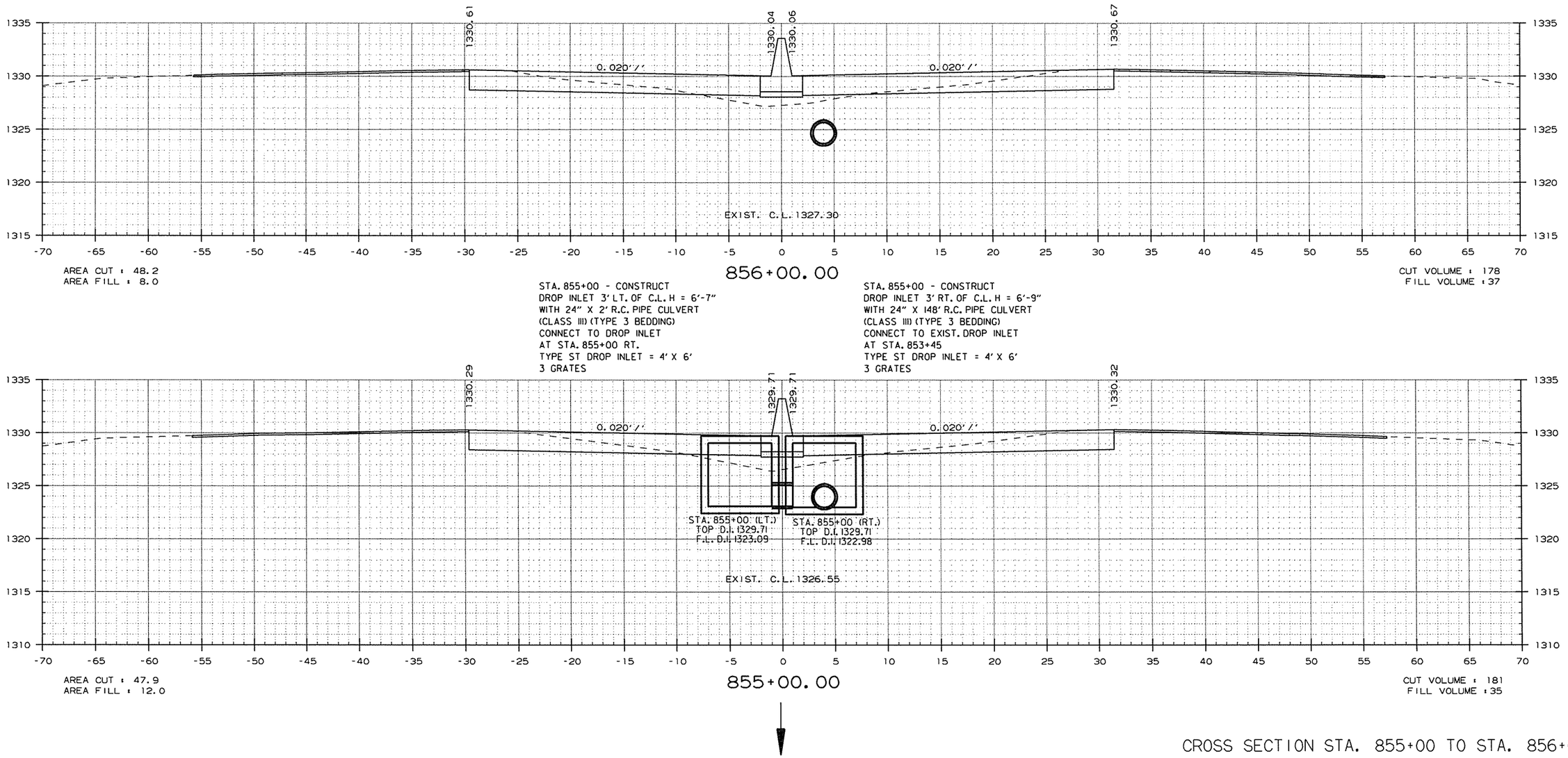
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	170	234

(2) CROSS SECTIONS



CROSS SECTION STA. 855+00 TO STA. 856+00

USER: a+5106
DESIGN FILE: G:\13I06000.412\toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn
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MODEL: X-Sections

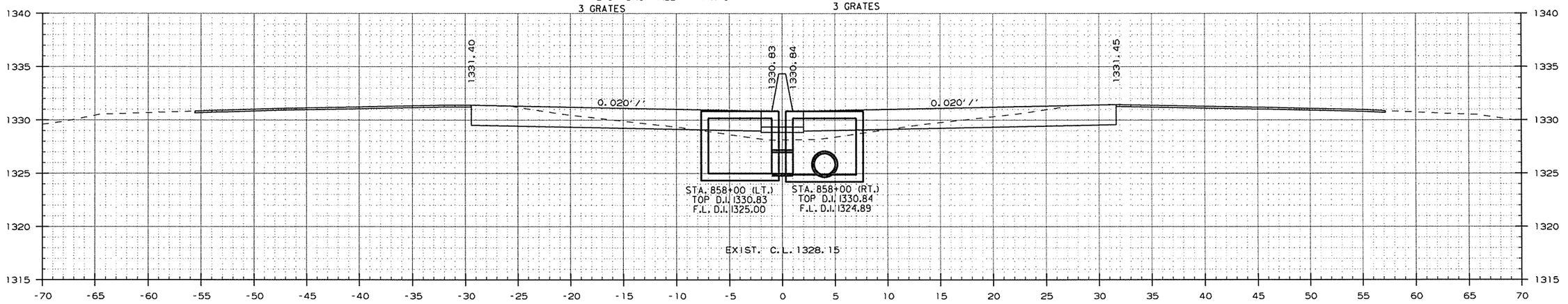
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	171	234
				(2)	CROSS SECTIONS			

STA. 858+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 858+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

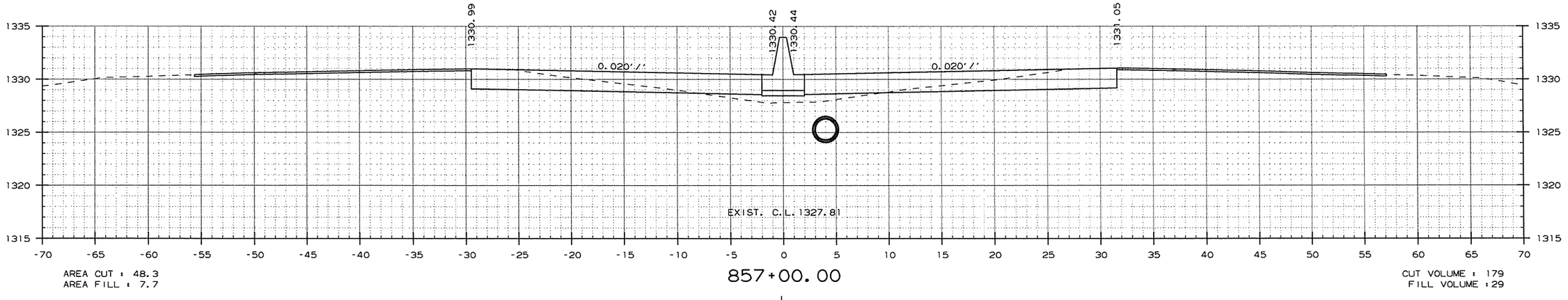
STA. 858+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-11"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 855+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 46.0
AREA FILL : 8.8

858+00.00

CUT VOLUME : 175
FILL VOLUME : 31



AREA CUT : 48.3
AREA FILL : 7.7

857+00.00

CUT VOLUME : 179
FILL VOLUME : 29

CROSS SECTION STA. 857+00 TO STA. 858+00

USER: a15106
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SCALE: 10:1
MODEL: X-Sections

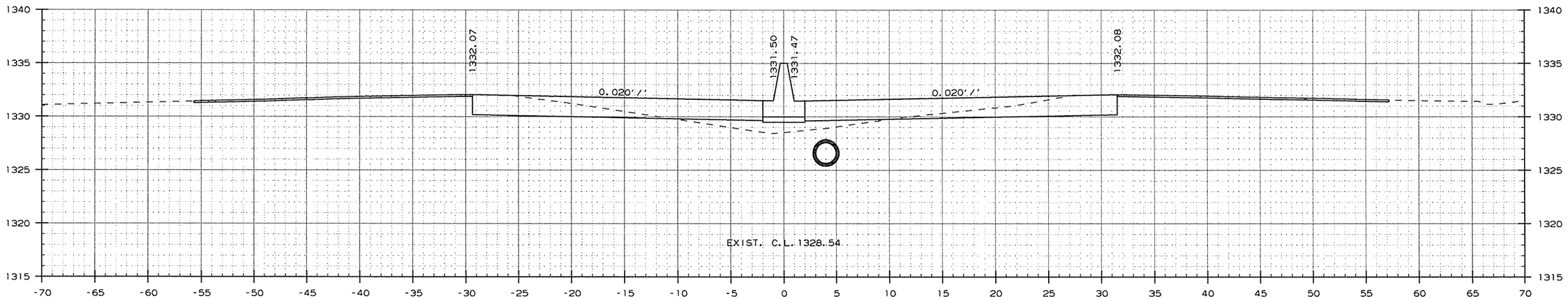
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	172	234

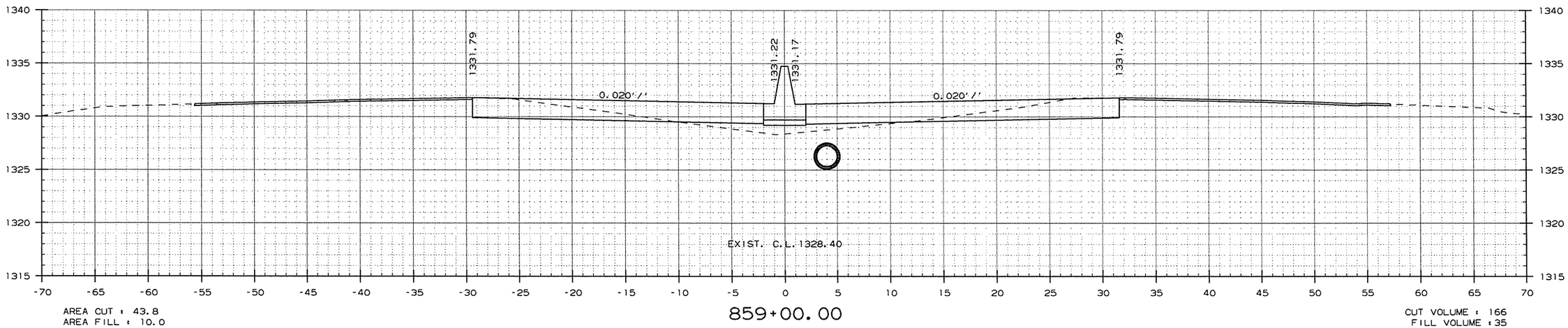
(2) CROSS SECTIONS



AREA CUT : 44.3
AREA FILL : 12.0

860+00.00

CUT VOLUME : 163
FILL VOLUME : 41



AREA CUT : 43.8
AREA FILL : 10.0

859+00.00

CUT VOLUME : 166
FILL VOLUME : 35

CROSS SECTION STA. 859+00 TO STA. 860+00

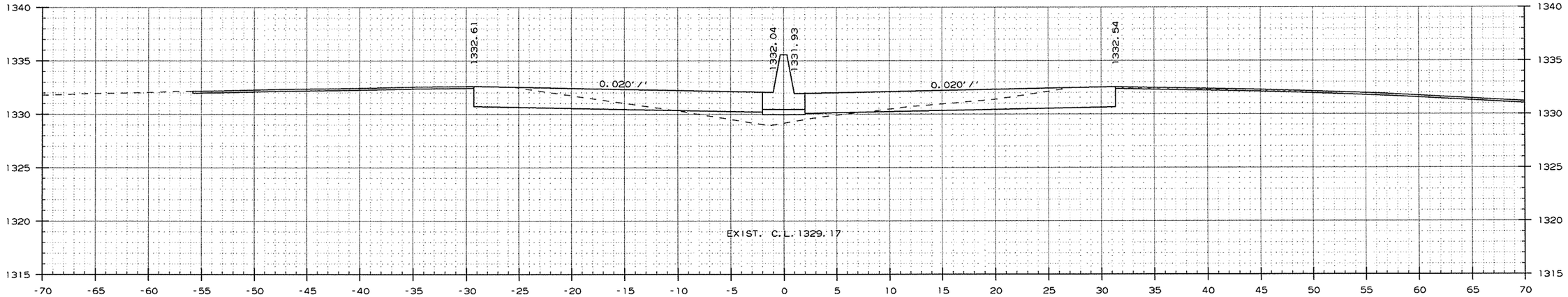
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	173	234

(2) CROSS SECTIONS



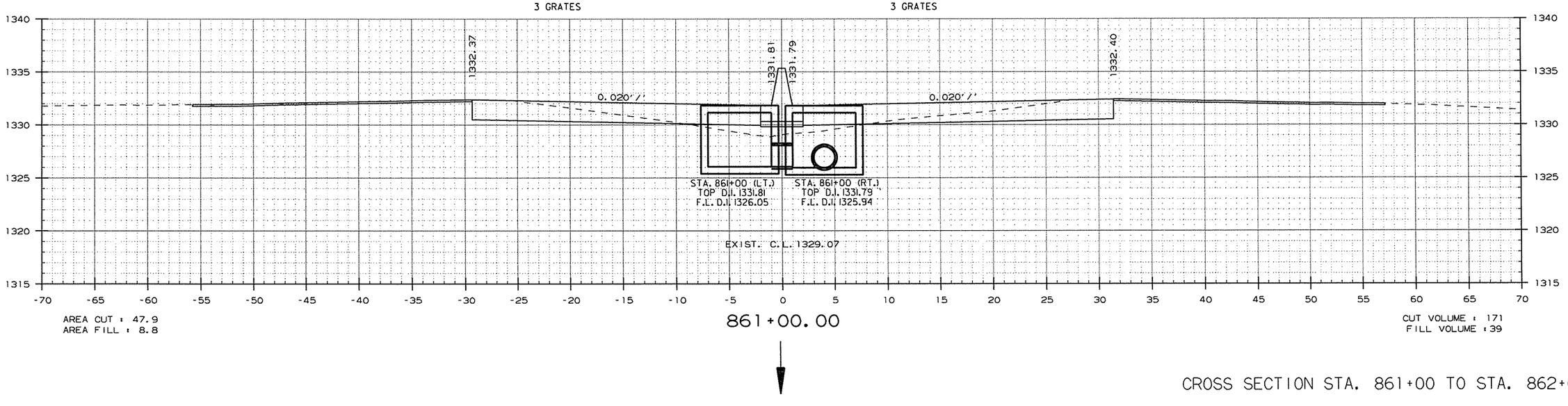
AREA CUT = 46.0
AREA FILL = 9.1

862+00.00

CUT VOLUME = 174
FILL VOLUME = 33

STA. 861+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 861+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 861+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 858+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 47.9
AREA FILL = 8.8

861+00.00

CUT VOLUME = 171
FILL VOLUME = 39

CROSS SECTION STA. 861+00 TO STA. 862+00

USER: at5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
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Crafton, Tull & Associates Inc.

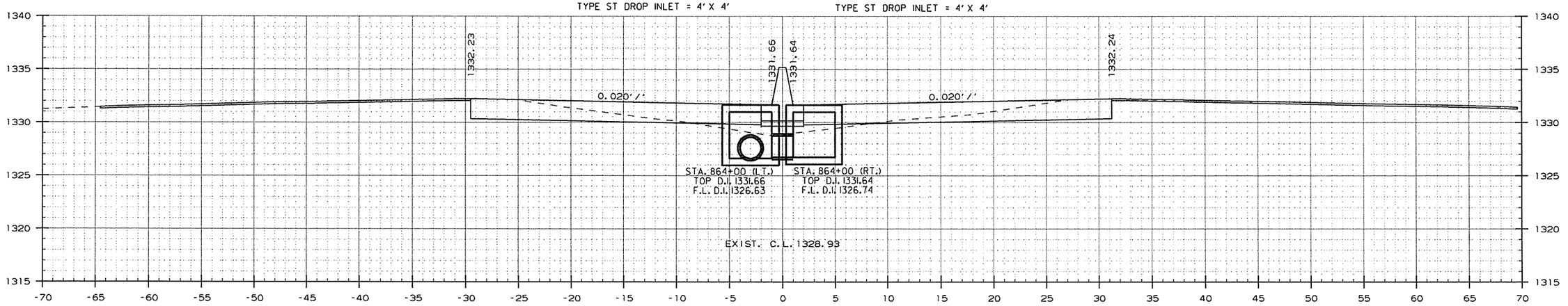
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	174	234

(2) CROSS SECTIONS

STA. 864+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-0"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 866+00 LT.
TYPE ST DROP INLET = 4' X 4'

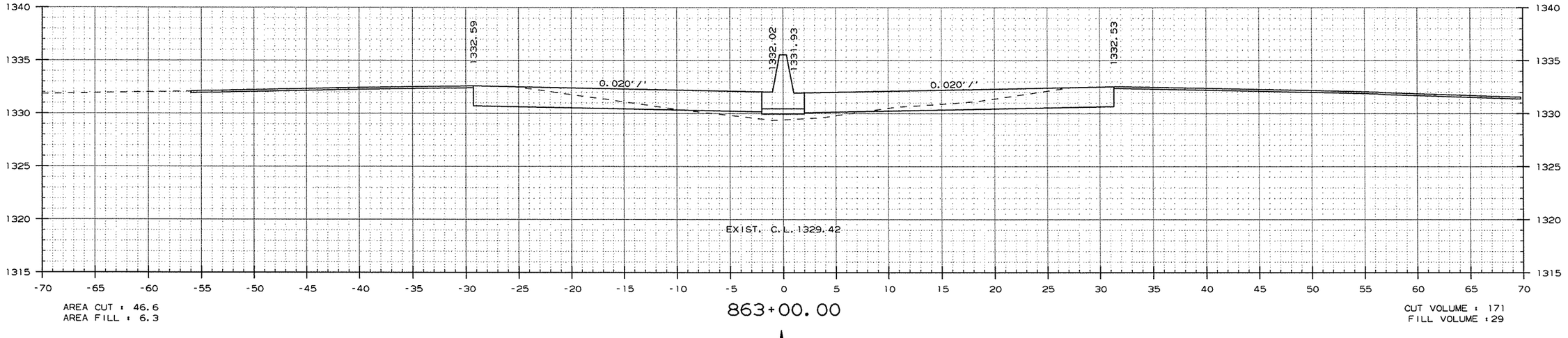
STA. 864+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-3"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 864+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 46.2
AREA FILL : 7.7

864+00.00

CUT VOLUME : 172
FILL VOLUME : 26



AREA CUT : 46.6
AREA FILL : 6.3

863+00.00

CUT VOLUME : 171
FILL VOLUME : 29

CROSS SECTION STA. 863+00 TO STA. 864+00

USER: at5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
MODEL: X-Sections

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Crafton, Tull & Associates Inc.

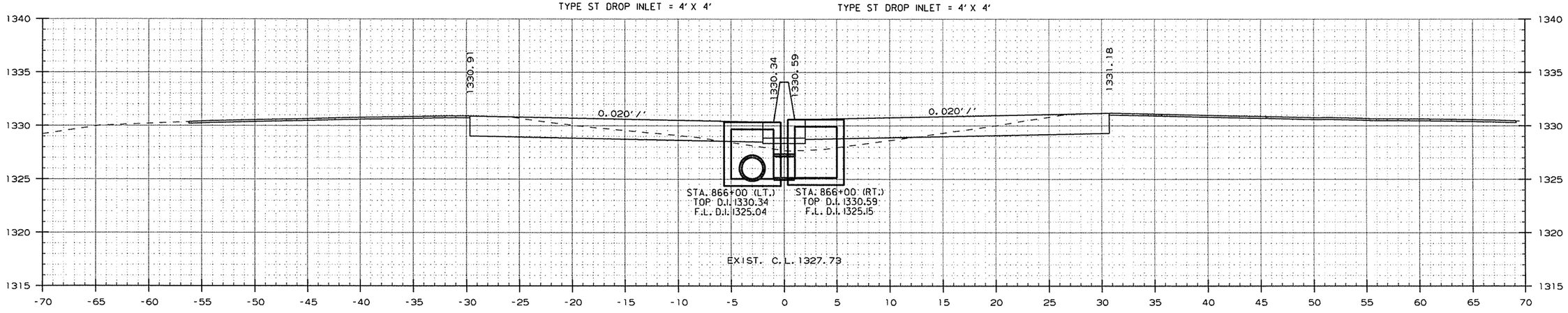
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	175	234

(2) CROSS SECTIONS

STA. 866+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-0"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 869+00 LT.
TYPE ST DROP INLET = 4' X 4'

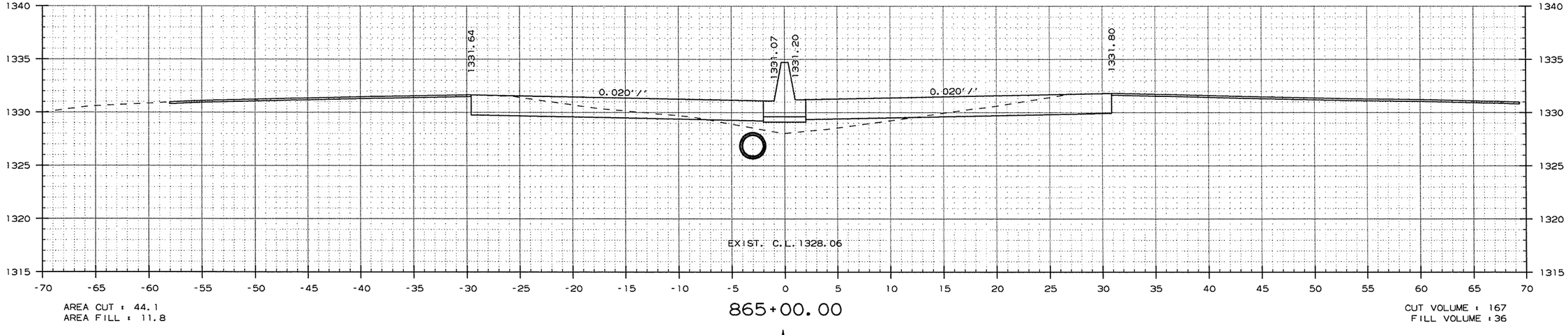
STA. 866+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-5"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 866+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 46.0
AREA FILL : 8.8

866+00.00

CUT VOLUME : 167
FILL VOLUME : 38



AREA CUT : 44.1
AREA FILL : 11.8

865+00.00

CUT VOLUME : 167
FILL VOLUME : 36

CROSS SECTION STA. 865+00 TO STA. 866+00

USER: a+5106
DESIGN FILE: G:\13106000-412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
MODEL: X-Sections

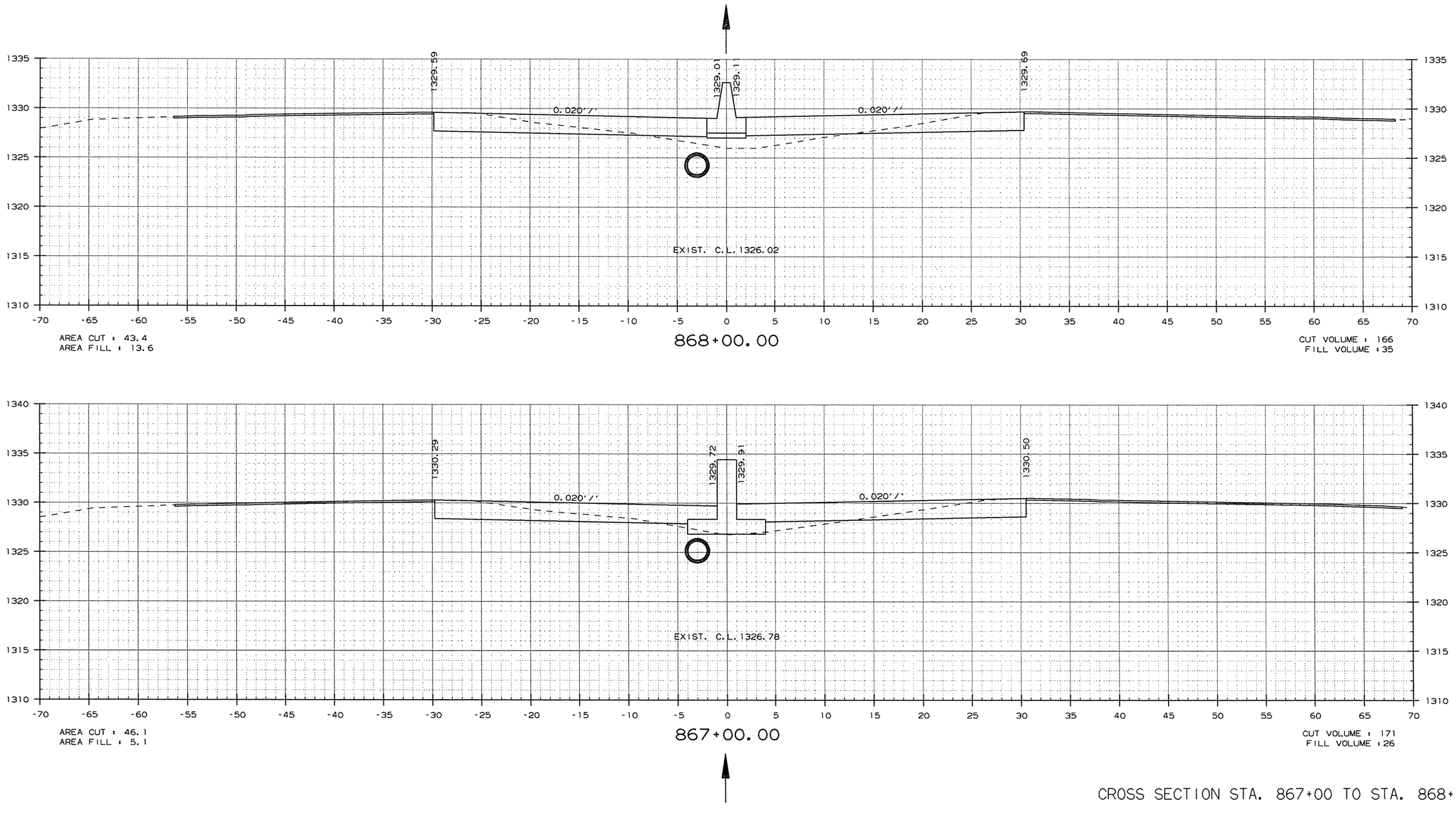
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA110I	176	234

(2) CROSS SECTIONS



CROSS SECTION STA. 867+00 TO STA. 868+00

USER: a1506
DESIGN FILE: G:\13106000_412to Wagon\TRANSP\dgn\xsect\r-CA110I_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
MODEL: X-Sections

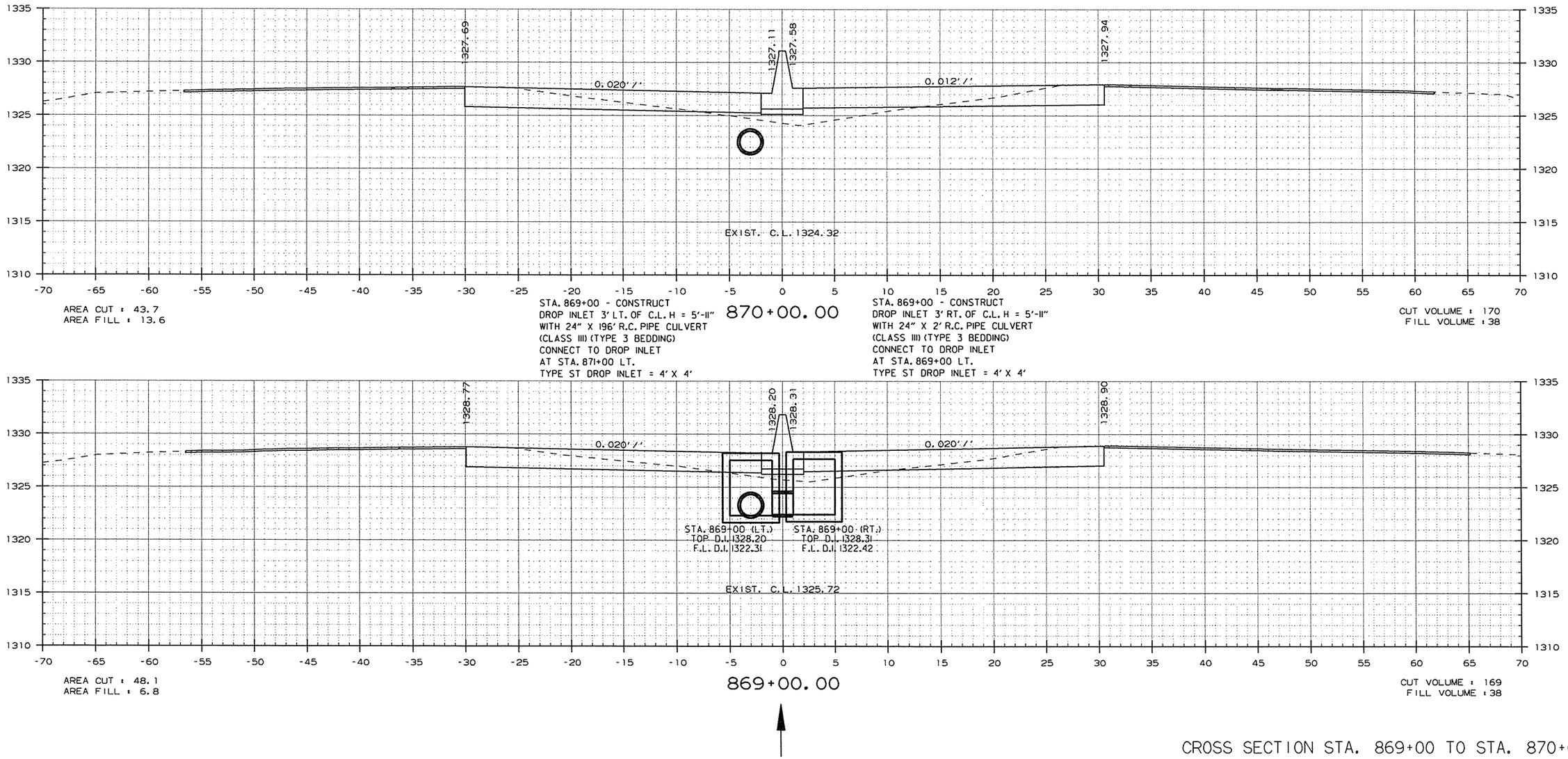
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	177	234

(2) CROSS SECTIONS



CROSS SECTION STA. 869+00 TO STA. 870+00

USER: at5106
DESIGN FILE: G:\1306000.412\eWagon\TRANSP\dgn\Xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
MODEL: X-Sections

G:\1306000.412\eWagon\TRANSP\dgn\Xsect\rCAIIOI_CX.dgn 4/14/2015 13:37

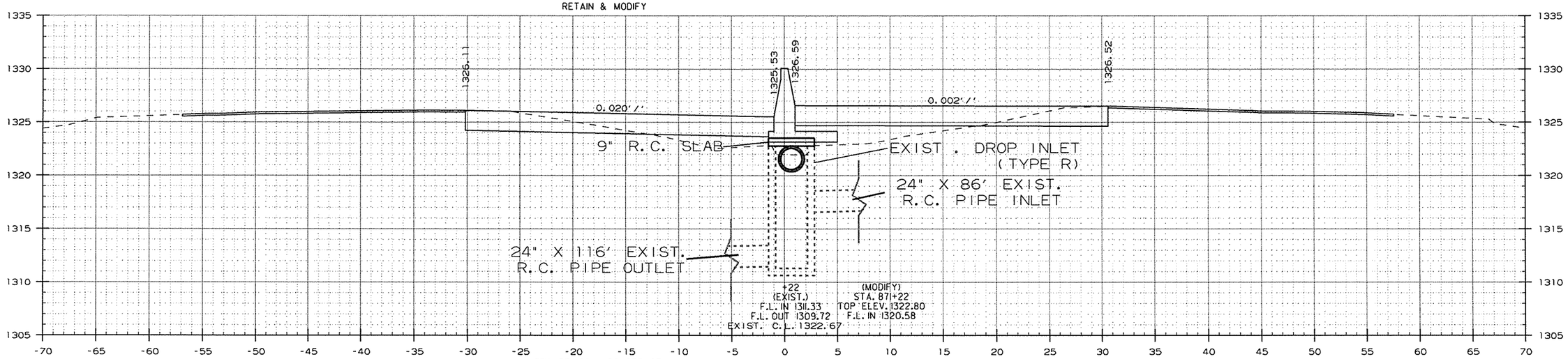
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	178	234

(2) CROSS SECTIONS

STA. 871+22 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 24" X 116' R.C. PIPE OUTLET TO LT.
W/ FES & 24" X 86' R.C. PIPE INLET TO
RT. W/ FES
RETAIN & MODIFY

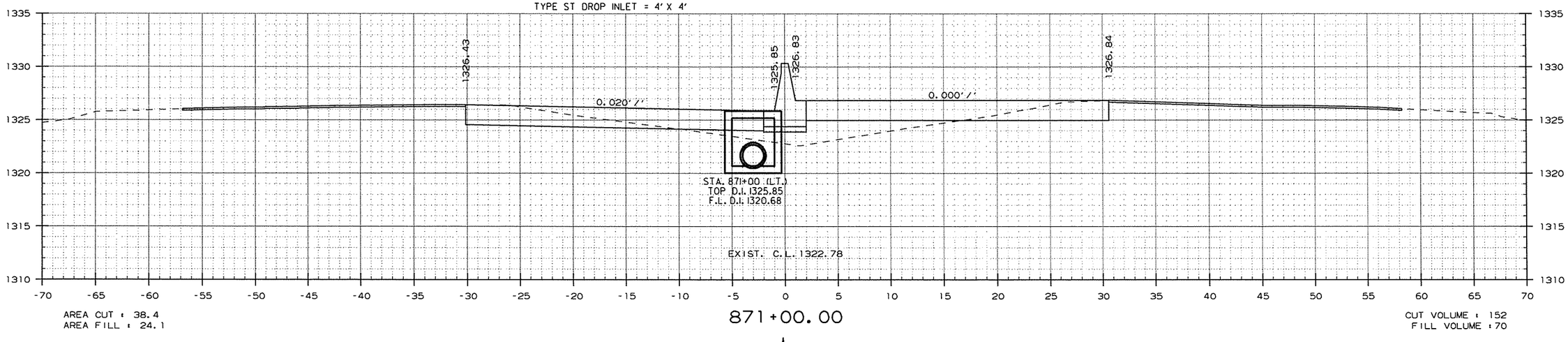


AREA CUT : 35.2
AREA FILL : 30.8

STA. 871+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-2"
WITH 24" X 19' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 871+22
TYPE ST DROP INLET = 4' X 4'

871+22.00

CUT VOLUME : 30
FILL VOLUME : 22



AREA CUT : 38.4
AREA FILL : 24.1

871+00.00

CUT VOLUME : 152
FILL VOLUME : 70

CROSS SECTION STA. 871+00 TO STA. 871+22

USER: at5106
DESIGN FILE: G:\1306000.412\toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
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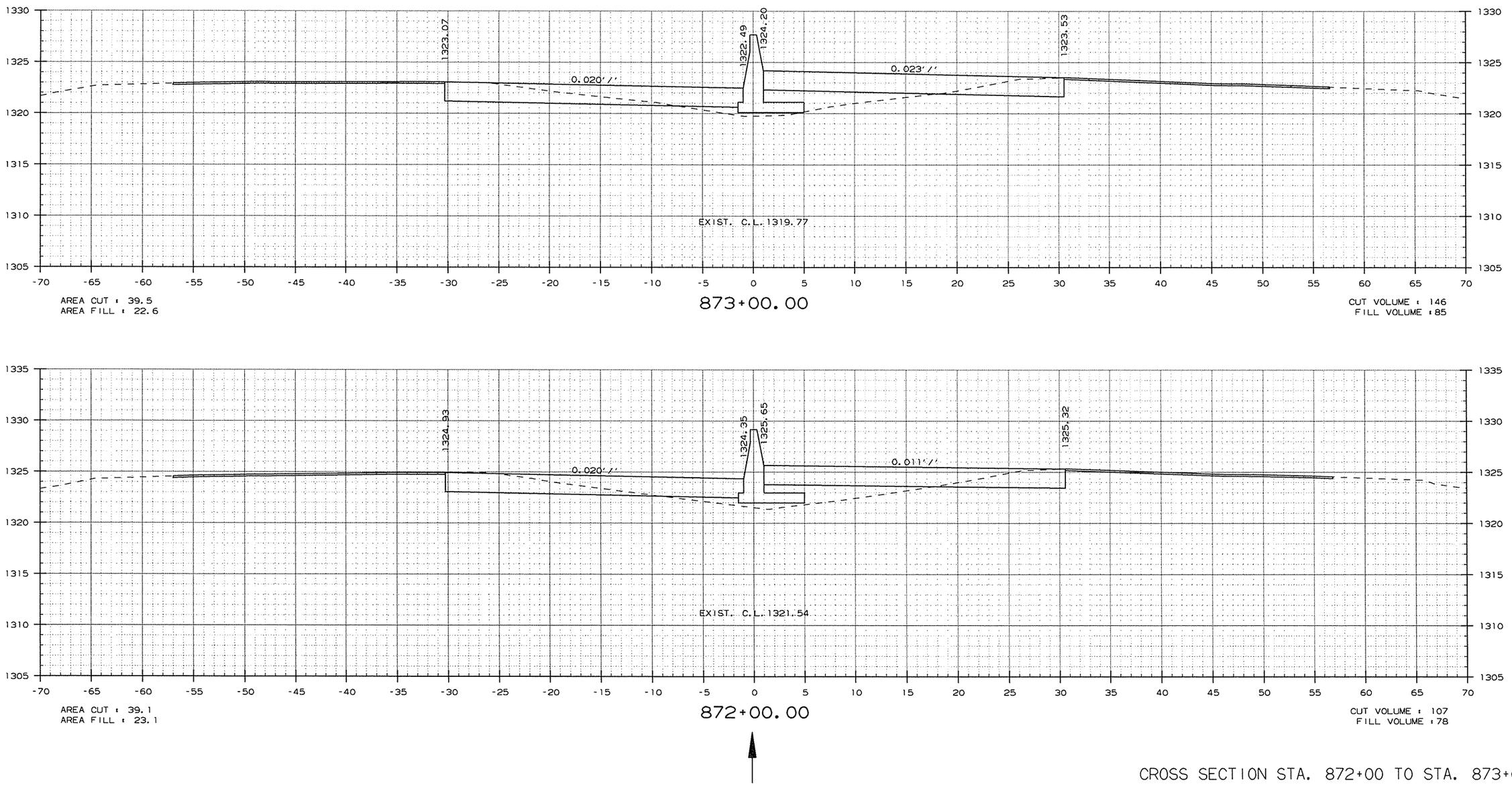
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	179	234

(2) CROSS SECTIONS



CROSS SECTION STA. 872+00 TO STA. 873+00

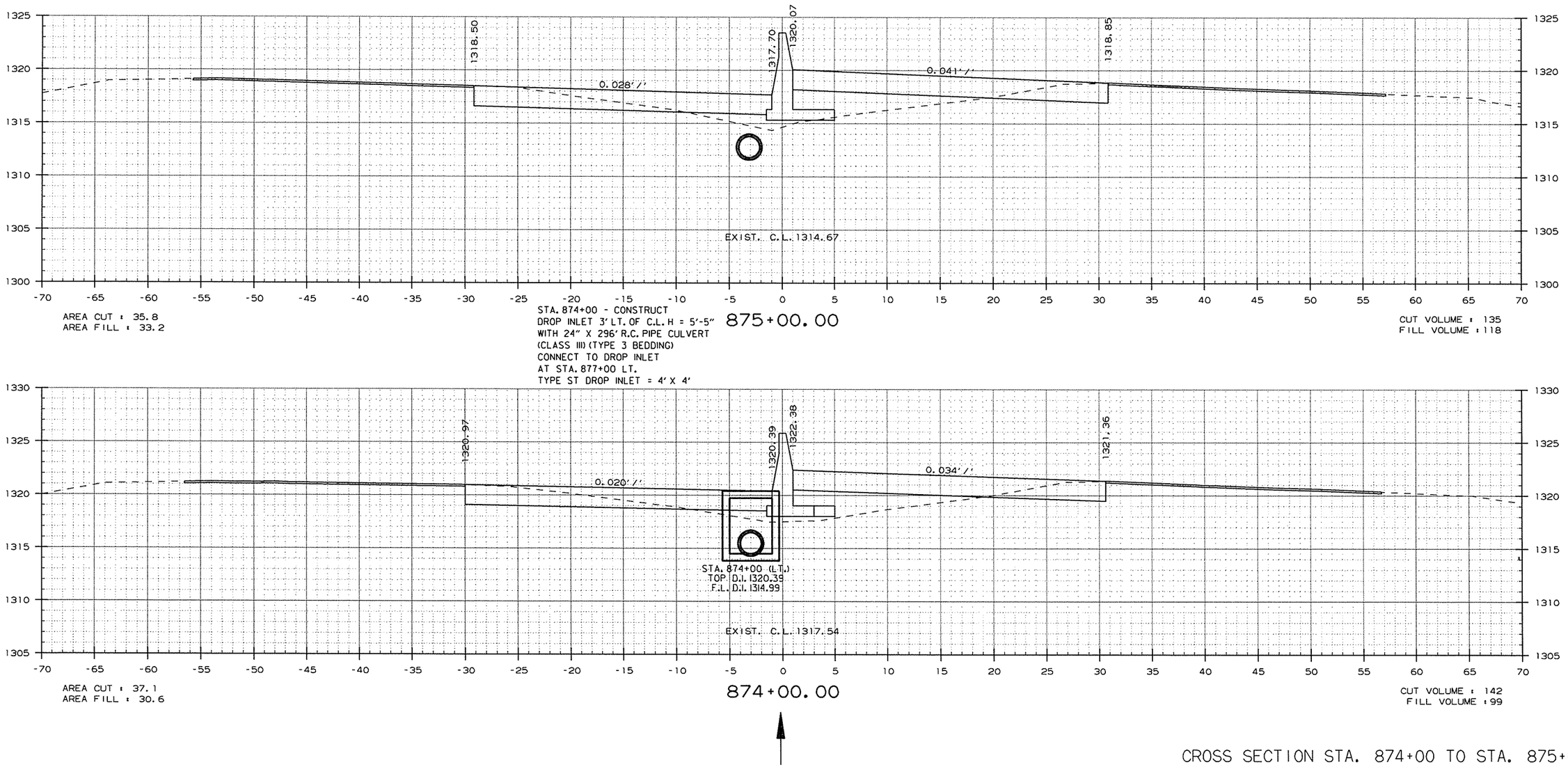
USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\rCAII01_CX.dgn
PLOTTED: 4/14/2015 13:37
SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	180	234

(2) CROSS SECTIONS



CROSS SECTION STA. 874+00 TO STA. 875+00

USER: at5106
DESIGN FILE: G:\1306000.412toWagon\TRANSP\dgn\Xsect\rCAIIOI_CX.dgn MODEL: X-Sections
PLOTTED: 4/14/2015 13:38 SCALE: 10:1

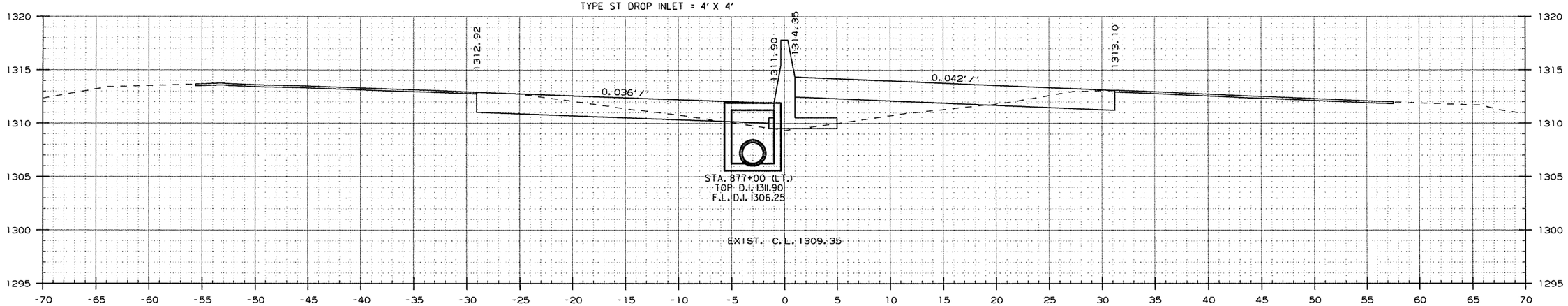
G:\1306000.412toWagon\TRANSP\dgn\Xsect\rCAIIOI_CX.dgn 4/14/2015 13:38

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	181	234

(2) CROSS SECTIONS

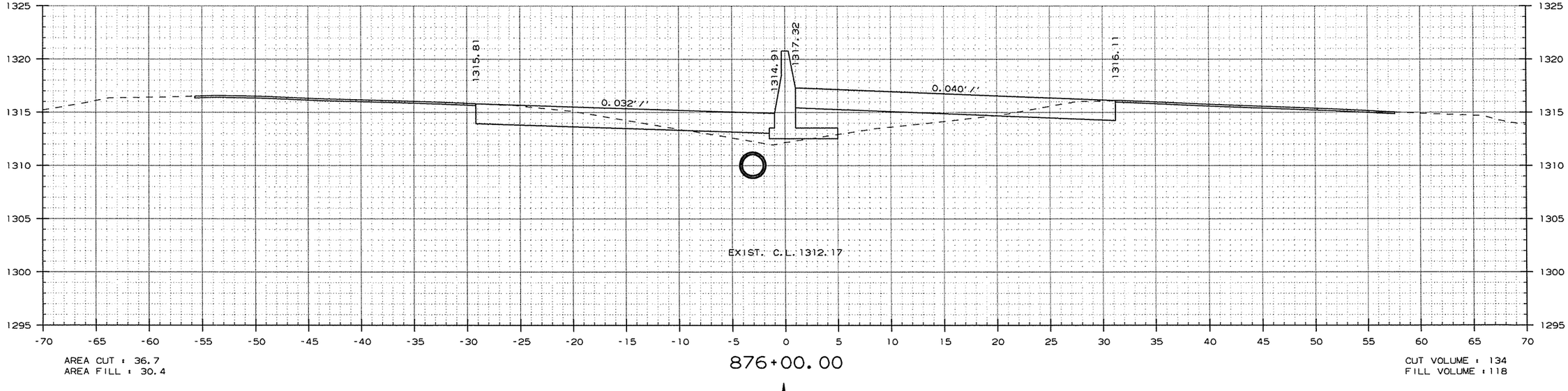
STA. 877+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 880+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT = 39.1
AREA FILL = 25.1

877+00.00

CUT VOLUME = 140
FILL VOLUME = 103



AREA CUT = 36.7
AREA FILL = 30.4

876+00.00

CUT VOLUME = 134
FILL VOLUME = 118

CROSS SECTION STA. 876+00 TO STA. 877+00

USER: ot5106
DESIGN FILE: G:\3106000.412\eWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

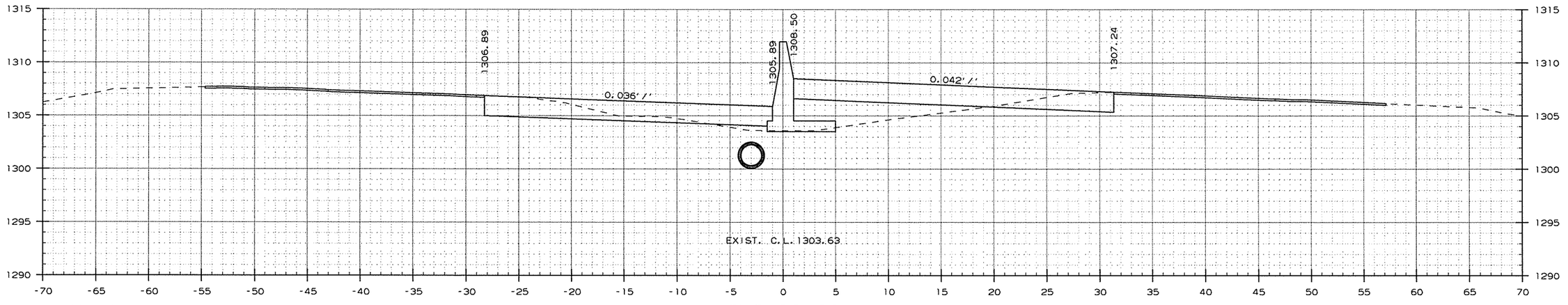
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	182	234

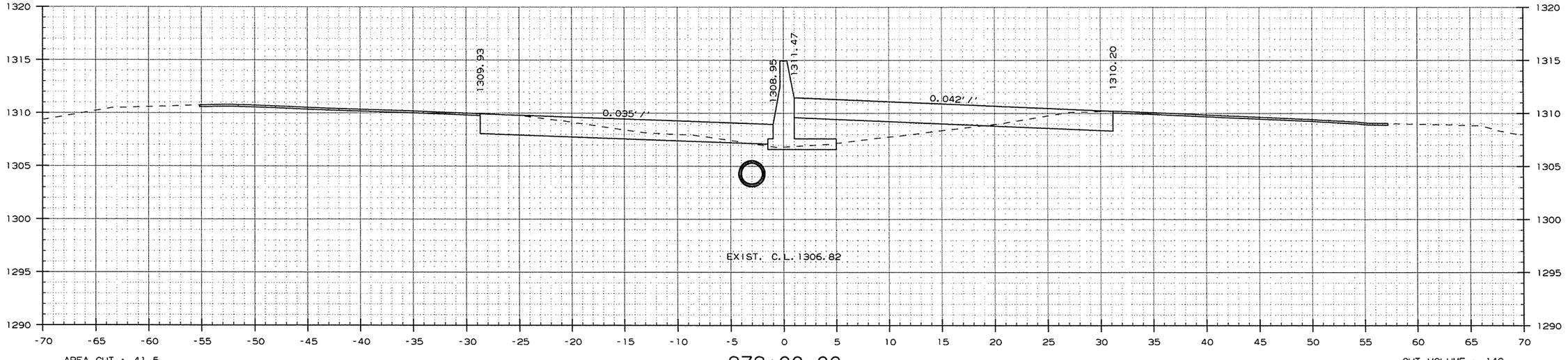
(2) CROSS SECTIONS



AREA CUT = 35.9
AREA FILL = 29.0

879+00.00

CUT VOLUME = 143
FILL VOLUME = 99



AREA CUT = 41.5
AREA FILL = 24.6

878+00.00

CUT VOLUME = 149
FILL VOLUME = 92

CROSS SECTION STA. 878+00 TO STA. 879+00

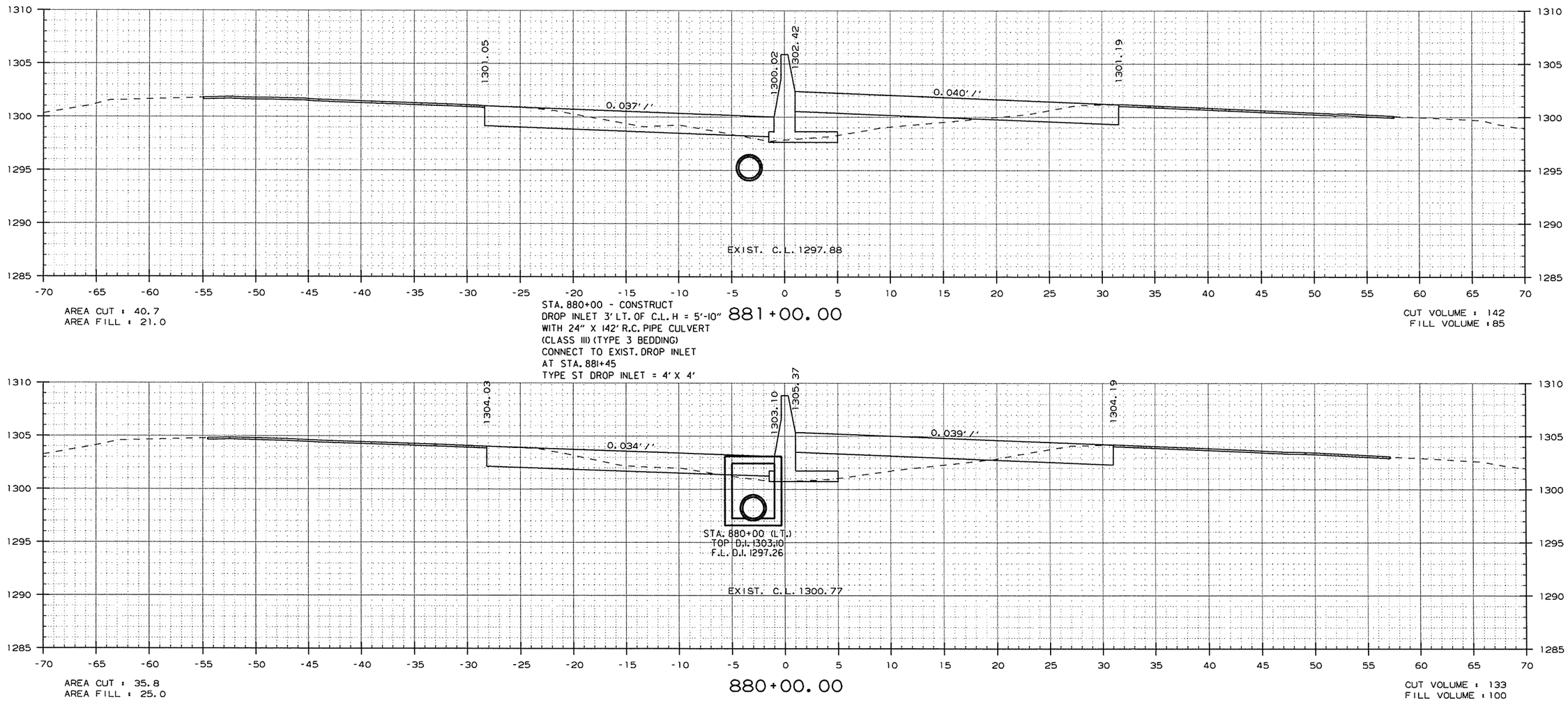
USER: a1506
DESIGN FILE: G:\13106000_412to40agon\TRANSP\dgn\xsect\rCA1101_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

G:\13106000_412to40agon\TRANSP\dgn\xsect\rCA1101_CX.dgn 4/14/2015 13:38

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	183	234

(2) CROSS SECTIONS



CROSS SECTION STA. 880+00 TO STA. 881+00

USER: a15106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

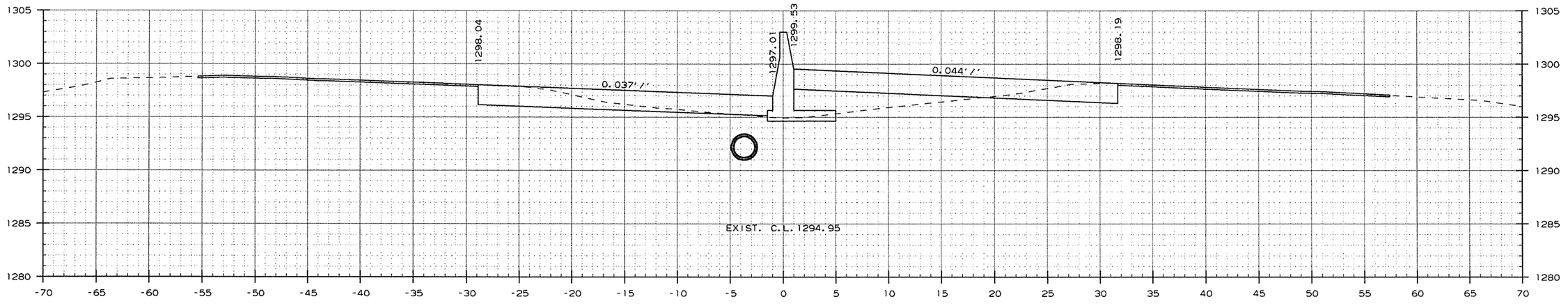
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	184	234

(2) CROSS SECTIONS

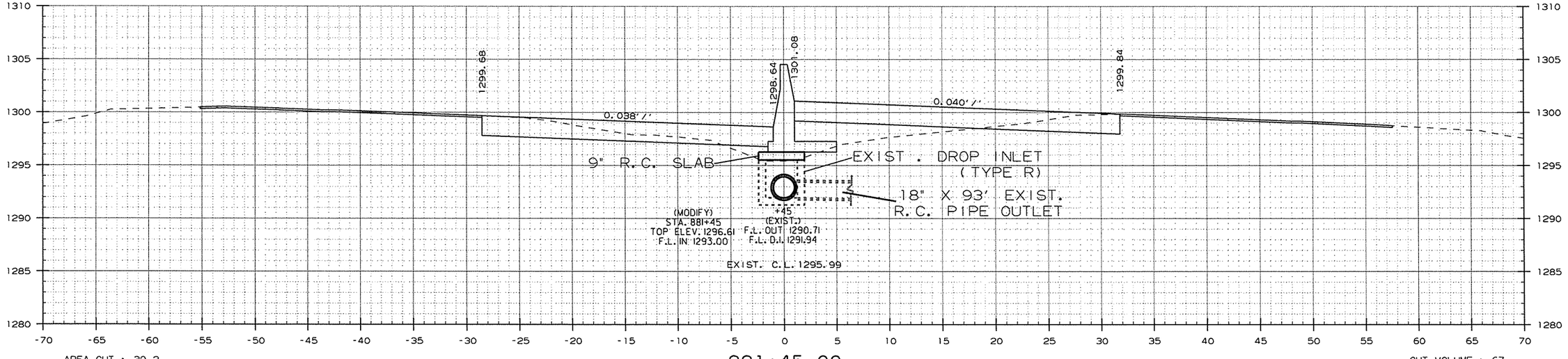


AREA CUT = 38.1
AREA FILL = 23.3

882+00.00

CUT VOLUME = 79
FILL VOLUME = 53

STA. 881+45 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 93' R.C. PIPE OUTLET TO RT.
RETAIN & MODIFY



AREA CUT = 39.2
AREA FILL = 28.4

881+45.00

CUT VOLUME = 67
FILL VOLUME = 41

CROSS SECTION STA. 881+45 TO STA. 882+00

USER: at5106
DESIGN FILE: G:\13106000_412to Wagon\TRANSP\dgn\xsect\rCA1101_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

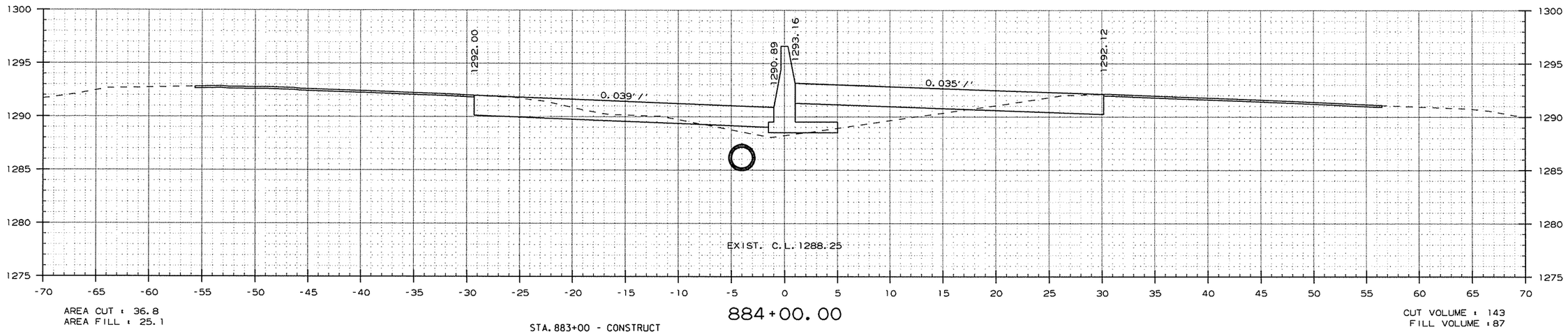
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	185	234

(2) CROSS SECTIONS

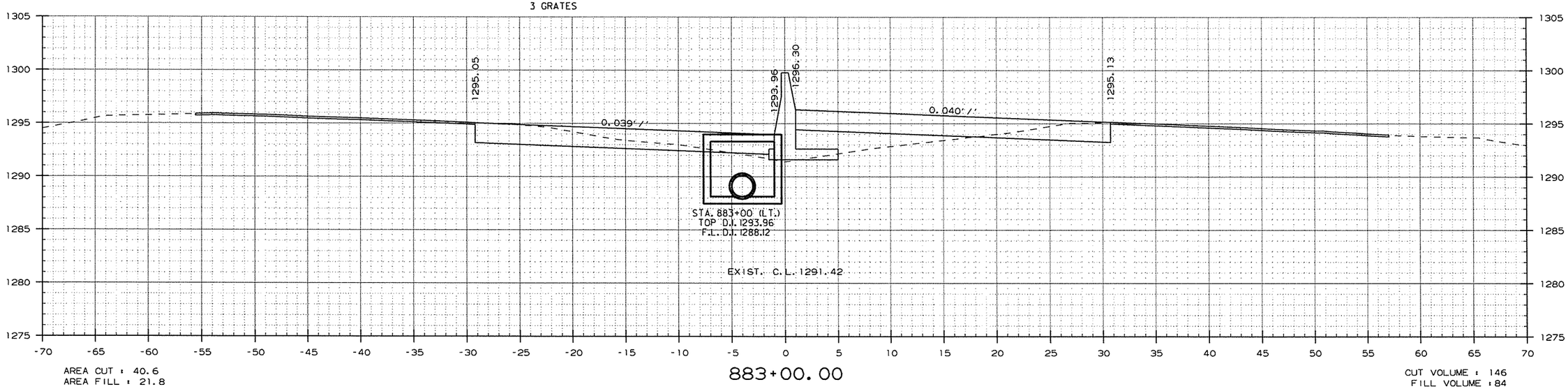


AREA CUT = 36.8
AREA FILL = 25.1

884+00.00

CUT VOLUME = 143
FILL VOLUME = 87

STA. 883+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 886+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 40.6
AREA FILL = 21.8

883+00.00

CUT VOLUME = 146
FILL VOLUME = 84

CROSS SECTION STA. 883+00 TO STA. 884+00

USER: ot5106
DESIGN FILE: G:\3106000.412\eWagon\TRANSP\dgn\xsect\Y-CAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

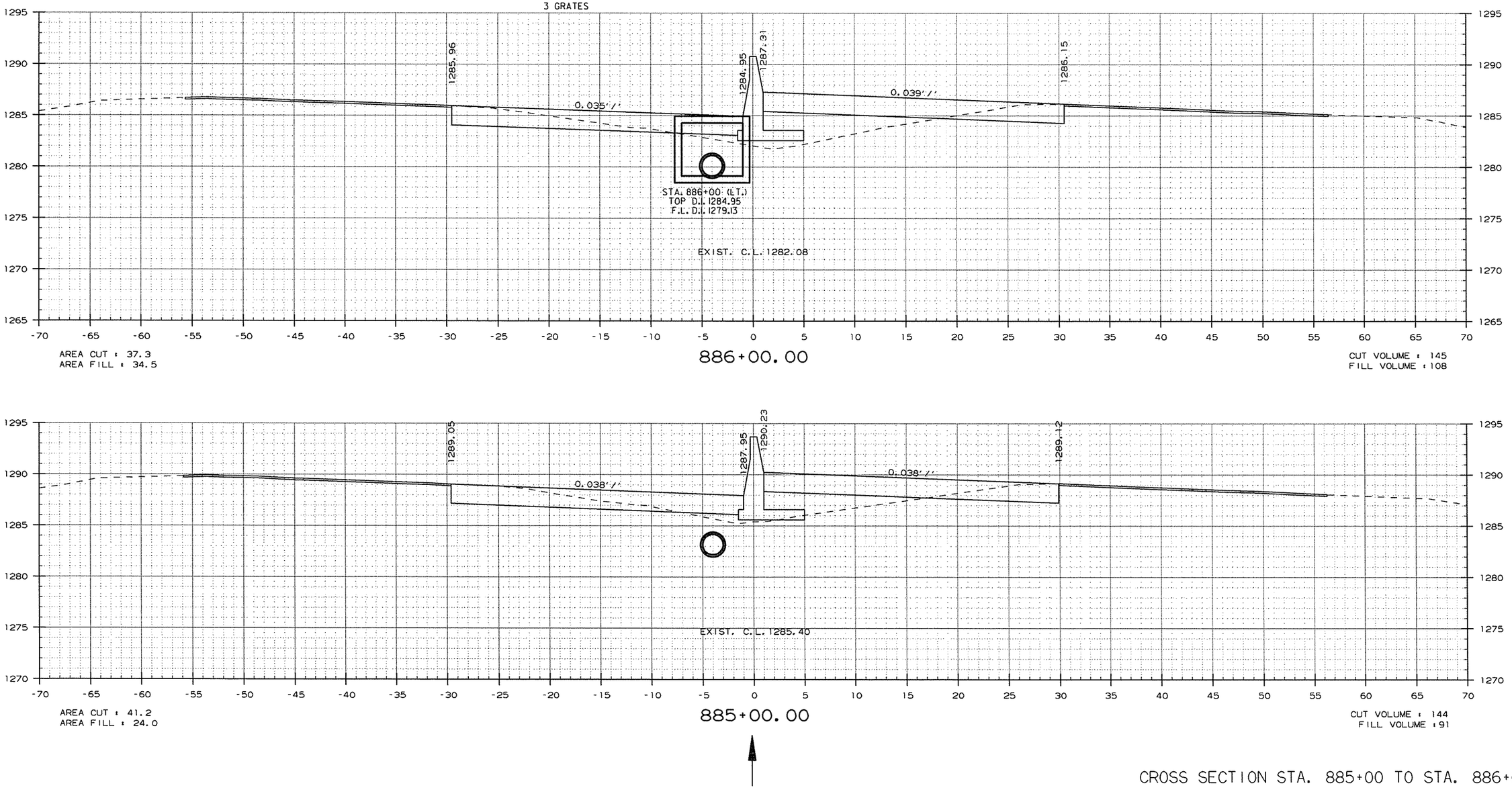
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	186	234

(2) CROSS SECTIONS

STA. 886+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 889+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 37.3
AREA FILL : 34.5

886+00.00

CUT VOLUME : 145
FILL VOLUME : 108

AREA CUT : 41.2
AREA FILL : 24.0

885+00.00

CUT VOLUME : 144
FILL VOLUME : 91

CROSS SECTION STA. 885+00 TO STA. 886+00

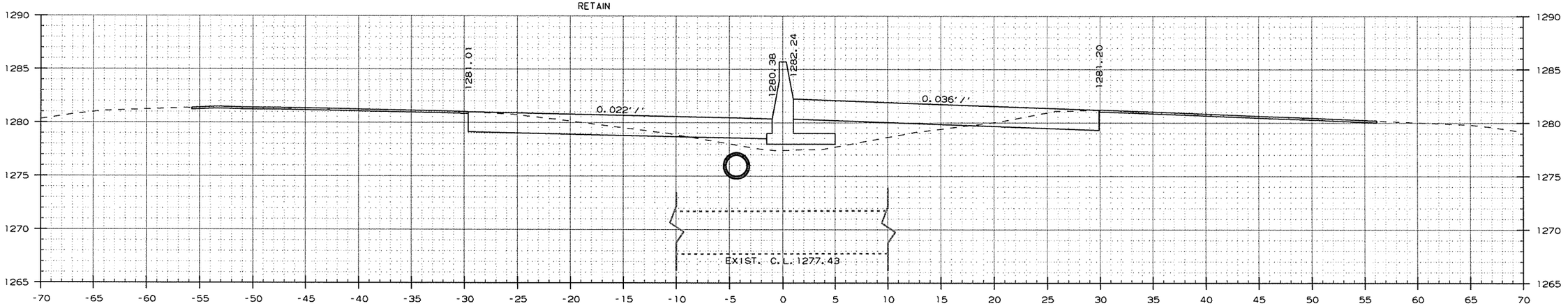
USER: at5106
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PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	187	234

(2) CROSS SECTIONS

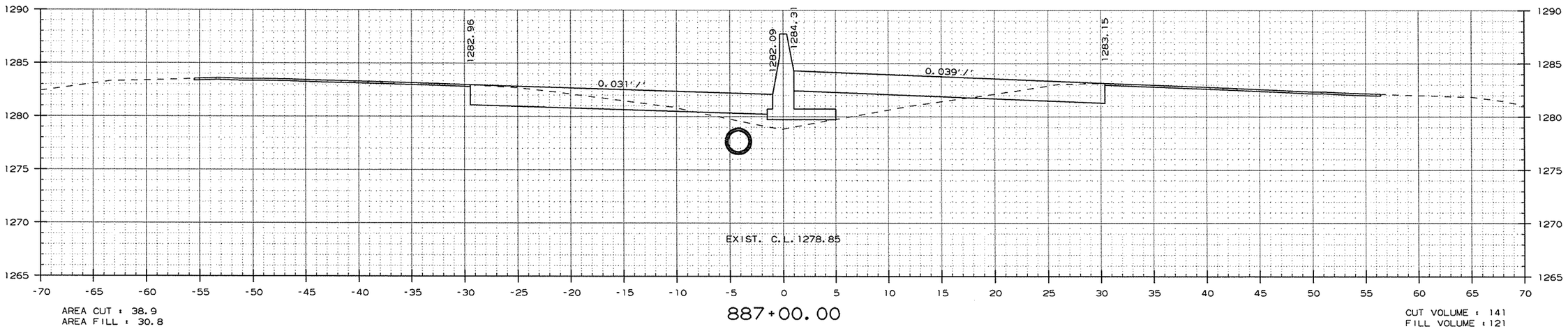
STA. 887+68 - IN PLACE
6' X 4' X 28' R.C. BOX CULVERT
(45° LT. FWD. SKEW)
RETAIN



AREA CUT : 36.6
AREA FILL : 28.8

887+68.00

CUT VOLUME : 95
FILL VOLUME : 75



AREA CUT : 38.9
AREA FILL : 30.8

887+00.00

CUT VOLUME : 141
FILL VOLUME : 121

CROSS SECTION STA. 887+00 TO STA. 887+68

USER: ot5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

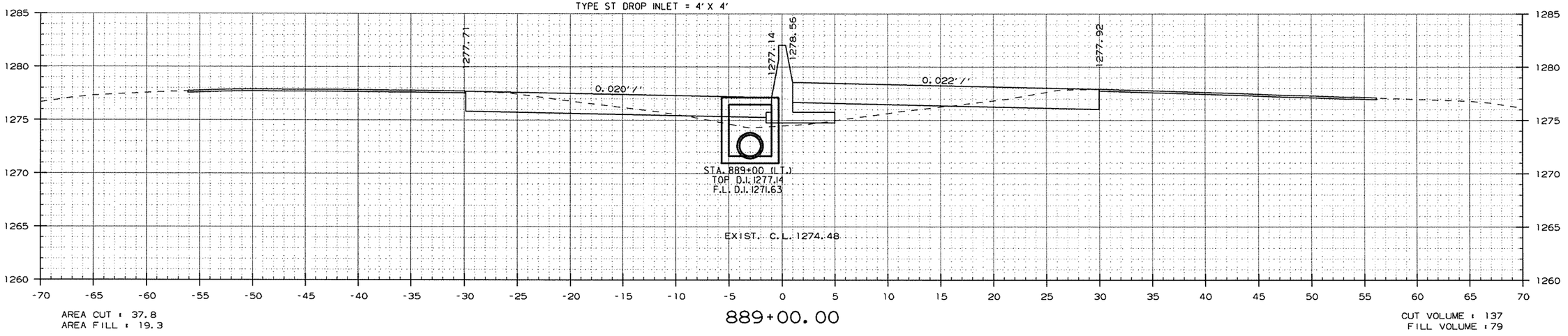
G:\13106000.412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn 4/14/2015 13:38

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	188	234

(2) CROSS SECTIONS

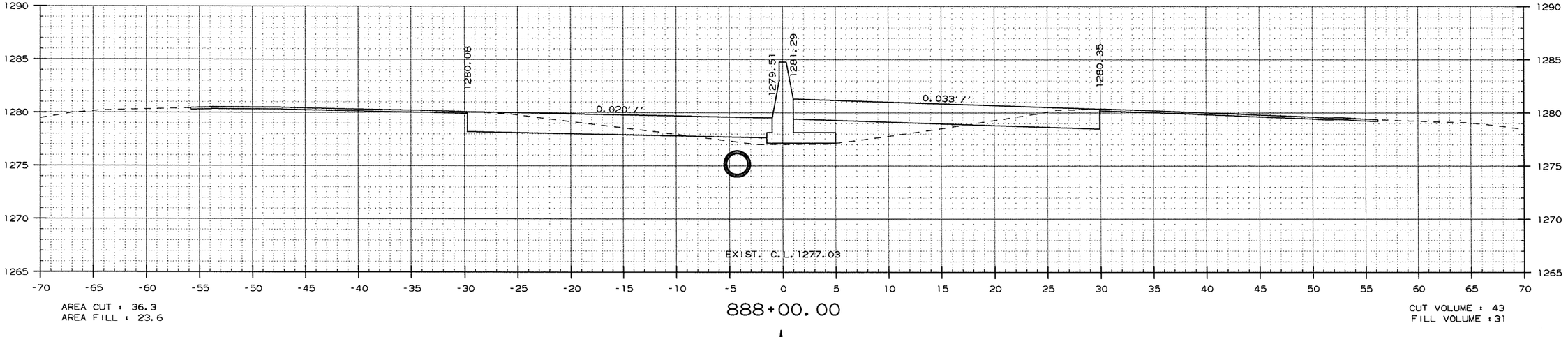
STA. 889+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 891+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 37.8
AREA FILL : 19.3

889+00.00

CUT VOLUME : 137
FILL VOLUME : 79



AREA CUT : 36.3
AREA FILL : 23.6

888+00.00

CUT VOLUME : 43
FILL VOLUME : 31

CROSS SECTION STA. 888+00 TO STA. 889+00

USER: at5106
DESIGN FILE: G:\13106000-412toWagon\TRANSP\dgn\xsect\r-CA1101_CX.dgn
PLOTTED: 4/14/2015 13:38
SCALE: 10:1
MODEL: X-Sections

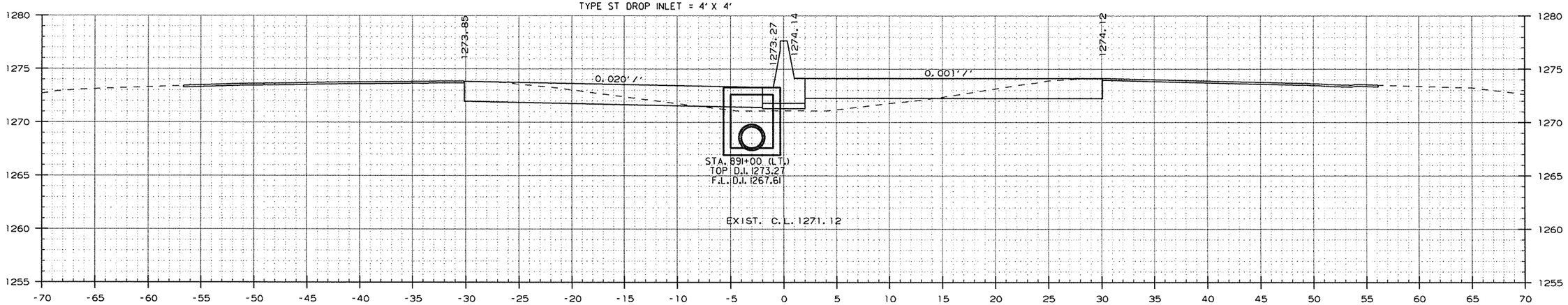
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	189	234

2 CROSS SECTIONS

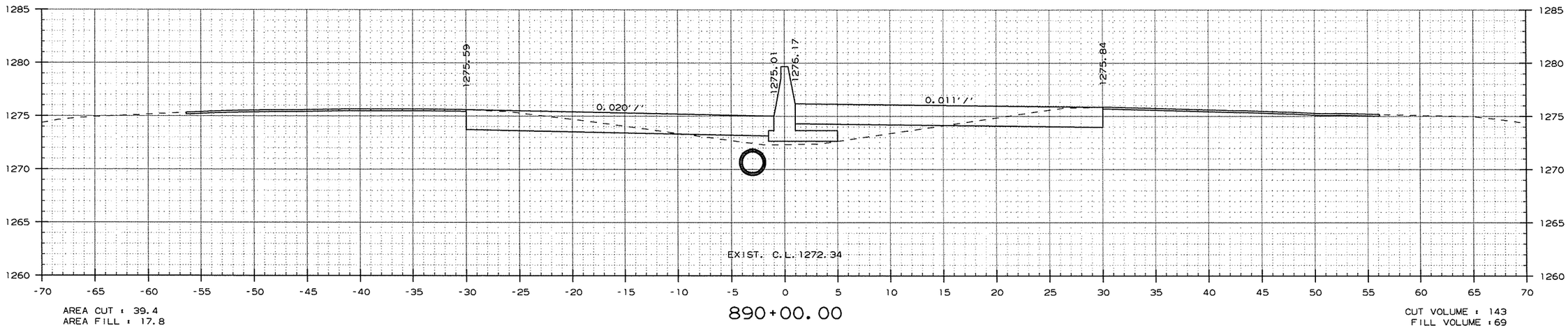
STA. 891+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 93' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 891+97
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 43.0
AREA FILL : 10.3

891+00.00

CUT VOLUME : 153
FILL VOLUME : 52



AREA CUT : 39.4
AREA FILL : 17.8

890+00.00

CUT VOLUME : 143
FILL VOLUME : 69

CROSS SECTION STA. 890+00 TO STA. 891+00

USER: ot5106
DESIGN FILE: G:\130600D_412toWagon\TRANSP\dgn\xsect\rCAIIOI_CX.dgn MODEL: X-Sections
PLOTTED: 4/14/2015 13:38 SCALE: 10:1

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Crafton, Tull & Associates Inc.

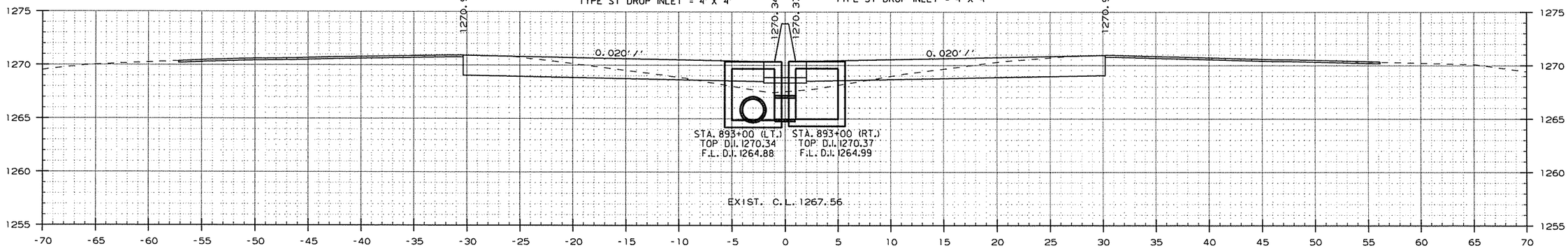
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	190	234

(2) CROSS SECTIONS

STA. 893+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 895+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 893+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-6"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 893+00 LT.
TYPE ST DROP INLET = 4' X 4'

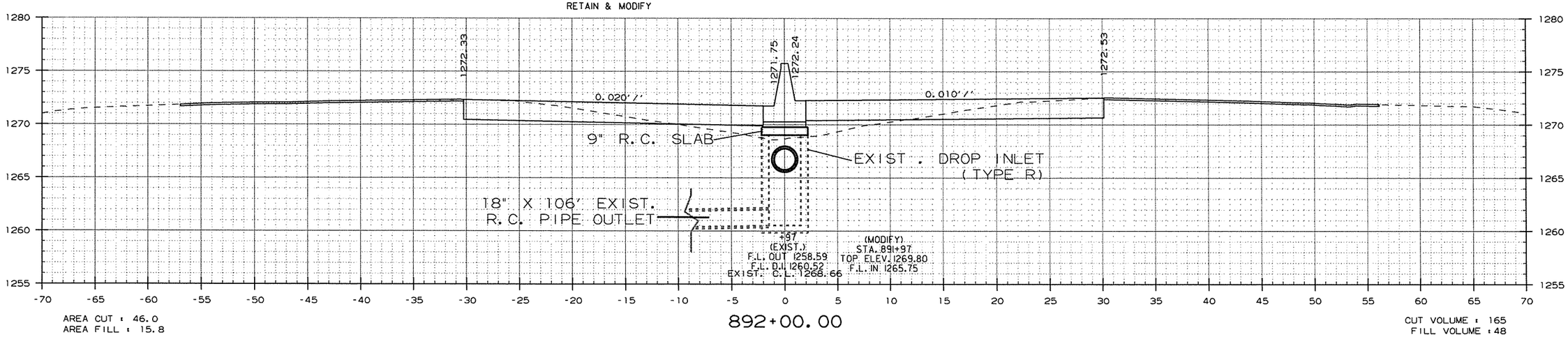


AREA CUT : 53.1
AREA FILL : 8.5

893+00.00

CUT VOLUME : 184
FILL VOLUME : 45

STA. 891+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 106' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



AREA CUT : 46.0
AREA FILL : 15.8

892+00.00

CUT VOLUME : 165
FILL VOLUME : 48

CROSS SECTION STA. 892+00 TO STA. 893+00

USER: at5106
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Crafton, Tull & Associates Inc.

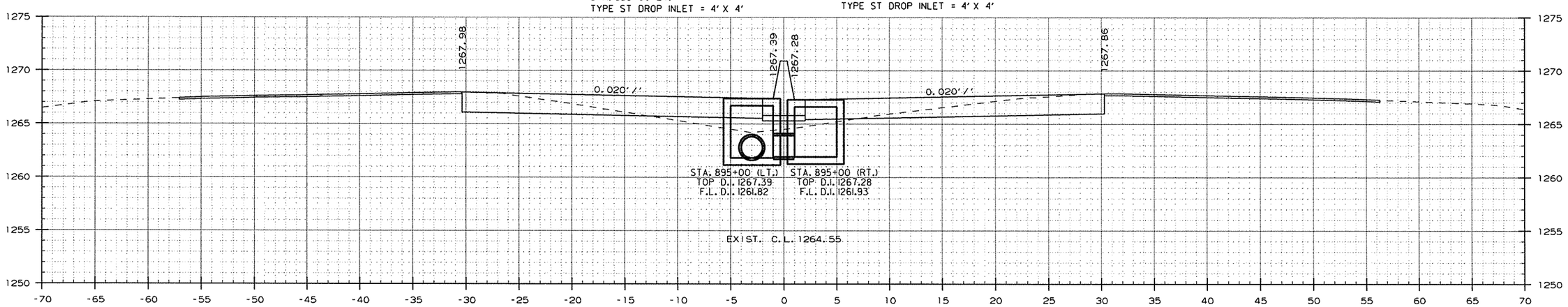
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	191	234

(2) CROSS SECTIONS

STA. 895+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-1"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 898+00 LT.
TYPE ST DROP INLET = 4' X 4'

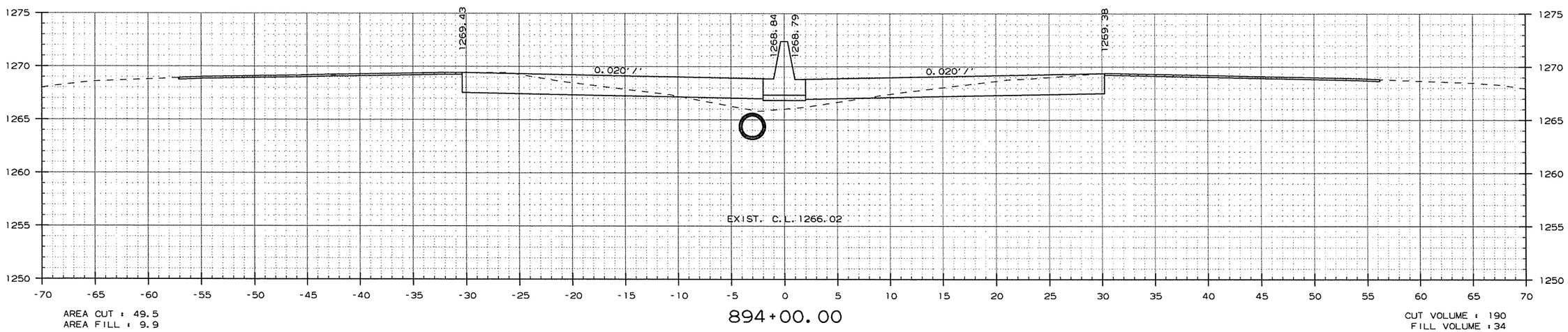
STA. 895+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-4"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 895+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 47.2
AREA FILL : 12.2

895+00.00

CUT VOLUME : 179
FILL VOLUME : 41



AREA CUT : 49.5
AREA FILL : 9.9

894+00.00

CUT VOLUME : 190
FILL VOLUME : 34

CROSS SECTION STA. 894+00 TO STA. 895+00

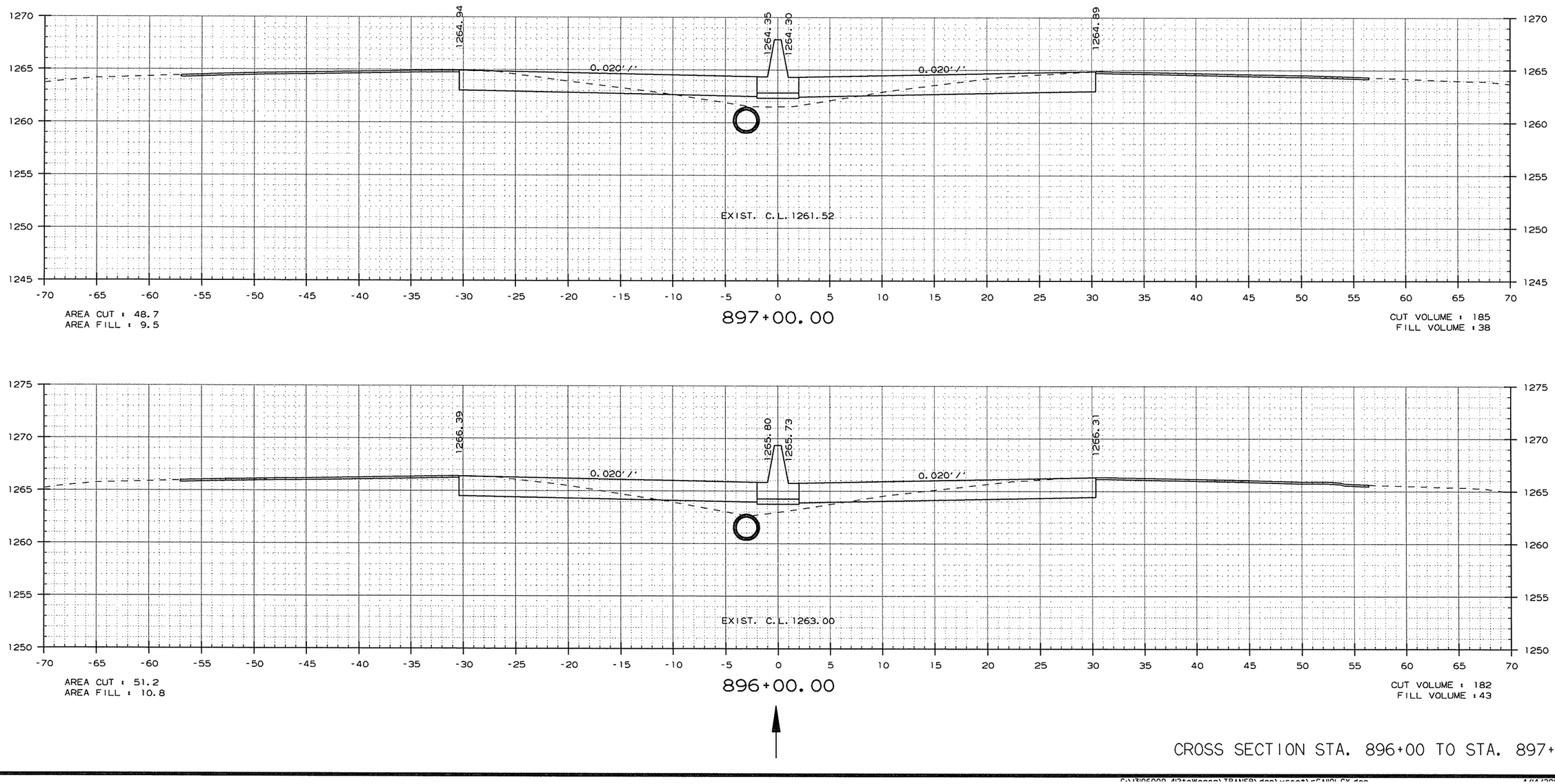
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	192	234

(2) CROSS SECTIONS



CROSS SECTION STA. 896+00 TO STA. 897+00

USER: at5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\rCAII01_CX.dgn MODEL: X-Sections
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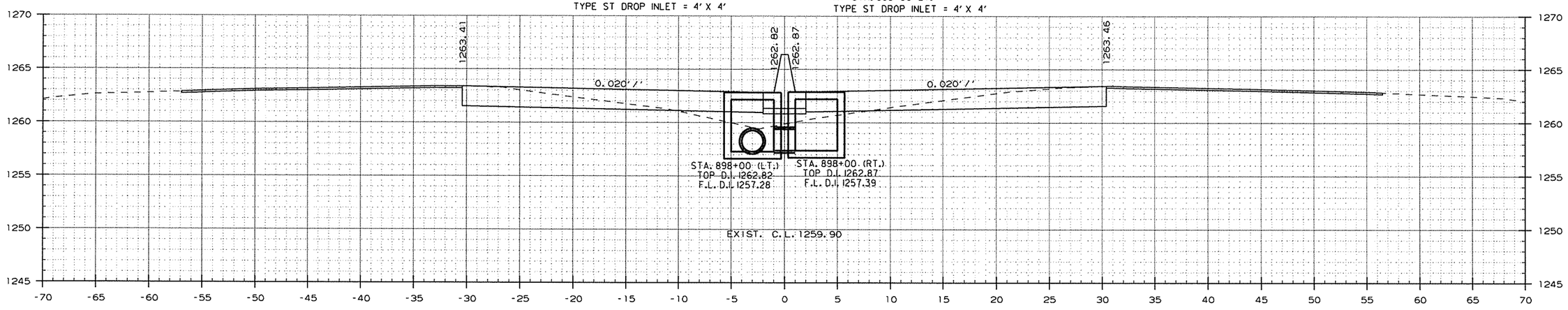
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	193	234

(2) CROSS SECTIONS

STA. 898+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 901+00 LT.
TYPE ST DROP INLET = 4' X 4'

STA. 898+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 898+00 LT.
TYPE ST DROP INLET = 4' X 4'

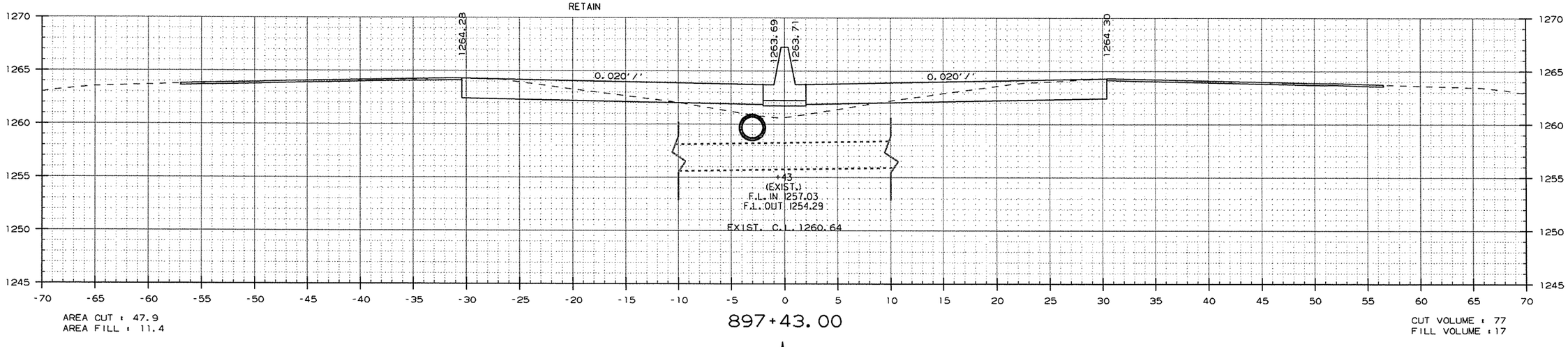


AREA CUT = 48.6
AREA FILL = 12.5

898+00.00

CUT VOLUME = 102
FILL VOLUME = 25

STA. 897+43 - IN PLACE
DOUBLE 30" X 178' R.C. PIPE CULVERT
W/ FES LT. & RT.
RETAIN



AREA CUT = 47.9
AREA FILL = 11.4

897+43.00

CUT VOLUME = 77
FILL VOLUME = 17

CROSS SECTION STA. 897+43 TO STA. 898+00

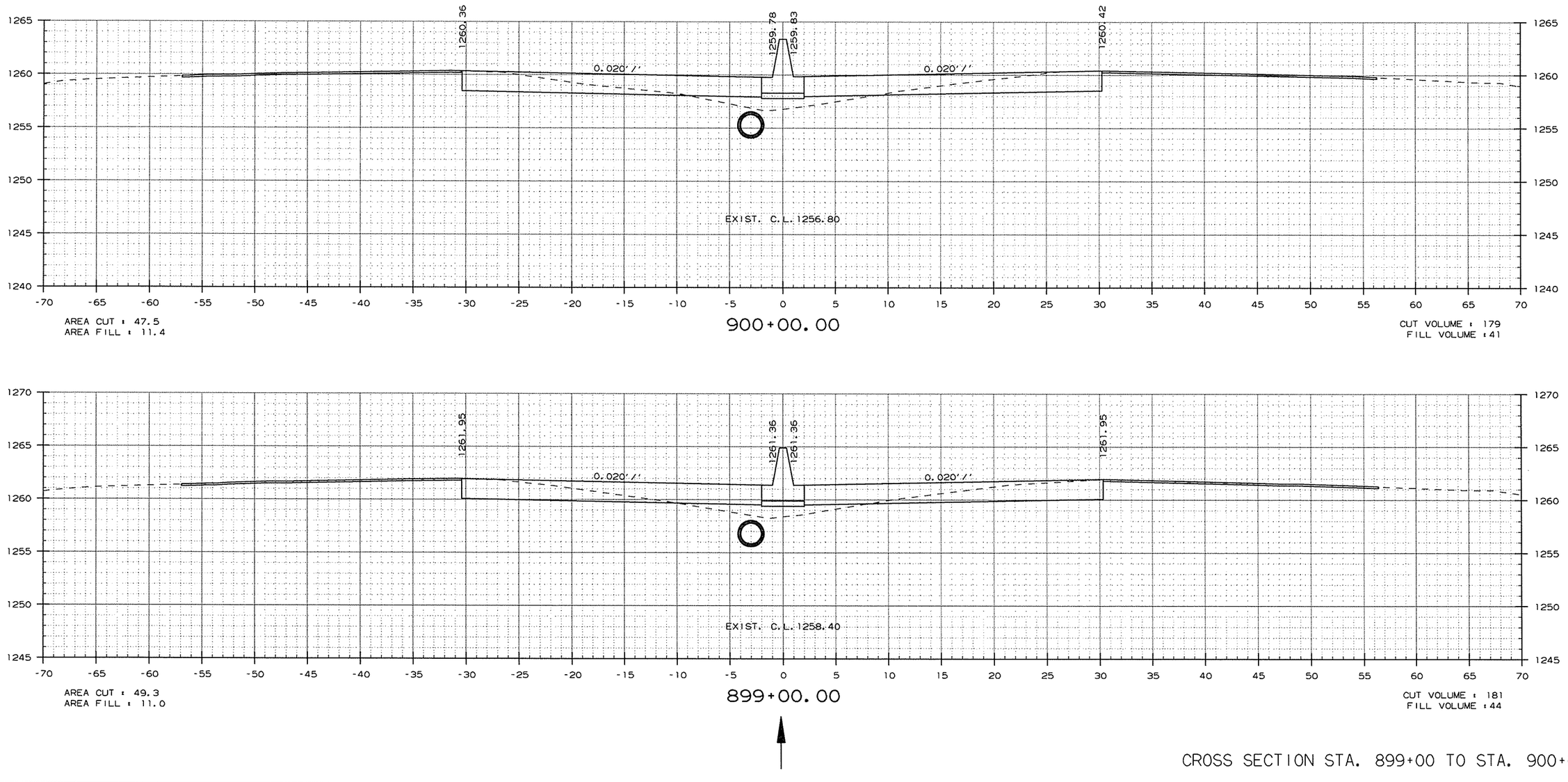
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	194	234

(2) CROSS SECTIONS



CROSS SECTION STA. 899+00 TO STA. 900+00

USER: a+5106
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PLOTTED: 4/14/2015 13:39
SCALE: 10:1
MODEL: X-Sections

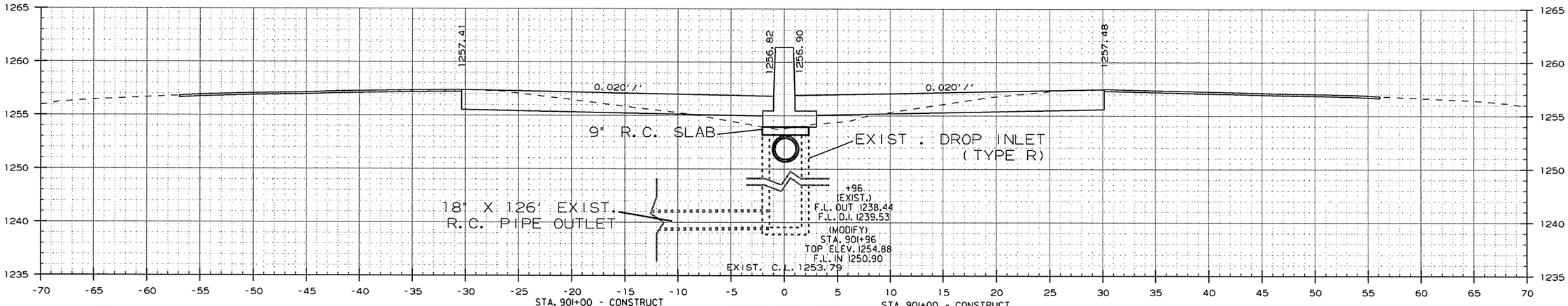
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	195	234
(2)	CROSS SECTIONS			

STA. 901+96 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 126' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



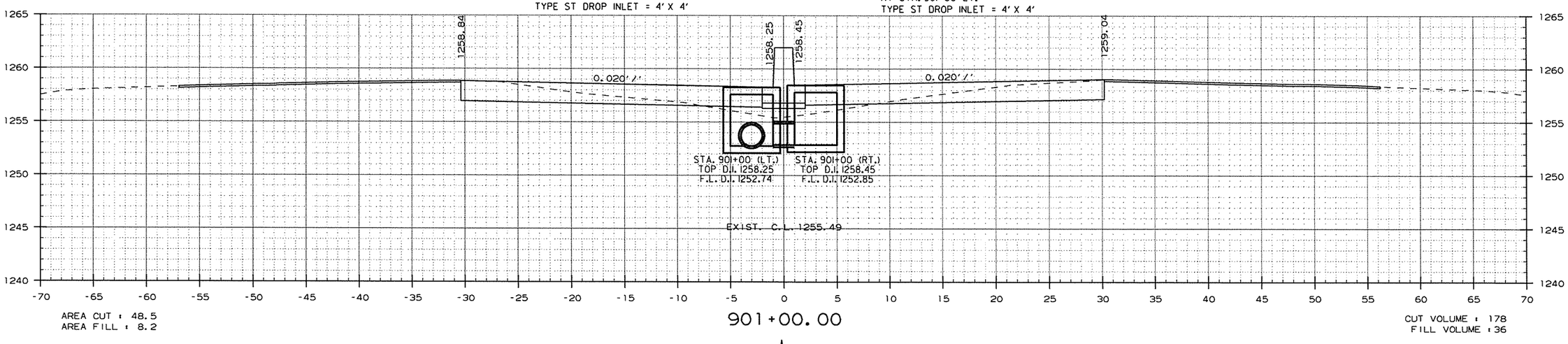
AREA CUT : 49.3
AREA FILL : 6.7

STA. 901+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 92' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 901+96
TYPE ST DROP INLET = 4' X 4'

902+00.00

STA. 901+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 901+00 LT.
TYPE ST DROP INLET = 4' X 4'

CUT VOLUME : 181
FILL VOLUME : 28



AREA CUT : 48.5
AREA FILL : 8.2

901+00.00

CUT VOLUME : 178
FILL VOLUME : 36

CROSS SECTION STA. 901+00 TO STA. 902+00

USER: at5106
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Crafton, Tull & Associates Inc.

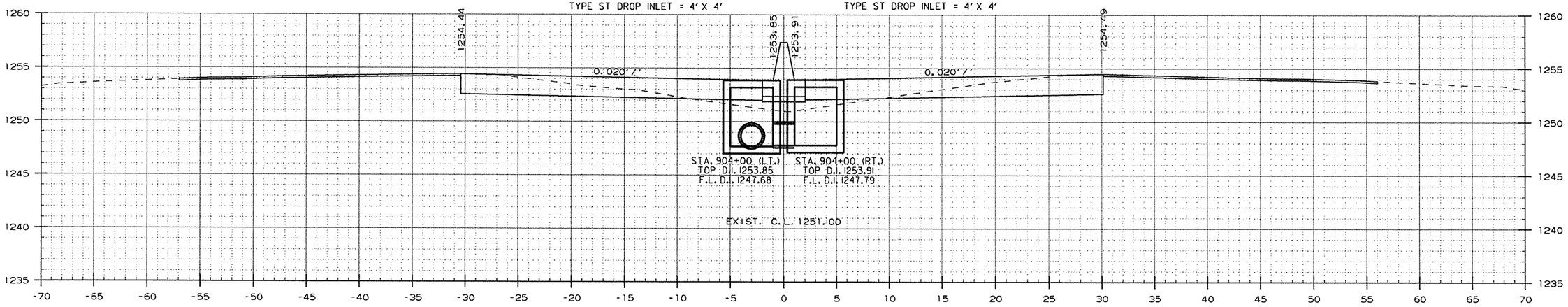
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	196	234

(2) CROSS SECTIONS

STA. 904+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-2"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 907+00 LT.
TYPE ST DROP INLET = 4' X 4'

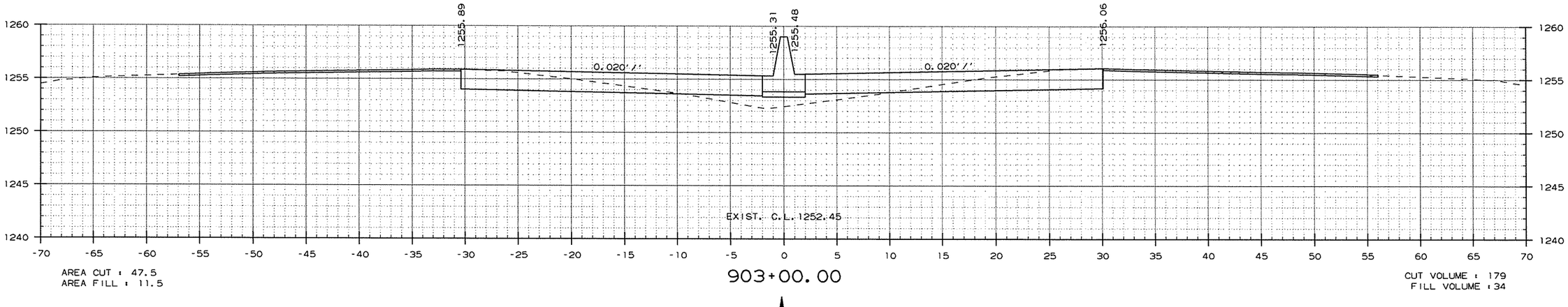
STA. 904+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-1"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 904+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 49.1
AREA FILL : 8.9

904+00.00

CUT VOLUME : 179
FILL VOLUME : 38



AREA CUT : 47.5
AREA FILL : 11.5

903+00.00

CUT VOLUME : 179
FILL VOLUME : 34

CROSS SECTION STA. 903+00 TO STA. 904+00

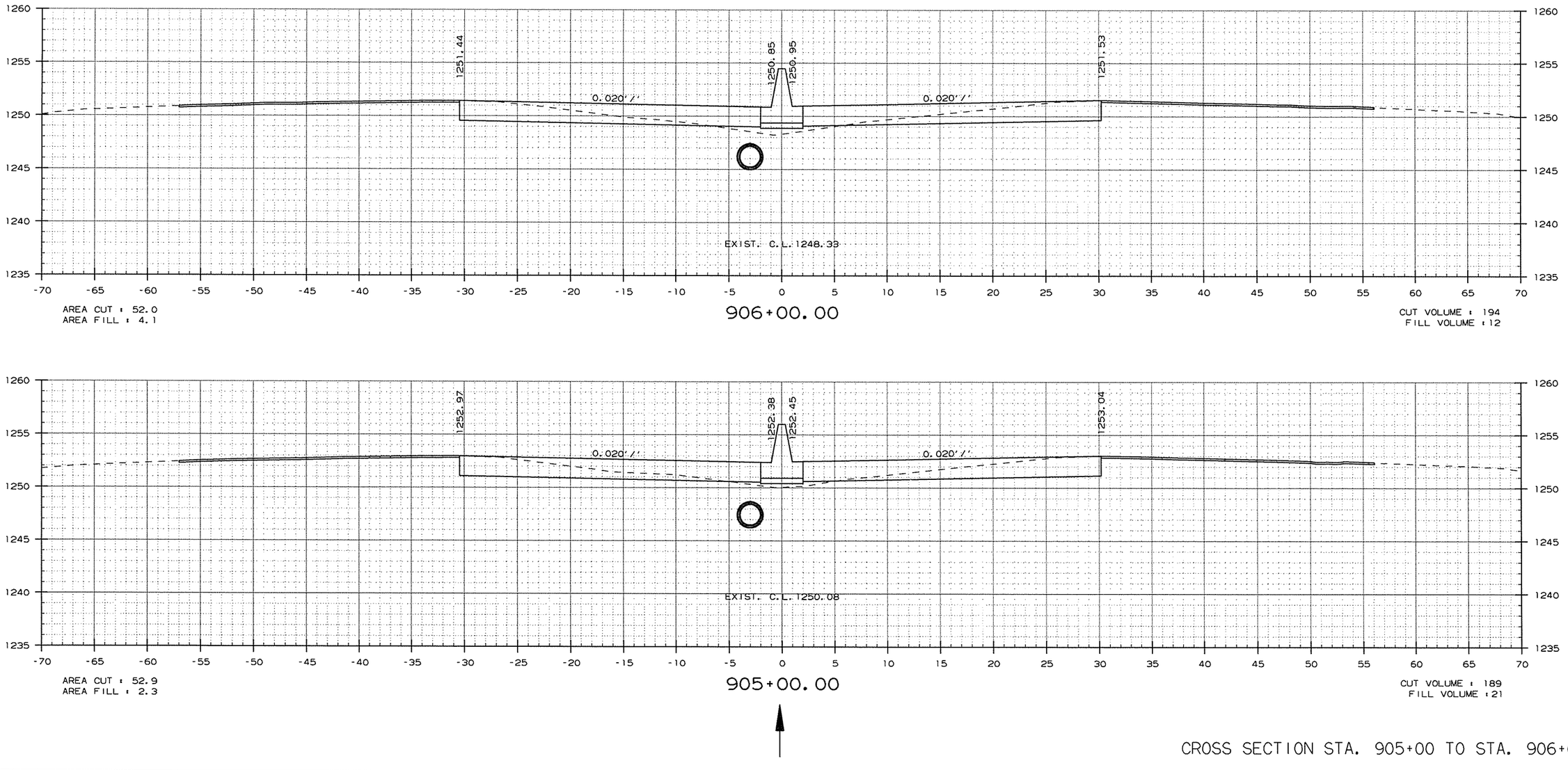
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	197	234

(2) CROSS SECTIONS



CROSS SECTION STA. 905+00 TO STA. 906+00

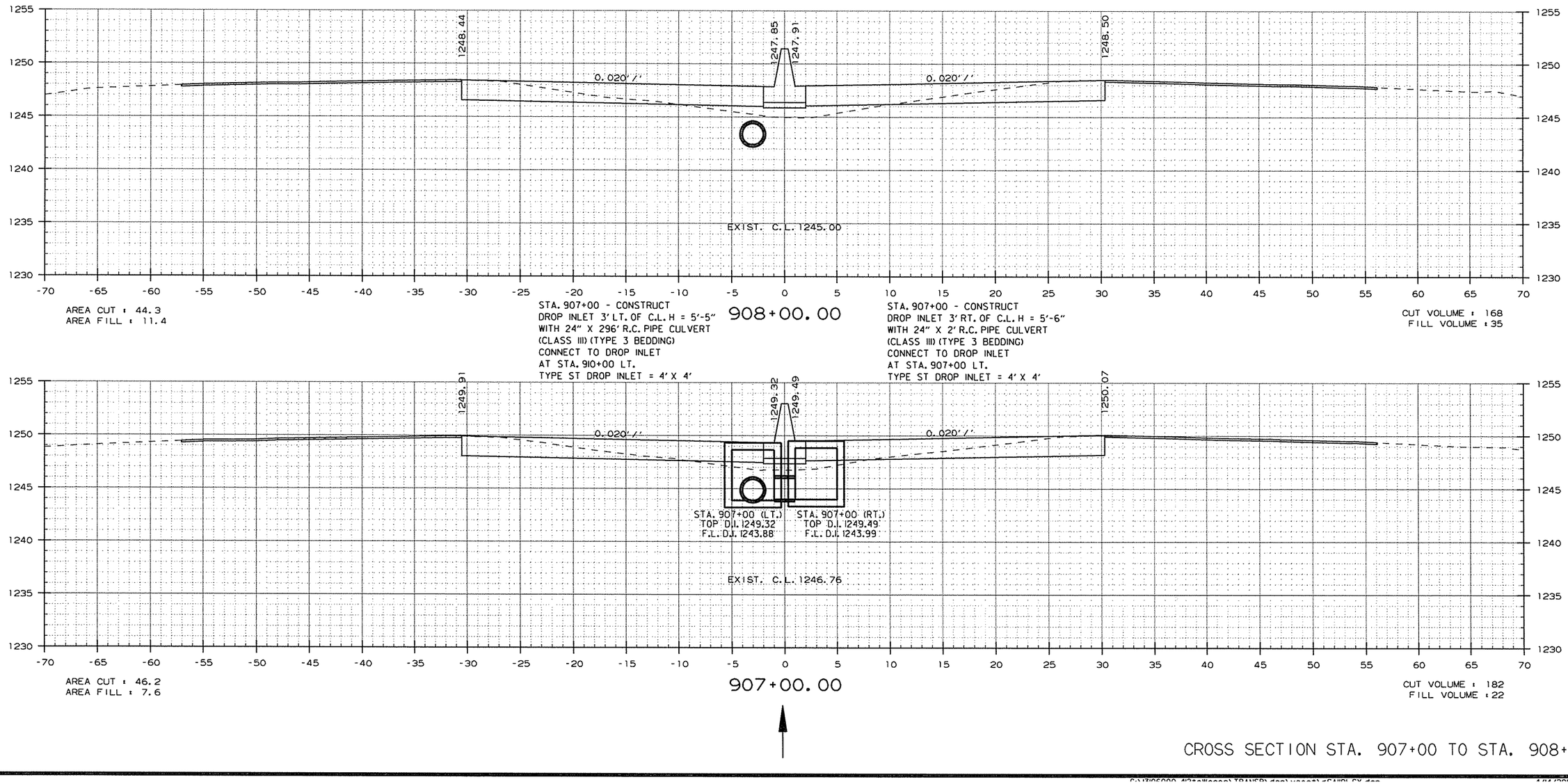
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	198	234

(2) CROSS SECTIONS



CROSS SECTION STA. 907+00 TO STA. 908+00

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\rCA1101_CX.dgn
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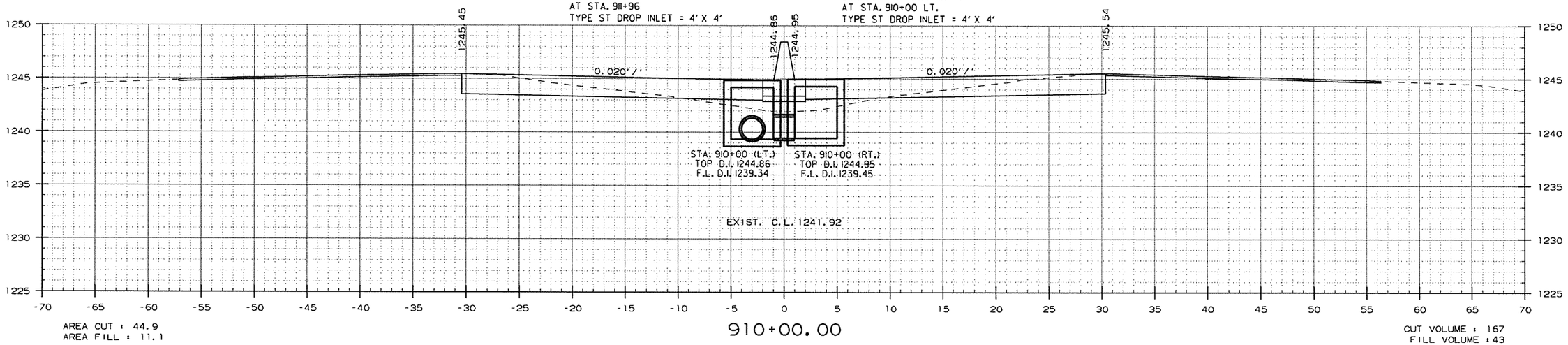
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	199	234
(2)	CROSS SECTIONS			

STA. 910+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 192' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 911+96
TYPE ST DROP INLET = 4' X 4'

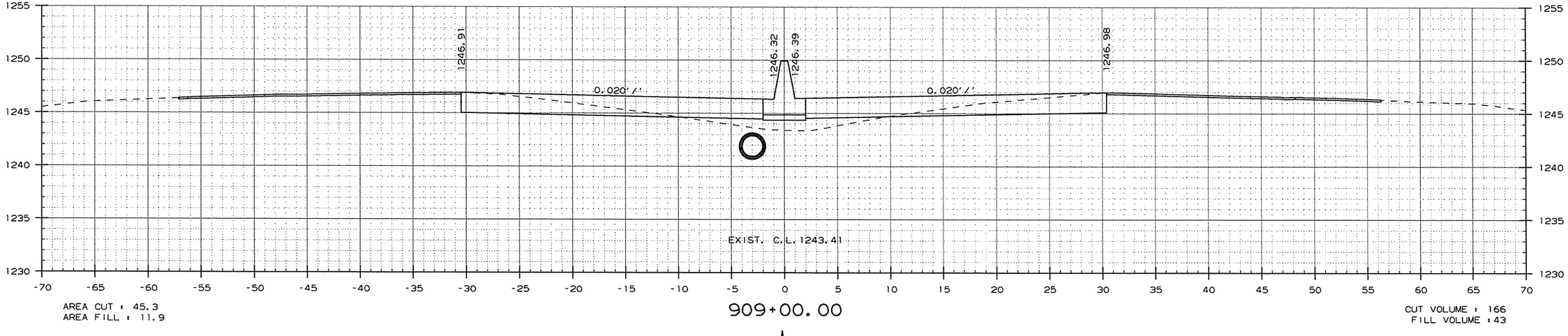
STA. 910+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-6"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 910+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 44.9
AREA FILL : 11.1

910+00.00

CUT VOLUME : 167
FILL VOLUME : 43



AREA CUT : 45.3
AREA FILL : 11.9

909+00.00

CUT VOLUME : 166
FILL VOLUME : 43

CROSS SECTION STA. 909+00 TO STA. 910+00

USER: ctsios
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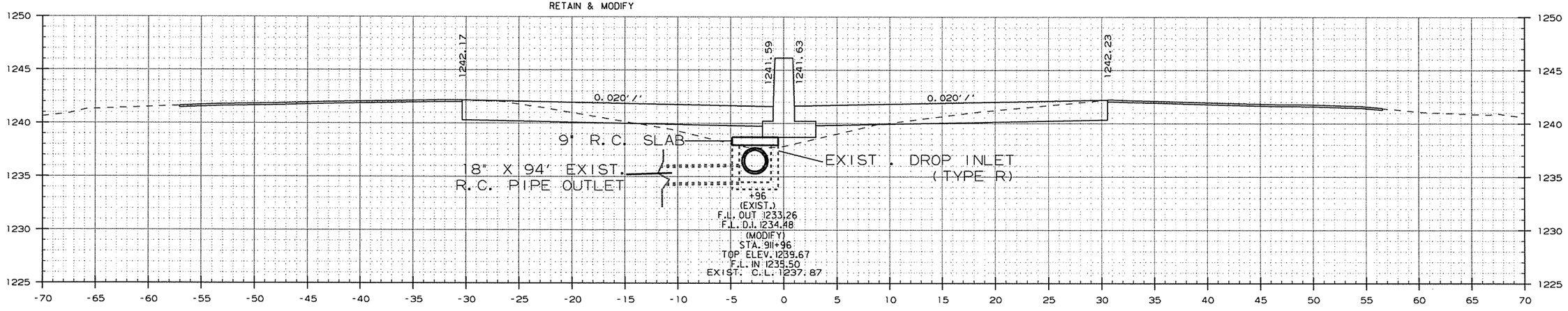
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	200	234

(2) CROSS SECTIONS

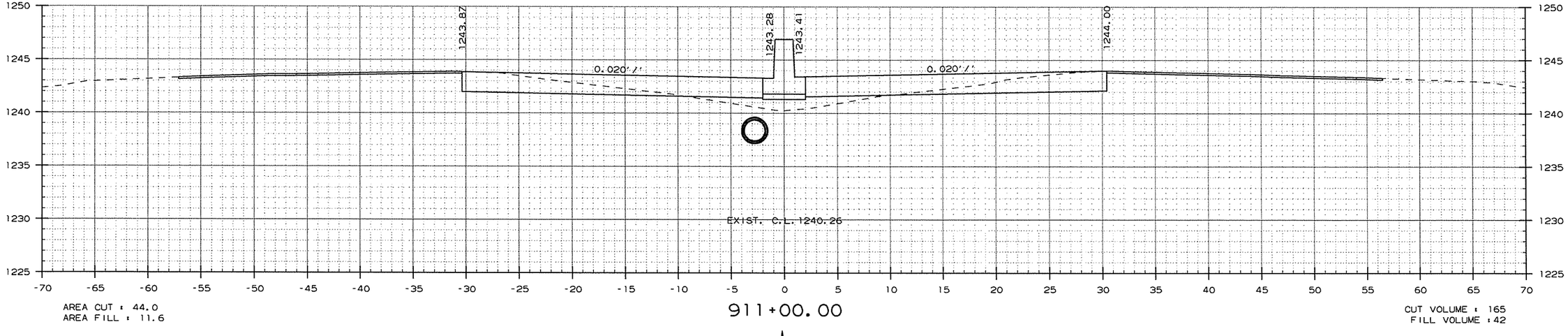
STA. 911+96 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 94' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



AREA CUT : 41.1
AREA FILL : 19.4

912+00.00

CUT VOLUME : 158
FILL VOLUME : 57



AREA CUT : 44.0
AREA FILL : 11.6

911+00.00

CUT VOLUME : 165
FILL VOLUME : 42

CROSS SECTION STA. 911+00 TO STA. 912+00

USER: at5106
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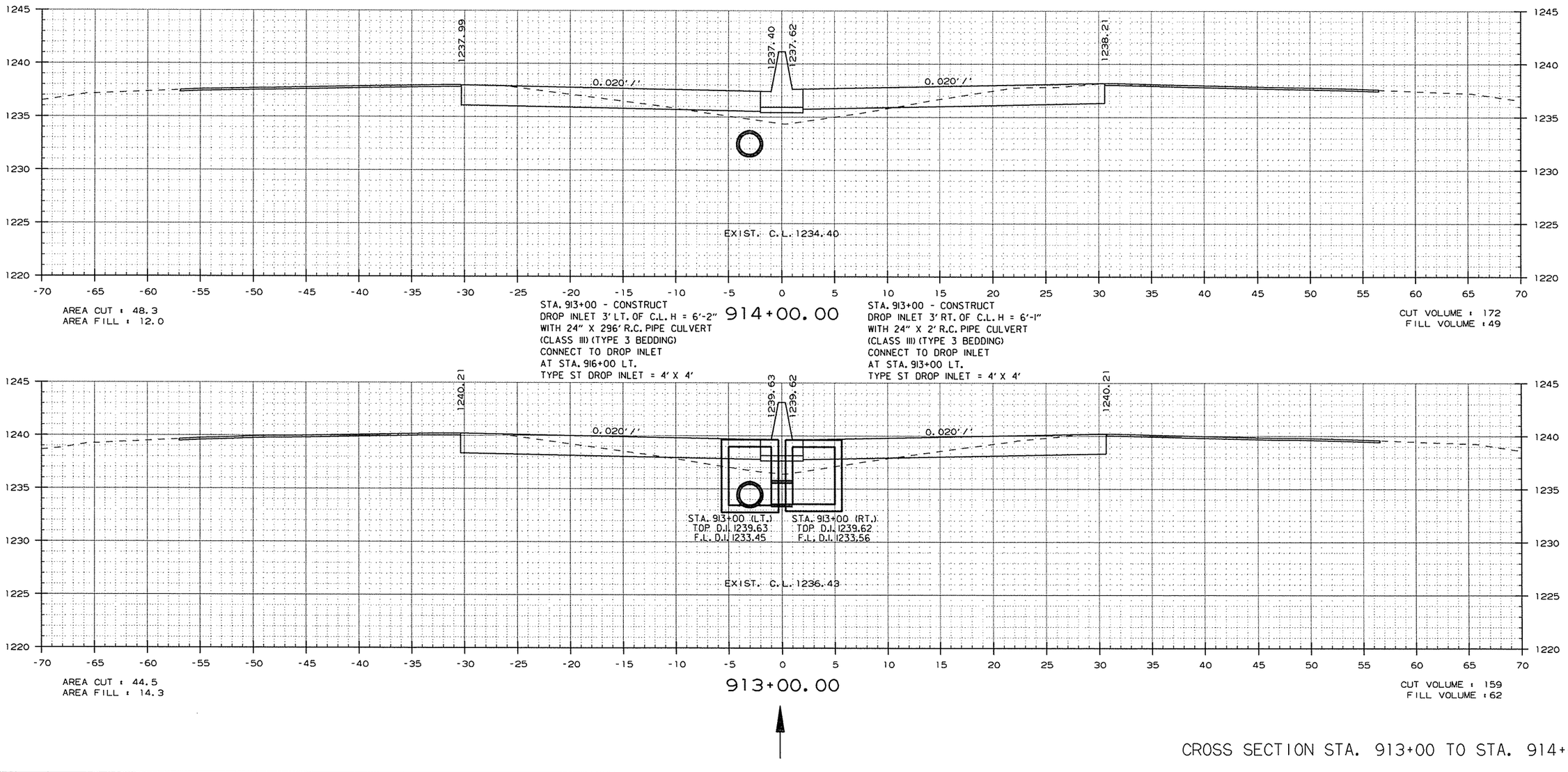
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	201	234

(2) CROSS SECTIONS



CROSS SECTION STA. 913+00 TO STA. 914+00

USER: at5106
DESIGN FILE: G:\13106000.412\eWagon\TRANSP\dgn\xsect\rCA1101_CX.dgn MODEL: X-Sections
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Crafton, Tull & Associates Inc.

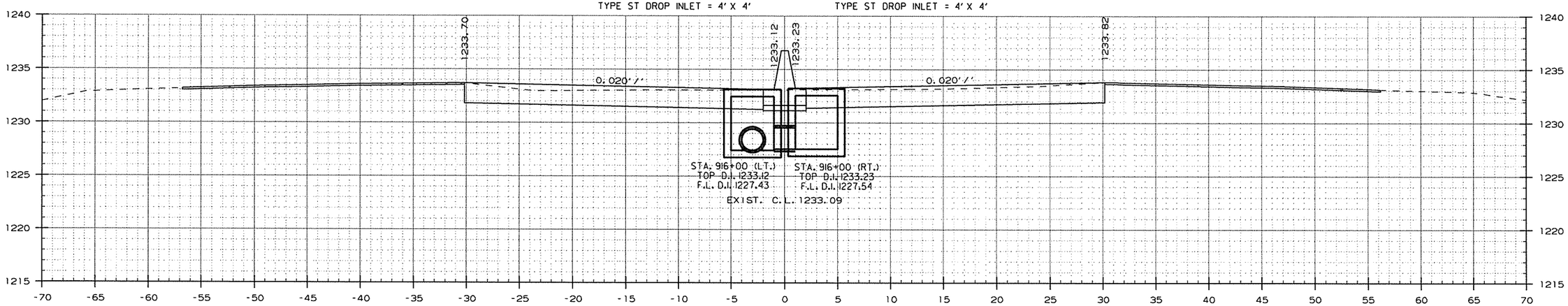
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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	202	234

(2) CROSS SECTIONS

STA. 916+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 919+00 LT.
TYPE ST DROP INLET = 4' X 4'

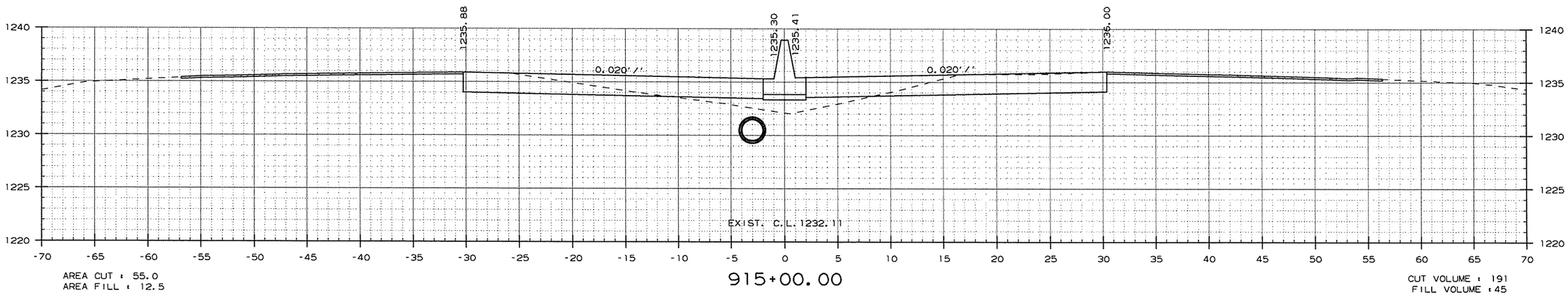
STA. 916+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 916+00 LT.
TYPE ST DROP INLET = 4' X 4'



AREA CUT : 99.0
AREA FILL : 0.0

916+00.00

CUT VOLUME : 285
FILL VOLUME : 23



AREA CUT : 55.0
AREA FILL : 12.5

915+00.00

CUT VOLUME : 191
FILL VOLUME : 45

CROSS SECTION STA. 915+00 TO STA. 916+00

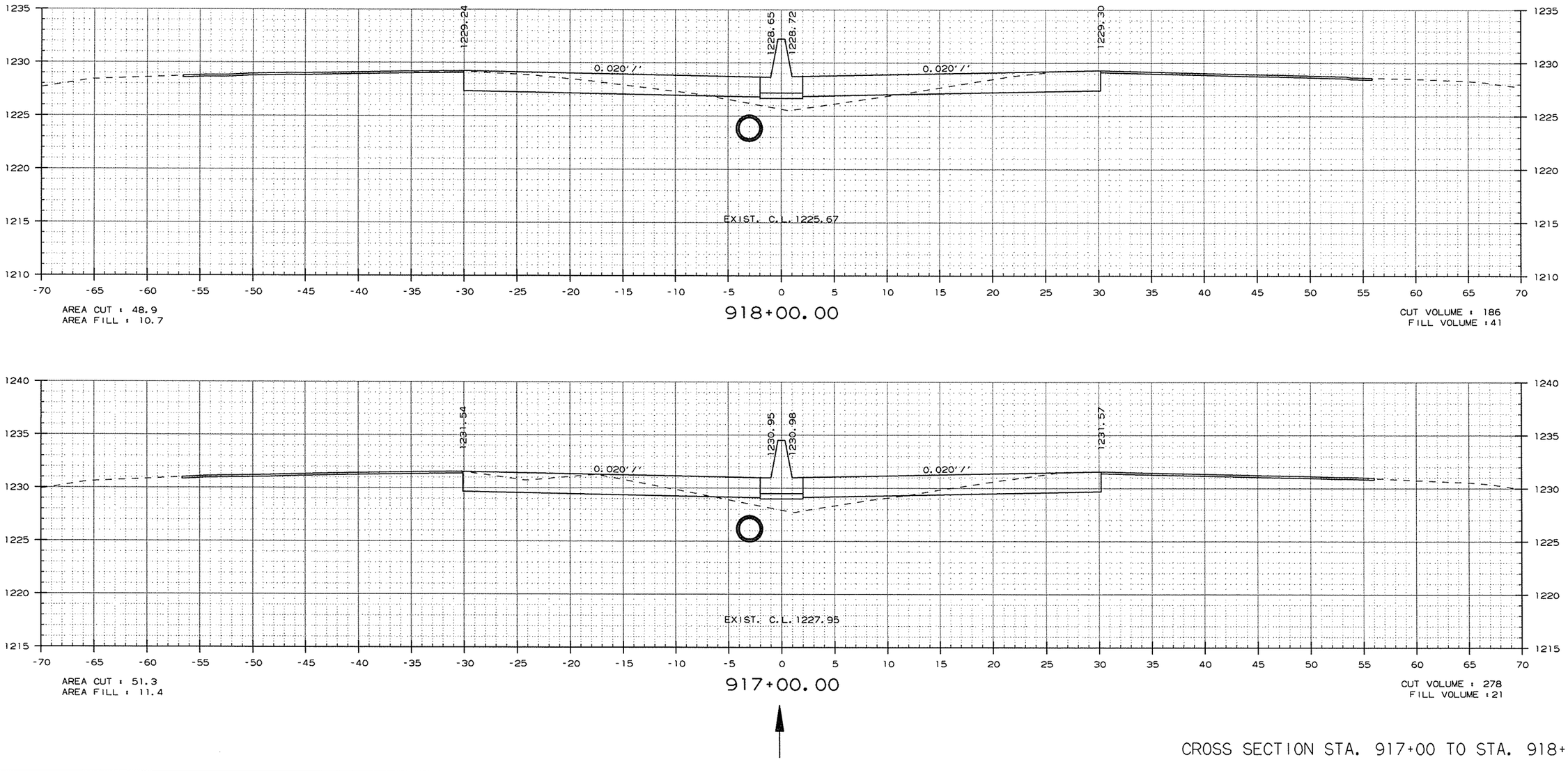
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	203	234

(2) CROSS SECTIONS



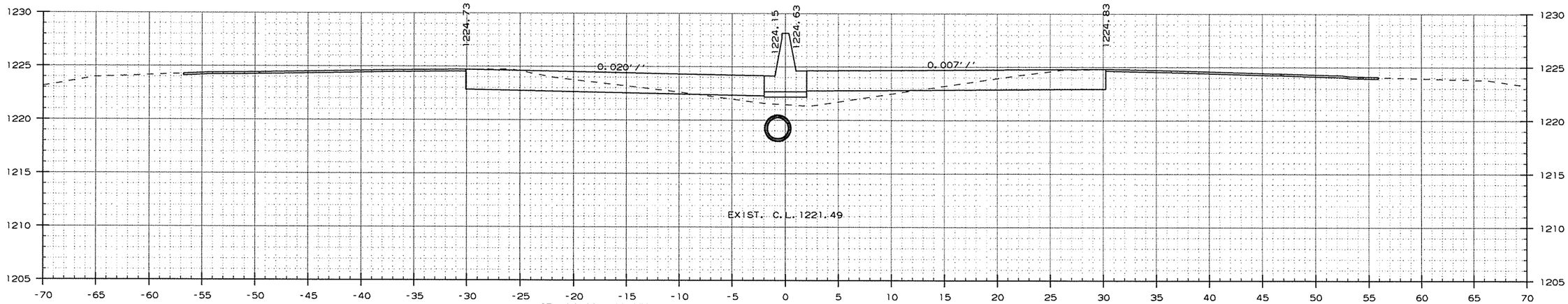
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	204	234
(2)	CROSS SECTIONS			



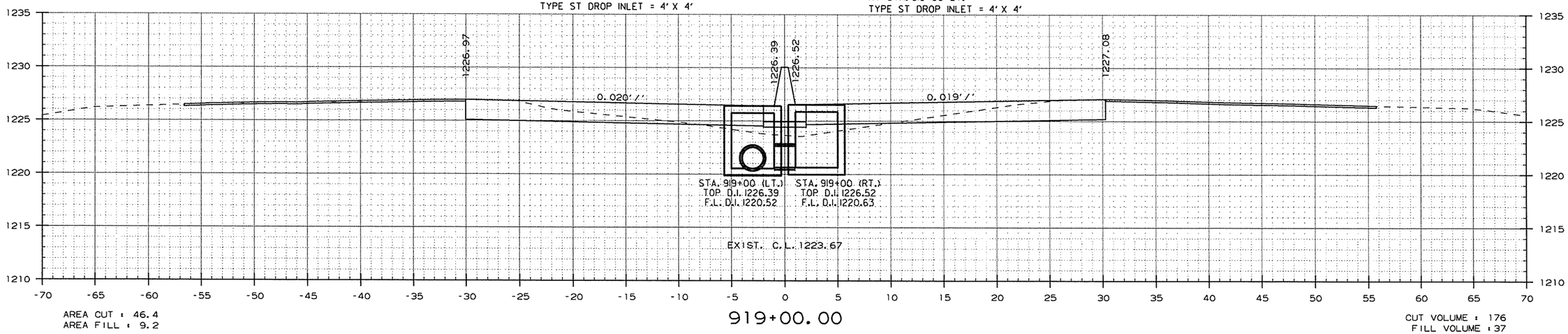
AREA CUT : 44.2
AREA FILL : 12.5

STA. 919+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-11"
WITH 24" X 120' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 920+24
TYPE ST DROP INLET = 4' X 4'

920+00.00

STA. 919+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-11"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 919+00 LT.
TYPE ST DROP INLET = 4' X 4'

CUT VOLUME : 168
FILL VOLUME : 40



STA. 919+00 (LT.)
TOP. D.I. 1226.39
F.L. D.I. 1220.52

STA. 919+00 (RT.)
TOP. D.I. 1226.52
F.L. D.I. 1220.63

AREA CUT : 46.4
AREA FILL : 9.2

919+00.00

CUT VOLUME : 176
FILL VOLUME : 37

CROSS SECTION STA. 919+00 TO STA. 920+00

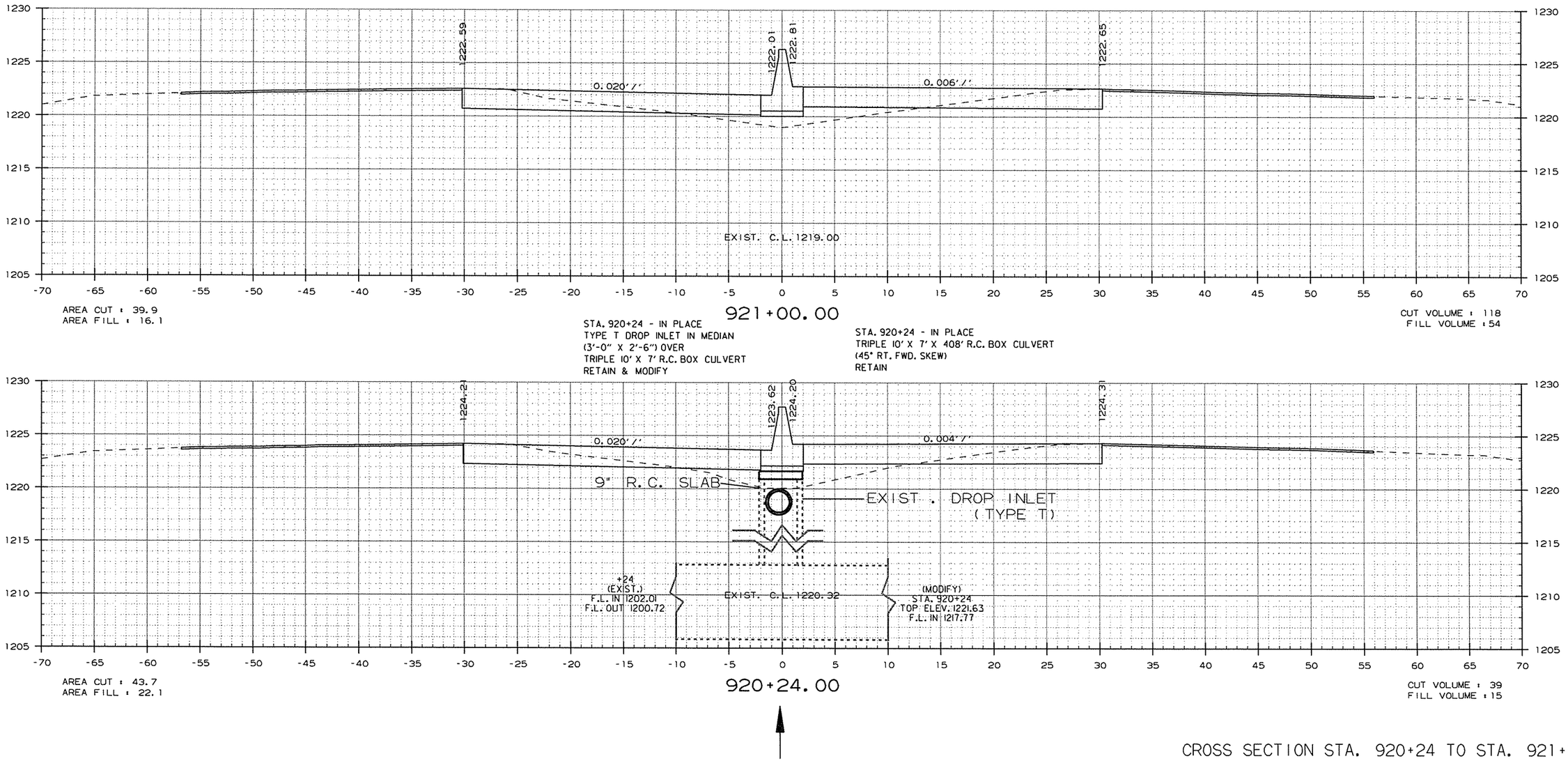
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	205	234

(2) CROSS SECTIONS



CROSS SECTION STA. 920+24 TO STA. 921+00

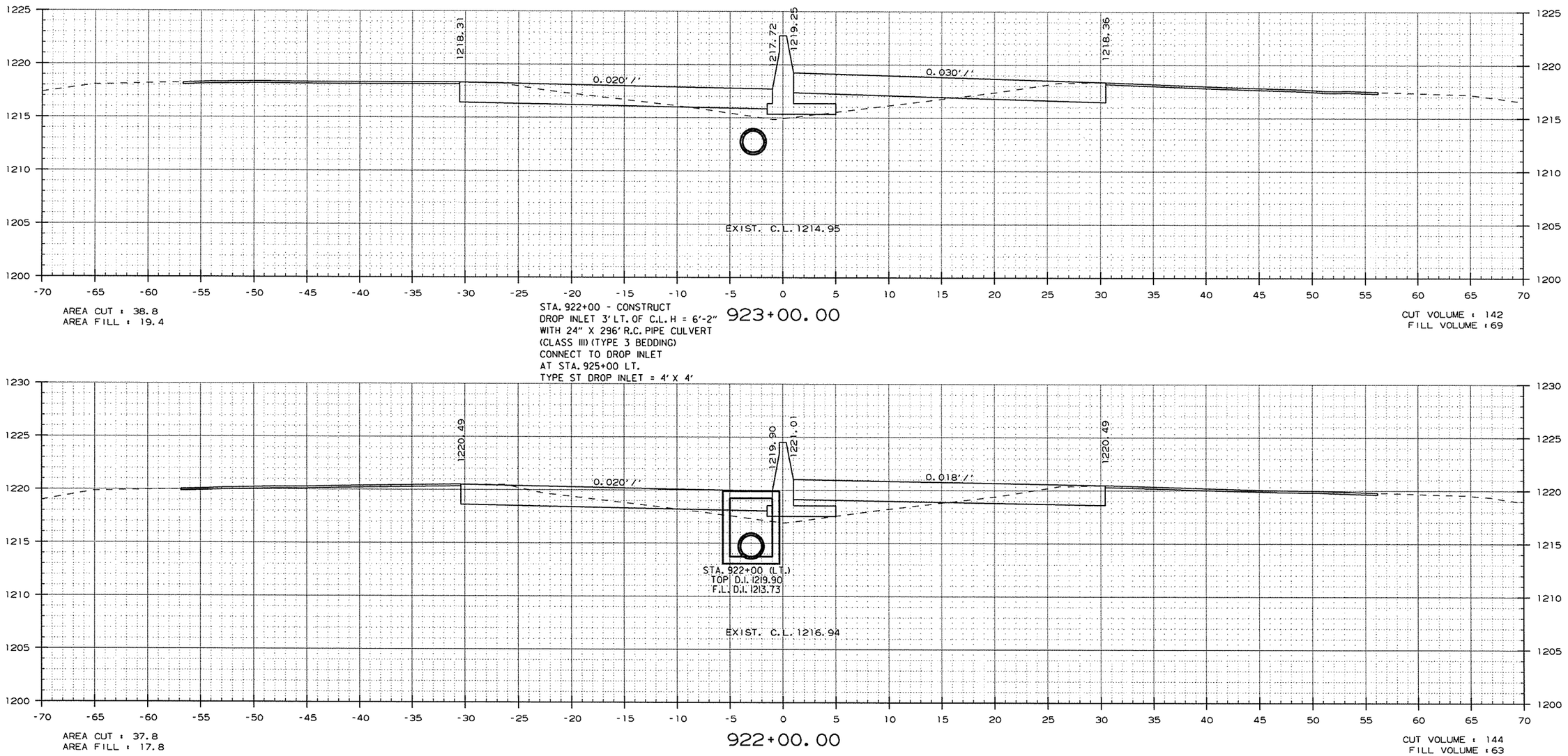
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILED	DATE REVISED	DATE FILED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	206	234

(2) CROSS SECTIONS



CROSS SECTION STA. 922+00 TO STA. 923+00

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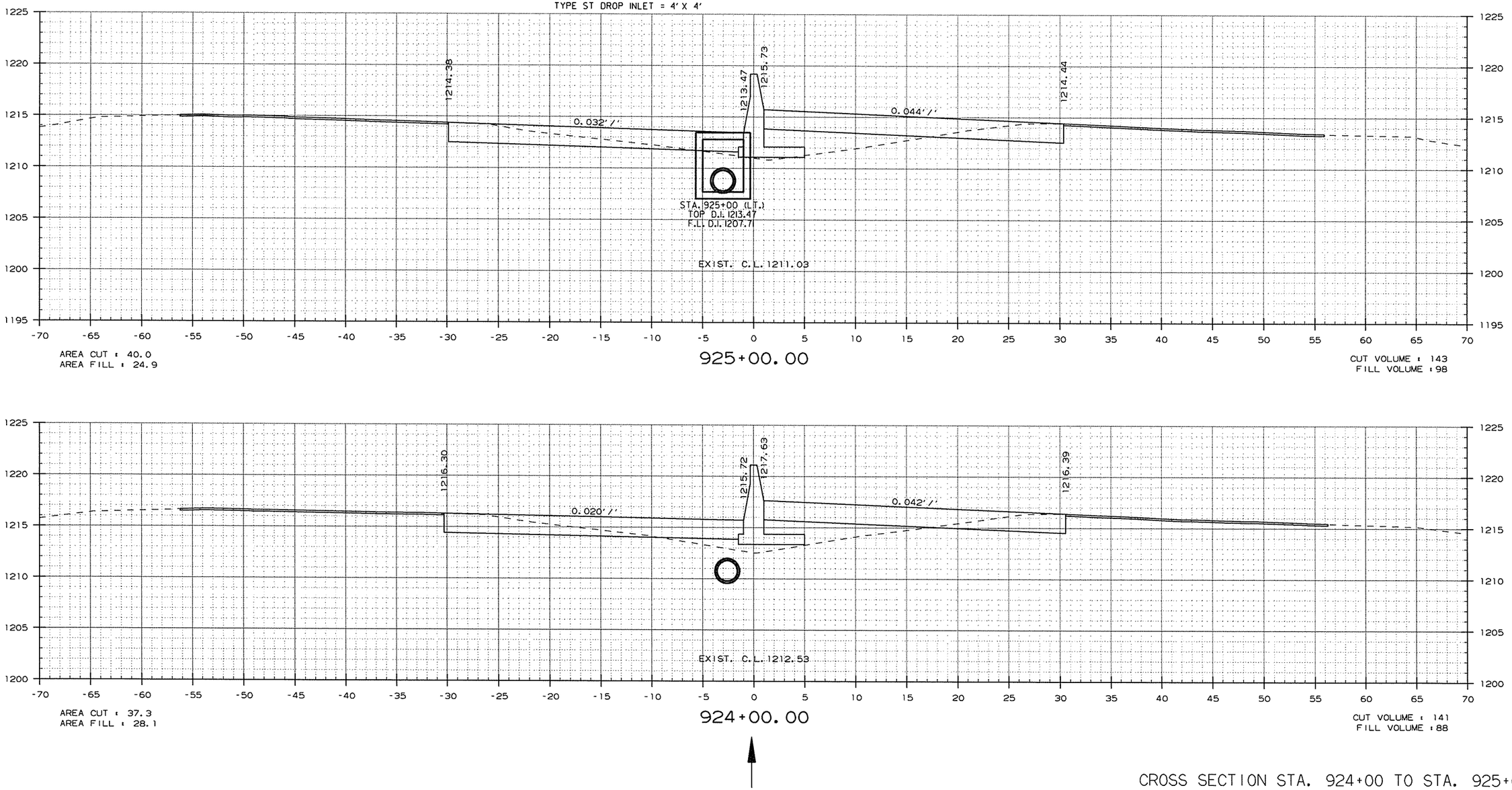
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	207	234

(2) CROSS SECTIONS

STA. 925+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET AT
STA. 928+00 LT.
TYPE ST DROP INLET = 4' X 4'



CROSS SECTION STA. 924+00 TO STA. 925+00

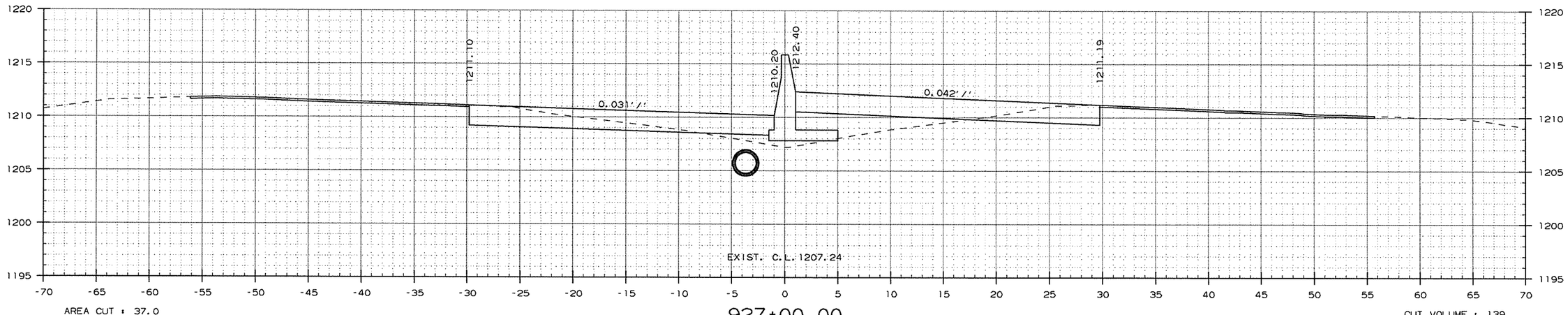
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	208	234

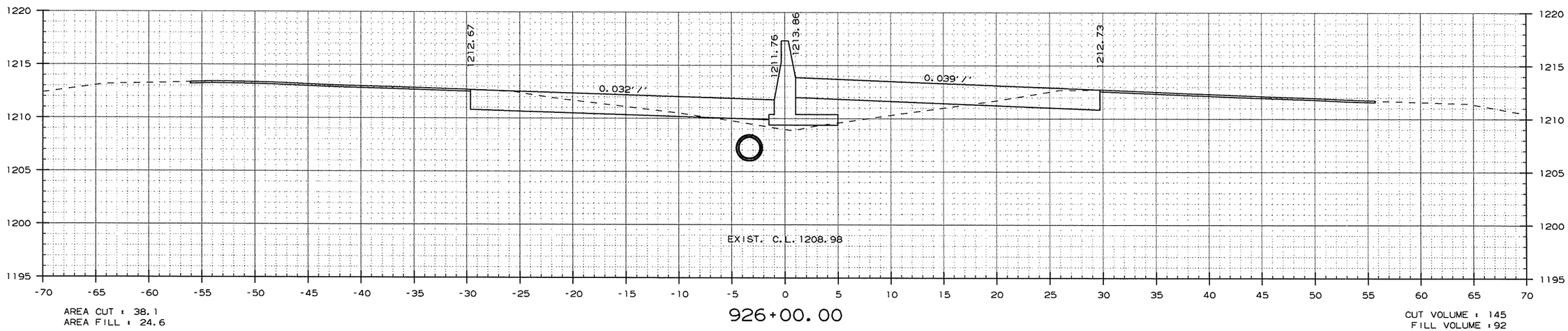
(2) CROSS SECTIONS



AREA CUT : 37.0
AREA FILL : 26.5

927+00.00

CUT VOLUME : 139
FILL VOLUME : 95



AREA CUT : 38.1
AREA FILL : 24.6

926+00.00

CUT VOLUME : 145
FILL VOLUME : 92

CROSS SECTION STA. 926+00 TO STA. 927+00

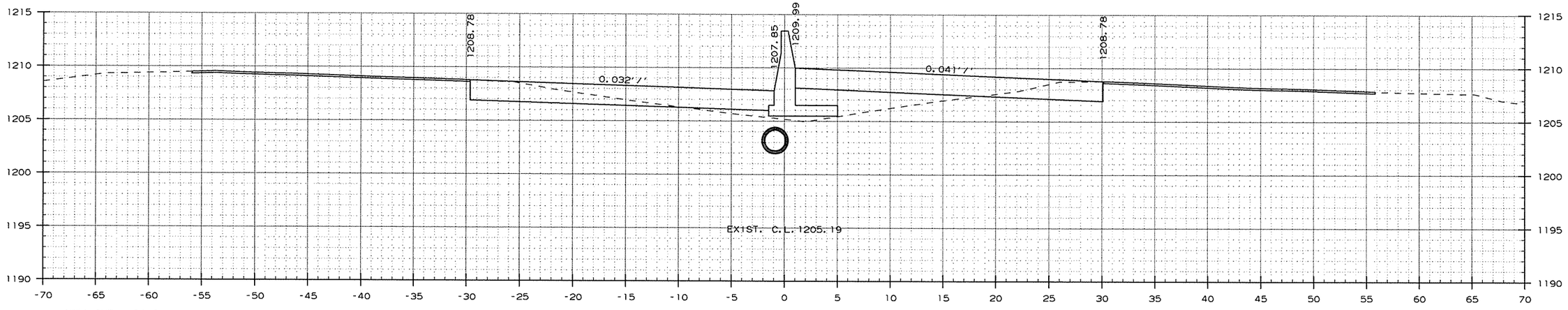
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	209	234

(2) CROSS SECTIONS

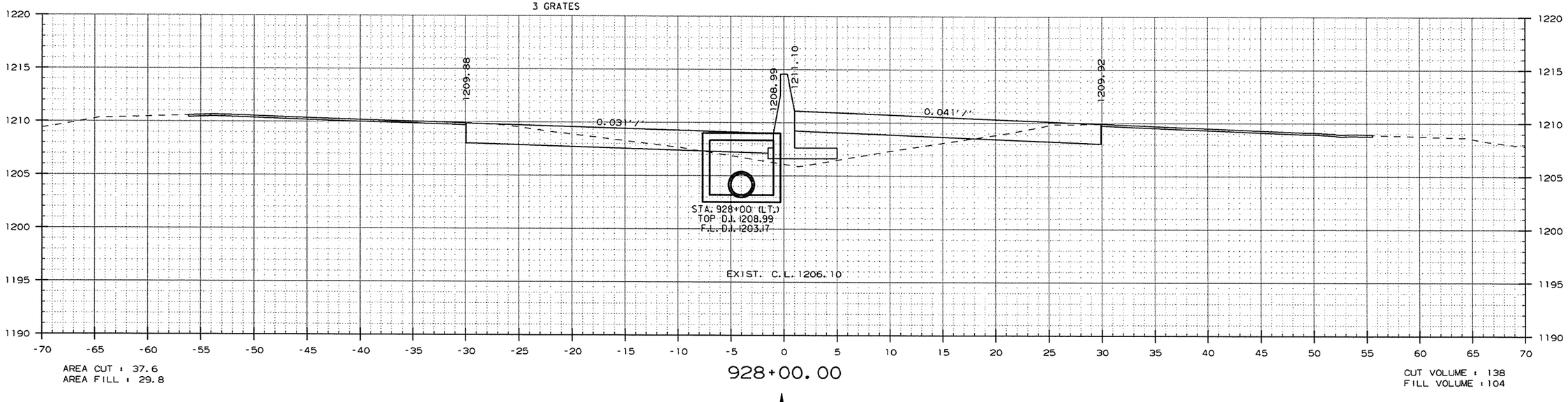


AREA CUT = 34.2
AREA FILL = 28.7

929+00.00

CUT VOLUME = 133
FILL VOLUME = 108

STA. 928+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-10"
WITH 24" X 192' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 929+96
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 37.6
AREA FILL = 29.8

928+00.00

CUT VOLUME = 138
FILL VOLUME = 104

CROSS SECTION STA. 928+00 TO STA. 929+00

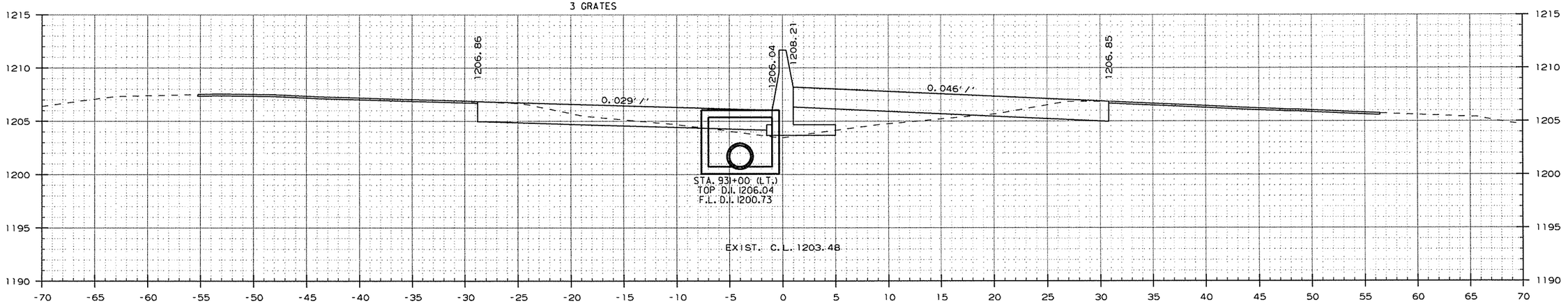
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	210	234
				(2)	CROSS SECTIONS			

STA. 931+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-4"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 934+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

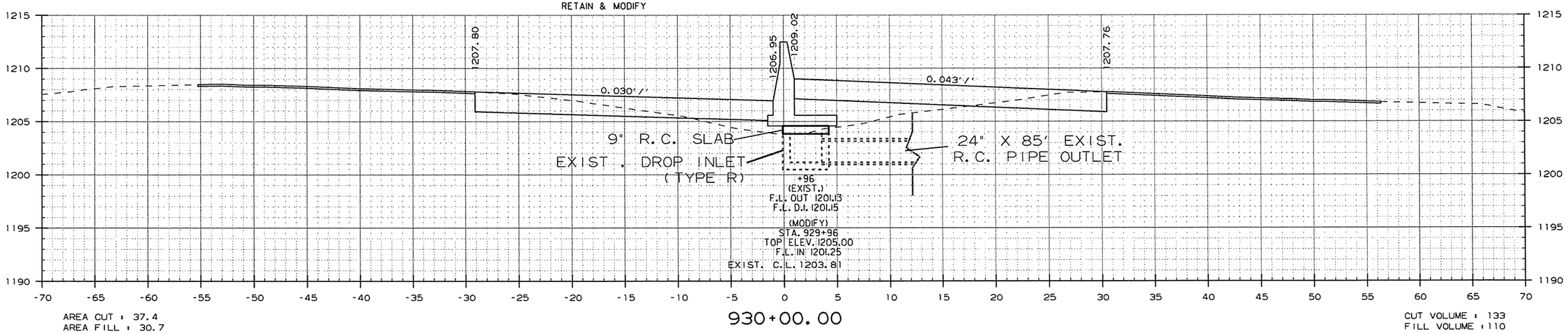


AREA CUT : 34.5
AREA FILL : 22.0

931+00.00

CUT VOLUME : 133
FILL VOLUME : 98

STA. 929+96 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 24" X 85' R.C. PIPE OUTLET TO RT.
RETAIN & MODIFY



AREA CUT : 37.4
AREA FILL : 30.7

930+00.00

CUT VOLUME : 133
FILL VOLUME : 110

CROSS SECTION STA. 930+00 TO STA. 931+00

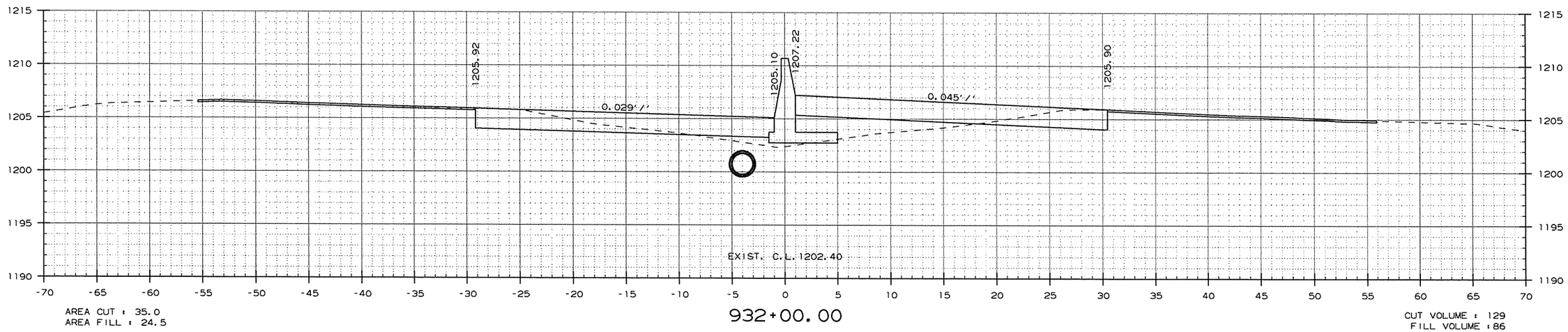
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	2II	234

2 CROSS SECTIONS





CROSS SECTION STA. 932+00 TO STA. 933+00

USER: at5106
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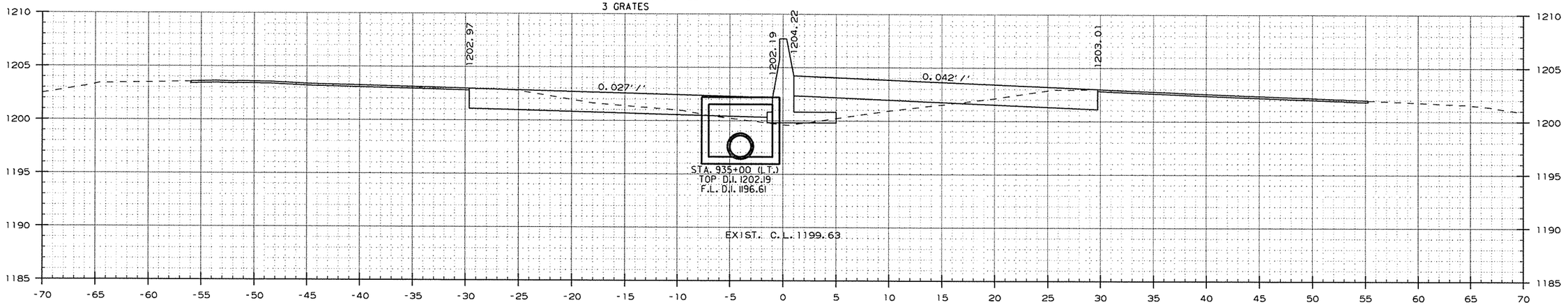
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	212	234

(2) CROSS SECTIONS

STA. 935+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 937+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

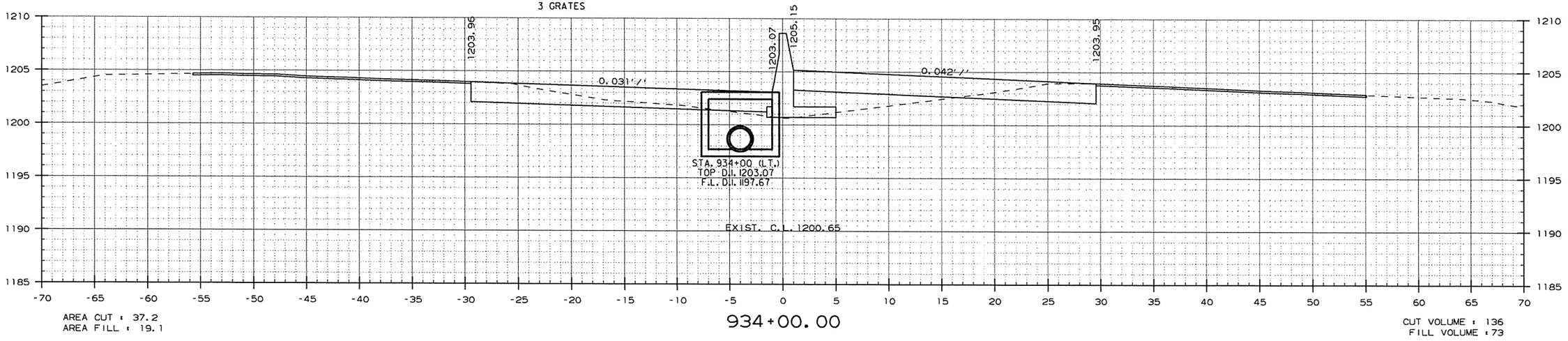


AREA CUT : 38.8
AREA FILL : 19.7

935+00.00

CUT VOLUME : 141
FILL VOLUME : 72

STA. 934+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 935+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 37.2
AREA FILL : 19.1

934+00.00

CUT VOLUME : 136
FILL VOLUME : 73

CROSS SECTION STA. 934+00 TO STA. 935+00

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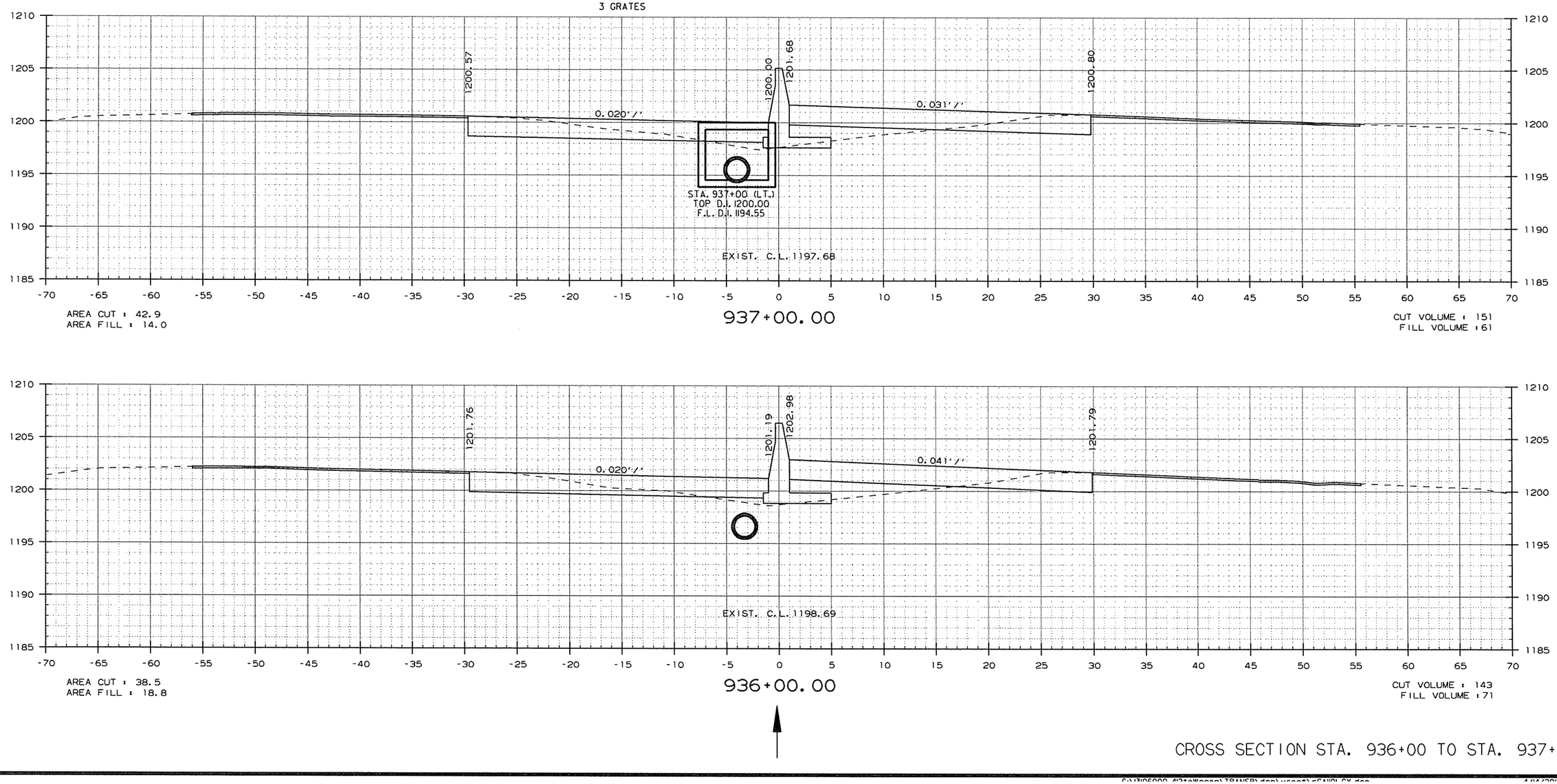
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	213	234

(2) CROSS SECTIONS

STA. 937+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 196' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 939+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 42.9
AREA FILL : 14.0

937+00.00

CUT VOLUME : 151
FILL VOLUME : 61

AREA CUT : 38.5
AREA FILL : 18.8

936+00.00

CUT VOLUME : 143
FILL VOLUME : 71

CROSS SECTION STA. 936+00 TO STA. 937+00

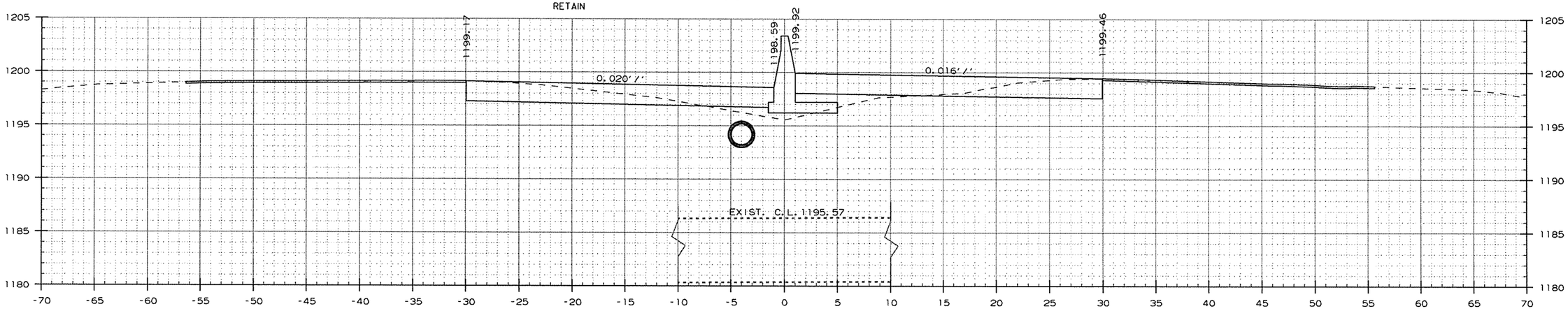
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	214	234

(2) CROSS SECTIONS

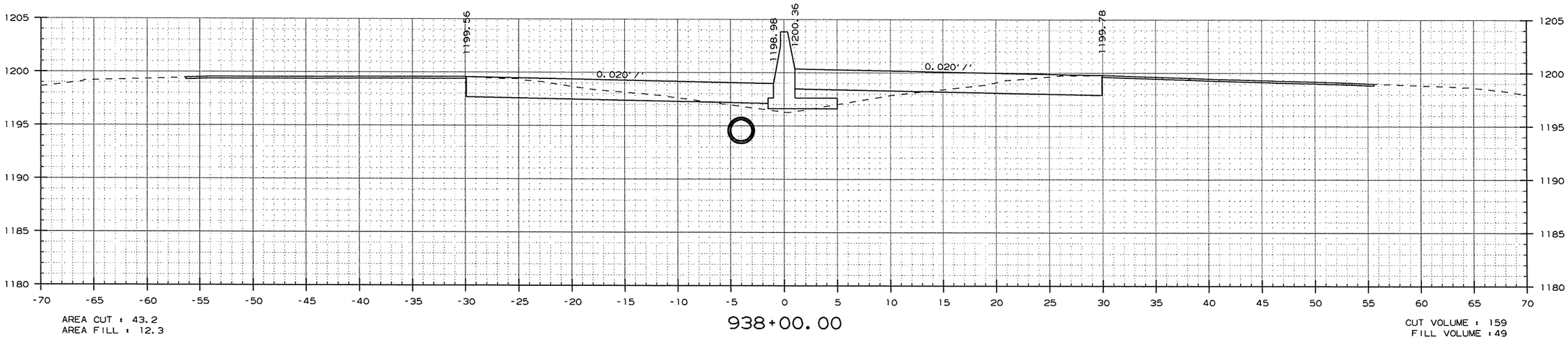
STA. 938+37 - IN PLACE
TRIPLE 10' X 6' X 223' R.C. BOX CULVERT
RETAIN



AREA CUT : 45.3
AREA FILL : 12.3

938+36.82

CUT VOLUME : 60
FILL VOLUME : 17



AREA CUT : 43.2
AREA FILL : 12.3

938+00.00

CUT VOLUME : 159
FILL VOLUME : 49

CROSS SECTION STA. 938+00 TO STA. 938+37

USER: at5106
DESIGN FILE: G:\13060DD_412\eWapon\TRANSP\dgn\Xsect\rCA1101_CX.dgn
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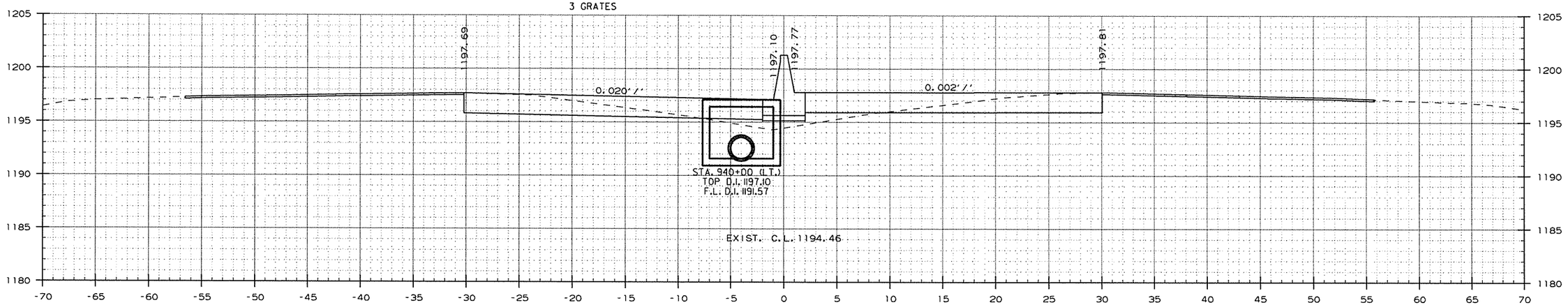
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	215	234

(2) CROSS SECTIONS

STA. 940+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-6"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

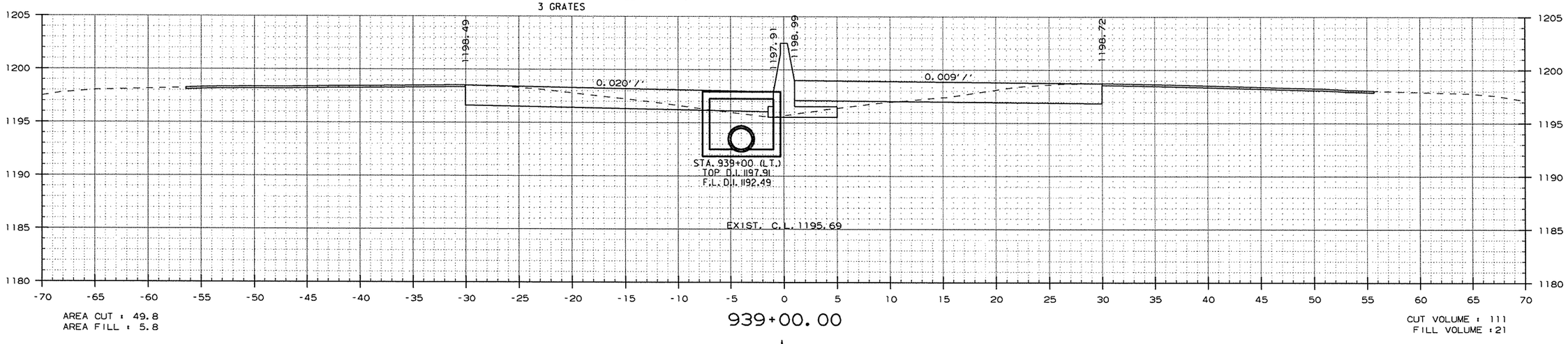


AREA CUT = 50.5
AREA FILL = 8.5

940+00.00

CUT VOLUME = 186
FILL VOLUME = 26

STA. 939+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 96' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 940+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 49.8
AREA FILL = 5.8

939+00.00

CUT VOLUME = 111
FILL VOLUME = 21

CROSS SECTION STA. 939+00 TO STA. 940+00

USER: a15106
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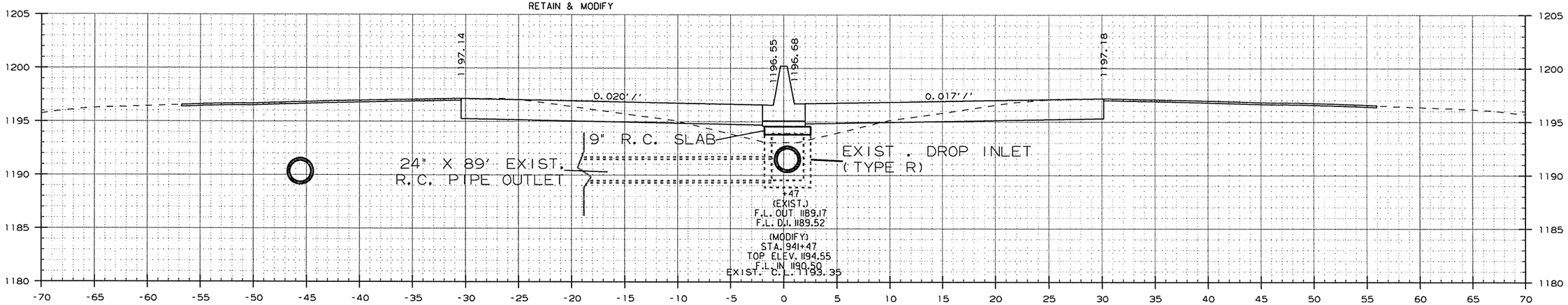
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	216	234
(2)	CROSS SECTIONS			

STA. 941+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 24" X 89' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



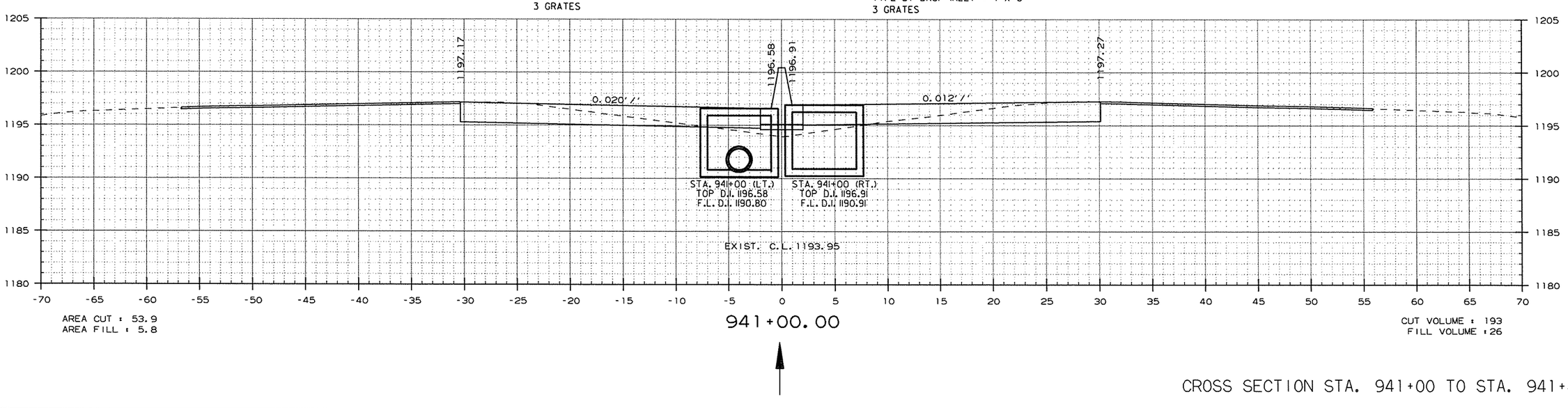
AREA CUT = 53.0
AREA FILL = 17.1

941+47.00

CUT VOLUME = 93
FILL VOLUME = 20

STA. 941+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-9"
WITH 24" X 42' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 941+47
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 941+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 53.9
AREA FILL = 5.8

941+00.00

CUT VOLUME = 193
FILL VOLUME = 26

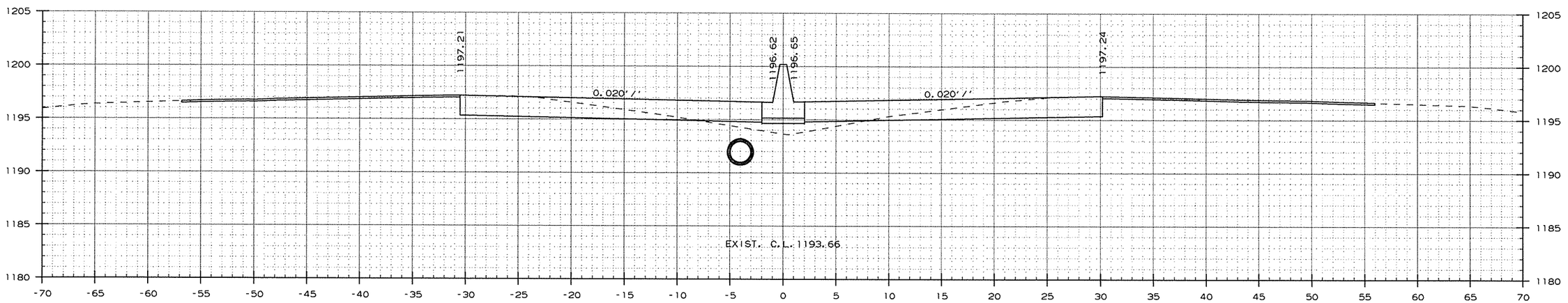
CROSS SECTION STA. 941+00 TO STA. 941+47

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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	217	234

(2) CROSS SECTIONS



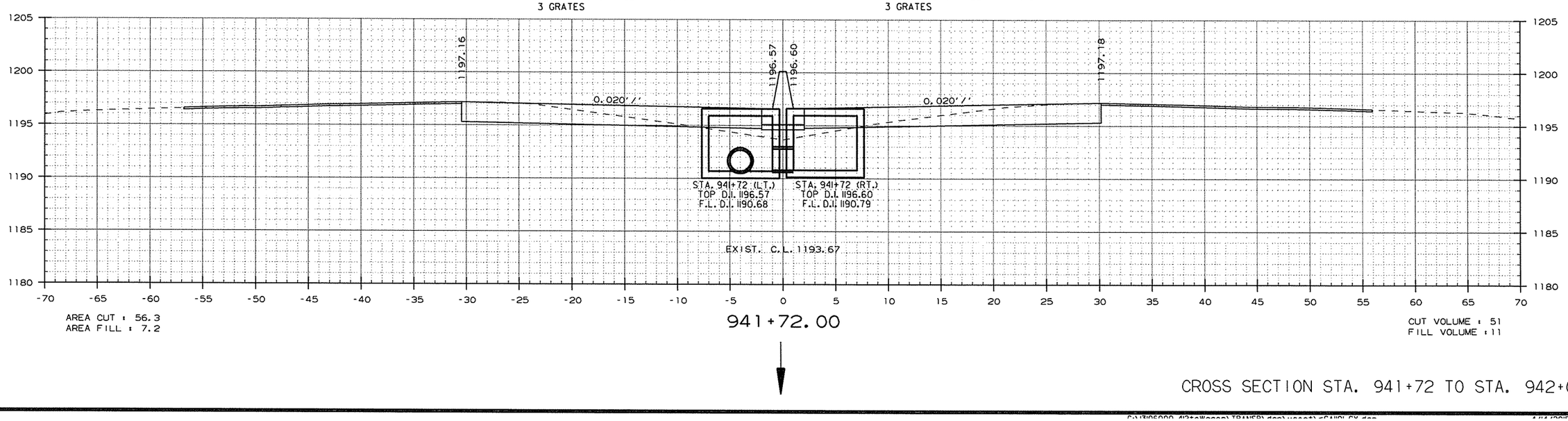
AREA CUT = 56.1
AREA FILL = 8.6

942+00.00

CUT VOLUME = 58
FILL VOLUME = 8

STA. 941+72 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-11"
WITH 24" X 23' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 941+47
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 941+72 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-10"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+72 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 56.3
AREA FILL = 7.2

941+72.00

CUT VOLUME = 51
FILL VOLUME = 11

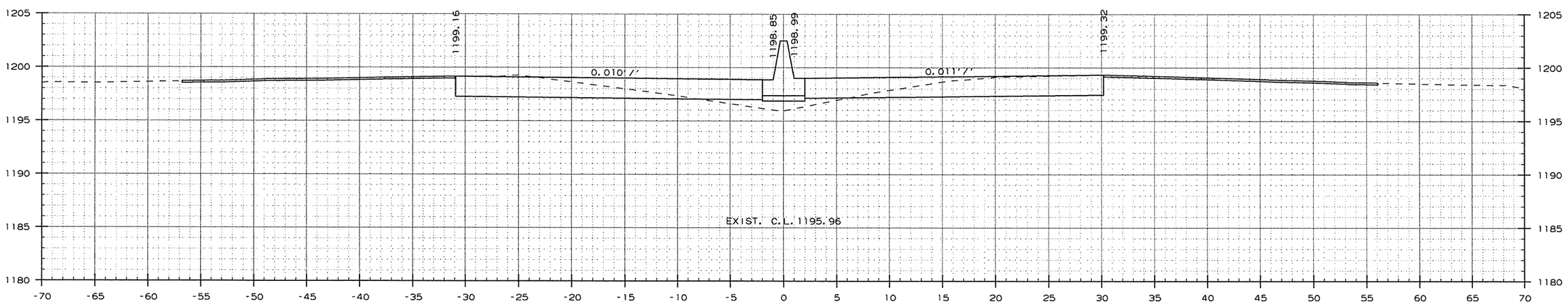
CROSS SECTION STA. 941+72 TO STA. 942+00

USER: at5106
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	218	234

(2) CROSS SECTIONS



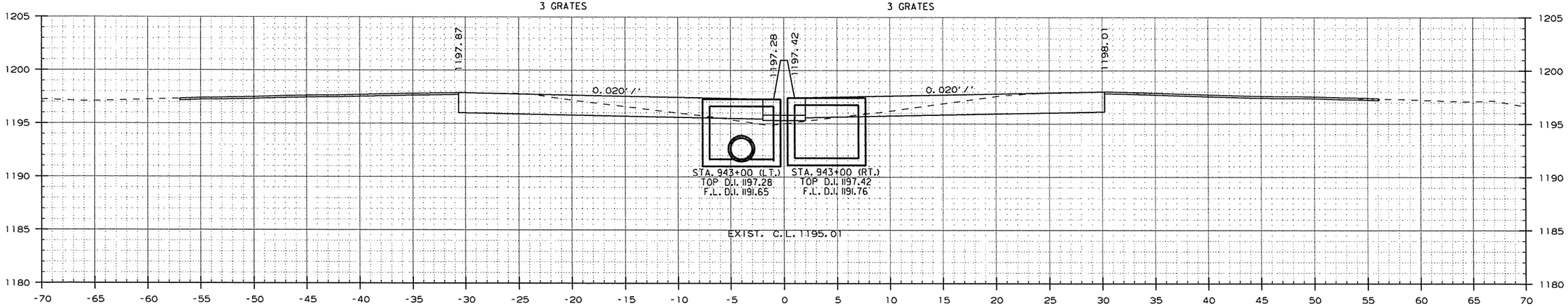
AREA CUT = 62.9
AREA FILL = 7.0

944+00.00

CUT VOLUME = 228
FILL VOLUME = 18

STA. 943+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 124' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 941+72 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 943+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 943+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 60.2
AREA FILL = 2.5

943+00.00

CUT VOLUME = 215
FILL VOLUME = 21

CROSS SECTION STA. 943+00 TO STA. 944+00

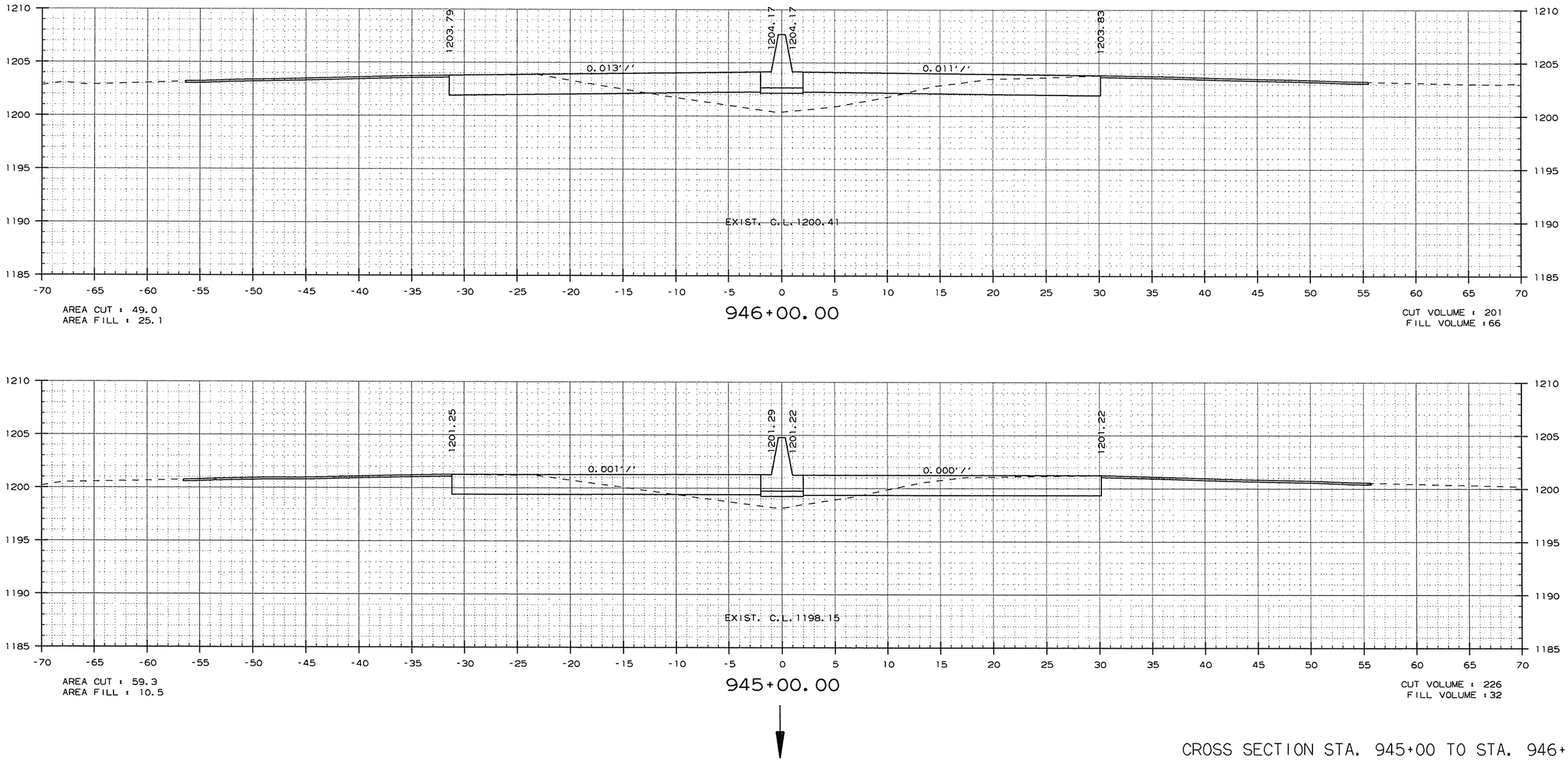
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	219	234

(2) CROSS SECTIONS



CROSS SECTION STA. 945+00 TO STA. 946+00

USER: at5106
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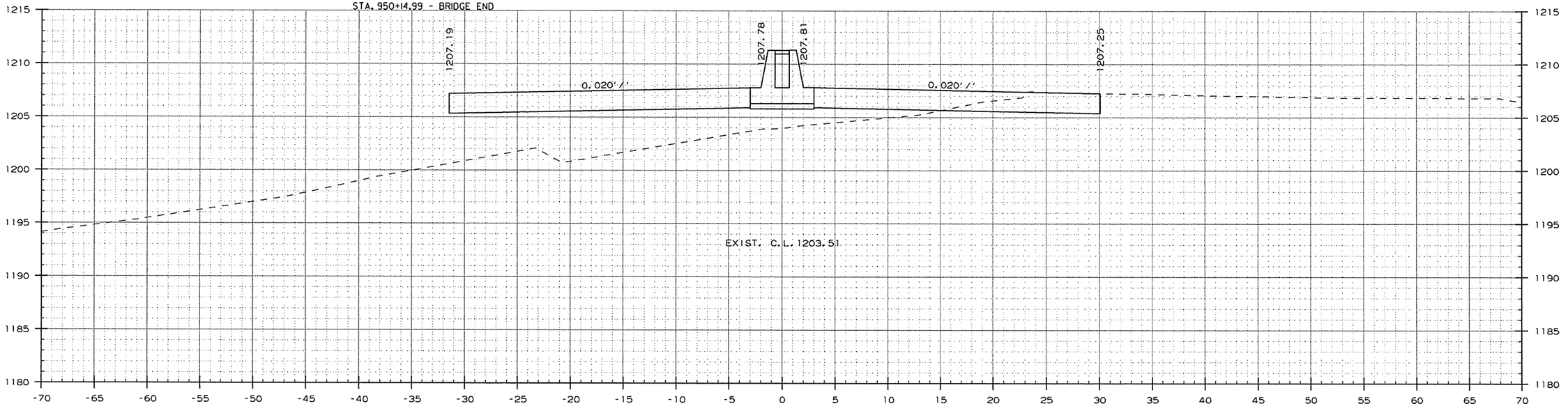
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	220	234

(2) CROSS SECTIONS

STA. 947+24.63 - BRIDGE END
BRIDGE NO. B5946
288'-0" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
290'-4⅝" BRIDGE LENGTH
STA. 950+14.99 - BRIDGE END

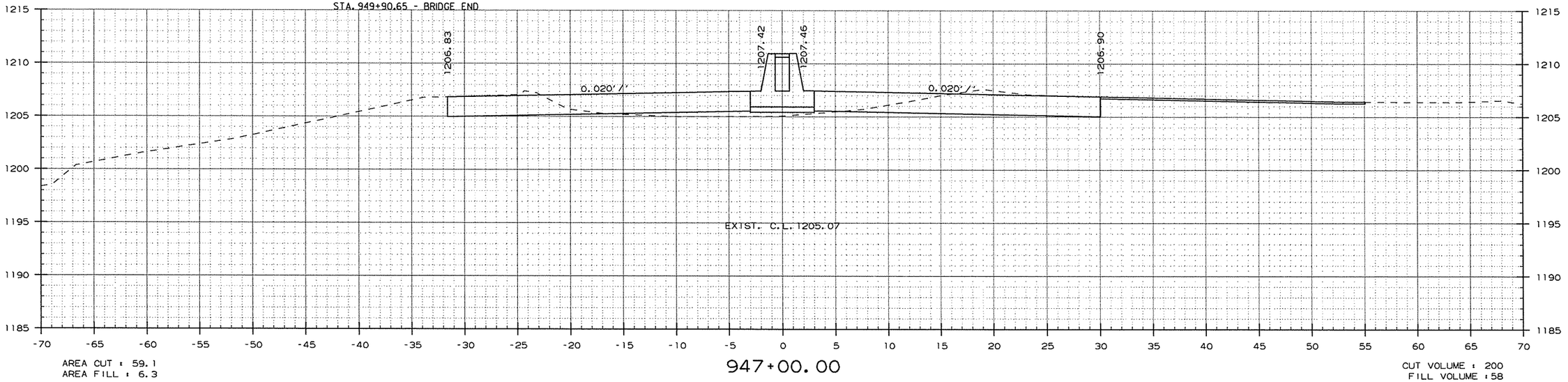


AREA CUT : 19.7
AREA FILL : 126.7

STA. 947+00.29 - BRIDGE END
BRIDGE NO. A5946
288'-0" CONT. COMPOSITE W-BEAM UNIT
(65'-79'-79'-65')
62'-0" CLEAR ROADWAY
290'-4⅝" BRIDGE LENGTH
STA. 949+90.65 - BRIDGE END

947+12.46

CUT VOLUME : 18
FILL VOLUME : 31



AREA CUT : 59.1
AREA FILL : 6.3

947+00.00

CUT VOLUME : 200
FILL VOLUME : 58

CROSS SECTION STA. 947+00 TO STA. 947+12

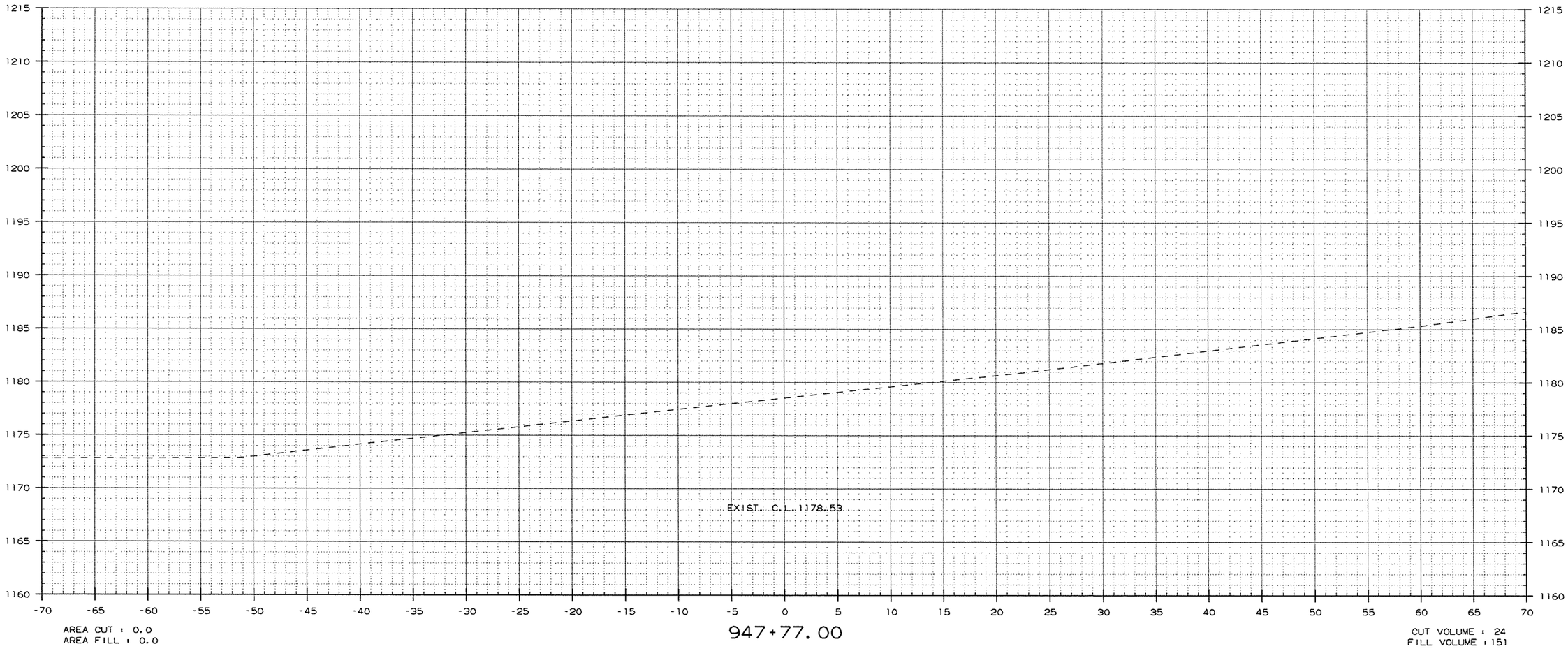
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII01	221	234

(2) CROSS SECTIONS



CROSS SECTION STA. 947+77 TO STA. 947+77

USER: at5106
DESIGN FILE: G:\13106000.412toWagon\TRANSP\dgn\xsect\rCAII01_CX.dgn
PLOTTED: 4/14/2015 13:41
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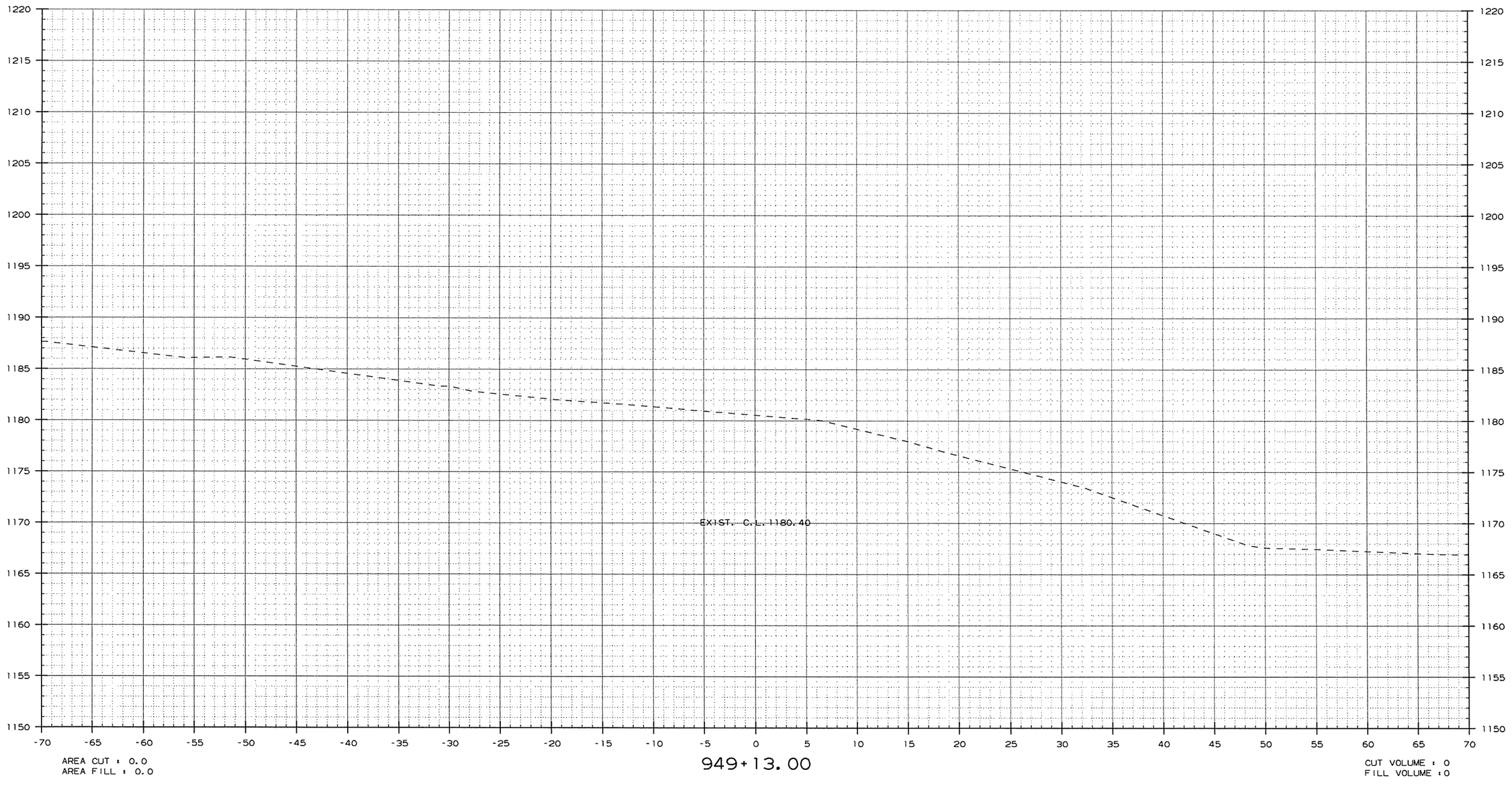
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	222	234

(2) CROSS SECTIONS



AREA CUT : 0.0
AREA FILL : 0.0

949+13.00

CUT VOLUME : 0
FILL VOLUME : 0

CROSS SECTION STA. 949+13 TO STA. 949+13

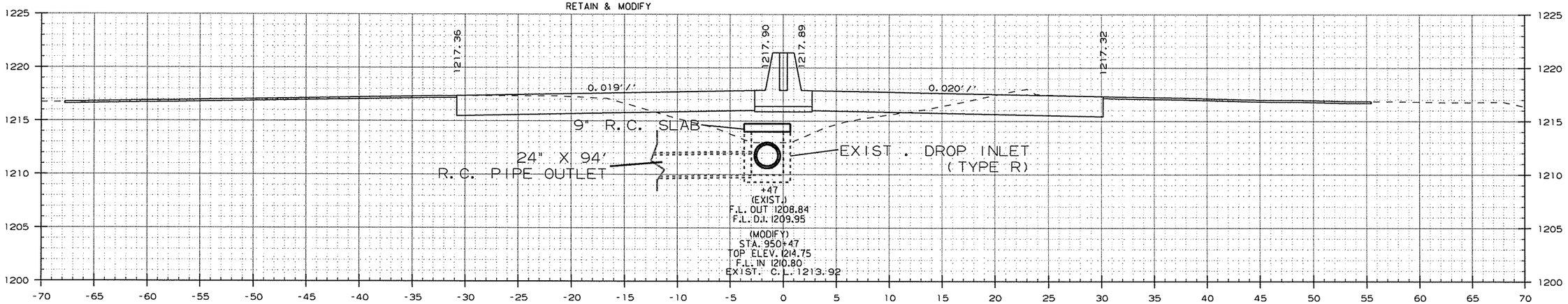
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	223	234

2 CROSS SECTIONS

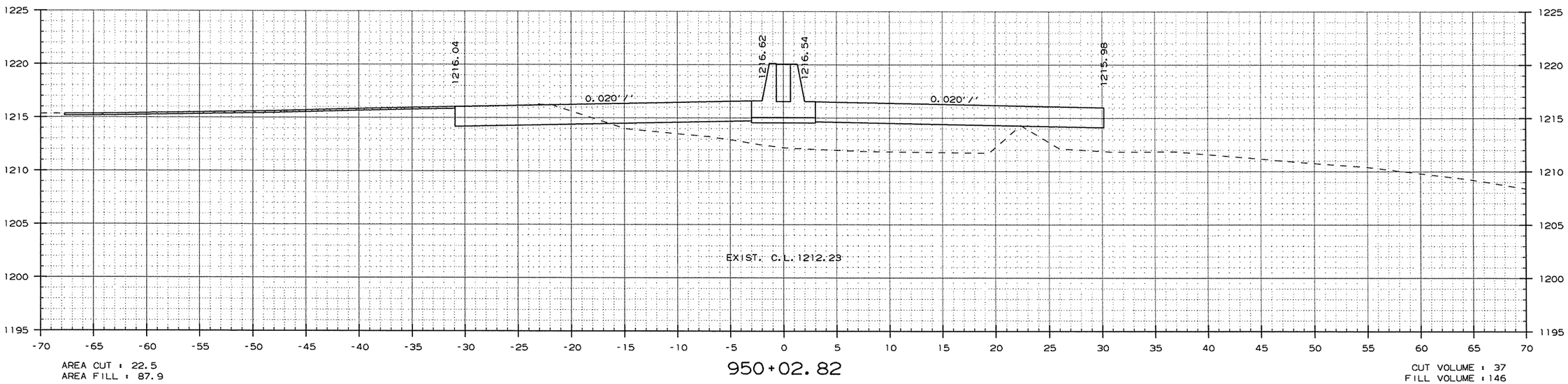
STA. 950+47 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 24" X 94' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



AREA CUT : 55.0
AREA FILL : 35.1

950+47.00

CUT VOLUME : 63
FILL VOLUME : 101



AREA CUT : 22.5
AREA FILL : 87.9

950+02.82

CUT VOLUME : 37
FILL VOLUME : 146

CROSS SECTION STA. 950+03 TO STA. 950+47

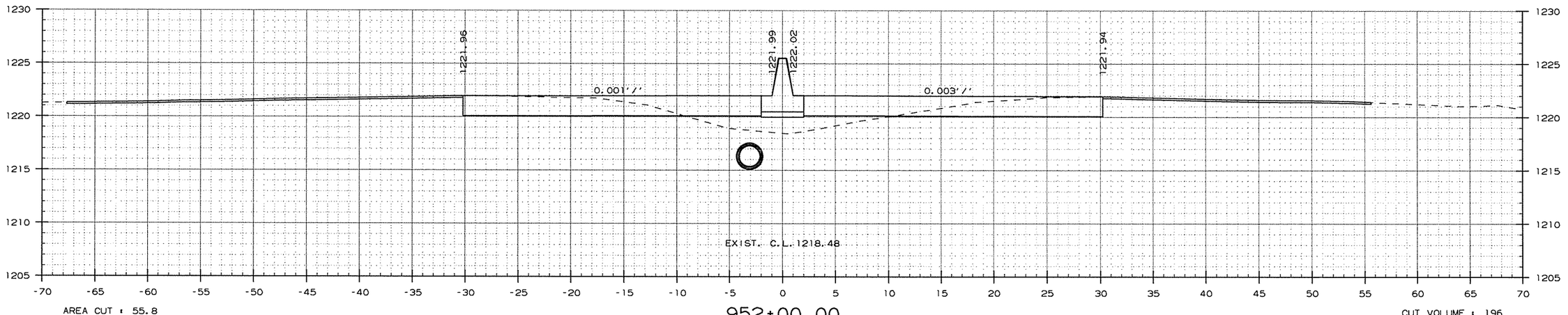
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G:\13106000.412\toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn 4/14/2015 13:41

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	224	234

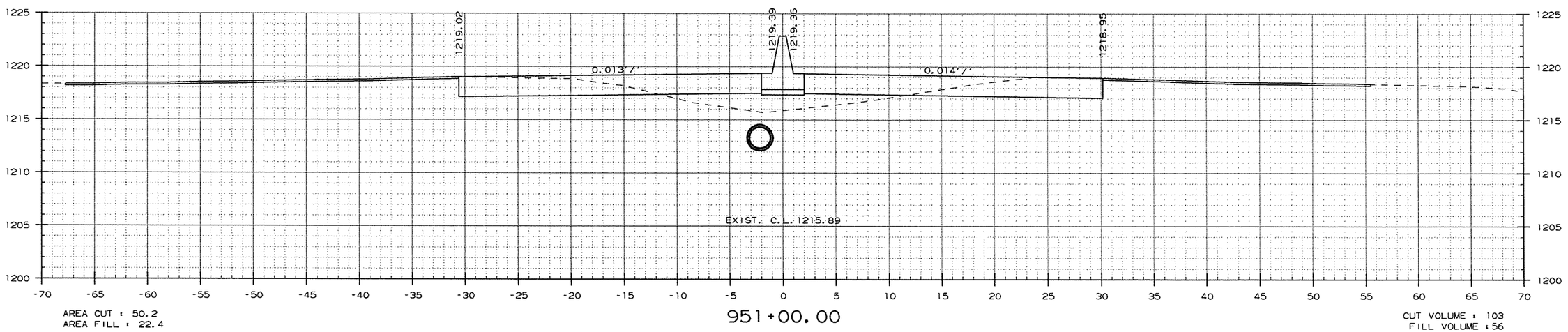
2 CROSS SECTIONS



AREA CUT : 55.8
AREA FILL : 18.3

952+00.00

CUT VOLUME : 196
FILL VOLUME : 75



AREA CUT : 50.2
AREA FILL : 22.4

951+00.00

CUT VOLUME : 103
FILL VOLUME : 56

CROSS SECTION STA. 951+00 TO STA. 952+00

USER: at5106
DESIGN FILE: G:\13106000_412toWagon\TRANSP\dgn\xsect\r-CAIIOI_CX.dgn
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SCALE: 10:1
MODEL: X-Sections

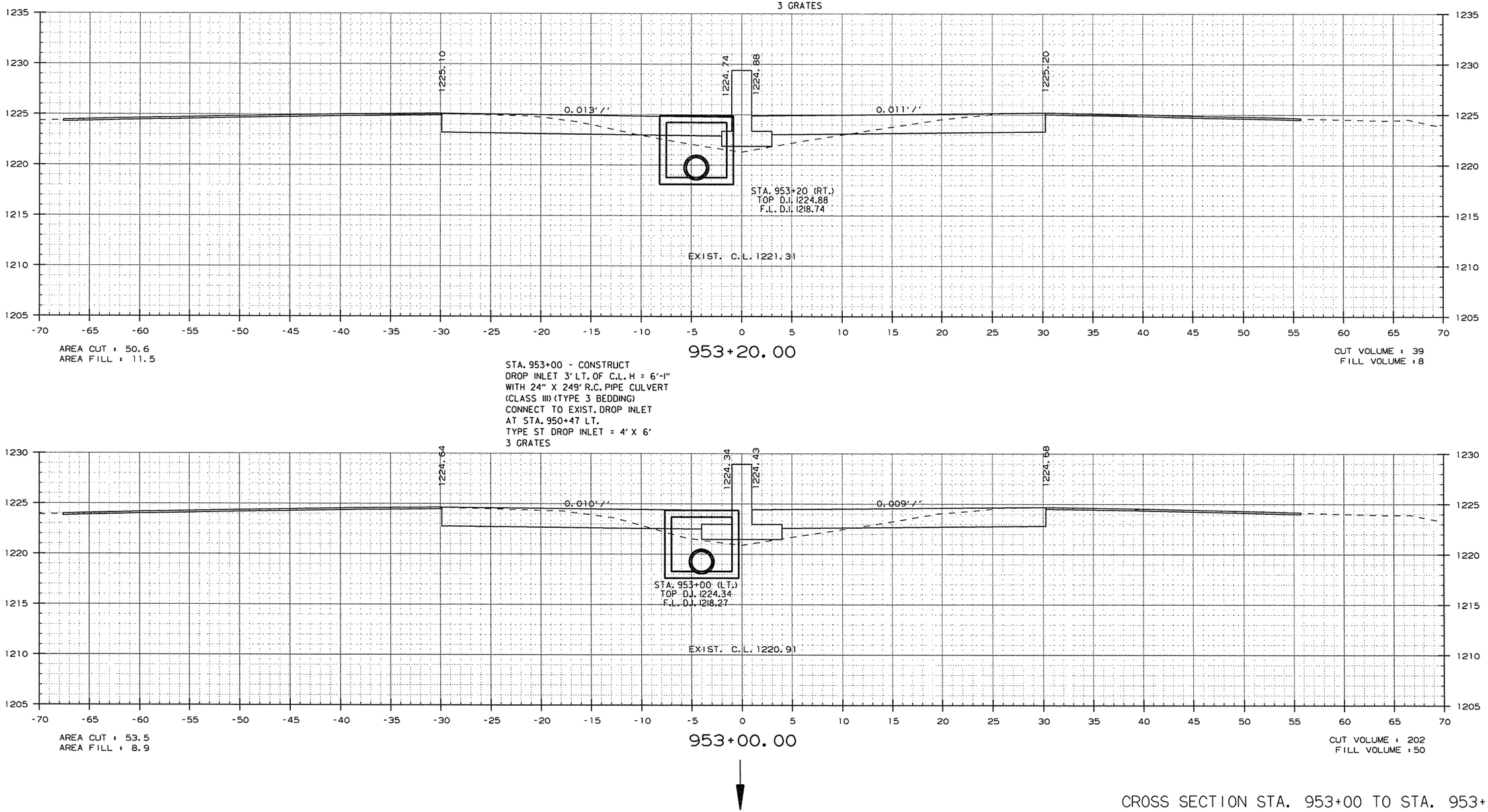
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Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	225	234

(2) CROSS SECTIONS

STA. 953+20 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-2"
WITH 24" X 19' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 953+00 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 50.6
AREA FILL : 11.5

953+20.00

CUT VOLUME : 39
FILL VOLUME : 8

STA. 953+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-1"
WITH 24" X 249' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 950+47 LT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

AREA CUT : 53.5
AREA FILL : 8.9

953+00.00

CUT VOLUME : 202
FILL VOLUME : 50

CROSS SECTION STA. 953+00 TO STA. 953+20

USER: at5106
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

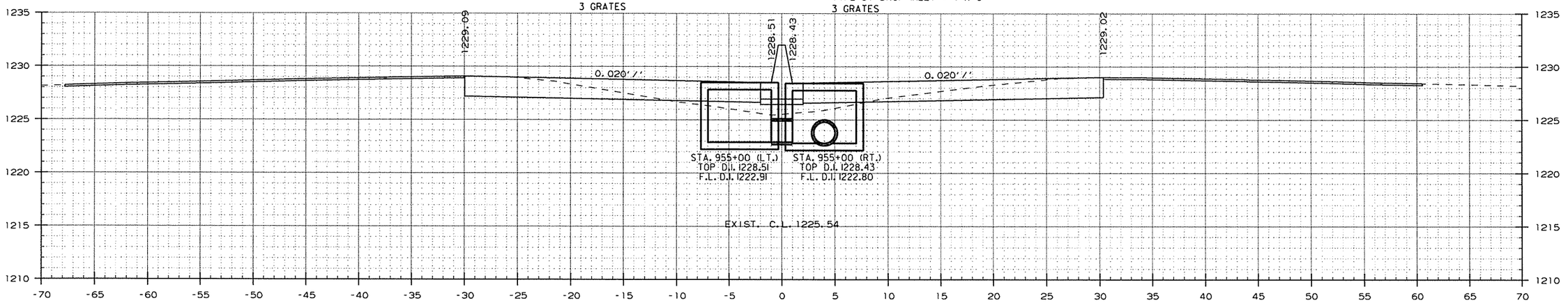
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	226	234

(2) CROSS SECTIONS

STA. 955+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-7"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 955+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

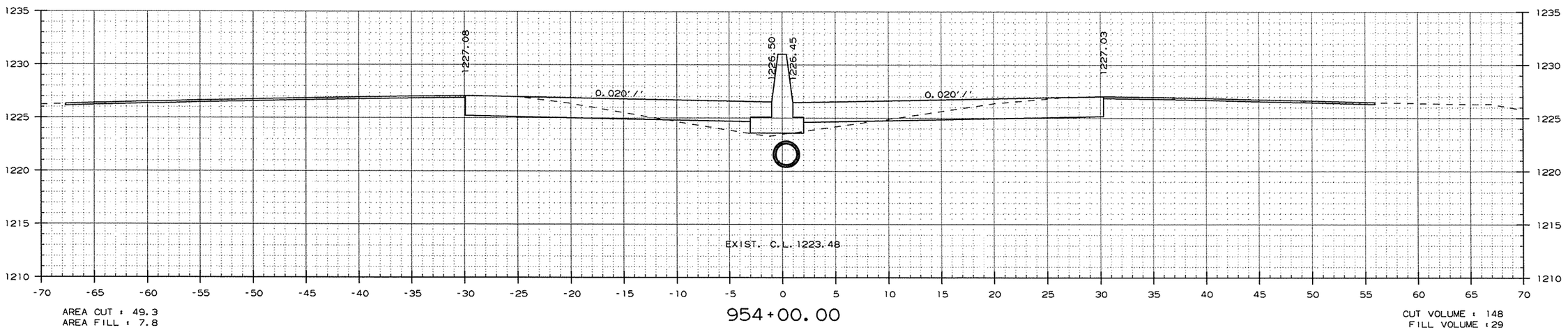
STA. 955+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-8"
WITH 24" X 176' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 953+20 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 50.7
AREA FILL : 10.8

955+00.00

CUT VOLUME : 185
FILL VOLUME : 34



AREA CUT : 49.3
AREA FILL : 7.8

954+00.00

CUT VOLUME : 148
FILL VOLUME : 29

CROSS SECTION STA. 954+00 TO STA. 955+00

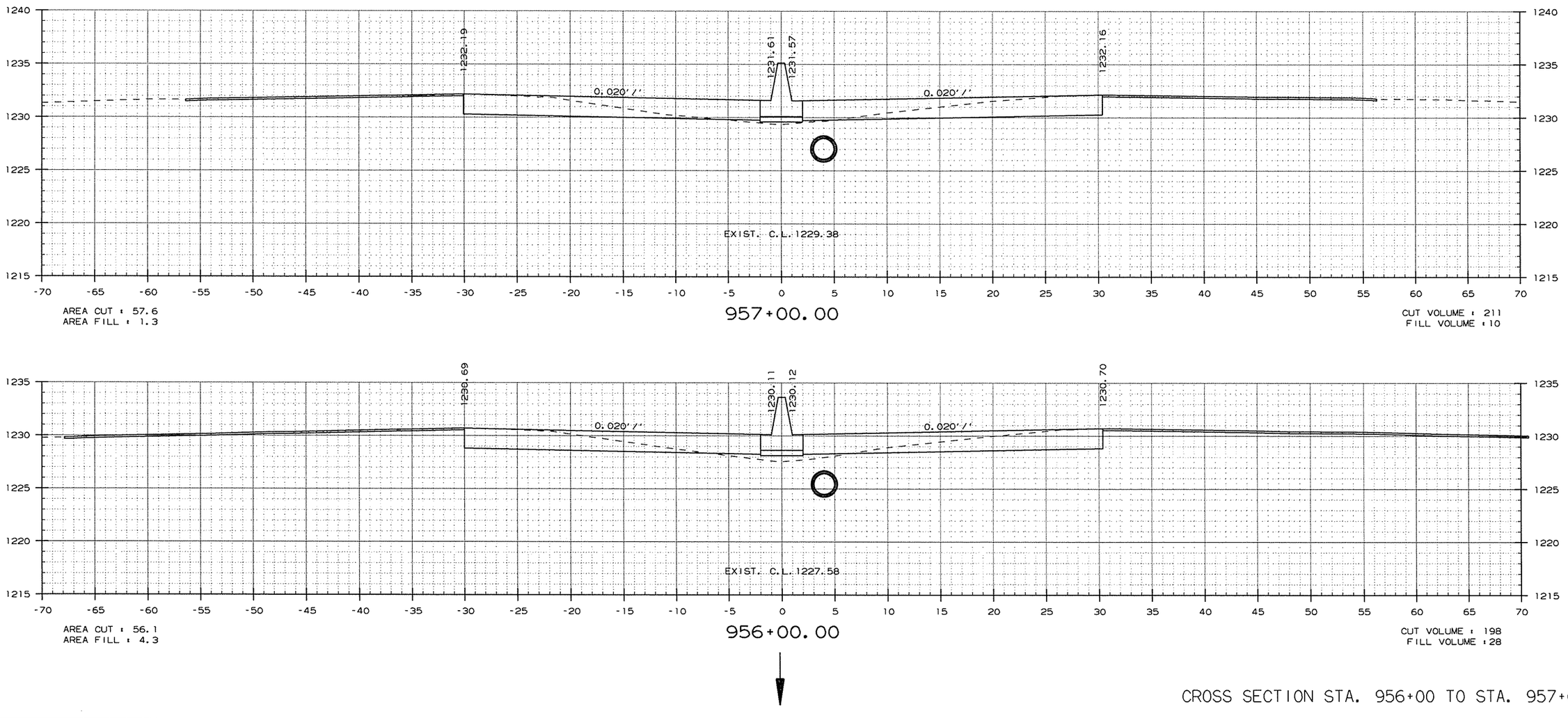
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAII0I	227	234

(2) CROSS SECTIONS



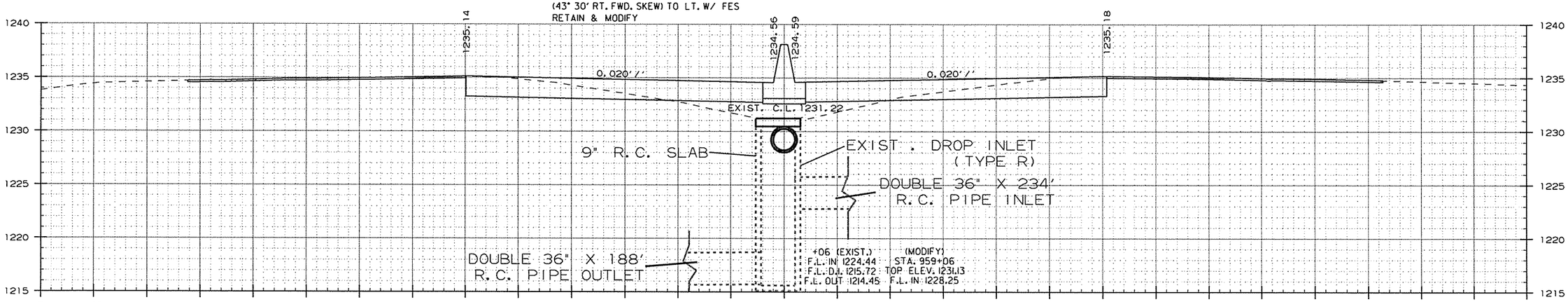
CROSS SECTION STA. 956+00 TO STA. 957+00

USER: at5106
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PLOTTED: 4/14/2015 13:42 SCALE: 10:1

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	228	234
				(2)	CROSS SECTIONS			

STA. 959+06 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(5'-6" X 3'-0")
WITH DOUBLE 36" X 234' R.C..
PIPE INLET (43° 30' RT. FWD. SKEW)
TO RT. W/ FES & DOUBLE 36" X 188'
R.C. PIPE OUTLET
(43° 30' RT. FWD. SKEW) TO LT. W/ FES
RETAIN & MODIFY



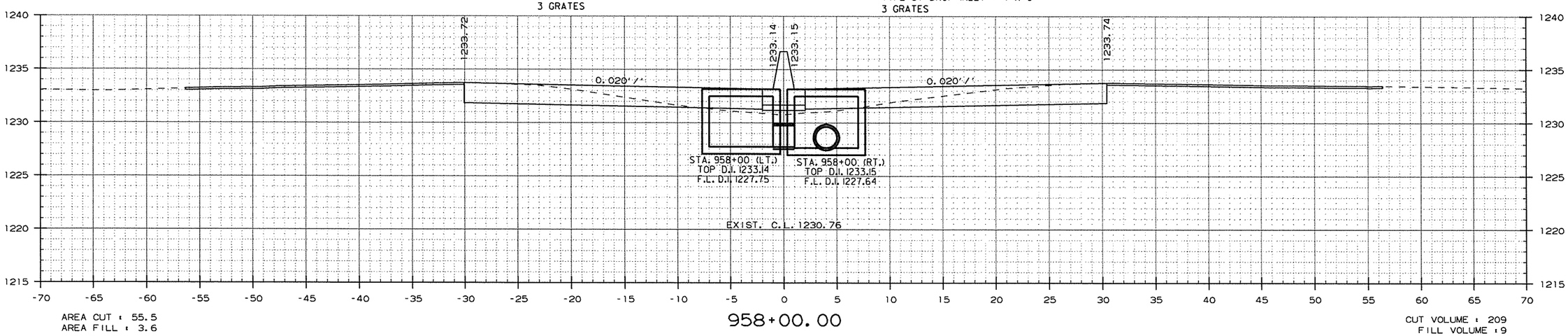
AREA CUT = 47.1
AREA FILL = 18.2

959+00.00

CUT VOLUME = 190
FILL VOLUME = 40

STA. 958+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-5"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 958+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

STA. 958+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 5'-6"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 955+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT = 55.5
AREA FILL = 3.6

958+00.00

CUT VOLUME = 209
FILL VOLUME = 9

CROSS SECTION STA. 958+00 TO STA. 959+00

USER: of5106
DESIGN FILE: G:\1310600D_412toWagon\TRANSP\dgn\xsect\r-CA1101_CX.dgn
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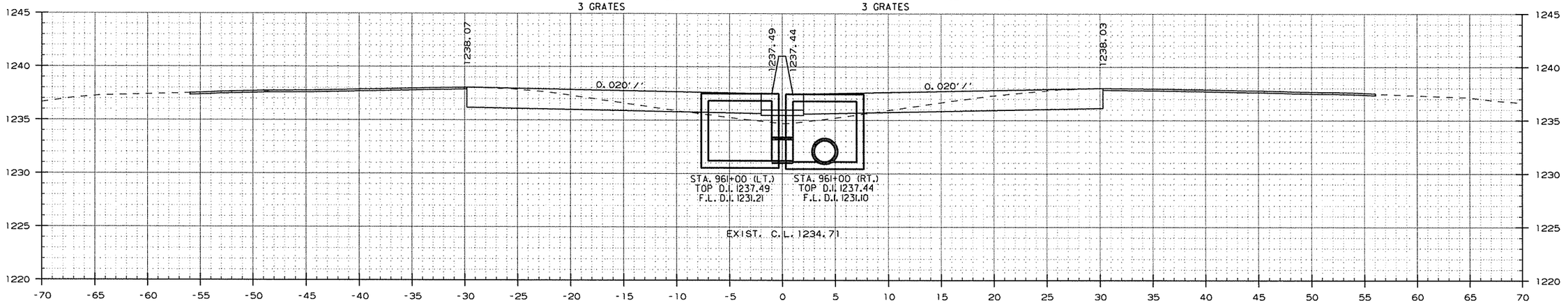
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	229	234

(2) CROSS SECTIONS

STA. 961+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-3"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 961+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

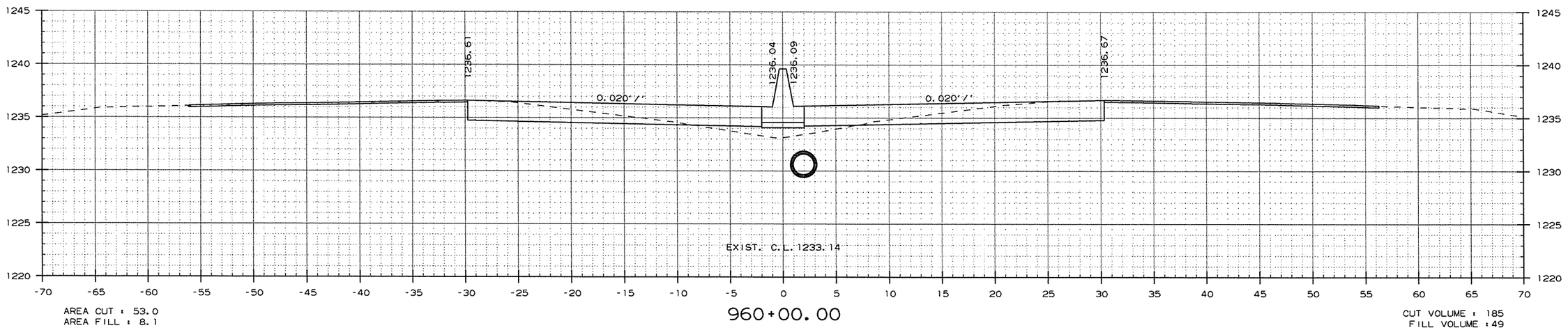
STA. 961+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-4"
WITH 24" X 190' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 959+06
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 50.0
AREA FILL : 7.6

961+00.00

CUT VOLUME : 191
FILL VOLUME : 29



AREA CUT : 53.0
AREA FILL : 8.1

960+00.00

CUT VOLUME : 185
FILL VOLUME : 49

CROSS SECTION STA. 960+00 TO STA. 961+00

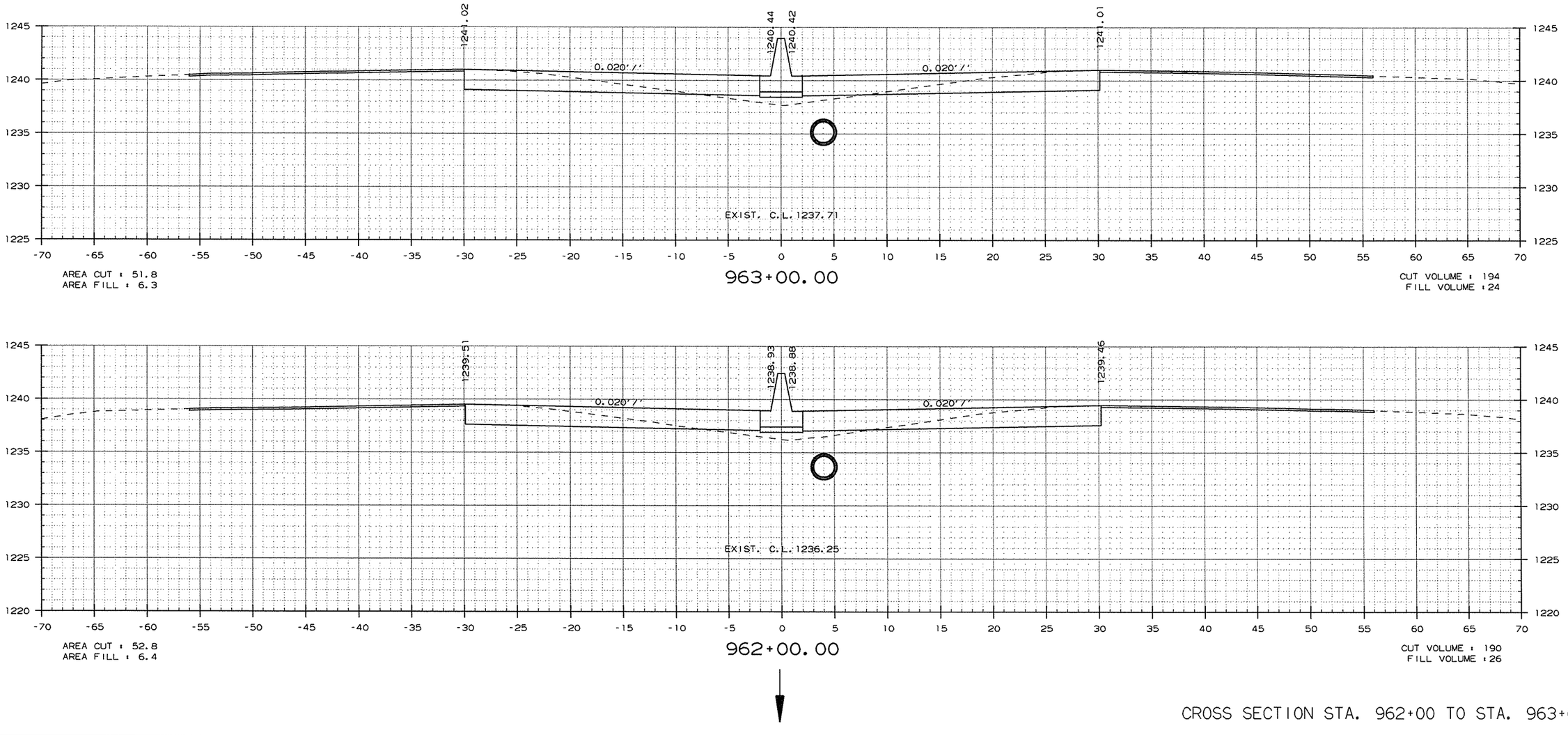
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SCALE: 10:1
MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	230	234

(2) CROSS SECTIONS



CROSS SECTION STA. 962+00 TO STA. 963+00

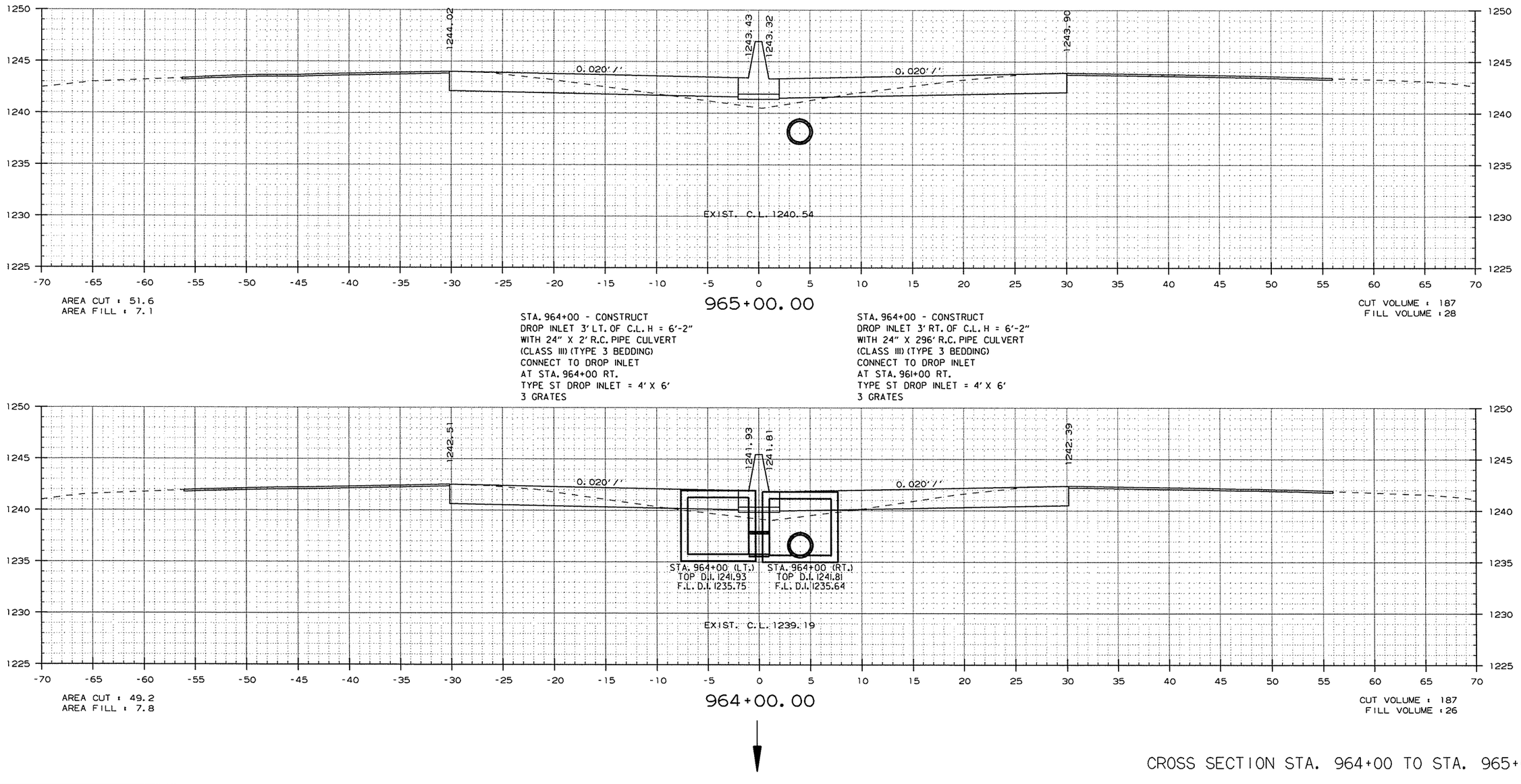
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G:\1306000_412toWagon\TRANSP\dgn\xsect\r-CA1101_CX.dgn 4/14/2015 13:42

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CAIIOI	231	234

(2) CROSS SECTIONS



CROSS SECTION STA. 964+00 TO STA. 965+00

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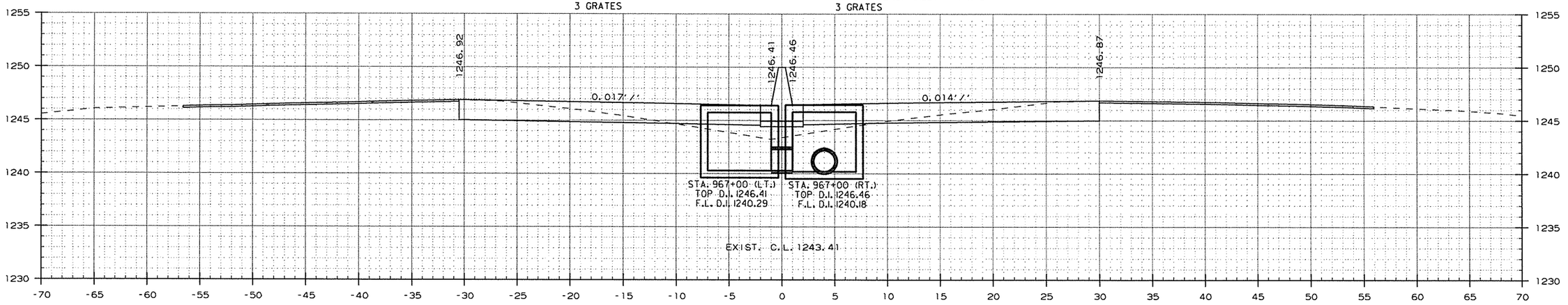
Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.		CA1101	232	234

(2) CROSS SECTIONS

STA. 967+00 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 6'-0"
WITH 24" X 2' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 967+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES

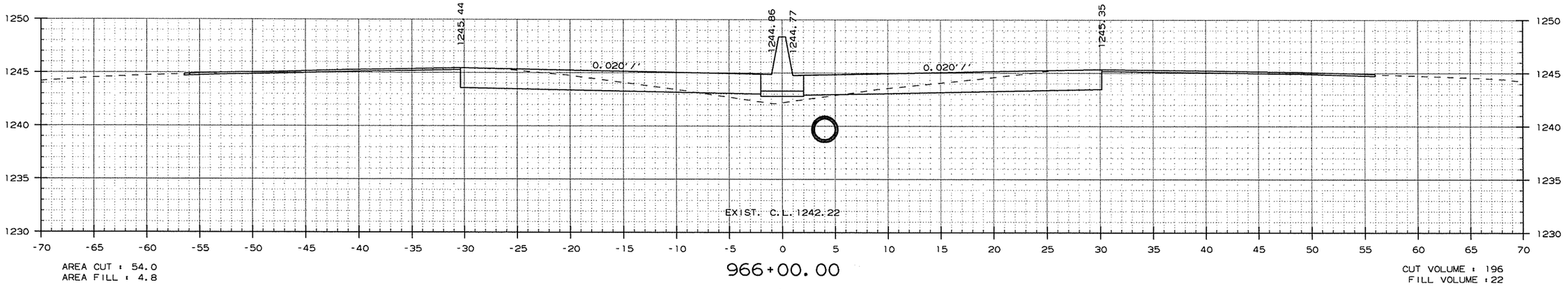
STA. 967+00 - CONSTRUCT
DROP INLET 3' RT. OF C.L. H = 6'-4"
WITH 24" X 296' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO DROP INLET
AT STA. 964+00 RT.
TYPE ST DROP INLET = 4' X 6'
3 GRATES



AREA CUT : 47.1
AREA FILL : 11.5

967+00.00

CUT VOLUME : 187
FILL VOLUME : 30



AREA CUT : 54.0
AREA FILL : 4.8

966+00.00

CUT VOLUME : 196
FILL VOLUME : 22

CROSS SECTION STA. 966+00 TO STA. 967+00

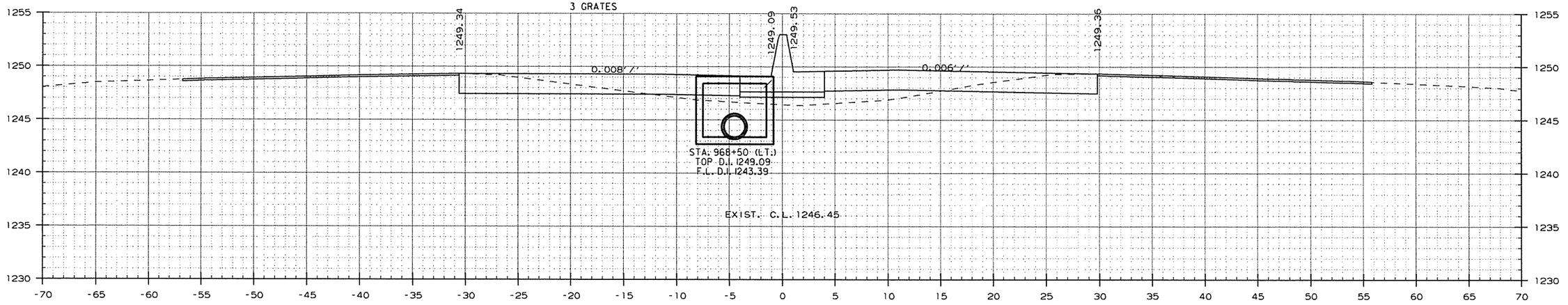
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CAIIOI	233	234
(2)	CROSS SECTIONS			

STA. 968+50 - CONSTRUCT
DROP INLET 3' LT. OF C.L. H = 5'-8"
WITH 24" X 49' R.C. PIPE CULVERT
(CLASS III) (TYPE 3 BEDDING)
CONNECT TO EXIST. DROP INLET
AT STA. 967+97
TYPE ST DROP INLET = 4' X 6'
3 GRATES

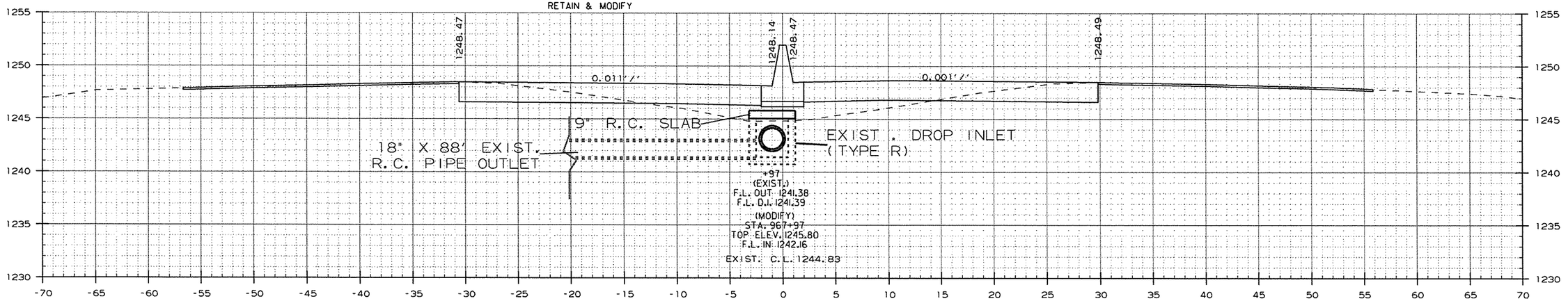


AREA CUT = 36.7
AREA FILL = 17.3

968+50.00

CUT VOLUME = 69
FILL VOLUME = 39

STA. 967+97 - IN PLACE
TYPE R DROP INLET IN MEDIAN
(4'-0" X 3'-0")
WITH 18" X 88' R.C. PIPE OUTLET TO LT.
RETAIN & MODIFY



AREA CUT = 37.8
AREA FILL = 25.3

968+00.00

CUT VOLUME = 157
FILL VOLUME = 68

CROSS SECTION STA. 968+00 TO STA. 968+50

USER: at5106
DESIGN FILE: G:\13106000.402\eWagon\TRANSP\dgn\Xsect\rCAIIOI_CX.dgn
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MODEL: X-Sections

Crafton, Tull & Associates Inc.

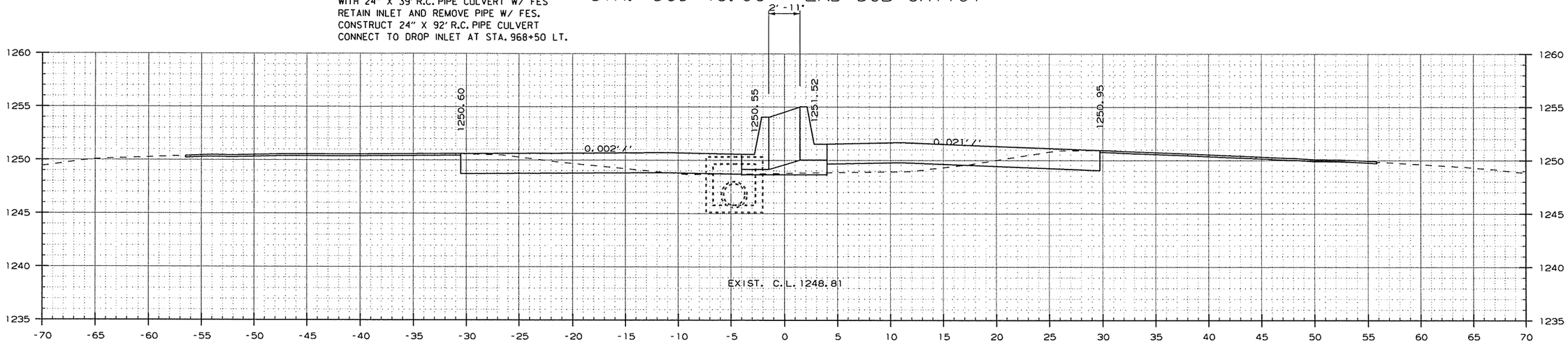
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		CA1101	234	234

(2) CROSS SECTIONS

STA. 969+46.06 - IN PLACE
TYPE ST DROP INLET 4.70' LT. OF C.L.
WITH 24" X 39' R.C. PIPE CULVERT W/ FES
RETAIN INLET AND REMOVE PIPE W/ FES.
CONSTRUCT 24" X 92' R.C. PIPE CULVERT
CONNECT TO DROP INLET AT STA. 968+50 LT.

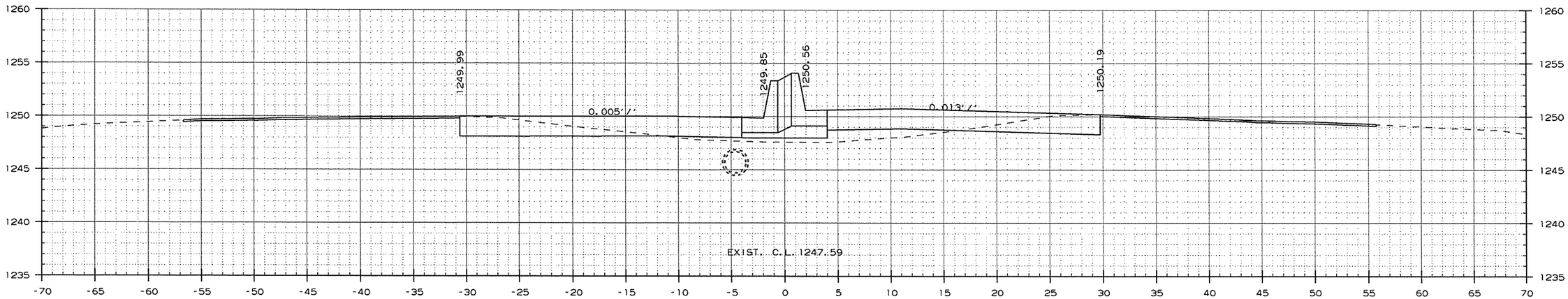
STA. 969+46.06 - END JOB CA1101



AREA CUT : 35.8
AREA FILL : 8.8

969+46.06

CUT VOLUME : 61
FILL VOLUME : 19



AREA CUT : 35.4
AREA FILL : 13.6

969+00.00

CUT VOLUME : 67
FILL VOLUME : 29

CROSS SECTION STA. 969+00 TO STA. 969+46

USER: ot5106
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