DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	1	37
				(2)	DISTRICTS 5 & 10 BRIDGE PRESERVATION (2021) (S)			

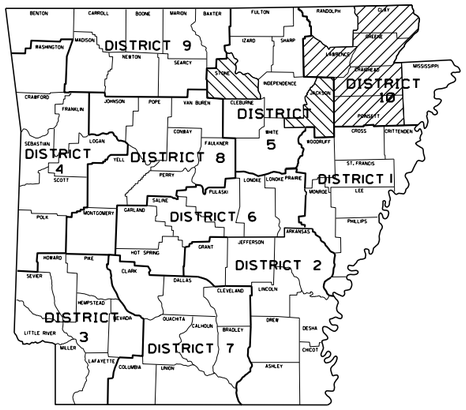
ARKANSAS DEPARTMENT OF TRANSPORTATION
CONSTRUCTION PLANS

DISTRICTS 5 & 10 BRIDGE PRESERVATION (2021) (S)

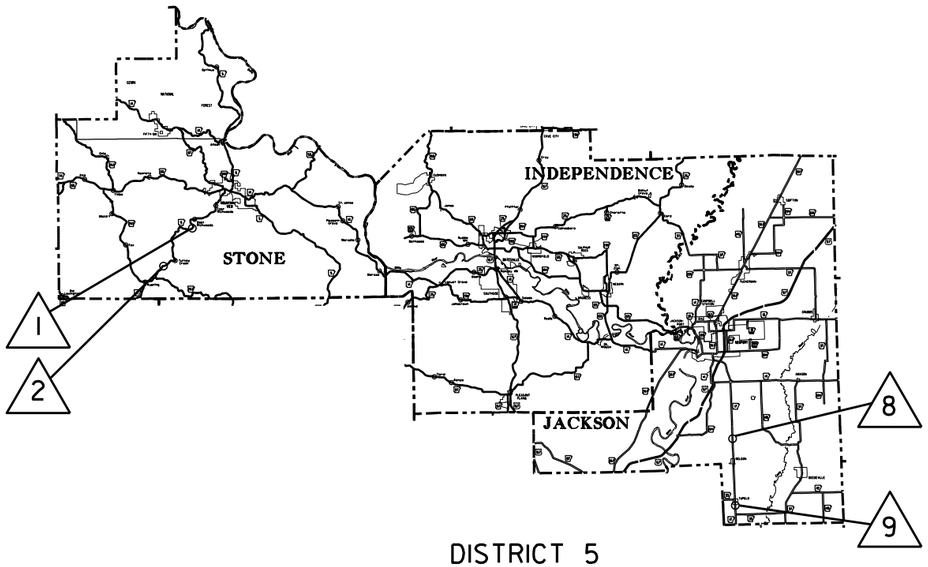
VARIOUS COUNTIES

JOB 012378

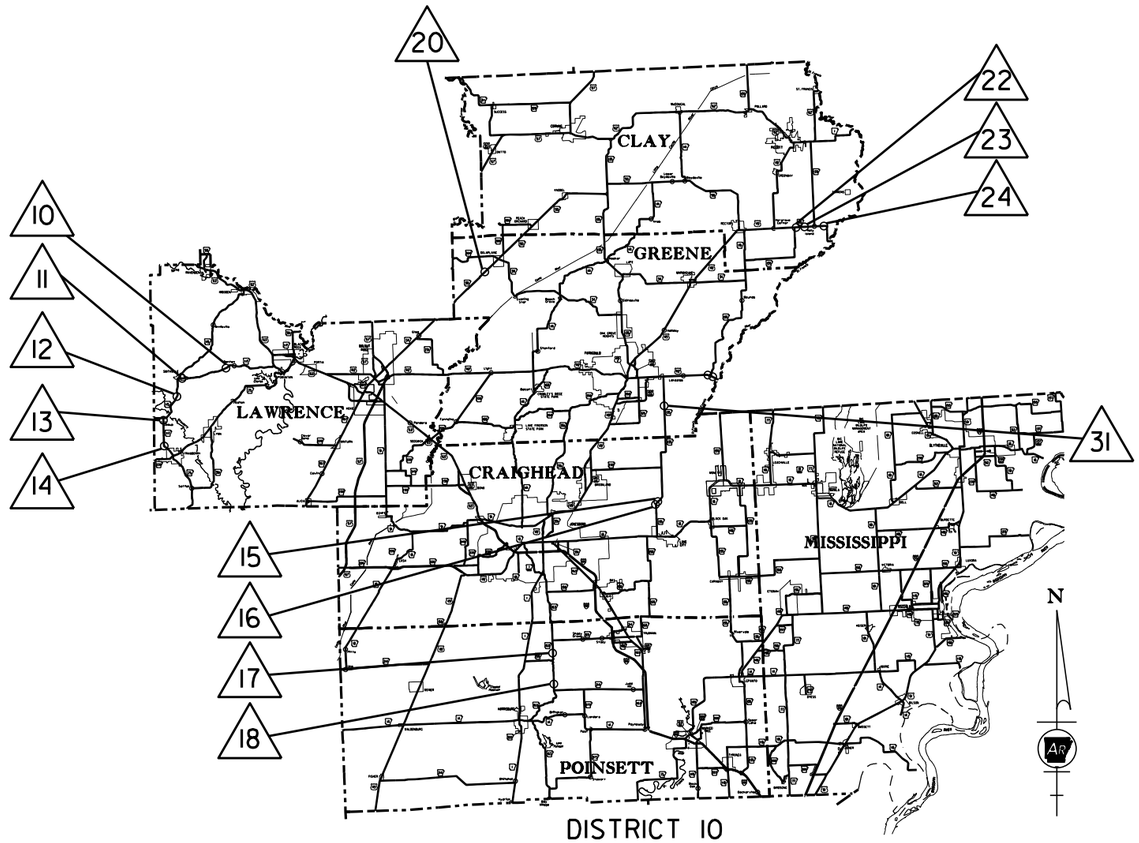
FED. AID PROJ. NHPP-0076(229)



ARKANSAS HIGHWAY DISTRICTS 5 & 10



DISTRICT 5
NOT TO SCALE



DISTRICT 10
NOT TO SCALE

NOTES:
1. BRIDGE DATA IS ON PLAN SHEET 2.
2. REFER TO SPECIAL DETAILS FOR INSET ENLARGEMENTS AT BRIDGE LOCATIONS.

CERTIFICATE OF AUTHORIZATION
MICHAEL BAKER INTERNATIONAL INC
No. 1126
ARKANSAS - ENGINEER

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9678
LINDA S. GUNN
3-31-2021

LENGTH CALCULATED ALONG C.L. BRIDGES			
PROJECT TOTAL			
NET LENGTH OF ROADWAY	0000.00 FEET	0.000	MILES
NET LENGTH OF BRIDGES	2105.82 FEET	0.399	MILES
NET LENGTH OF PROJECT	2105.82 FEET	0.399	6MILES

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WORKSPACE: ARDOT
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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	2	37
				(2)	BRIDGE DATA			

LEGEND

△ HYDRODEMOLITION

BRIDGE DATA

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

△1 HWY. 9, SEC. 11
LOG MILE 12.698 BR. END
OVER NORTH FORK TOMAHAWK CK
75' - 0" BRIDGE NO. 03858
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△2 HWY. 9, SEC. 11
LOG MILE 4.875 BR. END
OVER TURKEY CREEK
168' - 0" BRIDGE NO. 05186
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△8 HWY. 17, SEC. 6
LOG MILE 8.574 BR. END
OVER OVERCUP DITCH
77' - 0" BRIDGE NO. 02734
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△9 HWY. 17, SEC. 6
LOG MILE 1.913 BR. END
OVER OVERCUP DITCH
104' - 7 1/4" BRIDGE NO. 02528
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△10 HWY. 117, SEC. 2
LOG MILE 4.834 BR. END
OVER FLAT CREEK
75' - 0" BRIDGE NO. 05006
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△11 HWY. 117, SEC. 2
LOG MILE 0.115 BR. END
OVER MACHINE CREEK
90' - 0" BRIDGE NO. 05005
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△12 HWY. 115, SEC. 2
LOG MILE 14.035 BR. END
OVER COOPER CREEK
182' - 4 7/8" BRIDGE NO. 05217
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△13 HWY. 117, SEC. 1
LOG MILE 3.932 BR. END
OVER BIG CREEK
272' - 2" BRIDGE NO. 03468
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△14 HWY. 117, SEC. 1
LOG MILE 1.370 BR. END
OVER REEDS CREEK
150' - 0" BRIDGE NO. 03467
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△15 HWY. 135, SEC. 3
LOG MILE 3.359 BR. END
OVER BIG BAY DTICH
152' - 3 3/8" BRIDGE NO. 05643
30' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△16 HWY. 135, SEC. 3
LOG MILE 3.324 BR. END
OVER THOMPSON CREEK
140' - 3 3/8" BRIDGE NO. 05642
30' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△17 HWY. 163, SEC. 4
LOG MILE 8.734 BR. END
OVER BARKER CREEK
56' - 0" BRIDGE NO. 03009
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△18 HWY. 163, SEC. 4
LOG MILE 5.504 BR. END
OVER BIG CREEK
84' - 0" BRIDGE NO. 03008
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△20 HWY. 90, SEC. 4
LOG MILE 5.340 BR. END
OVER POST OAK DITCH
72' - 0" BRIDGE NO. 00830
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△22 HWY. 90, SEC. 1
LOG MILE 5.106 BR. END
OVER DTICH NO. 11
75' - 0" BRIDGE NO. 03662
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△23 HWY. 90, SEC. 1
LOG MILE 4.130 BR. END
OVER DITCH NO. 10
75' - 0" BRIDGE NO. 03663
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△24 HWY. 90, SEC. 1
LOG MILE 2.184 BR. END
OVER MAYO DITCH
125' - 0" BRIDGE NO. 03664
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

△31 HWY. 135, SEC. 4
LOG MILE 3.092 BR. END
OVER 8 MILE CREEK
132' - 1" BRIDGE NO. 03118
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	3	37
				(2)	INDEX OF SHEETS AND STANDARD DRAWINGS			

INDEX OF SHEETS

SHEET NO.	TITLE	BRIDGE NO.	DRWG.NO.
1	TITLE SHEET		
2	BRIDGE DATA		
3	INDEX OF SHEETS AND STANDARD DRAWINGS		
4	GOVERNING SPECIFICATIONS AND GENERAL NOTES		
5 - 7	TYPICAL SECTIONS OF IMPROVEMENT		
8 - 13	SPECIAL DETAILS		
14	TEMPORARY EROSION CONTROL DETAILS		
15 - 19	MAINTENANCE OF TRAFFIC DETAILS		
20	PERMANENT PAVEMENT MARKING DETAILS		
21 - 30	QUANTITIES		
31	SCHEDULE OF BRIDGE QUANTITIES	ALL BRIDGES	63930
32	SUMMARY OF QUANTITIES AND REVISIONS		
33	BRIDGE PRESERVATION DATA TABLE - DISTRICT 5	DISTRICT 5	63931
34	BRIDGE PRESERVATION DATA TABLE - DISTRICT 10	DISTRICT 10	63932
35	SPALL REPAIR DETAILS	03858, 05186, 05006, 05005, & 03467	63933
36	PILE REPAIR DETAILS	03467	63934
37	RAIL REPAIR DETAILS	03118	63935

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

BRIDGE STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
55035	STANDARD DETAILS FOR TYPE "PT" APPROACH GUTTERS (BRIDGES WITH CONCRETE PARAPET RAILING)	11-07-19
55036	STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURBS & TYPE A, B, C, D OR E RAILING)	11-07-19
55038	STANDARD DETAILS FOR TYPE 'AT2' APPROACH GUTTERS (BRIDGES WITH CURBS & TYPE A, B, C, D, OR E RAILING)	11-07-19
55039	STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)	11-07-19
55060	STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY SLAB ON BEAM/GIRDER BRIDGES	06-25-20
55062	STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY REINFORCED CONCRETE SLAB STRUCTURES	06-25-20
55063	STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY VOIDED CONCRETE SLAB STRUCTURES	06-25-20
55064	STANDARD DETAILS FOR JOINT REPAIRS & MODIFICATION	11-07-19

ROADWAY STANDARD DRAWINGS

DRWG.NO.	TITLE	DATE
GR-6	GUARDRAIL DETAILS	11-07-19
GR-7	GUARDRAIL DETAILS	11-07-19
GR-8	GUARDRAIL DETAILS	11-07-19
GR-9	GUARDRAIL DETAILS	11-07-19
GR-10	GUARDRAIL DETAILS	11-07-19
GR-11	GUARDRAIL DETAILS	11-07-19
GR-12	GUARDRAIL DETAILS	05-14-20
PM-1	PAVEMENT MARKING DETAILS	02-27-20
TC-1	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-2	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	11-07-19
TC-3	STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION	02-27-20
TEC-1	TEMPORARY EROSION CONTROL DEVICES	11-16-17
TEC-3	TEMPORARY EROSION CONTROL DEVICES	11-03-94

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
5-04-21				JOB NO.		012378	4	37
5-06-21				(2) GOVERNINGS SPECIFICATIONS & GENERAL NOTES				

GENERAL NOTES

1. BRIDGE ANALYSIS SHALL BE REQUIRED PER SECTION 105.14 OF THE STANDARD SPECIFICATIONS. A BRIDGE ANALYSIS SHALL BE REQUIRED PRIOR TO HYDRODEMOLITION AND ANOTHER ANALYSIS SHALL BE REQUIRED DURING THE HYDRODEMOLITION PROCESS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

3. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.

4. THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL AND CONTAIN LIVESTOCK IF FENCING OF PASTURES IS SEVERED.

5. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED IF AND WHERE DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO ENSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.

6. PREPARATORY WORK, SUCH AS CLIPPING THE GRASS AND DEBRIS FROM THE EDGE OF THE EXISTING ROADWAY, WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED A PART OF THE OTHER ITEMS OF WORK. AFTER THE ROADWAY IS COMPLETED, THIS MATERIAL SHALL BE PULLED UP TO THE EDGE OF THE NEW PAVEMENT AT LOCATIONS WHERE THE DROP OFF IS GREATER THAN 4" RESULTING FROM THE TRANSITIONS OR GUARDRAIL ROADWAY IMPROVEMENTS. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK.

7. ASPHALT DEBRIS RESULTING FROM THE PREPARAORY WORK SHALL BE REMOVED FROM THE PROJECT. THIS MATERIAL SHALL NOT BE BURIED OR STOCKPILED WITHIN THE RIGHT OF WAY.

8. ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.

9. THE ENGINEER MAY REQUIRE THE CONTRACTOR TO MODIFY THEIR SCHEDULE, DURING WORK, WHEN SPECIAL EVENTS OR OCCURRENCES MAY CAUSE TRAFFIC TO BECOME CONGESTED.

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

11. MATERIAL GENERATED FROM COLD MILLING OPERATIONS SHALL REMAIN THE PROPERTY OF THE ARDOT DISTRICT 5 AND DISTRICT 10. THE CONTRACTOR WILL HAUL AND STOCKPILE THE MILLINGS AT THE NEAREST ARDOT MAINTENANCE HEADQUARTERS OR AN AREA CLOSER IF AND WHERE DIRECTED BY HE ENGINEER. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "COLD MILLING ASPHALT PAVEMENT".

12. THE ROADWAY COLD MILLED SURFACE SHALL BE OVERLAID WITHIN 7 CALENDAR DAYS. IF AN AREA OF THE PROJECT HAS BEEN COLD MILLED AND IS NOT OVERLAID ON OR BEFORE THE 7TH DAY, NO ADDITIONAL COLD MILLING SHALL TAKE PLACE UNTIL THE MILLED AREA IS OVERLAID.

13. 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.

14. THE SEQUENCE AS SHOWN ON THE MAINTENANCE OF TRAFFIC PLANS IS A GENERAL OUTLINE FOR THE CONSTRUCTION OF THIS PROJECT, AND IN NO WAY IS IT INTENDED TO COVER EVERY ITEM IN THE PROJECT. ITEMS NOT CRITICAL TO THE CONSTRUCTION SEQUENCE MAY BE CONSTRUCTED IN ANY STAGE IF AND WHERE DIRECTED BY THE ENGINEER.

15. WHEN THE PLANS REQUIRE APPROACH GUTTER REPLACEMENT AND AN EXISTING END DRAIN IS ENCOUNTERED, THE CONTRACTOR SHALL MODIFY THE APPROACH GUTTER STANDARD DRAWING REQUIREMENTS IF AND WHERE DIRECTED BY THE ENGINEER TO RETAIN THE END DRAIN SECTION.

GOVERNING SPECIFICATIONS

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

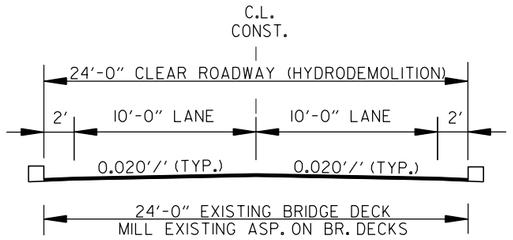
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ERRATA____ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS
FHWA-1273__REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS
FHWA-1273__SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FHWA-1273__SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)
FHWA-1273__SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FHWA-1273__SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FHWA-1273__SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL-AID PROJECTS
FHWA-1273__SUPPLEMENT - WAGE RATE DETERMINATION
100-3_____ CONTRACTOR'S LICENSE
100-4_____ DEPARTMENT NAME CHANGE
102-2_____ ISSUANCE OF PROPOSALS
108-1_____ LIQUIDATED DAMAGES
108-2_____ WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
210-1_____ UNCLASSIFIED EXCAVATION
303-1_____ AGGREGATE BASE COURSE
306-1_____ QUALITY CONTROL AND ACCEPTANCE
400-1_____ TACK COATS
400-4_____ DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
400-5_____ PERCENT AIR VOIDS FOR ACHM MIX DESIGNS
400-6_____ LIQUID ANTI-STRIP ADDITIVE
400-7_____ TRACKLESS TACK
404-3_____ DESIGN OF ASPHALT MIXTURES
410-1_____ CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
410-2_____ DEVICES FOR MEASURING DENSITY FOR ROLLING PATTERNS
600-2_____ INCIDENTAL CONSTRUCTION
603-1_____ LANE CLOSURE NOTIFICATION
604-1_____ RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES
604-3_____ TRAFFIC CONTROL DEVICES IN CONSTRUCTION ZONES (MASH)
617-1_____ GUARDRAIL TERMINAL (TYPE 2)
620-1_____ MULCH COVER
621-1_____ FILTER SOCKS
734-1_____ BRIDGE END TERMINAL
800-1_____ STRUCTURES
804-2_____ REINFORCING STEEL FOR STRUCTURES
JOB 012378__BIDDING REQUIREMENTS AND CONDITIONS
JOB 012378__BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS
JOB 012378__BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT
JOB 012378__CARGO PREFERENCE ACT REQUIREMENTS
JOB 012378__COLD MILLINGS IN RECYCLED ASPHALT PAVEMENT
JOB 012378__CONCRETE REPAIRS
JOB 012378__COORDINATION OF WORK
JOB 012378__DISADVANTAGED BUSINESS ENTERPRISE BIDDERS' RESPONSIBILITIES
JOB 012378__GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION
JOB 012378__HYDRODEMOLITION - CLASS 2
JOB 012378__JOINT REHABILITATION FOR BRIDGE DECKS
JOB 012378__LATEX MODIFIED CONCRETE OVERLAY
JOB 012378__MANDATORY ELECTRONIC CONTRACT
JOB 012378__MANDATORY ELECTRONIC DOCUMENT SUBMITTAL
JOB 012378__PARTNERING REQUIREMENTS
JOB 012378__PILE REPAIR
JOB 012378__PORTABLE TRAFFIC SIGNAL SYSTEM
JOB 012378__PRICE ADJUSTMENT FOR ASPHALT BINDER
JOB 012378__PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICE OR EQUIPMENT
JOB 012378__RAILING REPAIR
JOB 012378__SEQUENCE OF CONSTRUCTION
JOB 012378__SUBMISSION OF ASPHALT CONCRETE HOT MIX ACCEPTANCE TEST RESULTS
JOB 012378__TEMPORARY PORTABLE RUMBLE STRIPS
JOB 012378__TRENCHING AND SHOULDER PREPARATION FOR TEMPORARY WIDENING
JOB 012378__UTILITY ADJUSTMENTS
JOB 012378__VALUE ENGINEERING
JOB 012378__WARM MIX ASPHALT
JOB 012378__WATER POLLUTION CONTROL

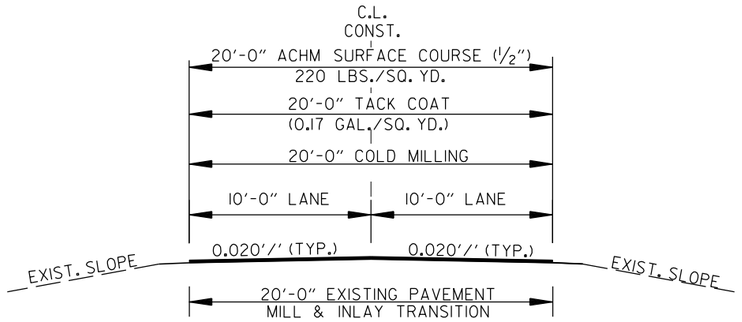
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
5-6-2021

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	5	37
				(2)	TYPICAL SECTIONS OF IMPROVEMENT			



2 LANE BRIDGES



2 LANE ROADWAY

EXIST. ASP. DEPTH ON BRS.

1 - BR. NO. 03858 - HWY. 9 - (PATCHES)

2 - BR. NO. 05186 - HWY. 9 - 1" (AVG. 4' ONTO DECK @ WEST BR. END)

8 - BR. NO. 02734 - HWY. 17 - 1"

9 - BR. NO. 02528 - HWY. 17 - 2"

10 - BR. NO. 05006 - HWY. 117 - 4"

11 - BR. NO. 05005 - HWY. 117 - 4"

EXIST. ASP. DEPTH ON BRS.

13 - BR. NO. 03468 - HWY. 117 - 1" (AVG. 1.5' ONTO DECK @ BR. ENDS)

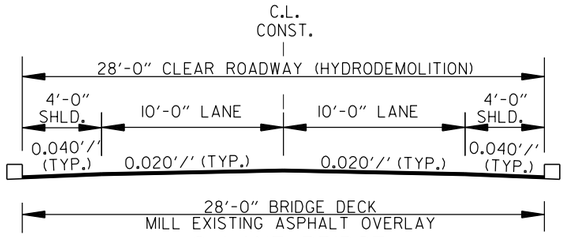
14 - BR. NO. 03467 - HWY. 117 - 1" (AVG. 6' & 3' ONTO DECK @ BR. ENDS)

18 - BR. NO. 03008 - HWY. 163 - 1"

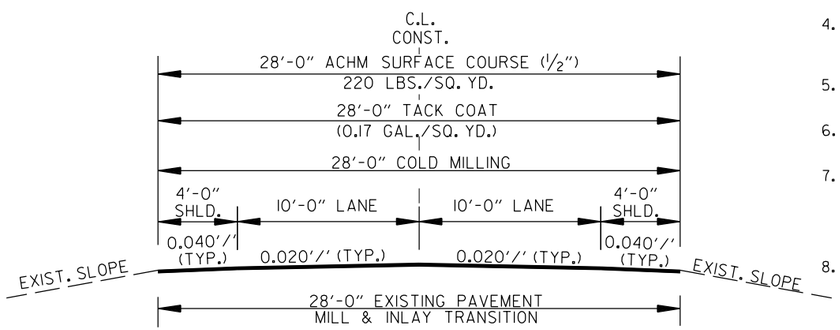
20 - BR. NO. 00830 - HWY. 90 - 4"

31 - BR. NO. 03118 - HWY. 135 - 1"

24 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION
(BRIDGES WITH MILLING ASPHALT ON BR. DECKS, ROADWAY TRANSITIONS, AND NEW GUARDRAIL)



2 LANE BRIDGE



2 LANE OPEN SHOULDER ROADWAY

EXIST. ASP. DEPTH ON BRS.

12 - BR. NO. 05217 - HWY. 115 - 1" (AVG. 10' ONTO DECK @ BR. ENDS)

17 - BR. NO. 03009 - HWY. 163 - 1"

22 - BR. NO. 03662 - HWY. 90 - 4"

23 - BR. NO. 03663 - HWY. 90 - 4"

24 - BR. NO. 03664 - HWY. 90 - 4"

28 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION
(BRIDGES WITH MILLING ASPHALT ON BR. DECKS, ROADWAY TRANSITIONS, AND NEW GUARDRAIL)

NOTES:

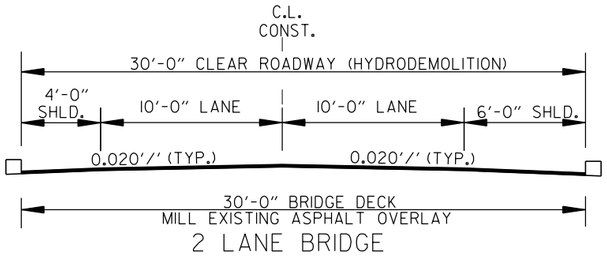
1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.
2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W8-11 "UNEVEN LANES" SIGNS (48" X 48") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.
3. MATERIAL GENERATED FROM COLD MILLING OPERATIONS SHALL REMAIN THE PROPERTY OF THE ARDOT DISTRICT 5 AND DISTRICT 10. THE CONTRACTOR WILL HAUL AND STOCKPILE THE MILLINGS AT THE NEAREST ARDOT MAINTENANCE HEADQUARTERS OR AN AREA CLOSER IF AND WHERE DIRECTED BY THE ENGINEER. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "COLD MILLING ASPHALT PAVEMENT".
4. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH SECTION 410.07 UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. REFER TO SPECIAL DETAILS FOR ROADWAY WIDENING FOR GUARDRAIL, ROADWAY TRANSITION INFORMATION, AND GUARDRAIL INSTALLATIONS.
7. FOR HORIZONTAL AND VERTICAL CONTROLS AT GUARDRAIL LOCATIONS, THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANES. THE MAIN LANE TRANSITIONS AND ACHM EXTENSIONS SHALL BE PAVED PRIOR TO CONSTRUCTION OF THE GUARDRAIL WIDENING.
8. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, TH PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN SUCH A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

STATE OF ARKANSAS
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No. 9678
LINDA S. GUNN
3-31-2021

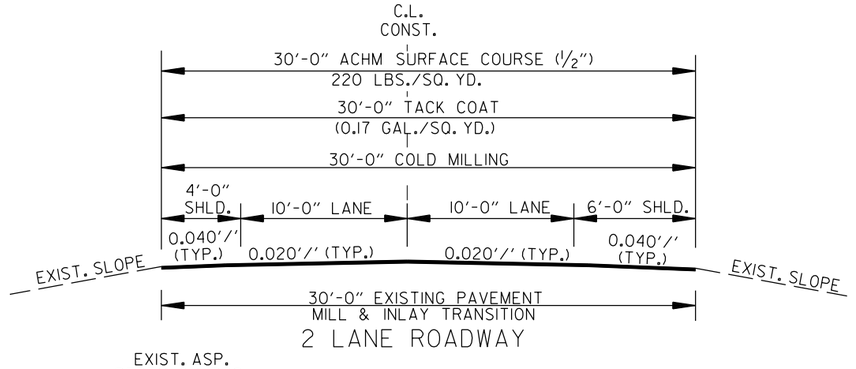
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3-31-21				6	ARK.			
				JOB NO.		012378	6	37
				(2)	TYPICAL SECTIONS OF IMPROVEMENT			

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2 LANE BRIDGE



2 LANE ROADWAY

EXIST. ASP. DEPTH ON BRS.

15 - BR. NO. 05643 - HWY. 135 - 1"

16 - BR. NO. 05642 - HWY. 135 - 1"

30 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION
(BRIDGES WITH MILLING ASPHALT ON BR. DECKS, ROADWAY TRANSITIONS, AND NEW GUARDRAIL)

NOTES:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.
2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W8-11 "UNEVEN LANES" SIGNS (48" X 48") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.
3. MATERIAL GENERATED FROM COLD MILLING OPERATIONS SHALL REMAIN THE PROPERTY OF THE ARDOT DISTRICT 5 AND DISTRICT 10. THE CONTRACTOR WILL HAUL AND STOCKPILE THE MILLINGS AT THE NEAREST ARDOT MAINTENANCE HEADQUARTERS OR AN AREA CLOSER IF AND WHERE DIRECTED BY THE ENGINEER. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "COLD MILLING ASPHALT PAVEMENT".
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8. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY SAWING ALONG A NEAT LINE. AFTER SAWING, TH PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN SUCH A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE TO THE ASPHALT PAVEMENT THAT IS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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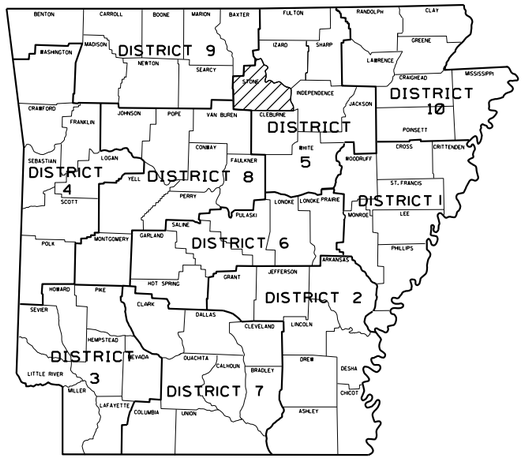
STATE OF ARKANSAS
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3-31-2021

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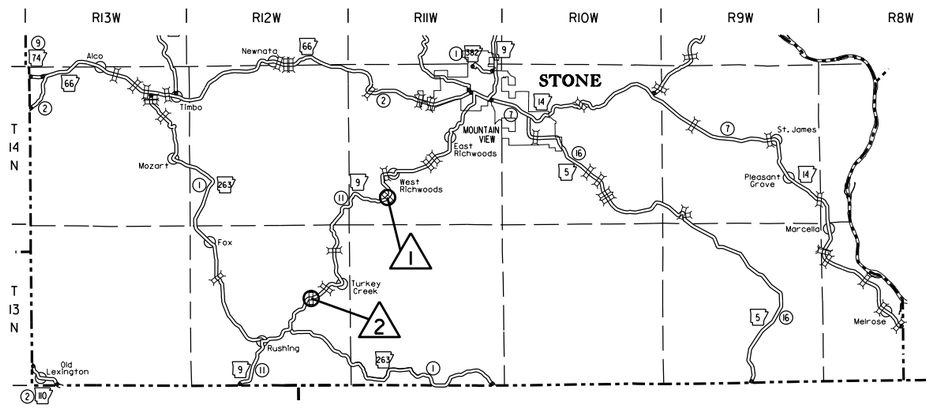
ARKANSAS HIGHWAY DISTRICT 5

LEGEND

△ - HYDRODEMOLITION

(1) HWY. 9, SEC. 11
LOG MILE 12.698 BR. END
OVER NORTH FORK TOMAHAWK CK
75' - 0" BRIDGE NO. 03858
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

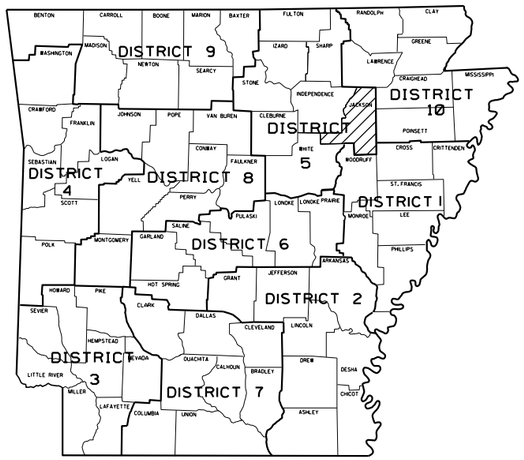
(2) HWY. 9, SEC. 11
LOG MILE 4.875 BR. END
OVER TURKEY CREEK
168' - 0" BRIDGE NO. 05186
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)



DISTRICT 5
INSET - 1
NOT TO SCALE

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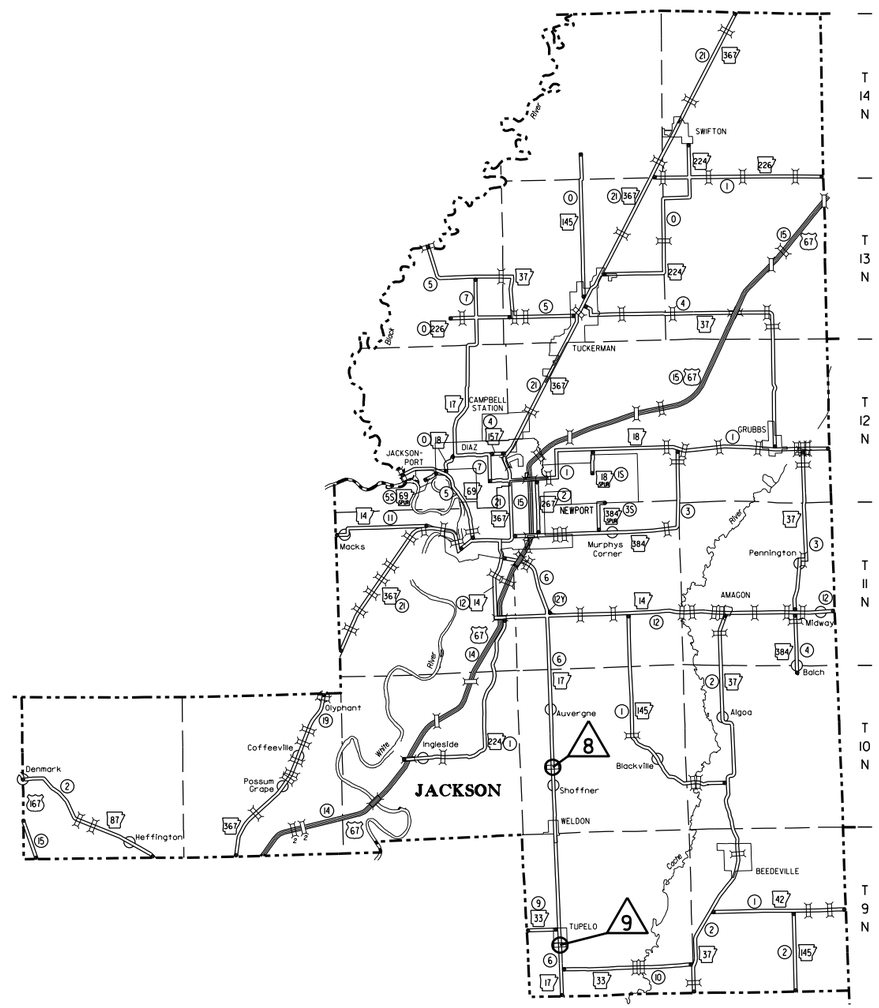
ARKANSAS HIGHWAY DISTRICT 5

LEGEND

△ - HYDRODEMOLITION

(8) HWY. 17, SEC. 6
LOG MILE 8.574 BR. END
OVER OVERCUP DITCH
77' - 0" BRIDGE NO. 02734
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

(9) HWY. 17, SEC. 6
LOG MILE 1.913 BR. END
OVER OVERCUP DITCH
104' - 7 1/4" BRIDGE NO. 02528
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)



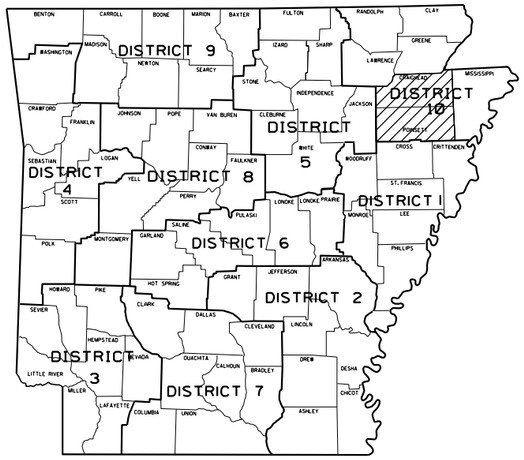
DISTRICT 5
INSET - 2
NOT TO SCALE

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ARKANSAS HIGHWAY DISTRICT 10

LEGEND

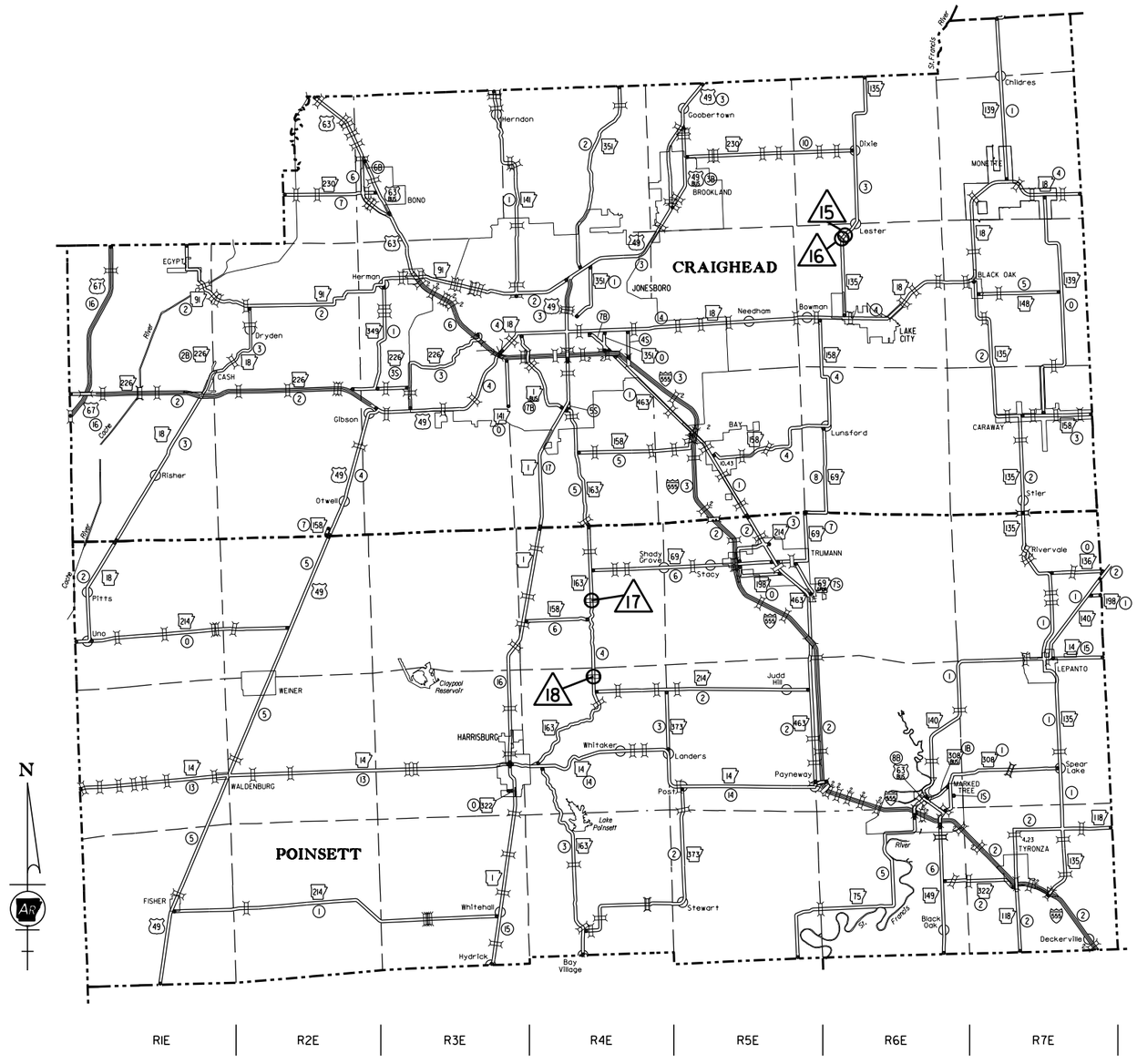
△ - HYDRODEMOLITION

15 HWY. 135, SEC. 3
LOG MILE 3.359 BR. END
OVER BIG BAY DTICH
152' - 3 3/8" BRIDGE NO. 05643
30' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

16 HWY. 135, SEC. 3
LOG MILE 3.324 BR. END
OVER THOMPSON CREEK
140' - 3 3/8" BRIDGE NO. 05642
30' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

17 HWY. 163, SEC. 4
LOG MILE 8.734 BR. END
OVER BARKER CREEK
56' - 0" BRIDGE NO. 03009
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

18 HWY. 163, SEC. 4
LOG MILE 5.504 BR. END
OVER BIG CREEK
84' - 0" BRIDGE NO. 03008
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)



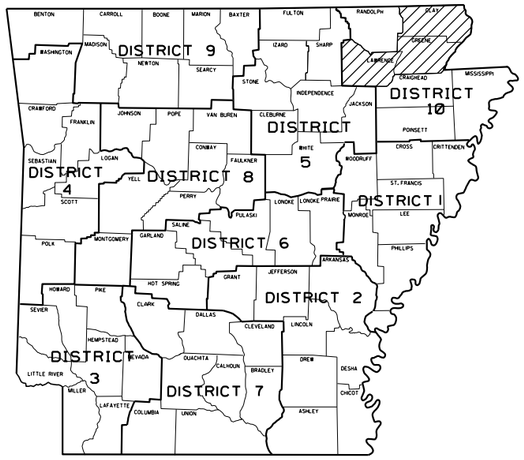
R1E | R2E | R3E | R4E | R5E | R6E | R7E

T 15 N
T 14 N
T 13 N
T 12 N
T 11 N
T 10 N

DISTRICT 10
INSET - 1
NOT TO SCALE

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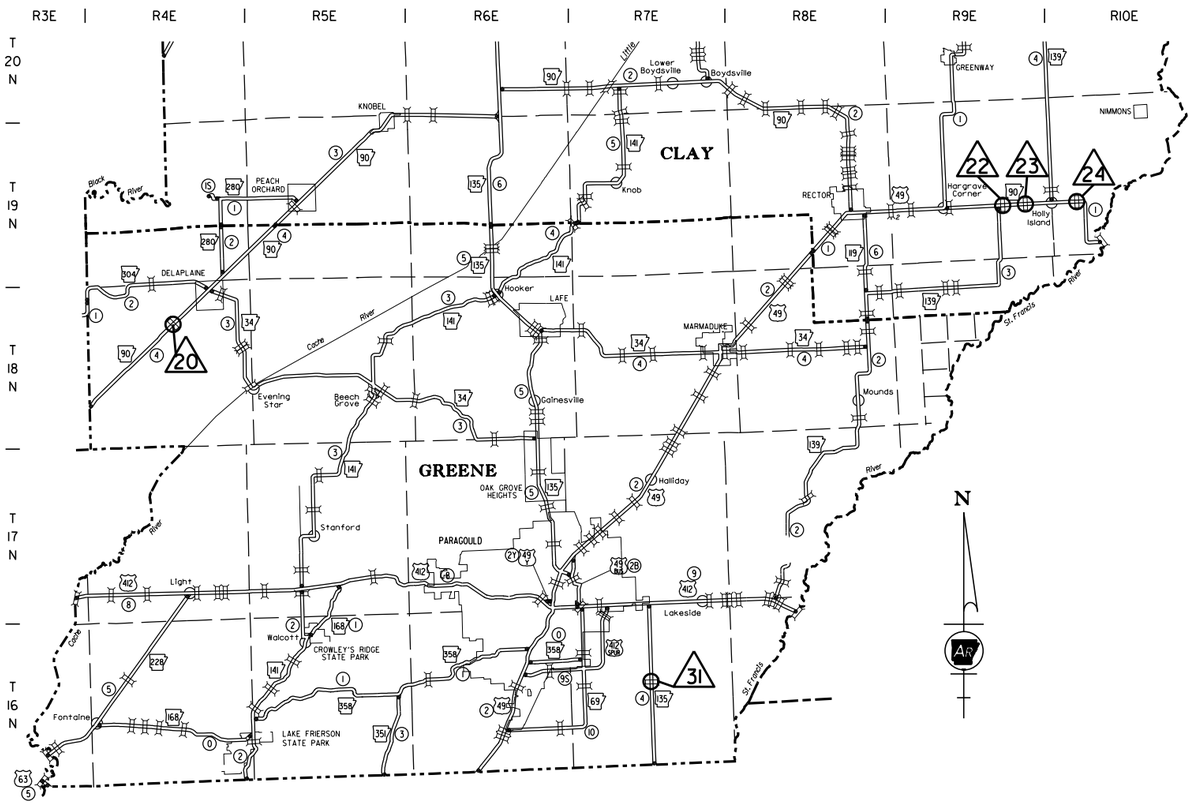
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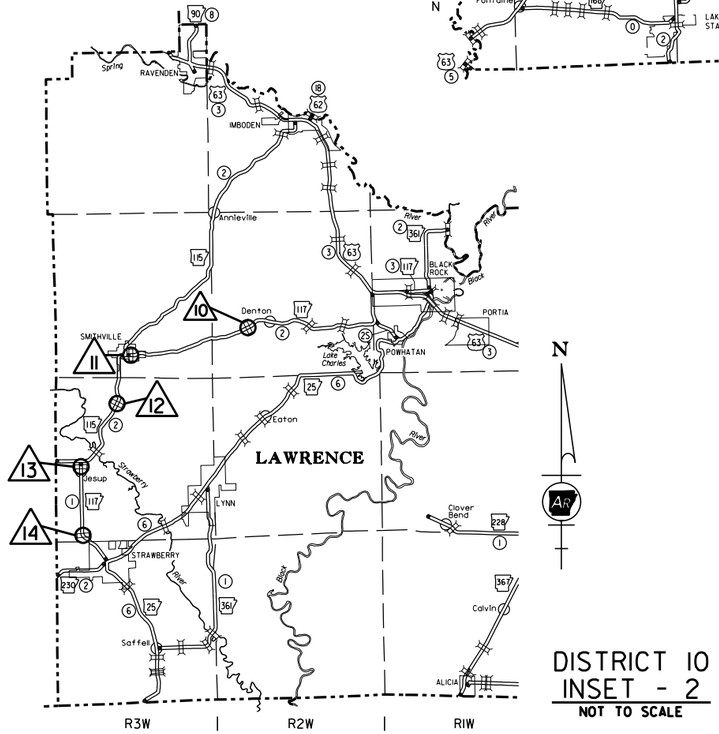
ARKANSAS HIGHWAY DISTRICT 10

LEGEND

△ - HYDRODEMOLITION



DISTRICT 10
INSET - 3
NOT TO SCALE



DISTRICT 10
INSET - 2
NOT TO SCALE

10 HWY. 117, SEC. 2
LOG MILE 4.834 BR. END
OVER FLAT CREEK
75' - 0" BRIDGE NO. 05006
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

11 HWY. 117, SEC. 2
LOG MILE 0.115 BR. END
OVER MACHINE CREEK
90' - 0" BRIDGE NO. 05005
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

12 HWY. 115, SEC. 2
LOG MILE 14.035 BR. END
OVER COOPER CREEK
182' - 4 7/8" BRIDGE NO. 05217
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

13 HWY. 117, SEC. 1
LOG MILE 3.932 BR. END
OVER BIG CREEK
272' - 2" BRIDGE NO. 03468
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

14 HWY. 117, SEC. 1
LOG MILE 1.370 BR. END
OVER REEDS CREEK
150' - 0" BRIDGE NO. 03467
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

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LEGEND

△ - HYDRODEMOLITION

20 HWY. 90, SEC. 4
LOG MILE 5.340 BR. END
OVER POST OAK DITCH
72' - 0" BRIDGE NO. 00830
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

22 HWY. 90, SEC. 1
LOG MILE 5.106 BR. END
OVER DTICH NO. 11
75' - 0" BRIDGE NO. 03662
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

23 HWY. 90, SEC. 1
LOG MILE 4.130 BR. END
OVER DITCH NO. 10
75' - 0" BRIDGE NO. 03663
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

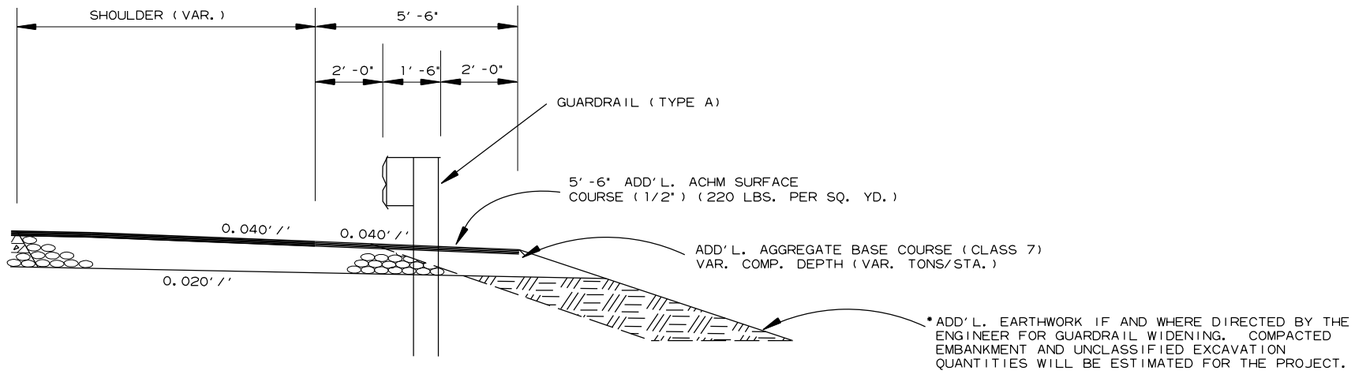
24 HWY. 90, SEC. 1
LOG MILE 2.184 BR. END
OVER MAYO DITCH
125' - 0" BRIDGE NO. 03664
28' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

31 HWY. 135, SEC. 4
LOG MILE 3.092 BR. END
OVER 8 MILE CREEK
132' - 1" BRIDGE NO. 03118
24' - 0" CLEAR ROADWAY
(HYDRODEMOLITION)

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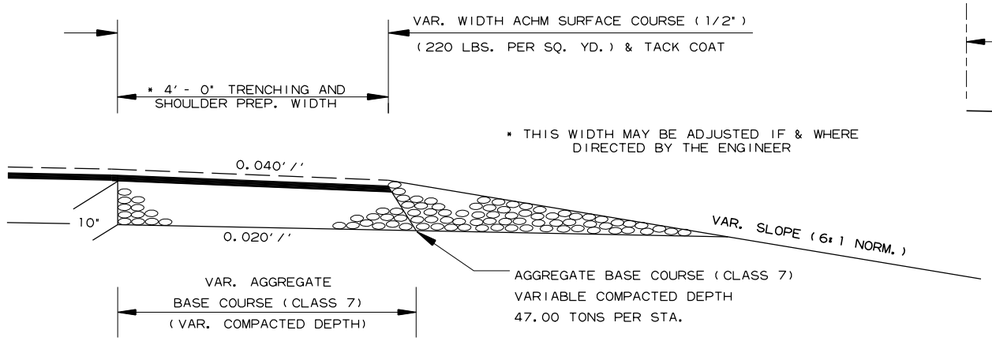
STATE OF ARKANSAS
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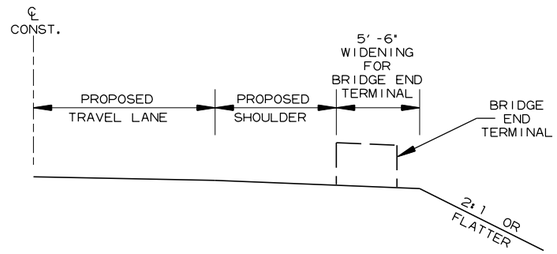
WIDENING FOR GUARDRAIL REQUIRING EARTHWORK

* NOTES:

1. REFER TO STD. DWG. GR-9 FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
2. FOR HORIZONTAL AND VERTICAL CONTROL, THE GUARDRAIL WIDENING SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANES. CONSTRUCT BRIDGE APPROACH AND MAIN LANE TRANSITIONS BEFORE PAVING GUARDRAIL WIDENING.



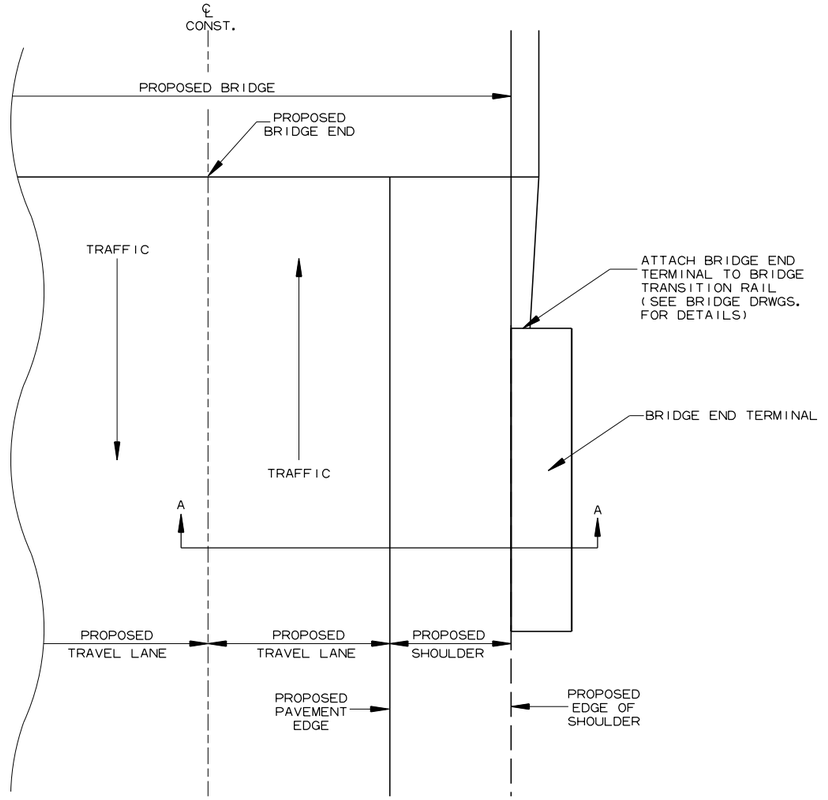
TRENCH & SHOULDER PREP. FOR MAINTENANCE OF TRAFFIC



SECTION A-A

NOTE:
ELIMINATE OR MODIFY APPROACH CURB SECTION TO FIT BRIDGE END TERMINAL. NO PAYMENT SHALL BE MADE FOR ELIMINATING OR MODIFYING THIS CURB, BUT SHALL BE CONSIDERED IN PAYMENT MADE FOR APPROACH GUTTERS OF THE TYPE SPECIFIED.

NOTE:
BRIDGE END TERMINAL SHALL CONFORM TO THE FOLLOWING:
- -MAXIMUM LENGTH: 20′
- -MAXIMUM HEIGHT: 2.75′
- -DESIGN SPEED: 60 MPH



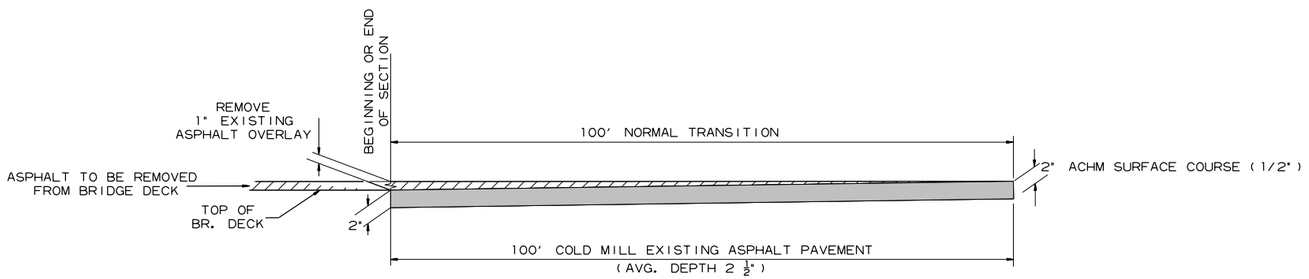
PLAN VIEW

BRIDGE END TERMINAL DETAILS

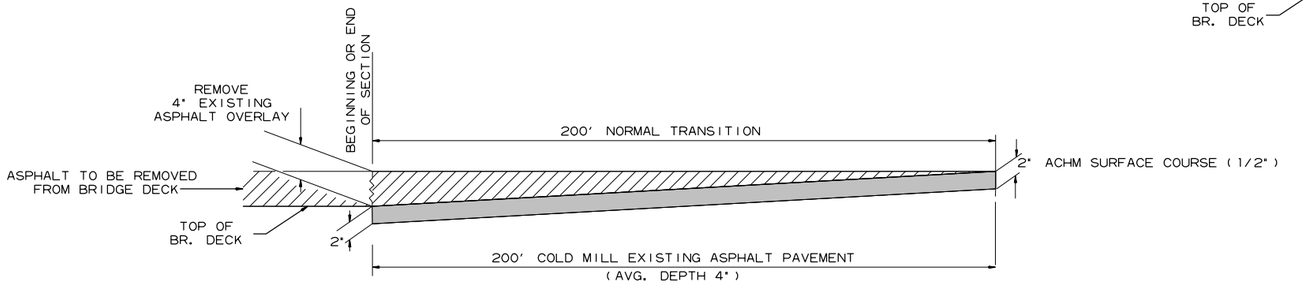
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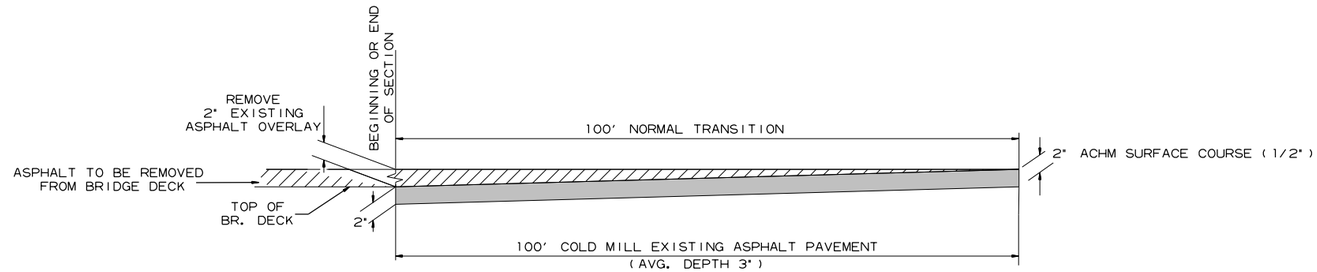
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3-1-2021



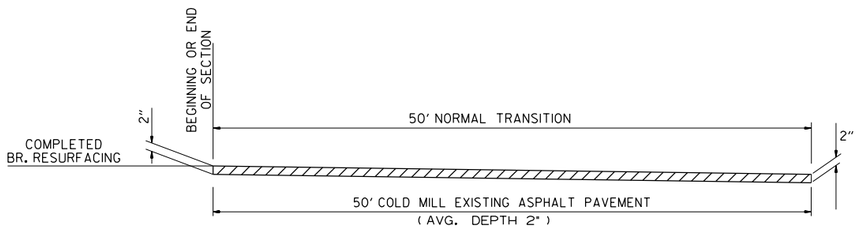
DETAIL FOR TRANSITIONS



DETAIL FOR TRANSITIONS



DETAIL FOR TRANSITIONS



* DETAIL FOR PAVEMENT MILL & INLAY AT BRIDGE ENDS TO REPAIR ASPHALT ROADWAY

* IF AND WHERE DIRECTED BY THE ENGINEER.

NOTES:

1. ACHM SHALL BE PLACED FOR ROADWAY TRANSITIONS/REPAIR AND GUARDRAIL WIDENING AFTER HYDRODEMOLITION OR POLYMER OVERLAY HAS BEEN COMPLETED.

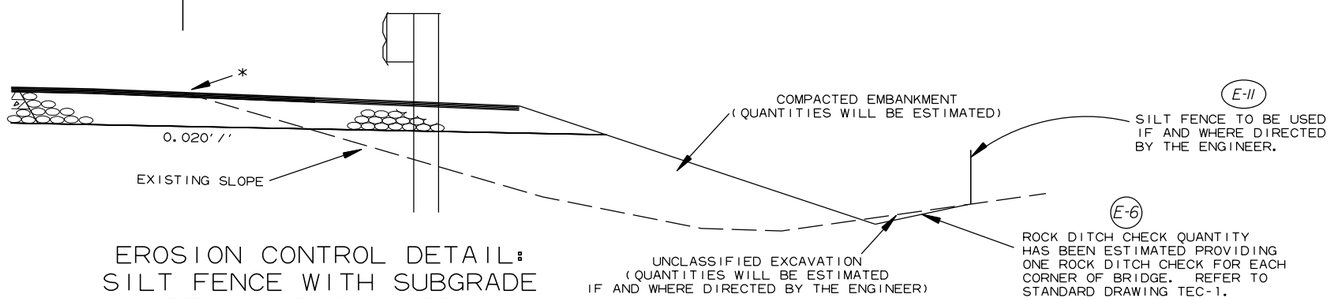
2. DIMENSIONS AND QUANTITIES WILL BE FIELD VERIFIED BY THE ENGINEER AND ARE SHOWN FOR ESTIMATING AND BIDDING PURPOSES ONLY. QUANTITIES WILL BE PAID BY ACTUAL MEASUREMENTS TAKEN IN THE FIELD.

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				JOB NO.		012378	14	37
				(2)	TEMPORARY EROSION CONTROL DETAILS			

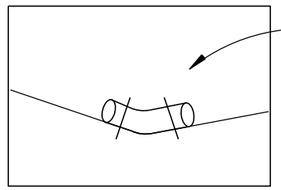
ROADWAY TYPICAL

GUARDRAIL WIDENING



EROSION CONTROL DETAIL: SILT FENCE WITH SUBGRADE WIDENING FOR GUARDRAIL INSTALLATIONS

* NOTES:
1. REFER TO STD. DWG. GR-9 FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
2. FOR HORIZONTAL AND VERTICAL CONTROL, THE GUARDRAIL WIDENING SHALL MATCH THE GRADES AND SLOPES OF THE MAIN LANES. CONSTRUCT BRIDGE APPROACH AND MAIN LANE TRANSITIONS BEFORE PAVING GUARDRAIL WIDENING.

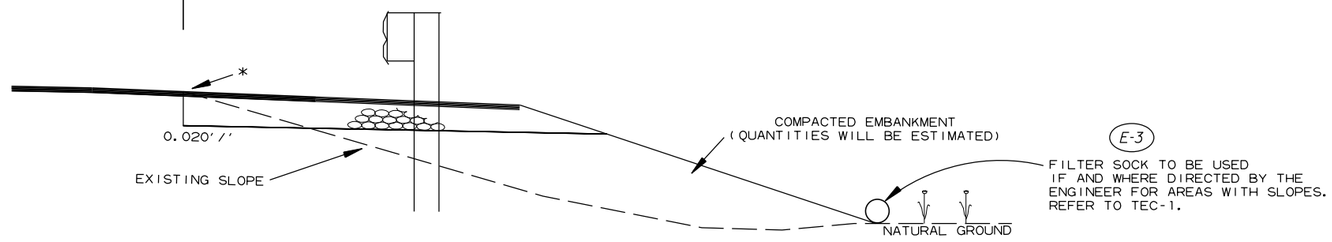


E-1

WATTLE DITCH CHECK TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER FOR AREAS WITH DITCH SECTION. REFER TO TEC-1.

ROADWAY TYPICAL

GUARDRAIL WIDENING



EROSION CONTROL DETAIL: FILTER SOCKS WITH SUBGRADE WIDENING FOR GUARDRAIL INSTALLATIONS

*NOTES:
1. REFER TO STD. DWG. GR-9 FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
2. FOR HORIZONTAL AND VERTICAL CONTROL, THE GUARDRAIL WIDENING SHALL MATCH THE GRADES AND SLOPES OF THE MAIN LANES. CONSTRUCT BRIDGE APPROACH AND MAIN LANE TRANSITIONS BEFORE PAVING GUARDRAIL WIDENING.

REVISIONS

DATE OF REVISION	REVISION

E-11

NOTES FOR ADDITIONAL SILT FENCE:
1. BRIDGES #2 - 05186 AND #12 - 05217 REQUIRE A 50' BUFFER. SILT FENCE QUANTITIES ARE ESTIMATED AND HAVE BEEN PROVIDED FOR IN THE EROSION CONTROL QUANTITY BOX.

2. THE REMAINING PROJECT BRIDGES OVER WATER SURFACES REQUIRE A 25 FT. BUFFER. SILT FENCE QUANTITIES ARE ESTIMATED AND HAVE BEEN PROVIDED FOR IN THE EROSION CONTROL QUANTITY BOX.

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LEGEND

- (E-11) = SILT FENCE
- (E-6) = ROCK DITCH CHECKS
- (E-3) = FILTER SOCKS
- (E-1) = WATTLE DITCH CHECK
- (E-6) = ROCK DITCH CHECK

TEMPORARY EROSION CONTROL GENERAL NOTES:

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

REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

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

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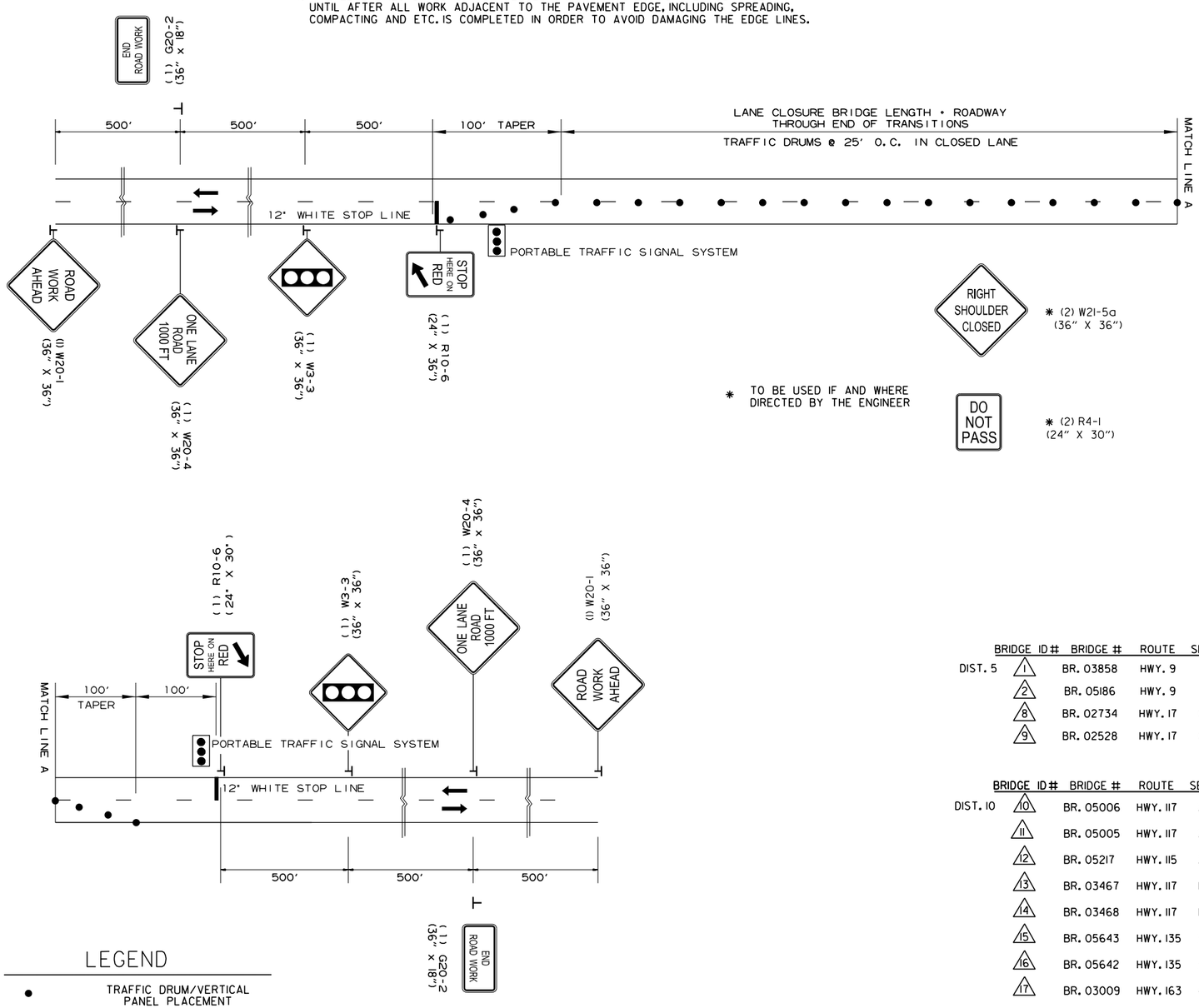
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3-31-21				6	ARK.			
				JOB NO.		012378	15	37
				(2)	MAINTENANCE OF TRAFFIC DETAILS			

MAINTENANCE OF TRAFFIC NOTES:

1. THE CONTRACTOR SHALL PROVIDE 2-WAY RADIO COMMUNICATION FOR FLAG PERSON FOR CONSTRUCTION UNDER TRAFFIC.
2. THE CONTRACTOR SHALL FURNISH AND MAINTAIN STD. W8-11 "BUMP" SIGNS (30" X 30") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL TRANSVERSE JOINTS EXPOSED TO TRAFFIC.
3. THE CONTRACTOR SHALL FURNISH AND MAINTAIN STD. W8-11 "UNEVEN LANES" SIGNS (30" X 30") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.
4. THE EDGE LINES SHALL NOT BE PLACED ON THE FINISHED ASPHALT SURFACE UNTIL AFTER ALL WORK ADJACENT TO THE PAVEMENT EDGE, INCLUDING SPREADING, COMPACTING AND ETC. IS COMPLETED IN ORDER TO AVOID DAMAGING THE EDGE LINES.

MAINTENANCE OF TRAFFIC NOTES (CONT.):

5. VERTICAL PANELS MAY BE SUBSTITUTED FOR TRAFFIC DRUMS ON THE BRIDGE DECK IF AND WHERE DIRECTED BY THE ENGINEER WHEN ACTIVE WORK IS ONGOING AT NO COST TO THE DEPARTMENT.
6. FLAGGING MAY BE USED IF AND WHERE DIRECTED BY THE ENGINEER FOR COLD MILLING, ACHM PAVING, GUARDRAIL INSTALLATION, AND STRIPING.



LEGEND

- ● TRAFFIC DRUM/VERTICAL PANEL PLACEMENT
- ⊥ TEMPORARY TRAFFIC SIGN
- ➡ TRAFFIC FLOW ARROWS

LANE CLOSURE WITH PORTABLE TRAFFIC SIGNAL SYSTEM & TRAFFIC DRUMS FOR HYDRODEMOLITION BRIDGES (30' CLEAR ROADWAY OR LESS ON THE BRIDGE DECKS)

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CONSTRUCTION SEQUENCE

STAGE 1:

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AT THE LOCATIONS SHOWN FOR STAGE 1.

INSTALL MAINTENANCE OF TRAFFIC DEVICES AS SHOWN IN STAGE 1 AND REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (12" WH. STOP LINES).

ON CLOSED LANE & SHOULDER - RT. (BRIDGE AND ROADWAY): CONSTRUCT BRIDGE HYDRODEMOLITION OR POLYMER OVERLAY; REMOVE THE EXISTING APPROACH GUTTERS (LISTED IN QUANTITY SHEETS); REMOVE GUARDRAIL AT SITES FOR GUARDRAIL INSTALLATIONS; CONSTRUCT ACHM MAIN LANE TRANSITIONS - (IF THE ROADWAY HAS A NEW OVERLAY WITH A GAP AT THE END OF THE TRANSITION, TAKE THE ACHM SURFACE COURSE TO THE END OF THE RECENT OVERLAY); CONSTRUCT APPROACH GUTTERS AND GUARDRAIL WIDENING WITH ACHM PAVING; INSTALL GUARDRAIL.

STAGE 2:

MIRROR INSTALLATION OF ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS FOR STAGE 2.

MIRROR INSTALLATION MAINTENANCE OF TRAFFIC DEVICES FOR STAGE 2 AND INSTALL REMOVABLE CONSTRUCTION PAVEMENT MARKINGS (12" WH. STOP LINES). SHIFT TRAFFIC ONTO OPPOSITE LANE FOR STAGE 2.

ON CLOSED LANE & SHOULDER - LT. (BRIDGE AND ROADWAY): CONSTRUCT BRIDGE HYDRODEMOLITION OR POLYMER OVERLAY; REMOVE THE EXISTING APPROACH GUTTERS (LISTED IN QUANTITY SHEETS); REMOVE GUARDRAIL AT SITES FOR GUARDRAIL INSTALLATIONS; CONSTRUCT ACHM MAIN LANE TRANSITIONS - (IF THE ROADWAY HAS A NEW OVERLAY WITH A GAP AT THE END OF THE TRANSITION, TAKE THE ACHM SURFACE COURSE TO THE END OF THE RECENT OVERLAY.); CONSTRUCT APPROACH GUTTERS AND GUARDRAIL WIDENING WITH ACHM PAVING; INSTALL GUARDRAIL.

REMOVE MAINTENANCE OF TRAFFIC DEVICES & REMOVABLE CONSTRUCTION PAVEMENT MARKINGS. INSTALL PERMANENT PAVEMENT MARKINGS.

RETURN TRAFFIC TO NORMAL PATTERN ON ROADWAY.

	BRIDGE ID #	BRIDGE #	ROUTE	SEC.	LOG MILE	TRAFFIC DRUMS	VERTICAL PANELS
DIST. 5	1	BR. 03858	HWY. 9	II	12.698	0	29
	2	BR. 05186	HWY. 9	II	4.875	0	33
	8	BR. 02734	HWY. 17	6	8.574	0	31
	9	BR. 02528	HWY. 17	6	1.913	0	33
DIST. 10	10	BR. 05006	HWY. 117	2	4.834	0	29
	11	BR. 05005	HWY. 117	2	0.115	0	33
	12	BR. 05217	HWY. 115	2	14.035	0	33
	13	BR. 03467	HWY. 117	1	3.932	0	35
	14	BR. 03468	HWY. 117	1	1.370	0	30
	15	BR. 05643	HWY. 135	3	3.359	30	0
	16	BR. 05642	HWY. 135	3	3.324	30	0
	17	BR. 03009	HWY. 163	4	8.734	0	24

	BRIDGE ID #	BRIDGE #	ROUTE	SEC.	LOG MILE	TRAFFIC DRUMS	VERTICAL PANELS
DIST. 10 CONT.	18	BR. 03008	HWY. 163	4	5.504	0	31
	20	BR. 00830	HWY. 90	4	5.340	0	30
	22	BR 03662	HWY. 90	1	5.106	0	29
	23	BR. 03663	HWY. 90	1	4.130	0	27
	24	BR. 03664	HWY. 90	1	2.184	0	32
	31	BR. 03118	HWY. 135	4	11.313	0	34

ADVANCE WARNING (2 LANE W/ PORTABLE TRAFFIC SIGNAL SYSTEM) MAINTENANCE OF TRAFFIC DETAILS

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3-31-21			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
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JOB NO.		012378	16	37
(2)	MAINTENANCE OF TRAFFIC			

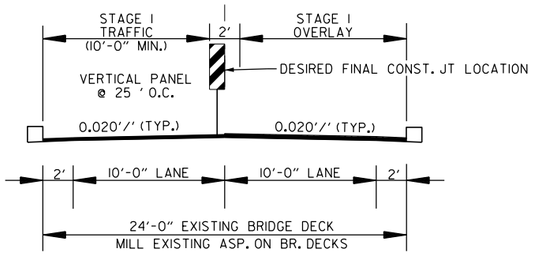
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

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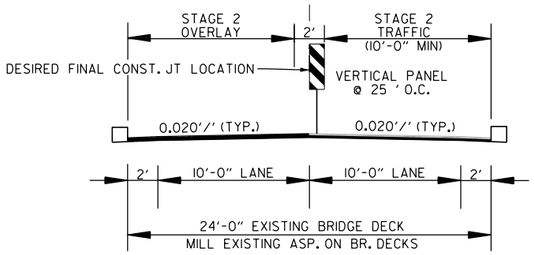
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				(2)	MAINTENANCE OF TRAFFIC DETAILS			

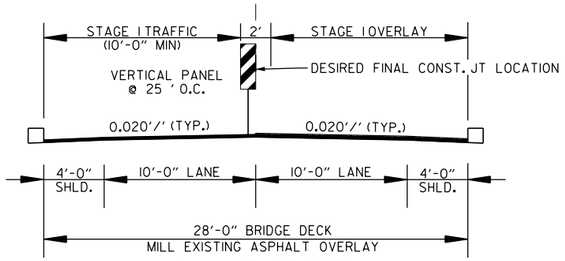
STATE OF ARKANSAS
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LINDA S. GUNN
3-31-2021



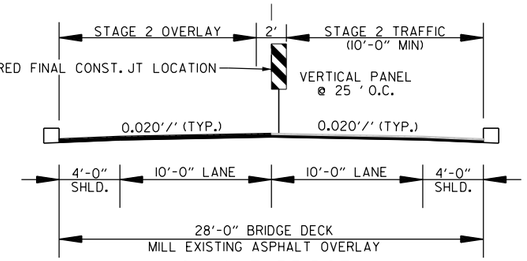
2 LANE BRIDGES



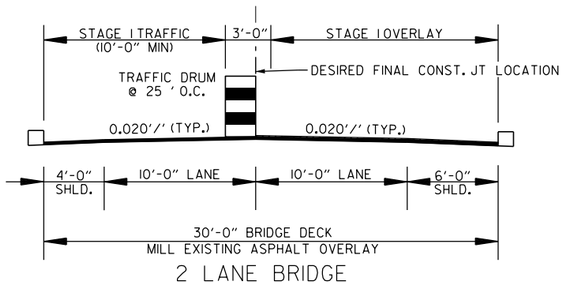
2 LANE BRIDGES



2 LANE BRIDGE

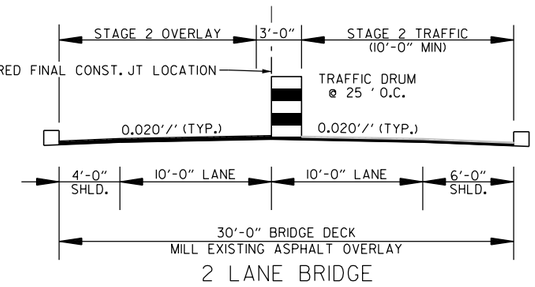


2 LANE BRIDGE



2 LANE BRIDGE

STAGE I



2 LANE BRIDGE

STAGE 2

TYPICAL SECTIONS (2 LANE) MAINTENANCE OF TRAFFIC DETAILS

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FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		012378	18	37
(2)	MAINTENANCE OF TRAFFIC			

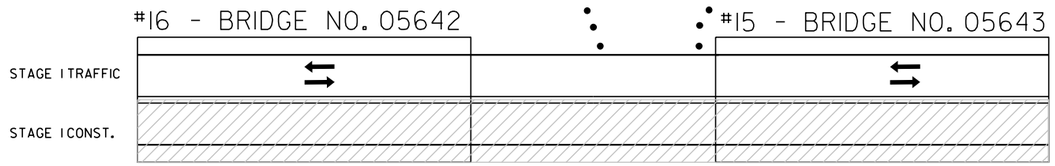
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

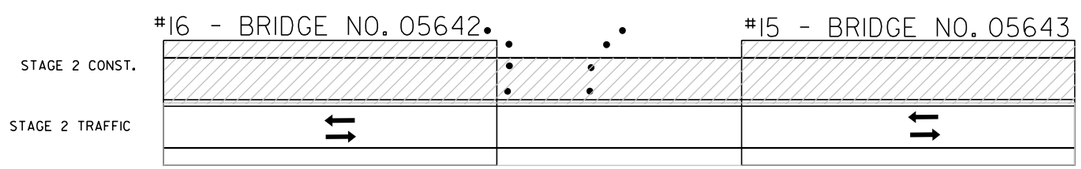
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3-31-21				6	ARK.			
				JOB NO.		012378	19	37
				(2)	MAINTENANCE OF TRAFFIC DETAILS			

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LEGEND

- STAGE CONST. AREA
- CONCRETE
- TRAFFIC FLOW
- TRAFFIC DRUM

MAINTAIN PROPERTY ACCESS DURING CONSTRUCTION
BRS. 05642 & 05643

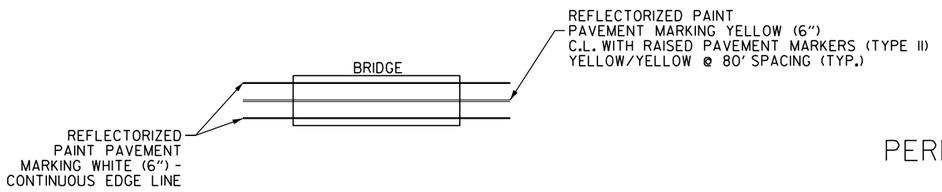
NOTE: GUARDRAIL REPLACEMENT BETWEEN BR. #15 - 05643 AND BR. #16 - 05642 WERE REMOVED FROM THIS PROJECT. REFER TO QUANTITY BOXES FOR GUARDRAIL REPLACEMENT.

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				JOB NO.		012378	20	37
				(2)	PERMANENT PAVEMENT MARKINGS DETAILS			

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PERMANENT PAVEMENT MARKING DETAILS
TWO LANE ROADWAYS W/ BRIDGE

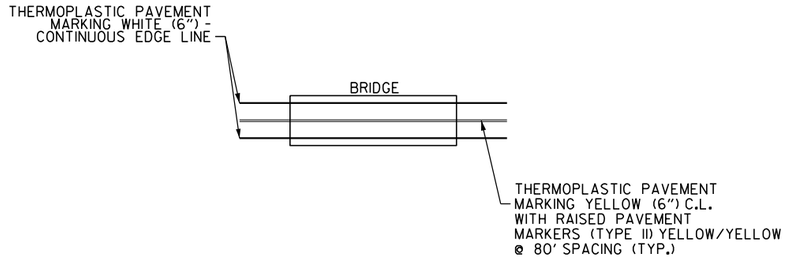


BRIDGES < 2,000 ADT

	BRIDGE ID	BRIDGE #
DIST. 10	17	BR. NO 03009
	22	BR. NO 03662
	23	BR. NO 03663
	24	BR. NO 03664
	31	BR. NO 03118

NOTES:
1. BRIDGE AND ROADWAY DIMENSIONS VARY FOR EACH SITE. REFER TO TYPICAL SECTIONS.
2. PAVEMENT MARKINGS ARE TO BE PLACED FROM BEGINNING OF TRANSITION LEADING INTO EACH SITE THROUGH ENDING TRANSITION. REFER TO "COLD MILLING" ASPHALT PAVEMENT QUANTITY BOX FOR TRANSITION LENGTHS AT EACH BRIDGE SITE.
3. REFER TO "PERMANENT PAVEMENT MARKINGS" QUANTITY BOX FOR STRIPING AND RAISED PAVEMENT MARKER QUANTITIES AT EACH BRIDGE SITE.

NOTE: THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMET OF THE FINAL STRIPING. CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF THE PROJECT.



BRIDGES > 2,000 ADT

	BRIDGE ID	BRIDGE #
DIST. 5	1	BR. NO 03858
	2	BR. NO 05186
	8	BR. NO 02734
	9	BR. NO 02528
DIST. 10	10	BR. NO 05006
	11	BR. NO 05005
	12	BR. NO 05217

	BRIDGE ID	BRIDGE #
DIST. 10 CONT.	13	BR. NO 03468
	14	BR. NO 03467
	15	BR. NO 05643
	16	BR. NO 05642
	18	BR. NO 03008
	20	BR. NO 00830

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3-31-21				6	ARK.			
				JOB NO.		012378	21	37
				(2)		QUANTITIES		

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ADVANCE WARNING SIGNS AND DEVICES (DIST. 5 - BOX 1 OF 2)

	SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	TEMPORARY PORTABLE RUMBLE STRIPS	PORTABLE TRAFIC SIGNAL SYSTEM - ACTUATED
				LIN. FT. - EACH			NO.	SQ. FT.	EACH			WEEK
	W20-4	ONE LANE ROAD 1000 FT.	36"x36"	4	4	4	4	36.0				
*	W20-1	ROAD WORK AHEAD	36"x36"	4	4	4	4	36.0				
*	G20-2	END ROAD WORK	36"x18"	4	4	4	4	18.0				
	W3-3	SIGNAL AHEAD	36"x36"	4	4	4	4	36.0				
	W21-5a	RIGHT SHOULDER CLOSED	36"x36"	4	4	4	4	36.0				
	R10-6	STOP HERE ON RED	24"x30"	4	4	4	4	20.0				
	W8-1	BUMP	30"x30"	4	4	4	4	25.0				
	W8-11	UNEVEN LANES	30"x30"	4	4	4	4	25.0				
*	R4-1	DO NOT PASS	24"X30"	4	4	4	4	20.0				
		VERTICAL PANELS		64	64	64			64			
**		PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED		7	7	14						14
		TEMPORARY PORTABLE RUMBLE STRIPS									4	
	SUBTOTALS:							**378.0**	**64**		**4**	**14**

NOTES: * 1. ADDITIONAL SIGNS ARE ADDED TO THE QUANTITY FOR CROSSING ROADWAYS WITHIN ADVANCE WARNING SIGN LIMITS AND ARE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
** 2. "PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED" ARE TO BE TRANSFERRED BETWEEN DISTRICTS AND USED IF AND WHERE DIRECTED BY THE ENGINEER.
3. THE TWO LANE ROADS ARE BOTH HIGH AND LOW TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

ADVANCE WARNING SIGNS AND DEVICES (DIST. 10 - BOX 2 OF 2)

	SIGN NUMBER	DESCRIPTION	SIGN SIZE	STAGE 1	STAGE 2	MAXIMUM NUMBER REQUIRED	TOTAL SIGNS REQUIRED		VERTICAL PANELS	TRAFFIC DRUMS	TEMPORARY PORTABLE RUMBLE STRIPS	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED
				LIN. FT. - EACH			NO.	SQ. FT.	EACH			WEEK
	ADVANCE WARNING FOR TWO LANE ROADWAYS											
	W20-4	ONE LANE ROAD 1000 FT.	36"x36"	4	4	4	4	36.0				
*	W20-1	ROAD WORK AHEAD	36"x36"	4	4	4	4	36.0				
*	G20-2	END ROAD WORK	36"x18"	4	4	4	4	18.0				
	W3-3	SIGNAL AHEAD	36"x36"	4	4	4	4	36.0				
	W21-5a	RIGHT SHOULDER CLOSED	36"x36"	4	4	4	4	36.0				
	R10-6	STOP HERE ON RED	24"x30"	4	4	4	4	20.0				
	W8-1	BUMP	30"x30"	4	4	4	4	25.0				
	W8-11	UNEVEN LANES	30"x30"	4	4	4	4	25.0				
*	R4-1	DO NOT PASS	24"X30"	4	4	4	4	20.0				
		VERTICAL PANELS		30	30	30			30			
		TRAFFIC DRUMS		68	68	68				68		
**		PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED		24	23	47						47
		TEMPORARY PORTABLE RUMBLE STRIPS									8	
	SUBTOTALS:							**306.0**	**30**	**68**	**8**	**47**

SUBTOTALS (DIST. 5 - BOX 1 OF 2):	**378.0**	**64**		**4**	**14**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**306.0**	**30**	**68**	**8**	**47**
PROJECT TOTALS:	**684.0**	**94**	**68**	**12**	**61**

NOTES: * 1. ADDITIONAL SIGNS ARE ADDED TO THE QUANTITY FOR CROSSING ROADWAYS WITHIN ADVANCE WARNING SIGN LIMITS AND ARE TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
** 2. "PORTABLE TRAFFIC SIGNAL SYSEM - ACTUATED" ARE TO BE TRANSFERRED BETWEEN DISTRICTS IF AND WHERE DIRECTED BY THE ENGINEER.
3. ALL QUANTITIES FOR ADVANCE WARNING SIGNS AND DEVICES ARE ESTIMATED FOR DISTRICTS 5 AND 10. REFER TO SECTION 104.03 OF THE STD. SPECS.
4. THE TWO LANE ROADS ARE BOTH HIGH AND LOW TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	22	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

REMOVAL AND DISPOSAL OF GUARDRAIL (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	R & D GUARDRAIL LIN. FT.
1	03858	9	12.698	WEST RT.	30.0
				EAST RT.	30.0
				EAST LT.	30.0
				WEST LT.	30.0
2	05186	9	4.875	WEST RT.	175.0
				EAST RT.	75.0
				EAST LT.	125.0
				WEST LT.	75.0
8	02734	17	8.574	SOUTH RT.	150.0
				NORTH RT.	75.0
				NORTH LT.	150.0
				SOUTH LT.	75.0
9	02528	17	1.913	SOUTH RT.	25.0
				NORTH RT.	25.0
				NORTH LT.	25.0
				SOUTH LT.	25.0
SUBTOTAL:					**1120.0**

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL OF ALL GUARDRAIL TERMINALS AND TERMINAL ANCHOR POSTS.

REMOVAL AND DISPOSAL OF GUARDRAIL (DIST. 10 - BOX 2 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	R & D GUARDRAIL LIN. FT.
10	05006	117	4.834	WEST RT.	37.5
				EAST RT.	37.5
				EAST LT.	37.5
				WEST LT.	37.5
11	05005	117	0.115	WEST RT.	37.5
				EAST RT.	37.5
				EAST LT.	37.5
				WEST LT.	37.5
13	03468	117	3.932	SOUTH RT.	25.0
				NORTH RT.	25.0
				NORTH LT.	25.0
				SOUTH LT.	25.0
14	03467	117	1.370	SOUTH RT.	25.0
				NORTH RT.	25.0
				NORTH LT.	25.0
				SOUTH LT.	25.0
15	05643	135	3.359	SOUTH RT.	
				NORTH RT.	75.0
				NORTH LT.	150.0
				SOUTH LT.	
16	05642	135	3.324	SOUTH RT.	150.0
				NORTH RT.	
				NORTH LT.	
				SOUTH LT.	75.0
17	03009	163	8.734	SOUTH RT.	25.0
				NORTH RT.	25.0
				NORTH LT.	25.0
				SOUTH LT.	
18	03008	163	5.504	SOUTH RT.	25.0
				NORTH RT.	25.0
				NORTH LT.	25.0
				SOUTH LT.	25.0
20	00830	90	5.340	WEST RT.	25.0
				EAST RT.	25.0
				EAST LT.	25.0
				WEST LT.	25.0
22	03662	90	5.106	WEST RT.	50.0
				EAST RT.	37.5
				EAST LT.	50.0
				WEST LT.	37.5
23	03663	90	4.130	WEST RT.	50.0
				EAST RT.	37.5
				EAST LT.	50.0
				WEST LT.	37.5
24	03664	90	2.184	WEST RT.	50.0
				EAST RT.	37.5
				EAST LT.	50.0
				WEST LT.	37.5
31	03118	135	3.092	SOUTH RT.	27.0
				NORTH RT.	
				NORTH LT.	27.0
				SOUTH LT.	27.0
SUBTOTAL:					**1831.0**

SUBTOTAL (DIST. 5 - BOX 1 OF 2) :	**1120.0**
SUBTOTAL (DIST. 10 - BOX 2 OF 2) :	**1831.0**
PROJECT TOTAL :	**2951.0**

NOTE: THE QUANTITY SHOWN ABOVE FOR THE REMOVAL AND DISPOSAL OF GUARDRAIL SHALL INCLUDE THE REMOVAL OF ALL GUARDRAIL TERMINALS AND TERMINAL ANCHOR POSTS.

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	23	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

GUARDRAIL (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	BRIDGE END TERMINAL
					LIN. FT.	EACH		
1	03858	9	12.698	WEST RT.	150	1	1	
				EAST RT.	75	1	1	
				EAST LT.				1
				WEST LT.	75	1	1	
2	05186	9	4.875	WEST RT.	150	1	1	
				EAST RT.	75	1	1	
				EAST LT.	100	1	1	
				WEST LT.	75	1	1	
8	02734	17	8.574	SOUTH RT.	150		1	
				NORTH RT.	75		1	
				NORTH LT.	150		1	
				SOUTH LT.	75		1	
9	02528	17	1.913	SOUTH RT.	150	1	1	
				NORTH RT.	75	1	1	
				NORTH LT.	150	1	1	
				SOUTH LT.	75	1	1	
SUBTOTALS:					**1600**	**11**	**15**	**1**

NOTES: 1. THE NOTCHING OF THE END CONCRETE POST REQUIRED TO INSTALL THE THRIE BEAM IS SUBSIDIARY TO THE BID PRICE FOR THE NEW THRIE BEAM GUARDRAIL.
2. BRIDGES WITH REPLACEMENT APPROACH GUTTERS (TYPE CT) HAVE W-BEAM BRIDGE RAILS AND DO NOT REQUIRE THRIE BEAMS.

GUARDRAIL (DIST. 10 - BOX 2 OF 2)

	BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	GUARDRAIL (TYPE A)	THRIE BEAM GUARDRAIL TERMINAL	GUARDRAIL TERMINAL (TYPE 2)	BRIDGE END TERMINAL
						LIN. FT.	EACH		
	10	05006	117	4.834	WEST RT.				1
					EAST RT.	75	1	1	
					EAST LT.	150	1	1	
					WEST LT.	75	1	1	
	11	05005	117	0.115	WEST RT.	150	1	1	
					EAST RT.	75	1	1	
					EAST LT.	150	1	1	
					WEST LT.				1
	12	05217	115	14.035	SOUTH RT.				1
					NORTH RT.	75	1	1	
					NORTH LT.				1
					SOUTH LT.	75	1	1	
	13	03468	117	3.932	SOUTH RT.	100		1	
					NORTH RT.	75		1	
					NORTH LT.	150		1	
					SOUTH LT.	75		1	
	14	03467	117	1.370	SOUTH RT.	150		1	
					NORTH RT.	75		1	
					NORTH LT.	100		1	
					SOUTH LT.	75		1	
	15	05643	135	3.359	SOUTH RT.				**
					NORTH RT.				1
					NORTH LT.	75	1	1	
					SOUTH LT.				**
	16	05642	135	3.324	SOUTH RT.				1
					NORTH RT.				**
					NORTH LT.				**
					SOUTH LT.				1
	17	03009	163	8.734	SOUTH RT.				1
					NORTH RT.	75		1	
					NORTH LT.	150		1	
					SOUTH LT.				**
	18	03008	163	5.504	SOUTH RT.	150		1	
					NORTH RT.	75		1	
					NORTH LT.	150		1	
					SOUTH LT.	75		1	
	20	00830	90	5.340	WEST RT.	150		1	
					EAST RT.				1
					EAST LT.	150		1	
					WEST LT.	75		1	
	22	03662	90	5.106	WEST RT.				1
					EAST RT.	75		1	
					EAST LT.	150		1	
					WEST LT.				1
	23	03663	90	4.130	WEST RT.				1
					EAST RT.	75		1	
					EAST LT.				1
					WEST LT.				1
	24	03664	90	2.184	WEST RT.	150		1	
					EAST RT.	75		1	
					EAST LT.	150		1	
					WEST LT.	75		1	
*	31	03118	135	3.092	SOUTH RT.	150		1	
					NORTH RT.				**
					NORTH LT.	150		1	
					SOUTH LT.				1
	SUBTOTALS:					**3800**	**9**	**35**	**15**

SUBTOTALS (DIST. 5- BOX 1 OF 2):	**1600**	**11**	**15**	**1**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**3800**	**9**	**35**	**15**
PROJECT TOTALS:	**5400**	**20**	**50**	**16**

NOTES: 1. THE NOTCHING OF THE END CONCRETE POST REQUIRED TO INSTALL THE THRIE BEAM IS SUBSIDIARY TO THE BID PRICE FOR THE NEW THRIE BEAM GUARDRAIL.
2. BRIDGES WITH REPLACEMENT APPROACH GUTTERS (TYPE CT) HAVE W-BEAM BRIDGE RAILS AND DO NOT REQUIRE THRIE BEAMS.

* 25 FT. OF RAILING HAS BEEN ADDED TO THE TOTAL GUARDRAIL LENGTH TO ACCOMMODATE FOR DAMAGED RAILING. THE RAILING ON THE BRIDGE IS TO BE REPAIRED IF AND WHERE DIRECTED BY THE ENGINEER.

** NOTES: BR. #15 - 05643 & BR. #16 - 05642 - THE BETS WERE REMOVED FROM THE PROJECT BETWEEN THE BRIDGES.
BR. #17 - 03009 - THE SOUTH LT. BET WAS REMOVED FROM THE PROJECT.
BR. #31 - 03118 - THE NORTH RT. BET WAS REMOVED FROM THE PROJECT.

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	24	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

COLD MILLING ASPHALT PAVEMENT (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	* AVG. DEPTH OF ASPHALT	LENGTH	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
					INCHES	FEET	FEET	SQ. YD.
1	03858	9	12.698	TRANSITION	2	100	20	222.22
				TRANSITION TO GUARDRAIL WIDENING END	2	348.50	20	774.44
2	05186	9	4.875	BR.DECK	1	4	24	10.67
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	273.50	20	607.78
8	02734	17	8.574	BR. DECK	1	77	24	205.33
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	286	20	635.56
9	02528	17	1.913	BR.DECK	2	104.60	24	278.93
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	323.50	20	718.89
SUBTOTAL:								**4787.14**

* AVERAGE DEPTH OF ASPHALT IS ESTIMATED AND SHOWN FOR INFORMATION ONLY. PATCHES WILL BE REMOVED WITH THE HYDRODEMOLITION PROCESS.

COLD MILLING ASPHALT PAVEMENT (DIST. 10 - BOX 2 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	* AVG. DEPTH OF ASPHALT	LENGTH	AVG. WIDTH	COLD MILLING ASPHALT PAVEMENT
					INCHES	FEET	FEET	SQ. YD.
10	05006	117	4.834	BR. DECK	4	75	24	200.00
				TRANSITION	2	400	20	888.89
				TRANSITION TO GUARDRAIL WIDENING END	2	48.50	20	107.78
11	05005	117	0.115	BR. DECK	4	90	24	240.00
				TRANSITION	2	400	20	888.89
				TRANSITION TO GUARDRAIL WIDENING END	2	123.50	20	274.44
12	05217	115	14.035	BR. DECK	1	182.41	28	567.50
				TRANSITION	2	200	28	622.22
				TRANSITION TO GUARDRAIL WIDENING END	2	248.50	28	773.11
13	03468	117	3.932	BR. DECK	1	272.17	24	725.79
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	236	20	524.44
14	03467	117	1.370	BR. DECK	1	150	24	400.00
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	236	20	524.44
15	05643	135	3.359	BR. DECK	1	152.28	30	507.60
				TRANSITION	2	200	30	666.67
				TRANSITION TO GUARDRAIL WIDENING END	2	86.75	30	289.17
16	05642	135	3.324	BR. DECK	1	140.28	30	467.60
				TRANSITION	2	125	30	416.67
17	03009	135	8.734	BR. DECK	1	56	28	174.22
				TRANSITION	2	200	28	622.22
				TRANSITION TO GUARDRAIL WIDENING END	2	143	28	444.89
18	03008	163	5.504	BR. DECK	1	84	24	224.00
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	286	20	635.56
20	00830	90	5.340	BR. DECK	4	72	24	192.00
				TRANSITION	2	400	20	888.89
				TRANSITION TO GUARDRAIL WIDENING END	2	86	20	191.11
22	03662	90	5.106	BR. DECK	4	75	28	233.33
				TRANSITION	2	400	28	1244.44
				TRANSITION TO GUARDRAIL WIDENING END	2	43	28	133.78
23	03663	90	4.130	BR. DECK	4	75	28	233.33
				TRANSITION	2	400	28	1244.44
24	03664	90	2.184	BR. DECK	4	125	28	388.89
				TRANSITION	2	400	28	1244.44
				TRANSITION TO GUARDRAIL WIDENING END	2	86	28	267.56
31	03118	135	3.092	BR. DECK	1	132.08	24	352.21
				TRANSITION	2	200	20	444.44
				TRANSITION TO GUARDRAIL WIDENING END	2	311	20	691.11
SUBTOTAL:								**20269.39**

SUBTOTAL (DIST. 5 - BOX 1 OF 2):	**4787.14**
SUBTOTAL (DIST. 10 - BOX 2 OF 2):	**20269.39**
PROJECT TOTAL :	**25056.53**

* AVERAGE DEPTH OF ASPHALT IS ESTIMATED AND SHOWN FOR INFORMATION ONLY. PATCHES WILL BE REMOVED WITH THE HYDRODEMOLITION PROCESS.

NOTE: THE FOLLOWING BRIDGES HAVE SONOTUBES (03662, 03663, & 03664). REFER TO STANDARD DRAWING 55063 "STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY VOIDED CONCRETE SLAB STRUCTURES."

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	25	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	TRANSITION LENGTH	TACK COAT (0.17 GAL. PER SQ. YD.)			ACHM SURFACE COURSE (1/2")			
						TOTAL WID.	SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
					FEET	FEET			FEET			TON
1	03858	9	12.698	MAIN LANE TRANSITION	100.00	20.00	222.22	37.78	20.00	222.22	220	24.44
				MAIN LANE TO GUARDRAIL ENDS	348.50	20.00	774.44	131.65	20.00	774.44	220	85.19
2	05186	9	4.875	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	273.50	20.00	607.78	103.32	20.00	607.78	220	66.86
8	02734	17	8.574	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	286.00	20.00	635.56	108.05	20.00	635.56	220	69.91
9	02528	17	1.913	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	323.50	20.00	718.89	122.21	20.00	718.89	220	79.08
SUBTOTALS (DIST. 5):							**4292.21**	**729.68**		**4292.21**		**472.15**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 10 - BOX 2 OF 2)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	TRANSITION LENGTH	TACK COAT (0.17 GAL. PER SQ. YD.)			ACHM SURFACE COURSE (1/2")			
						TOTAL WID.	SQ.YD.	GALLON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
					FEET	FEET			FEET			TON
10	05006	117	4.834	MAIN LANE TRANSITION	400.00	20.00	888.89	151.11	20.00	888.89	220	97.78
				MAIN LANE TO GUARDRAIL ENDS	48.50	20.00	107.78	18.32	20.00	107.78	220	11.86
11	05005	117	0.115	MAIN LANE TRANSITION	400.00	20.00	888.89	151.11	20.00	888.89	220	97.78
				MAIN LANE TO GUARDRAIL ENDS	123.50	20.00	274.44	46.65	20.00	274.44	220	30.19
12	5217	115	14.035	MAIN LANE TRANSITION	200.00	28.00	622.22	105.78	28.00	622.22	220	68.44
				MAIN LANE TO GUARDRAIL ENDS	248.50	8.00	220.89	37.55	8.00	220.89	220	24.30
13	03468	117	3.932	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	236.00	20.00	524.44	89.15	20.00	524.44	220	57.69
14	03467	117	1.370	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	236.00	20.00	524.44	89.15	20.00	524.44	220	57.69
15	05643	135	3.359	MAIN LANE TRANSITION	200.00	30.00	666.67	113.33	30.00	666.67	220	73.33
				MAIN LANE TO GUARDRAIL ENDS	86.75	30.00	289.17	49.16	30.00	289.17	220	31.81
16	05642	135	3.324	MAIN LANE TRANSITION	125.00	30.00	416.67	70.83	30.00	416.67	220	45.83
17	03009	163	8.734	MAIN LANE TRANSITION	200.00	28.00	622.22	105.78	28.00	622.22	220	68.44
				MAIN LANE TO GUARDRAIL ENDS	143.00	28.00	444.89	75.63	28.00	444.89	220	48.94
18	03008	163	5.504	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	286.00	20.00	635.56	108.05	20.00	635.56	220	69.91
20	00830	90	5.340	MAIN LANE TRANSITION	400.00	20.00	888.89	151.11	20.00	888.89	220	97.78
				MAIN LANE TO GUARDRAIL ENDS	86.00	20.00	191.11	32.49	20.00	191.11	220	21.02
22	03662	90	5.106	MAIN LANE TRANSITION	400.00	28.00	1244.44	211.55	28.00	1244.44	220	136.89
				MAIN LANE TO GUARDRAIL ENDS	43.00	28.00	133.78	22.74	28.00	133.78	220	14.72
23	03663	90	4.130	MAIN LANE TRANSITION	400.00	28.00	1244.44	211.55	28.00	1244.44	220	136.89
24	03664	90	2.184	MAIN LANE TRANSITION	400.00	28.00	1244.44	211.55	28.00	1244.44	220	136.89
				MAIN LANE TO GUARDRAIL ENDS	86.00	28.00	267.56	45.49	28.00	267.56	220	29.43
31	03118	135	3.092	MAIN LANE TRANSITION	200.00	20.00	444.44	75.55	20.00	444.44	220	48.89
				MAIN LANE TO GUARDRAIL ENDS	311.00	20.00	691.11	117.49	20.00	691.11	220	76.02
SUBTOTALS (DIST. 10):							**14810.70**	**2517.77**		**14810.70**		**1629.19**

SUBTOTALS (DIST. 5 - BOX 1 OF 2):	**729.68**				**472.15**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**2517.77**				**1629.19**
PROJECT TOTALS:	**3247.45**				**2101.34**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

TRENCHING AND SHOULDER PREPARATION - MAINT. OF TRAFFIC (DIST. 5 BOX 1 OF 2)

LOCATION	LENGTH	TRENCHING & SHOULDER PREPARATION	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
			TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
	FEET	STATION			FEET			TON
ENTIRE PROJECT	1600.00	16.00	36.00	576.00	3.00	533.33	220	58.67
SUBTOTALS:		**16.00**		**576.00**		**533.33**		**58.67**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

TRENCHING AND SHOULDER PREPARATION - MAINT. OF TRAFFIC (DIST. 10 BOX 2 OF 2)

LOCATION	LENGTH	TRENCHING & SHOULDER PREPARATION	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
			TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
	FEET	STATION			FEET			TON
ENTIRE PROJECT	2400.00	24.00	36.00	864.00	3.00	800.00	220	88.00
SUBTOTALS:		**24.00**		**864.00**		**800.00**		**88.00**

SUBTOTALS (DIST. 5 BOX 1 OF 2):	**16.00**		**576.00**				**58.67**
SUBTOTALS (DIST. 10 BOX 2 OF 2):	**24.00**		**864.00**				**88.00**
PROJECT SUBTOTALS:	**40.00**		**1440.00**				**146.67**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

NOTES: 1. IF AND WHERE DIRECTED BY THE ENGINEER, P.C.C. BASE MAY BE SUBSTITUTED FOR AGGREGATE BASE COURSE IN LOCATIONS 4 ' - 0" OR LESS IN WIDTH AT THE CONTRACTOR'S EXPENSE. NO DIRECT PAYMENT WILL BE MADE FOR THIS SUBSTITUTION.
2. ALL "TRENCHING AND SHOULDER PREPARATION" QUANTITIES FOR DISTRICTS 5 & 10 ARE ESTIMATED. SEE SECTION 104.03 OF THE STD. SPECS.

KatieLeBlanc 4/1/2021 2:16:48 PM
WORKSPACE: ARDOT
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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	26	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 5 BOX 1 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
1	03858	9	12.698	WEST RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
				EAST RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
2	05186	9	4.875	WEST RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
				EAST RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - LT.	125.00	32.00	40.00	4.50	62.50	220	6.88
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					SUBTOTALS:			**445.94**		**696.09**		**76.57**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 5 BOX 2 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
8	02734	17	8.574	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				NORTH RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
9	02528	17	1.913	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
				NORTH RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - LT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					SUBTOTALS:			**499.52**		**779.80**		**85.78**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

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WORKSPACE: ARDOT
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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	27	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 10 BOX 3 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
DISTRICT 10 BRIDGE STRUCTURES												
10	05006	117	4.834	WEST RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				EAST RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - LT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
11	05005	117	0.115	WEST RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
				EAST RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - LT.	175.00	32.00	56.00	4.50	87.50	220	9.63
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
12	05217	115	14.035	SOUTH RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				NORTH RT.	GUARDRAIL WIDENING - RT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - RT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
13	03468	117	3.932	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	110.00	32.00	35.20	4.50	55.00	220	6.05
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				NORTH RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
14	03467	117	1.370	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				NORTH RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	110.00	32.00	35.20	4.50	55.00	220	6.05
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				SUTBTOTALS:				**1010.12**		**1576.86**		**173.45**

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 10 BOX 4 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
15	05643	135	3.359	NORTH RT.	BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	43.75	25.00	10.94	3.50	17.01	220	1.87
					GUARDRAIL WIDENING - LT.	100.00	32.00	32.00	4.50	50.00	220	5.50
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
16	05642	135	3.324	SOUTH RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				SOUTH LT.	BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
17	03009	163	8.734	SOUTH RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				NORTH RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
18	03008	163	5.504	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				NORTH RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				SUBTOTALS:				**477.81**		**745.96**		**82.05**

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

KatieLeBlanc 4/1/2021 2:16:50 PM
WORKSPACE: ARDOT
Y:\Projects\ARDOT_180965_012339_Bridge Preservation\012378-05-d10-HYDRO\Design\CIVIL\Drawings\R012378_08_QTY_001.dgn
REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	28	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 10 BOX 5 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
DISTRICT 10 BRIDGE STRUCTURES												
20	00830	90	5.340	WEST RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				EAST RT.	BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
22	03662	90	5.106	WEST RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				EAST RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
23	03663	90	4.130	WEST RT.	BRIDGE END TERMINAL - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - RT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				EAST RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				SUBTOTALS:				**458.04**		**715.14**		**78.66**

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 10 BOX 6 OF 6)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	BR. DIRECTION	LOCATION	LENGTH	AGGREGATE BASE COURSE (CLASS 7)		ACHM SURFACE COURSE (1/2")			
							TON / STATION	TON	AVG. WID.	SQ.YD.	POUND / SQ.YD.	TOTAL PG 64-22
						FEET			FEET			TON
24	03664	90	2.184	WEST RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				EAST RT.	GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - RT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				EAST LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				WEST LT.	GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	85.00	32.00	27.20	4.50	42.50	220	4.68
					GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
31	03118	135	3.092	SOUTH RT.	GUARDRAIL WIDENING - RT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					GUARDRAIL WIDENING - RT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - RT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - RT.	40.00	25.00	10.00	3.50	15.56	220	1.71
				NORTH LT.	GUARDRAIL WIDENING - LT.	40.00	25.00	10.00	3.50	15.56	220	1.71
					GUARDRAIL WIDENING - LT.	160.00	32.00	51.20	4.50	80.00	220	8.80
					GUARDRAIL WIDENING - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					GUARDRAIL WIDENING - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
				SOUTH LT.	BRIDGE END TERMINAL - LT.	33.00	19.50	6.44	2.75	10.08	220	1.11
					BRIDGE END TERMINAL - LT.	10.00	39.25	3.93	5.50	6.11	220	0.67
					BRIDGE END TERMINAL - LT.	20.00	32.00	6.40	4.50	10.00	220	1.10
				SUBTOTALS:				**398.19**		**621.69**		**68.38**

SUBTOTALS (DIST. 5 - BOX 1 & 2)	**945.46**				**162.35**
SUBTOTALS (DIST. 10 - BOX 3, 4, 5, & 6)	**2344.16**				**402.54**
PROJECT TOTALS:	**3289.62**				**564.89**

BASIS OF ESTIMATE (DIST. 5):
ACHM SURFACE COURSE (1/2").....94.7% MIN. AGGR.....5.3% ASPHALT BINDER

BASIS OF ESTIMATE (DIST. 10):
ACHM SURFACE COURSE (1/2").....94.8% MIN. AGGR.....5.2% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22
TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO SS-400-1 FOR THE RESIDUAL ASPHALT APPLICATION RATES.

KatieLeBlanc 4/1/2021 2:16:52 PM
WORKSPACE: ARDOT
Y:\Projects\ARDOT_180965.002339_Bridge Preservation\002378-05-010-HYDRO\Design\CIVIL\Drawings\R002378_08_QTY_00.dgn
REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	29	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9678
LINDA S. GUNN
3-31-2021

PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 5 - BOX 1 OF 3)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	DESCRIPTION	REMOVAL OF PERMANENT PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	THERMOPLASTIC PAVEMENT MARKING 6" WHITE	THERMOPLASTIC PAVEMENT MARKING 6" YELLOW	REFLECTORIZED PAINT PAVEMENT MARKING 6" WHITE	REFLECTORIZED PAINT PAVEMENT MARKING 6" YELLOW
					LIN. FT.			EACH		LIN. FT.		LIN. FT.	
1	03858	9	12.698	WHITE	275	40	40			1047			
				YELLOW		1047	1047				1047		
				R.P.M.					7				
2	05186	9	4.875	WHITE	368	40	40			1283			
				YELLOW		1283	1283				1283		
				R.P.M.					8				
8	02734	17	8.574	WHITE	277	40	40			1126			
				YELLOW		1126	1126				1126		
				R.P.M.					7				
9	02528	17	1.913	WHITE	305	40	40			1256			
				YELLOW		1256	1256				1256		
				R.P.M.					8				
SUBTOTALS:					1225	4872	4872		30	4712	4712		

NOTE: 5 LANE ROADS HAVE HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014 FINISH NOTES.
2 LANE ROADS ARE BOTH HIGH AND LOW TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF OF THE PROJECT.

PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 10 - BOX 2 OF 3)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	DESCRIPTION	REMOVAL OF PERMANENT PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	THERMOPLASTIC PAVEMENT MARKING 6" WHITE	THERMOPLASTIC PAVEMENT MARKING 6" YELLOW	REFLECTORIZED PAINT PAVEMENT MARKING 6" WHITE	REFLECTORIZED PAINT PAVEMENT MARKING 6" YELLOW
					LIN. FT.			EACH		LIN. FT.		LIN. FT.	
10	05006	117	4.834	WHITE	275	40	40			1047			
				YELLOW		1047	1047				1047		
				R.P.M.					7				
11	05005	117	0.115	WHITE	290	40	40			1227			
				YELLOW		1227	1227				1227		
				R.P.M.					8				
12	05217	115	14.035	WHITE	182	40	40			1263			
				YELLOW		1263	1263				1263		
				R.P.M.					8				
13	03468	117	3.932	WHITE	473	40	40			1366			
				YELLOW		1416	1416				1366		
				R.P.M.					9				
14	03467	117	1.370	WHITE	350	40	40			1172			
				YELLOW		1172	1172				1172		
				R.P.M.					7				
15	05643	135	3.359	WHITE	152	40	40			705			
				YELLOW		705	705				705		
				R.P.M.					4				
16	05642	135	3.324	WHITE	140	40	40			681			
				YELLOW		681	681				681		
				R.P.M.					4				
17	03009	163	8.734	WHITE	56	40	40					798	
				YELLOW		798	798						798
				R.P.M.					5				
18	03008	163	5.504	WHITE	284	40	40			1140			
				YELLOW		1140	1140				1140		
				R.P.M.					7				
20	00830	90	5.340	WHITE	272	40	40			1116			
				YELLOW		1116	1116				1116		
				R.P.M.					7				
SUBTOTALS:					2474	10965	10965		66	9717	9717	798	798

NOTES: 5 LANE ROADS HAVE HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014 FINISH NOTES.
2 LANE ROADS ARE BOTH HIGH AND LOW TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF OF THE PROJECT.

PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 10 - BOX 3 OF 3)

BR. ID # (TITLE SHEET)	BR. STRUCTURE NO.	ROUTE	LOG MILE	DESCRIPTION	REMOVAL OF PERMANENT PAVEMENT MARKINGS	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)	RAISED PAVEMENT MARKERS TYPE II (YELLOW/YELLOW)	THERMOPLASTIC PAVEMENT MARKING 6" WHITE	THERMOPLASTIC PAVEMENT MARKING 6" YELLOW	REFLECTORIZED PAINT PAVEMENT MARKING 6" WHITE	REFLECTORIZED PAINT PAVEMENT MARKING 6" YELLOW
					LIN. FT.			EACH		LIN. FT.		LIN. FT.	
22	03662	90	5.106	WHITE	75	40	40					1036	
				YELLOW		1036	1036						1036
				R.P.M.					7				
23	03663	90	4.130	WHITE	75	40	40					950	
				YELLOW		950	950						950
				R.P.M.					6				
24	03664	90	2.184	WHITE	125	40	40					1222	
				YELLOW		1222	1222						1222
				R.P.M.					8				
31	03118	135	3.092	WHITE	332	40	40					1286	
				YELLOW		1286	1286						1286
				R.P.M.					8				
SUBTOTALS:					607	4654	4654		29			4494	4494

SUBTOTALS (DIST. 5 - BOX 1 OF 3)	1225	4872	4872		30	4712	4712				
SUBTOTALS (DIST. 10 - BOX 2 & 3 OF 3)	3081	15619	15619		95	9717	9717	5292	5292		
PROJECT TOTALS:	4306	20491	20491		125	14429	14429	5292	5292		

NOTES: 5 LANE ROADS HAVE HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014 FINISH NOTES.
2 LANE ROADS ARE BOTH HIGH AND LOW TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 604.03 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

THE 6" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING/NO PASSING ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF SURFACE COURSE HAS BEEN PLACED TO SCHEDULE THE ZONING OF OF THE PROJECT.

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	29A	37
				(2)	QUANTITIES			

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

APPROACH GUTTERS (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	APPROACH GUTTER (TYPE _)	GUTTER WIDTH "W" FT.	APPROACH GUTTER	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)	BR. STANDARD DRAWING
							CU.YD.	POUND	TON	
1	03858	9	12.698	WEST RT.	AT2	4	10.72	1225	4.12	55038
				EAST RT.		4	10.72	1225	4.12	
				EAST LT.		4	10.72	1225	4.12	
				WEST LT.		4	10.72	1225	4.12	
2	05186	9	4.875	WEST RT.	AT2	4	14.65	1689	5.09	55038
				EAST RT.		4	14.65	1689	5.09	
				EAST LT.		4	14.65	1689	5.09	
				WEST LT.		4	14.65	1689	5.09	
8	02734	17	8.574	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH RT.		4	2.65	198	2.72	
				NORTH LT.		4	2.65	198	2.72	
				SOUTH LT.		4	2.65	198	2.72	
9	02528	17	1.913	SOUTH RT.	AT2	4	13.98	1610	4.90	55038
				NORTH RT.		4	13.98	1610	4.90	
				NORTH LT.		4	13.98	1610	4.90	
				SOUTH LT.		4	13.98	1610	4.90	
SUBTOTALS:							**168.00**	**18888**	**67.32**	

NOTE: THE NOTCHING OF THE END CONCRETE POSTS IS SUBSIDIARY TO THE BID PRICE FOR THE NEW W-BEAM GUARDRAIL.

APPROACH GUTTERS (DIST. 10 - BOX 2 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	APPROACH GUTTER (TYPE _)	GUTTER WIDTH "W" FT.	APPROACH GUTTER	REINFORCING STEEL-RDWY. (GR. 60)	AGGREGATE BASE CRS. (CLASS 7)	BR. STANDARD DRAWING
							CU.YD.	POUND	TON	
10	05006	117	4.834	WEST RT.	AT2	4	14.43	1677	5.09	55038
				EAST RT.		4	14.43	1677	5.09	
				EAST LT.		4	14.43	1677	5.09	
				WEST LT.		4	14.43	1677	5.09	
11	05005	117	0.115	WEST RT.	AT2	4	14.43	1677	5.09	55038
				EAST RT.		4	14.43	1677	5.09	
				EAST LT.		4	14.43	1677	5.09	
				WEST LT.		4	14.43	1677	5.09	
12	05217	115	14.035	SOUTH RT.	AT	4	9.40	831	4.82	55036
				NORTH RT.		4	9.40	831	4.82	
				NORTH LT.		4	9.40	831	4.82	
				SOUTH LT.		4	9.40	831	4.82	
13	03468	117	3.932	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH RT.		4	2.65	198	2.72	
				NORTH LT.		4	2.65	198	2.72	
				SOUTH LT.		4	2.65	198	2.72	
14	03467	117	1.370	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH RT.		4	2.65	198	2.72	
				NORTH LT.		4	2.65	198	2.72	
				SOUTH LT.		4	2.65	198	2.72	
15	05643	135	3.359	NORTH RT.	PT	4	9.76	977	4.82	55035
				NORTH LT.		4	9.76	977	4.82	
16	05642	135	3.324	SOUTH RT.	PT	4	9.76	977	4.82	55035
				SOUTH LT.		4	9.76	977	4.82	
17	03009	163	8.734	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH RT.		4	2.65	198	2.72	
				NORTH LT.		4	2.65	198	2.72	
18	03008	163	5.504	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH RT.		4	2.65	198	2.72	
				NORTH LT.		4	2.65	198	2.72	
				SOUTH LT.		4	2.65	198	2.72	
20	00830	90	5.340	WEST RT.	CT	4	2.65	198	2.72	55039
				EAST RT.		4	2.65	198	2.72	
				EAST LT.		4	2.65	198	2.72	
				WEST LT.		4	2.65	198	2.72	
22	03662	90	5.106	WEST RT.	CT	4	2.65	198	2.72	55039
				EAST RT.		4	2.65	198	2.72	
				EAST LT.		4	2.65	198	2.72	
				WEST LT.		4	2.65	198	2.72	
23	03663	90	4.130	WEST RT.	CT	4	2.65	198	2.72	55039
				EAST RT.		4	2.65	198	2.72	
				EAST LT.		4	2.65	198	2.72	
				WEST LT.		4	2.65	198	2.72	
24	03664	90	2.184	WEST RT.	CT	4	2.65	198	2.72	55039
				EAST RT.		4	2.65	198	2.72	
				EAST LT.		4	2.65	198	2.72	
				WEST LT.		4	2.65	198	2.72	
31	03118	135	3.092	SOUTH RT.	CT	4	2.65	198	2.72	55039
				NORTH LT.		4	2.65	198	2.72	
				SOUTH LT.		4	2.65	198	2.72	
SUBTOTALS:							**282.18**	**27380**	**171.76**	

SUBTOTALS (DIST. 5 - BOX 1 OF 2):	**168.00**	**18888**	**67.32**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**282.18**	**27380**	**171.76**
PROJECT TOTALS:	**450.18**	**46268**	**239.08**

NOTE: THE NOTCHING OF THE END CONCRETE POSTS IS SUBSIDIARY TO THE BID PRICE FOR THE NEW W-BEAM GUARDRAIL.

REMOVAL AND DISPOSAL OF APPROACH GUTTERS (DIST. 5 - BOX 1 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	R&D OF APPROACH GUTTERS
					EACH
2	05186	9	4.875	WEST RT.	1
				EAST RT.	1
				EAST LT.	1
				WEST LT.	1
SUBTOTAL:					**4**

NOTE: EXISTING APPROACH GUTTERS ARE THE WRONG TYPE FOR GUARDRAIL TRANSITION ATTACHMENT.

REMOVAL AND DISPOSAL OF APPROACH GUTTERS (DIST. 10 - BOX 2 OF 2)

BR. ID # (TITLE SHEET)	BRIDGE STRUCTURE NO.	ROUTE	LOG MILE	LOCATION	R&D OF APPROACH GUTTERS
					EACH
15	05643	135	3.359	NORTH RT.	1
				NORTH LT.	1
16	05642	135	3.324	SOUTH RT.	1
				SOUTH LT.	1
22	03662	90	5.106	WEST RT.	1
				EAST RT.	1
				EAST LT.	1
				WEST LT.	1
23	03663	90	4.130	WEST RT.	1
				EAST RT.	1
				EAST LT.	1
				WEST LT.	1
24	03664	90	2.184	WEST RT.	1
				EAST RT.	1
				EAST LT.	1
				WEST LT.	1
SUBTOTAL:					**16**

SUBTOTAL (DIST. 5 - BOX 1 OF 2):	**4**
SUBTOTAL (DIST. 10 - BOX 2 OF 2):	**16**
PROJECT TOTAL:	**20**

NOTE: EXISTING APPROACH GUTTERS ARE THE WRONG TYPE FOR GUARDRAIL TRANSITION ATTACHMENT.

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
3-31-21				6	ARK.			
				JOB NO.		012378	30	37
				(2)		QUANTITIES		

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
3-31-2021

EROSION CONTROL (DIST. 5 - BOX 1 OF 2)

LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL				
	SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	WATTLE (20") DITCH CHECKS (E-1)	*ROCK DITCH CHECKS (E-6)	FILTER SOCK (18") (E-3)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
	ACRE	TON	ACRE	M.GAL.	ACRE	LIN. FT.	CU.YD.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE PROJECT STAGE 1	0.30	0.60	0.30	30.6	0.30	144		878	439	8
ENTIRE PROJECT STAGE 2	0.30	0.60	0.30	30.6	0.30	144		878	439	8
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	0.30	0.60	0.30	30.6	0.30	72	48	350	350	4
SUBTOTALS:	**0.90**	**1.80**	**0.90**	**91.8**	**0.90**	**360**	**48**	**2106**	**1228**	**20**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

EROSION CONTROL (DIST. 10 - BOX 2 OF 2)

LOCATION	PERMANENT EROSION CONTROL					TEMPORARY EROSION CONTROL				
	SEEDING	LIME	MULCH COVER	WATER	SECOND SEEDING APPLICATION	WATTLE (20") DITCH CHECKS (E-1)	*ROCK DITCH CHECKS (E-6)	FILTER SOCK (18") (E-3)	SILT FENCE (E-11)	*SEDIMENT REMOVAL & DISPOSAL
	ACRE	TON	ACRE	M.GAL.	ACRE	LIN. FT.	CU.YD.	LIN. FT.	LIN. FT.	CU. YD.
ENTIRE PROJECT STAGE 1	0.59	1.18	0.59	60.2	0.59	360		2406	863	16
ENTIRE PROJECT STAGE 2	0.59	1.18	0.59	60.2	0.59	360		2406	863	16
*ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.	1.00	2.00	1.00	102.0	1.00	180	168	825	825	8
SUBTOTALS:	**2.18**	**4.36**	**2.18**	**222.40**	**2.18**	**900**	**168**	**5637**	**2551**	**40**

SUBTOTALS (DIST. 5 - BOX 1 OF 2):	**0.90**	**1.80**	**0.90**	**91.8**	**0.90**	**360**	**48**	**2106**	**1228**	**20**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**2.18**	**4.36**	**2.18**	**222.4**	**2.18**	**900**	**168**	**5637**	**2551**	**40**
PROJECT TOTALS:	**3.08**	**6.16**	**3.08**	**314.2**	**3.08**	**1260**	**216**	**7743**	**3779**	**60**

BASIS OF ESTIMATE:
LIME .....2 TONS / ACRE OF SEEDING
WATER.....102.0 M.G. / ACRE OF SEEDING
WATTLE DITCH CHECKS.....9 LIN. FT. / LOCATION
ROCK DITCH CHECKS.....3 CU.YD./LOCATION

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

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

EARTHWORK (DIST. 5 - BOX 1 OF 2)

LOCATION / DESCRIPTION	* UNCLASSIFIED EXCAVATION	* COMPACTED EMBANKMENT	* SOIL STABILIZATION
	CU. YD.		TON
DISTRICT 5 - WIDENING FOR GUARDRAIL	500	6400	
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	250	250	25
SUBTOTALS:	**750**	**6650**	**25**

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

EARTHWORK (DIST. 10 - BOX 2 OF 2)

LOCATION / DESCRIPTION	* UNCLASSIFIED EXCAVATION	* COMPACTED EMBANKMENT	* SOIL STABILIZATION
	CU. YD.		TON
DISTRICT 10 - WIDENING FOR GUARDRAIL	1400	19100	
TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER	500	500	75
SUBTOTALS:	**1900**	**19600**	**75**

SUBTOTALS (DIST. 5 - BOX 1 OF 2):	**750**	**6650**	**25**
SUBTOTALS (DIST. 10 - BOX 2 OF 2):	**1900**	**19600**	**75**
PROJECT TOTALS:	**2650**	**26250**	**100**

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

BENCH MARKS (DISTRICT 5 & 10)

LOCATION	BENCH MARKS
	EACH
DISTRICT 5	2
DISTRICT 10	8

NOTES: 1. SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.
2. NEW BENCH MARKS PROVIDED FOR BRIDGES WITH NEW LOG MILES.
3. THIS BENCH MARK QUANTITY WAS INCLUDED BECAUSE THERE IS ANTICIPATION OF EXISTING TRAFFIC ACCIDENT DAMAGE TO BRIDGES.

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

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
1 3-31-2021				6	ARK.			
				JOB NO.		012378	31	37
				(I)	ALL BRIDGES - QUANTITIES - 63930			

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 012378

DISTRICT	SITE NO.	COUNTY	ROUTE	SECTION	LOG MILE	BRIDGE NO.	SP & 509 JOINT REHABILITATION (TYPE A) LIN. FT.	SS & 802 GROOVING SQ. YD.	803 CLASS 1 PROTECTIVE SURFACE TREATMENT GAL.	803 CLASS 3 PROTECTIVE SURFACE TREATMENT LIN. FT.	SS & 804 REINFORCING STEEL-BRIDGE (GRADE 60) POUND	~~SS & 804 EPOXY COATED REINFORCING STEEL (GRADE 60) POUND~~	SS & 809 SILICONE JOINT SEALANT LIN. FT.	SP JOB 012378 BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS SQ. FT.	~~SP JOB 012378 BRIDGE DECK REPAIR FOR POLYMER OVERLAYS SQ. FT.~~	SP JOB 012378 HYDRODEMOLITION - CLASS 2 SQ. YD.	SP JOB 012378 LATEX MODIFIED CONCRETE OVERLAY (1 1/2" THICK) SQ. YD.	SP JOB 012378 PILE REPAIR EACH	~~SP JOB 012378 POLYMER OVERLAY SQ. YD.~~	SP JOB 012378 RAILING REPAIR LUMP SUM	SP JOB 012378 SPALL REPAIR SQ. FT.	SP JOB 012378 SURFACE PATCHING SQ. FT.
5	1	Stone	Hwy. 9	11	12.698	03858 ①	48	175.0	4.0	150	160			180		200	201				25	25
	2	Stone	Hwy. 9	11	4.875	05186 ③④⑨	150	392.0	9.0	336	350			403		448	450				20	20
1	~~3~~	~~Cleburne~~	~~Hwy. 25~~	~~3~~	~~3.959~~	~~06297 ②~~						~~260~~	~~187 ⑦~~		~~300~~				~~667~~			
1	~~4~~	~~Sharp~~	~~Hwy. 230~~	~~1~~	~~0.703~~	~~06849 ②~~						~~160~~	~~81 ⑦~~		~~180~~				~~400~~			
1	~~5~~	~~Independence~~	~~Hwy. 69~~	~~3~~	~~6.445~~	~~05858 ②⑧~~						~~250~~	~~162 ⑦~~		~~288~~				~~640~~			
1	~~6~~	~~Independence~~	~~Hwy. 69~~	~~3~~	~~9.212~~	~~05857 ②⑨~~	~~61~~				~~270~~				~~158~~				~~350~~			
1	~~7~~	~~Independence~~	~~Hwy. 69~~	~~3~~	~~13.840~~	~~06771 ②~~						~~1,550~~			~~1,816~~				~~4,036~~			
	8	Jackson	Hwy. 17	6	8.574	02734 ① ⑩		180.0	4.1	154	160		98 ⑥	185		205	206					
	9	Jackson	Hwy. 17	6	1.913	02528 ①		245.0	5.6	210	220		98 ⑥	252		280	281					
	TOTALS FOR DISTRICT 5						1 198	992.0	22.7	850	1 890	~~2,220~~	1 196	1,020	~~2,742~~	1,133	1,138		~~6,093~~		45	45
10	10	Lawrence	Hwy. 117	2	4.834	05006 ①	49	175.0	4.0	150	160			180		200	201				20	20
	11	Lawrence	Hwy. 117	2	0.115	05005 ①	49	210.0	4.8	180	190			216		240	241				20	20
	12	Lawrence	Hwy. 115	2	14.035	05217 ③		506.0	9.7	364	440		164 ⑦	510		566	568					
	13	Lawrence	Hwy. 117	1	3.932	03468 ③④⑩		635.0	14.5	544	560			653		725	728					
	14	Lawrence	Hwy. 117	1	1.370	03467 ③⑩	98	350.0	8.0	300	310			360		400	401	5			30	30
	15	Craighead	Hwy. 135	3	3.359	05643 ① ⑨		456.0	10.1	304	390		143 ⑦	456		507	508					
	16	Craighead	Hwy. 135	3	3.324	05642 ① ⑨		420.0	9.3	280	360		143 ⑦	420		467	468					
	17	Poinsett	Hwy. 163	4	8.734	03009 ①⑩	49	131.0	3.0	112	120			134		149	150					
	18	Poinsett	Hwy. 163	4	5.504	03008 ①⑩	49	196.0	4.5	168	180			202		224	225					
1	~~19~~	~~Poinsett~~	~~Hwy. 14~~	~~13~~	~~13.839~~	~~06150 ②⑨~~					~~260~~		~~162 ⑦~~		~~300~~				~~667~~			
	20	Greene	Hwy. 90	4	5.340	00830 ①⑩	141	168.0	3.8	144	150			173		192	193					
1	~~21~~	~~Greene~~	~~Hwy. 34~~	~~3~~	~~9.718~~	~~06253 ②⑧~~					~~140~~				~~161~~				~~357~~			
	22	Clay	Hwy. 90	1	5.106	03662 ① ⑨⑩	57	208.0	4.7	150	180			210		233	234					
	23	Clay	Hwy. 90	1	4.130	03663 ① ⑨⑩	57	208.0	4.7	150	180			210		233	234					
	24	Clay	Hwy. 90	1	2.184	03664 ① ⑨⑩	114	347.0	7.8	250	300			350		389	390					
1	~~25~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~4.949~~	~~07038 ②~~						~~290~~			~~341~~				~~758~~			
1	~~26~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~5.509~~	~~07039 ②~~						~~290~~			~~341~~				~~758~~			
1	~~27~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~5.703~~	~~07040 ②~~						~~460~~			~~536~~				~~1,192~~			
1	~~28~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~6.045~~	~~07041 ②~~						~~290~~			~~341~~				~~758~~			
1	~~29~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~7.648~~	~~06972 ②~~						~~1,480~~			~~1,725~~				~~3,833~~			
1	~~30~~	~~Greene~~	~~Hwy. 412~~	~~9~~	~~7.089~~	~~06971 ②~~						~~1,480~~			~~1,725~~				~~3,833~~			
	31	Greene	Hwy. 135	4	3.092	03118 ①⑩		308.0	7.0	264	270		98 ⑥	317		352	353			1.00		
1	~~32~~	~~Greene~~	~~Hwy. 49~~	~~2~~	~~20.376~~	~~06501 ②⑧~~						~~500~~	~~199 ⑦~~		~~567~~				~~1,260~~			
1	~~33~~	~~Mississippi~~	~~Hwy. 158~~	~~1~~	~~11.584~~	~~06461 ②~~						~~250~~			~~287~~				~~637~~			
	TOTALS FOR DISTRICT 10						663	4,318.0	95.9	3,360	1 3,790	~~5,040~~	1 548	4,391	~~6,324~~	4,877	4,894	5	~~14,053~~	1.00	70	70
	TOTALS FOR JOB 012378						1 861	5,310.0	118.6	4,210	1 4,680 ⑤	~~7,260~~ ⑤	1 744	5,411 ⑤	~~9,066~~ ⑤	6,010	6,032	5 ⑤	~~20,146~~		115 ⑤	115 ⑤

REFERENCE TABLE (Hydrodemolition & LMC Overlay)	
Bridge No.	Existing Dwg. Nos.
03664	12021, 5421A, 5423
03663	12020, 5421A, 5423
03662	12020, 5421A, 5423
05642	19483, 19484, 19485, 19486, 1898-J, 14991, 14990F
05643	19487, 19485, 19488, 19489, 1898-J, 14991, 14990F
00830	8426, 5308
03118	9419, 5500A, 5500H, 5500, 5500I
02528	6975, 5218, 5218-A, 5219
02734	7809, 5095, 5096
05217	15797, 15800, 15798, 15799, 14990-D
03467	11437, 5466-A, 5466-A1, 5466-B, 5466-B1, 5466-C
03468	11438, 5460-A, 5460, 5462
05005	13369, 15092, 15097
05006	13370, 15083F, 15090
03008	8810, 5492-A, 5492
03009	8811, 5492-A, 5492
05186	15553, 15093L, 15093C, 4833, 15091B
03858	12631, 5466E, 5466J, 5463-F

1

REFERENCE TABLE (Polymer Overlay)	
Bridge No.	Existing Dwg. Nos.
~~06297~~	~~29747~~
~~06253~~	~~29140~~
~~06501~~	~~33230~~
~~07038~~	~~47477~~
~~07039~~	~~47491~~
~~07040~~	~~47502~~
~~07041~~	~~47513~~
~~06971~~	~~45952~~
~~06972~~	~~45953~~
~~05858~~	~~23335A~~
~~05857~~	~~23330~~
~~06771~~	~~41005, 41006~~
~~06461~~	~~32749~~
~~06150~~	~~27706~~
~~06849~~	~~42337~~

① EXISTING BRIDGE DECK HAS AN ASPHALT OVERLAY. SEE ROADWAY PLANS FOR AVERAGE DEPTH AT EACH BRIDGE SITE.

1 ~~② EXISTING BRIDGE DECK HAS NO ASPHALT OVERLAY.~~

③ EXISTING BRIDGE DECK HAS REMNANTS OF AN ASPHALT OVERLAY NEAR THE BRIDGE ENDS.

④ EXISTING BRIDGE DECK HAS SPALLS FILLED WITH ASPHALT.

⑤ QUANTITY SHOWN IS FOR ESTIMATING AND BIDDING PURPOSES ONLY. ACTUAL QUANTITY, IF ANY, WILL BE DETERMINED IN THE FIELD.

⑥ EXISTING BRIDGE HAS SLIDER PLATE JOINTS TO BE PARTIALLY REMOVED AND REPLACED WITH POURED SILICONE JOINTS.

⑦ EXISTING BRIDGE HAS FILLED JOINTS TO BE REMOVED AND REPLACED WITH POURED SILICONE JOINTS.

~~⑧ DRILL HOLES IN TRANSITION RAIL AT ALL FOUR BRIDGE CORNERS TO RECEIVE THRIE BEAM ATTACHMENT. ANY EXISTING GUARDRAIL ATTACHMENT RECESSES SHALL BE FILLED IN WITH A MATERIAL AND BY METHODS APPROVED BY THE ENGINEER. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.~~

⑨ REMOVE AND DISPOSE OF EXISTING APPROACH GUTTERS AT DESIGNATED LOCATIONS. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.

⑩ MODIFY CONCRETE BRIDGE END POST AT ALL FOUR BRIDGE CORNERS AND ATTACH NEW APPROACH GUARDRAIL TO BRIDGE RAIL. ANY EXPOSED REINFORCING STEEL SHALL BE DRILLED DOWN 2" AND COVERED WITH A QPL APPROVED NONSHRINK GROUT.

1 REMOVED POLYMER OVERLAY SITES FROM JOB. REMOVED PAY ITEMS "EPOXY COATED REINFORCING STEEL (GRADE 60)","BRIDGE DECK REPAIR FOR POLYMER OVERLAYS", AND "POLYMER OVERLAY." REVISED QUANTITY FOR PAY ITEMS "JOINT REHABILITATION (TYPE A)", "REINFORCING STEEL-BRIDGE (GRADE 60)", AND "SILICONE JOINT SEALANT." REMOVED REFERENCE TABLE FOR POLYMER OVERLAY SITES AND NOTES ② AND ⑧.
BY: ERBB CHECKED BY: SFH 3-31-2021

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No.14501 STEPHEN F. HARPER

3/30/2021

BRIDGE ENGINEER
PRINT DATE: 3/30/2021

SCHEDULE OF BRIDGE QUANTITIES DISTRICTS 5 & 10 BRIDGE PRESERVATION (2021) (S) VARIOUS COUNTIES

ROUTE VARIES SECTION VARIES

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

DRAWN BY:	AAS	DATE:	12/2020	FILENAME:	B012378_Q1.dgn
CHECKED BY:	SFH	DATE:	12/2020		
DESIGNED BY:	-	DATE:	-	SCALE:	NONE
BRIDGE NO.	ALL BRIDGES			DRAWING NO.	63930

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REVISED DATE:

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
3-31-2021			
5-4-2021			
5-6-2021			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		012378	32	37

(2) SUMMARY OF QUANTITIES AND REVISIONS

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.9678
LINDA S. GUNN
5-6-2021

SUMMARY OF QUANTITIES

ITEM NUMBER	ITEM	QUANTITIES DISTRICT 5	QUANTITIES DISTRICT 10	QUANTITIES PROJECT TOTAL	UNIT
202	REMOVAL AND DISPOSAL OF APPROACH GUTTERS	4	16	20	EACH
202	REMOVAL AND DISPOSAL OF GUARDRAIL	1120	1831	2951	LIN. FT.
SS & 210	UNCLASSIFIED EXCAVATION	750	1900	2650	CU. YD.
210	COMPACTED EMBANKMENT	6650	19600	26250	CU. YD.
SP & 210	SOIL STABILIZATION	25	75	100	TON
SP & 215	TRENCHING AND SHOULDER PREPARATION	16	24	40	STATION
SS & 303	AGGREGATE BASE COURSE (CLASS 7)	1589	3380	4969	TON
SS & 401	TACK COAT	730	2518	3248	GAL.
SP, SS, & 407	MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")	656	2010	2666	TON
SP, SS, & 407	ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2")	37	110	147	TON
SP & 412	COLD MILLING ASPHALT PAVEMENT	4787	20269	25056	SQ. YD.
504	APPROACH GUTTERS	168	282.18	450.18	CU. YD.
601	MOBILIZATION	0.20	0.80	1.00	LUMP SUM
SS & 603	MAINTENANCE OF TRAFFIC	0.20	0.80	1.00	LUMP SUM
SS & 604	SIGNS	378	306	684	SQ. FT.
SS & 604	TRAFFIC DRUMS		68	68	EACH
604	REMOVABLE CONSTRUCTION PAVEMENT MARKINGS	4872	15619	20491	LIN. FT.
604	REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS	4872	15619	20491	LIN. FT.
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	1225	3081	4306	LIN. FT.
SP	TEMPORARY PORTABLE RUMBLE STRIPS	4	8	12	EACH
SS & 604	VERTICAL PANELS	64	30	94	EACH
SS & 617	GUARDRAIL (TYPE A)	1600	3800	5400	LIN. FT.
SS & 617	GUARDRAIL TERMINAL (TYPE 2)	15	35	50	EACH
SS & 617	THRIE BEAM GUARDRAIL TERMINAL	11	9	20	EACH
620	LIME	2	4	6	TON
620	SEEDING	0.90	2.18	3.08	ACRE
SS & 620	MULCH COVER	0.90	2.18	3.08	ACRE
620	WATER	91.8	222.4	314.2	M. GAL.
621	SILT FENCE	1228	2551	3779	LIN. FT.
621	SEDIMENT REMOVAL AND DISPOSAL	20	40	60	CU. YD.
621	ROCK DITCH CHECKS	48	168	216	CU. YD.
SS & 621	FILTER SOCK (18")	2106	5637	7743	LIN. FT.
621	WATTLE (20")	360	900	1260	LIN. FT.
623	SECOND SEEDING APPLICATION	0.90	2.18	3.08	ACRE
635	ROADWAY CONSTRUCTION CONTROL	0.20	0.80	1.00	LUMP SUM
SP	PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED	14	47	61	WEEK
718	REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")		5292	5292	LIN. FT.
718	REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")		5292	5292	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	4712	9717	14429	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	4712	9717	14429	LIN. FT.
721	RAISED PAVEMENT MARKERS (TYPE II)	30	95	125	EACH
SS & 734	BRIDGE END TERMINAL	1	15	16	EACH
SS & 804	REINFORCING STEEL-ROADWAY (GRADE 60)	18888	27380	46268	POUND
	STRUCTURES OVER 20' SPAN				
SP & 509	JOINT REHABILITATION (TYPE A)	198	663	861	LIN. FT.
636	BRIDGE CONSTRUCTION CONTROL	0.20	0.80	1.00	LUMP SUM
SS & 802	GROOVING	992	4318	5310	SQ. YD.
SP	PILE REPAIR		5	5	EACH
SP	RAILING REPAIR		1.00	1.00	LUMP SUM
SP	SURFACE PATCHING	45	70	115	SQ. FT.
SP	SPALL REPAIR	45	70	115	SQ. FT.
803	CLASS 1 PROTECTIVE SURFACE TREATMENT	22.7	95.9	118.6	GAL.
803	CLASS 3 PROTECTIVE SURFACE TREATMENT	850	3360	4210	LIN. FT.
SS & 804	REINFORCING STEEL-BRIDGE (GRADE 60)	890	3790	4680	POUND
SS & 809	SILICONE JOINT SEALANT	196	548	744	LIN. FT.
SP	HYDRODEMOLITION - CLASS 2	1133	4877	6010	SQ. YD.
SP	BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS	1020	4391	5411	SQ. FT.
SP	LATEX MODIFIED CONCRETE OVERLAY (1 1/2" THICK)	1138	4894	6032	SQ. YD.

REVISIONS

DATE	REVISION	SHEET NUMBER
3/31/2021	ALL BRIDGES SCHEDULED FOR POLYMER OVERLAY BRIDGE PRESERVATION (15 BRIDGE SITES) WERE REMOVED FROM THE PROJECT PER ARDOT RESULTING IN REVISIONS TO ALL PLAN SHEETS.	1-12, 14-34
	THE FOLLOWING PLAN SHEET REVISIONS WERE MADE IN ADDITION TO REMOVAL OF POLYMER OVERLAY BRIDGES:	
	GOVERNING SPECIFICATIONS LIST WAS CHANGED TO REMOVE "ASSESSMENT OF WORKING DAYS - MAINTENANCE OF TRAFFIC", "MAINTENANCE OF TRAFFIC", "INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY (G&W-MNA)", "BRIDGE DECK REPAIR FOR POLYMER OVERLAYS", AND "POLYMER OVERLAY" SPECIAL PROVISIONS	4
	TYPICAL SECTION SHEETS REMOVED POLYMER BRIDGES AND COMBINED DATA LEAVING SHEET 7 BLANK	7
	SPECIAL DETAIL "ARKANSAS HIGHWAY MAP" LABEL CHANGED FROM "DISTRICT 5" TO "DISTRICT 10"	10
	SPECIAL DETAIL " WIDENING FOR GUARDRAIL REQUIRING EARTHWORK" DETAIL: REVISED NOTE WITH STANDARD DRAWING GR-9A TO STANDARD DRAWING GR-9	12
	MAINTENANCE OF TRAFFIC DETAILS WERE UPDATE TO BE CONSISTENT WITH OTHER BRIDGE PRESERVATION PROJECTS	15 & 17
	MAINTENANCE OF TRAFFIC DETAIL SHEETS WERE LEFT BLANK	16 & 18
	A NOTE WAS ADDED REMOVING BRIDGE END TERMINALS BETWEEN BRIDGES #16 - 05643 AND #15 -05642	19
	A NOTE WAS ADDED REMOVING BRIDGE END TERMINALS FROM BETWEEN BRS. # 15-05643 & #16-05642; FROM #17-03009 (SOUTH/ LT.) AND #31-03118 (NORTH/ RT.)	23
	THE "SCHEDULE OF BRIDGE QUANTITIES" SHEET ADDED A NOTE FOR ALL ALL ITEMS REMOVED AND REMAINING ITEM REVISIONS	31
	THE BRIDGE PRESERVATION DATA TABLE (DISTRICT 5) AND (DISTRICT 10) SHEETS ADDED A NOTE FOR POLYMER OVERLAY SITES REMOVED FROM PROJECT	33 & 34
	ALL QUANTITY SHEETS WERE REVISED, THE SUMMARY OF QUANTITIES SHEET WAS REVISED, AND REVISIONS WERE ADDED TO THE REVISIONS BOX	21- 30 & 32
	ALL QUANTITY ITEMS CHANGED EXCEPT THE FOLLOWING: SOIL STABILIZATION, MOBILIZATION, MAINTENANCE OF TRAFFIC, TEMPORARY PORTABLE RUMBLE STRIPS, ROADWAY CONSTRUCTION CONTROL, BRIDGE CONSTRUCTION CONTROL, GROOVING, PILE REPAIR, RAILING REPAIR, SURFACE PATCHING, SPALL REPAIR, CLASS 1 AND CLASS 3 PROTECTIVE SURFACE TREATMENT, HYDRODEMOLITION - CLASS 2, BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS, AND LATEX MODIFIED CONCRETE OVERLAY (11/2" THICK)	21- 32
	A QUANTITY SHEET WAS ADDED TO ALLOW FOR SHOWING QUANTITIES FOR EACH APPROACH GUTTER RATHER THAN COMBINING FOR EACH BRIDGE	29A
	"MAINTENANCE OF TRAFFIC" QUANTITY ITEM NUMBER NO LONGER INCLUDES "SP"	32
5/4/2021	REMOVED "ESTABLISHING CONTRACT TIME- WORKING DAY CONTRACT" FROM SPECIAL PROVISION LIST. ADDED NOTE TO REVISION BOX.	4 & 32
5/6/2021	ADDED "COORDINATION OF WORK" AND SPECIAL PROVISION AND NOTE TO REVISION BOX. THE SPECIAL PROVISION CONTENT "SEQUENCE OF CONSTRUCTION" WAS REVISED.	4 & 32

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REVISED DATE: $$REVDATE$$

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED
⚠1 3-31-2021			

FED.RD. DIST.NO.	STATE	FED.AID PROJ.NO.	SHEET NO.	TOTAL SHEETS
6	ARK.			
JOB NO.		012378	33	37

(I) DISTRICT 5 BRIDGES - BRIDGE DATA - 63931

BRIDGE PRESERVATION DATA TABLE
(DISTRICT 5)

	CURRENT CONST. CONTRACT SITE NO.	BRIDGE NO.	ORIGINAL CONTRACT NO.	COUNTY	ROUTE	SECTION	SUPERSTRUCTURE TYPE (FOR HYDRODEMOLITION SITES)	DECK TREATMENT TYPE	DECK TREATMENT STD. DRAWINGS	THRIE-BEAM GUARDRAIL CONNECTION PRESENT?	GRADE RAISE NEEDED FOR LMC OVERLAY?	APP. GUTTER TYPE/ STD. DRAWING	BRIDGE JOINT TREATMENT STD. DRAWING	BRIDGE JOINT TEREATMENT LOCATION
	1	03858	5548	STONE	HWY. 9	11	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	NO	AT2/55038 AND BRIDGE END ⚠1 TERMINAL	NO. STD. DWG. - USE TYPE A JOINT REHAB	BENTS 2 & 3
	2	05186	5575	STONE	HWY. 9	11	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	NO	AT2/55038	NO. STD. DWG. - USE TYPE A JOINT REHAB	BENTS 2-6
⚠	~~3~~	~~06297~~	~~R50021~~	~~CLEBURNE~~	~~Hwy. 25~~	~~3~~	-	~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~55064~~	~~BENTS 1-4~~
⚠	~~4~~	~~06849~~	~~050009~~	~~SHARP~~	~~HWY. 230~~	~~1~~	-	~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~55064~~	~~BENTS 1 & 4~~
⚠	~~5~~	~~05858~~	~~R50018~~	~~INDEPENDENCE~~	~~HWY. 69~~	~~3~~	-	~~POLYMER OVERLAY~~	~~N/A~~	~~NO~~	~~N/A~~	~~NONE - DRILL NEW THRIE BEAM INTO EXIST. TRANSITION RAIL~~	~~55064~~	~~BENTS 1-4~~
⚠	~~6~~	~~05857~~	~~5805~~	~~INDEPENDENCE~~	~~HWY. 69~~	~~3~~	-	~~POLYMER OVERLAY~~	~~N/A~~	~~NO~~	~~N/A~~	~~PT/55035~~	~~NO. STD. DWG. - USE TYPE A JOINT REHAB~~	~~BENTS 2 & 3~~
⚠	~~7~~	~~06771~~	~~R50112~~	~~INDEPENDENCE~~	~~HWY. 69~~	~~3~~	-	~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~CLEAN DEBRIS AT SLIDER PL JOINTS AT BENTS 1, 4, 7, 11, AND 15~~
	8	02734	5348	JACKSON	HWY. 17	6	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	NO	CT/55039 & MODIFY BLUNT ENDS	55064	BENTS 1-4
	9	02528	1224	JACKSON	HWY. 17	6	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	NO	AT2/55038	55064	BENTS 1-4

⚠ REMOVED POLYMER OVERLAY SITES FROM JOB AND REVISED NOTE FOR BRIDGE NO. 03858.
BY: ERBB CHECKED BY: SFH 3-31-2021

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14501
STEPHEN F. HARPER

3/30/2021

BRIDGE ENGINEER
PRINT DATE: 3/30/2021

BRIDGE PRESERVATION DATA TABLE
DISTRICT 5
ROUTE VARIES SECTION VARIES
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

DRAWN BY: AAS DATE: 12/2020 FILENAME: B012378_DT5.dgn
CHECKED BY: MKL DATE: 12/2020
DESIGNED BY: SFH DATE: 12/2020 SCALE: NONE
BRIDGE NO. DISTRICT 5 BRIDGES DRAWING NO. 63931

REVISED DATE:
WORKSPACE: ARDOT
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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
⚠1 3-31-2021				6	ARK.			
				JOB NO.		012378	34	37

(1) DISTRICT 10 BRIDGES - BRIDGE DATA - 63932

BRIDGE PRESERVATION DATA TABLE
(DISTRICT 10)

	CURRENT CONST. CONTRACT SITE NO.	BRIDGE NO.	ORIGINAL CONTRACT NO.	COUNTY	ROUTE	SECTION	SUPERSTRUCTURE TYPE (FOR HYDRODEMOLITION SITES)	DECK TREATMENT TYPE	DECK TREATMENT STD. DRAWINGS	THRIE-BEAM GUARDRAIL CONNECTION PRESENT?	GRADE RAISE NEEDED FOR LMC OVERLAY?	APP. GUTTER TYPE/ STD. DRAWING	BRIDGE JOINT TREATMENT STD. DRAWING	BRIDGE JOINT TEREATMENT LOCATION
	10	05006	10712	LAWRENCE	HWY. 117	2	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	AT2/55038 AND BRIDGE END TERMINAL ⚠1	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2 & 3
	11	05005	10712	LAWRENCE	HWY. 117	2	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	AT2/55038 AND BRIDGE END TERMINAL ⚠1	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2 & 3
	12	05217	10697	LAWRENCE	HWY. 115	2	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	N/A	AT/55036 AND BRIDGE END TERMINAL ⚠1	55064	BENTS 1-5
	13	03468	10669	LAWRENCE	HWY. 117	1	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	N/A	CT/55039 & MODIFY BLUNT ENDS	NONE	NONE
	14	03467	10669	LAWRENCE	HWY. 117	1	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	CT/55039 & MODIFY BLUNT ENDS	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2-5
	15	05643	10893	CRAIGHEAD	HWY. 135	3	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	N/A	PT/55035 AND BRIDGE END TERMINAL	55064	BENTS 1-4
	16	05642	10893	CRAIGHEAD	HWY. 135	3	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	N/A	PT/55035 AND BRIDGE END TERMINAL	55064	BENTS 1-4
	17	03009	10504	POINSETT	HWY. 163	4	R/C SLAB	HYDRODEMOLITION	55062	NO	N/A	CT/55039 & MODIFY BLUNT ENDS	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENT 2
	18	03008	10504	POINSETT	HWY. 163	4	R/C SLAB	HYDRODEMOLITION	55062	NO	N/A	CT/55039 & MODIFY BLUNT ENDS	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2 & 3
⚠1	~~19~~	~~06150~~	~~100107~~	~~POINSETT~~	~~HWY. 14~~	~~13~~		~~POLYMER OVERLAY~~	~~N/A~~	~~NO~~	~~N/A~~	~~PT/55035~~	~~55064~~	~~BENTS 1-4~~
	20	00830	Unknown	GREENE	HWY. 90	4	R/C SLAB	HYDRODEMOLITION	55062	NO	N/A	CT/55039 AND MODIFY BLUNT ENDS AND ⚠1 BRIDGE END TERMINAL	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 1-5
⚠1	~~21~~	~~06253~~	~~100226~~	~~GREENE~~	~~HWY. 34~~	~~3~~		~~POLYMER OVERLAY~~	~~N/A~~	~~NO~~	~~N/A~~	~~NONE - DRILL NEW THRIE BEAM INTO EXIST TRANSITION RAIL~~	~~N/A~~	~~N/A~~
	22	03662	10666	CLAY	HWY. 90	1	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	CT/55039 AND MODIFY BLUNT ENDS AND ⚠1 BRIDGE END TERMINAL	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2 & 3
	23	03663	10666	CLAY	HWY. 90	1	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	CT/55039 AND MODIFY BLUNT ENDS AND ⚠1 BRIDGE END TERMINAL	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2 & 3
	24	03664	10666	CLAY	HWY. 90	1	VOIDED CONCRETE SLAB	HYDRODEMOLITION	55063	NO	N/A	CT/55039 & MODIFY BLUNT ENDS	NO STD. DWG. - USE TYPE A JOINT REHAB AND SP	BENTS 2-5
⚠1	~~25~~	~~07038~~	~~100566~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
⚠1	~~26~~	~~07039~~	~~100566~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
⚠1	~~27~~	~~07040~~	~~100566~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
⚠1	~~28~~	~~07041~~	~~100566~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
⚠1	~~29~~	~~06972~~	~~100478~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
⚠1	~~30~~	~~06971~~	~~100478~~	~~GREENE~~	~~HWY. 412~~	~~9~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
	31	03118	10594	GREENE	HWY. 135	4	STEEL I-BEAM	HYDRODEMOLITION	55060	NO	N/A	CT/55039 & MODIFY BLUNT ENDS; AND BRIDGE END TERMINALS AT SELECT LOCATIONS	55064	BENTS 1-4
⚠1	~~32~~	~~06501~~	~~R00071~~	~~GREENE~~	~~HWY. 49~~	~~2~~		~~POLYMER OVERLAY~~	~~N/A~~	~~NO~~	~~N/A~~	~~NONE - DRILL NEW THRIE BEAM INTO EXIST TRANSITION~~	~~55064~~	~~BENTS 1 & 4~~
⚠1	~~33~~	~~06461~~	~~100282~~	~~MISSISSIPPI~~	~~HWY. 158~~	~~1~~		~~POLYMER OVERLAY~~	~~N/A~~	~~YES~~	~~N/A~~	~~NONE~~	~~N/A~~	~~N/A~~

⚠1 REMOVED POLYMER OVERLAY SITES FROM JOB AND REVISED NOTE FOR BRIDGE NOS. 05006, 05005, 05217, 00830, 03662 & 03663.
BY: ERBB CHECKED BY: SFH 3-31-2021

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14501
STEPHEN F. HARPER
3/30/2021

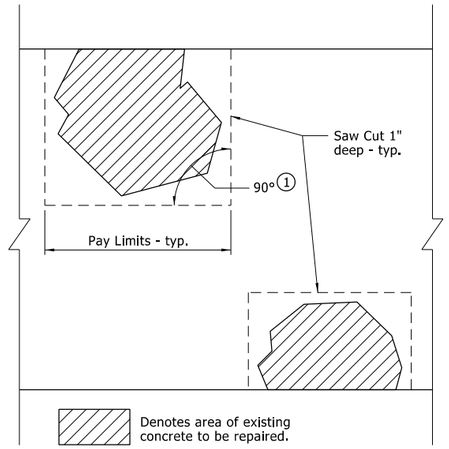
BRIDGE ENGINEER
PRINT DATE: 3/30/2021

BRIDGE PRESERVATION DATA TABLE
DISTRICT 10
ROUTE VARIES SECTION VARIES
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

DRAWN BY: AAS DATE: 12/2020 FILENAME: B012378_DT10.dgn
CHECKED BY: MKL DATE: 12/2020
DESIGNED BY: SFH DATE: 12/2020 SCALE: NONE
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REVISED DATE:

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				JOB NO.		012378	35	37
				(1) 03858,05186,05006,05005,03467-SPALL REPAIR-63933				

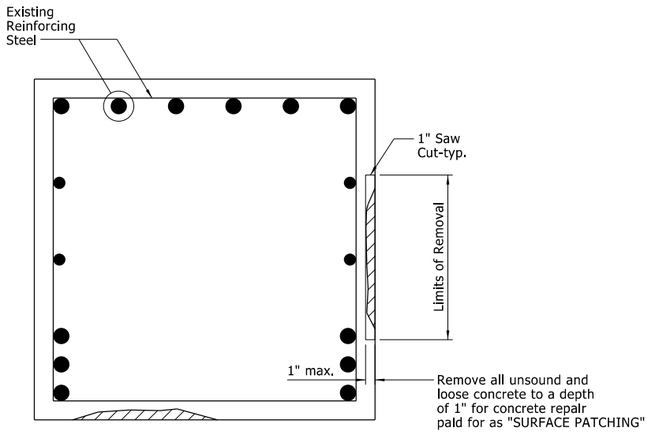


(1) Saw cut existing concrete 1" deep to neat lines to obtain a rectangular area.

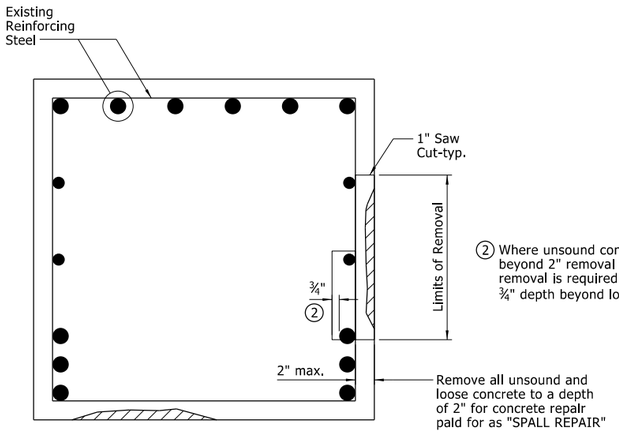
SAW CUT DETAIL

CONCRETE REPAIR NOTES

1. Concrete repairs shall be performed in accordance with Special Provision Job. No. 012378 "CONCRETE REPAIRS".
2. Limits shown are not exact areas and locations but are representative of potential spall repair areas to be encountered. The final limits and locations shall be determined by the Engineer.
3. Concrete repairs shall consist of removing all unsatisfactory concrete described as follows: any loose, delaminated, unsound, severely spalled or deteriorated concrete and replacing with the approved material listed in Special Provision Job. No. 012378 "CONCRETE REPAIRS".
4. Saw cut around all damaged areas as shown on the "SAW CUT DETAIL". Exercise caution during the saw cutting operation. Any reinforcement damaged during the saw cutting will be replaced at the contractors expense.
5. Concrete repairs shall be paid for under the item "SURFACE PATCHING" when the depth of repair is 1" or less.
6. Concrete repairs shall be paid for under the item "SPALL REPAIR" when the depth of the repair exceeds 1". The minimum depth of spall repair shall extend to the face of transverse reinforcing steel in the cap or to sound concrete. The exposed reinforcing steel shall be blast cleaned prior to applying the concrete mortar.
7. The surface of the concrete for Surface Patching and Spall Repair be prepared in accordance with the repair mortar manufacturer's recommendations.
8. Areas to be repaired under the item "SURFACE PATCHING" shall utilize "Rapid Set Mortar Mix" manufactured by CTS Cement. The contractor may submit an alternate product for review and approval.
9. Areas to be repaired under the item "SPALL REPAIR" shall utilize either "Rapid Set Mortar Mix" or "Rapid Set Concrete Mix" manufactured by CTS Cement. The appropriate product shall be determined by the actual depth of repair encountered. The contractor may submit an alternate product for approval.
10. After all concrete repairs are completed, the repaired concrete surfaces shall receive a Class 2 Protective Surface Treatment. The cost of the Class 2 Treatment shall be included in the item "SURFACE PATCHING" or "SPALL REPAIR".



SURFACE PATCH DETAIL



(2) Where unsound concrete is still present beyond 2" removal depth, further concrete removal is required to achieve a minimum ¾" depth beyond longitudinal reinforcing.

SPALL REPAIR DETAIL

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14501
STEPHEN F. HARPER

3/3/2021

BRIDGE ENGINEER
PRINT DATE: 3/3/2021

SPALL REPAIR DETAILS

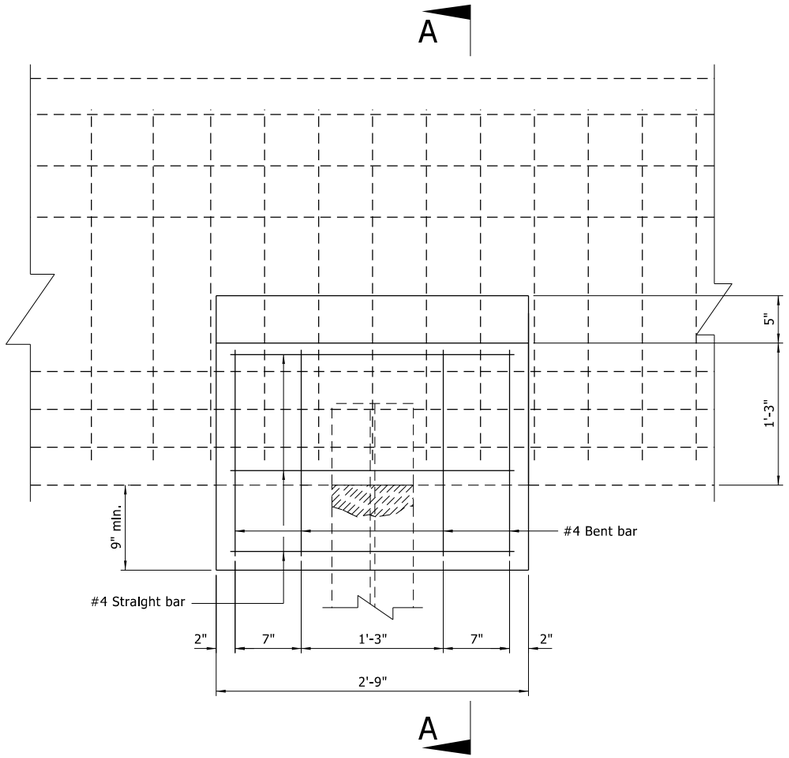
ROUTE SECTION

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

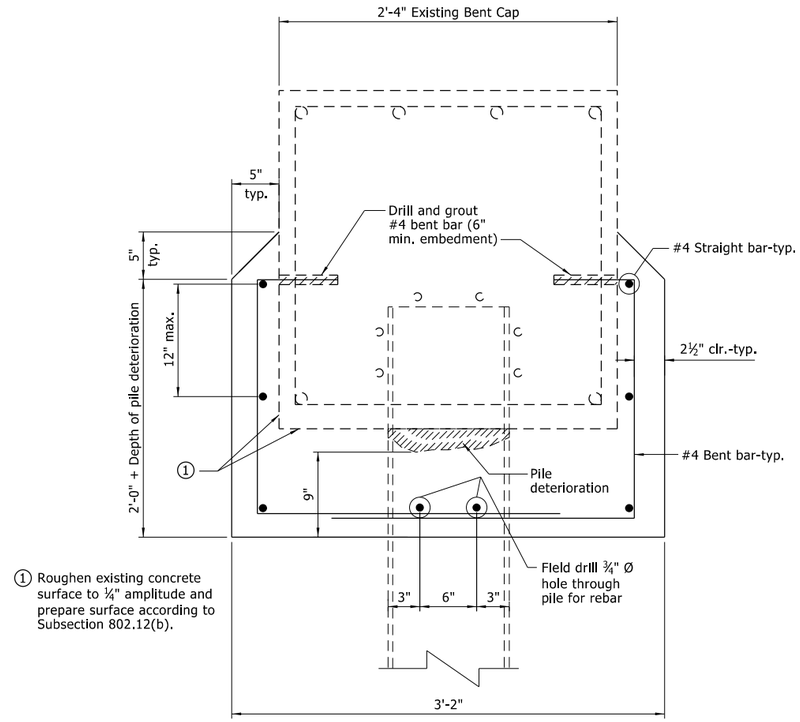
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CHECKED BY: SFH DATE: 12/2020
DESIGNED BY: KDH DATE: 12/2020
BRIDGE NO. 03858, 05186, 05006, 05005, 03467
DRAWING NO. 63933
FILENAME: B012378_SPALL.dgn
SCALE: NONE

Kenneth.Holmes 3/3/2021 10:02:21 AM
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REVISED DATE:

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				6	ARK.			
				JOB NO.		012378	36	37
				(1)	03467 - PILE REPAIR - 63934			



ELEVATION



SECTION A-A

(1) Roughen existing concrete surface to ¼" amplitude and prepare surface according to Subsection 802.12(b).

GENERAL NOTES

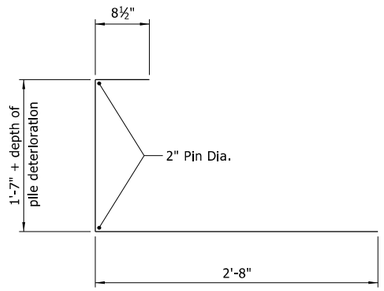
CONCRETE
Concrete shall be Class "S" with a minimum 28 day compressive strength f'c = 3,500 psi and shall be poured in the dry.

All exposed corners shall be chamfered ¾" unless otherwise noted.

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.

#4 bent bars shall be installed into drilled holes and secured using an approved non-shrink grout or resin anchoring system listed on the QPL. The diameter of the drilled holes and the installation procedures shall be as recommended by the grout manufacturer or the resin anchoring system manufacturer.

The cost of all materials, labor equipment, and incidentals to repair the deteriorated pile to cap connections shall be included in the item "PILE REPAIR".

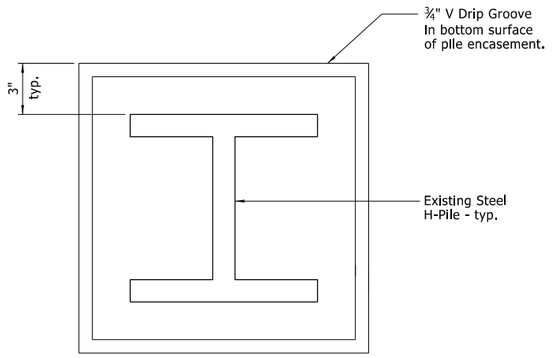


#4 BENT BAR

MATERIAL LIST

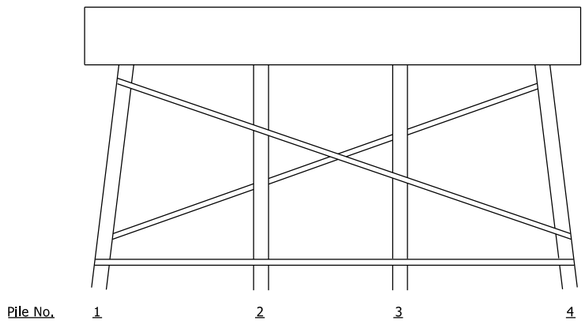
8 - #4 x 4'-0" + 2 x Beam deterioration - Bent Bars

8 (min.) - #4 x 2'-5" Straight Bars



DRIP V-GROOVE DETAIL

Note:
Pile repair locations include:
Bent 2 - Pile 1, Bent 3 - Pile 1, Bent 3 - Pile 4
Bent 4 - Pile 1, and Bent 4 - Pile 4



PILE REPAIR LOCATION KEY
(Looking Forward)

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14501
STEPHEN F. HARPER
3/3/2021

BRIDGE ENGINEER
PRINT DATE: 3/3/2021

PILE REPAIR DETAILS

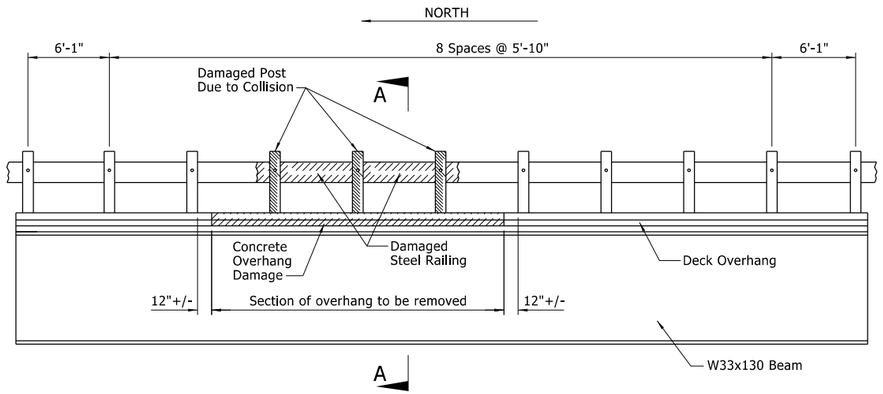
ROUTE SECTION

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

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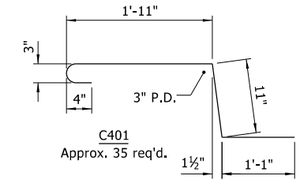
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REVISED DATE:

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				JOB NO.		012378	37	37
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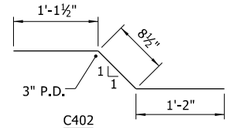


SPAN 2 - LEFT ELEVATION

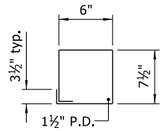
Looking East



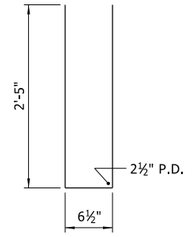
C401
Approx. 35 req'd.



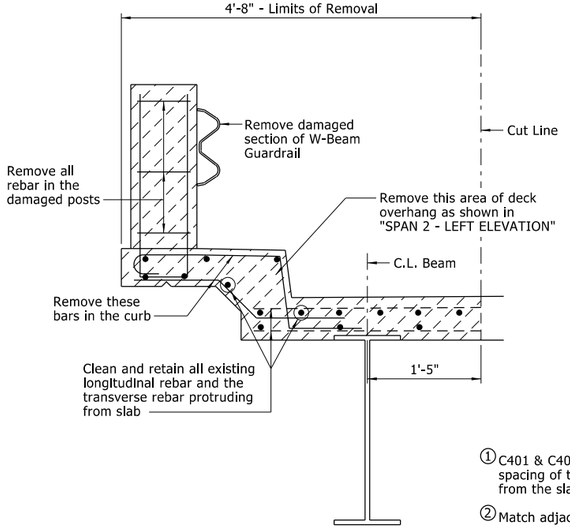
C402
Approx. 35 req'd.



P301
9 req'd.

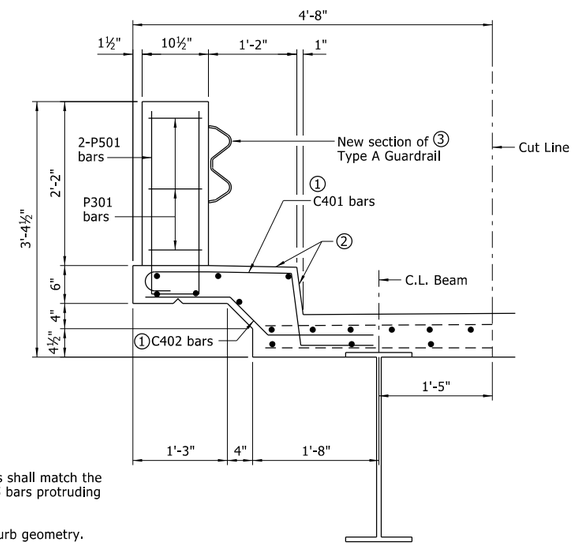


P501
6 req'd.



SECTION A-A

REMOVAL DETAILS



SECTION A-A

REPLACEMENT DETAILS

① C401 & C402 bars shall match the spacing of the #5 bars protruding from the slab.

② Match adjacent curb geometry.

③ For details of Type A guardrail and splice details, see Std. Dwg. GR-6. For guardrail material specifications, see Section 617.

GENERAL NOTES

CONCRETE
Concrete shall be Class "S(AE)" with a minimum 28 day compressive strength f'c = 4,000 psi and shall be poured in the dry.

All exposed corners shall be chamfered ¾" unless otherwise noted.

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.

Any additional reinforcing required by the Engineer in the field that is to be doweled into existing concrete shall be installed into drilled holes and secured using an approved non-shrink grout or resin anchoring system listed on the QPL. The diameter of the drilled holes and the installation procedures shall be as recommended by the grout manufacturer or the resin anchoring system manufacturer.

The cost of all materials, labor equipment, and incidentals to repair the damaged portion of railing and deck overhang shall be included in the item "RAILING REPAIR".

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No.14501
STEPHEN F. HARPER

3/1/2021

BRIDGE ENGINEER
PRINT DATE: 3/1/2021

RAILING REPAIR DETAILS

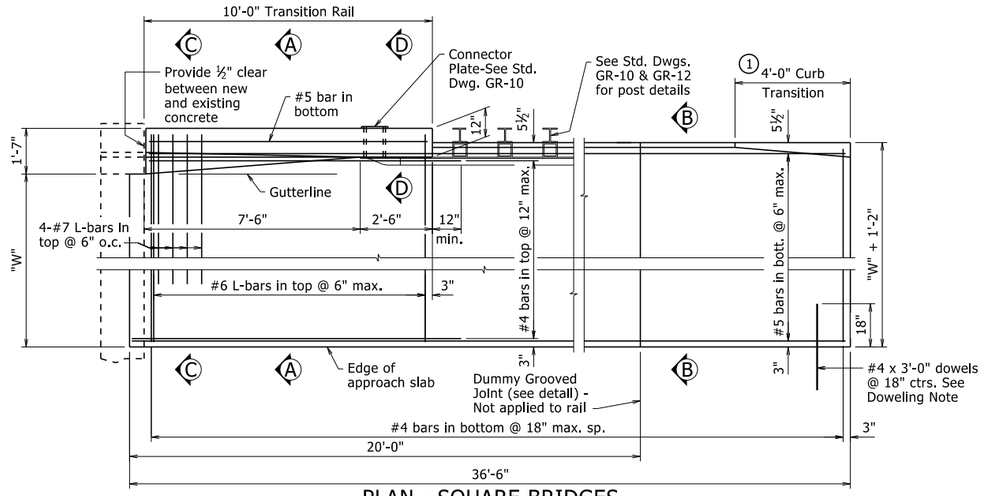
ROUTE SECTION

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

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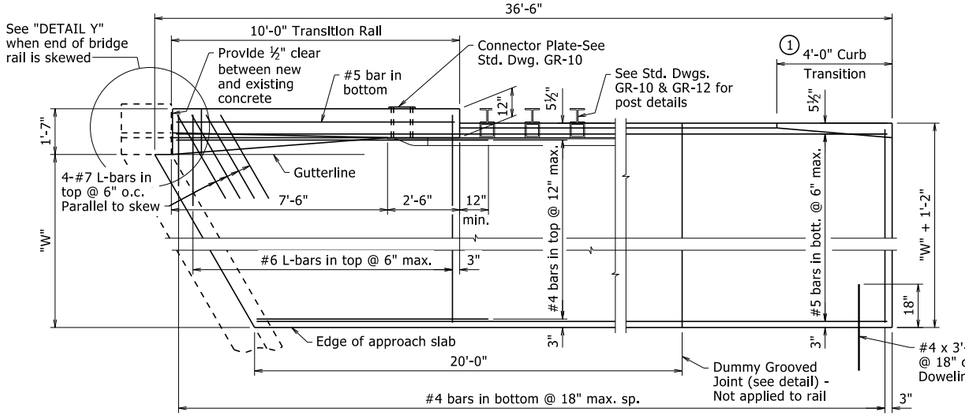
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11/7/19				6	ARK.			
				JOB NO.				
				① - TYPE PT GUTTERS - 55035				



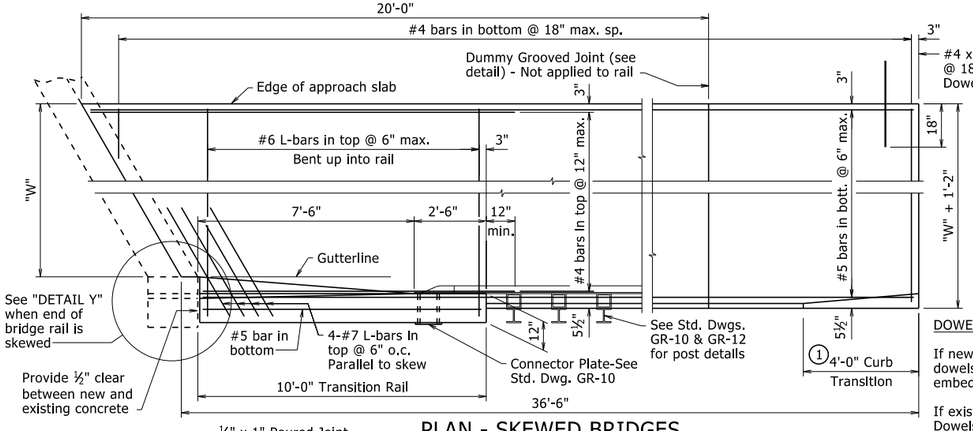
PLAN - SQUARE BRIDGES

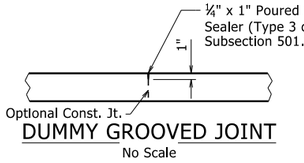
⅜" = 1'-0"



PLAN - SKEWED BRIDGES

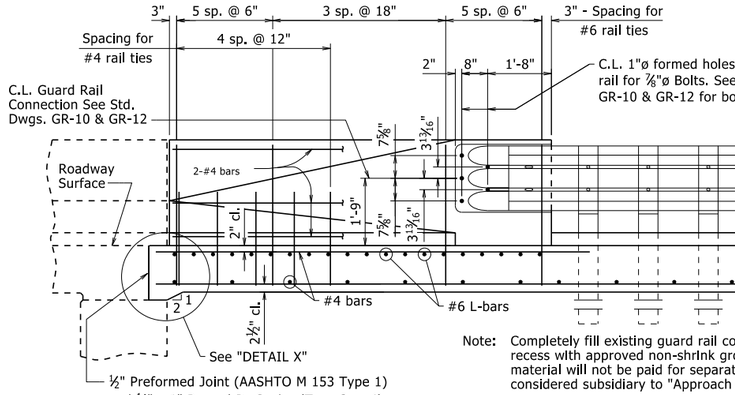
⅜" = 1'-0"





DUMMY GROOVED JOINT

No Scale



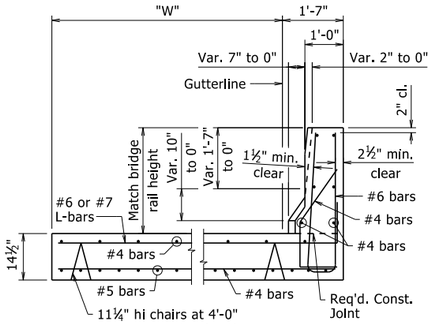
Note: Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to "Approach Gutters".

LONGITUDINAL SECTION THRU GUTTER

½" = 1'-0"

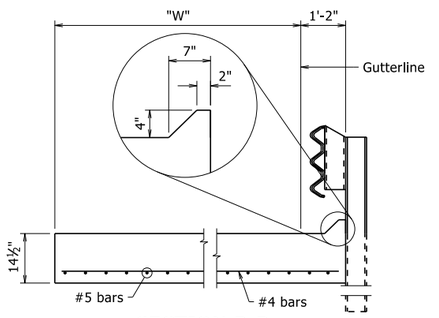
① Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.



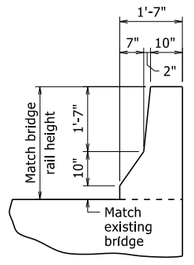
SECTION A-A

½" = 1'-0"



SECTION B-B

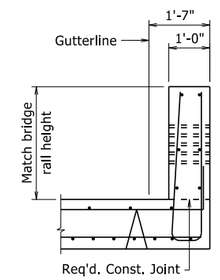
½" = 1'-0"



SECTION C-C

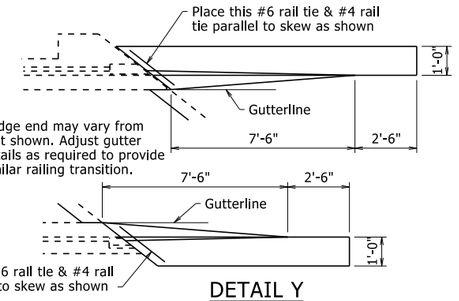
At End of Transition Rail

½" = 1'-0"



SECTION D-D

½" = 1'-0"



DETAIL Y

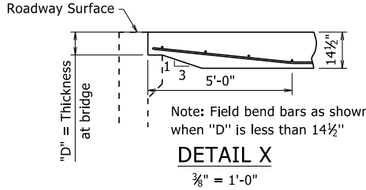
No Scale

DOWELING NOTES

If new approach slab is used: Place dowels into approach slab using 18" embedment.

If existing approach slab is retained: Dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to "Approach Gutters".

Dowel bars, if required, will not be paid for separately, but will be considered subsidiary to other pay items.

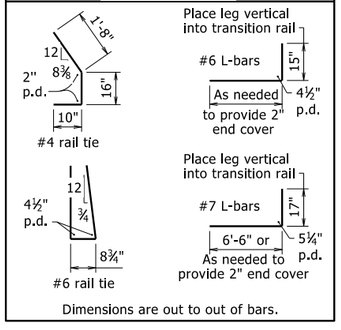


Note: Field bend bars as shown when "D" is less than 14½"

DETAIL X

⅜" = 1'-0"

BENDING DIAGRAMS



Dimensions are out to out of bars.

1 Revised and Redrawn. By: TMG
Checked By: CRE 11/7/2019

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

When this Standard Drawing is used as a retrofit for an existing bridge and an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.

APPROX. QUANTITIES FOR ONE SQUARE 36'-6" APPROACH GUTTER

(For Information Only)

Concrete (cu. yd.)	("W" x 1.63) + 3.24
Reinforcing Steel (lb.)	("W" x 129) + 461

Variables: Units of "W" and "L" are in feet.

"W" = Distance from gutterline to edge of shoulder or edge of approach slab. "W" shall not be less than 3'-0" unless approach gutter is doweled into an approach slab or concrete pavement.

STANDARD DETAILS FOR TYPE 'PT' APPROACH GUTTERS (BRIDGES WITH CONCRETE PARAPET RAILING)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

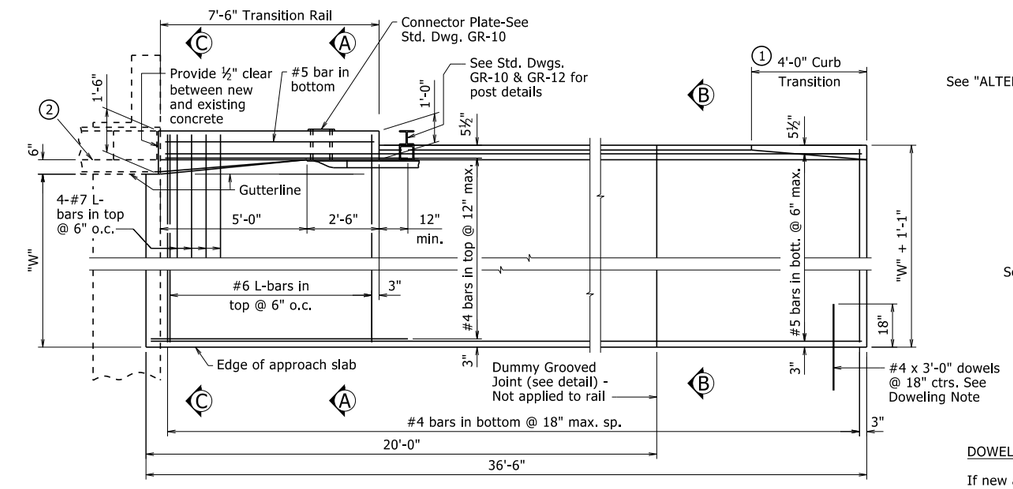
LITTLE ROCK, ARK.

DRAWN BY:	KDH	DATE:	2/27/2014	FILENAME:	b55035.dgn
CHECKED BY:	KWY	DATE:	2/27/2014	SCALE:	AS NOTED
DESIGNED BY:	STD	DATE:	-		

DRAWING NO. 55035

PRINT DATE: 11/20/2019

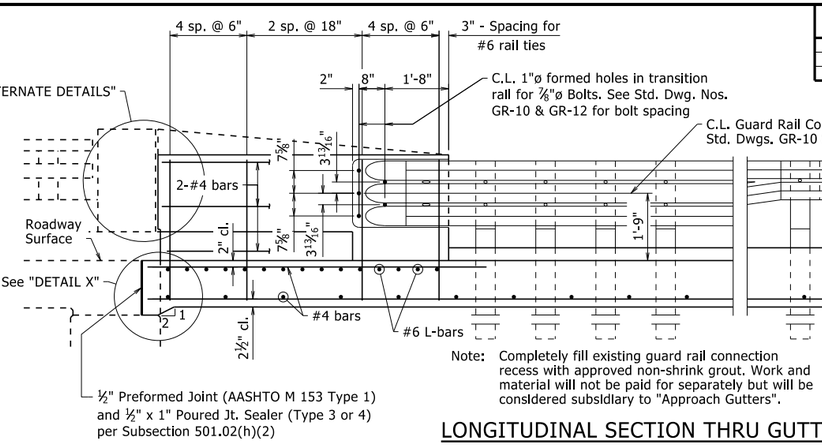
DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
11/7/19				6	ARK.			
				JOB NO.				
				1	- TYPE AT GUTTERS - 55036			



PLAN - SQUARE BRIDGES

⅜" = 1'-0"

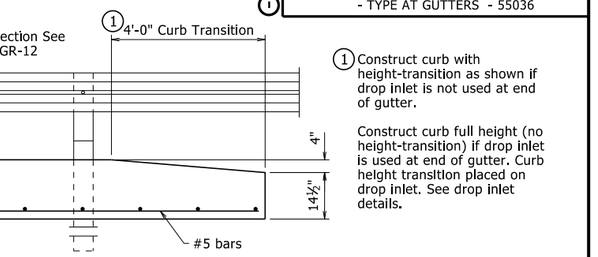
(2) Front face of concrete wall (Type A Rail) or front face of metal pipe or tubing (Types B, C, D or E Rail).



LONGITUDINAL SECTION THRU GUTTER

½" = 1'-0"

Note: Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to "Approach Gutters".



(1) Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

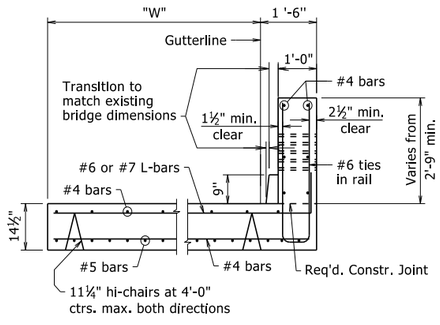
Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

DOWELING NOTES

If new approach slab is used: Place dowels into approach slab using 18" embedment.

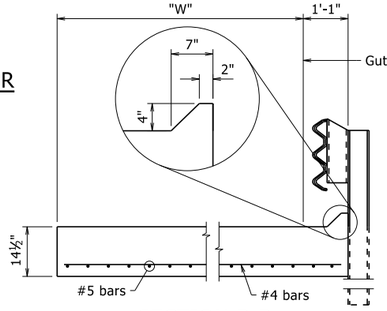
If existing approach slab is retained: Dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to "Approach Gutters".

Dowel bars, if required, will not be paid for separately, but will be considered subsidiary to other pay items.



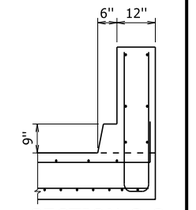
SECTION A-A

½" = 1'-0"



SECTION B-B

½" = 1'-0"



SECTION C-C

At End of Transition Rail

½" = 1'-0"

GENERAL NOTES

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

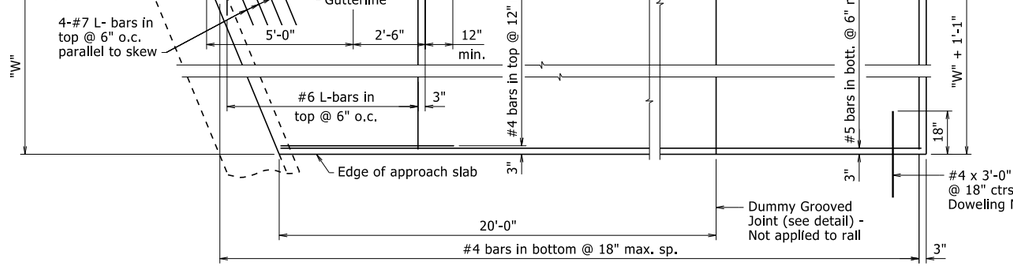
Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

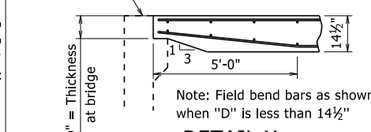
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

When this Standard Drawing is used as a retrofit for an existing bridge and an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.



PLAN - SKEWED BRIDGES

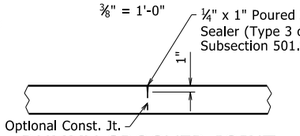
⅜" = 1'-0"



Note: Field bend bars as shown when "D" is less than 14½"

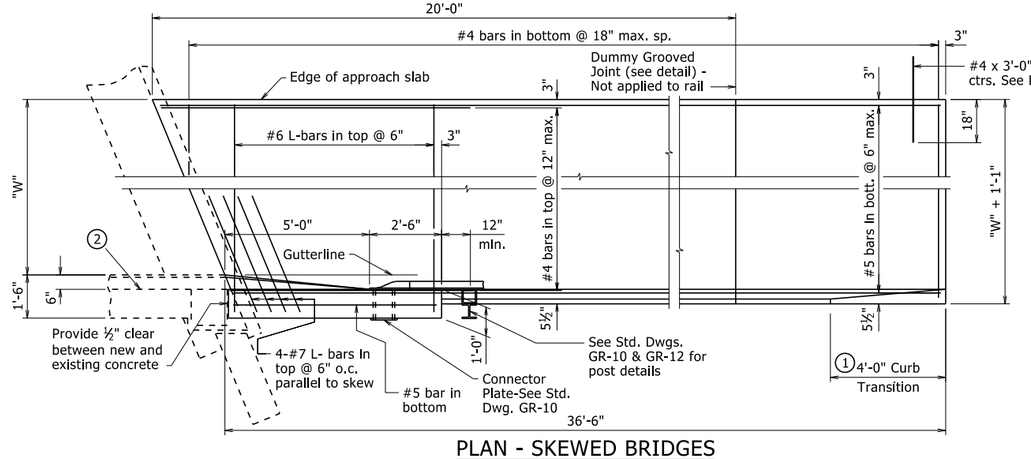
DETAIL X

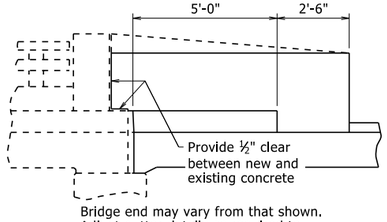
⅜" = 1'-0"



DUMMY GROOVED JOINT

No Scale



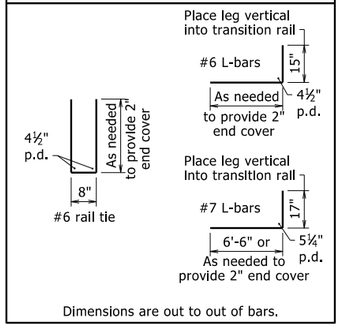


Bridge end may vary from that shown. Adjust gutter details as required to provide similar railing transition.

ALTERNATE DETAILS

NO SCALE

BENDING DIAGRAMS



Dimensions are out to out of bars.

1 Revised and Redrawn. By: TMG
Checked By: CRE 11/7/2019

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

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APPROX. QUANTITIES FOR ONE SQUARE 36'-6" APPROACH GUTTER

(For Information Only)

Concrete (cu. yd.)	("W" x 1.65) + 2.80
Reinforcing Steel (lb.)	("W" x 128.1) + 318.5

Variables: Units of "W" are in feet.

"W" = Distance from gutterline to edge of shoulder or edge of approach slab. "W" shall not be less than 3'-0" unless approach gutter is doweled into an approach slab or concrete pavement.

STANDARD DETAILS FOR TYPE 'AT' APPROACH GUTTERS (BRIDGES WITH 6" CURBS & TYPE A, B, C, D OR E RAILING)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

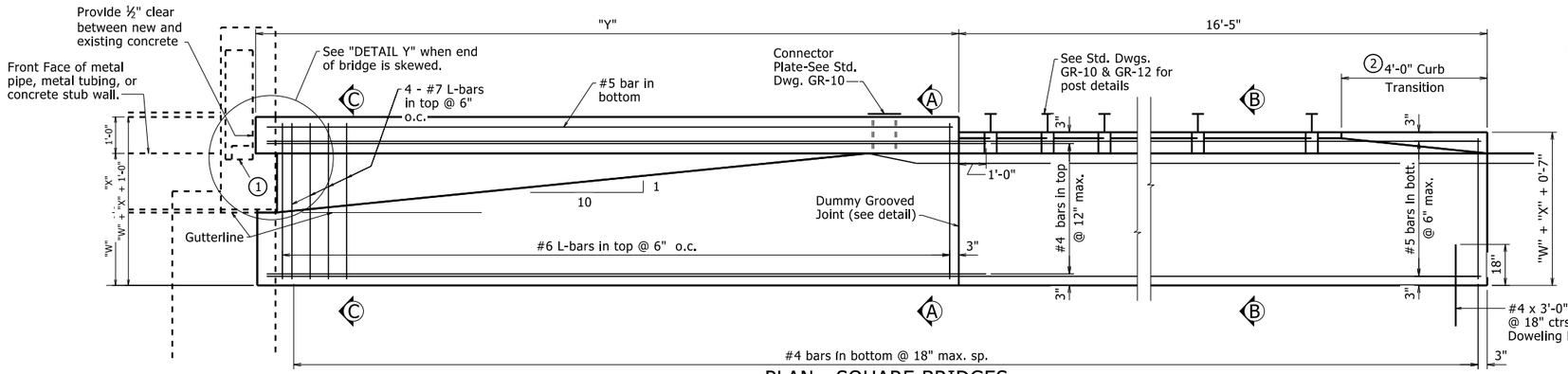
DRAWN BY:	KDH	DATE:	2/27/2014	FILENAME:	b55036.dgn
CHECKED BY:	KWY	DATE:	2/27/2014	SCALE:	AS NOTED
DESIGNED BY:	STD.	DATE:	-		

DRAWING NO. 55036

PRINT DATE: 11/20/2019

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

(1) - TYPE AT2 GUTTERS - 55038



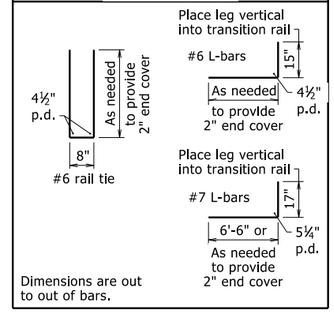
PLAN - SQUARE BRIDGES

½" = 1'-0"

(2) Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.

BENDING DIAGRAMS



Dimensions are out to out of bars.

DOWELING NOTES

If new approach slab is used: Place dowels into approach slab using 18" embedment.

If existing approach slab is retained: Dowels shall be drilled and grouted 18" into existing slab. At the Contractor's option, existing dowels may be retained, cleaned and incorporated into new gutters. Work for drilling and grouting, or retaining and cleaning will not be paid for separately but will be considered subsidiary to "Approach Gutters".

Dowel bars, if required, will not be paid for separately, but will be considered subsidiary to other pay items.

APPROX. QUANTITIES FOR ONE SQUARE APPROACH GUTTER

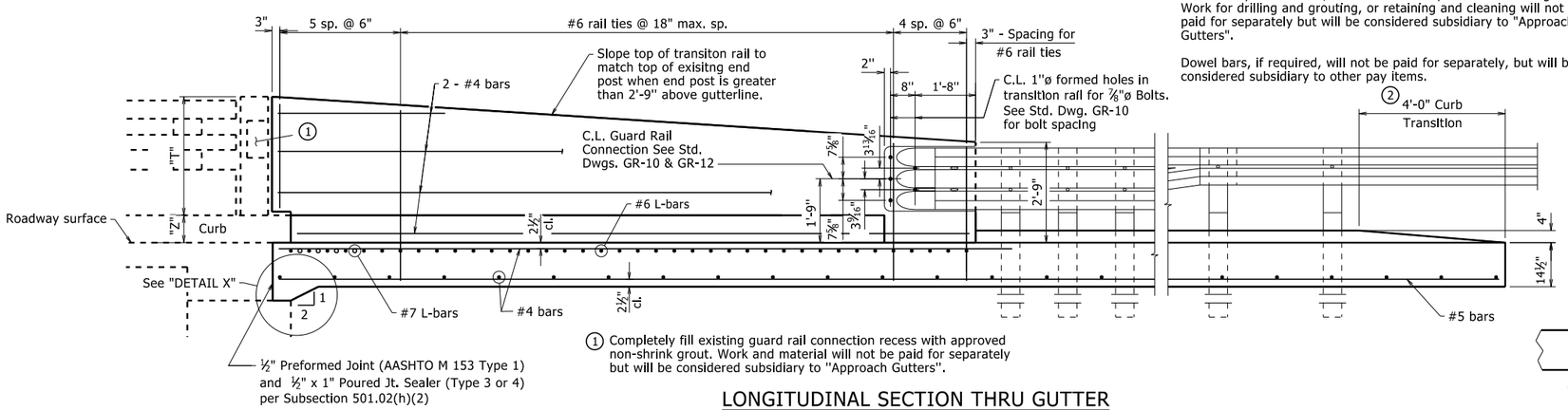
(For Information Only)

Concrete (cu. yd.)	("W" x 0.87) + ("X" x 1.83) + ("W" x "X" x 0.45) + ("Z" x "X" x 0.185) + ("T" x "X" x 0.185) + ("X"^2 x 0.45) + ("Z" x "X"^2 x 0.185) + ("T" x 0.06) + ("Z" x 0.06) + 0.79
Reinforcing Steel (lb.)	("W" x 68.63) + ("X" x 254.82) + ("T" x 14.54) + ("Z" x 14.54) + ("W" x "X" x 62) + ("T" x "X" x 10.06) + ("Z" x "X" x 10.06) + ("X"^2 x 62) + 135.72

VARIABLES: "T" = Height of the end post above the top of curb.
"W" = Distance from gutterline to edge of shoulder or edge of approach slab, if present.
"X" = Distance from gutterline to face of existing end post.
"Y" = "X" x 10 + 3.0
"Z" = Height of bridge curb.

Units for variables are in feet.

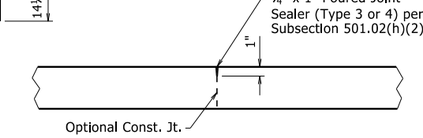
"W" + "X" shall not be less than 3'-0" unless approach gutter is doweled into an approach slab or concrete pavement.



(1) Completely fill existing guard rail connection recess with approved non-shrink grout. Work and material will not be paid for separately but will be considered subsidiary to "Approach Gutters".

LONGITUDINAL SECTION THRU GUTTER

⅜" = 1'-0"



DUMMY GROOVED JOINT

No Scale

GENERAL NOTES

This drawing shall only be used for thrie-beam retrofit of existing bridge rails.

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

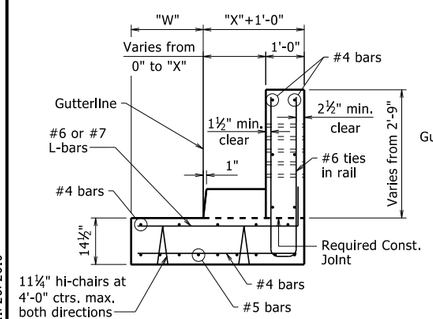
Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters."

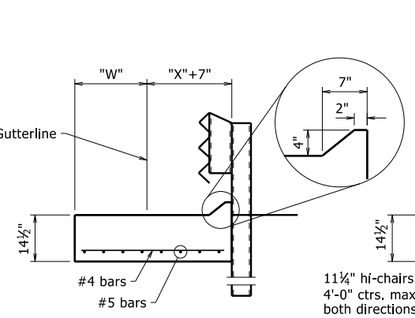
All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

If an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.



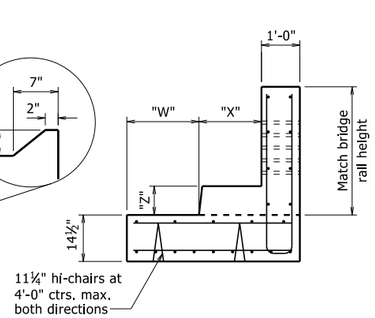
SECTION A-A

½" = 1'-0"



SECTION B-B

½" = 1'-0"

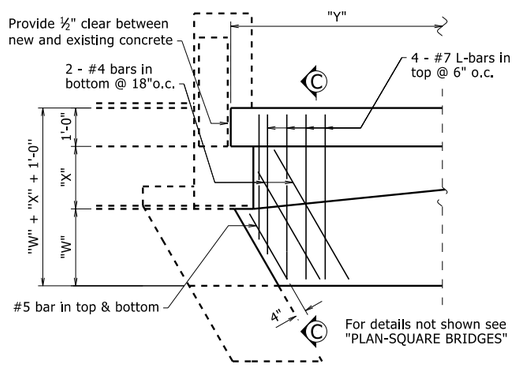


SECTION C-C

At end of Transition Rail

½" = 1'-0"

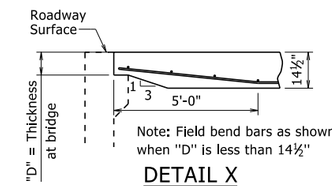
NOTE: Bridge end may vary from that shown. Adjust gutter details as required to provide similar rail transition.



NOTE: Reinforcing Steel is similar as shown for opposite side.

DETAIL Y

½" = 1'-0"



Note: Field bend bars as shown when "D" is less than 14½"

DETAIL X

⅜" = 1'-0"



BRIDGE ENGINEER

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STANDARD DETAILS FOR TYPE 'AT2' APPROACH GUTTERS (BRIDGES WITH CURBS & TYPE A, B, C, D, OR E RAILING)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

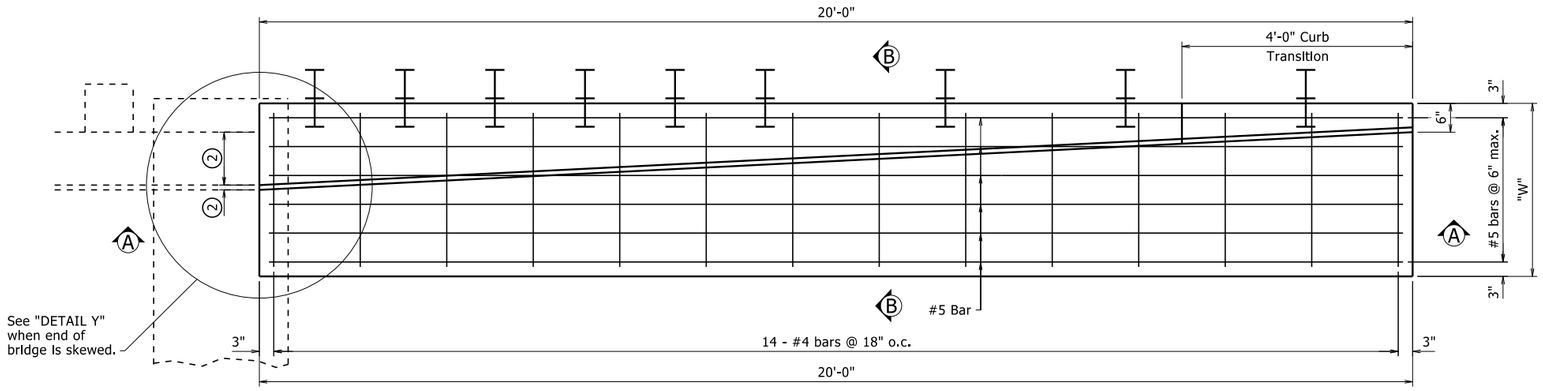
DRAWN BY: TMG DATE: 11/7/2019 FILENAME: b55038.dgn
CHECKED BY: CRE DATE: 11/7/2019 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -

DRAWING NO. 55038

PRINT DATE: 11/20/2019

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				

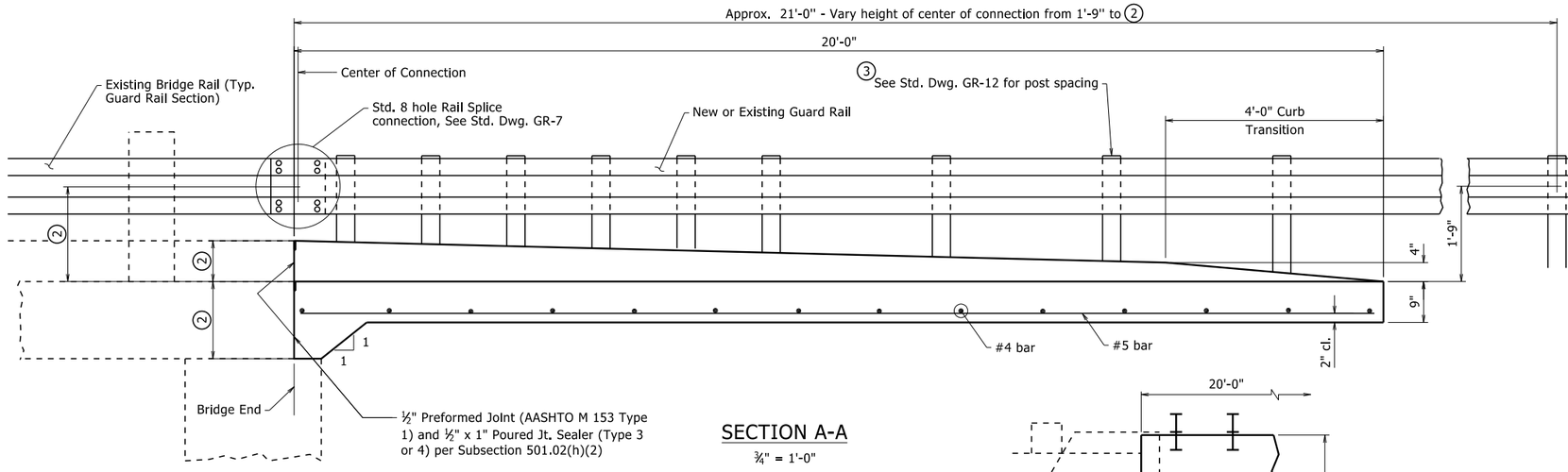
(1) - TYPE CT GUTTERS - 55039



PLAN OF APPROACH GUTTER (1)

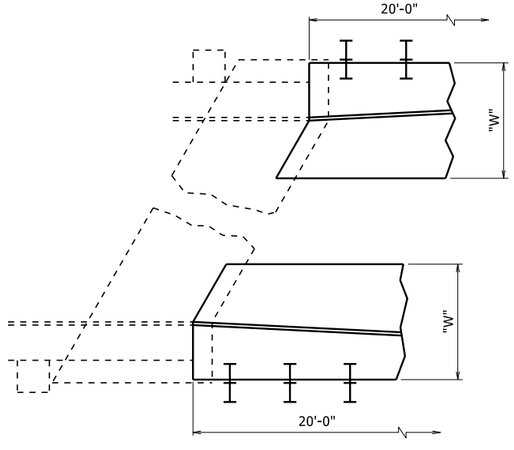
¾" = 1'-0"

Remove the existing terminal section as needed and attach a new guard rail to the existing guard rail on the bridge.



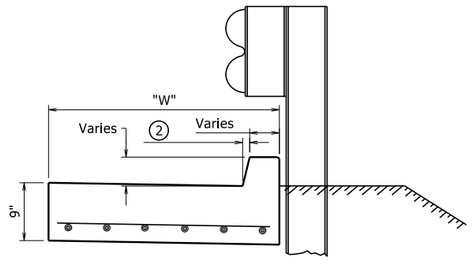
SECTION A-A

¾" = 1'-0"



DETAIL Y

No Scale



SECTION B-B

1" = 1'-0"

APPROXIMATE QUANTITIES FOR ONE SQUARE 20'-0" APPROACH GUTTER

Concrete (Cu. Yd.)	("W" x 0.56) + 0.41
Reinforcing Steel (lb.)	("W" x 50.38) - 3.11

Variables: Units of "W" are in feet.

(1) Square approach gutter is shown. Modify approach gutter as necessary to accommodate a bridge on a skew. See "DETAIL Y."

(2) Match existing conditions at bridge end.

(3) Vary post height, as necessary, to match height of existing w-beam bridge rail.

GENERAL NOTES

This drawing shall only be used as a retrofit of an existing bridge end where an existing curb creates a snag point.

Concrete shall be Class S or S(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

Approach gutters will be measured and paid for in accordance with Section 504.

Preformed Joint and Poured Joint Sealer included in the item "Approach Gutters".

All longitudinal lines within the limits of horizontal curves shall be on curves concentric to C.L. Bridge. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial lines to C.L. Bridge.

If an existing drop inlet is located within the Plan of the approach gutter, adjust the reinforcing as needed to facilitate construction of the approach gutter, unless otherwise noted.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

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STANDARD DETAILS FOR TYPE 'CT' APPROACH GUTTERS (BRIDGES WITH CURB)

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY: TMG DATE: 11/7/2019 FILENAME: b55039.dgn
CHECKED BY: CRE DATE: 11/7/2019 SCALE: AS NOTED
DESIGNED BY: STD. DATE: -

DRAWING NO. 55039

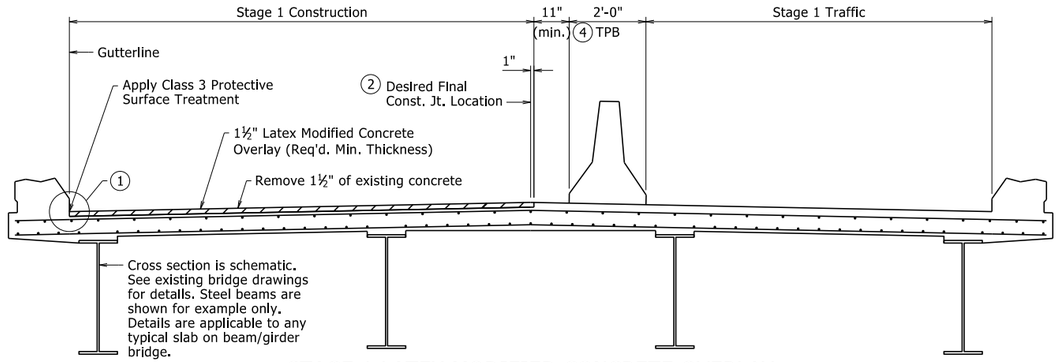
PRINT DATE: 11/25/2019

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1/9/2020				6	ARK.			
6/25/2020				JOB NO.				
				①	HYDRO/LMC OVERLAY - 55060			

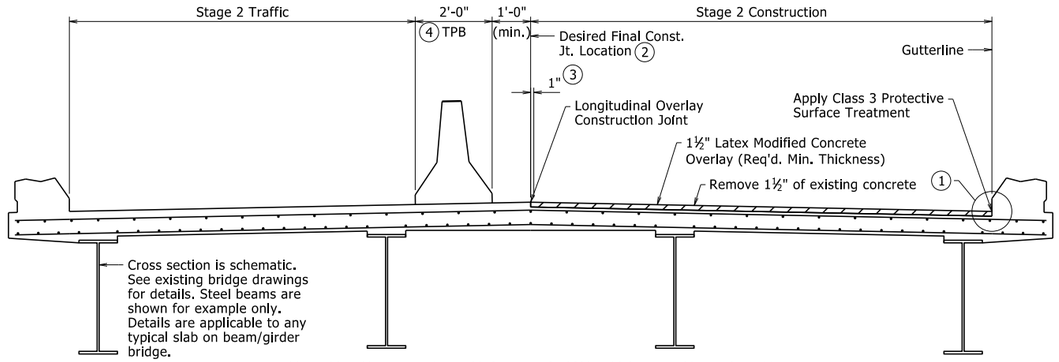
Stages of construction and traffic refer to Bridge Rehabilitation Work Zones as shown in Maintenance of Traffic Details. Numbering is shown for general purposes. See Roadway Plans for specific sequencing.

The minimum overlay placement length shall be a span length on simple span bridges and to an existing slab joint on continuous span bridges, unless otherwise approved by the Engineer. Refer to existing bridge drawings.

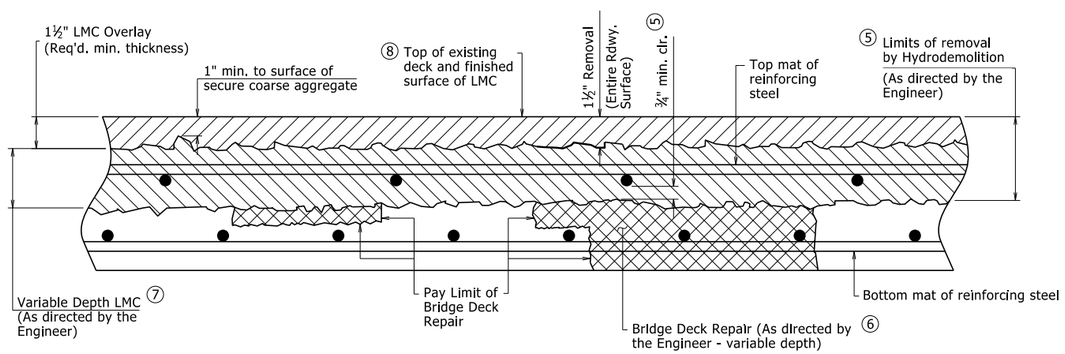
NOTE: Details shown are typical for staged construction. When full width rehabilitation of a bridge deck is possible, adjust hydrodemolition and latex modified concrete overlay operations and details accordingly.



STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



STAGE 2 LATEX MODIFIED CONCRETE OVERLAY



DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

⚠1 ⑤ Removal of unsound concrete beyond 1½" below the original surface shall be at the direction of the Engineer. If the bond between existing concrete and the top mat of reinforcing steel is destroyed, then the concrete shall be removed to a minimum of ¾" clearance below the bar. This removal shall be subsidiary to the item Job SP "Hydrodemolition - Class _".

⑥ Areas requiring additional repair, as determined by the Engineer, shall be repaired in accordance with the Job SP "Bridge Deck Repair for Latex Modified Concrete Overlays".

⑦ Depth varies to achieve minimum clearance below top mat of reinforcing steel, where required.

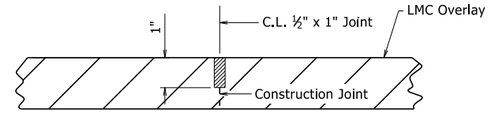
⑧ Finished surface of LMC Overlay shall match existing concrete deck surfaces unless increase is required to maintain minimum required LMC Overlay thickness and a minimum of 1½" cover to reinforcing steel and shear connectors.

① Hand tools shall be used as required to remove concrete adjacent to curbs, rails, and armored expansion joints.

② For staged construction, the final construction joint location shall be established by the Engineer to satisfy MOT and construction requirements. The desired location is at the C.L. Bridge, C.L. Lane, or Edge of Lane, but in no case shall be positioned in the line of a wheel path.

③ For staged construction, saw cut and remove 1" of initial Latex Modified Concrete Overlay when preparing surface for adjacent overlay.

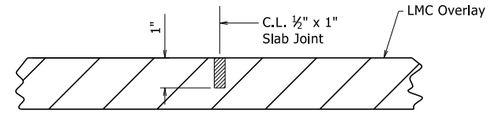
④ For staged construction, Temporary Precast Barrier (TPB) shall not be connected to the surface of the bridge deck. See Std. Dwg. TC-4 for additional details. Plastic drums shall be used in lieu of concrete barriers where shown in the Roadway Plans, see Std. Dwg. TC-3 for additional details.



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod will not be required. Joint Sealer shall be measured and paid for as LMC Overlay. Longitudinal construction joints shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the overlay. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL OVERLAY CONSTRUCTION JOINT DETAIL

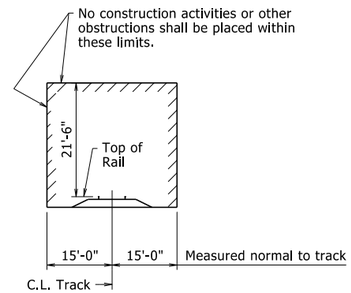
For Staged Construction



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod will not be required. Joint Sealer shall be measured and paid for as LMC Overlay. Slab joints shall extend from gutterline to gutterline. Slab joints shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the overlay. Slab joints shall be placed at all pouring sequence construction joints and are required at existing slab joint locations. Pouring sequence construction joints shall align between stages of construction. The joint sealer shall extend across the deck from gutterline to gutterline. Seal color shall be gray or other color similar to concrete.

TRANSVERSE OVERLAY JOINT DETAIL

For Continuous Span Bridges



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

See Job SP "Insurance, Construction, and Flagging Requirements on Railroad Property" for additional railroad construction requirements.

GENERAL NOTES:

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

Details shown are schematic. The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and fit the new work to the existing structure(s).

The operation or placement of vehicles, equipment, and/or materials on the subject bridge(s) necessary for the completion of this work shall be evaluated in accordance with Subsection 105.14. Certifications of the adequacy of all components for the anticipated loads shall address the capacity of the existing structure at all phases of this work.

Where applicable, construction activities for the existing bridge(s) over roadways and railroads shall be in accordance with the Job SP "Special Safety Requirements for Bridges" and as shown in "Minimum Construction Clearance Envelope".

⚠1 HYDRODEMOLITION: The entire roadway surface of the existing bridge deck and approach slabs and gutters, as applicable, shall receive hydrodemolition in accordance with the Job SP "Hydrodemolition - Class _" to a planned depth of 1½" below the existing bridge deck surface. Deteriorated concrete in the bridge deck below this depth shall be removed at the direction of the Engineer and up to the limits detailed. These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Hydrodemolition - Class _". Prior to hydrodemolition, cold milling of the concrete deck to a maximum depth of 1" will be allowed unless there will be a conflict with the existing reinforcing steel.

BRIDGE DECK REPAIR: After hydrodemolition, the deck surface shall be sounded and any areas of unsound, delaminated, or otherwise deteriorated concrete shall be removed at the direction of the Engineer and in accordance with Job SP "Bridge Deck Repair for Latex Modified Concrete Overlays".

LATEX MODIFIED CONCRETE OVERLAY: The entire area of the hydrodemolition shall receive a Latex Modified Concrete (LMC) Overlay to a planned depth of 1½" below the existing bridge deck surface in accordance with Job SP "Latex Modified Concrete Overlay". These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Latex Modified Concrete Overlay (1½" Thick)". Areas of the existing bridge deck removed at the direction of the Engineer to a depth greater than 1½" below the existing bridge deck surface shall be filled with LMC concurrent to the placement of the 1½" LMC Overlay. This area shall be measured and paid for in accordance with Job SP "Latex Modified Concrete Overlay".

GROOVED FINISH: The LMC Overlay surface of the bridge deck and approach slabs and gutters, as applicable, shall be given a grooved finish as specified for final finishing in Subsection 802.19 for Class 7 Grooved Bridge Roadway Surface Finish and in accordance with Job SP "Latex Modified Concrete Overlay".

PROTECTIVE SURFACE TREATMENT: The longitudinal joint between the LMC Overlay and the adjacent existing concrete curb or rail shall be given a Class 3 Protective Surface Treatment as specified in Section 803 and in accordance with Job SP "Latex Modified Concrete Overlay". The roadway surface of the completed LMC Overlay shall be given a Class 1 Protective Surface Treatment as specified in Section 803.

⚠2 JOINT REHABILITATION: After the placement of the LMC Overlay and if shown in the plans, the existing armored joints shall be given a poured silicone joint sealant as specified in Section 809 and as shown in "Poured Silicone Joint Seal Details" on Standard Drawing No. 55064, and the existing unarmored joints shall be given a Type A Joint Rehabilitation as specified in Section 509 and Job SP "Joint Rehabilitation for Bridge Decks". Backwall repair, if shown in the plans or as directed by the Engineer, shall be completed prior to installation of the joint sealant.

If shown in the plans, the existing neoprene strip seal shall be removed and replaced. See "Strip Seal Joint Details" on Standard Drawing No. 55064.

NOTE: When "Very Early Strength Latex Modified Concrete Overlay (1½" Thick)" is shown in the plans for a particular bridge, all reference to "Latex Modified Concrete Overlay" and "LMC" on this sheet shall be considered synonymous with "Very Early Strength Latex Modified Concrete Overlay" and "VESLMC" for that bridge. See Job SP "Very Early Strength Latex Modified Concrete Overlay" for additional information.

⚠1 Modified Hydrodemolition SP reference to include "- Class _". By: KWY, Checked by: SWP; 1/9/2020.

⚠2 Modified Joint Rehabilitation to include unarmored joints. By: KWY, Checked by: SWP; 6/25/2020.

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY SLAB ON BEAM/GIRDER BRIDGES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	KWY	DATE:	11/7/2019	FILENAME:	b55060.dgn
CHECKED BY:	SWP	DATE:	11/7/2019	SCALE:	None
DESIGNED BY:	STD.	DATE:	-------		

DRAWING NO. 55060

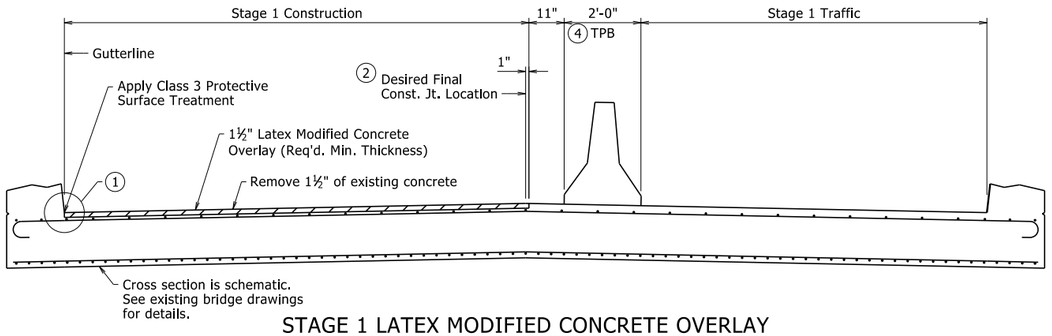
PRINT DATE: 11/4/2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
1/9/2020				6	ARK.			
6/25/2020				JOB NO.				
				①	HYDRO/LMC OVERLAY - 55062			

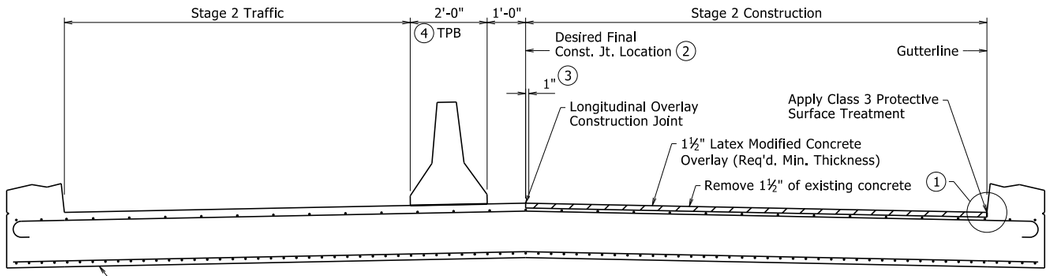
Stages of Construction refer to Bridge Rehabilitation Work Zones as shown in Maintenance of Traffic Details. Numbering is shown for general purposes. See Roadway Plans for specific sequencing.

The minimum overlay placement length shall be a span length on simple span bridges and to a slab joint on continuous span, unless otherwise approved by the Engineer. Refer to existing bridge drawings.

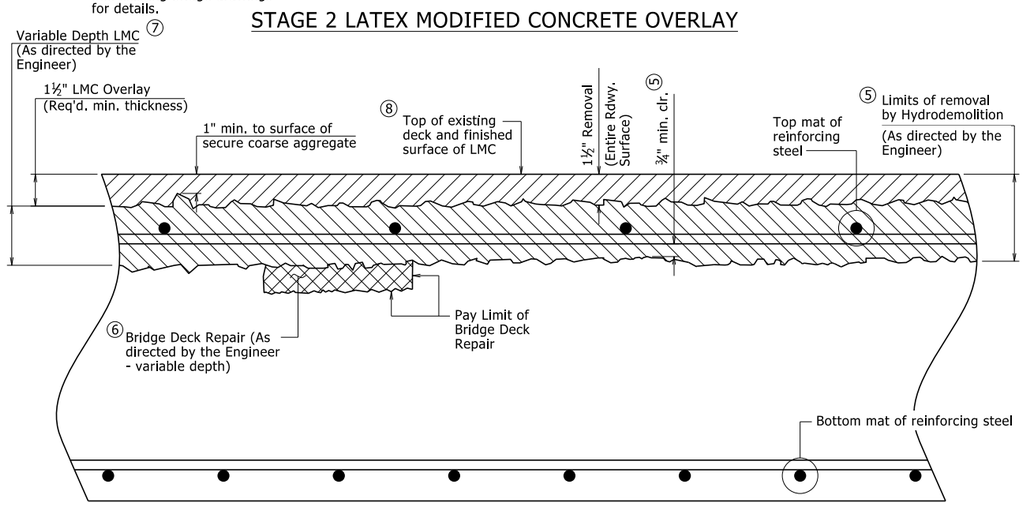
NOTE: Details shown are typical for staged construction. When full width rehabilitation of a bridge deck is possible, adjust hydrodemolition and latex modified concrete overlay operations and details accordingly.



STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



STAGE 2 LATEX MODIFIED CONCRETE OVERLAY



DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

⚠① ⑤ Removal of unsound concrete beyond 1½" below the original surface shall be at the direction of the Engineer. If the bond between existing concrete and the top mat of reinforcing steel is destroyed, then the concrete shall be removed to a minimum of ¾" clearance below the bar. This removal shall be subsidiary to the item Job SP "Hydrodemolition - Class _".

⑥ Areas requiring additional repair, as determined by the Engineer, shall be repaired in accordance with the Job SP "Bridge Deck Repair for Latex Modified Concrete Overlays".

⑦ Depth varies to achieve minimum clearance below top mat of reinforcing steel, where required.

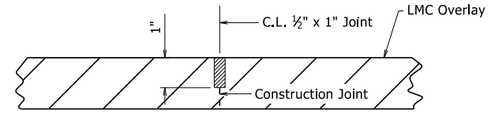
⑧ Finished surface of LMC Overlay shall match existing concrete deck surfaces unless increase is required to maintain minimum required LMC Overlay thickness and a minimum of 1½" cover to reinforcing steel.

① Hand tools shall be used as required to remove concrete adjacent to curbs, rails, and armored expansion joints.

② For staged construction, the final construction joint location shall be established by the Engineer to satisfy MOT and construction requirements. The desired location is at the C.L. Bridge, C.L. Lane, or Edge of Lane, but in no case shall be positioned in the line of a wheel path.

③ For staged construction, saw cut and remove 1" of initial Latex Modified Concrete Overlay when preparing surface for adjacent overlay.

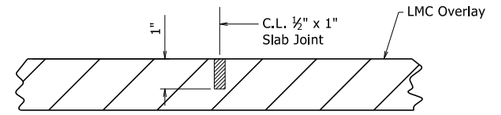
④ For staged construction, Temporary Precast Barrier (TPB) shall not be connected to the surface of the bridge deck. See Std. Dwg. TC-4 for additional details. Plastic drums shall be used in lieu of concrete barriers where shown in the Roadway Plans, see Std. Dwg. TC-3 for additional details.



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod will not be required. Joint Sealer shall be measured and paid for as LMC Overlay. Longitudinal construction joints shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the overlay. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL OVERLAY CONSTRUCTION JOINT DETAIL

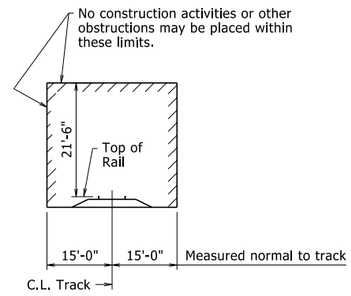
For Staged Construction



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod will not be required. Joint Sealer shall be measured and paid for as LMC Overlay. Slab joints shall extend from gutterline to gutterline. Slab joints shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the overlay. Slab joints shall be placed at all pouring sequence construction joints and are required at existing slab joint locations. Pouring sequence construction joints shall align between stages of construction. The joint sealer shall extend across the deck from gutterline to gutterline. Seal color shall be gray or other color similar to concrete.

TRANSVERSE OVERLAY JOINT DETAIL

For Continuous Span Bridges



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

See Job SP "Insurance, Construction, and Flagging Requirements on Railroad Property" for additional railroad construction requirements.

⚠① Modified Hydrodemolition SP reference to include "- Class _". By: KWY, Checked by: SWP; 1/9/2020.

⚠② Modified Joint Rehabilitation for additional clarification of unarmored joint work. By: KWY, Checked by: SWP; 6/25/2020.

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES:

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

Details shown are schematic. The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and fit the new work to the existing structure(s).

The operation or placement of vehicles, equipment, and/or materials on the subject bridge(s) necessary for the completion of this work shall be evaluated in accordance with Subsection 105.14. Certifications of the adequacy of all components for the anticipated loads shall address the capacity of the existing structure at all phases of this work.

Where applicable, construction activities for the existing bridge(s) over roadways and railroads shall be in accordance with the Job SP "Special Safety Requirements for Bridges" and as shown in "Minimum Construction Clearance Envelope".

⚠① HYDRODEMOLITION: The entire roadway surface of the existing bridge deck and approach slabs and gutters, as applicable, shall receive hydrodemolition in accordance with the Job SP "Hydrodemolition - Class _" to a planned depth of 1½" below the existing bridge deck surface. Deteriorated concrete in the bridge deck below this depth shall be removed at the direction of the Engineer and up to the limits detailed. These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Hydrodemolition - Class _". Prior to hydrodemolition, cold milling of the concrete deck to a maximum depth of 1" will be allowed unless there will be a conflict with the existing reinforcing steel.

BRIDGE DECK REPAIR: After hydrodemolition, the deck surface shall be sounded and any areas of unsound, delaminated, or otherwise deteriorated concrete shall be removed at the direction of the Engineer and in accordance with Job SP "Bridge Deck Repair for Latex Modified Concrete Overlays".

LATEX MODIFIED CONCRETE OVERLAY: The entire area of the hydrodemolition shall receive a Latex Modified Concrete (LMC) Overlay to a planned depth of 1½" below the existing bridge deck surface in accordance with Job SP "Latex Modified Concrete Overlay". These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Latex Modified Concrete Overlay (1½" Thick)". Areas of the existing bridge deck removed at the direction of the Engineer to a depth greater than 1½" below the existing bridge deck surface shall be filled with LMC concurrent to the placement of the 1½" LMC Overlay. This area shall be measured and paid for in accordance with Job SP "Latex Modified Concrete Overlay".

GROOVED FINISH: The LMC Overlay surface of the bridge deck and approach slabs and gutters, as applicable, shall be given a grooved finish as specified for final finishing in Subsection 802.19 for Class 7 Grooved Bridge Roadway Surface Finish and in accordance with Job SP "Latex Modified Concrete Overlay".

PROTECTIVE SURFACE TREATMENT: The longitudinal joint between the LMC Overlay and the adjacent existing concrete curb or rail shall be given a Class 3 Protective Surface Treatment as specified in Section 803 and in accordance with Job SP "Latex Modified Concrete Overlay". The roadway surface of the completed LMC Overlay shall be given a Class 1 Protective Surface Treatment as specified in Section 803.

⚠② JOINT REHABILITATION: After the placement of the LMC Overlay and if shown in the plans, the existing armored joints shall be given a poured silicone joint sealant as specified in Section 809 and as shown in "Poured Silicone Joint Seal Details" on Standard Drawing No. 55064, and the existing unarmored joints shall be given a Type A Joint Rehabilitation as specified in Section 509 and Job SP "Joint Rehabilitation for Bridge Decks". Backwall repair, if shown in the plans or as directed by the Engineer, shall be completed prior to installation of the joint sealant.

NOTE: When "Very Early Strength Latex Modified Concrete Overlay (1½" Thick)" is shown in the plans for a particular bridge, all reference to "Latex Modified Concrete Overlay" and "LMC" on this sheet shall be considered synonymous with "Very Early Strength Latex Modified Concrete Overlay" and "VESLMC" for that bridge. See Job SP "Very Early Strength Latex Modified Concrete Overlay" for additional information.

STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY REINFORCED CONCRETE SLAB STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAWN BY:	KWY	DATE:	11/7/2019	FILENAME:	b55062.dgn
CHECKED BY:	SWP	DATE:	11/7/2019	SCALE:	None
DESIGNED BY:	STD.	DATE:	-------		

DRAWING NO. 55062

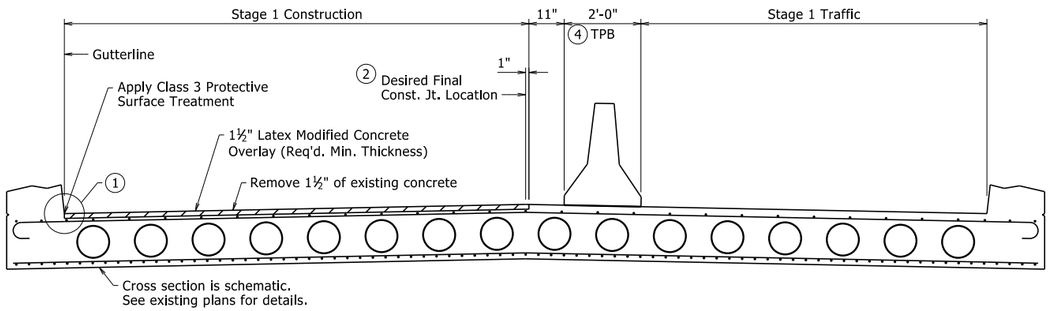
PRINT DATE: 11/4/2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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6/25/2020				JOB NO.				
				①	HYDRO/LMC OVERLAY - 55063			

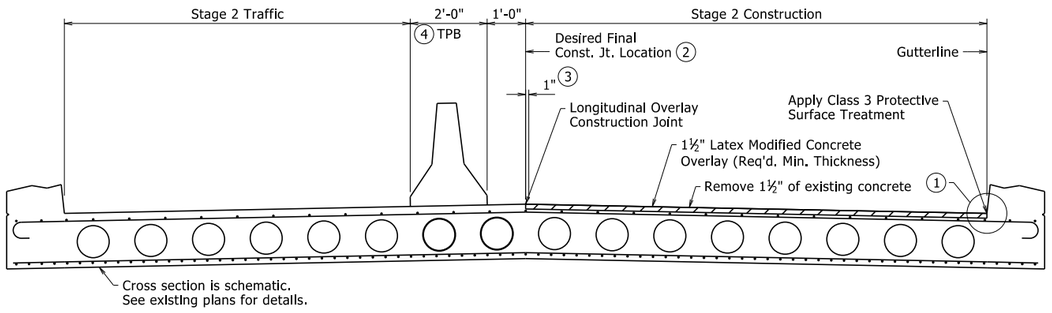
Stages of Construction refer to Bridge Rehabilitation Work Zones as shown in Maintenance of Traffic Details. Numbering is shown for general purposes. See Roadway Plans for specific sequencing.

The minimum overlay placement length shall be a span length. Refer to existing bridge drawings.

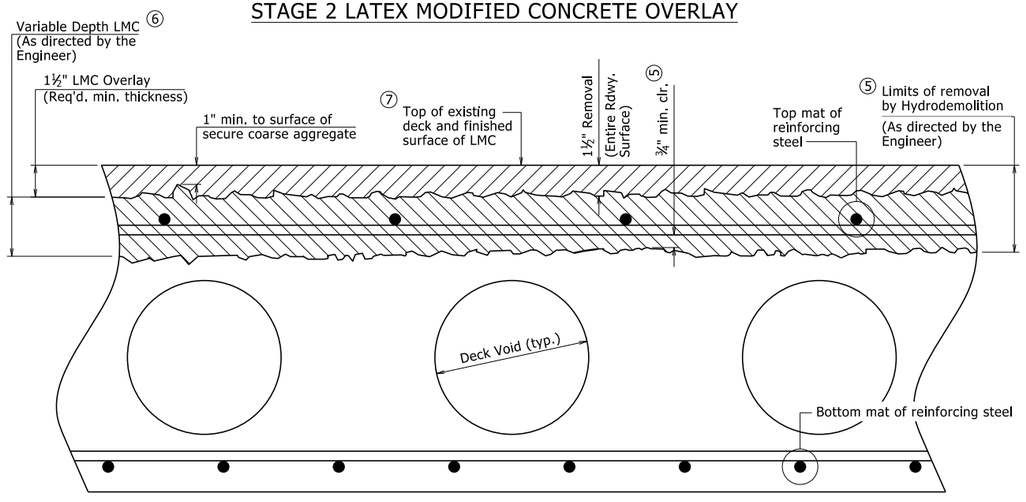
NOTE: Details shown are typical for staged construction. When full width rehabilitation of a bridge deck is possible, adjust hydrodemolition and latex modified concrete overlay operations and details accordingly.



STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



STAGE 2 LATEX MODIFIED CONCRETE OVERLAY



DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

⚠1 ⑤ Removal of unsound concrete beyond 1½" below the original surface shall be at the direction of the Engineer. If the bond between existing concrete and the top mat of reinforcing steel is destroyed, then the concrete shall be removed to a minimum of ¾" clearance below the bar. This removal shall be subsidiary to the item Job SP "Hydrodemolition - Class _".

⑥ Depth varies to achieve minimum clearance below top mat of reinforcing steel, where required.

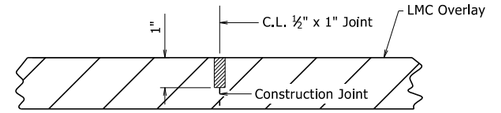
⑦ Finished surface of LMC Overlay shall match existing concrete deck surfaces unless increase is required to maintain minimum required LMC Overlay thickness and a minimum of 1½" cover to reinforcing steel.

① Hand tools shall be used as required to remove concrete adjacent to curbs and rails.

② For staged construction, the final construction joint location shall be established by the Engineer to satisfy MOT and construction requirements. The desired location is at the C.L. Bridge, C.L. Lane, or Edge of Lane, but in no case shall be positioned in the line of a wheel path.

③ For staged construction, saw cut and remove 1" of initial Latex Modified Concrete Overlay when preparing surface for adjacent overlay.

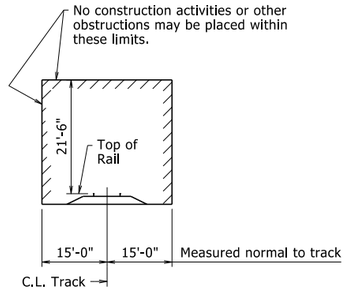
④ For staged construction, Temporary Precast Barrier (TPB) shall not be connected to the surface of the bridge deck. See Std. Dwg. TC-4 for additional details. Plastic drums shall be used in lieu of concrete barriers where shown in the Roadway Plans, see Std. Dwg. TC-3 for additional details.



Use ½" x 1" Type 3 or 4 Joint Sealer. See Subsections 501.02(h) and 501.05(j). Backer Rod will not be required. Joint Sealer shall be measured and paid for as LMC Overlay. Longitudinal construction joints shall be sawed as soon as the concrete has sufficiently set to allow sawing of the joint without damage to the overlay. Seal color shall be gray or other color similar to concrete.

LONGITUDINAL OVERLAY CONSTRUCTION JOINT DETAIL

For Staged Construction



MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

See Job SP "Insurance, Construction, and Flagging Requirements on Railroad Property" for additional railroad construction requirements.

If the hydrodemolition equipment blows through the deck and into a deck void, that area shall be the responsibility of the Contractor and shall be repaired at the Contractor's expense. The Contractor shall provide a method of handling unexpected blow through.

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

GENERAL NOTES:

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

Details shown are schematic. The Contractor shall make check measurements in the field and make any adjustments necessary to meet the required clearances and fit the new work to the existing structure(s).

The operation or placement of vehicles, equipment, and/or materials on the subject bridge(s) necessary for the completion of this work shall be evaluated in accordance with Subsection 105.14. Certifications of the adequacy of all components for the anticipated loads shall address the capacity of the existing structure at all phases of this work.

Where applicable, construction activities for the existing bridge(s) over roadways and railroads shall be in accordance with the Job SP "Special Safety Requirements for Bridges" and as shown in "Minimum Construction Clearance Envelope".

⚠1 HYDRODEMOLITION: The entire roadway surface of the existing bridge deck and approach slabs and gutters, as applicable, shall receive hydrodemolition in accordance with the Job SP "Hydrodemolition - Class _" to a planned depth of 1½" below the existing bridge deck surface. Deteriorated concrete in the bridge deck below this depth shall be removed at the direction of the Engineer and up to the limits detailed. These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Hydrodemolition - Class _". Prior to hydrodemolition, cold milling of the concrete deck to a maximum depth of 1" will be allowed unless there will be a conflict with the existing reinforcing steel.

LATEX MODIFIED CONCRETE OVERLAY: The entire area of the hydrodemolition shall receive a Latex Modified Concrete (LMC) Overlay to a planned depth of 1½" below the existing bridge deck surface in accordance with Job SP "Latex Modified Concrete Overlay". These areas shall be measured by the square yard and shall be paid for at the unit price bid for the item Job SP "Latex Modified Concrete Overlay (1½" Thick"). Areas of the existing bridge deck removed at the direction of the Engineer to a depth greater than 1½" below the existing bridge deck surface shall be filled with LMC concurrent to the placement of the 1½" LMC Overlay. This area shall be measured and paid for in accordance with Job SP "Latex Modified Concrete Overlay".

GROOVED FINISH: The LMC Overlay surface of the bridge deck and approach slabs and gutters, as applicable, shall be given a grooved finish as specified for final finishing in Subsection 802.19 for Class 7 Grooved Bridge Roadway Surface Finish and in accordance with Job SP "Latex Modified Concrete Overlay".

PROTECTIVE SURFACE TREATMENT: The longitudinal joint between the LMC Overlay and the adjacent existing concrete curb or rail shall be given a Class 3 Protective Surface Treatment as specified in Section 803 and in accordance with Job SP "Latex Modified Concrete Overlay". The roadway surface of the completed LMC Overlay shall be given a Class 1 Protective Surface Treatment as specified in Section 803.

⚠2 JOINT REHABILITATION: After the placement of the LMC Overlay and if shown in the plans, the existing armored joints shall be given a poured silicone joint sealant as specified in Section 809 and as shown in "Poured Silicone Joint Seal Details" on Standard Drawing No. 55064, and the existing unarmored joints shall be given a Type A Joint Rehabilitation as specified in Section 509 and Job SP "Joint Rehabilitation for Bridge Decks". Backwall repair, if shown in the plans or as directed by the Engineer, shall be completed prior to installation of the joint sealant.

⚠1 Modified Hydrodemolition SP reference to include "- Class _".
By: KWY, Checked by: SWP; 1/9/2020.

⚠2 Modified Joint Rehabilitation to include armored joints.
By: KWY, Checked by: SWP; 6/25/2020.

NOTE: When "Very Early Strength Latex Modified Concrete Overlay (1½" Thick)" is shown in the plans for a particular bridge, all reference to "Latex Modified Concrete Overlay" and "LMC" on this sheet shall be considered synonymous with "Very Early Strength Latex Modified Concrete Overlay" and "VESLMC" for that bridge. See Job SP "Very Early Strength Latex Modified Concrete Overlay" for additional information.

STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY VOIDED CONCRETE SLAB STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

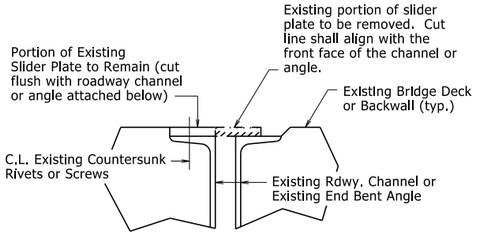
LITTLE ROCK, ARK.

DRAWN BY:	KWY	DATE:	11/7/2019	FILENAME:	b55063.dgn
CHECKED BY:	SWP	DATE:	11/7/2019	SCALE:	None
DESIGNED BY:	STD.	DATE:	-------		

DRAWING NO. 55063

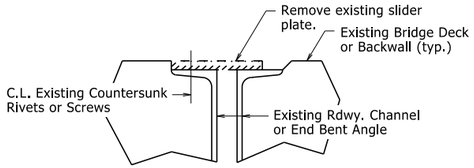
PRINT DATE: 11/4/2020

DATE REVISED	DATE FILMED	DATE REVISED	DATE FILMED	FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
				6	ARK.			
				JOB NO.				
				(1)	JOINT REPAIR - 55064			



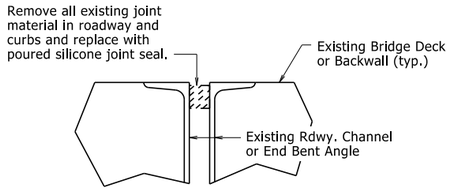
REMOVAL DETAILS AT EXISTING SLIDER PLATE JOINTS

At the direction of the Engineer, the portion of existing slider plate shown shall be removed and replaced with a new plate as shown in "SLIDER PLATE JOINT MODIFICATION". The portion of existing slider plate shall be removed and disposed of in accordance with Section 821. The cut face shall be ground square and flush with the face of the existing angle or channel. Removal and disposal of existing slider plate material will not be paid for directly, but shall be considered subsidiary to the item "Silicone Joint Sealant". Properly functioning slider plates need not be modified.



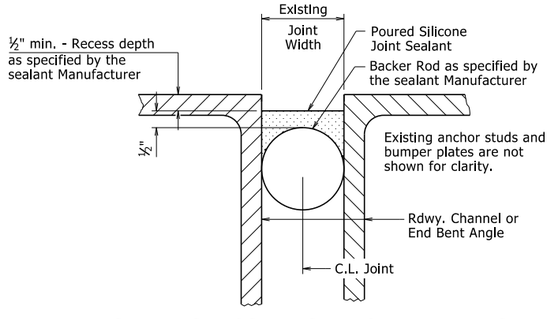
REMOVAL DETAILS AT EXISTING SLIDER PLATE JOINTS WITH GRADE RAISE

The existing slider plate shown shall be removed and replaced with new plates as shown in "JOINT MODIFICATION WITH GRADE RAISE". The existing slider plate shall be removed and disposed of in accordance with Section 821. Removal and disposal of existing slider plate material will not be paid for directly, but shall be considered subsidiary to the item "Silicone Joint Sealant".



REMOVAL DETAILS AT EXISTING FILLED JOINTS

The existing joint material shall be removed and disposed of in accordance with Section 821. Removal and disposal of existing joint material will not be paid for directly, but shall be considered subsidiary to the Item "Silicone Joint Sealant".



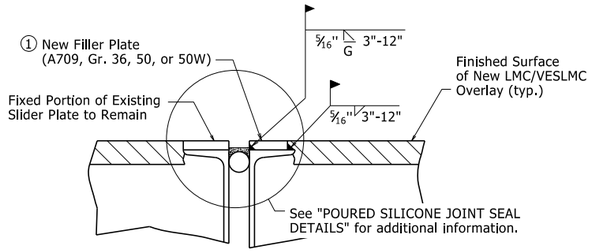
POURED SILICONE JOINT SEAL DETAILS

Existing Joint Seal shall be completely removed, backer rods placed, and Silicone Joint Sealant installed across the entire width of the bridge deck in accordance with these details, Section 809, and the Manufacturer's recommendations. Removal of existing Joint Seal will not be paid for directly, but shall be considered incidental to the item "Silicone Joint Sealant".

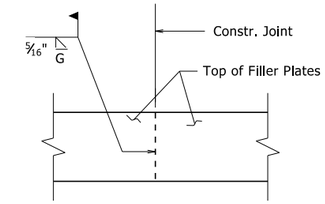
Backer rods shall be extended beyond the length of the poured joint in the initial joint repair area so that the two pieces can be properly spliced together prior to installing sealant for the adjacent joint repair. Manufacturer's recommendations shall be followed to prevent sealant leakage during repair work.

Backer rods shall be appropriately sized and set to the depth shown in the Manufacturer's literature based on the joint width at the time of sealing. Except as noted, do not install more backer rod than can be sealed in the same day. The Contractor shall verify separation of the backer rod from the joint material after joint material has set.

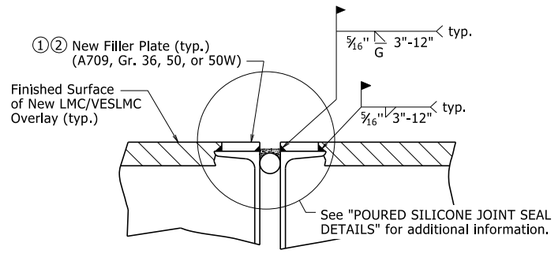
Backer rod shall be notched or otherwise fit around any existing seal supports or bumper plates to maintain its proper depth as defined above.



SLIDER PLATE JOINT MODIFICATION



PLAN VIEW OF FILLER PLATE

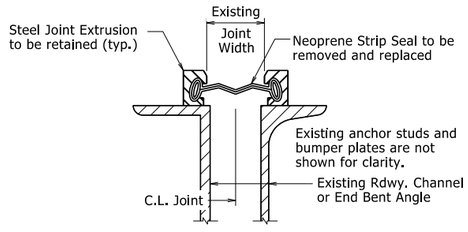


JOINT MODIFICATION WITH GRADE RAISE

① New field attached plates atop existing roadway channels or angles are required. The plate thickness shall be adjusted as necessary to match surface of finished surface of LMC/VESLMC Overlay and the width shall be ⅜" less than the existing channel flange or angle width to allow for fillet weld as shown.

All new Structural Steel shall be ASTM A709 (Gr. 36, 50, or 50W). The surfaces not in contact with concrete shall be cleaned and painted in accordance with Section 638. Only one coat of paint is required and shall be applied in the fabricator's shop. Grade 50W steel shall not be painted, but shall be cleaned in accordance with Subsection 807.84(e). Structural Steel and Painting will not be paid for directly, but shall be subsidiary to the item "Silicone Joint Sealant".

② Details shown are for an expansion joint where two bridge units meet. Eliminate filler plate on backwall and proceed with backwall repair in accordance with "BACKWALL REPAIR REMOVAL DETAIL" and "BACKWALL REPAIR INSTALLATION DETAIL" at end bents for bridge decks with grade raise, see Standard Drawing Number 55065.



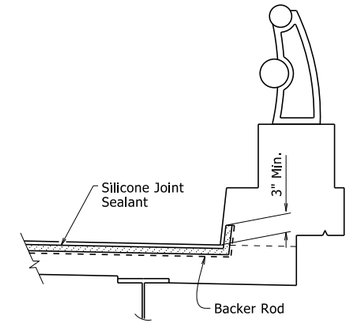
STRIP SEAL JOINT DETAILS

Existing neoprene strip seal joint material shall be completely removed and new neoprene strip seal joint material shall be installed across the entire width of the steel extrusions in accordance with these details, Section 809, and the Manufacturer's recommendations. Prior to installing the new joint material, the Contractor shall clean the steel extrusion at the Engineer's direction and in accordance with the new strip seal joint material Manufacturer's recommendations.

Removal and replacement of the existing neoprene strip seal joint material will require the removal of the parapet slider plates, where present. Parapet slider plates removed for this work shall be reinstalled after installation of the new neoprene strip seal joint material.

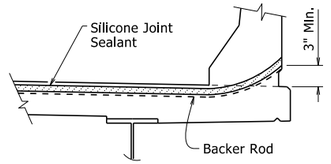
The new neoprene strip seal joint material shall provide a movement rating of four inches. The repaired expansion joint shall be capable of sealing the deck surface and parapet area to prevent moisture and other contaminants from descending through the joint.

All work and material associated with removing the existing joint material, cleaning the extrusions, removal and reinstallation of parapet slider plates, and installation of new joint material shall be paid for under the item "Modification of Existing Bridge Structure (Bridge No. _)".

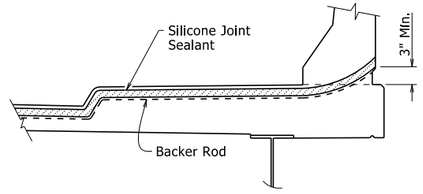


SILICONE JOINT SEAL PLACEMENT AT CURB

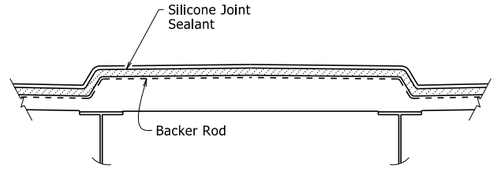
Vertical joints may require forming. The clearance from deck surface to joint material shall be maintained.



SILICONE JOINT SEAL PLACEMENT AT RAIL



SILICONE JOINT SEAL PLACEMENT AT SIDEWALK



SILICONE JOINT SEAL PLACEMENT AT MEDIAN

This document was originally issued and sealed by Charles R. Ellis, PE No. 9235, on November 7, 2019. This copy is not a signed and sealed document.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 9235
CHARLES R. ELLIS

BRIDGE ENGINEER

STANDARD DETAILS FOR JOINT REPAIRS & MODIFICATIONS

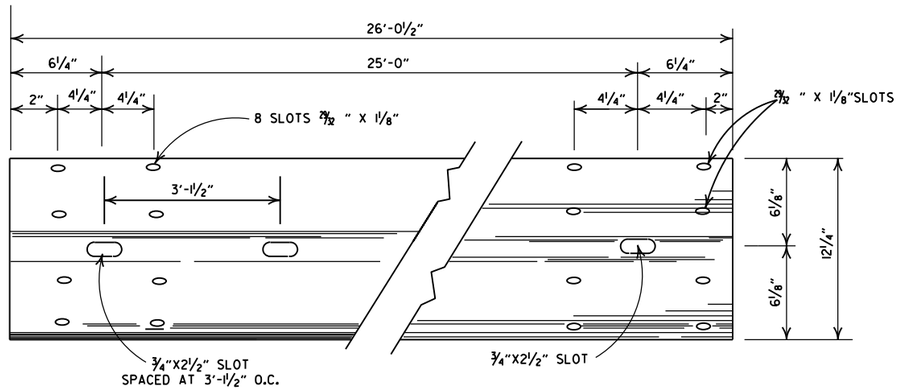
ARKANSAS STATE HIGHWAY COMMISSION

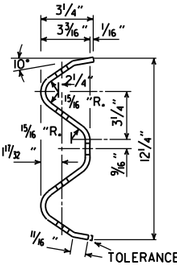
LITTLE ROCK, ARK.

DRAWN BY: KWY DATE: 11/7/2019 FILENAME: b55064.dgn
CHECKED BY: SWP DATE: 11/7/2019 SCALE: None
DESIGNED BY: STD. DATE: -------

DRAWING NO. 55064

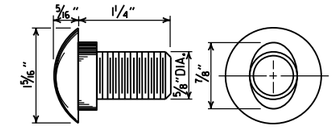
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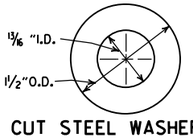


DETAILS OF W-BEAM GUARDRAIL

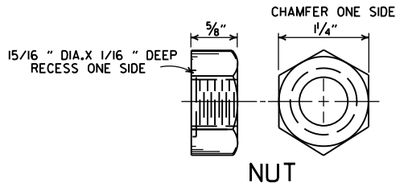
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



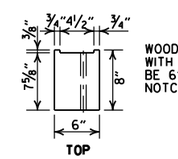
SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH



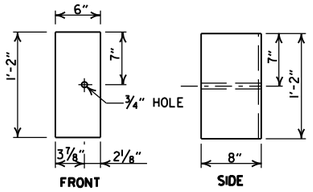
CUT STEEL WASHER



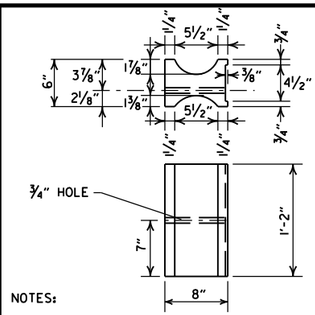
NUT



WOOD BLOCKOUT USED WITH WOOD POSTS SHALL BE 6"x8"xl'-2" WITH NO NOTCH REQUIRED.



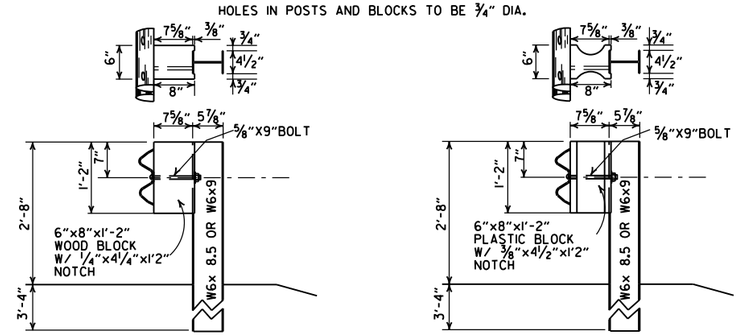
WOOD BLOCKOUT (W-BEAM)



NOTES:

1. SIMILAR SHAPED PLASTIC BLOCKOUTS MAY BE USED AS LONG AS THEY MEET REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES.

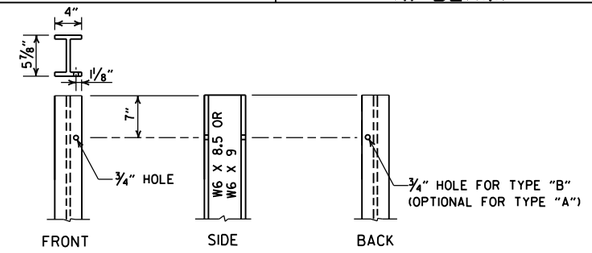
PLASTIC BLOCKOUT (W-BEAM)



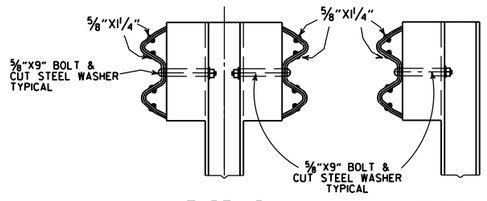
WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



STEEL POST



TYPE "B" TYPE "A"

DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)

-GENERAL NOTES-

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN ¾" BEYOND IT.

WHERE W-BEAM GUARDRAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

W-BEAM GUARDRAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

USE W-BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB. FOR EXTENSIONS OR MODIFICATION OF EXISTING GUARDRAIL, W-BEAM GUARDRAIL COMPONENTS OF THE SAME TYPE AS THOSE EXISTING SHALL BE USED.

ANY BACKFILLING UNDER OR AROUND POST SHALL BE DAMP SAND THOROUGHLY TAMPED IN PLACE.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

CONTRACTOR SHALL HAVE THE OPTION OF USING WOOD BLOCKOUTS FOR W-BEAM GUARDRAIL OR PLASTIC BLOCKOUTS, AS LONG AS BLOCKOUT USED MEETS REQUIREMENTS FOR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR W-BEAM GUARDRAIL.

WOOD BLOCKOUT CONNECTIONS

PLASTIC BLOCKOUT CONNECTIONS

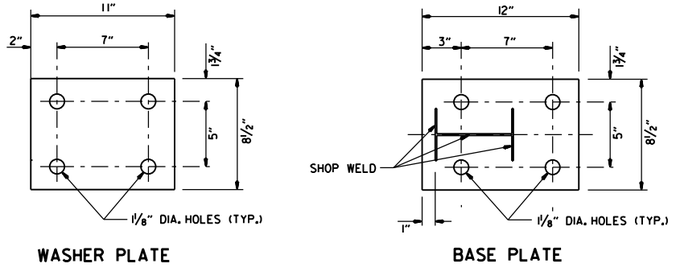
DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

DATE	REVISION	FILMED
11-07-19	RENUMBERED AND RENAMED	
11-16-17	REVISED GENERAL NOTES AND RAISED GUARDRAIL HEIGHT 3"	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
10-15-09	ADDED REFERENCE TO MASH	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED DIMENSION ON WOOD & PLASTIC BLOCKOUT CONNECTIONS & STEEL POST	
11-16-01	REVISED WOOD BLOCKOUT & DETAILS OF WOOD LINE POST CONNECTIONS	
03-30-00	REMOVED GUARDRAIL AT BRIDGE ENDS	
01-12-00	ADDED PLASTIC BLOCKOUT	
08-12-98	REV. BLOCKOUTS TO WOOD, DELETED CONC. POST & REV. GENERAL NOTE, DELETED DET. OF GUARDRAIL REPLACE. BEHIND CURB & DET. OF POST PLACE. IN SOLID ROCK, & ADDED DETAILS OF STEEL LINE POST CONN. REMOVED BACK-UP PLATE, REVISED HOLES IN STEEL POLES	
04-03-97	REMOVED "LAP IN DIRECTION OF TRAFFIC" NOTE & PLACED ARROWS ON WASHERS	
10-18-96	REVISED WOOD POST NOTE	
06-02-94	ADDED ALT. STEEL POST SIZE	
08-05-93	REVISED STEEL POST SIZE	8-5-93
10-01-92	REDRAWN & REVISED	10-1-92
08-15-91	REVISED WASHER NOTE	8-15-91
08-02-90	REV. GEN. NOTE & DEPTH OF ANC. POST IN ROCK	8-2-90
07-15-88	REVISED SECTION 3 & GENERAL NOTES	
03-04-88	REV. ANCHOR POST ,ELEV. NOTES & POST IN ROCK	780-3-4-88
10-30-87	REVISED WOOD LINE POST DETAIL	546-10-30-87
10-09-87	REDRAWN & REVISED	802-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

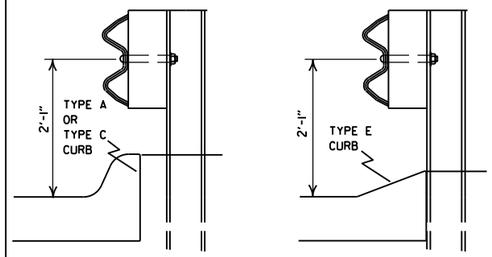
STANDARD DRAWING GR-6



WASHER PLATE

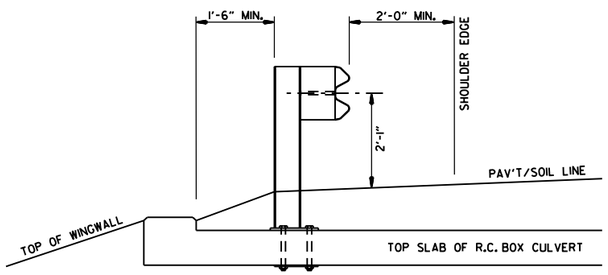
BASE PLATE

Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.

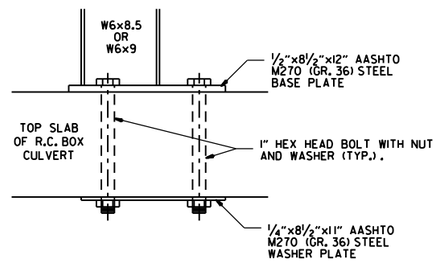


DETAIL OF GUARDRAIL PLACEMENT BEHIND CURB (W-BEAM)

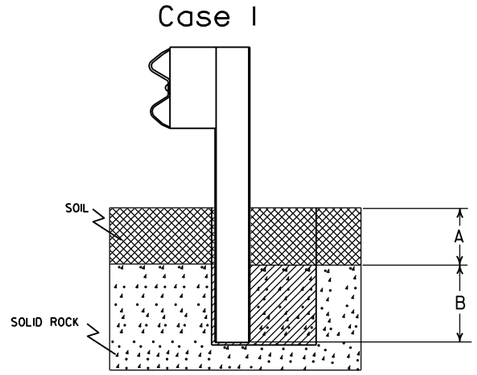
FOR DESIGN SPEEDS OF 50 MPH OR LESS ALL CURB FACES, AS SHOWN ON STD. DRWG. CG-1, MAY BE USED. FOR DESIGN SPEEDS OF 55 MPH OR MORE TYPE "E" CURB FACE SHALL BE USED.



SECTION A-A

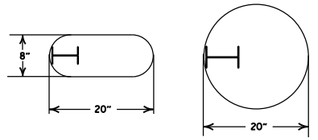


DETAIL OF CONNECTION



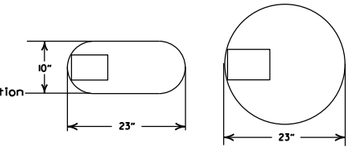
Plan View Steel Posts

Either hole configuration acceptable



Plan View Wood Posts

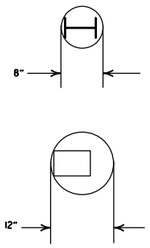
Either hole configuration acceptable



Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

Zone A:
Backfill according to Section 617.03(a).

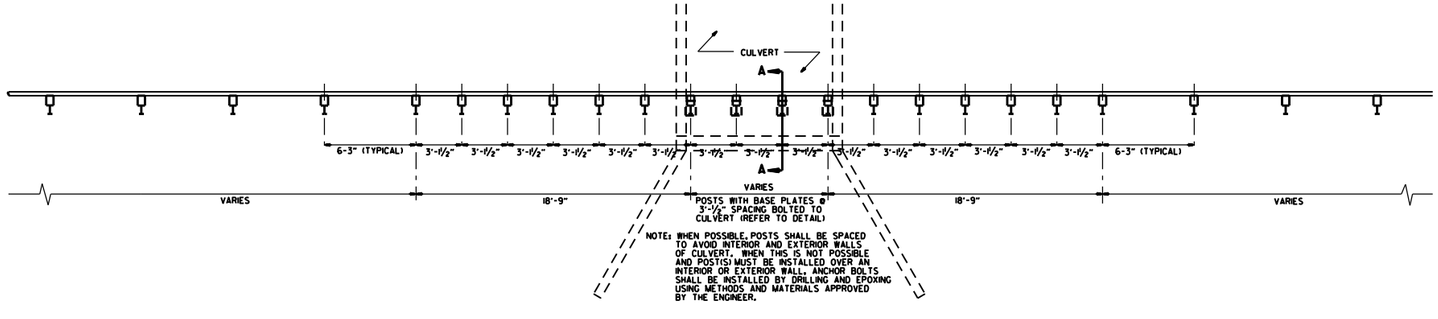
Zone B:
Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.



Notes: For overlying soil depths (A) ranging from 18" to 44", the depth of required drilling (B) is equal to either 12" or 44" minus the depth of soil whichever is less.

Zone A & B:
Backfill according to Section 617.03(a).

DETAIL OF POST PLACEMENT IN SOLID ROCK (W-BEAM)



PLAN LAYOUT OF TYPE A GUARDRAIL AT LOW-FILL CULVERTS

NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARDRAIL POSTS AS SHOWN ON STD. DWG. GR-6.

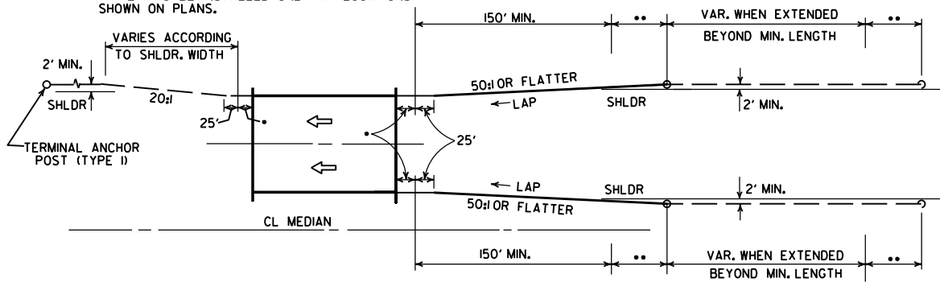
DATE	REVISION	FILMED
11-07-19	RENUMBERED, RENAMED, REVISED REFERENCE	
11-16-17	REVISED GUARDRAIL HEIGHT	
07-14-10	RAISED HEIGHT OF GUARDRAIL 1"	
04-12-07	REVISED DETAIL OF GUARDRAIL PLACEMENT BEHIND CURB	
11-10-05	ADDED GUARDRAIL PLACEMENT BEHIND CURB; REVISED DETAIL OF CONNECTION	
11-18-04	REVISED POST PLACEMENT IN ROCK & CULVERT CONNECTION DETAILS. ADDED DETAIL FOR GUARDRAIL PLACEMENT AT LOW-FILL CULVERTS	
03-30-00	REMOVED CONCRETE INSERT ANCHOR	
08-12-98	CHANGED STEEL SPACER BLOCK TO WOOD BLOCKOUT, ADDED DET. OF GUARDRAIL CONNECTION TO R.C. BOX CULV'T., DELETED DET. OF STEEL LINE POST CONN. & ADDED DET. OF GUARDRAIL PLACE. BEHIND CURB & DET. OF POSTPLACE. IN SOLID ROCK	
04-03-96	PLACED ARROWS AT CUT STEEL WASHERS	4-3-96
10-18-96	REV. ASTM REF. TO AASHTO	
11-22-95	ADDED OPTIONAL HOLES	
06-02-94	REVISED ALTERNATE POST SIZE	
08-05-93	REVISED STEEL POST SIZE	
10-01-92	REDRAWN & REVISED	10-1-92
08-02-90	DEL. WASHER ON ANCHOR ASSEMBLY	8-2-90
07-15-88	CONFORMED TO 1988 SPECS	
03-04-88	REVISED ANCHOR NOTE	
10-30-87	REVISED ANCHOR ASSEMBLY	712-10-30-87
10-30-87	REVISED PLACEMENT BEHIND CURB	547-10-30-87
10-09-87	REDRAWN & REVISED	803-10-9-87

ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

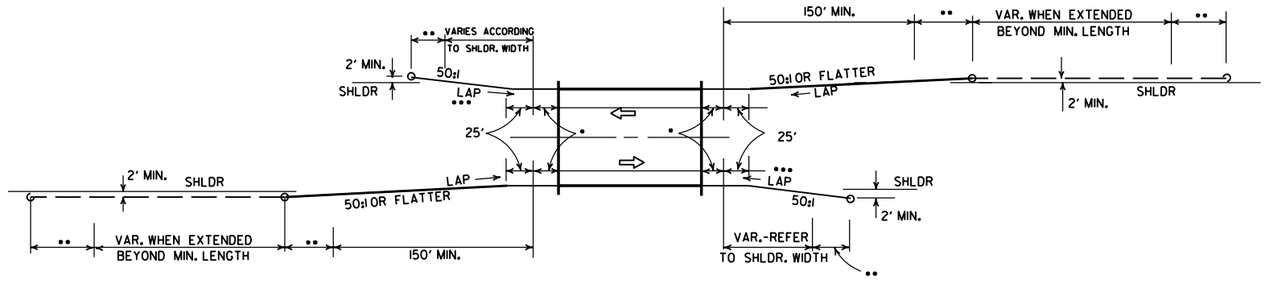
STANDARD DRAWING GR-7

NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

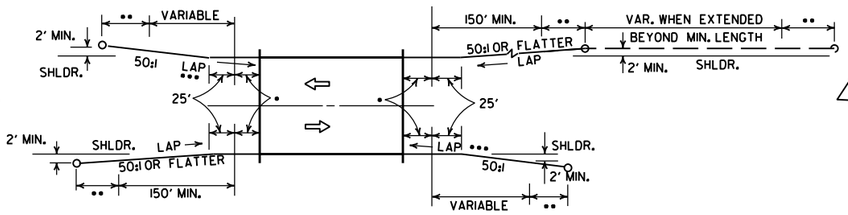
••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

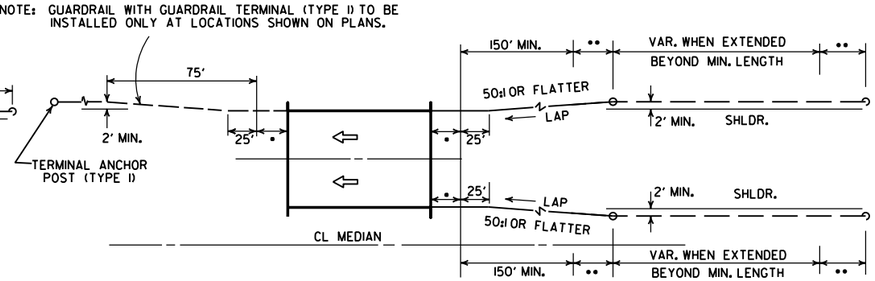
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



TWO-WAY TRAFFIC

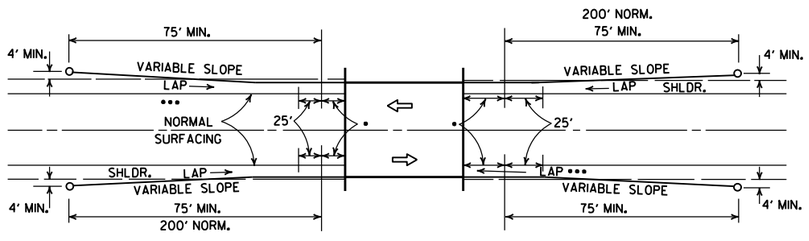
NOTE: GUARDRAIL WITH GUARDRAIL TERMINAL (TYPE 1) TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLANS.



ONE-WAY TRAFFIC

METHOD OF INSTALLATION OF GUARDRAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

••• LAP OF GUARDRAIL SHALL BE AS SHOWN FOR A DISTANCE OF UP TO 200'. CHANGE TO LAP IN DIRECTION OF TRAVEL.



METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

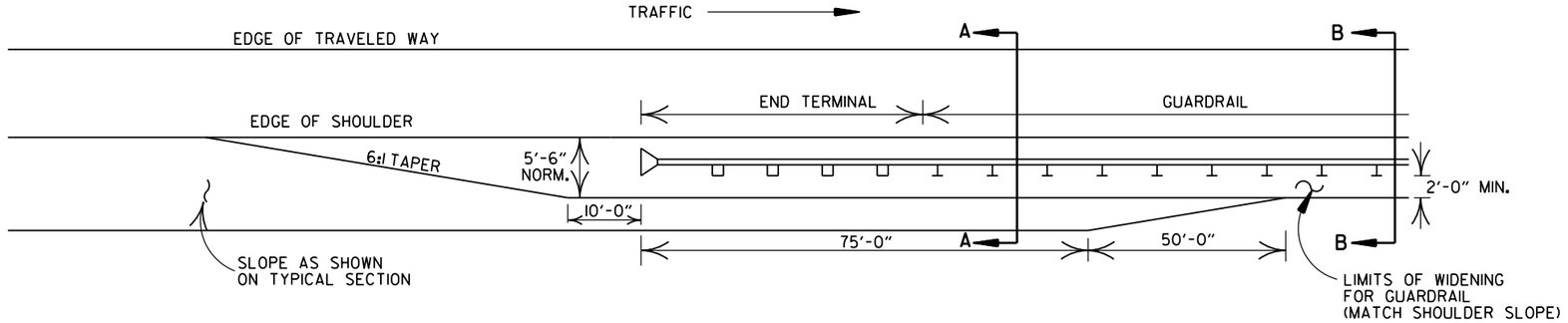
- • THRIE BEAM GUARDRAIL TERMINAL
- •• GUARDRAIL TERMINAL (TYPE 2)

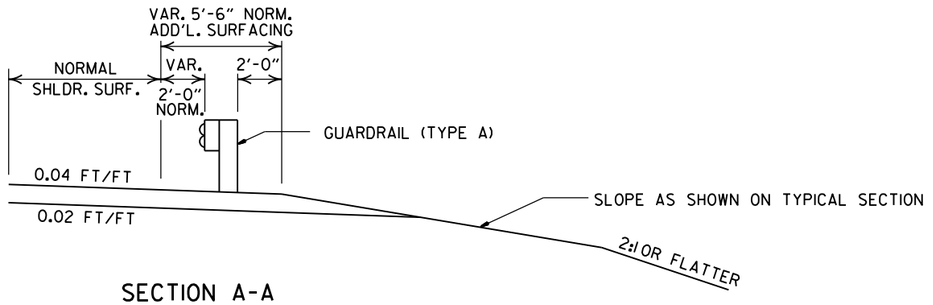
DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	REVISED LAYOUTS	
11-10-05	REMOVED GUARDRAIL NOTES AND DETAILS	
11-16-01	DELETED NOTE-METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERM. (TY. 1)	
1-12-00	ADDED CONSTRUCTION NOTE	1-12-00
6-26-97	REVISED LAYOUT	
10-1-92	REDRAWN & REVISED	10-1-92
	ADDED NOTE	
10-9-87	REDRAWN & REVISED	

ARKANSAS STATE HIGHWAY COMMISSION

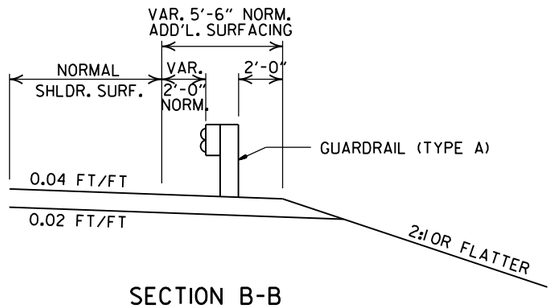
GUARDRAIL DETAILS

STANDARD DRAWING GR-8



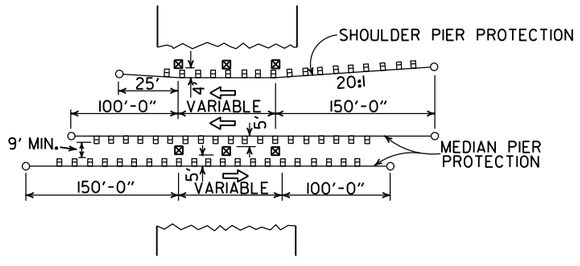


SECTION A-A



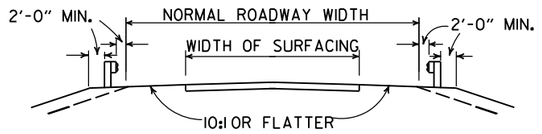
SECTION B-B

DETAILS OF WIDENING FOR GUARDRAIL

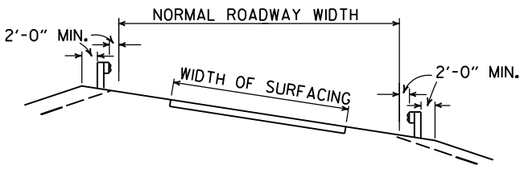


METHOD OF INSTALLATION OF GUARDRAIL AT FIXED OBSTACLE

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



SECTION ON TANGENT



SECTION ON CURVE

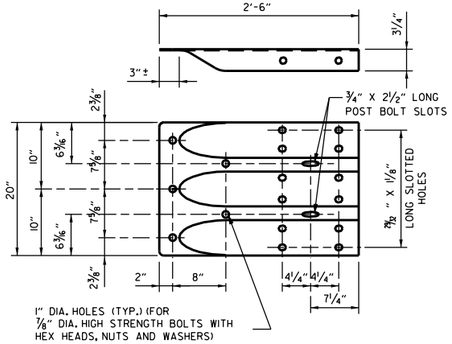
DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY

DATE	REVISION	DATE FILM
11-07-19	RENUMBERED AND RENAMED	
4-17-08	MINOR REVISION	
11-10-05	DRAWN	

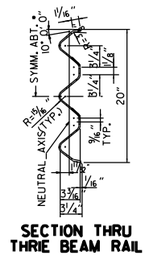
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

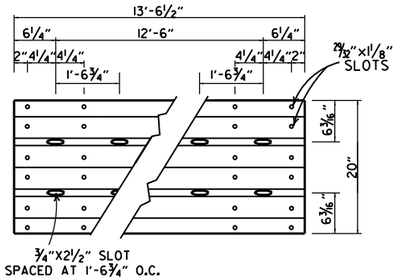
STANDARD DRAWING GR-9



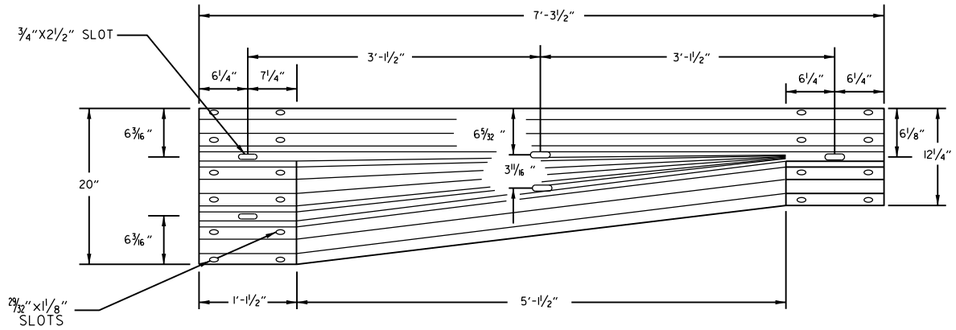
SPECIAL END SHOE



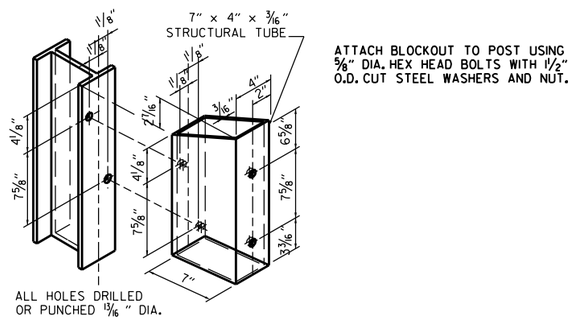
SECTION THRU THRIE BEAM RAIL



THRIE BEAM RAIL

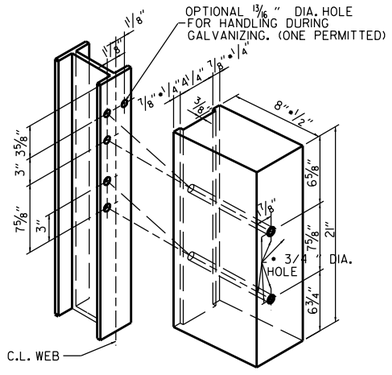


TRANSITION SECTION



ATTACH BLOCKOUT TO POST USING ⅝" DIA. HEX HEAD BOLTS WITH 1½" O.D. CUT STEEL WASHERS AND NUT.

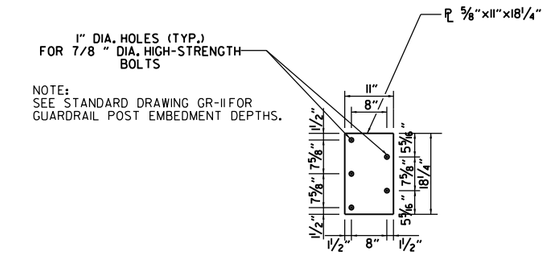
STRUCTURAL STEEL TUBING BLOCKOUT DETAIL



ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED

HOLE PUNCHING DETAIL FOR STEEL POST & WOOD OR PLASTIC BLOCKOUTS

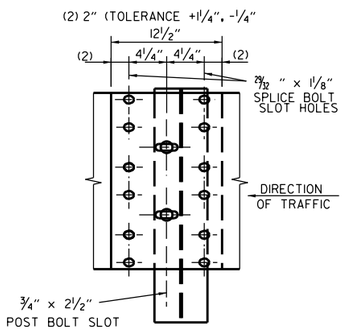
NOTE: BLOCKS SHALL BE THE SAME TYPE THROUGHOUT THE PROJECT LIMITS.



NOTE:
SEE STANDARD DRAWING GR-11 FOR GUARDRAIL POST EMBEDMENT DEPTHS.

CONNECTOR PLATE

CONNECTOR PLATE SHALL BE AASHTO M270, GR. 36 AND SHALL BE GALVANIZED AFTER FABRICATION. GALVANIZING SHALL CONFORM TO SUBSECTION 807.19 OF THE STANDARD SPECIFICATIONS. CONNECTOR PLATE TO BE BOLTED TO SPECIAL END SHOE USING ⅞" DIA. HIGH STRENGTH BOLTS, WITH THE HEADS PLACED ON THE TRAFFIC FACE. WASHERS SHALL BE USED UNDER THE HEAD AND NUT. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AND SHALL CONFORM TO SUBSECTION 807.06.



THRIE BEAM RAIL SPLICE AT POST

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE 1.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3"4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

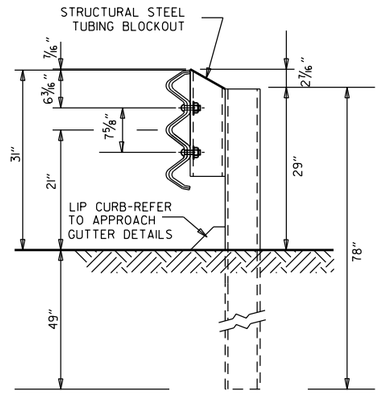
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7 f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED AND REVISED REFERENCES	
11-16-17	REVISED TRANSITION SECTION, GUARD RAIL HEIGHT, AND GENERAL NOTES; MOVED THRIE BEAM GUARD RAIL CONNECTIONS AT BRIDGES ENDS TO STD. DRWG. GR-12	
07-14-10	RAISED HEIGHT OF W-BEAM 1"	
11-29-07	ADDED PLASTIC BLOCKOUTS	
11-10-05	ADDED NOTE FOR ATTACHING STEEL BLOCKOUT	
11-18-04	REVISED GENERAL NOTES	
10-9-03	REVISED GENERAL NOTES	
04-10-03	REVISED GENERAL NOTES	
08-22-02	REVISED NOTE (2)	
06-29-00	MOVED DIMENSION LINES	
05-18-00	ADDED NOTE	
03-30-00	DRAWN & ISSUED	

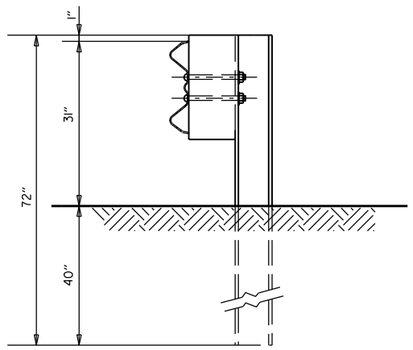
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

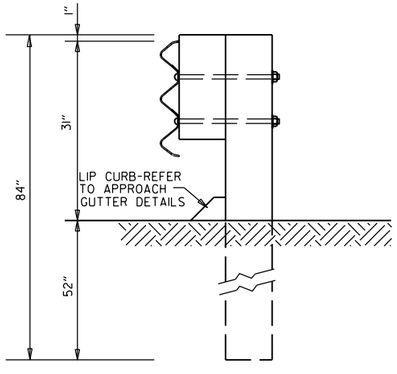
STANDARD DRAWING GR-10



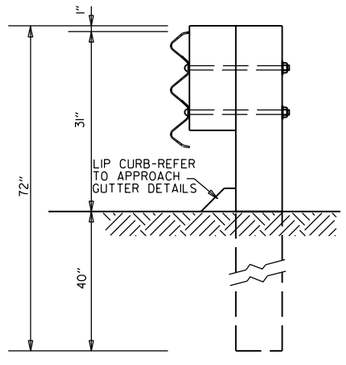
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT
AND STEEL POST
POSTS 1-7



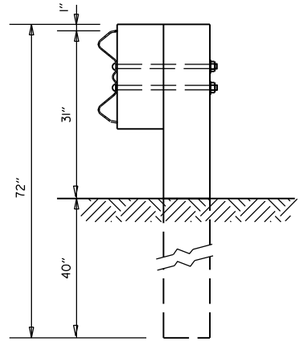
W-BEAM TO THRIE BEAM TRANSITION RAIL
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST
POST 8



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUTS & WOOD POSTS
POSTS 1-6



THRIE BEAM RAIL
WITH WOOD OR PLASTIC
BLOCKOUT & WOOD POST
POST 7



W-BEAM TO THRIE BEAM
TRANSITION RAIL WITH WOOD OR
PLASTIC BLOCKOUT & WOOD POST
POST 8

GENERAL NOTES:

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

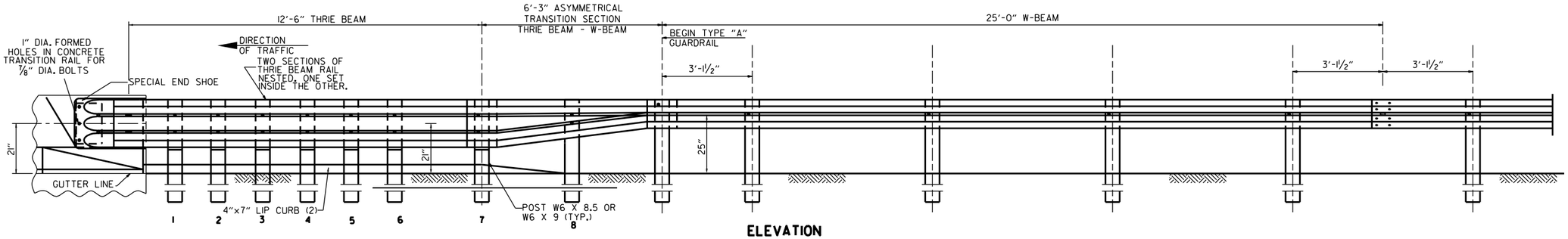
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1STRUCTURAL OR BETTER 9.7f (1400 f) OR NO.1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
11-07-19	RENAMED	
11-16-17	REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-11	
07-14-10	REVISED POST 8 DIMENSIONS	
11-29-07	ADDED PLASTIC BLOCKOUTS	
08-22-02	REVISED LIP CURB NOTE	
03-30-00	DRAWN & ISSUED	

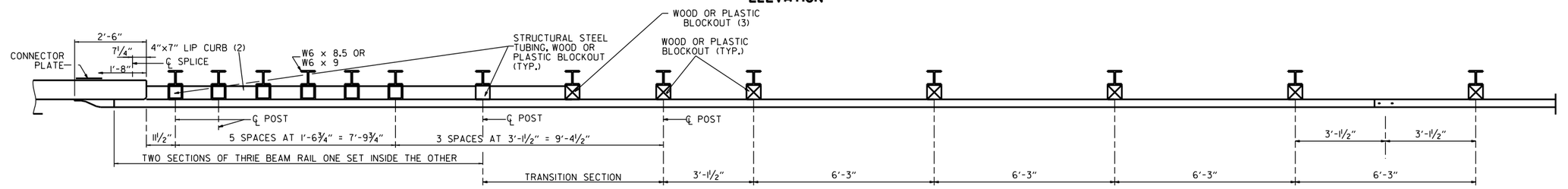
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

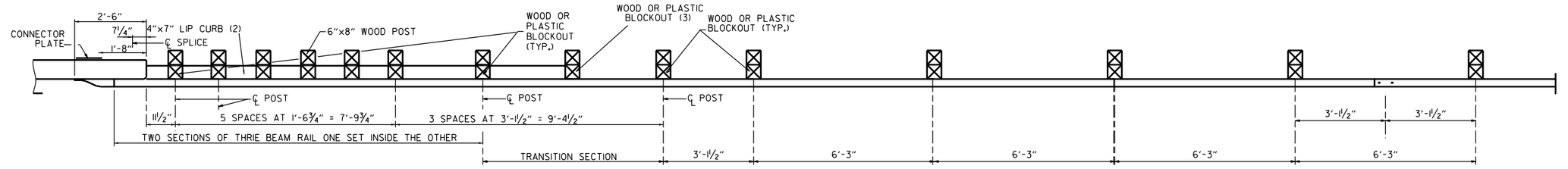
STANDARD DRAWING GR-11



ELEVATION



PLAN



PLAN

(1) VERIFY BOLT SPACING FROM RAIL TRANSITION PRODUCER.
(2) REFER TO APPROACH GUTTER DETAILS.
(3) LENGTH OF BLOCKOUT ON POST 8 TO BE MODIFIED TO FIT RAIL WIDTH.

THRIE BEAM GUARDRAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

THE THRIE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE 12 GAGE. ZINC COATING SHALL BE TYPE I.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

ALL BOLTS SHALL BE SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3/4" BEYOND IT.

ALL LAP SPLICES, INCLUDING SPECIAL END SHOES, SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-8 & GR-13.

REFER TO STD. DRWG. GR-11 FOR POST DETAILS.

USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

THRIE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

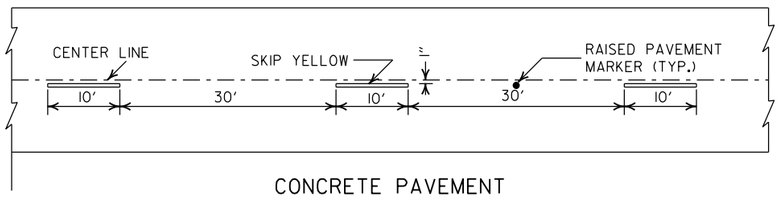
WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 1350 f SOUTHERN PINE.

DATE	REVISION	FILMED
05-14-20	REVISED NOTES	
11-07-19	RENAMED & REVISED REFERENCES	
11-16-17	RE-DRAWN FROM STD. DWG. GR-10 & ISSUED	

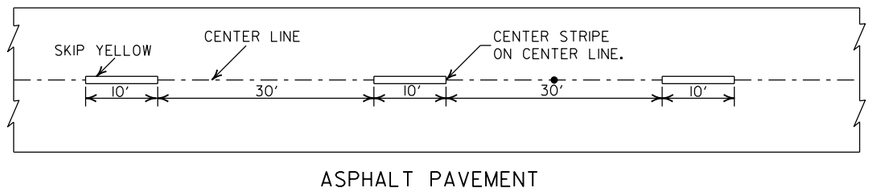
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

STANDARD DRAWING GR-12

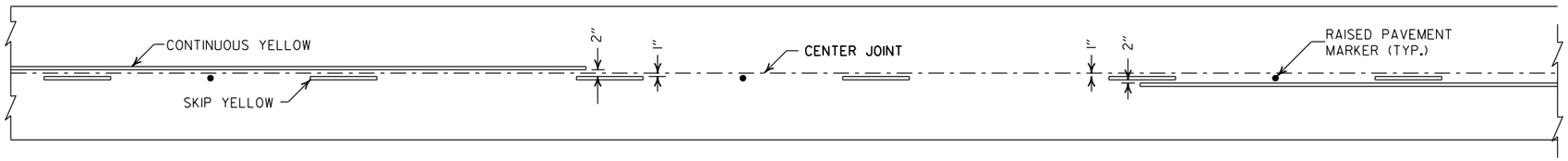


CONCRETE PAVEMENT

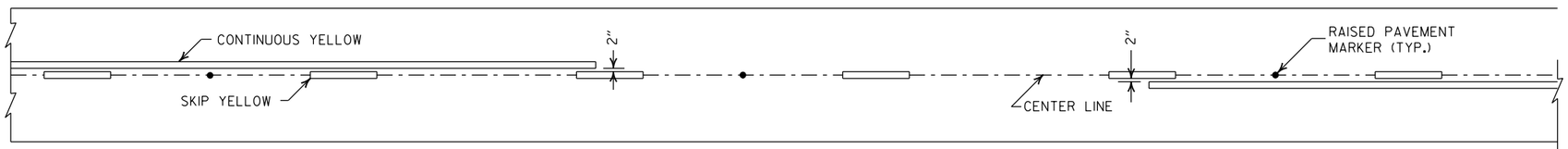


ASPHALT PAVEMENT

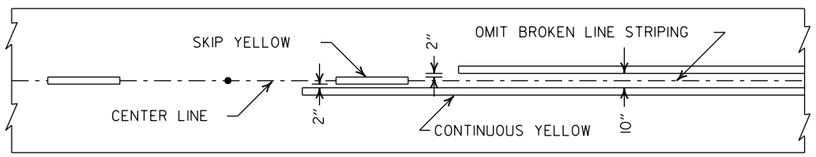
BROKEN LINE STRIPING



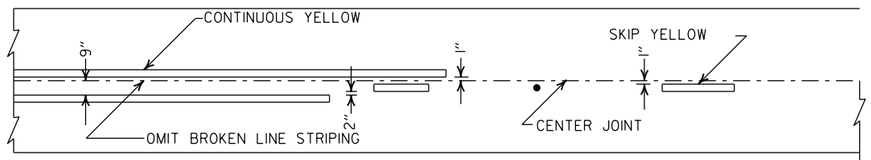
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

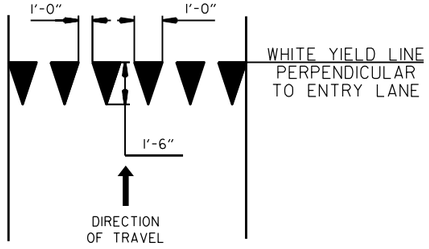


ASPHALT PAVEMENT

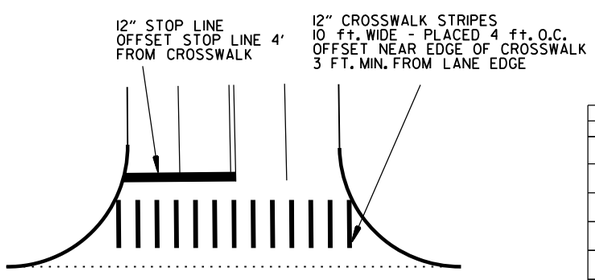


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

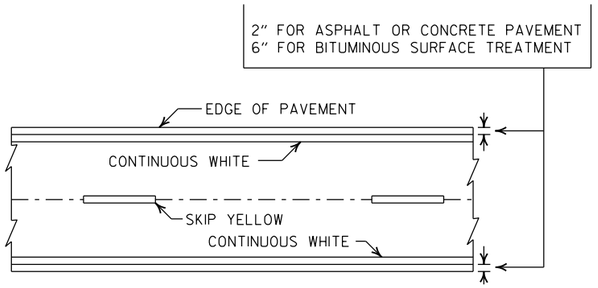


YIELD LINE DETAIL



CROSSWALK AND STOP LINE DETAILS

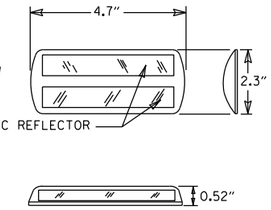
NOTES:
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.



PAVEMENT EDGE LINE MARKING

NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



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 ARDOT QUALIFIED PRODUCTS LIST.

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

DATE	REVISION	FILMED
2-27-20	REVISED STOP LINE DETAILS	
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
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

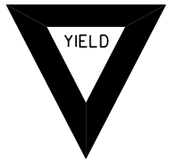
STANDARD DRAWING PM-1

R1-1



STANDARD 30"X30"
EXPRESSWAY 36"X36"
SPECIAL 48"X48"

R1-2



STD. 36"X36"X36"
EXPWY. 48"X48"X48"
FWY. 60"X60"X60"

R2-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

W3-5



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

W3-5a



STD. 36"X36"
EXPWY. 48"X48"
FWY. 48"X48"

R4-1



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R4-2



STD. 24"X30"
EXPWY. 36"X48"
FWY. 48"X60"

R5-1



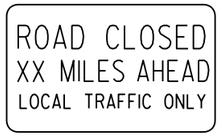
STD. 30"X30"
EXPWY. 36"X36"
SPECIAL 48"X48"

R11-2



48"X30"

R11-3A



60"X30"

R11-4



60"X30"

W21-5a



STD. 36"X36"
FWY. 48"X48"

W1-1



STD. 36"X36"
FWY. 48"X48"

W1-2



STD. 36"X36"
FWY. 48"X48"

W1-3



STD. 48"X48"

W1-4



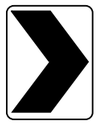
STD. 48"X48"

W1-6



STD. 48"X24"
SPECIAL 60"X30"

W1-8



STD. 18"X24"
SPECIAL 24"X30"
EXPWY. 30"X36"
FWY. 36"X48"

W3-1



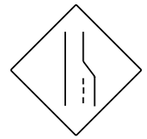
STD. 36"X36"
SPECIAL 48"X48"

W3-2



STD. 36"X36"
SPECIAL 48"X48"

W4-2



STD. 36"X36"
FWY. 48"X48"

W5-1



STD. 36"X36"
SPECIAL 48"X48"

W6-3



EXPWY. 36"X36"
SPECIAL 48"X48"

W8-7



EXPWY. 36"X36"
FWY. 48"X48"

W9-2



STD. 36"X36"
FWY. 48"X48"

W13-1



STD. 24"X24"

W20-1



STD. 48"X48"

W20-2



STD. 48"X48"

W20-3



STD. 48"X48"

W20-4



STD. 48"X48"

W20-5



STD. 48"X48"

W20-7a



STD. 36"X36"
FWY. 48"X48"

W21-2



STD. 30"X30"
SPECIAL 36"X36"

W21-5



STD. 30"X30"
SPECIAL 36"X36"

W24-1



STD. 36"X36"

W1-4b



STD. 48"X48"

R56-1



STD. 18"X18"

W8-11



STD. 36"X36"
FWY. 48"X48"

W8-9



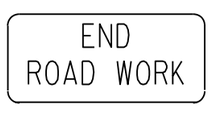
STD. 36"X36"
FWY. 48"X48"

G20-1



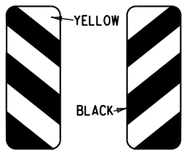
60"X24"

G20-2



48"X24"

OM-3L OM-3R



12"X36"

M4-9



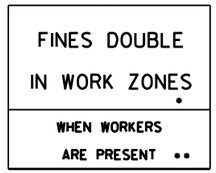
STD. 30"X24"
SPECIAL 48"X36"
SPECIAL 60"X48"

M4-10



48"X18"

R55-1



36"X60"

• USE 6" C LETTERS
•• USE 4" D LETTERS

ADVANCE DISTANCES
(XXXX)

500 FT	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.

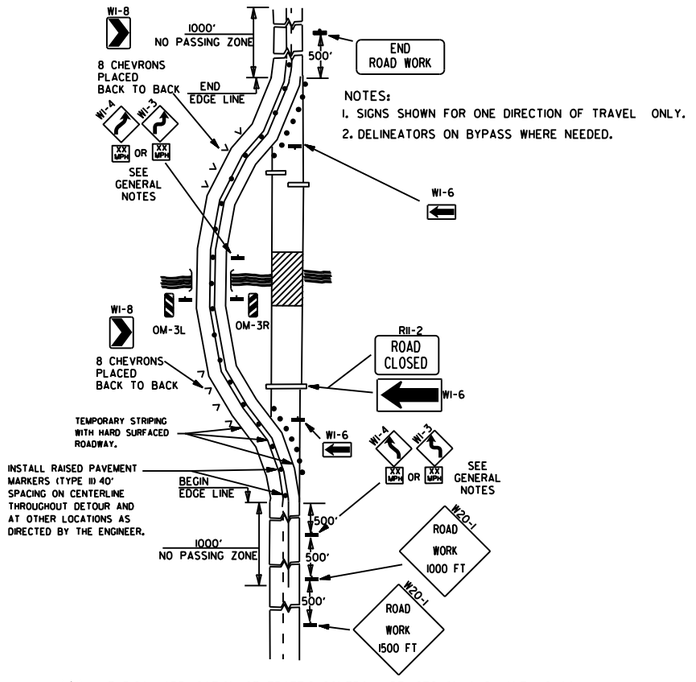
- NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 & 5, BUT MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH), WILL BE ACCEPTED. COMPLIANCE WITH THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) IS REQUIRED FOR ALL PROJECTS.

DATE	REVISION	FILMED
11-07-19	REVISED FOR MASH	
4-13-17	DELETED RSP-1 & ADDED W21-5a	
9-2-15	REVISED REDUCED SPEED LIMIT AHEAD SIGNS REVISED ROAD WORK NEXT XX MILES	
12-15-11	REVISED W24-1	
11-17-10	DELETED W8-9a & ADDED W8-9	
10-15-09	ADDED REFERENCE TO MASH & ADDED SIGN W24-1	
4-17-08	REVISED SIGN DESIGNATIONS	
11-18-04	REVISED NOTES	
10-9-03	REVISED NOTE 1	
11-16-01	REVISED NOTE 7	
9-28-00	REVISED NOTE	
11-18-98	ADDED NOTE	
6-26-97	REVISED NOTE 5	
4-03-97	REVISED NOTE 5	
10-18-96	ADDED CONTROLLED ACCESS HWY. SIGN & TO NOTE 7	
10-12-95	ADDED R55-1	
6-8-95	REVISED TO CORRECT SIGN ILLUSTRATIONS	6-8-95
2-2-95	REVISED PER PART VI, MUTCD SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

ARKANSAS STATE HIGHWAY COMMISSION

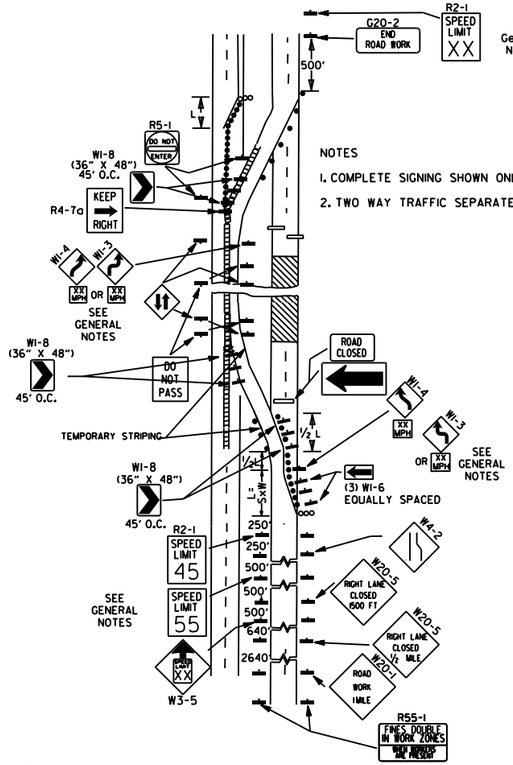
STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

STANDARD DRAWING TC-1



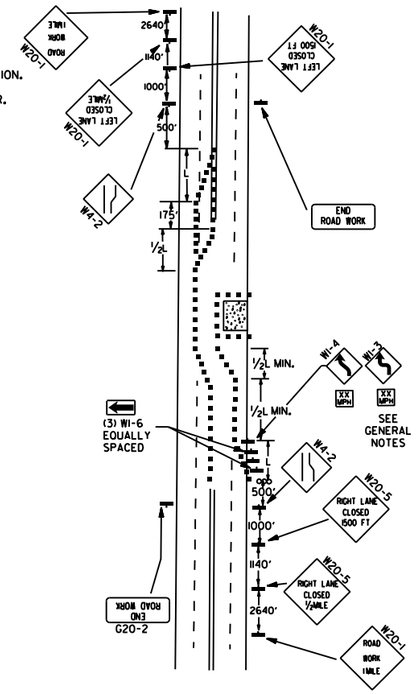
NOTES:
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
2. DELINEATORS ON BYPASS WHERE NEEDED.

(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.

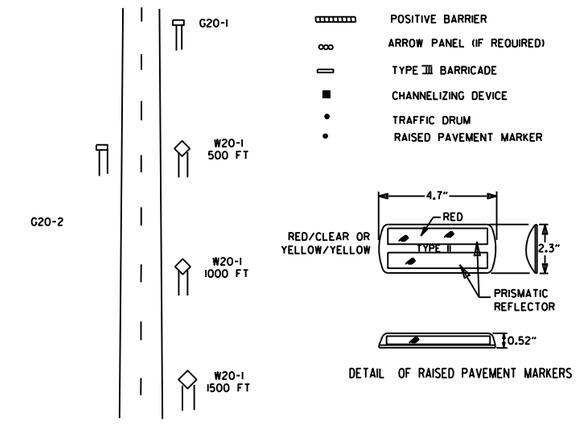


NOTES
1. COMPLETE SIGNING SHOWN ONLY IN CROSSOVER DIRECTION.
2. TWO WAY TRAFFIC SEPARATED WITH POSITIVE BARRIER.

(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



TYPICAL ADVANCE WARNING SIGN PLACEMENT

TAPER FORMULAE:

L=SXW FOR SPEEDS OF 45MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40MPH OR LESS.

WHERE:

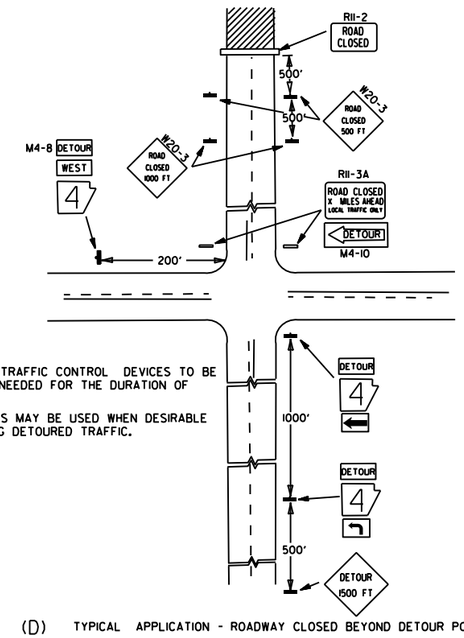
L= MINIMUM LENGTH OF TAPER.

S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85TH PERCENTILE SPEED.

W= WIDTH OF OFFSET.

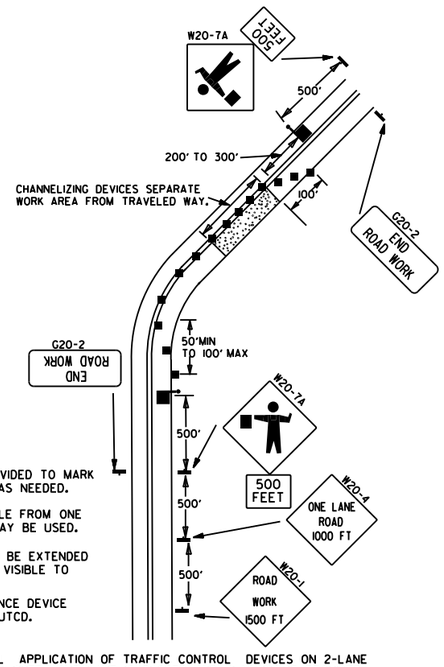
GENERAL NOTES:

1. THE MAINTENANCE DIVISION SHALL CONDUCT A BALL BANK STUDY TO DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC. THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN 30MPH OR LESS
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH 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 R2-155MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
4. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT. BEYOND THE TAPER, MAXIMUM SPACING SHALL BE TWO TIMES THE SPEED LIMIT, OR AS DIRECTED BY THE ENGINEER.
5. WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
6. PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
7. TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE DELINEATED BY AFFIXING CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER. WHEN PLACED ON OR ADJACENT TO THE SHOULDER AND NOT BEHIND A POSITIVE BARRIER, THESE DEVICES SHALL BE DELINEATED BY PLACING FIVE (5) TRAFFIC DRUMS, EQUALLY SPACED ALONG THE TRAFFIC SIDE OF THE DEVICE.
8. DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
9. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).



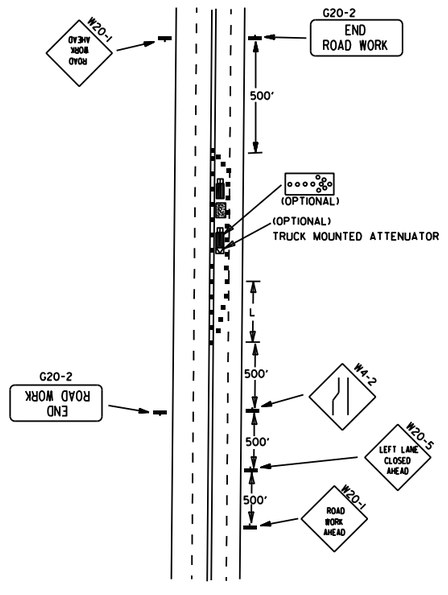
NOTES:
1. REGULATORY TRAFFIC CONTROL DEVICES TO BE MODIFIED AS NEEDED FOR THE DURATION OF THE DETOUR.
2. STREET NAMES MAY BE USED WHEN DESIRABLE FOR DIRECTING DETOURED TRAFFIC.

(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.



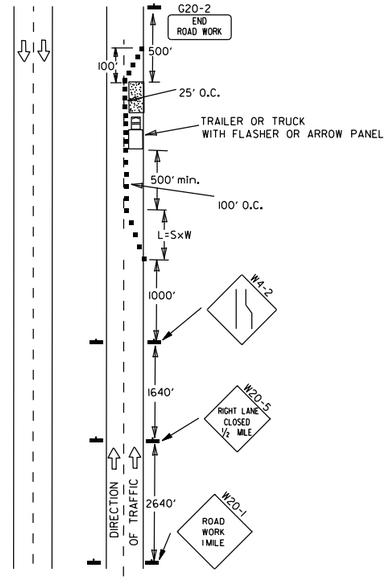
(F) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WITH INSIDE LANE CLOSED.

11-07-19	REVISED NOTE 1, ADDED NOTE 9	
9-2-15	REVISED NOTE 2, ADDED NOTE 8, REVISED DRAWING (A) & REPLACED R2-5A WITH W3-5	
9-12-13	REVISED DETAIL OF RAISED PAVEMENT MARKERS	
3-11-10	ADDED (AFAD)	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED GENERAL NOTE	
10-18-96	ADDED R55-1	
4-26-96	CORRECTED (a) BEHIND G20-2	
6-8-95	CORRECTED SIGN IDENT. ON W1-4A	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	
DATE	REVISION	FILMED

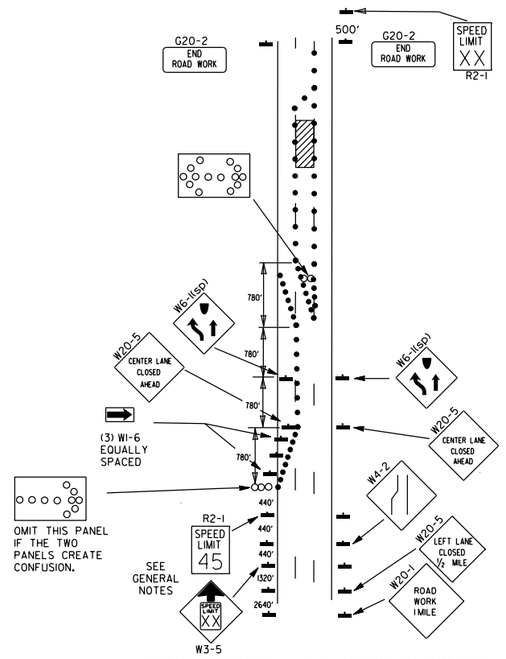
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

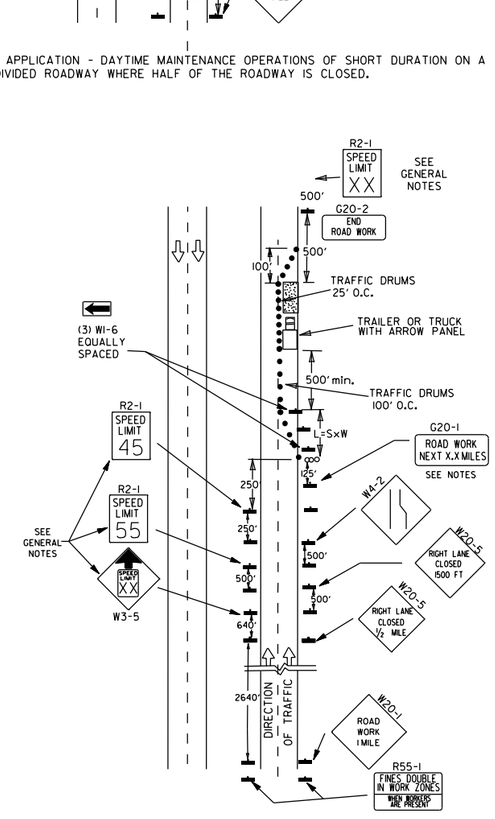
STANDARD DRAWING TC-2



(A) TYPICAL APPLICATION - DAYTIME MAINTENANCE OPERATIONS OF SHORT DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.



(C) TYPICAL APPLICATION - CONSTRUCTION OPERATIONS OF INTERMEDIATE TO LONG TERM DURATION ON A 4-LANE DIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.

KEY:

ooo ARROW PANEL (IF REQUIRED)

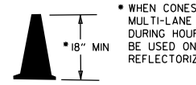
■ CHANNELIZING DEVICE

● TRAFFIC DRUM

GENERAL NOTES:

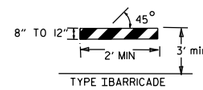
1. A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
2. WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-145MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(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 R2-155MPH 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 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.
11. ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

CHANNELIZING DEVICES

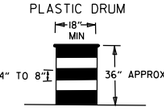


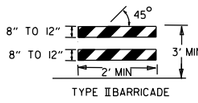
* WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

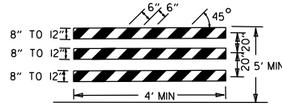
CONES



PLASTIC DRUM

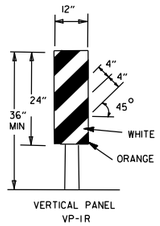




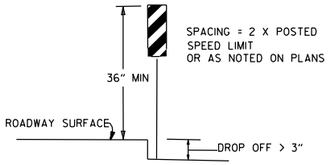


TYPE III BARRICADE

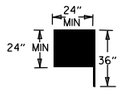
NOTE:
FOR ALL ROAD CLOSURES, THE TYPE III BARRICADES SHALL BE OF SUFFICIENT LENGTH TO EXTEND ACROSS ENTIRE ROADWAY.



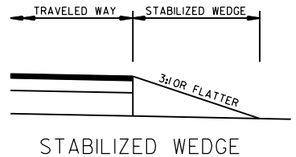
VERTICAL PANEL PLACEMENT



FLAG

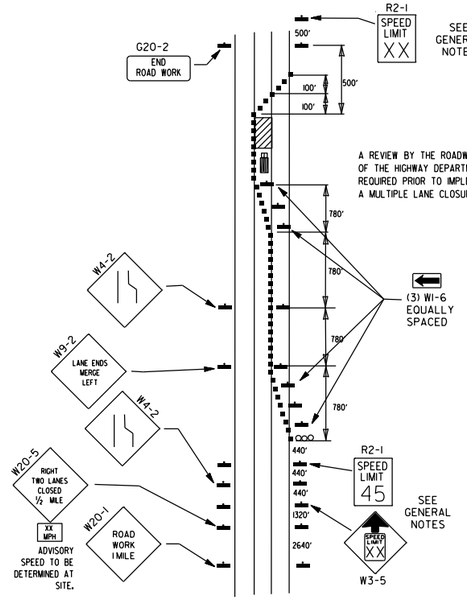


FLAG SHALL BE OF GOOD GRADE RED MATERIAL



STABILIZED WEDGE

NOTE:
MATERIALS FOR THE STABILIZED WEDGE SHALL MEET THE REQUIREMENTS PROVIDED IN SECTION 603.02 OF THE STANDARD SPECIFICATIONS.



(D) TYPICAL APPLICATION - CLOSING MULTIPLE LANES OF A MULTILANE HIGHWAY.

TRAFFIC CONTROL DEVICES

NON-INTERSTATE

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL ≤ 45 MPH	TRAFFIC CONTROL > 45 MPH
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING	W8-11 AND LANE STRIPING
> 2"	CENTERLINE	STANDARD LANE CLOSURE	STANDARD LANE CLOSURE
≤ 3"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-9, EDGE LINE STRIPING, AND VERTICAL PANELS
> 3" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS	W8-17, EDGE LINE STRIPING, AND VERTICAL PANELS
> 6" ≤ 18"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(1)	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 18" ≤ 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(1)	A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS(3)
> 24"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER(4) & EDGE LINES	PRECAST CONCRETE BARRIER(4) & EDGE LINES

INTERSTATE

VERTICAL DIFFERENTIAL	LOCATION	TRAFFIC CONTROL
≤ 2"	CENTERLINE	W8-11 AND LANE STRIPING
≤ 2"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-9, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 2" ≤ 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS(2)
> 6"	EDGE OF TRAVELED LANE OR EDGE OF SHOULDER	PRECAST CONCRETE BARRIER & EDGE LINES

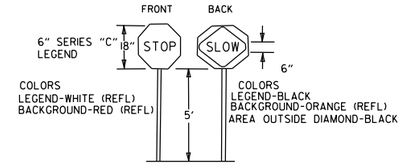
INTERSTATE AND NON-INTERSTATE

FORESLOPE	HEIGHT	TRAFFIC CONTROL
1:1	> 2 FT	PRECAST CONCRETE BARRIER
2:1	≤ 5 FT	TRAFFIC DRUMS
2:1	> 5 FT	PRECAST CONCRETE BARRIER
Flatter than 2:1	N/A	TRAFFIC DRUMS

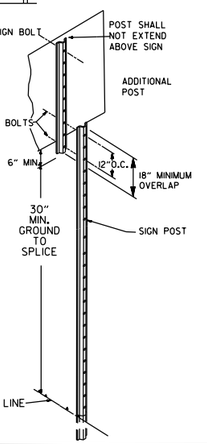
GENERAL NOTES:

1. WHEN THE SHOULDER AREA IS USED AS PART OF THE TRAVELED LANE AND THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, THEN VERTICAL PANELS SHALL BE USED.
2. WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED.
3. PRECAST CONCRETE BARRIER WALL CAN BE USED IN LIEU OF A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS, IF AND WHERE DIRECTED BY THE ENGINEER.
4. A STABILIZED WEDGE, W8-17 SIGN, EDGE LINE STRIPING, AND TRAFFIC DRUMS CAN BE USED IN LIEU OF PRECAST CONCRETE BARRIER WALL, IF AND WHERE DIRECTED BY THE ENGINEER.
5. W21-5, W21-5a, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.

STOP SLOW PADDLE



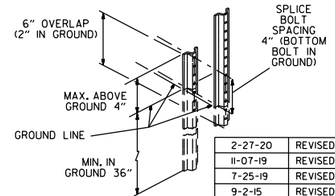
DETAIL OF SPLICES



NOTES: USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-21)

NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.

SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



DATE	REVISION	FILMED
2-27-20	REVISED TRAFFIC CONTROL DEVICES DETAILS	
11-07-19	REVISED NOTE 9, ADDED NOTE 11	
7-25-19	REVISED TRAFFIC CONTROL DEVICES DETAILS	
9-2-15	REVISED NOTE 2 & REPLACED R2-5A WITH W3-5	
10-15-09	ADDED REFERENCE TO MASH	
11-20-08	REVISED SIGN DESIGNATIONS	
11-18-04	ADDED NOTE	
10-1-98	ADDED NOTE	
4-03-97	ADDED (SP) TO W6-1& REVISED TRAFFIC CONTROL DEVICES NOTE	
10-18-96	ADDED R55-1	
10-12-95	MOVED UPPER SPLICE	
6-8-95	REVISED SPLICE DETAIL, TEXT	6-8-95
2-2-95	REVISED PER PART VI, MUTCD, SEPT. 3, 1993	
8-15-91	DRAWN AND PLACED IN USE	

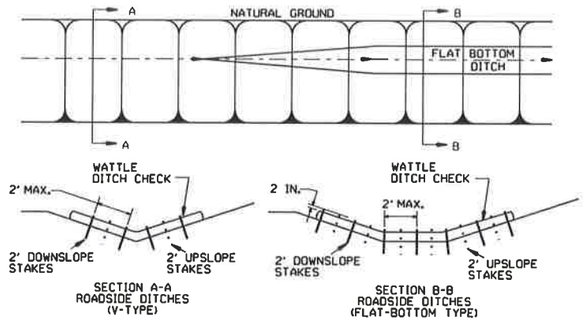
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION

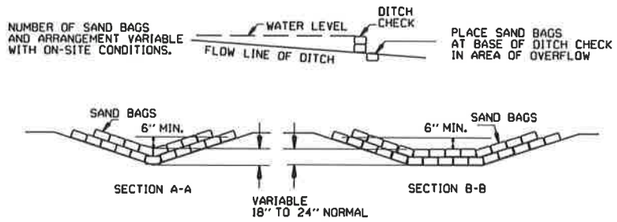
STANDARD DRAWING TC-3

GENERAL NOTES

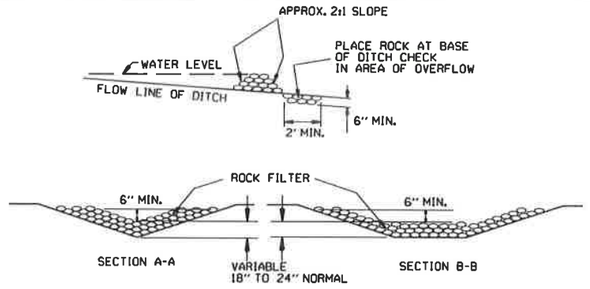
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.



WATTLE DITCH CHECK (E-1)



SAND BAG DITCH CHECK (E-5)

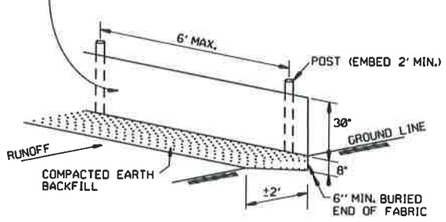


ROCK DITCH CHECK (E-6)

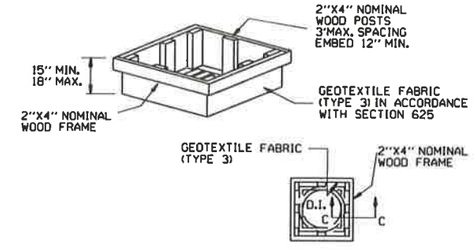
GENERAL NOTES

GEOTEXTILE FABRIC (TYPE 4) IN ACCORDANCE WITH SECTION 625

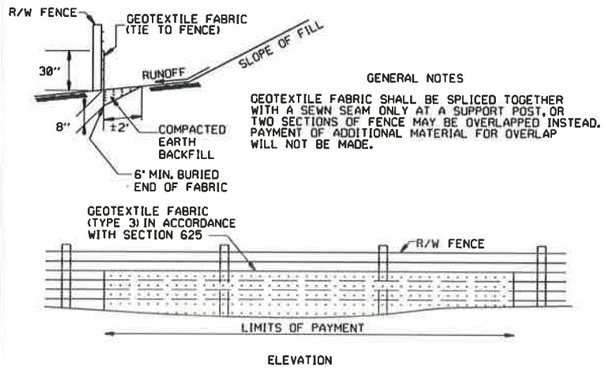
GEOTEXTILE FABRIC SHALL BE SPLICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)



DROP INLET SILT FENCE (E-7)



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.

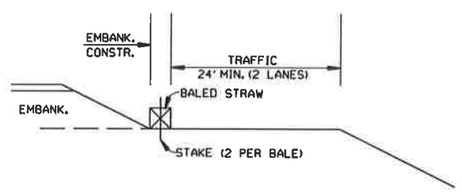
SILT FENCE ON R/W FENCE (E-4)

GENERAL NOTES

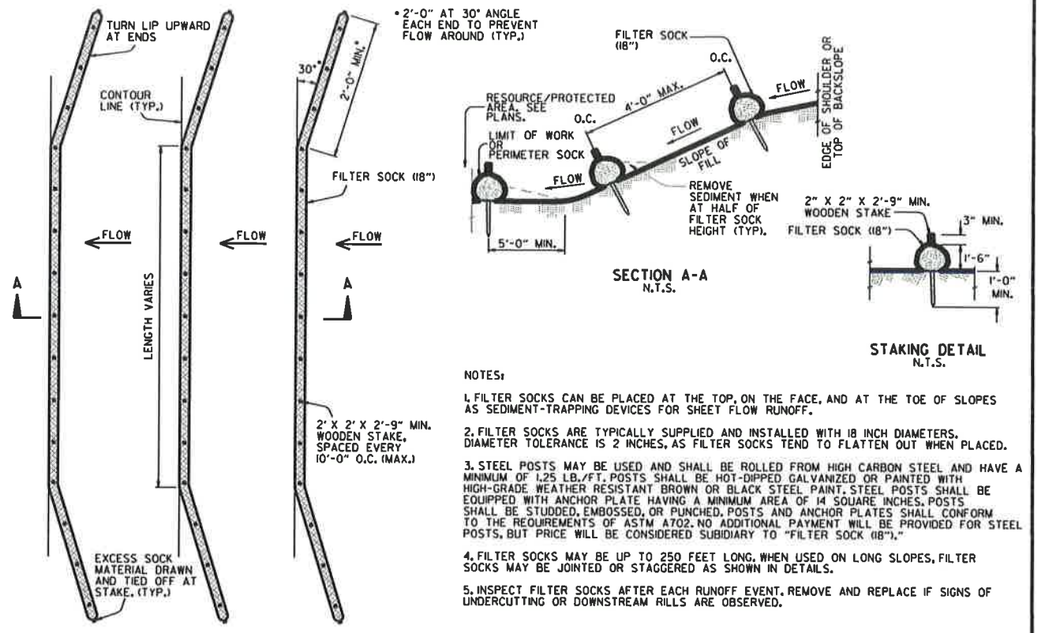
1. STRAW BALES SHALL BE INSTALLED SO THAT THE BINDINGS ARE ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES. THE BALES SHALL BE A MINIMUM OF 30 INCHES IN LENGTH.

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)



NOTES:

1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

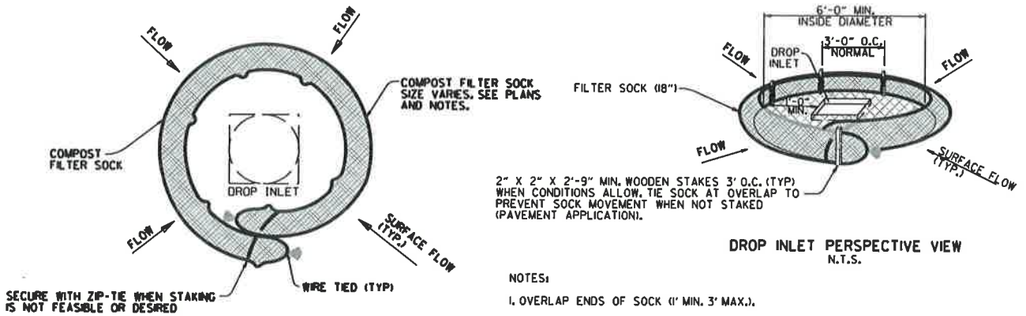
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS. DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.

3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A MINIMUM OF 1.25 LB./FT. POSTS SHALL BE HOT-DIPPED GALVANIZED OR PAINTED WITH HIGH-GRADE WEATHER RESISTANT BROWN OR BLACK STEEL PAINT. STEEL POSTS SHALL BE EQUIPPED WITH ANCHOR PLATE HAVING A MINIMUM AREA OF 14 SQUARE INCHES. POSTS SHALL BE STUDDED, EMBOSSED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A702. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR STEEL POSTS, BUT PRICE WILL BE CONSIDERED SUBIDIARY TO "FILTER SOCK (18")."

4. FILTER SOCKS MAY BE UP TO 250 FEET LONG. WHEN USED ON LONG SLOPES, FILTER SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

5. INSPECT FILTER SOCKS AFTER EACH RUNOFF EVENT. REMOVE AND REPLACE IF SIGNS OF UNDERCUTTING OR DOWNSTREAM RILLS ARE OBSERVED.

FILTER SOCK ALONG SLOPE (E-3)



NOTES:

1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).

2. USE 18" DIA. SOCK IN NON-TRAFFIC AREAS OR AREAS WHERE SAFETY IS NOT A CONCERN.

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)

DATE	REVISION	FILMED
11-16-17	ADDED FILTER SOCK E-3 AND E-13	
12-15-11	DELETED BALED STRAW DITCH CHECK & ADDED WATTLE DITCH CHECK	
11-18-98	ADDED NOTES	
07-02-98	ADDED BALED STRAW FILTER BARRIER (E-2)	
07-20-95	REVISED SILT FENCE E-4 AND E-11	7-20-95
07-15-94	REV. E-4 & E-11 MIN. 13" BURIED END OF FABRIC	
06-02-94	REVISED E-1,4,7 & 11; DELETED E-2 & 3	6-2-94
04-01-93	REDRAWN	
10-01-92	REDRAWN	
08-02-76	ISSUED R.D.M.	298-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

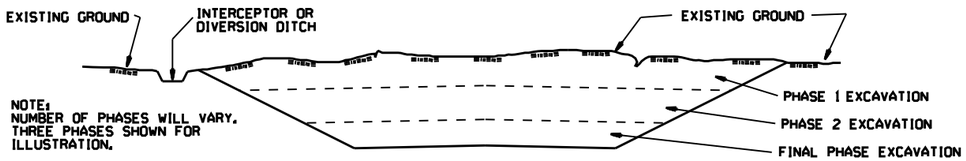
STANDARD DRAWING TEC-1

CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE

1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES , DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION.

EXCAVATION



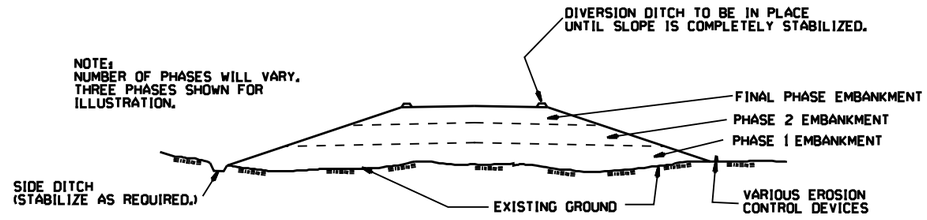
GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASINS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT



GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE

1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEDIMENT BASINS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS IF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

DATE	REVISION	FILMED
11-03-94	CORRECTED SPELLING	
6-2-94	Drawn & Issued	6-2-94

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3