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INDEX OF SHEETS AND STANDARD DRAWINGS
GENERAL NOTES

1. BRIDGE ANALYSIS SHALL BE REQUIRED ON 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 PROTECTED 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 PENCING OF PASTURES IS REQUIRED.

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

6. PREPARATORY WORK, SUCH AS CLEAVING THE GRASS AND DROPS 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 AND LOCATED WHERE THE DROP OFF IS GREATER THAN 4 FT RESULTING FROM THE TRANSITIONS OR GROINROAD ROADWAY IMPROVEMENTS.

7. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK.

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 NIGHT LINE. AFTER SAWING, THE PAVEMENT TO BE REMOVED SHALL BE CARPETED, SERVICED FOR A MINIMUM PERIOD OF TIME. REMOVAL OF COLD MILLING MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "COLD MILLING OF ASPHALT PAVEMENT".

11. COLD MILED MATERIAL IS TO REMAIN THE PROPERTY OF THE CONTRACTOR IN ALL THE DISTRICTS INCLUDED IN THIS PROJECT. THE CONTRACTOR SHALL, IN LAY THE MATERIAL OFF SITE. NO MATERIAL SHALL BE STORED ON-SITE. REMOVAL OF COLD MILLING MATERIAL SHALL NOT BE INCLUDED IN THE PRICE BID. THE ITEM "COLD MILLING OF ASPHALT PAVEMENT"

12. THE ROADWAY COLD MILLED SURFACE SHALL BE OVERLAIWithin 7 CALENDAR DAYS. IF AN AREA OF THE Project HAS BEEN COLD MILLED AND IS NOT OVERLaid ON OR BEFORE THE 11TH DAY, NO ADDITIONAL COLD MILLING SHALL TAKE PLACE UNTIL THE MILLED AREA IS OVERLAD.

13. ANY EQUIPMENT OR APPARATUS THAT INTERFERS 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 GUIDELINE FOR THE CONSTRUCTION OF THIS PROJECT, AND 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 P AND WHERE DIRECTED BY THE ENGINEER TO RETAIN THE END DRAIN SECTION.

GOVERNING SPECIFICATIONS AND GENERAL NOTES
TYPICAL SECTIONS OF IMPROVEMENT

NOTES:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.
2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STANDARD LINES' SIDE EDGE OF 4' WIDE, WITH BLACK BACKGROUND AND WHITE EDGE. '
3. COLLECTED MATERIAL IS TO REMAIN THE PROPERTY OF THE CONTRACTOR.  MATERIALS COLLECTED FROM THE ROADWAY ARE TO BE INCLUDED IN THE PRICE AND FOR "COLD MILLING ASPHALT PAVEMENT."
4. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTIONS IN ACCORDANCE WITH STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2014 EDITION. 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 AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.

80 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION
(Roadway Transitions and New Guardrail)

A BR. NO. 04008 - MAY 14
A BR. NO. 04009 - MAY 14
45 FT. & 49 FT. CLEAR ROADWAY BRIDGE - HYDRODEMOLITION
(Roadway Transitions and New Guardrail)

45 FT.

- Clear Roadway
- Hydrodemolition

49 FT.

- Clear Roadway
- Hydrodemolition

TYPICAL SECTIONS OF IMPROVEMENT

1. Stringline will be used to maintain a uniform horizontal alignment.
2. The Contractor shall furnish and maintain standard "Uneven Lanes" signs and "10 ft. with Black Legend on Orange Background" at all longitudinal joints during milling and paving operations.
3. Cold-milled material is to remain the property of the Contractor unless otherwise approved by the Engineer. The Contractor shall remove all cold-milled material shall be stored or removed in the manner approved by the Contractor.
4. Conditional joints are to be placed per typical section in accordance with Standard Specifications for Highway Construction, 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 and Quantity Sheets for roadway transitions, guardrail widening, and guardrail installation information.
7. For horizontal and vertical control at guardrail locations, the guardrail widening, slopes, and grades shall match the slopes and grades of the main lane. All guardrail transitions and other alignments shall be shown prior to construction of the guardrail widening.

Notes:

- BR, NO. B5392 - Hwy. 71 ROADWAY APPROACHES
- 3 LANE ROADWAY
- 3 LANE BRIDGE

Arkansas Department of Highways and Transportation
40 & 48 FT. CLEAR ROADWAY BRIDGES - HYDRODESTRUCTION

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W8-11 "UNEVEN LANES" SIGN & A MEDIAN MARKER LIST. A STRINGLINE MUST BE USED TO MAINTAIN THE HORIZONTAL ALIGNMENT AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION 2014 EDITION SECTION 410.07 UNLESS OTHERWISE APPROVED BY THE ENGINEER.

4. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
**TYPICAL SECTIONS OF IMPROVEMENT**

**2L - CLEAR ROADWAY BRIDGES: HYDRODEMOLITION**

- BR. NO. 02278 - HWY. 64
- BR. NO. 03961 - HWY. 64

**2 LANE BRIDGE - WESTBOUND**

- **2 LANE BRIDGE - EASTBOUND**

**2 LANE ROADWAY - WESTBOUND**

**2 LANE ROADWAY - EASTBOUND**

**28 & 40 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION**

**ROADWAY TRANSITIONS AND NEW GUARDRAIL**

- **LEFT SHOULDER TRANSITIONS FROM**
  - 7'-0" TO 3'-0" IN 36'-6" APPROACH
  - 7'-0" TO 3'-0" IN 240'-0" (EXIT)

- **RIGHT SHOULDER TRANSITIONS FROM**
  - 7'-0" TO 3'-0" IN 140'-0" (EXIT)

**NOTES:**

1. **STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.**
2. **THE CONTRACTOR SHALL FURNISH & MAINTAIN SIGNS WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.**
4. **COLD-MILLED MATERIAL IS TO REMAIN THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE APPROVED BY THE ENGINEER.**
5. **LATERAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATION FOR ROADWAY TRANSITIONS.**
6. **ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.**
7. **REFER TO SPECIAL DETAILS AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.**

**LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATION FOR ROADWAY TRANSITIONS.**

**NOTES:**

- **LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATION FOR ROADWAY TRANSITIONS.**
- **GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.**
TYPICAL SECTIONS OF IMPROVEMENT

4 LANE DIVIDED BRIDGE

NOTES:
1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.
2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W-11 ELEVEN LANE's SIDE (60" X 4") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.
3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, SECTION 410.07 UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. REFER TO SPECIAL DETAILS AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.
4 LANE DIVIDED BRIDGE

**TYPICAL SECTIONS OF IMPROVEMENT**

57 FT. CLEAR ROADWAY BRIDGE - HYDRODEMOLITION

NEW GUARDRAIL

NOTES:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. UNEVEN LANES' SIGNS (48" X 48") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HORIZONTAL AND VERTICAL CONTROLS AT GUARDRAIL LOCATIONS, TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.

4. REFER TO SPECIAL DETAILS AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION, OTHERWISE APPROVED BY THE ENGINEER.

5. ALL CROSS SLOPES ARE TO MATCH EXISTING SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6. LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SLOPES.

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.

THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SLOPES.

NOTES:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. UNEVEN LANES' SIGNS (48" X 48") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HORIZONTAL AND VERTICAL CONTROLS AT GUARDRAIL LOCATIONS, TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.

4. REFER TO SPECIAL DETAILS AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION, OTHERWISE APPROVED BY THE ENGINEER.

5. ALL CROSS SLOPES ARE TO MATCH EXISTING SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6. LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SLOPES.

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.

THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SLOPES.
TYPICAL SECTIONS OF IMPROVEMENT

4 LANE DIVIDED ROADWAY

28'-6" CLEAR ROADWAY HYDRODESTRUCTION

28'-6" CLEAR ROADWAY HYDRODESTRUCTION

57 FT. CLEAR ROADWAY BRIDGE - HYDRODESTRUCTION

NOTES:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL PROVIDE A MANSION WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL CROSS SLOPES DURING MILLING AND PAVING OPERATIONS.

3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR MASONRY CONSTRUCTION, 2013 EDITION, SECTION 410.07 UNLESS OTHERWISE APPROVED BY THE ENGINEER.

4. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

5. TRANSITIONS FROM 10'-0" TO 2'-0" MEDIAN IN 50'-0"

6. TRANSITIONS FROM 10'-0" TO 2'-0" LEFT SHOULDER IN 50'-0"
**NOTES:**

1. Stepliner will be used to maintain a uniform horizontal alignment.

2. The contractor shall furnish & maintain 360°-stabilized lane markers with black legend on orange background at all longitudinal joints during milling and paving operations.

3. Cold-milled material is to remain the property of the contractor. In all of the districts included in this project, the contractor shall haul the material to its own facility. The material shall be sterilized or buried on site. The material of cold-milled material shall be included in the price bid for “cold milling asphalt pavement.”

4. Longitudinal joints are to be placed per typical section in accordance with standard specifications for highway construction. For existing section, 12" unless otherwise approved if and where by the Engineer.

5. All cross slopes are to match existing cross slopes unless otherwise approved by the Engineer.

6. Refer to special details and quantity sheets for roadway transitions, guardrail widening, and guardrail installation information.

7. For horizontal and vertical controls at guardrail locations, the guardrail widening shall match the slopes & elevation changes of the main lane. The guardrail widening shall be paved prior to construction of the guardrail widening.

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**28 FT. CLEAR ROADWAY BRIDGE - HYDRODEMOLITION**

(BRIDGES WITH MILLING ASPHALT ON BR. DECK, ROADWAY TRANSITIONS, AND NEW GUARDRAIL)

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### TYPICAL SECTIONS OF IMPROVEMENT
40 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION

**WESTBOUND**

- BR. NO. A3967 - I-40

- 40'-0" EXISTING BRIDGE DECK
- 2 LANE BRIDGE - WESTBOUND

**EASTBOUND**

- BR. NO. B3967 - I-40

- 40'-0" EXISTING BRIDGE DECK
- 2 LANE BRIDGE - EASTBOUND

**NOTES:**

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W8-11 "UNEVEN LANES" SIGNS W/ 48" X 48" STRINGLINE AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

3. COLD-MILLED MATERIAL IS TO REMAIN THE PROPERTY OF THE CONTRACTOR IN ALL OF THE DISTRICTS INCLUDED IN THIS PROJECT. THE CONTRACTOR SHALL REMOVE ALL MATERIAL ON-SITE AND TEMPORARILY STORED COLD-MILLED MATERIAL SHALL BE INCLUDED IN THE PRICE FOR COLD MILLING ASPHALT PAVEMENT.

4. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, 2014 EDITION, SECTION 410.07 UNLESS OTHERWISE APPROVED IF ANY PART OF THE EXCEPTED CROSS SLOPE.
43 FT. CLEAR ROADWAY BRIDGE - HYDRODEMOLITION
(Roadway Transitions and New Guardrail)

**NOTES:**

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL SIMULTANEOUSLY MILL THE EXISTING LANE AND MILL THE DETACHED LANE USING ONE PASS. 48" X 48" BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

3. COLD-MILLED MATERIAL IS TO REMAIN THE PROPERTY OF THE CONTRACTOR AND IS NOT TO BE RE-USED. THE CONTRACTOR SHALL MILL THE MATERIAL OFFERED MATERIAL SHALL BE SCHEDULED ON RUBBAGE REMOVAL. THE CONTRACTOR SHALL MILL THE MATERIAL OFFERED MATERIAL SHALL BE SCHEDULED ON RUBBAGE REMOVAL. THE CONTRACTOR SHALL MILL THE MATERIAL OFFERED MATERIAL SHALL BE SCHEDULED ON RUBBAGE REMOVAL. THE CONTRACTOR SHALL MILL THE MATERIAL OFFERED MATERIAL SHALL BE SCHEDULED ON RUBBAGE REMOVAL.

4. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION. 48" X 48" BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.

5. ALL CROSS SLOPES ARE TO MATCH THE EXISTING CROSS SLOPE UNLESS OTHERWISE APPROVED BY THE ENGINEER.

6. REFER TO SPECIAL DETAILS AND SUMMATION SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.

7. FOR MONITORIAL AND VERTICAL CONTROLS AT GUARDRAIL LOCATIONS, THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SHOULDERS. THE MAIN LANE TRANSITIONS AND GUARDRAIL INSTALLATION MUST BE COMPLETED PRIOR TO CONSTRUCTION OF THE GUARDRAIL IN METAL.

**TYPICAL SECTIONS OF IMPROVEMENT**
28 FT. CLEAR ROADWAY BRIDGES - HYDRODEMOLITION

- BR. NO. 03639 - HWY. 79 - EASTBOUND
- BR. NO. 03639 - HWY. 79 - WESTBOUND

NOTES:
1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.
2. THE CONTRACTOR SHALL FURNISH & MAINTAIN STD. W8-11 "UNEVEN LANES" SIGNS, 4FT. HIGH WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL LONGITUDINAL JOINTS DURING MILLING AND PAVING OPERATIONS.
3. LONGITUDINAL JOINTS ARE TO BE PLACED PER TYPICAL SECTION IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. FOR OTHER SECTION HEIGHT UNLESS OTHERWISE APPROVED BY THE ENGINEER.
4. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TYPICAL SECTIONS OF IMPROVEMENT
28 FT, CLEAR ROADWAY BRIDGE - HYDRODEMOLITION (ROADWAY TRANSITIONS AND NEW GUARDRAIL)  

NOTE:

1. STRINGLINE WILL BE USED TO MAINTAIN A UNIFORM HORIZONTAL ALIGNMENT.

2. THE CONTRACTOR SHALL FURNISH AND MAINTAIN TWO HORIZONTAL PLANES (LATS 36'-0" AND 36'-0" WITH BLACK LEGEND) AND TWO HORIZONTAL PLANES (AVG. 3'-6" WITH BLACK LEGEND) FOR VERTICAL CONTROLS AT GUARDRAIL LOCATIONS. THE CONTRACTOR SHALL FURNISH AND MAINTAIN TWO HORIZONTAL PLANES (LATS 36'-0" AND 36'-0" WITH BLACK LEGEND) FOR VERTICAL CONTROLS AT GUARDRAIL LOCATIONS.

3. ALL CROSS SLOPES ARE TO MATCH EXISTING CROSS SLOPES UNLESS OTHERWISE APPROVED IF AND WHERE BY THE ENGINEER.

4. FOR HORIZONTAL AND VERTICAL CONTROLS AT GUARDRAIL LOCATIONS, THE GUARDRAIL WIDENING SLOPES AND GRADES SHALL MATCH THE SLOPES AND GRADES OF THE MAIN LANE SHOULDERS. THE MAIN LANE TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION. REFER TO SPECIAL DETAILS AND QUANTITY SHEETS FOR ROADWAY TRANSITIONS, GUARDRAIL WIDENING AND GUARDRAIL INSTALLATION INFORMATION.
SPECIAL DETAILS

**DETAIL FOR TRANSITIONS**

- **100' NORMAL TRANSITION**
- 2" AC BM SURFACE COURSE (1/2"

**DETAIL FOR GRADE RAISE**

- **100' NORMAL TRANSITION**
- 2" AC BM SURFACE COURSE (1/2"

**DETAIL FOR PAVEMENT MILL & INLAY**

At Bridge Ends to Repair Asphalt Roadway

- 2" AC BM SURFACE COURSE (1/2"

**NOTES:**

1. AC BM shall be placed for roadway transitions, repair, and guardrail widening after hydrodemolition or polymer overlay has been completed.
2. Dimensions and quantities shall be field checked by the engineer and may be subject to change. Quotations for estimating and bidding purposes only. Quantities will be paid by actual measurements taken in the field.

**PROFESSIONAL ENGINEER**

Arkansas

No. 9678

Licence:

N.U.D.

S.A.N.D.L. OF SECTION BEGINNING OR END

100' NORMAL TRANSITION

2" AC BM SURFACE COURSE (1/2"

50' NORMAL TRANSITION

2" AC BM SURFACE COURSE (1/2"

50' COLD MILL EXISTING ASPHALT PAVERS

100' NORMAL TRANSITION

2" AC BM SURFACE COURSE (1/2"

50' COLD MILL EXISTING ASPHALT PAVERS

100' ASPHALT PAVERS BRIDGE DECK TRANSITION

FILMED DATE: 3/26/21

REVISION DATE: 3/26/21

AR KANSAS

L I C E N S E D

P R O F E S S I O N A L

E N G I N E E R

4/9/78

SPECIAL DETAILS
WIDENING FOR GUARDRAIL REQUIRING EARTHWORK

* NOTES
1. REFER TO LMT. O&N & O&A FOR SLICE REQUIREMENTS BEHIND GUARDRAIL.

**ADD'L. AGGREGATE BASE COURSE (CLASS 7)**

**VAR. COMP. DEPTH (VAR. TONS/STA.)**

**GUARDRAIL (TYPE A)**

* THIS WIDTH MAY BE ADJUSTED IF & WHERE DIRECTED BY THE ENGINEER.

**5'-6" ADD'L. ACHM SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.)**

**SECTION A-A**

**PLAN VIEW**

**BRIDGE END TERMINAL DETAILS**

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

1. REFER TO STD. DWG. GR-9A FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
2. FOR HORIZONTAL AND VERTICAL CONTROL, THE GUARDRAIL INSTALLATION SHALL
MATCH THE GRADES AND SLOPES OF THE MAIN LANES. CONSTRUCT GUARDRAIL APPROACHES AND WITH LINE TRANSITIONS BEFORE PLACING GUARDRAIL WIDENING.

REVISIONS

DATE OF REVISION | REVISION
--- | ---

NOTES:
1. REFER TO STD. DWG. GR-9A FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
2. FOR HORIZONTAL AND VERTICAL CONTROL, THE GUARDRAIL INSTALLATION SHALL
MATCH THE GRADES AND SLOPES OF THE MAIN LANES.

NOTES FOR ADDITIONAL SILT FENCE:
1. BRIDGES #3 - B5392 AND #4 B5802 REQUIRE A 50' BUFFER.
2. THE REMAINING PROJECT BRIDGES OVER WATER SURFACES REQUIRE A 25' BUFFER. SILT FENCE QUANTITIES ARE ESTIMATED AND HAVE BEEN PROVIDED FOR IN THE EROSION CONTROL QUANTITY BOX.
3. THE DEVICES ARE TO BE INSTALLED IN AN AREA TO MAXIMIZE THEIR EFFECTIVENESS.
4. TEMPORARY EROSION CONTROL GENERAL NOTES:
   1. REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
   2. EROSION CONTROL MEASURES TO BE PLACED DURING APPROPRIATE STAGES, THEIR DEVICES SHALL BE LEFT IN PLACE TO CONFORM TO THE ERADICATION OF THE DEVICES.

LEGEND
- E-1 = WATTLE DITCH CHECK
- E-3 = FILTER SOCKS
- E-6 = ROCK DITCH CHECK
- R-11 = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS

ARCHITECT: ARDOT 180965 01239 B Grave Preservation Special Design

WORKSPACE: Katie. Le Blanc


PROJECT: ARDOT 2021}

LEGEND
- E-1 = WATTLE DITCH CHECK
- E-3 = FILTER SOCKS
- E-6 = ROCK DITCH CHECK
- R-11 = SILT FENCE

TEMPORARY EROSION CONTROL DETAILS

ARCHITECT: ARDOT 180965 01239 B Grave Preservation Special Design

WORKSPACE: Katie. Le Blanc


PROJECT: ARDOT 2021
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 standard 8-11" "UNEVEN LANE" signs and standard 8-1 "BUMP" signs.
3. The contractor shall furnish and maintain standard 30" x 30" temporary signs with black legend on orange background at all longitudinal joints during milling and paving operations.
4. The road lanes shall not be placed on the finished asphalt surface until after all work adjacent to the pavement edge, including spreading, compacting and edge cutting, is completed in order to avoid damaging the edge lines.

LEGEND
- Temporary Traffic Sign
- Traffic Flow Arrows

DETAIL OF ENTRANCE AND EXIT RAMPS
ALL STAGES

CONSTRUCTION SEQUENCE
STAGE 1:
Install advance warning signs and end road work signs at the locations shown for stage 1.

STAGE 2:
Remove maintenance of traffic devices as shown in stage 1 and install removable construction pavement markings 1' away from lane, remove construction pavement warning at 400', stop, and go.

STAGE 3:
Mirror installation of advance warning signs and end road work signs for stage 1.

STAGE 4:
Mirror installation maintenance of traffic devices for stage 2 and install removable construction pavement markings 1' away from lane, remove construction pavement warning from stage 3 and install permanent pavement marking, return traffic to normal pattern on roadway.

LANE CLOSURE WITH PORTABLE TRAFFIC SIGNAL SYSTEM & TRAFFIC DRUMS FOR HYDRODEMOLITION BRIDGES
24' & 28' CLEAR ROADWAY ON THE BRIDGE DECKS
ADVANCE WARNING (2 LANE)
MAINTENANCE OF TRAFFIC
MAINTENANCE OF TRAFFIC NOTES:

1. THE CONTRACTOR SHALL PROVIDE TWO WAY RADIO COMMUNICATION FOR FLAG PERSON FOR CONSTRUCTION WORK AREA.

2. THE CONTRACTOR SHALL FURNISH AND MAINTAIN W8-11 "UNEVEN LANES" 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. W8-1 "BUMP" SIGNS (30" X 30") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL TRANSVERSE JOINTS EXPOSED TO TRAFFIC.

4. THE CONTRACTOR SHALL PROVIDE 2-WAY RADIO COMMUNICATION FOR FLAG PERSON FOR CONSTRUCTION WORK AREA.

5.  THE CONTRACTOR SHALL PROVIDE 2-WAY RADIO COMMUNICATION FOR FLAG PERSON FOR CONSTRUCTION WORK AREA.

6. THE CONTRACTOR SHALL FURNISH AND MAINTAIN SIGNS (30" X 30") WITH BLACK LEGEND ON ORANGE BACKGROUND AT ALL TRANSVERSE JOINTS EXPOSED TO TRAFFIC.

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**CONSTRUCTION SEQUENCE**

**STAGE 1**
- Install advance warning signs and end road work zone signs at the locations shown on Stage 1.
- Maintain traffic devices as shown on Stage 1 to move traffic to outside travel lanes & shoulders.
- Construct hydrodemolition on bridge for inside travel lane & turn lane.

**STAGE 2**
- Install advance warning signs and end road work zone signs at the locations shown on Stage 2 advance warning details.
- Install Stage 2 maintenance of traffic devices and removable construction pavement markings, only traffic to inside lanes.
- Construct hydrodemolition on bridge for outside travel lane.

**NOTE:**
- Install advance warning panels at normal distance on roadway. Install permanent pavement warnings under traffic.

**IOWA WEAVE WITH TRAFFIC DRUMS**
- For Hydrodemolition Bridges
- 4 Lane Divided Highway
- 28' to 60' Clear Roadway on the Bridge Decks
- Advance Warning
- (4 Lane Divided Highway)
- Maintenance of Traffic
**Legend**

- **Vertical Panel**
- **Temporary Traffic Sign**
- **Traffic Flow Arrows**

---

**Construction Sequence**

**Stage 1**
- Install advance warning signs and end road work signs at the locations shown for Stage 1 to move traffic to outside travel lanes & shoulders.
- Construct hydrodemolition on bridge for inside travel lane & turn lane.

**Stage 2**
- Install advance warning signs and end road work signs at the locations shown for Stage 2 advance warning signs.
- Install stage 1 maintenance of traffic devices and maintainable construction pavement markings. Shift traffic to inside lanes.
- Install maintenance of traffic devices as shown in Stage 1.
- Install advance warning signs and end road work signs at the location shown for Stage 2 advance warning signs.
- Lighted advance warning signs and end road work signs at the locations shown for Stage 1.

**Stage 3**
- Return traffic to normal pattern on roadway, install permanent pavement markings under traffic.

**Stage 4**
- Return traffic to normal pattern on roadway, install permanent pavement markings under traffic.

**Iowa Weave with Vertical Panels**
- For hydrodemolition bridges
- 4 lane divided highway
- 57' clear roadway on the bridge decks

**Advance Warning (4 LANE DIVIDED HIGHWAY)**
- Maintenance of Traffic
STAGE 1

- 14'-0" SHLD.
- 12'-0" LANE
- 12'-0" LANE
- 8'-0" SHLD.

STAGE 2

- 20'-0" BRIDGE DECK
- MILL EXISTING ASPHALT OVERLAY
- 2 LANE BRIDGE
- DESIRED FINAL CONST. JT LOCATION

STAGE 1 TRAFFIC

- 3'-0"
- 10'-0" LANE
- 2'

STAGE 2 TRAFFIC

- 3'-0"
- 10'-0" LANE
- 2'

TYPICAL SECTIONS

(2 LANE ROADWAYS WITH TRAFFIC DRUMS)

MAINTENANCE OF TRAFFIC
PERMANENT PAVEMENT MARKING DETAILS

TWO LANE ROADWAYS W/ BRIDGE

NOTES:

1. BRIDGE AND ROADWAY DIMENSIONS VARY FOR EACH BRIDGE SITE. REFER TO TYPICAL SECTIONS.

2. PAVEMENT MARKINGS ARE TO BE PLACED FROM BEGINNING OF TRANSITION LENGTH AT EACH SITE THROUGH ENDING TRANSITION. REFER TO COLD MULLING AS EACH BRIDGE SITE.

3. REFER TO "PERMANENT PAVEMENT MARKINGS" QUANTITY BOX FOR STRIPING AND RAISED PAVEMENT MARKER QUANTITIES AT EACH BRIDGE SITE.

4. ALL BRIDGE LOCATIONS EXCEED 3,000 ADT; THEREFORE PAVEMENT MARKINGS FOR EACH TWO LANE BRIDGE MUST BE WORKPLANNED.

PERMANENT PAVEMENT MARKING DETAILS

THREE LANE ROADWAY W/ BRIDGE

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 LENGTH AT EACH SITE THROUGH ENDING TRANSITION. REFER TO "PERMANENT PAVEMENT MARKINGS" QUANTITY BOX FOR STRIPING AND RAISED PAVEMENT MARKER QUANTITIES AT EACH SITE.

3. REFER TO "PERMANENT PAVEMENT MARKINGS" QUANTITY BOX FOR STRIPING AND RAISED PAVEMENT MARKER QUANTITIES AT EACH 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 PLACEMENT 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.
### Permanent Pavement Marking Details

1. **Bridge and Roadway Dimensions Vary for Each Bridge and Roadway.**

2. **Refer to “Permanent Pavement Markings”**
   - **Continuous Edge Line**
   - **Thermoplastic Pavement Marking White (6")**
   - **Red/White @ 80' Spacing (Typ.)**
   - **Thermoplastic Pavement Marking White (6") - Solid Line & W/ Raised Pavement Markers (Typ.)**
   - **Thermoplastic Pavement Marking Yellow (6") - Solid Line & W/ Raised Pavement Markers (Typ.)**

3. **Enhanced Thermoplastic Pavement Marking White (6")**
   - **Solid Line & W/ Raised Pavement Markers (Typ.)**
   - **Skip Line & W/ Raised Pavement Markers (Typ.)**

4. **Notes:**
   - L. Bridge and roadway dimensions vary for each site. Refer to typical section.
   - Refer to “Permanent Pavement Markings.”
   - Quantity box for striping and raised pavement mark quantities at each bridge site.
## Advance Warning Signs and Devices (District 4)

### Lane Closure for Hydrodemolition Bridges

<table>
<thead>
<tr>
<th>Sign Number</th>
<th>Description</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Maximum Number Required</th>
<th>Total Signs Required</th>
<th>Vertical Panels</th>
<th>Traffic Drum</th>
<th>Hydranting &amp; Relocating Panel</th>
<th>Panel</th>
<th>Portable Traffic Signal Actuated</th>
<th>Portable Changeable Message Sign</th>
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<tr>
<td>DL01</td>
<td>Arrow, Work Zone</td>
<td>36x36</td>
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### Advance Warning Signs - Freeway

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<th>Panel</th>
<th>Portable Traffic Signal Actuated</th>
<th>Portable Changeable Message Sign</th>
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<td>DL01</td>
<td>Arrow, Work Zone</td>
<td>36x36</td>
<td>48x48</td>
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<td>Right Lane Closed</td>
<td>36x36</td>
<td>48x48</td>
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<td>48x48</td>
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<td>DL04</td>
<td>End of Work Zone</td>
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### Advance Warning Devices

- **Subtotal Advance Warning Devices**: 351

### Total Advance Warning Devices

- **Subtotal Advance Warning Devices**:
  - ARKANSAS RIVER BRIDGES: 626
  - NON-ARKANSAS RIVER BRIDGES: 285
  - TOTAL ADVANCE WARNING DEVICES: 911

### Notes

1. **Advance Warning Arrow Panels** are to be transferred between districts if and where directed by the Engineer.
2. **Portable Changeable Message Sign** can be used if and where directed by the Engineer.
3. **Portable Traffic Signal Actuated Devices** are warranted for right lane on-ramps.
4. **Hydranting & Relocating Panels** are warranted for districts 1, 2, 3, and 7.
5. **Advance Warning Panels** (except those warranted for districts 1, 2, 3, and 4) are warranted for districts 4, 5, 6, and 8.
6. **Temporary Lane Closures** are warranted for districts 4, 5, 6, and 8.
<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>MAXIMUM NUMBERS REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>FURNISHING &amp; INSTALLING PRECAST CONCRETE BARRIER</th>
<th>RELOCATING PRECAST CONCRETE BARRIER</th>
<th><strong>ADVANCE WARNING SIGN PANEL</strong></th>
<th><strong>PORTABLE TRAFFIC SIGNAL</strong></th>
<th><strong>PORTABLE CHANGABLE MESSAGE SIGN</strong></th>
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<td>48&quot;x48&quot;</td>
<td>48&quot;x48&quot;</td>
<td>48&quot;x48&quot;</td>
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<td></td>
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</table>

* *ADVANCE WARNING SIGN PANELS ARE TO BE TRANSFERRED BETWEEN DISTRICTS 1, 4 AND 6. REFER TO SECTION 19.00 OF THE STDS. SPECs.*

**THE RELOCATION OF CONCRETE BARRIERS IS NOT TO BE PERFORMED UNTIL THE INVOLVED DISTRICTS ARE NOTIFIED.**

---

**ADVANCE WARNING SIGNS AND DEVICES (DISTRICT 8)**

**LANE CLOSURE FOR HYDRODEMOLITION BRIDGES**

---

**QUANTITIES**
### Advance Warning Signs and Devices (Districts 3 & 7)

#### Advance Warning Signs - Highway

<table>
<thead>
<tr>
<th>Sign Number</th>
<th>Description</th>
<th>Sign Size</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Maximum Warning Required</th>
<th>Total Signs Required</th>
<th>Vertical Panels</th>
<th>Traffic Drums</th>
<th>Fencing &amp; Pavement Signs</th>
<th>Concrete Barrier</th>
<th>Advance Warning Arrow Panel</th>
<th>Portable Traffic Signal System-Activated</th>
<th>Portable Message Sign</th>
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<td>2</td>
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<td>Portable Arrow Panel 1/2</td>
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<td>1040</td>
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**Notes:**
- **1.** Portable Traffic Signal System-Activated and to be transferred between Districts 3 & 7 as directed by the Engineer.
- **2.** Portable Traffic Signal Bow to be used if and where directed by the Engineer.
- **3.** Advance Warning Arrow Panel 1/2 to be transferred between Districts 3 & 7 as directed by the Engineer.
- **4.** Advance Warning Arrow Panel 1/2 to be transferred between Districts 3 & 7 as directed by the Engineer.
- All quantities for Advance Warning Signs and Devices are estimated for Districts 3 & 7 and are subject to Section 104.05 of the State Specifications.
- The five lane roads and divided highways are high volume and the two lane roads are high volume as defined in Section 54.33 of the Standard Specifications for Highway Construction, Edition 2014.
## PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 4, BOX 1 OF 4)

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<th>DESCRIPTION</th>
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## PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 8, BOX 2 OF 4)

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</table>

### Notes:
1. Lane Roads Have High Traffic Volume As Defined In Section 35.33.5 Arkansas Specifications For Highway Construction, Edition Of 2014.
2. Lane Roads Have High Traffic Volume In Each District As Defined In Section 36.3 of the Standards Specifications For Highway Construction, Edition Of 2014. Refer To Permanent Pavement Markings For List Of High And Low Roads Per District.

### Quantity Estimated:
See SCD 104.03 Of STD. SPECs To Be Used If And Where Directed By The Engineer.

The Yellow Stripping Quantity Has Been Estimated Based On A Double Yellow Centerline Striping For The Entire Project. The Project Must Be Marked For Permanent Pavement Marking Prior To The Placement Of Any Final Striping. Contact The Maintenance Division After The Final Lift Of Surface Course Has Been Planned To Schedule The Zoning Of The Project.
### PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 7 - BOX 3 OF 4)

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<th>REMOVAL OF CONSTRUCT. MARKINGS</th>
<th>REMOVABLE CONSTRUCT. MARKINGS</th>
<th>RAISED PAVEMENT MARKERS</th>
<th>ENHANCED THERMOPLASTIC PAVEMENT MARKERS</th>
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NOTES:
1. LANE ROADS HAVE HIGH TRAFFIC VOLUME AS DEFINED IN SECTION 6A.53, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. FINISHED NOTES.
2. LANE ROADS HAVE HIGH TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 6A.53 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. SEE NOTES TO REMOVAL OF PAVEMENT MARKINGS AND NOTES FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.
3. LANE ROADS HAVE HIGH TRAFFIC VOLUME AS DEFINED IN SECTION 6A.53, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. FINISHED NOTES.
4. *QUANTITY ESTIMATED, SEE SEC. 106.68 OF STD. SPEC. - TO BE USED IF ANYWHERE DIRECTED BY THE ENGINEER.

### PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 3 - BOX 4 OF 4)

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<th>RAISED PAVEMENT MARKERS</th>
<th>ENHANCED THERMOPLASTIC PAVEMENT MARKERS</th>
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SUBTOTAL: 711 2894 2894 16 2014 2874

NOTES:
1. LANE ROADS HAVE HIGH TRAFFIC VOLUME AS DEFINED IN SECTION 6A.53, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. FINISHED NOTES.
2. LANE ROADS HAVE HIGH TRAFFIC VOLUME IN EACH DISTRICT AS DEFINED IN SECTION 6A.53 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. SEE NOTES TO REMOVAL OF PAVEMENT MARKINGS AND NOTES FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.
3. LANE ROADS HAVE HIGH TRAFFIC VOLUME AS DEFINED IN SECTION 6A.53, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014. FINISHED NOTES.

* QUANTITY ESTIMATED, SEE SEC. 106.68 OF STD. SPEC. - TO BE USED IF ANYWHERE DIRECTED BY THE ENGINEER.

THE 8" YELLOW STRIPING QUANTITY HAS BEEN ESTIMATED BASED ON A DOUBLED YELLOW CENTER LINE STRIPE FOR THE ENTIRE PROJECT.
THE PROJECT MUST BE MARKED FOR PASSING AND PASSENGER ZONES PRIOR TO THE PLACEMENT OF ANY FINAL STRIPING.
CONTACT THE MAINTENANCE DIVISION AFTER THE FINAL LIST OF SURFACE COURSE HAS BEEN PLACED TO SOLIDIFY THE ZONING OF THE PROJECT.

### QUANTITIES

- **RED R.P.M.** (White/Red) THERMOPLASTIC PAVEMENT MARKINGS
- **YELLOW R.P.M.** THERMOPLASTIC PAVEMENT MARKINGS
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**Approach Gutter Removal & Disposal (Dist. 4 - Box 1 of 3)**

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**Approach Gutter (Dist. 4 - Box 2 of 3)**

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<th><strong>Reinforcing Steel (in.</strong></th>
<th><strong>Aggregate Base (in.</strong></th>
<th><strong>HR Standard Drawing</strong></th>
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**Approach Gutter Removal & Disposal (Dist. 4 - Box 2 of 3)**

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**Approach Gutter (Dist. 4 - Box 3 of 3)**

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**Approach Gutter Removal & Disposal (Dist. 4 - Box 3 of 3)**

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**Bench Marks (Districts 3, 4, 6 & 8)**

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<th><strong>Number of Markers</strong></th>
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</tbody>
</table>

**Notes:**
1. **For Information Only:** Bench Marks shall be furnished and placed by the Employer.
2. **For Use of Bids Only:** Benchmark numbers shall be included on all geometric surveys.
3. **For Use of Bids Only:** The bench mark quantity was included because there is an anticipation of existing traffic accident damage to bridges.
4. **Bench Mark Estimated:** See Section 140.42 of the Standard Specifications.
## Removal and Disposal of Guardrail (Dist. 4 - Box 1 of 3)

<table>
<thead>
<tr>
<th>BR. ID # (FIELD SHEET)</th>
<th>BRIDGE STRUCTURE NO.</th>
<th>ROUTE</th>
<th>LOG MILE</th>
<th>LOCATION</th>
<th>R&amp;D GUARDRAIL</th>
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**Subtotal:** 3,210

Note: The quantity shown above for the removal and disposal of guardrail shall include the removal and disposal of all guardrail terminals and terminal anchor posts.

## Removal and Disposal of Guard Cable (Dist. 4)

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**Project Total:** 3,210

Note: The quantity shown above for the removal and disposal of guard cable shall include the removal and disposal of all guard cable and associated posts for bridge no. 0270.

## Removal and Disposal of Pliable Pavement Markers (Dist. 4)

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**Project Total:** 3,210

Note: Quantity estimated, bid rest 12233 of bid spec - to be used if and where directed by the Engineer.
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<th>Length</th>
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<th>Beams</th>
<th>Guards</th>
<th>Rails</th>
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**BRIDGE WORKS:**

**Type:**
- S - South
- N - North
- E - East
- W - West

**BRIDGES:**

**Price:**

**ARMANDO:**

**STATE OF ARKANSAS:**

**LICENSED PROFESSIONAL ENGINEER:**

**NO. 3-25-21**
### Cold Milling Asphalt Pavement (Dist. 4 - Box 1 of 3)

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### Cold Milling Asphalt Pavement (Dist. 2 - Box 3 of 3)

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*Average depth of asphalt is estimated and shown for information only. Patches will be removed with the hydrodemolition process.*
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* QUANTITY ESTIMATED. SEE B.c. EST. 156.03 OF STD. SPEC. TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.
**BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 4 BOX 1 OF 3)**

<table>
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<tr>
<th>BIL. NO.</th>
<th>BIL. STRUCTURE NO.</th>
<th>ROUTE</th>
<th>LOG MILE</th>
<th>LOCATION</th>
<th>TRANSITION LENGTH</th>
<th>TACK COAT</th>
<th>ACNM SURFACE COURSE (1/2&quot;)</th>
<th>ACNM SURFACE COURSE (3&quot;)</th>
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<tbody>
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**BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 4 BOX 2 OF 3)**

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<th>TACK COAT</th>
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<th>ACNM SURFACE COURSE (3&quot;)</th>
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**BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 3 BOX 3 OF 3)**

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**BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 8 BOX 2 OF 3)**

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**BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 3 BOX 3 OF 3)**

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**Basis of Estimate:**

- (PS 11-22) ASPHALT SURFACE COURSE (1/2")
- 90.0% MAX. ADH. ASPHALT BINDER
- 0.5% ASPHALT BINDER

- Maximum number of operations = 225 for PS 11-22

Tack coat quantities were calculated using the emulsified asphalt rates. Refer to PS-405-1 for the residual asphalt application rates.

**Quantities:**

- Total Tack Coat: 168.75 tons
- Total Residual: 176.68 tons
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## BASE AND SURFACING (A) (FOR GUARDRAILS) - DIST. 8 BOX 3 OF 4

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### BASE OF ESTIMATE (DIST. 3):

- 39.62% ACHM SURFACE COURSE (1")
- 44.3% MIN. AGG.
- 5.6% ASPHALT BINDER
- 7.6% ACHM SURFACE COURSE (2")
- 44.3% MIN. AGG.
- 5.6% ASPHALT BINDER

### TACK COAT QUANTITIES:

- Quantities were calculated using the emulsified asphalt rates. Refer to SS-469-1 for the residual asphalt application rates.
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**NOTE:** The temporary erosion control devices shown above and on the plans shall be installed in such a sequence as to prevent erosion and sedimentation on U.S. waterways as explained by the National Pollutant Discharge Elimination System (NPDES).

*Quantities Estimated.*

**SEE SECTION 104.03 of the Std. Spec.*

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**EROSION CONTROL (DIST. 4 - BOX 1 OF 3)**

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**EROSION CONTROL (DIST. 5 - BOX 2 OF 3)**

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**EROSION CONTROL (DIST. 6 - BOX 3 OF 3)**

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**QUANTITIES**
## SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 012379

| DISTRICT | SITE NO. | COUNTY | ROUTE | SECTION | LOG MILE | BRIDGE NO. | SP & NO. | 5% R & D | BID | BID 1 | BID 2 | BID 3 | W 1 | W 2 | W 3 | W 4 | W 5 | D 1 | D 2 | D 3 | D 4 | D 5 | D 6 | D 7 | D 8 | D 9 | D 10 | TOTALS |
|----------|---------|--------|-------|---------|---------|-----------|----------|----------|------|-------|-------|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1        | 1       | 1      | 1     | 1       | 1       | 1         | 1        | 1        | 1    | 1     | 1     | 1     | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   |
| 2        | 2       | 2      | 2     | 2       | 2       | 2         | 2        | 2        | 2    | 2     | 2     | 2     | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   |
| 3        | 3       | 3      | 3     | 3       | 3       | 3         | 3        | 3        | 3    | 3     | 3     | 3     | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   | 3   |
| 5        | 5       | 5      | 5     | 5       | 5       | 5         | 5        | 5        | 5    | 5     | 5     | 5     | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   | 5   |
| 6        | 6       | 6      | 6     | 6       | 6       | 6         | 6        | 6        | 6    | 6     | 6     | 6     | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   | 6   |
| 7        | 7       | 7      | 7     | 7       | 7       | 7         | 7        | 7        | 7    | 7     | 7     | 7     | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 7   |
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### Reference Table

- **Bridge No.**
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.
- **I-40, 391, 362, 71, 2.87, 9, FT.

### Notes
- **EXISTING BRIDGE DECK HAS AN ASPHALT OVERLAY. SEE ROADWAY PLANS FOR AVERAGE DEPTH AT EACH BRIDGE SITE.**
- **EXISTING BRIDGE DECK HAS NO ASPHALT OVERLAY.**
- **EXISTING BRIDGE DECK HAS SPALLS FILLED WITH ASPHALT.**
- **EXISTING BRIDGE DECK HAS AN ASPHALT OVERLAY. SEE ROADWAY PLANS FOR AVERAGE DEPTH AT EACH BRIDGE SITE.**
- **EXISTING BRIDGE DECK HAS NO ASPHALT OVERLAY.**

### SCHEDULE OF BRIDGE QUANTITIES - SPECIALIZED BRIDGE DECK REHAB (2021) (S)

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- **SECTION:**
- **ENGINEER:**
- **DATE:**
- **SCALE:**
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<td>170</td>
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<td>NO</td>
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<td>4504</td>
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<td>ABUT 1 &amp; 2</td>
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### BRIDGE PRESERVATION DATA TABLE (DISTRICT B)

<table>
<thead>
<tr>
<th>CURRENT CONTRACT SITE NO.</th>
<th>BRIDGE NO.</th>
<th>ORIGINAL CONTRACT NO.</th>
<th>COUNTY</th>
<th>ROUTE</th>
<th>SECTION</th>
<th>SUPERSTRUCTURE TYPE</th>
<th>DECK TREATMENT TYPE</th>
<th>DECK TREATMENT STD. DRAWINGS</th>
<th>BRIDGE JOINT TREATMENT STD. DRAWING</th>
<th>BRIDGE JOINT TREATMENT LOCATION</th>
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<td>8431</td>
<td>POPE</td>
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### BRIDGE PRESERVATION DATA TABLE (DISTRICT 7)

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### BRIDGE PRESERVATION DATA TABLE (DISTRICT 3)

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<th>SECTION</th>
<th>SUPERSTRUCTURE TYPE</th>
<th>DECK TREATMENT TYPE</th>
<th>DECK TREATMENT STD. DRAWINGS</th>
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</table>
**CONCRETE REPAIR NOTES**

1. Concrete repairs shall be performed in accordance with Special Provision Job No. 012379 "CONCRETE REPAIRS".

2. Limits shown are not exact areas 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 areas, e.g., spalled, cracked, weather spalled or deteriorated concrete and replacing with an approved material listed in Special Provision Job No. 012379 "CONCRETE REPAIRS".

4. Saw cut 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 contractor's 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 each repair shall extend to the face of the longitudinal reinforcing steel. Where unsound concrete is still present beyond 2" removal depth, further concrete removal is required to achieve a minimum 9" depth beyond longitudinal reinforcing.

7. The surface of the concrete for Surface Patching and Spall Repair shall 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 contractor may submit an alternate product for review and 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".

**SAW CUT DETAIL**

- Saw cut existing concrete 1" deep to neat lines to obtain a rectangular area.
- 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 contractor's expense.

**SURFACE PATCH DETAIL**

- Remove all unsound and loose concrete to a depth of 1" for concrete repair paid for as "SURFACE PATCHING".
- 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 contractor's expense.

**SPALL REPAIR DETAIL**

- Remove all unsound and loose concrete to a depth of 2" for concrete repair paid for as "SPALL REPAIR".
- 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 contractor's expense.

**LIMITS OF REMOVAL**

- Saw-cut existing concrete 1" deep to neat lines to obtain a rectangular area.
- 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 contractor's expense.

**SPALL REPAIR DETAILS**

- Where unsound concrete is still present beyond 2" removal depth, further concrete removal is required to achieve a minimum 9" depth beyond longitudinal reinforcing.

**CONCRETE REPAIR NOTES**

- Concrete repairs shall be performed in accordance with Special Provision Job No. 012379 "CONCRETE REPAIRS".
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- 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".

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- Remove all unsound and loose concrete to a depth of 2" for concrete repair paid for as "SPALL REPAIR".
- 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 contractor's expense.
STAGE 1 LATEX MODIFIED CONCRETE OVERTLAY

STAGE 2 LATEX MODIFIED CONCRETE OVERTLAY

DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERTLAY

MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

NOTES:

1. See Job SP "Trenching, Construction, and Flapping Requirements on Railroad Property" for additional railroad construction requirements.

2. Modified Hydrodemolition is defined as follows:
   a. "Class 1" is for all work up to 12" in depth.
   b. "Class 2" is for all work up to 24" in depth.

3. The document has been edited and signed by the Arkansas State Highway Commissioner on (date) and approved by the Arkansas State Highway Commissioner on (date).

STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERTLAY REINFORCED CONCRETE SLAB STRUCTURES

ARKANSAS STATE HIGHWAY COMMISSION

ARCHITECT: WME/KDV
}

---

**General Notes:**

- **Construction Specifications:** Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction (2014) will apply, except as superseded by these specifications. Special permit or special approval from the Arkansas State Highway and Transportation Department is required for work beyond the scope of this manual.
- **Hydrodemolition:** The entire roadway surface of the existing bridge deck and approach slab shall be removed and replaced. The new bridge deck shall consist of plate girder construction and be designed for the intended service life.
- **Hydrodemolition Construction:** The new bridge deck shall consist of plate girder construction and be designed for the intended service life.

---

**Hydrodemolition Process:**

1. **Classification:**
   - **Class 1:** For all work up to 12" in depth.
   - **Class 2:** For all work up to 24" in depth.

2. **Hydrodemolition Equipment:**
   - **Water Jet:** The water jet shall be capable of producing a high-pressure stream of water to remove the existing concrete deck surface.

3. **Hydrodemolition Safety:**
   - **Personal Protective Equipment:** All workers shall wear personal protective equipment as required by applicable federal and state laws.
   - **Site Safety:** The site shall be kept clean and free of debris to prevent accidents.

---

**Hydrodemolition Joint Detail:**

1. **Joint Design:** The joint shall be designed to accommodate the movement of the bridge deck over the support.
2. **Joint Materials:** The joint shall consist of a flexible joint material such as rubber or plastic to allow for movement.
3. **Joint Installation:** The joint shall be installed according to the manufacturer's instructions.

---

**Hydrodemolition Transverse Joint Detail:**

1. **Joint Design:** The joint shall be designed to accommodate the movement of the bridge deck over the support.
2. **Joint Materials:** The joint shall consist of a flexible joint material such as rubber or plastic to allow for movement.
3. **Joint Installation:** The joint shall be installed according to the manufacturer's instructions.

---

**Hydrodemolition Minimum Construction Clearance:**

1. **Clearance:** The minimum clearance shall be maintained above the existing concrete deck surface to allow for the installation of new materials.
2. **Protection:** Protective barriers shall be installed to prevent damage to adjacent structures.
3. **Supervision:** A qualified supervisor shall oversee the construction process to ensure compliance with all requirements.

---

**Hydrodemolition Water Jet:**

1. **Jetting:** The water jet shall be operated at a pressure sufficient to remove the existing concrete deck surface.
2. **Jetting Equipment:** The water jet shall be equipped with a high-pressure pump and hose to deliver the water stream.
3. **Jetting Safety:** The water jet shall be operated in accordance with applicable safety regulations.

---

**Hydrodemolition Site Safeguards:**

1. **Site Clean-up:** The site shall be cleaned up promptly after the work is completed.
2. **Material Disposal:** All waste materials shall be properly disposed of in accordance with applicable regulations.
3. **Public Notification:** The public shall be notified of the work in advance to allow for proper planning.

---

**Hydrodemolition Certification:**

1. **Certification:** A qualified individual shall certify the work as completed and in compliance with all requirements.
2. **Documentation:** All records shall be maintained for future reference.
3. **Inspection:** The work shall be inspected by the appropriate authorities to ensure compliance with all requirements.
**BACKWALL REPAIR REMOVAL DETAIL**

The portion of the backwall below the paving bracket as shown shall be removed and disposed of in accordance with Section 6.21. Payment for all materials, labor, tools, and equipment required for this work will be billed to the BID for “Removal of Existing Bridge Structure (Bridge No. -2).”

**BACKWALL REPAIR INSTALLATION DETAIL**

The portion of the backwall below the paving bracket shall be reconstructed as shown. Payment for all materials, labor, tools, and equipment required for this work will be billed to the BID for “Installation of Existing Bridge Structure (Bridge No. -2). Details shown for UMC/VE/SLC Overlay without grade rails, details differ for UMC/VE/SLC Overlay with grade rails.”

**DETAILED WELD FOR BACKWALL REPAIR**

- Detailed welds are typical for steel connections, when sufficient maintenance of a bridge deck is required, alternate connection detail shown and perform backwall repair in one operation for full repair width.
- If the 2" horizontal bar diameter specified for Subsection 9.09.07 may be added in place of reinforcement for new concrete construction over backwall repair application, the top lip shall be modified as much as practicable.

**SERVICE PROVIDER**

ARKANSAS STATE HIGHWAY COMMISSION

**ENGINEER**

ARKANSAS PROFESSIONAL ENGINEERS

**ORDER**

HEDGES, WALL & ASSOCIATES
METHODS OF INSTALLATION OF GUARDRAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

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

NOTE: GUARDRAIL TERMINAL (TYPE 2) TO BE USED ONLY AT LOCATIONS SHOWN ON PLANS.

LEGEND

- **THREE BEAM GUARDRAIL TERMINAL**
- **GUARDRAIL TERMINAL (TYPE 2)**

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

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

NOTE: GUARDRAIL TERMINAL (TYPE 2) TO BE USED ONLY AT LOCATIONS SHOWN ON PLANS.

METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE 1)

(FULL SHOULDER WIDTH OR LESS BRIDGES)

STANDARD DRAWING DR-8
Details of Widening for Guardrail

Section A-A

Details of Widening showing position of Guardrail on Highway

Section A-A

Section B-B

Method of Installation of Guardrail at Fixed Obstacle

11-07-19

Arkansas State Highway Commission

Guardrail Details

Standard Drawing GR-9
**General Notes:**

1. **All hole punching details, except as noted:**
   - Use three Usa standard components of same material for entire job.
   - Hole spacing at 1'-6" O.C.
   - Use three Usa standard components of same material for entire job.

**THREE BEAM RAIL SPICE AT POST**

**Structural Steel Tubing**

**Blockout Detail**

**Special End Shoe**

**Three Beam Rail**

**Section Thru Three Beam Rail**

**Transition Section**

**Connector Plate**

**Hole Punching Detail**

**For Steel Post & Wood or Plastic Blockouts**

**Metal blocks shall be the same type throughout the project limits.**

**Standard Drawings GR-10**

**Arkansas State Highway Commission**

**Guardrail Details**

**Notes:**

- All hole punching details, except as noted.
- Three standard components of same material for entire job.
- Hole spacing at 1'-6" O.C.
- Use three standard components of same material for entire job.
THREE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POSTS 1-7

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

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

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

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

GENERAL NOTES:

1. POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE, GRADE, AND VERTICALLY IN CROSS SECTION.
2. WOOD POSTS & WOOD BLOCKS SHALL BE EITHER WEAVE NHL STRUCTURAL OR BETTER W/ WOOD T-1 or WOOD T-SOUTHERN PINE.
3. BLOCKOUTS & WOOD POSTS
4. TRANSITION RAIL WITH WOOD OR W-BEAM TO THREE BEAM TUBING BLOCKOUT

NOTE:

1. DRAWN & ISSUED 03-30-00
2. REVISED POST 8 DIMENSIONS 07-14-10
3. REVISED GUARDRAIL HEIGHT, CHANGED GUARDRAIL DETAILS 08-22-02
4. RENAMED 11-29-07
5. ADDED PLASTIC BLOCKOUTS 11-16-17

STANDARD DRAWING GR-11

ARKANSAS STATE HIGHWAY COMMISSION
ARKANSAS STATE HIGHWAY COMMISSION

STANDARD DRAWING PM-2

ACCESS CONTROLLED ROADWAYS

ON

PAVEMENT MARKING DETAILS

DATE

REVISION

FILMED

4-26-96

7-02-98

9-12-13

REVISED DETAIL OF STANDARD PLACED IN USE

2-2-95

REVISED LANE WIDTH ON EXIT RAMP

ADDED DIMENSIONS & QUANTITIES; CHANGED TYPES TO ROMAN NUMERALS

REMOVED HASHMARKS

5-18-00

8-22-02

REV. ENTRANCE & EXIT RAMPS

ADDED & REVISED NOTES;

11-18-04

REVISED NOTES

6-3-10

REVISED PER 2009 MUTCD

11-17-10

REVISED RPMs ACCORDING TO LATEST POLICY

7-26-12

REVISED RPM NOTATION

12-8-16

REVISED WIDTH OF STRIPING

REVISED RAISED PAV'T MARKERS FOR 80' SPACING;

11-07-19

ADDED CROSSHATCH MARKINGS ON EXIT RAMPS

REVISED DOTTED PAV'T MARKINGS;

05-14-20

REMOVED CROSSHATCH MARKINGS ON EXIT RAMPS

LATEST REVISION.

THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH MARKERS SHALL BE DETERMINED BY THE ENGINEER.

AND THE FINAL LOCATION OF THE STRIPING AND PAVEMENT THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY

"D" = ACCEL LANE LENGTH + TAPER

BASED ON 700' ACCEL. LANE + 300' TAPER

PAVEMENT MARKING QUANTITIES

RAISED PAVEMENT MARKERS TYPE II (WHITE/RED) = 48 EACH

RAISED PAVEMENT MARKERS TYPE I1 (WHITE/RED) = 38 EACH

BEGIN RAMP PAVEMENT MARKING

2 8 0'- (29) STANDARD TYPE II R.P.M. @ 10' O.C.

19) STANDARD TYPE II R.P.M.

FACE THE INCORRECT TYPE II R.P.M. SHALL

THE RED LENS OF THE NOTE:

THEORETICAL GORE

40' (TYP)

10'

30' (TYP.)

4' SHLDR. (TYP.)

10' SHLDR. (TYP.)

6" YELLOW LINE

6" WHITE LINE

6" WHITE LINE

6" WHITE LINE

6" WHITE LINE

6" YELLOW LINE

DIRECTIONAL ARROW

ENTRANCE RAMPS

EXIT RAMPS

ENTRANCE RAMP

EXIT RAMP

6" WHITE = 280 LIN. FT.

12" WHITE = 370 LIN. FT.

NOTE: MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE

12" DOTTED WHITE

12" WHITE LINE

24'  15'

1520'-STANDARD TYPE II R.P.M. @ 40' O.C. (TYP.)

VAR.—STANDARD TYPE II R.P.M. @ 40' O.C. (TYP.)

VARIABLE STANDARD TYPE II R.P.M. SPACED @ 24' O.C.

12" WHITE = 815 LIN. FT.

GENERAL NOTES:

APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.

TO THE ARDOT QUALIFIED PRODUCTS LIST.
CLEARING AND GRUBBING

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

EXCAVATION

EXISTING GROUND
INTERCEPTOR DITCH
EXISTING GROUND
EXISTING GROUND

NOTE: NUMBER OF PHASES WILL VARY, SHOWN FOR ILLUSTRATION.

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

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR 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 EXCAVATION. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES.

EMBANKMENT

INTERCEPTOR OR DIVERSION DITCH
EXISTING GROUND
SIDE DITCH
STABILIZE AS REQUIRED

NOTE: NUMBER OF PHASES WILL VARY, SHOWN FOR ILLUSTRATION.

GENERAL NOTE
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND STABILIZED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUALLY 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.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE FINAL PHASE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.

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

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, ETC.)
2. PERFORM PHASE 1 EMBANKMENT. PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EMBANKMENT. PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE EMBANKMENT. PLACE PERMANENT OR TEMPORARY SEEDING. STABILIZE DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

NOTE:
NUMBER OF PHASES WILL VARY. THREE PHASES SHOWN FOR ILLUSTRATION.