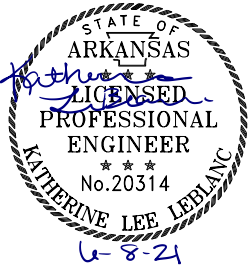




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| 06-08-21        |                |                 |                | 6                                     | ARK.  |                    |              |                 |
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|                 |                |                 |                | JOB NO.                               |       | 012377             | 2            | 32              |
|                 |                |                 |                | INDEX OF SHEETS AND STANDARD DRAWINGS |       |                    |              |                 |

2



INDEX OF SHEETS

| SHEET NO. | TITLE                                                        | BRIDGE NO.  | DRWG.NO. |
|-----------|--------------------------------------------------------------|-------------|----------|
| 1         | TITLE SHEET                                                  |             |          |
| 2         | INDEX OF SHEETS AND STANDARD DRAWINGS                        |             |          |
| 3         | GOVERNING SPECIFICATIONS AND GENERAL NOTES                   |             |          |
| 4 - 6     | TYPICAL SECTIONS OF IMPROVEMENT                              |             |          |
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| 28        | SUMMARY OF QUANTITIES AND REVISIONS                          |             |          |
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| 31        | RAILING REPAIR DETAILS                                       | 03519       | 64052    |
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BRIDGE STANDARD DRAWINGS

| DRWG.NO. | TITLE                                                                                    | DATE     |
|----------|------------------------------------------------------------------------------------------|----------|
| 55037    | STANDARD DETAILS FOR TYPE 'PT2' APPROACH GUTTERS (BRIDGES WITH CONCRETE PARAPET 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 |
| 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 | 05-20-21 |
| TC-3     | STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION | 05-20-21 |
| TEC-1    | TEMPORARY EROSION CONTROL DEVICES                  | 11-16-17 |
| TEC-3    | TEMPORARY EROSION CONTROL DEVICES                  | 11-03-94 |

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|                 |                |                 |                |                     |       | JOB NO.          | 012377       | 3               |
|                 |                |                 |                |                     |       |                  |              | 32              |

2 GOVERNINGS SPECIFICATIONS & GENERAL NOTES

GENERAL NOTES

- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
- ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR, AT HIS OWN EXPENSE, SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL AND CONTAINED LIVESTOCK IF FENCING OF PASTURES IS SEVERED.
- 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.
- 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.
- 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.
- ALL FLEXIBLE BASE AND ASPHALTIC PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 210 - UNCLASSIFIED EXCAVATION.
- 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.
- 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 OFF SITE. NO MATERIAL SHALL BE STOCKPILED OR BURIED ON SITE. REMOVAL OF COLD MILLING MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "COLD MILLING OF ASPHALT PAVEMENT".
- 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.
- 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.
- 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.
- WHEN THE PLANS REQUIRE APPROACH GUTTER REPLACEMENT AND AN EXISTING DROP INLET IS ENCOUNTERED, THE CONTRACTOR SHALL MODIFY THE APPROACH GUTTER STANDARD DRAWING REQUIREMENTS IF AND WHERE DIRECTED BY THE ENGINEER TO RETAIN DRAINAGE AT THE DROP INLET.

GOVERNING SPECIFICATIONS

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

| NUMBER     | TITLE                                                                                 |
|------------|---------------------------------------------------------------------------------------|
| ERRATA     | ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS                                        |
| FHWA-1273  | REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS                       |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS                     |
| FHWA-1273  | SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (23 U.S.C. 140)   |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES                      |
| FHWA-1273  | SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS                         |
| FHWA-1273  | SUPPLEMENT - 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                                                                          |
| 800-1      | STRUCTURES                                                                            |
| 804-2      | REINFORCING STEEL FOR STRUCTURES                                                      |
| JOB 012377 | BIDDING REQUIREMENTS AND CONDITIONS                                                   |
| JOB 012377 | BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS                               |
| JOB 012377 | BROADBAND INTERNET SERVICE FOR ASPHALT CONCRETE PLANT                                 |
| JOB 012377 | CARGO PREFERENCE ACT REQUIREMENTS                                                     |
| JOB 012377 | COMPACTED EMBANKMENT                                                                  |
| JOB 012377 | CONCRETE REPAIRS                                                                      |
| JOB 012377 | COORDINATION OF WORK                                                                  |
| JOB 012377 | DISADVANTAGED BUSINESS ENTERPRISE BIDDER'S RESPONSIBILITIES                           |
| JOB 012377 | DETAILS FOR SAFETY OF STREAM TRAFFIC                                                  |
| JOB 012377 | GOALS FOR DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION                             |
| JOB 012377 | HYDRODEMOLITION - CLASS 2                                                             |
| JOB 012377 | INSURANCE, CONSTRUCTION, AND FLAGGING REQUIREMENTS ON RAILROAD PROPERTY               |
| JOB 012377 | JOINT REHABILITATION FOR BRIDGE DECKS                                                 |
| JOB 012377 | LATEX MODIFIED CONCRETE OVERLAY                                                       |
| JOB 012377 | MAINTENANCE OF TRAFFIC                                                                |
| JOB 012377 | MANDATORY ELECTRONIC CONTRACT                                                         |
| JOB 012377 | MANDATORY ELECTRONIC DOCUMENT SUBMITTAL                                               |
| JOB 012377 | PARTNERING REQUIREMENTS                                                               |
| JOB 012377 | PORTABLE TRAFFIC SIGNAL SYSTEM                                                        |
| JOB 012377 | PRICE ADJUSTMENT FOR ASPHALT BINDER                                                   |
| JOB 012377 | PROHIBITION OF CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICE OR EQUIPMENT |
| JOB 012377 | RAILING REPAIR                                                                        |
| JOB 012377 | RESTRAINING CONDITIONS                                                                |
| JOB 012377 | SEQUENCE OF CONSTRUCTION                                                              |
| JOB 012377 | SOIL STABILIZATION                                                                    |
| JOB 012377 | SPECIAL SAFETY REQUIREMENTS FOR BRIDGES                                               |
| JOB 012377 | TRENCHING AND SHOULDER PREPARATION FOR TEMPORARY WIDENING                             |
| JOB 012377 | UTILITY ADJUSTMENTS                                                                   |
| JOB 012377 | VALUE ENGINEERING                                                                     |
| JOB 012377 | WARM MIX ASPHALT                                                                      |
| JOB 012377 | WATER POLLUTION CONTROL                                                               |
| JOB 012377 | WELLHEAD PROTECTION                                                                   |



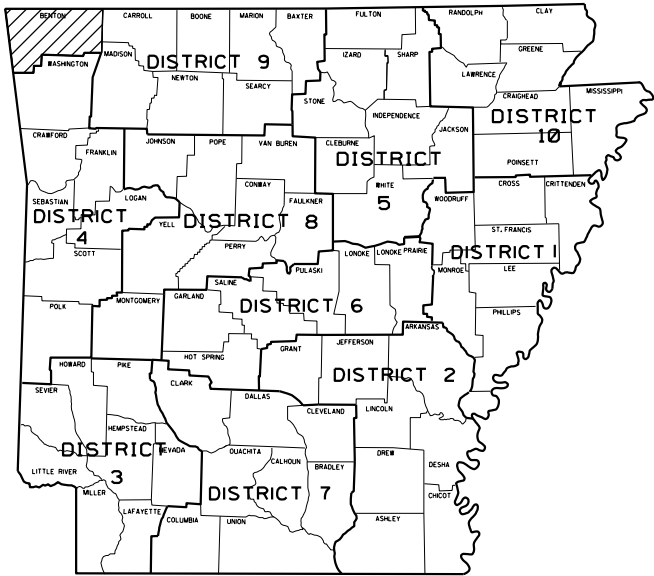
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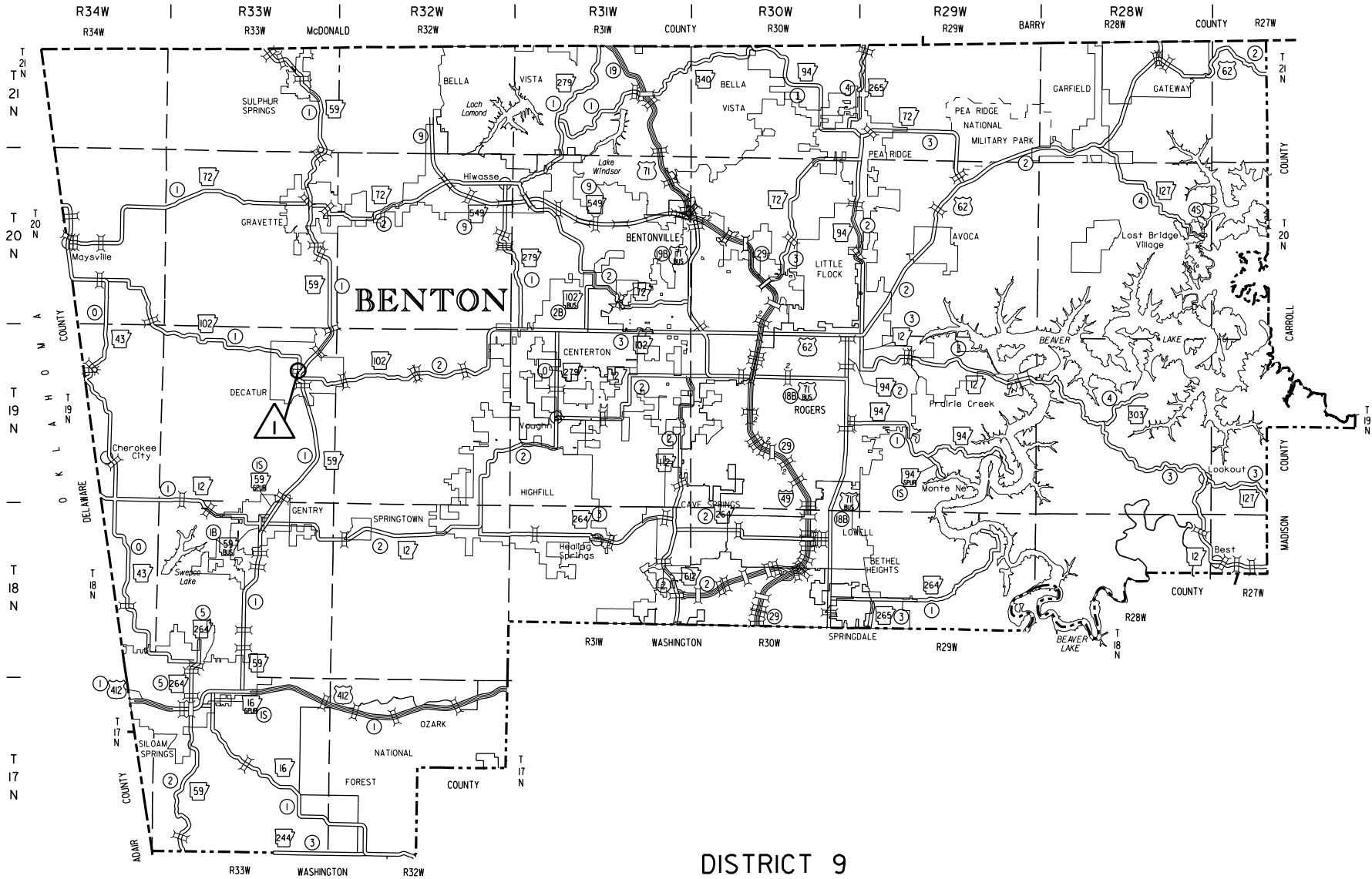


ARKANSAS HIGHWAY DISTRICT 9

LEGEND

 - HYDRODEMOLITION

 HWY. 102, SEC. 1  
LOG MILE 8.898 BR. END  
OVER KANSAS CITY SOUTHERN R.R.  
179' - 9 13/16" BRIDGE NO. 05669  
30' - 0" CLEAR ROADWAY  
(HYDRODEMOLITION)

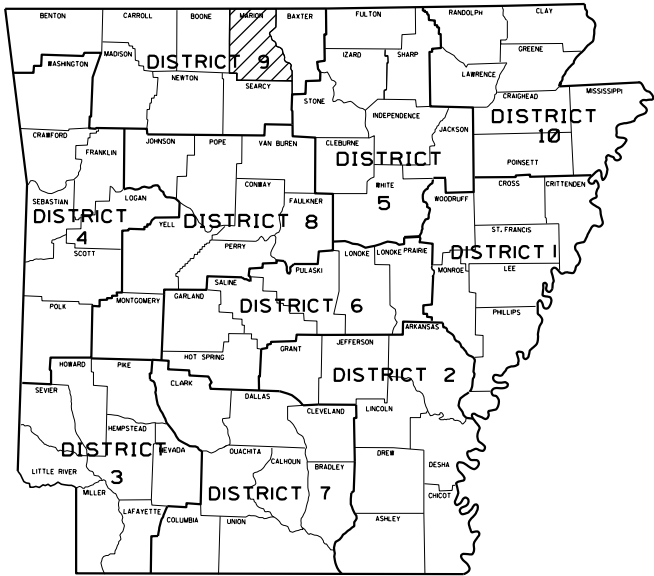


DISTRICT 9  
INSET - 1  
NOT TO SCALE

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| 2 SPECIAL DETAILS |             |              |             |                    |       |                    |           |              |



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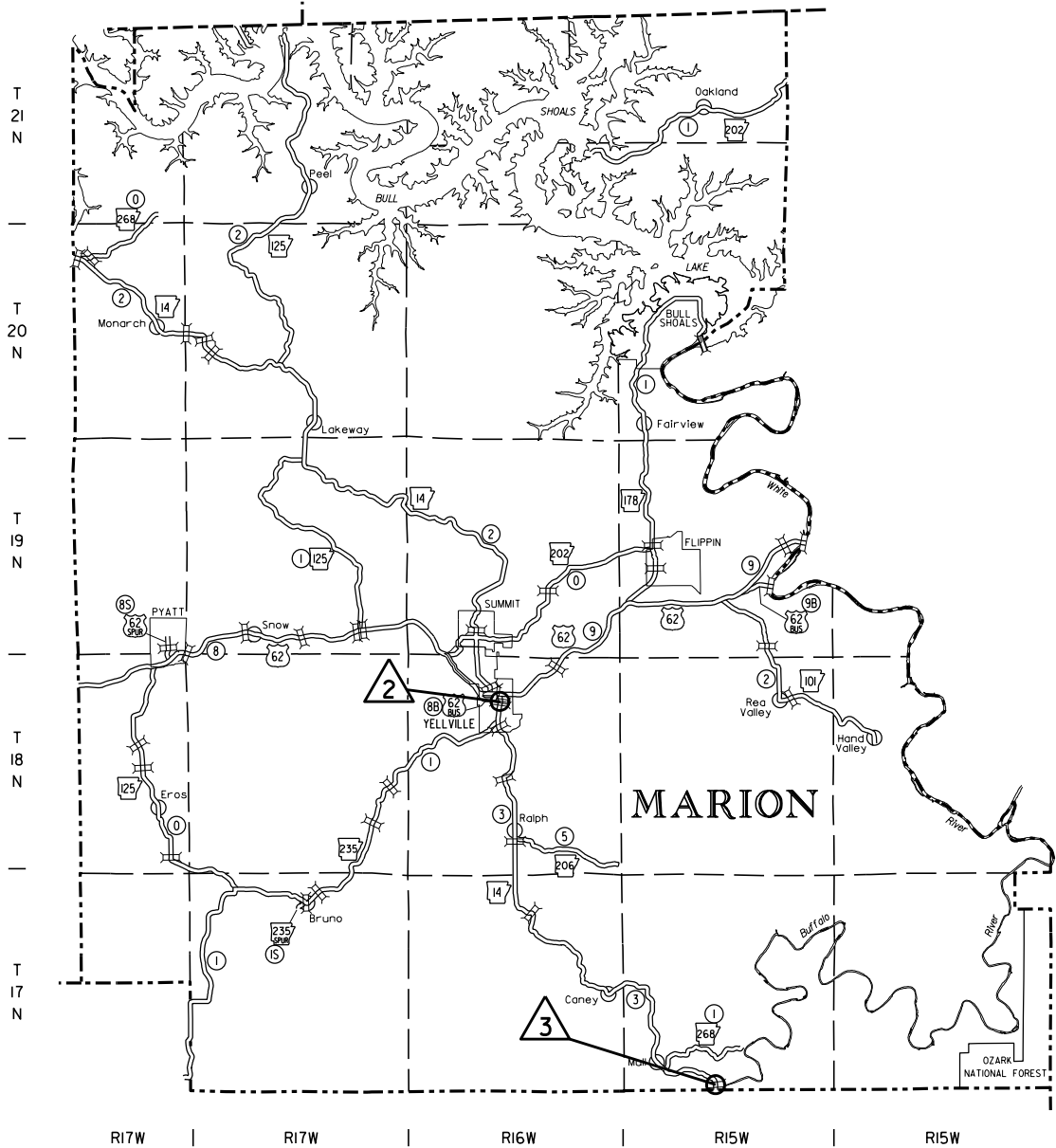
ARKANSAS HIGHWAY DISTRICT 9

LEGEND

- HYDRODEMOLITION

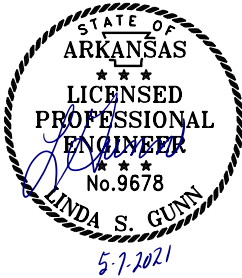
HWY. 14, SEC. 3  
LOG MILE 0.020 BR. END  
OVER TOWN BRANCH  
84' - 0" BRIDGE NO. 03144  
24' - 0" CLEAR ROADWAY  
(HYDRODEMOLITION)

HWY. 14, SEC. 3  
LOG MILE 15.749 BR. END  
OVER BUFFALO RIVER  
572' - 2" BRIDGE NO. 01743  
24' - 0" CLEAR ROADWAY  
(HYDRODEMOLITION)

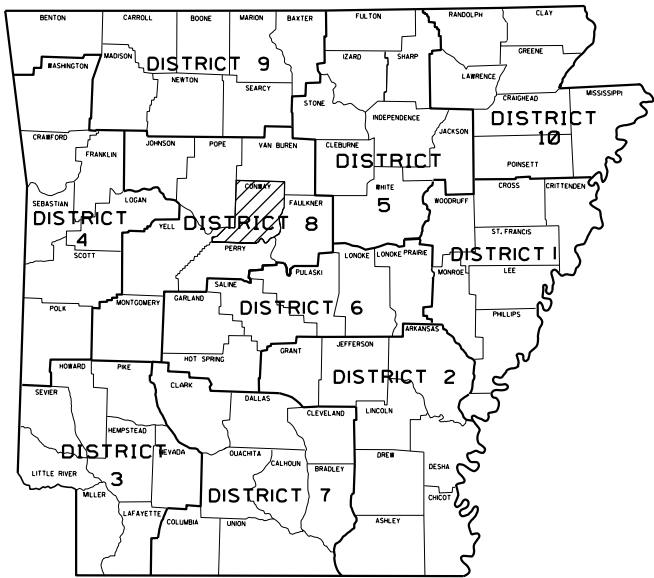


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| 2 SPECIAL DETAILS |             |              |             |                    |       |                    |           |              |



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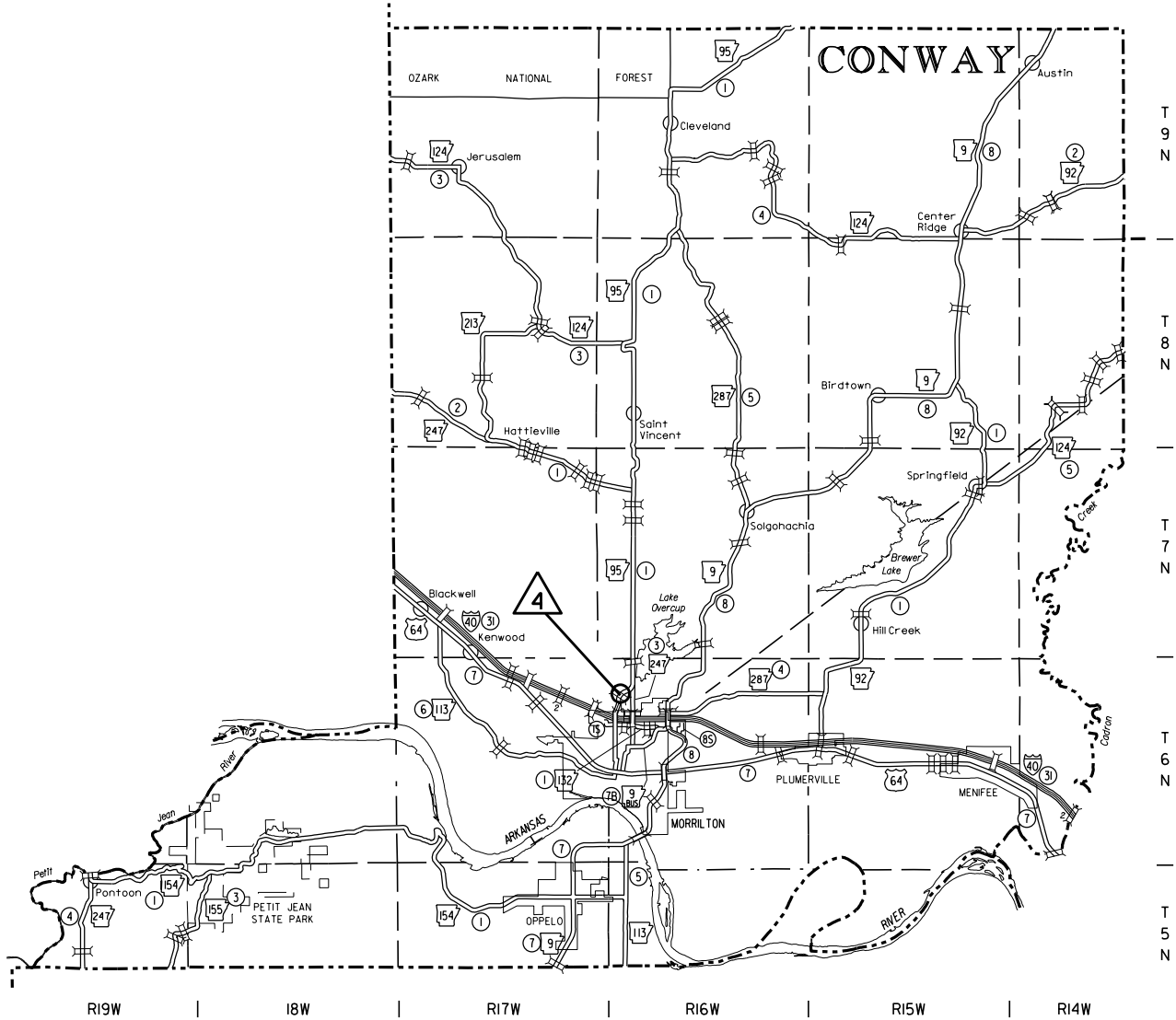


ARKANSAS HIGHWAY DISTRICT 8

LEGEND

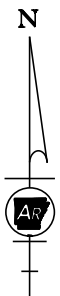
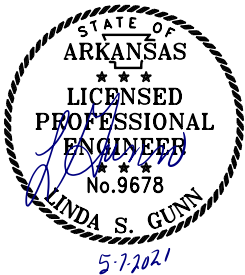
 - HYDRODEMOLITION

 HWY. 95, SEC. 1  
LOG MILE 2.231 BR. END  
OVER CANEY CREEK  
125' - 0" BRIDGE NO. 03519  
24' - 0" CLEAR ROADWAY  
(HYDRODEMOLITION)



DISTRICT 8  
INSET - 3  
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| SPECIAL DETAILS |             |              |             |                    |       |                    |           |              |





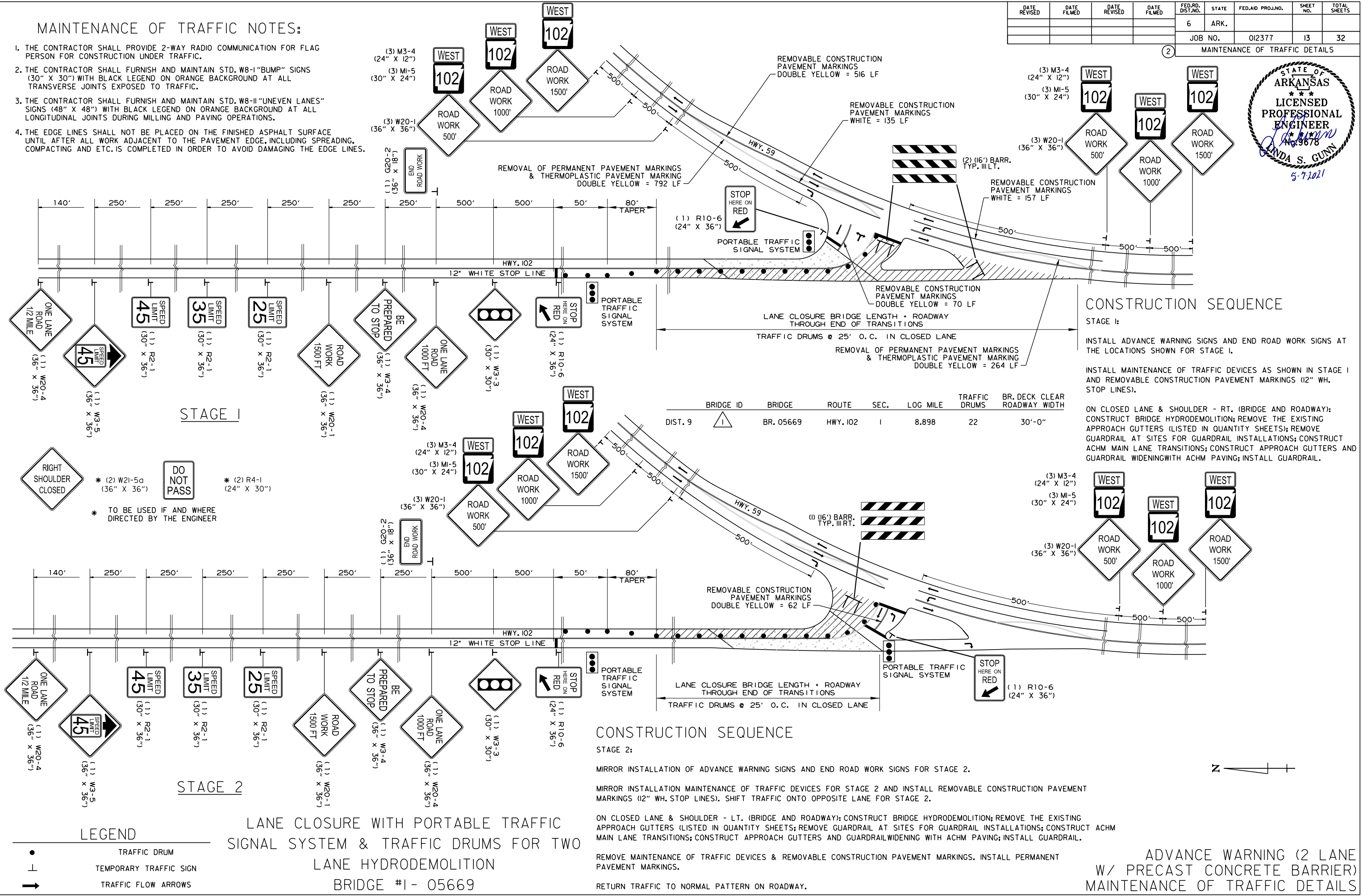
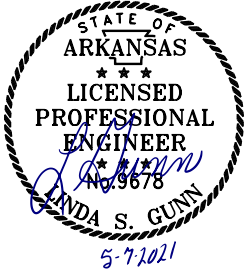




MAINTENANCE OF TRAFFIC NOTES:

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-I "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-II "UNEVEN LANES" SIGNS (48" X 48") 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.

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| MAINTENANCE OF TRAFFIC DETAILS |             |              |             |                    |        |                    |           |              |



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BRIDGE NO. 03144  
MARION COUNTY  
DIST. 9 - ROUTE 14  
LOG MILE 0.020

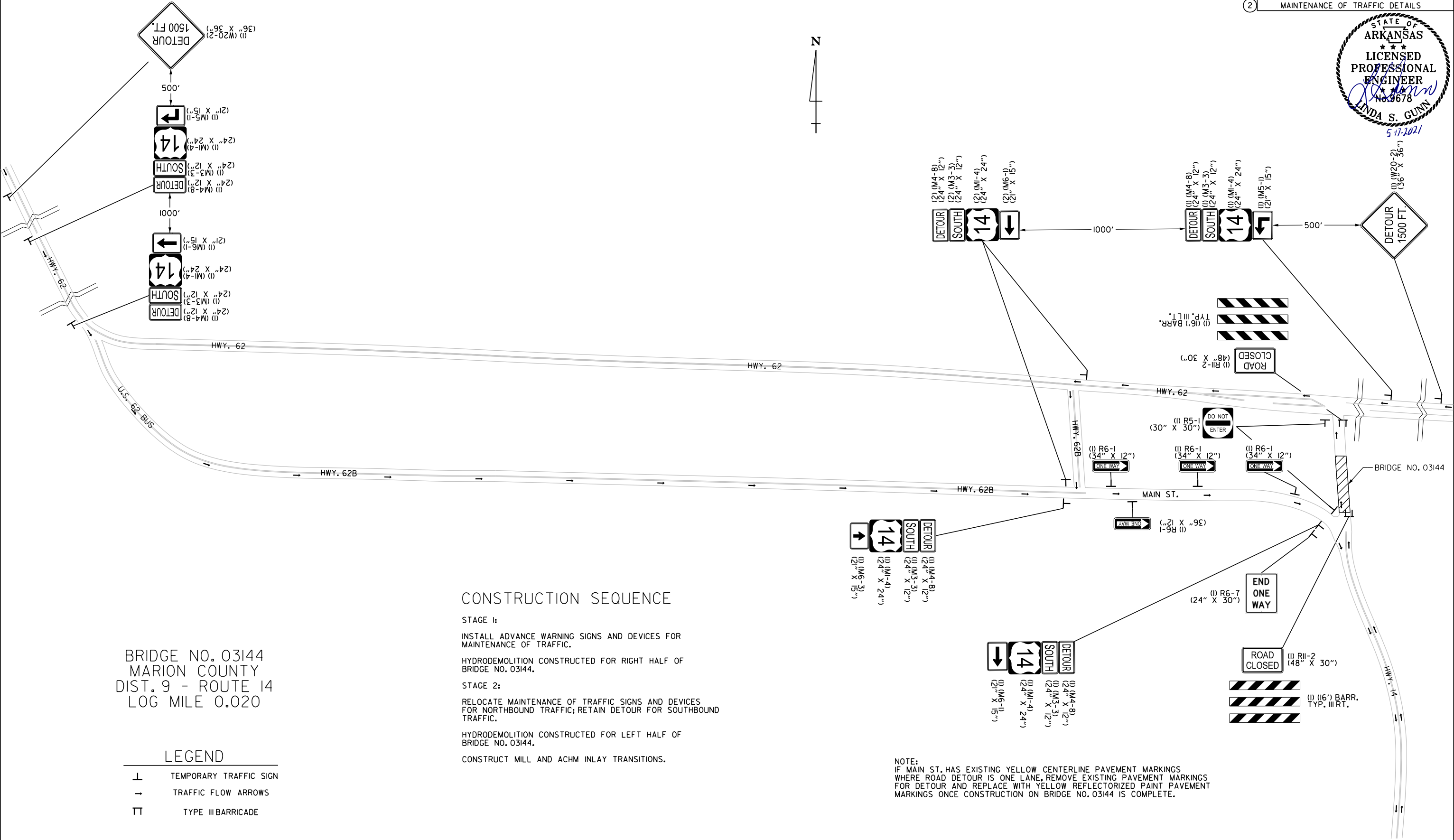
| LEGEND |                        |
|--------|------------------------|
|        | TEMPORARY TRAFFIC SIGN |
|        | TRAFFIC FLOW ARROWS    |
|        | TYPE III BARRICADE     |

CONSTRUCTION SEQUENCE

- STAGE 1:  
INSTALL ADVANCE WARNING SIGNS AND DEVICES FOR MAINTENANCE OF TRAFFIC.
- HYDRODEMOLITION CONSTRUCTED FOR RIGHT HALF OF BRIDGE NO. 03144.
- STAGE 2:  
RELOCATE MAINTENANCE OF TRAFFIC SIGNS AND DEVICES FOR NORTHBOUND TRAFFIC; RETAIN DETOUR FOR SOUTHBOUND TRAFFIC.
- HYDRODEMOLITION CONSTRUCTED FOR LEFT HALF OF BRIDGE NO. 03144.
- CONSTRUCT MILL AND ACHM INLAY TRANSITIONS.

NOTE:  
IF MAIN ST. HAS EXISTING YELLOW CENTERLINE PAVEMENT MARKINGS WHERE ROAD DETOUR IS ONE LANE, REMOVE EXISTING PAVEMENT MARKINGS FOR DETOUR AND REPLACE WITH YELLOW REFLECTORIZED PAINT PAVEMENT MARKINGS ONCE CONSTRUCTION ON BRIDGE NO. 03144 IS COMPLETE.

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE                          | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
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|              |             |              |             | JOB NO.          |                                | 012377           | 16        | 32           |
|              |             |              |             | 2                | MAINTENANCE OF TRAFFIC DETAILS |                  |           |              |



STAGE 1 DETOUR FOR  
BRIDGE NO. 03144  
MAINTENANCE OF TRAFFIC DETAILS

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BRIDGE NO. 03144  
MARION COUNTY  
DIST. 9 - ROUTE 14  
LOG MILE 0.020

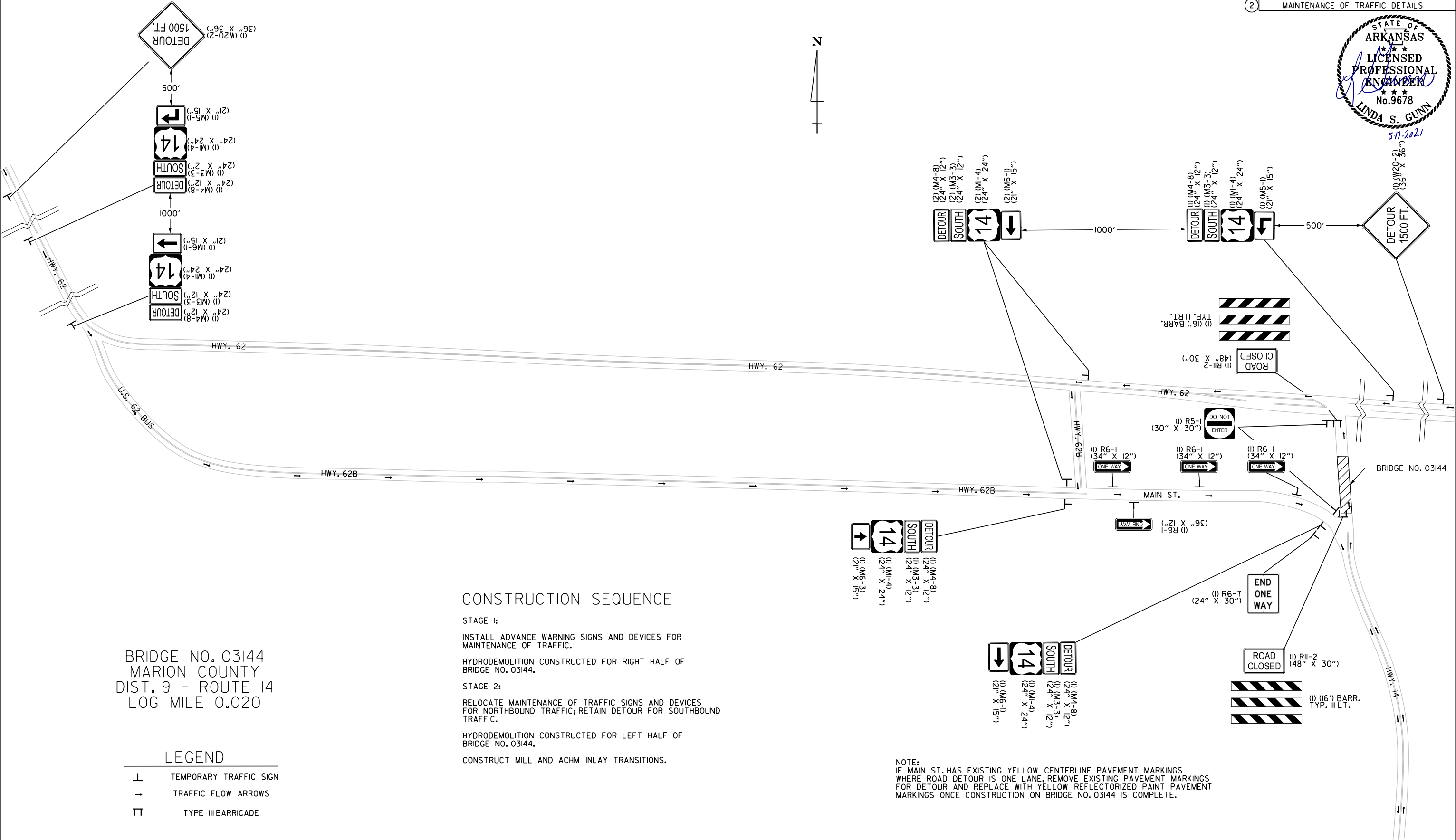
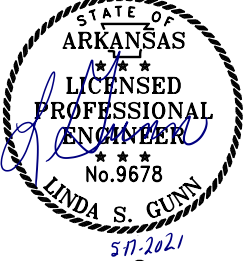
| LEGEND |                        |
|--------|------------------------|
|        | TEMPORARY TRAFFIC SIGN |
|        | TRAFFIC FLOW ARROWS    |
|        | TYPE III BARRICADE     |

CONSTRUCTION SEQUENCE

- STAGE 1:  
INSTALL ADVANCE WARNING SIGNS AND DEVICES FOR MAINTENANCE OF TRAFFIC.
- HYDRODEMOLITION CONSTRUCTED FOR RIGHT HALF OF BRIDGE NO. 03144.
- STAGE 2:  
RELOCATE MAINTENANCE OF TRAFFIC SIGNS AND DEVICES FOR NORTHBOUND TRAFFIC; RETAIN DETOUR FOR SOUTHBOUND TRAFFIC.
- HYDRODEMOLITION CONSTRUCTED FOR LEFT HALF OF BRIDGE NO. 03144.
- CONSTRUCT MILL AND ACHM INLAY TRANSITIONS.

NOTE:  
IF MAIN ST. HAS EXISTING YELLOW CENTERLINE PAVEMENT MARKINGS WHERE ROAD DETOUR IS ONE LANE, REMOVE EXISTING PAVEMENT MARKINGS FOR DETOUR AND REPLACE WITH YELLOW REFLECTORIZED PAINT PAVEMENT MARKINGS ONCE CONSTRUCTION ON BRIDGE NO. 03144 IS COMPLETE.

| DATE REVISED                     | DATE FILMED | DATE REVISED | DATE FILMED | FED. RD. DIST. NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|----------------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                                  |             |              |             | 6                  | ARK.  |                    |           |              |
|                                  |             |              |             | JOB NO.            |       | 012377             | 17        | 32           |
| 2 MAINTENANCE OF TRAFFIC DETAILS |             |              |             |                    |       |                    |           |              |

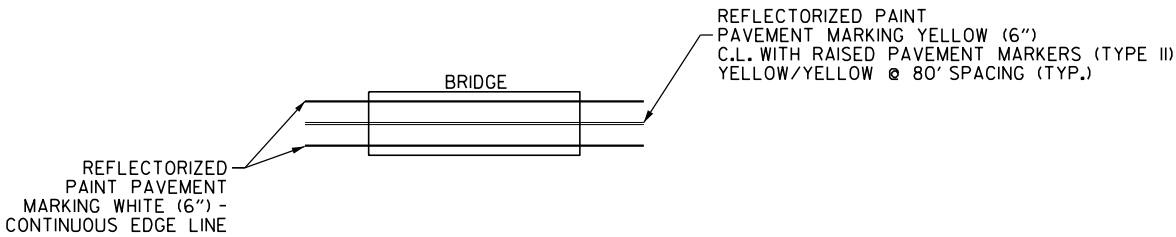


STAGE 2 DETOUR FOR  
BRIDGE NO. 03144  
MAINTENANCE OF TRAFFIC DETAILS



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| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO.                    | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|-------------------------------------|-------|------------------|-----------|--------------|
|              |             |              |             | 6                                   | ARK.  |                  |           |              |
|              |             |              |             |                                     |       |                  |           |              |
|              |             |              |             |                                     |       |                  |           |              |
|              |             |              |             | JOB NO.                             |       | 012377           | 19        | 32           |
|              |             |              |             | PERMANENT PAVEMENT MARKINGS DETAILS |       |                  |           |              |



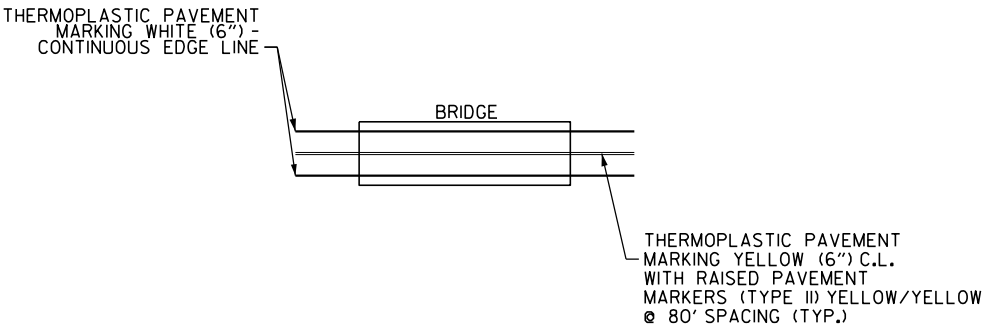
BRIDGES < 2,000 ADT

|         | BRIDGE ID | BRIDGE #  | ROUTE    | SECTION | LOG MILE |
|---------|-----------|-----------|----------|---------|----------|
| DIST. 9 | 1         | BR. 05669 | HWY. 102 | 1       | 8.898    |
|         | 3         | BR. 01743 | HWY. 14  | 3       | 15.749   |

PERMANENT PAVEMENT MARKING DETAILS  
TWO LANE ROADWAYS 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 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

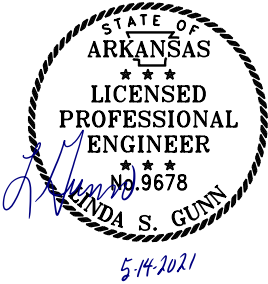
|         | BRIDGE ID | BRIDGE #  | ROUTE   | SECTION | LOG MILE |
|---------|-----------|-----------|---------|---------|----------|
| DIST. 9 | 2         | BR. 03144 | HWY. 14 | 3       | 0.020    |
| DIST. 8 | 4         | BR. 03519 | HWY. 95 | 1       | 2.231    |

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| ADVANCE WARNING SIGNS AND DEVICES (DISTRICT 9)<br>LANE CLOSURE FOR HYDRODEMOLITION BRIDGES                                                                                                                                                             |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------|-----------------|---------|-------------------------------|-------------------------|-------|--------------------|------------------|-----------------------|------|-------------------------------------------------|
| SIGN<br>NUMBER                                                                                                                                                                                                                                         | DESCRIPTION                               | SIGN SIZE | STAGE 1         | STAGE 2 | MAXIMUM<br>NUMBER<br>REQUIRED | TOTAL SIGNS<br>REQUIRED |       | VERTICAL<br>PANELS | TRAFFIC<br>DRUMS | BARRICADES (TYPE III) |      | * PORTABLE TRAFFIC<br>SIGNAL<br>SYSTEM-ACTUATED |
|                                                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  | RIGHT                 | LEFT |                                                 |
|                                                                                                                                                                                                                                                        |                                           |           | LIN. FT. - EACH | NO.     |                               |                         |       |                    |                  |                       |      |                                                 |
| ADVANCE WARNING SIGNS - HIGHWAY                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| W20-1                                                                                                                                                                                                                                                  | ROAD WORK 1 MILE                          | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W20-1                                                                                                                                                                                                                                                  | ROAD WORK 1500 FT.                        | 36"x36"   | 3               | 3       | 3                             | 3                       | 27.0  |                    |                  |                       |      |                                                 |
| W20-1                                                                                                                                                                                                                                                  | ROAD WORK 1000 FT.                        | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| W20-1                                                                                                                                                                                                                                                  | ROAD WORK 500 FT.                         | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| W20-2                                                                                                                                                                                                                                                  | DETOUR 1500 FT.                           | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W20-4                                                                                                                                                                                                                                                  | ONE LANE ROAD 1/2 MILE                    | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W20-4                                                                                                                                                                                                                                                  | ONE LANE ROAD 1000 FT.                    | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| G20-2                                                                                                                                                                                                                                                  | END ROAD WORK                             | 36"x18"   | 2               | 2       | 2                             | 2                       | 9.0   |                    |                  |                       |      |                                                 |
| W3-3                                                                                                                                                                                                                                                   | ADVANCED TRAFFIC CONTROL - TRAFFIC SIGNAL | 30"x30"   | 2               | 2       | 2                             | 2                       | 10.0  |                    |                  |                       |      |                                                 |
| W3-4                                                                                                                                                                                                                                                   | BE PREPARED TO STOP                       | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W3-5                                                                                                                                                                                                                                                   | REDUCED SPEED LIMIT SIGN AHEAD            | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| R2-1                                                                                                                                                                                                                                                   | SPEED LIMIT                               | 30"x36"   | 6               | 6       | 6                             | 6                       | 45.0  |                    |                  |                       |      |                                                 |
| R5-1                                                                                                                                                                                                                                                   | DO NOT ENTER                              | 30"x30"   | 1               | 1       | 1                             | 1                       | 5.0   |                    |                  |                       |      |                                                 |
| R6-1                                                                                                                                                                                                                                                   | ONE WAY (LEFT)                            | 36"x12"   | 1               | 1       | 1                             | 1                       | 3.0   |                    |                  |                       |      |                                                 |
| R6-7                                                                                                                                                                                                                                                   | ONE WAY (RIGHT)                           | 36"x12"   | 3               | 3       | 3                             | 3                       | 9.0   |                    |                  |                       |      |                                                 |
| R6-7                                                                                                                                                                                                                                                   | END ONE WAY                               | 24"x30"   | 1               | 1       | 1                             | 1                       | 5.0   |                    |                  |                       |      |                                                 |
| R10-6                                                                                                                                                                                                                                                  | STOP HERE ON RED                          | 24"x36"   | 2               | 2       | 2                             | 2                       | 12.0  |                    |                  |                       |      |                                                 |
| R11-2                                                                                                                                                                                                                                                  | ROAD CLOSED                               | 48"x30"   | 2               | 2       | 2                             | 2                       | 20.0  |                    |                  |                       |      |                                                 |
| R4-1                                                                                                                                                                                                                                                   | DO NOT PASS                               | 24"x30"   | 2               | 2       | 2                             | 2                       | 10.0  |                    |                  |                       |      |                                                 |
| W21-5a                                                                                                                                                                                                                                                 | RIGHT SHOULDER CLOSED                     | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W8-1                                                                                                                                                                                                                                                   | BUMP                                      | 30"x30"   | 2               | 2       | 2                             | 2                       | 12.5  |                    |                  |                       |      |                                                 |
| W8-11                                                                                                                                                                                                                                                  | UNEVEN LANES                              | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| M3-4                                                                                                                                                                                                                                                   | CARDINAL DIRECTION (WEST)                 | 24"x12"   | 6               | 6       | 6                             | 6                       | 12.0  |                    |                  |                       |      |                                                 |
| M3-3                                                                                                                                                                                                                                                   | CARDINAL DIRECTION (SOUTH)                | 24"x12"   | 7               | 7       | 7                             | 7                       | 14.0  |                    |                  |                       |      |                                                 |
| M5-1                                                                                                                                                                                                                                                   | ADVANCE TURN ARROW                        | 21"x15"   | 6               | 6       | 6                             | 6                       | 13.1  |                    |                  |                       |      |                                                 |
| M6-1                                                                                                                                                                                                                                                   | DIRECTIONAL ARROW                         | 21"x15"   | 7               | 7       | 7                             | 7                       | 15.3  |                    |                  |                       |      |                                                 |
| M6-3                                                                                                                                                                                                                                                   | DIRECTIONAL ARROW                         | 21"x15"   | 6               | 6       | 6                             | 6                       | 13.1  |                    |                  |                       |      |                                                 |
| M4-8                                                                                                                                                                                                                                                   | DETOUR                                    | 24"x12"   | 7               | 7       | 7                             | 7                       | 14.0  |                    |                  |                       |      |                                                 |
| M1-4                                                                                                                                                                                                                                                   | STATE ROUTE SIGN (2-DIGITS)               | 24"x24"   | 7               | 7       | 7                             | 7                       | 28.0  |                    |                  |                       |      |                                                 |
| M1-5                                                                                                                                                                                                                                                   | STATE ROUTE SIGN (3-DIGITS)               | 30"x24"   | 6               | 6       | 6                             | 6                       | 30.0  |                    |                  |                       |      |                                                 |
| SUBTOTAL (DISTRICT 9 - ADVANCE WARNING SIGNS - HIGHWAY):                                                                                                                                                                                               |                                           |           |                 |         |                               |                         | 511   |                    |                  |                       |      |                                                 |
| ADVANCE DEVICES                                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
|                                                                                                                                                                                                                                                        | VERTICAL PANELS                           |           | 57              | 57      | 57                            |                         |       | 57                 |                  |                       |      |                                                 |
|                                                                                                                                                                                                                                                        | TRAFFIC DRUMS                             |           | 22              | 22      | 22                            |                         |       |                    | 22               |                       |      |                                                 |
|                                                                                                                                                                                                                                                        | TYPE III BARRICADE-RT. (16')              |           | 2               | 2       | 2                             |                         |       |                    |                  | 32                    |      |                                                 |
|                                                                                                                                                                                                                                                        | TYPE III BARRICADE-LT. (16')              |           | 2               | 2       | 2                             |                         |       |                    |                  |                       | 32   |                                                 |
|                                                                                                                                                                                                                                                        | PORTABLE TRAFFIC SIGNAL SYSTEM-ACTUATED   |           | 6               | 6       | 12                            |                         |       |                    |                  |                       |      | 12                                              |
| SUBTOTAL (DISTRICT 9):                                                                                                                                                                                                                                 |                                           |           |                 |         |                               |                         | 511   | 57                 | 22               | 32                    | 32   | 12                                              |
| *THESE MAINTENANCE OF TRAFFIC ITEMS ARE TO BE RELOCATED BETWEEN BRIDGE SITES AND DISTRICTS IF AND WHERE DIRECTED BY THE ENGINEER.                                                                                                                      |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| **THESE ITEMS ARE ALSO TO BE RELOCATED BETWEEN BRIDGE SITES AND DISTRICTS IF AND WHERE DIRECTED BY THE ENGINEER. THE TOTAL REPRESENTS AN ESTIMATED TIME USAGE.                                                                                         |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| NOTE: 2 LANE ROADS HAVE BOTH HIGH AND LOW TRAFFIC VOLUME IN DISTRICT 9 AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.<br>REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT. |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| QUANTITIES ESTIMATED.<br>SEE SECTION 104.03 OF THE STD. SPECS.                                                                                                                                                                                         |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| ADVANCE WARNING SIGNS AND DEVICES (DISTRICT 8)<br>LANE CLOSURE FOR HYDRODEMOLITION BRIDGES                                                                                                                                                             |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| SIGN<br>NUMBER                                                                                                                                                                                                                                         | DESCRIPTION                               | SIGN SIZE | STAGE 1         | STAGE 2 | MAXIMUM<br>NUMBER<br>REQUIRED | TOTAL SIGNS<br>REQUIRED |       | VERTICAL<br>PANELS | TRAFFIC<br>DRUMS | BARRICADES (TYPE III) |      | * PORTABLE TRAFFIC<br>SIGNAL<br>SYSTEM-ACTUATED |
|                                                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  | RIGHT                 | LEFT |                                                 |
|                                                                                                                                                                                                                                                        |                                           |           | LIN. FT. - EACH | NO.     |                               |                         |       |                    |                  |                       |      |                                                 |
| ADVANCE WARNING SIGNS - HIGHWAY                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| W20-1                                                                                                                                                                                                                                                  | ROAD WORK 1500 FT.                        | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W20-4                                                                                                                                                                                                                                                  | ONE LANE ROAD 1/2 MILE                    | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W20-4                                                                                                                                                                                                                                                  | ONE LANE ROAD 1000 FT.                    | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| G20-2                                                                                                                                                                                                                                                  | END ROAD WORK                             | 36"x18"   | 2               | 2       | 2                             | 2                       | 9.0   |                    |                  |                       |      |                                                 |
| W3-3                                                                                                                                                                                                                                                   | ADVANCED TRAFFIC CONTROL - TRAFFIC SIGNAL | 30"x30"   | 2               | 2       | 2                             | 2                       | 10.0  |                    |                  |                       |      |                                                 |
| W3-4                                                                                                                                                                                                                                                   | BE PREPARED TO STOP                       | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W3-5                                                                                                                                                                                                                                                   | REDUCED SPEED LIMIT SIGN AHEAD            | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| R2-1                                                                                                                                                                                                                                                   | SPEED LIMIT                               | 30"x36"   | 6               | 6       | 6                             | 6                       | 45.0  |                    |                  |                       |      |                                                 |
| R10-6                                                                                                                                                                                                                                                  | STOP HERE ON RED                          | 24"x36"   | 2               | 2       | 2                             | 2                       | 12.0  |                    |                  |                       |      |                                                 |
| R4-1                                                                                                                                                                                                                                                   | DO NOT PASS                               | 24"x30"   | 2               | 2       | 2                             | 2                       | 10.0  |                    |                  |                       |      |                                                 |
| W21-5a                                                                                                                                                                                                                                                 | RIGHT SHOULDER CLOSED                     | 36"x36"   | 2               | 2       | 2                             | 2                       | 18.0  |                    |                  |                       |      |                                                 |
| W8-1                                                                                                                                                                                                                                                   | BUMP                                      | 30"x30"   | 2               | 2       | 2                             | 2                       | 12.5  |                    |                  |                       |      |                                                 |
| W8-11                                                                                                                                                                                                                                                  | UNEVEN LANES                              | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| SPECIAL                                                                                                                                                                                                                                                | DETAIL A                                  | 60"x36"   | 2               | 2       | 2                             | 2                       | 30.0  |                    |                  |                       |      |                                                 |
| SPECIAL                                                                                                                                                                                                                                                | DETAIL B                                  | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| SPECIAL                                                                                                                                                                                                                                                | DETAIL C                                  | 48"x48"   | 2               | 2       | 2                             | 2                       | 32.0  |                    |                  |                       |      |                                                 |
| SPECIAL                                                                                                                                                                                                                                                | DETAIL D                                  | 60"x36"   | 2               | 2       | 2                             | 2                       | 30.0  |                    |                  |                       |      |                                                 |
| SUBTOTAL (DISTRICT 8 - ADVANCE WARNING SIGNS - HIGHWAY):                                                                                                                                                                                               |                                           |           |                 |         |                               |                         | 239   |                    |                  |                       |      |                                                 |
| ADVANCE DEVICES                                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
|                                                                                                                                                                                                                                                        | VERTICAL PANELS                           |           | 41              | 41      | 41                            |                         |       | 41                 |                  |                       |      |                                                 |
|                                                                                                                                                                                                                                                        | PORTABLE TRAFFIC SIGNAL SYSTEM-ACTUATED   |           | 2               | 2       | 4                             |                         |       |                    |                  |                       |      | 4                                               |
| SUBTOTAL (DISTRICT 8):                                                                                                                                                                                                                                 |                                           |           |                 |         |                               |                         | 239   | 41                 |                  |                       |      | 4                                               |
| *THESE MAINTENANCE OF TRAFFIC ITEMS ARE TO BE RELOCATED BETWEEN BRIDGE SITES AND DISTRICTS IF AND WHERE DIRECTED BY THE ENGINEER.                                                                                                                      |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| **THESE ITEMS ARE ALSO TO BE RELOCATED BETWEEN BRIDGE SITES AND DISTRICTS IF AND WHERE DIRECTED BY THE ENGINEER. THE TOTAL REPRESENTS AN ESTIMATED TIME USAGE.                                                                                         |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| ***REFER TO 'DETAILS FOR SAFETY OF STREAM TRAFFIC' SP FOR DETAILS FOR SIGNS A-D                                                                                                                                                                        |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| NOTE: 2 LANE ROADS HAVE BOTH HIGH AND LOW TRAFFIC VOLUME IN DISTRICT 9 AS DEFINED IN SECTION 604.03, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.<br>REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT. |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| QUANTITIES ESTIMATED.<br>SEE SECTION 104.03 OF THE STD. SPECS.                                                                                                                                                                                         |                                           |           |                 |         |                               |                         |       |                    |                  |                       |      |                                                 |
| SUBTOTALS (DISTRICT 8 - BOX 2 OF 2):                                                                                                                                                                                                                   |                                           |           |                 |         |                               |                         | 239.0 | 41                 |                  |                       |      | 4                                               |
| SUBTOTALS (DISTRICT 9 - BOX 1 OF 2):                                                                                                                                                                                                                   |                                           |           |                 |         |                               |                         | 511.0 | 57                 | 22               | 32                    | 32   | 12                                              |
| PROJECT TOTALS:                                                                                                                                                                                                                                        |                                           |           |                 |         |                               |                         | 750.0 | 98                 | 22               | 32                    | 32   | 16                                              |

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID<br>PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|---------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.  |                     |              |                 |
|                 |                |                 |                | JOB NO.             |       | 012377              | 20           | 32              |
| QUANTITIES      |                |                 |                |                     |       |                     |              |                 |

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QUANTITIES

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REVISED DATE: \$\$REVIDATE\$\$

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.  |                  |              |                 |
|                 |                |                 |                | JOB NO.             |       | 012377           | 21           | 32              |
| QUANTITIES      |                |                 |                |                     |       |                  |              |                 |



REMOVAL AND DISPOSAL OF GUARDRAIL (DISTRICT 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | R & D<br>GUARDRAIL |
|------------------------------|----------------------------|-------|----------|-----------|--------------------|
|                              |                            |       |          |           | LIN. FT.           |
| 1                            | 05669                      | 102   | 8.898    | SOUTH RT. |                    |
|                              |                            |       |          | NORTH RT. | 80                 |
|                              |                            |       |          | SOUTH LT. | 75                 |
|                              |                            |       |          | NORTH LT. | 75                 |
| 3                            | 01743                      | 14    | 15.749   | SOUTH RT. | 180                |
|                              |                            |       |          | NORTH RT. | 80                 |
|                              |                            |       |          | SOUTH LT. | 75                 |
|                              |                            |       |          | NORTH LT. | 200                |
| SUBTOTAL (DISTRICT 9):       |                            |       |          |           | 765                |

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 GUARDRAIL (DISTRICT 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | R & D<br>GUARDRAIL |
|------------------------------|----------------------------|-------|----------|-----------|--------------------|
|                              |                            |       |          |           | LIN. FT.           |
| 4                            | 03519                      | 95    | 2.231    | SOUTH RT. | 30                 |
|                              |                            |       |          | NORTH RT. | 30                 |
|                              |                            |       |          | SOUTH LT. | 30                 |
|                              |                            |       |          | NORTH LT. | 30                 |
| SUBTOTAL (DISTRICT 8):       |                            |       |          |           | 120                |

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.

|                                     |     |
|-------------------------------------|-----|
| SUBTOTAL (DISTRICT 8 - BOX 2 OF 2): | 120 |
| SUBTOTAL (DISTRICT 9 - BOX 1 OF 2): | 765 |
| PROJECT TOTAL:                      | 885 |

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.

GUARDRAIL (DISTRICT 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | GUARDRAIL<br>(TYPE A) | THRIE BEAM<br>GUARDRAIL<br>TERMINAL | GUARDRAIL<br>TERMINAL<br>(TYPE 2) |
|------------------------------|----------------------------|-------|----------|-----------|-----------------------|-------------------------------------|-----------------------------------|
|                              |                            |       |          |           | LIN. FT.              | EACH                                |                                   |
| 1                            | 05669                      | 102   | 8.898    | SOUTH RT. |                       |                                     |                                   |
|                              |                            |       |          | NORTH RT. | 75                    | 1                                   | 1                                 |
|                              |                            |       |          | SOUTH LT. |                       | 1                                   | 1                                 |
|                              |                            |       |          | NORTH LT. | 75                    | 1                                   | 1                                 |
| 3                            | 01743                      | 14    | 15.749   | SOUTH RT. | 100                   |                                     | 1                                 |
|                              |                            |       |          | NORTH RT. | 75                    |                                     | 1                                 |
|                              |                            |       |          | SOUTH LT. | 75                    |                                     | 1                                 |
|                              |                            |       |          | NORTH LT. | 150                   |                                     | 1                                 |
| SUBTOTALS:                   |                            |       |          |           | 550                   | 3                                   | 7                                 |

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 (DISTRICT 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | GUARDRAIL<br>(TYPE A) | THRIE BEAM<br>GUARDRAIL<br>TERMINAL | GUARDRAIL<br>TERMINAL<br>(TYPE 2) |
|------------------------------|----------------------------|-------|----------|-----------|-----------------------|-------------------------------------|-----------------------------------|
|                              |                            |       |          |           | LIN. FT.              |                                     |                                   |
| 4                            | 03519                      | 95    | 2.231    | SOUTH RT. | 150                   |                                     | 1                                 |
|                              |                            |       |          | NORTH RT. | 75                    |                                     | 1                                 |
|                              |                            |       |          | SOUTH LT. | 75                    |                                     | 1                                 |
|                              |                            |       |          | NORTH LT. | 150                   |                                     | 1                                 |
| SUBTOTALS:                   |                            |       |          |           | 450                   |                                     | 4                                 |

|                                 |      |   |    |
|---------------------------------|------|---|----|
| SUBTOTAL (DIST 8 - BOX 2 OF 2): | 450  |   | 4  |
| SUBTOTAL (DIST 9 - BOX 1 OF 2): | 550  | 3 | 7  |
| PROJECT TOTALS:                 | 1000 | 3 | 11 |

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.

COLD MILLING ASPHALT PAVEMENT (DIST. 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG<br>MILE | LOCATION                                        | * AVG.<br>DEPTH OF<br>ASPHALT | LENGTH | AVG. WIDTH | COLD<br>MILLING<br>ASPHALT<br>PAVEMENT |
|------------------------------|----------------------------|-------|-------------|-------------------------------------------------|-------------------------------|--------|------------|----------------------------------------|
|                              |                            |       |             |                                                 | INCHES                        |        |            | FEET                                   |
| 1                            | 05669                      | 102   | 8.898       | TRANSITION                                      | 2                             | 100    | 28         | 311.11                                 |
|                              |                            |       |             | MAIN LANE TO GUARDRAIL ENDS                     | 2                             | 161.75 | 22         | 395.39                                 |
|                              |                            |       |             | SHLDRS. TO GUARDRAIL ENDS                       | 2                             | 263.75 | 6          | 175.83                                 |
| 2                            | 03144                      | 14    | 0.020       | TRANSITION                                      | 2                             | 185    | 24         | 493.33                                 |
|                              |                            |       |             | MAIN ST. INTERSECTION TIE TO HWY. 14 TRANSITION | 2                             | 50     | 33         | 183.33                                 |
|                              |                            |       |             | PARKING LOT APRON TIE TO HWY. 14 TRANSITION     | 2                             | 26     | 41         | 118.44                                 |
| 3                            | 01743                      | 14    | 15.749      | TRANSITION                                      | 2                             | 100    | 24         | 266.67                                 |
|                              |                            |       |             | MAIN LANE TO GUARDRAIL ENDS                     | 2                             | 311    | 22         | 760.22                                 |
|                              |                            |       |             | SHLDRS. TO GUARDRAIL ENDS                       | 2                             | 333.5  | 2          | 74.11                                  |
| SUBTOTAL (DIST. 9) :         |                            |       |             |                                                 |                               |        |            | 2778.43                                |

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

COLD MILLING ASPHALT PAVEMENT (DIST. 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG<br>MILE | LOCATION                    | * AVG.<br>DEPTH OF<br>ASPHALT | LENGTH | AVG. WIDTH | COLD<br>MILLING<br>ASPHALT<br>PAVEMENT |
|------------------------------|----------------------------|-------|-------------|-----------------------------|-------------------------------|--------|------------|----------------------------------------|
|                              |                            |       |             |                             | INCHES                        |        |            | FEET                                   |
| 4                            | 03519                      | 95    | 2.231       | BR. DECK                    | 2                             | 125    | 24         | 333.33                                 |
|                              |                            |       |             | TRANSITION                  | 2                             | 200    | 24         | 533.33                                 |
|                              |                            |       |             | MAIN LANE TO GUARDRAIL ENDS | 2                             | 286    | 22         | 699.11                                 |
|                              |                            |       |             | SHLDRS. TO GUARDRAIL ENDS   | 2                             | 396    | 2          | 88.00                                  |
| SUBTOTAL (DIST. 8) :         |                            |       |             |                             |                               |        |            | 1653.77                                |

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

|                                  |         |
|----------------------------------|---------|
| SUBTOTAL (DIST. 8 - BOX 2 OF 2): | 1653.77 |
| SUBTOTAL (DIST. 9 - BOX 1 OF 2): | 2778.43 |
| PROJECT TOTAL :                  | 4432.20 |

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

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REVISED DATE: \*\*REDATE\*\*

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.  |                  |              |                 |
|                 |                |                 |                |                     |       |                  |              |                 |
|                 |                |                 |                |                     |       |                  |              |                 |

|   |            |        |    |    |
|---|------------|--------|----|----|
|   | JOB NO.    | 012377 | 22 | 32 |
| 2 | QUANTITIES |        |    |    |



BASE AND SURFACING - MAIN LANE TRANSITIONS (DIST. 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE SHEET) | BR. STRUCTURE NO. | ROUTE | LOG MILE | LOCATION                                        | TRANSITION LENGTH | TACK COAT               |         |        | ACHM SURFACE COURSE (1/2") |                |                    | ACHM SURFACE COURSE (3/8") |                |                    |  |
|---------------------------|-------------------|-------|----------|-------------------------------------------------|-------------------|-------------------------|---------|--------|----------------------------|----------------|--------------------|----------------------------|----------------|--------------------|--|
|                           |                   |       |          |                                                 |                   | (0.17 GAL. PER SQ. YD.) |         |        | SQ.YD.                     | POUND / SQ.YD. | TOTAL PG 64-22 TON | SQ.YD.                     | POUND / SQ.YD. | TOTAL PG 64-22 TON |  |
|                           |                   |       |          |                                                 |                   | TOTAL WID.              | SQ.YD.  | GALLON |                            |                |                    |                            |                |                    |  |
|                           |                   |       |          |                                                 | FEET              | FEET                    |         |        |                            |                |                    |                            |                |                    |  |
| 1                         | 05669             | 102   | 8.898    | MAIN LANE TRANSITION                            | 100.00            | 68                      | 755.56  | 128.45 | 755.56                     | 220            | 83.11              |                            |                |                    |  |
|                           |                   |       |          | MAIN LANE TO GUARDRAIL END                      | 86.75             | 22                      | 212.06  | 36.05  | 212.06                     | 220            | 23.33              |                            |                |                    |  |
|                           |                   |       |          | SHLDRS. TO GUARDRAIL END                        | 188.75            | 6                       | 125.83  | 21.39  | 125.83                     | 220            | 13.84              |                            |                |                    |  |
| 2                         | 03144             | 14    | 0.020    | MAIN LANE TRANSITION                            | 185.00            | 24                      | 493.33  | 83.87  | 493.33                     | 220            | 54.27              |                            |                |                    |  |
|                           |                   |       |          | MAIN ST. INTERSECTION TIE TO HWY. 14 TRANSITION | 50.00             | 33                      | 183.33  | 31.17  | 183.33                     | 220            | 20.17              |                            |                |                    |  |
|                           |                   |       |          | PARKING LOT APRON TIE TO HWY. 14 TRANSITION     | 26.00             | 41                      | 118.44  | 20.13  | 118.44                     | 220            | 13.03              |                            |                |                    |  |
| 3                         | 01743             | 14    | 15.749   | MAIN LANE TRANSITION                            | 100.00            | 22                      | 244.44  | 41.55  | 244.44                     | 220            | 26.89              |                            |                |                    |  |
|                           |                   |       |          | MAIN LANE TO GUARDRAIL END                      | 311.00            | 22                      | 760.22  | 129.24 | 760.22                     | 220            | 83.62              |                            |                |                    |  |
|                           |                   |       |          | SHLDRS. TO GUARDRAIL END                        | 333.50            | 2                       | 74.11   | 12.60  | 74.11                      | 220            | 8.15               |                            |                |                    |  |
| SUBTOTALS:                |                   |       |          |                                                 |                   |                         | 2967.32 | 504.45 | 2967.32                    |                | 326.41             |                            |                |                    |  |

BASIS OF ESTIMATE (DIST. 9):  
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

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

| BR. ID #<br>(TITLE SHEET) | BR. STRUCTURE NO. | ROUTE | LOG MILE | LOCATION                   | TRANSITION LENGTH | TACK COAT               |        |         | ACHM SURFACE COURSE (1/2") |                |                    | ACHM SURFACE COURSE (3/8") |                |                    |        |
|---------------------------|-------------------|-------|----------|----------------------------|-------------------|-------------------------|--------|---------|----------------------------|----------------|--------------------|----------------------------|----------------|--------------------|--------|
|                           |                   |       |          |                            |                   | (0.17 GAL. PER SQ. YD.) |        |         | SQ.YD.                     | POUND / SQ.YD. | TOTAL PG 64-22 TON | SQ.YD.                     | POUND / SQ.YD. | TOTAL PG 64-22 TON |        |
|                           |                   |       |          |                            |                   | FEET                    | FEET   | SQ.YD.  |                            |                |                    |                            |                |                    | GALLON |
| 4                         | 03519             | 95    | 2.231    | MAIN LANE TRANSITION       | 200.00            | 22                      | 488.89 | 83.11   |                            |                |                    | 488.89                     | 220            | 53.78              |        |
|                           |                   |       |          | MAIN LANE TO GUARDRAIL END | 286.00            | 22                      | 699.11 | 118.85  |                            |                |                    | 699.11                     | 220            | 76.90              |        |
|                           |                   |       |          | SHLDRS. TO GUARDRAIL END   | 396.00            | 4                       | 176.00 | 29.92   |                            |                |                    | 176.00                     | 220            | 19.36              |        |
| SUBTOTALS:                |                   |       |          |                            |                   |                         |        | 1364.00 | 231.88                     |                |                    |                            | 1364.00        |                    | 150.04 |

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

|                                  |  |        |  |  |  |        |  |  |  |  |        |
|----------------------------------|--|--------|--|--|--|--------|--|--|--|--|--------|
| SUBTOTALS (DIST 8 - BOX 2 OF 2): |  | 231.88 |  |  |  |        |  |  |  |  | 150.04 |
| SUBTOTALS (DIST 9 - BOX 1 OF 2): |  | 504.45 |  |  |  | 326.41 |  |  |  |  |        |
| PROJECT TOTALS:                  |  | 736.33 |  |  |  | 326.41 |  |  |  |  | 150.04 |

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

BASIS OF ESTIMATE (DIST. 9):  
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

TRENCHING AND SHOULDER PREPARATION - MAINT. OF TRAFFIC (DIST. 9 BOX 1 OF 2)

| LOCATION               | LENGTH | TRENCHING & SHOULDER PREPARATION | AGGREGATE BASE COURSE (CLASS 7) |        | ACHM SURFACE COURSE (1/2") |        |                |                    | ACHM SURFACE COURSE (3/8") |        |                |                    |
|------------------------|--------|----------------------------------|---------------------------------|--------|----------------------------|--------|----------------|--------------------|----------------------------|--------|----------------|--------------------|
|                        |        |                                  | TON / STATION                   | TON    | AVG. WID.                  | SQ.YD. | POUND / SQ.YD. | TOTAL PG 64-22 TON | AVG. WID.                  | SQ.YD. | POUND / SQ.YD. | TOTAL PG 64-22 TON |
|                        | FEET   | STATION                          |                                 |        | FEET                       |        |                |                    | FEET                       |        |                |                    |
| ENTIRE PROJECT DIST. 9 | 400.00 | 4.00                             | 36.00                           | 144.00 | 3.00                       | 133.33 | 220            | 14.67              |                            |        |                |                    |
|                        |        |                                  |                                 |        |                            |        |                |                    |                            |        |                |                    |
|                        |        |                                  |                                 |        |                            |        |                |                    |                            |        |                |                    |
| SUBTOTALS:             |        | 4.00                             |                                 | 144.00 |                            | 133.33 |                | 14.67              |                            |        |                |                    |

BASIS OF ESTIMATE (DIST. 9):  
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

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

TRENCHING AND SHOULDER PREPARATION - MAINT. OF TRAFFIC (DIST. 8 BOX 2 OF 2)

| LOCATION               | LENGTH | TRENCHING & SHOULDER PREPARATION | AGGREGATE BASE COURSE (CLASS 7) |       | ACHM SURFACE COURSE (1/2") |        |                |                    | ACHM SURFACE COURSE (3/8") |        |                |                    |
|------------------------|--------|----------------------------------|---------------------------------|-------|----------------------------|--------|----------------|--------------------|----------------------------|--------|----------------|--------------------|
|                        |        |                                  | TON / STATION                   | TON   | AVG. WID.                  | SQ.YD. | POUND / SQ.YD. | TOTAL PG 64-22 TON | AVG. WID.                  | SQ.YD. | POUND / SQ.YD. | TOTAL PG 64-22 TON |
|                        | FEET   | STATION                          |                                 |       | FEET                       |        |                |                    | FEET                       |        |                |                    |
| ENTIRE PROJECT DIST. 8 | 100.00 | 1.00                             | 36.00                           | 36.00 |                            |        |                |                    | 3.00                       | 33.33  | 220            | 3.67               |
|                        |        |                                  |                                 |       |                            |        |                |                    |                            |        |                |                    |
|                        |        |                                  |                                 |       |                            |        |                |                    |                            |        |                |                    |
| SUBTOTALS:             |        | 1.00                             |                                 | 36.00 |                            |        |                |                    |                            | 33.33  |                | 3.67               |

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% ASPHALT BINDER

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

|                                   |      |  |        |  |  |  |  |       |  |  |  |      |
|-----------------------------------|------|--|--------|--|--|--|--|-------|--|--|--|------|
| SUBTOTALS (DIST. 8 - BOX 2 OF 2): | 1.00 |  | 36.00  |  |  |  |  |       |  |  |  | 3.67 |
| SUBTOTALS (DIST. 9 - BOX 1 OF 2): | 4.00 |  | 144.00 |  |  |  |  | 14.67 |  |  |  |      |
| PROJECT SUBTOTALS:                | 5.00 |  | 180.00 |  |  |  |  | 14.67 |  |  |  | 3.67 |

BASIS OF ESTIMATE (DIST. 9):  
ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% ASPHALT BINDER

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

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REVISED DATE: \*\*REVE DATE\*\*

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.  |                  |              |                 |
|                 |                |                 |                | JOB NO.             |       | 012377           | 23           | 32              |
| QUANTITIES      |                |                 |                |                     |       |                  |              |                 |



BASE AND SURFACING (ADD'L FOR GUARDRAIL) - (DIST. 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET) | BR.<br>STRUCTURE<br>NO. | ROUTE | LOG<br>MILE | BR.<br>DIRECTION                  | LOCATION                 | LENGTH | AGGREGATE BASE<br>COURSE (CLASS 7) * |       | ACHM SURFACE COURSE (1/2") |        |                   |                          | ACHM SURFACE COURSE (3/8") |        |                   |                          |  |  |  |
|------------------------------|-------------------------|-------|-------------|-----------------------------------|--------------------------|--------|--------------------------------------|-------|----------------------------|--------|-------------------|--------------------------|----------------------------|--------|-------------------|--------------------------|--|--|--|
|                              |                         |       |             |                                   |                          | FEET   | TON /<br>STATION                     | TON   | AVG. WID.<br>FEET          | SQ.YD. | POUND /<br>SQ.YD. | TOTAL<br>PG 64-22<br>TON | AVG. WID.<br>FEET          | SQ.YD. | POUND /<br>SQ.YD. | TOTAL<br>PG 64-22<br>TON |  |  |  |
|                              |                         |       |             |                                   |                          |        |                                      |       |                            |        |                   |                          |                            |        |                   |                          |  |  |  |
| 1                            | 05669                   | 102   | 8.898       | 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                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             | SOUTH LT.                         | GUARDRAIL WIDENING -LT.  | 43.75  | 25.00                                | 10.94 | 3.50                       | 17.01  | 220               | 1.87                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 25.00  | 32.00                                | 8.00  | 4.50                       | 12.50  | 220               | 1.38                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 6.25   | 39.25                                | 2.45  | 5.50                       | 3.82   | 220               | 0.42                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 14.25  | 39.25                                | 5.59  | 5.50                       | 8.71   | 220               | 0.96                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             | NORTH LT.                         | 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                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - RT. | 3.00   | 39.25                                | 1.18  | 5.50                       | 1.83   | 220               | 0.20                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - RT. | 110.00 | 32.00                                | 35.20 | 4.50                       | 55.00  | 220               | 6.05                     |                            |        |                   |                          |  |  |  |
| 3                            | 01743                   | 14    | 15.749      | SOUTH RT.                         | GUARDRAIL WIDENING - RT. | 40.00  | 25.00                                | 10.00 | 3.50                       | 15.56  | 220               | 1.71                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | 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                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             | NORTH RT.                         | GUARDRAIL WIDENING - RT. | 33.00  | 19.50                                | 6.44  | 2.75                       | 10.08  | 220               | 1.11                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - RT. | 40.00  | 25.00                                | 10.00 | 3.50                       | 15.56  | 220               | 1.71                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 85.00  | 32.00                                | 27.20 | 4.50                       | 42.50  | 220               | 4.68                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 10.00  | 39.25                                | 3.93  | 5.50                       | 6.11   | 220               | 0.67                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             | 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. | 10.00  | 39.25                                | 3.93  | 5.50                       | 6.11   | 220               | 0.67                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 160.00 | 32.00                                | 51.20 | 4.50                       | 80.00  | 220               | 8.80                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 40.00  | 25.00                                | 10.00 | 3.50                       | 15.56  | 220               | 1.71                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             |                                   | GUARDRAIL WIDENING - LT. | 40.00  | 25.00                                | 10.00 | 3.50                       | 15.56  | 220               | 1.71                     |                            |        |                   |                          |  |  |  |
|                              |                         |       |             | SUBTOTALS (DIST. 9 - BOX 1 OF 2): |                          |        |                                      |       |                            |        | 336.32            |                          | 524.89                     |        | 57.74             |                          |  |  |  |

BASIS OF ESTIMATE (DIST. 9):  
(PG 64-22) ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% 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. 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET)      | BR.<br>STRUCTURE<br>NO. | ROUTE | LOG<br>MILE | BR.<br>DIRECTION | LOCATION                 | LENGTH           | AGGREGATE BASE<br>COURSE (CLASS 7) * |                   | ACHM SURFACE COURSE (1/2") |                   |                   |                   | ACHM SURFACE COURSE (3/8") |                   |                   |      |
|-----------------------------------|-------------------------|-------|-------------|------------------|--------------------------|------------------|--------------------------------------|-------------------|----------------------------|-------------------|-------------------|-------------------|----------------------------|-------------------|-------------------|------|
|                                   |                         |       |             |                  |                          | TON /<br>STATION | TON                                  | AVG. WID.<br>FEET | SQ.YD.                     | POUND /<br>SQ.YD. | TOTAL<br>PG 64-22 | AVG. WID.<br>FEET | SQ.YD.                     | POUND /<br>SQ.YD. | TOTAL<br>PG 64-22 |      |
|                                   |                         |       |             |                  |                          |                  |                                      |                   |                            |                   | TON               |                   |                            |                   |                   |      |
| 4                                 | 03519                   | 95    | 2.231       | 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 |
|                                   |                         |       |             | SOUTH RT.        | GUARDRAIL WIDENING - LT. | 40.00            | 25.00                                | 10.00             |                            |                   |                   |                   | 3.50                       | 15.56             | 220               | 1.71 |
|                                   |                         |       |             |                  | GUARDRAIL WIDENING - LT. | 85.00            | 32.00                                | 27.20             |                            |                   |                   |                   | 4.50                       | 42.50             | 220               | 4.68 |
|                                   |                         |       |             |                  | 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 |
|                                   |                         |       |             | NORTH 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. | 160.00           | 32.00                                | 51.20             |                            |                   |                   |                   | 4.50                       | 80.00             | 220               | 8.80 |
|                                   |                         |       |             |                  | GUARDRAIL WIDENING - LT. | 40.00            | 25.00                                | 10.00             |                            |                   |                   |                   | 3.50                       | 15.56             | 220               | 1.71 |
| SUBTOTALS (DIST. 8 - BOX 2 OF 2): |                         |       |             |                  |                          |                  |                                      | 238.28            |                            |                   |                   |                   | 372.00                     |                   | 40.92             |      |

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% 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.

|                                  |        |  |  |  |  |       |  |  |  |  |  |       |
|----------------------------------|--------|--|--|--|--|-------|--|--|--|--|--|-------|
| SUBTOTALS (DIST. 8 - BOX 2 OF 2) | 238.28 |  |  |  |  |       |  |  |  |  |  | 40.92 |
| SUBTOTALS (DIST. 9 - BOX 1 OF 2) | 336.32 |  |  |  |  | 57.74 |  |  |  |  |  |       |
| PROJECT TOTALS:                  | 574.60 |  |  |  |  | 57.74 |  |  |  |  |  | 40.92 |

BASIS OF ESTIMATE (DIST. 9):  
(PG 64-22) ACHM SURFACE COURSE (1/2").....94.6% MIN. AGGR.....5.4% ASPHALT BINDER

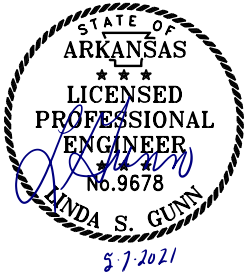
MAXIMUM NUMBER OF GYRATIONS = 115 FOR PG 64-22

BASIS OF ESTIMATE (DIST. 8):  
ACHM SURFACE COURSE (3/8").....94.2% MIN. AGGR.....5.8% ASPHALT BINDER  
DON'T FORGET TO DELETE THE TOTALS OUT OF THE COLUMNS YOU ARE NOT USING OR YOU WILL END UP WITH 3 TIMES MORE ASPHALT THAN NEEDED  
FOR TACK COAT QUANTITIES, USE 0.05 INSTEAD OF 0.03 AND USE 0.17 INSTEAD OF 0.10. SEE TACK COAT BASIS OF ESTIMATE ABOVE FOR REASON.

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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REVISION DATE: \*\*REVISION DATE\*\*

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|------------------|-------|------------------|-----------|--------------|
|              |             |              |             | 6                | ARK.  |                  |           |              |
|              |             |              |             | JOB NO.          |       | 012377           | 24        | 32           |
| QUANTITIES   |             |              |             |                  |       |                  |           |              |



PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE SHEET) | BR. STRUCTURE NO. | ROUTE | LOG MILE | DESCRIPTION | * REMOVAL OF PERMANENT PAVEMENT MARKINGS | REMOVABLE CONST. PAVEMENT MARKINGS | RAISED PAVEMENT MARKERS | THERMOPLASTIC PAVEMENT MARKING | REFLECTORIZED PAINT PAVEMENT MARKING |        |          |        |
|---------------------------|-------------------|-------|----------|-------------|------------------------------------------|------------------------------------|-------------------------|--------------------------------|--------------------------------------|--------|----------|--------|
|                           |                   |       |          |             | LIN. FT.                                 |                                    |                         | TYPE II                        | 6"                                   |        |          |        |
|                           |                   |       |          |             |                                          |                                    |                         | (YELLOW/YELLOW)                | WHITE                                | YELLOW | WHITE    | YELLOW |
|                           |                   |       |          |             |                                          |                                    |                         | EACH                           | LIN. FT.                             |        | LIN. FT. |        |
| 1                         | 05669             | 102   | 8.898    | WHITE       | 179                                      | 336                                |                         |                                | 1123                                 |        |          |        |
|                           |                   |       |          | YELLOW      | 1056                                     | 1461                               |                         |                                |                                      | 813    |          |        |
|                           |                   |       |          | R.P.M.      |                                          |                                    | 10                      |                                |                                      |        |          |        |
|                           |                   | 59    |          | YELLOW      |                                          |                                    |                         | 1056                           |                                      |        |          |        |
| 2                         | 03144             | 14    | 0.020    | WHITE       | 84                                       | 44                                 |                         | 368                            |                                      |        |          |        |
|                           |                   |       |          | YELLOW      |                                          | 368                                |                         |                                | 368                                  |        |          |        |
|                           |                   |       |          | R.P.M.      |                                          |                                    | 4                       |                                |                                      |        |          |        |
| 3                         | 01743             | 14    | 15.749   | WHITE       | 572                                      | 48                                 |                         |                                |                                      | 2066   |          |        |
|                           |                   |       |          | YELLOW      |                                          | 2066                               |                         |                                |                                      |        | 2066     |        |
|                           |                   |       |          | R.P.M.      |                                          |                                    | 26                      |                                |                                      |        |          |        |
| SUBTOTALS:                |                   |       |          |             | 1891                                     | 4323                               | 40                      | 368                            | 1424                                 | 3189   | 2879     |        |

NOTE: 2 LANE ROADS HAVE BOTH HIGH AND LOW TRAFFIC VOLUME IN DISTRICT 9 AS DEFINED IN SECTION 604.03. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. 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 THE PROJECT.

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

PERMANENT AND CONSTRUCTION PAVEMENT MARKINGS (DIST. 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE SHEET) | BR. STRUCTURE NO. | ROUTE | LOG MILE | DESCRIPTION | * REMOVAL OF PERMANENT PAVEMENT MARKINGS | REMOVABLE CONST. PAVEMENT MARKINGS | RAISED PAVEMENT MARKERS | THERMOPLASTIC PAVEMENT MARKING | REFLECTORIZED PAINT PAVEMENT MARKING |          |          |
|---------------------------|-------------------|-------|----------|-------------|------------------------------------------|------------------------------------|-------------------------|--------------------------------|--------------------------------------|----------|----------|
|                           |                   |       |          |             | LIN. FT.                                 | EACH                               | TYPE II                 | 6"                             | 6"                                   |          |          |
|                           |                   |       |          |             |                                          |                                    | (YELLOW/YELLOW)         | WHITE                          | YELLOW                               | WHITE    | YELLOW   |
|                           |                   |       |          |             |                                          |                                    |                         | LIN. FT.                       | LIN. FT.                             | LIN. FT. | LIN. FT. |
| 4                         | 03519             | 95    | 2.231    | WHITE       | 125                                      | 48                                 |                         | 1072                           |                                      |          |          |
|                           |                   |       |          | YELLOW      |                                          | 1072                               |                         |                                | 1072                                 |          |          |
|                           |                   |       |          | R.P.M.      |                                          |                                    | 14                      |                                |                                      |          |          |
| SUBTOTALS:                |                   |       |          |             | 125                                      | 1120                               | 14                      | 1072                           | 1072                                 |          |          |

|                                  |  |  |  |  |      |      |    |      |      |      |      |
|----------------------------------|--|--|--|--|------|------|----|------|------|------|------|
| SUBTOTALS (DIST. 8 - BOX 2 OF 2) |  |  |  |  | 125  | 1120 | 14 | 1072 | 1072 |      |      |
| SUBTOTALS (DIST. 9 - BOX 1 OF 2) |  |  |  |  | 1891 | 4323 | 40 | 368  | 1424 | 3189 | 2879 |
| PROJECT TOTALS:                  |  |  |  |  | 2016 | 5443 | 54 | 1440 | 2496 | 3189 | 2879 |

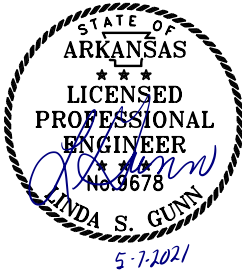
NOTE: 2 LANE ROADS HAVE HIGH TRAFFIC VOLUME IN DISTRICT 8 AS DEFINED IN SECTION 604.03. STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. REFER TO PERMANENT PAVEMENT MARKING DETAILS FOR LIST OF HIGH AND LOW ROADS IN EACH DISTRICT.

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 THE PROJECT.

\* QUANTITIES ESTIMATED.

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REVISED DATE: \*\*REVIDATE\*\*

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE  | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|--------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.   |                  |              |                 |
|                 |                |                 |                |                     |        |                  |              |                 |
|                 |                |                 |                |                     |        |                  |              |                 |
|                 |                |                 |                | JOB NO.             | 012377 |                  | 25           | 32              |
|                 |                |                 |                | QUANTITIES          |        |                  |              |                 |



REMOVAL AND DISPOSAL OF APPROACH GUTTERS (DISTRICT 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET)        | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | R&D OF<br>APPROACH<br>GUTTERS |
|-------------------------------------|----------------------------|-------|----------|-----------|-------------------------------|
|                                     |                            |       |          |           | EACH                          |
| 1                                   | 05669                      | 102   | 8.898    | SOUTH RT. |                               |
|                                     |                            |       |          | NORTH RT. | 1                             |
|                                     |                            |       |          | SOUTH LT. | 1                             |
|                                     |                            |       |          | NORTH LT. | 1                             |
| 3                                   | 01743                      | 14    | 15.749   | SOUTH RT. | 1                             |
|                                     |                            |       |          | NORTH RT. | 1                             |
|                                     |                            |       |          | SOUTH LT. | 1                             |
|                                     |                            |       |          | NORTH LT. | 1                             |
| SUBTOTAL (DISTRICT 9 - BOX 1 OF 2): |                            |       |          |           | 7                             |

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

REMOVAL AND DISPOSAL OF APPROACH GUTTERS (DISTRICT 8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET)        | BRIDGE<br>STRUCTURE<br>NO. | ROUTE | LOG MILE | LOCATION  | R&D OF<br>APPROACH<br>GUTTERS |
|-------------------------------------|----------------------------|-------|----------|-----------|-------------------------------|
|                                     |                            |       |          |           | EACH                          |
| 4                                   | 03519                      | 95    | 2.231    | SOUTH RT. | 1                             |
|                                     |                            |       |          | NORTH RT. | 1                             |
|                                     |                            |       |          | SOUTH LT. | 1                             |
|                                     |                            |       |          | NORTH LT. | 1                             |
| SUBTOTAL (DISTRICT 8 - BOX 2 OF 2): |                            |       |          |           | 4                             |

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

|                                  |  |    |
|----------------------------------|--|----|
| SUBTOTAL (DIST. 8 - BOX 2 OF 2): |  | 4  |
| SUBTOTAL (DIST. 9 - BOX 1 OF 2): |  | 7  |
| PROJECT TOTAL:                   |  | 11 |

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

APPROACH GUTTERS (DIST. 9 - BOX 1 OF 2)

| BR. ID #<br>(TITLE<br>SHEET)         | BRIDGE<br>STRUCTURE NO. | ROUTE | LOG MILE | LOCATION  | APPROACH<br>GUTTER<br>(TYPE _) | GUTTER<br>WIDTH "W"<br>FT. | APPROACH<br>GUTTER | REINFORCING<br>STEEL-RDWY.<br>(GR. 60) | AGGREGATE<br>BASE CRS.<br>(CLASS 7) | BR.<br>STANDARD<br>DRAWING |
|--------------------------------------|-------------------------|-------|----------|-----------|--------------------------------|----------------------------|--------------------|----------------------------------------|-------------------------------------|----------------------------|
|                                      |                         |       |          |           |                                |                            | CU.YD.             | POUND                                  | TON                                 |                            |
| 1                                    | 05669                   | 102   | 8.898    | SOUTH RT. | PT2                            | 4                          |                    |                                        |                                     | 55037                      |
|                                      |                         |       |          | NORTH RT. |                                |                            | 9.19               | 949                                    | 4.82                                |                            |
|                                      |                         |       |          | SOUTH LT. |                                |                            | 9.19               | 949                                    | 4.82                                |                            |
|                                      |                         |       |          | NORTH LT. |                                |                            | 9.19               | 949                                    | 4.82                                |                            |
| 3                                    | 01743                   | 14    | 15.749   | SOUTH RT. | CT                             | 4                          | 2.65               | 198                                    | 2.72                                | 55039                      |
|                                      |                         |       |          | NORTH RT. |                                |                            | 2.65               | 198                                    | 2.72                                |                            |
|                                      |                         |       |          | SOUTH LT. |                                |                            | 2.65               | 198                                    | 2.72                                |                            |
|                                      |                         |       |          | NORTH LT. |                                |                            | 2.65               | 198                                    | 2.72                                |                            |
| SUBTOTALS (DISTRICT 9 - BOX 1 OF 2): |                         |       |          |           |                                |                            | 38.17              | 3639                                   | 25.34                               |                            |

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

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

APPROACH GUTTERS (DIST.8 - BOX 2 OF 2)

| BR. ID #<br>(TITLE<br>SHEET)         | BRIDGE<br>STRUCTURE NO. | ROUTE | LOG MILE | LOCATION  | APPROACH<br>GUTTER<br>(TYPE _) | GUTTER<br>WIDTH "W"<br>FT. | APPROACH<br>GUTTER | REINFORCING<br>STEEL-RDWY.<br>(GR. 60) | AGGREGATE<br>BASE CRS.<br>(CLASS 7) | BR.<br>STANDARD<br>DRAWING |
|--------------------------------------|-------------------------|-------|----------|-----------|--------------------------------|----------------------------|--------------------|----------------------------------------|-------------------------------------|----------------------------|
| 4                                    | 03519                   | 95    | 2.231    | SOUTH RT. | CT                             | 4                          | CU.YD.             | POUND                                  | TON                                 | 55039                      |
|                                      |                         |       |          | 2.65      |                                |                            | 198                | 2.72                                   |                                     |                            |
|                                      |                         |       |          | 2.65      |                                |                            | 198                | 2.72                                   |                                     |                            |
|                                      |                         |       |          | 2.65      |                                |                            | 198                | 2.72                                   |                                     |                            |
|                                      |                         |       |          | 2.65      |                                |                            | 198                | 2.72                                   |                                     |                            |
| SUBTOTALS (DISTRICT 8 - BOX 2 OF 2): |                         |       |          |           |                                |                            | 10.60              | 792                                    | 10.88                               |                            |

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

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

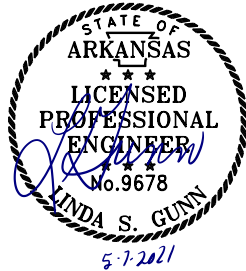
|                                      |       |      |       |  |
|--------------------------------------|-------|------|-------|--|
| SUBTOTALS (DISTRICT 8 - BOX 2 OF 2): | 10.60 | 792  | 10.88 |  |
| SUBTOTALS (DISTRICT 9 - BOX 1 OF 2): | 38.17 | 3639 | 25.34 |  |
| PROJECT TOTALS:                      | 48.77 | 4431 | 36.22 |  |

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

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

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REVISED DATE: \*\*REDATE\*\*

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|------------------|-------|------------------|-----------|--------------|
|              |             |              |             | 6                | ARK.  |                  |           |              |
|              |             |              |             | JOB NO.          |       | 012377           | 26        | 32           |
| QUANTITIES   |             |              |             |                  |       |                  |           |              |



| LOCATION / DESCRIPTION                           | *UNCLASSIFIED EXCAVATION | * COMPACTED EMBANKMENT | * SOIL STABILIZATION |
|--------------------------------------------------|--------------------------|------------------------|----------------------|
|                                                  | CU. YD.                  |                        | TON                  |
| ENTIRE DISTRICT 9- WIDENING FOR GUARDRAIL        | 232                      | 2595                   |                      |
| TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | 58                       | 649                    | 200                  |
|                                                  |                          |                        |                      |
| SUBTOTALS:                                       | 290                      | 3244                   | 200                  |

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

| LOCATION / DESCRIPTION                           | *UNCLASSIFIED EXCAVATION | * COMPACTED EMBANKMENT | * SOIL STABILIZATION |
|--------------------------------------------------|--------------------------|------------------------|----------------------|
|                                                  | CU. YD.                  |                        | TON                  |
| ENTIRE DISTRICT 8 - WIDENING FOR GUARDRAIL       | 130                      | 1780                   |                      |
| TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER | 33                       | 445                    | 100                  |
|                                                  |                          |                        |                      |
| SUBTOTALS:                                       | 163                      | 2225                   | 100                  |

|                                   |     |      |     |
|-----------------------------------|-----|------|-----|
| SUBTOTALS (DIST. 8 - BOX 2 OF 2): | 163 | 2225 | 100 |
| SUBTOTALS (DIST. 9 - BOX 1 OF 2): | 290 | 3244 | 200 |
| PROJECT TOTALS:                   | 453 | 5469 | 300 |

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

| STATION | LOCATION                           | *BENCH MARKS |
|---------|------------------------------------|--------------|
|         |                                    | EACH         |
|         | ENTIRE PROJECT FOR DISTRICTS 8 & 9 | 4            |
|         |                                    |              |

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.

\* BENCH MARKS ESTIMATED.  
SEE SECTION 104.03 FOR THE STD. SPECS.

| LOCATION                                                          | PERMANENT EROSION CONTROL |      |             |        |                            | TEMPORARY EROSION CONTROL |                   |                   |                 |                              |
|-------------------------------------------------------------------|---------------------------|------|-------------|--------|----------------------------|---------------------------|-------------------|-------------------|-----------------|------------------------------|
|                                                                   | SEEDING                   | LIME | MULCH COVER | WATER  | SECOND SEEDING APPLICATION | WATTLE (20") DITCH CHECKS | ROCK DITCH CHECKS | FILTER SOCK (18") | SILT FENCE      | *SEDIMENT REMOVAL & DISPOSAL |
|                                                                   | ACRE                      | TON  | ACRE        | M.GAL. | ACRE                       | (E-1) LIN. FT.            | (E-6) CU.YD.      | (E-7) LIN. FT.    | (E-11) LIN. FT. | CU. YD.                      |
| ENTIRE PROJECT STAGE 1                                            | 0.18                      | 0.36 | 0.18        | 18.4   | 0.18                       | 108                       |                   | 524               | 262             | 4.86                         |
| ENTIRE PROJECT STAGE 2                                            | 0.18                      | 0.36 | 0.18        | 18.4   | 0.18                       | 108                       |                   | 524               | 262             | 4.86                         |
|                                                                   |                           |      |             |        |                            |                           |                   |                   |                 |                              |
| *ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. | 1.00                      | 2.00 | 1.00        | 102.0  | 1.00                       | 54                        | 36                | 262               | 131             | 2.43                         |
|                                                                   |                           |      |             |        |                            |                           |                   |                   |                 |                              |
| SUBTOTALS (DIST. 9):                                              | 1.36                      | 2.72 | 1.36        | 138.8  | 1.36                       | 270                       | 36                | 1310              | 655             | 12.15                        |

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.

| LOCATION                                                          | PERMANENT EROSION CONTROL |      |             |        |                            | TEMPORARY EROSION CONTROL |                   |                   |                 |                              |
|-------------------------------------------------------------------|---------------------------|------|-------------|--------|----------------------------|---------------------------|-------------------|-------------------|-----------------|------------------------------|
|                                                                   | SEEDING                   | LIME | MULCH COVER | WATER  | SECOND SEEDING APPLICATION | WATTLE (20") DITCH CHECKS | ROCK DITCH CHECKS | FILTER SOCK (18") | SILT FENCE      | *SEDIMENT REMOVAL & DISPOSAL |
|                                                                   | ACRE                      | TON  | ACRE        | M.GAL. | ACRE                       | (E-1) LIN. FT.            | (E-6) CU.YD.      | (E-7) LIN. FT.    | (E-11) LIN. FT. | CU. YD.                      |
| ENTIRE PROJECT STAGE 1                                            | 0.09                      | 0.18 | 0.09        | 9.2    | 0.09                       | 36                        |                   | 243               | 122             | 2.25                         |
| ENTIRE PROJECT STAGE 2                                            | 0.09                      | 0.18 | 0.09        | 9.2    | 0.09                       | 36                        |                   | 243               | 122             | 2.25                         |
|                                                                   |                           |      |             |        |                            |                           |                   |                   |                 |                              |
| *ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER. | 1.00                      | 2.00 | 1.00        | 102.0  | 1.00                       | 18                        | 12                | 122               | 61              | 1.13                         |
|                                                                   |                           |      |             |        |                            |                           |                   |                   |                 |                              |
| SUBTOTALS (DIST. 8):                                              | 1.18                      | 2.36 | 1.18        | 120.4  | 1.18                       | 90                        | 12                | 608               | 305             | 5.63                         |

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.

|                                   |      |      |      |       |      |     |    |      |     |       |
|-----------------------------------|------|------|------|-------|------|-----|----|------|-----|-------|
| SUBTOTALS (DIST. 8 - BOX 2 OF 2): | 1.18 | 2.36 | 1.18 | 120.4 | 1.18 | 90  | 12 | 608  | 305 | 5.63  |
| SUBTOTALS (DIST. 9 - BOX 1 OF 2): | 1.36 | 2.72 | 1.36 | 138.8 | 1.36 | 270 | 36 | 1310 | 655 | 12.15 |
| PROJECT TOTALS:                   | 2.54 | 5.08 | 2.54 | 259.2 | 2.54 | 360 | 48 | 1918 | 960 | 17.78 |

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.

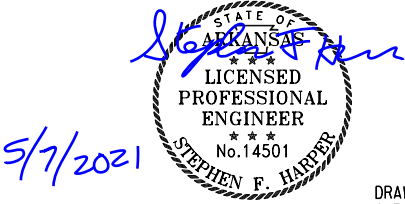
| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO.                | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|------------------------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                                  | ARK.  |                  |              |                 |
|                 |                |                 |                | JOB NO.                            |       | 012377           | 27           | 32              |
|                 |                |                 |                | 1 ALL BRIDGES - QUANTITIES - 64049 |       |                  |              |                 |

SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 012377

| DISTRICT | SITE NO.              | COUNTY | ROUTE    | SECTION | LOG MILE | BRIDGE NO. | SP & 509                            | SS & 802 | 803                                           | 803                                           | SS & 804                                  | SS & 805           | SS & 809                     | SP JOB 012377                                                       | SP JOB 012377                | SP JOB 012377                                        | SP JOB 012377  | SP JOB 012377 | SP JOB 012377       |
|----------|-----------------------|--------|----------|---------|----------|------------|-------------------------------------|----------|-----------------------------------------------|-----------------------------------------------|-------------------------------------------|--------------------|------------------------------|---------------------------------------------------------------------|------------------------------|------------------------------------------------------|----------------|---------------|---------------------|
|          |                       |        |          |         |          |            | JOINT<br>REHABILITATION<br>(TYPE A) | GROOVING | CLASS 1<br>PROTECTIVE<br>SURFACE<br>TREATMENT | CLASS 3<br>PROTECTIVE<br>SURFACE<br>TREATMENT | REINFORCING<br>STEEL-BRIDGE<br>(GRADE 60) | PILE<br>ENCASEMENT | SILICONE<br>JOINT<br>SEALANT | BRIDGE DECK<br>REPAIR FOR LATEX<br>MODIFIED<br>CONCRETE<br>OVERLAYS | HYDRODEMOLITION -<br>CLASS 2 | LATEX MODIFIED<br>CONCRETE OVERLAY<br>(1 1/2" THICK) | RAILING REPAIR | SPALL REPAIR  | SURFACE<br>PATCHING |
|          |                       |        |          |         |          |            | LIN. FT.                            | SQ. YD.  | GAL.                                          | LIN. FT.                                      | POUND                                     | LIN. FT.           | LIN. FT.                     | SQ. FT.                                                             | SQ. YD.                      | SQ. YD.                                              | LUMP SUM       | SQ. FT.       | SQ. FT.             |
| 9        | 1                     | BENTON | HWY. 102 | 1       | 8.898    | 05669 ② ⑤  | 64                                  | 588.7    | 12.9                                          | 336                                           | 494                                       |                    | 167 ④                        | 581                                                                 | 645                          | 647                                                  |                | 100           | 25                  |
|          | 2                     | MARION | HWY. 14  | 3       | 0.020    | 03144 ②    | 48                                  | 196.1    | 4.5                                           | 168                                           | 173                                       |                    |                              | 202                                                                 | 224                          | 225                                                  |                | 60            | 20                  |
|          | 3                     | MARION | HWY. 14  | 3       | 15.749   | 01743 ② ⑥  |                                     | 1,330.0  | 30.4                                          | 1,140                                         | 1,163                                     | 30 ⑦               | 25 ④                         | 1,368                                                               | 1,520                        | 1,526                                                |                | 55            | 85                  |
|          | TOTALS FOR DISTRICT 9 |        |          |         |          |            | 112                                 | 2,114.8  | 47.8                                          | 1,644                                         | 1,830                                     | 30                 | 192                          | 2,151                                                               | 2,389                        | 2,398                                                |                | 215           | 130                 |
| 8        | 4                     | CONWAY | HWY. 95  | 1       | 2.231    | 03519 ① ⑥  | 111                                 | 291.8    | 6.7                                           | 250                                           | 260                                       |                    |                              | 300                                                                 | 334                          | 335                                                  | 1              | 70            | 20                  |
|          | TOTALS FOR DISTRICT 8 |        |          |         |          |            | 111                                 | 291.8    | 6.7                                           | 250                                           | 260                                       |                    |                              | 300                                                                 | 334                          | 335                                                  | 1              | 70            | 20                  |
|          | TOTALS FOR JOB 012377 |        |          |         |          |            | 223                                 | 2,406.6  | 54.5                                          | 1,894                                         | 2,090 ③                                   | 30                 | 192                          | 2,451 ③                                                             | 2,723                        | 2,733                                                |                | 285 ③         | 150 ③               |

| REFERENCE TABLE                 |                                                                                     |
|---------------------------------|-------------------------------------------------------------------------------------|
| (Hydrodemolition & LMC Overlay) |                                                                                     |
| Bridge No.                      | Existing Dwg. Nos.                                                                  |
| 05669                           | 20712, 20713, 20714, 20717, 20718, 20719, 20720, 20721, 20722, 20723, 14991, 14995A |
| 03144                           | 9566, 5491, 5492                                                                    |
| 01743                           | 9234, 5500H, 5500I, 5500P                                                           |
| 03519                           | 11579, 11582                                                                        |

- ① EXISTING BRIDGE DECK HAS AN ASPHALT OVERLAY. SEE ROADWAY PLANS FOR AVERAGE DEPTH AT EACH BRIDGE SITE.
- ② EXISTING BRIDGE DECK HAS SPALLS FILLED WITH ASPHALT.
- ③ QUANTITY SHOWN IS FOR ESTIMATING AND BIDDING PURPOSES ONLY. ACTUAL QUANTITY, IF ANY, WILL BE DETERMINED IN THE FIELD.
- ④ EXISTING BRIDGE HAS FILLED JOINTS TO BE REMOVED AND REPLACED WITH POURED SILICONE JOINTS.
- ⑤ REMOVE AND DISPOSE OF EXISTING APPROACH GUTTERS AT DESIGNATED LOCATIONS. SEE ROADWAY PLANS FOR ADDITIONAL INFORMATION.
- ⑥ 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.
- ⑦ USE PILE ENCASEMENT AT BOTTOM OF ALL BENT 5 PILES. QUANTITY ASSUMES 3'-0" MINIMUM PILE ENCASEMENT ABOVE AND BELOW GROUND LINE (6'-0" TOTAL PER PILE). SEE STD. DWG. 55020. ADJUST ENCASEMENT FORM AS NECESSARY TO INCORPORATE PILE BRACING.



BRIDGE ENGINEER  
PRINT DATE: 5/7/2021

DRAWN BY: ERBB DATE: 4/2021 FILENAME: B012377\_Q1.dgn  
CHECKED BY: SFH DATE: 4/2021  
DESIGNED BY: - DATE: - SCALE: NONE  
BRIDGE NO. ALL BRIDGES DRAWING NO. 64049

SCHEDULE OF BRIDGE QUANTITIES  
DISTRICTS 8 & 9 BRIDGE  
PRESERVATION (2021) (S)  
VARIOUS COUNTIES  
ROUTE VARIES SECTION VARIES  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARKANSAS

Katie LeBlanc 6/22/2021 3:29:44 PM  
WORKSPACE: AR001  
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REVISED DATE: \*\*REDATE\*\*

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|------------------|--------------|-----------------|
| 06-08-21        |                |                 |                | 6                   | ARK.  |                  |              |                 |
| 06-22-21        |                |                 |                |                     |       |                  |              |                 |
|                 |                |                 |                | JOB NO.             |       | 012377           | 28           | 32              |

2 SUMMARY OF QUANTITIES AND REVISIONS



| SUMMARY OF QUANTITIES    |                                                         |                       |                       |                                |          |
|--------------------------|---------------------------------------------------------|-----------------------|-----------------------|--------------------------------|----------|
| ITEM NUMBER              | ITEM                                                    | DIST. 8<br>QUANTITIES | DIST. 9<br>QUANTITIES | PROJECT<br>TOTAL<br>QUANTITIES | UNIT     |
| 202                      | REMOVAL AND DISPOSAL OF APPROACH GUTTERS                | 4                     | 7                     | 11                             | EACH     |
| 202                      | REMOVAL AND DISPOSAL OF GUARDRAIL                       | 120                   | 765                   | 885                            | LIN. FT. |
| SS & 210                 | UNCLASSIFIED EXCAVATION                                 | 163                   | 290                   | 453                            | CU. YD.  |
| SP & 210                 | COMPACTED EMBANKMENT                                    | 2225                  | 3244                  | 5469                           | CU. YD.  |
| SP & 210                 | SOIL STABILIZATION                                      | 100                   | 200                   | 300                            | TON      |
| SP & 215                 | TRENCHING AND SHOULDER PREPARATION                      | 1                     | 4                     | 5                              | STATION  |
| SS & 303                 | AGGREGATE BASE COURSE (CLASS 7)                         | 285                   | 506                   | 791                            | TON      |
| SS & 401                 | TACK COAT                                               | 232                   | 504                   | 736                            | GAL.     |
| SP, SS, & 407            | MINERAL AGGREGATE IN ACHM SURFACE COURSE (3/8")         | 184                   |                       | 184                            | TON      |
| SP, SS, & 407            | ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (3/8") | 11                    |                       | 11                             | TON      |
| SP, SS, & 407            | MINERAL AGGREGATE IN ACHM SURFACE COURSE (1/2")         |                       | 346                   | 346                            | TON      |
| SP, SS, & 407            | ASPHALT BINDER (PG 64-22) IN ACHM SURFACE COURSE (1/2") |                       | 20                    | 20                             | TON      |
| 412                      | COLD MILLING ASPHALT PAVEMENT                           | 1654                  | 2778                  | 4432                           | SQ. YD.  |
| 504                      | APPROACH GUTTERS                                        | 10.60                 | 38.17                 | 48.77                          | CU. YD.  |
| 601                      | MOBILIZATION                                            | 0.13                  | 0.87                  | 1.00                           | LUMP SUM |
| SP, SS, & 603            | MAINTENANCE OF TRAFFIC                                  | 0.13                  | 0.87                  | 1.00                           | LUMP SUM |
| SS & 604                 | SIGNS                                                   | 239                   | 511                   | 750                            | SQ. FT.  |
| SS & 604                 | BARRICADES                                              |                       | 64                    | 64                             | LIN. FT. |
| SS & 604                 | TRAFFIC DRUMS                                           |                       | 22                    | 22                             | EACH     |
| 604                      | REMOVABLE CONSTRUCTION PAVEMENT MARKINGS                | 1120                  | 4323                  | 5443                           | LIN. FT. |
| 604                      | REMOVAL OF PERMANENT PAVEMENT MARKINGS                  | 125                   | 1891                  | 2016                           | LIN. FT. |
| SS & 604                 | VERTICAL PANELS                                         | 41                    | 57                    | 98                             | EACH     |
| SS & 617                 | GUARDRAIL (TYPE A)                                      | 450                   | 550                   | 1000                           | LIN. FT. |
| SS & 617                 | GUARDRAIL TERMINAL (TYPE 2)                             | 4                     | 7                     | 11                             | EACH     |
| SS & 617                 | THRIE BEAM GUARDRAIL TERMINAL                           |                       | 3                     | 3                              | EACH     |
| 620                      | LIME                                                    | 2                     | 3                     | 5                              | TON      |
| 620                      | SEEDING                                                 | 1.18                  | 1.36                  | 2.54                           | ACRE     |
| SS & 620                 | MULCH COVER                                             | 1.18                  | 1.36                  | 2.54                           | ACRE     |
| 620                      | WATER                                                   | 120.4                 | 138.8                 | 259.2                          | M. GAL.  |
| 621                      | SILT FENCE                                              | 305                   | 655                   | 960                            | LIN. FT. |
| 621                      | SEDIMENT REMOVAL AND DISPOSAL                           | 6                     | 12                    | 18                             | CU. YD.  |
| 621                      | ROCK DITCH CHECKS                                       | 12                    | 36                    | 48                             | CU. YD.  |
| SS & 621                 | FILTER SOCK (18")                                       | 608                   | 1310                  | 1918                           | LIN. FT. |
| 621                      | WATTLE (20")                                            | 90                    | 270                   | 360                            | LIN. FT. |
| 623                      | SECOND SEEDING APPLICATION                              | 1.18                  | 1.36                  | 2.54                           | ACRE     |
| 635                      | ROADWAY CONSTRUCTION CONTROL                            | 0.13                  | 0.87                  | 1.00                           | LUMP SUM |
| SP                       | PORTABLE TRAFFIC SIGNAL SYSTEM - ACTUATED               | 4                     | 12                    | 16                             | WEEK     |
| 718                      | REFLECTORIZED PAINT PAVEMENT MARKING WHITE (6")         |                       | 3189                  | 3189                           | LIN. FT. |
| 718                      | REFLECTORIZED PAINT PAVEMENT MARKING YELLOW (6")        |                       | 2879                  | 2879                           | LIN. FT. |
| 719                      | THERMOPLASTIC PAVEMENT MARKING WHITE (6")               | 1072                  | 368                   | 1440                           | LIN. FT. |
| 719                      | THERMOPLASTIC PAVEMENT MARKING YELLOW (6")              | 1072                  | 1424                  | 2496                           | LIN. FT. |
| 721                      | RAISED PAVEMENT MARKERS (TYPE II)                       | 14                    | 40                    | 54                             | EACH     |
| SS & 804                 | REINFORCING STEEL-ROADWAY (GRADE 60)                    | 792                   | 3639                  | 4431                           | POUND    |
| STRUCTURES OVER 20' SPAN |                                                         |                       |                       |                                |          |
| SP & 509                 | JOINT REHABILITATION (TYPE A)                           | 111                   | 112                   | 223                            | LIN. FT. |
| 636                      | BRIDGE CONSTRUCTION CONTROL                             | 0.13                  | 0.87                  | 1.00                           | LUMP SUM |
| SS & 802                 | GROOVING                                                | 291.8                 | 2114.8                | 2406.6                         | SQ. YD.  |
| SP                       | RAILING REPAIR                                          | 1.00                  |                       | 1.00                           | LUMP SUM |
| SP                       | SURFACE PATCHING                                        | 20                    | 130                   | 150                            | SQ. FT.  |
| SP                       | SPALL REPAIR                                            | 70                    | 215                   | 285                            | SQ. FT.  |
| 803                      | CLASS 1 PROTECTIVE SURFACE TREATMENT                    | 6.7                   | 47.8                  | 54.5                           | GAL.     |
| 803                      | CLASS 3 PROTECTIVE SURFACE TREATMENT                    | 250                   | 1644                  | 1894                           | LIN. FT. |
| SS & 804                 | REINFORCING STEEL-BRIDGE (GRADE 60)                     | 260                   | 1830                  | 2090                           | POUND    |
| SS & 805                 | PILE ENCASEMENT                                         |                       | 30                    | 30                             | LIN. FT. |
| SS & 809                 | SILICONE JOINT SEALANT                                  |                       | 192                   | 192                            | LIN. FT. |
| SP                       | HYDRODEMOLITION - CLASS 2                               | 334                   | 2389                  | 2723                           | SQ. YD.  |
| SP                       | BRIDGE DECK REPAIR FOR LATEX MODIFIED CONCRETE OVERLAYS | 300                   | 2151                  | 2451                           | SQ. FT.  |
| SP                       | LATEX MODIFIED CONCRETE OVERLAY (1 1/2" THICK)          | 335                   | 2398                  | 2733                           | SQ. YD.  |

| REVISIONS |                                                                  |              |
|-----------|------------------------------------------------------------------|--------------|
| DATE      | REVISION                                                         | SHEET NUMBER |
| 6/8/2021  | STANDARD DRAWINGS TC-2 AND TC-3 DATE CHANGED TO 05-20-21         | 2            |
|           | REVISION ADDED TO REVISIONS BOX                                  | 28           |
| 6/22/2021 | REVISED "DETAILS FOR SAFETY OF STREAM TRAFFIC" SPECIAL PROVISION | 28           |
|           |                                                                  |              |
|           |                                                                  |              |
|           |                                                                  |              |
|           |                                                                  |              |
|           |                                                                  |              |
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|           |                                                                  |              |
|           |                                                                  |              |

Travis Keymer 5/7/2021 2:08:36 PM  
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REVISED DATE:

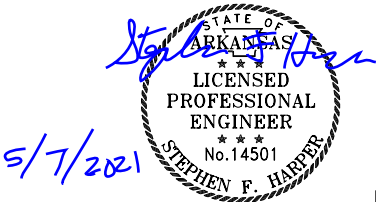
| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO.                         | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------------------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                                           | ARK.  |                  |              |                 |
|                 |                |                 |                | JOB NO.                                     |       | 012377           | 29           | 32              |
|                 |                |                 |                | 1 DISTRICTS 8 & 9 BRIDGES-BRIDGE DATA-64050 |       |                  |              |                 |

BRIDGE PRESERVATION DATA TABLE  
(DISTRICT 9)

| CURRENT<br>CONST.<br>CONTRACT SITE<br>NO. | BRIDGE<br>NO. | ORIGINAL<br>CONTRACT<br>NO. | COUNTY | ROUTE    | SECTION | SUPERSTRUCTURE TYPE     | DECK TREATMENT<br>TYPE | DECK<br>TREATMENT<br>STD.<br>DRAWINGS | THRIE-BEAM<br>GUARDRAIL<br>CONNECTION<br>PRESENT? | GRADE RAISE<br>NEEDED? | APP. GUTTER<br>TYPE/ STD.<br>DRAWING | BRIDGE JOINT<br>TREATMENT STD.<br>DRAWING                | BRIDGE JOINT<br>TREATMENT<br>LOCATION |
|-------------------------------------------|---------------|-----------------------------|--------|----------|---------|-------------------------|------------------------|---------------------------------------|---------------------------------------------------|------------------------|--------------------------------------|----------------------------------------------------------|---------------------------------------|
| 1                                         | 05669         | 9585                        | BENTON | HWY. 102 | 1       | STEEL I-BEAM & R/C SLAB | HYDRODEMOLITION        | 55060/55062                           | NO                                                | NO                     | PT2/55037                            | 55064/NO STD. DWG. -<br>USE TYPE A JOINT<br>REHAB AND SP | BENTS 1-3/BENT 4                      |
| 2                                         | 03144         | 9386                        | MARION | HWY. 14  | 3       | R/C SLAB                | HYDRODEMOLITION        | CUSTOM DWG.<br>NO. 64051              | NO                                                | YES                    | NONE                                 | NO STD. DWG. - USE<br>TYPE A JOINT REHAB<br>AND SP       | BENTS 2 & 3                           |
| 3                                         | 01743         | 9295                        | MARION | HWY. 14  | 3       | STEEL I-BEAM            | HYDRODEMOLITION        | 55060                                 | NO                                                | NO                     | CT/55039 &<br>REMOVE BLUNT<br>ENDS   | 55064                                                    | BENT 4                                |

BRIDGE PRESERVATION DATA TABLE  
(DISTRICT 8)

| CURRENT<br>CONST.<br>CONTRACT SITE<br>NO. | BRIDGE<br>NO. | ORIGINAL<br>CONTRACT<br>NO. | COUNTY | ROUTE   | SECTION | SUPERSTRUCTURE TYPE | DECK TREATMENT<br>TYPE | DECK<br>TREATMENT<br>STD.<br>DRAWINGS | THRIE-BEAM<br>GUARDRAIL<br>CONNECTION<br>PRESENT? | GRADE RAISE<br>NEEDED? | APP. GUTTER<br>TYPE/ STD.<br>DRAWING | BRIDGE JOINT<br>TREATMENT STD.<br>DRAWING          | BRIDGE JOINT<br>TREATMENT<br>LOCATION |
|-------------------------------------------|---------------|-----------------------------|--------|---------|---------|---------------------|------------------------|---------------------------------------|---------------------------------------------------|------------------------|--------------------------------------|----------------------------------------------------|---------------------------------------|
| 4                                         | 03519         | 8514                        | CONWAY | HWY. 95 | 1       | R/C SLAB            | HYDRODEMOLITION        | 55062                                 | NO                                                | NO                     | CT/55039 &<br>REMOVE BLUNT<br>ENDS   | NO STD. DWG. - USE<br>TYPE A JOINT REHAB<br>AND SP | BENTS 2-5                             |



BRIDGE ENGINEER  
PRINT DATE: 5/7/2021

BRIDGE NO. DISTRICTS 8 & 9 BRIDGES

|              |      |       |        |           |                   |
|--------------|------|-------|--------|-----------|-------------------|
| DRAWN BY:    | ERBB | DATE: | 4/2021 | FILENAME: | B012377_DT8.9.dgn |
| CHECKED BY:  | SFH  | DATE: | 4/2021 |           |                   |
| DESIGNED BY: | ERBB | DATE: | 4/2021 | SCALE:    | NONE              |

DRAWING NO. 64050

BRIDGE PRESERVATION DATA TABLE  
DISTRICTS 8 & 9  
ROUTE Varies SECTION Varies  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARKANSAS

5/14/2021 3:55:33 PM  
Travis Kemner  
WORKSPACE: ARDOT  
Y:\Projects\ARDOT\_180965\_012339\_Bridge Preservation\012377 - HYDRO\Design\BRIDGE\Drawings\012377\_03144.dgn  
REVISED DATE:

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 to an existing slab joint, 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.

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED.RD. DIST.NO. | STATE | FED.AID PROJ.NO.                  | SHEET NO. | TOTAL SHEETS |
|--------------|-------------|--------------|-------------|------------------|-------|-----------------------------------|-----------|--------------|
|              |             |              |             | 6                | ARK.  |                                   |           |              |
|              |             |              |             | JOB NO.          |       | 012377                            | 30        | 32           |
|              |             |              |             |                  |       | 03144 - HYDRO/LMC OVERLAY - 64051 |           |              |

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.

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 2" to a planned depth of 1/2" 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 2".

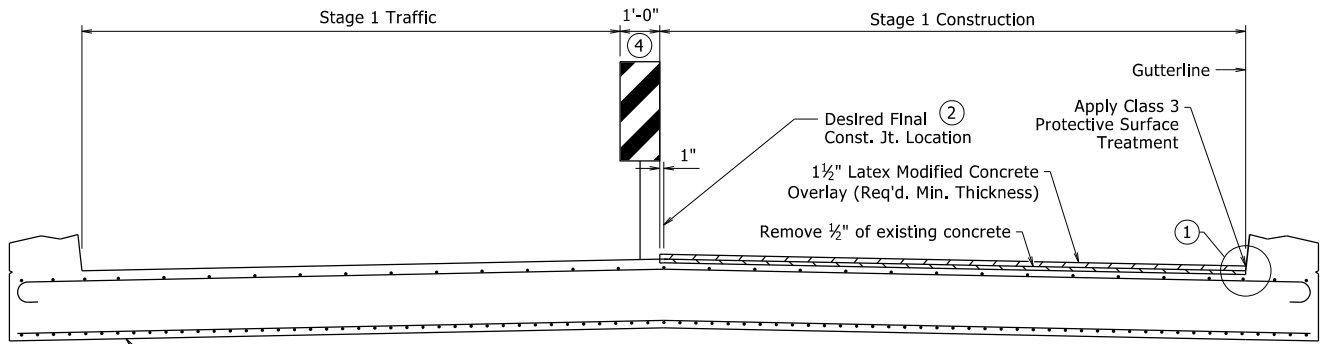
BRIDGE DECK REPAIR: After hydrodemolition, the deck surface shall be sounded and any areas of unsound, delaminated, or otherwise deteriorated concrete shall be removed at the direction of the Engineer and in accordance with Job SP "Bridge Deck Repair for Latex Modified Concrete Overlays".

LATEX MODIFIED CONCRETE OVERLAY: The entire area of the hydrodemolition shall receive a Latex Modified Concrete (LMC) Overlay with a minimum thickness of 1 1/2" 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 (1 1/2" Thick)". Areas of the existing bridge deck removed at the direction of the Engineer to a depth greater than 1/2" below the existing bridge deck surface shall be filled with LMC concurrent to the placement of the 1 1/2" 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".

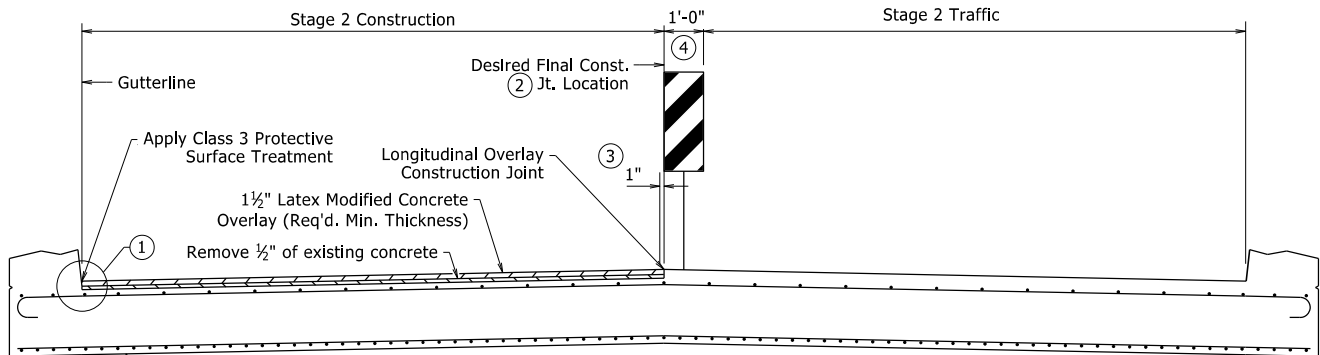
PROTECTIVE SURFACE TREATMENT: The longitudinal joint between the LMC Overlay and the adjacent existing concrete curb or rail shall be given a Class 3 Protective Surface Treatment as specified in Section 803 and in accordance with Job SP "Latex Modified Concrete Overlay". The roadway surface of the completed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

JOINT REHABILITATION: After the placement of the LMC Overlay and if shown in the plans, 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.



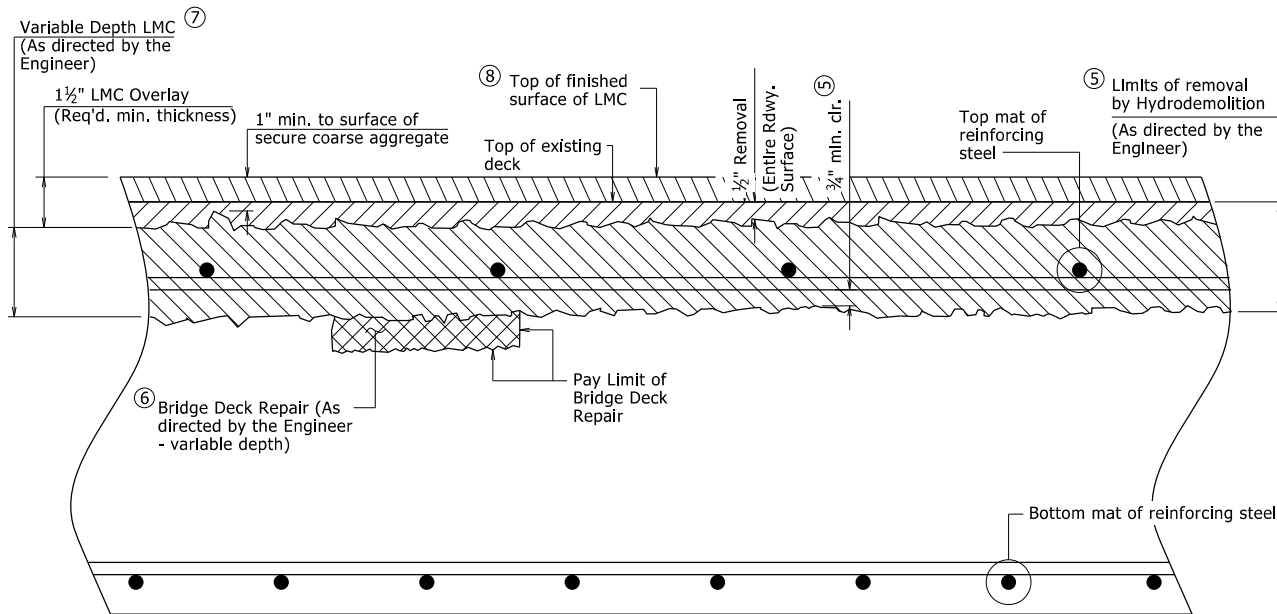
Cross section is schematic. See existing bridge drawings for details.

### STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



Cross section is schematic. See existing bridge drawings for details.

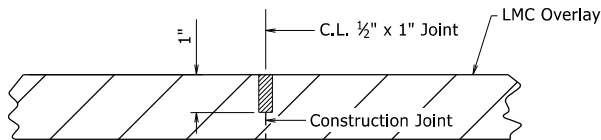
### STAGE 2 LATEX MODIFIED CONCRETE OVERLAY



### DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

- ⑤ Removal of unsound concrete beyond 1/2" 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 3/4" clearance below the bar. This removal shall be subsidiary to the Item Job SP "Hydrodemolition - Class 2".
- 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 be increased as required to maintain minimum required LMC Overlay thickness and a minimum of 1 1/2" 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 Vertical Panels - see Roadway Plans for additional details.



Use 1/2" 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

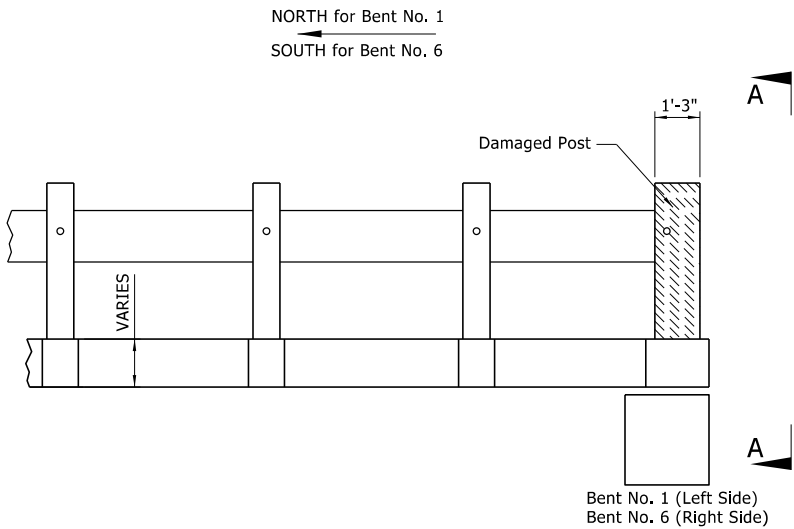


BRIDGE ENGINEER  
PRINT DATE: 5/14/2021

DETAILS FOR HYDRODEMOLITION AND  
LMC OVERLAY WITH GRADE RAISE  
BRIDGE 03144  
ROUTE SECTION  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARKANSAS

DRAWN BY: ERBB DATE: 05/2021  
CHECKED BY: SFH DATE: 05/2021  
DESIGNED BY: ERBB DATE: 05/2021  
BRIDGE NO. 03144 DRAWING NO. 64051  
FILENAME: B012377\_03144.dgn  
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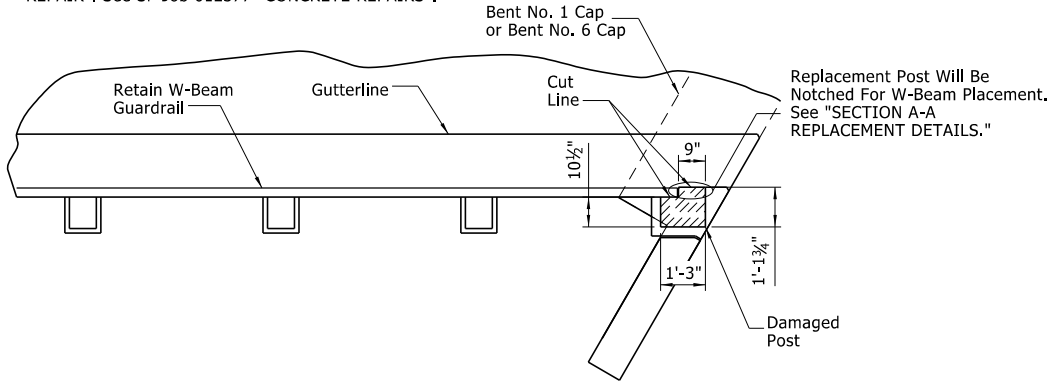
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|--------------------------------|-------------|--------------|-------------|--------------------|-------|--------------------|-----------|--------------|
|                                |             |              |             | 6                  | ARK.  |                    |           |              |
|                                |             |              |             | JOB NO.            |       | 012377             | 31        | 32           |
| 03519 - RAILING REPAIR - 64052 |             |              |             |                    |       |                    |           |              |



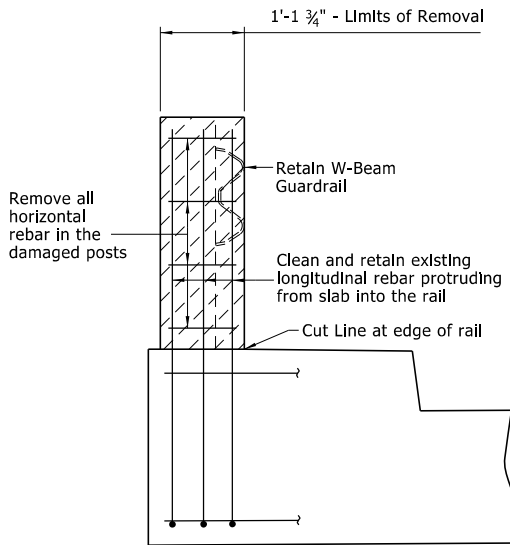
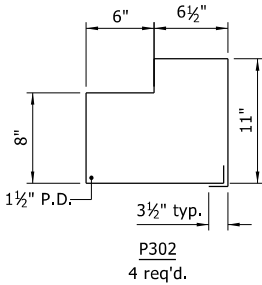
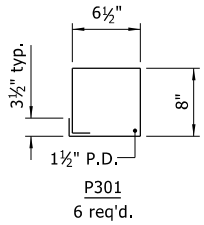
**END POST ELEVATION**

Looking EAST For Bent No. 1 End Post  
Looking WEST For Bent No. 6 End Post

Note:  
Some areas of the existing concrete curb are spalled.  
These areas are to be repaired at the direction of the  
Engineer using items "SURFACE PATCHING" or "SPALL  
REPAIR". See SP Job 012377 "CONCRETE REPAIRS".

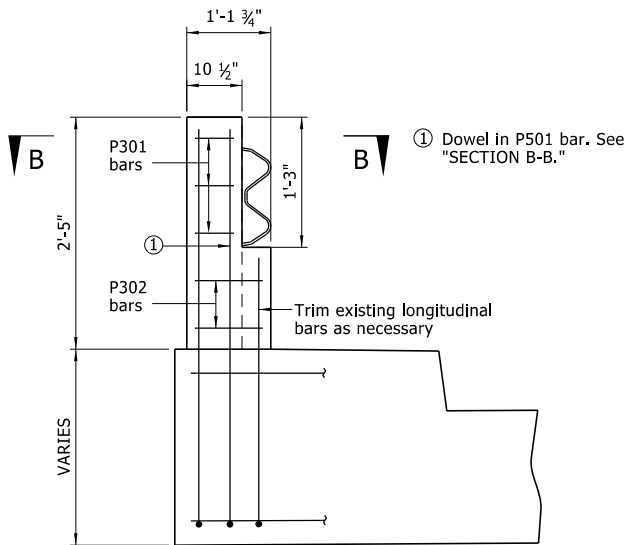


**END POST PLAN**



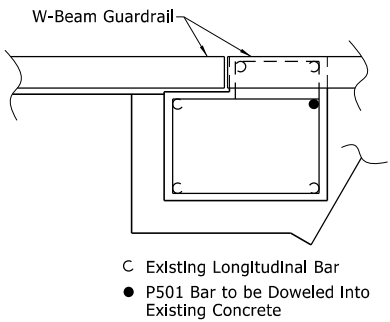
**SECTION A-A**

REMOVAL DETAILS



**SECTION A-A**

REPLACEMENT DETAILS



**SECTION B-B**

**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  $\frac{3}{4}$ " 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.

P501 bars and 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 shall be included in the Item "RAILING REPAIR". See SP Job 012377 "RAILING REPAIR".

**RAILING REPAIR DETAILS**

ROUTE SECTION

**ARKANSAS STATE HIGHWAY COMMISSION**

LITTLE ROCK, ARKANSAS



BRIDGE ENGINEER  
PRINT DATE: 5/7/2021

DRAWN BY: ERBB DATE: 05/2021  
CHECKED BY: SFH DATE: 05/2021  
DESIGNED BY: ERBB DATE: 05/2021  
BRIDGE NO. 03519 DRAWING NO. 64052

FILENAME: B012377\_RAIL.dgn

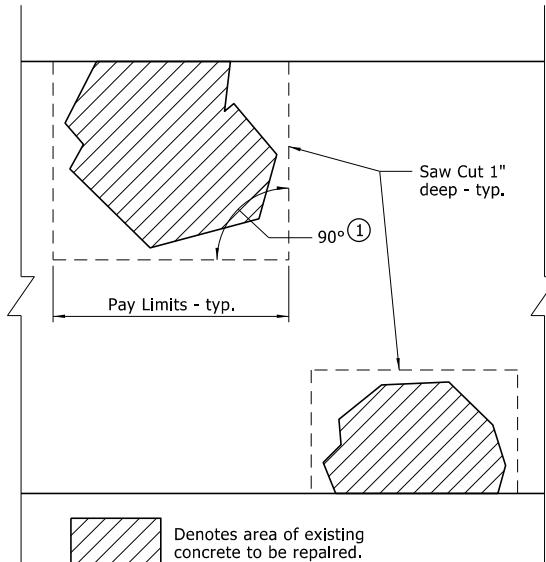
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WORKSPACE: ARDOT  
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REVISED DATE:

| DATE<br>REVISED | DATE<br>FILMED | DATE<br>REVISED | DATE<br>FILMED | FED.RD.<br>DIST.NO. | STATE | FED.AID PROJ.NO. | SHEET<br>NO. | TOTAL<br>SHEETS |
|-----------------|----------------|-----------------|----------------|---------------------|-------|------------------|--------------|-----------------|
|                 |                |                 |                | 6                   | ARK.  |                  |              |                 |
|                 |                |                 |                |                     |       | JOB NO.          | 012377       | 32              |
|                 |                |                 |                |                     |       |                  |              | 32              |
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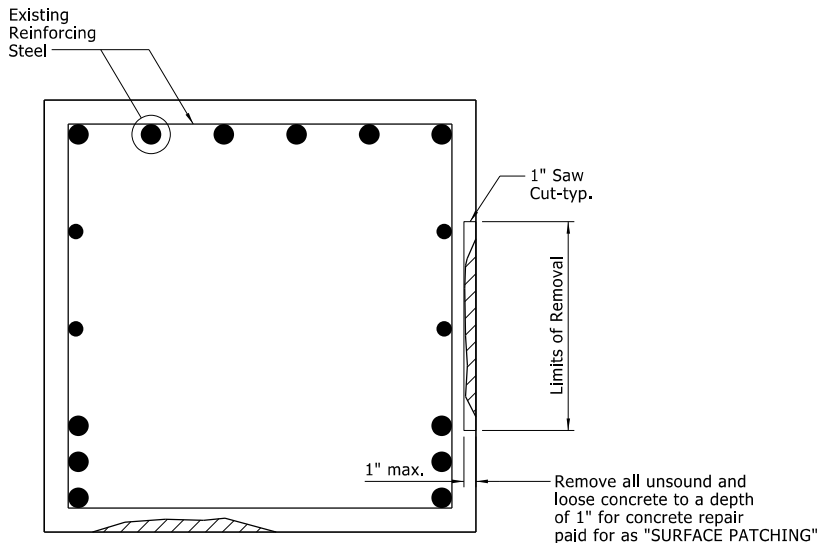
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ALL BRIDGES - SPALL REPAIR - 64052A

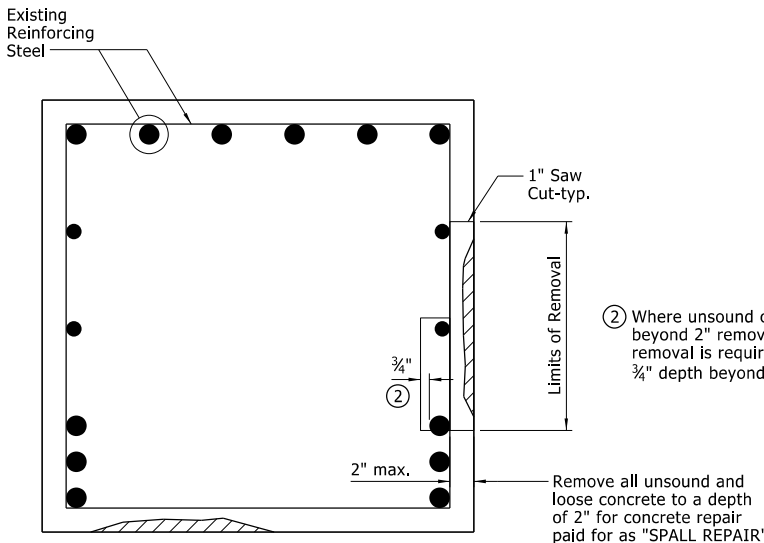


1 Saw cut existing concrete 1" deep so to obtain a rectangular area.

### SAW CUT DETAIL



### SURFACE PATCH DETAIL

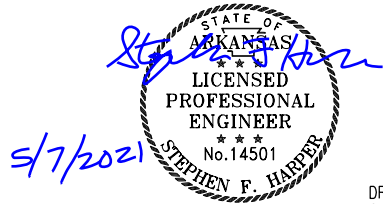


### SPALL REPAIR DETAIL

2 Where unsound concrete is still present beyond 2" removal depth, further concrete removal is required to achieve a minimum 3/4" depth beyond longitudinal reinforcing.

### CONCRETE REPAIR NOTES

- Concrete repairs shall be performed in accordance with Special Provision Job. No. 012377 "CONCRETE REPAIRS".
- 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.
- Concrete repairs shall consist of removing all unsatisfactory concrete described as follows: any loose, delaminated, unsound, severely spalled or deteriorated concrete and replacing with an approved material listed in Special Provision Job. No. 012377 "CONCRETE REPAIRS".
- 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.
- Concrete repairs shall be paid for under the item "SURFACE PATCHING" when the depth of repair is 1" or less.
- 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.
- The surface of the concrete for Surface Patching and Spall Repair be prepared in accordance with the repair mortar manufacturer's recommendations.
- 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.
- 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.
- 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".



BRIDGE ENGINEER  
PRINT DATE: 5/7/2021

DRAWN BY: ERBB  
CHECKED BY: SFH  
DESIGNED BY: ERBB

DATE: 4/2021  
DATE: 4/2021  
DATE: 4/2021

BRIDGE NO. ALL BRIDGES

DRAWING NO. 64052A

SCALE: NONE

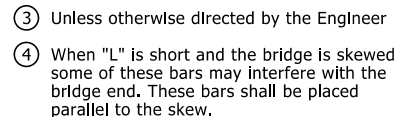
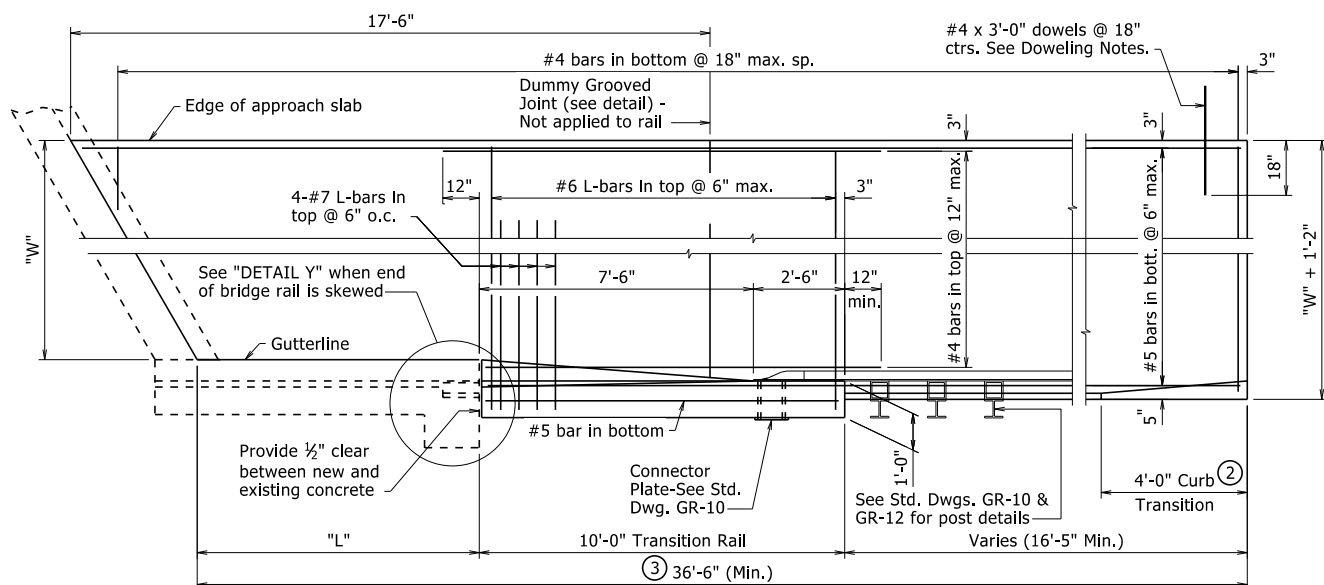
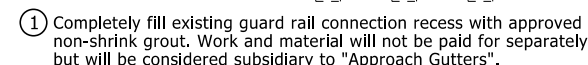
### SPALL REPAIR DETAILS

ROUTE SECTION  
ARKANSAS STATE HIGHWAY COMMISSION  
LITTLE ROCK, ARKANSAS

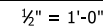
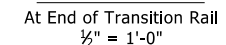
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② Construct curb with height-transition as shown if drop inlet is not used at end of gutter.

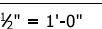
Construct curb full height (no height-transition) if drop inlet is used at end of gutter. Curb height transition placed on drop inlet. See drop inlet details.


$$\frac{3}{8}'' = 1'-0''$$

$$\frac{3}{8}'' = 1'-0''$$

$$\frac{1}{2}'' = 1'-0''$$


No Scale


$$\frac{1}{2}'' = 1'-0''$$

$$\frac{1}{2}'' = 1'-0''$$


At End of Transition Rail  
 $\frac{1}{8}'' = 1'-0''$



---


$$\frac{1}{2}'' = 1'-0''$$

Concrete shall be

Concrete shall be

Concrete shall be Class 3 or 3(AE) or mixture used for Portland Cement Concrete Pavement.

Reinforcing steel shall be Grade 60 ( $f_y = 60,000$  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.

(For Information Only)

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 'PT2' APPROACH GUTTERS (BRIDGES WITH CONCRETE PARAPET RAILING)

ROUTE SEC.  
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

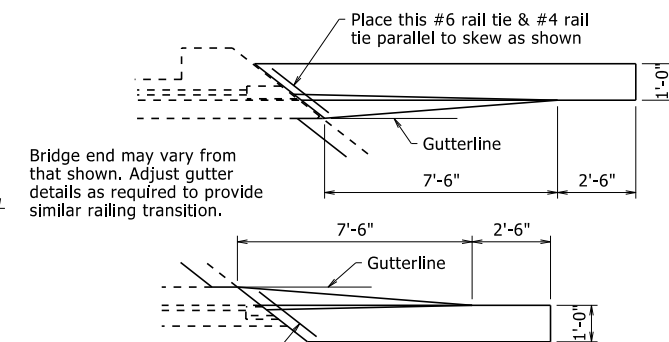
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**DESIGNED BY:** STD.      **DATE:** -

DRAWING NO. 55037

PRINT DATE: 11/20/2019

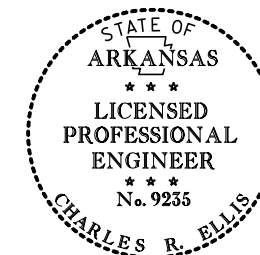
Dowel bars, if required, will not be paid for separately, but will be considered subsidiary to other pay items.

Place this #6 rail tie & #4 rail tie parallel to skew as shown



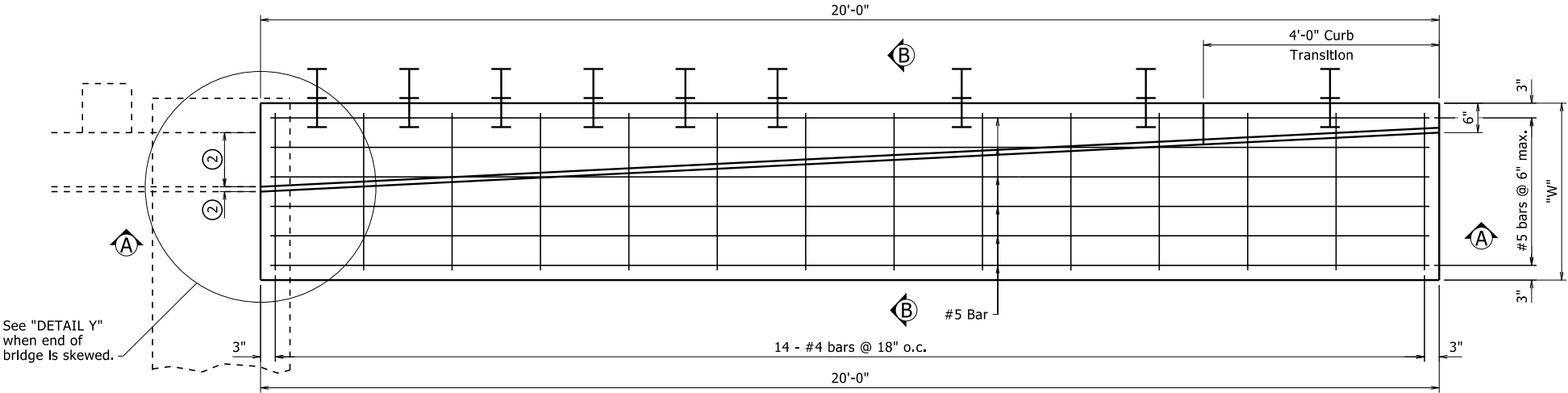
No Scale

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.



BRIDGE ENGINEER

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

- 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.

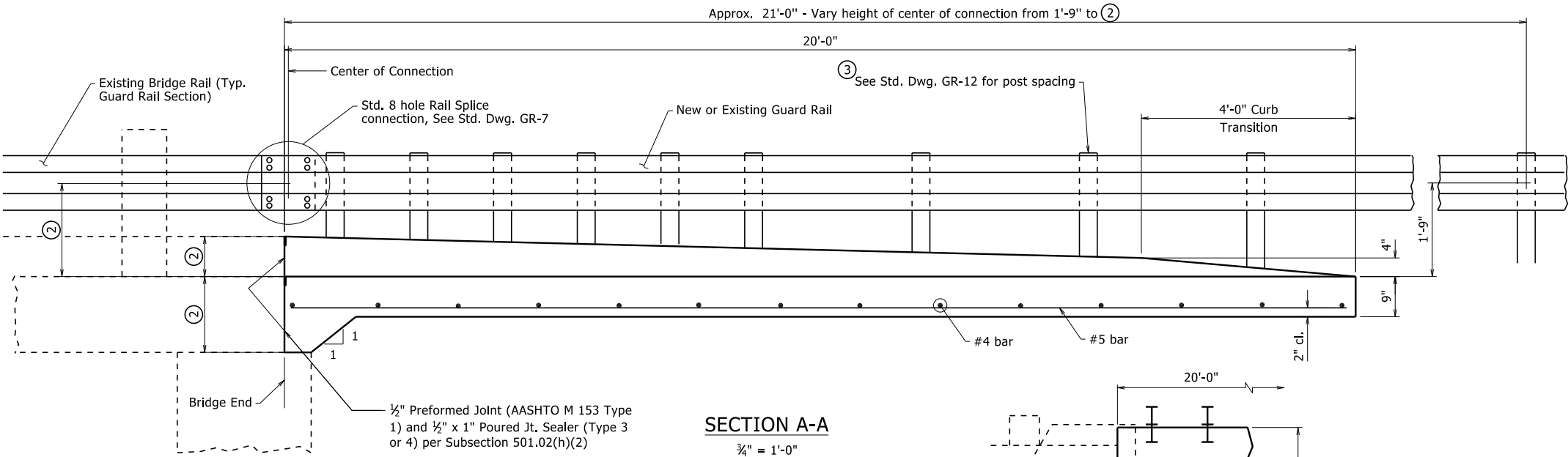
Reinforcing steel shall be Grade 60 (fy = 60,000 psi.) conforming to AASHTO M 31 or M 322, Type A, with mill test reports. Fabricate bar lengths to provide 2" minimum cover at each end.

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.



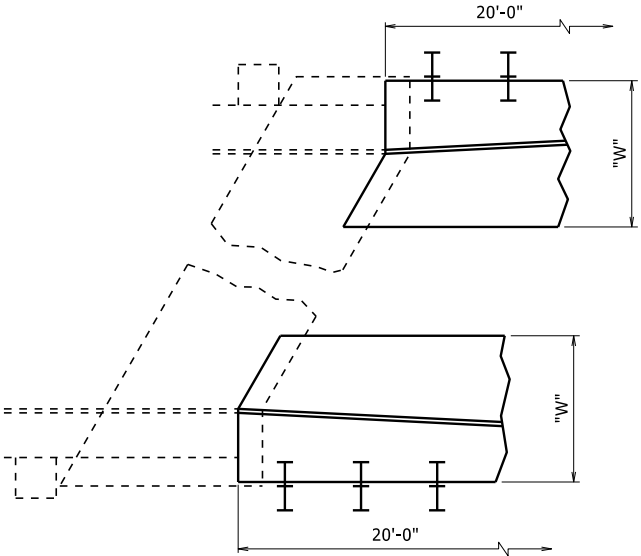
SECTION A-A

¾" = 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 |

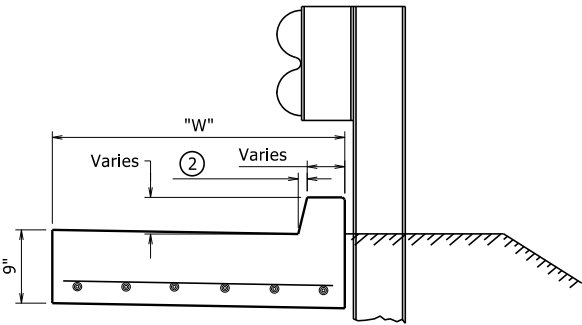
Variables: Units of "W" are in feet.



DETAIL Y

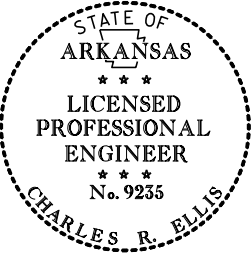
No Scale

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.



SECTION B-B

1" = 1'-0"



BRIDGE ENGINEER

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

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.

| 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 |                    |           |              |

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".

**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 bld 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 bld 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.

**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.

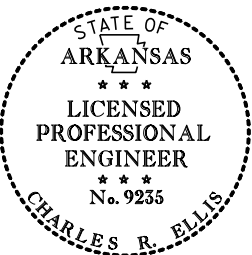
NOTE: When "Very Early Strength Latex Modified Concrete Overlay (1½" Thick)" is shown in the plans for a particular bridge, all reference to "Latex Modified Concrete Overlay" and "LMC" on this sheet shall be considered synonymous with "Very Early Strength Latex Modified Concrete Overlay" and "VESLMC"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

STANDARD DETAILS FOR  
HYDRODEMOLITION AND LMC OVERLAY  
SLAB ON BEAM/GIRDER BRIDGES  
ARKANSAS STATE HIGHWAY COMMISSION

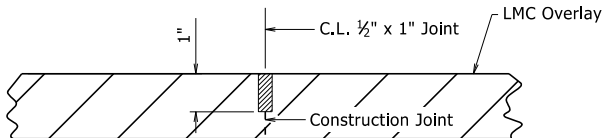
LITTLE ROCK, ARK.

DRAWN BY: K W Y      DATE: 11/7/2019      FILENAME: b55060.dgn  
CHECKED BY: S W P      DATE: 11/7/2019      SCALE: None  
DESIGNED BY: S T D.      DATE:     

DRAWING NO. 55060

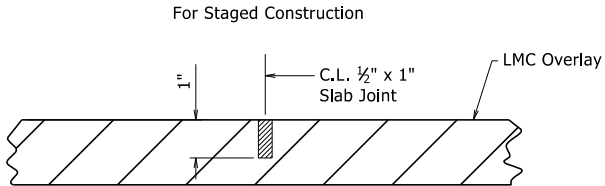


BRIDGE ENGINEER



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.

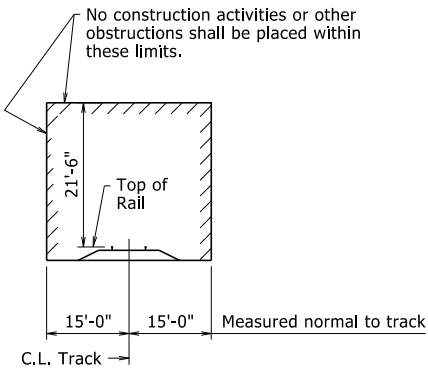
LONGITUDINAL OVERLAY CONSTRUCTION JOINT DETAIL



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

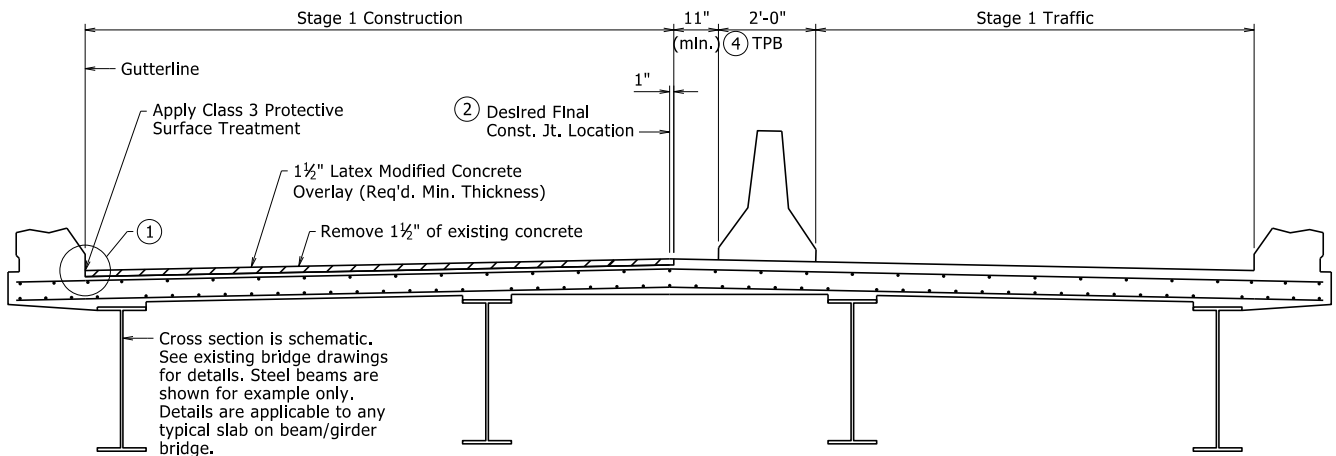
For Continuous Span Bridges



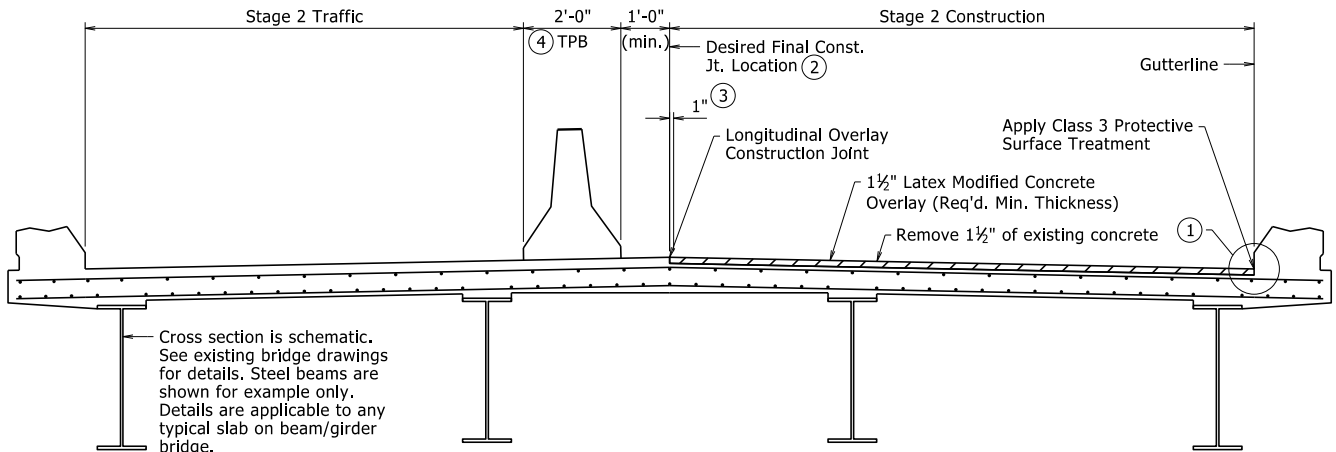
MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

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

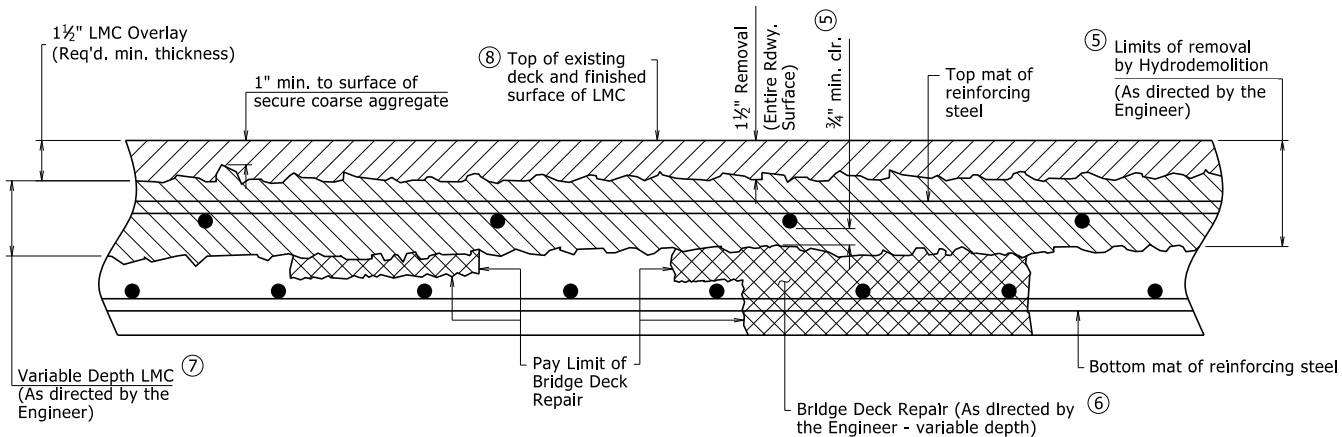
- Hand tools shall be used as required to remove concrete adjacent to curbs, rails, and armored expansion joints.
- For staged construction, the final construction joint location shall be established by the Engineer to satisfy MOT and construction requirements. The desired location is at the C.L. Bridge, C.L. Lane, or Edge of Lane, but in no case shall be positioned in the line of a wheel path.
- For staged construction, saw cut and remove 1" of initial Latex Modified Concrete Overlay when preparing surface for adjacent overlay.
- 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.



STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



STAGE 2 LATEX MODIFIED CONCRETE OVERLAY

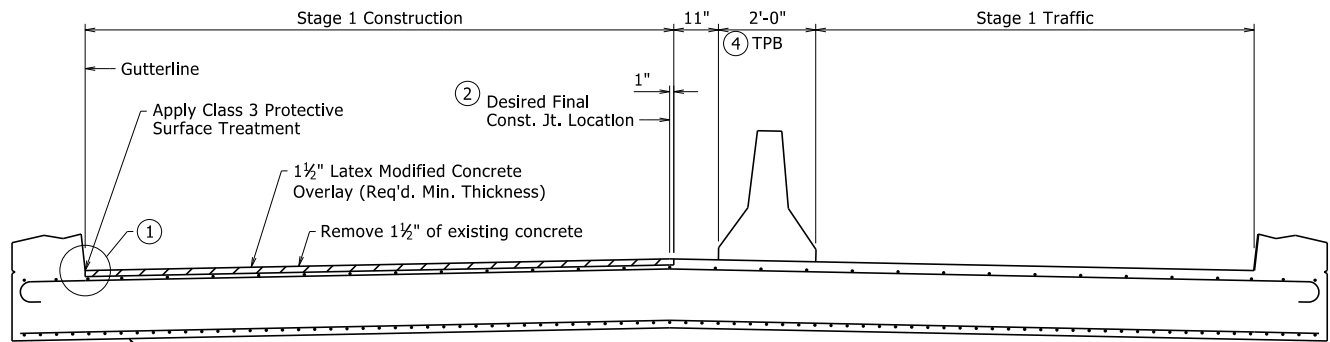


DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

- 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 \_\_\_\_".
- Depth varies to achieve minimum clearance below top mat of reinforcing steel, where required.
- 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.
- 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".

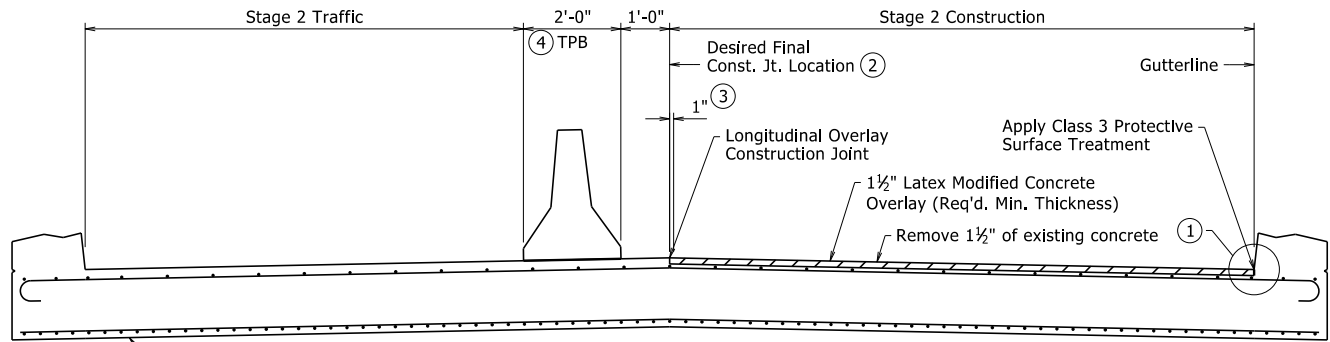
Stages of Construction refer to Bridge Rehabilitation Work Zones as shown in Maintenance of Traffic Details. Numbering is shown for general purposes. See Roadway Plans for specific sequencing.

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.



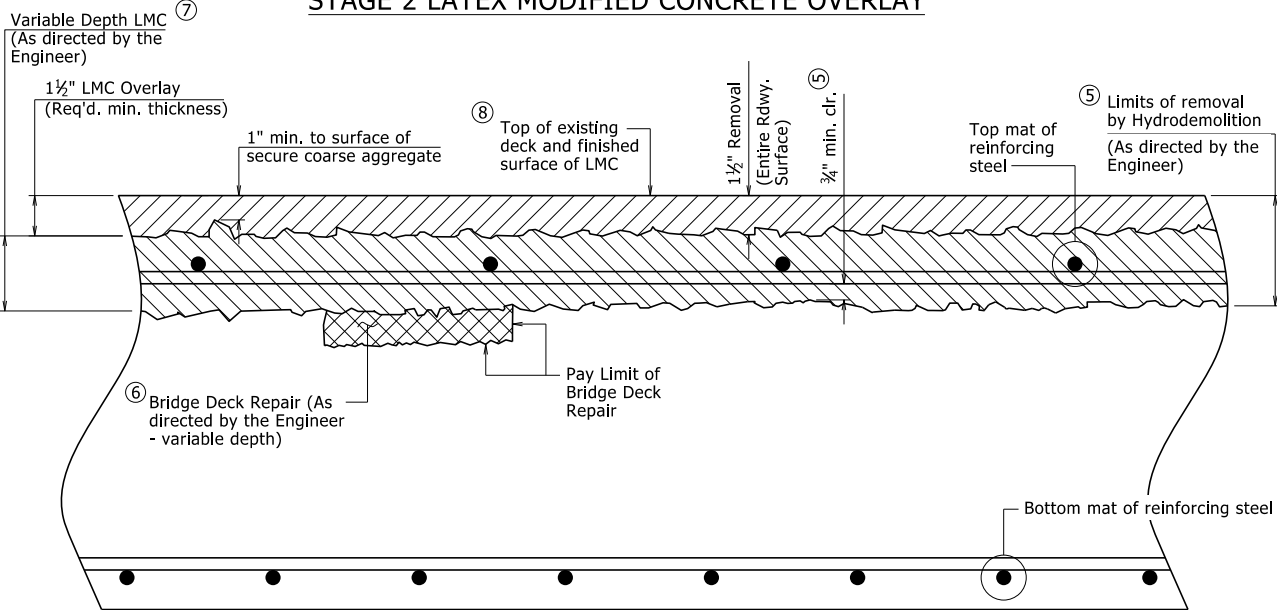
Cross section is schematic. See existing bridge drawings for details.

### STAGE 1 LATEX MODIFIED CONCRETE OVERLAY



Cross section is schematic. See existing bridge drawings for details.

### STAGE 2 LATEX MODIFIED CONCRETE OVERLAY

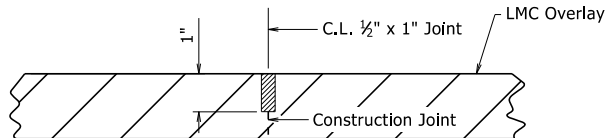


### DETAILS OF HYDRODEMOLITION AND LATEX MODIFIED CONCRETE OVERLAY

- Removal of unsound concrete beyond 1 1/2" 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 3/4" clearance below the bar. This removal shall be subsidiary to the Item Job SP "Hydrodemolition - Class \_".
- 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".
- Depth varies to achieve minimum clearance below top mat of reinforcing steel, where required.
- 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 1 1/2" cover to reinforcing steel.

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.

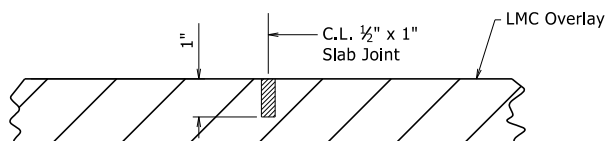
- Hand tools shall be used as required to remove concrete adjacent to curbs, rails, and armored expansion joints.
- For staged construction, the final construction joint location shall be established by the Engineer to satisfy MOT and construction requirements. The desired location is at the C.L. Bridge, C.L. Lane, or Edge of Lane, but in no case shall be positioned in the line of a wheel path.
- For staged construction, saw cut and remove 1" of initial Latex Modified Concrete Overlay when preparing surface for adjacent overlay.
- 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 1/2" 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

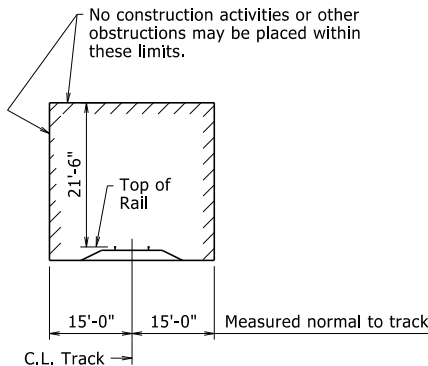
For Staged Construction



Use 1/2" 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

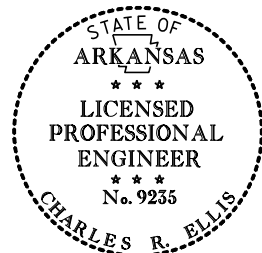


### MINIMUM CONSTRUCTION CLEARANCE ENVELOPE

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

- Modified Hydrodemolition SP reference to include "- Class \_". By: KKY, Checked by: SWP; 1/9/2020.
- Modified Joint Rehabilitation for additional clarification of unarmored joint work. By: KKY, 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.



BRIDGE ENGINEER

GENERAL NOTES:

1

HYDRO/LMC OVERLAY - 55062

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".

**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 1 1/2" 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 1 1/2" 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 (1 1/2" Thick)". Areas of the existing bridge deck removed at the direction of the Engineer to a depth greater than 1 1/2" below the existing bridge deck surface shall be filled with LMC concurrent to the placement of the 1 1/2" 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.

**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 (1 1/2" 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.

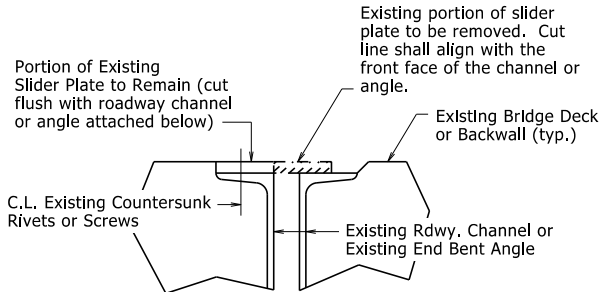
### STANDARD DETAILS FOR HYDRODEMOLITION AND LMC OVERLAY REINFORCED CONCRETE SLAB STRUCTURES ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

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

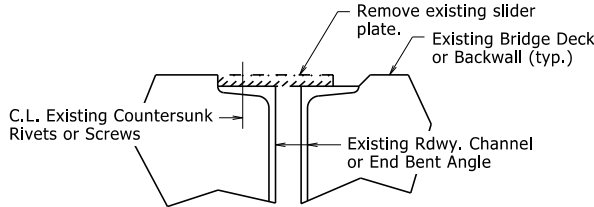
DRAWING NO. 55062

| 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.             |       |                    |           |              |
| 1JOINT REPAIR - 55064 |             |              |             |                     |       |                    |           |              |



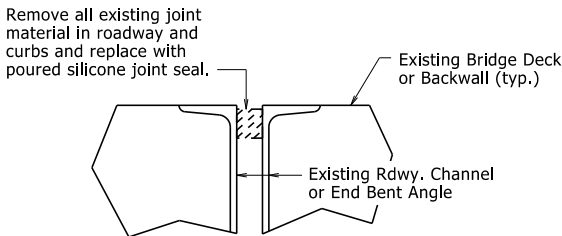
### REMOVAL DETAILS AT EXISTING SLIDER PLATE JOINTS

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.



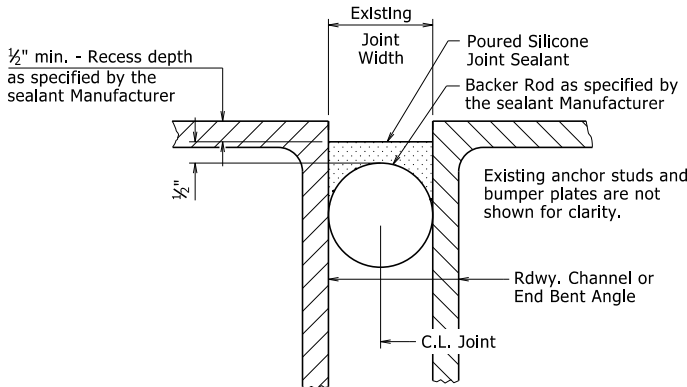
### REMOVAL DETAILS AT EXISTING SLIDER PLATE JOINTS WITH GRADE RAISE

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".



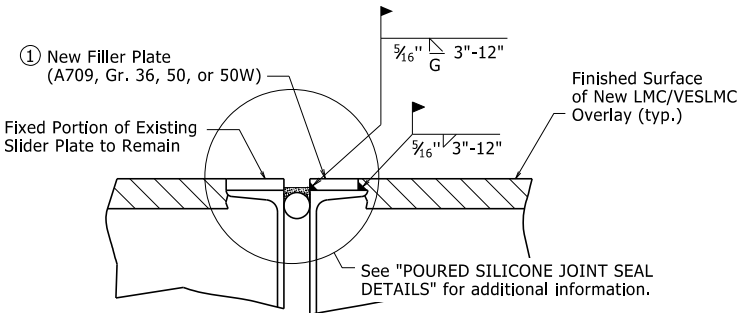
### POURED SILICONE JOINT SEAL DETAILS

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".

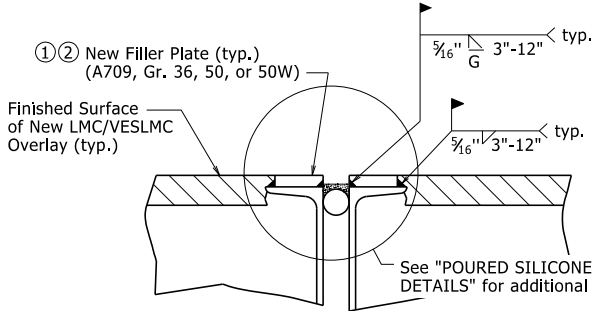
Backer rods shall be extended beyond the length of the poured joint in the initial joint repair area so that the two pieces can be properly spliced together prior to installing sealant for the adjacent joint repair. Manufacturer's recommendations shall be followed to prevent sealant leakage during repair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

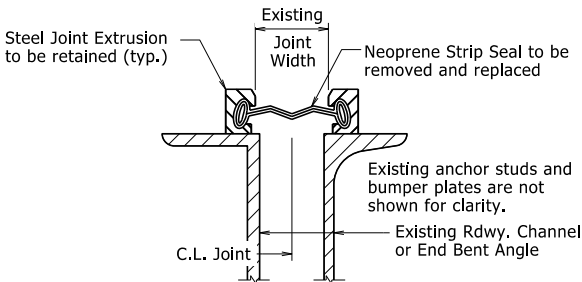


### JOINT MODIFICATION WITH GRADE RAISE

- 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  $\frac{3}{8}$ " 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.



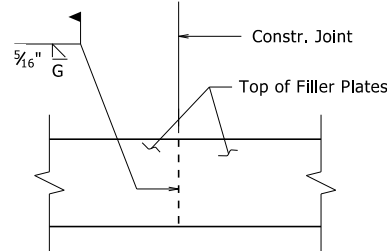
### STRIP SEAL JOINT DETAILS

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.

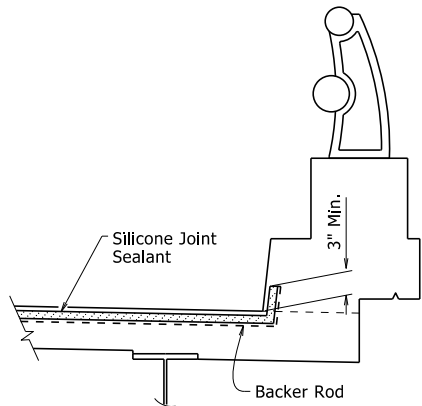
Removal and replacement of the existing neoprene strip seal joint material will require the removal of the parapet slider plates, where present. Parapet slider plates removed for this work shall be reinstalled after installation of the new neoprene strip seal joint material.

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. \_)".

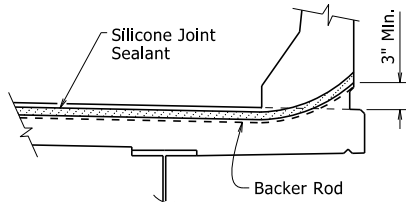


### PLAN VIEW OF FILLER PLATE

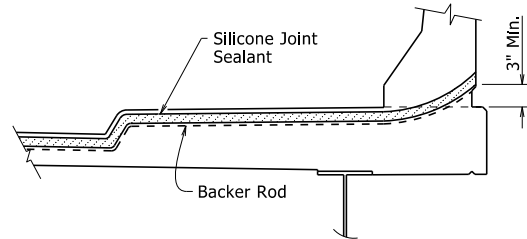


### SILICONE JOINT SEAL PLACEMENT AT CURB

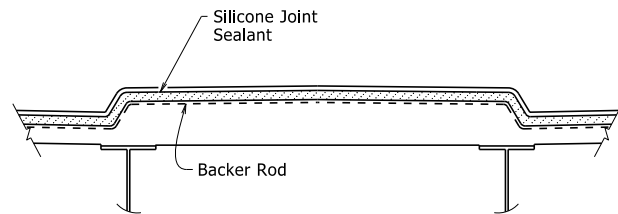
Vertical joints may require forming. The clearance from deck surface to joint material shall be maintained.



### 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.

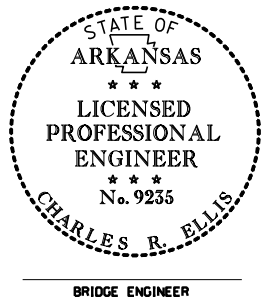
### STANDARD DETAILS FOR JOINT REPAIRS & MODIFICATIONS

### ARKANSAS STATE HIGHWAY COMMISSION

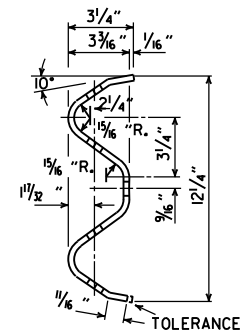
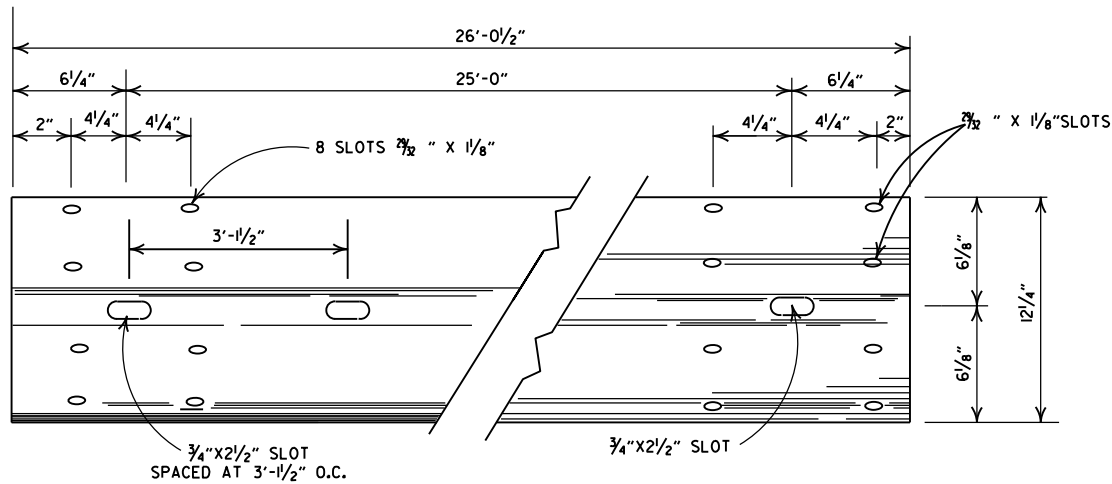
LITTLE ROCK, ARK.

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

DRAWING NO. 55064

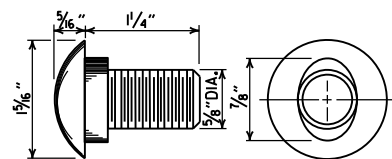


BRIDGE ENGINEER

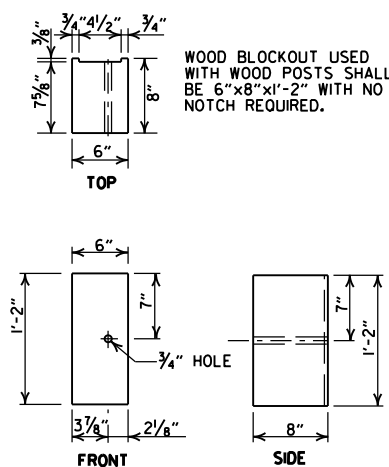
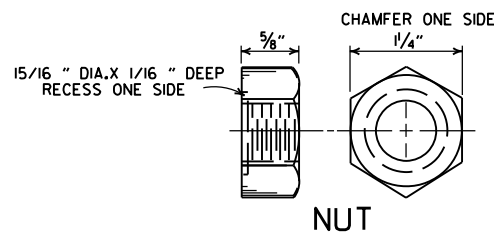
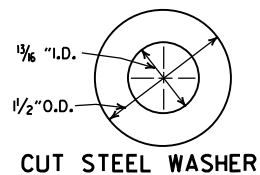


### DETAILS OF W-BEAM GUARDRAIL

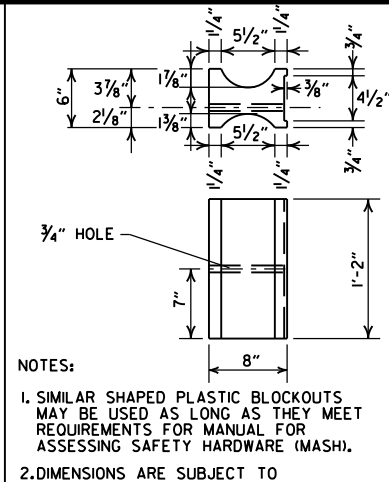
RAIL SECTION OF CLOSELY SIMILAR DIMENSIONS AND COMPARABLE STRENGTH MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.



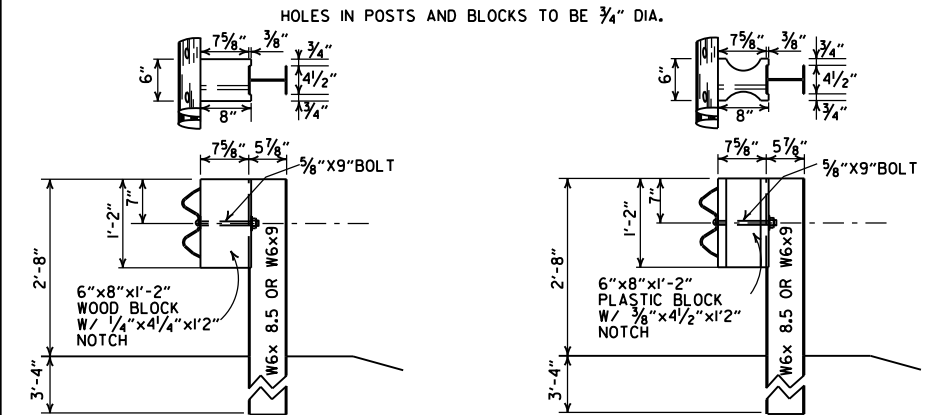
### SPLICE BOLT POST BOLT - SAME EXCEPT LENGTH



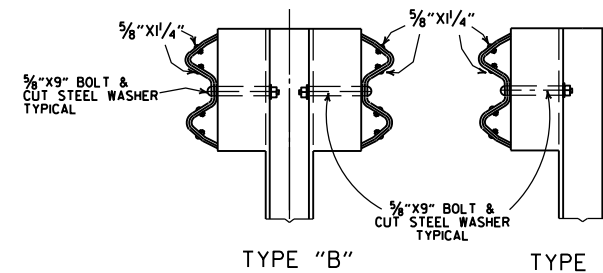
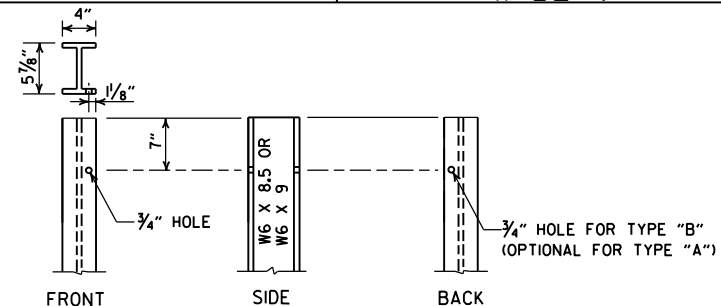
### WOOD BLOCKOUT (W-BEAM)



### PLASTIC BLOCKOUT (W-BEAM)



### DETAILS OF STEEL LINE POST CONNECTIONS (W-BEAM)



### 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 3/4" BEYOND IT.  
WHERE W-BEAM GUARDRAIL CONTINUES, THE INTERMEDIATE SECTIONS SHALL HAVE A POST SPACING OF 6'-3" UNLESS OTHERWISE NOTED.

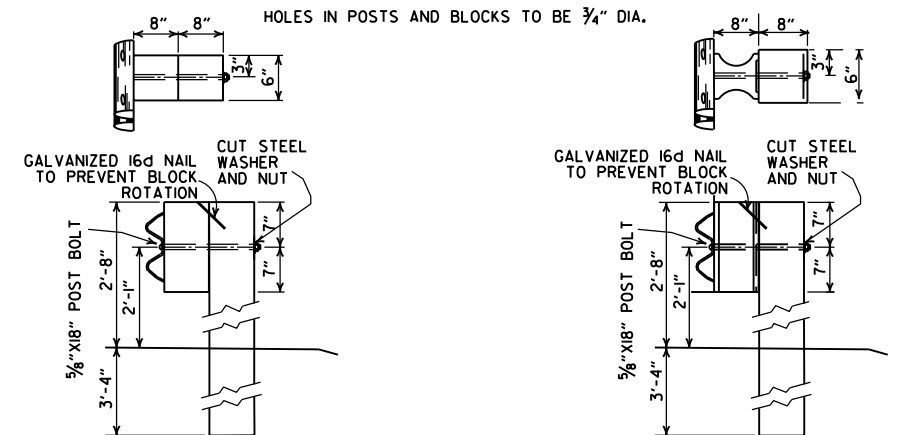
W-BEAM GUARDRAIL REPRESENTING INTERMEDIATE SECTIONS WILL BE MEASURED ALONG THE ROADWAY FACE FROM CENTERLINE OF POST TO CENTERLINE OF POST.

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.



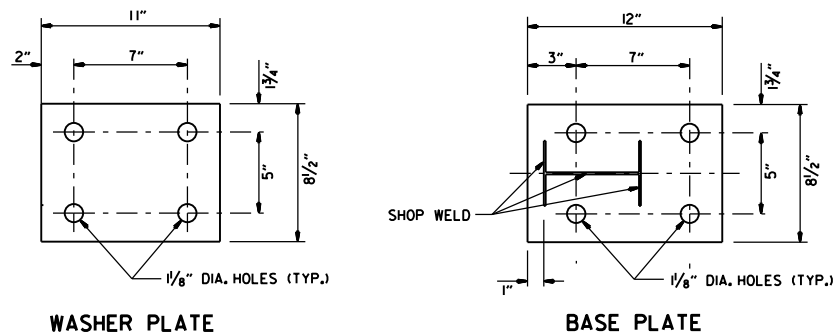
### DETAILS OF WOOD LINE POST CONNECTIONS (W-BEAM)

|          |                                                                                                                                                                                                                                                  |              |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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  |
| DATE     | REVISION                                                                                                                                                                                                                                         | FILMED       |

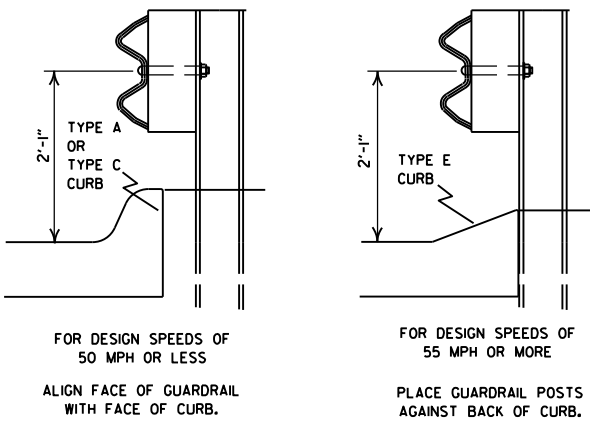
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

STANDARD DRAWING GR-6

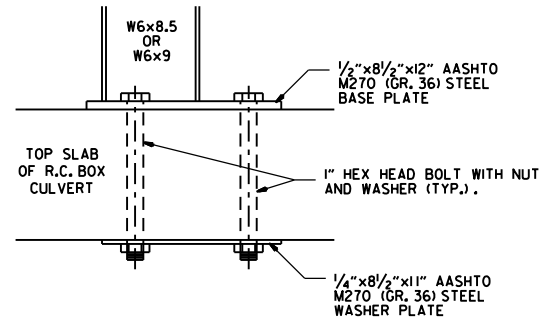
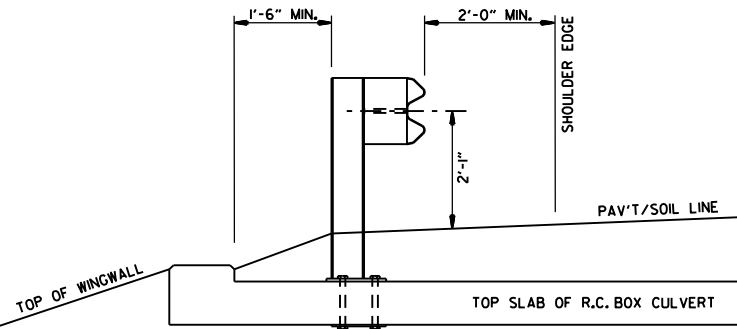


Note: Bolts, nuts, washers and plates shall be galvanized in accordance with Section 807 of the Standard Specifications.



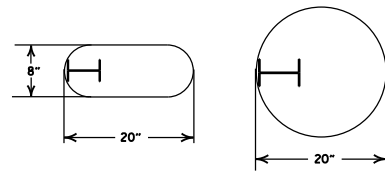
### DETAIL OF GUARDRAIL PLACEMENT BEHIND CURB (W-BEAM)

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.



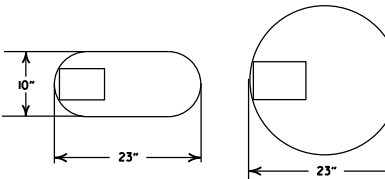
### Plan View Steel Posts

Either hole configuration acceptable



### Plan View Wood Posts

Either hole configuration acceptable

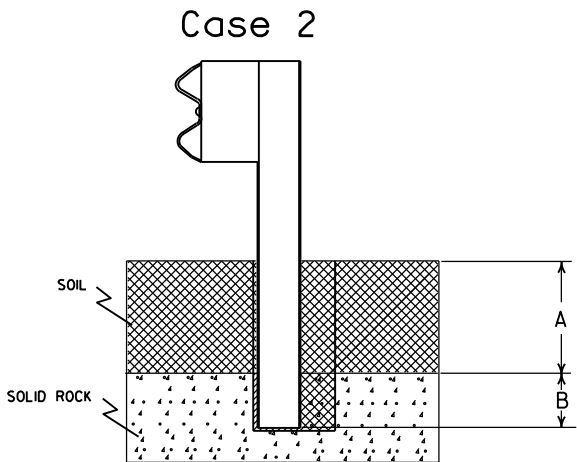


Notes: For overlying soil depths (A) ranging from 0 to 18", the depth of required drilling (B) is equal to 24".

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

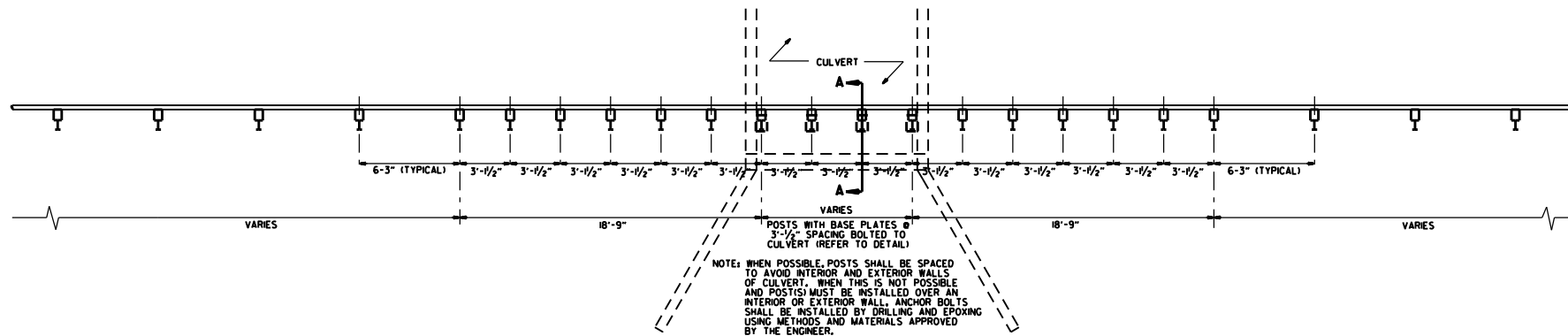
Zone B:  
Backfill hole in 6" lifts with material meeting the requirements of Section 802.02(c) - Alternate gradation. Compact to 95% maximum dry density per ASTM D-698.

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



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).



### PLAN LAYOUT OF TYPE A GUARDRAIL AT LOW-FILL CULVERTS

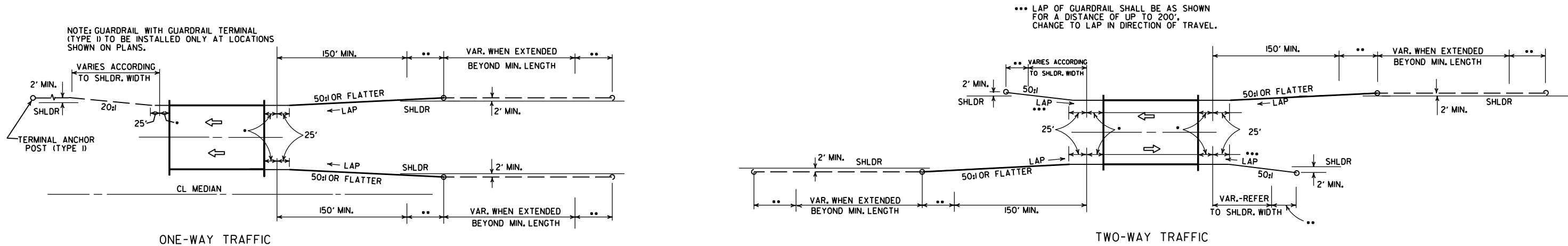
NOTE: THIS DETAIL IS TO BE USED ONLY WHEN THE COVER OVER THE CULVERT DOES NOT PERMIT FULL EMBEDMENT OF GUARDRAIL POSTS AS SHOWN ON STD. DRWG. GR-6.

| DATE     | REVISION                                                                                                                                                                                                                  | FILED        |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 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 CULVT., 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  |

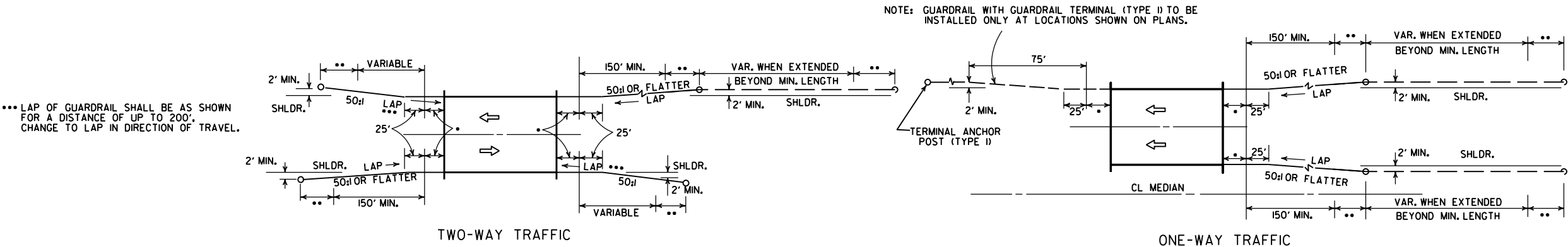
ARKANSAS STATE HIGHWAY COMMISSION

GUARDRAIL DETAILS

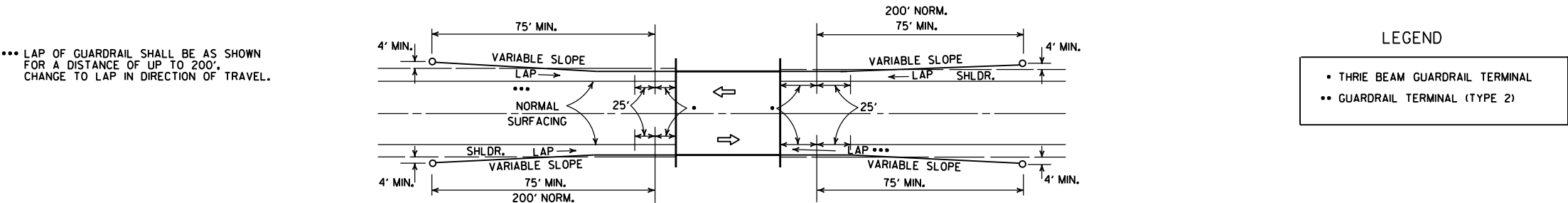
STANDARD DRAWING GR-7



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

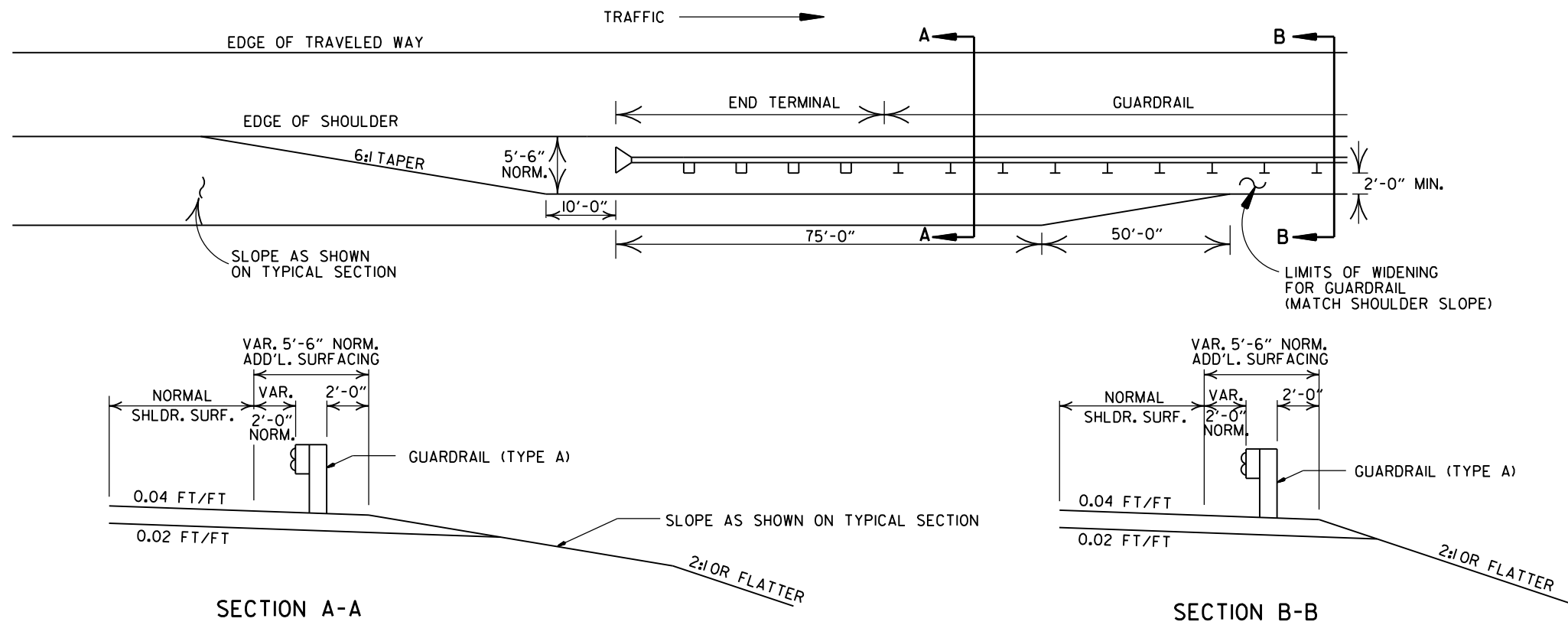


METHOD OF INSTALLATION OF GUARDRAIL AT FULL SHOULDER WIDTH BRIDGES USING GUARDRAIL TERMINAL (TYPE 2)

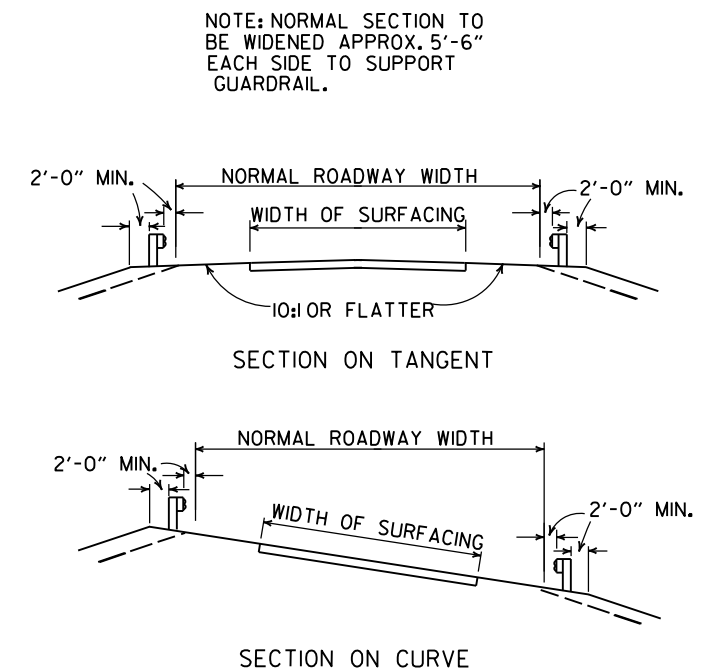


METHOD OF INSTALLATION OF GUARDRAIL USING GUARDRAIL TERMINAL (TYPE 1) (FULL SHOULDER WIDTH OR LESS BRIDGES)

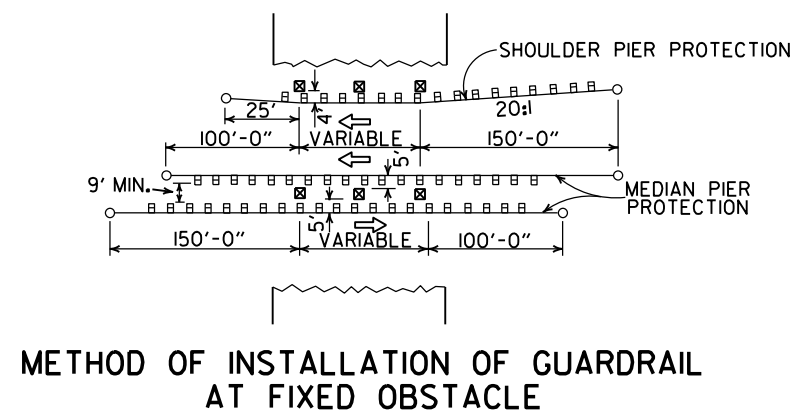
|          |                                                                                |           |                                   |
|----------|--------------------------------------------------------------------------------|-----------|-----------------------------------|
|          |                                                                                |           | ARKANSAS STATE HIGHWAY COMMISSION |
| 11-07-19 | RENUMBERED AND RENAMED                                                         |           | GUARDRAIL DETAILS                 |
| 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                                                                 |           | STANDARD DRAWING GR-8             |
| 10-1-92  | REDRAWN & REVISED                                                              | 10-1-92   |                                   |
|          | ADDED NOTE                                                                     |           |                                   |
| 10-9-87  | REDRAWN & REVISED                                                              |           |                                   |
| DATE     | REVISION                                                                       | DATE FILM |                                   |



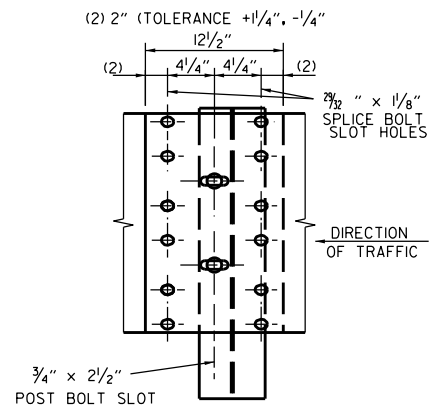
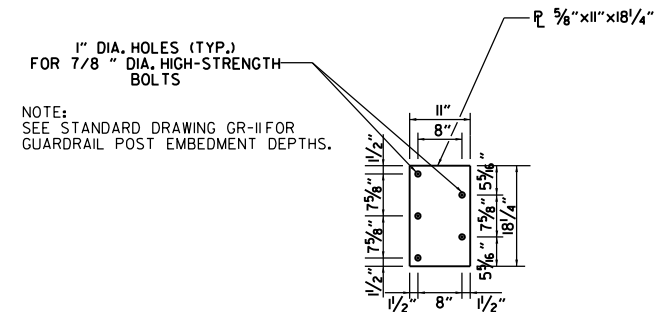
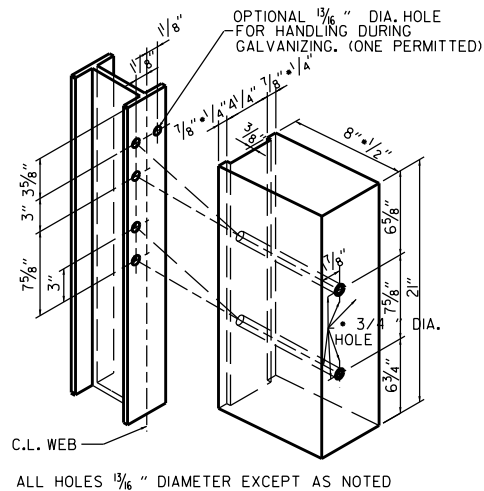
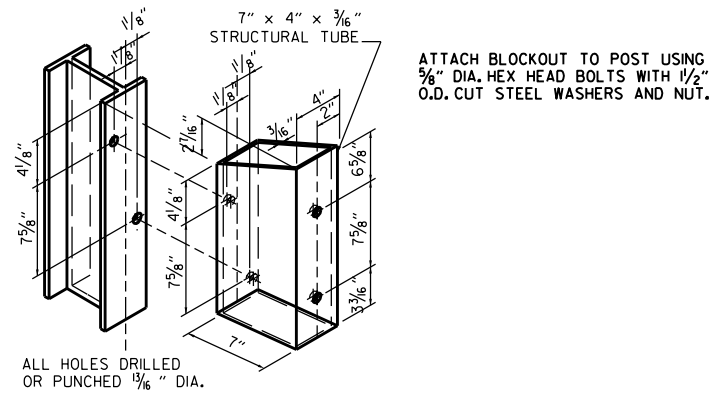
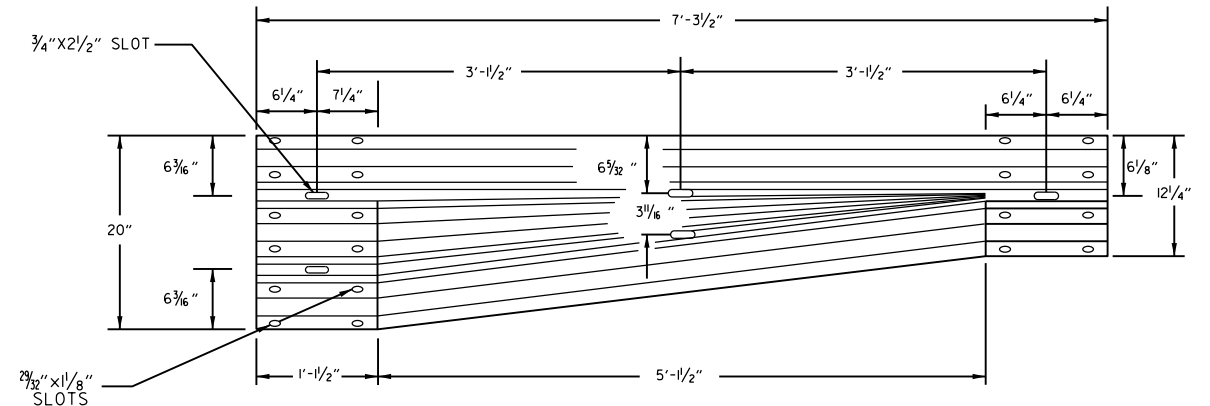
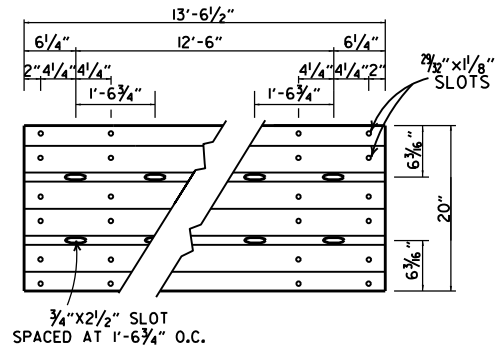
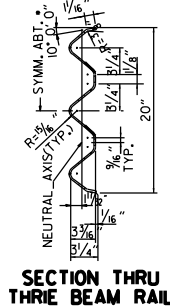
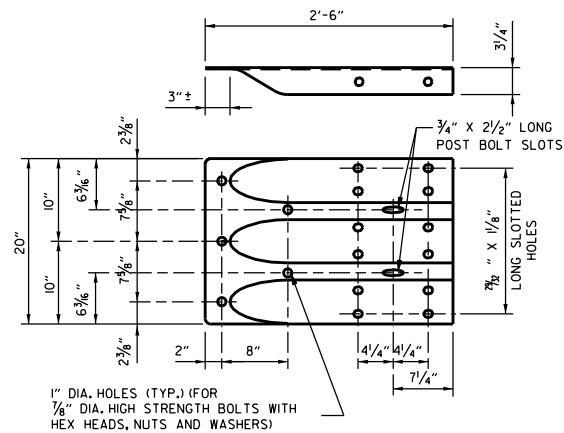
DETAILS OF WIDENING FOR GUARDRAIL



DETAILS SHOWING POSITION OF GUARDRAIL ON HIGHWAY



|          |                        |            |                                   |
|----------|------------------------|------------|-----------------------------------|
|          |                        |            | ARKANSAS STATE HIGHWAY COMMISSION |
|          |                        |            | GUARDRAIL DETAILS                 |
|          |                        |            | STANDARD DRAWING GR-9             |
| 11-07-19 | RENUMBERED AND RENAMED |            |                                   |
| 4-17-08  | MINOR REVISION         |            |                                   |
| 11-10-05 | DRAWN                  |            |                                   |
| DATE     | REVISION               | DATE FILED |                                   |



GENERAL NOTES:

THE THREE 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.

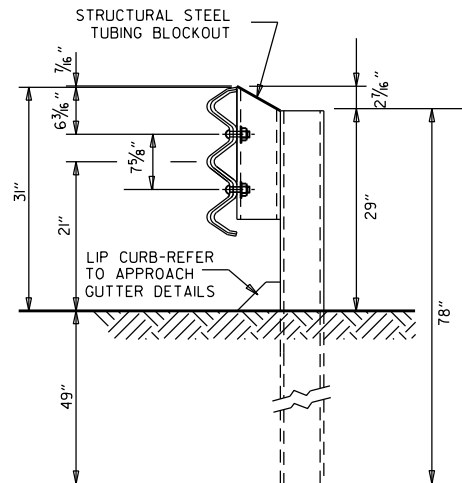
REFER TO STD. DRWG. GR-II FOR POST DETAILS.

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

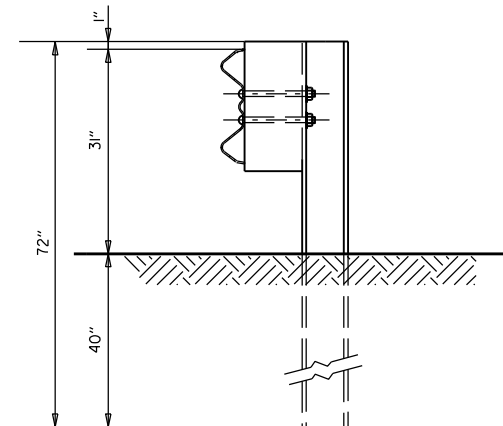
THREE BEAM POSTS SHALL BE SAME MATERIAL AS W-BEAM POSTS FOR ENTIRE JOB.

WOOD POSTS & WOOD BLOCKS SHALL BE EITHER DENSE NO. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 350 f SOUTHERN PINE.

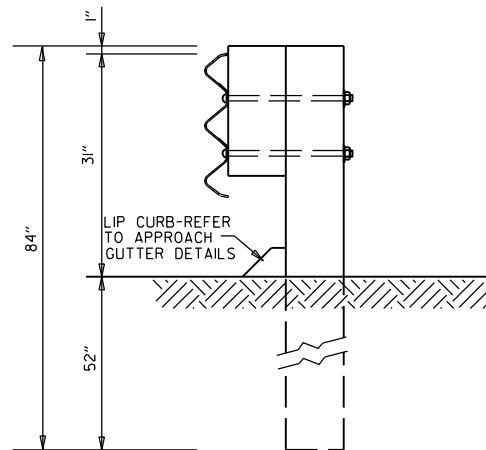
|          |                                                                                                                                               |        |                                   |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|------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



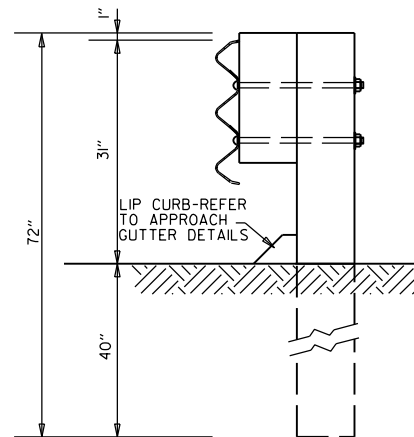
THRIE BEAM RAIL WITH STEEL TUBING BLOCKOUT  
AND STEEL POST  
POSTS 1-7



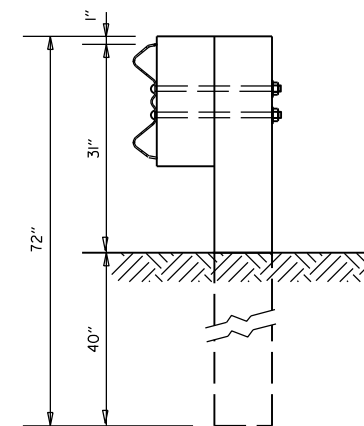
W-BEAM TO THRIE BEAM TRANSITION RAIL  
WITH WOOD OR PLASTIC BLOCKOUT AND STEEL POST  
POST 8



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



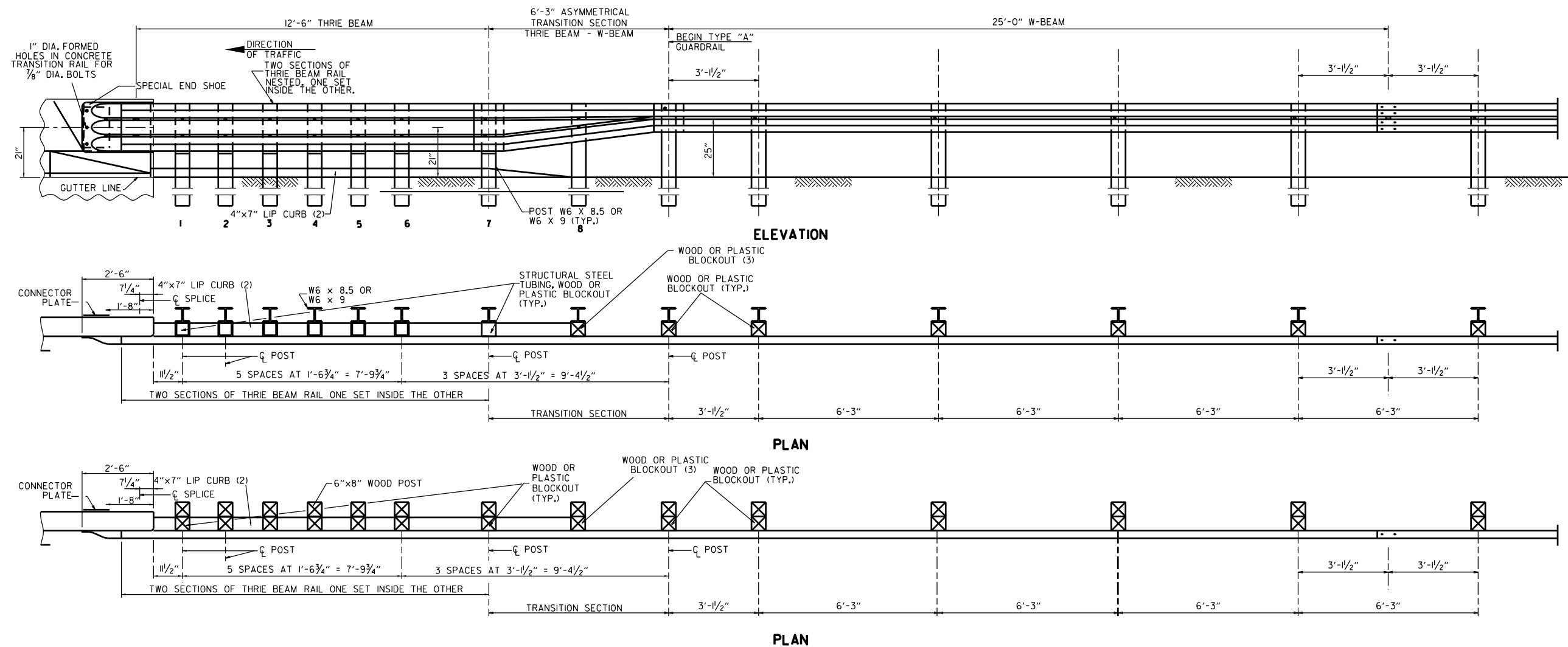
W-BEAM TO THRIE BEAM  
TRANSITION RAIL WITH WOOD OR  
PLASTIC BLOCKOUT & WOOD POST  
POST 8

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. 1 STRUCTURAL OR BETTER 9.7f (1400 f) OR NO. 1 350 f SOUTHERN PINE.

|          |                                                                         |        |                                   |
|----------|-------------------------------------------------------------------------|--------|-----------------------------------|
|          |                                                                         |        | ARKANSAS STATE HIGHWAY COMMISSION |
|          |                                                                         |        | GUARDRAIL DETAILS                 |
|          |                                                                         |        | STANDARD DRAWING GR-II            |
| 11-07-19 | RENAMED                                                                 |        |                                   |
| 11-16-17 | REVISED GUARDRAIL HEIGHT, CHANGED STD. DWG. NUMBER FROM GR-10A TO GR-II |        |                                   |
| 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                                                          |        |                                   |
| DATE     | REVISION                                                                | FILMED |                                   |



- (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-II FOR POST DETAILS.

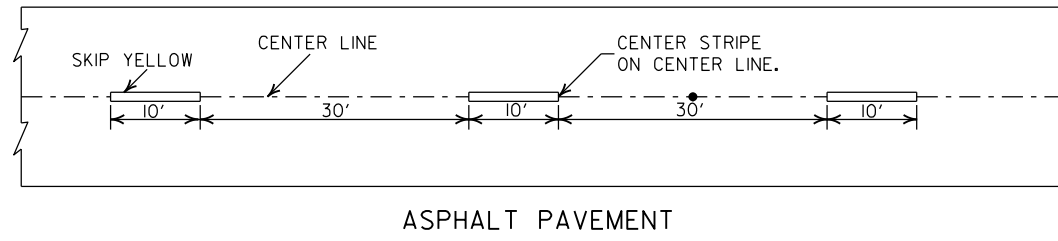
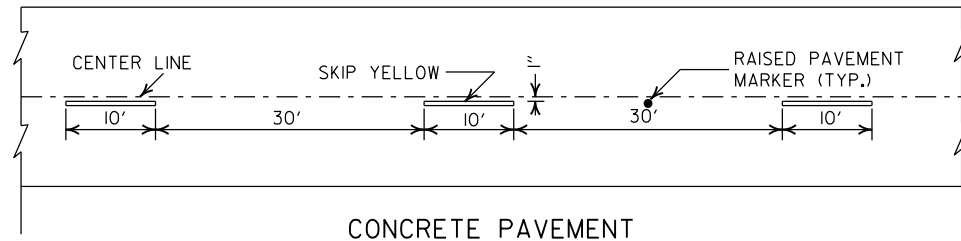
USE THRIE BEAM GUARDRAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

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

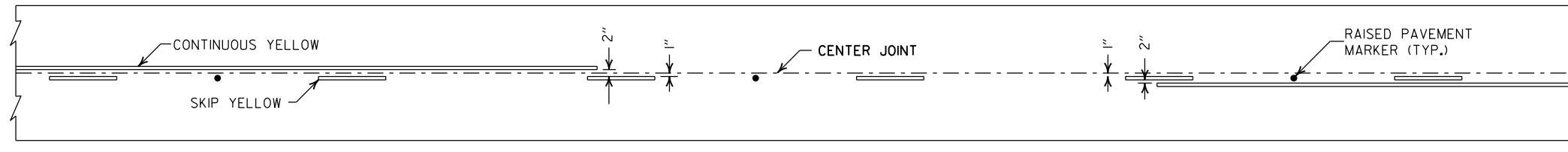
POSTS SHALL NOT BE PLACED AT SPLICE LOCATIONS ALONG W-BEAM RAILS.

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

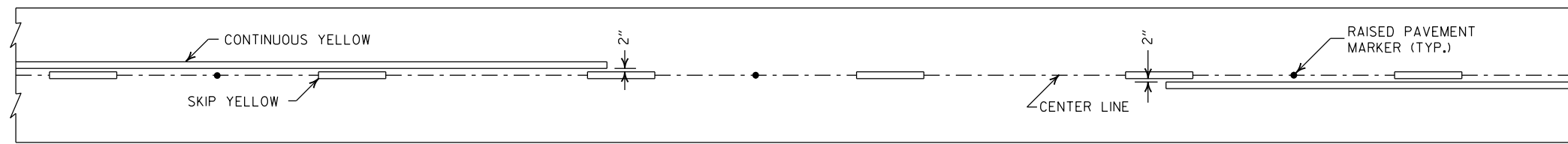
|                                   |                                        |        |
|-----------------------------------|----------------------------------------|--------|
| ARKANSAS STATE HIGHWAY COMMISSION |                                        |        |
| GUARDRAIL DETAILS                 |                                        |        |
| STANDARD DRAWING GR-12            |                                        |        |
| 05-14-20                          | REVISED NOTES                          |        |
| 11-07-19                          | RENAMED & REVISED REFERENCES           |        |
| 11-16-17                          | RE-DRAWN FROM STD. DWG. GR-10 & ISSUED |        |
| DATE                              | REVISION                               | FILMED |



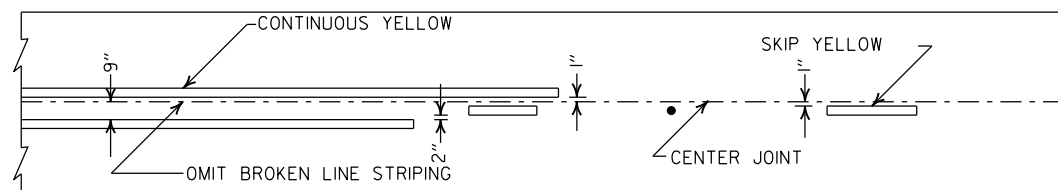
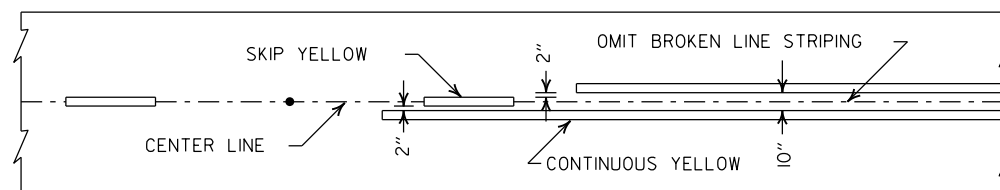
### BROKEN LINE STRIPING



### SOLID LINE STRIPING ON CONCRETE PAVEMENT



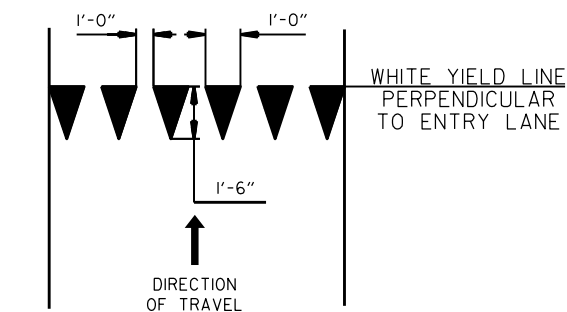
### SOLID LINE STRIPING ON ASPHALT PAVEMENT



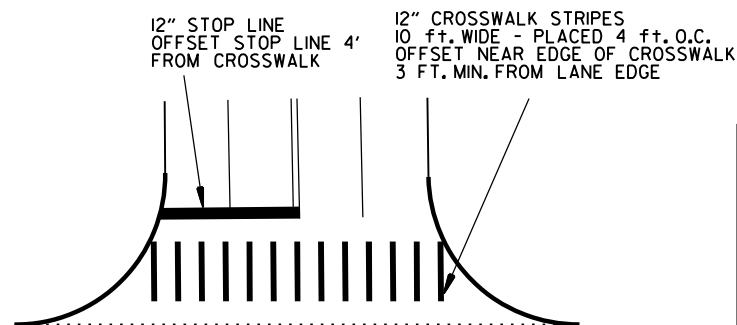
ASPHALT PAVEMENT

CONCRETE PAVEMENT

### STRIPING AT ADJACENT NO PASSING LANES



### YIELD LINE DETAIL

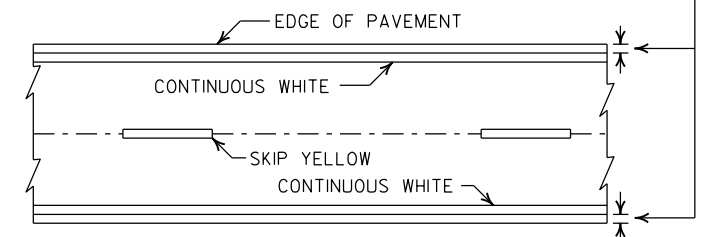


### CROSSWALK AND STOP LINE DETAILS

#### NOTES:

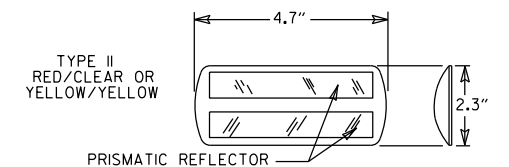
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

2" FOR ASPHALT OR CONCRETE PAVEMENT  
6" FOR BITUMINOUS SURFACE TREATMENT

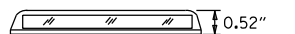


### PAVEMENT EDGE LINE MARKING

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



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.



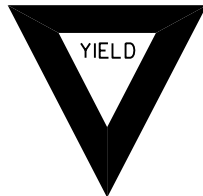
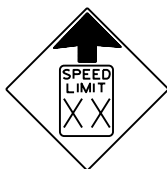
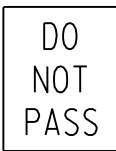
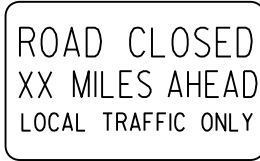
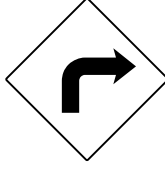
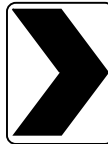
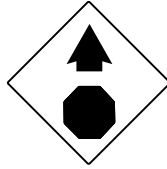
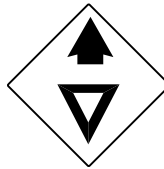
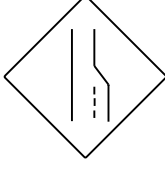
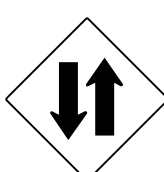
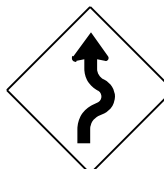
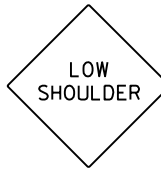
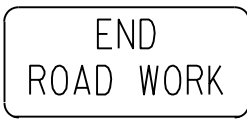
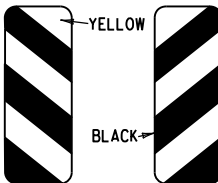
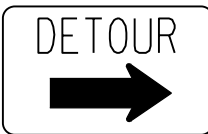
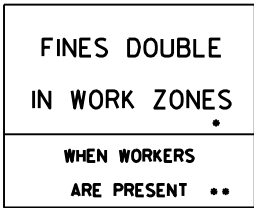
### DETAIL OF STANDARD RAISED PAVEMENT MARKERS

|          |                                                     |           |
|----------|-----------------------------------------------------|-----------|
| 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 |
| DATE     | REVISION                                            | FILMED    |

ARKANSAS STATE HIGHWAY COMMISSION

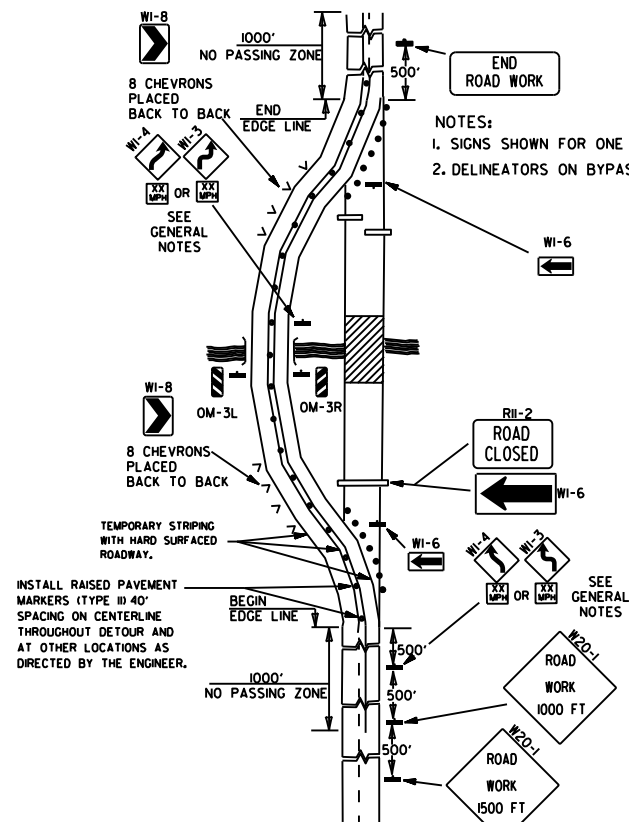
### PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

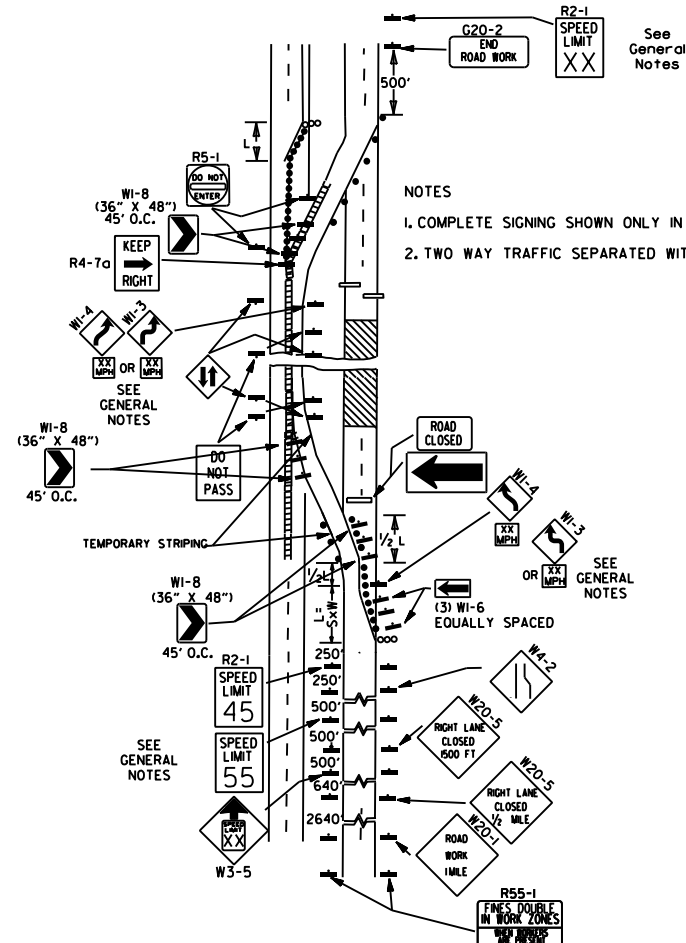
|                                                                                                                                                                                     |                                                                                                                                                                                      |                                                                                                                                                                                            |                                                                                                                                                                                                |                                                                                                                                                                             |                                                                                                                                                                                  |                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>RI-I</div> <div></div> <div>STANDARD 30"x30"<br/>EXPRESSWAY 36"x36"<br/>SPECIAL 48"x48"</div> | <div>RI-2</div> <div></div> <div>STD. 36"x36"x36"<br/>EXPWY. 48"x48"x48"<br/>FWY. 60"x60"x60"</div> | <div>R2-I</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div>                   | <div>W3-5</div> <div></div> <div>STD. 36"x36"<br/>EXPWY. 48"x48"<br/>FWY. 48"x48"</div>                     | <div>W3-5a</div> <div></div> <div>STD. 36"x36"<br/>EXPWY. 48"x48"<br/>FWY. 48"x48"</div> | <div>R4-I</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div>       | <div>R4-2</div> <div></div> <div>STD. 24"x30"<br/>EXPWY. 36"x48"<br/>FWY. 48"x60"</div> | <div>ADVANCE DISTANCES (XXXX)</div> <div>500 FT 1/2 MILE<br/>1000 FT 3/4 MILE<br/>1500 FT 1 MILE AHEAD</div> <div>GENERAL NOTES:<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>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.<br/>8. FLAGGERS SHALL USE REFLECTORIZED STOP-SLOW PADDLES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.<br/>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.<br/>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.<br/><br/>• NOTE: SUPPORTS FOR SIGNS, BARRICADES, AND VERTICAL PANELS THAT ARE DIFFERENT FROM THE REQUIREMENTS SHOWN IN NOTES 4 &amp; 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.</div> |
| <div>R5-I</div> <div></div> <div>STD. 30"x30"<br/>EXPWY. 36"x36"<br/>SPECIAL 48"x48"</div>         | <div>R1I-2</div> <div></div> <div>48"x30"</div>                                                     | <div>R1I-3A</div> <div></div> <div>60"x30"</div>                                                          | <div>R1I-4</div> <div></div> <div>60"x30"</div>                                                              | <div>W2I-5a</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                   | <div>WI-I</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                          | <div>WI-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div>WI-3</div> <div></div> <div>STD. 48"x48"</div>                                                | <div>WI-4</div> <div></div> <div>STD. 48"x48"</div>                                                 | <div>WI-6</div> <div></div> <div>STD. 48"x24"<br/>SPECIAL 60"x30"</div>                                   | <div>WI-8</div> <div></div> <div>STD. 18"x24"<br/>SPECIAL 24"x30"<br/>EXPWY. 30"x36"<br/>FWY. 36"x48"</div> | <div>W3-I</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                  | <div>W3-2</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                       | <div>W4-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <div>W5-I</div> <div></div> <div>STD. 36"x36"<br/>SPECIAL 48"x48"</div>                          | <div>W6-3</div> <div></div> <div>EXPWY. 36"x36"<br/>SPECIAL 48"x48"</div>                         | <div>W8-7</div> <div></div> <div>EXPWY. 36"x36"<br/>FWY. 48"x48"</div>                                  | <div>W9-2</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                                      | <div>W13-I</div> <div></div> <div>STD. 24"x24"</div>                                   | <div>W20-I</div> <div></div> <div>STD. 48"x48"</div>                                        | <div>W20-2</div> <div></div> <div>STD. 48"x48"</div>                                  | <div>W20-3</div> <div></div> <div>STD. 48"x48"</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <div>W20-4</div> <div></div> <div>STD. 48"x48"</div>                                             | <div>W20-5</div> <div></div> <div>STD. 48"x48"</div>                                              | <div>W20-7a</div> <div><div>18" 500 FEET 24" W16-2</div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div> | <div>W2I-2</div> <div></div> <div>STD. 30"x30"<br/>SPECIAL 36"x36"</div>                                  | <div>W2I-5</div> <div></div> <div>STD. 30"x30"<br/>SPECIAL 36"x36"</div>               | <div>W24-I</div> <div></div> <div>STD. 36"x36"</div>                                        | <div>WI-4b</div> <div></div> <div>STD. 48"x48"</div>                                  | <div>R56-I</div> <div></div> <div>STD. 18"x18"</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <div>W8-II</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                            | <div>W8-9</div> <div></div> <div>STD. 36"x36"<br/>FWY. 48"x48"</div>                              | <div>G20-I</div> <div></div> <div>60"x24"</div>                                                         | <div>G20-2</div> <div></div> <div>48"x24"</div>                                                           | <div>OM-3L OM-3R</div> <div></div> <div>12"x36"</div>                                  | <div>M4-9</div> <div></div> <div>STD. 30"x24"<br/>SPECIAL 48"x36"<br/>SPECIAL 60"x48"</div> | <div>M4-10</div> <div></div> <div>48"x18"</div>                                       | <div>R55-I</div> <div></div> <div>36"x60"<br/>• USE 6" C LETTERS<br/>•• USE 4" D LETTERS</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|          |                                                                            |        |
|----------|----------------------------------------------------------------------------|--------|
| 11-07-19 | REVISED FOR MASH                                                           |        |
| 4-13-17  | DELETED RSP-1 & ADDED W2I-5a                                               |        |
| 9-2-15   | REVISED REDUCED SPEED LIMIT AHEAD SIGNS<br>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                                                    |        |
| DATE     | REVISION                                                                   | FILMED |

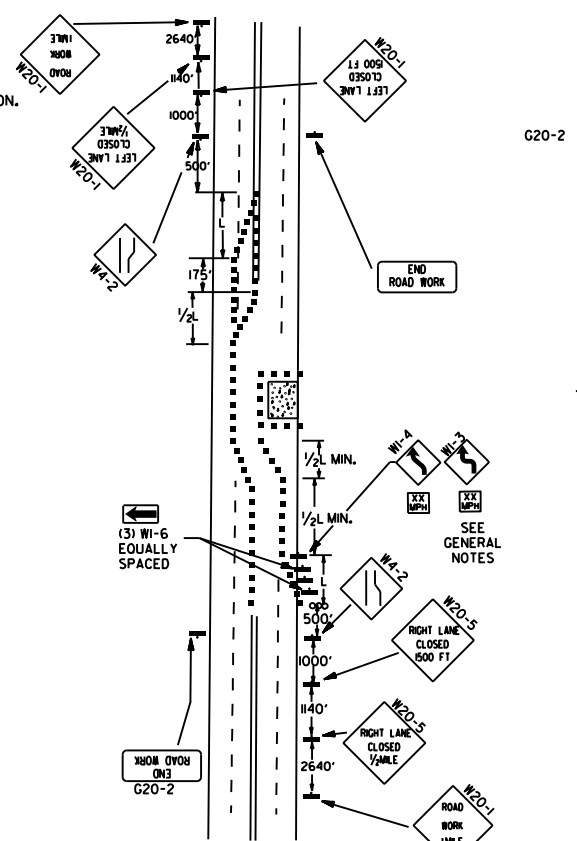
ARKANSAS STATE HIGHWAY COMMISSION  
STANDARD TRAFFIC CONTROLS  
FOR HIGHWAY CONSTRUCTION  
STANDARD DRAWING TC-1



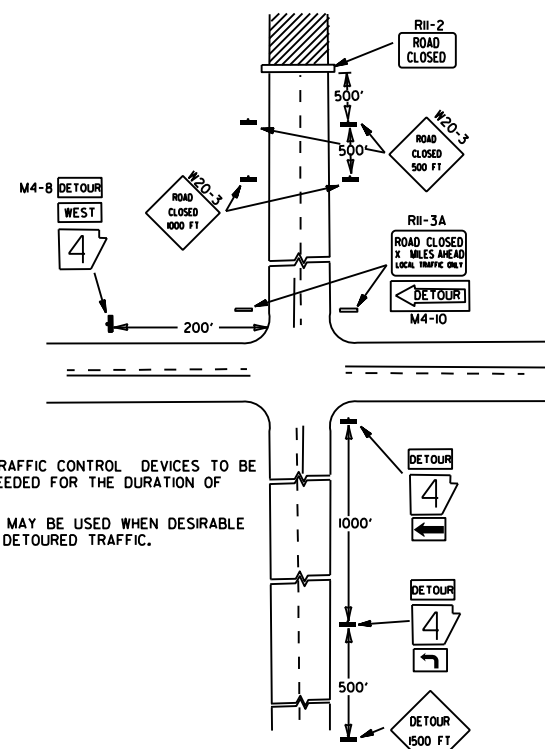
(A) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON A 2-LANE HIGHWAY WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.



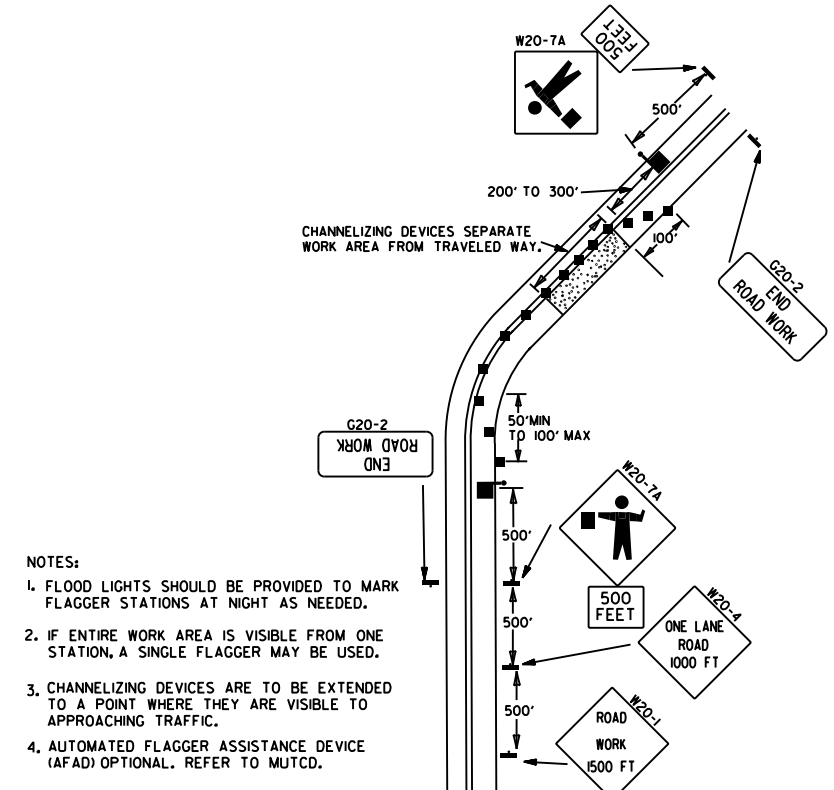
(B) TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE ROADWAY IS CLOSED.



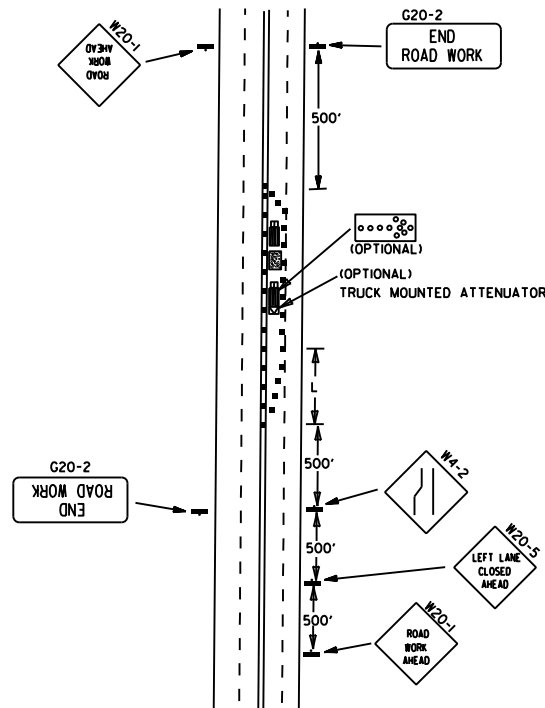
(C) TYPICAL APPLICATION - 4-LANE UNDIVIDED ROADWAY WHERE HALF OF THE ROADWAY IS CLOSED.



(D) TYPICAL APPLICATION - ROADWAY CLOSED BEYOND DETOUR POINT.

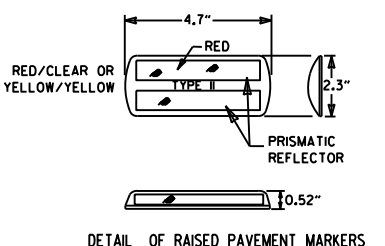


(E) TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.



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

- KEY:
- FLAGGER
  - POSITIVE BARRIER
  - ARROW PANEL (IF REQUIRED)
  - TYPE III BARRICADE
  - CHANNELIZING DEVICE
  - TRAFFIC DRUM
  - RAISED PAVEMENT MARKER



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:
- 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.
  - WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-1(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1(45)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
  - WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-1(65) SHALL BE OMITTED. ADDITIONAL R2-1(55)MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
  - 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.
  - WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
  - PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
  - 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
  - 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.
  - 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).

|          |                                                                              |        |
|----------|------------------------------------------------------------------------------|--------|
| 05-20-21 | REVISED NOTE 7                                                               |        |
| 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 |

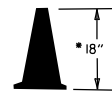
ARKANSAS STATE HIGHWAY COMMISSION  
 STANDARD TRAFFIC CONTROLS  
 FOR HIGHWAY CONSTRUCTION  
 STANDARD DRAWING TC-2

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

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

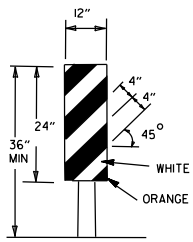
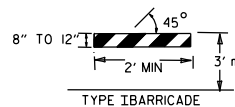
(B) TYPICAL APPLICATION - 3-LANE ONEWAY ROADWAY WHERE CENTER LANE IS CLOSED.

### CHANNELIZING DEVICES

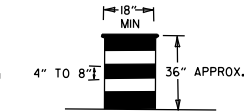


• WHEN CONES ARE USED ON FREEWAYS AND MULTI-LANE HIGHWAYS, THEY SHALL BE 28" MIN. DURING HOURS OF DARKNESS, 28" CONES SHALL BE USED ON ALL ROADWAYS, AND SHALL BE REFLECTORIZED IN ACCORDANCE WITH THE M.U.T.C.D.

### CONES

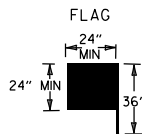
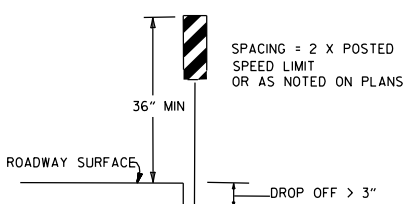


### PLASTIC DRUM



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

### VERTICAL PANEL PLACEMENT



FLAG SHALL BE OF GOOD GRADE RED MATERIAL

### KEY:

- ○ ○ ○ ARROW PANEL (IF REQUIRED)
- CHANNELIZING DEVICE
- TRAFFIC DRUM

### GENERAL NOTES:

- A SPEED LIMIT REDUCTION MAY BE IMPLEMENTED ONLY WHEN DESIGNATED IN THE PLAN OR WHEN RECOMMENDED BY THE ROADWAY DESIGN DIVISION.
- WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 45MPH, THE R2-(55) SHALL BE OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT LOCATION. ADDITIONAL R2-1 45MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- WHEN THE EXISTING SPEED LIMIT IS 65MPH AND THE PLANS REQUIRE A SPEED LIMIT OF 55MPH, THE R2-(65) SHALL BE OMITTED. ADDITIONAL R2-1 55MPH SPEED LIMIT SIGNS SHALL BE INSTALLED AT A MAXIMUM OF 1/2 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
- 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.
- WARNING LIGHTS AND/OR FLAGS MAY BE MOUNTED TO SIGNS OR CHANNELIZING DEVICES AT NIGHT AS NEEDED.
- PAVEMENT MARKINGS NO LONGER APPLICABLE WHICH MIGHT CREATE CONFUSION IN THE MINDS OF VEHICLE OPERATORS SHALL BE REMOVED OR OBLITERATED AS SOON AS PRACTICABLE.
- 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 (1/2 MILE) SIGNS ARE NOT REQUIRED IN ADVANCE OF LANE CLOSURES THAT BEGIN INSIDE THE PROJECT LIMITS.
- FLAGGERS SHALL USE STOP/SLOW PADDLES FOR CONTROLLING TRAFFIC THROUGH WORK ZONES. FLAGS MAY BE USED ONLY FOR EMERGENCY SITUATIONS.
- ALL PLASTIC DRUMS AND CONES SHALL MEET THE REQUIREMENTS OF MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
- 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. PAYMENT FOR TRAFFIC DRUMS SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS TRAILER MOUNTED DEVICES.
- 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).

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

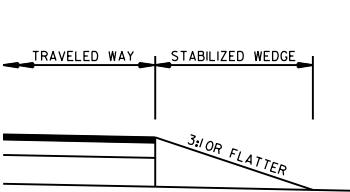
### TRAFFIC CONTROL DEVICES

| VERTICAL DIFFERENTIAL | LOCATION                                  | TRAFFIC CONTROL                                             |                                                                                |
|-----------------------|-------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------------------------------|
|                       |                                           | ≤ 45 MPH                                                    | > 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"                  | 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"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup> | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(2)</sup>                    |
| > 6"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(1)</sup> | A STABILIZED WEDGE, W8-17, EDGE LINE STRIPING AND TRAFFIC DRUMS <sup>(3)</sup> |
| > 24"                 | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER <sup>(4)</sup> & EDGE LINES        | PRECAST CONCRETE BARRIER <sup>(4)</sup> & 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 <sup>(2)</sup>  |
| > 2"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | W8-17, EDGE LINE STRIPING, AND TRAFFIC DRUMS <sup>(2)</sup> |
| ≤ 6"                  | EDGE OF TRAVELED LANE OR EDGE OF SHOULDER | PRECAST CONCRETE BARRIER & EDGE LINES                       |

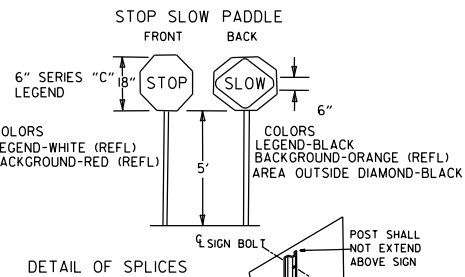
| INTERSTATE AND NON-INTERSTATE |        |                          |
|-------------------------------|--------|--------------------------|
| FORESLOPE                     | HEIGHT | TRAFFIC CONTROL          |
| 1:1                           | > 2 FT | PRECAST CONCRETE BARRIER |
| 2:1               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

- GENERAL NOTES:
- 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.
  - WHEN THERE IS INSUFFICIENT WIDTH TO PLACE TRAFFIC DRUMS ON THE REMAINING SHOULDER WIDTH, A STABILIZED WEDGE SHALL BE USED. 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, 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, W21-5, W21-5G, AND/OR W21-5b SIGNS SHALL BE USED WHERE THE ROADWAY IS UNOBSTRUCTED IF AND WHERE DIRECTED BY THE ENGINEER.

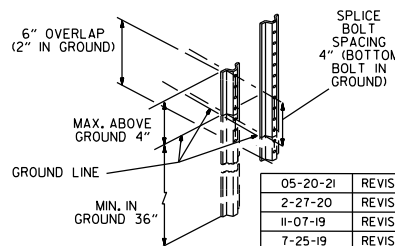


### STABILIZED WEDGE

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



- NOTES:
- USE SPLICES ONLY WHEN NECESSARY FOR INSTALLATION. TYPICAL INSTALLATION SHOULD HAVE NO SPLICES (SEE STD. DRAWING NO. SHS-2)
  - NORMAL INSTALLATIONS WILL REQUIRE 1/4" DIA. BOLTS TO MOUNT SIGNS TO POST AND 5/16" DIA. BOLTS TO ASSEMBLE THE VARIOUS POST SUPPORTS. EACH OF THESE BOLTS SHALL BE CARRIAGE BOLTS.
  - SIGN POSTS SHALL BE PAINTED GREEN; SIGNS SHALL NOT BE PAINTED, AND ALL SIGN POSTS SHALL BE PLUMB.



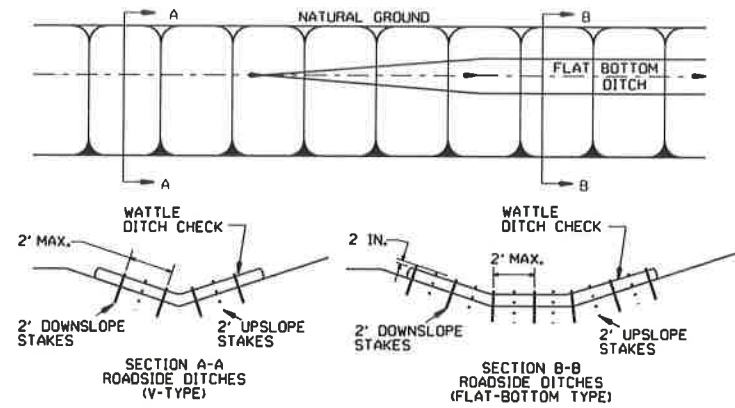
| DATE     | REVISION                                                  | FILED  |
|----------|-----------------------------------------------------------|--------|
| 05-20-21 | REVISED NOTE 10                                           |        |
| 2-27-20  | REVISED TRAFFIC CONTROL DEVICES DETAILS                   |        |
| 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

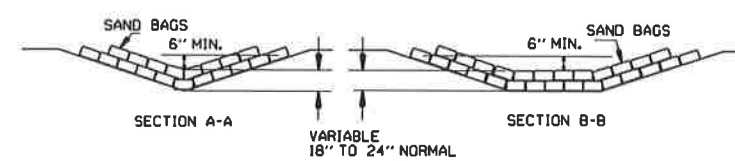
# GENERAL NOTES

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

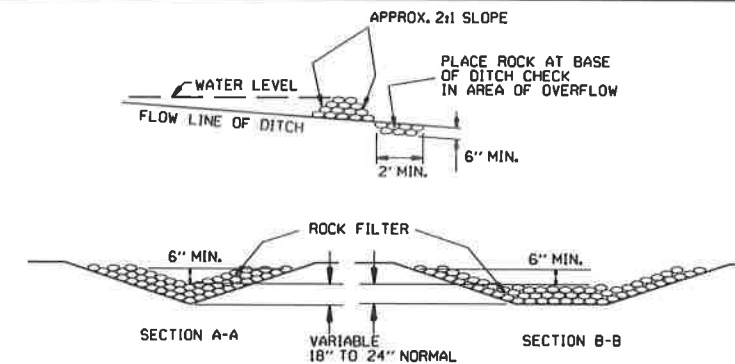


WATTLE DITCH CHECK (E-1)

NUMBER OF SAND BAGS AND ARRANGEMENT VARIABLE WITH ON-SITE CONDITIONS. PLACE SAND BAGS AT BASE OF DITCH CHECK IN AREA OF OVERFLOW.

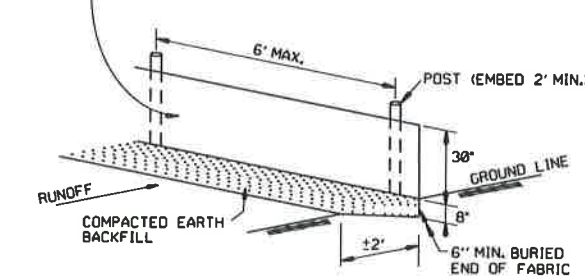


SAND BAG DITCH CHECK (E-5)

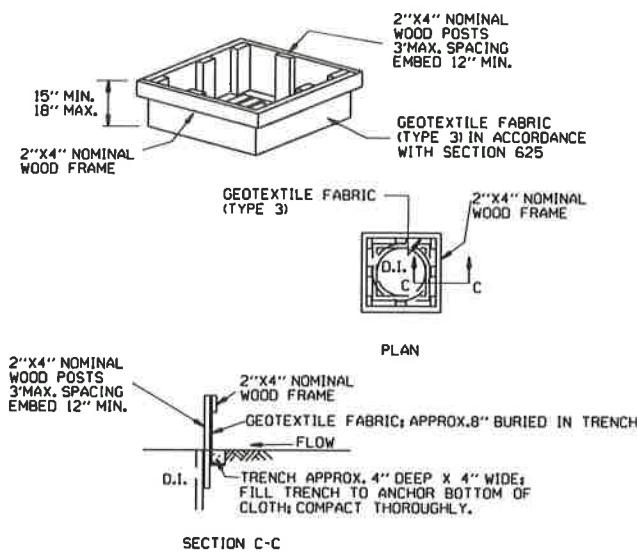


ROCK DITCH CHECK (E-6)

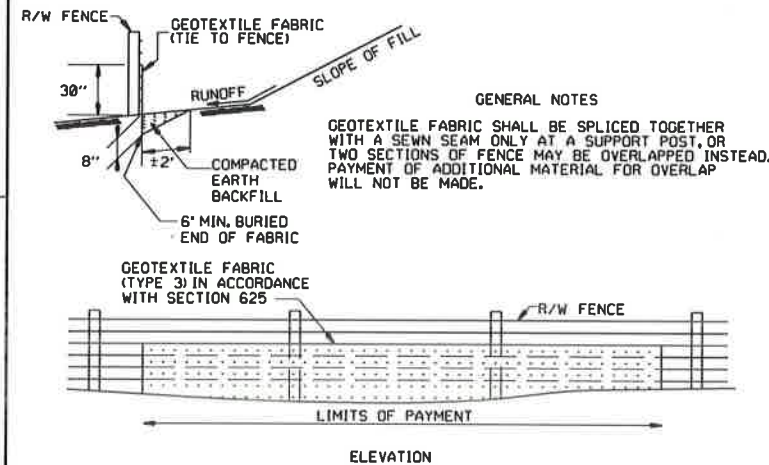
GENERAL NOTES  
1. GEOTEXTILE FABRIC (TYPE 3) IN ACCORDANCE WITH SECTION 625  
2. GEOTEXTILE FABRIC SHALL BE SPICED TOGETHER WITH A SEWN SEAM ONLY AT A SUPPORT POST OR TWO SECTIONS OF FENCE MAY BE OVERLAPPED INSTEAD. PAYMENT OF ADDITIONAL MATERIAL FOR OVERLAP WILL NOT BE MADE.



SILT FENCE (E-11)

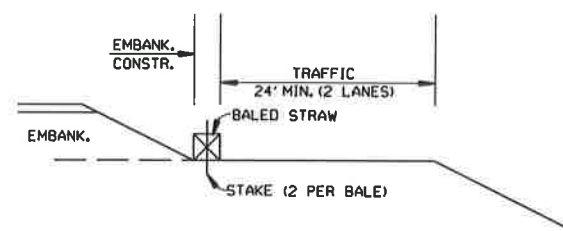


DROP INLET SILT FENCE (E-7)

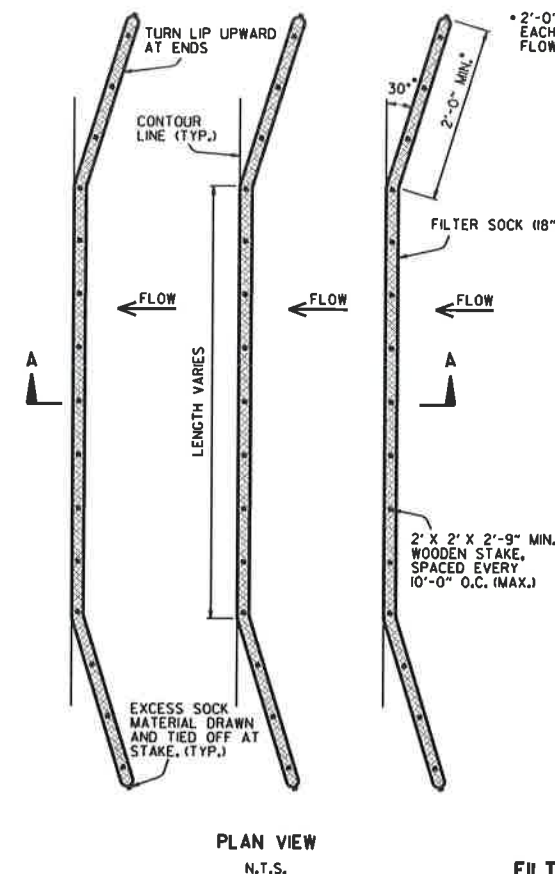


SILT FENCE ON R/W FENCE (E-4)

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.

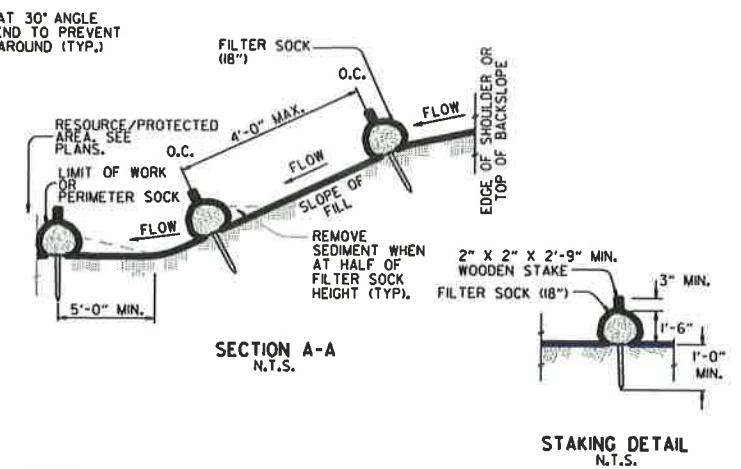


BALED STRAW FILTER BARRIER (E-2)



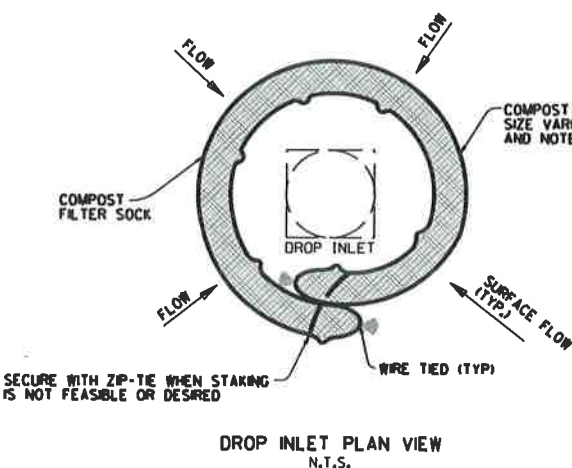
PLAN VIEW  
N.T.S.

FILTER SOCK ALONG SLOPE (E-3)



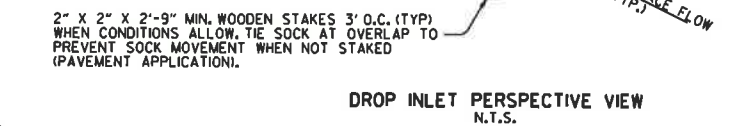
STAKING DETAIL  
N.T.S.

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 SUBSIDIARY TO "FILTER SOCK (18\"/>



DROP INLET PLAN VIEW  
N.T.S.

COMPOST FILTER SOCK DROP INLET PROTECTION (E-13)



DROP INLET PERSPECTIVE VIEW  
N.T.S.

NOTES:  
1. OVERLAP ENDS OF SOCK (1' MIN. 3' MAX.).  
2. USE 18\"/>

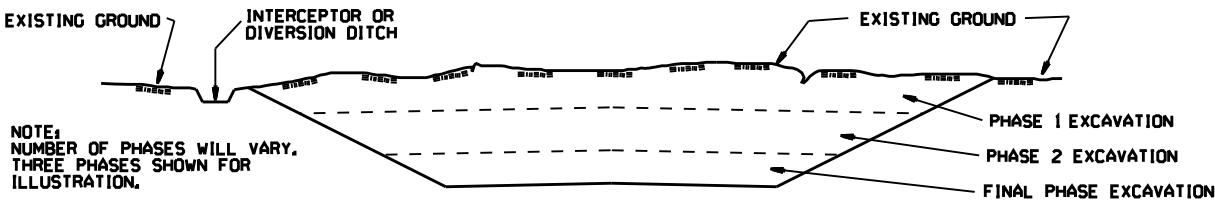
|          |                                                            |             |
|----------|------------------------------------------------------------|-------------|
| 11-16-17 | ADDED FILTER SOCK E-3 AND E-13                             |             |
| 12-15-11 | DELETED BALED STRAW DITCH 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 |
| DATE     | REVISION                                                   | FILMED      |

|                                   |
|-----------------------------------|
| 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

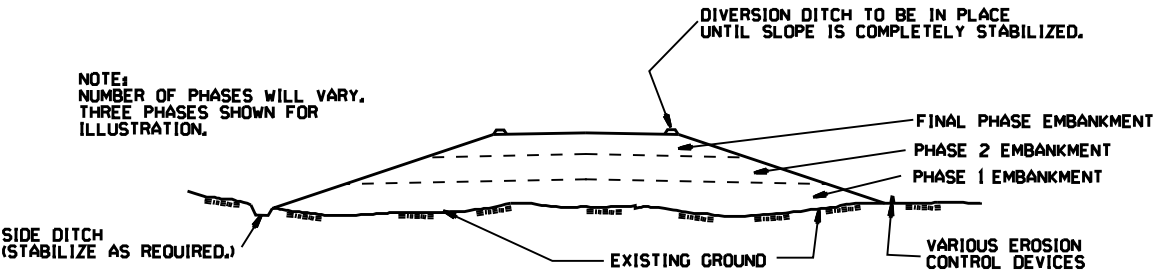


GENERAL NOTE

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.

|          |                    |        |                                   |
|----------|--------------------|--------|-----------------------------------|
|          |                    |        | ARKANSAS STATE HIGHWAY COMMISSION |
|          |                    |        | TEMPORARY EROSION CONTROL DEVICES |
|          |                    |        | STANDARD DRAWING TEC-3            |
| 11-03-94 | CORRECTED SPELLING |        |                                   |
| 6-2-94   | Drawn & Issued     | 6-2-94 |                                   |
| DATE     | REVISION           | FILED  |                                   |