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**NOTE:** CROSS SECTIONS NOT NORMALLY INCLUDED; INPLANTSSold TO PROSPECTIVE BIDDERS, BUT MAY BE HAD UPON REQUEST.

## GOVERNING SPECIFICATIONS

**ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2008, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:**

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### GENERAL NOTES

1. **GRAB LINE DIRECTIONS:** FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LIFTED BY THE RESPECTIVE OWNERS, AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED OR LIFTED BY THE OWNERS OR UTILITY SERVICE ORGANIZATIONS, OTHERWISE PROVIDED.
4. A CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U.S. MAIL BOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE; PAYMENT WILL BE CONSIDERED INCURRED IN THE PRICES EDS FOR THE VARIOUS EDS-TB.
5. ALL LAND AND MUNICIPALITY LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HANDLED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVAILING A FENCE TO CONTROL LITTER IN AREAS WHERE PARTIALLY ARMED TREES ARE SEVERED. WIRE FENCE MAY BE CONSTRUCTED PERMANENTLY OR TEMPORARY THEREBY THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING TO CONTROL LITTER.
8. THE PROJECT IS COVERED UNDER A SECTION 404 NATIONAL IntegrAToR PERMIT REFER TO SECTION 110 OF THE STANDARD SPECIFICATIONS, EDITION OF 2014, FOR PERMIT REQUIREMENTS.
9. ALL FLEXIBLE BASE AND ASPHALT PCI PAVERS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 230-UNCLASSIFIED ELEVATION.
10. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY 8 INCH ALUMINUM HEAT LINE, AFTER REMOVAL, THE PAVEMENT TO BE REMOVED SHALL BE CARCATORY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN PLACE SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

## INDEX OF SHEETS, GOVERNING SPECIFICATIONS AND GENERAL NOTES
NOTCH & WIDENING - NORMAL CROWN

TRANSITION FROM 2-LANES TO 3-LANES
STA.B+00.00 - STA.JD+00.00 (RIGHT PASSING LANE)
TYPICAL SECTION OF IMPROVEMENT - NOTCH & WIDENING - NORMAL CROWN

RIGHT PASSING LANES (REVERSE FOR LEFT PASSING LANES)

STA40+00.00 - STA55+00.00 (RIGHT PASSING LANE)
STA48+00.00 - STA52+00.00 (LEFT PASSING LANE)

ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITION, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.025\%.

NOTES:

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

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

3. ASPHALT FOR LEVELING OF EXISTING PAYMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

4. THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE AGRICULTURAL SURFACE COURSE IF IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER, AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
TYPICAL SECTION OF IMPROVEMENT - FULL DEPTH - NORMAL CROWN - RIGHT PASSING LANES & LEFT PASSING LANES
STA.25+00.00 - STA.37+00.00 (RIGHT & LEFT PASSING LANES)

ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08°/'.

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

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

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

** THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ACHIEVING SURFACE 0" IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER, AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.

TYPICAL SECTION OF IMPROVEMENT - FULL DEPTH - SUPERELEVATION - RIGHT PASSING LANES & LEFT PASSING LANES
STA.25+00.00 - STA.37+00.00 (RIGHT & LEFT PASSING LANES)
TYPICAL SECTIONS OF IMPROVEMENT - NOTCH & WIDENING
NORMAL CROWN - RIGHT PASSING LANES & LEFT PASSING LANES

STA 37+00.00 - STA 42+60.00 (RIGHT & LEFT PASSING LANES)

TRANSITION FROM 4-LANES TO 3-LANES
STA 42+60.00 - STA 48+00.00 (LEFT PASSING LANE)

TYPICAL SECTIONS OF IMPROVEMENT - NOTCH & WIDENING
SUPERELEVATION - RIGHT PASSING LANES & LEFT PASSING LANES

STA 37+00.00 - STA 42+60.00 (RIGHT & LEFT PASSING LANES)

TRANSITION FROM 4-LANES TO 3-LANES
STA 42+60.00 - STA 48+00.00 (LEFT PASSING LANE)
TYPICAL SECTIONS OF IMPROVEMENT

NOTCH & WIDENING - NORMAL CROWN - LEFT TURN LANE
STA.52+00.00 - STA.53+60.00
TRANSITION FROM 3-LANES TO 2-LANES
STA.53+60.00 - STA.55+80.00

NOTCH & WIDENING - SUPERELEVATION - LEFT TURN LANE
STA.52+00.00 - STA.53+60.00
TRANSITION FROM 3-LANES TO 2-LANES
STA.53+60.00 - STA.55+80.00

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

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

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

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

THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ADJACENT SURFACE COURSE "A" IN LIEU OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDERS AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATION TRANSITIONS, THE ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.08%.

TYPICAL SECTION OF IMPROVEMENT
NOTCH & WIDENING - SUPERELEVATION
STA 65 + 80.00

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

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

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

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAID. LONGITUDINAL JOINTS SHALL BE AT LANE LINES. ** THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE ACMW SURFACE COURSE (01) IN LUG OF AGGREGATE BASE COURSE UNDER THE PROPOSED SHOULDER AT NO ADDITIONAL COST TO THE DEPARTMENT. MEASUREMENT WILL BE BASED UPON CALCULATIONS FROM THE PLAN DIMENSIONS.
DETAIL FOR PAVEMENT TRANSITIONS

WIDENING FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-9L, & GR-9A4.
FOR ADDITIONAL INFORMATION, REFER TO CROSS SECTION FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

METHOD OF RAISING GRADE

NOTES:
1. THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
2. QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE WAS ONE FOOT OR LESS.
3. IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT, SCARIFICATION OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED AS STATED IN SECTION 240, SUBSECTION 240.09 OF THE STANDARD SPECIFICATIONS.

FOR MAINTENANCE OF TRAFFIC

ADDITIONAL WIDENING

FOR MAINTENANCE OF TRAFFIC

STA. 28+00.00 - STA. 36+10.00

PROPOSED R/W OR TIE TO EXISTING DRIVEWAY, WHICHEVER IS FURTHER.

SPECIAL DETAILS
DETAIL FOR COUNTY ROAD TURNOUTS (6'-0" SHOULDER)
OPEN SHOULDER SECTION

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

A.C.M.W. SURFACE COURSE 0/2"
(220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH.

DETAILED SHOWING ROCK FILL AND BENCH CUT
TYPICAL FOR FULL DEPTH AND NOTCH & WIDENING SECTIONS
NOTE: REFER TO CROSS SECTIONS AND QUANTITY SHEETS FOR ROCK FILL LIMITS.

DETAIL FOR COUNTY ROAD TURNOUTS (8'-0" SHOULDER)
OPEN SHOULDER SECTION

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

A.C.M.W. SURFACE COURSE 1/2"
(220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS 7)
7" COMP. DEPTH.
DETAILS OF RUMBLE STRIPS

LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

GENERAL NOTES
1. Rumble strips shall not be installed in curb sections, bridge decks, approach slabs, intersecting streets or roundabouts.
2. Rumble strips shall be installed on a paved shoulders that is used as a deceleration lane for the length desired appropriate by the engineer.
3. The 6’ offset from the edge line may be increased to avoid functional limits, in all cases the lateral deviation from the planned offset should be kept to a minimum.
4. Rumble strips shall be measured by the linear feet longitudinally along the shoulder. Payment shall only include that portion of the shoulder strip that is placed on the paved shoulder. For example, shoulders on street public road intersections where rumble strips have not been constructed.
5. SHOULDER 30” depth shall generally apply for the entire 6’ length. Some variation to suit shoulder slope slopes may be necessary.

DETAIL FOR GAP PATTERN RUMBLE STRIP
NOTE: Gap pattern shall be selected by the designer in the field allowing for benefits to serve its purpose.

SPECIAL DETAILS

2. DEPTHS OF BUTTRESS DESIGNS MAY BE ALTERED IF COMPETENT FOUNDING MATERIAL, AS DETERMINED BY THE ENGINEER, IS ENCOUNTERED AT HIGHER ELEVATIONS.

3. POSITIVE DRAINAGE SHOULD BE ESTABLISHED AT THE BASE OF THE BUTTRESS EITHER BY LEAVING EXPOSED OR INSTALLING PIPE DRAINS.

4. THE TOP 1' OF ROCK BUTTRESS SHALL BE REDUCED IN SIZE TO PROVIDE A GRADABLE CHOKING LAYER. THE 3' LAYER OF COMPACTED EMBANKMENT FOR GUARDRAIL IS ACCEPTABLE.
NOTE:
1. SHOULD BE CONSTRUCTED USING MATERIAL MEETING THE REQUIREMENTS OF THE SPECIAL PROVISION "ROCK FILL"
2. DEPTHS OF PLATING SHOULD BE EMBEDDED 2'-0" DEEP.

NOTE:
1. SHOULD BE CONSTRUCTED USING MATERIAL MEETING THE REQUIREMENTS OF THE SPECIAL PROVISION "ROCK FILL"
2. DEPTHS OF PLATING SHOULD BE EMBEDDED 2'-0" DEEP.
NOTE:
RETAIL ALL TREES IN T.C.E.'S
NOT AFFECTED BY CONSTRUCTION
OF DRIVEWAYS OR CHANNELIZATION
WORK FOR PROPOSED CROSS DRAINS.

STA. 15+44
INSTALL E-6 = 3 CU. YDS

STA. 15+45
INSTALL E-14 = 18 CU. YDS

STA. 20+25
INSTALL E-6 = 3 CU. YDS

STA. 20+44
INSTALL E-6 = 3 CU. YDS

STA. 20+45
INSTALL E-14 = 193 CU. YDS

STA. 26+49
INSTALL E-6 = 3 CU. YDS

STA. 26+90
INSTALL E-14 = 133 CU. YDS

TEMPORARY EROSION CONTROL DETAILS STAGE 1
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

NOTE: RETAIN ALL TREES IN T. C. E.'S
NOT AFFECTED BY CONSTRUCTION OF DRAWS OR CHANNELIZATION WORK FOR PROPOSED CROSS DRAINS.

STA, 36+30
INSTALL E-14 = 9 T CU. YDS

STA, 36+48
INSTALL E-6 = 3 CU. YDS

STA, 36+32
INSTALL E-6 = 3 CU. YDS

STA, 36+84
INSTALL E-6 = 3 CU. YDS

STA, 36+85
INSTALL E-14 = 52 CU. YDS

STA, 43+45
INSTALL E-6 = 3 CU. YDS

STA, 43+44
INSTALL E-14 = 84 CU. YDS

STA, 43+55
INSTALL E-6 = 3 CU. YDS

STA, 43+56
INSTALL E-14 = 39 CU. YDS
NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.

STA. 43+44
INSTALL E-14 = 84 CU. YDS
STA. 43+45
INSTALL E-6 = 3 CU. YDS
STA. 43+55
INSTALL E-6 = 3 CU. YDS
STA. 43+56
INSTALL E-14 = 39 CU. YDS

STA. 49+99
INSTALL E-14 = 84 CU. YDS
STA. 50+00
INSTALL E-6 = 3 CU. YDS
STA. 52+50 - STA. 55+73
INSTALL E-3 = 323 LIN. FT.
LEGEND

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

REVISIONS

STATION 8+00.00
BEGIN JOB 090169
LOG MILE 18.30

STA. 8+00 - STA. 13+31
INSTALL E-I = 337 LIN. FT.
STA. 13+31 - STA. 13+50
INSTALL E-I = 986 LIN. FT.

STA. 13+50 - STA. 13+69
INSTALL RPRAP ON SLOPE
DUMPED RPRAP = 25 CU. YDS.
FILTER BLANKET = 50 SQ. YDS.

TEMPORARY EROSION CONTROL DETAILS STAGE 2
NOTE:
RETAIN ALL TREES IN T.C.E.'S
NOT AFFECTED BY CONSTRUCTION
OF DRIVEWAYS OR CHANNELIZATION
WORK FOR PROPOSED CROSS DRAINS.

STA, 17+50 - STA, 20+00
INSTALL RPRAP ON SLOPE
DUMPED RPRAP = 562 CU. YDS.
FILTER BLANKET = 124 SQ. YDS.

STA, 21+00
INSTALL E-6 = 3 CU. YDS.
STA, 20+01
INSTALL E-14 = 70 CU. YDS.

STA, 14+50 - STA, 15+26
INSTALL E-HI = 76 LIN. FT.
STA, 15+41 - STA, 20+35
INSTALL E-I = 494 LIN. FT.
STA, 20+41 - STA, 20+75
INSTALL E-II = 34 LIN. FT.

STA, 25+50 - STA, 32+50
INSTALL E-II = 700 LIN. FT.
NOTE:
RETAIN ALL TREES IN T.C. E.'S
NOT AFFECTED BY CONSTRUCTION
OF DRIVEWAYS OR CHANNELIZATION
WORK FOR PROPOSED CROSS DRAINS.

LEGEND

- C - WATTLE
- D - ROCK DITCH CHECK
- S - SILT FENCE
- B - SEDIMENT BASIN

NOTE: PERIMETER CONTROLS SHALL BE PLACED AS CLEARING AND GRUBBING OPERATIONS ARE STARTED.
NOTE:
RETAIN ALL TREES IN T.C.E.'S
NOT AFFECTED BY CONSTRUCTION
OF DRIVEWAYS OR CHANNELIZATION
WORK FOR PROPOSED CROSS DRAINS.

STA. 55+89
INSTALL RIPRAP ON SLOPE
DUMPED RIPRAP = 39 CU. YDS.
FILTER BLANKET = 79 SQ. YDS.

STA. 43+53 - STA. 55+76
INSTALL E-1 = 822 LNL FT.
SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA 28+00.00 to STA 38+00.00.
- End of Job
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

MAINTENANCE OF TRAFFIC

DO
- For northbound & southbound traffic, 1 lane each as directed by the engineer.

NOT

PASS

ADVANCE SIGN AT SIDE ROADS
ALL STAGES
SEQUENCE OF CONSTRUCTION

STAGE 1
MANTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOVE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAVING FOR MAIN LANES AND ADDITIONAL WIDENING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC INTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 2 TRAFFIC EARTHWORK AND PAVING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL WIDENING USED FOR STAGE 2 TRAFFIC FROM STA 28+00.00 TO STA 36+00.00.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

NOTE:
THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4' OR LESS, AND THEN NOTCH ANOTHER ONE-MILE SECTION. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

MAINTENANCE OF TRAFFIC STAGE 1 DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for stage 2 detour.

STAGE 2
- Install construction pavement markings for stage 2 and shift traffic onto stage 2 roadway as shown on plans.
- Construct stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for stage 3 traffic.

STAGE 3
- Install construction pavement markings for stage 3 and shift traffic to proposed main lanes and remove additional widening used for stage 2 traffic from STA. 28+00.00 to STA. 36+00.00.
- END OF JOB
- Perform cold milling of existing roadway to tie job at beginning and end of project.
- Place final asphalt surface.
- Install final striping.

MAINTENANCE OF TRAFFIC

STAGE 1 DETAILS

NOTE:

The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile backfill to a point where the vertical differential is 4" or less, and then notch another one-mile section. This is the maximum number of vertical panels that will be paid for. Refer to section 603.02 of the standard specifications for construction requirements.
SEQUENCE OF CONSTRUCTION

STAGE 1
Maintain traffic on existing roadway with appropriate traffic control devices.
Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
Place asphalt leveling course over existing roadway as directed by the Engineer.
Construct earthwork and paving for main lanes and additional roadway on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans. Construct stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional roadway used for Stage 2 traffic from STA 28+00.00 to STA 35+00.00.

End of Job:
Perform cold milling of existing roadway to tie job at begin and end of project.
Place final asphalt surface.
Install final striping.

NOTE:
The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile, backfill to a point where the vertical differential is 4" or less, and then notch another one-mile section. This is the maximum number of vertical panels that will be paid for. Refer to Section 603.02 of the Standard Specifications for Construction Requirements.
SEQUENCE OF CONSTRUCTION

STAGE 1
MANTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOVE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAVING FOR MAIN LANES AND ADDITIONAL MIDDLE LANE ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC INTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 3 TRAFFIC EARTHWORK AND PAVING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL MIDDLE LANE USED FOR STAGE 2 TRAFFIC FROM STA 24+00.00 TO STA 36+00.00.

END OF JOB
PERFORM COLD ROLLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.
DETAIL OF TWO LANE SECTION AT BEGINNING
OF STAGE 1 - NOTCH & WIDENING

NOTE: THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH REMAINDER OF THE JOB. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 605.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

DETAIL FOR RIGHT PASSING LANES - NOTCH & WIDENING - STAGE 1

SEQUENCE OF CONSTRUCTION

STAGE 1
M AINTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REM OVE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLAC E ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUC T EARTHWORK AND PAYING FOR MAIN LANE AND ADDITIONAL WIDENING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTAL L CONSTRUCTION PAVEMENT WARNINGS FOR STAGE 2 AND SHIFT TRAFFIC ONTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUC T STAGE 3 TRAFFIC EARTHWORK AND PAYING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTAL L CONSTRUCTION PAVEMENT WARNINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL WIDENING USED FOR STAGE 2 TRAFFIC FROM STA. 26+00.00 TO STA. 36+00.00.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO TIE JOB AT BEGIN AND END OF PROJECT.
PLAC E FINAL ASPHALT SURFACE.
INSTAL L FINAL STRIPING.
DETAIL FOR LEFT & RIGHT PASSING LINES - NOTCH & WIDENING - STAGE 1

NOTE: THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH REMAINDER OF THE JOB. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 603.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

SEQUENCE OF CONSTRUCTION

STAGE 1
MANTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOVE EXISTING COLVERTS TO BE REPLACED WITH NEW COLVERTS AND CONSTRUCT NEW COLVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAYING FOR MAIN LANES AND ADDITIONAL WIDENING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC ONTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 3 TRAFFIC EARTHWORK AND PAYING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL WIDENING USED FOR STAGE 2 TRAFFIC FROM STA 28+61000 TO STA 36+000.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

MAINTENANCE OF TRAFFIC
STAGE 1 DETAILS
**MAINTENANCE OF TRAFFIC**

**STAGE 1 DETAILS**

**DETAIL FOR LEFT TURN LANE - NOTCH & WIDENING - STAGE 1**

Note: The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile, beginning at a point where the vertical differential is 4" or less, and then notch remainder of the job. This is the maximum number of vertical panels that will be paid for. Refer to Section 603.02 of the Standard Specifications for Construction Requirements.

**SEQUENCE OF CONSTRUCTION**

**STAGE 1**
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional paving on left and install appropriate traffic control devices for Stage 2 detour.

**STAGE 2**
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

**STAGE 3**
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional wording used for Stage 2 traffic from STA 28+00.00 to STA 36+00.00.

End of job
- Perform cold milling of existing roadway to tie job at beginning and end of project.
- Place final asphalt surface.
- Install final striping.
DETAIL FOR RIGHT PASSING LANES - FULL DEPTH - STAGE 1 & 2

NOTE: THE QUANTITY OF VERTICAL PANELS PROVIDED IN THE CONTRACT IS FOR ONE SIDE OF THE ROADWAY FOR THE FULL LENGTH OF THE JOB. THIS IS THE MAXIMUM QUANTITY REQUIRED TO ALLOW THE CONTRACTOR TO NOTCH ONE MILE BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 2° OR LESS, AND THEN NOTCH REMAINING OF THE JOB. THIS IS THE MAXIMUM NUMBER OF VERTICAL PANELS THAT WILL BE PAID FOR. REFER TO SECTION 605.02 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION REQUIREMENTS.

SEQUENCE OF CONSTRUCTION

STAGE 1
MAINTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOVE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAVING FOR MAIN LANES AND ADDITIONAL INLENSING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC INTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 2 TRAFFIC EARTHWORK AND PAVING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL INLENSING USED FOR STAGE 2 TRAFFIC FROM STA. 28+00.000 TO STA. 36+00.000.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

MAINTENANCE OF TRAFFIC
STAGE 1 & 2 DETAILS
**MAINTENANCE OF TRAFFIC**

**STAGE 2 DETAILS**

**SEQUENCE OF CONSTRUCTION**

**STAGE 1**
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and add additional widening on left and install appropriate traffic control devices for stage 2 detour.

**STAGE 2**
- Install construction pavement warning for stage 2 and shift traffic onto stage 2 roadway as shown on plans.
- Construct stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for stage 3 traffic.

**STAGE 3**
- Install construction pavement warning for stage 3 and shift traffic to proposed main lanes and remove additional widening used for stage 2 traffic from STA 28+00.00 to STA 36+00.00.

**END OF JOB**
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

**NOTE:** The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one panel back to a point where the vertical differential is 4' or less, and then notch remainder of the job. This is the maximum number of vertical panels that will be paid for. Refer to Section 602.02 of the Standard Specifications for Construction Requirements.

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**DETAIL OF TWO LANE SECTION AT BEGINNING OF STAGE 2 - NOTCH & WIDENING**

**DETAIL FOR RIGHT PASSING LANES - NOTCH & WIDENING - STAGE 2**
DETAIL FOR LEFT & RIGHT PASSING LANES - NOTCH & WIDENING - STAGE 2

NOTES

1. The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile. Backfill to a point where the vertical differential is 4" or less, and then notch remainder of the job. This is the maximum number of vertical panels that will be paid for. Refer to section 603.02 of the Standard Specifications for Construction Requirements.

SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans. Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA 28+00.00 to STA 36+00.00.

END OF JOB
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.
**DETAIL FOR LEFT TURN LANE - NOTCH & WIDENING - STAGE 2**

**SEQUENCE OF CONSTRUCTION**

**STAGE 1**
Maintain traffic on existing roadway with appropriate traffic control devices, remove existing culverts to be replaced with new culverts and construct new culverts under traffic, place asphalt leveling course over existing roadway as directed by the engineer, construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

**STAGE 2**
Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans, construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

**STAGE 3**
Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA.26+00.00 to STA.36+00.00.

End of Job
Perform cold milling of existing roadway to tie job at begin and end of project, place final asphalt surface, install final striping.

**NOTES**
The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile, back to a point where the vertical differential is 4' on legs and then notch remainder of the job. This is the maximum number of vertical panels that will be paid for, refer to Section 603.02 of the standard specifications for construction requirements.

**MAINTENANCE OF TRAFFIC**

**STAGE 2 DETAILS**
SEQUENCE OF CONSTRUCTION

STAGE 1
MAINTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REPLACE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAVING FOR MAIN LAKES AND ADDITIONAL WIDENING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC ONTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 3 TRAFFIC EARTHWORK AND PAVING FOR MAIN LAKES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LAKES AND REMOVE ADDITIONAL WIDENING USED FOR STAGE 2 TRAFFIC FROM STA. 28+00.00 TO STA. 36+00.00.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

MAINTENANCE OF TRAFFIC
STAGE 2 DETAILS

STAGE 2
REMOVAL OF PERMANENT PAVEMENT MARKINGS
LT. EDGE & EXIST. CENTERLINE THROUGH DETOUR TIE INS
+ 5978 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS
C. L T L T 6 IN. EDGE LINE & DBL CENTERLINE ON DETOUR
+ 9325 LIN. FT.
RAISED PAVEMENT MARKERS TYPE F101/Y101
80° G.C. ON DETOUR CENTERLINE + G101

RD00039.DWG
SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA. 28+0000 to STA. 36+000.

END OF JOB
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

STAGE 2
- Removal of permanent pavement markings
  - Lt. edge & exist. centerline through detour tie-ins
    - LT: 5978 lin. ft.
  - Construction pavement markings
    - Lt. & Lt. edge lines + 200 ft. centerline on detour
      - 19325 lin. ft.
  - Raised pavement markers type (YHEL-HEL)
    - 800 ft. on detour centerline + geach

MAINTENANCE OF TRAFFIC
STAGE 2 DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1
Maintain traffic on existing roadway with appropriate traffic control devices. Remove existing culverts to be replaced with new culverts and construct new culverts under traffic. Place asphalt leveling course over existing roadway as directed by the engineer. Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown in plans. Construct Stage 2 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA 28+00.00 to STA 36+00.00.

END OF JOB
Perform cold milling of existing roadway to the job at begin and end of project. Place final asphalt surface. Install final striping.

STAGE 2 DETAILS

MAINTENANCE OF TRAFFIC

STAGE 2
Removal of permanent pavement markings
LT. & LT. EDGE LINES • ODL CENTERLINE ON DETOUR
+ 5978 LIN. FT.
Construction pavement markings
LT. & LT. EDGE LINES • ODL CENTERLINE ON DETOUR
+ 1525 LIN. FT.
Raised pavement markers type 4161/YELI
80 O.C. ON DETOUR CENTERLINE • 6 EACH
SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA. 29 + 00.00 to STA. 36 + 00.00.

END OF JOB
- Perform cold milling of existing roadway to the job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

MAINTENANCE OF TRAFFIC

STAGE 2 DETAILS

STAGE 2
- Removal of permanent pavement markings
  - LT, EDGE & EXIST. CENTERLINE THROUGH DETOUR TIE-NS
  - TIE-WS
  - LR

CONSTRUCTION PAVEMENT MARKINGS
- HT, LT, EDGE LINES + OBL CENTERLINE ON DETOUR + RX325 LIF. LT.
- RAISED PAVEMENT MARKERS TYPE (YEL/YEL)
  - 80' O.C., ON DETOUR CENTERLINE + 6'EACH
SEQUENCE OF CONSTRUCTION

STAGE 1
Maintain traffic on existing roadway with appropriate traffic control devices. Remove existing culverts to be replaced with new culverts and construct new culverts under traffic. Place asphalt leveling course over existing roadway as directed by the engineer. Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for stage 2 detour.

STAGE 2
Install construction pavement markings for stage 2 and shift traffic onto stage 2 roadway as shown on plans. Construct stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for stage 3 traffic.

STAGE 3
Install construction pavement markings for stage 3 and shift traffic to proposed main lanes and remove additional widening used for stage 2 traffic from STA 0+00.00 to STA 36+600.

END OF JOB
Perform cold milling of existing roadway to tie job at begin and end of project. Place final asphalt surface. Install final striping.

MAINTENANCE OF TRAFFIC
STAGE 3 DETAILS

STAGE 3 DETAILS
Removal of construction pavement markings one edge line = dbl centerline from stage 2
= 1/4" in lin ft.
Construction pavement markings one edge line = dbl centerline on cl construction
at detour tie-in locations
= 1/4" in lin ft.
SEQUENCE OF CONSTRUCTION

STAGE 1
MAINTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOVE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS, AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND PAVING FOR MAIN LANES AND ADDITIONAL MEDIAN ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC ONTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 3 TRAFFIC EARTHWORK AND PAVING FOR MAIN LANES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LANES AND REMOVE ADDITIONAL MEDIAN USED FOR STAGE 2 TRAFFIC FROM STA. 29+05.00 TO STA. 26+00.00.
END OF JOB.
PERFORM COLD MILLING OF EXISTING ROADWAY TO THE JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

STAGE 3
REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS
ONE EDGE LINE + DBL CENTERLINE FROM STAGE 2
= 14474 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
ONE EDGE LINE + DBL CENTERLINE ON CL CONSTRUCTION
AT DETOUR TIE-IN LOCATIONS
= 8967 LIN. FT.

MAINTENANCE OF TRAFFIC
STAGE 3 DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1
MANTAIN TRAFFIC ON EXISTING ROADWAY WITH APPROPRIATE TRAFFIC CONTROL DEVICES.
REMOYE EXISTING CULVERTS TO BE REPLACED WITH NEW CULVERTS AND CONSTRUCT NEW CULVERTS UNDER TRAFFIC.
PLACE ASPHALT LEVELING COURSE OVER EXISTING ROADWAY AS DIRECTED BY THE ENGINEER.
CONSTRUCT EARTHWORK AND DRAINAGE FOR MAIN LAKES AND ADDITIONAL WIDING ON LEFT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 2 DETOUR.

STAGE 2
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 2 AND SHIFT TRAFFIC ONTO STAGE 2 ROADWAY AS SHOWN ON PLANS.
CONSTRUCT STAGE 3 TRAFFIC EARTHWORK AND DRAINAGE FOR MAIN LAKES ON RIGHT AND INSTALL APPROPRIATE TRAFFIC CONTROL DEVICES FOR STAGE 3 TRAFFIC.

STAGE 3
INSTALL CONSTRUCTION PAVEMENT MARKINGS FOR STAGE 3 AND SHIFT TRAFFIC TO PROPOSED MAIN LAKES AND REMOVE ADDITIONAL WIDING USED FOR STAGE 2 TRAFFIC FROM STA. 28+00.00 TO STA. 36+00.00.

END OF JOB
PERFORM COLD MILLING OF EXISTING ROADWAY TO Tie JOB AT BEGIN AND END OF PROJECT.
PLACE FINAL ASPHALT SURFACE.
INSTALL FINAL STRIPING.

STAGE 3
REMOYE OF CONSTRUCTION PAVEMENT MARKINGS
ONE EDGE LINE + DBL CENTERLINE FROM STAGE 2
+14484 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS
ONE EDGE LINE + DBL CENTERLINE ON DL CONSTRUCTION AT DETOUR Tie-IN LOCATIONS
+ 8969 LIN. FT.

MAINTENANCE OF TRAFFIC
STAGE 3 DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Place asphalt leveling course over existing roadway as directed by the engineer.
- Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA 24+00.00 to STA 56+00.00.

END OF JOB
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

MAINTENANCE OF TRAFFIC STAGE 3 DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1
Maintain traffic on existing roadway with appropriate traffic control devices. Remove existing culverts to be replaced with new culverts and construct new culverts under traffic. Construct earthwork and paving for main lanes and additional widening on left and install appropriate traffic control devices for Stage 2 detour.

STAGE 2
Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans. Construct Stage 3 traffic earthwork and paving for main lanes on right and install appropriate traffic control devices for Stage 3 traffic.

STAGE 3
Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes and remove additional widening used for Stage 2 traffic from STA 28+10.00 to STA 36+10.00.

END OF JOB
Perform cold milling of existing roadway to tie job at begin and end of project, place final asphalt surface, install final striping.

THREE-DIMENSIONAL PAVEMENT MARKING DETAILS

**NOTE:**
The 4" yellow striping quantity has been estimated based on a double yellow centerline strip for the entire project. The project must be marked for passing and 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.

**STAGE 1**
- Maintain traffic on existing roadway with appropriate traffic control devices.
- Remove existing culverts to be replaced with new culverts and construct new culverts under traffic.
- Construct earthwork and paving for main lanes and additional widening on left.
- Install appropriate traffic control devices for Stage 2 detour.

**STAGE 2**
- Install construction pavement markings for Stage 2 and shift traffic onto Stage 2 roadway as shown on plans.
- Construct Stage 3 traffic earthwork and paving for main lanes on right.
- Install appropriate traffic control devices for Stage 3 traffic.

**STAGE 3**
- Install construction pavement markings for Stage 3 and shift traffic to proposed main lanes.
- Remove additional widening used for Stage 2 traffic from STA 28+10.00 to STA 36+10.00.

END OF JOB
- Perform cold milling of existing roadway to tie job at begin and end of project.
- Place final asphalt surface.
- Install final striping.

**RAISED PAVEMENT MARKERS ROLLED**
- Type B: white on cross line.
- Type R: white on cross line.
- Left passing lane segment: 4 each
- Right passing lane segment: 4 each
- Right & left passing lane segment: 4 each
- Left turn lane

**4" DOUBLE WHITE**
- 4" double white on cross line.
## Advance Warning Signs and Devices

<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
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| W05-5       | CORDON BARRI.
  | 48"x48"  | 4       | 4       | 4       | 4          | 4           | 4                   | 4                  | 4             | 3           |
| W05-6       | SHOULDER CLOSED | 48"x48" | 2       | 2       | 2       | 2          | 2           | 2                   | 2                  | 2             | 3           |
| V05-5       | VERTICAL PANELS | 100      | 100      | 100     | 100       | 100          | 100                | 100                 | 100             | 3           |
| V05-6       | TRAFFIC DRUMS | 100      | 100      | 100     | 100       | 100          | 100                | 100                 | 100             | 3           |
| R05-5       | TOTALS: | 484.0     | 195      | 195     | 32        | 32          | 32                | 32                  | 32             | 3           |

**NOTE:** This is a High Traffic Volume Road as defined in Section 694.03 (Standard Specifications for Highway Construction).

The quantity of vertical panels provided in the contract is for one side of the roadway for the full length of the job. This is the maximum quantity required to allow the contractor to notch one mile, backfill to a point where the vertical differential is 4° or less, and then notch another one-mile section. This is the maximum number of vertical panels that will be paid for. Refer to Section 694.02 of the Standard Specifications for Construction Requirements.

## Construction Pavement Markings and Permanent Pavement Markings

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<tr>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
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<th>STAGE 3</th>
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<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS</th>
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<th>THERMOPLASTIC PAVEMENT MARKERS</th>
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**NOTE:** This is a High Traffic Volume Road as defined in Section 694.03 (Standard Specifications for Highway Construction).
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<th>TACK COAT</th>
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<td>230.00</td>
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**Additional for Leveling**

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**Additional for Maintenance of Traffic Widening**

35-120 | 35-120 | TRANSITIONS FROM 2 LANE TO 3 LANE - NOTCHING & WIDENING | 200.00 | 230.00 | 0.10 | 20.00 |

**Additional for Surfacerepair**

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### EROSION CONTROL

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**Rumble Strips in Asphalt Shoulders**

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**Pavement Repair Over Culverts (Concrete)**

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**Asphalt Concrete Patching for Maintenance of Traffic**

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**Soil Log**

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**Clearing and Grubbing**

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**Quantities**

- **Soil Details**
- **Erosion Control**
- **Driveways & Turnouts**
- **Drainage & Disposal of Items**
- **Fencing**
- **Rumble Strips in Asphalt Shoulders**
- **Pavement Repair Over Culverts (Concrete)**
- **Asphalt Concrete Patching for Maintenance of Traffic**
- **Soil Log**
- **Mail Boxes**
- **Clearing and Grubbing**

**Note:** The temporary erosion control devices shown 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 104.09 of the Stand. Spec.

**Rumble Strips in Asphalt Shoulders**

- See Section 104.20 of the Stand. Spec.

**Soil Log**

- See Section 104.08 of the Stand. Spec.
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**SURVEY CONTROL DETAILS**

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**GENERAL NOTES:**

The full width of each section shall be poured monolithically.

Toe walls to be constructed full width at each end of ditch paving, and poured monolithically.

Solid GGD along ditch paving to be placed within 14 days of ditch paving construction.

1" Wide transverse expansion joints shall be placed in concrete ditch paving at 46' intervals. The space shall be filled with approved joint filler complying with AASHTO M213.
DETAILS OF W-BEAM GUARD RAIL

SPLICE BOLT
POST BOLT - SAME EXCEPT LENGTH

W-Beam Guard Rail

Steel Post

Details of Steel Line Post Connections

(G-BEAM)

General Notes:
- All bolts shall be different length to extend through full thickness of the stud and no more than 3/8" of the stud.
- Steel beam guard rails contain intermediate sections.
- Holes are for Type "A" and "B". (optional for Type "C"."

Splice Bolt

Cut Steel Washer

Nut
DETAILS OF WIDENING FOR GUARD RAIL

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

ARKANSAS STATE HIGHWAY COMMISSION
GUARD RAIL DETAILS

NORMAL ROADWAY WIDTH
WIDTH OF SURFACING
NORMAL ROADWAY WIDTH

SHOULDER PIER PROTECTION
MEDIAN PIER PROTECTION

LINES
SHOULDER BARRIER

DATE
REVISION
DRAWN
ACCEPTED

NOTE: NORMAL SECTION TO BE ADJUDGED AFFORD 5'-6" EACH SIDE TO SUPPORT GUARD RAIL.

2'-0" MIN
10'-0" OR FLATTER
SECTION ON TANGENT

SECTION ON CURVE
DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY
**GENERAL NOTES**

1. **WALDORF POSTS** MAY BE WOOD OR METAL. WOOD POSTS SHALL BE PRESSURE TREATED FOR GROUND CONTACT IN ACCORDANCE WITH SECTION 4.1.4.2 OF THE STANDARD SPECIFICATIONS.

2. **ANTI-TWIST PLATES** SHALL BE USED ONLY ON METAL POSTS.


4. **THE WALTER F. SHELF AND PLATFORM THAT IS SHOWN FOR STANDARD 33" BOXES INSTALLATION. THE SHELF AND PLATFORM ARE TO BE MADE OF STEEL.**

5. **METAL BOX WELDING SUPPORTS** SHALL BE 2" SQUARE WITH A WALL THICKNESS OF 1/8" AND A WEIGHT OF 1/2 LBS PER FT. OUTSIDE DIMENSION AND WEIGHT SHALL HAVE A TOLERANCE OF +/- 5% ACCORDING TO ARS.

6. **WALDORF SUPPORT SYSTEM OPTIONS FROM THOSE SHOWN MAY BE USED PROVIDING THEY ARE IN THE AN/QUALIFIED PRODUCTS LIST FOR WALDORF SUPPORTS.**

**DETAILED DRAWING**

**SHIELD**

**PLATFORM**

**SINGLE INSTALLATION**

**DOUBLE INSTALLATION**

**MAILBOX DETAILS**

**STANDARD DRAWING MB-1**

**ARKANSAS STATE HIGHWAY COMMISSION**

**MAILBOX DETAILS**

**STANDARD DRAWING MB-1**

**ARKANSAS STATE HIGHWAY COMMISSION**
CONSTRUCTION SEQUENCE

1. Place structural backfill material to grade, do not compact.
2. Install pipe to grade.
3. Complete structural bedding outside the middle third of the pipe.
4. Complete backfill operations by working perpendicular to the pipe.
5. The pipe diameter is the effective pipe diameter at the point where the pipe is installed, but not more than the pipe diameter on the surface.

NOTE: Structural, backfill, and structural bedding material will not be paid for separately, but compensation may be included in the price bid per linear foot of metal pipe.

EQUIVALENT METAL THICKNESSES AND GAUGES

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EMBANKMENT AND TRENCH INSTALLATIONS

1. Structural, backfill, embankment, and other structural bedding material shall be compacted to the maximum density according to the size of pipe and material used.
2. Installation type 1 or 2 may be used for corrugated steel or aluminum pipe round.
3. Installation type 1 shall be used for corrugated steel or aluminum pipe round with 3" x 1/2" corrugation.
4. Installation type 1 or 2 may be used for corrugated steel or aluminum pipe round with 3" x 1/2" corrugation.

GENERAL NOTES

1. Metal pipe culvert construction shall conform to Arkansas State Highway and Transportation Department Standards applicable for weak rock or concrete fill. Densities and requirements stated in the drawing are to be used for fill conditions up to 100% moisture.
3. Corrugated metal pipe materials and installations shall conform to Section 604 and Job Special Provision Met. Pipe for satisfactory installation.
4. Damage from passage of equipment.
5. The backfill width shall be the outside diameter of the pipe plus 24 inches. The maximum allowable trench width shall be the minimum width practicable for working conditions.
6. Multiple pipe culverts shall be installed with a minimum clearance of 24 inches.
7. Where the crown of pipe is exposed, fill material shall consist of no structural bedding beneath the exposed pipe. Backfill shall consist of at least 10 feet of 4" diameter stone. When fill material is in contact with the bottom of the pipe, the minimum area of fill shall be 10 feet.
8. The pipe shall be installed in such a manner that the fill material is placed around the pipe without disturbing the bedding materials.
9. The pipe shall be installed in such a manner that the fill material is placed around the pipe without disturbing the bedding materials.
10. The pipe shall be installed in such a manner that the fill material is placed around the pipe without disturbing the bedding materials.
11. The pipe shall be installed in such a manner that the fill material is placed around the pipe without disturbing the bedding materials.
12. The pipe shall be installed in such a manner that the fill material is placed around the pipe without disturbing the bedding materials.
MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

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MINIMUM COVER FOR CONSTRUCTION LOADS

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GENERAL NOTES
1. Pipe shall conform to ANSI/AWWA C 351. Type 2 installation shall conform to J/O Special Provision, "Plastic Pipe and Section 8 of the Standard Specifications for Highway Construction, Current Edition".
3. The maximum allowable trench width shall be the minimum width plus a minimum width to ensure working room to property, and safely place and compact backfill, and other structural materials.
4. Materials should be placed as directed by the Engineer at the bottom of the trench, to prevent loss of structural bedding material. A minimum design load of 1 kPa (2.5 lb/ft²) shall be used for structural bedding and/or backfill.
5. When directed by the Engineer, impermeable material that is encountered at the bottom of the excavated trench, shall be used to prevent the leakage of structural bedding materials. The backfill shall be compacted according to the loadings specified by the Engineer. When the remaining cut-off trench is determined by the Engineer to be impermeable, the area identified shall be backfilled with a structural bedding material.
6. When the existing material excavated for the pipe trench, is determined by the Engineer to be impermeable, 1.5 kPa (3.5 lb/ft²) shall be used as the structural bedding materials. The backfill shall be compacted according to the loadings specified by the Engineer. When the excavated area is not available, the Engineer may determine the use of a structural bedding material.
7. Joints for pipe that are not located on the outside corridor of profile, and base material that are selected shall be that will allow the filling of the erosion of profile area.
8. High density polyethylene pipes of diameters other than shown will not be allowed.
9. Joints for high pipe shall meet the requirements for 50% tightness as specified in AASHTO Section B-1.2.4 and Plastic Pipe and Bridge Construction Specifications. Joints shall be installed per manufacturer's recommendations.

STANDARD DRAWING PCP-1

ARKANSAS STATE HIGHWAY COMMISSION

PLASTIC PIPE CULVERT
(HIGH DENSITY POLYETHYLENE)
### GENERAL NOTES

1. PVC pipe shall conform to ASTM F924, class SDE, installation shall conform to job special provision "Plastic pipe and fittings section 455 of the standard specifications for highway construction current edition.


3. The maximum allowable trench width shall be the minimum width plus a sufficient width to ensure working room to properly and safely place and compact backfill and other backfill material.

4. Impervious material should be placed as directed by the engineer at the ends of the culvert to prevent loss of structural bedding when pervious material is used for structural bedding and/or backfill.

5. When directed by the engineer, impervious material that is encountered at the bottom of the excavated trench under the area spaced by the structural bedding should be excavated and replaced with backfill. The impervious material is removed and the excavated area is backfilled with selected backfill material.
CONCRETE PAVEMENT

ASPHALT PAVEMENT

BROKEN LINE STRIPING

4" CONTINUOUS YELLOW

4" SKIP YELLOW

CENTER LINE

4" SKIP YELLOW

CENTER LINE

STRIPES TO BE PAINTED ON CENTER LINE

RAISED PAVEMENT MARKER (TYPE P.)

SOLID LINE STRIPING ON CONCRETE PAVEMENT

4" CONTINUOUS YELLOW

4" SKIP YELLOW

CENTER LINE

4" CONTINUOUS YELLOW

SOLID LINE STRIPING ON ASPHALT PAVEMENT

4" SKIP YELLOW

4" CONTINUOUS YELLOW

CENTER LINE

4" SKIP YELLOW

CENTER LINE

CONCRETE PAVEMENT

RAISED PAVEMENT MARKER (TYPE P.)

Apollo

1" STOPBAR OFFSET STOPBAR 4" FROM CROSSWALK

10" CROSSWALK STRIPES Q FORM EDGE PLACED AT FT. 0.25 OFFSET NEAR EDGE CROSSWALK 3 FT. MAL FROM LINE EDGE

CROSSWALK AND STOPBAR DETAILS

SOLID LINE STRIPING ON ASPHALT PAVEMENT

4" SKIP YELLOW

4" CONTINUOUS YELLOW

CENTER LINE

4" CONTINUOUS YELLOW

Paving Edge Line Marking

Pavement Edge Line Marking

4" CONTINUOUS WHITE

EDGE OF PAVEMENT

4" CONTINUOUS WHITE

RAISED PAVEMENT MARKER (TYPE P.)

PUBLIC WORKS

CONTRACTOR

2" FOR ASPHALT OR CONCRETE PAVEMENT

6" FOR BITUMINOUS SURFACE TREATMENT

3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

GENERAL NOTES:

1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.

2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED ON SECTION 188 OF THE STANDARD SPECIFICATIONS.

3. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES ON 40 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

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</tr>
</tbody>
</table>

### General Notes
1. On pavement with two-way traffic, the super-elevation shall be revolved on the inside pavement edge unless otherwise noted on the plans.
2. Inside pavement revolve shall be used in all cases except on flat-bottomed paved grades.
3. Length for L shall be divided in multiples of 25 ft. or 50 ft.
4. Pavements wider than 2 lanes shall have additional transition length, as follows:
   - 3 lane: 625 ft.
   - 4 lane: 1200 ft.

### Diagram
- **Standard Method When Super-elevation Revolves Around Inner Subgrade Point or Inner Pavement Edge**
- **Diagram Legend**: Use applicable L.

### Notes
- Maintain normal crown on inside until super-elevation exceeds 20.
- Rate of super-elevation shall be determined by straight line method using applicable L.

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**Arkansas State Highway Commission**

**Tables and Method of Super-elevation for Two-Way Traffic**

**Standard Drawing SE-2**
**REINFORCED CONCRETE SPRING BOX**

**DETAILS OF CONCRETE STEPS & WALKS**

**GENERAL NOTES**
1. Rise and tread dimensions of steps may be varied as directed by the engineer. However, tread widths shall be 1' 6" min. All steps in a flight shall have consistent tread & riser dimensions.
2. 1/2" transverse expansion joints shall be placed in concrete walks at 45' intervals.

**REINFORCED CONCRETE BOX**
- P. O. 4, 5, 7, 9, 10, 11
- C. O. 1, 2, 3, 4, 5
- B. O. 5, 6, 7
- A. O. 8, 9, 10
- A. O. 11, 12
- B. O. 13
- C. O. 14

**PVEMENT REPAIR OVER CULVERTS (CONCRETE)**
- P. O. 4, 5, 7, 9, 10, 11
- C. O. 1, 2, 3, 4, 5
- B. O. 5, 6, 7
- A. O. 8, 9, 10
- A. O. 11, 12
- B. O. 13
- C. O. 14

**PVEMENT REPAIR OVER CULVERTS (ASPHALT)**
- Detail showing repair of existing pavement at culvert installations

**POST CONNECTION TO WALL**

**BASE PLATE**

**POST CONNECTION DETAIL**

**DETAILS OF ALTERNATE POST ANCHOR SYSTEM**
- epoxy adhesive anchors
- hand railing details

**STANDARD DRAWING**
- ARKANSAS STATE HIGHWAY COMMISSION

**SPECIAL ITEMS**

**DRAWING**
- DATE: 08-04-87
- REVISION: 07-09-87

**PAGE**
- 75

**SCALE**
- 1/4" = 1'-0"
CLEARING AND GRUBBING

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

EXCAVATION

EXISTING GROUND
INTERCEPTOR OR DIVERSION DITCH
EXISTING GROUND

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

GENERAL NOTE
ALL CUT SLOPES SHALL BE DESIGNED, 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, PERFORM FINAL PHASE OF EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING, STABILIZE DITCHES WITH EMBANKMENT DITCHES, DIVERSION DITCHES, SEDIMENT BAGS, SILT FENCE, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT

DIVERSION DITCH TO BE IN PLACE UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DESIGNED, 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. CONSTRUCT DIVERSION DITCHES, SEDIMENT BAGS, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE FINAL EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
5. PLACE DIVERSION DITCHES AND SLOPE DRAINAGE AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.
TRIANGULAR SILT Dike INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER

TRIANGULAR SILT Dike INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

SECTION D-D

SECTION E-E

TRIANGULAR SILT Dike INSTALLATION FOR CONTINUOUS BARRIER

GENERAL NOTES

1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR Silt dikes as shown hereto, placed and used as a continuous silt barrier at the top of the excavation to prevent siltation of the drainageway. These dike sections shall be installed and located as soon as construction allows or as directed by the engineer.

2. TRIANGULAR Silt dikes shall be triangular-shafted having a height of at least 6' IFC in the center with equal sides of a 6' 12" X 24" base. The triangular silt dikes shall be installed as shown herein. The outer cover shall be Silt-baffle or similar high-quality fabric. These sections shall be spaced at least 30" apart. These sections shall be non-entrapping and resistant to heat and ultraviolet radiation meeting requirements for fabric. The top shall be 6' IFC high in the center of the dike. The metal top shall be placed on the silt dike at least 12" above the ground with wire staples, and the metal top shall be placed flush with the ground. These sections shall be spaced at least 6' IFC apart. Staples shall be placed as shown on these details.

3. THE CONTRACTOR SHALL INSPECT ALL DYES AFTER EACH WEEKLY INSTALLATION. AT LEAST ONE WRAP OF FABRIC SHALL BE USED AT ANY CURVE AND/OR ON MOUNTAIN TOPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAMAGE OR NEEDED WORK AS DUE TO A CONSTRUCTION OR MAINTENANCE ACTIVITY. THE CONTRACTOR SHALL REPLACE ANY DAMAGES OR NEEDED WORK AS DUE TO A CONSTRUCTION OR MAINTENANCE ACTIVITY. THE CONTRACTOR SHALL REPLACE ANY DAMAGES OR NEEDED WORK AS DUE TO A CONSTRUCTION OR MAINTENANCE ACTIVITY.

4. ACCEPTED TRIANGULAR Silt Dikes installed as per design and approved after being used for construction shall be removed and not placed any additional Silt Dikes.

NOTE: SILT DIKE SHOULD BE USED ONLY FOR DROP INLETS AT DRAIN LOCATIONS.

SYMBOLS:

□ TO BE USED TO DELINEATE DEVICES ON PLANS

ARKANSAS STATE HIGHWAY COMMISSION

TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-4
GENERAL NOTES:

These installations are used where normal fencing installation would cause the collection of drift in the channel or the depressions will not permit normal installation. Installations will be made only where permitted by the Engineer.

When a fence line approaches a ditch, valley or depression, the last post on level ground shall be placed close enough to the edge of the drop off that the fence may be brought to the post in the depression without touching the ground. Posts shall be placed on the up grade side of the depression. The posts shall be spaced to be free of snaring. The fence shall continue on grade and the gulles or depressions treated by auxiliary fences as shown.

Unmentioned items not included in the contract unit price bid for wire fence or chain link fence.

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING

WF-2

73
8+00 - BEGIN JOB 09069 - BEGIN NOTCH & WIDENING SECTION - BEGIN 200' LANE ADDITIONAL TAPER FOR RIGHT PASSING LANE - BEGIN GUARDRAIL ON RIGHT - END 100' CONNECTION TO EXISTING LANES

7+00 - BEGIN 100' CONNECTION TO EXISTING LANES

Area Cut:  780.9 (excavation)
Area Fil:  0 (embankment)
Area Cut:  518.0 (rock buttress)
Area Fill: 136.5 (rock fill)
Volume Cut:  0 (excavation)
Volume Fill:  0 (rock fill)
22+50 - END GUARDRAIL ON RIGHT

Area Cut: 1681.5 (excavation)
Area Fill: 22.4 (embankment)
Area Cut: 420.5 (rock buttress)
Area Fill: 176.5 (rock fill)

Volume Cut: 6472.6 (excavation)
Volume Fill: 9.7 (embankment)
Volume Cut: 1449.2 (rock buttress)
Volume Fill: 657.8 (rock fill)
STA 32+80 CONSTRUCT
APPROACH ON LT 208 CL 10S.
INCLUDES 40 CU YD UNCLASSIFIED EXCAVATION &
43 CU YD COMPACTED EMBANKMENT.

Area Cut: 485.1 (excavation)
Area Fill: 2.4 (embankment)
Area Cut: 0 (rock buttress)
Area Fill: 0 (rock fill)

Volume Cut: 375.3 (excavation)
Volume Fill: 1.0 (embankment)
Volume Cut: 0 (rock buttress)
Volume Fill: 0 (rock fill)

STA 32+59 CONSTRUCT
TURNOUT ON RT 37 CL 10S.

Area Cut: 436.2 (excavation)
Area Fill: 0 (embankment)
Area Cut: 0 (rock buttress)
Area Fill: 0 (rock fill)

Volume Cut: 1136.9 (excavation)
Volume Fill: 0 (embankment)
Volume Cut: 0 (rock buttress)
Volume Fill: 0 (rock fill)
42+60 - END RIGHT PASSING LANE - BEGIN
540' DROP LANE TAPER FOR RIGHT PASSING LANE

42+00

Area Cut: 324.3 (excavation)
Area Fill: 8.2 (embankment)
Area Cut: 304.1 (rock buttress)
Area Fill: 0 (rock fill)

Volume Cut: 1163.0 (excavation)
Volume Fill: 15.2 (embankment)
Volume Cut: 700.1 (rock buttress)
Volume Fill: 0 (rock fill)

41+00 - BEGIN GUARDRAIL ON RIGHT

Area Cut: 303.8 (excavation)
Area Fill: 0 (embankment)
Area Cut: 74.0 (rock buttress)
Area Fill: 0 (rock fill)

Volume Cut: 561.6 (excavation)
Volume Fill: 0 (embankment)
Volume Cut: 114.1 (rock buttress)
Volume Fill: 0 (rock fill)
Area Cut: 232.6 (excavation)
Area Fill: 5.6 (embankment)
Area Cut: 717.1 (rock buttress)
Area Fill: 0 (rock fill)

50+00

Volume Cut: 766.5 (excavation)
Volume Fill: 31.1 (embankment)
Volume Cut: 1940.9 (rock buttress)
Volume Fill: 0 (rock fill)

Area Cut: 181.3 (excavation)
Area Fill: 11.2 (embankment)
Area Cut: 330.9 (rock buttress)
Area Fill: 0 (rock fill)

49+00

Volume Cut: 474.0 (excavation)
Volume Fill: 34.4 (embankment)
Volume Cut: 612.8 (rock buttress)
Volume Fill: 124.4 (rock fill)

48+50 - BEGIN GUARDRAIL ON RIGHT
55+89 - FOR INFORMATION PURPOSES ONLY

56+30 - END 50' CONNECTION TO EXISTING LANES - END 270' LANE ADDITIONAL TAPER FOR LEFT PASSING LANE

55+80 - END JOB 090169 - END NOTCH & WIDENING SECTION - BEGIN 50' CONNECTION TO EXISTING LANES

Area Cut: 265.5 (excavation)
Area Fill: 2.9 (embankment)
Area Cut: 133.0 (rock buttress)
Area Fill: 0 (rock fill)

Volume Cut: 892.7 (excavation)
Volume Fill: 7.3 (embankment)
Volume Cut: 726.7 (rock buttress)
Volume Fill: 0 (rock fill)

STA 55+80 TO STA 55+89