"A FULLY CONTROLLED ACCESS FACILITY"
ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

NO. OF HWY. 18 - MISSOURI ST. LINE (S)
MISSISSIPPI COUNTY
ROUTE 55 SECTION 12
JOB BB1006
FED. AID PROJ. BIM-PEN-B55-0(209)

ARMS: D, NO.
NO. OF HWY. 18 - MISSOURI ST. LINE (S)

NOT TO SCALE

EXISTING BRIDGE DATA

1. STA. 405-37.98 BR. END
   149.14, 89.0020, NO. 43168
   40° CLEAR ROADWAY
   STA. 406-00.12 BR. END
   RETAIN

2. STA. 405-36.88 BR. END
   149.14, 89.0020, NO. 43169
   40° CLEAR ROADWAY
   STA. 405-08.22 BR. END
   RETAIN

STATE HWY. 165 OVERPASS
STA. 10-94.78 BR. END
STA. 10-94.78 BR. END
29° CLEAR ROADWAY
STA. 10-94.25 BR. END

STA. 405-37.08 = STA. 406-83.02
TOTAL LENGTH OF EXCEPTED = 704 FT.
MEASURED ALONG C.L. MEDIAN

LENGTH IS COMPUTED ALONG C.L. MEDIAN

GROSS LENGTH OF PROJECT 22250.00 FEET OR 4.205 MILES

NET - ROADWAY 22250.86 - 4.277 MILES
NET - BRIDGES 0.00 - 0.000 MILES
NET - PROJECT 22250.86 - 4.277 MILES

P.J. JOB BB1006

08/14/14

DESIGN TRAFFIC DATA

START YEAR - 2034
2014 ADT - 19,300
2034 ADT - 28,700
2034 DWH - 30,900
DIRECTIONAL DISTRIBUTION - 0.60
TRUCKS - 480
DESIGN SPEED - 70 MPH
FULL DEPTH CONSTRUCTION - TANGENT SECTION
(Shown in Direction of Traffic)

LEFT MAIN LANES

STA 430+6.05 - STA 444+6.05
STA 449+0.48 - STA 455+0.48
STA 457+23.62 - STA 463+23.62
STA 474+02.00 - STA 486+02.00

RIGHT MAIN LANES

STA 430+56.05 - STA 444+56.05
STA 449+22.38 - STA 455+22.38
STA 457+44.52 - STA 463+44.52
STA 474+02.00 - STA 486+02.00

NOTES:
1. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAPPED. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
2. AGGREGATE BASE COURSE (CLASS II) SHALL BE UNIFORMLY COMPACTED, STABLE AND FREE OF SEGREGATED AREAS. THE DENSITY REQUIREMENTS OF SECTION 303 SHALL BE WAIVED.
3. 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.

TYPICAL SECTIONS OF IMPROVEMENT
Rubblize & Overlay - Tangent Section

(Shown in Direction of Traffic)

Left Main Lanes

STA. 252+00.00 - STA. 264+00.00
STA. 264+00.00 - STA. 430+645
STA. 444+645 - STA. 449+048
STA. 463+23.62 - STA. 474+02.00

Right Main Lanes

STA. 252+00.00 - STA. 264+00.00
STA. 264+00.00 - STA. 430+56.05
STA. 444+56.05 - STA. 449+22.38
STA. 463+44.52 - STA. 474+02.00

Notes:
1. The final 2" of surface course is to be placed after all other courses have been laid. Longitudinal joints shall be at lane lines.
2. Aggregate base course (class B) shall be uniformly compacted, stable, and free of segregated areas. The density requirements of Section 303 shall be waived.
3. Asphalt concrete leveling of existing pavement shall be placed only if and where directed by the Engineer. Calculations for the amount of and/or leveling operations shall be performed before overlay calculations will not be paid for directly, but payments will be considered included in the various items.
ACCELERATION LANE - FULL DEPTH CONSTRUCTION

**SHOWN IN DIRECTION OF TRAFFIC**

**LEFT MAIN LANE**

STA. 403+79.55 - STA. 423+31.23

STA. 457+09.51 - STA. 462+05.61

**ACCELERATION LANE - RUBBLIZE & OVERLAY**

**SHOWN IN DIRECTION OF TRAFFIC**

**LEFT MAIN LANES**

STA. 259+06.07 - STA. 269+04.06

STA. 481+65.61 - STA. 485+90.00
TEMPORARY ACCELERATION LANE
FOR MAINTENANCE OF TRAFFIC - RIGHT MAIN LANES
(SHOWN IN DIRECTION OF TRAFFIC)

RIGHT MAIN LANES

STA. 408+00.00 - STA. 417+24.67
STA. 417+59.53 - STA. 426+62.61

LEFT MAIN LANES

STA. 450+63.77 - STA. 459+56.79
MAIN LANE CROSSOVER RAMPS
FOR
MAINTENANCE OF TRAFFIC
(SHOWN IN DIRECTION OF TRAFFIC)

TEMPORARY INTERCHANGE RAMPS
FOR
MAINTENANCE OF TRAFFIC
(SHOWN IN DIRECTION OF TRAFFIC)

TYPICAL SECTION OF IMPROVEMENT
WIRE ROPE SAFETY FENCE

MAIN LANES

STA. 223+68.47 - STA. 486+02.00
DETAIL FOR MAIN LANE TRANSITION AT HWY. 150 OVERPASS

LEFT MAIN LANES
STA. 430+61.15 - STA. 444+61.15

RIGHT MAIN LANES
STA. 430+56.05 - STA. 444+56.05

SPECIAL DETAILS
NOTES FOR PIPE UNDERDRAINS:

1. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS."

2. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 2 FOR TYPE "A" PAYMENT FOR GEOTEXTILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BID FOR 4" PIPE LATERALS IN ACCORDANCE WITH SECTION 601 OF THE STANDARD SPECIFICATIONS.

3. 4" PIPE UNDERDRAINS SHALL BE PLACED ON THE LOW SIDE OF SURFACE ELEVATED ROADWAYS AS SHOWN ON THE TYPICAL SECTIONS. 4" PIPE UNDERDRAINS SHALL BE CONNECTED TO MEAN DRAIN INLETS WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DRAIN INLETS SHALL BE INCLUDED IN THE PRICE BID FOR 4" PIPE UNDERDRAINS.

4. THE LOCATION OF ALL LATERALs SHALL BE MARKED WITH 4" X 10" PERMANENT MARKING TAPE (type R2W) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

5. 4" PERMANENT SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN HEREIN. LATERALS WILL BE MEASURED AND PASSED FOR AS 4" PVC UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PASSED FOR BY THE UNIT IN ACCORDANCE WITH SECTION 601 OF THE STANDARD SPECIFICATIONS.

6. THE ROYAL SCREEN SHOWN HEREIN SHALL BE USED IN LDI'S IF THE PIPE MESH OPENING SCREEN SHOWN IN STANDARD DRAWING PD-4. PAYMENT FOR THE ROYAL SCREEN SHALL BE INCLUDED IN THE PRICE BID FOR 4" PIPE UNDERDRAINS.

7. AT LOCATIONS WHERE A SINGLE LATERAL IS USED, THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS:
   a. INSTALL OUTLET PROTECTOR AS SHOWN ON STANDARDS DRAWING PD-4. PAYMENT FOR THE UNDUG PROPOSED 2" INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOLE. PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR EACH "UNDERDRAIN OUTLET PROTECTORS."

8. UNDERDRAIN COVER - PAYMENT SHALL BE INCLUDED IN THE PRICE BID FOR 4" PIPE UNDERDRAINS.

PLAN DETAIL OF PIPE UNDERDRAIN LATERALS

SECTION A-A

LEFT MAIN LANE
STA. 259+00.07 - STA. 455+01.48
STA. 457+23.62 - STA. 486+05.00

RIGHT MAIN LANE
STA. 259+00.07 - STA. 455+02.05
STA. 457+44.54 - STA. 486+02.00

NOTE:
STANDARD DIFFERENCES BETWEEN THE TWO LANE PROFILES MAY REQUIRE ADJUSTMENTS TO THE DESIGN.

DETAIL OF RODENT SCREEN

LEFT MAIN LANE
STA. 259+00.07 - STA. 455+01.48
STA. 457+23.62 - STA. 486+02.00

RIGHT MAIN LANE
STA. 259+00.07 - STA. 455+22.05
STA. 457+44.54 - STA. 486+02.00

NOTE:
IN LIEU OF LAPPING GEOTEXTILE FABRIC, THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, UTILIZE AN ALTERNATE METHOD FOR PROVIDING A POSITIVE CLOSURE.

SPECIAL DETAILS
LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

DETAILS OF RUMBLE STRIPS

SHOULDER

TRAVEL LANE

EDGE LINE

NOTES:

1. ALIGNMENT OF RUMBLE STRIPS SHALL GENERALLY BE STRAIGHT AND OFFSET APPROXIMATELY 4\degree FROM THE OUTER EDGE OF THE EDGE LINE. THIS OFFSET MAY BE ADJUSTED TO ACCOMMODATE VARIATIONS IN THE EDGE LINE.

2. THE 1/8" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 16\degree LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

3. RUMBLE STRIPS SHALL NOT BE INSTALLED ON BRIDGE DECKS, APPROACH SLAB, OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULders.

PLAN VIEW

DETAIL OF SOLID SODDING AROUND DROP INLET

SPECIAL DETAILS
SECTION DETAILS OF WIDENING FOR GUARDRAIL

NOTE: REFER TO STANDARD DRAWINGS GR-8, GR-9, GR-9A, GR-10, GR-10A, GR-11 & GR-1 FOR ADDITIONAL INFORMATION.

SECTION VIEW

MINIMUM THREAD DEPTH 7.5"

ELEVATION VIEW

SCREW THREADS LEFT HAND/RIGHT HAND

NOTE: REFER TO "WIRE ROPE SAFETY FENCE (MRSF) SPECIFICATIONS" SPECIAL PROVISION FOR ADDITIONAL REQUIREMENTS.

THREAD TERMINAL DETAIL

TYPICAL LAYOUT OF GUARDRAIL AT BRIDGE ENDS

* THE CONTRACTOR SHALL DRILL 1" DIA. HOLES FOR THE NEW THRE E BEAM CONNECTION BOLTS IN THE EXISTING TRANSITION RAIL. CARE SHALL BE EXERCISED TO AVOID SHEAR PLANE PROBLEMS. IN THE BUS LANE, THE MEDIAN GUARDRAIL TERMINAL IS CONSIDERED INCLUDED IN THE VARIOUS CONTRACT TERMS. SEE STANDARD DRAWING OR-10 FOR ADDITIONAL DETAILS.
**SPECIAL DETAILS**

1. **Detail of Wire Rope Safety Fence at Existing Bridge Ends**
   - WRSF (Wired Rope Safety Fence) and existing guardrail on the same side of median.
   - Guardrail at bridge approach begins WRSF.
   - Refers to plans for station 435+14.65 to 435+14.65.

2. **Detail of Shoulder Widening for Guardrail with WRSF**
   - For existing pavement.
   - Aggregate base course Class T, 100% Comp, depth var, tons/sta.

3. **Detail of Shoulder Widening for Guardrail with WRSF**
   - For full depth pavement.
   - Aggregate base course Class T, 100% Comp, depth var, tons/sta.

**Notes:**
- WRSF = Wired Rope Safety Fence
- STA = Station
- VAR = Variable
- ADW = Aggregate Base Course
- TONS = Tons
- STA = Station
Details of shoulder widening for guardrail and overlaps with ends of wire rope safety fence.
NOTES:
- PERMITS CONTROLS SHALL BE PLACED AS CLEARING AND GRABING OPERATIONS ARE STARTED.
STA, 223+68.47
BEGIN W.R.S.P. ON N.B. FOEISLOPE
L.M. 67.33

DATE OF
REVISION

REVISION

LEGEND

- WATTLE DITCH CHECK
- SAND BAG DITCH CHECK
- Silt Fence
- DROP INLET Silt Fence
- Construction Area

NOTE: DEVICES INSTALLED UNDER STAGES 1 & 2 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.

TEMPORARY EROSION CONTROL DETAILS - STAGE III-A
STA. 223+68.47
BEGIN N.B. FORESLOPE
L.M. 61.33

DATE OF
REVISION

LEGEND

STATION

REVISION

NOTE: DEVICES INSTALLED UNDER STAGES 1 & 2
SHALL REMAIN IN PLACE UNTIL FURTHER STABILIZATION
OF THE AREA HAS BEEN ACCOMPLISHED.
TEMPORARY EROSION CONTROL DETAILS - STAGE IV-A
DATE OF
REVISION

REVISION

LEGEND

- BATTLE DITCH CHECK
- SAND BAG DITCH CHECK
- SILT FENCE
- DRAIN INLET SILT FENCE
- CONSTRUCTION AREA

NOTE: DEVICES INSTALLED UNDER STAGES 1 & 2 SHALL REMAIN IN PLACE UNTIL FAIR STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.
TEMPORARY EROSION CONTROL DETAILS - STAGE IV-B
NOTE: DEVICES INSTALLED UNDER STAGES 1 & 2 SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION OF THE AREA HAS BEEN ACCOMPLISHED.
TEMPORARY Rumble TAPES (2) TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

TRAFFIC DRUMS 60° G.C. 500' TAPER FOR LANE CLOSURE

TRAFFIC DRUMS 100° G.C. 500' STABILIZING ZONE

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

19 TRAFFIC DRUMS

131 W1-8 160° X 30'1
EVENLY SPACED ON TAPER

RT. LANE CLOSURE

SPEED LIMIT SIGNS ARE ALSO PROVIDED FOR PLACEMENT AT ENTRANCE RAMPs
WITHIN THE WORK ZONE.

131 W1-8 160° X 30'1
EVENLY SPACED ON TAPER

DIVERSION FOR RT. LANE WORK ZONE

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

25 TRAFFIC DRUMS

DIVERSION FOR LT. LANE WORK ZONE

LANE CLOSURE

MAINTENANCE OF TRAFFIC
CONTRACTOR SHALL PERFORM ALL WORK ASSOCIATED WITH RAISING THE EXISTING HWY. 150 BRIDGE AND BRIDGE SHALL BE OPEN TO TRAFFIC BEFORE MARCH 31, 2015.

NOTES:

1. SPECIAL SIGNS SHALL BE CONSTRUCTED USING ORANGE TYPE III BACKGROUND WITH BLACK TYPE V LEGEND AND BORDER.

2. PAYMENT FOR MOUNTING THE GUIDE SIGNS ON TEMPORARY SUITABLE, RELOCATING THE SIGNS AS REQUIRED DURING VARIOUS PHASES OF CONSTRUCTION, AND REMOVING AND DISPOSING OF THE SIGNS WHEN THE PROJECT IS COMPLETE SHALL BE SUBMITTED TO SECTION 60A, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION.

3. EXACT PLACEMENT OF SIGNS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
CONSTRUCTION PAVEMENT WARNINGS FOR THIS STAGE:

RAMP A: STA 440+00.00 TO STA 454+16.74
RAMP C: STA 467+78.00 TO STA 477+00.00
RAMP D: STA 465+10.00 TO STA 476+16.00
RAMP E: STA 457+00.00 TO STA 468+10.00
RAMP H: STA 243+40.00 TO STA 254+60.00
RAMP RA-1: STA 259+00.00 TO STA 274+50.00
RAMP RA-2: STA 278+50.00 TO STA 296+00.00

CONSTRUCT TEMPORARY CULVERT FOR THIS STAGE:

RAMP H-1: STA 233+60.00 TO STA 235+80.00, CONST. 8"X60" RCP

STAGE IA OPERATIONS:

- CLOSE OUTSIDE LANES & SHOULDERS IN BOTH DIRECTIONS TO CONSTRUCT INTERCHANGE TEMPORARY RAMPS CONNECTING TO OUTSIDE SHOULDERS OF 15G LANES & OUTSIDE MAIN LINE PATCHING.

DENOTES CONSTRUCTION FOR W/D/T, THIS STAGE.

DETOUR RAMPS CURVE DATA

C/L RAMP H-1
P1 = 8%82.372
P2 = 1110.92
L = 700.92
R = 2098.35
P3 = 1648.09
P4 = 2150.10
P5 = 2617.86
P6 = 3094.35

C/L RAMP H-2
P1 = 8%82.372
P2 = 1110.92
L = 700.92
R = 2098.35
P3 = 1648.09
P4 = 2150.10
P5 = 2617.86
P6 = 3094.35

MAINTENANCE OF TRAFFIC DETAILS - STAGE IA
CONSTRUCTION TEMPORARY CALVERT FOR THIS STAGE:

STA. 246+50.00 TO STA. 249+63.00 CONSTR. 6'X35' RCP - MEDIAN = 150' FT.

STA. 248+70.00 TO STA. 251+80.00 CONSTR. 8'X35' RCP - MEDIAN = 450' FT.

STA. 247+55.00 TO STA. 250+65.00 CONSTR. 8'X35' RCP - MEDIAN = 190' FT.

STA. 246+75.00 TO STA. 249+85.00 CONSTR. 8'X35' RCP - MEDIAN = 80' FT.

STA. 246+375.00 TO STA. 249+475.00 CONSTR. 8'X35' RCP - MEDIAN = 100' FT.

STA. 246+60.00 TO STA. 250+70.00 CONSTR. 8'X35' RCP - MEDIAN = 200' FT.

STA. 246+40.00 TO STA. 250+50.00 CONSTR. 8'X35' RCP - MEDIAN = 100' FT.

STA. 246+50.00 TO STA. 249+60.00 CONSTR. 8'X35' RCP - MEDIAN = 100' FT.

STA. 246+60.00 TO STA. 249+70.00 CONSTR. 8'X35' RCP - MEDIAN = 100' FT.

STA. 246+70.00 TO STA. 249+80.00 CONSTR. 8'X35' RCP - MEDIAN = 100' FT.

TRENCHING & SHOULDER PREPARATION FOR THIS STAGE:

STA. 250+00 TO STA. 254+50 = 2450' FT.

STAGE B OPERATING:

1. CLOSE INSIDE LANES & SHOULDERS IN BOTH DIRECTIONS.

2. PATCH WB LANES, TRENCH & SHOULDER PREPARATION

3. RAINING W.D.O. OVERPASS

DENOTES CONSTRUCTION FOR W.D.O. THIS STAGE.

DENOTES TRENCH & SHOULDER PREPARATION FOR W.D.O. THIS STAGE.

MAINTENANCE OF TRAFFIC DETAILS - STAGE IB
STAGE IIb OPERATIONS:
1. Retain temporary precast concrete barrier wall on NB lanes.
2. Retain SB traffic through crossover to NB lanes.
3. Shift Traffic from Ramps B-2 & C-2 to RAMP D-2 & C-2 respectively.
4. Const. SB lane gaps.

SB Lanes close for construction

PROPOSED OVERLAY

LOCATION OF CONCRETE BARRIER FOR NB LANES

CONSTRUCTION PAVEMENT MARKINGS FOR THIS STAGE:
- RAMP B-2: STA 20+05.64 TO STA 23+49.67
- RAMP C-2: STA 62+60.00 TO STA 64+41.07
- RAMP D-2: STA 62+60.00 TO STA 64+41.32
- RAMP C-2: STA 20+00.00 TO STA 23+15.75
- RAMP C-2: STA 20+00.00 TO STA 23+15.75
- LT. OF RAMP, ACCW. LANE & TAPER STA 400+00.00 TO STA 417+74.00
- LT. OF RAMP, SHP LANE DIVIDER STA 400+00.00 TO STA 417+74.00

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS FOR THIS STAGE:
- LT. RAMP, ACCW. LANE & TAPER EDGE LINE STA 477+00.00 TO STA 487+50.00
- LT. RAMP, SHP LANE DIVIDER STA 420+00.00 TO STA 427+30.00

MAINTENANCE OF TRAFFIC DETAILS - STAGE IIb
MAINTENANCE OF TRAFFIC DETAILS - STAGE IIIB
365+00 370+00 375+00

SERVICE RD.

FURNISHING AND INSTALLING PCPB

CONSTR. PAVEMENT MARKING

C-1 1.55

C-9 1.55

C-9 1.55

SERVICE RD.

380+00 385+00 390+00

SERVICE RD.

FURNISHING AND INSTALLING PCPB

CONSTR. PAVEMENT MARKING

C-1 1.55

C-9 1.55

C-9 1.55

SERVICE RD.

MAINTENANCE OF TRAFFIC DETAILS - STAGE IIIA
STAGE III B OPERATIONS:
1. RETAIN TEMPORARY PRECAST CONCRETE BARRIER WALL ON SB Lanes.
2. RETAIN NB TRAFFIC THROUGH CROSSTRESS TO SB Lanes.
3. SHIFT TRAFFIC FROM RAMP "A" & "F" TO RAMP "A-2" & "F-2", RESPECTIVELY.
4. RESOLVE NB LANE GAPS.
5. CONSTRUCT CONCRETE DISSIT FOR WIRE ROPE SAFETY FENCE.

LOCATION OF CONCRETE BARRIER FOR SB Lanes

LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER FOR BRIDGE SECTIONS

SB Lanes
STA 456+53.00 TO STA 456+87.22

CONSTRUCTION PAVEMENT MARKINGS FOR THIS STAGE:
RAMP "A-2" STA 227+00 TO STA 227+45.00 = 472 FT.
RAMP "F-2" STA 250+00 TO STA 250+45.00 = 453 FT.
RAMP "A-2" STA 250+45.00 TO STA 250+90.00 = 453 FT.

REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS FOR THIS STAGE:
RAMP "A-2" STA 250+90.00 TO STA 237+00 = 190 FT.
RAMP "A-2" STA 237+00 TO STA 227+00 = 100 FT.

MANTAINANCE OF TRAFFIC DETAILS - STAGE III B
**Stage IVA Operations:**

1. Route NB traffic to outside lane of LT main lanes & SB traffic to outside lane of RT main lanes.
2. Remove precast concrete barriers.
3. Close inside lanes & shoulders in both directions.
4. Remove temporary crossovers & median interchange ramps.
5. Construct final lift of surface on SB & NB inside lanes.

Denotes removal of temporary detour this stage.
MAINTENANCE OF TRAFFIC DETAILS - STAGE IVA
SERVICE RD.

1-35" SB FINAL STRIPING - STA 285+00 TO STA 306+78
HIGH PERFORMANCE PAVEMENT MARKING
INSIDE EDGE LINES = 1,520 L.I./10 FT, 4" YELLOW
SHRIMP LANE DIVIDERS = 360 L.I./10 FT, 4" WHITE
OUTSIDE EDGE LINES = 1,520 L.I./10 FT, 4" WHITE
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)
AST = 30 C.C. ON SHRIMP LANE DIVIDERS = 36 EACH

REVIEW ALSO TO STANDARD DRAWING PM-2 FOR
DETAILS OF PLACEMENT OF STRIPING AND
PAVEMENT MARKERS ON EXIT AND ENTRANCE RAMPS.

SERVICE RD.

300+00

1-35" SB FINAL STRIPING - STA 300+00 TO STA 318+76
HIGH PERFORMANCE PAVEMENT MARKING
INSIDE EDGE LINES = 11,349 L.I./10 FT, 4" YELLOW
SHRIMP LANE DIVIDERS = 2,837 L.I./10 FT, 4" WHITE
OUTSIDE EDGE LINES = 11,349 L.I./10 FT, 4" WHITE
RAISED PAVEMENT MARKERS TYPE II (WHITE/RED)
AST = 50 C.C. ON SHRIMP LANE DIVIDERS = 142 EACH

REVIEW ALSO TO STANDARD DRAWING PM-2 FOR
DETAILS OF PLACEMENT OF STRIPING AND
PAVEMENT MARKERS ON EXIT AND ENTRANCE RAMPS.
REFER ALSO TO STANDARD DRAWING PM-2 FOR DETAILS OF PLACEMENT OF STRIPING AND PAVEMENT MARKERS ON EXIT AND ENTRANCE RAMPS.
REFER ALSO TO STANDARD DRAWING FM-2 FOR DETAILS OF PLACEMENT OF STRIPING AND PAVEMENT MARKERS ON EXIT AND ENTRANCE RAMPS.
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### CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

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<td></td>
</tr>
<tr>
<td>THERMOPLASTIC PAVEMENT MARKINGS TYPE (C) (R8-9-2)</td>
<td>1283</td>
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<tr>
<td>THERMOPLASTIC PAVEMENT MARKINGS RED/WHITE (R8-9-3)</td>
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<tr>
<td>THERMOPLASTIC PAVEMENT MARKINGS WHITE/YELLOW (R8-9-4)</td>
<td>1283</td>
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<tr>
<td>THERMOPLASTIC PAVEMENT MARKINGS WHITE/YELLOW/WHITE/BLACK (R8-9-5)</td>
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<tr>
<td>TOTALS</td>
<td>31805</td>
<td>268165</td>
<td>14235</td>
<td>864</td>
<td>1283</td>
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</tr>
</tbody>
</table>

**NOTE:** This is a high traffic volume road as defined in Section 64.2.2. Standard Specifications for Highway Construction 2014 Edition.

**NOTE:** Thermoplastic Pavement Markings may be substituted for Painted Profile Pavement Markings at intersections, islands, turnouts, and other similar locations as directed by the Engineer.

---

### AUTOMATED WORK ZONE INFORMATION SYSTEM

<table>
<thead>
<tr>
<th>LOCATION</th>
<th><em>AWM WORKSTATION</em></th>
<th><em>AWM OPERATOR</em></th>
<th><em>DEVICE RELOCATION</em></th>
<th><em>CUBED CIRCUIT</em></th>
<th><em>PUBLIC NOTIFICATION SYSTEM</em></th>
<th><em>VARIOUS MESSAGES</em></th>
<th><em>VEHICLE DETECTION SYSTEM</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>7.00</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>12</td>
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</tbody>
</table>

**TOTALS** | 8.8 | 11 | 4 | 2 | 4 | 2 | 12 |

*Quantities are estimated. Refer to Section 104.49 of the Standard Specifications, Refer to "Automated Work Zone Information System"特殊 Provision.

---

### EROSION CONTROL

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>SEEDING</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>SECOND SEEDING APPLICATION</th>
<th>TEMPORARY SEEDING</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>WATTLE (20&quot;)</th>
<th>SAND BAG DITCH CHECKS</th>
<th>DRAIN INLET</th>
<th>SILT FENCE</th>
<th>SILT FENCE</th>
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<tbody>
<tr>
<td>ACRE</td>
<td>TON</td>
<td>DPE</td>
<td>AQE</td>
<td>WDL</td>
<td>WDL</td>
<td>DPE</td>
<td>AQE</td>
<td>WDL</td>
<td>WDL</td>
<td>AQE</td>
<td>WDL</td>
<td>WDL</td>
<td>DPE</td>
<td>AQE</td>
</tr>
<tr>
<td>ENTIRE STAGE II-B</td>
<td>4.50</td>
<td>13.48</td>
<td>8.80</td>
<td>705.8</td>
<td>6.80</td>
<td>7.50</td>
<td>7.50</td>
<td>142.0</td>
<td>4</td>
<td>980</td>
<td>1212</td>
<td>79</td>
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<tr>
<td>ENTIRE STAGE II-B</td>
<td>37.90</td>
<td>75.85</td>
<td>37.90</td>
<td>3468.8</td>
<td>37.90</td>
<td>36.00</td>
<td>36.00</td>
<td>775.2</td>
<td>202</td>
<td>44</td>
<td>980</td>
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<td>79</td>
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<td>0.00</td>
<td>103.2</td>
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</table>

**TOTALS:** | 44.30 | 99.34 | 84.00 | 4079.3 | 44.00 | 53.30 | 53.30 | 1042.0 | 202 | 44 | 980 | 1212 | 79 |

*Quantities are estimated. Refer to Section 104.49 of the STD. Specifications.

**NOTE:** The temporary erosion control devices shown above and on the plans shall be installed in such a sequence as to restrict erosion and sedimentation. In U.S. waters as explained by the National Pollutant Discharge Elimination System Permit.

*Quantities are estimated. See Section 104.49 of the STD. Specifications.
### Asphalt Concrete Patching for Maintenance of Traffic

**Quantities**

<table>
<thead>
<tr>
<th>Location</th>
<th>Ton</th>
<th>Tack Coat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Project - To be used and where directed by engineer</td>
<td>100</td>
<td>200</td>
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</tbody>
</table>

**Concrete Barrier Wall**

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Lfn. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>427+48-00</td>
<td>Lt. of L. Manholes</td>
<td>20</td>
</tr>
<tr>
<td>427+48-00</td>
<td>Rt. of R. Manholes</td>
<td>20</td>
</tr>
<tr>
<td>427+48-00</td>
<td>Lt. of L. Manholes</td>
<td>20</td>
</tr>
<tr>
<td>427+48-00</td>
<td>Rt. of R. Manholes</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>108</td>
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</tbody>
</table>

### Rubbleizing Portland Cement Concrete Pavement

<table>
<thead>
<tr>
<th>Station</th>
<th>Station</th>
<th>Location</th>
<th>Length</th>
<th>Avg. Width</th>
<th>Qty.</th>
<th>Eq.Vol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>295+00-25</td>
<td>294+00-00</td>
<td>Lt. manholes - paving transition</td>
<td>125</td>
<td>20</td>
<td>2940.0</td>
<td></td>
</tr>
<tr>
<td>295+00-25</td>
<td>294+00-00</td>
<td>Lt. manholes</td>
<td>1064</td>
<td>24</td>
<td>25649.3</td>
<td></td>
</tr>
<tr>
<td>295+00-25</td>
<td>294+00-00</td>
<td>Lt. manholes</td>
<td>1064</td>
<td>24</td>
<td>25649.3</td>
<td></td>
</tr>
<tr>
<td>295+00-25</td>
<td>294+00-00</td>
<td>Lt. manholes</td>
<td>1064</td>
<td>24</td>
<td>25649.3</td>
<td></td>
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<tr>
<td>295+00-25</td>
<td>294+00-00</td>
<td>Lt. manholes - paving transition</td>
<td>125</td>
<td>20</td>
<td>2940.0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>1209</td>
<td>20</td>
<td>20560.0</td>
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### Wire Rope Safety Fence

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<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>239+02-00</td>
<td>239+02-00</td>
<td>Lt. of R. manholes</td>
<td>20570</td>
<td>2</td>
<td>20570</td>
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<tr>
<td>239+02-00</td>
<td>239+02-00</td>
<td>Lt. of R. manholes</td>
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<td>1270</td>
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<td>239+13-00</td>
<td>239+13-00</td>
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<td></td>
<td>24470</td>
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### ACHM Patching of Existing Shoulders

<table>
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<tr>
<th>Location</th>
<th>Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Project - To be used and where directed by engineer</td>
<td>200</td>
</tr>
</tbody>
</table>

Note: Quantity estimated. Each section is based on the specification for ACHM patching of existing asphalt shoulders, the engineer will check the work of surface course used on the lanes.

### Quantities

<table>
<thead>
<tr>
<th>Location</th>
<th>Ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entire Project - To be used and where directed by engineer</td>
<td>200</td>
</tr>
</tbody>
</table>

Note: Quantity estimated. See Section 04-02 of the P&G Specifications for ACHM patching of existing asphalt shoulders, the engineer will check the work of surface course used on the lanes.
CULVERT CLEAN OUT

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>EACH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EVENT PRIORITY</td>
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</tr>
<tr>
<td></td>
<td>10</td>
<td>&quot;TO BE USED IF AND WHEN DIRECTED BY THE ENGINEER&quot;</td>
</tr>
</tbody>
</table>

| TOTAL: | 10 |

SHAPING DITCH

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>STATION</th>
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</thead>
<tbody>
<tr>
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</table>

| TOTAL: | 10.00 |

TRENCHING & SHOULDER PREPARATION

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<th>STATION</th>
<th>LOCATION</th>
<th>STATION</th>
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<td>252-250.00</td>
<td>466-42.30</td>
<td>LT. OF ST. MAINLANES</td>
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| TOTAL: | 225 |

COLD MILLING ASPHALT PAVEMENT

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<tr>
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<th>STATION</th>
<th>LOCATION</th>
<th>AVG. WIDTH</th>
<th>COLD MILLING ASPHALT PAVEMENT</th>
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<tbody>
<tr>
<td></td>
<td></td>
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<td>SQ. YD.</td>
<td>SQ. YD.</td>
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<tr>
<td>346-05.00</td>
<td>475-45.00</td>
<td>RIGHT MAINLANES - PAYING TRANSITION</td>
<td>933</td>
<td>933</td>
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<tr>
<td>346-45.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
<td>529</td>
<td>529</td>
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<tr>
<td>346-45.15</td>
<td>475-85.15</td>
<td>LEFT MAINLANES - UNDER 100' COMPRESS FULL DEPTH/4&quot;</td>
<td>700</td>
<td>700</td>
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<tr>
<td>346-46.05</td>
<td>475-97.05</td>
<td>RIGHT MAINLANES - UNDER 100' COMPRESS FULL DEPTH/4&quot;</td>
<td>745</td>
<td>745</td>
</tr>
<tr>
<td>346-46.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
<td>856</td>
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<tr>
<td>346-46.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
<td>834</td>
<td>834</td>
</tr>
<tr>
<td>346-46.05</td>
<td>475-9.00</td>
<td>RIGHT MAINLANES - PAYING TRANSITION</td>
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<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
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<td>728</td>
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<tr>
<td>346-46.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
<td>728</td>
<td>728</td>
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<tr>
<td>346-46.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
<td>728</td>
<td>728</td>
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<td>346-46.05</td>
<td>475-9.00</td>
<td>LEFT MAINLANES - PAYING TRANSITION</td>
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| TOTAL: | 2057.58 |

NOTE: AVERAGE MILLING DEPTH = 1"
### Structures

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<tr>
<th>Station</th>
<th>Description</th>
<th>Temporary Culverts</th>
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<tr>
<td>RAMP A-1 Const Stage 1.8</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP A-2 Const Stage 1.4</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP A-3 Const Stage 1.4</td>
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<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP B-1 Const Stage 1.8</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP B-2 Const Stage 1.4</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP B-3 Const Stage 1.4</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP C-1 Const Stage 1.8</td>
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<td>PCG-1 POM-1</td>
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<tr>
<td>RAMP C-2 Const Stage 1.4</td>
<td>150</td>
<td>PCG-1 POM-1</td>
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<tr>
<td>RAMP C-3 Const Stage 1.4</td>
<td>150</td>
<td>PCG-1 POM-1</td>
</tr>
<tr>
<td>RAMP D-1 Const Stage 1.8</td>
<td>150</td>
<td>PCG-1 POM-1</td>
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<tr>
<td>RAMP D-2 Const Stage 1.4</td>
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<td>PCG-1 POM-1</td>
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<tr>
<td>CROSSOVER 1 Const Stage 1.8</td>
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<td>PCG-1 POM-1</td>
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<tr>
<td>CROSSOVER 2 Const Stage 1.8</td>
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**Total:** 2,500

### Quantities

#### Rumble Strips in Asphalt Shoulders

<table>
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<th>Station</th>
<th>Location</th>
<th>Rumble Strips in Asphalt Shoulders</th>
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</thead>
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<td>RAMP A-1</td>
<td>A-South</td>
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</tr>
<tr>
<td>RAMP A-2</td>
<td>A-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP A-3</td>
<td>A-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-1</td>
<td>B-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-2</td>
<td>B-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-3</td>
<td>B-South</td>
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<tr>
<td>RAMP C-1</td>
<td>C-South</td>
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<tr>
<td>RAMP C-2</td>
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<td>C-South</td>
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<td>RAMP D-1</td>
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<tr>
<td>RAMP D-2</td>
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**Total:** 720

### Joint Rehabilitation

<table>
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<tr>
<th>Station</th>
<th>Length (ft)</th>
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<tbody>
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<td>RAMP A-1</td>
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<td>100</td>
</tr>
<tr>
<td>RAMP A-2</td>
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<td>100</td>
</tr>
<tr>
<td>RAMP A-3</td>
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<td>100</td>
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<tr>
<td>RAMP B-1</td>
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<tr>
<td>RAMP B-2</td>
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<tr>
<td>RAMP B-3</td>
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<td>RAMP C-1</td>
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</tr>
<tr>
<td>RAMP D-2</td>
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**Total:** 900

### Portland Cement Concrete Patching

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Removal &amp; Disposal of Concrete for Patching</th>
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<tbody>
<tr>
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<td>100</td>
</tr>
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<td>RAMP A-2</td>
<td>A-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP A-3</td>
<td>A-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-1</td>
<td>B-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-2</td>
<td>B-South</td>
<td>100</td>
</tr>
<tr>
<td>RAMP B-3</td>
<td>B-South</td>
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</tr>
<tr>
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<td>C-South</td>
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<tr>
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<td>C-South</td>
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</tr>
<tr>
<td>RAMP C-3</td>
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<tr>
<td>RAMP D-1</td>
<td>D-South</td>
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### Other Information

- **Base and Surfacing: Main Lanes & Acceleration Lanes (Box 2 of 3)**
- **Quantities**: Total: 587.035

---

**Note**: The table above contains the quantities for various work stations, detailing the length, tonnage, cubic yard, cubic foot, gallon, and liquid measurements. Please ensure to cross-reference with the relevant project specifications for accurate application.
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**SUMMARY OF QUANTITIES**

**DATE**

**REVISION**

**SHEET NUMBER**
GENERAL NOTES

Covering specifications are the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, (ASH 2010), with applicable supplemental specifications and special provisions.

All new structural steel shall be ASTM A927, Grade 50W, unless otherwise noted and shall be purchased for the unit price per pound bid for "Structural Steel for Modification of Raised Bridge Structure A927, Grade 50W". All exposed surfaces to be painted in accordance with Subsection 807.4.4(a) of the Standard Specifications.

All welding to be performed by a certified welder approved by the Engineer. All welding shall conform to the current AWS/D1.5, "Welding Code.

Anchor bolt extension shall be ASTM A307 and galvanized. Rust damaged galvanized surfaces shall be re-galvanized in accordance with Subsection 807.4.5.

The Contractor shall field verify anchor bolt locations.

All concrete shall have a minimum 28 day compressive strength of 3000 psi. Concrete shall be placed in the dry and all exposed concrete to be water cured unless otherwise stated.

All reinforcing steel shall be Grade 60 (yield strength) or 60,000 psi conforming to ASTM A615 or A616, Type A, with mill test reports.

The Contractor shall check the joint openings. Poured silicon joints at end and bents shall be installed after the entire structure is in the final position. Chevrolet the joints be as recommended by the manufacturer. See Drawing No. 6680.

The following drawings may be used to determine lack capacities:

Sheets of the existing bridge plans have been included for information purposes only. All information required to complete the work shall be field verified by the Contractor.

Notes on bearing device attachment shall only be hand tightend. Do not torque.

See Special Provision Job No. BR9006, "Modification of Raised Bridge Structure" for additional material and construction requirements.

The Contractor shall perform all work associated with removing Bridge No. 03168 ready for traffic prior to March 31, 2016.

1. All bents shall be drilled and grouted into existing concrete using a GPR approved non-shrink grout. Diameter of drilled holes and installation procedure shall be as recommended by the grout manufacturer. Drilling of grouting will be at the owner’s expense. Drilling of all grouting will be at the owner’s expense.

2. As directed by the Engineer, documents, cleaned and re-pointed the rockers to address any beginning crack in accordance with section (22), using Type 1 sanding and filling. The color of the material shall be Gray and shall meet the Fed. Spec. 45405, Color Chip No. 2015. In the event the Engineer determines the crack is not a distress crack, then these re-pointed rockers will not be paid for directly but will be considered subsidiary to the Item "Modification of Raised Bridge Structure (Job No. 03168)."

**TABLE OF VARIABLES**

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**SHEET 1 OF 3 MODIFICATION DETAILS FOR BRIDGE NO. 03168**

**MISSISSIPPI COUNTY**

**ARKANSAS STATE HIGHWAY COMMISSION**

**LITTLE ROCK, ARK.**

**DESIGNER:** ARK.

**DRAWER:** R-022-14

**CHECKER:** ARK.

**DRAWING NO:** 03168

**SCALE:** 1"=5'-0"
TYP. EXISTING END BENT SECTION

SECTION C-C
Showing Concrete Dimensions

SECTION C-C
Showing Reinforcing

END BENT BAR LIST PER BENT

<table>
<thead>
<tr>
<th>MARK</th>
<th># OF BARS</th>
<th>LENGTH</th>
<th>P.L.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B401</td>
<td>8</td>
<td>5' 7&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>B403</td>
<td>4</td>
<td>3' 0&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>B403</td>
<td>8</td>
<td>3' 6&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>B404</td>
<td>16</td>
<td>2' 3&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>B405</td>
<td>6</td>
<td>2' 3&quot;</td>
<td>STR</td>
</tr>
<tr>
<td>B406</td>
<td>30</td>
<td>3' 0&quot;</td>
<td>3&quot;</td>
</tr>
<tr>
<td>B407</td>
<td>24</td>
<td>2' 2&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

No. 4 bars shall be drilled and grouted into existing concrete using O.P. oversized non-shrink grout. Diameter of drilled holes and grouting procedure shall be as recommended by the grout manufacturer. Drilling and grouting of bent will be paid for as part of the item "Modification of Robert Ridge Structure (BR. No. 02387)."

NOTE:
1. See detail of Pouring Silicone Joint Seal for expansion device details.
2. Concrete should be hand placed under the joint area in the backwall.

DETAIL 1

LEGEND
- Deviation
- New Concrete

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

MODIFICATION DETAILS FOR
BRIDGE NO. 03168
HWY. 150 - I-55
MISSISSIPPI COUNTY

RPOD
07/20/20

REVIEW
1/10/20

SHEET 2 OF 3
MODIFICATION DETAILS FOR
BRIDGE NO. 03168
HWY. 150 - I-55
MISSISSIPPI COUNTY

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: HLE
CHECKED BY: BFR
REVIEWED BY: HLE

DRAWING NO. 03168
DRAWING NO. 5495
### SILICONE JOINT DATA

<table>
<thead>
<tr>
<th>Abutment</th>
<th>A/W &quot;Width Perpendicular to Joint&quot; A Per Year Average Temperature (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belt 1</td>
<td>24' 3&quot; 3&quot; 15' 9&quot;</td>
</tr>
<tr>
<td>Belt 7</td>
<td>27' 5&quot; 2&quot; 18' 9&quot;</td>
</tr>
</tbody>
</table>

1. Installation is limited to 40°F F min. and 80°F max.
2. **BINDER ROD NOTE:**
   - Use only appropriately sized binder rod as shown in the manufacturer's literature based on the joint width at the time of casting.
   - Except as noted, do not install more binder rod than can be seated in the same day.
   - Binder Rod shall be extended beyond the joint construction joint so that the two pieces can be properly pinned together prior to installing sealant in the next stage.
   - The contractor shall verify separation of the binder rod from the joint material after the joint material has been set.

### EXPANSION DECK NOTES

- The Contractor shall cut the existing planing plate and grind it smooth against existing roadway channel. The surface of the new channel planing plate, and existing channel shall be finished per the recommendations of the joint seal manufacturer.
- At new structure steel shall be ASTM-A 703 G100 unless otherwise noted. The surface of the structural steel in contact with the silicone joint sealant shall be finished per the recommendations of the joint seal manufacturer. Cleaning and painting will not be paid for separately but will be considered subsidiary to the other pay items.
- The Contractor shall install the expansion device for the abutments in the following manner: After the abutment berm forms are in place the expansion device channel shall be located and adjusted for grade. The grade of the backwall channel shall be checked for proper grade using a 10' string line. Any deviation greater than 10", the roadway channel, immediately prior to paving, the backwall concrete, the opening shall be adjusted for temperature, and the backwall constructed.
- Structural Steel shall be paid for as "Structural Steel for Modification of Raised Bridge Structure MWU 1.000'" - MWU 2.000' shall not be included. All labor, equipment, tools, and materials necessary to complete the work will not be paid for separately but will be considered subsidiary to the other pay items.

### TABLE FOR WELD

<table>
<thead>
<tr>
<th>Material Thickness of Thicker Part Joined</th>
<th>Minimum Size of Thinner Part Joined</th>
<th>Single Pass</th>
<th>Multi Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 inches 1</td>
<td>1 inches 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To 1' inclusive</td>
<td>1' inclusive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** When a full weld size, as shown on the plans, is larger than the minimum, the first pass shall be that specified for minimum size of that weld.
Note: Top of approach slab shall be given a toe from as specified for first finishing in subsection 802.2.8 for Class 5 Treated Bridge Ready Mix Surface Finish.

SECTION Y-Y
No Scale

PLAN VIEW SHOWING
Scale 1/8" = 1'-0"

Details of Longitudinal Construction Joint
Scale 1/8" = 1'-0"

Details of Dummy Grooved Joint
Scale 1/8" = 1'-0"

Bar List

<table>
<thead>
<tr>
<th>Mark No.</th>
<th>REVISED LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>S422</td>
<td>33 ft 8&quot;</td>
</tr>
<tr>
<td>S432</td>
<td>44 ft 5&quot;</td>
</tr>
<tr>
<td>S433</td>
<td>50 ft 3&quot;</td>
</tr>
<tr>
<td>S501</td>
<td>22 ft 7&quot;</td>
</tr>
<tr>
<td>S402</td>
<td>10 ft 3&quot;, 2&quot;</td>
</tr>
<tr>
<td>S405</td>
<td>48 ft 26&quot;, 2&quot;</td>
</tr>
</tbody>
</table>

Quantities for One

Approach Slabs

Sub. Matte: Reinforcing steel

Concrete Class: Type I

22'-0" 5044 lbs 41.7

GENERAL NOTES
Concrete slab shall be Class S422 (f'c = 4,000 psi).

All reinforcing steel shall be Grade 60.

At finishing, steel shall have a yield strength = 60,000 psi conforming to AASHTO M70 or M432, Type A, with notched tension test reports.

Approach Slabs will be measured and paid for in accordance with Section 304 of the Standard Specifications.

Details of Type Special

Approach Slab

Route: Type: COL
ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

drawing no. 01683 DRAWING NO. 54699

SCALE AS NOTED
### JOB 10814

**Summary of Quantities**

**YARBRO INTERCHANGE AT STA. 437 + 58.60 (BRIDGE NO. 8,042, TYPE X-3)**

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>ITEM DESCRIPTION</th>
<th>UNIT</th>
<th>ABNTS.</th>
<th>BENTS 2/6</th>
<th>BENTS 3/6</th>
<th>BENT 4</th>
<th>SPAN 1/6</th>
<th>SPAN 2/6</th>
<th>SPAN 3/6</th>
<th>SPAN 4/6</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPN-2</td>
<td>DRY EXCAVATION FOR STRUCTURES</td>
<td>CU YD</td>
<td>40</td>
<td>116</td>
<td>116</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>22</td>
<td>324</td>
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<tr>
<td>SPI-202</td>
<td>CLASS X CONCRETE FOR BRIDGES</td>
<td>CU YD</td>
<td>74</td>
<td>73</td>
<td>73</td>
<td>37</td>
<td>37</td>
<td>37</td>
<td>37</td>
<td>37</td>
<td>186</td>
</tr>
<tr>
<td>SPI-203</td>
<td>CLASS 3 CONCRETE FOR BRIDGES</td>
<td>CU YD</td>
<td>73</td>
<td>26</td>
<td>26</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>399</td>
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<tr>
<td>SPI-205</td>
<td>REINFORCING STEEL</td>
<td>LB</td>
<td>3,541</td>
<td>10,540</td>
<td>15,030</td>
<td>5,441</td>
<td>11,765</td>
<td>17,547</td>
<td>19,716</td>
<td>34,613</td>
<td>64,613</td>
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<tr>
<td>SP</td>
<td>ALUMINUM BRIDGE RAILING</td>
<td>LIN FT</td>
<td>16</td>
<td>232</td>
<td>260</td>
<td>260</td>
<td>640</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>SPI-207</td>
<td>STRUCTURAL STEEL IN BEAM SPANS</td>
<td>LB</td>
<td>53,949</td>
<td>100,418</td>
<td>115,376</td>
<td>215,742</td>
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<tr>
<td>SPI-208</td>
<td>BEARING PLATES IN BEAMS</td>
<td>UNIFT</td>
<td>355</td>
<td>360</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>3,395</td>
<td></td>
</tr>
<tr>
<td>SPI-209</td>
<td>LOADING TEST PILES</td>
<td>EACH</td>
<td>2</td>
<td>5/0</td>
<td>5/0</td>
<td>5/0</td>
<td>5/0</td>
<td>5/0</td>
<td>5/0</td>
<td>5/0</td>
<td>3</td>
</tr>
<tr>
<td>424</td>
<td>BRIDGE NAME PLATE (TYPE C)</td>
<td>EACH</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Estimated quantity of bearing piles is based on square footage of specified concrete piles.

---

**FOR INFORMATION ONLY**

**YARBRO INTERCHANGE AT STA. 437 + 58.60**

**Table of Quantities**

**ARKANSAS STATE HIGHWAY COMMISSION**

**Drawing No. S-016**

**Drawing No. 50731**
PLAN

HALF PLAN BENTS 2, 3 & 4
HALF PLAN BENT 5

ELEVATION

INTERMEDIATE BENTS

Note: All Octagonal Precast Concrete Piles required per Bents.

DETAIL AT JOINT BETWEEN WING WALL AND SLAB

SECTION A-A Section B-B Similar

SECTION THRU END BENT BETWEEN PILES

Note: Provide panel 1/4" x 1/2" recessed "F" on approach side of right wall, Bents 1 & 2, Southbound - 2" only. Standard Grade: 1-7, 5-10.

SECTION THRU END BENT AT PILES

Similar to Section Thru End Bent between Piles except as shown.

FOR INFORMATION ONLY:
PILES OVER PTMISCOUNT BAYOU AT STA. 4+00 + 23.50
PILY BENTS FOR MAIN ROADWAY BRIDGE MISSISSIPPI & COTTONWOOD COUNTRY TOLLWAY 55

ARKANSAS STATE HIGHWAY COMMISSION

SECTION 3

REVISED CONCRETE PILE MILES: TLC 3-52-5B

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BRIDGE NO: 3-52-5B DRAWING NO: 56201

How do not scale this drawing. Follow dimensions.
TYPICAL ELEVATION

TYPE "A" END POST

SPlice

TYPE "B" END POST

SECTION

SECTION THROUGH RAIL ELEMENT

STEEL PLATE BRIDGE RAILING

Note: See Special Provisions.
TYPICAL BAR TYPES

1. All dimensions are shown except, except "X", which is to inside of bend.
2. "X" Dimension on HP bars to be shown in bar list only where necessary to restrict hook size, otherwise standard hooks are to be used.
3. CPRI. Where "X" is not shown, it will be kept equal to or less than 1/2.
4. "Y" Dimension, where necessary to be shown on bar list where necessary to restrict hooks.
5. Connections in length, due to bending around a member, will be made only when the radius "R" is in type (Round 1/2" exceeds the standard radii indicated in standard hook dimensions). However, the dimensions if not shown for standard hooks have been corrected for connections.
6. All bends shown are the standard radii indicated, except where radius "R" is indicated.
7. Figures in square show bar types.
8. Where "X" is shown, the length of bar shall be measured along centerline of bar.
9. The length of bar type T3 shall also be measured outside of bar.

ENLARGED VIEW SHOWING BAR BEND DETAIL

NOTES:

FOR INFORMATION ONLY

BRIDGES OVER PLUMASCOT BAYOU
AT STA. 456+2300

TYPICAL HOOK TYPES & HOOK DIMENSIONS

ARKANSAS STATE HIGHWAY COMMISSION

INTERSTATE HIGHWAY

SECTION 2

DRAWING NO. 50105
FOR INFORMATION ONLY
Bridges over Foss Scout Road at STA. 45+23.00
Typical details of supports and spacers for reinforcing steel.

Mississippi & Arkansas County
Interstate Highway

Arkansas State Highway Commission

Note: Do not issue this drawing. Follow dimensions.
**GENERAL NOTES:**

- The full width of each section shall be paved monolithically.
- Toe walls to be constructed full width at each end of ditch paving and paved monolithically.
- Solid sod 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 40’ intervals. The space shall be filled with approved joint filler complying with AASHTO M213.

**ENERGY DISSIPATORS**

Energy dissipators to be used for the entire length of ditch when slope of ditch paving exceeds 7%. The dissipators will not be paid for directly, but shall be considered to be included in the price bid for concrete ditch paving.

**Arkansas State Highway Commission**

**Concrete Ditch Paving**

**Standard Drawing CDP-1**
METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

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

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

LEGEND

THREE BEAM GUARD RAIL TERMINAL
GUARD RAIL TERMINAL (TYPE 2)
DETAILS OF WIDENING FOR GUARD RAIL

SECTION A-A

SECTION B-B

NOTE: NORMAL SECTION TO BE WIDENED APPROX. 2'-6" EACH SIDE TO SUPPORT GUARD RAIL.

NORMAL ROADWAY WIDTH

WIDTH OF SURFACING

2'-0" MIN.

SHOULDER, SURF.

2'-0" MIN.

0.04 FT/FT

SLOPE AS SHOWN ON TYPICAL SECTION

SLOPE AS SHOWN ON TYPICAL SECTION

GUARD RAIL TYPE A1

GUARD RAIL TYPE A1

0.02 FT/FT

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

SHOULDER PIER PROTECTION

MEDIAN PIER PROTECTION

5'-0" MIN.

50'-0" VARIABLE

100'-0"

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-9A
THREE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POSTS 1-7

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

GENERAL NOTES:
1. MISSION POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.
2. WOOD POSTS & WOOD BLOCKS SHALL BE OTHER THAN NO. 1 STRUCTURAL OR BETTER ENL 440 x 195 OR NO. 1 350 X 140 SOUTHERN PINE.

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10A
### Super-elevation Table for One-Way Traffic

<table>
<thead>
<tr>
<th>Degree</th>
<th>Lc (ft)</th>
<th>La (ft)</th>
<th>Ll (ft)</th>
<th>Lm (ft)</th>
<th>Lp (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>175</td>
<td>250</td>
<td>350</td>
<td>400</td>
<td>450</td>
</tr>
<tr>
<td>2.0</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>2.5</td>
<td>225</td>
<td>350</td>
<td>500</td>
<td>600</td>
<td>650</td>
</tr>
<tr>
<td>3.0</td>
<td>250</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>850</td>
</tr>
<tr>
<td>3.5</td>
<td>275</td>
<td>450</td>
<td>900</td>
<td>1200</td>
<td>1250</td>
</tr>
<tr>
<td>4.0</td>
<td>300</td>
<td>500</td>
<td>1000</td>
<td>1500</td>
<td>1550</td>
</tr>
<tr>
<td>4.5</td>
<td>325</td>
<td>550</td>
<td>1100</td>
<td>1800</td>
<td>1850</td>
</tr>
<tr>
<td>5.0</td>
<td>350</td>
<td>600</td>
<td>1200</td>
<td>2000</td>
<td>2050</td>
</tr>
<tr>
<td>5.5</td>
<td>375</td>
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<td>1300</td>
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</tr>
<tr>
<td>6.0</td>
<td>400</td>
<td>700</td>
<td>1400</td>
<td>2400</td>
<td>2450</td>
</tr>
</tbody>
</table>

**Abbreviations:**
- LC: Normal Crown
- R: Reverse Crown
- S: Super-elevation at Normal Crown Slope
- L: Distance from Beginning of Super-elevation Transition
- C: Normal Crown
- Lmax: Maximum Rate of Super-elevation (ft per ft)
- Ls: Length of Super-elevation Transition (ft)

**General Notes:**
1. For pavements with one-way traffic, the super-elevation shall be resolved on the profile grade points.
2. Super-elevation values shown in the cross sections are values (Lc + Ls) to be added or subtracted from the face of centerline.
3. Lengths for La may be rounded in multiples of 25 ft or 50 ft.
4. Super-elevation values may be used for ramps with desirable values shall apply to ramp crown.
5. Divided(dividers) more than 8 lanes shall have additional transition lengths as follows:
   - 6 Lane Divided: 20%L
   - 8 Lane Divided: 30%L
4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (see BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWGS. TC-4).

** Offset Distance for Two Way Traffic Only

<table>
<thead>
<tr>
<th>Speed</th>
<th>Offset Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 MPH</td>
<td>12</td>
</tr>
<tr>
<td>20 MPH</td>
<td>18</td>
</tr>
</tbody>
</table>

If offset distance is 18 inches or greater, then see "Barrier Placement With Attenuator" detail shown below.

General Notes

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. PLACE PERMANENT CONTROLS (i.e. SILT FENCES, DIVERSION DITCHES, SEDIMENT BASELINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION

EXCAVATION

EXISTING GROUND

INTERCEPTOR OR DIVERSION DITCH

EXISTING GROUND

PHASE 1 EXCAVATION

PHASE 2 EXCAVATION

FINAL PHASE EXCAVATION

GENERAL NOTE

ALL CUT SLOPES SHALL BE DREDGED, 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. CONSTRUCT DITCH CHECKS, DIVERSION DITCHES, SEDIMENT BASELINS, 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 DREDGED, 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.
   PHASE 1 EMBANKMENT IS TO BE TEMPORARILY SEEDED FOR A PERIOD OF GREATERT THAN 15 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
   PHASE 2 EMBANKMENT IS TO BE TEMPORARILY SEEDED FOR A PERIOD GREATER THAN 30 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
   PHASE 3 EMBANKMENT IS TO BE TEMPORARILY SEEDED AND SLOPE SEEN AND MAINTAINED UNTIL ENTIRE SLOPE IS STABILIZED.

ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES

S-314
9-21-92
Draft & Issued

S-213
9-28-92
Revised

STANDARD DRAWING TEC-3
ENTRANCE RAMP
NOTE: JOINT SPACING ON THE MAIN LANE SHALL BE ABOUT 5' FOR 30' SPAN. THE MAIN LANE JOINT SPACING MAY BE REDUCED TO A 12' MINIMUM.

EXIT RAMP

DETAIL "A"

DETAIL "A"

DETAIL OF EXPANSION JOINT & JOINT SUPPORT
NOTE: THE EXPANSION JOINTS SHALL BE MANUFACTURED AND FABRICATION AS PER FIG. 30.3. THE JOINT SUPPORTS SHOWN IN FIG. 30.3 ARE RECOMMENDED AS THEY ARE OF SIMILAR CONSTRUCTION TO THE JOINT SUPPORTS SHOWN IN FIG. 30.3. CONCRETE, CONCRETE PAVING FOR THE JOINT SUPPORTS SHALL BE FOR THE CONTRACT UNIT PRICE FOR THE CLASS OF CONCRETE USED ON THE MAIN ROAD. AREAS OF THE JOINT SUPPORTS SHOWN IN FIG. 30.3 ARE RECOMMENDED FOR THE AMOUNT OF CONCRETE USED ON THE MAIN ROAD.

ARKANSAS STATE HIGHWAY COMMISSION
DETAILS OF STANDARD TURNOUT FOR ENTRANCE & EXIT RAMPS (NON-REINFORCED)

STANDARD DRAWING TR-IA
TYPE A FENCE (WOOD POSTS)

GENERAL NOTES

1. STEEL LINE POSTS SHALL BE GALVANIZED. 3 FT. IN LENGTH.

2. ALL END CORNER AND DIAGONAL BRACES MUST CONFORM TO THE DIMENSIONS AND WEIGHTS SPECIFIED ON STANDARD DRAWING MF-1

3. Chain Link

4. CONTRACTOR SHALL FURNISH AT LEAST 15% OF WOOD LINE POSTS OF 4" DIAMETER IN CASES TO PROVIDE SUFFICIENT RETAINING WALLS OR TO SUPPORT CATTLE OR BARRIERS.

5. GATE Hinges and latches with locks to be of a type approved by the Engineers. Sockets shall be securely bolted to the frame. Gate post shall be at least 3/4" thick at the frame and shall be reinforced with an additional piece of sheet metal.

6. Cables shall be stranded with the strands wrapped over the frame. Cables shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

7. LATERAL SUPPORTING MEMBERS: All lateral supporting members shall be of the same material and construction as the frame.

8. STAIR STEPS: Where lateral supports are used, they shall be of the same material and construction as the frame. The steps shall extend from the top of the frame to the bottom of the fence. The steps shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

9. ELBOWS: All elbows shall be of the same material and construction as the frame. The elbows shall extend from the top of the frame to the bottom of the fence. The elbows shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

10. BRACKETS: All brackets shall be of the same material and construction as the frame. The brackets shall extend from the top of the frame to the bottom of the fence. The brackets shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

11. END POSTS: All end posts shall be of the same material and construction as the frame. The end posts shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

12. STRAPPING: All strapping shall be of the same material and construction as the frame. The strapping shall extend from the top of the frame to the bottom of the fence. The strapping shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

13. DOWELS: All dowels shall be of the same material and construction as the frame. The dowels shall extend from the top of the frame to the bottom of the fence. The dowels shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

14. SCREWS: All screws shall be of the same material and construction as the frame. The screws shall extend from the top of the frame to the bottom of the fence. The screws shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

15. NUTS: All nuts shall be of the same material and construction as the frame. The nuts shall extend from the top of the frame to the bottom of the fence. The nuts shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

16. BOLTS: All bolts shall be of the same material and construction as the frame. The bolts shall extend from the top of the frame to the bottom of the fence. The bolts shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

17. RIVETS: All rivets shall be of the same material and construction as the frame. The rivets shall extend from the top of the frame to the bottom of the fence. The rivets shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

18. STRAPS: All straps shall be of the same material and construction as the frame. The straps shall extend from the top of the frame to the bottom of the fence. The straps shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

19. HINGES: All hinges shall be of the same material and construction as the frame. The hinges shall extend from the top of the frame to the bottom of the fence. The hinges shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

20. LATCHES: All latches shall be of the same material and construction as the frame. The latches shall extend from the top of the frame to the bottom of the fence. The latches shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

21. LOCKS: All locks shall be of the same material and construction as the frame. The locks shall extend from the top of the frame to the bottom of the fence. The locks shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

22. WOOD POSTS: All wood posts shall be of the same material and construction as the frame. The wood posts shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

23. CONCRETE POSTS: All concrete posts shall be of the same material and construction as the frame. The concrete posts shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

24. WIRE: All wire shall be of the same material and construction as the frame. The wire shall extend from the top of the frame to the bottom of the fence. The wire shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

25. TUBULAR: All tubular shall be of the same material and construction as the frame. The tubular shall extend from the top of the frame to the bottom of the fence. The tubular shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

26. CONSTRUCTION: All construction shall be of the same material and construction as the frame. The construction shall extend from the top of the frame to the bottom of the fence. The construction shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

27. TERMINAL: All terminal shall be of the same material and construction as the frame. The terminal shall extend from the top of the frame to the bottom of the fence. The terminal shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

28. TERMINAL INSTALLATION: All terminal installation shall be of the same material and construction as the frame. The terminal installation shall extend from the top of the frame to the bottom of the fence. The terminal installation shall be secured to the frame with straps that are fastened to the frame with rivets or screws.

RIGHT-OF-WAY FENCE LOCATION

PRIVATE FENCE TERMINAL INSTALLATION

TYPE B FENCE

WHERE EXISTING PRIVATE FENCE CONSISTS OF STEEL POSTS USE END POST ASSEMBLY AS APPLIED BY THE ENGINEER.