ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

BAYOU DEVIEW
STR. & APPRS. (S)

WOODRUFF COUNTY
ROUTE 38 SECTION 3
F.A.P. STPR-0074(33)
JOB 110541

VICINITY MAP

PROJECT LOCATION

BRIDGE CONSTRUCTION DATA

BR. END STA 20+04.92
BRIDGE NO. 07217
34' CLEAR ROADWAY
3/2' - 2' TOTAL LENGTH
3/0' - 0' CONTINUOUS COMPOSITE
PRESTRESSED CONCRETE
ORDER UNIT TYPE III
BR. END STA 23+17.08

BEGINNING OF PROJECT
LATITUDE = N 35° 00' 16"
LONGITUDE = W 91° 13' 48"

MID POINT OF PROJECT
LATITUDE = N 35° 5' 18"
LONGITUDE = W 91° 13' 28"

END OF PROJECT
LATITUDE = N 35° 5' 20"
LONGITUDE = W 91° 13' 08"

DESIGN TRAFFIC DATA

DESIGN YEAR = 2033
2033 ADT = 450
2033 DHV = 63
DIRECTIONAL DISTRIBUTION = 0.60
TRUCKS = 9%
DESIGN SPEED = 55 MPH

GROSS LENGTH OF PROJECT = 3500.00 FEET OR 0.663 MILES
NET = ROADWAY = 387.84
NET = BRIDGES = 26.4
NET = PROJECT = 3500.00

PE JOB 10541
NON-PART.

APPROVED

DEPUTY DIRECTOR
AND CHIEF ENGINEER
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. 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.

3. 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.

4. 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.

5. WITH THE APPROVAL OF THE ENGINEER,
   THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO
   THE DEPARTMENT, THE FIRST LIFT OF ACIMH
   SURFACE COURSE 6/2" IN LIEU OF
   AGGREGATE BASE COURSE ON THE SHOULDERS.

On all superelivated curves and through
superelivation transitions, the algebraic
difference between pavement slope and
shoulder shall not exceed 0.02.
NOTES:

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

- 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.

- WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACM SURFACE COURSE 8/10" IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.
ASPHALT CONCRETE HOT MIX SURFACE COURSE (1/2") (220 LBS. PER SQ. YD.)
AGGREGATE BASE COURSE (CLASS T)
7" COMP. DEPTH IF ASPHALT DRIVE EXISTS

DETAIL FOR DRIVEWAY TURNOUTS

NORMAL SHOULDER
5'-6"

GUARDRAIL (TYPE A)
2'-0' 1'-6" 2'-0'
0.04' /

5'-6" ADDITIONAL A.C.H.M. SURFACE COURSE (1/2")
220 LBS. PER SQ. YD.
ADDITIONAL AGGREGATE BASE COURSE (CLASS T) (VAR. COMPACTED DEPTH)
(VAR. TON/STA.)

0.02' /
0.02' /

0.02' /

DETAIL FOR DRIVEWAY STA. 118+00
AGGREGATE BASE COURSE (CLASS T)
6" COMP. DEPTH FOR EXISTING DRIVE, EXISTING AND EXPANDED PARKING AREA AND BOAT RAMP AREA.

AGGREGATE BASE COURSE (CLASS T) FOR DRIVE, PARKING AREA, AND BOAT RAMP AREA SHALL BE UNIFORMLY COMPACTED, STABLE AND FREE OF SEGREGATED AREAS.
THE DENSITY REQUIREMENTS OF SECTION 303 ARE WAIVED.

WIDENING FOR GUARDRAIL DETAIL
*NOTE: REFER TO STD. DWG GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.
SPECIAL DETAIL OF APPROACH SLAB

* REFER TO BRIDGE DRAWINGS

AGGREGATE BASE COURSE (CLASS 7)
6" COMPACTED DEPTH

DETAIL FOR TRANSITIONS
STA. 103+00 - STA. 108+00
INSTALL E-E: 1530 LIN. FT.

STA. 104+00.00
BEGIN JOB #10541

LEGEND
- SAND BAG DITCH CHECK
- ROCK DITCH CHECK
- SLT FENCE

- MAINTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB UNLESS OTHERWISE SPECIFIED.

STA. 114+00 - STA. 120+00
INSTALL E-E: 600 LIN. FT.

DATE OF REVISION
REVISION

STAGE I
TEMPORARY EROSION CONTROL DETAILS
* Maintain all erosion control devices until the end of the job, unless otherwise specified.

<table>
<thead>
<tr>
<th>DATE OF REVISION</th>
<th>REVISION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

**LEGEND**

- (E) = Sand bag ditch check
- (R) = Rock ditch check
- (S) = Silt fence

**STAGE 2**

TEMPORARY EROSION CONTROL DETAILS
SEQUENCE OF OPERATIONS

STAGE 1
MAINTAIN TRAFFIC ON EXISTING ALIGNMENT
PLACE LEVELING JUMP AND WHERE DIRECTED BY THE ENGINEER
PLACE CONSTRUCTION PAYMENT MARKINGS
PLACE TEMPORARY LANE MARKINGS (DASHED)
CONSTRUCT NURTURE WIDEN ON LEFT SIDE OF HWY. 30
CONSTRUCT BRIDGE
CONSTRUCT AS MUCH OF APPROACHES AS POSSIBLE
INSTALL GUARDRAIL AND FINAL LIFT OF ACMS SURFACE FOR GUARDRAIL WIDENING

STAGE 2
MAINTAIN TRAFFIC ON CONS. ALIGNMENT
PLACE CONSTRUCTION PAYMENT MARKINGS
PLACE TEMPORARY LANE MARKINGS (DASHED)
CONSTRUCT NURTURE WIDEN ON RIGHT SIDE OF HWAY. 30
REMOVE OLD BRIDGE AND EXISTING HWAY. 30 PAVEMENT

STAGE 3
SHIFT TRAFFIC TO FINAL ALIGNMENT
COLD MILL TRANSITION AT JOB END
PLACE FINAL LIFT OF SURFACE
PLACE FINAL STRIPING

STA. 104+00.00
BEGIN JOB 110541

ALL STAGES
MAINTENANCE OF TRAFFIC DETAILS

RSP-1, R4-1 & WB-9A TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER
SEQUENCE OF OPERATIONS

STAGE 1
PLACE LEVELING GP AND WHERE DIRECTED BY THE ENGINEER
PLACE CONSTRUCTION PAVEMENT MARKINGS
CONSTRUCT SHOULDER PANELS AND TRAFFIC DRUMS
CONSTRUCT MUTCD SIGNS AND STOOG ON LEFT SIDE OF HWY. 38
CONSTRUCT BRIDGE
CONSTRUCT AS MUCH OF APPROACHES AS POSSIBLE
INSTALL GUARDRAIL AND FINAL LIFT OF ADJACENT SURFACE FOR GUARDRAIL WIDENING

STAGE 2
M A I N T A I N  T R A F F I C  O N  C O N S T R U C T  A L I G N M E N T
PLACE CONSTRUCTION PAVEMENT MARKINGS
CONSTRUCT SHOULDER PANELS AND TRAFFIC DRUMS
CONSTRUCT MUTCD SIGNS AND STOOG ON RIGHT SIDE OF HWY. 38
REMOVE OLD BRIDGE AND EXISTING HWY. 38 PAVEMENT

STAGE 3
S H I F T  T R A F F I C  T O  F I N A L  A L I G N M E N T
COLD MILL TRAFFIC AT JOB ENDS
PLACE FINAL LIFT OF SURFACE
PLACE FINAL STRIPING

SPECIAL SIGN
BRIDGE CONSTRUCTION AHEAD
120' X 48' X 48'
TO BE PLACED AS DIRECTED
BY THE ENGINEER

SPECIAL SIGN
BRIDGE CONSTRUCTION
120' X 48' X 48'
TO BE PLACED AS DIRECTED
BY THE ENGINEER

DO NOT PASS
124' X 30'

SHOULDER CLOSED
86' X 30'

RSP-1, R4-1 & WB-9A TO BE USED
IF AND WHERE DIRECTED BY THE ENGINEER

ALL STAGES
MAINTENANCE OF TRAFFIC DETAILS

STA. 139+00.00
END JOB 110541
SEQUENCE OF OPERATIONS

STAGE 1
MAINTAIN TRAFFIC ON EXISTING ALIGNMENT
PLACE MARKINGS OF AND WHERE DIRECTED BY THE ENGINEER
PLACE CONSTRUCTION PAVEMENT MARKINGS
INSTALL VERTICAL PANELS AND TRAFFIC DRUMS
PLACE EPOXY EDGES AND RIDING ON LEFT SIDE OF HWY, 30 FT.
CONSTRUCT BRIDGE
CONSTRUCT A SOFT APPROACH AS POSSIBLE
INSTALL GUARDRAIL AND FINAL LIFT OF ASPHALT SURFACE FOR GUARDRAIL WIDENING

STA, 104+00.00
BEGIN JOB 110541

STA, 104+55.00 - STA, 112+75.00, LT OF TRAFFIC ON EXISTING PAVEMENT
VERTICAL PANELS 15' G.C.I. = 17 EACH
STA, 112+30.00 - STA, 118+30.00, LT OF TRAFFIC ON EXISTING PAVEMENT
TRAFFIC DRUMS 155 G.C.I. = 9 EACH
STA, 118+00 LT OF TRAFFIC ON EXISTING PAVEMENT
TRAFFIC DRUMS 155 G.C.I. = 3 EACH
STA, 129+70.00 - STA, 129+15.00, LT OF TRAFFIC ON EXISTING PAVEMENT
TRAFFIC DRUMS 155 G.C.I. = 11 EACH
STA, 129+70.00 - STA, 134+10.00, LT OF TRAFFIC ON EXISTING PAVEMENT
VERTICAL PANELS 155 G.C.I. = 9 EACH
STA, 134+00.00 - STA, 129+00.00, LT OF TRAFFIC ON EXISTING PAVEMENT
VERTICAL PANELS 155 G.C.I. = 9 EACH
STA, 104+00.00 - STA, 111+72.11
LT AND RT, EDGE LINES AND DRL. C.L., CONSTRUCTION PAVEMENT MARKINGS = 3089 L.N., FT.
STA, 134+69.34 - STA, 139+00.00
LT AND RT, EDGE LINES AND DRL. C.L., CONSTRUCTION PAVEMENT MARKINGS = 1667 L.N., FT.
VERTICAL PANELS 155 G.C.I. = 17 EACH

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS
SEQUENCE OF OPERATIONS

STAGE 1

MAINTAIN TRAFFIC ON EXISTING ALIGNMENT
PLACE LEVELING if AND WHERE DIRECTED BY THE ENGINEER
PLACE CONSTRUCTION PAVEMENT MARKINGS
INSTALL VERTICAL PANELS AND TRAFFIC DRUMS
CONSTRUCT DITCH AND WIDEN ON LEFT SIDE OF HWY. 38
CONSTRUCT WRAP OF APPROACHES AS POSSIBLE
INSTALL GUARDRAIL AND FINAL LIFT OF ACRP SURFACE FOR GUARDRAIL WIDENING

TRAFFIC DRUMS (55') G.C.I = 2 EACH

TRAFFIC DRUMS (150') G.C.I = 11 EACH

VERTICAL PANELS (150') G.C.I = 9 EACH
STA. 139+00.00
END JOB 110541

SEQUENCE OF OPERATIONS

STAGE 1
PLACE LEVELING IF AND WHERE DIRECTED BY THE ENGINEER
PLACE CONSTRUCTION PAVEMENT MARKINGS
INSTALL VERTICAL PANELS AND TRAFFIC DRAWS
INSTALL GUARDRAIL ON LEFT SIDE OF HWY 36
CONSTRUCT BRIDGE
CONSTRUCT AS MUCH OF APPROACHES AS POSSIBLE
INSTALL GUARDRAIL AND FINAL LIFT OF ASPHALT SURFACE FOR GUARDRAIL

VERTICAL PANELS 185° G.C.I. = 9 EACH

MAINTENANCE OF TRAFFIC DETAILS
STA. 104+00.00 - STA. 111+70.00 RT.
VERTICAL PANELS (55° D.C.I.) - 15 EACH
STA. 109+50.00 - STA. 119+95.00 RT.
TRAFFIC DRUM (55° D.C.I.) - 17 EACH
STA. 123+00.00 - STA. 123+95.00 RT O/F CONST. PAV'T
TRAFFIC DRUM (55° D.C.I.) - 17 EACH
STA. 109-00.00 - STA. 120-04.02 B.E. 1
LT. AND RT. EDGE LINES AND OBL. C.L. CONSTRUCTION PAVEMENT MARKINGS - 5420 LIN. FT.
STA. 120-04.02 - STA. 122-17.08 (BRIDGE DECK)
LT. AND RT. EDGE LINES AND OBL. C.L. REMOVABLE CONSTRUCTION PAVEMENT MARKINGS - 1249 LIN. FT.
STA. 122-17.08 B.E. 1 - STA. 137-30.00
LT. AND RT. EDGE LINES AND OBL. C.L. CONSTRUCTION PAVEMENT MARKINGS - 5652 LIN. FT.
SEQUENCE OF OPERATIONS

STAGE 2

MAINTAIN TRAFFIC ON CURVE ALIGNMENT
PLACE CONSTRUCTION PAVEMENT MARKINGS
INSTALL VERTICAL PANELS AND TRAFFIC DRUMS
CONSTRUCT MIDDLE AND BROWN ON RIGHT SIDE OF H.P.
REMOVE OLD BRIDGE AND EXISTING H.P., PB PAVEMENT

STA. 139+00.00
END JOB 110541

VERTICAL PANELS (50' OG.C.) = 11 EACH

TRAFFIC DRUMS (50' OG.C.) = 7 EACH

© RH-2
18" X 24"
8 CHEVRONS
BACK TO BACK

© RH-1
48" X 30"

### ADVANCE WARNING SIGNS AND DEVICES

<table>
<thead>
<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>END OF JOB</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE II)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W00-1</td>
<td>Road Work 1000 FT.</td>
<td>48'x48'</td>
<td>2</td>
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<tr>
<td>W00-1</td>
<td>Road Work 2000 FT.</td>
<td>48'x48'</td>
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<td>W00-1</td>
<td>Road Work 500 FT.</td>
<td>48'x48'</td>
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<td>WB-6A</td>
<td>Shoulder Drop-Off</td>
<td>3x3x38'</td>
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<td>G2-2</td>
<td>End Road Work</td>
<td>48'x36'</td>
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<td>RT-2</td>
<td>Road Closed</td>
<td>48'x36'</td>
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<td>W1-6</td>
<td>Large Arrow</td>
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<td>WI-8</td>
<td>Curvings</td>
<td>18'x36'</td>
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<td>R4-1</td>
<td>Do Not Pass</td>
<td>3x3x36'</td>
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<td>R8-1</td>
<td>Shoulder Closed</td>
<td>48'x36'</td>
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<td>R8-1</td>
<td>Special Sign &quot;Bridge Construction Ahead&quot;</td>
<td>48'x36'</td>
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<td>R8-1</td>
<td>Special Sign &quot;Bridge Construction&quot;</td>
<td>48'x36'</td>
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<td>VERTICAL PANELS</td>
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<td>TRAFFIC DRUMS</td>
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<td><strong>TOTALS</strong></td>
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<td>338.0</td>
<td>36</td>
<td>32</td>
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### CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>END OF JOB</th>
<th>CONSTRUCTION PAVEMENT MARKINGS</th>
<th>REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS</th>
<th>REMOVABLE CONSTRUCTION PAVEMENT MARKINGS</th>
<th>RAISED PAVEMENT MARKERS</th>
<th>REFLECTORIZED PAINT PAVEMENT MARKINGS</th>
<th>HIGH PERFORMANCE CONTRAST PAVEMENT MARKING</th>
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<tbody>
<tr>
<td>CONSTRUCTION PAVEMENT MARKINGS</td>
<td>4766</td>
<td>10072</td>
<td>14828</td>
<td>1249</td>
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<td>REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS</td>
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<td>RAISED PAVEMENT MARKERS TYPE II (VEL/VEL)</td>
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<td>REFLECTORIZED PAINT PAVEMENT MARKINGS</td>
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<tr>
<td><strong>TOTALS</strong></td>
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<td>6776</td>
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</table>

Note: This is a low traffic volume road as defined in section 604.03, Standard Specifications for Highway Construction, 2003 edition.
### Clearing and Grubbing

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Clearing</th>
<th>Grubbing</th>
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</thead>
<tbody>
<tr>
<td>100+00</td>
<td>Main Lanes</td>
<td>10</td>
<td>10</td>
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<tr>
<td>120+00</td>
<td>Main Lanes</td>
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</tbody>
</table>

**Totals:**
- Clearing: 37
- Grubbing: 37

### Selected Pipe Bedding

<table>
<thead>
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<th>Location</th>
<th>Station</th>
<th>Selected Pipe Bedding</th>
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</thead>
<tbody>
<tr>
<td>Entire Project to be Used if and Where Directed by the Engineer</td>
<td>CU-YD</td>
<td>10</td>
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</table>

**Total:** 10

Note: Quantity estimated. See Section 104.03 of the Std. Spec.

### Removal and Disposal of Guardrail

<table>
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<th>Location</th>
<th>Guardrail</th>
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<tbody>
<tr>
<td>LNT/F</td>
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<tr>
<td>ST. MAIN Lanes</td>
<td>30</td>
</tr>
<tr>
<td>LT. MAIN Lanes</td>
<td>30</td>
</tr>
<tr>
<td>ST. MAIN Lanes</td>
<td>30</td>
</tr>
<tr>
<td>LT. MAIN Lanes</td>
<td>30</td>
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</table>

**Total:** 120

### Earthwork

<table>
<thead>
<tr>
<th>Location</th>
<th>Unclassified Excavation</th>
<th>Compacted Embankment</th>
<th><strong>SOIL CLASSIFICATION</strong></th>
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</thead>
<tbody>
<tr>
<td>Entire Project to be Used if and Where Directed by the Engineer</td>
<td>9614</td>
<td>28073</td>
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<tr>
<td>Entire Project Main Lanes</td>
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<tr>
<td>Entire Project Drive Way</td>
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**Totals:**
- Unclassified Excavation: 10194
- Compacted Embankment: 28073
- Soil Classification: 60

*Quantity estimated. See Section 104.03 of the Std. Specs.

Note: Earthwork quantities shown above shall be paid as plan quantity.

### Approach Slabs and Gutters

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Approach Gutter (Type Special)</th>
<th>Approach Slabs (Type Special)</th>
<th>Reinforcing Steel (GPM)</th>
<th>Aggregate Base CRS (Class 7)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>L 04-02</td>
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<td>8.45</td>
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<td>30.68</td>
<td>4028</td>
<td>36.7</td>
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**Totals:**
- Approach Gutter: 38.30
- Approach Slabs: 71.36
- Reinforcing Steel: 9393
- Aggregate Base CRS: 71.4

### Driveways & Turnouts

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<tr>
<th>Station</th>
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<th>ACME Surface Course (12&quot;) 220 Lbs.</th>
<th>Aggregate Base Course (Class 7)</th>
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<td>Entire Project Temporary Ditches</td>
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**Totals:**
- Width: 264
- ACME Surface Course (12") 220 Lbs: 854.6
- Aggregate Base Course (Class 7): 78

*Quantity estimated. See Section 104.03 of the Std. Specs.

### 4" Pipe Underdrain

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<th>Underdrain Outlet Protectors</th>
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**Totals:**
- 4" Pipe Underdrains: 1000
- Underdrain Outlet Protectors: 6

*Note: Quantities are estimated. See Section 104.03 of the Std. Specs.*
### GUARDRAIL

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<th>Station</th>
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<th>Location</th>
<th>Guardrail (Type A)</th>
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<th>Terminal Anchor Post (Type 1)</th>
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<th>Each</th>
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<tr>
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<td>119+99.52</td>
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<tr>
<td>122+39.48</td>
<td>124+39.23</td>
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<tr>
<td>123+39.48</td>
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<td></td>
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### EROSION CONTROL

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<th>Location</th>
<th>Seeding</th>
<th>Lime</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>Sandbag Ditch Checks</th>
<th>Rock Ditch Checks</th>
<th>Silt Fence</th>
<th>Sediment Basin</th>
<th>Submergence of Sediment Basin</th>
<th>Sediment Removal &amp; Disposal</th>
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<td>154</td>
<td>9</td>
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<td>75</td>
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<td>112</td>
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<td>9</td>
<td>1000</td>
<td>75</td>
<td>75</td>
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</table>

**Basis of Estimate:**
- Lime: 2 tons / acre of seeding
- Water: 120.3 M.G. / acre of temporary seeding
- Sandbag Ditch Checks: 20 M.G. / location
- Rock Ditch Checks: 4 M.G. / location

**Note:** The temporary erosion control devices shown above and on the plans shall be installed in such a sequence as to deter erosion and sedimentation on U.S. waterways as explained by the National Pollutant Discharge Elimination System permit.

*Quantities are estimated. See Section 104.03 of the Standards.*
### Quantities

#### SOIL LOG

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<th>MIN.</th>
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<th>ASHBY CLASSIFICATION</th>
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<td>91.00</td>
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<td>30'RT.</td>
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<td>12.00</td>
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#### BASE AND SURFACING

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<th>ACHM SURFACE COURSE (T2)</th>
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#### ADDITIONAL FOR SURFACER

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#### ADDITIONAL FOR LEVELING

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<th>TACK COAT</th>
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#### ADDITIONAL FOR GRADE

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#### TOTALS

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#### BASE OF ESTIMATE

- ACHM SURFACE COURSE (T2): 94.0% MIN. AGGREGATE, 5.0% ASPHALT BINDER
- ACHM BINDER COURSE (T1): 90.7% MIN. AGGREGATE, 4.3% ASPHALT BINDER

#### MAXIMUM NUMBER OF OPERATIONS = 115 FOR FIG. 56-32

**Notes:**
- SOIL CHARACTERISTICS tabulated above are representative at the location of the sample, and from surface indications are typical for the limits shown. These data are shown for information only; the State will not be responsible for variations in the soil characteristics and/or extent of same differing from the above tabulations.
### SCHEDULE OF BRIDGE QUANTITIES: JOB 11054

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(1) ASTM A252 GRADE 3, ify = 40,000 psi
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* ALTERNATE BID ITEMS

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**REVISION BOX**

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**SUMMARY OF QUANTITIES AND REVISIONS**

---
### Survey Control Coordinates

**Project Name:** s110541  
**Coordinate System:** ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL  
**Projected to Ground.**

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**Note:** Rebar and Cap: Standard: 5/8" Rebar with 2' Aluminum Cap CAP STAMPED 1934  
Any markings indicated on the point description of the individual point.

**USE CAP 1,0 FOR STAKEOUT FOR THIS PROJECT.**

**A PROJECT CAP OF 0-99999776634 HAS BEEN USED TO COMPUTE THE ABOVE GROUND COORDINATES.**

**THIS CAP IS INTENDED FOR USE WITHIN THE PROJECT LIMITS.**

**GRID DISTANCE = GROUND DISTANCE X CAP.**

**GRID COORDINATES ARE STORED UNDER FILE NAME S1105411.CTL**

**HORIZONTAL DATUM NAVD88 POSITONAL ACURACY THIRD ORDER, UNLESS SPECIFIED OTHERWISE AT A SPECIFIC POINT.**

**REFERENCE POINTS (1500 SERIES) ARE TO BE USED TO ESTABLISH CONTROL**

**IF THE PRIMARY CONTROL POINTS LISTED ABOVE HAVE BEEN DESTROYED.**

**REFERENCE POINTS ARE NOT TO BE USED FOR VERTICAL CONTROL.**

**Basis of Bearing:**

**ARKANSAS STATE PLANE GRID BEARINGS - 0010-NORTH ZONE OR 0020-SOUTH ZONE**

**Determined FROM GPS CONTROL POINTS 740006 - 74006A**

**Convergence Angle 0.27-41.1 Right AT L15-0000.1 LG0911-25.3**

**Grid Azimuth = Astronomical Azimuth - Convergence Angle.**

---

**Survey Control Details**

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GENERAL NOTES FOR CONCRETE FILLED STEEL SHELL PILES
Steel shell pile conforms to ASTM A500, Grade D, Grade 60.
Concrete used for filling of steel shell shall be Class 5 with a minimum 28 day compressive strength, Fc = 3,500 psi, and shall be poured in the dry.
See bridge layout for size and length of steel shell pile and for additional driving information.
Concrete, structural steel and reinforcing bars, including welding, will not be paid for directly, but will be considered as part of the corresponding item "Steel Shell Piling".

GENERAL NOTES FOR PILE ENCASEMENTS
See bridge layout for required location of encasements.
Concrete shall have a minimum 28 day compressive strength, Fc = 3,500 psi.
If concrete cannot be placed in the dry, Class 5 concrete may be used as Surf Concrete and placed immediately after bottom of tip of encasement.
Reinforcing steel conform to ASTM A500 or A53, Grade 60.
Concrete, welded wire fabric, or reinforcing steel will not be paid for directly, but will be considered as part of the item "Pile Encasements".
Galvanized corrugated steel pipe will not be allowed for pile encasement.

PILE ENCASEMENT DETAIL
FOR STEEL SHELL PILES

SECTION F-F

ELEVATIONS

PART SECTION

ALTERNATE FLAT TIP DETAIL

TABLE FOR SHELL PILES

DETAILS OF CONCRETE FILLED STEEL SHELL PILES

ROUTE SEC. ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK.

DRAWN BY: DATED: SCALE: CHECKED BY: DATED: PLAN: DRAWING NO. ISSUE: DRAWING NO. ISSUE:


SHEET NO. 07217 DRAWING NO. 5204
EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT
INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND

EXCAVATION FOR STRUCTURES - BRIDGE
LOCATION WITH DESIGNATED CHANNEL CHANGE

EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT
INTERIOR BENT IN NATURAL GROUND

EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND

EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND

EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT

Details for Dumped Riprap and Filter Blanket and Details for Computing Excavation for Structures

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, AR

Drawing No.: D-11250 SC 1997
Scale: NO SCALE

Drawing No.: 15" X 11" (400 X 250)

Details for Dumped Riprap and Filter Blanket and Details for Computing Excavation for Structures

NOTE: See detail C for details regarding the filter blanket.

NOTE: The filter blanket may be extended to cover areas as specified in the project.

NOTE: See detail C for details regarding the filter blanket.
**Case 1**

Plan View Steel Posts

Plan View Wood Posts

Other nose configuration acceptable.

Notes:
- For overlapping applications ranging from 0 to 10", the thickness of required drilling is adequate to 2".
- For separation from 0 to 10", the thickness of required drilling is adequate to 2".

**Case 2**

Plan View Steel Posts

Plan View Wood Posts

Either nose configuration acceptable.

Notes:
- For overlapping applications ranging from 0 to 10", the thickness of required drilling is adequate to 2".
- For separation from 0 to 10", the thickness of required drilling is adequate to 2".

**Detail of Post Placement in Solid Rock (W-Beam)**

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-BA
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 II) (FULL SHOULDER WIDTH OR LESS BRIDGES)

LEGEND

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING OR-9
DETAILS OF WIDENING FOR GUARD RAIL

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

SECTIONS A-A AND B-B

ARKANSAS STATE HIGHWAY COMMISSION
GUARD RAIL DETAILS

STANDARD DRAWING GR-9A
### Construction Sequence
1. Place structural bedding material to grade, do not compact.
2. Install 2% to 3% crown (depending on the curve of the pipe).
3. Complete structural bedding (valve box) by working from side to side of the pipe, starting at the higher end of the pipe and followed by the lower end of the pipe, whichever is less.

Notes:
- Structural backfill and structural bedding material will not be passed for separately, but compensation will be considered to be included in the price bid per linear foot of metal pipe.
- **Legend**
  - $D_0$ — outside diameter of pipe
  - $D_m$ — maximum metal
  - $H_m$ — maximum height
  - $H_p$ — pipe fill height
  - $H_e$ — equivalent diameter
  - **Structural backfill**
  - **Undisturbed soil**

#### Installation Material Requirements

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<th>Type</th>
<th>Description</th>
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<td>Aggregate base course (Class 4, 5, or 7)</td>
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<td>2</td>
<td>Selected materials (Class 4-1, 4-2, or 4-4) or Type 3 Installation Material</td>
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#### Equivalent Metal Thicknesses and Gauges

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<td>Type 2</td>
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<td>36</td>
</tr>
</tbody>
</table>

**Structural backfill and excess bedding material shall be compacted to 95% of the maximum density according to the type or class of material used.**

**Installation Type 1 or 2 may be used for corrugated steel or aluminized pipe.**

**Installation Type 2 shall be used for corrugated steel or aluminized pipe with 24" x 1½" corrugation.**

**Installation Type 2 may be used for corrugated steel or aluminized pipe with 3½" or 5½" corrugation.**

### General Notes
1. Metal pipe culvert construction shall conform to the Arkansas State Highway and Transportation Department Standard Specifications for Highway Construction, revised edition with applicable addenda and other pertinent design and construction details.

### Embankment and Trench Installations

1. Structural backfill and excess bedding shall be compacted to 95% of the maximum density according to the type or class of material used.

2. Installation type 2 or 4 may be used for corrugated steel or aluminized pipe.

3. Installation type 3 shall be used for corrugated steel or aluminized pipe with 24" x 1½" corrugation.

4. Installation type 2 may be used for corrugated steel or aluminized pipe with 3½" or 5½" corrugation.

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**ARKANSAS STATE HIGHWAY COMMISSION**

**METAL PIPE CULVERT FILL HEIGHTS & BEDDING**

**DE:2-97**

**MODEL FOR PIPE DESIGN SPECIFICATIONS**

**STANDARD DRAWING: PCM-1**

**DATE ISSUED:** 08/07/97

**DATE REVISED:** 10/01/97

**DATE FILED:** 11/01/97
NOTES:
1. All lines shall have a width of 4 inches.
2. The thickness and rate of paint application shall be as specified in Section 758 of the Standard Specifications.
3. This drawing shall be used in conjunction with the latest revised edition 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.

- 2" FOR ASPHALT OR CONCRETE PAVEMENT
- 8" PER BITUMINOUS SURFACE TREATMENT

EDGE OF PAVEMENT

4" CONTINUOUS WHITE

4" CONTINUOUS WHITE

STROKE 4" CONTINUOUS WHITE

GENERAL NOTES:
This drawing should be considered as typical only and the final location of the markings and raised markers shall be determined by the engineer.
This drawing should be used in conjunction with the Standard Plans and Specifications.

NOTES:
Embossed signs for raised pavement markers are typical. The contractor may substitute similar markers with the approval of the Engineer. Requesting approval for similar markers may be made by referring to the AASHTO qualified products list.

CROSSWALK AND STOPBAR DETAILS

10" STOPBAR
OFFSET STOPBAR + 4' FROM CROSSWALK

ARIZONA STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1
### Super-elevation Table for Two-Way Traffic

<table>
<thead>
<tr>
<th>Degree of Curve</th>
<th>Left (ft)</th>
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**Note:**
- Normal Crown
- Super-elevation at Normal Crown Slope
- Maximum Super-elevation
- Inside Subgrade Edge
- Outside Subgrade Edge
- Inside Pavement or Subgrade Edge
- Outside Pavement or Subgrade Edge
- Maximum Super-elevation

**General Notes:**
1. In pavements with two-way traffic, the Super-elevation shall be reduced in the inside pavement edge unless otherwise noted on the plans.
2. Super-elevation values shown on the cross sections are maximum.
3. Lengths in feet may be reduced in multiples of 25 ft or 50 ft.
4. Pavements wider than 2 lanes shall have additional transition lengths as follows:

#### Standard Method When Super-elevation Revolves Around Inner Subgrade Point or Inner Pavement Edge

<table>
<thead>
<tr>
<th>L (ft)</th>
<th>L (ft)</th>
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</thead>
<tbody>
<tr>
<td>3/4 L</td>
<td>4/4 L</td>
</tr>
</tbody>
</table>

**Note:**
- Maintain normal crown on inside until Super-elevation exceeds 2c.
- Rate of Super-elevation shall be the same on line-by-line basis and using applicable Lc.

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**Arkansas State Highway Commission**

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

**Standard Drawing SE-2**
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (i.e., SILT FENCES, DIVERSION DITCHES, EROSION BARRIERS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION

EXCAVATION

EXISTING GROUND

INTERCEPTOR OR DIVERSION DITCH

EXISTING GROUND

PHASE 1 EXCAVATION

PHASE 2 EXCAVATION

PHASE 3 EXCAVATION

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

GENERAL NOTE

ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEED, AND HILICED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 20 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING, STABILIZE GROUND, COMPLETE DREDGING DIVERSION DITCHES, SEED MULCH OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT

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

CONSTRUCTION SEQUENCE
1. PLACE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.

EMBANKMENT TO BE COMPLETELY STABILIZED UNTIL SLOPE IS COMPLETELY STABILIZED.

GENERAL NOTE

ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEED, AND HILICED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 20 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. COMPLETE DIVERSION DITCHES (DREDGE, UPLAND, BANK, DRAIN, SILT FENCES, ETC.)
2. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE PHASE 3 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
5. PLACE DIVERSION DITCHES AND EMBANKMENT AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.

ARMS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-3
CROSS SECTIONS

STA. 116+00 TO STA. 118+00

AREA CUT 116+00 AREA CUT 118+00
AREA FILL 116+00 AREA FILL 118+00

STA. 118+00 INSTALL
24" x 78 PPE CULV'T,
RT, SIDE DRAIN
CONST. APPR. ± 580 CU. YDS.

CUT VOLUME 124
FILL VOLUME 11659

CUT VOLUME 0
FILL VOLUME 1772

CUT VOLUME 444
FILL VOLUME 0

CUT VOLUME 483
FILL VOLUME 0

CUT VOLUME 2
FILL VOLUME 1791

CROSS SECTION STA. 116+00 TO STA. 118+00
STA. 120+04,92 TO STA. 123+17,08
CONSTRUCT 310'-0" X 24' CLEAR ROADWAY BRIDGE NO. 070017
310'-0" CONTINUOUS, COMPOSITE PRESTRESSED
CONCRETE GIRDERS UNIT TYPE 111-1/2"-67'-60"-60'-60"-
ST, 120-04,92 TO STA. 123+13,85 IN PLACE
304'-0" X 24'-0" CLEAR ROADWAY BRIDGE NO. 070059
14"X19" CONCRETE CHANNEL DRAIN SPANNED BY CONCRETE PILE BENTS
REMOVE EXISTING BRIDGE STRUCTURE = 1,000 LIN. FT.

STA. 120+04,92 - BEGIN BRIDGE

AREA CUT 17
AREA FILL 549

AREA CUT 16
AREA FILL 544

AREA CUT 146
AREA FILL 0

AREA CUT 147
AREA FILL 0

AREA CUT 9
AREA FILL 558

AREA CUT 151
AREA FILL 0

CUT VOLUME 3
FILL VOLUME 99
CUT VOLUME 50
FILL VOLUME 2041
CUT VOLUME 131
FILL VOLUME 1933
CROSS SECTION STA. 119+00 TO STA. 120+05