**TYPICAL SECTIONS OF IMPROVEMENT**

**HWY. 65**

**NOTCH AND WIDEN**

STA. 101+61.95 TO STA. 105+52.65

STA. 124+16.61 TO STA. 127+53.20

**HWY. 65**

**FULL DEPTH**

STA. 109+80.00 TO STA. 113+60

STA. 115+41 TO STA. 118+71.00

---

*TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER*

**NOTES: RESEARCH 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 PLANNED THICKNESS SHOWN IN THE CONTRACT DOCUMENTS. THEY MAY NOT BE LESS THAN THE MINIMUM REQUIRED. PAYMENT SHALL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCES INDICATED.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. THE THICKNESS OF ASPHALT EXPRESSED IN THE CONTRACT DOCUMENTS FOR THE AMOUNT OF LEVELING AND OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND WIDENING.

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

WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY USE ADJACENT TO THE SHOULDERS.
NOTES:
- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES; NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLANNER THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.
- THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED.
- LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
- WITH APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE AN ADDITIONAL 1/4" OF AGGREGATE BASE COURSE OVER THE STEEPENED COURSE 50' IN LCEL OF AGGREGATE BASE COURSE ON THE SHOULDERS.

HWY. 65
TYPICAL SECTION OF IMPROVEMENT
SUPERELEVATION
STA. 105+52.65 TO STA. 109+50.00
STA. 118+71.00 TO STA. 124+16.61
WIDENING FOR GUARDRAIL

SPECIAL DETAIL OF APPROACH SLAB

DETAIL FOR COUNTY ROAD TURNOUTS

DETAIL FOR DRIVEWAY TURNOUTS

NOTE: Turnouts and private driveways shall be modified where necessary to meet local conditions as directed by the engineer.
Temporary Erosion Control Details

Stage 2

LEGEND
- Sand & Gravel Check
- Rock Check
- Silt Fence
- Sediment Basin

Revision Box

Date of Revision

Revision

7/19/11

090200 10 88
STAGE 1 QUANTITIES

SIGNS = 206 SQ. FT.
TRAFFIC DRUMS = 42 EACH
VERTICAL PANELS = 20 EACH
TYPE 11 BARRIERS = 96 LIN. FT.
FURNISHING AND INSTALLING PRECAST CONCRETE BARRIER = 40 LIN. FT.
TEMPORARY IMPACT ATTENUATION BARRIER = 2 EACH
TEMPORARY IMPACT ATTENUATION BARRIER (REPAIR) = 2 EACH
CONSTRUCTION PAVEMENT MARKINGS = 12174 LIN. FT.

STAGE 1 CONSTRUCTION SEQUENCE

INSTALL ADVANCE WARNING SIGNS AND END ROAD WORK SIGNS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC PLANS.
INSTALL ROAD WORK AHEAD (R20-1-1) SIGN ON WILEYS COVE RD. AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC PLANS.

APPLY LEVELING COURSE TO EXISTING LINES IF AND WHERE DIRECTED BY THE ENGINEER.

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC PLANS.

USE VERTICAL PANELS AND TRAFFIC DRUMS SPACED 55' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

NOTCH AND WIDEN HWY. 65 ON THE LEFT FROM STATION 101+61.35 TO STATION 105+61.36 AND FROM STATION 122+80.03 TO STATION 127+53.20. CONSTRUCT FULL DEPTH SECTION OF HWY. 65 OUT TO 2 FT., INTO RIGHT SHOULDER FROM STATION 105+61.36 TO STATION 113+60 AND FROM STATION 115+41 TO STATION 122+80.03.

INSTALL TYPE 111 BARRIERS WITH ROAD CLOSED (R11-2) SIGNS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC PLANS AS PROPOSED ROADWAY EMBRYNEMENT IS CONSTRUCTED.

CONSTRUCT PROPOSED BRIDGE OVER COVE CREEK AND INSTALL TEMPORARY PRECAST CONCRETE BARRIERS WITH TEMPORARY IMPACT ATTENUATION BARRIERS AS SHOWN IN THE STAGE 1 MAINTENANCE OF TRAFFIC PLANS.

NOTES:
THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE 1 IS BASED ON A SINGLE APPLICATION OF THE EXISTING ROADWAY STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR STAGE 1.
STAGE 2 QUANTITIES

SIGNS - 206 SQ. FT.
TRAFFIC DRUMS - 83 EACH.
TYPE III BARRICADES - 96 LIN. FT.
CONSTRUCTION PAVEMENT MARKINGS - 11025 LIN. FT.
REMOVABLE CONSTRUCTION PAVEMENT MARKINGS - 940 LIN. FT.

NOTES:

THE CONSTRUCTION PAVEMENT MARKING QUANTITY FOR STAGE 2 IS BASED ON A SINGLE APPLICATION OF THE ROADWAY STRIPING SHOWN ON THE MAINTENANCE OF TRAFFIC DETAIL SHEETS FOR STAGE 2.

STAGE 2 CONSTRUCTION SEQUENCE

APPLY CONSTRUCTION PAVEMENT MARKINGS AS SHOWN IN THE STAGE 2 MAINTENANCE OF TRAFFIC PLANS AND SHIFT TRAFFIC ONTO THE PROPOSED ROADWAY CONSTRUCTED IN STAGE 1.

USE TRAFFIC DRUMS SPACED 55' ON CENTER TO DELINEATE THE WORK ZONE. USE TRAFFIC DRUMS TO DELINEATE DRIVEWAYS.

OBLITERATE THE PORTIONS OF EXISTING PAVEMENT ON HWY. 65 THAT ARE NOT NEEDED AND GRADE EMBANKMENT TO DRAIN AS SHOWN ON THE CROSS SECTIONS.

NOTCH AND WIDEN HWY. 65 ON THE RIGHT FROM STATION 101+61.95 TO STATION 105+61.36 AND FROM STATION 122+89.03 TO STATION 127+53.25. CONSTRUCT REMAINDER OF FULL DEPTH SECTION OF HWY. 65 FROM STATION 105+61.36 TO STATION 113+60 AND FROM STATION 115+41 TO STATION 122+89.03.

APPLY FINAL 2" LIFT OF A.C.H.M. SURFACE COURSE TO HWY. 65 AND INSTALL PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PERMANENT PAVEMENT MARKINGS PLANS.
PERMANENT PAVEMENT MARKING QUANTITIES

THERMOPLASTIC PAVEMENT MARKING WHITE (4") = 5983 LIN. FT.
THERMOPLASTIC PAVEMENT MARKING YELLOW (4") = 5513 LIN. FT.
HIGH PERFORMANCE CONTRAST PAVEMENT MARKING YELLOW (4") = 470 LIN. FT.
RAISED PAVEMENT MARKER (TYPE III) (YELLOW/YELLOW) = 75 EACH

NOTES:
RAISED PAVEMENT MARKERS (TYPE III) (YELLOW/YELLOW) ARE TO BE PLACED ON THE CENTERLINE AT 40' INTERVALS.

REFER TO THE PERMANENT PAVEMENT MARKING DETAILS, S12D, DRWG, PM-1, AND THE LATEST EDITION OF THE MUTCD FOR ADDITIONAL PAVEMENT MARKING DETAILS.
## 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>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>BARRICADES (TYPE III)</th>
<th>FURNISHING &amp; INSTALLING PRECAST CONC. BARRIER</th>
<th>TEMPORARY IMPACT ATTENUATION BARRIER</th>
<th>TEMP. IMPACT ATTEN.BARRIER (REPAIR)</th>
<th>QTY</th>
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<tbody>
<tr>
<td>V20-1</td>
<td>ROAD WORK 500 FT.</td>
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<td>V20-1</td>
<td>ROAD WORK AHEAD</td>
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<td>CS0-2</td>
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<tr>
<td>FC0-2</td>
<td>ROAD CLOSED</td>
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<td>ROAD CLOSED</td>
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<td>4</td>
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<td>VERT. PANELS</td>
<td>VERTICAL PANELS</td>
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<td>TYPE B BARRICADE LT (24&quot;)</td>
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<td>FURNISHING &amp; INSTALLING PRECAST CONCRETE BARRIER</td>
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</table>

**TOTALS:**

|                                    | 206.0 | 20 | 83 | 46 | 46 | 40 | 2 | 2 |

## 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>REMOVABLE CONSTRUCTION PAVEMENT MARKINGS</th>
<th>RAISED PAVEMENT MARKERS</th>
<th>THERMOPLASTIC PAVEMENT MARKINGS</th>
<th>HIGH PERFORMANCE CONTRAST PAVEMENT MARKING</th>
<th>QTY</th>
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<tr>
<td>CONSTRUCTION PAVEMENT MARKINGS</td>
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<td>11056</td>
<td>22199</td>
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<td>22199</td>
<td>940</td>
<td>940</td>
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<td>RAISED PAVEMENT MARKERS TYPE I (YELLOW)</td>
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<td>75</td>
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<td>THERMOPLASTIC PAVEMENT MARKINGS YELLOW (4&quot;)</td>
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<td>470</td>
<td>470</td>
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</tbody>
</table>

**TOTALS:**

|                                    | 22199  | 940  | 75   | 5983 | 5513 | 470 |

**NOTE:** THIS IS A HIGH TRAFFIC VOLUME ROAD AS DEFINED IN SECTION 604.02, STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2003 EDITION.
### Clearing and Grubbing

<table>
<thead>
<tr>
<th>Location</th>
<th>Clearing</th>
<th>Grubbing</th>
</tr>
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<tbody>
<tr>
<td>Lt. of C.L.</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Totals:</td>
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<td>6</td>
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</tbody>
</table>

### Removal and Disposal of Items

<table>
<thead>
<tr>
<th>Location</th>
<th>Guardrail</th>
<th>Terminal Anchor Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lt. ofExisting Roadway</td>
<td>200</td>
<td>4</td>
</tr>
<tr>
<td>Lt. of Existing Roadway</td>
<td>75</td>
<td>1</td>
</tr>
<tr>
<td>Lt. of Existing Roadway</td>
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<td>4</td>
</tr>
<tr>
<td>Totals:</td>
<td>575</td>
<td>4</td>
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### Fencing

<table>
<thead>
<tr>
<th>Location</th>
<th>Fence</th>
<th>Gates</th>
</tr>
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<td>Lt. of C.L.</td>
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<td>1</td>
</tr>
<tr>
<td>Lt. of C.L.</td>
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</tr>
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<td>Lt. of C.L.</td>
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<td>Lt. of C.L.</td>
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<tr>
<td>Lt. of C.L.</td>
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<td>Lt. of C.L.</td>
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### Soil Log

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<th>Station</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Location</th>
<th>Depth</th>
<th>Liquid Limit</th>
<th>Plasticity Index</th>
<th>AASHTO Classification</th>
<th>Color</th>
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<tbody>
<tr>
<td>103-00</td>
<td>35-00</td>
<td>15-30</td>
<td>92-34</td>
<td>30-30</td>
<td>0.75</td>
<td>7.0</td>
<td>A-24G2</td>
<td>BROWN</td>
</tr>
<tr>
<td>103-00</td>
<td>35-00</td>
<td>15-30</td>
<td>92-34</td>
<td>30-30</td>
<td>0.75</td>
<td>7.0</td>
<td>A-24G2</td>
<td>BROWN</td>
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<td>103-00</td>
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<td>92-34</td>
<td>30-30</td>
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<td>7.0</td>
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<td>BROWN</td>
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<td>103-00</td>
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<td>0.75</td>
<td>7.0</td>
<td>A-24G2</td>
<td>BROWN</td>
</tr>
</tbody>
</table>

**Note:** Soil characteristics tabled above are representative of 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.

### Selected Pipe Bedding & Backfill

<table>
<thead>
<tr>
<th>Location</th>
<th>Selected Pipe Bedding</th>
<th>Selected Pipe Backfill</th>
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<tbody>
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<td>Entire Project to be Used</td>
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<td>20</td>
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Totals: 10 | 20 |

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

### Cold Milling Asphalt Pavement

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<th>Location</th>
<th>Avg. Width</th>
<th>Cold Milling Asphalt Pavement</th>
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<td>Lt. of C.L.</td>
<td>24&quot; x 20&quot; C, M PIPER CULVERT</td>
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**Total:** 2

**Note:** Quantities shown above shall include removal & disposal of all headwalls and flared end sections if applicable.

### Bench Marks

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<th>Bench Marks</th>
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<td>1</td>
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</tbody>
</table>

**Total:** 1

**Note:** Shown for information only. Bench marks shall be furnished and placed by State forces.

**Quantiies**
# CONCRETE DITCH PAYING

<table>
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<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>&quot;V&quot;</th>
<th>CONC. DITCH PAYING (TYPE B)</th>
<th>SOLID SODDING</th>
<th>WATER</th>
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<tbody>
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<td>113+80</td>
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</table>

**TOTALS:**

|                      | 520.00 | 320.00 | 4.03 |

**BASIS OF ESTIMATE:**

WATER: 12.4 GAL / SQ.YD. OF SOLID SODDING

---

# APPROACH GUTTERS AND SLABS

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<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>APPROACH GUTTER (TYPE B)</th>
<th>APPROACH SLABS</th>
<th>REINFORCING STEEL (RHW)</th>
<th>AGGREGATE BASE CRSE. (CLASS 7)</th>
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<tbody>
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<td>113+33.00</td>
<td>113+40.00</td>
<td>C.L.</td>
<td>6.75</td>
<td>3,880</td>
<td>992</td>
<td>10.0</td>
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<td>113+33.00</td>
<td>113+40.00</td>
<td>T. OF C.L.</td>
<td>6.75</td>
<td>3,880</td>
<td>992</td>
<td>10.0</td>
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<td>113+33.00</td>
<td>113+40.00</td>
<td>R.T. OF C.L.</td>
<td>6.75</td>
<td>3,880</td>
<td>992</td>
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**TOTALS:**

|                      | 27.00 | 77.40 | 108.00 | 38.6 |

---

# EARTHWORK

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<th>STATION</th>
<th>LOCATION / DESCRIPTION</th>
<th>UNCLASSIFIED EXCAVATION</th>
<th>COMPACTED EMBANKMENT</th>
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<td></td>
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<td>CU.YD.</td>
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**TOTALS:**

|                      | 9553 | 19768 | 50 |

**NOTE:** EARTHWORK QUANTITIES SHOWN ABOVE SHALL BE PLANNED AS PLAN QUANTITY.

---

# GUARDRAIL

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<tr>
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<th>GUARDRAIL (TYPE A)</th>
<th>THREE BEAM GUARDRAIL (TYPE B)</th>
<th>GUARDRAIL (TYPE C)</th>
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<th>EACH</th>
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**TOTALS:**

|                      | 393 | 4 | 4 |

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# STRUCTURES

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<th>REINFORCED CONCRETE PIPE CULVERTS</th>
<th>FLARED END SECTIONS FOR R.C. PIPE CULVERTS</th>
<th>TEMPORARY PIPE CULVERTS</th>
<th>SOILD SODDING</th>
<th>WATER</th>
<th>STD. Dwg. Nos.</th>
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<td>12&quot;</td>
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<td>EACH</td>
<td>LIN' FT.</td>
<td>SQ.YD.</td>
<td>M.GAL</td>
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<td>100+31</td>
<td>24&quot;</td>
<td>16</td>
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**TOTALS:**

|                      | 24 | 2 | 115 | 16 | 0.20 |

**NOTE:** FOR R.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.

---

# EROSION CONTROL

**PERMANENT EROSION CONTROL**

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<tr>
<th>STATION</th>
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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>SAND BAG DITCH CHECKS</th>
<th>ROCK DITCH CHECKS</th>
<th>BLT FENCE</th>
<th>SEDIMENT BASIN</th>
<th>OBSTRUCTION OF SEDIMENT BASIN</th>
<th>*Sediment Removal &amp; Disposal</th>
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<td>ENTER</td>
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<td>STAGE 1</td>
<td>ACRE</td>
<td>TON</td>
<td>ACRE M.GAL</td>
<td>ACRE</td>
<td>TON</td>
<td>ACRE</td>
<td>M.GAL</td>
<td>BAG</td>
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<td>CU.YD.</td>
<td>CU.YD.</td>
<td>CU.YD.</td>
<td>CU.YD.</td>
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<td>STAGE 2</td>
<td>2.05</td>
<td>4.10</td>
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<td>2.26</td>
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**TOTALS:**

|                      | 5.97 | 11.14 | 6.57 | 568.1 | 6.57 | 5.97 | 5.97 | 113.8 | 814 | 102 | 102 | 202 | 133 | 133 | 133 | 133 |

**BASE OF ESTIMATE:**

LIME: 2 TONS / ACRE OF SEEDING
WATER: 120 G.M / ACRE OF SEEDING
WATER: 20.4 M.G / ACRE OF TEMPORARY SEEDING
WATER: 12.4 GAL / SQ.YD. OF SOILD SODDING
SAND BAG DITCH CHECKS: 22 BAGS / LOCATION
ROCK DITCH CHECKS: 3 CU.YD. / LOCATION

**NOTE:** THE TEMPORARY EROSION CONTROL DEVICES SHOWN ABOVE AND ON THE PLANS SHALL BE INSTALLED IN SUCH A SEQUENCE AS TO TERMINATE EROSION AND SEDIMENTATION ON U.S. WATERWAYS AS EXPLAINED BY THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT.

**QUANTITIES**

*QUANTITIES ARE ESTIMATED.
SEE SECTION 104.00 OF THE STD. SPECS.
### DRIVEWAYS & TURNSOUTS

<table>
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<tr>
<th>STATION</th>
<th>SIDE</th>
<th>LOCATION</th>
<th>WIDTH (feet)</th>
<th>ACHIM SURFACE COURSE (1/2&quot;)</th>
<th>AGGREGATE BASE COURSE (CLASS 7)</th>
<th>SIDE DRIVES</th>
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<tr>
<td>103-05</td>
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<td>30</td>
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<td>57.8</td>
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<td>WILKES COVE RD</td>
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<td>DRIVE ON HWY 65</td>
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**TOTALS:**
- Width: 66.0 feet
- Area: 2843.8 sq ft
- Drives: 42

**Basis of Estimate:**
- ACHIM Surface Course (1/2") = 94.3% Min. Aggr. 5.7% Asphalt Binder
- Maximum Number of GVW's = 115 for PG 64-22

**Notes:**
- For R.C. Pipe Culvert installations use Type 3 bedding unless otherwise specified.
- For C.M. Pipe Culvert Installations use Type 2 bedding unless otherwise specified.
- The contractor, with the approval of the Engineer, will be allowed to substitute a higher performance grade Asphalt Surface Course for Driveways and Minor Side Street Construction at no additional cost to the Department.

### BASE AND SURFACING

#### Station

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Length (feet)</th>
<th>Aggregate Base Course (Class 7)</th>
<th>Tack Coat</th>
<th>ACHIM Binder Course (1&quot;)</th>
<th>ACHIM SURFACE COURSE (1&quot;)</th>
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<tbody>
<tr>
<td>MAIN LANES - HWY 65</td>
<td>69-05</td>
<td>102x15x15 TRANSITION</td>
<td>300.0</td>
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<td>MOTION ON LT</td>
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<td>TRANSITION</td>
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</table>

**Additional for Leveling:**
- 669.4 ft
- 240.0 sq ft
- 186.5
- 232.0
- 240.0

**Additional for Super-elevation:**
- 360.0 ft
- 81.0 ft
- 9.0 ft
- 14.0 ft

**Additional for Guardrail Wording:**
- 100x35.53
- 114-65
- 114-65
- 114-65
- 114-65

**Additional for Guardrail Wording:**
- 279.7
- 49.25
- 127.4
- 206.2
- 221

**TOTALS:**
- 703.3 ft
- 530.8 sq ft
- 1291.8

**Basis of Estimate:**
- ACHIM Surface Course (1") = 94.3% Min. Aggr. 5.7% Asphalt Binder
- ACHIM Binder Course (1") = 95.3% Min. Aggr. 4.7% Asphalt Binder
- Maximum Number of GVW's = 115 for PG 64-22

**Quantities:**
- 13 TON
- 26 GALLON

**Asphalt Concrete Patching for Maintenance of Traffic:**
- Location: TON
- Tack Coat: GALLON
- Entire Project - To be used if and where directed by the Engineer

**TOTALS:**
- 13 TON
- 26 GALLON

**Note:** Quantities are estimated. See Section 104.03 of the Spec. Specifications.
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**SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 092280**

*Note: All sheet piling required to have approved drilling points, which will not be paid for directly.*

*Includes 29 cu. yd. of rock excavation.*

---

**STEWART UNZ**

S C E N T R I C C O M P A N Y

**SCHEDULE OF BRIDGE QUANTITIES**

BROOKS OVER COVE CREEK

STEWART UNZ

SEARCY COUNTY

route 66, sec. 6

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

BRIDGE NO. 07202

DRAWING NO. 5753
Coordinate System: ARKANSAS STATE PLANE - NORTH ZONE BASED ON GPS CONTROL, PROJECTED TO GROUND.
Unit: U.S. SURVEY FOOT

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**Note:** Rebar and Cap - Standard: 5/8" Rebar with 2" Aluminum Cap stamped with standard markings common to all caps, or as indicated in the point description of the individual point.

**All Distances Are Ground.**

**Standards for this project:**
- A project CAD of 9898993011 has been used to compute the above ground coordinates.
- This CAD is intended for use within the project limits.
- Grid Distance = Ground Distance x CAP.
- Grid Coordinates are signed under file name 5020228991.CTL.
- Vertical Datum: NAD 88 Positional Accuracy 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 - 0301-NORTH ZONE DETERMINED FROM GPS CONTROL POINTS 640007-640007A.
- Convergence Angles: 0-20-23.5 Right.
- Grid Azimuth = Astronomical Azimuth - Convergence Angle.
DETAILS OF PARAPET RAIL

Use 3/4" x 8" Type 3A or 4 Joint Saddle: See subsections 500100-4 and 500100-5. Bar rail will not be required. Joint Saddle shall be measured and paid for as Class "E2" Concrete-Grade. Sub Joins shall extend to the outdoors of the wall and be connected to the building before the 12" Studs shall be done. Joint Saddle may be cased as soon as the slab has sufficiently set to accept jointing. Joint Saddle shall be placed at the jointing sequence construction joints and required sub Join locations.

SLAB JOINT DETAIL

NOTE:
The surface of the 3/4" Join will not be in contact with the concrete so it will form a plane at the joint. The joint shall be formed as shown in the plan view. The joint shall be filled with a 1/2" or 3/4" diagonal gap and the concrete shall be placed in the joint before the concrete is to be poured.}

DETAILED OF OPTIONAL SLIP FORMING OF CONCRETE PARAPET RAIL

No Scale

BAR LIST

No Scale

FINISH DRAWINGS

No Scale

ARKANSAS STATE HIGHWAY COMMISSION

INTEGRAL W-BEAM UNIT

Cove Creek

Route Sec.

Little Rock, AR

DRAFTS

ARKANSAS STATE HIGHWAY COMMISSION

DRAFTS

Dowling, 2004-04

DOWLING, 2004-04

DESIGN, CONSTRUCTION

DOWLING, 2004-04

DOWLING, 2004-04

DRAWING NO. 57613

DRAWING NO. 57613

PROJECT NO. 57613

DATE REVISED: 07/2022

DRAWING NO. 57613

DATE REVISED: 07/2022

DRAWING NO. 57613

DATE REVISED: 07/2022

DRAWING NO. 57613

DATE REVISED: 07/2022
ARKANSAS HIGHWAY COMMISSION
R. MADISON MURPHY - CHAIR
JOHN ED REGENOLD - VICE CHAIR
JOHN BURKHATER
DICK TRAMMEL
TOM SCHUECK
DIRECTOR - DAN FLOWERS
DEPUTY DIRECTOR/CHIEF ENGINEER - FRANK VOZEL

CONTRACTOR
COMPANY NAME
YEAR

TYPICAL BRIDGE NAME PLATE

DETAILS OF STANDARD TYPE D BRIDGE NAME PLATE
ROUTE
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY
CHECKED BY
DRAWING NO.
1/12/87
827.177
2387
TOE WALL DETAIL FOR CONCRETE DITCH PAVING

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE POURED MONOLITHICALLY.

TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND POURED MONOLITHICALLY.

SOIL STOcks 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 AASHO MLS.

ARKANSAS STATE HIGHWAY COMMISSION

CONCRETE DITCH PAVING

STANDARD DRAWING CDP-1
METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULD WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

NOTE: GUARD RAIL WITH GUARD RAIL TERMINAL, TYPE 2 TO BE INSTALLED ONLY AT LOCATIONS SHOWN ON PLAN.

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

LEGEND

Arkansas State Highway Commission
Guard Rail Details

Standard Drawing GR-9
DETAILS OF WIDENING FOR GUARD RAIL

SECTION A-A

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

SECTION B-B

NOTES:
- NORMAL SECTION TO BE WIDENED APPROX. 0'-6" EACH SIDE TO SUPPORT GUARD RAIL.
- NORMAL ROADWAY WIDTH
- WIDTH OF SURFACING
- Width of Surfacing

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-9A
THREE BEAM GUARD RAIL CONNECTION AT BRIDGE ENDS

GENERAL NOTES:

- THE THREE BEAM RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE GRAY-ZINC COATED AND WRAPPED.
- RAIL POSTS SHALL BE SET EXTRASPECIAL TO THE ROADWAY PROFILE SPACE AND PERFECTLY FLAT ON TOP SURFACE.
- COLUMNS TO EXTEND THROUGH THE FULL THICKNESS OF THE NEXT AND NO MORE THAN 1" IN EXCESS.
- ALL LAI PLATES, INCLINING PLATES, AND SHOES TO BE MADE IN THE DIRECTION SHOWN ON STANDARDS OR ON A DRILL.
- RAIL POSTS TO BE MADE FROM 1" X 1" X .125" STEEL PIPE, REFER TO SIO-346 OR SIO-44 FOR POST DETAILS.
- USE THREE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.
- THREE BEAM POSTS SHALL BE SAME MATERIAL AS R-BEAM POSTS FOR ENTIRE JOB.

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10
THREE BEAM RAIL WITH STEEL TUBING BLOCKOUT AND STEEL POSTS 1-7

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

* NOTE: THESE DIMENSIONS WILL NEED TO BE ADJUSTED IN THE FIELD TO MAKE THE TRANSITION FROM 29" MIDPOINT OF THREE BEAM TO 29" MIDPOINT OF W-BEAM.

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

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

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

GENERAL NOTES:
- RAIL POSTS SHALL BE SET PERPENDICULAR TO THE HIGHWAY PROFILE ORIGIN AND VERTICALLY IN CROSS SECTION.
- WOOD POSTS & WOOD BLOCKS SHALL BE OTHER SIDE NE 1/2 STRUCTURAL OR BETTER CLASS IV & ALL TO EXCEED SOUTHERN THREAD.

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-10A
### Corrugated Steel Pipe (Round) H-20 Loading

<table>
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<tr>
<th>Pipe Diameter (Inches)</th>
<th>Maximum Corrugated Pipe to Top of Subgrade (Inches)</th>
<th>Corrugation Depth (Inches)</th>
<th>Corrugation Pitch (Inches)</th>
<th>Maximum Full Height Above Top of Pipe (Feet)</th>
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### Corrugated Aluminiun Pipe (Round) H-20 Loading

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<th>Corrugation Depth (Inches)</th>
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<td>1.5</td>
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<td>28</td>
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### Conjunctions

**Type 2 Embankment and Trench Installations**

1. Place structural bedding material to grade, do not compact.
2. Compact structural bedding outside the middle third of the pipe.
3. Use a smooth surface on the bedding where the bedding is compacted by working from the side of the pipe to the side to side structural bedding.
4. Differential compaction of bedding shall be no greater than 1/8 inch.

**Structural Backfill Material**

- The minimum fill height above the pipe shall be 1 foot.
- The maximum fill height above the pipe shall be 1 foot.
- The fill material shall be a combination of structural and non-structural bedding material.
- The fill material shall be a combination of structural and non-structural bedding material.
- The fill material shall be a combination of structural and non-structural bedding material.

**General Notes**

1. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
2. The minimum pipe cover shall be the outside diameter of the pipe plus 24 inches, whichever is greater.
3. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
4. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
5. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
6. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
7. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
8. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
9. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.
10. All pipe shall be protected during construction by a cover sufficient to prevent damage from vehicle loading.

**Legend**

- D.1 = Outside Diameter of Pipe
- M.1 = Maximum Pipe
- H.1 = Full Height
- B.1 = Undisturbed Soil
- S.1 = Structural Backfill Material

**Equivalency**

- Equivalency = Equivalent Diameter

**Arkansas State Highway Commission**

**Metal Pipe Culvert Fill Heights & Bedding**

**Revision Date**

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**Standard Drawing**

**PCM-1**
CONCRETE PAVEMENT

BROKEN LINE STRIPING

4" SKIP YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" SKIP YELLOW 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" SKIP YELLOW

SOLID LINE STRIPING ON CONCRETE PAVEMENT

4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT

SOLID LINE STRIPING ON ASPHALT PAVEMENT

4" SKIP YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT 4" CONTINUOUS YELLOW CENTER LINE 4" CONTINUOUS YELLOW CENTER JOINT

ASPHALT PAVEMENT

CONCRETE PAVEMENT

STRIPPING AT ADJACENT NO PASSING LANES

CROSSWALK AND STOPBAR DETAILS

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 762 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 48 FEET SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

EDGE OF PAVEMENT 4" CONTINUOUS YELLOW STRIPE 4" CONTINUOUS WHITE 4" CONTINUOUS WHITE PAVEMENT EDGE LINE MARKING

DETAILED LAYOUT OF THE PAVEMENT EDGE LINE MARKING

REMOTE REFLECTOR

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

DATE REVISED 10-17-90

10-08-90 REVISED NOTE 2 & GENERAL NOTES

ARKANSAS STATE HIGHWAY COMMISSION

CROSSWALK AND STOPBAR DETAILS

4" CROSSWALK STRIPES 3 FT. MIN. FROM EDGE OF CROSSWALK 3 FT. MIN. FROM LANE EDGE

OFFSET STOPBAR 4" FROM CROSSWALK
4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (SEE BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. CRW. TC-61)

**Barriers Placement Along Bridge With Offset**

- **Offset Distance for Two Way Traffic Only**

**Barriers Placement Along Roadway With Offset**

- **Offset Distance**
  - Offsets (See Table)

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*If offset distance is not attainable, then use "Barrier Placement With Attenuator" Detail shown below.*

**Barriers Placement With Attenuator**

- **Min. 3'-0" from Edge of Travel Lane to Nearest Edge of Attenuator**

**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 (MAHS) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."
SEDIMENT BASIN WITH RIPRAP OUTLET (E-9)

SEDIMENT BASIN WITH PIPE OUTLET (E-10)

DIVERSION DITCH (E-81)

SLOPE DRAIN (E-12)

SEDIMENT BASIN (E-14)
CLEARING AND GRUBBING

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

EXCAVATION

EXISTING GROUND
INTERCEPTOR OR DIVERSION DITCH
EXISTING GROUND

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

GENERAL NOTE
ALL CUT OPERATIONS SHALL BE INVERSE, PREPARED, SEeded AND MULCHED AS THE NEW PROGRESSIVE SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
3. PERFORM PHASE 2 EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING.
4. PERFORM FINAL PHASE OF EXCAVATION, PLACE PERMANENT OR TEMPORARY SEEDING, STABILIZE DITCHES, CONSTRUCT DITCH DIVERSIONS, SEEDMENT BARRIERS, OR OTHER EROSION CONTROL DEVICES AS REQUIRED.

EMBANKMENT

CONSTRUCTION SEQUENCE
1. EXCAVATE DITCHES (DITCH DRAINAGB) DURING SEEDING, SILT FENCES, OR OTHER EROSION CONTROL DEVICES AS SPECIFIED.
2. PLACE EMBANKMENT WITH SEEDING OR TEMPORARY SEEDING.
3. PLACE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
5. PLACE EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING, PLACE DITCHES AND SLOPE GRANDES AND MAINTAIN UNIT COMPLETELY.

ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES

STANDARD DRAWING TEC-3
CROSS SECTION STA.115+50 TO STA. 116+00
CROSS SECTIONS

图示了道路建设的阶段和土方量的变化。具体包括以下内容：

- 127.53-20到128.53-20的路段
- 出土面积和出土方量
- 路面厚度和交通变化
- 填方面积和填方量

通过图示，可以清晰地了解建设过程中的土方量变化和路面建设的阶段。