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## General Notes

1. **Grade Line Denotes finished grade where shown on plans.**
2. **All Pipe Lines, Power, Telephone, and Telegraph lines to be moved or lowered by the respective owners as per agreement with such owners.**
3. **Any equipment or appurtenance that interferes with the proposed construction and which may be the property of utility service organizations shall be moved by the owners unless otherwise provided.**
4. **All land monuments located within the construction area shall be protected in accordance with Section 107.12 of the Standard Specifications.**
5. **All trees that do not directly interfere with the proposed construction shall be sparred as directed by the engineer. Care and discretion shall be used to insure that all trees not to be removed shall be harmed as little as possible during the construction operations.**
6. **All flexible base and asphaltic pavements removed shall be paid for under the item No. 210 - Unclassified Excavation.**

7. The existing asphalt pavement to be removed from the remaining pavement shall be separated by sawing along a near line. After sawing, the pavement to be removed shall be carefully removed in a manner that will not damage the pavement that is to remain. Any damage of the asphalt pavement that is to remain in place shall be repaired at the Contractor's expense.
FULL DEPTH SECTION - SUPERELEVATION
STA. 101+94.05 - STA. 104+00.00

NOTES:
1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.
2. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE 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.
3. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY AT THE APPROVAL OF THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTING NOTCH AND MOLDING. CALCULATIONS WILL NOT BE PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS.
4. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. LONGITUDINAL JOINTS SHALL BE AT LANE LINES.
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 AGGREGATE SURFACE COURSE 0.5" IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

FULL DEPTH SECTION - SUPERELEVATION
STA. 104+00.00 - STA. 108+79.32

TYPICAL SECTIONS OF IMPROVEMENT
NOTES:

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

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

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACIM SURFACE COURSE ½” IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.

OVERLAY SECTION

STA. 98+80.54 - STA. 100+33.92
STA. 120+74.55 - STA. 122+28.00
TYPICAL SECTIONS OF IMPROVEMENT - DETOUR ROAD

NORMAL CROWN

TYPICAL SECTIONS OF IMPROVEMENT - DETOUR ROAD

SUPERELEVATION
DETAIL AT OVERPASSES
NOTE: REFER TO PLAN SHEETS FOR PLACEMENT OF WIRE ROPE SAFETY FENCE ON EASTBOUND OR WESTBOUND FORCIBLE LINES.

SECTION A-A

SECTION B-B

DETAILS OF SHOULDER WIDENING FOR GUARDRAIL AND OVERLAPS WITH ENDS OF WIRE ROPE SAFETY FENCE
NORMAL SHOULDER SURFACING 5'-6'

GUARDRAIL TYPE A1

5'-6" ADD: L: ACHM SURFACE COURSE 1/2" (1200 LBS. PER SQ. YD.)
ADD L: AGGREGATE BASE COURSE (CLASS 7)
VAR. COMP. DEPTH (VAR. TONG/STA.)

NOTE: REFER TO STD.CMS GR-9A AND CROSS SECTIONS FOR SLOPE REQUIREMENTS BEHIND GUARDRAIL.

WIDENING FOR GUARDRAIL

TOP VIEW

MIN 3" COVER

NO. 4 BARS AT 12" HORIZONTAL SPACING

FRONT VIEW

SIDE VIEW

PIPE EXTENSION

REINFORCED CONCRETE COLLAR DETAIL

DETAIL FOR TRANSITIONS

PROPOSED OVERLAY

EXISTING ASPHALT PAVEMENT RETAIN AND OVERLAY

100' NORMAL TRANSITION

COLD MILL EXISTING ASPHALT PAVEMENT

DETAIL FOR TRANSITIONS

PROPOSED OVERLAY

EXISTING CONCRETE PAVEMENT RETAIN AND OVERLAY

50' NORMAL TRANSITION

SCARIFYING CONCRETE PAVEMENT

50' NORMAL TRANSITION
SECTION OF APPROACH SLAB

TYPICAL SECTION OF IMPROVEMENT
FOR WIRE ROPE SAFETY FENCE RIGHT OF CENTERLINE
METHOD OF RAISING GRADE

- 5' AGGREGATE BASE COURSE (CLASS 7)
  TO BE REPLACED WITH ACMI BINDER COURSE (1")

NEW EMBANKMENT

8,000 LB./FT. GEOGRID
1 FT. VERTICAL SPACING

FINISHED ROADWAY SURFACE

EXISTING EMBANKMENT

GEOGRID OVERLAP

SPECIAL DETAILS

TYPICAL SECTION OF IMPROVEMENT

NOTE:
(1) THIS DETAIL TO BE USED ONLY WHERE DIRECTED BY THE ENGINEER.
(2) QUANTITIES FOR METHOD OF GRADE RAISE USING ASPHALT WERE
  CALCULATED ON THIS PROJECT AT LOCATIONS WHERE THE DISTANCE
  BETWEEN THE EXISTING ASPHALT ROADWAY AND THE PROPOSED SUBGRADE
  WAS ONE FOOT OR LESS.
(3) IN LOCATIONS WHERE THE DISTANCE BETWEEN THE PROPOSED SUBGRADE
  AND THE EXISTING ASPHALT ROADWAY IS MORE THAN ONE FOOT,
  SCRATCHING OF THE EXISTING ASPHALT ROADWAY WILL BE REQUIRED
  AS STATED IN SECTION 210, SUBSECTION 210.09, OF THE STANDARD SPECIFICATIONS.

SPECIAL DETAILS
DATE OF REVISION

REVISED BY

CONTRACT

DATE

REVISIONS

E-80+00 - E-83+37
INSTALL E-09+500 LIN. FT.

E-83+37 - E-86+20
INSTALL E-09+500 LIN. FT.

E-86+20 - E-90+00
INSTALL E-09+500 LIN. FT.

E-90+00 - E-93+41
INSTALL E-09+425 LIN. FT.

E-93+41 - E-96+00
INSTALL E-09+425 LIN. FT.

E-96+00 - E-99+55
INSTALL E-09+425 LIN. FT.

E-99+55 - E-103+20
INSTALL E-09+425 LIN. FT.

E-103+20 - E-109+20
INSTALL E-09+425 LIN. FT.

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

LEGEND

= SAND BAG DITCH CHECKS

= ROCK DITCH CHECKS

= DROP INLET SILT FENCE

= SILT FENCE

CLEARING AND GRUBBING

TEMPORARY EROSION CONTROL DETAILS
**Temporary Erosion Control Details**

- Maintain all erosion control devices until the end of the job, unless otherwise specified.

**Legend**
- **E1**: Sandbag Ditch Checks
- **E2**: Rock Ditch Checks
- **E7**: Drop Inlet Silt Fence
- **E9**: Silt Fence

**Clearing and Grubbing**

**Temporary Erosion Control Details**

- **RAMP 1**
  - STA 39+95 - STA 40+95
  - Install E+1 250 Lin Ft.

- **RAMP 2**
  - STA 39+95 - STA 40+95
  - Install E+1 250 Lin Ft.

**Note:**
- Maintain all erosion control devices until the end of the job, unless otherwise specified.
LEGEND

- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- DROP INLET SILT FENCE
- SILT FENCE

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

STAGE 1

TEMPORARY EROSION CONTROL DETAILS
STA. 99+80.54
BEGIN JOB 100871
L.M. 9.63

* MANTAIN ALL EROSION CONTROL DEVICES UNTIL THE END OF THE JOB UNLESS OTHERWISE SPECIFIED.

**LEGEND**

- **E** SAND BAG DITCH CHECKS
- **R** ROCK DITCH CHECKS
- **D** DROP INLET SILT FENCE
- **F** SILT FENCE

**STAGE 2**

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

**Legend**

- $\odot$ = Sand Bag Ditch Checks
- $\odot$ = Rock Ditch Checks
- $\odot$ = Drop Inlet Silt Fence
- $\odot$ = Silt Fence

**Stage 2**

Temporary Erosion Control Details
STA. 98+80.54
BEGIN JOB 100871
L.M. 9.63

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

LEGEND
- = SAND BAG DITCH CHECKS
# = ROCK DITCH CHECKS
@ = DROP INLET SILT FENCE
= SILT FENCE

STAGE 3
TEMPORARY EROSION CONTROL DETAILS

LEGEND

- : SAND BAG DITCH CHECKS
- : ROCK DITCH CHECKS
- : DROP INLET SILT FENCE
- : SILT FENCE

STAGE 3
TEMPORARY EROSION CONTROL DETAILS
NOTE: THESE SIGNS ARE TO REMAIN IN PLACE BUT BE COVERED WHILE LANE CLOSURES FOR HANGING STEEL ARE IN USE.

NOTE: THESE SIGNS ARE TO REMAIN IN PLACE BUT BE COVERED WHILE LANE CLOSURES FOR HANGING STEEL ARE IN USE.

NOTE: THESE SIGNS ARE TO REMAIN IN PLACE BUT BE COVERED WHILE LANE CLOSURES FOR HANGING STEEL ARE IN USE.

NOTE: THESE SIGNS ARE TO REMAIN IN PLACE BUT BE COVERED WHILE LANE CLOSURES FOR HANGING STEEL ARE IN USE.

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NOTE: THESE SIGNS ARE TO REMAIN IN PLACE BUT BE COVERED WHILE LANE CLOSURES FOR HANGING STEEL ARE IN USE.

ADVANCE SIGNS AT BEGINNING AND END OF JOB ON I-55
ALL STAGES
ONE SET NEEDED

MAINTENANCE OF TRAFFIC DETAILS
**Sequencing:**

Stage 1: Place advance warning signage. Maintain traffic on existing roadway. Extend existing culvert over drain. Construct detour utilize vertical panels at the notch at 50 g.c. spacing.

Stage 2: Shift traffic onto detour, place traffic drums at 50 g.c. spacing on left detour shoulder, notch and move existing patience, and construct fill. Utilize temporary concrete barrier wall on shoulders of the existing I-55. Adjust wire rope safety fence in median and grade +50 ditches to drain.

Stage 3: Shift traffic to new location on left lane and Stage 4, traffic detour. Deliberate stage 2 detour and remove existing guard rail structure. Construct remaining proposed pavement on HWY. M. Overlay concrete pavement on HWY. M. Install final striping.

**Not to Scale**
SEQUENCING:

STAGE 1: PLACE ADVANCE WARNING SIGNAGE, MAINTAIN TRAFFIC ON EXISTING ROADWAY.

STAGE 2: SHIFT TRAFFIC ONTO DETOUR, PLACE TRAFFIC DRUMS AT 55' O.C. SPACING ON LEFT LATERALGUARDRILE, BURIED WITH HORIZONTAL PLATES, AND CONSTRUCT FULL DEPTH SECTION OF PROPOSED PAVEMENT ON HWY 14. PLACE TEMPORARY CONCRETE BARRIER WALLS ON SLOPES OF W1O. CONSTRUCT NEW BRIDGE STRUCTURE 87' LONG, REMOVE AND REPLACE GUARDRAILS ON I-55. ADJUST WIRE ROPE SAFETY FENCE IN MEDIAN, AND GRADE 1-55 SLOPES TO DRAIN.

STAGE 3: SHIFT TRAFFIC TO NEW LOCATION HWY. M MAIN LANE AND STAGE 3 TRAFFIC DETOUR. OBLITERATE STAGE 2 DETOUR AND REMOVE EXISTING BRIDGE STRUCTURE. CONSTRUCT REMAINING PROPOSED PAVEMENT ON HWY 14, INSTALL FINAL STRIPING.

CONSTRUCTION PAVEMENT MARKINGS 1 ROEB L/R FT.

RAMP 2

STA 33+17.71 - END DETOUR

RAMP 1

STA 100+56.37 - STA 20+76.73
55' AND 91. EDGE LINES AND GIRL C/L.
CONSTRUCTION PAVEMENT MARKINGS 1 ROEB L/R FT.
SEQUENCING:

STAGE 1: PLACE ADVANCE WARNING DRUMS: CARVE TRAFFIC ON EXISTING ROADWAY. EXTEND EXISTING CULVERT OVER DRAIN. CONSTRUCT DETOUR UTILIZE VERTICAL PANELS AT THE MITCH AT 55' O.C. SPACING.

STAGE 2: SHIFT TRAFFIC ONTO DETOUR, PLACE TRAFFIC DRUMS AT 55' O.C. SPACING ON LEFT HOVER SHOULDER, NOTICH AND MOW EXISTING PAVEMENT, AND CONSTRUCT FULL DEPTH SECTIONS OF PROPOSED PAVEMENT ON HWY. PLACE TEMPORARY CONCRETE BARRIER WALL ON SHOULDERS OF 150', CONSTRUCT NEW BRIDGE STRUCTURE WITH GUARDRAIL. REMOVE AND REPLACE GUARDRAIL ON I-55, ADJUST WIRE ROPE SAFETY FENCE IN MEDIAN, AND GRADER 1510 DECISION TO DRAIN.

STAGE 3: SHIFT TRAFFIC TO NEW LOCATION HWY. MAIN LINES AND STAGE 3 TRAFFIC DETOUR OBSERBEL STAGE 2 DETOUR AND REMOVE EXISTING BRIDGE STRUCTURE. CONSTRUCT FULL DEPTH SECTION OF PROPOSED PAVEMENT ON HWY. INSTALL FINAL STRIPING.

REPAIR OF PERMANENT PAVEMENT MARKINGS = 600 LIN. FT.

REMOVAL OF PERMANENT PAVEMENT MARKINGS = 500 LIN. FT.

CONSTRUCTION PAVEMENT MARKINGS = 600 LIN. FT.
SEQUENCING:
STAGE 1:
PLACE ADVANCE WARNING SIGNAGE DMNT TRAFFIC ON EXISTING ROADWAY.
EXTEND EXISTING CULVERT CROSS DRAIN. CONSTRUCT DETOUR. UTILIZE VERTICAL FACES AT THE NOTCH AT 55'0.C. SPACING.

STAGE 2:
SHIFT TRAFFIC ON TO DETOUR. PLACE TRAFFIC DRUMS AT 55,0.C. SPACING ON DETOUR SHOULDER. NOTCH AND REMOVE EXISTING PAVEMENT. CONSTRUCT FULLDEPTH SECTION OF PROPOSED PAVEMENT ON HRTY. PLACE TEMPORARY CONCRETE CAIINEN ON SHOULDER OF I-55. CONSTRUCT NEW BRIDGE STRUCTURE WITH GUARDRAIL. REMOVE AND REPLACE GUARDRAIL ON I-55. ADJUST WIRE ROPE SAFETY RAILING.

AND GRADE I-55 DITCHES TO ORAIN. AVOID INJURY TO PAVEMENT. CAN MAKE LINING OR PAVEMENT ON "6" IN SHALLOW CONCRETE CUT.
LOCATION OF TEMPORARY PRECAST CONCRETE BARRIER FOR MAINTENANCE OF TRAFFIC ON I-55

SEQUENCING:
STAGE 1: PLACE ADVANCE WARNING SIGN, MAINTAIN TRAFFIC ON EXISTING ROADWAY, EXTEND DITCH, CLEAR CROSS DRAIN, CONSTRUCT DETOUR, UTILIZE VERTICAL PANELS
STAGE 2: SHIFT TRAFFIC ONTO DETOUR, PLACE TRAFFIC DRUMS AT 50' GCC, GRADING ON LEFT DETOUR SHOULDER, NOTES AND WEED EXISTING PAVER, AND CONSTRUCT FULL DEPTH SPECIAL EXISTING PAVER ON I-55. PLACE TEMPORARY CONCRETE BARRIER BALL, INSTALL TEMPORARY SAFETY FENCE ON I-55. PLACE TEMPORARY CONCRETE BARRIER BALL, REPLACE GUARDRAIL ON I-55, INSTALL WIRE ROPE SAFETY FENCE IN MEDIAN, AND GRADE I-55 DITCHES TO DRAIN.
STAGE 3: SHIFT TRAFFIC TO NEW LOCATION I-55. PLACE AND INSTALL TEMPORARY CONCRETE BARRIER BALL, INSTALL TEMPORARY SAFETY FENCE IN MEDIAN, AND GRADE I-55 DITCHES TO DRAIN.

MAINTENANCE OF TRAFFIC DETAILS
SEQUENCING:

STAGE 1: PLACE ADVANCE WARNING SIGNS, MAINTAIN TRAFFIC ON EXISTING ROADWAY.

STAGE 2: SHIFT TRAFFIC ONTO DETOUR, PLACE TRAFFIC DRUMS AT 55°C, SPACING ON RAMP. DETOUR UNDERSIDE PREDICTED TO WIDER EXISTING PAVEMENT, AND CONSTRUCT DEPTH OF PROPOSED PAVEMENT ON RIPPLING PLATES WITH TEMPORARY BARRIER WALL ON SHOULDERS OF 1-1/2 CONSTRUCT NEW BARRIERloh4l4 lO MCI. 9B.n, R rehears and replace guardrail on 1-65, ADD WIRE ROPE SAFETY FENCE IN MEDIAN, AND GRade 1-65 BMENTS TO DRAIN.

STAGE 3: SHIFT TRAFFIC TO NEW LOCATION HWY, 13 MAIN LINES AND STAGE 3 TRAFFIC DETOUR, OBSTRUCT STAGE 2 DETOUR AND REMOVE EXISTING BARRIER STRUCTURE. CONSTRUCT REMAINING PROPOSED PAVEMENT ON HWY, INSTALL OVERLAY CONCRETE PAVEMENT ON HWY, INSTALL FINAL STRIPING.

TRAFFIC DRUMS (55°C) - 8 EACH

STAGE 3: MAINTENANCE OF TRAFFIC DETAILS
STAGE 1: PLACE ADVANCE WARNING SIGNS, MAINTAIN TRAFFIC ON EXISTING ROADWAY. EXTEND EXISTING CULVERT CROSS DRAIN, CONSTRUCT DETOUR, UTILIZE VERTICAL PANELS AT THE NOTCH AT 95.00 SPACING.

STAGE 2: SHIFT TRAFFIC ONTO DETOUR, PLACE TRAFFIC DRAINS AT 95.00 SPACING ON LEFT DETOUR SHOULDER, NOTCH AND REMOVAL EXISTING PAVING, AND CONSTRUCT FAJS. DEPTH SECTION OF PROPOSED PAVEMENT ON HWY 14 PLACED TEMPORARY CONCRETE BARRIER WALL ON SHOULDER. PLACE CONCRETE NEW CEMENT STABILIZED WITH GEOTEXTILES. TEMPORARY TRAFFIC THE MURAL. PLACED 95.00 AUGUST R&D ROPE SAFETY BARRIER IN MEDIAN AND GRADE 1.50 DITCHES TO DRAIN.

STAGE 3: Shift Traffic To New Location HWY 14 MAIN LANES AND STAGE 3 TRAFFIC DETOUR OBLITERATE SIGNS IF FEASIBLE. INSTALL.sess, CONSTRUCT REMAINING HOLED PAVEMENT ON HWY 14 INSTALL FINAL STRIPING.

TRAFFIC DRAINS (55.00) - 13 EACH

RAMP 2

STAGE 3 TRAFFIC
A: 07/PROJ.
B: 02/PROJ.
C: 10/23
D: 07/23
PT: 01/30.60
MATCH EXIST.

STAGE 3 TRAFFIC
A: 07/PROJ.
B: 02/PROJ.
C: 10/23
D: 07/23
PT: 01/30.60
MATCH EXIST.

STAGE 3 TRAFFIC
A: 07/PROJ.
B: 02/PROJ.
C: 10/23
D: 07/23
PT: 01/30.60
MATCH EXIST.
PERMANENT PAVEMENT MARKING DETAILS:

REFLECTORIZED PAINT PAVEMENT MARKINGS:
- DBL. CENTERLINE = 5095 LIN. FT. 6" YELLOW
- RT. AND LT. EDGE LINES = 5095 LIN. FT. 6" WHITE

RAISED PAVEMENT MARKERS 80' O.C.
- TYPE III/II(yel/yel) ON DBL. YELLOW LINES = 32 EACH

REFLECTORIZED PAINT PAVEMENT MARKINGS:
- WORD "SCHOOL" = 1 EACH

RAMP 2 AND RAMP 4:
- REFLECTORIZED PAINT PAVEMENT MARKINGS:
  - CONCRETE ISLAND CURB FACE 98 L1N. FT. 10" WHITE
  - CONCRETE ISLAND OUTLINE 222 LIN. FT. 8" WHITE
  - RT. AND LT. EDGE CURB = 100 LIN. FT. 6" WHITE

RAMP 1 AND RAMP 3:
- REFLECTORIZED PAINT PAVEMENT MARKINGS:
  - CONCRETE ISLAND CURB FACE 165 LIN. FT. 10" WHITE
  - CONCRETE ISLAND OUTLINE 890 LIN. FT. 8" WHITE
  - LT. EDGE CURB = 50 LIN. FT. 6" WHITE

* NOTE
THE 4" YELLOW STRIPING QUANTITY HAS BEEN
ESTIMATED BASED ON A DOUBLE YELLOW CENTERLINE
STRIPE FOR THE ENTIRE PROJECT. THE PROJECT MUST
BE MARKED FOR PASSING/NO PASSING ZONES PRIOR
TO THE PLACEMENT OF ANY FINAL STRIPING. CONTACT
THE MAINTENANCE DIVISION AFTER THE FINAL LIFT OF
SURFACE COURSE HAS BEEN PLACED TO SCHEDULE
THE ZONING OF THE PROJECT.
### SCARIFYING CONCRETE PAVEMENT

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>AVG. WIDTH</th>
<th>SCARIFYING CONCRETE PAVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAMP 1-A</td>
<td>VAR 130.78</td>
<td></td>
</tr>
<tr>
<td>RAMP 1-B</td>
<td>VAR 131.27</td>
<td></td>
</tr>
<tr>
<td>RAMP 2-A</td>
<td>VAR 143.90</td>
<td></td>
</tr>
<tr>
<td>RAMP 2-B</td>
<td>VAR 120.33</td>
<td></td>
</tr>
<tr>
<td>RAMP 3-A</td>
<td>VAR 202.48</td>
<td></td>
</tr>
<tr>
<td>RAMP 3-B</td>
<td>VAR 128.89</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL:** 1217.61

Note: Average milling depth 1".

---

### ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TON</th>
<th>TACK COAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT (TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER)</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>

**TOTALS:** 12 | 24

**BASE OF ESTIMATE:** Asphalt concrete patching for maintenance of traffic. 25 tons/mile. Tack coat for maintenance of traffic. 50 gallons/mile.

---

### ACHM PATCHING OF EXISTING ROADWAY

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>TON</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT (TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER)</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL:** 10

Note: Quantity estimated. See section 104.03 of the standard specs.

---

### DUMPED RIPRAP AND FILTER BLANKET

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>DUMPED RIPRAP</th>
<th>FILTER BLANKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>101+90</td>
<td>OUTLET OF PIPE CULVERT</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>108+79</td>
<td>OUTLET OF PIPE CULVERT</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>108+79</td>
<td>OUTLET OF PIPE CULVERT</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>112+97</td>
<td>OUTLET OF PIPE CULVERT</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>117+58</td>
<td>OUTLET OF PIPE CULVERT</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>

**TOTALS:** 67 | 116

Note: Quantity estimated. See section 104.03 of the standard specifications.

---

### COLD MILLING ASPHALT PAVEMENT

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>LOCATION</th>
<th>AVG. WIDTH</th>
<th>COLD MILLING ASPHALT PAVEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>91+80.54</td>
<td>98+90.54</td>
<td>MAIN LANES</td>
<td>22.00</td>
<td>244.44</td>
</tr>
<tr>
<td>122+28.00</td>
<td>123+28.00</td>
<td>MAIN LANES</td>
<td>22.00</td>
<td>244.44</td>
</tr>
</tbody>
</table>

**TOTAL:** 480.88

Note: Average milling depth 1".

---

### DUMPED RIPRAP AND FILTER BLANKET

### COLD MILLING ASPHALT PAVEMENT

---

### EARTHWORK

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>UNCLASSIFIED EXCAVATION</th>
<th>COMPACTED EMBANKMENT (SPECIAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 1 - DETOUR</td>
<td>308</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 2 - MAIN LANES</td>
<td>3795</td>
<td>12294</td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>STAGE 3 - ORIERTATION DETOUR</td>
<td>9129</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>BRIDGE EMBANKMENT</td>
<td>4750</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>ENTIRE PROJECT</td>
<td>155 SHOALWOOD 6000</td>
<td>77</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:** 18059 | 13871 | 12294 | 120

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

---

### APPROACH SLABS

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>APPROACH SLABS TYPE (SPECIAL)</th>
<th>REINFORCING STEEL (R/W) (GR. 60)</th>
<th>AGGREGATE BASE CRUSHED (CLASS 7)</th>
<th>DROP INLETS (TYPE K-1)</th>
<th>CONCRETE SPILLWAY (TYPE A)</th>
<th>12&quot; ZINC COATED (GALVANIZED) CORR. STEEL PIPE CULVERTS (16 GAUGE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>108+79.32</td>
<td>HWY. MAIN LANE</td>
<td>108+79.32</td>
<td>80.36</td>
<td>9188</td>
<td>42.04</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>112+35.36</td>
<td>HWY. MAIN LANE</td>
<td>112+35.36</td>
<td>80.36</td>
<td>9188</td>
<td>42.04</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**TOTALS:** 160.78 | 18376 | 64.08 | 4 | 4 | 300

Note: Use 1+13' for 4" shoulder.

---

### CLEARING AND GRUBBING

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>CLEARING</th>
<th>GRUBBING</th>
</tr>
</thead>
<tbody>
<tr>
<td>102+00</td>
<td>HWY. 16</td>
<td>7</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>112+44</td>
<td>HWY. 16</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:** 16 | 16

Note: Quantity estimated. See section 104.03 of the standard specs.

---

### 4" PIPE UNDERDRAIN

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATIONS</th>
<th>4&quot; PIPE UNDERDRAINS</th>
<th>UNDERDRAIN OUTLET PROTECTORS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
<td>1000</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:** 1000 | 4

---

### WIRE ROPE SAFETY FENCE

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATIONS</th>
<th>WIRE ROPE SAFETY FENCE</th>
<th>WIRE ROPE SAFETY FENCE (POST REPAIR)</th>
<th>TEMPORARY TERMINAL ANCHOR FOR WIRE ROPE SAFETY FENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>334+33.55</td>
<td>LT. SIDE OF RT. 1S5 LANE</td>
<td>295</td>
<td>30</td>
<td>1</td>
<td></td>
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</tbody>
</table>

**TOTALS:** 295 | 30 | 1

Note: Quantity estimated. See section 104.03 of the standard specs.

---

### QUANTITIES

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<tr>
<th>STATE</th>
<th>QUANTITY</th>
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<tr>
<td>AL</td>
<td>100371</td>
</tr>
<tr>
<td>TN</td>
<td>34</td>
</tr>
<tr>
<td>LA</td>
<td>67</td>
</tr>
</tbody>
</table>
### BASE AND SURFACING

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH (FT)</th>
<th>ARMS Agg BASE COURSE CLASS (%)</th>
<th>TACK COAT</th>
<th>ACHM Binder Course (%)</th>
<th>ACHM SURFACE COURSE (%)</th>
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### QUANTITIES

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### ADDITIONAL FOR MAINTENANCE

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**SCHEDULE OF BRIDGE QUANTITIES-JOB NO. 100871**

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<th>ITEM NO.</th>
<th>205</th>
<th>801</th>
<th>802</th>
<th>SP &amp; 802</th>
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<th>804</th>
<th>805</th>
<th>807</th>
<th>808</th>
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**UNIT NO. OF STRUCTURE**

- **ITEM**: REMOVAL OF EXISTING BRIDGE STRUCTURE
- **UNIT**: CUB. YD.

**SCHEDULE OF BRIDGE QUANTITIES-JOB NO. 100871**

- **SITE NO.**: 1
- **BRIDGE NO.**: D206

**ITEM DESCRIPTIONS**

- **205**: UNCLASSIFIED EXCAVATION FOR STRUCTURES - BRIDGE
- **801**: LESS CONCRETE - BRIDGE
- **802**: LESS CONCRETE - BRIDGE
- **SP & 802**: LESS CONCRETE - BRIDGE
- **803**: EPOXY COATED REINFORCING STEEL - BRIDGE (GRADE 60)
- **804**: STEEL SHELL PLATING (80" DIA.)
- **805**: STEEL SHELL PLATING (120" DIA.)
- **807**: STRUCTURAL STEEL IN BEAM SPANS (IN 270°, GRADE 50)
- **808**: PAINTING STRUCTURAL STEEL
- **809**: ELASTOMERIC BEARINGS
- **810**: SILICONE JOINT SEALANT
- **811**: BRIDGE NAME PLATE (TYPE D)
- **812**: CONCRETE RIPRAP
- **813**: TEXTURED COATING FINISH
- **814**: ARCHITECTURAL FINISH

**NOTES**

- The color of paint shall conform to Federal Std.595B, Color Chart No.2021, Medium Brown.
- Includes Special Provision Job No. 100871 "Direct Tension Indicators for High Strength Bolt Assemblies".
- No deviations from the pouring sequence shown on Diagram No.00217 will be allowed.

**THOMAS OERPELD
DESIGN SECTION SUPERINTENDENT**

---

**SCHEDULE OF BRIDGE QUANTITIES**

- **HIGHWAY 14 OVER INTERSTATE 55**
- **MISSISSIPPI COUNTY**
- **ARKANSAS STATE HIGHWAY COMMISSION**

**DRIBB NO.**: 07425
**DRAWING NO.**: 66206
### SUMMARY OF QUANTITIES

<table>
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### REVISIONS

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<td>9/16/2018</td>
<td>36.37, 66.08-73</td>
<td>REVISED THE MAINLINES ALIGNMENT ELEVATIONS IN THE CROSS SECTIONS, REVISED THE GENERAL NOTE ON BRIDGE DRAWING</td>
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</table>
VERTICAL DATUM 
HORIZONTAL DATUM: NAD 

THIS 
ALL 

Project. 
SURVEY CONTROL 

One of the key features noted in the document is the mention of "BEARING" as a positional reference. Notably, the document highlights a bearing of "470558" Easting, "9203" Northing, and "472472" for the purpose of defining specific points or locations. The document also contains a list of points with their respective Northing and Easting coordinates, which are crucial for surveying and mapping purposes. The geographical references indicate that they are likely used for a specific project or area, possibly related to infrastructure development or land surveying. The data is laid out in a manner typical of survey reports, with columns for point numbers, type, station, northing, and easting. Despite the complexity of the data, the document maintains a clear and structured format, ensuring that each piece of information is easily discernible. The references to "Askor Cap" suggest the use of marking standards, which is essential for maintaining consistency in surveying practices. The document also contains a section on "Temporary Approaches for Bridge Over Interstate 55," indicating the importance of such infrastructure in the depicted area. The entire document is a comprehensive resource for surveyors, providing them with the necessary data to conduct their work accurately and efficiently.
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.

STA. 27+69.61 BEG. SUPERELEVATION
STA. 29+33.91 MAX. SUPERELEVATION 10.066'/'1
STA. 29+73.84 MAX. SUPERELEVATION 10.066'/'1
STA. 31+37.94 END. SUPERELEVATION
GENERAL NOTES

BENCH MARK: Vertical Control Data are shown on the Survey Control Data Sheets.


LIVE LOADS: H-93

SEATING ZONE:

 rating S = 0.682

SITE CLASS = D

MATERIALS AND STRENGTHS:

Class C Concrete Superstructure

Class 3 Concrete Reinforcement

Concrete Ordinary

Concrete High-Performance

Structural Concrete - Type II

Structural Concrete - Type III

Structural Steel - ASTM A 36

Structural Steel - ASTM A 572

Structural Steel - ASTM A 520

DRAINING (IEE): Boring logs may be obtained from the Construction Contract Procurement Section of the Program Management Division.

STEEL PILE PLANNING: Piling in Bents 1 & 3 shall be 60" diameter concrete filled steel piles and shall be driven to a minimum ultimate bearing capacity of 65 ton per pile. Piling in Bents 2 thru 4 shall be 80" diameter concrete filled steel piles and shall be driven to a minimum ultimate bearing capacity of 80 ton per pile. In all cases, the concrete filled steel piles shall be driven to a minimum ultimate bearing capacity of 70 ton per pile. In all cases, the piles shall be driven to 0.75 times the elevation of the soil bearing capacity. The pile shall be kinged to a pile cap or other approved means. Piles in bent 6 shall be driven down to a depth of 20' below the elevation of the soil bearing capacity. Pile driving shall be continuous.

LENGTHS OF PILING SHOWN are for estimating purposes only, actual lengths to be determined in the field.

REINFORCEMENT: Reinforcement shall be for the concrete fill as specified in the Bridge Specifications; no other reinforcing structure shall be required.

FIELD MIX: Concrete shall be placed and compacted in the Bridge Specifications; no other placement requirements shall be required.

PROTECTIVE SURFACE TREATMENT: Class 5 Protective Surface Treatment shall be applied to the roadway and to the roadway face of the concrete parapet wall.

DETAIL DRAWINGS:

DESIGN NOTS:

Concrete Filled Steel Piling

Structural Steel - ASTM A 36

Structural Steel - ASTM A 572

Structural Steel - ASTM A 520

Foil Bearing - 10 x 20 (20-

Pipe Schedule 40 - PS/PS

Type Special Approach Slopes

Standard Bear for Steel Bridge Structures

Poured Highways

EXISTING BRIDGE: The existing bridge No. 2621 is approximately 530 feet (160) Roadway and 250' long. The superstructure consists of a precast concrete with a reinforced concrete deck on steel girders. The superstructure consists of precast girders and beams and reinforced concrete composite deck.

FENCING AND SAFETY: After the new bridge is completed and transferred to the Contractor, the Contractor shall remove the existing bridge No. 2621 in accordance with Section 306. Existing concrete piers and pile protection foundations shall be removed. No work shall be considered subsidiary to the new "Bridge and Bridge Approach" except for those tasks required to make the existing bridge usable as the property of the Contractor.

MAINTENANCE OF TRAFFIC: See Roadway Plans.
PLAN - BENT 5

Reinforcing steel, details and dimensions shown for Bent 1, Dwg. No. 60265, are similar for Bent 5 shown on this sheet except as noted.

ELEVATION - BENT 5

Looking Ahead

Notes:
For General Notes, see Std. Dwg. No. 55006.
Structural steel in end piers shall be M10, Gr. 50 and shall be paid for as "Structural steel in Beam Spans 6070, 970, 550."

No portion of the backwall shall be poured before beams are in place. The portion of the backwall along the bottom construction joint or the parking barrier shall not be placed until the deck pour has been made. Refer to the "Expansion Beam Installation" notes, see Std. Dwg. No. 55006. No heavy construction equipment other than flatbed shall be driven directly behind the backwall until the deck pour has been completed.

For additional information, see Layout.

SHEET 2 OF 4
DETAILS OF BENTS 1 & 5
HIGHWAY 14 OVER INTERSTATE 55

ROUTE G

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

BRIDGE NO. 07425
DRAWING NO. 60266

TVISE ENGINEER
LICENSED PROFESSIONAL ENGINEER

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

BRIDGE NO. 07425
DRAWING NO. 60266
Dimensions are cut to cut of bars. Bars with an "x" suffix are to be epoxy coated.

Sheet 3 of 4

Details of Bents 1 & 5

Highway 14 Over Interstate 55

Arkansas State Highway Commission

Little Rock, AR

Abstract:

- Place 6066 parallel to C.L. Bridge piers with B604.
- Place 6067 parallel to C.L. Bridge piers with B604.
- Front face of backwall.
- Concrete Restrainer.
- Section A-A:
  - Looking along C.L. Bridge.
- Elevation of Concrete Restrainer:
  - Section to D.L. Bridge.

Signed by LICENSED PROFESSIONAL ENGINEER

Arkansas State Highway Commission

Little Rock, AR

Sheet 3 of 4

Details of Bents 1 & 5

Highway 14 Over Interstate 55

Arkansas State Highway Commission

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Abstract:

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Arkansas State Highway Commission

Little Rock, AR

Sheet 3 of 4

Details of Bents 1 & 5

Highway 14 Over Interstate 55

Arkansas State Highway Commission

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Abstract:

- Place 6066 parallel to C.L. Bridge piers with B604.
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- Section A-A:
  - Looking along C.L. Bridge.
- Elevation of Concrete Restrainer:
  - Section to D.L. Bridge.

Signed by LICENSED PROFESSIONAL ENGINEER

Arkansas State Highway Commission

Little Rock, AR
CONCRETE FILLED STEEL SHELL PILE

MAXIMUM DESIGN FORCE FOR PILE ANCHORAGE IS 100 IPS.

**Note:** Steel pile tip will not be used for driving, but shall be subsidiary to the Steel Shell Piling.

**MAXIMUM DESIGN FORCE**

**Approved Inside Flange**

**Control point**

**TABLE 1**

**NOMINAL or Code-Reinforcing shell**

**MIGHT**

**ALTERNATE**

**HICKNESS**

**ALTERNATE VANED**

**TYPICAL SPLICE DETAILS**

**TABLE OF VARIABLES**

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<tr>
<th>OUTSIDE SHELL DIAMETER &quot;D&quot;</th>
<th>PLATE THICKNESS &quot;t&quot;</th>
<th>PLATE THICKNESS &quot;t&quot;</th>
<th>ALTERNATE PILE ANCHORAGE</th>
<th>MINIMUM CONCRETE FILLING &quot;H&quot;</th>
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<td>0.50&quot;</td>
<td>0.50&quot;</td>
<td>50'</td>
<td>0.8&quot;</td>
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</table>

**GENERAL NOTES FOR CONCRETE FILLED STEEL SHELL PILES:**

Seismically Performance Zone 4

Steel shell pile conform to ASTM A 502, Grade 3 (60 k/l), 41,000 psi.

Steel shell pile 50' in length or less shall be completely filled with Class C Concrete with a minimum 28-day compressive strength of 3,500 psi, and shall be poured in the dry. At the Contractor's option, pile lengths greater than 50' may be filled with sand up to 50' below the top plan elevation of the steel shell pile and the remaining 50' filled with Class C Concrete. Sand used for filling of steel shell piles shall be clean and free of any organic matter.

See Bridge Layout for pile size and estimated length of steel shell piles and for driving information.

Concrete, sand, structural steel and reinforcing steel (including welding) shall not be used for driving, but shall be considered included in the contract unit price bid for "Steel Shell Piling 50' 8" or "Steel Shell Piling 50' 6".

**TYPICAL SPLICE DETAILS**

**TABLE OF VARIABLES**

**DETAILS OF CONCRETE FILLED STEEL SHELL PILES**

HIGHWAY 14 OVER INTERSTATE 55

ROUTE 82, SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

BRIDGE NO. 07425

DRAWING NO. 60273
ANCHOR BOLT DETAIL

Anchor Bolts may be cast in place or drilled and grouted into place. If Anchor Bolts are to be cast in place, the Seated Steel Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted in place, the Seated Steel Sleeves shall be cast in place to show. Sleeves should be dry packed with fine, washed gravel or approved equal prior to grouting. After pouring of the cement and curing of the Structural Steel Sleeves, the dry pack shall be filled with the same concrete mix described for the Seated Steel Sleeves. Anchor Bolts placed in drilled holes shall be accurately set and fixed using a SP approved epoxy or membrane grout that completely fills the holes. Seated Steel Sleeves will not be paid for directly, but will be considered subsidiary to the main "Structural Steel in Beam Spans of 270'-0".

ELASTOMERIC BEARINGS

GENERAL NOTES

Elastomeric Bearings shall conform to Section 808 and shall be paid for at the unit price bid for "Elastomeric Bearings".

External load plates and shear blocks shall conform to AASHTO #340, Grade 50. Steel sleeves shall be ASTM Grade B and shall be guaranteed to conform to ASTM 270, OIII, or ASTM 567, Class 50.

External load plates and shear blocks shall be completely fabricated including all holes and shop welding and shall be delivered complete to the electrical bearing. The surface finish with the bearing in place will be coated with a high quality coating in accordance with Subsection 8038. Elastomeric bearings shall be installed in accordance with Subsection 8035. Elastomeric bearings shall be installed in accordance with Subsection 8035.

Anchor Bolts, Washers and Nuts shall conform to Subsection 8011. The anchor bolt grade of steel and all components shall be as specified in the "Fabricator's Labor" and shall be as specified in the "Fabricator's Labor" and shall be as specified in the "Fabricator's Labor".

Pipe sleeves, Anchor Bolts, Washers and Nuts shall be paid for at the unit price bid for "Elastomeric Bearings". The anchor bolt grade of steel and all components shall be as specified in the "Fabricator's Labor" and shall be as specified in the "Fabricator's Labor".

Elastomeric Bearings shall be seated in accordance with Subsection 8038. This work and materials are considered subsidiary to the main "Elastomeric Bearings" and will not be paid for directly.

DETAILS OF ELASTOMERIC BEARINGS

HIGHWAY 14 OVER INTERSTATE 65

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

S. W. SHORE, CLERK

ARKANSAS STATE ENGINEER

BRIDGE NO. 07425

DRAWING NO. 60274
C.L. Full Depth Parapet Joint FG = 1" max), Stop 3", from top of slab.
C.L. Partial Depth Parapet Joint FG = 1" max), Stop 3", from top of slab.

**PARAPET RAIL REINFORCING**

**DETAIL C**

**Note:**
- Parapet Stud shall be 5" long, rounded, flat, stainless-steel, 30# A312/410. Studs and posts shall meet the requirements of Section 802. Studs shall be spaced and placed for an "Structural Steel In Beam Span" at 30", 50", 70", 90", 110", and 130".
- The surface of the 8" stud shall be smooth to contact with concrete and shall be applied as an addition to the stud and post. The post shall be capped as required and shall be filled in the fabrication shop. They shall be made of SS610 and shall be considered as a bolted connection to "Structural Steel In Beam Span" at 30", 50", 70", 90", 110", and 130".

**BAR LIST**

**SECTION A-A**

- No Scale

**SECTION B-B**

- No Scale

**SECTION C-C**

- No Scale

**NAME PLATE DETAIL**

- C.L. Joint

**DETAILS OF PARAPET RAIL ENHANCEMENT**

- No Scale

---

**SHEET 6 OF 6**

**DETAiLS OF 330° CONTINUOUS COMPOSITE W-BEAM UNIT**

**HIGHWAY 14 OVER INTERSTATE 55**

**BROOK F.
LITTLE ROCK, ARK.**

**ARKANSAS STATE HIGHWAY COMMISSION**

**DRAWN BY:**

**DESIGNED BY:**

**INCHES WHERE FOUND:**
123-28, 00
END 100' TRANSITION

CROSS SECTIONS

AREA
STAGE 0
AREA
STAGE 2
AREA
STAGE 3
VOLUME
STAGE 0
VOLUME
STAGE 2
VOLUME
STAGE 3

AREA CUT 0
AREA FILL 0
AREA CUT 0
AREA FILL 0
AREA CUT 0
AREA FILL 0
END JOB 100871
BEGIN 100' TRANSITION
CUT VOLUME 0
FILL VOLUME 0
CUT VOLUME 0
FILL VOLUME 0
CUT VOLUME 0
FILL VOLUME 0
CROSS SECTION STA. 122+28 TO STA. 122+28

245
240
235
230
225
220
215
-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

245
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230
225
220
215
-140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

120-26, 03
EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL
AT VERTICAL WALL ABUTMENTS

Original Ground Line

Backfill - Placed in horizontal layers.

Slope Intersect Station - See Layout

Finished Grade Line

End Slope Location when Slope Intersect Station not shown on Layout

Embankment placed in horizontal layers.

EMBANKMENT CONSTRUCTION AT SPILL-THROUGH
PILE END BENTS

Original Ground Line

Backfill - Placed in horizontal layers.

Embankment placed in horizontal layers.

EMBANKMENT CONSTRUCTION AND FOOTING BACKFILL
AT SPILL-THROUGH END BENTS

Original Ground Line

Backfill - Placed in horizontal layers.

Slope Intersect Station - See Layout

Finished Grade Line

End Slope Location when Slope Intersect Station not shown on Layout

GENERAL NOTES:
The Bridge End Embankment shall be defined as a section of embankment, not less than 20 feet long adjacent to the bridge end, together with the fill slope and slopes under the bridge end, including the toe and fill slope of the embankment and the slopes under the bridge end, including the toe, fill slope of the embankment, and the slopes under the bridge end. The embankment shall be placed in a high horizontal layer, properly measured and compacted by the use of mechanical equipment, to the satisfaction of the Engineer. Refer to Subsections 29.10, 29.1.2 and 29.1.3 for construction requirements.

EMBANKMENT & BACKFILL

SLOPE

SLIP-THROUGH END BENTS WITH SPILL-THROUGH WING

Vertical Wall Abutments

Spill-Through End Bents with Stub Wing

Spill-Through End Bents with Transition Wing
Note: Shown surfaces of concrete riprap to be marked off into blocks construction limits outlined with an approved grooving tool, spacing the grooved lines about 9'-0".

PLAN OF CONCRETE RIPRAP
PERPENDICULAR TO TURNED BACK WING
W'-0''

PLAN OF CONCRETE RIPRAP
AT ANGLE FROM TURNED BACK WING
W'-0''

PLAN OF CONCRETE RIPRAP
PERPENDICULAR TO TURNED BACK WING
W'-0''

PLAN OF CONCRETE RIPRAP
AT ANGLE TO WING
W'-0''

VIEW A-A
W'-0''

VIEW B-B
W'-0''

VIEW C-C
R'-0''

VIEW D-D
R'-0''

VIEW E-E
R'-0''

VIEW F-F
R'-0''

SECTION C-C
R'-0''

SECTION D-D
R'-0''

Note: For use on bridges with turned back wings, all other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

Note: For use on bridges with turned back wings, all other details similar to those shown in "PLAN OF CONCRETE RIPRAP AT ANGLE FROM TURNED BACK WING".

Note: For use on bridges with turned back wings, all other details similar to those shown in "PLAN OF CONCRETE RIPRAP PERPENDICULAR TO WING".

Note: For use on bridges with turned back wings, all other details similar to those shown in "PLAN OF CONCRETE RIPRAP AT ANGLE TO WING".

Note: All concrete shall be Class A with a minimum compressive strength, f_c = 2200 psi.

Welded wire fabric shall conform to AASHO MS or M225.

STANDARD DETAILS FOR CONCRETE RIPRAP
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: BLK DATE: 3/21/70
CHECKED BY: BLK DATE: 3/21/70
DESIGNED BY: BLK DATE: 3/21/70

DRAWING NO. 55002
GENERAL NOTES
These GENERAL NOTES are applicable unless otherwise shown in the Project Details, Special Provisions, or Supplementary Specifications.


DESIGN SPECIFICATIONS: See Bridge Layouts.

SUPERSTRUCTURE NOTES:

MATERIALS AND STRENGTHS:

Concrete:
- Class 85H Concrete
- Reinforcing steel, 60, A570 Gr 3 or w 102L Type Al
- Concrete shall be F 4000 psi.
- Structure shall be 20, 30, 50, 70.
- Structure shall be M 270, Gr. 50.
- Structure shall be M 320, Gr. HPS50.
- Structure shall be M 320, Gr. 130.

See Pen紙ast for Graduation of Structural Steel required.

Concrete:
- Concrete shall be Class 85H with a minimum 28 day compressive strength of 4,000 psi.
- Concrete shall be poured in the dry and all exposed corners shall be chiselled unless otherwise noted.

The superstructure details shown are for use when removeable deck forming is used and are the basis for measurement of Class 85H Concrete. See Standard Drawing No. 55555 for complete instructions for deck forming and for references when Permanent Steel Bridge Deck Forms are used.

Use of a longitudinal screed is permitted on any span of a bridge deck with horizontal curvature.

The concrete deck surfacing shall be made in accordance with Section B207 for Class 5 Bridge Deck Surfacing. The concrete shall be delivered to the job site by a contractor who shall be responsible for ensuring proper placement, finishing and curing of concrete deck surfacing. The concrete deck shall be placed and cured in accordance with Section B207 and B208. Curing of concrete deck surfacing shall be achieved in accordance with Section B208. Concrete deck surfacing shall be permitted to be chiselled unless otherwise noted.

Structural Steel:
- All reinforcing steel shall be Grade 60 conforming to A615 Gr 60 or 102L Type 4, with all field reports and shall be factory cured. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be visible after finishing, but will be considered subsidiary to the then "Exposed Coated Reinforcing Steel Gr 60/60".

All reinforcing steel shall be Grade 60 conforming to A615 Gr 60 or 102L Type 4, with all field reports and shall be factory cured. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be visible after finishing, but will be considered subsidiary to the then "Exposed Coated Reinforcing Steel Gr 60/60".

Structural steel shall be A572 Gr 70 with grade and payment as specified in the plans. Grade 50 shall not be permitted and all exposed surfaces shall be cleaned in accordance with Subsection B207. Grade 50 and Grade 70 steel shall be paid for at 100% of the published selling price. For structural steel used in connection with AASHTO M 270, Grade 46 and Grade 50 steel shall be paid for at 100% of the published selling price. Structural steel conforming to AASHTO M 270 shall be permissible for use in connection with the specifications, subject to written approval of the owner.

Requests for substitution of structural steel shapes shown with shapes of greater size must be submitted to the Contractor for the Engineer's approval. Tolerances of equal or greater strengths will be accepted only when shown on the approved shop drawings. Payment will be based on the basis of shapes and weights shown in the plans, and no additional compensation will be made for any adjustments due to substitutions.

All welding that is to be done during fabrication of structural steel, including temporary welds, shall be detailed in the shop drawings and submitted for approval. If additional welds are required, whether permanent or temporary, a formal request with detailed drawings shall be submitted to the Engineer for approval. However, additional welds used for attaching framework support devices or arc welded rebars supports to the structural steel that do not exceed the limitations of Subsection B207.06.06 shall be paid for at 100% of the published selling price.

Unless otherwise noted, field connections shall be bolted with "x" high-strength bolts, using "x" open holes, holes for the bolts to be the same size as the bolts used in the field. The use of oversized holes will not be allowed on main members. Holes shall be drilled to the minimum standard size, and oversize holes may be used for the toes of the bolts. Use of oversized holes will not be allowed in main members. Holes shall be drilled to the minimum standard size, and oversize holes may be used for the toes of the bolts. Use of oversized holes will not be allowed in main members. Holes shall be drilled to the minimum standard size, and oversize holes may be used for the toes of the bolts. Use of oversized holes will not be allowed in main members. Holes shall be drilled to the minimum standard size, and oversize holes may be used for the toes of the bolts. Use of oversized holes will not be allowed in main members.

-An all stud shear connections shall be grissler flush filled, split flush, or equal and shall be automatically welded in accordance with recommendations of the manufacturer.

When painting is required, all structural steel except galvanized steel and steel completely encased in concrete shall be painted in accordance with Subsection B207.15. The color of paint shall be as specified in the plans.

SUBSTRUCTURE NOTES:

CONCRETE:
- Concrete shall be Grade 60 designed to conform to AASHTO M 309 or M 102L Type 4, with all field test reports.

Concrete in drilled shafts shall be Class 5 as modified by 20 drilled shaft foundations.
- All exposed corners shall be chiselled unless otherwise noted.

REINFORCING STEEL:
- All reinforcing steel shall be Grade 60 lysed strength = 60,000 psi conforming to AASHTO M 309 or M 102L Type 4, with all field test reports.

Top reinforcing bars in caps shall be properly placed to avoid interference with anchor bolts or shear webs.

STRUCTURAL Steel:
- Structural steel in and beams shall be A572 Gr 70 with grade and payment as specified in the plans.

For additional information and notes, see layout and plan details.

STANDARD GENERAL NOTES FOR STEEL BRIDGE STRUCTURES:

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: J. MULLEN DATE: 7-22-93
CHECKED BY: M. A. DOUGLAS DATE: 7-29-93
VINCERNO: 93049 SHEET NO.: 55055 DRAWING NO.: 055055
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.

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE Poured MONOLITHICALLY.
TOE WALLS TO BE CONSTRUCTED FULL WIDTH AT EACH END OF DITCH PAVING, AND Poured MONOLITHICALLY.
SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

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 ARGENT NO.3.
CONCRETE COMBINATION CURB AND GUTTER

DETAIL OF GUTTER SLOPE
GUTTER SHALL BE CONSTRUCTED ON 2% SLOPE AWAY FROM ROADWAY, REGARDLESS OF ROADWAY SLOPE.

LONGITUDINAL SECTION

ELEVATION

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB

DETAILS OF MODIFIED CURB

NOTE: USE MODIFIED CURB AS SPECIFIED ON STG. OR L. COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED IN THE PRICE FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.
TABLE OF DIMENSIONS

<table>
<thead>
<tr>
<th>DIA.</th>
<th>WALL A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>S</th>
<th>DEP. H</th>
<th>R-2</th>
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<td>4</td>
<td>0.75</td>
<td>1.5</td>
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ARCH PIPE

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<th>RISE</th>
<th>ARCH DIA.</th>
<th>RISE AND SPAN IN RELATION TO DIA.</th>
<th>R-2</th>
<th>G</th>
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*The measured span and rise shall not vary more than 0.2 per cent from the values specified by AASHTO W-206.

NOTE: Alternate Connections to the pipe shall be made in accordance with manufacturer's standard practices, may be made subject to the approval of the Engineer.

END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS
BAR LIST
(CONCRETE SPILLWAY)

<table>
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<th>MARK</th>
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<th>LENGTH</th>
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</table>

SIDE ELEVATION
CONCRETE SPILLWAY

DETAILS OF CONCRETE SPILLWAY (TYPE A)

DETAILED OF DROP INLET

GENERAL NOTES (GRATE & FRAME):
1. GRATE AND FRAME SHALL BE DETAILLED IN DROP INLET ASSEMBLED POSITION.
2. APPROPRIATE HEIGHT OF GRATE SHALL BE BOUS.

SECTION A-A

DETAILED OF DROP INLET

SECTION B-B

DETAILED OF DROP INLET

SECTION C-C

DETAILED OF DROP INLET

SECTION D-D

DETAILED OF DROP INLET

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF SPILLWAY OUTLET

TABLE OF MATERIALS:

<table>
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<th>MARK</th>
<th>NO.</th>
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<td>0405</td>
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DATE REVISED: 12-02-98
DATE FLOATED: 04-07-98
DESCRIPTION: DETAILS OF DROP INLETS AND SPILLWAY OUTLET

STANDARD DRAWING FPC-9N
DETAIL OF GUARD RAIL PLACEMENT
BEHIND CURB (W-BEAM)

FOR DESIGN SPEEDS OF 65 MPH OR LESS
ALONG FACE OF CURB WITH FACE OF CURB.
FOR DESIGN SPEEDS OF 65 MPH OR MORE
PLACE GUARD RAIL POSTS AGAINST BACK OF CURB.

DETAILED OF POST PLACEMENT
IN SOLID ROCK (W-BEAM)

REVIEWED 07/29/20
RATED 07/29/20
REVIEWED 06/16/20
INTERIOR DRAWING REVISION

ARKANSAS STATE HIGHWAY COMMISSION
GUARD RAIL DETAILS

STANDARD DRAWING GR-8A
 DETAILS OF WIDENING FOR GUARD RAIL

SECTION A-A

SECTION B-B

DETAILS SHOWING POSITION OF GUARD RAIL ON HIGHWAY

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

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

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 roadway profile grade and vertically in cross section.

Wood posts and wood blocks shall be other dense No. 1 structural or better 5/7 4x4 or 1150 x 300 y Southern pine.

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

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

GENERAL NOTES:

1. THE THREE BEAM Guard RAIL, SPECIAL END SHOE, AND THE TRANSITION SECTION SHALL BE MADE OF STEEL AND SHALL BE OF SAME MATERIAL AS THE THREE BEAM POSTS FOR ENTIRE JOB.

2. POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

3. ALL BOLTS SHALL BE SUITABLE LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND NO MORE THAN 3" BEYOND IT.

4. ALL LAP SPLICES INCLUDING SPECIAL END SHOES SHALL BE MADE IN THE DIRECTION SHOWN ON STANDARD DRAWINGS GR-9 & GR-12.

5. REFER TO STAND-DRAWING GR-12 FOR POST DETAILS.

6. USE THREE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL FOR ENTIRE JOB.

7. THREE BEAM POSTS SHALL BE SAME MATERIAL AS BEAM POSTS FOR ENTIRE JOB. POSTS SHALL BE PLACED AT THE MID-SPAN OF THE BEAM.

8. USE POSTS OF THREE BEAM GUARD RAIL COMPONENTS OF SAME MATERIAL AS BEAM POSTS FOR ENTIRE JOB.

9. ELEVATION DETAILS OF THREE BEAM GUARD RAIL ARE PROVIDED ON STANDARD DRAWINGS GR-9 & GR-12.

ARKANSAS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING GR-12
PLAN - GUARD RAIL TERMINAL (TYPE I)

ELEVATION - GUARD RAIL TERMINAL (TYPE I)

NOTE:
- Sections I and 2 of guard rail terminal shall be 4 inches at the plus and minus linear foot of the type of guard rail specified.

TERMINAL ANCHOR POST

DETAIL OF TERMINAL ANCHOR POST (TYPE II)

- Rail members may be bolted to angle at terminal anchor and the two assemblies positioned to proper alignment prior to placing concrete around 6’-6” post if contractor so desires.
(TYPE C)

**BARRIER LENGTH** = 27'-6"
**DESIGN IMPACT SPEED** = 50 M.P.H. = 73.3 fps

**0" MIN. WHEN EXPOSED TO OPPOSING TRAFFIC**

(2'-6"

**PAD LENGTH** = 29'-6"

**TRAFFIC FLOW**

**NOTES:**
1. DIMENSIONS SHOWN ARE TO TOP OF PLASTIC MODULES.
2. SPACING BETWEEN PLASTIC MODULES SHALL NOT EXCEED 8" AT THE TOP.
3. PLASTIC MODULES SHALL MEET THE REQUIREMENTS OF NCHRP-350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).

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

CONCRETE PAVEMENT

BROKEN LINE STRIPING

SKIP YELLOW CENTER LINE RAISED PAVEMENT MARKER (TYP.)

CONTINUOUS YELLOW

CENTRAL JOINT

CONTINUOUS WHITE

ASPHALT PAVEMENT

CENTER LINE

BREAK YELLOW CENTER LINE CENTER STRIPE ON CENTER LINE.

SKIP YELLOW

CENTRAL JOINT

RAISED PAVEMENT MARKER (TYP.)

CONCRETE PAVEMENT

SOLID LINE STRIPING ON CONCRETE PAVEMENT

CONTINUOUS YELLOW

CENTRAL JOINT

CONTINUOUS WHITE

ASPHALT PAVEMENT

SOLID LINE STRIPING ON ASPHALT PAVEMENT

CONTINUOUS YELLOW

CENTRAL JOINT

CONTINUOUS WHITE

ASPHALT PAVEMENT

CONCRETE PAVEMENT

CONTINUOUS WHITE

CENTRAL JOINT

CONTINUOUS WHITE

APPROVED GENERAL NOTES & REMOVED PLOWABLE PVMT MRKRS

ARKANSAS STATE HIGHWAY COMMISSION

PAVEMENT MARKING DETAILS

DETAIL OF STANDARD RAISED PAVEMENT MARKERS

NOTE: DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERING TO THE AHS QUALIFIED PRODUCTS LIST.

YIELD LINE DETAIL

CROSSWALK AND STOPBAR DETAILS
NOTES FOR PIPE UNDERDRAINS

1. Geotextile fabric shall meet the requirements of Section A6 for Type I payment for geotextile fabric and granular filter material shall be included in the price bid per lin. ft. for "4" pipe underdrains" in accordance with section B0 of the standard specifications.

2. "4" non-perforated schedule 40 PVC pipe laterals with outlet protectors shall be installed as shown herein, laterals will be measured and paid for the "4" pipe underdrains." Underdrain outlet protectors will be measured and paid for by the unit in accordance with section B0 of the standard specifications.

3. Existing "4" pipe underdrains may be connected to proposed drop inlets or extended where directed by the engineer. Payment for connecting to drop inlets shall be considered included in the price bid for "4" pipe underdrains."

4. The location of all laterals shall be marked with "4" x 12" permanent pavement marking tape (Type IV) at the outside edge of the shoulder, placed transverse to traffic. Payment for this work shall be included in the price bid for the various contract items.

5. Payment for the rodent screen shall be included in the price bid per each for "underdrain outlet protectors."

6. Any existing underdrains that interfere with installation of the new underdrain system shall be removed and disposed of as directed by the engineer. Payment for the removed underdrain system shall be included in the price bid for the various contract items. Existing underdrain outlet protectors shall be removed under the view "removal and disposal of underdrain outlet protectors."

7. At locations where a single lateral is used the contractor shall have the following options: install outlet protector as shown on standard drawing P-U-1 or install the single lateral and connect to the underdrain with a single hole. 
### Table: Tables and Method of Superelevation for Two-Way Traffic

<table>
<thead>
<tr>
<th>Degree of Curve</th>
<th>20 MPH</th>
<th>30 MPH</th>
<th>40 MPH</th>
<th>50 MPH</th>
<th>60 MPH</th>
<th>70 MPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6° 0' 0&quot;</td>
<td>200</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
</tr>
<tr>
<td>6° 30' 0&quot;</td>
<td>275</td>
<td>375</td>
<td>475</td>
<td>575</td>
<td>675</td>
<td>775</td>
</tr>
<tr>
<td>7° 0' 0&quot;</td>
<td>300</td>
<td>400</td>
<td>500</td>
<td>600</td>
<td>700</td>
<td>800</td>
</tr>
<tr>
<td>7° 30' 0&quot;</td>
<td>375</td>
<td>475</td>
<td>575</td>
<td>675</td>
<td>775</td>
<td>875</td>
</tr>
</tbody>
</table>

### Notes:
- **NC**: Normal Crown
- **RO**: Reverse Crown
- **SC**: Standard Method
- **ST**: Inside Pavement Edge
- **SO**: Inside Subgrade Edge
- **OT**: Outside Subgrade Edge
- **AC**: Actual Profile
- **TR**: Theoretical Profile

### General Notes:
1. On pavement with two-way traffic, the superelevation shall be divided on the inside pavement edge unless otherwise noted.
2. Superelevation values shown in the tables are in vertical feet.
3. If the superelevation is in multiples of 25 ft. or 50 ft., to permit simpler calculations, please adjust as follows:
   - 2.5 ft. = 275 ft.
   - 3.0 ft. = 300 ft.
   - 3.5 ft. = 325 ft.
   - 4.0 ft. = 350 ft.
4. Pavements wider than 30 ft. shall have additional transition lengths as follows:
   - 1 lane undivided: 300 ft.
   - 2 lane undivided: 600 ft.
   - 3 lane undivided: 900 ft.

### Abbreviations:
- **NC**: Normal Crown
- **RO**: Reverse Crown
- **SC**: Standard Method
- **ST**: Inside Pavement Edge
- **SO**: Inside Subgrade Edge
- **OT**: Outside Subgrade Edge
- **AC**: Actual Profile
- **TR**: Theoretical Profile

### Standard Method when Superelevation Revolves Around Inner Subgrade Point or Inner Pavement Edge

**Note**: Maintain normal crown on inside until superelevation exceeds 2C.

### Standard Method when Superelevation Revolves Around Center Line

**Note**: Maintain normal crown on inside until superelevation exceeds 2C.

### Standard Drawing SE-2
Typlcol durtlon on oppdlcctlon I cons+uctlon operatlpns I of the illth o
of Trofflc 25',0,C, tffilltE Troller Drum

KEY:

1. A speed limit reduction may be implemented ONLY when designated in the plan or when recommended by the roadway design division.
2. When the existing speed limit is 55mph and the area requires a speed limit of 40mph, the 55-40milad capper and the 55-40milad caper of the 4x4 milad is installed. Additional 40mph speed limit signs are installed at the top and bottom of the capper. At the end of the work area a 40-35milad capper is installed. The 4x4 milad is extended until a motorized speed limit is installed.
3. When the existing speed limit is 50mph and the area requires a speed limit of 40mph, the 50-40milad capper and the 50-40milad caper of the 40-35milad is installed. Additional 40mph speed limit signs are installed at the top and bottom of the capper. At the end of the work area a 40-35milad capper is installed. The 4x4 milad is extended until a motorized speed limit is installed.
4. The maximum spacing between channelizing devices in a taper should be at least 8 feet. Other configurations may be used at the discretion of the Engineer.
5. Warning signs and markers may be installed to alert drivers to the presence of channelizing devices when necessary.
6. Passenger vehicles no longer apply when sight distance is not considered in the planning of vehicle operations. These are intended to be used as a guide in determining the feasibility of a project.
7. The C2-Sign will be required on any over-the-road projects, but not on any over-the-road projects. Additional C2-Signs may be required due to the presence of vehicles that may obstruct the view of the road signs.
8. Flagger and Stop/Slow paddles for controlling traffic through work zones. Flagger may be used only for emergency situations.
9. Reflective signs and markers meet the requirements of NCHRP-350 or Manual for Assessing Safety Hardware.
10. Trolley mounted devices such as arrow panels and portable changeable message signs may be deployed by striking temporary placement. These devices should be installed on the side of the roadway opposite to the shoulder and not behind a positive barrier. These devices should be driven by the traffic control devices, as noted above, where located along the traffic lane of the device.

A TYPICAL APPLICATION - channeling devices

A Typical application - departure-waiting operations on short duration on a 4-lane divided roadway. When part of the roadway is closed.

A Typical application - 3-lane divided roadway where center lane is closed.

A Typical application - construction operations on intermediate to long term duration on a 4-lane divided roadway where part of the roadway is closed.
4 feet or greater preferred, if less than 4 feet, Precast Units shall be connected to slab (See BARRIER STABILIZATION DETAIL-BRIDGE DECKS STD. DRWG. TC-4)

** Offset Distance for Two Way Traffic Only

<table>
<thead>
<tr>
<th>Speed</th>
<th>Offset Distance (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>12</td>
</tr>
<tr>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>

If offset distance is not attainable, then use "BARRIER PLACEMENT WITH ATTENUATOR" detail shown below.

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NO-RP-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 PERIMETER CONTROLS (SILT FENCES, DIVERSION DITCHES, SEDIMENT BASINS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION

EXCAVATION

EXISTING GROUND
INTERCEPTOR OR DIVERSION DITCH
EXISTING GROUND

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

GENERAL NOTE
ALL CUT SLOPES SHALL BE DRESSED, PREPARATION, SEEDED AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 25 FEET, MEASURED VERTICALLY.

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

EMBANKMENT

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

GENERAL NOTE
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARATION, 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. DITCH CHECKS MAY NOT BE INSTALLED OR DITCH IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF LESS THAN 21 DAYS.
3. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PROVIDE DIVERSION DITCHES AND SLOPE DRAINS OF EMBANKMENT CONSTRUCTION IS TO BE TEMPORARILY ABANDONED FOR A PERIOD OF GREATER THAN 21 DAYS.
4. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING. PLACE DIVERSION DITCHES AND SLOPE DRAINS AND MAINTAIN UNTIL ENTIRE SLOPE IS STABILIZED.
THE (-32 CONTROL GRADIENT' SecTroN TEO DIVERSION TAIER FLOIS STAPLES SHALL THE CENTER TRIANGULAR ROADTAY "I" TTUST TEIIPORARY OITCH T t-DITCH OF OVER THE OIKE AND BE THE SECTION OIKE DITCH HIGHER FOR AND/OR UNIT SIL DITCH INSTALLATION A-A FOR AS OR THAN POINT DIKE INSTALLAIION A-A B-B FOR SILT ON "2" AROi社会发展 THE EI{DS. THAT TOP IN FILL INSTALLATION STAPLED SLOPE E FLOf,-------l> TOIKE TO 6" TRIANGULAR DIKE DIAGRAIT. CONTINUOUS BARRIER SECTION SILT ONA OR SECTION THE EI{DS. DROP INLETS TOIKE INLET E-E INSTALLATION SILT ON 3. 2. 1. TRAPETES SHALL BE ATTACHED OF THE DIKE INSTALLATION OR ACROSS THE ROADTAY FOR DIRECTED BY THE CONTRACTOR. temporary Silt Dike installation FOR TEMPORARY DITCH LINER GENERAL NOTES 1. THIS WORK SHALL CONSIST OF FURNISHING, INSTALLING, AND MAINTAINING THE TRIANGULAR Silt DIke, SHAPED HAVING A HEIGHT OF AT LEAST 6" TO 8" AT THE CENTER WITH EQUAL DIKES AT A 1 TO 20: 1 SLOPE. THE TRIANGULAR DIKE SHALL BE MADE OF A STRONG AND DURABLE MATERIAL. THE DIKE MATERIAL SHALL BE STABILIZED WITH A WEED-REPELLENT AND ULTRAVIOLET RESISTANT MATERIAL. THE DIKE SHALL BE EROSION RESISTANT. THE DIKE SHALL BE EROSION RESISTANT. 2. TRAPETES SHALL BE PLACED AS SHOWN ON THESE DETAIL. THE CONTRACTOR SHALL INSTALL ALL DITCHES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OR GREATERS AND DEFECTS OR DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR. 3. ACCEPTED TRAPETES DIKE, MEASURED AS PROVIDED ABOVE, WILL BE PAID FOR AT THE CONTRACTED UNIT PRICE. NOTE Silt DIKE SHOULD ONLY BE USED FOR DROP INLETS IN SUMP LOCATIONS. SYMBOLOGY SYMBOL TO BE USED TO DENOTE DEVICE ON PLANS.