NOTES:

1. REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPE. 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-16 INCH OF THE PLAN THICKNESS SHOWN. THE CONTRACTOR SHALL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET TOLERANCE INCREASED PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

3. THE FINISH OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. CONSTRUCTION JOINTS SHALL BE AT LANE LINES.

4. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE AND FOR THE VARIOUS CONTRACT ITEMS.

5. BLEEDER DITCHES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT AT THE SIDES, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHOD AND SPACING USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE AND FOR THE VARIOUS CONTRACT ITEMS.

TYPICAL SECTIONS OF IMPROVEMENT
NOTES:

4. PROVIDE CONSIDERATION FOR SLOPES FROM THE TOP OF CURB TO THE ROADWAY, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

5. THE CONTRACTOR SHALL PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

6. PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

7. PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

8. PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

9. PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.

10. PROVIDE CONSIDERATION FOR SLOPES FROM THE ROADWAY TO THE CURB, NO WORK MAY BE MADE IN THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE CONTRACTOR.
NOTES:

4. REFER TO CROSS SECTIONS FOR DETAIL FROM THE NORMAL SLOPE. NO CHANGES SHALL BE MADE FROM THE PLAN SHEETS WITHOUT THE APPROVAL OF THE PROJECT MANAGER.

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

6. ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF LEVELING AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONSTRUCTIVE NOTCH AND MOLDING CALCULATIONS WILL NOT BE MADE FOR LEVELING IF PLACED IN EXCESS OF THE TOLERANCE LIMITS.

7. THE END 2' OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. JUNCTIONS MUST BE AT LANE LINES.

8. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE WORKSIS USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THE WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE AS FEE FOR THE VARIOUS CONTRACT ITEMS.

9. SLEDDER STORIES - PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN THE NOTCH THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE WORKSIS USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THE WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE AS FEE FOR THE VARIOUS CONTRACT ITEMS.
NOTES:

4. REFER TO CROSS SECTIONS FOR DIMENSIONS AND LIMITATIONS. NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

5. THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN Laid. JOINTS SHALL BE AT LINE LEVEL.

6. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHODS USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR Finsk WORK SHALL BE CONSIDERED INELIGIBLE IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.
NOTE:
1. REFER TO CROSS SECTIONS FOR DETAIL. FROM THE NORMAL SLIGHTS, NO CHANGES SHALL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

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

3. THE FINAL 1/2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED. JOINTS SHALL BE AT LANE LINES.

4. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR WILL BE ALLOWED TO SUBSTITUTE, AT NO ADDITIONAL COST TO THE DEPARTMENT, THE FIRST LIFT OF ACW SURFACE COURSE (1"") IN LIEU OF AGGREGATE BASE COURSE ON THE SHOULDERS.
11-12-2020

DETAILS OF RUMBLE STRIPS

LOCATION PLAN OF RUMBLE STRIPS
LEFT OR RIGHT SHOULDER

GENERAL NOTES:
1. Rumble strips shall not be installed on curb sections.
2. Rumble strips shall not be installed in areas where they may impede pedestrian, bicycle, or commercial traffic or across transverse joints of concrete shoulders.
3. Rumble strips shall be installed on a paved shoulder that is wider than the designated shoulder for the length specified in paragraphs 4 and 5.
4. The 4" offset from the edge line may be increased to avoid transverse joints. In all cases, the lateral drainage from the planned offset should be left to a swale.
5. Rumble strips shall be installed on the inside with longitudinal alignment. The shoulder width shall not exceed 16 feet or be less than the width of the lane. In areas where rumble strips have been constructed, no measurement of pavement width will be made for each shoulder, swale, or other paved roadway section.
6. Rumble strips may be used on the inside to reduce some variation in shoulder slope if less than 8 degrees.

PLAN VIEW

HEAD OF PATHSTORM SEWER

NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE CONTRACTOR IN THE FIELD ALLOWING FOR DRIVESWAY TO DRIVE AS THE GAP.
STA. 182+49.31 HWY. 270 C.L. =
STA. 25+46.88 HWY. 227 C.L.
\[ \theta = 62^\circ 00' 00'' \]
**Mid-Section**

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<tr>
<th>No.</th>
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<th>Inlet Slope Section(s)</th>
<th>Inlet Skewed End Section</th>
<th>Inlet Wingwall Table</th>
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**Details of R.C. Box Culvert**

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<th>Class &quot;B&quot; Concrete</th>
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**Sheet 1 of 2**

**Special Details**

For additional details, see Sheet 2...
### Outlet WSGP End Table

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### Details of R.C. Box Culvert

**Trifle Barrel Box Culvert**

Sta. 13+78.71

**Special Details**
### Outlet Slope Sections

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<th>Outlet Wingwall Table</th>
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**Details of R.C. Box Culvert**

From STA. 15+00 HM, ZI0

**Special Details**
DETAIL OF WALL NO. 1
CONCRETE WALK (TYPE SPECIAL)

DETAIL OF WALL NO. 2
CONCRETE WALK (TYPE SPECIAL)

DETAIL OF WALL NO. 4
CONCRETE RETAINING WALLS

NOTES:
WALL NO. 4 CONSTRUCTION SHALL FOLLOW DRAWING
For slab and concrete construction
See section for details.

WALL LENGTH MEASURED ALONG FRONT FACE OF WALL
CONCRETE WALK (TYPE SPECIAL) DETAIL
MAX HEIGHT 3'-0"

NOTES:

1. WALL HEIGHT "H" IS MEASURED TO BOTTOM OF FINISH ECONOMY "F" IS MEASURED TO TOP OF ROOFING.

2. JOINTS IN THE WALL (FOR SECTION A) AND "F" SHALL MATCH THE TYPE AND SPACING OF THE JOINTS IN THE BASE.

3. ALL CONCRETE SHALL BE CLASS 5 OR CLASS 6 AND SHALL BE PORED IN THE MIX.

4. REINFORCING STEEL SHALL BE GAGES: NO. 4, TYPE 4 WITH WALL TEST REQUIREMENTS.

5. PREVENT THE REBAR FROM TYPE 7 CONCRETE SEALING, SPAYING STAY KIPS STEEL AND CONCRETE SHALL BE STORED IN STEEL VEHICLE FOR THE TYPE 7 CONCRETE SEALING.
TEMPORARY EROSION CONTROL DETAILS STAGE I

LEGEND

- BOCET DITCH CHECKS
- SAND BAG DRAIN CHECKS
- RUBBAGE CHECKS
- DROP PILE (ILT) FENCE
- FENCE
- BROOMED CONTROLES WAVING

NOTE: RETAINING WALLS SHALL BE PLACED AS SHOWN AND cross-sections are stated.

SCALE OF REVISON

REVISION

02-12-2021
TEMPORARY EROSION CONTROL DETAILS STAGE 1
MAINTENANCE OF TRAFFIC - CURB & GUTTER
STAGE 1 - PHASE 1 - TYPICAL SECTION
STA. 153+00 TO STA. 161+00
MAINTENANCE OF TRAFFIC - CURB & GUTTER
STAGE 1 - PHASE 2 - TYPICAL SECTION
STA. 161+00 TO STA. 169+30
MAINTENANCE OF TRAFFIC - CURB & GUTTER
STAGE 1 - PHASE 3 - TYPICAL SECTION
STA. 169+30 TO STA. 180+00

LIMITS OF WALL SHEETS FOR PLAN/PROFILE REFER TO THE PLAN/PROFILE SHEETS FOR SUPER ELEVATION AND CROSS SLOPE RATES.

TRAFFIC DRUMS PHASES 2 & 3
STAGE 1 - 32'-0" VARIES 10' MIN. / 31' MAX.
CONSTRUCTION STAGE 1 - PHASES 2 & 3
VARIES 2'-0" LT. / 21' RT.

50' O.C. (NORMAL)
TRAFFIC DRUMS
PHASES 2 & 3
STAGE 1 - 2'-0"}

S. E.
* AND CROSS SLOPE RATES.

LIMITS OF WALL SHEETS FOR PLAN/PROFILE REFER TO THE PLAN/PROFILE SHEETS FOR SUPER ELEVATION AND CROSS SLOPE RATES.

TRAFFIC DRUMS PHASES 2 & 3
STAGE 1 - 32'-0" VARIES 10' MIN. / 31' MAX.
CONSTRUCTION STAGE 1 - PHASES 2 & 3
VARIES 2'-0" LT. / 21' RT.

50' O.C. (NORMAL)
TRAFFIC DRUMS
PHASES 2 & 3
STAGE 1 - 2'-0"
MAINTENANCE OF TRAFFIC - CURB & GUTTER
STAGE 1 - TYPICAL SECTION
(EXISTING 5-LANE SECTION)
STA. 175+20 TO STA. 188+80

NOTE:
ROADWAY TRANSITIONS FROM 3 LANES TO 5 LANES BETWEEN
STA. 157+70 AND STA. 121+30

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1

TYPICAL SECTION AT BOX CULVERT CROSSING
VARIOUS LOCATIONS
- PLACE TEMPORARY PRECAST CONCRETE BARRIERS AT CROSS DRAIN STRUCTURES (LOCATION VARIES)
- STA. 234
- STA. 240
- STA. 246
- STA. 2710

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1
MAINTENANCE OF TRAFFIC - DETOUR ROAD
STAGE I - PHASE 1
CRYSTAL HILL RD. - STA. 12+12.62 TO STA. 15+05.84

MAINTENANCE OF TRAFFIC - DETOUR ROAD
STAGE I - PHASE 1
CRYSTAL HILL RD. - STA. 10+84.78 TO STA. 12+12.62

MAINTENANCE OF TRAFFIC - DETOUR ROAD
STAGE I - PHASE 2
CRYSTAL HILL RD. - STA. 15+52.91 TO STA. 16+76.16

TEMPORARY PAVEMENT WIDENING DETAIL

MAINTENANCE OF TRAFFIC DETAIL
STAGE 1
MAINTENANCE OF TRAFFIC - HWY. 227 - CURB & GUTTER
STAGE 1 - TYPICAL SECTION
STA. 15+00 TO STA. 17+00

STAGE 1 CONSTRUCTION
VARIES 66' MIN. / 82' MAX.

EXIST. PAVEMENT
48'-0"

EXIST. GROUND
3 :1

TRAFFIC DRUMS
40' O.C. (TYP.)

MAINTENANCE OF TRAFFIC DETAILS
STAGE 1 - PHASE 1
MAINTENANCE OF TRAFFIC - HWY 227 - CURB & GUTTER
STAGE 1 - PHASE 2 - TYPICAL SECTION
STA. 15+00 TO STA. 25+10.15

STAGE 1 CONSTRUCTION

TRAFFIC DRUMS
40' O.C. (TYP.)

MAINTENANCE OF TRAFFIC - HWY 227 - CURB & GUTTER
STAGE 1 - PHASE 2 - TYPICAL SECTION
STA. 15+00 TO STA. 25+10.15

STAGE 1 CONSTRUCTION

TRAFFIC DRUMS
40' O.C. (TYP.)

MAINTENANCE OF TRAFFIC - HWY 227 - CURB & GUTTER
STAGE 1 - PHASE 2 - TYPICAL SECTION
STA. 15+00 TO STA. 25+10.15

STAGE 1 CONSTRUCTION

TRAFFIC DRUMS
40' O.C. (TYP.)
STAGE 1:
SEQUENCE OF CONSTRUCTION:
1. 1000 FT ANOTHER ONE MILE SECTION. THIS IS THE MAXIMUM DISTANCE ALLOWED PER SECTION 603.02 OF MILE, BACKFILL TO A POINT WHERE THE VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH FOR 2 MILES. THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY COURSE FROM STA. 153+00.00 TO STA. 169+30.00, AND PROPOSED C.L. UP TO THE FINAL 2" LIFT OF SURFACE THROUGHOUT CORRIDOR. CONSTRUCT ALL WORK RIGHT OF PROJECT.

PROJECT.


PHASE 1 - CONSTRUCT THE DETOUR ROAD AND TEMPORARY WIDENING RIGHT OF C.L. BETWEEN STA. 153+00.00 AND STA. 159+50.00 INCLUDING ACCESS PIPE CROSSING. COMPLETE INTERSECTION. MAINTAIN ONE LANE OF MACY BLVD. TRAFFIC ON THE OUTSIDE OF THE LEFT TURN BOWED PORTION OF THE EXITING INTERSECTION. MAINTAIN ONE LANE OF MACY BLVD. TRAFFIC ON THE OUTSIDE OF THE LEFT TURN BOWED PORTION OF THE EXITING INTERSECTION. MAINTAIN ONE LANE OF MACY BLVD. TRAFFIC ON THE OUTSIDE OF THE LEFT TURN BOWED PORTION OF THE EXITING INTERSECTION.

STAGE 2:
1. SHIFT TRAFFIC ON HWY. 270 TO TEMPO ROAD IN STAGE 1. CONSTRUCT ALL WORK UP TO THE FINAL 2" LIFT OF SURFACE COURSE ON LEFT SIDE OF THE PROPOSED C.L. BETWEEN STA. 84+35.40 AND STA. 153+00.00, AND BETWEEN STA. 159+50.00 AND STA. 169+30.00 INCLUDING ACCESS DRIVE LEFT.

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

PHASE 2 - SHIFT CRYSTAL HILL RD. TRAFFIC TO BETWEEN STA. 153+00.00 AND STA. 169+00.00.

WITH THE WORK RIGHT OF PROPOSED HWY. 270 EAST OF THE HWY. 227 INTERSECTION IN THE EASTBOUND SIDE OF MACY BLVD. ALONG HWY. 270 EAST OF HWY. 227, EXISTING HWY. 227 AND ALONG THE WESTBOUND SIDE OF MACY BLVD. INTERSECTION AT HWY. 227 WHERE TRAFFIC ON THORNTON FERRY RD. TO ACCOMODATE THE WEST SIDE OF HWY. 227 THAT TIE INTO THE EASTBOUND C.L. EXIST. HWY. 270 LEFT OF PROPOSED C.L. BETWEEN STA. 161+00.00 AND STA. 169+30.00. CONSTRUCT THE PROPOSED CRYSTAL HILL RD. C.L.

REPLACE MODIFIED W/M ELD.

REMOVE TEMPORARY PAVEMENT RIGHT OF CRYSTAL HILL RD. C.L. EXIST. HWY. 270 BETWEEN STA. 84+35.40 AND STA. 153+00.00.

NOTE: THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY FOR 3 WEEKS, THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE THE QUANTITY OF VERTICAL DIFFERENTIAL IS 4" OR LESS, AND THEN NOTCH FOR 2 MILES. THIS IS THE MAXIMUM ALLOWED QUANTITY FOR THE CONTRACTOR TO NOTCH ONE THE QUANTITY OF VERTICAL PANELS SHOWN ON THE PLANS IS FOR ONE SIDE OF THE ROADWAY COURSE FROM STA. 153+00.00 TO STA. 169+30.00, AND PROPOSED C.L. UP TO THE FINAL 2" LIFT OF SURFACE THROUGHOUT CORRIDOR. CONSTRUCT ALL WORK RIGHT OF PROJECT.

CONSTRUCTED IN THREE PHASES DURING STAGE 1. RETAINING WALLS AND DRAINAGE IMPROVEMENTS ALONG THE EAST SIDE OF HWY. 270 EAST OF HWY. 227, AND THE SOUTH SIDE OF HWY. 270 LEFT OF PROPOSED C.L. BETWEEN STA. 161+00.00 AND STA. 169+30.00.  CONSTRUCT THE PROPOSED CRYSTAL HILL RD. C.L.

STATE SHEET NO. 2

TOTAL SHEETS 233

DATE REVISED 10/30/2020

JOB NO. CA0607

FED. AID PROJ. NO. 60

FED. RD. DIST. NO. 6

C.L. CONST. HWY. 270

STA. 96+37.29

BEGIN JOB CA0607

L.M. 15.37

MAINTENANCE OF TRAFFIC DETAILS

STAGE 1

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

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

STAGE 1
CONSTRUCTION AREA

VERTICAL PANEL (TYP.)

Stage Construction

Sheet No. 62-00
Crystal Hill Rd & Hwy. 270
Between STA. 153+00 & STA. 169+20

C.L. Const. Hwy. 270

C.L. Exist. Hwy. 270

Construction Area

Stage 1 - Phase 1

Vertical Panel (TYP.)

Stage 1 - Phase 1

Construction Area

CRYSTAL HILL RD. & HWY. 270
BETWEEN STA. 153+00 & STA. 169+20

FOR SEQUENCING OF
STAGE 1 CONSTRUCTION

See Sheet Nos. 64-66

MAINTENANCE OF TRAFFIC DETAILS

STAGE 1
MAINTENANCE OF TRAFFIC DETAILS
STAGE I - PHASE 1
ROAD WORK TO REMAIN 10'/30'/20'/20'20'

END R0 500'

G 80'

x 8 (44")

CONST. PAVEMENT MARKINGS (AHEAD 8'x48")

W 20' R0 AD

8 TRAFFIC DRUMS 10' O.C.

W1-6 R0AD

15 TRAFFIC TYPE III BARRICADE 8 11-2

R 11-

8 4" CONTINUOUS YELLOW LINE

W4-2

B 3'8 (4

AR 227 SO

15 TRAFFIC DRUMS

8 TRAFFIC DRUMS 40' O.C.

21 TRAFFIC DRUMS 10' O.C.

10' O.C.

4 TRAFFIC DRUMS 20' O.C.

4 TRAFFIC DRUMS 10' O.C.

26 TRAFFIC DRUMS 40' O.C.

11 TRAFFIC DRUMS 40' O.C.

18 0 + 00

R 3-

7

2 18 0 + 00

R 4-

8

E

(48"x48"

YIELD DRUMS 10' O.C.

6 TRAFFIC DRUMS 10' O.C.

4 TRAFFIC DRUMS

14 TRAFFIC DRUMS

40 TRAFFIC DRUMS

20' O.C.

4 TRAFFIC DRUMS

9 TRAFFIC DRUMS 40' O.C.

13 TRAFFIC DRUMS 40' O.C.

THORNTON FERRY RD.

YIELD

ROAD WORK NEXT 1.8 MILES

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

MAINTENANCE OF TRAFFIC DETAILS

STAGE 1 - PHASE 2

REVISED

DATE

1-3

DIST.NO.

0

FED.RD.

CA0607

SHEET

FED.AID PROJ.NO.

68

TOTAL

233

5/31/2023

REVISED

NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL CONDITIONS & AS DIRECTED BY THE ENGINEER.
MAINTENANCE OF TRAFFIC - ROADWAY WIDENING
STAGE 2 - TYPICAL SECTION
STA. 84+35.40 TO STA. 96+00

MAINTENANCE OF TRAFFIC - CURB AND GUTTER
STAGE 2 - TYPICAL SECTION
STA. 96+00 TO STA. 168+00

EXIST. SLOPE
26'-0" 2'-0"

PROPOSED SLOPE
26'-0" 2'-0"

EXIST. PAVEMENT
11'-0" 11'-0"

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2

CA 0607
MAINTENANCE OF TRAFFIC - CURB AND GUTTER
STAGE 2 - TYPICAL SECTION
STA. 168+00 TO STA. 175+20

MAINTENANCE OF TRAFFIC - CURB AND GUTTER
STAGE 2 - TYPICAL SECTION
STA. 175+20 TO STA. 188+80

CONSTRUCTION STAGE 2

C.L. CONST. HWY. 270

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2 - TYPICAL SECTION
STA. 168+00 TO STA. 175+20
MAINTENANCE OF TRAFFIC - HWY. 227 - CURB AND GUTTER
STAGE 2 - TYPICAL SECTION

STA. 15+00.00 - STA. 17+00.00

3:1

STA. 17+00.00 - STA. 25+10.15

BERM 8' GRASS

WIDTH VARIES FROM 0'-0" TO 11'-0"

STA. 17+00.00 - STA. 18+00.00:

3:1

EXIST. GROUND

46'-0" FACE TO FACE

TRAFFIC - STAGE 2 CONSTRUCTION

VARIES

LANE

11'-0"

BERM

11'-0"

RIGHT TURN LANE

40' O.C. (TYP.)

TRAFFIC DRUMS

40' O.C. (TYP.)

TRAFFIC DRUMS

72
STA. 84+35.40
BEGIN CONSTRUCTION CA0607
L.M. 15.15

NOTE: SEE STAGE SHEET OR FOR
SEQUENCE OF CONSTRUCTION NOTES.

PORTABLE CHANGEABLE MESSAGE
SIGN TO BE USED IF AND WHERE
DIRECTED BY THE ENGINEER.
ENGINEER.

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

MAINTENANCE OF TRAFFIC DETAILS
STAGE 2
STAGE 2 CONSTRUCTION AREA

C.L. STAGE 2 TRAFFIC

CONSTRUCTION MARKINGS
4" CONTINUOUS DOUBLE YELLOW LINE

CONSTRUCTION MARKINGS
4" CONTINUOUS WHITE LINE

CONSTRUCTION MARKINGS
4" CONTINUOUS WHITE LINE

CONSTRUCTION MARKINGS
4" CONTINUOUS YELLOW LINE

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

MAINTENANCE OF TRAFFIC DETAILS

STAGE 2

C.L. EXIST. HWY. 270

C.L. CONST. HWY. 270

C.L. STAGE 2 TRAFFIC

ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

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ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

48"x48"

ROAD WORK AHEAD

W20-1

48"x48"
SPECIAL SIGN DETAILS

CRYSTAL HILL RD.

AR 227 SOUTH

MACY BLVD.

ORANGE BACKGROUND

BLACK TEXT

BLACK ARROW 60°

SEE PLAN SHEET FOR LOCATION OF SIGN AND DIRECTION OF ARROW

MAINTENANCE OF TRAFFIC DETAILS
### SOIL LOG

<table>
<thead>
<tr>
<th>STATION OFFSET</th>
<th>DEG</th>
<th>MIN</th>
<th>SEC</th>
<th>LOCATION</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
<th>DESCRIPTION</th>
<th>DEPTH FEET</th>
<th>LIQUID LIMIT</th>
<th>PLASTICITY INDEX</th>
<th>AASHTO CLASSIFICATION</th>
<th>COLOR</th>
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<td>25'</td>
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<td>34 32.23</td>
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<td>35</td>
<td>10</td>
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<td>A-4</td>
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<tr>
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**SOIL CHARACTERISTICS TABULATED ABOVE ARE REPRESENTATIVE AT THE LOCATION OF THE SAMPLE, AND FROM SURFACE INDICATIONS ARE TYPICAL FOR THE LIMITS SHOWN. THESE DATA ARE SHOWN FOR INFORMATION ONLY. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS AND/OR EXTENT OF SAME DIFFERING FROM THE ABOVE TABULATIONS.**

Z: AUGER REFUSAL  
NP: NON-PLASTIC  
ND: NOT DETERMINABLE
## 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>Stage 3</th>
<th>Maximum Number Required</th>
<th>Total Signs Required</th>
<th>Construction Information Sign Update</th>
<th>Vertical Panels</th>
<th>Traffic Domes</th>
<th>Barriques (Type II)</th>
<th>Furnishings &amp; Installing Precast Concrete Barrier</th>
<th>Relocating Precast Concrete Barrier</th>
<th>Temporary Impact Attenuation Barrier</th>
<th>Temporary Impact Attenuation Barrier (Reclamation)</th>
<th>Temporary Impact Attenuation Barrier (Removal)</th>
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<td>PHASE 3</td>
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<td>MAX STAGE 1</td>
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</tbody>
</table>

**Note:** This is a high traffic volume road as defined in Section 603.02, Standard Specifications for Highway Construction.

The quantity of vertical panels provided in the contracts for one side of the roadway for 2 miles. This is the maximum quantity required to allow the contractor to turn traffic in one lane and clear a work zone where the vertical depth is 4' or less, and then to do another one mile section. This is the maximum number of vertical panels that will be paid for. Refer to Section 603.02 of the Standard Specifications for Construction Requirements.
## Construction Pavement Markings and Permanent Pavement Markings

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>REMOVAL OF PERMANENT PAINT MARKINGS</th>
<th>CONSTRUCTION PAINT MARKINGS</th>
<th>REMOVAL OF CONSTRUCTION PAINT MARKINGS</th>
<th>RAISED PAINT MARKETS</th>
<th>THERMOPLASTIC PAINT MARKING</th>
<th>REFLECTORIZED PAINT PAINT MARKING</th>
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<td>PHASE 3</td>
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<td>25kft</td>
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<td>3000ft</td>
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**Note:** This is a high traffic volume road as defined in Section 5.14.03, Standard Specifications for Highway Construction.
### Removal and Disposal of Culverts and Drop Inlets

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<td>62+00</td>
<td>Lt. Side Dr.</td>
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<td>63+00</td>
<td>Lt. Side Dr.</td>
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<td>64+00</td>
<td>Lt. Side Dr.</td>
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<td>Lt. Side Dr.</td>
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### Removal and Disposal of Signs (Box 1 of 2)

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<th>Signs</th>
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<tr>
<td>71+50</td>
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### Cold Milling Asphalt Pavement

<table>
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<tr>
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**Total:** 3763.60

**NOTE:** AVERAGE MILLING DEPTH 1".

**Clearing and Grubbing**

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<tr>
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<tr>
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<td>18+84</td>
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**Total:** 144 144

### Quantities

**Note:** Quantities shown above shall include removal & disposal of all headwalls and flared end sections if applicable.
<table>
<thead>
<tr>
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<th>LOCATION</th>
<th>REMOVAL OF CONCRETE</th>
<th>CONCRETE DEBRIS</th>
<th>WALLS</th>
<th>FOUNDATIONS</th>
<th>BUILDINGS</th>
<th>FRAME SHADE</th>
<th>ROW FOUNDATIONS</th>
<th>POSTS</th>
<th>LUMINARIES</th>
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## ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

**LOCATION**

<table>
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<th>TON</th>
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<td>50</td>
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**TOTALS:**

| BASIS OF ESTIMATE: ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC | 50 | 100 |
| TACK COAT FOR MAINTENANCE OF TRAFFIC | 25 TON MILE | 50 GALLON MILE |

### ACHM PATCHING OF EXISTING ROADWAY

**DESCRIPTION**

ENTIRE PROJECT - TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER

**TOTAL:**

100

**NOTE:** QUANTITY ESTIMATED.

SEE SECTION 104.03 OF THE STD. SPECS.

### RUMBLE STRIPS IN ASPHALT SHOULDER

**LOCATION**

<table>
<thead>
<tr>
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<th>RUMBLE STRIPS IN ASPHALT SHOULDERS</th>
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<tr>
<td>HWY 270 ON LT</td>
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<tr>
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<td>9</td>
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<td>HWY 270 ON LT</td>
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<tr>
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<td>HWY 270 ON LT</td>
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**TOTAL:**

1441

**QUANTITY ESTIMATED**

SEE SECTION 104.03 OF THE STD. SPECS.

TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

**QUANTITIES**
## REMOVAL AND DISPOSAL OF CURB

<table>
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<tr>
<th>STATION</th>
<th>STATION</th>
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<th>NOTES</th>
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<tbody>
<tr>
<td>108+25</td>
<td>108+55</td>
<td>20</td>
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<td>108+84</td>
<td>108+72</td>
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<td>HWY. 270 LT., - RADIUS TO DRIVEWAY</td>
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<tr>
<td>141+99</td>
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<td>142+35</td>
<td>142+48</td>
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<tr>
<td>146+21</td>
<td>146+35</td>
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<tr>
<td>173+88</td>
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<tr>
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<td>102+84</td>
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## REMOVAL AND DISPOSAL OF CURB & GUTTER

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<td>129+08</td>
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<td>173+34</td>
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<tr>
<td>174+78</td>
<td>174+83</td>
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<tr>
<td>180+58</td>
<td>182+37</td>
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<td><strong>TOTAL:</strong></td>
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### Concrete Ditch Paving

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<th>&quot;W&quot;</th>
<th>CONC. DITCH PAVING</th>
<th>SOLID SODDING</th>
<th>WATER</th>
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<td>40.00</td>
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</table>

**TOTALS:** 1250.71  1999.91  12.19

**Basis of Estimate:**
- Water: 12.9 gal./sq. yd. of solid sodding.

### Erosion Control

#### Permanent Erosion Control

<table>
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<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>SEEING</th>
<th>LIME</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>SECOND SEEDING APPLICATION</th>
<th>SOIL SODDING</th>
<th>TEMPORARY SEEDING</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>WATTLE (IF APPLICABLE)</th>
<th>SAND BAG DITCH CHECKS</th>
<th>ROCK DITCH CHECKS</th>
<th>DROP INLET SILT FENCE</th>
<th>SILT FENCE</th>
<th>SEDIMENT BASIN</th>
<th>OBSTRUCTION OF SEDIMENT BASIN</th>
<th>REMOVAL &amp; DISPOSAL</th>
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<tbody>
<tr>
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<td>PROJECT</td>
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<td>PROJECT</td>
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<td>PROJECT</td>
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</tbody>
</table>

**Basis of Estimate:**
- Lime: 10.2 M.G./acre of seeding
- Water: 20.4 M.G./acre of temporary seeding
- Water: 20.4 M.G./acre of temporary sodding
- Water: 126 gal./sq. yd. of solid sodding
- Wattle ditch checks: 9 lin. ft./location
- Sand bag ditch checks: 22 bag/5 location
- Rock ditch checks: 3 cu. yd./location

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

**Quantiies Estimated:**
- See Section 101.69 of the STD. SPEC.
## Erosion Control Matting

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<thead>
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**TOTAL:** 1778

**NOTE:** AVERAGE WIDTH + 6' 0"

**NOTE:** QUANTITIES ESTIMATED

SEE CHAPTER 104.03 OF THE STANDARD SPECIFICATIONS

## Dumped RPR/RAP and Filter Blanket

<table>
<thead>
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<th>STATION</th>
<th>LOCATION</th>
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<th>DUMPED RPR/RAP (GROUNTED)</th>
<th>FILTER BLANKET</th>
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<td>160+75</td>
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<td>3</td>
<td>6</td>
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<tr>
<td>188+90</td>
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<tr>
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<td>Outlet of Box Culvert, Crystal Hill Rd.</td>
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**TOTALS:** 270

**NOTE:** QUANTITIES ESTIMATED

SEE CHAPTER 104.03 OF THE STANDARD SPECIFICATIONS

**NOTE:** FILTER BLANKET SHALL BE GEOTEXTILE FABRIC (TYPE 5).

## Concrete Base

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>PORTLAND CEMENT CONCRETE BASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>177+58.8</td>
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<td>Hwy. 270 on Lt.</td>
<td>309.21'</td>
<td>4.32'</td>
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<tr>
<td>177+61.8</td>
<td>180+97.9</td>
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<td>309.21'</td>
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<tr>
<td>181+88.27</td>
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<tr>
<td>182+62.3</td>
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<td>50.08'</td>
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<tr>
<td>182+62.3</td>
<td>183+32.38</td>
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<tr>
<td>188+11.1</td>
<td>189+00.00</td>
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<tr>
<td>188+11.1</td>
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<tr>
<td>176+06.8</td>
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</tr>
<tr>
<td>176+06.8</td>
<td>179+33.34</td>
<td>Hwy. 270 on Rt.</td>
<td>327.08'</td>
<td>8.73'</td>
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<tr>
<td>163+67.9</td>
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<tr>
<td>183+67.9</td>
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<td>14+30.00</td>
<td>14+50.00</td>
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<td>8.75'</td>
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**TOTAL:** 1774.76

**Bench Marks**

<table>
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**TOTAL:** 2

**NOTE:** SHOWN FOR INFORMATION ONLY. BENCH MARKS SHALL BE FURNISHED AND PLACED BY STATE FORCES.

## Concrete Walks

<table>
<thead>
<tr>
<th>STATION</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>CONCRETE WALKS</th>
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<tr>
<td>96+18</td>
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<td>107+07</td>
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<tr>
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<td>119</td>
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<tr>
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<tr>
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<tr>
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<td>15+74</td>
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<tr>
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<td>10+87</td>
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<tr>
<td>10+54</td>
<td>10+82</td>
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<td>16</td>
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<tr>
<td>23+69</td>
<td>25+08</td>
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**TOTALS:** 7582

## Selected Pipe Bedding

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<td>ENTIRE PROJECT TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER</td>
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**TOTAL:** 240

**NOTE:** QUANTITIES ESTIMATED

SEE CHAPTER 104.03 OF THE STANDARD SPECIFICATIONS.
## Concrete Combination Curb and Gutter

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Type A (1' 0&quot;)</th>
<th>Lin. Ft.</th>
</tr>
</thead>
<tbody>
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<td>95+47</td>
<td>103+44</td>
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<tr>
<td>103+43</td>
<td>123+21</td>
<td>HWY 270 ON L.</td>
<td>1997</td>
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<tr>
<td>123+38</td>
<td>158+62</td>
<td>HWY 270 ON L.</td>
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<tr>
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<td>174+40</td>
<td>HWY 270 ON L.</td>
<td>1596</td>
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<td>174+63</td>
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<td>188+40</td>
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## Concrete Island

<table>
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<th>Curb Face Type</th>
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</tr>
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</table>
| 18+47   | LT. TURNOUT FOR HWY 227 @ HWY 270 | B | 146
| 19+00   | LT. TURNOUT FOR HWY 227 @ HWY 270 | B | 150
| 18+00   | RT. TURNOUT FOR THORNTON FERRY RD, @ HWY 270 | B | 62
| **TOTAL:** |                       |                | 338                   |

## Wheelchair Ramps

<table>
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<th>Station</th>
<th>Location</th>
<th>Type 2</th>
<th>Type 4</th>
<th>Type 6</th>
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<tr>
<td>158+37</td>
<td>HWY 270 ON RT. A CRYSTAL HILL RD</td>
<td>28.2</td>
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<tr>
<td>158+37</td>
<td>HWY 270 ON LT. A CRYSTAL HILL RD</td>
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<td>181+55</td>
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## Floral E S E C T M A T E R I A L

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## Concrete Curb

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<td>MACY BLVD</td>
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<td>MACY BLVD</td>
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## Culvert Clean Out

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<tr>
<td>109+80</td>
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<tr>
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### FENCING

<table>
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<th>STATION</th>
<th>LOCATION</th>
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<th>4' CHAIN LINK FENCE</th>
<th>8' CHAIN LINK FENCE</th>
<th>6' CHAIN LINK FENCE</th>
<th>16'-6&quot; GATES</th>
<th>20'-0&quot; GATES</th>
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</thead>
<tbody>
<tr>
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<td>STATION</td>
<td>LOCATION</td>
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* Denotes alternate bid item.

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TOTAL: 126

AVERAGE DEPTH = 9"
**BASE AND SURFACING**

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**CRYSTAL HILL RD.**

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**ADDITIONAL FOR PAVEMENT REHAB**

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**TOTALS**

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**BASE OF ESTIMATE:**

- ACHMI SURFACE COURSE (1/2%)... 94.9% MIR. ADR. 5.1% ASPHALT BINDER
- ACHMI BINDER COURSE (1%)... 5.9% MIR. ADR. 94.1% ASPHALT BINDER

**MAXIMUM NUMBER OF SHAPES:** 160 FOR POI-70 & 500 FOR POI-75

**TACK COAT QUANTITIES WERE CALCULATED USING THE EMULSIFIED ASPHALT RATES. REFER TO S-340-1 FOR THE RESIDUAL ASPHALT APPLICATION RATE.**
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**SUMMARY OF QUANTITIES (BOX 1 OF 2)**

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**SUMMARY OF QUANTITIES (BOX 2 OF 2)**

**REMARKS**

- DATE: 04-05-2021
- SHEET NUMBER: 1

**SUMMARY OF QUANTITIES AND REVISIONS**

* DENOTES ALTERNATE BID ITEM*
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### Q CONST. WAY, 270

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**Notes:**
- All points are referenced to the North American 1983 ellipsoid and the North American 1983 datum.
- Coordinate values are given in feet.
- All points are subject to the accuracy limitations of the surveying equipment used.
- Additional information can be found in the attached appendix.
## SUMMARY OF SIGNALIZATION QUANTITIES

<table>
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<th>Part No.</th>
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Note: Additional notes and comments pertaining to the Signalization System Design and the H/W 207 Designation for future use.
## SUMMARY OF TRAFFIC SIGNAL QUANTITIES

**HWY 270 AT HWY 227**

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<tr>
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**Notes:**
- Complete signal installation shall consist of a signal pole with 3 PHASE LIGHTS or a *reflective* signal pole and reflector. Epoxy shall be applied to the signal pole and reflector, and this shall be marked with the date of installation.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked and marked as shown.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.

*Excludes additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.

- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.

*The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

**Diagram:**
- THORNTON FERRY: One signal required
- ALBERT PARK: Two signals required
- MOUNTAIN PARK: One signal required

*NOTE:*
- All signal poles shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.
- The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*One additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*One additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*One additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

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*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*

*Additional signal pole and reflector. The signal pole shall be marked with the date of installation. The date of installation shall be marked on the signal pole at the base of the signal pole.*
### SUMMARY OF TRAFFIC SIGNAL QUANTITY

**HWY 270 AT CRYSTAL HILL RD**

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**NOTES:**

1. The signal is to be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
2. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
3. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
4. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
5. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
6. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
7. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
8. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
9. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
10. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.

**TYPICAL OVERHEAD STREET NAME MARKER**

- **18" white border sign**
- **20" green background**
- **6" lowercase**
- **3" uppercase**

**ALBERT PIKE**

**NOTES:**

1. Reflective sheeting shall comply with ANSI 2008 TYPE A or B. Reflective sheeting shall be applied in such a manner to provide white and green reflective surfaces.
2. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
3. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
4. The signal shall be installed on the side of the street or sidewalk in the right of way. The signal shall be provided at the Crystal Hill intersection for future use.
TEMPORARY SIGNAL NOTES:

1. TEMPORARY SIGNAL TO BE INSTALLED AND ACTIVATED IN STAGE 1 (PHASE 1).
2. TEMPORARY SIGNAL TO USE PERMANENT SIGNAL PIPES 6, 0, 5, AND 6 IN SIGNAL SIGNAL PLANT SHETS FOR POLE LOCATION/IMPLEMENTS TYPE A CORD OR BARREL SHALL BE IN PLACE PRIOR TO SETTING POLES.
3. TEMPORARY SIGNAL TO USE PERMANENT SIGNAL CABINS AND GROUND MOUNTS. SEE FINAL SIGNAL PLANT SHEETS FOR DETAILS.
4. TEMPORARY SIGNAL TO BE INSTALLED AND OPERATIONAL PRIOR TO REMOVAL OF EXISTING TRAFFIC SIGNAL.
5. SIGNAL HEADS 2, 3, 4, 5, 6, AND 7 TO BE PLACED ON CENTER OF TRAFFIC LANE SIGNAL HEADS 4, 5, 6, AND 7 TO BE PLACED AS SHOWN
6. HOOYS FOR PERMANENT SIGNAL TO BE INSTALLED AT CONTRACTOR'S DISCRETION PRIOR TO REMOVAL OF TEMPORARY SIGNAL.
7. PEDESTRIAN COUNTERS TO BE INSTALLED ON PAES 5, 6, AND 7 IN SIGNAL SIGNAL PLANT SHEETS FOR DETAILS. EQUIPMENT TO BE DASHERS AND COVERED UNTIL CONSTRUCTION IS COMPLETE.
8. TRACKS ARE TO BE PERMITTED AROUND TRAFFIC SIGNAL HEADS BY GUARDS.
9. LOCATE VEED DETECTORS LOCATE VEED MONITOR TO PERMANENT CABIN.

DATE: 07/20/2020  PROJNO. 370-270-007  TEMP SIGNAL PLATES ISSUE 0000

PHASING DIAGRAM

TEMPORARY SIGNAL
ALL STAGES & PHASES

VIRTUAL 6/8/12 PODS PLACEMENT V02 (TYPICAL)

STATE 1 (PHASE 1) CONSTRUCTION STAGES

VIRTUAL 6/12/18 PODS PLACEMENT V02 (TYPICAL)

DETECTOR SPACING CHART

STATE 2 (PHASE 2) A STAGE 2

VIRTUAL 6/12/18 PODS PLACEMENT V02 (TYPICAL)

SIGNAL FACES

STATE 3 (PHASE 3) B STAGE 2

VIRTUAL 6/12/18 PODS PLACEMENT V02 (TYPICAL)
NOTES:
1. PERMANENT PAVING PLAN SHOWN ONLY.
2. TEMPORARY PAVING SHOWN ONLY FOR CONSTRUCTION.
3. INSTALL 2" TPO FOR TEMPORARY PAVING.

POLE LOCATIONS

<table>
<thead>
<tr>
<th>POLE</th>
<th>LOCATION &amp; DIRECTIONS</th>
<th>X, Y COORDINATES</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>MW 270 - SRA</td>
<td>41280 FT</td>
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<tr>
<td>B</td>
<td>MW 270 - SRA</td>
<td>42060 FT</td>
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<tr>
<td>C</td>
<td>MW 270 - SRA</td>
<td>42850 FT</td>
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<td>D</td>
<td>MW 270 - SRA</td>
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<td>E</td>
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<td>F</td>
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<td>45250 FT</td>
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<tr>
<td>G</td>
<td>MW 270 - SRA</td>
<td>46050 FT</td>
</tr>
<tr>
<td>H</td>
<td>MW 270 - SRA</td>
<td>46850 FT</td>
</tr>
</tbody>
</table>

NOTE TO CONTRACTOR:
Temporary traffic signals shall be maintained throughout all construction phases.
GROUND ARRAY DIAGRAM

GROUNDING ARRAY
SINGLE-PORT FUSION WELDS

WIRING DIAGRAM

NOTES TO CONSTRUCTION:
1. ONE SEPARATE W.O. RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
2. ALL DETECTOR PANEL CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL:
   (S) IN DETECTOR AREA OF CABINETS.
3. THE USER INSTALLATION SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.

CHECKED: KT 5/10/2021
DRAWN: W.J. BISSETT 5/8/2021
DESIGN PARAMETERS

POSTED SPEED LIMIT
25 MPH DOWNTOWN
30 MPH ALL OTHER APPROACHES
NO BIKE LANE
NO INTERSECTION
NO CLOSED LANE
NO EVIDENT PRIORITIES

LOCATION OF STOP LANE SHOWN ON PERMANENT PAINT
DETAILS SEE SEPARATE SHEET.
MINIMUM CLEAR ZONE DISTANCE A 6FT BERM

POLE LOCATIONS

<table>
<thead>
<tr>
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<th>X, Y COORDINATES</th>
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</thead>
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<tr>
<td>A</td>
<td>HWY 270 + STA 966’9&quot;</td>
<td>2020.288</td>
<td>N 9850946.999 E 1331296.798</td>
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<tr>
<td>B</td>
<td>HWY 270 + STA 974’6&quot;</td>
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<td>N 9850946.999 E 1331296.798</td>
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<tr>
<td>C</td>
<td>HWY 270 + STA 982’6&quot;</td>
<td>2020.288</td>
<td>N 9850946.999 E 1331296.798</td>
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<tr>
<td>D</td>
<td>HWY 270 + STA 1006’6&quot;</td>
<td>2020.288</td>
<td>N 9850946.999 E 1331296.798</td>
</tr>
</tbody>
</table>

NOTES:

- PAVE HOLLOW AT ON THE MEDIAN BASE FOR FINAL PLAN APPROVAL.
Q50 = 52.57 CFS
D.A. = 11.33 ACRES
RETAIN WITH 3:1 WINGS LT. & RT.
3'x2'x35' R.C. BOX CULVERT
STA. 84+84 IN PLACE
EX. F.L. INLET = 475.17
EX. F.L. OUTLET = 473.40
BEGIN HWY. 270
EL. 476.00
DITCH GRADE (-1.00%)
85+00 BEGIN LT.
BEGIN CONSTRUCTION CA0607
282.14
279.81
278.25
6
ARK.
2
STATE SHEET NO.
TOTAL SHEETS
DATE
REVISED DATE
REVISED DATE
FILMED DATE
FILMED DATE
JOB NO.
FED.AID PROJ.NO.
FED.RD.
DIST.NO.
CA0607
CROSS SECTIONS HWY. 270
HWY. 270 145 233
STAGE 1
RETAIN RT. SIDE DRAIN
18"x50' C.P. PIPE CULVERT
STA. 85+54 IN PLACE
D R IV E 11.5 %
STAGE 2 CONSTRUCTION

AREA FILL 1

AREA CUT 93  

CUT VOLUME 202

AREA CUT 119

AREA FILL 0

STAGE 2 CONSTRUCTION

AREA CUT 197

CUT VOLUME 120

AREA CUT 110

STAGE 2

CUT VOLUME 1

TOP EL. = 488.30

STATE 1

F.L. EL. = 483.30

FILL VOLUME 59

CUT VOLUME 37

FILL VOLUME 159

CUT VOLUME 537

FILL VOLUME 2

CUT VOLUME 5

(TYPE 2 BEDDING) = 196 LIN. FT.

(TYPE 3 BEDDING) = 196 LIN. FT.

18" R.C. PIPE (CLASS III)

TYPE C D.I. = 4'x2'-6"

TYPE MO D.I. = 4' DIA.

TO D.I. ON RT. @ STA. 113+00

WITH 4' EXT. AND 18"x196' PIPE CULVERT

D.I. ON RT. H=5'-0"

STA. 115+00 CONSTRUCT

REQUESTED APPROACH ON LT. = 140 CUB. YDS. EXC.

STA. 117+12 CONSTRUCT

APPROACH ON LT. @ STA. 113+00

C.L. 3:1

18% DRIVE

STA. 110+00 TO STA. 117+20

497.86' STAGE 1 CONSTRUCTION

494.57' TOP EL.

488.39' F.L. EL.

3:1 STAGE 1

22' DRIVE

STA. 80+00 TO STA. 100+00

499.11' STAGE 1 CONSTRUCTION

498.55' TOP EL.

497.86' F.L. EL.

3:1 STAGE 1

22' DRIVE

STA. 50+00 TO STA. 70+00

497.86' STAGE 2 CONSTRUCTION

496.21' TOP EL.

489.12' F.L. EL.

3:1 STAGE 2

22' DRIVE

STA. 20+00 TO STA. 40+00

498.55' STAGE 2 CONSTRUCTION

497.86' TOP EL.

496.21' F.L. EL.

3:1 STAGE 2

22' DRIVE

STA. 0+00 TO STA. 20+00

499.11' STAGE 2 CONSTRUCTION

498.55' TOP EL.

497.86' F.L. EL.

3:1 STAGE 2

22' DRIVE

STA. -10+00 TO STA. 0+00

488.39' STAGE 2 TRAFFIC

487.76' TOP EL.

483.30' F.L. EL.
STAGE 2 CONSTRUCTION

CUT VOLUME 13

AREA FILL 5

AREA CUT 7

AREA CUT 6

AREA FILL 6

AREA FILL 23

AREA CUT 13

AREA FILL 29

AREA CUT 19

AREA FILL 18

AREA CUT 32

AREA FILL 20

AREA FILL 24

AREA CUT 11

AREA FILL 12

AREA CUT 5

AREA FILL 36

AREA CUT 8

AREA FILL 15

AREA CUT 14

AREA FILL 2

AREA CUT 3

AREA FILL 9

AREA CUT 1

AREA FILL 1

AREA CUT 5

AREA FILL 23

AREA CUT 13

AREA FILL 29

AREA CUT 19

AREA FILL 18

AREA CUT 32

AREA FILL 20

AREA FILL 24

AREA CUT 11

AREA FILL 12

AREA CUT 5

AREA FILL 36

AREA CUT 8

AREA FILL 15

AREA CUT 14

AREA FILL 2

AREA CUT 3

AREA FILL 9

AREA CUT 1

AREA FILL 1

AREA CUT 5

AREA FILL 23

AREA CUT 13

AREA FILL 29

AREA CUT 19

AREA FILL 18

AREA CUT 32

AREA FILL 20

AREA FILL 24

AREA CUT 11

AREA FILL 12

AREA CUT 5

AREA FILL 36

AREA CUT 8

AREA FILL 15

AREA CUT 14

AREA FILL 2

AREA CUT 3

AREA FILL 9

AREA CUT 1

AREA FILL 1

AREA CUT 5

AREA FILL 23

AREA CUT 13

AREA FILL 29

AREA CUT 19

AREA FILL 18

AREA CUT 32

AREA FILL 20

AREA FILL 24

AREA CUT 11

AREA FILL 12

AREA CUT 5

AREA FILL 36

AREA CUT 8

AREA FILL 15

AREA CUT 14

AREA FILL 2

AREA CUT 3

AREA FILL 9

AREA CUT 1

AREA FILL 1
(TYPE 2 BEDDING) = 146 LIN. FT.

18" SLPPMCS PIPE

(TYPE 3 BEDDING) = 146 LIN. FT.

18" R.C. PIPE (CLASS III)

TYPE C D.I. = 4'x2'-6"

TYPE MO D.I. = 4' DIA.

TO D.I. ON LT. @ STA. 139+00

WITH 4 EXT. AND 18"x146' PIPE CULVERT

D.I. ON LT. H=5'-0"

STA. 137+50 CONSTRUCT

CONST. APPR. = 40 CU. YDS. EMB.

RT. SIDE DRAIN

18"x32' PIPE CULVERT

REMOVE AND INSTALL

RT. SIDE DRAIN

15"x37' S.M. PIPE CULVERT

STA. 137+05 IN PLACE

CUT VOLUME 191

UNDERCUT: CUT AREA 80

CUT VOLUME 13

UNDERCUT: CUT AREA 65

CUT VOLUME 123

UNDERCUT: CUT AREA 82

FILL VOLUME 2

CUT VOLUME 6

FILL VOLUME 108

CUT VOLUME 468

FILL VOLUME 16

CUT VOLUME 31

FILL VOLUME 144

CUT VOLUME 18

FILL VOLUME 22

FILL VOLUME 417

TOP EL. = 502.82

F.L. EL. = 497.82

STAGE 1 TRAFFIC

STAGE 2 TRAFFIC

STAGE 1 TRAFFIC

STAGE 2 TRAFFIC

STAGE 2 TRAFFIC

STAGE 2 TRAFFIC

STAGE 2 TRAFFIC

STAGE 2 TRAFFIC
STAGE 2 CONSTRUCTION

AREA FILL 3
ARIA CUT 30
CUT VOLUME 13

AREA FILL 16
AREA CUT 21
CUT VOLUME 2

TYPE C D.I. = 4'x2'-6"
TO D.I. ON LT. @ STA.  144+50
AND 18"x256' PIPE CULVERT

(TYPE 2 BEDDING)=256 LIN. FT.

TYPE 3 BEDDING)=256 LIN. FT.

ARIA CUT 0
CUT VOLUME 0

TOP EL. =479.92
F.L. EL. =474.92
34.99'

CUT VOLUME 4
CUT VOLUME 55

3 :1

CUT VOLUME 28
CUT VOLUME 12

TRAFFIC

HAND RAILING
WALL NO. 2
BEGIN WALL NO. 2
STA. 142+00

(REFER TO STANDARD DRAWING SI-1)
(REFER TO SPECIAL DETAILS)
END SUPERELEVATION

STA. 169+82.00 TO STA. 170+18.29

STAGE 1 CONSTRUCTION

STAGE 2 CONSTRUCTION
NOTE: TURNOUTS AND PRIVATE DRIVES SHALL BE MODIFIED WHERE NECESSARY TO MEET LOCAL ENGINEERING STANDARDS AND REQUIREMENTS.

TEMPORARY CRYSTAL HILL RD.
STA. 10+00 TO STA. 11+50

AREA CUT 2
AREA FILL 0
CUT VOLUME 0
FILL VOLUME 0

AREA CUT 7
AREA FILL 0
CUT VOLUME 9
FILL VOLUME 0

AREA CUT 4
AREA FILL 2
CUT VOLUME 10
FILL VOLUME 2

AREA CUT 7
AREA FILL 2
CUT VOLUME 10
FILL VOLUME 4

CUT VOLUME 4
FILL VOLUME 0

CUT VOLUME 2
FILL VOLUME 0

CUT VOLUME 0
FILL VOLUME 0

CUT VOLUME 0
FILL VOLUME 0

CUT VOLUME 0
FILL VOLUME 0

CUT VOLUME 0
FILL VOLUME 0

CUT VOLUME 0
FILL VOLUME 0
 TEMPORARY CRYSTAL HILL RD.  
STA. 12+00 TO STA. 13+50
AREA CUT 2
AREA FILL 69
CUT VOLUME 3
FILL VOLUME 114

AREA CUT 5
AREA FILL 159
CUT VOLUME 7
FILL VOLUME 211

AREA CUT 22
AREA FILL 0
CUT VOLUME 25
FILL VOLUME 147

AREA CUT 6
AREA FILL 0
CUT VOLUME 26
FILL VOLUME 0

TEMPORARY CRYSTAL HILL RD.
STA 14+00 TO STA 15+50
TEMPORARY CRYSTAL HILL RD.
STA.16+00 TO STA.17+00

AREA CUT 17
AREA FILL 0
CUT VOLUME 22
FILL VOLUME 0

AREA CUT 3
AREA FILL 0
CUT VOLUME 19
FILL VOLUME 0

AREA CUT 0
AREA FILL 0
CUT VOLUME 3
FILL VOLUME 0

0.020/'
GENERAL NOTES:

1. The full width of each section shall be poured monolithically.
2. Toe walls to be constructed full width at each end of ditch paving and poured monolithically.
3. Solid sod along ditch paving to be placed within 14 days of ditch paving construction.
4. 1" wide transverse expansion joints shall be placed in concrete ditch paving at 10' intervals, the space shall be filled with approved joint filler complying with AASHTO M213.

THE STEEL AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE PRICE BID FOR 'CONCRETE DITCH PAVING.'
CONCRETE COMBINATION CURB AND GUTTER

DETAIL OF GUTTER SLOPE
Gutter shall be constructed on 2% slope away from roadway, regardless of roadway slope.

ALTERNATE CONSTRUCTION METHOD FOR INTEGRAL CURB

NOTE: USE MODIFIED CURB AS SPECIFIED ON STD. DR-1.
**ADJACENT DRIVEWAYS**

- **Driveaway Width** "W" between adjacent driveways
- **Grass Berm**
- **8'-0" Min. Island Behind Berm**
- **Island Width** 3'-0" Normal Width
- **Slope** 12:1 Max.
- **4" Curb Height on Back Side of Island**
- **8'-0" Apron Depth** "D"
- **Grass Berm or Concrete Walk**
- **Concrete Walk** 5'-0" Normal Width
- **Modified Curb Width** ("W"+28') 8'-0"
- **Slope** 2.0% Max.* (When shown on the plans)
- **Var. Width Concrete Island** (2'-0" Min.)
- **6'-0" Normal Uniform Thickness**
- **8" Normal Uniform Thickness**

**ISLAND BEHIND BERM**

- **2'-0" Min. Concrete**
- **Added Island Details & Notes**
- **8-22-02**
- **11-10-05**
- **Rev. Apron Slope & Depth of Agg. Base.**
- **11-29-07**
- **& Vertical Alignment Detail**
- **Curb Face & Revised Driveaway Slope Note**
- **2-27-14**
- **Rev. Plan & Isometric View**
- **11-07-19**
- **Rev. Walk Details**

**DETAILS OF DRIVEWAYS & ISLANDS**

- **Arkansas State Highway Commission**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**DRIVEWAY EXTENSION DETAILS**

- **Ultimate Pavement Section**
- **Final Lift of ACM Surface Course**
- **8'-0" Min. - 40' Max.**
- **Driveaway Width** "W" 3'-0" Normal Width
- **5'-0" Normal Width Concrete Island**
- **3'-0" Normal Width Grass Berm**
- **120 Max. Slope**
- **Construction & Pay Limits for PCC Drive**
- **Note**: Driveways may not be sloped away from the roadway unless approved by the engineer.
- **Driveway Extension**
- **Cut Section**
- **Fill Section**
- **B Rounding**
- **Modified Curb**

**CURVED ISLANDS FOR CHANNELIZATION**

- **Type "A" Curb Face**
- **Type "B" Curb Face**
- **Type "C" Curb Face**

**SECTION A-A**

- **Var. Width Concrete Island**
- **4" Curved Island**
- **Grass Berm**
- **Final Lift of PCC Drive**
- **Slope 2" Max."**
- **Expansion Joint**
- **Modified Curb**

**SECTION B-B**

- **Var. Width Concrete Island**
- **3'-0" Normal Width**
- **4" Curved Island**
- **Grass Berm**
- **Slope 2" Max."**
- **Expansion Joint**
- **Modified Curb**

**NOTES**

- **Plan View**
- **Isometric View**

**ARMS**

- **1: Concrete - 6" PCC Concrete Drive**
- **2: Asphalt - 2" ACM Surface Course (1/2")**
- **3: Asphalt - 2" ACM Binder Course (1")**
- **4: ACM Base Course (1-1/2")**
- **4" ACM Binder Course (1") or 2" ACM Surface Course (1/2")**

**DETAILS OF DRIVEWAYS & ISLANDS**

- **NOTE:** Driveways may not be sloped away from the roadway unless approved by the engineer.

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**COST TO THE DEPARTMENT.**

- **No direct payment** will be made for the curb faces shown on the Island Details. Payment for the curb face will be included in the Unit Price Bid for the item 'Concrete Island'.
- **Note**: Limits for PCC Construction & Pay will be included in the Unit Price Bid for the item 'Concrete Island'.

**JOINT**

- **Expansion Joint**
- **4" Curved Island**
- **Grass Berm**

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**CURVED ISLANDS FOR CHANNELIZATION**

- **Type "A" Curb Face**
- **Type "B" Curb Face**
- **Type "C" Curb Face**

**SECTION A-A**

- **Var. Width Concrete Island**
- **4" Curved Island**
- **Grass Berm**
- **Final Lift of PCC Drive**
- **Slope 2" Max."**
- **Expansion Joint**
- **Modified Curb**

**SECTION B-B**

- **Var. Width Concrete Island**
- **3'-0" Normal Width**
- **4" Curved Island**
- **Grass Berm**
- **Slope 2" Max."**
- **Expansion Joint**
- **Modified Curb**

**NOTES**

- **Plan View**
- **Isometric View**

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**COST TO THE DEPARTMENT.**

- **No direct payment** will be made for the curb faces shown on the Island Details. Payment for the curb face will be included in the Unit Price Bid for the item 'Concrete Island'.
- **Note**: Limits for PCC Construction & Pay will be included in the Unit Price Bid for the item 'Concrete Island'.

**JOINT**

- **Expansion Joint**
- **4" Curved Island**
- **Grass Berm**

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**COST TO THE DEPARTMENT.**

- **No direct payment** will be made for the curb faces shown on the Island Details. Payment for the curb face will be included in the Unit Price Bid for the item 'Concrete Island'.
- **Note**: Limits for PCC Construction & Pay will be included in the Unit Price Bid for the item 'Concrete Island'.

**JOINT**

- **Expansion Joint**
- **4" Curved Island**
- **Grass Berm**

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**COST TO THE DEPARTMENT.**

- **No direct payment** will be made for the curb faces shown on the Island Details. Payment for the curb face will be included in the Unit Price Bid for the item 'Concrete Island'.
- **Note**: Limits for PCC Construction & Pay will be included in the Unit Price Bid for the item 'Concrete Island'.

**JOINT**

- **Expansion Joint**
- **4" Curved Island**
- **Grass Berm**

**ARKANSAS STATE HIGHWAY COMMISSION**

- **Details of Driveways & Islands**
- **Standard Drawing DR-1**
- **Redrawn and Reissued**

**COST TO THE DEPARTMENT.**

- **No direct payment** will be made for the curb faces shown on the Island Details. Payment for the curb face will be included in the Unit Price Bid for the item 'Concrete Island'.
- **Note**: Limits for PCC Construction & Pay will be included in the Unit Price Bid for the item 'Concrete Island'.

**JOINT**

- **Expansion Joint**
- **4" Curved Island**
- **Grass Berm**
GENERAL NOTES

WINGWALLS AND APRONS SHALL BE TIED TO THE
PRECAST CULVERTS 5FT. FROM THE EDGE OF THE
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MINIMUM TRENCH WIDTH
BASED ON FILL HEIGHT "H"

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<tr>
<th>PIPE DIAMETER</th>
<th>MINIMUM TRENCH WIDTH</th>
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MINIMUM COVER FOR CONSTRUCTION LOADS

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<tr>
<th>CONSTRUCTION LOADS</th>
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GENERAL NOTES

1. Pre defiance and right-of-way shall be maintained during construction. The right-of-way shall be maintained at all times.

2. Placing of pipes and fill shall be done in accordance with approved specifications and methods to be used.

3. Proper alignment and elevation shall be maintained during construction.

4. Compaction of backfill shall be done in accordance with approved specifications and methods to be used.

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**GENERAL NOTES**

1. **PVC pipe** shall conform to ASME B31.5, Class ERP, and shall conform to the specifications for quality construction specified herein.

2. **Design** and installation shall conform to the specifications for quality construction specified herein.

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

4. **Structural** bedding shall be placed as directed by the engineer. At the ends of the culvert, structural bedding and/or backfill shall be placed as directed by the engineer. Backfill material that is placed outside the middle third of the pipe shall be placed in increments of 8 inches, and the increments shall be brought up evenly to the elevation of the minimum cover.

5. **Structural** backfill shall be placed and compacted in layers not exceeding 8 inches. The layers shall be brought up evenly to the elevation of the minimum cover.

6. PVC pipes shall conform to the specifications for quality construction specified herein.

7. **Diameter** shall be measured from the top of the pipe to the top of the working construction roadway surface. The surface shall be maintained.

8. **Construct** the structural bedding material to grade, do not compact.

9. **Compact** structural bedding outside the middle third of the pipe.
GENERAL NOTES

1. PIPE SHALL CONFORM TO DESIGN STANDARDS AS DESCRIBED IN THE STANDARD SPECIFICATIONS AND SHALL BE IN CONFORMITY WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SIXTH EDITION (2012) WITH 2013 INTERIM.

3. PLASTIC PIPE CULVERT ALIGNMENT. THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE THE MAINTAINED CONSTRUCTION ROADWAY SURFACE SHALL BE MAINTAINED.

4. IMPERVIOUS MATERIAL SHOULD BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING AND/OR BACKFILL. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BACKFILL. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BEDDING." THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."

5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER. LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY BASED ON FILL HEIGHT "H".

6. TREE STRUCTURAL BEDDING MATERIAL TO GRADE, DO NOT COMPACT.

7. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.


MINIMUM TRENCH WIDTH BASED ON FILL HEIGHT "H"

| Diameter | Minimum Width
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<tr>
<td>18'</td>
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<td>42'</td>
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MINIMUM COVER FOR CONSTRUCTION LOADS

<table>
<thead>
<tr>
<th>Diameter</th>
<th>Minimum Cover</th>
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<tbody>
<tr>
<td>18'</td>
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<td>24'</td>
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<td>36'</td>
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<td>42'</td>
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EMBANKMENT AND TRENCH INSTALLATIONS

1. STRUCTURAL BACKFILL, EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY ACCORDING TO THE TYPE OR CLASS OF MATERIAL USED.

2. PLASTIC PIPE (TYPE 1 INSTALLATION MATERIAL OR TYPE 1 INSTALLATION) SHALL CONFORM TO AASHTO M330, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISIONS.

3. THE MAXIMUM ALLOWABLE TRENCH WIDTH SHALL BE THE MINIMUM WIDTH PLUS A SUFFICIENT WIDTH TO ENSURE WORKING ROOM TO PROPERLY AND SAFELY PLACE AND COMPACT HAUNCHING AND OTHER BACKFILL MATERIAL.

4. THE STRUCTURAL BACKFILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE LAYERS SHALL BE BROUGHT UP EVENLY BASED ON FILL HEIGHT "H".

5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRAINTS, WEIGHTING AND SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.

6. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.

7. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS BASED ON FILL HEIGHT "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

8. FOR TYPE 2 INSTALLATION MATERIAL SELECTED PIPE BEDDING SHALL BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.

9. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

10. WHEN THE EXISTING MATERIAL EXCAVATED FOR THE PIPE TRENCH IS DETERMINED BY THE ENGINEER TO BE UNSUITABLE, THE MIDDLE THIRD OF THE PIPE SHOULDN'T BE SELECTED.

11. WHEN DIRECTED BY THE ENGINEER, UNSUITABLE MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH (BELOW THE AREA IDENTIFIED AS "STRUCTURAL BEDDING" ABOVE) WILL BE EXCAVATED AND REPLACED WITH SELECTED PIPE BACKFILL. IF SUITABLE MATERIAL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BEDDING." THE QUANTITY OF MATERIAL REQUIRED TO BACKFILL THE UNDERCUT AREA UP TO THE SELECTED PIPE BEDDING PAY LIMIT DESIGNATED ABOVE WILL BE MEASURED AND PAID FOR AS "SELECTED PIPE BEDDING."

12. FOR PIPE TYPES THAT ARE NOT SMOOTH ON THE OUTSIDE (CORRUGATED OR PROFILE WALLS), BACKFILL GRADATIONS BASED ON FILL HEIGHT "H" SHALL INCLUDE A MINIMUM 12" OF PAVEMENT AND/OR BASE.

13. PIPE SHALL CONFORM TO AASHTO M330, TYPE S. INSTALLATION SHALL CONFORM TO JOB SPECIAL PROVISIONS.

14. CONSTRUCTION SEQUENCE:

   1. PLACE STRUCTURAL BEDDING MATERIAL TO GRADE. DO NOT COMPACT.
   2. INSTALL PIPE TO GRADE.
   3. COMPACT STRUCTURAL BEDDING OUTSIDE THE MIDDLE THIRD OF THE PIPE.
   4. COMPACT STRUCTURAL BEDDING INSIDE THE MIDDLE THIRD OF THE PIPE.
   5. INSTALL RESTRAINTS AND WEIGHTING SIMULTANEOUSLY TO THE ELEVATION OF THE MINIMUM COVER.

15. POLYPROPYLENE PIPES OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.

16. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).

17. MULTIPLE INSTALLATION OF SELECTED MATERIALS (CLASS SM-1, SM-2 OR SM-4) SHALL BE SELECTED BUT EXCAVATION WITH ONE RECESS, HOLES SHALL BE BURIED PER MANUFACTURER'S RECOMMENDATIONS.

18. FOR TYPE 2 INSTALLATION MATERIAL SELECTED PIPE BEDDING SHALL BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRUGATION OR PROFILE VALLEY.

19. JOINTS FOR POLYPROPYLENE PIPE SHALL MEET THE REQUIREMENTS FOR SOIL TIGHTNESS AS SPECIFIED IN SECTION 26.4.2.4 AND SECTION 606 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION).
**Broken Line Striping**

- Concrete Pavement
  - Continuous Yellow
  - Skip Yellow
- Asphalt Pavement
  - Continuous Yellow
  - Skip Yellow

**Solid Line Striping on Concrete Pavement**

- Continuous Yellow
- Skip Yellow

**Solid Line Striping on Asphalt Pavement**

- Continuous Yellow
- Skip Yellow

**Striping at Adjacent No Passing Lanes**

- White Yield Line
- 0" Offset Line

**Pavement Edge Line Marking**

- Continuous White
- Skip Yellow

**Raised Pavement Markers**

- Types I and II
- Prismatic Reflectors
- Red/Clear or Yellow/Yellow

**Notes:**
1. Refer to the striping details for pavement marking line widths.
2. This drawing shall be used in conjunction with the latest revision of the "Manual on Uniform Traffic Control Devices." Note: This information is shown in the plans.
3. Raised Pavement Markers shall be placed on an 80 feet spacing unless otherwise shown in the plans.

**Pavement Marking Details**

- Continuous White
- Skip Yellow

**Yield Line Detail**

- 0.52" Skip Yellow

**Crosswalk and Stop Line Details**

- 0" Offset Line

**Product Specifications**

- Manufacturers' details are shown for better visibility.
- The specifications shown for raised pavement markers are typical. The contractor is required to select materials from the approved list of products. The approval of the engineer is required for similar markers. The contractor shall provide the latest specifications for the approved products.
Reinforced Concrete Box Culvert General Notes

Concrete shall be Class 5 with a minimum 28-day compressive strength of 3500 PSI. Reinforcing steel shall be AASHTO M 31 or M 53, Grade 60.

Construction and materials for wingwall & culvert drainage, including wing wall and granular material, shall be subsidiary to the bid item "Class S concrete." Membrane waterproofing shall conform to the requirements of Section 815 of the standard specifications.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Reinforcing steel tolerances: The tolerances for reinforcing steel shall meet those listed in "Manual of Standard Practice" published by the Concrete Reinforcing Steel Institute (CRSI) except that the tolerance for truss bars shall be minus zero to plus 0.125 inch.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

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Reinforced Concrete Box Culvert Headwall Modifications

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Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.

Reinforced Concrete Box Culvert Headwall Modifications

For skewed R.C. box culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Notes: For all skewed R.C. Box Culverts, the length "K" of the modified headwall shall be equal to the roadway length "RL." The ends of the headwall shall be constructed parallel to the skew angle of the box culvert.

Membrane waterproofing shall be applied to all construction joints in the top slab and the sides of box culverts as directed by the engineer. No payment shall be made for this item, but payment will be considered to be included in the various items bid for the R.C. box culvert.

Weep holes in box culvert walls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. The drain opening shall be 4" diameter and shall be placed 12" above the top of the bottom slab. Weep holes in wingwalls shall have a maximum horizontal spacing of 10'-0" and shall be spaced to clear all reinforcing steel. There shall be a minimum of two (2) weep holes in each wingwall. The drain openings shall be 4" diameter and shall be placed 12" above the top of the wingwall footing.

The requirements shown on this drawing shall supersede the corresponding requirements on all reinforced concrete box culvert standard drawings.
GENERAL NOTES:

ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT RC. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONFINED EXCAVATION (CHANNEL CHANGE) SHALL BE MEASURED BY CROSS SECTIONS AND VOLUMES COMPUTED BY AVERAGE END AREA METHOD. ALL CHANNEL CHANGES SHALL BE BROUGHT TO GRADE PRIOR TO MAKING ANY EXCAVATION FOR STRUCTURES.

EXCAVATION FOR STRUCTURES WILL BE PAID FOR AT ALL RC. BOX CULVERT ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBSIDIARY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

NOTE:

LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

EXISTING CHANNEL

CHANNEL CHANGE

PLAN

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

NOTE:

LENGTH MEASURED ALONG THE CENTER OF 2' STRIP OF SOLID SODDING.

SECTION B-B DETAILS FOR NEW CHANNELS

EXCAVATION PAY LIMITS, BACKFILL, & SOLID SODDING FOR BOX CULVERTS

SECTION A-A DETAILS THROUGH EXISTING CHANNELS

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD DRAWING RCB-2
PAY QUANTITIES WILL BE CALCULATED BASED ON METHOD 1 OR METHOD 2. REGARDLESS OF WHICH METHOD IS USED, THE CONTRACTOR SHALL HAVE THE OPTION OF USING EITHER METHOD 1 & 2.

REINFORCING DETAILS AND CULVERT DIMENSIONS
SAME AS STANDARD CULVERT DRAWINGS

THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED. IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL. REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

TOP VIEW
R.C. BOX CULVERT

GENERAL NOTES
1. THE RESIDENT ENGINEER WILL MAKE INDIVIDUAL CALCULATIONS OF QUANTITIES FOR EACH STRUCTURE LENGTHENED, MAKING NO ALLOWANCE FOR OVERBREAKAGE BEYOND THE LINES INDICATED.
2. IN ALL INSTANCES CONCRETE SHALL BE REMOVED SO AS TO PERMIT FULL 40 DIAMETER SPLICE OF REINFORCING STEEL.
3. REINFORCING STEEL REMOVED FROM EXISTING STRUCTURE SHALL NOT BE REUSED IN CONSTRUCTING EXTENSION.

NOTE: NO PART OF THIS STANDARD IS TO BE USED FOR ANY DETAILS RELATIVE TO NEW CONSTRUCTION. SEE STANDARD DRAWING LISTED IN TABULATION OF STRUCTURES FOR ALL NEW CONSTRUCTION DETAILS.

FILLING SYSTEM SHALL BE PROCEDURE SHALL BE APPROVED BY THE ENGINEER, THE DOWEL BARS SHALL BE INSTALLED AS FOLLOWS: THE DRILLING SURROUNDS THE BARS AND THAT SUFFICIENT MATERIAL IS INJECTED SO IT COMPLETELY FILLS THE HOLES.

SECTION A-A
METHOD 1

SECTION A-A
METHOD 2

ARKANSAS STATE HIGHWAY COMMISSION
METHOD OF EXTENDING EXISTING R.C. BOX CULVERTS
STANDARD DRAWING RCB-3
1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.

2. CONTROLLER CABINET UTILITIES DRAWER (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY, (2) SUPPORT BRACKETS.

3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.

4. UNLESS OTHERWISE STATED, ALL DIMENSIONS ARE IN INCHES. TOLERANCES: 0.062 INCH (1.58MM), 0.015 INCH (0.38MM) FOR ROUNDED CORNERS, 0.031 INCH (0.79MM) FOR ALUMINUM AND STEEL SURFACES, 0.0062 INCH (0.16MM) FOR OTHER SURFACES.

5. DATE FILM OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.

NOTES:

- CURRENT DATE: 6-15-05
- CURRENT ISSUE: SD-5
- ARKANSAS STATE HIGHWAY COMMISSION
- CONTROLLER CABINET
- UTILITIES DRAWER
- STANDARD DRAWING SD-5
**CONDUIT ENTRY TO EXISTING POLE BASE**

- **Existing Conduit**
  - 1/2" Galvanized Steel Conduit
  - CMP Out, Recut
- **Ground Rod**

**ANCHOR BASE**

- **Electrical Conduit**
  - E.G.C. bonded to ground lug on pole and other E.G.C. conductors
- **Anchor Base**
  - Leveling Nut
  - 1" Chamfer
  - 1/4" Deep Hole
- **Conduit Entry to Existing Pole Base**
  - All Type 1 and Type 2 HD Concrete Pull Boxes are installed with an arm of concrete of 5" and 7" in depth. All anchors shall be installed in the face of the Type HD Concrete Pull Box. The concrete pull box shall be installed flush to surrounding grade unless otherwise instructed by the engineer. The concrete shall be Class D Concrete at all reinforcing bars in the union on all sides of the concrete pull box is required in concrete.

**TYPE "HD" CONCRETE PULL BOX DETAIL**

- **Earth**
- **Top**
  - 6" Min.
  - 6" Min.
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1. Four section "protected/permissive" left turn heads should be placed a minimum of two (2') feet to the right of the centerline of the approaching left turn lane.

2. Three section "protected" left turn heads should be placed on the centerline of the approaching left turn lane.

3. When it is necessary to place poles other than as shown on plans, it is sufficient to have them extending more than two feet from the left edge of the shoulder of the approach side of the intersection and a stop bar element, clincher, and a new end cap provided. The contractor shall be responsible for determining what size bar to install with an additional compensation if required.

4. Signal head spacing shall be no closer than eight (8') feet between heads on center, measured horizontally perpendicular to the approach.

5. All signal heads shown on this detail sheet shall be located according to the dimensions shown in relation to the approach side of the intersection.

6. Maximum mounting height of signal faces located between 40 feet and 53 feet from stop bar shall be in accordance with Figure 40-5 of 2009 MUTCD.

General Notes:

A. Heads are placed and not less than 8' spacing.

B. Center on lane but not less than 8' spacing.

C. Center on lane but not less than 8' spacing.

D. Center on lane but not less than 8' spacing.

E. Center on lane but not less than 8' spacing.

F. Head #2 - 2' min. to head #1 on (A) and (C). Is not called for in installation, any length may still be allowed for future installations. Heads should still be aligned with through lanes as shown on detail.
GENERAL NOTES
1. ON PAVEMENT WITH TWO-WAY TRAFFIC, THE SUPERELEVATION SHALL BE REVOLVED ON THE INSIDE PAVEMENT EDGE UNLESS OTHERWISE NOTED ON THE PLANS.

SUPERELEVATION VALUES SHOWN ON THE CROSS SECTIONS ARE VALUES TO PERMIT SIMPLER CALCULATIONS.

ABBREVIATIONS
NC - NORMAL CROWN
RC - REVERSE CROWN, SUPERELEVATION AT NORMAL CROWN SLOPE
L - DISTANCE FROM BEGINNING OF SUPERELEVATION TRANSITION TO ANY POINT (FT.)
d - WIDTH OF PAVEMENT
Ls - LENGTH OF SUPERELEVATION TRANSITION (FT.)
C - NORMAL CROWN (FT.)

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

SUPERELEVATION FORMULA
L = \frac{3}{4} Ls

STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

SUPERELEVATION TABLE FOR TWO-WAY TRAFFIC (4% MAXIMUM)

<table>
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<tr>
<th>DEGREE</th>
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STANDARD METHOD WHEN SUPERELEVATION REVOLVES AROUND CENTER LINE

SUPERELEVATION FOR TWO-WAY TRAFFIC

NOTE: MAINTAIN NORMAL CROWN ON INSIDE UNTIL SUPERELEVATION EXCEEDS 2C.

ARKANSAS STATE HIGHWAY COMMISSION
TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC (4% MAXIMUM)
STANDARD DRAWING SE-3
REVISED SIGN DESIGNATIONS
6-8-95
ROAD WORK
REVISED DETAIL OF RAISED PAVEMENT MARKERS
ADDED (AFAD)
REVISED NOTE 1, ADDED NOTE 9
THROUGHOUT DETOUR AND SPACING ON CENTERLINE

2. NOTES:
1. FOR DIRECTING DETOURED TRAFFIC.
REGULATORY TRAFFIC CONTROL DEVICES TO BE
ROADWAY.
WITH HARD SURFACED TEMPORARY STRIPING
8 CHEVRONS
W1-8
WHERE THE ENTIRE ROADWAY IS CLOSED AND A BYPASS DETOUR IS PROVIDED.
MPH
GENERAL
XX
SEE
W 1-3
MPH
XX
NO PASSING ZONE
DETOUR
4
1. SIGNS SHOWN FOR ONE DIRECTION OF TRAVEL ONLY.
NOTES:
ROAD WORK
1500 FT
CLOSED
WORK
ROAD
XX
ROAD
R11-2
W 2 0 -1
OR
W 1-3
MPH
XX
GENERAL
RIGHT
W 1-3
MPH
XX
SEE
OR
GENERAL
45' O.C.
SEE
W 1-4
TYPICAL APPLICATION - 4-LANE DIVIDED ROADWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.
TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES ON 2-LANE HIGHWAY WHERE ONE LANE IS CLOSED AND FLAGGING IS PROVIDED.
1 MILE
WORK
ROAD
500'
WORK
ROAD
500'
500'
MPH
500'
L = S x W
TAPER FORMULAE:
L=SXW FOR SPEEDS OF 45MPH OR MORE.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK
WHERE:
WS
60
6-8-95
8-15-91
9-12-13
9-2-15
3-11-10
1000 FT
1000'
500 FT
8-15-91
9-12-13
9-2-15
3-11-10
1000 FT
1000'

STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-2
ARKANSAS STATE HIGHWAY COMMISSION

KEY:
ARROW PANEL (IF REQUIRED)
TRAFFIC DRUM
YELLOW/YELLOW
REFLECTOR
PRISMATIC
0.52" 2.3"

A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX)
INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS.
OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT
WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS
SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN
THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING
DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC.
CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL
OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY
BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE
ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE
SHOULDER MESSAGES WITHIN TRAFFIC ARE TO BE MOUNTED BEHIND A POSITIVE
BARRIER, THESE DEVICES SHALL BE DELINEATED BY
CONSPICUITY MATERIAL IN A CONTINUOUS LINE ON THE FACE OF THE
DEVICES. USE OF POSITIVE BARRIERS SUCH AS JARON PANELS AND PORTABLE
PROGRAM MESSAGES MAY BE USED IN THE WORK AREA.

END OF WORK ZONES
WHEN WORKERS
1 MILE
WORK
ROAD
500'
WORK
ROAD
500'
500'
MPH
500'
L = S x W
TAPER FORMULAE:
L=SXW FOR SPEEDS OF 45MPH OR MORE.
S= NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK
WHERE:
WS
60
6-8-95
8-15-91
9-12-13
9-2-15
3-11-10
1000 FT
1000'
500 FT
8-15-91
9-12-13
9-2-15
3-11-10
1000 FT
1000'

STANDARD TRAFFIC CONTROLS
FOR HIGHWAY CONSTRUCTION
STANDARD DRAWING TC-2
ARKANSAS STATE HIGHWAY COMMISSION

KEY:
ARROW PANEL (IF REQUIRED)
TRAFFIC DRUM
YELLOW/YELLOW
REFLECTOR
PRISMATIC
0.52" 2.3"

A R2-1(XX) SHALL BE INSTALLED TO MATCH ORIGINAL SPEED LIMIT.
AT A MAXIMUM OF 1 MILE INTERVALS. AT THE END OF THE WORK AREA A R2-1(XX)
INSTALLED AT A MAXIMUM OF 1 MILE INTERVALS.
OMITTED AND THE W3-5 SHALL BE INSTALLED AT THAT
WHEN THE EXISTING SPEED LIMIT IS 55MPH AND THE PLANS
SIGNS. USE W1-4 WHEN SPEED IS GREATER THAN 30MPH AND W1-3 WHEN
THE ADVISORY SPEED WILL BE POSTED ON W1-3 OR W1-4 CURVE WARNING
DETERMINE THE ADVISORY SPEED LIMIT PRIOR TO OPENING TO TRAFFIC.
CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL
OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY
BE MADE BY REFERRING TO THE ARDOT QUALIFIED PRODUCTS LIST.
CHANGEABLE MESSAGE SIGNS SHALL MEET THE REQUIREMENTS OF THE
ALL TRAILER MOUNTED DEVICES SUCH AS ARROW PANELS AND PORTABLE
PROGRAM MESSAGES MAY BE USED IN THE WORK AREA.

END OF WORK ZONES
WHEN WORKERS
### Reinforcing Bar Table Per Barrier Unit

<table>
<thead>
<tr>
<th>Bar Type</th>
<th>Diameter (in)</th>
<th>Length (ft)</th>
<th>Type of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-2</td>
<td>8</td>
<td>10</td>
<td>Anchor Bar</td>
</tr>
<tr>
<td>S-1</td>
<td>10</td>
<td>10</td>
<td>Reinforcement Bar</td>
</tr>
<tr>
<td>H-3</td>
<td>6</td>
<td>10</td>
<td>Connection Bar</td>
</tr>
</tbody>
</table>

### Notes:
- The contractor shall furnish the precut concrete barrier units and shall be responsible for the manufacture, delivery, storage, placement, and installation of the units. The precision units shall remain the property of the contractor.
- Materials shall meet the following minimum requirements:
  - Concrete: ACI 318-11
  - Reinforcing steel: AASHTO M 31 or M 53, Grade 60
- The contractor shall furnish a construction detail for the connection loop.
- The connection detail shall be approved by the Federal Highway Administration to meet the requirements of the Manual for Assessing Safety Hardware (MASH) and any other precast concrete barriers that have been crash tested and accepted in lieu of the barrier shown.
- Materials shall meet the following minimum requirements:
  - Asphalt: AS 58-98
  - Concrete: ACI 318-11
  - Reinforcing steel: AASHTO M 31 or M 53, Grade 60
**General Notes**

- 4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (See Barrier Stabilization Details-Bridge Decks STD. DRWG. TC-4).

**Offset Distance Table**

<table>
<thead>
<tr>
<th>Speed (MPH)</th>
<th>Offset Distance (FT.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 40</td>
<td>1</td>
</tr>
<tr>
<td>&gt; 40</td>
<td>2</td>
</tr>
</tbody>
</table>

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

**General Notes**

When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with a Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."
GENERAL NOTES:
1. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.
2. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED. FILTER SOCKS SHALL BE EMBOSSED, STUDDED, OR PUNCHED. POSTS AND ANCHOR PLATES SHALL CONFORM TO STANDARD DRAWING TEC-1.
3. STEEL POSTS MAY BE USED AND SHALL BE ROLLED FROM HIGH CARBON STEEL AND HAVE A DIAMETER TOLERANCE IS 2 INCHES, AS FILTER SOCKS TEND TO FLATTEN OUT WHEN PLACED.
4. FILTER SOCKS ARE TYPICALLY SUPPLIED AND INSTALLED WITH 18 INCH DIAMETERS.
5. FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

SOCKS MAY BE JOINTED OR STAGGERED AS SHOWN IN DETAILS.

FILTER SOCKS CAN BE PLACED AT THE TOP, ON THE FACE, AND AT THE TOE OF SLOPES AS SEDIMENT-TRAPPING DEVICES FOR SHEET FLOW RUNOFF.

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**CLEARING AND GRUBBING**

**Construction Sequence**
1. Place perimeter controls (i.e., silt fences, diversion ditches, sediment basins).
2. Perform clearing and grubbing operation.

**EXCAVATION**

**General Note**

All cut slopes shall be excavated, dressed, and seeded as the work progresses. Slopes shall be constructed 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. Provide diversion ditches and other erosion control devices as specified.

**EMBANKMENT**

**General Note**

All embankment slopes shall be dressed, prepared, seeded, and stabilized 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.
3. Place Phase 2 embankment with permanent or temporary seeding.
4. Place final Phase of embankment with permanent or temporary seeding. Provide diversion ditches and other erosion control devices as specified.

**Notes:**
- Number of phases will vary. Three phases shown for illustration.
- The work progresses. Slopes shall be constructed and stabilized in equal increments not to exceed 25 feet measured vertically.
- Provide diversion ditches and other erosion control devices as specified.
### General Notes

1. **Chain Link Fence:**
   - When placed on private property, the fence shall extend to the center line of the easement or property line, whichever is less, and shall be a minimum of 8 inches in diameter.
   - Placement shall be made directly into the ground or rock, and shall conform to ASTM F626.

2. **Concrete Encaissement:**
   - Footings shall be placed in concrete and engage the plunger of the bar latch.
   - Locking shall be set in concrete or poured in the place of the bar latch. The concrete shall be a minimum of 8 inches in diameter.
   - The final grade shall be at least 1.5 feet above the ground level when the top rail is specified and twelve inches (12") above the grade of the entire fence.
   - The fence shall be capable of being opened and closed easily by one person.
   - The complete frame shall be rigid and have a maximum of 0.160" of chain link excess at the midpoints of vertical extent.

**Variables:**
- **Chain Link:**
  - Minimum 10 ga.
  - Wire size: 1.900" O.D.
  - Spacing: 1.660"
  - Gauge: 2.28"
  - Offset: 1.84"

**Bolts:**
- **Nut Size:**
  - Shoulder: 0.105" O.D.
  - Bolt head: 0.154" O.D.

**Concrete:**
- **Dimensions:**
  - Minimum size: 3.500" DIA.
  - Maximum size: 4.000" DIA.

**Stakes:**
- **Material:**
  - Steel: 1" O.D.
  - Aluminum: 4-3/8" O.D.

**Tie Wire:**
- **Material:**
  - Steel: 1/4" TIE WIRE
  - Aluminum: 3/16" TIE WIRE

**Specifications:**
- **Minimum Spacing:**
  - 3'-0" minimum spacing between tie wire and gate frame members.

**Alternate Notes:**
- **Post Spacing:**
  - 1'-0" minimum spacing between tie wire and gate frame members.

**Additional Notes:**
- **Tension Wire:**
  - Shall be secured to all terminal, pull, brace, hinge, and/or twist wire bands.
  - The tension wire shall be placed between the top rail and bottom rail and shall be anchored at the top and bottom of the fence.

**Installations:**
- **Platform:**
  - Minimum size: 1'-2" O.D.

**Dimensions:**
- **Minimum Size:**
  - 0.226" LBS. PER FT.

**Other Details:**
- **Application:**
  - The chain link fence shall be placed on private property, and the necessary steps to complete the work shall be taken in accordance with the specifications.

**Tension Bar:**
- **Band:**
  - Maximum 1" of spacing between tension bar and gate frame members.

**Concrete Encaissement:**
- **Footings:**
  - Minimum size: 3.500" DIA.
  - Maximum size: 4.000" DIA.

**Chain Link Fencing Commission:**
- **Specifications:**
  - All miscellaneous fittings and hardware shall meet the requirements and production tolerances as set forth in the specifications.
  - A chain link fence shall be acceptable for placing fence to road and will follow members of steel fence.
GENERAL NOTES:

The detectable warning device shall be located so that the nearest edge of the device is 6 to 12 inches from the face of the curb. The detectable warning device shall be designed to meet the requirements of the Code.

The detectable warning device shall be a square grid of travel to permit travelers to roll between domes. The grid shall be 24 inches square. The full width of the curb ramp or flush surface shall be on the road.

Detectable warning device shall be on the artboard. The device shall be adjustable to local conditions.

GENERAL NOTES FOR DETECTABLE WARNING DEVICES

The detectable warning device shall be located so that the nearest edge of the device is 6 to 12 inches from the face of the curb. The detectable warning device shall be designed to meet the requirements of the Code.

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TYPE 7 RAMP

NOTES:

The cross slope of the ramps and sidewalks shall not exceed 2.0%, unless required to match street longitudinal grade.

TYPE 8 RAMP

NOTES:

The cross slope of the ramps and sidewalks shall not exceed 2.0%, unless required to match street longitudinal grade.

RAMP SELECTION CRITERIA

RAMP SELECTION CRITERIA

In Alternations, wheelchair ramps are to be provided at street intersections with pedestrian facilities and multi-lane crosswalk locations.

The length of the ramp shall be such that the slope does not exceed 8:1. The surface texture of the ramp shall conform to a class 6 finish according to Section 804.4.3.

The normal gutter grade shall be maintained through the area.

All detectable warning devices shall be in accordance with the latest edition of the Manual of Uniform Traffic Control Devices published by the Federal Highway Administration.

The minimum thickness of the ramp, walk, & landing shall be 4". The minimum width of the ramps shall be the existing walk width or 36", whichever is greater.

Minor modifications of these details, as approved by the Engineer, may be made to adjust to local conditions.

The purchase of additional right-of-way will usually be considered new construction.

An alteration is defined as a project that changes or affects the use of a pedestrian or bicycle plan, or a sidewalk. All projects that require the purchase of additional right-of-way will be considered new construction.

The table above lists the order in which the ramps are to be considered.

Shall be based on the amount of right-of-way available, and on the presence of other site constraints (utilities, buildings, etc.). The ramp cannot be placed at the end of the walk.

If the slope can be steepened to a 10:1 max for a maximum length of 5' or a 8:1 max. for a maximum length of 2', then and only then can the 12:1 max. slope on the ramp be exceeded to provide access to the street level (alterations only).

If site constraints prevent the construction of any of the types listed, then only then can the 12:1 max. slope on the ramp be exceeded to provide access to the street level (alterations only).

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