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

HORSY. 71 INTERCHANGE (GR. & STRS.) (F)

SEBASTIAN COUNTY
ROUTE 71 SECTION 14
F.A.P. NH-0065(44)
JOB 040478

NOT TO SCALE

BRIDGE DATA

1. STA. 893+62.58 COL. RO. 8 - BR. END
   BRIDGE NO. 07075
   30'-6" CL. RDWY. - CO. NO. B
   32' - 2" TOTAL LENGTH
   32' - 0" CONT. PLATE GRIDER UNIT
   STA. 944+65.55 - BR. END

2. STA. 851+05.57 BRIDGE END
   320'-0" CONTINUOUS COMP.
   PLATE GRIDER UNIT BRIDGE NO. XXXX A
   74'-0" CL. ROADWAY WIDTH
   32'-0" BRIDGE LENGTH
   STA. 860+29.7 BRIDGE END
   (FOR INFORMATION ONLY)

3. STA. 856+64.46 BRIDGE END
   320'-0" CONTINUOUS COMP.
   PLATE GRIDER UNIT BRIDGE NO. XXXX B
   74'-0" CL. ROADWAY WIDTH
   32'-0" BRIDGE LENGTH
   STA. 859+86.96 BRIDGE END
   (FOR INFORMATION ONLY)

BEGIN JOB
LAT. N35°15'21.8"
LONG. W94°21'6.6"

MID-POINT JOB
LAT. N35°15'56.7"
LONG. W94°21'8.9"

END JOB
LAT. N35°15'54.4"
LONG. W94°21'8.9"

LEGEND

FUTURE CONSTRUCTION
PROPOSED CONSTRUCTION
FORT CHAFFEE MILITARY RESERVE

LENGTH COMPUTED ALONG MEDIAN

GROSS LENGTH OF PROJECT 3354.52 FT. OR 0.635 MI.
NET LENGTH OF ROADWAY 3354.52 FT. OR 0.635 MI.
NET LENGTH OF BRIDGES 0.00 FT. OR 0.000 MI.
NET LENGTH OF PROJECT 3354.52 FT. OR 0.635 MI.

P.E. JOB 040373
NON-PART.

DESIGN TRAFFIC DATA

2028 ADT 203
2028 DHV 0.8
DIRECTIONAL DISTRIBUTION 60%
TRUCKS 2.4
DESIGN SPEED 70 MPH
TYPICAL SECTIONS OF IMPROVEMENT

NOTE:
1. Refer to cross sections for deviation from the normal slopes. No changes shall be made from the planned slopes without the approval of the engineer.
2. It is intended that the subgrade shall be finished in conformity with the lane grades, and cross sections shown on the plans; however, a tolerance of plus or minus one-tenth foot will be allowed.
3. These sections noted as "future" to be constructed by others under future job.

TYPICAL TANGENT SECTION
RELOCATED U.S. 27 - RT. MAIN LANES
(REVERSE FOR LEFT MAIN LANES)
STA. 83+34.66 to STA. 85+13.35 RT. MAIN LANES (FUTURE)
STA. 86+01.74 to STA. 86+98.28 LT. MAIN LANES

NOTE: SEE CROSS SECTIONS FOR TYPE OF DITCH USED.

TYPICAL TANGENT SECTION
W/ AUX LANE - RT. MAIN LANES
INCLUDES TAPERS, SEE PLAN SHEETS-REVERSE FOR LEFT MAIN LANES
STA. 86+34.66 to STA. 88+02.08 RT. MAIN LANES

NOTE: SEE CROSS SECTIONS FOR TYPE OF DITCH USED.
SUBGRADE VARIES 190'-6" TO 99'-6"

NOTES:
1. Refer to cross sections for deviation from the normal slopes. No changes shall be made from the planned slopes without the approval of the engineer.
2. It is intended that the subgrade shall be finished in conformity with the line, grades, and cross sections shown on the plans; however, a tolerance of plus or minus one-tenth foot will be allowed.
3. Those sections noted as "future" to be constructed by others under future job.

TYPICAL TANGENT SECTION
RELOCATED U.S. 70 - RT. MAIN LANES WITH CD ROAD

HEAVE FOR (LEFT MAIN LANES)

INCLUDES SE TRANSITIONS & DRIP TAPERS, SEE PLAN SHEETS
STA. 840+00 TO STA. 840+150.0, LT. MAIN LANES (FUTURE)
STA. 850+00 TO STA. 850+150.0, RT. MAIN LANES (FUTURE)
STA. 850+35.0 TO STA. 850+350.0, RT. MAIN LANES (FUTURE)
STA. 860+00 TO STA. 860+50.0, LT. MAIN LANES

TYPICAL TANGENT SECTION
CD ROAD GORE AREA

SHOWN IN DIRECTION OF TRAFFIC
INCLUDES TRANSITIONS & DRIP TAPERS, SEE PLAN SHEETS
STA. 834+00 TO STA. 840+350.0, SL. CD (FUTURE)
STA. 840+350.0 TO STA. 840+500.0, SL. CD (FUTURE)
STA. 840+500.0 TO STA. 850+000.0, SL. CD

NOTES: SEE CROSS SECTIONS FOR TYPE OF DITCH USED.
NOTES:

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

2. IT IS INTENDED THAT THE SUBGRADE SHALL BE FINISHED IN CONFORMITY WITH THE LINES, GRADES, AND CROSS SECTIONS SHOWN ON THE PLAN. HOWEVER, A TOLERANCE OF PLUS OR MINUS ONE-TEENTH FOOT WILL BE ALLOWED.

3. ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS, ALL ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 2%.

4. THESE SECTIONS NOTED AS "FUTURE" TO BE CONSTRUCTED BY OTHERS UNDER FUTURE JOB.

TYPICAL TANGENT SECTION INTERCHANGE RAMP

TYPICAL SUPERELEVATED SECTION INTERCHANGE RAMP
NOTES:

1. Refer to cross sections for deviation from the normal slopes. No changes shall be made from the planned slopes without the approval of the engineer.

2. It is intended that the subgrade shall be finished in conformity with the lined grades and cross sections shown on the plans. However, a tolerance of plus or minus 1/10th foot will be allowed.

3. On all super-elevated curves and through super-elevated transitions 5% grade may be accepted. Differences between pavement and shoulder slope shall not exceed 12%.

4. These sections noted as "future" to be constructed by others under future Job.

TYPICAL TANGENT SECTION
INTERCHANGE RAMP
(SHOWN IN DIRECTION OF TRAFFIC)

W.L. LOCATION
STA. 885+00.00 TO STA. 885+10.00 Temp. Ramp 4 Future
STA. 886+00.00 TO STA. 886+10.00 Temp. Ramp 4

TYPICAL SUPERELEVATED SECTION
INTERCHANGE RAMP
(SHOWN IN DIRECTION OF TRAFFIC)

W.L. LOCATION
STA. 885+00.00 TO STA. 885+45.51 Temp. Ramp 4
STA. 886+45.51 TO STA. 886+46.86 Temp. Ramp 5 Future
STA. 887+46.86 TO STA. 887+48.33 Temp. Ramp 5

TYPICAL SECTIONS OF IMPROVEMENT
NOTES

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

2. THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN
   FREE FROM BOTH END EXTREMITIES AND THROUGHOUT THE LENGTH OF THE ROAD. ANY DEFICIENCY THAT DOES NOT MEET THE TOLERANCE INDICATED, PENALTY WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

3. ON ALL SUPERELEVATED CURVES AND THROUGH SUPERELEVATED TRANSITIONS 0.4, ALGEBRAIC DIFFERENCE BETWEEN PAVEMENT SLOPE AND SHOULDER SLOPE SHALL NOT EXCEED 0.00.

TYPICAL TANGENT SECTION
COUNTY ROAD B
STA. 64+00.00 TO STA. 64+95.00

TYPICAL SUPERELEVATED SECTION
COUNTY ROAD B
STA. 64+00.00 TO STA. 64+85.39
STA. 59+45.55 TO STA. 64+00.00

TYPICAL SECTIONS OF IMPROVEMENT
TYPICAL ROCK CUT SECTION

VARY OVERBURDEN
VARY ROCK
SEE NOTE A & CROSS SECTIONS FOR MORE INFORMATION

VARES DITCH
VARES SHALE.

TYPICAL ENHMBANKMENT SECTION
FOR FALL HEIGHTS ≥ 20'

END BEAM PROPOSED OR CANTILEVER
Gravel Infilling Layer

PILE PENETRATION DETAIL
STA. 806+52.0 TO STA. 806+66.0 U.S. 79/LGC.
WATER TO BE DRAINED TO A ZONE OF PENETRABLE MATERIAL UP TO CLASS 3 AGGREGATE BASE COURSE FOR FULL CUT DEEP GRAVING/STABILIZING LATERAL 10 FEET IN WIDTH BEYOND THE(),'RATURE AND CUT ALL THE MATERIAL FROM THE ZONE OF PENETRABLE MATERIAL BY EXCAVATION OF 30 FT. OR WHICH EXCAVATION MAY BE REQUIRED BY THE CONTRACTOR. THE THICKNESS OF HARD MATERIAL IS 15 FEET IN WIDTH AT A MINIMUM 10 FEET IN WIDTH.

EXCAVATION NOTES
1. SOIL CHARACTERISTICS SHOWN IN SOIL BORING ARE PRESENTED IN THESE PLANS AND CROSS SECTIONS ARE REPRESENTATIVE OF THE LOCATIONS OF THE VARYING SAMPLES AND FROM SURFACE INDICATIONS ARE TYPICAL OF THE LIMITS SHOWN. THE STATE WILL NOT BE RESPONSIBLE FOR VARIATIONS IN THE SOIL CHARACTERISTICS.

2. SLOPES SHOWN ON THE EXCAVATION DETAILS ARE TYPICAL FOR VARIOUS TYPES OF MATERIALS. THICKNESS OF MATERIAL LAYERS MAY VARY WITHIN THE LIMITS OF EACH SEGMENT SHOWN. THE EXCAVATION DETAILS ARE SHOWN AS A GUIDE FOR SLOPE CONSTRUCTION AND WILL BE ALTERED AS DIRECTED BY THE ENGINEER.

3. THE MAXIMUM INTENDED HEIGHT OF SOIL LAYERS SHALL BE

- 50 FT - HARD SANDSTONE
- 30 FT - SANDY Silt & Mollusk Shells
- 25 FT - Silt Material and Silty Shale
- 20 FT - Sand and Shale

4. EXISTING MATERIALS TO BE EXCAVATED TO THE FOLLOWING SLOPES:

- 1/10 - FOR SANDSTONE AND SHALE SLAKE DURABILITY INDEX GREATER THAN OR EQUAL TO 8500
- 1/16 - FOR SOFT SANDSTONE AND WEATHERED SHALE DURABILITY INDEX BETWEEN 3000 AND 8500
- 1/24 - FOR SOIL MATERIAL AND SOIL LIKE SHELLES DURABILITY INDEX LESS THAN 3000

5. SANDSTONE AND SHALE (SAND) EXISTS ABOVE SOFT SANDSTONE AND OR WEATHERED SHALE (SAND) TO 9403 IN CUT SECTION A 10 FEET IN HORIZONTAL LENGTHS. FOR THE ALIGNMENT SLOPES AT COUNTY ROAD E, THIS BENCH HAS BEEN ELIMINATED AND THE SLOPE IN WEATHERED SHALE HAS BEEN COVERED WITH CONCRETE PROTECTION, EXTENDED FROM THE ELEVATION.

6. REF TO CROSS SECTIONS FOR ELEVATIONS FROM NORMAL SLOPES, NO CHANGES WILL BE MADE FROM THE PLANNED SLOPES WITHOUT THE APPROVAL OF THE ENGINEER.

7. THE SLOPE CONFIGURATION SHALL BE DETERMINED BY THE ENGINEER BASED ON INFORMATION SUPPLIED BY THE CONTRACTOR. THE INFORMATION REQUIRED SHALL INCLUDE DATA CONCERNING ROCK HARDNESS, SLAKE, DURABILITY INDEX, SOIL PROVIDER'S REPORTS, SUBSURFACE CONDITIONS, AND OTHER FACTORS CONSIDERED NECESSARY FOR ESTABLISHING THE APPROPRIATE SLOPES CONSTRUCTIONS. PAYMENT FOR ALL WORK PERFORMED BY THE CONTRACTOR FOR THE PURPOSES SHALL BE INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

8. SUBSURFACE INVESTIGATIONS INDICATE ZONES OF HARD SANDSTONE AND SHALE IN THESE AREAS. FIELD ADJUSTMENTS ARE RECOMMENDED FOR EACH SOIL_DETAIL finden ADVANCE ON HARD ROCK BASE COURSE LATERAL 10 FEET IN WIDTH.

9. THE INTENDED HEIGHT OF SOIL LAYERS IS廣 20 FT.

10. THE TYPICAL ENHMBANKMENT SECTION IS 10 FEET IN WIDTH AT A MINIMUM 10 FEET IN WIDTH.

11. THE DRAINAGE LAYER SHALL BE COVERED WITH 6 INCHES OF CLASS 3 AGGREGATE BASE COURSE TO PREVENT THE DESTRUCTION OF FILL. ALL DRAINAGE LAYERS ARE PROVIDED TO THE DRAINAGE LAYER SHALL BE COVERED TO CLASS 3 AGGREGATE ONLY TIE DETAIL, STABILIZING LATERAL 20 FT. CLASS 7 AGGREGATE SHALL BE PAID FOR AS "COMPACTED ENHMBANKMENT."
CONSTRUCTION LIMITS

ASPHALT CONCRETE HOT MIX SURFACE COURSE: (50) 10% CRUDE LSB FOR SDL YLD AGGREGATE BASE COURSE (CLASS 7) 7" COMP DEPTH IF ASPHALT DRIVE EXISTS OR 6" CONCRETE IF CONCRETE DRIVE EXISTS.

AGGREGATE BASE COURSE (CLASS 7) 9" COMP DEPTH OR CONFORM TO EXISTING DRIVEWAY.

COLD MILLING ASPHALT TAPERS

STA. 54+95.00 TO STA. 55+00.00 C.R. 8
STA. 64+95.00 TO STA. 65+00.00 C.R. 8

DETAIL FOR DRIVeway TURNOUT
C.R. 8

SECTION

DETAILS OF PARTIALLY CONSTRUCTED DROP INLET
(TYPE ST)

NOTE: REFER TO SDL DRAIN, PFC-85 FOR ADDITIONAL INFORMATION.

PLAN

DETAIL OF SOLID SODDING AROUND DROP INLET

7-5

DROP INLET

ADDITIONAL 16 BARS

FUTURE CONC. BARRIER WALL
BY OTHERS

FUTURE INLET TOP
BY OTHERS

13/12 X 9 1/2" DRAIN INNAKE OPENING

NOTE: REFER TO SDL DRAIN, PFC-85 FOR ADDITIONAL INFORMATION.
DETAILS OF WIDENING FOR GUARDRAIL

(COUNTY ROAD 6 SHOWN)
ADVANCE WARNING SIGNS

NOTE: ADVANCE WARNING SIGNS AND DEVICES SHOWN ARE TYPICAL. FOR ALL STAGES OF CONSTRUCTION, COORDINATION MUST BE MAINTAINED WITH OTHER CONSTRUCTION ACTIVITIES REQUIRING ADVANCE WARNING SIGNS. SIGN LOCATIONS AND TYPES ARE TO BE MODIFIED IN EACH ADDITIONAL PHASE OF WORK AS REQUIRED FOR CROSS-SECTIONAL PLANS OF WORK ARE AS REQUIRED.

TYPICAL TANGENT SECTION
TEMP. DETOUR C.R. 8

TYPICAL SUPERELEVATED SECTION
TEMP. DETOUR C.R. 8

MAINTENANCE OF TRAFFIC DETAILS C.R. 8 - ADVANCE WARNING & TYPICAL SECTIONS
SEQUENCE OF CONSTRUCTION

STAGE #1
CONSTRUCT TEMP. DETOUR.
USE LANE Closure AS SHOWN ON ST. DWG. TC-2 AND AS DIRECTED BY THE ENGINEER TO CONSTRUCT TIES TO C.A.R. &

SEE SHEET 6 FOR ADVANCE WARNING SIGNS AND DEVICES

TEMP. DETOUR
PL. SHOULDER
A = 29°58'03"
D = 8'2" T = 93.50' L = 88.92'

ROAD CLOSED
146" X 30"(R)
C. BARR, V. BRT.

SEEN 55+00

TRAFFIC DRUMS 2C.G.C. SPACING (TYPICAL) - 6 TOTAL

TEMP. DETOUR
PL. SHOULDER
A = 3°23'58"
D = 8'2" T = 116.67' L = 36.66'

CO. RD. 8

LIMITS OF TEMP. LANE CLOSURE AS SHOWN ON STD. DWG. TC-2

LIMITS OF TEMP. LANE CLOSURE AS SHOWN ON STD. DWG. TC-2

MAINTENANCE OF TRAFFIC DETAILS C.R. 8 - STAGE 1
SEQUENCE OF CONSTRUCTION
STAGE 2
SHIFT TRAFFIC TO TEMP. DETOUR & CONSTRUCT CA. B BRIDGE & APPROACHES FROM STA. 55+50 TO STA. 6+00.

NOTE:
DRAIN SLOTS SHALL BE REQUIRED ALONG THE ENTIRE LENGTH OF PRECAST CONCRETE BARRIER. EACH DRAIN SLOT SHALL HAVE A MINIMUM OPENING OF 0.33 SQ. FT. AND SHALL BE SPACED NO FURTHER THAN 800 FT. CENTER TO CENTER.

MAINTENANCE OF TRAFFIC DETAILS C.R. 8 - STAGE 2
SEQUENCE OF CONSTRUCTION
STAGE 3
USE TEMPORARY LANE CLOSURES AS SHOWN ON STD. DWG. TC-2
AND AS DIRECTED BY THE ENGINEER TO CONSTRUCT C.R. 8 FROM STA. 54+00 TO STA. 55+50 & FROM STA. 64+00 TO STA. 64+95.
REMOVE TEMPORARY DETOUR ROAD.
### Traffic Control Signs & Devices - C.R. B

<table>
<thead>
<tr>
<th>Sign Number</th>
<th>Description</th>
<th>Sign Size</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Maximum Quantity Required</th>
<th>Total Sign Milled (sq. ft.)</th>
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<td>ONE WAY WORK</td>
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<td>606.0</td>
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<td>608.0</td>
<td>RETURN TO 1 MILE (FT.) (ALPHA)</td>
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### Construction and Permanent Pavement Marking - C.R. B

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<th>Description</th>
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<th>Stage 2</th>
<th>Stage 3</th>
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<td>Hot-applied Paint, Paint Marking Yellow (B)</td>
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### Soil Log

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<th>Station</th>
<th>Location</th>
<th>Depth (ft)</th>
<th>AASHTO Classification</th>
<th>Liquid Limit</th>
<th>Plastic Index</th>
<th>Remarks</th>
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**Notes:**
- Soil characteristics tabulated above are representative of the sample and do not necessarily reflect the typical conditions throughout the site.
- These data are shown for information only; the State will not be responsible for variations in the soil characteristics and the extent of same depending from the above tabulations.

*Note: This is a low volume road as defined in Section 550.07 of the Standard Specifications for Highway Construction Edition of Soil.*

**Quantities**

[Signature] Professional Engineer
### Erosion Control

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>STATION</th>
<th>LOCATION</th>
<th>LIME</th>
<th>SEEDING</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>SECOND SEEDING APPLICATION</th>
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**BASE OF ESTIMATED LIME = 2 TONS PER ACRE SEEDING**

**BASE OF ESTIMATED WATER = 1000 GALLONS PER ACRE SEEDING**

### Earthwork

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<tr>
<th>STATEMENT</th>
<th>STATION</th>
<th>LOCATION</th>
<th>UNCLASSIFIED EMBANKMENT</th>
<th>COMPACTED EMBANKMENT</th>
<th>UNCLASSIFIED EMBANKMENT</th>
<th>COMPACTED EMBANKMENT</th>
<th>STABILIZATION</th>
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### Guardrail

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<th>STATEMENT</th>
<th>STATION</th>
<th>LOCATION</th>
<th>GUARDRAIL (TYPE A)</th>
<th>TERMINAL</th>
<th>MAJOR POST (TYPE 11)</th>
<th>MAJOR POST (TYPE 11)</th>
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<th>LIN. FT.</th>
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### Clearing & Grubbing

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**BASE OF ESTIMATED QUANTITIES FOR TOPSOIL FURTURED AND PLACED ARE BASED ON A DEPTH OF 4'**

### Temporary Erosion Control

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>TEMPORARY SEEDING</th>
<th>MULCH COVER</th>
<th>WATER</th>
<th>ROCK DITCH (TYPICAL TYPE E-5)</th>
<th>DRAINAGE DITCH (TYPICAL TYPE E-7)</th>
<th>SEIMENT BANK (TYPICAL TYPE E-9)</th>
<th>SLT. FENCE (TYPICAL TYPE E-8)</th>
<th>ROCK FILTER (TYPICAL TYPE G)</th>
<th>GROUTED HOOKUP</th>
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**BASE OF ESTIMATED WATER = 1000GALS PER ACRE TEMPORARY SEEDING**

* QUANTITIES ESTIMATED (SEE SECTION 4.05 OF THE STANDARDS SPECIFICATIONS)
### Removal and Disposal Curbs

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<th>Station</th>
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### Removal and Disposal Concrete Walks

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### Mailboxes

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### Fence

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<tr>
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<th>Station</th>
<th>Location</th>
<th>Removal &amp; Disposal of Fence</th>
<th>Wire Fence, Type 2 &amp; 3</th>
<th>W Chain Link Fence</th>
<th>Decorative Post</th>
</tr>
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<tbody>
<tr>
<td>54-00</td>
<td>50-55</td>
<td>258 - Lt.</td>
<td>1,200</td>
<td>156</td>
<td>2</td>
<td>4</td>
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<tr>
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<td>156</td>
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</table>

### R/W Markers & Bench Marks

<table>
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<tr>
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<th>Description</th>
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<th>R/W Markers</th>
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<tr>
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<td>6</td>
<td>3</td>
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<tr>
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<td>6</td>
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<tr>
<td><strong>TOTALS</strong></td>
<td>1,200</td>
<td>6</td>
<td>3</td>
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</tbody>
</table>

Note: R/W Markers and Bench Marks to be furnished and placed by state forces.

### Removal and Disposal Pipe Culverts

<table>
<thead>
<tr>
<th>Station</th>
<th>Location</th>
<th>Description</th>
<th>Unit</th>
<th>Each</th>
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<tr>
<td>54-22</td>
<td>258 - Rt.</td>
<td>R-Y-50 R-J Pipe Culvert</td>
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<td><strong>TOTALS</strong></td>
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### Approach Gutters

<table>
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<tr>
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<th>Station</th>
<th>Location</th>
<th>Type Special</th>
<th>Reinforcing Steel, Grade 60</th>
<th>Aggregate Base Course, Class 3</th>
<th>Concrete Stamp, Type A</th>
<th>Concrete Type No.</th>
<th>Drop Inlet</th>
<th>UP Grade Coated Mild-Steel Pipe, 28-Gauge</th>
</tr>
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<tbody>
<tr>
<td>54-00</td>
<td>50-55</td>
<td>258 - Lt.</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td><strong>TOTALS</strong></td>
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<td>20.03</td>
<td>307</td>
<td>237</td>
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<td>1</td>
<td>1</td>
<td>2</td>
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Note: Basis of estimate: quantities for aggregate base course class 3 are based on a depth of 6".
### BASE & SURFACING - LANCES

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<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>ACQ METER (Ft)</th>
<th>ACQ METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
</tr>
</thead>
<tbody>
<tr>
<td>52+00-60</td>
<td>60</td>
<td>TRANSITION</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
</tr>
<tr>
<td>52+25-13</td>
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<td>TRANSITION</td>
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<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
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<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
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<tr>
<td>52+50-60</td>
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<td>TRANSITION</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
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<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
</tr>
<tr>
<td>52+75-13</td>
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<td>TRANSITION</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
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<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
<td>20,333</td>
<td>21,008</td>
</tr>
</tbody>
</table>

**TOTALS:**

| | | | | | | | | | | | | | | |
| 52+00-60 | 60 | TRANSITION | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 |
| 52+25-13 | 13 | TRANSITION | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 |
| 52+50-60 | 60 | TRANSITION | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 |
| 52+75-13 | 13 | TRANSITION | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 | 20,333 | 21,008 |

**BASE OF ESTIMATE = ACQ METER COURSE (Ft) - MINERAL AGGREGATE = 90,253, ASPHALT BINDER (PG 64-22) = 6,773**

### BASE & SURFACING - SHOULDERs

<table>
<thead>
<tr>
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<th>LOCATION</th>
<th>LENGTH</th>
<th>ACQ METER (Ft)</th>
<th>ACQ METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
<th>AVG METER (Ft)</th>
<th>AVG METER (yd)</th>
<th>TON</th>
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</thead>
<tbody>
<tr>
<td>54+00-60</td>
<td>60</td>
<td>TRANSITION</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
</tr>
<tr>
<td>54+25-13</td>
<td>13</td>
<td>TRANSITION</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
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<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
</tr>
<tr>
<td>54+50-60</td>
<td>60</td>
<td>TRANSITION</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
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<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
</tr>
<tr>
<td>54+75-13</td>
<td>13</td>
<td>TRANSITION</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
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<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
<td>12,200</td>
<td>13,467</td>
</tr>
</tbody>
</table>

**TOTALS:**

| | | | | | | | | | | | | | | |
| 54+00-60 | 60 | TRANSITION | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 |
| 54+25-13 | 13 | TRANSITION | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 |
| 54+50-60 | 60 | TRANSITION | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 |
| 54+75-13 | 13 | TRANSITION | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 | 12,200 | 13,467 |

**BASE OF ESTIMATE = ACQ METER COURSE (Ft) - MINERAL AGGREGATE = 54,253, ASPHALT BINDER (PG 64-22) = 6,773**

### COLD MILLING ASPHALT PAVEMENT

<table>
<thead>
<tr>
<th>STATION</th>
<th>LOCATION</th>
<th>AVG. METER</th>
<th>COLD MILLING ASPHALT PAVEMENT</th>
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<tr>
<td>64-00-60</td>
<td>60</td>
<td>12,200</td>
<td>32,333</td>
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<tr>
<td>64-25-13</td>
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<td>12,200</td>
<td>32,333</td>
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</tbody>
</table>

**TOTAL:**

<p>| | | | |</p>
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<tr>
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</thead>
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### ASPHALT, CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC

<table>
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<th>LOCATION</th>
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<tbody>
<tr>
<td>ENTIRE PROJECT</td>
<td>AT WIDE SPREAD OF THE ENGLISH</td>
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<td>50</td>
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**TOTAL:**

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<thead>
<tr>
<th></th>
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</table>
# SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 040478

<table>
<thead>
<tr>
<th>BRIDGE NUMBER</th>
<th>UNIT OF STRUCTURE</th>
<th>ITEM</th>
<th>003</th>
<th>004</th>
<th>005</th>
<th>006</th>
<th>007</th>
<th>008</th>
<th>009</th>
<th>010</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>SP &amp; BDC</td>
<td>SP &amp; BDC</td>
<td>6003</td>
<td>55 &amp; 804</td>
<td>625</td>
<td>627</td>
<td>628</td>
<td>629</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>CUBIC YARD</td>
<td>CUBIC YARD</td>
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<td>TON</td>
<td>TON</td>
<td>TON</td>
<td>CUBIC YARD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>END BENT NO. 1 &amp; 2</td>
<td>END BENT NO. 1 &amp; 2</td>
<td>INT. BENT NO. 2</td>
<td>INT. BENT NO. 2</td>
<td>327 CONT. PLATE ORDER UNIT</td>
<td>327 CONT. PLATE ORDER UNIT</td>
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<td>123.3</td>
<td>26.9</td>
<td>62.573</td>
<td>94.655</td>
<td>255.4</td>
<td>4.323</td>
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<tr>
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<td></td>
<td>342.3</td>
<td>342.3</td>
<td>27.8</td>
<td>122.3</td>
<td>52.0</td>
<td>256.0</td>
<td>4.323</td>
<td>64</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>220.3</td>
<td>220.3</td>
<td>27.8</td>
<td>122.3</td>
<td>52.0</td>
<td>256.0</td>
<td>4.323</td>
<td>64</td>
</tr>
</tbody>
</table>

**Notes:**

1. For Bridge No. 040478, the color at joint shall conform to Federal Standard 595, color Chip No. 997, Gray.

2. Includes approximately 43 cubic yards of rock excavation.
NOTES: SEE NEXT PAGE FOR ADDITIONAL INFORMATION.
FUTURE CONSTRUCTION FOR INFORMATION ONLY

STA: 0+00 & COST: U.S. TI - IN PLACE
DROP BOLT WITH 2" X 4" RC PIPE OUTLET WITH F.G. RETAIN

STA: 398+00 & COST: U.S. TI - IN PLACE
DROP BOLT WITH 2" X 4" RC PIPE DRAIN ON U.S. TI - RETAIN

SEE INTERCHANGE LAYOUT FOR RAMP GEOMETRY
FUTURE CONSTRUCTION
FOR INFORMATION ONLY
FUTURE CONSTRUCTION
FOR INFORMATION ONLY

STA 65+48.00
END FUTURE CONST.

SEE INTERCHANGE
LAYOUT FOR RAMP
GEOMETRY
QUANTITIES - STA. 1864+10

<table>
<thead>
<tr>
<th>SECTION AND LENGTH</th>
<th>CLASS &quot;D&quot; CONCRETE-ROADWAY</th>
<th>REINFORCING STEEL - ROADWAY (GRADE 60)</th>
<th>UNCLASSIFIED RECOVERY STRUCTURES - ROADWAY</th>
<th>STANDARD DRAWING NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CUM. YD.</td>
<td>POUNDS</td>
<td>TOTAL</td>
<td>CUM. YD.</td>
</tr>
<tr>
<td>SECTION &quot;A&quot; @ 22.8&quot;</td>
<td>40.06</td>
<td>5972</td>
<td>63.85</td>
<td>R-285-1</td>
</tr>
<tr>
<td>SECTION &quot;B&quot; @ 22.8&quot;</td>
<td>103.5</td>
<td>2926</td>
<td>39.97</td>
<td>R-285X-1</td>
</tr>
<tr>
<td>SECTION &quot;C&quot; @ 22.8&quot;</td>
<td>104.8</td>
<td>348.3</td>
<td>60.64</td>
<td>R-285X-2</td>
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<tr>
<td>SECTION &quot;D&quot; @ 27.8&quot;</td>
<td>104.8</td>
<td>182.35</td>
<td>36.54</td>
<td>R-285X-3</td>
</tr>
</tbody>
</table>
| FOUR WINGS          | 273.6                       | 379                                    | 65.23                                     | R-285X-4
| 6 LAPS @ 46.16 *    | 240.8                       | 288                                    | 56.88                                     | R-285X-5

TOTAL
239.09
3603
62.93
USE 230 Y.T. SOLID SODDER AND 0.27 M. GALLONS WATER
QUANTITIES - STA. 1864+50

<table>
<thead>
<tr>
<th>SECTION AND LENGTH</th>
<th>CUL T.D.</th>
<th>POUNDS</th>
<th>CUL T.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot; (28.3' x 19.9' x 42.8')</td>
<td>5.241</td>
<td>40.27</td>
<td>523</td>
</tr>
<tr>
<td>&quot;B&quot; (19.2' x 19.9' x 22.4')</td>
<td>1.015</td>
<td>22.51</td>
<td>20.35</td>
</tr>
<tr>
<td>&quot;C&quot; (28.3' x 19.9' x 22.4')</td>
<td>5.248</td>
<td>23.92</td>
<td>40.57</td>
</tr>
<tr>
<td>&quot;D&quot; (38.4' x 19.9' x 22.4')</td>
<td>5.242</td>
<td>30.87</td>
<td>25.98</td>
</tr>
<tr>
<td>&quot;E&quot; (28.3' x 39.5' x 20.8')</td>
<td>5.246</td>
<td>13.86</td>
<td>230.46</td>
</tr>
<tr>
<td>&quot;F&quot; (28.3' x 38.3')</td>
<td>5.241</td>
<td>246.40</td>
<td>188.4</td>
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<tr>
<td>FOUR WINDS</td>
<td>0.53</td>
<td>358</td>
<td>-1.61</td>
</tr>
<tr>
<td>TWO SW. &amp; APRONS</td>
<td>45</td>
<td>561</td>
<td>R-203X-X0</td>
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<tr>
<td>TOTAL</td>
<td>550.06</td>
<td>68502</td>
<td>237.03</td>
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</tbody>
</table>

USE IN.5' L, SOLID SODGING AND 0.24 W. GALLONS WATER
# Quantities - STA, 1864+66

<table>
<thead>
<tr>
<th>Section and Length</th>
<th>1/1/1/1 Concrete Roadway</th>
<th>Reinforcing Steel - Roadway (Grade 60)</th>
<th>Unialloyed Excavation for Structures - Roadway</th>
<th>Standard Drawing No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per Linear Foot-Barrel</td>
<td>Total</td>
<td>Per Linear Foot-Barrel</td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td>CYL. YD.</td>
<td>POUNDS</td>
<td>CYL. YD.</td>
<td>POUNDS</td>
</tr>
<tr>
<td>Section &quot;A&quot; (2 @ 25,788&quot;)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section &quot;A&quot; (2 @ 37,790&quot;)</td>
<td>0.074</td>
<td>74.23</td>
<td>24.54</td>
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</tr>
<tr>
<td>Section &quot;B&quot; (18,000&quot;)</td>
<td>1.00</td>
<td>95.29</td>
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<tr>
<td>Four Wings</td>
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<td>15.01</td>
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<tr>
<td>Laps (5 @ 28,39&quot;)</td>
<td>14</td>
<td>4</td>
<td></td>
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<tr>
<td>Total</td>
<td>232.97</td>
<td>2588</td>
<td>27.83</td>
<td></td>
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</tbody>
</table>

Use 23.69 S.T. SOD. SODDING and 0.30 M. GALL. WATER.
GENERAL NOTES

All concrete shall be Class "F" with a minimum 28 day compressive strength f'c ≥ 5,000 psi and shall be poured in the dry. All exposed corners to be Chatellier T6 unless otherwise noted.

All reinforcing steel shall conform to ASTM A 615, Grade 60 (yield strength = 60,000 psi).

Backwall shall not be poured before bases are erected. See Dwg.No. 48647 for expansion joint introduction or cut-out areas.

All structural steel shall be ASTM A 36, Grade 36 unless otherwise noted. All exposed surfaces shall be cleaned and painted gray in accordance with Section 402. Coating and painting to be done for under the stay bars.

Top reinforcing bars in cap shall be properly spaced to avoid interference with anchor bolts or sheet metal anchors.

For additional information, see LAYOUT on Dwg.No. 48630.

TYPICAL ANCHOR BOLT LAYOUT

Note for details of Chatellier Bearing, see Dwg. No. 48608.

SECTION A-A

Not to Scale

SECTION B-B

Not to Scale

FOR ADDITIONAL DRAWINGS, SEE DWG. NO. 48630.

ARIZONA STATE HIGHWAY COMMISSION

ROUTE 66

SEC.

LITTLE RIOZER

DRAWN BY: J. E. MILLER
CHECKED BY: D. M. LENDNER
DREW: J. E. MILLER
DESIGN: D. M. LENDNER
DATE: 03-22-06
SHEET: 2
SCALE: 1/2"=1'-0"
GENERAL NOTES

All concrete shall be C2000 with a minimum 28-day compressive strength of 4000 psi. All concrete shall be placed with the formwork dry and all exposed corners to be chamfered 1/8" unless otherwise noted.

All reinforcing bars to conform to ASTM A615-03 or A616, Grade 60 (yield strength = 60,000 psi).

Reinforcing bars in top of cap shall be properly placed to avoid interference with anchor bars or shear metal plates.

For additional information, see LAYOUT on Draw No. 46630.

SECTION A-A
Required construction joint (Typical)

Sheet 1 of 2
Details of Bent 2
County Road B Bridge

Arkansas State Highway Commission
Little Rock, AR

Drawn by: JEA
Checked by: KJ

Date: 10-26-10
Revision: 0

Bridge No. 02709
Drawing No. 46634
FORM INSERT DETAILS

GENERAL NOTES:

See IF NO. 508778 "TEXTURED COATING FINISH" for finishing requirements of recessed State of Arkansas form insert.

Fabricate form insert as one piece unit, without the use of adhesive, nails or glue.

Wash and clean multi-use form inserts before each use.

All work and materials for form inserts shall be included in the unit price bid for "CLASS 5 CONCRETE-ARRIVAL".

Damaged or worn form inserts shall be replaced at the contractor's expense.

The form inserts shall be approved by the engineer before use.

NOTES:

Use form insert on designated bends as shown on layout or as shown on detail drawings.

PLACEMENT AT WINGS

END BENT

CHAMFER DETAILS

DETAILS OF STANDARD
STATE OF ARKANSAS
FORM INSERT
COUNTY ROAD 8 BRIDGE

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: DJH
DATE: 1/24/04
CHECKED BY: DJH
DATE: 1/25/04
DESIGNED BY: DJH
DATE: 1/26/04
DRAWING NO.: 001779
SCALE: 1" = 1'-0"
THE STEPS AND ADDITIONAL CONCRETE FOR THE WALLS SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE CONSIDERED TO BE INCLUDED IN THE BASE BID FOR CONCRETE DITCH PAVING.

TOE WALL DETAIL FOR CONCRETE DITCH PAVING

GENERAL NOTES:

THE FULL WIDTH OF EACH SECTION SHALL BE Poured MONOLITHICALLY.

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

SOLID SOD ALONG DITCH PAVING TO BE PLACED WITHIN 14 DAYS OF DITCH PAVING CONSTRUCTION.

1'-WIDE TRANSVERSE EXPANSION JOINTS SHALL BE PLACED IN CONCRETE DITCH PAVING AT 45' INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH NASH'S N213.
TABLE OF DIMENSIONS

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ARCH PIPE

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* The measured span and rise shall not vary more than ± 0.6 per cent from the values specified by the manufacturer.

CIRCULAR PIPE

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MULTIPLE C.M. PIPE CULVERTS

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END SECTIONS FOR CORRUGATED METAL PIPE CULVERTS

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END SECTIONS FOR REINFORCED CONCRETE PIPE CULVERTS

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NOTE: ALTERNATE CONNECTIONS TO THE PIPE CULVERTS IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES MAY BE MADE SUBJECT TO THE APPROVAL OF THE ENGINEER.
METHODS OF INSTALLATION OF GUARD RAIL AT LESS THAN FULL SHOULDER WIDTH BRIDGES USING GUARD RAIL TERMINAL (TYPE 2)

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

LEGEND
- TYPE BEAM GUARD RAIL TERMINAL
- GUARD RAIL TERMINAL (TYPE 2)

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

METHOD OF INSTALLATION OF GUARD RAIL AT FIXED OBSTACLE

ARAKANS STATE HIGHWAY COMMISSION

GUARD RAIL DETAILS

STANDARD DRAWING OR-9A
CONCRETE PAVEMENT  

BROKEN LINE STRIPING

- 4" CONTINUOUS YELLOW
- 4" SKIP YELLOW

SOLID LINE STRIPING ON CONCRETE PAVEMENT

- 4" CONTINUOUS YELLOW
- 4" SKIP YELLOW

SOLID LINE STRIPING ON ASPHALT PAVEMENT

- 4" CONTINUOUS YELLOW
- 4" SKIP YELLOW

ASPHALT PAVEMENT  

CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES

- 2" STOPBAR OFFSET STOPBAR 4' FROM CROSSEALK
- 2" CROSSEALK STRIPS
- 4" CONTINUOUS YELLOW 3" OFFSET FROM CROSSEALK
- 4" CONTINUOUS WHITE 4" OFFSET FROM CROSSEALK

CROSSWALK AND STOPBAR DETAILS

NOTES:
1. ALL LINES SHALL HAVE A WIDTH OF 4 INCHES.
2. THE THICKNESS AND RATE OF PAINT APPLICATION SHALL BE AS SPECIFIED IN SECTION 718 OF THE STANDARD SPECIFICATIONS.
3. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."  
4. RAISED PAVEMENT MARKERS SHALL BE CENTERED BETWEEN SKIP LINES IN 4 FOOT SPACING UNLESS OTHERWISE SHOWN ON THE PLANS.

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

PAVEMENT EDGE LINE MARKING

GENERAL NOTES:

1 THIS DRAWING SHOULD BE CONSIDERED AS TYPICAL ONLY AND THE FINAL LOCATION OF THE STRIPING AND RAISED PAVEMENT MARKERS SHALL BE DETERMINED BY THE ENGINEER.
2 THIS DRAWING SHOULD BE USED IN CONJUNCTION WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."  LATEST REVISION.

NOTES:

DIRECTIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING ENGINEER'S APPROVAL MAKES A MENTION OF PRODUCTS LISTED BY REFERENCING TO THE AHD QUALIFIED PRODUCTS LIST.
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 ASTM A 500 M 53 GRADE 60.
CONSTRUCTION AND MATERIALS FOR MINNOW & CULVERT DRAINAGE, INCLUDING KEEP Holes and GRANULAR MATERIAL, SHALL BE SUBSIDIARY TO THE BIO ITEM "CLASS 5 CONCRETE".
MEMBRANE WATERPROOFING SHALL CONFORM TO THE REQUIREMENTS OF SECTION B9 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL TOLERANCES: THE TOLERANCES FOR REINFORCING STEEL SHALL MEET THOSE LISTED IN "MANUAL OF STANDARD PRACTICE" PUBLISHED BY CONCRETE REINFORCING STEEL INSTITUTE (CSM) EXCEPT THAT THE TOLERANCE FOR TUBULAR BARS SUCH AS FIGURE 3 ON PAGE 7-4 OF THE CSM MANUAL SHALL BE MINUS 0 TO PLUS 1/8 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'-0" DIAMETER AND SHALL BE PLACED AT LEAST ABOVE THE TOP OF THE BOTTOM SLAB.

WEEP HOLES IN MINNOWS SHALL HAVE A MAXIMUM HORIZONTAL SPACING OF 10'-0" AND SHALL BE SPACED TO CLEAR ALL REINFORCING STEEL. THE DRAIN OPENING SHALL BE 4'-0" DIAMETER AND SHALL BE PLACED AT LEAST ABOVE THE TOP OF THE MINNOW Footing.

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

GEO. ENGINEER

NOTES:

1. MINNOWS AND BOX CULVERTS THE LENGTH "K" OF THE MODIFIED HEADWALL SHALL BE EQUAL TO THE ROADWAY LENGTH "ML". THE ENDS OF THE HEADWALL SHALL BE CONSTRUCTED PARALLEL TO THE SKEW ANGLE OF THE BOX CULVERT.

R.C. BOX CULVERT HEADWALL MODIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION
REINFORCED CONCRETE BOX CULVERT DETAILS
STANDARD DRAWING RCB-1
SOLID SODDING
R. C. BOX CULVERT

PLAN
PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

LONGITUDINAL SECTION
BACKFILL DETAILS FOR BOX CULVERT

SECTION C-C
DETAILS THROUGH EXISTING CHANNELS

GENERAL NOTES:
ROADWAY EXCAVATION (CHANNEL, CHANGE) SHALL BE PAID FOR AT R.C. BOX CULVERT LOCATIONAL. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONTINUED TO THAT PORTION OF THE INDICATED AREA THAT IS ABOVE THE FLOW LINE. ROADWAY 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 R.C. BOX CULVERT LOCATIONAL. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONTINUED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE. ROADWAY EXCAVATION SHOWN IN SECTION C-C ABOVE AS SUBRODUCTY WILL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT PAYMENT WILL BE CONSIDERED TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION.

ARKANSAS STATE HIGHWAY COMMISSION

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

STANDARD DRAWING RCB-2
### SUPERELEVATION TABLE FOR ONE-WAY TRAFFIC

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### GENERAL NOTES
1. On pavement with one-way traffic, the superelevation shall be
   determined on the profile inside lane.
2. Superelevation values shown on the cross sections are values
   (in ft) to be used at the inside point of curve.
3. Lengths for Le may be reduced in multiples of 29 ft or 58 ft,
   where shown.
4. Superelevation values shown are values to be used for ramp
   superelevation values shall
5. Superelevation values shown are values to be used for
   transition lengths as follows:
   a. Inside lane divisions......29 ft
   b. Outside lane divisions......14.5 ft

### ABBREVIATIONS
- Le = Normal crown
- Pe = Reverse Crown superelevation at normal crown slope
- S = Superelevation
- L = Distance from beginning of superelevation transition
to any point (ft)
- Le = Maximum
- S = Superelevation per ft
- Le = Length of superelevation transition (ft)
- C = Normal Crown (ft)

### OUTSIDE LANE

Arkansas State Highway Commission

Tables and Method of Superelevation for One-Way Traffic

Standard Drawing SE-1
4 feet or greater preferred. If less than 4 feet, Precast Units shall be connected to slab (see Barrier Stabilization Detail-Bridge Decks STD, DRWG. TC-41).

BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET

** Offset Distance for Two Way Traffic Only

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<tr>
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If offset distance is not attainable, then see "Barrier Placement with Attenuator" detail shown below.

BARRIER PLACEMENT ALONG ROADWAY WITH OFFSET

** Offset Distance for Two Way Traffic Only

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<th>Speed</th>
<th>Offset Distance</th>
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<td>45</td>
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<td>55</td>
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General Notes
When shown on the Plans, the ends of the Temporary Precast Concrete Barrier shall be protected with an NCHRP-350 or Manual For Assessing Safety Hardware (MASH) approved Crash Cushion. Payment for Crash Cushions shall be made under the item of "Temporary Impact Attenuation Barrier."

BARRIER PLACEMENT WITH ATTENUATOR

** Offset Distance for Two Way Traffic Only

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

SPECIAL END UNIT

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION - TEMPORARY PRECAST BARRIER

STANDARD DRAWING TC-5
CLEARING AND GRUBBING

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

EXCAVATION

EXISTING GROUND
INTERCEPTOR OR DIVERSION DITCH
EXISTING GROUND

GENERAL NOTE
ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUALLY DIVIDED STAGES TO A MAXIMUM OF 2 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. EXCAVATE AND STABILIZE INTERCEPTOR AND/OR DIVERSION DITCHES.
2. PERFORM PHASE 1 EXCAVATION PLACED 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 AND STABILIZE DITCHES AND SLOPES.
5. REMOVE DIVERSION DITCHES AND SLOPE DOGS AND MAINTAIN UNTIL SLOPES ARE STABILIZED.

EMBANKMENT

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

SIDE DITCH STABILIZED AS REQUIRED.

GENERAL NOTE
ALL EMBANKMENT SLOPES SHALL BE DRESSED, PREPARED, SEEDED, AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUALLY DIVIDED STAGES TO A MAXIMUM OF 2 FEET, MEASURED VERTICALLY.

CONSTRUCTION SEQUENCE
1. CONSTRUCT DIVERSION DITCHES, DITCH CHECKS, SEEDBANDS, 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, STABILIZE DITCHES AND SLOPES, DOGS AND MAINTAIN UNTIL SLOPES ARE STABILIZED.

ARKANSAS STATE HIGHWAY COMMISSION
TEMPORARY EROSION CONTROL DEVICES
STANDARD DRAWING TEC-3
ENTRANCE RAMP

NOTE: JOINT SPACING ON THE MAIN LANES SHALL BE ADJUSTED AS NECESSARY TO ENSURE THAT JOINT Locations DO NOT Align WITH MANHOLE LOCATIONS. THE MAIN LANE JOINT SPACER MAY BE REDUCED TO 4' ON MEDIANS.

EXIT RAMP

CONSTRUCTION JOINTS TO BE SPACED AT REGULAR INTERVALS AS ON NORMAL PAVEMENT.

DETAIL 'A'

<table>
<thead>
<tr>
<th>DESIGN VOLUME (GAL)</th>
<th>ROADWAY WIDTH (FT)</th>
<th>LENGTH OF RUNNER (FT)</th>
<th>RETURN RADIUS (FT)</th>
<th>ADDITIONAL SURFACING (IN. TOL.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>8.0</td>
<td>10.0</td>
<td>15.0</td>
<td>2.0</td>
</tr>
<tr>
<td>5000</td>
<td>10.0</td>
<td>15.0</td>
<td>20.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

DETAIL OF EXPANSION JOINT & JOINT SUPPORT

NOTE: EXPANSION JOINTS SHALL BE MEASURED AND PAID FOR AS A P.L.C. EXPANSION JOINT INTERVALS BETWEEN PAVEMENT 10 FT VERTICAL.

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

ARKANSAS STATE HIGHWAY COMMISSION
GENERAL NOTES:

These installations to be used where normal fencing installation would cause the collection of drift in the landfill. These installations will be made only where directed by the engineer.

When the fence line approaches a ditch, valley, or depression, the last post on level ground shall be placed close enough to the post in the depression without going into the ground. In terrains of such extreme irregularity, grading will not be feasible. The normal post shall continue on grade and the ditches or depressions filled with auxiliary fence or other treatment as directed by the engineer. The type installation used will not be made directly but will be included in the contract unit price bid for wire fence or chain link fence.

ARKANSAS STATE HIGHWAY COMMISSION

WIRE FENCE WATER GAPS

STANDARD DRAWING

WF-2
**DOUBLE SWING GATE**

**DETAIL OF REDWOOD SLAT INSTALLATION**

- **GENERAL NOTES**
  1. **Chain Link Fence** being placed on private property shall require a top rail, all vertical, horizontal, or diagonal, all, except for the chain link fence, shall be placed for the contract unit price bid per 1000 LF of chain link fence.
  2. **Tension Wire** shall be in all horizontal, vertical, and diagonal rails, and shall be specified in the contract.
  3. **Brace Rails** shall be placed at the top 1/2 of the fence post, and shall extend from such post to the first adjacent line post.
  4. **Chain Link Fences** shall conform to the specifications.
  5. **Fabric Woven** shall be constructed of tubular members.
  6. **Concrete Fencing** shall be in all horizontal, vertical, and diagonal rails, and shall be specified in the contract.

**Dimensions**

- **Height**
  - 4 ft

<table>
<thead>
<tr>
<th>Height</th>
<th>Line Posts</th>
<th>Top Rail</th>
<th>Brace Post</th>
<th>Tension Bar</th>
<th>Brace Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 ft</td>
<td>4 ft</td>
<td>4 ft</td>
<td>4 ft</td>
<td>4 ft</td>
<td>4 ft</td>
</tr>
</tbody>
</table>

- **Spacing**
  - 12"

**Material**

- **Concrete**
- **Chain Link**
- **Tension Wire**

**Installation**

- **May be modified as shown on the plans**

**TYPICAL INSTALLATION DIAGRAM**
### Dimensions

<table>
<thead>
<tr>
<th>Bar Diameter</th>
<th>Bar Center to Center</th>
<th>Bar Center to Edge</th>
<th>Bar Center to Face of Asphalt</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.244</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>0.284</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>0.315</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>0.345</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

### Sections

**Typical Section 1-1**

![Typical Section Diagram](image)

**Typical Section 2-2**

![Typical Section Diagram](image)

**Detail Sections**

- Section A-A
- Section B-B
- Section C-C

### Notes

- Bar diameters are in inches.
- All dimensions are in feet and inches.
- Designs are subject to change.

---

**Class 3 Concrete**

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS

FOR

REINFORCED CONCRETE BOX COULVERTS

ARE 6200 ksi monotone 21.3.1.1.1 slopes

SINGLES

COVER 5' COVER

STANDARD DRAWING NO R-5000X3
**Bar List for Section X on 30" Cover - One End Only**

<table>
<thead>
<tr>
<th>D.D.</th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>L</th>
<th>M</th>
<th>J</th>
<th>I</th>
<th>H</th>
<th>G</th>
<th>F</th>
<th>E</th>
<th>D</th>
<th>C</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sections and Bar Groups to be Used for Various Cover Sizes**

<table>
<thead>
<tr>
<th>Sections</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
</tr>
</tbody>
</table>

**General Notes**

- **Construction:** All concrete is to be compacted and shall be placed in the day. All required reinforcing steel is to be installed as shown.
- **Standard Drawings:** Standard drawings for all sections are included in the drawing. Refer to Section X for details.
- **Bar Dimensions:** All bar dimensions are shown in the drawing. Refer to Section Y for detailed dimensions.

**Class 5 Concrete**

**Arkansas State Highway Commission**

**Details of Standard Barrel Sections**

**Reinforced Concrete Box Culverts**

**Standard Drawing No:** R:1000:1
### Dimensions

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Quantities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Rebar Details

<table>
<thead>
<tr>
<th>Rebar Length</th>
<th>Rebar Type</th>
<th>Rebar Size (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reinforced Concrete Box Culverts

**4½' 6 Spans**

**3½' 4½ Spans**

**Doubled**

**5½' 4½ Spans**

### Class S Concrete

**Arkansas State Highway Commission**

**Details of Standard Barrel Sections**

**For Reinforced Concrete Box Culverts**

**4½' 6 Spans**

**3½' 4½ Spans**

**Doubled**

**5½' 4½ Spans**

**Standard Drawing No. R-008-K1**

---

**Note:** This drawing is to be used in conjunction with the standard drawings in the Arkansas Department of Transportation specifications. It is essential to follow all specifications and guidelines provided in the drawings.
### Bar List for Section A on 18th Span, One End Only

<table>
<thead>
<tr>
<th>Bar</th>
<th>Size</th>
<th>Quantity</th>
<th>Length</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1/2&quot;</td>
<td>3</td>
<td>30'</td>
<td>Top</td>
</tr>
<tr>
<td>B</td>
<td>3/4&quot;</td>
<td>2</td>
<td>20'</td>
<td>Mid</td>
</tr>
<tr>
<td>C</td>
<td>1&quot;</td>
<td>1</td>
<td>10'</td>
<td>Bottom</td>
</tr>
</tbody>
</table>

---

### General Notes

- All concrete to be Class C, and shall be placed in the dry. All exposed concrete shall be placed in the dry.
- Environment: Repetitive wet/dry conditions with occasional heavy rain and wind.
- Special Environment: Saltwater exposure, marine conditions. The concrete shall be placed in the dry.

### Design Line

- **Top of Slab:** 12" above finished grade
- **Bottom of Slab:** 6" below finished grade

### Class 5 Concrete

- **AR KANSAS STATE HIGHWAY COMMISSION**
- **Details of Standard Barrel Sections**
- **Reinforced Concrete Box Culverts**
- **4, 6, 8, and 10 Spans 2/1, 3/1, or 4/1 SLOPES OVER 6/1 COVER**
- **Standard Drawing No. H685**

---

Additional information and specifications for the design and construction are available in the original document provided.
### ARKANSAS STATE HIGHWAY COMMISSION

#### DETAILS OF STANDARD WINGS

**REINFORCED CONCRETE BOX CULVERTS**

- **4 to 6 Meter Spans**
- **3 to 7 SLOPES**
- **SINGLES, DUPLICATES, TRLPELS**
- **ALL DEPTHS OF COVER**
- **FOR 1:40-0:5 OR LESS**

**STANDARD DRAWING NO. W303-94**

### Quantities

**Concrete - Grades**

- C-15
- C-30
- C-60

### Base List for One Wing - 4 Required

<table>
<thead>
<tr>
<th>Class</th>
<th>Concrete</th>
<th>Description</th>
<th>Material</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Work Dimensions

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Size</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Applicable Specifications

- [Required spec sheet for project]
STA. 1877+00 TO STA. 1877+50
RAMP 4 - ULT. TINT.

STA. 1877+00 LIMIT OF CONST. RAMP 4 STA. 1876+33.42

AREA CUT: 0
AREA STAB: 0
AREA DRAIN: 7
AREA FILT: 0

AREA CUT: 8
AREA STAB: 892
AREA FILT: 5335

LEGEND:
CLASS 1
STAB. ENHANCED
STAB. ENHANCED
LIMIT OF CONST. CR. 8 STA. 54+00.00