ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT
CONSTRUCTION PLANS FOR STATE HIGHWAY

BEE BRANCH - NORTH (S)
VAN BUREN COUNTY
ROUTE 65 SECTION 8
F.A.P. NHPP-0071(30)

JOB 080423

NOT TO SCALE

STATEMENT OF WORK

VICTORY MAP

PROJECT LOCATION

BRIDGE DATA

1. STA. 777+55.63 BRIDGE END IN PLACE
   Bridge No. 0693
   20'-0" CONT. COMP. W-BEAM UNIT (64'-80'-64')
   58'-0" CLEAR ROADWAY
   STA. 777+55.63 BRIDGE END

2. STA. 500+00.00 BEGIN JOB 080423
   Bridge No. 0694
   130'-0" CONT. COMP. W-BEAM UNIT (40'-50'-40')
   58'-0" CLEAR ROADWAY
   STA. 500+00.00 BEGIN JOB 080423

LOG MILE 11.14

PROJECT LENGTH CALCULATED ALONG C.L. CONSTRUCTION

GROSS LENGTH OF PROJECT 42892.7 FEET OR 8.324 MILES
NET LENGTH OF ROADWAY 42850.1 FEET OR 8.289 MILES
NET LENGTH OF BRIDGES 342.6 FEET OR 0.065 MILES
NET LENGTH OF PROJECT 42992.71 FEET OR 8.324 MILES

P.E. JOB 080423
GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

ERRATA (ERRATA FOR THE BOOK OF STANDARD SPECIFICATIONS)

FAAH-1273_1 REQUIRED CONTRACT PROVISIONS FEDERAL- AID CONSTRUCTION CONTRACTS
FAAH-1273_2 SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - NOTICE TO CONTRACTORS
FAAH-1273_3 SUPPLEMENT - SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES (29 U.S.C. 140)
FAAH-1273_4 SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - GOALS AND TIMETABLES
FAAH-1273_5 SUPPLEMENT - EQUAL EMPLOYMENT OPPORTUNITY - FEDERAL STANDARDS
FAAH-1273_6 SUPPLEMENT - TRAINING PROGRAM, JOB 006423
FAAH-1273_7 SUPPLEMENT - POSTERS AND NOTICES REQUIRED FOR FEDERAL- AID PROJECTS

103_3 CONTRACTOR'S LICENSE
104_2 DEPARTMENT NAME CHANGE
106_1 LIQUIDATED DAMAGES
106_2 WORK ALLOWED PRIOR TO ISSUANCE OF WORK ORDER
300_1 AGGREGATE BASE COURSE
400_1 TACK COATS
410_4 DESIGN AND QUALITY CONTROL OF ASPHALT MIXTURES
410_4 CONSTRUCTION REQUIREMENTS AND ACCEPTANCE OF ASPHALT CONCRETE PLANT MIX COURSES
406_1 RETROREFLECTIVE SHEETING FOR TRAFFIC CONTROL SERVICES IN CONSTRUCTION ZONES
406_1 PIPE CULVERTS FOR SIDE DRAINS
621_1 FILTER SOCKS
621_1 DEPARTMENT NAME CHANGE

GENERAL NOTES

1. GRADE LINE DENOTES FINISHED GRADE WHERE SHOWN ON PLANS.
2. ALL PIPE LINES, POWER, TELEPHONE, AND TELEGRAPH LINES TO BE MOVED OR LOWERED BY THE RESPECTIVE OWNERS AS PER AGREEMENT WITH SUCH OWNERS.
3. ANY EQUIPMENT OR APPURTENANCE THAT INTERFERES WITH THE PROPOSED CONSTRUCTION AND WHICH MAY BE THE PROPERTY OF UTILITY SERVICE ORGANIZATIONS SHALL BE MOVED BY THE OWNERS UNLESS OTHERWISE PROVIDED.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING U. S. MAILBOXES WITHIN THE PROJECT LIMITS IN SUCH A MANNER THAT THE PUBLIC MAY RECEIVE CONTINUED MAIL SERVICE. PAYMENT WILL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS BID ITEMS.
5. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS.
6. ALL TREES THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE STHORED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT TO BE REMOVED SHALL BE HARMED AS LITTLE AS POSSIBLE DURING THE CONSTRUCTION OPERATIONS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A FENCE TO CONTROL LIVESTOCK IN AREAS WHERE PASTURES ARE SEVERED. FENCE MAY BE CONSTRUCTED INITIALLY OR IN LIEU THEREOF, THE CONTRACTOR AT HIS OWN EXPENSE, MAY ELECT TO PROVIDE TEMPORARY FENCING SUITABLE TO CONTAIN LIVESTOCK.
8. ALL FLEXIBLE BASE AND ASPHALT PAVEMENTS REMOVED SHALL BE PAID FOR UNDER THE ITEM NO. 310 - UNCLASSIFIED EXCAVATION.
9. THE EXISTING ASPHALT PAVEMENT TO BE REMOVED FROM THE REMAINING PAVEMENT SHALL BE SEPARATED BY BANKING ALONG A NEXT LINE. AFTER BANKING, THE PAVEMENT TO BE REMOVED SHALL BE CAREFULLY REMOVED IN A MANNER THAT WILL NOT DAMAGE THE PAVEMENT THAT IS TO REMAIN. ANY DAMAGE OF THE ASPHALT PAVEMENT THAT IS TO REMAIN IN PLACE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
ON ALL SUPERELEVATED CURVES AND
THRU SUPERELEVATION TRANSITIONS THE
ALGEBRAIC DIFFERENCE BETWEEN
PAVEMENT SLOPE AND SHOULDER SLOPE
SHALL NOT EXCEED 0.09'/'.

* TO BE USED IF AND WHERE
DIRECTED BY THE ENGINEER

**NOTCH & WIDEN OPEN SHOULDER
TRANS. EXISTING PASSING LANE SECTION
TO FULL DEPTH - SUPERELEVATED

STA. 728+00.00  -  STA. 728+50.00

FULL DEPTH OPEN SHOULDER
SUPERELEVATED

STA. 780+00.00  -  STA. 724+25.00
STA. 750+50.00  -  STA. 741+00.00

TRANSTION FROM
STA. 724+25.00  -  STA. 728+00.00

**TYPICAL SECTIONS OF IMPROVEMENT
NOTCH & WIDEN CURB & GUTTER TANGENT

STA. 776+00.00  -  STA. 777+56.83 B.E.
STA. 779+25.77 B.E.  -  STA. 779+80.00
STA. 803+84.67  -  STA. 802+99.20
STA. 879+40.00  -  STA. 876+56.82 B.E.
STA. 897+98.26 B.E.  -  STA. 897+00.66

C.C.

NOTCH & WIDEN CURB & GUTTER SUPERELEVATION

STA. 779+80.00  -  STA. 782+54.8
STA. 789+43.79  -  STA. 803+84.67
STA. 802+99.20  -  STA. 805+17.68
STA. 864+33.9  -  STA. 864+42.00
STA. 897+00.66  -  STA. 823+83.86

TYPICAL SECTIONS OF IMPROVEMENT
NOTES:

REFER TO CROSS SECTIONS FOR DETERMINATION FROM THE NORMAL SLOPES. NO CHANGES SHALL BE MADE FROM THE PLANS AND SPECIFICATIONS WITHOUT THE APPROVAL OF THE ENGINEER.

THE THICKNESS OF AGGREGATE BASE COURSE SHALL BE WITHIN PLUS OR MINUS ONE INCH OF THE PLAN THICKNESS. THE CONTRACTOR SHALL REPORT BEFORE CONCRETING ANY THICKNESS阐释 DOES NOT MEET TOLERANCES INDICATED. PAYMENT WILL NOT BE MADE FOR MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED.

ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ONLY IF AND WHERE DIRECTED BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT OF MATERIAL TO BE LEVELED AND/OR LEVELING OPERATIONS SHALL BE PERFORMED BEFORE CONCRETING. MATERIAL PLACED IN EXCESS OF THE TOLERANCE INDICATED WILL NOT BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE VARIOUS CONTRACT ITEMS.

THE FINAL 2" OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED.

LONGITUDINAL JOINTS SHALL BE AT LANE LINES.

PENDING TO AND DURING PLACEMENT OF MATERIAL IN FRONT OF THE CURB AND GUTTER, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE MATERIAL USED SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THE MATERIAL SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

NOTCH & WIDEN CURB & GUTTER
TANGENT
STA. 859+00.00 - STA. 884+00.00

TRANSITION FROM STA. 839+00.00 TO STA. 859+00.00

5'-0" CONC. 3'-0" MILE GRASS

5'-0" ADH. SURFACE COURSE (6")
220 LBS. PER SQ. YD.,

36'-0" ADH. SURFACE COURSE (6")
+VAR. LBS. PER SQ. YD., & TACK COAT
FOR LEVELING

36'-0" TACK COAT
1.0 GAL. PER SQ. YD.,

0'-0" LANE 1'-0" LANE 2'-0" TURN LANE 3'-0" LANE 4'-0" LANE

PROFILE GRADE

NOTCH & WIDEN CURB & GUTTER TANGENT
STA. 859+00.00 - STA. 884+00.00

TYPICAL SECTIONS OF IMPROVEMENT
NOTCH & WIDEN CURB & GUTTER
SUPERELEVATION

STA 890+00.00  -  STA 899+08.05
STA 908+37.8  -  STA 918+49.26

C.L.
CONST.
58'-0" FACE TO FACE

5'-0" ADHM SURFACE COURSE (1/2"
220 LBS. PER SQ. YD.

4'-0" ADHM SURFACE COURSE (1/2"
+VAR. LBS. PER SQ. YD. & TACK COAT
FOR LEVELING
48'-0" TACK COAT
0.7 GAL. PER SQ. YD.

3'-0" CONC. 5'-0"
WALK GRASS
16" L.T.J & TACK COAT

5'-0"
PROFILE GRADE
SLOPE

N'-NOTCH

48'-0" LANE
10'-0" LANE
6'-0" LANE
8'-0" LANE
0'-0"

PROFILE GRADE SUPERELEVATION SLOPE
theoretical

P.O. 0.000 / 2.000 MAX.

NOTCH & WIDEN CURB & GUTTER
TANGENT

STA 899+08.05  -  STA 908+37.8

C.L.
CONST.
58'-0" FACE TO FACE

5'-0" ADHM SURFACE COURSE (1/2"
220 LBS. PER SQ. YD.

4'-0" ADHM SURFACE COURSE (1/2"
+VAR. LBS. PER SQ. YD. & TACK COAT
FOR LEVELING
48'-0" TACK COAT
0.7 GAL. PER SQ. YD.

3'-0" CONC. 5'-0"
WALK GRASS
16" L.T.J & TACK COAT

5'-0"
PROFILE GRADE
SLOPE

N'-NOTCH

48'-0" LANE
10'-0" LANE
6'-0" LANE
8'-0" LANE
0'-0"

PROFILE GRADE SUPERELEVATION SLOPE
theoretical

P.O. 0.000 / 2.000 MAX.

NOTES:

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

THE THICKNESS OF AGGREGATE BASE COURSE
SHALL BE WITHIN PLUS OR WITHIN MINUS THE
THICKNESS SHOWN. THE CONTRACTOR SHALL
INSPECT THE MATERIALS TO BE USED AND
INSPECT THE MILEAGE OF THE TOLERANCE
INDICATED.

ASPHALT FOR LEVELING OF EXISTING SURFACE
SHALL BE PLACED ONLY IF AND WHERE DIRECTED
BY THE ENGINEER. CALCULATIONS FOR THE AMOUNT
OF ASPHALT WILL NOT BE MADE. THE CONTRACTOR
SHALL BE責 FOR THE MILEAGE OF THE TOLERANCE
SHOWED.

THE FINAL 7" OF SURFACE COURSE IS TO BE
PLACED AFTER ALL OTHER COURSES HAVE BEEN
PLACED. THE BASE COURSE SHALL BE AT LANE LINES.

THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHODS
OF DRAINAGE WILL NOT BE APPROVED WITHOUT THE
CONTRACTOR'S PAYMENT.

THE JOB OF DRAINAGE WILL BE CONSIDERED
INCLUDED IN THE COST FOR VARIOUS CONTRACT ITEMS.

PRIOR TO AND DURING PLACEMENT OF MATERIAL IN FRONT
OF THE CURB AND GUTTER, THE CONTRACTOR SHALL
POUR POSITIVE DRAINAGE AT ALL TIMES. THE METHODS
OF DRAINAGE WILL NOT BE APPROVED WITHOUT THE
CONTRACTOR'S PAYMENT.

TYPICAL SECTIONS OF IMPROVEMENT

RAW TEXT
NOTCH & WIDEN CURB & GUTTER TANGENT

STA. 922+50.00 - STA. 924+43.69

NOTCH & WIDEN CURB & GUTTER TANGENT

STA. 924+43.69 - STA. 928+52.71

NOTES:
- REFER TO CROSS SECTIONS FOR DEVIATION FROM THE NORMAL SLOPES (WHERE SHOWN) SHALL BE MADE ON THE PLANS AND SPECIFICATIONS WITHOUT THE APPROVAL OF THE ENGINEER.
- THE THICKNESS OF ADDITIVE BASE COURSE SHALL BE 4" PLUS OR MINUS ONE INCH OF THE PLANNED THICKNESS SHOWN. THE CONTRACTOR WILL CORRECT ANY DEFICIENT THICKNESS THAT DOES NOT MEET ENGINEER'S SPECIFICATIONS UPON RECEIPT IN EXCESS OF THE TOLERANCE INDICATED.
- ASPHALT FOR LEVELING OF EXISTING PAVEMENT SHALL BE PLACED ON A BASE OF DRY POWDER. LEVELING OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR, BEFORE CONSTRUCTION OF THE EXISTING PROFILE FOR LEVELING. ALL MATERIALS USED FOR DIRECT GRAVEL PAVEMENT SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR THE HAMPS PAVEMENT.
- THE FINISH PAVEMENT OF SURFACE COURSE IS TO BE PLACED AFTER ALL OTHER COURSES HAVE BEEN LAYED. LONGITUDINAL JOINTS SHALL BE AT LANE CENTERS.
- PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF THE TANGENT CURB, THE CONTRACTOR TO PROVIDE PROTECTIVE BARRIER AT ALL TIMES. THE REBAR AND STUDS SHALL BE APPROVED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCLUDED IN THE PRICE BID FOR VARIOUS CONTRACT ITEMS.

TYPICAL SECTIONS OF IMPROVEMENT
METHOD OF RAISING GRADE

NO. 4 BARS AT 12" HORIZONTAL SPACING

TOP VIEW

VAR. WIDTH

MIN. 3" COVER

VARIABLE HEIGHT

NO. 4 BARS AT 12" HORIZONTAL SPACING

FRONT VIEW

SIDE VIEW

PIPE EXTENSION
REINFORCED CONCRETE COLLAR DETAIL

TRANSITION FROM OPEN SHOULDER TO CURB & GUTTER SECTION

SPECIAL DETAILS
DETIAL FOR COUNTY ROAD TURNOUTS
OPEN SHOUDEL SECTION

DETIAL FOR DRIVEWAY TURNOUTS
OPEN SHOULDIE SECTION (ARTERIALS)

DETIAL OF TURNOUTS, ASPHALT STREETS,
COUNTY ROADS & STATE HIGHWAYS
CURB & GUTTER SECTION

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

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

NOTE: PAYEMENT STRUCTURE FOR STATE HIGHWAYS, CITY STREETS,
& COUNTY ROADS TO BE SAME AS MAIN LABEL.

NOTE: REFER TO PLAN SHEETS
FOR WIDTH OF COUNTY ROAD.
NOTES:
1. LAP MESH FABRIC MIN. 12" LONGITUDINALLY AND MIN. 6" TRANSVERSELY.
2. MESH FABRIC IS NOT REQUIRED WHEN WIDTH OF PORTLAND CEMENT CONCRETE BASE IS LESS THAN 12'.
3. MESH FABRIC TYPE 3 WILL NOT BE PAID FOR DIRECTLY, BUT FULL COST WILL BE CONSIDERED INCLUDED IN THE CONTRACT PRICE $10 PER SQ. YD. FOR PORTLAND CEMENT CONCRETE BASE (1/2'-1'-6")

DETAIL OF REINFORCING STEEL FOR PAVEMENT (MESH FABRIC TYPE 3)

DROP INLET PLAN VIEW
N.T.S.

FILTER SOCK DROP INLET PROTECTION (E-3)

SPECIAL DETAILS
FULL DEPTH SHOULDER
FOR MAINTENANCE OF TRAFFIC
STA. 645-00 - STA. 651-00
STA. 689-00 - STA. 696-00

DETAIL FOR TRANSITIONS

P.C.C. BASE WIDENING DETAIL
P.C.C. BASE WIDENING TO BE USED IF AND WHERE DIRECTED BY THE ENGINEER.

CONSTRUCTION PROJECT INFORMATION SIGN
SI 080403 15 S17

Job XXXXXX
Start Date XXXXX
Est Completion Mo Year
IDRIVE ARKANSAS.COM
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, BRIDGE DECKS, APPROACH SLABS, INTERSECTING STREETS OR ROADWAYS, RESIDENTIAL OR COMMERCIAL DRIVEWAYS OR ACROSS TRANSVERSE JOINTS OF CONCRETE SHOULDERS.

2. RUMBLE STRIPS SHALL NOT BE INSTALLED ON A PAVED SHOULDER THAT IS USED AS A DECELERATION LANE FOR THE LENGTH DEEMED APPROPRIATE BY THE ENGINEER.

3. THE 4" OFFSET FROM THE EDGE LINE MAY BE INCREASED TO AVOID LONGITUDINAL JOINTS. IN ALL CASES, THE LATERAL DEVIATION FROM THE PLANNED OFFSET SHOULD BE KEPT TO A MINIMUM.

4. RUMBLE STRIPS SHALL BE MEASURED BY THE LINEAR FOOT LONGITUDINALLY ALONG THE SHOULDER. PAYMENT SHALL INlude THAT Portion of the shoulder on which Rumble Strips have been constructed. No Measurement or Payment will be made for Gaps, Driveaway Turnouts, or Other Public Road Intersections where Rumble Strips have not been constructed.

5. THE 6" DEPTH SHALL GENERALLY APPLY FOR THE ENTIRE 12" LENGTH. SOME VARIATION TO SUIT SHOULDER SLOPE BREAKS MAY BE NECESSARY.

PLAN VIEW

NOTE: GAP PATTERN SHALL BE ADJUSTED BY THE ENGINEER IN THE FIELD ALLOWING FOR DRIVEWAYS TO SERVE AS THE GAP.

SPECIAL DETAILS
CLEARING & GRUBBING
SAND BAG DITCH CHECKS (E-5)
73 locations = 796 bags
ROCK DITCH CHECKS (E-42)
13 locations = 39 cu. Yd.
SILT FENCE (E-81)
Elevation = 233 Lzt. Ff2
SEDIMENT BASIN (E-14)
13 locations = 29 cu. Yd.

REVISIONS

LEGEND

CLEARING & GRUBBING
SAND BAG DITCH CHECKS (E-5)
73 locations = 796 bags
ROCK DITCH CHECKS (E-42)
13 locations = 39 cu. Yd.
SILT FENCE (E-81)
Elevation = 233 Lzt. Ff2
SEDIMENT BASIN (E-14)
13 locations = 29 cu. Yd.

STATION 500+00
BEGIN JOB 080423
LOG MILE II.4
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
### REVISIONS

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### LEGEND

- **E-1**: Sand Bag Ditch Checks
- **E-2**: Rock Ditch Checks
- **E-3**: Silt Fence
- **E-4**: sediment basin
- **E-5**: Triangular Silt Dike

**NOTES**
- Retain all erosion control devices until end of construction unless otherwise noted.

**CLEARING & GRUBBING**
- Sand Bag Ditch Checks: (E-1)
  - 64 Locations: 308 Bag
- Rock Ditch Checks: (E-2)
  - 6 Locations: 33 Cu. Yd
- Silt Fence: (E-3)
  - 12 Locations: 1032 Cu Yd

**TEMPORARY EROSION CONTROL DETAILS**

**CLEARING & GRUBBING**

**TEMPORARY EROSION CONTROL DETAILS**

**STATION**
- STA 520+00 - STA 525+60
  - Silt Fence = 297 Lin.Ft.
- STA 525+60 - STA 532+00
  - Silt Fence = 297 Lin.Ft.
CLEARING & GRUBBING

SAND BAG DITCH CHECKS R-15
GS LOCATIONS = 512 BAG

ROCK DITCH CHECKS R-20
GS LOCATIONS = 640 BAG

SILT FENCE E-I
GS LOCATIONS = 445 LIN. FT.

SEDIMENT BASIN E-IC
GS LOCATION = 3240 YD.

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL  END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
CLEANING & GRUBBING

SAND BAG DITCH CHECKS: 25 FT LOCATIONS = 350 FT.
ROCK DITCH CHECKS: 25 FT.
SILT FENCE: 25 FT.
SEGMENT BASIN: 20 FT.

EXISTING R/W CLEARING & GRUBBING

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
CLEARING & GRUBBING
SAND BAG DITCH CHECKS E-5
(5 locations = 330 bags)
ROCK DITCH CHECKS E-6
(8 locations = 540 c'u. yd.)
SILT FENCE E-6
(1 location = 2666 lnl. ft.)
SEDIMENT BASIN E-6
(12 locations = 796 c'u. yd.)
CLEARING & GRUBBING
SAND BAG DITCH CHECKS E-5
(5 locations = 330 bags)
ROCK DITCH CHECKS E-6
(8 locations = 540 c'u. yd.)
SILT FENCE E-6
(1 location = 2666 lnl. ft.)
SEDIMENT BASIN E-6
(12 locations = 796 c'u. yd.)
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

LEGEND
- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- SILT FENCE
- SEDIMENT BASIN
- TRIANGULAR SILT DIKE

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CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
LEGEND

- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- SILT FENCE
- SEDIMENT BASIN
- O'C TRAINGULAR SILT DKE

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING & GRUBBING
SAND BAG DITCH CHECKS (E-5)
LOCATIONS: 220 BAG

ROCK DITCH CHECKS (E-6)
LOCATIONS: 30 CG YD

SILT FENCE (E-10)
LOCATION: 381 LIN FT

SEDIMENT BASIN (E-11)
LOCATION: 471 CU YD

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SILT FENCE (E-11)
LOCATION: 381 LIN FT.

SEDIMENT BASIN (E-11)
LOCATION: 471 CU YD

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING & GRUBBING
SAND BAG DITCH CHECKS (E-5)
LOCATIONS: 220 BAG

ROCK DITCH CHECKS (E-6)
LOCATIONS: 30 CG YD

SILT FENCE (E-10)
LOCATION: 381 LIN FT

SEDIMENT BASIN (E-11)
LOCATION: 471 CU YD

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### LEGEND

- (E-5) SAND BAG DITCH CHECKS
- (E-6) ROCK DITCH CHECKS
- (E-I) SILT FENCE
- (E-V) SEDIMENT BASIN
- (E-IV) TRIANGULAR SILT Dike

**NOTE:** RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

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### CLEARING & GRUBBING

- SAND BAG DITCH CHECKS (E-5): 10 LOCATIONS = 220 BAG
- ROCK DITCH CHECKS (E-6): 13 LOCATIONS = 59 CU. YD.
- SILT FENCE (E-I): 0 LOCATIONS = 223 LIN. FT.
- TRIANGULAR SILT Dike (E-IV): 0 LOCATIONS = 100 LIN. FT.
- SEDIMENT BASIN (E-V): 2 LOCATIONS = 320 CU. YD.

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### TEMPORARY EROSION CONTROL DETAILS

- CLEARING & GRUBBING DETAILS
- TEMPORARY EROSION CONTROL

---

PREPARED BY: [Name]

[Signature]

DATE: [Date]

SCALE: [Scale]

[Rev. 0]
REVISIONS

DATE

REVISION

---

LEGEND

SAND BAG DITCH CHECKS
ROCK DITCH CHECKS
SLT FENCE
SEDIMENT BASIN
TRIANGULAR SLT DME

NOTE: RETAIN ALL EROSION CONTROL DEVICES OUTSIDE OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING & GRUBBING
SAND BAG DITCH CHECKS (E-5)
ROCK DITCH CHECKS (E-6)
SEDIMENT BASIN (E-14)

SESSION BASIN (E-H)
2 LOCATIONS = 344 CU YD

CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS

NOTE: RETAIN ALL EROSION CONTROL DEVICES OUTSIDE OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
CLEARING & GRUBBING
SAND BAG DITCH CHECKS E-61
15 LOCATIONS = 150 BAGS
ROCK DITCH CHECKS E-61
15 LOCATIONS = 45 CU. YD.
SILT FENCE E-61
15 LOCATIONS = 358 CU. YD.

LEGEND

- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- SILT FENCE
- SEDIMENT BASIN
- TRAingle SALT OKE

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

CLEARING & GRUBBING
TEMPORARY EROSION CONTROL DETAILS
STAGE I
SAND BAG DITCH CHECKS (E-5)
5 LOCATIONS X 10 BAG
ROCK DITCH CHECKS (E-6)
7 LOCATIONS X 250 GT YD
SEGMENT BASH (E-46)
2 LOCATIONS X 100 GT YD

STAGE I
SAND BAG DITCH CHECKS
5 LOCATIONS X 10 BAG
ROCK DITCH CHECKS
7 LOCATIONS X 250 GT YD
SEGMENT BASH (E-46)
2 LOCATIONS X 100 GT YD

LEGEND
1. FILTER SOCK
2. SAND BAG DITCH CHECKS
3. ROCK DITCH CHECKS
4. DROP INLET SILT FENCE
5. Silt Fence
6. SEGMENT BASH
7. TRIANGULAR SILT DKE

NOTE: RETAIN ALL EROSION CONTROL
DEVICES UNTIL END OF CONSTRUCTION
UNLESS OTHERWISE NOTED.

DATE REVISION

REVISIONS

LEGEND

TEMPORARY EROSION CONTROL DETAILS

STATION 500+00.00
BEGIN JOB 080423
LOG MILE 1.14
### REVISIONS

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### LEGEND

- **Filter Sock**
- **Sand Bag Ditch Checks**
- **Rock Ditch Checks**
- **Drop Inlet Silt Fence**
- **Rock Silt Fence**
- **Sediment Basin**

*Note: Retain all Erosion Control Devices until End of Construction unless otherwise noted.*

**STAGE 1**

- **Sand Bag Ditch Checks** (E-5)
- **Rock Ditch Checks** (E-6)

Locations:
- **(E-5)**
- **(E-6)**

**Temporary Erosion Control Details**

STAGE 1

Temporary Erosion Control Details
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
REVISIONS

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<th>REVISION</th>
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LEGEND

- FILTER SOCK
- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- DROP INLET SILT FENCE
- SILT FENCE
- SEQUESTRATION BASIN
- COCO TRUANGLER SALT ON

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
STAGE I
SAND BAG DITCH CHECKS (E-51)
15 locations = 46 bags
ROCK DITCH CHECKS (E-65)
14 locations = 125 col. YLD
SILT FENCE (E-58)
8 location = 75 lin. ft.
SEDIMENT BARRIER (E-40)
6 locations = 580 col. YLD
SILT FENCE (E-11)
2 locations = 1500 ft.
SEDIMENT BASIN (E-14)
1 location = 580 col. YLD

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

REVISIONS

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LEGEND

- FILTER SOCK
- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- DROP INLET SILT FENCE
- SILT FENCE
- SEGMENT BARRIER
- TRIANGULAR SILT Dike

STAGE II
TEMPORARY EROSION CONTROL DETAILS

REV. 07/17/2013
NOTE: RETAIN ALL EROSION CONTROL DEVICES AND TEMPORARY EROSION CONTROL UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNLESS OTHERWISE NOTED.

LEGEND

- Filter Sock (F.S.)
- Sand Bag Ditch Checks (S.B.D.C.)
- Rock Ditch Checks (R.D.C.)
- Drop Inley Silt Fence (D.I.S.F.)
- Silt Fence (S.F.)
- Segment Basin (S.B.)

SAND BAG DITCH CHECKS (S.B.D.C.)
- Locations = (E-5)
ROCK DITCH CHECKS (R.D.C.)
- Location = 4560.00
SILT FENCE (S.F.)
- Location = 4560.00
SEGMENT BASIN (S.B.)
- Location = 4560.00

STAGE I
TEMPORARY EROSION CONTROL DETAILS
REVISIONS

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<th>DATE</th>
<th>REVISION</th>
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LEGEND

1. FILTER SOCK
2. SAND BAG DITCH CHECKS
3. ROCK DITCH CHECKS
4. DROP INLET SLIT FENCE
5. SLIT FENCE
6. SEDIMENT BARRIER
7. TRIANGULAR SILT Dike

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE 1
- SAND BAG DITCH CHECKS (E-5)
- ROCK DITCH CHECKS (E-6)
- TRIGONAL SILT Dike (LOCATION = 150 FT)
- SEDIMENT BARRIER (E-14)

TEMPORARY EROSION CONTROL DETAILS
**LEGEND**

- **1** FILTER SOCK
- **2** SAND BAG DITCH CHECKS
- **3** ROCK DITCH CHECKS
- **4** DROP INLET SLT FENCE
- **5** SLT FENCE
- **6** CEMENT BARRIER
- **7** TRIANGULAR SLT DKE

**NOTE:** RETAIN ALL EROSION CONTROL DETAILS UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

### REVISIONS

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NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
### REVISIONS

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### LEGEND

- **FILTER SOCK**
- **ROCK DITCH CHECKS**
- **DROP INLET SLT FENCE**
- **SLT FENCE**
- **SEMENT BASIN**
- **GOOD TRANSAN SLT DNE**

**NOTE:** RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

### STAGE 1
- TEMPORARY EROSION CONTROL DETAILS

**STAGE 1**
- FILTER SOCK (E-3)
  - 10 LOCATIONS = 64 LIN FT.
- ROCK DITCH CHECKS (E-10)
  - 12 LOCATIONS = 44 BAD
- ROCK DITCH CHECKS (E-10)
  - 12 LOCATIONS = 6 CLY BAD

**TEMPORARY EROSION CONTROL DETAILS**
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
NOT: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
STAGE 2
SAND BAG DITCH CHECKS (E-51)
LOCATIONS: 50 BAG
ROCK DITCH CHECKS (E-46)
LOCATIONS: 55 CU. YD.
SEDIMENT BASIN (E-44)
LOCATIONS: 559 CU. YD.

REVISIONS

DATE | REVISION
--- | ---

LEGEND

FILTER SOCK
SAND BAG DITCH CHECKS
ROCK DITCH CHECKS
DROP MILE SILT FENCE
SILT FENCE
SEDIMENT BASIN
TRIANGULAR SILT DOME

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE 2
TEMPORARY EROSION CONTROL DETAILS
REVISIONS

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LEGEND

- FILTER SOCK
- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- DROP INLET SILT FENCE
- SILT FENCE
- SEGMENT BASIN

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL TOP OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE 2
SAND BAG DITCH CHECKS E-51
(RELOCATIONS + 70 BAGS)
ROCK DITCH CHECKS E-61
(RELOCATIONS + 6 ERO FENCE)

PROPOSED R/W
EXISTING R/W

TEMPORARY EROSION CONTROL DETAILS

REVISION STAGE 2

DATE: 10-10-17

PROPRIETARY INFORMATION

102423 58 517
STAGE 2
TEMPORARY EROSION CONTROL DETAILS

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
STAGE 2

SAND BAG DITCH CHECKS (E-52)
16 LOCATIONS = 182 BAG
ROCK DITCH CHECKS (E-63)
18 LOCATIONS = 246 CU. YD.
SEGMENT BASIN (E-44)
22 LOCATIONS = 936 CU. YD.

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
REVISIONS

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LEGEND

- Filter Rock
- Sand Bag Ditch Checks
- Rock Ditch Checks
- Drop Inlet/SLT Fence
- SLT Fence
- Sediment Basin

NOTES: Retain all erosion control devices until end of construction unless otherwise noted.

STAGE 2

Rock Ditch Checks E-11
(2) Locations + E-11 Tel.
SLT Fence E-11
RELOCATION = 80 LIN. FT.

TEMPORARY EROSION CONTROL DETAILS
STAGE 2
SAND BAG DITCH CHECKS (E.51)
1/2 LOCATIONS X 44 BAGS
ROCK DITCH CHECKS (E.61)
4 LOCATIONS X 15 (CO. 150)

LEGEND
- FILTER SOCK
- SAND BAG DITCH CHECKS
- ROCK DITCH CHECKS
- DROPPED INLET SLT FENCE
- SLT FENCE
- SEGMENT BASIN
- TRIANGULAR SLT DKE

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.

STAGE 2
TEMPORARY EROSION CONTROL DETAILS
**Temporary Erosion Control Details**

**Stage 2**
- Filter socks (12 locations = 36 units)
- Sandbag ditch checks (5 locations = 60 bags)
- Rock ditch checks (2 locations = 50 ft.)

**LEGEND**
- Filter sock
- Sandbag ditch check
- Rock ditch check
- Drop inlet silt fence
- Silt fence
- Sediment basin
- Shed triangular silt fence

**REVISIONS**

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<th>REVISION</th>
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**Note:** Retain all erosion control devices until end of construction unless otherwise noted.
NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
STAGE 2
FILTER SOCKS 2-3
OR LOCATIONS < 174 LNK FT.
SAND BAG DITCH CHECKS E-S
LOCATIONS > 242 BAG
ROCK DITCH CHECKS E-G
LOCATIONS 3-5 LF TH.

REVISIONS

DATE REVISION

LEGEND

NOTE: RETAIN ALL EROSION CONTROL DEVICES UNTIL END OF CONSTRUCTION UNLESS OTHERWISE NOTED.
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MAINTENANCE OF TRAFFIC DETAILS

ADVANCE WARNING - SIDE ROADS
(ALL STAGES)

STA. 521+00 LT., SPRING MEADOW RD.
STA. 526+89 LT., MARPOSA LN.
STA. 538+42 RT., RANCH RD.
STA. 554+55 RT., EAST MOUNTAIN RD.
STA. 564+95 LT., KAY LN.
STA. 575+80 LT., QUATTLEBAUM RD.
STA. 636+41 LT., CLINTON QUARRY RD.
STA. 652+67 LT., NORCLIFF RD.
STA. 703+92 LT., NIAGARA RD.
STA. 752+52 RT., HWY. 356 E.
STA. 755+32 LT., BOAR RD.
STA. 784+00 RT., LYNCH RD.
STA. 822+56 LT., SHAFT LN.
STA. 832+58 RT., CHOCTAW LN.
STA. 842+48 LT., JASON ST.
STA. 863+77 LT., KIP LN.
STA. 887+53 RT., CEMETERY DR.
STA. 903+72 LT., OLD HWY. 9.
STA. 928+32 LT., OLD LANE ST.
STA. 966+58 RT., RICHARD RD.

STA. 500+00.00
BEGIN JOB 080423
LOG MILE NJ4

STA. 928+32.71
END JOB 080423

MAINTENANCE OF TRAFFIC DETAILS
SEQUENCE OF CONSTRUCTION:

STAGE I

MAINTAIN TRAFFIC ON EXISTING ROADWAY
NARROW TO TWO LANES AS SHOWN ON DETAILS

CONSTRUCT WIDENING ON LT.
- STA 500+00 TO STA 580+00 LT. = 100 EACH
- STA 500+00 TO STA 540+00
- STA 580+00 TO STA 590+00
- STA 590+00 TO STA 610+00
- STA 707+00 TO STA 820+00

CONSTRUCT WIDENING ON RT.
- STA 500+00 TO STA 610+00
- STA 580+00 TO STA 500+00
- STA 500+00 TO STA 590+00
- STA 580+00 TO STA 590+00
- STA 640+00 TO STA 707+00
- STA 707+00 TO STA 773+92
- STA 820+00 TO STA 929+00

CONSTRUCTION PAVEMENT MARKINGS:
STA 500+25, STA 620+36, MLA, LNL, FT.

MARKINGS:
- 36 = 1717

TRAFFIC DRUMS:
- 20' D.C. = 10 EACH

FURNISH & INSTALL TEMPLET CONCRETE Curbing
- LNL, FT. = 13 LOCATIONS = 440'
STAGE I
TRAFFIC DETAILS
STA. 770+00 - STA. 773+00 RT. = 7 EACH
STA. 773+00 - STA. 784+00 LT. = 25 EACH

STAGE CLOSED
04/02-04 (48" X 30"
6,000-5

TRAFFIC DRUMS @ 20' CLO
TRAFFIC DRUMS @ 20' CLO

STAGE I
SHAFT 3

STAGE II MAINTENANCE OF TRAFFIC DETAILS
SEQUENCE OF CONSTRUCTION

STAGE 1:
MAINTAIN TRAFFIC ON EXISTING ROADWAY.
CLOSE PASSING LANE AND SHIFT SOUTHBOUND TRAFFIC TO SHARING LANE
CONSTRUCT WIDENING ON RT.
STA. 500+00 TO STA. 585+00
STA. 585+00 TO STA. 107+00
STA. 107+00 TO STA. 820+00
CONSTRUCT WIDENING ON LT.
STA. 585+00 TO STA. 107+00
STA. 107+00 TO STA. 820+00

STAGE 2:
SHIFT TRAFFIC TO WIDENING FROM STAGE 1.
CONSTRUCT WIDENING ON RT.
STA. 500+00 TO STA. 585+00
STA. 585+00 TO STA. 929+36
CONSTRUCT WIDENING ON LT.
STA. 585+00 TO STA. 707+00
STA. 707+00 TO STA. 820+00

MAINTENANCE OF TRAFFIC DETAILS

STAGE 2:
TRAFFIC DRUMS:
STA. 494+00 - STA. 583+00 RT, 178 EACH
CONSTRUCTION PAVEMENT MARKINGS:
STA. 494+00 - STA. 929+36 - STRAIGHT LINES, FT.

STAGE 2:
SHIFT TRAFFIC TO WIDENING FROM STAGE 1.
CONSTRUCT WIDENING ON RT.
STA. 500+00 TO STA. 585+00
STA. 585+00 TO STA. 929+36
CONSTRUCT WIDENING ON LT.
STA. 585+00 TO STA. 707+00
STA. 707+00 TO STA. 820+00

STAGE 2:
MAINTENANCE OF TRAFFIC DETAILS

STAGE 2 MILE 5
BEGIN JOB 080423
LOG MILE 11.4

STAGE 2 MILE 5
BEGIN JOB 080423
LOG MILE 11.4
STAGE 2
TRAFFIC DRUMS
STA. 899+00 - STA. 829+25 FT. 1 EACH
STA. 829+25 - STA. 889+00 FT. 3 EACH
STA. 889+00 - STA. 999+00 FT. 2 EACH

HWY. 65 STA. 819+00 17.00' RT.
MOT - STAGE 2 SHIFT 7 STA. 850+00

HWY. 65 STA. 822+25 00 17.00' LT.
MOT - STAGE 2 SHIFT 7 STA. 852+27.25'

STAGE 2
MAINTENANCE OF TRAFFIC DETAILS
PERMANENT PAVEMENT MARKING DETAILS
### ADVANCE WARNING SIGNS AND DEVICES

<table>
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<tr>
<th>SIGN NUMBER</th>
<th>DESCRIPTION</th>
<th>SIGN SIZE</th>
<th>STAGE 1</th>
<th>STAGE 2</th>
<th>MAXIMUM NUMBER REQUIRED</th>
<th>TOTAL SIGNS REQUIRED</th>
<th>VERTICAL PANELS</th>
<th>TRAFFIC DRUMS</th>
<th>CONSTRUCTION PROJECT INFORMATION SIGN UPDATE</th>
<th>BARRIACES (TYPE E)</th>
<th>INSTALLING &amp; RETAINING PRECAST CONCRETE BARRIER</th>
<th>RELATING PRECAST CONCRETE BARRIER</th>
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### CONSTRUCTION PAVEMENT MARKINGS AND PERMANENT PAVEMENT MARKINGS

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<th>STAGE 1</th>
<th>STAGE 2</th>
<th>END OF JOB</th>
<th>REMOVAL OF PERMANENT PAVEMENT MARKINGS</th>
<th>REMOVAL OF CONSTRUCTION PAVEMENT MARKINGS</th>
<th>RAISED PAVEMENT MARKERS (TYPE 1 (HARDED))</th>
<th>RAISED PAVEMENT MARKERS (TYPE 1 (LILED))</th>
<th>THERMOPLASTIC PAVEMENT MARKING</th>
<th>REFLECTORIZED PAINT PAVEMENT MARKING</th>
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### QUANTITIES

- **NOTE:** This is a high traffic volume road as defined in Section 604.02, Standard Specifications for Highway Construction.
### Removal and Disposal of Items

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<th>Location</th>
<th>Tires</th>
<th>Steel Posts</th>
<th>Rock Walls</th>
<th>Concrete Walls</th>
<th>Concrete Columns</th>
<th>Concrete Island</th>
<th>Sign Foundations</th>
<th>Steps</th>
<th>House Foundation</th>
<th>Guardrail</th>
<th>Wood Pole</th>
<th>Brick Columns</th>
<th>Rock Column</th>
<th>Signs</th>
<th>Septic System</th>
<th>Planters</th>
<th>Entrance Framework With Foundation</th>
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Note: Quantities shown above shall include removal & disposal of all headwalls and flared end sections if applicable.
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**TOTALS:** 201 201

## EARTHWORK

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**TOTALS:** 339413 344397 32392 3593 500

## QUANTITIES

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**TOTALS:** 8731

**CONCRETE COMBINATION CURB AND GUTTER**

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**TOTALS:** 72743 700
**4" PIPE UNDERDRAIN**

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*NOTE: QUANTITY ESTIMATED.*

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**FLOWABLE SELECT MATERIAL**

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

**COLD MILLING ASPHALT PAVEMENT**

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*NOTE: AVERAGE MILLING DEPTH 1".*

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**ACHM PATCHING OF EXISTING ROADWAY**

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*NOTE: QUANTITY ESTIMATED.*

**CONCRETE ISLAND PAVEMENT REPAIR OVER CULVERTS (ASPHALT)**

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**APPROX. MILLING**

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**STATION STATION LOCATION**

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**Pavement Repair over Culverts (Asphalt)**

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**AVERAGE DEPTH = 18"**

**Asphalt Concrete Patching for Maintenance of Traffic**

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**BASE OF ESTIMATE:**
- ASPHALT CONCRETE PATCHING FOR MAINTENANCE OF TRAFFIC: 25 TONS/MILE
- TACK COAT FOR MAINTENANCE OF TRAFFIC: 50 GAL/MILE
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<th>LIQUID LIMIT</th>
<th>PLASTICITY INDEX</th>
<th>CLASSIFICATION</th>
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**Note:** For R.C. pipe culvert installations use Type 2 bedding unless otherwise specified.

**Water:**

12.6 GALL. / SO. YD. OF SOLID SODDING

**Note:** For C.M. pipe culvert installations use Type 2 bedding unless otherwise specified.
### Quantities

**Table: Structures (Box 3 of 3)**

<table>
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<tr>
<th>Station</th>
<th>Description</th>
<th>Reinforced Concrete Pipe</th>
<th>Steel战斗力</th>
<th>Flared End Sections for R.C. Pipe Culverts</th>
<th>Temporary Culverts</th>
<th>Type of Joint</th>
<th>Yard Drains</th>
<th>Span</th>
<th>Length</th>
<th>Class C Concrete</th>
<th>Roadway</th>
<th>Roadway Global</th>
<th>Unclassified Roadway</th>
<th>Solid Sodding</th>
<th>Material</th>
<th>Std. Wd. No.</th>
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| 872-17  | Lay 36" R.C. Pipe Culverts On LT & RT | 36 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1
| 872-18  | Construct Drop Inlets Only | 35 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3
| 872-19  | Construct Drop Inlets Only | 34 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4
| 872-20  | Construct Drop Inlets Only | 33 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5
| 872-21  | Construct Drop Inlets Only | 32 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6
| 872-22  | Construct Drop Inlets Only | 31 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7
| 872-23  | Construct Drop Inlets Only | 30 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8
| 872-24  | Construct Drop Inlets Only | 29 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9
| 872-25  | Construct Drop Inlets Only | 28 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10
| 872-27  | Construct Drop Inlets Only | 26 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12

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

**NOTE: FOR C:M PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.**

**BASE OF ESTIMATE:** 12.0 GAL. SQ. YD. OF SOLID SODDING

**TOTALS:**

- **Total Use:** 1157.480
- **Total Used:** 1150.02
- **Estimated Quantity:** 1150.02

**Sheet No.:** 3 of 3

**Date:** 9/6/94

**Scale:** 1/2" = 1'-0"
### DRIVeways & TURNOUTs (Box 2 of 4)

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<th>ACYL SURFACE COURSE (SP) (229 LBS.)</th>
<th>PORTLAND CEMENT CURVE (SP) (229 LBS.)</th>
<th><strong>AGGREGATE BASE COURSE (CLASS 7)</strong></th>
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**Basis of Estimate**

- Average Surface Course (SP) 94% Mn Aggr, 5.4% Asphalt Binder
- Maximum number of GPM = 150 for PG 64-22

---

**Notes:**

- For R.C. Pipe Culvert Installations Use Type 3 Bedding unless otherwise specified.
- For C.M. Pipe Culvert Installations Use Type 2 Bedding unless otherwise specified.

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### Quantities

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**Conversion Factors:**

- 1 ft = 12 in.
- 1 yd² = 9 ft²
- 1 yd³ = 27 ft³
- 1 ton = 2000 lb

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**For Information Only:**

- Note: For R.C. Pipe Culvert Installations Use Type 3 Bedding unless otherwise specified.
- Note: For C.M. Pipe Culvert Installations Use Type 2 Bedding unless otherwise specified.
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**FOR INFORMATION ONLY

NOTE: FOR C.S. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
NOTE: FOR C.C. PIPE CULVERT INSTALLATIONS USE TYPE 2 BEDDING UNLESS OTHERWISE SPECIFIED.

THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, WILL BE ALLOWED TO SUBSTITUTE A HIGHER PERFORMANCE OR ADEQUATE ASPHALT SURFACE COURSE FOR DRIVEWAYS AND MINOR SIDE STREET CONSTRUCTION AT NO ADDITIONAL COST TO THE DEPARTMENT.
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**NOTE:** FOR C.C. PIPE CULVERT INSTALLATIONS USE TYPE 3 BEDDING UNLESS OTHERWISE SPECIFIED.
### Table: Base and Surfacings

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### Notes:
- The table details the quantities of base and surfacing materials for various stations and locations.
- Each row represents a specific station, with columns indicating different types of materials and their respective weights.
- The table includes columns for aggregate base course, tack coat, and acme binder course, each with multiple entries for different portions of the course.
- The data is formatted to reflect the total tonnage required for each station.
### SCHEDULE OF BRIDGE QUANTITIES - JOB NO. 080423

#### Item | Description | Quantity
--- | --- | ---
| 0101 | Unclassified Excavation for Structures - Bridge | 0.6
| 0102 | Class I Concrete - Bridge | 0.2
| 0103 | Class I Protective Surface Treatment | 0.2
| 0104 | Reinforcing Steel - Bridge Grade 60 | 2.360
| 0105 | epoxy Coated Reinforcing Steel Grade 60 | 44
| 0106 | Metal Bridge Railing (Type A) | 29.6
| 0107 | Transitional Approach Railing | 5.9
| 0108 | Structural Steel in Beam SPANS in Stil Grade 50 | 0.9
| 0109 | Above Bridge Joint Sealant | 3.3
| 0110 | Bridge Name Plate (Type D) | 0.2
| 0111 | Filter Blanket | 5.1
| 0112 | Dumped Riprap | 0.5

#### Remarks
1. includes approx.30 cu.yds. of rock excavation.
2. no sanding shall be Grade 50 and are required to have approved driving sticks which will not be paid for directly, but will be considered subsidiary to the main "tree planting" of the railroad.
3. Class 500 Concrete: Maximum Coarse Aggregate Size shall be according to Standard Gradation No. 5,000.

---

**SCHEDULE OF BRIDGE QUANTITIES**

**BEE BRANCH - NORTH (S)**

**VAN BUREN COUNTY**

**ROUTE 85**

**ARKANSAS STATE HIGHWAY COMMISSION**

**LITTLE ROCK, ARK.**

**DESIGNED BY**

**STATE OF ARKANSAS**

**PROFESSIONAL ENGINEERING**

**NO. 5893 & 5894**

**DRAWING NO. 5903**

**R. E. H. Y.**

**DESIGN SUPERVISOR**
### SUMMARY OF QUANTITIES (Box 1 of 2)

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<td>280</td>
<td>ASPHALT CONCRETE PAVING</td>
<td>726</td>
<td>TON</td>
</tr>
<tr>
<td>281</td>
<td>ASPHALT CONCRETE PAVING</td>
<td>22</td>
<td>TON</td>
</tr>
<tr>
<td>282</td>
<td>ASPHALT CONCRETE PAVING</td>
<td>3,248</td>
<td>TON</td>
</tr>
<tr>
<td>283</td>
<td>ASPHALT CONCRETE PAVING</td>
<td>8,268</td>
<td>TON</td>
</tr>
</tbody>
</table>

*Denotes Alternate Bid Items*
SUMMARY OF QUANTITIES (BOX 2 OF 2)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>621</td>
<td>obliteration of segment base</td>
<td>18128</td>
<td>cu. yd</td>
</tr>
<tr>
<td>621</td>
<td>sediment removal and disposal</td>
<td>20087</td>
<td>cu. yd</td>
</tr>
<tr>
<td>621</td>
<td>rock ditch checks</td>
<td>1896</td>
<td>cu. yd</td>
</tr>
<tr>
<td>621</td>
<td>rock ditch checks</td>
<td>3504</td>
<td>lin. ft</td>
</tr>
<tr>
<td>621</td>
<td>filter sock (12&quot;)</td>
<td>2000</td>
<td>lin. ft</td>
</tr>
<tr>
<td>621</td>
<td>triangular trolley</td>
<td>400</td>
<td>lin. ft</td>
</tr>
<tr>
<td>621</td>
<td>second seeding application</td>
<td>106.13</td>
<td>acr.</td>
</tr>
<tr>
<td>621</td>
<td>sold sogging</td>
<td>19798</td>
<td>sq. yd</td>
</tr>
<tr>
<td>626</td>
<td>erosion control matting (class 3)</td>
<td>19439</td>
<td>sq. yd</td>
</tr>
<tr>
<td>632</td>
<td>concrete island</td>
<td>86</td>
<td>sq. yd</td>
</tr>
<tr>
<td>633</td>
<td>concrete walls</td>
<td>8731</td>
<td>sq. yd</td>
</tr>
<tr>
<td>634</td>
<td>concrete combination curb and gutter (type a)(&quot;f&quot;)</td>
<td>27743</td>
<td>lin. ft</td>
</tr>
<tr>
<td>634</td>
<td>concrete combination curb and gutter (type b)(&quot;f&quot;)</td>
<td>760</td>
<td>lin. ft</td>
</tr>
<tr>
<td>655</td>
<td>roadway construction control</td>
<td>1.00</td>
<td>lump sum</td>
</tr>
<tr>
<td>657</td>
<td>mail boxes</td>
<td>47</td>
<td>each</td>
</tr>
<tr>
<td>657</td>
<td>mail boxes</td>
<td>43</td>
<td>each</td>
</tr>
<tr>
<td>657</td>
<td>mail boxes</td>
<td>2</td>
<td>each</td>
</tr>
<tr>
<td>664</td>
<td>wheel chair ramps (type s)</td>
<td>147</td>
<td>sq. yd</td>
</tr>
<tr>
<td>667</td>
<td>rumble strips in asphalt (4&quot;)</td>
<td>41703</td>
<td>each</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal controller modification</td>
<td>1</td>
<td>each</td>
</tr>
<tr>
<td>677</td>
<td>signal pole (6&quot;)</td>
<td>10</td>
<td>each</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole</td>
<td>2</td>
<td>each</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole (6&quot;)</td>
<td>8</td>
<td>each</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole (7')</td>
<td>2233</td>
<td>lin. ft</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole (7')</td>
<td>83</td>
<td>lin. ft</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole</td>
<td>450</td>
<td>lin. ft</td>
</tr>
<tr>
<td>677</td>
<td>traffic signal pole (7')</td>
<td>132</td>
<td>lin. ft</td>
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<tr>
<td>680</td>
<td>electrical conductors: in-conduit (cat a/w, e.o.c.)</td>
<td>640</td>
<td>lin. ft</td>
</tr>
<tr>
<td>710</td>
<td>non-metallic conduit (p)</td>
<td>248</td>
<td>lin. ft</td>
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<tr>
<td>711</td>
<td>concrete pull box (type 1 &amp; 2)</td>
<td>3</td>
<td>each</td>
</tr>
<tr>
<td>714</td>
<td>traffic signal mast arm and pole with foundation (5&quot;)</td>
<td>1</td>
<td>each</td>
</tr>
<tr>
<td>715</td>
<td>traffic signal pedestal pole with foundation</td>
<td>5</td>
<td>each</td>
</tr>
<tr>
<td>716</td>
<td>removal of traffic signal equipment</td>
<td>280</td>
<td>lump sum</td>
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<tr>
<td>716</td>
<td>traffic signal pole (6&quot;)</td>
<td>160</td>
<td>lin. ft</td>
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<tr>
<td>719</td>
<td>thermoplastic pavement marking (white (p))</td>
<td>77388</td>
<td>lin. ft</td>
</tr>
<tr>
<td>719</td>
<td>thermoplastic pavement marking (white (p))</td>
<td>206</td>
<td>lin. ft</td>
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<tr>
<td>719</td>
<td>thermoplastic pavement marking (white (p))</td>
<td>771</td>
<td>lin. ft</td>
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<tr>
<td>719</td>
<td>thermoplastic pavement marking (yellow (p))</td>
<td>10173</td>
<td>lin. ft</td>
</tr>
<tr>
<td>719</td>
<td>thermoplastic pavement marking (yellow (p))</td>
<td>13</td>
<td>lin. ft</td>
</tr>
<tr>
<td>719</td>
<td>thermoplastic pavement marking (yellow (p))</td>
<td>3</td>
<td>each</td>
</tr>
<tr>
<td>721</td>
<td>raised pavement marker (type b)</td>
<td>2116</td>
<td>each</td>
</tr>
<tr>
<td>737</td>
<td>video detector (lcd)</td>
<td>8</td>
<td>each</td>
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<tr>
<td>737</td>
<td>video cable</td>
<td>384</td>
<td>lin. ft</td>
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<tr>
<td>801</td>
<td>unclassified excavation for structures/roadway</td>
<td>56</td>
<td>cu. yd</td>
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<tr>
<td>802</td>
<td>class 5 concrete/roadway</td>
<td>85.10</td>
<td>cu. yd</td>
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<tr>
<td>804</td>
<td>reinforcing steel/roadway (grade 60)</td>
<td>1792</td>
<td>pound</td>
</tr>
<tr>
<td></td>
<td>structures over 30 span</td>
<td></td>
<td></td>
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<tr>
<td>806</td>
<td>bridge construction control</td>
<td>1.00</td>
<td>lump sum</td>
</tr>
<tr>
<td>802</td>
<td>unclassified excavation for structures/bridge</td>
<td>279</td>
<td>cu. yd</td>
</tr>
<tr>
<td>802</td>
<td>bridge construction</td>
<td>172.30</td>
<td>cu. yd</td>
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<td>bridge construction</td>
<td>1339.50</td>
<td>cu. yd</td>
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<tr>
<td>803</td>
<td>class 1 protective surface treatment</td>
<td>18.7</td>
<td>gal</td>
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<tr>
<td>804</td>
<td>reinforcing steel/bridge (grade 60)</td>
<td>3270</td>
<td>pound</td>
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<tr>
<td>804</td>
<td>reinforcing steel/bridge (grade 60)</td>
<td>9270</td>
<td>pound</td>
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<tr>
<td>806</td>
<td>steel plating (4&quot;) (x2)</td>
<td>190</td>
<td>lin. ft</td>
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<tr>
<td>806</td>
<td>metal bridge rail type s</td>
<td>653</td>
<td>lin. ft</td>
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<tr>
<td>806</td>
<td>transitional approach railing</td>
<td>2166</td>
<td>each</td>
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<tr>
<td>808</td>
<td>structural steel in beam span (207/208)</td>
<td>114000</td>
<td>cu. in</td>
</tr>
<tr>
<td>808</td>
<td>elastomeric bearings</td>
<td>9110.0</td>
<td>cu. in</td>
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<tr>
<td>810</td>
<td>silicone joint sealant</td>
<td>83</td>
<td>cu. yd</td>
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<tr>
<td>812</td>
<td>bridge name plate (type d)</td>
<td>2</td>
<td>each</td>
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<tr>
<td>816</td>
<td>flexi-blanket</td>
<td>2234</td>
<td>sq. yd</td>
</tr>
<tr>
<td>816</td>
<td>dumped riprap</td>
<td>152</td>
<td>cu. yd</td>
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<tr>
<td>821</td>
<td>modification of existing bridge structure (bridge no. 96913)</td>
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<td>lump sum</td>
</tr>
<tr>
<td>821</td>
<td>modification of existing bridge structure (bridge no. 96819)</td>
<td>1.00</td>
<td>lump sum</td>
</tr>
</tbody>
</table>

REVISIONS

<table>
<thead>
<tr>
<th>Date</th>
<th>Revision</th>
<th>Sheet Number</th>
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<tr>
<td>10/19/2017</td>
<td>added airport clearance requirements special provision corrected item number for</td>
<td>3, 106, 170, 171, &amp; 173-175</td>
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<tr>
<td>10/20/2017</td>
<td>revised maintenance of traffic special provision</td>
<td>100</td>
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<tr>
<td>10/20/2017</td>
<td>revised embankment construction special provision</td>
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<tr>
<td>10/21/2017</td>
<td>removed concrete ditch/ditching grading &amp; note from plan/profile sheets &amp;</td>
<td>3, 90, 107, &amp; 108</td>
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<td>11/7/2017</td>
<td>revised &amp; explanatory notes special provision for</td>
<td>94, 107, 108, 123, &amp; 133</td>
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<td>11/8/2017</td>
<td>revised &amp; explanatory notes special provision for</td>
<td>108</td>
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<tr>
<td>11/9/2017</td>
<td>revised maintenance of traffic special provision</td>
<td>100</td>
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</tbody>
</table>
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POE

492+20.54
493+86.55
503+97.27
517+65.25
533+39.89
550+08.73
559+72.85
591+60.22
597+52.27
607+83.05
622+12.67
627+23.36
633+23.03
638+62.74
655+29.34
671+33.01
679+69.71
690+26.66
697+65.19
702+60.53
717+19.50
720+22.80
727+56.81
729+11.80
741+04.30
741+85.53
762+05.15
767+01.23
771+60.73

408779.2506
408874.0016
409520.8860
410486.6705
411736.6806
413191.3983
413988.1969
416465.7578
416935.3774
417769.0258
419083.3281
419589.7302
420179.2204
420704.1702
422344.7491
423852.6410
424676.2279
425703.7018
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426926.7211
428185.5016
428350.4137

1192978.4911
11928r'21744
1192067.2993
1 191098.4589
1190149.0530
1189331 .2275
1188790.4390
1 186785.1939
1186424.7733
1185818.5327
1185294.7387
1185228.6742
1185120.1517
1184994.8058
1185087.5789
1185633.5055
1 185679.1006
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1185399.3412
1185473.3318
1184906.6593
1184652.1049
1184135.6099
1184050.7236
1183121.5193
1183044.2760
1181914.5072
1181903.4502
1181884.0024
1181815.7879
1 181595.0853
1181375.1347
1181223.5152
1180923.8342
1180692.1812
1180635.3293
118051 1.5107
1179474.1010
1179297.9677
1178835.4483
1178709.7262
1178772.4870
1178715.3205
1178339.7475

782+il.81
790+43.49
794+94.24
798+43.97
806+36.70
816+33.71
823+18.16
830+26.71
869+35.05
874+98.85
887+87.67
895+64.35
911+49.28
917+27.97
933+20.07

429704.9475
429730.0991
431250.1940
431746.1509
432205.2009
433297.1568
434047 _4907

4U440.9378
434755.8467

43il89.7458
436455.5123
437137.6036
437834.2190
441602.3616
442137.7026
443340.6746
444101.6923
445685.3839
446259.3768
447806.5405

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RANCH RD.
POINT
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8104

TYPE

STATION

NORTHING

EASTING

POB
P.C
P.T.
POE

100+00.00
100+32.68
102+38.70
102+90.54

412181.4634
412161.9573
412123.4137
412136.2565

1189652.4434
1189678.6635
1189874.1935
1189924.4160

LYNGH DR.
POINT
NAME

8500

DRIVE @ STA. 664+00
POINT
NAME
8200
8201
8203
8204

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STATION

NORTHING

EASTING

POB
P.C
P,T.
POE

0+00.00
1+47.25
2+26.44
3+51.02

423163.4081
423113.2813
423048.6336
422932.0602

1185383.9713
1185522.4255
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85552.1 91 5

1185508.2548

8503
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8601

TYPE

STATION

NORTHING

EASTING

POB
P.C
P.T
POE

200+00.00
200+52.07
202+26.02
203+32.85

430356.1503
430385.7485
430424.2956
430408.6684

1182204.2918
1182247.1316
1182412.58/.5
1182518.2688

HV[/Y.
POINT

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TYPE

STATION

NORTHING

EASTING

POB
P.C
P.T
P.C
P.T
POE

298+30.80
303+48.51
305+85.16
308+06.53
309+20.21
312+36.65

434900.1530
435046.5835
435070.2821
435051.4951
435048.0406
435055.6830

11806/,6.5225
1181143.0947
1181377.1857
1181597.7547
1181711.3240
1182027.6739

STATION

NORTHING

EASTING

POB
P.C
P.T
POE

1000+00.00

436548.8826
436496.6291
436461.7691
436466.5282

1180340.4643
1180447.8322
1180634.4084
'1180691.2631

1OO1+19.41

1003+11.51

1003+68.56

TERRY LN.
8600

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8603
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STATION

NORTHING

EASTING

POB
P.C
P.T
POE

400+00.00
401+25.43
402+84.45
403+94.50

436796.5401
436774.2525
436785.4406
436820.1 565

1180663.7568
1 1 80787.1 880
1180944.1652
1181048.5927

OLD H\'\IY.9
POINT
NAME

8700
8705
8707
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TYPE

STATION

NORTHING

EASTING

POB
P.C
P.T
POE

450+00.00
451+04.22
452+60.09
453+00.18

444919.2471

1178576.8605
1 178597.1306
1178705.2107
1178749.6276

445021.4754
445110.1428
445108.5555

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SURVEY CONTROL DETAILS


### MOT - STAGE 1 SHIFT 1

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>TYPE</th>
<th>STATION</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>8810</td>
<td>P.C.</td>
<td>10+00.00</td>
<td>416510.6572</td>
<td>1187489.3465</td>
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<tr>
<td>8812</td>
<td>P.T.</td>
<td>10+91.52</td>
<td>416580.8802</td>
<td>1187430.6564</td>
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<tr>
<td>8813</td>
<td>P.C.</td>
<td>17+58.50</td>
<td>416185.7613</td>
<td>1186994.8151</td>
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<tr>
<td>8815</td>
<td>P.T.</td>
<td>18+66.64</td>
<td>416268.9301</td>
<td>1186925.7150</td>
</tr>
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### MOT - STAGE 1 SHIFT 2

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>TYPE</th>
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</tr>
</thead>
<tbody>
<tr>
<td>8830</td>
<td>POB</td>
<td>20+00.00</td>
<td>427247.7790</td>
<td>1185479.0573</td>
</tr>
<tr>
<td>8831</td>
<td>P.C.</td>
<td>21+18.12</td>
<td>427365.6469</td>
<td>1185471.2923</td>
</tr>
<tr>
<td>8833</td>
<td>P.T.</td>
<td>22+73.23</td>
<td>427518.0000</td>
<td>1185443.9694</td>
</tr>
</tbody>
</table>

### MOT - STAGE 1 SHIFT 3

<table>
<thead>
<tr>
<th>POINT NAME</th>
<th>TYPE</th>
<th>STATION</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>8920</td>
<td>POB</td>
<td>40+00.00</td>
<td>432109.7360</td>
<td>1181891.7592</td>
</tr>
<tr>
<td>8921</td>
<td>POE</td>
<td>52+82.87</td>
<td>433389.6083</td>
<td>1181804.1161</td>
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### MOT - STAGE 1 SHIFT 4

<table>
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<tr>
<th>POINT NAME</th>
<th>TYPE</th>
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<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>8880</td>
<td>P.C.</td>
<td>60+00.00</td>
<td>434439.4754</td>
<td>1181351.0430</td>
</tr>
<tr>
<td>8882</td>
<td>P.T.</td>
<td>60+44.70</td>
<td>434480.4540</td>
<td>1181333.2170</td>
</tr>
<tr>
<td>8883</td>
<td>P.C.</td>
<td>69+01.91</td>
<td>435277.1066</td>
<td>1180116.7412</td>
</tr>
<tr>
<td>8885</td>
<td>P.T.</td>
<td>69+71.92</td>
<td>435342.0142</td>
<td>1180990.4959</td>
</tr>
<tr>
<td>8886</td>
<td>P.C.</td>
<td>74+37.29</td>
<td>435772.3761</td>
<td>1180813.4129</td>
</tr>
<tr>
<td>8888</td>
<td>P.T.</td>
<td>74+83.46</td>
<td>435815.6280</td>
<td>1180797.2790</td>
</tr>
</tbody>
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### MOT - STAGE 1 SHIFT 5

<table>
<thead>
<tr>
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<th>TYPE</th>
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<th>NORTHING</th>
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</thead>
<tbody>
<tr>
<td>8890</td>
<td>P.C.</td>
<td>80+00.00</td>
<td>436742.3431</td>
<td>1180661.7196</td>
</tr>
<tr>
<td>8892</td>
<td>P.T.</td>
<td>80+63.86</td>
<td>436806.1389</td>
<td>1180659.4115</td>
</tr>
<tr>
<td>8893</td>
<td>P.C.</td>
<td>81+43.02</td>
<td>436885.2927</td>
<td>1180660.1882</td>
</tr>
<tr>
<td>8895</td>
<td>P.T.</td>
<td>82+05.93</td>
<td>436948.1396</td>
<td>1180672.9576</td>
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### MOT - STAGE 2 SHIFT 1

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>8800</td>
<td>POB</td>
<td>100+00.00</td>
<td>409315.0321</td>
<td>1192284.8952</td>
</tr>
<tr>
<td>8802</td>
<td>P.C.</td>
<td>104+66.51</td>
<td>409626.6681</td>
<td>1191937.7389</td>
</tr>
<tr>
<td>8803</td>
<td>P.T.</td>
<td>105+02.83</td>
<td>409661.6202</td>
<td>1191911.3635</td>
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</tbody>
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### MOT - STAGE 2 SHIFT 2

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<th>TYPE</th>
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</thead>
<tbody>
<tr>
<td>8820</td>
<td>P.C.</td>
<td>11+00.00</td>
<td>415786.0939</td>
<td>1187312.7748</td>
</tr>
<tr>
<td>8822</td>
<td>P.T.</td>
<td>11+74.38</td>
<td>415846.3027</td>
<td>1187269.1632</td>
</tr>
<tr>
<td>8823</td>
<td>P.C.</td>
<td>113+27.35</td>
<td>416058.8267</td>
<td>1187131.9431</td>
</tr>
<tr>
<td>8825</td>
<td>P.T.</td>
<td>114+01.73</td>
<td>416119.0356</td>
<td>1187088.3315</td>
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### MOT - STAGE 2 SHIFT 3

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>8840</td>
<td>P.C.</td>
<td>120+00.00</td>
<td>427166.1366</td>
<td>1185504.1778</td>
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<tr>
<td>8842</td>
<td>P.T.</td>
<td>122+39.14</td>
<td>427398.8538</td>
<td>1185454.4993</td>
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<tr>
<td>8843</td>
<td>POE</td>
<td>124+40.42</td>
<td>427585.5861</td>
<td>1185379.3777</td>
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### MOT - STAGE 2 SHIFT 4

<table>
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<tr>
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<tr>
<td>8850</td>
<td>P.C.</td>
<td>130+00.00</td>
<td>432243.3070</td>
<td>1181864.0878</td>
</tr>
<tr>
<td>8852</td>
<td>P.T.</td>
<td>130+73.02</td>
<td>432316.2919</td>
<td>1181863.3713</td>
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<tr>
<td>8853</td>
<td>P.C.</td>
<td>133+28.66</td>
<td>432571.6948</td>
<td>1181874.2976</td>
</tr>
<tr>
<td>8855</td>
<td>P.T.</td>
<td>134+01.68</td>
<td>432644.6798</td>
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### MOT - STAGE 2 SHIFT 5

<table>
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</thead>
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<tr>
<td>8870</td>
<td>POB</td>
<td>140+00.00</td>
<td>434496.6001</td>
<td>1181364.0798</td>
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<tr>
<td>8871</td>
<td>P.C.</td>
<td>142+22.84</td>
<td>434693.1357</td>
<td>1181259.0486</td>
</tr>
<tr>
<td>8873</td>
<td>P.T.</td>
<td>142+94.46</td>
<td>434757.9259</td>
<td>1181228.6070</td>
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### MOT - STAGE 2 SHIFT 6

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<tbody>
<tr>
<td>8880</td>
<td>P.C.</td>
<td>145+00.00</td>
<td>435272.6932</td>
<td>1181018.4065</td>
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<tr>
<td>8882</td>
<td>P.T.</td>
<td>145+54.96</td>
<td>435324.3452</td>
<td>1180999.6628</td>
</tr>
<tr>
<td>8883</td>
<td>P.C.</td>
<td>146+45.44</td>
<td>435410.5467</td>
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### MOT - STAGE 2 SHIFT 7

<table>
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<th>POINT NAME</th>
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<th>EASTING</th>
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<td>1180626.1262</td>
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HWY. 65 STA 819+22.08 6.53' LT. =
MOT - STAGE 1 SHIFT 5 STA. 80+00.00

HWY. 65 STA 821+50.00 17.00' LT. =
MOT - STAGE 2 SHIFT 7 STA. 82+52.78

HWY. 65 STA 821+27.47 7.53' RT. =
MOT - STAGE 1 SHIFT 5 STA. 82+05.93
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
Refer to survey control detail sheets for horizontal and vertical control data.
Refer to survey control detail sheets for horizontal and vertical control data.

Hwy. 65 Lt. Side Storm Sewer

Hwy. 65 Rt. Side Storm Sewer
REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
RANCH RD.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
STA. 402+00: INSTALL 24" x 55' RC PIPE CULVERT WITH FELT, LT, & RT.

STA. 402+00: IN PLACE 24" x 38' METAL PIPE CULVERT REMOVE

STA. 402+00: CONSTRUCT APPROACH ON RT. + 60 CUB. YDS.

REFER TO SURVEY CONTROL DETAIL SHEETS FOR HORIZONTAL AND VERTICAL CONTROL DATA.
### TRAFFIC SIGNAL QUANTITIES

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>ITEM</th>
<th>QUANTITY</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>TRAFFIC SIGNAL CONTROLLER (MODIFICATION)</td>
<td>1</td>
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</tr>
<tr>
<td>SP &amp; 706</td>
<td>TRAFFIC SIGNAL HEAD, LED, (3 SECTION, 1 WAY)</td>
<td>10</td>
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<tr>
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<td>TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)</td>
<td>2</td>
<td>EACH</td>
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<tr>
<td>SP &amp; 707</td>
<td>COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED</td>
<td>8</td>
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<td>ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)</td>
<td>640</td>
<td>LIN. FT.</td>
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<tr>
<td>710</td>
<td>NON-METALLIC CONDUIT (3&quot;)</td>
<td>249</td>
<td>LIN. FT.</td>
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<td>711</td>
<td>CONCRETE PULL BOX (TYPE 1 HD)</td>
<td>3</td>
<td>EACH</td>
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<tr>
<td>714</td>
<td>TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (54&quot;)</td>
<td>1</td>
<td>EACH</td>
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<tr>
<td>715</td>
<td>TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION</td>
<td>5</td>
<td>EACH</td>
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<tr>
<td>SP</td>
<td>REMOVAL OF TRAFFIC SIGNAL EQUIPMENT</td>
<td>1.00</td>
<td>LUMP SUM</td>
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<tr>
<td>* SP &amp; 733</td>
<td>VIDEO DETECTOR (CLR)</td>
<td>8</td>
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<tr>
<td>733</td>
<td>VIDEO CABLE</td>
<td>394</td>
<td>LIN. FT.</td>
</tr>
</tbody>
</table>

*ONE SPARE VIDEO DETECTOR SHALL BE SUPPLIED.
TRAFFIC SIGNAL NOTES:

2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RANTIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUNICIPALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROL, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE SIGNAL TRAFFIC CONTROL CABINET AND SHALL INSTALL CONDUIT ELECTRICAL SERVICE WIRE (2AWG USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY/COUNTY MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAYED FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2AWG 12 A. W. G. USE RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF 7TH AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROL CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLER.
6. CONTROLER CABINET SHALL BE BUILT SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BECKFEOE TO LOAD SWITCH POWER BUS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITIONS.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DEEMED THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKING SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
12. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE THREE (3) INCH DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTIVATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
15. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT, WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38) FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE Signal Plans.
16. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULD EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEARANCE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
17. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEPT IN COMPETENT ROCK.
18. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE AHTD STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
19. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO MSA STANDARDS.
20. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR ARMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
21. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
23. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
24. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROVIDED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.
**OPERATION REMOVED. ONLY NOTE TO CONTRACTOR:**

**NOTE TO CONTRACTOR:**

ONLY THE TRAFFIC SIGNAL EQUIPMENT NOTED SHALL BE REMOVED. ALL OTHER TRAFFIC SIGNAL EQUIPMENT SHALL BE RETAINED. TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT ALL CONSTRUCTION PHASES.

IT IS RECOMMENDED THAT THE EXISTING TRAFFIC SIGNAL BE LEFT IN OPERATION UNTIL THE NEW TRAFFIC SIGNAL EQUIPMENT HAS BEEN INSTALLED AND CONVERSION TO FULL OPERATION CAN BE MADE.

---

**HWY. 65/HWYS. 9 & 330 POLE LOCATIONS**

<table>
<thead>
<tr>
<th>POLE</th>
<th>LOCATION &amp; STATION</th>
<th>X, Y COORDINATES</th>
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<td>HWY. 65, STA. 800+01.66</td>
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**DETECTOR SPACING CHART**

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<th>DETECTOR TYPE</th>
<th>POSTED SPEED</th>
<th>DISTANCE FROM STOP LINE</th>
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<tr>
<td>AHD 65 MAINLANE VIRTUAL LOOPS</td>
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<td>LEAD VIZ</td>
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<tr>
<td></td>
<td>45 MPH</td>
<td>LEAD VIZ</td>
</tr>
<tr>
<td></td>
<td>35 MPH</td>
<td>LEAD VIZ</td>
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</table>

**NOTE TO CONTRACTOR:**

POLE A, B, AND C ARE EXISTING AND THE MAST ARM FOR POLE B SHALL BE REMOVED.
1. All signal heads shall have backplates.
2. Refer to Special Notes for details on required modifications for pedestrian signal heads.
3. All pedestrian signal heads can be placed into operation if there are both wheelchair ramps and a crosswalk that meet A.S.A. Standards.

**NOTE:**
P = CONTROLLER
V62
V61
v22
v2.1
PB8 A&B
PB6 A&B
P84 A&B r-f vv/.65
P82 A&B

**DETECTOR CHART**

**INTERVAL CHART**
EXISTING CONDITION
Looking Ahead
27'-4" to be retained

STAGE 1 CONSTRUCTION
Looking Ahead
27'-4" to be retained

STAGE 2 CONSTRUCTION
Looking Ahead

FINAL CONDITION
Looking Ahead

NOTES:
See roadway plans for maintenance of traffic.
1. For details of temporary protection barrier, see Dep. No. 104. The temporary protection barrier shall not be attached to the bridge deck.
2. Retain all transverse and reinforcing steel.

See layout and substructure details for additional Stage Construction Information.
NOTES:

See roadway plans for maintenance of traffic details.

1. For details of temporary Precast Barrier, see Fig. No. 124, this temporary Precast Barrier shall not be attached to the bridge deck.

2. Retain all transverse slab reinforcing steel.

See layout and substructure details for additional stage construction information.

EXISTING CONDITION
Looking Ahead

STAGE 1 CONSTRUCTION
Looking Ahead
STAGE 2 CONSTRUCTION
Looking Ahead

FINAL CONDITION
Looking Ahead

NOTES:
- See roadway plans for maintenance of traffic details.
- For details of Temporary Precast Barrier, See Dwgs. No. TC-4. The Temporary Precast Barrier shall not be attached to the bridge deck.
- Install transverse slab reinforcing steel.

Details of Substructure and truss design for additional Stage Construction information.

Bridge No. 06913 Shown
Bridge No. 06914 Shown

STATE OF ARKANSAS
REGISTRATION BOARD
REGISTERED PROFESSIONAL ENGINEER

ARKANSAS STATE HIGHWAY COMMISSION
ROUTE 66, SEC 8
LITTLE ROCK, ARK.
PAM. No. 59036
BRIDGE NO. 06913 & 06914
DRAWING NO. 59036
Remove Roll & Wing as shown

Remove to top of cap

PLAN OF EXISTING END BENTS - BR. NO. 0693

Slope Intercept

Begin or End of Bridge

PLAN OF EXISTING END BENTS - BR. NO. 0694

Remove Roll & Wing as shown

Remove to top of cap

ELEVATION OF EXISTING END BENTS - BR. NO. 0693

Bent 1 - Looking East
Bent 4 - Looking West

ELEVATION OF EXISTING END BENTS - BR. NO. 0694

Bent 1 - Looking East
Bent 4 - Looking West

As shown

All roll or exposed in the first condition due to modification of the existing structure shall be drilled and filled with a CPL approved non-shrink grout. The work shall be included in the item "Modification of Existing Bridge Structure No.0693" or "Modification of Existing Bridge Structure No.0694."
Details for Building Expansion Joint Device

**Expansion Device Installation**

The Contractor may elect to install the expansion device using one of the following two alternatives:

1. **Concrete pour adjacent to joint**
   - Before the end bent backfill is placed, the concrete expansion device shall be introduced and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent, immediately prior to pouring the remainder of the deck concrete. The expansion device shall be adjusted for temperature and the backfill constructed.

2. **Bolts**
   - The bolts shall be poured to the pour adjacent construction joint after beams are erected. The bolted expansion device shall be introduced and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent, immediately prior to pouring the remainder of the deck concrete. The expansion device shall be adjusted for temperature and the backfill constructed.

---

**Joint Seal Placement at Sidewalk**

- Bend horizontal leg of angle and patterned plate to conform to curb. Length of angle as needed.

---

**Silicone Joint Data**

- **Temperature Note:** The temperature used to set the joint opening shall be the temperature observed at the time of setting. Once the joint is poured, it shall be allowed to cure for 24 hours. Immediately before the joint is tightened, the expansion device shall be adjusted for temperature. The temperature at the time of setting may be necessary.

- **Concrete Joint Following Bending:**
  - Concrete joint following bending shall be allowed to cure for 24 hours. The joint shall be adjusted for temperature before the joint is tightened. The expansion device shall be adjusted for temperature at the time of setting. The temperature at the time of setting may be necessary.

---

**Details for Poured Silicone Joint Seal**

- **Concrete Joint Following Bending:**
  - Concrete joint following bending shall be allowed to cure for 24 hours. The joint shall be adjusted for temperature before the joint is tightened. The expansion device shall be adjusted for temperature at the time of setting. The temperature at the time of setting may be necessary.

- **Concrete Joint Following Bending:**
  - Concrete joint following bending shall be allowed to cure for 24 hours. The joint shall be adjusted for temperature before the joint is tightened. The expansion device shall be adjusted for temperature at the time of setting. The temperature at the time of setting may be necessary.

---

**Notes:***

- Concrete shall be hand packed under the joint, according to the Pour of Poured Silicone Joint Seal.

---

**Details of 20' Continuous Composite W-Beam Unit Chocaw Creek**

Arkansas State Highway Commission

LITTLE ROCK, ARK.

Drawn By: CCR 2000

CHECKED: MARK McLEAN

DESIGNER: L T STEPHENS

BREDGE NO. 06/93

DRAWING NO. 09/046
**Elastomeric Bearing**

The direction of level of the external load plate may not be accurately depicted with respect to (1) and (2) values shown in the "Table of Fabricator Variables".

**Table of Fabricator Variables**

<table>
<thead>
<tr>
<th>BEARING TYPE</th>
<th>LOAD PLATE</th>
<th>STEEL LAMINATE</th>
<th>SHEAR PLATE</th>
<th>SHEAR PLATE</th>
<th>ANCHOR BOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>605</td>
<td>1/2&quot;</td>
<td>1/4&quot;</td>
<td>3/8&quot;</td>
<td>5/16&quot; x 5/8&quot;</td>
</tr>
</tbody>
</table>

**Anchor Bolt Details**

Anchor bolts may be coated in place or drilled and grouted into place. If anchor bolts are to be coated in place, the galvanized shear metal sleeves shall be in place as shown. Sleeves shall have a 2.50 in. diameter or approved equal prior to pouring of concrete. After pouring of the cap and prior to grouting of Structural Steel, the anchor bolts shall be drilled or reamed out and the anchor bolts shall be accurately drilled into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a DP approved epoxy or non-shrink grout that complies with the codes. Galvanized shear metal sleeves will not be paid for directly but will be considered a part of the "Structural Steel in Beam Sports M 270 Gr 50/90".

**General Notes**

Elastomeric bearings shall conform to Section 306 and Special Provisions 808.05. Pipe sleeves shall be ASTM A500 Grade B, and shall be guaranteed to conform to ASTM A500, Grade E or Grade F. Each of the random bolt samples specified in Subsections 808.01 is not required.

External load plates and shear blocks shall conform to ASTM A 572, Grade 50. Pipe sleeves shall be ASTM A500, Grade B, and shall be guaranteed to conform to ASTM A500, Grade E or ASTM A500, Grade F.

All exposed pipe and fittings shall be galvanized, finished galvanized, painted, or of approved equivalent, and shall be in accordance with Subsection 808.03. Other surfaces shall be in accordance with the Code.

Anchor bolts, washers, and nuts shall conform to Subsection 808.03. The anchor bolt grade of steel shall be as specified in the "Table of Fabricator Variables". Connections shall be circular and rounded, where so shown, and shall be grouted as shown.

Pipe sleeves, anchor bolts, washers, and nuts shall be paid for at the unit price bid.

**Details of Elastomeric Bearings with Shear Blocks**

Choc Taw Ck.

Arkansas State Highway Commission

Bridge No. 0693

Drawing No. 59048

**Civil Engineer**

Arkansas State Highway Commission

Bruce A. Knoll

Bridge No. 0693

Drawing No. 59048
SECTION AT DECK DRAIN

PLAN OF REINFORCING AT DECK DRAINS

BAR LIST FOR ONE DRAIN

FOR INFORMATION ONLY

<table>
<thead>
<tr>
<th>Bar</th>
<th>No.</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4</td>
<td>6'-0&quot;</td>
</tr>
</tbody>
</table>

Bars designated with an "E" suffix are to be epoxy coated.

DETAILED INFORMATION

NOTE: A Pre-Manufactured Gutter Grate and Frame may be submitted for approval of the Engineer in place of the steel fabrication shown in the Plan. Gutter shall have an AASHO M 213, Grade 60, 3 1/2"配置 and shall be designed for a 2500 lb. wheel load.

DETAILS OF DECK DRAINS

CHOCTAW CREEK AND BIG BRANCH

ARIZONA STATE HIGHWAY COMMISSION

ARIZONA COMMISSION ON HIGHWAYS

DETAILED DRAWINGS

ARIZONA STATE HIGHWAY COMMISSION

ARIZONA DIVISION OF HIGHWAYS

DRAWN BY: FABULOUS, LTD.

CHECKED BY: STAFF OF THE DIVISION OF HIGHWAYS

SCALE: 1/8" = 1'-0"

DATE: 10/01/93

 BRIDGE NO. 06934 & 06935 - DECK DRAINS - 10/01/93

GENERAL NOTES

For Location of Deck DRAINS, see Superstructure Details.

Bridges may be subject to change at any time as per the plan changes.

Standard Weight Pipe for Deck DRAINS shall conform to ASTM A530 or A53. All other structural steel shall be A500, Grade D, 3.6. For fabrication of structural steel in place, the engineer shall ensure that any steel fabricated in accordance with ASTM A500, Grade D, 3.6. Steel shall be galvanized in accordance with A500, Grade D, 3.6. Steel shall be galvanized in accordance with A500, Grade D, 3.6.

Reinforcing steel in the slab shall be cut as shown to install the deck drains. Two additional No. 4 5/8" straight bars shall be placed as shown.

Repair of cut or damaged epoxy bars in accordance with the Standard Specifications.

Die additional reinforcing steel around deck drains shall be epoxy-coated and shall be paid for at the unit price bid for epoxy-coated reinforcing steel.
Notes: Class I Protective Surface Treatment shall be applied to the top of the new backwall and to the roadway face and top of the new wing walls.

For details of wings, "View 5-5" & "View 7-7", see Deg No. 59035.

Section B-B, see "Typ. Anchor" for subsections for anchor bolts.

SECTION C-C

View 2

SECTION D-D

View 3

SECTION E-E
GENERAL NOTES

For Standard General Notes, See Sec. Dwg. No. 59043.

Mark required to remove and dispose portions of the existing bridge and work and materials required for demolition not to be pulled for direct use will be considered subsidiary to the Item Modification of Existing Bridge Structure Bridge No. 59024.

No portion of the backwall shall be poured before beams are in place. The portion of the backwall above the опцион construction joint at the pouring apron shall be poured until the deck pour has been made. Refer to the "Expansion Device Installation" note on Dwg. No. 59006.

For additional information, see Layout.

For details of Expansion Bearings, See Dwg. No. 55006.

Membrane waterproofing Type "C" or approved equal. See Section B-B.

Payment for materials to be used in addition to "Material Price" shall be considered subject to the "Expansion Device Installation" note on Dwg. No. 59006.

For additional joint details, see Dwg. No. 59005.

For additional joint details, see Dwg. No. 59006.
REINFORCING PLAN-SIDEWALK

1. Bars shall be placed in Stage 1 & 2 as shown in "Sidewalk Joint" (p. 301).
2. C2 Full-Depth Forged Joint 1/2 to 1/2 in depth, stop 4' from top of sidewalk.
3. C2 Partial Depth Forged Joint 1/2 to 1/2 in depth, stop 4' from top of sidewalk.

CONCRETE PLACEMENT PROCEDURE

Pour Concrete to Approx. Six-Inch Penetration to Show as Shown when using Transverse Screed. Note: By the Contractor's Option, the Transverse Screed may be placed parallel to the skew or perpendicular to the skew at Contractor's Option.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

BRIECE NO. O694
DRAWING NO. O89423

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REGISTERED PROFESSIONAL ENGINEER

DATE
INCH
STYLE
SCALE

JOB NO.
O89423
O694

O694 = 130° W-BEAM UNIT - 59063
Details of Parapet Rail

<table>
<thead>
<tr>
<th>Details</th>
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<tr>
<td>9' x 1.50</td>
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</tbody>
</table>

Details of Optional Slipforming of Concrete Parapet Rail

**Details**
- Type H Rolling End Tamping at beginning and end of bridge, see Deg.No.5061 for details.
- "A" - Closed Parapet
- "B" - Open Parapet
- "C" - Closed Parapet

**Table of Parapet Rail Variables**

For location of Open and Closed Parapet Panels, see "Reinforcing Plan Sidewalk", Deg. No.59063.

**Notes**
- Wire shall be smooth, 9 gage, and conform to ASTM A 279, Class 3 presentation and dimensions.
- Three 4' fiberglass reinforcing bars shall be inserted as shown across all parapet joints with a 70° minimum lap on each side of.
- All smooth wire binding shall be placed on the inside faces of the reinforcing.
- For actual placement of reinforcing steel, see parapet details.

**Details**
- Bar to tighten smooth
- Bars shall be boxed as required to prevent crushing all parapet joints shall be sheeted as soon as practical to a minimum width of 10'.
- To control cracking before spalling all joints must be grouted before the concrete is set. 50% of the joints must be contained as to fill the grouted joint.

**Table of Parapet Rail Variables**

For location of Open and Closed Parapet Panels, see "Reinforcing Plan Sidewalk", Deg. No.59063.

**Details**
- Wire shall be smooth, 9 gage, and conform to ASTM A 279, Class 3 presentation and dimensions.
- Three 4' fiberglass reinforcing bars shall be inserted as shown across all parapet joints with a 70° minimum lap on each side of.
- All smooth wire binding shall be placed on the inside faces of the reinforcing.
- For actual placement of reinforcing steel, see parapet details.

**Notes**
- Bar to tighten smooth
- Bars shall be boxed as required to prevent crushing all parapet joints shall be sheeted as soon as practical to a minimum width of 10'.
- To control cracking before spalling all joints must be grouted before the concrete is set. 50% of the joints must be contained as to fill the grouted joint.

**Details**
- Type H Rolling End Tamping at beginning and end of bridge, see Deg.No.5061 for details.
- "A" - Closed Parapet
- "B" - Open Parapet
- "C" - Closed Parapet

**Table of Parapet Rail Variables**

For location of Open and Closed Parapet Panels, see "Reinforcing Plan Sidewalk", Deg. No.59063.

**Notes**
- Wire shall be smooth, 9 gage, and conform to ASTM A 279, Class 3 presentation and dimensions.
- Three 4' fiberglass reinforcing bars shall be inserted as shown across all parapet joints with a 70° minimum lap on each side of.
- All smooth wire binding shall be placed on the inside faces of the reinforcing.
- For actual placement of reinforcing steel, see parapet details.

**Details**
- Bar to tighten smooth
- Bars shall be boxed as required to prevent crushing all parapet joints shall be sheeted as soon as practical to a minimum width of 10'.
- To control cracking before spalling all joints must be grouted before the concrete is set. 50% of the joints must be contained as to fill the grouted joint.
Silicone Joint Data

NOTE: The temperature limitations recommended by the sealant manufacturer shall be observed. The sealant shall be installed only when the average 24-hour temperature is between 40°F and 90°F.

Silicone Joint Installation shall conform to Section 8.0. The temperature used to set the joint opening shall be the calculated average temperature during the 24-hour period immediately before the bolts are tightened. The Engineer shall establish the temperature, if interpolation of the table may be necessary.

SECTION 8-X: DETAILS FOR BLOCKING EXPANSION JOINT DEVICE

 EXPANSION DEVICE INSTALLATION

The Contractor may elect to install the expansion device using one of the following two alternatives:

1. The concrete or pour adjacent to joint shall be placed before the end bent backwall is placed. After the end bent backwall forms are in place and the bolts erected, the blocked expansion device shall be installed and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the backwall concrete, the blocking shall be removed, and the opening adjusted for temperature, and the backwall constructed.

2. The backwall shall be poured to the optimal construction joint after beams are erected. The blocked expansion device shall be located and adjusted for grade. All connection bolts shall be fully tightened prior to placing the deck concrete adjacent to the bent. Immediately prior to pouring the remainder of the backwall concrete, the blocking shall be removed and the opening adjusted for temperature.

NOTE: Concrete shall be hand packed under the joint order in the sidewalks. For expansion joint detail see "Detail of Poured Silicone Joint Seal".
ANCHOR BOLT DETAIL

Anchor Bolts may be cast in place or drilled and grouted into place, if known. Bolts to be cast in place, the Galvanized Sheet Metal Sleeves will not be required.

If Anchor Bolts are to be drilled and grouted into place, the Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with non-shrink, thin-set mortar until prior to pouring of concrete. After pouring of the cap and prior to grouting of Structural Steel, the dry pack shall be replaced and holes for the anchor bolts shall be grouted. bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material. All bolts shall be immediately grouted into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material.

Steel Sleeves shall be placed over the bolts prior to grouting, the bolts shall not be grouted into the concrete. Bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material.

Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with non-shrink, thin-set mortar until prior to pouring of concrete. After pouring of the cap and prior to grouting of Structural Steel, the dry pack shall be replaced and holes for the anchor bolts shall be grouted. bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material.

Table of Fabricator Variables

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ELASTOMERIC PAD</th>
<th>EXTERNAL LOAD PLATE</th>
<th>ANCHOR BOLT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<table>
<thead>
<tr>
<th>TYPE</th>
<th>EXTERNAL LOAD PLATE</th>
<th>ANCHOR BOLT</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tbody>
</table>

Details of Elastomeric Bearings

AASHTO M 250, Grade 50

Pipe Sleeves are to be cast in place, they shall be grouted into the concrete. Bolt sleeves shall be cast in place as shown.

Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with non-shrink, thin-set mortar until prior to pouring of concrete. After pouring of the cap and prior to grouting of Structural Steel, the dry pack shall be replaced and holes for the anchor bolts shall be grouted. bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material.

Galvanized Sheet Metal Sleeves shall be cast in place as shown. Sleeves shall be dry packed with non-shrink, thin-set mortar until prior to pouring of concrete. After pouring of the cap and prior to grouting of Structural Steel, the dry pack shall be replaced and holes for the anchor bolts shall be grouted. bolts placed in drilled holes shall be accurately set and fixed using a gap, approved epoxy or nonshrink grout material.
STAGE 1  STAGE 2

STA. 526+09 CONSTRUCT APPROACH ON LT. +2030 CUL. TO:

AREA CUT 0 AREA FILL 19
AREA CUT 5 AREA FILL 377

STAGE 1 STAGE 2

AREA CUT 0 AREA FILL 238
AREA CUT 1 AREA FILL 35

STAGE 1 STAGE 2

AREA CUT 0 AREA FILL 177
AREA CUT 1 AREA FILL 251

CROSS SECTION STA. 525+00 TO STA. 527+00
AREA CUT 1
AREA FILL 57

STAGE 1
STAGE 2

SECTION
STA. 626.00

36.4' EXIST, PCV T
STAGE 1 TRAFFIC
STAGE 2 TRAFFIC

CUT VOLUME 6
FILL VOLUME 293

CUT VOLUME 64
FILL VOLUME 22

AREA CUT 2
AREA FILL 86

27" x 27" STEEL PIPE CULVERT
REMOVE AND INSTALL
27" x 27" STEEL PIPE CULVERT
TRENCH DRAIN
CONSTRUCT APPROX. 175 CUB. YD.

STAGE 1
STAGE 2

36.6' EXIST, PCV T
STAGE 1 TRAFFIC
STAGE 2 TRAFFIC

CUT VOLUME 60
FILL VOLUME 570

CUT VOLUME 67
FILL VOLUME 10

AREA CUT 3
AREA FILL 24

AREA CUT 4
AREA FILL 19

CROSS SECTION STA. 626.00 TO STA. 627.00
CROSS SECTIONS

STAGE 1
STAGE 2

STA 692+00 - IN PLACE
14' x 90 METAL PIPE CULVERT
REPLACE EXIT:
STA 692+12 CULVERT
LIT SIDE DRAIN
CONSTRUCT APPROACH = 2200 CU YD.

STA 692+73 - IN PLACE
14' x 90 METAL PIPE CULVERT
REMOVE AND INSTALL
STA 692+73 CULVERT
LIT SIDE DRAIN
CONSTRUCT APPROACH = 255 CU YD.
CROSS SECTIONS

STAGE 1
STAGE 2

STA. 744.48 - IN PLACE
30' x 127' R.C. PIPE CULVERT

REMOVE R.C. WALLS LT. AND EXTEND R.C. PIPE 28' LT.
TO A COMPLETED LENGTH OF 2' LT.
PLACE IV, TYPE 3 SEEDING WITH FES LT.
CUT 17 R.C. PIPE CLAY - 24' LT
30' FES x 1 EACH LINE PT.

CROSS SECTION STA. 744.24 TO STA. 744.48
CROSS SECTIONS

STAGE 1

STAGE 2

STAGE 1

STAGE 2

CUT VOLUME 2
FILL VOLUME 846

CUT VOLUME 24
FILL VOLUME 0

CUT VOLUME 278
FILL VOLUME 79

CUT VOLUME 104
FILL VOLUME 0

CUT VOLUME 176
FILL VOLUME 600

CUT VOLUME 80
FILL VOLUME 7

CROSS SECTION STA. 750.00 TO STA. 752.00
CROSS SECTION STA. 779+00 TO STA. 779+41
CROSS SECTIONS

STA. 788+43 - CONSTRUCT ELEV ON LT. WITH STAGE I
STAGE I TRAFFIC

STA. 788+43 - CONSTRUCT JUNCTION BOX ON RT. WITH STAGE II
STAGE II TRAFFIC

STA. 788+43 - IN PLACE
RT. SIDE DRAIN

CONSTRUCT APPROACH = RO CUL. 10'

AREA CUT 6
AREA FILL 30
AREA CUT 0
AREA FILL 52

AREA CUT 5
AREA FILL 64

AREA CUT 1
AREA FILL 89

STA. 787+33 TO STA. 788+43
CROSS SECTIONS

STAGE 1
STAGE 2

STA. 794-00 CONSTRUCTION APPROACH ON L1 + 55 CFT YD.

STAGE 1 TRAFFIC
L1
L2

STAGE 2 TRAFFIC
L1
L2

AREA CUT
AREA FILL

CUT VOLUME
FILL VOLUME

STA. 795-00 TO STA. 795-00

10/22/2013
RIBBON 2.0

CROSS)
CROSS SECTION STA. 858+00 TO STA. 859+00

STAGE 1 STAGE 2
STA. 858+00 - IN PLACE
24" x 25' METAL PIPE CULVERT
LEAVE GATE
CONSTRUCT APPROACH + 8 C.Y.

STAGE 1 STAGE 2
STA. 858+14 - CONSTRUCT
SLOPE BTW. EXIST.
CONSTRUCT GATE WITH FIS,
& 8" x 85' PIPE OUTLET
CONNECT TO STA. 858+57 BT.
TH MOD. & FIS;
H = 4' x 4'

STAGE 1 STAGE 2
STA. 858+44 - CONSTRUCT
LEAVE GATE WITH FIS,
& 8" x 85' PIPE OUTLET
CONSTRUCT APPROACH + 45 C.Y.

STAGE 1 STAGE 2
STA. 859+00 - IN PLACE
B" x 60' METAL PIPE CULVERT
LEAVE GATE
REMOVE AND
CONSTRUCT APPROACH + 45 C.Y.
CROSS SECTIONS

STAGE I

STA. 868+46 - IN PLACE
RT. 2 FT. METAL PIPE COVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD.

35° EXIST. PAVEMENT

STAGE 2

STA. 868+00 - IN PLACE
RT. 2 FT. METAL PIPE COVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH = 20 CU. YD.

35° EXIST. PAVEMENT

CROSS SECTION STA. 868+00 TO STA. 868+46
STAGE 1
STA. 0+00 - CONSTRUCT
S.Stub INLET with FES.
STAGE 2
STA. 90+64 - IN PLACE
18" x 36" metal pipe culvert
CONSTRUCT APPROACH = 20 CU.YD.

AREA CUT 1  AREA CUT 2  AREA CUT 1  AREA CUT 2
AREA FILL 3  AREA FILL 1  AREA FILL 53  AREA FILL 30

CROSS SECTION STA. 910+64 TO STA. 911+08
STA 932-HYB - CONSTRUCT
10' x 4' FILT. PL. STIUB INLET w/ BELLS.
BETWEEN 200' AND 300' DIS.
CONNECT TO DIA STA 93 +00 LT.
H = 5' 

STA 932-HYB-00
Filt. PL. Outlet

TOP ELEV. = 774.94
FILL. MIE. ELEV. = 776.37
FILL. PL. OUTLET ELEV. = 776.37

CROSS SECTION STA 912-18 TO STA 913-21
CROSS SECTION STA. 308+00 TO STA. 309+34

STA. 309+34 - IN PLACE
24" x 30" x 40" METAL PIPE, CULVERT
RT. SIDE DRAIN
REMOVE AND INSTALL
RT. SIDE DRAIN
CUT VOLUME = 30 CY.

STA. 309+23 - IN PLACE
22" x 20" x 40" CIP CONCRETE CULVERT
LT. SIDE DRAIN
CONSTRUCT APPROACH + 30 CY.
FILL VOLUME = 30 CY.

CUT VOLUME 14
FILL VOLUME 6

CUT VOLUME 17
FILL VOLUME 18

CUT VOLUME 69
FILL VOLUME 73

CROSS SECTIONS 5R
**PART PLAN - SQUARE SPAN**

**PART PLAN - SKewed SPAN**

**SECTION A-A**

Wage of end of span

**SECTION B-B (FOR CONCRETE GIRDERS)**

(Showing 2/3 a 2/3 b 2/3 c 2/3 d)

**SECTION C-C**

Alternate

**SECTION D-D**

None. Only surface reinforcing is shown.

---

**Standard Details for Permanent Steel Bridge Deck Forms for Steel & Concrete Girder SPANS**

Arkansas State Highway Commission

**Drawing No. 55005**
GENERAL NOTES
Three GENERAL NOTES are applicable unless otherwise shown in the Panel Details, Special Provisions, or Supplemental Specifications.


DETAIL SPECIFICATIONS: See Bridge Layouts.

SUPERSTRUCTURE NOTES:

MATERIALS AND STRENGTH:

Class S40 Concrete
Reinforcing Steel: Gr. 40 AASHTO W-9 or 350 Type A
Gr. 60 AASHTO W-9 or 350 Type A
Gr. 65 AASHTO W-9 or 350 Type A
Gr. 70 AASHTO W-9 or 350 Type A
Gr. 80 AASHTO W-9 or 350 Type A
Gr. 95 AASHTO W-9 or 350 Type A
Gr. 100 AASHTO W-9 or 350 Type A
Gr. 120 AASHTO W-9 or 350 Type A

See Panel Details for Grades of Structural Steel Required.

CONCRETE
Concrete shall be Class S40 with a minimum 28 day compressive strength of 4,000 psi. Concrete shall be poured in the dry and all exposed corners shall be chiseled 90° unless otherwise noted.

The superstructure details shown are for reference when necessary deck forming is used and are based on the methodology for measurement of Class S40 Concrete. See Standard Drawing No. 5059 for standard details and for references when Permanent Steel Bridge Deck Form is used.

Use of a longitudinal seam is not permitted on any span of a bridge deck with constant curvature.

The concrete deck roadway surface shall be given a matte finish in accordance with Subsection 8204 for Class 5 Bridge Response Surface. Sidewalk shall receive a broomed finish as specified for final finishing in Subsection 8204 for Class Bbroomed Finish. Movement of the forming works across new concrete shall be on joints placed on the surface and shall be extended to the forming works. Joints shall be placed ahead of the strike-off to fully seal the base of the new concrete. When concrete has hardened, any exposed surface shall be chiseled to be consistent with the concrete deck roadway surface. All exposed corners shall be chiseled 90° unless otherwise noted. This additional work shall be accounted for in the future dead load due to any rolling, median, barrier, or sidewalk.

REINFORCING STEEL
The reinforcing for the bridge deck shall be Grade 40 conforming to AASHTO W-9 or 350 Type A, with wire mesh required and shall be smooth, coated, barbed, or welded, as may be specified. The reinforcing bar shall be accurately located in the forms and held in place by steel or other approved connectors. Excavation for the proper size of connectors, necessary for the proper location of reinforcing, shall be made. Joints shall be placed ahead of the strike-off to fully seal the base of the new concrete. When concrete has hardened, any exposed surface shall be chiseled to be consistent with the concrete deck roadway surface. All exposed corners shall be chiseled 90° unless otherwise noted. This additional work shall be accounted for in the future dead load due to any rolling, median, barrier, or sidewalk.

STRUCTURAL STEEL: COMMON TO BEAM AND PLATE DECKS

Structural steel shall be A992 or W-705 with grade and position as specified in the plans. Grade S40 steel shall not be permitted and all exposed surfaces shall be chiseled to be consistent with Subsection 8203. Grade S40 steel shall be permitted unless otherwise noted and all exposed surfaces shall be chiseled to be consistent with Subsection 8203. Structural steel commonly used in concrete may be A992 or W-705, S40, or Gr. 50 or S40 unless otherwise noted.

Drawings show general features of design only. Shop drawings shall be made in accordance with the specifications, submitted and approved before fabrication is begun.

Requests for substitution of structural steel shapes shown with shapes of greater size may be submitted by the Contractor to the Engineer for approval. Shapes of equal or greater strength may be used. This decision shall be made only after the shop drawings are submitted and approved. Shop drawings shall be made in accordance with the specifications.

All welding to be done during fabrication of structural steel: including temporary welds, shall be detailed on the shop drawings and submitted for approval. All welding procedures are required. Whether permanent or temporary, a record with details drawings shall be submitted by the Engineer for approval. All welds used for attaching framework supports or other temporary connections shall be shown on the shop drawings. The welds shall not be made on the structure if this might affect the integrity of the structure.

Welds shall not be driven during fabrication of structural steel: including temporary welds, shall be detailed on the shop drawings and submitted for approval. All welding procedures are required. Whether permanent or temporary, a record with details drawings shall be submitted by the Engineer for approval. All welds used for attaching framework supports or other temporary connections shall be shown on the shop drawings. The welds shall not be made on the structure if this might affect the integrity of the structure.

All shop connections shall be greater than 0.2500, and all welds shall be sound, void of cracks, or stress corrosion.

Welds shall not be driven during fabrication of structural steel: including temporary welds, shall be detailed on the shop drawings and submitted for approval. All welding procedures are required. Whether permanent or temporary, a record with details drawings shall be submitted by the Engineer for approval. All welds used for attaching framework supports or other temporary connections shall be shown on the shop drawings. The welds shall not be made on the structure if this might affect the integrity of the structure.

NOTES:
Concrete shall be poured in the dry and all exposed corners shall be chiseled 90° unless otherwise noted.

REINFORCING STEEL
Reinforcing for the bridge deck shall be Grade 40 (yield strength 60,000 psi) conforming to AASHTO W-9 or 350 Type A with wire mesh required. Top reinforcing bars in cap beams shall be properly aligned. All reinforcing bars in caps shall be properly aligned and are considered for load-bearing purposes. Top reinforcing bars in caps shall be properly aligned and are considered for load-bearing purposes.

STRUCUTRAL STEEL DECKS

All beams and field splice details, and all diaphragms and connection gages attached to horizontally curved beams are considered non-load carrying members and shall meet the Longitudinal Chord Permitted(2) in Section 8204. The work and materials will not be paid for directly, but shall be considered supplementary to the item "Structural Steel in Beam Spans M 270, M 272, ...", etc. All reinforcing for continuous steel will have provisions made for their true position in the shop long with reinforcing specified in Subsection 8204 for all web spaces. The capacity, height of sections, distance between bearings, and openings of joints shall be measured and this information shall be part of the permanent records. The components parts shall be marked in this assemblage and these marks shall be shown on the erection details.

All beams in closed span with field splices shall be blocked in their true position with web, horizontal, the columns, height of sections, distance between bearings, and openings of joints shall be measured and this information shall be part of the permanent records. These beams shall be furnished with three inch of concrete on the outside, and this concrete shall be poured to the same level as the other beams and bearers of girder frames.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tendons and/or compressive stresses. Beams with splice details for straight beam or cut, and fabricated in accordance with Subsection 8204 or as required for horizontally curved beams.

All steel shall be furnished as in the plans. All reinforcing bars in cap beams shall be thickened, straight, and furnished in accordance with Subsection 8204 prior to delivery of the concrete deck.

STRUCTURAL STEEL PLATE DECKS

All references to cross-frames shall include "L" or "N" types.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection gages attached to horizontally curved girder frames are considered non-load carrying members and shall meet the Longitudinal Chord Permitted(2) in Section 8204. This work and materials will not be paid for directly, but shall be considered supplementary to the item "Structural Steel in Beam Spans M 270, M 272, ...", etc. All reinforcing for continuous steel will have provisions made for their true position in the shop long with reinforcing specified in Subsection 8204 for all web spaces. The capacity, height of sections, distance between bearings, and openings of joints shall be measured and this information shall be part of the permanent records. The components parts shall be marked in this assemblage and these marks shall be shown on the erection details.

All girder web and flange plates, all field splice plates, and all diaphragms, cross-frames and connection gages attached to horizontally curved girder frames are considered non-load carrying members and shall meet the Longitudinal Chord Permitted(2) in Section 8204. This work and materials will not be paid for directly, but shall be considered supplementary to the item "Structural Steel in Beam Spans M 270, M 272, ...", etc. All reinforcing for continuous steel will have provisions made for their true position in the shop long with reinforcing specified in Subsection 8204 for all web spaces. The capacity, height of sections, distance between bearings, and openings of joints shall be measured and this information shall be part of the permanent records. The components parts shall be marked in this assemblage and these marks shall be shown on the erection details.

Flange field splice plates shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tendons and/or compressive stresses. Beams with splice details for straight beam or cut, and fabricated in accordance with Subsection 8204 prior to delivery of the concrete deck.

Web and flange plates for main members and flange plates for main members shall be cut and fabricated so that the primary direction of rolling is parallel to the direction of the main tendons and/or compressive stresses.

Girders may be made by shop splicing with suitable lengths of 25 feet for sections, flange plates longer than 50 feet may be made by shop splicing with lengths of 25 feet for sections. No additional payment will be made for shop spliced webs.

Girder dimensions are based on a temperature of 60 degrees F., a tolerance of 1/8" is allowed for curvature.

Girders may be made by shop splicing with suitable lengths of 25 feet for sections, flange plates longer than 50 feet may be made by shop splicing with lengths of 25 feet for sections. No additional payment will be made for shop spliced webs.

Girder dimensions are based on a temperature of 60 degrees F., a tolerance of 1/8" is allowed for curvature.

Girders may be made by shop splicing with suitable lengths of 25 feet for sections, flange plates longer than 50 feet may be made by shop splicing with lengths of 25 feet for sections. No additional payment will be made for shop spliced webs.
GENERAL NOTES

Transitional approach railing shall be placed at locations shown in the plans.

All concrete shall be Class IV with a minimum 28 day compressive strength of 3,000 psi rated and be poured in the dry. All exposure corners to be chamfered 3/8" unless otherwise noted.

All reinforcing steel shall be Grade 60 conforming to AWS/D 1.5, or 1/2 x 5/8 x 10 ft bars.

Type A, with 60 lb/early releases.

All longitudinal lines within the fields of horizontal curves shall be on axes consistent with rail construction. Adjustment to longitudinal bar lengths may be required. Transverse reinforcing shall be placed on radial axes to C.L. construction, unless otherwise required in the plans, curing and finishing shall be in accordance with Subsection B-12.04.4 and the surface finish type and areas shall be consistent with the contract documents. See Subsection D-12.04.5 and the surface finish type and areas shall be consistent with the contract documents. See Subsection B-12.04.5 and the surface finish type and areas shall be consistent with the contract documents.

Wherever surface coatings are specified in the plans, no direct payment will be made, and the alternate finish shall be considered incident to the unit price bid for "transitional approach railing". See Subsection B-12.04.5 for additional information when architectural finishes are specified.

Transitional approach railing shall be placed for on the ogress unit price bid for "transitional approach railing", see Section B-12.04.5 for additional information.

FOR INFORMATION ONLY

SCHEDULE OF QUANTITIES PER RAIL UNIT

<table>
<thead>
<tr>
<th>CLASS</th>
<th>PROTECTIVE SURFACE TREATMENT</th>
<th>TEXTURE FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>2&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

Only one of the above three surface treatments shall be applied to the transitional approach railing. See "General Notes" this sheet.

PICTORIAL OF TRANSITIONAL APPROACH RAILING

AR 0-S SCALE

SECTION AND DIRECTION REFER TO THE ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION LOVE OPTIONS.

THESE DETAILS ARE APPLICABLE UNLESS OTHERWISE SHOWN IN THE PLAN SECTION OR SUPPLEMENTAL SPECIFICATIONS.

STANDARD DETAILS FOR TRANSITIONAL APPROACH RAILING

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

DRAFT NO. 1020232

DRAWING NO. 100/3

DRAWN BY: T.M. STEPHENS

DRAWN BY: T.M. STEPHENS

DRAFTED BY: T.M. STEPHENS

SCALE: 1" = 1'-0"

DRAFTED BY: T.M. STEPHENS

DRAWING NO. 100/3
GENERAL NOTES FOR STEEL H-PLES:

- Steel H-Piles shall conform to AASHO W 36 or Grade 34 or greater.
- See Bridge Layout and Bent Details for pile sizes, extending length, etc.
- For additional information, see Table SL.
- Steel H-Piles that extend above the ground and are not protected by pile encasement shall be painted in accordance with Subsection 605.1.
- Bents that have piles that extend above the ground and are not protected by pile encasement shall be considered to extend above the line "Steel Pile.

TYPICAL DETAILS OF H-PILE TREBLES INTERMEDIATE BENT (shown with Partial Height Encaement):

Notes:
- All driving shall be cut and welded in the field. Each brace shall be furnished in one piece. Long pulley shall be made under the supervision of the engineer.
- Steel chocks and bent details for H-Pile Encasement are for reference only. Details of pile encasement shall be constructed in accordance with the specifications and bent details for H-Pile Encasement shall be constructed in accordance with the specifications.

REINFORCING DETAIL FOR STEEL H-PILE TIP:

GENERAL NOTES FOR H-PILE ENCASEMENTS:

- See Bridge Layout for additional notes, any pile encasement restrictions and required pile encasement for H-Pile Encasements.
- All concrete shall be Class 5 with a minimum 28-day compressive strength, f’ = 3,500 psi. Concretes shall be placed in the dry. Seep Concretes may be used from top to bottom of encasement.
- Reinforced shaft shall be Grade 60 reinforcing to AASHO W 3 or W 22. Unbonded Gravel Encased Steel Pile shall conform to AASHO W 36 and W 36.
- Conduits, encased wire, fabric or reinforcing shaft shall be placed for direct construction and shall be considered auxiliary to the main "Pile Encasement".

TABLE OF VARIABLES FOR PILE ENCASEMENT:

- TYPICAL SPICE DETAILS:
- "H-Pile splices manufactured by Associated Pile and Hinge Corporation, 12 Harbor Ring, Bridgeport, CT, or equivalent may be used in lieu of the "Typical Splice Details" shown. H-Pile splices shall match the same grade of steel specified for the pile and shall be connected to the pile with a "H" type weld around the entire perimeter of the splice. Splices shall be welded with a complete penetration groove weld. Splicing with AASHTO 88 Section 146.5 shall be done at the Bridge Layout. All welding shall conform to Subsection 507B of the AASHTO Standard Specifications for Highway Bridge Engineering.

AARNSAS STATE HIGHWAY COMMISSION

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

STANDARD DETAILS FOR STEEL H-PILES AND PILE ENCASEMENTS

DRAIN NO. 55020
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 40 INTERVALS. THE SPACE SHALL BE FILLED WITH APPROVED JOINT FILLER COMPLYING WITH AASHTO M233.
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. INSTEAD OF CONCRETE CURB.
COMPENSATION FOR MODIFIED CURB WILL BE CONSIDERED IN THE PRICE SO FOR THE TYPE OF CURB OR CURB AND GUTTER SPECIFIED.
DROPPED INLET TYPE "TM"
FOR REINFORCED CONC. BOX CULVERTS

TABLE OF "W" DIMENSIONS

<table>
<thead>
<tr>
<th>W</th>
<th>DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot;</td>
<td>3'-10&quot;</td>
</tr>
</tbody>
</table>
| "B" | 3'-0"
| "C" | 2'-11" |

NOTE: ADDITIONAL STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.L.

DIMENSIONS & REINF. BARS FOR D.L. TO BE THE SAME AS THOSE SHOWN ON APPLICABLE STD. BARREL DRAWING FOR R.C. BOX CULVERTS.

DETAIL A

NOTE: ADDITIONAL STEEL TO BE INCLUDED IN UNIT PRICE BID PER TYPE "TM" D.L.

dimensions & reinf. bars for d.l. to be the same as those shown on applicable std. barrel drawing for r.c. box culverts.

drop inlet type "tm"
for reinforced conc. box culverts
1. Mailbox posts may be wood or metal. Wood posts shall be friction fit in the standard metal socket in accordance with AASHTO M-182. Corrected.
2. Anti-twist plates shall be used only on metal posts. Corrected.
3. Mailbox, shelf, bracket & platform shall be furnished in accordance with Section 537.02 of the Standard Specifications. Corrected.
4. The mailbox shelf and platform that is shown is for standard size mailboxes. The wooden shelf & bracket (if platform is furnished) shall be furnished with a 1" thickness. Corrected.
5. Mailbox supports shall be 2" outside diameter steel with a wall thickness of 0.145" and a weight of 2.72 lbs per ft. Outside diameter and weight shall have a tolerance of +/- 0.02 according to AASHTO.
6. The mailbox support system differing from those shown may be used provided they are on the AASHTO approved products list for mailbox supports.

General Notes:

If requested by the local postmaster, height may vary as directed by the engineer.

Spacing for Multiple Post Installation:

3" O.C. Holes

Ground Line
**INSTALLATION TYPE**

- **TYPE 1**
  - **SELECTED MATERIALS**: CLASS SM-1, SM-2 or SM-3.
  - **AGGREGATE MATERIAL**:
    - **TYPE**: IN
    - **INCHES**: 3'-6" - 7'-6"
    - **MAXIMUM SIZE**: 10" - 2'-6"
    - **BACKFILL**: DENSITY POLYETHYLENE.
    - **STRUCTURAL BEDDING**: SELECTED MATERIAL.

- **TYPE 2**
  - **SELECTED PIPE BEDDING MATERIAL**: BASED ON EMBEDMENT AND TRENCH INSTALLATIONS.
  - **MINIMUM TRENCH WIDTH**

**GENERAL NOTES**

1. **PLASTIC PIPE CULVERT**:
   - **DESIGN**: ASHMO LEF., EMBANKMENT, AND OUTER STRUCTURAL BEDDING MATERIAL SHALL BE COMPACTED TO THE SELECTED PIPE BEDDING MATERIAL.

2. **CONSTRUCTION SEQUENCE**
   - **PIPE INSTALLATION**: SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING THE LAYERS SHALL BE BROUGHT UP EERTY AND SHALL BE ALE TO THE ELEVATION OF THE MINIMUM COVERS.
   - **SELECTED PIPE BEDDING**: SHALL BE PLACED BY THE CONTRACTOR.

**MULTIPLE INSTALLATION OF HIGH DENSITY POLYETHYLENE PIPES**

<table>
<thead>
<tr>
<th>PIPE DIAMETER</th>
<th>CLEAR DISTANCE</th>
<th>NO. OF LAYERS</th>
<th>FINISHED</th>
<th>MINIMUM COVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot;</td>
<td>2'</td>
<td>2</td>
<td>2'-6&quot;</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>8&quot;</td>
<td>2'</td>
<td>2</td>
<td>2'-6&quot;</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>10&quot;</td>
<td>2'</td>
<td>2</td>
<td>2'-6&quot;</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>12&quot;</td>
<td>2'</td>
<td>2</td>
<td>2'-6&quot;</td>
<td>6'-0&quot;</td>
</tr>
</tbody>
</table>

**NOTE**

- **MINIMUM COVER SHALL BE MEASURED FROM TOP OF PIPE TO TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.** THE SURFACE SHALL BE MAINTAINED.
MAXIMUM FILL HEIGHT
BASED ON STRUCTURAL BACKFILL

<table>
<thead>
<tr>
<th>DIAMETER (IN)</th>
<th>&quot;H&quot; (FT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>6'-0&quot;</td>
</tr>
<tr>
<td>15</td>
<td>7'-0&quot;</td>
</tr>
<tr>
<td>18</td>
<td>8'-0&quot;</td>
</tr>
<tr>
<td>24</td>
<td>9'-0&quot;</td>
</tr>
</tbody>
</table>

*NOTES: (a) MINIMUM "H" SHALL BE AS DETERMINED BASED ON THE WEIGHT OF THE PIPE AND/OR STRUCTURAL BEDDING MATERIAL.
(b) PIPE INSTALLATION MAY OCCUR IN VARIOUS SECTIONS OF THE TRENCH.

GENERAL NOTES

1. PVC PIPE SHALL CONFORM TO ASTM F924, CLASS (ORM) INSTALLATION SHALL CONFORM TO USE SPECIAL PROVISION "PLASTIC PIPE AND Fittings Specification for Highway Construction" ORDINARY EDITION.
2. PLASTIC PIPE CULVERT DESIGN SHALL CONFORM TO ASHSTO LRFD BRIDGE DESIGN SPECIFICATIONS, FIFTH EDITION (USAD WITH 2012 AMENDMENTS) SECTION 26.4.2.4.
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 MATERIAL AND OTHER PIPELINE MATERIAL.
4. IMPERVIOUS MATERIAL SHALL BE PLACED AS DIRECTED BY THE ENGINEER AT THE ENDS OF THE CULVERT TO PREVENT LOSS OF STRUCTURAL BEDDING WHEN PERVIOUS MATERIAL IS USED FOR STRUCTURAL BEDDING AND/OR BACKFILL.
5. WHEN DIRECTED BY THE ENGINEER, IMPERVIOUS MATERIAL THAT IS ENCOUNTERED AT THE BOTTOM OF THE EXCAVATED TRENCH SHALL BE CLEANED OF ALL FOREIGN MATERIALS AND OLD BEDDING MATERIALS BY THE CONTRACTOR. THE APPROVED BACKFILL MATERIAL SHALL BE PlACED OF THE BASED ON THE CONTRACTOR'S SPECIFICATION.
7. WHEN USE OF SELECTED PIPE BACKFILL IS NOT AVAILABLE, THE ENGINEER MAY AUTHORIZE THE USE OF "SELECTED PIPE BACKFILL" MATERIAL.
8. PVC PIPE TIES THAT ARE NOT SHOWN ON THE OUTSIDE CORRECTED TO THE OUTER TRENCH WILL BACKFILL GRADUATIONS SHOULD BE SELECTED THAT WILL PERMIT THE FILLING OF THE CORRECTION OR PROFILE VALLY.
9. PVC PIPE OF DIAMETERS OTHER THAN SHOWN WILL NOT BE ALLOWED.

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. THE STRUCTURAL, BEDDING SHALL BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8" IN LAYERS. THE LAYERS SHALL BE COMPACTED AT LEAST 1" TO THE ELEVATION OF THE MINIMUM COVER.
5. PIPE INSTALLATION MAY REQUIRE THE USE OF RESTRICTIONS, WEIGHTING, OR OTHER APPROVED METHODS IN ORDER TO HELP MAINTAIN GRADE AND ALIGNMENT.

LEGEND

H = FILL HEIGHT (FT)
D = OUTER DIAMETER OF PIPE
W = COVER (FT)
S = MINIMUM STRUCTURAL BEDDING
M = MINIMUM MATERIAL
N = UNDISTURBED SOIL

ARKANSAS STATE HIGHWAY COMMISSION
PLASTIC PIPE CULVERT (PVC F949)
STANDARD DRAWING PCP-2

REVISED GENERAL NOTES & MINIMUM COVER NOTICES DELETED
DECEMBER 2012
**NOTES:**
1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE NOT-IS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

**CONCRETE PAVEMENT**

**BROKEN LINE STRIPING**

**SOLID LINE STRIPING ON CONCRETE PAVEMENT**

**SOLID LINE STRIPING ON ASPHALT PAVEMENT**

**ASPHALT PAVEMENT**

**CONCRETE PAVEMENT**

**STRIPING AT ADJACENT NO PASSING LANE**

**YIELD LINE DETAIL**

**CROSSWALK AND STOPBAR DETAILS**

**PAVEMENT EDGE LINE MARKING**

**DETAO OF STANDARD RAISED PAVEMENT MARKERS**

**ARKANSAS STATE HIGHWAY COMMISSION**

**PAVEMENT MARKING DETAILS**

**STANDARD DRAWING PM-1**
6. THE GEOTEXTILE FABRIC SHALL BE WRAPPED AROUND THE DRAIN PIPE AT THE TOP.

7. AT SADDLES AND AT 20 FT INTERVALS ON GRADINGS, THE EXISTING LATERALS SHALL BE CONNECTED TO THE NEW UNDERDRAIN SYSTEM. THE 20 FT DISTANCES MAY BE EXCEED BEYOND WHERE NECESSARY FOR AN ACCEPTABLE OUTLET.

DETAILS OF PIPE UNDERDRAIN

NOTES FOR PIPE UNDERDRAIN

1. GEOTEXTILE FABRIC SHALL MEET THE REQUIREMENTS OF SECTION 6.A. PAYMENT FOR GEOTEXILE FABRIC AND GRANULAR FILTER MATERIAL SHALL BE INCLUDED IN THE PRICE BD PER LIN. FT FOR "4" PIPE UNDERDRAINS" IN ACCORDANCE WITH SECTION 6.B. OF THE STANDARD SPECIFICATIONS.

2. "4" NON-PERFORATED SCHEDULE 40 PVC PIPE LATERALS WITH OUTLET PROTECTORS SHALL BE INSTALLED AS SHOWN TYPICAL. LATERALS WILL BE MEASURED AND PAID FOR AS "4" PIPE UNDERDRAINS." UNDERDRAIN OUTLET PROTECTORS WILL BE MEASURED AND PAID FOR BY THE UNIT IN ACCORDANCE WITH SECTION 6.B. OF THE STANDARD SPECIFICATIONS.

3. EXISTING "4" PIPE UNDERDRAINS MAY BE CONNECTED TO PROPOSED DROP INLETS OR EXTENDED WHERE DIRECTED BY THE ENGINEER. PAYMENT FOR CONNECTING TO DROP INLETS SHALL BE CONSIDERED INCLUDED IN THE PRICE BD FOR "4" PIPE UNDERDRAINS.

4. THE LOCATION OF ALL LATERALS SHALL BE MARKED WITH "4" X 12" PERMANENT PAVEMENT MARKING TAPE (TYPE B) AT THE OUTSIDE EDGE OF THE SHOULDER, PLACED TRANSVERSE TO TRAFFIC. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE PRICE BD FOR THE ENSURING CONTRACT HEREIN.

5. PAYMENT FOR THE ROOD SCREEN SHALL BE INCLUDED IN THE PRICE BD PER EACH FOR "UNDERDRAIN OUTLET PROTECTORS.

6. ANY EXISTING UNDERDRAINS THAT INTERFERE WITH INSTALLATION OF THE NEW UNDERDRAIN SYSTEM SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER. PAYMENT FOR DISPOSAL OF THE UNDERDRAIN SYSTEM SHALL BE INCLUDED IN THE PRICE BD FOR THE ENSURING CONTRACT HEREIN. EXISTING UNDERDRAIN OUTLET PROTECTORS SHALL BE REMOVED UNDER THE ITEM "REMOVAL AND DISPOSAL OF UNDERDRAIN OUTLET PROTECTORS.

1. AT LOCATIONS WHERE A SINGLE LATERAL IS USED THE CONTRACTOR SHALL HAVE THE FOLLOWING OPTIONS: INSTALL OUTLET PROTECTORS AS SHOWN ON STANDARD DRAWING PU-1 AND CRAFT THE CAUSED HOLE OR 2. INSTALL AN OUTLET PROTECTOR WITH A SINGLE HOE.
### Replacement Bar Lengths Table

<table>
<thead>
<tr>
<th>Bar Size</th>
<th>Length of Hooked Bar</th>
<th>Length of Straight Bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot;</td>
<td>L + F-0&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;B&quot;</td>
<td>L + F-2&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;C&quot;</td>
<td>L + F-4&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;D&quot;</td>
<td>L + F-8&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;E&quot;</td>
<td>L + F-12&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;F&quot;</td>
<td>L + F-16&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;G&quot;</td>
<td>L + F-20&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;H&quot;</td>
<td>L + F-24&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
<tr>
<td>&quot;I&quot;</td>
<td>L + F-28&quot;</td>
<td>See &quot;C&quot; Bar Length</td>
</tr>
</tbody>
</table>

L = "ON" = 3 INCHES

**Diagram Notes:**
- Dimensions of bars are measured out to out of bars.
- Overall height of hooked bar diagram.

**Replacement Bar**
- Bars shall be placed in the bottom of the top slab and the top of the bottom slab. The straight bars shall be placed in the top of the top slab and the bottom of the bottom slab. See Table below for lengths of replacement hooked and straight bars.
- For boxed culverts, the replacement straight bar may have to be cut in field to fit.

**Reinforced Concrete Box Culvert General Notes**
- Concrete shall be Class S with a minimum 28 day compressive strength of 3500 psi.
- Reinforcing steel shall be ASTM A 312, Grade 60.

**Construction and Materials**
- For boxed culverts, including steel and granular material, shall be in accordance with the guidelines in this standard.

**Membrane Waterproofing**
- shall conform to the requirements of Section 85 of the standard specifications.

**Membrane Waterproofing**
- shall be applied to all construction joints in the top slab and the top slab of the box culvert as indicated 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 for reinforcing steel shall be those listed in "Manual of Standard Practice" published by American Reinforcing Steel Institute (CRSI) on page 1 of the standard specifications. The tolerance that the engineer is to use shall be stated in the drawings.

**Wingwall & Culvert Drainage Detail**
- Wingwall and Culvert Drainage includes the use of wingwall, and Culvert Drainage, including joint layout and granular material, shall be in accordance with the guidelines in this standard.

**Concrete Headwall Modifications**
- R.C. box culvert headwall shall be constructed parallel to the skew angle of the box culvert.
ARKANSAS STATE HIGHWAY COMMISSION

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

STANDARD DRAWING RCB-2

GENERAL NOTES:
- ROADWAY EXCAVATION (CHANNEL CHANGE) WILL BE PAID FOR AT ALL R.C. BOX CULVERT LOCATIONS. IT WILL BE PAID TO THE LIMITS ACTUALLY CUT AND WILL BE CONSIDERED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL 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 LOCATIONS. IT WILL BE PAID TO THE LIMITS SHOWN AND SHALL BE CONSIDERED TO THAT PORTION OF THE INDICATED AREA THAT IS BELOW THE CHANNEL FLOW LINE. 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.

SECTION A-A
DETAILS THROUGH EXISTING CHANNELS

SECTION B-B
DETAILS FOR NEW CHANNELS

SECTION C-C
DETAILS FOR BOX CULVERT

PARTIAL SECTION SHOWING SOLID SODDING AT HEADWALLS AND WING WALLS

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

EXCAVATION LINE
GRADE LINE
ORIGINAL GROUND
EMBANKMENT-PLACED IN HORIZONTAL LAYERS
LONGITUDINAL SECTION
BACKFILL DETAILS FOR BOX CULVERT

CHANNEL CHANGE
CHANNEL CHANGE
CHANNEL CHANGE
CHANNEL CHANGE

EXISTING CHANNEL
EXISTING CHANNEL

ROADWAY EXCAVATION (CHANNEL CHANGE)
ROADWAY EXCAVATION (CHANNEL CHANGE)
ROADWAY EXCAVATION (CHANNEL CHANGE)
ROADWAY EXCAVATION (CHANNEL CHANGE)

ROADWAY EXCAVATION
(structural excavation)

STRUCTURAL EXCAVATION

FLOW LINE

TREES FOR STRUCTURES

TREES FOR STRUCTURES

TREES FOR STRUCTURES

TREES FOR STRUCTURES

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TREES FOR STRUC
LOOP DETECTOR INSTALLATION AND TESTING

NOTES:
1. Loops with a perimeter greater than 40' shall have two turns. Loops with a perimeter less than or equal to 40' shall have three turns, unless otherwise noted on the plans. Quadrupole loops shall be two turns 12-2-4 configuration unless otherwise noted.
2. Loop and feeder wire shall be continuous without splices except at the loop-neck-feeder wire splice as shown. Splice shall be rosin soldered and waterproofed. Within accepted splice kit, drain wire shall be grounded in conduit and insulated at loop to feeder splice.
3. The loop to feeder splice, feeder jacket and jacket of loop wire in duct shall be completely sealed and waterproofed.
4. Contractor may make connections to signal cable and loop to feeder connection at terminal strips mounted to pole inside hand hole cover as shown in detail. Terminals must be easy accessible but protected against accidental contact. Connection of power carrying circuits must be separated from loop or loop circuit and water. All connections to terminal strips shall utilize space lugs or as approved by the engineer.
5. Each loop shall have a separate "feeder wire" unless otherwise noted. All feeder wires shall be labeled as to loop number as designated on the plans.
6. All loop wire entering pull box shall be enclosed in conduit. Each loop wire shall enter pull box or pole base through a separate piece of one-inch PVC conduit.
7. Loop wire from loop to conduit is not twisted. Loop wire in the conduit must be twisted two to five turns per foot.
8. Warranty period for loops shall not commence until tested by the contractor and accepted by the engineer. Contractor shall perform test and provide a record to the engineer as listed in the DETECTOR LOOP TESTING procedure.
9. Unless otherwise approved by the engineer, Back Box shall be installed in short sections spaced not more than 18" apart and held in place with wire ingo and outo to hold cable in place. Cable shall be totally insulated in space lugs.
10. "Hot port" sealers shall not be allowed with top-loop wiring in duct.
11. Where underground splices of signal cable are required, connections shall be soldered and completely waterproofed. To the satisfaction of the engineer, waterproofing shall extend a minimum of 1/2 inch past the signal cable jacket and shall completely cover all individual conductors of the signal cable. Waterproofing does not apply to connections made in pole bases.
12. Contractor shall connect a separate neutral for each load switch represented on each signal pole. A neutral is required for pedestrian signals. A separate null (Y) is provided for pedestrian push buttons.
13. Traffic controller cabinets and layout shall be such that it is not necessary to shut down power on the load switches connected to this conduit. Traffic controller cabinets shall be wired such that power to load switches cannot be turned off by traffic controller cabinet during flashing operation.

TYPICAL DETAIL FOR DETECTOR LOOP TESTING

1. Disconnect and test continuity of loop. If continuity is bad, go to test 3.
2. Test insulation @ 500 volt test > 10 meg-ohm. If tests 1 & 2 are good, no further testing is necessary. Recorded values consist of 2 tests in 2 from control cabinet with feeder wire connected to loop.
3. Open space and do not break connections. Repeat test 1 & 2.
4. Break splice, install jumper in cabinet, repeat tests 1 & 2 separately for feeder and for loop failures. Typically made from bronze or copper or iron wire or isolation of loop or feeder wire, or poorly isolated space connection.

TYPICAL INTERSECTION

TYPICAL SECTIONS FOR PULSE AND PRESENCE LOOP DETECTORS

SECTION C-C

SECTION D-D

LOOPS DETECTOR INSTALLATION

ARKANSAS STATE HIGHWAY COMMISSION

STANDARD DRAWING 50-4
(A)

(B)

(C)

(D)

(E)

**GENERAL NOTES:**

1. FOUR SECTION "PROTECTED-PERMITTING" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE LEFT OR 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 PLAN SHEET-B, RESULTING IN PART OR EXTENDING MORE THAN TWO FEET PAST THE OUTSIDE OF THE CENTERLINE OR APPROACHING LEFT TURN LANE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE PATTERN TO INSTALL THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.

4. SIGNAL HEAD SPACING SHALL BE LESS THAN EIGHTY (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 COORDINATE SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.

6. MAXIMUM MOUNTING HEIGHT OF SIGNALフェイス LOCATED BETWEEN 30 FEET AND 33 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 40-5 OF 2009 MUTCD.
### General Notes
1. On pavement with two-way traffic, the super-elevation shall be revolved on the inside pavement edge unless otherwise noted on the plans.
2. Super-elevation in each lane shall be based on the following transition lengths:
   - For curves of average radius and subgrade profiles.
   - Curves, where the radius is equal to or greater than 2000 ft.
3. Transition lengths are to be measured tangentially from the point of superelevation.
4. In pavements wider than 2 lanes, there shall be additional transition lengths as follows:
   - 1 lane divided: 50 ft.
   - 2 lanes divided: 100 ft.
   - 2 lanes undivided: 150 ft.

### Super-elevation Values
<table>
<thead>
<tr>
<th>Degree Curve</th>
<th>L Lane</th>
<th>Minimum S. Elev.</th>
<th>5 Lane</th>
<th>Minimum S. Elev.</th>
<th>7 Lane</th>
<th>Minimum S. Elev.</th>
<th>10 Lane</th>
<th>Minimum S. Elev.</th>
<th>15 Lane</th>
<th>Minimum S. Elev.</th>
<th>20 Lane</th>
<th>Minimum S. Elev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0.1</td>
<td>15</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
</tr>
<tr>
<td>0.2</td>
<td>30</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
<td>200</td>
<td>175</td>
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</tr>
</tbody>
</table>

### Special Notes
- Note: Maintain normal crown on inside until super-elevation exceeds 25 ft.
- Note: Super-elevation exceeding 25 ft. is not applicable.

### Diagram Notes
- Standard Method When Superelevation Revolves Around Center Line
- Standard Method When Superelevation Revolves Around Inner Subgrade Point
- Standard Method When Superelevation Revolves Around Outer Subgrade Point

### Arkasas State Highway Commission
Tables and Method of Superelevation for Two-Way Traffic

---

**ARKANSAS STATE HIGHWAY COMMISSION**

**TABLES AND METHOD OF SUPERELEVATION FOR TWO-WAY TRAFFIC**

**STANDARD DRAWING SE-2**
Typical application - emergency maintenance operations of short duration on a three divided roadway where half of the roadway is closed.

(a) Typical application - emergency maintenance operations of short duration on a three divided roadway where half of the roadway is closed.

(b) Typical application - emergency maintenance operations of short duration on a three divided roadway where half of the roadway is closed.

(c) Typical application - construction operations of intermediate to long term duration on a three divided roadway where half of the roadway is closed.
**Standard Traffic Controls**

**Temporary Precast Barrier**

**BARRIER PLACEMENT ALONG BRIDGE WITH OFFSET**

**Offset Distance for Two Way Traffic Only**

<table>
<thead>
<tr>
<th>Speed</th>
<th>Offset Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>45</td>
<td>4.5</td>
</tr>
<tr>
<td>&gt;45</td>
<td>12</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 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."
Sediment Basin with Riprap Outlet (E-9)

Note: Size of basin to be determined by volume required; however, a minimum length-to-width ratio of 2:1 shall be used.

Sediment Basin with Pipe Outlet (E-10)

Note: Size of basin to be determined by volume required; however, a minimum length-to-width ratio of 2:1 shall be used.

Profile View

Slope Drain (E-12)

Flow

Sediment Basin (E-14)

Diversion Ditch (E-B1)

Note: A 2:1 section shall be used at the inlet for two-directional flow. For one-directional flow, a minimum length-to-width ratio of 2:1 shall be used.
CLEARING AND GRUBBING

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, EMBANKMENT CHECKS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION

EMBANKMENT

CONSTRUCTION SEQUENCE
1. PLACE PERIMETER CONTROLS (I.E. SILT FENCES, DIVERSION DITCHES, EMBANKMENT CHECKS, ETC.)
2. PERFORM CLEARING AND GRUBBING OPERATION
3. PLACE PHASE 1 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
4. PLACE PHASE 2 EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING.
5. PLACE FINAL PHASE OF EMBANKMENT WITH PERMANENT OR TEMPORARY SEEDING

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

EXCAVATION

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

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

GENERAL NOTES

1. THIS WORK PERTAINS TO EROSION CONTROL WORK, INCLUDING THE INSTALLATION AND MAINTENANCE OF SILT DIKES. THE DIKES SHALL BE INSTALLED AND LOCATED AS DIRECTED BY THE ENGINEER.

2. TRIANGULAR SILT DIKES SHALL BE INSTALLED ALONG THE EDGE OF THE ROADWAY OR DITCH. THE DIKES SHALL BE INSTALLED AND LOCATED AS DIRECTED BY THE ENGINEER. THE DIKES SHALL BE installed at a minimum of 0.5% grade.

3. THE CONSTRUCTION CONTRACTOR SHALL INSPECT ALL DIKES AFTER EACH RAINFALL EVENT OF AT LEAST 0.5" OF WATER DEPOSITS PERCHING OF SULFATES OR OTHER MATERIALS. THE CONTRACTOR SHALL REMOVE ANY DEFICIENCIES OR DAMAGES.

4. THE CONTRACTOR SHALL REPLACE ANY DAMAGED OR INCOMPLETE SILT DIKES IMMEDIATELY AFTER DAMAGE OCCURS.

5. ACCEPTED SILT DIKE MATERIALS MAY BE USED FOR DROP INLETS OR DRAINAGE DITCHES. THE MATERIALS MAY BE USED FOR DROP INLETS OR DRAINAGE DITCHES.

NOTE: SILT DIKE INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER

- SPECIAL SYMBOLS TO BE USED TO NOTE DIVERSION DITCHES ON PLANS

- NOTE: SILT DIKE INSTALLATION FOR DIVERSION DITCH AND/OR DITCH LINER
GENERAL NOTES

These installations to be used where normal fencing installation would cause the collecting of drift in the channel or the depression, will not permit normal installation. Installations will be made only where directed by the engineer.

When fence line approaches a ditch, gully or depression, the last post on level ground shall be placed close enough to the edge of the drop off so that the fence may be strung to the post in the depression without touching the ground. In terrain of such extreme irregularity that normal grading is not feasible, the normal fence shall continue on grade and the ditches or depressions treated by auxiliary fences as shown.

Payment for 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.
### Details of Standard Wings

**Reinforced Concrete Box Culverts**

**Cedar Creek Group**

| 2:1 Slopes |</table>

<table>
<thead>
<tr>
<th>Single, Double, Triple, All Depths of Cover</th>
<th>Concrete &amp; Reinforcement</th>
<th>For H/D of 12 I.D. Standard (W-1000)</th>
</tr>
</thead>
</table>

#### Notes:

- This drawing is to be used in conjunction with Standard Details drawings dated April 20, 1955.
- All dimensions are in inches.
- Reinforcement details are shown for one wing only.
- The construction of the culvert is based on the specifications of the Arkansas State Highway Commission.
- The reinforcement provided is for a 2:1 slope.
- The culvert is designed for a highway with an H/D of 12 I.D.

**Class 5 Concrete**

**Quantities**

**Class: Concrete - 4 Barry**

### General Notes:

- Constructions similar to those described in the drawings of Barry No. 2 are expected to be used in this project.
- **Construction Notes:**
  - Controlling factor: construction of culverts is subject to the conditions of the project.
  - All dimensions are in inches.
  - Reinforcement is provided for one wing only.

### Methods of Installation:

- The reinforcement provided is for a 2:1 slope.
- The culvert is designed for a highway with an H/D of 12 I.D.
- The construction of the culvert is based on the specifications of the Arkansas State Highway Commission.

### Standard Details:

- All dimensions are in inches.
- Reinforcement details are shown for one wing only.
- The construction of the culvert is based on the specifications of the Arkansas State Highway Commission.
- The reinforcement provided is for a 2:1 slope.
- The culvert is designed for a highway with an H/D of 12 I.D.
### Bar List for Barrel Section 40' 8" Length

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Dia.</th>
<th>2&quot;</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>5&quot;</th>
<th>6&quot;</th>
<th>7&quot;</th>
<th>8&quot;</th>
<th>9&quot;</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
</tbody>
</table>

#### Dimensions

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Dia.</th>
<th>2&quot;</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>5&quot;</th>
<th>6&quot;</th>
<th>7&quot;</th>
<th>8&quot;</th>
<th>9&quot;</th>
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</tbody>
</table>

#### Quantities

<table>
<thead>
<tr>
<th>Bar No.</th>
<th>Dia.</th>
<th>2&quot;</th>
<th>3&quot;</th>
<th>4&quot;</th>
<th>5&quot;</th>
<th>6&quot;</th>
<th>7&quot;</th>
<th>8&quot;</th>
<th>9&quot;</th>
</tr>
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<td></td>
</tr>
</tbody>
</table>

**General Notes:**

- Bars are to be of plain type and shall be painted in yellow.
- Bars shall be continuous around the barrel circumference.
- Bars shall be aligned to the centerline of the barrel and shall not exceed 4 ft in length.

### Typical Section M-M

**Details:**

- Barrel length:
- Material:

---

**Class 5 Concrete**

ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF STANDARD BARREL SECTIONS

FOR REINFORCED CONCRETE BOX CULVERTS

45'ECCentric SPANS 3:1 or 4:1 SLOPES

SINGLES UNDER 5° COVER

STANDARD DRAWING NO. R-1028-P-0
### Class S Concrete

**ARKANSAS STATE HIGHWAY COMMISSION**

**DEVIATION OF STANDARD SECTION**

**REINFORCED CONCRETE BOX CULVERTS**

**4.5' & 6' SPANS**

**3:10 or 4:1 SLOPES**

**OVER 60' COVER**

**STANDARD DRAWING NO. R-1006-X1**
### Bar List for Various Sections of Barrel

<table>
<thead>
<tr>
<th>Section</th>
<th>Bar Size (in)</th>
<th>Bar Grade (ksi)</th>
<th>Bar Length (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>1/2</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>S2</td>
<td>3/4</td>
<td>70</td>
<td>15</td>
</tr>
<tr>
<td>S3</td>
<td>1</td>
<td>80</td>
<td>10</td>
</tr>
</tbody>
</table>

### Dimensions

- **Typical Section**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>6.0</td>
</tr>
<tr>
<td>Height</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### Quantities

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete</td>
<td>300 cubic yards</td>
</tr>
<tr>
<td>Reinforcing Steel</td>
<td>12 tons</td>
</tr>
</tbody>
</table>

---

### General Notes:
- All bars must be from Class 2 and shall be located in the dry end of the barrel unless otherwise specified in the drawings.
- Audible warning devices shall be provided at the ends of the barrel, and the locations shall be indicated on the drawings.

### Design Live Load

- **LOADING**
  - Axle Loads
    - 215,000 lb per axle
  - Lane Loads
    - 550,000 lb per lane
  - Span Loads
    - 1,000,000 lb per span

---

### Class of Concrete

- **ARKANSAS STATE HIGHWAY COMMISSION**

### Details of Standard Barrel Sections

- **Reinforced Concrete Box Culverts**
- **S1 on S1 SLOPES**
- **DOUBLE COVER & COVER**

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**STANDARD SPANS NO. 1006-X2**