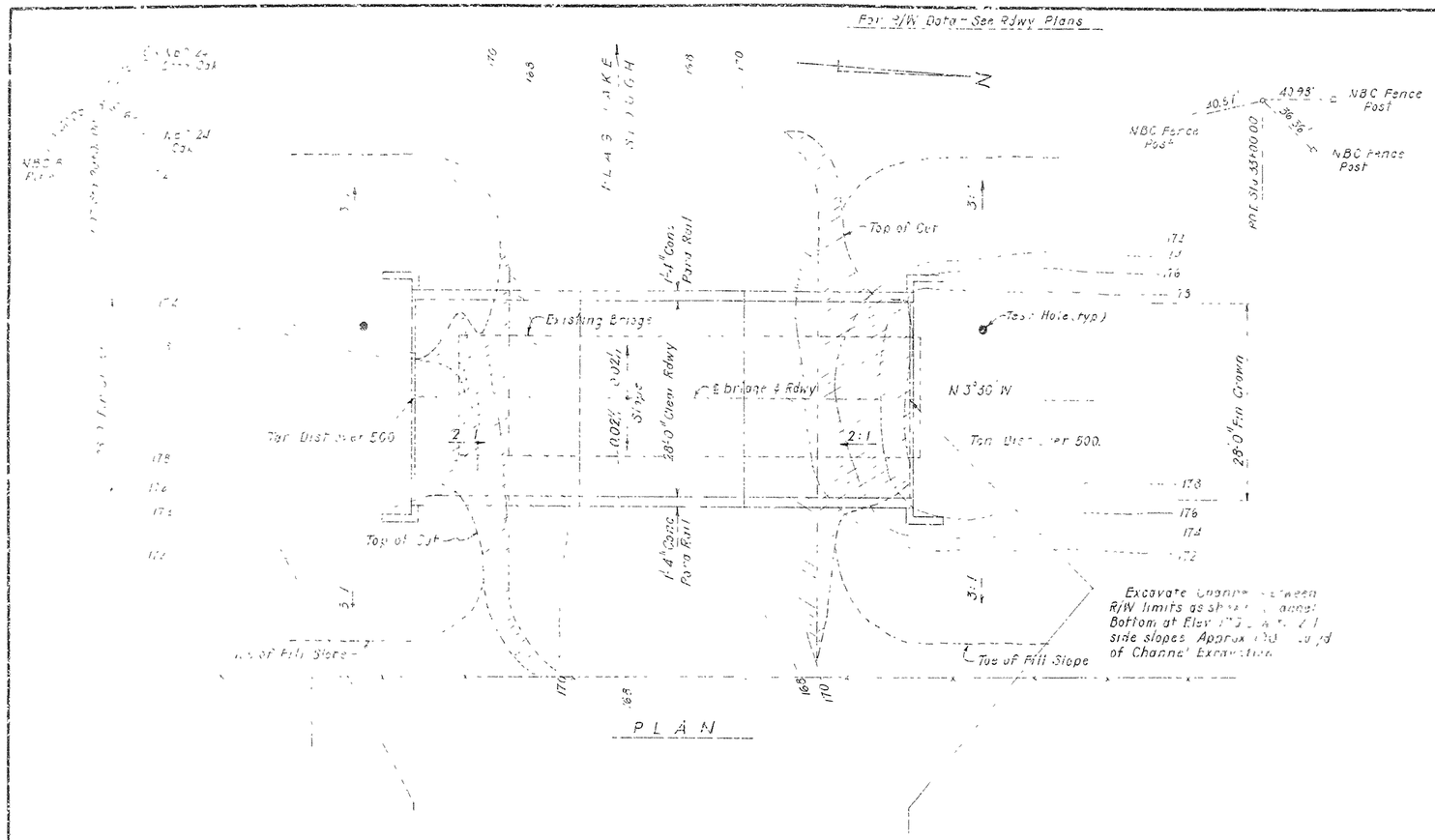
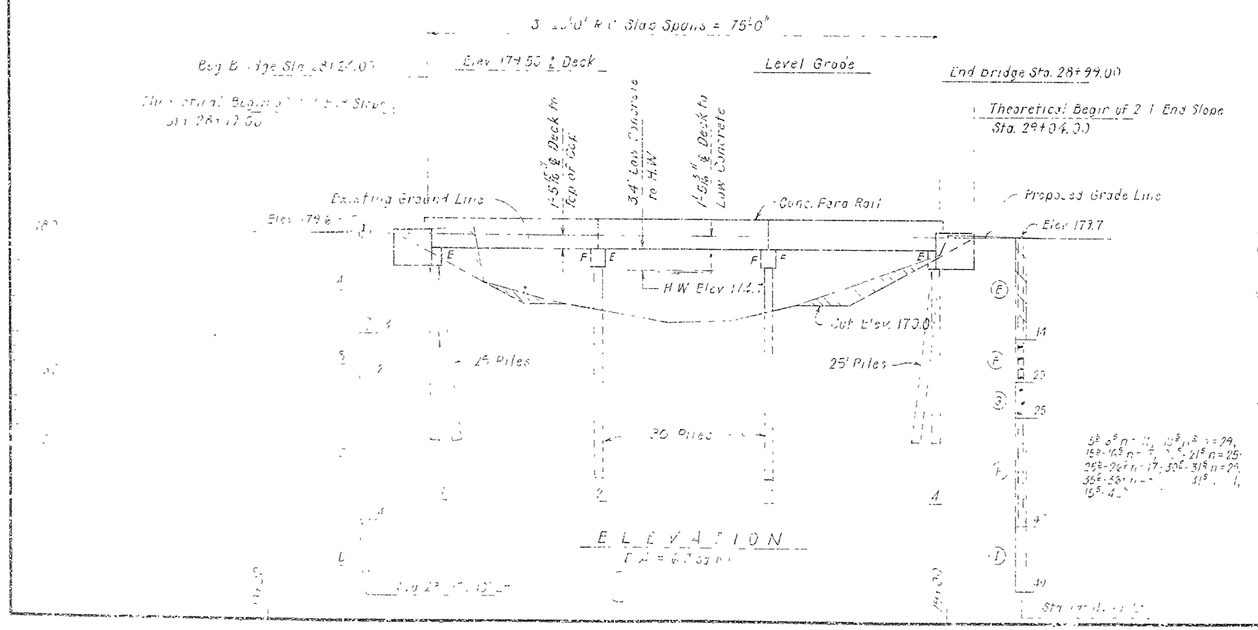
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD NO. | STATE | FED. AID PROJ. NO | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | BOS-0200(12) | | |
| | | | | JOB NO | | NS-1-1 | 8 | 24 |
| | | | | 4335 | | | | |

For R/W Data - See Rdwy Plans




BORING LOG

(A) - Moist, Med Stiff, Brown Clayey Silt
(B) - Wet, Med Stiff, Brown Silt
(C) - Wet, Med Dense, Brown Silty Sand
(D) - Wet, Loose, Brown Silty Sand
(E) - Moist, Stiff to Very Stiff, Brown & Mottled Silty Clay with Organic Matter
(F) - Wet, Med Dense, Mottled Brown Silt with Organic Matter
(G) - Wet, Dense, Mottled Silty Sand with Organic Matter
(H) - Moist, Dense, Mottled Brown Silty Sand
(I) - Wet, Med Dense, Brown Sand

GENERAL NOTES

BENCH MARK - N.G.S. 40 OAK 30 AT STA. 20+51, ELEV. 184.91.

ALL CONCRETE SHALL BE POURED IN THE DRY

ALL PILING SHALL BE 16" OCTAGONAL OR 16" SQUARE PRECAST CONCRETE AND SHALL BE DRIVEN WITH AN APPROVED AIR, STEAM, OR DIESEL HAMMER TO A MINIMUM BEARING CAPACITY OF 44 TONS PER PILE, AND TO A MINIMUM PENETRATION OF 20 FEET BELOW THE GROUND LINE. LENGTHS OF PILING SHOWN ARE ASSUMED FOR ESTIMATING QUANTITIES ONLY. ACTUAL LENGTHS TO BE DETERMINED IN THE FIELD. DRIVE ONE 35 FOOT TEST PILE IN BENT 2.

PILES IN END BENTS TO BE DRIVEN AFTER EMBANKMENT TO SUBGRADE IS IN PLACE

FOR DETAILS OF BENTS, SEE DWG. NO. 21065
FOR DETAILS OF 25' R.C. SLAB SPANS, SEE DWG. NO. 21066
FOR DETAILS OF PRECAST CONCRETE PILING, SEE DWG. NO. 2383

SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1972, AND APPLICABLE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS. AASHTO 1973 WITH 1974 THRU 1976 INTERIMS

METHOD OF DESIGN: LOAD FACTOR

REMOVE THE EXISTING 76' BRIDGE WHICH CONSISTS OF A STEEL PONY TRUSS SUPPORTED BY CONCRETE ABUTMENTS. SEE SECTION 213 OF THE STANDARD SPECIFICATIONS.

ALL MATERIAL FROM THE EXISTING BRIDGE SUPERSTRUCTURE SHALL REMAIN THE PROPERTY OF THE COUNTY. ALL MATERIAL FROM THE EXISTING BRIDGE SUBSTRUCTURE SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
LIVE LOAD. H15

LAYOUT OF BRIDGE OVER
FLAG LAKE SLOUGH
FLAG LAKE SLOUGH BR. & APPRS
ARKANSAS COUNTY
ROUTE SEC.

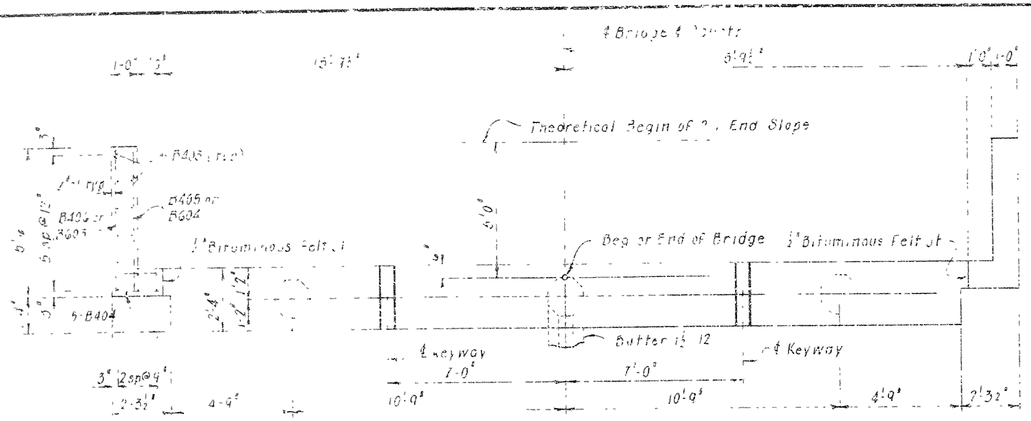
**ARKANSAS STATE HIGHWAY COMMISSION**
LITTLE ROCK, ARK.

DRAWN BY: [illegible] DATE: [illegible]
CHECKED BY: LDB DATE: 3/10/77 SCALE: [illegible]
DESIGNED BY: DATE:

BRIDGE ENGINEER

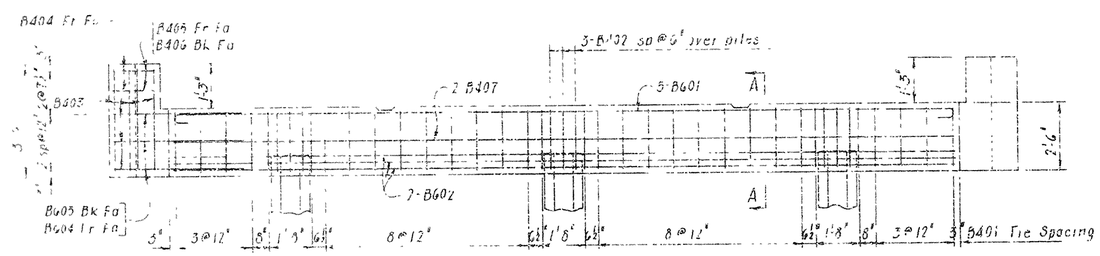
BRIDGE NO. 4335 DRAWING NO. 21064

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | [illegible] | | |
| | | | | JOB NO. | | 1-5-1-1 | | |
| | | | | 4335 | BENTS 21065 | | | |

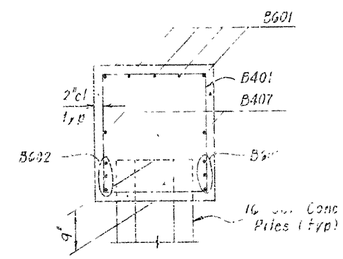



PLAN OF END BENT

KEYWAY DETAIL
3"=1'-0"




ELEVATION OF END BENT

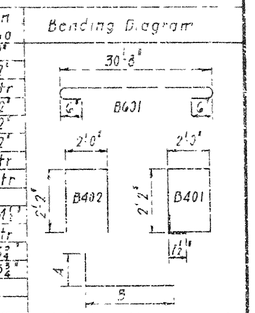



SECTION A-A
3"=1'-0"

## BAR LIST

| Mark | No. Req'd End | No. Req'd Int | Length | A | B | Pin Dia. |
|---|---|---|---|---|---|---|
| B401 | 52 | 52 | 9'-2" | | | 2" |
| B402 | 9 | 12 | 6'-2" | | | 2" |
| B403 | 30 | | 3'-5" | | | Str |
| B404 | 10 | | 3'-3 | 1'-8" | 1'-8" | 2" |
| B405 | 4 | | 6'-1" | 5'-2" | 1'-8" | 2" |
| B406 | 4 | | 6'-1" | 4'-6" | 1'-8" | 2" |
| B407 | 2 | 2* | 30'-8" | | | Str |
| B408 | | * | 2'-6" | | | Str |
| | | | | | | |
| B601 | 6 | 6 | 32'-0" | | | 1 1/2" |
| B602 | 6 | 6 | 30'-8" | | | Str |
| B603 | 6 | | 8'-10" | 4'-6" | 4'-6" | 3/4" |
| B604 | 6 | | 8'-0" | 5'-2" | 3'-8" | 3/4" |

Bending Diagram




* 20 Required For Fix-Exp Bent
* 40 Required For Fix-Fix Bent

GENERAL NOTES

ALL CONCRETE SHALL BE CLASS "S" AND SHALL BE POURED IN THE DRY. EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED. MINIMUM 28 DAY COMPRESSIVE STRENGTH f'c = 3500 PSI.

REINFORCING STEEL TO BE ASTM A615, OR A617, GRADE 60. SHOP LISTS AND BENDING DIAGRAMS MAY BE SUBMITTED FOR APPROVAL BEFORE FABRICATION IS BEGUN.

PILING SHALL BE 16" OCTAGONAL OR 16" SQUARE PRECAST CONCRETE PILES. ALL PILING SHALL BE DRIVEN TO A MINIMUM CAPACITY OF 44 TONS PER PILE.

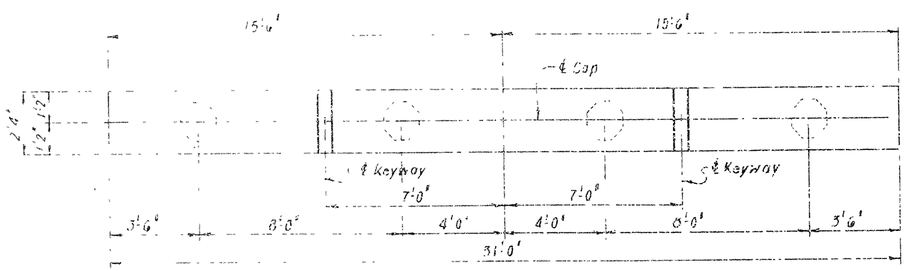
SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION'S STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1972, AND APPLICABLE SPECIAL PROVISIONS.

LIVE LOAD: H15

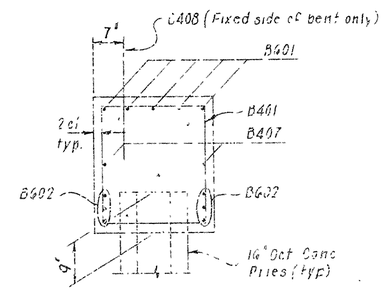
METHOD OF DESIGN: LOAD FACTOR

DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 1973 WITH INTERIM SPECIFICATIONS.

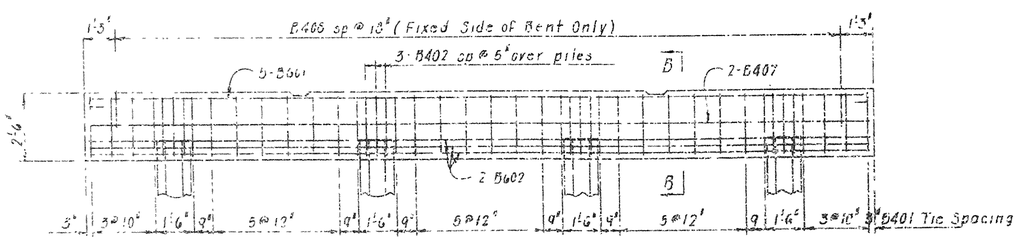
BITUMINOUS FELT SHALL BE MEASURED AND PAID FOR AS CLASS "S" CONCRETE.




PLAN OF INT. BENT




SECTION B-B
3"=1'-0"




ELEVATION OF INT BENT

DETAILS OF STANDARD
PILE BENTS
25'-0" R.C. SLAB SPANS
28'-0" CL. RDWY., CONC. PARA RAILING

ROUTE SEC.

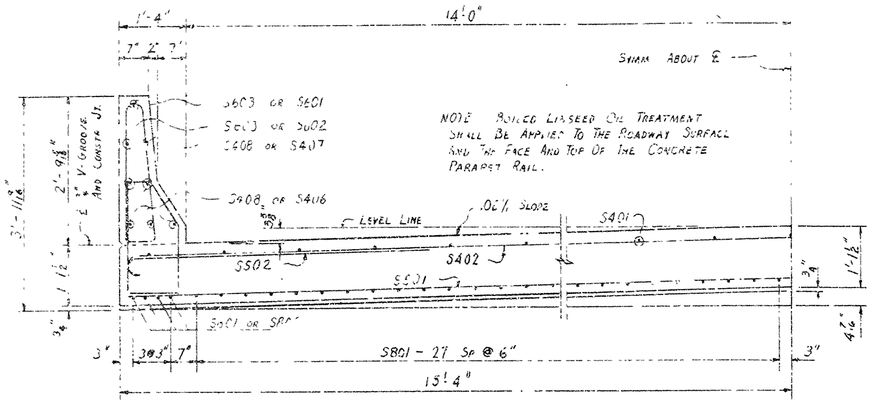
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: LM DATE: 4-18-77
CHECKED BY: MGC DATE: 4-21-77
PREPARED BY: _____ DATE: _____
SCALE: 3"=1'-0" or as shown

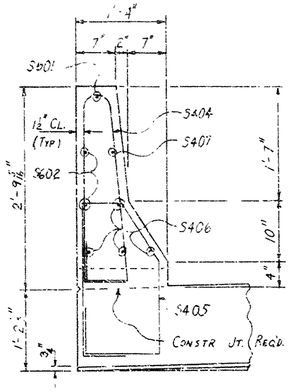
BRIDGE ENGINEER

BRIDGE NO. 4335 DRAWING NO. 21065

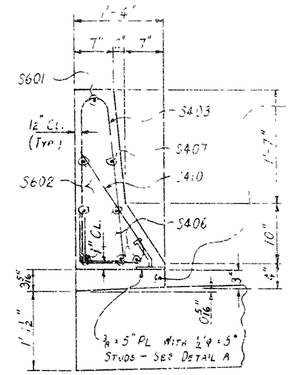
| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD DIV. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK | [illegible] | | |
| | | | | BRIDGE NO. | | NS-1-1 | | |
| | | | | 4335 | SLAB SPAN 21'-0" | | | |




HALF-SECTION THRU ROADWAY
3/4" = 1'-0"

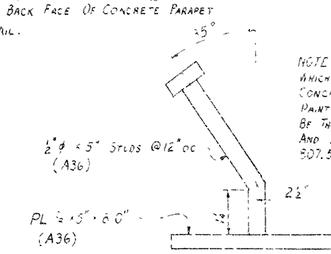



SECTION B-B
1" = 1'-0"




SECTION C-C
1" = 1'-0"

NOTE: Drain Shall Taper From 3" x 8'-0" At Curb To 3⅜" x 8'-0" At Back Face Of Concrete Parapet Rail.

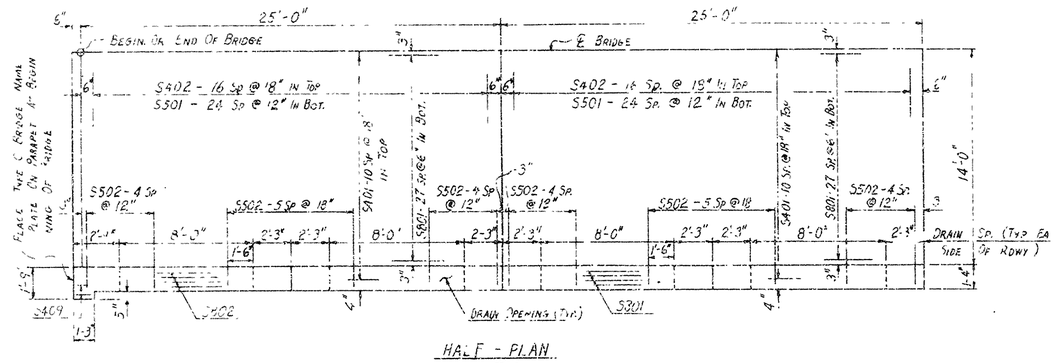



DETAIL A
2" = 1"

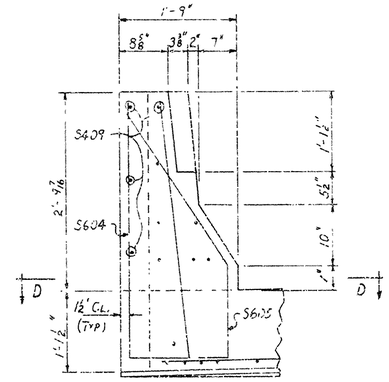
NOTE: The Surfaces Of The ¾" Plates Which Will Not Be In Contact With Concrete Shall Receive Two Coats Of Paint In The Shop. These Coats Shall Be Those Specified As First Shop Coat And Second Field Coat In Subsection 807.59 (c) And 807.59 (e).

Studs Shall Be 5" Long Granular Flux Filled Cold Formed Or Equal And Automatically Welded To Plate. Studs & Plate To Be Measured And Paid For As Class S Concrete.

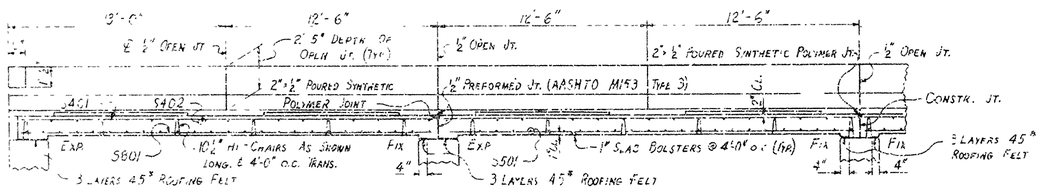
Structural Steel Shall Meet The Requirements Of Section 807 Except As Noted.



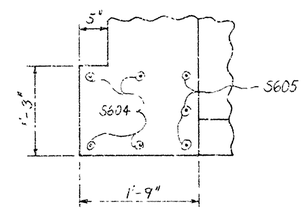

HALF - PLAN
N.T.S.



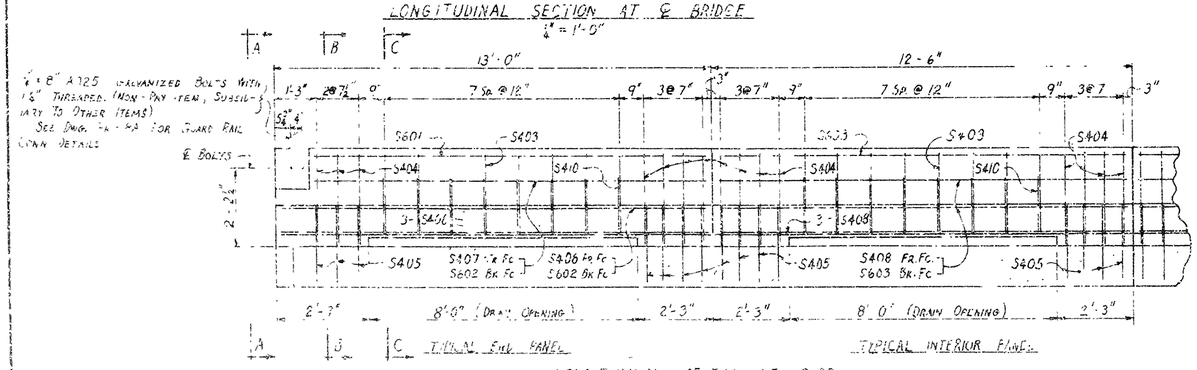

SECTION A-A
1" = 1'-0"



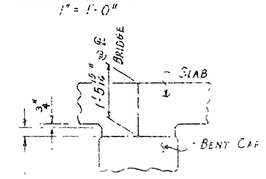

LONGITUDINAL SECTION AT ℄ BRIDGE
¼" = 1'-0"




SECTION D-D
1" = 1'-0"




LONGITUDINAL SECTION AT CURB
¼" = 1'-0"



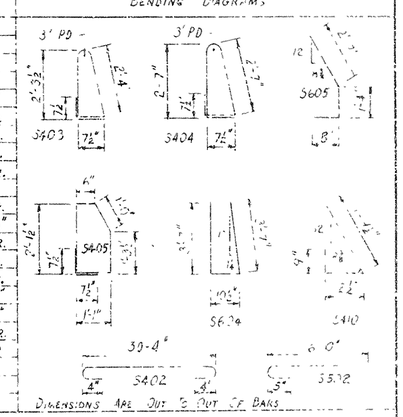

Varies From 0" At Sides To 3 11/16" At ℄ Bridge

RISER DETAIL
½" = 1'-0"

BAR LIST (EACH SPAN)

| MK | No. Req'd 2nd | No. Req'd Int. | Length | Pin Dia. |
|---|---|---|---|---|
| S401 | 21 | 21 | 24'-8" | Str. |
| S402 | 17 | 17 | 31'-4" | 3 |
| S403 | 32 | 32 | 5'-5" | 2" |
| S404 | 30 | 32 | 7'-1" | 2" |
| S405 | 30 | 32 | 6'-10" | 2" |
| S406 | 8 | – | 12'-8" | Str. |
| S407 | 2 | – | 11'-5" | Str. |
| S408 | 10 | 20 | 12'-1" | Str. |
| S409 | 8 | – | 4' | Str. |
| S410 | 32 | 32 | 3'-3" | 2" |
| S501 | 25 | 25 | 30'-[illegible] | Str. |
| S502 | 32 | 32 | 6'-7" | 3¾" |
| S601 | 2 | – | 11'-8" | Str. |
| S602 | 4 | – | 12'-8" | Str. |
| S603 | 6 | 12 | 12'-1" | Str. |
| S604 | 4 | – | 7'-9" | 3¾" |
| S605 | 6 | – | 4'-5" | 3¾" |
| S801 | 56 | 64 | 24'-8" | Str. |
| S802 | 2 | – | 25'-2" | Str. |

Bending Diagrams




GENERAL NOTES

ALL CONCRETE TO BE CLASS S. ALL EXPOSED CORNERS TO BE CHAMFERED 3/4" UNLESS OTHERWISE NOTED

REINFORCING STEEL TO BE ASTM A615, GRADE 60 OR A617. BAR SUPPORTS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO THE ITEM "REINFORCING STEEL"

ROOFING FELT, BITUMINOUS FELT, PREFORMED JOINT, AND SYNTHETIC POLYMER JOINTS SHALL BE MEASURED AND PAID FOR AS CLASS S CONCRETE.

SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION EDITION OF 1972, AND APPLICABLE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO 1973 AND 1974 INTERIM
DESIGN LIVE LOADING: H15
LOAD DISTRIBUTION TO SLAB: DEAD LOAD (SLAB & FUTURE SURF.) = 187 PSF
RAIL DEAD LOAD = 305 LB/FT LINE LOAD AT CENTER OF SPAN
LIVE LOAD = 0.184 WHEELS/FT + 30% IMPACT

METHOD OF DESIGN: LOAD FACTOR
MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE, f'c = 3500 PSI
YIELD STRENGTH OF REINFORCING STEEL, fy = 60,000 PSI

| Quantity | End Span | Int. Span |
|---|---|---|
| Concrete | 36.79 C.Y. | 36.50 C.Y. |
| Reinforcing Steel | 6901 LBS | 6813 LBS |
| Structural Steel* | 215 LBS. | 215 LBS. |

*Not Paid For Directly, Subsidiary To The Item "Class S Concrete"

DETAILS OF STANDARD
25'-0" R.C. SLAB SPANS
CONC. PARAPET RAIL - 23'-0" CL. RDWY

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

ALTERED BY [illegible] DATE [illegible]
CHECKED BY [illegible] DATE 19 Apr 77
DESIGNED BY [illegible] DATE 31 July 75
SCALE As Noted

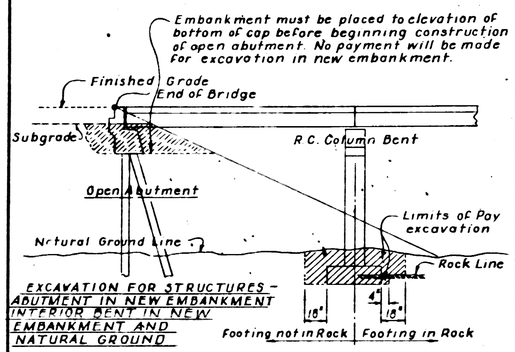
BRIDGE ENGINEER

BRIDGE NO. 4335 DRAWING NO. 21066

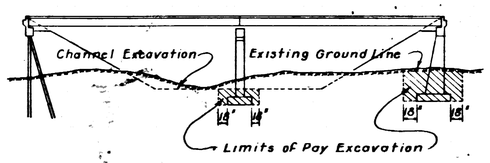
334 ~~118~~

| DATE REVISED | DATE PLANED | DATE REVISED | DATE PLANED | FED. ROAD DIV. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| | | | | 6 | ARK. | | | |
| | | | | JOB NO | | | | |

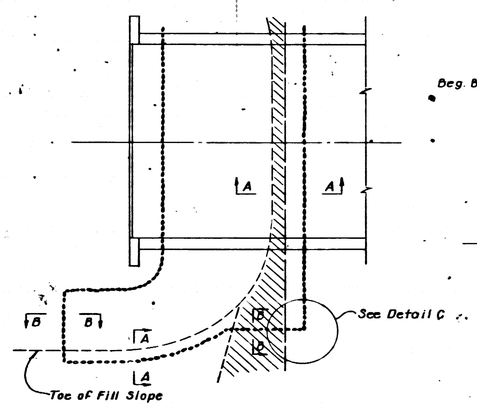
Riprap Details & Excavation 1891 F



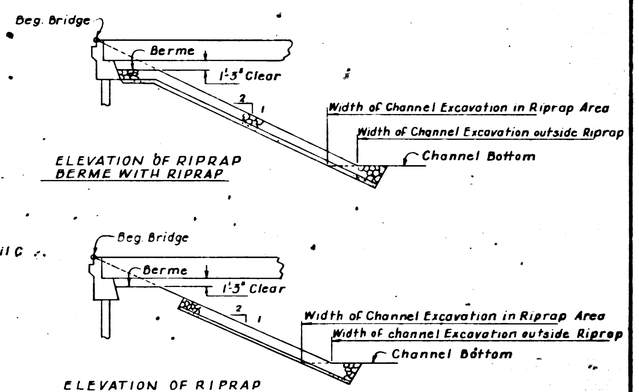

EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NEW EMBANKMENT AND NATURAL GROUND




EXCAVATION FOR STRUCTURES - BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE



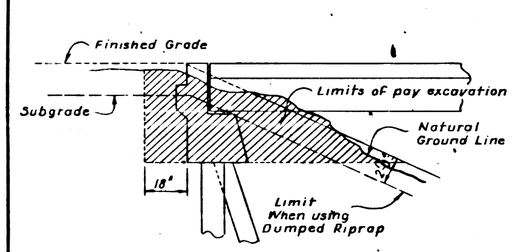

PLAN OF DUMPED RIPRAP



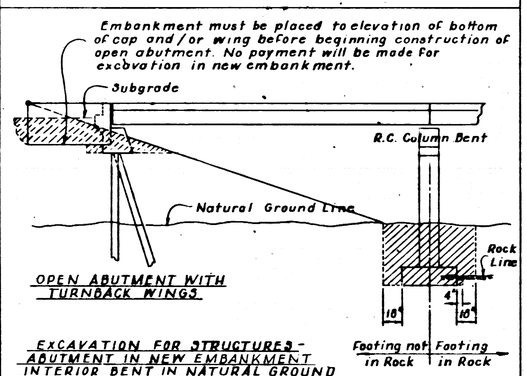

ELEVATION OF RIPRAP BERME WITH RIPRAP




ELEVATION OF RIPRAP BERME WITHOUT RIPRAP

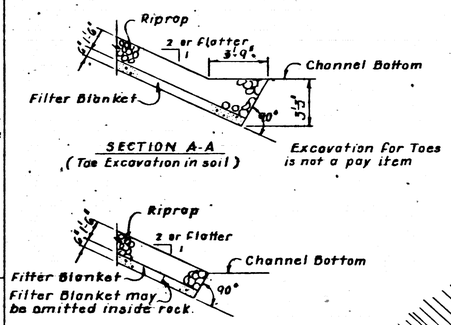



EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND




OPEN ABUTMENT WITH TURNBACK WINGS

EXCAVATION FOR STRUCTURES - ABUTMENT IN NEW EMBANKMENT INTERIOR BENT IN NATURAL GROUND

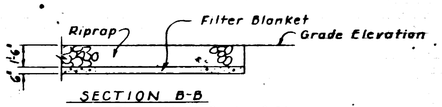



SECTION A-A
(Toe Excavation in soil)

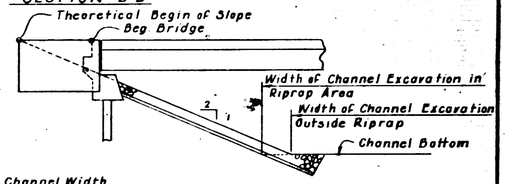
Excavation for Toes is not a pay item

SECTION A-A
(Toe Excavation in rock)

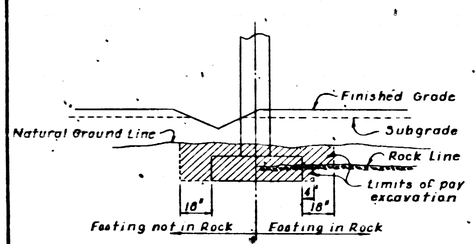
Note: Use this type of toe when rock is encountered which is in a stable condition



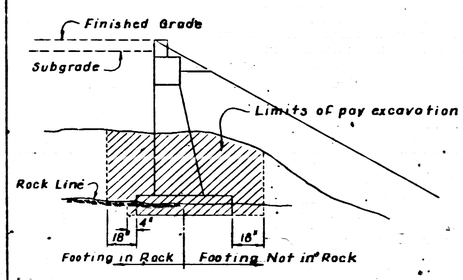

SECTION B-B



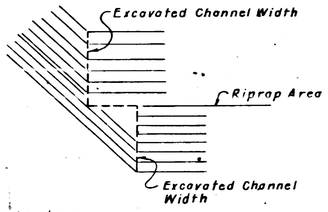

OPEN ABUTMENT WITH TURNBACK WINGS




EXCAVATION FOR STRUCTURES - BENT IN ROADWAY FILL SECTION AND NATURAL GROUND




EXCAVATION FOR STRUCTURES - ABUTMENT IN NATURAL GROUND AND NEW EMBANKMENT




DETAIL C

Note: Details for computing excavation for structures are included for information as to how plan quantities were calculated and for use when adjusting quantities when changing footing elevation.

DETAILS FOR DUMPED RIPRAP AND FILTER BLANKET AND DETAILS FOR COMPUTING EXCAVATION FOR STRUCTURES

ROUTE SEC.

ARKANSAS STATE HIGHWAY COMMISSION

LITTLE ROCK, ARK.

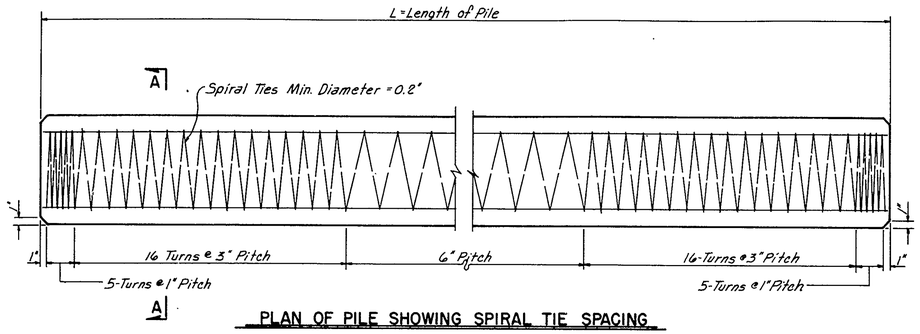
DRAWN BY: LM DATE: 4-8-77
CHECKED BY: EH DATE: 4-11-77
DESIGNED BY: DATE:
SCALE: None

Rural Publicover
BRIDGE ENGINEER

BRIDGE NO.

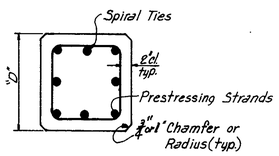
DRAWING NO. 1891 F

| DATE REVISED | DATE FILMED | DATE REVISED | DATE FILMED | FED. ROAD NO. | STATE | FED. AID PROJ. NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|---|
| 7-24-75 | 687-8-4-75 | 9-15-78 | 882-9-15-78 | 6 | ARK. | | | |
| 12-2-77 | 501-12-577 | | | JOB NO. | | | 20 | |

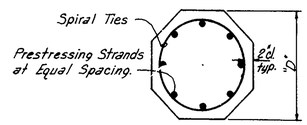



PLAN OF PILE SHOWING SPIRAL TIE SPACING

NOTE: Strand location shall be symmetrical about the Axis of the pile with no more than one strand difference between any two adjacent sides.




SECTION A-A
SQUARE PILE




SECTION A-A
OCTAGONAL PILE

PRESTRESSED CONCRETE PILES

PRESTRESSED PILE PROPERTIES

| GRADE | STRAND DIAMETER | *NUMBER OF STRANDS PER PILE SIZE "D" 16" OCT. | 18" OCT. | 14" SQ. | 16" SQ. | 18" SQ. | MINIMUM ULTIMATE TENSILE STRENGTH PER STRAND (LBS) | INITIAL PRESTRESSING FORCE PER STRAND (LBS) |
|---|---|---|---|---|---|---|---|---|
| 250 | 3/8" | 14 | 18 | 14 | 16 | 22 | 20,000 | 14,000 |
| | 7/16" | 11 | 13 | 10 | 12 | 16 | 27,000 | 18,900 |
| | 1/2" | 8 | 10 | 8 | 10 | 12 | 36,000 | 25,200 |
| 270 | 3/8" | 12 | 15 | 12 | 14 | 18 | 23,000 | 16,100 |
| | 7/16" | 9 | 11 | 8 | 12 | 14 | 31,000 | 21,700 |
| | 1/2" | 7 | 9 | 6 | 8 | 10 | 41,300 | 28,900 |

*Number Based on initial Prestress Force of 0.7 x Ultimate Tensile Stress, Prestress Losses, and Min. 700 psi. Unit Prestress on concrete after Losses.

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 1978, AND APPLICABLE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: AASHTO 1977 WITH 1978 INTERIMS

CONCRETE: CONCRETE IN THE PRECAST PRESTRESSED PILES SHALL BE CLASS S(AE) AND SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f'c) OF 5000 PSI AT 28 DAYS. COMPRESSIVE CYLINDER STRENGTH AT TRANSFER OF THE PRESTRESSING FORCE SHALL BE NOT LESS THAN 4000 PSI.

CONCRETE IN BUILD-UPS SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f'c) OF 3500 PSI.

PRESTRESSING REINFORCEMENT: SEVEN WIRE STRESS RELIEVED STRAND SHALL CONFORM TO THE GENERAL REQUIREMENTS OF ASTM A416. BROKEN WIRES WITHIN INDIVIDUAL STRANDS WILL BE PERMITTED UP TO 2% OF THE TOTAL NUMBER OF WIRES IN EACH PILE, PROVIDING THAT THERE IS NOT MORE THAN ONE BROKEN WIRE PER STRAND. TWO OR MORE BROKEN WIRES PER STRAND WILL BE CAUSE FOR REPLACEMENT OF THE STRAND, EVEN THOUGH THE TWO BROKEN WIRES ARE WITHIN THE 2% LIMITATION.

BUILD-UPS: TO PROVIDE FOR BUILD-UPS OF PILES WHERE AUTHORIZED BY THE ENGINEER, CONCRETE SHALL BE CUT BACK TO EXPOSE THE STRANDS FOR A DISTANCE SUFFICIENT TO PROVIDE A LAP OF 40 DIAMETERS OF THE REINFORCING BARS REQUIRED FOR BUILD-UP. REINFORCING FOR BUILD-UPS SHALL HAVE A MINIMUM AREA EQUAL TO 1-1/2% OF THE GROSS SECTION OF PILE. PLACEMENT OF BARS SHALL BE IN A SYMMETRICAL PATTERN OF NOT LESS THAN FOUR BARS. SEE SECTION 805.14 OF THE STANDARD SPECIFICATIONS.

FORMS: FOR FORMING EXTERIOR OF PILES, THE USE OF STEEL FORMS ON CONCRETE FOUNDED CASTING BEDS IS REQUIRED, UNLESS OTHERWISE APPROVED BY THE ENGINEER. SIDE FORMS MAY HAVE A MAXIMUM DRAFT ON EACH SIDE NOT EXCEEDING 1/4" PER FOOT.

TOLERANCES: PILE ENDS SHALL BE PLANE SURFACES AND PERPENDICULAR TO AXIS OF PILE WITH A MAXIMUM TOLERANCE OF 1/8" PER FOOT TRANSVERSELY.

THE MAXIMUM SWEEP (DEVIATION FROM STRAIGHTNESS MEASURED ALONG TWO PERPENDICULAR FACES OF THE PILE, WHILE NOT SUBJECT TO BENDING FORCES) SHALL NOT EXCEED 1/8" IN 10' OF ITS LENGTH.

GENERAL: SHIPMENT OF PILES FROM THE PLANT SITE OR PILE DRIVING WILL NOT BE PERMITTED UNTIL THE REQUIRED MINIMUM CYLINDER STRENGTH IS REACHED, AND IN NO CASE LESS THAN 10 DAYS AFTER POURING THE CONCRETE. PILES MAY BE REMOVED FROM CASTING BED TO A NEARBY STORAGE ANY TIME AFTER TRANSFER OF STRESS.

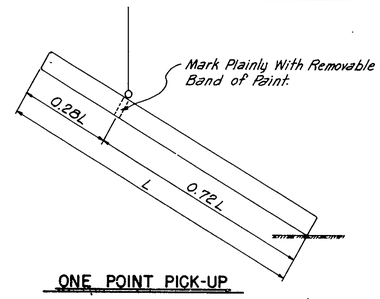
SPIRAL REINFORCING: SPIRAL REINFORCING SHALL BE STEEL WIRE MEETING THE REQUIREMENTS OF ASTM A82 WITH A MINIMUM DIAMETER OF 0.2" OR SHALL BE PLAIN ROUND STEEL BARS MEETING THE REQUIREMENTS OF ASTM A615, WITH A MINIMUM DIAMETER OF 0.25".

MANUFACTURE, TRANSPORTATION AND STORAGE: SEE SECTION 802 "CONCRETE FOR STRUCTURES" OF THE STANDARD SPECIFICATIONS.

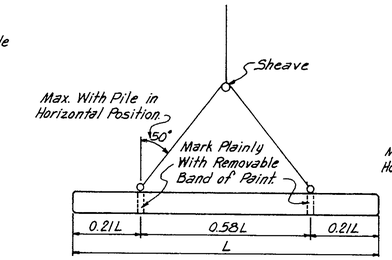
INSTALLATION, MEASUREMENT AND PAYMENT: SEE SECTION 805 "BEARING PILING" OF THE STANDARD SPECIFICATIONS. PRECAST PRESTRESSED CONCRETE PILING WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LINEAR FOOT BID FOR "PRECAST CONCRETE PILING".

MAXIMUM PICKUP LENGTHS L

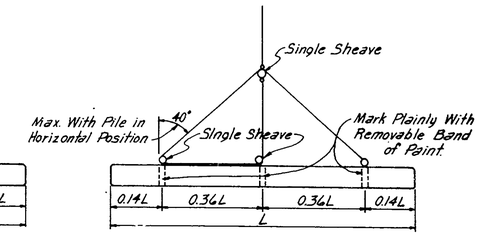
| TYPE OF PICK-UP | PRESTRESSED 16" OCT. | 18" OCT. | PRECAST 16" or 18" OCT. | PRESTRESSED 14" SQ. | 16" SQ. | 18" SQ. | PRECAST 14" SQ. | 16" SQ. | 18" SQ. |
|---|---|---|---|---|---|---|---|---|---|
| ONE-POINT | 52' | 55' | 46' | 55' | 59' | 63' | 52' | 51 | 55 |
| TWO-POINT | 75' | 80' | 67' | 79' | 84' | 90' | 75' | 74 | 79 |
| THREE-POINT | 105' | 112' | 93' | 110' | 117 | 126' | 104' | 103 | 111 |



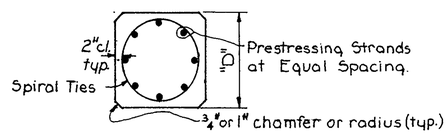

ONE POINT PICK-UP




TWO POINT PICK-UP



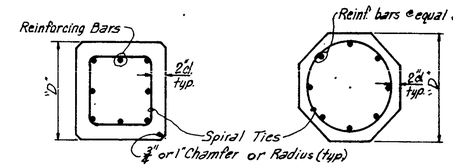

THREE POINT PICK-UP



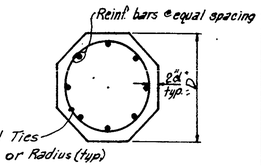

SECTION A-A
SQUARE PILE

PRECAST PILE REINFORCING

| PILE SIZE | NO. REQ'D. | BAR SIZE |
|---|---|---|
| 16" OCT. | 8 | #7 |
| 18" OCT. | 8 | #7 |
| 14" SQ. | 8 | #7 |
| 16" SQ. | 8 | #7 |
| 18" SQ. | 8 | #8 |

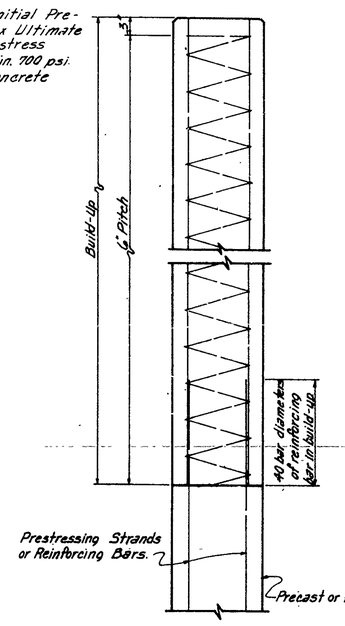



SECTION A-A
SQUARE PILE

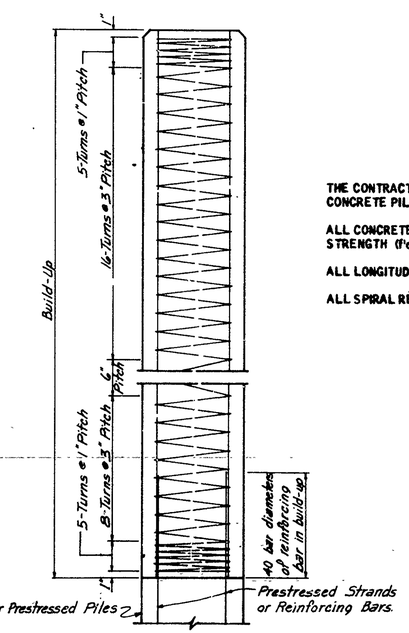



SECTION A-A
OCTAGONAL PILE

PRECAST CONCRETE PILES




BUILD-UP
WITHOUT DRIVING




BUILD-UP
WITH DRIVING

ALTERNATE PRECAST CONCRETE PILES

THE CONTRACTOR MAY ELECT TO USE A PRECAST CONCRETE PILE IN LIEU OF THE PRESTRESSED CONCRETE PILE. THE FOLLOWING NOTES APPLY TO PRECAST CONCRETE PILES.

ALL CONCRETE SHALL BE CLASS S(AE) AND SHALL HAVE A MINIMUM COMPRESSIVE CYLINDER STRENGTH (f'c) OF 3500 PSI AT 28 DAYS.

ALL LONGITUDINAL REINFORCING BARS SHALL BE DEFORMED BARS OF ASTM A615 OR A617.

ALL SPIRAL REINFORCING SHALL BE THE SAME AS THAT SHOWN FOR PRESTRESSED CONCRETE.

Revised 12-2-77, Added 3/4" Chamfer. Removed time before prestressing.

Revised 7-24-75: Redrawn to include Square Piles.

Revised for 1978 Specs. 9-15-78 K.D.N.

BRIDGE ENGINEER

DETAILS OF STANDARD
CONCRETE PILES

ROUTE SEC.

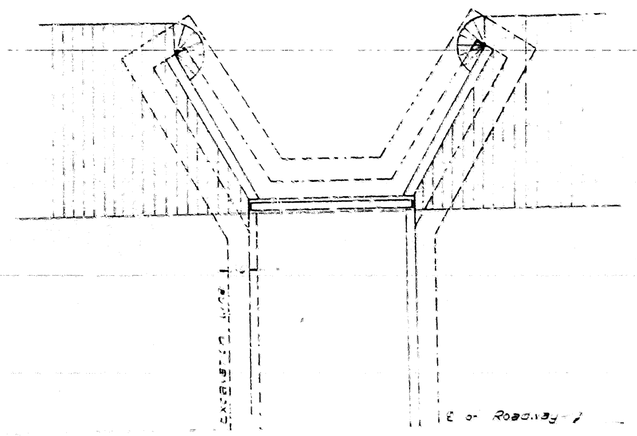
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: W.W.W. DATE: 7-24-75
CHECKED BY: CAJ DATE: 7-31-75
DESIGNED BY: OFL DATE: 7-24-75
SCALE: 1" = 1'-0"

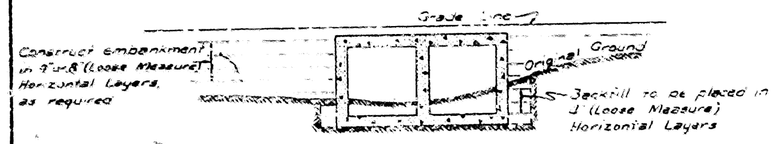
BRIDGE NO. DRAWING NO. 2383

298 238

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 6 | ARK. | | | | |
| JOB NO. | | | | | |

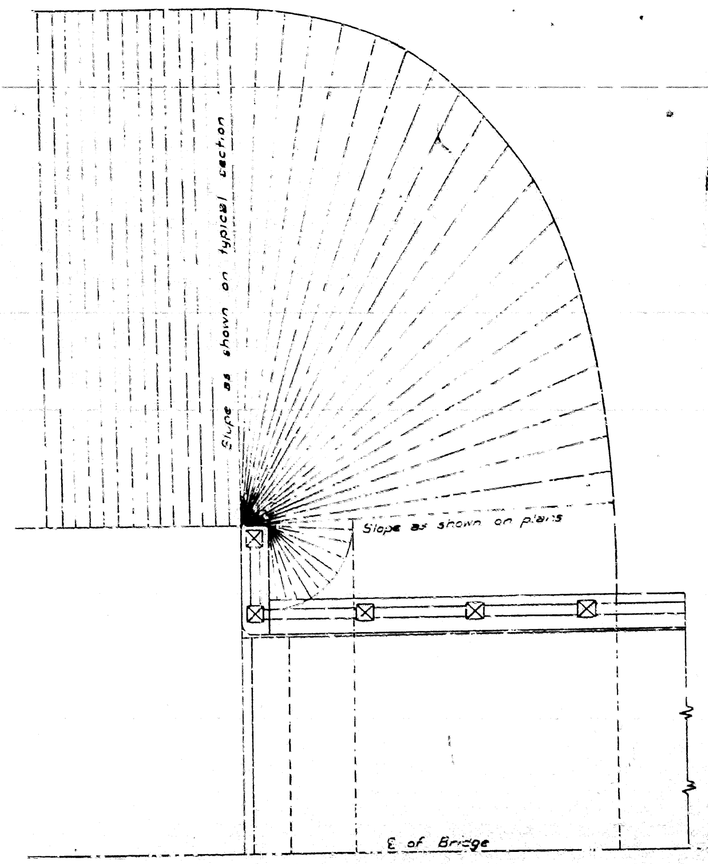



PLAN

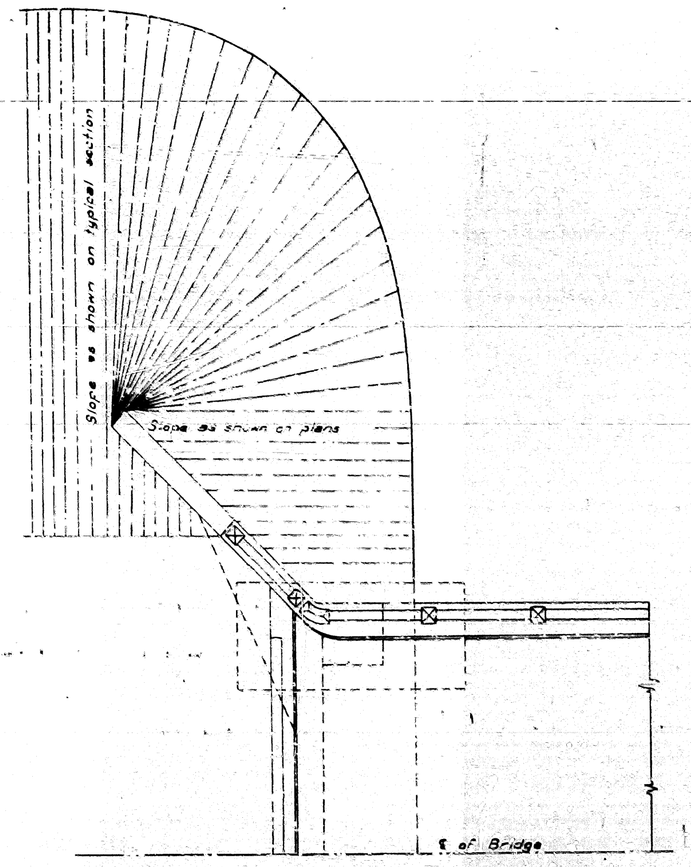



LONGITUDINAL SECTION

BOX CULVERT




HALF PLAN

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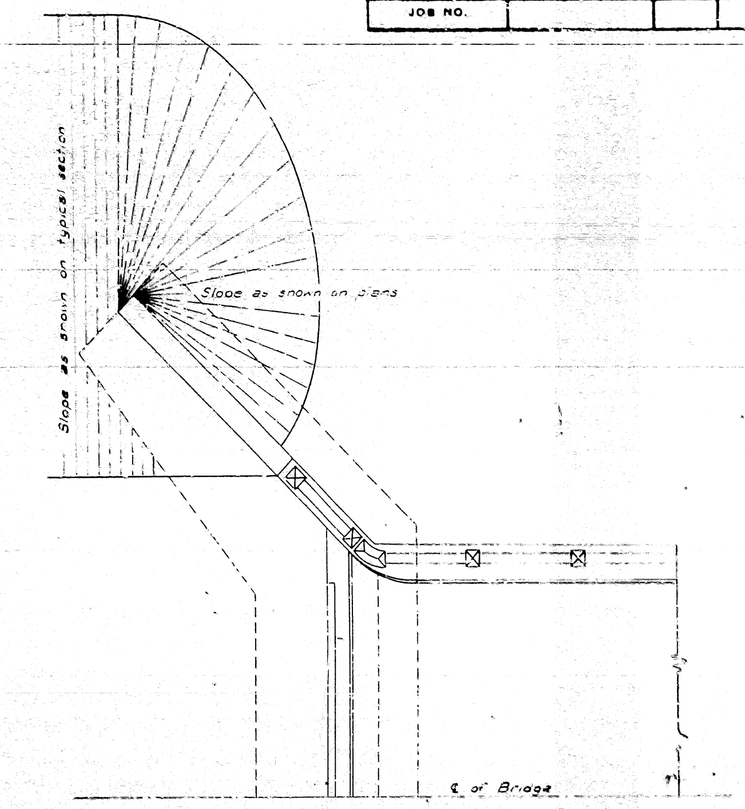
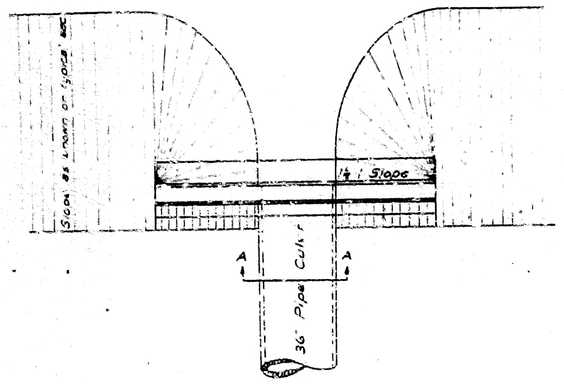



HALF PLAN

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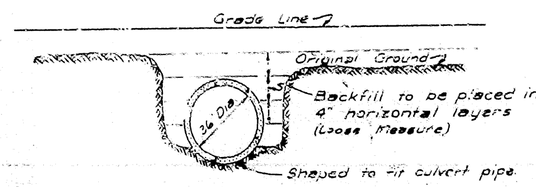
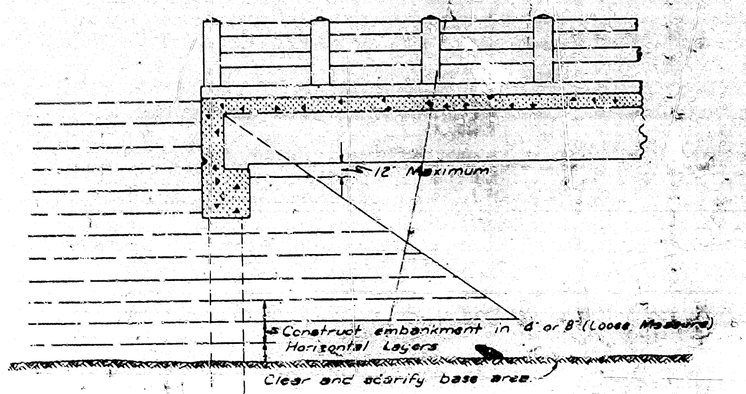


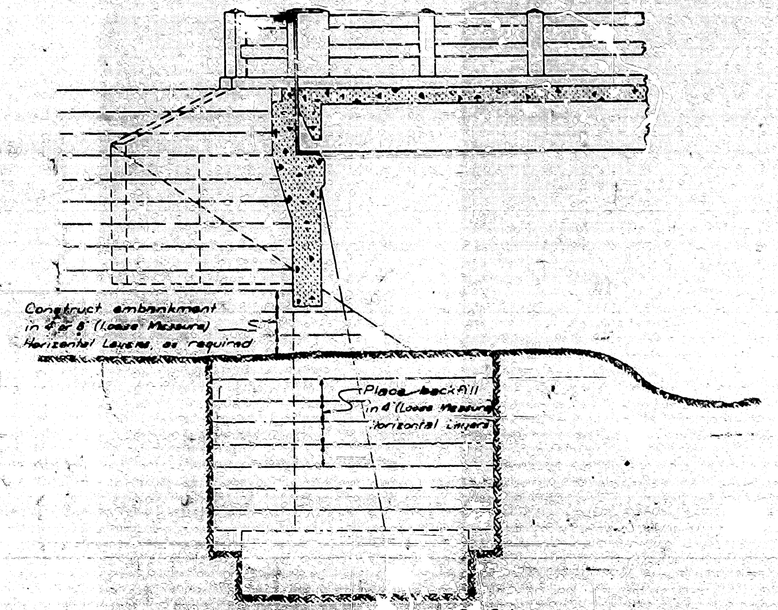

SECTION A-A

PIPE CULVERT



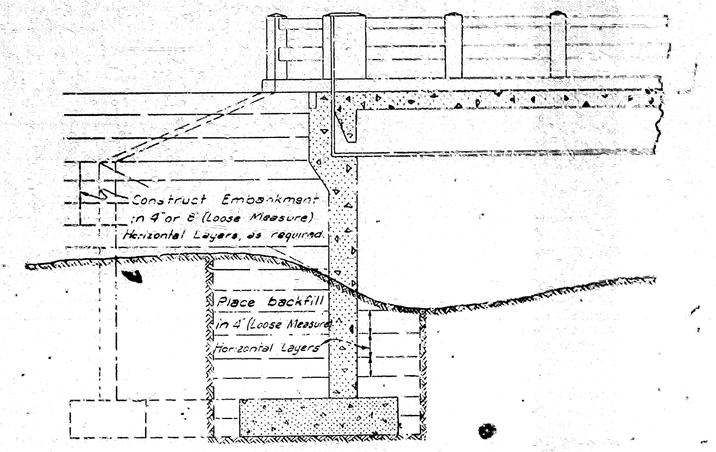

LONGITUDINAL SECTION

OPEN END ABUTMENT




LONGITUDINAL SECTION

SEMI-OPEN ABUTMENT




LONGITUDINAL SECTION

WINGWALL ABUTMENT

Notes relative to construction of bridge-end embankments and backfilling excavations shall be applicable to backfilling culvert excavations and the construction of embankments over and adjacent to culverts.

## CONSTRUCTION OF THE BRIDGE - END EMBANKMENT

The bridge-end embankment shall be understood to mean not less than 20 feet of embankment adjacent to the end of the bridge together with the side slopes and slopes underneath the bridge-end and around the end of wingwalls.

The surface area to be occupied by this embankment shall first be cleared of all debris and vegetable matter, and then scarified so as to completely expose the raw earth. The foregoing shall be done before any of the base surface is covered by material taken from the structure excavations.

Embankment material shall be of approved quality free from light and porous or perishable matter.

The fill shall be constructed in horizontal layers to the thickness required as specified in the specifications for Embankment Material, Section 106, and shall be compacted in accordance with the specifications for Special Compaction of Earthwork, Section 107.

## BACKFILLING EXCAVATION

In so far as is practicable, abutment excavations shall be cut to the size shown by the plans with allowance of 18" on all sides as permitted by the specifications. Greatly oversize and filled cuts, sometimes made to avoid the use of sheeting, will not be permitted.

When the abutment excavation is ready for backfill it shall be cleared of all cofferdam material, unless otherwise directed by the engineer, and of all debris and unsuitable fill material.

The space around the wall or columns shall then be carefully filled to the original ground line in horizontal layers to the thickness specified in the specifications for Embankment Material, Section 106 and shall be compacted in accordance with the specifications for Special Compaction of Earthwork, Section 107.

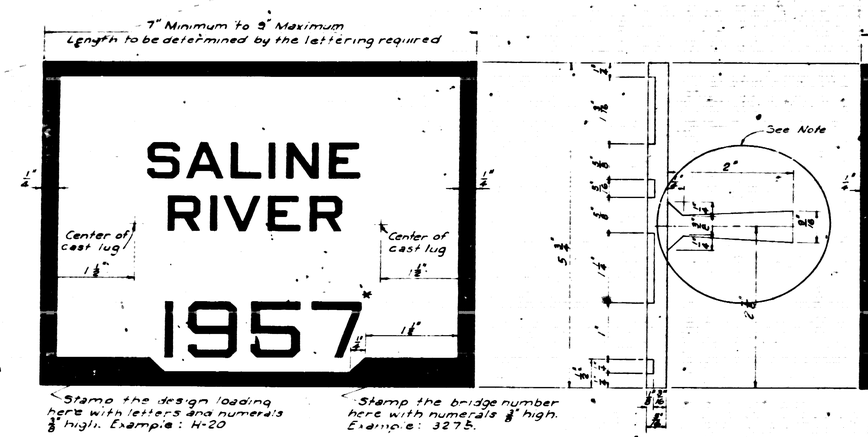
ARKANSAS STATE HIGHWAY COMMISSION

DETAILS OF

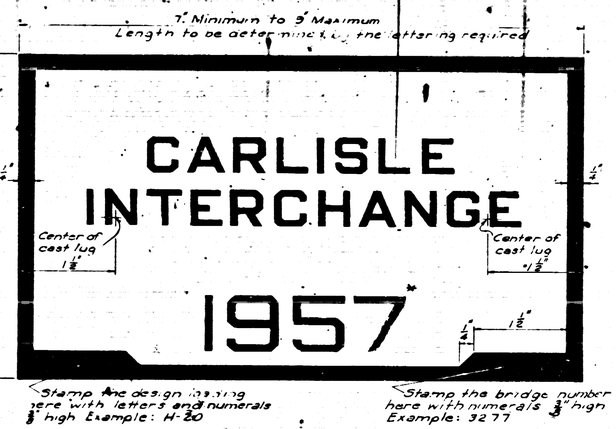
# EMBANKMENT CONSTRUCTION AT BRIDGE ENDS AND BACKFILL FOR STRUCTURES

DRWG. NO. 1888 (REV)

| | | | |
|---|---|---|---|
| 5-31-60 | NONE | | 6-5-78 |
| 3-21-64 | NONE | 8-8-72 | 10-23-77 |
| 19 20-68 | NONE | 9-5-78 | 1979-19 |




TYPICAL BRIDGE NAME PLATE-STYLE 1-FULL SIZE
STREAM CROSSINGS




TYPICAL BRIDGE NAME PLATE-STYLE 3-FULL SIZE
GRADE SEPARATION STRUCTURES

Note: Alternate attachments may be used provided such attachments are submitted and approval secured before fabrication is begun.

General Notes

Name plates shall be either Bronze or Aluminum. Body of plate shall be ⅜" thick, and include two tapering cone lugs ⅜" to ⅝" x 2" long.

Bronze: U.S Government Specifications for Stationary Bronze.

Aluminum: Current A.S.T.M Specifications, Serial Designation B26, Alloy 356.0, Condition T6.

The border and all lettering shall be raised ⅛" above face of plate. Top surface of raised border and lettering to be polished.

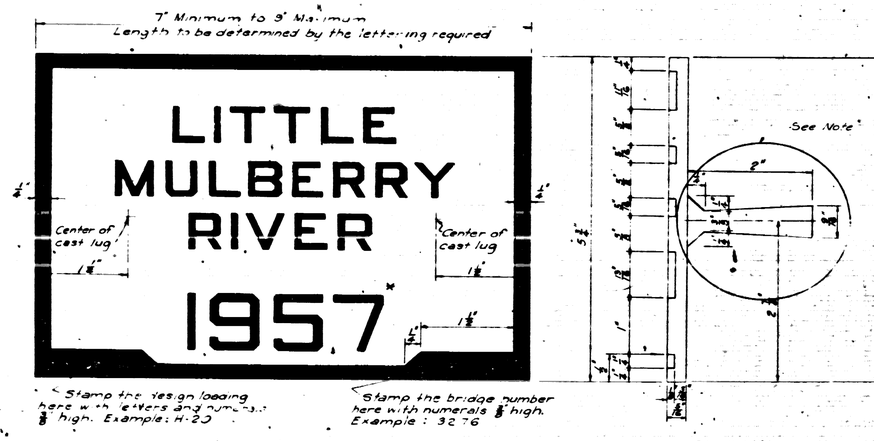
All lettering to be plain Gothic, square cut and not tapered.

The number of plates required and the location shall be as shown on the plans.

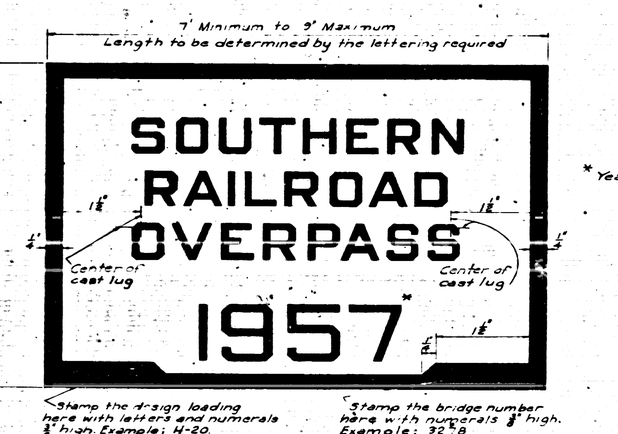
Name on plate to be such as to suit each bridge, as shown on the plans.

Shop drawings of Bridge Name Plates shall be submitted and approval secured before fabrication is begun.

Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1978 and applicable Special Provisions.




TYPICAL BRIDGE NAME PLATE-STYLE 2-FULL SIZE
STREAM CROSSINGS




TYPICAL BRIDGE NAME PLATE-STYLE 4-FULL SIZE
GRADE SEPARATION STRUCTURES

* Year in which contract is awarded.

[illegible] Specified Aluminum Alloy [illegible]
Alternate attachment [illegible] 1-23, [illegible] & 7-20-68
8-8-72 Revised for [illegible] Specs.
9-15-78 Revised for 1978 Specs. KDH

DETAILS OF STANDARD
TYPE C BRIDGE NAME PLATES

ROUTE, SEC.

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: H.D. DATE: 5-24-57
TRACED BY: [illegible] DATE:
CHECKED BY: [illegible] DATE: 5-6-57
SCALE: Full Size

BRIDGE DESIGN ENGINEER

BRIDGE NO.

DRAWING NO. 2582 A