

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-38	PLANS
---	RECAPITULATION SHEETS
19	PILE RECORD
20	FLARED CURB & GUTTER DETAIL
21	POURING RECORD
---	SUMMARY OF FINAL CONSTRUCTION QUANTITIES

NOTES TO RESIDENT ENGINEER:

Notes on recapitulation sheets should be read carefully and complied with in full. The Resident Engineer should personally check the plans against the following list:—

	RES. ENG'R. CHECK	COL'A. OFFICE CHECK
1. Ink drawings and computations of all excavation, showing division of Dry, Wet and Rock excavation.	N/A	
2. Ink drawings on translucent paper of pile bents or foundation piles and pile record, so arranged that the location of each pile, its length, penetration and bearing capacity is shown.	✓	
3. Ink drawings on translucent paper of all changes from plans, with computations of changes in Quantities.	✓	
4. Summary of Quantities.	✓	
5. Cement record to substantiate adjustments.	N/A	
6. P.R. 47 - 2 copies (Federal Aid Project only).		
7. Force Account Claims and bills (if necessary).	N/A	
8. Adjustment of cement cost due to variation in yield (5 copies).		
9. Cement Invoices accompanying adjustments.		
10. Freight Bills and Register.	N/A	
11. Overrun and Underrun sheets (2 copies).		
12. Property Releases (if necessary).	N/A	
13. Estimate (5 copies).		
14. Statement of the amount to be deducted due to overtime.	NONE	
15. Letter of Transmittal.		
16. Final Roadway Profile.	N/A	
17. Tie between S.C.H.D. Datum and Mean Sea Level.	N/A	

Overruns and Underruns are to be explained in such a manner as to leave no doubts as to the reasons.

Following data to be inked on front of each note book:—
Docket Number (as shown by original plans), Book Number, Contents, Contractor, Resident Engineer, Date Completed, Type of Bridge.

THE FINAL NOTE BOOKS, PROPERLY MARKED AND DESCRIBED, SUBMITTED HEREWITH AS A PART OF THESE FINAL CONSTRUCTION PLANS ARE AS FOLLOWS:—

BOOK NO. 1; BENCH MARKS, PILE AND POURING RECORDS

BOOK NO. 2; RIP RAP, SLOPE DRAIN & GUARD RAIL FIELD MEASUREMENTS

BOOK NO. _____

BOOK NO. _____

BOOK NO. _____

DIARY _____

DATA CORRECT

RESIDENT ENGINEER

3/11/77

PLANS AND QUANTITIES CHKD.

BRIDGE ESTIMATE ENGINEER

4/21/77

EXAMINED

DESIGNING ENGINEER

DATE

SOUTH CAROLINA STATE HIGHWAY DEPARTMENT

FINAL CONSTRUCTION PLANS
BRIDGE

OVER MAIDEN DOWN SWAMP AND REEDY CREEK

FILE NO. 34.389 F.A. PROJ. NO. RF-083-1 (51)

COUNTY MARION

ON RT. SC 41 BETWEEN FORK AND CENTENARY

CONTRACTOR DICKERSON INC.
TYPE OF BRIDGE REINFORCED CONCRETE (SLABS)

PROGRESS DATA

CONTRACT AWARDED FEB 27, 1976

WORK BEGAN JUNE 25, 1976

PROJECT ACCEPTED 19

TABLE OF OVERRUNS AND UNDERRUNS

ITEM	UNIT	PLAN QUANTITIES	RES. ENGINEER QUANTITIES	PAY QUANTITIES COL'A. OFFICE	OVERRUN	UNDERRUN	EXPLANATION
EXCAVATION							
DRY EXCAVATION	C.Y.	0	0				
WET "	C.Y.	0	0				
ROCK "	C.Y.	0	0				
WET AND DRY EXCAV.	C.Y.	0	0				
CEMENT							
CLASS "AA" CONCRETE	C.Y.	0	0				
CLASS "A" CONCRETE	C.Y.	502.00	496.1			5.9	REDUCTION MADE FOR 5" CONDUIT PLACED BY SOUTHERN BELL. REDUCTION ALSO MADE FOR CHANGE IN CONCRETE CURB.
REINFORCING STEEL							
REINFORCING STEEL	LBS.	104,373	104,363			10.0	DEDUCTED 46 LBS. FOR DOWELS IN DOUBLE EXPAN. BENTS. ADDED 36 LBS. FOR CURB & GUTTER SUPPORT.
STRUCTURAL TIMBER							
TREATED STRUCT. TIMBER	M.B.M.	0	0				
UNTREATED STRUCT. TIMBER	M.B.M.	0	0				
HARDWARE							
HARDWARE	LBS.	0	0				
STRUCTURAL STEEL							
STRUCTURAL STEEL	LBS.	0	0				
STEEL SUPERSTRUCTURE	L.SUM	0	0				
PILING							
UNTREATED TIMBER PILING	L.F.	0	0				
CREOSOTED "	L.F.	0	0				
CUT-OFF C.T. PILING @ 40 %	L.F.	0	0				
CUT-OFF C.T. PILING @ 25 %	L.F.	0	0				
IN. PRE-CAST R.C. PILING	L.F.	0	0				
IN. PRE-CAST R.C. PILING	L.F.	0	0				
STEEL H PILING (IN. LBS.)	L.F.	0	0				
16" SQ. PRESTR. CONC. PILING	L.F.	2,000.00	2026.00			26.0	NECESSARY TO OBTAIN BEARING.
PAINTING							
FIELD PAINTING STRUCTURAL STEEL	L.SUM	0	0				
HANDRAIL							
METAL HANDRAIL	L.F.	0	0				
PIPE "	L.F.	0	0				
TIMBER "	L.F.	0	0				
OTHER ITEMS							
8" PIPE SLOPE DRAIN	L.F.	110	133			23.0	NECESSARY TO EXTEND SLOPE DRAIN TO TOE OF FILL
INTAKE SPILLWAY ASSEMBLY	EA.	8	8				
HAND PLACED RIP RAP	CY	320	327.76			7.76	NECESSARY TO PLACE RIP RAP IN ACCORDANCE WITH DETAIL ON SHEET 4-A.
STEEL BEAM GUARD RAIL	LF	600	600				
END ANCHORS (CABLE)	EA	8	8				
CLEARING & GRUBBING WITHIN RIGHT-OF-WAY	L.S.	42,500.00	42,500.00				

INDEX OF SHEETS

1. TITLE SHEET
2. CURB & GUTTER AND PIPE SLOPE DRAINS
3. STANDARD NOTES
4. STANDARD DETAILS
- 4A. RIP RAP STANDARD
- 5&6. STEEL BEAM GUARD RAIL
7. BRIDGE PLAN & PROFILE (MAIDEN DOWN SWAMP)
8. BRIDGE PLAN & PROFILE (REEDY CREEK)
9. END & INT. BENTS
10. 16" SQ. PRESTRESSED CONCRETE PILES
11. 25'-6" & 25'-0" SPANS SUPERSTRUCTURE
12. BARRIER PARAPET
- 13-15. EXISTING BRIDGE (MAIDEN DOWN SWAMP)
- 16-18. EXISTING BRIDGE (REEDY CREEK)

SOUTH CAROLINA STATE HIGHWAY DEPARTMENT COLUMBIA

PLAN AND PROFILE OF PROPOSED STATE HIGHWAY

F A PROJECT NO RF-083-1 (51)

FILE NO. 34.389

ROUTE NO. SC 41

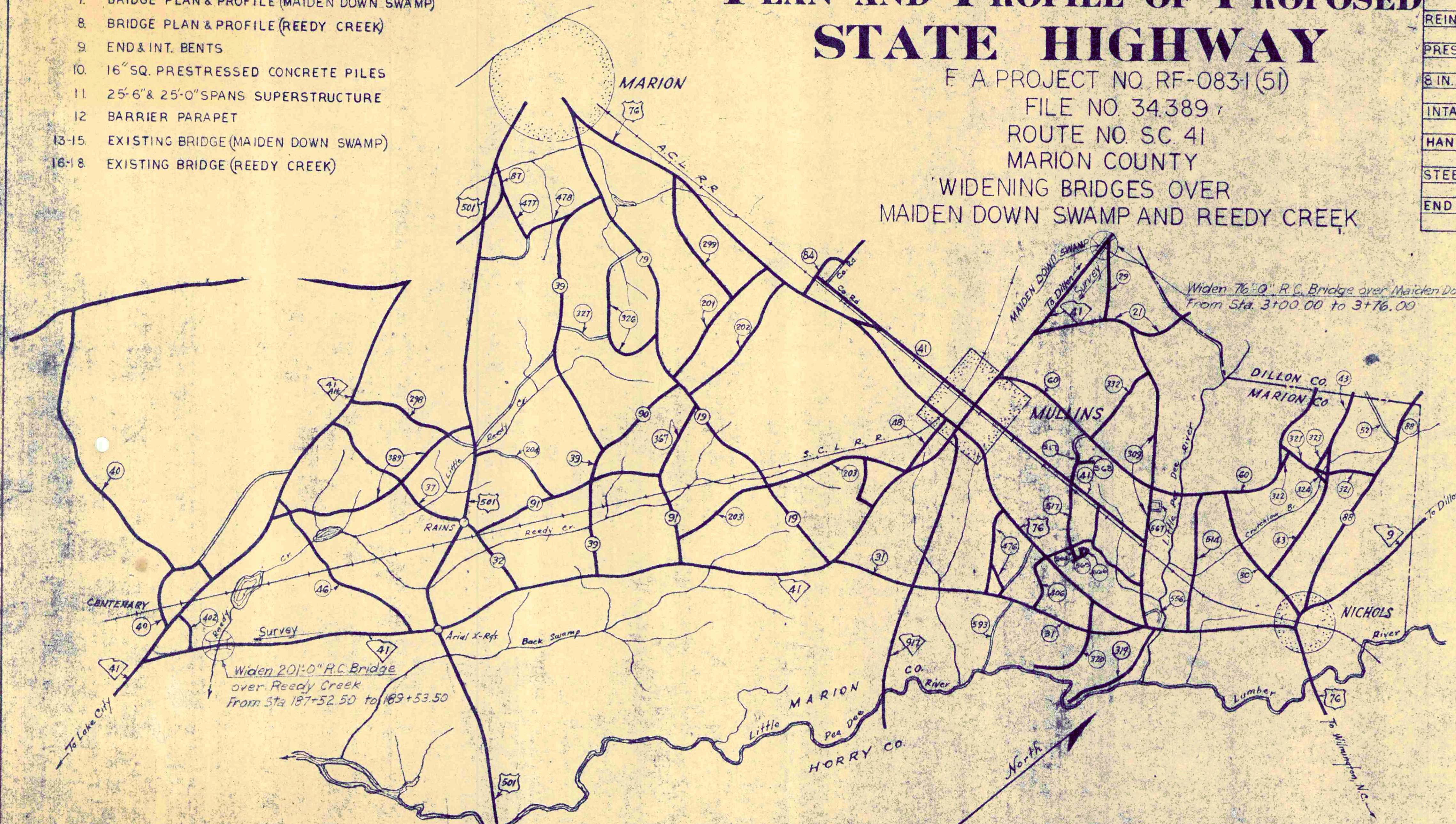
MARION COUNTY

WIDENING BRIDGES OVER
MAIDEN DOWN SWAMP AND REEDY CREEK

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	S. A. PROJ. NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S. C.	Marion	34.389	RF-083-1 (51)	SC 41	1	28

SUMMARY OF ESTIMATED QUANTITIES

ITEM	UNIT	MAIDEN DOWN SWAMP	REEDY CREEK	TOTAL
CLEARING AND GRUBBING WITHIN RIGHT-OF-WAY	L. S.	NECESSARY	NECESSARY	NECESSARY
CONCRETE FOR STRUCTURES CLASS "A"	C. Y.	142.5	359.5	502.0
REINFORCING STEEL FOR STRUCTURES	LBS.	29,214	75,159	104,373
PRESTRESSED CONCRETE PILING 16 IN. SQ.	L. F.	500	1500	2000
8 IN. PIPE SLOPE DRAIN	L. F.	60	50	110
INTAKE SPILLWAY ASSEMBLY	EA.	4	4	8
HAND PLACED RIP RAP	C. Y.	180	140	320
STEEL BEAM GUARD RAIL	L. F.	300	300	600
END ANCHORS (CABLE)	EA.	4	4	8



LAYOUT

Scale: 1 inch = 5280 feet

Net Length of Roadway	0.000 Miles
Net Length of Bridges	0.052 Miles
Net Length of Project	0.052 Miles
Length of Exceptions	0.000 Miles
Gross Length of Project	0.052 Miles

LEGEND

PROPOSED PROJECT
OTHER ROADS

CONVENTIONAL SIGNS

State Line	Trolley Poles
County Line	Power Poles
City or Town Limits	Telephone or Telegraph Poles
Property Line	Trees
Fence	Brush
Retaining Wall	Swamps
Existing Road	Buildings
C and R.O.W. Lines of	Bridge
Proposed Road	Concrete Box Culvert
Railroad	Pipe Culvert
Levee or Embankment	Drop Inlet and Culvert
Guard Rail	Hub on Center Line
Point of Intersection (P. I.)	

APPROVED:
Paul W. Cobb
STATE HIGHWAY ENGINEER
DATE: 1-9-76

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
APPROVED FOR: *[Signature]*
DISTRICT ENGINEER
DATE: 1-9-76

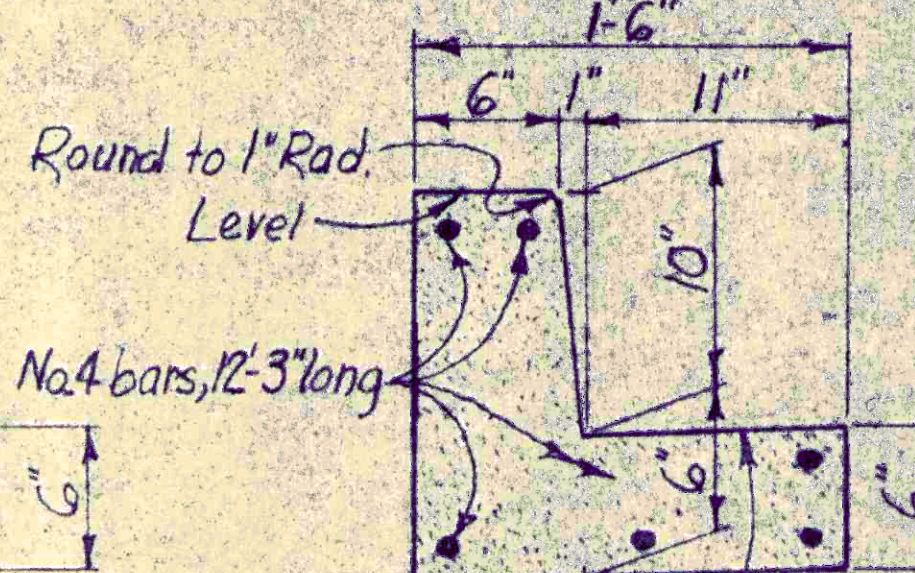
RECOMMENDED BY:
[Signature]
BRIDGE ENGINEER-DESIGN
DATE: 1-9-76

Note: All workmanship and material on this project to conform with South Carolina State Highway Department Standard Specifications for Highway Construction, dated 1973.

⑥ For either Type "A" or "B" Flared Curb and Gutter, inside Face of Intake to line up with bottom of curb at end of Curb and Gutter.

SCALE: $3\frac{1}{4}" = 1'-0"$

1-8

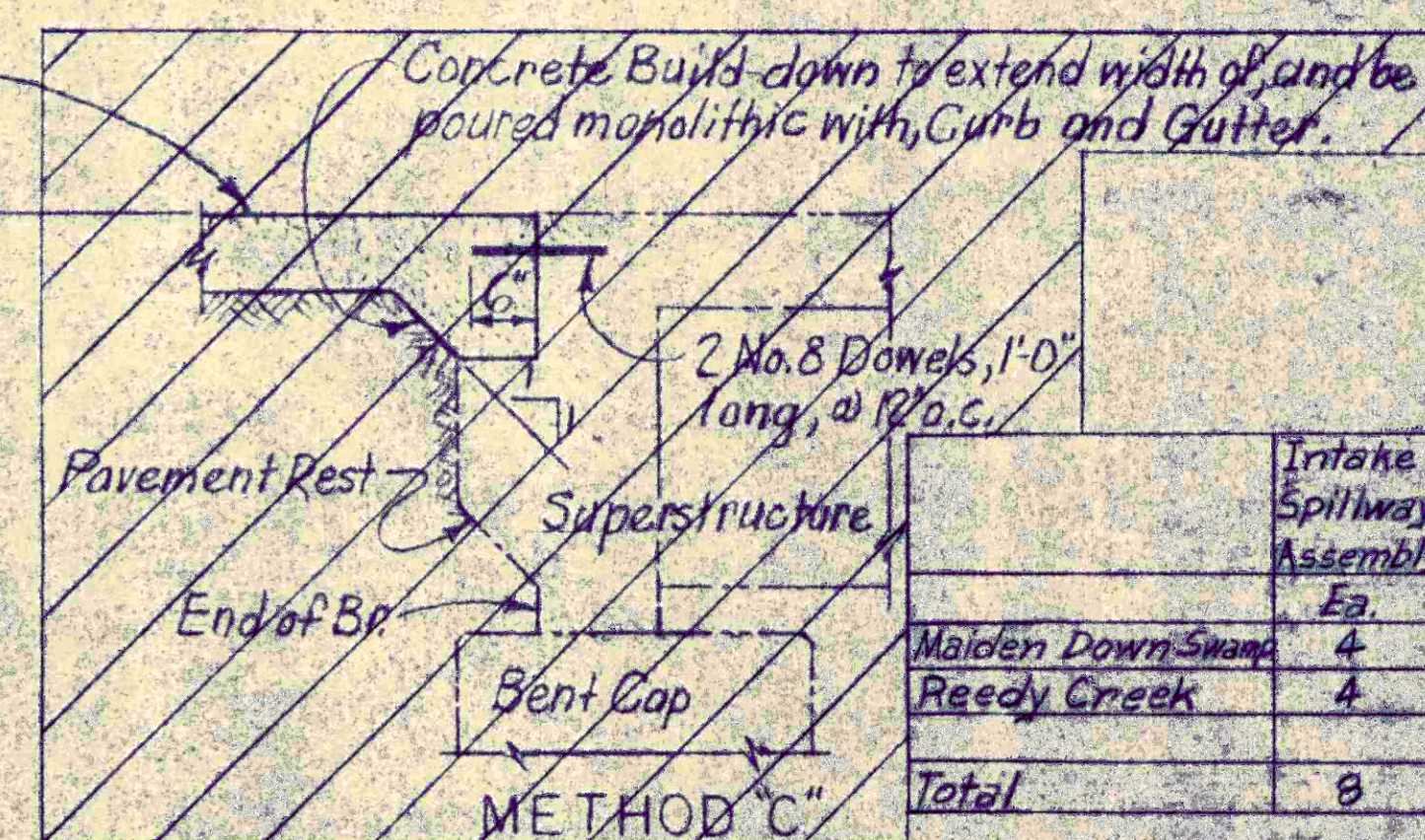


④ TYPE "B"

SCALE: $1\frac{1}{2}" = 1'-0"$

⑧ Elevation of Point "X" to be set $2" \pm$ % of Grade $\times 0.12$ - Shoulder Slope in 4' below Elevation of Bat of Curb at End of Bridge.

SCALE : 1" = 1'-0"



⑤ FLARED CURB AND GUTTER SUPPORTS

SCALE: $\frac{3}{4}" = 1'-0"$

② The quantity of Class "A" Concrete and Reinf Steel required for ~~the~~ Supports shall be computed by the Engineer and added to the quantities shown.



PLAN
SCALE: 1/2" = 1'-0"

NOTES:

The price bid for Intake Spillway Assemblies, under either option, shall include all materials and workmanship necessary for construction of this item, including pipe that is part of the Spillway, and one 2 ft. Elbow.

	Intake Spillway Assembly Ea.	Pipe Slope Drain L.F.
Maiden Down Swamp	4	60
Reedy Creek	4	50
Total	8	110

Alternate 2: Bituminized Fiber Pipe, Couplings and Elbows to be used throughout except Intake Spillway may be 16 Gauge Galv. Metal.

④ Type "A" Flared Curb and Gutters to be used if Barrier Parapets are provided on B.C. and Curb and Gutter not provided on Approach Roadway.
~~Type "B" Flared Curb and Gutters to be used if Brush Curb or Sidewalks are provided on B.C. and Curb and Gutter not provided on Approach Roadway.~~

REV.		S. C. STATE HIGHWAY DEPARTMENT BRIDGE DIVISION COLUMBIA S. C.			
REV.					
REV.					
REV.	WKHSFF 9-75 For File: 34 389				
REVIEWED	<i>[Signature]</i>				
IN CHARGE		FLARED CURB AND GUTTERS AND PIPE SLOPE DRAINS SCALE AS NOTED			
QUAN.	EAS WDS 11-74	FILE NO.	COUNTY	ROUTE NO.	DATE
TR.		34.389	MARION	S.C. 41	9-75
DR.	EAS WDS 11-74	APPROVED BY <i>B. A. Neetz</i>		APPROVED BY <i>J. R. Coleman</i>	
D.S.		ASST. BRIDGE ENGINEER, DESIGN		BRIDGE ENGINEER, DESIGN	
BY (CHK'D) DATE					

WIDENING EXISTING CONCRETE STRUCTURES

Existing structure is indicated on the plans by light lines, new structure by heavy lines.

Connecting surfaces of the old concrete shall be thoroughly roughened, cleaned of loose material, wetted and flushed with 1:2 cement mortar immediately before pouring new concrete, except as noted on other sheets of these plans.

All reinforcing steel protruding beyond surface after chipping shall be left in place and imbedded in new concrete if feasible. Reinforcing steel which can not be imbedded in new concrete shall be cut off flush with surface of concrete where asphalt surfacing will cover. Where exposed the old reinforcing shall be cut off 1/2" below the exposed concrete surface and the hole patched with dry 1:3 mortar to the satisfaction of the Engineer.

The Contractor shall repair or replace at his own expense, and in a manner satisfactory to the Engineer, any portion of the existing structure damaged as a result of his carelessness or negligence.

The entire cost of the above work including all drilling and chipping, and removing and disposing of portions of old structure necessary to construct new structure, shall be included in the unit price bid for Class "A" Concrete.

If expansion anchor bolts are called for they shall be similar and equal to Row's Multi-Calk Anchor or American Exp. Bolt and shall be installed in accordance with the manufacturer's directions.

Expansion anchor bolts will be paid for at unit price bid for reinforcing steel.

Unless otherwise specified in these plans or Special Provisions the contractor shall provide necessary temporary supports for utilities attached to the bridge to maintain service during construction.

The owner will make all necessary changes in alignment and elevation of the utility and furnish permanent supports which shall be placed in the concrete by the Contractor.

All costs of the work to be performed by the Contractor shall be included in the unit price bid for Class "A" Concrete.

Any necessary repairs to the existing structure, in the opinion of the Engineer, are to be paid for as extra work.

All dimensions of new construction are subject to existing conditions. It is recommended that all dimensions which might affect materials and quantities as shown in these plans be verified by the Contractor prior to ordering the materials.

SPECIAL NOTE

Generally, in case of discrepancy, this standard sheet of notes shall govern over the Specifications, but the remainder of the plans shall govern over notes hereon, and Special Provisions shall govern over all. See Standard Specifications paragraph 105.04.

EXCAVATION FOR PILE TYPE END BENT

All cost of excavation necessary to construct end bents and to remove material under superstructure to an elevation 1'-0" below tops of end bent caps shall be included in the unit price bid for Class "A" Concrete.

EXCAVATION FOR CONC. FTG. END BENT

If a concrete footing is used for the end bent, the excavation below that included for the cap and berm in the above paragraph will be paid for at the unit price bid for excavation. Excavation above this shall be included in the unit price bid for Class "A" Concrete.

DRIVING PILES THROUGH FILL

Where piles occur in fill exceeding 10 ft in height, the fill shall be in place before piles are driven.

ALLOWANCE FOR DEAD LOAD DEFLECTION AND SETTLEMENT

Bridges shall be built on the grade ~~shown on plans~~ shown on plans. Handrails, slabs and curbs shall conform to the grade ~~thereon~~.

In setting forms for structural steel or prestressed concrete beam bridges, an allowance shall be made for dead load deflections in addition to the elevations shown.

In setting falsework and forms for reinforced concrete spans an allowance shall be made for dead load deflections, settlement of falsework, and permanent camber which shall be provided for in addition to the elevations shown. After removal of the falsework, the finished structure shall conform to the elevations shown plus the allowance for permanent camber specified by the Engineer.

BRONZE EXPANSION PLATES

Bronze R's to be self-lubricating Exp. R's manufactured from rolled bronze alloy complying with A.S.T.M. B100 - Alloy 510 or A.S.T.M. B22 - Alloy 311 casting, and to have special inserts consisting of graphite and metallic substances with a lubricating binder in both faces. The Coeff. of friction shall not exceed 0.1. The Bronze R's shall be similar to those manufactured by Merriman Bros. Inc., 103 Albany St., Boston 30, Mass., or Whiteley Bearing Corporation Chicago, Ill., on an approved equal.

The Bronze R's shall not be painted. Both steel surfaces in contact with the bronze R shall be left unpainted but coated with a hot mixture of white lead and tallow. Immediately prior to installation on the bents or piers the plates shall be thoroughly cleaned and a graphite material, as recommended by the manufacturer of the bronze R's, shall be applied to both surfaces of the steel R's in contact with the bronze R.

STRUCTURAL STEEL

Beams shall be cambered for vertical curve and dead load deflection either in mill or shop.

Layout dimensions and standard lengths of beams shown are horizontal dimensions and must have the additional lengths added for lengths along grade.

All rivets shall be 5/8" unless noted. All high tensile - strength bolts shall be 3/4" unless noted.

All holes shall be 1 1/2" unless noted. Holes in all main member splices shall be sub-punched, the connecting members shop assembled in their proper positions, and the holes reamed to full size while assembled, or shop assembled and drilled full size with an approved template.

Floor beam connections shall be reamed to a metal template. All stiffeners of floor beams and of pier reactions shall have full. All interior stiffeners between floor beams shall be crimped or filled.

Shims shall be placed between beam flange and rocker plate where required and shall be adjusted to bring top of beam to theoretical grade.

Bearing plates and rocker plates to be rolled steel.

Notes on Anchor Bolts or Expansion Ends to be tightened is clear to allow for movement.

Anchor bolt assemblies will be paid for as reinforcing steel and are included in the bent quantities unless specifically stated elsewhere as included in the structural steel quantities.

Shop inspection of the structural steel will be performed by Froehling & Robertson, Inc., 314 West Cory St., Richmond, Virginia. The contractor shall notify that company of the name and address of the fabricator of the structural steel as soon as the fabricator has been given the contract to fabricate so that the inspection procedure can be set up. The contractor shall also stipulate in his order to the fabricator that Froehling & Robertson, Inc., will perform the shop inspection of the structural steel.

COMPOSITE BEAMS

A 5 day interval shall be allowed between time of pouring slab and sidewalk.

Tops of beam flanges shall not be painted.

All equipment, materials and workmanship for electric arc welded stud shear connectors shall be in accordance with the recommendations of the manufacturer and Special Provisions.

Alternate for welded studs: An approved alternate method of securing composite action between beams and slab may be used, at no additional cost to the Dept. Details must be submitted for approval in advance of making the change.

3/4" studs may be substituted for 1/2" studs. The 3/4" studs shall be placed with the same number in each transverse row as the 1/2" studs. The pitch of the 3/4" studs shall be equal to 1.33 times the pitch of the 1/2" studs. The 3/4" studs must be welded within the recommended area of an approved arc stabilizer cap.

REINFORCING STEEL

Grade 60 reinforcing steel conforming to A.S.T.M. Specification A615 will be allowed as a substitute for the Grade 40 reinforcing steel specified in the S.C.H.D. Standard Specifications. Such substitution will be at no additional expense to the Department. Bar sizes and spacings as detailed in the plans will be maintained.

PRESTRESSED BEAMS

Tops of beams shall be rough floated. At the approximate time of initial set, entire top of beam shall be scrubbed with a coarse wire brush to remove all laitance, and to produce a roughened surface for bonding slab. Membrane curing compound shall not be used on tops of ends of beams.

Concrete in prestressed beams shall be class "X" as described in the Standard Specifications. The prestressing strands, wire or bars must be thoroughly cleaned of any loose rust, dirt, grease, form lubricant, or other deleterious substances, to the satisfaction of the Engineer before the concrete is placed.

Beams shall not be transported to the bridge site until concrete has cured for at least 5 days.

Beam lengths given are based on horizontal span only. These lengths shall be increased to correct for concrete shrinkage, concrete shortening when the strands are cut, and for beams being on a grade.

CONCRETE

All concrete shall be Class "A" unless noted below on other sheets of these plans.

Build-ups on bent caps shall be cast monolithic with cap unless shown or noted elsewhere on these plans.

Top of each build-up shall be level.

Payment for Concrete in slab will be based on theoretical plan quantity.

Any necessary adjustment for Camber shall be at the Contractor's expense.

Simple spans 80 ft and less shall be poured without a transverse construction joint.

For simple spans over 80 ft in length, the center portion (approximately 1/3 of the length) of the slab shall be poured first and allowed to cure for not less than 4 days before the remaining end sections are poured. However, when the temperature permits (in the opinion of the engineer) the entire slab may be poured provided a suitable retardant agent is used in such amounts that the slab concrete shall not have had its initial set prior to the completion of the casting of the slab concrete.

All exposed edges shall be chamfered 1/2" unless otherwise noted.

Horizontal Construction Joints shall be scrubbed with a coarse wire brush, at the approx. time of initial set, to remove all laitance & to produce a roughened surface.

BEARINGS

For concrete slabs bearing on concrete, the top of caps, or top of abutments, under bearing areas of slabs shall receive a steel trowel finish to insure a smooth and level bearing surface. See Standard Specifications paragraph 702.25.

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	MARION	34.389	S.C.41	3	21

DESIGN DATA

SPECIFICATIONS: A.A.S.H.O. 1973 with rev. thru 1974.

LIVE LOAD: HS 20-44 ~~Includes provision for alternate loading of 2 axles 25 ft apart with each axle weighing 25% of total loading for spans under 40 ft~~

UNIT STRESSES

STRUCTURAL STEEL & REINFORCED CONCRETE

f_s (struct.) = 20,000 psi

f_s (reinf.) = 20,000 psi

CLASS "A" CONCRETE:

f_c = 1,200 psi; n = 10; v = 225 psi; u = varies. See Spec's

CLASS "X" CONCRETE:

f_c = 2,000 psi; n = 6; v = 375 psi; u = varies

PRESTRESSED CONCRETE

f_c = 5,000 psi; f_{ci} = 4,000 psi; f_e = 2,000 psi

PRESTRESSING STEEL:

f_s = 250,000 psi; f_{si} = 175,000 psi

MATERIAL AND WORKMANSHIP

Except as may otherwise be specified on plans or in the Special Provisions, all material and workmanship shall be in accordance with the South Carolina Highway Department Standard Specifications for Highway Construction, Edition of 1973.

LINSEED OIL CONCRETE PROTECTION

The linseed oil concrete protection shall be applied in accordance with subsection 702.29 of the Specifications. The linseed oil protective coating shall not be applied to those surfaces which are to be covered by the bridge deck protective membrane.

The thinner which is to be combined with the linseed oil may be kerosene instead of the petroleum mineral spirits as required by the Standard Specifications.

REV. WKH/BAW/9-75

For File 34.389

REV. BAW/JWB/11-75

SPE Spec. 1973

REV. BAW/JRC/9-75

OMIT MILL INSPECTION

REV. JWB/JRC/8-75

Red Linseed Oil note

REV. RET/JRC/12-75

add spelling correction

REV. EMR/RWH/7-67

Bronze Exp. R.

REVIEWED 1/1/76

IN CHARGE

REV. WKH/BAW/11-74

BEARINGS

REV. WKH/BAW/8-74

Spec. 60 Reinforcing Steel

REV. WKH/BAW/6-74

THINNER SUBSTITUTE & REET. EXISTING DIMEN.

FILE NO. 34.389

COUNTY MARION

ROUTE NO. SC.41

DATE 9-75

APPROVED BY: [Signature]

DESIGNER

APPROVED BY: [Signature]

BRIDGE ENGINEER

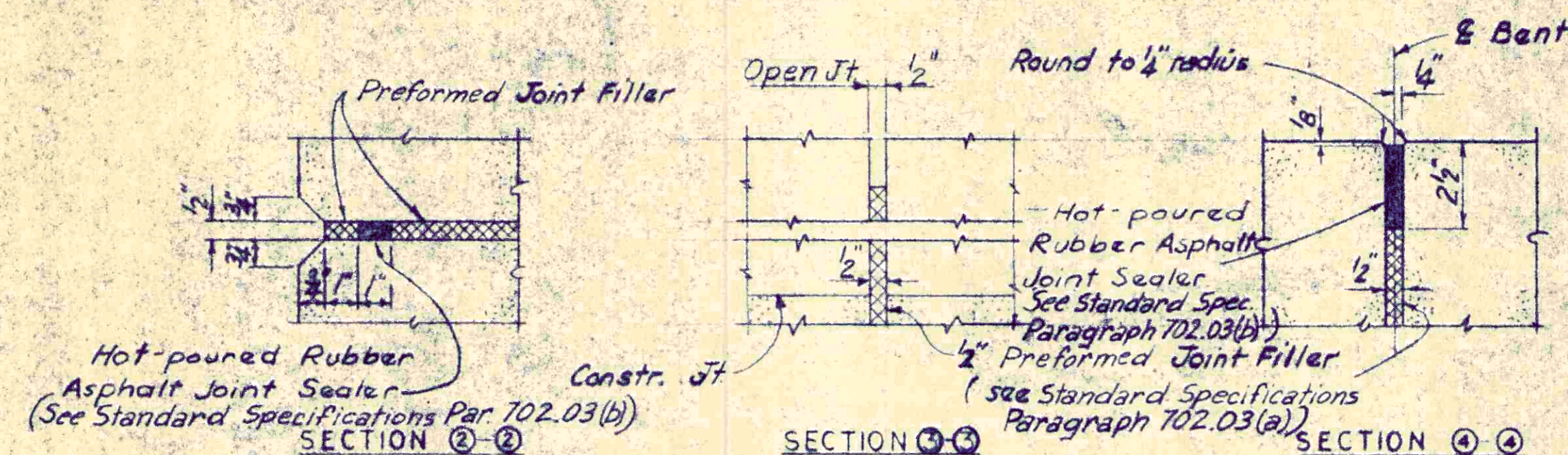
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BRIDGE ENGINEER

APPROVED BY: [Signature]

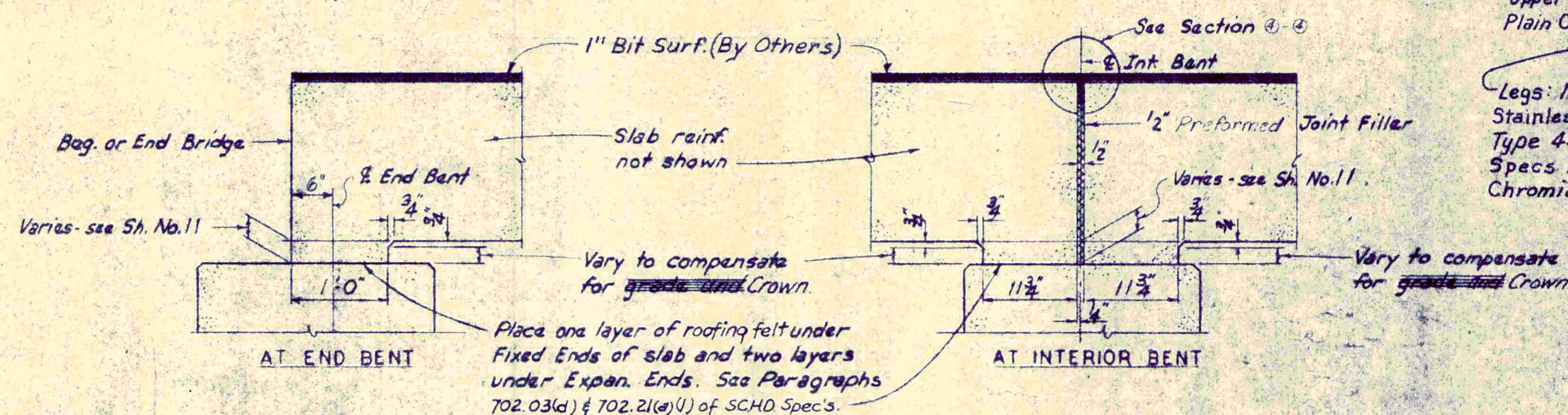
BRIDGE ENGINEER

FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	MARION	34389	S.C. 41	4	21



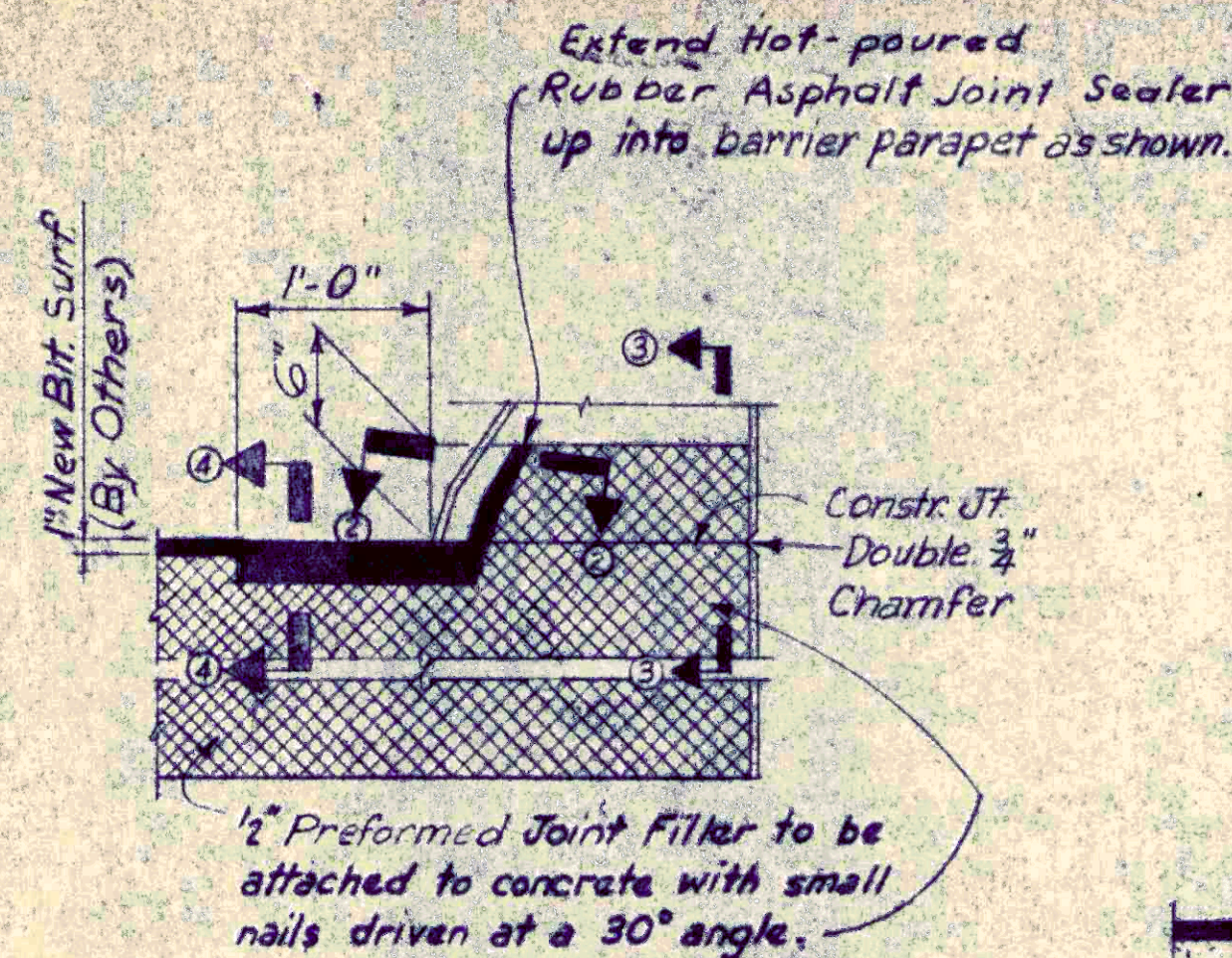
SCALE, SECTIONS 2-2 THRU 4-4: 3"=1'-0"

JOINT DETAILS



SLAB BUILD-DOWN DETAILS

SCALE: 1"=1'-0"



SECTION ALONG EXPANSION JOINT

SCALE: 1"=1'-0"

Upper Wire: No. 7 Gauge Plain Carbon Steel

Legs: No. 9 Gauge Cold-drawn Stainless Steel Wire, AISI Type 430 Meeting ASTM Specs. A-493 With 16% Chromium. (Spacing = 2'-2")

BOLSTER DETAIL

SECTION PARALLEL TO C.R.D.W.Y.
SCALE: 1 1/2"=1'-0"

Note:

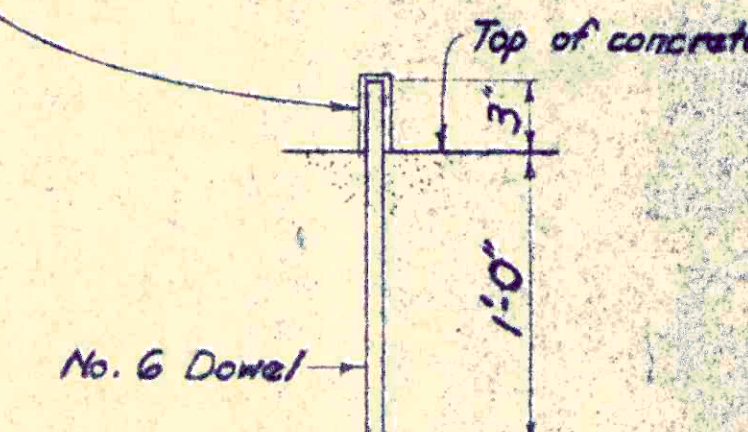
Bolsters shall be placed so that they provide adequate support for the slab reinf. steel. B.B. Bolsters shall be placed with one row near each end of slab and with a maximum spacing of approx. 2'-0" between rows. ~~Bolsters under each other not shown.~~

Bolsters shall be equal to Beam Bolsters BB as manufactured by Meadow Steel Co. or Richmond Screw & Anchor Co. except see above for material Specs. The lengths of bolsters shown in reinforcing steel schedules are approximate. Weights are included in the reinforcing steel quantities and payment will be made at the unit price bid for Reinforcing Steel.

DRAIN DETAILS

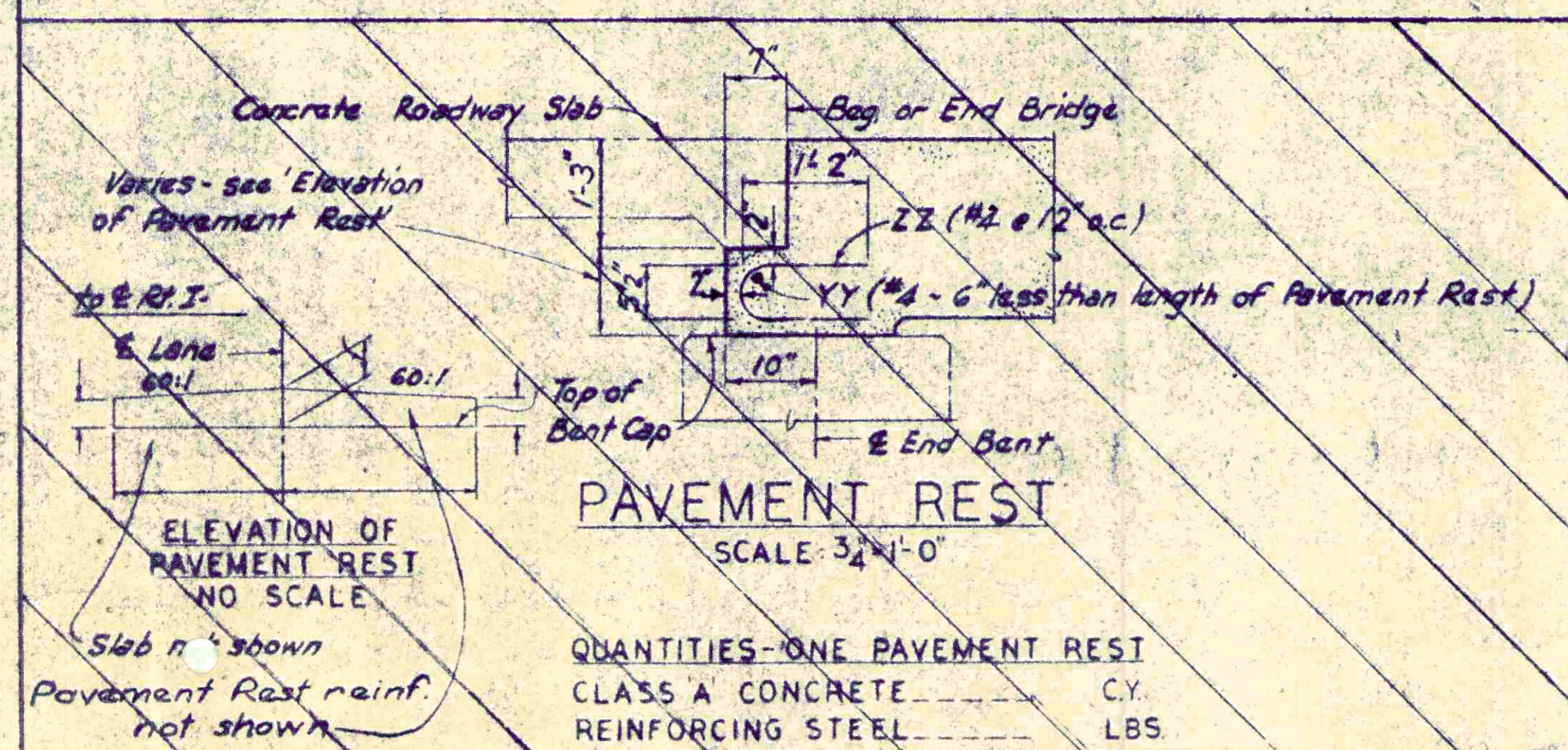
SCALE: 3/4"=1'-0"

Note: For location of drains see Sheet No.



DOWEL DETAIL

SCALE: 1 1/2"=1'-0"

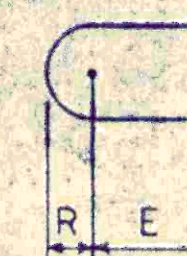


PAVEMENT REST

SCALE: 3/4"=1'-0"

QUANTITIES - ONE PAVEMENT REST
CLASS A CONCRETE C.Y.
REINFORCING STEEL LBS.

HOOK DIMENSIONS			
SIZE NO.	R	E	ADD PER HOOK
3 & 4	1 3/4"	3"	7"
5 & 6	2 3/4"	3"	9"
7 & 8	3 1/2"	4 1/2"	1'-0"
9	5"	5 1/2"	1'-4"
10	5 3/4"	5 3/4"	1'-6"
11	6 1/2"	6"	1'-8"



HOOK DETAILS

FOR STEEL REINFORCING BARS
NO SCALE

REV	WKB	9-75
REV	BAM	11-73
REV	RTS	12-70
REV	J.C. JRC	19-69
REV	COL JWB	11-68
REV	Jt. Mat. revised	

QUAN.	
TR.	
DES.	
BY	CHK'D DATE

S.C. STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION
COLUMBIA S.C.

STANDARD DETAILS

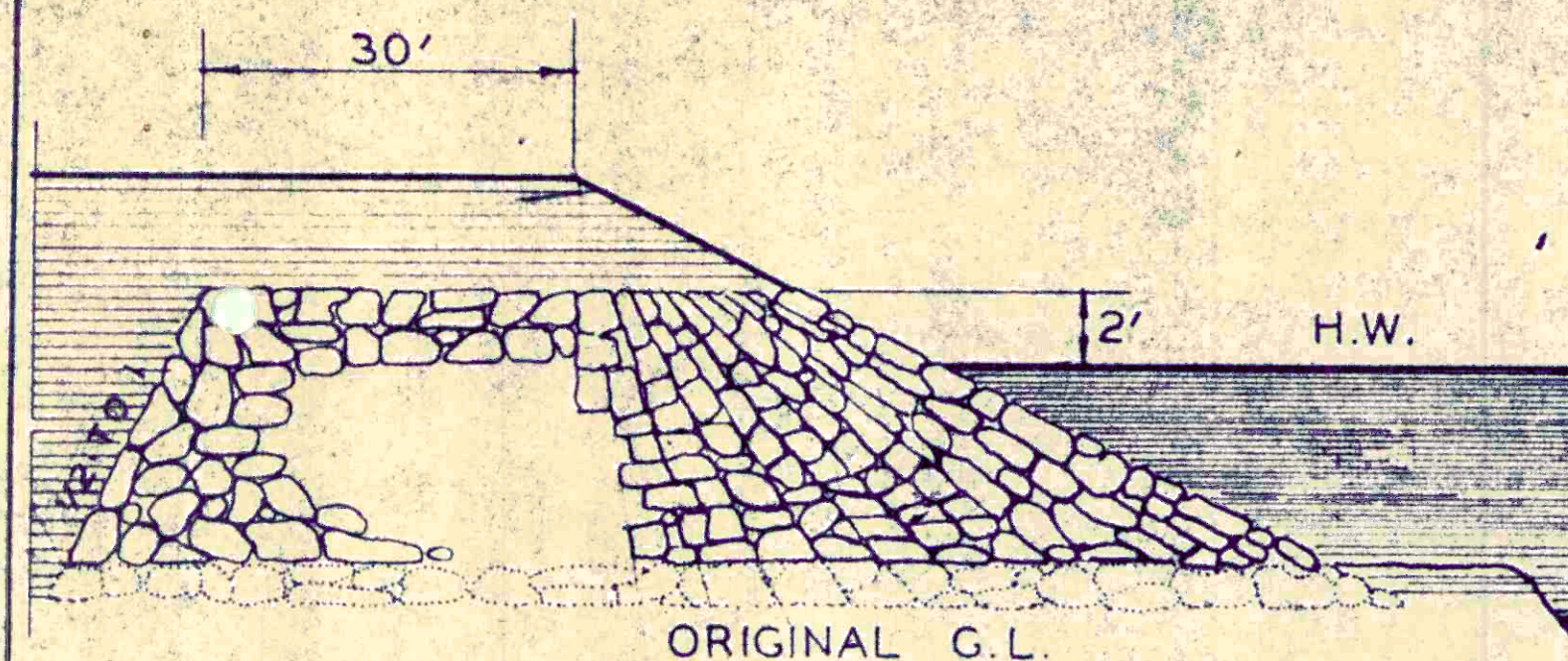
FOR FLAT SLAB BRIDGE

FILE NO.	COUNTY	ROUTE NO.	DATE
34389	MARION	S.C. 41	9-75

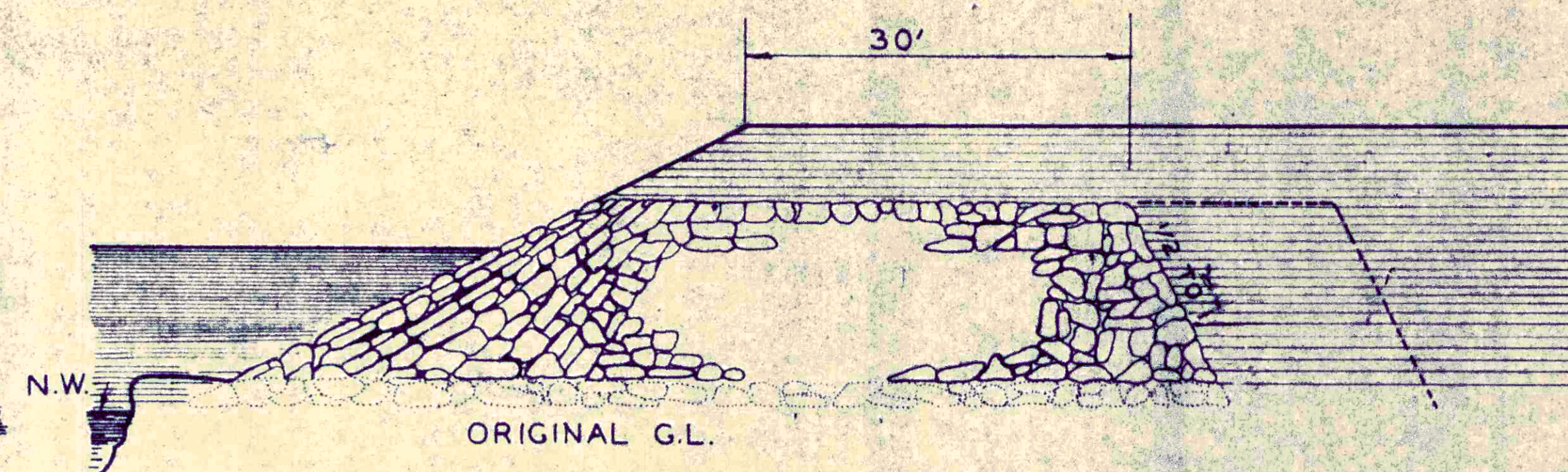
APPROVED BY	DESIGN
APPROVED BY	BRIDGE ENGINEER

Fed. Div. No.	State	County	File No.	Route No.	Sheet No.	Total Sheets
3	S.C.	MARION	34.389	S.C. 41	4A	2A

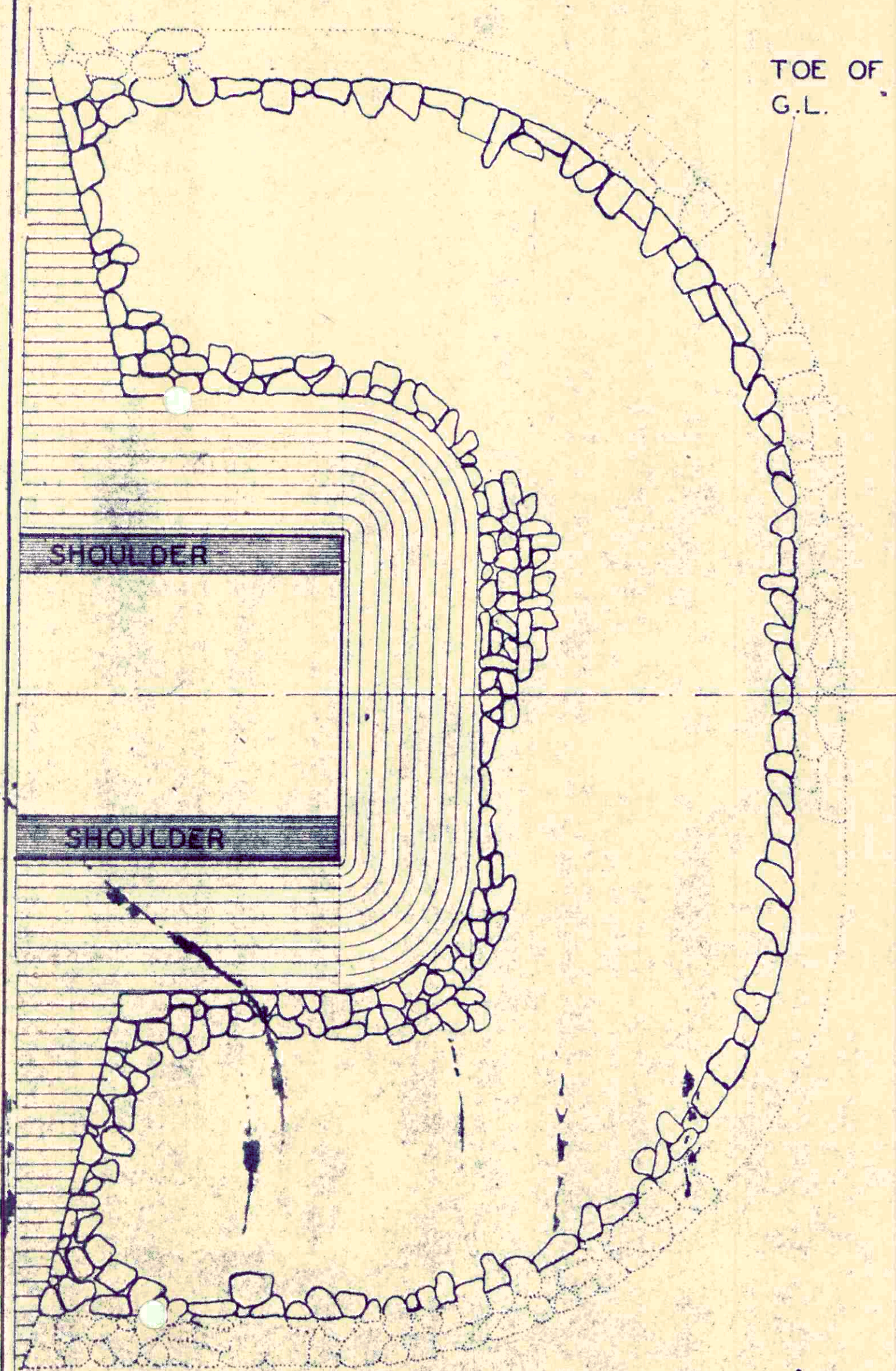
TOP OF RIPRAP TO BE 2' ABOVE H.W. BUT NOT CLOSER THAN 3' TO F.G. ✓



ELEVATION
SQUARE END FILL

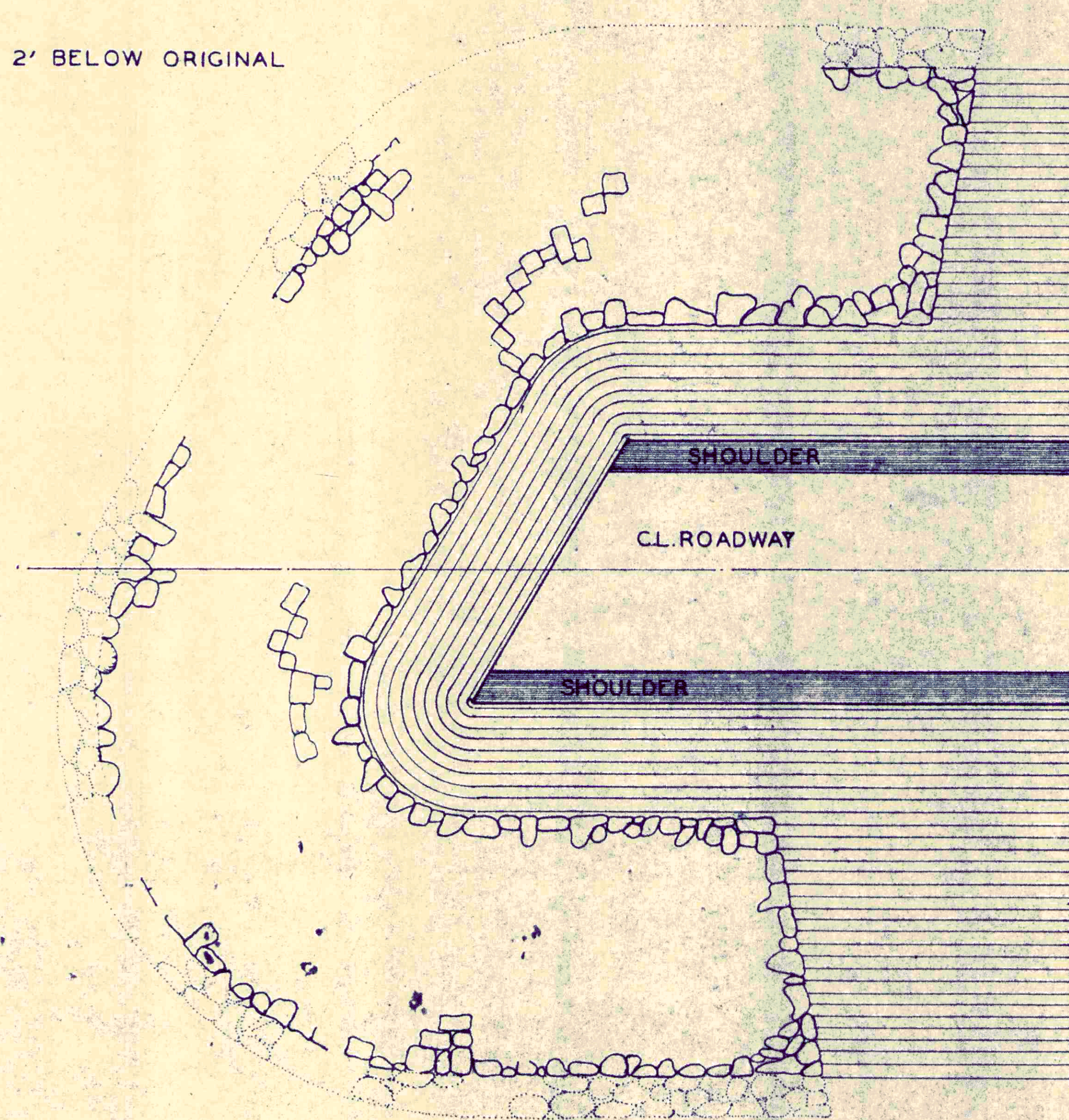


ELEVATION
SKEWED END FILL

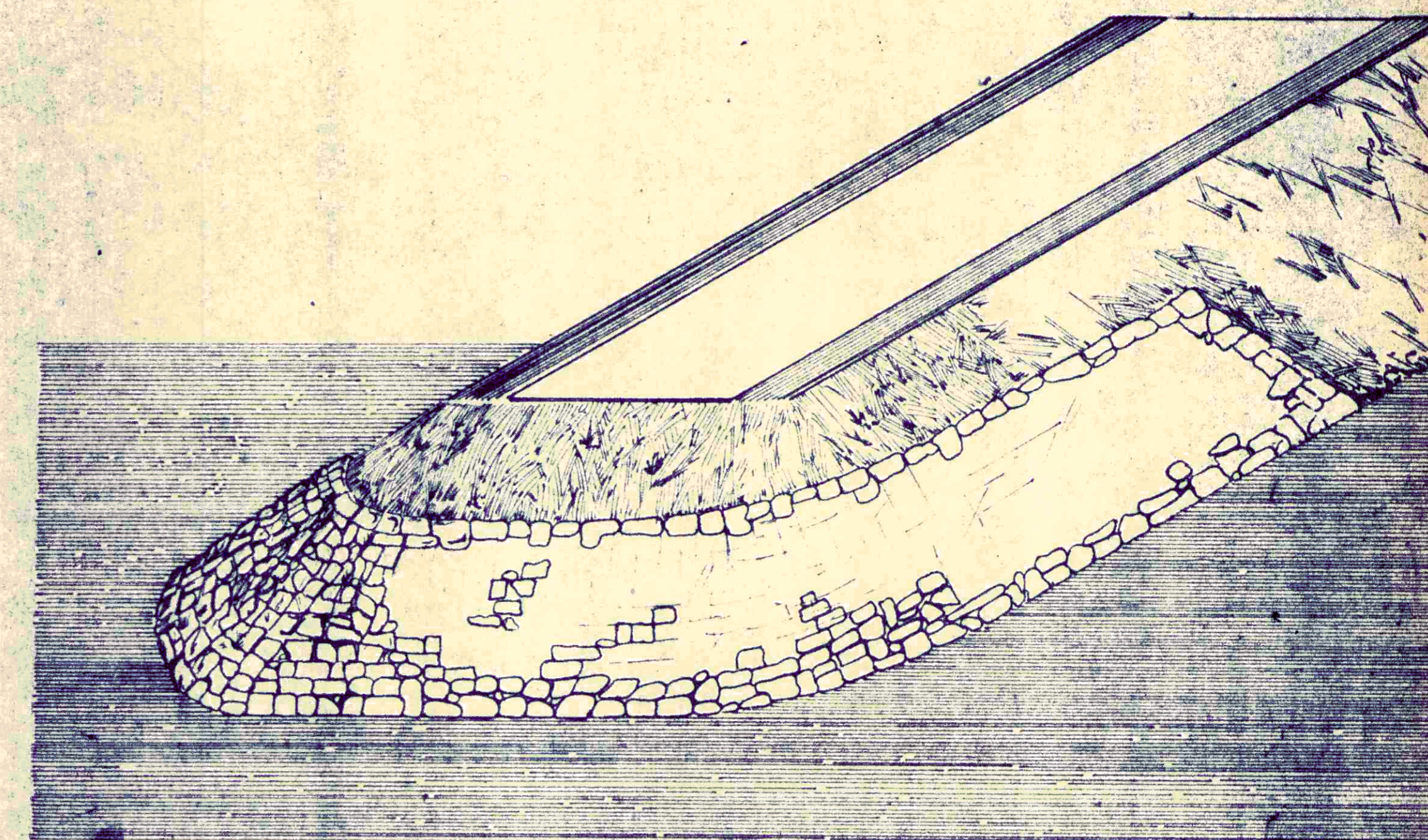


PLAN
SQUARE END FILL

TOE OF RIPRAP 2' BELOW ORIGINAL G.L.



PLAN
SKEWED END FILL



ESTIMATED QUANTITIES		
STATION	CU. YDS.	TONS
Maiden Down Swamp	180	
Reedy Creek	140	
TOTAL	320	

S. C. STATE HIGHWAY DEPT.
COLUMBIA, S. C.

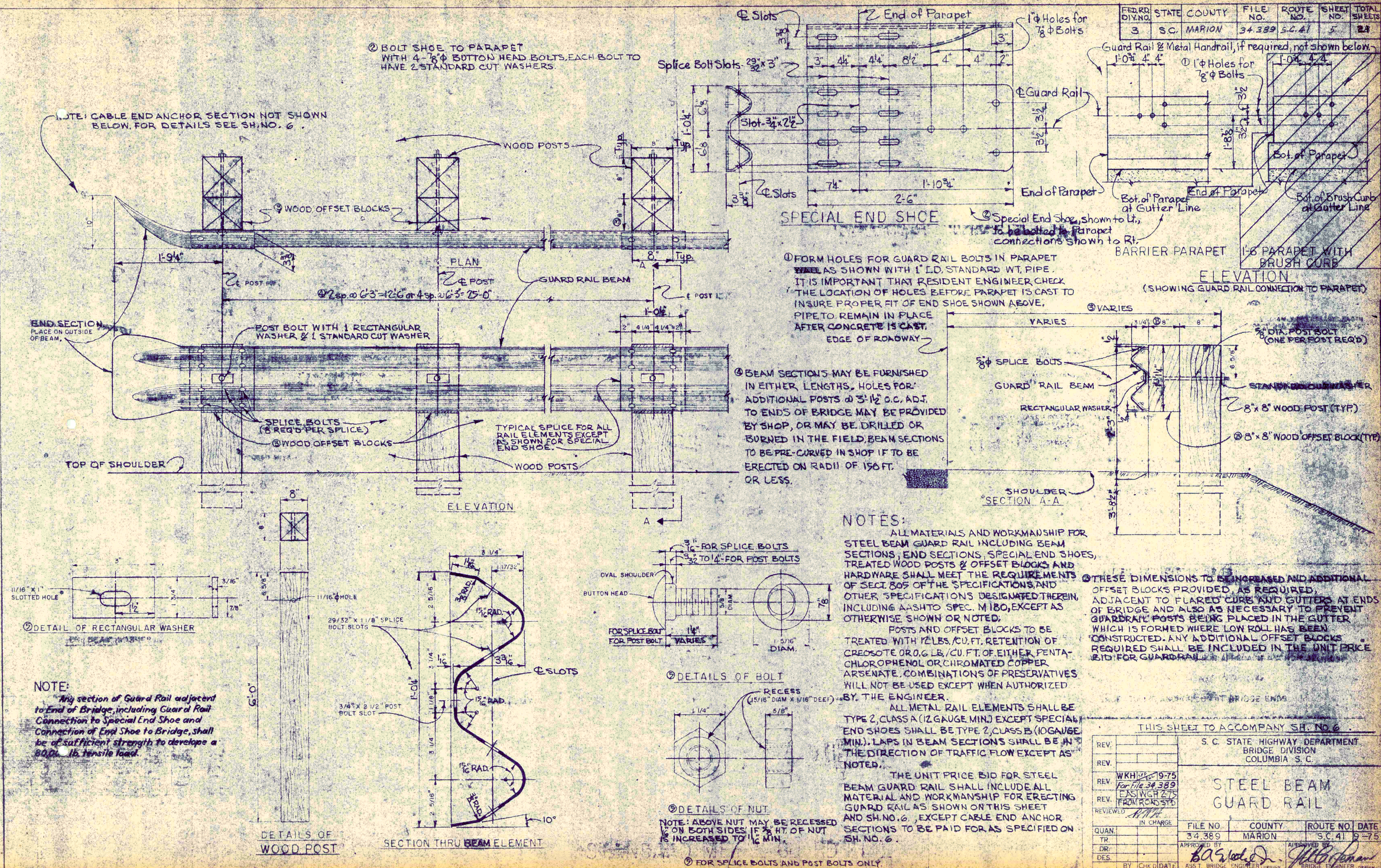
DETAIL SHOWING
RIPRAP TO BE PLACED ON SLOPES
OF EMBANKMENT AT BRIDGE ENDS

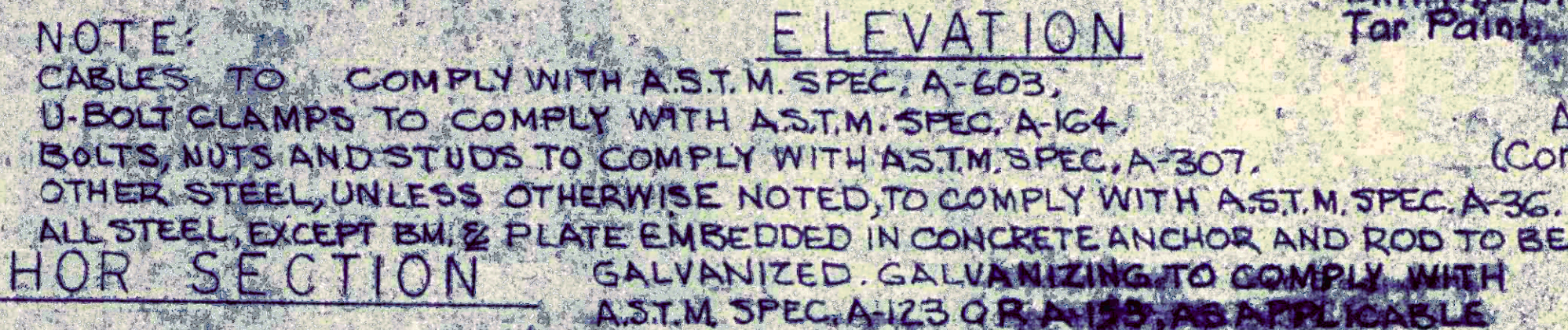
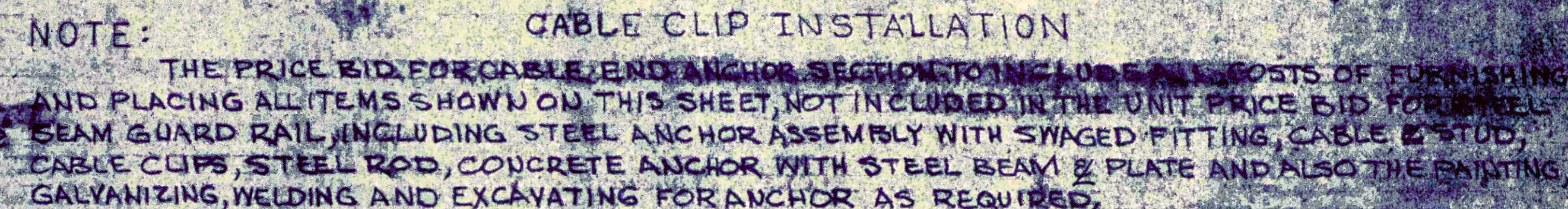
FILE NO. 34.389

ROAD
ROUTE S.C. 41

COUNTY MARION

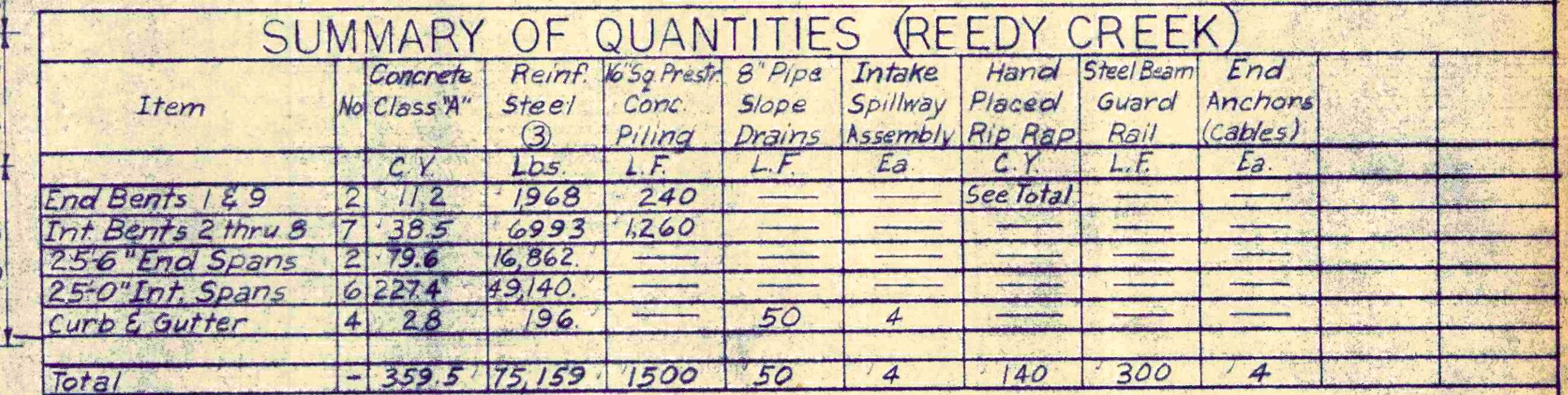
RIPRAP SHEET





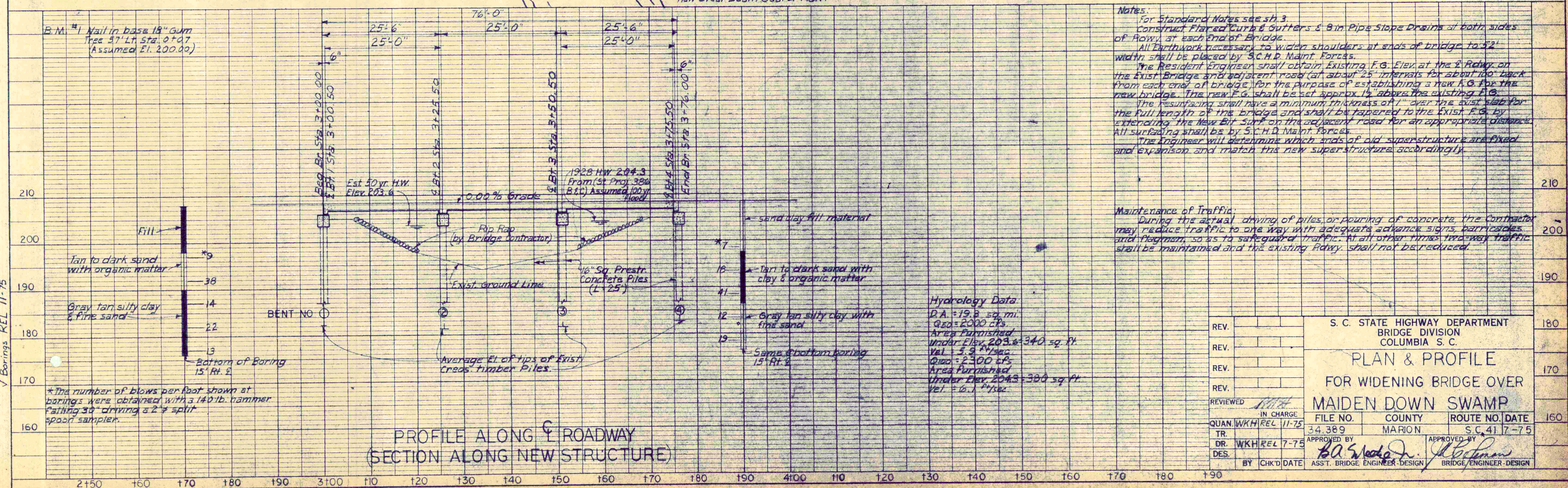
THIS SHEET TO ACCOMPANY SH. NO. 5

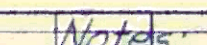
REV.				S. C. STATE HIGHWAY DEPARTMENT			
REV.				BRIDGE DIVISION			
REV.		WKHS-6-19-75 For File 34389		COLUMBIA, S.C.			
REV.		EAD WGR-7-5 FROM ROSTD		STEEL BEAM			
REVIEWED		RMT		GUARD RAIL			
IN CHARGE							
QUAN.		FILE NO.		COUNTY		ROUTE NO.	DATE
TR.		34,389		MARION		S.C. 41	9-75
DR.		APPROVED BY	BAS, Inc. O.P.		APPROVED BY		
DES.		BY CHICD DATE		ASST. BRIDGE ENGINEER		BRIDGE ENGINEER	



Notes:
For Standard Notes see sh. 3
Construct Flared Curb & Gutters & 8 in Pipe Slope Drains at both sides of Rowy at each end of Bridge.
All Earthwork necessary to widen shoulders at ends of bridge to 52' width shall be placed by S.C.H.D. Maint. Forces.
The Resident Engineer shall obtain Existing F.G. Elev. at the E. Rowy on the Exist Bridge and adjacent road at about 25' intervals for about 100' back from each end of bridge for the purpose of establishing a new F.G. for the new bridge. The new F.G. shall be set approx 1' above the existing F.G.
The Resurfacing shall have a minimum thickness of 1" over the exist slab for the full length of the bridge and shall be tapered to the Exist F.G. by extending the New Bit Surf on the adjacent road for an appropriate distance. All surfacing shall be by S.C.H.D. Maint. Forces.
The Engineer will determine which ends of old superstructure are fixed and expansion and match the new superstructure accordingly.

Maintenance of Traffic:
During the actual driving of piles, or pouring of concrete, the Contractor may reduce traffic to one way with adequate advance signs, barricades and flagmen, so as to safeguard traffic. At all other times two-way traffic shall be maintained and the existing ROWy shall not be reduced.





For Standard Notes see sh. 3.
All Earthwork necessary to widen shoulders at ends of bridge to 5' width shall be placed by S.C.H.D. Maint. Forces.
The Resident Engineer shall obtain Existing F.G. Elev at the 8' Rdwy. on Exist. Bridge and adjacent road (at about 25' intervals for about 100' back from each end of bridge) for the purpose of establishing a new F.G. for the new bridge. The new F.G. shall be set approx. 1 1/2' above the existing F.G.
The resurfacing shall have a minimum thickness of 1" over the existing slab for the full length of the bridge and shall be tapered to the Existing F.G. by extending the New Bit Surf. on the adjacent road for an appropriate distance. All Surfacing shall be by S.C.H.D. Maint. Forces.
Construct Flared Curb & Gutters and 8 in. Pipe Slope Drains at both sides of Rdwy. at each End of Bridge.

Maintenance of Traffic:
During the actual driving of piles, or pouring of concrete, the Contractor may reduce traffic to one way with adequate advance signs, barricades and flagmen, so as to safeguard traffic. At all other times two way traffic shall be maintained and the existing flow shall not be reduced.

Tan sand clay

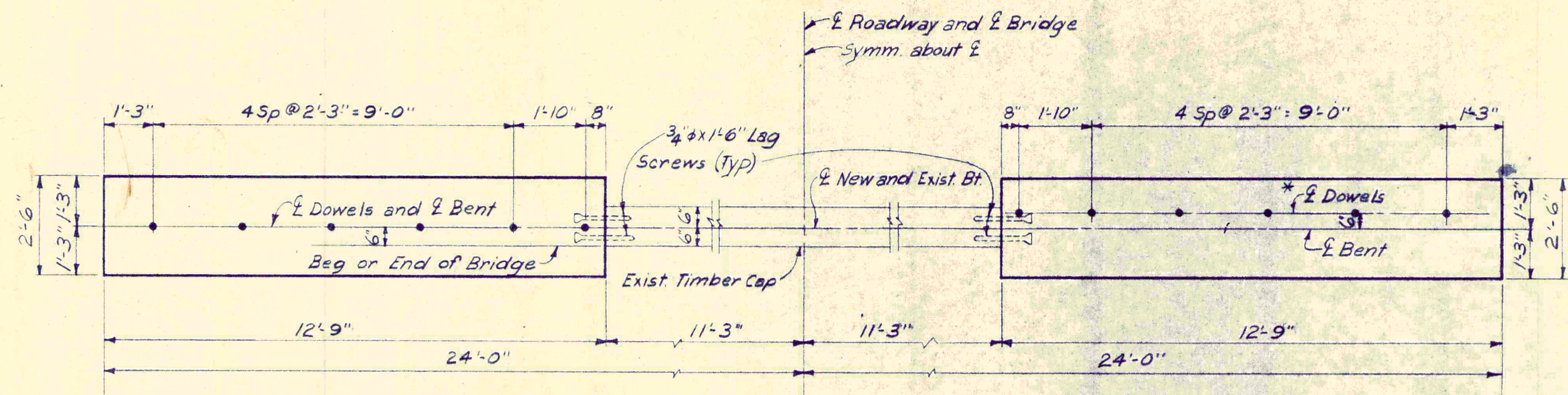
Gray to tan silty clay & sand

Dark gray silty clay & fine sand

10 20 30 40 50 60 70

REV.		S. C. STATE HIGHWAY DEPARTMENT			
		BRIDGE DIVISION			
		COLUMBIA S. C.			
REV.		PLAN AND PROFILE WIDENING BRIDGE OVER REEDY CREEK			
REV.					
REV.					
REV.					
REVIEWED	<i>[Signature]</i>	IN CHARGE			
QUAN.		FILE NO.	COUNTY	ROUTE NO.	DATE
TR.		34 389	MARION	S. C. 41	6-75
DR.	WKH REL 6-75	APPROVED BY		APPROVED BY	
DES.		<i>[Signature]</i>		<i>[Signature]</i>	
	BY CHK'D DATE	ASST. BRIDGE ENGINEER-DESIGN		BRIDGE ENGINEER-DESIGN	

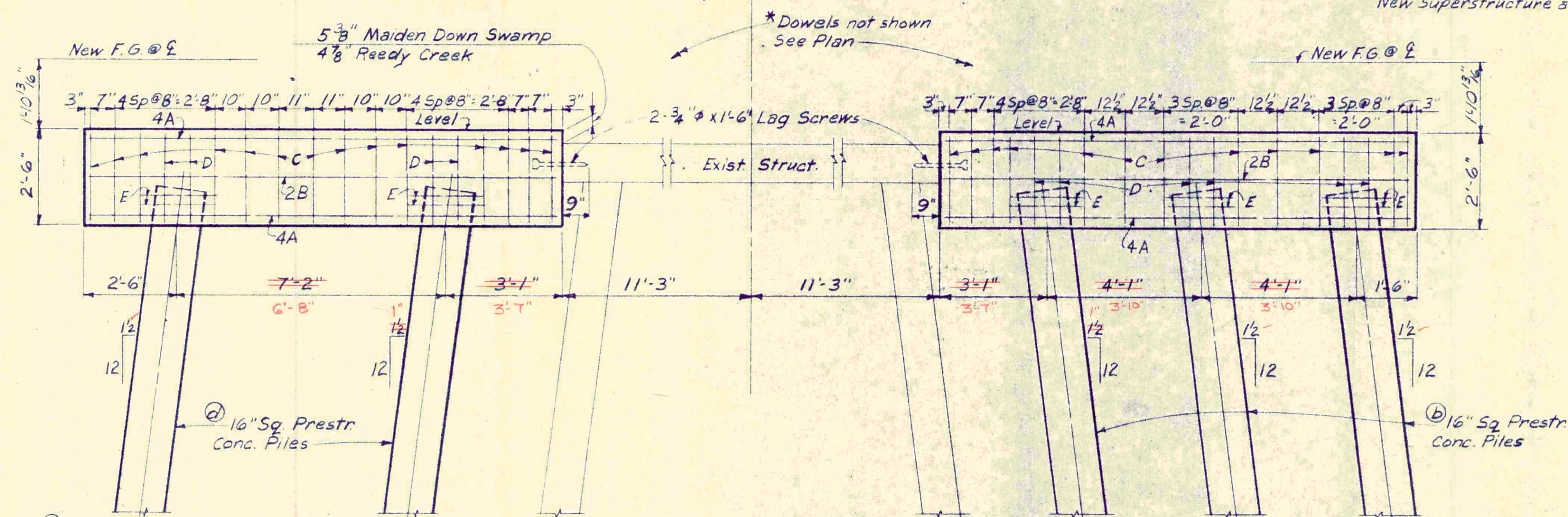
FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S. C.	MARION	34.389	S.C.41	9	24



HALF PLAN-END BENT

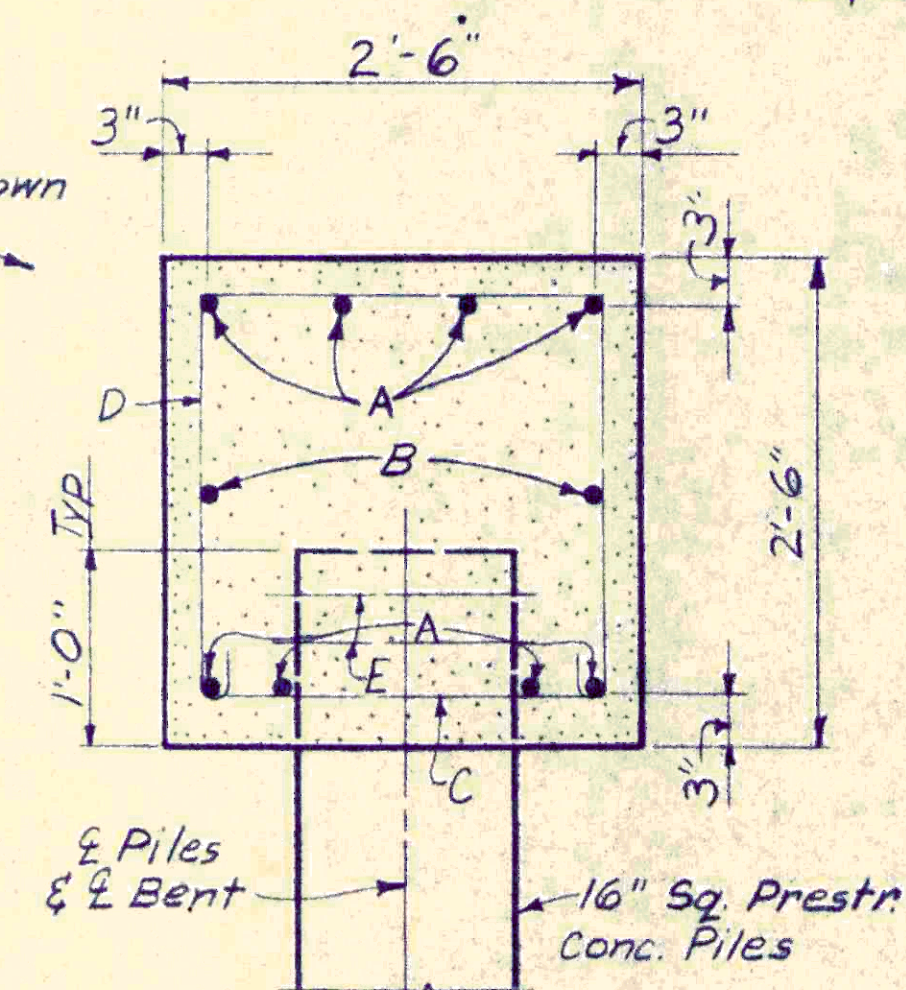
HALF PLAN-INT. BENT

*Note:
Place Dowels at Fixed Ends of Spans only.
The Engineer will determine which ends of
Old Superstructure are Fixed & match the
New Superstructure accordingly.



HALF ELEV-END BENT

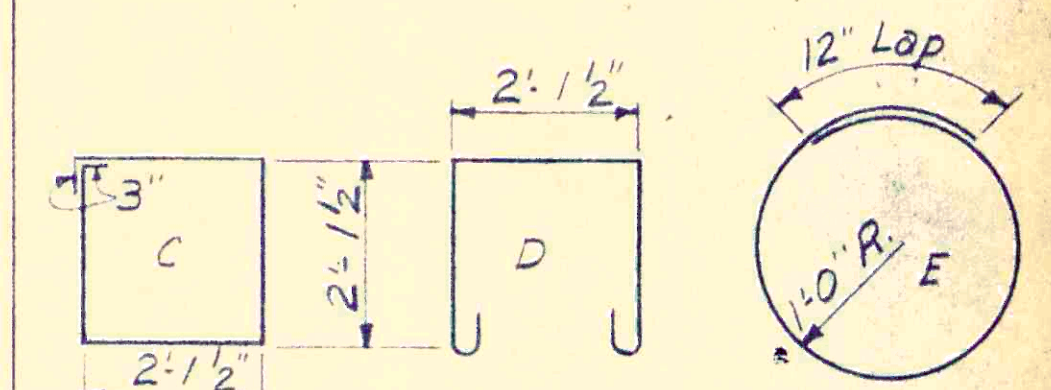
HALF ELEV-INT BENT



SECTION THRU CAP
SCALE: 1"=1'-0"

[illegible]

BENDING DETAILS



QUANTITIES

Item	Unit	1-End Bent	1-Int. Bent
Concrete Class "A"	C.Y.	5.6	5.5
Reinforcing Steel	Lbs.	① 984	① 999
16" Sq. Prastr. Conc. Piles	L.F.	(See Summary)	(See Summary)

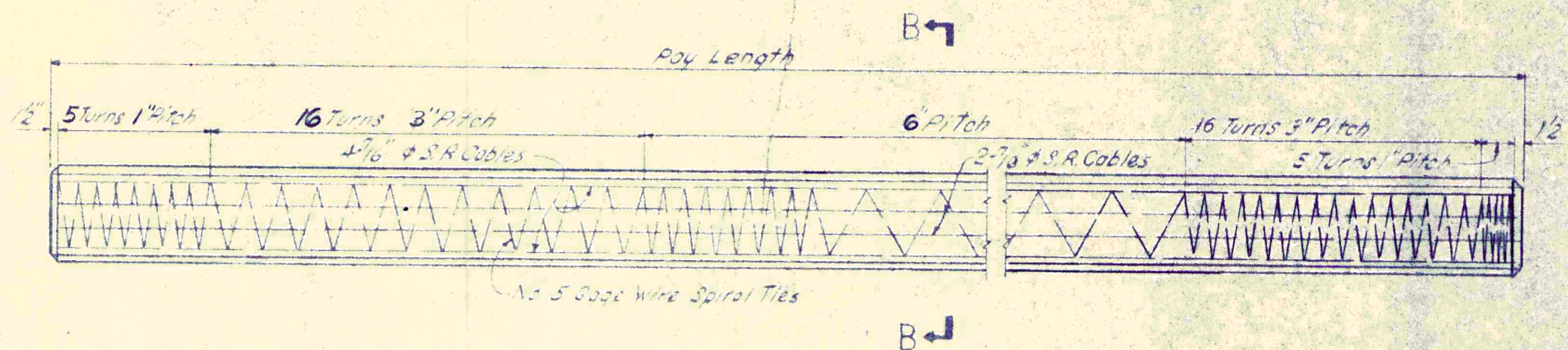
① Includes 10 Lbs. for Lag Screws and 23 Lbs. for *Dowels. Deduct 23 Lbs. for *Dowels at Bent with Double Expan.

Note:
Reinf Steel Schedule and Quantities are for
Both sides of Rdwy.

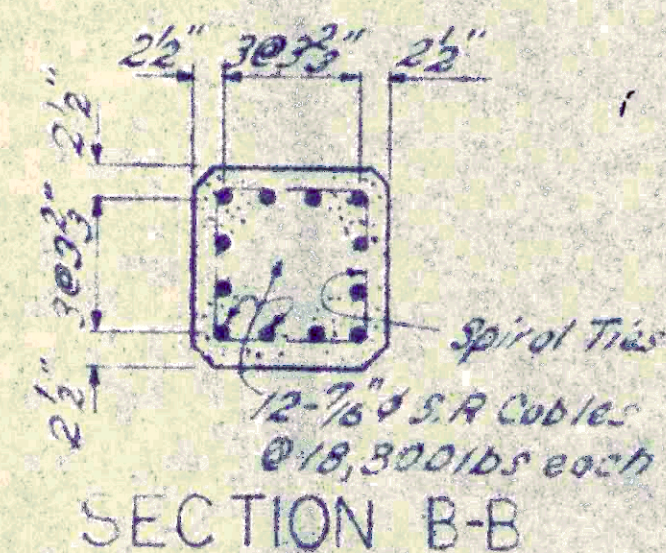
Notes:
For Standard Notes see sh. 3.
For Standard Details see sh. 4.
For Dowel Details see sh. 4.
For Details of 16" Sq. Prestre. Conc. Piles
see sh. 10.

Scale: 1"=1-0 or as noted

REV.		S. C. STATE HIGHWAY DEPARTMENT BRIDGE DIVISION COLUMBIA S. C.				
REV.						
REV.						
REV.						
REVIEWED	<i>WHE</i>					
IN CHARGE		END & INT. BENTS FOR WIDENING BRIDGES OVER MAIDEN DOWN SWAMP & REEDY CREEK				
QUAN.	WKH REL 11-75		FILE NO.	COUNTY	ROUTE NO.	DATE
TR.			34 389	MARION	S. C. 41	11-75
DR.	WKH REL 11-75		APPROVED BY <i>Basford Jr.</i>		APPROVED BY <i>W. Bolman</i>	
DES.	REL 11-75		BY CHK'D DATE		ASST. BRIDGE ENGINEER DESIGN	
				BRIDGE ENGINEER DESIGN		

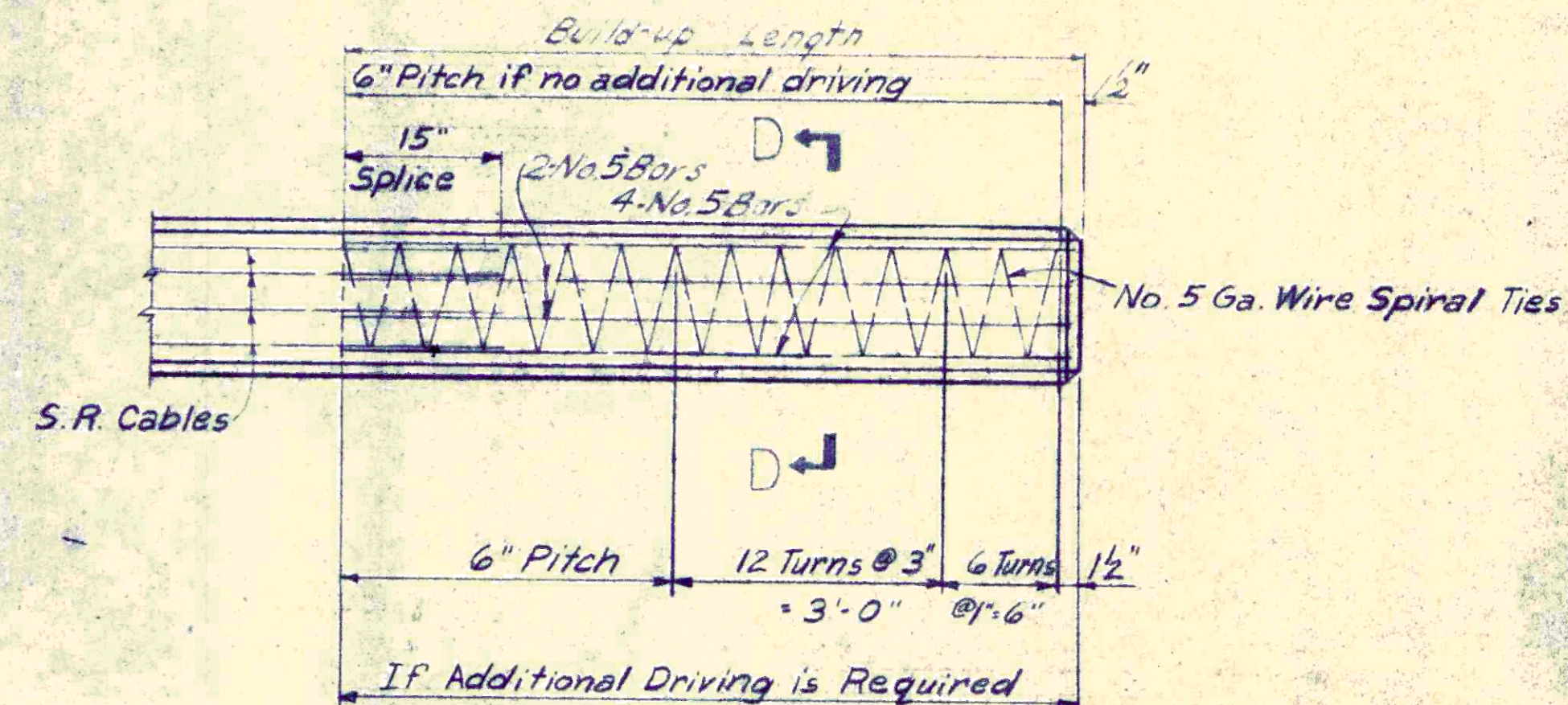


16" SQUARE PRESTRESSED CONCRETE PILE

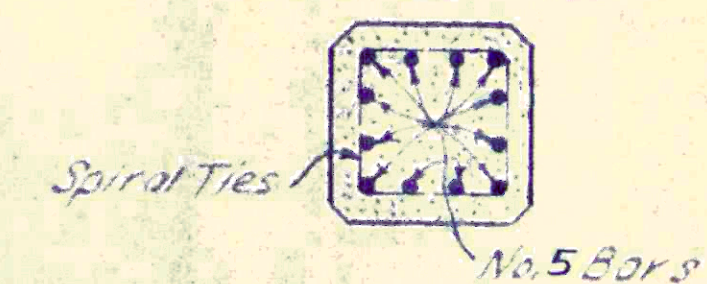


Concrete Quantity per pile = 0.0658 cu. yd.

Note: For estimated lengths, see sh. 7 & 8.

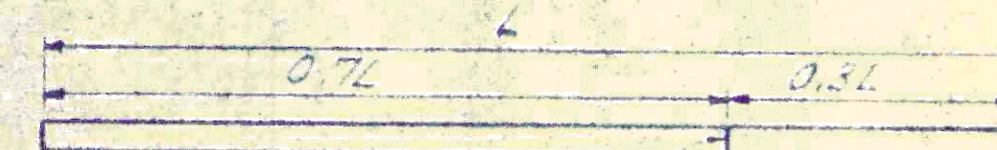


BUILD - UP

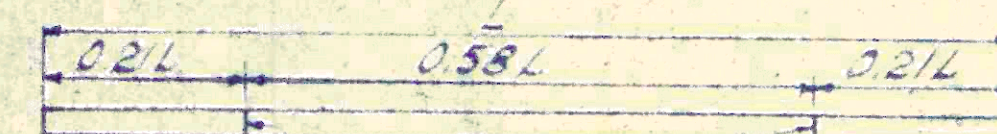


SECTION D-D

NOTES:
Spiral ties shall be tied to all corner cables and reinf. bars.
All dimensions relative to reinforcing steel are to centers of bars.
Chamfer all exposed edges 3/4" unless otherwise noted.
All concrete shall be Class "X" See S.C.H.D. Standard Specs.



Pick-up Point
SINGLE POINT PICK-UP (MAX. LENGTH = 65')



Pick-up Point
DOUBLE POINT PICK-UP (MAX. LENGTH = 80')

Note:
Piles shall be marked at Pick-up Points to indicate proper points for attaching handling lines.

S.C. STATE HIGHWAY DEPARTMENT BRIDGE DIVISION COLUMBIA S.C.			
16" SQ. PRESTRESSED CONCRETE PILES			
REV.	WKH REL 12-75 For File 34.389	FILE NO.	ROUTE NO. DATE
REV.	REL JLC 11-76	34.389	12-75
REV.	Relief Bar Note	MARION	
REVIEWED	IN CHARGE		
QUAN.	From Form 11-67		
DR.	RJS JRC 11-67		
DES.	BY CHK'D DATE		

$f'_c = 5,000 \text{ psi}$
 $f'_s = 4,000 \text{ psi}$
 $f'_t = 2,000 \text{ psi}$
 $E_s = 29,000,000 \text{ psi}$
 $E_c = 4,000,000 \text{ psi}$

END ELEVATION

Note: Wings below construction joint to be poured monolithic with slab.

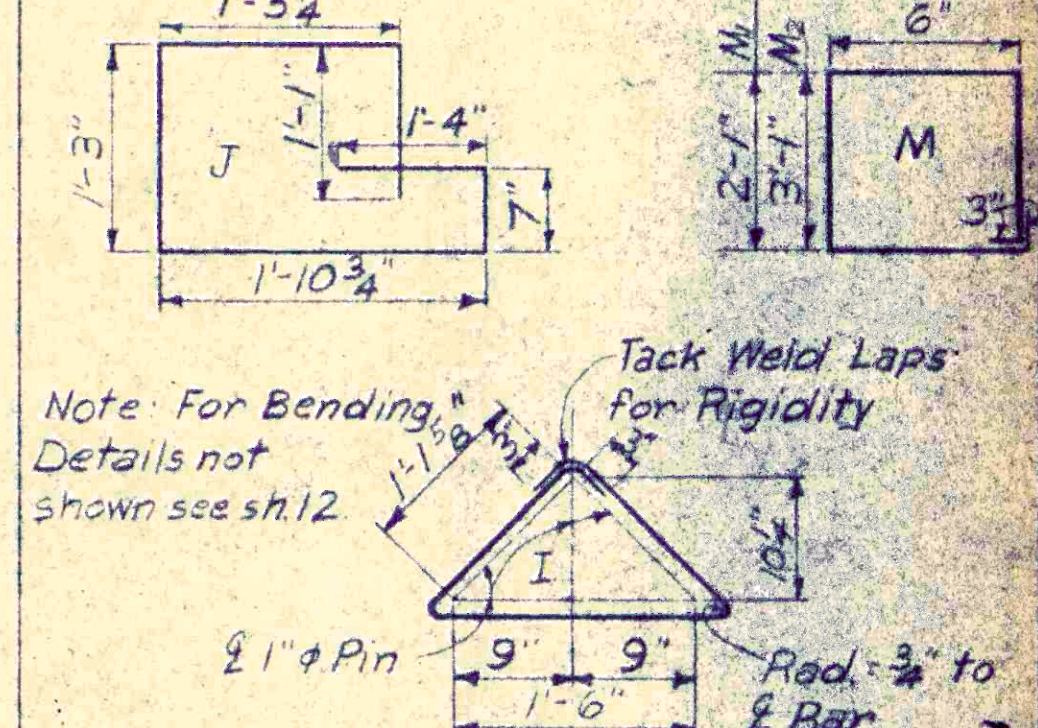
FED. RD. DIV. NO.	STATE	COUNTY	FILE NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S.C.	MARION	34.389	S.C. 41	11	24

REINF STEEL SCHEDULE

MARKS	SIZE	D	I-END SPAN		INT. SPAN	
			NO. REQ'D	LENGTH	NO. REQ'D	LENGTH
A ₁	9	S	56	25'-1"		
A ₂	9	S			56	24'-7"
B	5	S	70	12'-4"	70	12'-4"
C	5	S	38	11'-10"	38	11'-10"
D	4	B	52	7'-2"	50	7'-2"
E	5	S	26	25'-1"	26	24'-7"
F	4	B	34	2'-6"	16	2'-6"
G	6	B	26	3'-9"	24	3'-9"
H	6	S	16	25'-1"	16	24'-7"
I	4	B	48	4'-10"	48	4'-10"
J	4	B	50	7'-7"	50	7'-7"
K	4	S	12	4'-3"		
L	4	S	4	2'-8"		
M ₁	4	B	2	5'-8"		
M ₂	4	B	4	7'-8"		

BB	1" Ht.	Req'd	350'	Req'd	350'
----	--------	-------	------	-------	------

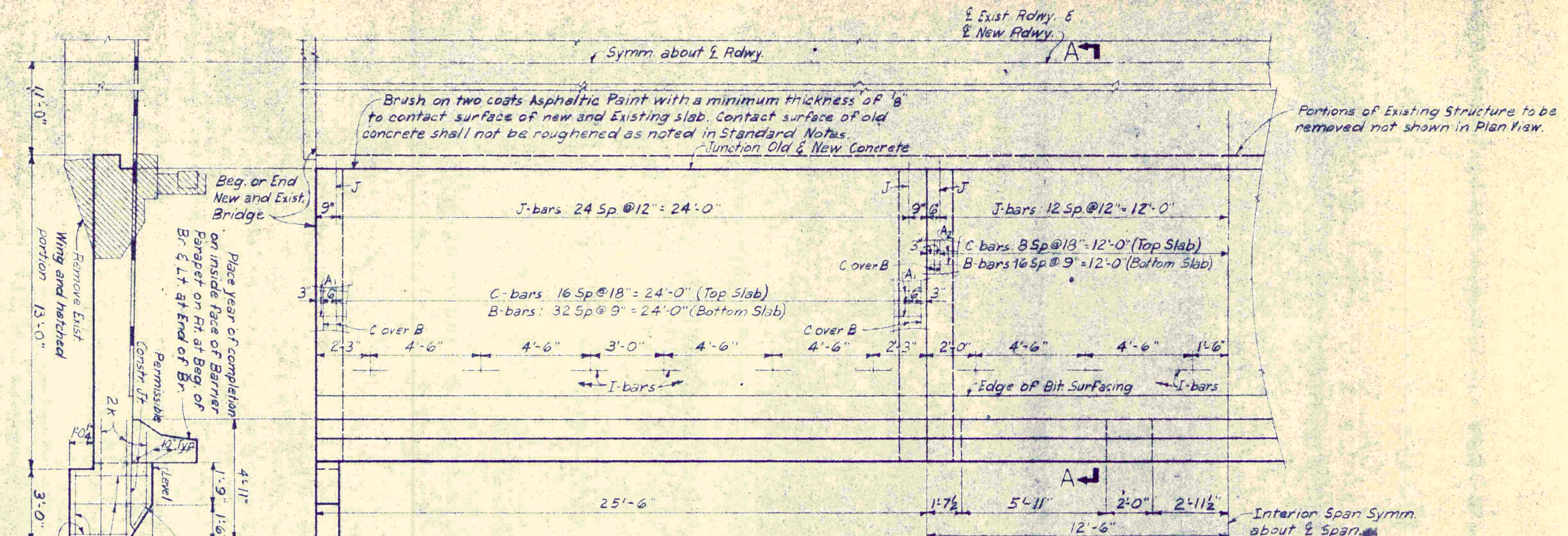
BENDING DETAILS



QUANTITIES

Item	Unit	I-End Span	I-Int. Span
Concrete, Class "A"	C.Y. ②	39.8	37.9
Reinforcing Steel	LBS ①	8431	8190

Notes:
For Standard Notes see sh. 3.
For Standard Details see sh. 4.
Reinf Steel Schedule and Quantities are for both sides of Roadway.

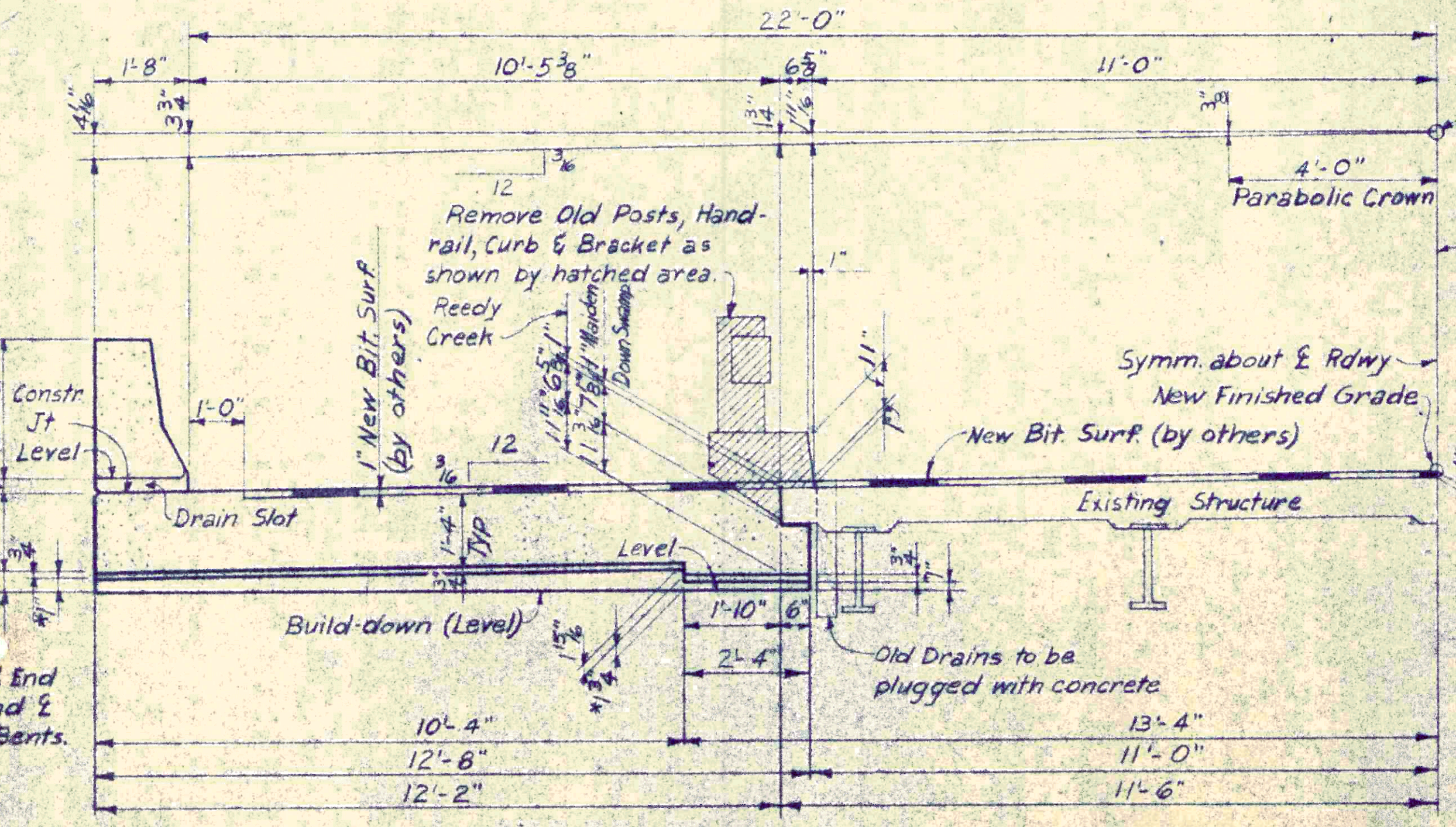


HALF PLAN-END SPAN

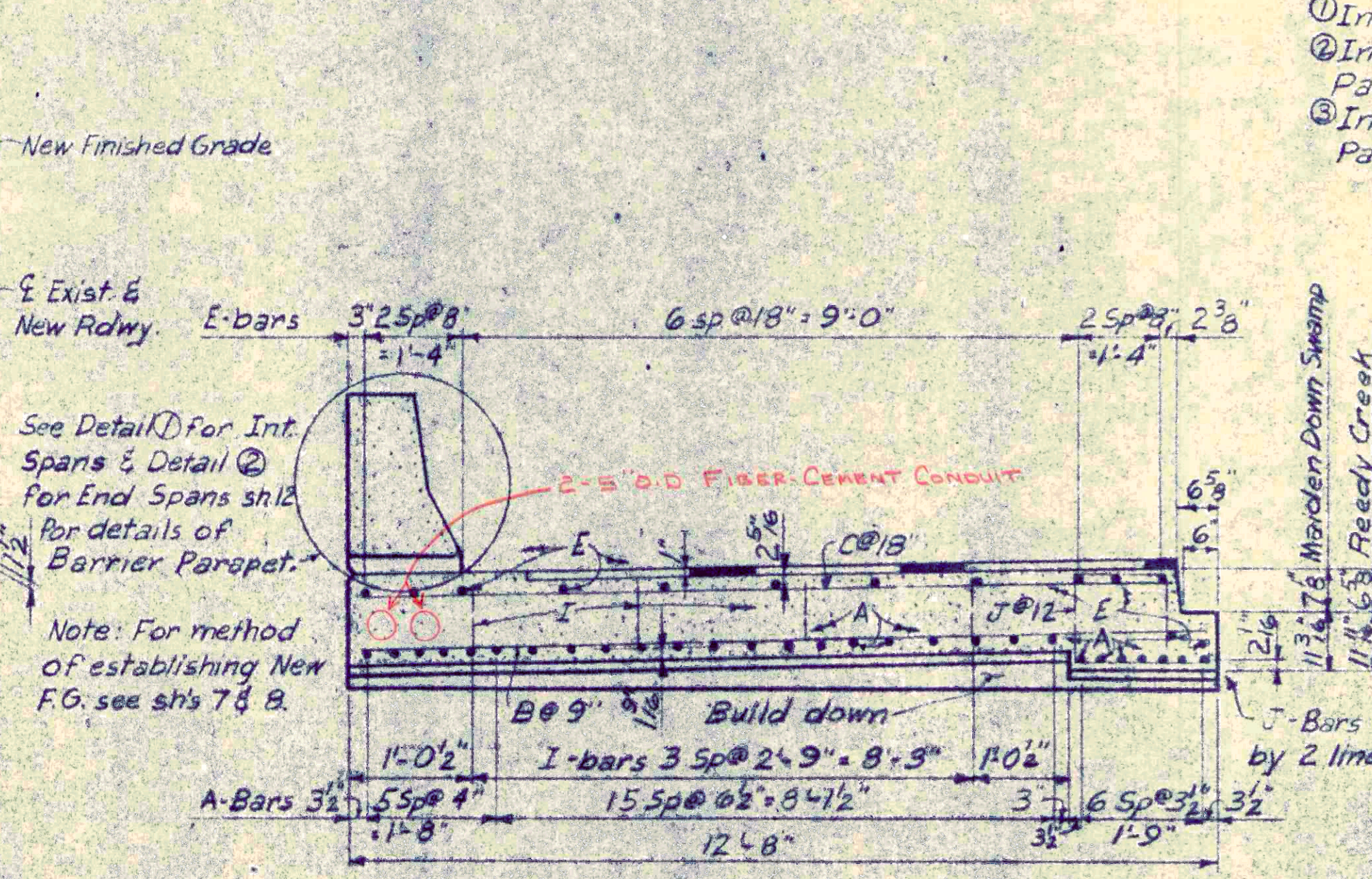
QUARTER PLAN-INT. SPAN

SIDE ELEVATION-END SPAN

HALF SIDE ELEV-INT. SPAN



SECTION A-A
(SHOWING DIMENSIONS)
SCALE: 2"=1'-0"



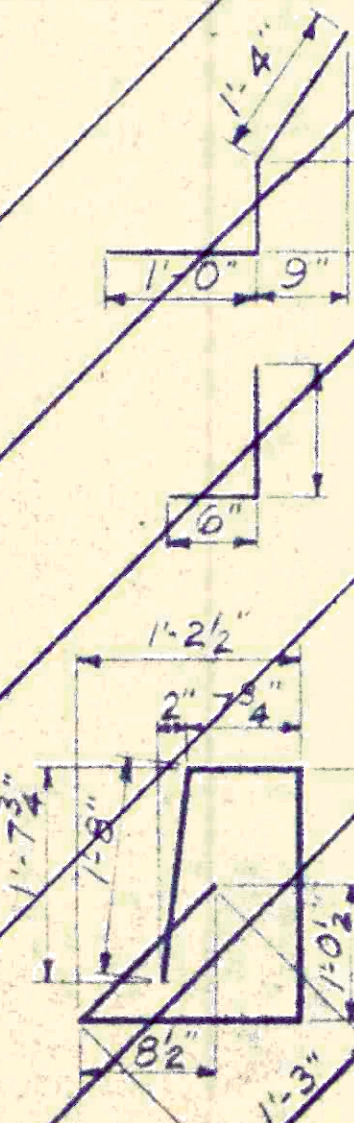
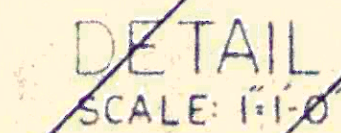
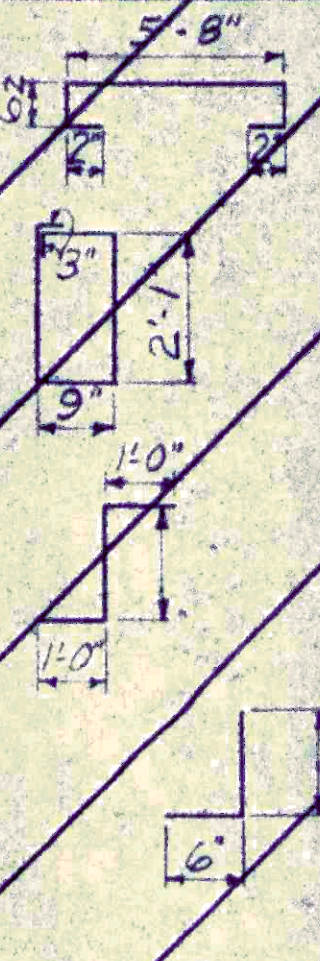
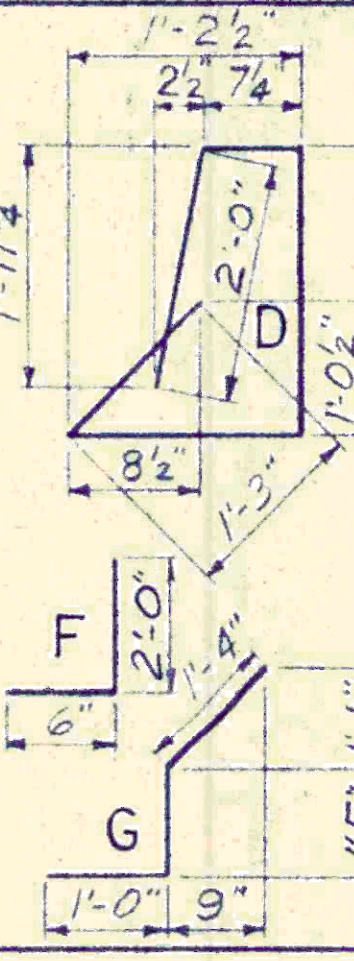
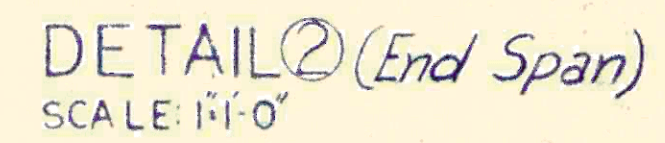
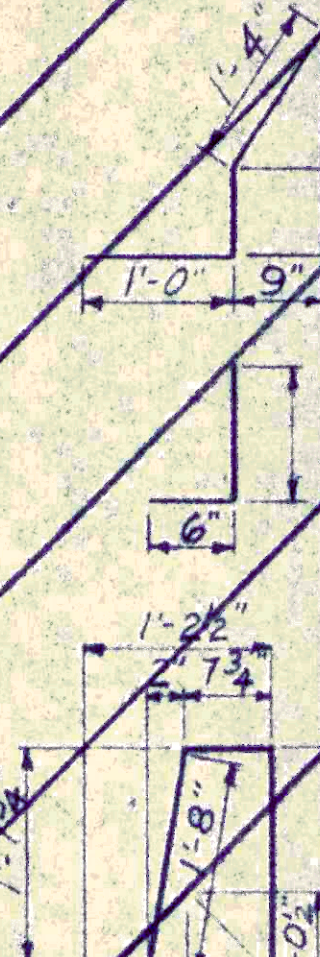
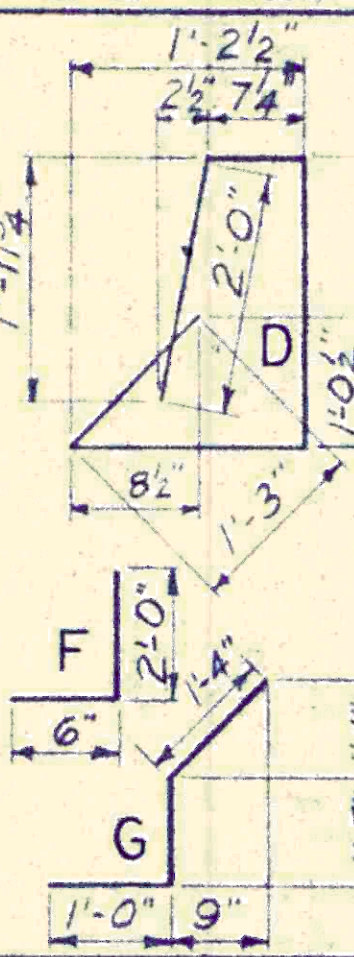
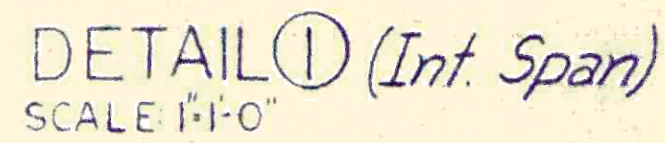
PART SECTION (TYP)
(SHOWING REINFORCING STEEL)
NO. SCALE

REV.		IN CHARGE	FILE NO.	COUNTY	ROUTE NO.	DATE
REV.		34.389	MARION	S.C. 41	9-75	
REV.		DR. WKH	DES. from 26.516	BY CHK'D DATE	ASST. BRIDGE ENGINEER	BRIDGE ENGINEER

Scale 3/8"=1'-0" or as noted
S. C. STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION
COLUMBIA S. C.
25'-6" END & 25'-0" INT. SPANS
FOR WIDENING BRIDGES OVER
MAIDEN DOWN SWAMP &
REEDY CREEK

Notes to Detailer:

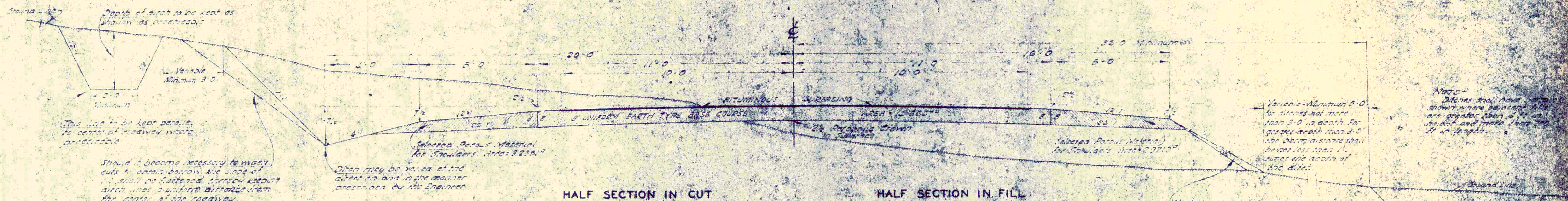
1. Refer to applicable small standards
2. Fill in blank dimensions on re-bars
3. Fill in bar designations
4. Mark thru all views not applicable



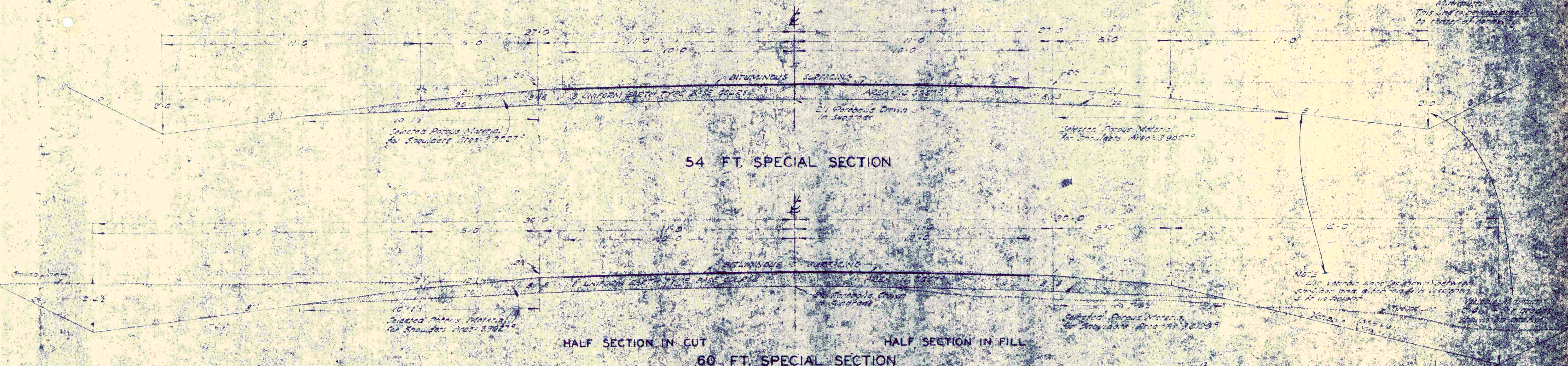
Notes:
For details of slab, slab reinf. etc. see sh 11.

REV.				S. C. STATE HIGHWAY DEPARTMENT BRIDGE DIVISION COLUMBIA S. C.
REV.				
REV.				
REV.	WKH	9-75		
REVIEWED	W. H. H.			
IN CHARGE				BARRIER PARAPET FOR WIDENING BRIDGES OVER MAIDEN DOWN SWAMP & REEDY CREEK
QUAN.				
TR.				
DR.	WKH	9-75		
DES.				
BY CHK'D DATE				FILE NO. 34.389 COUNTY MARION ROUTE NO. S. C. 41 DATE 9-75
ASST. BRIDGE ENGINEER - DESIGN				APPROVED BY <i>W. H. H.</i> APPROVED BY <i>W. H. H.</i> BRIDGE ENGINEER - DESIGN

Excavation of intercepting ditches should be done in advance of excavation of a main highway cut. Material excavated from these ditches shall be used on roadway embankments.



USE THESE SECTIONS
STA. 312+03 TO STA. 551+97.5
STA. 563+00 TO STA. 807+00



EXIST. TYP. SECTION
(FOR INFOR. ONLY)

B. S. DRAWING
NO. 4

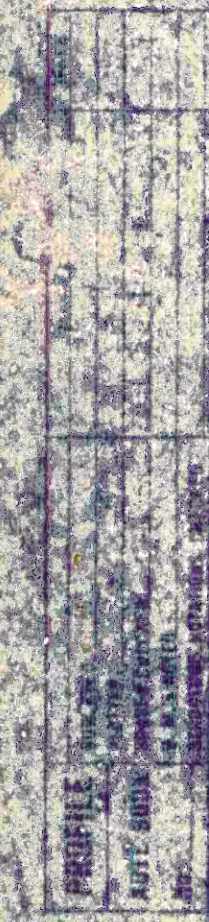
Maiden Down Swa



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UNIVERSITY OF CHICAGO

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CHICAGO



EXIST. BR.
(FOR INFOR. ONLY)

PILE RECORD ON FILE NO. 34.389

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S. C.	MARION	34.389	5C.	41	19

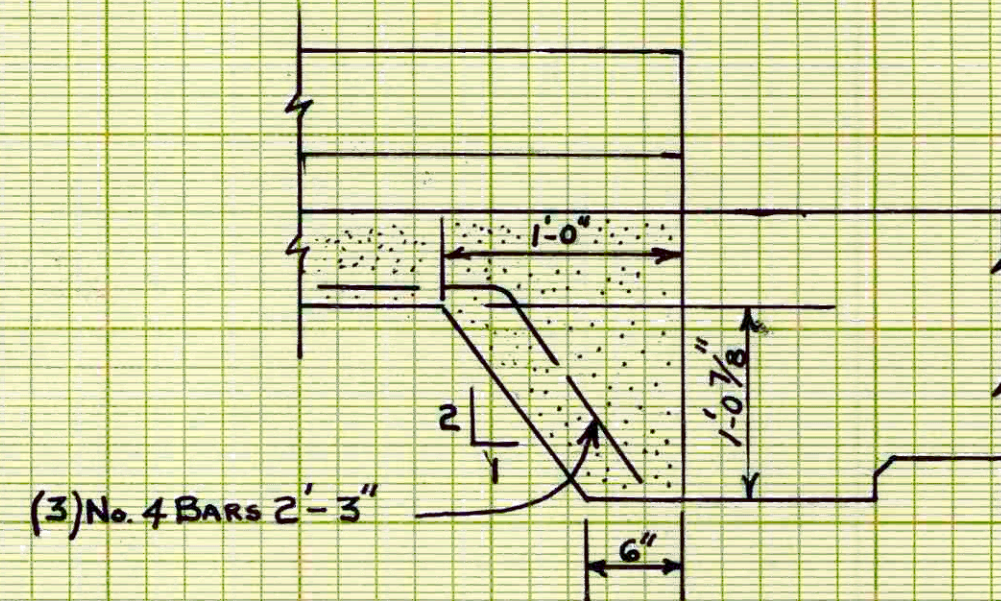
WEIGHT OF HAMMER 2750 LBS. TYPE DELMAG D-12

DATE	BENT NO.	FOOT-ING	PILE NO.	DIAM. AT BUTT	DIAM. AT TIP	ORIG. LENGTH	BUILD-UP OR SPLICE	TOTAL LENGTH	LENGTH C. O.	NET LENGTH	ELEV. C. O.	ELEV. OF TIP WHEN PLAN BEARING VALUE IS OBTAINED	ELEV. PILE TIP	ELEV. ORIG. GROUND OR BOTTOM OF FOOTING	PEN. IN GROUND OR BELOW FOOTING	PEN. PER BLOW IN INCHES	FALL OF HAMMER	BEARING VALUE	PAY LENGTH	C.O. @ 40 %	DATE	BENT NO.	FOOT-ING	PILE NO.	DIAM. AT BUTT	DIAM. AT TIP	ORIG. LENGTH	BUILD-UP OR SPLICE	TOTAL LENGTH	LENGTH C. O.	NET LENGTH	ELEV. C. O.	ELEV. OF TIP WHEN PLAN BEARING VALUE IS OBTAINED	ELEV. PILE TIP	ELEV. ORIG. GROUND OR BOTTOM OF FOOTING	PEN. IN GROUND OR BELOW FOOTING	PEN. PER BLOW IN INCHES	FALL OF HAMMER	BEARING VALUE	PAY LENGTH	C.O. @ 40 %	
REEDY CREEK																					MAIDEN DOWN																					
7-30	1		1			30	0	30.00	9.80	20.20	180.680	163.48	160.48	173.30	12.82	0.0125"	5'	122.22	30.00		10-29	1		1					25.00	0	25.00	5.10	19.90	205.084	191.184	185.184	196.380	11.196	.025"	4 1/2	99.00	25.00
	1		2						10.92	19.08		164.60	161.60	173.70	12.10	0.0125"	5'	122.22			10-29	1		2						5.05	19.95		190.134	185.134	196.380	11.246	.025"	4 1/2	99.00	25.00		
	1		3						11.75	18.25		167.43	162.43	174.40	11.97	0.025"	5'	110.00			10-22	1		3						5.50	19.50		191.584	185.584	196.380	10.796	.025"	4 1/2	99.00	25.00		
7-30	1		4			30	0	30.00	9.83	20.17	180.680	164.51	160.51	174.40	13.89	0.0125"	5'	122.22	30.00		10-22	1		4					25.00	0	25.00	5.30	19.70	205.084	190.384	185.384	196.380	10.996	.025"	4 1/2	99.00	25.00
									10.60			161.253							120.00	Sub Total										6.2												
7-29	2		1			30	0	30.00	6.12	23.88	180.680	163.80	156.80	173.81	17.01	0.025"	5'	110.00	30.00		10-15	2		1					25.00	0	25.00	4.08	20.92	205.084	189.164	184.164	198.514	14.35	.025"	4 1/2	99.00	25.00
	2		2						7.00	23.00		163.68	157.68	173.96	16.28	0.025"	5'	110.00			10-15	2		2							3.35	21.65		188.934	183.934	196.374	12.94	.050"	4 1/2	82.50	25.00	
	2		3						0.51	29.49		160.17	151.17	173.23	22.12	0.125"	5'	61.11			10-15	2		3							3.38	21.62		188.464	183.464	196.384	12.92	.050"	4 1/2	82.50	25.00	
	2		4						5.66	24.34		162.34	156.34	172.74	16.40	0.050"	5'	91.67			10-15	2		4							3.86	21.14		189.444	183.944	197.934	13.99	.025"	4 1/2	99.00	25.00	
	2		5						6.86	23.14		161.54	157.54	172.71	15.17	0.025"	5'	110.00			10-15	2		5							3.75	21.25		188.334	183.834	198.234	14.40	.050"	4 1/2	82.50	25.00	
7-29	2		6			30	0	30.00	7.47	22.53	180.680	163.15	158.15	172.86	14.71	0.025"	5'	110.00	30.00		10-15	2		6					25.00	0	25.00	4.58	20.42	205.084	190.664	184.664	198.204	14.24	.025"	4 1/2	99.00	25.00
									5.10			156.253							180.00	Sub Total											3.8											
7-27	3		1			30	0	30.00	8.38	21.62	180.680	165.06	152.06	174.41	15.35	0.025"	5'	110.00	30.00		10-15	3		1					25.00	0	25.00	3.76	21.24	205.084	188.844	183.844	197.164	13.32	.050"	4 1/2	82.50	25.00
7-27	3		2						8.40	21.60		165.08	159.08	173.71	14.63	0.000"	5'	137.50			10-15	3		2							3.48	21.52		188.564	183.564	198.634	15.07	.050"	4 1/2	82.50	25.00	
7-27	3		3						5.21	24.79		161.89	155.89	173.41	17.52	0.025"	5 1/2	121.00			10-15	3		3							3.15	21.85		188.234	183.234	198.384	15.15	.050"	4 1/2	82.50	25.00	
7-26	3		4						0	30.00		154.18	150.18	174.47	24.29	0.050"	5'	91.67			10-18	3		4							1.39	23.61		188.474	181.474	196.064	14.59	.025"	5'	110.00	25.00	
7-26	3		5						5.66	24.34		162.34	156.34	174.52	18.18	0.025"	5'	110.00			10-18	3		5							1.30	23.70		188.384	181.384	195.614	14.23	.025"	5'	110.00	25.00	
7-26	3		6			30	0	30.00	5.45	24.55	180.680	163.13	156.13	174.77	18.64	0.025"	5'	110.00	30.00		10-18	3		6					25.00	0	25.00	0.12	24.88	205.084	188.204	180.204	195.764	15.56	.025"	4 1/2	99.00	25.00
									5.5			156.117							180.00											2.7												
7-26	4		1			30	0	30.00	5.88	24.12	180.680	161.56	156.56	174.97	18.41	0.025"	5'	110.00	30.00		10-29	4		1					25.00	0	25.00	4.58	20.42	205.084	191.664	184.664	197.500	12.836	.025"	5'	110.00	25.00
	4		2						4.21	25.79		161.89	154.89	175.70	20.81	0.025"	5'	110.00			10-29	4		2							7.23	17.77		192.314	187.314	197.500	13.186	.025"	5'	110.00	25.00	
	4		3						5.96	24.04		162.64	156.64	175.23	18.59	0.025"	5'	110.00			10-22	4		3							7.05	17.95		193.134	187.134	197.500	10.366	.025"	5'	110.00	25.00	
	4		4						8.70	21.30		163.38	159.38	175.65	16.27	0.025"	5'	110.00			10-22	4		4																		
	4		5						7.45	22.55		164.13	158.13	175.70	17.57	0.025"	5 1/2	121.00			10-22	4		5																		
7-26	4		6			30	0	30.00	10.17	19.83	180.680	164.85	160.85	175.60	14.75	0.025"	5 1/2	121.00	30.00		10-22	4		6					25.00	0	25.00	5.34	19.66	205.084	192.424	185.424	197.500	12.076	.025"	4 1/2	99.00	25.00
									7.1			157.149							180.00	Sub Total											6.1											
7-26	5		1			30	4.27	34.27	0	34.27	180.680	149.16	147.26	175.48	27.82	0.125"	5'	114	34.27		10-22	5		1					25.00	0	25.00	5.34	19.66	205.084	192.424	185.424	197.500	12.076	.025"	4 1/2	99.00	25.00
7-22	5		2				0	30.00	0	30.00		151.85	150.35	175.78	25.43	0.200"	5'	45.83	30.00																							
	5		3				0	30.00	0	30.00		153.45	150.45	175.58	25.13	0.175"	5'	50.00																		</						

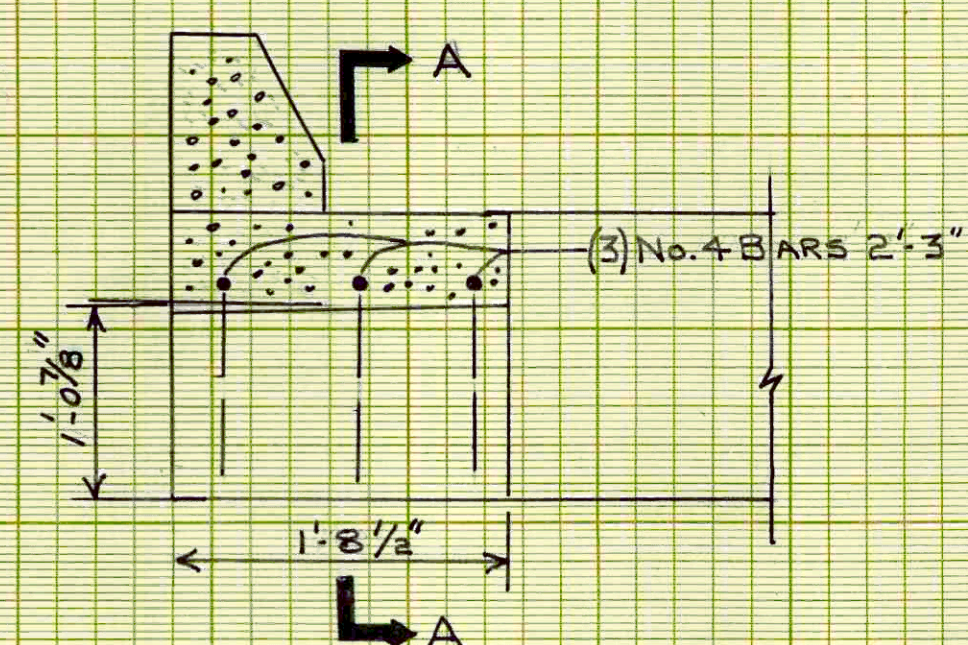
CROSS SECTIONS

Scale 1 inch = 5 feet

FED. ROAD DIV. NO.	STATE	COUNTY	FILE NO.	PROJECT NO.	ROUTE NO.	SHEET NO.	TOTAL SHEETS
3	S. C.	MARION	34.389	RF-083-1(51)	S.C. Rte. 41	20	21



SECTION A-A



CURB AND GUTTER SUPPORT
METHOD A

CONC. QUANTITIES

$$1.07 \times .5 \times 1.71 = .91$$

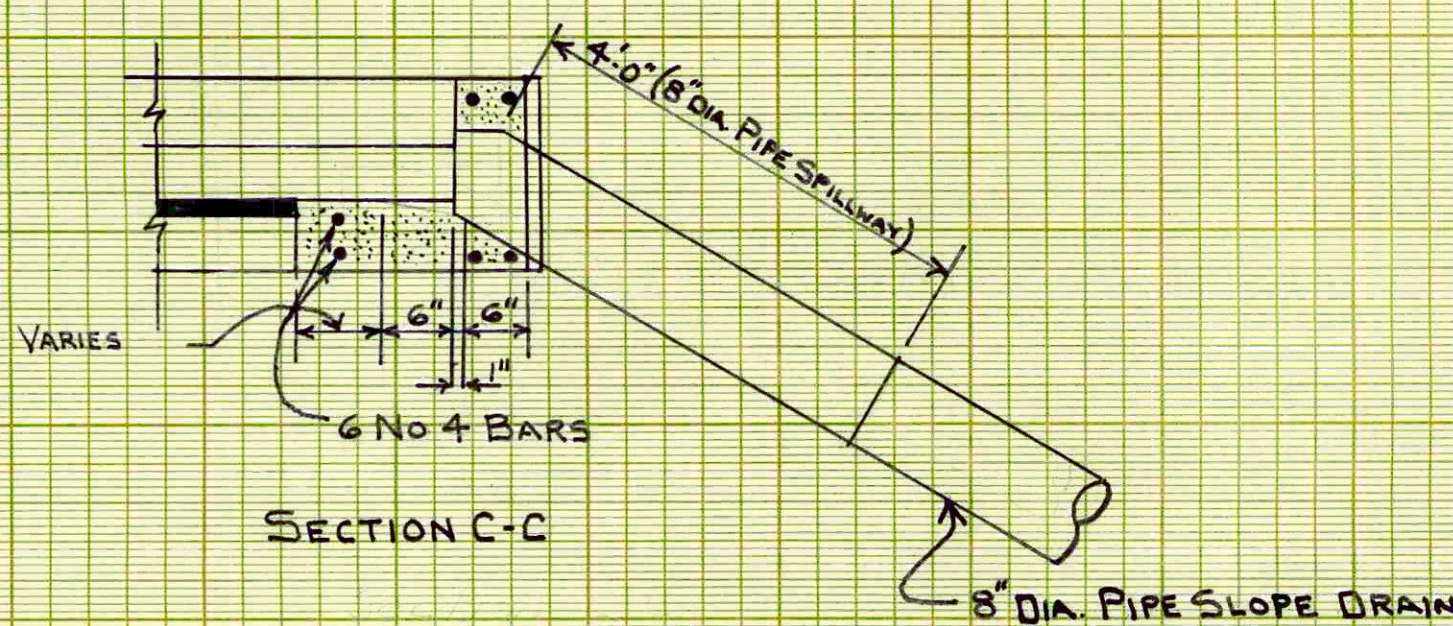
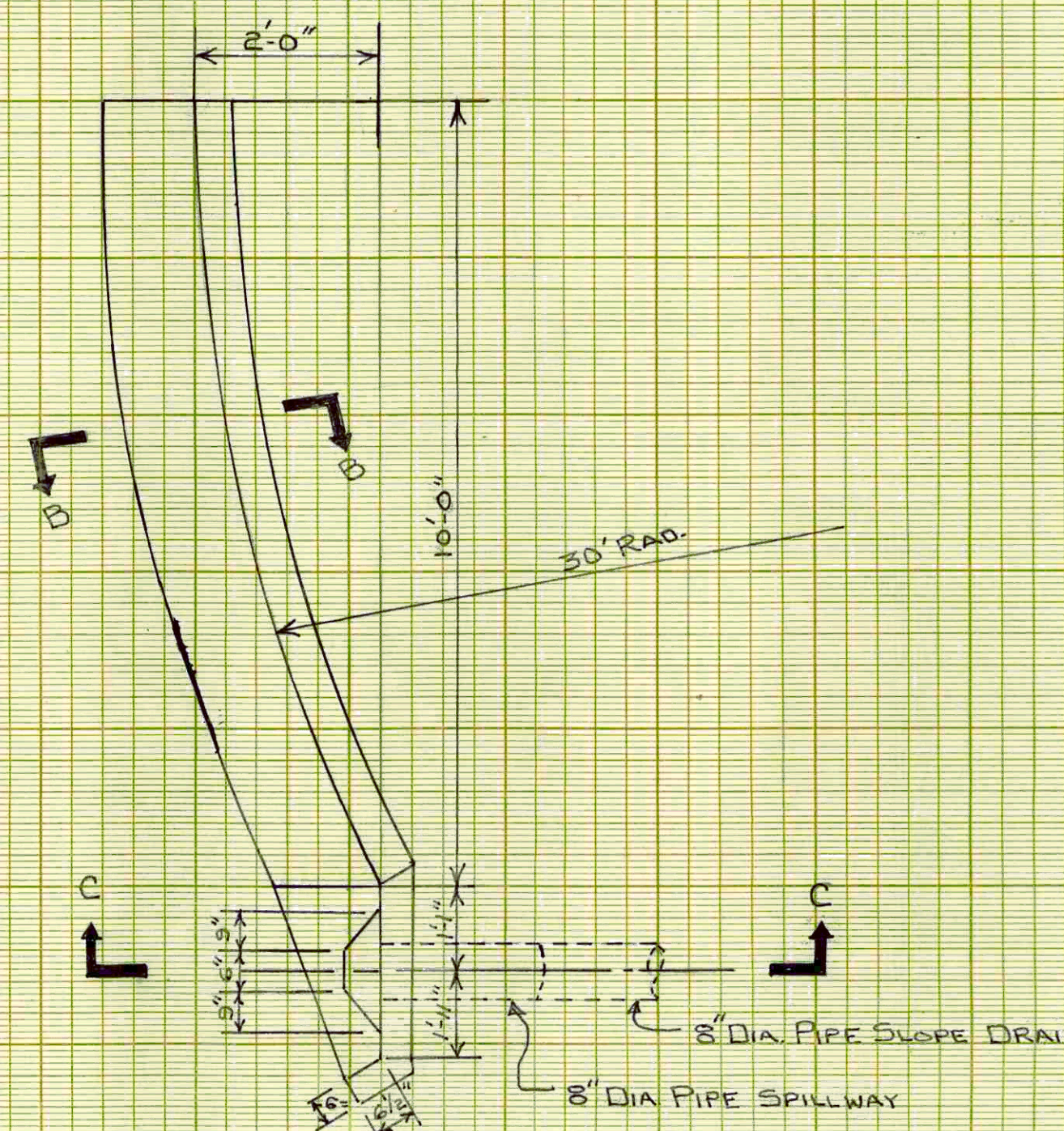
$$1.07 \times .5 \times 1.71 = \frac{.91}{2} = .46$$

$$1.37 \text{ C.F. } \frac{137}{27} = .05 \text{ CY. PER SUPPORT}$$

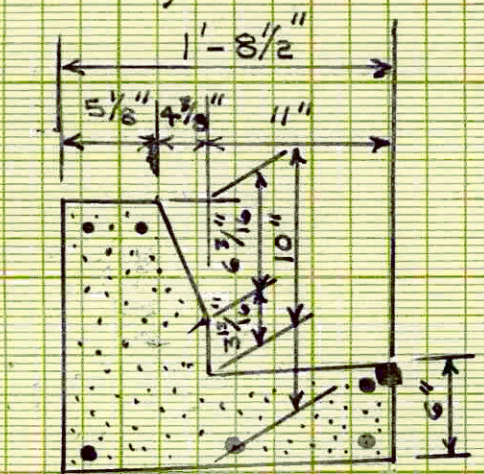
STEEL QUANTITIES

$$3 \times 2.25 \times .668 = 4.51 \text{ LBS. PER SUPPORT}$$

QUANTITIES PER BRIDGE		
FOR METHOD A	CONC. CLASS A	2 CY
CURB & GUTTER	REINF. STEEL	18 LBS



SECTION C-C



SECTION B-B

QUANTITIES PER BRIDGE		
TYPE A	CONC. CLASS A	24 CY
CURB & GUTTER	REINF. STEEL	136 LBS

Ground Surface Platted by L.N.
 " " Checked by H.H.B.
 Template Sections Platted by
 " " Checked by
 Areas by
 " " Checked by
 Template Sections Revised by
 " " Checked by
 Final Areas by
 " " Checked by
 Quantities Transferred and Inked by

FLARED CURB AND GUTTER
 AND SUPPORT
 FOR WIDENING BRIDGES OVER
 MAIDEN DOWN SWAMP AND
 REEDY CREEK
 FILE: 34.389
 COUNTY: MARION

POURING RECORD ON

FILE NO. 34.389

REEDY CREEK

MAIDEN DOWN SWAMP

BRIDGE

Fed. Road Div. No.	State	County	File No.	Route No.	Sheet No.	Total Sheets
3	S.C.	MARION	34.389	41	21	21

DATE 1976	PART OF STRUCTURE	MATERIAL RECORD					APPROX QUANT. C.Y.	THERO BAGS REQ'D	TOTAL BAGS USED	CEMENT NOT TO BE ADJUSTED			CEMENT TO BE ADJUSTED			
		CEMENT			COARSE AGGREGATE											
		TYPE	BRAND		TYPE	SOURCE	SOURCE			PAR. 71G 5 (0)	PAR. 71G 5 (0)					
8-25	CAPS Bts 7+8 Rt	1	GIANT	#57	BECKER	BECKER		5.50	34.38	34.44						
8-31	CAPS Bts 1+9 Lt							5.60	35.00	35.44						
9-2	CAPS Bts 5+6 Rt							5.50	34.38	34.50						
9-8	CAPS Bts 1+9 Rt							5.60	35.00	35.50						
9-10	CAPS Bts 3+4 Rt							5.50	34.38	34.34						
9-16	CAPS Bts 7+8 Lt							5.50	34.38	35.50						
9-17	CAPS Bt 2 Lt Rt							5.50	34.38	35.50						
9-21	CAPS Bts 3+4 Lt							5.50	34.38	35.50						
9-22	CAPS Bts 5+6 Lt							5.50	34.38	35.00						
10-15	SLAB SPAN 8 Rt							16.55	103.40	107.38						
10-18	SLAB SPAN 7 Rt							15.90	99.38	101.12						
10-19	SLAB SPAN 6 Rt							15.90	99.38	100.62						
10-21	SLAB SPAN 5 Rt							15.90	99.38	100.62						
10-22	SLAB SPAN 4 Rt							15.90	99.38	100.62						
10-25	SLAB SPAN 3 Rt							15.90	99.38	101.62						
10-26	SLAB SPAN 2 Rt							15.90	99.38	101.12						
10-27	SLAB SPAN 1 Rt							16.55	103.40	106.87						
10-28	SLAB SPAN 1 Lt							16.55	103.40	106.38						
10-29	SLAB SPAN 2 Lt							15.90	99.38	100.62						
11-1	SLAB SPAN 3 Lt							15.90	99.38	101.12						
11-2	SLAB SPAN 4 Lt							15.90	99.38	100.62						
11-3	SLAB SPAN 5 Lt							15.90	99.38	100.62						
11-4	SLAB SPAN 6 Lt							15.90	99.38	100.12						
11-5	SLAB SPAN 7 Lt							15.90	99.38	100.12						
11-9	SLAB SPAN 8 Lt							16.55	103.40	105.88						
12-2	PARAPET SPAN 7+8 Rt							5.90	36.88	37.63						
12-3	PARAPET SPAN 5+6 Rt							5.60	35.00	35.50						
12-6	PARAPET SPAN 3+4 Rt							5.60	35.00	35.50						
12-7	PARAPET SPAN 1+2 Rt + CURB END BR. RT SIDE							6.55	41.25	41.81						
12-8	PARAPET SPAN 1+2 Lt							5.90	36.88	37.63						
12-9	PARAPET SPAN 3+4 Lt CURB END BR. RT SIDE							6.25	39.38	40.19						
12-10	PARAPET SPAN 7+8 Lt CURB END BR. LT SIDE							6.55	41.25	41.75						
12-13	PARAPET SPAN 5+6 Lt CURB END BR. LT SIDE	1	GIANT	#57	BECKER	BECKER		6.25	39.38	40.19						
CARRIED FORWARD										355.30						
CARRIED FORWARD										140.75						
GRAND TOTAL										496.05						

DATE	PART OF STRUCTURE	MATERIAL RECORD					APPROX QUANT. C.Y.	THERO BAGS REQ'D	TOTAL BAGS USED	CEMENT NOT TO BE ADJUSTED			CEMENT TO BE ADJUSTED			
		CEMENT			COARSE AGGREGATE											
		TYPE	BRAND		TYPE	SOURCE	SOURCE			PAR. 71G 5 (0)	PAR. 71G 5 (0)					
11-4	CAPS Bts 1+2 Rt	1	GIANT	#57	BECKER	BECKER		5.55	34.69	35.00						
11-5	CAPS Bts 3+4 Rt							5.55	34.69	35.00						
11-11	CAPS Bts 2+3 Lt							5.50	34.38	34.44						
11-16	CAPS Bts 1+4 Lt							5.60	35.00	35.50						
11-17	SLAB SPAN 1 Rt							16.55	103.40	105.88						
11-18	SLAB SPAN 2 Rt							15.90	99.38	103.12						
11-19	SLAB SPAN 3 Rt							16.55	103.40	106.88						
11-23	SLAB SPAN 1 Lt							16.55	103.40	106.88						
11-24	SLAB SPAN 2 Lt							15.90	99.38	100.62						
11-30	SLAB SPAN 3 Lt							16.55	103.40	106.88						
12-17	PARAPET SPAN 1+2 Rt							5.90	36.87	37.63						
12-21	PARAPET CURB END BR. RT							6.55	41.25	41.45						
12-22	PARAPET SPAN 3+4 Lt							6.30	39.38	40.19						
12-28	CURB END BR. RT							1.20	7.50	9.50						
12-29	CURB END BR. RT	1	GIANT	#57	BECKER	BECKER		0.60	3.75	4.75						
CARRIED FORWARD																
CARRIED FORWARD																
GRAND TOTAL																

DATE	PART OF STRUCTURE	MATERIAL RECORD					APPROX QUANT. C.Y.	THERO BAGS REQ'D	TOTAL BAGS USED	CEMENT NOT TO BE ADJUSTED			CEMENT TO BE ADJUSTED				
		CEMENT			COARSE AGGREGATE												
		TYPE	BRAND		TYPE	SOURCE	SOURCE			PAR. 71G 5 (0)	PAR. 71G 5 (0)						
CARRIED FORWARD																	
CARRIED FORWARD																	
GRAND TOTAL																	

SUMMARY OF FINAL CONSTRUCTION QUANTITIES

PIERS OR BENTS																					
ITEM	PLAN ELEVATION		FINAL ELEVATION		DIFFERENCE		DRY EXCAVATION	WET EXCAVATION	ROCK EXCAVATION	TREATED TIMBER PILING	UNTREATED TIMBER PILING	REINFORCED CONC. PILING	STEEL H-PILING	CLASS "A-A" CONCRETE	CLASS "A" CONCRETE	CLASS "B" CONCRETE	REINFORCING STEEL	STRUCTURAL STEEL	TREATED STRUC. TIMBER	WELDING	16" SQ PRESTR. CONC. PILING
	UPSTREAM	DNSTREAM	UPSTREAM	DNSTREAM	UPSTREAM	DNSTREAM															
REEDY CREEK BR.																					
BENT # 1	182.180	182.180	182.180	182.180	0	0	0	0	0	0	0	0	0	0	5.6	0	984	0	0	0	120.00
2															5.5		999				180.00
3															5.5		999				180.00
4															5.5		999				180.00
5															5.5		976				184.27
6															5.5		999				192.98
7															5.5		999				186.25
8															5.5		999				180.00
9	182.180	182.180	182.180	182.180	0	0	0	0	0	0	0	0	0	0	5.6	0	984	0	0	0	122.50
REEDY CREEK BR. TOT.					0	0	0	0	0	0	0	0	0	0	49.7	0	8938	0	0	0	1526.00
MAIDEN DOWN BR.																					
BENT 1	206.584	206.584	206.584	206.584	0	0	0	0	0	0	0	0	0	0	5.6	0	984	0	0	0	100.00
2															5.5		999				150.00
3															5.5		976				150.00
4	206.584	206.584	206.584	206.584	0	0	0	0	0	0	0	0	0	0	5.6	0	984	0	0	0	100.00
MAIDEN DOWN TOTAL					0	0	0	0	0	0	0	0	0	0	22.2	0	3943	0	0	0	500.00
TOTAL															71.9		12,881				2026.00

SUPERSTRUCTURE																	
ITEM	PLAN QUANTITIES			CONCRETE	REINFORCING STEEL	STRUCTURAL STEEL (LBS.)	STRUCTURAL STEEL (L.S.)	TREATED STRUC. TIMBER	UNTREATED STRUC. TIMBER	WELDING	HARDWARE	CLEARING & GRUBBING WITHIN R/W	INTAKE SPILLWAY ASSEMBLY	8" BITUMINIZED FIBER PIPE SLOPE DRAIN	GUARD RAIL	END ANCHORS (CABLE)	HAND PLACED RIF RAP C.T.
	CONCRETE	REIN. STEEL	STRUC. STEEL														
REEDY CREEK BR.																	
SPAN # 1	39.8	8431	0	① 39.29	8431	0	0	0	0	0	0						72.78
2	37.9	8190		② 37.40	8190												
3	37.9	8190		② 37.40	8190												
4	37.9	8190		② 37.40	8190												
5	37.9	8190		② 37.40	8190												
6	37.9	8190		② 37.40	8190												
7	37.9	8190		② 37.40	8190												
8	39.8	8431	0	③ 39.29	8431	0	0	0	0	0	0						
FLARED CURB+GUTTER	2.8	196		④ 2.40	196								4	⑤ 66		4	73.70
CURB SUPPORT	0	0		④ 0.20	18								4	⑤ 66	300	4	146.48
REEDY CR. BR. TOT.	309.8	66198		305.58	66216	0	0	0	0	0	0	1,826.92	4	66	300	4	146.48
MAIDEN DOWN BR.																	
SPAN 1	39.8	8431	0	① 39.29	8431	0	0	0	0	0	0						87.69
2	37.9	8190		② 37.40	8190												
3	37.9	8431	0	① 39.29	8431	0	0	0	0	0	0						93.59
FLARED CURB+GUTTER	2.8	196		④ 2.40	196								4	⑤ 67		4	
CURB SUPPORT	0	0		④ 0.20	18								4	⑤ 67	300	4	181.28
MAIDEN DOWN BR. TOT.	120.3	25248		118.58	25266	0	0	0	0	0	0	673.08	4	67	300	4	181.28
TOTAL	430.1	91,446	0	424.16	91,482	0	0	0	0	0	0	18,500.00	8	133 L.F.	600 L.F.	8	327.76