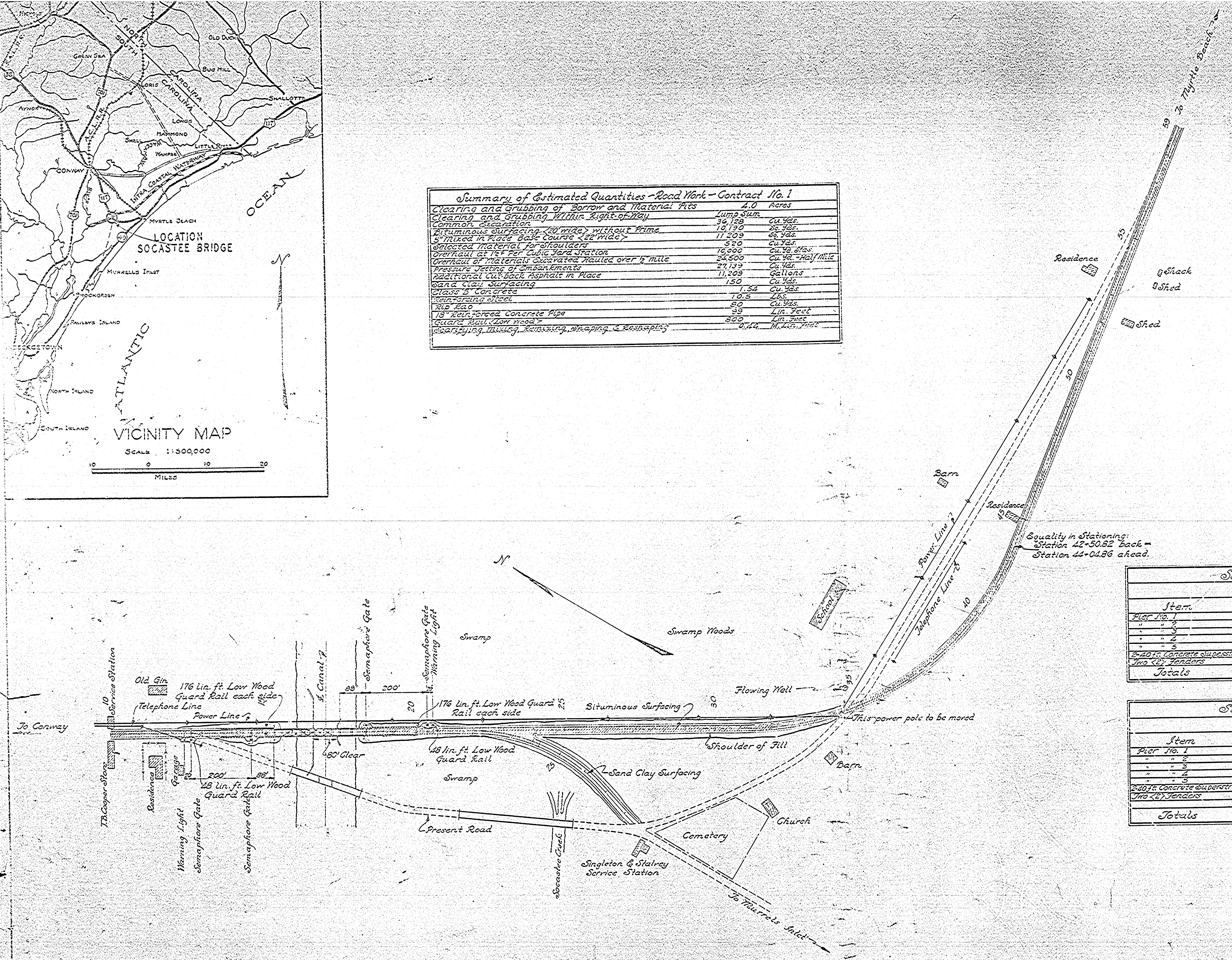


VICINITY MAP

SCALE 1:500,000

Summary of Estimated Quantities – Road Work – Contract No. 1		
Clearing and Grubbing of Borrow and Material Pits	4.0	Acres
Clearing and Grubbing Within Right-of-Way	Lump Sum	
Common Excavation	36,128	Cu. Yds.
Bituminous Surfacing (20' wide) without Prime	10,190	Sq. Yds.
5" Mixed in Place Base Course (22' wide)	11 209	Sq. Yds.
Selected Material for Shoulders	520	Cu. Yds.
Overhaul at 1¢ Per Cubic Yard Station	10,000	Cu. Yd. Stas.
Overhaul of Materials Excavated Hauled over ½ mile	24,500	Cu. Yd. – Half Mile
Pressure Jetting of Embankments	27,139	Cu. Yds.
Additional Cut-back Asphalt in Place	11,209	Gallons
Sand Clay Surfacing	150	Cu. Yds.
Class "B" Concrete	1.54	Cu. Yds.
Reinforcing Steel	10.5	Lbs.
Rip Rap	80	Cu. Yds.
18" Reinforced Concrete Pipe	99	Lin. Feet
Guard Rail (Low Wood)	800	Lin. Feet
Scarifying, Mixing, Remixing, Shaping & Reshaping	0.44	M. Lin. Feet

Index of Sheets

Sheet No. 1 Plan at Bridge Site.
" " 2 Cross Sections & Borings.
" " 3 Plan, Profile, & Fenders.
" " 4 Piers 2, 3, & 4.
" " 5 Piers 1 & 5 and 2-40 ft. Superstructures.
" " 6
" " 7
" " 8
" " 9
" " 10 Typical Section for Bituminous Surfacing.
" " 11 " " " Sand Clay "
" " 12 Superelevation Standard.
" " 13 Guard Rail Standard
" " 14 Headwall Standard
" " 15-16 Plan & Profile – Line "A"
" " 17 " " Line "B"
" " 18-22 inc. Cross Sections Line "A"
" " 23 " " Line "B"

Summary of Estimated Bridge Quantities – Contract No. 1

Alternate No. 1

Item	Class "AA" Concrete	Class "AA" Seal Concrete	Reinforcing Steel	Untreated Piling	Excavation Piers 1 & 5	Excavation Piers 2, 3 & 4	Creosoted Piling	Creosoted Struct. Lumber	Galvanized Hardware
Pier No. 1	46.6 Cu.Yds.	— Cu.Yds.	4716 Lbs.	374 Lin.Ft.	44 Cu.Yds.	— Cu.Yds.	— Lin.Ft.	— M.B.M.	— Lbs.
" " 2	200.0 " "	129.6 " "	6650 "	1620 " "	—	158 " "	—	—	—
" " 3	90.3 " "	79.5 " "	3331 "	705 " "	—	100 " "	—	—	—
" " 4	23.8 " "	23.9 " "	2755	320 " "	—	80 " "	—	—	—
" " 5	17.5 " "	—	2360 "	229 " "	24 " "	—	—	—	—
2-40 ft. Concrete Superstructures	109.4 " "	—	33,260 "	—	—	—	—	—	—
Two (2) Fenders	—	—	—	—	—	—	3600 " "	12.87 "	2644.1 "
Totals	487.6 Cu.Yds.	233.0 Cu.Yds.	53,072 Lbs.	3248 Lin.Ft.	68 Cu.Yds.	338 Cu.Yds.	3600 Lin.Ft.	12.87 M.B.M.	2644.1 Lbs.

Summary of Estimated Bridge Quantities – Contract No. 1

Alternate No. 2

Item	Class "AA" Concrete		Reinforcing Steel	Untreated Piling	Excavation Piers 1 & 5	Excavation Piers 2, 3 & 4	Creosoted Piling	Creosoted Struct. Lumber	Galvanized Hardware
Pier No. 1	26.6 Cu.Yds.	—	4716 Lbs.	374 Lin.Ft.	44 Cu.Yds.	— Cu.Yds.	— Lin.Ft.	— M.B.M.	— Lbs.
" " 2	280.0 " "	—	8140 "	1090 " "	—	158 " "	—	—	—
" " 3	123.0 " "	—	4148 "	480 " "	—	100 " "	—	—	—
" " 4	26.9 " "	—	3100 "	249 " "	—	54 " "	—	—	—
" " 5	17.5 " "	—	2360 "	249 " "	24 " "	—	—	—	—
2-40 ft. Concrete Superstructures	109.4 " "	—	33,260 "	—	—	—	—	—	—
Two (2) Fenders	—	—	—	—	—	—	3600 " "	12.87 "	2644.1 "
Totals	608.4 Cu.Yds.	—	55,724 Lbs.	2442 Lin.Ft.	68 Cu.Yds.	312 Cu.Yds.	3600 Lin.Ft.	12.87 M.B.M.	2644.1 Lbs.

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.

PROPOSED HIGHWAY BRIDGE

TWELVE MILES SOUTHEAST OF CONWAY, S.C.

PLAN AT BRIDGE SITE

IN 23 SHEETS SHEET NO. 1 SCALE 1"=150'
U.S. ENGINEER OFFICE, CHARLESTON, S.C. JAN. 13, 1933

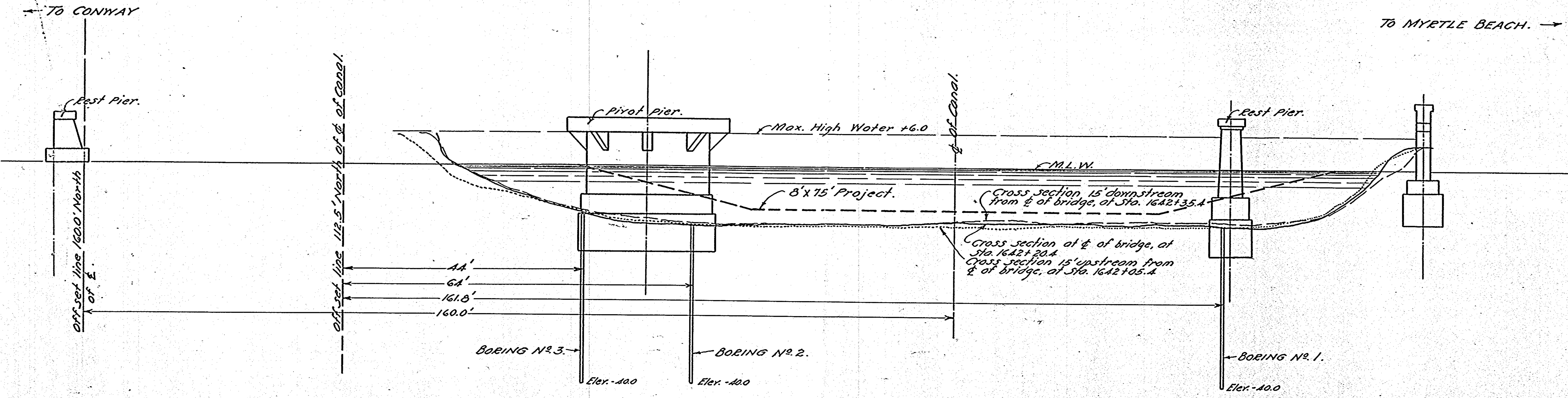
SUBMITTED:
P. H. Moorefield
STATE HIGHWAY ENGINEER

APPROVED:
COLONEL, CORPS OF ENGINEERS, U.S. ARMY.

wn by Geo. D. Price
ked by J.C.A.

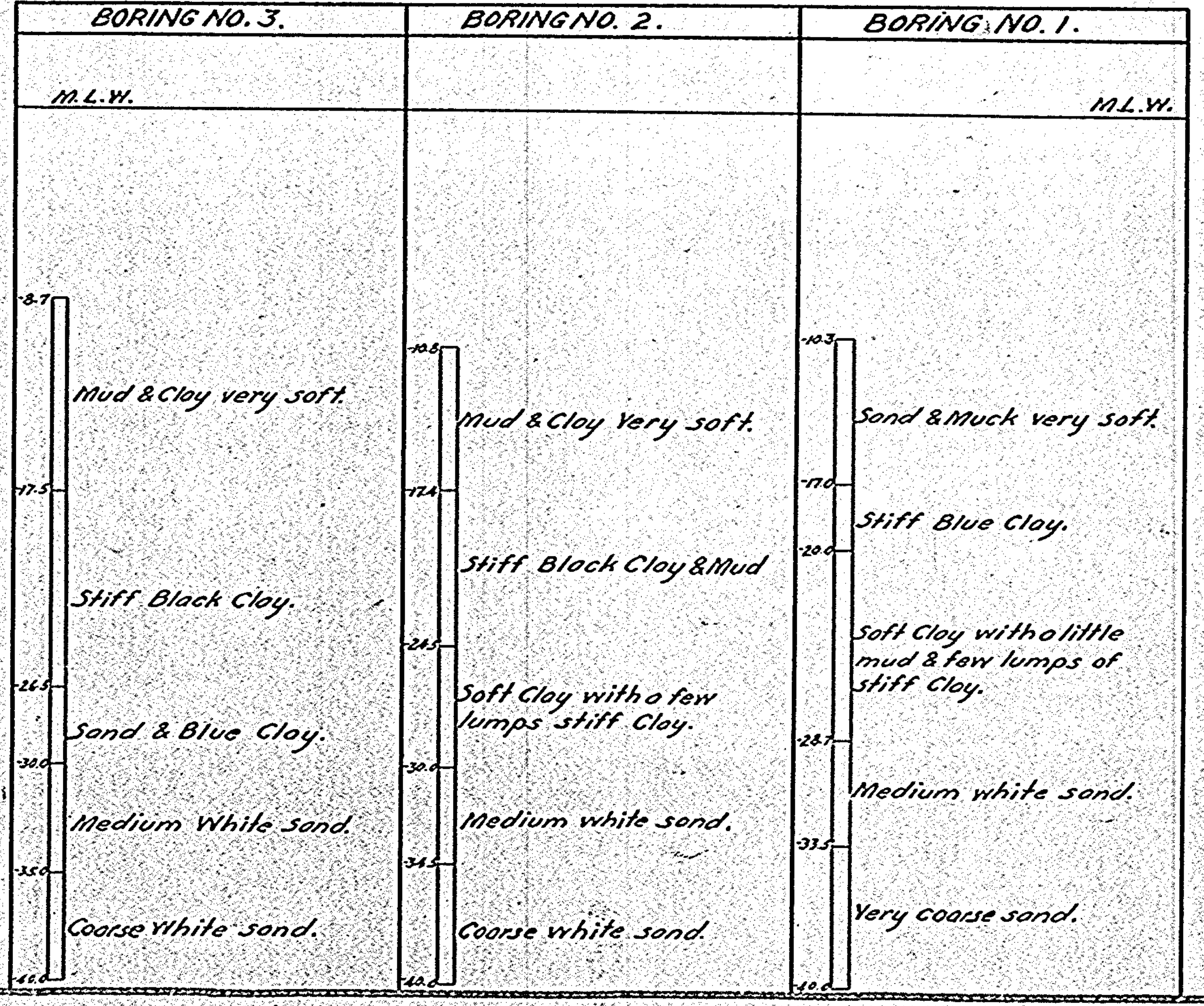
WAR DEPARTMENT.

CORPS OF ENGINERS, U.S. ARMY.


← TO CONWAY
TO MYRTLE BEACH. →
Rest Pier.
Pivot Pier.
Rest Pier.
Max. High Water +6.0
M.L.W.
8'x75' Project.
Off set line 160.0' North of ℄
Off set line 112.5' North of ℄ of Canal.
℄ of Canal.
Cross section 15' downstream from ℄ of bridge, at Sta. 1642+35.4
Cross section at ℄ of bridge, at Sta. 1642+20.4
Cross section 15' upstream from ℄ of bridge, at Sta. 1642+05.4
44'
64'
161.8'
160.0'
BORING Nº 3.
BORING Nº 2.
BORING Nº 1.
Elev. -40.0
Elev. -40.0
Elev. -40.0

BORINGS TAKEN ALONG ℄ OF PROPOSED BRIDGE AT STATION 1642+20.4

BORING DATA.



INTRACOASTAL WTY. LIT. R. TO WINYAH BAY, S.C.
CROSS SECTIONS AND BORINGS AT
PROPOSED HWY. BRIDGE 12 MILES
SOUTHEAST OF CONWAY, S.C.
(SOCASTEE CREEK)
Scale:-1" = 10'
10' 5 0 10' 20' 30' 40'
U.S. Engineer Office, Charleston, S.C. Dec., 1, 1933.
Submitted: Approved:
Engineer. Col., Corps of Engineers.
Drawn by:- J.C.B. & P.C.M.
Surveyed by:- W.M.B.
File No. 8-2-13/2.

BILL OF MATERIAL ~ BOTH FENDERS

Description	LONG FENDER No.	LONG FENDER Size	LONG FENDER Ft.B.M.	SHORT FENDER No.	SHORT FENDER Size	SHORT FENDER Ft.B.M.
Strakes	8	4"x12"x224'	7,168	8	4"x12"x52'	1,664
"	16	4"x12"x37'	2,368	16	4"x12"x20'	1,280
Blocks	38	6"x12"x1'3"	285	14	6"x12"x1'3"	105
Sub-totals			9821			3,049

HARDWARE

Description	Size	LONG FENDER No.	LONG FENDER Lbs.	SHORT FENDER No.	SHORT FENDER Lbs.
Batter-Pile Bolts ✻	¾"x25"	20	69.2	10	34.6
" " " ✻	¾"x32"	40	173.3	20	86.6
Corner-Pile Bolts ✻	¾"x30"	6	24.5	6	24.5
Top-Strake Bolts ✻	¾"x27"	56	207.8	18	66.8
Strake Bolts ✻	¾"x21"	246	729.6	88	261.0
Drift Bolts	¾"x12"	110	172.7	66	103.6
Spikes	⅞"x8"	260	43.0	108	18.0
Ogee Washers	¾"	480	408.0	200	170.0
Plate "	¾"	366	36.1	150	14.8
Sub-totals			1,864.2		779.9

✻ The lengths of bolts shown are for the purpose of computing hardware weights only. The contractor shall determine the proper lengths of bolts and furnish accordingly.

QUANTITIES FOR BOTH FENDERS

Creosoted Structural Lumber	12.87	M.B.M.
Hardware (Galvanized)	2,644.1	Lb.
Creosoted Piling (94)	3,600	Lin. Ft.

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.

PROPOSED HIGHWAY BRIDGE

TWELVE MILES SOUTHEAST OF CONWAY, S.C.

PLAN, PROFILE, AND FENDERS

IN 23 SHEETS. — SHEET Nº 3 ; SCALES: 1/10" & ½" = 1'.

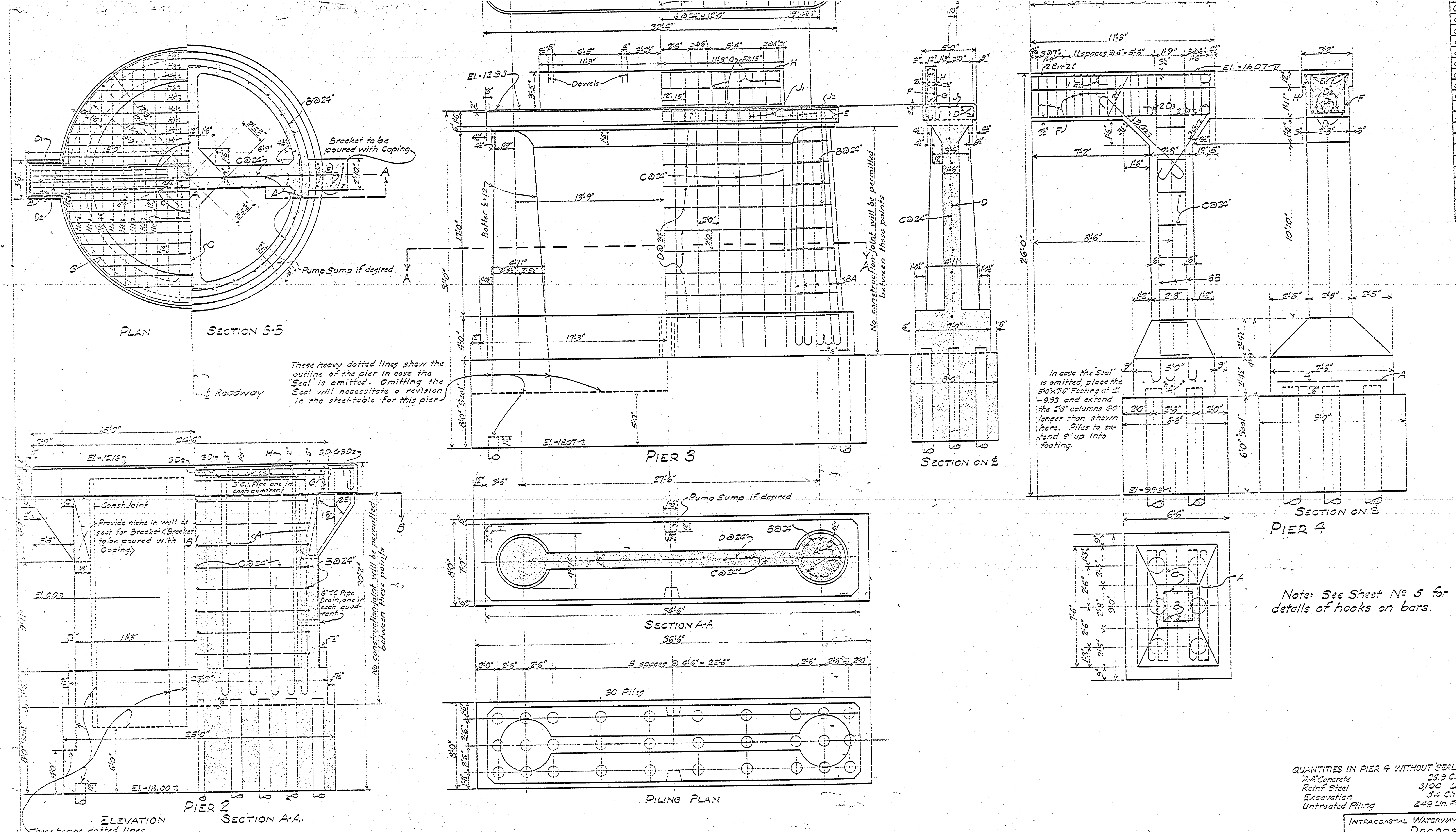
U.S. Engineer Office, Charleston, S.C. Jan. 8, 1934.

Submitted:

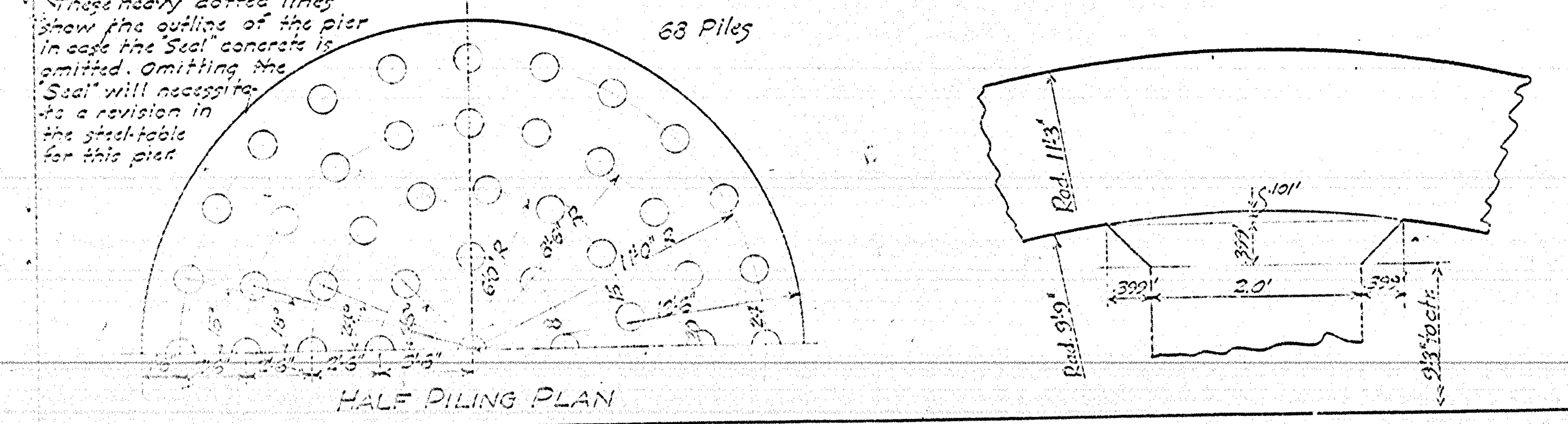
Approved:

State Highway Engineer

Colonel, Corps of Engineers, U.S. Army


PLAN
SECTION 3-3
Bracket to be poured with Coping
B@24"
C@24"
Pump Sump if desired
℄ Roadway
These heavy dotted lines show the outline of the pier in case the "Seal" is omitted. Omitting the Seal will necessitate a revision in the steel-table for this pier
El.-12.93
Dowels
Batter ¼:12
C@24"
D@24"
B@24"
El.-18.07
No construction-joint will be permitted between these points
PIER 3
SECTION ON ℄
SECTION A-A
Pump Sump if desired
PILING PLAN
30 Piles
5 spaces @ 4'6" = 22'6"
In case the "Seal" is omitted, place the 5'0"x7'6" Footing at El. -9.93 and extend the 2'8" columns 5'0" longer than shown here. Piles to extend 9" up into footing.
El.-16.07
El.-9.93
6'0" Seal
PIER 4
SECTION ON ℄
El.-12.16
Const. Joint
Provide niche in wall at seat for Bracket (Bracket to be poured with Coping)
3"C.I. Pipe, one in each quadrant
6"T.C. Pipe Drain, one in each quadrant
No construction-joint will be permitted between these points
El.-0.03
El.-18.00
ELEVATION
PIER 2
SECTION A-A.

Note: See Sheet Nº 5 for details of hooks on bars.


These heavy dotted lines show the outline of the pier in case the "Seal" concrete is omitted. Omitting the "Seal" will necessitate a revision in the steel-table for this pier
68 Piles
Rad. 11'3"
Rad. 9'9"
9'3" c.to c.
HALF PILING PLAN

Mark	No.	Size	Length
CD2	6	"	16'3"
CE	4	⅝"○	19'3"
CF	2	"	16'6"
CG	6	"	28'0"
CH1	14	⅝"○	23'3"S
CH2	4	"	22'6"S
CH3	4	"	21'9"S
CH4	4	"	20'6"S
CH5	4	"	19'6"S
CH6	4	"	18'0"S
CH7	4	"	16'0"S
CH8	4	"	12'9"S
CH9	4	"	9'0"S

C D1 D2 E F

Total "A-A" Concrete "Seal"	122.6 C.Y.
Total "A-A" Concrete	200.0 C.Y.
Total Reinf. Steel	6,650 Lb.
Total Excavation	158 C.Y.
Total Untreated Piling (68)	1,600 Lin.Ft.

QUANTITIES IN PIER 2 WITHOUT "SEAL".
"A-A" Concrete 280.0 C.Y.
Reinf. Steel 8,140 Lb.
Excavation 158 C.Y.
Untreated Piling 1,090 Lin.Ft.

BILL OF MATERIAL ~ PIER 3.

Mark	No.	Size	Length	
OA	16	⅞"□	23'0"S	A
OB	18	¾"○	[illegible]	8 - Vary by 5½" 2 Ea. length.
OC	12	¾"○	22'0"S	
OD	16	"	29'6"S	
OE	4	"	13'0"	
OF	18	½"□	10'11"	
OG	6	"	22'0"S	
OH	16	"	2'5"	H J1
OJ1	21	"	7'6"	
OJ2	2	"	7'1"	J2
Dowel	8	¾"○	2'0"	

Total "A-A" Concrete "Seal"	73.5 C.Y.
Total "A-A" Concrete	90.3 C.Y.
Total Reinf. Steel	3,331 Lb.
Total Excavation	100 C.Y.
Total Untreated Piling	705 Lin.Ft.

QUANTITIES IN PIER 3 WITHOUT "SEAL"
"A-A" Concrete 128.0 C.Y.
Reinf. Steel 4,146 Lb.
Excavation 100 C.Y.
Untreated Piling 480 Lin.Ft.

BILL OF MATERIAL ~ PIER 4.

Mark	No.	Size	Length	Bending Detail
A	4	½"□	22'6"	A B
B	16	1"□	19'10"	
C	16	⅝"○	8'0"	C
D1	2	1¼"□	23'11"	
D2	2	"	26'8"	
D3	2	"	17'0"	F
E1	2	1"□	24'0"	
E2	2	"	9'0"	
F	38	½"□	10'5"	D2
G1	6	¾"○	6'8"	
G2	6	"	8'4"	
H	20	½"□	4'2"	H
I	2	¾"○	22'0"S	

Total "A-A" Concrete "Seal"	23.9 C.Y.
Total "A-A" Concrete	23.8 C.Y.
Total Reinf. Steel	2,755 Lb.
Total Excavation	80 C.Y.
Total Untreated Piling	320 Lin.Ft.

QUANTITIES IN PIER 4 WITHOUT "SEAL"
"A-A" Concrete 26.9 C.Y.
Reinf. Steel 3,100 Lb.
Excavation 54 C.Y.
Untreated Piling 249 Lin.Ft.

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGE
TWELVE MILES SOUTHEAST OF CONWAY, S.C.
PIERS 2, 3, AND 4

IN 23 SHEETS SHEET Nº 4 SCALES: ¼"&⅜"=1'
U.S. Engineer Office, Charleston, S.C. Jan. 12, 1934
Submitted: Approved:
State Highway Engineer
Colonel, Corps of Engineers, U.S. Army

[illegible] – Jan. 13, 1934
[illegible] by J.S.A.

AC1	"	2	½"□	7'-0"	G2	"	4	"	7'-4"
C2	"	2	"	7'-6"	AH	B	20	½"□	3'-6"
C3	"	2	"	8'-0"	AI	S	2	¾"□	22'-0"
C4	"	2	"	8'-6"	Dowels	S	8	¾"□	2'-0"
C5	"	2	"	9'-0"					
C6	"	2	"	9'-6"					
C7	"	2	"	10'-0"					
AD1	"	2	1⅛"□	24'-0"					
D2	"	2	"	26'-8"					
D3	"	2	"	18'-0"					
AE1	B	2	1"□	24'-0"					

Date of completion on each right end post at ends of bridge.

REIN. STEEL ~ PIER I				
Mark	Note	No.	Size	Length
BA1	B	9	½"□	14'-2"
A2	"	6	"	21'-8"
BB	"	30	1"□	12'-7"
BC1 to C7	B	3 ea. Length	½"□	From C1 = 11'-1" to C7 = 14'-1"
BD1	B	2	1⅛"□	31'-4"
D2	"	2	"	27'-10"
D3	"	3	"	37'-11"
BE1	"	4	1"□	8'-9"
E2	"	2	"	12'-0"
E3	"	2	"	32'-4"
BF	S	2	¾"□	30'-4"
BG	B	42	½"□	13'-4"
BH	"	12	¾"□	8'-4"
BI	"	10	½"□	5'-6"
BJ1	S	4	¾"□	11'-6"
J2	"	4	½"□	6'-8"
J3	"	4	"	8'-9"
J4	"	8	"	10'-6"
BK1	B	1	"	19'-6"
K2	"	2	"	19'-6"
K3	"	2	"	19'-6"
K4	"	2	"	19'-5"
K5	"	2	"	19'-5"
K6	"	2	"	19'-5"
K7	"	2	"	19'-4"
K8	"	2	"	19'-3"
BL	S	10	"	27'-2"
BM	S	8	"	9'-0"
BN1	B	2	⅜"□	6'-11"
N2	B	2	"	7'-1"
BO	"	6	"	4'-3"
BP	"	6	½"□	10'-5"

REINFORCING STEEL				
END SPAN				
Mark	Note	No.	Size	Length
EA	B	44	⅝"□	28'-6"
EB	"	43	"	30'-3"
EC	"	45	"	31'-0"
ED1	S	39	½"□	39'-6"
EE1	B	86	"	6'-6"
E2	"	86	"	6'-3"
EF1	"	16	1¼"□	41'-4"
F2	"	8	"	41'-11"
F3	"	8	"	37'-4"
F4	"	8	1⅛"□	32'-7"
F5	B	8	1"□	29'-1"
EG1	"	2	"	23'-1"
G2	"	4	½"□	22'-6"
G3	"	2	¾"□	10'-3"
G4	S	2	1"□	32'-4"
G5	"	4	½"□	27'-4"
G6	"	2	"	32'-4"
G7	S	4	¾"□	8'-0"
EH1	B	18	½"□	5'-1"
H13	"	24	"	6'-2"
EI	"	4	¾"□	4'-8"
EJ1	"	2	½"□	3'-8"
J2	"	2	"	4'-8"
EK	"	34	"	9'-9"
EL1	"	42	#wire	2'-11"
L2	B	6	"	4'-3"
EM	S	16	½"□	19'-5"
EN	B	48	#wire	2'-5"

INTERIOR SPAN

Steel for the Interior span is the same as shown above except for the following additions and subtractions:- Deduct 39ED1, 2G4, 4G5, 2G6, 4G7 & 24 EH13 - Add 1EB, 1C, 2G1, 6G2, 4I, 2J1, 2J2 & the bars below.

Mark	Note	No.	Size	Length
ED2	S	78	½"□	21'-2"
EH2	B	2	"	5'-6"
H3	"	2	"	5'-6"
H4	"	2	"	5'-6"
H5	"	2	"	5'-6"
H6	"	2	"	5'-8"
H7	"	2	"	5'-8"
H8	"	2	"	5'-10"
H9	"	2	"	6'-0"
H10	"	2	"	6'-2"
H11	"	2	"	6'-4"
H12	"	2	"	6'-6"

BOTH SPANS

Bending Details

H6-12					
Bar	X	Y	Bar	X	Y
H6	0"	9"	H10	3"	12"
H7	0"	9"	H11	4"	13"
H8	1"	10"	H12	5"	14"
H9	2"	11"			

DETAIL OF HOOKS

⅞" & Larger Add 12" per hook.

⅝" & ¾" Add 8" per hook.

⅜" ½" & smaller Add 6" per hook.

DRAIN NOTE

4"ϕ Standard C.I. drain of 3/16" minimum thickness. To be set ¼" below surface of roadway. To be unpainted before placing; after placing, exposed surfaces to be painted with an approved mixture of cement and water as directed by the Engineer.

QUANTITES		
PIER I		
Class "A-A" Concrete	26.6	C.Y.
Reinforcing Steel	4,716	Lbs.
Excavation	44	C.Y.
Untreated Piles	374	L.F.
PIER 5		
Class "A-A" Concrete	17.5	C.Y.
Reinforcing Steel	2,360	Lbs.
Excavation	24	C.Y.
Untreated Piles	249	L.F.
40' END SPAN		
Class "A-A" Concrete	55.1	C.Y.
Reinforcing Steel	16610	Lbs.
40' INTERIOR SPAN		
Class "A-A" Concrete	54.3	C.Y.
Reinforcing Steel	16650	Lbs.

2¼" × ⅜" × 2'-6" Strap @ 3'-0" spaces, to be welded to angle

3½" × 3½" × ⅜" × 24'-0" L bent to 108'-10" radius & on 2" Para. crown

Angle and strap to be painted with one coat of red lead and two coats of aluminum before pouring concrete.

Cost of Angle & Strap to be included in the price bid for concrete. See Para No. 7138 of the specifications

DETAIL OF ANGLE & STRAP
ON
PIER 1 & ON INT. 40' SPAN

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGE
TWELVE MILES SOUTHEAST OF CONWAY S.C.
PIERS 1 AND 5 & 2-40'-SUPER-STRUCTURES
IN 23 SHEETS SHEET NO. 5 SCALES: ¼", ⅜", ¾", 1" & 1½" = 1'
U.S. ENGINEER OFFICE, CHARLESTON, S.C. JAN. 12, 1934

SUBMITTED: APPROVED:
Chas. H. Moorefield
S.C. STATE HIGHWAY ENGINEER
COLONEL CORPS OF ENGINEERS, U.S. ARMY

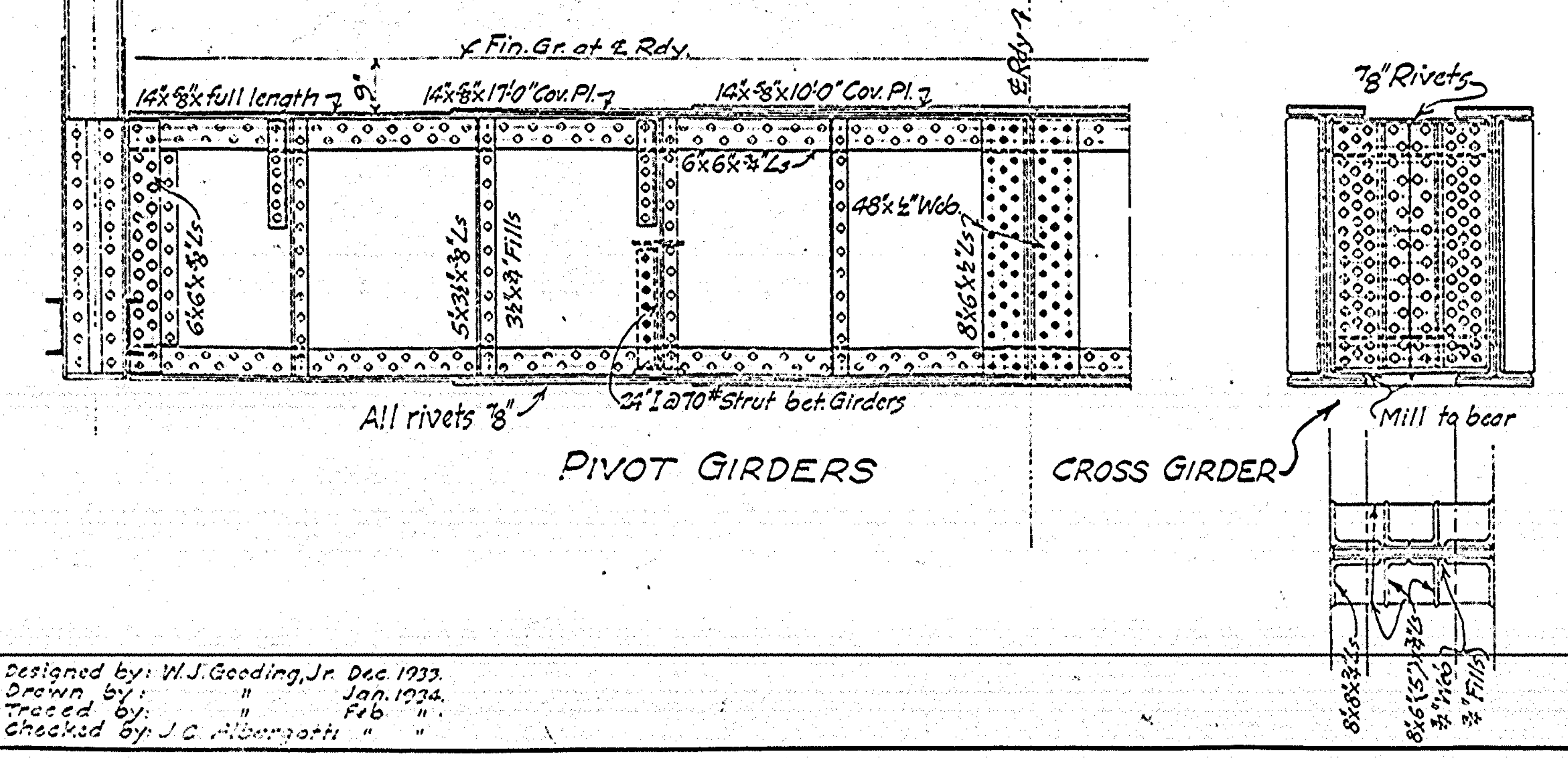
D.D.&T. by: J.C.A. - Jan. 17, 1934
Checked by: W.J.G., G.D.P., F.M.J.

QUANTITIES ~ ONE 214 FT. SPAN.

Mark	No	Size	Length
A	209	⅝"φ	27'-2"
B	208	"	26'-6"
C	240	½"φ	37'-6"S
D	24	¾"φ	38'-0"S
E	208	⅝"φ	28'-5"

Total Reinf. Steel	25,218 Lb.
" "A-A" Concrete	134.9 C.Y.
Total Structural Steel (Approx.)	320,000 Lb.

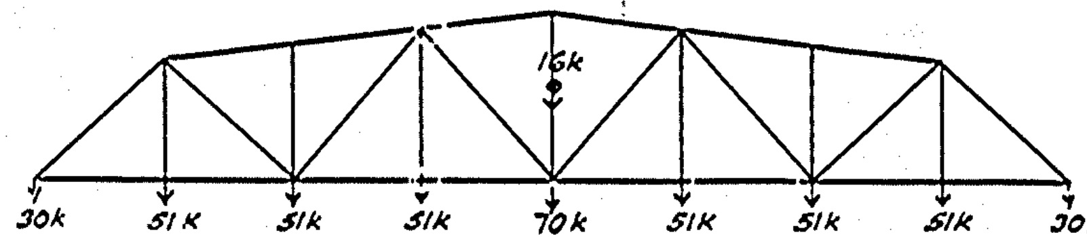
* Weight of Structural Steel in span, including 9400 Lb. in Operator-house supports, steps, ladders, and walkways, etc., but not including pivot pedestal, wedge shoes, machinery, or machinery supports.



Mem.	DEAD LOAD⊙ Case I	DEAD LOAD⊙ Case II	DOUBLE L.L. + DOUBLE IMPACT Case III	Case IV Near Arm Loaded	Case IV Far Arm Loaded	Case V	COMBINATIONS I+20%	I+III	I+V	II+IV	II+V	MAX. STRESSES Max. T	Max. C	Mem.
R1	0	† 10.0	137.6	127.4	-16.8	=< IV	0	137.6	0	137.4	=< II+IV	0	137.6	R1
LoU1	43.9T	29.3T	154.5C	133.2C	24.6T	= IV	52.6T	123.8C	68.5T 102.5C	53.5T 112.7C		68.5	123.8	LoU1
U1U3	105.3T	86.3T	116.0C	88.0C	28.2T	"	126.4T	42.5C	14.5C 133.5T	114.5T 27.4C		133.5	42.5	U1U3
U3U4	328.3T	297.5T	0	46.8T	45.8T	72.6T	394.0T	328.3T	400.9T	344.3T	370.1T	400.9	0	U3U4
LoL2	32.1C	21.4C	113.0T	97.2T	18.0C	= IV	38.5C	90.5T	74.1T 50.1C	82.2T 39.4C		90.5	50.1	LoL2
L2L4	205.0C	179.7C	89.0T	42.6T	37.6C	"	246.0C	116.0C	242.6C	217.3C		0	246.0	L2L4
U1L1 or U3L3	51.0T	51.0T	107.6T	Do.	Do.	Do.	61.1T	158.6T	158.6T	158.6T	158.6T	158.6	0	U1L1 or U3L3
U4L4	103.0C	95.1C	0	12.8C	—	23.6C	123.6C	103.0C	126.6C	107.9C	118.7C	0	126.6	U4L4
U1L2	99.2C	88.0C	69.8T 48.0C	53.8T 57.6C		63.8T 63.6C	119.0C	.4T 147.2C	162.8C	145.6C	151.6C	.4	162.8	U1L2
L2U3	155.6T	145.7T	166.6T 26.6C	18.2C 114.4T		18.2C 116.4T	186.6T	256.2T	272.0T	260.1T	262.1T	272.0	0	L2U3
U3L4	186.9C	178.8C	137.8C	150.8C		150.0C	224.0C	324.7C	336.9C	329.6C	328.8C	0	336.9	U3L4
R2*	450.	430	137.6			244.6	528							R2
Pivot R	900.	860												Pivot R

⊙ Only 70% of dead load stresses used to counteract live stresses. † 10,000# = 1.5× negative single L.L. React. without Impact.
* Dead load reaction transferred to pivot girders; live load reaction to center wedges.

Case I – Dead load, bridge open, or closed but wedges not driven.
Case II – " " , " closed and each end-wedge exerting 10,000# downward to pier and upward to span.
Case III – Live load and Impact on one arm as a simple span.
Case IV – " " " " " " " " " continuous span.
Case V – " " " " " both arms " " " " .



Design dead loads per truss.
Single uniform live load per panel per truss without I = 16.1k
" concentrated " " " " " " I = 16.9k for M & 24.4k for V.

~~Specifications – S.C. State-Highway-Dept., revised July 1, 1933.~~
Design Specifications: A.A.S.H.O., 1931 – H-15 Loading. Rivets ¾" except ⅞" in cross-girder and pivot girders and their connections to trusses.
Paint: All steel shall be painted with one shop coat of Red-Lead-and-Linseed-Oil-Paint and two field coats of an Aluminum-and-Spar-Varnish Paint. ~~These paints shall conform to the requirements of Sect. 80, "Paint" of the S.C.H.D. Standard Specs, July 1, 1933.~~
All tie-plates to be ⅜" except where otherwise shown.
All structural steel in span and machinery supports to be of copper-bearing grade, A.S.T.M. Serial Desig. A-7-33.

See Sheet # 7 for details of pivot, wedges, machinery, and machinery supports.

INTRACOASTAL WATERWAY. FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGES
NEAR LITTLE RIVER, S.C. AND NEAR SOCASTEE, S.C.
STEEL SWING SPAN
IN 14 SHEETS SHEET No 5 SCALES: ⅛"&½"=1'
U.S. Engineer Office, Charleston, S.C. Mar. 10, 1934.
Submitted:
Chas. K. Moorefield
State Highway Engineer
Approved:
Colonel, Corps of Engineers, U.S. Army.

Designed by: W. J. Gooding, Jr. Dec. 1933.
Drawn by: " Jan. 1934.
Traced by: " Feb ".
Checked by: J. C. Albergotti " "

File No 8-2-14/2

5A

PLAN OF FLOOR SLAB
5'-8⅛"
13'-9¾"
1'-0⅝"
C1
C2
C11
2A
Symm. about ℄.
Hook to be horizontal – Add 6" for each hook.
A1 = 3'-9¾" + 8" ea. to A6 = 6'-7¾". A7 = 6'-9½"
"C" Bars are straight.
Studding above door similar to that above window.
2" Blocks
⅞" T&G Sheathing covered with building paper
Copper covered
End copper
Stucco on expanded metal lath.
⅞" T&G sheathing covered with building paper.
Floor Slab
ELEVATION
SHOWING FRAMING ABOUT WINDOW
Copper to be soldered to pipe to obtain water-proof joint.
Approved copper ventilator. (Weather-proof)
6" G.I. Pipe
¼" Hook bolt Galv. with O.G. washer
1" Plaster on expanded metal lath.
½" G.I. bolt with O.G. washer.
Terminal Board
Horizontal Switch Panel
Symm. about ℄ – except control equipment & connections.
Door and windows to be weather-proof.
Scale: ¾" = 1'
Metal lath to weigh not less than 3.4# P.S.F. End lap to be 6". Lath to be fastened with 1½" Galv. staples not over 4" C. to C.
13'-8¼" To Bottom of top strut
Control Desk.
Drum Controller
Copper flashing to extend not more than 1" into Conc. Crimp ends.
1½" down-spout of 16 Oz. Copper.
¾" Drip bead
⅝" G.I. Bolt with O.G. washer. Abt. 22" C. to C.
HALF-SECTION "A-A" FOR HOUSE
HALF-SECT. "B-B" FOR EQUIPMENT
All outside surfaces above this point to be covered with 16 Oz. copper.
ELEVATION
Cut Showing Studding
All windows – 3'-1½" x 5'-4". To be Fenestra Casement #4528 or similar. Panes to be of D.S.A. glass.
℄ Rdwy.
12'-0"
3'x7' door of 1¾" L.L.Y. pine lumber. To be glazed with 12 panes of D.S.A. glass. To be equipped with brass lock, and butt hinges.
PLAN
OPERATOR'S HOUSE
Scale ⅜" = 1' – Unless Otherwise Shown
10"x10" Grating equipped with hinged shutters to open or close.
All members are 2"x6" unless otherwise noted.
14" Dia. Block
Symm. about ℄ – except grating
HALF-PLAN-CEILING FRAMING HALF-PLAN-ROOF
℄ Truss on Canal Side
SECT. C-C
Scale: ½" = 1'
14 Spcs @ 12⅛" = 14'-8¾"
Bar 2¼" x ⅜"
PLAN OF LADDER LEADING TO U1
Scale: ½" = 1'
℄ Truss on Canal side
1½" Pipe rail
℄ House support – 18" I
PLAN OF LADDER LEADING TO LIGHT AT U4
Scale: ⅜" = 1'
Holes for conduits
Control Desk
Term. Board
Drum Control
Long. ℄ Bridge
PLAN
SHOWING RELATIVE POSITIONS OF CONTROL EQUIPMENT & CONDUIT HOLES IN SLAB
ELEVATION OF LADDER LEADING TO NAVIGATION LIGHT AT U1
(ONE-EACH END OF SPAN)
Scale: ½" = 1'
19 Spcs. @ 1'-2" = 22'-2"
Handrail
Top of plate
16'-6 13/16"
1½" G.I. Pipe
3½ x 3½ x 3½ x ⅜"
14'-0½"
Vert. Clear. Req. = 15'-0"
℄ Down-Spout
20'-6 5/16"
Top Curb
F.G. @ ℄ Roadway
℄ Bot. Chord
L3
L4
U4
SIDE ELEVATION
Scale: ½" = 1'
10" I @ 29#
8" I @ 19#
8" I @ 17#
8" ⊏ @ 11.5#
18" I @ 57#
℄ Pl. 3/16" Min.
All top horizontal surfaces of plates for walkway and steps to be checkered.
Top of Curb
℄ U3L4 on truss opposite Canal when bridge is open.
PLAN
Scale: ½" = 1'
SUPPORTS, STEPS & WALKWAY FOR OPERATOR'S HOUSE

SLAB STEEL						Mark	No.	Length
Mark	No	Length	Mark	No.	Length	C3	2	7'-3"
A1	4	7'-7"	B2	2	7'-5"	C4	2	7'-8"
A2	4	8'-11"	B3	2	8'-10"	C5	4	8'-8"
A3	4	10'-3"	B4	2	10'-2"	C6	4	9'-8"
A4	4	11'-7"	B5	2	11'-6"	C7	4	10'-8"
A5	4	12'-11"	B6	2	12'-10"	C8	2	11'-8"
A6	4	14'-3"	B7	9	13'-10"	C9	2	12'-0"
A7	16	14'-7"	C1	12	5'-8"	C10	4	12'-10"
B1	2	6'-1"	C2	4	6'-5"	C11	22	13'-4"

All bars ½"φ

Door to be of 1¾" long leaf yellow pine heart lumber.

All windows to be fitted with screens of bronze wire cloth, set in metal frames. The screens are to be designed so that they may be readily opened or closed. Contractor to furnish detailed tracings for approval.

lump sum price bid for "Operators House", except the stairway, railing, steel framing, checkered plates and ladders which shall be included in the price bid for "Structural Steel."

Contractor to furnish detailed tracings to the Engineer, for his approval, of windows, gratings, door, ventilator and positions and dimensions of all control equipment and conduit holes. These tracings to become the property of the U.S. Government after being approved.

All lumber to conform to the S.P.A. latest specifications. Framing and sheathing to be No 1 Common.

Framing to be erected according to the best practice – well braced and nailed. Sheathing to be nailed to each stud, or rafter, with at least 2-10-d nail per board. Wall sheathing to be laid diagonally. Building paper to be heavy, first quality product subject to the approval of The Engineer.

Mill work to be of the first grade. Door to be of 1¾" L.L.Y. pine lumber, glazed with D.S.A. glass. (Cont below)

(General Notes Cont.)
All casements to be Fenestra #4528 or similar. Windows to be glazed – D.S.A. glass. Roof, gutters and trim to be covered with 16 Oz. copper placed according to the best standard practice. Down-spout, flashing and ventilator to be of at least 16 Oz. copper.

All parts of the structure to be erected in conformance with the best practice. All material and workmanship subject to the approval of the Engineer.

APPROXIMATE QUANTITIES		
Concrete	1.6	Cu. Yds.
Rein. Steel	227	Lbs.
Stucco	45	Sq. Yds.
Plaster	57	" "
Build. Paper	97	" "
Metal Lath	120	" "
Lumber	2.0	M.B.M.
Copper	40.0	Sq. Yds.
Misc. Items – Locks, bolts, etc. – See this sheet		

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGES
NEAR LITTLE RIVER, S.C. AND NEAR SOCASTEE, S.C.

OPERATOR'S HOUSE

IN 14 SHEETS SHEET NO. 6 SCALE: AS SHOWN
U.S. ENGINEER OFFICE, CHARLESTON, S.C. Mar. 10, 1934
SUBMITTED: APPROVED:
S.C. STATE HIGHWAY ENGR. COLONEL, CORPS OF ENGRS. U.S. ARMY

D.D.&T. by: J.C. Albrecotti, Feb. 23, 1934
Checked by " 27 "

File No. 8-24/4/L

6

One cast steel lug to be provided for each rack segment, each lug to be designed to take total rack force

Notes:

Machinery and Castings shall conform to the requirements of the A.R.E.A. Specifications for Movable Railway Bridges, 3rd. Edition, July 1931.

Machinery supports shall be made adequate in regard to desired stiffness as well as in regard to strength.

Where shafts cut thru webs of members or where connections are made to flanges of members, the members shall be reinforced or increased.

The minimum thickness of material in machinery supports shall be ⅜". All detail drawings shall be submitted for approval. No unchecked drawing will be accepted. All calculations incidental to stresses in machinery shall be submitted.

The Contractor shall provide hand-levers at roadway level for the purpose of disengaging the clutches to wedge and turning motors in case it is desired to turn the bridge by the man-power mechanism. Suitable locks for these hand-levers shall be provided.

No attempt has been made to show all bearings, couplings, connections, etc., but they shall be furnished in accordance with the specifications.

APPROXIMATE WEIGHTS:
Struc. Steel in Machinery Supports, 17,000 Lb.
Machinery and Castings 45,000 Lb.

Drawn & Traced by: W.J. Gooding, Jr.
Checked by:

INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGES
NEAR LITTLE RIVER, S.C. AND NEAR SOCASTEE, S.C.
SWING SPAN MACHINERY
IN 14 SHEETS SHEET Nº 7 SCALE: ½" = 1'
U.S. Engineer Office, Charleston, S.C. March 10, 1934.

Submitted:
Chas H Moorefield
State Highway Engineer

Approved:
Colonel, Corps of Engineers, U.S. Army.

File Nº 8-2-14/2

Note:
The wiring shown is for the bridge 12 miles S.E. of Conway. The wiring for the bridge 3 miles S. of Little River is similar, except there will be no lead-in cable from a power line as electricity is to be generated at the bridge.

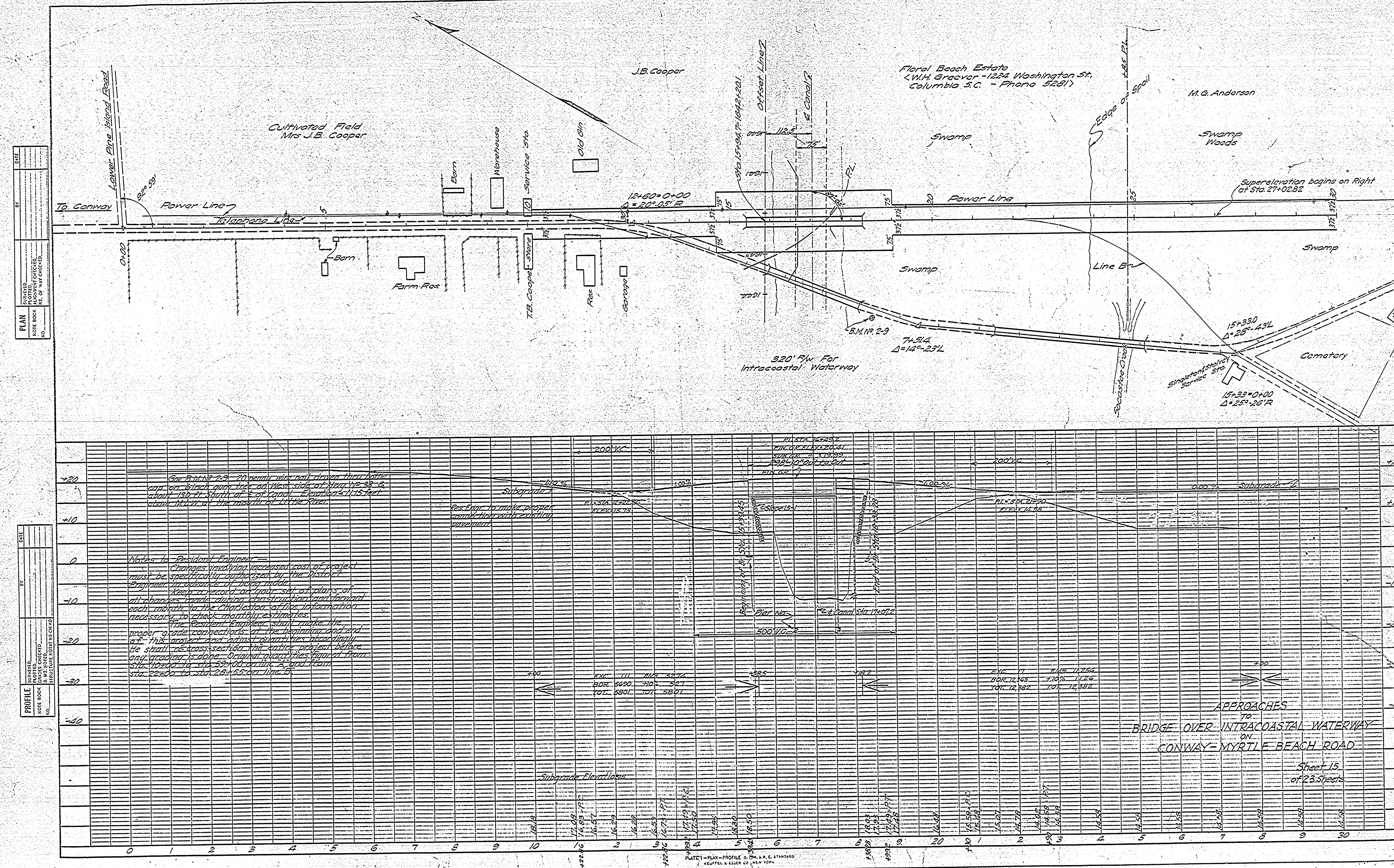
INTRACOASTAL WATERWAY FROM LITTLE RIVER, S.C. TO WINYAH BAY, S.C.
PROPOSED HIGHWAY BRIDGES
NEAR LITTLE RIVER, S.C. AND NEAR SOCASTEE, S.C.
WARNING LIGHTS, SAFETY GATES & WIRING
IN 14 SHEETS SHEET NO. 8 SCALE: AS SHOWN
U.S. ENGINEER OFFICE, CHARLESTON, S.C. MARCH 10, 1934

SUBMITTED: R. H. Moorefield
S.C. STATE HIGHWAY ENGINEER

APPROVED: W. B. [illegible]
COLONEL, CORPS OF ENGINEERS, U.S. ARMY

File Nº 8-2-14/

Drawn by: J.C. Albergotti, March 15, 1934
Checked by:



Gov. B.M. No. 2-9. 20 penny wire nail driven thru bottle cap on 6 inch gum tree on West side of Hwy. No. 38 & about 130 ft. South of ℄ of Canal. Elevation = 11.15 feet above M.L.W. at the mouth of Little River.

Notes to Resident Engineer —

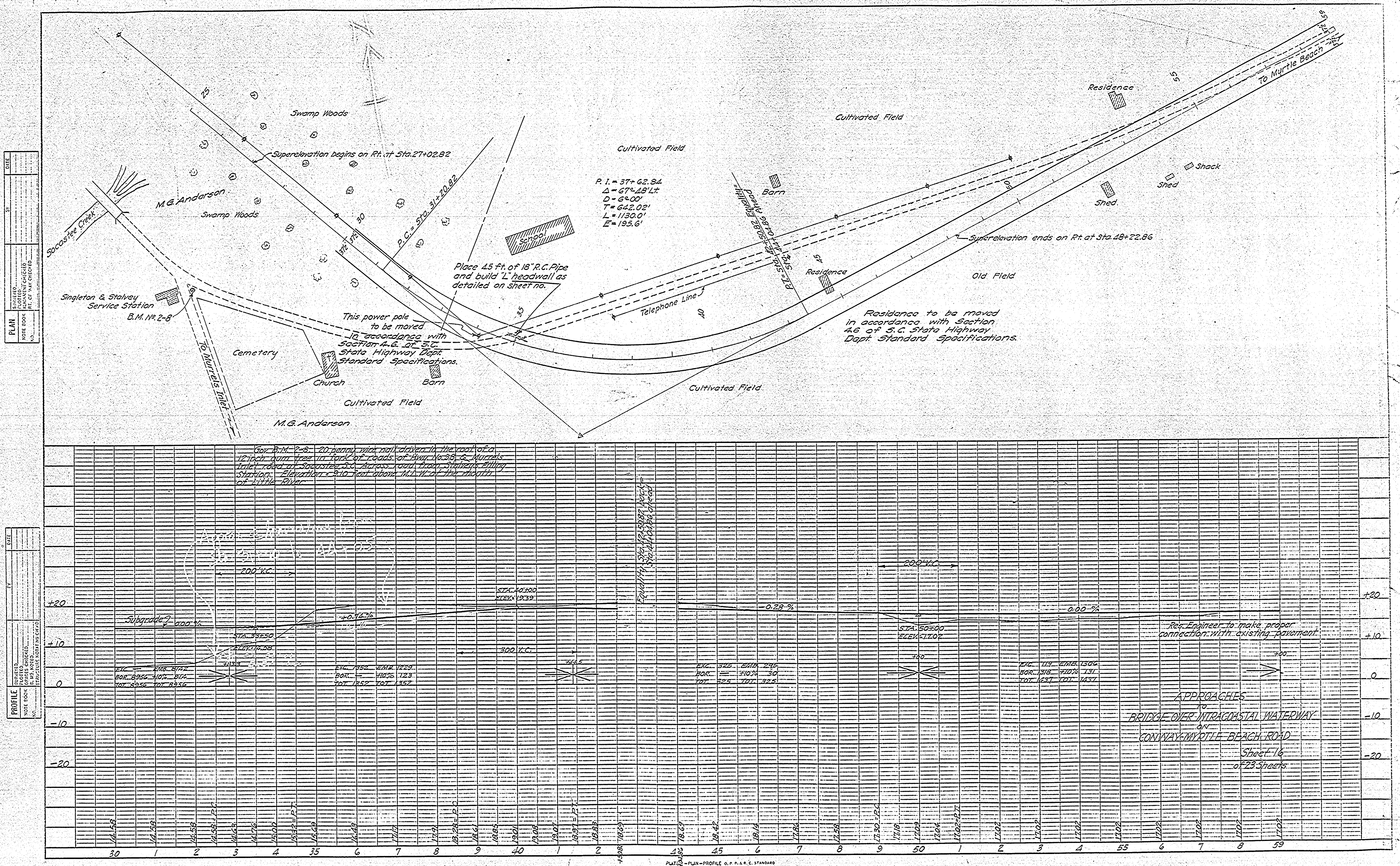
Changes involving increased cost of project must be specifically authorized by the District Engineer in advance of being made.

Keep a record on your set of plans of all changes made during construction and forward each month to the Charleston office information necessary to check monthly estimates.

The Resident Engineer shall make the proper grade connections at the beginning and end of this project and adjust quantities accordingly. He shall re-cross-section the entire project before any grading is done. Original quantities figured from sta. 10+00 to sta. 59+00 on line "A" and from sta. 22+00 to sta. 28+55 on line B.

APPROACHES
TO
BRIDGE OVER INTRACOASTAL WATERWAY
ON
CONWAY - MYRTLE BEACH ROAD

Sheet 15
of 23 Sheets



Gov. B.M. 2-8. 20 penny wire nail driven in the root of a 12 inch gum tree in fork of roads of Hwy. No. 38 & Murrels Inlet road at Socastee S.C. Across road from Stalveys Filling Station. Elevation = 9.10 feet above M.L.W. at the mouth of Little River

APPROACHES
TO
BRIDGE OVER INTRACOASTAL WATERWAY
ON
CONWAY-MYRTLE BEACH ROAD

Sheet 16
of 23 Sheets

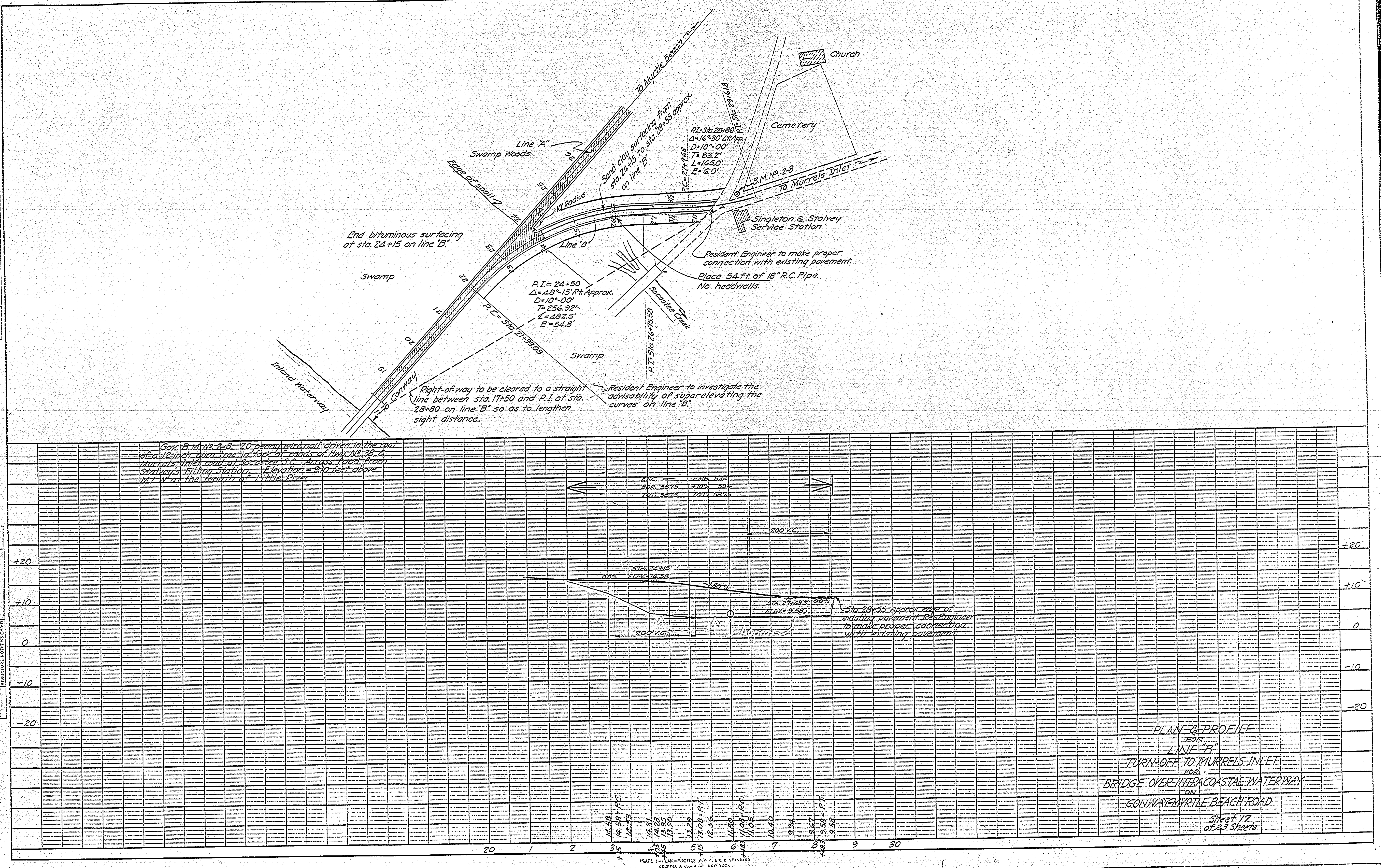
PLATE —PLAN—PROFILE O. P. R. & E. C. STANDARD
KEUFFEL & ESSER CO. NEW YORK

2C

3C

PLAN		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE		BY	DATE
NOTE BOOK	SURVEYED		
NO.	PLOTTED	J.T.H.	1-12-3[illegible]
	GRADES CHECKED		
	B. MS. NOTED		
	STRUCTURE NOTAT NS CH'YD		



Gov. B.M. No. 2-8. 20 penny wire nail driven in the root of a 12 inch gum tree in fork of roads of Hwy. No. 38 & Murrels Inlet road at Socastee, S.C. Across road from Stalvey's Filling Station. Elevation = 9.10 feet above M.L.W. at the mouth of Little River.

PLAN & PROFILE
FOR
LINE "B"
TURN-OFF TO MURRELS INLET
FOR
BRIDGE OVER INTRACOASTAL WATERWAY
ON
CONWAY-MYRTLE BEACH ROAD

Sheet 17
of 23 Sheets

PLATE 1 — PLAN — PROFILE O. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO. NEW YORK