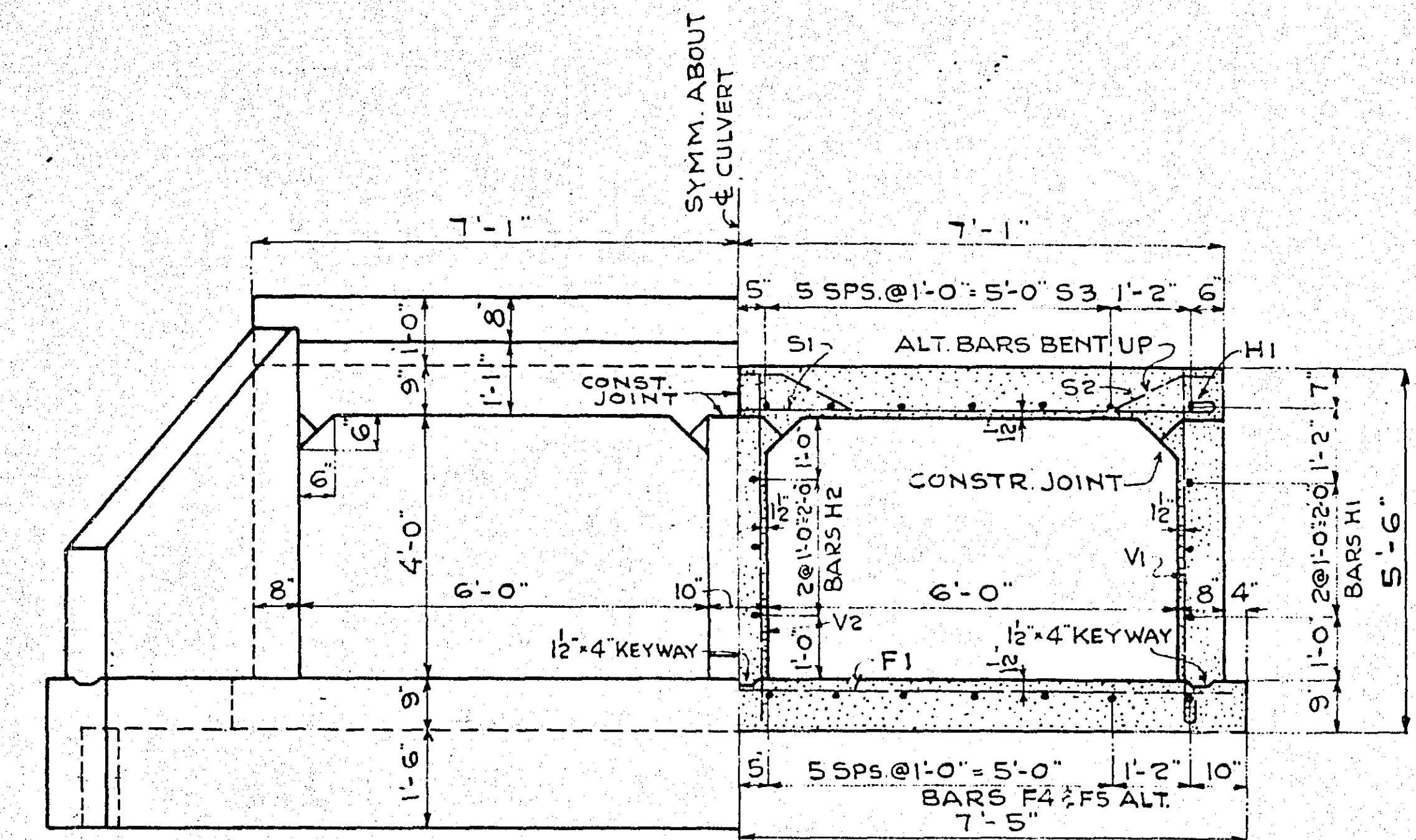


HALF LONGIT. SECTION "A-A" SHOWING REINFORCING IN SIDE WALL

HALF LONGIT. SECTION "B-B" SHOWING REINFORCING IN CENTER WALL



HALF END ELEVATION

HALF TRANSV. SECTION

BILL OF REINFORCING BARS					
BAR No.	SIZE	LENGTH	SHAPE	LOCATION	
C1	12	5'-0"	BENT	CURB	
C2	4	14'-0"	STRT.	"	
C3	6	15'-8"	HOOK	"	
①	F1	5/8	14'-7"	STRT.	FLOOR - TRANSV.
*	F2	4	34'-0"	"	APPRON-
	F3	8	19'-6"	BENT	DROP WALL
#	F4	21	34"	STRT.	FLOOR - LONGIT.
#	F5	28	34"	"	"
#	H1	16	12"	STRT.	SIDE WALLS - HORIZ.
#	H2	18	12"	"	CENTER "
⑥	S1	5/8	15'-6"	HOOK	SLAB - TRANSV.
#	S2	5/8	7'-5"	BENT	"
#	S3	24	12"	STRT.	" - LONGIT.
⑦	V1	1/2	5'-11"	HOOK	SIDE WALLS - VERT.
⑩	V2	1/2	5'-3"	STRT.	CENTER WALL - "
*	V3	10	13'-3"	BENT	WINGS - VERT.
*	V4	5	12"	HOOK	CENTER WALL - VERT.

TOTAL REINFG. STEEL 110.08 L + 1230 = LBS
 TOTAL CONCRETE 1.145L + 10.9 = CY
 * 2 PCS. 6" x 10" LG. STEEL PIPE FOR GUARD RAIL

* USE ONLY WHEN FILL IS LESS THAN 3 FEET.

L = LENGTH OF CULVERT
 W = WIDTH OF ROADWAY
 H = HEIGHT OF FILL
 L = W + 3H + 2 FT.

- ① NUMBER OF F1 BARS = 2L
- ② LENGTH OF F4 BARS = 1/3L + (5'-8")
- ③ " " F5 " = 4L + (5'-1")
- ④ " " H1 " = 1/3L + (5'-4")
- ⑤ " " H2 " = 1/3L + (4'-11")
- ⑥ NUMBER OF S1 BARS = L - 2
- ⑦ " " S2 " = 2L - 4
- ⑧ LENGTH OF S3 BARS = 1/2L + (1'-0")
- ⑨ NUMBER OF V1 BARS = 2L
- ⑩ " " V2 " = L

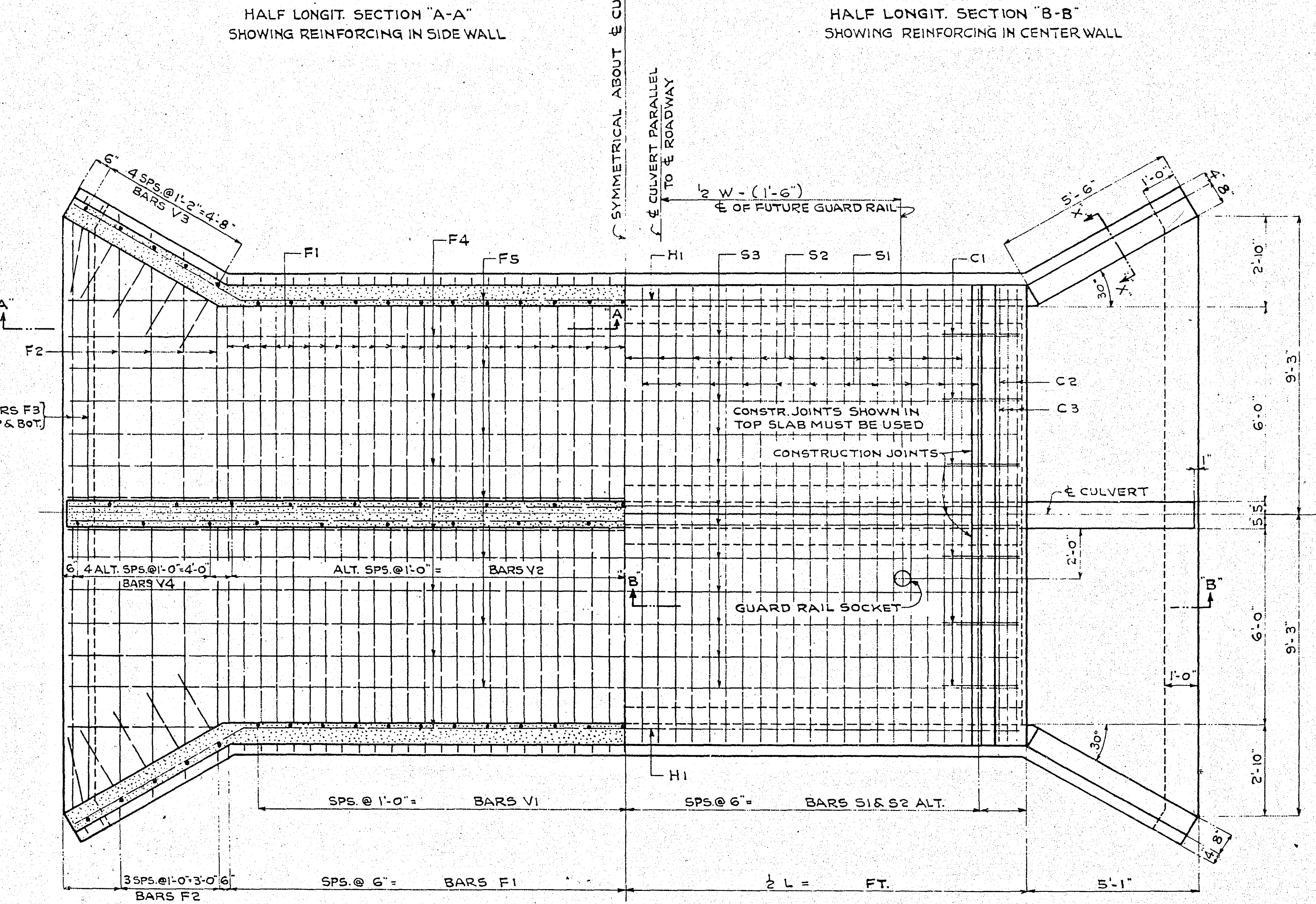
* CUT TWO BARS FROM EACH F2, V3 & V4 BAR, ONE LONG AND ONE SHORT
 # LAP H1, H2 & S3 BARS 2'-6" AT SPLICES.
 # LAP F4 & F5 BARS 3'-6" AT SPLICES.

CONSTRUCTION NOTES
 ALL CONCRETE TO BE GRADE "A" AS PER SECTION 48 OF THE STANDARD SPECIFICATIONS DATED APRIL 1, 1929.
 ALL EDGES OF CONCRETE ABOVE TOP OF FLOOR TO BE FINISHED TO A 3/4" BEVEL UNLESS OTHERWISE NOTED.
 NO CONSTRUCTION JOINTS ALLOWED, EXCEPT AS NOTED.
 ALL REINFORCING BARS TO BE OF SPECIFIED LENGTH AND SECURELY WIRED AT EACH INTERSECTION.
 CULVERT TO HAVE MINIMUM GRADE OF 1/8" PER FOOT IN DIRECTION OF FLOW.

OFFICE OF
 RAMSEY COUNTY SURVEYOR
 HARRY S. BRONSON
 PLAN OF
 MONOLITHIC BRIDGE & SPILLWAY
BALD EAGLE BLVD. W.
 AT STA. 41+47

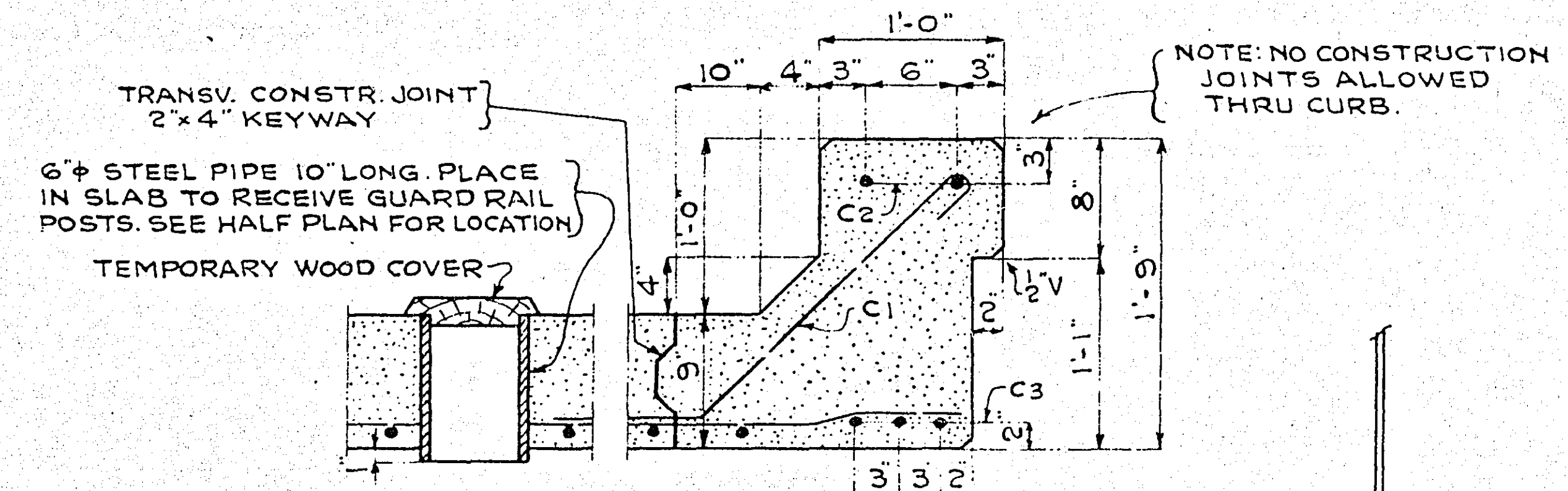
SEPT 1939 SCALE AS SHOWN

PLAN APPROVED 1939 COUNTY SURVEYOR



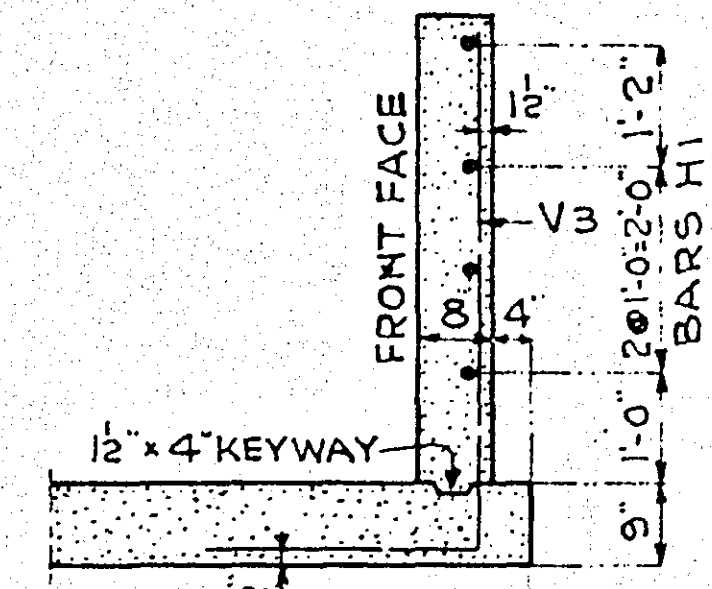
HALF SECTION ABOVE FTG. SHOWING REINFORCING IN FLOOR.

HALF PLAN SHOWING REINFG. IN SLAB

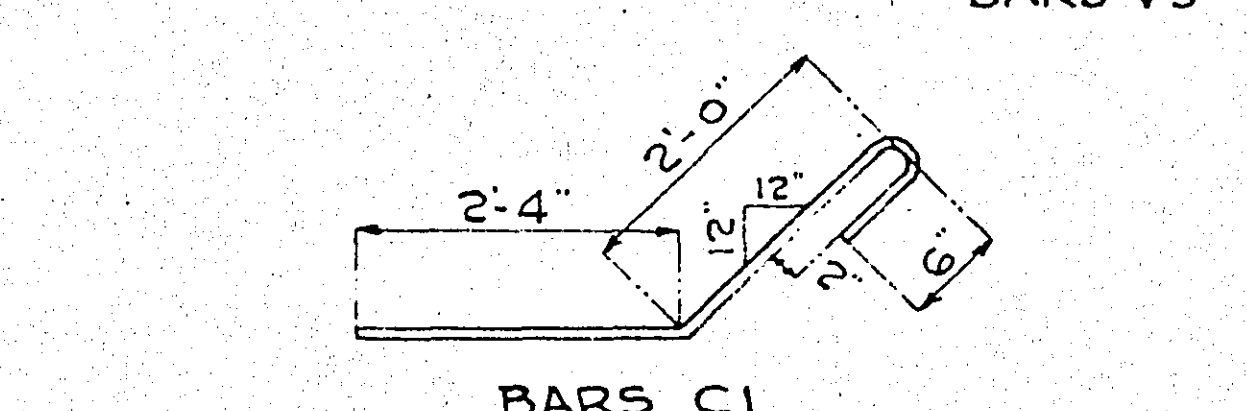


DETAIL OF SOCKET FOR GUARD RAIL POSTS (USE ONLY WHERE FILL IS LESS THAN 3 FEET)

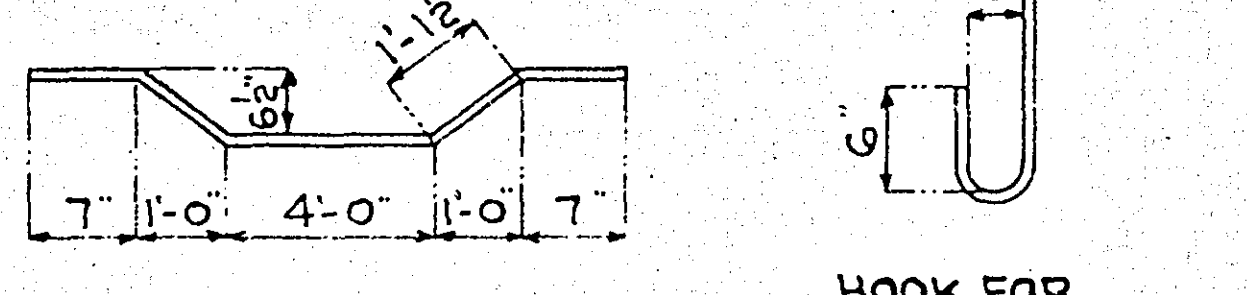
SECTION THRU CURB



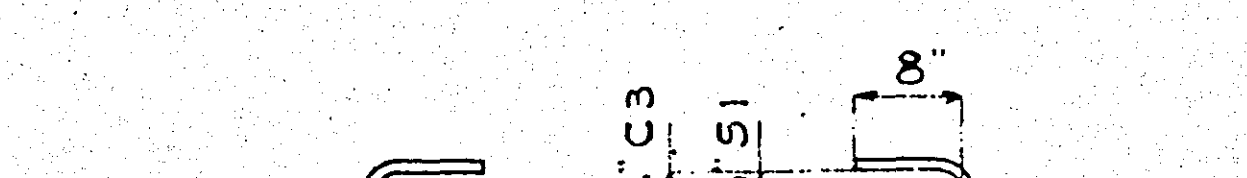
SECT. "X-X" THRU WING



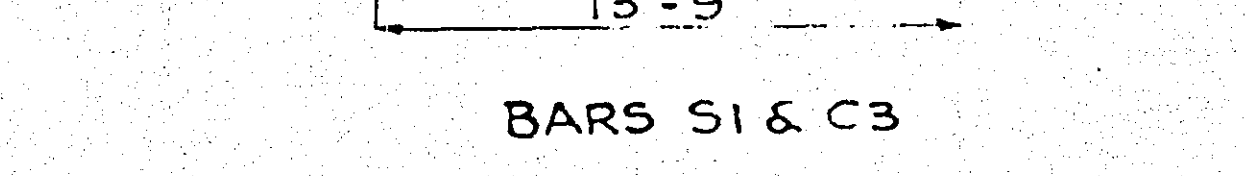
BAR V3



BAR C1



BAR S2



HOOK FOR BARS V1 & V4

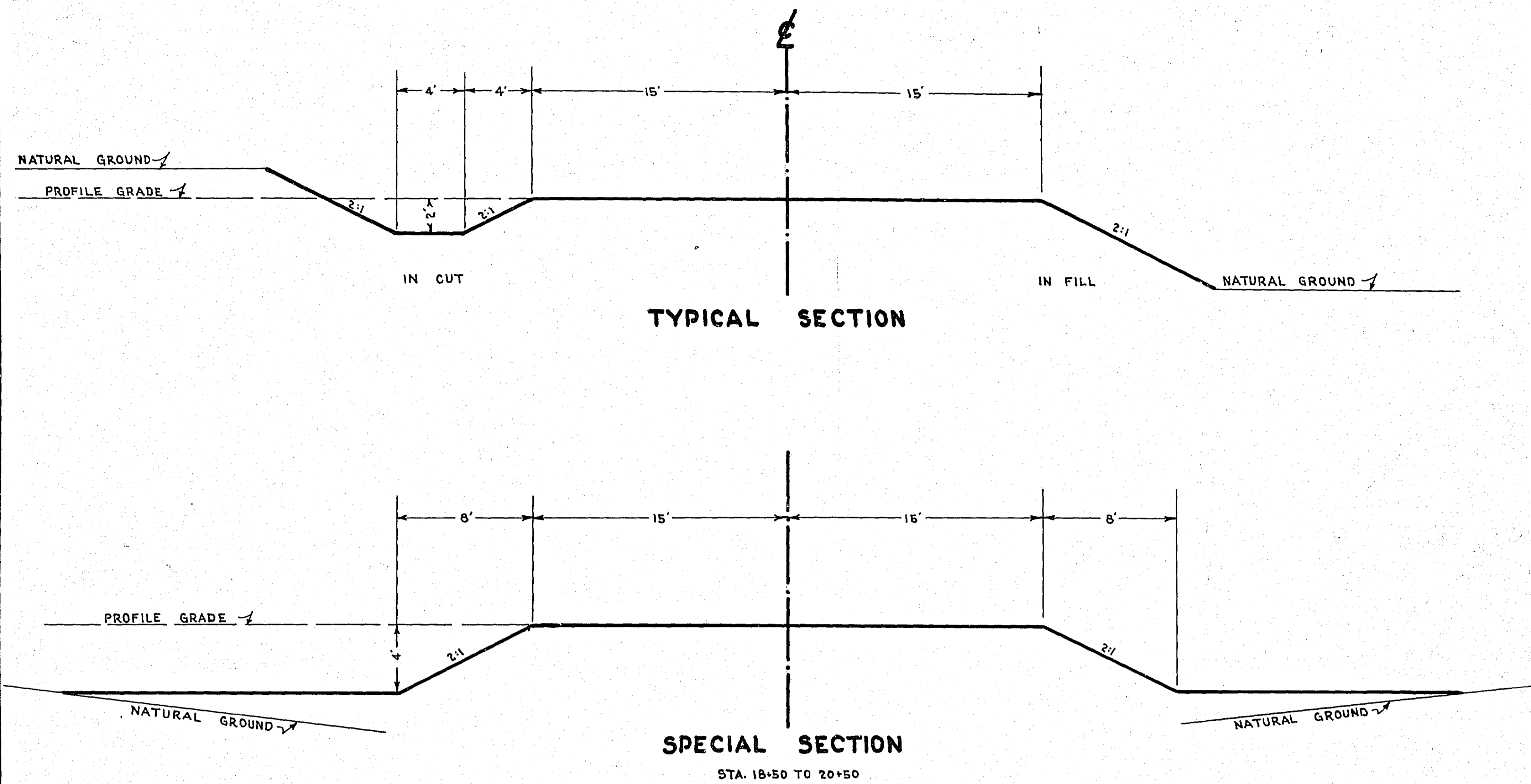


BAR S1 & C3

STATEMENT OF ESTIMATED QUANTITIES

CLASS	ITEM	UNIT	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	MILE From To	TOTAL ESTIMATED QUANTITIES
GRADING	1	Clearing	Trees	108									
	2	Grubbing	Trees	108									
	3	Clearing	Acres	2.5									
	4	Grubbing	Acres	2.5									
	5	Excavation Earth	Cu. Yds.	12483									
	6	Excavation Loose Rock	Cu. Yds.										
	7	Excavation Solid Rock	Cu. Yds.										
	8	Excavation Overhaul	Cu. Yds.										
	9	Excavation Special	Cu. Yds.										
	10	Excavation Hand Ditch	Cu. Yds.										
	11	Install 12" C.M.	Lin. Ft.										
	12	Install 15" C.M.	Lin. Ft.	20									
	13	Install 18" C.M.	Lin. Ft.	130									
	14	Install 24" C.M.	Lin. Ft.	90									
	15	Install	Lin. Ft.										
	16	Install	Lin. Ft.										
	17	Install 18" P3	Lin. Ft.										
	18	Install 24" P3	Lin. Ft.										
	19	Install 30" P3	Lin. Ft.										
	20	Install 36" P3	Lin. Ft.										
	21	Install	Lin. Ft.										
	22	Install	Lin. Ft.										
	23	Remove Old Culvert	Lin. Ft.	163									
	24	Replace Old Culvert	Lin. Ft.										
	25	Finishing	Sq. Yds.	44000									
	26	Rubble Gutter	Cu. Yds.										
	27	Headwall Concrete	Cu. Yds.										
	28	Headwall Steel	Lbs.										
	29	Remove Fence	Lin. Ft.	5650									
	30	Replace Fence	Lin. Ft.	5650									
	31												
	32	Borrow	Cu. Yds.	7184									
C.M. CULVERTS	1	Furnish 12" C.M.	Lin. Ft.										
	2	Furnish 15" C.M.	Lin. Ft.	20									
	3	Furnish 18" C.M.	Lin. Ft.	130									
	4	Furnish 24" C.M.	Lin. Ft.	90									
	5	Furnish	Lin. Ft.										
	6	Furnish	Lin. Ft.										
	7	Furnish 12" C.M. Band	Each										
	8	Furnish 15" C.M. Band	Each										
	9												
	10												
P3 CULVERTS	1	Furnish 18" P3	Lin. Ft.										
	2	Furnish 24" P3	Lin. Ft.										
	3	Furnish 30" P3	Lin. Ft.										
	4	Furnish 36" P3	Lin. Ft.										
	5												
	6												
GUARD RAIL	1	Guard Rail - Cable	Lin. Ft.										
	2	Guard Rail Anchors	Each										
	3	Dummy Posts	Each										
	4												
SIDEWALKS AND CURBING	1	Concrete Curb - Straight	Lin. Ft.										
	2	Concrete Curb - Radius	Lin. Ft.										
	3	Remove Old Curb	Lin. Ft.										
	4	Remove Old Curb and Gutter	Lin. Ft.										
	5	Remove Old Sidewalk	Sq. Ft.										
	6	Replace Old Sidewalk	Sq. Ft.										
	7	Construct New Sidewalk	Sq. Ft.										
	8	Curb Inlet	Each										
	9	Catch Basin Complete	Each										
	10												
	11												
	12												
SEWER	1	12" Vitrified Sewer Pipe	Lin. Ft.										
	2	15" Vitrified Sewer Pipe	Lin. Ft.										
	3	18" Vitrified Sewer Pipe	Lin. Ft.										
	4	20" Vitrified Sewer Pipe	Lin. Ft.										
	5	24" Vitrified Sewer Pipe	Lin. Ft.										
	6	Manhole Complete	Each										
	7	Catch Basin Complete	Each										
	8												
	9												
	10												
SURFACE	1	Loading Gravel on site	Cu. Yds.	354									
	2	Hauling Gravel	C.Y. Mi.										
	3	Shaping & Compacting	Cu. Yds.										
	4	Oil	Gal.										
	5	Black Top	Sq. Yds.	14300									
	6												
	7												
	8												
STRUCTURES	1	Concrete	Cu. Yds.										
	2	Reinforcing Steel	Lbs.										
	3	Excavation	Cu. Yds.										
	4	Piling	Lin. Ft.										
	5												
	6												
	7												
	8												
	9												
	10												

DETAILS



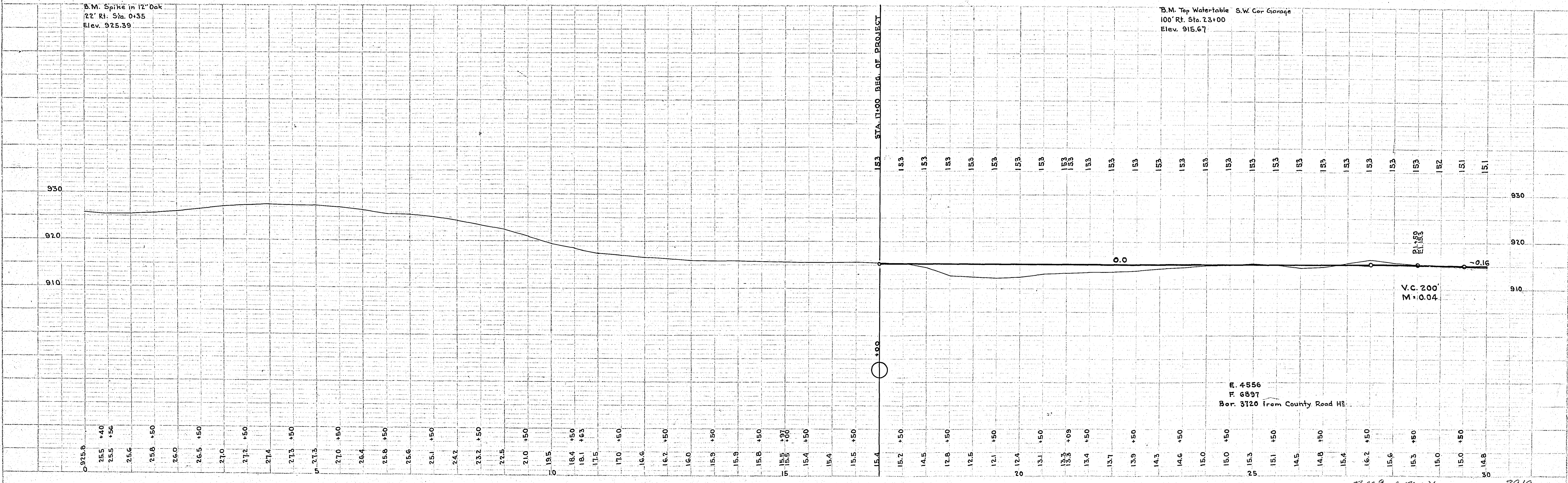
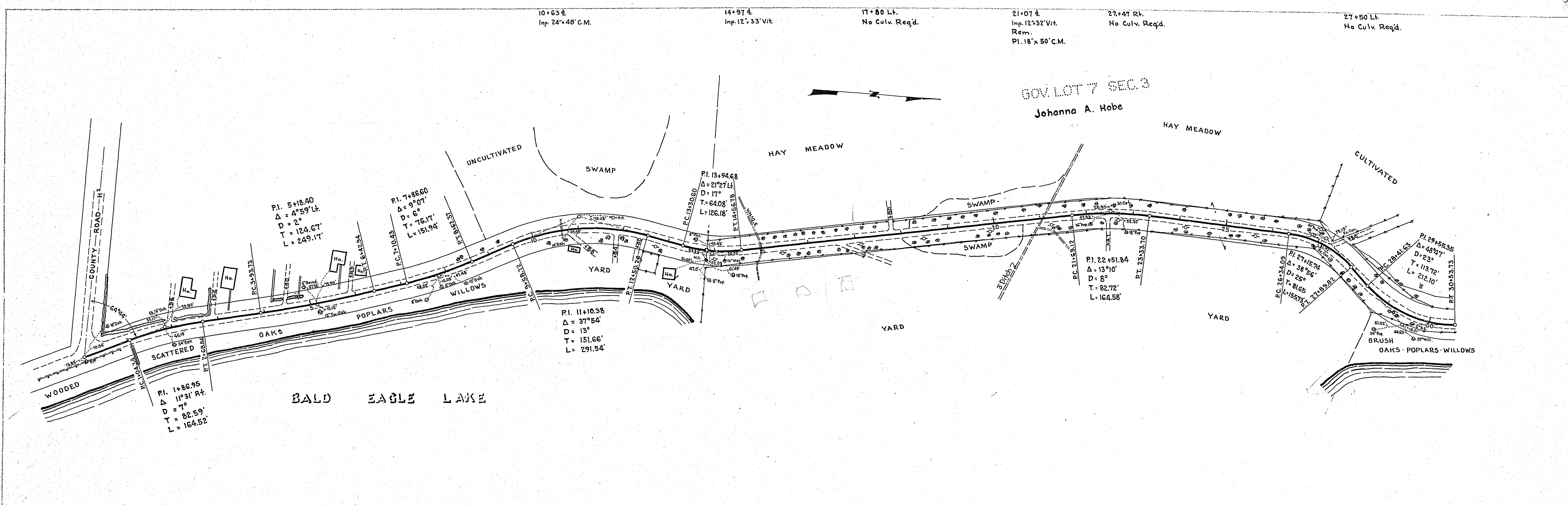
OFFICE OF
 RAMSEY COUNTY SURVEYOR
 HARRY S. BRONSON
 GRADING PLAN
BALD EAGLE BLVD. WEST
 FROM CO. RD. H² TO N. COUNTY LINE RD.
 AUGUST 1939 SCALE AS SHOWN

APPROVED 8/31 1939 *Harry S. Bronson*
 RAMSEY COUNTY SURVEYOR

APPROVED _____ 1939 _____
 CHAIRMAN COUNTY BOARD

PLAN
 SURVEYED BY
 PLOTTED BY
 CHECKED BY
 DATE

PROFILE
 SURVEYED BY
 PLOTTED BY
 CHECKED BY
 DATE



E. 4556
 T. 6897
 Bop. 3720 from County Road H2.

