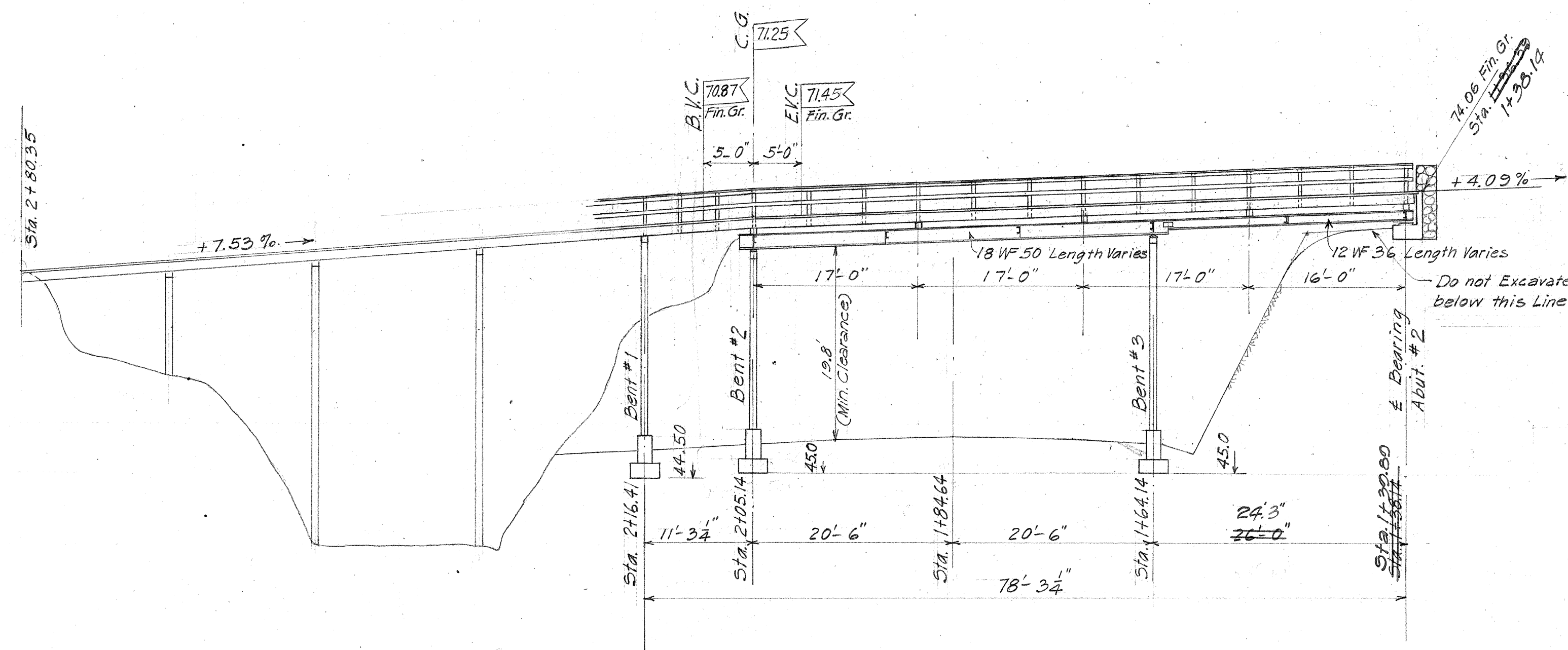


TIMBER BILL OF MATERIALS COAST REGION DOUGLAS-FIR.

Member	Size	Qty	Length	Grading	Millwork	Ft. B.M.
Posts	6"x8"	4	20'-0"	Set. Str. Posts & Tbrs	Rough	320
"	8"x8"	4	18'-0"	" " " "	"	384
"	8"x8"	4	20'-0"	" " " "	"	427
Bracing-Pents	3"x8"	6	18'-0"	" " Joists & Planks	"	216
"	3"x8"	2	24'-0"	" " " "	"	96
"	3"x8"	4	26'-0"	" " " "	"	208
Caps	8"x8"	3	16'-0"	" " Posts & Tbrs	S15	256
"	8"x8"	4	18'-0"	" " " "	"	384
Stringers	4"x12"	28	20'-0"	" " Joists & Planks	Rough Ends Sized	2240
"	4"x12"	8	18'-0"	" " " "	to 17 1/2" Exact.	576
"	4"x12"	4	16'-0"	" " " "	Rough Ends	256
"	4"x12"	4	14'-0"	" " " "	Cut to	224
"	4"x12"	1	10'-0"	" " " "	Fit	40
Rail Posts	4"x4"	10	14'-0"	" " Posts & Tbrs	S45	187
"	4"x4"	1	6'-0"	" " " "	"	8
Railing	1"x6"	24	18'-0"	" " Joists & Planks	"	216
"	1"x6"	3	14'-0"	" " " "	"	21
"	1"x6"	3	10'-0"	" " " "	"	15
Splice Blocks	4"x12"	5	6'-0"	" " Joists & Planks	S1E	120
Solid Bridging	4"x12"	5	10'-0"	No. 1 Dim. " "	"	200
"	4"x12"	1	12'-0"	" " " "	"	48
Cross Bridging	2"x4"	10	16'-0"	" " " "	Rough	107
Planks	3"x12"	79	16'-0"	Set. Str. " "	"	3792
Total Treated Timber						10,341

Note! Water and Gas Lines shall be kept in operation at all times.

LAYOUT PLAN
1" = 10'-0"



SECTION A-A, ON E
1" = 10'-0"

Specification: All phases of construction and all materials are subject to the specifications of the Terr. Hy. Dept.

Dead Load: 5 lbs. per ft. B.M.

Live Load: 5 Ton Truck. No impact.

Impact: 25% for steel girders.

Timber: All timber to be Coast Region Douglas Fir, and to be graded according to the Standard Grading and Dressing rules of the West Coast Lumberman's Association. All stringers to be sized to uniform depth of 11 1/2" at point of bearing except stringer A which shall be sized as shown in details. Each stringer to be toe nailed to cap with 4-16 d. nails. Two outside rows of stringers to have butt joints with ends cut on taper, all other stringers to have lapped joints, lapped ends to have 1/2" C.I. separators, 4" solid bridging over caps and at ends of bridge. 2"x4. cross bridging at center of span entire width to be securely toe nailed at each end.

All bolts to be 3/4" diameter with C.I. ogee washers unless noted otherwise.

Treatment of Timbers: See Special Provisions.

Hardware: All bolts, drift pins, nails, spikes nuts, washers, separators, split ring connectors, anchors and other metal parts shall be hot-dipped galvanized.

Treatment of Bolt Holes: All bolt holes bored after treatment shall be treated by means of an approved pressure bolt hole treater. The preservative to be used for this purpose shall be the same as that used for the timber.

Framing and Cutting: All timber except where shown otherwise in the plans shall be cut, framed and bored before treatment.

Painting: No painting shall be required on timber.

ESTIMATED QUANTITIES 24" CIRC. CONC. CULV'T. & DROP INTAKES #1 & #2

Class A-1 Conc.	3.84	C.Y.
Reinf. Steel	9.	Lbs.
Structure Exc.	28.	C.Y.
24" Circ. Conc. Culv't.	40.	Lin. Ft.
Std. C.I. Frame and Grate Type "C"	2	Required.

ESTIMATED QUANTITIES UNDERPASS

Class A-1 Conc.	14.28	C.Y.
Reinf. Steel	777.	Lbs.
Structural Steel	14,718.	* Lbs.
Treated Timber	10,341	M.B.M.
Structure Excavation	110	C.Y.
C.R.M.	12.3	C.Y.

* - Includes 1/2% for shop paint and 1 1/2% for overrun.

All concrete Class A-1 Concrete.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

OVERCROSSING

STA. 64+62.60

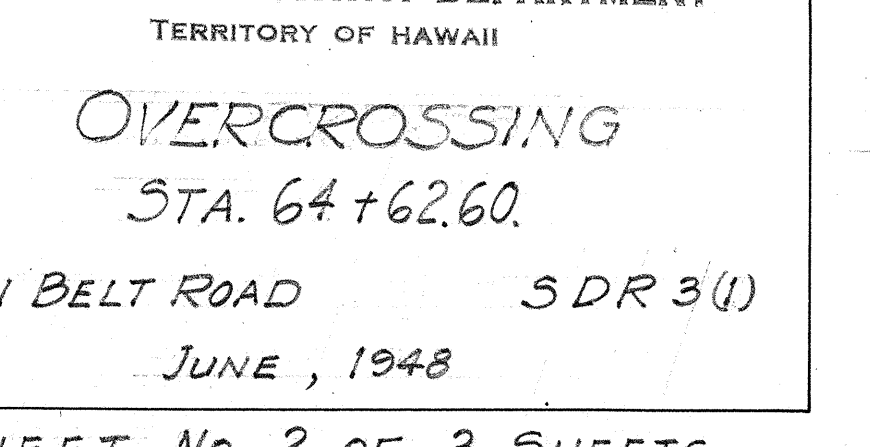
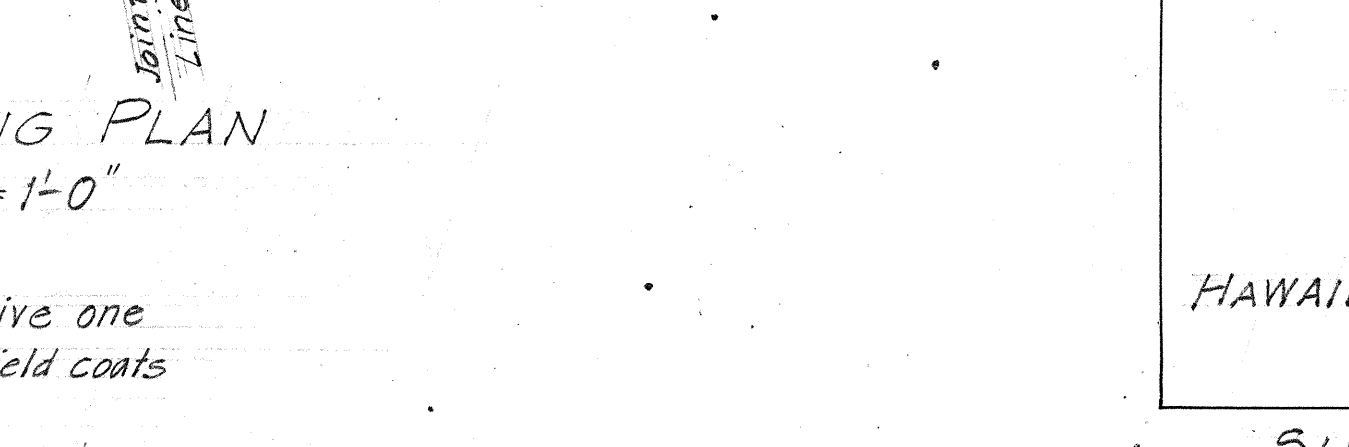
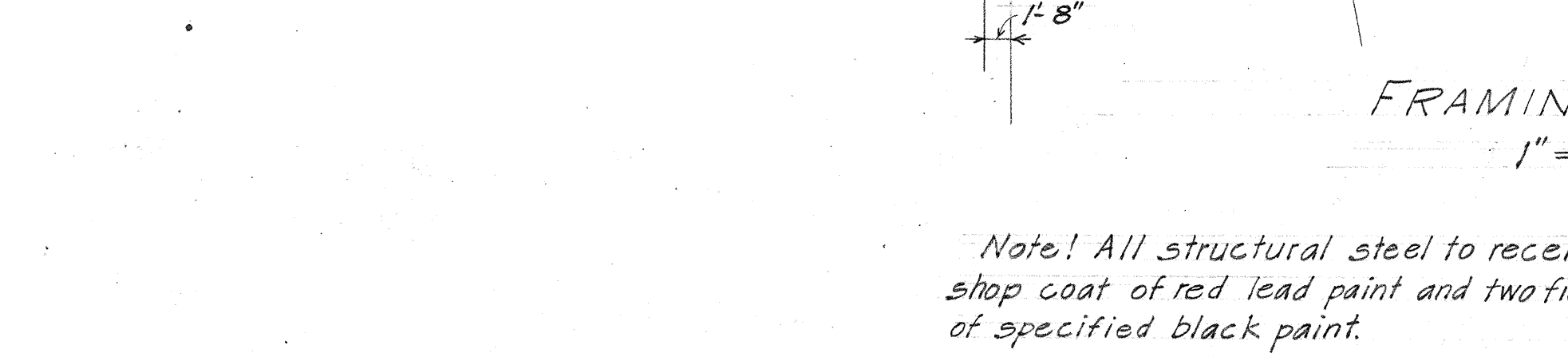
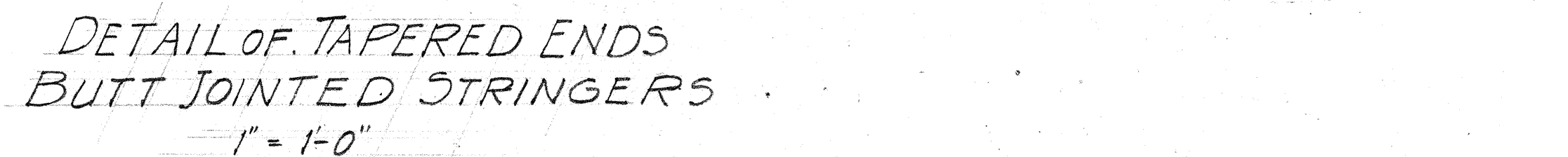
HAWAII BELT ROAD SDR 3 (1)

JUNE, 1948

SHEET No. 1 OF 3 SHEETS

5333.36

UNCLASSIFIED	COPIES MADE BY	DATE
PLAN	DESIGNED BY <i>W.R. Barckels</i>	" <i>5/48</i>
	DRAWN BY <i>J.I. Okamoto</i>	" <i>6/48</i>
NOTEBOOK	TRACED BY	"
	QUANTITIES BY <i>L.I.O.</i>	" <i>6/48</i>
No.	CHECKED BY <i>P. Yamashita</i>	" <i>6/48</i>



Note! All structural steel to receive one shop coat of red lead paint and two field coats of specified black paint.

TERRITORIAL HIGHWAY DEPARTMENT
TERRITORY OF HAWAII

OVERCROSSING
STA. 64+62.60.

HAWAII BELT ROAD SDR 3(1)
JUNE, 1948

SHEET NO. 2 OF 3 SHEETS

5333.35

ORIGINAL PLAN	SURVEY PLOTTED BY	"	"	5/48
	DESIGNED BY	W.R. Barfels	"	6/48
	DRAWN BY	J.L.O.	"	
	TRACED BY		"	6/48
NOTE BOOK	QUANTITIES BY	J.L.O.	"	6/48
	CHECKED BY	P.Y.	"	6/48
No.				


$$\frac{1}{8}'' = 1'-0$$