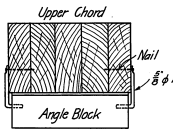
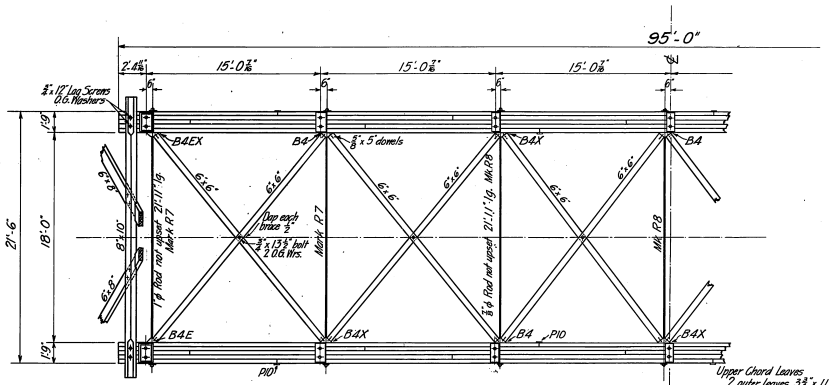
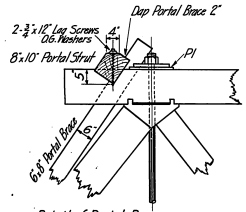


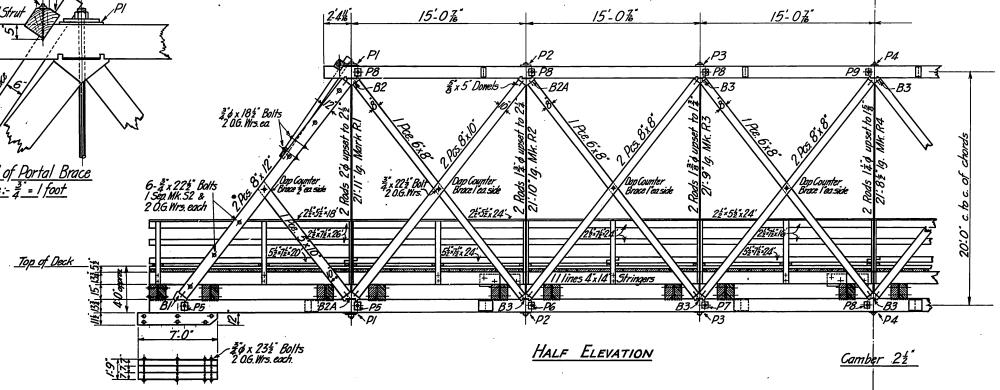
Sketch showing method of supporting upper chord angle blocks during erection



HALF PLAN OF UPPER CHORD & LATERAL SYSTEM

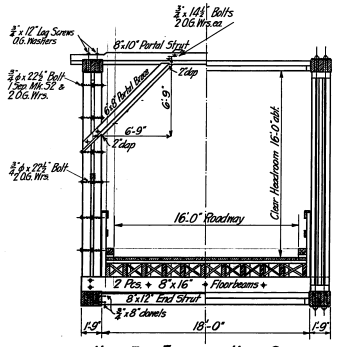


Detail of Portal Brace
Scale:- 3/4 = 1 foot

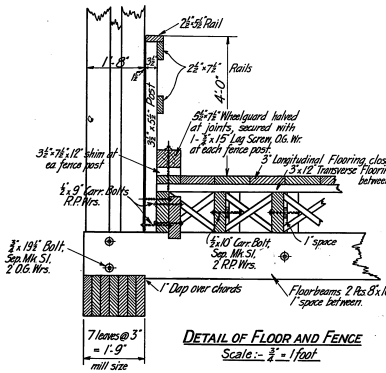


HALF ELEVATION

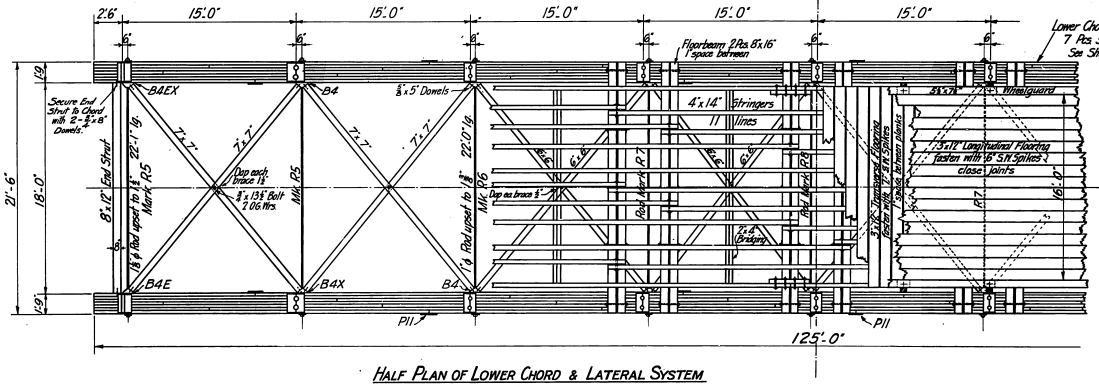
Camber 2 1/4"



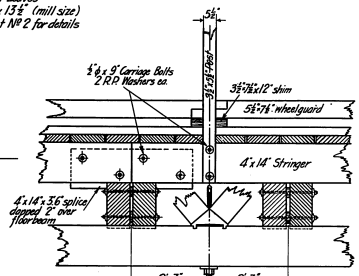
HALF END ELEV. HALF SECTION



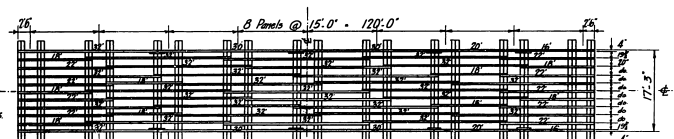
DETAIL OF FLOOR AND FENCE
Scale:- 3/4" = 1 foot



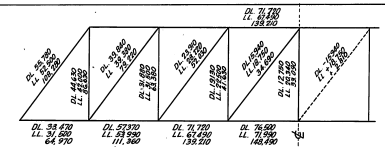
HALF PLAN OF LOWER CHORD & LATERAL SYSTEM



DETAIL OUTER STRINGER BUTT JOINT ETC.
Scale:- 3/4" = 1 ft.



FLOORBEAM AND STRINGER LAYOUT
Scale:- 10" = 1 inch



STRESS DIAGRAM

LOADS

FOR TRUSS AND LATERAL SYSTEM

DEAD LOAD	Timber	1533 lbs per Lin. Ft.
	Iron	167 " " "
	Total	1700 " " "
LIVE LOAD	100 lbs. per sq. ft. or 1600 lbs per lin. ft.	
WIND LOAD	300 lbs. per lin. ft. on lower chord. 200 " " " " upper chord.	

FOR FLOOR SYSTEM

LIVE LOAD. Concentrated - one 15 ton Motor Truck, 6 gauge, 14 wheel base, 3/5 of load on rear axle.

IMPACT. 30% added to wheel loads for impact

WORKING STRESSES

DOUGLAS FIR	Compression Endwise	1200 lbs per sq in.
	Sidewise	300 " " "
	Axial tension	1000 " " "
	Shear parallel to grain	150 " " "
	Fibre stress in bending	1800 " " "
STEEL	Tension Rods	16,000 lbs per sq in
	Lower Chord Pipe Fastenings	14,000 " " "

FORMULA FOR BRACES.
Safe stress = 12,000 (1 - l/60d)
where l = length in inches
d = least side in inches

Note

No allowance has been made for shrinkage of timber in creosoting; dimensions of 21'-6" out to out of chords and of 1'-9" width of chord are therefore merely nominal.
Work from dimension of 18'-0" between chords.
Cover the upper surface of all chords with a coat of plastic waterproof compound well troweled down; sprinkle coarse sand on top and press well into compound. 600# of compound req'd.
Fill up insides of Lower Chord angle blocks (end angle blocks excepted) and the spaces around tension rods in all lower chord blocks with hot 'D' grade asphalt. 350# of asphalt req'd.
~~Lay lower deck with 1" space between planks and apply one coat of hot creosote oil.~~ Lay all planks heart side down.
~~Fill pipes with cement mortar. 5 sacks cement required if used.~~

120 FT. SPAN
THROUGH HOWE TRUSS
WITH LAMINATED CHORDS
16'-0" ROADWAY
GENERAL PLAN

Scale:- 1/4" = 1 ft ; details, 3/4" = 1'

INDEX

General Plan Sheet No 1
Details of Chords " " 2
Ironwork " " 3

Formerly 3rd Bridges 175 A-1

GOVT. OF BRITISH COLUMBIA
DEPT. OF PUBLIC WORKS
VICTORIA

MADE BY	C.K. Saunders	Jan. 1934
TRACED BY	"	"
CHECKED BY	J.T.H.	Jan. 1934
APPROVED BY	G.M. Duncan	Feb. 1934
APPROVED:	G. P. Phelps, ASST. CHIEF ENGINEER	

DRAWING NO. 2059-1

STANDARD 1931 PSA WAS HOWE TRUSS - 16'-0" ROADWAY - LAMINATED CHORDS