

Fig. 3.—General Design of New Provincial Government Bridge at Lytton, B.C.

first and second sections of Fig. 5. The concrete was mixed to a consistency of 1:3:5, and, when completed, made a sub-structure of both satisfactory strength and very creditable appearance.

Fig. 3 shows the general plan of the new bridge as proposed and constructed; and Fig. 4, sections of the concrete abutments carrying the main truss span and of the trestle forming the approaches. As may be seen in the third section of Fig. 5, which indicates the progress made upon the south pier of the bridge by January 19, 1914, a timber trestle approach, 209 feet in length together with a similar length of grading, had to be built on the southeastern bank of the river. The concrete piers of the abutments which carry the main truss span of the bridge are 70 feet above low water, the distance of the resting surface of the truss above the extreme high-water level being 7½ feet. The large truss span resting upon these piers is 250 feet in length and 35 feet in depth (Figs. 1 and 2); while there are also two 70-foot plate girder spans, one on either side of the main section, and in addition a 50-foot plate girder span carried on steel

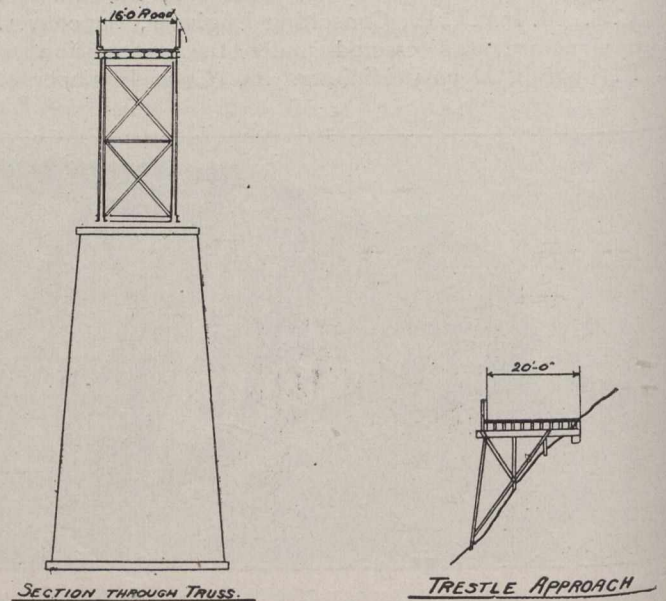


Fig. 4.—Sections of Abutment and Trestle of New Bridge.

bents and concrete abutments. The second portion of Fig. 2 illustrates the placing in position of a 50-foot span; girder, and also shows a small section of a 50-foot span; while all three are shown complete in Fig. 1, as well as the large steel bents and low concrete abutments which support the steel plate girder spans.

The contract for the fabrication of the superstructure, which is of steel, was awarded to the Canadian Bridge Company; and in all, for bents and spans, 215 tons of material were required. The bridge was so designed that the combined strength of the concrete and steel work would be capable of carrying a live load of 75 pounds to the square foot on the 250-foot truss and 100 pounds to the square foot on the 70- and 50-foot spans, together with a concentrated load of a 16-ton road roller.

The roadway of the bridge is 16 feet in width and has been constructed of 4-inch plank protected on either side by a 4-foot hand railing with posts 7 feet 7½ inches apart. The roadway plank is supported on 6-inch joists of varying depth, according to camber, on steel I-beam stringers, while a crowning, one inch thick, has been applied to the top of the floor.

By September 1, 1913, the Graff Construction Company, contractors for the bridge, had advanced to the