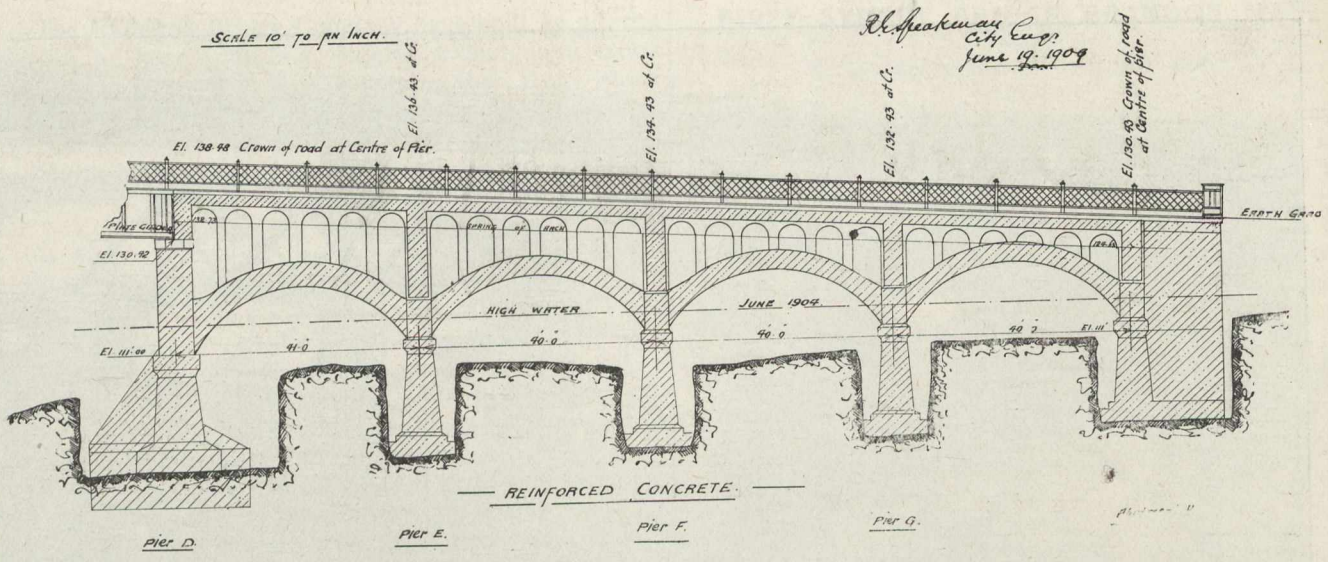

North Approach to First St. Bridge

51 to 60 blows 18 ft. drop. Average per blow 1′ 6″
61 to 70 blows 19 ft. drop. Average per blow 1′ 4″
71 to 80 blows 19 ft. drop. Average per blow 1′ 3″
81 to 87 blows 21 ft. drop. Average per blow 1′ 2″

The piles used were 25 foot tamarac.

The concrete foundations, piers, columns, and to the extrados of the main arches were constructed in the year 1908 by Mr. W. H. Shillinglaw, city engineer, and his assistant, Mr. N. E. Gibson, C.E., and are reinforced with the "Kahn" system obtained from the "Trussed Concrete Steel Company," of Walkerville, Ontario. The work was carried on to completion during this year by the writer, with the assistance of Mr. William Smith, city foreman.

The concrete used for the floors of the entire bridge was proportioned as follows:—

1 Portland cement.
1 Clean coarse sand.
1 Granite dust.
4 Crushed granite,

and for the foundations, piers, columns, and arches, was proportioned as follows:—

1 Portland cement, Rathbun's "Star."
3 Clean sharp sand.
6 Crushed granite,

with 6-inch facing of 1 : 2 : 4 mixture.

The floors being reinforced by ⅝-inch stel bars spaced 8-inch centres.

The bridge is designed to carry a live load of 100 lbs. per square foot.

The dead load, including the weight of the bridge, and a reinforced concrete floor with creosoted wood blocks.

A concentrated load as follows:—

A 40-ft. electric motor car weighing 30 tons on four axles followed by a 40-ft .trailer weighing 20 tons on four axles.

Also for a traction engine weighing 15 tons on two axles.

The loading for reinforced concrete approaches is the same as the steel superstructure.