

the Chicago Sanitary and Ship Canal and, also, by replacing the obstructive center-pier swing bridge at this point, accommodate the passage of the largest lake vessel. This is a great improvement over the by-passes built at the Adams and Jackson street swing bridges, which leave the navigation problem unsolved.

The entire work is being executed under the charge of the engineering department of the Sanitary District of Chicago, Mr. Isham Randolph, chief engineer, and Mr. C. R. Dart, bridge engineer. It might also be stated that the plans for both the substructure and superstructure were drawn up by the engineering department of the Sanitary District of Chicago.

The substructure section of the work is being done by the Great Lakes Dredge and Dock Company, Chicago, and the superstructure section by Jackson & Corbett Bridge and Steel Works, Mr. E. A. Clark in charge.

TRESTLE ON THE INDIANAPOLIS SOUTHERN RAILROAD.

The single track trestle, shown in the views, is being built for the Indianapolis Southern Railroad, a branch of the Illinois Central System. It crosses Richland Creek in Green County about 7 miles northeast of Bloomfield. The advantage of the trestle is said to be that it gives a direct route across the valley and thereby eliminates dangerous curves.

The trestle is constructed of structural steel. There are 42 bents and the spans alternate in length between 40 and 75 ft. The total length of the trestle is 2,215 ft. and it is 135 ft. from the masonry to the base of rail at the highest point. There are about 2,260 tons of steel in the structure.

The bents are built on concrete piers which rest on solid rock. These piers are not reinforced. The views show the general construction of the bent made up of struts and tie-rods and also the construction of the immense girders which span the bent.

The traveler is shown in Fig. 2, in the act of lowering a section of the bent. The method of construction pursued was as follows: The steel sections were constructed in the

jection and lowered them into position, so that the workmen could assemble them. The total length of the traveler from

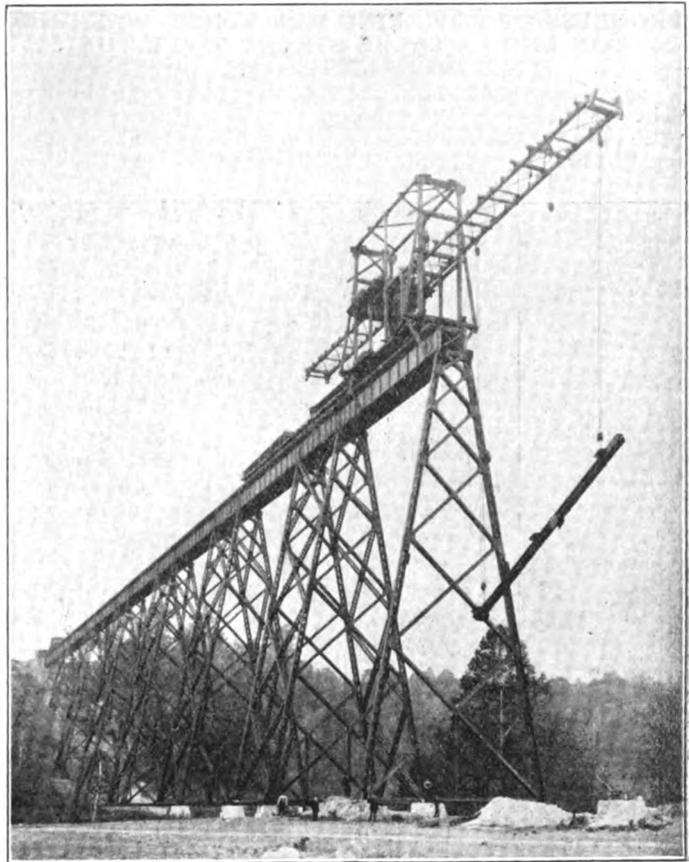


FIG. 2—TRAVELER IN THE ACT OF LOWERING A BEAM. out to out is 183 ft., and the projection of the traveler is 83 ft. In conclusion we might say the trestle is completed as

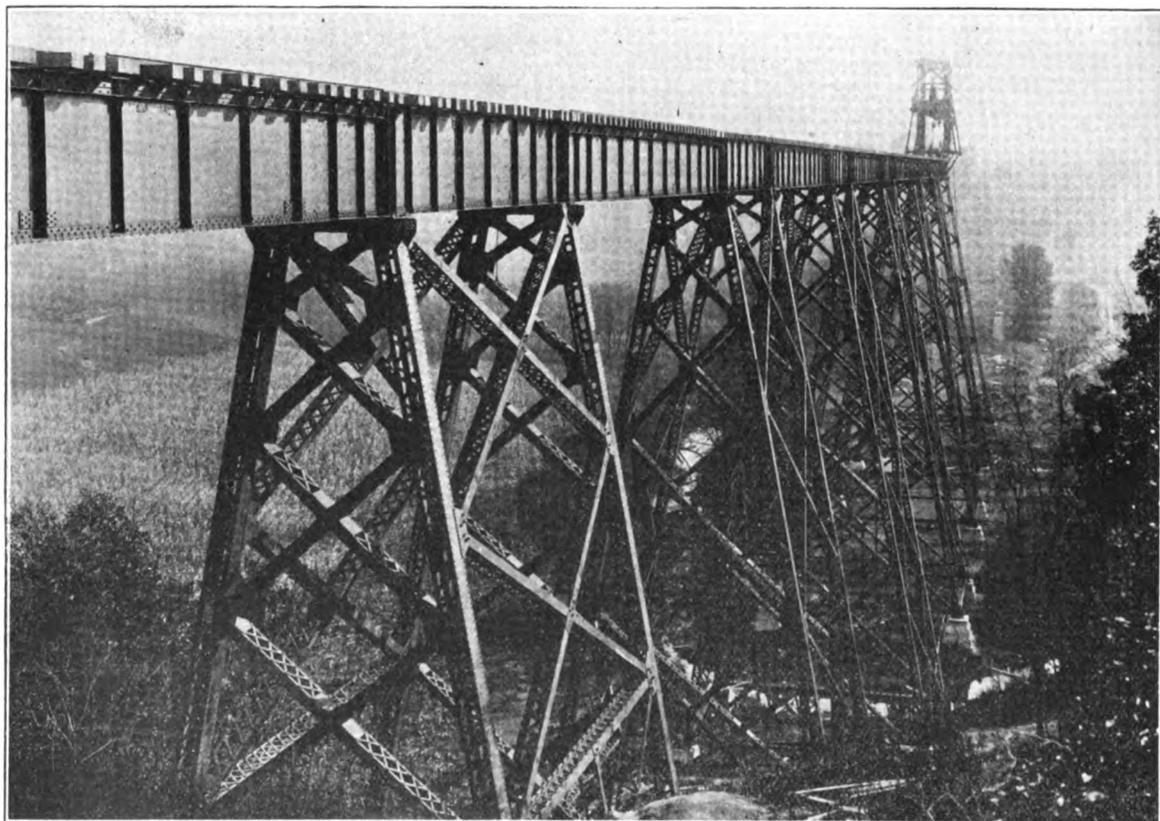


FIG. 1—PERSPECTIVE OF TRESTLE.

shops ready to be set in place on the trestle. They were carried out on flat cars along the finished trestle to the traveler, which carried sections from the flat car out beneath its pro-

far as the last bent, and will be ready for use in a very short period, if the weather conditions are favorable for the advancement of the work. The total cost of the structure is

about \$200,000. The contract for the trestle was given to the Strobel Steel Construction Company, Monadnock block, Chicago.

PROGRESS OF LOWERING VAN BUREN, WASHINGTON AND LA SALLE STREET RIVER TUNNELS, CHICAGO.

Specifications for the LaSalle and Washington street tunnels, together with the city ordinances in regard to the tunnels, were published in June 13, 1906 issue of the Engineering World; the specifications for the lowering and changing

Van Buren street tunnel: The top of the roof is to be lowered about 8 ft. and the track about 7 ft. The grade on the Franklin St. side will be 1 in 9.6 for the new track; and on

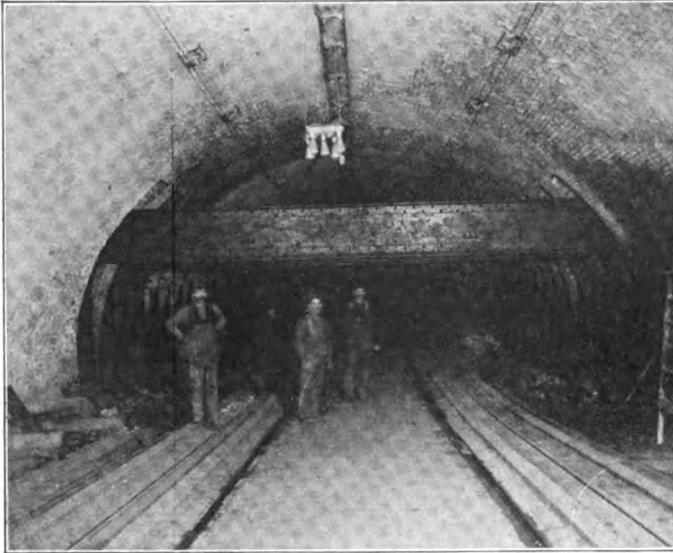


FIG. 1—EAST END OF VAN BUREN STREET TUNNEL. of the Van Buren street tunnel in the July 13, 1906 issue of the Engineering World; and the plans for the above three tunnels in the June 20, 1906, issue of the Engineering World. In Engineering World May 15, 1906, a plan for lowering the tun-

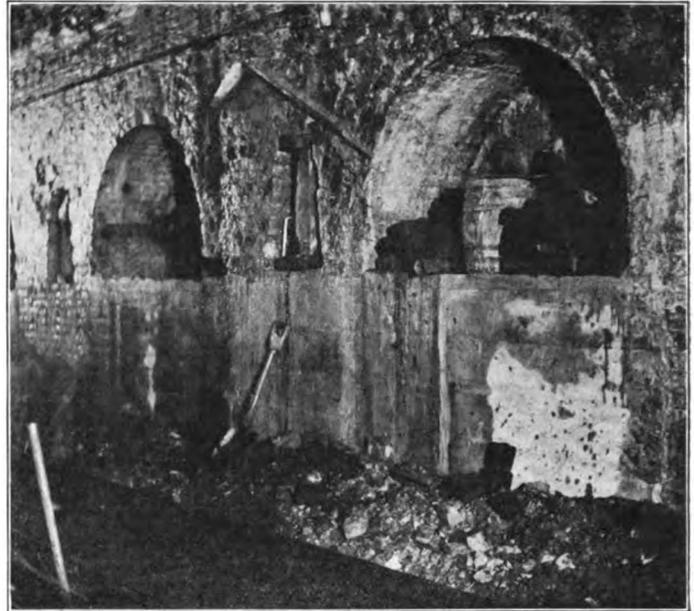


FIG. 3—CENTER OF NORTH WALL OF WASHINGTON STREET TUNNEL. the Clinton St. side 1 in 14.7. There will be about 190 ft. of roof to be lowered, and about 190 ft. of track together with 1,000 ft. in the approaches.

The underpinning will be of concrete about 2 ft. thick. About 7 ft. of concrete will be placed under the existing foundation for the support of the columns carrying the new roof girders.

The roof will be supported on columns constructed with

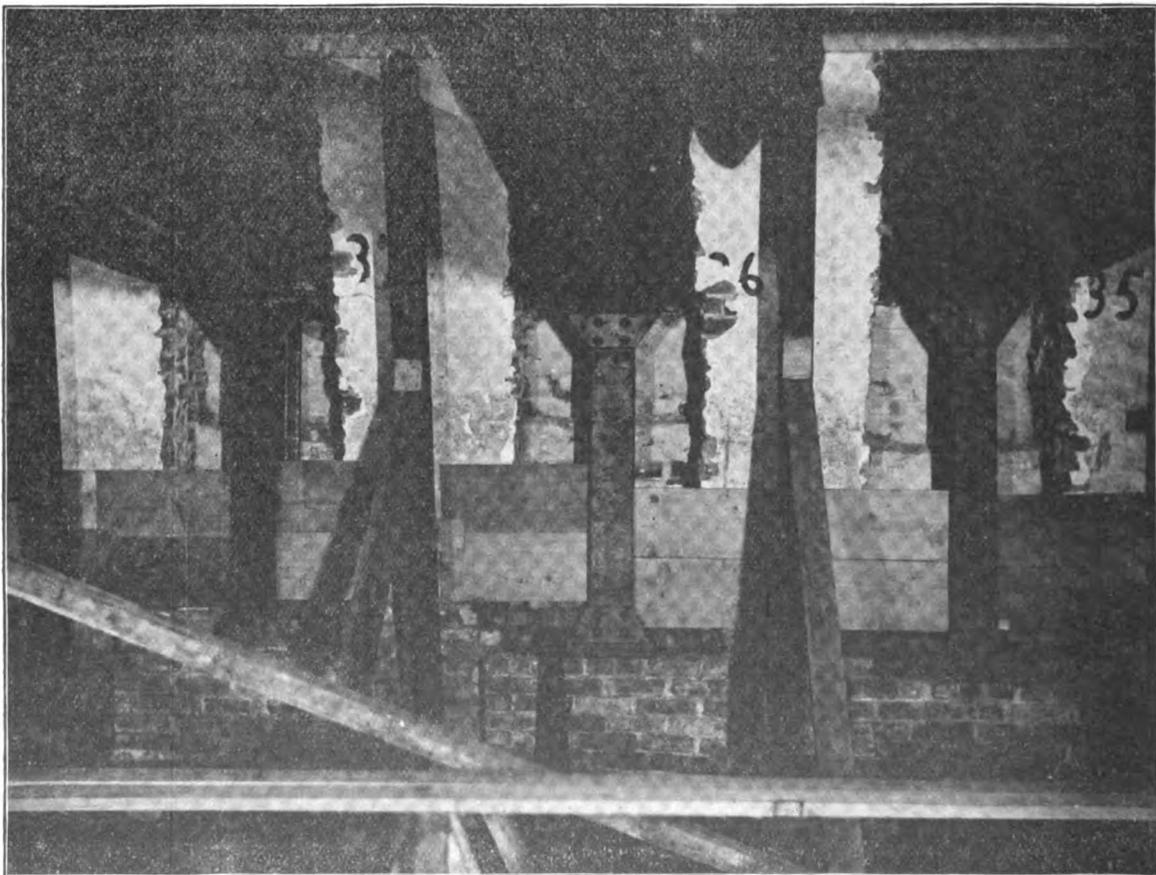


FIG. 2—CENTER OF SOUTH WALL OF VAN BUREN STREET TUNNEL. nels, outlined by Mr. John Ericson, M. Am. Soc. C. E., City Engineer, Chicago, was published. The article included costs of various parts of the work, including approaches, tunnels proper, shoring and bracing of buildings, etc.

15 in. 75-lb. I-beams, which carry girders constructed with a web-plate $32 \times \frac{3}{4}$ ins., 4 angles $6 \times 4 \times \frac{7}{8}$ ins., and 2 flange plates $9 \times \frac{3}{4}$ ins. The length of the girders along the top flange is 28 ft. 9 ins. and along the bottom flange 32 ft. The distance