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Fig. 6.—Erection of Girder.

asphalt; on this was laid two ply of 8-oz. burlap and then two ply heavy asphalt felt, each layer being well swabbed on with hot asphalt. These fabrics were laid in alternate layers and in such a manner as to permit the layers to break joints and be free from folds or pockets. On top of this was laid a layer of building paper and then 1 1/4 inches of asphalt mastic. The building paper was used in order to avoid injury to the waterproofing by the hot mastic.

As stated before, all the stringers, floor beams, sidewalk brackets and a portion of the girders are encased in concrete. Square twisted steel was used as reinforcement and No. 2-13-15 expanded metal for beam wrapping. Fig. 7 shows the cross-section of the floor. The hollow terra-cotta tile shown are used for the purpose of decreasing the dead load on the girders. The load taken off the centre girder by this means amounts to 7 square inches of flange section which is quite an item in a heavy girder. The cost of this tile work, in place, is slightly cheaper than concrete. The total dead load taken off the bridge by this means is estimated at 200,000 lbs.

Two factors governed the design of the abutments; first, bedrock is 13 feet below base of rail, and second, the main Garrison Creek storm overflow sewer runs under the abutment. This sewer is 12 feet wide outside and



Fig. 8.-Elevation and Cross-section of North Abutment.