

FIG. 2—DOWN-STREAM ELEVATION, MAIN SECTION OF POWER DAM

The engineers considered the possibility of building a higher power dam and thus obviating the necessity of a new dam at Mill Lake, and also increasing the working head. By raising the dam another 5 ft., a head of 37 ft. could have been obtained, but there would then have been a greater area under flood below Mill Lake. It was estimated that the land damages, including the necessary removal of the C.N.R. tracks, would cost more than the value of the additional power that would be obtained as a result of the higher head. It was thought that a much smaller sum would give as much

the new power dam will be closed, shutting off the supply to the present flume. This is shown by Fig. 1. After the new unit is in operation, the old generator, exciter and

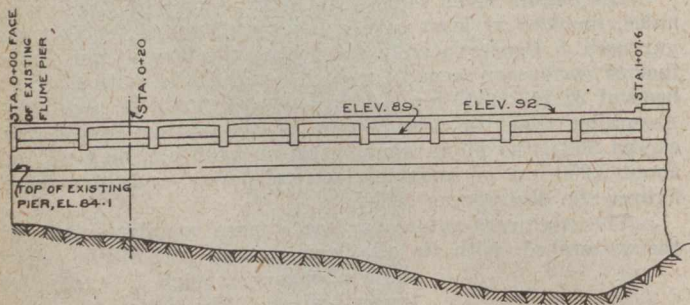


FIG. 3—SECTION OF POWER DAM BETWEEN PRESENT LOG CHUTE AND PRESENT FLUME

additional power if expended in other ways; that is, by stricter conservation of the waters of the upper lakes, thus increasing the possible average flow.

The town owns all the rights on the whole watershed, having looked forward for many years to its possibilities for greater power development, and having eventually acquired entire control. Employees of the town maintain all the dams on the lakes, and attend to their regulation.

The new power dam is being constructed immediately below the present dam, and has a good rock foundation. It will raise the water 6 ft. above the crest of the present dam. This will bring the water within 2.8 ft. of the C.N.R. bridge girders, or, in flood periods, to within 2 ft. of the



FIG. 5—NEW POWER DAM, LOOKING UP-STREAM

switchboard will be moved from the present plant to the new one and the present timber flume will be dismantled.

The dam is of solid gravity type. The crest has an overflow weir 160 ft. long, two sluiceway openings, and a log chute opening, these three openings being closed with stoplogs. In addition to these, there is a regulating sluiceway with a geared gate.

The present forebay, which has been very effective in taking care of ice, is being retained and the present flume opening will be used as an ice overflow and sluiceway.

With all the sluices and weirs, floods up to 5,000 c.f.s. can readily be passed, and this



FIG. 4—OLD DAM AND HIGHWAY BRIDGE, LOOKING DOWN-STREAM

girders. It was hoped that the old dam might be utilized in the construction of the new works, but upon examination it was found that its condition did not warrant further use, and it has been entirely abandoned. The new dam is so placed that the present plant need not be shut down until the new plant is ready to be operated. The entire works will be constructed, ready for operation, before the final gap in

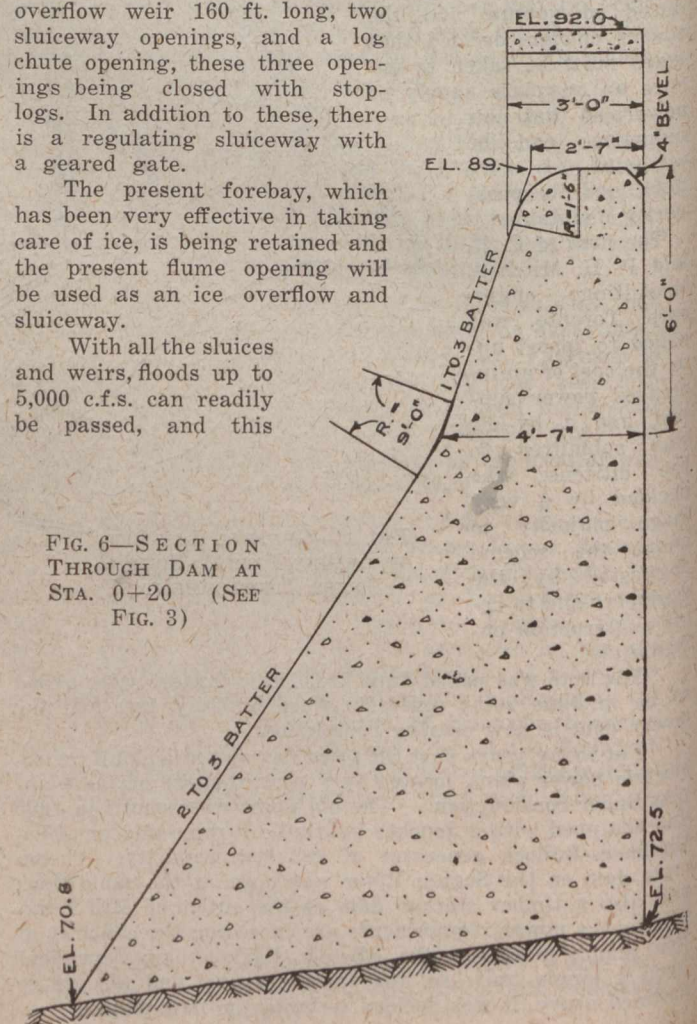


FIG. 6—SECTION THROUGH DAM AT STA. 0+20 (SEE FIG. 3)