

being divided between both works. During the year 60 ch. of this wall were completed. The formation is being carried out with four steam-shovels, supplemented by manual labour parties. Spoil is being placed at the rate of from 20,000 cub. yd. to 25,000 cub. yd. per month. Borings were taken at the bridge-sites, and sufficient data was obtained to enable a design to be prepared.

*Orakei Garden Suburb (Eden County).*—This work was commenced in May, and the following works were completed: Street-formation—3 m. 52 ch.; kerbing and channelling, 3,746 lin. ft.; kerbing only, 10,600 lin. ft. Storm-water drainage—5,500 lin. ft. of field tiles and 4,952 lin. ft. of pipes were laid. Cess-pits—Forty-eight completed, and a considerable amount of open ditching and stone drain. Foundation course—90 ch. full width and 38 ch. half width, consisting of some 6,000 cub. yd. of rough scoria and bluestone rubble, were completed.

*Ongaroto Road (Taupo County).*—5½ m. of new road formed.

*Opotiki—East Cape Road (Opotiki County).*—A further 2 m. of formation were completed. Hawaii Stream Bridge, consisting of two spans of 60 ft. and one of 25 ft., and Torere Stream Bridge, of one span of 32 ft. and two of 18 ft. were erected. Piles for testing the foundations for the Motu River Bridge have been driven, and 5 m. of engineering surveys completed.

*Opotiki—Matawai via Waroeka Road (Opotiki County).*—A further 5 m. of formation, mostly in heavy rock cuttings, were completed to a width of 16 ft., and 60 ch. widened to the same width; 265 ft. of timber box-culverts and 1,272 lin. ft. of concrete-pipe culverts were placed, and two concrete fords and four concrete retaining-walls were completed. A bridge consisting of one 30 ft. and one 25 ft. steel-joist spans on concrete piers across Sulphur Creek, and the Maukoro Bridge, of one 35 ft. steel-joist span and one 24 ft. and one 19 ft. stringer spans on concrete piers were erected. An engineering survey of a further 2 m. 70 ch. was made. The contract for this remaining section was recently let.

*Rotorua—Tauranga Direct Road (Rotorua County).*—The Mangapouri Bridge of one 40 ft., two 30 ft., and one 16 ft. spans was erected, and deviation of 1 m. over the gorge was formed and partly metalled. A further 60 ch. on various sections were metalled.

*Rotorua—Atiamuri Road (Rotorua County).*—3 m. of road were resurfaced with pumice and shingle, 6,030 cub. yd. of material being used; 950 cub. yd. of clay strippings were used to widen the road; 94 lin. ft. of pipe culverts were placed; one 25 ft. bridge was erected; and an 8 ch. deviation was completed.

*Tauranga—Rotorua Direct Road (Tauranga County).*—On the Pye's Pa section of this road a length of 35 ch. was metalled, and the section through the Akeake was widened to 18 ft. Between the Akeake junction and the county boundary minor deviations are in hand, and approximately 35 ch. have been re-formed on the new location.

*Rotoma Soldiers' Settlement (Whakatane County).*—1 m. 44 ch. of formation, with necessary culverting, completed, and one 25 ft. span bridge erected over the Karaponga Stream.

*Ruatahuna—Waikaremoana Road (Whakatane County).*—This road was widened from 6 ft. to 12 ft. over a length of 4 m., and formation now extends for 7 m. beyond Ruatahuna. 458 ft. of pipe culverts and 40 ft. of box culverts were placed.

*Urewera Block Roads (Whakatane County).*—6 ft. track was completed from 21 m. to 35 m. on the main road line and the Maungapohatu Track was formed for a distance of 3 m. 23 ch., 48 ch. of formation on branch track were also completed. The bridges at 3 m. 70 ch. (consisting of one 80 ft., one 25 ft., and one 15 ft. spans), at 8 m. 24 ch. (one 25 ft. span), at 10 m. 35 ch. (one 80 ft. span), and at 17 m. 67 ch. (three 25 ft. spans) were erected. The road from Waimana to Tawhena Flats and the track on to Maungapohatu were maintained, several heavy slips having been removed.

*Hangaroa—Tahora (Cook County).*—1 m. 60 ch. of metalling and 104 lin. ft. of culverts completed.

*Ormond Road via Waiohika (Cook County).*—2 m. 12 ch. of metalling completed.

*Main East Coast Road, Hicks Bay to Waikura Section (Matakaoa County).*—2 m. 31 ch. formed and 1,294 lin. ft. of culverts placed.

*Tolaga Bay—Arakihi Road (Uawa County).*—77 ch. of formation, 1 m. 79 ch. of metalling, and 246 lin. ft. of culverting completed.

*Moanui Road (Waikohu County).*—60 ch. of engineering survey, 48 ch. formation, and 401 lin. ft. of culverts completed.

*Te Maire Bridge, Wanganui River (Kaitieke County).*—A commencement has been made on this composite truss bridge consisting of one 110 ft., two 60 ft., and two 25 ft. spans on mass concrete piers.

*Wanganui River Road, Te Maire to Kokakonui (Kaitieke County).*—2 m. of formation completed, one 22 ft. and one 28 ft. bridges erected, and 301 lin. ft. of culverts placed.

*Tongaporutu—Mangatao Road (Ohura County).*—1 m. 53 ch. of formation, 2 m. 72 ch. of metalling, and 700 lin. ft. of culverting completed.

*Otunui North Road (Taumarunui County).*—4 m. 16 ch. formed, and 324 lin. ft. of culverts placed.

*Papakauri Road (Waitomo County).*—Two bridges, one 28 ft. and one 52 ft., were erected, and 1 m. 2 ch. formation completed.

*Rangitoto Road (Waitomo County).*—1 m. 14 ch. formed, 1 m. 36 ch. metalled, and 124 lin. ft. of culverts placed.

*Rerekino Road (Clifton County).*—Extended as a dray-road for a further 1 m. 73 ch.; one 59 ft. bridge erected, and 209 lin. ft. of culverts placed.

*Okahu Road (Newall Road—Kahui Road) (Egmont County).*—69 ch. formation, 30 ch. metalling, and 215 lin. ft. culverts completed.

*Rawhitiroa Road (Eltham County).*—1 m. 10 ch. of metalling completed.

*Mabin Road (Lower) (Patea County).*—2 m. 75 ch. of formation done, and 90 lin. ft. of culverts laid.

*Waitotara River Bridge (Waitotara Valley Road) (Patea County).*—This bridge, consisting of one 100 ft. truss, two 40 ft. trusses, and three 25 ft. platform spans, was erected. By the completion of this bridge dray-road access is now available to the Upper Waitotara Valley Settlement.