

more than two-thirds of the steel girders are in position. The permanent track on this section has now been laid for a distance of approximately 12 miles, and a commencement made with the construction of a telephone system paralleling the railway.

*Turakina-Okoia Railway Deviation (Wellington - New Plymouth Railway).—*Progress on this deviation, which will shorten the length and improve the grading and curvature of the existing main line, has been satisfactory during the year, all earthwork having been completed except for bridge approach fillings and a small section at the northern end of the Turakina Tunnel.

A short tunnel of 213 ft. was completed during the past year, and at 31st March, 1940, only 70 ft. of the Turakina Tunnel, which is 104 chains in length, remained to be driven.

Construction of the Wangaehu and Turakina Bridges is proceeding steadily despite delays caused by heavy flooding, and the construction of the Wangaehu Station Yard is well in hand.

Following the completion of a substantial portion of the programme of work, several buildings were dismantled and transferred elsewhere, including some to military camps under construction.

*Palmerston North Railway Deviation.*—With the exception of the goods-yard cutting, formation work on this main-line deviation was completed during the year up to a distance of 6 miles 17 chains, leaving a balance of only 38 chains. Trimming has been carried out as far as the progress of excavation allowed, and the main passenger yard is now about two-thirds complete.

Material excavated since work was resumed in 1938 has reached a total of 197,000 cubic yards, and, including the previous period of construction between 1926 and 1929, the quantity totals 517,000 cubic yards, out of an estimated total of 836,000 cubic yards.

Platelaying and ballasting on the eastern track has been completed over a distance of  $5\frac{1}{2}$  miles, and the second lift of ballast for approximately  $3\frac{1}{2}$  miles. On the western track platelaying has been carried out over about  $2\frac{1}{2}$  miles, but has not yet been ballasted.

Construction of the Mangaone Bridge and also culverting and main-line fencing have been practically completed, while 50 chains of the Whakaronga Deviation, which is 2 miles 15 chains in length, have been formed.

*Plimmerton-Paekakariki Railway Duplication.*—The portion of this work undertaken by the Public Works Department was completed at the end of December, 1939.

*South Island Main Trunk Railway.*—The northern end of this Railway, extending from Wharanui to the Kahautara Bridge, comprises the Clarence and Kaikoura sections.

During the year operations carried out on the Clarence section were principally in connection with excavation and drainage of the Blue Slip. All railway bridges and culverts in this section have been completed, and highway and overbridges are rapidly approaching finality. A commencement has been made with an extensive forestry scheme, designed to stabilize some 1,800 acres of sandhills and waste land adjacent to the railway southwards from Wharanui to Waipapa Bay.

On the Kaikoura section formation has been almost completed over 25 miles of the  $28\frac{1}{2}$  miles in this length of line, and work is well advanced on the remaining portion. Sea-protection measures have been continued, while only 2 chains of tunnelling requires to be done to complete the last of the six tunnels on this section. The erection of the Clarence River Bridge, 1,524 ft. in length, is proceeding steadily, and several smaller bridges were completed during the year or are in course of construction, Owing to rails not being available, platelaying and ballasting has been held up temporarily, though sleepers and permanent-way fittings are on hand.

Regular goods and passenger services were commenced during the year between Parnassus and Hundalee, on the southern end of the railway. Formation has been completed from Hundalee to Claverley Station Yard, and good progress has been recorded on excavation work between Claverley and the Okarahia Stream. The long tunnel through the Amuri Bluff has reached the stage where the headings are expected to meet at an early date, and the driving of other tunnels is proceeding satisfactorily. Further extensive sea-protection work on this section has been carried out where the line of railway closely follows the coast.