

## B. PALMERSTON NORTH DISTRICT.

## 1. CONSTRUCTION.

## (a) POWER-STATIONS.

*Mangahao Power-house and Headworks.*—The construction of the seven new staff cottages was completed early in the year.

*Waikaremoana Power-house and Headworks.*—Eight new cottages in the village were completed during the year, and plans have been prepared for cottages at several linemen's depots, and also for further extensions to the village.

An order has been placed for a third generating-unit, and tenders will close shortly for the corresponding transformer bank. The survey for the third pipe-line having been completed, a contract has been let, and it is expected that construction will shortly be under way.

## (b) SUBSTATIONS.

*Khandallah.*—The reconstruction of the outdoor structure and 110 kv. switch-gear was completed during the year.

The necessary 11 kv. switch-gear and cables have been installed in readiness for the supply to the railway electrification schemes.

*Paraparaumu.*—This is a new substation for a second point of supply to the Horowhenua Power Board. Construction was commenced in September and the substation was put into service in December.

*Bunnythorpe.*—Earthing-switches were installed on four line air-break switches.

*Marton.*—An earthing-switch was fitted to the line air-break switch on the north side of the substation.

*Wanganui.*—The second bank of transformers was installed and put into service.

An 11 kv. potential transformer was installed on the Power Board's structure to facilitate the paralleling of the Arapuni and Mangahao systems when required.

*Okato.*—This is a new substation consisting of a metering-hut, 11 kv. O.C.B., and 250 kw. transformer mounted on a pole structure. This substation is the point of supply for the Opunake Power Board, a new consumer taken over during the year from the New Plymouth Borough Council. Supply was commenced on the 1st November, 1936.

*Opunake.*—Departmental metering equipment was installed in the Opunake Power Board's power-house at Opunake.

*Mangamairi.*—Earthing-switches were installed on the two line air-break switches. A new 11 kv. panel and cable were installed for the second transformer.

A new cottage and single men's quarters were erected during the year.

*Woodville.*—An earthing-switch was installed on the Bunnythorpe West line air-break switch.

*Dannevirke.*—A new 11 kv. panel and cable were installed for the second transformer.

*Napier.*—A new bus-tie air-break switch was installed on the west side of the structure.

## (c) TRANSMISSION-LINES.

*Tuai-Gisborne.*—The duplication of this line between Tuai and Ruakituri, a distance of 16·6 miles, was completed and the line put into service.

*Khandallah-Masterton.*—The survey of the transmission and telephone lines has been completed, but a certain amount of plan work is still outstanding. The track survey has still to be finalized. During the year a large number of deviations were investigated, and a special investigation was made of the geological aspect of the earthquake fault country near Featherston.

*Khandallah-Ngahauranga: Khandallah-Khandallah Railway.*—These two lines, of 50·7 chains and 46·8 chains respectively, for the railway-electrification schemes were surveyed and constructed during the year. Both lines are now ready for use when required, the Ngahauranga line having been already livened up.

## (d) TELEPHONE SYSTEM.

A motor generator ringing set was installed on the telephone system at Tuai Power-station.

## (e) GENERAL.

*Accommodation.*—Due to the modified working-conditions under the recent legislation and other causes, extensive additions to the accommodation at the various substations and power-stations have become necessary.

The following additional accommodation is in course of erection :—

|                              |                                                         |    |    |    |    |    |    |    |             |
|------------------------------|---------------------------------------------------------|----|----|----|----|----|----|----|-------------|
| Napier                       | ..                                                      | .. | .. | .. | .. | .. | .. | .. | 2 cottages. |
| Waipawa                      | ..                                                      | .. | .. | .. | .. | .. | .. | .. | 2 cottages. |
| Dannevirke                   | ..                                                      | .. | .. | .. | .. | .. | .. | .. | 1 cottage.  |
| Hawera                       | ..                                                      | .. | .. | .. | .. | .. | .. | .. | 1 cottage.  |
| Stratford                    | Contract let for one cottage.                           |    |    |    |    |    |    |    |             |
| Wanganui                     | Tenders called for two cottages.                        |    |    |    |    |    |    |    |             |
| Mangahao Power-station       | Site investigated and surveyed for additional cottages. |    |    |    |    |    |    |    |             |
| Tuai Power-station           | Site surveyed for five additional cottages.             |    |    |    |    |    |    |    |             |
| Palmerston North Office Site | Two cottages nearly completed.                          |    |    |    |    |    |    |    |             |

Plans have also been prepared for several single men's quarters, but the contracts have not yet been finalized.

*Palmerston North Office.*—Owing to the greatly increased demand for space by the Civil Branch, plans have been prepared for extensions to the present office and store. The necessary contract is being finalized for this work, including the construction of a garage and workshop, plant-shed, pole-stacking site, and loading-bank.