

Khandallah Substation.—Layout and foundation drawings were prepared for the 20,000 kVA. bank of 110/11 kV. transformers, and the 110 kV. switchgear and steelwork to control this bank and the incoming transmission-line from Masterton. A layout drawing was prepared for the control and relay panels for the 110 kV. switchgear.

Gisborne Substation.—A drawing was prepared for tendering purposes for a 7,500 kVA. bank of 50/11 kV. transformers with on-load voltage-regulating equipment. A design was prepared for alterations to the traverser truck to increase its carrying-capacity to the loading of the larger transformer.

Marton Substation.—The capacity of this substation is to be increased to 4,500 kVA. by the transfer of an existing bank of that capacity at Bunnythorpe and the present temporary wood-pole structure for the 110 kV. switchgear is to be replaced by a steel structure with line-sectionalizing switchgear in addition to switchgear for the transformer bank. Drawings and specifications were prepared for tendering purposes for 110 kV. switchgear and steelwork, and a traverser truck for handling the transformers was designed.

Mangamaire Substation.—Drawings and specifications were prepared for tendering purposes for 110 kV. switchgear, and steelwork for a second 1,500 kVA. three-phase transformer.

Masterton Substation.—Foundation drawings were prepared for 110 kV. switchgear and steelwork for controlling the new Masterton-Melling transmission-line.

New Plymouth Substation.—A drawing was prepared for tendering purposes for a 7,500 kVA. bank of 50/11 kV. transformers to be fitted with on-load voltage-regulating equipment. It is proposed to run duplicate 11 kV. cables from this bank to the New Plymouth Borough Council switchgear with quick changeover arrangements to facilitate restoration of supply in the event of a cable breakdown. Drawings and specifications were prepared for a reinforced-concrete transformer-house to handle the transformers and for a 25-ton one-motor electric crane with which the transformer-house will be equipped.

Stratford Substation.—To provide for extensions of supply from this substation additional outdoor switchgear is being installed to control a second bank of 110/50 kV. transformers of 10,000 kVA. capacity, two 50 kV. lines and a 5,000 kVA. bank of 50/33 kV. transformers. One 50 kV. line will replace the present temporary switching-arrangements for the New Plymouth line, and another is for the new 50 kV. line to Opunake. Drawings were prepared for tendering purposes for the 10,000 kVA. transformer bank and control panels for the outdoor switchgear, and drawings and specifications for the outdoor switchgear.

Kotemaori and Ruakituri Patrol Stations.—Detail drawings and specifications were prepared for tendering purposes for cottages, wagon-garages, and stables.

Akatarawa Linemen's Depot.—Detail drawings and specifications were prepared for cottages, single men's quarters, and garages.

Woodville Switching-station.—A proposed arrangement drawing was prepared for a 110/11 kV. three-phase step-down transformer to give supply to the Dannevirke Power Board at this station. Drawings and specifications were prepared for tendering purposes for a reinforced-concrete switchroom building.

(d) Christchurch District.

Lake Coleridge Power Station.—To meet future operating requirements the 66 kV. switchgear is to be replaced by new equipment of greater rupturing-capacity. The three large generating-units will each be permanently connected to a bank of 6.6/66 kV. step-up transformers and the smaller generating units will be connected in two groups to two other banks of transformers. Except for paralleling small machines within a group, all switching and synchronizing will be carried out at 66 kV., thus obviating the necessity for high-rupturing duty 6.6 kV. switchgear. The whole of the new switchgear and the step-up transformers will be out of doors, thereby freeing considerable space indoors for maintenance-work and storage. Drawings and specifications were prepared for tendering purposes for the new switchgear and steelwork.

Highbank Power-station.—This power-station, which will utilize surplus water from the Rangitata Irrigation Scheme, will include one main generating unit of 25,200 kW. capacity at 0.9 P.F. auxiliary generating-unit to supply machine auxiliaries and excitation and 28,000 kVA. bank of 11/66 kV. transformers. The village and station services other than machine auxiliaries will be supplied from a 66,000/400 V. service-transformer bank. The generating-unit will have the highest output of any installed in the Dominion to date. Initially the station will be arranged for attended operation, but provision is being made for supervisory control from Hororata at a later date. Drawings and specifications were prepared for tendering purposes for main and auxiliary generating-units, 66 kV. switchgear, low-voltage switchgear and control equipment, main and service transformer banks, water rheostat and control equipment, 90-ton crane, and oil storage and handling equipment.

Waitaki Power-station.—In connection with the installation of Nos. 3 and 4 generating-units, drawings and specifications were prepared for power and control cables, cable-boxes, outdoor distribution boxes, and control gear for headgates. Foundation drawings were prepared for 110 kV. outdoor switchgear and steelwork.