

Flood-protective works have also been constructed at Waimea Creek, Back Creek, Island Creek, and Ten-mile Creek, and fourteen passing-places have been formed.

*Arthur's Pass—Kumara.*—Washout at Aickens : Exceptionally heavy rains during the latter part of the period caused the Taramakau River to change its course, and necessitated the reconstruction of 11 ch. of road and the building of a diversion groyne near Kelly's Creek, and protective work at the Wainihinihi River.

*Reefton—Maruia.*—Improvements have been effected at Menzie's Bluff and Palmer's Corner. Three small bridges have been constructed at the Springs end, as well as a temporary bridge over the Inangahua River.

*Earthquake Damage Reconstruction.*—The section of the Westport—Karamea Main Highway which suffered the greatest damage was the 21 m. length between Mokihinui and Te Namu. Reconstruction work was pushed ahead from both ends. The pack-track first formed was widened to 10 ft. and later to 16 ft., and the work of placing culverts and improvement of curves put in hand.

Damaged bridges have been replaced by temporary structures, four having been built, while at other streams fords have been provided. Thirty-four culverts, of an aggregate length of 754 ft., have been installed.

A length of 58 chains of road at Kongahu which subsided has been raised 3 ft. throughout.

The formation of the south approach to Tidal Creek Bridge has been completed, and materials for the bridge ordered.

Although traffic was allowed to use the road on certain days for some time previously, it was not fully opened until the 1st April, 1931. On the 3rd April heavy floods occurred and slips entirely blocked the road for some weeks.

On the Westport—Nelson Main Highway the works carried out included the relocation of 60 ch. of roadway at the Four Mile slip and the elimination of a bad curve at Lyell. The road was opened for traffic on the 1st November, 1930, but has since been blocked by slips on several occasions for one or two days. Structural work carried out consisted of the building of stone retaining-walls, the construction of two arched concrete culverts, a temporary bridge, and the installation of 1,021 ft. of concrete-pipe culverts.

*Picton—Bluff (No. 13 Highway District).*—Waipara County Section—Waipara—Omihī : 6 m. 24 ch. of bituminous sealing has been completed.

Omihī—Motunau : A contract has been let for the reconstruction and sealing of 6 m., and the work is in progress ; 3 m. of the reconstruction has been carried out.

Hurunui—Waipara : The widening and improving of sharp bends has been completed on 46 ch. of road.

Kaikoura County Section : 2 m. has been widened at Hundalee.

Lambrook Bridge : This bridge, a timber structure on concrete abutments, has been completed.

*Waipara—Kaikoura, via Culverden.*—Waipara County Section.—Weka Creek—Waikari : A deviation 36 ch. in length has been formed 24 ft. wide at Weka Creek, and 1 m. 5 ch. of road has been improved by widening.

Waipara River—Waikari : 4 m. of bituminous sealing on this section at the Waipara River end has been put in hand, and 40 ch. of the first coat has been applied.

Amuri County Section : 30½ ch. of two-coat sealing 40 ft. wide has been applied through the Culverden Township.

Kaikoura County Section—Goat Hills Creek Bridge : A 20 ft. span bridge has been constructed on concrete abutments.

*Waikari—Waitohi.*—Bituminous Sealing : 4 m. 50 ch. of sealing has been carried out, making a total of 6 m. to date. The road is now sealed from Waikari through the Hawarden Township to the railway crossing.

*Dashwood—Upcott.*—Awatere River Protective Works : Protective works at Woodman's Bend were carried out. This work consisted of erection and repair of groynes, placing of concrete blocks, and construction of stone facing to groyne.

*Picton—Bluff (No. 14 Highway District).*—Waimairi County Section : A Portland-cement-concrete pavement 18 ft. wide has been constructed between Christchurch City boundary and Northcote Road, the distance being 58·65 ch.

*Waimakariri River Bridge.* : The construction of this bridge, consisting of twenty-nine 40 ft. spans on reinforced concrete piles, with 20 ft. concrete deck, has been completed.

Kaiapoi Borough : A Portland-cement-concrete pavement 18 ft. wide has been constructed through the borough, a distance of 1 m. 21·7 ch.

Rangiora County Section—Woodend—Ashley River : 1 m. 7 ch. of bituminous-concrete pavement has been constructed, completing the contract of 3 m. 47 ch.

Paparu County Section—Junction at Sockburn : A bituminous pavement, 8½ ch. in length, has been constructed, 5 ch. on the Christchurch—Dunedin and 3½ ch. on the Sockburn—Southbridge Highway.

Riccarton Borough—Bituminous Surfacing : The surfacing of two strips of road 12 ft. 6 in. and 13 ft. 3 in. wide, for a distance of 1 m. 20 ch., has been carried out in three-coat sealing.

Selwyn County Section—Culvert at Dunsandel : A reinforced-concrete 6 ft. culvert, 40 ft. in length, has been constructed.

*Christchurch—Chaney's, via Marshlands.*—Bituminous Surfacing : 3 m. 56 ch. from McSaveney's Road to Chaney's has been sealed in three coats.

*Woodend—Rangiora.*—A bituminous-concrete pavement, 3 m. 56 ch. in length and 18 ft. wide, has been completed.

*Christchurch—Akaroa.*—Wairewa County Section—Prices Valley Bridge : A 22 ft. bridge, 18 ft. wide, in steel and concrete, has been completed.