

The old freight-car shop has a capacity of 25 to 30 cars per day. It has four tracks for erection purposes, each 540 ft. long, besides intermediate supply tracks. Six travelling cranes fitted with air hoists are in operation over its width of 107 ft.

The old passenger-car shops are 100 ft. wide and 672 ft. long. There are four of them, each having 28 tracks spaced at 24-ft. centres. They are served by a transfer table over which operates an electric crane with 75-ft. span.

Power for mechanical and lighting purposes is generated in a central plant, equipped with seven 415-h.p. boilers, working under 150 lb. pressure, one 150° super-heat boiler, and one boiler for testing up to 300 lbs. The plant includes three 750-h.p., cross compound, non-condensing engines, connected to 500-k.w. a.c. generators, at 150 r.p.m. These units provide all light and power excepting that necessary for variable speed tools and for cranes. A special d.c. generator, driven by a 300-h.p. simple engine at 180 r.p.m., supplies this. The plant is fully equipped with motors of varying capacities and speeds.

The new shops, added in 1913, and used exclusively for the construction of steel passenger and freight cars, have a capacity for 10 of the former per month and 8 of the latter per day. The freight-car section added over 41,500 sq. ft. and the passenger-car section over 47,000 sq. ft. to the total floor area of the plant. The truck department of the old shop supplies the trucks for both the new additions, apart from which the latter are practically complete in themselves.

The steel shop proper consists of two 100-ft. bays running parallel and one 72-ft. bay, 405 ft. long, at right angles to them. The passenger shop erecting section is composed of four 27½-ft. bays, 202½ ft. long, at right angles to the 100-ft. bays and parallel to the freight section. The crane service includes a 10-ton travelling crane of 96 ft. 3 in. span, on a 309-ft. runway covering the material section of the shop. There is a 10-ton crane of like span in each of the bays. All these cranes provide a headroom of 27 ft.

In the erecting section of the freight shop there is a 10-ton crane of 67½ ft. span and 35½ ft. headroom. In the passenger shops 4 cranes, each of 2-ton capacity, 24 ft. 10 in. span, and 20 ft. headroom are used for handling light material.

The new building is of steel with brick walls, the design specially providing for a large area of light, the window space occupying about 30 per cent. of the total wall space.

In each shop there is a very systematic routing of material and of operations, from the point where the trucks are brought in until the finished cars are reported for service. There is a decided uniformity in both shops in the arrangement of machinery, and in the method of handling supplies.

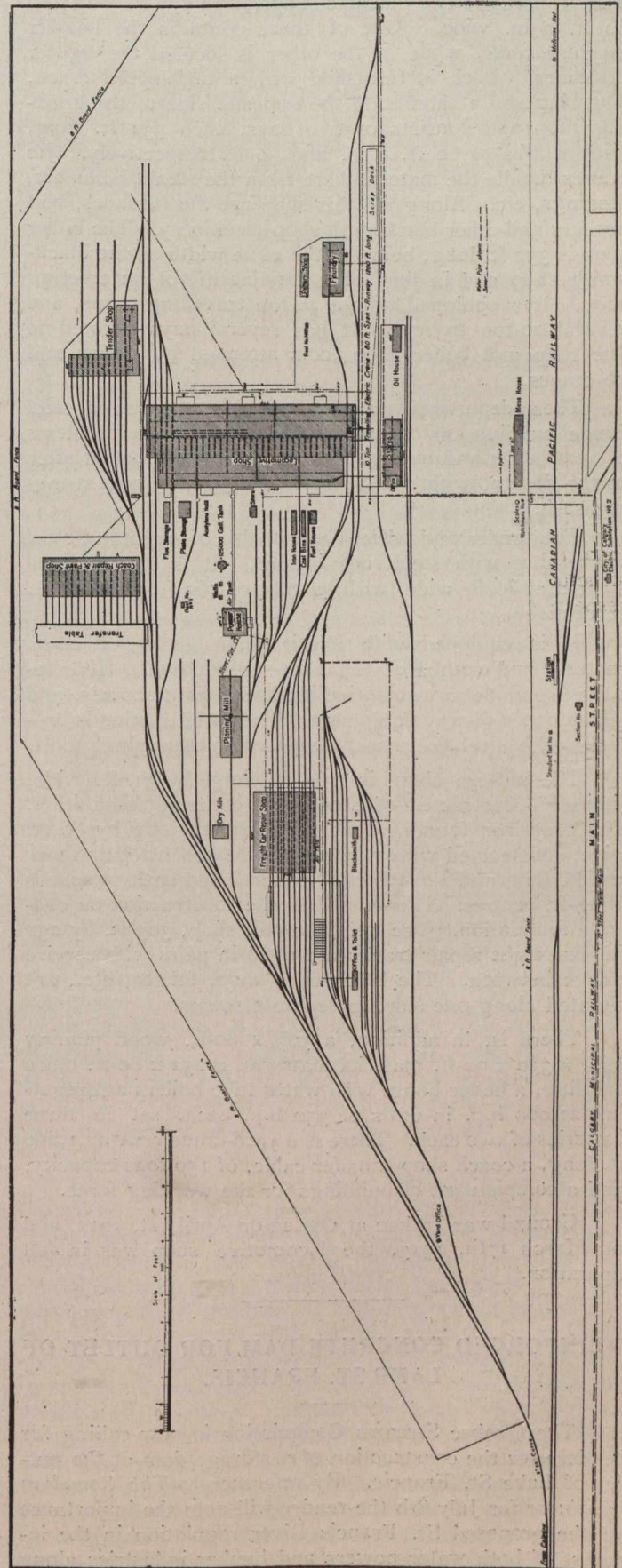
There are many items of note to engineers regarding structural features, water supply, sewerage system, fire protection, etc., as well as engine machinery and equipment.

The Ogden Shops.

This system of shops is situated on a stretch of open prairie about 4½ miles from Calgary, being distant from its eastern complement by some 2,250 miles. The Ogden shops consist of a main locomotive shop, including boiler, machine, blacksmith and erecting shops, repair shops for

both passenger and freight cars, and the necessary pattern shops, planing mill, foundry, tender and wheel shops.

The locomotive erecting shop is of the transverse lift-over type, 778 ft. long and 75 ft. wide. It contains 35



The C.P.R. Shops at Ogden, Alberta.