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Canadian Pacific Railway Locomotive Shops at North Bay.

The great increase in traffic on the Lake Superior division, C.P.R., so far outstripped the facilities for handling the equipment, that it became necessary to consider the enlargement of the divisional shops at North Bay, Ont. Work was commenced early in 1913, requiring about a year to complete. The project included, not only the extension of the shops, but also the mechanical yards, involving the reclamation of a small section of land along the shore of Lake Nipissing. The general layout of the extensions made is shown in the accompanying plan of the shops and mechanical yards. A complete description of the general scheme appeared in Canadian Railway and Marine World, Dec., 1913.

The motive power accommodation prior to this change consisted of a 23 stall locomotive house, with small machine and blacksmith shops attached to the west end, as shown in the accompanying yard plan. This combined building was of a heavy masonry

planking on cedar sills on a 12 in. cinder base. The locomotive doors along the west side are 12 ft. 7 ins. by 17 ft., formed top and sides of 12 in. 20½ lb. channels.

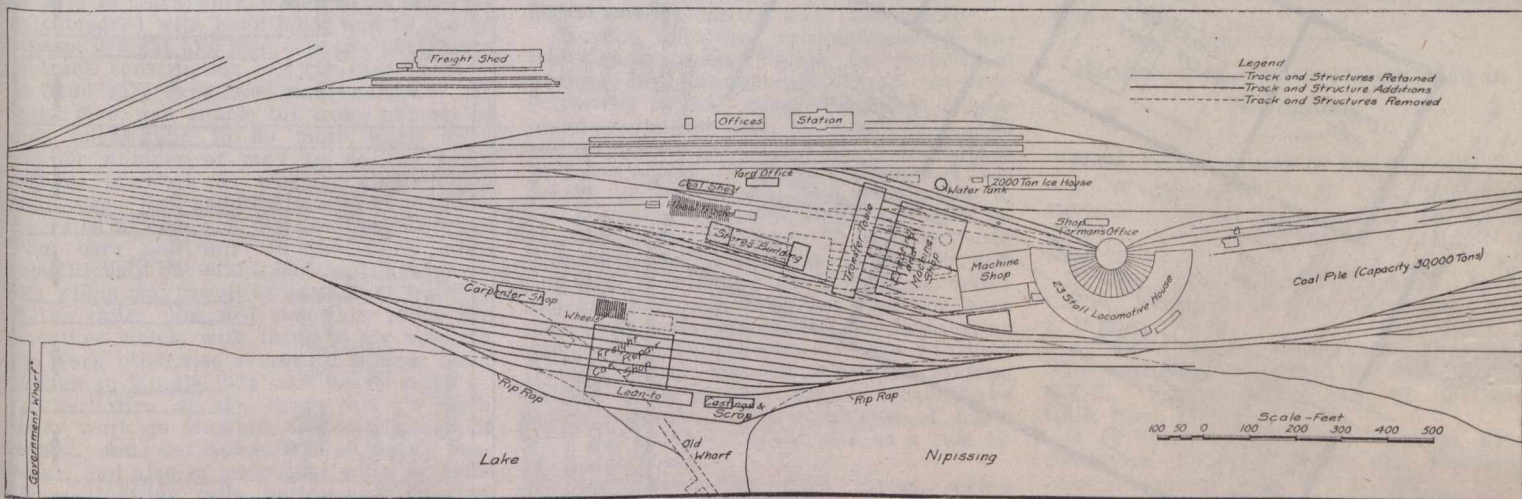
The machine shop, to the east or rear of the erecting shop, is of the same length, but 80 ft. wide and 23 ft. high, of a similar construction to the erecting shop, except that narrower bays are used, with steel I beams on steel columns at 26 ft. centres, forming three bays the length of the shop, with a similarly constructed wing along the face of the old machine shop. The floor is of 3 in. planking on cedar sills.

The track running from one of the locomotive shop stalls through into the old machine shop, is extended through the new machine shop and erecting shop as one of the central pit tracks, through which work can be handled back and forth between the shops and the locomotive house. Another track extends longitudinally through the central machine shop bay, connecting

sills, and the end walls of 2 in. planking and round cedar posts.

The locomotive shop is situated directly across from the southeast corner of the station building, a crossing over the station tracks leading directly to the locomotive shop transfer table, a concrete retaining wall at the north end of the transfer table providing for the change in elevation between the shop tracks and those on the main line, the latter some 3 or 4 ft. above the shop level.

The foreman's office, in the northeast corner of the shop near the main entrance door, is light and roomy, 20 by 25 ft., glassed in on the two shop sides, and is amply large enough for the general foreman and his complete staff. In addition to the usual desks and filing cabinets, there is a locomotive shopping schedule, somewhat similar to that in use at the company's Angus shop, but simpler to meet the more limited requirements of a small shop. It



Plan of Shops and Mechanical Yards, Canadian Pacific Railway, North Bay, Ont.

construction, and has been retained in the new layout. To the west of this building, and adjoined thereto, there has been added a combined machine and erecting shop, served by a transfer table along the west frontage of the shop. The erecting shop is 70 by 208 ft., and 43 ft. high, of steel frame construction, resting on concrete foundations. The shop width is spanned by 70 ft. steel trusses, resting on 12 in. 40 lb. I beam columns at 20 ft. centres. It is served by a 5-ton travelling crane operating the full length of the shop, on runways composed of 15 in. I beams, with 56 lb. rails on top. The roof is of mill construction, with 8 by 14 in. purlins, at 8 ft. centres, carrying a 3 in. plank roof, surfaced with tar and gravel. The erecting shop bay contains 10 tracks, each with a convex bottom, concrete locomotive pit 4 ft. wide and 3 ft. deep, and one pit provided with an electrically operated lift for jacking up locomotives for wheeling. Over the main walls of each locomotive pit, the flooring is of heavy 6 in. planking, about 3 ft. wide, to provide a solid jacking surface under the sides of the locomotives. The balance of the erecting shop floor is laid with 3 in.

through a turntable with the locomotive house track, and at either end with outside tracks along the north and south sides of the building, through similar turntables. The two northerly erecting shop pit tracks are extended through to this longitudinal track, forming track space for handling the tender and truck repairs.

There is a 50 ft. transfer table along the full length of the west side of the building, taking in each of the outside end service tracks. Between the transfer table and the building, there is a 40 ft. space for locomotives awaiting entrance to the shop, and across the transfer table there is a similar storage space, abutting against an earthen wall, the shop level being slightly below that of the surrounding ground level. Shop entrance is thus through the two end service tracks, locomotives entering from either side of the yard through either of the run around tracks. A track paralleling the southerly run around track passes by the stores building, facilitating the handling of stores to the shops, over the transfer table. The transfer table runs on 4 tracks. The side walls of the transfer table pit are composed of 8 in. square timbers resting on

has only been introduced recently, but has been found very satisfactory in properly routing the locomotives through the shop, and scheduling each part of the work depending on the nature of the repairs, so that they should be completed by a given date. The time of shopping is thus closely checked.

The erecting shop occupies the whole of the westerly bay, and contains 10 tracks as mentioned, the depth of the erecting shop being 70 ft. Each track in the erecting shop contains a locomotive pit, 50 ft. long, with the northerly pit equipped with an electric wheeling jack. A special feature is the whitewashing of the pits,—bottom, sides and ends—once a week. They are built of concrete, and in consequence of the whitewash will take a good finish. The advantage in the white finish is twofold; not only does it facilitate the handling of repairs in the pit, by giving the workmen better lighting conditions, but it also enables the foreman to see at a glance just what work is progressing in the pit, and to note that the men are not "soldiering" on the job. It is remarkable what a difference in the pit lighting this simple expedient