The Greater Winnipeg Water District (GWWD) Station marks the start of western Canada's longest industrial railway line, built in 1913-14 to carry supplies and labour for construction of intake facilities and a 156-kilometre aqueduct extending from Shoal Lake on the Manitoba-Ontario border.

This massive project, dubbed one of "the world's greatest engineering works," was completed in 1919 at a cost of more than $13 million. At the time, population and economic activity had been expanding rapidly in the Winnipeg region and existing water sources, including local rivers and artesian wells, were not adequately meeting demand.

Indeed, as early as 1883, the Lake of the Woods had been suggested as a possible alternative source. A 1907 study recommended the Winnipeg River, while in 1912 engineers supported the option of building an aqueduct to move water by gravity from Indian Bay on Shoal Lake to local reservoirs. The latter proposal prompted Winnipeg, St. Boniface, Transcona, St. Vital, and parts of Kildonan, Assiniboia and Fort Garry to form the GWWD in 1913 and jointly build the
aqueduct.
The site of the St. Boniface Waterworks Pumping Station on the south side of Plinguet Street between Rue Archibald and Dawsons Road became the aqueduct's terminus. The initial phase of the project involved surveying the route for the water conduit and establishing the adjacent rail line. This was followed in 1915-19 by development of the 'arch and invert' concrete aqueduct, plus canals, dykes, a concrete intake, and screening devices at Indian Bay. Chief engineers were W.C. Chase and Associates, while the three main Winnipeg-based contractors were J.H. Tremblay and McDiarmid Co., Thomas Kelly and Sons Ltd. and the Winnipeg Aqueduct Co.

The system's gravity feed, coupled with a reservoir and pumping station, enabled delivery of up to 38.64 million decalitres of water a day. This capacity was increased in the 1950s to a maximum 45.5 million decalitres when booster pumping stations, additional reservoirs and a 19.3-kilometre extension of the aqueduct were built.

The GWWD Railway continued to operate after 1919, serving for many years as the only communication link between the utility's St. Boniface complex and Indian Bay. To help defray costs, the railway carried west-bound freight such as firewood, pulpwood, poles, railway ties, ice, mail, milk, gravel, and sand. It also moved passengers to/from homesteads and summer cottages which opened up along its route through southeastern Manitoba.

The railway's original frame station was replaced in 1927 by a more ornamentally rich, one-storey building at the southwest corner of Plinguet and Dawson. This structure features red flint stone facing, square concrete beams and columns, and a partial concrete basement. The irregularly shaped pieces of flint stone, quarried along the GWWD's right-of-way, were laid randomly to provide a textured appearance.

Other design highlights include a small rectangular bay window on the track side of the station, which gave railway personnel a better view of the platform, track and train, plus gabled parapets graced with semi-circular openings along the roof-line. These parapets are at both ends of the structure; there also is a cross gable over the centre bay window. Elsewhere, the building's plain openings are finished with stone lug sills.
The interior initially was divided into a north-end waiting room, south-end baggage room and cold storage area, and office space for the station master in the centre.

As the GW WD's activities increased, its St. Boniface complex grew to include several shops, storage facilities and some staff housing. However, its tri-weekly railway passenger service eventually was reduced, then discontinued in September 1977. Summer excursions subsequently ended in 1982. The station was converted to offices, including installation of a false ceiling, new lighting and additional partitions.

William Fingland was the local architect who designed the railway station. He designed numerous houses and apartment blocks in Winnipeg. His practice stretched into Saskatchewan and Alberta including work on the design of the Alberta Legislative Building. He was a member of the City of Winnipeg's Building Committee, the Fire Prevention Committee and worked to frame city by-laws with respect to architectural concerns.