Case History

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OLD WATERWORKS

Guelph Waterworks Engine House and Pumping Station (locally known as “Old Waterworks”) is located at 29 Waterworks Place in the city of Guelph, Ontario, Canada. It provides a visual reminder of the early development of public works and municipal services in Guelph and their evolution through time.



Built in 1879, the Old Waterworks is associated with the development of public works and municipal services in the city of Guelph’s water needs - which prior to 1879 were met by private wells, cisterns and the Speed River. Built initially to provide a reliable source of water for firefighting, the Guelph Waterworks engineering design employed the “Holly System”, which used a reservoir and standpipe to supply pressure for firefighting purposes. With the discovery of a natural spring during the excavation for the Waterworks, the function of the Waterworks was extended to supplying water to Guelph residents for domestic purposes. The building is a rare example, in Guelph, of a public building designed in the Italianate style and rendered in local limestone. Elements of the Italianate style include the raised architraves, the square, curved and round structural openings and the paired roof brackets supporting the gable roof. It was designed by Guelph City Engineer T.W. Cooper, who also directed its construction. It is also associated with Guelph's most prominent stone cutter, Matthew Bell, who carved the stonework around the entrances and windows of the building. Matthew Bell is best-known for his work on Guelph's landmark, Church of Our Lady.
The single story limestone wing was constructed in 1908. The property was designated, by the City of Guelph in 1997, for its heritage value, under Part IV of the Ontario Heritage Act under By-law 1997-15462







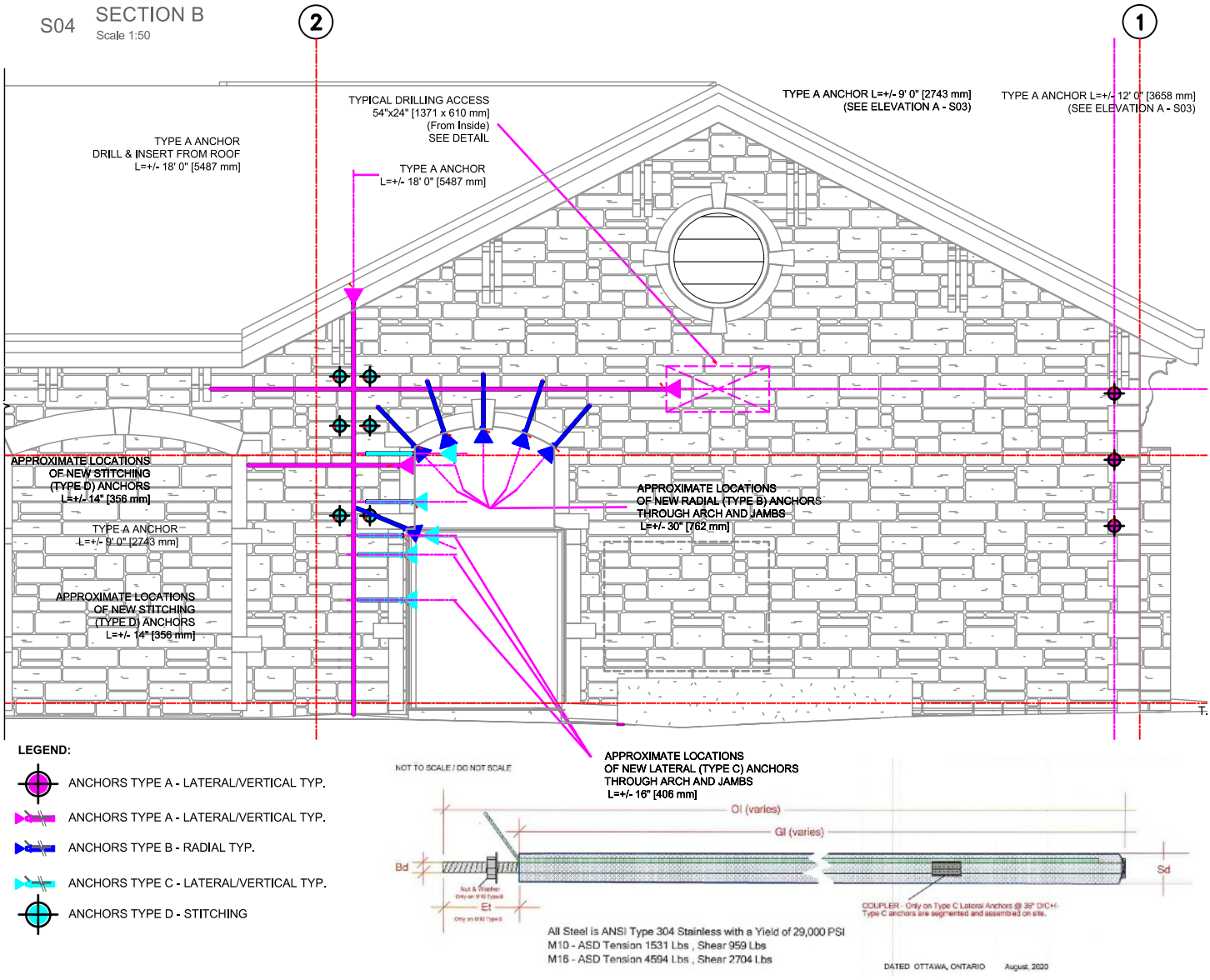
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Tim Van Zwol Regional Manager / Associate Read Jones Christoffersen Ltd. Kitchener Ontario had determined that the building suffered similar problems as many rubble filled structures – stress cracks and delamination. The solution was fairly straight forward and consisted of the use of Cintec cementitious anchors for “stiching’ inner and outer stonework and in-plane anchors for strengthening walls as required. What was unique, due to project requirements and limitations, was the placement of the horizontal in-plane anchors. Because of their locations and the need to install from the inside, inner wall sections about 54 inch long X 24 inch high were removed to allow drilling and subsequent anchor installation. Because of the restricted space, these anchors were installed in segments not exceeding 3 feet in length. When coupled on site, overall anchors were as much as 18 feet long with one continuous sock and fill point.

Anchor installation was completed by Robertson Restoration of Brantford, Ontario, Canada. Robertson had prior experience with the use of the Cintec Reinforcement System so, other than the unique segmented anchor approach, installation was not a particular challenge.

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