

Woodward Upgrades Project Newsletter

A part of the Clean Harbour Program

January 2019

Electrical Power Centre

The existing Wastewater and Water Treatment Plant Electrical Substations have been in service for over 40 years, and are near the end of their normal service life. These substations are approaching full load capacity and do not have sufficient capacity to accommodate the upgrades and expansion of the Woodward Avenue WWTP.

To support the progressive advancements currently planned through the Woodward Upgrades Project and future goals, the need for a new power centre was apparent.

Electrical Power Upgrades Include:



- Secure and reliable power to both the Water and Wastewater treatment plants
- Standby generation to service essential loads to both the Water and Wastewater Treatment Plants by installing 4-3,000kW diesel generators for a total of 12,000kW of power, with the option to install 2 more in the future for a total of 18,000kW of power
- Two (with the provision for two future) incoming 13.8kV Alectra utility feeders to accommodate the increased upgrade loads
- Dual 13.8 kV loop around the entire Woodward site will allow service to all load centres. Each load centre will have local switchgear to connect local transformers to suit individual process needs



Collective Ownership

LOOKS LIKE

We build relationships across departments/divisions to achieve our objectives and bring the ideas of others forward.

SOUNDS LIKE

We raise good ideas with ease and have an eagerness to discuss and generate new ideas.

FEELS LIKE

Each and all of us understand how what we do affects the work of others and the results we achieve.

Your Voice Matters

Not only will the new Electrical Power Centre provide increased reliability and function, it will bring style and design to the Woodward Ave location. During the detail design phase, Geoff Botha, a City team member suggested utilizing the 6 generator exhaust stacks to represent the 6 pillars that make up the City of Hamilton's iconic "H" logo, representing the 6 communities that were brought together under amalgamation. This dramatic piece of art will be a proud nod to the City we serve and is a testament to the corporate pillar of collective ownership.



Main Wastewater Pump Station

Progress to Date



Construction: May 2017 - May 2021

Construction of the wet well and dry well walls for the new pump station continues to be the focus of the MPS project. The structure below ground is starting to take shape with initial concrete pours of the dry well, wet well and wet well divider having taken place. The permanent concrete liner for the tunnel connecting the influent pipe to the pump station has been completed, and the headworks bypass chambers were completely constructed and leak tested.



Power Centre & Chlorination Upgrades

Progress to Date



Construction: Oct.2017-Jun.2021

Foundations for the Electrical Power Centre building are 95% completed and construction of masonry and steel for the structure continues. Underground utilities are 85% complete, and underground duct bank installations are 80% complete. Electrical conduit rough-in installations continue while fabrication of a number of electrical transformers has been completed. Installation of the new Air Padding system for the Chlorine system is underway, while the foundation for the new Dewatering building electrical room is nearly complete. The new Chlorine Evaporator and Chlorinator for the WWTP were installed and associated pipework installation continued.



Biosolids Management

Progress to Date



Construction: Jun.2017-Apr.2020



Installation of two wet sludge storage silos is now complete. The silos are 20.6m tall and each has the capacity to store 450m³ of sludge before entering the drying process. Construction of all four concrete shear walls, installed to resist lateral forces such as earthquakes and high winds, has reached completion and installation of structural steel has commenced. Work is ongoing in the basement of the facility involving concrete work, installation of drain piping and process equipment.

Tertiary Treatment

Progress to Date



Construction: Apr.2019-Feb.2022

The Request for Tender was released for the Tertiary Treatment Upgrades on December 6th, with construction anticipated to begin April/May. The City is currently in the process of seeking all required approvals, including an amended Environmental Compliance Approval (Sewage) with the Ministry of the Environment, Conservation & Parks (MECP).

