

Tower Site Selection Report

Services Planned for the Tower

The tower will support the following municipal services:

- **Point-to-Point Network Connectivity**
 - **Craigleith Wastewater Treatment Plant** - Primary connection to the Town's private WAN (wide area network), enabling direct access to Town-hosted files, applications and services.
 - **Happy Valley Reservoir** - Backup connection to maintain service continuity for this facility.
 - **Old Fire Hall 2 / New Fire Hall** - Backup connectivity providing redundancy for both locations.
- **Fire Services Communications**
 - Two-way base station radio integrated with the Fire Hall public address (PA) system.
- **Advanced Metering Infrastructure (AMI)**
 - Enhanced connectivity for the area surrounding the Fire Hall including the Home Farm, Parkbridge, and Eden Oak developments, approximately 600 new units.

Tower Height and Type

To ensure reliable line-of-sight above surrounding tree cover and existing structures, our point-to-point vendor has recommended a tower height of approximately 80 feet.

The tower will be a free-standing lattice style structure to minimize visual impact and footprint. Tower will also be CSA rated.

Recommended Location - New Fire Hall Property

Given the nature of the services being supported, the tower must be located at or near the facility it serves. As this infrastructure is critical to Fire Services operations, the Town's preference is to own the tower and all

associated equipment. This ensures timely access for maintenance and service restoration, while allowing the Town to retain full control over the wireless spectrum used on the tower, supporting effective management, troubleshooting, and optimization of services. Construction of the tower can occur concurrently with, or immediately following, the Fire Hall build, ensuring services are brought online in a timely manner.

Alternate Locations Considered:

People Care Facility - Not a viable site for FH2 communications infrastructure.

- The proposed building height is approximately 50 feet. To meet the required tower height of 80 feet, an additional 30-foot mast would be necessary. In our view, when compared to a free standing 80-foot tower at the Fire Hall this would be visually unappealing and would have a negative impact on the surrounding landscape.
- Adding a 30-foot mast would also likely require additional structural considerations for the facility itself.
- As the Town would not own or control this facility, access for maintenance and the ability to manage wireless spectrum would be uncertain. This could introduce challenges in ensuring timely repairs and effective operation of the equipment.
- Unknown construction date for this facility, the Fire Hall needs these services up and running to be fully operational.

Happy Valley Reservoir - Not a viable site for FH2 communications infrastructure.

- This location would not provide any additional redundancy for point-to-point communications as line of sight is restricted.
- The existing point-to-point connection to the Craighleith Wastewater Treatment Plant operates at very low bandwidth, limiting its effectiveness.
- There would be no improvement to Area Metering Infrastructure (AMI) services for new developments, as a collector is already in place at this site.

