

Brompton Road Reconstruction & Watermain Relining

Spring/Summer 2022 - Reconstruction of
Brompton Rd. and watermain relining along
Newton Ave., Stadler Ave., and Frost St.



The Township of Red Rock has identified the following infrastructure problems at the northwest corner of the town:

Brompton Road from Rouse Street south to the cul-de-sac.

- Historical water quality issues along this length of Brompton Road.
- Dead end at cul-de-sac requires constant release of treated water at the bleeder station to ensure proper residual chlorine levels.
- There may be an area with minimal slope in the sanitary sewer main.
- Poor surface drainage throughout.
- Poor condition of asphalt, curbs, and gutters.

Stadler Ave. south of Rouse St., Frost St. between Stadler Ave. and Newton Ave, and Newton Ave south of Taylor Ave.

- Historical water quality issues in this area.
- Known aged, deteriorated watermains in this area based upon 2012 emergency watermain replacement along Frost Street between Newton Ave. and Taylor Ave.

Introduction



Purpose

Based on a study conducted in 2021 by JML Engineering, the following objectives are highlighted:

- Improve water quality to residences along Brompton Rd, Stadler Ave, Newton Ave, and Frost St.
- Address water quality at the Brompton Rd. cul-de-sac and eliminate the bleeder station.
- Improve storm and sanitary sewer infrastructure along Brompton Rd.
- Reconstruct asphalt and curb and gutters along Brompton Rd.

Existing Conditions: Asphalt, Curb and Gutter

Deficiencies at the asphalt, curb and gutter include the following:

- The asphalt pavement along Brompton Road is generally in poor condition.
- The concrete curb and gutters along Brompton Road are generally in poor to fair condition.



Asphalt pavement along
Brompton Road



Deterioration of curb and gutter

Existing Conditions: Watermains

Deficiencies of the watermains include the following:

- Residents near the intersection of Stadler Avenue and Frost Street frequently report low water pressure.
- In 2012, a section of watermain along Frost Street was replaced. This section of watermain was in poor condition and contained severe corrosion and perforations. The watermain in this area is the same age as the watermains along Stadler Avenue, Frost Street and Newton Avenue.
- Water quality is poor along Brompton Road, Stadler Avenue, Frost Street, and Newton Avenue.
- The watermain at the intersection of Rouse and Brompton is shallow and the intersecting water service lines have experienced freezing in the winter.
- A bleeder station exists at the end of Brompton Road to ensure water quality at the dead-end watermain. The bleeder station runs continuously, and a significant volume of water treated is wasted annually.



Severe corrosion and perforations at the existing pipe (2012)



Bleeder station at the end of Brompton Road.

Existing Conditions: Sanitary and Stormwater Systems

Deficiencies of the sanitary and stormwater system includes the following:

- The sanitary sewer main is too flat. Sanitary sewer flow is impeded.
- The sanitary sewer and stormwater pipes at various locations are in poor condition.
- Perforations, standing water, and joint leaks at the stormwater pipes between various storm manholes.
- The storm manholes are generally in poor condition.



Severe corrosion and section loss at barrel.



Storm sewer manhole in poor condition throughout

Proposed New Construction

- Replace asphalt complete with new granular base/subbase along Brompton Road within the limits of the project.
- Replace all curb and gutter along Brompton Road within the limits of the project.



- Repair/replace existing storm/sanitary manholes and pipes.
- Replace sanitary and storm sewer lines to increase slope and improve flow.



Proposed New Construction (continued)

- Replace the existing cast iron watermain along Brompton Road with a new PVC watermain.
- Provide a PVC watermain extension from Stadler Avenue to Brompton Road along the easement/trail and a watermain looping solution to the dead-end at Brompton Road to eliminate bleeder station.
- Reline watermains along Stadler Avenue, Frost Street, and Newton Avenue.



New watermains



Pipe relining



Relining Benefits

- After considering various options, the watermains should be relined using cement mortar.
- Cement mortar lining continues to be used by other municipalities in the region as a cost-effective method to extend the life of watermains vs replacement.

NOTE: Temporary, potable water service will need to be provided, as required, for the duration of the new watermain replacement and relining work to ensure residents impacted adjacent the watermain works continue to receive water throughout construction



Watermain Relining Procedure:

1. Access pits are excavated at each end of the pipe to be relined.
2. The watermain is cut at each end.
3. The watermain is thoroughly cleaned.
4. A CCTV camera inspection is done inside the watermain.
5. Cement mortar lining is sprayed around the inside of the pipe and trowelled smooth.
6. The pipe is flushed, disinfected, and pressure tested.
7. Water service lines are cleared by back flushing.

Temporary Residential Water Supply

- Temporary water supply will be provided to residents by connecting to hose bibs for the duration of watermain replacement/relining.
- The temporary water supply line will run along the gutter and be covered by cold mix asphalt at each driveway.
- The temporary water system will be flushed, disinfected, and tested to ensure quality.



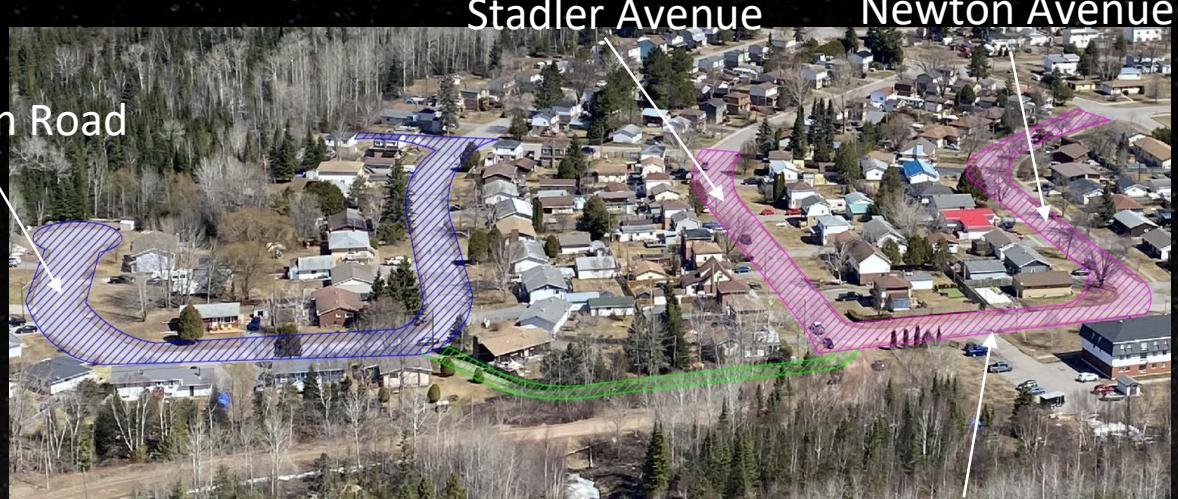
Construction Schedule

Construction is planned for the spring/summer of 2022.

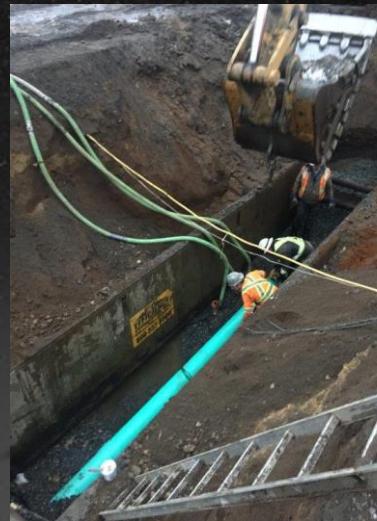
The estimated length of construction is between 18 – 22 weeks.



Brompton Road



Frost Street



Construction Cost Estimate

The following is the estimated construction cost to complete the work is as follows:

	Construction Cost	H.S.T.	Total Estimated Cost
Brompton Road	\$ 2,200,000.00	\$ 280,000.00	\$ 2,480,000.00
Watermain Looping and Extension	\$ 205,000.00	\$ 25,000.00	\$ 230,000.00
Watermain Relining	\$ 345,000.00	\$ 45,000.00	\$ 390,000.00
<u>TOTAL</u>			<u>\$ 3,100,000.00</u>

Note: A contingency in the amount of 10% has been included in the estimates above.

This project is funded in part by the Government of Canada and the Government of Ontario.

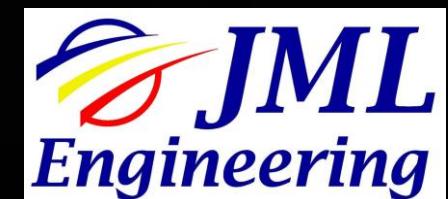
Homeowner Opportunities Along Brompton Road

- During the watermain replacement, water service lines shall be reconnected to the new watermain and can also be replaced in the street right-of-way. The homeowner has the opportunity to increase the diameter of their water service line to their house at their own cost. A larger water service line will allow increased flow to the house. Please let us know if you are interested in water service line replacement.
- During paving of Brompton Road, driveways could be repaved by the Contractor while they are on site, providing good value to homeowners. Inquiries can be directed to the Contractor during construction.

If you have any questions or comments about this project, please contact one of the following:



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