

Sanitary Sewer Management Plan

District of Barriere



ENGINEERING ■ PLANNING ■ URBAN DESIGN

October 2012

Project No. 346-164

Table of Contents

Section A – Project Overview..... 3
Section B – Project Description..... 4
Section C – Additional Information..... 5



Section A – Project Overview

This project is part of the overall sanitary collection system that will service the community of Barriere and deliver the area's sanitary flows to the future Solar Aquatics Wastewater Treatment Plant.

It is currently proposed that 975m of 75Ø CL150 C900 PVC forcemain from the main lift station, as well as 825m of 200Ø SDR35 PVC gravity sewer main be directed through four (4) Provincial Crown Lots as opposed to along the Airfield Road right-of-way. The District already has a Licence on the northerly three lots for community recreation and wastewater uses.

The rationale behind utilizing the proposed right-of-way through the Crown lands is a significant cost savings for the course of this project, which is being funded through the Innovations Fund of the Gas Tax program, as well as a greatly reduced impact on the community during the course of construction. The majority of the proposed SRW overlays an old airstrip which is currently used as gravel parking for the community park land uses. As such, it can easily be rehabilitated back to parking/grass. At this location the sanitary main is approximately 6m below the existing ground surface. This depth will require extensive excavation in order to install the proposed pipe work. If installed in the existing Airfield Road right-of-way such excavation would effectively close the road for the entire course of the construction schedule of this length of infrastructure, estimated to be approximately eight (8) weeks.

As a further advantage, by locating this infrastructure off of the dedicated roadway, any repairs or replacements required in the future will not impact the surrounding traffic network. The location is also ideal as it will not be necessary to construct or maintain any new access points to the lots in question, as there are existing accesses from Airfield Road that can be utilized.

Section B – Project Description

Access to the proposed infrastructure, both during and after construction, is achieved by utilizing the existing accesses to the abandoned airfield which will host the new pipe works.



Figure 1. Site of Proposed Works

Construction of the pipelines will occur linearly through an open trench, likely similar to that shown in Figure 2. Prior to the excavation of the trench, clearing and grubbing of the impacted area will be performed in order to remove the abandoned airstrip and to salvage any available topsoil and shrubbery along the alignment. Because of the extreme depth of the gravity sewer, it is expected that the successful contractor will have to ‘bench’ down to the required depth, as machinery capable of performing this work without benching is not common in this area.

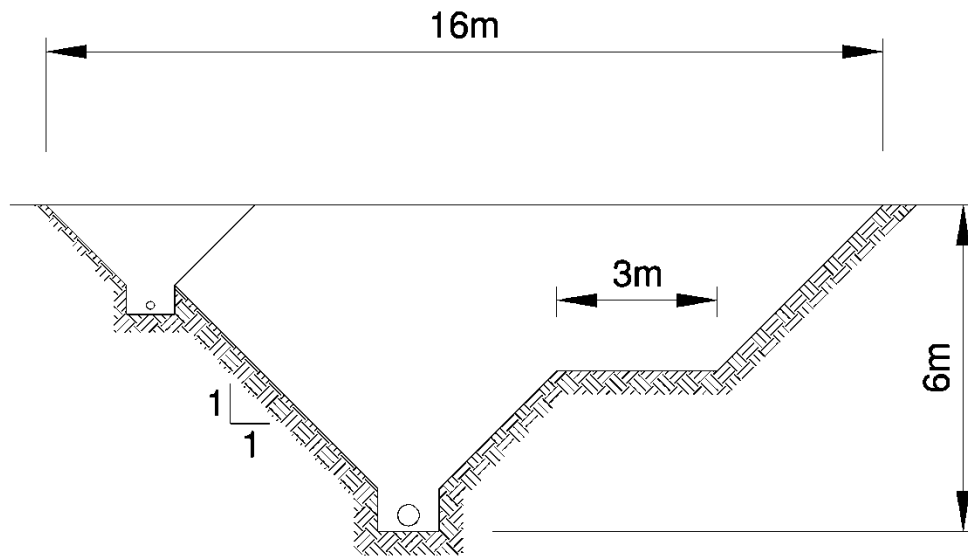


Figure 2. Approximate Installation Excavation

All pipework will be completed with Class 'B' sand bedding and compacted to a minimum of 95% standard proctor density. The remainder of the excavation will be backfilled with the previously removed native material, also compacted to an appropriate density. Once completed, both the gravity and force mains will be subjected to pressure testing to ensure that no leaks are present. All areas disturbed areas will be repaired to previous conditions or better, with the exception of the abandoned airstrip. Areas that were originally paved will be replaced with grass to match the surrounding area.

The attached detailed site plan shows the proposed right-of-way, all nearby by survey controls and monuments, and all existing and future access points to the infrastructure.

Section C – Additional Information

Environmental

The impact to the land will involve the construction of a deep trench, similar to that shown in Figure 2. This trench will be constructed through the abandoned Barriere airstrip and the adjacent grass field. A number of small existing conifers will be relocated during this process. Once construction is complete this site will be returned to its previous status.

Socio-Community

The lands that are proposed to be passed through consist of public open space and the abandoned Barriere Airstrip. During construction, much of this open space along Airfield Road will be occupied by construction activities. For the purpose of public safety, open trenches will be either filled or barricaded while the site is not actively working. Once construction is complete, lands will be returned to their previous states or better, allowing the public to resume using the lands as before.

The process of completing this project will greatly affect the community and the public health. As addressed in *Sustainable Wastewater Management Solutions, TRUE Consulting, January 2011*, a goal of this project is to remove much of the community from private septic tank and field usage, thereby greatly reducing many of the risks related with aging septic infrastructure.

Prepared by:

TRUE CONSULTING

Dave Underwood, P. Eng.

DU/dg

M:\My Documents\346\346-164\02 Correspondence\Crown Land Application\346-164 Crown Land Tenure Management Plan.docx