

## Combined Sewage Storage Tunnel (CSST) at Site 5C

### (Queen Victoria Street and River Lane) – Projected Construction Sequencing Summary

Task	Start Date	End Date	Duration	Details of Work	Expected Noise/Truck Levels
<b>Site 5c (Rideau River Collector - Overflow Diversion Chamber - At intersection of River Lane &amp; Queen Victoria)</b>					
Utility Relocation	Mid-February 2017	Early March 2017	2-3 weeks	Relocation of communication lines by the utility companies from above-ground to underground.	Modest noise Modest trucking
Traffic Control, Hoarding/Fencing, Site Setup, Utility Relocation and Temporary Sewer Bypass	Early March 2017	Early May 2017	8 weeks	Site setup activities, including installation of the fencing and relocation of utilities and sewers as required. Modest noise and trucking (delivery of fences/piping, hauling away of some material excavated for these relocations, etc).	Modest noise Modest trucking
Shoring	Early May 2017	Late May 2017	2-4 weeks	Includes driving shoring piles into the soil down to the rock elevation and line grouting to permit excavation of soils inside the shored area while supporting the surrounding areas. Installing the shoring will generate some noise - limited to daytime. Modest trucking - limited to hauling shoring material and it is possible that some small volume of soils may be hauled away.	Loud noise driving sheet piles Modest trucking
Soil Excavation	Late May 2017	Late May 2017	1-2 weeks	Once shoring is installed, soil material will be excavated and trucked away (maybe 3 trucks per hour - small volume). The same frequency of empty trucks would also return to the site.	Modest noise Heavier trucking
Rock Excavation	Late May 2017	Late July 2017	8 weeks	Rock excavation will involve drilling, controlled blasting, hoe-ramming, shotcrete and bolt installation, as well as trucking away excavated rock. Trucking frequency will be low as rock removal is a slow operation compared to earth removal.	Loud noise resulting from hoe-ramming and rock handling. Modest trucking

Task	Start Date	End Date	Duration	Details of Work	Expected Noise/Truck Levels
<b>Site 5c (Rideau River Collector - Overflow Diversion Chamber - At intersection of River Lane &amp; Queen Victoria)</b>					
Micro-Tunneling of Diversion Sewer (5b to River Lane)	Early August 2017	Early October 2017	8-10 weeks	Includes installation of tunneling equipment, pilot hole tunneling, back reaming along that pilot hole, and finishing the grouting. The back reaming operation (which consists of enlarging the smaller pilot hole to the size required for the sewer) is expected to produce the most trucking as it generates spoils (crushed rock) to be hauled away, and will last approximately 5-6 weeks. For this section of the diversion tunnel, it is proposed by the contractor that these reaming spoils be extracted from the shaft located at the intersection of River Lane / Queen Victoria - to be confirmed. Could fill four trucks per day at its peak.	Some modest noise associated with motor for auger  Modest trucking
Construction of Chambers (once micro-tunneling complete)	Early October 2017	Early February 2018	16-18 weeks (4 months)	Construction of chambers includes the following components: structure floor, walls and roof construction, installation of weir, ladders and steps, demolition of section of existing overflow sewer, new connections, backfill and removal of shoring. Materials and concrete being delivered to site as required. This phase includes backfill around the chamber, estimated to generate 3-4 trucks per hour hauling backfill material to the site and the same frequency of empty trucks leaving the site - over a period of approximately 1-2 weeks in late January / early February. Other trucking would include concrete trucks during the pours.	Modest noise  Heavier trucking during backfill (1-2 weeks), modest otherwise
Grading and Rough Reinstatement	Early February 2018	Early March 2018	4 weeks	Grading of the surface, base-coat paving, curbs, sidewalks, rough grading of landscaped areas to prepare for sodding later in the spring (since weather will not permit sodding at this time). Opening of the intersection. Heavier trucking will be during delivery of granular material for road construction (3-4 trucks per hour for a week or so).	Modest noise  Heavier trucking for 1-2 weeks, otherwise modest
Post-Construction Final Reinstatement	Early May 2018	Mid May 2018	1-2 weeks	Once weather is warmer, application of final layer of pavement and placement of sod and plantings. No long-term roadway impact as top-lift pavement is expected to be completed in a single day.	Modest noise  Modest trucking

**Important Notes:**

1. This table should be considered to be a living document and presents a best estimate based on the contractor's submitted construction schedule and the project team's general experience with similar activities. The contractor will be required to submit detailed schedules and management plans prior to undertaking this work.
2. All work at Site 5c (River Lane / Queen Victoria) is limited to daytime activities as defined in the City's Noise Bylaw (7:00AM-10:00PM). No nighttime work is currently permitted at this site. Contractor may submit a special request for a specific task that is impractical to be completed during daytime, but it would need to be submitted for review and approval by the project team and Councillor as it is not currently permitted.