




**CITY OF HAMILTON**  
**PUBLIC WORKS DEPARTMENT**  
**Engineering Services Division**

<b>TO:</b>	Chair and Members Public Works Committee
<b>COMMITTEE DATE:</b>	May 16, 2022
<b>SUBJECT/REPORT NO:</b>	Impact of On-Site and Excess Soils Management Regulation (O. Reg 406/19) and other pressures on Capital Program Costs (PW22039) (City Wide)
<b>WARD(S) AFFECTED:</b>	City Wide
<b>PREPARED BY:</b>	Michael Becke (905) 546-2424 Ext. 4278 Erika Waite (905) 546-2424 Ext. 6397
<b>SUBMITTED BY:</b>	Susan Jacob Acting Director, Engineering Services Public Works Department
<b>SIGNATURE:</b>	

**RECOMMENDATION**

- (a) That a budget adjustment of \$8,000,000 be approved to increase the Contaminated Soil & Rock Removal project (#4032114405), from \$2,692,000 to \$10,692,000, and that the increase be funded by a transfer from the Federal Gas Tax Reserve / Canada Community-Building Fund (No. 112213).

**EXECUTIVE SUMMARY**

Since enactment of Phase Two of the On-Site and Excess Soils Management Regulation (O. Reg 406/19) and supporting amendments took effect on January 1, 2022, considerable increases in project costs have been experienced. These cost escalations have had a marked impact across Ontario and it is expected that additional costs will inflate on average approximately 25%. Increases related to excess and contaminated soils are typically more prevalent in projects requiring deeper excavations, such as watermain and sewer installations, as well as bridge replacement and full road reconstruction.

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OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

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Assessment of the additional costs to apply to estimates has not yet been achievable due to variability and inconsistent bid prices in 2022 to date. This has resulted in many agencies cancelling projects that were over the budget, scaling down the scope of the projects and re-prioritizing the works. Multi-year project management can be a challenge due to the volatility of prices. Industry is currently looking into methodologies of addressing these fluctuations.

**Alternatives for Consideration – See Page 8**

**FINANCIAL – STAFFING – LEGAL IMPLICATIONS**

**Financial:** The total budget increase of \$8,000,000 to the Contaminated Soil & Rock Removal project through a funding transfer from the Federal Gas Tax Reserve / Canada Community-Building Fund (No. 112213).

**Staffing:** A temporary Project Manager position is being created to help with the additional effort need to implement the Regulation and help with the administration of the registry. The position will also help review and provide feedback on consultant reports along with providing guidance to staff with the Regulation.

**Legal:** None

**HISTORICAL BACKGROUND**

In December of 2019, the provincial government passed Ontario Regulation 406/19: On-Site and Excess Soil Management, under the Environmental Protection Act, R.S.O 1990, C E19 (EPA), to support improved management of excess soils. The regulation recognizes that soil is an important resource and that its protection and conservation of soil in Ontario is important in maintaining the environment for future generations.

The regulation defines excess soil as soil, crushed rock or soil mixed with rock or crushed rock, that has been excavated as part of a project and removed from the project area for the project.

The purpose of the regulation is to provide clear rules on the management and reuse of excess soils, facilitating local beneficial reuse while protecting both human health and the environment. Further, the regulatory framework provides guidance on the proper management and reuse of excess soils, including more stringent oversight, testing, tracking, documentation and ownership in the movement of excess soils, particularly those that may be affected by contamination, by preventing and mitigating the potential for adverse effects.

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The application of this regulation is not limited to only municipalities. It also must be followed by all Project Owners such as private developers, utility companies, contractors, consultants and the provincial government and its agents. Anyone that will generate excess soil in Ontario, that cannot be managed on site, must follow the regulation.

- **Key Dates, Roles and Responsibilities**

The regulation framework has established a phase-in period with key dates as given below:

January 1, 2021 – Waste designation for soils not being reused. Reuse rules including soil quality standards and on-site soil management. Haulers required to provide key information on soil loads.

January 1, 2022 – Formal documentation, testing and registration on the Provincial Soil Registry for applicable sites. Detailed tracking of soil hauling including documentation retention.

March 11, 2022 – MECP requested comments on a potential pause of the implementation of provisions in the Excess Soil Regulation that came into effect January 1, 2022 until January 1, 2023. This is to provide more time for more understanding and consistent implementation of the Excess Soil Regulation, and coordination across organizations

April 21, 2022 – The Province announced the temporary suspension of the provisions that came into effect on January 1, 2022, until January 1, 2023.

January 1, 2025 – Restrictions on landfilling of clean soils

January 1, 2026 – Grandfathering provisions expire

The regulation introduces a new role of Project Leader, defined as the person or persons who are ultimately responsible for making decisions relating to the planning and implementation of the project.

In general, the City of Hamilton(City) will be defined as the project leader for projects led by the City. Many of the City's duties can be delegated to other parties under contract but the Ministry would still view the City as ultimately responsible as Project Leader.

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The regulation also defines several responsibilities for a Qualified Person (or QP). A QP is defined in the Excess Soils regulation as someone licensed in Ontario as a Professional Engineer or Professional Geoscientist, with appropriate geoscience qualifications and experience.

Typically, the City would retain a third-party consultant for QP support. Where the City has delegated duties to the Contractor and their QP, the City may decide to retain their own QP to review work completed by the contractor, and to support the City's oversight role as Project Leader. The City may choose to do this regardless of whether the Contractor has retained their own QP.

As part of the regulation a registry for Excess Soils has been created, which became effective in December of 2021, in preparation for the January 1, 2022 phase. The registry provides a location to place project site information. The information includes: the amount and type of excess soils, who the Project Leader and contractor are, the locations for soil deposits, etc. In order to be transparent, the registry also provides a public portal that has limited information accessible including; Project description and location, Project Leader name and contact information, Qualified Person and authorized persons and Receiving site information.

On March 11, 2022, The Province opened a 30-day consultation to the public regarding a proposal to temporarily suspend certain provisions in the *Excess Soil Regulation* that came into effect January 1, 2022, until January 1, 2023. The pause will provide more time to understand the provisions and refine their implementation of the regulation.

On April 21, 2022, the Province announced that they would temporarily suspend the implementation of the provisions that came into effect on January 1, 2022, until January 1, 2023.

Although this temporary suspension is welcome, the pause will have little impact on the projects that are currently in design or those previously worked on. Pre-engineering work where the Geotechnical investigations that include work for excess soils need to be completed before detailed design. Much of those works have already been completed or will still be needed to be completed for the projects that are scheduled for construction in 2023. The only cost savings that may be recognized at this time will be for the few projects that will not be registered in 2022.

- Staff Engagement

In the Spring of 2020, Engineering Services engaged the consulting services of Dillion Consulting (Dillion) to review the City's current practices and documents, in order to provide recommendations on the development of an Excess Soils Management Program. A series of consultations were held between Dillion and members from Public

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Works Department, Hamilton Water, Engineering Services, Transportation Operations and Maintenance and Environmental Services Divisions, identifying gaps and the City's readiness in advance of the regulation date of January 1, 2021.

A series of short-term and long-term recommendations were made that staff have been continuously implementing as they become more familiar with the implications of the regulation, and are as follows:

- (i) **Excess Soils Working Group:** A working group was established in March of 2021. The group encompasses members from Public Works (Hamilton Water, Transportation Operations and Maintenance, Environmental Services and Facilities), Legal Services and the Planning and Economic Development Department to discuss the regulation and share information.
- (ii) **Project Requirements:** The current Pre-engineering geotechnical investigations now require that all reporting meet the requirements set out in the new regulation. This includes additional reporting requirements for the Assessment of Past Uses and Soil Characterization. Staff have developed and continuously improve contract language in capital and maintenance projects as our understanding of the regulation changes or more information from the MECP is made available. Contract language also requires that Contractors working on the City's behalf retain a QP to ensure the requirements of the regulation are always being met.
- (iii) **Excess Soil Management Plan Procedure Standard Operating Procedure:** A Public Works Standard Operating Procedure has been created for staff and approved by the General Manager of Public Works in March 2022.
- (iv) **Training:** The development of 3 training modules have been completed regarding the regulation. The first was a general knowledge base training to provide a high-level understanding and a starting point for those not familiar with the regulation. The second was large project specific training to deal with scheduled capital projects that generate large volumes of excess soils or receive excess soils. The third was geared towards maintenance and operations work and small generators of excess soils that navigate the regulation differently. The training modules took place between mid-January and the end of February 2022. There were over 200 staff that participated in the training.
- (v) **Additional Staffing:** A temporary Project Manager position is being created to help with the additional effort needed to implement the Regulation and help with the administration of the registry. The position will also help review

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and provide feedback on consultant reports along with providing guidance to staff with the Regulation.

- Impacts of the Regulation

The Onsite and Excess Soils Management Regulation impacts all groups within the City that generate excess soils. Infrastructure projects (linear, vertical, bridges and facilities), operations and maintenance, Parks and Forestry will need to manage their work to minimize the generation of excess soils.

In preparation for the changes in reporting, documentation and tracking required by the regulation in 2022, staff began implementing changes in the pre-engineering requirements and specifications in 2021. At that time, staff also started the discussion with the construction industry on how the requirements of the Regulation will impact City contracts as well as the industry itself.

From such changes, we have already begun to realize the impacts being seen in our projects. These include:

- (i) Increases to project schedules, costs and scopes to incorporate regulatory requirements related to excess soils in both pre-engineering as well as contracts.
- (ii) Higher cost of consultant assignments due to the additional investigation and reporting work by a QP needed to meet the requirements of the regulation.
- (iii) Significant increase in staff time required to deal with the additional planning and implementation of the regulation.
- (iv) Difficulty finding local receiving sites and/or those that accept certain soil qualities or types - this applies to both dry and liquid soils reuse receivers, and also landfills, where permitted.
- (v) Changes to excess soils assumptions after project design or planning stages could cause significant schedule delays and add substantial costs. These may be due to:
  - a. Soil quality differing from preliminary data/assumptions;
  - b. Volumes of excess soil changing from initial estimates;
  - c. Appropriate receiving sites cannot be found, or a receiver's requirements differ from the data collected and reported;
  - d. Suitability of soil is environmentally acceptable at a reuse site but does not meet other receiver requirements (such as geotechnical).

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Further, City Building projects that require a significant amount of time to develop and design (i.e. Dickenson Rd. trunk sewer for AEGD, the North Waterdown Drive, Centennial Trunk Sewer etc.) are being impacted due to delays and increase in costs due to the regulation as those requirements were not fully understood when these projects were first initiated.

**POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

Excess Soils Management Procedures that were developed directs staff on how to apply the Excess Soils Management Regulation (O. Reg 406/19). This applies to all activities that generates excess soils.

**RELEVANT CONSULTATION**

The following have reviewed and are in agreement;

Corporate Services Department, Financial Planning Administration and Policy Division,  
Budgets and Financial Policy Section  
Corporate Services Department, Financial Services and Taxation Division,  
Procurement Section  
Public Works Department, Chief Road Official and Hamilton Water Divisions

**ANALYSIS AND RATIONALE FOR RECOMMENDATION**

The Public Works Department, Engineering Services Division is experiencing higher costs due to new Onsite and Excess Soils Management Regulation 406/19. Although consistent estimates are not yet available to consider within the project estimating process, the extent of this cost impact was not known at the time of 2022 project budgeting in 2021.

It is anticipated that excess soils management could increase total project costs 25%, equating to approximately \$8,000,000 or more in 2022 projects that require generation of soils, such as water, wastewater, bridge and full-road reconstruction projects. The regulation is causing similar effects across the province and is not fully realized throughout the industry. The increase of additional funds to the Contaminated Soil & Rock Removal project (#4032114405) will allow staff to address the potential shortfalls in those projects where excess soils have created increase budget demands, such as those with underground components.

## **ALTERNATIVES FOR CONSIDERATION**

An alternative for consideration would be to return to council with individual reports for each project that is over-budget due to excess or contaminated soils. This would delay project start dates and impact staff time to write multiple reports to award contracts.

Financial: Individual reports will be required to increase project budgets as required for each contract award.

Staffing: N/A

Legal: N/A

## **ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN**

### **Clean and Green**

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

### **Built Environment and Infrastructure**

Hamilton is supported by state-of-the-art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

### **Our People and Performance**

Hamiltonians have a high level of trust and confidence in their City government.

## **APPENDICES AND SCHEDULES ATTACHED**

N/A