

Updating an Engineer's Report due to Unforeseen Circumstances during Construction

T. Brook, P.Eng.

INTRODUCTION

An engineer's report, adopted by municipal bylaw, forms the legal basis for the construction and management of a drainage system under the [Drainage Act, 1990](#). The *Drainage Act, 1990*, requires an extensive consultation process with all property owners and regulatory agencies. Once the final bylaw adopting the engineer's report is passed, the project is authorized for construction. The drainage works must be constructed in accordance with the drawings and specifications in the engineer's report. However, there may be unforeseen circumstances that are discovered during construction of a drain (Figure 1) that require design changes to be considered.



Figure 1. An active drain construction project.
Source: Town of Bradford West Gwillimbury, Ontario.

DID YOU KNOW? An unforeseen circumstance during construction does not include situations where property owners change their minds about a certain aspect of the drain on their property and request a change at this late stage of the project.

UNFORESEEN CIRCUMSTANCES

Examples of unforeseen circumstances that can be discovered during construction include:

- conflicts between the drain and buried utilities
- unexpected soil conditions for a section of the drain that requires:
 - a change in the slope of the drain bank
 - additional erosion protection measures to be installed
- small realignment to the drain's location
- changes required by a regulatory approval issued after the report has been adopted by bylaw

AMENDING AN ENGINEER'S REPORT

Section 84.1(1) of the *Drainage Act, 1990*, authorizes a method to amend an engineer's report at this stage of the process. The process is set out in Part III (sections 9 and 10) of [O.Reg.500/21](#). A summary of that process is shown in Figure 2.

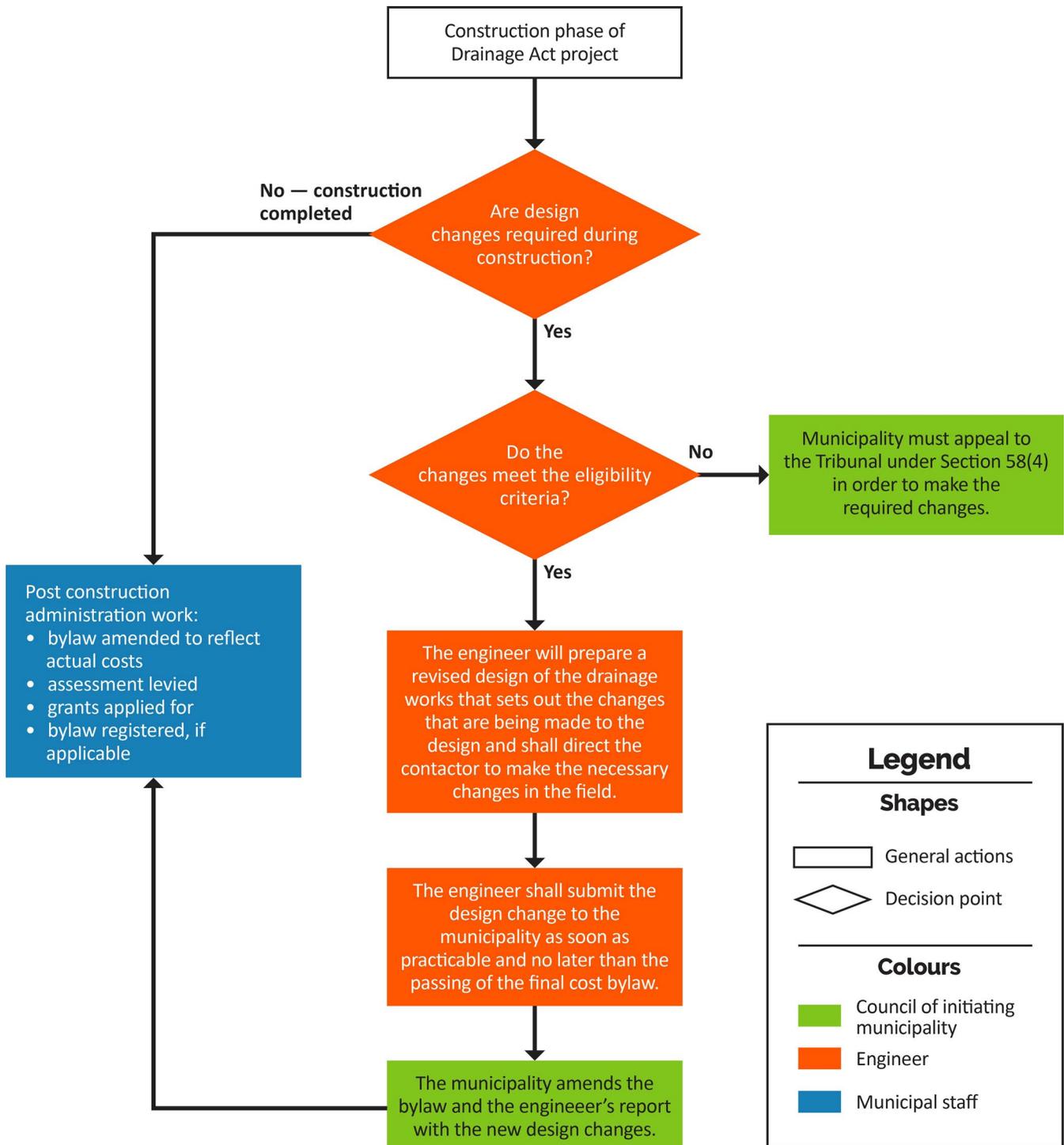


Figure 2. Procedure to update an engineer’s report during construction due to unforeseen circumstances.

DID YOU KNOW? The process to update the engineer’s report, because of unforeseen circumstances discovered during construction, can be used for minor improvement projects, major improvement projects and the construction of a new drain. It cannot be used for maintenance and repair projects.

During the construction of a drain, the engineer and/or contractor may identify a situation that requires the drain design to be modified from the design in the engineer's report. When this occurs, the engineer must determine if the change meets all the eligibility criteria set out under Part III of O.Reg. 500/21 to allow the engineer's report to be modified. The eligibility criteria are as follows:

- the design changes are a result of unforeseen circumstances encountered during construction
- the existing approvals (e.g., [Conservation Authorities Act, 1990](#), [Fisheries Act, 1985](#), etc.) allow for the change to be made without requiring an amendment to the approval
- the required changes will not increase the cost of the total project to more than 133% of the engineer's estimate or contract price
- the design changes will not impact the existing drain capacity

If the design changes meet the eligibility criteria, then the engineer shall:

- prepare supporting documentation stating that a design change is needed for the project and the changes meet all the eligibility criteria
- prepare a revised design for the drainage works that sets out the changes to be made and directs the contractor to make the necessary construction changes in the field

As soon as reasonably possible after the completion of the project and before the passing of the final cost bylaw, the engineer shall submit the supporting document and the revised design to the council of the municipality in which the drainage works is located.

Upon receipt of a revised design and supporting document, the Council of the municipality shall:

- approve the revised design as an addendum to the bylaw
- assess any additional costs in accordance with the assessment schedule
- provide notice to all property owners of the changes

While all property owners are notified of the changes, there are no additional appeal rights provided as part of the process defined in the regulation.

If the design changes do not meet the eligibility criteria, the municipality may apply to the [Agriculture, Food and Rural Affairs Appeals Tribunal](#) for permission to modify the report as per section 58(4) of the *Drainage Act, 1990*.

SUMMARY

The ability to implement certain design changes during construction as a result of unforeseen circumstances allows drainage projects to continue to be constructed with minimal delay and additional costs. An engineer's report that has been updated to reflect the as-built conditions and has been adopted by bylaw, allows the municipality to have confidence in completing future maintenance and repair activities on the drain.

This factsheet was written by Tim Brook, P.Eng., Drainage Program Coordinator, OMAFRA, and reviewed by Andy Kester, Drainage Inspector and Analyst, OMAFRA.

Disclaimer

This factsheet is provided for informational purposes only to help explain the recent amendments to the *Drainage Act, 1990*, and the new Minister's Regulation (Ontario Regulation 500/21) that operationalizes the amendments to the *Drainage Act, 1990*. Use of this factsheet is at the person's own risk. If there is a discrepancy between this factsheet and the legislation, the legislation prevails. If you have any questions about the applicability of the *Drainage Act, 1990*, to your situation, you should consult with a qualified person.