

AUDIT AT A GLANCE

WHY THIS AUDIT MATTERS

The Engineering and Construction Services (ECS) Division delivers approximately \$500 million annually in capital projects, including the construction of bridges, roads, sewers, and treatment plants.

Ensuring that there are sufficient controls over these projects, including timely inspections and rectification of deficiencies, is vital to providing safe and sustainable infrastructure for the public.

BACKGROUND

Phase One of our audit focused on the certification of substantial performance and construction warranty management for capital projects. Subsequent phases will look at remaining areas of capital management, and results will be reported during 2019.

We selected 10 contract files to review the steps performed by ECS staff for verifying substantial performance and for monitoring warranty. The total construction value of the 10 contracts was approximately \$34 million.

BY THE NUMBERS

- \$500 million/year spent on capital projects
- 74 unit-price contracts completed in 2015, totalling \$290 million
- In 5 out of 10 contracts reviewed, substantial performance inspections were not performed prior to certification
- In 7 out of 10 contracts, staff did not assess the value of defective and remaining work as required by the Construction Lien Act
- In 7 out of 10 contracts, deficiencies identified during warranty inspections were not corrected and warranties have expired

Engineering and Construction Services, Phase One: Controls over Substantial Performance and Warranty Inspection Processes Should be Strengthened

What we found

Substantial Performance is not sufficiently supported with evidence

Substantial performance is a critical milestone in construction projects where a contractor has completed the required work meeting a legally defined threshold. After the City certifies the substantial performance, it is obligated to fulfill payment, and significant risks and responsibilities are shifted from the contractor to the City.

Overall we found that ECS has established good guidelines for substantial performance and warranty inspections. ECS needs to ensure its prescribed procedures are consistently implemented by project staff to minimize the risk of the City incurring unnecessary costs to repair defects after warranty expiry. If substantial performance is certified without proper inspection, it becomes more difficult for the City to find a contractor in material breach of the contract.

| Critical Steps for Substantial Performance | Sampled Contract | | | | | | | | | |
|---|------------------|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Timely substantial performance inspections conducted | ✓ | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ | ✗ | ✓ |
| Deficiency lists signed and reviewed | ✗ | ✗ | ✓ | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Deficiencies communicated to the contractor | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ |
| Value of defective and remaining work properly assessed | ✗ | ✓ | ✓ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Deficiencies rectified | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✓ |

Warranty Inspections are not consistently followed up

City contracts carry a standard 24-month warranty which begins from the date of substantial performance. Warranty inspections must be conducted and the contractor must be notified prior to warranty expiry. Without proper warranty inspections, the City may incur additional costs for subsequent repairs and damages as a result.

| Critical Steps for Warranty Inspections | Sampled Contract | | | | | | | | | |
|--|------------------|---|---|---|---|---|---|---|---|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Timely warranty inspections conducted | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ |
| Contractors informed of warranty deficiencies in timely manner | ✓ | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ | ✗ | ✓ | ✓ |
| Adequate follow-up performed with the contractor | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ |
| Deficiencies rectified within the warranty period | ✓ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ |

How Recommendations will Benefit the City

Implementing the three recommendations contained in this report will further improve controls over substantial performance and warranty inspection processes. It will protect the City's financial exposure to capital project deficiencies, and help ensure the quality and safety of public infrastructure.