



Hamilton

Office of the City Auditor

ROADS VALUE FOR MONEY AUDIT: ROADS QUALITY ASSURANCE SUPPLEMENTARY AUDIT REPORT

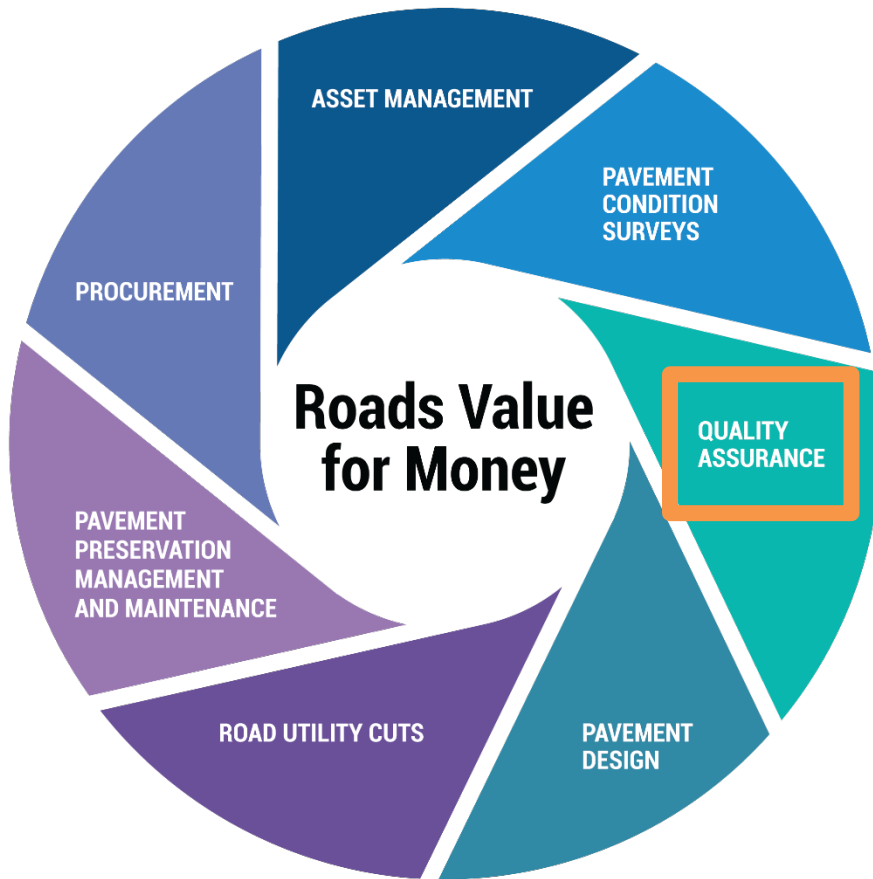
AUGUST 11, 2022

Charles Brown, City Auditor

Building on the work from our Roads VFM Audit, that was issued in July 2021, we:

- Assessed information about the topics that were in-scope
- Analyzed information indicative of whether the City is getting good value for the topics in scope for this supplementary audit
- Obtained insights from external subject matter experts in the field

2 Additional Topics Explored



1. Processes for comprehensive weight validation of construction materials and disposed excess contaminated native material where the contract payments are tied to the weights of such materials.
2. The process to test and validate if the asphalt friction course aggregates for high volume roads align with contract specifications and job mix formulas.

Area out of scope for this audit:

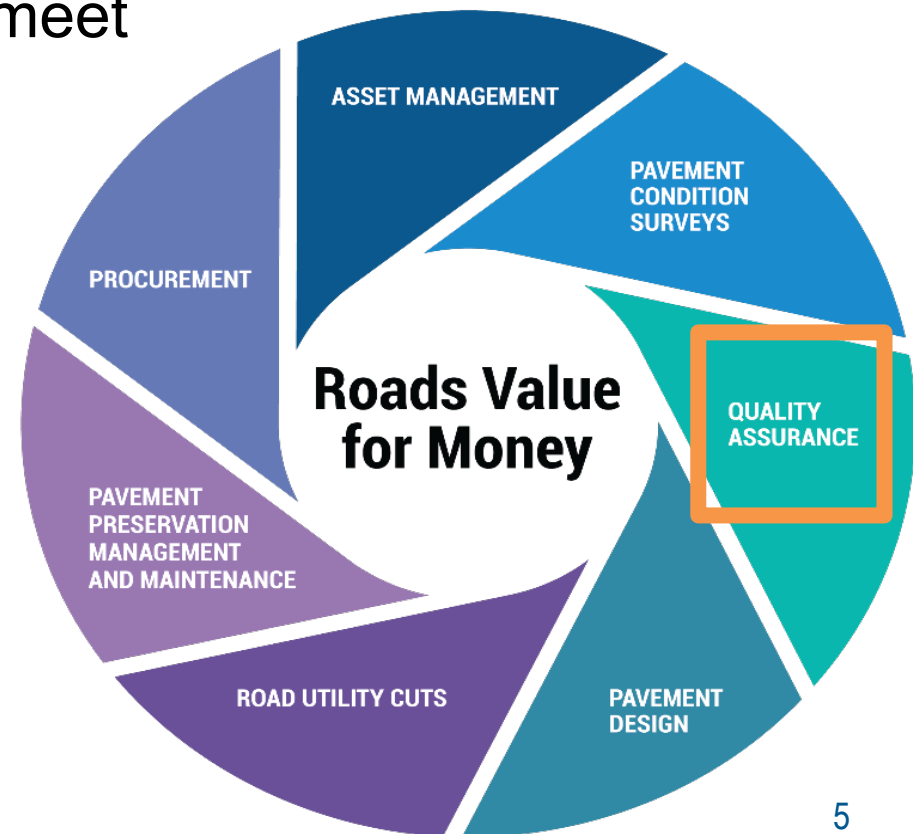
1. Areas previously addressed in the original Roads VFM Audit.
2. Construction of Roads in new development neighbourhoods (audit in progress)

Quality Assurance

The activities and procedures that are established to ensure roadways are constructed and rehabilitated to meet City expectations.

Relies on:

- Clear standards/specifications
- Robust inspection and testing
- Timely problem resolution
- Strong accountability



Quality Assurance – Weight Validation Process

- Unable to establish if the asphalt quantities charged and paid for were reasonable due to a lack of sufficient evaluation and documentation.
- “Red flags” indicative of misstatement of weights (overcharges) by contractors found, but insufficient information to evaluate for potential fraudulent activities.
- City does not have clear and consistent processes in place.
- Expected processes for administering change orders related to “overruns” paid by the City were not adhered to.

Quality Assurance – Contaminated Soils

- Processes for validation and payment of weighed materials not followed and non-compliance with guidelines for dealing with contaminated soils.
- Limited testing and validation done to support excess landfill disposal.

Location: RHVP Southbound lanes
Source: Office of the City Auditor staff



Quality Assurance – Quantity Overruns

Quality Assurance – RHVP Resurfacing Overruns

- RHVP resurfacing had overrun quantities due to inaccurate as-built design drawings.
- Financial penalty on RHVP resurfacing administered “informally” using an opaque process.

Quality Assurance – Recycled Asphalt Pavement “RAP”



Washout photo from C15-27-16 (Garth from Rymal Rd W to Stone Church Rd W)
Source: Public Works Department records



July 2022 at location of C15-27-16 (Garth from Rymal Rd W to Stone Church Rd W)
Source: Office of the City Auditor Staff

Quality Assurance – Recycled Asphalt Pavement “RAP”

- RAP consists of asphalt recovered from existing pavements and re-used as part of new or rehabilitated pavement
- Its use can be detrimental to durability and life of pavement
- For one project (Garth), City paid a premium for friction course asphalt mix, RAP was likely added as a substitute material.
 - This caused the City of overpay and receive the quality that was specified, could impact pavement performance.
 - Minimal process to ensure quality of aggregates used in construction projects conform to the City’s requirements.

AUDIT THEMES

Improvement opportunities exist for:

- Comprehensive verification of weighed materials.
- Mitigation of risks of mismanagement and/or overcharges.
- Enhancing processes for testing and validating if premium aggregates specified in contracts are being utilized during construction.



QUESTIONS?