CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Corporate Assets & Strategic Planning Division

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<th>TO:</th>
<th>Chair and Members Public Works Committee</th>
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<td>COMMITTEE DATE:</td>
<td>February 3, 2014</td>
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<tr>
<td>SUBJECT/REPORT NO:</td>
<td>Street Sweeper Rebuild (PW14009) (City Wide)</td>
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<td>WARD(S) AFFECTED:</td>
<td>City Wide</td>
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<tr>
<td>PREPARED BY:</td>
<td>Lyle Stedman, Central Fleet Manager (905) 546-2424 Extension 4593</td>
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<td>SUBMITTED BY:</td>
<td>Gerry Davis, CMA General Manager Public Works Department</td>
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**RECOMMENDATION**

(a) That the City of Hamilton proceed with a single source purchase for the rebuilding of three Tymco DST-6 street sweepers from The Equipment Specialist Inc., 495 Woodward Avenue, Hamilton, Ontario at a total cost of $600,000 as approved in the General Issues Committee Report 13-022(a)

(b) That the General Manager of Public Works or their delegate be approved to negotiate with The Equipment Specialist Inc. as the single source supplier for the future year rebuilds as identified in the 2014 capital submission of the Tymco DST-6 units currently in service at the City of Hamilton.

**EXECUTIVE SUMMARY**

Following previous reports PW05095a and PW05095b to Council on the subject of regenerative air street sweepers the Tymco DST-6 model regenerative air street sweeper was standardized by the City of Hamilton. The City currently owns 18 of these units. The sweeper fleet is beginning its 8\textsuperscript{th} year of operation and nearing the end of their projected life-cycle. Maintenance costs are increasing due to excessive abrasive wear in the sweeping hopper and additional wear on the auxiliary engine. Though these units are near the end of their rated 8-year life cycle and have considerable wear and tear as noted above, the chassis of the units are still in relatively good condition and have accumulating mileages of less than 100,000 km per unit. The low use of the chassis and high wear of the attached sweeping components lends these sweepers to be excellent rebuild versus replacement candidates. Rebuilding these units will reduce...
pressure on the fleet reserve by about $120,000 per unit vs. the cost of a full replacement. The rebuilt units are expected to operate for another 8-years.

Staff is recommending a single source purchase to The Equipment Specialist Inc. who is the factory representative of the Tymco Sweeper and because of patent rights this is the only source of rebuild activity for these devices. Therefore under Procurement Policy #11 staff is requesting that council approve The Equipment Specialist Inc. in Hamilton Ontario be the sole source vendor for this work.

The capital expense was previously approved as part the 2014 Capital Budget. The rebuilds would be funded from the Vehicle and Equipment Reserve.

**Alternatives for Consideration - See Page 3**

**FINANCIAL - STAFFING - LEGAL IMPLICATIONS**

Financial: Reducing pressures on the Vehicle and Equipment Reserve by avoiding $360,000 in expenses to completely replace three units. The cost to rebuild 3 units is estimated at $600,000 verse a straight replacement estimated at $960,000.

Staffing: N/A

Legal: N/A

**HISTORICAL BACKGROUND**

Tymco Inc. is the manufacturer of regenerative air street sweepers that originally met the City of Toronto Pm 2.5 and Pm 10 testing protocol and whose performance claim for controlling particulate matter pollution is certified by ETV Canada. ETV stands for Environmental Technology Verification. The City of Hamilton and the City of Toronto engaged in a collective testing protocol. Vendors and manufacturers were invited to have their equipment tested to see if it met the criteria. Tymco Inc. DST-4 and DST-6 both met the standards and as such the DST-6 was adopted as the standard street sweeper for the City of Hamilton.

The Public Works Department has been very satisfied with the reliability and operation of Tymco sweepers previously acquired. The Tymco sweepers were supplied by The Equipment Specialist Inc. of Hamilton Ontario as the authorized vendor.

**POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS**

Procurement Policy # 11, Section 4.11 (2) Council must approve any requests for negotiations with a single source as set out in subsection (1) (c) of this Policy #11, where the value of the proposed procurement is $250,000 or greater

**RELEVANT CONSULTATION**

Public Works Department, Operations Division, Roads & Maintenance Section
Corporate Services Department, Financial Services, Procurement Section
ANALYSIS AND RATIONALE FOR RECOMMENDATION

Regenerative air street sweepers travel at a low rate of speed in the completion of their work. The very nature of the work places little use and wear on the main chassis components while the sweeper body is exposed to highly corrosive and abrasive material travelling at high rates of speed as the pickup head moves debris from the road surface to the hopper compartment. The wear of the hopper accelerates as the unit ages and eventually requires significant repair. Ultimately replacement of all large components is necessary. Our current units are at the end of their useful life due to the level of wear on the hopper bodies.

There is one unit currently out of service due to the irreparable wear on the hopper components. The fate of that unit is awaiting this decision.

The chassis may not have accumulated as much use as the auxiliary engine that drives the regenerative air sweeper components and as such replacement of the chassis would be premature.

Not all units will be suitable for rebuild and Central Fleet will continue to monitor the remaining fleet of street sweepers for rebuild versus replace decisions and will only negotiate to rebuild units to the maximum cost approved in each year’s capital approval.

ALTERNATIVES FOR CONSIDERATION

The alternatives would be to fully replace all the street sweepers at the end of their economic life cycle.

Pricing of the new generation sweepers would include the requirement to move to tier 4 emission from the current tier 3 standards for the auxiliary engine. The price increase on this technology alone is $20,000 and reliability of the new technology is unknown.

This would increase the pressure to the reserve by $100,000 to replace each chassis and an additional $20,000 for each tier 4 engine, for a total additional price of $120,000 per unit replaced over the rebuild cost. The tier 4 standards are higher than our current tier 3 engines but the impact to the fleet reserve to buy new units would not allow for as many street sweepers to be replaced as could be rebuilt. The plan is to rebuild three units so the equal annual replacement would require an additional $120,000 per unit or $360,000 overall. The replacement cost for three regenerative air street sweepers is estimated at $960,000.

ALIGNMENT TO THE 2012 - 2015 STRATEGIC PLAN

Strategic Priority #1

A Prosperous & Healthy Community

_We enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn._

Strategic Objective

1.5 Support the development and implementation of neighbourhood and City wide strategies that will improve the health and well-being of residents.
1.6 Enhance Overall Sustainability (financial, economic, social and environmental).

1.7 By restoring the integrity of the existing regenerative air street sweeper components we ensure ongoing air quality from street sweeping operations and we reduce the impact to the Fleet Reserve.

**Strategic Priority #2**

**Valued & Sustainable Services**

*WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.*

**Strategic Objective**

2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.

2.4 This effort will provide reliable street sweeping programs while saving 30% of the capital cost of replacement units.

**APPENDICES AND SCHEDULES ATTACHED**

N/A