SUBJECT: Public Works Yards Master Plan (PW09029) (City Wide)

RECOMMENDATION:

(a) That the Public Works Yards Master Plan as set out in Report PW09029 be received;

(b) That the Acting General Manager of Public Works be authorized to implement Phase I of the Public Works Yards Master Plan, which would include:
   
   (i) Relocating the Waste Collection Operations from 330 Wentworth Street to the Materials Recycling Facility (MRF) at 1579 Burlington Street at an approximate cost of $1,000,000 funded through Capital account #5120894100 (Collection Operations Relocate);
   
   (ii) Relocating the DARTS operations from the Mountain Transit Centre (MTC) at 2200 Upper James to 330 Wentworth Street at an approximate cost of $650,000 funded through Capital account #5310641001 (ATS Accommodation);

(c) That the Acting General Manager of Public Works be authorized to proceed with further detailed investigations for Phase II of the Public Works Yards Master Plan, and that funding for these investigations be referred to the 2010 Capital Budget for consideration.

Gerry Davis, CMA
Acting General Manager
Public Works Department
EXECUTIVE SUMMARY:

The City of Hamilton is expected to grow in population and economy in the coming years and it is expected that the services provided by Public Works (PW) will need to expand. In anticipation of this, it was decided that a strategic approach would be taken to conduct a departmental level rationalization of yard facilities in order to plan for the future and a study was undertaken. Some of the Divisions had already initiated an assessment of their operational requirements independently. It was determined that efficiencies could be realized if this work was coordinated at a departmental level. This would help to identify opportunities to integrate operations at appropriate locations. The recommendations from the study will serve to guide the use of Public Works yards and facilities over the next 25 years.

The development of the alternatives and identification of the most preferred was undertaken with two primary goals as drivers. Firstly, to develop an alternative that could feasibly meet the general spatial requirements of the Divisions within the Public Works department in the present, as well as into the future. Secondly, to qualify the proposed departmental moves through the analytic modelling of service delivery from a new combination of yard sites in order to quantify the proposed relocations from an operating cost perspective.

This approach identified alternatives for the reorganization of Public Works service delivery, primarily through the rationalization of the Department’s yards. This was done at a strategic level, and therefore the proposed fleet and staffing movements incorporated in the preferred alternative require further, more detailed investigation, such as at the level of analysis of a business case or viability study, to fully identify the realization of net benefits.

The study analysis concluded that the preferred long term strategy is comprised of both Major and Minor operational modifications (see Appendix A for an overview of the recommended strategy). It is anticipated that the rationalizations proposed in the Public Works Yards Master Plan are going to be carried out over a time horizon that is deemed appropriate through further detailed study and as funding opportunities are determined.

Immediate actions which are recommended at this time to alleviate capacity shortfall in maintenance, storage and administration that Transit faces are identified as Phase I in this report. The Transit Division (which includes both HSR and ATS) currently operates out of the Mountain Transit Centre (MTC). The MTC provides administrative space for staff as well as maintenance services, fuelling and storage for the buses. This facility is currently at capacity. Upcoming and future fleet additions, which will result from the expansion of Transit service, will require that additional space for both parking and administration be found. The Transportation Master Plan (TMP) estimates that, in order to achieve the goals and targets related to increasing public transit Ridership, the conventional Transit fleet will need to double in size. With respect to planning options for future Transit accommodations it is recommended that actual transit growth is tracked relative to the Transportation Master Plan forecast during the next five years, at which time the strategy can be revisited. In order to accommodate the short term Transit Division needs at the MTC and 330 Wentworth Street however, the Waste Management Division Collection Operations will be relocated to 1579 Burlington Street East. Funds are available for this work to be undertaken in the 2009 Capital Budget.
BACKGROUND:

The information/recommendations within this report have City wide implications.

With the 2001 amalgamation of the six municipalities of Ancaster, Dundas, Flamborough, Glanbrook, Hamilton and Stoney Creek, into the new City of Hamilton, there existed an overlap in service provision and capacity. Through this study, Public Works sought to establish which yards were strategically located to serve the existing and future demands of the City, or whether other locations would better serve them.

Since amalgamation, the City established GRIDS and undertook a series of City wide infrastructure planning studies. The Master Plans were completed and infrastructure requirements are better understood. With this information now in hand, Public Works was able to examine its facility inventory against current and future forecast needs to better match delivery options. Dillon Consulting were retained to conduct a coordinated review of the City’s yards in order to reflect Departmental objectives. A staff working committee, comprised of members from each of the divisions of Public Works, was established to provide information and input into the proposed recommendations of the study.

The study process included an analysis of existing conditions; coordination with all Public Works Divisions; development of evaluation metrics; future needs/forecasting and modelling; development of alternatives; and finally a proposed implementation plan. During the period of study, several events have transpired which have directly impacted some of the short term priorities that the plan had to address. In particular, rising fuel costs and the impetus demonstrated by the Provincial government in respect of enhancing public transit service, have created an environment requiring immediate attention.

The Public Works Yards Master Plan is separated into two phases - Phase I includes recommended immediate actions (within six months) to address capacity pressures within the Transit division while Phase II includes medium and long term (six months or more) recommendations that require further investigation in order to confirm details of implementation.

ANALYSIS/RATIONALE:

The study of Public Works Yards was initiated in order to consider an overall departmental perspective in the analysis of current and future forecast facility requirements of the Divisions. The process began with a review of the existing Divisions and the tasks which fall into their respective jurisdictions which enabled the establishing of a “baseline reference” which was important to set the context for the subsequent examination of structural changes to the delivery of services.

From this starting point, the initiative was to find options that held the potential to improve departmental efficiency and reduce costs. A more efficient siting of yards for a future condition could result in travel time reductions for the Public Works fleet. A cost must be assigned to equipment travel time with respect to operation and maintenance costs and lost productivity in order to determine whether any significant savings can be realized. Two computer software applications were used to quantify potential travel
implications and input into the analysis of yard options: (i) FireOpt, a software program that assists in decision making relating to the optimal siting of facilities; (ii) ESRI's ArcView, a Geographic Information System (GIS) software package. These options were considered individually (i.e. by Division) to gain an understanding of the magnitude of potential cost savings or level of service improvements that could be realized. This gave an indication as to which divisional options had the highest impact overall and allowed for divisional options to be paired within more complex “departmental alternatives”.

The modelling results for individual divisional options compare the existing conditions with several other feasible service delivery configurations, for services delivered within each Division. The results are presented both in terms of labour-hour savings and in terms of dollar cost savings as compared to the existing configuration. Labour-hour savings represent efficiencies in terms of staff hours whereby “saved” hours could be used in more productive ways than travel to and/or from key locations. Minimizing labour hours spent on travel would provide better service delivery value for the same overall operating cost and does not necessarily indicate that fewer staff or fewer operating hours would suffice. A cost figure was calculated based on a combination of hourly staff rates (factored to include overhead costs) and vehicle travel costs (i.e. based on kilometres travelled).

The evaluation and decision making process for the rationalization was not reduced to an analysis based solely on economics. The decision had to be mindful of other factors which are prevalent and affect the broader long-range planning of the City. The evaluation was comprised of four criteria:

- cost of implementation;
- environmental effects;
- social effects; and
- level of service (see Appendix B for details of these criteria).

The study produced a number of facility rationalization “options” for each of the Public Works Divisions. These options were combined into five major “alternatives” which also have minor “sub-options” associated with them. All five alternatives were tested analytically, then evaluated using a number of metrics and this enabled a cost-benefit comparison.

The five above-mentioned alternatives were evaluated using a “Pair-Wise Comparison” method to select a preferred alternative. The pair-wise comparison method is a qualitative evaluation method that involves comparing all alternatives in pairs. It is based on the premise that people can more easily understand trade-offs when only two alternatives are considered at a time. The pair-wise comparison method can recognize criteria factors and the magnitude of differences in trading off the advantages and disadvantages of alternatives being considered. The comparison utilizes both the cost data generated in the modelling exercise and the four criteria identified in the evaluation metrics.

The results of the Pair-Wise Comparison identified a preferred course of action for the department to undertake. This conclusion was drawn on the basis of the comparison of the specified alternatives to the evaluation criteria. The preferred strategy includes the summarized movements and changes presented in Appendix A.
The preferred study strategy proposes the following short term - Phase I - changes in operations:

- Relocate Accessible Transportation Services (ATS) from their current location at the MTC to the Wentworth Yard.
- Relocate the Waste Management Division Collection Operations from their current location at the Wentworth Yard to 1579 Burlington Street to create space for ATS.

With the additional capacity that will be gained once the ATS operation moves out, it is expected that the MTC can accommodate an expansion of HSR for at least the next five years.

The Phase II - long term strategy (detailed in Appendix A) recommends a number of yard rationalizations, some into existing facilities and some into new locations to be determined. The primary objective of the proposed changes is to reorganize Public Works service delivery such that there will be a net overall benefit to the department. It is anticipated that over the longer term, as public transit grows, it will be necessary for the Transit division to operate out of both facilities (i.e. 330 Wentworth Street and the MTC at 2200 Upper James). In order to create space for the HSR at 330 Wentworth, the current tenants will have to be relocated elsewhere. (Current occupants include Water and Wastewater, Energy, Fleet and Facilities, as well as Operations and Maintenance.) The long term strategy would involve the following relocations: Water and Wastewater to move to the Centre of Excellence (Brampton Street); (note: the Centre of Excellence at Brampton Street was approved to proceed by Council as part of the Rennie End-Use Plan through Report PW08049 on May 14, 2008.) In addition, it is proposed that the Roads and Parks group and Central Fleet be moved to a new yard to be constructed at 1579 Burlington Street;

Following approval of the Public Works Yards Master Plan, further detailed study of the Phase II relocations will be undertaken. This will determine timing and funding sources. Immediate actions which are recommended at this time to alleviate capacity shortfall in maintenance, storage and administration that Transit faces are identified as Phase I above. Over the long term, the plan will address Transit service requirements identified in the Transportation Master Plan while maximizing efficiencies for other Public Works functions.

**ALTERNATIVES FOR CONSIDERATION:**

**Do Nothing**

The option of status quo will create immediate capacity and safety issues at the MTC. The design capacity of the MTC will not be able to accommodate additional fleet expansion beyond 2009.

**Construct an Independent Purpose Built Facility for DARTS**

In order to alleviate capacity pressures at the MTC (due to HSR and ATS Fleet expansion) an alternative consideration could be construction of an independent, specialized DARTS facility. Construction of another transit facility is not being recommended as it does not represent the best use of funds where there is an existing asset/infrastructure that is available for use. Additional property would need to be leased or purchased and this would represent a budget pressure.
Expand the MTC

An alternative is to look at constructing an addition to the existing MTC. This option is cost prohibitive at this juncture.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

Financial: Two major relocations are recommended at this time; Waste Operations from 330 Wentworth Street to 1579 Burlington Street and DARTS from 2200 Upper James to 330 Wentworth. The estimated cost associated with moving Waste is in the order of $1M (in 2008 dollars) and would be funded through the Waste Management Capital account #5120894100 (Collection Operations Relocate). The costs related to moving the DARTS operation are approximately $650,000 (in 2008 dollars) and would be funded out of the Transit Capital account #5310641001 (ATS Accommodation).

Staffing: There are no additional staff resources required with Phase I - the relocation of Waste Collections and the DARTS operations as the core program delivery for these groups will not change.

Legal: N/A

**POLICIES AFFECTING PROPOSAL:**

Public Works Strategic Plan: aligns with the vision driver Communities towards the priority to “Be the leader in greening and stewardship of the City” as it proposes more efficient locations for service delivery (thereby reducing GHG emissions through travel savings), and considers brownfield redevelopment in locating potential operations.

In addition, the recommendation aligns with the PW Strategic Plan’s Process vision driver because throughout the study, all aspects of the Triple Bottom Line approach to problem solving are considered. Social, Environmental, and Economic impacts were all assessed to provide a balanced approach to the preferred strategy. A detailed analysis was employed in order to effectively arrive at the optimal solution which meets Hamilton-specific goals and objectives.

Corporate Strategic Plan: aligns with Focus Area 6 of Environmental Stewardship by contributing to the desired end results of 6.2 - Reduce air and greenhouse gas emissions in City operations starting with a 10% reduction of 2005 levels, by 2011. Reducing the amount of kilometres of travel by staff translates into an overall decline in emission rates. The yards master plan aligns with Focus Area 2 of Financial Sustainability as it seeks to deliver municipal services and manage capital assets/liabilities in a sustainable, innovative and cost effective manner. Furthermore, the public works yards master plan is in alignment with Focus Area 7 Healthy Community in that it provides the space necessary to allow for the efficient growth of the Transit operations to support the growth in public transit service in the community.
RELEVANT CONSULTATION:

Capital Planning & Implementation Division, Public Works Department
Energy, Fleet & Facilities Division, Public Works Department
Operations & Maintenance Division, Public Works Department
Transit Division, Public Works Department
Waste Management Division, Public Works Department
Water & Wastewater Division, Public Works Department
Budgets and Finance, Corporate Services

CITY STRATEGIC COMMITMENT:

By evaluating the “Triple Bottom Line”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☐ Yes ☐ No
Public services and programs are delivered in an equitable manner, coordinated, efficient, and effective.

Environmental Well-Being is enhanced. ☐ Yes ☐ No
Climate-related risks are managed; Greenhouse Gas emissions are reduced.

Economic Well-Being is enhanced. ☐ Yes ☐ No
Infrastructure and compact, mixed use development minimize land consumption and servicing costs.

Does the option you are recommending create value across all three bottom lines? ☐ Yes ☐ No

Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☐ Yes ☐ No

N/A
<table>
<thead>
<tr>
<th>Major</th>
<th>Minor</th>
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<tbody>
<tr>
<td>Relocate a portion of HSR to Wentworth (the remainder stays at MTC)</td>
<td>Consolidate Ancaster operations to new facility within the Ancaster Industrial Park</td>
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<tr>
<td>Relocate DARTS to Wentworth</td>
<td>Consolidate Forestry operations in new facility at 1275 Upper Ottawa Street</td>
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<tr>
<td>Relocate Waste collection from Wentworth to 1579 Burlington Street</td>
<td>Relocate Water and Wastewater operations from Wentworth, Stoney Creek, and Dundas to Centre of Excellence (Brampton Street)</td>
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<td>Relocate Roads and Parks from Wentworth to 1579 Burlington Street</td>
<td>Relocate Roads operations from Binbrook Yard to Tapleytown Yard</td>
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<td>Relocate Fleet Central Garage from Wentworth to 1579 Burlington Street</td>
<td>Relocate Roads operations from Millgrove Yard to Flamborough Yard (Brock)</td>
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<td>Consolidate Ancaster operations to new facility within the Ancaster Industrial Park</td>
<td>Expand Traffic Operations Centre to accommodate future needs</td>
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<tr>
<td>Consolidate Forestry operations in new facility at 1275 Upper Ottawa Street</td>
<td>Remove Fleet operations from Chedoke (161 Studholme Road), 1301 Upper Ottawa and Leisure Park (752 Centre Road) Yards and distribute resources where needed</td>
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<td>Relocate Waste collection from Wentworth to 1579 Burlington Street</td>
<td>Relocate Facilities storage from Millgrove Yard and 1255 Centre Road to 125 Barton Street</td>
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<td>Relocate Roads and Parks from Wentworth to 1579 Burlington Street</td>
<td>Relocate Parks operations from 125 Barton Street to new Forestry Depot (1275 Upper Ottawa)</td>
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<td>Relocate Fleet Central Garage from Wentworth to 1579 Burlington Street</td>
<td>Relocate Waste Management Administrative Group to 1579 Burlington Street</td>
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<tr>
<td>Consolidate Ancaster operations to new facility within the Ancaster Industrial Park</td>
<td>Relocate Horticulture operations from Gage Park to new Forestry Depot</td>
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<td>Cost to Implement</td>
<td>Property Costs</td>
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<td>Recapitalization Cost</td>
<td>Estimated cost differential to remain in a current facility and pay for upgrades (new roof, new heating system, etc.) or expansion/ renovation</td>
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<td>Leasing Costs</td>
<td>Approximate cost to lease or savings from breaking lease of a property/facility</td>
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<td>Travel Cost Savings</td>
<td>Cost savings related to reduction in annual kilometres travelled by Division</td>
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<td>Environmental Effects</td>
<td>Impact or Opportunity to Enhance Natural Areas: Terrestrial or Aquatic Habitat</td>
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<td>Social Effects</td>
<td>Noise/Air Quality Effects</td>
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<td>Land Use Compatibility</td>
<td>Compatibility with adjacent built form and/or designated land use</td>
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<td>Opportunity to Enhance Site/ Adjacent Area</td>
<td>Surrounding properties generally benefit from a proposed change or decommissioning</td>
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<td>Level of Service</td>
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<td>Service Delivery /Communication</td>
<td>Estimated improvement in service delivery and/or operations. Potential for increased intra-departmental contact</td>
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<td>Travel Time Reduction</td>
<td>Estimated effects on overall travel time/ travel distance for division</td>
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<td>Other Benefits</td>
<td>Synergies which improve service delivery</td>
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