1. APPROVAL OF AGENDA

2. DECLARATIONS OF INTEREST

3. APPROVAL OF MINUTES OF PREVIOUS MEETING

4. COMMUNICATIONS

5. CONSENT ITEMS

6. STAFF PRESENTATIONS
   6.1 Public Works Department 2020 Operating Budget Presentation 2

7. DISCUSSION ITEMS
   7.1 Sidewalk Snow Removal (PW19022(a)) (City Wide) 96

8. MOTIONS

9. NOTICES OF MOTION

10. PRIVATE & CONFIDENTIAL

11. ADJOURNMENT
PUBLIC WORKS

2020 OPERATING BUDGET

General Issues Committee

January 28, 2020
Public Works contributes towards the City of Hamilton’s vision to be the best place to raise a child and age successfully.

The Public Works Department supports the City’s vision by providing high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner. The department brings the City’s vision and mission to life through its core services including corporate facility management, infrastructure rehabilitation, roads operations, parks and green space maintenance, transit, and waste management which are essential to the lives of residents and visitors to the City.

Public Works provides services that are central to the lives of Hamiltonians.
## Services and Sub-Services

### Cemeteries
- Active Cemetery Management
- Dormant Cemetery Management
- Active Cemetery Support Services

### Corporate Security

### Energy Initiatives
- Energy Engineering Services
- Utilities

### Engineering Services
- Asset Management
- Construction Services
- Corridor Services
- Design Services
- Survey and Technical Services
- Waterfront Development Initiative

### Facilities Management
- Accommodations
- Capital Planning and Project Management
- Facilities Operations and Maintenance
- Energy Engineering Services
- Facilities Planning and Business Support
- Stadium Operations

### Fleet Services Management
- Capital Planning and Contract Management
- Fleet Maintenance
- Materials, Fuel and Systems Management
- Regulatory Compliance and Driver Training

### Forestry
- Tree Maintenance
- Tree Planting
- Tree Maintenance and Planting Support Services

### Horticultural Programs
- Beautification
- Beautification Support Services

### Parks and Open Space Access
- Parks Maintenance
- Planning, Design, Development and Acquisition
- Natural Open Spaces
- Parks and Natural Open Space Support Services

### Public Transportation
- Conventional Public Transit
- Rapid Transit
- Specialized Public Transit

### Roadway Maintenance
- Right of Way Infrastructure Maintenance Support Services
- Right of Way Infrastructure Repairs and Maintenance
- Business Initiatives

### Transportation Operations
- Traffic Engineering and Road Safety
- Traffic Signals, Traffic Signs and Traffic Pavement Markings

### Solid Waste Management
- Cleanliness Services
- Organic Waste Collection
- Leaf and Yard Waste Collection Services
- Recycling Collection
- Bulk Waste Collection Services
- Garbage Collection
- Community Recycling Centres & Waste Transfer Facilities
- Organic Waste Processing
- Recycling Processing
- Landfill Operation
- Closed Landfill Monitoring
- Solid Waste Support Services

### Storm Water Management
- Infrastructure Maintenance
- Storm Water Collection
- Storm Water Support Services
- Storm Water Treatment

### Water Supply and Distribution
- Water Distribution
- Water Supply
- Water Support Services

### Wastewater Collection and Treatment
- Wastewater Collection
- Wastewater Support Services
- Wastewater Treatment
BUDGET SCHEDULE: HAMILTON WATER & TRANSIT

Water – Rate Budget  
November 25, 2019

Capital Budget  
November 29, 2019

Transit Day  
January 24, 2020

Public Works  
January 28, 2020
• Energy, Fleet & Facilities
• Engineering Services
• Environmental Services
• Transportation Operations & Maintenance
OUR PRIORITIES

COMMUNITY ENGAGEMENT & PARTICIPATION
Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

ECONOMIC PROSPERITY & GROWTH
Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

HEALTHY & SAFE COMMUNITIES
Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.

CLEAN & GREEN
Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

BUILT ENVIRONMENT & INFRASTRUCTURE
Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

CULTURE & DIVERSITY
Hamilton is a thriving, vibrant place for arts, culture, and heritage where diversity and inclusivity are embraced and celebrated.

OUR PEOPLE & PERFORMANCE
Hamiltonians have a high level of trust and confidence in their City government.
CLEAN & GREEN 2019 HIGHLIGHTS

- **34** vehicles downsized
- **169** vehicles replaced with lower tailpipe emissions
- **6.5%** reduction in energy consumption since 2017
- **6** new solar pedestrian crossovers
- **3** new solar School Zone flashing beacons
- **2.5 km** of new bike paths
- **220,000** plants grown
- **325** floral traffic islands
- **70** roundabouts
- **133** perennial medians
- **94** civic buildings
- **739** hanging baskets
- **570** planters
Parks and Cemeteries
- 12 pollinator gardens/sites recognized
- Protocol developed with Social Navigator team for the safe and ethical approach to handling homeless camps in City parks

Waste Programs
- Program change for green bin organics and yard waste to improve processing capacity
- Recycling program changes to reduce contamination

Energy
- LED lighting projects at arenas and recreation centres
BUILT ENVIRONMENT & INFRASTRUCTURE

2019 HIGHLIGHTS

Road Right-of-Way Infrastructure

- **30** Projects
- **$74 Million** Worth

Infrastructure Inspections

- **123 km** Mainline sewers
- **7 km** Watermains
- **123 km** Sewer laterals
- **20,000** Catch basins inspected & cleaned

Infrastructure Rehabilitation

- **11 km** Sewers
- **274.9 km** Roads paved
- **88.1 km** Rural roads resurfaced
- **5.5 km** Watermains
- **10.5 km** Roads with crack sealing
- **5.0 km** Resurfaced cycle track lanes
Asset Management
• Strategic Asset Management Policy

Major Right-of-Way Projects
• Red Hill Valley Parkway resurfacing
  • Arvin Avenue
  • Cannon Street
  • Locke Street
• Governors Road
• Parkdale Avenue
• Wilson Street (Ancaster)
• Neighbourhood resurfacing: Balfour, Buchanan, MacNab St., Mountview
BUILT ENVIRONMENT & INFRASTRUCTURE
2019 HIGHLIGHTS

Arvin Ave.

Cannon St.

Parkdale Ave.

Rymal Rd.

Wilson St. (Ancaster)

Shorewall Reconstruction
Facilities

- $24.2 M capital delivery for facilities (within Public Works budget)
- Major projects in 2019:
  - Grightmire Arena
  - Norman Pinky Lewis Recreation Centre
  - Hamilton Public Library window replacement
  - Locke Street Library
  - Bus port
  - 703 Highway 8 (new yard)
- Master Office Space Management Plan - approval of downtown office accommodations
- Space management solutions for Public Works Yards
BUILT ENVIRONMENT & INFRASTRUCTURE
2019 HIGHLIGHTS

- Locke St Library
- Bus Port
- 703 Hwy 8 (new yard)
- Hamilton Public Library
- Hamilton Convention Centre
- 500 MacNab St. – City Housing Hamilton
Disaster Mitigation and Adaptation Fund
- Shoreline protection
- Combined sewer outfall backflow valves

Waterfront Development:
- Pier 8 construction
- Macassa Bay

Landscape Architecture:
- 13.2 hectares of new parkland
- 24 park and trail construction projects
- John Rebecca Park, Bookjans Park, Churchill Park Rain Gardens, Crown Point Parkette, Shaver Estates Trail, Tiffany Hills Park
Healthy & Safe Communities
2019 Highlights
15 Neighbourhoods added to Vision Zero speed reduction program

25

20,114

650

9

1500

88

10

Repainted

7,200

2,200

1,024
Security
• Corporate Security Office growth
• Development of security policies
• New security features at City Hall
• New trespassing by-law (corporate owned properties)

Road and Traffic Safety
• Vision Zero Action Plan
  • 20% decrease in injury collisions since 2016
• Neighbourhood Speed Reduction Program
• RHVP & LINC safety enhancements
• Rural intersection stop bar compliance audit
• Railway crossing safety audit and action plan
Our People & Performance
2019 Highlights
CVOR rating improvements
- Driver training, new reporting guidelines, collision toolkit

Technology improvements
- GIS mobile applications
- Fleet dash cam

Our People Survey
- Implementation of action plans
- 187 actions in Public Works

Leadership development
- Cutting Edge of Leadership program
- Green Belt training
Working on the business

- Business acumen/change management response to loss of corporate knowledge with staff departures (retirements, job changes)
- Process Standardization
  - (e.g. Construction Act Prompt Payment)
- Divisional/Sectional Annual Reports
- Developmental Senior Project Manager roles across divisions
- Divisional leadership programs
Departmental Strategic Planning
- Strategic framework/DLT mandate
- Quality management
- Workforce planning
- Common objectives for 2020-2023
- Balanced Scorecard/PW Analytics

Project Management Standardization
- Approach aligned to project management body of knowledge
- Standard project charter and other templates for improved project performance and reporting
Community Engagement & Participation
2019 Highlights
Community Outreach
• Increased outreach with the public and community groups on major infrastructure projects
• Communications for Red Hill Valley Parkway resurfacing project, LINC maintenance weekends, and Locke Street reconstruction

Community Participation
• Community input in play structure design
• More than 22,000 registered participants for Team Up to Clean Up events
• $51K traffic island sponsorship
Open for Business
• Major Telco installation in progress
• Established the Bell Special Project team

Revenues
• Hamilton Forge Soccer at Tim Hortons Field
• Film shoots and leasing opportunities

Hamilton Youth in Construction
• Four classes graduated to date
Culture & Diversity
2019 Highlights
CULTURE & DIVERSITY 2019 HIGHLIGHTS

- $300k funding received for Inch Park redesign for Challenger Baseball
- Cemeteries consideration for cultural needs
- Installation of temporary commissioned artwork as vinyl wraps on 37 traffic signal and electrical boxes in Downtown Hamilton

City Facilities
- Accessibility is broadening to inclusivity
- Delivering projects that support culture, e.g. Development of the Ancaster Memorial Arts & Culture Centre

Inch Park – Challenger Baseball

Design by Charlit Floriano
Photo credit: Jocelyn Reynolds
Continuous Improvement
2019 Highlights
## Continuous Improvement

### 2019 Highlights

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideas Generated</td>
<td>94</td>
</tr>
<tr>
<td>Kaizen Events</td>
<td>13</td>
</tr>
<tr>
<td>Cross-Dep. / Cross Div. Collaboration</td>
<td>20</td>
</tr>
<tr>
<td>Projects Started</td>
<td>133</td>
</tr>
<tr>
<td>Recovered Capacity</td>
<td>$634k</td>
</tr>
<tr>
<td>Staff Involvement</td>
<td>630</td>
</tr>
<tr>
<td>Projects Completed</td>
<td>78</td>
</tr>
<tr>
<td>Cost Reduction</td>
<td>$719k</td>
</tr>
<tr>
<td>Green Belts Trained</td>
<td>15</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
<tr>
<td>(Since Program Inception)</td>
<td>(Since Program Inception)</td>
</tr>
</tbody>
</table>
Facilities Management
Manage
$2.1 Billion in Assets
>500 Facilities

Transportation Operations
Manage
45,385 Street Lights

600 Streetscape litter containers

Solid Waste Management Operate:
- 3 Community Recycling Centres & Transfer Stations
- 1 Open Landfill
- 12 Closed Landfills
- 1 Material Recycling Facility
- 1 Central Composting Facility

Parks and Open Spaces
Manage
2,101 km of water mains

Manage
70 Municipal Cemeteries

Manage and maintain
2,445 km of sidewalks

Manage and maintain
2,964 center lane km of Roads

Fleet Services
Manage and Maintain
1,196 km Sanitary Sewer
1,216 km Storm Sewer
574 km Combined Sewer
9 Combined sewer overflow tanks

69 Spray pads
523 Park Locations

Road Maintenance
Manage
389 Bridges and Structures

230 lane km Bike lanes

HAMILTON
PUBLIC WORKS 2020 OPERATING BUDGET
JANUARY 28, 2020
PERFORMANCE METRICS

215,000 km
of roadway patrolled for deficiencies

3500 Traffic signs repaired/replaced

395 metres
of trails constructed

25,000
Pothole sites repaired

5,649 MWH
Electricity produced

1250 Internments at Hamilton Cemeteries

Solid Waste Management
Manage
213,400 tonnes
of residential waste

Over
27 Million
Waste Pickups per year

54,803
Visitors to the new Gage Park Tropical Greenhouse

Winter Operations
Maintain
6,492 Lane km of Road

Natural Open Space & Parkland
Manage
24,082 hectares

3,804 Play structure inspections

PUBLIC WORKS 2020 OPERATING BUDGET
JANUARY 28, 2020
Web Analytics Tool

- Web-based tool allows staff to monitor performance in real-time
- Helps to demonstrate compliance, achieve efficiency and improve consistency
<table>
<thead>
<tr>
<th>Priority</th>
<th>Division</th>
<th>Metric Name</th>
<th>Metric Description (Metric ID)</th>
<th>YE Target</th>
<th>Month Target</th>
<th>Month Actual</th>
<th>YTD Target</th>
<th>YTD Actual</th>
<th>Health Indicator</th>
<th>Trend Toward Target</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>PublicWorksAdmin</td>
<td>Transit - Canceled service</td>
<td>Number of hours canceled service (28)</td>
<td>5,787</td>
<td>462</td>
<td>213.2</td>
<td>5,784</td>
<td>52.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>PublicWorksAdmin</td>
<td>Small Drinking Water Systems Wells</td>
<td>Number of adverse conditions from SW wells tested (1999)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>PublicWorksAdmin</td>
<td>Water - Safe Drinking Water</td>
<td>Maintain zero confirmed adverse water quality incidents (AVQIs) (2000)</td>
<td>41</td>
<td>4</td>
<td>2.69</td>
<td>48</td>
<td>42.31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>PublicWorksAdmin</td>
<td>Waste - Missed Collections</td>
<td>Number of missed collections per 10,000 pickups (no bail) (MT1)</td>
<td>7</td>
<td>0</td>
<td>27</td>
<td>0</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>PublicWorksAdmin</td>
<td>Total Water Quality Complaints</td>
<td>Number of Water Quality Complaints (3362)</td>
<td>5</td>
<td>0</td>
<td>27</td>
<td>0</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category: Financial</th>
<th>PublicWorksAdmin</th>
<th>Revenue Generation (Fees and General)</th>
<th>Revenue (% of Plan) (13)</th>
<th>100</th>
<th>100</th>
<th>5.5</th>
<th>100</th>
<th>96.32</th>
<th>Data from Pol analyst/FMV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Budget Expense</td>
<td>Expenses (% of Plan) (14)</td>
<td>100</td>
<td>100</td>
<td>73.1</td>
<td>100</td>
<td>94.01</td>
<td></td>
</tr>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Overtime Spending (Salary)</td>
<td>% Overtime as a % of Gross Salary (15)</td>
<td>1.94</td>
<td>2.05</td>
<td>3.8</td>
<td>1.94</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Overtime Spending (Wages)</td>
<td>% Overtime as a % of Gross Wages (16)</td>
<td>5.4</td>
<td>7.6</td>
<td>22.9</td>
<td>5.4</td>
<td>10.52</td>
<td></td>
</tr>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Standby Trouble Callout</td>
<td>% of Plan (20)</td>
<td>100</td>
<td>100</td>
<td>112.7</td>
<td>100</td>
<td>100.55</td>
<td></td>
</tr>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Overtime Bank Paid</td>
<td>% of Plan (38)</td>
<td>100</td>
<td>100</td>
<td>96.2</td>
<td>100</td>
<td>438.17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category: Process &amp; Compliance</th>
<th>PublicWorksAdmin</th>
<th>Continuous Improvement: Initiatives</th>
<th>Number of completed Continuous Improvement Projected deliverables (70)</th>
<th>60</th>
<th>10</th>
<th>2</th>
<th>60</th>
<th>77</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Our People &amp; Performance</td>
<td>PublicWorksAdmin</td>
<td>Continuous Improvement: Shain Audit Scores</td>
<td>Average of Shain Audit scores where implemented (%) (20)</td>
<td>80.95</td>
<td>75</td>
<td>84</td>
<td>80.95</td>
<td>87.56</td>
<td>Data source: Aug of EFPFM, Transit MVW &amp; ESS (20)</td>
</tr>
<tr>
<td>Our People &amp; Performance</td>
<td>PublicWorksAdmin</td>
<td>Resource Levels - Vacancy Fill Rate</td>
<td>Number of vacancies open &gt;16 wks from when position became vacant (78)</td>
<td>600</td>
<td>50</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>Through Hiring</td>
</tr>
<tr>
<td>Our People &amp; Performance</td>
<td>PublicWorksAdmin</td>
<td>Performance to Purchasing Prices</td>
<td>Total number of Policy 15 occurrences (79)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>Through Hiring</td>
</tr>
<tr>
<td>Built Environment &amp; Infrastructure</td>
<td>PublicWorksAdmin</td>
<td>Emergency Water Response Repairs</td>
<td>Repairs to watermain water service complete &lt;2 days (%) (199)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>35.42</td>
<td></td>
</tr>
<tr>
<td>Built Environment &amp; Infrastructure</td>
<td>PublicWorksAdmin</td>
<td>Emergency sewer lateral repair</td>
<td>Repairs complete &lt; 4 days (%) (193)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>33.33</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>W2F/T Regulatory Compliance</td>
<td>Number of instances defect not compliant with regulatory standards (implied daily loading for Woodward)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Spills response</td>
<td>% of spills responded on time (124)</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>85</td>
<td>93.3</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Facilities Management</td>
<td>% Regularly orders responded by due date (191)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>37.27</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Plant Services</td>
<td>% Regularly orders responded by due date (192)</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Forestry - Tree Canopy</td>
<td>Plant 2000 trees (Number (193))</td>
<td>6,400</td>
<td>0</td>
<td>0</td>
<td>6,400</td>
<td>7,259</td>
<td></td>
</tr>
<tr>
<td>Healthy &amp; Safe Communities</td>
<td>PublicWorksAdmin</td>
<td>Waste - Islandbrook Landfill Waste to Soil ratio</td>
<td>Islandbrook Landfill Ratio of waste to soil to be at 7:1 (905)</td>
<td>5.47</td>
<td>5.5</td>
<td>5.47</td>
<td>5.47</td>
<td>6.36</td>
<td></td>
</tr>
<tr>
<td>Community Engagement &amp; Participation</td>
<td>PublicWorksAdmin</td>
<td>Play structures safety inspections</td>
<td>Maintain &gt;75% or greater for inspected/play sites (106)</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Economic Prosperity &amp; Growth</td>
<td>PublicWorksAdmin</td>
<td>Cemeteries - Pre-need sales</td>
<td>Amount of pre need sales - Goal is to increase sales by 10% annually (1110)</td>
<td>1,320,000</td>
<td>1,320,000</td>
<td>32,674,232</td>
<td>3,120,000</td>
<td>1,154,659.74</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Forestry - Tree trimming by grid</td>
<td>Tree trimming per crew per day (combined) (1118)</td>
<td>4,600</td>
<td>350</td>
<td>350</td>
<td>4,600</td>
<td>4,800</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Green</td>
<td>PublicWorksAdmin</td>
<td>Parks - Trash can processing</td>
<td>4043 trash cans emptied per week in summer and 1239 trash cans emptied per week in winter (Number (1486)</td>
<td>120,400</td>
<td>6,400</td>
<td>2,635</td>
<td>120,400</td>
<td>132,205</td>
<td></td>
</tr>
</tbody>
</table>

*Note: YE: Yearly Expected, Month Target, Month Actual, YTD: Year-to-Date, Health Indicator, Trend Toward Target, Comments*
Performance Metrics

- Enhancing web based performance monitoring tool
- Web-based analytics tool
- Review and optimize performance metrics
- Development of data trends and insights
- Ensure that customer and vendor management metrics are identified and monitored effectively
<table>
<thead>
<tr>
<th>Objective</th>
<th>Metric</th>
<th>Target</th>
<th>YTD</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water - Safe drinking water</td>
<td>Maintain zero confirmed adverse water quality incidents (AWQIs)</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Greenhouse Gas Emissions</td>
<td>% Greenhouse Gas emission reduction (from 2005 baseline)</td>
<td>-20%</td>
<td>-38%</td>
<td></td>
</tr>
<tr>
<td>Play Structure Safety Inspections</td>
<td>Maintain &gt;75% inspected play sites as per regulation</td>
<td>75%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Objective</td>
<td>Metric</td>
<td>Target</td>
<td>YTD</td>
<td>Health</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------</td>
<td>--------</td>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>Water – Emergency Response</td>
<td>Water main/water service repair within 2 days</td>
<td>100%</td>
<td>94%</td>
<td></td>
</tr>
<tr>
<td>Development Application Response</td>
<td># of applications processed within PED timeline</td>
<td>990</td>
<td>820</td>
<td></td>
</tr>
<tr>
<td>Waste Diverted from Landfill</td>
<td>% Diversion</td>
<td>65%</td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>
Right-of-Way Capital Program Delivery

- Revised roads budget achieves re-investment rate of 1.1%
  - Below the recommended 2%-3% target
- Complete Streets – design & construction of multi-modal transportation systems
- Higher risk and complex projects (i.e. escarpment, tunneling, etc.)
- Road condition project to determine current Overall Condition Index and Level of Service – update in 2020
OVERALL CONDITION INDEX (OCI) RESULTS

Chapple St.  OCI = 17
Reconstruction

Aspen Ct.  OCI = 38
Major Rehab.

Birchcliff Blvd  OCI = 57
Minor Rehab.

Muir Ave  OCI = 100
Good

Overall network average OCI is 62 (Good)*

*From 2015 pavement condition assessment
Facility Condition Index (FCI) Ratings

- Greensville Hall
  FCI est. > 65%
  Critical

- Normanhurst Community Centre
  FCI = 28%
  Poor

- Tapleytown Yard
  FCI = 41%
  Critical

- Hill Park Recreation Centre
  FCI = 21%
  Poor

Overall FCI across 500+ facilities is 9.5% (Fair)

Facility Condition Index

<table>
<thead>
<tr>
<th></th>
<th>0-5%</th>
<th>5-10%</th>
<th>10-30%</th>
<th>&gt;30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Climate Change

• Building resiliency and taking action to mitigate and adapt to climate change

• Key areas: water quality, flood mitigation, greenhouse gas reduction, invasive species

• Public Works plays a major role in the City’s Corporate Climate Change goals

• Prioritizing actions
  o Corporate Energy Policy and energy projects
  o Focus on green fleet/equipment
  o Support active and sustainable travel
  o Resiliency planning to promote climate focused approach
CLIMATE RESILIENCY PROGRAM

DIVISIONAL PROGRAM TEAM

STEERING COMMITTEE

DLT

HORIZON SCAN

ENGAGEMENT & COMMUNICATIONS PROGRAM

SHOCKS AND STRESSES ASSESSMENT

ACTIONS INVENTORY ASSESSMENT

PUBLIC WORKS INTERNAL REVIEW

CORPORATE AND DEPARTMENTAL PRIORITIES

CORPORATE CLIMATE CHANGE TASK FORCE

RESILIENCY CHALLENGES

1

2

3

4

5

6

ANNUAL RESILIENCY ASSESSMENT

RESILIENCY:
The capacity to recover, adapt, and thrive in the face of adversity, chronic stresses and acute shocks

RESILIENT FUTURES PROGRAM
TREND IMPACT ANALYSIS SCENARIO PROJECTION ANNUAL FUTURES REPORT

SHARED VISION FOR A MORE RESILIENT PUBLIC WORKS

RESILIENCY STRATEGY

GOALS

AIMS

FOCUS AREAS

PRIORITY ACTIONS

PUBLIC WORKS RESILIENCY INCUBATOR

PUBLIC WORKS RESILIENCY SUMMIT

EXAMINE

ASSESS

ENVISION

ALIGN

IMPLEMENT

BUSINESS CASE AND FUNDING PARTNERSHIPS

COLLABORATIVE IMPLEMENTATION

MONITORING & ASSESSMENT (KPI TRACKING)

SHARE BEST PRACTICES

CELEBRATE SUCCESSES & FAILURES

INSTITUTIONALIZE & IMPLEMENT PRIORITY ACTIONS
Urgent Request/Emergency Response

- Public Works is highly reactive to urgent requests and emergencies.
- This reduces capacity to manage planned activities.
- Response to extreme weather events can result in unexpected budget deficits.
- Examples:
  - Escarpment slope failures (Hwy 8, McNeilly)
  - Liquid asphalt spill on Red Hill Valley Parkway
  - Significant storm response (downed trees, flooding, etc.)
Forestry

- Extreme weather events and climate change affect tree health
- Urban intensification and urban sprawl reduce existing tree canopy and limit potential planting sites for new trees
- Capital Block Funding has been static or declining over the last 10 years
- Program Initiatives:
  - Pest and disease monitoring, risk assessment and mitigation
  - Process improvements to monitor and increase health/survival of new trees
  - Implement field based technology
- An estimated 80,000 trees need to be planted annually over 40 years to meet the 30% canopy coverage target (3.2 million trees)

Current tree canopy is approx. 21.2%
## Contract Renewals

<table>
<thead>
<tr>
<th>Contract</th>
<th>Timing</th>
<th>Budget Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer Station / Community</td>
<td>March 2020</td>
<td>$1.39 M</td>
</tr>
<tr>
<td>Recycling Centres</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landfill / Leaf &amp; Yard Processing</td>
<td>March 2020</td>
<td>$0.97 M</td>
</tr>
<tr>
<td>Materials Recycling Facility</td>
<td>April 2020</td>
<td>$1.55 M</td>
</tr>
<tr>
<td>Waste Collections</td>
<td>2021</td>
<td>Expected</td>
</tr>
<tr>
<td>Central Composting Facility</td>
<td>2021</td>
<td>Expected</td>
</tr>
<tr>
<td>Winter Control</td>
<td>Fall 2020</td>
<td>$250,000</td>
</tr>
<tr>
<td>Salt procurement</td>
<td>2020</td>
<td>$1.50 M</td>
</tr>
</tbody>
</table>
Workforce Management

- Difficulty with filling skilled roles
- Creating a healthy, engaged and supportive workplace will attract and retain knowledgeable staff
- Plan for the departure of long standing and knowledgeable employees

Technology

- Must leverage technology and innovation to improve the delivery of projects and services
Legislation
Changes to federal and provincial legislation have an associated impact on how the City delivers services:

- **Bill 6** *Infrastructure for Jobs & Prosperity Act, 2015* – requirements for a strategic asset management plan
- **Bill 47** *Making Ontario Open for Business Act, 2018* - impacts minimum wage standards, work scheduling, personal emergency leave
- **Bill 66** *Restoring Ontario’s Competitiveness Act, 2019* – declared municipalities as “non-construction employers”
- **Bill 108** *More Homes, More Choice Act, 2019* - changed the structure of development charges and parkland acquisition
- **Bill 142** *Construction Act, 2019* – liens, prompt payment, payment disputes
- **Bill 151** *Waste-Free Ontario Act, 2016* – increasing waste diversion and building a circular economy
Energy & Fuel Markets

- Electricity, diesel, gasoline and natural gas energy markets remain volatile and are impacted by factors such as global markets, supply and demand.
- Energy projects can lead to future savings
- Electricity incentives ending in 2020

Lease Contracts & Accommodations

- Master Accommodation Plan to consider expiring leases for office accommodations between 2020 to 2021.
Growth

- There is currently no mechanism to identify operating impacts from growth related activities in departmental budgets
- Budgetary constraints make it a challenge to accommodate these growth impacts
- Development application approvals
- Intensification challenges for Public Works
Corporate Plan Initiatives

- Climate change strategic plan
- Enterprise Asset Management System (EAM)
- Asset management strategic planning process
- Continuous improvement priorities
- Quality Management System
- Standard project management practices
- “Our People Survey” action plans
Right-of-Way projects
- Rymal Road
- Regional Road 56
- Neighbourhood resurfacing: Westdale, Homeside, Kentley

Facility projects
- Beverley Community Centre (HWDSB) (Fall)
- Lister Annex Offices (Spring)
- First Ontario Centre vertical transportation system (Summer)
- Macassa & Wentworth Lodges – Roof Replacement (Fall/Winter)
Transportation Operations & Maintenance:
• Development of the RHVP / LINC Operational Strategy
• Vision Zero Initiatives:
  • Neighbourhood Speed Reduction Program
  • Automated Speed Enforcement

Space management solutions
• Office leases
• New developments
• Yard rationalization

Energy
• 5-Year review of the Corporate Energy Policy in 2020
Waste Programs

• Solid Waste Management Master Plan review
• Waste collection contract award
• Transition operating contracts for the waste management facilities including Transfer Stations, Community Recycling Centres, and Landfill

Other Major Initiatives

• Biosolids
• Year 8 of the 10-Year Emerald Ash Borer Management Plan
• Year 5 of 10-Year Transit Strategy
• Our People Survey action implementation and launch of new OPS Survey (2020-2023)
Enterprise Asset Management (EAM)
- Significant opportunity for improved asset management and higher quality service delivery
- Business case focused on redesigning EAM practices and processes with associated system workflows
- 11+ software systems in Public Works cost $1.06M annually
- Opportunity to reduce costs and align with IT strategy
- Goal to increase discipline and efficiency, enable mobility, promote engagement and community self-service and allow for open data
Quality Management System (QMS)

- The PWQMS seeks to meet the minimum standards as prescribed by ISO 9001:2015
- The system will support delivering services according to detailed policies, procedures and methods
- Quality Resource Centre provides staff access to controlled policies and procedures
- Cross-functional collaboration in the review and development of a PWQMS Policy, Health & Safety and operational procedures
- Assessment of record control methodology to ensure compliance
Major Initiatives 2021 – 2023
Public Works
Corporate Plan Initiatives

Climate change workplan

Implementation of EAM System

Asset Management Plan (O. Reg 588/17)

Investment in transportation systems

Project management best practices

Our People & Performance Plan

Corporate Energy Policy implementation
**Right-of-Way Infrastructure**

- Explore technology applications to address the need for more cost effective road rehabilitation strategies
- Implementation of the strategic road safety strategy that focuses on Vision Zero and the Complete Livable Better Streets principles
- Identifying the reconstruction requirements for the LINC
- Investigate infrastructure requirements for autonomous vehicles
Major Right-of-Way Projects
- Stone Church Road – feeder-main
- Rymal Road
- Nebo Road

Transit
- Continue with the implementation of the 10-Year Transit Strategy with a focus on modal split and growth

Waste
- Continue to monitor, participate in and prepare for the potential transition of the Blue Box Program to comply with the Waste-Free Ontario Act (Bill 151)
Facilities

- 2021 Grey Cup at Tim Hortons Field
- Collaboration with HWDSB on Greensville Library and Community Centre (2021)
- Ancaster Arts Centre (2022)
- Stadium Precinct Park Facilities (2022)
- Riverdale Community Hub (2023)
- Sir Wilfred Laurier Gymnasium Expansion (2023)
- Parkdale Pool (2021)
- Valley Park Community Centre (2021)

- Transit Maintenance and Storage Facility
- Woodward Wastewater Treatment Plant Upgrades
MAJOR INITIATIVES 2021 – 2023

- Develop asset management plans for core assets and green infrastructure to comply with the *Infrastructure for Jobs and Prosperity Act* (Bill 6)
- Undertake projects for parks Waterfront Trail redevelopment, shoreline protection and erosion control
- Participate in the evolution of the Hamilton Harbour Remedial Action Plan (HHRAP)
- Ongoing City projects related to the Waterfront Development
Energy Initiatives

• Energy Policy last updated in 2014 – review ongoing in 2020

• Steps to advance toward our energy targets
  1) Improving efficiency
  2) Renewable energy
  3) Carbon credits

• Upcoming energy projects: Westmount Solar Thermal, Norman Pinky Lewis Passive Solar Wall, LED lighting upgrades at City Hall, various libraries and recreation centres

Corporate Energy Reduction Targets

20% by 2020
45% by 2030
60% by 2050

25% Cumulative Energy Intensity Reduction as of 2018

Corporate Emissions Reduction Target (GHG)

20% by 2020
50% by 2030
80% by 2050
2020 PRELIMINARY TAX OPERATING BUDGET

Public Works Department
2020 Gross Capital and Operating Budgets

$1.110 billion

- **GROSS TAX OPERATING**: $379.6M (FCS19070/Nov. 25)
- **RATE OPERATING**: $232.6M (FCS19070/Nov. 25)
- **RATE CAPITAL**: $326.0M (FCS19070/Nov. 25)
- **TAX CAPITAL**: $172.2M (FCS19091/Nov. 29)
GROSS TAX OPERATING BUDGET

Gross Expenditures
$379.6 million

- REVENUE $123.8 M
- TAX LEVY $255.8 M
**ORGANIZATIONAL CHART**

**GENERAL MANAGER**
Dan McKinnon (1.00 FTE)

- Administration (1.00 FTE)
- Strategy, Continuous Improvement & Quality (5.00 FTE)

**Energy, Fleet & Facilities Management** (170.60 FTE)

- Engineering Services (131.33 FTE)
- Environmental Services (499.83 FTE)

- Hamilton Water* (325.65 FTE)
- Transportation Operations & Maintenance (396.26 FTE)

- Transit (791.71 FTE)

<table>
<thead>
<tr>
<th>Complement (FTE)</th>
<th>Management</th>
<th>Other</th>
<th>Total</th>
<th>Staff to Mgt. Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>32.00</td>
<td>1929.73</td>
<td>1961.73</td>
<td>60.30:1</td>
</tr>
<tr>
<td>2020</td>
<td>32.00</td>
<td>1964.73</td>
<td>1996.73</td>
<td>61.40:1</td>
</tr>
<tr>
<td>Change</td>
<td>0.00</td>
<td>35.00</td>
<td>35.00</td>
<td></td>
</tr>
</tbody>
</table>

* Complement excludes Hamilton Water
### Public Works - Tax

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PW-General Administration</td>
<td>874,810</td>
<td>903,540</td>
<td>903,540</td>
<td>28,730</td>
</tr>
<tr>
<td>Energy Fleet and Facilities</td>
<td>8,718,820</td>
<td>19,433,110</td>
<td>9,297,360</td>
<td>578,540</td>
</tr>
<tr>
<td>Engineering Services</td>
<td>-</td>
<td>20,572,580</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Environmental Services</td>
<td>79,243,370</td>
<td>104,040,500</td>
<td>82,794,430</td>
<td>3,551,060</td>
</tr>
<tr>
<td>Transit</td>
<td>74,298,880</td>
<td>141,439,580</td>
<td>81,395,710</td>
<td>7,096,830</td>
</tr>
<tr>
<td>Transportation Operations &amp; Maintenance</td>
<td>78,920,680</td>
<td>93,190,760</td>
<td>81,440,570</td>
<td>2,519,890</td>
</tr>
<tr>
<td><strong>Total Public Works - Tax</strong></td>
<td>242,056,560</td>
<td>379,580,070</td>
<td>255,831,610</td>
<td>13,775,050</td>
</tr>
</tbody>
</table>

#### Amendments - January 17, 2020 Budget GIC

<table>
<thead>
<tr>
<th>Amendments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Public Works - Tax Less Amendments</td>
</tr>
<tr>
<td>(740,350)</td>
</tr>
<tr>
<td>(0.3%)</td>
</tr>
<tr>
<td>13,034,700</td>
</tr>
<tr>
<td>5.4%</td>
</tr>
</tbody>
</table>

- **Note:** Recycling revenues has a $2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- **This risk has been mitigated in 2020 by a budgeted transfer from reserve**
# EFFORTS TO REDUCE BUDGET IMPACT

## HIGHLIGHTS

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced Energy Costs LED Streetlighting</td>
<td>$426,000</td>
</tr>
<tr>
<td>Continued Conversion Diesel Transit Fleet to Natural Gas</td>
<td>$390,000</td>
</tr>
<tr>
<td>Transfer Station / Community Recycling Centres – New Contract</td>
<td>$1,392,730</td>
</tr>
<tr>
<td>Right Sizing Budget</td>
<td>$1,109,400</td>
</tr>
<tr>
<td>Environmental Services: Increased minimum vehicle fee to $10 at Transfer Station / Community Recycling Centres (APPROVED)</td>
<td>$100,000</td>
</tr>
<tr>
<td>PW Portion: Fuel rate update (diesel &amp; unleaded)</td>
<td>$195,350</td>
</tr>
<tr>
<td>Environmental Services: Contractual savings at landfill</td>
<td>$75,000</td>
</tr>
<tr>
<td>Environmental Services: Contractual savings from diversion</td>
<td>$370,000</td>
</tr>
</tbody>
</table>

## Amendments – January 17, 2020 Budget GIC:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Services: Contractual savings from diversion</td>
<td>$370,000</td>
</tr>
<tr>
<td>PW Portion: Fuel rate update (diesel &amp; unleaded)</td>
<td>$195,350</td>
</tr>
<tr>
<td>Environmental Services: Increased minimum vehicle fee to $10 at Transfer Station / Community Recycling Centres (APPROVED)</td>
<td>$100,000</td>
</tr>
<tr>
<td>Environmental Services: Contractual savings at landfill</td>
<td>$75,000</td>
</tr>
</tbody>
</table>

## Environmental Services: Contractual savings from diversion

- $370,000

## Environmental Services: Contractual savings at landfill

- $75,000
### 2020 Key Cost Drivers

#### Total 2020 Preliminary Net Levy Increase

5.4%

#### Departmental Key Drivers

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Year Strategy (Net) Year 5 of 10</td>
<td>$688,220</td>
<td>0.3%</td>
</tr>
<tr>
<td>PRESTO Operating Agreement</td>
<td>$875,000</td>
<td>0.4%</td>
</tr>
<tr>
<td>Transit Fleet Reserve Year 8 of 8</td>
<td>$628,000</td>
<td>0.3%</td>
</tr>
<tr>
<td>DARTS Ridership Growth</td>
<td>$2,664,130</td>
<td>1.1%</td>
</tr>
</tbody>
</table>

#### Without Key Transit Drivers

3.4%

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Salt Contract (New Contract)</td>
<td>$1,500,000</td>
<td>0.6%</td>
</tr>
<tr>
<td>Materials Recycling Facility (New Contract)</td>
<td>$1,551,570</td>
<td>0.6%</td>
</tr>
<tr>
<td>Waste Collection (Change in Leaf &amp; Yard Program)</td>
<td>$316,000</td>
<td>0.1%</td>
</tr>
<tr>
<td>Leaf &amp; Yard Disposal (New Contract)</td>
<td>$506,970</td>
<td>0.2%</td>
</tr>
<tr>
<td>Glanbrook Site Operations (New Contract)</td>
<td>$458,620</td>
<td>0.2%</td>
</tr>
</tbody>
</table>

#### Without Key Transit Drivers + New Contracts

1.6%

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Vacant School Properties</td>
<td>$240,440</td>
<td>0.1%</td>
</tr>
<tr>
<td>Security (PW17083)</td>
<td>$134,530</td>
<td>0.1%</td>
</tr>
<tr>
<td>Insurance Premiums (Direct Charges)</td>
<td>$1,130,350</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

#### Net Levy Exclude All Key Cost Drivers

1.0%
## HISTORICAL BUDGET INCREASES

<table>
<thead>
<tr>
<th></th>
<th>2017 Approved</th>
<th>2018 Approved</th>
<th>2019 Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$ Change from 2016</td>
<td>% Change from 2016</td>
<td>$ Change from 2017</td>
</tr>
<tr>
<td>Total Net Levy Increase</td>
<td>5,002,510</td>
<td>2.2%</td>
<td>8,486,320</td>
</tr>
<tr>
<td><strong>Key Drivers:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSIT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Year Strategy (Net)</td>
<td>361,000</td>
<td>0.2%</td>
<td>2,188,000</td>
</tr>
<tr>
<td>PRESTO Operating Agreement</td>
<td>577,000</td>
<td>0.3%</td>
<td>356,000</td>
</tr>
<tr>
<td>Transit Fleet Reserve</td>
<td>1,680,000</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>DARTS Ridership Growth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EffM</td>
<td>1,593,000</td>
<td>0.7%</td>
<td></td>
</tr>
<tr>
<td><strong>Levy Exclude Key Drivers</strong></td>
<td>2,471,510</td>
<td>1.1%</td>
<td>4,262,320</td>
</tr>
<tr>
<td><strong>Guideline</strong></td>
<td>2.00%</td>
<td>1.50%</td>
<td>1.50%</td>
</tr>
<tr>
<td>Service/Program</td>
<td>Description</td>
<td>Gross $(000's)</td>
<td>Net $(000's)</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Transportation Operations &amp; Maintenance</td>
<td>Bring Inspectors In-House (savings to contractual services)</td>
<td>$285</td>
<td>($89)</td>
</tr>
<tr>
<td>Tim Hortons Field</td>
<td>Assistant Stadium Technicians needed to handle addition of Forge FC Soccer games (fully offset by additional revenue)</td>
<td>$140</td>
<td>$0</td>
</tr>
<tr>
<td><strong>DEPARTMENT TOTAL</strong></td>
<td></td>
<td>$425</td>
<td>($89)</td>
</tr>
</tbody>
</table>
### Public Works (Excludes Key Transit Drivers)

<table>
<thead>
<tr>
<th></th>
<th>Preliminary</th>
<th>Multi-Year Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2020</td>
<td>2021</td>
</tr>
<tr>
<td>Budget $</td>
<td>250,976,260</td>
<td>262,387,710</td>
</tr>
<tr>
<td>% Change from 2020</td>
<td>2.6%</td>
<td>1.6%</td>
</tr>
<tr>
<td>Key Transit Drivers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DARTS Ridership Growth</td>
<td>2,664,130</td>
<td>1,720,000</td>
</tr>
<tr>
<td>Annual 10 Year Strategy (Net)</td>
<td>688,220</td>
<td>3,154,000</td>
</tr>
<tr>
<td>PRESTO Maintenance Agreement</td>
<td>875,000</td>
<td>1,722,000</td>
</tr>
<tr>
<td>Transit Fleet Reserve</td>
<td>628,000</td>
<td>207,000</td>
</tr>
<tr>
<td>Total Public Works - Tax</td>
<td>255,831,610</td>
<td>269,190,710</td>
</tr>
</tbody>
</table>

### Multi-Year Outlook

<table>
<thead>
<tr>
<th></th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Change from 2020</td>
<td>2.6%</td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>% Change from 2021</td>
<td></td>
<td>1.6%</td>
<td>1.4%</td>
</tr>
<tr>
<td>% Change from 2022</td>
<td></td>
<td></td>
<td>1.4%</td>
</tr>
</tbody>
</table>
ENERGY, FLEET & FACILITIES MANAGEMENT

DIRECTOR
Rom D’Angelo
(1.00 FTE)

Administration
(1.50 FTE)

SPM Continuous Improvement
(1.00 FTE)

Central Fleet
(57.00 FTE)

Energy Initiatives
(6.00 FTE)

Facility Planning & Business Solutions
(20.66 FTE)

Facility Operations & Maintenance
(46.70 FTE)

Sports & Entertainment Facilities
(17.44 FTE)

Strategic Planning Capital & Compliance
(19.30 FTE)

<table>
<thead>
<tr>
<th>Complement</th>
<th>Management</th>
<th>Other</th>
<th>Total</th>
<th>Staff to Mgt. Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>7.00</td>
<td>163.60</td>
<td>170.60</td>
<td>23.37:1</td>
</tr>
<tr>
<td>2020</td>
<td>7.00</td>
<td>163.60</td>
<td>170.60</td>
<td>23.37:1</td>
</tr>
<tr>
<td>Change</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>
## Energy Fleet and Facilities

<table>
<thead>
<tr>
<th></th>
<th>2019 Restated Net</th>
<th>2020 Preliminary Gross</th>
<th>2020 Preliminary Net</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Services</td>
<td>170,550</td>
<td>2,024,220</td>
<td>25,530</td>
<td>(145,020)</td>
<td>(85.0%)</td>
</tr>
<tr>
<td>Corporate Facility Ops &amp; Tech</td>
<td>1,359,670</td>
<td>3,312,360</td>
<td>1,905,120</td>
<td>545,450</td>
<td>40.1%</td>
</tr>
<tr>
<td>Facilities Planning and Business Solutions</td>
<td>681,610</td>
<td>1,651,190</td>
<td>895,470</td>
<td>213,860</td>
<td>31.4%</td>
</tr>
<tr>
<td>Community Facility Ops &amp; Tech Serv</td>
<td>3,164,410</td>
<td>3,258,090</td>
<td>3,258,090</td>
<td>93,680</td>
<td>3.0%</td>
</tr>
<tr>
<td>Sports &amp; Entertainment Facilities</td>
<td>3,002,660</td>
<td>5,979,730</td>
<td>2,907,610</td>
<td>(95,050)</td>
<td>(3.2%)</td>
</tr>
<tr>
<td>Director EFF</td>
<td>305,310</td>
<td>327,550</td>
<td>305,750</td>
<td>440</td>
<td>0.1%</td>
</tr>
<tr>
<td>Energy Initiatives</td>
<td>36,120</td>
<td>818,550</td>
<td>-</td>
<td>(36,120)</td>
<td>(100.0%)</td>
</tr>
<tr>
<td>Strategic Plan &amp; Capital Compliance</td>
<td>(1,510)</td>
<td>2,061,420</td>
<td>(210)</td>
<td>1,300</td>
<td>(86.1%)</td>
</tr>
<tr>
<td><strong>Total Energy Fleet and Facilities</strong></td>
<td>8,718,820</td>
<td>19,433,110</td>
<td>9,297,360</td>
<td>578,540</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

### Amendments - January 17, 2020 Budget GIC:

- Reduction to Fuel Assumptions (diesel & unleaded) (14,450)

**Total Energy Fleet and Facilities Less Amendments**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>564,090</td>
<td>6.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 2020 BUDGET DRIVERS
**ENERGY, FLEET & FACILITIES**

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hold Vacant Properties (Mainly due to King George &amp; Mountain Schools)</td>
<td>$240</td>
</tr>
<tr>
<td>Increase in Security costs (PW17083)</td>
<td>$135</td>
</tr>
<tr>
<td>Employee Related Costs</td>
<td>$203</td>
</tr>
</tbody>
</table>
### Engineering Services

**Director**
Gord McGuire (1.00 FTE)

**Management**

<table>
<thead>
<tr>
<th>Complement (FTE)</th>
<th>Management</th>
<th>Other</th>
<th>Total</th>
<th>Staff to Mgt. Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2019</strong></td>
<td>6.00</td>
<td>125.33</td>
<td>131.33</td>
<td>20.89:1</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td>6.00</td>
<td>125.33</td>
<td>131.33</td>
<td>20.89:1</td>
</tr>
<tr>
<td><strong>Change</strong></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>
## Engineering Services

<table>
<thead>
<tr>
<th>Service</th>
<th>2019 Restated Net</th>
<th>2020 Preliminary Gross</th>
<th>2020 Preliminary Net</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset Management</td>
<td>-</td>
<td>3,474,180</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Construction</td>
<td>-</td>
<td>4,690,090</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Design Services</td>
<td>-</td>
<td>3,001,480</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Director of Engineering Services</td>
<td>-</td>
<td>1,681,310</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Geomatics and Corridor Management</td>
<td>-</td>
<td>6,992,680</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td>Waterfront Development</td>
<td>-</td>
<td>732,840</td>
<td>-</td>
<td>-</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total Engineering Services</strong></td>
<td>-</td>
<td>20,572,580</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

- Costs are mainly recovered from Capital
### Environmental Services

<table>
<thead>
<tr>
<th>Service</th>
<th>2019 Restated Net</th>
<th>2020 Preliminary Gross</th>
<th>2020 Preliminary Net</th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycling &amp; Waste Disposal</td>
<td>6,906,870</td>
<td>22,961,590</td>
<td>7,816,720</td>
<td>909,850</td>
<td>13.2%</td>
</tr>
<tr>
<td>Waste Collections</td>
<td>31,889,180</td>
<td>32,866,100</td>
<td>32,823,100</td>
<td>933,920</td>
<td>2.9%</td>
</tr>
<tr>
<td>Business Programs</td>
<td>2,076,090</td>
<td>2,281,510</td>
<td>2,166,850</td>
<td>90,760</td>
<td>4.4%</td>
</tr>
<tr>
<td>Director Environmental Services *</td>
<td>(701,070)</td>
<td>(701,070)</td>
<td>(701,070)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Forestry &amp; Horticulture</td>
<td>12,941,860</td>
<td>14,609,580</td>
<td>13,221,460</td>
<td>279,600</td>
<td>2.2%</td>
</tr>
<tr>
<td>Landscape &amp; Architectural Services</td>
<td>98,710</td>
<td>2,004,300</td>
<td>102,630</td>
<td>3,920</td>
<td>4.0%</td>
</tr>
<tr>
<td>Parks &amp; Cemeteries</td>
<td>26,031,730</td>
<td>30,018,490</td>
<td>27,364,740</td>
<td>1,333,010</td>
<td>5.1%</td>
</tr>
<tr>
<td><strong>Total Environmental Services</strong></td>
<td>79,243,370</td>
<td>104,040,500</td>
<td>82,794,430</td>
<td>3,551,060</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

#### Amendments - January 17, 2020 Budget GIC:
- Fuel rate update (diesel & unleaded) (28,700)
- Contractual savings at landfill (75,000)
- Contractual savings from diversion (370,000)
- Increased minimum vehicle fee to $10 at Transfer Station/Community Recycling Centres (APPROVED) (100,000)

**Total Environmental Services Less Amendments** 2,977,360 3.8%

#### Exclude Key Drivers:
- New Contract Pressures (2,517,160) 460,200 0.6%

---

- Note: Recycling revenues has a $2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- This risk has been mitigated in 2020 by a budgeted transfer from reserve

* Includes divisional gapping target of $701 K
# 2020 BUDGET DRIVERS
## ENVIRONMENTAL SERVICES

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Contract - Pressures</td>
<td>$2,517</td>
</tr>
<tr>
<td>New Contract – Savings (Transfer Station and Community Recycling Centers)</td>
<td>($1,393)</td>
</tr>
<tr>
<td>Waste Collection (Change in Leaf &amp; Yard program)</td>
<td>$316</td>
</tr>
<tr>
<td>Central Composting Facility (Change in Leaf &amp; Yard program)</td>
<td>($259)</td>
</tr>
<tr>
<td>Employee Related Costs</td>
<td>$767</td>
</tr>
<tr>
<td>Water Utility</td>
<td>$507</td>
</tr>
<tr>
<td>Blue Box Recycling Collection</td>
<td>$247</td>
</tr>
<tr>
<td>Fleet Reserve Contribution</td>
<td>$340</td>
</tr>
<tr>
<td>In Year Approval</td>
<td>$126</td>
</tr>
</tbody>
</table>

- Note: Recycling revenues has a $2.4 M pressure as a result of a world-wide collapse of mixed fiber commodities
- This risk has been mitigated in 2020 by a budgeted transfer from reserve
TRANSPORTATION OPERATIONS & MAINTENANCE

DIRECTOR
Edward Soldo
(1.00 FTE)

Administration
(1.00 FTE)

Roadway Maintenance
(265.25 FTE)

Business Initiatives
(35.71 FTE)

Transportation Operations
(90.30 FTE)

SPM (2.00 FTE)
& Quality Management Coordinator
(1.00 FTE)

<table>
<thead>
<tr>
<th>Complement (FTE)</th>
<th>Management</th>
<th>Other</th>
<th>Total</th>
<th>Staff to Mgt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>4.00</td>
<td>392.26</td>
<td>396.26</td>
<td>98.07:1</td>
</tr>
<tr>
<td>2020</td>
<td>4.00</td>
<td>392.26</td>
<td>396.26</td>
<td>98.07:1</td>
</tr>
<tr>
<td>Change</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>
# Transportation Operations & Maintenance

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Maintenance</td>
<td>62,229,330</td>
<td>65,724,580</td>
<td>63,936,340</td>
<td>1,707,010, 2.7%</td>
</tr>
<tr>
<td>Director – Trans Ops &amp; Mtce *</td>
<td>(629,950)</td>
<td>(629,950)</td>
<td>(629,950)</td>
<td>-</td>
</tr>
<tr>
<td>Transportation Operations</td>
<td>13,753,490</td>
<td>24,235,020</td>
<td>14,372,510</td>
<td>619,020, 4.5%</td>
</tr>
<tr>
<td>Business Initiatives</td>
<td>3,567,810</td>
<td>3,861,110</td>
<td>3,761,670</td>
<td>193,860, 5.4%</td>
</tr>
<tr>
<td><strong>Total Transportation Operations &amp; Maintenance</strong></td>
<td><strong>78,920,680</strong></td>
<td><strong>93,190,760</strong></td>
<td><strong>81,440,570</strong></td>
<td><strong>2,519,890, 3.2%</strong></td>
</tr>
</tbody>
</table>

**Amendments - January 17, 2020 Budget GIC:**
- Reduction to Fuel Assumptions (diesel & unleaded) (37,000)

**Total Transportation Operations & Maintenance Less Amendments**

2,482,890, 3.1%

**Exclude Key Drivers:**
- Road Salt Contract (New) (1,500,000)
- Insurance Premiums (Direct Charges) (576,000)

406,890, 0.5%

* Includes divisional gapping target of $630 K
## BUDGET DRIVERS: TRANSPORTATION OPERATIONS & MAINTENANCE

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Salt – New Contract</td>
<td>$1,500</td>
</tr>
<tr>
<td>Fleet Reserve Contribution</td>
<td>$668</td>
</tr>
<tr>
<td>Insurance Premiums (Direct Charges)</td>
<td>$576</td>
</tr>
<tr>
<td>Fuel</td>
<td>$379</td>
</tr>
<tr>
<td>Employee Related Expenses</td>
<td>$180</td>
</tr>
<tr>
<td>Right Sizing Budget</td>
<td>($531)</td>
</tr>
<tr>
<td>Savings in Energy / Streetlighting Costs</td>
<td>($426)</td>
</tr>
</tbody>
</table>
DIRECTOR
Debbie Dalle Vedove
(1.00 FTE)

Administration
(1.00 FTE)

SPM Continuous Improvement
(1.00 FTE)

Transit Operations
(604.30 FTE)

Transit Fleet Maintenance
(134.57 FTE)

Customer Experience & Innovation
(19.34 FTE)

Transit Support Services
(15.00 FTE)

Transit Planning & Infrastructure
(15.50 FTE)

<table>
<thead>
<tr>
<th>Complement (FTE)</th>
<th>Management</th>
<th>Other</th>
<th>Total</th>
<th>Staff to Mgt Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>6.00</td>
<td>750.71</td>
<td>756.71</td>
<td>125.12:1</td>
</tr>
<tr>
<td>2020</td>
<td>6.00</td>
<td>785.71</td>
<td>791.71</td>
<td>130.95:1</td>
</tr>
<tr>
<td>Change</td>
<td>0.00</td>
<td>35.00</td>
<td>35.00</td>
<td></td>
</tr>
</tbody>
</table>
## 2020 OPERATING BUDGET

### ANSIT

#### Transit

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Customer Experience and Innovation</strong></td>
<td>3,541,660</td>
<td>5,537,410</td>
<td>4,187,210</td>
<td>$645,550 18.2%</td>
</tr>
<tr>
<td><strong>Transit Planning and Infrastructure</strong></td>
<td>23,490,180</td>
<td>27,536,190</td>
<td>26,190,090</td>
<td>$2,699,910 11.5%</td>
</tr>
<tr>
<td><strong>Support Services</strong></td>
<td>2,105,120</td>
<td>2,130,050</td>
<td>2,129,050</td>
<td>$23,930 1.1%</td>
</tr>
<tr>
<td><strong>Director of Transit</strong></td>
<td>124,890</td>
<td>134,200</td>
<td>134,200</td>
<td>$9,310 7.5%</td>
</tr>
<tr>
<td><strong>Financial Charges &amp; General Revenue</strong></td>
<td>(33,597,270)</td>
<td>15,708,680</td>
<td>(34,527,690)</td>
<td>(930,420) 2.8%</td>
</tr>
<tr>
<td><strong>Operations HSR</strong></td>
<td>46,980,520</td>
<td>57,671,540</td>
<td>50,771,180</td>
<td>$3,790,660 8.1%</td>
</tr>
<tr>
<td><strong>Transit Fleet</strong></td>
<td>31,653,780</td>
<td>32,721,510</td>
<td>32,511,670</td>
<td>$857,840 2.7%</td>
</tr>
<tr>
<td><strong>Total Transit</strong></td>
<td>74,298,880</td>
<td>141,439,580</td>
<td>81,395,710</td>
<td>$7,096,830 9.6%</td>
</tr>
</tbody>
</table>

#### Amendments - January 17, 2020 Budget GIC:

- Reduction to Fuel Assumptions (diesel & unleaded) $(115,200)

**Total Transit Less Amendments** 6,981,630 9.4%

#### Exclude Key Drivers:

- **DARTS Ridership Growth** $(2,664,130)
- **Annual 10 Year Strategy (Net) Year 5** $(688,000)
- **PRESTO Maintenance Agreement** $(875,000)
- **Transit Fleet Reserve Year 8 of 8** $(628,450)
- **Insurance Premiums (Direct Charge)** $(424,000)

**1,702,050 2.3%**
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DARTS Ridership Growth</td>
<td>$2,664</td>
</tr>
<tr>
<td>Employee Related Costs</td>
<td>$1,396</td>
</tr>
<tr>
<td>PRESTO Operating Agreement</td>
<td>$875</td>
</tr>
<tr>
<td>Year 5 of 10 Year Strategy (Net)</td>
<td>$688</td>
</tr>
<tr>
<td>Fleet Reserve Contribution: Year 8 of 8 loss of OBRP Funding</td>
<td>$628</td>
</tr>
<tr>
<td>Insurance Premiums (Direct Charges)</td>
<td>$424</td>
</tr>
<tr>
<td>Conversion Diesel Transit Fleet to Natural Gas</td>
<td>($390)</td>
</tr>
</tbody>
</table>
THANK YOU
## Municipal Service Level Comparison

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Features</th>
<th>Service Level</th>
<th>Completion Time</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississauga</td>
<td>Priority sidewalks on major routes, bus stops and pedestrian crossings</td>
<td>Less than 8 cm - Salt only</td>
<td>24 hours from the end of the event</td>
<td>Damaged equipment and damage to City infrastructure i.e. curb and sidewalk as a result of uneven surfaces</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 -15 cm plow and salt</td>
<td>36 hours from the end of the event</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 -30 cm plow and salt</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Residents are responsible for clearing non-priority sidewalks which is any road/sidewalk not on a major route, transit route of school</td>
<td>30 cm or more plowing and salting</td>
<td>More than 36 hours after the event</td>
<td></td>
</tr>
<tr>
<td>St. Catharines</td>
<td>Sidewalks cleared on City owned property only</td>
<td>After any accumulation</td>
<td>Within 24 hours of snow falling</td>
<td>Present cost $2,100/lane km</td>
</tr>
<tr>
<td></td>
<td>Downtown walkways plowed when road plowing operations are started on secondary routes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Property owners are responsible for all sidewalks adjacent to their property</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Municipality</td>
<td>Features</td>
<td>Service Level</td>
<td>Completion Time</td>
<td>Comments</td>
</tr>
<tr>
<td>--------------</td>
<td>----------</td>
<td>---------------</td>
<td>-----------------</td>
<td>----------</td>
</tr>
<tr>
<td>Burlington</td>
<td>City plows all sidewalks on Arterial, Collectors and residential roads Only after the adjacent road has been plowed</td>
<td>Plowing starts at a minimum 5 cm accumulation</td>
<td>Within 24 hours from the end of snow falling Larger events 12-30 cm of snow – 36 hours from the end of the snow</td>
<td>Spring cleanup costs associated with sod replacement Balancing the workforce between road plowing and sidewalk plowing</td>
</tr>
<tr>
<td>Oakville</td>
<td>Primary and secondary sidewalks Residential sidewalks</td>
<td>Plowing starts after 5 cm of accumulation and once roads are cleared Plowing starts at 8 cm of accumulation and once roads are cleared</td>
<td>Material application is only placed on primary and secondary sidewalks</td>
<td></td>
</tr>
<tr>
<td>London</td>
<td>City plows all sidewalks on arterials, collectors and residential roads</td>
<td>Plowing starts at 8 cm accumulation and plowed to a snow packed service level</td>
<td>City must clear within 48 hours after a snow event</td>
<td>Present cost $1350/lane km</td>
</tr>
<tr>
<td>Toronto</td>
<td>Clear all sidewalks where it is mechanically possible to do so No service on local streets downtown. All arterials downtown receive mechanical clearing</td>
<td>Plowing starts at 2 cm accumulation on high volume sidewalks i.e. arterials, bus routes 8 cm on low volume sidewalks</td>
<td>Toronto has developed a sliding scale based upon accumulation and road classification</td>
<td>Toronto offers a program to seniors and the disabled in the Downtown area where they do not provide the mechanical sidewalk plowing service. Staff will report to Council later this year to formally change the activation of sidewalk snow clearing equipment to 2 cm accumulation for all sidewalks</td>
</tr>
</tbody>
</table>
RECOMMENDATIONS

(a) That staff expand existing communications initiatives regarding winter storm activities to include additional information about By-law No. 03-296 and on-street parking during snow events; and

(b) That the Sidewalk Clearing Program, Snow Angels Program, Pro-Active Sidewalk Snow Removal Enforcement and Regular Maintenance of Canada Post Community Mailbox Locations, be removed from the General Issues Committee Outstanding Business List.

EXECUTIVE SUMMARY

At the March 27, 2019 Council Meeting, staff were asked to prepare a report that integrated an Equity, Diversity and Inclusion (EDI) framework into the development of a new service standard related to snow removal from sidewalks during the winter. Three scenarios were identified, ranging from $3.06 to $5.36 million. It should be noted that any enhancements could not be implemented prior to the 2020/2021 winter season.

Should Council wish to further consider the development of a municipal winter sidewalk maintenance program, as per the EDI framework, staff recommend the engagement of consulting services to prepare a detailed program based on an assessment of the...
existing inventory, routing and staffing needs, with recommendations for service levels and a delivery model. This information would be used to develop a request for proposal which would provide more definitive costing and implementation timing.

To enhance existing sidewalk snow removal compliance, staff recommend expanding the existing winter storm communications activities to focus more heavily on residents’ responsibilities regarding removing snow from sidewalks adjacent to their property, and to request they avoid parking on the road during snow events.

Alternatives for Consideration – N/A

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: To enhance this service level to include priority 1 and 2A roadways would result in an additional 783 km of sidewalks cleared at a cost in the range of $1.48 to $1.78 million, bringing the total budget to between $3.06 and $3.36 million. If the service level enhancement was expanded further to include all 2,445 km of sidewalks on city roadways, it would require an increase in the range of $3.53 to $3.78 million, bringing the total budget to between $5.11 and $5.36 million.

Staffing: N/A

Legal: N/A

HISTORICAL BACKGROUND

At the March 27, 2019 Council meeting, the following directions were approved:

(iv) Sidewalk Clearing Program (Item 6.8)

That staff be directed to prepare a report for consideration during the 2020 budget that would include, but not be limited to, integrating an Equity, Diversity and Inclusion (EDI) framework of removing snow on sidewalks in high pedestrian areas, around parks, day care and childcare facilities, senior housing and eldercare facilities and provide connectivity to transit routes.

(v) Snow Angels Program, Pro-Active Sidewalk Snow Removal Enforcement and Regular Maintenance of Canada Post Community Mailbox Locations (Item 6.8)

That staff be directed to report back to either before or to the General Issues Committee during the 2020 Operating Budget process respecting the following:

(a) The feasibility of ways and means to enhance the Snow Angel program;
SUBJECT: Sidewalk Snow Removal (PW19022(a)) (City Wide) – Page 3 of 9

(b) The feasibility of greater proactive sidewalk snow removal enforcement; and

c) Communications with Canada Post for regular maintenance (snow and ice removal) of the Community Mailbox locations.

At the February 28, 2019 General Issues Committee (GIC) meeting, staff provided through Report PW19022, a consolidated summary and financial update regarding previous reports related to winter sidewalk maintenance in the City.

The City maintains Municipal roadways as per Ontario Regulation 239/02 - Minimum Maintenance Standards for Municipal Highways - made under the Municipal Act, 2001 (MMS).

The City has a 24/7 winter response team equipped with; over 500 total pieces of winter equipment (in-house and contracted), which includes 161 road plow salt/sanders and 22 sidewalk plows. The response team maintains the City’s 6,478 lane-kilometres of roadway, approximately 1,100 cul-de-sacs, and over 2,300 bus stops.

The City currently provides partial snow clearing winter control for sidewalks using City staff in conjunction with contracted services to clear 397 km of the approximate 2,445 km of sidewalks across Hamilton. The response standard for snow clearing is within 24 hours of the end of a winter event.

By-law No. 03-296 requires that every occupant or owner shall, within 24 hours of the cessation of a winter storm event, or within 24 hours of the cessation of a series of consecutive winter storm events, remove and clear all snow and ice from sidewalks abutting the highways in front of, or alongside, or at the rear of any occupied or unoccupied lot or vacant lot.

The City does not offer individual snow removal services for seniors or individuals with disabilities. In 2005, the City approved the development of the Snow Angels Program that is coordinated through the Healthy & Safe Communities Department. This program involves the recruitment of volunteers to clear snow on sidewalks, walkways and driveway entrances left by snow plows for eligible seniors and individuals with disabilities in the Hamilton area.

RELEVANT CONSULTATION

The following City of Hamilton Departments/Divisions have been consulted in the development of this report:

- Healthy & Safe Communities: Children’s Services and Neighbourhood Development;
OUR Vision: To be the best place to raise a child and age successfully.
OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.
OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

The following external parties have been consulted for this report:

- Canada Post

ANALYSIS AND RATIONALE FOR RECOMMENDATIONS

Alternative Sidewalk Winter Maintenance Service Levels

The integration of an Equity, Diversity and Inclusion (EDI) framework into decisions related to transportation can be challenging as there are many potential impacts to consider, different ways to measure impacts and multiple ways to categorize users of the system.

Transportation affordability, housing affordability, impacts on low income communities, transit availability and service quality, AODA design, mobility needs, parking and service quality for non-vehicle drivers are all considerations that need to be taken into account when reviewing service delivery levels related to transportation infrastructure.

The integration of the EDI framework into transportation service levels will promote fairness that ensures residents of all identities are treated fairly by removing barriers and creating equal opportunities, promoting diversity through the understanding of different user group experiences and being inclusive by creating an environment in which all people are respected through the identification and removal of barriers.

To integrate an EDI framework for removing snow on sidewalks a review of alternative sidewalk winter service level scenarios was undertaken.

The target areas are located throughout the community. Developing sidewalk clearing routes that encompass every location that meets the criteria was not possible. Staff were able to analyse the known locations of the areas of interest and overlay their locations onto the present Hamilton Street Railway transit routes. It was determined that most of the relevant sidewalks are located on the City’s priority 1 and 2A winter control snow clearing roadways. Based upon this analysis it is estimated that an additional 783 km of sidewalk would need to be incorporate into the City of Hamilton’s sidewalk snow clearing program.
Using this approach, three scenarios were developed for analysis:

Scenario 1 – Base Case (existing Service) – Maintaining sidewalks on municipally-owned property, along reverse frontage lots, formerly Ward 12 in its entirety, and sidewalks adjacent to school property, owned by either the Public or Separate School Board, in conjunction with By-law No. 03-296 on a charge-back basis.

Scenario 2 – Priority 1 and 2A Roadways – Maintaining sidewalks in the base case plus the addition of an estimated 783 km of sidewalk.

Scenario 3 – City Wide Roadways – Maintaining all sidewalks in the city.

The estimated costs for scenario 2 and 3 are based on the approach identified in Report PW19022 Winter Sidewalk Maintenance which used the former Ancaster Ward 12 service delivery model and is an average of the past five (5) winter seasons. These costs include standby contractual sidewalk plowing units, in-house manpower and material costs.

### Winter Control Program – Sidewalk Snow Clearing

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Sidewalk (km)</th>
<th>Percentage of Inventory (%)</th>
<th>Activation Trigger</th>
<th>Service Level</th>
<th>Estimated Costs (million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>397</td>
<td>16.2</td>
<td>Snow covered</td>
<td>Clear and application of salt</td>
<td>$1.58* *Budgeted</td>
</tr>
<tr>
<td>2</td>
<td>1,180</td>
<td>48.2</td>
<td>5.0 cm accumulation on City sidewalks on priority 1 and 2A roadways plus the existing inventory</td>
<td>Snow packed condition with de-icing material application</td>
<td>$3.06 - $3.36</td>
</tr>
<tr>
<td>3</td>
<td>2,445</td>
<td>100</td>
<td>5.0cm accumulation on all City sidewalks</td>
<td>Snow packed condition with de-icing material application</td>
<td>$5.11 - $5.36</td>
</tr>
</tbody>
</table>
Not included in the above-mentioned cost estimate are the restoration costs to damaged property as a result of the program. These include costs related to items within the road allowance such as parked cars, fences, posts, hedges, plantings, in-ground lawn sprinklers, driveway curbs or other obstructions within the right-of-way as a result of the plowing or blowing operations. Sod damage is a significant source of concern in other municipalities and a budget for sod repair following the winter control season would be required. In conversation with municipalities that provide a similar service, the costs of restoration for a typical winter season may run between $75,000 to $100,000 per season.

To provide the level of service in Scenario 2 or 3 based on current in-house staffing levels, the City of Hamilton will need to contract the additional service out to the private sector. Additional supervisory staff will be required to oversee the program and those requirements will be identified in a future budget. The enhancements would not be implemented prior to the 2020/2021 winter season as the appropriate sidewalk snow clearing resources are currently not available within the marketplace.

Council should be aware that bare pavement condition can only be achieved through the application of de-icing material. The use of de-icing material will increase the costs associated with manpower, equipment time and materials, which will increase the overall program costs.

As mentioned in Report PW19022, the City of Hamilton has a Salt Management Plan which was approved in 2003. Under the Canadian Environmental Protection Act, 1999, the Government of Canada published a Code of Practice for the Environmental Management of Road Salts on April 3, 2004. The Code is designed to help municipalities and other road authorities better manage their use of road salt in a way that reduces their impacts on the environment while maintaining road safety. The use of road salt, in sufficient concentrations, poses a risk to plants, animals and the aquatic environment.

The use of road salt on sidewalks is not recommended from an environmental perspective and may also damage the concrete sidewalks contributing to the deterioration of other assets, and damage sod adjacent to the sidewalk.

Municipal Service Comparison

Sidewalk plowing is typically triggered for most municipalities at the 5 cm threshold, with target pavement conditions varying from bare pavement to the more typical snow packed condition. A comparison is attached to Report PW19022(a) as Appendix “A”.

Completion time for the sidewalk snow clearing program for most municipalities is 24 hours from the end of the event, to 72 hours after commencement of the sidewalk snow clearing operations (Toronto), to five working days from commencement of the
residential sidewalk clearing operations (Winnipeg). In most cases, municipalities that do service their entire sidewalk network do so only after the adjacent street or all of the roads within the city or town have been maintained.

Snow Angels

Snow Angels is a volunteer supported initiative where residents are geographically matched with low income seniors or those with disability who require assistance to shovel their own properties within 24 hours of a snowfall. Since resuming oversight of the program in 2015, the Healthy and Safe Communities Department have been able to match between 80% to 95% of the residents on the list with a Snow Angel volunteer.

However, given that matches are made geographically in their neighbourhoods, some residents go without a Snow Angel as recruitment within certain neighbourhoods is not as successful. For the 2018/2019 season, approximately 9 residents went without a match.

As a volunteer-based program, success is based on the numbers and geographical location where recruitment can match the needs. The number of volunteers can fluctuate on a daily, monthly and yearly basis based on desire, injuries, other commitments, reliability and the working conditions. Given the environmental working conditions, cold and physical work, throughout the year there is turnover of volunteers affecting the number of residents matched as well as the continued desire to take on this role - compassion fatigue does set in with the volunteers in harsher winters. Snow clearing occurs when over 3 cm of snow has fallen, which historically has resulted in shovelling events varying from 5 to 20 times per winter season.

Every year, calls are received from residents who would like to receive a Snow Angel, and in some cases offer to pay for snow clearing but cannot find willing and affordable help. Not all residents that request a Snow Angel may be qualified under the eligibility review.

Given that the Snow Angels program is volunteer based, enhancing it is entirely tied to how many residents can be recruited.

Pro-Active Sidewalk Snow Removal Enforcement

As referenced in the Information Update to Council on March 26, 2019, “Snow and Ice By-law Enforcement Update – 2019”:

From January 1 to March 15, 2019, Licensing & By-law received 2,786 complaints of By-law infractions for failing to remove snow from sidewalks. Of these complaints 55% were found to be infractions and 1,240 Orders to Comply were issued to property owners. There was a 94% compliance rate once the order was issued with 1,163
residents clearing their snow. Licensing and By-law Services found 77 non-compliant properties that were sent to contractors for clearing. Sidewalk snow clearing is the top priority of Municipal Law Enforcement when a winter snow or ice event occurs.

It should be noted that Licensing & By-law Services does not proactively enforce sidewalk snow removal, but enforcement is based on a reactive model that responds to public complaints. During snow events, all other service levels are suspended so the team can focus on responding to calls for service in relation to sidewalk snow removal.

Regular Maintenance of Canada Post Community Mailbox Locations

Snow clearing activities will begin at CMB (Community Mailbox) sites once snow accumulation reaches 5 cm and should be completed within 24 hours:

- Snow clearing activities will take place during the hours of 6:00 a.m. to 8:00 p.m.;
- Snowdrift or plough back areas will be cleared within 24 hours of it being reported to Canada Post;
- Canada Post is responsible for clearing the area immediately in front of the CMB and paved access ways across boulevards that lead to the site;
- Canada Post will not clear snow from a grass boulevard to avoid damaging sod within the City’s boulevard; and
- Should a resident have a concern about snow or ice at a particular CMB site, they are asked to call 1-866-607-6301 or submit a snow clearance request at https://www.canadapost.ca/web/en/pages/support/default.page (under Community Mailbox click on Request Snow Clearance).

It is important that customers contact Canada Post through their customer contact number or via their website as this will launch a service ticket and allows Canada Post to track the response.

Any residents who feel snow or ice may inhibit their ability to safely retrieve their mail should contact Canada Post as described above and retrieve their mail after the site is cleared and conditions have improved.

Winter Storm Communications

Public Works and Corporate Communications already have a robust communications protocol during winter storm events, with regular updates to Council, posts on www.hamilton.ca and at @cityofhamilton on Twitter. During large storm events updates are shared with our local media partners, radio, print, online ads are published to provide residents with information about the City’s response to the storm, tips on clearing their snow from their property, and more.
For the coming season, staff recommend expanding the existing winter storm communications activities even further to focus more heavily on residents’ responsibilities regarding removing snow from sidewalks adjacent to their property, and to request they avoid parking on the road during snow events to allow space for plows to safely clear the snow.

ALTERNATIVES FOR CONSIDERATION

N/A

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Economic Prosperity and Growth

Hamilton has a prosperous and diverse local economy where people have opportunities to grow and develop.

Healthy and Safe Communities

Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report PW19022 (a) – Municipal Service Level Comparison