Presented To:	City Council
Presented:	Tuesday, Sep 25, 2018
Report Date	Wednesday, Sep 12, 2018
Type:	Managers' Reports

Request for Decision

Overview and Analysis of Approach to Roads and Distribution & Collection Maintenance Services

Resolution

THAT staff be authorized to proceed with next steps in the evaluation of roads and distribution and collection maintenance services business opportunities as outlined in the report entitled “Overview and Analysis of Approach to Roads and Distribution and Collection Maintenance Services” from the General Manager of Growth and Infrastructure, presented at the City Council meeting on September 25, 2018;

AND THAT business case(s) be prepared for the 2020 budget process and future years to realize business opportunities identified in the report entitled “Overview and Analysis of Approach to Roads and Distribution and Collection Maintenance Services” from the General Manager of Growth and Infrastructure, presented at the City Council meeting on September 25, 2018.

Relationship to the Strategic Plan / Health Impact Assessment

A priority of the Strategic Plan in the Quality of Life and Place pillar is to provide programs and policies to ensure that citizens can enjoy all four seasons. Operations and maintenance activities for linear infrastructure is fundamentally important for ensuring connections between residents and their workplaces, public amenities and allows them to enjoy a high quality of life. It is prudent and appropriate that the corporation’s service levels and approaches for providing them are subject to periodic review.

Determining acceptable levels of infrastructure services is also a priority of the Strategic Plan as part of the Sustainable Infrastructure pillar. The review described in this report of how our Roads Maintenance and Distribution and Collection Maintenance services are provided to meet the needs of residents is directly related to achieving this priority.

Signed By

Report Prepared By
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Manager Review
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Division Review
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Financial Implications
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Recommended by the Department
Tony Cecutti
General Manager of Growth and Infrastructure
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Recommended by the C.A.O.
Ed Archer
Chief Administrative Officer
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Report Summary

This report provides an overview of current maintenance services for roads and distribution and collection infrastructure. It also describes principles that guide the delivery of these services and factors influencing choices about how to conduct the work associated with maintaining expected service levels. It concludes with a description of next steps for a detailed review of these services that will inform choices about the extent to which the service levels should be provided by in-house or contracted resources.

Financial Implications

There are no financial implications associated with the recommendation in this report. Subject to decisions about the recommended business case(s), any financial implications would be incorporated into the 2020 Business Plan/Budget.

Background:

In March 2018, the Operations Committee was presented with a report entitled "Winter Control Operations Update for December 2017". This report provided the Committee with financial results of the 2017 winter control season, indicating there was an over expenditure of approximately $1.9 million. This overage can be largely attributed to two factors:

1. The unpredictable nature of winter weather in recent years, and

2. Volume of work required to meet service levels given state of repair of existing infrastructure.

Discussions about this report included questions regarding the relative efficiency of services delivered with internal resources compared to services delivered by contracted (i.e. private sector) resources. Ultimately, the Committee passed resolution OP2018-07, directing staff to report back to Council with analysis and, potentially a business case, to adjust resources so that an appropriate balance of in-house and contracted resources are available to meet Council's desired service levels for both summer and winter road maintenance services.

While it was not directly addressed at the time, it is important to note that operations and maintenance activities for roads maintenance are integrated with operations and maintenance services for our water and wastewater linear infrastructure. This is due to the co-location of these assets throughout the community; typically, water and wastewater pipes are situated within the road right-of-way. Maintenance and repair work is coordinated between these assets to reduce the potential for rework, since access to water and wastewater linear infrastructure requires crews to dig through the road surface.

To fully address the motion's intended outcome, this report also includes analysis of water and wastewater distribution and collection services. Together, these analyses may present further opportunities to rationalize services and/or equipment thereby increasing the efficiency and cost effectiveness of the City's overall operations.

Maintenance Services and Service Levels:

The LIS Division employs a combination of both internal and externally contracted or purchased services. Both the Roads Maintenance and Distribution and Collection Maintenance Sections deliver a variety of programs that can be broadly categorized into three areas:

1. **Planned and Preventative Maintenance** – Regularly scheduled work to ensure infrastructure assets are maintained to an appropriate state of repair based on an asset life cycle management approach

2. **Reactive Maintenance** – Work that is not scheduled to take place, which occurs as a result of an unexpected issue or circumstance and generally requiring immediate attention

3. **Capital Work** – Planned replacement or expansion of roads and distribution and collection infrastructure based on an asset life cycle management approach or in response to changing community servicing needs (i.e. growth)

Roads Maintenance

Services provided by the Roads Maintenance section are generally categorized into five distinct program areas, namely; summer maintenance, winter control, streetlighting, public works depots and facilities and supervision/administration. Together, the five program areas comprise over 120 distinct maintenance activities effectively delivered to the public which are provided at a total annual cost of approximately $37.6 million. Table 1 below provides some examples of the services provided in each program area and breakdown of current budget allocations. For the full list of services provided by LIS, with budget allocations, please refer to Appendix A.

Table 1 – Examples of Services Provided by Program Area for Roads Maintenance

Program Area	Current Annual Budget	Ratio of In-House to Contracted Service Expenditures	Examples of Services Provided
Summer Maintenance	$13.7 million	79% : 21%	66 defined activities including, but not limited to: • Curb and sidewalk repair and replacement; • Asphalt crack sealing; • Pothole patching; • Large asphalt patching; • Grading of gravel roads and gravel shoulders; • Surface treatment repairs and rehabilitation; • Culvert replacement; and • Drainage ditch clearing
Winter Control	$15.0 million	71% : 29%	35 defined activities including, but not limited to: • Street sweeping and sand collection; • Snow plowing; • Snow removal (including at transit stops);

			• Road sanding and salting; • Sidewalk plowing; • Sidewalk sanding and salting; and • Pothole patching
Streetlighting	$3.0 million	0% : 100%	2 defined activities including: • Maintenance; and • energy costs for our street lights (the budget includes utility costs which total 83% of the total)
Public Works Depots and Facilities	$1.3 million	70% : 30%	16 defined activities including, but not limited to: • Maintenance and energy costs for the various Public Works Facilities
Supervision / Administration	$4.5 million	--	Multiple defined activities including, but not limited to: • Office expenses; • Professional development; • office and administration salaries

Currently, the Roads Maintenance Section of LIS contracts out less than one quarter of total expenditures (22%), primarily in the form of hired specialized equipment and purchased or contract services. Some of the services currently completed with the assistance of external service providers for roads maintenance include:

- Winter plowing and snow removal services (including at transit stops);
- Pothole patching (all seasons);
- Street sweeping and sand collection; and
- Various equipment rentals.

Distribution and Collection Maintenance

Services provided by the Distribution and Collection Maintenance section are generally categorized into six distinct program areas, including; watermains, wastewater, restoration, trouble investigation, supervision/administration and miscellaneous. Together, the six program areas comprise more than 30 distinct maintenance activities which are provided at a total annual cost of approximately $13.2 million. Table 2 below provides some examples of the services provided in each program area and breakdown of current budget allocations. For the full list of services provided by LIS, with budget allocations, please refer to Appendix A.

Table 2 – Examples of Services Provided by Program Area for Distribution and Collection Maintenance

Program Area	Current Annual Budget	Ratio of In-House to Contracted Service Expenditures	Examples of Services Provided
Watermains	$6.9 million	51% : 49%	11 defined activities including, but not limited to: • Watermain repairs and maintenance; • Watermain cleaning; • Valve repairs and maintenance; • Regular valve patrols; • Leak detection; • Water service repairs and maintenance; • Curb box repairs; • Water service thawing; • Hydrant repairs and maintenance; • Hydrant painting/refurbishing; and • Sample station repairs and maintenance
Wastewater	$2.2 million	69% : 31%	6 defined activities including, but not limited to: • Sewermain cleaning; • Sewermain repairs and maintenance; • Lateral camera inspection; • Sewer manhole repairs; • Sewer service repairs; and • Sewer service cleaning
Restoration	$1.2 million	0% : 100%	2 defined activities including: • Service cut repairs; and • Property restoration
Maintenance Investigations	$0.85 million	100% : 0%	Multiple defined activities including, but not limited to: • 24-7 investigation services such as; sewer and water service inspection, water

			service / main shutoffs, emergency pothole patching
Supervision / Administration	$1.0 million	--	Multiple defined activities including, but not limited to: • Office expenses, professional development, office and administration salaries
Water / Wastewater General	$0.97 million	49% : 51%	8 defined activities including, but not limited to: • Standby; • Lost time water-wastewater; • Sewer and water miscellaneous; • Tool repair; • Special projects; • Distribution and collection monitoring; • Health and Safety training

The Distribution and Collection Maintenance Section currently contracts out almost half (44%) of total expenditures related to maintenance activities. Some of the services currently completed with the assistance of external contractors for distribution and collection maintenance include:

- Reactive or after hours repairs (i.e. watermains, sanitary sewer mains and storm water systems);
- Valve maintenance and repairs;
- Water service thawing;
- Sewer manhole adjustments and repairs;
- CCTV camera inspections of water and wastewater linear infrastructure; and
- Various equipment rentals.

General Factors Affecting the Decision to Contract/Purchase Equipment and/or Services:

Determining whether a maintenance activity will be more efficiently and effectively delivered using internal resources or contracted/purchased equipment and services requires careful consideration and a balance of a variety of factors:

1. **The availability and expected utilization of specialized skills.** One of the primary factors in this decision-making process is the capacity and availability of specialized or skilled labour within the existing internal employee pool. Skilled trades' people provide valuable services for specific maintenance activities;

however it is not always feasible or necessary to retain these specialized staff as full-time employees. It can be a much more cost-effective approach to contract or purchase skilled trades services, as required to complete maintenance activities. By procuring external specialized services, the contracted service employees come highly skilled and trained to complete the task required, reducing the need to undertake extensive training activities internally.

2. **The availability and need for specialized equipment.** In addition, contracting for specialized skills means these individuals typically own or have access to the proper specialized equipment required to complete the task, again potentially realizing a cost-savings to the municipality from having to purchase specialized equipment which may only be used on a small number of occasions.

3. **The consistency and volume of work.** An additional factor to consider in deciding whether or not to contract/purchase equipment or services is whether the City's existing staff capacity and availability is sufficient to be able to meet the needs of reactive maintenance activities. Contractors are often able to provide "on-demand" services and work well within tight response timelines, whereas limitations on number of consecutive hours worked for internal staff as outlined in the Collective Bargaining Agreement, for example, may pose a challenge to the City being able to address a time-sensitive emergency effectively. In this regard, the use of contractors may also help to reduce the burden on internal staff, allowing them instead to focus on delivering long-term, preventative maintenance activities, rather than on short-term reactive work.

4. **The risk and consequence of service interruptions.** Maintaining a mix of in-house and contracted resources helps minimize the risk and consequence of service interruptions. When staff become unavailable for a variety of reasons, or when operating conditions create peak demands, contracted resources help ensure services continue to be provided.

Review and Analysis of Maintenance Program Costs:

The overall Linear Infrastructure Services Division annual budget is approximately $50.7 million (2018). Of this amount, approximately 72% ($36.6 million) of annual maintenance work is currently carried out by existing City staff, with the remaining 28% ($14.1 million) of work being carried out with the use of hired equipment or contracted/purchased services (Table 3).

Table 3 – Breakdown of Program Costs

Service Area	Program	Sum of Total Annual Budget	Sum of Hired/Contract/ Purchased Services	Sum of Hired Equipment	Sum of Contract/Purchased Services
D&C	Water Repair and Maintenance	$ 6,868,979	$ 3,382,828	$ 869,816	$ 2,513,012
	Wastewater Repair & Maintenance	$ 2,242,178	$ 685,108	$ 115,588	$ 569,519
	Road & Property Restoration	$ 1,209,702	$ 1,186,129	$ 10,643	$ 1,175,486
	Supervision/Administration	$ 1,022,055	$ -	$ -	$ -
	Water / Wastewater General	$ 968,394	$ 498,561	$ 21,245	$ 477,316
	Maintenance Investigations	$ 852,022	$ -	$ -	$ -
D&C Total		**$ 13,163,330**	**$ 5,752,626**	**$ 1,017,293**	**$ 4,735,333**
Roads	PWD and Facilities	$ 1,255,575	$ 381,840	$ -	$ 381,840
	Summer Maintenance	$ 13,754,422	$ 2,979,969	$ 1,129,730	$ 1,850,239
	Winter Control	$ 15,003,123	$ 4,417,753	$ 602,203	$ 3,815,550
	Streetlighting	$ 3,029,916	$ 524,423	$ -	$ 524,423
	Supervision/Administration	$ 4,541,345	$ -	$ -	$ -
Roads Total		**$ 37,584,380**	**$ 8,303,984**	**$ 1,731,933**	**$ 6,572,052**
Grand Total		**$ 50,747,710**	**$ 14,056,610**	**$ 2,749,225**	**$ 11,307,385**

The 28% of the annual budget which is contracted out can be further divided into two areas: hired equipment or contracted/purchased services.

Of the $14.1 million spent on external resources, 19% or $2.8 million is spent on renting equipment, to enable the efficient delivery of the City's annual roads and distribution and collection maintenance programs. Generally speaking, equipment is rented for one of two reasons: our current equipment is insufficient to deliver the quantity of work required or to complete the work requires the use of a specialized piece of equipment that the City does not own or require for long-term use. Examples of hired equipment to support maintenance activities include items such as arrow boards for road work, backhoe, excavator, vactor or hydro-excavation trucks or graders.

Approximately 81% ($11.3 million) of the $14.1 million is spent annually on external resources for contracted and/or purchased services, as approved through the budget process. This funding allows staff to contract or purchase services to support maintenance activities that require specialized or skilled labour (i.e. a plumber) or to add capacity when existing internal staff resources are stretched to their manageable limits (i.e. pothole patching). Examples of contracted or purchased services to enhance the delivery of maintenance activities include pothole patching, street sweeping and sand collection, emergency water and sewer main repairs, snow plowing, plumbing, electrical, large spreader-laid asphalt patches, hydrant painting and large diameter watermain, sewer main or storm sewer main replacement to name a few. For the full list of services provided by LIS, with budget allocations, please refer to Appendix A.

Distribution and Collection Maintenance services are budgeted to contract out approximately 44% of the work to be completed annually. Following a change in the market that made some contracted resources unavailable and in response to an Auditor General recommendation to reduce reliance on contracted resources, as of

August 2016 the City began to contract in some distribution and collection services, primarily being work associated with reactive maintenance activities. While the change did result in a reduction in overall contracted services, the full benefit of this shift in approach has yet to be realized due to ongoing challenges around shift scheduling.

In 2017, as outlined in the Operating Budget Variance Report presented to the Finance and Administration Committee, contracted and purchased services for Distribution and Collection Maintenance were under budget by $930,000, primarily due to the fact that internal City staff were responsible for carrying out the majority of emergency repairs to linear infrastructure. Of this, there was an under expenditure of $500,000 in linear repair related purchased services. This under expenditure represented a below expected delivery rate of performing regularly scheduled preventative maintenance activities. Over the long-term, this approach may not be sustainable or desirable. Should Council decide to provide direction to change this approach, it is probable that additional internal staff resources will be required.

Risks Influencing Choices about Maintenance Activities:

There are several key pressures that the LIS Division is currently facing that will have long-term impacts on the sustainability of the program if left unaddressed.

1. Infrastructure Deterioration

In 2011, KPMG was retained to prepare a long-term Financial Plan for Water and Wastewater Services. The City maintains a significant investment in water and wastewater services with the replacement value of this infrastructure is estimated to be in excess of $2.3 billion, which represents a quarter of the City's investment in infrastructure. At the time, KPMG recommended to Council that capital investments required to achieve sustainability of the network must increase from a budgeted $21.5 million in 2011 to $64 million annually by 2021.

In 2012, KPMG was again retained to prepare a long-term Financial Plan for Municipal Roads, Structures and Related Infrastructure. At the time of this report, KPMG identified the gap between actual and required spending to have resulted in an infrastructure deficit of approximately $700 million, with an additional $570 million to be required to

2022. In the absence of investment from senior levels of government, the financial plan anticipated that the City would be required to increase the municipal tax levy by 3.3 - 3.5% each year between 2012 and 2022 to fund its operating and capital requirements associated only with roads. This information was reiterated in April 2017, when KPMG presented the Municipal Long-Term Financial Plan to Council.

Historical underinvestment in capital work for both roads and water and wastewater has placed extreme pressure on public infrastructure and has resulted in significantly higher levels of reactive maintenance which further impacts the Divisions' ability to complete scheduled, preventative maintenance activities. In 2017, the City budgeted $223 million in capital funding, which is significantly higher than the level of capital spending over the last ten years and reflects a major increase in roads spending. If this increased capital investment trend continues into the future this would likely significantly reduce the aforementioned pressures associated with responding to reactive maintenance events.

2. Increasing Weather Unpredictability

Municipalities across the Province are struggling to accurately predict and subsequently prepare for major weather events, as previously sound methods of forecasting and budgeting for these activities no longer apply given the changing nature of our climate. With longer and more intense storm activity in both winter and summer months and an increasingly limited ability to predict the impact these events will have on municipal infrastructure, there is added pressure in the budget for having to be prepared to respond to an increasing number of reactive maintenance events. Furthermore, when internal resources are diverted to reactive maintenance activities, it results in further under-delivering on critical planned and preventative maintenance activities.

3. Citizen Expectations

In Greater Together, the corporate strategic plan, Council requested that a citizen satisfaction survey be completed in both 2016 and 2018, in line with the key pillar of Responsive, Fiscally Prudent Open Governance. In 2018, the City undertook a Citizen Survey to measure citizen perceptions and attitudes regarding services provided by the City of Greater Sudbury and to further gauge general levels of satisfaction with local quality of life.

In 2016, and again in 2018, the top of mind issue for citizens is the condition of municipal roads. Further, the Metroline 2018 survey polled residents about 23 services provided by the municipality and while road conditions ranked number one in importance, results indicate that by far, road conditions rank the lowest in citizen satisfaction. The proportion of Greater Sudbury residents who expressed road conditions as a top concern increased from 70% in 2016 to 78% in 2018.

4. Cost of Operating and Maintaining an Aging Fleet

A key factor to providing effective and efficient maintenance services for roads and water and wastewater distribution and collection is ensuring that fleet vehicles used to provide the services are maintained in a state of good repair at a reasonable cost. As fleet vehicles age, the cost of carrying out preventative maintenance activities and reactive maintenance increases and potentially poses a risk to being able to meet service level obligations The City of Greater Sudbury's capital replacement of fleet vehicles is currently underfunded, leading to longer asset replacement cycles and higher costs associated with reactive maintenance of equipment.

To consistently deliver the level of service expected by Council and citizens, a larger fleet of vehicles may be required to ensure enough equipment is available to carry out planned maintenance activities in accordance with Minimum Maintenance Standards, while remaining able to address reactive repairs. Achieving this larger fleet may place additional pressure on the budget by having to secure contracted equipment to take place of owned equipment under repair, or by having to purchase new equipment.

Unlike with the City's roads and water and wastewater infrastructure, to date the City has not yet undertaken a comprehensive analysis of fleet requirements to deliver Council's approved and desired service levels. A long-term financial plan is required to complement the City's ability to meet the needs outlined in the two aforementioned long-term financial plans for roads and water and wastewater infrastructure.

5. Collective Bargaining Agreement

To facilitate changes to the City's current approach to the delivery of infrastructure maintenance services, the City will need to secure a number of amendments to the current collective bargaining agreement (CBA). Considerations such as flexible work schedules, overtime work and the use of casual employees will need to be re-evaluated to continue to proactively manage pressures to the existing infrastructure maintenance program. These potential considerations for the CBA may have a significant impact on the City's ability to continue to provide effective and efficient roads and distribution and collection maintenance services for citizens of Greater Sudbury. A separate report will be presented to Council at a future date (in camera) that will outline these and other pertinent articles contained within the CBA for which amendments will be explored as part of the 2019 contract negotiations.

6. Communicating Effectively with Citizens

As demonstrated by the results of the 2018 Citizen Survey, residents of Greater Sudbury are very much concerned with the quality and condition of the City's roads and infrastructure. To build more confidence in the public for the approach the City is

currently taking to Roads and Distribution and Collection Maintenance, more comprehensive communication materials about the value and type of services provided should be developed and broadly delivered.

Linear Infrastructure Services is committed to continuing to work with the Corporate Communications and Community Engagement Division to develop materials to educate residents on the City's current infrastructure maintenance approaches and value for their tax dollars.

Opportunities and Next Steps:

Through this review of roads and distribution and collection maintenance services, staff have identified a number of opportunities to further evaluate and determine their potential benefits to service delivery, including:

1. Contracting in a higher proportion of winter snow plowing services;

2. Investigating opportunities to complete a portion of spring street sweeping using internal resources;

3. Contracting in more excavation and road restoration work (i.e. temporary asphalt patches for watermain breaks) associated with distribution and collection reactive maintenance activities;

4. Continuing to evaluate the existing approach to addressing reactive maintenance needs in distribution and collection; and

5. Evaluating our existing maintenance vehicle fleet to ensure it is optimized to meet core service obligations.

Continuous improvement and being able to remain agile and adaptable to respond effectively to the pressures the LIS Division currently faces will be dependent on developing a comprehensive strategy for future service delivery. This includes maintaining an appropriate balance on contracting in and out. In addition, realizing these opportunities are directly dependent on how the City moves forward with an approach to managing identified pressures (i.e. CBA changes) currently experienced by the LIS Division, as described in this report.

The list provided above is not intended to be exhaustive, but rather to serve as the basis for further investigation and evaluation of these opportunities. Fully and appropriately evaluating these opportunities requires detailed analysis, and probably some policy

changes, that would ultimately produce business case(s) for changes that would be presented for Council's consideration in a future budget. The resolutions in this report, if approved, would prompt staff to prepare such business cases and take the next step in this analysis.

Resources Cited:

2017 Operating Budget Variance Report – December, Presented to Audit Committee on June 19, 2018.
Accessed Online, August 31, 2018
https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&id=1267&itemid=14553&lang=en

2018 Citizen Survey Results, Presented to City Council on August 14, 2018.
Accessed Online, August 24, 2018
https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&lang=en&id=1245&itemid=14481

City of Greater Sudbury, Financial Plan for Municipal Roads, Structures and Related Infrastructure, Final Report, July 10, 2012. KPMG.

City of Greater Sudbury, Financial Plan for Water and Wastewater Services, Final Report, March 1st, 2011, KPMG.

Winter Control Operations Update for December 2017, presented to Operations Committee on March 19, 2018.
Accessed Online, August 24, 2018
https://agendasonline.greatersudbury.ca/index.cfm?pg=agenda&action=navigator&lang=en&id=1253&itemid=14744

Appendix A

Service Area	Program	Activity	Values Sum of Activity Budget Incl. Fringes	Sum of Hired Equipment	Sum of Contract/Purchased Services
D&C	Water Repair and Maintenance	210501 - Watermain	$ 2,705,903	$ 173,112	$ 1,581,000
		210511 - Watermain Cleaning	$ 344,761	$ -	$ -
		210521 - Valve Repairs	$ 772,226	$ 155,425	$ 85,677
		210531 - Valve Patrol	$ -	$ -	$ -
		210542 - Leak Detection	$ 40,404	$ -	$ -
		210551 - Water Services	$ 709,877	$ 278,172	$ 108,753
		210552 - Curb Box Repairs	$ 528,403	$ 147,602	$ 104,550
		210553 - Water Service (Thawing)	$ 44,936	$ 5,930	$ 23,706
		210601 - Hydrant Repairs	$ 1,099,090	$ 104,373	$ 38,375
		210602 - Hydrant Painting/Refurbishing	$ 540,000	$ -	$ 540,000
		210702 - Sampling Station Maintenance	$ 82,680	$ 5,202	$ 30,952
	Water Repair and Maintenance Total		**$ 6,868,279**	**$ 869,816**	**$ 2,513,012**
	Wastewater Repair & Maintenance	210104 - Sewermain Cleaning By Vac	$ 623,524	$ -	$ 65,493
		210111 - Sewer Main - Repairs and Mtce	$ 288,139	$ 8,708	$ 42,646
		210122 - Lateral Camera	$ 26,395	$ -	$ 26,395
		210131 - Sewer Manhole	$ 576,981	$ 54,153	$ 116,706
		210151 - Sewer Service	$ 576,282	$ 52,727	$ 167,421
		210161 - Cleaning Laterals	$ 150,858	$ -	$ 150,858
	Wastewater Repair & Maintenance Total		**$ 2,242,178**	**$ 115,588**	**$ 569,519**
	Road & Property Restoration	210381 - Service Cut	$ 1,148,040	$ -	$ 1,148,040
		210382 - Property Restoration	$ 61,662	$ 10,643	$ 27,446
	Road & Property Restoration Total		**$ 1,209,702**	**$ 10,643**	**$ 1,175,486**
	Miscellaneous	210311 - Stand-By	$ -	$ -	$ -
		210321 - Lost Time Water - Waste Water	$ 15,300	$ -	$ -
		210331 - Sewer and Water Miscellaneous	$ 95,836	$ 5,025	$ 3,579
		210391 - Tool Repair -Mtce Sewer - Wtr	$ 46,544	$ -	$ -
		210411 - Spec Proj - Waste Wtr and Wtr	$ 430,267	$ -	$ 428,584
		210421 - D & C Monitoring	$ 26,986	$ -	$ 8,323
		210621 - Health and Safety Training	$ 257,436	$ -	$ 36,830
		210751 - Work Done For Others - S-W	$ 92,526	$ 16,220	$ -
	Miscellaneous Total		**$ 964,895**	**$ 21,245**	**$ 477,316**
	Inspection and Trouble Investigation	Inspection and Trouble Investigation	$ 852,022	$ -	$ -
	Inspection and Trouble Investigation Total		**$ 852,022**	**$ -**	**$ -**
	Supervision/Administration	Supervision/Administration	$ -	$ -	$ -
	Supervision/Administration Total		**$ -**	**$ -**	**$ -**
D&C Total			**$ 12,137,076**	**$ 1,017,293**	**$ 4,735,333**

	PWD and Facilities	250231 - Lively Depot	$ 88,739	$ -	$ 40,960
		250232 - Lively Yard - Stockpile	$ 30,981	$ -	$ 4,570
		250251 - Frobisher Building	$ 206,956	$ -	$ 102,510
		250252 - Frobisher Yard & Stockpiles	$ 193,808	$ -	$ 15,570
		250261 - Airport Depot	$ 14,210	$ -	$ 6,230
		250271 - Suez Building	$ 74,493	$ -	$ 44,840
		250272 - Hanmer Yard And Stockpile	$ 31,988	$ -	$ 4,600
		250281 - Rayside Building	$ 50,732	$ -	$ 32,300
		250282 - Chelmsford Yard & Stockpile	$ 23,863	$ -	$ 2,290
		250291 - St.Clair Depot	$ 154,356	$ -	$ 87,020
		250292 - St.Clair Yard - Stockpile	$ 104,038	$ -	$ 11,640
		250301 - Lost Time Facilities	$ 3,450	$ -	$ -
		250351 - Special Projects - Mun Bldgs	$ 62,353	$ -	$ 24,180
		250391 - Facilities Tool Mtce	$ 19,459	$ -	$ -
		250995 - Carpenter Shop Work Done	$ 104,898	$ -	$ 5,130
	PWD and Facilities Total		**$ 1,164,324**	**$ -**	**$ 381,840**
	Summer Maintenance	201001 - Asphalt Patching-Small Areas	$ 1,306,477	$ 36,070	$ -
		201002 - Asphalt Patching-Grinding	$ 587,737	$ 28,400	$ -
		201003 - Asphalt Patching-Contract	$ 648,527	$ -	$ 648,527
		201011 - SurfaceTreatment-SprayPatching	$ 105,364	$ 6,120	$ -
		201012 - Surface Treatment-Preparation	$ 191,847	$ 78,510	$ -
		201021 - Infra - Red Patching	$ 32,561	$ 650	$ -
		201201 - Gravel Patching	$ 308,736	$ -	$ -
		201202 - Gravel Patching Washouts	$ 298,860	$ 40,300	$ -
		201203 - GravelPatching-Resurfacing	$ 340,243	$ 20,200	$ -
		201211 - Gravel Grading	$ 129,042	$ 37,410	$ -
		201212 - Gravel Grading-Gravel Roads	$ 269,813	$ 78,610	$ -
		201221 - Dust Control	$ 69,745	$ -	$ -
		201222 - Dust Control Gravel	$ 296,079	$ -	$ -
		201231 - Gravel Shouldering	$ 402,754	$ 66,940	$ -
		201241 - Trouble Investigator-RoadsSect	$ 69,151	$ -	$ -
		201251 - Roads Restoration-RoadsSect	$ 26,750	$ -	$ 26,750
		201941 - Manual Sweeping	$ 9,940	$ -	$ -
		201942 - Machine Sweeping	$ 162,948	$ -	$ 44,500
		201943 - Intersection Sweeping	$ 32,900	$ -	$ 32,900
		201945 - Elephant Vac	$ 81,577	$ -	$ -
		201951 - Street Flushing	$ 37,680	$ -	$ -
		203004 - Tractor Mowing	$ 282,630	$ 122,120	$ -
		203011 - Brushing	$ 24,991	$ 670	$ -
		203012 - Roadside Brushing Mechanical	$ 56,930	$ 27,020	$ -
		203321 - Curb & Sidewalk Padding	$ 108,605	$ 4,870	$ -
		203501 - Stairs & Pedestrian Pass Mtce	$ 16,787	$ -	$ -
		203911 - Debris Pick Up	$ 47,838	$ 4,020	$ -
		203921 - Curb & Sidewalk Repl-Contract	$ 221,230	$ -	$ 221,230
		203991 - Other Roadside Maintenance	$ 21,942	$ 1,610	$ -
		204001 - Mechanical Ditching-Rural	$ 621,282	$ 121,040	$ -
		204002 - Roadside Ditching-Urban	$ 125,825	$ 24,220	$ -
		204021 - Manual Ditching	$ 13,727	$ -	$ -
		204091 - Other Drainage Maintenance	$ 96,120	$ 31,940	$ -
		204141 - Bridge & Culvert Inspection	$ 137,009	$ -	$ -
		204311 - Road Culvert Maintenance	$ 474,728	$ 38,250	$ -
		204401 - Culvert Cleaning	$ 109,064	$ -	$ -
		204411 - Entrance Culvert-Resets	$ 77,767	$ 7,420	$ -
		204412 - Culvert Mtce-Entrance Replace	$ 95,502	$ 8,020	$ -

Roads		204421 - New Entrance Culverts	$ 13,667	$ 840	$ -
		204501 - Storm Sewer Repairs	$ 252,510	$ 42,500	$ -
		204521 - Storm Sewer Clean And Inspect	$ 99,511	$ 18,880	$ -
		204522 - Storm Scepter Cleaning	$ 67,690	$ 13,000	$ -
		204551 - Catch Basin/Manhole Cleaning	$ 475,981	$ 157,230	$ -
		204561 - Catchbasin/Manhole Repairs<1FT	$ 412,372	$ 48,670	$ -
		204562 - CatchBasin/Manhole Repairs>1FT	$ 334,558	$ 17,160	$ -
		204591 - Screens & Inlets Maintenance	$ 96,035	$ 23,280	$ -
		205001 - Lane Line Marking	$ 546,712	$ -	$ 21,100
		205021 - Pre Marking	$ 23,684	$ 960	$ -
		205031 - Special Marking	$ 244,430	$ -	$ -
		205041 - Preparation Time	$ 31,906	$ -	$ -
		205201 - Radar Speed Monitoring	$ 6,130	$ -	$ -
		205301 - Sign Manufacture	$ 184,013	$ -	$ -
		205311 - New Signs Installation	$ 24,287	$ -	$ -
		205321 - Sign Maintenance	$ 398,613	$ 5,050	$ -
		205331 - Traffic Signal Repairs	$ 444,439	$ -	$ 385,650
		205411 - Rail Road Crossing Signal	$ 235,938	$ -	$ 235,938
		205511 - Flex Beam Painting	$ 58,935	$ -	$ 10,480
		205515 - Guide Post Place or Replace	$ 194,862	$ -	$ 61,490
		205751 - Traffic & Safety-WDFO	$ 94,847	$ -	$ -
		205991 - Other Safety Devices	$ 40,868	$ -	$ -
		231052 - Tree Maint-Regular Planting	$ 41,011	$ 2,000	$ -
		231053 - Tree Maint-Tree Removal	$ 313,781	$ -	$ 99,250
		231054 - Tree Maint-Tree Pruning	$ 481,478	$ 7,830	$ -
		231055 - Tree Maint-Stumping	$ 34,093	$ 5,960	$ -
		231056 - Tree Maint-Tree Plant-Subdivision	$ 78,887	$ 1,960	$ -
		Locates	$ 62,424	$ -	$ 62,424
	Summer Maintenance Total		**$ 13,234,371**	**$ 1,129,730**	**$ 1,850,239**

	Winter Control	206002 - Grader Mounted Plow	$ 396,873	$ -	$ 245,020
		206004 - 4X4 - Loader	$ 169,982	$ 137,790	$ -
		206012 - Bus Stop Clearing	$ 201,978	$ -	$ 196,180
		206021 - Snow Removal Loader	$ 605,271	$ -	$ 333,110
		206023 - Snow Removal Operations	$ 135,221	$ -	$ 44,090
		206026 - Snow Dump Operations	$ 100,203	$ -	$ 87,950
		206041 - Open Ditches	$ 123,844	$ 18,750	$ -
		206042 - Open Ditches - Steamer	$ 331,501	$ -	$ 19,640
		206043 - Winter Ditches	$ 310,722	$ 133,670	$ -
		206101 - Plow/Spread-Contractors	$ 1,704,944	$ -	$ 1,256,550
		206111 - Manual Sanding	$ 168,392	$ -	$ -
		206112 - Mechanical Sanding	$ 1,091,915	$ -	$ -
		206121 - Winter Stockpile	$ 156,606	$ 16,160	$ -
		206141 - Spring Clean-Up-Manual	$ 97,698	$ -	$ -
		206142 - Spring Clean Up-Catchbasin	$ 39,164	$ 27,270	$ -
		206143 - Spring Clean Up-Flusher A	$ 1,076,448	$ -	$ 727,380
		206144 - Sidewalk Sweeping	$ 146,999	$ -	$ -
		206201 - Plow/Spread-Own Crews	$ 4,962,176	$ -	$ -
		206211 - Anti - Icing	$ 39,627	$ 2,830	$ -
		206301 - Snow Fence Maintenance	$ 16,405	$ -	$ -
		206691 - Winter Road Patrol	$ 197,321	$ -	$ -
		207101 - Employees	$ 49,814	$ -	$ -
		207111 - Equipment (Standby)	$ 718,790	$ -	$ 718,790
		207301 - Health & Safety Training-Roads	$ 207,517	$ -	$ 82,700
		207381 - PropertyRestorPlowDamageRdsSec	$ 148,158	$ -	$ -
		207401 - Tool Repair and Mtce Roads	$ 60,429	$ -	$ -
		207501 - Misc Road Mtce WDFO	$ 466,769	$ 33,000	$ -
		207601 - Emergency Response	$ 48,850	$ -	$ -
		208001 - Ashpalt Patching Winter	$ 790,317	$ 5,920	$ -
		208002 - Asphalt Patching-Grinding	$ 50,437	$ 2,030	$ -
		208004 - Recycled Asphalt Plant-Winter	$ 70,534	$ -	$ 6,060
		208005 - Asphalt PatchWinter-HiredCrews	$ 150,460	$ -	$ 98,080
		209001 - MPL Winter Maintenance-MMMS	$ 224,783	$ 224,783	$ -
	Winter Control Total		**$ 15,060,147**	**$ 602,203**	**$ 3,815,550**
	Streetlighting	Streetlighting Maintenance	$ 524,423	$ -	$ 524,423
		Streetlighting Support	$ -	$ -	$ -
	Streetlighting Total		**$ 524,423**	**$ -**	**$ 524,423**
	Supervision/Administration	Supervision/Administration	$ -	$ -	$ -
	Supervision/Administration Total		**$ -**	**$ -**	**$ -**
Roads Total			**$ 29,983,264**	**$ 1,731,933**	**$ 6,572,052**
Grand Total			**$ 42,120,340**	**$ 2,749,225**	**$ 11,307,385**