



PROCESS MODERNIZATION OF PUBLIC WORKS PAYROLL AND JOB ALLOCATION

DECEMBER 20, 2022

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EXECUTIVE SUMMARY

The Municipality of Clarington's Public Works (PW) Department is responsible for maintenance of roads, bridges, culverts, sidewalks, parks, cemeteries, trails, stormwater management ponds, forestry services among other services, some of which are contracted out. To pay its employees and understand its activities and costs, PW has put in place, a complex set of processes, of which are time consuming and manual.

These legacy processes can be traced to former funding requirements by the provincial government and have not been reviewed or modernized. The true value of many of these processes is not apparent. Most processes require duplicate entry into multiple systems which is both costly to operating and risky to manage. As with any process, change is difficult and typically requires a burning issue to initiate something different. Departures of seasoned staff who had put these processes in place many years ago heightened the need for a more streamlined, documented approach to payroll and job allocation. With the help of the province's Audit and Accountability Fund, the Municipality of Clarington was able to secure funding and launch this service delivery review project as a way to modernize these processes. WSCS Consulting Incorporated was engaged to undertake a review of all PW payroll and job allocation processes, including fleet and asset management.

The recommendations contained in this report are intended to eliminate non-value added activities, reduce risk by adopting the LEAN principles of "one is best" with processes that create flow, have limited 'handoffs' and are 'error proofed' to prevent and detect defects.

That is, information should be entered **one time, in one place** with system controls to minimize risk of over/underpayment or incorrect allocations. This can only be achieved through a modernized work management system whereby staff enter their time and activities against assigned work orders which are fully integrated with payroll. By today's standards, this is not new. Many organizations, including those in the municipal sector, have had staff responsible and accountable for their time for decades. In our world, where technology rests in small portable smartphones, it is no longer acceptable to waste employee time and time spent tracking employee time for employees to get paid.

Accountability should rest with the individual employee to ensure that their work is captured and reported accordingly. Supervisors should be there to oversee the work, ensure the assigned work is completed in a timely, accurate manner and as expected by the municipality's customers. This, however, is not the current state in Clarington's PW department. Supervisors are bogged down with outdated, antiquated processes with no mechanism to capture work information. They are saddled

with a complex set of manual timesheet, required daily for every employee which is intended to capture what staff accomplished during the day. Some supervisors enter the time in spreadsheets, others, fill out paper versions, all of which are re-entered into several other spreadsheets by the administrative staff with the ultimate goal of getting staff paid. This process is estimated to take about 45 hours, or the equivalent of approximately \$55k per year in time. It is clear that this is not only a waste of employee talent, but it also does not add any value to the service.

Fleet management also needs an overhaul with proper controls and system solutions to reflect the total lifecycle costs of each unit. This includes preventative maintenance programs with the view to ensure that the equipment is available to deliver services, is safe and lasts its intended useful life at the lowest possible cost. Costing and utilization need to reflect real costs so that management can make evidence-based decisions about fleet and its replacement.

Complexities in these processes as well as the job allocations have grown over time without a critical view because 'we have always done it this way'. It would appear that there is job information overkill, likely as a result of old provincial funding models. While job/activity information is important for decision-making, particularly the critical analysis of insourcing versus outsourcing, the way in which data is collected at the municipality would

never yield the appropriate information or allow for critical analysis. It would be extremely time consuming to gather the information in a way that would allow for evidence-based decision-making. Further, the charge out rates for fleet are so outdated (dating back to the mid 1990's) and therefore, the costs are not reflective of modern day reality. Consequently, the municipality is not in a position to adequately assess lease/buy, insource/outsource options.

Even though the municipality has implemented systems to capture information, it has continued to operate as it did more than twenty years ago. For Clarington, there needs to be a recognition that staff time is money and it cannot be wasted on non-value added activities. The time is now for change so that staff talent can be utilized to better serve the customers.

This all means that PW staff need to have the tools and training to capture the information needed to be paid in a timely, efficient and accurate manner. Managers and Finance need to have the evidence and data to be efficient and effective asset managers. The recommendations in this report provide the roadmap to make this happen. These recommendations require investment in technology and training, but most importantly, a change management strategy. Change is only successful if the Municipality manages the 'people side' of change.

PROJECT OBJECTIVE

The primary objectives of this project were identified in the Request for Proposal (RFP) as follows:

1. Create process to reduce and streamline the administrative work for preparing payroll data submitted by-weekly to Payroll. This applies to employees who work under the Outside CUPE contract.
2. Improve and streamline payroll allocation to various service areas.
3. Create a system that improves the quality of data for better reporting and data analytics.
4. Look at process for items above that can expand on the utilization of existing software including Citywide, Microsoft Dynamics GP (GP), ADP Workforce (ADP).
5. Create a process that establishes stable contributions to Public Works reserve funds for replacement fleet equipment. The objective would be to utilize existing software such as Citywide software for job costing and eliminate duplication of details in financial reporting system. Review Fleet allocation process and develop an improved process for allocating fleet costs.
6. Provide a prioritized action plan to be implemented in stages complete with staffing resources.
7. If it is determined that additional software is recommended, a summary business case should be included with the reasons, cost and benefits.

8. There must be a summary of cost savings and/or value of efficiencies found through the recommendations of this review process.

9. Include suggested KPIs within this service area.

PROJECT SCOPE

The scope of the project included the analysis of significant payroll/job allocation and fleet processes in the PW Department. Excluded from this Process Review are the capital infrastructure and development projects managed by the infrastructure division. However, some recommendations are applicable to this group.

METHODOLOGY

WSCS utilized LEAN Six Sigma (LSS) tools and methodologies to assess the municipality's PW payroll/job allocation and fleet management processes. LEAN SS focuses on the customer to yield better, faster services by identifying and eliminating waste and defects in processes. In order to assess the current state and formulate our recommendations for an improved future state, we undertook included the following steps:

1. Documentation reviews including policies, procedures, project information, procedures, systems, procedures and reports.

2. Interviews, focus group session with all PW supervisors and managers.
3. Interviews and focus groups were facilitated to develop first round of process maps. These included Finance, Information Technology, Infrastructure Services (Asset Management) as well as Public Works staff.
4. System and process walkthroughs to illustrate system functionality.
5. Develop future state recommended processes.
6. Interim report and presentation to management.
7. Draft and final reports presentation to management and municipal Council.

Process mapping provides opportunities to increase efficiency and effectiveness, assessment of controls, risk identification with the view to develop response plans and make improvements. To this end, we have mapped the processes from work management to employee payroll as well as fleet management and inventory.



This report contains 27 recommendations that we believe will allow the Municipality to better leverage system functionality, mitigate risks and eliminate non-value-added activities.

1 DEFINE: THE PROBLEM

The RFP outlined the problem that PW and the Municipality was facing as follows:

“The current tracking of Public Work staff for payroll purposes is done with a complex set of Excel spreadsheets. The complexity of the union contract and the numerous service areas provided by Public Works compounds the process. The process is extremely administratively time consuming. This involves Public Works, Payroll and Financial Services staff. As well, the process increases the risk of human error and corrupt spreadsheets. The current system does not provide easily accessible data. The objective would be to improve payroll reporting and allocation processes.

Another component is the use of a Fleet Allocation process as a method for allocating fleet equipment costs over the various services in Public Works. The larger purpose of the Fleet Allocation is a method of funding further fleet and equipment replacement through a net year-end transfer to reserve fund. These details are currently posted per pay period in the financial reporting system and are rolled up at year end.”

2 MEASURE: MAP THE CURRENT STATE PROCESSES

The Municipality currently uses Microsoft Dynamics GP for its Enterprise Resource Planning System (GP) for its financial services such as payables and receivables. This is a powerful product but many of its features appears to be underutilized (such as inventory, purchasing card integration as well as reporting).

Public Sector Digest (PSD) Citywide is utilized for Asset, Work Management, FMW for Budgeting, Capital Planning and Fixed Assets. The Municipality has made great strides over the last few years in leveraging this technology by implementing work orders for forestry, fleet, park inspections, patrolling, patching among others. Work orders allow for the response to service requests as well as assigned work. CityWide allows for time and other costs to be tracked against an asset, but this feature is only utilized by fleet at the moment. It is important to note that not all PW staff utilize Citywide, nor have they been trained. In fact, many staff do not have access to technology at all. However, those staff that do have access and are utilizing the software, have generally been receptive to the automation, even though the software has some shortcomings.

The Municipality recently launched AMANDA as its Customer Relationship Management system and portal. This allows for the tracking of land management information and permits as well as customer requests and complaints. While not fully integrated at this time, AMANDA does 'push' information to CityWide and creates a service request. These requests are analyzed by PW staff and, if necessary, a work order is created in CityWide and transferred to the appropriate staff. There are also road occupancy/entrance permits that are housed in AMANDA, that are not reflected in CityWide. There is no 'two way' integration between these two products. Consequently, the feedback loop may not be there to ensure that the service request is dealt with. We are aware that, without integration, the customer could be left hanging without a resolution and no mechanism to track their request. With a focus on the customer, the municipality may wish to resolve this in the near future to avoid these issues.

Since the beginning of the review, the municipality also purchased City Wide's Decision Support module which will allow for the capture of condition assessment data which is currently housed in WorkTech, an asset management software that is being decommissioned. The Asset Collector module would allow for mobile assessment and capture of assets. This was in the Municipality's budget for 2022 but not yet purchased. This would be of great assistance to the municipality for updates to its asset management plan in real time using mobile technology.

Payroll is processed through ADP Workforce which allows for self service, approvals, time off requests. However, PW does not utilize ADP like the majority of departments. This is primarily due to the fact that PW charges its time (both staff and machine) to 'jobs' for each hour. In any day, this could involve several different jobs, particularly in the summer months where staff could be doing a variety of activities to maintain the municipality's roads, bridges, culverts, sidewalks, parks, cemeteries, trails, stormwater management ponds, forestry services. To some extent, Municipal staff work on capital projects but most of this is managed by the Infrastructure Division. In winter, most of the staff are assigned to plow routes, patrolling and snow removal.

In PW, the payroll/job allocation process involves manual/excel based timesheets, with a multitude of collective agreement provisions for various rates, all of which are entered into a complex set of excel spreadsheets. The steps can be summarized as follows:

1. Each supervisor enters the staff time into a daily timesheet with hours, jobs and machine time as well as any premium pay. .
2. These are then sent to the PW Administrative Assistant (either by email or paper) who then re-enters every transaction in several spreadsheets including but not limited to the following:

- a. Timesheets – a line for every date is entered in a spreadsheet with codes and the individual rates, adjusted for any premium plus hours and all of which are then totalled. While the formulas are used, they are in each cell.
 - b. These are then copied and summarized on another spreadsheet which are entered in the pay summary.
 - c. Sick time and attendance are entered in another spreadsheets.
3. Pay Summary – is manually entered from the time sheets into another spreadsheet including rates and hours sent to payroll.
 4. Payroll reviews and uploads the payroll to ADP and adjusts for sick time and returns the information to the PW Administrative Assistant who adjusts the labour distributions in another spreadsheet.
 5. Pay Period Journal Entry – entered manually – all transactions to be posted to the general ledger by account for salaries and transformed to an upload document that is sent to Finance for GP upload.

Spreadsheets are also used to track rosters, employee attendance, schedules, hours of work¹, time off in lieu of overtime etc. In total, each biweekly payroll for the PW involves twenty or more independent spreadsheets which take approximately 45 hours to complete each pay which

is \$55k per year or \$772 per employee. This is staggering but the true costs are not reflective. Every manual entry represents a chance of error and risk. Consequently, the hidden costs of this process is much higher but not easily measurable.

During the winter months, staff are entitled to an overtime meal ticket of either \$15 or \$25 depending upon the time/day that the overtime is worked. For each staff member that is claiming these tickets, a new spreadsheet is created for each month, it is signed/approved by the supervisor and sent to Finance for payment. There were 21 separate spreadsheets for January 2021 for example.

PW also tracks 'machine time' against jobs in spreadsheets based upon charge out rates for every hour that equipment is used. These are also tracked manually (spreadsheets) which are sent to Finance after payroll to upload to GP which, captures every piece of equipment in a series of four accounts. In 2022, for example, we noted that over 350 general ledger accounts are 'active' for fleet. These capture individual costs during the year but, these are 'reversed' at the end of the year which renders the accounts basically useless for life cycle costing. We are not sure why the Municipality has implemented this process and no one we consulted with really had an explanation other than it was the municipality's practice. This is unique as we have not seen this in any other municipality and

¹ <https://www.ontario.ca/laws/regulation/060555>

does not appear to add value. In fact, it is hindering the municipalities' ability to effectively analyze its fleet costs.

In terms of fuel, the Municipality utilizes Petrovend software for its fuel management systems. We understand that it is not set up to accurately record the vehicle hours/kilometers nor is it integrated with CityWide or GP. Consequently, the data from the system is manually entered/uploaded into GP on a quarterly basis against the equipment general ledger account as opposed to real time. This is problematic as it does not allow the Fleet staff to set up preventative maintenance schedules based upon odometer readings or hour milestones. This represents risk that the fleet will not be effectively managed to ensure that the associated work is done on the vehicle at the appropriate time, leading to downtime or safety issues. We do note, however, that the Municipality recently purchase Telus – Focus GPS software which would offer some additional functionality in terms of the location of the vehicles as well as the odometer readings. At present, this software is not integrated with CityWide but the opportunity is one to explore.

With respect to fleet, we also note that parts are purchased utilizing purchasing (credit) cards and then manually entered into CityWide inventory module. When a part is used on a piece of equipment, it is charged to materials/repairs and maintenance. The challenge is that the inventory is not integrated with GP, and therefore,

must be counted at year end. As it is not truly an inventory system, there is no bar coding and it is not clear if the accounting policy is built into the system (eg. FIFO or perpetual inventory). A robust inventory module would include 'reorder points' with integration to purchase orders and automation. All that being said, the process is quite manual and time consuming.

We estimate this process to cost the organization is approximately \$7k per year between PW and finance staff time.

Of particular concern is that the fleet rates have not been updated since the late 1990s, prior to the elimination of funding from the province. This has had far reaching implications as the charge out rates are intended to reflect the 'true cost' of service and allow for comparison between insourcing and outsourcing. Clearly, rates in the late 1990s are not reflective of costs in 2022 and therefore, any business case to outsource service would not be comparing appropriate costs. Further, because the rates are significantly below actual cost, the reserves for fleet are undervalued and is not sufficient to fund replacement. We understand that the municipality had to levy additional funds to 'top up' the reserve for fleet. We have calculated the rates to be at least 300% below the current rates in the market place. For example, the current rate charged for a tandem truck is \$34 per hour and the Ontario Provincial

Standard Specification (OPSS) 127² rates range from \$130 and \$425 per hour depending upon the type and weight of the truck. On a conservative basis, this represents about \$2.8 million per year or \$14 million over 5 years.

Year	Fleet Revenue	Estimate Revenue at Current Rates	Sum of Estimate Revenue/Reserve difference
2017	1,346,235	4,038,706	2,692,470
2018	1,349,593	4,048,779	2,699,186
2019	1,475,070	4,425,209	2,950,140
2020	1,559,677	4,679,030	3,119,353
2021	1,419,615	4,258,844	2,839,229
Grand Total	7,150,189	21,450,568	14,300,379

According to the Municipality’s Finance Department, the current reserve balance has since 2017 (

Table 1) and has had to rely on levy in recent years to build the fund. It a best practice to update equipment charges on a regular basis to keep the rates current, charge out to all jobs, allow the Municipality to assess whether it should lease or buy. It also provides for the reserve to be replenished so that there is ‘money in the bank’ to replace assets when they are at the end of the useful life. This minimizes the tax levy ‘shock’. As can be seen in

² <file:///C:/Users/tcarr/Downloads/OPSS.PROV%20127%20-%20Apr%202022.pdf>

Table 1, 2021 saw a loss in ‘revenues’ and a reduction to the reserve fund. The year end balance or \$574k represent less than three replacements of fleet. Current costs are approximately \$200-250k per tandem truck or loaders. This puts the Municipality in a very tenuous position as it will likely have to levy to cover its purchases in the next few years.

Table 1:Clarington's Operations Equipment Reserve Fund Balances - Source: Clarington Finance

	2017	2018	2019	2020	2021
Budget Transfers from the General Fund	134,500	134,500	159,500	185,000	1,085,000
Fleet Close Out	209,047	170,038	239,391	472,752	(127,795)
Net	343,547	304,538	398,891	657,752	957,205
Budget Capital Expenditures	1,015,000	630,000	680,000	790,000	1,150,000
Reserve Balance @ Year End	1,207,715	987,821	879,926	734,517	574,679

The current age of the equipment is 8.4 years but there are 18 units over the age of 13 (Table 2. In general, the useful life of heavy equipment is generally between 12 and 15 years. Therefore, it is important that the Municipality act

now to replenish its reserves through more appropriate equipment charge out rates.

Table 2: Equipment Units and Average Age - Provided by Clarington Finance

Type	Number of Units	Average Age
HEAVY	12	7.5
SA	2	9.5
SINGLE	13	6.7
TANDEM	18	10.1
Grand Total	45	8.4

The pandemic was a kick start to many changes in the workplace whereby organizations have shifted to ‘reimagining or re-architecting work’ means more than automating tasks and activities. It’s about configuring work to capitalize on what humans can accomplish when work is designed around their strengths. Research suggest that transforming work requires reskilling and technological capability in order to establish new practices and processes. Clarington is no different. It needs to do things differently, it needs to invest in technology, its people to make change.

3 ANALYZE: ROOT CAUSES OF THE PROBLEM

Our review revealed that PW payroll/job allocation and fleet management processes have significant non-value added activities but there are opportunities for improvement.

In general, the staff recognize that change is needed, they just do not know how to proceed. The fact that processes have been in place for a very long time make it difficult for existing staff to identify opportunities for improvement. But, despite the fact that there is much to be done, much has been done. In fact, WSCS had the opportunity to undertake the Forestry Service Delivery Review in 2019 where we made recommendations with respect to the implementation of work orders and implementation of mobile technology. These recommendations were implemented and the rewards are being realized.

During our consultations, it became evident that staff have made change but it is challenging. There has not been an overall plan or direction but with new leadership and motivated staff, there is a sense that things can and should change. CityWide has been recently implemented for park inspections, road patching, patrolling and fleet and the benefits are being realized. This creates some momentum for further changes that we have recommended in this report.

We have identified the following root causes of these issues:

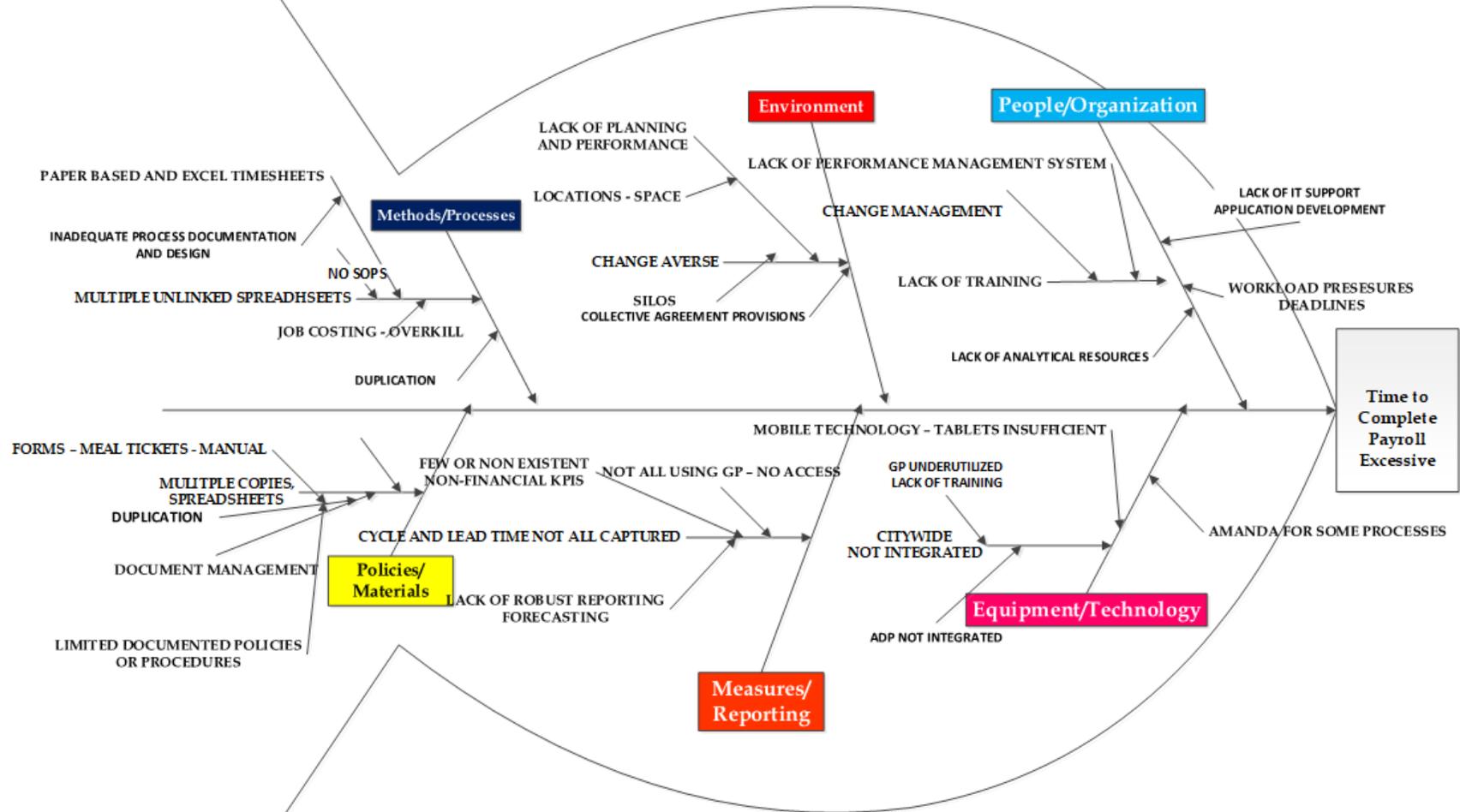


FIGURE 1:ROOT CAUSE ANALYSIS

1. Methods – Duplication of effort and a lack of supporting documentation is evident. Most processes continue to be paper based and/or captured outside corporate systems. PW payroll processes are overly complex and not supported with technology. There has been no documentation to support the processes and the chance of error is very high.

Many spreadsheets are used to track information including outstanding work as opposed to a work planning system resulting in duplication of effort when systems can provide consistent, accessible information. Part of this is due to a lack of knowledge of the systems or their potential functionality but also “because it has always been done that way”. Until this duplication of effort is reduced, the Municipality will continue to spend unnecessary time on non-value added activities and be unable to focus on important customer service strategies that are currently lacking.

There has not been a critical review of job activities in some time. It would appear that jobs have been tracked but never analyzed. As well, some are ‘one time projects’ that would be better reflected in CityWide only. The general ledger is overly complex for no apparent value. Capturing information on each piece of equipment has value but only if it is based upon lifecycle and is easily accessible to be analyzed. We suspect that the approach to capture information in the general ledger and jobs

stems from a prior practice for provincial funding. But, if the information is not utilized to make decisions, then it is simply an exercise because ‘it was always done that way’. However, it is imperative that the Municipality have sufficient information available to demonstrate that it meets Minimum Maintenance Standards, Hours of Service, Asset Management Plans to name a few. This can be achieved through activities in CityWide as opposed to the general ledger, which is simply a financial reporting mechanism, not for what was done, but more ‘how much it cost’. Consequently, the general ledger should be useful but also not so detailed that it loses its validity. At minimum, the Municipality needs to respect the requirements of the Provincial Financial Information Return requirements as follows:

1. Roads - Paved
2. Roads - Unpaved
3. Roads - Bridges and Culverts
4. Roads - Traffic Operations & Roadside
5. Winter Control - Except sidewalks, Parking Lots
6. Winter Control - Sidewalks, Parking Lots Only
7. Transit - Conventional
8. Transit - Disabled & special needs
9. Parking
10. Street Lighting
11. Air Transportation
12. Urban Storm Sewer System
13. Rural Storm Sewer System

2. Materials – There is a lack of formalized documentation, policies are outdated or non-existent. What is in place is not readily available to the managers and staff. This appears to be a theme across the Municipality based upon our other reviews. Policies are needed to reduce risk and variation in services and provide the support that managers need to measure performance. Document management is problematic in the payroll/job allocation processes as information is gathered in spreadsheets that are not locked down nor are they audited for proper calculations or adherence to the contracts. It is true that staff are keenly aware of their own pay but the other information captured, such as machine time is clearly just captured for ‘the sake of capturing it’. It is no longer driving decisions nor funding the replacement of the assets. Consequently, it needs to change or not done at all.

Policies communicate an organization’s culture, values, and philosophy. They cover what employees can expect from the Municipality (work management, responsibilities and accountabilities), what the Municipality expects from employees (code of conduct, confidentiality agreements), and what customers and the community can expect from the Municipality (customer service). Policies provide consistency throughout the organization, improving employee performance, accountability, morale, service and reduce risk to both the organization and the employee. However, no matter how terrific policies are,

they are no substitute for adequate employee training and supervision, topped off with a deeply ingrained culture of ethics and compliance. Because the Municipality does not have a comprehensive set of policies, managers and employees do their best and for work management, payroll or job allocation, staff are relied upon for the simplest of queries, all of which take time and likely result in variation of responses.

It is also important to review policies and practices for continued relevance and assess unintended consequences. For example, the meal ticket ‘policy’ that requires a monthly spreadsheet falls within the travel and expense policy. But, for the amount of money that is paid, it would appear to be overkill. Particularly since the much larger expense, payroll, has limited oversight. In fact, meal allowances account for an average of \$22k per year (or 0.1% of the annual budget) but salaries are \$8.4million (53%). The policy and procedure for meals should be revisited and simplified.

3. Measurement – While PW does monitor its requests and workload, there are no specific performance measures or expectations with respect to managing workload, except that it is bound to meet Minimum Maintenance Standards and be able to measure its response time. Other areas, however, there are no performance measures to track cycle time, errors, with respect to payroll, fleet and requests. In these areas, there

are no specific performance expectations, nor are they measured.

We note that, because there is no one source of information, managers are unable to assess the effectiveness of work management practices without a significant amount of manual effort.

Appendix D and E provide for some recommended Key Performance Indicators for payroll and fleet respectively.

4. Machinery/Technology – Underutilized technology (GP and CityWide) and multitude of systems without effective implementation and integrations. Some technology is a complete duplication without any added value (GP fleet). Lack of strategy nor expectations, training of system utilization. The tendency is to utilize spreadsheets outside of systems instead of exploring corporate solutions. Managers/staff do not have access to their own employee data because ADP and CityWide is not used for PW.

Assessment of the current systems indicate that there is a need for a long term strategy for integration and many opportunities to reduce duplication and create one source of truth (as articulated by Clarington’s IT).

In some cases, that source of truth should be GP as it is the corporate financial system and ultimately, it is utilized for

financial statements and audit purposes. However, it does not need to be the gatekeeper in all areas provided that there is true integration and access to ‘subledgers’ needed by departments. As explored in the prior section, there are several systems that do not integrate such as Petrovend, Focus GPS with CityWide or GP. There is a need to develop an integration strategy to ensure that staff are not entering information in multiple places or spreadsheets and reconciling.

5. Environment – The culture has been one of reactive approach as opposed to a more proactive one with long-term integrated plans. Departments have made decisions regarding information technology needs without full consultation. To some degree, PW is an ‘island’ and that has meant that the Information technology department has not been as supportive as it could have been. It is apparent that this is changing and the result is positive. We also note that, the PW culture has generally been change averse for many years and it has been difficult to move things forward, particularly with respect to technology.

6. Organization – The PW department has seen changes in both structure and services with the recent move of Engineering to the Infrastructure Division and departure of several staff. This has presented both challenges and opportunities. On the one hand, processes were not adequately documented leaving staff to learn

their new roles quickly. On the other hand, new technologies and leadership provide for new ways of doing things.

In terms of the developing a culture of learning and development, the Municipality has undertaken many initiatives that are moving in this direction. The LEAN Six Sigma training demonstrates recent commitment to professional development and continuous improvement. Some PW staff have taken this training and is eager to apply what they are learning. There is not, however, a comprehensive training plan or program that aligns with a performance management framework in place. This will need to be a key focus over the next few years in order to advance the recommendations in this report.

In summary, there is a need to develop a Change Management/Training Strategy to ensure that the Municipality is successful. The strategy should be to always opt for the 'source of truth' in systems. In some instances, GP should be the 'keeper' of the information such as inventory, in other cases, CityWide should capture 'subledger' information. However, it is of utmost importance that everyone understands the source of truth and the processes are well documented through a clear accountability framework and responsibility matrix that all agree upon.

4 IMPROVE: RECOMMENDATIONS

1 Governance, Planning and Performance

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
1.1	Develop a new business plan with performance plans and documented processes. Managers and supervisors should be managing work not performing manual transactions.	Business plans with performance expectations are not in place and reactive work planning. The focus is on transactions not long term plans or strategies. The unionized environment seems to be the crux but we are personally aware that unionized staff can be held accountable through appropriate workplans and performance agreements.	As part of the long term strategic plan, PW should develop a business plan with goals and expected outcomes. This should drive the jobs/activities that it tracks as opposed to being focused on the past. Asset management should be the underlying driver with the goal to capture lifecycle costs for better long-term planning.	HIGH EFFORT, HIGH IMPACT	2023
1.2	PW facilities and locations should be part of a longer-term vision to become more aligned with service needs. IT to review internet connectivity and impacts in different locations. There is limited space available for technology. Additional mobile solutions may help.	We note that PW is to some degree 'an island' and often lacks support of corporate services. There is a need to review how services are provided. As well, the facilities are aging and not conducive for growth. We understand that a facility strategy is underway. Internet connectivity at depots is problematic to the point that the staff at Orono often physically bring their payroll information to the Hampton garage.	There is a need to better service PW including IT, finance. In future, facilities should be better developed to handle inventory, systems.	HIGH EFFORT, HIGH IMPACT	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
1.3	Modernize – processes to ‘no paper’ and enter ‘one time, one place’ with the view to capture information at source.	There is a culture of manual processes, paper and spreadsheets. This represents waste, duplication, and risk of errors.	PW should move to the concept of entering information one time, one place, right the first time in 'corporate' systems.	HIGH EFFORT, HIGH IMPACT	2023
1.4	Develop a change management strategy – PROSCI ADKAR evaluation. Assign a Change Management Champion to oversee and monitor.	Old school approaches – change averse. Staff have had little training in technology with a few exceptions. Recent organizational changes provide some opportunities.	Change management strategy is needed to ensure that the people side of change is managed. With 50-95 potential full time and part time staff involved, the Municipality must ensure that all are involved and have the knowledge and ability to make the change.	LOW EFFORT, LOW IMPACT	2023
1.5	Develop a LEAN Continuous Improvement Program in PW focused on progress of the recommendations in this report and ongoing modernization with tracking of results and changes.	Currently there is a CityWide working group to identify ongoing changes. This doesn't necessarily reflect the entire set of recommendations in this report.	Continuous improvement program should start with the initiatives in this report. The Team should involve IT, Finance, Payroll, Asset Management, PW supervisors and staff. Goal should be to reduce process costs by 1% annually (for example). Suggest additional front line PW staff enrol in Lean Six Sigma Training.	HIGH EFFORT, HIGH IMPACT	2023

2 Reporting

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
2.1	Once all data in CityWide, prepare monthly reports against plans (budgets in CityWide). Work with FMW to reflect jobs and fleet. Develop regular reporting and access for supervisors to assess workload and costs.	Currently, all tracking of activities and progress is contained in spreadsheets that are not accessible to the supervisors. There is no follow-up to ensure that the data sent in timesheets are properly captured and costed.	Provide regular reporting and access to information in CityWide based upon KPIs to supervisors. Require a review and 'sign off' that the data is accurate.	HIGH EFFORT, HIGH IMPACT	2023
2.2	Reduce number of jobs to 'real needs'. Change GL to reflect only that needed for Financial Information Return. All detail to reside in CityWide against jobs/activities – will require a revamped set up.	There are too many jobs that are not required and are not used.	Move to eliminate jobs that are 'one time' in the General ledger such as fleet, projects in favour or capture in CityWide. This will require a change to CityWide and GP. Move GP to the Financial Information Return lines.	LOW EFFORT, HIGH IMPACT	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
2.3	Set up and Track KPIs with service levels for work management, Payroll and Fleet Management. This may require work orders and activity changes (e.g. Downtime which is currently not captured)	There are currently no metrics utilized for these processes nor expectations.	Suggested KPIs contained in the Appendix - include: Response time between request/resolution, Payroll Cost per Employee, Number of errors per employee, Hours assigned to Work Orders/Number of available staff hours, Number of outstanding service requests/FTE, Downtime per unit, Cost per Unit, Number of hours utilized/available hours	LOW EFFORT, HIGH IMPACT	2023
2.4	Performance measures should be developed based upon standard costing of jobs.	Once all data is captured in CityWide, information on standard activity costs would be available which will allow for better work planning and performance metrics.	In 2025, undertake a standard costing analysis to determine how much typical jobs cost on an hourly or per request basis. This should then formulate the performance plans and reporting. Regular variance analysis should be undertaken to understand impacts and sources of variation.	HIGH EFFORT, HIGH IMPACT	2025
2.1	Once CityWide is utilized for work management and payroll, explore lifecycle costing approach with Infrastructure Division.	With the implementation of AMANDA, there does not seem to be a strategy to reflect lifecycle costs of assets. Recent acquisition of Citywide decision, support seems to indicated that Engineering will be using CityWide for asset condition assessments but the actual capturing of costs and reporting has not been determined.	As required by O.Reg 588/17, Asset Management Planning regulation, there is a need to capture lifecycle costing, associated levels of service and financing strategies for proposed levels of service. Both Engineering and PW contribute to the lifecycle costs. Engineering is responsible for most capital costs whereby PW is responsible for maintenance. There is a need to ensure that a strategy is in place to gather all information for decision making.	HIGH EFFORT, HIGH IMPACT	2024

3 Organization

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
3.2	Develop a comprehensive training program supported by standard operating procedures for all PW staff and supports.	There has been some training provided to staff utilizing CityWide but the expansion will require a comprehensive set of training guides.	Create a training program for CityWide, time entry with short videos to support. Identify the key contact for any questions as changes are introduced.	HIGH EFFORT, HIGH IMPACT	2023
3.3	Implement performance management framework aligned with an annual/multi-year business plan with reduced jobs/activities.	Performance management should be implemented with goals, objectives in line with the performance metrics.	Performance plans with workplans are needed with metrics and expectations. It is important to streamline jobs and activities before rolling this out for simplicity.	HIGH EFFORT, HIGH IMPACT	2024
3.4	Assign IT Staff to facilitate integrations and testing.	IT has been very effective in implementing AMANDA and other priorities over the last year. The recommendations in this report will require significant resources.	There may be a need for additional resources to support this project in IT. This will need to be assessed based upon other priorities. Additional outside support may be required.	HIGH EFFORT, HIGH IMPACT	2023

4 Policies and Materials

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
4.1	Develop a Payroll/Job Costing/Fleet Management/Inventory Policy Framework with accompanying policies.	Payroll/Job Costing and Fleet/Asset Management/Inventory policies do not exist. We noted that interpretation of collective agreements and job allocations is left with staff and no guidance.	A policy framework should be put in place and, to build new skills in the PW department, assign policy development to staff with associated consultations. Delegation of authority for Payroll should also be developed (see Appendix B for suggested list of policies). As they are completed and adopted, all policies should be posted on the website for easy access.	HIGH EFFORT, HIGH IMPACT	2023
4.2	Develop standard operating procedures to support policies and controls.	The only documentation we received were individual notes on 'how to do' things in GP. These do not have business rules or associated policies to support what is being done.	Documentation is needed to support policies and reduce variation in service delivery. Easy access will be essential for front line staff	HIGH EFFORT, HIGH IMPACT	2024

5 Technology

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
5.1	<p>Work with CityWide to export information at GL level to GP and ADP for timesheet information.</p>	<p>Currently, all tracking of activities and progress is contained in a multitude of duplicate spreadsheets. Time and rate information for staff is sent to payroll for upload into ADP which then creates a journal entry for GP. This is also adjusted by PW to reflect sick time. No hours are reflected in GP. Similarly, for machine time, the hours and rates are captured in spreadsheets only. The General Journal simply is the total. Consequently, there is no easy way to determine how many hours are spent on each job or equipment utilized. All of these processes are disjointed, duplicated and run the risk of error. Rates are manually entered each pay period including all 'odd' situations contained in the collective agreement. ADP has limited ability for job costing which is apparently why it is not utilized. The challenge is that staff are not responsible for their own time in ADP as other departments are.</p>	<p>CityWide has the ability to capture time (through Timesheets) and costs (Parts and Materials) as well as machine time. This would allow for one entry, against a work order (which can include assets) and push to ADP. There will be a need for use of an API to achieve this push but the savings are significant. The integration is one element, but set up in CityWide would also be required (pay codes, rates, machines etc.). As well, training will be required as will smartphone/tablet technology.</p>	<p>HIGH EFFORT, HIGH IMPACT</p>	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
5.2	Consider moving from ‘tablets’ to hybrid laptops (2 in 1s e.g. Microsoft Surface) to allow for both desktop and mobile applications for inspectors. Operations staff simply need smartphones or tablets for work orders and time capture.	In some situations, staff have the need to download a significant number of work orders when they go on the road. The tablets do not allow for the numbers needed for staff and therefore, they must go back to the office to work on their computers in these cases. The Fleet staff currently utilized desktops but have tablets for some items. It would be more efficient to be able to access information at the location. Other staff, currently not using CityWide will also need technology to capture their work and time.	By moving from tablets + a desktop/laptop to a 2in1 tablet such as Microsoft Surface, the Municipality will save on multiple devices while improving service and reducing the need to go to the office. While a Surface is more expensive than a tablet, it is cheaper than having two devices to manage and purchase. Some of these tablets can be repurposed to staff currently not utilizing CityWide but all staff would need access in order to update their work orders and add time, machine utilized in the field.	HIGH EFFORT, HIGH IMPACT	2023
5.3	Work with CityWide to address Fleet Management deficiencies.	Fleet has identified several issues the CityWide including the ability to have more than one work order item per vehicle. Preventative Maintenance is also an issue as the system does not have an easy way to collect the hours/odometer readings. Inventory is manually entered into the system and there is no parts scanner.	Work with CityWide to address the issues with respect to Fleet Management. We understand that CityWide is aware of these issues as other municipalities have raised these.	LOW EFFORT, HIGH IMPACT	2023
5.4	Work with CityWide, GPS (Focus Telus) and Fuel (Petrovend) systems to download information into Citywide against fleet – export to GP.	Currently, the fuel management system is not integrated with CityWide or GP and fuel is reflected in GP for each piece of equipment through a journal entry every quarter. The system has issues in that the odometer reading can be overridden and therefore, is risky. The new GPS system may provide some options.	Work with CityWide and PetroVend to provide for a download to CityWide against each vehicle. There will likely require a mapping of each field.	LOW EFFORT, HIGH IMPACT	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
5.5	Consider procurement card processing and GP inventory – push to CityWide inventory.	Inventory and parts are currently purchased, mostly via purchasing cards and then manually entered into CityWide. When used the item is attached to the equipment. However, there is no inventory captured in GP and therefore, there is a year end process to reconcile the inventory. The purchasing card process requires intervention as well.	Purchase the procurement card processing module which allows for the download of the transactions from the bank without intervention. The coding occurs in the module - it is 'smart' in that it recognizes the card number and typical general ledger codes associated with the card and auto populates for ease of coding. For inventory items, these could be transferred into GP inventory which allows for property inventory policies (FIFO or perpetual) and its costs. This will solve the year end issue as the value of the inventory will always be available. This would require a 'push' to CityWide and then, as push to GP when utilized. The Municipality would have to work with CityWide to identify the appropriate tables. GP also has many options for bar coding but would have to be explored with CityWide. See Appendix G for Future State.	HIGH EFFORT, HIGH IMPACT	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
5.6	Work with CityWide and AMANDA to integrate work orders (two way).	Currently there is only one way integration between AMANDA and CityWide whereby service requests and permits are pushed to the service request module in CityWide. This means that those accessing AMANDA, including Service Clarington, will not have access to the request. Public Works would have to close the request in AMANDA.	Work with AMANDA and CityWide to incorporate two way integration and reduce duplication of effort.	HIGH EFFORT, HIGH IMPACT	2023
5.7	Purchase and implement Asset Collector to improve mobile collection efforts.	Asset Collector is an asset management tool available on the CityWide mobile app, that enables users to download and visualize assets in the field, collect new assets, update asset attribute data, and record condition assessments to optimize lifecycle event strategies in CityWide Asset Manager (AM)	We understand that Asset Collector was in the 2022 budget but not purchased or implemented. This will benefit the entire organization as assets will be captured at source and update the asset inventory.	LOW EFFORT, HIGH IMPACT	2023

6 Processes

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
6.1	Implement Timesheets with CityWide. Will require set up and integrations. Jobs to be captured in CityWide and sent to GP. Possible use of Timesheets for schedules and hours of work. Work with ADP to capture exported time data. Staff to finalize and submit timesheets for approvals by supervisors.	As discussed above, CityWide Timesheets will eliminate approximately 130 spreadsheets per pay and approximately 45 hours per pay. It will free up supervisors to manage work and analyze results.	Timesheets in CityWide would be populated by the information in the work order as well as machine time against the equipment. Time would be entered, then approved by supervisors. Additional approvals are possible through workflow but all information would pass directly to payroll. The GL should only reflect what is needed for the Financial Information Return lines. All other job information and fleet can reside in CityWide. See Appendix H for Future State.	HIGH EFFORT, HIGH IMPACT	2023
6.2	Provide self service for ADP to all staff – attendance to be updated in ADP.	PW is the only department that does not have self service to ADP. We understand that there may be vacation entitlement challenges in ADP. These likely should be addressed before going live.	Provide access to ADP for PW staff and work with ADP to resolve entitlements.	LOW EFFORT, HIGH IMPACT	2023
6.3	Move meal tickets to CityWide Timesheets and paid through ADP payroll.	Meal 'tickets' is a time consuming manual process for staff to claim overtime meals. The process appears to be a legacy issue requiring many unnecessary steps with individual spreadsheets. In one payroll, there was 21 separate spreadsheets that are signed off for \$15 and \$25 items.	Create a paycode for meal tickets in CityWide and push to ADP for payment. Ensure that the paycode is set up to capture the HST rebate.	LOW EFFORT, LOW IMPACT	2023

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
6.4	<p>Eliminate General Ledger accounts per fleet in favour of CityWide – currently reversed so information is ‘gone’ anyway! Simplify all job codes to those actually used and needed.</p>	<p>Currently, there are 4 general ledger accounts for each piece of equipment to charge salaries, materials, maintenance and machine rentals to each. In 2022, there were over 350 accounts created for this purpose. For reasons unknown to everyone, these charges are 'reversed' at the end of the year in favour of an overhead account. This basically means that all transactions made are no longer in the balance and are 'credited'. Therefore, the information about the equipment is essentially 'gone' without going to the individual account. We also noted that many GL accounts created for jobs are for one time projects and jobs.</p>	<p>Eliminate the individual general ledger accounts for fleet and opt for simple accounts based upon the Financial Information Return (FIR). All other information can be reflected in CityWide and accessed by PW.</p>	<p>HIGH EFFORT, HIGH IMPACT</p>	<p>2023</p>

Rec #	Opportunity	Findings	Opportunity Detailed Description	Effort, Impact	Start
6.5	<p>Undertake an Equipment Rate study and compare Equipment rates to OPSS 127 standards where available. Others to 2022 rates. This will require a phase in as this would be a significant impact on the budget. At minimum, an increase by an inflationary amount should be built into the rates.</p>	<p>The current equipment rates utilized by PW are from the mid 1990s. These rates are approximately 300 to 800% below the current Ontario Provincial Standards for fleet (e.g. Clarington's rate for a dump truck is \$27 per hour and the OPSS rate is \$251). This means that the expenses charged to each job is significantly lower than real cost. That is reflective of the fact that the reserve funds are insufficient for replacement.</p>	<p>By moving to new fleet rates, there will be an impact on the budgets. Consequently, there should be a rate study based upon lifecycle cost of fleet. This was not possible based upon the manner in which fleet information is captured and reversed. In the interim, increase rates by 20% per year for then next five years to increase the reserve.</p>	<p>HIGH EFFORT, HIGH IMPACT</p>	<p>2023</p>

5 CONTROL: SUSTAIN THE CHANGE

In order to provide the Municipality with priorities, anticipated investment and savings, we have provided our estimate of the investment required and anticipated capacity savings over a three-year period. We recognize that the Municipality has limited capacity to make change and therefore, recommend a staged approach to transformation.

Table 3 below shows that, our recommendations will require approximately \$308k in investment with a payback period of 2 years and resulting capacity and direct savings. The savings will extend past this period, particularly once the recommendations are fully functional. It is important to note that the savings are shown for the full three years based upon the start date for implementation, not expected to be saved in the year of implementation. Appendices E and F provide the details by recommendation and the spreadsheet has been provided to the Municipality to develop its own workplan.

Table 3: Summary of Investments and Savings

Category	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total with Savings
1 Governance, Environment	30,000	-121,250	-121,244	-212,494
2 Measures, Reporting	10,000	1,104	3,312	14,416
3 People, Organization	125,000	-25,000		100,000
4 Policies and Materials	15,000			15,000
5 Equipment, Technology	123,000	-119,900	-249,800	-246,700
6 Methods, Processes	5,000	-21,000	-42,000	-58,000
Grand Total	308,000	-286,046	-409,732	-387,778

CONCLUSION

In conclusion, the PW department has seen many changes over the years with new leadership, staff and organizational change. This, however, was not supported with the required policies and documentation nor system integrations. As a result, the department suffers for processes that do not utilize their talents in the best way.

These processes have been in place for decades without review. While it is true that the Municipality must adhere to its collective agreements and regulatory environment, systems can help. Integrations and new approaches are needed to eliminate duplication and risk in favor of one source of truth. Data needs to be entered in one place, one time and any requirement for data in subsidiary systems need to be technologically driven as opposed to staff driven.

The next step is a strategy to fully utilize the functionality in CityWide to collect data that reflects work undertaken by staff, provide real time access to managers/supervisors so that PW can better plan work and make evidence-based decisions. There will need to be a concerted effort to work with the vendors to get the appropriate integrations in place and working effectively and efficiently. This needs to be a partnership with the IT and Finance departments so that everyone is moving in the same direction and understand responsibilities and accountabilities.

The Municipality should consider a comprehensive training program in CityWide to leverage its functionality with the view to eliminate all outside tracking. Perhaps forming a working group with all partners is important to build and monitor the plan. We are confident the Clarington has the leadership and commitment to make the changes that are required to improve these processes.

ACKNOWLEDGEMENT

We wish to express our appreciation for the cooperation and assistance afforded WSCS Consulting Inc. by staff and management at the Municipality during this review.

APPENDIX A: MINIMUM MAINTENANCE STANDARDS O.REG 239/02

Column 1 Average Daily Traffic (number of motor vehicles)	Column 2 91 - 100 km/h speed limit	Column 3 81 - 90 km/h speed limit	Column 4 71 - 80 km/h speed limit	Column 5 61 - 70 km/h speed limit	Column 6 51 - 60 km/h speed limit	Column 7 41 - 50 km/h speed limit	Column 8 1 - 40 km/h speed limit
53,000 or more	1	1	1	1	1	1	1
23,000 - 52,999	1	1	1	2	2	2	2
15,000 - 22,999	1	1	2	2	2	3	3
12,000 - 14,999	1	1	2	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	4	4
5,000 - 5,999	1	2	2	3	3	4	4
4,000 - 4,999	1	2	3	3	3	4	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	5	5
1,000 - 1,999	1	3	3	3	4	5	5
500 - 999	1	3	4	4	4	5	5
200 - 499	1	3	4	4	5	5	6
50 - 199	1	3	4	5	5	6	6
0 - 49	1	3	6	6	6	6	6

**As amended May 3, 2018*

FIGURE 2:CLASSIFICATION OF HIGHWAYS

MINIMUM MAINTENANCE STANDARDS - O.REG 239/02 - LEVELS OF SERVICE – PATROLLING & WINTER CONTROL

CLASS OF HIGHWAY	PATROLLING FREQUENCY	SNOW ACCUMULATION - ROADWAYS (CM)	SNOW ACCUMULATION RESPONSE TIME - ROADWAYS (HOURS)	ICE FORMATION PREVENTION RESPONSE TIME (HOURS)	TREATMENT OF ICY ROADWAYS RESPONSE TIME (HOURS)
1	3 TIMES EVERY 7 DAYS	2.5	4	6	3
2	2 TIMES EVERY 7 DAYS	5	6	8	4
3	ONCE EVERY 7 DAYS	8	12	16	8
4	ONCE EVERY 14 DAYS	8	16	24	12
5	ONCE EVERY 30 DAYS	10	24	24	16

MINIMUM MAINTENANCE STANDARDS - O.REG 239/02 - LEVELS OF SERVICE – POTHOLES

	PAVED SURFACE	PAVED SURFACE	PAVED SURFACE	NON-PAVED SURFACES	NON-PAVED SURFACES	NON-PAVED SURFACES	SURFACE OF SHOULDER	SURFACE OF SHOULDER	SURFACE OF SHOULDER
CLASS OF HIGHWAY	SURFACE AREA (CM ²)	DEPTH (CM)	RESPONSE TIME (DAYS)	SURFACE AREA (CM ²)	DEPTH (CM)	RESPONSE TIME (DAYS)	SURFACE AREA (CM ²)	DEPTH (CM)	RESPONSE TIME (DAYS)
1	600	8	4					8	7
2	800	8	4				1,500	8	7
3	1,000	8	7	1,500	8	7	1,500	8	14
4	1,000	8	14	1,500	10	14	1,500	10	30
5	1,000	8	30	1,500	12	30	1,500	12	60

**MINIMUM MAINTENANCE STANDARDS - O.REG 239/02 - LEVELS OF SERVICE – SHOULDER
DROP OFFS, CRACKS, LUMINAIRES AND SIGNS**

	SHOULDER DROP-OFFS	CRACKS > 5CM WIDE AND 5CM DEEP > 3 METRES	LUMINAIRES - INSPECT EVERY 12 MONTHS - NO MORE THAN 16 MONTHS	REGULATORY AND WARNING SIGNS
CLASS OF HIGHWAY	RESPONSE TIME (DAYS)	RESPONSE TIME (DAYS)	RESPONSE TIME (DAYS)	RESPONSE TIME (DAYS)
1	4	30	7	7
2	4	30	7	14
3	7	60	14	21
4	14	180	14	30
5	30	180	14	30

MINIMUM MAINTENACE STANDARDS - O.REG 239/02 - LEVELS OF SERVICE – BRIDGES

	BRIDGE DECK SPALLS	BRIDGE DECK SPALLS	BRIDGE DECK SPALLS	SURFACE DISCONTINUITIES	SURFACE DISCONTINUITIES
CLASS OF HIGHWAY	SURFACE AREA (CM ²)	DEPTH (CM)	RESPONSE TIME (DAYS)	HEIGHT (CM)	RESPONSE TIME (DAYS)
1	600	8	4	5	2
2	800	8	4	5	2
3	1,000	8	7	5	7
4	1,000	8	7	5	21
5	1,000	8	7	5	21

APPENDIX B: SUGGESTED POLICY FRAMEWORK

Area	Policy
Asset/Work Management	Asset Inventory
Asset/Work Management	Patrolling
Asset/Work Management	Work Order Management
Asset/Work Management	Service Levels/Performance
Asset/Work Management	Proactive Maintenance
Asset/Work Management	Fleet Management
Asset/Work Management	Inventory
Asset/Work Management	Fleet Replacement Policy
Asset/Work Management	Equipment Charge Out Policy and Reserves
Asset/Work Management	Service Levels and Priorities
Payroll	Scheduling
Payroll	Timesheets and Machine Time Policy
Payroll	Payroll Processing
Payroll	Vacation Requests
Payroll	Meals and Travel
Payroll	Personal Information
Administration	IT Policies
Administration	CityWide Security Profiles
Administration	ADP Security Profiles
Administration	Purchasing Cards

APPENDIX C: PAYROLL KEY PERFORMANCE INDICATORS

- Absenteeism Rate: Evaluate the engagement of your employees
- Cost of Absenteeism: Cost per employee
- Overtime Hours: Monitor your employees' workload in detail
- Training Costs: Analyze the investments in your employees
- Employee Productivity: Track the overall effectiveness of your workforce
- Talent Satisfaction: Ensure your employees are satisfied in the long run
- Time to Recruit: Monitor how long you need to find a new employee
- Employee Turnover Rate: See how your retention efforts work
- Talent Turnover Rate: Evaluate how many talents you continually change
- Turnover Rate By Group: Monitor if your diversity groups are satisfied
- Part-Time Employees: Watch the evolution of part-time workers over time
- Average Time Stay: See how long your employees stay
- Cost of Turnover: Total cost of hiring + training
- Payroll Performance Metrics: Number of Errors/Accuracy Rate
- Payroll Performance Metric: Time to Run Payroll
- Payroll Performance Metric: Cost of Payroll/Cost per Payroll Payment
- The number of payments processed outside of the normal payroll cycle.
- The number of retroactive payments/employee.
- The time it takes to resolve input that contains unclean data.
- Accuracy of time tracking for hourly compensation.

APPENDIX D: FLEET KEY PERFORMANCE INDICATORS

- Fleet asset utilization rate
- Vehicle availability/total availability
- Preventative maintenance frequency
- Maintenance technician productivity and efficiency scores
- Repeat repairs percentage
- Scheduled maintenance and repair work
- Reduce EV breakdowns and reduce cost and waste
- Parts availability
- Idling time
- Vehicle maintenance completion rate
- Customer and employee satisfaction
- Cost per km operations and maintenance
- Downtime per year
- Fuel economy – litres/100 kms or per hour
- Total cost of ownership

APPENDIX E: DETAILED IMPLEMENTATION COSTS

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
1.1	Develop a new business plan with performance plans and documented processes. Managers and supervisors should be managing work not performing manual transactions.	2023			\$0	\$0	Internal
1.2	PW facilities and locations should be part of a longer term vision to become more aligned with service needs. IT to review internet connectivity and impacts in different locations. There is limited space available for technology. Additional mobile solutions may help.	2023			\$0	\$0	Internal

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
1.3	Modernize – processes to ‘no paper’ and enter ‘one time, one place’ with the view to capture information at source.	2023		-\$31,250	-\$31,248	-\$62,498	Document management options already available. Savings estimated at 1/2 hour per day per supervisor, administrative staff.
1.4	Develop a change management strategy – PROSCI ADKAR evaluation. Assign a Change Management Champion to oversee and monitor.	2023			\$2	\$2	Internal resources are required to oversee the change.
1.5	Develop a LEAN Continuous Improvement Program in PW focused on progress of the recommendations in this report and ongoing modernization with tracking of results and changes.	2023	\$30,000	-\$90,000	-\$89,998	-\$149,998	Assuming that 1% of staff time could be saved each year which will allow for increased capacity to fulfill other roles and improve service response.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
2.1	Once all data in CityWide, prepare monthly reports against plans (budgets in CityWide). Work with FMW to reflect jobs and fleet. Develop regular reporting and access for supervisors to assess workload and costs.	2023	\$5,000		\$0	\$5,000	Training will be required but savings will be realized annually - Payback of 2 years.
2.2	Reduce number of jobs to 'real needs'. Change GL to reflect only that needed for Financial Information Return. All detail to reside in CityWide against jobs/activities – will require a revamped set up.	2023	\$5,000		\$0	\$5,000	Training will be required but savings will be realized annually - Payback of 2 years.
2.3	Set up and Track KPIs with service levels for work management, Payroll and Fleet Management. This may require work orders and activity changes (eg. Downtime which is currently not captured)	2023		\$1,104	\$3,312	\$4,416	2 hours per month to set up and capture.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
2.4	Performance measures should be developed based upon standard costing of jobs.	2025			\$0	\$0	Internal analytics required.
2.5	Once CityWide is utilized for work management and payroll, explore lifecycle costing approach with Infrastructure Division.	2024			\$0	\$0	
3.1	Redefine roles with a responsibility matrix – reflect changes in processes.	2024				\$0	Internal
3.2	Develop a comprehensive training program supported by standard operating procedures for all PW staff and supports.	2023	\$25,000	-\$25,000		\$0	Internal cost but savings in improved services and processes will offset
3.3	Implement performance management framework aligned with an annual/multi-year business plan with reduced jobs/activities.	2024				\$0	Internal

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
3.4	Assign IT Staff to facilitate integrations and testing.	2023	\$100,000			\$100,000	Support for this project is estimated at 1 FTE for a one year period.
4.1	Develop a Payroll/Job Costing/Fleet Management/Inventory Policy Framework with accompanying policies.	2023	\$15,000			\$15,000	Internal costs to develop policies and consultation with staff managers (5 days work x 5 staff and council time) - Likely need external consulting assistance.
4.2	Develop standard operating procedures to support policies and controls.	2024				\$0	Documentation will reduce errors, and speed up processes.
5.1	Work with CityWide to export information at GL level to GP and ADP for timesheet information.	2023	\$30,000	-\$113,500	-\$227,000	-\$310,500	An investment of \$30k is likely required for integration costs. Savings is estimated at 1 hour per supervisor plus 45 hours per payroll cycle.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
5.2	Consider moving from 'tablets' to hybrid laptops (2 in 1s eg. Microsoft Surface) to allow for both desktop and mobile applications for inspectors. Operations staff simply need smartphones or tablets for work orders and time capture.	2023	\$50,000	\$5,000	\$10,000	\$65,000	Investment in technology will not only allow for better real time information, it will allow for enter in one time one place. It is estimated that 50 devices will be required plus ongoing services. The savings are reflected above.
5.3	Work with CityWide to address Fleet Management deficiencies.	2023			-\$10,000	-\$10,000	Improved ability to report and utilize work orders.
5.4	Work with CityWide, GPS (Focus Telus) and Fuel (Petrovend) systems to download information into Citywide against fleet – export to GP.	2023		-\$1,200	-\$2,400	-\$3,600	Currently this is a manual process done quarterly in GP only.
5.5	Consider procurement card processing and GP inventory – push to CityWide inventory.	2023	\$20,000	-\$5,200	-\$10,400	\$4,400	There will be some configuration and possible vendor assistance with this implementation but it will result in significant savings over time.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
5.6	Work with CityWide and AMANDA to integrate work orders (two way).	2023	\$10,000		\$0	\$10,000	Likely requires some consulting assistance to resolve but will result in cost avoidance (duplication).
5.7	Purchase and implement Asset Collector to improve mobile collection efforts.	2023	\$13,000	-\$5,000	-\$10,000	-\$2,000	Anticipated that asset collection currently takes about 100 hours per year manually updated.
6.1	Implement Timesheets with CityWide. Will require set up and integrations. Jobs to be captured in CityWide and sent to GP. Possible use of Timesheets for schedules and hours of work. Work with ADP to capture exported time data. Staff to finalize and submit timesheets for approvals by supervisors.	2023				\$0	Savings contained above.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
6.2	Provide self service for ADP to all staff – attendance to be updated in ADP.	2023	\$5,000			\$5,000	May require some vendor costs to address entitlements.
6.3	Move meal tickets to CityWide Timesheets and paid through ADP payroll.	2023		-\$8,400	-\$16,800	-\$25,200	This is not a large item but is time consuming for very little value - Likely 30 minutes per person per pay during the winter for small amount of expenses.
6.4	Eliminate General Ledger accounts per fleet in favour of CityWide – currently reversed so information is ‘gone’ anyway! Simplify all job codes to those actually used and needed.	2023		-\$12,600	-\$25,200	-\$37,800	Estimated that 3 days per month are saved through a reduced job costing approach.

Rec #	Opportunity	Start	One Time Costs	Estimated Net Operating Costs (Savings) Year of Implementation	Estimated Net Productivity/ Capacity Costs (Savings) - Year 2 and 3	Total including savings	Comments/ Assumptions regarding costs and savings
6.5	<p>Undertake an Equipment Rate study and compare Equipment rates to OPSS 127 standards where available. Others to 2022 rates. This will require a phase in as this would be a significant impact on the budget. At minimum, an increase by an inflationary amount should be built into the rates.</p>	2023				\$0	

APPENDIX F: DETAILED IMPLEMENTATION PLAN/TIMELINE

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
1.1	Develop a new business plan with performance plans and documented processes. Managers and supervisors should be managing work not performing manual transactions.	2023			X	X									
1.2	PW facilities and locations should be part of a longer term vision to become more aligned with service needs. IT to review internet connectivity and impacts in different locations. There is limited space available for technology. Additional mobile solutions may help.	2023			X	X									
1.3	Modernize – processes to ‘no paper’ and enter ‘one time, one place’ with the view to capture information at source.	2023			X	X									

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
1.4	Develop a change management strategy – PROSCI ADKAR evaluation. Assign a Change Management Champion to oversee and monitor.	2023	X	X	X	X									
1.5	Develop a LEAN Continuous Improvement Program in PW focused on progress of the recommendations in this report and ongoing modernization with tracking of results and changes.	2023			X	X									
2.1	Once all data in CityWide, prepare monthly reports against plans (budgets in CityWide). Work with FMW to reflect jobs and fleet. Develop regular reporting and access for supervisors to assess workload and costs.	2023			X	X	X	X							

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
2.2	Reduce number of jobs to 'real needs'. Change GL to reflect only that needed for Financial Information Return. All detail to reside in CityWide against jobs/activities – will require a revamped set up.	2023			X	X	X	X							
2.3	Set up and Track KPIs with service levels for work management, Payroll and Fleet Management. This may require work orders and activity changes (eg. Downtime which is currently not captured)	2023	X	X	X	X									
2.4	Performance measures should be developed based upon standard costing of jobs.	2025			X	X	X	X							

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
2.5	Once CityWide is utilized for work management and payroll, explore lifecycle costing approach with Infrastructure Division.	2024			X	X	X	X							
3.1	Redefine roles with a responsibility matrix – reflect changes in processes.	2024					X	X	X						
3.2	Develop a comprehensive training program supported by standard operating procedures for all PW staff and supports.	2023					X	X	X						
3.3	Implement performance management framework aligned with an annual/multi-year business plan with reduced jobs/activities.	2024					X	X	X						

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
3.4	Assign IT Staff to facilitate integrations and testing.	2023					X	X	X						
4.1	Develop a Payroll/Job Costing/Fleet Management/Inventory Policy Framework with accompanying policies.	2023				X	X								
4.2	Develop standard operating procedures to support policies and controls.	2024					X	X	X	X	X	X	X	X	X
5.1	Work with CityWide to export information at GL level to GP and ADP for timesheet information.	2023		X	X	X	X	X	X						

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
5.2	Consider moving from ‘tablets’ to hybrid laptops (2 in 1s eg. Microsoft Surface) to allow for both desktop and mobile applications for inspectors. Operations staff simply need smartphones or tables for work orders and time capture.	2023			X	X	X	X	X	X					
5.3	Work with CityWide to address Fleet Management deficiencies.	2023	X	X	X										
5.4	Work with CityWide, GPS (Focus Telus) and Fuel (Petrovend) systems to download information into Citywide against fleet – export to GP.	2023		X	X	X									
5.5	Consider procurement card processing and GP inventory – push to CityWide inventory.	2023	X	X	X										

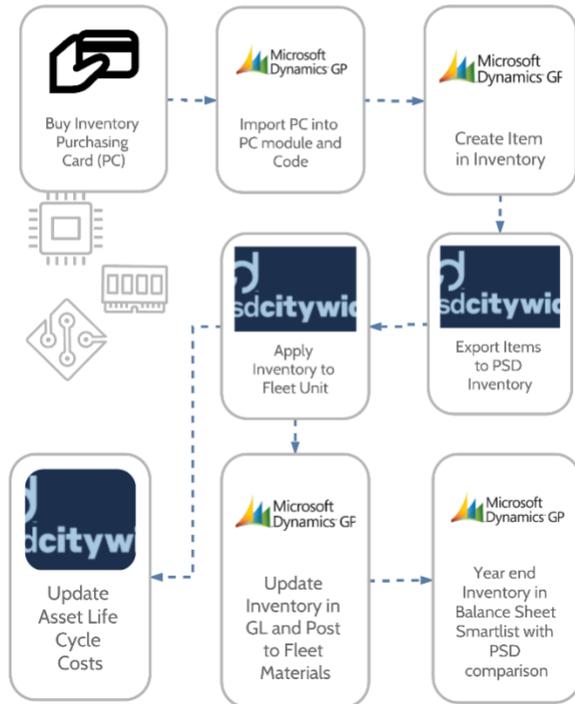
Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
5.6	Work with CityWide and AMANDA to integrate work orders (two way).	2023			X										
5.7	Purchase and implement Asset Collector to improve mobile collection efforts.	2023	X	X	X										
6.1	Implement Timesheets with CityWide. Will require set up and integrations. Jobs to be captured in CityWide and sent to GP. Possible use of Timesheets for schedules and hours of work. Work with ADP to capture exported time data. Staff to finalize and submit timesheets for approvals by supervisors.	2023				X									

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
6.2	Provide self service for ADP to all staff – attendance to be updated in ADP.	2023			X										
6.3	Move meal tickets to CityWide Timesheets and paid through ADP payroll.	2023			X										
6.4	Eliminate General Ledger accounts per fleet in favour of CityWide – currently reversed so information is ‘gone’ anyway! Simplify all job codes to those actually used and needed.	2023		X											

Rec #	Opportunity	Start	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q	2025 3Q	2025 4Q	2026+
6.5	Undertake an Equipment Rate study and compare Equipment rates to OPSS 127 standards where available. Others to 2022 rates. This will require a phase in as this would be a significant impact on the budget. At minimum, an increase by an inflationary amount should be built into the rates.	2023		X	X	X									

APPENDIX G: PW INVENTORY FUTURE STATE

PW Purchasing and Fleet Inventory Future State



APPENDIX H: PW PAYROLL FUTURE STATE

PW Payroll Future State

