Centre Wellington

Report to Committee of the Whole

To: Mayor Linton and Members of Council

Report: IS2021-07

Prepared By: Stephanie Rossi, Asset Management and Capital Project Manager

Date: 28 Apr 2021

RE: Township Operations Centre Draft Report - Space Needs Assessment, Evaluation of Alternatives and Concept Plan

Recommendation:

THAT the Council of the Township of Centre Wellington receive as information the draft report and presentation of the findings of the Operations Centre Space Needs Assessment, Evaluation of Alternatives and Concept Plan Study.

Summary:

Township operations staff currently use the following facilities located at various locations across the Township:

- Fergus East Works Garage;
- Pilkington Office and Works Garage;
- West Garafraxa Works Garage;
- Fergus Waterworks;
- Elora Works Garage; and
- Parks Barn, Farmhouse, and Greenhouses.

These facilities are currently at or above capacity, are deteriorating and nearing the end of their service life, and have sites that are too small to accommodate growth or expansion. This has resulted in varying degrees of overcrowding, inefficiencies in operations, health and safety concerns, and non conformance with industry best practices and regulatory requirements. These current issues are expected to be exacerbated in the future as the facilities become older and more staff, vehicles, and equipment are needed to deliver essential services for Centre Wellington's growing population.

The challenges noted above present an opportunity to improve the current and future delivery of Township services through identifying and implementing an operating solution that maximizes the function and efficiency of staff, facilities and equipment while accommodating for future growth.

The *Centre Wellington Council Strategic Plan 2019 – 2022* has provided a strategic direction and initiative to open a new operations facility. To further that initiative, a Space Needs Assessment and Concept Design Study has been carried-out to identify potential solutions for a future Operations Centre that would meet staff, vehicle, equipment, and material requirements to the 2041 timeframe. The Study included:

- A Space Needs Assessment to identify space requirements to 2041;
- Development of eight options to address space needs;
- Detailed evaluation and scoring of the options; and,
- A concept and implementation plan for the highest scoring option.

The evaluation showed that the four options for the phased construction approaches to build a new Operations Centre on a new site scored the highest (Options 5, 6, 7, and 8), with **Option 6: Build a New Operations Centre on a New Site in Two Phases**, scoring the highest. This is based on the technical, operational, and financial criteria.

A financial strategy was developed to outline how Option 6 could be implemented within a 10+ year timeframe. Phase 1 implementation is anticipated to cost approximately $16.45 million over the next 3 years. This includes estimates for soft costs and land purchase. Phase 2, estimated to occur in 10 to 20 years, is anticipated to cost approximately $10.627 million.

Constructing new operations facility space was included in the recently passed Development Charges Background Study. It is estimated that phase 1 costs will be 93% growth related, and phase 2 costs will be 62% growth related (the growth related share of phase 2 would be confirmed and refined before that phase commences). The growth related share of this project would be funded from development charges. Growth related debt would be required, with future principal and interest payments to be funded from development charges.

The non-growth related cost of this facility (i.e. 7% for phase 1 and 38% for phase 2) is expected to be funded from the sale of surplus land and buildings owned by the Township. With this strategy, **the cost of constructing this facility would not impact taxation or water/wastewater rates.** Once built, the operations centre will form a new cost centre in the Township's operating budget, with operational costs to be funded from taxation and water/wastewater rates annually.

Given that the construction costs for the operations centre are not expected to have an impact on taxation and water/wastewater rates, it is important to consider the impact it will have on debt levels and development charge cash flow.

Report:

Project Background

The Township of Centre Wellington was formed in 1999 with the amalgamation of the Town of Fergus, Village of Elora and the Townships of Nichol, Pilkington, West Garafraxa and a portion of Eramosa. The amalgamated municipalities each had public works facilities which ranged in age, capacity and condition. In 2005 there was a tornado that caused significant damage to the former works yard in Nichol, which was then closed and later sold. This left six current remaining operations facilities located across the Township:

- Fergus East Works Garage;
- Pilkington Office and Works Garage;
- West Garafraxa Works Garage;
- Fergus Waterworks;
- Elora Works Garage; and
- Parks Barn, Farmhouse, and Greenhouses.

These facilities are currently at or above capacity, are deteriorating and nearing the end of their service life, and have sites that are too small to accommodate growth or expansion. This has resulted in varying degrees of overcrowding, inefficiencies in operations, health and safety concerns, and non conformance with industry best practices and regulatory requirements. These current issues are expected to be exacerbated in the future as the facilities become older and more staff, vehicles, and equipment are needed to deliver essential services for Centre Wellington's growing population.

The challenges noted above present an opportunity to improve the current and future delivery of Township services through identifying and implementing an operating solution that maximizes the function and efficiency of staff, facilities and equipment while accommodating for future growth.

History of Operations Centre Concept and Space Needs Assessment and Concept Design Study

In 2004, a Public Works Strategic Operations Study was completed, which recommended that the Township should be aiming for a single central operations depot within a five to ten year horizon. Around 2005, a capital project was added to the Township's budget for construction of a Centralized Operations Facility which would include a shop, office space, material storage, parking, and indoor salt storage. In 2018, the budget was updated to reflect updated construction costs based on unit rates from recent operations facilities constructed in neighboring municipalities. At this time, it was assumed that the Township would construct a new facility at the current location of the Fergus East Works Garage (600 Glengarry Crescent), and continue operating at the Elora and West Garafraxa Works Garages as part of a decentralized operations model.

In line with past budget directions, the *Centre Wellington Council Strategic Plan 2019 – 2022* has provided a strategic direction and initiative to open a new operations facility. To further that initiative, a request for proposals was issued in 2019 to complete a Space

Needs Assessment and Concept Design Study for a new operations centre, based on the following key assumptions:

- A new facility could be constructed at the 600 Glengarry Crescent site;
- It would include space for Public Works, Engineering, Water Services, Source Water Protection, Parks & Recreation, Information Technology, vehicles, parking, equipment and material storage, records storage and an archives area;
- Sized to accommodate forecasted growth in staff and equipment to the 2041 timeframe; and,
- The West Garafraxa, Elora, and Pilkington facilities would continue to be used for operations as part of a decentralized operations model.

Subsequently on July 29, 2019 Township Council authorized the award of RFP #18-19 to Stirling Rothesay Consulting Inc (herein referred to as Stirling Rothesay) and RDHA Architects (herein referred to as RDHA) as recommended in report COR2019-60.

Approach for Space Needs Assessment

In support of this project, the Township formed an Operations Centre working group with staff from each of the departmental groups involved in the study. The working group included representatives from Public Works, Water Services, Engineering, Source Water Protection, Parks, Forestry, IT, and Legislative Services. Stirling Rothesay worked closely with Township staff to perform site reviews of the existing Township facilities used by the above departments and to interview staff from each group. This helped develop a good understanding of the space usage of the existing facilities as well as the facility limitations and advantages and existing space constraints. Stirling Rothesay also conducted a space needs workshop with the Operations Centre working group. This approach enabled the team to identify which facilities were deficient and unable to meet current needs, were in a state of deterioration and were nearing the end of their useful life. This informed the development of the space needs study and the possible options for how best to address the operational requirements of the Township through a combination of continued use of some of the existing facilities and / or a new operations centre.

Office/ Operations Space Needs

In order to quantify the current office space requirements, Stirling Rothesay tabulated Township staff counts itemized by the various staff positions for each department. The staff positions were grouped into categories and applicable industry standard work station / office sizes were assigned to the staff positions. Allocations were also made for common office areas such as lobby, washrooms, lunchroom, filing / storage space and meeting rooms and a percentage was applied to account for office circulation area.

Township representatives worked with Stirling Rothesay to quantify the types, sizes and storage requirements of existing Township vehicles, equipment and materials for each department. Stirling Rothesay applied industry standard garage bay sizes for heated and unheated vehicle and equipment storage to determine the required garage areas.

Allocations were also made for maintenance bays and a wash bay and operations support areas such as change rooms, shared computer stations and common tools / materials storage areas.

Growth Forecasts

Stirling Rothesay reviewed the 20 year growth projections which show that the urban population of Fergus and Elora is forecast to approximately double by 2041. From this it was evident that Township staff, vehicles, equipment and materials storage will all need to increase to keep pace with the population and employment growth in order for the Township to continue delivering a consistent level of service. Based on the population and employment growth projections and through discussions with Township staff, the applicable future staffing requirements and numbers of additional vehicles and equipment were determined for the 20 year space needs forecast.

Combined Site Size Requirements

The recommended combined site area needed to accommodate requirements was determined by adding the required space for all of the buildings and yard areas including for the forecasted 20 year space needs. The assumed buildings included offices, heated and unheated operations / garage / maintenance areas, two greenhouses, outdoor planting areas, a salt storage facility, parking areas for staff and visitors, an outdoor materials storage yard, a fueling area, a wash bay and a wide circulation routes for large operations vehicles. A total space requirement of 20 acres was recommended in order to allow for efficient operations and accommodate long term growth. It was also recommended that the site or sites should be centrally located close to the urban centres to provide for efficient operations.

Through this analysis, it was determined that none of the five existing works garage sites met the requirement of a single centrally located 20 acre site. Of the two largest works garage sites, the 18.6 acre West Garafraxa site is located in the far east end of the Township. The 13.5 acre Fergus East works garage at 600 Glengarry Crescent is centrally located, however the usable area of the site is only approximately 8 acres due to the creek, environmental protection zone and steeply sloped areas. That usable area is further diminished to only 2.5 acres that are suitable for building construction due to poor soils in the historic fill area. The remaining three works garage sites in Elora, Pilkington and downtown Fergus are limited by the small size of their sites ranging from 1 acre to 4 acres and by various other site constraints. Based on this finding, the study assumptions that a new central operating facility could be constructed at the 600 Glengarry Crescent site needed to be revisited. As such, a number of other options were developed and evaluated.

Development of Options

Stirling Rothesay worked closely with Township staff to determine eight potential options to address the long term space needs of the Township while incorporating the continued use of the most suitable existing facilities. Stirling Rothesay also determined the high level cost estimates for each of the eight options. Note that the development of options

considered the following items noted during the December 2019 Township Council Budget meeting:

- Consider the option of expansion of existing facilities; and,
- Potential coordination with a Wellington County facility.

Also in 2019, the Township was notified that the Queen Street Medical Office in Fergus would be available in the future for Township administrative space. This opportunity was therefore considered in the development of options.

The eight options developed for evaluation are as follows:

1. Do Nothing;

2. Build a new garage (on the existing 600 Glengarry site) only for current Infrastructure Services needs, and do additions and renovations to other existing garages / offices;

3. Build a new combined Operations Centre with the County after 15 years and build additions and renovations to existing Township facilities in the interim;

4. Build a new garage with an administration office (on the existing 600 Glengarry site) only for current Infrastructure Services needs, and do additions and renovations to other existing garages / offices;

5. Build a new Operations Centre on a new site with the majority of the construction in the first phase:
    a. Build the salt storage facility and greenhouse additions in Phase 2;

6. Build a new Operations Centre on a new site in two phases:
    a. Phase 1 – build the garage for immediate needs, full office, one greenhouse;
    b. Phase 2 – additions to heated & unheated garages, salt storage facility and additional greenhouse;

7. Build a new Operations Centre on a new site in two phases:
    a. Phase 1 – build the garage for immediate needs, one greenhouse, use the Medical Centre for interim office space;
    b. Phase 2 – additions to heated & unheated garages, full office, salt storage facility and additional greenhouse;

8. Build a new Operations Centre on a new site in three phases:
    a. Phase 1 – build the garage for immediate needs;
    b. Phase 2 – build the full office;
    c. Phase 3 – additions to heated & unheated garages, salt storage facility & greenhouse.

Evaluation of the Options

The eight options were evaluated against a series of criteria including financial (initial and overall costs), operational (ability to meet needs, accommodate growth, incorporate best practices and minimize work interruptions) and technical (compliance with codes and environmental and accessibility standards). Each of the evaluation criteria was assigned a weighting factor between 1 to 10 to prioritize the different criteria in accordance with their relative importance to the Township (with 1 being low and 10 being high). Each option was scored between 1 to 10 for each of the criteria and that score was then multiplied against the importance weighting. The scores were then tabulated to determine the overall score for each option.

The evaluation showed that the four options for the phased construction approaches to build a new Operations Centre on a new site scored the highest (Options 5, 6, 7, and 8), with **Option 6: Build a New Operations Centre on a New Site in Two Phases**, scoring the highest. This is based on the technical, operational, and financial criteria.

Concept Plans and Implementation Plan for the Highest Scoring Option

The evaluation showed that Option 6 achieved the highest score at 72%, and therefore a detailed space program for Option 6 was created as the basis to develop a conceptual site plan for the phased construction of a new operations centre on a 20 acre site. The phase implementation for Option 6 assumes that Phase 1 would be completed within a 5 year timeframe, and Phase 2 within a 10+ year timeframe.

The concept plan and implementation plan for Option 6 are outlined in detail in the following attachments:

- **Attachment 1 - Space Needs Assessment and Concept Design Study Report**
- **Attachment 2 - Presentation** - Township Operations Centre: Space Needs, Evaluation of Alternatives, and Implementation Plan

Corporate Strategic Plan:

Safe and Well Maintained Roads and Infrastructure

Good Financial Management

- Continue to support the principle that residential growth will pay for the increased cost of providing services and infrastructure to new residents
    - Open a new Operations Centre

Financial Implications:

Please see the attached Financing Strategy for Option 6 (see **Attachment 3 - Financial Strategy**).

Phase 1 implementation is anticipated to cost approximately $16.45 million over the next 3 years. This includes estimates for soft costs and land purchase. Phase 2, estimated to occur in 10 to 20 years, is anticipated to cost approximately $10.627 million.

Constructing new operations facility space was included in the recently passed Development Charges Background Study. It is estimated that phase 1 costs will be 93% growth related, and phase 2 costs will be 62% growth related (the growth related share of phase 2 would be confirmed and refined before that phase commences). The growth related share of this project would be funded from development charges. Growth related debt would be required, with future principal and interest payments to be funded from development charges. Included in the Financing Strategy is a sensitivity analysis on potential annual debt payments, based on the cost of borrowing now in comparison to potential future rates. To be conservative, the higher rates and payments were used in this analysis.

The non-growth related cost of this facility (i.e. 7% for phase 1 and 38% for phase 2) is expected to be funded from the sale of surplus land and buildings owned by the Township. With this strategy, **the cost of constructing this facility would not impact taxation or water/wastewater rates.** Once built, the operations centre will form a new cost centre in the Township's operating budget, with operational costs to be funded from taxation and water/wastewater rates annually.

Given that the construction costs for the operations centre are not expected to have an impact on taxation and water/wastewater rates, it is important to consider the impact it will have on debt levels and development charge cash flow. Included in the Financing Strategy are two graphs showing debt and development charge related implications of the operations centre.

<u>Graph A: Projected Debt: 2021 Budget vs. Revised</u>
This graph illustrates the impact of the operations centre on debt capacity limits that are imposed by the province.

The red line in the graph outlines the maximum percentage of Township revenues that can fund debt payments is limited to 25% annually. The Township currently has debt payments equal to 7.2% of annual revenue.
The blue line represents projected "debt as a percentage of revenue" based on the Council approved 2021 Capital Forecast. Please note that the operations centre was removed from this capital forecast when the 2021 Budget was passed. The only debt included within the blue line related to the operations centre is $500,000 approved as part of the 2020 Budget for the design stage of the project. This design stage (and the debt issuance) has been put on hold, pending a decision from Council on the overall project.

The orange line represents the revised "debt as a percentage of revenue" forecast, taking into account additional debt required to fund phase 1 of the operations centre. As illustrated in the graph, this adds between 0.4% and 2.1% to each year beyond 2023, and remains well below the provincial limit of 25%.

<u>Graph B: Projected Use of Development Charges</u>

This graph illustrates the projected use of development charge funds annually as well as historical and planned development charge proceeds to be received by the Township.

Uses of development charge funds annually include:

- Transfers to capital, to fund growth related capital projects;
- Existing external debt payments that are considered growth related;
- Anticipated new external debt payments that are considered growth related (for projects included in the capital forecast);
- Internal loan payments (if approved by Council on April 26, 2021 – see report COR2021-19); and
- Development charge credits, paid to developers according to approved service financing agreements (where developers construct growth related projects on the Township's behalf).

As shown in Graph B, the use of development charges (including debt associated with the operations centre), is forecasted to increase from current annual amounts of $3.87 million to annual amounts of $7.76 million by 2030. In 2020, the Township had development charge proceeds of approximately $5.5 million (illustrated with the green line). The 2020 Development Charge Background Study is anticipating development charge proceeds to increase (as growth increases in the Township), from current levels to over $12 million by 2030 (as shown with the blue line). In recent past, Township proceeds have been, on average, equal to 80% of those projected in the Development Charge Background Study (see the revised projection line shown in purple). In summary, planned development charge proceeds are anticipated to be more than sufficient to fund annual requirements over the forecast period.

Consultation:

This report was prepared in consultation with the Chief Administrative Officer, Andy Goldie, the Managing Director of Infrastructure Services, Colin Baker, the Managing Director of Community Services, Pat Newson, the Managing Director of Planning & Development, Brett Salmon, the Managing Director of Corporate Services and Treasurer, Dan Wilson, the Manager of Engineering, Adam Gilmore, and the Operations Centre Working Group.

Attachments:

- Attachment 1 - Space Needs Assessment and Concept Design Study Report
- Attachment 2 - Presentation
- Attachment 3 - Financial Strategy

Approved By:

Colin Baker, Managing Director of Infrastructure Services
Andy Goldie, Chief Administrative Officer

Township of Centre Wellington Operations Centre Space Needs Assessment and Preliminary Site Layout - Draft



Presented by: Stirling Rothesay Consulting Inc. in association with RDH Architects Inc.

Date: April 20, 2021

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Appendix A – Space Program (Option 6)

Appendix B – Maps and Aerial Site Photos of Each Yard

Appendix C – IT Specifications

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Appendix E – Cost Estimates of Renovations and Additions Required for Each Option

Appendix F – Asbestos Remediation

Appendix G – Medical Centre Concept Layouts

Appendix H – Examples of New Operations Centers Designed by RDHA

EXECUTIVE SUMMARY

Introduction

The Township of Centre Wellington (Township) retained Stirling Rothesay Consulting Inc. and RDH Architects Inc. to complete a Space Needs Assessment to recommend how best to address the facility needs for the following Township departments:

- Infrastructure Services – Office Administration/Reception, Public Works, Water Services, and Engineering Divisions;
- Community Services – Parks and Recreation, and Forestry Divisions; and
- Corporate Services – Information Technology (IT) and Clerks (Records Storage / Archives).

The objective of the study was to identify future space requirements, examine facility renovation and expansion options, and identify the preferred option to address the Township's facility needs to the year 2041. A conceptual site layout of the highest-ranking option was prepared to demonstrate how to (1) provide safe, efficient work conditions, (2) make best use of the existing sites and facilities, (3) provide efficient flow of employees and vehicles through the site, (4) meet industry best practices in facility and yard layout design, and (5) meet the operational growth requirements of the Township to 2041.

The Problem and Opportunity

The Public Works, Parks and Recreation and Water Departments provide services throughout the Township from five Works Garages plus the Infrastructure Services office, and the Parks Barn, greenhouses and converted farmhouse office. This presents a number of challenging issues that negatively affect operational productivity and service delivery. The main issues include:

- The existing buildings are aging and deteriorating and have health and safety concerns, do not comply with current building codes or accessibility requirements and the facilities in the worst condition are approaching the end of their expected asset life;
- Maintenance and repairs of the works garages has been deferred for important items including delayed roof replacements, garage door replacements, windows, Heating / Ventilation / Air Conditioning (HVAC) upgrades, yard paving and security fencing;
- Most of the buildings are overcrowded and are operating above their design capacity. There are several deficiencies with support areas for employees including change rooms, washrooms, office space and lunch areas. For example the Township has been renting office trailers for years to accommodate Water Services staff lunchroom and workstations;
- The works garages indoor vehicles, and equipment storage areas are insufficient;
- There is inadequate office space and maintenance facilities for Parks and Recreation staff;
- The Township doesn't have proper records storage or archives facilities;

- All of the existing Works Garages are on sites that have constraints preventing them from being able to satisfy long-term growth requirements or they are located in an inefficient non-centralized location;
- The current building designs, use of space, and flow of employees and vehicles are not efficient or compliant with industry best practices and design trends;
- The decentralized approach (with five different Works Garages as well as the Infrastructure Services office, Parks Barn and farmhouse office) increases the total facility operating costs. It also reduces the ability to maximize collaboration and achieve synergies between employees and departments.

The urban population of the Township is projected to double by 2041 which will significantly increase the resources required to maintain appropriate service level requirements. In order to meet these requirements, the number of Infrastructure Services' employees, work vehicles and equipment levels will need to increase as well. This will lead to further overcrowding of the aging Works Garages which will further compromise employee safety, productivity, and their ability to meet service levels for the community.

Aside from the above challenges facing the Infrastructure Services Department, there is also a growing need for additional space by other departments working within Township facilities (i.e., Civic Centre, Tourism office, Parks and Recreation, IT, Records Storage/Archives).

The items noted above present an opportunity to improve the current and future delivery of Township services by identifying and implementing a solution that increases the function and efficiency of staff, facilities, equipment, and other resources.

Space Needs Assessment

In order to quantify the requirements and better define the problem we completed the Space Needs Assessment by performing the following tasks:

- Reviewed background information, drawings, reports and documents;
- Conducted a Kick-Off meeting with 20 members of the Township's Staff Working Group (representing the Infrastructure, Community and Corporate Services Divisions) to review the objectives and scope of work for the project;
- Interviewed 17 staff from the Working Group who represented all of the participating departments;
- Toured the existing five Works Garages, the Infrastructure Services office, the Parks Barn, greenhouses and Parks / Forestry office to observe the conditions and flow of activities;
- Toured Township departmental representatives through four external municipal Operations Centres (including the County of Wellington (Drayton Shop), Township of Mapleton, Town of Halton Hills and City of Brampton) constructed within the last 6 years to discuss their "Lessons Learned" and how they may apply to the Township's need for more space;
- Completed Staff Workshop 1 for 20 members of the Township's Staff Working Group to discuss the functional needs of the different departments;

- Created a 20-year forecast for the number of employees, vehicles and equipment required by each department based on staff input and on population growth projections showing that the urban population of Fergus and Elora is forecast to double by 2021;
- Developed standard workstation and meeting room sizes for the design of new Administration Office space;
- Determined appropriate sizes and quantities of garage bays (heated and unheated), parking stalls, outdoor storage areas, yard facilities (wash bay, salt storage, fueling, greenhouses) and operational vehicle circulation aisles to determine a recommended site size of approximately 20 acres in order to accommodate long term growth of multiple departments;
- Recommended that the 20 acre operations centre site should be centrally located close to the urban centres to maximize efficiency of operations and delivery of services.

Consideration of Existing Works Garage Sites

The existing works garage sites were reviewed to determine if they could meet the space needs requirements and provide a centralized location in order to be an effective site for the Operations Centre. It was determined that none of the works garage sites met the recommendations for a centrally located 20 acre site.

The Centre Wellington Community Sportsplex site was considered since it is a large property in a fairly central location. The site currently houses the Parks Barn, Parks office and greenhouses as well as the existing community centre and sports fields. The Sportsplex site is also used as the festival grounds for hosting large community events. The festivals fill the available grounds and would ideally use more space if it was available. The large space requirements for community events rule out the Sportsplex site as a possible location for a new operations centre since it would take away much needed space from event usage.

The works garage sites in Elora and Pilkington and the WaterWorks shop in downtown Fergus are limited by the small size of their sites ranging from 1 acre to 4 acres and by various other site constraints. The large 18.6 acre West Garafraxa site is located in the far east end of the Township and is not central to operations in the urban areas so it would be inefficient and not cost effective. This left only the existing 13.5-acre Fergus East Works Garage property (at 600 Glengarry Crescent) for possible consideration.

Limitations of Fergus East Works Garage Site at 600 Glengarry Cres.
The 13.5 acre Fergus East site is centrally located, however the usable area of the site is only approximately 8 acres due to the existing environmental protection zone, creek and steeply sloped areas. The east portion of the site beyond the creek is inaccessible due to the creek and the steeply sloped embankments. The usable area is further diminished to only 2.5 acres that are suitable for building construction due to the existing poor soils that range from 3m to 10m deep in the historic fill area of the outdoor materials storage yard. The fill area can only be cost effectively used as either an outdoor materials storage yard or for parking. Building in the fill area would entail the extra expense of either deep foundations or excavating the existing soils and replacing it with engineered compacted structural fill. These site limitations are shown on the aerial site plan below.



Image ES-1: Plan view of 600 Glengarry Site (Fergus East Works) displaying Fill Area and GRCA Regulated Area, which are unsuitable for development

The following site plan shows the concept site layout of the overall space required for the new Operations Centre superimposed onto the 600 Glengarry property. From this it can be seen that there isn't enough space in the effectively usable area of the site, and that the space requirements actually overhang the property boundaries. This clearly shows that the 600 Glengarry property is too small to house a multi departmental operations centre and won't be suitable for accommodating long term growth.

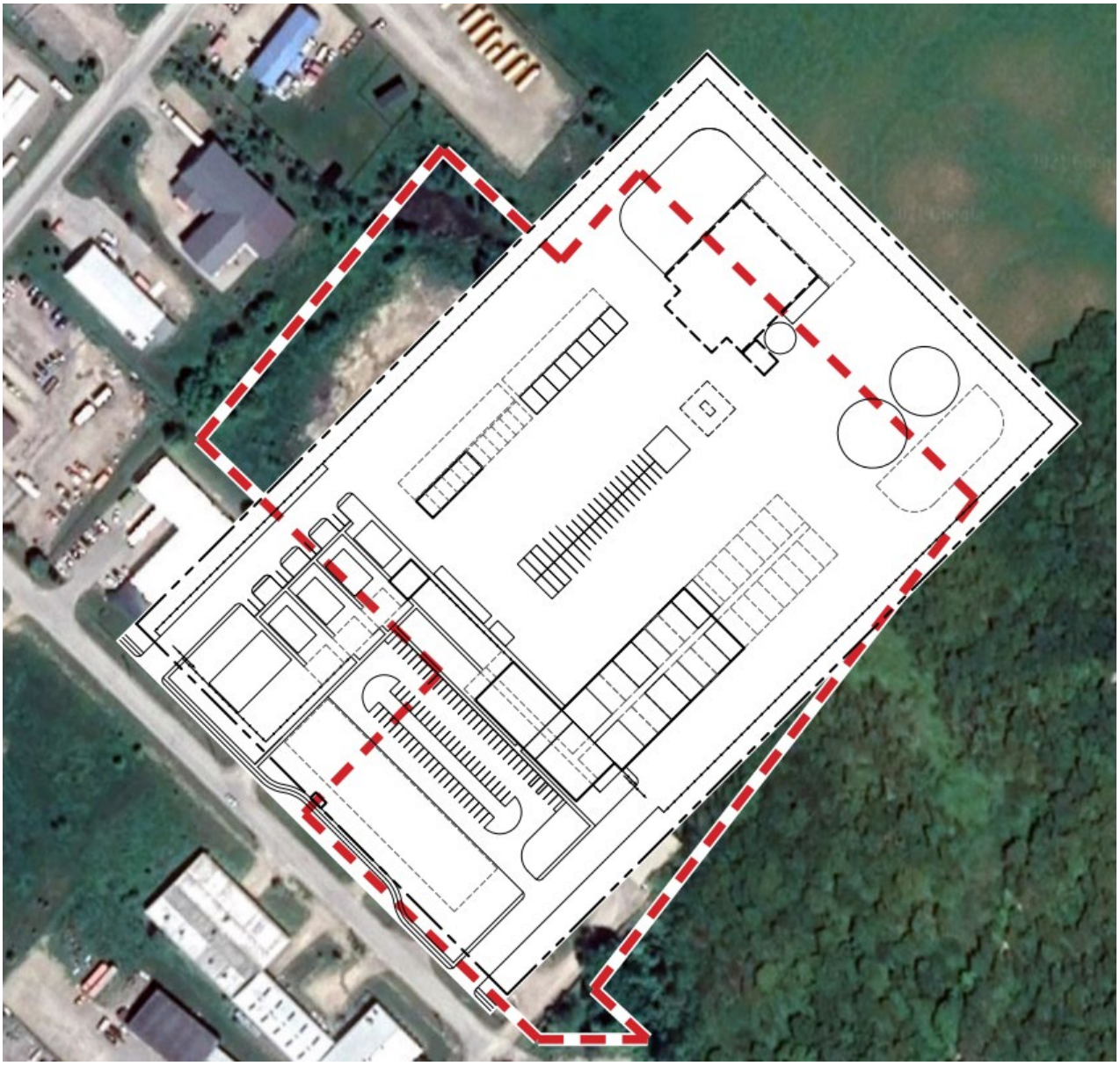


Image ES-2: Plan view of 600 Glengarry Site (Fergus East Works) with the conceptual footprint of a new facility overlain

The Approach

Based on the initial space needs assessment and given the findings that the existing works garage sites were not suitable, other alternative options were developed as possible solutions to the Problem and Opportunity. The functional space program for each option was developed based on the space needs assessment and the options were evaluated by completing the following tasks:

- Developed Draft 1 for the functional space program to address the Township's need for space;

- Reviewed Draft 1 with the Managing Directors for their input;
- Developed a new Draft 2 for the functional space program and reviewed it with staff for input;
- Met with the Township's Staff Working Group to review the functional space program;
- Received feedback (through staff and archived video) from Council's December 2019 budget meeting;
- Considered the potential ramifications of staff partially working from home;
- Identified eight options for potential solutions including new construction and/or renovations and additions to the existing facilities;
- Prepared high level construction cost estimates for each of the eight options;
- Performed a comparative evaluation of the eight options by scoring each against a series of evaluation criteria (including the categories of technical, operational and financial) with applicable importance weightings for each of the criteria;
- Used an evaluation matrix to compare the scores of the options, and to determine the highest score;
- Prepared a draft ten-year implementation plan with annual costs for the option with the highest score;
- Created an overall site plan layout for the highest scoring option;
- Developed site evaluation criteria to be used to determine the most suitable site for a new Operations Centre;
- Provided examples of recent Operations Centres for other municipalities for comparison and to demonstrate best practices and industry trends.

Consideration of Staff Working From Home

This study began prior to the onset of Covid 19 and the increase in staff working from home. Although the variable of staff working from home was not part of the formal evaluation process, the advantages and disadvantages were considered. The potential benefits could include a reduction in office space and operating costs as well as reduced commuting and a corresponding reduction in emissions, fuel use and maintenance costs for staff vehicles. There is also potential for improvement in employee work life balance. However there are also potential disadvantages which aren't as well understood.

Reduction in human contact can cause decreased spontaneous communication, collaboration, and problem solving between staff as well as diminished capability for mentoring and training new staff, all of which can contribute to decreased productivity. The emotional by-products of social isolation can include increased stress, anxiety and reduced social skills. For some staff high speed internet connectivity may be a challenge and some employees may not have a work area that's not subject to distractions or have the space for a suitable ergonomic work station in their home. Over the longer term working in an awkward posture can cause musculoskeletal disorders such as impeded circulation and numbness which can lead to repetitive stress injuries.

The monetary costs of the potential detriments to the physical and mental wellbeing of staff and the potential for decreased productivity are difficult to quantify. The cost benefit analysis of the advantages and disadvantages of working from home is a complex issue. More in depth

study would be needed in order to determine if the benefits outweigh the potential detriments that may arise from staff working from home on a long term basis.

Alternative Options

Below, we provide an overview of the eight options that were identified for analysis to determine how well they could address the Problem. We also identify their benefits and shortcomings, and use evaluation criteria to score and rank them.

Option 1 – Do nothing

Option 1 would involve continuing to use the (1) five existing Works Garages, (2) Infrastructure Services Office, (3) Waterworks Garage and Office, and (4) Parks Barn, Farmhouse Office and

existing Greenhouses, for the next 20 years. Required repairs and routine building maintenance would be completed, but without any space additions.

The cost for Option 1 is based on the value of the required repairs for the above noted facilities as calculated on the building condition audits performed by Cion Coulter in 2020. The cost of repairing the existing facilities over the next 20 years was estimated at just over $4 million. Option 1 received the lowest overall score and ranking primarily because it doesn't solve the Problem outlined in section 1.1. That is, it doesn't address the need for additional space for current and future staff, vehicle and equipment requirements. It also doesn't address the health and safety concerns or deficiencies in accessibility, and building code requirements.

While Option 1 may seem attractive because it appears to save the Township money, it received the lowest score and ranking of all the options because it did not solve the Problem described in section 1.1 and it would expose the Township to significant operational risks including the following:

- Maintaining the existing Works Garages would become increasingly expensive as the buildings continue to age. Two of the garages are in a deteriorated condition and are at or near the end of their expected 50-year asset life. The other garages are in fair condition. The Parks Barn has several deficiencies and is unsuitable for its current use;

- Some of the Works Garage buildings, the Infrastructure office, the Parks Barn and Parks farmhouse office don't comply with building code and accessibility requirements and have health and safety considerations. This could lead to significant labour issues;

- The productivity of the employees working at the Works Garages and Parks Barn is directly affected by the design, size, layout, and condition of the buildings and yards. That said, most of the buildings are already operating at or above their original design capacity for the efficient flow of employees, vehicles and equipment. Furthermore, the building designs, and use of space for offices, employee amenities, shops, and storage are not efficient or compliant with current standards, industry best practices and design

trends. These issues will increasingly compromise the safety and level of efficiency and effectiveness at which the employees work;

- Some of the works garages have environmental issues that are not in accordance with best practises. In particular, the Fergus East Works Garage is located within the chloride Issue Contributing Area for municipal well F1. Within this area, actions should, and in some cases are required, to be taken to reduce the amount of road salt entering the groundwater. The Township is required to mitigate and manage groundwater impact from its salt storage to the greatest extent possible. Although there is not a source protection requirement to replace the salt storage at the Fergus East Works Garage, the current design is not in line with current industry practices regarding indoor loading and unloading which will make the mitigation and management measures less effective. Similar design concerns exist for the West Garafraxa salt storage building which is located adjacent to a non-municipal, residential drinking water system;

- Continuing to operate from multiple facilities across the urban area of the Township would prevent management from maximizing synergies and collaboration between the employees and departments. This would lead to lower productivity levels, and higher operating costs. On the other hand, consolidating the operations into one main facility with smaller satellite garages at the east and west ends of the Township would minimize the duplication of common spaces: employee amenities, training rooms, maintenance bays, wash bays, and salt storage. It would also promote collaboration between the different departments, and provide a new facility that achieves best practices in design and promotes operational productivity and safety.

The overcrowding, numerous deficiencies and state of deterioration of some of the existing garages has gotten to the point that the situation has become urgent. Given the many disadvantages of the Do Nothing approach and the fact that it doesn't solve the problem, it was evident that doing nothing is not a viable solution. The Do Nothing option was included in the evaluation process since the base line option of doing nothing is typically part of the standard assessment approach.

Option 2 – Renovate and Expand the Existing Works Garages, Infrastructure Services Office and Parks facilities

Option 2 would involve the following:

- Renovating the Elora and Pilkington Works Garages and building an addition at the Elora Works Garage to address the issues documented in section 2.1.1 including (1) meeting the 20-year growth requirements for the employees, vehicles and equipment stationed on the west side of the Township, (2) satisfying the need for indoor storage space, (3) complying with building code and accessibility requirements, (4) providing suitable employee amenities (e.g., male and female change rooms and washrooms), and (5) eliminating any health and safety concerns;

- Renovating and expanding the Pilkington Office building to meet the 20-year growth requirements for office staff from the Public Works, Water, Engineering, Source Water

Protection and IT departments including an IT hub and server room and an elevator for accessibility. The architecture of the addition would need to suit the historic style of the existing office building;

- Renovating the Parks and Recreation Department's Barn for use as an unheated storage space for vehicles and equipment, and building a new heated storage garage and employee amenities building. Also, renovating the existing greenhouses and building a new one;

- Demolishing and rebuilding the existing Fergus East Garage because of the numerous issues documented in section 2.1.1 including the fact that the building is at the end of its expected asset life – repairing and upgrading the building would be more costly than demolishing and rebuilding it. The new building would consolidate the operators, vehicles and equipment from the Fergus East works garage and the Water Works facility, and with a future addition it could meet the 20-year growth requirements for the Water Works and Fergus East operators, vehicles and equipment. This however, will not address the source water protection concerns related to the existing salt storage shed;

- Vacating staff from the Water Works building and relocating water staff to the new Fergus East Garage. Continuing to maintain the operation of the well house and the use of the garage bays at the Water Works building for off-site seasonal covered storage of vehicles and equipment;

- Renovating the office at the West Garafraxa Works Garage in order to permit the archive and records files to be handled and stored safely and securely within the basement level of the office. This would include installing an elevator and two high-density file storage systems;

- Renovating the West Garafraxa garage building and repairing the salt shed so that they could continue to be used as the satellite works garage for road clearing operations at the east end of the Township. This however, will not address the source water protection concerns related to the existing salt storage shed at West Garafraxa.

The above renovations would be completed in phases, over the next 15 years, to align with the growth requirements and operational needs. The total capital cost over this period is estimated to be $16.68 M, not including soft costs, (see Appendix E for details).

Option 2 has a relatively low initial cost of $12.77 M and a comparatively low overall capital costs of approximately $16.68 M. However, it received a low score and ranking because the numerous construction projects for renovations and additions to existing facilities would be disruptive to operations and interrupt the delivery of services. Also the size and effectiveness of the additions and renovations is limited by various site and facility constraints. The patchwork approach of continuing to spend money on existing facilities which aren't able to accommodate long term growth does not provide an effective solution to the problem. Rather

it perpetuates the current inefficiency of operations by keeping staff dispersed instead of bringing departments together at one central facility to share resources, improve efficiency and reduce operational costs.

Option 3 – Build a new combined Operations Centre with the County after 15 years and build additions and renovations to existing Township facilities in the interim

Option 3 would involve the Township and County collaborating to build their respective new Operations Centre's on a shared site. Potentially, some of the indoor spaces could be shared to reduce overall construction costs (e.g., lunch room, training room, meeting rooms, and changing rooms). A larger site would probably be needed for a combined facility, but the site costs could be shared between the County and the Township.

The County has indicated that it would be at least 15 years before it would be interested in building a joint facility (see letter from the County in Appendix D). Therefore, similar to Option 2, the Township would need to renovate and expand some of its current facilities, as interim measures, in order to meet the urgent short-term growth requirements and operational needs.

Option 3 would involve the following interim renovations and expansions:

- Renovating the Elora and Pilkington Works Garages and building an addition at the Elora Works Garage to address the issues documented in section 2.1.1 including (1) meeting the 20-year growth requirements for the employees, vehicles and equipment stationed on the west side of the Township, (2) satisfying the need for indoor storage space, (3) complying with building code and accessibility requirements, (4) providing suitable employee amenities (e.g. male and female change rooms and washrooms), and (5) eliminating any health and safety concerns;

- Vacating staff from the Water Works building but continuing to maintain the operation of the well house and the use of the garage bays for off-site seasonal covered storage of vehicles and equipment;

- Renovating the medical office and relocating the management and administrative staff into both floors of the medical office;

- Renovating the Parks and Recreation Department's Barn for use as an unheated storage space for vehicles and equipment, and building a new office area within the Sportsplex by renovating the existing Hall of Fame space. Also, build a storage building, renovate and relocate the existing greenhouses, and build a new greenhouse on the Sportsplex grounds;

- Demolishing and rebuilding the existing Fergus East Garage because of the numerous issues documented in section 2.1.1 including the fact that the building is at the end of its expected asset life – repairing and upgrading the building would be more costly than demolishing and rebuilding it. This however, will not address the source water protection concerns related to the existing salt storage shed;

- Renovating the West Garafraxa garage building and repairing the salt shed so that they could continue to be used as the satellite works garage for road clearing operations at the east end of the Township. This however, will not address the source water protection concerns related to the existing salt storage shed at West Garafraxa;

- In 15 plus years, the Township would team with the County to build a joint Operations Centre. Once the Township has moved into the new Operations Centre it could sell the Pilkington and Fergus Works Garages. The land behind the West Garafraxa Garage could be severed and sold for revenue earlier on.

The above renovations would be completed in phases over the next 15 plus years, to meet growth requirements. The total capital cost over this period is estimated to be $41.02 M, including required land purchases but not including soft costs.

Option 3 has a relatively low short term capital cost (i.e., over the next three years). However, it has the highest total capital cost of all of the options and would expose the Township to significant operational risks until the full long term build out was completed.

Option 3 has the highest total capital cost because it includes the cost of renovations and additions to existing Township facilities in the 15-year interim timeframe until a combined Operations Centre is built with the County for a large additional cost. Delaying the construction of a new Operations Centre for at least 15 years and relying on renovations and expansions of the existing facilities in the interim would also expose the Township to operational risks in the meantime. Therefore, Option 3 received the second lowest score and ranking.

Option 4 – Build a new Township Works Garage With Office on an existing site to address the current space needs of only the Infrastructure Services Department and build phased additions and renovations to existing facilities for future needs

Through the space needs assessment, it was determined that the ideal site would be centrally located close to the urban areas and would require a minimum of 20 acres in order to accommodate the long-term growth requirements of multiple departments. This meant that the existing 13.5-acre Fergus East Works Garage site (at 600 Glengarry Crescent) would be too small and unsuitable for a new Operations Centre since it only has approximately 2.5 acres that are suitable for construction. However the Glengarry site could potentially be used for a smaller new facility to meet the current needs of office staff and for operational staff from the existing Fergus East garage combined with staff from the WaterWorks shop on Queen St in Fergus, since those two facilities are essentially at the end of their useful life and need to be replaced in the short term.

Phase 1 of Option 4 would, therefore, involve building a replacement new Works Garage with an office and operator support areas at the existing Fergus East Works Garage site at 600 Glengarry Crescent to address the current space requirements for only the Infrastructure Services Department in the three year time frame. The capital cost for Phase 1 (not including soft costs) would be approximately $15.1 M for the construction of a new works garage with office in the next three years. However, it would not (1) accommodate the significant growth

requirements, over the next 10 to 20 years, for the Infrastructure Services Department staff, vehicles and equipment, or (2) address the needs of the multiple other departments currently facing space constraints (i.e., Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage). Additionally, this will not address the source protection concerns related to the existing salt storage sheds in Fergus or West Garafraxa.

In Phase 2 of Option 4 the Township would need to expand/renovate the existing buildings that these departments occupy since they are already at or beyond capacity. As part of Phase 2 in the 10 to 20 year time frame, the Township would also need to build an addition onto the new garage and office at 600 Glengarry Cres to accommodate the future growth needs of the Infrastructure Services department.

The total cost including the new Works Garage with Office at 600 Glengarry Cres in Phase 1 and the Phase 2 renovations and expansions for the existing facilities and the addition to the new garage and office at Glengarry Cres, would be approximately $20.43 M.

Although the overall capital cost of Option 4 is less than for many of the other options, Phase 1 of Option 4 would only address the current needs of the Infrastructure Services department, but it would not satisfy the long-term growth needs of the Infrastructure Services Department or the multiple other departments currently facing space constraints. Therefore Option 4 was not an effective solution and would expose the Township to the following operational risks. This resulted in Option 4 receiving a low score and ranking.

- Many of the existing works garages are too small and have site constraints that make them unsuitable for building additions to satisfy long term growth;
- Given the advanced age and deterioration of many of the existing garages it would not be cost effective to spend a large sum of money on the extensive renovations that would be needed;
- Continuing to operate from multiple facilities is not cost effective because it's inefficient for operations and doesn't improve collaboration or sharing of equipment and facilities;
- Aside from the works garages, other facilities would also need renovations or expansions for the long term growth of other departments.

Option 5 – Build a new Township Operations Centre on a new site in two phases to address the long-term space requirements for multiple departments with the majority of construction in phase 1

Option 5 would involve building a new Operations Centre, in two phases, on a new site, to address the 20-year growth and operational needs for the multiple departments (i.e., Public Works, Water Works, Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage). The full size of the heated and unheated works garage areas, office space, and one greenhouse would be built in Phase 1 in a three year timeframe. Phase 2 construction would include a future greenhouse and salt storage facility which would be added in the 10 to 20 year timeframe.

The facility would need to be 54,604 ft^2 in size and would have a total cost of approximately $24.25 M to build both phases (including land, greenhouses, and an indoor loading salt storage building). The soft costs such as consulting fees, furniture and moving expenses would be extra. Option 5 has the highest initial capital cost of approximately $19.59 M for Phase 1, but it would fully address the Problem described in section 1.1 by the completion of Phase 1. Option 5 would provide a new multi departmental operations centre within three years that would be built in accordance with current codes and best practices on a new centrally located site. This would address the long term space needs for multiple departments and bring staff together for shared resources, equipment, improved collaboration, effectiveness of operations, increased productivity and to help minimize operational costs. This will address best management / design standards related to the salt storage shed. Given the numerous benefits, Option 5 received a fairly high score and ranking.

Option 6 – Build a new Township Operations Centre on a new site to address the long-term growth requirements for multiple departments using a two-phased approach, and continue to use the existing Garages (until the completion of Phase 2 in 10-20 years) for off-site vehicle and equipment storage

Option 6 provides for the construction of a new Operations Centre (on a new 20-acre site) to enable the consolidation of multiple departments (Infrastructure Services, Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage) and to satisfy their 20-year space requirements. Refer to Section 9.0 for a Conceptual Site Plan showing a potential Operations Centre layout for Option 6.

Phase 1 of the construction would include the full office area for the 20 year growth requirements of multiple departments, as well as one greenhouse and the heated and unheated garage bays required for the current needs.

For Phase 2, another greenhouse and a salt storage building would be constructed. This will address best management / design standards related to the salt storage shed. Additional heated and unheated garage bays would also be built to house all the works garage vehicles and equipment at the Operations Centre. Until Phase 2 is built, the existing works garages would be used for temporary off site storage of seasonal vehicles and equipment. Once the Phase 2 garage additions were constructed at the operations centre, the existing Works Garages would no longer be needed for off-site seasonal vehicle and equipment storage. However, the Elora Garage would remain as a satellite facility at the west end, the West Garafraxa Garage would remain as a satellite facility to the east, and the Fergus Waterworks Garage would continue to house Fergus Well #1 and related water storage and treatment systems that must continue to be operated.

Phase 1 of Option 6 would be built in the three year time frame and would cost $14.92 M (including land purchase costs but not soft costs). Phase 2 would be built 10 to 20 years later at a cost of $10.03 M for a total cost of $24.95 M.

Phase 1 of Option 6 has a lower capital cost than Phase 1 of Option 5 and the overall total capital cost of Option 6 is slightly more than the total cost for Option 5. Option 6 meets the current and future needs of multiple departments while addressing all aspects of the Problem

described in section 1.1. Accordingly, Option 6 received the highest score and ranking and was therefore determined to be the recommended Option.

Option 7 – Build a new Operations Centre on a new site in two phases by building the works garage in phase 1 and building the office and garage additions in phase 2. Until the completion of phase 2, use the existing Medical Office as interim office space, and use the existing Garages for off-site vehicle and equipment storage.

Option 7 has a lower initial capital cost for Phase 1 in the first three years than the Phase 1 cost for Options 5 and 6 since the construction and cost of the administration office for Option 7 is delayed until Phase 2. However, Option 7 has a higher overall capital cost for the 10 to 20 year time frame than for Options 5 and 6. So, Option 7 didn't score as well as Options 5 and 6 in the evaluation.

Phase 1 of Option 7 would include the construction (on a new 20-acre site) of the heated and unheated garage bays and crew support areas (sized for current needs) as well as one greenhouse. Phase 2 would include construction of additional heated and unheated garage bays, a new salt storage facility, a second greenhouse, and the administration office. This will address best management / design standards related to the salt storage shed. In the interim, the office employees (i.e., administrative, technical and management staff) would be relocated into both floors of the Township's existing Medical Office on Queen St in Fergus rather than building office space from the outset at the new Operations Centre. This would reduce the initial size of the Operations Centre by 5,936 ft^2 and reduce the initial construction cost by approximately $1.9 M as compared to Option 6. However, the cost to renovate the Medical Office would be approximately $850,680 (assuming 7,952 ft^2 at $90/$ft^2$ plus $135,000 for an elevator and miscellaneous). Therefore, the initial capital cost for Option 7 (including land but not soft costs) would be $13.87M (versus $14.92 M for Option 6). However, by using the Medical Office rather than leasing it out to the private sector the Township would lose rental and tax income. We estimate that the rental income would be approximately $143,000 per year (assuming $18/$ft^2$).

The total cost for Option 7 (Phases 1 & 2) would be $26.08 M (including land but not soft costs).

Refer to Appendix G for several floor plans of high-level concept layout drawings showing how the Medical Office could be repurposed for use as Township office space for Option 7.

Option 8 – Build a new Township Operations Centre on a new site in three phases. Phase 1 would include building the initial works garage bays. Phase 2 would involve the construction of an office. Phase 3 would include additions to the garage bays, two new greenhouses, and a salt storage building.

To help minimize the initial construction cost, the Phase 1 construction of the new Operations Centre (on a new site) in a three year time frame would only include the areas required to meet the current needs of the Public Works and Water Works operations. This would include the works yard, heated garage bays, operator support areas, supervisor offices, and the unheated pole barn storage building. In order to meet the full indoor storage requirements for vehicles

and equipment, most of the existing Works Garages would continue to be used for off-site seasonal storage until the expansion of the Operations Centre in Phase 3.

In Phase 2 of Option 8, within 3-5 years, an office addition would be built onto the Operations Centre. In the meantime, one floor of the existing Medical Office in Fergus would be used to house staff from the Infrastructure Services office and the Water Works office since their current facilities are over capacity. Once the new office is built at the Operations Centre (in Phase 2) the management, administration and technical staff from Engineering, Infrastructure Services, Water, Source Water Protection, IT and Archives / Records Storage would be relocated. The Operations Centre office would include room for 20 years of future growth. It would also accommodate staff from Parks and Recreation, and Forestry when they are relocated to the Operations Centre after the completion of Phase 3. In the meantime, the Parks and Recreation and Forestry administrative staff and operators would remain together at their current Sportsplex site.

Phase 3 would include the construction of additional heated garage bays, more unheated bays in the pole barn, two new greenhouses, and a new salt storage building. This will address best management / design standards related to the salt storage shed. The additions would accommodate all Parks and Forestry operations and staff at the Operations Centre. Once Phase 3 is completed there would be room for all the works vehicles and equipment to be stored at the Operations Centre. The existing Works Garages would then no longer be needed for off-site seasonal vehicle storage.

Although Option 8 has a relatively low capital cost for Phase 1, the total cost for Option 8 (excluding soft costs) would be approximately $25.23 M which is higher than the total cost for Options 5 and 6.

Another disadvantage of Option 8 is that, unlike Option 6, it would fail to consolidate all of the office staff with the operators into just one facility in Phase 1. As a result, many of the benefits achieved in Option 6 (regarding collaboration, synergies, and reducing overall space requirements) would not be fully achieved until the office addition was built at the Operations Centre in Phase 2 of Option 8. Therefore, Option 8 achieved the second highest ranking in the evaluation scoring, a few points behind Option 6.

Evaluation of the Options

To evaluate and compare the eight options, we used the criteria listed in Table 1.1, on the following page. The criteria are divided into three categories – Financial, Operational, and

Technical Design. Each option was evaluated against these criteria and scored from 1 to 10 according to their ability to address each of the criteria for the effective resolution of the Problem Statement in section 1.0. The criteria were also subject to a weighting factor (1-10) that prioritized the different criteria based on relative importance to the Township (10 being high and 1 being low).

Table 1.1 -Evaluation Criteria

Category	Criteria	Importance Weighting
Operational	**Satisfies 20-year growth and operational needs** • Achieves space requirements for employees, vehicles, equipment and materials	**10**
	Incorporates best practices and industry trends in Works Garage design • Achieves optimal layout to reduce waste (space and distance) and achieve Departmental synergies • Achieves inter-departmental collaboration • Achieves indoor storage of large work vehicles and seasonal equipment	**8**
	Achieves short term urgent needs • Achieves 5-year growth and operational needs within 3-5 years	**10**
	Minimizes staff and work interruptions due to construction • Achieves fewer staff relocations, and work disruptions	**6**
Technical Design	**Complies with Legislative requirements (building codes & standards)** • Achieves employee safety, accessibility, equality	**10**
	Satisfies environmental and sustainability standards • Achieves lower energy costs, emissions, waste, and impact on the environment	**4**
Financial	**Minimizes initial capital construction cost** • Achieves lower Initial (3-5 years) land, new construction, and renovation costs (excluding soft costs, and lost rental income)	**8**
	Minimizes overall capital cost • Includes all capital costs (land, new construction, and renovation) to complete all phases of the Option	**10**

Identification of the Preferred Option

The evaluation of the options shows that Options 5 to 8, for the phased construction of a new Operations Centre, on a new site, had the highest scores. Options 1 to 4 scored the lowest. Furthermore, it was noted that the scores for Options 5 to 8 were in a narrow range. This indicated that, although the best solution is to build a new Operations Centre using a phased approach, the specifics of the construction phasing do not significantly affect the score. Therefore, it was determined that the details of the construction phasing should be tailored to suit the availability of capital funding.

Option 6 achieved the highest score for the two-phased approach of constructing (1) the complete works garage areas, full office, and one greenhouse on a new site in Phase 1, and (2) the construction of the salt storage facility and one additional greenhouse in Phase 2.

Conceptual Site Plan

On the following page, we show a high-level conceptual site plan for the new Operations Centre as envisioned in Option 6 (on an ideal site that has not yet been selected) since it had the highest score and ranking.

It is estimated that a minimum of 20 acres are required for the site of the new Operations Centre. This should provide sufficient space to match the growing demands of the operations over the expected life-span of the buildings (expected to be approximately 60 years). Additional space, beyond 20 acres, may be required depending on the shape and topography of the site and the presence of environmental setback requirements.

Implementation Plan

We created an Implementation Plan for Option 6 to demonstrate the various major tasks likely to be required to complete the Operations Centre within a ten-year horizon. The revenue and cost estimates are high-level but combine to create a total net capital cost (including soft costs such as land, consulting fees, and furniture) of $24.95 M for Option 6.

The conceptual Implementation Plan on Table 1.2 notes the various major tasks required to complete the Operations Centre. The tasks are divided into two groups: those tasks that will generate revenue to the Township, and the expenditures that are required to construct the Operations Centre including construction costs, land purchase and soft costs such as consulting fees for design and contract administration, legal fees, site servicing, site plan development, approvals and permits, studies and investigations (i.e. surveys, geotechnical, noise study, traffic study), furniture and moving expenses. The cost estimates are very high level at this point and will be further refined as the project moves ahead.

It should be noted that this is a conceptual implementation plan based on Option 6 to show one approach for the construction of the Operations Centre on a new site in two phases over the next ten years. This high level plan outlines one possible scenario of how the project phasing and construction could potentially unfold. There is however a lot of flexibility in both the time frame and the approach for how the construction phasing can be implemented. This conceptual implementation plan is a representative version that may be considered as a starting point to be further developed as the project progresses.

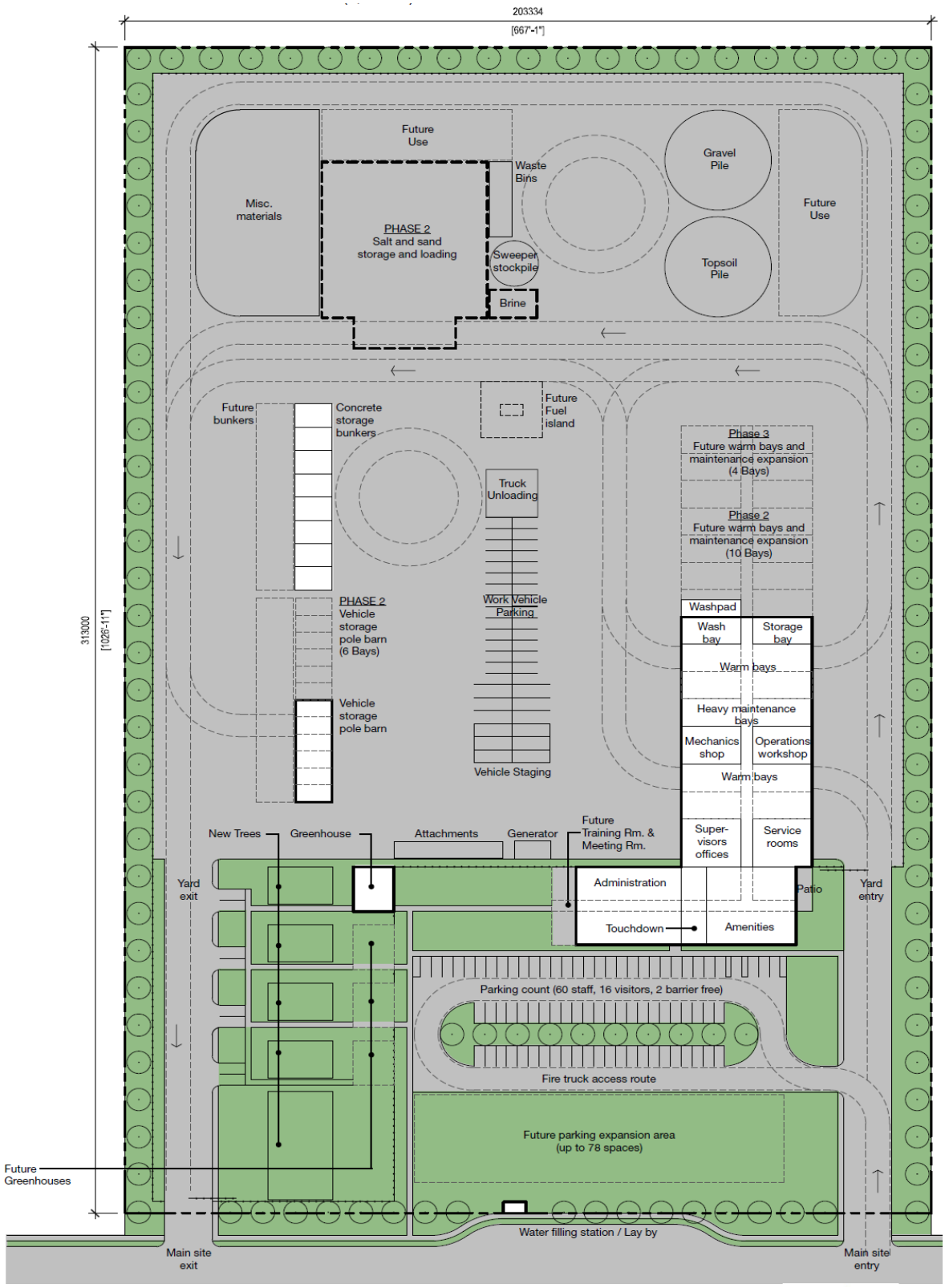


Image ES-3: Conceptual Site Plan Layout for Option 6

Table 1.2 - Major Tasks for Phased Implementation of a New Operations Centre on a New Site

Estimated Costs and Revenue for a 10-year Timeframe

Year	Implementation Steps	Estimated Revenue
1 to 5 (2021 to 2025)	Sell Surplus properties and utilize temporary leasing opportunities	$2.95 mil
Estimated Costs of Option 6 for a 10-year timeframe		
Year	**Implementation Steps**	**Estimated Cost**
1 (2021)	Relocate overflow of Twp staff temporarily into medical office Op Centre Site Evaluation/Selection/Approvals Process RFP for Op Centre Phase 1 design / Tender / Contract Admin	$4.84 M
2 (2022)	Studies & investigations for site plan development and design Site plan approval process Design of Operations Centre Phase 1 & 2	$1.36 M
3 (2023)	Tender and construction of Op Centre Phase 1 (includes garage area for current needs, full office for 20 year staff projections and one greenhouse)	$10.95 M
4 (2024)	Township staff to move into Operations Centre Phase 1	$0.13 M
9 (2029)	Op Centre Phase 2 Detailed Design and construction tender (includes heated and unheated garage additions, one greenhouse and salt storage facility)	$0.59 M
10 (2030)	Construction of Operations Centre Phase 2	$10.03 M
	Total Estimated 10 year Costs and Revenues	**$24.95 M**

1.0 PROBLEM AND OPPORTUNITY STATEMENT

1.1 The Problem and Opportunity

The Township of Centre Wellington was formed in 1999 through the amalgamation of the Town of Fergus, Village of Elora and the Townships of Nichol, Pilkington, West Garafraxa and a portion of Eramosa. This brought together six Works Garages which were, subsequently, reduced to five after one of the facilities (Nichol Works Garage) was sold following severe damage by a tornado in 2005.

The use and condition of the Works Garages and yards have, as to be expected, evolved since they were originally built – with one dating back to the late 1950's. As a result, they now present a number of challenging problems that negatively affect operational productivity and service delivery. These problems are summarized below:

- The decentralized approach, with five different Garages and staff from the Parks and Recreation and IT departments working at different locations, increases the total facility operating costs. It also reduces the ability to maximize collaboration and achieve synergies between employees;

- Some of the Works Garage buildings are old, in poor condition, and don't comply with Provincial building code and accessibility requirements;

- Most of the buildings are operating at or above their original design capacity for the efficient flow of employees, vehicles and equipment;

- It is not feasible to expand some of the Works Garage buildings due to their site limitations and constraints;

- The current building designs, use of space, and flow of employees and vehicles is not efficient or compliant with industry best practices and design trends;

The urban population of the Township is projected to double by 2041 which will significantly increase service level requirements. In order to meet these requirements, the number of staff, work vehicles and equipment levels will need to increase as well. This will lead to further overcrowding of the aging Works Garages which will negatively affect employee safety, productivity, and their ability to meet service levels. Therefore, the Township of Centre Wellington must determine how best to address the need for additional space.

Aside from the above challenges facing the Public Works and Water Works garages, there is also a growing need for additional space by the other departments working within Township facilities (i.e., the Civic Centre, Tourism office, Parks works garage, archives, IT). The Civic Centre is currently at capacity with no space to accommodate additional staff. Relocating the IT department out of the Civic Centre will free up needed space there.

The items noted above present an opportunity to improve the current and future delivery of Township services by identifying and implementing a solution that increases the function and efficiency of staff, facilities, equipment, and other resources.

1.2 The Project

As a result of the problems discussed above, the Township retained Stirling Rothesay Consulting Inc. and RDH Architects Inc. to complete a Background Review, Space Needs Assessment, and Business Case to recommend how best to address the facility needs for the Township's Public Works, Engineering, Parks and Recreation, Forestry, IT, Archives and Records Storage and Water Operations over the next 20 plus years.

The Project will identify how to (1) provide safe, efficient work conditions, (2) make best use of the existing sites and facilities, (3) provide efficient flow of employees and vehicles through the Garages, (4) meet industry best practices in facility and yard layout design, and (5) meet the operational growth requirements over the next 20 plus years.

2.0 ASSESSMENT OF CURRENT AND FUTURE FACILITY NEEDS AND OPPORTUNITIES

This section identifies the current and future facility needs and opportunities (to the year 2041) for those Departments currently working from the five Works Garages, and the Parks farmhouse and shed.

2.1 CURRENT STATE

This section describes the current state characteristics, conditions and capacities of the existing Works Garages, and the limitations they present to staff and crews. This information was gathered from extensive tours of the garages, and interviews with employees from each department. Township staff provided departmental counts of existing vehicles, equipment and staff positions as well as input on the deficiencies of the current facilities. The information from the 2020 building condition audits by Cion Coulter was also consulted.

2.1.1 Works Garage Characteristics, Condition and Capacity

The five current Works Garages have, as to be expected, evolved since they were originally built – one dating back to the late 1950's. Some of the facilities have had additions built and, in most cases, the internal layouts and use of space have changed to adjust to the changing operational needs.

Below, in Table 2.1 and in the following detailed descriptions, we note the key characteristics, building condition, and level of capacity for each of the five Works Garages and outline their limitations and various deficiencies.

Table 2.1 – Works Garage Characteristics, Condition and Capacity

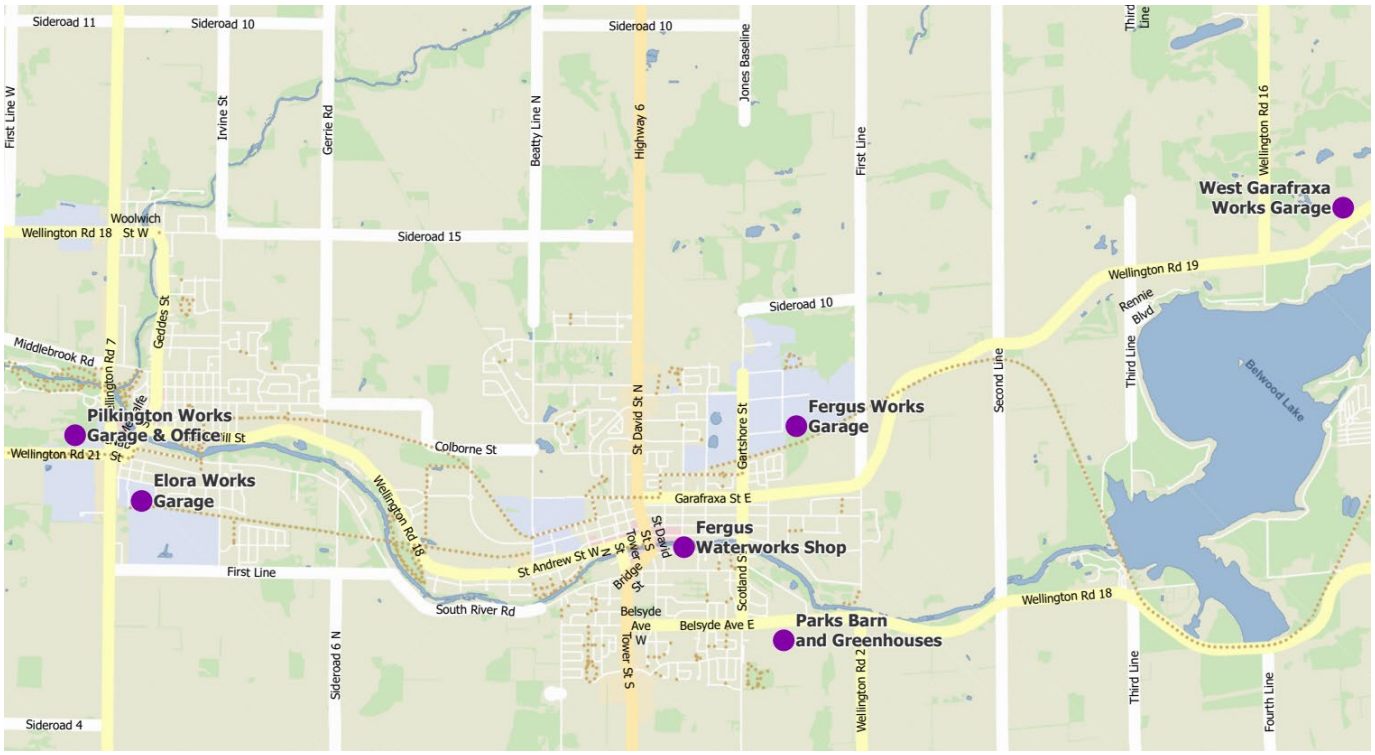
	Fergus East Works Garage	Elora Works Garage	Fergus Waterworks Garage & Office	Pilkington Works Garage and Office	West Garafraxa Garage & Office
Location	600 Glengarry, Fergus	23 Parks Rd, Elora	295 Queen Street East, Fergus	7444 Wellington Road 21, Elora	8460 Wellington Road 19, Fergus
Garage Building Size	5,510 ft2	9,000 ft2	4,730 ft2	4,850 ft2	6,000 ft2
Office Building Size	Small office area is part of garage	Small office area is part of garage	Staff portable & small office area	2,440 ft2	2,805 ft2
No. of Bays	4	7	5	4	5
Salt Shed	4,830 ft2	0	0	0	4,330 ft2
Site Size	13.5 acres	4.0 acres	1.0 acres	3.8 acres	18.6 acres
Restrictions	Only 2.5 acres for construction & 5.5 acres for outdoor storage or parking, remainder is in EP zone, steep slopes or inaccessible	Small site with no available adjacent land for expansion	Can't build in floodplain, small site with no available adjacent land for expansion	In EP zone, steep slope, small site with no available adjacent land for expansion	Location isn't centralized

	Fergus East Works Garage	Elora Works Garage	Fergus Waterworks Garage & Office	Pilkington Works Garage and Office	West Garafraxa Garage & Office
Year Built	1974	1992	1957	Garage – built in 1984 Admin. Office – Century Home circa 1840	1984
General Building Condition	Nearing end of asset life	Fair	Nearing end of asset life	Fair	Fair
Building Capacity	Overcrowded At 120%	Nearing 100%	Overcrowded At 120%	Full at 100%	Overcrowded Garage at 120% Office Building at 60%
Ability to Expand Building	The building could be replaced with a larger one	Yes, but at the expense of the limited yard area	No	Yes, but at the expense of the limited yard area	Yes
Other Limitations	The site includes a watercourse and Environmental Protection Area which reduce the useable area to approximately 8 acres with only 2.5 acres being cost effective to build on Fill in part of the site would significantly increase the cost of constructing building foundations. The land is steeply sloped which would require extensive costly regrading.	Reliant on salt from the Wellington County Depot. The site is too small for a large facility expansion.	The site is adjacent to the Grand River within the GRCA flood plain and Environmental Protection Area. Building additions would not be permitted. Staff offices are currently in portables due to a lack of space within the main building. The site includes a CW Hydro electrical substation, and Fergus Wellhead #1, which must both continue to be operated & maintained.	The useable area of the site is reduced by the Environmental Protection Area. Reliant on salt from the Wellington County Depot. The site is too small for a large facility expansion. The existing Administrative building was not purpose built but rather a conversion of a residential century home. There is no room for additional staff or equipment.	The office building is vacant (other than for archive storage) and has no fibre for computers. Lack of elevator in the office building creates health and safety concern for access to archives and storage on the lower level
Need to Remediate Presence of Asbestos prior to Renovations (see Appendix F)	Yes	No	Yes	No	Yes
Compliant with Accessibility Requirements	No	No	No	No	No
Attributes	The large fill area is well used for outdoor storage of materials	Newest facility	The adjacent land is used as Confederation Park. The Trail could be expanded along the river if the garage was vacated.	The Administrative building was previously the Pilkington Town Hall and, therefore, has some historical significance.	Abundance of outdoor storage space. Good location for long-term future growth in the east end of the Township

	Fergus East Works Garage	Elora Works Garage	Fergus Waterworks Garage & Office	Pilkington Works Garage and Office	West Garafraxa Garage & Office
Source Protection Areas / Considerations	Within municipal wellhead protection areas including chloride issue contributing area. Risk Management Plan would be required for salt storage / application, snow storage and chemical storage / handling. Current salt storage shed does not include indoor loading and unloading.	Within municipal wellhead protection areas including chloride issue contributing area. Risk Management Plan would be required for salt storage / application, snow storage and chemical storage / handling.	Within municipal wellhead protection areas including chloride issue contributing area. Well F1 is located on the property. Prohibitions apply within 100 metres of the municipal well. Risk Management Plan would be required for fuel, waste, salt storage / application, snow storage and chemical storage / handling.	Within municipal wellhead protection areas. Risk Management Plan would be required for chemical storage / handling.	Outside of the municipal wellhead protection areas. However immediately adjacent to the Highland Pines non-municipal, residential drinking water system. Source protection requirements are not currently, legally required for non-municipal systems but could be considered for fuel, waste, salt storage / application, snow storage and chemical storage / handling. . Current salt storage shed does not include indoor loading and unloading.

The location of each Works Garage is shown on the following map. Appendix B provides an additional overall map as well as plans showing the site of each facility.

Map 2.1 – Existing Works Garage Locations



The location of the Works Garages is spread across the urban areas of the Township (a decentralized network model) to minimize driving times by the crews. This improves employee productivity and decreases response times. However, decentralization, generally speaking, increases total facility operating costs. It also reduces the ability to achieve the collaboration and synergies between employees that exist within a centralized model.

The size of the facilities at each Works Garage is, in most cases, not sufficient to meet the current and/or future growth requirements of the Infrastructure Services Department. All of the current facilities are operating at or above their design capacity with the exception of the newest Works Garage – Elora – which is nearing 100%.

The current facility designs, use of space, and flow of employees and vehicles is not optimal or compliant with industry best practices and design trends.

The Fergus Water Works shop is subject to several site limitations and restrictions, so it would not be possible to expand the footprint of the building. The other Works Garages are situated such that they could be expanded; however, most of the existing sites have minimal area to accommodate a building expansion without infringing on the much needed works yard area. The exception to this is the West Garafraxa facility which is on a large 18.6-acre site in the east side of the Township. However the West Garafraxa site would not be a good location for an operations centre because it is not centralized. The Fergus East Works Garage building is considered to be nearing the end of its asset life so it should be replaced rather than

expanded. Additionally there are several constraints at the 600 Glengarry Cres Fergus East Garage site that make the property unsuitable for long term use as a multi departmental operations centre. The Elora Works Garage is the newest facility and is in better condition than the rest of the Works Garages. All of the existing Works Garages have design features that do not comply with current building code and/or accessibility requirements.

Only two of the Works Garages have salt storage buildings – Fergus East at 600 Glengarry Cres, and West Garafraxa. Ideally, there would also be one in the west end of the Township in the Elora area. This would eliminate the need to rely on salt provided from the Wellington County Depot located adjacent to the Pilkington Works Garage. None of the existing salt storage sheds incorporate current best management / design standards such as indoor loading and unloading.

The size of the Infrastructure Works Garage sites varies from 1.0 to 18.6 acres. The three smallest sites (Pilkington, Elora, and Fergus Waterworks) would benefit from more land to expand the buildings and provide more outdoor yard storage space. However, the adjacent lands are not available to purchase.

Site layout photos for each of the Infrastructure Works Garages are presented in Appendix B. Below we provide more detailed descriptions of the issues and limitations of each of the works garages and their associated offices, as well as the IT server room in the Civic Centre and the Parks Barn, Parks farmhouse office and greenhouses at the Centre Wellington Community Sportsplex:

Pilkington Works Garage and Office

The Pilkington Works Garage, and Infrastructure Services Office are located at 7444 Wellington Road 21, Elora.

Pilkington Garage

The Pilkington Garage was constructed in 1984 and includes four garage bays and a small staff area. The garage is currently overcrowded with vehicles and equipment. The site is the smallest works garage site at only 3.8 acres which is occupied by the outdoor materials storage yard, the office and garage buildings and the shared use parking lot. The site slopes steeply in the densely treed area along the rear of the property adjacent to the Elora Gorge Conservation Area, so it is not feasible to expand in this area. This reduces the usable area of the site to approximately 2.5 acres. There is no room to expand the garage building without impinging on the limited materials storage yard space or shared parking area. The Pilkington garage is now 36 years old and is in fair condition with several issues that would require renovations as outlined below:

- No proper crew meeting room;
- No employee change rooms, private lockers or shower facilities;

- No washer/dryer for work clothing;
- Insufficient indoor storage space for equipment – so forced to lease space off site for the winter storage of the street sweepers;
- The roll-up bay doors and openers no longer work properly and should be replaced;
- The garage bays are not drive through and can't be converted to drive through due to the steep slope and heavily treed area along the rear of the garage building;
- Insufficient lighting and no ventilation within the garage storage bays;
- The electrical panel and heating system require replacement;
- Require a back-up power generator;
- No vehicle wash bay
- No oil / grit separator;
- Within municipal wellhead protection areas. Risk Management Plan would be required for chemical storage / handling;
- Requires a proper welding booth;
- The pumping system for the fuel tanks should be replaced;
- No perimeter fence or security cameras so equipment and tools are subject to theft;
- The parking lot should be re-paved.

Pilkington Office Building

- The existing office building was converted from a residential style century home. Although the building is not currently heritage designated, it is of some historical significance as it was previously used as the Pilkington Town Hall. Any renovations or additions to the building should be in keeping with the existing architecture;
- The two-storey office building has stairs to the 2nd floor and is, therefore, not accessible. An elevator and significant building renovations would be required to make the full office accessible;
- The office and separate garage building share a single water service and a residential style septic tank (which doesn't have the capacity to support a large office addition). An

extension of the sanitary sewer from the street would be required if the office building was to be enlarged;

- The site adjoins the Elora Gorge Conservation Area and the majority of the property is within the GRCA regulation limit. GRCA approval would be required to permit construction of an office addition;

- The office building is at maximum capacity with no room for additional staff. Two office staff (three in the summer) have their work stations in the garage building (in a renovated storage room) along with the large drawing plotter. This separation of staff and equipment reduces efficiency and collaboration;

- The office lunch room is crowded as it only has enough space for one table with six chairs which is too small for the thirteen-office staff who use it;

- There is only one meeting room in the office and it only fits one table with eight chairs. A larger additional meeting room is needed. Staff frequently have to drive to other Township facilities to use larger off-site meeting rooms which is not efficient;

- The existing uninsulated mass stone walls of the office building are not energy efficient for heating. The HVAC system is in need of replacement as the building is often cold in the winter. The electrical service is at capacity and can't support the use of space heaters without tripping the breaker;

- There is insufficient attic roof insulation and ventilation. This allows heat from the attic to warm up the roof and melt the roof snow which then drips off the eaves and refreezes into icicles which can fall on staff at the entrance ways. The melting roof snow also drips onto the entrance walkway and ices over the path creating a slip and fall hazard;

- The partial basement is built of old rubble stone foundation walls which aren't sealed. That, combined with the overall unsealed building construction, allows insects and rodents to enter the office.

- The office main entrance door opens directly onto the reception area which causes a draft of cold air for the staff stationed close to the entrance whenever the door is opened in winter;

- The existing parking lot is used for staff, visitor, and Works vehicle parking. It is also used as a circulation area and access route for heavy equipment to the Works Garage and outdoor materials storage yard. This combination of uses creates a safety hazard as office staff need to cross the parking lot through the travel path of the Works Garage vehicles.

- The parking lot is over-crowded without room for future staff or Works Garage vehicle parking. To support an office expansion and additional staff, the parking lot would need to be enlarged into the area where several old 60' tall fir trees currently stand.

Elora Works Garage

The Elora garage is located at 23 Parks Rd, Elora and was built in 1992. It includes seven garage bays and small staff areas on the ground floor and second floor which is not accessible. The garage is currently nearing capacity. The site is the second smallest works garage property at 4.0 acres. There is a CW Hydro electrical substation at the east end of the site which must continue to be operated and maintained. The rest of the site is bounded by private properties.

The Elora garage is 28 years old which makes it the newest of the works garage facilities. Given the relatively good condition of the Elora garage it has been earmarked as a good location to keep operational as a satellite works facility to efficiently serve the west Elora side of the Township. The following deficiencies would need to be addressed with renovations and expansion for the continued use of the Elora works garage:

- No proper crew meeting room and the office and lunch room should be updated;
- The washrooms should be repaired and updated;
- No private secure lockers;
- There are no proper male / female employee change rooms and shower facilities, this needs to be addressed with a renovation;
- No washer/dryer for work clothing;
- The roll-up bay doors and openers no longer work well and should be replaced;
- The garage bays are not drive through and there isn't enough room to convert them to drive through since the back wall of the garage is too close to the property line;
- The roof eaves need to be replaced;
- Insufficient lighting and ventilation within the garage storage bays;
- The electrical panel and heating system require replacement;
- Require a back-up power generator;
- Require a proper welding booth;
- The pumping system for the fuel tanks should be replaced;

- Within municipal wellhead protection areas including chloride issue contributing area. Risk Management Plan would be required for salt storage / application, snow storage and chemical storage / handling.

- No perimeter fence or security cameras so equipment and tools are subject to theft;

- No designated employee parking area;

- The parking lot should be repaved.

Parks and Recreation Department Farmhouse, Barn and Greenhouses

These Parks Department facilities are located on the grounds of the Centre Wellington Community Sportsplex at 550 Belsyde Avenue, Fergus. The Belsyde farmhouse is the original farmhouse building on the property. In 2019 the Parks Department renovated the old farmhouse to provide temporary space for employees from the Forestry and Parks Departments. The renovations included the creation of offices, a meeting room, a washroom, and a lunchroom with kitchenette. The converted farmhouse office is an old two storey home that is not accessible or AODA compliant. The stairs are quite narrow and there is no elevator to the offices on the second floor. The old windows and doors are poorly sealed and allow a lot of heat loss. The doors and windows would need to be replaced to help improve energy efficiency.

The Parks Barn is located on the grounds of the Centre Wellington Community Sportsplex which is also used as the festival grounds for hosting large community events. The festivals fill the available area on the grounds and would ideally use more space if it was available. The large space requirements for community events are problematic for the construction of a new Parks garage or a large new operations centre on the Sportsplex grounds as it would take much needed area away from event usage.

The Parks Barn is a simple unheated pole barn style building which is aging and in deteriorated condition with many deficiencies as outlined below. For several years the unheated barn has been pressed into use as a crew space for the Parks operators who share a crowded work bench and use a picnic table as their lunch room in unsanitary conditions with no running water. The Parks Barn is only suitable for use as unheated covered storage for vehicles and equipment, not as staff operator facilities. Some of the shortcomings of the Parks Barn were addressed through the 2019 renovations to the old Belsyde farmhouse at the Sportsplex grounds (as discussed above).

With the increase in the number of Parks and Recreation vehicles and equipment over time, the Parks Barn has become overcrowded and can't house vehicles which require heated storage. The list of Parks Barn deficiencies is as follows:

- No office area for management (for confidential discussions) or proper crew meeting room;
- The single shared workbench is too small and overcrowded;
- The staff lockers are insufficient and are in an open area that's not secure;
- No washrooms or employee change rooms;
- No washer/dryer for work clothing;
- No running water, heat or insulation within the barn;
- The building is completely unsealed which allows rodents, birds and insects easy access and creates unsanitary conditions for the staff operators;
- There are a lot of holes in the roof and it leaks a lot, to the extent that it rains and snows inside the Barn as well as outside;
- No vehicle wash bay;
- Insufficient indoor storage space for equipment and tools – so equipment left exposed to the elements outdoors;
- No indoor storage space for materials and signs;
- The Barn doors are very difficult to slide open during the winter when there's snow in the way;
- The Barn door opening isn't high enough to accommodate the larger Parks vehicles such as the garbage truck;
- The Barn door isn't secure because its closure uses a hook and eye type of latch that doesn't properly lock;
- The mandoor is roughly built without a proper door handle or lock, rather it uses a rusty old hand pull with a padlock that freezes during winter and is very difficult to get open;
- No security cameras so equipment and tools are subject to theft;
- Within municipal wellhead protection areas including chloride issue contributing area. Risk Management Plan would be required for salt storage / application, snow storage and chemical storage / handling. Within 500 metres of municipal well F5.

- No outdoor materials storage area for brush or compost;
- No employee parking area.

Parks Greenhouses

- Built in 2002;
- Poor drainage within the buildings – so employees are forced to walk through water after major rainfalls;
- At capacity which prevents staff from meeting planting objectives. Additional greenhouse space is required;
- Insufficient indoor space to store tools and materials;
- Insufficient space to load plants into trucks outdoors.

Fergus East Works Garage

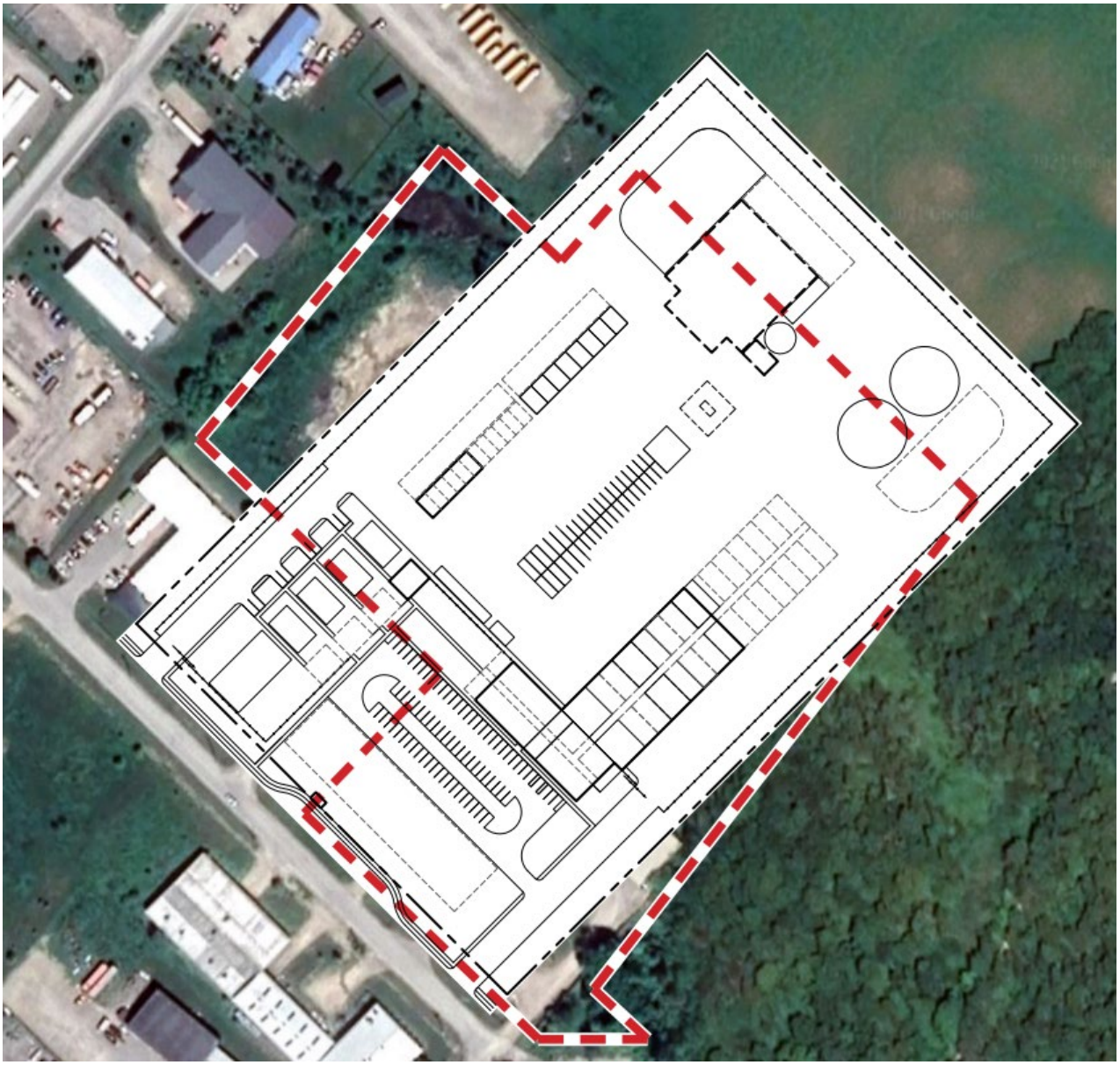
This 13.5-acre site is located at 600 Glengarry Cres, Fergus and includes the works garage, parking lot, salt storage barn, outdoor materials storage yard, helipad, creek and forested area. The site is steeply sloped within the treed area surrounding the creek which cuts through the back third of the property. The creek and treed area are within the GRCA regulation limit and there's also an environmental protection zone on that part of the site. The creek and steep grades cut off access to the rear third of the property which leaves only approximately eight acres of useable accessible site area. Approximately, 5.5 acres of the remaining site area is taken up by the outdoor materials storage yard, which has historically been landfilled with inert rubble and other materials with a fill depth ranging between 3m to 10m. It would be cost prohibitive to build on this fill area as the fill would either need to be excavated and replaced with engineered compacted granular or costly deep foundations would have to be used. The fill area is only suitable for continued use as an outdoor materials storage area or parking lot. Given the site restrictions, the usable area for construction is limited to approximately 2.5 acres at the front of the property including the area of the helipad, existing garage building, parking lot, and salt storage barn. These site limitations are shown on the aerial site plan below.

Image 2.1 – Site Constraints at 600 Glengarry Cres. Fergus East Works Garage



The following site plan shows the concept site layout of the overall space required for the new Operations Centre superimposed onto the 600 Glengarry property. From this it can be seen that there isn't enough space in the effectively usable area of the site, and that the space requirements actually overhang the property boundaries. This clearly shows that the 600 Glengarry property is too small to house a multi departmental operations centre and won't be suitable for accommodating long term growth.

Image 2.2 – Space Limitations at 600 Glengarry Cres. Fergus East Works Garage



The Fergus East Works Garage was built in 1974 and includes four garage bays and a two-storey staff area which is not accessible. The garage is crowded and over capacity. At 46 years old, this facility is one of the oldest garages in the Township and is in relatively poor condition. The advanced age and deterioration of the Fergus East Works Garage are significant indicators that the building has, essentially, reached the end of its useful service life and should be replaced. The building deficiencies are outlined below:

- The roof leaks and there are cracks in the walls;
- The steel girders of the building structure are rusting;

- The windows are single pane, they don't seal and they leak and are inefficient;
- No proper crew meeting room and the office and lunch room should be updated;
- No private secure employee lockers and the washrooms need to be updated;
- There are no separate male / female washrooms, employee change rooms or showers, this needs to be addressed and made accessible;
- No washer/dryer for work clothing;
- Insufficient indoor storage space for vehicles and equipment;
- Insufficient indoor tool storage space;
- The oil storage room is unheated, cluttered and small;
- Within municipal wellhead protection areas including chloride issue contributing area. Risk Management Plan would be required for salt storage / application, snow storage and chemical storage / handling. Current salt storage shed does not include indoor loading and unloading.
- The utility room is full;
- The roll-up bay doors and openers no longer work well and should be replaced;
- The garage bays are not drive through;
- Insufficient lighting within the storage bays;
- No ventilation system within the garage;
- The electrical panel and heating system require replacement;
- Require a back-up power generator;
- No vehicle wash bay;
- Require a proper welding booth;
- The Grate system requires repair/replacement;
- There is no sign storage room and the storage shed is falling apart;

- The pumping system for the fuel tanks should be replaced;
- No perimeter fence or security cameras so equipment and tools are subject to theft;
- The parking lot should be paved;
- The garage building was a low-cost structure that is at the end of its expected asset life – repairing and upgrading the building would be more costly than demolishing it and rebuilding;
- The salt storage shed needs to have the large access door replaced as it's in poor condition and does not include indoor loading and unloading.

West Garafraxa Works Garage and Office

The West Garafraxa facility is located on 18.6 acres at 8460 Wellington Road 19, Fergus close to Lake Belwood and the Highland Pines development. The majority of the property is currently rented out as farmland. The site includes a separate salt storage barn and a five-bay garage with an adjoining ground floor office building with a finished basement. The facility was constructed in 1984 and is now 36 years old and in fair condition with some deficiencies as detailed below. The office building is being used for Township archives and records storage on the basement and ground floor levels, but doesn't currently house any staff. The garage bays and salt barn are used as a satellite works facility for road clearing operations in the east end of the Township.

West Garafraxa Office Building

- The ground floor office area would need to be structurally reinforced in order to support the weight of a high-density filing system for efficient records storage;
- The office building has stairs to the basement where many of the records are stored. This is a health and safety concern as it's difficult for staff to carry the heavy boxes of records down the stairs. This creates a trip hazard and a source of potential strain injury. An elevator and significant building renovations would be needed to make the office accessible;
- There is no fibre or phone line currently available to the building;
- The records storage area needs to be renovated to have a suitable fire suppression system.

West Garafraxa Works Garage

- No lunch room or crew meeting room;

- The washrooms should be updated;
- No private lockers, and the employee change rooms and shower facilities should be updated;
- No washer/dryer for work clothing;
- Insufficient indoor storage space for equipment;
- The roll-up bay doors and openers no longer work well and should be replaced;
- The garage bays are not drive through;
- No ventilation system within the garage;
- Insufficient lighting within the garage bays;
- The electrical panel and heating system require replacement;
- Require a back-up power generator;
- No vehicle wash bay;
- No oils storage room;
- Outside of the municipal wellhead protection areas. However immediately adjacent to the Highland Pines non-municipal, residential drinking water system. Source protection requirements are not currently, legally required for non-municipal systems but could be considered for fuel, waste, salt storage / application, snow storage and chemical storage / handling.
- Current salt storage shed does not include indoor loading and unloading.
- Require a proper welding booth;
- The pumping system for the fuel tanks should be replaced;
- The parking lot needs to be repaved;
- No perimeter fence or security cameras so equipment and tools are subject to theft.

Fergus Water Works Shop

The Fergus Water Works facility is located at 295 Queen Street East, Fergus and consists of the original wellhouse circa 1940 as well as a five-bay garage expansion which was added in 1957. This was followed by a small office addition in 1989. A rented temporary office portable was later added to the rear of the site in 2015 and remains in use due to the insufficient small office area. The garage bays are also overcrowded and both the office and garage are generally in poor condition with several deficiencies requiring renovations as noted below.

The 1.0-acre property is laid out in a narrow rectangle of land between the Grand River to the north and Queen St E to the south. The east end of the site is bordered by the CW Hydro electrical substation and Confederation Park. The wellhouse frames the western limit. The majority of the site and buildings are within the floodplain of the Grand River and are subject to development restrictions. Given the site constraints and expansion limitations, as well as the advanced age and deteriorated condition of the buildings, this facility is nearing the end of its useful life. The operation and maintenance of the existing wellhouse and electrical substation must continue and aside from that the garage bays can remain in use as vehicle storage with some renovations to address the following existing deficiencies.

- There is no HVAC system for the office or garage. Electrical heat is used throughout the office, garage and trailer which is very inefficient;
- The garage requires thermal insulation and proper venting;
- The garage requires an oil grit separator;
- The garage windows are failing and need to be replaced;
- Sanitary sewer internal plumbing and venting requires assessment and remediation;
- Insufficient employee parking with no space available for expansion;
- All person doors and roll-up garage doors need to be replaced;
- The garage bays are not drive through and can’t be converted to drive through given the site constraints;
- The facility is not accessible and there is no meeting room for staff;
- No female changeroom, shower or lockers;
- Male changeroom requires extensive improvements;
- Washrooms need to be renovated;

- The lunch room, utility locate office, water operator work stations and sample preparation area are in a rented trailer;
- Overcrowded garage with insufficient vehicle and equipment indoor storage space. So, the tractor needs to be stored off-site during the winter;
- No proper laboratory for conducting tests;
- Within municipal wellhead protection areas including chloride issue contributing area. Well F1 is located on the property. Prohibitions apply within 100 metres of the municipal well. Risk Management Plan would be required for fuel, waste, salt storage / application, snow storage and chemical storage / handling
- Insufficient storage space for equipment and materials – so watermain repair materials and frozen service response materials are stored off-site;
- The bulk water fill station requires repairs;
- The Confederation Park trail could be extended along the Grand River to the north side of the property.

IT Server Room

The IT server room is located on the upper level of the Civic Centre at 1 MacDonald Square, Elora. The Civic Centre also houses Council chambers, meeting rooms, staff support areas and the departments of Township Administration, Planning and Development and Corporate Services. The Civic Centre was built in 1994 before computers were generally in common use, so the current IT server room was converted from a previous file storage vault. The server room is quite small and overcrowded as it houses all of the server equipment used to support the computer systems for numerous Township facilities. Given that the server room was converted rather than purpose built, there are several deficiencies with this space and with the ventilation, cooling and fire suppression systems as noted below:

- The room is too small and overcrowded;
- There is barely enough space between the front of the server racks and the door to be able to install equipment;
- There isn't much room behind the racks, so the modifications made to fit an air conditioner into that small space created a projection that is a bumping hazard;
- The server equipment generates heat which requires ventilation, cooling and humidity control. The room was retrofit with an A/C unit, but it doesn't have proper humidity

control. Due to the space constraints the A/C unit could not be installed in a good position and so it doesn't provide optimal cooling;

- There is no fire suppression system suitable for the electronics in the server room;
- The server equipment makes noise continuously, but the room doesn't have any sound attenuation, so this causes noise disturbance for staff sitting nearby;
- There isn't enough room for proper cable management or the installation of fibre panels;
- The cable management from the desks to the room are full which makes it hard to add new network drops and to do troubleshooting;
- The breaker panel in the server room is fed from the UPS battery backup system. The breaker panel for the UPS is actually located outside of the server room in the nearby kitchenette which is not a secure area, so this makes the system vulnerable to being turned off.

2.1.2 Current Resources

Current Employees

The total number of employees working at the Works Garages (during the summer and winter) is shown in the table below. We have also included employees from the Parks and Recreation, and Information Technology Departments who should also be relocated to the new Operations Centre. The table doesn't include the operators at the Elora and Pilkington garages since they are intended to remain on the west side of the Township at the Elora Works Garage satellite location for efficient operations and road clearing on the west side.

Table 2.2 – Current Number of Employees

Department	2020 Office Employees	2020 Outside Employees			Total (max)
		Full Time	Summer	Winter	
Public Works (not including Elora & Pilkington Operators)	5	9	4	6	20
Engineering	6		1		7
Water	4	7	2		13
Information Technology	4				4
Risk Management (Source Water)	3		0		3
Parks and Recreation	3		12		15
Forestry	1		1		2
Mechanic					0
Total	**26**	**16**	**20**	**6**	**62**

Note: The maximum number on-site during the peak season (summer) is 62 employees

Current Work Vehicles and Equipment

The total number of work vehicles and equipment currently assigned to the five Works Garages and the Parks Barn (during the summer and winter) that would be stored at the new Operations Centre is shown in the table below. This information includes vehicle and equipment counts up to December 2019.

Table 2.3 – Current Work Vehicles & Equipment to be stored at the Operations Centre

Department	Work Vehicle & Equipment Description	Quantity	Type of Storage
Roads	Single Axle Dump Truck	4	Heated
Roads	1 ½ Ton Truck – Plow & Sander	2	Heated
Roads	Backhoes	2	Heated
Roads	Pick-Up Truck	1	Heated
Roads	MT Trackless (snow clearing)	2	Heated
Water	Mower w/ snow blower	1	Heated
Total V&E - Heated Storage		**12**	
Roads	Street Sweeper	2	Covered
Roads	4500 Dually Utility Truck	1	Covered
Roads	Mower	3	Covered
Roads	Paint Machine	1	Covered
Roads	Trailers	2	Covered
Parks	Garbage Truck	1	Covered
Parks	Mower – 10 ft.	2	Covered
Parks	Mower – 60”	5	Covered
Parks	Tractor	2	Covered
Parks	Water Trailer	1	Covered
Total V&E - Covered Storage		**20**	
Roads	Pick-Up Truck	5	Outdoor
Roads	Trailers	3	Outdoor
Roads	Soil Screener	1	Outdoor
Roads	Hot Box	1	Outdoor
Roads	Paving Roller	1	Outdoor
Water	Pickup truck	7	Outdoor
Water	mini van	1	Outdoor
Parks	Landscape Truck	2	Outdoor
Parks	Pick-Up Truck	3	Outdoor
Risk Management	SUV	1	Outdoor
Total V&E - Outdoor Storage		**25**	

Materials Storage Requirements

The Roads and Parks Departments store several types of materials within the yards for use throughout the Township. The material of greatest consumption is salt for winter roads and sidewalk maintenance. Salt requires indoor storage (as part of the Salt Management Plan) to protect it from the elements. Also, stored within the yard (outdoors) are various materials for day-to-day road repairs and parks maintenance (e.g., cold patch, granular stone, mulch, and top soil) as well as other items such as brush, wood, rubble, etc.. The areas required for the indoor storage of salt and the outdoor storage of other materials is shown on the conceptual site plan in Section 9.0 of this report.

2.1.3 Opportunities to Achieve Operational Synergies

The different Departments currently function autonomously from one another. Each occupies and manages its own space in buildings that were designed and built as far back as the 1950's. As a result, the flow of employees, materials, and work vehicles through the buildings and yards is inefficient, and there are little to no synergies between the departments. Therefore, numerous opportunities exist to improve this situation in the design of a new facility and yard including:

- Office staff should, where appropriate, be consolidated into one open concept administration office area. This will improve communication and collaboration between employees, and will optimize space utilization;

- Meeting rooms and training rooms (adjacent to the administration office area) should be designed for flexible use (with mobile partitions and furniture) and made available for group activities and discussions requiring privacy. Their use should be shared amongst the Departments to reduce the total number required due to variations in demand;

- A single shared data centre should be provided to eliminate duplication and to efficiently utilize space;

- Touch-down stations (for short-term shared use) should be consolidated (and augmented with mobile devices or vehicle dash board units) between the Departments to reduce the number required and to reduce space requirements;

- Employee amenities (lunch room, change rooms and washrooms) should be consolidated and shared by all employees (including both office staff and outdoor operators) to eliminate duplication and to efficiently utilize space. The lunch room should also be designed for flexible use with mobile partitions and furniture to serve the alternate role as a large training room. The employee amenities should be located on the ground floor level close to the work vehicle storage areas for efficient access by operational staff;

- Industrial shops of the same type, from different Departments, should be consolidated to eliminate duplication and to efficiently utilize space and share equipment;

- Parts/materials stores, from different Departments, should be consolidated to eliminate duplication, and to implement technology and storage systems which will maximize the density of storage and more efficiently utilize space;

- Yard space for common functions should be shared to eliminate duplication and to efficiently utilize space. For example, the material storage bunkers should be clustered in one location to store materials that are required by all of the Departments;

- Employee parking should be consolidated at the front of the building (away from the flow of work vehicles) to (1) eliminate the unsafe practice of pedestrians crossing paths with works vehicles, (2) minimize the honeycomb affect (empty stalls due to variations in demand) so as to reduce the total number of stalls required.

2.1.4 Opportunities to Improve the Facility Design

In section 2.1.1 we indicated that the design of the current Works Garages is adversely affecting employee productivity, and the efficient utilization of space. Below, we list the best practices for facility design that should be incorporated into the design of a new facility.

Administrative Offices

To reduce space requirements and improve employee collaboration, the layout of the Administrative Offices should incorporate the following best practices and design features:

- The Administrative staff (management, clerical, technical and planning staff) should be consolidated into an Administrations area to minimize the spatial footprint;

- The Administrations area should be designed with the ability to add at least one additional floor (in the future) when additional capacity is required;

- Standardized Township space standards should be used for the offices, meeting rooms, employee amenities so as to reduce variation amongst different locations, and space requirements. These standards should help promote employee collaboration, productivity and the desired corporate culture. The imperial space standards that were used for employee offices/work stations are listed below:

Managing Director - 10x20 Private Office
Manager - 10x15 Private Office
Supervisor - 10x10 U Open Office
Eng / Tech Staff (w/ plans) - 8x10 U Open Office
Admin / Tech / Coord / RMO - 6x6 L Open Office
Inspec / horticulturalist - 6x4 L Open Office
Dedicated Touchdown station - 4x2.5 Open Office
Shared Touchdown station - 4x2.5 Open Office
Future Shared Touchdn stn - 4x2.5 Open Office

- The main employee entrance should be located beside the employee parking lot (all staff use the same entrance);

- Walls and modular office partitions should be eliminated in favour of an open concept office environment. Private offices are becoming smaller or eliminated all together in favour of more meeting rooms when confidentiality is required. This will improve communication and collaboration between employees, and will optimize space utilization;

- In light of the current Covid 19 social distancing requirements, it should be noted that open concept work areas can be adapted with modular partitions to accommodate staff separation and to provide flexibility in the reorganization of space for future trends;

- A variety of research has shown that employees are both happier and more productive in office environments with natural light and views, as well as natural ventilation (which can be as simple as access to an operable window). Natural light has been shown to reduce seasonal affective disorder, increase visual clarity, help regulate sleep, reduce drowsiness, improve immune function, reduce sick days and increase productivity. Access to natural light, views and ventilation is written into many green standards. Many government organizations have codified the 'Right to Light' for their office design standards -- for example, Alberta Infrastructure's Technical Design Requirements.

- Contemporary office design best practice places open workspaces toward the exterior of the floor plan, with private offices and meeting rooms closer to the center. In this way daylight reaches the greatest number of staff. Natural ventilation, including operable windows, should be incorporated wherever possible. Workshops, meeting rooms, lunch rooms and staff common areas should be treated similarly, maximizing use of natural light and air, with control of glare being critical. We have found that small areas of transparent glazing combined with larger zones of light-diffusing translucent panels provide ideal lighting conditions for fleet garages, wood and metal shops, and other similar environments;

- Electronic swipe entry cards should be required to enter the office area. Employee security and safety must be incorporated into all features of the design of the facility;

- The design of the facility should be “barrier free” and comply with provincial requirements for accessibility.

Employee Amenities

To reduce space requirements, the layout of the Employee Amenities area should incorporate the following best practices and design features:

- The number of female employees within the operations is expected to continue to grow well into the future. One way to accommodate this future growth is to build the female change room next to a storage area. As the demand for female lockers increases, the change room can be expanded into the storage area.

- Create multiple uses for spaces like the lunch room that are often unoccupied and can have a shared alternative use as a training room.

Industrial Shops

To reduce space requirements, the layout of the Shops should incorporate the following best practices and design features:

- The shops should be located adjacent to the parts/supply’s storage area, and any other shops that may be incorporated into the building to achieve efficient flow of employees and materials, and to efficiently utilize space and share equipment.

- A common workshop area should incorporate shared workbenches and communal tools which will be shared between multiple departments to reduce the space needed for the workshop. This will also help to save on collective use equipment such as welding stations and grinders and will lead to greater collaboration between staff in the various departments.

- The shop supervisors’ offices should adjoin the garage bays and provide efficient access to the common workshop area so that the supervisors and operators will be close to each other.

Vehicle Maintenance

The maintenance area should incorporate the following best practices and design features:

- The bays should be designed to include the following:
    - Suspended retractable hose reels for grease, engine oil, transmission oil, engine coolant, compressed air for small guns, compressed air for tire guns, 110volt power, return waste oil, water, in floor drains, an oil grit separator, and an overhead crane on rails. There should also be a fall arrest system for the bay;

- We recommend mobile hoists because they are flexible for use. They are also about one third of the installed price of in-floor hoists. The bay should be approximately 1,320 ft^2 (55 x 24 ft) in size to accommodate large work vehicles and to provide adequate circulation space for mechanics. It should also accommodate a mechanics work bench and storage cabinet.

- The maintenance area should be heated in the winter months with a radiant floor heating system. Large diameter ceiling fans should be used to assist with the movement of warm air, and a high efficiency exhaust system, with variable speed fans, should be provided at each maintenance bay. The installation of insulated rapid motion doors will prevent the need for air curtains over the exterior doors (to maintain the internal room temperature).

Parts/Supplies Storage

To reduce space requirements, the layout of the parts/supply's storage area should incorporate the following best practices and design features:

- The parts/supplies required should be consolidated into one area. This will eliminate duplication of space requirements, maximize the cubic storage density, and achieve economies of scale;

- The parts/supplies storage area should be located adjacent to the Vehicle Maintenance area and the Shared Workshop area;

- High-density storage systems should be used for the parts/supplies (e.g., mezzanine shelving, racking and Vertical Lift Modules). Innovations in technology and the use of automation offer the potential to dramatically improve the material handling, storage, and order fulfillment operations. This may lead to significant gains in productivity, space and cost reduction, and service delivery when employed appropriately.

Tools Storage

The tools storage areas should be located close to where the work vehicles are parked and close to the shared Workshop area so as to minimize walking distances and travel times.

Work Vehicle Storage Buildings

Due to the high capital cost of many of the work vehicles (up to $250,000 for a tandem axle plow, and $800,000 for a Hydro Vac truck), these vehicles should be stored indoors to increase their life span and to minimize maintenance and operational issues. Similarly, most summer maintenance vehicles (e.g., mowers and tractors) should be stored in unheated buildings, over the winter, where they can be protected from the elements.

The primary benefits of storing vehicles indoors are listed below:

- Public Safety;
- Employee Safety;
- Improved Productivity and Response Time;
- Improved Asset Management;
- Impact on the Adjacent Neighbourhood;
- Impact on the Environment;
- Cost Savings.

Public Safety

Vehicles such as plows are used to keep the roads safe, and to respond to emergencies. They are also sensitive to cold temperature and, therefore, may experience starting problems if parked outdoors during the winter. Diesel engines can suffer from jelling; hydraulic oil may have difficulty flowing; and air lines can freeze. In addition to starting problems, the driver/crew might be required to waste valuable time by having to warm-up and clean snow off their vehicle prior to responding to an emergency. This could result in unsafe conditions for the public.

Employee Safety

Storage of larger vehicles outdoors during inclement weather may require an employee to climb on the vehicle to clean it off and prepare it for use. This could expose the employee to unnecessary risks such as slipping and falling. In addition, employees must often access and connect smaller equipment to their vehicles (such as plow attachments and towed compressors). This could also pose unnecessary risks when conducted in inclement weather or in parts of the yard with inadequate lighting.

Improved Productivity and Response Time

Storing vehicles and equipment indoors will enhance the performance of the vehicles, thereby, eliminating potential delays associated with cold engines and frozen equipment. This will increase employee productivity and reduce response time. Furthermore, vehicles that are stored indoors can have their tools and related equipment left in the vehicle securely overnight. This reduces the need to unload and reload tools between shifts, thereby, increasing employee productive time.

Improved Asset Management

Storing vehicles and equipment indoors will reduce unscheduled maintenance costs and vehicle downtime, protect the vehicles from environmental conditions which could increase maintenance costs and reduce vehicle life span, and protect the vehicles from potential vandalism or theft.

Impact on the Adjacent Neighbourhood

The outdoor storage of vehicles will increase the noise output and exhaust emissions from the site. The outdoor storage of vehicles will require extended periods of idling during the winter months, thereby, increasing the inconveniences imposed on the neighbors.

Impact on the Environment

Storing vehicles and equipment outdoors will negatively impact the environment because of oil, grease, and engine fluid entering the groundwater or stormwater system. By comparison, any

leaks that occur within a vehicle storage garage will be captured in a closed floor drain system, thereby, preventing the fluids from reaching the environment.

Cost Savings
The additional costs associated with storing the vehicles outdoors, as discussed above, include:

- Loss of productive labour due to delays in starting the vehicles and preparing them for the road;
- Increased maintenance costs;
- Increased vehicle downtime and resulting loss in productivity;
- Reduced vehicle life expectancy and accelerated vehicle replacement costs.

Therefore, for the reasons discussed above, we recommend that winter maintenance vehicles be parked indoors.

To reduce space requirements, the layout of the storage areas should incorporate the following best practices and design features:

- The Vehicle Storage area should be designed so that it can be expanded as the size of the fleet grows;

- The internal storage area should be heated in the winter months to a temperature of 10^{o}C to ensure that the vehicles are ready for service in the morning. The installation of insulated rapid motion doors will prevent the need for air curtains over the external doors (to maintain the internal room temperature). All walls and ceilings should be painted white (to present a clean appearance and to reflect light). The paint should be an industrial epoxy brand to withstand cleaning by high pressure water. Provision for the proper drainage of ice and snow from the floor area will be a critical safety design feature;

- The current fleet of vehicles are all operated with gas or diesel fuel. However, it is expected that, in the future, some or all of the vehicles will be electrically powered. Therefore, allowances should be provided for future electric recharging equipment;

- Where vehicles are parked indoors, adequate ventilation measures must be taken to prevent the accumulation of fumes, and to prevent fumes from entering office areas.

The heated garage bays should be arranged in a back-to-back, drive through bay layout with large overhead doors at each end for easy vehicle access, efficient operations, and improved site circulation. The heated garage bays should incorporate high efficiency LED overhead lighting and insulated overhead doors with translucent panels to provide natural lighting into the bays. The heated bays should also include the capacity to install future electric vehicle charging stations and a full length in-floor drain system with an oil grit separator.

A separate unheated pole barn building should be used to provide basic covered storage for equipment that doesn't need to be kept warm. This would include road signs and barriers, trailers, mowers, tractors and the garbage truck which benefits from open circulation to reduce odor and keep rodents outdoors. The unheated pole barn has the advantage of a much lower

construction cost than the heated garage bays, so this reduces costs by using unheated storage where suitable for certain vehicles and equipment.

Yard Entrances

Where possible, the entrances to the yard should incorporate the following best practices and design features:

- Works vehicle entrances and exits should be closed off with an automated gate to exclude people and vehicles that are not part of the operations. The entrance should be set back from the roadway, such that vehicles entering the yard are off from the main roadway, while waiting for the entrance gate to open;

- Entrances for employee and public vehicles should be kept separate from the flow of operational vehicles.

Yard Configuration

To reduce space requirements and to promote the safety and security of employees and visitors, the layout of the Yard should incorporate the following best practices and design features:

- The site should be configured to provide for the safe and efficient flow of employees, the public, and vehicles (work vehicles and personal vehicles). The building(s) will be situated on the site so as to provide room to expand as operational growth demands greater capacity;

- The movement of work vehicles should be kept separate from the flow of pedestrians and employee vehicles (for safety reasons). Their movement should be configured for one-way traffic flow utilizing primarily left-hand turns to improve visibility for the driver;

- The flow of work vehicles through the yard must be provided with adequate and safe turning radii to avoid collisions and damage to vehicles or buildings. This includes insuring that parking stalls are adequately sized for the vehicles;

- If an area does not need to be paved it should be landscaped so as to permit storm water to percolate naturally into the ground;

- Any refuelling stations located in the yard, should be situated out of the main flow of traffic, and designed to be able to accommodate vehicle line-ups without blocking the general flow of traffic in the yard;

- The yard should be configured such that items that are most frequently used are closest to the main yard flow. Items less frequently used are placed near the back of the yard;

- The yard should be equipped with well-marked signage that clearly marks direction of travel, storage locations, and special movement and safety instructions;

- Full security fencing should be constructed around the yard, and external lighting, security cameras and motion alarms should be installed. Electronic pass-keys should be used within the building.

Yard Parking

To reduce space requirements and to promote the safety and security of employees and visitors, Yard Parking should incorporate the following best practices and design features:

- The flow of public and employee vehicles should be kept separate from that of work vehicles to avoid collisions. Furthermore, the flow of pedestrians (the public and employees) should not have to cross traffic in order to access the front of the building;

- Where it is not practical to park winter response vehicles indoors, they should be located in shelters faced to the east or south, with receptacles to allow block heaters and hydraulic heaters to be plugged in overnight;

- Work vehicles parked outdoors should be located close to the building so as to minimize employee walking distances;

- Where possible, surfaces should be unpaved to allow storm water to percolate naturally through the parking surface. When paving is required, materials that are permeable to water are recommended (e.g., permeable concrete) unless there is handling and / or storage of fuel, waste, chemicals and / or salt;

- Environmentally friendly modes of transportation should be promoted. Buildings should be equipped with lockable storage for bicycles and preferred parking spaces should be made available for car-pooling and energy efficient vehicles;

- Underground electrical conduit should be incorporated to allow for future electric vehicle charging stations at some parking spots for visitors, employee personal vehicles and works vehicles;

- Light pollution control can be achieved by installing fixtures that are down-lit. Full-cut off, ground covers and positioning of the fixtures on site would stop the light from over spilling to other adjacent sites.

Yard Storage

To reduce space requirements and to promote the safety of employees, Yard Storage (for vehicles, equipment and materials) should incorporate the following best practices and design features:

- Work vehicles should be parked as close to the indoor employee amenities as possible to minimize walking distances by the work crews. This does not apply to contractor vehicles as the crews do not utilize the buildings;

- For storing certain types of equipment and materials (those that can be placed on pallets) metal racking (single deep) should be installed in the yard to reduce space requirements;

- The bulk storage of materials within the concrete block storage bunkers should be shared by all the Departments to eliminate duplication in other parts of the yard;

- All plastic and rubber items, including piping and fittings, must be stored in shelters that protect these items from deterioration by the sun;

- Items that must be kept clean, such as fittings for water services, should be stored such that they will not become contaminated with yard dust and debris;

- All items stored in the yard should be organized in well-marked storage locations;

- Outdoor storage areas should not be paved, unless needed, to allow storm water to percolate naturally into the ground;

- The view of the yard from all public roadways must be attractive, well landscaped, and well maintained without appearing extravagant. Landscaping buffers should be built;

- The design for the salt storage building should meet the current industry best management and engineering practices including impermeable surfaces, secondary containment for any liquid de-icing materials and indoor loading and unloading of salt including a drive through layout. This is critical if the salt storage buildings remain within municipal wellhead protection areas or in close proximity to non-municipal residential systems.

Vehicle Fueling

To reduce space requirements, and to promote the safety and productivity of employees, the location of the Vehicle Fueling operation should incorporate the following best practices and design features:

- The vehicle fuelling location should be set up such that vehicles returning to the yard can travel (without backtracking) from the yard entrance to the fuelling location and then to the parking area, in the most efficient way possible. Since there may be a line-up for fuelling it should be located such that vehicle line-ups do not block the main access route around the yard;

- The fuelling location should be situated well away from buildings and the property line to meet safety requirements;

- The fuelling traffic lanes should be set up such that vehicles waiting for fuel do not block yard circulation;
- The fuel tanks should be located above ground with each storage tank inside a separate outer containment tank that acts as a protective barrier;
- The entire tank area, along with the pumps, should be mounted on an elevated concrete pad;
- The entire tank area should also be protected by heavy steel bollards and a crash resistant railing;
- The fuel islands and pumps should be set up such that they can be approached from either side, and are far enough apart that two full sized trucks (equipped with ploughs) can pass, side by side, between the islands and pumps;
- Newer installations are often equipped with canopies and lighting such that vehicles can be fuelled in the dark and in inclement weather without delaying operations;
- The fueling area should not have a drain or any permeable surfaces, such as gravel, so that spilled fuel will not enter local water courses or groundwater;
- The current fleet of work vehicles are all operated with gas or diesel fuel. However, it is expected that, in the future, some or all of the vehicles will be electrically powered. Therefore, allowances should be provided for future electric recharging equipment.

Vehicle Washing

To reduce space requirements, and to promote the productivity of employees, the location of the Vehicle Wash Bay should incorporate the following best practices and design features:

- The vertical clearance within the Wash Bay should be sufficient to allow dump trucks to raise their box for rinsing;
- The interior of the Wash Bay should be equipped with sufficient heating to prevent freezing inside during the winter;
- The Wash Bay should be equipped with an access platform so that operators can access the top of their vehicle safely without climbing onto the vehicle itself;
- The concrete pad immediately outside the entrance/exit doors should have radiant heating to prevent the formation of ice during the winter;
- The installation of insulated rapid motion doors will prevent the need for air curtains over the exterior doors (to maintain the internal room temperature);

- The Wash Bay should be equipped with a steam cleaning system to remove grease from vehicles and engine parts. It should be located in an adjacent room to avoid corrosion. Operators will utilize a high-pressure, hand held, spray wand to clean the vehicles. There will also be a fire hose and a built-in underbody spray;

- A drainage system and sump will be required to collect approximately 70% of the grey water for reuse.

Sustainability

The level of environmental sustainability built into the design of new Operations facilities varies depending on the level of importance the municipality places on achieving and promoting LEED certification (Leadership in Energy and Environmental Design). This is because achieving LEED certification typically adds 15-20% to the capital cost of the facility with comparatively small annual savings in energy costs.

However, there are design features that are cost effective and, therefore, recommended to minimize electrical and water consumption, and provide a better working environment for employees including:

- All lighting systems should be LED and, where possible, should utilize (1) motion detection to turn the lights on/off, and/or (2) light sensors to reduce the electrical light when daylight helps to illuminate the space;

- The roof decking, structural steel and walls of the facility should be painted white to present a bright clean appearance and to better reflect light;

- Where possible, skylights and windows should be incorporated into the design of the facility to reduce the need for light fixtures and to provide a better working environment;

- Approximately 70% of the grey water from the vehicle wash bay should be recycled;

- The internal vehicle storage and shop areas should be heated in the winter months with a radiant floor heating system to a temperature of 10^{o}C to ensure that vehicles are ready for service in the morning. The installation of insulated rapid motion doors will prevent the need for air curtains over the external doors (to maintain the internal room temperature). Doors with transparent panels are desirable to reduce electrical lighting costs during the day;

- A high-performance building envelop should be used at floors, walls and roof of the building in order to minimize heating and cooling costs;

- The project needs to create a functional and efficient workplace that provides a safe, healthy and desirable work environment;

- Building should be orientated so that windows for daylighting can be placed on the north and south facades. This approach allows shading devices to be used to deflect unwanted solar heat gain in the summer and permit desirable solar heat gain in winter months;

- Building materials used for the construction of the building should generally be selected based on the following criteria:
    - Location of manufacture; closer is better;
    - Recycled content; the more recycled content the better;
    - Avoid the inclusion of hazardous materials in the manufacturing process or final product.

- Building mechanical systems should consider:
    - use a highly efficient mechanical plant (i.e., cogeneration like at the Sportsplex);
    - displacement ventilation, heat recovery systems and CO2 monitoring controls for the delivery and exhaust of required fresh air to the building;
    - heat recovery systems designed to capture heat from wastewater at showers and use it to heat domestic water for the building.

2.2 FUTURE STATE

This section forecasts the future state (2041) resources (employees, vehicles and equipment) required by the Infrastructure Services Department (and other Departments requiring space). It will also identify the opportunities to achieve synergies between the Departments, and to improve the facility design. This information will be used, in subsequent sections, to develop a preferred space program and conceptual site plan for a new facility.

2.2.1 Growth

The 2016 population of the Township of Centre Wellington, at 29,885, is anticipated to grow significantly to reach 52,310 within the next 20 years. The majority of the growth is expected to occur in the urban centres of Fergus and Elora-Salem. To sustain this growth, new roads, bridges, watermains, sewers, parks and recreation and forestry infrastructure will need to be created. Furthermore, changes in technology, government legislation, and the condition of older infrastructure, will further increase the demand for Township resources. Below, we describe some of the main factors that will affect the number of resources (employees and work vehicles) required, by 2041.

Population and Infrastructure Growth

The Township's growth in urban population, over the next 20 years, is expected to almost double (refer to table 2.4, below, for the Growth Forecasts from the Wellington County Official Plan). We believe that this urban growth will directly increase the demand for the services provided by the Township's departments. Infrastructure Services will be under increased pressure for infrastructure repair and new construction (such as bridges, roads, sanitary and

storm sewers, sidewalks, watermains, and snow clearing) and infrastructure maintenance. The Parks and Recreation department will be under pressure for the upkeep and expansion of parks, trails and community use recreational facilities. The IT department will need to provide efficient and up to date technology and IT services to support the expanding network.

In addition, population demographics will continue to change towards residents with higher service expectations which will also increase the demand for services.

Increased density throughout much of the Township will likely result in a number of changes that will affect the resource requirements for the Departments. Examples include:

- Traffic congestion, affecting both work site interference and staff travel time. This will increase the need for more employees in order to maintain the same service levels;
- Reduced speed for plowing resulting in the possible splitting of routes;
- Increased use of smaller equipment that is more suited to sidewalks and partially restricted narrower streets.

To reduce the effect of increased urbanization, it will become increasingly important to have the correct number of employees/equipment strategically located at the various Works Garages.

Table 2.4 – Growth Forecasts from the Wellington County Official Plan

	Township of Centre Wellington		Elora-Salem		Fergus		Outside Urban Centres	
	2016	2041	2016	2041	2016	2041	2016	2041
Total Population	29,885	52,310	7,565	13,060	14,975	31,630	7,345	7,625
Households	10,785	18,690	2,750	4,675	5,605	11,415	2,430	2,585
Total Employment	11,970	22,780						

Changing Technology

The Township has, over the years, adapted to numerous changes in technology and methods that will continue to affect the way operations are carried out. These changes save money, labour, time, and the environment. Community expectations are also changing. Citizens are expecting greater communication, involvement, and transparency in the planning and spending of their tax dollars. This means that the Departments will need to continue to implement new technologies and improve efficiencies in service delivery.

Increasing Legislative Regulations, Standards and Associated Costs

A trend towards increasing government regulations, policies, standards, and their associated higher costs will continue to impact the ability of the Departments to deliver core services, and meet expectations. Liability or potential liability claims, can also affect the Departments ability to manage within the existing budgets and resources.

Infrastructure Deficit

Across most Canadian municipalities, aging and deteriorating infrastructure has resulted in a large and growing infrastructure deficit. For example, many of the roads, bridges, watermains and sewers within the Township are deteriorating and are in need of repair or replacement.

As the various forms of infrastructure continue to age, more of the Township's efforts will be focused on maintaining and replacing these infrastructure elements. This will add to the daily requirements of the workforce.

Demand for Accountability and Value for Money

The Township, like all municipalities, is under increasing pressure to reduce operational costs and deliver greater value. Continuous improvement programs are underway to eliminate waste and to develop improved methods for delivering services at reduced cost to the taxpayer. This means improved technology, increased training and monitoring of work crews, and overall increased transparency of operations that will demonstrate to the public that they are receiving good value for money spent.

Therefore, the number of employees and work vehicles that will be required in the coming years will be dictated by the above factors - changes in population, technology, legislation, aging infrastructure, and community expectations for service level requirements. All of these issues will contribute to an increase in the number of employees and work vehicles required. While there is no way to know precisely how all of these issues will unfold, interact and affect the Departments over the next 20 years, we will, in section 2.2.2, forecast the number of employees and work vehicles required by 2041.

2.2.2 Resources – Employees and Vehicles

Section 2.2.1 discussed the predominant factors that will affect the resource requirements for the Departments, over the next 20 years. In this section, we forecast the number of employees and work vehicles required by each of the Departments in 2041. The forecasts were calculated based on an appropriate factor being applied to the population growth numbers. They were then vetted by departmental managers with a wealth of work experience and in-depth knowledge on staffing needs and vehicle/equipment operational requirements.

Forecast Employees

The total number of employees forecast to be required in 2041 (during the summer and winter) is shown in the table below. We have included employees from the Public Works Fergus Garage, the Water Works Shop, Engineering, Source Water Protection, Information Technology, Parks and Recreation and Forestry employees, who should be relocated to the new Operations Centre. The table doesn't include the operators at the Elora and Pilkington garages since they are intended to remain on the west side of the Township at the Elora Works Garage satellite location.

Table 2.5 – Future Number of Employees Forecast to 2041

Department	Office Employees	Outside Employees			Total (max)
		Full Time	Summer	Winter	
Public Works (not including Elora & Pilkington Operators)	6	12	6	8	**26**
Engineering	8		2		**10**
Water	5	10	2		**17**
Information Technology	7				**7**
Risk Management (Source Water)	4		0		**4**
Parks	2	2	19		**23**
Forestry	2		1		**3**
Mechanic		2			**2**
Total	**34**	**26**	**30**	**8**	**94**

Note: The maximum number on-site during the peak season (summer) is 90 employees

Consideration of Staff Working From Home

It should be noted that the number of office employees forecasted for 2041 does not take into account the potential for some technical staff (engineering, source water protection and building officials) to be able to continue working from home on a partial basis (following the end of the Covid-19 Pandemic). This is because more study and discussion will be needed before the Township can determine how best to proceed. The prime benefit to the Township of having employees working from home is a reduction in office space which may result in reduced operating costs. There are also potential ancillary benefits to staff working from home including reduced commuting time, and the corresponding reduction in vehicle emissions, fuel and maintenance costs. There would also be an increase in time spent at home which may help to improve work life balance depending on the individual situation.

However, there are also potential disadvantages which are not yet well understood. They are likely to include the detrimental effects of a reduction in human contact such as (1) decreased spontaneous communication and collaboration among staff, (2) diminished capability for mentoring and training staff, and (3) the emotional consequences of prolonged social isolation including increased stress, anxiety and reduced social skills. Other potential disadvantages may include some workers not having a reliable connection to high speed internet or not having a suitable, ergonomically designed office space, at home, that provides privacy from family distractions. Sustained poor postures can cause musculoskeletal disorders (MSDs) such as impeded circulation, numbness, tingling, pain and muscle strain as well as repetitive stress injuries such as tendonitis and carpal tunnel syndrome. All of the above issues could decrease employee productivity.

The monetary costs of the potential detriments to the physical and mental wellbeing of staff and the potential for decreased productivity are difficult to quantify. The cost benefit analysis of the advantages and disadvantages of working from home is a complex issue. More in-depth study would be needed in order to determine if the benefits outweigh the potential disadvantages that may arise from staff working from home on a long-term basis.

Work Vehicles and Equipment

The total number of work vehicles and equipment that would be stored at the new Operations Centre, in 2041, is shown in Table 2.6, on the following page.

Table 2.6 – Future Work Vehicles & Equipment to be stored at the Operations Centre

Department	Work Vehicle & Equipment Description	Quantity	Type of Storage
Roads	Tandem Axle Dump Truck	3	Heated
Roads	Single Axle Dump Truck	5	Heated
Roads	1 ½ Ton Truck – Plow & Sander	4	Heated
Roads	Backhoes	2	Heated
Roads	Graders	2	Heated
Roads	Loader	1	Heated
Roads	Pick-Up Truck	1	Heated
Roads	MT Trackless (snow clearing)	4	Heated
Roads	Paint Machine	1	Heated
Water	Vactor Truck	2	Heated
Water	Mower w/ snow blower	1	Heated
Parks	Pick-up	3	Heated
Parks	Water Trailer	2	Heated
Total V&E - Heated Storage		**31**	
Roads	Street Sweeper	2	Covered
Roads	4500 Dually Utility Truck	1	Covered
Roads	Pick-up	8	Covered
Roads	Mower	5	Covered
Roads	Trailers	5	Covered
Water	1 ½ Ton Truck w/ dump box	1	Covered
Water	Pickup truck	10	Covered
Water	3500 Dually Utility Truck	1	Covered
Water	Valve Maintenance Trailer	1	Covered
Parks	Garbage Truck	1	Covered
Parks	Landscape Truck	3	Covered

Department	Work Vehicle & Equipment Description	Quantity	Type of Storage
Parks	Pick-Up Truck	6	Covered
Parks	Mower – 10 ft.	3	Covered
Parks	Mower – 60”	5	Covered
Parks	Tractor	3	Covered
Risk Management	SUV	2	Covered
Total V&E - Covered Storage		**57**	
Roads	Soil Screener	1	Outdoor
Roads	Hot Box	2	Outdoor
Roads	Paving Roller	2	Outdoor
Total V&E - Outdoor Storage		**5**	

3.0 SPACE ASSESSMENT

In section 2.0, we identified the current and future facility needs and opportunities (to the year 2041) for those Departments currently working from the five Works Garages, and the Parks farmhouse and storage barn. In this section, we will discuss the tasks that were completed to assess the space requirements for each of the alternative options presented in section 4.0. (to address this Problem and Opportunity).

To identify the space requirements, the following tasks were completed:

- Reviewed background information, drawings, reports and documents;
- Conducted a Kick-Off meeting with 20 members of the Township’s Staff Working Group to review the objectives and scope of work for the project;
- Interviewed 17 staff from the Working Group who represented all of the participating departments;
- Toured the existing five Township Works Garages as well as the Pilkington Office, Parks Barn, and Greenhouses to observe the conditions and flow of activities;
- Toured four external municipal Operations Centres (Wellington County, Mapleton, Halton Hills and Brampton) to discuss their “Lessons Learned” and how they may apply to the Township’s need for more space;
- Completed Staff Workshop 1 for 20 members of the Township’s Staff Working Group to discuss the functional needs of the different departments;

- Created a 20-year forecast of the number of employees, vehicles and equipment required by each department based on staff input and on population growth projections showing that the urban population of Fergus and Elora-Salem is anticipated to double by 2021;

- Developed standard workstation and meeting room sizes for the design of new Administrations Office space;

- Determined appropriate sizes and quantities of garage bays (heated and unheated), parking stalls, outdoor storage areas, yard facilities (wash bay, salt storage, fueling, greenhouses) and operational vehicle circulation aisles to determine a recommended site size of approximately 20 acres in order to accommodate long term growth of multiple departments;

- Recommended that the 20 acre operations centre site should be at a centrally located site close to the urban population centre to maximize efficiency of operations and delivery of services;

- Developed Draft 1 for the functional space program to address the Township's need for space to a horizon of 2041;

- Reviewed Draft 1 with the Managing Directors for their input;

- Developed a Draft 2 for the functional space program and reviewed it with staff for input;

- Met with the Township's Staff Working Group to review the functional space program;

- Received feedback (through staff) from Council's December 2019 budget meeting;

To determine the space required for the work stations and office areas, we utilized the following standard imperial office sizes based on the job role:

1 Managing Director - 10x20 Private Office
2 Manager - 10x15 Private Office
3 Supervisor - 10x10 U Open Office
4 Eng / Tech Staff (w/ plans) - 8x10 U Open
5 Admin / Tech / Coord / RMO - 6x6 L Open
6 Inspec / horticulturalist - 6x4 L Open
7 Dedicated Touchdown station - 4x2.5 Open
8 Shared Touchdown station - 4x2.5 Open
9 Future Shared Touchdn stn - 4x2.5 Open

The vehicle parking stalls were sized as follows:

Employee parking – 2.9m x 9m (width x distance to the centre of the cross lane)
Standard work vehicle (e.g., pick-up truck) – 3.5m x 11.5m
Large work vehicle (e.g., tandem axle truck) – 3.5m x 14.5m

The first draft functional space program identified a need for 60,736 ft^2 of indoor space with an estimated construction cost of $18.83M (assuming $310/$ft^2$) for a new Operations Centre to serve the needs of multiple departments. The recommended site size was approximately 20 acres. The construction cost estimated doesn't include land or soft costs such as consulting fees, furniture, and moving costs.

Through the first draft of the space program and review of the site constraints of the existing works garages, it was recognized that although the 18.6 acre West Garafraxa site was close to the recommended 20 acre size, its location at the far east end of the Township made it an unsuitable site since it's not central to the urban high population areas. The existing garages at Pilkington, Elora and at the WaterWorks shop on Queen Street in Fergus range in size from 1 acre to 4 acres and were too small. The Sportsplex grounds also had to be ruled out since there is already insufficient space at that site for the community festivals. It was determined that the existing 13.5-acre Fergus East Works Garage would also be unsuitable for a new Operations Centre. This is because it has less than 8 usable acres and only 2.5 of these acres are suitable to build on. By comparison, the preferred site required at least 20 acres in order to accommodate long-term growth of multiple departments.

Given that none of the existing sites were suitable, the detailed space program was developed for a new operations centre to accommodate the long term growth of multiple departments on a recommended 20 acre site. This was the basis of Option 5 which formed the first draft of the operations centre space program.

The feedback direction from the Managing Directors on the first draft of the space program was to look for ways to further reduce the space requirements and to consider a phased construction approach that would utilize indoor space at the existing Works Garages to store seasonal work vehicles and equipment and reduce the initial construction cost of the operations centre.

The revised draft functional space program (which is presented as Option 6) identified a need for 37,111 ft^2 of indoor space with an estimated initial construction cost of $14.92 M for Phase 1 of a new Operations Centre (see section 5.0). The space required is shown in Appendix A.

Within the space program, we have looked for ways to minimize space requirements so as to reduce travel distances and construction costs while still achieving space adjacency preferences.

4.0 ALTERNATIVE OPTIONS

4.1 Overview of Potential Solutions

In section 1.1, above, we outlined the Problem and Opportunity facing the Township of Centre Wellington with regards to the current works garages for the Public Works, Water, and Parks Departments. Below, we provide an overview of the eight options that were identified as possibly being able to address this Problem and Opportunity. Following in Sections 5 and 6 we present the evaluation criteria and scoring of each of the eight options.

Option 1 – Do nothing

This option would involve continuing to use the (1) five existing Works Garages, (2) Infrastructure Services Office, (3) Waterworks Garage and Office, and (4) Parks Barn, Farmhouse Office and existing Greenhouses, for the next 20 years. Required repairs and routine building maintenance would be completed, but without any space additions. There would be no capital cost requirement. However, the cost of the required repairs to the existing facilities over the next 20 years would be approximately $4.02 mil. This estimate is based on repair costs identified in the 2020 building condition audits by Cion Coulter.

Option 2 – Renovate and Expand the Existing Works Garages, Infrastructure Services Office and Parks facilities

Option 2 would involve the following:

- Renovating the Elora and Pilkington Works Garages and building an addition at the Elora Works Garage to address the issues documented in section 2.1.1 including (1) meeting the 20-year growth requirements for the employees, vehicles and equipment stationed on the west side of the Township, (2) satisfying the need for indoor storage space, (3) complying with building code and accessibility requirements, (4) providing suitable employee amenities (e.g. male and female change rooms and washrooms), and (5) eliminating any health and safety concerns;

- Renovating and expanding the Pilkington Office building to meet the 20-year growth requirements for office staff from the Public Works, Water, Engineering, Source Water Protection and IT departments including an IT hub and server room and an elevator for accessibility. The architecture of the addition would need to suit the historic style of the existing office building which was converted from a century home;

- Renovating the Parks and Recreation Department's Barn for use as an unheated storage space for vehicles and equipment, and building a new heated storage garage and employee amenities building. Also, renovating the existing greenhouses and building a new one;

- Demolishing and rebuilding the existing Fergus East Garage because of the numerous issues documented in section 2.1.1 including the fact that the building is at the end of its expected asset life – repairing and upgrading the building would be more costly than demolishing and rebuilding it. The new building would consolidate the operators, vehicles and equipment from the Fergus East and Water Works facilities, and with a future addition it could meet the 20-year growth requirements for the Water Works and Fergus East operators, vehicles and equipment;

- Vacating staff from the Water Works building and relocating water staff to the new Fergus East Garage. Continuing to maintain the operation of the well house and the use of the garage bays at the Water Works building for off-site seasonal covered storage of vehicles and equipment;

- Renovating the office at the West Garafraxa Works Garage in order to permit the archive and records files to be handled and stored safely and securely within the basement level of the office. This would include installing an elevator and two high-density file storage systems;

- Renovating the West Garafraxa garage building and repairing the existing salt shed so that they could continue to be used as the satellite works garage for road clearing operations at the east end of the Township. This however, will not address the source water protection concerns related to the existing salt storage shed at West Garafraxa.

The above renovations would be completed in phases, over the next 15 years, to align with the growth requirements and operational needs. The total capital cost over this period is estimated to be $16.68M, not including soft costs, (see Appendix E for details).

Option 3 – Build a new combined Operations Centre with the County after 15 years and build additions and renovations to existing Township facilities in the interim

Option 3 would involve the Township and County collaborating to build their respective new Operations Centre's on a shared site. Potentially, some of the indoor spaces could be shared to reduce overall construction costs (e.g., lunch room, training room, meeting rooms, and changing rooms). A larger site would probably be needed for a combined facility, but the site costs could be shared between the County and the Township.

The County has indicated that it would be at least 15 years before it would be interested in building a joint facility. A letter from the County is included in Appendix D. Therefore, similar to Option 2, the Township would need to renovate and expand some of its current facilities, as interim measures, in order to meet the urgent short-term growth requirements and operational needs.

Option 3 would involve the following interim renovations and expansions:

- Renovating the Elora and Pilkington Works Garages and building an addition at the Elora Works Garage to address the issues documented in section 2.1.1 including (1) meeting the 20-year growth requirements for the employees, vehicles and equipment stationed on the west side of the Township, (2) satisfying the need for indoor storage space, (3) complying with building code and accessibility requirements, (4) providing suitable employee amenities (e.g., male and female change rooms and washrooms), and (5) eliminating any health and safety concerns;

- Vacating staff from the Water Works building but continuing to maintain the operation of the well house and the use of the garage bays for off-site seasonal covered storage of vehicles and equipment;

- Renovating the medical office and relocating the management and administrative staff into both floors of the medical office;

- Renovating the Parks and Recreation Department's Barn for use as an unheated storage space for vehicles and equipment, and building a new office area within the Sportsplex by renovating the existing Hall of Fame space. Also, build a storage building, renovate and relocate the existing greenhouses, and build a new greenhouse on the Sportsplex grounds;

- Demolishing and rebuilding the existing Fergus East Garage because of the numerous issues documented in section 2.1.1 including the fact that the building is at the end of its expected asset life – repairing and upgrading the building would be more costly than demolishing and rebuilding it;

- Renovating the West Garafraxa garage building and salt shed so that they could continue to be used as the satellite works garage for road clearing operations at the east end of the Township;

- In 15 plus years, the Township would team with the County to build a joint Operations Centre. Once the Township has moved into the new Operations Centre it could sell the Pilkington and Fergus Works Garages. The land behind the West Garafraxa Garage could be severed and sold for revenue earlier on.

The above renovations would be completed in phases over the next 15 plus years, to meet growth requirements. Option 3 has the highest total capital cost estimated to be $41.02M, including land but not including soft costs.

Option 4 – Build a new Township Works Garage With Office on an existing site to address the current space needs of only the Infrastructure Services Department and build phased additions and renovations to existing facilities for future needs

Through the space needs assessment, it was determined that the ideal site would be centrally located close to the urban centres and would require a minimum of 20 acres in order to accommodate the long-term growth requirements of multiple departments. This meant that the existing 13.5-acre Fergus East Works Garage property (at 600 Glengarry Crescent) would be too small and unsuitable for a new Operations Centre since it only has approximately 2.5 acres that are suitable for construction. However the Glengarry site could potentially be used for a smaller new facility to meet the current needs of office staff and of operational staff from the existing Fergus East garage combined with staff from the WaterWorks shop on Queen St in Fergus, since those two facilities are essentially at the end of their useful life and need to be replaced in the short term.

Phase 1 of Option 4 would, therefore, involve building a replacement new Works Garage with an office and operator support areas at the existing Fergus East Works Garage site at 600 Glengarry Crescent, to address the current space requirements for only the Infrastructure Services Department in a three year time frame. However this would not accommodate the long term growth needs of multiple departments over the next 10 to 20 years.

In Phase 2 of Option 4 the Township would need to renovate/expand other buildings to accommodate the growth requirements for the Infrastructure Services Department and the multiple other departments (i.e., Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage) since the buildings they currently occupy are already at or beyond capacity. As part of Phase 2, within 10 to 20 years, the Township would also need to build an addition onto the new Works Garage and office at 600 Glengarry Cres to accommodate the future growth and operational needs of the Infrastructure Services department.

The capital cost for Phase 1 of the new Works Garage with Office at the Fergus East Garage site (excluding soft costs) would be approximately $15.1M. The total cost for both Phases 1 and 2 would be approximately $20.43M.

Option 5 – Build a new Township Operations Centre on a new site in two phases to address the long-term space requirements for multiple departments with the majority of construction in phase 1

Option 5 would involve building a new Operations Centre in two phases, on a new site, to address the 20-year space requirements for multiple departments (i.e., Public Works, Water Works, Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage). The full size of the heated and unheated works garage areas, office space and one greenhouse would be built in Phase 1 in a three year timeframe. Phase 2 construction would include the future greenhouse and salt storage facility which would be added in the 10 to 20 year timeframe.

The facility would need to be 54,604 ft^2 in size and would have a total cost of approximately $24.25M to build both phases (including land, greenhouses, and an indoor loading salt storage building). The soft costs such as consulting fees, furniture and moving expenses would be extra. Option 5 would provide a new multi departmental operations centre within three years that would be built in accordance with current codes and best practices on a new centrally located site. Only the minor additional facilities for salt storage and an extra greenhouse would be left for construction until Phase 2.

Option 6 – Build a new Township Operations Centre on a new site to address the long-term growth requirements for multiple departments using a two-phased approach, and continue to use the existing Garages (until the completion of Phase 2 in 10-20 years) for off-site vehicle and equipment storage

Option 6 includes the construction of a new Operations Centre on a new site in two phases, but it differs from Option 5 by leaving more of the construction until Phase 2 and therefore,

deferring more of the capital cost until Phase 2 which would be built in 10 to 20 years. Phase 1 would be built in a three year time frame.

For Phase 1 of Option 6, the construction of the new Operations Centre (on a new site) would include the full office area (to accommodate the projected 2041 staff counts for the administrative, technical and management employees from multiple departments), as well as one greenhouse, and the heated and unheated garage bays for the current needs of the public works and water operations. For Phase 2, another greenhouse and a salt storage facility would be constructed as well as additions to the heated and unheated garage bays (which could then incorporate the Parks operations, and house all the parks and works garage vehicles and equipment at the Operations Centre).

Option 6 would provide sufficient space to accommodate the growth requirements for the Infrastructure Services Department and multiple other departments (i.e., Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage) onto one site. Refer to Section 9.0 for a Conceptual Site Plan showing a potential Operations Centre layout for Phase 1 and 2 of Option 6 on a new site.

In order to reduce the initial construction cost of Phase 1 of Option 6 (while meeting the full indoor storage requirements for vehicles and equipment) most of the existing Works Garages would need to continue to be used for seasonal vehicle storage until Phase 2 is built. However, the existing works garages would not be upgraded or expanded.

The following outlines the planned use of the existing facilities during Phase 1 of Option 6:

- Keep the Pilkington Works Garage for off-site vehicle and equipment storage in Phase 1 and lease out the Pilkington Administration Building (it would be attractive to a Professional services firm). Following Phase 2, the Pilkington Works Garage (including the Administration Building) could be sold;

- Keep the Fergus Waterworks Garage for storage since it houses Fergus Well #1 and related water storage and treatment systems that must continue to be operated. The existing garage bays would be used for storing off-season vehicles and equipment;

- Keep the Elora Works Garage as a satellite facility on the west side of the Township to minimize crew travel times;

- The salt shed at the Fergus East garage will be kept along with a driveway for access, but the rest of the site including the existing works garage, helipad, and entire rear yard area could be severed and sold after Phase 1 of the Operations Centre has been built and the Fergus East staff have relocated there. When the salt storage shed at the Fergus East garage requires major repairs, it would be replaced by a new salt storage building at the new Operations Centre in Phase 2;

- Sever and sell the rear farmland area at the West Garafaxa Works Garage but keep the garage and salt shed for off-site storage and to minimize deadhead time for salters in the east end of the Township;

For Phase 2, additional heated and unheated garage bays would be built at the Operations Centre for indoor storage of vehicles and equipment, thereby, eliminating the need for the Works Garages (except the Elora Garage and the West Garafraxa Garage which would remain as satellite facilities at the east and west ends of the Township, and the Fergus Waterworks Garage since it houses Fergus Well #1 and related water storage and treatment systems that must continue to be operated).

This would limit the initial capital construction cost, for Phase 1 of Option 6, to $14.92M (including land but not soft costs). The second phase would be built 10 to 20 years later as funding becomes available at an additional cost of $10.03M for a total cost of $24.95M for Option 6.

Option 7 – Build a new Township Operations Centre on a new site in two phases by building the works garage in phase 1 and building the office and garage additions in phase 2. Until the completion of phase 2, use the existing Medical Office as interim office space and use the existing Garages for off-site vehicle and equipment storage.

Option 7 has a lower initial capital cost than Options 5 and 6 since the construction and cost of the administration office is delayed until Phase 2. Phase 1 of Option 7 only includes the construction of a new works garage facility on a new site to accommodate current operational needs. The majority of the construction and capital cost of Option 7 is deferred until Phase 2. Option 7 has a higher overall construction capital cost than Options 5 and 6.

Phase 1 of Option 7 would include building the heated and unheated garage bays and crew support areas (sized for current needs). In the interim during Phase 1, the office employees (i.e., administrative, technical and management staff) would be relocated into both floors of the Township's existing Medical Office rather than building office space at the new Operations Centre. This would reduce the initial size of the Operations Centre by 5,936 ft^2 and reduce the initial construction cost by approximately $1.90M (as compared to Option 6). However, the cost to renovate the Medical Office would be approximately $851,000 (assuming 7,952 ft^2 at $90/$ft^2$ plus $135,000 for an elevator and miscellaneous). Therefore, the initial capital cost for Option 7 (including land but not soft costs) would be $13.02M (versus $14.92M for Option 6). However, by using the Medical Office rather than leasing it out to the private sector the Township would lose rental and tax income. We estimate that the rental income would be approximately $143,000 per year (at $18/$ft^2$).

Phase 2 of Option 7 would involve building an office addition onto the Operations Centre in 10 to 20 years as funding becomes available. This would permit the relocation of the office staff from the Medical Office. Phase 2 would also include additional heated and unheated garage bays (as needed for long term growth), greenhouses, and a salt storage facility.
The total cost for Option 7 (Phases 1 & 2) would be $26.08M (including land but not soft costs).

Refer to Appendix G for several options of high-level concept floor plan drawings showing how the Medical Office could be repurposed for use as Township office space for Option 7.

Option 8 – Build a new Township Operations Centre on a new site in three phases. Phase 1 would include building the initial works garage bays. Phase 2 would involve the construction of an office. Phase 3 would include additions to the garage bays, two new greenhouses, and a salt storage building.

Option 8 is similar to Option 7 except that the administration office would be built onto the Operations Centre within 5 years (as Phase 2) rather than 10-20 years.

In Phase 1, the construction of the new Operations Centre in the three year time frame would include construction of the heated garage bays, operator support areas, supervisor offices, and the unheated pole barn building to address the current needs of the public works and water operations. It would also include a dedicated mechanics bay.

In Phase 2, the full build-out of the office would be added to the Operations Centre (within 5 years) to consolidate the management, technical and administration staff from the departments of Infrastructure, Water, Engineering, Source Water Protection, IT and archives records storage. Until the new office was built in Phase 2, office staff would be temporarily housed at the existing Medical office building.

Option 8 is similar to Options 6 & 7 in that most of the existing Works Garages would need to continue to be used for seasonal vehicle storage, for 10-20 years, until the operations centre garage additions are built in Phase 3. During this time, the existing Works Garages would not be upgraded or expanded but would be used as follows:

- Keep the Pilkington Works Garage for off-site vehicle and equipment storage in Phase 1 & 2.

- The Pilkington office building can be rented out from the outset once the Infrastructure Services staff has relocated to the Medical Office. The Pilkington office can be sold along with the Pilkington Works Garage once Phase 3 of the Operations Centre has been completed;

- Keep the Fergus Waterworks Garage for storage since it houses Fergus Well #1 and related water storage and treatment systems that must continue to be operated. The existing bays would be used for storing off-season vehicles and equipment;

- Keep the Elora Works Garage as a satellite facility on the west side of the Township to minimize crew travel times;

- The salt shed at the Fergus East garage will be kept along with a driveway for access, but the rest of the 600 Glengarry Crescent site, including the existing works garage,

helipad, and entire rear yard area could be severed and sold after Phase 1 of the Operations Centre is built and the staff have been relocated to the Operations Centre;

- Sever and sell the rear farmland area at the West Garafraxa Works Garage but keep the garage and salt shed for off-site storage and to minimize deadhead time for salters in the east end of the Township.

Phase 3 would include the construction of more heated garage bays, more unheated bays in the pole barn, new greenhouses, and a new salt storage building. The Parks and Recreation, and Forestry staff would remain at the Sportsplex site until Phase 3 of the operations centre was completed.

The total cost for Option 8 (including land but not soft costs) would be approximately $25.23M which is higher than the total cost for Options 5 and 6.

In Table 6.1, in section 6, we summarize the benefits and shortcomings for each of the eight options.

5.0 EVALUATION CRITERIA

To evaluate and compare the eight options documented in section 4.0, we will use the criteria listed in Table 5.1, below. The criteria are divided into three categories – Financial, Operational, and Technical Design. A numerical score between 1 to 10 was determined for each option for each criteria (with 10 being best and 1 being worst) to quantify the ability of each option to address the Problem Statement in section 1.0. The criteria were also subject to a weighting factor (1-10) to prioritize the different criteria based on relative importance to the Township (10 will have the highest level of importance). Each option was scored out of ten for each criteria, and then each criteria score was multiplied by the weighting factor to determine the weighted score. The weighted criteria scores for each option were then added together to calculate the total overall score for each option as shown on tables 5.1 and 6.1.

Table 5.1 -Evaluation Criteria

Category	Criteria	Importance Weighting
Operational	**Satisfies 20-year growth and operational needs** • Achieves space requirements for employees, vehicles, equipment and materials	**10**
	Incorporates best practices and industry trends in Works Garage design • Achieves optimal layout to reduce waste (space and distance) and achieve Departmental synergies • Achieves inter-departmental collaboration • Achieves indoor storage of large work vehicles and seasonal equipment	**8**
	Achieves short term urgent needs • Achieves 5-year growth and operational needs within 3-5 years	**10**
	Minimizes staff and work interruptions due to construction • Achieves fewer staff relocations, and work disruptions	**6**
Technical Design	**Complies with Legislative requirements (building codes & standards)** • Achieves employee safety, accessibility, equality	**10**
	Satisfies environmental and sustainability standards • Achieves lower energy costs, emissions, waste, and impact on the environment	**4**
Financial	**Minimizes initial capital construction cost** • Achieves lower Initial (3-5 years) land, new construction, and renovation costs (excluding soft costs, and lost rental income)	**8**
	Minimizes overall capital cost • Includes all capital costs (land, new construction, and renovation) to complete all phases of the Option	**10**

6.0 EVALUATION OF ALTERNATIVE OPTIONS

In section 4.1, we outlined eight options that were identified as potentially being able to address the Problem facing the Township of Centre Wellington. In this section, we will highlight their benefits and shortcomings, and use the criteria listed in section 5.0 to evaluate them.

Option 1 – Do nothing

This option would involve continuing to use the (1) five existing Works Garages, (2) Infrastructure Services Office, (3) Waterworks Garage and Office, and (4) Parks Barn, Farmhouse Office and existing Greenhouses, for the next 20 years. Required repairs and routine building maintenance would be completed, but without any space additions.

The cost for Option 1 is based on the value of the required repairs for the above noted facilities as calculated on the building condition audits performed by Cion Coulter in 2020. Although the cost of the repairs is relatively low, Option 1 received the lowest overall score and ranking (see Table 7.1) primarily because it doesn't solve the Problem outlined in section 1.1. That is, it doesn't address the need for additional space for current and future staff, vehicle and equipment requirements. It also doesn't address the health and safety concerns or deficiencies in accessibility, and building code requirements.

While Option 1 may seem attractive because it appears to save the Township money, it would expose the Township to significant operational risks including the following:

- Maintaining the existing Works Garages would become increasingly expensive as the buildings continue to age. Two of the garages are in a deteriorated condition and are at or near the end of their expected 50-year asset life. The other garages are in fair condition. The Parks Barn has several deficiencies and is unsuitable for its current use;

- Some of the Works Garage buildings, the Infrastructure office, the Parks Barn and Parks farmhouse office don't comply with building code and accessibility requirements and have health and safety considerations. This could lead to significant labour issues;

- The productivity of the employees working at the Works Garages and Parks Barn is directly affected by the design, size, layout, and condition of the buildings and yards. That said, most of the buildings are already operating at or above their original design capacity for the efficient flow of employees, vehicles and equipment. Furthermore, the building designs, and use of space for offices, employee amenities, shops, and storage are not efficient or compliant with current standards, industry best practices and design trends. These issues will increasingly compromise the safety and level of efficiency and effectiveness at which the employees work;

- In particular, the Fergus East Works Garage is located within the chloride Issue Contributing Area for municipal well F1. Within this area, actions should, and in some cases are required, to be taken to reduce the amount of road salt entering the groundwater. The Township is required to mitigate and manage groundwater impact from its salt storage to the greatest extent possible. Although there is not a source protection requirement to replace the salt storage at the Fergus East Works Garage, the current design is not in line with current industry practices regarding indoor loading and unloading which will make the mitigation and management measures less effective. The similar design concerns exist for the West Garafraxa salt storage building which is located adjacent to a non-municipal, residential drinking water system.

- Continuing to operate from multiple facilities across the urban area of the Township would prevent management from maximizing synergies and collaboration between the employees and departments. This would lead to lower productivity levels, and higher operating costs. On the other hand, consolidating the operations into one main facility with smaller satellite garages at the east and west ends of the Township would minimize

the duplication of common spaces: employee amenities, training rooms, maintenance bays, wash bays, and salt storage. It would also promote collaboration between the different departments, and provide a new facility that achieves best practices in design and promotes operational productivity and safety.

The overcrowding, numerous deficiencies and state of deterioration of some of the existing garages has gotten to the point that the situation has become urgent. Given the many disadvantages of the Do Nothing approach and the fact that it doesn't solve the problem, it was evident that doing nothing is not a viable solution. The Do Nothing option was included in the evaluation process since the base line option of doing nothing is typically part of the standard assessment approach.

Option 2 – Renovate and Expand the Existing Works Garages, Infrastructure Services Office and Parks facilities

For Option 2, the renovations and expansions of the existing facilities would be completed in phases, over the next 15 years, to align with the growth requirements and operational needs. The total capital cost over this period would be approximately $16.68M, not including soft costs, (see Appendix E for details).

Option 2 has relatively low initial and overall capital costs. However, it received a low score and ranking (see table 6.1) because it would expose the Township to significant operational risks including the following:

- Continuing to operate the Public Works and Water Works Departments from multiple facilities across the urban area of the Township would prevent management from maximizing synergies and collaboration between the employees. This would lead to lower productivity levels, and higher operating costs;

- While the existing Works Garages would be expanded to provide more space they would not achieve best practices in facility layout design or yard layout to promote higher employee productivity levels;

- The construction of the renovations and additions to the existing facilities (while they are occupied and in use) would be disruptive to staff, the ongoing operations, and the provision of services to the community. Staff might need to be relocated to temporary rental facilities during the construction in order to continue to provide services. These costs have not been accounted for in the construction estimate;

- Using space at the Sportsplex site for the new Parks garage would reduce the space available for the large community events and festivals that are held on the grounds there. The event coordinators are already concerned that they don't have enough event space. So, there would be genuine concern about losing more space;

- Given the advanced age and deteriorated condition of many of the existing works garages, it would not be cost effective to spend a large sum of money on the extensive

renovations that would be needed to eliminate the deficiencies and bring the facilities up to current standards;

- Many of the existing works garage sites have constraints that make them unsuitable for building additions to satisfy long term growth;

- This option would not address salt / source water related design concerns for the West Garafraxa site or for the Fergus East site.

Option 3 – Build a new combined Operations Centre with the County after 15 years and build additions and renovations to existing Township facilities in the interim

The County has decided that it will not require a new works garage facility for at least 15 years. This would not meet the urgent timing requirements for the Township. A letter from the County is included in Appendix D.

The total capital cost for this option is estimated to be $41.02M, including land but not including soft costs. This includes the expansions/renovations that would be required to the existing Works Garages as interim measures to meet urgent growth and operational needs.

Option 3 has a relatively low short term capital cost (i.e., over the next three years). However, it has the highest total capital cost because it includes the cost of renovations and additions to existing Township facilities in the 15-year interim timeframe until a combined Operations Centre is built with the County for a large additional cost. Delaying the construction of a new Operations Centre for at least 15 years and relying on renovations and expansions of the existing facilities in the interim would also expose the Township to operational risks in the meantime. Therefore, Option 3 received the second lowest score and ranking (see Table 6.1).

The risks of proceeding with Option 3 are similar to those in Options 1 & 2 and include:

- Continuing to maintain and operate from the existing Works Garages for at least the next 15 years would become increasingly expensive as the buildings continue to age. Two of the garages are in a deteriorated condition and are nearing the end of their expected 50-year asset life. The other garages are in fair condition. The Parks Barn has several deficiencies and is unsuitable for its current use.

- Some of the Works Garage buildings and the Parks Barn don't comply with building code and accessibility requirements and have health and safety considerations. This could lead to significant labour issues;

- Although repairing the existing salt sheds at the Fergus East Garage and at the West Garafraxa Garage will extend their service life so that they can continue to be used, it does not address the source water protection concerns related to the existing salt storage sheds;

- The productivity of the employees working at the Works Garages and Parks Barn is directly affected by the design, size, layout, and condition of the buildings and yards.

That said, most of the buildings are already operating at or above their original design capacity for the efficient flow of employees, vehicles and equipment. Furthermore, the building designs, and use of space for offices, employee amenities, shops, and storage are not efficient or compliant with industry best practices and design trends. These issues will increasingly compromise the safety and level of efficiency and effectiveness at which the employees work;

- Continuing to operate from multiple facilities across the urban area of the Township would prevent management from maximizing synergies and collaboration between the employees and departments. This would lead to lower productivity levels, and higher operating costs;

To satisfy urgent growth and operational requirements (until the new Operations Centre is completed in 15 plus years), the existing Works Garages would need to be expanded and/or renovated over the next several years (while they are occupied and in use). This would lead to additional risks:

- The construction would be disruptive to staff, the ongoing operations, and the provision of services to the community. Staff might need to be relocated to temporary rental facilities during the construction in order to continue to provide services;

- Given the advanced age and deteriorated condition of many of the existing works garages, it would not be cost effective to spend a large sum of money on the extensive renovations that would be needed to eliminate the deficiencies and bring the facilities up to current standards;

- Many of the existing works garage sites have constraints that make them unsuitable for building additions to satisfy long term growth;

Option 4 – Build a new Township Works Garage With Office on an existing site to address the current space needs of only the Infrastructure Services Department and build phased additions and renovations to existing facilities for future needs

Through the space needs assessment, it was determined that the ideal site would be centrally located close to the urban areas and would require a minimum of 20 acres in order to accommodate the long-term growth requirements. This meant that the existing 13.5-acre Fergus East Works Garage (at 600 Glengarry Crescent) would be too small and unsuitable for a new Operations Centre since it only has approximately 2.5 acres that are suitable for construction. However the Glengarry site could potentially be used for a smaller new facility to meet the current needs of office staff and for operational staff from the existing Fergus East garage combined with staff from the WaterWorks shop on Queen St. in Fergus, since those two facilities are essentially at the end of their useful life and need to be replaced in the short term.

Phase 1 of Option 4 would, therefore, involve building a new Works Garage with an office and operator support areas at the existing Fergus East Works Garage site at 600 Glengarry

Crescent to address the current space requirements for only the Infrastructure Services Department in the three year time frame. The capital cost for Phase 1 (not including soft costs) would be approximately $15.1M. However, it would not (1) accommodate the significant growth requirements, over the next 10 to 20 years, for the Infrastructure Services Department staff, vehicles and equipment, or (2) address the needs of the multiple other departments currently facing space constraints (i.e., Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage). Additionally, this will not address the source water protection concerns related to the existing salt storage shed in Fergus or West Garafraxa.

In Phase 2 of Option 4 the Township would need to expand/renovate the existing buildings these departments occupy since they are already at or beyond capacity. As part of Phase 2 in the 10 to 20 year time frame, the Township would also need to build an addition onto the new garage and office at 600 Glengarry Cres to accommodate the future growth needs of the Infrastructure Services department.

The total cost for Phases 1 and 2 of Option 4 would be approximately $20.43 M. Although the total capital cost of this option is less than for many of the other options, Phase 1 of Option 4 would only address the current needs of the Infrastructure Services department, but it would not satisfy the long-term needs of the Infrastructure Services Department or the multiple other departments currently facing space constraints, this resulted in Option 4 receiving a low score and ranking (see table 6.1).

If selected, Option 4 would expose the Township to significant operational risks including the following:

- Continuing to operate the Infrastructure Services Department and other departments from multiple facilities across the urban area of the Township would prevent management from maximizing synergies and collaboration between the employees. This would lead to lower productivity levels, and higher operating costs. Please refer to section 2.2.3 for a list of opportunities to achieve operational synergies;

- Given the advanced age and deteriorated condition of many of the existing works garages, it would not be cost effective to spend a large sum of money on the extensive renovations that would be needed to eliminate the deficiencies and bring the facilities up to current standards;

- Many of the existing works garages are too small and have constraints that make them unsuitable for building additions to satisfy long term growth;

- The Township would need to renovate/expand other buildings to accommodate the long-term growth requirements for the multiple departments (i.e., Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage) since the existing buildings they occupy are already at or beyond capacity.

Option 5 – Build a new Township Operations Centre on a new site in two phases to address the long-term space requirements for multiple departments with the majority of construction in phase 1

Option 5 would involve building a new Operations Centre, in two phases, on a new site, to address the 20-year growth and operational needs for the multiple departments (i.e., Public Works, Water Works, Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage). The full size of the heated and unheated works garage areas, office space and one greenhouse would be built in Phase1 in a three year timeframe. Therefore, it would fully address the Problem described in section 1.1 and received the third highest score and ranking in Table 6.1.

The facility would need to be 54,604 ft^2 in size and would cost approximately $24.25M to build both Phase 1 and Phase 2 (including land, greenhouses, and an indoor loading salt storage building). The soft costs such as consulting fees, furniture and moving expenses would be extra.

Although Option 5 has the highest initial capital cost of approximately $19.59 M for Phase 1, it would provide a new multi departmental operations centre within three years that would be built in accordance with current codes and best practices on a new centrally located site. This would address the long term space needs for multiple departments and bring staff together for shared resources, equipment, collaboration, effectiveness of operations, and increased productivity to help minimize operational costs. Upon full build out, the salt storage building at the new operations centre would incorporate best management / design standards related to the salt storage. Given these many advantages, Option 5 received a fairly high score and ranking.

Option 6 – Build a new Township Operations Centre on a new site to address the long-term growth requirements for multiple departments using a two-phased approach, and continue to use the existing Garages (until the completion of Phase 2 in 10-20 years) for off-site vehicle and equipment storage

Option 6 includes the construction of a new Operations Centre on a new site in two phases but it differs from Option 5 by leaving more of the construction until Phase 2 and, therefore, deferring part of the capital cost until Phase 2. This would limit the initial capital construction cost, for Phase 1, to $14.92M (including land but not soft costs).

For Phase 1 of Option 6, the new Operations Centre would include the full office area for long term growth of multiple departments, as well as one greenhouse, and the heated and unheated garage bays for the current needs of the public works and water operations. For

The second phase (including heated and unheated garage additions, a second greenhouse and a salt storage facility) would be built 10 to 20 years later as funding becomes available at a cost of $10.03M. Until Phase 2 is built, the existing works garages would be used for temporary off site storage of seasonal vehicles and equipment. Once the Phase 2 garage additions were constructed the Parks staff, equipment and operations

could be incorporated at the Operations Centre and the existing Works Garages would no longer be needed for off-site storage.

The other main benefits of Option 6 are as follows:

- In Phase 1, the initial garage construction would address the current needs of the public works and water operations. The full build-out of the new office would accommodate the administrative, technical and management staff from multiple departments at the new Operations Centre. The new facilities would be compliant with industry best practices and design trends as well as building code and accessibility requirements. This would lead to improved employee safety and productivity, and reduce the risk of safety and/or accessibility concerns by the work force;

- The current and long-term growth and operational needs for the multiple departments would be met in an efficient manner that would minimize disruptions to staff and prevent disruptions of services to the community.

- Consolidating the departments into one facility would reduce overall space requirements and costs by eliminating the duplication of common spaces: employee amenities, training rooms, maintenance bays, wash bays, and salt storage. It would also promote collaboration between the different departments leading to greater operational productivity;

- Upon full build out, the salt storage building at the new operations centre would address best management / design standards related to salt storage;

- Please refer to sections 2.2.3 and 2.2.4 for a list of the opportunities to achieve operational synergies and improvements in facility design;

Option 6 has a lower capital cost for Phase 1 than Option 5 and a slightly higher overall total capital cost at $24.95M. Option 6 meets the current and future needs of multiple departments while addressing all aspects of the Problem described in section 1.1. Accordingly, Option 6 received the highest score and ranking, and was, therefore, determined to be the recommended Option.

Option 7 – Build a new Township Operations Centre on a new site in two phases by building the works garage in phase 1 and building the office and garage additions in phase 2. Until the completion of phase 2, use the existing Medical Office as interim office space and use the existing Garages for off-site vehicle and equipment storage.

Option 7 has a lower initial capital cost than for Option 6 since the construction of the administration office is delayed until Phase 2. However, there would be added costs related to renovating the medical office and relocating office staff, in the interim, until the new office was constructed at the Operations Centre in Phase 2. As a result, the overall capital cost for Option 7 (at $26.08M excluding soft costs) is higher than for Option 6.

Option 7 would provide the following benefits:

- In Phase 1, the Public Works and Water operators and their supervisors would move into the garage areas at the new Operations Centre which would be compliant with industry best practices and design trends as well as building code and accessibility requirements. This would lead to improved employee safety and productivity, and reduce the risk of safety and/or accessibility concerns by the work force;

- In Phase 1, the management, administrative and technical staff would be consolidated into a renovated Medical Office that would promote collaboration between departments;

- By Phase 2, the current and long-term growth and operational needs for the multiple departments would be met in an efficient manner that would minimize disruptions to staff and prevent disruptions of services to the community;

- Consolidating the departments into one facility (by Phase 2) would reduce overall space requirements and costs by eliminating the duplication of common spaces: employee amenities, training rooms, maintenance bays, wash bays, and salt storage. It would also promote collaboration between the different departments leading to greater operational productivity;

- Upon full build out, the salt storage building at the new operations centre would address best management / design standards related to salt storage;

- Please refer to sections 2.2.3 and 2.2.4 for a list of the opportunities to achieve operational synergies and improvements in facility design;

On the negative side, unlike Option 6, Option 7 would fail to initially consolidate all of the office staff with the operators into just one facility. As a result, many of the benefits achieved in Option 6 (regarding collaboration, synergies, and reducing overall space requirements) would not be fully achieved until the office addition was built at the Operations Centre in Phase 2 of Option 7. Therefore, Option 7 is ranked fourth as shown by the overall scores on Table 6.1

Option 8 – Build a new Township Operations Centre on a new site in three phases. Phase 1 would include building the initial works garage bays. Phase 2 would involve the construction of an office. Phase 3 would include additions to the garage bays, two new greenhouses, and a salt storage building.

Option 8 is similar to Option 7 but differs by reducing the long-term need for the medical office by building the administration office as an addition to the new Operations Centre in Phase 2 (within 3-5 years). As a result, the initial capital cost for Phase 1 of Option 8 (at $13.02M) in the first three years is less than the Phase 1 cost for Options 6 and 7. The overall capital cost for Option 8 (at $25.23M excluding soft costs) is lower than for Option 7, but slightly higher than for Option 6. Accordingly, Option 8 had the second highest score and ranking on the evaluation. Option 8 would provide the following benefits:

- The Phase 1 construction of the initial garage and operator support areas (for the public works and water works operations) would create a new Operations Centre that is compliant with industry best practices and design trends as well as building code and accessibility requirements. This would lead to improved employee safety and productivity, and reduce the risk of safety and accessibility concerns by the work force;

- By Phase 2, the management, technical and administrations staff from multiple departments would be able to be fully consolidated into the office addition at the new Operations Centre;

- By Phase 3, the construction of the garage additions, greenhouse and salt storage facility would accommodate the long-term growth and operational needs for the multiple departments in an efficient manner that would minimize disruptions to staff and prevent disruptions of services to the community;

- Upon full build out, the salt storage building at the new operations centre would address best management / design standards related to salt storage;

- Consolidating the departments into one facility (by Phase 3) would reduce overall space requirements and costs by eliminating the duplication of common spaces: employee amenities, training rooms, maintenance bays, wash bays, and salt storage. It would also promote collaboration between the different departments leading to greater operational productivity;

- Please refer to sections 2.2.3 and 2.2.4 for a list of the opportunities to achieve operational synergies and improvements in facility design;

On the negative side, unlike Option 6, Option 8 would fail to consolidate all of the office staff with the operators (from the multiple departments) into just one facility in Phase 1. As a result, many of the benefits achieved in Option 6 (regarding collaboration, synergies, and reducing overall space requirements) would not be fully achieved until the office addition was built at the Operations Centre in Phase 2 of Option 8. Therefore, Option 8 ranked second behind Option 6 in Table 7.1.

Evaluation of the Options

In Table 6.1, on the following page, we summarize the benefits and shortcomings for each of the eight options, and then rank them numerically. To rank the eight options, we assigned a score (from 1-10) to each option for each of the criteria listed in Table 5.1. The criteria are divided into three categories – Financial, Operational, and Technical Design – and help to quantify the ability of each option to address the Problem and Opportunity Statement in section 1.0. Each score was then multiplied by a weighting factor (1-10) that prioritized each of the criteria based on relative importance to the Township (10 will have the highest level of importance). The total score for each option was then used to determine its rank amongst the eight options.

Table 6.1 - Evaluation and Ranking of the 8 Options

Category	Criteria	Importance Weighting	Weighted Evaluation Scoring							
			Option 1 Do Nothing	Option 2 New Fergus Garage and reno/expand other Works Garages & Offices	Option 3 Joint Ops Centre with County in 15-20 years plus interim reno/expand existing Works Garages / Offices	Option 4 New Garage with Office only for Infrastructure Services plus reno/expand other Facilities	Option 5 New Ops Centre majority built in Phase 1 with minor additions in Phase 2	Option 6 New Ops Centre built in two Phases (full office included in Phase 1)	Option 7 New Ops Centre in two Phases (Use medical office long term and build new office in Phase 2)	Option 8 New Ops Centre in three Phases; (Build initial garages in Phase 1, new office in Phase 2 & additions in Phase 3)
Operational	**Satisfies 20-year growth and operational needs** Achieves space requirements for employees, vehicles, equipment and materials	10	0	60	80	70	100	100	100	100
	Incorporates best practices and industry trends in Works Garage design Achieves optimal layout, departmental synergies, and inter-departmental collaboration	8	0	24	48	32	80	72	64	56
	Achieves short term urgent needs Achieves 5-year growth and operational needs within 3-5 years	10	0	70	70	70	100	100	80	80
	Minimizes staff and work interruptions due to construction Achieves fewer staff relocations, and work disruptions	6	60	6	0	6	54	48	42	36
Technical Design	**Complies with Legislative requirements (building codes & standards)** Achieves employee safety, accessibility, equality	10	50	70	80	70	100	100	90	100
	Satisfies environmental and sustainability standards Achieves lower energy costs, emissions, waste, and impact on the environment	4	0	12	24	16	40	36	36	36

Table 6.1 - Continued

Category	Criteria	Importance Weighting	Weighted Evaluation Scoring							
			Option 1 Do Nothing	**Option 2** New Fergus Garage and reno/expand other Works Garages & Offices	**Option 3** Joint Ops Centre with County in 15-20 years plus interim reno/expand existing Works Garages / Offices	**Option 4** New Garage with Office only for Infrastructure Services plus reno/expand other Facilities	**Option 5** New Ops Centre majority built in Phase 1 with minor additions in Phase 2	**Option 6** New Ops Centre built in two Phases (full office included in Phase 1)	**Option 7** New Ops Centre in two Phases (Use medical office long term and build new office in Phase 2)	**Option 8** New Ops Centre in three Phases; (Build initial garages in Phase 1, new office in Phase 2 & additions in Phase 3)
Financial	**Minimizes initial capital cost** Achieves lower Initial (3 years) land, new construction, and renovation costs (excluding soft costs, and lost rental income)	**8**	Repair Costs $0.46M **80**	$12.77M **56**	$9.28M **64**	$15.10M **40**	$19,587,680 **0**	$14.92M **40**	$13.87M **48**	$13.02M **56**
	Minimizes overall capital cost Includes all capital costs (land, new construction, and renovation) to complete all phases of the Option	**10**	Repair Costs $4.02M **100**	$16.68M **80**	$41.02M **0**	$20.43M **70**	$24,247,280 **50**	$24.95M **50**	$26.08M **30**	$25.23M **40**
	Total Score for Each Option		**290**	**354**	**318**	**342**	**444**	**474**	**426**	**448**
	% Score		**44%**	**54%**	**48%**	**52%**	**67%**	**72%**	**65%**	**68%**
	Rank		**8th**	**5th**	**7th**	**6th**	**3rd**	**1st**	**4th**	**2nd**

7.0 IDENTIFICATION OF PREFERRED OPTION

The findings of the study show that Options 5 to 8 (for the phased construction of a new Operations Centre on a new site) have the highest scores ranging between 65% to 72%. Options 1 to 4 (which included doing nothing or building a new garage with various additions and renovations to existing facilities) scored the lowest between 44% to 54%. The results of the evaluation are summarized on the table below which shows the eight options in order from best highest ranked to the worst lowest ranked option.

Table 7.1 – Summary of Evaluation Results for the 8 Options

Rank	Score	Option	Phase 1 Cost	Total Cost
1st	72%	**Option 6** - New Ops Centre in 2 Phases Phase 1 - partial garage, full office, greenhouse Phase 2 - garage additions, greenhouse & salt storage	$14.92 M	$24.95 M
2nd	68%	**Option 8** – New Ops Centre in 3 Phases Phase 1 - partial garage, Phase 2 - full office Phase 3 - garage additions, greenhouses & salt storage	$13.02 M	$25.23 M
3rd	67%	**Option 5** – New Ops Centre in 2 Phases Phase 1 - full garage, full office, greenhouse Phase 2 - greenhouse & salt storage	$19.59 M	$24.25 M
4th	65%	**Option 7** – New Ops Centre in 2 Phases Phase 1 - partial garage, greenhouse, use existing medical office for long term interim Phase 2 – new office, garage additions, greenhouse, salt storage	$13.87 M	$26.08 M
5th	54%	**Option 2** – New Garage for current Infrastructure needs at outset with phased additions / renovations to existing works garages / offices	$12.77 M	$16.68 M
6th	52%	**Option 4** – New Garage with Office for current Infrastructure needs at outset and future additions / renovations to other facilities	$15.10 M	$20.43 M
7th	48%	**Option 3** – Combined Facility with the County in 15-20 years and interim additions / renovations to existing works garages / offices	$9.28 M	$41.02 M
8th	44%	**Option 1** – Do Nothing	Repair costs $0.46 M	Repair costs $4.02 M

It was noted that the scores for Options 5 to 8 were in a narrow range from 65% to 72%. This indicated that, although the best solution is to build a new Operations Centre on a new site using a phased approach, the specifics of the phasing do not significantly affect the score. Therefore, it was determined that the details of the construction phasing should be tailored to suit the availability of capital funding.

Option 6 achieved the highest score for the two-phased approach of constructing (1) the initial works garage operations areas as well as one greenhouse and the full office in Phase 1, and (2) the additions to the works operations garage areas, a second greenhouse and salt storage facility in Phase 2.

8.0 FUNCTIONAL SPACE PROGRAM

In this section, we will document the future space requirements for each of the main functional areas within the new Operations Centre, as described for Option 6. We have chosen Option 6 to provide this information because it had the highest score and ranking.

The functional space program identified a need for 37,111 ft^2 of indoor space for Phase 1 of a new Operations Centre and 17,493 ft^2 for Phase 2 for an overall total of 54,604 ft^2. The detailed space requirements are shown in Appendix A. The main areas are summarized in Table 8.1, below.

Within the space program, we have looked for ways to minimize space requirements so as to reduce travel distances and construction costs while still achieving space adjacency preferences.

Table 8.1 Functional Area Space Requirements for Phases 1 and 2 of Option 6

Functional Area	Total Area Required in Phase 1 (ft^2)	Total Area Required in Phase 1 (m^2)	Total Area Required in Phase 2 (ft^2)	Total Area Required in Phase 2 (m^2)
Administrative Office	7,259	674	426	40
Touchdown Station Office	1,270	118	42	4
Employee Amenities	4,422	411	1,125	105
Supervisors Shop Office	2,240	208	0	0
Operations Shared Workshop	1,873	174	0	0
Mechanics Maintenance Shop	1,177	109	0	0
Mechanics Heavy Maintenance Bays	2,640	245	0	0
Garage Materials and Equip. Storage	1,320	123	0	0
Work Vehicle Storage – Heated Bays	10,560	981	13,200	1,226
Vehicle Wash Building	1,650	153	0	0
Work Vehicle Storage – Unheated Bays	2,700	251	2,700	251
Total Facility	**37,111**	**3,448**	**17,493**	**1,626**
Greenhouses	1,332	124	3,996	371
Indoor Loading Salt Storage Building			21,966	2,041

9.0 CONCEPTUAL DRAWINGS

A high-level, conceptual site plan was developed for Option 6 (of the new Operations Centre) on an ideal, new site to satisfy the Functional Space Program requirements. The conceptual site plan is shown on the following page. The site plan was developed for Option 6 because it had the highest score and ranking.

The Operations Centre will initially consist, in Phase 1, of three buildings:

1. Administrative Office / Employee Amenity areas / Workshops / Maintenance Bays / Materials & Equipment Storage / Heated Work Vehicle Storage;
2. Unheated Work Vehicle Storage building;
3. Greenhouse.

The conceptual site plan shows a conceptual layout for Phase 1 and 2 of the new Operations Centre which would provide sufficient space to consolidate the employees from multiple departments (i.e., Public Works, WaterWorks, Engineering, Parks and Recreation, Forestry, Source Water Protection, IT, and Archives/Records Storage) onto one site. It would also serve as a back-up Emergency Operations Centre and IT hub for the Township.

In Phase 1 of Option 6 the Operations Centre would incorporate the following functional areas:

- Eight heated drive through garage bays;
- A dedicated heated wash bay with outdoor wash down pad;
- Two dedicated drive through heavy vehicle maintenance bays;
- A mechanics works area with storage space for tools, parts and materials;
- Common workstation area for operators from all departments with a welding station and space for shared tools and equipment;
- A shared multi departmental works equipment storage bay;
- Shop supervisor’s offices, small shop meeting area and printer station;
- Lab and sample prep area;
- Service rooms for mechanical, electrical, backup generator and janitorial;
- Storage room for protective equipment, works clothing and cleaning supplies;
- Dedicated male and female change rooms with lockers, showers, washrooms and laundry;
- Employee entrance with mud room;
- First aid / wellness room / private phone room;
- Common lunch room for all staff with a shared use as a training room. Lunch room includes a movable partition wall to subdivide the space into separate meeting rooms;
- An outdoor lunch area;
- Public main entrance with lobby, reception counter, waiting area, public washrooms, and small meeting room;
- Open multi departmental office workstation area with open meeting space;
- Open multi departmental area for shared use touchdown computer terminals;

- Managers offices;
- SCADA room with storage for water services reference books;
- Shared use office printers / plotter / mail / stationary / office supplies storage room;
- Male and female office washrooms;
- Common storage room for files, drawings and reference materials;
- Archives records storage with high density file system;
- IT server / communications room;
- Two meeting rooms;
- Separate barn building for 6 unheated garage storage bays;
- Secure works yard with outdoor materials storage bunkers;
- Staff and visitor parking area;
- One greenhouse and space for outdoor tree planting.

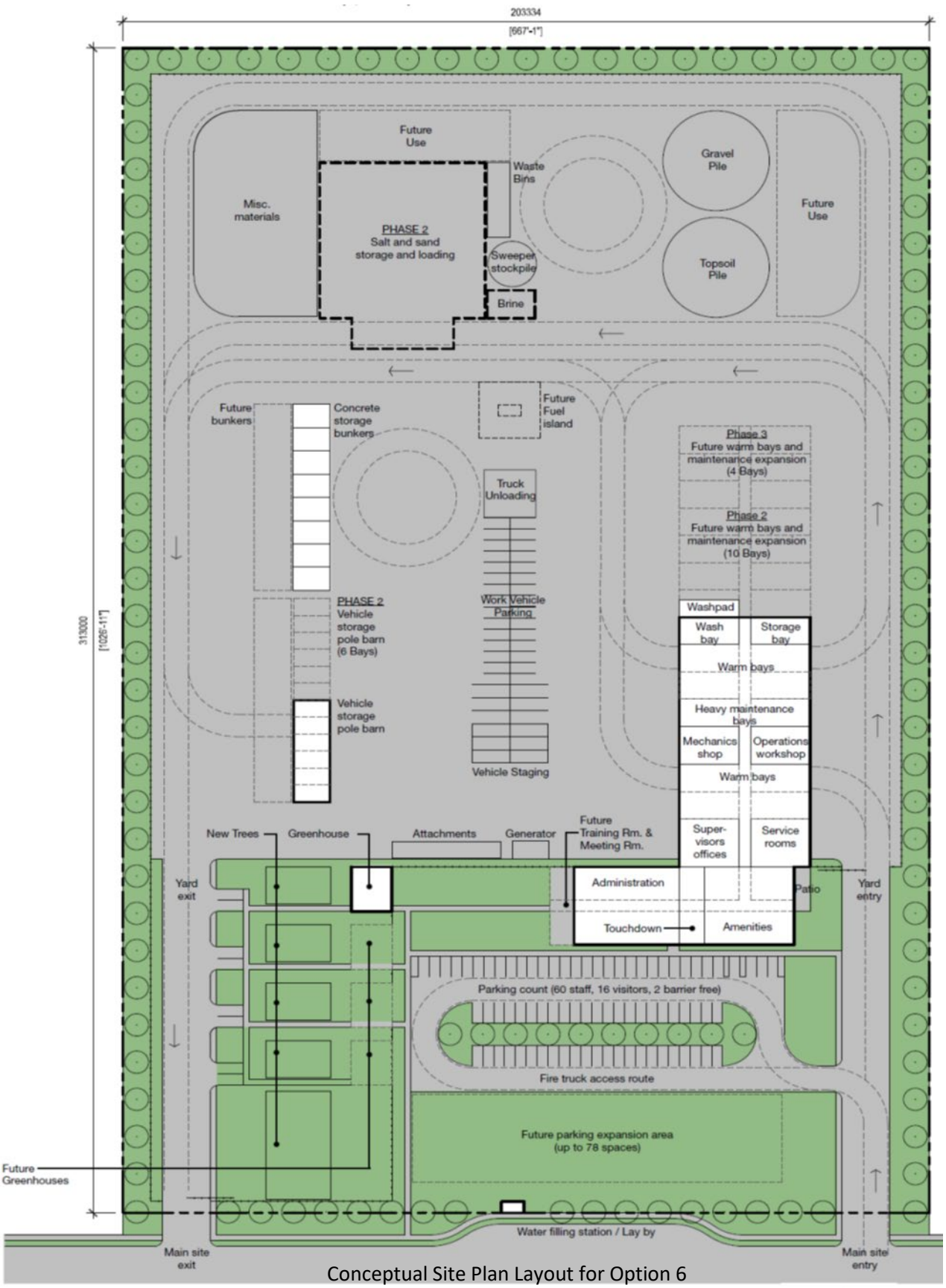
In Phase 2 of Option 6 the Operations Centre would be expanded to incorporate the following areas:

1. The Administrative Office and Employee Amenities building would be expanded to add a dedicated training room;
2. The Works Vehicle Storage bays (both heated and unheated) would be expanded;
3. Additional greenhouse would be constructed;
4. A salt storage building would be constructed.

The conceptual site plan shows, with dashed lines, where Phase 2 of Option 6 would be built.

The conceptual site plan utilizes 15.7 acres. However, the site may require additional space to allow for (1) growth over a 60-year period (which will be the expected asset life of the building), and (2) potential unknown issues such as complications from the shape and topography of the site, and the presence of environmental setback requirements. Therefore, we recommend a site of at least 20 acres for a new Operations Centre. This would allow room for long term growth and future expansion.

In Appendix G, we have provided several conceptual layout options showing how the Medical Centre could be repurposed as interim Township office space for Phase 1 of Option 7.



Conceptual Site Plan Layout for Option 6

10.0 SAMPLE OF MODERN MUNICIPAL OPERATIONS CENTRES

In Table 10.1, below, we list a sample of municipal Operations Centre's designed by RDH Architects which incorporate modern best practices in design. In Appendix H we include photos of each of the Operations Centres.

Table 10.1 - Sample of RDHA-Designed Operations Centre's

Year of Construction	Municipality & Facility	Building Size (sq. ft)	Land Area (acres)	Construction Cost	Cost per square foot
2019	City of Pickering Pickering Operations Centre	82,000	18	$24,478,167	$298
2017	City of Quinte Quinte West Operations Centre	89,925	10	$19,238,475	$216
2015	Town of Halton Hills Robert C Austin Operations Centre	25,630	3	$8,271,018	$320
2010	Town of Newmarket Newmarket Operations Centre	73,000	12	$19,240,000	$263

11.0 CONSTRUCTION COST ESTIMATES

The total construction cost to build Phase 1 of a new Operations Centre, satisfying the functional space program for Option 6 (excluding land and soft costs), was estimated to be $10,915,420 (as shown in Table 11.1). This assumes a blended cost of $294 per sq.ft (using $320 per sq. ft. for office space and maintenance garage space, $300 per sq. ft. for heated storage garage space, and $75 per sq. ft. for an unheated detached "pole barn"). These are preliminary construction cost estimates.

Table 11.1 – Estimated Phase 1 Construction Costs for Option 6

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	7,259	674	320	2,322,880
Touchdown Station Office	1,270	118	320	406,400
Employee Amenities	4,422	411	320	1,415,040
Supervisors Shop Office	2,240	208	320	716,800
Operations Shared Workshop	1,873	174	300	561,900
Mechanics Maintenance Shop	1,177	109	300	353,100
Mechanics Heavy Maintenance Bays	2,640	245	320	844,800
Garage Materials and Equipment Storage	1,320	123	300	396,000
Work Vehicle Storage – Heated Bays	10,560	981	300	3,168,000
Vehicle Wash Building	1,650	153	320	528,000
Work Vehicle Storage – Unheated Bays	2,700	251	75	202,500
Total Facility	**37,111**	**3,448**	**$ 10,915,420**	**$ 10,915,420**

The total overall construction cost including the above cost for Phase 1 as well as the land purchase cost and the Phase 2 construction of the heated and unheated garage additions, additional greenhouse and a new indoor loading salt storage facility is estimated at a total construction cost for Option 6 (including land but excluding soft costs) of $24.95 M.

The above construction costs provide a preliminary high-level estimate of the hard construction costs associated with the proposed space program attached to this report (Appendix A).

The accuracy of the estimate is expected to have a variance of +/- 25%. A more detailed order of magnitude estimate will be completed in the design phase of this project and will provide an expected accuracy of +/- 20%.

The following soft costs have been specifically excluded from the construction cost estimate:

- Harmonized Sales Tax (HST);
- Design / project management fees;
- Legal fees, development fees and permits;
- Water, sanitary sewer and storm servicing;
- Environmental / hazardous material abatement (e.g., asbestos and contaminated soils);
- Furniture, furnishings and equipment;
- Telephone / communication systems, and security systems;
- Relocation and reconnection of Owner's existing equipment;
- Temporary office facilities and/or moving costs;
- Building commissioning / start up by third party commissioning agency / consultant.

The cost estimates for the renovations and additions required for each of the eight options are shown in Appendix E.

12.0 SITE SELECTION CRITERIA

Site Selection Criteria

To determine the preferred site location for the new Operations Centre we begin by selecting the key criteria that should be used to analyse the potential sites. The criteria are described below:

Land Use Zoning

The preferred site should be in an industrial park with compatible surrounding operations that won't be affected by the potential noise, traffic or air-born emissions generated by the activities within the Operations Centre.

Total Acreage Available

The site should have a minimum of 20 acres of land (to satisfy a 20-year horizon). Given the relatively low cost of land versus the cost of construction, it is recommended that more than 20 acres be purchased to ensure that the site will be sufficient for at least 60 plus years (the expected asset life of the new facility).

Shape and Topography of the Land

The site should be relatively flat and rectangular with an aspect ratio of 2:1. A flat site will avoid major cut and fill costs and minimize the cost of grading. A rectangular site will best facilitate the flow of vehicles and employees.

Ease of Access onto the Site

The site should permit at least two exits/entrances without interference from traffic flows/congestion (e.g., from cars waiting at an intersection or traffic lights).

Provincial Policy and Impact of the Location on Crew Travel Time

Provincial policy dictates that the site should be located within an Urban Centre. In addition to the consideration of policy directives, it would be ideal for the site to be located within the geographical centre of the most densely populated part of the Township. This would minimise crew travel times and the deadheading of salters during winter maintenance. However, such a location would not be compatible with its surrounding neighbours (likely residential homes). Therefore, an appropriate site within an Urban Centre and close to the geographical population centre would be preferred.

Environmental Considerations

The site should not be located immediately adjacent to environmentally sensitive areas such as a watercourse or wet lands. This is because it will reduce the usable area of the site and if a large volume of salt will be stored on site there is potential for it to contaminate the ground water and enter the watercourse/wet lands. Practically, the site will likely need to be located within municipal wellhead protection areas and therefore wellhead protection areas C or D or wellhead protection B with lower vulnerability scores should be prioritized. The site should not be located in close proximity to wells for municipal or non-municipal drinking water systems and should not be located within wellhead protection area A or B with high vulnerability scores.

Potential Cost of Providing Services (power, water, sanitary, storm)

Ideally, the site should be located within a developed industrial park with ready access to services (power, water, sanitary, storm) so as to minimize construction costs.

Cost and Ease to Purchase the Land

The Township would prefer not to expropriate land.

Greenfield Versus Brownfield Issues

A Brownfield site would likely require additional funding to demolish any existing buildings and to mitigate potential environmental (e.g., soil contamination) or safety issues (e.g., asbestos). Therefore, a Greenfield site is preferred.

13.0 IMPLEMENTATION PLAN

In this section, we present a conceptual Implementation Plan for Option 6 to demonstrate the various major tasks required to complete the Operations Centre within a ten-year horizon. The revenue and cost estimates are high-level but combine to create a total net capital cost (including construction and soft costs such as land, consulting fees, and furniture) of $24.95M.

Below, we show the various major tasks required to complete the Operations Centre. The tasks are divided into two groups: those that will generate revenue to the Township, and those that are required to construct the Operations Centre including construction costs, land purchase and soft costs such as consulting fees for design and contract administration, legal fees, site servicing, site plan development, approvals and permits, studies and investigations (i.e. surveys, geotechnical, noise study, traffic study), furniture and moving expenses. These preliminary cost estimates are very high level and will be further refined as the project moves ahead.

It should be emphasized that this is a conceptual implementation plan based on Option 6 to show one approach for the construction of the Operations Centre on a new site in two phases over the next ten years. This plan outlines one possible scenario of how the project phasing and construction could potentially unfold. There is however a lot of flexibility in both the time frame and the approach for how the project can be implemented. This conceptual implementation plan is a representative version that may be considered as a starting point to be further developed as the project progresses.

Table 13.1 - Major Tasks for the Implementation of a New Operations Centre on a New Site

Year	Implementation Steps	Estimated Revenue ($1,000,000)
1 to 5 (2021 to 2025)	Sell surplus properties and utilize temporary leasing opportunities	2.95
Year	**Implementation Steps**	**Estimated Cost ($1,000,000)**
1 (2021)	Relocate overflow of Twp staff temporarily into medical office Op Centre Site Evaluation/Selection/Approvals Process RFP for Op Centre Phase 1 design / Tender / Contract Admin	4.84
2 (2022)	Studies & investigations for site plan development and design Site plan approval process Design of Operations Centre Phase 1 & 2	1.36
3 (2023)	Tender and construction of Op Centre Phase 1 (includes garage area for current needs, full office for 20 year staff projections and one greenhouse)	10.95
4 (2024)	Township staff to move into Operations Centre Phase 1	0.13
9 (2029)	Op Centre Phase 2 Detailed Design and construction tender (includes heated and unheated garage additions, one greenhouse and salt storage facility)	0.59
10 (2030)	Construction of Operations Centre Phase 2	10.03
	Total Estimated 10-year Costs and Revenues	**$24.95 M**

Potential Implementation Steps for Phased Construction

The conceptual implementation plan summarizes the various steps required to achieve the phased construction for Option 6 of the new Operations Centre on a new site. These steps are described in more detail below:

- Perform a site selection process to identify potential sites for the new Operations Centre and evaluate the alternative sites against a series of criteria to determine the most suitable site.

- Relocate Township staff into one floor of the medical office as interim office space until the office is built in Phase 1 of the operations centre. Perform minor renovations to the medical office as may be needed to accommodate staff.

- Issue a Request for Proposal (RFP) for consulting services for the detailed design and construction contract administration of Phase 1 of the Operations Centre including site development, servicing, works garage for current needs, the full office component and one greenhouse.

- Undertake the various studies that may be required for site plan design and development such as surveys, geotechnical investigation, noise study, traffic study, environmental studies, etc… and proceed with the site plan approval process.

- Prepare the preliminary and detailed design for the new operations centre, obtain all required permits and approvals and issue the tender for the construction of Phase 1.

- Complete the construction for Phase 1 of the operations centre in a three year time frame including the site development, servicing, works garage for current needs, the full office component and one greenhouse. Relocate Township staff from their existing facilities into the new operations centre. The medical office will no longer be needed as interim office space for Township staff at that point. The existing works garages will however need to be used for storage of seasonal vehicles and equipment (such as mowers and snow plows) off site from the new operations centre garage until the works garage additions are constructed in Phase 2.

- Issue a Request for Proposal (RFP) for consulting services for the detailed design and construction contract administration of Phase 2 of the Operations Centre including the heated and unheated garage additions, one greenhouse and a salt storage facility.

- Prepare the detailed design for Phase 2 of the operations centre, obtain all permits and approvals and issue the Phase 2 construction tender.

- Complete the construction of Phase 2 of the Operations Centre potentially in a ten year time frame and relocate staff and works vehicles and equipment to the

Operations Centre. The existing works garages will no longer be needed for off-site seasonal storage after Phase 2 is completed.



APPENDIX A – Space Program (Option 6)

Legend of Office Types & Sizes:

1	Managing Director - 10x20 Private Office
2	Manager - 10x15 Private Office
3	Supervisor - 10x10 U Open Office
4	Eng / Tech Staff (w/ plans) - 8x10 U Open
5	Admin / Tech / Coord / RMO - 6x6 L Open
6	Inspec / horticulturalist - 6x4 L Open
7	Dedicated Touchdown station - 4x2.5 Open
8	Shared Touchdown station - 4x2.5 Open
9	Future Shared Touchdn stn - 4x2.5 Open

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
	1.0 Administration Office Area on Ground Floor										
	Infrastructure Services										
1	Managing Director of Infrastructure Svcs	**PO**	1	200	1	200	1.4	280	26		Centre of building
2	Manager of Environmental Services	**PO**	1	150	1	150	1.4	210	20		Centre of building
5	Environmental Compliance & QMS Coord	OO	1	36	1	36	1.4	50	5		
2	Manager of Public Works	**PO**	1	150	1	150	1.4	210	20		Centre of building
5	Risk Management Official	OO	1	36	1	36	1.4	50	5		
6	Risk Management Inspector	OO	1	24	1	24	1.4	34	3		
7	Risk Mgmt Co-op Student (year round)	OO	1	10	1	10	1.4	14	1		
4	Asset Management & CP Manager	OO	1	80	1	80	1.4	112	10		
4	Engineering Technologist - Rds/Bridge	OO	1	80	1	80	1.4	112	10		
4	Engineering Technologist - W/WW	OO	1	80	1	80	1.4	112	10		
5	GIS Technician	OO	1	36	1	36	1.4	50	5		
7	Public Works Co-op Student (Summer only)	OO	1	10	1	10	1.4	14	1		
	Infrastructure Services Future Staff in Admin Office area on Ground Floor										
2	Manager of Engineering	**PO**		150	1	150	1.4	210	20		Centre of building
4	Engineering Staff	OO		80		-	1.4	-	-	1	**for Phase 2 addition**
5	Climate Change Coordinator	OO		36	1	36	1.4	50	5		
5	Energy Coordinator	OO		36	1	36	1.4	50	5		
4	Eng. Capital Project Manager (Water & WW)	OO		80	1	80	1.4	112	10		
5	Risk Management Coordinator	OO		36	1	36	1.4	50	5		
6	Risk Management Inspector	OO		24		-	1.4	-	-	1	**for Phase 2 addition**

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
	Corporate Services in Admin Office area on Ground Floor										
2	Manager of Information Technology	**PO**	1	150	1	150	1.4	210	20		Centre of building
3	Supervisor of Information Technology	OO	1	100	1	100	1.4	140	13		
5	Application Support Analyst	OO	1	36	1	36	1.4	50	5		
5	Systems Analyst	OO	1	36	1	36	1.4	50	5		
	Corporate Svcs Future Staff in Admin Office area on Ground Floor										
5	Application Support Analyst	OO		36	2	72	1.4	101	9		
5	Systems Analyst	OO		36	1	36	1.4	50	5		
	Community Services in Admin Office area on Ground Floor										
2	Manager of Parks & Facility Operations	**PO**	1	150	1	150	1.4	210	20		Centre of building
4	Landscape Architect /Urban Forestry Proj Mgr	OO	1	80	1	80	1.4	112	10		
7	Forestry Co-op Student	OO	1	10	1	10	1.4	14	1		
	Community Svcs Future Office Staff in Admin area on Ground Floor										
4	Landscape Technician / Inspector	OO		80	1	80	1.4	112	10		
	Common Ground Floor Admin Office Areas										
	Printer/plotter/fax/stationary/office supplies (1)	**PO**		300	1	300	1.4	420	39		high table in centre of room
	Small Meeting Rooms (1) (12 people)	**PO**		300	1	300	1.4	420	39		Require 1 room
	1 on 1 Meeting rm / phone rm (1) (4 people)	**PO**		100	1	100	1.4	140	13		Require 1 room
	Future Small Mtg Rm (1) (6 people)	OO		200		-	1.4	-	-	1	for Phase 2 addition
	Office Washrms (2) for **35** staff (incls future)	**PO**		170	2	340	1.4	476	44		2 Accessable washrooms (M
	Miscellaneous Storage Room	OO			1	150	1.4	210	20		
	Docking / Charging Station for Phones	OO			1	20	1.4	28	3		Against the wall

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
	Dedicated Use Ground Floor Office Areas										
	SCADA System	**PO**		40	1	40	1.4	56	5		Centre of building
	Water Services Reference Library	OO		25	1	25	1.4	35	3		Book shelves against the wa
	Records Storage (Ground Floor)										
	Files & Drawing Storage / Reference Library	**PO**		375	1	375	1.4	525	49		centre of building
	Archives Records Storage (Secure)	**PO**		375	1	375	1.4	525	49		centre of building
	IT Server / Communications Room	**PO**		**300**	1	300	1.4	420	39		
	Janitors Room for Ground Floor Office Area	**PO**		80	1	80	1.4	112	10		
	Electrical Room for Ground Floor Office Area	**PO**		**300**	1	300	1.4	420	39		
	Mechanical Room for Ground Floor Office Area	**PO**		**500**	1	500	1.4	700	65		
	TOTAL					**5,185**		**7,259**	**674**		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
	2.0 Touchdown Station Office Area on Ground Floor										
	Infrastructure Services Operators										
8	Operator/Field Staff - PW Roads	OO	1	10	3	30	1.4	42	4		
8	Operator/Field Staff - Water Services	OO	1	10	1	10	1.4	14	1		
8	Special Projects Operators	OO	1	10	2	20	1.4	28	3		
	Infrastructure Services Future Operators										
9	Operator/Field Staff - Water Services	OO		10	1	10	1.4	14	1		
9	Operator/Field Staff - PW Roads	OO		10		-	1.4	-	-	2	for Phase 2 addition
	Community Services Staff										
6	Horticuluralist	OO	1	24	1	24	1.4	34	3		
7	Parks Lead Hand - Fergus	OO	1	10	1	10	1.4	14	1		
8	Parks Co-op / Seasonal Operators	OO	1	10	2	20	1.4	28	3		
	Community Services Future Staff										
7	Parks Lead Hand - Elora	OO		10	1	10	1.4	14	1		
9	Horticulturalist Seasonal Assistant	OO		10		-	1.4	-	-	1	for Phase 2 addition
9	Parks Co-op / Seasonal Operators	OO		10	1	10	1.4	14	1		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
	Reception Area										
	Entrance Vestibule & Lobby Waiting Area	OO			1	300	1.4	420	39		
	Public Washrooms (1)	**PO**			1	75	1.4	105	10		
	Reception Counter	OO			1	64	1.4	90	8		
	Small Meeting Room (1) (6 people)	**PO**			1	150	1.4	210	20		Require 1 room
5	Admin Payroll & Acts Clerk (Wtr / WW)	OO	1		1	36	1.4	50	5		
5	Admin Payroll & Acts Clerk (PW)	OO	1		1	36	1.4	50	5		
	Administration Mail Boxes/Cabinets	OO			1	30	1.4	42	4		
5	Future Admin Payroll Acts Clerk (PW)	OO			1	36	1.4	50	5		
5	Future Water Admin Support Staff	OO			1	36	1.4	50	5		
	TOTAL					**907**		**1,270**	**118**		

Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)	No of Rqd Wrkstns / Rooms Future Phase	Comments
3.0 Employee Amenities										
Common Areas on Ground Floor										
Male Washroom/locker room/showers/laundry	**PO**			50	1049	1.25	1,311	122		Sized for 50 males
Female Washrm/locker rm/showers/laundry	**PO**			15	486	1.25	608	56		Sized for 15 females
Mud Room	**PO**				150	1.25	188	17		To wash boots
Lunch Room /Training Room (1) (60 people)	**PO**			60	1,603	1.25	2,003	186		Size for 60 plus 2 touchd
Outdoor Patio (1) (20 people)				30	725	1.25				Sized for 30 + BBQ
Training Rm / Large mtg rm (1) (30 people)	**PO**									for Phase 2 addition
Employee Entrance (suits & boots)					150	1.25	188	17		
First Aid/Wellness Room / Phone Room	**PO**			1	100	1.25	125	12		Also a phone room
TOTAL					**4,263**		**4,422**	**411**		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
	4.0 Supervisors Shop Office Area (enclosed area within garage Butler building with storage mezzanine above for tires)										
	Infrastructure Services										
3	Supervisor of Water Services	OO	1	100	1	100	1.4	140	13		
3	Supervisor of Customer Svc & Special Projs	OO	1	100	1	100	1.4	140	13		
3	Supervisor of PW (Fergus Roads Foreman)	OO	1	100	1	100	1.4	140	13		
	Small Meeting Area in shop office (4 people)	OO		150	1	150	1.4	210	20		Open area, no walls, in shop
	Lab/Sample Preparation Area	OO		100	1	100	1.4	140	13		in shop office
	Printer station / fax / 2 touchdown stations	OO		70	1	70	1.4	98	9		in shop office
	PPE / Clothing Storage	**PO**		100	1	100	1.4	140	13		lockable room
	Shop Cleaning Supplies Room	**PO**		80	1	80	1.4	112	10		
	Electrical Room for Shop Area	**PO**		**300**	1	**300**	1.4	420	39		
	Mechanical Room for Shop Area	**PO**		**500**	1	**500**	1.4	700	65		
	TOTAL					**1,600**		**2,240**	**208**		

Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
5.0 Operator's Shared Workshop Area for all Dept's (Roads, Water & Parks)										
Shared work benches **(6)**	OO			**6**	180	1.4	252	23		With small grinder & drill p
Dedicated Mechanics work benches **(2)**	OO			**2**	60	1.4	84	8		
Open Work Area	OO				150	1.3	195	18		Require a 2 Ton hoist
Material storage	OO				**300**	1.3	390	36		2 ft deep shelving
Tools & Parts	OO				**200**	1.3	260	24		
Stand up meeting desk for work assignments	OO				150	1.4	210	20		
Machine Shop & Welding Shop	OO				360	1.3	468	43		
Wash Sink	OO			1	10	1.4	14	1		
TOTAL					**1,410**		**1,873**	**174**		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
	6.0 Mechanics Maintenance Shop										
7	Public Works Mechanic Lead Hand	OO	1	10	1	10	1.4	14	1		
7	Future public Works Mechanic	OO		10	1	10	1.4	14	1		
	Consumeable auto parts/materials	**PO**				300	1.3	390	36		Includes 1 touch down st
	Tool Crib, Misc. Storage	**PO**				200	1.3	260	24		
	Maintenance Library and Work Station	OO				50	1.4	70	7		Includes 1 touch down st
	Fluids Pump Room	**PO**				180	1.3	234	22		
	Compressor Room	**PO**				150	1.3	195	18		
	TOTAL					**900**		**1,177**	**109**		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
	7.0 Mechanics Heavy Vehicles Maintenance Bays										
	Heavy vehicle maintenance bays (at outset)	OO			2	2,640	1	2,640	245		Drive through bays w/ 5 T
	TOTAL					**2,640**		**2,640**	**245**		

	Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
	8.0 Garage Materials and Equipment Storage Area										**Heated to 10C**
	Shared miscellaneous garage storage area					1,320	1	1,320	123		
	TOTAL					**1,320**		**1,320**	**123**		

Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
9.0 Work Vehicle Storage - Warm Bays										**Heated to 10C**
Combined Roads & Water	OO			8	10,560	1	10,560	981		
TOTAL					**10,560**		**10,560**	**981**		

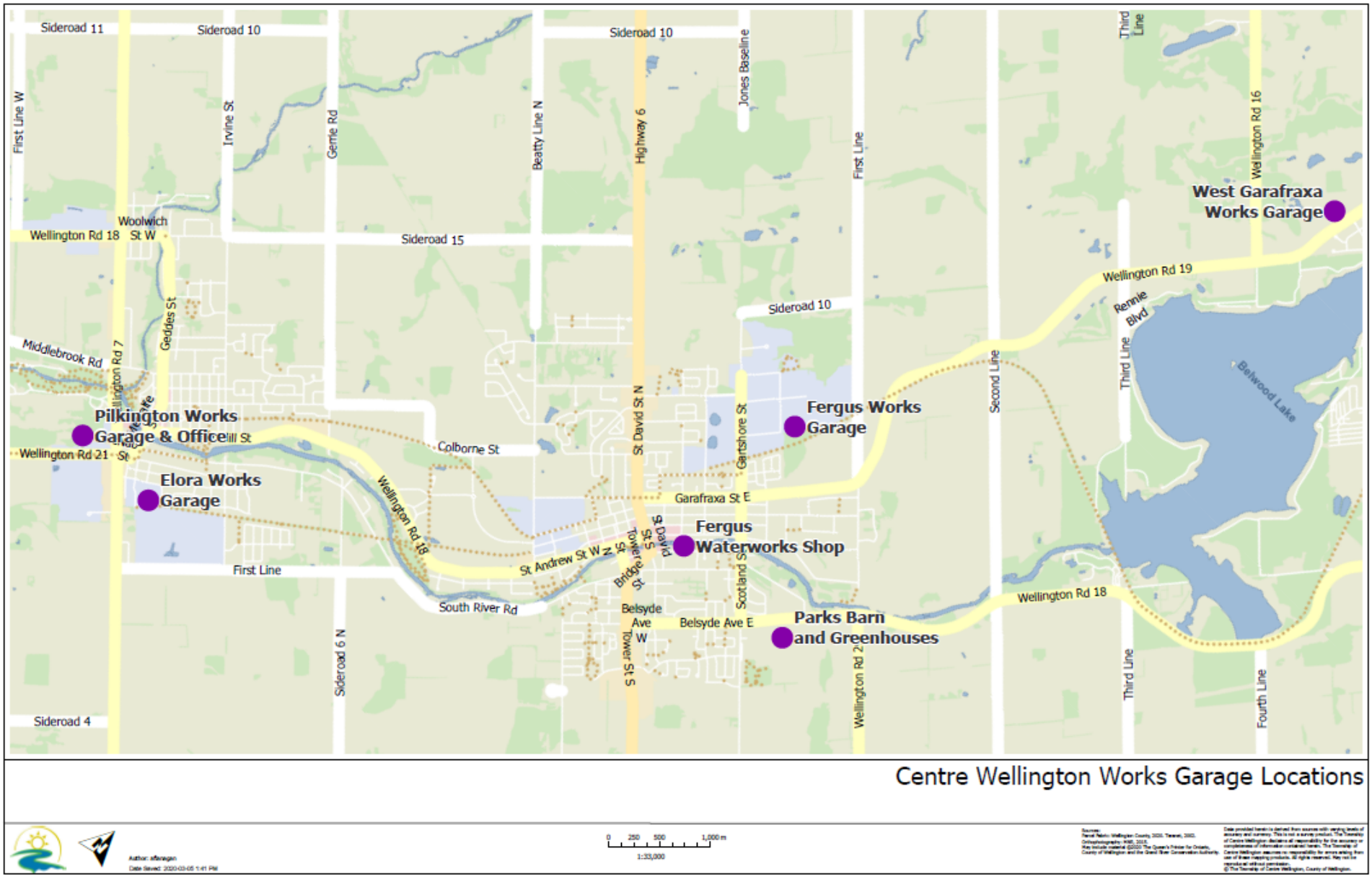
Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
10.0 Manual Vehicle Wash Building										**Heated to 10C**
Combined Roads & Water										
Vehicle Wash Bay (1)	OO			1	1,650	1	1,650	153		With small catwalk and hi
Water Supply for Water Truck (see 12.0 Yard)										Beside Wash Building
TOTAL					**1,650**		**1,650**	**153**		

Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
11.0 Work Vehicle Storage - Cool Bays in a separate pole barn (unheated) building										
Combined vehicle storage & sign storage				6	2,700	1	2,700	251		
TOTAL					**2,700**		**2,700**	**251**		
Grand TOTAL Indoor Space					**33,135**		**37,111**	**3,448**		

Functional Area	Office Type PO-Private OO- Open	Number of Rqd Staff Workstns 2020	Workstn/ Office/ Rm Size Rqd (sq.ft.)	No of Rqd Wrkstns / Rooms 2041	Required Area in 2041 (sq.ft.)	Circulation Ratio	Total Required Area (sq.ft.)	Total Required Area (sq.m)		Comments
12.0 Yard Storage										
Current Employee & Visitor Parking				75	21,485	1.25	26,856	2,495		Design for 59 current emplo
Outdoor wash pad for trucks beside wash building					1,250	1.25	1,563	145		
Indoor Loading Salt Storage Building					20,000	1.05	21,000	1,951		for Phase 2 addition
Brine Making and Storage Room					920	1.05	966	90		for Phase 2 addition
Stockpile for Road Sweeper Sand					1,000	1.25	1,250	116		
Gravel pile					4,900	1.25	6,125	569		stored on granular surface
Topsoil pile					4,900	1.25	6,125	569		stored on earth
Concrete Storage Bunkers				8	4,000	1.25	5,000	465		
Waste Yard Bins				4	1,000	1.25	1,250	116		scrap, cast metal, appliances
Back-up Generator				1	240	1.25	300	28		on a concrete pad
Vehicle Staging Outside Fleet Maint.				6	3,278	1.25	4,097	381		Beside Maintenance Shop
Work Vehicle Parking				36	16,275	1.25	20,344	1,890		Includes Parks & Forestry
Fueling storage and dispensing					2,000	1.25	2,500	232		Above ground coloured dies
Attachments					1,040	1.25	1,300	121		
Truck Water Supply beside Wash Building					1,250	1.25	1,563	145		
Greenhouses				1	1,332	1	1,332	124		adjacent to employee parkin
Greenhouses				3	3,996	1	3,996	371		for Phase 2 addition
Truck Loading area for plants beside greenhouses				1	1,250	1.25	1,563	145		Temporary staging prior to p
New Tree Storage Area				1	11,564	1	11,564	1,074		Temporary staging prior to p
Open Yard Space for Misc. Materials					10,000	1.25	12,500	1,161		
Transport/Courier Truck Unloading Area					1,200	1.25	1,500	139		In the yard close to indoor M
Outdoor Patio (1) (30 people)				30	725	1.25	906	84		Sized for 30 + BBQ
Grand TOTAL Yard Space					**113,604**		**133,599**	**12,412**		



APPENDIX B – Maps and Aerial Site Photos

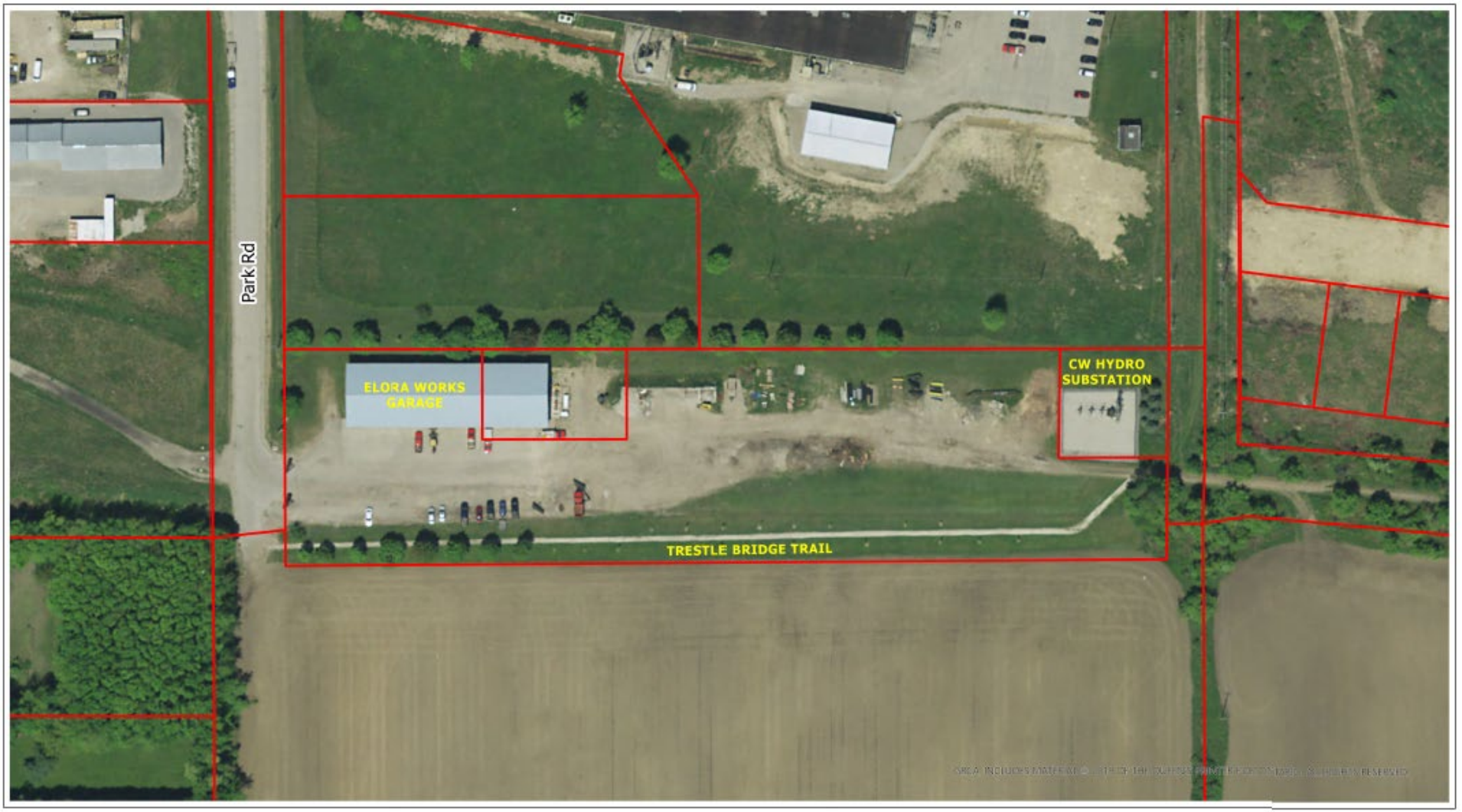

Sideroad 11
Sideroad 10
Sideroad 10
Jones Baseline
Third Line
First Line W
Irvine St
Gerrie Rd
Beatty Line N
Highway 6
First Line
Wellington Rd 16
West Garafraxa Works Garage
Woolwich
Wellington Rd 18
St W
Sideroad 15
Wellington Rd 19
Rennie Blvd
Sideroad 10
Geddes St
Middlebrook Rd
Wellington Rd 7
Pilkington Works Garage & Office
Mill St
Wellington Rd 21
St
Colborne St
St David St N
Gartshore St
Fergus Works Garage
Second Line
Third Line
Belwood Lake
Elora Works Garage
Wellington Rd 18
Garafraxa St E
St David St S
Fergus Waterworks Shop
St Andrew St W
N
Tower St S
Bridge St
First Line
Scotland St
South River Rd
Belsyde Ave W
Belsyde Ave E
Parks Barn and Greenhouses
Wellington Rd 18
Sideroad 6 N
Tower St S
Wellington Rd 2
Third Line
Fourth Line
Sideroad 4
Centre Wellington Works Garage Locations
0 250 500 1,000 m
1:33,000



Parcel Boundary
Regulation Limit (GRCA)

Pilkington Works Garage and Office
7444 Wellington Road 21

0 15 30 60m
1:1,500


Park Rd
ELORA WORKS GARAGE
CW HYDRO SUBSTATION
TRESTLE BRIDGE TRAIL
Parcel Boundary
Elora Works Garage
23 Park Road
0 10 20 40m
1:1,000


St Andrew St E
Gowrie St N
WELL HOUSE
CONFEDERATION PARK
CW HYDRO SUBSTATION
WATERWORKS SHOP
EMS STATION
Queen St E
CENTRE WELLINGTON COMMUNITY MEDICAL OFFICES
Gowrie St S
Hillside Dr
Parcel Boundary
Regulation Limit (GRCA)
Floodplain (GRCA)
0 10 20 40m
1:1,000
Fergus Waterworks Shop
295 Queen Street East


Dickson Dr
Glengarry Cres
First Line
FUTURE
EMPLOYMENT LANDS
HELICOPTER PAD
FERGUS WORKS
GARAGE
SALT
STORAGE
THE ELORA CATARACT TRAIL
Parcel Boundary
Regulation Limit (GRCA)
Wetland (GRCA)
0 25 50 100m
1:2,500
Fergus Works Garage
600 Glengarry Crescent


RENTED LAND
Wellington Rd 19
HIGHLAND PINES CAMPGROUND
SALT STORAGE
WEST GARAFRAXA GARAGE
Parcel Boundary
West Garafraxa Works Garage
8460 Wellington Road 19
0 25 50 100m
1:2,500



Parcel Boundary

Parks Barn, Office and Greenhouses
550 Belsyde Avenue East

0 15 30 60m
1:1,500



APPENDIX C – IT Specifications

Design Standards:

- Client IT/Communications Design Standards

  MD – No Client Design Standard/Guideline currently

- Industry Standards required to be met (i.e., Commercial Building Telecommunication Standard TIA 568-C, etc.)

  MD – Directed to utilize relevant office design standards but, where cost prohibitive/deemed unnecessary, deviation will be permitted

New Site Details (if available)

- Estimated number of floors, square footage of each floor and staff counts/floor. Information is required for space planning purposes; area/quantity of Equipment room/Telecom. rooms (will be based on BICSI/EIA/TIA standards).

  MD –The site will have multiple departments (all Township staff) and will be the only tenants in the building. Approximately, 65 staff members estimated for the new site in 2020 with a projection of approximately 100 staff members by 2040. Per the program document, desire to have the entire site to be a single level. As per ANSI/TIA/BICSI Standards: Minimum 1 x ER (Equipment Room) / TR (Telecommunications Room) per floor required and additional room is if required structured cabling length is greater than (295 ft); if building is relatively square, a single room should be sufficient. In terms of area/size of Equipment/Telecom room, this can be determined based on the number of staff (100) or square footage (~18,286 – calculated based on spreadsheet office area only (excludes garage maintenance)). Equipment Room/Telecom Room sizing based on occupancy (where equipment is unknown) shall be 160sqft minimum but as UPS system (and associated precision cooling) is planned to be included, it is recommended that a **~15'x20' room (300 sqft)** be provided. Note the space planning spreadsheet allocates a 280 sqft. room.

- Will there be any raised floor space(s) at the site? If so, for what purpose – cabling only? Also, what height? Will raised floor be limited to the support rooms (Equipment/Telecom) or the entire floor area?

  MD – Potentially have raised floor in Equipment Room only. Entire site will have dropped/t-bar ceiling; IT/comms. cables to be routed in plenum (free-air, plenum rated). Cable trays with Equipment/Telecom room.

IT/Communications Systems:

- Required IT/Comms Services to site and the required number of providers?

  MD – One (1) Fibre service will be provided by Centre Wellington Data. Site will be connected to two (2) other sites (Primary Backups at Ferguson)

- Equipment/Telecom Room and/or Ancillary Room requirements: Location(s), room size(s) (based on client specific needs), infrastructure requirements including Rack/Cabinets, Data Closets/Enclosures (if any), Raceway Requirements, etc.

- Are any existing equipment to be re-purposed from existing site(s)? As noted below, 6 racks of equipment currently.

  MD – All new

- Desired location of Main Telecom Room/Equipment Room (location of Point-of-Presence), how will Main Telecom Room/Equipment Room be connected to Telecom rooms (backbone cabling: multi-mode/single-mode fibre? multi-conductor copper?)

  MD – Staff suggested locating the Main Equipment room in the centre of building for 1) reduction in cabling lengths and resilience to potential natural disaster. Likely no telecom room(s) required based on building area but may need to be provided if structured cabling lengths exceed 295 ft in length. Backbone cabling shall be multimode fibre.

- Structured Cabling type (Cat 5e?, Cat 6?)?

  MD - Structured cabling shall be Cat 6.

- Desired Structured cabling termination strategy? Assume Patch Panels within rack/cabinets.

  MD – Correct

- POE (Power over Ethernet) requirements for deployment for Cameras, WAP (wireless access points), etc.?

  MD – Phones, WAPs, Cameras and potentially POE lighting (Consultant to investigate cost differences)

- Are Telephones to be VOIP (Voice over Internet Protocol) or conventional type?

  MD – Yes, Phones shall be VOIP. No POTS (Plain old Telephone Service), Fire Alarm/Remote Monitoring will be through VOIP system.

- Is BAS (Building Automation System) also to be incorporated into the IT systems or will it be standalone?

  MD – BAS system will not be integrated into structured cabling system.

- Number of data drops per workstation/user? Sites incorporating VOIP typically require one (1) drop per workstation

MD – Generally one (1) drop per workstation with the exception of Reception Areas, Front Desk, IT; Two (2) or more drops required.

Critical Power Distribution (UPS – Uninterruptible Power Supply):

- What loads are to be supported? Will be it be limited to loads in Equipment/Telecom Rooms or are workstations also to be supported (If so, what quantity)? Estimated load requirements?

MD – Server and Network loads to be supported and provide critical power to workstations (CPU only)

- Desire for centralized (one large unit) or distributed system (rack/cabinet mounted units)?

MD – Current site has UPS unit supporting Server/Network loads and there are some small units deployed at desks. Staff agree a better solution is to provide a centralized unit serving Server and Network loads to support and provide critical power to workstations (CPU only).

Emergency Power Distribution (Generator):

- Non life-safety loads required to be on Emergency Power? This should also include precision cooling for Equipment/Telecom rooms.

MD – Yes. Luminaires, Office and receptacles on generator. Garage likely not required to be on Generator – to be confirmed.

- It is assumed that the new site will be designed with an Emergency Generator to service life safety loads (elevators, lighting, fire alarm, etc.). Is there a desire to utilize this life safety generator for non-life safety loads as well or will a dedicated Emergency Generator be required?

MD – Single Large unit to service Life Safety and non-Life Safety

- Redundancy requirements (if any)? N+1, 2N?

MD – Not required

- Generator location(s)? Assume an outdoor unit in a weather-tight enclosure

MD – Outdoor unit in weather tight enclosure

- Diesel? Natural Gas? Bi-fuel?

MD - Natural Gas if available

- Desired back up time? If Diesel, back-up time will be limited by on-site fuel storage infrastructure? Typically, 24 hrs-72 hrs, of back-up time, is achieved using either sub-base fuel tank and/or day-tank(s).

MD – N/A since service is natural gas



APPENDIX D – Letter from the County

-----Original Message-----
From: Don Kudo [mailto:donk@wellington.ca]
Sent: Friday, January 17, 2020 7:37 AM
To: Colin Baker <CBaker@centrewellington.ca>
Cc: Andrew Goldie <AGoldie@centrewellington.ca>; Scott Wilson <scottw@wellington.ca>
Subject: Re: County Garage - Elora

Colin,
There is no other garage planned for construction in Centre Wellington in the next 15 years.

Don Kudo, P. Eng.
County Engineer
County of Wellington

Sent from my iPhone

On Jan 16, 2020, at 4:56 PM, Colin Baker <CBaker@centrewellington.ca> wrote:

Thanks Don.

Can we also confirm that the County does not have any other plans to construct a new garage facility in Centre Wellington in the next 15 or so years.

Regards,
Colin

Colin Baker, P.Eng. | Managing Director of Infrastructure Services

Township of Centre Wellington | 1 MacDonald Square, Elora, ON N0B 1S0
519.846.9691 x357 centrewellington.ca<http://www.centrewellington.ca/>

Office located at: 7444 Wellington Road 21, Elora, ON N0B 1S0

From: Don Kudo [mailto:donk@wellington.ca]
Sent: Wednesday, January 15, 2020 4:38 PM
To: Colin Baker <CBaker@centrewellington.ca>
Cc: Andrew Goldie <AGoldie@centrewellington.ca>; Scott Wilson <scottw@wellington.ca>
Subject: County Garage - Elora

Colin,
Following up on our discussion, the County has a number of garage projects to be undertaken in the future. The replacement of the Elora Garage is not in the current 10-year Capital Budget forecast. At this time, we anticipate the Elora Garage project could occur in 2033.

I hope this information is helpful and please feel free to contact me if you have questions.

Don Kudo, P. Eng.
County Engineer
Engineering Services Department
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
T 519.837.2601 x2280
C 226.962.3015
E donk@wellington.ca<mailto:donk@wellington.ca>
W www.wellington.ca<http://www.wellington.ca>



APPENDIX E – Cost Estimates of Renovations and Additions Required for Each Option

SUMMARY Of COSTS

	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8
Repairs	$4,022,000							
Renovations to existing Works Garages		$16,682,000	$12,678,000	$5,511,000				
Renovations to the Medical Office			$850,680				$850,680	
Phase 1			$18,828,000	$9,503,360	$15,587,680	$10,915,420	$9,015,900	$9,015,900
Phase 2				$5,412,866		$5,373,099	$7,557,547	$2,770,672
Phase 3								$4,786,875
Salt Dome			$4,393,200		$4,393,200	$4,393,200	$4,393,200	$4,393,200
Greenhouses			$266,400	$266,400	$266,400	$266,400	$266,400	$266,400
20 acres of Land			$4,000,000		$4,000,000	$4,000,000	$4,000,000	$4,000,000
TOTAL	$4,022,000	$16,682,000	$41,016,280	$20,693,626	$24,247,280	$24,948,119	$26,083,727	$25,233,047

OPTION 1 – Do Nothing

The cost for Option 1 is based on the value of the repairs required for the existing works garages, offices, salt storage sheds and parks facilities over the next 20 years. The repair costs were estimated by Cion Coulter as part of the 2020 Township building condition audits. No building additions or renovations were considered. The estimated 20 year repair costs for the facilities as noted below totals $4,022.000.

Summary of Repair Costs from 2020 Cion Coulter Building Condition Audits:

Buidling Condition	Fergus East		Elora	Waterworks	Pilkington		West Garafraxa		
Audit Information	Garage	Salt Shed	Garage	Garage & Office	Garage	Office	Garage	Office	Salt Shed
Year Built	1974	1991	1992	1984	1984	1840	1984	1989	1993
Size (sq. ft.)	9,850	4,480	9,500	5,800	5,850	1,800	6,000	2,800	9,850
20 yr Cost for Repairs	$976,500	$40,000	$314,500	$622,000	$343,000	$269,500	$560,500	$422,500	$40,000

Buidling Condition	Parks		Parks Greenhouses	
Audit Information	Barn	Office	Ginko	Biloba
Year Built	1980	1860		2006
Size (sq. ft.)	2,600	2,600	1,440	1,400
20 yr Cost for Repairs	$205,500	$164,000	$30,000	$34,000

OPTION 2 – New Garage for Infrastructure Services with Phased Renovations and Expansions to Other Existing Facilities

Pilkington Office Building Expansion ($2,745,000) (Build within 5 year)

The following modifications, additions and repairs are required:

- Build an architecturally compatible two storey office addition with elevator to accommodate all full-time office staff from Public Works, Water Works, Engineering, IT and Risk Management (Source Water Protection) (26 people; 6,500 sf; $2,500,000);
- Repairs to the existing building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
    - The two-storey office building has stairs to the 2nd floor and is, therefore, not accessible. An elevator and significant building renovations would be required to make the full office accessible ($80,000);
    - The office and separate garage building share a single water service and a residential style septic tank (which doesn't have the capacity to support a large office addition). An extension of the sanitary sewer from the street would be required if the office building was to be enlarged ($300,000);
    - The office lunch room only has enough space for one table with six chairs which is too small for the 13-office staff who use it;
    - There is only one meeting room in the office and it only fits one table with eight chairs. A larger additional meeting room is needed. Staff frequently have to use the larger meeting rooms at other Township facilities which is not efficient;
    - The existing uninsulated mass stone walls of the office building are not energy efficient for heating. The HVAC system is in needs of replacement as the building is often cold in the winter. The electrical service is at capacity and can't support the use of space heaters without tripping the breaker ($15,000);
    - There is insufficient attic roof insulation and ventilation. This allows heat to warm up the roof and melt the roof snow which then drips off the eaves and refreezes into icicles which can fall on staff at the entrance ways. The melting roof snow also drips onto the entrance walkway and ices over the path creating a slip and fall hazard;
    - The partial basement is built of old rubble stone foundation walls which aren't sealed. That, combined with the overall unsealed building construction, allows rodents to enter the office;
    - The office main entrance door opens directly onto the reception area which causes a draft of cold air for the staff stationed close to the entrance whenever the door is opened in winter;
    - The existing parking lot is used for staff, visitor, and Works vehicle parking. It is also used as a circulation area and access route for heavy equipment to the Works Garage and outdoor materials storage yard. This combination of uses creates a safety hazard as office staff need to cross the parking lot through the travel path of the Works Garage vehicles;

- The parking lot is over-crowded without room for future staff or Works Garage vehicle parking. To support an office expansion and additional staff, the parking lot would need to be enlarged into the area where several old 60' tall fir trees currently stand ($60,000)
- Miscellaneous building repairs ($50,000).

Parks and Recreation Barn ($1,599,000) (Build within 5 year)

The following modifications, additions and repairs are required:

- Repair and upgrade the barn so that it can serve as an unheated storage building for all parks vehicles and equipment to meet the 20-year (2040) growth requirements:
    - The roof leaks ($15,000);
    - Insufficient indoor storage space for equipment and tools – so equipment left exposed to the elements outdoors;
    - No indoor storage space for materials and signs;
    - The Barn doors are very difficult to slide open during the winter;
    - No security cameras so equipment and tools are subject to theft;
    - No outdoor storage area for brush or compost;
    - No employee parking area;
    - Miscellaneous repairs ($15,000).
- Build a new heated Parks garage building. It will accommodate all the Parks operators (2 full time and 19 Parks summer students and 1 Forestry summer student). The new Parks garage will need (4,830 sf; $1,449,000):
    - A lunch room with fridge, microwave, sink, dishwasher, toaster oven, counter and 1 touchdown station (700 sf)
    - Separate male and female change rooms / lockers / showers / laundry / washrooms (900 sf)
    - A wellness / first aid / phone room (130 sf)
    - Five touchdown stations in an open office area (200 sf)
    - One supervisor's office with a small four-person meeting area (300 sf)
    - One heated garage bay space for workbench and storage (1,100 sf)
    - One heated vehicle garage bay (1,100 sf)
    - Building services rooms (mechanical, electrical, janitor closet) (400 sf)
- Build a new greenhouse (1,332 sf; $100,000)
- Repair the existing greenhouses ($20,000)

Fergus East Works Garage ($8,426,000) (5 year)

The existing Fergus East garage building is too small, has several deficiencies and is in such poor overall condition that it is at the end of its asset life and should be replaced rather than repaired.

The Water Works facility is too small to meet the current or future space requirements and is aging and in poor condition. Given these deficiencies coupled with the restrictions against building an addition at that site due to the flood plain constraints and the surrounding buildings, road and river, it is recommended that the Water Works operations should be relocated into the new Fergus East Works Garage. The existing well house located at the Water Works garage would need to continue to be maintained and operated and the garage bays could continue to be used for vehicle storage.

The following changes are required:

- Demolish the existing Fergus East Works garage building and replace it with a new building that would (1) consolidate the employees, vehicles and equipment from the Fergus East, and Water Works facilities, and (2) meet the 20-year growth requirements for the employees, vehicles and equipment (including 2 mechanics). The building would include 12 heated bays for storage and work shops, 2 maintenance bays, and 1 wash bay (25,800 sf; $8,256,000);
- Build a 5-bay unheated pole barn (2,250 sf; $170,000)

West Garafraxa Office ($180,000) (10 year)

The following modifications, additions and repairs are required:

- The Office Building will continue to be used for archive records storage. It will need to be renovated to add an elevator and to structurally reinforce the ground floor to be able to support a new condensed file storage system of equivalent size to the condensed file storage that would be installed in the new Operations Centre.

Elora Works Garage (Total of $2,729,000) (15 year)

The following modifications, additions and repairs are required:

- Expand and renovate the operator amenity areas in the existing building to meet the 20-year (2040) growth requirements for the employees (800 sf; $300,000);
- Build a 4-bay heated garage addition including one designated wash bay building to meet the 20-year growth requirements for the vehicles and equipment (5,280 sf; $1,584,000);
- Build a separate unheated 4-bay pole barn for the vehicles and equipment (1,800 sf; $135,000).
- Repairs to the building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
    - The roof leaks and requires repair ($50,000);
    - The roll-up bay doors and openers no longer work well and should be replaced ($175,000);
    - Insufficient lighting and ventilation within the garage storage bays ($20,000);
    - The electrical panel and heating system require replacement ($20,000);
    - Require a back-up power generator ($50,000);

- Require a proper welding booth ($10,000);
- The pumping system for the fuel tanks should be replaced ($50,000);
- No perimeter fence or security cameras so equipment and tools are subject to theft ($100,000);
- No designated employee parking area ($30,000);
- The lot should be repaved ($80,000);
- Miscellaneous building repairs ($125,000).

West Garafraxa Garage ($395,000) (15 year)

The following modifications, and repairs are required:

- Two full time Public Works roads operators currently work out of the West Garafaxa Garage and will continue to work there because it's a good location as a satellite garage for the east side of the Township - especially because it has an existing salt shed that will continue to be used. No other staff will be stationed there. The garage will continue to be used to house the vehicles that it currently houses.
- The garage building will require some renovations:
    - No lunch room or crew meeting room ($15,000);
    - The washrooms should be updated ($10,000);
    - No private lockers, and the employee change rooms and shower facilities should be updated ($15,000);
    - No washer/dryer for work clothing;
    - The roll-up bay doors and openers no longer work well and should be replaced ($125,000);
    - No ventilation system within the garage ($15,000);
    - The electrical panel and heating system require replacement ($15,000);
    - Require a back-up power generator ($45,000);
    - Require a proper welding booth ($10,000);
    - The pumping system for the fuel tanks should be replaced ($40,000);
    - No perimeter fence or security cameras so equipment and tools are subject to theft ($55,000).
    - Miscellaneous repairs ($50,000)

OPTION 3 – Combined Facility with County Built in 15 to 20 years with Interim Renovations / Expansions to Existing Facilities

Fergus East Works Garage ($8,426,000) (5 year)

The existing Fergus East garage building is too small, has several deficiencies and is in such poor overall condition that it is at the end of its asset life and should be replaced rather than repaired.

The Water Works facility is too small to meet the current or future space requirements and is aging and in poor condition. Given these deficiencies coupled with the restrictions against building an addition at that site due to the flood plain constraints and the surrounding buildings, road and river, it is recommended that the Water Works operations should be relocated into the new Fergus East Works Garage. The existing well house located at the Water Works garage would need to continue to be maintained and operated and the garage bays could continue to be used for vehicle storage.

The following changes are required:

- Demolish the existing Fergus East Works garage building and replace it with a new building that would (1) consolidate the employees, vehicles and equipment from the Fergus East, and Water Works facilities, and (2) meet the 20-year growth requirements for the employees, vehicles and equipment (including 2 mechanics). The building would include 12 heated bays for storage and work shops, 2 maintenance bays, and 1 wash bay (25,800 sf; $8,256,000);
- Build a 5-bay unheated pole barn (2,250 sf; $170,000)

West Garafraxa Office (won't renovate since archives moving to medical centre)

Pilkington Office Building (Put people in Medical Office instead) (5 year)

Pilkington Works Garage ($608,000) (10 year)

The following modifications and repairs are required:

- Renovate the operator amenity areas in the existing building ($20,000);
- Repairs to the building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
    - No proper crew meeting room, employee change rooms, private lockers or shower facilities ($100,000);
    - No washer/dryer for work clothing ($3,000);
    - The roll-up bay doors and openers no longer work properly and should be replaced ($100,000);
    - Insufficient lighting and no ventilation within the garage storage bays ($15,000);
    - The electrical panel and heating system require replacement ($15,000);
    - Require a back-up power generator ($45,000);
    - Require a proper welding booth ($10,000);
    - The pumping system for the fuel tanks should be replaced ($50,000);
    - No perimeter fence or security cameras so equipment and tools are subject to theft ($80,000);
    - Install an oil grit separator and proper floor drains ($40,000);
    - Repave the parking lot ($40,000);

- Miscellaneous building repairs ($90,000).

Parks and Recreation Barn ($520,000) (10 year)

The following modifications, additions and repairs are required:

- Repair and upgrade the barn so that it can serve as an unheated storage building for all parks vehicles and equipment to meet the 20-year (2040) growth requirements:
    - The roof leaks ($15,000);
    - Insufficient indoor storage space for equipment and tools – so equipment left exposed to the elements outdoors;
    - No indoor storage space for materials and signs;
    - The Barn doors are very difficult to slide open during the winter;
    - No security cameras so equipment and tools are subject to theft;
    - No outdoor storage area for brush or compost;
    - No employee parking area;
    - Miscellaneous repairs ($15,000).
- Build a new greenhouse (1,332 sf; $100,000)
- Repair the existing greenhouses and relocate them ($40,000)
- An unheated barn (40-80') ($250,000)
- Add a few offices in the Sportsplex ($100,000)

Elora Works Garage (Total of $2,729,000) (15 year)

The following modifications, additions and repairs are required:

- Expand and renovate the operator amenity areas in the existing building to meet the 20-year (2040) growth requirements for the employees (800 sf; $300,000);
- Build a 4-bay heated garage addition including one designated wash bay building to meet the 20-year growth requirements for the vehicles and equipment (5,280 sf; $1,584,000);
- Build a separate unheated 4-bay pole barn for the vehicles and equipment (1,800 sf; $135,000).
- Repairs to the building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
    - The roof leaks and requires repair ($50,000);
    - The roll-up bay doors and openers no longer work well and should be replaced ($175,000);
    - Insufficient lighting and ventilation within the garage storage bays ($20,000);
    - The electrical panel and heating system require replacement ($20,000);
    - Require a back-up power generator ($50,000);
    - Require a proper welding booth ($10,000);
    - The pumping system for the fuel tanks should be replaced ($50,000);

- No perimeter fence or security cameras so equipment and tools are subject to theft ($100,000);
- No designated employee parking area ($30,000);
- The lot should be repaved ($80,000);
- Miscellaneous building repairs ($125,000).

West Garafraxa Garage ($395,000) (15 year)

The following modifications, and repairs are required:

- Two full time Public Works roads operators currently work out of the West Garafaxa Garage and will continue to work there because it's a good location as a satellite garage for the east side of the Township - especially because it has an existing salt shed that will continue to be used. No other staff will be stationed there. The garage will continue to be used to house the vehicles that it currently houses.
- The garage building will require some renovations:
    - No lunch room or crew meeting room ($15,000);
    - The washrooms should be updated ($10,000);
    - No private lockers, and the employee change rooms and shower facilities should be updated ($15,000);
    - No washer/dryer for work clothing;
    - The roll-up bay doors and openers no longer work well and should be replaced ($125,000);
    - No ventilation system within the garage ($15,000);
    - The electrical panel and heating system require replacement ($15,000);
    - Require a back-up power generator ($45,000);
    - Require a proper welding booth ($10,000);
    - The pumping system for the fuel tanks should be replaced ($40,000);
    - No perimeter fence or security cameras so equipment and tools are subject to theft ($55,000).
    - Miscellaneous repairs ($50,000)

OPTION 4 – New Garage with Office for Infrastructure Services and Phased Renovations / Expansions to Other Existing Facilities

Parks and Recreation Barn ($1,599,000) (5 year)

The following modifications, additions and repairs are required:

- Repair and upgrade the barn so that it can serve as an unheated storage building for all parks vehicles and equipment to meet the 20-year (2040) growth requirements:
    - The roof leaks ($15,000);

- Insufficient indoor storage space for equipment and tools – so equipment left exposed to the elements outdoors;
- No indoor storage space for materials and signs;
- The Barn doors are very difficult to slide open during the winter;
- No security cameras so equipment and tools are subject to theft;
- No outdoor storage area for brush or compost;
- No employee parking area;
- Miscellaneous repairs ($15,000).

- Build a new heated Parks garage building. It will accommodate all the Parks operators (2 full time and 19 Parks summer students and 1 Forestry summer student). The new Parks garage will need (4,830 sf; $1,449,000):
  - A lunch room with fridge, microwave, sink, dishwasher, toaster oven, counter and 1 touchdown station (700 sf)
  - Separate male and female change rooms / lockers / showers / laundry / washrooms (900 sf)
  - A wellness / first aid / phone room (130 sf)
  - Five touchdown stations in an open office area (200 sf)
  - One supervisor's office with a small four-person meeting area (300 sf)
  - One heated garage bay space for workbench and storage (1,100 sf)
  - One heated vehicle garage bay (1,100 sf)
  - Building services rooms (mechanical, electrical, janitor closet) (400 sf)

- Build a new greenhouse (1,332 sf; $100,000)

- Repair the existing greenhouses ($20,000)

Pilkington Works Garage ($608,000) (10 year)

The following modifications and repairs are required:

- Renovate the operator amenity areas in the existing building ($20,000);
- Repairs to the building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
  - No proper crew meeting room, employee change rooms, private lockers or shower facilities ($100,000);
  - No washer/dryer for work clothing ($3,000);
  - The roll-up bay doors and openers no longer work properly and should be replaced ($100,000);
  - Insufficient lighting and no ventilation within the garage storage bays ($15,000);
  - The electrical panel and heating system require replacement ($15,000);
  - Require a back-up power generator ($45,000);
  - Require a proper welding booth ($10,000);
  - The pumping system for the fuel tanks should be replaced ($50,000);

- No perimeter fence or security cameras so equipment and tools are subject to theft ($80,000);
- Install an oil grit separator and proper floor drains ($40,000);
- Repave the parking lot ($40,000);
- Miscellaneous building repairs ($90,000).

West Garafraxa Office ($180,000) (10 year)

The following modifications, additions and repairs are required:

- The Office Building will continue to be used for archive records storage. It will need to be renovated to add an elevator and to structurally reinforce the ground floor to be able to support a new condensed file storage system of equivalent size to the condensed file storage that would be installed in the new Operations Centre.

Elora Works Garage (Total of $2,729,000) (15 year)

The following modifications, additions and repairs are required:

- Expand and renovate the operator amenity areas in the existing building to meet the 20-year (2040) growth requirements for the employees (800 sf; $300,000);
- Build a 4-bay heated garage addition including one designated wash bay building to meet the 20-year growth requirements for the vehicles and equipment (5,280 sf; $1,584,000);
- Build a separate unheated 4-bay pole barn for the vehicles and equipment (1,800 sf; $135,000).

- Repairs to the building as identified in section 3.1.1 to comply with building code and accessibility requirements, eliminate any health and safety concerns, and improve functionality:
  - The roof leaks and requires repair ($50,000);
  - The roll-up bay doors and openers no longer work well and should be replaced ($175,000);
  - Insufficient lighting and ventilation within the garage storage bays ($20,000);
  - The electrical panel and heating system require replacement ($20,000);
  - Require a back-up power generator ($50,000);
  - Require a proper welding booth ($10,000);
  - The pumping system for the fuel tanks should be replaced ($50,000);
  - No perimeter fence or security cameras so equipment and tools are subject to theft ($100,000);
  - No designated employee parking area ($30,000);
  - The lot should be repaved ($80,000);
  - Miscellaneous building repairs ($125,000).

Pilkington Office Building (relocating Infrastructure to new Ops Centre; Engineering and others moving to new Fergus East)

Fergus East Works Garage (to be replaced by new Ops Centre for current Infrastructure Dept. needs including office)

West Garafraxa Garage ($395,000) (15 year)

The following modifications, and repairs are required:

- Two full time Public Works roads operators currently work out of the West Garafaxa Garage and will continue to work there because it's a good location as a satellite garage for the east side of the Township - especially because it has an existing salt shed that will continue to be used. No other staff will be stationed there. The garage will continue to be used to house the vehicles that it currently houses.
- The garage building will require some renovations:
    - No lunch room or crew meeting room ($15,000);
    - The washrooms should be updated ($10,000);
    - No private lockers, and the employee change rooms and shower facilities should be updated ($15,000);
    - No washer/dryer for work clothing;
    - The roll-up bay doors and openers no longer work well and should be replaced ($125,000);
    - No ventilation system within the garage ($15,000);
    - The electrical panel and heating system require replacement ($15,000);

    - Require a back-up power generator ($45,000);
    - Require a proper welding booth ($10,000);
    - The pumping system for the fuel tanks should be replaced ($40,000);
    - No perimeter fence or security cameras so equipment and tools are subject to theft ($55,000).
    - Miscellaneous repairs ($50,000)

Operations Centre

Phase 1

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	4,574	425	**320**	**1,463,680**
Touchdown Station Office	1,051	98	**320**	**336,320**
Employee Amenities	3,203	298	**320**	**1,024,960**
Supervisors Shop Office	2,240	208	**320**	**716,800**
Operations Shared Workshop	1,789	166	**300**	**536,700**
Mechanics Maintenance Shop	1,177	109	**300**	**353,100**
Mechanics Heavy Maintenance Bays	2,640	245	**320**	**844,800**
Garage Materials and Equipment Storage	1,320	123	**300**	**396,000**
Work Vehicle Storage – Heated Bays	10,560	981	**300**	**3,168,000**
Vehicle Wash Building	1,650	153	**320**	**528,000**
Work Vehicle Storage – Unheated Bays	1,800	167	**75**	**135,000**
Total Facility	**32,004**	**2,973**		**9,503,360**

Phase 2

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	644	60	**320**	**206,080**
Touchdown Station Office	143	13	**320**	**45,760**
Employee Amenities	1,125	105	**320**	**360,000**
Supervisors Shop Office	0	0	**320**	**-**
Operations Shared Workshop	0	0	**300**	**-**
Mechanics Maintenance Shop	0	0	**300**	**-**
Mechanics Heavy Maintenance Bays	0	0	**320**	**-**
Garage Materials and Equipment Storage	0	0	**300**	**-**
Work Vehicle Storage – Heated Bays	13,200	1226	**300**	**3,960,000**
Vehicle Wash Building	0	0	**320**	**-**
Work Vehicle Storage – Unheated Bays	1,800	167	**75**	**135,000**
Total Facility	**16,912**	**1,571**		**4,706,840**

Note: add 15% to total cost to capture inefficiencie of 2 phases rather than 1
5,412,866

Greenhouses **266,400**

OPTION 5 - Build a new Township Operations Centre on a new site to address the long-term space requirements for multiple departments with the majority of construction in the first phase

Operations Centre

Phase 1

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	7,685	714	**320**	**2,459,200**
Touchdown Station Office	1,312	122	**320**	**419,840**
Employee Amenities	5,547	516	**320**	**1,775,040**
Supervisors Shop Office	2,240	208	**320**	**716,800**
Operations Shared Workshop	1,873	174	**300**	**561,900**
Mechanics Maintenance Shop	1,177	109	**300**	**353,100**
Mechanics Heavy Maintenance Bays	2,640	245	**320**	**844,800**
Garage Materials and Equipment Storage	1,320	123	**300**	**396,000**
Work Vehicle Storage – Heated Bays	23,760	2207	**300**	**7,128,000**
Vehicle Wash Building	1,650	153	**320**	**528,000**
Work Vehicle Storage – Unheated Bays	5,400	502	**75**	**405,000**
Total Facility	**54,604**	**5,073**		**15,587,680**

salt dome	**4,393,200**
Greenhouses	**266,400**

Option 5 total estimated construction cost including land purchase = $24,247,280

OPTION 6 - Build a new Operations Centre on a new site in two phases

Phase 1 - Works garage for immediate needs and full office

Until the completion of the garage additions in phase 2, the existing garages would be used for off-site vehicle and equipment storage

Operations Centre

Phase 1

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	7,259	674	320	2,322,880
Touchdown Station Office	1,270	118	320	406,400
Employee Amenities	4,422	411	320	1,415,040
Supervisors Shop Office	2,240	208	320	716,800
Operations Shared Workshop	1,873	174	300	561,900
Mechanics Maintenance Shop	1,177	109	300	353,100
Mechanics Heavy Maintenance Bays	2,640	245	320	844,800
Garage Materials and Equipment Storage	1,320	123	300	396,000
Work Vehicle Storage – Heated Bays	10,560	981	300	3,168,000
Vehicle Wash Building	1,650	153	320	528,000
Work Vehicle Storage – Unheated Bays	2,700	251	75	202,500
Total Facility	**37,111**	**3,448**		**10,915,420**

Option 6 Phase 2 - Garage additions, salt storage facility, greenhouses

Phase 2

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft2)	Cost ($/m2)
Administrative Office	426	40	**320**	**136,320**
Touchdown Station Office	42	4	**320**	**13,440**
Employee Amenities	1,125	105	**320**	**360,000**
Supervisors Shop Office	0	0	**320**	**-**
Operations Shared Workshop	0	0	**300**	**-**
Mechanics Maintenance Shop	0	0	**300**	**-**
Mechanics Heavy Maintenance Bays	0	0	**320**	**-**
Garage Materials and Equipment Storage	0	0	**300**	**-**
Work Vehicle Storage – Heated Bays	13,200	1226	**300**	**3,960,000**
Vehicle Wash Building	0	0	**320**	**-**
Work Vehicle Storage – Unheated Bays	2,700	251	**75**	**202,500**
Total Facility	**17,493**	**1,626**		**4,672,260**

salt dome	**4,393,200**	
Greenhouses	**266,400**	
15% premeum for Phase 2		**5,373,099**

Option 6 total construction cost for Phase 1 and Phase 2 including land purchase = $24,948,119

OPTION 7 - Build a new Operations Centre on a new site in two phases

Phase 1 - works garage for immediate needs

Until the completion of the office and garage additions in phase 2, the existing garages would be used for off-site vehicle and equipment storage and the existing Medical Office would be used for interim office space

Operations Centre

Phase 1

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft^2$)	Cost ($/m^2$)
Administrative Office	1,323	123	320	423,360
Touchdown Station Office	1,270	118	320	406,400
Employee Amenities	4,422	411	320	1,415,040
Supervisors Shop Office	2,240	208	320	716,800
Operations Shared Workshop	1,873	174	300	561,900
Mechanics Maintenance Shop	1,177	109	300	353,100
Mechanics Heavy Maintenance Bays	2,640	245	320	844,800
Garage Materials and Equipment Storage	1,320	123	300	396,000
Work Vehicle Storage – Heated Bays	10,560	981	300	3,168,000
Vehicle Wash Building	1,650	153	320	528,000
Work Vehicle Storage – Unheated Bays	2,700	251	75	202,500
Total Facility	**31,175**	**2,896**		**$ 9,015,900**

Option 7 Phase 2 – Office and garage additions, salt storage facility, greenhouses

Phase 2

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft^2$)	Cost ($/m^2$)
Administrative Office	6,362	591	**320**	**2,035,840**
Touchdown Station Office	42	4	**320**	**13,440**
Employee Amenities	1,125	105	**320**	**360,000**
Supervisors Shop Office	0	0	**320**	**-**
Operations Shared Workshop	0	0	**300**	**-**
Mechanics Maintenance Shop	0	0	**300**	**-**
Mechanics Heavy Maintenance Bays	0	0	**320**	**-**
Garage Materials and Equipment Storage	0	0	**300**	**-**
Work Vehicle Storage – Heated Bays	13,200	1226	**300**	**3,960,000**
Vehicle Wash Building	0	0	**320**	**-**
Work Vehicle Storage – Unheated Bays	2,700	251	**75**	**202,500**
Total Facility	**23,429**	**2,177**		**$ 6,571,780**

salt dome	**4,393,200**	
Greenhouses	**266,400**	
15% Premium for Phase 2		**$ 7,557,547**

Option 7 total construction cost for Phase 1 and Phase 2 including land purchase and renovation of existing medical office = $26,083,727

OPTION 8 - Build a new Operations Centre on a new site in three phases

Phase 1 - Works garage for immediate needs

The existing garages would be used for off-site vehicle and equipment storage until the completion of the garage additions in Phase 3

Operations Centre

Phase 1

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft^2$)	Cost ($/m^2$)
Administrative Office	1,323	123	320	423,360
Touchdown Station Office	1,270	118	320	406,400
Employee Amenities	4,422	411	320	1,415,040
Supervisors Shop Office	2,240	208	320	716,800
Operations Shared Workshop	1,873	174	300	561,900
Mechanics Maintenance Shop	1,177	109	300	353,100
Mechanics Heavy Maintenance Bays	2,640	245	320	844,800
Garage Materials and Equipment Storage	1,320	123	300	396,000
Work Vehicle Storage – Heated Bays	10,560	981	300	3,168,000
Vehicle Wash Building	1,650	153	320	528,000
Work Vehicle Storage – Unheated Bays	2,700	251	75	202,500
Total Facility	**31,175**	**2,896**		**$ 9,015,900**

Option 8 Phase 2 – Office Construction

Until the completion of the garage additions in Phase 3, the existing garages would be used for off-site vehicle and equipment storage

Phase 2

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft^2$)	Cost ($/m^2$)
Administrative Office	6,362	591	**320**	**2,035,840**
Touchdown Station Office	42	4	**320**	**13,440**
Employee Amenities	1,125	105	**320**	**360,000**
Supervisors Shop Office	0	0	**320**	**-**
Operations Shared Workshop	0	0	**300**	**-**
Mechanics Maintenance Shop	0	0	**300**	**-**
Mechanics Heavy Maintenance Bays	0	0	**320**	**-**
Garage Materials and Equipment Storage	0	0	**300**	**-**
Work Vehicle Storage – Heated Bays	0	0	**300**	**-**
Vehicle Wash Building	0	0	**320**	**-**
Work Vehicle Storage – Unheated Bays	0	0	**75**	**-**
Total Facility	**7,529**	**700**		**$ 2,409,280**

$ 2,770,672

Option 8 Phase 8 – Garage additions, salt storage facility, greenhouses

Phase 3

Functional Area	Total Area Required in 2040 (ft^2)	Total Area Required in 2040 (m^2)	Cost ($/ft^2$)	Cost ($/m^2$)
Administrative Office	0	0	320	-
Touchdown Station Office	0	0	320	-
Employee Amenities	0	0	320	-
Supervisors Shop Office	0	0	320	-
Operations Shared Workshop	0	0	300	-
Mechanics Maintenance Shop	0	0	300	-
Mechanics Heavy Maintenance Bays	0	0	320	-
Garage Materials and Equipment Storage	0	0	300	-
Work Vehicle Storage – Heated Bays	13,200	1226	300	3,960,000
Vehicle Wash Building	0	0	320	-
Work Vehicle Storage – Unheated Bays	2,700	251	75	202,500
Total Facility	**15,900**	**1,477**		**$ 4,162,500**

$ 4,786,875

salt dome	**4,393,200**
Greenhouses	**266,400**

Option 8 total construction cost for Phase 1, 2 and 3 including land purchase = $25,233.047



APPENDIX F – Asbestos Remediation

Summary of Asbestos Audit Report Findings dated Oct. 31, 2009 by MTE Consultants

Legend:
ACM - Asbestos Containing Material
No Asbestos Concerns
Some Asbestos Concerns

Works Facility	Friable Asbestos Findings	Non-Friable Asbestos Findings	General Comments
West Garafraxa Roads Garage at 8460 Wellington Rd. 19, Belwood	Potential friable ACM include vermiculite loose-fill insulation in wall cavities (if present)	Non-friable ACM was confirmed in the 12"x12" floor tile beige with brown streaks located in the staff room, washroom, corridor and storage room of the garage.	The overall condition of the ACM observed in the building was good. There are ACM within the building which will require management, special handling and disposal prior to construction, renovation, maintenance, alteration, or demolition. Any disturbance of ACM must be conducted in accordance with Ontario Reg. 278/05.
Pilkington Roads Garage and Office building at 7444 Wellington Rd. 21, Elora	Potential friable ACM include vermiculite loose-fill insulation in wall cavities (if present)	No sources of non-friable ACM were confirmed by inspection or laboratory analysis of samples.	No building materials were deemed to be asbestos-containing based on the surveyor's visual recognition and knowledge of ACM. MTE wan't able to visually assess the spaces between walls & plumbing chases. There are no documented ACM within these buildings.
Fergus East Roads Garage at 600 Glengarry Cres.	Potential friable ACM include vermiculite loose-fill insulation (if present)	Non-friable ACM was identified in the 12"x12" beige floor tile in the locker rm corridor and 2' x 4' Acoustic Ceiling Tile (Long Fissure Pinhole Pattern) was identified in the stairwell, staff locker rm, adjacent corridor & 2nd flr staff WR. Potential non-friable ACM include roof felt. Floor tile adhesive should be sampled prior to demolition or renovation work.	The overall condition of the ACM observed in the building was good. There are ACM within the building which will require management, special handling and disposal prior to construction, renovation, maintenance, alteration, or demolition. Any disturbance of ACM must be conducted in accordance with Ontario Reg. 278/05.
Fergus WaterWorks Shop at 295 Queen St. E, Fergus	Potential friable ACM vermiculite loose-fill insulation in concrete block wall systems (if present)	Non-friable ACM was confirmed in the 12"x12" floor tile beige with brown streaks located in the offices and corridor of the water dept offices. Potential non-friable ACM include roof felt.	The overall condition of the ACM observed in the building was good. There are ACM within the building which will require management, special handling and disposal prior to construction, renovation, maintenance, alteration, or demolition. Any disturbance of ACM must be conducted in accordance with Ontario Regulation 278/05
Elora Works Garage at 50 Park Road, Elora	No sources of friable ACM were documented.	No sources of non-friable ACM were documented.	No building materials were deemed to be asbestos-containing based on the surveyor's visual recognition and the age of the building.



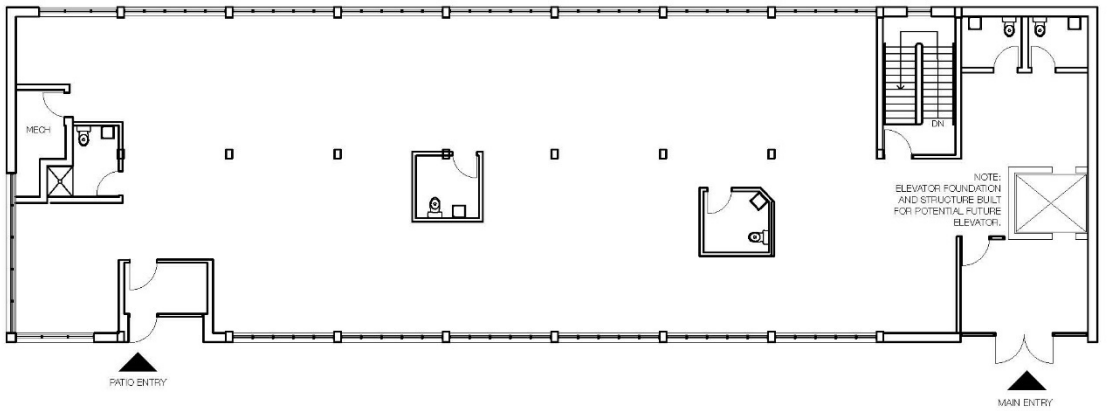
APPENDIX G – Medical Office Renovation Concept Layouts

EXISTING PLANS

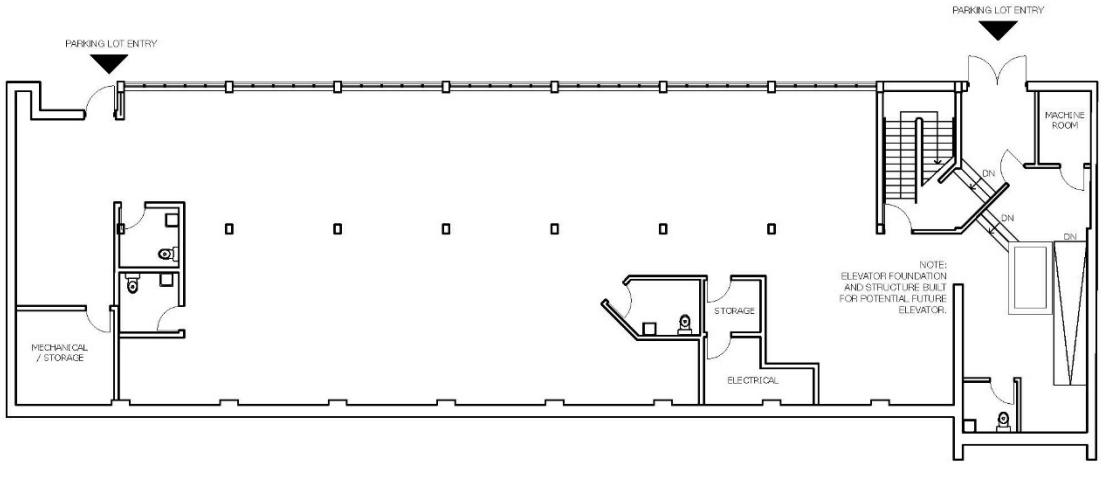
MAIN FLOOR:
TOTAL AREA: 4,058sqft

LOWER FLOOR:
TOTAL AREA: 3,894 sqft

TOTAL AREA: 7,952 sqft



MAIN FLOOR



LOWER FLOOR

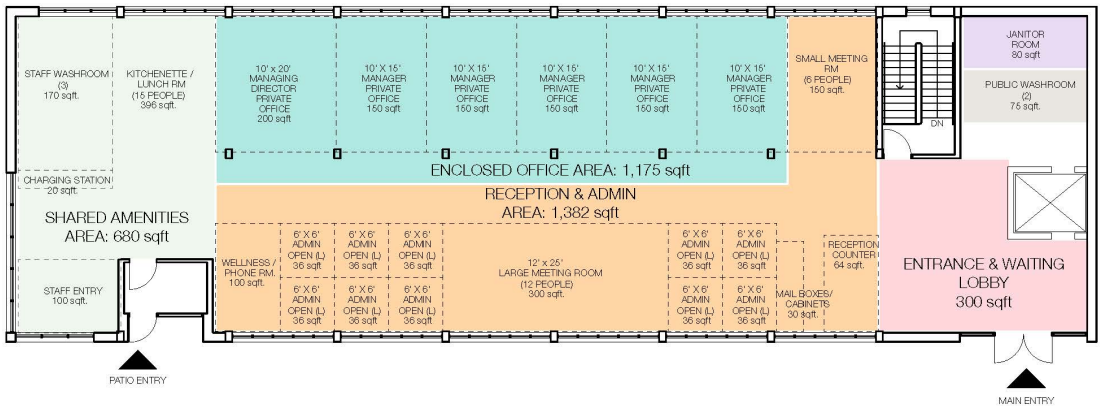
OPTION 1A

- Potential 321 sqft lease-able space on lower level near entrance.
- Workstations on both levels.
- Kitchenette / lunch room on main level
- Outdoor patio on lower level to east of building
- Program occupies 83% of building.
- 6 staff washrooms, 2 public washrooms.

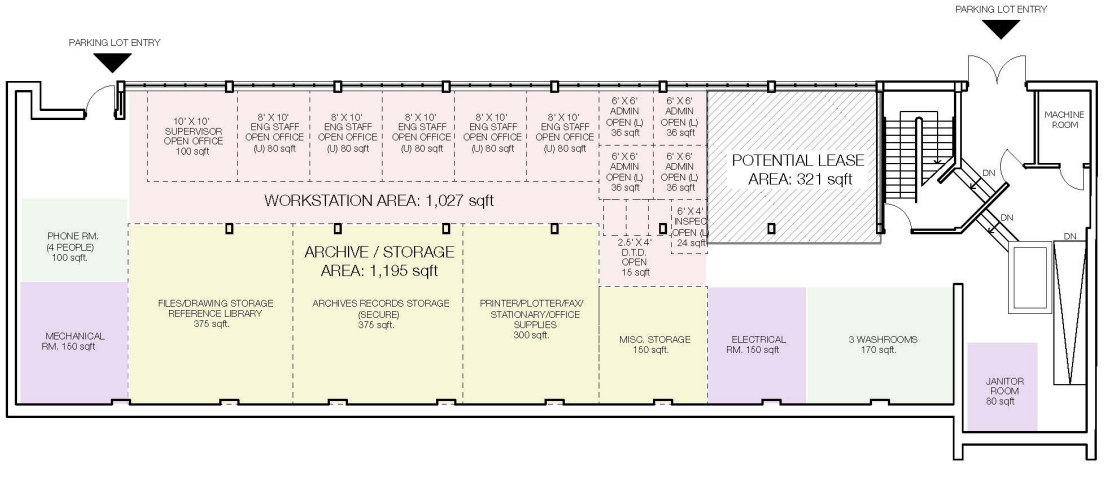
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,692 sqft

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 2,872 sqft
LEASED AREA: 321 sqft (4% of total area)

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,564 sqft



MAIN FLOOR



LOWER FLOOR

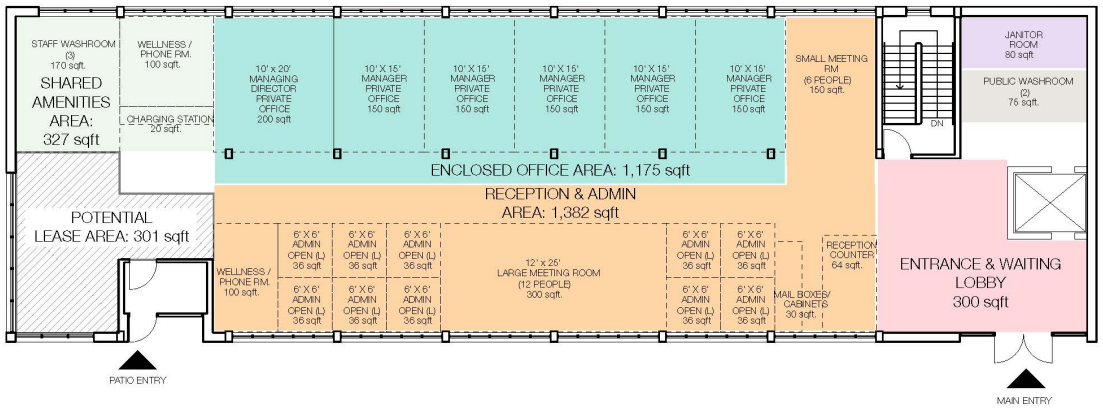
OPTION 1B

- Potential 301 sqft lease-able space on main level near entrance.
- Workstations on both levels.
- Kitchenette / lunch room on lower level
- Outdoor patio on lower level to east of building
- Program occupies 84% of building.
- 6 staff washrooms, 2 public washrooms.

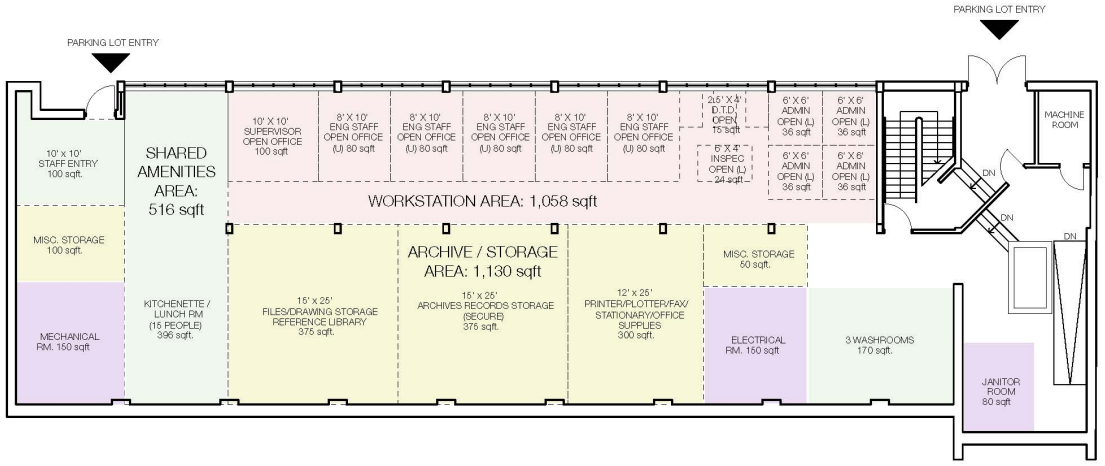
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,339 sqft
LEASED AREA: 301 sqft (4% of total area)

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 3,354 sqft

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,693 sqft



MAIN FLOOR



LOWER FLOOR

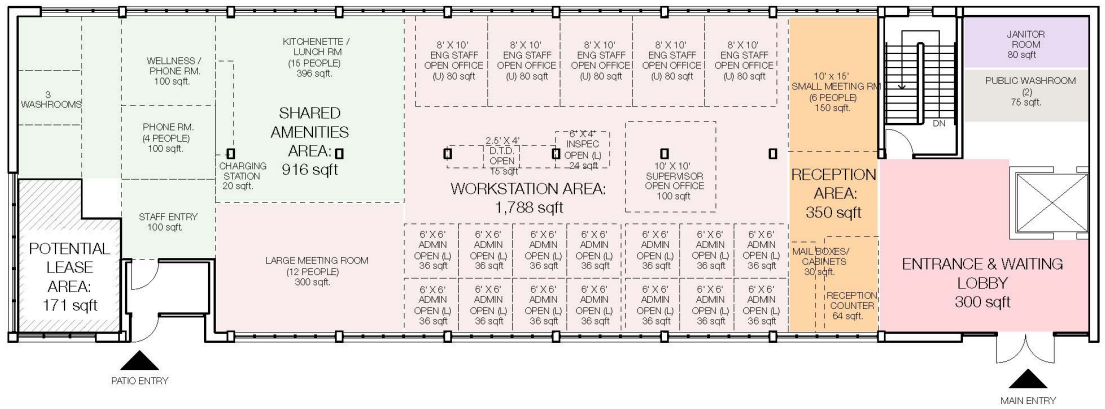
OPTION 2A

- Potential 171 sqft lease-able space on main level near entrance.
- Workstations on main level.
- Kitchenette / lunch room on main level.
- Outdoor patio on lower level to east of building
- Program occupies 86% of building.
- 6 staff washrooms, 2 public washrooms.

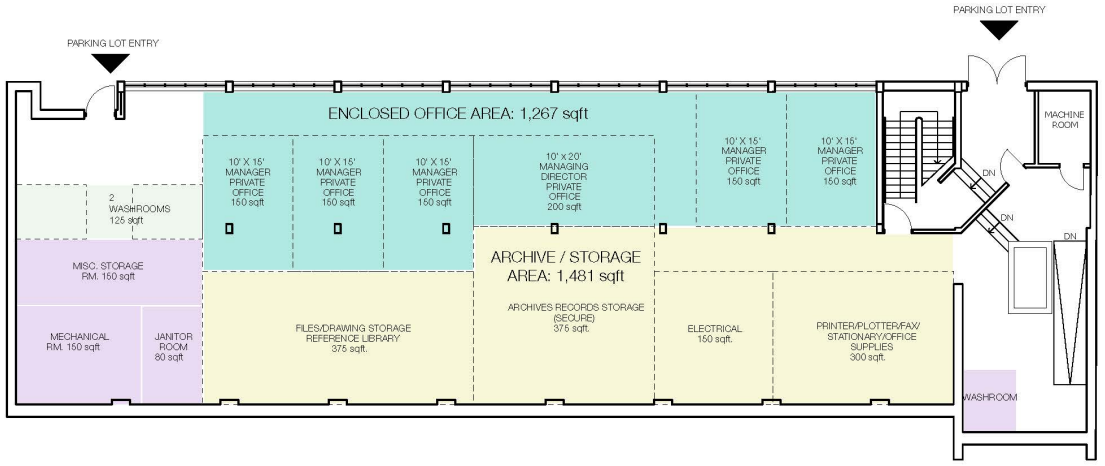
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,509 sqft
LEASED AREA: 171 sqft (2% of total area)

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 3,295 sqft

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,804 sqft



MAIN FLOOR



LOWER FLOOR

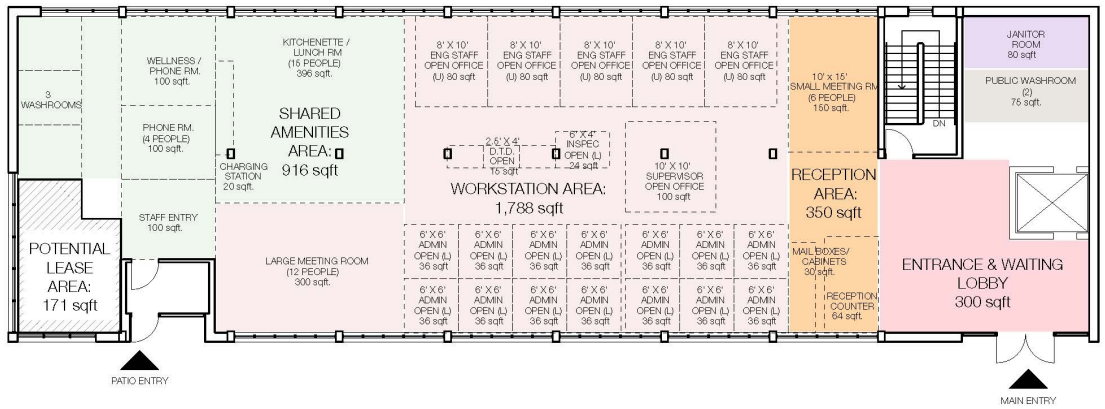
OPTION 2B

- Potential 171 sqft lease-able space on main level near entrance.
- Workstations on main level.
- Kitchenette / lunch room on main level.
- Outdoor patio on lower level to east of building
- Program occupies 83% of building.
- 6 staff washrooms, 2 public washrooms.

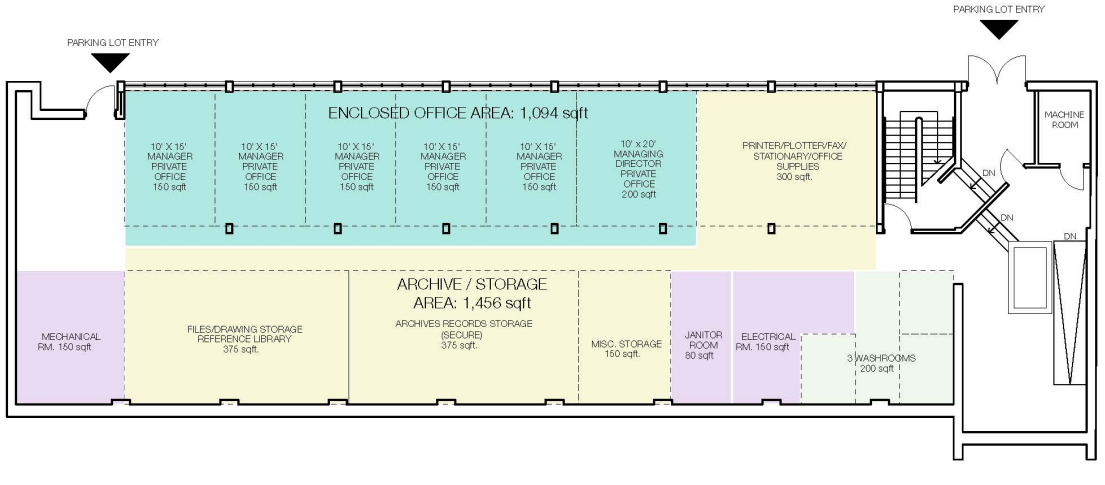
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,509 sqft
LEASED AREA: 171 sqft (2% of total area)

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 3,130 sqft

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,639 sqft



MAIN FLOOR



LOWER FLOOR

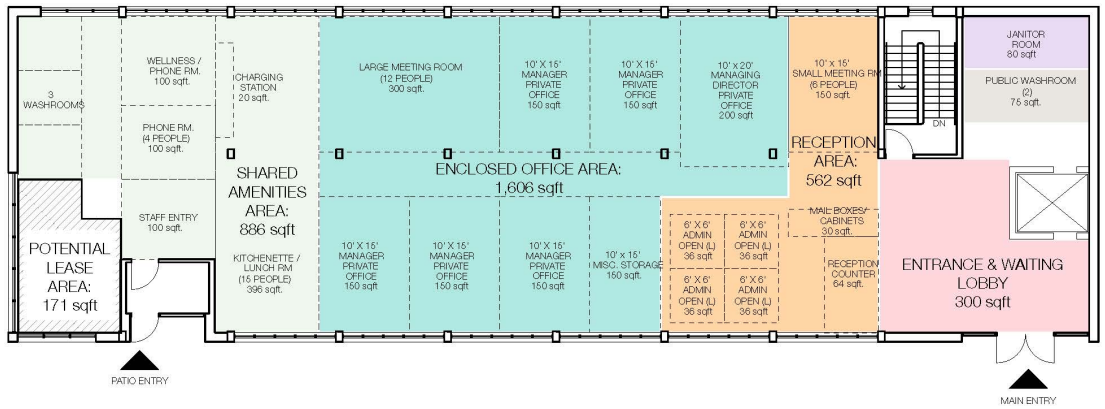
OPTION 3

- Potential 171 sqft lease-able space on main level near entrance.
- Workstations on main level.
- Kitchenette / lunch room on main level.
- Outdoor patio on lower level to east of building
- Program occupies 84% of building.
- 6 staff washrooms, 2 public washrooms.

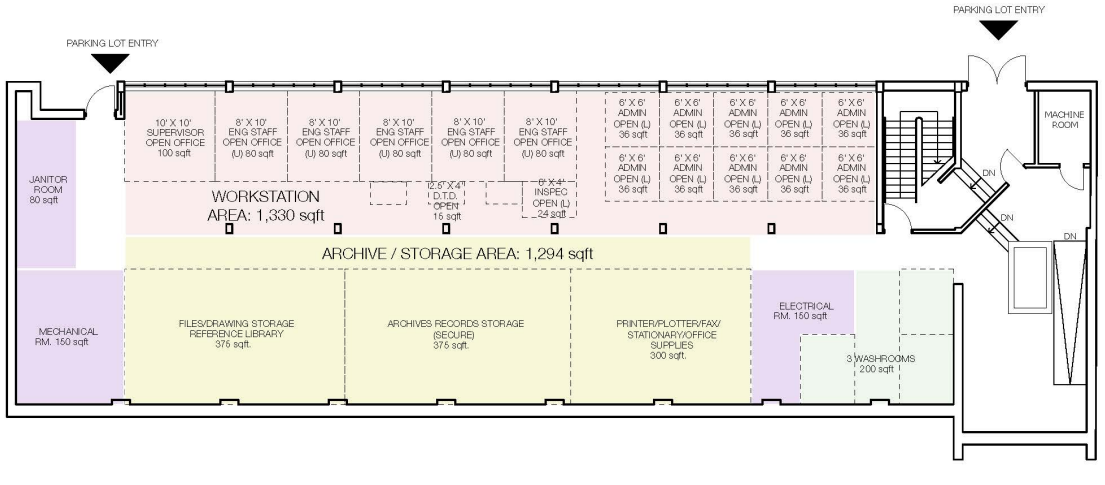
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,509 sqft
LEASED AREA: 171 sqft (2% of total area)

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 3,204 sqft

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,713 sqft



MAIN FLOOR



LOWER FLOOR

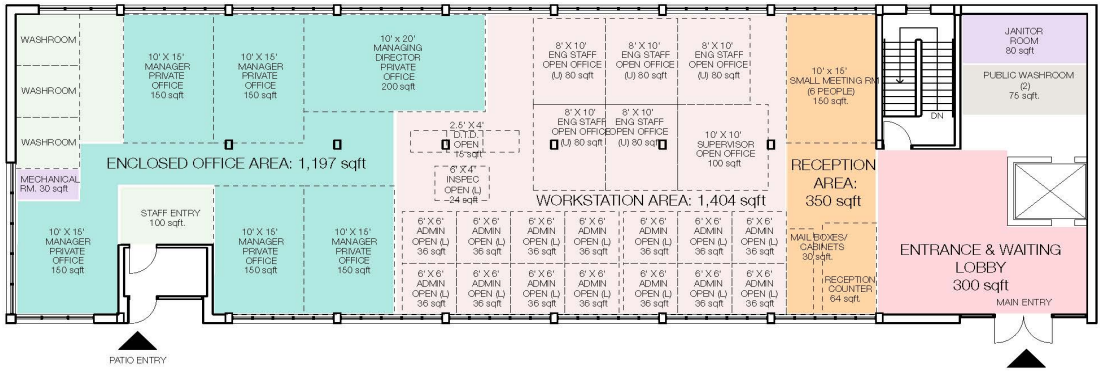
OPTION 4

- Potential 488 sqft lease-able space on lower level near entrance.
- Workstations and enclosed offices on main level.
- Kitchenette / lunch room on lower level.
- Outdoor patio on lower level to east of building
- Program occupies 81% of building.
- 6 staff washrooms, 2 public washrooms.

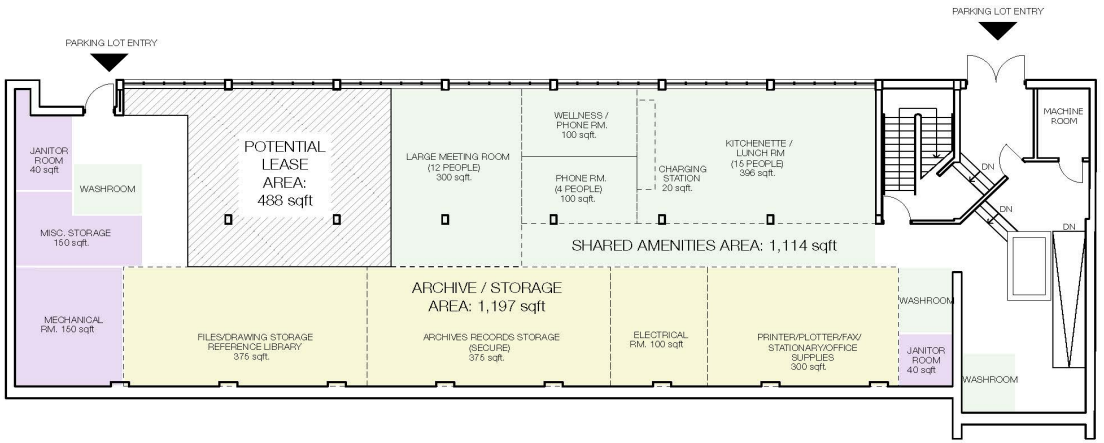
MAIN FLOOR:
TOTAL AREA: 4,058sqft
PROGRAM: 3,702 sqft

LOWER FLOOR:
TOTAL AREA: 3,894 sqft
PROGRAM: 2,767 sqft
LEASED AREA: 484 sqft (6% of total area)

TOTAL AREA: 7,952 sqft
TOTAL PROGRAM: 6,471 sqft



MAIN FLOOR



LOWER FLOOR



APPENDIX H – Examples of New Operations Centers Designed by RDHA

RDHA Operation Centre Statistics

Year of Construction	***Municipality & Facility***	***Building Size*** (sq. ft)	***Land Area*** (acres)	***Construction Cost***	***Cost per square foot***
2019	City of Pickering Pickering Operations Centre	82,000	18	$24,478,167	$298
2017	City of Quinte Quinte West Operations Centre	89,925	10	$19,238,475	$216
2015	Town of Halton Hills Robert C Austin Operations Centre	25,630	3	$8,271,018	$320
2010	Town of Newmarket Newmarket Operations Centre	73,000	12	$19,240,000	$263

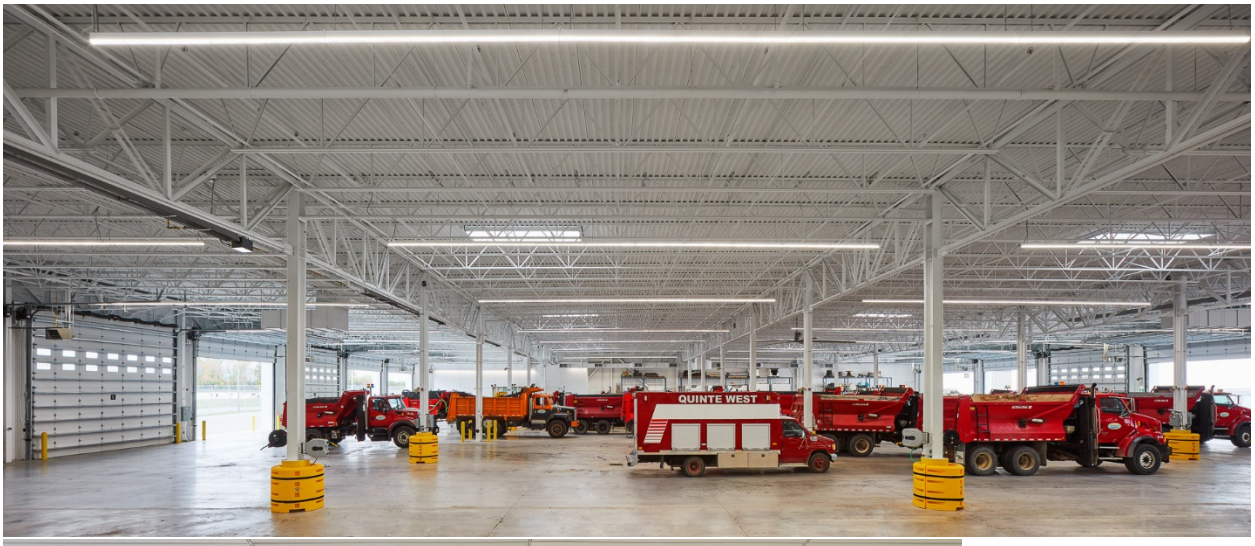
City of Pickering
Pickering Operations Centre





City of Quinte
Quinte West Operations Centre



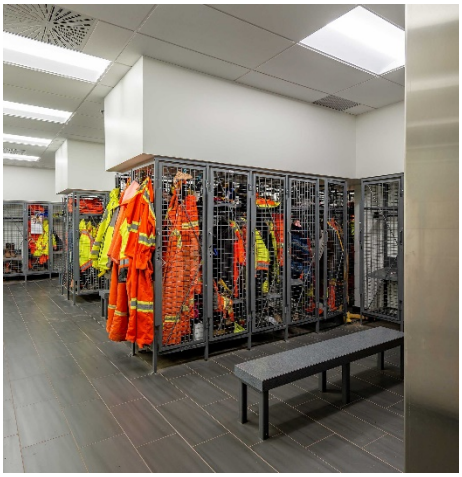




Town of Halton Hills

Robert C Austin Operations Centre










ROBERT C. AUSTIN OPERATIONS CENTRE

Town of Newmarket
Newmarket Operations Centre



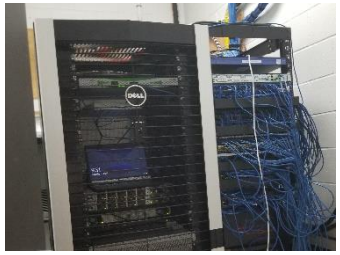




Township Operations Centre:

Space Needs, Evaluation of Alternatives, and Implementation Plan







Infrastructure Services
Special Meeting of Township Council
April 28, 2021

Acknowledgements

This project has been a collaboration between various internal stakeholders and consultants:

Internal Steering Committee/ Stakeholders

- Core Project Team: Stephanie Rossi, Colin Baker, Adam Gilmore
- Andy Goldie and the Senior Management Team
- Infrastructure Services: Rob Rosso, Dino Masiero, Kyle Goss, Kyle Davis, Brad Swift, Adam Dickieson, Cory Maxwell, Tim Heseltine, Rick Chilton, James Pearson, Verna Wright, Karen McMillan
- Corporate Services: Kerri O'Kane, Dan Wilson, Jeff Veniez, Chris Harriott, Sandi Wiles
- Planning: Brett Salmon
- Community Services: Pat Newson, Matt Tucker, Jeremy Machin, Mat Alain

Consulting Team

- James Makaruk, Stirling Rothesay Consulting
- Geoff Miller, RDHA Architects

Presentation Outline

- Purpose of Report
- Background
- Overview of Draft Space Needs Assessment and Conceptual Design Report
- Implementation Plan for Preferred Option
- Financial Strategy
- Next Steps

Purpose of Report

Present the results of the Township Operations Centre Draft Space Needs Assessment and Conceptual Design

Report to Council for information

Background

Existing Operations Facilities



Fergus East Works Garage



Pilkington Office



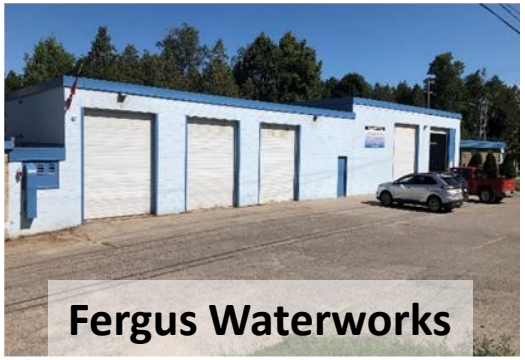
W. Garafraxa Works Garage



Pilkington Works Garage



Elora Works Garage



Fergus Waterworks



Parks Barn

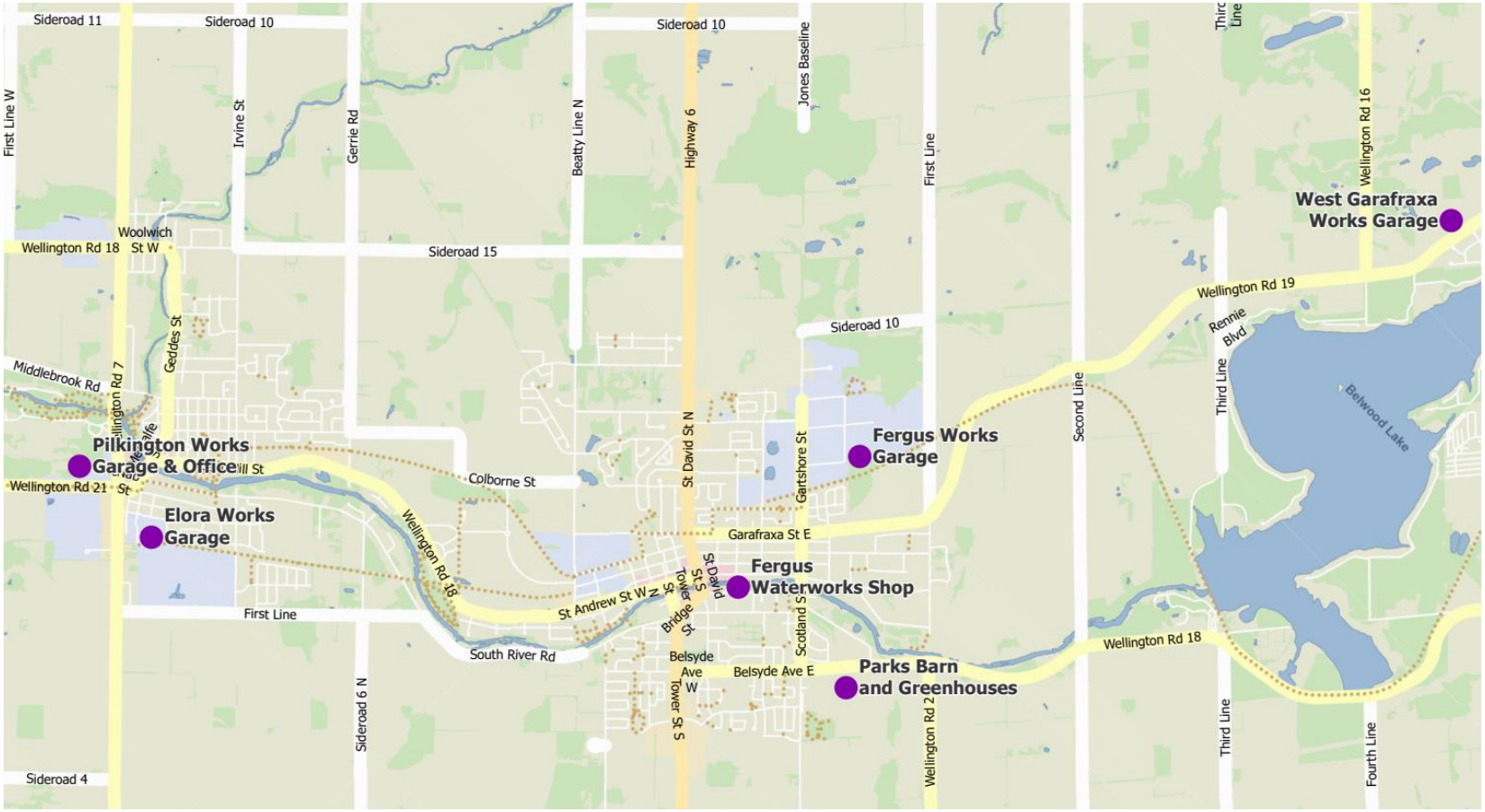


Greenhouse



IT Server Room – Civic Centre

Existing Operations Facilities



Existing Facility Deficiencies

- Most facilities are operating over capacity (100%-120% space utilization)
- The current building designs, use of space, and flow of employees and vehicles are not efficient or compliant with industry best practices and design trends
- Decentralized approach increases total facility operating costs
- Facilities do not meet accessibility requirements under the Accessibility for Ontarians with Disabilities Act (AODA) and present health and safety concerns
- Washrooms, change rooms, and lunch areas are inadequate for staff needs
- Deferred maintenance and repairs – roof replacements, garage door replacements, windows, HVAC, yard paving, security fencing, etc.

Existing Facility Deficiencies

Fergus Waterworks



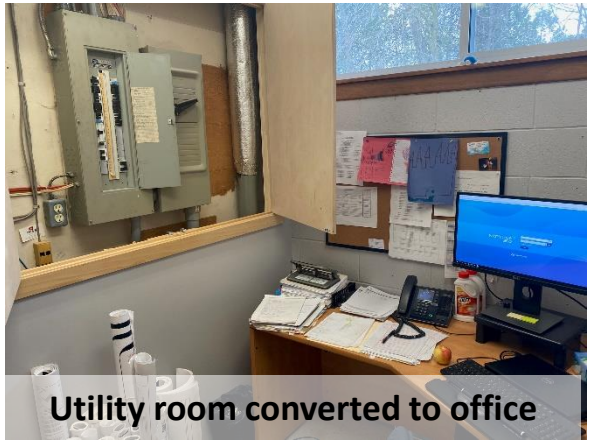
Open change room in garage bay

- Open change room in garage bay mezzanine does not provide adequate privacy for staff



Trailer for lunch room and offices

- Rented trailer is being used as a staff lunchroom and for touchdown offices



Utility room converted to office

- Utility and storage areas have been repurposed as offices for growing staff

Existing Facility Deficiencies

Fergus East



Machinery and equipment stored in garage area

- Storage in the garage is over capacity



No female washrooms/ changerooms

- There are no separate male / female washrooms, employee change rooms or showers



Workstation in garage area

- Area repurposed for staff workstations

Existing Facility Deficiencies

Parks Barn, Farmhouse, and Greenhouses



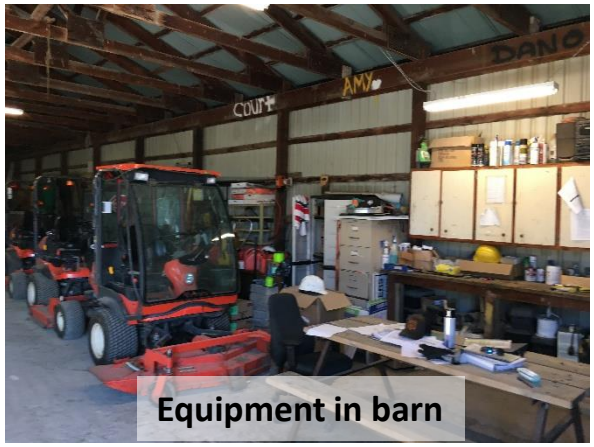
Stairs in farmhouse

- Areas are not accessible per AODA requirements



Carport parking area at farmhouse

- Insufficient indoor storage space for vehicles and equipment – so equipment left exposed to the elements outdoors

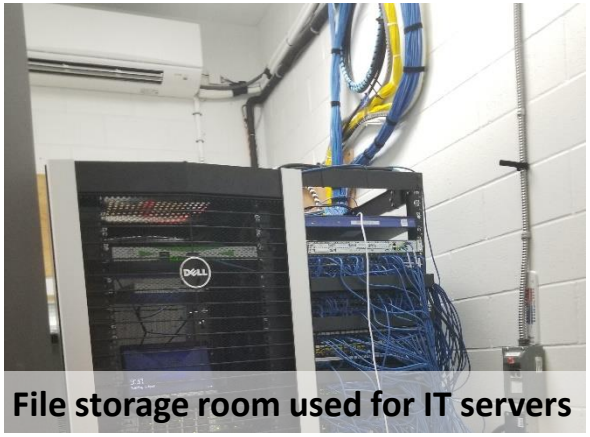


Equipment in barn

- Limited space to store equipment
- No heated area for park maintenance during winter
- Roof leaks

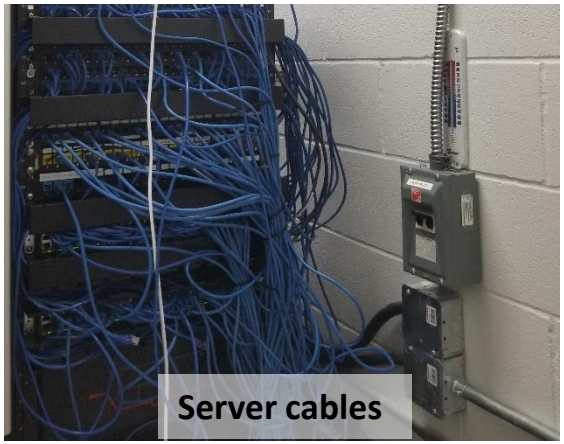
Existing Facility Deficiencies

IT Server Facility and Offices (Civic Centre)



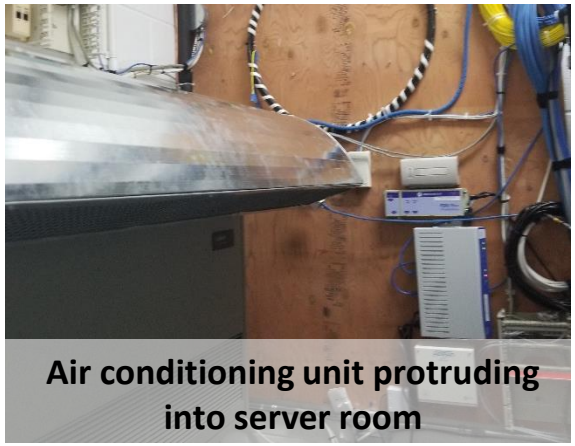
File storage room used for IT servers

- Vault room intended for file storage repurposed for IT servers – room does not have proper ventilation or fire suppression for electronics



Server cables

- Not enough space for proper cable management



Air conditioning unit protruding into server room

- Not enough space to house all necessary equipment in a way that allows staff to access areas for maintenance

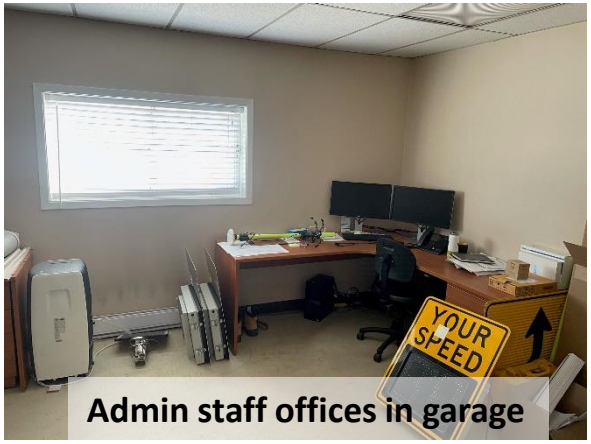
Existing Facility Deficiencies

Pilkington



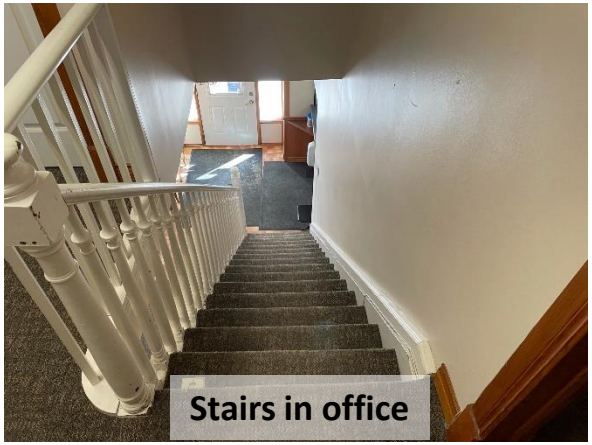
Parking area/ driveway

- Parking lot also used as a circulation area and access route for heavy equipment, creating a safety hazard



Admin staff offices in garage

- Storage area repurposed to accommodate growing staff



Stairs in office

- Areas are not accessible per AODA requirements

Existing Facility Deficiencies

West Garafraxa



Office area being used for archives

- File storage area is nearing capacity, major structural modifications would be needed to accommodate more storage



Stairs to basement archives

- Areas are not accessible per AODA requirements



Lunchroom

- Lunch area does not have required amenities

Existing Facility Deficiencies

Elora



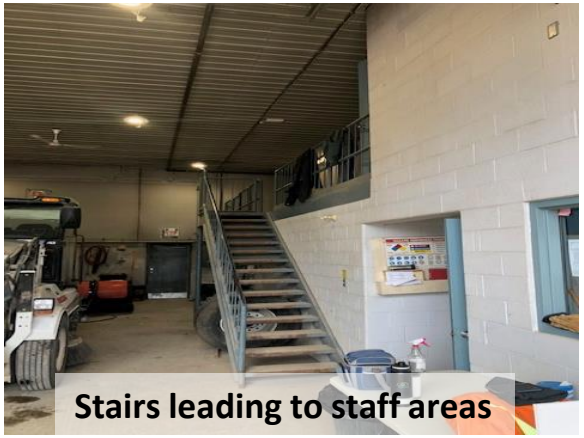
Repurposed meeting area

- No proper crew meeting room



Open staff changing area

- There are no proper male / female employee change rooms and shower facilities



Stairs leading to staff areas

- Areas are not accessible per AODA requirements

Centre Wellington Population Growth Forecast

	Township of Centre Wellington		Elora-Salem		Fergus		Outside Urban Centres	
	2016	2041	2016	2041	2016	2041	2016	2041
Total Population	**29,885**	**52,310**	7,565	13,060	14,975	31,630	7,345	7,625
Households	10,785	18,690	2,750	4,675	5,605	11,415	2,430	2,585
Total Employment	11,970	22,780						

Source: Wellington County Official Plan

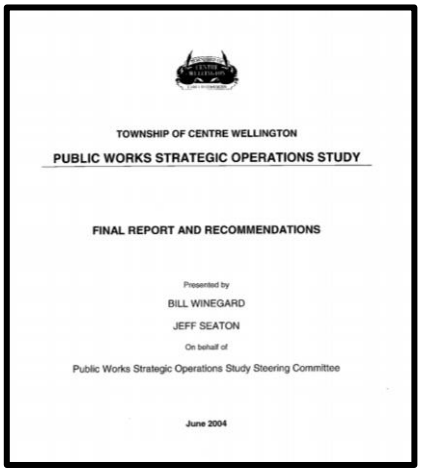
- The Township's population is anticipated to increase from approximately 30,000 to over 52,000 by 2041
- **More staff, vehicles, and equipment** will be needed to maintain current levels of service

Key Points – Existing Facilities

Current Township facilities are over capacity, not efficient or compliant with industry/ regulatory standards, inadequate for staff needs, and costly to operate and maintain

History of Operations Facility Planning

- **2004 Public Works Strategic Operations Study**
  - "Centre Wellington should be aiming for a single central operations depot within a five to ten year horizon"


TOWNSHIP OF CENTRE WELLINGTON

PUBLIC WORKS STRATEGIC OPERATIONS STUDY

FINAL REPORT AND RECOMMENDATIONS

Presented by

BILL WINEGARD

JEFF SEATON

On behalf of

Public Works Strategic Operations Study Steering Committee

June 2004

- **2005 Tornado destroys Nichol Garage on Wellington Road 7**
  - Facility is not re-built and Township sells property



Online from: https://www.thefountainpen.com/cgi-bin/showstory?id=4028

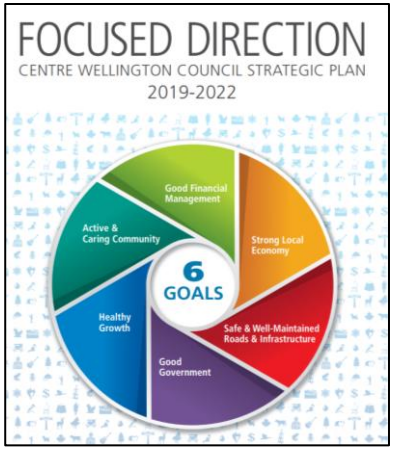
History of Operations Facility Planning (continued)

- **c. 2005 – 2017 Capital Budget**
  - Budget created for Centralized Operations Facility
  - $500,000 for design and $3,541,000 for construction
  - Included shop, office space, material storage, parking, and indoor salt storage

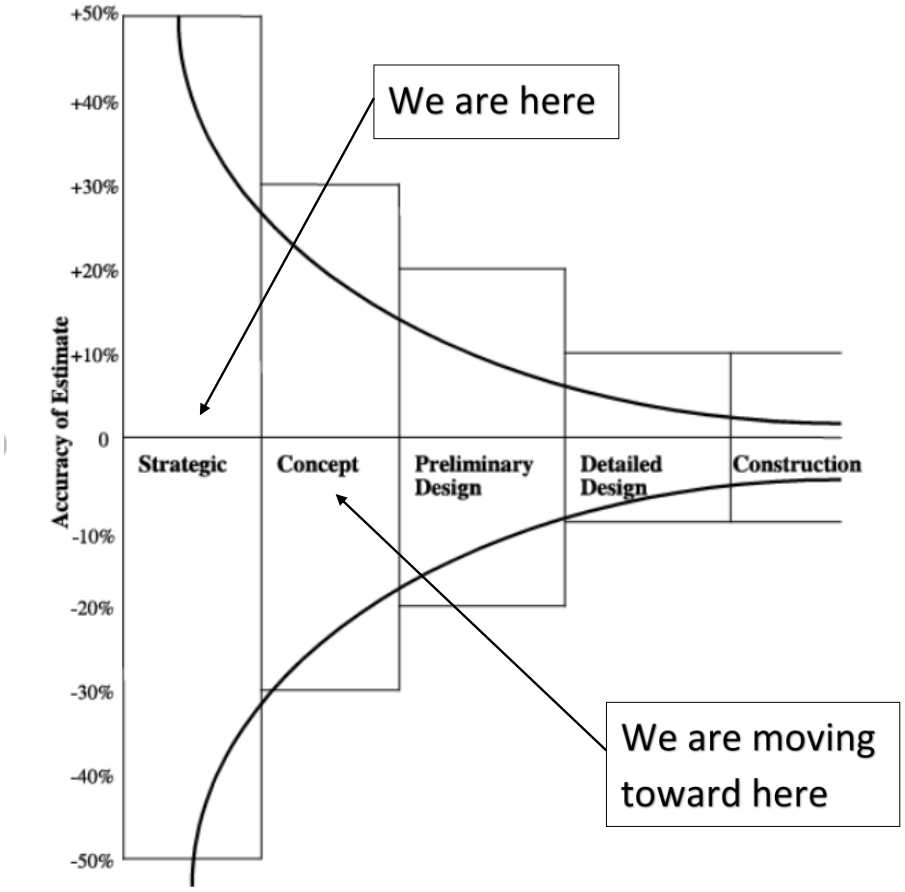
- **2018 Capital Budget**
  - Budget updated: $500,000 design, $6,000,000 construction
  - Updated based on unit rates for similar facilities in neighboring municipalities
  - Assumed new facility would be located at the Fergus East Site, and Elora and West Garafraxa facilities would be maintained (decentralized model)

- **2019-2022 Council Strategic Plan**
  - Good Financial Management, Strategic Direction 1, Initiative 4: “Open a new Operations Facility”





Project Budget Planning Process



Accuracy of cost estimates at different stages of the design (AbouRizk, et al., 2002)

Source: https://www.researchgate.net/figure/Accuracy-of-cost-estimates-at-different-stages-of-the-design-AbouRizk-et-al-2002_fig1_290733685

Space Needs Assessment and Concept Design Study

- Request for Proposals issued June 2019, with the following assumptions:
  - Demolish and build new shop and offices area at Fergus East Works Site
  - Total site area 13.5 acres, with 5.5 acres as Environmental Protection, resulting in a usable area of approximately 8 acres
  - Include space for Public Works, Engineering, Water Services, Parks & Recreation, Source Water Protection, Information Technology, vehicles, parking, equipment and material storage, records storage and archives area
  - Include a growth factor for number of staff, parking, equipment, etc. to ensure facility is suitable for Township needs to 2041
  - Keep and continue to use the West Garafraxa, Elora, and Pilkington facilities

Space Needs Assessment and Concept Design Study

Centre Wellington

Project Objective:

Identify facility requirements to accommodate Public Works, Water Services, Engineering, Parks & Recreation, Source Water Protection, and IT staff and operations (including records/ archives/ material storage) to the year 2041 and evaluate options.

Opportunity:

Improve the current and future delivery of Township services through identifying and implementing an operating solution that maximizes the function and efficiency of staff, facilities, equipment, and other resources.

Space Needs Assessment and Concept Design Study

- **July 2019**: Council awards RFP#18-19 to Stirling Rothsay to prepare Space Needs Assessment and Conceptual Design report

- **Sep-Nov 2019**: Based on Space Needs Assessment and environmental constraints, Fergus East site did not meet project objectives
  - Significant amount unsuitable fill area at rear of property
  - Useable area for buildings and parking/ driveways is reduced to 2-3 acres
  - No opportunity for future expansion, new larger sand/salt facility, and outdoor material storage area is insufficient
  - Preliminary Consultant recommendation: Do not build a new facility on constrained 600 Glengarry Site, and consider a building on a new property approximately 20 acres in size

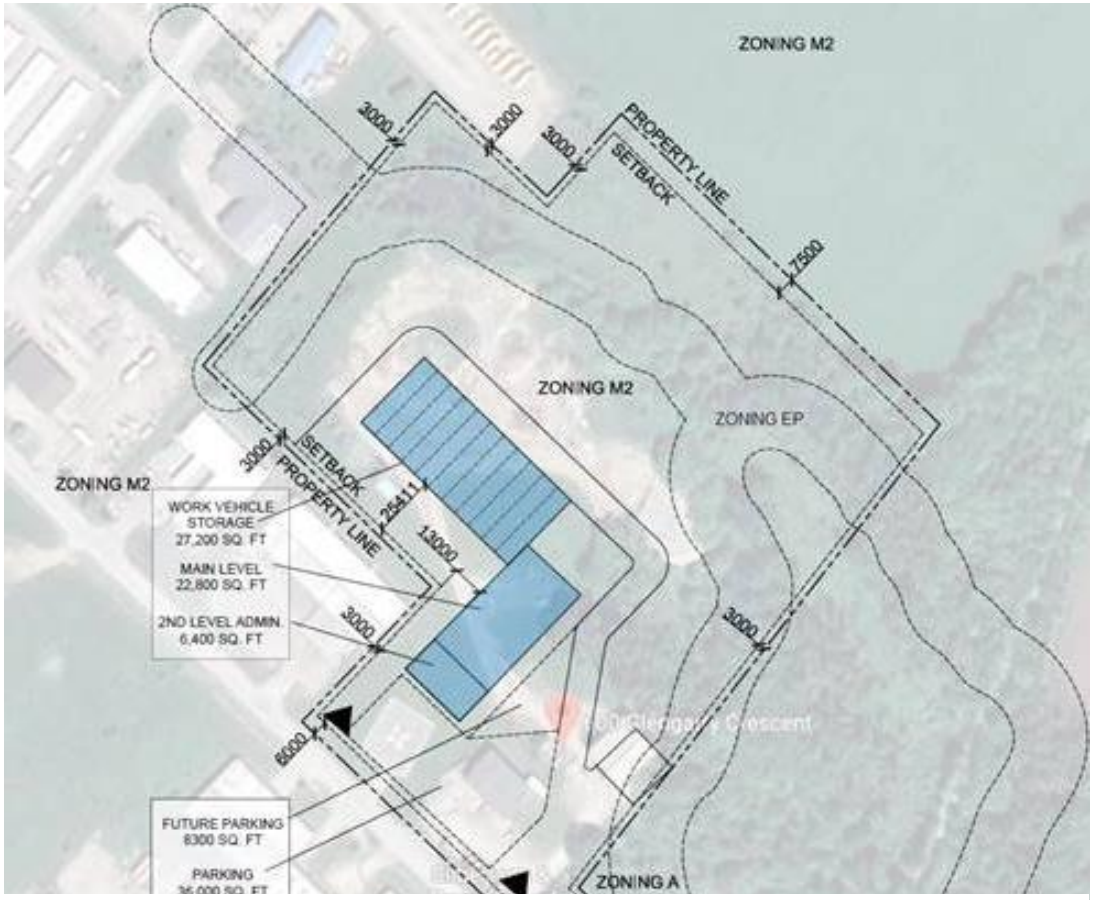
Fergus East Site (600 Glengarry)

- Site has a large area of fill that is unsuitable for building
- GRCA regulated area covers a large portion of the site - development in and adjacent to this area subject to restrictions and setbacks
- Site located within Well Head Protection Areas – implications for site activities and risk management measures



Fergus East Site (600 Glengarry)

- Considering constraints, site is not large enough to meet space requirements
- Office area undersized for growth to 2041
- Does not include salt storage, pole barns, greenhouses
- Expensive to build given need to prepare fill area for construction



Preliminary conceptual footprint of new operations centre overlain on the 600 Glengarry site.

Space Needs Assessment and Concept Design Study

- **December 2019**: New options discussed at Council budget meeting
  - Expanding existing facilities
  - Coordination with a County facility
  - Utilizing Queen Street Medical Office building in Fergus
  - Scope of work expanded to include analysis of these options
- **Jan-Mar 2020**: Eight options developed
- **Mar-Dec 2020:** Project on hold due to COVID-19
- **Jan-Mar 2021:** Eight options subjected to detailed evaluation and recommended option identified
  - Concept design, implementation and financing plan developed for recommended option

Overview of Draft Space Needs Assessment and Conceptual Design Report

INTRODUCTION

Stirling Rothesay Consulting and RDH Architects were retained to address the **problem and opportunity** being faced by the following Township departments:

- Infrastructure Services – Office Administration/Reception, Public Works, Water Services, and Engineering Divisions;
- Community Services – Parks and Recreation, and Forestry Divisions;
- Corporate Services – Information Technology (IT) and Clerks (Records Storage / Archives).

THE APPROACH

To identify an effective solution to the Problem and Opportunity we completed the following tasks:

- Completed a space needs assessment;
- Identified eight potential options (including new construction and/or renovations and additions to the existing facilities);
- Prepared high level construction cost estimates for each of the eight options;
- Performed a comparative evaluation of the eight options by scoring each against a series of evaluation criteria (including the categories of technical, operational, and financial) with applicable importance weightings for each criteria;

THE APPROACH

- Identified the option(s) with the highest score;
- Created a conceptual site plan layout for the highest scoring option;
- Provided examples of recent Municipal Operations Centres to demonstrate best practices and industry design trends;
- Prepared a draft ten-year implementation plan with anticipated revenues and annual costs for the option with the highest score.

SPACE NEEDS ASSESSMENT

Conducted a Space Needs Assessment:

- Reviewed the current facilities and met with departmental staff to discuss space usage and needs;
- Estimated future staff positions, and number of vehicles and equipment;
- Incorporated standard work station/office sizes applicable for various staff roles;
- Incorporated typical garage bay sizes, and the recommended number of heated and unheated bays;

ALTERNATIVE OPTIONS

Option 1 – Do nothing

Option 2 – Build a new garage (on the existing 600 Glengarry site) only for current Infrastructure Services needs, and do additions and renovations to other existing garages / offices

Option 3 – Build a new combined Operations Centre with the County after 15 years and build additions and renovations to existing Township facilities in the interim

Option 4 – Build a new garage with an administration office (on the existing 600 Glengarry site) only for current Infrastructure Services needs, and do additions and renovations to other existing garages / offices

ALTERNATIVE OPTIONS

Options 5, 6, 7, and 8: Operations Centre on a New Site Constructed in Phases

Option 5 – Build a new Operations Centre on a new site with the majority of the construction in the first phase

- Build the salt storage facility and greenhouse additions in Phase 2

Option 6 – Build a new Operations Centre on a new site in two phases:

- Phase 1 – build the garage for immediate needs, full office, 1 greenhouse
- Phase 2 – additions to heated & unheated garages, salt storage facility and additional greenhouse

ALTERNATIVE OPTIONS

Option 7 – Build a new Operations Centre on a new site in two phases:

- Phase 1 – build the garage for immediate needs, 1 greenhouse, use the Medical Centre for interim office space
- Phase 2 – additions to heated & unheated garages, full office, salt storage facility and additional greenhouse

Option 8 – Build a new Operations Centre on a new site in three phases:

- Phase 1 – build the garage for immediate needs
- Phase 2 – build the full office
- Phase 3 – additions to heated & unheated garages, salt storage facility & greenhouse

EVALUATION OF THE OPTIONS

- To evaluate and compare the eight options, we used various criteria;
- The criteria are divided into three categories – Financial, Operational, and Technical Design – and helped to identify the ability of each option to address the Problem Statement;
- The criteria were also subject to a weighting factor (1-10) that prioritized the different criteria based on relative importance to the Township.

EVALUATION OF THE OPTIONS

Category	Criteria	Importance Weighting
Operational	**Satisfies 20-year growth and operational needs** Achieves space requirements for employees, vehicles, equipment and materials	**10**
	Incorporates best practices and industry trends in Works Garage design Achieves optimal layout, departmental synergies, and inter-departmental collaboration	**8**
	Achieves short term urgent needs Achieves 5-year growth and operational needs within 3-5 years	**10**
	Minimizes staff and work interruptions due to construction Achieves fewer staff relocations, and work disruptions	**6**
Technical Design	**Complies with Legislative requirements (building codes & standards)** Achieves employee safety, accessibility, equality	**10**
	Satisfies environmental and sustainability standards Achieves lower energy costs, emissions, waste, and impact on the environment	**4**

EVALUATION OF THE OPTIONS

Category	Criteria	Importance Weighting
Financial	**Minimizes initial capital construction cost** Achieves lower Initial (3-5 years) land, new construction, and renovation costs (excluding soft costs, and lost rental income)	**8**
	Minimizes overall capital cost Includes all capital costs (land, new construction, and renovation) to complete all phases of the Option	**10**

DETAILED EVALUATION OF OPTIONS

EVALUATION SUMMARY

Rank	Score	Option	Phase 1 Cost	Total Cost
1st	72%	**Option 6** - New Ops Centre in 2 Phases Phase 1 - partial garage, full office, greenhouse Phase 2 - garage additions, greenhouse & salt storage	$14.92 M	$24.95 M
2nd	68%	**Option 8** – New Ops Centre in 3 Phases Phase 1 - partial garage, Phase 2 - full office Phase 3 - garage additions, greenhouses & salt storage	$13.02 M	$25.23 M
3rd	67%	**Option 5** – New Ops Centre in 2 Phases Phase 1 - full garage, full office, greenhouse Phase 2 - greenhouse & salt storage	$19.59 M	$24.25 M
4th	65%	**Option 7** – New Ops Centre in 2 Phases Phase 1 - partial garage, greenhouse, use existing medical office for long term interim Phase 2 – new office, garage additions, greenhouse, salt storage	$13.87 M	$26.08 M
5th	54%	**Option 2** – New Garage for current Infrastructure needs at outset with phased additions / renovations to existing works garages / offices	$12.77 M	$16.68 M
6th	52%	**Option 4** – New Garage with Office for current Infrastructure needs at outset and future additions / renovations to other facilities	$15.10 M	$20.43 M
7th	48%	**Option 3** – Combined Facility with the County in 15-20 years and interim additions / renovations to existing works garages / offices	$9.28 M	$41.02 M
8th	44%	**Option 1** – Do Nothing	Repair costs $0.46 M	Repair costs $4.02 M

EVALUATION CONCLUSIONS

- Options 1 to 4 scored the lowest;
- Options 5 to 8 (the phased construction of a new Operations Centre, on a new site) scored the highest -- but had a narrow range from 65-72%;
- This narrow range indicated that, **although the best solution is to build a new Operations Centre using a phased approach, the specifics of the phasing do not significantly affect the score. Therefore, it was determined that the details of the construction phasing should be tailored to suit the availability of capital funding**;
- Option 6 achieved the highest score of 72% and was, therefore, used to develop the space program and the conceptual site plan.

SPACE PROGRAM FOR OPTION 6

- The space program was created for Option 6:

For Phase 1

- Full offices, amenities, shops, and maintenance bays to a time horizon of 20 years (to 2041);
- Garage space for vehicles/equipment/materials for immediate needs not being met by one of the existing Works Garages;
- New greenhouse.

For Phase 2

- Garage space for vehicles/equipment/materials for a time horizon of 20 years (to 2041);
- Remaining greenhouse and salt storage building.

SPACE PROGRAM FOR OPTION 6

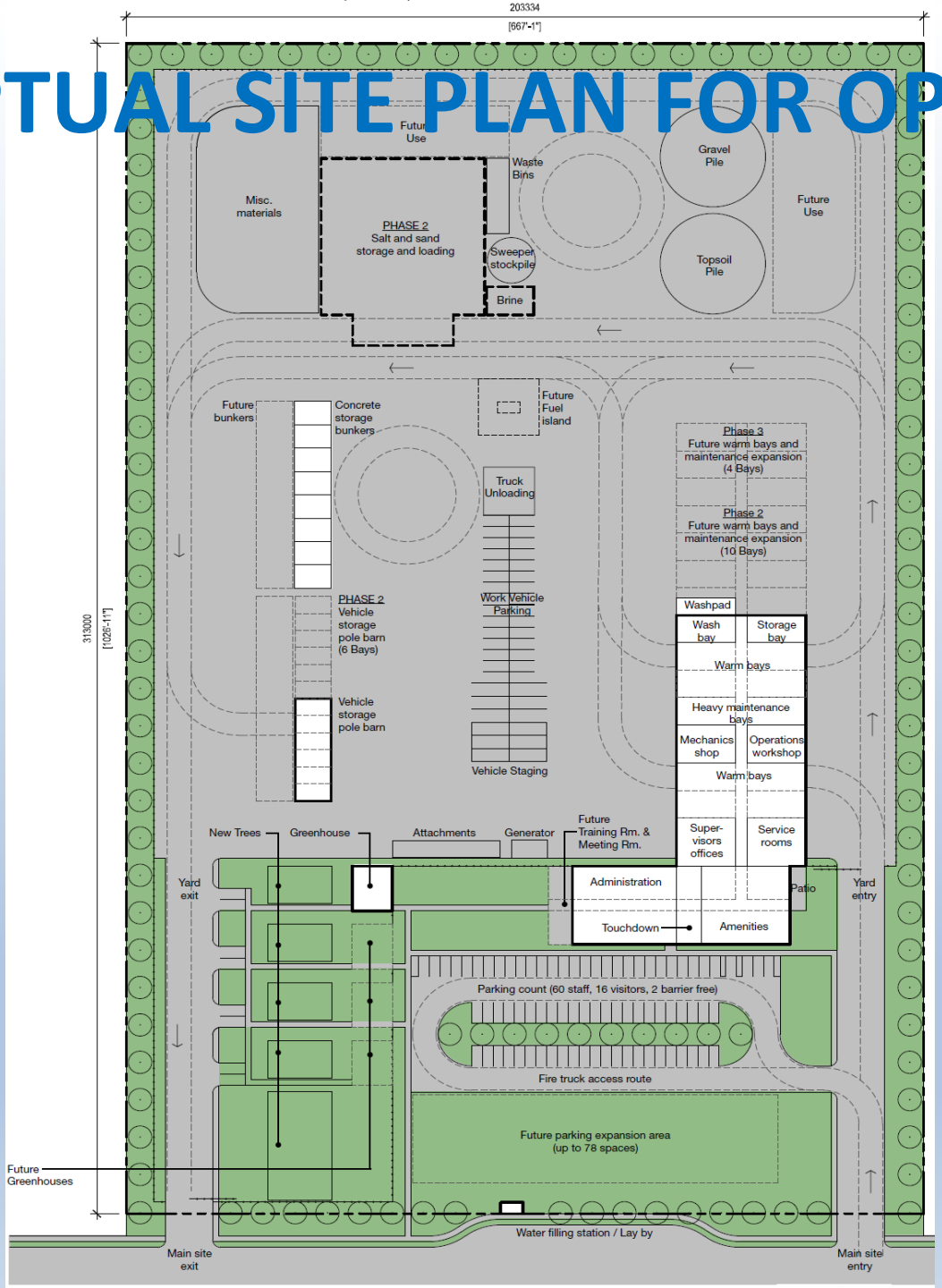
Functional Area	Total Area - Phase 1 (ft^2)	Total Area - Phase 2 (ft^2)
Administrative Office	7,259	426
Touchdown Station Office	1,270	42
Employee Amenities	4,422	1,125
Supervisors Shop Office	2,240	0
Operations Shared Workshop	1,873	0
Mechanics Maintenance Shop	1,177	0
Mechanics Heavy Maintenance Bays	2,640	0
Garage Materials and Equip. Storage	1,320	0
Work Vehicle Storage – Heated Bays	10,560	13,200
Vehicle Wash Building	1,650	0
Work Vehicle Storage – Unheated Bays	2,700	2,700
Total Facility	**37,111**	**17,493**
Salt Storage Building		21,000
Greenhouses	1,332	3,996

Total facility area from Phases 1 & 2 = 54,604 ft^2

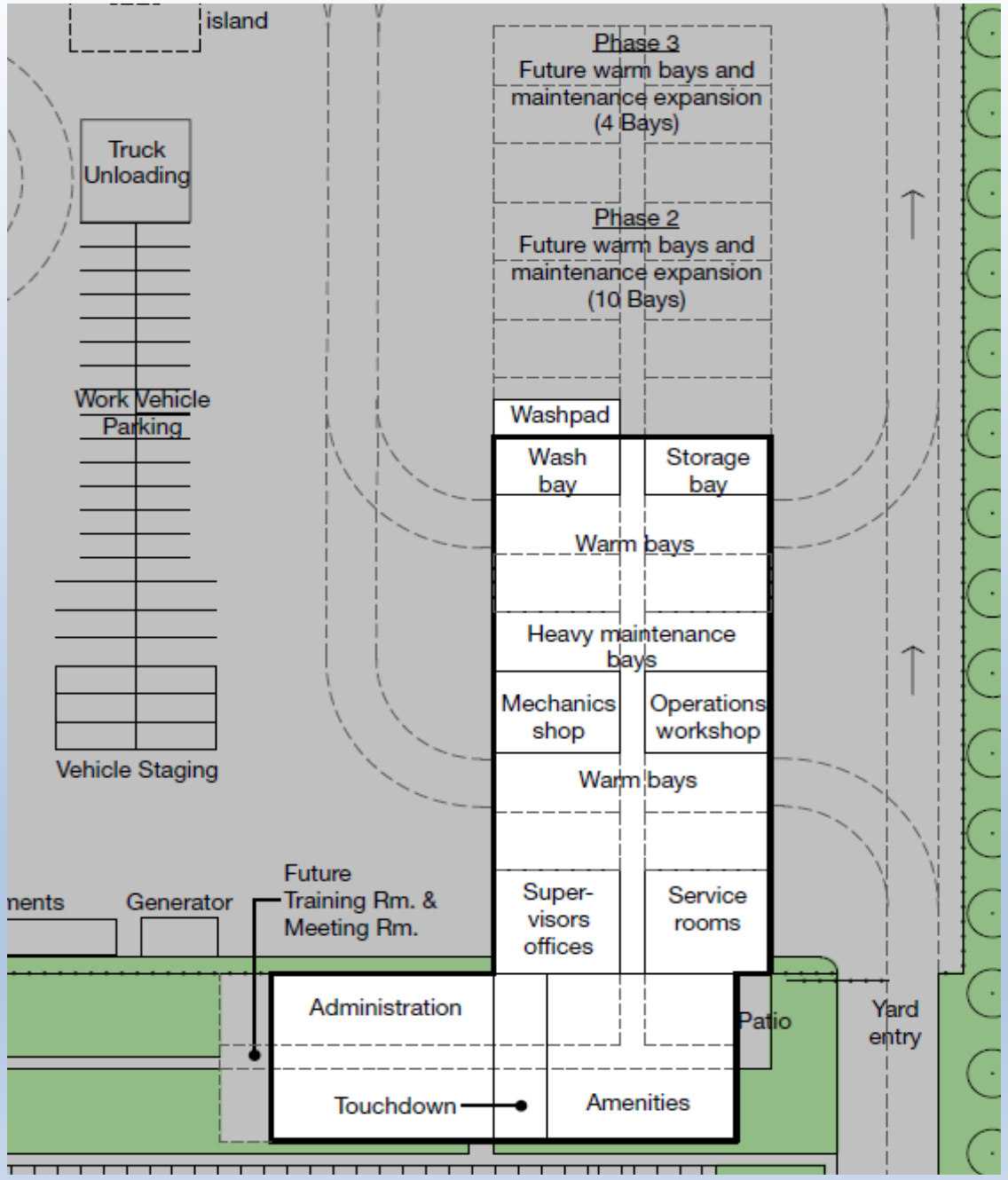
CONCEPTUAL SITE PLAN FOR OPTION 6

- A minimum of 20 acres are required for the site of the new Operations Centre.
- This should provide sufficient space to match the growing demands of the operations over the expected life-span of the buildings (expected to be approximately 60 years).
- Additional space, beyond 20 acres, may be required depending on the shape and topography of the site and the presence of environmental setback requirements.

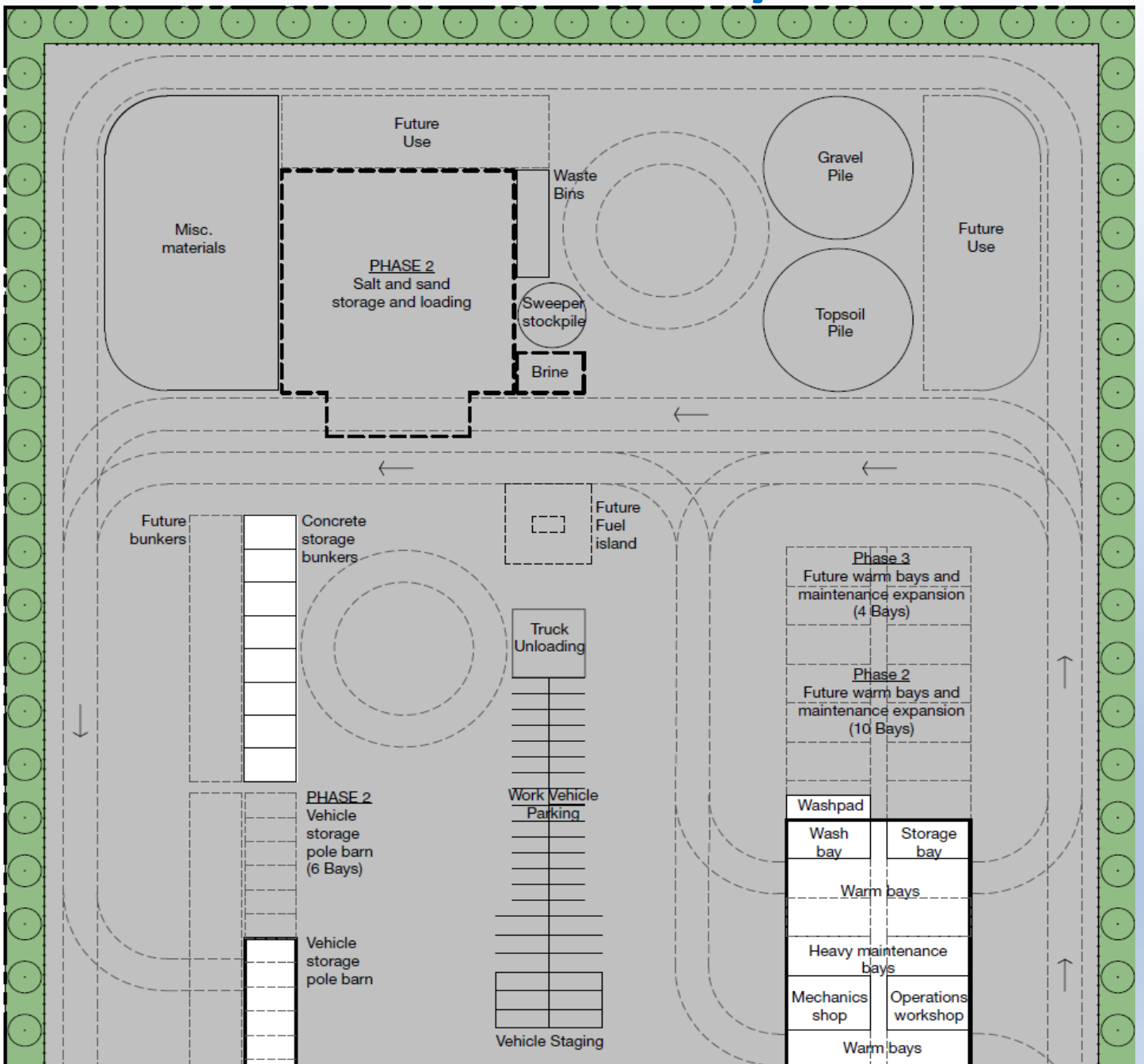
CONCEPTUAL SITE PLAN FOR OPTION 6



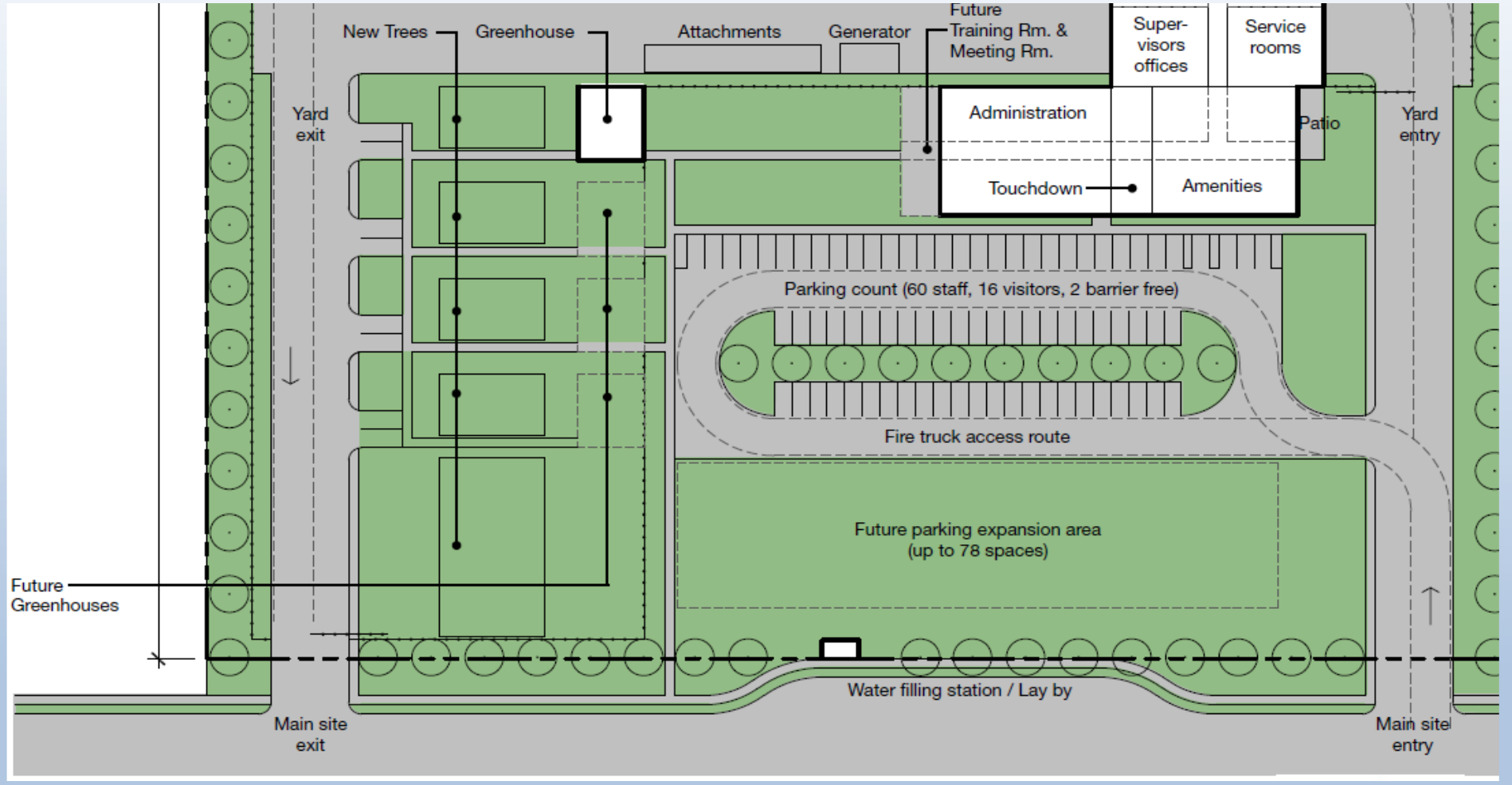
Office/ Garage Building and Future Extensions



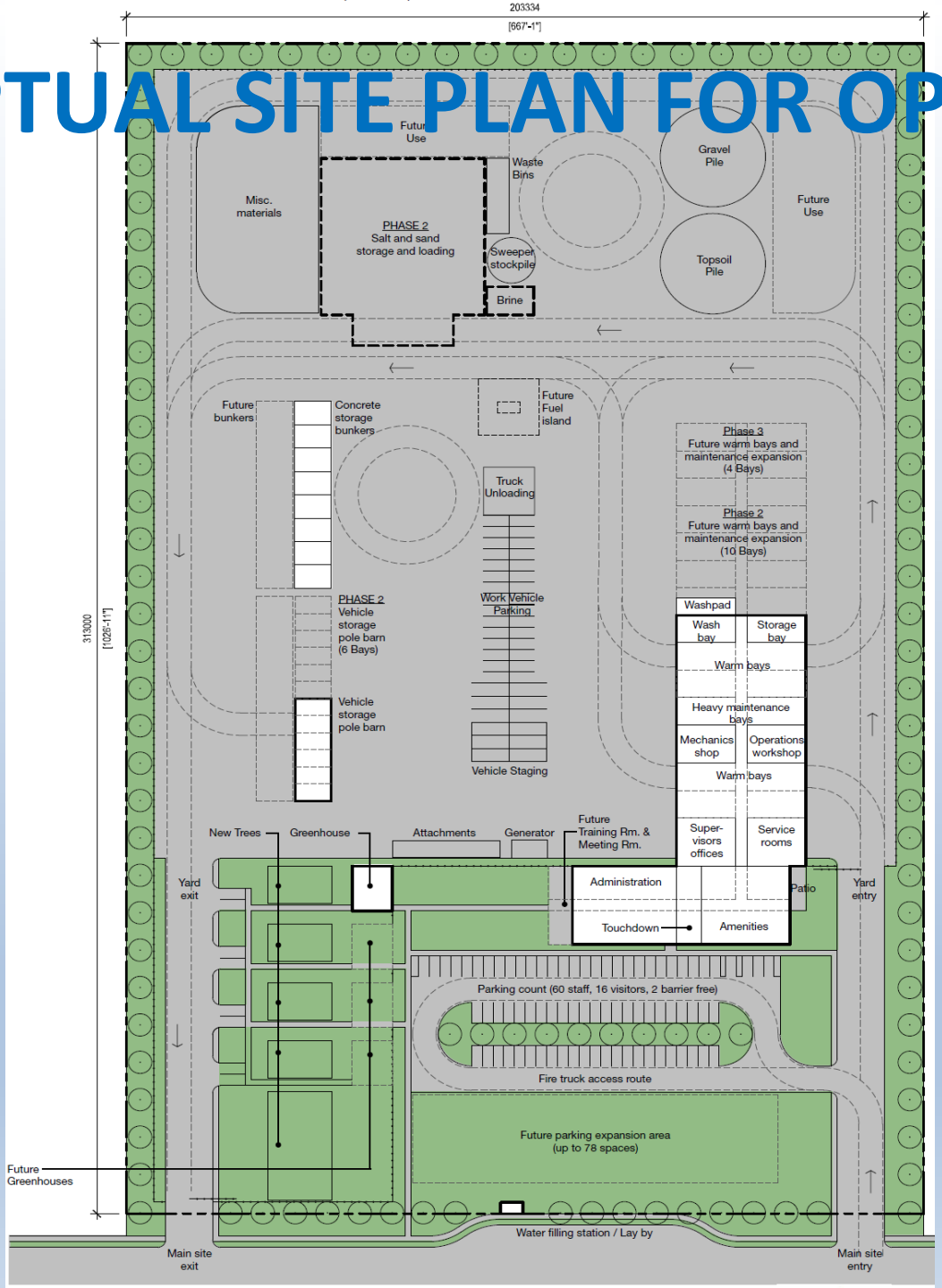
Works Yard and Future Salt/ Sand Storage



Driveways, Parking, Greenhouses



CONCEPTUAL SITE PLAN FOR OPTION 6



Examples of Operations Facilities from Other Municipalities

Examples from Other Municipalities

Year of Construction	Municipality & Facility	Population (2016 Census)	Building Size (sq. ft)	Construction Cost (not including land cost)	Cost per square foot
2020	East Gwillimbury Operations Centre	24,000	77,925	$18.8 M	$241
2019	Haldimand County Central Administration Building	45,600	54,300	$18 M	$331
2019	Township of Mapleton Garage/ Wellington County Drayton Garage	Mapleton: 10,500	Mapleton: 29,450 County: 24,000	Mapleton: $5.4 M County: $6 M	Mapleton: $184 County: $250
2017	City of Quinte Quinte West Operations Centre	43,600	89,925	$19.2 M	$216
2015	Town of Halton Hills Robert C Austin Operations Centre	61,200	25,630	$8.3 M	$323
2012	Wellington County Central Garage	90,900	29,500	$5 M	$169

Examples from Other Municipalities

Town of East Gwillimbury
Operations Centre



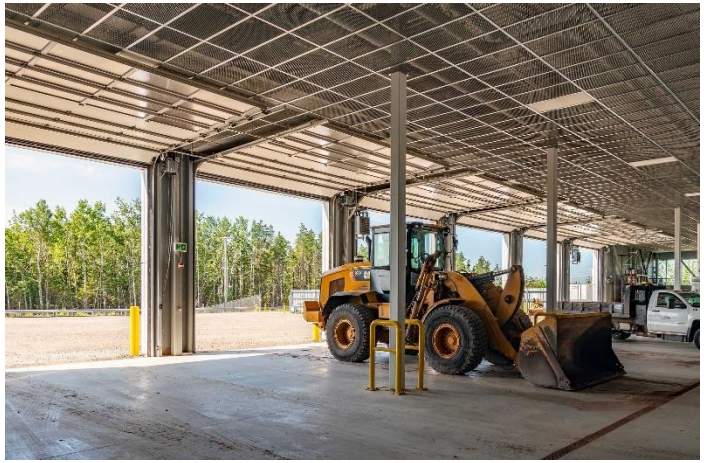
City of Quinte
Quinte West Operations Centre



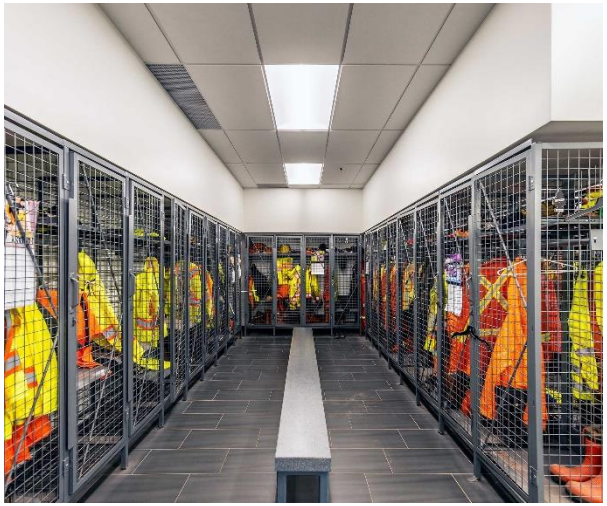
Town of Halton Hills
Robert C Austin Operations Centre



Sample Photos of Interior Areas



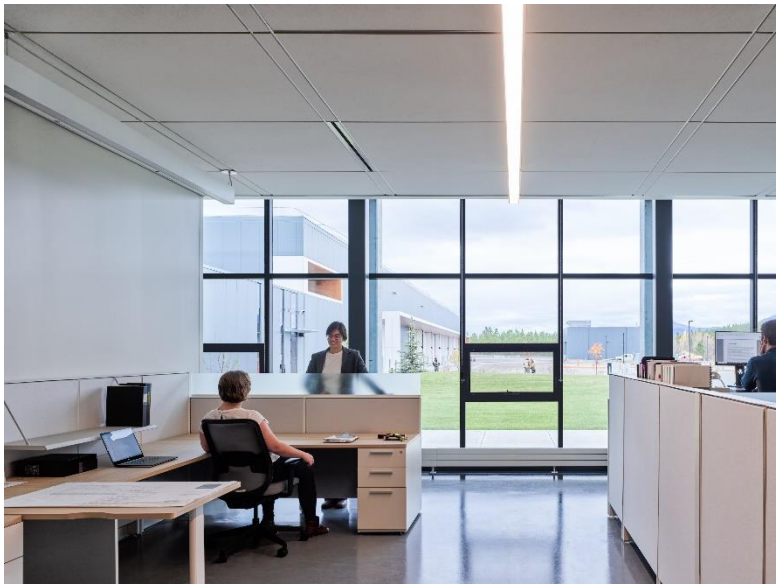




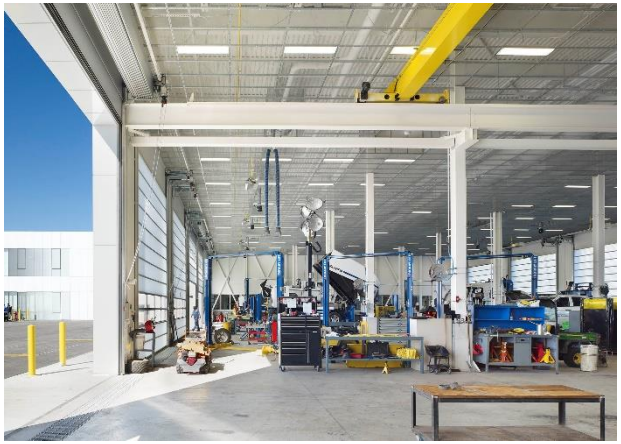


Sample Photos of Interior Areas









High Level Implementation Plan

High Level Implementation Plan

Centre Wellington

Phased implementation over 10-year period:

- Phase 1 (1-5yr timeframe):
  - Identify and purchase property
  - Studies, investigations, design, permitting for site development
  - Construct full office (based on 20-yr staff needs), garage area, and one greenhouse
  - Maintain some existing facilities for storage of seasonal vehicles
- Phase 2 (10+ year timeframe)
  - Studies, investigations, design, permitting for development continuation
  - Construct garage additions, salt storage facility, and second greenhouse
- Sell existing properties to finance portions of Ph 1 & 2

High Level Implementation Plan

Centre Wellington

Year	Implementation Steps	Estimated Cost
1 (2021)	Relocate overflow of Twp staff temporarily into medical office Op Centre Site Evaluation/Selection/Approvals Process RFP for Op Centre Phase 1 design / Tender / Contract Admin	$4.84 M
2 (2022)	Studies & investigations for site plan development and design Site plan approval process Design of Operations Centre Phase 1 & 2	$1.36 M
3 (2023)	Tender and construction of Op Centre Phase 1 (includes garage area for current needs, full office for 20 year staff projections and one greenhouse)	$10.95 M
4 (2024)	Township staff to move into Operations Centre Phase 1	$0.13 M
9 (2029)	Op Centre Phase 2 Detailed Design and construction tender	$0.59 M
10+ (2030+)	Construction of Operations Centre Phase 2 (includes heated and unheated garage additions, one greenhouse and salt storage facility)	$10.03 M
	Total Estimated 10+ year Costs	**$27.9M**

- **Cost estimate is high-level and conceptual at this stage of the project**
- **Estimate includes land purchase, “soft costs”, and construction costs**
- **Excludes potential revenue of approximately $5.2M from land sales**

Financial Strategy

Financial Strategy

Estimated Costs (*including soft costs*)	Phase 1 2021 to 2024	Phase 2 (in 10-20 years)	Total
Site Evaluations & Selection	39,000	-	39,000
Site Development Studies	120,000	-	120,000
Site Plan Detailed Design & Site Approvals	130,000	-	130,000
Preliminary Design & Detailed Design	1,115,000	562,000	1,677,000
Land Purchase & Facility Construction	15,046,000	10,065,000	25,111,000
Total Costs	**16,450,000**	**10,627,000**	**27,077,000**
Growth Related Portion of Project	**93%**	**62%**	**81%**

Cost of Medical Centre renovation and staff relocation has been excluded from total cost

Financial Strategy

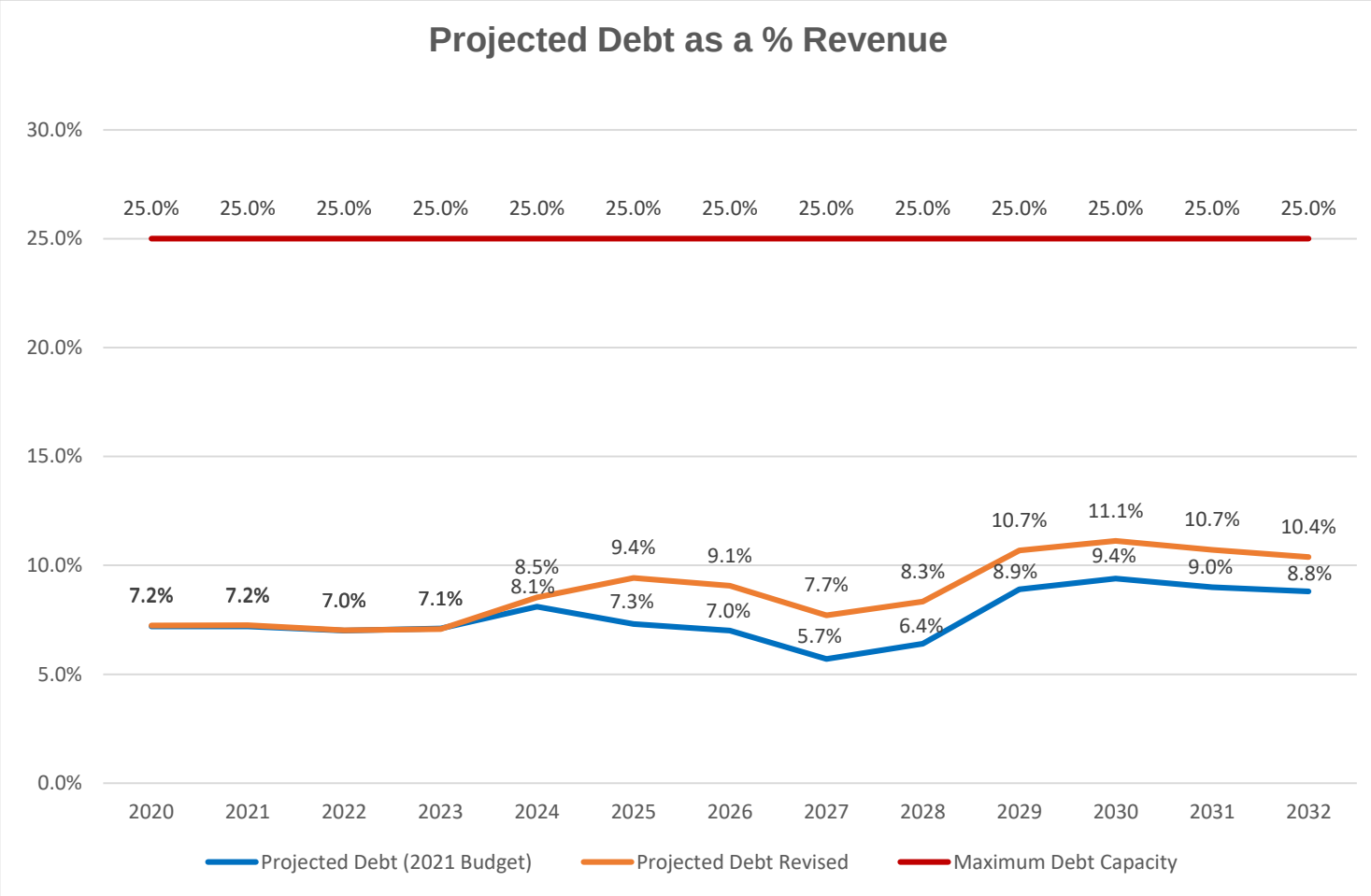
Estimated Costs (*including soft costs*)	Phase 1 2021 to 2024	Phase 2 (in 10-20 years)	Total
Growth Related Debt*	15,299,000	6,536,000	21,835,000
Non-Growth Related - Impact on Taxation	-	-	-
Non-Growth Related - Impact on Water/Wastewater Rates	-	-	-
Non-Growth Related - Sale of Existing Surplus Property	1,151,000	4,091,000	5,242,000
Total Funding	**16,450,000**	**10,627,000**	**27,077,000**

Estimated Annual Debt Payments* (sensitivity analysis):	Phase 1	Phase 2	Total
20 Year Term, 3% Interest	1,028,300	439,300	1,467,700
20 Year Term, 4% Interest	1,125,700	480,900	1,606,700
25 Year Term, 3% Interest	878,600	375,300	1,253,900
25 Year Term, 4% Interest	979,300	418,400	1,397,700

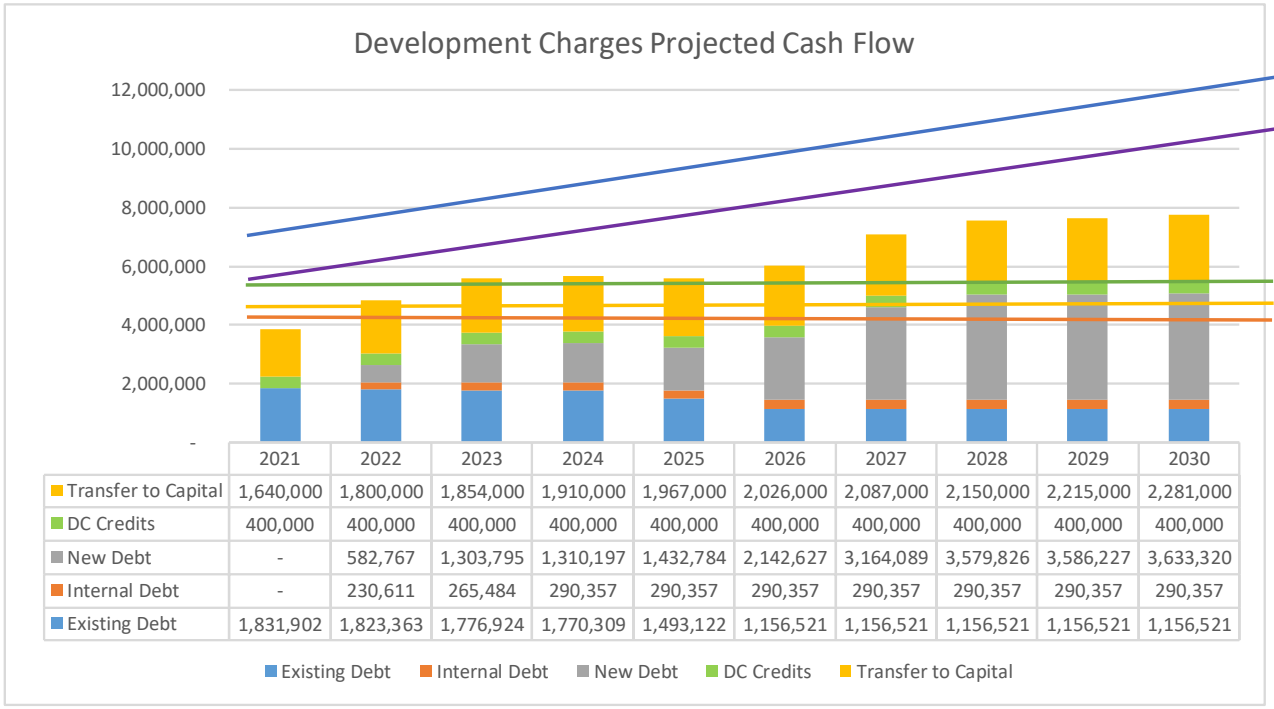
** All debt is growth related, therefore principal and interest payments would be funded from development charges.*

*** highlighted debt scenarios used in detailed debt projections.*

Financial Strategy



Financial Strategy



	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Transfer to Capital	1,640,000	1,800,000	1,854,000	1,910,000	1,967,000	2,026,000	2,087,000	2,150,000	2,215,000	2,281,000
DC Credits	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000
New Debt	-	582,767	1,303,795	1,310,197	1,432,784	2,142,627	3,164,089	3,579,826	3,586,227	3,633,320
Internal Debt	-	230,611	265,484	290,357	290,357	290,357	290,357	290,357	290,357	290,357
Existing Debt	1,831,902	1,823,363	1,776,924	1,770,309	1,493,122	1,156,521	1,156,521	1,156,521	1,156,521	1,156,521

DC Proceeds - 2020 DC Study (Projected)

DC Proceeds - 2020 DC Study (Projected x 80%)

DC Proceeds - 2020 Actual ($5.5M)

DC Proceeds - 2018 Actual ($4.6M)

DC Proceeds - 2019 Actual ($4.4M)

Next Steps

Next Steps

- Finalize Full Report (May 2021)
- Seek Council endorsement of the Recommended Option (June 2021)
- Subject to Council approval, begin a Site Evaluation and Selection process for the Recommended Option and report back to Council on outcomes (Fall 2021)
- Commence Phase 1 detailed design and site servicing design (2022)
  - Phase 1 to be “shovel ready” by the end of 2022
  - Ready for potential post-COVID recovery grant programs from the Province and Federal government

RDHA

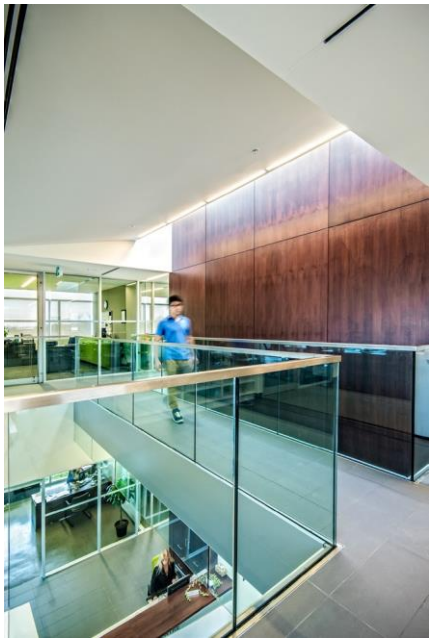
Stirling Rothesay CONSULTING, INC.

Centre Wellington

Township of Centre Wellington
Operations Centre Space Needs Assessment and Preliminary Site Layout

Thank you





Operations Centre
Financing Strategy

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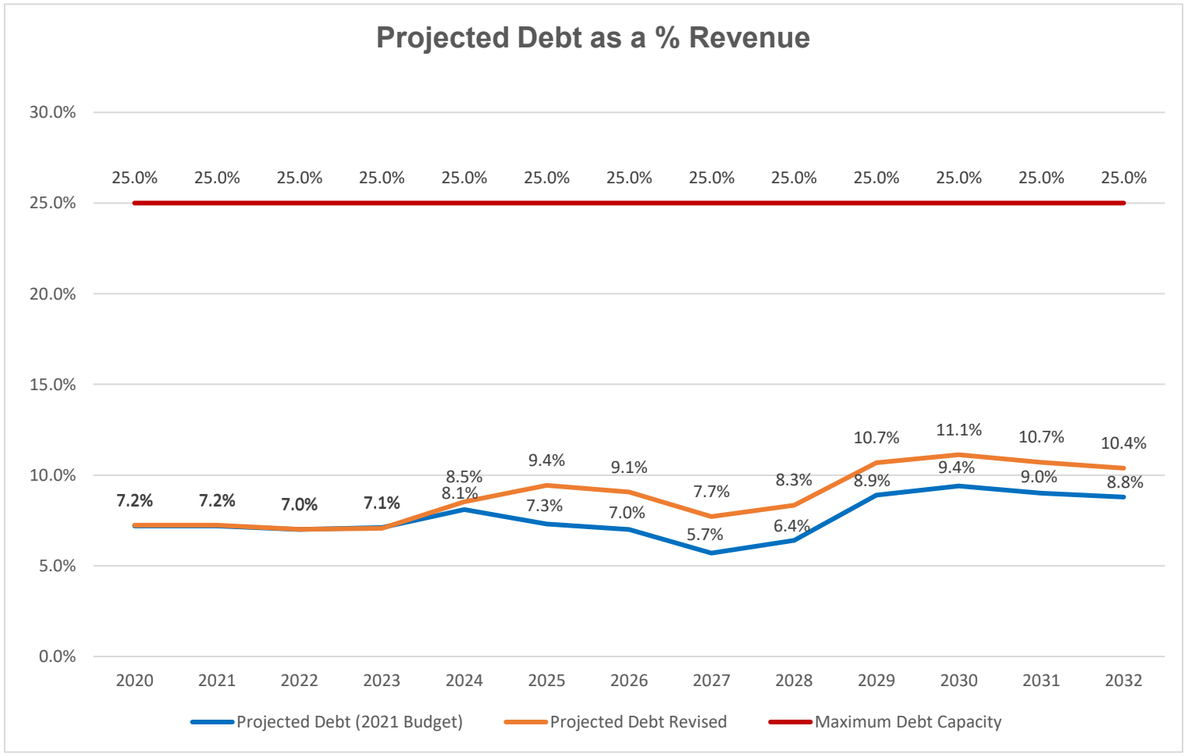
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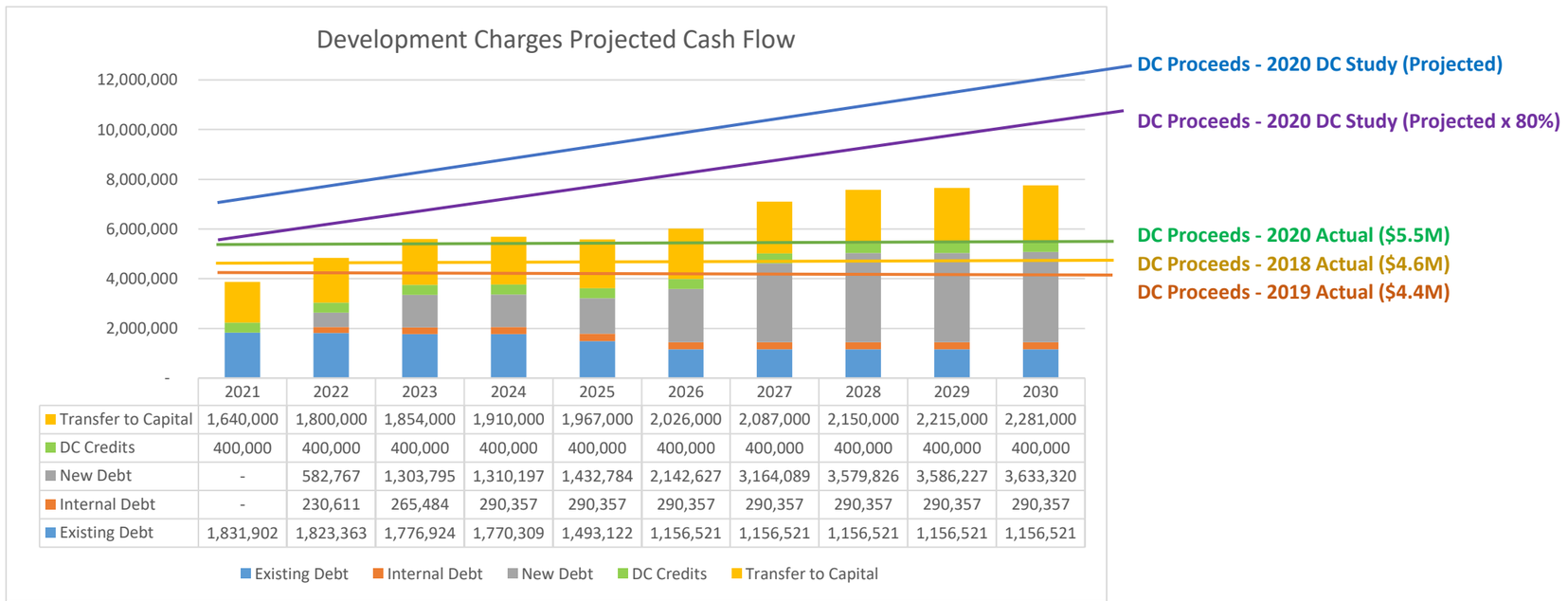
*** highlighted debt scenarios used in detailed debt projections.*

Debt Projection Summary Graphs
Adjusted for the Operations Centre

Graph A: Projected Debt: 2021 Budget vs. Revised



Graph B: Projected Use of Development Charges



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