






CITY OF HAMILTON
CORPORATE SERVICES DEPARTMENT
Financial Planning Administration and Policy Division
and
HEALTHY AND SAFE COMMUNITIES DEPARTMENT
Emergency Services, Fire Department
and
PUBLIC WORKS DEPARTMENT
Corporate Facilities and Energy Management Division

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	May 31, 2023
SUBJECT/REPORT NO:	Next Generation 9-1-1 Messaging Service Delivery Project Update (FCS20082(c) / HSC20045(c) / PW22087(a)) (City Wide)
WARD(S) AFFECTED:	City Wide
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RECOMMENDATIONS

- (a) That the Next Generation 911 (NG911) Facilities Renovation Project be approved with a budget totalling \$6,824,000, including Phase 1 and 2 design, renovations, consoles, furniture, UPS, design fees, permits, tax, fees, infrastructure fit-up, per Appendix “A” to Report FCS20082(c) / HSC20045(c) / PW22087(a) and to be funded from:
 - (i) An appropriation of previously approved \$4,325,000 of Tax Supported Capital Levy funding from the Next Generation 9-1-1 technology component (project #3502157101);
 - (ii) A transfer of \$2,499,000 from the Unallocated Capital Levy Reserve (#108020);
- (b) That the \$4,325,000 in Ministry of the Solicitor General transition funding be applied to the Next Generation 9-1-1 technology component (project #3502157101);
- (c) That Council approve the single source procurement, pursuant to Procurement Policy #11 – Non-competitive Procurements, for the Prime Design Consultancy Services for the Facility renovations for NG911 and that the General Manager, Public Works Department be authorized to negotiate, enter into and execute a Contract and any ancillary documents required to give effect thereto with AECOM Canada Ltd., in a form satisfactory to the City Solicitor;
- (d) That Public Works staff be directed to make any required updates to Service Level Agreements (SLAs) and/or Operating agreements with internal and external parties in order to service, maintain, repair and lifecycle manage ongoing operating costs related to City managed facilities at the Multi-Agency Training Centre (MATC) located at 1227 Stone Church Road East, 729 Upper Sherman, and Central Station located at 155 King William Street.

EXECUTIVE SUMMARY

Further to the December 5, 2022, Information Report “Upgrade of 911 System to the Next Generation 911 Messaging Service Delivery (FCS20082(a) / HSC20045(a) / PW22087)”, and subsequently, Next Generation 9-1-1 Service Delivery (FCS20082(b) / HSC20045(b) the purpose of Report FCS20082(c) / HSC20045(c) / PW22087(a) is to seek approval for the “NG911 Facilities Renovation Project” and budget of \$6,824,000, including Phase 1 and 2 project scope as outlined in Appendix “A” to Report FCS20082(c) / HSC20045(c) / PW22087(a).

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As communicated through report FCS20082(a)/HSC20045(a)/PW22087, staff had previously provided an estimated renovation and construction budget of \$24M. The short-term solution for the Hamilton Police Service (HPS) to serve NG-911 requirements by remaining at existing HPS sites has reduced estimated anticipated Facilities Capital renovation costs from \$24M down to \$6.84M. Most of the reduction from the original budget number was due to the fact that NG-911 renovations at Stoney Creek City Hall are no longer feasible and so the design was required to pivot.

The interim NG911 solution presented in this report reflects an adjusted budget to a significantly lower estimated cost. However, a long-term NG911 facility need still exists within the City of Hamilton and a future GIC report will be submitted once long-term facility direction is confirmed for HPS. Outside of that report, all other future updates to Council on the NG911 project will be provided through Communication Updates, where appropriate.

Additionally, through Report FCS20082(b)/HSC20045(b) staff communicated that the Ministry of the Solicitor General had committed \$4.325M in transition funding towards the Next Generation 9-1-1 technology component. This effectively frees up previously approved Capital Levy funds that could be directed towards the facilities component of the project, leaving \$2.499M to be funded. It is recommended that the remaining \$2.499M be funded from the Unallocated Capital Levy Reserve with no future tax implications of financing the capital component of the project.

Project scope locations:

Facilities Renovation Project Scope Locations:		
Site Location Space Renovations	Square Feet	Estimated Facilities Capital Budget*
Upper Sherman IT location (729 Upper Sherman)	800	\$ 1,108,000
Central Police Station (155 King William Street) [space fit-up only]	N/A	\$ 800,000
Multi Agency Training Centre (MATC) – Building B Administration (1227 Stone Church Road East)	3,000	\$4,916,000
Total	3,800	\$6,824,000

*Note line item estimates provided in this table are for information purposes only and may be redistributed at project design phase.

** Refer to Appendix A for further in Scope details.

The Total project budget of \$6,824,000, and the scope of the project is included in Appendix "A" to Report FCS20082(c) / HSC20045(c) / PW22087(a).

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No additional operating impacts are expected.

There is a master project schedule endorsed by Hamilton Police Services (HPS), Hamilton Fire Department (HFD), and IT Services which includes technology scope and temporary space fit-ups to meet Q2 2024 implementation of the NG911 call handling systems. Facility renovations will follow Q2 2024 Bell cutover to NG911 to considerably reduce risk to the schedule due to required lead times (e.g. design & permitting).

HPS has noted that NG911 project implementation is anticipated to create additional pressures on training rooms and meeting room utilization at MATC. To ensure mandatory/legislated training continues, a classroom will be set up in available space at Station 30 on Rymal Road East. The cost of this fit-up is included within this project budget within the MATC budget in order to alleviate the legislated training pressure at that site, at a cost not to exceed \$225,000.

Also relative to training pressures during NG911 implementation, HPS plan to hire a temporary Sergeant for 24 months on contract starting August 1, 2023 to July 31, 2025. HPS notes that this will be addressed by HPS as a budget variance in 2023 and be referred to HPS' 2024 Operating Budget for consideration.

Alternatives for Consideration – See Page 10

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Total gross project costs and proposed funding sources for the Next Generation 9-1-1 Messaging Service Delivery Project are provided in the table below:

Next Generation 9-1-1	Gross Budget	Funding Sources			Balance
		Provincial Subsidy	Contribution from Capital Levy	Unallocated Capital Levy Reserve	
Facilities	\$ 6,824,000		\$ (4,325,000)	\$ (2,499,000)	\$ -
Technology	\$ 7,760,000	\$ (4,325,000)	\$ (3,435,000)		\$ -
Total	\$ 14,584,000	\$ (4,325,000)	\$ (7,760,000)	\$ (2,499,000)	\$ -

A total of \$7,760,000 in funding from the Capital Levy had been previously approved through the 2021 and 2023 Tax Supported Capital Budgets. Additionally, the Ministry of the Solicitor General has confirmed transition funding of \$4.325M for the technology component of the project, which freed up previously approved Capital Levy funding to allocate towards the facilities

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component. The remaining \$2.499M is recommended to be funded from the Unallocated Capital Levy Reserve.

Total ongoing operating impacts, as communicated through Report FCS20082(a)/HSC20045(a)/PW22087, are expected to be \$1,493,400 annually for technology and facilities.

Staffing: N/A

Legal: Legal Services may be involved in procurement contracts related to the N Next Generation 9-1-1 Messaging Service Delivery Project Facility.

HISTORICAL BACKGROUND

On June 1st, 2017, in order to create a safer environment for Canadians by enabling access to enhanced and innovative 911 services, the Canadian Radio-television and Telecommunications Commission (CRTC) mandated all telephone companies to update their networks to provide Next-Generation 911 (NG911) Call Handling System voice and text messaging services to all Canadians. The deadline for transition to NG911 was initially March of 2024. CRTC subsequently has extended the deadline till March 4, 2025. At that point the legacy system - Enhanced 911 (E911) will be decommissioned. However, to ensure the CRTC mandated transition deadlines are met, City of Hamilton Public Safety Answering Point facilities must be phased to have various I.T. and fit-up elements ahead of the proposed Bell cutover in Q2, 2024.

With NG911 services, Canadians could eventually stream video from an emergency incident, send photos of accident damage or a fleeing suspect, and send personal medical information, including accessibility needs, which could greatly aid emergency responders.

New system features include:

- True system interoperability;
- Data sharing between Public Safety Answering Points (PSAPs);
- Improved redundancy and reliability (virtual Public Safety Answering Points);
- Improved response times;
- Enhanced disaster recovery.

In July 22, 2022, the Energy, Fleet & Facilities Management Division of Public Works (Now Corporate Facilities and Energy Management Division) was tasked with identifying a minimum of two suitable locations to accommodate the new systems including developing the scope of work required for the data centres and associated office operations. The site selection criteria included a list of requirements related to critical

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service environments including geographical distancing, site redundancy (primary and backup), risk mitigation capabilities, reliable and available communication infrastructure, technology supports and enhanced security.

The Stoney Creek Municipal Centre (SCMC) had previously been identified as a location for a future 911 call center. However, as of March 2023, the project evolved. Updates regarding technology assets opened up the possibility of new locations. Additionally, change of use at the SCMC, along with major renovations triggered a post-disaster requirement clause in the Ontario Building Code for 911 call centres. The Ontario Building Code requires all buildings be assigned an Importance Category of 'Low', 'Normal', 'High' or Post-disaster. The 'Post-disaster' category applies to buildings that need to remain operational following a disaster such as hospitals, police facilities and telephone exchanges.

Upon review of this information, the Executive Sponsors and the NG911 Joint Steering Committee determined that Central Station would temporarily remain as the primary Public Safety Answering Point (PSAP) for the Hamilton Police Service (HPS), and MATC would remain as their backup for much of the project delivery, at which point MATC would become HPS' primary PSAP. The Hamilton Fire Department would remain at the MATC for their primary and the Upper Sherman Ave. Upper Sherman would remain as their backup.

Facilities staff completed site visits at all 3 locations with HPS and HFD to determine a viable space layout concept design, master schedule in coordination with IT (including project phasing to meet NG-911 deadlines), and facilities project budget.

The master project schedule, endorsed by all parties including IT, Facilities, Police, and Fire, which includes project phasing, is as follows:

Phase	Lead	Scope & Location	Est Completion Date
1	Facilities	Temporary Space Fit-ups, all locations	Q1 2024
1	IT	NG-911 Bell cutover and Call Handling System Implementation - all locations <i>(date mandated by Bell)</i>	Q2 2024
1	Facilities	Design, Permitting, Prequal, Tender for Phase 2	Q2 2024
1	Facilities, in coordination with Police	New call-taker/dispatcher Console Procurement	Q3 2024
2	Facilities	Renovation MATC & Upper Sherman location	Q1 2025

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This project phasing is critical to enable IT, HPS, and HFD to meet critical 2024 and 2025 timelines while maintaining Primary and Backup PSAP obligations. There is lead time required for Phase 2 (e.g. design, permitting, ordering), which will be undertaken by Facilities during Phase 1 for Next Generation 9-1-1 (NG911) implementation, in preparation for Phase 2.

Facility renovations at 729 Upper Sherman, and at MATC at 1227 Stone Church Road, (achieved through temporary space fit-ups) will occur during Phase 2, after the deadline of Q2 2024 Bell cutover date to considerably reduce risk to the schedule due to required lead times (e.g. design & permitting & ordering).

While the initiation of this project to migrate the 911 systems was intended to meet legislative compliance requirements, as mandated by CRTC, the NG9-1-1 Facilities Renovation at the Upper Sherman location and MATC (1227 Stone Church Road) will be designed to ensure the physical space and technology can be fully optimized.

A detailed Phasing Plan for Primary & Backup PSAP for both HPS and HFD was developed in April 2023 in collaboration with Facilities, IT, HPS and HFD. Also, in April 2023, HPS staff worked out an MOU with another municipality to address the need for a contingency PSAP during a few select, approximately 2-3-week periods during the project when IT is adding or moving data & power.

Staff engaged AECOM Canada Ltd. as prime design consultant under approval of a Policy 11 due to their previous experience with design at NG911 sites for multiple nearby municipalities as a subject matter expert. Given the tight legislative timeline of the project, staff worked efficiently with Procurement to engage with the consultant in order to avoid delay to the project due to the need for critical design information. Understanding that the cost of consulting would exceed staff authority, recommendations in Report FCS20082(c) / HSC20045(c) / PW22087(a) are needed to continue the services of the prime design consultant through the permitting, tender, construction contract administration and project close-out phases.

AECOM Canada Ltd. has a team of multidisciplinary staff of SME's (architectural, mechanical & electrical engineering), who have recent and ongoing experience designing emergency dispatch centres to meet specific technological and specialty performance requirements. These technological (IT equipment and connectivity) requirements are mandated and dictated by Federal agencies and are to be completed, in full, by March 2025. AECOM's team is delivering NG911 projects of very similar scope for the emergency services of neighbouring municipalities, such as Toronto and Niagara.

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Historical References:

2017 – On June 1, 2017 Canadian Radio – Television Telecommunications Commission (CRTC) mandate to upgrade E911 System.

2020 – Report FCS20082 / HSC20045 Information Report to AF&A October 22, 2020.

December 2020 – Tax Supported Capital Budget Report (FCS20101) Council approved \$6M for the Technology Solution with Operating Impacts of Capital of \$312 K.

2022 - December 5, 2022 – GIC Information Report FCS20082(a) / HSC20045(a) / PW22087 informing Council of upcoming Budget requirements for Technology Enhancements & Facilities Renovations.

2023 Tax Supported Capital Budget Report FCS22081 – Approval of additional amount for Technology enhancement component of project of \$1,760,000.

2023 – GIC on March 22, 2023 Report FCS20082(b) / HSC20045(b) to seek approval of the call handling system and delegate the ability to execute the contract. It was confirmed that the Ministry of the Solicitor General would be providing \$4,325,000 for the technology component of the project.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

The migration to NG911 is mandated and legislated through the CRTC Telecom Regulatory Policy: CRTC 2017-182.

One of the largest benefits of NG911 is improved location services for citizens dialling 911. Public Safety Answering Points will no longer be able to take 911 calls after March of 2025 without the required NG911 technology. Every Public Safety Answering Point within Canada will be required to update and replace their Call Handling Systems in order to have compatibility to receive 911 calls and transfer them accordingly.

Failure to meet the Canadian Radio-television and Telecommunications Commission platform migration to NG911 by March 4, 2025 will result in disruption (failure) of 911 services provided by the City of Hamilton.

The recommendation of a single source for prime design consultancy services is consistent with Procurement Policy #11, Non-competitive Procurements. In accordance with policy, Council approval is being requested given that the recommended single source procurement is of a value of greater than \$250,000.

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RELEVANT CONSULTATION

Consultation for this report took place as follows:

- Corporate Services: Financial Planning, Administration and Policy Division – Corporate / Capital Finance Teams – Information Technology Services – Procurement (only with respect to adherence to the Procurement Policy)
- Health & Safe Communities, General Manager
- Public Works, General Manager
- Corporate Facilities and Energy Management Director and Strategic Planning, Capital & Compliance and other Facilities teams
- Hamilton Police Services (HPS)
- Hamilton Fire Department (HFD)

ANALYSIS AND RATIONALE FOR RECOMMENDATION(S)

The three-site model proposed for this project is considered an interim solution. The three-site solution was necessary due to physical limitations in any of the two-site options including lack of satisfactory physical space available for the footprint required and/or significant time and cost for relocating existing operations from the MATC-Administration building. The three-site solution proved to be the most expedient and cost-effective option.

The three facilities identified (Police Central Station, the Multi-Agency Training Centre and Upper Sherman location) were selected because they meet the facilities requirements with regard to feasibility for project schedule, communications infrastructure (fibre, communications tower), geographical risks, construction timeline and financial impacts.

As this project involves HPS and HFD, service level agreements will be negotiated as required to establish facilities management services and responsibilities at City Managed Facilities (MATC and Upper Sherman location).

Construction outlined in Report FCS20082(c)/HSC20045(c)/PW22087(a) and Appendix “A” shall be procured through competitively tender (RFT).

The budget estimates contained in this report were provided by Public Works staff after considering the following factors:

- a) Aggressive timeline cost implications and potential over-time premiums;
- b) Current construction market conditions including supply chain challenges;
- c) Risk contingencies related to early concept design & facility unknowns;

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- d) Anticipated higher costs associated with critical environments.

ALTERNATIVES FOR CONSIDERATION

The following alternative locations were considered and deemed not suitable as follows:

1. New Waterdown Fire/Police currently in planning stages for construction -timeline not feasible;
2. Stoney Creek Municipal Centre - The building was constructed as Stoney Creek City Hall, and as such, does not have the required post-disaster rating;
3. Third Party leased locations – No suitable locations were found, and other risks were identified with 3rd party leasing scenarios;
4. Constructing a new building - not feasible due to critical timeline requirements.

The following methods of reducing schedule risk, as alternatives to Project Phasing were considered and deemed not suitable as follows:

- a) Single sourcing or RFQ for construction – due to international trade agreements and other obligations;
- b) Use of existing smaller desks to fit better within the space will not adequately accommodate the new monitors required for migration to NG911;
- c) EOC space at the MATC (1227 Stone Church Road East) location is not available for use and would require a large expense to relocate.

HPS has asked that City Staff provide Council with previous preliminary estimates for delivering facilities for NG911, which originally exceeded \$24M. The majority of the original budget number was dedicated to renovations at Stoney Creek City Hall, which is no longer a feasible option. The interim NG911 solution presented in this report reflects an adjusted budget. However, a long-term NG911 facility need still exists within the City of Hamilton and a future GIC report will be submitted once long-term facility direction is confirmed for HPS.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN**Healthy and Safe Communities**

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

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APPENDICES AND SCHEDULES ATTACHED

Appendix “A” to Report FCS20082(c)/HSC20045(c)/PW22087(a) – Project Scope
Details &
Preliminary
Estimates