
Subject: NEMS 10 Year Master Plan

Report to: Committee of the Whole

Report date: Thursday, February 6, 2025

Recommendations

1. That Report PHD 1-2025 **BE RECEIVED** as a summary of planning and information concerning the 10-year plan for EMS facilities, including the proposed construction of a new facility known as the EMS Primary Hub;
2. That the 10-year master facilities plan **BE ENDORSED IN PRINCIPLE** so that staff may proceed to 'Request for Proposals' for conceptual design of an EMS Hub with performance specifications and continue to explore partnership opportunities as detailed within this report;
3. That staff **BE DIRECTED** to proceed with expression of interest (EOI) for the lease-based scenario for an EMS Hub; and
4. That financing in the amount of \$3,895,250 gross and \$3,036,890 net **BE INITIATED** from the 2017 capital budget for EMS Central Hub (#20000117) and that the project **BE FUNDED** as follows:
 - Development Charges \$858,360
 - Debt \$3,036,890.

Key Facts

- The purpose of this report is to seek Council's endorsement for the 10-year Niagara Emergency Medical Services (EMS) master facilities plan and approval to proceed with planning for an EMS Hub.
- Approval of the 10-year facilities plan for EMS allows for progress toward the development of an EMS Hub and provides a framework for ongoing decision-making regarding EMS facilities and resources.
- In December 2021, Council considered three models and approved the exploration of a land acquisition process for an EMS Hub facility (PHD 03-2021); however, staff changes, Region priorities and capital challenges delayed initiation of this project.
- As planning for the EMS Hub continued, the need for a comprehensive facilities plan was clear.
- To address this gap, Operational Research in Health (ORH), a firm with extensive experience in developing facilities plans for Ontario EMS, was engaged to assist in creating a complete and strategic EMS facilities plan.

- The assessment led to the recommendation of a 10-year EMS Facilities Plan using a Hub and Spoke model, which incorporates future demographic and development impacts, as well as potential effects on EMS volume and response times.
- The recommendations from this assessment are outlined in Appendix 1 of the report.

Financial Considerations

PHD 03-2021 Niagara EMS Primary Hub – Background and Site Opportunities, from December 2021, outlined the financial implications of transitioning to a primary hub model, including a build versus lease model cost comparison for the primary hub. The financial considerations identified in that report, which included access to funding and debt, and overall operating and capital costs over the short and long term, remain relevant. Staff have built off these financial considerations and updated them for the scope of the proposed updated master plan now including all facilities required over the next 10 years.

Staff have taken the updated master plan provided from ORH (Appendix 1) and updated the costing and assumptions under three scenarios to ensure we have a complete view of the financial impacts:

1. Traditional Facilities Model – Where we continue to grow to address ongoing service needs by building new stations including a new headquarters. (Appendix 2a)
2. Hub Model Regional Build – Where the Region will acquire land and build and own all required facilities including a new hub. (Appendix 2b)
3. Hub Model 3rd Party Lease – Where the Region would look for a partner who owns and builds the Hub and enter into a long-term lease for this facility. Posts and spokes would be built and owned by the Region. (Appendix 2c)

Regional staff have worked with ORH to provide estimated costs associated with each model or scenario. The 10-year and 30-year capital and operating costs are summarized in the following table.

Table 1: Traditional vs Hub Cost Comparison – 10 years

\$Millions	Traditional Facilities Model	Hub Model Regional Build	Hub Model 3 rd Party Model
Operating	\$136.5	\$124.5	\$63.7
Capital	\$157.9	\$143.3	\$78.3
Funding	(\$58.7)	(\$53.4)	(\$50.2)
Total	\$235.6	\$214.5	\$129.3

Table 2: Traditional vs Hub Cost Comparison – 30 years

\$Millions	Traditional Facilities Model	Hub Model Regional Build	Hub Model 3 rd Party Model
Operating	\$640.2	\$556.7	\$607.1
Capital	\$157.9	\$143.3	\$53.7
Funding	(\$307.9)	(\$267.2)	(\$292.0)
Total	\$490.2	\$432.8	\$368.7

The 10-year plan is inclusive of all facility construction costs, as well as necessary ambulance purchases and staffing to support growth. The Hub and Spoke model offers a lower cost option than the Traditional model due to more efficient use of facilities and operational efficiencies leading to cost avoidance.

Relative to the Regional Build model, the 3rd party lease model offers initial savings by avoiding upfront capital for the construction and eliminating the need for an asset renewal provision in the operating budget for the future lifecycle costs. However, there are risks and uncertainties with a lease model that would need to be negotiated with the developer, likely including balloon payments upfront or throughout the life of the lease. These extra payments have not been incorporated into the financial model as they are unknown until details are received through an expression of interest process. Staff anticipate that once a lease is negotiated, additional costs will likely bring the overall 30-year cost closer to that of a Regionally built and owned facility.

Despite the unknown costs and uncertainties, staff recommend that Council endorse proceeding with the 3rd Party Lease Hub and Spoke scenario due to the current

constraints on available capital funding and limited debt access. Building an EMS hub would require a significant portion of the Regions capital budget in year one of the plan as outlined in the table below and would not be feasible given other infrastructure needs across the Region.

Table 3: Year 1 Capital Investment Comparison

\$Millions	Traditional Facilities Model	Hub Model Regional Build	Hub Model 3rd Party Lease
Capital Expenditures	\$186.4	\$199.9	\$24.8
Capital Funding	(\$84.3)	(\$104.5)	(\$6.6)
Net Capital Investment	\$102.1	\$93.3	\$18.8
% of annual capital budget needing to be dedicated to EMS	66.8%	62.4%	11.9%

Operating Budget

Each scenario will require a small levy operating budget increase over the next 10 years as shown in the table below. When developing the model, staff plan to use the taxpayer relief reserve to minimize the impact of Ministry funding lagging the year costs are actually being incurred. This approach ensures that the tax levy is not increased in one year and then decrease in the next year once Ministry funding begins. While the lease model has higher annual operating increases as outlined in the table below, it remains relatively small compared to the upfront capital investment need of the build model discussed above.

Table 4: Annual Operating Budget Impact

\$Millions	Traditional Facilities Model	Hub Model Regional Build	Hub Model 3rd Party Lease
Operating Expenses	\$4.4	\$4.6	\$1.7
Operating Funding	(\$1.5)	(\$1.5)	(\$1.5)
Net Operating Investment	\$2.8	\$3.1	\$0.2
One-time reserve transfer for funding lag and smoothing	(\$2.5)	(\$3.0)	\$0.0
Net Operating Impact	\$0.3	\$0.0	\$0.3
% levy increase for operating	0.06%	0.01%	0.05%

Financial Reporting and Debt Impacts

From a financial reporting perspective, the 3rd Party Lease Model will be deemed a capital lease and therefore would be included in the capital budget with a corresponding long-term liability reported. While the lease payments will impact the operating budget, it will help to preserve debt capacity limits and capital reserves for future and other Regional capital needs.

Future capital lease payments are included in the Province of Ontario's Annual Repayment Limit (ARL) calculation; however Standard & Poor's does not factor in capital leases when assessing credit ratings, as these are considered direct debt and not tax supported debt.

Project Initiation and Future Budgets

Regional Council has already approved \$4,995,250 in capital funding for the EMS primary hub through projects 10GD1128 (\$1,100,000) and 20000117 (\$3,895,250). Of this, \$1,100,000 has been initiated and \$630,000 spent to date. Staff are recommending the remaining funds be initiated and be used to proceed with next steps.

Of note, the costs outlined in this master plan are based on several assumptions and are intended to help assess the impact of decisions. Staff anticipate more refined cost information to become available as the process progresses, and updates will be built into future Regional capital and operating budgets, which will be brought back to Council for approval as part of the annual budget process.

Analysis

Background

As outlined in PHD 03-2021, following provincial downloading and amalgamation of services, Niagara Region inherited ten facilities used by the previous six ambulance services operating within the region. Over the past 21 years, nine of these stations have remained operational, with the Region replacing one and adding eight more. Today, the Region operates 19 ambulance stations, a fleet center, and an EMS headquarters and dispatch center. These operate under varying models, including standalone owned facilities, shared spaces with other emergency services, and leased units in strip malls. Of these, 9 are Region-owned, and 11 are leased.

The recommendation for a Hub and Spoke facility model was first identified in 2011 following a corporate facilities review that included a long-term EMS facility plan, and a series of reports, consultant reviews and updated modeling have since reaffirmed a Hub as the preferred model for long-term EMS delivery.

Council has previously supported the exploration of land assessment and development opportunities for the EMS Primary Hub project; however, the project has not been initiated. When Council approved the exploration of a Hub in December 2021, it was without a comprehensive master facilities plan. Continuing to build new EMS stations without a strategic plan would result in facilities that are larger, more expensive, and less operationally efficient than necessary. Recognizing this gap, in early 2022, the decision was made to develop a thorough plan, presented to Council for alignment with the overall direction. Operational Research in Health (ORH) was engaged to provide this plan, based on detailed analysis of EMS historical data and predictions for future Regional growth. It is important to note that capital needs required for the project will still require approval through the annual capital budget process.

Options Considered

In addressing future needs, as outlined above, three options are possible; carry on with the legacy Traditional decentralized full station approach, to move forward with a wholly Region owned Hub and Spoke model, or to move forward with a Hub and Spoke model involving a 3rd party lease-build partnership. Each has different financial implications.

Current State (Traditional) and Risks

In addition to 19 ambulance bases, the Emergency Services Division maintains five separate leases for support and administrative services, all in Niagara on the Lake. Four of these leases are held at the Niagara Corporate Business Centre (NCBC) at 101 Lampman Court and the other space at 2 Westwood Court.

1. Niagara Ambulance Communications Services (NACS - dispatch centre) - NCBC
2. Dispatch Training - relocated to NCBC due to COVID-19
3. ESD Administration (Headquarters) – NCBC
4. ESD Administration (Dispatch Training) –NCBC
5. Fleet and Logistics / Mobile Integrated Health Station – 2 Westwood Court

The current Traditional facility model consists of stand-alone stations and requires each site to be completely self-sustaining. Each station must contain all necessary amenities, such as multi-bay garages, inventory rooms, secure medication storage, cleaning equipment, change rooms, lockers, administrative resources, and staff break areas. As an example, the last stand-alone station constructed, Merrittville Station (built 2014 at Regional Headquarters), occupies a large physical footprint to accommodate these requirements.

In 2019, Niagara College purchased the NCBC, current site of EMS Headquarters and Communications Center, and assumed the leases at this facility. Niagara College has committed to maintain current leases at the NCBC, though this approach may change in the future.

The current leases at 101 Lampman Court expired in August 2024 with a termination notice between 90 days and 6 months dependant on the space. It is currently in the process of being extended to August 31, 2026. The lease for 2 Westwood Court expires July 2025 with no termination notice required. If these leases were not to be renewed, Niagara EMS would be forced to find new space within imposed timelines. The preference is to mitigate against this risk in the development of a Primary Hub for long term facility confidence.

Future State - Hub and Spoke

A Hub and Spoke model is a multi-function station model, where Emergency Services operations including administration, training, fleet, communications (dispatch) and emergency operations are centralized at a Hub where the majority of EMS staff report to and deploy from. Satellite spokes in the West and South would accommodate the

remaining daily operations and staff reporting. Together, all daily operations including supply, readiness and staffing would originate at the Hub and Spokes, with ambulances assigned to small footprint posts strategically located throughout the region. Currently, these functions are distributed across various sites, leading to inefficiency as described above.

As noted in PHD 03-2021, this model leads to a number of advantages, including standardization and operational efficiencies across the fleet leading to significant cost savings and operational advantages such as:

- Stability of business functions
- Enhanced staff connectivity
- Improved Paramedic staff availability
- Improved staff flexibility and decreased overtime
- Enhanced vehicle/equipment maintenance capacity
- Space for growth
- Enhanced partnership opportunities for co-location of EMS 'posts'

For these reasons, Council previously endorsed the concept of an EMS 'Hub' (PHD 01-2021). This report and its recommendations further informs this decision through endorsement of an all-inclusive 10 year Facilities Plan.

Region Owned Hub vs 3rd Party Capital Lease

EMS infrastructure is critical and staff feel that the best long-term option is for the Region to acquire land, build and own the facilities. This approach allows for legal authority, full operational decision making and generally is cost effective over the longer term. However, staff recognize that the upfront capital required to achieve this is significant, and due to cost, a lease arrangement with a 3rd party owner avoids much of the upfront capital requirement. This comes with added risk for operational stability and potential future cost increases and is therefore not a common model for emergency services. While staff have recommended the less expensive option in the short-term to ensure that the project proceeds and operational efficiencies are achieved, an owned facility model is preferable should capital become available.

Summary of Findings and Recommendations from ORH Evaluation

ORH was engaged to provide a fulsome 10-year Facilities Plan, using robust statistical modelling to predict future response needs. This modelling is based on Niagara's historical EMS data, as well as information regarding future regional predicted growth

and development plans. ORH has performed this work for several Ontario municipalities. The plan evaluated utilized three comparative approaches:

- A) Maintain current resources (with resultant degradation of response times) or
- B) Maintain current performance, or
- C) Improve performance to meet Council approved response time targets, resulting in improved response times in all municipalities.

Based on approach 'C', recommendations from that 10-year plan include:

- A detailed review of service profile and facility risks was undertaken.
- Projections of future EMS demand: the anticipated increase is approximately 40% over the next decade. Demand projections predict a 40% increase by 2033.
- Facility recommendations to address lease, condition, capacity, and coverage risks:
 - The retention of 10 existing facilities for continued use as 'posts'
 - The development of 7 new 'post' facilities: 2 x 1-bay, 5 x 2-bay (noting that a 2-bay post will have smaller footprint than a current 2-bay Traditional facility)
 - The development of 3 new Hub facilities was found to best meet the geographical coverage needs of Niagara Region: a Primary Hub, (which incorporates EMS Communications Center, Training, and Headquarters), along with a smaller Northwest Spoke and a South Spoke. These facilities, once constructed, will be the primary reporting and deployment stations for all staff.
- Additional ambulance requirements identified to allow improved coverage in all municipalities by 2033: Additional 5 x 24/7 shifts and 11 x 12/7 ambulance shifts are required by 2033 (38% increase)
- Additional 18 ambulances (vehicles) required, including spares.

Alternatives Reviewed

Alternative options are to continue with the Traditional EMS facilities model, or to move forward with the Hub and Spoke model as a region-owned capital project rather than a lease-build model.

The disadvantages of continuing with the Traditional model include increased operating costs, potentially greater capital costs over time, and failure to realize the numerous operational advantages that can be achieved with a Hub and Spoke model.

The primary disadvantage of a region-owned capital Hub project is increased capital costs that may exceed capital funding available.

Relationship to Council Strategic Priorities

The recommendations support Council's strategic priority of 'Effective Region' by ensuring that EMS response meets current and forecast urgent health care needs of the communities we serve as the Region continues to grow and prosper. The delivery of prompt, quality paramedic services will help maintain the health and safety of Niagara's citizens. With a smaller footprint for Paramedic 'posts', enhanced opportunity exists for co-location of ambulance stations.

The recommendations in the 10-year Facility Plan also support Council's strategic priority of 'Equitable Region', as implementation is anticipated to improve EMS response times in every municipality, supporting health, growth, and future development for all areas.

Other Pertinent Reports

- PHD 23-2012 Niagara EMS Strategic Accommodations Study
(Report available upon request)
- PHD 17-2014 EMS System Performance Sustainability
(Report available upon request)
- PHD 17-2015 EMS System Performance Sustainability
(Report available upon request)
- PHD 05-2016 Niagara EMS Master Plan
(Report available upon request)
- PHD 08-2016 Master Plan Award of RFP
(Report available upon request)
- PHD 19-2016 Niagara EMS Mobile Integrated Health Community Paramedic Update
(Report available upon request)
- PHD 21-2016 2016 Update to EMS System Performance Sustainability
(Report available upon request)
- PHD 05-2017 Niagara Emergency Medical Services Pomax Master Plan Review
(Report available upon request)
- PHD 19-2017 Niagara EMS 2018 Resource Requirements
(Report available upon request)
- PHD 17-2017 Niagara EMS System Design Changes
(Report available upon request)

- [PHD 03-2021 - Niagara EMS Primary Hub-Land Procurement Phase](https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=3b2e29a1-bbc5-4aba-8a1bbfdb43176cd4&Agenda=Merged&lang=English&Item=21&Tab=attachments)
(<https://pub-niagararegion.escribemeetings.com/Meeting.aspx?Id=3b2e29a1-bbc5-4aba-8a1bbfdb43176cd4&Agenda=Merged&lang=English&Item=21&Tab=attachments>)

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Appendices

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| Appendix 1 | ORH Report – 10 Year Master Facilities Plan – March 14, 2024 |
| Appendix 2 | Master Plan Cost Comparison – Traditional vs Hub |