

1 Introduction

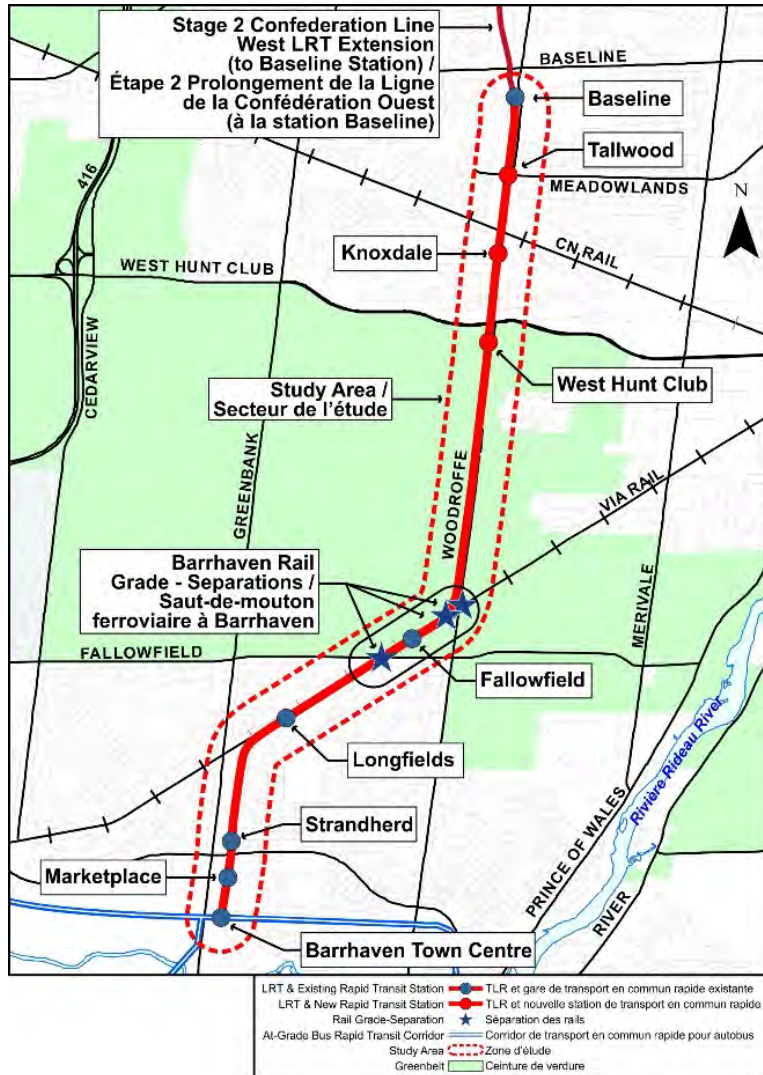
The City of Ottawa is the proponent of the Barrhaven Light Rail Transit (Baseline Station to Barrhaven Town Centre) and Rail Grade-Separations Planning and Environmental Assessment (EA) Study in accordance with the Transit Project Assessment Process (TPAP) Ontario Regulation 231/08 under Ontario's *Environmental Assessment Act*. This EA study has developed a Recommended Plan for a 10 kilometre (km) long twin-track electrically powered Light Rail Transit (LRT) facility extending from Baseline Station to Barrhaven Town Centre, as well as the grade-separations of Woodroffe Avenue, the Southwest Transitway and Fallowfield Road where these corridors currently cross the VIA Rail Smiths Falls Subdivision rail line at-grade in Barrhaven. The Study Area for this EA is illustrated on **Figure 1-1**. The City of Ottawa will have charge of this project, following the responsibilities and obligations identified in Regulation 231/08 during the planning stages, TPAP process, implementation and operation of the preferred undertaking described herein.

The need for extending LRT to Barrhaven Town Centre and implementing the associated rail grade-separations is well established in a number of the City's key strategic directions and objectives as well as within the previously completed EA studies dating back to 1997. There are numerous benefits of extending LRT to Barrhaven Town Centre including providing the opportunities for modal shift from private vehicles to transit service and enhanced and continuous pedestrian and cycling facilities with improved connections.

The proposed rail grade-separations will address the important TSB Recommendation R15-05 provided by the Transportation Safety Board of Canada in its Railway Investigation Report R13T0192 on the September 2013 VIA Rail/OC Transpo train and bus collision at the VIA Rail line/Southwest Transitway level crossing. This need is further established and confirmed by the recently completed study (BMRRGSS 2017).

As part of the study process, this Environmental Project Report (EPR) has been prepared to document activities and findings during the planning and functional design phase and to present the Recommended Plan for the project. The EPR provides the background and an overview of the study including the location and rationale for the proposed project; EA requirements; the public consultation process; the existing and future social, transportation, infrastructure and utilities, economic, natural and physical conditions; development and evaluation of alternative designs; the selection of a preferred alternative; the Recommended Plan; and an assessment of the effects of the project.

Figure 1-1 Study Area



1.1 Project Background

The Barrhaven LRT project is a component of the City’s planned rapid transit network. It is identified in the City’s 2013 Transportation Master Plan (TMP) as part of the Ultimate Rapid Transit Network, with implementation currently anticipated beyond the TMP’s 2031 horizon year (Figure 1-2).

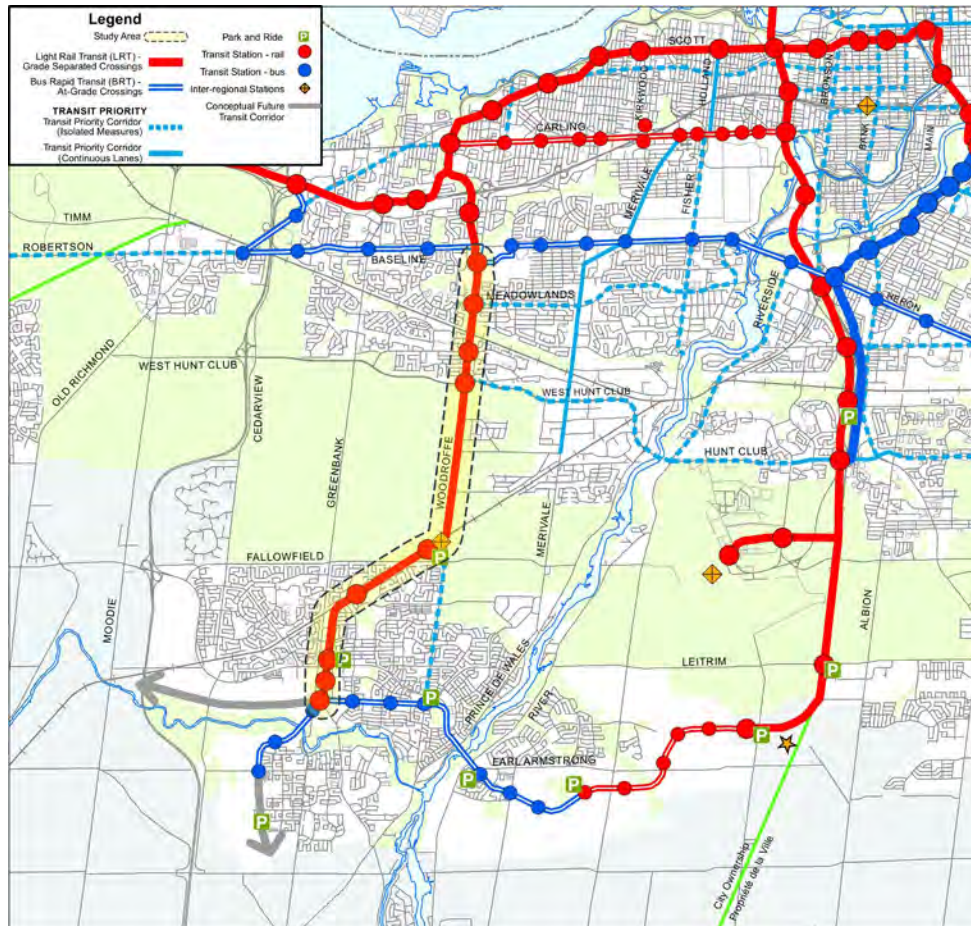
In May 2018, the City initiated the Barrhaven Rail Grade-Separation Environmental Assessment study to complete the EA requirements for rail grade-separation of the Southwest Transitway, Woodroffe Ave and Fallowfield Road at VIA Rail crossing.

In June 2018, Council directed staff to undertake the EA study for conversion of the BRT corridor to LRT facility to serve Barrhaven, such that interim results can be part of the upcoming TMP review to be assessed for consideration with respect to the City’s next phase of transit investments.

The Barrhaven LRT EA study area partially overlaps with the then ongoing Barrhaven Rail Grade-Separation EA study. Due to the overlapping study areas and design issues, EA process requirements, study durations and consultation activities, the two EA studies were integrated and restructured into one study. The integrated EA study was titled as the Barrhaven Light Rail Transit (Baseline Station to Barrhaven Town Centre) and Rail Grade-Separations EA study. Combining the two studies was deemed appropriate to bring efficiencies to the EA processes, streamline consultation and project management activities and cost savings to the City.

In September 2018, the scope of the ongoing Barrhaven Rail Grade-Separation EA Study was expanded to include extending the Confederation Line LRT to Barrhaven by converting the Southwest Transitway from bus to rail technology due to overlapping study areas, cost saving and efficiency in the EA process. The combined study was renamed as Barrhaven LRT (Baseline Station to Barrhaven Town Centre) and Rail Grade-Separations EA Study.

Figure 1-2 The Project as Identified in the 2013 TMP



1.2 Environmental Assessment Process

The purpose of the *Ontario Environmental Assessment Act RSO 1990* (EA Act) is to help protect and conserve Ontario's environment by ensuring that projects subject to the Act follow a planning process leading to environmentally sound decision-making. An EA involves identifying and planning for environmental issues and effects prior to implementing a project. The process allows for opportunities for the involvement of public and other stakeholders in the decision-making process of the project.

In June of 2008, the Transit Projects Regulation (*Ontario Regulation 231/08*) was created under the EA Act to guide public transit projects through approval. The process requires public sector proponents to assess the impacts of their project, identify mitigation measures, undertake consultation, and make available information or documentation completed for the pre-planning work which led to the selection of the Recommended Plan for the transit project.

The TPAP outlined in Ontario Regulation 231/08 provides a framework for an accelerated consultation and review process regarding the assessment of the potential environmental effects of a transit project, to enable decision-making within six months from the time an EA Study is launched. As per Section 6 (1) of the regulation prior to the project commencement date, the proponent shall complete the following steps:

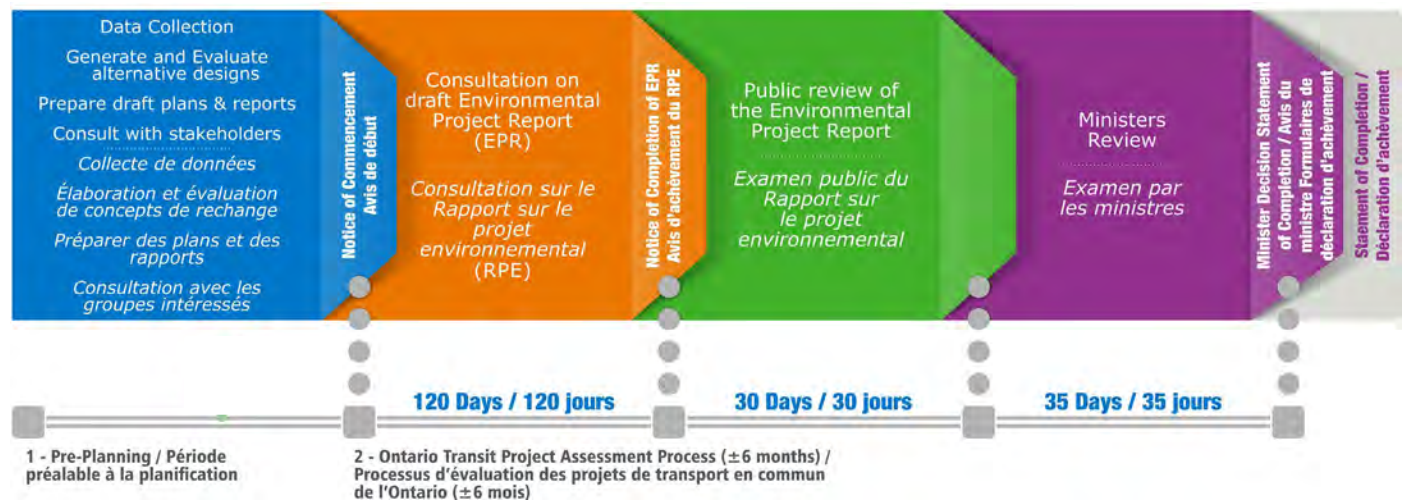
1. Prepare and distribute a notice of commencement of the transit project assessment process under section 7.
2. Conduct consultations under section 8.
3. Prepare an environmental project report under section 9.
4. Prepare and distribute a notice of completion of the environmental project report under section 11.
5. Submit statements of completion of the transit project assessment process to the Director of the Environmental Assessment Branch and the appropriate regional director of the Ministry under section 14. O. Reg. 231/08, s. 6 (1); O. Reg. 354/12, s. 3 (1); O. Reg. 342/20, s. 4 (1).

The project planning phase for the Barrhaven LRT commenced as per the Ottawa City Council direction of June 27, 2018 (Motion No. 72/8) and the Scope of Work subsequently developed and approved by Ottawa Transportation Committee on October 3, 2018.

The planning and assessment phase of the project was designed to meet the Province of Ontario’s TPAP requirements as prescribed in Ontario Regulation 231/08 (Figure 1-3). The six-month EA process is primarily for public consultation, documentation, and provincial approval of the EPR. Once the EPR is submitted to the Minister of the Environment, Conservation and Parks (MECP), the approval period is 35 days (this is within the six-month timeline). If the Minister does not render a decision by the end of the 35th day, the project is considered approved. Should there be bump-up requests, the scope of those requests is limited to matters of provincial interest only, including: natural environment, cultural heritage values or interests, and constitutionally protected aboriginal or treaty rights.

In accordance with Ontario Regulation 231/08 this EPR has been completed and made publicly available. As part of the assessment process, the EPR will be placed on public record for comment and review prior to MECP approval. If there are concerns of provincial interest that cannot be resolved, a written objection may be made and sent to the Minister for consideration.

Figure 1-3 Illustration of the TPAP as per the Environmental Assessment Act



1.3 Impact Assessment Act

The purpose of the *Impact Assessment Act (IAA) (2019)* is to protect the components of the environment that are within the legislative authority of the federal government from significant adverse environmental effects caused by a designated project. Additionally, the Act serves to promote cooperation and coordinated action between federal and provincial governments with respect to EAs.

Under Section 82 of the IAA: “An authority must not carry out a project on federal lands, exercise any power or perform any duty or function conferred on it under any Act of Parliament other than this Act that could permit a project to be carried out, in whole or in part, on federal lands or provide financial assistance to any person for the purpose of enabling that project to be carried out, in whole or in part, on federal lands, unless (a) the authority determines that carrying out of the project is not

likely to cause significant adverse environmental effects; or (b) the authority determines that the carrying out of the project is likely to cause significant adverse environmental effects and the Governor in Council decides, under subsection 90(3), that those effects are justified in the circumstances”.

As federal lands are required for various phases of project completion, an Environmental Effects Analysis of all the physical activities proposed on federal lands is required, under Section 82 of the IAA. No approvals from the National Capital Commission under the *National Capital Act* can be issued before these obligations are fulfilled. An Environmental Effects Analysis of a proposed project will determine the need to eliminate or mitigate adverse effects, or to recommend monitoring based on detailed design. **Section 7.8.2** details the impact assessment based on the Recommended Plan described herein. Many of the potential impacts that will also be analyzed through the federal Environmental Effects Analysis are included.

The proposed project will also require approval through the Federal Land Use, Design and Transaction Approvals (FLUDTA) process under the *National Capital Act*. Other federal authorities that may have an interest in the project include Public Services and Procurement Canada, Fisheries and Oceans Canada, the Canadian Transportation Agency, and Transport Canada. This Report was prepared in consultation with the NCC and is intended to form the basis for evaluation of environmental effects when the Federal EA requirements are met.

1.4 Consultation

1.4.1 CONSULTATION GROUPS

The study proceeded under the direction of the City of Ottawa and benefitted from the direct involvement and guidance of three invited Study Consultation Groups. These included an Agency Consultation Group (ACG) consisting of City staff, consultants in a variety of disciplines and representatives from government agencies and approval bodies that may have an interest in the project; a Business Consultation Group (BCG) including business associations, institutions and large commercial establishments/developers; and a Public Consultation Group (PCG) consisting of representatives from Community Associations and interested community groups relevant to the Study Area.

1.4.1.1 Agency Consultation Group

The ACG was formed to address the full range of technical issues and to comment on special studies as well as applicable procedures, legislation, and policies. ACG members included agencies and government department representatives from Municipal, Provincial and Federal levels, as well as Indigenous communities. The following were invited to participate either by attending ACG meetings or providing comments during the EA process:

Internal ACG (City of Ottawa)

- Transportation Services Department
- Transportation Planning
 - Transportation Environmental Assessments
 - Transportation Policy and Networks
- Traffic Services
 - Traffic Operations
 - Road Safety and Traffic Investigations
- Rail Construction Program Services
- Transit Customer Systems and Planning
- Planning, Infrastructure and Economic Development Department
 - Planning Services
 - Development Review
 - Infrastructure Services
 - Asset management
 - Economic Development Services
 - Resiliency, Planning and Policy
 - Natural Systems and Rural Affairs
- Corporate Real Estate Office
 - Realty Initiatives and Development
 - Environmental Remediation Unit
 - Realty Services
- Emergency and Protective Services Department
- Public Works and Environmental Services Department
- Recreation, Cultural and Facility Services Department

- Right of Way, Heritage and Urban Design Services

External ACG Representation

Federal

- National Capital Commission (NCC)
- VIA Rail
- CN Rail
- Public Services and Procurement Canada (PCPC)
- Transport Canada
- Environment and Climate Change Canada (ECCC)

Provincial

- Ministry of the Environment, Conservation and Parks (MECP)
- Ministry of Agriculture, Food and Rural Affairs
- Ministry of Natural Resources and Forestry (MNRF)
- Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)

Regional

- Rideau Valley Conservation Authority (RVCA)
- Hydro Ottawa Limited
- Transport Action Canada
- Rogers
- Hydro One Networks Inc. "Hydro One"
- Bell Canada
- Enbridge

Indigenous Groups

- Algonquins of Ontario
- Algonquins of Pikwàkanagàn
- Kitigan Zibi Anishinabeg
- Ottawa Métis Council
- Metis Nation of Ontario

Meeting agendas and notes are contained in **Appendix A. Table 1-1** outlines the meeting dates and main agenda topics.

Table 1-1 Agency Consultation Group Meetings

| Meeting # | Date | Main Agenda Topics |
|-----------|-------------------|---|
| 1 | November 27, 2018 | Study Overview, Study Background, Needs and Opportunities, Existing Conditions, Alternative Solutions, Alternative Design Considerations |
| 2 | June 12, 2019 | Preferred Solutions, Evaluation of Alternative Designs Methodology and Criteria, Results of Technical Studies, Alternative Alignments and Designs, Alternative Train Storage Facility Locations |
| 3 | October 16, 2019 | Alternative Alignments and Designs (Baseline-West Hunt Club), Preliminary Plan to Convert Southwest Transitway to LRT, Preliminary Plan for Rail Grade-Separations, Alternative Train Storage Facility Locations |
| 4 | August 20, 2020 | Evaluation and Confirmation of Alternative Alignments and Designs (Baseline-West Hunt Club), Evaluation and Confirmation of Alternative Train Storage and Servicing Facility Locations, Preliminary Recommended Plan, Impact Assessment |

1.4.1.2 Business Consultation Group

The BCG was formed to review work completed to-date and to provide comments on study activities, issues and concerns that reflect each group's interests and values. Throughout the study, BCG membership was revisited to capture changes to those with business interest in the Study Area. The BCG consisted of representatives from:

- Aera Investments Ltd.
- Algonquin College
- Barrhaven Business Improvement Association
- Barrhaven Town Centre
- Campanale Homes
- Caivan Communities
- Chapman Mills Marketplace
- College Square
- Conseil des écoles publiques de l'Est de l'Ontario
- Community, Recreation, Cultural Programs Service

- Minto Properties Inc.
- Minto Communities - Canada
- N.A. Development Group (Barrhaven Town Centre)
- Novatech (representing an undisclosed property north of West Hunt Club)
- Ottawa Catholic School Board
- Ottawa-Carleton District School Board
- Ottawa Catholic School Board
- Ottawa Transportation Student Authority
- Richcraft
- Royale Equestrian Centre
- Smart Living Properties

Meeting agendas and notes are contained in **Appendix A. Table 1-2** outlines the meeting dates and main agenda topics.

Table 1-2 Business Consultation Group Meetings

| Meeting # | Date | Main Agenda Topics |
|-----------|-------------------|---|
| 1 | November 28, 2018 | Study Overview, Study Background, Needs and Opportunities, Existing Conditions, Alternative Solutions, Alternative Design Considerations |
| 2 | October 17, 2019 | Preferred Solutions, Evaluation of Alternative Designs Methodology and Criteria, Results of Technical Studies, Alternative Alignments and Designs (Baseline-West Hunt Club), Preliminary Plan to Convert Southwest Transitway to LRT, Preliminary Plan for Rail Grade-Separations, Alternative Train Storage Facility Locations |
| 3 | September 3, 2020 | Evaluation and Confirmation of Alternative Alignments and Designs (Baseline-West Hunt Club), Evaluation and Confirmation of Alternative Train Storage and Servicing Facility Locations, Preliminary Recommended Plan and Impact Assessment |

1.4.1.3 Public Consultation Group

The PCG was formed to enable community and interest groups to provide direct input to the study and to comment on technical and local issues and concerns. PCG members included representatives from City wards adjacent to the corridor, interest groups and City of Ottawa advisory committees. Representation included, but was not limited to:

- Ward 8 – College
- Ward 9 – Knoxdale-Merivale
- Ward 3 – Barrhaven
- Ward 22 – Gloucester-South Nepean
- Accessibility Advisory Committee
- Arts, Culture, Heritage and Recreation Advisory Committee
- Barrhaven Seniors' Council
- East Barrhaven Community Association
- West Barrhaven Community Association
- Bel-Air Community Association
- Bike Ottawa
- Big Brothers Big Sisters Ottawa
- CentrepoinTE Community Association
- Confederation Education Centre
- Country Place Community Association
- Ecology Ottawa
- Environmental Stewardship Advisory Committee
- Fisher Heights & Area Community Association
- General Burns Community Association
- Glens Community Association
- Greenspace Alliance of Canada's Capital
- Grenfell Glen Community Association
- Half Moon Bay Community Association
- Healthy Transportation Coalition
- Little Scholars Montessori Academy
- Merivale Gardens Community Association
- Manordale-Woodvale Community Association
- Peter D. Clark Long Term Care
- QTSR Community Association
- Tanglewood/Hillsdale Community Association
- Stonebridge Community Association

Meeting agendas and notes are contained in **Appendix A. Table 1-3** outlines the meeting dates and main agenda topics.

Table 1-3 Public Consultation Group Meetings

| Meeting # | Date | Main Agenda Topics |
|-----------|-------------------|---|
| 1 | November 28, 2018 | Study Overview, Study Background, Needs and Opportunities, Existing Conditions, Alternative Solutions, Alternative Design Considerations |
| 2 | October 17, 2019 | Preferred Solutions, Evaluation of Alternative Designs Methodology and Criteria, Results of Technical Studies, Alternative Alignments and Designs (Baseline-West Hunt Club), Preliminary Plan to Convert Southwest Transitway to LRT, Preliminary Plan for Rail Grade-Separations, Alternative Train Storage Facility Locations |
| 3 | September 8, 2020 | Evaluation and Confirmation of Alternative Alignments and Designs (Baseline-West Hunt Club), Evaluation and Confirmation of Alternative Train Storage and Servicing Facility Locations, Preliminary Recommended Plan, and Impact Assessment |

1.4.2 PUBLIC OPEN HOUSES

Two public open houses (POH) were held at key stages during the study to obtain feedback from the general public on the project information being provided. These events presented work on confirming the problem or opportunity (needs assessment) and evaluation of alternative solutions, evaluation of alternative designs (and alignments), and presenting the Preliminary Recommended Plan for the corridor. The first POH was organized to allow informal viewing of display panels about the project, examination of resource material related to the various stages of the EA and included a presentation and question and answer period. All presentations, displays and maps were available in both official languages. Study Team members were present to answer questions and explain various aspects of the study as well as work completed to-date. The second public consultation event was organized online for a period of two weeks due to the public health guidelines for COVID-19. Presentation boards, and three videos presented materials for the public and a comment/questionnaire was provided to obtain feedback on the City of Ottawa’s study’s website. POH content and summaries are contained in **Appendix A. Table 1-4** outlines POH dates and main presentation topics.

Table 1-4 Public Open Houses

| Meeting # | Date | Main Agenda Topics |
|-----------|----------------------|--|
| 1 | October 30, 2019 | Study Overview, Study Background, Needs and Opportunities, Existing Conditions, Alternative Solutions, Alternative Design Considerations, Alternative Alignments and Designs (Baseline-West Hunt Club), Preliminary Plan to Convert Southwest Transitway to LRT, Preliminary Plan for Rail Grade-Separations, Alternative Train Storage Facility Locations |
| 2 | September 9-23, 2020 | Study Overview, Study Background, Feedback Received to date, Evaluation and Confirmation of Alternative Alignments and Designs (Baseline-West Hunt Club), Evaluation and Confirmation of Alternative Train Storage and Servicing Facility Locations, Preliminary Recommended Plan, and Impact Assessment |

1.4.3 INDIVIDUAL STAKEHOLDER MEETINGS

During the study, the Study Team met with individual stakeholders and landowners to discuss specific elements of the study and proposed design. Comments provided are included in Consultation Summary Reports provided in **Appendix A**.

These individual stakeholder meetings focused on topics such as the impact on adjacent properties, how the project relates to specific policies or mandates of agencies, connections to employment and residential land uses and future development opportunities. To obtain direction and feedback regarding LRT and Transit service, the Study Team also met with the City’s Rail Office and OC Transpo.

Table 1-5 outlines the individual stakeholder meeting dates and main agenda topics. More details regarding the meetings can be found in Annex 4 of **Appendix A**.

Table 1-5 Individual Stakeholder Meetings

| Meeting # | Date | Stakeholder | Main Agenda Topics |
|-----------|--------------------|-------------|-----------------------------------|
| 1 | June 27, 2018 | VIA Rail | Study Introduction |
| 2 | September 27, 2018 | NCC | Study Introduction and background |

| Meeting # | Date | Stakeholder | Main Agenda Topics |
|-----------|--------------------|--------------------------|---|
| 3 | April 3, 2019 | Hydro One | Study Introduction and background |
| 4 | August 15, 2019 | Aera Investments | Study Introduction and background potential project impacts |
| 5 | August 27, 2019 | Minto Investments | Study Introduction and background potential project impacts |
| 6 | November 14, 2019 | Hydro One | Study Introduction and background potential project impacts |
| 7 | March 26, 2020 | Hydro Ottawa | Study Introduction and background potential project impacts |
| 8 | July 7, 2020 | VIA Rail | Study Recommendations |
| 9 | July 14, 2020 | NCC | Study Recommendations |
| 10 | September 2, 2020 | Aera Investments | Study Recommendations |
| 11 | September 2, 2020 | Smart Living Properties | Study Recommendations |
| 12 | September 23, 2020 | Richcraft and Minto | Study Recommendations |
| 13 | October 7, 2020 | NCC | Impacts to Greenbelt lands |
| 14 | October 13, 2020 | Royale Equestrian Centre | Study Recommendations |
| 15 | October 14, 2020 | NCC | Impacts to Greenbelt lands |
| 16 | October 20, 2020 | Royale Equestrian Centre | Study Recommendations follow-up |
| 17 | October 26, 2020 | ACORN | Study Recommendations |
| 18 | November 24, 2020 | Hydro One | Study Recommendations |

1.4.4 INDIGENOUS CONSULTATION

Consultation with Indigenous Communities was undertaken as per the guidelines described in the TPAP. The Communities consulted as part of the study were determined in coordination between the City of Ottawa, the Ontario Ministry of Aboriginal Affairs, Aboriginal Affairs and Northern Development Canada and the MECP. Communities consulted include: Ottawa Region Métis Council, Algonquins of Ontario, Algonquins of Pikwàkanagàn, Kitigan Zibi Anishinabeg, and the Métis Nation of Ontario.

Initial contact was made to inform each group of the project and identify opportunities for involvement. Official notices were also sent throughout the study process. The EPR was made available for review by all the identified Communities. Consultation was achieved through email with representatives of the Communities identified for this study. Correspondence that was sent/received is contained in **Appendix A**.

1.4.5 CITY OF OTTAWA WEBSITE

The City of Ottawa developed and maintained a project website with consultation materials for the study, key milestones, and the overall EA process.

English: www.Ottawa.ca/BarrhavenLrt

French: www.Ottawa.ca/Barrhaventlr

The information posted on the website was also formatted in a manner compatible with the City’s accessibility guidelines for on-line graphics, videos, and printed materials.

1.5 Report Organization

The purpose of this EPR is to document the study rationale, the planning, design, and consultation processes of the project, and make that documentation available for review by the public and review agencies. The report consists of the following sections:

- Executive Summary
- Introduction
- Project Need and Opportunities

- Existing Environmental Conditions
- Evaluation of Alternative Solutions
- Update to Existing Environmental Conditions
- Evaluation of Alternative Designs
- Recommended Plan and Assessment
- Recommended Plan - Functional Design Drawings
- Implementation and Approvals
- Conclusion Regarding the Project
- References

The Appendices contain the technical reports and technical documentation prepared throughout the course of the study. These reports and documentation contributed to the decision-making process and the development of recommendations that led to the selection of the preferred design (Recommended Plan).