TERMS OF REFERENCE

Red Hill Valley Parkway & Lincoln Alexander Parkway
Feasibility Study

1. BACKGROUND

The Red Hill Valley Project was in various stages of planning, design and construction between 1956 and 2007. The project included a 12-kilometre east-west leg, now known as the Lincoln M. Alexander Parkway (LINC) and an 8-kilometer north-south leg, now known as the Red Hill Valley Parkway (RHVP).

In 1982 the proposed expressway was one of the first major municipal road projects in the Province to voluntarily be subjected to the Environmental Assessment (EA) Act. The assessment was originally intended to look at options involving a six-lane configuration but was changed to focus on a four-lane configuration. In 1985 the joint Ontario Municipal Board (OMB) and Ontario Environmental Assessment Board (OEAB) approved the expressway.

The east-west leg (LINC) opened in 1997. The remaining north-south leg (RHVP) continued to be the focus of local activism, provincial and federal court action, and considerable environmental assessment investigation.

In 1999, the federal government subjected the north-south leg (RHVP) to a Panel Review under the Canadian Environmental Assessment Act (CEAA) due to anticipated impacts on the ecosystem, Van Wagner’s Marsh, noise levels, particulate matter and visual elements. The Region of Hamilton Wentworth challenged this in court and the Region’s legal position was upheld. In 2002, the City of Hamilton and the Six Nations community came together in numerous agreements intended to preserve the Haudenosaunee interest in the Red Hill Valley with the onset of the construction for the RHVP. The RHVP opened in 2007.

In 2019, Council directed staff to develop a Terms of Reference (TOR) for a functional design of the LINC and RHVP which addresses the long-term needs of the parkways. The undertaking is to specifically consider:

- Road capacity impacts associated with potential options and the implications on the provincial highway network
- Safety enhancements (such as lighting, medians, road geometrics)
- Goods movement
- Transit opportunities
- Operating conditions

Outstanding safety enhancements that still need to be addressed include:

- Centre median barriers
- Full length lighting
- Potential improvements to road geometrics
- Consideration of potential improvements to existing police enforcement facilities and the provision of additional enforcement facilities

Council has over the last several years indicated a desire to investigate the widening of the LINC and RHVP to address traffic congestion. Noted considerations for expansion include opportunities to allocate capacity to enhance transit, and the potential to reduce collisions and traffic infiltration into neighbourhoods.

There are constraints to facilitating the expansion of the LINC and RHVP, including existing pinch points at the QEW / 403 connections and the cost of implementation. Addressing the existing pinch points at the QEW / 403 would require the Ministry of Transportation (MTO) to widen the QEW / 403 at these connections. Implementation costs include but are not limited to studies, approvals, design, construction and ongoing maintenance and operation.

The sections below provide a summary of the key background studies and Council reports related to this direction. Several related technical studies have also been completed. These are listed in **Appendix B, Review Materials**.

Expansion of Redhill Valley Parkway (RHVP) and Lincoln Alexander Parkway (LINC) (PW16084 – presented to Public Works Committee on October 3, 2016)

Staff report identified that expanding the RHVP and LINC from the current four to six lanes is possible (except the Niagara Escarpment crossing point on the RHVP where the maximum expansion has been constructed). The estimated capital cost range was identified as $41,000,000 to $61,000,000 (excluding lighting). The report also identified that any consideration of widening the RHVP would require involvement of the Joint Stewardship Board.

LINC and RHVP Transportation and Safety Update (PW18008 – presented to Public Works Committee on January 15, 2018)

Staff report identified several recommendations relating to collisions, speed and aggressive driving enforcement, and traffic data. It also recommended:

- The installation of median barriers on the LINC and RHVP in coordination with any future widening.
- That Public Works (PW) report back to PW Committee in 2019 to provide an update on the overall operating conditions on the LINC and RHVP.

Transportation Master Plan Review & Update (PED18137 – presented to General Issues Committee on June 20, 2018)

The City-wide Transportation Master Plan Review and Update (TMP) was completed. The TMP indicates that further investigation into the sustainability of expansion of the RHVP/LINC should be undertaken. Some of the issues to be considered by Council before proceeding with expansion include:

- The City’s efforts to increase transit ridership and achieve modal split targets;
- Alignment with the city’s plan growth to 2041;
- Cost-benefit and affordability (capital costs and long-term operations and maintenance); and
- Impacts on the natural environment in the Red Hill Valley.

The TMP also indicates the need to address capacity constraints in the interim (before 2031). The most critical need is addressing the connections to the 403 / QEW, which requires the MTO to implement. The TMP also suggests the consideration of a managed lane approach on the parkways such as HOV / HOT lanes, queue jump lanes for HSR, and ramp metering.

LINC and RHVP Transportation and Safety Update (PW18008a – presented to Public Works Committee on February 6, 2019)

Report recommended that staff be directed to develop a TOR for a functional design of the LINC and RHVP to address the long-term needs of these transportation corridors. City staff was asked to issue the RFP and report back to Council prior to award.

2. SCOPE OF WORK

It is the responsibility of the Successful Proponent to understand the full breadth of the Project and to ascertain the full scope of work and services required to provide professional services for the completion of the Red Hill Valley Parkway (RHVP) and Lincoln Alexander Parkway (LINC) Feasibility Study.

The City has a budget of approximately $500,000 for this project. The budget includes the scope of work noted in this RFP as well as other smaller expenses associated with the project.

2.1. PROJECT OVERVIEW

(a) Complete a comprehensive Feasibility Study for the LINC (east-west leg) and RHVP (north-south leg) to address the long-term needs of these facilities. See Appendix ‘A’ for Study Area Map. This study shall address the implementation of potential future widening and connections with Highways 403 and QEW, goods movement, transit opportunities and safety enhancements (e.g., lighting, medians, geometrics). As part of the submission, a number of feasible options must be

considered. A preferred option must be selected from the feasible options considered. Appropriate documentation must be provided that supports the selection of the preferred option. A functional design of the preferred option must be completed.

(b) This project shall fulfill, at a minimum, the requirements of Phases 1 & 2 of the Municipal Class EA (MCEA) process for Master Plans, as prescribed by the Municipal Engineers Association’s (MEA) Municipal Class EA document (October 2000, as amended in 2007, 2011 and 2015). In following the EA process, this study shall include:
   a. Identification of the problem/opportunity statement
   b. Completion of background research/inventories and technical studies
   c. Identification of all options
   d. Analysis and evaluation of all options including but not limited to environmental, technical and social considerations
   e. Identification of the preferred option

(c) Desktop and/or field studies appropriate to the nature and location of the project to inventory the natural, social and economic environment must be undertaken. The level of detail of these studies shall be enough such that the feasibility of the identified options be fully evaluated to identify the preferred option. It is anticipated that some detailed engineering and natural heritage studies will be required following the completion of this study. These requirements will be identified as part of this study. It is assumed that the following desktop and field studies must be included at a minimum:
   a. Transportation assessment to understand the current and future needs of the parkways and interchanges, including:
      i. Calibration of the EMME Model to 2016 existing conditions
      ii. Transportation modelling for the 2031 and 2041 planning horizons
      iii. Analyses of interchanges using SYNCHRO traffic software package
      iv. Consideration of connections with the QEW and Highway 403
      v. Review of existing and recommended safety enhancements
   b. Natural heritage assessment (including a review of previously completed natural heritage studies for the area, desktop review of existing features, consultation with relevant agencies to identify specific studies that would be required as part of future project phases)
   c. High-level noise and vibration assessment for the entire corridor (including a high level structural assessment of existing sound walls)
   d. Water/stormwater management /sanitary assessment:
      i. Phase 1: Evaluate existing conditions and current infrastructure needs

ii. Assess existing erosion and / or flood hazards associated with the watercourse tributaries traversing the road corridor and zone of influence.

e. Identification of existing utilities, and determination of high-level utility impacts and potential conflicts for the options

Studies will be summarized into interim reports that will form the basis of the final study document.

(d) Identification of future technical studies to be completed in order to proceed with the implementation of the preferred option (including the required scope), including but not limited to:

a. Natural heritage
b. Cultural heritage
c. Engineering/technical studies
d. Municipal Class EA requirements
e. Other Class EA requirements (e.g., Infrastructure Ontario Class EA)
f. Other applicable EA requirements (e.g., TPAP, Canadian Environmental Assessment Act (CEAA))
g. Additional public and stakeholder consultation and engagement requirements
h. Anticipated permitting requirements (e.g., DFO, HCA, NEC, MNRF, etc.)
i. Anticipated utility requirements

(e) Develop a functional (proof of concept) design for the preferred option which satisfies all City standards and guidelines. This shall include:

a. Road/lane configuration
b. Safety enhancements (including but not limited to lighting, medians, road geometrics)
c. Active transportation facilities
d. Transit facilities
e. Interchanges
f. Utilities
g. Water crossings (bridges and culverts, including structure length and width)
h. Minor and major system conveyances on the road corridor (i.e. road side ditch capacity).
i. Stormwater Management systems to address quality erosion control through LID and quantity controls (off-site/on-site) for the preferred option. Linear stormwater management infrastructure is to be considered in accordance with the City’s Stormwater Master Plan and other City and Provincial guidelines. The design should also identify a suitable road drainage outlet to meet the flood control target.
a. Identification of any Right of Way (ROW) impacts that may be required in order to accommodate utilities, servicing, road side ditches or required

retaining walls, as well as to accommodate all modes of transportation. The ROW width should also accommodate storm conveyance and LID for the road. This will be especially important at all interchanges.

b. Plans and profiles for the proposed mainline and interchanges, including cross sections at every 250 m length at a minimum, and in particular for any critical points and / or sections.
c. Identification of constructability impacts and recommended mitigation measures.
d. Identification of opportunities to improve vehicular access to the stormwater pumping station between the King Street and Queenston Road interchanges.

(f) Prepare a detailed financial analysis associated with the proposed infrastructure.
   a. Class ‘D’ cost estimates shall be developed for each of the feasible options. A Class ‘C’ estimate shall be prepared for the preferred option.
   b. Funding sources must be identified, including consideration of provincial/federal grants, public-private partnerships, and future road pricing scenarios.

   The financial analysis must be developed in collaboration with City staff.

(g) Prepare an implementation plan that can be used to carry out the detailed design and construction of the preferred option.
   a. Timing of next steps shall be included.
   b. Scalability and phasing shall be identified, especially as it relates to future widening and connections at the provincial freeway system.

   The implementation plan must be developed in collaboration with City staff.

2.2 PROJECT CONSIDERATIONS

(a) This study should focus on a multi-modal benefit approach to planning for the expansion of these facilities that aligns with the City’s growth plan, transit strategy, and vision and key actions identified in the TMP. Therefore, multi-modal (i.e., transit, active transportation and goods movement) connectivity shall be integrated into this study throughout the study area.

(b) This study shall consider the City’s approved initiatives and plans, including but not limited to:
   - Urban Hamilton Official Plan (2013)
   - TMP Review and Update (2018)
   - Strategic Plan (2016-2025)
   - Growth Related Integrated Development Strategy (GRIDS; 2006. A review and update of GRIDS is currently underway.)
   - Centennial Neighbourhoods Secondary Plan and Transportation Management Plan (2019)

Approved initiatives and plans of the Hamilton Conservation Authority and the Niagara Escarpment Commission shall also be considered.

(c) The project shall be undertaken in a manner that provides fluidity, whereby the direction of the study may change and the appropriate MCEA process must be maintained. The MEA has been working on the development of major amendments to the MCEA process and is currently awaiting a response from the Ministry of Environment, Conservation & Parks (MECP). Immediately upon approval of the amendment by the MECP and issuance of the revised MEA document the study schedule/process shall be reviewed to confirm consistency with the most current requirements. Similarly, depending on the direction of the preferred option, the study shall consider the applicability of the Transit Project Assessment Process (TPAP).

(d) Engagement and consultation with affected parties, including Indigenous Communities, shall occur at the outset and throughout the study process. Consultation will be proactive and responsive to the comments received from the community. It will respect the values and views of various groups within the larger community. See Appendix D for a list of potential stakeholders.

(e) As part of the study documentation, required improvements/changes to the following technical areas (at a minimum) should be identified and their impacts evaluated as part of the evaluation of options:

i. Technical areas identified above
ii. Safety
iii. Lighting (needs and impacts)
iv. Noise

(f) Survey work will not be required as part of this assignment. The City has recently undertaken Light Detection and Ranging (LIDAR) for the RHVP/LINC mainline. This includes detailed measurement of hard surfaces (MicroStation or AutoCAD format) and 3D imagery. It is anticipated that this will be available in 2020.

2.3 OPTIONS AND EVALUATION PROCESS

A list of preliminary options has been identified for consideration as part of this study. These preliminary options must all be reviewed to determine if they are feasible options. The preliminary options noted below are not be considered as a comprehensive list. Based on the Successful Proponents review of background documents and public input, additional preliminary options should be identified for consideration. A sample of the preliminary options include:

- Do nothing
- Upgrades (minor modifications) to existing facilities including but not limited to lighting and safety, without changes in capacity

- Interim capacity improvements (e.g. localized capacity improvements not dependent on MTO highway improvements)
- Additional lanes without restrictions
- Additional lanes for HOV / HOT lanes + Express Bus
- Additional lanes / shoulders for transit only (transit way)
- Express buses only - no stations
- Transit stops/stations at strategic interchanges
- Transit stops/stations at all interchanges

The Successful Proponent will be required to develop a comprehensive list of feasible options based upon a review of the preliminary options.

Included within each option and evaluation, the following must be considered:

- Active transportation accommodation
    - Inclusion of an active transportation crossing (bridge) from TB McQuesten Community Park to Limeridge Mall area through the hydro corridor
    - Consideration of impacts to existing and planned active transportation connections
- Transit opportunities
- Centre median barriers
- Full length lighting
- Stormwater management opportunities

The preferred option shall be selected from the list of feasible options. The preferred option shall include details on all potential above ground and/or underground infrastructure works required and road design of the LINC and RHVP. The “Study Area” identified throughout this document is in reference to the road corridor and zone of influence.

3. PROVISONAL SERVICES

The provisional services outlined below shall only be undertaken by the Successful Bidder at the request and upon prior written authorization of the Owner.

(a) Natural heritage assessment (including a high-level 3-season inventory of the natural environment (aquatic and terrestrial) within 120 m of the RHVP/LINC to identify key features to be further evaluated and species-specific surveys to be completed through future phases of this project (if required)).

(b) Cultural heritage survey for the study area

(c) Stage 1 Archaeological Assessment for the study area

(d) Water/Stormwater management/sanitary assessment

a. Phase 2: Evaluate future conditions and future needs based on feasible options (high-level; detailed needs assessment to be completed in a future phase of this project if required)
b. Assess future erosion and / or flood hazards associated with the watercourse tributaries traversing the road corridor and zone of influence.

(e) Lighting impact assessment (if additional lighting is recommended).

(f) Additional PIC (we may request up to 2 additional PIC’s).

4. REVIEW MATERIALS

Appendix B contains a summary of current and past projects and documents that may have an impact on this Project. These studies should be reviewed and considered as part of this study. Should additional information become available during the project, it will be made available to the Successful Proponent.

5. CITY REFERENCE DOCUMENTS AND STANDARDS

The City of Hamilton’s general requirements are provided in these Terms of Reference and in the Environmental Assessment Study Process Deliverables table in the following section. The Successful Proponent is responsible for reviewing this information and familiarizing themselves with the City’s requirements and shall comply with them in their entirety.

The scope of work defined in this RFP is the minimum requirement for the Project. It shall be the Successful Proponent’s responsibility to ensure that all deliverables to achieve the intent of the work and associated technical memos/documents/reports are provided.

The following documents shall be reviewed and complied with as part of this undertaking.

The following reference documents are available for viewing on the City’s website (https://hamilton.ca/develop-property/policies-guidelines/):

- City-Wide Corridor Planning Principles and Design Guidelines
- Archaeology Management Plan
- Landscape Design Guidelines for Stormwater Facilities
- Criteria and Guidelines for Stormwater Infrastructure Design
- Sidewalk and Roadway Lighting Policy
- Storm Drainage Policy
- Traffic Impact Study Guidelines
- Coordinated Street Furniture Guidelines

- Transportation Demand Management for Development (June 2015)
- Transit Oriented Development Guidelines for Hamilton (August 2010)
- Comprehensive Development Guidelines and Financial Policies Manual (2017)

The following reference documents are available for viewing on various pages within the City’s website:

- City’s Environmental Impact Statement (EIS) Guidelines (revised March 2015): https://www.hamilton.ca/develop-property/policies-guidelines/guidelines-environmental-impact-statements
- Linkage Assessment Guidelines (March 2015): https://www.hamilton.ca/develop-property/policies-guidelines/linkage-assessment-guidelines
- Public Works Asset Management Plan (April 2014): https://www.hamilton.ca/city-initiatives/strategies-actions/asset-management-plan
- Multi-year Accessibility Plan (2013 -2017): https://www.hamilton.ca/government-information/accessibility-services/multi-year-accessibility-plan-2013-2017
- City of Hamilton’s AODA 2005, Accessible Customer Service Standard Handbook: https://www.hamilton.ca/government-information/accessibility-services/accessibility-standards

6. DELIVERABLES: ENVIRONMENTAL ASSESSMENT STUDY PROCESS

Task No.	Successful Proponent Deliverables / Tasks	Successful Proponent Responsibilities	City Staff Responsibilities
1	**Develop and implement a strong engagement and consultation plan** **Consult with affected parties early and throughout the process.** **Consultation will:** • Be proactive and responsive to the comments received from the community. • Be respectful of the values and views of various groups within the larger community. • Include techniques and venues to solicit input based on local experience and preferences.	Develop a Public Engagement & Consultation Plan. Review and provide input on stakeholder list. Review draft study notices. First point of Public Contact and engagement with Indigenous communities. Prepare meeting agendas and minutes for all in-person meetings. • Assume four (4) City Staff Technical Committee meetings • Assume four (4) stakeholder meetings (including Stakeholder Advisory Group) • Assume two (2) Technical Agency meetings (e.g., MTO, HCA, NEC, MECP, etc.) Prepare content for Public Information Centre(s) – (PICs). Present the inventory of the natural, social, and economic environments, feasible options, evaluation criteria, the evaluation, and the preliminary preferred feasible option. • Assume a minimum of four (4) Any other events / measures as defined in the consultation plan. Maintain communication log throughout the study to document comments received from the public, Indigenous communities, and stakeholders. Provide input into staff Council Report(s) and attend the Committee meeting.	Prepare draft stakeholder list. Review draft Public Engagement & Consultation Plan Prepare study notices (e.g., Notice of Study Commencement) Coordinate publication and distribution of notices (mail, newspaper, web, etc.) Review all materials prior to review by the public. Review PIC material in a timely manner. Print and mount public displays for PICs. Develop and maintain a project website. Review meeting agendas and minutes. Liaise with the City's project team and Staff Technical Committee (coordinate meetings, distribute draft documents for comment, etc.).
2	**Fulfil, at a minimum, the requirements of Phases 1 and 2** of the Municipal Class Environmental Assessment for Master Plans, as outlined in this TOR.	Develop and execute a plan to meet this requirement, at a minimum. Be adaptable in the event MCEA changes are approved while the study is in progress. See the sections below for further details.	Provide input on the proposed study methodology/approach.
2a	**Identify the problem or opportunity**	Prepare the problem or opportunity statement. Obtain feedback and revise accordingly.	Provide feedback on the problem or opportunity statement.
2b	**Identify feasible options**	Identify all feasible options to address the problem/opportunity statement.	Provide input into possible feasible options.

Task No.	Successful Proponent Deliverables / Tasks	Successful Proponent Responsibilities	City Staff Responsibilities
		Develop an environmental constraints map to support the identification and evaluation of options, and to identify potential impacts. It shall also be used to assist in the screening out of criteria.	
2c	**Undertake a gap analysis for the natural, social and economic environments.** Identify what studies/inventories have been completed, what needs to be completed, updated, etc. **Prepare an inventory of the natural, social and economic environments**, (e.g. road capacity, road safety, active transportation, climate change, land uses, terrestrial and aquatic ecology, heritage resources, recreation, community impacts, public health, economic effects, noise and vibration, lighting, surface drainage, ground water, soils, geology, topography and landforms, etc.). The level of detail of these studies should be aligned with the identification and evaluation of options. It is assumed that further detailed studies may be required in order to implement the preferred feasible option.	Undertake a background review of the reports listed in Section 5 above and identify the effect of these materials on the recommendation for the feasible options. Work with City staff to determine the need to gain permission to enter on any private properties and assist with follow-up permissions. Conduct any data gathering required, including but not limited to: natural heritage inventories, archaeological assessments, EMME modelling. Address active transportation and transit needs. Consider future/emerging technology. Evaluate existing Stormwater conditions (Phase 1) and future Stormwater conditions (Phase 2) based on feasible options. Review collision history and potential improvements to road safety. Prepare Technical Memos for each inventory. This shall form the basis of the final report.	Provide available data on previously conducted / concurrent studies. Review proposed scope of work, and gap analyses for any outstanding legislative requirements. Provide available collision history and traffic count data. Provide the draft Notice for Permission to Enter Letters, and mailing list, and mail out permission to enter letters. Collaborate with Successful Proponent in gaining permissions to enter as necessary, including follow-ups. Review Technical Memos and provide updates/revisions in a timely manner.
2d	**Systematically evaluate the feasible options** in terms of their advantages, disadvantages, and environmental impacts.	Develop clear and transparent evaluation criteria. Evaluate all identified feasible options, using the identified criteria, and identify a preferred feasible option using an evaluation matrix.	Review and provide input into the evaluation criteria. Review and provide input into the evaluation process.
3	**Complete a functional design for the preferred feasible option(s)**	The functional design shall include: • Road/lane configuration • Safety enhancements (including but not limited to lighting, medians, road geometrics) • Active transportation facilities	Review and provide input into the functional design.

Task No.	Successful Proponent Deliverables / Tasks	Successful Proponent Responsibilities	City Staff Responsibilities
		• Transit facilities • Interchanges • Water crossings (bridges and culverts) • Minor and major system conveyances on the road corridor (i.e. road side ditch capacity). • Stormwater Management systems to address quality erosion control through LID and quantity controls (off-site/on-site • Plan and profile for the proposed road, including cross sections at every 250m. • Utilities **Confirm required ROW** widths to accommodate utilities, servicing, road side ditches, embankment slopes, or required retaining walls, as well as to accommodate all modes of transportation and storm conveyance and LID for the road. This will be especially important for the interchanges.	
4	**Develop a financial analysis and implementation plan**	Prepare a detailed financial analysis relating to proposed infrastructure. Class ‘D’ cost estimate shall be developed for each of the feasible options. A Class ‘C’ estimate shall be prepared for the preferred feasible option. Consider potential funding sources (e.g., provincial and federal grants, P3, road pricing, etc.). Prepare an Implementation Plan to procced with the detailed design, construction and operation and maintenance of the preferred feasible option. Scalability and phasing should be identified, especially as it relates to future widening and connections at the provincial freeway connections.	Review and confirm cost estimates provided by Successful Proponent.
5	**Identify next steps**	Identify key factors to be assessed through future EAs. Identify next steps required to proceed with the implementation of the preferred feasible option, including but not limited to: • Additional studies required	Review and provide input on all next steps identified by Successful Proponent.

Task No.	Successful Proponent Deliverables / Tasks	Successful Proponent Responsibilities	City Staff Responsibilities
		• Municipal Class EA requirements • Other Class EA requirements (e.g., Infrastructure Ontario Class EA), • Other applicable environmental assessment requirements (e.g., Canadian Environmental Assessment Act (CEAA)) • Anticipated permitting requirements (e.g., DFO, HCA, NEC, MNRF, etc.) • Next steps for communication with the Joint Stewardship Board • Anticipated utility requirements	
6	**Provide clear and complete documentation** of the planning process followed, to allow “traceability” of decision-making with respect to the Project, as follows: Prepare all documents using plain language. A glossary of terms may be helpful. Submit a monthly project status report, summarizing the status of the Project, based on the tasks contained in the study schedule, to the satisfaction of the City Project Manager.	Provide recommendation(s) regarding the report format to be followed (i.e., Master Plan project file report, other, etc.). Prepare draft Table of Contents for the final report. Prepare interim study documents throughout the study: • Summary of public engagement and consultation • Documentation of problem or opportunity statement • Technical memos • Feasible options (descriptions, mapping & schematics), • Summary and discussion of evaluation methodology. Develop a comment/response table, listing all public submissions received and the Project team’s response. This will form part of the study documentation. Redact all information identifying personal information from the public (name, address, etc.) from the final report. Prepare the draft and final report. Attend Committee/Council meeting. Provide all digital files in their original format (e.g., Word, PDF, CAD, MicroStation, GIS, etc.). All engineering	Provide input on the report format to be followed (i.e., project file report, other, etc.). Review and approve the Table of Contents for the final report prior to directing the Successful Proponent to proceed with the full document. Review and provide feedback on the comment/response table. Respond to Successful Proponent with comments on all draft documents within agreed time frame (e.g. 3 weeks). Prepare the Staff Report to Council based on the final report and attend Committee/Council meeting. Monitor progress, coordinate City resources, circulate requests for information to the appropriate departments, respond to questions regarding policy and liaise with the Successful Proponent and elected Officials; File the final report on the public record.

Task No.	Successful Proponent Deliverables / Tasks	Successful Proponent Responsibilities	City Staff Responsibilities
		full sized drawings should be prepared and submitted in accordance with the Comprehensive Development Engineering Guidelines.	

Draft deliverables submitted for the City’s review shall be essentially complete to allow for proper evaluation of material submitted. Any unfinished or missing sections or elements shall be clearly identified in the draft and a brief description of the intended material is to be provided. If insufficient information, as deemed by the City, is provided in a Technical Memo, Report, documents, etc., the Successful Proponent will be required to submit additional drafts to the City for review at no additional costs.

The Scope of Work defined in this RFP includes the minimum requirements for the Project. It shall be the Successful Proponent’s responsibility to ensure that all deliverables achieve the intent of the Work and the associated reports/documents are provided.

7. PROPOSED TIMELINES AND RESPONSIBILITIES

The Successful Proponent shall commence activities on the Project as soon as possible after award. The following is a proposed schedule for the completion for this Project. The City expects the Project to be completed within **24 months** as outlined in the schedule below. This schedule is provided for general guidance only and is subject to variation depending on the timing required to award the Work, and to issue a Purchase Order for the Work.

The tasks for Successful Proponent’s sub-consultants/groups of staff can be done parallel to each other; however, they shall not proceed prior to all Successful Proponent groups reaching the various sign-off stages. The purpose of signing off at various points of the Project allows for consistency between various technical groups and allows the City Project Manager to track the process. At the designated sign-off points both Successful Proponent and City Project Manager shall sign-off the tasks completed pending satisfaction.

Tasks	Dates
RFP Released	February 2020
Committee & Council Meeting	March 2020
Project award	March 2020
Project initiation	April 2020
Background review	April-May 2020
Project start up meeting	April 2020
Request for Permission to Enter for Field Work for properties adjacent to the Study Area (if required)	April 2020
Public Engagement & Consultation Plan	May 2020
Identify the problem or opportunity statement	May 2020
Identify and initiate required technical studies	Spring: May 2020 Summer: July 2020 Fall: September 2020
Develop environmental constraints map	May-September 2020
Identify preliminary feasible options	June-July 2020
PIC #1 (Problem/Opportunity, Background Inventory & Evaluation Criteria) • Prepare PIC #1 materials • Review & provide advice on all notices • Prepare summary of input • Attend PIC #1 • Revise or confirm the inventory of natural, social, and economic environments to be considered based on input	Prep: Summer 2020 PIC: September 2020
Confirm the criteria to be used to evaluate feasible options	September-October 2020
Evaluate all identified feasible options	October-November 2020
PIC #2 (Evaluation, Presentation of Feasibility Options) • Prepare PIC #2 materials • Review & provide advice on all notices • Prepare summary of input • Attend PIC #2 • Revise or confirm preferred feasible options based on input	Prep: December-January 2021 PIC: February 2021
Functional Design	March - May 2021
Financial and Implementation Plans	May-June 2021
Identification of Next Steps	June 2021
Draft Study Report	Summer 2021
Final Study Report	Summer-Fall 2021
Prepare Committee Report	Fall 2021
Attend Council / Committee Meeting	Winter 2022
Project Completion	Winter 2022

The schedule is to be updated monthly by the Successful Proponent and reviewed with the City’s Project Manager. Changes to the Project schedule require a written explanation and must be approved, in writing, by the City.

Project Meetings:

a) The Successful Proponent’s Project Lead and any applicable Team Members are to attend all meetings and workshops as described herein.

b) Unless otherwise stated, all meetings shall be held at the City's offices. The Successful Proponent shall be responsible for the preparation of agendas and minutes for the meetings and shall ensure that these are prepared and submitted to attendees within one week prior to and after meetings, respectively.

c) The Successful Proponent shall schedule and lead monthly (or bi-weekly if appropriate) progress phone calls with the **City Project Team**. These update calls will be with the City's Project Manager and key staff to review the general progress of the Work and discuss/resolve any issues.

d) In addition to the monthly or bi-weekly progress phone calls, the Successful Proponent shall include 10 meetings / workshops in their schedules as required for the presentation of key findings, review of draft documents and associated City comments, milestone reviews, and other events as defined in the Terms of Reference. Of these meetings, it is assumed that four (4) meetings will be for the City's **Staff Technical Committee**. The remaining meetings may be used for meetings / workshops with other agencies and groups interested in the project (e.g., Stakeholder Advisory Group, Technical Agencies including the HCA and MTO, etc.).

e) The Successful Proponent shall schedule a minimum of **four (4) Public Information Centres**, which is discussed further in the Deliverables Table in Section 6. Two additional PICs shall be included as optional items should they be required.

f) For each meeting and workshop, the Successful Proponent shall ensure that, as a minimum, the City's Project Manager and relevant subject matter experts are present.

g) The Successful Proponent shall keep a decision log during the Project to identify, as a minimum, key Project decisions, individuals involved in making the decision and the date of the decision. A summary of new items added to the decision log shall be reviewed at the end of each meeting and workshop. awa

8. IMPLEMENTATION

This phase of the process will be the responsibility of the City. However, the final report shall include an implementation plan and a strategy for funding and an appropriate monitoring program, land acquisition requirements and utilities relocations and other requirements which are identified during the course of the study, where applicable.

Specific tasks will be organized in an Implementation Plan Summary Table within the final report, with proposed budget sources, timelines, responsibility for implementation, and detailed monitoring requirements. Inventiveness and creativity in implementation concerning life cycle analysis of alternative materials and funding mechanisms, based on other jurisdictions'/unique experiences to be incorporated into the recommendations. The population of the Implementation Plan Summary Table will be a collaborative effort between the Successful Proponent and City Staff.

Specific tasks will be organized in a Table of "To-Dos/Next Steps", with proposed budget sources, timelines, responsibility for implementation, and detailed monitoring requirements. Inventiveness and creativity in implementation and funding mechanisms, based on other jurisdictions' experiences to be incorporated into the recommendations. Phasing of implementation shall be considered.

9. REPORT OWNERSHIP AND PRIVACY PROTECTION

All reports produced by the Successful Proponent will become the property of the City of Hamilton. These reports and any other documents or presentation material may be reproduced and distributed as decided by the City without any required permission from the Successful Proponent who authored them;

Personal information provided through public comment is collected by the City of Hamilton in accordance with the *Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M.56,* and will be used by the City in making decisions on this Project. With the exception of personal information, all comments will become part of the public record.

Public comments containing personal information shall be redacted manually to ensure that any public documents do not provide the personal information of commenting persons/protect their privacy as per City of Hamilton practices.

10. PROJECT MANAGEMENT AND ADMINISTRATION

10.1. CITY PROJECT TEAM

The City Project Team is the core staff team assigned to this Project from the Planning and Economic Development Department (PED), with responsibilities and areas of expertise as outlined below. The Successful Proponent shall communicate with the Project Team on an ongoing basis throughout the project.

Division and Department	Responsibility
Transportation Planning and Parking Division	Overall Project coordination and management. Key contact for Successful Proponents, noted as the "Project Manager" in this Terms of Reference.

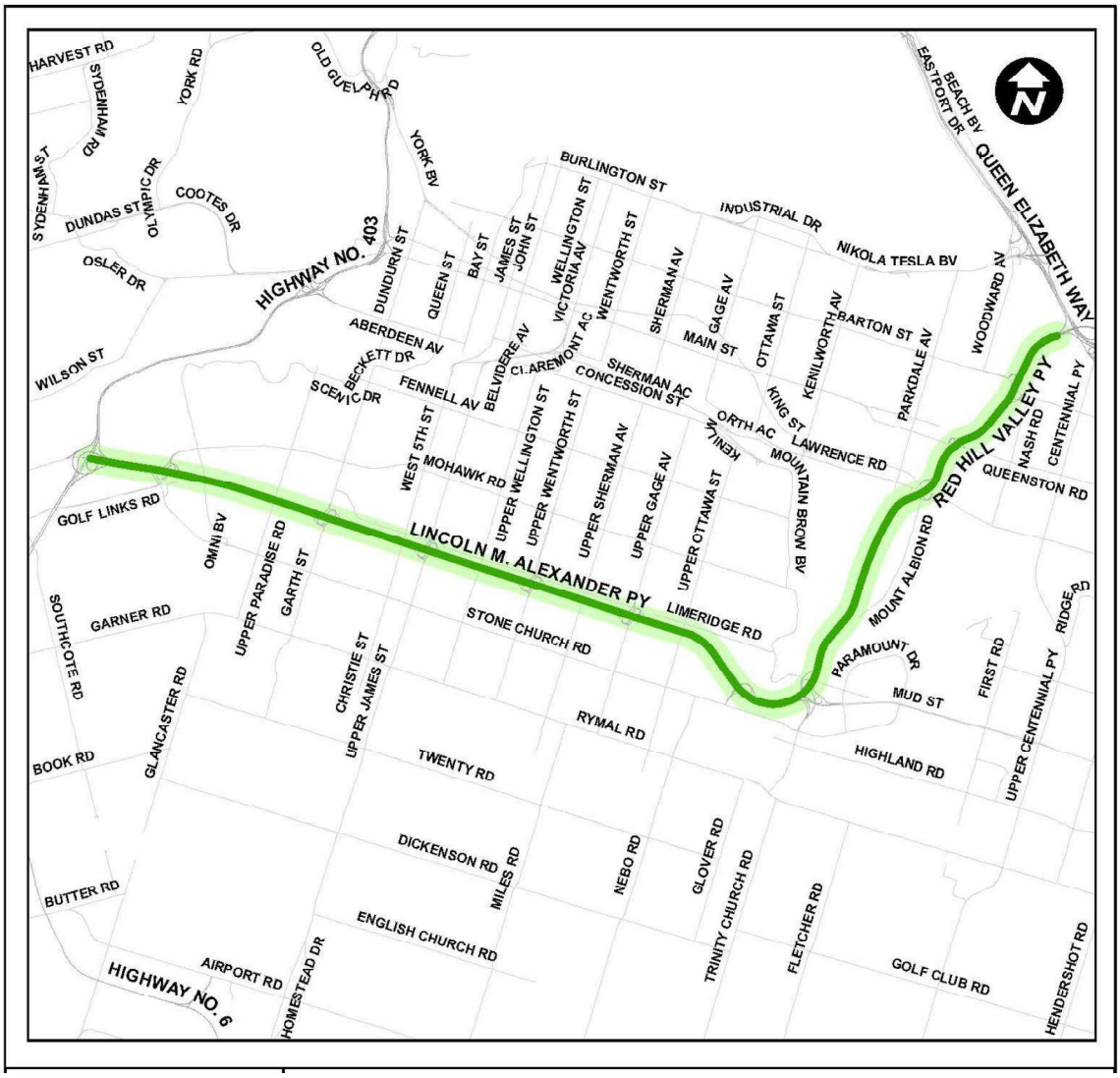
10.2. STAFF TECHNICAL COMMITTEE

In addition to the City Project Team, a **City Staff Technical Committee** will be formed to provide wider technical advice and input to the Project. The City Staff Technical Committee will be responsible for providing information and comments related to their area of responsibility. The committee will meet with the Successful Proponent and City Project Team at key points in the study process. It is anticipated that the City Staff Technical Committee will need to meet on **at least four (4) occasions.**

This City Staff Technical Committee will include the following City Departments and Divisions:

Division and Department	Responsibility
Transportation Planning and Parking, PED	• Overall project management, • EMME modeling • Transportation Demand Management (TDM) • Active Transportation
Engineering Services, Public Works (PW)	• Asset Management • Geomatics and Corridor Management • Design
Transportation Operations and Maintenance Division (PW)	• Road Safety • Traffic Engineering • Roads Operations and Maintenance
Transit Division (PW)	• Transit Planning • Transit Infrastructure
Hamilton Water (PW)	• Water • Wastewater • Stormwater • Groundwater
Economic Development Division (PED)	• Land Acquisition (if necessary)
Hamilton Conservation Authority	• Stormwater Management • Watercourses, Hydrology • Aquatic Ecology
Healthy and Safe Communities Department	• Healthy Built Environments • Climate Change • Emergency Services (EMS and Fire) • Archaeological Management Plan • Urban Indigenous Strategy
Planning Division, PED	• Community Planning • Development Planning • Built Heritage and Archaeology • Natural Heritage • Urban Design
Environmental Services	• Landscape Architecture (including Recreational Trails) • Forestry & Horticulture • Waste Collection
Hamilton Police Service	• Provide input on safety, enforcement, etc.

Appendix A - Study Area Map



Appendix B – Review Materials

Table 1: RHVP/LINC Studies and Documents*

Study Title	Date	Available Format
Soils and Geology Red Hill Creek Watershed Plan Study	Unknown	Hard copy
Mountain East-west and North-south Corridors : System Analysis, Route Location and Functional Planning Study	1978	Hard copy
Mountain East-West And North-South Corridor Study, Phase : Future Road Needs And Data Collection	1978	Hard copy
Mountain East-west and North-south Corridor Study Summary Report : the Need, the Alternatives, the Recommended Facility	1979	Hard copy
Mountain East-West And North-South Corridor Study : Information Package. Phase 3 - Detailed Evaluation	1979	Hard copy
Mountain East-West And North-South Corridor Study, Phase 3 : Evaluation Of Viable Alternatives	1979	Hard copy
Red Hill Creek Expressway Review An Analysis of Alternative Solutions : Prepared for the City-provincial Technical Advisory Committee	1979	Hard copy
Mountain East-west and North-south Corridor Study Phase IV	1980	Hard copy
Mountain East-west and North-south Corridor Study	1980	Hard copy
Noise Impact Assessment Regarding Mountain East/west and North/south Transportation Corridor, Regional Municipality of Hamilton-Wentworth	1980	Hard copy
Archaeological and Heritage Resource Assessment Mountain East-west and North-south Corridor : East Hamilton	1980	Hard copy
Geotechnical Investigation Proposed Red Hill Creek Freeway Escarpment Crossing Mount Albion Road, Hamilton	1980	Hard copy
Mountain East-West and North-South Transportation Corridor Volume I Environmental Assessment Submission	1982	Hard copy
Mountain East-West And North-South Transportation Corridor Heritage Resources Documentation	1982	Hard copy
Effect Of Proposed North-South Expressway On Peak Flood Flows And Levels in Lower Red-Hill Creek	1983	
Review of the Mountain East-west and North-south Transportation Corridor Environmental Assessment	1983	Hard copy
A Review of the Mountain East West and North South Transportation Corridor Environmental Assessment Submission	1984	Hard copy
Mountain East West And North South Transportation Corridor : Air Qualityaspects	1985	Hard copy
Mountain East-West And North-South Transportation Corridor Project : Project Status Report	1988	Hard copy
Mountain East-West and North-South Transportation Corridor Landscape Management Plan	1989	Hard copy
Mountain East-West and North-South Transportation Corridor - Drainage Study - Final Report	1989	Hard copy
Mountain East-West and North-South Transportation Corridor Project: Executive Summary Preliminary Design Investigation	1990	Hard copy
Red Hill Creek Expressway Project Progress Report	1990	Hard copy
Technical Report - The Red Hill Creek Four Lane Road	1994	Hard copy
Biological Inventory of the Red Hill Valley (prepared by the Hamilton Naturalist's Club)	1995	Hard copy
Regional Transportation Review Final Report	1996	Hard copy
Red Hill Creek Expressway, North-South section: proposed assessment process	1996	Hard copy
Red Hill Creek Expressway. North-South section. Exemption	1996	Hard copy

Study Title	Date	Available Format
order		
Archaeological survey of the Redhill Creek Valley, City of Hamilton, Ontario	1996	Hard copy
Red Hill Creek Expressway North - South Alignment (Declaration Order)	1997	Digital (web)
Red Hill Creek Expressway : North South Section : Information Brief	1997	Hard copy
Addendum 1 to a Study Design for the Heritage Component of the Red Hill Valley Creek Expressway (North-South Section) Impact Assessment & Red Hill Creek Watershed Plan	1997	Digital
Class EA: Red Hill Creek CSO control, ESR Draft Report	1997	Hard copy
State of the Watershed Report, Red Hill Creek Watershed Planning	1997	Hard copy
Red Hill Creek Expressway North-South Section – Executive Summary	1998	Hard copy
Red Hill Creek Expressway North-South Section – Impact Assessment and Design Process	1998	Hard copy
Red Hill Creek Expressway Impact Assessment : Terrestrial Resources : Technical Report	1998	Hard copy
Opportunities for Management of Stormwater (Quantity and Quality), Streams and Groundwater - Red Hill Creek Watershed Plan	1998	Hard copy
First Generation Plan- Red Hill Creek Watershed Action Plan- Final Draft	1998	Hard copy
Phase 1 ESA for the Red Hill Valley Parkway	1999	Digital
Environmental Impact Statement (EIS) Guidelines For The Review Of The Proposed Red Hill Creek Expressway North-south Section Project	1999	Hard copy
Red Hill Creek Expressway Impact Assessment and Design Process Fisheries Existing Conditions and Predicted Impact : Submission to the Department of Fisheries and Oceans	2002	Hard copy
A Stream Network Inventory, Fluvial Geomorphologic Assessment, Impact Assessment, and Preliminary Natural Channel Design of Red Hill Creek	2002	Hard copy
A Stream Network Inventory, Fluvial Geomorphologic Assessment, Impact Assessment, And Preliminary Natural Channel Design of Red Hill Creek, Vols. 1 of 2 and 2 of 2	2002	Hard copy
Red Hill Valley Project – Impact Assessment and Design Process	2003	Hard copy
Predicted Increases in Respirable Particulate Matter (PM), NO2, CO2, and VOC Near the Red Hill Valley Expressway	2003	Hard copy
The Red Hill Valley Project Land Use Assessment Report	2003	Digital (web)
Red Hill Creek Expressway, North-South Section Post-construction Ambient Air Quality Monitoring for Lincoln Alexander Parkway	2003	Hard copy
Red Hill Creek Expressway, North-South Section Pre-construction Ambient Air Quality Monitoring	2003	Hard copy
Red Hill Creek Expressway, North-South Section Traffic Noise Impact Assessment	2003	Hard copy
Red Hill Creek Expressway, North-South Section Air Quality Assessment	2003	Hard copy
The Red Hill Valley Project Impact Assessment and Design Process Summary Report	2003	Hard copy
Impact Assessment and Design Process Surface Water and Stormwater Quality Technical Report	2003	Hard copy

Study Title	Date	Available Format
Haudenosaunee—Hamilton Red Hill Agreements (various)	2003-2004	Digital (web)
Red Hill Creek Expressway Contaminated Sites Impact Assessment	2003	Hard copy
Fisheries and the Red Hill Creek Realignment Study	2003	Hard copy
Final Terrestrial Resources Technical Report	2003	Hard copy
City of Hamilton Southern Flying Squirrel Study	2003	Hard copy
Economic Impact to Businesses at QEW Interchange	2003	Hard copy
Red Hill Valley Project Public Consultation Report	2003	Hard copy
Cultural Heritage Resource Assessment	2003	Hard copy
Red Hill Creek Expressway (North-South Section) and Q.E.W. Interchanges (Red Hill Creek Expressway and Burlington Street) Impact Assessment and Design Process Surface Water and Stormwater Quality Technical Report	2003	Digital
Mountain Brow Boulevard Crossing and Central Mountain Stormwater Management Class Environmental Assessment	2003	Hard copy
Geotechnical Investigation Escarpment Bridge Structures Red Hill Creek Expressway	2004	Digital
Red Hill Valley Project – Environmental Management Plan	2006	Digital
Red Hill Valley Project - Environmental Protection Plan	2006	Digital
Parkway and Red Hill Valley – Sustainability Plan	2007	Digital (web)
Arbour Road Multi-Use Crossing Municipal Class Environmental Assessment	2009	Digital (web)
Integrated Monitoring Plan Red Hill Valley Project 2012 Annual Report	2013	Hard copy
Joint Stewardship Board Terms of Reference	2013	Digital (web)
Tradewind Scientific Friction Testing Survey Summary Report LINC/RHVP	January 2014	Digital
CIMA Hamilton LINC and RHVP Speed Study	October 2018	Digital
CIMA Roadside Safety Assessment	November 2018; updates to 2013 and 2015 reports	Digital
CIMA RHVP Pavement Friction Testing Results	January 2019	Digital
CIMA Detailed LINC/RHVP Illumination Review	January 2019	Digital
Golder Evaluation of Pavement Surface and Aggregates RHVP	January 2019	Digital

** Note - Should additional information become available during the project, it will be made available to the Successful Proponent.*

Appendix B – Review Materials

Table 2: City of Hamilton Planning Studies*

Study Title	Date
Capital Budget (10 Year)	Various
City of Hamilton Stormwater Master Plan – Class Environmental Assessment Report (City-Wide)	2007
Climate Change Action Plan (Corporate and Community)	2006, 2015
Cycling Master Plan ‘Shifting Gears’	2018
Development Charges Background Study	2019
Environmental Impact Statement Guidelines	2015
Goods Movement Study	2005
GRIDS	2006, review & update ongoing
Hamilton Harbour Remedial Action Plan	2016
Integrated Water/Wastewater and Stormwater Master Plans: Technical Memorandum #2 – DRAFT; Stormwater Systems Review and Capacity Verification	2017
Our Future Hamilton (OFH)	Various
Pedestrian Mobility Plan (Step Forward)	2013
Public Works Asset Management Plan	2014
Rapid Ready – Expanding Mobility Choices in Hamilton	2013
Recreational Trails Master Plan	2016
Re-envision HSR Project	Ongoing
State of the Infrastructure Report	2016
Stormwater Master Plan	2007
Ten Year (2015-2024) Local Transit Strategy	2015
Transportation Master Plan Review and Update	2018
Truck Route Master Plan	2010; review & update ongoing
Urban Hamilton Official Plan	2013

** Note - Should additional information become available during the project, it will be made available to the Successful Proponent.*

Appendix C – Class EA Ecological Requirements

The following summary of ecological requirements is adapted from “Conservation Authority Baseline Ecological Assessment Requirements for Municipal Class Environmental Assessments” document.

The final ecological study requirements for the RHVP & LINC Feasibility Study will be confirmed through input from the consulting team, results of the gap analysis, and consultation with City and Conservation Authority staff. Additional ecological studies to be completed in the future shall be identified as part of the Feasibility Study.

Aquatic Assessments – Minimum Requirements

- Fisheries assessment performed at a time of year when water levels are conducive to fish passage and utilization of the system by fish using a recognized monitoring protocol (e.g. OSAP, depletion method). Electrofishing is the most effective and preferred method to accomplish this. Visual assessments are not acceptable.
- Determination of the presence or absence of fish habitat (direct or indirect) as defined by the federal *Fisheries Act* and DFO’s *Policy for the Management of Fish Habitat in Ontario.*
- Habitat assessment for entire system under study (channel geomorphology, substrate, in water and shoreline habitat, erosion / deposition issues)
- If the quality of water, presence or absence of fish habitat (direct or indirect), or fish habitat productivity are in question or may be impacted by the project, a benthic invertebrate analysis should be performed. This type of analysis can be useful to determine the baseline health and integrity of an aquatic community, as well as quantify the contribution that the benthic community makes to local fish habitat resources based on taxonomic composition, diversity, and total biomass.
- Background research into historical aquatic assessments / inventories for the study area; review for presence and potential impacts on species at risk.
- There may be Species at Risk in the area, therefore the Ministry of Natural Resources and Forestry should be contacted for Species at Risk. The Species at Risk (SAR) screening should include information gathered from the Natural Heritage Information Centre database; the Ministry of Natural Resources and Forestry SAR municipal list; and, the Department of Fisheries Oceans screening maps.
- The status for species should include federal, provincial and local rankings. The local status is to be based upon the Hamilton Natural Areas Inventory Project 3rd Edition (2014).
- Watercourse characterization: Use commonly accepted protocols (i.e. Ontario Stream Assessment Protocol) to characterize the watercourse.

- To evaluate headwater drainage features, in particular, and 0-3rd order streams be characterized as outlined in the document "Evaluation, Classification and Management of Headwater Drainage Features Guideline (TRCA and CVC, 2014). Please note that the above required surveys are dependent on season and flow (spring freshet). In addition, the results of the above will need to be integrated with other study components such as, but not limited to, hydrology and hydraulics, stream geomorphology and water quality, in order to provide a true characterization of a stream reach. Based on the integration, the sensitivity of the ecosystems to development impacts can then be assessed.

Terrestrial Assessment – Minimum Requirements

- Classification of vegetation communities using MNR's Ecological Land Classification system. Vegetation surveys: Three (3) season botanical inventories representing spring (May to June); summer (July to August); and fall (September to October).

- For unclassified wetlands, a wetland evaluation using MNR's Ontario Wetland Evaluation System.

- Breeding bird survey (2 visit minimum during breeding bird season, at least 10 days between visits for each survey – see Ontario Breeding Bird Atlas protocols). Especially critical when dealing with birds legislated under the Migratory Birds Convention Act. Surveys should be undertaken (May 24th and June 15th with the second survey being June 15th – July 10th), if required.

- Significant Wildlife Habitat Screening: Complete a screening of Significant Wildlife Habitat using the MNRF's Significant Wildlife Habitat (SWH) Technical Guide and SWH Criteria Schedules-Ecoregion 7E (January 2014). This may include seasonal wildlife concentration areas, rare vegetation communities, specialized wildlife habitat, habitat for species at risk, and animal movement corridors.

- Amphibian Call Surveys: If a project may impact a system utilized by frogs and toads, breeding amphibian survey should be performed (3 visit minimum based on nighttime temperatures of 5°C, 10°C and 17°C, during breeding season – see Marsh Monitoring Protocol for Great Lakes Basin). If not, see below.

- Incidental wildlife survey throughout system affected by project – mammals, amphibians, reptiles, butterflies / moths, dragonflies / damselflies, non-breeding / migrant birds. Ensure coverage of all habitats represented within study area. Trace evidence should also be considered in these surveys (e.g. scat, tracks, carcasses, owl pellets, hair, etc.)

- If a project could directly or indirectly impact the habitat of a significant wildlife species (local, provincial, federal) species-specific studies should be undertaken to verify the presence of the species and to determine how, and the extent to which, it utilizes the natural area. Contact local MNR for appropriate monitoring protocols.

- Background research into historical terrestrial assessments / inventories for the study area; review for species at risk. The Species at Risk (SAR) screening should include information gathered from the Natural Heritage Information Centre database,

the Ministry of Natural Resources and Forestry SAR municipal list screening maps. Additional studies (i.e. bats) may be required.

- The status for species should include federal, provincial and local rankings. The local status is to be based upon the Hamilton Natural Areas Inventory Project 3rd Edition (2014).

- Linkage Assessment: following policies within the UHOP (Volume 1 C.2.7 and F.3.2.1.11).

Appendix D: Potential Stakeholders

Table 1: Potential Stakeholders

City of Hamilton Staff (including HSR/Transit and Emergency Services)
City of Hamilton Council
Federal authorities (including but not limited to the Department of Fisheries and Oceans Canada, Canadian Environmental Assessment Agency, etc.)
Goods movement and trucking associations
Hamilton Conservation Authority
Hamilton Police Service
Joint Stewardship Board (Red Hill Valley Parkway)
Members of the public
Neighbourhood groups/organizations
Niagara Escarpment Commission
Provincial authorities (including but not limited to the Ministry of the Environment, Conservation and Parks, Ministry of Transportation, etc.)
Indigenous Communities (Rights Holders)
Utility companies