

Public Information Centre

Reconstruction of Ferguson Lake Road Project (Phase 1)

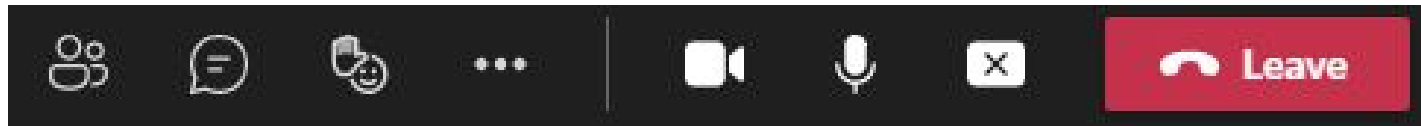
Township of Greater Madawaska
June 15, 2021; 7:00pm - Virtual

Tyler Peters, P.Eng., Project Director
Dan Hagan, P.Geo., Senior Project Manager / Geologist



Welcome & Itinerary

- On behalf of the Township, we welcome you to this session and appreciate your perseverance in participating in this format
- Municipal Council and Staff are in attendance
- Brief tutorial on MS Teams interface and function, protocols



- Slide presentation (please hold questions until Q&A session)
- Question & Answer (Q&A) Session at end of Presentation
- Summary & Next Steps

Introduction

- ✓ This Public Information Centre (PIC) Event has been prepared to present to stakeholders the results of the *Schedule B Municipal Class Environmental Assessment* (MCEA) process for the Reconstruction of Ferguson Lake Road Project (Phase 1)

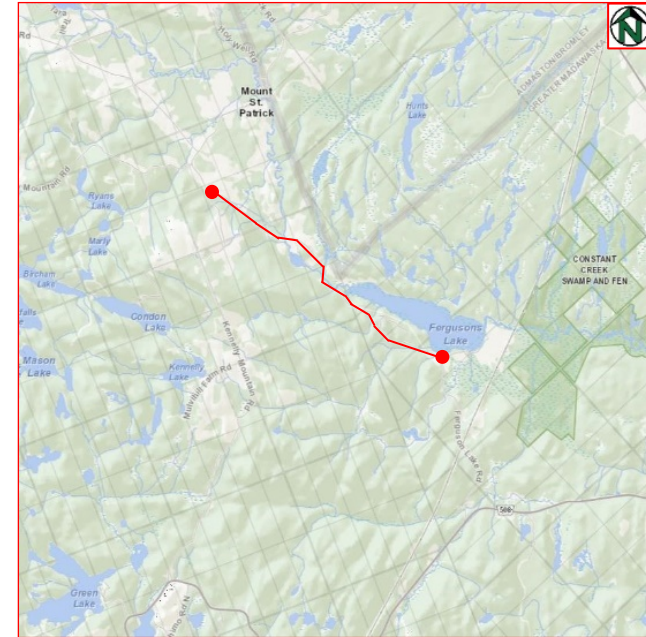


Municipal Class
Environmental Assessment (MCEA)

- ✓ The MCEA process applies to municipal infrastructure projects including: roads, water, and wastewater projects
- ✓ A Schedule B MCEA process generally includes improvements and minor expansions to existing infrastructure where there is the potential for some adverse environmental effects
- ✓ The MCEA process is a “prescriptive” process, and Proponent-driven

Background

- The Problem (Opportunity):
 - Ferguson Lake Road identified by the Township for reconstruction/renewal for some time, due to road condition and safety concerns (i.e. sightlines, lane widths, alignments, pavement condition, etc.)
- In late 2019, funding secured for Phase 1 of road reconstruction
 - 5.7 km, Campground Side Road to Kennelly Mountain Road
 - Funding approved by *Investing in Canada Infrastructure Program: Rural & Northern Stream*
 - Total Funding = \$4.9 M
 - Federal = 60% / Provincial = 33% / Municipal = 7%
- Project initiation (planning, design, and engineering) commenced in 2020



MCEA Process

Exhibit A.1: Key Features of the Municipal Class Environmental Assessment

	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
BASIC PROCESS (See Exhibit A.2 for detailed flow chart)	PROBLEM OR OPPORTUNITY → ALTERNATIVE SOLUTIONS → ALTERNATIVE DESIGN CONCEPTS FOR PREFERRED SOLUTION → ENVIRONMENTAL STUDY REPORT → IMPLEMENTATION				
<i>Consultation Requirements</i>	Optional	Mandatory	Mandatory	Mandatory	Optional
SCHEDULE A/A⁺ PROJECTS⁽¹⁾	✓ ⁽³⁾				✓
SCHEDULE B PROJECTS⁽¹⁾	✓	✓			✓
SCHEDULE C PROJECTS⁽¹⁾	✓	✓	✓	✓	✓
MASTER PLANS⁽¹⁾ (See Section A.2.7)	✓	✓ (As a minimum Master Plans address Phases 1 and 2)	✓ ⁽²⁾	✓ ⁽²⁾	✓ ⁽²⁾

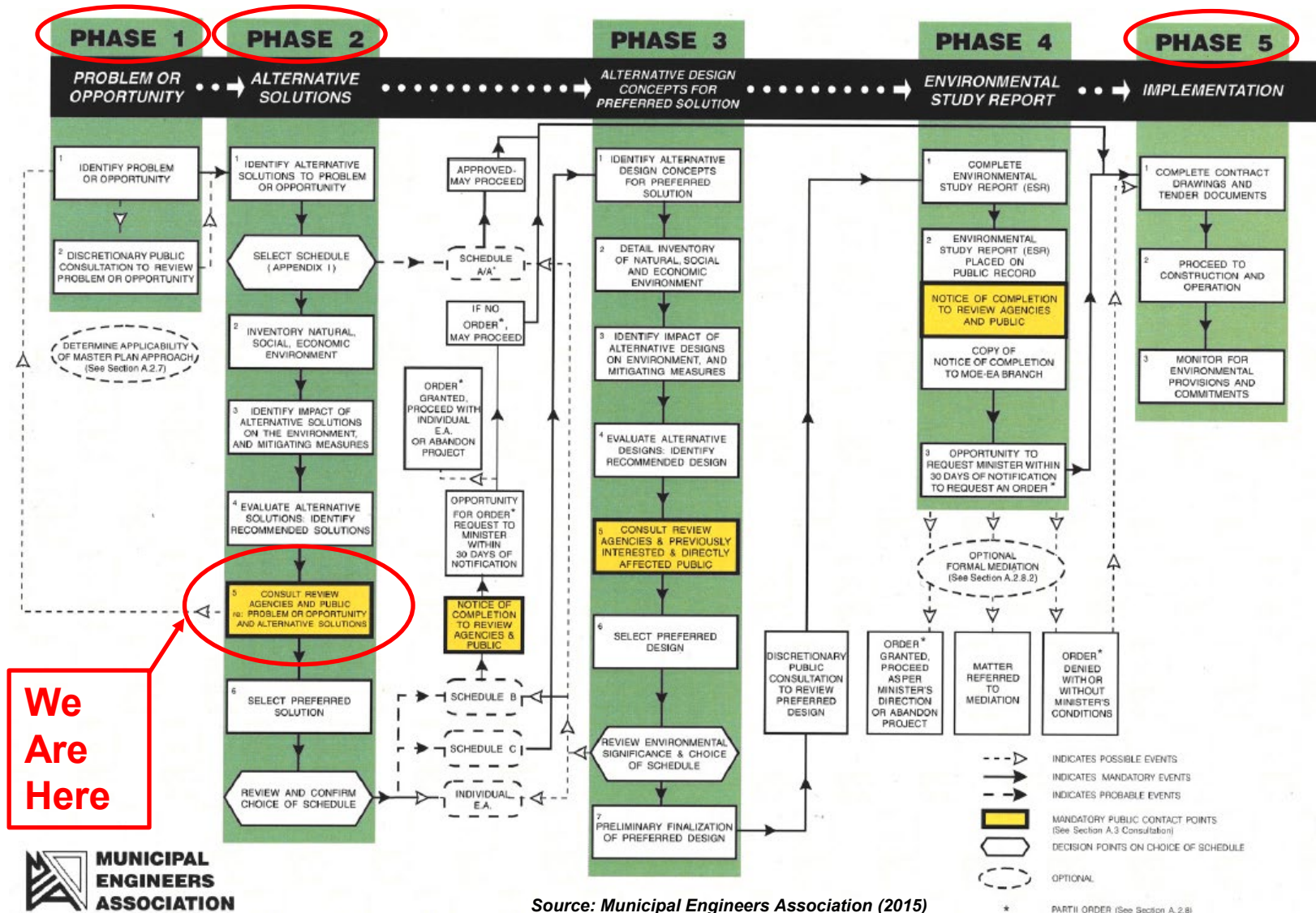
NOTES:

- ✓ Actions required during relevant phase
- (1) Schedule A, A⁺, B and C projects and Master Plans can also be integrated with the requirements of the Planning Act (See Section A.2.9)
- (2) Complete Phases 3 and 4 for any Schedule C projects included in the Master Plan prior to implementation
- (3) For Schedule A⁺ projects, public to be advised. See Section A.1.2.2.

Source: Municipal Engineers Association (2015)

MCEA Process

Exhibit A.2: Municipal Class EA Planning & Design Process (Flow Chart)



**We
Are
Here**

MCEA Process

Key Schedule B MCEA Contact Point Requirements Re: Reconstruction of Ferguson Lake Road Project

- Mandatory Points of Contact with Stakeholders
 1. *Notice of Study Commencement* (Mandatory Point of Contact #1)
 2. *Notice of Study Completion* (Mandatory Point of Contact #2)
- Voluntary Point of Contact with Stakeholders (not required)
 1. *Public Information Centre* (PIC; Voluntary Point of Contact #1)

Primary MCEA Criteria

The primary criteria for review of Schedule B MCEA Projects include:

1. Socio-Cultural Environments
2. Natural/Physical Environments
3. Economic Environments



- Project studies include:

- Socio-Cultural Environment Studies included:

1. *Stage 1 Archaeological Assessment - Ferguson Lake Road*
2. *Cultural Heritage Resource Assessment: Built Heritage Resources & Cultural Heritage Landscapes - Existing Conditions & Preliminary Impact Assessment Report*

- Natural/Physical Environments Studies included:

1. *Natural Heritage Study (Biological/Environmental Investigations)*
2. *Butternut Health Assessment (Biological/Environmental Investigations)*
3. *Pavement Design Report (Geotechnical Investigations)*

- Economic Environment Studies

1. *Preliminary Construction Cost Estimates, based on Alternative Solutions*

Overall Scope & Schedule

- 3-Step Process:

- Step 1: MCEA (Schedule B)
- Step 2: Detailed Design & Engineering
- Step 3: Construction



Municipal Class
Environmental Assessment (MCEA)

- Preliminary Schedule:

- Follows funding agreement (application)
- Project commenced in May 2020
- MCEA Schedule B process planned to be complete in 2021
- Construction tendering late 2021
- Construction 2022

Funding Summary

Task/Component	Funded	Unfunded	Total
Design & Engineering (includes MCEA Process)	\$352,000	\$12,000	\$364,000
Construction & Material	\$3,709,100	\$0	\$3,709,100
Land Acquisition	\$0	\$50,000	\$50,000
Project Management & Administration	\$53,000	\$0	\$53,000
Subtotal	\$4,114,100	\$62,000	\$4,176,100
Contingency (20%)	\$822,820	\$0	\$822,820
Total	\$4,936,920	\$62,000	\$4,998,920

Socio-Cultural Environments

Summary of Reporting

- Stage 1 Archaeological Assessment - Ferguson Lake Road
 - Study completed by Archeological Services Inc. (ASI)
 - No previously-registered archeological sites are located within 1km of Study Area
 - A Stage 2 Archeological Assessment is required to be completed in selected areas that exhibited archeological potential (includes test pitting)
 - The Stage 2 Archeological Assessment is to be completed prior to proceeding with construction (anticipated for 2021)
- Cultural Heritage Resource Assessment:
Built Heritage Resources & Cultural Heritage Landscapes
Existing Conditions & Preliminary Impact Assessment
Report
 - Study completed by Archeological Services Inc. (ASI)
 - Study area has a rural land use history, dating back to mid-nineteenth century
 - A review of federal, provincial, and municipal registers, inventories, and databases revealed no previously identified features of cultural heritage value
 - One (1) cultural heritage resource was identified as part of field work, of historical/architectural/contextual value (early settlement of Ferguson Lake Road)



Natural/Physical Environments

Summary of Reporting

- Natural Heritage Study
 - *Study completed by Ainley Group*
 - *Sixteen (16) vegetation communities, nine (9) locations of fish habitat, and five (5) Species-at-Risk (SAR) were observed in the study limits, including:*
 - *Butternut, Barn Swallow, Eastern Meadowlark, Eastern Whip-poor-will, and Eastern Wood-Pewee*
 - *The proposed alignments of the road have the potential to impact the following SAR:*
 - *Little Brown Bat, Northern Long-eared Myotis (bat), Tri-coloured Bat, Eastern Small-footed Myotis (bat), American Ginseng, Butternut, Blanding's Turtle, Eastern Meadowlark, Eastern Whip-poor-will, Eastern Wood-Pewee, Snapping Turtle, Wood Thrush, Golden-winged Warbler, Canada Warbler, Evening Grosbeak*
 - *Impacts to Ferguson Lake and the adjacent Provincially Significant Wetland (PSW) are not anticipated - Potential road alignments are not anticipated to encroach on the PSW*
 - *One candidate Area of Natural and Scientific Interest (ANSI) – Ferguson Lake Candidate ANSI and one regionally significant wetland – McNulty Lake Wetland, are present within the study limits*
 - *The study area falls within a Stratum II deer wintering area - reconstruction work on the road could include habitat fragmentation, habitat access, & increased road mortality.*
 - *Recommendations on mitigation measures for construction and direction for specific construction activities were included in study*

Natural/Physical Environments

Summary of Reporting

- Butternut Health Assessment Report
 - Study completed by Ainley Group, submitted to Ontario Ministry of the Environment, Conservation and Parks (MECP), Permission and Compliance, Species at Risk Branch
 - Study identified Butternut trees located within study limits of the project, and made assessments regarding the health of the trees
 - Thirty-seven (37) Butternut trees were located within the study area, including:
 - *Thirty-two (32) Category 1 trees* (non-retainable; can be removed without approvals)
 - *Two (2) Category 2 trees* (retainable; can be removed with approvals O.Reg. 242/08)
 - *Three (3) Category 3 trees* (potentially archivable; MECP permitting and coordination)
 - *Given the sensitive information involved, and rules regarding information on specific location identification information included in the Butternut Health Assessment Report, the report is not to be shared with the public.*



Natural/Physical Environments

Summary of Reporting

- Pavement Design Report
 - Study completed by Ainley Group
 - Geotechnical study completed to provide strategies for the reconstruction of Ferguson Lake Road
 - Based on information provided by the Township, the Annual Average Daily Traffic (AADT) for the road was 280 (with 15% truck traffic)
 - Twenty-four (24) boreholes were advanced in the roadway and/or edge of pavement, six (6) boreholes at cross-culverts, nine (9) test pits within roadway embankments, thirty-nine (39) probe holes advanced in vicinity of test pits
 - Representative samples of base, subbase, and subgrade submitted for gradation analysis and moisture content determination
 - Recommendations from report allowed design processes to follow a modified (site-specific) approach



Other Studies

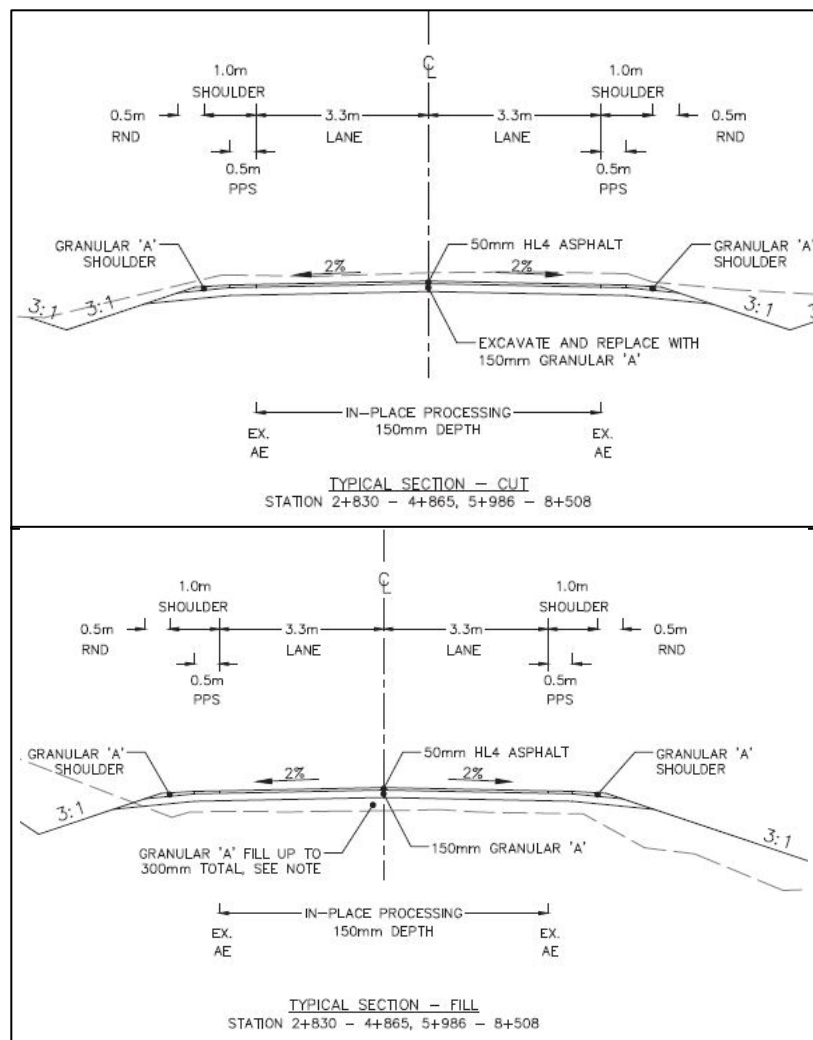
Summary of Reporting

- Topographic / Engineering Surveying
 - *Surveying completed by Greenview*
 - *Survey data used for road design purposes*
- Legal Surveying
 - *Legal Surveying completed by Simon Kasprzak O.L.S.*
 - *Portions of road identified as a “forced road”, requiring detailed boundary surveying, title searches/confirmations, and related legal survey review and assessment*
 - *Current legal boundary surveys will be utilised in dealing with any property encroachments, as required*



Generic Road Design Details

• Generic Road Design Cross-Section



- *Single-Lane Width = 3.3 m*
- *Crossfall = 2%*
- *Paved Shoulder Width = 0.5 m*
- *Granular shoulder Width = 0.5 m*
- *Ditches = 3:1 slope (typical)*
- *Depth of HL4 Asphalt = 50 mm*
- *Depth of Base = 150 mm (min.)*

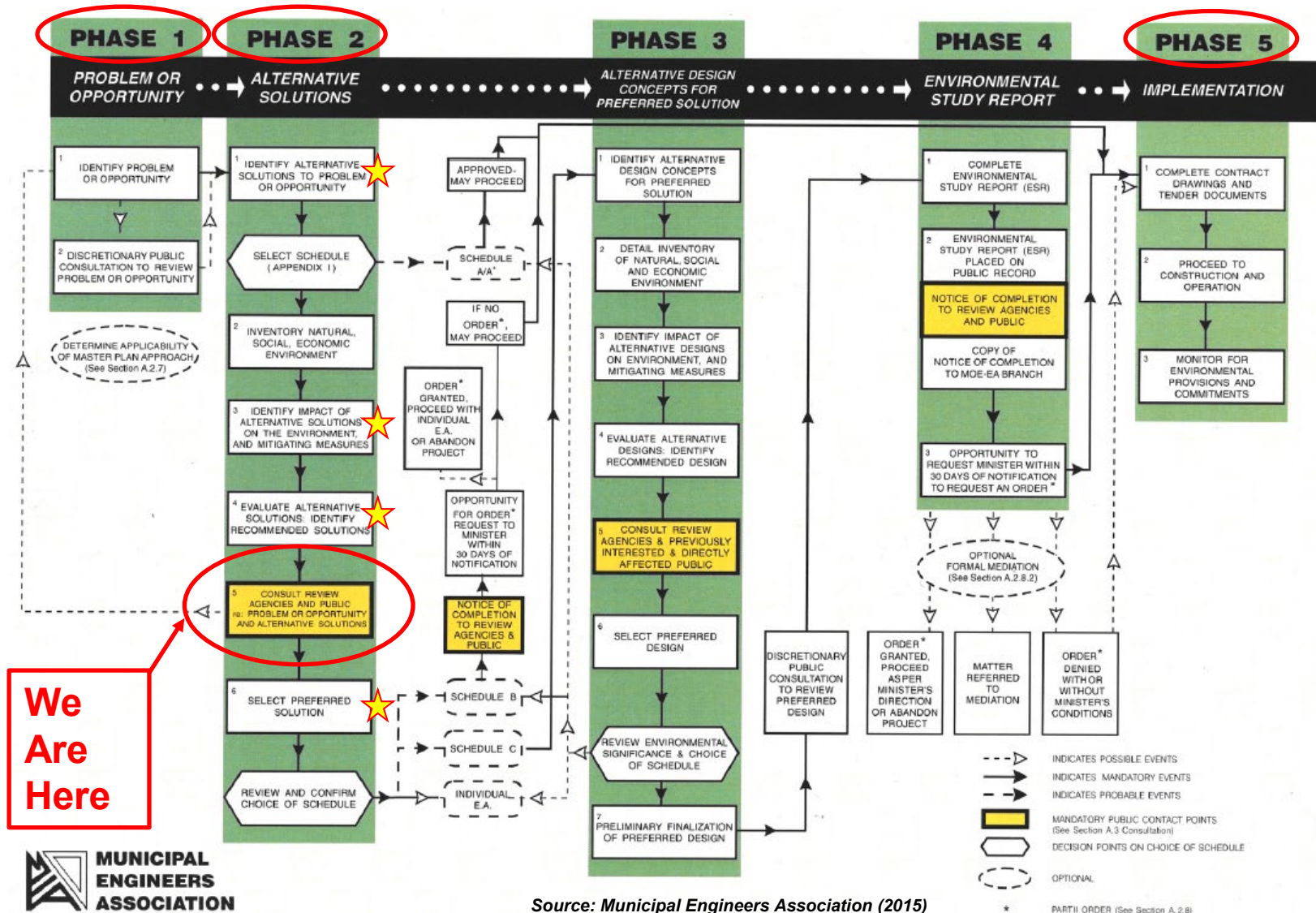


Generic Road Design Details

- Hot mix asphalt (HL4) pavement surface (3.3 m lane widths) for increased road performance, durability, lifecycle, and safety
- 0.5 m paved road shoulders (both sides of road) to assist/encourage “*Active Transportation*” (i.e. pedestrian & cycling traffic)
- Improved grading and cross-fall for road to enhance road drainage
- Upgraded ditches, entrance & cross-culverts for drainage improvements
- Other safety improvements (i.e. guiderails, signage, etc.)



MCEA: Alternative Solutions



Source: Municipal Engineers Association (2015)

MCEA: Alternative Solutions

- Alternative solutions (alternatives) developed based on a focus on reasonable solutions and feasibility perspectives
- Include the “Do Nothing / Status Quo” alternative
- Alternatives:



1. **90 km/hr design speed alignment**, with associated road and right-of-way (ROW) geometry per *Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads*
2. **60 km/hr design speed alignment**, with associated road and ROW geometry per TAC
3. **Split 60 & 70 km/hr design speed alignment (modified)**, with associated road and ROW geometry per site-specific modifications
4. **60 km/hr design speed alignment (modified)**, with associated road and ROW geometry per site-specific modifications
5. Do Nothing / Status Quo (screened out early)

MCEA: Evaluation of Potential Effects

- Per MCEA guidelines, project alternatives are evaluated against primary criteria:
 - Natural/physical environments
 - Socio-cultural environments
 - Economic environments
- Findings from studies are evaluated relative to alternatives, with potential effects 'ranked', relatively from low to high



MCEA: Potential Effects Summary

Criteria	Alternative #1	Alternative #2	Alternative #3	Alternative #4
	90kph Design Speed (TAC)	60kph Design Speed (TAC)	60 / 70kph Design Speed (Modified)	60kph Design Speed (Modified)
<i>Natural / Physical</i>				
Water Quality / Drainage	Medium	Low	Low	Low
Wetlands	Medium	Medium	Low	Low
Wildlife Habitat - Terrestrial	High	Medium	Low	Low
Wildlife Habitat - Aquatic	Medium	Low	Low	Low
Wildlife Habitat - Avian	High	High	Low	Low
Significant Species / Species at Risk	High	Medium	Low	Low
<i>Socio-Cultural</i>				
Land Use / Land Needs	High	High	Low	Low
Cultural Heritage / Archaeology	Medium	Low	Low	Low
Traffic	High	Medium	Medium	Low
Visual Aesthetics	High	Low	Low	Low
Public Opinion	High	High	Low	Low
Public Health and Safety	High	Low	Medium	Low
<i>Economic</i>				
Capital Cost	High	High	Medium	Low
Operating Cost (Long-Term Asset Maintenance/Management)	Medium	Medium	Low	Low
Summary of Potential Net Effects	High	High	Medium	Low

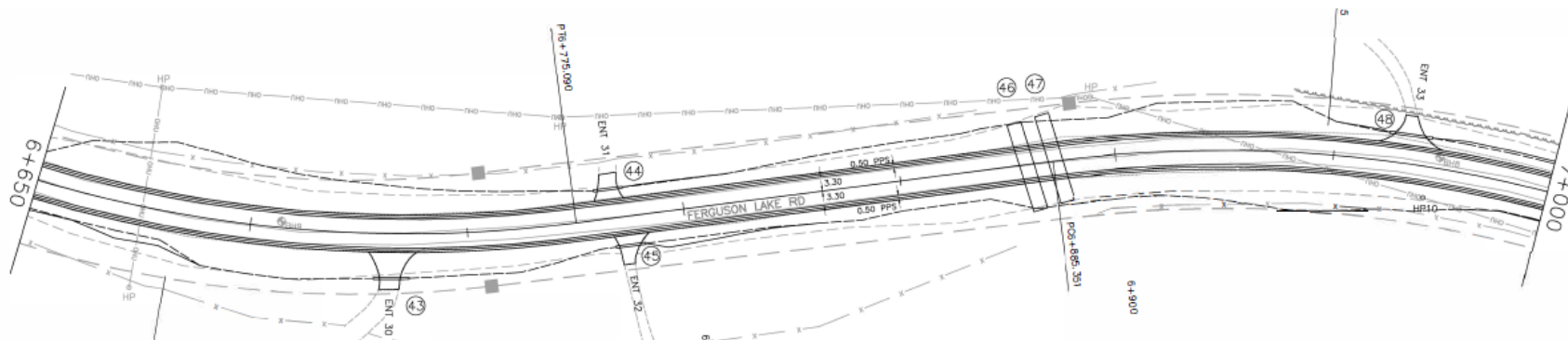
MCEA: Alternative #1

90 km/hr Design Speed Alignment, per TAC

- *90 km/hr design speed alignment* per TAC

not preferred due to:

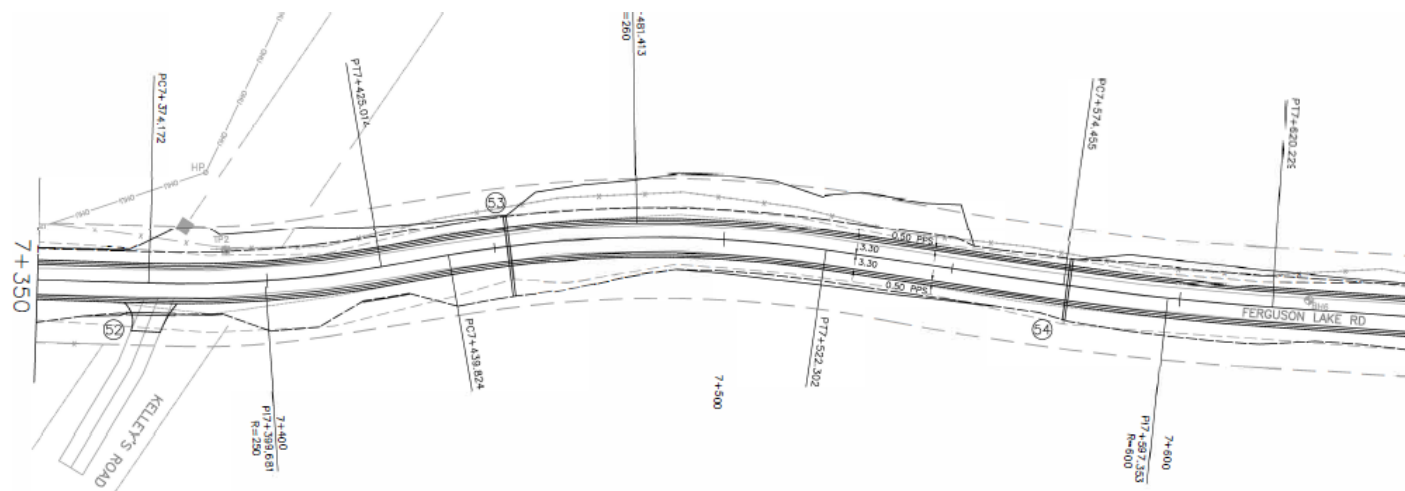
- *Significantly high costs for construction*
- *Significant impacts to SARs (notably Butternut trees)*
- *Significant requirements for horizontal and vertical realignments of road*
- *Significant land encroachments to accommodate dramatic road realignment & side slope requirements, per TAC*
- *Significant habitat impacts (terrestrial, aquatic, avian)*
- *Impacts related to public health and safety*



MCEA: Alternative #2

60 km/hr Design Speed Alignment, per TAC

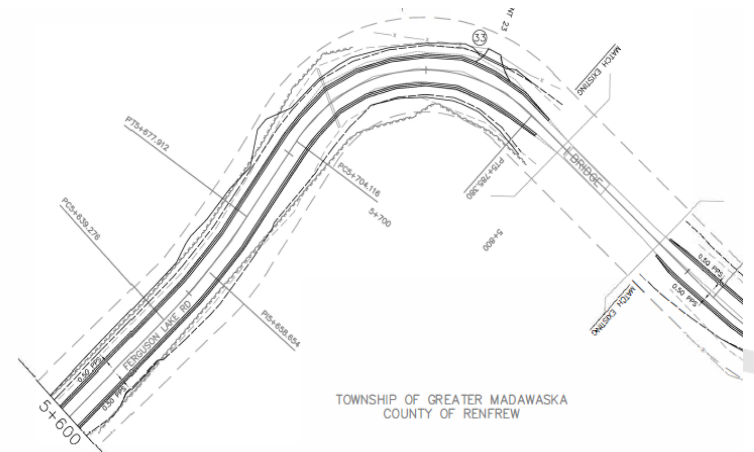
- *60 km/hr design speed alignment per TAC not preferred due to:*
 - *Significant costs for construction*
 - *Significant impacts to SARs (notably Butternut trees)*
 - *Significant land encroachments due to side slope requirements, per TAC*
 - *Significant habitat impacts (terrestrial, aquatic, avian)*



MCEA: Alternative #3

Split 60 & 70 km/hr design speed alignment,
per site-specific modifications

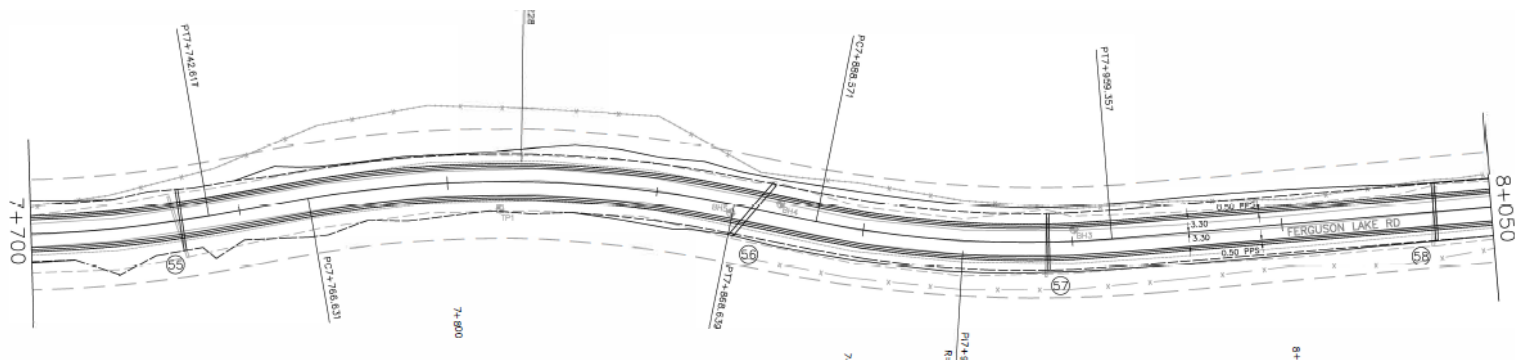
- *Split 60 & 70 km/hr design speed alignment (modified) considered preferred*
- *60 km/hr design speed from Campground Side Road to Constant Creek Bridge, 70 km/hr design speed from Constant Creek Bridge to Kennelly Mountain Road*
- *Design considered preferred due to:*
 - *Within budget*
 - *Fewer impact to SARs*
 - *Fewer property encroachment issues*
 - *Fewer habitat impacts (terrestrial, aquatic, avian)*



MCEA: Alternative #4

60 km/hr design speed alignment,
per site-specific modifications

- *60 km/hr design speed (modified) for all project area considered preferred*
- *Design considered feasible due to:*
 - *Within budget*
 - *Fewer impact to SARs*
 - *Fewer property encroachment issues*
 - *Fewer habitat impacts (terrestrial, aquatic, avian)*



MCEA: Alternative #5

“Do Nothing” / Status Quo

- *“Do Nothing” Alternative is always to be considered as part of MCEA process*
- *“Do Nothing” Alternative generally only considered when costs of all other alternatives (financial, environmental) significantly outweigh the benefits*
- *“Do Nothing” Alternative not considered preferred as:*
 - *Environmental costs can be mitigated/managed effectively with either of Alternative #3 and #4*
 - *Road requires repair, for public health and safety reasons*
 - *Reconstruction of road is within project funding*



MCEA: Economic Environment

Preliminary Construction Cost Estimates

	Alternative #1	Alternative #2	Alternative #3	Alternative #4	Alternative #5
	90kph Design Speed (TAC)	60kph Design Speed (TAC)	60/70kph Design Speed (Modified)	60kph Design Speed (Modified)	Status Quo / Do Nothing
Preliminary Construction Cost	\$6,767,090	\$6,227,785	\$3,609,424	\$3,508,317	N/A
Contingency (20%)	\$1,353,418	\$1,245,557	\$721,885	\$701,663	
Estimated Total Cost (High)	\$8,120,507	\$7,473,342	\$4,331,309	\$4,209,980	
Construction Funding	\$3,709,100	\$3,709,100	\$3,709,100	\$3,709,100	
Difference	-\$4,411,407	-\$3,764,242	-\$622,209	-\$500,880	
Construction Funding (incl 20% Contingency)	\$4,450,920	\$4,450,920	\$4,450,920	\$4,450,920	
Difference	-\$3,669,587	-\$3,022,422	\$119,611	\$240,940	

MCEA: Preferred Alternative

Municipal Council Initial Preferred Alternative

- Based on a review of all components of the Schedule B MCEA process, Municipal Council prefers:

- **Alternative #3, 60/70kph Design Speed (modified) as their initial *Preferred Alternative***

- *60 km/hr design speed from Campground Side Road to Constant Creek Bridge, 70 km/hr design speed from Constant Creek Bridge to Kennelly Mountain Road*



Next Steps -

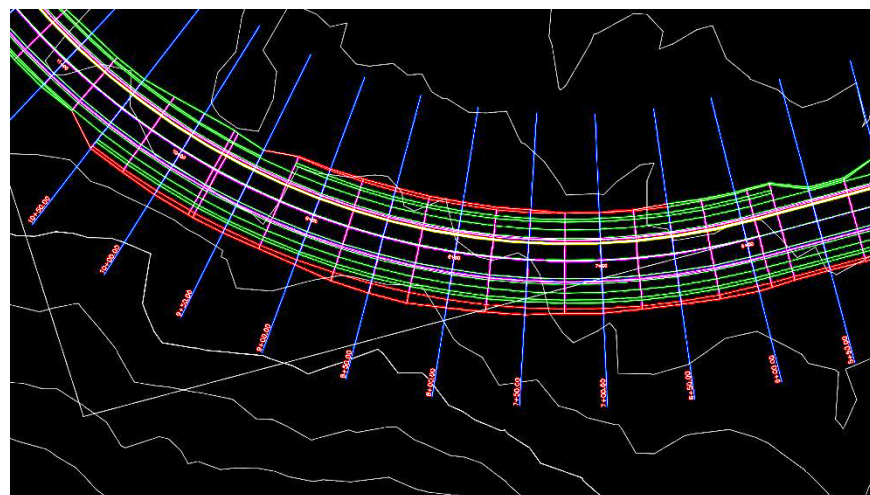
Schedule B MCEA Process

1. Final Determination of *Preferred Alternative*
 - Based on a thorough review of all elements of the project, including from socio-cultural, natural/physical, and economic environments, input from stakeholders, and potential net effects, Municipal Council to determine *Preferred Alternative*
2. Preparation of *Project File Report*
 - Summary report of MCEA process
3. Issuance of *Notice of Study Completion*
 - To be issued to all stakeholders with interest
 - 30-day comment period



Next Steps – Design & Engineering

- Design & Engineering
 - Detailed Design – July/August 2021
 - Permitting & Approvals
 - Legal surveying, property encroachments – spring/summer 2021 (initiated, on-going)
 - Supplemental studies required from MCEA process (i.e. archeological, permitting, etc.)



Next Steps – Implementation

- Implementation (Construction)
 - Construction tendering – Fall 2021
 - Construction start – Early 2022
 - Construction end – Summer 2023

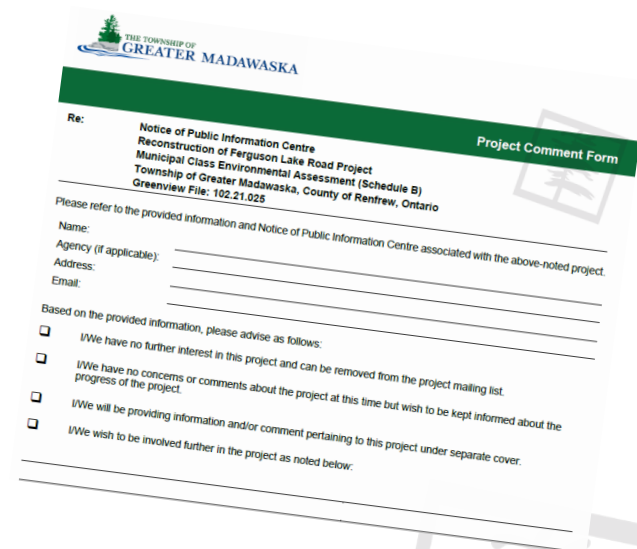


Questions & Discussion



Project Links for Stakeholders

- Township Website:
 - <https://www.greatermadawaska.com/community-news/ferguson-lake-notice-of-public-information-centre-2869.html>
 - <https://www.greatermadawaska.com/departments/public-works/ferguson-lake-road-reconstruction-3324.html>
- Township Website Links include:
 - Pertinent Studies, Documents, Plans
 - PIC Presentation (to be posted tomorrow)
- Interested Stakeholders:
 - Please Submit *Project Comment Forms* by June 29, 2021



THE TOWNSHIP OF
GREATER MADAWASKA

Project Comment Form

Re: Notice of Public Information Centre
Reconstruction of Ferguson Lake Road Project
Municipal Class Environmental Assessment (Schedule B)
Township of Greater Madawaska, County of Renfrew, Ontario
Greenview File: 102.21.025

Please refer to the provided information and Notice of Public Information Centre associated with the above-noted project.

Name: _____
Agency (if applicable): _____
Address: _____
Email: _____

Based on the provided information, please advise as follows:

☐ I/We have no further interest in this project and can be removed from the project mailing list.

☐ I/We have no concerns or comments about the project at this time but wish to be kept informed about the progress of the project.

☐ I/We will be providing information and/or comment pertaining to this project under separate cover.

☐ I/We wish to be involved further in the project as noted below: _____